OFFICIAL GAZETTE

UNITED STATES PATENT OFFICE

VOL. 744 - 745

JUL. - AUG.

1959

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE
July 7, 1959 Volume 744 Number 1

PATENTS

NOTICES

Foreign Patents Received in the Scientific Library as of May 31, 1959

Country	Date received	Highest number
Australia:		
(*Abstracts*)	Apr. 16, 1959	41,547
(*Patents*)	Apr. 20, 1959	218,187
Austria	May 7, 1959	203,150
Belgium	May 25, 1959	537,600
Canada	May 28, 1959	576,766
Denmark	Feb. 4, 1959	86,392
Egypt	Apr. 2, 1959	1,398
Finland	Mar. 2, 1959	29,790
France:		
(*Patents*)	May 11, 1959	1,177,300
(*Additions*)	May 11, 1959	70,400
Germany:		
(*Auslegeschriften*)	May 13, 1959	1,054,390
(*Patents*)	May 4, 1959	1,034,807
Great Britain	May 25, 1959	813,470
India	Feb. 2, 1959	60,884
Ireland	May 18, 1959	21,900
Italy	Nov. 12, 1958	558,700
Japan	May 14, 1959	2,600
Netherlands	May 4, 1959	90,789
Norway	May 4, 1959	93,627
Philippines	June 29, 1956	217
Poland	Mar. 12, 1959	41,718
Sweden	Mar. 23, 1959	166,158
Switzerland	Apr. 23, 1959	386,843
U.S.S.R.	Apr. 7, 1959	116,999
Yugoslavia	Feb. 17, 1955	16,461

Australia: First 2,000 incomplete
Belgium: First printed 493,079
Canada: First printed 453,746
Czechoslovakia: Latest 81,300/1952
Finland: First printed 19,428
First 500 incomplete
Hungary: First received 5,792
Latest 140,582/1951
Ireland: Missing 1–10,000
Italy: First 243,000 incomplete
Yugoslavia: First received 10,001

Receipt of Mail

In view of reports that there have been delays in the receipt by the U.S. Patent Office of mail having due dates (amendments, motions, etc.), it is appropriate to set forth the arrangements which have been made with the Washington City Post Office for the handling of mail addressed to the Patent Office.

Regular Mail

The mail addressed to Washington 25, D.C., upon receipt at the Washington City Post Office is sorted and distributed, and that portion addressed to the Patent Office is placed in Patent Office mail pouches. A pouch is kept open until midnight of each weekday, except Saturdays, and holidays in the District of Columbia, closed and locked at that hour, and delivered to the Patent Office the following day. The contents are stamped as received in the Patent Office on the day the pouch was closed and locked.

Mail received in the Post Office between midnight Friday and midnight Sunday is stamped in the Patent Office as received in the Patent Office as of the following weekday (not a holiday).

Mail received in the Post Office on a holiday is stamped in the Patent Office as received in the Patent Office as of the following weekday (not a Saturday).

Special Delivery Mail

Special delivery mail received in the Washington City Post Office is sorted, distributed, and placed in vehicles for delivery within two or three hours after arrival. Such mail is not usually dispatched for delivery after 10:00 p.m. Special delivery mail which is received before midnight on a weekday, except Saturdays and holidays in the District of Columbia, but too late for 10:00 p.m. dispatch to the Patent Office, is placed in the Patent Office pouch which is closed and locked at midnight.

Special delivery mail received in the Post Office after midnight is delivered the next day to the Patent Office and is stamped as received that day, if not a Saturday, Sunday, or holiday.

Special delivery mail received in the Post Office on a Saturday, Sunday or holiday is stamped in the Patent Office as received in the Patent Office as of the following weekday, following the practice for regular mail.

June 8, 1959.

C. A. KALK,
Director of Administration.

Notice of Tentative Recordation of a Trade Name

[T.D. 54,062]

Tentative recordation of trade name under section 42, Trademark Act of July 5, 1946, and section 11.16, Customs Regulations

TREASURY DEPARTMENT,
OFFICE OF THE COMMISSIONER OF CUSTOMS,
Washington, D.C., June 3, 1959

To Collectors of Customs and Others Concerned:

An application has been filed in the Treasury Department for the recordation of the following described trade name under the provisions of section 42, Trademark Act of 1946, and section 11.16, Customs Regulations:

"ABWOOD MACHINE TOOLS LTD.," located and doing business at Princes Road, Dartford, Kent, England, which trade name is used in connection with the production and marketing of machine tools and small tools.

Since the trade name is owned by a foreign corporation, merchandise manufactured or sold by this firm bearing the name may be imported by anyone.

Any person who desires to file an opposition to the recordation of this trade name shall notify the Commissioner of Customs, Bureau of Customs, Washington 25, D.C., before the expiration of 30 days after July 15, 1959, of his intent to oppose the recordation. If a notice of opposition is filed, the opposer will be furnished with a copy of the application

New Applications Received During May 1959

Patents	6,777
Designs	415
Plant Pats	15
Reissues	25
Total	7,232

Issue

Patents	1,257	—No. 2,893,005 to No. 2,894,261, incl.
Designs	34	—No. 185,621 to No. 185,654, incl.
Reissues	2	—No. 24,665 to No. 24,666, incl.
Total	1,293	

for recordation of the trade name, together with its supporting documents and instructions as to the procedure to be followed. The customs officers concerned will be given notice within 45 days after July 15, 1959, of any opposition proceeding.

Until 45 days after July 15, 1959, all articles of foreign manufacture bearing names or marks which copy or simulate the above-mentioned trade name shall be detained, but not seised, and thereafter, shall receive the treatment provided for in section 11.17, Customs Regulations, unless a notice is received that an opposition has been filed, in which case such articles shall continue to be detained until a final determination is made concerning the right of the applicant to the trade name.

(Signed) D. B. STRUBINGER,
Acting Commissioner of Customs.

Erratum

All references to Patent No. 2,890,950 to John C. Elliott, assignor to Bjorksten Research Laboratories, Inc., for Metal Foam and Method for Making, appearing in the OFFICIAL GAZETTE of June 16, 1959, should be deleted as the application was withdrawn from issue and the patent was not issued.

Disclaimers

2,405,134.—*Walter J. Brown*, Cleveland Heights, and *John E. Shomer*, Lakewood, Ohio. DISTANCE MEASURING SYSTEMS. Patent dated Aug. 6, 1946. Disclaimer filed May 18, 1959, by the assignee, *Clevite Corporation*.

Hereby enters this disclaimer to claim 5 of said patent.

2,548,789.—*Rudolf C. Hergenrother*, West Newton, Mass. ELECTRONIC STORAGE DEVICE. Patent dated Apr. 10, 1951. Disclaimer filed June 4, 1959, by the inventor and the assignee, *Raytheon Company*.

Hereby enter this disclaimer to claim 5 of said patent.

2,837,249.—*Philip Meshberg*, Fairfield, Conn. AEROSOL VALVE. Patent dated June 3, 1958. Disclaimer filed June 3, 1959, by the inventor.

Hereby enters this disclaimer to claim 4 of said patent.

Classification Order No. 281

The following transfer is hereby ordered to take effect on Monday, June 8, 1959:

From Division 62 to Division 53
Class 240, ILLUMINATION.

M. C. ROSA,
Director, Patent Examining Operation.

June 8, 1959.

Patents Available for Licensing or Sale

2,774,137. Method and Flux for Soldering Aluminum. Max Yarow, 636 W. Moyamensing Ave., Philadelphia, Pa.

2,886,071. Combined Milk Cooling and Filtering Device. Rasmus E. Rasmussen, 115 Oak Ave., Galt, Calif.

2,888,965. Mountings for a Portable Electric Motor. Carleton A. Phillips, 231 Baker St., Corning, N.Y.

General Electric Company is prepared to grant non-exclusive licenses under the following 10 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 5 patents may be addressed to: Patent Counsel, Heavy Military Electronics Department, General Electric Company, Legal Section, Building 1, Room 35, Court Street Plant, Syracuse, N.Y.

2,836,812. Expanded Display for Cathode Ray Tubes.

2,852,772. Receiver Scanning System.

2,860,342. Support Structure for Radar Antenna Systems.

2,862,187. Signal Modulating System.

2,868,981. Signal Processing Arrangement.

Applications for license under the following 2 patents may be addressed to: General Electric Company, Component Products Division, 1635 Broadway, Fort Wayne, Ind., Attention: Patent Counsel.

2,871,412. Starting and Operating Circuit for Arc-Discharge Device.

2,879,185. Ceramic Coating for Magnet Wire.

Applications for license under the following patent may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, 1 River Road, Schenectady 5, N.Y.

2,878,195. Process of Preparing an Organopolysiloxane, the Product Thereof, Mixtures of the Product With Rubbery Polymers, and Method of Curing the Mixtures.

Applications for license under the following 2 patents may be addressed to: Patent Counsel, Switchgear & Control Division, General Electric Company, 6901 Elmwood Ave., Philadelphia 42, Pa.

2,881,786. Convertible Pneumatic Valve.

2,882,457. Magnetic Control Apparatus.

Dedication

2,806,789.—*Jackson Sebree Kiser*, Orangeburg, N.Y., and *John A. Roberts*, Westwood, N.J. ENHANCEMENT OF THERAPEUTIC EFFICACY OF ANTIBIOTICS. Patent dated Sept. 17, 1957. Dedication filed May 28, 1959, by the assignee, *American Cyanamid Company*.

Hereby dedicates this patent to the free use of the Government and people of the United States.

CONDITION OF PATENT APPLICATIONS AS OF MAY 30, 1959

Total number of pending applications (excluding Designs)	198, 799
Total number of pending Design applications	6, 927
Total number of applications awaiting action (excluding Designs)	83, 843
Total number of Design applications awaiting action	1, 790
Date of oldest new application	May 27, 1958
Date of oldest amended application	Apr. 9, 1958

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 62, 64.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 69.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 26, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Excavating; Planting; Plant Husbandry; Scattering Unloaders; Harrows and Diggers; Plows	9-30-58	9-8-58
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	9-16-58	10-2-58
3. (VII) MARMELSTEIN, N. (WINDHAM, R. K., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Resistances and Rheostats	12-1-58	12-3-58
4. (VI) FALLER, E. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	11-3-58	11-5-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	7-24-58	8-28-58
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	11-3-58	11-3-58
7. (IV) GONSALVES, J. E. (ANDERSON, E. G., acting), Optics	10-13-58	10-1-58
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	9-22-58	8-5-58
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	10-27-58	10-27-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	11-3-58	11-3-58
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	11-3-58	10-7-58
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	10-20-58	10-17-58
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	10-24-58	10-13-58
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	7-2-58	6-3-58
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	11-4-58	11-3-58
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	9-15-58	9-18-58
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Association or Folding	12-1-58	12-2-58
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	11-14-58	11-5-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation	11-3-58	10-29-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	10-31-58	10-29-58
21. (III) MADER, R. C., Textiles	11-10-58	11-5-58
22. (VI) PAUL, E. (acting), Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	10-29-58	10-29-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators, Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	5-27-58	4-9-58
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	11-12-58	11-13-58
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	11-4-58	10-31-58
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	11-3-58	10-15-58
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	10-23-58	10-27-58
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyers; Pressure Modulating Relays; Wheel Substitutes	9-2-58	9-15-58
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	11-7-58	11-19-58

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
30. (VII) O'LEARY, R. A., Illuminating Burners; Comminutors; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling; Refrigeration; Fluid Sprinkling, Spraying and Diffusing	8-1-58	8-11-58
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Polypropylenes, Polyisobutylenes); Mineral Oils	1-23-59	1-16-59
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Agitation; Fire Extinguishers	11-17-58	11-10-58
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs; Building Structures	10-29-58	10-1-58
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Separating and Assorting Solids (part)	5-23-58	5-19-58
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Sheet Feeding; Severing by Tearing or Breaking	1-6-59	1-5-59
36. (V) EVANS, R. L., Measuring and Testing (part)	7-1-58	7-1-58
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	11-3-58	10-13-58
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	11-17-58	11-5-58
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	12-1-58	11-13-58
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	12-1-58	12-1-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	11-19-58	11-13-58
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	9-15-58	9-15-58
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	11-10-58	11-5-58
44. (II) EVANS, N. H., Directive Radio Systems; Mass Spectrometers; Nuclear Batteries; Nuclear Resonant Devices; Neutron Detecting and Measuring; Radar; Sonar; Torpedoes	8-5-58	8-1-58
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	12-2-58	10-15-58
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e. g., fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	11-4-58	11-4-58
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	11-5-58	11-4-58
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	10-20-58	10-17-58
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass	10-16-58	10-1-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	9-23-58	9-10-58
51. (II) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas; Oscillators	10-7-58	10-6-58
52. (V) LE ROY, C. A., Supports and Racks	12-5-58	12-1-58
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators	1-12-59	1-12-59
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications	12-9-58	12-15-58
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	8-18-58	8-6-58
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	10-27-58	10-29-58
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting and Punching	9-2-58	9-4-58
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Punching	10-20-58	10-27-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	10-1-58	9-22-58
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	10-15-58	10-6-58
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	10-16-58	10-16-58
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Illumination; Photographic Apparatus	10-21-58	10-3-58
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e. g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	11-3-58	11-3-58
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	9-9-58	9-5-58
66. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	12-1-58	12-2-58
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	6-24-58	6-25-58
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators; Separating and Assorting Solids (part)	11-3-58	11-3-58
81. (III) MONCURE, J. A., Industrial Arts	2-6-59	3-12-59
82. (III) GRAY, M. A., Household, Personal and Fine Arts	2-11-59	2-13-59
91. BAILEY, J. S., Laminated Fabrics	11-4-58	11-3-58
92. GAUSS, H., Detectors, Miscellaneous Electron Tube Circuits	10-24-58	10-8-58
93. WAHL, R. A., Metal Bending; Web Feeding	10-1-58	10-3-58
94. BERLOWITZ, W., Earth Boring; Gas Separation	11-21-58	10-15-58
95. ANGEL, C. D., Masonry and Concrete Structures; Time-Controlling Apparatus; Packed Rod Joints; Joint Packings	11-3-58	10-21-58
M. E. DIV. A (I) LANHAM, B. E., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part), i. e., Polyethylenes	12-16-58	10-13-58

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1959, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1955*.

Patents..... Numbers 2,823,589 to 2,881,896, inclusive
Plant Patents..... Numbers 531 to 536, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

United States Court of Appeals
District of Columbia Circuit

HALORO, INC. *v.* OWENS-CORNING FIBREGLAS CORPORATION

No. 14,730. Decided May 14, 1959

[— U.S. App. D.C. —; — F.2d —; 121 USPQ 339]

1. APPEAL TO THE U.S. COURT OF APPEALS—INFRINGEMENT—PRESUMPTION OF VALIDITY (35 U.S.C. § 282)—FRAUD AND INEQUITABLE CONDUCT.

Upon review of the District Court's decision that the patent in suit in an action for infringement was unenforceable because the patent had been procured by the fraud and inequitable conduct of plaintiff's assignors in earlier R.S. 4915 proceedings, *Held* that "By statute, 35 U.S.C. § 282 (1952), 'a patent shall be presumed valid' and the party asserting invalidity has the burden of establishing it"; that "The requirement of proof to sustain the burden is heavy"; that "It must be 'by clear and convincing evidence'"; and that "On the record * * * the evidence of fraud and inequitable conduct was not sufficient to meet the required standard."

2. SAME—SAME—SAME—SAME.

"We have considered *Hazel-Atlas Glass Co.* v. *Hartford-Empire Co.*, 322 U.S. 238, and *Precision Instrument Mfg. Co.* v. *Automotive Maintenance Mach. Co.*, 324 U.S. 806, relied upon by the District Court, but do not find them controlling. In Hazel-Atlas, in the words of the Court, there was a 'deliberately planned and carefully executed scheme to defraud,' of which the proof was 'conclusive'; and no equities had intervened through transfer of the fraudulently procured patent to an innocent purchaser. 322 U.S. at 245–46. And in Precision the Court said that 'the history of the patents and contracts in issue is steeped in perjury and undisclosed knowledge of perjury' with the plaintiffs having 'at least moral and actual certainty if not absolute proof of the facts concerning the perjury . . .' 324 U.S. at 816."

3. SAME—JURISDICTION—REMAND.

"In vacating the present judgment, * * *, we shall at the same time remand the case to the District Court for further proceedings, since, * * *, other issues affecting the merits of the plaintiff's case were left undecided. We think remand the better course, notwithstanding we could in our discretion pass upon those issues ourselves."

APPEAL from the United States District Court for the District of Columbia.

REVERSED AND REMANDED.

Mr. Conder C. Henry for Haloro, Inc.

Mr. Carl F. Schaffer of the bar of the Supreme Court of Ohio, *pro hac vice*, by special leave of court, with whom *Mr. Lloyd Symington* was on the brief, for Owens-Corning Fibreglas Corporation.

Before EDGERTON, WILBUR K. MILLER, and FAHY, *Circuit Judges*

PER CURIAM:

The appeal is from a judgment of the District Court in favor of the defendant company following a trial upon the merits of an action for infringement of a patent for a spun glass roofing mop.[1] The court held that the patent, which the court had authorised to be granted to plaintiff's assignors in earlier R.S. 4915 proceedings,[2] was unenforceable because the patent had been procured by the fraud and inequitable conduct of plaintiff's assignors in those proceedings. The bases of the finding of fraud and inequitable conduct were representations and testimony as to the universal adoption and use of the mop in the roofing industry and its commercial success, not as to the status otherwise of the patent as an invention. In the present litigation the court left two other issues affecting the merits of plaintiff's claim undecided.

[1] By statute, 35 U.S.C. § 282 (1952), "a patent shall be presumed valid" and the party asserting invalidity has the burden of establishing it. The requirement of proof to sustain the burden is heavy. It must be "by clear and convincing evidence," *Oliver United Filters, Inc.* v. *Silver*, 206 F.2d 658, 664 (10th Cir. 1953), cert. denied, 346 U.S. 928. And see *Radio Corporation of America* v. *Radio Engineering Laboratories, Inc.*, 293 U.S. 1, 7–8; *Marks* v. *Polaroid Corp.*, 237 F.2d 428, 436 (1st Cir. 1956), cert. denied, 352 U.S. 1005; *Martin* v. *Ford Alexander Corp.*, 160 F. Supp. 670, 685 (S.D. Calif. 1958). On the record before us we hold that the evidence of fraud and inequitable conduct was not sufficient to meet the required standard.

[2] We have considered *Hazel-Atlas Glass Co.* v. *Hartford-Empire Co.*, 322 U.S. 238, and *Precision Instrument Mfg. Co.* v. *Automotive Maintenance Mach. Co.*, 324 U.S. 806, relief upon by the District Court, but do not find them controlling. In Hazel-Atlas, in the words of the Court, there was a "deliberately planned and carefully executed scheme to defraud," of which the proof was "conclusive"; and no equities had intervened through transfer of the fradulently procured patent to an innocent purchaser. 322 U.S. at 245–46. And in Precision the Court said that "the history of the patents and contracts in issue is steeped in perjury and undisclosed knowledge of perjury" with the plaintiffs having "at least moral and actual certainty if not absolute proof of the facts concerning the perjury . . ." 324 U.S. at 816.

[3] In vacating the present judgment, however, we shall at the same time remand the case to the District Court for further proceedings, since, as we have said, other issues affecting the merits of the plaintiff's case were left undecided. We think remand the better course, notwithstanding we could in our discretion pass upon those issues ourselves. See *Barie* v. *Superior Tanning Co.*, 182 F.2d 724 (7th Cir. 1950), and *Moore* v. *C. R. Anthony Co.*, 198 F.2d 607 (10th Cir. 1952).

REVERSED AND REMANDED.

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[1] Patent No. 2,671,922. It is described as relating "to a mop formed of twisted strands of continuous fibrous glass cord instead of the usual strands of cotton twill or fibre." The purpose of the invention, as the patent states, "is to provide a mop particularly adapted for spreading asphalt, or like substances . . . in which the asphalt functions as a lubricant lengthening the life of the strands instead of causing deterioration therein."

[2] Under 27 Stat. 436 (1893), as amended, 35 U.S.C. § 63 (1946), as amended, 66 Stat. 803, 35 U.S.C. § 145 (1952).

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

1,962,979. (See 2,266,647.)

1,961,134. (See 2,266,647.)

2,662,991. (See 2,266,647.)

2,639,694. (See 2,266,647.)

2,654,989, W. C. Moore, Compositions for application to human skin; **2,665,470,** A. L. Omohundro, Insect repellant stick; **2,668,514,** H. L. Van Mater, Zirconium compound deodorant and anti-perspirant; **2,732,327,** T. W. Kedzie, Anti-perspirant stock, filed May 28, 1956, D.C., S.D.N.Y., Doc. 110/79, *Helene Curtis Industries, Inc.* v. *Pharma-Craft Corp.* Order of discontinuance Apr. 23, 1959.

2,689,691. (See 2,266,647.)

2,105,914. (See 2,266,647.)

2,119,705. (See 2,266,647.)

2,123,825. (See 2,266,647.)

2,124,852. (See 2,266,647.)

2,205,634. (See 2,266,647.)

2,226,668, S. W. Caron, Golf bag cart; **2,626,814,** J. F. Chamberlin, Collapsible golf carts; **2,626,815,** same; **2,740,638,** Chamberlin and Westphal, same; **2,741,490,** same, Cart for golf bags, filed Sept. 7, 1956, D.C., E.D. Mich. (Detroit), Doc. 16012, *Joseph F. Chamberlin, doing business as Chamberlin Metal Products et al.* v. *United Metal Products Corp.* Stipulation and order of dismissal Oct. 24, 1958.

2,266,647, Lucas and Stephen, Horizontal boring machine; **2,239,425,** H. N. Stephan, Machine tool; **1,962,979,** A. F. Bennett, same; **1,961,234,** C. B. De Vlieg, Automatic positioning mechanism; **2,662,991,** same, Backlash remover; **2,119,705,** same, Backlash eliminator mechanism; **2,639,691,** same, Backlash compensator for machine tools; **2,123,825,** same, Combination positioning and locking mechanism; **2,629,694,** De Vlieg and Lundberg, Power transmission mechanism; **2,105,914,** F. A. Fritzsch, Power transmission mechanism; **2,124,852,** Graves and Bennett, Machine tool; **2,205,634,** H. S. Siser, Screw and nut driving connection, filed July 17, 1947, D.C., E.D. Mich. (Detroit), Doc. 6813, *Lucas Machine Tool Co. et al.* v. *De Vlieg Engineering Co. et al.* Notice of dismissal Mar. 26, 1959.

2,239,425. (See 2,266,647.)

2,437,615. (See 2,758,632.)

2,465,470. (See 2,054,989.)

2,466,514. (See 2,054,989.)

2,535,591, L. M. Cotchett, Top roll for textile drafting mechanism; **2,644,202,** same, Ball bearing top rolls; **2,716,780,** K. P. Swanson, Top roll for drawing mechanisms; **2,755,515,** L. M. Cotchett, Top roll for drawing frames, Appeal, filed Mar. 23, 1959, C.C.A. First Circuit, Doc. 5492, *Progression Engineering, Inc. et al.* v. *Machinecraft, Inc. et al.*

2,582,575, C. F. Hansen, Means for interchanging cores in wire ropes, filed June 4, 1956, D.C., N.D. Calif. (San Francisco), Doc. 7399, *Charles F. Hansen* v. *Ottis M. Colliver et al.* Patent held valid but not infringed Apr. 28, 1959.

2,622,196, W. Sher, Lamp shade and supporting member therefor, filed Apr. 24, 1950, D.C., N.D. Ill. (Chicago), Doc. 59c652, *Hamilton Industries, Inc.* v. *William Sher.*

2,626,814. (See 2,226,053.)

2,626,815. (See 2,226,053.)

2,627,896, J. M. De Grandis, Waterproof plastic covered bust pad, filed Oct. 3, 1958, W.D.N.Y. (Buffalo), Doc. 8013, *Virginia Hall, Inc.* v. *Miriam Gates, Inc.* Complaint and counterclaim dismissed by stipulation and counterclaim dismissed by stipulation May 4, 1959.

2,644,202. (See 2,525,591.)

2,646,115, Bucher and Skiver, Venetian blind, filed May 5, 1957, D.C., E.D.N.Y. (Brooklyn), Doc. C-17599, *Hunter Douglas Aluminum Corp.* v. *Interstate Venetian Blind Co., Inc.* Consent judgment for injunction Apr. 24, 1959.

2,668,077, J. H. Kirby II, Magnetic fishing tool; **2,789,790,** same, Core drilling apparatus; **2,790,116,** same, Magnetic fishing tool and method of manufacture, filed Feb. 9, 1954, D.C., S.D. Tex. (Houston), Doc. 8005, *G & G Fishing Magnets, Inc. et al.* v. *John H. Kirby II et al.*, suit for declaratory judgment, by G & G Fishing Magnets, Inc. et al., dismissed with prejudice; in decision on counterclaim of John H. Kirby II et al.; Patents 2,668,077, 2,789,790 and 2,790,116, valid and infringed. Counterclaim defendants enjoined Apr. 28, 1959.

2,676,666, F. Richardson, Reclining article of furniture; **2,880,785,** F. F. Schliephacke, Reclining article of furniture having movable leg rest, filed May 5, 1959, D.C., S.D.N.Y., Doc. 146/5, *Anton Lorenz* v. *F. W. Woolworth Co.*

2,678,265, A. Schwerdle, Weed control, filed Nov. 2, 1955, D.C.N.J. (Newark), Doc. 1036/55, *W. A. Cleary, Inc. et al.* v. *Arthur and Miriam Schwerdle, doing business as Vineland Chemical Co.* Stipulation of dismissal with prejudice May 1, 1959.

2,704,806, A. Grossman, Sliding closure, filed May 1, 1950, D.C., S.D. Calif. (Los Angeles), Doc. 405/59-TC, *Abraham Grossman et al.* v. *Holiday Door Corp.*

2,716,780. (See 2,525,591.)

2,729,052, A. W. Vibber, Twisting spindle balloon control; **2,729,082,** same; **2,736,160,** same, Twisting and plying spindle balloon control; **2,857,736,** same, Apparatus for twisting and plying strands, filed Apr. 22, 1959, D.C.N.J. (Newark), Doc. 351/59, *Alfred W. Vibber* v. *United States Rubber Co.*

2,729,082. (See 2,729,052.)

2,732,327. (See 2,054,989.)

2,736,160. (See 2,729,052.)

2,740,638. (See 2,236,053.)

2,741,490. (See 2,236,053.)

2,755,515. (See 2,525,591.)

2,789,790. (See 2,668,077.)

2,790,116. (See 2,668,077.)

2,793,254, J. F. Wood, Cartridge case and turnover mechanism; **2,851,541,** same, Electromechanical transducer; **2,852,619,** same, Phonograph cartridge; **Des. 186,847,** same, Phonograph transducer, suit for declaratory judgment, filed Apr. 20, 1959, D.C., W.D. Mich. (Grand Rapids), Doc. 3627, *The Astatic Corp.* v. *Electro-Voice, Inc.*

2,803,615, S. Milone, Inflatable hat, filed Feb. 4, 1959, D.C., E.D. Pa. (Philadelphia), Doc. 25907, *Samuel Milone* v. *Anton Eisner et al., doing business as Anrob Manufacturing Co.* Motion and judgment by default; defendant enjoined Apr. 23, 1959.

2,814,671, Adler and Marks, Noise pulse interruption of synchronizing signal separator; **2,817,825,** R. Adler, Control system; **2,821,954,** same; **2,821,955,** Ehlers and Wandrey, Ultrasonic transmitter; **2,821,956,** O. E. Wold, Ultrasonic generator, filed Apr. 15, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c597, *Zenith Radio Corp.* v. *Motorola, Inc.*

2,817,825. (See 2,814,671.)

2,821,954. (See 2,814,671.)

2,821,955. (See 2,814,671.)

2,821,956. (See 2,814,671.)

2,827,294, S. M. McCurdy, Gravity flow crop handler, filed Aug. 20, 1958, D.C., N.D. Ohio (Cleveland), Doc. 8079, *McCurdy Steel Products Co.* v. *Kill Brothers Company.* Consent judgment, patent held valid and infringed; paragraphs 7 to 12 of complaint dismissed with prejudice; injunction granted Apr. 30, 1959.

2,828,888, J. Zuckerman, Cover for garment hanger, filed Apr. 30 1959, D.C., S.D.N.Y., Doc. 145/855, *Yankee Plastics, Inc.* v. *Hall Tischer and Co. of New York, Inc. et al.*

2,851,541. (See 2,793,254.)

2,852,619. (See 2,793,254.)

2,853,077, L. Hunan, Foundation garment, filed Apr. 29, 1959, D.C., S.D.N.Y., Doc. 145/320, *Esquisite Form Brassiere Co.* v. *Super-Form Brassieres, Inc.*

2,855,668, De Long and Lutes, Austenitic manganese steel weld deposit, filed May 4, 1959, D.C. Md. (Baltimore), Doc. 11367, *The McKay Co.* v. *The Baltimore and Ohio Railroad Co.*

2,857,730. (See 2,729,052.)

2,859,785. (See 2,670,030.)

Des. 177,962, R. G. Corbin, Highway guard for wet traffic lines, suit for declaratory relief, filed Aug. 13, 1958, D.C., S.D. Calif. (Los Angeles), Doc. 791/58–BH, *Shore-Calsecur, Inc.* v. *Scott Paper Co., Inc.* Consent judgment; patent held valid and infringed by plaintiff (notice Apr. 30, 1959).

Des. 180,347. (See 2,793,254.)

Des. 181,148, K. C. Hoffman, Textile fabric or similar surface, filed Apr. 29, 1959, D.C., S.D.N.Y., Doc. 145/321, *Ostow and Jacobs, Inc.* v. *Morgan Jones, Inc. et al.*

Des. 182,002, N. S. Leichter, Handle or similar article, filed Apr. 7, 1959, D.C., S.D. Calif. (Los Angeles), Doc. 316/59–WB, *Ajax Hardwood Manufacturing Corp.* v. *Jaybee Manufacturing Corp.*

Erratum

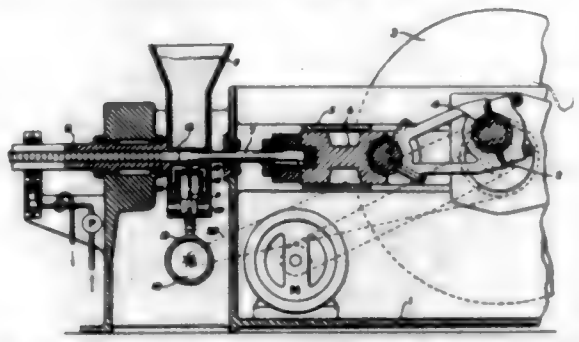
In the OFFICIAL GAZETTE, issue of May 19, 1959, page 620, under the heading "Patent Suits," fourth line of first paragraph, for "Dismissed with prejudice for lack of jurisdiction" read *Dismissed without prejudice for lack of jurisdiction.*

REISSUES

JULY 7, 1959

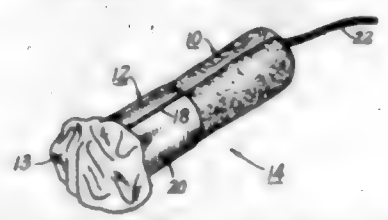
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,665
EXTRUSION PRESS
Konrad Ruckstuhl, Basel, Switzerland
Original No. 2,818,181, dated October 22, 1957, Serial No. 460,179, October 4, 1954. Application for reissue March 31, 1958, Serial No. 725,459
10 Claims. (Cl. 18—12)



5. An extrusion press comprising an extrusion die, a hopper adapted to receive compressible material disposed at one end of the die and having a downwardly facing opening at the bottom portion thereof, a ram for pushing material flowing through said opening into said die, pre-compressing means for substantially reducing the volume of material flowing from the hopper and comprising a pair of gutter-like members having upper and lower portions and material engaging faces below said hopper, at least one of said members being movable toward and away from the other of said members, said members being movable under the opening in the hopper and movable into ultimate compressing position beneath said opening, means for moving said one member with respect to the other member, said ram being movable transversely of said opening and substantially parallel to and between said material engaging faces, means at the lower portion of said gutter-like members for supporting the material of the hopper when the gutter-like members are open, and means for supporting the material of the hopper when said gutter-like members are closed.

24,666
TAMPON
André Draghi, Stamford, Conn.
Original No. 2,844,150, dated July 22, 1958, Serial No. 550,981, December 5, 1955. Application for reissue March 16, 1959, Serial No. 799,828
3 Claims. (Cl. 128—285)



1. A vaginal type tampon comprised of a supporting body, flexible but stiff enough to project its end into the vaginal cavity and against the cervix, and a jacket secured to said body and covering one end of said supporting body and the adjacent portion of the body, but extending beyond it in a loose cap, said jacket being a fine-mesh fabric made of non-absorbent relatively fine filament.

PATENTS

GRANTED JULY 7, 1959

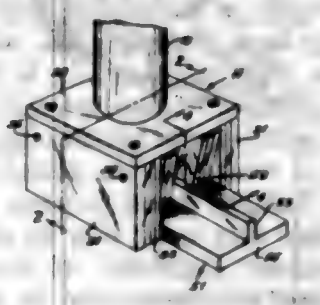
GENERAL AND MECHANICAL

2,893,885

TOOL SHIELD

Elmer F. Pfaff, Manton, and Robert W. Henning, Fairview Park, Ohio, assignors, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia

Application May 16, 1956, Serial No. 584,954
12 Claims. (Cl. 1—44.5)



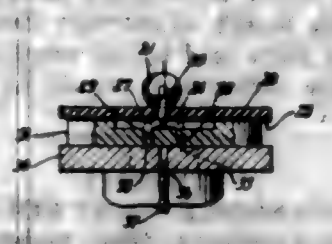
1. A shield to enclose an area of impact between an explosively driven element and an irregular surface against which said element is driven from the barrel of a powder-actuated tool, said shield comprising wall means having an end adapted to engage said surface, said wall means being orificed opposite said end, a tube carried in said orifice for mounting said shield on said tool wth said barrel passing into said orifice, and movable means in said end of said wall means to permit said wall to conform to irregularities in the configuration of said surface against which said end of the wall is emplaced.

2,893,886

METHOD OF SECURING COMPONENTS TO A PRINTED WIRING PANEL

Walter Stuhrs, Horsham, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Original application July 20, 1955, Serial No. 523,188. Divided and this application May 2, 1958, Serial No. 732,486
6 Claims. (Cl. 1—60)



1. In the securement of components to wiring terminals of printed wiring panels, the process comprising applying a component in position at the rear side of the panel with its lead wires projecting through holes in the panel to the face thereof in proximity to the respective printed terminals with which they are to be interconnected, and securing said lead wires in the desired positions by crimping the projecting portion of one of them laterally against its associated terminal and crimping the projecting portion of the other laterally in a different direction against its associated terminal, said crimping operations being accomplished by bending the projecting portions of said terminals by opposed wiping operations performed laterally against said portions.

2,893,887

COVERED HINGE JOINT FOR CONVEYOR BELTS

Herbert John De Windt, Grand Rapids, Mich., assignor to Ten-Tex Corporation, Grand Rapids, Mich., a corporation of Michigan

Application August 17, 1955, Serial No. 528,864
2 Claims. (Cl. 1—66)

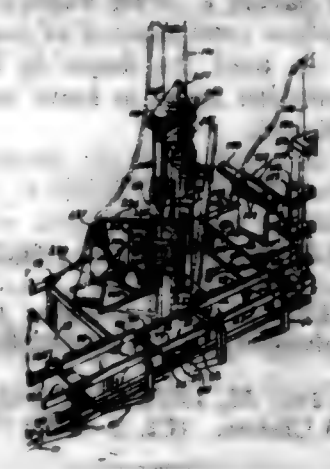
1. The method of forming a covered hinge joint for adjacent ends of a conveyor belt which comprises removing a surface portion of one surface of a section of the belt at each end thereof so as to form residual end sections of substantially less thickness than the remainder of the belt, securing hinge knuckles to the terminal extremities of each of the reduced-thickness end sections, interconnecting the hinge knuckles with a hinge pin, securing to the surface of the thus joined reduced-thickness end sections a single cover portion of such thickness as to restore the end sections to substantially their original thickness, and thereafter severing the cover portion along a line parallel to and aligned with the hinge pin.

2,893,888

ELECTRONIC COMPONENT ATTACHING MACHINE

George A. Gagnon, Chicago, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware

Application September 9, 1955, Serial No. 533,561
36 Claims. (Cl. 1—102)

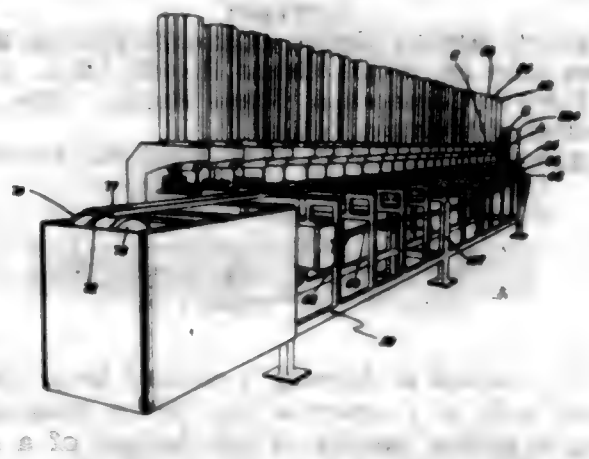


1. An automation machine comprising a base, a track support disposed alongside the base and a track supported thereby, a magazine disposed at one end of the track in communication therewith for supporting and discharging a plurality of chassis boards one at a time onto the track, means cooperative with the track and magazine for moving said chassis board from said magazine onto said track, said base being provided with a plurality of component attaching mechanisms disposed in stations at predetermined points along the track, said track being formed with movable sections opposite each of said stations, and support means for adjustably supporting said component attaching means over said movable track sections and anvil means disposed below said movable track sections and cooperating with said component attaching means for attaching components to said chassis.

2,893,009
MACHINE FOR ASSEMBLING CIRCUIT COMPONENTS

Charles H. Berglund, Stillwater, Thomas R. James, Minneapolis, Raymond S. Karlsen, St. Paul, George A. Kwasniewski, Minneapolis, and Karl E. Neumeier, Stillwater, Minn., assignors to General Mills, Inc., a corporation of Delaware

Application February 15, 1955, Serial No. 488,232
44 Claims. (Cl. 1—106)

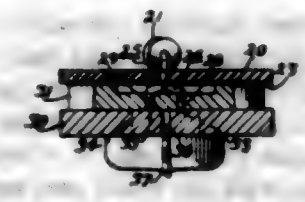


1. A machine for mounting electrical components on a circuit board comprising a conveyor carrying a series of individual circuit boards along a path, a plurality of component attaching heads arranged adjacent the path and operable to attach components to the circuit boards when they are positioned opposite the attaching heads, means for driving the conveyor with an intermittent motion to move the circuit boards from head to head to receive electrical components, stop members for positioning the circuit boards with respect to the individual heads, means for moving the stop members into the path of the circuit boards just before the conveyor is stopped, a board pusher finger pivotally attached to the conveyor to engage the board and carry it with the conveyor against said stops, and a finger biasing spring attached to the conveyor and engaging the finger with a resultant force acting through the pivotal point of said finger normal to the force between the finger and circuit board, said finger having a spring engaging surface conforming to the surface configuration of the spring so that the spring tends to hold the finger in board-engaging position and permits the finger to move resiliently as the board engages said stop.

2,893,010
APPARATUS FOR SECURING COMPONENTS TO PANELS

Walter Stuhre, Horsham, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Application July 20, 1955, Serial No. 523,188
4 Claims. (Cl. 1—210)

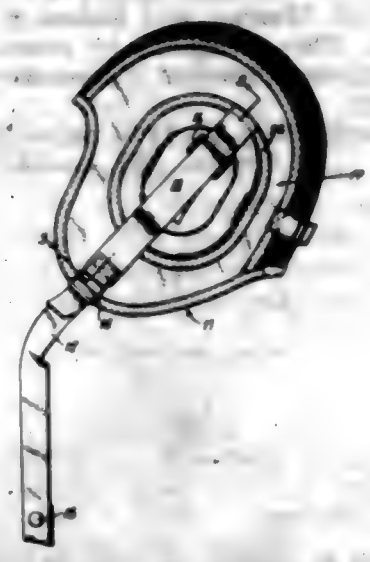


1. In a crimping device, the combination comprising a flat support for a crimping member, a crimping member having a flat surface mounted for rotation on said support and having a pair of holes on opposite sides of its axis to receive ends of wires to be crimped, said holes being normally aligned with underlying holes in said support, and means for rotating said crimping member about its axis upon said support to sever portions of wire members projecting through the holes in said crimping member into the underlying holes in said support, and to crimp wire members received in said holes into substantially opposite directions simultaneously.

2,893,011
SOUND ATTENUATOR HELMET

Walter S. Finkon, Brooklyn, N.Y., and Jackson A. Alloo, Carbondale, Pa., assignors to Leonard P. Frieder, Great Neck, N.Y.

Application September 24, 1954, Serial No. 458,094
5 Claims. (Cl. 2—3)

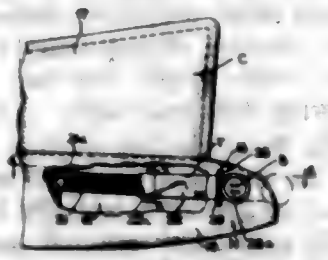


1. Sound attenuating apparatus comprising a support adapted to fit over a wearer's head, a pair of sound attenuating devices, each adapted to fit over one ear of the wearer when the support is in place on the head, each device comprising an annular plate of relatively stiff material attached at its edges to the support and adapted to encircle the wearer's ear, an elliptically annular pad attached to the inner side of the plate and extending inwardly therefrom, said pad having internal dimensions large enough to encircle the ear, an elliptical pad shaped peripherally to conform with the internal dimensions of the annular pad and the annular plate, means supporting said elliptical pad within said annular pad and plate, said pads being formed at least in part of compressible material, and compressing strap means for each device, means fixedly securing spaced portions of each said strap means to said support at spaced localities on opposite sides of its associated sound attenuating device, each said strap means having an intermediate portion between said spaced portions, which intermediate portion extends across and engages the outwardly extending portion of said associated sound attenuating device, each said strap means including length adjustment means by which the compression of each said sound attenuating device may be independently varied with respect to each other.

2,893,012
EXPANSIBLE SHIRT COLLARS

Leon G. Kahn, Cleveland, Ohio, assignor, by mesne assignments, to The Kaynee Company, Greenville, S.C., a corporation of South Carolina

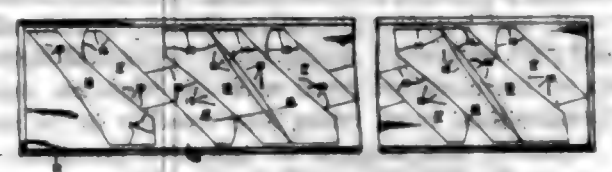
Application February 18, 1957, Serial No. 640,738
1 Claim. (Cl. 2—141)



In a shirt and collar neckband having separate ends at the front thereof for overlapping to fasten said neckband,

in combination, said neckband including an inner ply and an outer ply; one of said separate ends of said neckband having a buttonhole therein; the other and opposite separate end of said neckband having a buttonhole through said outer ply thereof only disposed transversely thereacross; an expansible tape member comprised of a flat, band-like strip of elastic material attached at one end thereof between said inner and outer plies of said neckband at a location spaced a distance inwardly therealong from said transversely disposed buttonhole and providing an outer free end, and a flat, band-like strip of non-expansible material attached at its inner end to the outer free end of said strip of elastic material between said inner and outer plies of said neckband and providing an outer free end with said non-expansible strip of material extending freely slidably and outwardly through said transversely disposed buttonhole with said outer free end thereof being freely movable independently and longitudinally of said neckband by expansion and contraction longitudinally of said expansible tape member; a fastening button secured to and movable with said outer free end of said non-expansible strip of material by expansion and contraction longitudinally of said strip of elastic material; said fastening button on said outer free end of said expansible tape member being adapted to be received in said buttonhole of said other and opposite separate end of said neckband for yieldingly fastening said neckband; and said strip of non-expansible material adjacent its outer end overlying said neckband between the edge of said neckband and said buttonhole in the normally contracted position of said tape member.

2,893,013
NECKTIE MANUFACTURE
Nathaniel Miller, Baltimore, Md.
Application April 9, 1956, Serial No. 576,853
5 Claims. (Cl. 2—146)

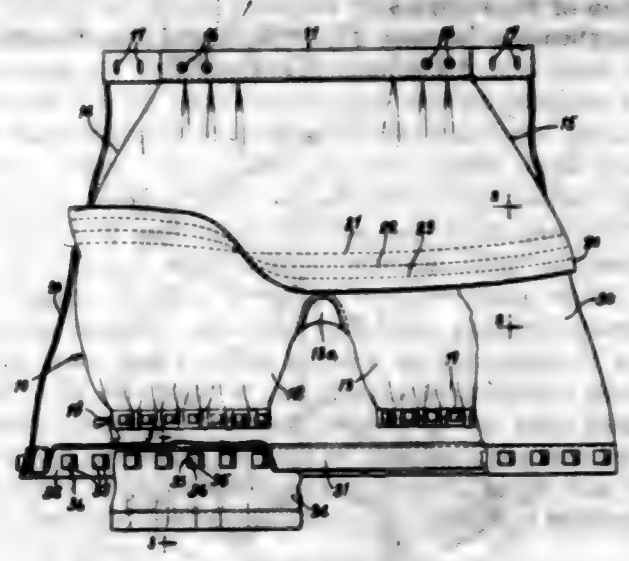


1. The method of manufacturing a multiplicity of multiple fold neckties comprising laying up a stack of cloth sheets from which the neckties are to be made, each sheet of the stack being of a size to itself yield a plurality of neckties, placing on top of the stack a pattern of guide lines delineating the boundaries of elongated complementary blank sections from which the neckties are to be made and reference marks within the boundaries of the sections, said reference marks each being disposed in a line longitudinally of a blank section and substantially one-fourth the distance between the longitudinal edges of the section, piercing the entire stack of sheets simultaneously with rows of holes beneath said reference marks, cutting the entire pile of sheets simultaneously along lines below the said guide lines to separate the blank sections with the pierced holes therethrough, then sewing together complementary blank sections to form in each case a complete elongated necktie blank, folding each complete blank in half lengthwise with the longitudinal edges thereof in substantial registry and securing the folded halves together with stitches extending longitudinally along a line adjacent the pierced holes to form a tubular piece with exterior longitudinal flaps, and then reversing the resulting tubular piece, thereby disposing the said flaps on the interior of the tubular piece and providing a necktie with multiple folds.

2,893,014
FIBREGLASS CAP
Theron W. Mabry, Dallas, Tex.
Application June 5, 1956, Serial No. 589,393
2 Claims. (Cl. 2—200)

2. In a cap, the combination which comprises a plurality of vertically disposed fibreglass screen sections assembled to provide a crown, means permanently connecting the sections at the sides of the crown, means for adjustably connecting the sections at the rear of the crown, said crown including a cover formed of an insulating material having layers of fibreglass mesh on both sides thereof, said cover being secured to upper edges forming the sections of the crowns.

2,893,015
ADJUSTABLE PANTY SKIRT
Dorothea Doctors Fox, New York, N.Y.
Application January 23, 1957, Serial No. 635,835
2 Claims. (Cl. 2—212)

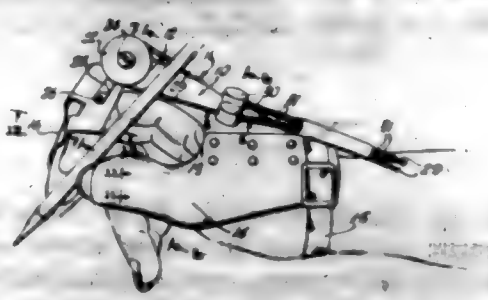


1. An adjustable garment including a pair of pants having a waist, a crotch, and a circumferential tuck between the waist and the crotch, the tuck being secured by a plurality of rows of stitching extending along the circumference of the tuck so that a row of stitching can be removed and the pants thereby adjusted in length between the crotch and the waist, and a skirt attached to the pants between the tuck and the crotch adjacent to and beneath the tuck.

2,893,016
PROSTHETIC DEVICES
Moses Zion, Brooklyn, N.Y., assignor to The Lionel Corporation, New York, N.Y., a corporation of New York
Application January 27, 1956, Serial No. 561,722
1 Claim. (Cl. 3—1)

An artificial hand for use by a person having a hand with thumb and fingers and comprising a rigid metallic body member adjusted to fit about the back of the hand, a pair of spaced bearing forming portions extending beyond the knuckles at the forward end of said body member, a rigid thumb receiving portion of heat softenable plastic material carried by the body member, means for securing the body member to the hand, a rigid hinged member of heat softenable plastic material

secured to said bearing forming portions for movement about an axis substantially parallel to the knuckle axis and adapted to accept the outer end of at least one finger with the finger tip protruding so that when the hinged member is moved inwardly it brings the tip of the inserted finger against the thumb, a rocker member carried by said hinged member, a pair of cable sheath



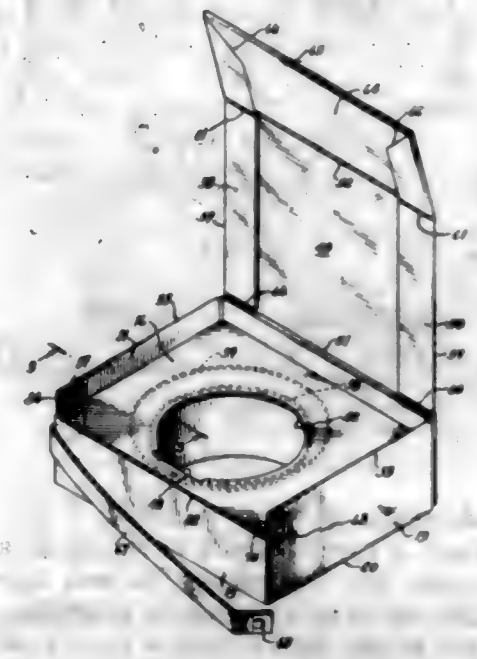
anchors on said body member adjacent said rocker member, a pair of cables extending through said sheath to said rocker member whereby actuation of one of said cables will draw said hinged members towards said thumb portion and actuation of the other of said cables will move said hinged portions away from said thumb portion.

2,893,017

PORTABLE COMMODE

Lawrence J. Beck, Upper Montclair, N.J., assignor to Hanover Associates, Inc., New York, N.Y., a corporation of New Jersey

Application January 27, 1958, Serial No. 711,355
3 Claims. (Cl. 4—135)



1. A portable commode, comprising a box portion made up from a folded blank of paperboard providing a bottom panel, two side wall panels, front and rear wall panels, a seat panel extending from said front panel, a rear flap extending from said seat panel and having the same width in a vertical direction when assembled as said front wall panel and serving to help support said seat panel, said panels having additional tabs and flanges arranged to overlap adjacent panels; said side wall panels being formed at least as to their upper portions by folded-over portions of said blank contiguous with said side wall panels, so that said folded-over portions will provide smooth rounded upper edges at the top of each of said side wall panels when the assembly of the commode is completed; a cover assembly made up from a second blank of paperboard and providing a panel portion forming a part of the rear wall of said commode, a movable lid panel connected at a fold line to said panel portion forming a part of the rear wall, and a front flap connected to said lid panel at a fold line; a central aperture formed in said seat panel in which a removable flexible receptacle is adapted to be placed for the use of the device as a commode; means for removably securing such a receptacle about the edge of said aperture in said seat panel and comprising a curved band of resilient material having a flange portion adapted to rest on said seat panel and another flange portion depending through said central aperture, said band being adapted to be completely enclosed in a part of said flexible receptacle while the commode is in use, and at least one substantially cylindrical wall member extending between said bottom panel and said seat panel and surrounding the space for a receptacle as aforesaid substantially in alignment with said central aperture, each said cylindrical member being secured to said bottom panel and serving to assist in supporting said seat panel.

2,893,018

SPRING MATTRESSES, UPHOLSTERY SEATS AND THE LIKE

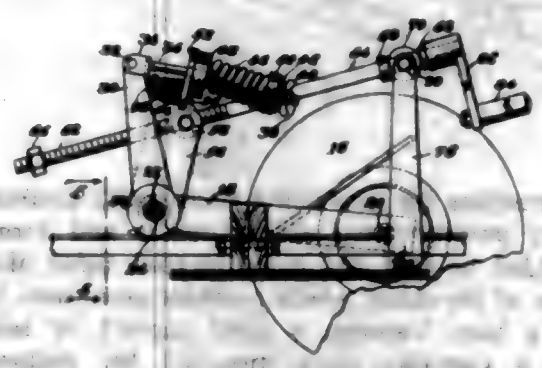
Erik Hjalmar Frisell, Lidingo, Sweden, assignor to Kommanditbolaget Irving & Frisell, Nykoping, Sweden, a corporation of Sweden

Application November 8, 1954, Serial No. 467,528
Claims priority, application France March 18, 1950
6 Claims. (Cl. 5—247)

1. A resilient supporting surface for a spring mattress, upholstered furniture and the like comprising, a frame having opposite sides, a plurality of parallel, mutually spaced and laterally stiff band-like means extending between the sides of the frame and including opposite ends connected thereto, each said band-like means comprising at each end portion a curved spring steel band having an inner end, and between the respective inner ends of each opposed pair of curved spring steel bands and connected thereto an intermediate band of a less high-test material, said intermediate band being non-tensible in its longitudinal direction and straight in unloaded condition, each of the opposite sides of the frames including means providing a rigid upper convex surface extending inwardly and disposed adjacent the curved spring steel bands, the said curved spring steel bands having such strength and elastic capabilities as to withstand the entire spring stress upon application of load to the band-like means, the curved spring steel bands before assembly being pre-set to a curvature of a radii greater than the radii of curvature of the rigid upper convex surfaces of the sides of the frame, the connection between the inner ends of the curved spring steel bands and the intermediate bands being located at a point substantially inwards of the high point of curvature of the respective rigid upper convex surfaces and above the same, the connection between the outer ends of the curved spring steel band and the respective sides of the frame being located in such relation to the different radii of curvatures of the under surfaces of the curved spring steel bands and the upper convex surfaces of the sides of the frame that when assembled and in unloaded condition the under surface of each of the curved spring steel bands starts to recede from the rigid upper convex surfaces of the sides of the frame at a point on said curved upper convex surfaces that is located approximately where the curvature of the convex surfaces of the sides of the frame commences to extend upwardly and inwardly toward the vertical plane through the high point of curvature of the upper surfaces of the sides of the frame, the curvature of the convex surfaces and the curvature of the spring steel bands cooperating so that upon the application of load successive portions of the spring steel bands engage

the convex surfaces from the outer portion thereof upwardly and inwardly with rolling contact without exceeding the elastic limit of the material of the curved spring steel bands to decrease the free lengths thereof so that upon deflection under load the ends of the curved spring steel bands at the points of connection with the intermediate bands receive a pre-adjusted movement inwardly so as to shorten the distance between the opposite points of connection with the intermediate bands whereby the latter form a downwardly bent parabolic curve, and said curved spring steel bands being pre-set so that during connection with the intermediate bands they reach approximately the allowed maximum deflection strain to provide the supporting surface with the desired stiffness in unloaded condition and to reduce fatigue-causing variations in strain during usage when the spring steel bands make rolling contact with the underlying convex surfaces thereby permitting a higher maximum strain and lighter weight spring steel bands and with the result that even upon application of an off-center load the rolling contact engagement of the curved spring steel band immediately commences and continues until equilibrium is reached when the pull of the spring steel bands changes its direction and thereby the nature of the rolling engagement is changed and with the lower limit of downward movement of the inner ends of the curved spring steel bands being attained when said inner ends reach a point approximately level with the last point on the respective convex surfaces engaged by the under surface of the spring steel bands during the making of rolling contact with said convex surfaces where the inward movement of the ends of the spring steel bands tends to reverse to outward movement thereby applying a stretching force on the intermediate bands.

2,893,019
RETRACTIBLE RUNNING GEAR FOR BOAT TRAILERS
Lester C. Renfroe, Jacksonville, Fla., and Charles C. Renfroe, Decatur, Ga.
Application January 5, 1955, Serial No. 479,936
2 Claims. (Cl. 9—1)

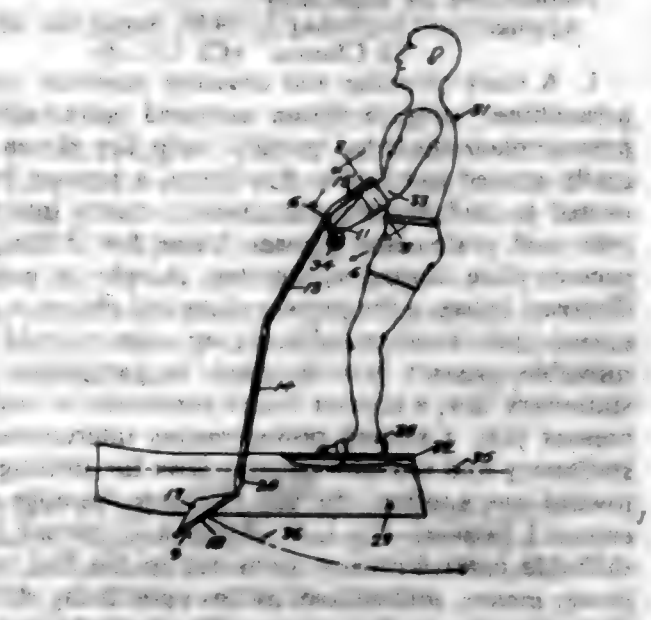


1. In a boat having retractable wheels, the combination of a boat having a plurality of side walls, wells in said side walls, a rockable shaft extending into each of said wells, a supporting arm mounted on each end of said shaft in said wells, a ground engaging wheel secured to each of said arms, a pair of rockable arms having their lower extremities affixed to said shaft, third arm means having its lower extremity rotatably mounted on said shaft, resilient means connecting the upper extremities of said third arm means and said rockable arms, said resilient means further including a plate affixed to said third arm means, a rod means having one of its ends pivotally connected to each of said rockable arms, an abutting member adjustably engaging said rod means, a compressible spring being mounted on the end of said rod means between said plate and said abutting member, screw threaded means connected to said third arm means, means for actuating said screw threaded means to rotate said third arm means on said rockable shaft, and vary the tension on said spring, said rockable arms being adapted to be urged by screw threaded means through said resilient means and to rotate said rotatable shaft and move said wheels in varying positions.

2,893,020
FLOTATION GARMENT
Harold E. Miller, Greenfield, Ohio, assignor to The American Pad & Textile Co., Greenfield, Ohio, a corporation of Ohio
Application April 8, 1954, Serial No. 421,851
3 Claims. (Cl. 9—26)

1. A buoyant garment comprising a front portion and a back portion secured together at the shoulders, the front portion comprising a right hand part and a left hand part and means for connecting the vertical edges of said parts together, said right hand and left hand parts having stiff and form-maintaining flotation elements, the back portion having an upper flotation pad for positioning at the wearer's shoulder blades and a lower flotation pad for positioning at the wearer's kidneys, the said pads being connected by the back portion for relative hinging, a first strap connection independent of the said front parts connecting means and guided by the lower back portion below the hinging line and effective for connecting the lower parts of said front portion, said front portion being stiff and shape maintaining, second strap connections independent of said front parts connecting means and extending between the front and back portions above the hinging line, and a collar portion in the shape of a split toroid with the ends at the front and having a flotation element, said collar portion being at its rear hingedly connected to the upper edge of the back portion and the front ends of the collar portion being free of said front parts, and separable connections on the collar portion and said front parts.

2,893,021
WATER SKI POLE
Gustav L. Lundberg, Norristown, Pa.
Application August 14, 1957, Serial No. 678,149
7 Claims. (Cl. 9—24)



1. A water ski pole comprising an elongated slender shank having an upper end portion and a lower end por-

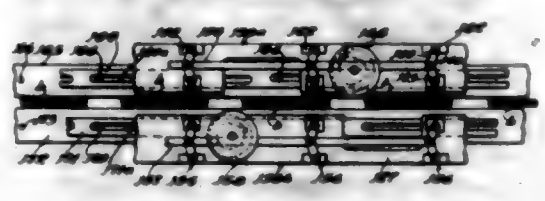
tion, a blade secured to and projecting at an angle from the distal end of said lower end portion including a substantially flat rear side disposed at an obtuse angle to the lower shank portion and in a plane substantially parallel to said upper shank portion, a forearm embracing member secured to the upper portion of the shank, and a handle secured to and projected from said shank below and spaced from said forearm embracing member.

2,893,822

MACHINE FOR FORMING HINGE JOINTS IN CASED BOOKS

Robert L. Schoenberger, Jr., Crawfordsville, Ind., assignor to R. R. Donnelley & Sons Company, a corporation of Delaware

Application September 5, 1956, Serial No. 608,168
14 Claims. (Cl. 11—1)



1. In a machine for forming hinge joints in cased books: a frame; book gripping conveyor means for moving cased books continuously forward through said frame with their hinge areas exposed in longitudinal alignment; a heated pair of opposed, parallel, long joint forming irons coplanar with the aligned hinge areas of several books in the conveyor means; first cam controlled linkage means on the frame operatively connected to said irons to reciprocate them longitudinally in a relatively long, straight forward stroke at effectively the same speed as books in the conveyor, and in a return stroke; and second cam controlled linkage means on the frame operatively connected to said irons to move the irons straight laterally a very short distance into pressing engagement with the hinge areas of said books early in the forward stroke and retract them near the end of said stroke, said first and second linkage means cooperating to move the irons conjointly in opposed, closed, translatory paths which have a straight line forward stroke.

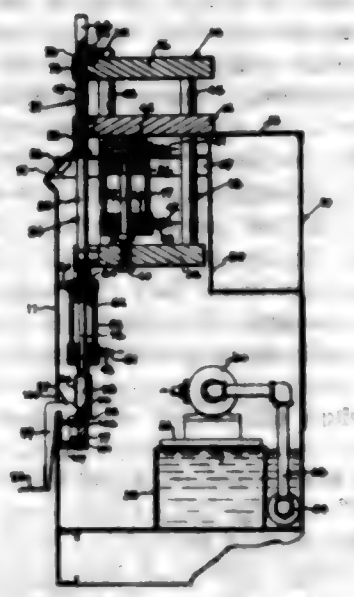
2,893,823

SINGLE STATION BOOK PRESSING AND CREASING MACHINE

Arthur Crawley, Newton, Thomas E. Dugle, Cincinnati, and Roland W. Wagner, Sharonville, Ohio, assignors to Crawley Book Machinery, Inc., Newport, Ky., a corporation of Kentucky

Application December 3, 1956, Serial No. 625,746
12 Claims. (Cl. 11—1)

1. A book pressing and creasing machine, comprising, a machine frame, a platen mounted upon said frame, a presser plate mounted parallel with the platen and normally spaced outwardly therefrom, a presser frame connected to said presser plate, power means interconnected with said platen and presser frame for shifting the said presser plate toward said platen, thereby to press a book disposed between the presser plate and platen, a stationary creaser jaw residing adjacent an edge of said platen, a movable creaser jaw disposed in parallelism with the stationary jaw, a creaser frame connected to said movable creaser jaw, a second power means interconnecting said stationary and movable creaser jaws for shifting said jaws toward one another, thereby to crease the edge of a book engaged between the said platen and presser plate, and shiftable control means connected to the first and second power means, said control means upon being shifted, energizing the first power means, thereby to press the book between the platen and presser plate, said control means being responsive to the pressure imposed upon the book by the presser plate to energize the second power means



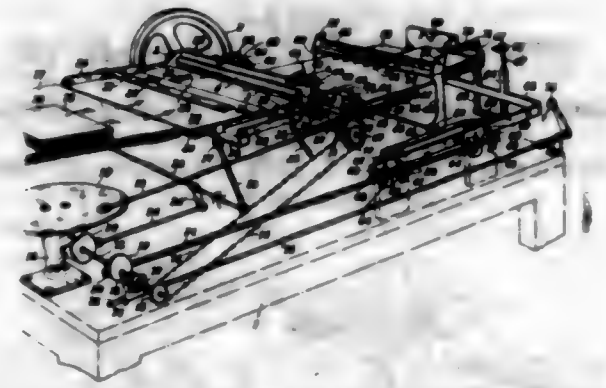
for creasing the edge of the book while the same is engaged between the platen and presser plate.

2,893,824

MACHINE FOR THE PRODUCTION OF BOOKS AND THE LIKE HAVING CENTRALLY UNINTERRUPTED DOUBLE PAGES

Alessandro Salomone, Rome, Italy

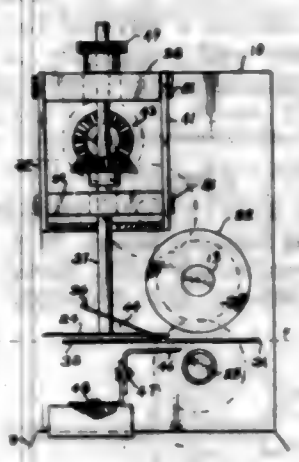
Application October 2, 1957, Serial No. 687,700
Claims priority, application Italy January 26, 1957
8 Claims. (Cl. 11—1)



1. A machine for producing books with double pages which are uninterrupted at the center and formed by sheets folded by half and glued to each other along the outer face of the sheet, which machine comprises in combination a base framing, a shelf carried by said base framing, a movable plate mounted for reciprocating movement on the said shelf for carrying the folded sheet intended to form the book, a gluing roller carried by the said shelf and rotatable about its axis with respect to the said shelf, said gluing roller being arranged to receive one by one the said folded sheets for rolling glue onto the lower outer face thereof, two feeding rollers between said movable plate and said gluing roller for receiving the folded sheets therefrom and conveying them to the gluing roller, the said sheets having the folding at the side facing the gluing roller, a sump located underneath said gluing roller for holding glue and wherein the lower portion of the gluing roller is immersed, pressing means between the said feeding rollers and the said gluing roller for pressing the sheets against said gluing roller, a stationary terminal plate on the side of said gluing roller away from said movable plate for receiving the glue coated folded sheets coming from the gluing roller and for keeping said sheets in stacked position, removing means associated with said gluing roller for removing the said sheet from the said gluing roller, two guides

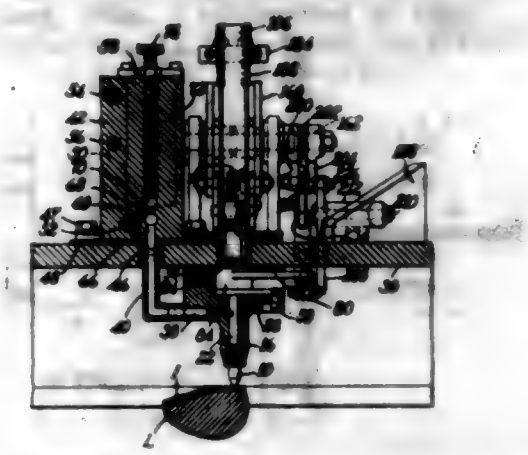
fastened to the said base framing parallel to and laterally of the said gluing roller and the said terminal plate, said guides having a first portion of the upper surface thereof horizontal and a second portion toward the terminal plate inclined downwards, a carriage reciprocably movable on the said guides for movement toward and away from the gluing roller, said carriage having two vertical standards with wheels on the ends thereof rolling on the said guides, a transverse yoke connecting the two standards at the lower parts thereof and a grate member which connects the upper part of the said standards, said movable carriage being positioned to receive the glue coated sheets coming from the gluing roller and to lay them down on said terminal plate, a frame carried by the base framing and movable in a vertical plane, said movable frame having means thereon for pressing said folded sheets piled on the said terminal plate, driving means rotating said feeding rollers and said gluing roller, a shaft carried by the base framing and operatively connected to the shaft for the gluing roller from which it is driven, a reduction gear connected to the said driven shaft, a rotating disc carried by the base framing and rotatable in a horizontal plane by the said reduction gear, a plurality of eccentrics mounted on the said driven shaft, a first rod operatively connected to one of the eccentrics of the said plurality and connected to said movable frame for moving said movable frame in a vertical plane, articulated means operatively connected to a second eccentric of the said plurality of eccentrics to reciprocate said movable plate, and a connecting rod eccentrically articulated on the said rotating disc and connected to said movable carriage for moving said movable carriage on the said guides.

2,893,025
MIDSOLE SKIVING AND TRIMMING MACHINE
Lawrence Cipolla, Hollis, N.Y.
Application March 20, 1958, Serial No. 722,726
9 Claims. (Cl. 12—33)



1. A midsole skiving and trimming machine comprising in combination a supporting framework, a pair of rotary feed elements supported in the framework cooperable with one another to receive between them a pair of superimposed laterally extending flat strips defining an edge about a partially completed shoe and stitched together along an inner longitudinal edge thereof, means for causing one strip of the pair to progressively diverge in a vertical plane from the other as both strips issue from between the feed elements, and a disc knife rotating in a horizontal plane rearwardly of the issuing elements having a peripheral cutting edge in the path of rearward movement of the diverging strip.

2,893,026
METHODS OF BONDING BY THERMOPLASTIC ADHESIVES
Frederick S. Sillers, Beverly, and Henry C. Pavian, late of Beverly, Mass.; Dorothy S. Pavian, administratrix of Henry C. Pavian, deceased, assignors to United Shoe Machinery Corporation, Boston, Mass., a corporation of New Jersey
Application June 1, 1953, Serial No. 359,982
2 Claims. (Cl. 12—142)
(Filed under Rule 47(a) and 35 U.S.C. 116)



1. That improvement in the art of temporarily securing insoles to lasts to hold them against displacement during the lasting of shoes, which comprises the steps of maintaining an insole blank in contact with the bottom of a last and introducing at the interface between the insole and the last bottom a plurality of frangible fastening elements formed by projecting at selected points on the outer unpierced surface of the insole heated liquid plastic adhesive in the form of minute jets at pressure and velocity sufficient such that the adhesive pierces the insole and after passing therethrough is dispersed laterally at the interface between the insole and the last bottom, whereupon the hot adhesive instantaneously hardens on contact with the last to form plastic fastening elements.

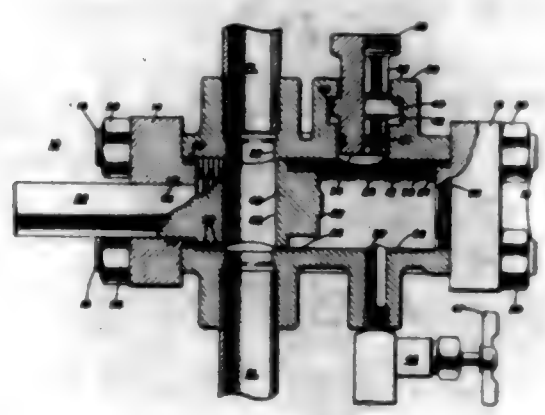
2,893,027
EXHAUST TIP SHIELD
Stephen G. Crosswell, Mill Hall, Pa., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts
Application September 12, 1958, Serial No. 760,657
3 Claims. (Cl. 15—21)

1. A pin buffing machine comprising a plate having openings for receiving the pins of an electron tube, with said pins adapted to extend below the plate and near the center of the plate, a pin cleaning device whose movement creates air disturbances and means to drive the same, with the device operating against at least one extending pin of the tube to clean the same, a shield means mounted centrally in said plate, said shield means being substantially air impervious in the region below the plate.

2,893,028
PISTON TYPE SOLUBLE PLUG INJECTOR
Demer Sentmanat, Oklahoma City, Okla.
Application June 21, 1955, Serial No. 517,929
8 Claims. (Cl. 15—104.06)

1. An injector for soluble control plugs comprising an elongated plug transfer chamber having a transversely

aligned pair of flow ports adjacent one end thereof, a non-turning, free piston biased toward the flow ports end of said chamber by a relatively larger effective end area remote from said flow ports end and having a transverse transfer port arranged to align with said flow ports when the transfer piston is at said flow ports end of the transfer chamber, the plug transfer chamber being formed with a transverse plug receiving bore in the wall thereof adjacent to the opposite and piston end of said chamber

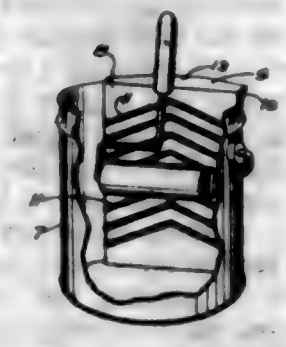


and having its axis parallel to that of said flow ports, a removable injector cap detachably secured in the plug receiving bore, the said piston including means for leaking fluid from said flow ports past the piston to act on the larger area head end thereof, and drain means communicating with the plug transfer chamber adjacent the piston end thereof for relieving pressure between said transfer piston and the last-mentioned end of the transfer chamber.

2,893,029
UNIVERSAL CLEANERS AND POLISHERS
Peter S. Vosbikian and Thomas S. Vosbikian, Melrose, Pa.
Application December 28, 1954, Serial No. 476,437
4 Claims. (Cl. 15—118)

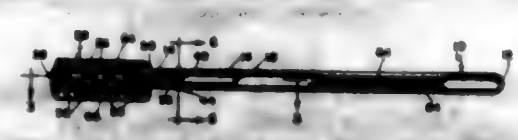
1. A cleaner and polisher, comprising elongated laminations of cellular sponge material in flat sheet form assembled together, a U-shaped retainer having prongs extending longitudinally along opposite sides of the central portions of the assembled laminations, and a handle arrangement having an end aperture receiving the ends of said prongs when the latter are pressed together, thereby causing lateral compression of the central portions of the laminations, their radial disposition and circumferential spacing, said prongs extending into said end aperture to an extent to cause the inner central portion of the assembled laminations to be compressed against the handle arrangement and the central portions at the outer ends of the lamination to be compressed towards the handle arrangement, whereby the inner and outer ends of the assembled laminations assume a coned formation to facilitate their entrance into and their removal from a tubular or cup shaped article to be cleaned or polished.

2,893,030
PAINT ROLLER WIPING AND SATURATING DEVICES
Carl J. Averna, Janesville, Wis.
Application October 17, 1955, Serial No. 540,993
3 Claims. (Cl. 15—121.2)



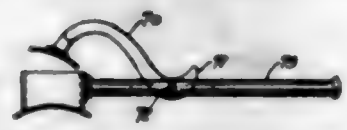
1. A paint bucket comprising a bottom, an upright curved side wall, and an upright flat wall for paint roller wiping and saturating use, said flat wall having rigid ribs integrally thereon extending completely thereacross interrupting both upright edges thereof, said ribs being parallel inverted V-shaped ribs with the points thereof aligned in a vertical upright line and with the legs thereof slanted downwardly from said points.

2,893,031
DISPOSABLE HEAD TOOTH BRUSH
Rudolf Dengler, Palm C[illegible], Calif.
Application November 25, 1957, Serial No. 698,542
8 Claims. (Cl. 15—123)



3. A tooth brush comprising: a hollow handle having one open end; a casing removably held in said open end; an elongated loop element secured in said casing and extending longitudinally from said handle; a brush head of resilient material shaped to fit tightly in said loop element; said head having a serrated face and a smooth face opposed thereto, and a plurality of dentifrice-containing channels communicating with both of said faces.

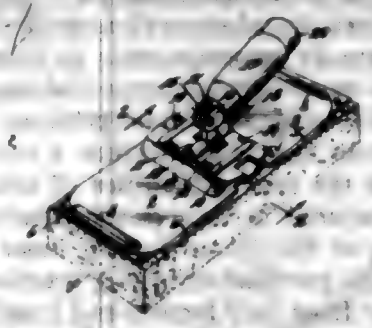
2,893,032
CORN BUTTERING DEVICE
Alois Selmer, Bronx, N.Y.
Application November 29, 1956, Serial No. 625,162
2 Claims. (Cl. 15—131)



1. A corn butterer, comprising an elongated handle having a longitudinally positioned slot formed intermediate its ends, a receiver having an open top and bottom and interconnected sides for receiving a pat of butter, one of said sides being firmly connected to one end of said handle, the lower edges of opposed sides being of concave form conforming to the outer surface of an ear of corn, flanges circumscribing said lower concave edges of the receiver and integral therewith, a plurality of rungs carried by and extending across the bottom of said receiver and between said opposed sides close to said concave lower edges for supporting the pat of butter thereon, said slot extending transversely to said rungs, a swingable elongated retaining arm extending substantially in the direction of the handle, a pin extending across said handle and said slot and pivotally connecting said arm inter-

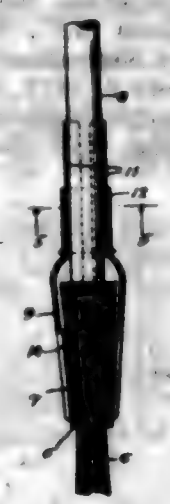
mediate its ends to said handle within said slot, and a retainer plate portion fitting into said receiver between the sides thereof, said arm having a portion extending to one side of said pin and connected to said retainer plate portion, and another finger-engageable end portion extending to the other side of said pin and projecting outside of said slot, whereby said plate portion may be moved into said receiver in engagement with the pat of butter upon said rungs when the finger-engaged end portion of the arm is actuated.

2,893,033
MOP HANDLE CONNECTION WITH MOP BODY PORTION
Peter S. Vosbikian and Thomas S. Vosbikian, Melrose, Pa.
Application March 11, 1957, Serial No. 645,325
3 Claims. (Cl. 15—144)



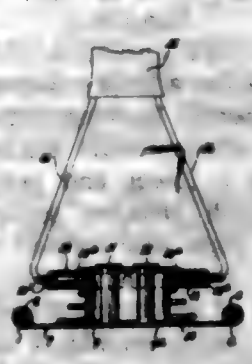
1. A mop, comprising a body portion, cleaning material carried by the body portion, a spring member having a channel closed at its top and open at its bottom, with a top opening through the closed top of the channel said spring member being fixed at marginal portions to the top face of the body portion, a bearing rod in said channel riding on said body portion and having a stud insertable from the bottom of the spring member through the top opening and extending upwardly through said opening, said spring member pressing the bearing rod against the body portion, and a mop handle connected with said stud.

2,893,034
BROOM CONSTRUCTION
John C. Jones, Waco, Tex.
Application December 20, 1957, Serial No. 704,045
1 Claim. (Cl. 15—146)



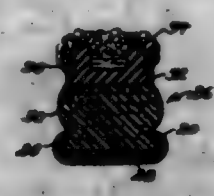
In a broom, a broom head comprising broom straws secured together by adhesive material, a cuff encasing an end portion of said broom head further securing the broom straws together, said cuff having recesses formed in the outer side surfaces thereof, a removable handle, a clamp comprising jaws fitted in said recesses, in contact with the walls thereof, said jaws embodying converging arms formed integral therewith, adapted to removably grip the handle positioned between said jaws, said handle being held between said jaws resting on said cuff, and a slip ring movable over said arms adapted to move the jaws and arms into contact with the cuff and handle respectively.

2,893,035
MOP FRAMES
John H. Weaver and Rae E. Hendershell, Newark, Ohio, assignors to Doniss Maid Manufacturing Company, Inc., Newark, Ohio, a corporation of Ohio
Application June 18, 1956, Serial No. 592,101
11 Claims. (Cl. 15—147)



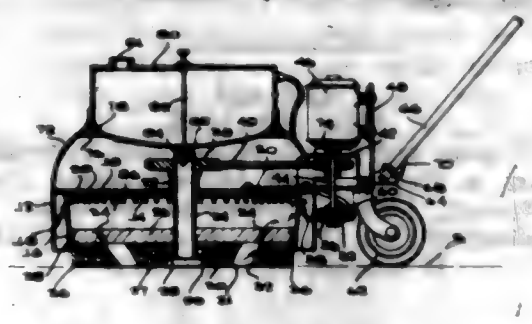
1. A mop frame, comprising a head, and a handle pivotally connected thereto and rotatably adjustable throughout an angle of 360 degrees with respect thereto; said head comprising an elongated frame; a member fixedly mounted adjacent the center of said frame; an inverted cup-shaped member secured to the upper end of said member having a downwardly extending peripheral flange; a second cup-shaped member vertically movable on and rotatable about said first member below and of smaller diameter than the first cup-shaped member having an upstanding peripheral flange provided with a pair of diametrically opposed downwardly extending notches in its peripheral flange; a coiled spring around said first member interposed between said frame and said second cup-shaped member; and said mop handle having a pair of divergent arms at its lower end provided with diametrically opposed inturned lower ends terminating adjacent said first member, said inturned ends having portions pivotally seating in the pair of notches of the second cup-shaped member and having portions normally contacting the lower edge of the flange of the first cup-shaped member.

2,893,036
SINGLE-USE TOOTHBRUSH
Edward Z. Filler, Roslyn Heights, and Joseph J. Keller, Brooklyn, N.Y.
Application November 26, 1957, Serial No. 699,107
4 Claims. (Cl. 15—176)



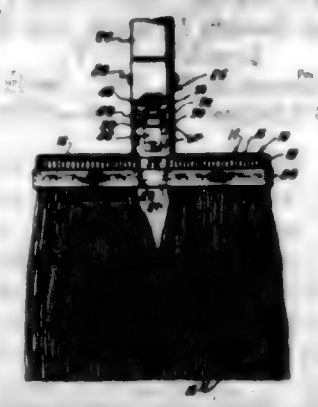
3. A disposable single-use toothbrush head comprising a relatively rigid and relatively thin bottommost layer, a layer of pliable material which expands greatly when wetted with water superposed above and secured to said bottommost layer, and a bristle layer comprising a layer of pliable rubber that is impervious to water, said bristle layer having bristles projecting upwardly, and said bristle layer being superposed above and secured to said pliable material layer, and each of said layers being of uniform thickness throughout its entire length and having straight sides.

2,893,037
FLOOR SCRUBBING APPLIANCE
Joy R. Strong, Fort Collins, Colo.
Application June 22, 1956, Serial No. 593,290
2 Claims. (Cl. 15—180)



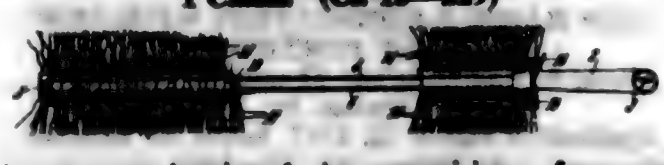
1. A rotary brush for a floor-washing appliance, comprising: a flat, horizontal backing plate having a center opening; a vertical tubular shaft engaged in said center opening and having a lower end projecting below the backing plate; a brush member secured to the underside of the backing plate and formed of a material pervious to water, the lower end of the shaft terminating above the underside of the brush member and the brush member having in its underside a center recess with which the shaft communicates at said lower end thereof, the brush member having a series of slots regularly spaced about said center recess and extending through the full thickness of the brush member, the backing plate having passages extending through the full thickness thereof in communication with the slots, the slots having inner ends spaced closely from the shaft and outer ends terminating close to the outer periphery of the brush member, the inner ends leading the outer ends in the sense of the direction of rotation of the brush, the slots being inclined, when viewed in cross section, obliquely to the axis of rotation of the brush member, in a direction such that the tops of the slots are radially spaced from said axis a greater distance than are the bottoms thereof, some at least of the passages being inclined correspondingly to the slots; and water-impervious liners covering one wall of the slots, said one wall of the several slots being those that are nearer the brush member periphery.

2,893,038
DETACHABLE MOP HEADS AND FRAMES THEREFOR
Jess B. Cunningham, Dallas, Tex.
Application July 1, 1954, Serial No. 440,627
3 Claims. (Cl. 15—229)



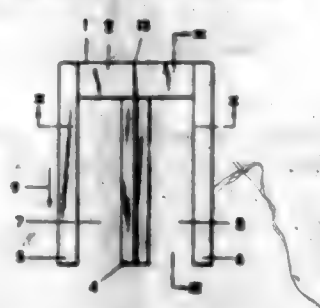
3. A mop comprising: a single elongate rod having two pairs of aligned upper and lower members, vertical outer members connecting the outer ends of each pair of upper and lower members, vertical spaced inner members extending upwardly from the inner ends of the lower members past the upper members, and means connecting the upper ends of the inner vertical members, the inner end of each of said upper members being disposed adjacent its inner vertical member, said upper members being bendable upwardly and outwardly about their junction with the outer vertical members; mop strands disposed between said upper and lower members and between said inner and outer vertical members; a horizontal flexible strap extending about said lower members and said strands, and means securing said strap to said strands.

2,893,039
CLEANING DEVICE AND FRAME THEREFOR
Stella Szlachetka, Chicopee Falls, Mass., assignor to Stanley Home Products, Inc., Westfield, Mass., a corporation of Massachusetts
Application February 28, 1957, Serial No. 641,284
1 Claim. (Cl. 15—229)



A two-part cleaning device comprising a frame and a cleaning member, said frame including a single elongated length of relatively rigid and somewhat resilient wire bent around intermediate its opposite ends to form an elongated U having a semi-circular outer end and opposite transversely spaced elongated side portions extending rearwardly therefrom to rear extremities, a handle having a ferrule in which the rear extremities of said side portions are rigidly secured in transversely spaced relation, said side portions of the frame having inner and outer substantially straight portions diverging transversely relative to one another from said ferrule and from said outer semi-circular end to intermediate portions thereof and being resiliently and relatively yieldable inwardly towards one another, said cleaning element including an elongated flat sleeve of substantially uniform cross section throughout its length formed from a fabric of relatively pliable material to have an open end and a closed end, a plurality of elongated pliable cleaning elements secured to said sleeve and extending outwardly therefrom, the open end of said sleeve adapted to be slipped over the semi-circular outer end of the frame and the transverse dimension of said sleeve throughout the length thereof being such relative to the overall transverse dimension of the side portions of the frame that as said sleeve is drawn along to enclose the side portions said side portions yield towards one another to resiliently engage and releasably hold said sleeve.

2,893,040
FILM APPLICATOR
Hendrik J. Beens, Zaandam, Netherlands, assignor to Pieter Schoen & Zoon N.V., Zaandam, Netherlands, a corporation of the Netherlands
Application January 8, 1957, Serial No. 633,102
Claims priority, application Netherlands January 10, 1956
2 Claims. (Cl. 15—236)



1. A film applicator for applying film-forming materials to flat surfaces comprising, at least three substantially parallel, spaced, longitudinally extending, work-contacting, wall-forming members for engaging the flat surfaces substantially in a common plane, an elongated member cross-connecting said work-contacting members on an end portion thereof and cooperating therewith to define two wells for receiving film-forming materials to be applied to said flat surfaces, the cross-connecting mem-

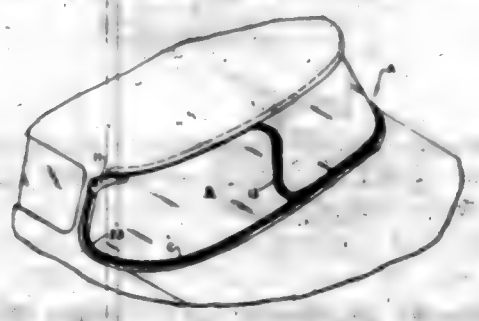
ber having a single inclined lower surface spaced from said flat surfaces when the applicator is being used and converging toward the common plane of the work-contacting members and converging in a direction toward a rearward side of said cross-connecting member to provide an edge evenly spaced from said plane a predetermined distance for laying a film of a desired thickness on said surfaces, and one of said work-contacting members comprising an intermediate longitudinal member extending substantially normal to a front side of said cross-connecting member and having a truncated V-shaped work-contacting profile for engaging the flat surfaces in said common plane, said profile converging longitudinally toward a sharp edge terminating at a point corresponding with said edge, whereby two well defined films of equal thickness can be applied side by side with the film applicator.

2,893,041

WINDSHIELD WIPER WITH MAGNETICALLY ACTUATED FLEXIBLE BLADE

George Schafer, Santa Clara, Calif.

Application August 1, 1958, Serial No. 752,572
7 Claims. (Cl. 15—253)



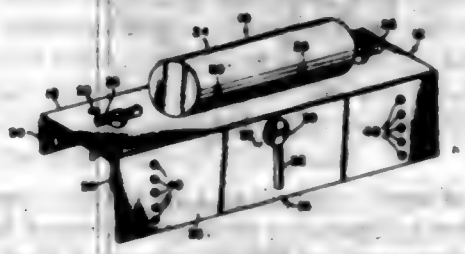
7. A windshield wiper assembly comprising a flexible blade of magnetically permeable metal, a squeegee-like wiper member mounted on an edge of said blade, bracket means for mounting said blade on the external side of a windshield and with the squeegee-like wiper member in wiping engagement therewith, said blade being of a length to lie along one side and one edge of the windshield, a plurality of separate magnets mounted marginally about the windshield and arranged for successive magnetic attraction of the metal blade, and means for alternately energizing the magnets along opposite sides and edges of the windshield, thereby to draw said blade in sinuous sweeps back and forth across the windshield with the squeegee member in wiping contact therewith, thereby to clean the surface of the windshield.

2,893,042

GUIDE FOR FACILITATING REMOVAL OF PAINT FROM GLAZING OF WINDOWS, DOORS AND THE LIKE

Constantine G. Paskaly, Lincoln Park, Pa.

Application July 17, 1958, Serial No. 749,149
7 Claims. (Cl. 15—257)



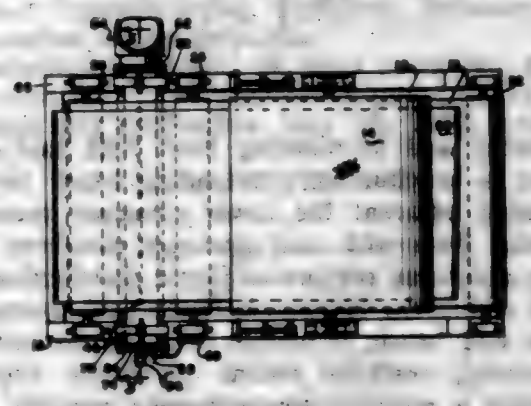
1. A guide device for use in painting glazed structures, said device comprising an elongate body of substantially U-shaped cross section and formed of at least two members, one member forming the head of the device and embodying an elongate plate of substantial width having a flange along one longitudinal edge, said flange forming a support leg, the other member embodying an elongate plate having a flange along one longitudinal edge, means for securing the plate of said other member longitudinally of and against the under side of the plate of said one member with the flange of said other member in spaced parallel relation with the flange of said one member to form a second support leg, means for reversing the said other member and for securing the flange thereof to and lengthwise of the plate of the head member in spaced relation with the flange thereof for use as a support leg of greater height than said second support, and a handle secured to said one member plate.

2,893,043

VACUUM EXTRACTION TUBE

Richard E. Charlton, Jr., Fairfax, and Verna L. Payne, Shawmut, Ala., assignors to West Point Manufacturing Company, West Point, Ga., a corporation of Georgia

Application June 4, 1956, Serial No. 589,224
1 Claim. (Cl. 15—306)



A vacuum extraction tube for use in impregnating nonwoven fabric comprising a flat upper surface on said tube, said surface having a single centrally disposed slot extending longitudinally thereof and communicating with the interior of said tube, said slot being approximately one fourth inch wide and defined by walls perpendicular to said upper surface, said upper surface having an overall width at least ten times the width of said slot, said tube being substantially square in cross section and comprising an integral upper and an integral lower section, said sections being substantially U-shaped in cross section and each having an outwardly extending right angle flange on each of its longitudinal edges, said flanges terminating a considerable distance from the ends of said tube, bolt means securing said flanges together in face to face relation, and an end flange fixed to each end of said tube and extending at right angles thereto, said end flanges each comprising two semi-circular segments each welded to one of said sections and defining a central opening communicating with the interior of said tube.

2,893,044

SQUEEGEE TYPE FOUNTAIN CLEANING DEVICE

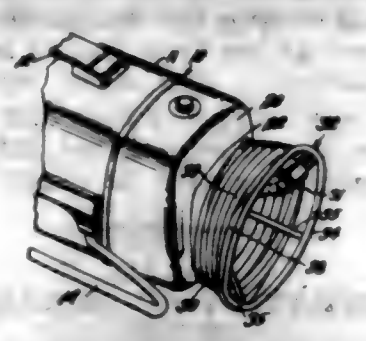
Keamon Kurcon, Mercer Island, Wash.

Application February 16, 1956, Serial No. 565,804
1 Claim. (Cl. 15—322)

A fountain type window cleaning device for cleaning upright window panes comprising a relatively long narrow box shaped housing having a back wall and two end walls and an upper and a lower wall and having an open front, the lower housing wall having a front edge which is straight from end to end of the housing and said lower housing wall sloping downwardly from front to rear as from both ends toward a location medially of the length of said housing forming in the bottom of said housing a drainage chamber having its lowest point substantially mid way between the two ends of said housing; two lon-

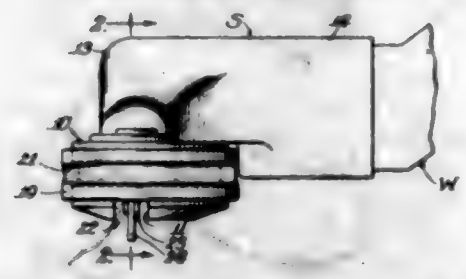
gitudinally extending flexible squeegee members within said housing secured flatly against the upper and lower housing wall respectively and protruding from the open front of the housing, the lower squeegee member having a straight outer edge and sloping downwardly from front to rear and from both ends toward the center in conformance with the slope of said lower housing wall; two flexible end squeegee members secured to the inner sides of the respective end walls of said housing, said four squeegee members forming a box shaped receptacle; a longitudinally extending sponge rubber cleaning pad disposed within the housing in contact with the upper squeegee member and terminating flush with said squeegee members; a longitudinally extending brush disposed in the housing adjacent the lower squeegee member and terminating flush with said squeegee members; a longitudinally extending perforated liquid distribution conduit disposed within the housing between said sponge rubber pad and said brush; a handle pivotally connected with said housing; resilient means yieldingly urging said handle into a position approximately parallel with the back wall of said housing; a liquid inlet conduit connected with said liquid distribution conduit; and a flexible liquid drainage conduit connected with the lowermost portion of said drainage chamber.

2,893,045
CORD-CARRYING STRUCTURE FOR SUCTION CLEANER
Eric Dalbec, Montreal, Quebec, Canada, assignor to Aktiebolaget Elektrolux, Stockholm, Sweden, a corporation of Sweden
Application June 24, 1954, Serial No. 438,934
Claims priority, application Sweden July 27, 1953
6 Claims. (Cl. 15—323)



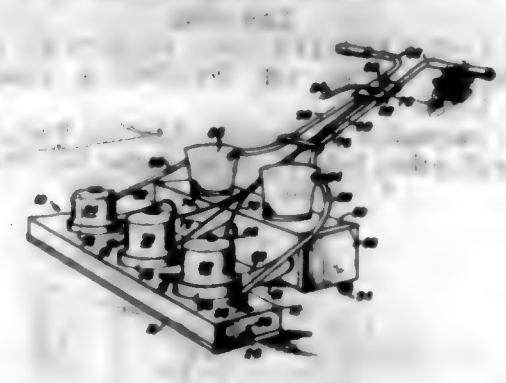
1. In combination, a horizontal tank-type cleaner including a transverse wall having an exhaust port to which a hose is adapted to be connected for blowing air therethrough, an electrical cord, means for connecting one end of the cord to the cleaner, a generally spool-shaped cord-carrying structure about which the cord is adapted to be wound, said cord-carrying structure being disposed lengthwise of the cleaner at one end thereof and having a hollow center portion and end portions at opposite ends of the center portion extending transversely of and radially outward from the center portion, said transverse wall of the cleaner, from an annular region which encircles the axis of the exhaust port and is of larger diameter than the exhaust port, having an outwardly extending portion which serves as one of the end portions of said cord-carrying structure, said hollow center portion and opposite end portion of said cord-carrying structure being formed by a hollow wheel section which is generally in the form of a truncated cone whose smaller end is at the vicinity of the transverse wall of the cleaner, the smaller end of the hollow reel section being joined to said transverse wall of the cleaner at the annular region of the wall and being spaced radially from the exhaust port to form a passage through the hollow reel section large enough for the hose to be inserted therethrough and connected to the exhaust port, and said hollow reel section forming a base for supporting the cleaner on end.

2,893,046
SQUEEGEE ATTACHMENT FOR VACUUM CLEANER
Kenneth C. Thompson, Lyons, Ill.
Application February 18, 1954, Serial No. 411,174
4 Claims. (Cl. 15—325)



2. A squeegee attachment for a vacuum cleaner comprising: an elongated head having a slot extending lengthwise of its lower surface and an air passage communicating with said slot which is adapted to communicate with a vacuum cleaner hose, and a plurality of holes extending through the head normal to, and in communication with the slot; a pin loosely mounted in each hole so as to extend across the slot; removable resilient guard means surrounding the head and bearing on both ends of the pins to hold said pins in the holes; and a squeegee mounted on said pins with a flexible, resilient blade portion projecting below the head.

2,893,047
SWEEPING DEVICE
Glen W. Swihart, Greenland, Ark.
Application June 26, 1956, Serial No. 593,924
1 Claim. (Cl. 15—347)



A power sweeper comprising a rectangular open-bottom housing, a brush depending through said open bottom and extending transversely of said housing on a shaft journaled in two opposite sides of said housing, a pulley midway on said shaft, a suction fan and motor mounted on said housing over an opening in its top above said pulley, a belt connecting said motor to said shaft pulley for rotating said brush, an additional pair of motors and suction fans, each mounted on said housing over an additional opening in its top between said first motor and one of said opposite sides

of said housing, a platform extending rearwardly from said housing, castor means at the rear of said platform supporting said rear of said platform, a dust collecting box mounted on said platform, a duct connecting each said motor and fan to said dust box through a side of said dust box, porous dust excluding air discharge means mounted on the top of said dust box and connected therethrough, an operating handle pivotally mounted on the top of said housing and arranged to extend rearwardly therefrom over said dust box, and motor control means mounted on said handle connected to each of said motors.

2,893,048

SUCTION CLEANER NOZZLE CONSTRUCTION FOR CLEANING COTTON RUGS

Eugene F. Martinec, East Cleveland, Ohio, assignor to Health-Mor, Inc., Chicago, Ill., a corporation of Illinois

Application April 21, 1955, Serial No. 502,968
4 Claims. (Cl. 15—422)

1. Suction cleaner cotton rug nozzle construction including walls forming an elongated nozzle terminating in front and rear parallel lips forming an elongated mouth opening therebetween, the lips having bottom surfaces engageable with a rug to be cleaned by the nozzle; a plate member detachably mounted on the nozzle, the plate member including an elongated central flat portion having a width substantially the same as and offset from the width of the bottom lip surfaces of the nozzle between the front and rear edges of the front and rear lips, an elongated front flange portion extending forwardly upwardly from the front of the flat portion and being connected with the flat plate portion at a corner spaced rearwardly from the front edge of the front lip, an elongated rear flange portion extending rearwardly upwardly from the rear of the flat portion; the front, flat and rear plate portions being parallel with the longitudinal axis of the nozzle mouth opening; the front flange portion extending to a zone spaced forwardly beyond the front edge of the front nozzle lip; the rear flange portion being spaced rearwardly of the rear nozzle lip and being connected with the flat plate portion at a second corner spaced from the rear edge of the rear nozzle lip; there being elongated opening means formed in the flat plate portion, said opening means being aligned with the nozzle mouth when the plate member is attached to the nozzle; clamp means on the plate member detachably securing the plate member to the nozzle including rigid clip means engageable with the front lip and spring clip means yieldingly engageable with the rear lip, the nozzle having grooves in the oppoite end walls between the front and rear lips, the central flat portion of the plate member having an upwardly convex embossement extending from each end of the elongated opening means to the outer edge of the portion, and the embossments being registrable with the grooves in the end walls of the nozzle.

2,893,049

TRACK SUSPENSION FOR SLIDING DOORS

Edmonds L. Gesrreat, Fort Worth, Tex.

Application February 27, 1957, Serial No. 642,902
1 Claim. (Cl. 16—94)

Track suspension means for sliding doors in a wall opening including a rough header, said suspension means comprising: a finish header beneath and spaced from said rough header, a bendable track spaced from and beneath said finish header, a pair of fulcrum spacers between said track and said finish header and located substantially over a door center when said door is positioned

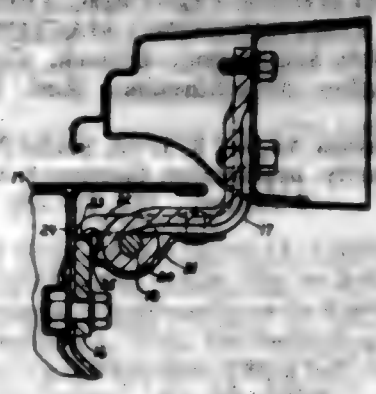
at either end of said track, a bolt through said track and secured in said finish header adjacent each said spacer outwardly thereof with reference to the transverse center of said track, the lengths of said tracks outwardly of said bolts being freely suspended.

2,893,050

MOTOR VEHICLE DOOR HINGE

McFarrell Hollansworth, Pittsburgh, Pa., assignor to McKinney Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

Original application October 21, 1954, Serial No. 463,696, now Patent No. 2,799,042, dated July 16, 1957. Divided and this application May 28, 1957, Serial No. 662,136
2 Claims. (Cl. 16—142)



1. A door hinge comprising a pair of hinge plates having parallel portions connected at their outer ends by a barrel and vertical hinge pin, one of the plates being provided adjacent the pin with an opening through it, and a leaf spring between the plates having its inner end secured to the other plate, the outer end portion of the spring extending through said opening and having its end curved away from the pin to form a stop adapted to be engaged by a wall of said opening when the hinge is opened, and the spring having a laterally projecting portion near its outer end pressing against the inner side of said one plate while the hinge is open, said one plate having an area between its spring-engaging point and said wall that is closer than said point to the axis of the pin, and said spring being compressible by said plate area as the hinge starts to close, whereby the hinge resists initial closing movement.

2,893,051

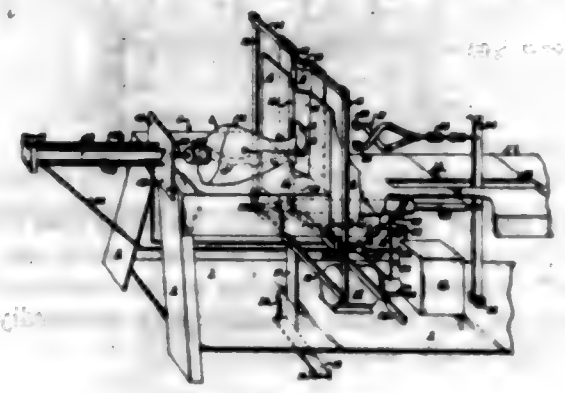
APPARATUS FOR PREPARING HAMS

Robert T. Mazzeglli, Chicago, Ill.

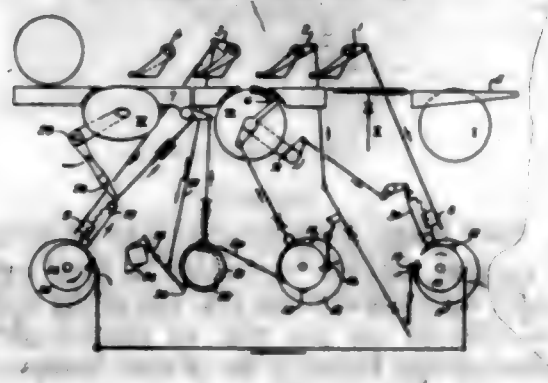
Application December 26, 1957, Serial No. 706,365
11 Claims. (Cl. 17—2)

1. Ham treating apparatus comprising a frame, means on said frame for supporting a ham with the bone of the ham exposed at one end of the ham, a fixed abutment on said frame adjacent said supporting means and having an opening therein of such size that the exposed end of said bone may be projected through said opening and the body of the ham may not pass through said opening, a grab device on one side of said abutment in

position to engage the exposed end of said bone when said bone is projected through said opening in said abutment, means connected to said grab device for moving said grab device away from said abutment to extract the bone from the body of the ham, a pusher movably mounted on said frame on the opposite side of said abutment in position to engage to opposite end of the bone, and means connected to said pusher for moving said pusher toward said abutment to push against the bone as the bone is being pulled by said grab device so as to prevent separation of the bone sections.



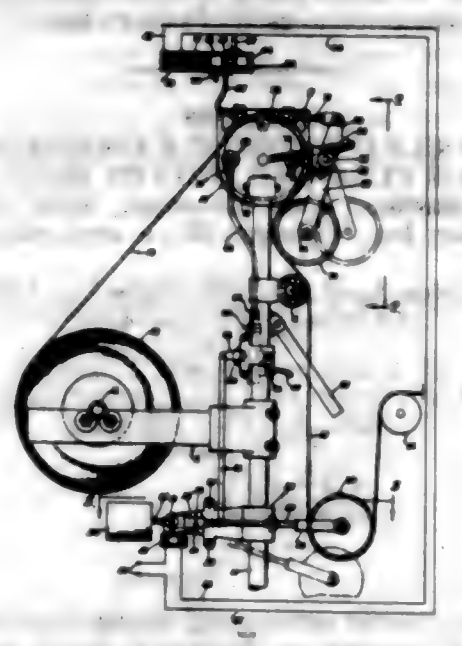
2,893,052
TOOL AND GUIDE CONTROL APPARATUS FOR FISH DRESSING MACHINES
Karl Friedrich Schlichting, Lubeck, Germany, assignor to Nordischer Maschinenbau Rud. Baader, Lubeck, Germany
Application August 8, 1956, Serial No. 602,719
Claims priority, application Germany August 10, 1955
7 Claims. (Cl. 17—3)



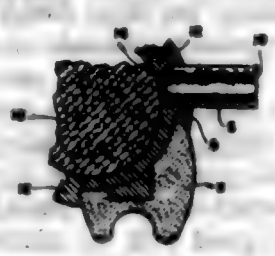
1. Apparatus for controlling the tools and guides of fish dressing machines, comprising dressing tools arranged one behind the other, conveying devices extending along all of the tools, and cooperating therewith for bringing a fish body consecutively to all of said tools, measuring devices connected with said tools for determining the control paths of the tools according to the size and shape of the fish, and measuring devices connected with said tools for timing the commencement and termination of the operation of the tools.

2,893,053
DECURLING APPARATUS
Ernest P. Powell, Philadelphia, Pa., assignor to E. G. Staude Manufacturing Company, Inc., St. Paul, Minn., a corporation of New Hampshire
Application June 29, 1955, Serial No. 518,761
3 Claims. (Cl. 18—1)

1. A decurling device for continuously treating the surface area of a continuous length of thermoplastic sheet material comprising means adapted to hold a source of supply of sheet material, a pivotally mounted rotary heater, a drive roll for advancing said sheet material past the rotary heater, a variable speed motor for driving said drive roll, guide means for changing the direction of movement of said sheet material in advance of the rotary heater, a counterweighted pivotally mounted tension roller responsive to changes in tension of said sheet material in advance of said guide means, control means for varying the supply of energy to said motor to vary the speed thereof, said control means being operatively connected to and responsive to changes in position of said tension roll, an air cylinder operatively connected to said pivotally mounted rotary heater to move the same toward and away from the path of travel of the sheet material, said rotary heater being moved out of contact with the sheet material in the event of breaking the continuity of the sheet, a solenoid actuated valve for controlling the supply of air to said cylinder and a switch for controlling flow of electricity for energizing said solenoid, said switch means being responsive to movement of said tension roller.



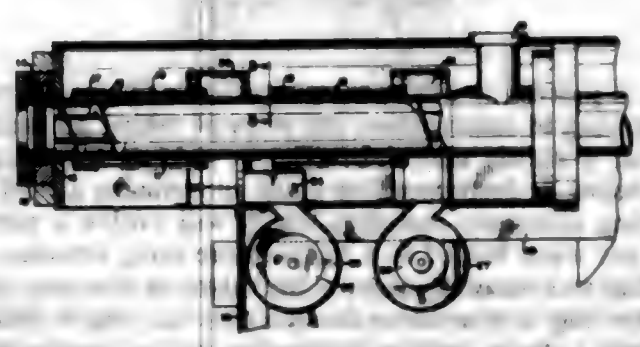
2,893,054
DENTAL SETUP
Jacob Daniel Schwartz, Pittsburgh, Pa.
Application February 11, 1957, Serial No. 639,407
4 Claims. (Cl. 18—5.7)



4. In an artificial denture set-up, comprising a cast of a jaw, formed of artificial stone, a coating of wax on the tissue surface of said cast, shaped to form the pattern of the base of the finished denture, and at least one artificial tooth, set in said wax coating in desired position, a plastic positioning pin, said pin comprising a rigid, elongated body of polymerized plastic, having a flesh color, said pin having at least two different thicknesses in its cross-sectional aspect, said pin being positioned in said set-up in a manner having its long axis lying transversely to the long axis of said tooth, one end of said pin being embedded in the flange portion of said wax coating, the axial surface of said pin being in contact with the periphery of the neck of said tooth, the long thickness of said pin extending substantially in the direction of the long axis of said tooth, the embedded end of said pin extending lingually beyond the periphery of the neck of said tooth and the other end of said pin lying outwardly beyond said flange portion of said wax coating, where

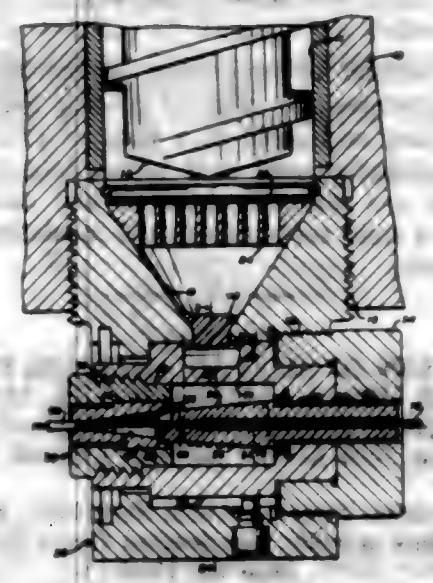
it can be enveloped and held by plaster of Paris when said set-up containing said pin is invested with plaster of Paris in a denture flask.

2,893,055
APPARATUS FOR HEATING PLASTIC MATERIAL IN AN EXTRUDING MACHINE
Robert H. Wenzel, Temple City, Calif., assignor to Farrel-Birmingham Company Incorporated, Ansonia, Conn., a corporation of Connecticut
Application August 6, 1956, Serial No. 602,391
3 Claims. (Cl. 18—12)



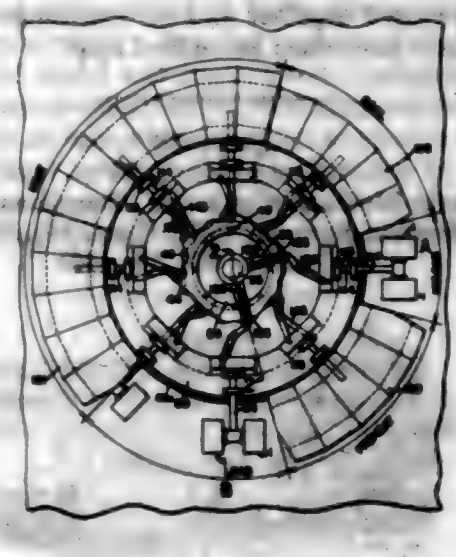
1. In an extruding machine including an elongated barrel for containing thermoplastic material, an extrusion orifice at one end of the barrel, and means within said barrel for advancing said plastic material toward said orifice, an electrically energizable induction coil for heating said barrel, separating members supporting said induction coil in spaced concentric relation to said barrel, said separating means also partly defining a plurality of longitudinal coextensive cooling passages extending completely through the space between said barrel and said coil, air blower means mounted adjacent said barrel, and air duct means including a housing surrounding said barrel adjacent one end of said coil and adapted to direct the flow of air from said blower through said passages between said coil and barrel.

2,893,056
APPARATUS FOR EXTRUDING PLASTIC MATERIAL
George E. Henning, Baltimore, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application May 8, 1956, Serial No. 583,468
1 Claim. (Cl. 18—13)



In an apparatus for extruding plastic material including an extrusion cylinder and an extrusion head having a coaxial passageway therein mounted transversely with respect to the extrusion cylinder, the improvement which comprises a substantially cylindrical tool holder mounted closely, and detachably in the passageway in the head and having a coaxial bore and a coaxial counterbore, a portion of the counterbore forms a relatively large, hollow pressure-equalizing chamber extending coaxially with respect to the head and transversely on opposite sides of the cylinder, a channel formed by a peripheral groove extending substantially one hundred and eighty degrees circumferentially of the tool holder and positioned so that the peripheral groove is symmetrical with respect to the axis of the cylinder, a pair of channels formed by a pair of parallel, longitudinally extending peripheral grooves extending rearwardly from the ends of the first-mentioned channel in diametrically opposite portions of the tool holders, a pair of relatively small, radial feed ports positioned at diametrically opposite portions of the tool holder adjacent to the end of the chamber and connecting the chamber with the rearwardly extending channels, a die holder mounted in the forward end of the counterbore adjacent to the hollow chamber, a die provided with a frustoconical bore and positioned in the die holder, a core guide having a grooved, frustoconical, plug-like head fitting within a complementary portion of the bore in the die, means for advancing successive portions of a core of indefinite length continuously through the core guide and die, and means for forcing plastic material through the cylinder and head and out the free area between the core and die, the sizes of each of the channels forming the pair of channels, each of the feed ports and the pressure-equalizing chamber being such that the average velocity of the plastic material flowing therethrough will be respectively approximately 0.05, 0.88, and 0.036 times the average velocity of the plastic material flowing through the minimum free area between the core and die orifice.

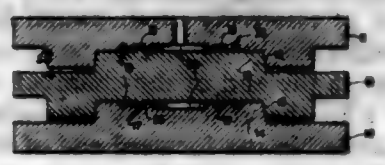
2,893,057
APPARATUS FOR ROTATIONAL CASTING OF VINYL RESINS AND SIMILAR PLASTISOLS
Paul Rekettye, Akron, Ohio, assignor to The Sun Rubber Company, Barberton, Ohio, a corporation of Ohio
Application April 28, 1954, Serial No. 426,164
6 Claims. (Cl. 18—26)



3. An apparatus for casting articles against the inner surface of a hollow mold comprising, a sleeve member and a series of mold carrying units arranged radially thereof, means to move said sleeve member relative to said mold carrying units, each mold carrying unit including a pair of coaxial shafts, a mold carrier attached to the outer end of one shaft and rotatable thereby on one axis and driving connections between the outer end of the other shaft and the carrier to rotate the carrier on an axis divergent to said first axis, individual cam means secured to said sleeve radially thereof, and individual linkage means extending between said cam means and

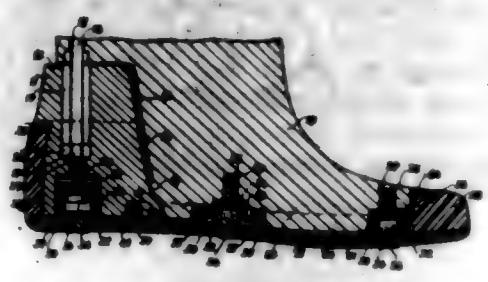
the inner ends of said shafts whereby movement of said sleeve relative to said mold carrying units causes a movement of said mold carrier on said different axes.

2,893,058
SEAL RING
John W. Wurtz, San Gabriel, and Walter C. Bowker, Compton, Calif., assignors, by mesne assignments, to Federal-Mogul-Bower Bearings, Inc., Detroit, Mich., a corporation of Michigan
Application June 24, 1955, Serial No. 517,796
4 Claims. (Cl. 18—42)



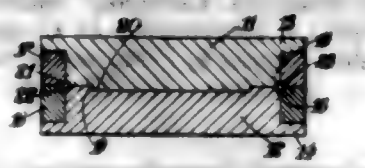
1. A compression mold for encasing an annular metal case in a thin covering of resilient elastomeric material while very accurately locating said core within said covering, so as to produce exceptionally accurately formed cored O-rings, said mold comprising upper and lower core blocks and a center core plate, said blocks and said plate having interfitting tapering surfaces adapted to nest together interchangeably and accurately positioned in triplicate as well as in pairs, said core blocks having annular channels in their opposed faces adapted to register very accurately with one another to form a cavity for an O-ring, said center plate having aligned annular flanges extending from its opposite faces and adapted to project one into each of said channels of said core blocks at an exact relation therewith and form a depression the exact size of said metal core accurately positioned in said elastomeric material placed in said channel, two halves of said elastomeric material being molded while said mold is assembled in triplicate and then said center core plate being removed, neither half of said elastomeric material being removed from its core block, a metal core ring placed in one of said depressions, and said core blocks then being closed together and the elastomer cured about the accurately positioned embedded ring.

2,893,059
ELASTIC LAST
Gerardo Medinas Capdevila, Barcelona, Spain
Application June 23, 1955, Serial No. 517,571
6 Claims. (Cl. 18—46)



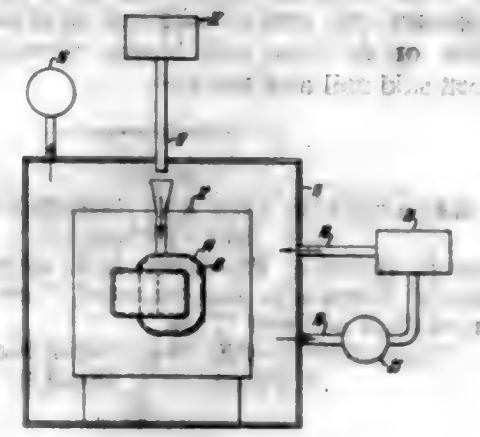
1. An elastic last comprising a front member, a removable rear member secured to said front member for facilitating fitting and withdrawing of the last into and out of a shoe or the like, said front member having a peripheral recess adjacent the sole surface, a plate and a resilient member completing the lateral and lower surface of said front member, means for removably securing said plate to said front member, said resilient member being located in said recess and said resilient member receiving the shoe upper where the lateral compressor members of a vulcanizing press bear.

2,893,060
JOINT RINGS
Percy Wills, Bridgwater, England, assignor to Wills Pressure Filled Joint Ring Limited, Bridgwater, England, a British company
Application January 12, 1956, Serial No. 561,384
Claims priority, application Great Britain January 12, 1955
3 Claims. (Cl. 18—55)



1. A process of producing gas pressure-filled joint rings comprising in combination the steps of taking an embryo ring of a plastic material having a welding temperature well below its decomposition point, introducing a solid gas evolving substance thereinto which will evolve a permanent gas when heated to a temperature lying between the welding and decomposition temperature of the ring, placing the ring in a mold so formed that the ring is held in its desired shape, heating first to the welding temperature of the ring and so effecting a weld thereafter raising the temperature to the gas evolution temperature of the introduced solid, and allowing to cool while still held in the mold.

2,893,061
METHOD FOR ENCAPSULATING ELECTRICAL EQUIPMENT
William M. Terry, Jr., Pittsburgh, Pa., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application April 5, 1957, Serial No. 651,074
2 Claims. (Cl. 18—59)

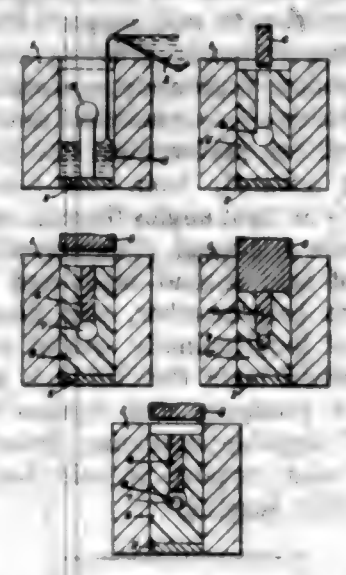


1. In a method of producing an insulated electrical conducting member the steps of placing said member in a mold placing said mold in a vacuum chamber, evacuating said chamber and said mold, introducing sulfur hexafluoride gas into the chamber and said mold, and introducing a solid setting electrical insulating compound into said mold.

2,893,062
PRODUCTION OF SHAPED ARTICLES FROM POWDERS USING LYOPHILIC GEL MOLDS
Thomas William Penrice, Fittwick, England, assignor to Production Tool Alloy Company Limited, Sharpenhoe, England
Application June 17, 1955, Serial No. 516,273
Claims priority, application Great Britain June 22, 1954
8 Claims. (Cl. 18—59.5)

1. The process of consolidating refractory powders into shaped articles which consists in, confining an elastic dimensionally stable substantially incompressible mold consisting of a lyophilic gel material into a die body, filling the mold with at least one of said refractory powders,

and exerting pressure upon the confined mold whereby the mold will progressively and immediately accommodate

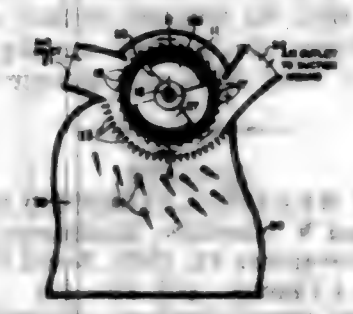


itself to the decreasing volume of the powder resulting from the shrinkage of the powder to thereby obtain even and maximum compacting of the powder.

2,893,863
PROCESS OF PRODUCING COMPOSITE OR COATED ARTICLES COMPRISING FOAMED PLASTICS AND COVERING LAYERS
Peter Hoppe, Treisdorf, Germany, assignor, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware
No Drawing. Application February 2, 1955
Serial No. 485,820
Claims priority, application Germany February 9, 1954
11 Claims. (Cl. 18—60)

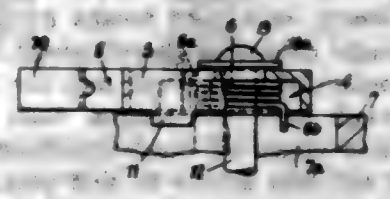
1. A process of producing coated polyurethane foams which comprises forming, on a surface, a layer comprising a polyester-isocyanate mixture dissolved in an inert organic solvent therefor, evaporating substantially all of said solvent, applying to the resulting layer a foaming composition comprising a polyester-isocyanate mixture, and carrying out the foaming operation.

2,893,864
SELF-FEEDING AND SELF-DOFFING OPENER CLEANER FOR TEXTILE FIBERS
Ralph A. Rusca and Ray C. Young, New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture
Application July 18, 1955, Serial No. 522,886
2 Claims. (Cl. 19—76)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An opener cleaner for textile fibers comprising a hollow, fiber working beater cylinder having closed ends and a perforate peripheral surface, fiber working teeth mounted on said surface, a stationary shaft on which said beater cylinder is rotatably mounted, grid bars mounted below said rotatable beater cylinder, a housing for accumulation of dirt and trash provided with an inlet duct and outlet duct and containing the said beater cylinder, stationary shaft, and grid bars, perforations in said peripheral surface of the beater cylinder providing communication between said inlet duct, the interior of the cylinder, and said outlet duct, an external suction means communicating with said outlet duct of the housing, an air baffle secured to the surface of the shaft and arranged within the interior of the beater cylinder so that when the cylinder is rotated and the suction means activated, air, carrying the incoming fibers, is drawn from said inlet duct through the perforate surface of the cylinder adjacent to the inlet duct while the fibers being carried thereby are deposited on this surface and carried thereon as the cylinder rotates, the drawn air meanwhile flowing into the interior of the cylinder and thence being directed, by virtue of the baffle arrangement, through the perforate surface of the cylinder to the outside thereof in the area adjacent to the outlet duct whereupon the fibers, being carried on the cylinder and having reached this area during the one complete revolution of the rotating cylinder, are doffed therefrom by the flowing air and carried away therewith into said outlet duct.

2,893,865
UNDERCLEARERS FOR TEXTILE FIBRE ROLLER DRAFTING MECHANISMS
Joseph Negmara, London, England, assignor to Casablancas High Draft Company Limited, Manchester, England, a British company
Application April 9, 1957, Serial No. 651,677
Claims priority, application Great Britain July 25, 1956
7 Claims. (Cl. 19—140)



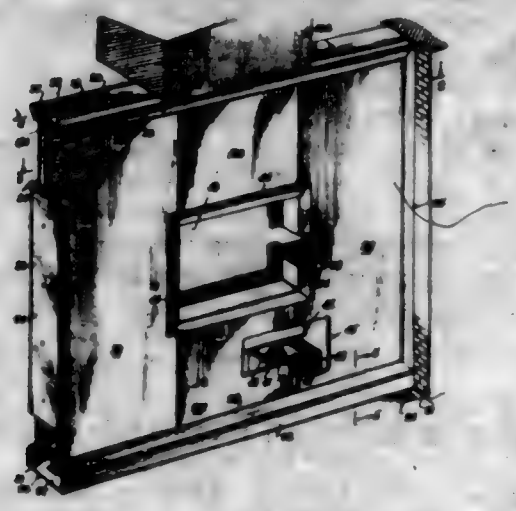
1. In a textile fibre roller drafting apparatus the combination with a roller stand of under-clearer end mounting means comprising a bracket arm, a pivotal support carried on said stand and transversely engaging one end of said arm, an upwardly directed seating provided in the arm forwardly of said pivotal support to receive an under-clearer end pivot and a coil spring housed in said arm and interacting between the said stand and arm to exert a gentle upward pressure on the forward end of said arm.

2,893,866
SECTIONAL TRAILER HOUSE
Frederick S. Perdue, Fort Wayne, Ind.
Application August 13, 1956, Serial No. 603,503
8 Claims. (Cl. 20—2)

1. A mobile sectional trailer house comprising at least two self-contained trailer units, the end wall of one of said units being concave in shape so as to fit the convex exterior contour of the entire portion of the other unit

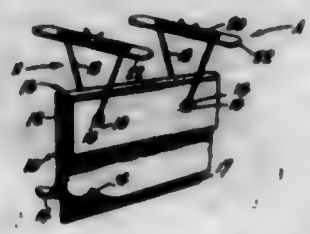
and sealing means mounted on the end of said one unit in position to sealingly engage the exterior of the other unit.

2,893,067
STRUCTURAL BUILDING PANELED WALL CONSTRUCTIONS AND PANEL MEANS THEREFOR
George W. Mook, Pelham, N.Y., assignor to American W.M.B., Inc., New York, N.Y., a corporation of New York
Application May 10, 1955, Serial No. 507,251
14 Claims. (Cl. 20—4)



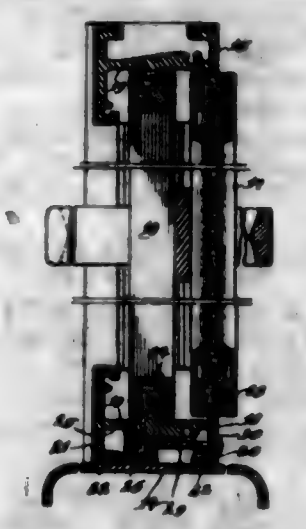
1. A structural building paneled wall construction comprising, in combination; a plurality of substantially aligned panel units defining opposite wall faces, each of said panel units comprising a pair of transversely-spaced sheathing sheets and core means located between and spacing said sheets, said core means having a plurality of lateral passages extending therethrough from side portion to side portion of each panel unit for reception of a tool stem through said core means, each of said panel units having side edges of their sheathing sheets transversely-spaced for tool access to said passages with said side sheet edges abutted to those of the adjacent panel unit in a panel junction, said abutted side edges of said sheathing sheets at at least one of said wall faces being provided with opposed abutment means located back of said sheathing sheets with those of one panel unit being paired with those of the adjacent panel unit; and a plurality of tool-rotatable fasteners each aligned with one of said lateral passages and rotated to fastening engagement of said paired abutment means thereby securing them together and fastening adjacent panel units to each other.

2,893,068
ADHESIVE INSULATION CLIP
Donn T. Johnson, Vista, Albert W. Albertine, Santa Monica, Stanley Lippert, Los Angeles, and Walter F. Sheetz, Hollywood, Calif., assignors to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Application December 17, 1956, Serial No. 628,613
3 Claims. (Cl. 20—4)



2. A fastener for anchoring to a support an insulation blanket composed of material incapable of sustaining itself and susceptible to sagging, comprising: a substantially rigid, elongate base-member extending longitudinally of the support; a strip of pressure-sensitive adhesive material enfolding said base-member so as to afford a pair of free flaps for adhering facewise to said support and thereby fixing the fastener-base to said support, the base-member and said enfolding material including a pair of sets of longitudinally spaced, registering perforations therein; a loop of flexible fibrous lacing material having a first bight extending through the perforations and having a second bight protruding inwardly from said base member and lying substantially at right angles thereto; and a free, rigid, elongate and wide frictional clamping-strip disposed at the outer end of said second bight and extending rectangularly to the base-member, said clamping-strip including a pair of longitudinally spaced perforations for receiving said second bight therethrough so as to clampingly-engage said clamping strip against the inner face of a blanket of saggable insulating material to be fastened stably to said support by said fastener and prevented thereby from sagging.

2,893,069
SHOWER BATH FRAME LEVELING DEVICE
Ward P. Kessler, near Bristol, Ind., assignor, by mesne assignments, to Tusco Corporation, a corporation of Texas
Application December 31, 1954, Serial No. 479,868
5 Claims. (Cl. 20—11)

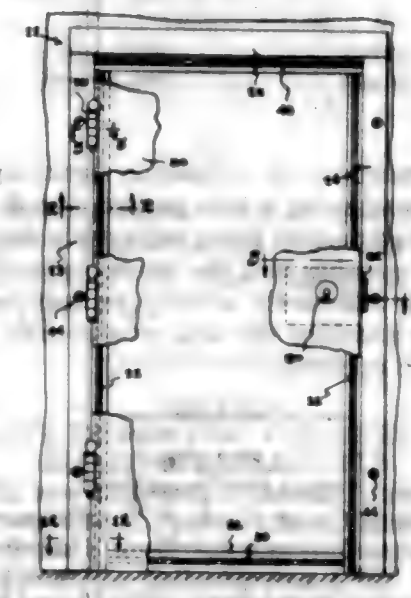


2. A shower bath frame leveling device comprising a channeled horizontal lower member of said frame having a central web with legs depending from its opposite side margins contacting a supporting bottom member and with the bottom side of said web inclined downwardly in a plane towards one of its said legs of lesser height than its opposite leg, a bottom member supporting said lower frame member, a leveling block disposed between said legs having one side inclined in a plane corresponding to the angle of declination of said bottom side of said web with which it is in contact and its opposite side in slidable contact with the adjacent surface of said bottom member, and means for slidably moving said leveling block towards or away from said shorter leg.

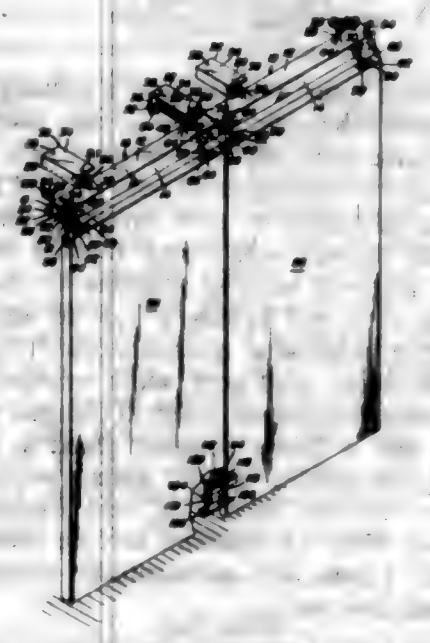
2,893,070
ADJUSTABLE WEATHER-STRIPPED DOOR JAMB
Raymond V. Gauthier, Kissimmee, Fla.
Application November 15, 1957, Serial No. 696,748
4 Claims. (Cl. 20—11)

1. A door frame comprising inner channel-shaped vertical side members adapted to be secured to the vertical margins of a doorway opening, a pair of channel-shaped vertical side members engaged over said first-named side members, a plurality of horizontal, inwardly extending internally threaded sleeves on each side flange of said first-named vertical side members, respective bolts engaged through the side flanges of the second-named ver-

tical side members and threadedly engaging in said sleeves, adjustably securing the side flanges of said second-named vertical side members to the side flanges of said first-named vertical side members, a channel-shaped top member connecting the top ends of said side members, and a threshold member connecting the lower ends of said side members, said side members and top member being of identical cross sectional shape and having their web portions located inwardly to define a door opening, auxiliary channels formed on said web portions and being substantially narrower than said web portions, whereby to define a peripheral recess adjacent thereto around the frame to receive the marginal portions of the sides and top of a door, and a plurality of hinges adjustably secured to a portion of one of said side members for hingedly connecting a door to said frame.

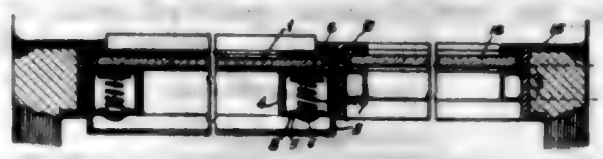


2,893,871
SLIDING DOOR ASSEMBLY
Clifford N. Oden, Belmont, Calif., assignor to Gustave Miller, Washington, D.C.
Application October 14, 1957, Serial No. 689,883
5 Claims. (Cl. 20—19)



1. In combination, a door frame having an upper frame member, side frame members and a front frame member, at least two elongated track members supported from the upper frame member by means of individual transverse track members, each transverse track member comprising a top plate secured to said upper frame member, and a track channel dependent from said top plate, each elongated track member having at least one hanger member extending upwardly therefrom, each hanger member having a roller movably positioned in the track channel of a corresponding transverse track member, spring means connected to said transverse track members and urging said elongated track members into a forward, flush, end-to-end alignment, each elongated track member having a front and rear track thereon, said front and rear tracks of each elongated track member being in end-to-end alignment with the corresponding front and rear tracks of the other elongated track member when said elongated track members are in said flush alignment and the front track of one elongated track member being in end-to-end alignment with the rear track of the other elongated track member when said one elongated track member is pushed back transversely into a predetermined rearward position, and a fixed stop means projecting from the front frame member into the path of the rollers on the front track of each elongated track member when said elongated track member is in its forward position, said elongated track member being clear of said stop means when in said predetermined rearward position, and a door panel supported by the rollers movable in the tracks of said elongated track members.

2,893,872
WINDOW ASSEMBLY
John Marchbank, Croftfoot, Glasgow, Scotland, assignor to Frederick Braby and Company Limited, London, England, a company of Great Britain
Application February 12, 1957, Serial No. 639,701
5 Claims. (Cl. 20—52.4)



1. A window assembly including two window jambs provided with vertically-extending grooves, an upper sash and a lower sash supported by said jambs in the grooves thereof, at least one of said sashes being movable up and down in the grooves in which it is mounted, at least one friction member mounted in a side wall of each of the grooves in which said movable sash is mounted, each friction member being located adjacent to the side face of said movable sash and movable along a line normal to the plane of said movable sash, and spring means urging each friction member into engagement with the adjacent side face of said movable sash to press the opposite side face of said movable sash into contact with the other side wall of each of said grooves in which said movable sash is mounted, whereby said movable sash is held at the vertical position to which it is moved.

2,893,973
AWNINGS
Ralph L. Humphrey, Wichita, Kans.
Application March 14, 1955, Serial No. 493,885
3 Claims. (Cl. 20—57.5)

1. An awning that comprises a plurality of individual awning slats and a support for said slats; said slats being of resilient material and being elongated and generally flat except along their longitudinal edges; flanges extending along both of said edges and being integral with said

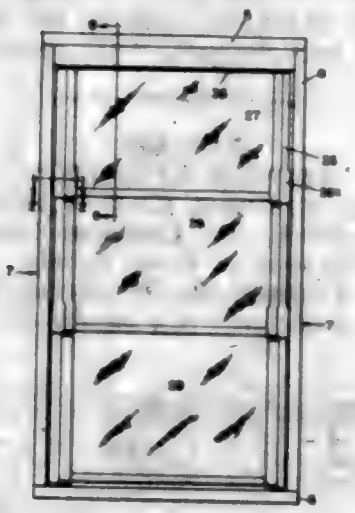
slats and projecting laterally from the generally flat bodies of the slats; said flanges being generally S-shaped in cross section; each S-shaped flange being so formed that the outside radius of the loop of the S that is adjacent the slat body is substantially equal to the inside radius of the loop of the S that is spaced from the slat body, so that two of said slats, inverted relative to each other, can be resiliently interlocked along adjacent longitudinaly edges by direct engagement of the two S-shaped flanges extending along said edges with each other, without any fasteners being required.

2,893,874

JALOUSIE WINDOWS AND DOORS

Lorenzo S. Guetti, Hialeah, Fla., assignor, by direct and mesne assignments, to United Windows Corporation, a corporation of Florida

Application February 17, 1955, Serial No. 488,753
3 Claims. (Cl. 20—62)



1. In a jalousie structure of the character described, a pair of spaced vertical frame members defining the sides of an opening to be closed and the inner faces of which are vertically channeled to provide guideways, a pair of actuator bars mounted for vertical sliding movement in said guideways, manually operated means connected to and moving said bars vertically and in unison, a plurality of louvre sections, each comprising a glass panel extending across said opening and carriers for said glass panels, said carriers comprising members of channel formation within which the ends only of the glass panels are received, said carriers being pivoted by horizontal pivots upon the frame members, the said members of channel formation being so constructed that the lower rear face of one glass panel may overlap and make glass to glass contact with the upper outer face of the glass panel of the louvre next below throughout the entire length of said panels, actuating links connecting the actuator bars with the said carriers whereby to rock the carriers by vertical movement of the actuator bars and adjusting means included in said link connections for independently adjusting the throw of each of the links with the carrier which it actuates, whereby the pressure exerted by every glass panel against the panel which it engages may be independently adjusted at each end of the panels.

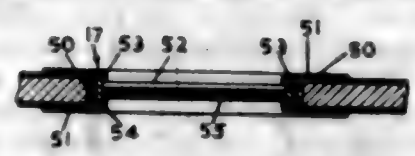
2,893,875

METHOD OF ERECTING ENCLOSURES

Joseph A. Potchen, Marne, and George E. Kloote, Grand Rapids, Mich., assignors to Haskelite Manufacturing Corporation, Grand Rapids, Mich., a corporation of New York

Application March 21, 1955, Serial No. 495,404
5 Claims. (Cl. 20—74)

1. In a method of erecting structures, the steps which include erecting a wall by adhesively joining a plurality of laminated panels having a low density synthetic resin core and facing sheets adhesively bonded to the sides of said core, cutting entirely through at least one of said panels along a line to entirely sever at least one slab therefrom and form an opening therein, adhesively securing a reinforcement member to and covering the edges of said panel exposed by said cutting, reinforcing said reinforcement member by adhesively securing thereto a channel member having a web portion and depending leg portions, the web portion being adhesively secured to said reinforcement member and the inside surfaces of said leg members being adhesively secured to said facing sheets, and thereafter installing the said severed slab as a closure member in said opening.

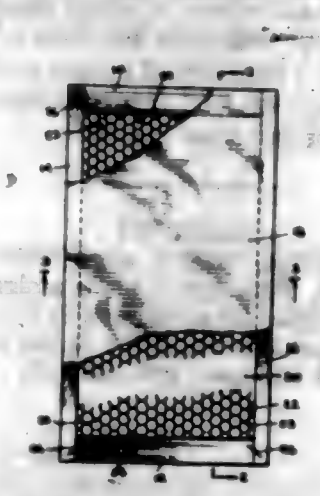


2,893,876

HOLLOW PANELS

John H. B. Herts, Great Neck, N.Y., assignor, by mesne assignments, to Intercontinental Door Corporation, Long Island City, N.Y., a corporation of New York

Original application October 14, 1954, Serial No. 462,352, now Patent No. 2,719,809, dated October 4, 1955. Divided and this application August 15, 1955, Serial No. 528,355
2 Claims. (Cl. 20—91)



1. A structural panel, comprising a rectangular frame of predetermined thickness, a cellular core insert mounted within said frame with opposite ends of said core glued to inner surfaces of the opposite ends of said frame, said core having a plurality of slits provided therein adjacent said ends thereof and being formed of strips of flexible sheet material secured together to define a plurality of cells, each cell having a pair of opposed walls of double strip thickness interconnected by walls of single strip thickness, said core walls terminating in opposite core faces defined by integral flanged gluing portions thereof, and a facing member glued to each frame surface and to associated flanged gluing portions in surface-to-surface relation therewith, said flanged portions being co-planar with the opposite surface planes, respectively, of said frame and substantially perpendicularly disposed to said core walls.

2,893,877

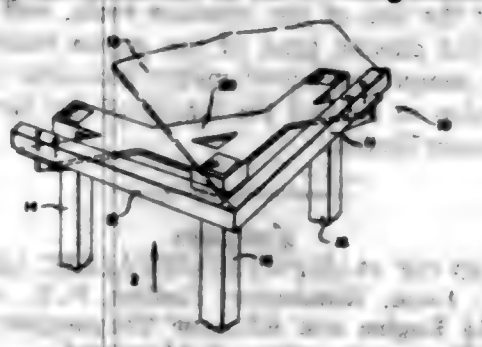
AWNING VERTICAL COLUMN CONNECTOR

Hans G. Ernesman, Detroit, Mich., assignor to Lito Vent Industries, Inc., Detroit, Mich.

Application July 31, 1958, Serial No. 752,344
4 Claims. (Cl. 20—95)

1. A column connector formed in the shape of an A and made of a rigid metallic material, the vertex of the A

and the free ends of the two legs thereof being formed with sockets arranged substantially normal to the plane of the A, whereby a column end may be secured within each socket, the cross bar of the A being extended a pre-



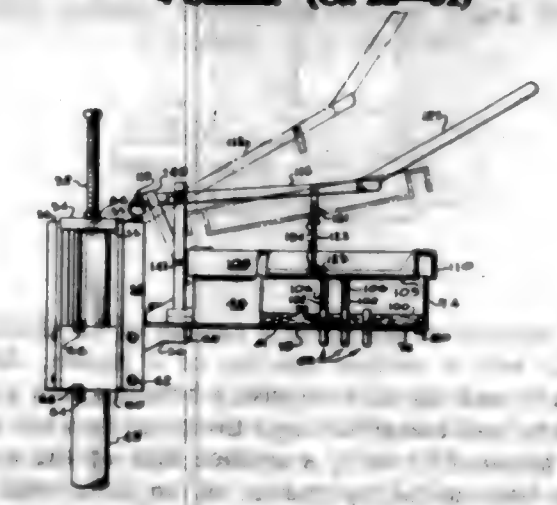
determined distance beyond each of the two legs, wherein the free ends of said extended cross bar may each be connected to one of two frame members meeting at a substantially right angle.

2,893,078

ADHESIVE DEPOSITOR FOR SHELL MOLD BONDING APPARATUS

Earl W. Jahn and Marvin C. Preuss, Springfield, Mass., assignors to Production Pattern & Foundry Co., Chicopee, Mass., a corporation of Massachusetts

Application May 2, 1958, Serial No. 732,548
4 Claims. (Cl. 22—31)



1. An adhesive discharge mechanism for depositing liquid adhesive material on parting line surfaces of shell molds in shell bonding operations, comprising a tray at least partially filled with liquid adhesive material; a plurality of valve controlled openings in the bottom of said tray, each of the valves comprising a body having an interior bore, a pressure actuated check valve in the lower end of said bore, and a port in said body above said check valve opening from said bore interiorly of said tray; operating pins inserted in the upper ends of the bores of selected valves, a spring holding the lower end of each pin above said port, and a movable plate for engaging the upper ends of said pins to simultaneously push the pins downwardly within the bores of the selected valves to close off said ports and exert a pressure on liquid within said bores to open said check valves and eject liquid from the selected valves.

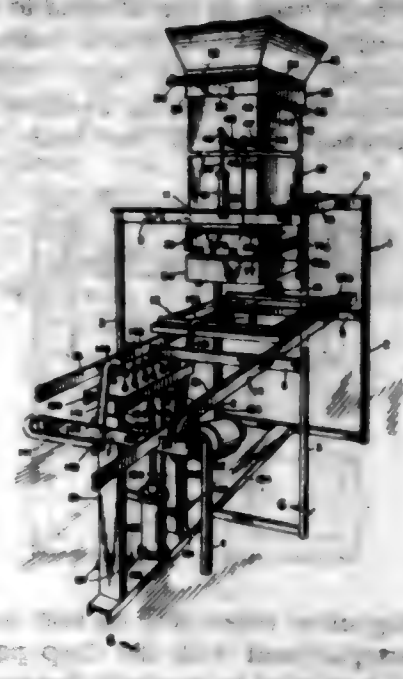
2,893,079

SHELL MOLD MACHINE AND METHOD

Joseph I. Mercu, Detroit, and William E. Bopp, Coleman, Mich., assignors to Portal Products Corporation, Boyne Harbor, Mich., a corporation of Illinois

Application January 21, 1955, Serial No. 483,367
7 Claims. (Cl. 22—35)

1. In a machine for producing shell molds, a frame, an upper hopper on said frame adapted to contain a quantity of a sand mix for use in making the molds, an elongated enclosure extending downwardly from said hopper and having an opening in the lower end thereof, a chamber in the upper part of said enclosure, means for depositing a predetermined charge of sand mix into said chamber from said hopper, a carriage below said enclosure adapted to support a pattern thereon, a lower



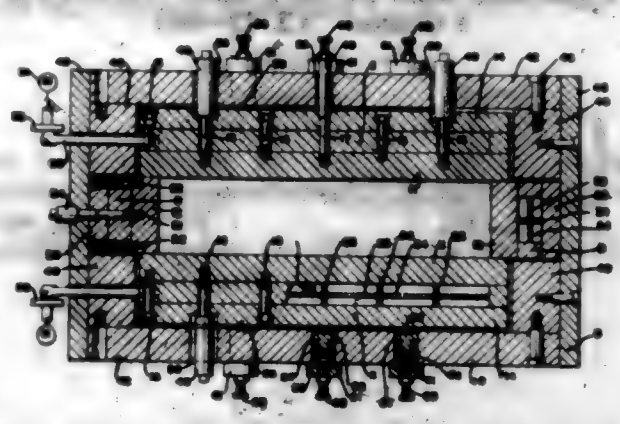
hopper below said carriage, means for elevating said lower hopper and pattern to the open lower end of said enclosure, means for dropping downwardly the entire sand mix charge in said chamber onto the pattern, and means to dump the excess sand mix from said pattern into said lower hopper.

2,893,080

APPARATUS FOR THE CONTINUOUS CASTING OF METALS

Norman P. Geez, Mayfield Heights, Ohio

Application March 26, 1954, Serial No. 419,014
8 Claims. (Cl. 22—57.2)



1. Continuous-casting apparatus comprising, in combination, a plurality of sections in end-to-end abutting relationship, each section including a plurality of mold-cavity defining members, with the members of one section normally in slightly spaced relationship to members of the adjacent section, said sections being movable apart to compensate for undue expansion of said members.

2,893,081

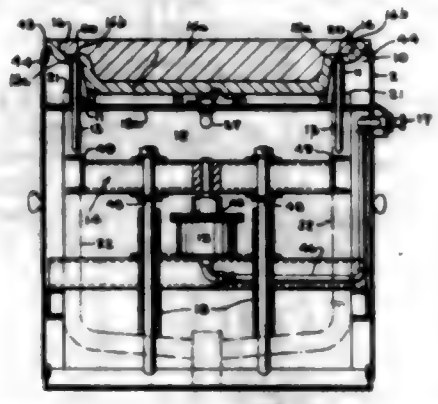
INGOT CASTING MACHINE

Max Gerster, Sierre, Switzerland, assignor to Aluminium-Industrie-Aktien-Gesellschaft, Chippis, Switzerland, a corporation of Switzerland

Application February 16, 1956, Serial No. 566,019
Claims priority, application Switzerland July 18, 1955
1 Claim. (Cl. 22—61)

A multiple pig mold arrangement, for use in connection with a pig casting machine for light metals, compris-

ing a multiple mold having a series of substantially parallel elongated individual pig molds, each individual mold having two shallow end portions and therebetween a deep portion for the casting of correspondingly elongated pigs having deep and shallow portions, a support for said multiple mold comprising a container defining a water compartment open on top adapted to contain water up to a predetermined level, means connected to said container operable for flowing water into and out of said water compartment including overflow means determining the aforesaid level of the water, said multiple



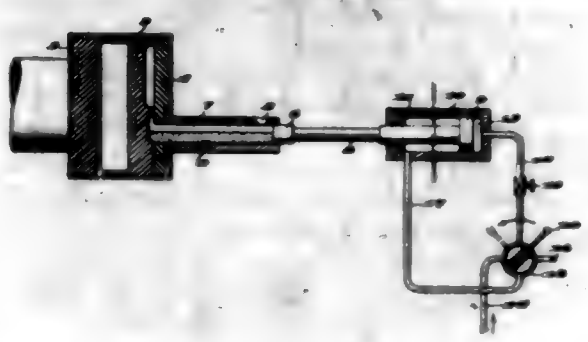
mold being supported removably on said container above said water compartment with the deep portion of each individual mold adapted to protrude downwardly through said open top to a depth below the level of the water in said compartment and the shallow portions of each individual mold adapted to be disposed at all times above the water level, and pig ejecting means connected to said support and operable to abut from below against the underside of the shallow portions of each pig in each individual mold for exerting lifting pressure from below thereagainst.

2,893,082

DEVICE FOR INCREASING THE CAPACITY OF DIE CASTING MACHINES

Fritz Hedler, Tavannes, Switzerland

Application April 29, 1957, Serial No. 655,650
3 Claims. (Cl. 22—68)



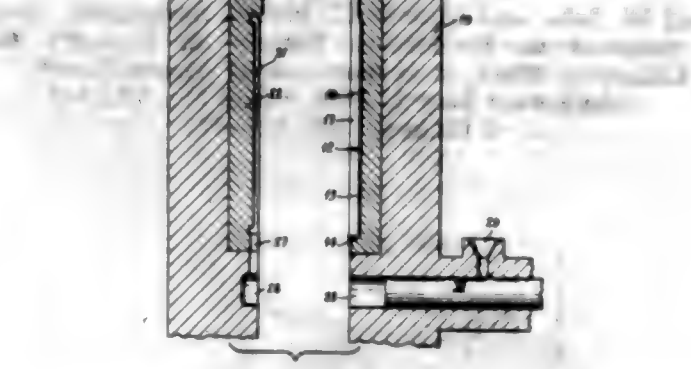
1. In a hydraulically-operated die casting machine having an injection plunger, differential-type hydraulic ram and cylinder means for longitudinally displacing said plunger, a first conduit for applying fluid under pressure to the cylinder pressure chamber associated with the large area side of the hydraulic ram during the injection-cycle, and a second conduit connected to the cylinder counter-pressure chamber associated with the small area side of the hydraulic ram for the return of fluid from the cylinder; means causing the pressure of fluid in the counter-pressure chamber of said cylinder to be increased near the end of the injection cycle to oppose the influence of the increased injection force which occurs in the cylinder pressure chamber near the end of the injection cycle comprising a valve having an inlet and an outlet connected in series in the return conduit of the cylinder, said valve having a piston element slidably movable therein for controlling the passage of fluid through said valve, piston-controlling conduit means connected at one end to said valve and at the other end to said cylinder pressure chamber to cause said piston element to reduce the flow of fluid through said valve when the injection pressure in the cylinder pressure chamber exceeds a predetermined value near the end of the injection cycle, and means for adjusting the closing time of the piston element within the valve comprising screw means mounted in the wall of said valve to control the length of the stroke of the piston element therein.

2,893,083

METHOD OF MAKING BIMETALLIC ARTICLES

George T. Ladd, Huntington Station, N.Y., assignor to Fairchild Engine and Airplane Corporation, Farmingdale, N.Y., a corporation of Maryland

Continuation of application Serial No. 356,572, May 21, 1953. This application August 10, 1956, Serial No. 603,290
2 Claims. (Cl. 22—204)



1. The method of providing a casting of an aluminum base metal with a surface coating of a harder, denser, polishable ferrous metal, comprising bonding with a sheet of flexible ferrous metal having a thickness between about .006 and about .030 inch, a surface film of the molten aluminum base metal by means of an interposed thin layer of a ferro-aluminum alloy, allowing the sheet to cool to solidify the surface film thereon and consequently form an oxide surface skin on said surface film, mounting the cooled sheet in a mold having a contour desired for the surface of the finished casting, heating the surface film to melt the same, closing the mold, injecting molten aluminum base metal into the mold at high velocity to flush the oxide skin from the molten surface film to expose the same, said molten aluminum base metal being subjected to a pressure between about 4,000 and 15,000 p.s.i. to force said sheet into coextensive engagement with said mold and being maintained at a temperature to fuse with the exposed surface film of molten metal on said sheet, maintaining said pressure within the mold until the casting metal has solidified, and removing the resulting bimetallic casting from the mold.

2,893,084

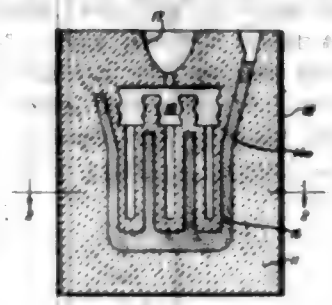
CASTING MOLD AND METHOD OF CASTING CARBON-CONTAINING ALLOYS

Friedrich Eisermann, Winterthur, Switzerland, assignor to Sulzer Frères, Société Anonyme, Winterthur, Switzerland

Application October 12, 1954, Serial No. 461,884
Claims priority, application Switzerland October 16, 1953
14 Claims. (Cl. 22—214)

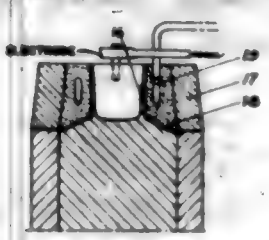
1. A method of making castings from carbon containing metals which comprises forming a gas-permeable refractory casting mold having a casting cavity and at least one additional cavity, said additional cavity being

so positioned that when the casting cavity is filled with the molten metal, the casting cavity will be separated from said adjacent cavity by a thin wall of gas-permeable refractory mold material, inserting into said additional



cavity a protective substance which produces a reducing gas during the cooling of the casting in the mold to prevent surface decarbonization of the casting, and filling the casting cavity with a molten metal containing carbon.

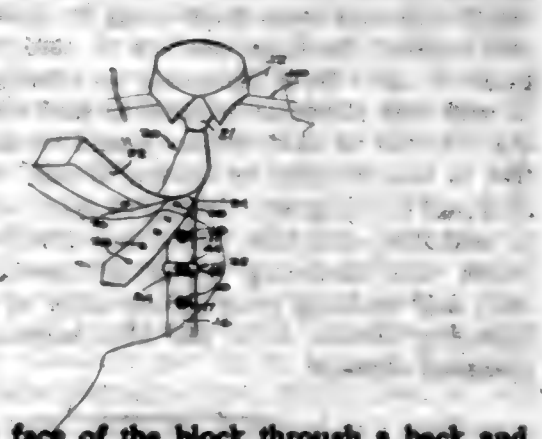
2,893,085
METHODS OF CASTING STEEL BODIES
Erik Johansson, Motala, and Elis Erik Wilhelm Hellis, Goteborg, Sweden, assignors to Elektriska Svetsningsaktiebolaget, Goteborg, Sweden, a corporation of Sweden
Application February 17, 1955, Serial No. 488,950
Claims priority, application Sweden March 20, 1954
3 Claims. (Cl. 22—216)



1. A method of forming a steel casting which comprises the steps of pouring a body of killed steel into a mold; maintaining a blanket of flux over said body of steel; maintaining a pool of liquid steel immediately below said flux blanket by applying electrical energy to the upper portion of the body through at least one electrode spaced therefrom and extending through said blanket of flux until all other portions of the casting have solidified, said electrical energy input being insufficient, in the absence of any additional source of heat, to prevent a rim zone of frozen metal having a substantial thickness from progressively forming around said pool during the sinking of the pool level attending the gradual shrinking of the body of steel, whereby the formation of pipes is substantially suppressed, and heating the part of the mold confining the upper portion of the metal body by means of an additional source of heat energy disposed outside of said part of the mold to a temperature at which said pool of liquid steel extends during substantially all of the period of shrinking of the steel body over substantially all of the cross-section of the space enclosed by said part of the mold.

2,893,086
FOUR-IN-HAND NECKTIE AND HOLDER
Edwin C. Parker, Cranston, R.I.
Application May 29, 1956, Serial No. 588,144
1 Claim. (Cl. 24—69)

A necktie holder assembly for holding a necktie front and back panel to a shirt front, said assembly comprising a substantially U-shaped clip having confronting front and rear imperforate legs, said front and rear legs having adjoining ends connected by a U-shaped spring biasing bight portion, said front leg having a smooth rear wall adapted to bear flush against the outer surface of a shirt front and having an opposed front wall, said rear leg engaging the rear surface of a shirt front to pressingly hold the front leg flat against the outer surface, a forwardly outstanding block provided substantially centrally on said front wall of said front leg, said block having a flat outer face of substantial cross-sectional area relative to a back panel of a necktie, said outer face being substantially parallel to the rear wall of the front leg, a stud fixedly attached to the projection and projecting axially outwardly therefrom, said block having a centrally located axial bore extending therethrough and through the outer face and being of a diameter slightly greater than the diameter of the stud to snugly receive and support said stud, said stud being of a length to extend outwardly



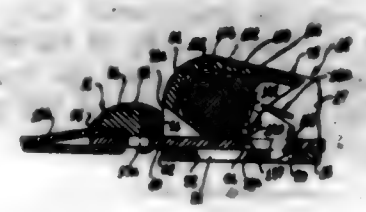
beyond the outer face of the block through a back and a front panel of a necktie and having an outer end adapted to extend beyond the front panel of a necktie, an ornamental piece provided on the outer end of the stud and being of a cross-sectional size greater than the cross-sectional area of the stud to secure the panels on the stud between the outer face of the block and the ornamental piece, and means, including a screw thread connection, for adjusting the ornamental piece relative to the outer face of the block axially of the stud so as to adjust the clamping pressure applied by the outer face and the ornamental piece on the panels interposed therebetween and disposed on the stud.

2,893,087
FASTENING DEVICE
Robert A. Bramberger, Birmingham, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application October 18, 1956, Serial No. 616,716
2 Claims. (Cl. 24—73)

1. A fastening device for assembly with a strip of molding having inturned flanges along the side edges thereof forming opposing recesses, said device comprising an elongated cross plate having a major axis and adapted to span the distance between the inturned edges of said molding, said cross plate having a periphery of eccentric contour to accommodate its reception by rotation in a first direction in the opposing recesses of moldings having different widths, a support engaging shank substantially centrally disposed relative to and depending from one side of said cross plate, said shank being threaded so that rotation of a cooperating threaded element in said first direction on said shank will effect a fastening of said device to a support and urge said cross

plate into tight engagement with said inturned flanges, and locking means adapted to resist rotation of said device in a direction relative to said molding opposite to said first direction, said locking means comprising a pair of parallel tabs stamped from portions of said cross plate located within the confines of the above described periphery, said tabs being further located on opposite sides of said shank in laterally offset relation thereto and slanting athwart the above mentioned major axis of said cross plate, each of said tabs having a substantially flat side surface and terminating in a sharp edge wholly contained within the plane of its side surface, each of said tabs extending upwardly at an acute angle from the side of said cross plate opposite said shank with the sharp terminal edges of said tabs defining the extremity of said device remote from said shank, the inclinations of said tabs relative to said cross plate being in directions to point at and contact the inner surface of said molding in directions to offer little resistance to rotation of said device in said first direction relative to said molding and to resist rotation of said device in said second direction relative to said molding by reason of said sharp edges biting into said molding and tending to apply compressive forces to said tabs, said tabs thus being effective to temporarily retain said fastening device in assembled relationship with said molding prior to assembly of the molding and fastening device with the aforementioned cooperating threaded element.

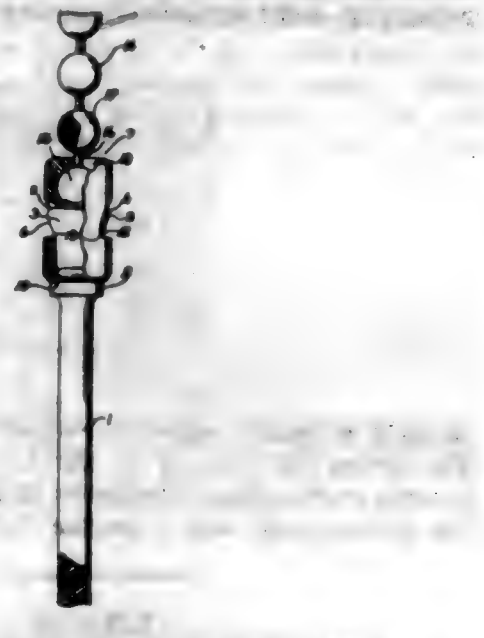
2,893,088
SAFETY BELT BUCKLE
William W. Harper and John W. Snyder, Pasadena, Calif., assignors to Automotive Safety Associates, South Pasadena, Calif., a corporation of California
Application April 27, 1956, Serial No. 581,047
9 Claims. (Cl. 24—75)



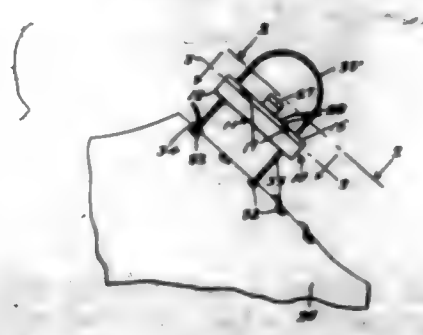
1. A safety belt buckle which comprises: a channel member; a hood pivotally movable about one end of said channel member; torsion spring means attached to said hood to force said hood inwardly towards said channel member; a linking member slidable within said channel member and beneath said hood; a spring-loaded locking member adapted to positively lock said channel member and said linking member when they assume a predetermined position with respect to each other; means for moving said locking member outwardly to unlock said channel member and said linking member; and a helical ejector spring having two ends, one end being retained within said channel, the other end adapted to move rearwardly to eject said linking member from within said channel member as said linking member and said channel member are unlocked.

2,893,089
DEVICE FOR COUPLING PLASTIC ELEMENTS AND BEADED CHAINS
John H. Bacon, Wellesley Hills, Mass.
Application March 22, 1956, Serial No. 573,263
6 Claims. (Cl. 24—116)

1. A fastening device adapted to engage a beaded chain comprising a plastic engaging clip having an enclosing wall forming a hollow center portion adapted to receive an end bead of said chain, and means adapted to be secured to said chain and for securing said bead at one end of said hollow center portion including a probe positioned within said hollow center portion adjacent said bead.



2,893,090
SHOELACE TIGHTENER
Walter S. Pagoda, Manville, N.J.
Application January 24, 1958, Serial No. 711,046
4 Claims. (Cl. 24—117)

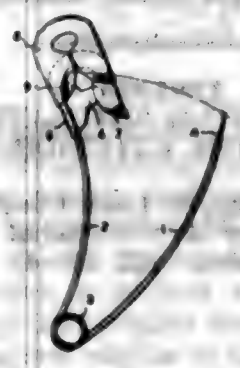


1. A shoelace tightener comprising an elongated housing including a top wall and a bottom wall, said walls having transversely spaced aligned openings adjacent the ends thereof, a clamping bar mounted for sliding movement longitudinally within said housing and having openings aligning with said top and bottom wall openings in one position of the clamping bar in the housing, said aligned openings being adapted to accommodate looped portions of a shoelace, a shaft extending through and journaled in the top and bottom walls, a pinion fixed to said shaft between said walls, said bar having a toothed portion forming a rack meshing with said pinion, and a handle fixed to an end of the shaft and disposed externally of the top wall for turning the shaft and pinion for displacing said bar longitudinally of the housing for moving the openings thereof out of full registry with the top and bottom wall openings for clasping said loop portions of the shoelace in the shoelace tightener.

2,893,091
SAFETY-PINS
Harold Mitchell, Birmingham, England, assignor to George Goodman Limited, Birmingham, England, a British company
Application June 25, 1956, Serial No. 593,597
Claims priority, application Great Britain July 30, 1955
2 Claims. (Cl. 24—158)

1. A safety pin comprising a cap and first and second limbs, said limbs being secured together at one end of each, said cap being secured to the other end of said first limb and the other end of said second limb being pointed

to engage said cap, said cap being formed of sheet metal shaped to define a tongue and a U-section recess between two wings, said tongue extending from said first limb and into said recess and being of a thickness smaller than that of said limbs, whereby to form two gaps between said tongue and wings, through either of which gaps the pointed end of said second limb can enter said recess, the relationship between said first and second limbs being such that the pointed end of said second limb is resiliently urged to a position beyond said recess remote



from said first limb, a sheath, said sheath being formed of sheet metal shaped to fit over said cap and have a limited sliding movement with respect to said cap, portions on said sheath being pinched inwardly towards each other, said inwardly pinched portions frictionally engaging the base of said tongue and serving to limit outward sliding movement of said sheath with respect to said cap, said sheath serving, in its innermost position, to block each of said gaps and prevent passage therethrough of said pointed end.

2,893,092

WITHDRAWN

2,893,093

SLIDE FASTENERS

Hans Erdmann, Maplewood, N.J., assignor to Waldes Kohinoor, Inc., Long Island City, N.Y., a corporation of New York

Application November 8, 1955, Serial No. 545,711
1 Claim. (Cl. 24—205.11)

A slide fastener comprising, in combination, rows of oppositely disposed interlocking fastener elements mounted on the adjacent edges of a pair of flexible carriers, a slider for engaging and disengaging said fastener elements when moved in opposite directions along the length of the fastener, said slider comprising front and rear wings, a neck connecting said wings in spaced parallel relation and cooperating therewith to define a Y-shaped channel extending through the slider body, a pull tab pivotally connected to the slider for actuating the same and having a normal lowered position in which it lies close to the slider front wing, and means for locking the slider in a fastener-closing end position thereby to prevent unintentional opening of the fastener while permitting free movement of the slider in fastener-opening direction from any intermediate position along the length of the slider, said means including a locking lug on the pull tab adapted in the lowered position of said pull tab to project through an opening in the slider front wing into the slider channel and to press on the one of the fastener elements within the channel then positioned directly below its free end, the inner face of the rear slider wing having a depression therein disposed generally below said opening which increases the normal depth of the channel by an amount such that said locking lug may slip on said one fastener element rather than cam-locking therewith, said depression having length as to accommodate a plurality of the fastener elements and terminating at its end adjacent the neck end of the slider in a locking shoulder, said shoulder being substantially spaced from the locking lug in the direction of the said neck end whereby said one element disposed beneath the locking lug is correspondingly spaced from said shoulder and is accordingly free to tilt clear of said locking shoulder upon movement of the slider in fastener-opening direction being initiated, and a top stop for establishing the fastener-closing end position of the slider, said top stop comprising a member having size and shape corresponding generally to that of the fastener elements and being mounted on a flexible carrier between two adjacent fastener elements at the upper end of a row thereof and being provided with means enabling it to interfit with the lower of said two adjacent elements, the construction and arrangement being such that said member forms a rigid extension of the lower of said two adjacent elements which is adapted to fill the space between said two adjacent elements, thereby to prevent the upper of said two adjacent elements from tilting clear of said locking shoulder when the slider is moved to a position in which said lower element is disposed below and is pressed upon by said locking lug as aforesaid.

2,893,094

STRAP FASTENERS

John E. Heckethorn, Denver, Colo., assignor to Heckethorn Manufacturing & Supply Company, Littleton, Colo., a corporation of Colorado

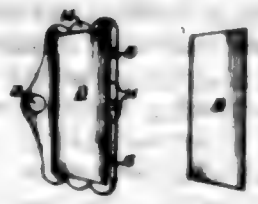
Application January 28, 1957, Serial No. 636,657
1 Claim. (Cl. 24—226)

A pair of interlocked strap fasteners for attaching two strap extremities together, the fasteners of the pair being formed from sheet metal and being exactly similar in construction and each comprising: a relatively wide, substantially rectangular portion provided with a rectangular opening similar in shape to the rectangular portion and occupying the major portion of the area of said portion; a tab portion extending forwardly from the middle of one side of said rectangular portion and lying in the plane of the latter, the said tab portion being narrower than the width of said rectangular opening; a hook formed on the outer extremity of said tab portion and extending upwardly and inwardly over one face of the latter so that two of said fasteners may be engaged by passing the hook of each fastener through the rectangular opening of the other fastener, with the tab portions of the fasteners lying in substantially parallel relation; a ridge resulting from an indentation in the rectangular portion of each fastener said ridge being positioned adjacent the tab portion and extending transversely of the axis of the tab portion, the ridge of each fastener being spaced away from the hook of the fastener so as not to be covered by the hook of that fastener, the hook of each fastener extending over and frictionally engaging the ridge on the other fastener and acting to retain the pair of fasteners in interlocked relation.

2,893,095
PLASTIC JEWELRY FINDING DEVICE MADE OF TWO PARTS INTEGRALLY JOINED

Leo F. Dolan, Jamaica, N.Y., assignor to Guild Arts & Crafts, Inc., a corporation of New York

Application July 24, 1952, Serial No. 300,670
1 Claim. (Cl. 24—265)



A plastic end-finding comprising a body member provided with a recess, the side walls of which are a multi-sided bordering flange and the bottom wall of which is a surface of said body member, one side only of said flange being provided with at least one notch to accommodate a flexible strand, a second body member substantially complimentary with said recess and having a mating surface adapted to mate with the bottom surface of said recess, a flexible bead strand positioned in said notch and between the mating surfaces of said body members, said mating surfaces being of such a composition that they will integrally unite throughout their mating surfaces to form a bead finding assembly having said flexible strand permanently secured thereto.

2,893,096
FASTENER STRUCTURE

Eric Birger Forsberg, Northwood, England

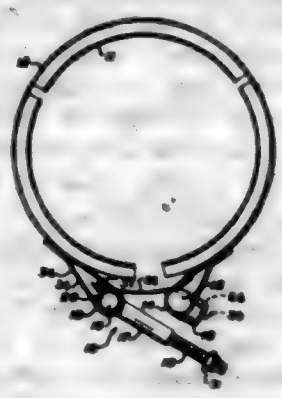
Application March 16, 1956, Serial No. 572,117
1 Claim. (Cl. 24—265)

A fastener comprising a single strip of stiff resilient metal of C-shape extending over a major arc of the C, a pair of prongs on each end of said strip folded back upon themselves so as to be directed inwardly and rearwardly with respect to the C, the distance between the points of the prongs at the respective ends of the C being approximately equal to but less than the diameter of the fastener.

2,893,097
TAKE-UP AND LATCHING DEVICE

Joseph F. Hill, Columbus, William C. Whitcomb, Hilliards, and Donald J. Van Horn, Columbus, Ohio, assignors to Surface Combustion Corporation, Toledo, Ohio, a corporation of Ohio

Application December 3, 1956, Serial No. 625,818
9 Claims. (Cl. 24—279)

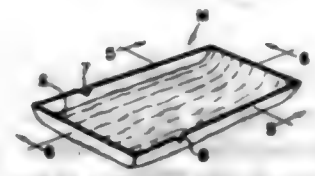


1. A take-up and fastening device for detachably securing the ends of a flexible band circumscribing a member to be clamped comprising first and second loops attached to the ends of said band; a bolt pivotably disposed in the first of the loops; a nut threadably mounted on said bolt; a bolt receiving member pivotably disposed in the second loop; and a flexible tang extending outwardly from said second loop; and said first loop having an aperture through its walls for engaging said tang when disposed therethrough; the combination of said bolt, said nut and said bolt receiving member forming a first locking means, and a combination of said tang and said apertured wall forming a second locking means.

2,893,098
MEANS FOR APPLYING SIMULATED MASONRY TO WALLS AND THE EXTERIOR SURFACES OF BUILDINGS

David H. Tilley, St. Louis County, Mo.

Application January 28, 1955, Serial No. 483,028
3 Claims. (Cl. 25—1)

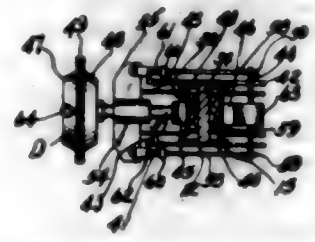


3. A disposable mold for use in applying simulated masonry facings to building structures, said mold comprising a pan-shaped body having a flat bottom wall and a narrow upstanding rim extending around the entire periphery of said bottom wall, said body being formed of paper-like material, the interior surface of which is contoured to simulate the surface-texture of a piece of masonry, and a thin loosely adherent layer of rock particles mechanically pressed into said interior surface.

2,893,099
TAMPING DEVICES

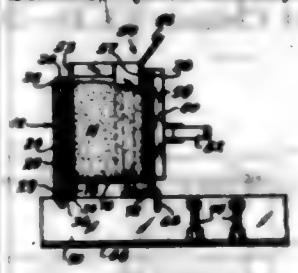
Herman P. Trautman, Saginaw, Mich., assignor to American-Marietta Company, Chicago, Ill.

Application June 22, 1953, Serial No. 363,240
3 Claims. (Cl. 25—37)



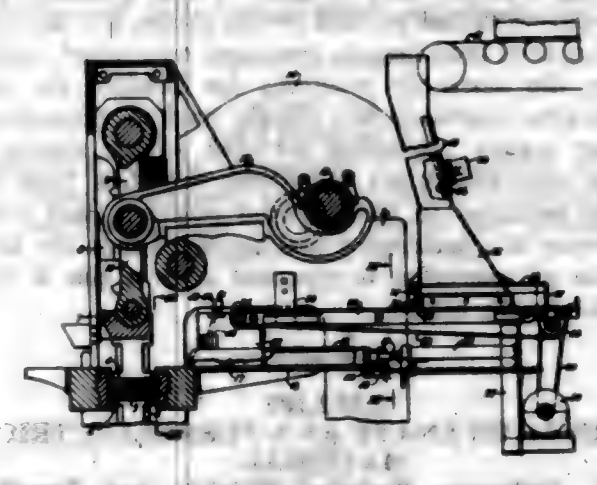
1. In a tamping device for compacting material between forms, a tamp holder, support means to position said holder relative to said forms, parallel disposed tamp sticks in said holder, means for actuating said holder and the tamp sticks therein rapidly to-and-fro to compact said material, a friction plate in engagement with the outer surface of each tamp stick, resilient means positioned adjacent each friction plate, a pressure operated diaphragm having a plunger to compress the resilient means adjacent one of said friction plates and exert a pressure thereon to retain said stick in said holder, and means on said plunger movable in a direction opposite thereto upon actuation thereof to compress the resilient means in engagement with a second friction plate and exert pressure thereon to frictionally retain a second tamp stick in said holder.

2,893,100
BLOCK MOLDING DEVICE
Richard D. Evans, Melville, Me.
Application January 23, 1956, Serial No. 560,511
2 Claims. (Cl. 25—41)



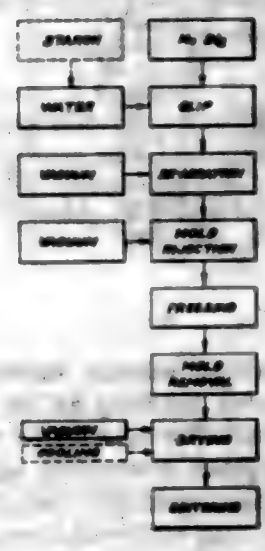
1. A block molding device comprising a stationary platform with a bridge member extending thereacross; an unattached mold portion positioned on the stationary portion having a base member with a downwardly projecting stud thereon which is positioned adjacent to said bridge member and which is adapted to cooperate with said bridge member to limit angular displacement of the mold portion to 90 degrees relative to the stationary platform, a pair of mold walls hinged together and mounted in upstanding position on the base member for angular movement thereover, each of said mold walls having a clamp member attached to the opposite free end thereof; a pallet removably attached to said mold walls by the clamp members, said mold walls, said pallet, and said base member defining a mold cavity having an opening thereinto; and a funnel member positioned on the mold walls and having a shape that conforms to the shape of the opening into the mold cavity, said funnel member increasing the capacity of the mold cavity so as to hold an excess of molding material and including means thereon for holding said funnel member in position on the mold walls when the mold portion is jarred to settle the molding material, said funnel member having an edge thereon which is positioned to be drawn across the opening into the mold cavity for scraping the edge of the molding material adjacent thereto when removing the funnel member from the mold portion.

2,893,101
BRICK PRESS BATCH DISTRIBUTOR
Richard B. Brimer and Paul Lisec, Windham, Ohio, assignors to Harbison-Walker Refractories Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application July 26, 1956, Serial No. 600,240
5 Claims. (Cl. 25—103)



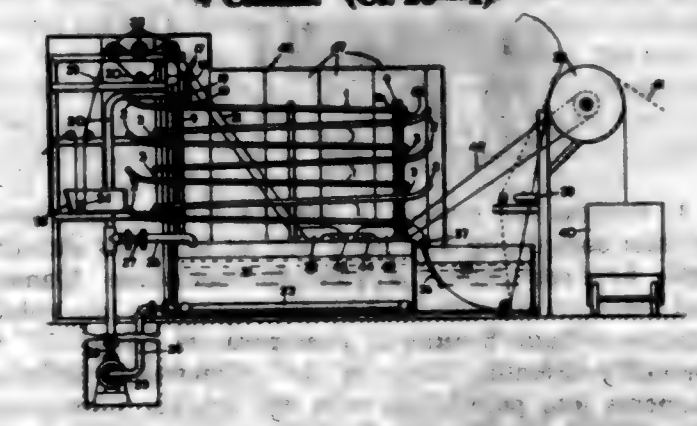
1. Feeding apparatus for use with a brick press provided with a molding cavity, said apparatus comprising a horizontally reciprocable charging box having an open top and bottom and being movable forward from a rear batch-receiving position to a discharging position over said cavity, a transfer hopper directly above the charging box and emptying into it in its rear position, a conveyor belt having one end delivering to said hopper, and an open-bottom feed hopper above the opposite end of the belt and substantially engaging it, the lower end of the front of the feed hopper being provided with an outlet slot, whereby the belt will convey from the feed hopper to the transfer hopper a layer of batch material, the widths of the charging box, transfer hopper and said slot transversely of the belt being substantially the same to minimize agitation of the batch material after it leaves the feed hopper.

2,893,102
ARTICLE FABRICATION FROM POWDERS
William A. Maxwell, Bay Village, Raymond S. Gurwick, Cuyahoga Falls, and Allen C. Francisco, Berea, Ohio, assignors to the United States of America as represented by the Secretary of the Navy
Application January 7, 1954, Serial No. 402,828
4 Claims. (Cl. 25—156)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A process of forming articles from a refractory powder which consists in mixing a liquid with said powder to form a thick, non-flowing slip, moving the slip into a mold while subjecting the slip to vibration, freezing the slip to form a casting, removing the mold, drying the casting in a vacuous atmosphere at a temperature below the melting point of the liquid and sintering the casting.

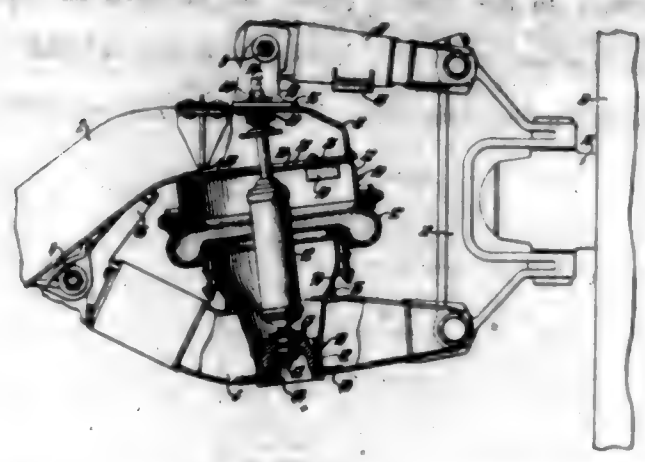
2,893,103
APPARATUS FOR TREATMENT OF TEXTILE MATERIALS
Thomas Ellison and Harold Mailhall, Spondon, near Derby, England, assignors to British Celanese Limited, a corporation of Great Britain
Application December 24, 1953, Serial No. 400,176
Claims priority, application Great Britain January 2, 1953
4 Claims. (Cl. 26—1)



1. Apparatus for the liquid treatment of textile fabrics in open width, said apparatus comprising an inclined tray open at its lower end, means for feeding to the upper end of the tray a fabric in open width and a treatment liquid therefor, whereby the fabric is carried down the tray by the liquid, both fabric and liquid falling

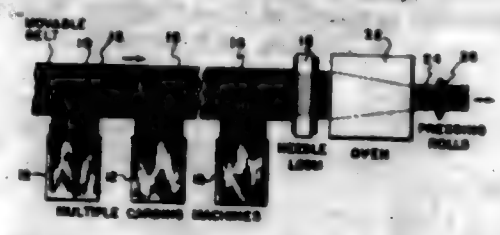
freely downwards at the end of the tray, and an expander bar adapted to maintain the fabric in open width at the point at which the latter leaves the tray, said expander bar being near to but back from the end of the tray and spaced away from the tray sufficiently to permit escape of liquid from between the fabric and the end of the tray.

2,893,104
AIR SUSPENSION
Richard H. Hancock, Orchard Lake, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 23, 1957, Serial No. 661,121
4 Claims. (Cl. 267—15)



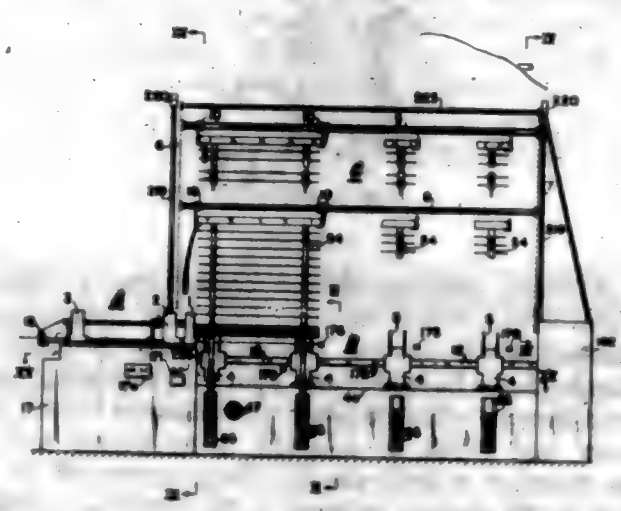
1. In a front wheel vehicle suspension including a hollow frame member forming an air reservoir, a lower arm pivotally connected to said frame member for movement in a vertical plane containing said frame member, a resilient air bellows assembly interposed between said frame member and arm removed from said pivotal point and supporting said frame member on said arm, said bellows assembly having an open upper end in registry with an opening in said frame member, and shock absorbing means concentrically located within said bellows and having a lower end secured to said arm and an upper end extending through said opening and secured to said frame member.

2,893,105
FORMATION OF FELT-LIKE PRODUCTS FROM SYNTHETIC FILAMENTS
Herbert G. Lauterbach, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application June 11, 1954, Serial No. 436,014
3 Claims. (Cl. 28—72.2)



1. Process for making a felt-like laminar non-woven product comprising forming a batt of filaments including both heat-retractable polytetrafluoroethylene filaments and filaments characterized by decomposition into volatile substances upon heating to a temperature below 327° C., forceably orienting some of the polytetrafluoroethylene filaments into parallelism with one another substantially perpendicular to the faces of the batt, removing essentially all except the polytetrafluoroethylene filaments from the product by heating to a temperature below 327° C., the fusion temperature of the polytetrafluoroethylene filaments, and above the decomposition temperature of the other filaments, and diminishing the batt by retraction of the filaments into a coherent mass.

2,893,106
APPARATUS FOR ASSEMBLING VENETIAN BLINDS
Harry S. Rosenbaum, Baltimore, Md.
Application April 3, 1952, Serial No. 280,210
31 Claims. (Cl. 29—24.5)

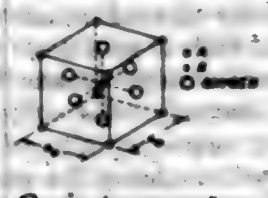


28. A machine for assembling slats, ladder tapes and lifting cords of Venetian blinds comprising dies for cutting slats from long lengths of slat material and dies mounted at a predetermined location for punching holes therein for lifting cords at locations in the slat material at a predetermined distance from the ends of the slats, means for creating a releasable feed of slat material for feeding it longitudinally through the dies and to positions for assembly in the tapes, slat supporting means at said assembly positions in line with the path of slat material through the dies, and removed from the dies in the direction of travel of the slat material through the dies, lifting cord feed means mounted at spaced locations relative to each other and at the same spaced distance that the holes are spaced from each other in the slat, switch means in line with the advancing slat material and at a distance from said lifting cord feed means to stop the slat with the holes therein located in position for actuation of said lifting cord feed means, said switch means being operable by the slat material as it passes from the dies through the assembly positions for actuating the cutting and punching dies to cut and punch the slat material and momentarily stop the movement of the slat material through said assembly positions so that holes for lifting cords punched in the slat material are at said assembly positions, a tape guide adjacent each assembly position for guiding a ladder tape to each of said assembly positions, means actuated by said switch means for activating said lifting cord feed means, a support positioned vertically above the assembly positions for holding the tapes and slats after assembly in a closely stacked arrangement, slat lifter means controlled by said switch means for actuating said slat lifters for lifting the slats from said assembly positions to said stacked position, said switch means being so constructed and arranged that the aforesaid cycle of operation is repeated after a slat is lifted from said switch means.

2,893,107
BARIUM TITANATE AS A FERROELECTRIC MATERIAL
John R. Anderson, Berkeley Heights, and Joseph P. Remeika, Newark, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application August 7, 1952, Serial No. 303,197
11 Claims. (Cl. 29—25.35)

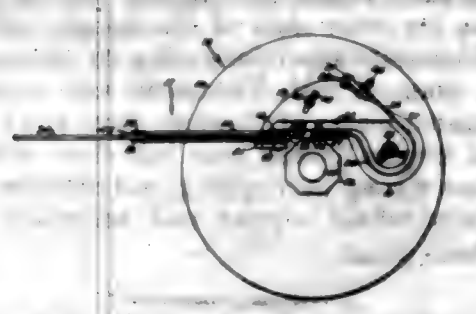
1. The method of reducing the coercive force and squaring the hysteresis loop in a single crystal of ferroelectric material which comprises applying across said crystal alternating voltages having a frequency between

four and fifty kilocycles per second, and simultaneously varying the temperature of the said crystal from a tem-



perature above the Curie temperature to room temperature.

2,893,108
BREAKER POINT FILING DEVICE
Harry R. Kitts, Green Bay, Wis., assignor to Stanley E. Binish, Green Bay, Wis.
Application May 23, 1957, Serial No. 661,185
1 Claim. (Cl. 29—76)

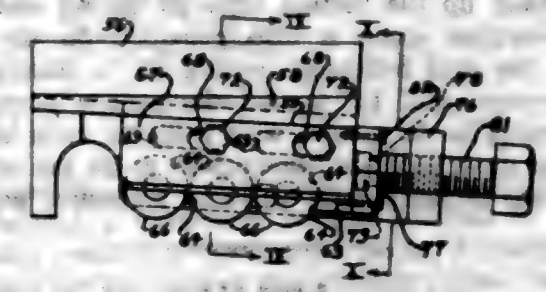


In a filing device for filing the opposed faces of a pair of coacting contact points of an ignition interrupter wherein the contact points are mounted in alignment on respective supporting means that are spring biased in a direction to normally close the contacts and to permit their separation in a predetermined manner, a guide case having opposed spaced walls adapted to receive a file therebetween for reciprocation in performing filing operations, the walls of said case having aligned openings therein adapted to receive the contact points to be filed, the thickness of said case adjacent said openings being greater than the distance between said contact point supporting means when the contact points are closed to effect clamping of the case in any position by said biasing of said supporting means when the case is inserted between said supporting means with the contact points in the respective openings in said walls, and each wall of said case being of less thickness than the protrusion of the corresponding contact point in the opening therein from its supporting means to enable a file guided between the contact points by said case to engage and file the face of both contact points simultaneously in situ.

2,893,109
LEAD PENCIL
Marshall B. Young, Riverdale, N.Y., assignor to Eagle Pencil Company, a corporation of Delaware
Application May 18, 1956, Serial No. 585,904
1 Claim. (Cl. 29—90)

An implement comprising a rod shaped handle member of wood which is hexagonal in cross section and thus has six panels, a burnishing cap at one end thereof of polystyrene, said cap being hexagonal in end view and of dimensions completely to cover the end of the handle and having a keying structure integral therewith consisting of three prongs triangular in cross section with the roots thereof flush with the periphery of the cap, said prongs tapering toward a substantially pointed free end both in their width and their triangular cross section, said prongs being three in number, extending from alternate sides of the hexagonal cap and of width at their roots substantially equal to the widths of alternate panels, said handle having notches at alternate panels thereof extending inward and downward from its free end and of dimensions complementary to those of the respective prongs on the burnishing cap for accommodating said prongs to extend flush with the corresponding faces of the panels, said burnishing cap being adhesively attached to the handle substantially throughout that area of the cap and prongs which engage the handle member.

2,893,110
WHEEL MACHINING TOOL HOLDER
Seabron H. Gibson and Loyola I. Mulvaney, Birmingham, Ala.
Application June 18, 1956, Serial No. 591,848
4 Claims. (Cl. 29—97)

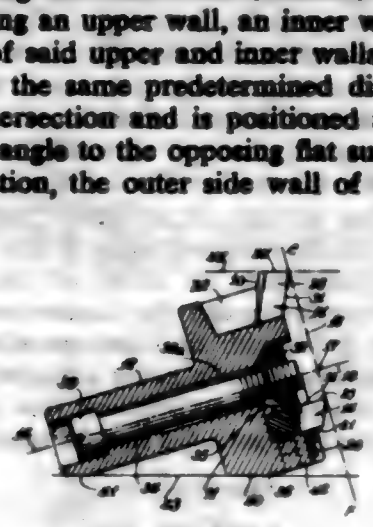


1. For use in machining the treads of flanged wheels, a tool holder having a curved slot at one end adapted to fit over a wheel flange and having openings spaced along a side thereof, a cutting element holder mounted on the tool holder and having a plurality of elongated slots therein registering with said openings in the tool holder, said cutting element holder having a working edge disposed adjacent the curved slot and a plurality of contiguous arcuate recesses extending through said working edge, each of said recesses comprising slightly more than a semi-circle, a cylindrical cutting element mounted in each recess and projecting beyond the tool holder in cutting position, a retaining plate mounted over the cutting element holder and having a plurality of elongated slots therein registering with the openings in the tool holder and the slots in the cutting element holder, and securing means passing through the slots in the retaining plate and the cutting element holder and into the openings in the tool holder, whereby the retaining plate and cutting element holder are movable with respect to the securing means to provide for adjustment of the positions of the cutting elements relative to the tool holder.

2,893,111
ROTARY CUTTER
Lowell W. Dodekind, Melrose Park, Ill.
Application May 16, 1955, Serial No. 508,344
6 Claims. (Cl. 29—105)

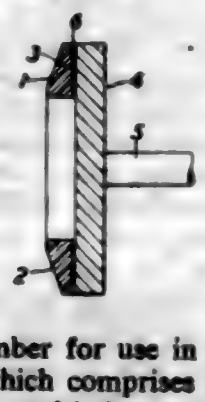
1. A rotary cutter having a plurality of cutting bits which comprises: a rotatably mountable tool body, said tool body having a plurality of flat surfaces on its periphery, said surfaces lying in respective planes each of which is at the same predetermined angle to the axis of rotation of the body, at the same predetermined distance from the point where said axis intersects the plane of the cutting face of the tool, and at the same predetermined angle

to the planes of the adjoining flat surfaces on either side, said tool body also having a plurality of bit-receiving grooves in its bottom face, one of said grooves terminating generally opposite each of said flat surfaces, each groove having the same cross sectional dimensions, each groove having an upper wall, an inner wall, and an outer wall, each of said upper and inner walls lying in a plane which is at the same predetermined distance from said point of intersection and is positioned at the same predetermined angle to the opposing flat surface and to said axis of rotation, the outer side wall of the groove being



located inwardly of the periphery of the tool body and being approximately as deep as the height of the bit which is inserted in the groove so that when a bit is installed in place in the groove a part of the mass of the tool body is located behind the heel of the tool bit to back up the cutting edge of the bit and so that chip clearance space is also provided on the leading side of the next following cutting bit; a cutting bit for each groove, said bit having dimensions permitting it to be seated in the groove with a slip fit, each bit having the same cross sectional dimensions as all the other bits; and means securing each bit in its respective groove.

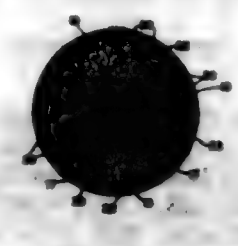
2,893,112
FRICTION MEMBERS HAVING SINTERED COMPOSITIONS
Norman C. Moore and John B. Huffadine, Northampton, England, assignors to The Plessey Company Limited, Ilford, England, a British company
Application September 3, 1957, Serial No. 681,856
5 Claims. (Cl. 29—182.5)



1. A friction member for use in brakes, clutches, and similar apparatus, which comprises a supporting element made of metal and a friction element firmly attached thereto and consisting of a sintered mixture of 5 to 40 percent by weight of alumina with a molybdenum chromium alloy having substantially the same coefficient of thermal expansion as the alumina used.

2,893,113
RECOVERY OF TITANIUM FINES AND MANUFACTURE OF ELECTRODES THEREFROM
William Howell, Warren, Ohio, assignor to Mallory-Sharon Titanium Corporation, Niles, Ohio, a corporation of Delaware
Application August 19, 1955, Serial No. 529,516
5 Claims. (Cl. 29—184)

2. A consumable titanium electrode formed from titanium scrap material, including a rigid laminated core comprising a stack of rectangular pieces of titanium sheet material of uniform size and shape in metal-to-metal, surface-to-surface contact, the stacked pieces having aligned edges, adjacent pieces being secured together by edge welding and by spaced titanium straps, titanium skulls welded to the ends of said core, the cross section of the skulls being considerably greater than the cross section of the core, relatively wide strips of titanium sheet material welded to opposite sides of the core forming troughs on two opposite sides of the core, elongated pieces

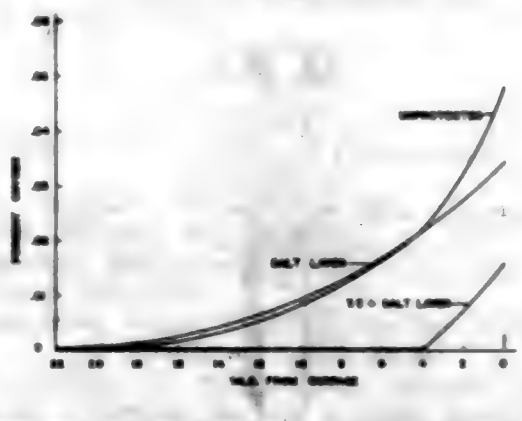


of titanium sheet material of various lengths and widths bound upon the outer sides of the troughs with titanium straps and substantially conforming to the curvature of the skulls, titanium fines located in said troughs, additional elongated pieces of titanium sheet scrap of various widths and lengths located over said fines with end and edge portions thereof overlapping, and titanium straps circumferentially bound around said additional elongated pieces of sheet scrap.

2,893,114
HOT WORKING OF METALS
Roy A. Halverson, Dearborn, Mich.
No Drawing. Application December 4, 1953
Serial No. 396,323
7 Claims. (Cl. 29—424)

1. In the hot working of a metal selected from the group consisting of magnesium and copper and the metals lying therebetween in the electromotive series of elements, the method for preventing substantial accumulation of impurities in the metal which comprises the step of hot working the metal in an atmosphere of air and maintaining on the heated working surface of the metal a fluxing salt which has a melting point below, and a boiling point above, the working temperature and which is oxidizable under the working conditions to give a volatile product containing the anion of the fluxing salt and a non-volatile product containing the cation of the fluxing salt, the non-volatile product being reactive under the working conditions with the oxide of the metal being worked to form a liquid flux.

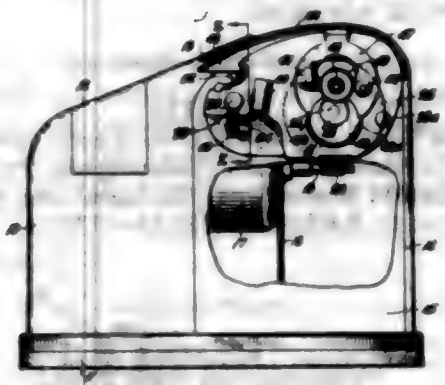
2,893,115
METHOD OF COATING AND WORKING METAL
Frank X. McCawley, Cheverly, Md., assignor to Chicago Development Corporation, Riverdale, Md., a corporation of Delaware
Application June 28, 1957, Serial No. 668,771
1 Claim. (Cl. 29—424)



The method of fabricating a metal selected from the group consisting of titanium, and zirconium, and alloys consisting principally of these metals which consists in

coating said metal with carbon and making it a cathode in an electrolytic cell having a fused electrolyte of at least one chloride selected from the group consisting of calcium, strontium, barium, sodium, potassium and lithium chlorides and dissolved therein 1–10% titanium as lower chlorides and .1–5% of a metal corresponding to the chlorides of the fused electrolyte, and passing a direct current from a particulate titanium anode to said cathode whereby to form a coating on the cathode surface and then fabricating the metal by subjecting it to working at temperatures from 750–900° C., whereby to limit oxygen absorption to .02% when a surface layer about 5 mils thick is removed.

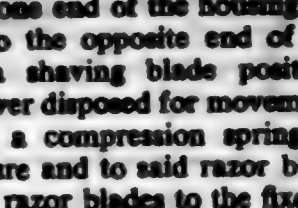
2,893,116
POWER-OPERATED CAN OPENER
Frank E. Aberer, Kansas City, Kans., and Henry J. Talge, Kansas City, Mo., assignors to John C. Hockery, Kansas City, Mo., trustee
Application May 29, 1957, Serial No. 662,464
7 Claims. (Cl. 30—4)



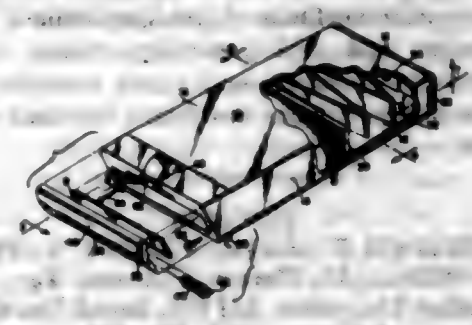
1. A power operated can opener comprising a power source, a drive shaft driven by said power source, a plate rotatably journaled on said drive shaft, means limiting the rotation of said plate in both directions around said shaft to a restricted arc between a first and a second extremity, resilient means tending to maintain the plate at the first extremity of said arc, actuating means for said power source, means cooperating with said plate to contact said actuating means on rotation of the plate to the second extremity of its arc, a cutter wheel carried by said plate and at least substantially fixed relative thereto whereby at least some of any forces applied to the cutter wheel are applied to said plate, a feed wheel fixedly mounted on said drive shaft to rotate therewith relative said cutter wheel, one of said wheels movable toward and away from the other wheel to permit engagement and disengagement of a can rim therebetween, the feed wheel and drive shaft driven in rotation by said power source in such direction that force from the feed wheel applied to the cutter wheel through a can being cut tends to rotate the plate around the drive shaft from the first to the second extremity, and means for initially rotating said plate from the first extremity to the second extremity whereby to actuate said power source when a can is positioned between the cutter wheel and the feed wheel.

2,893,117
CAN OPENER LATCH AND CUTTER ASSEMBLY
William J. Landry, Blue Springs, Mo., assignor to John C. Hockery, Kansas City, Mo., as trustee
Application November 27, 1957, Serial No. 699,359
4 Claims. (Cl. 30—9)

1. A can opener cutter assembly comprising a base with two posts mounted thereon, a cutter with a bearing disc rotatably and removably mounted on one of said posts, a groove around the cutter mounting post, a locking clip having two segments, the first segment pivotally mounted on the post other than the cutter mounting post, the second segment of said latch pivotally mounted on said first segment and engageable with the groove around the cutter mounting post, said clip having a projection engageable by the cutter bearing disc when the cutter is improperly mounted on the cutter post, thereby preventing latching of the clip on the cutter post.



2,893,118
MAGAZINE TYPE SAFETY RAZOR
Harold C. Lewis, Seattle, Wash., assignor of fifteen per cent to Eugene Krajewski and Sophie Krajewski, Seattle, Wash.
Application May 31, 1957, Serial No. 662,813
4 Claims. (Cl. 30—40)

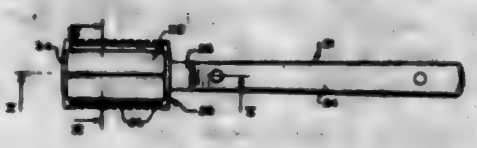


1. A repeating safety razor, comprising: a rectangular housing having a transverse section adapted to accept razor blades parallel to the section plane; a loading end closure plate for one end of the housing; a cover member fixedly secured to the opposite end of the housing and provided with a shaving blade positioning means; a razor blade follower disposed for movement longitudinally of said housing; a compression spring secured to said loading end closure and to said razor blade follower and adapted to move razor blades to the fixed cover member; said fixed cover positioned in spaced apart relationship to said housing to provide a slot through which the sharpened edge of a razor blade may be passed to its shaving position and a discharge slot at one end of said fixed cover through which a used razor blade may be discharged; a slider member, a resilient hook slidably disposed in said fixed cover and adapted to engage one end of a razor blade and as the slider member is moved to said discharge slot, to carry the blade with it and move it partially out through said discharge slot; a blade recess formed in the inner face of said fixed cover member adapted to receive a razor blade and position it in its shaving position; a resilient blade seating follower member adapted to engage the unsharpened edge of a razor blade and position it in front of said blade recess; and a depressable button on the exterior of said housing and engaging said resilient follower and coacting with said compression spring to position a razor blade in its position of use.

2,893,119
SAFETY RAZOR WITH BLADE RETAINING MEANS ON THE RAZOR CAP AND BLADE ADJUSTING MEANS
Joseph Eichner, West Caldwell, N.J.
Application September 25, 1956, Serial No. 611,902
4 Claims. (Cl. 30—64)

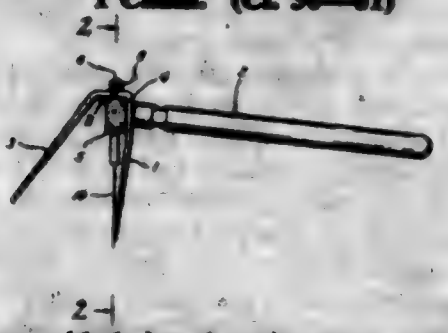
3. A safety razor comprising a guard member and a clamping member for holding a flexible razor blade, said guard member and blade each having a longitudinal slot and said blade adapted to be interposed between and in

contact with said guard member and clamping member, said guard member having spaced apart teeth along opposite edges thereof and said longitudinal slot of said guard member being intermediate of said opposite edges, said clamping member comprising laterally extending pressure members and a pair of spring arms projecting from said pressure members for disposition in said slots of the blade and guard member, said spring arms connected together along adjacent edges and normally spread apart in direction of extension of said arms away from said connected



edges and toward said pressure members, said arms providing means integral therewith and projecting outwardly therefrom adapted to pass through both of said slots to underlie the margin of said slot of the guard member with said spring arms pressed into close relation where passing through said slots and in tensional contacting relation with opposite surfaces of the longitudinal slot in said guard member and said projecting means holding the pressure members toward said guard member and compressing the blade between the guard member and clamping member.

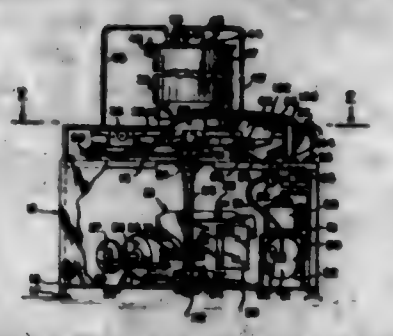
2,893,120
YIELDABLE BLADE SAFETY RAZOR
William M. Mercer, Houston, Tex.
Application December 3, 1956, Serial No. 626,823
1 Claim. (Cl. 30—61)



In a razor, a blade housing, the upper end of said housing having a chamber, said chamber having a port extending through the upper end wall thereof, a vertically movable plate in said chamber having a projection extending upwardly through said port, the upper end of said projection being externally threaded and a nut on said threaded end of said projection bearing against the outer surface of said housing for adjusting the limitation of downward movement of said plate in said chamber, a block of resilient material in said chamber between said plate and the upper inside wall of said chamber, said block having a port therethrough in alignment with the port in said chamber and through which the said projection extends permitting upward movement of said plate upon application of sufficient pressure by the blunt edge of a razor blade to be mounted in said housing to cause the resilient material to yield and to permit the resilient material to return the blade to starting position upon release of pressure against said plate.

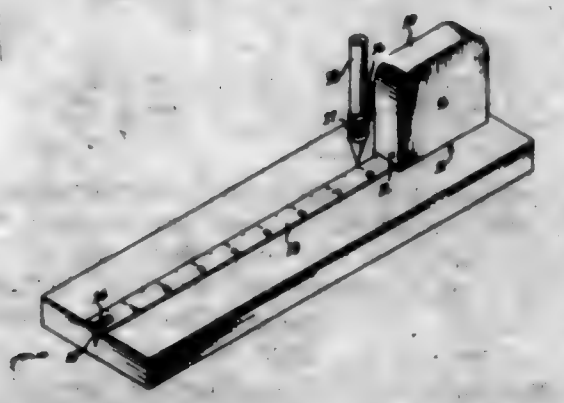
2,893,121
CHEESE BALL WEIGHING AND SHAPING MACHINE
Angelo A. Mongiello, Brooklyn, N.Y.
Application August 1, 1957, Serial No. 675,729
12 Claims. (Cl. 31—46)

1. A machine for forming cheese balls and the like comprising a table, a shaft extending upwardly through the table, a rotatable carrier mounted on the shaft, power means connected to the shaft for intermittently turning said shaft and carrier, a series of split molds on said carrier and angularly spaced from each other, said molds having cheese-receiving openings lying flush with the top of the carrier, a hopper adapted to contain cheese under pressure with which the mold openings are automatically registered in succession, means between the hopper and



the mold for severing the cheese in the mold from the cheese in the hopper upon the molds being advanced from the hopper opening and a laminating plate overlying the carrier and the molds for laminating and smoothing down the severed part of the cheese in the mold upon the mold being advanced.

2,893,122
COMBINATION MEASURING TAPE AND SCRIBE
Arcanio Greco, Philadelphia, Pa.
Application March 1, 1956, Serial No. 568,871
1 Claim. (Cl. 33—27)

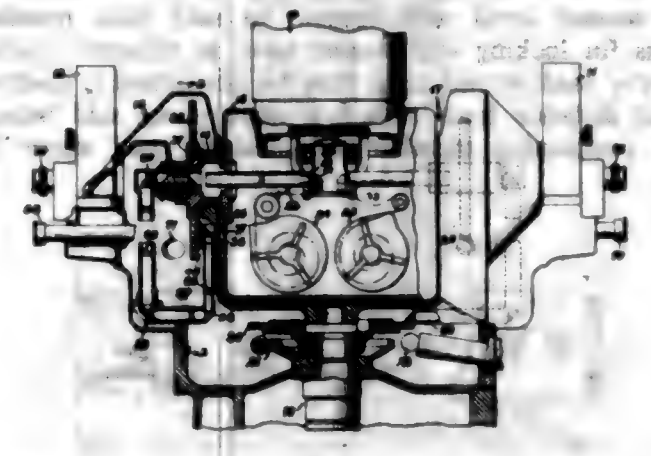


A combination measuring tape and scribe comprising, a box-like casing having flat surfaces, said casing having a slotted opening adjacent to one of said flat surfaces, a metallic measuring tape residing within said casing and having one end protruding from said slotted opening, a rigid L-shaped pull-tab fixedly attached to the protruding end of said tape and having a pointed arm depending therefrom, an L-shaped bracket mounted on said casing in spaced relationship with said tape, and a C-shaped metallic clamp carried by said bracket and lying in spaced relationship and adjacent to the side edge of said tape, said clamp being self-expandable to accommodate cylindrical scribing means of various diameters.

2,893,123
CINETHEODOLITES
Willi Bach, Berlin-Wilmersdorf, and Ernst Brockerte, Berlin-Steglitz, Germany, assignors to Askania-Werke A.G., Berlin-Friedenau, Germany, a corporation of Germany
Application April 21, 1955, Serial No. 502,911
Claims priority, application Germany April 30, 1954
7 Claims. (Cl. 33—46)

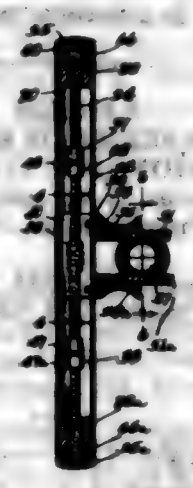
1. A cinetheodolite comprising: a telescope; a camera; a mechanism for angularly moving the telescope together with the camera to different, consecutive angular positions; means in the camera for producing on a photographic film record consecutive target images at predetermined ones of said positions of the telescope and camera, so that each image shows a target imaged through the telescope; a disc mounted for angular movement with

the telescope and camera; a reference member opposite the disc; a marker system on the disc, including a plurality of separate, visible, spiral markers, disposed in different concentric portions of the disc, for identifying said consecutive angular positions by exposing a different series of points of spiral markers to the reference member in each consecutive angular position; and marker



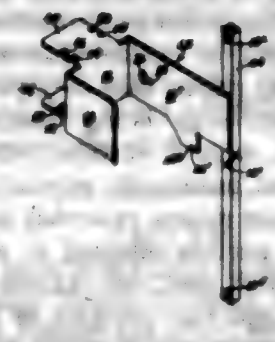
imaging means associated with the reference member, extending across the entire system of spiral markers and adapted in each of said predetermined positions to optically transmit to said film record a marker image indexed with the corresponding target image and showing one of said series of points, thereby facilitating automatic scanning of the film record.

2,893,124
ARCHERY BOWSIGHT
Arvid M. Sundquist, Dundee, Ill., assignor to Reliance Tool & Die Works, Elgin, Ill., a copartnership
Application March 20, 1957, Serial No. 647,307
18 Claims. (Cl. 33—46)



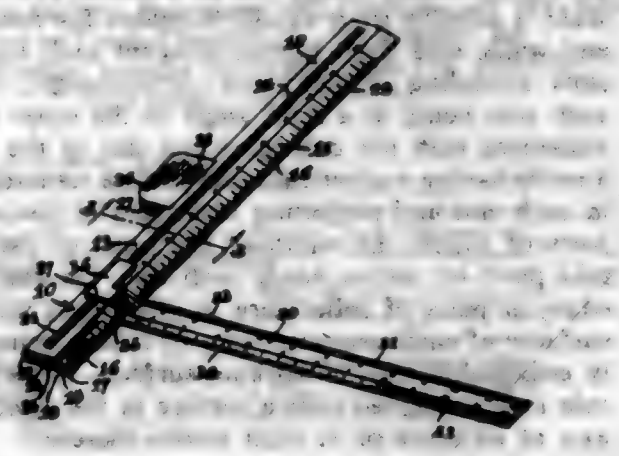
1. A bow sight comprising elongated guide means for mounting on a bow limb, rotatable screw means carried by said guide means and extending longitudinally thereof, slide means carried by said guide means for rectilinear movement relative thereto independently of said screw means, a sighting device carried by said slide means, a plurality of stop members having threaded engagement with said screw means and normally disposed in predetermined spaced apart relationship and with each stop member adapted for micro adjustment therealong when held against rotation during rotation of said screw means, and means providing a releasable and selectively engageable connection between said slide means and each said stop member and operating to hold a connected stop member against rotation when the slide means is connected thereto for effecting micro adjustment of the slide means upon rotation of said screw means, while permitting quick release and selective shifting of the slide means from the connected stop member to another stop member.

2,893,125
LINE HOLDING DEVICE FOR BRICKLAYING
Everett Kaeppel, Hartford, Conn.
Application November 25, 1955, Serial No. 548,927
10 Claims. (Cl. 33—85)



1. A device adapted for use with a stationary rectangular upright member and adapted for holding a bricklaying guide line extending horizontally in a selected direction perpendicular to two opposite faces of said upright member, which device includes an open-front U-shaped retaining portion having two parallel legs spaced for engaging said opposite faces of said upright member and having a rear connecting portion between said legs which device also includes a downwardly exposed locating face registrable with a course mark on an engaged upright member and located at a level at least as low as the lowermost part of said retaining portion and which device has all of its parts positioned to leave an unobstructed space below said locating face, one of the legs of said device projecting substantially forwardly beyond the retaining portion of the device and beyond an engaged upright member and the last said leg also having a portion projecting downwardly substantially below the level of the locating face, and a line holding means on said projecting leg adapted for holding a horizontal guide line extending in said selected direction, said line holding means being located to hold a guide line in a position which is approximately at the level of said locating face and which is spaced from the outermost edge of said projecting leg by a distance on the order of the thickness of a guide line.

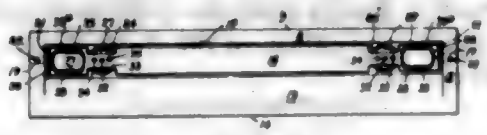
2,893,126
DRAWING INSTRUMENT
Maurice Cailler, Montreal-Nord, Quebec, Canada
Application November 30, 1956, Serial No. 625,277
3 Claims. (Cl. 33—103)



1. A T square comprising an elongated rectangular head member of U-shaped cross section of resilient material having a bottom portion, a rounded central portion and a top portion, said top portion having a longitudinally extending slot, said top portion being of less width than said bottom portion, said top portion along the longitudinal edge thereof remote from said rounded central portion being integrally formed with a straight, downwardly and outwardly extending portion terminating along its lower longitudinal edge in an inwardly extending base portion lying in the same plane as said bot-

tom portion, said inwardly extending base portion along its inner longitudinal edge being integrally formed with an upwardly bent portion passing over the longitudinal edge of said bottom portion and continuing inwardly in an overlying portion in abutment with the outer portion of said bottom portion whereby to provide a pair of cooperating jaws adapted to receive therebetween the edge of a sheet of drawing paper, said overlying portion along its inner longitudinal edge being integrally formed at right angles thereto with a vertical portion supporting said downwardly and outwardly extending portion, longitudinally spaced stop means provided on the upper surface of said bottom portion adapted to align the edge of the drawing paper with said slot, handle means for separating the bottom and top portions of said head member so as to permit the insertion of the edge of the drawing paper into engagement with said stop means, a slide of substantially T-shaped cross section having a depending portion received within said slot for sliding movement therewithin and a horizontal portion in sliding engagement with said top portion, a downwardly and outwardly extending member connected to one end of said slide and in sliding engagement with said downwardly and outwardly extending portion of said head member, an elongated rectangular blade, and means connecting one end of said blade with said downwardly and outwardly extending member whereby to secure the paper to said head member and to permit the movement of said blade longitudinally thereof for drawing parallel lines on the paper.

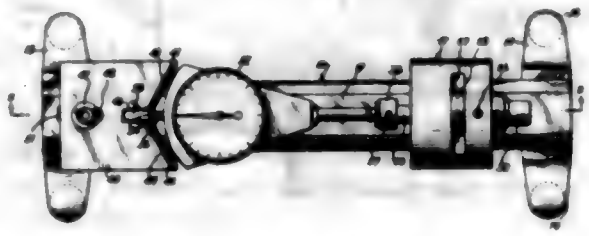
2,893,127
PARALLEL RULE
Ian Arthur McIntosh, Westmead, near Sydney, New South Wales, Australia
Application August 23, 1956, Serial No. 605,820
Claims priority, application Australia August 25, 1955
5 Claims. (Cl. 33—109)



1. A parallel rule comprising, an elongated body having a cavity opening at its bottom side and bounded by opposite end walls and lateral side walls terminating in outwardly flaring ledges one of which is provided with a scale, a tubular shaft axially mounted for rotation in the end walls, said shaft having adjacent each end a pair of slots extending diametrically therethrough, one slot of each pair being at a right angle to the other slot and in alignment with the corresponding slot of the other pair, a roller having a spherical tread surface rotatably mounted in each slot and projecting therefrom in the provision of pairs of rollers the width of the tread of each roller of said pairs of rollers being such that the respective side edges of pairs of rollers are in alignment, said spherical surfaces of each respective pair of rollers being alternately engageable with a working surface, whereby the said rule may be moved over a surface in the direction of the axis of its body or at right angles thereto.

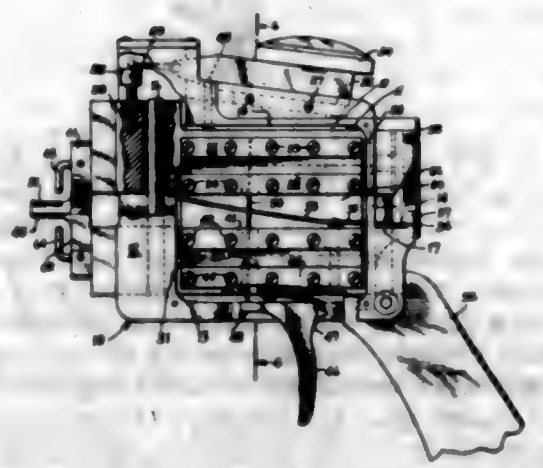
2,893,128
ADJUSTABLE SETTING MASTER FOR DIAL BORE GAGES
Harry N. Carlson, Poughkeepsie, and Richard L. Pitchford, Gardiner, N.Y., assignors to Standard Gage Company, Inc., Poughkeepsie, N.Y., a corporation of New York
Application January 4, 1955, Serial No. 479,771
1 Claim. (Cl. 33—143)

In a setting master for dial bore gages, in combination, a longitudinally extending cylindrical member forming a base, said member having a flat upper surface, a fixed gaging anvil fixedly mounted in said base and extending above said flat upper surface adjacent one end of said base, a slide member mounted on said base for movement toward and away from said fixed gaging anvil, said member comprising a cylindrical sleeve having a thicker walled upper portion, a second gaging anvil mounted in said thick walled portion for reciprocation with respect to said sleeve, means for causing reciprocatory movement of said second anvil with respect to said slide member, means for locking said second anvil in adjusted position whereby said second anvil may be positioned a predetermined distance from said first anvil along said base, a gage positioning member mounted on said upper flat



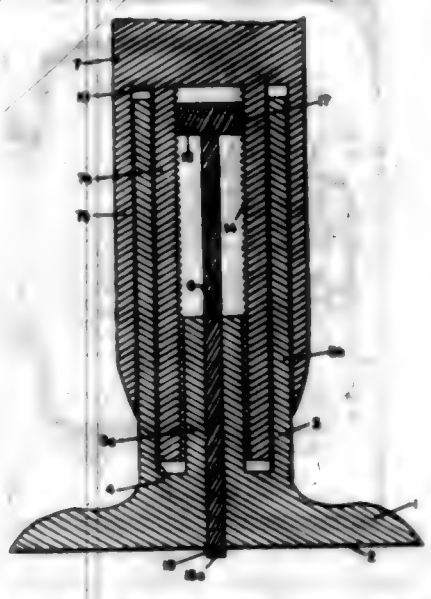
surface of said base adjacent said fixed anvil, said gage positioning member having a face thereof adjacent said fixed anvil forming a V with the apex of the V at substantially the center line of said base and said fixed anvil, the open end of the V facing said second anvil, said V of said gage positioning member being adapted to move a dial bore gage into position to indicate the minimum distance between said gaging anvils in a horizontal plane, and a sleeve mounted on said movable gaging anvil and extending beyond the face thereof, said sleeve being adapted to encompass the fixed gaging button of the dial bore gage and to act as a pivot about which to rock the gage being set, to thereby indicate the minimum distance between said anvils in a vertical plane.

2,893,129
GAGE HAVING A SERIES OF REEDS TO SUPPORT THE MOVABLE CONTACT
John Klink, Pine Plains, N.Y., assignor to Standard Gage Company, Inc., Poughkeepsie, N.Y., a corporation of New York
Application December 5, 1956, Serial No. 626,396
10 Claims. (Cl. 33—147)



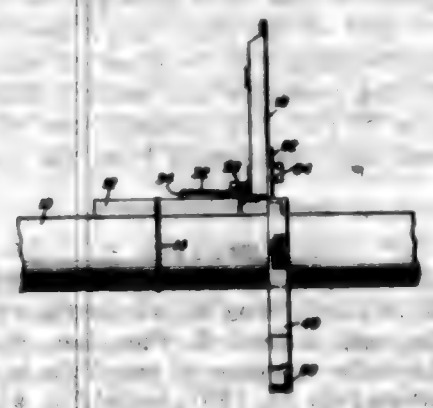
1. In a precision linear gage having a fixed gaging contact, an opposed movable gaging contact, and a dial indicator operated by the movable contact, the improvement which comprises a plurality of reeds lying in planes parallel to the direction of the gaging movement, and means connecting said reeds in a series arrangement between the fixed and movable gaging contacts.

2,893,130
MICROMETER DEPTH GAUGE
Nikiforos Iarokomos, Brooklyn, N.Y.
Application May 20, 1957, Serial No. 660,146
6 Claims. (Cl. 33—170)



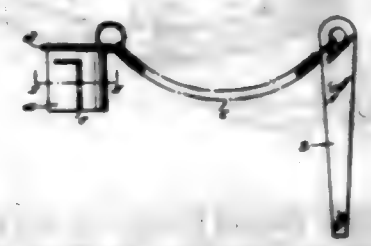
1. A micrometer depth gauge comprising a base, a fixed cylindrical threaded sleeve extending from said base, said base having an aperture extending axially of said sleeve, a hollow thimble rotatable on said sleeve and having threads engaging the threads of said sleeve whereby the thimble is movable axially of said sleeve by rotation of the thimble relative to the sleeve, said thimble having a threaded bore, a slender spindle extending through said aperture in the base and having at its upper end an enlarged threaded head engaging the threads of said bore and means holding said spindle from rotation relative to the base while permitting relative axial sliding movement, the threads of said bore and head having a pitch twice that of the threads of said sleeve so that when the thimble is screwed upwardly away from the base said spindle moves downwardly at the same rate and an end portion of the spindle projects beyond the base.

2,893,131
PIPE CUTTING INDICATOR
Evans A. De Pew, San Francisco, Calif.
Application May 13, 1955, Serial No. 508,009
6 Claims. (Cl. 33—174)



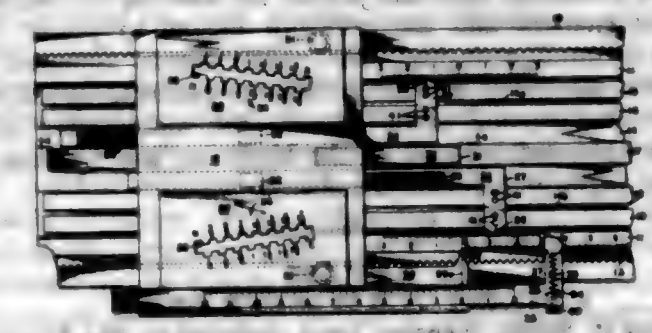
1. A gauge for the angular scribing and cutting of pipes comprising a base adapted to rest upon the side of a pipe in longitudinal alignment therewith and having a flat, planar top surface, means for clamping said base fixedly upon said pipe, a standard, pivot means mounting said standard upon said base for movement about an axis perpendicular thereto, said standard having a flat plate provided with a protractor and resting upon the flat surface of said base for rotation thereon about said axis whereby to set said standard at predetermined angles relative to the longitudinal axis of said pipe, a rigid frame adapted to loosely encircle said pipe and provide a straight edge for positioning a tool at said predetermined angles relative to the longitudinal axis of said pipe, means mounting said frame for vertical and for pivotal movement upon said standard whereby to successively engage the inner periphery of the frame with the circumference of the pipe.

2,893,132
DISTRIBUTOR GAUGE
Ernest Tooke, London, England
Application August 13, 1957, Serial No. 677,991
4 Claims. (Cl. 33—180)



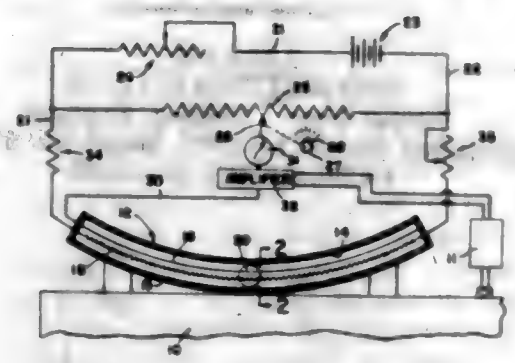
1. An ignition gauge for adjusting the setting of the contact points of the distributor of an internal combustion engine having a breaker cam and follower comprising, in combination, a cylindrical sleeve having a wall of uniform thickness for supported engagement upon the breaker cam of the distributor adjacent to the follower of the breaker unit, said wall having opposite end edges and defining a slit therebetween, said slit extending from one of said edges toward and spaced inwardly from the other one of said edges, the outside diameter of said one edge of said sleeve communicating with said slit being adjustable to conform substantially to the diameter of the breaker cam of the distributor, and said opposite edge of said sleeve being of substantially constant diameter so as to retain frictionally said sleeve upon the breaker cam of the distributor.

2,893,133
LAYOUT INSTRUMENT
William S. Sacher, Pottstown, Pa., assignor of fifty per cent to Lewis Cambell, Jr., Boyertown, Pa.
Application August 16, 1956, Serial No. 604,432
21 Claims. (Cl. 33—192)



1. A layout instrument comprising a point mark locator and a point mark receiver coupled for movement of one with respect to the other in a defined path of travel, a pair of mark guides mounted on said locator and movable therewith and also movable with respect to the locator in said path of travel, and means responsive to relative movement between the locator and the receiver operative to cause said guides to move on the locator simultaneously at different rates of travel relative to the receiver but in the same direction.

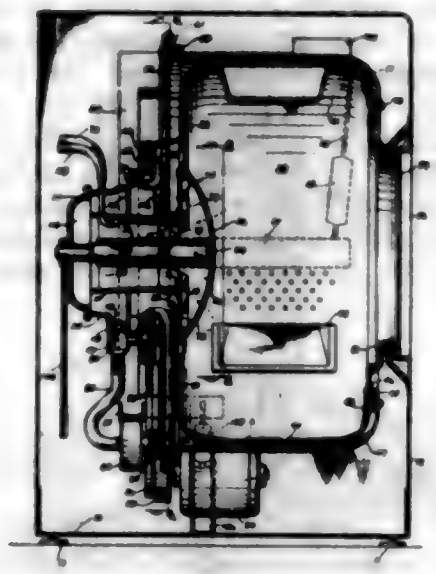
2,893,134
AUTOMATIC LEVELING CONTROL AND CLINOMETER
Rexford P. Shea and Charles Rendenbach, Riverside, Calif., assignors, by direct and mesne assignments, to Preco Incorporated, Los Angeles, Calif., a corporation of California
Application March 22, 1954, Serial No. 417,736
2 Claims. (Cl. 33—206)



1. An automatic control system for setting and holding the blade of an earthworking machine at any selected angle of inclination within a predetermined range of inclinations extending on both sides of zero, said system comprising, in combination with the blade, a first resistance element, a first contact element relatively movable in electrical contact along the length of said first resistance element through a definite range of movement, means whereby said first contact element is moved from a medial point on said first resistance element toward opposite ends thereof in response to opposite inclinations of the blade, a second resistance element, a second contact element relatively movable in electrical contact along the length of said second resistance element through a definite range of movement, first circuit means including a source of electrical energy and connecting said resistance elements in parallel relation to each other and to said source in a closed circuit, second circuit means interconnecting said two contact elements, said resistances, said contact elements and said two circuit means forming a bridge circuit, said range of movement of the second contact element being sufficient to provide a balanced condition of the bridge substantially throughout said range of movement of the first contact element, indicator means driven with the movement of the second contact element and indicating the position thereof in terms of the blade inclination that corresponds to a balanced condition of the bridge, manually operable means for moving the second contact element and the indicator means to preset the blade inclination desired, and power means actuated in opposite directions by current flow in opposite directions in the said second circuit means for maintaining said bridge balanced by moving the blade to, and holding it at, the angle of inclination selected.

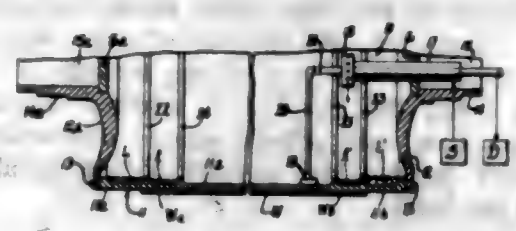
2,893,135
UNITARY TUB WASHER-DRIER
Thomas R. Smith, Newton, Iowa, assignor to The Maytag Company, Newton, Iowa, a corporation of Delaware
Application April 8, 1957, Serial No. 651,313
14 Claims. (Cl. 34—75)

1. A clothes drier comprising, a support, a revoluble shaft journalled in said support, a tumbler for retaining damp fabrics, said tumbler having a rear wall rigidly fastened to said shaft, said tumbler further including a perforate side wall for admitting air into said tumbler and having a front wall with an access opening therein, an opening in said rear wall for exhausting air from said tumbler, an imperforate casing encompassing and unitarily fastened to said tumbler, said casing being spaced from said perforate side wall and said rear wall to define a passageway located exteriorly of said tumbler and communicating with said perforate side wall, heating



means positioned in said passageway to heat air entering said perforate side wall, and means communicating with said exhaust opening for removing moisture vapors from said tumbler.

2,893,136
PAPER MACHINE DRYER CONDENSATE CONTROL
Edgar J. Justus and Robert A. Dunne, Beloit, Wis., assignors to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Application July 5, 1957, Serial No. 670,144
6 Claims. (Cl. 34—119)

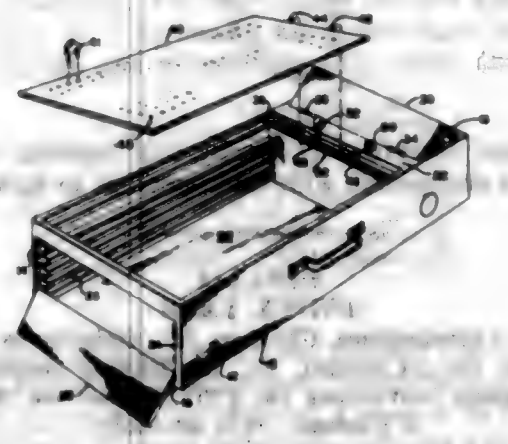


1. A dryer drum comprising a cylindrical shell, a head closing each end of the shell, a steam inlet line leading into the shell through one of said heads, axially spaced annular members on the inner periphery of the shell spaced from said heads for restricting flow of condensate from the regions of said shell adjacent the heads to the intermediate region of the shell, and a condensate drainage line communicating with the inner surface of the shell only between said members and leading from the intermediate region of the shell through one of said heads receiving steam and condensate from the shell.

2,893,137
PORTABLE TRAINING DEVICE FOR ELECTRIC ACCOUNTING MACHINE OPERATORS
John F. Alling and Alfred R. Fleischer, Pleasant Hill, Calif., said Fleischer assignor of two-fifths to said Alling
Application July 22, 1957, Serial No. 673,289
3 Claims. (Cl. 35—19)

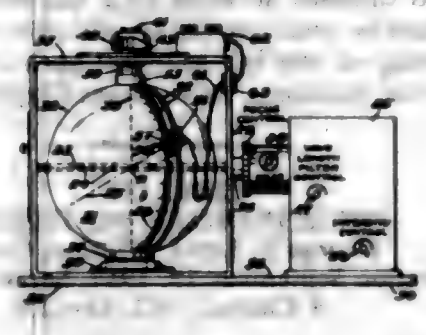
1. A portable electric accounting machine operator training kit comprising a carrying case, a first partial electrical circuit embodied in said case including a source of electrical current and energizable indicator means to indicate the passage of a current through said first partial circuit, a practice board corresponding to an electric accounting machine control panel removably positioned in said case, said board having positioned therein and extending therethrough a plurality of female jacks, pre-

selected pairs of said female jacks being interconnected by fixed conductor means to constitute a discontinuous second partial circuit adapted to be made continuous by the bridging of said pairs of hubs by male jack con-



ductors, and means separably interconnecting said first and second partial circuits adapted when said second partial circuit is made continuous to form an integrated complete circuit through which an electric current may flow to energize said indicator means.

2,893,138
OPTICAL ANALOGUE OF A RADIO SCATTERING ATMOSPHERE
Victor W. Bolie, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application September 5, 1957, Serial No. 682,171
4 Claims. (Cl. 35—19)

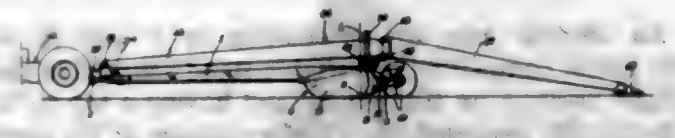


3. Means for simulating tropospheric radio wave scattering by means of light-energy scattering, comprising a spherical transparent container, a light-scattering mixture contained within said container, said mixture comprising a plurality of hard lime glass spherical particles having a diameter of the order of 0.1 millimeter, and a fluid medium supporting said particles in distributed relationship, said fluid medium comprising a solution of about 45 percent by volume of methylene iodide and about 55 percent by volume of ethyl alcohol to provide a refractive index for said fluid medium within the range of 10^{-3} to 10^{-4} of the refractive index of said particles from the refractive index of said particles, light-generating means providing a polarized collimated beam diametrically through said container, said beam having a predetermined wavelength, a box having a dull black inner surface surrounding said container, a supporting track fixed to the outer surface of said container in a direction transverse to said beam, a photoelectric cell supported on said track and positionable along said track, a meter positioned external to said box and connected to said photoelectric cell to indicate its output, angle indicating and adjusting means external to said box coupled to said spherical container for rotating it to and indicating a required angular position of said photoelectric cell.

2,893,139
DUAL RATIO LEVER MECHANISM
Edward R. Fryer, Euclid, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 30, 1956, Serial No. 581,719
10 Claims. (Cl. 37—118)

1. A dual ratio lever assembly comprising a first lever pivotally mounted at one end on a support, a second lever pivotally mounted on the other end of said first lever, means on said support limiting angular movement of said first lever in one direction only, means on said second lever limiting angular movement thereof in the opposite direction relative to said first lever, means on the free end of said second lever connected to a load, and force applying means arranged to react between said support and said second lever.

2,893,140
FINISH LEVELER
Raymond A. Gurries, San Jose, Calif., assignor to Gurries Manufacturing Co., San Jose, Calif., a corporation of California
Application November 18, 1955, Serial No. 547,622
9 Claims. (Cl. 37—165)

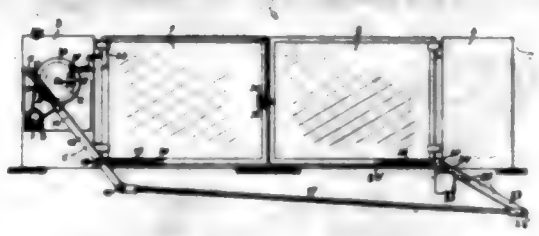


1. A finish leveler comprising a draft tongue arranged at its forward end for connection to a tractor at a fixed distance from the ground, a scraper blade rigid with the tongue at its rear end, a boom over the tongue and blade and projecting rearwardly therefrom, means pivoting the boom at its forward end on the tongue, a ground engaging member supporting the rear end of the boom, ground engaging wheels supporting the blade from the ground for vertical adjustment of said blade relative to the wheels, a power device connected between the wheels and blade to thus vertically adjust the latter, and means mounted on the tongue and functioning upon upward or downward movement of the boom from a predetermined level at a point adjacent the blade to place said device in operation to cause the blade to correspondingly move up or down.

2,893,141
GATE DRIVE WITH SLIDER CRANK
Gebhard Hägle, Pfaffendorf, Baden, Germany
Application October 22, 1957, Serial No. 691,674
Claims priority, application Germany October 23, 1956
8 Claims. (Cl. 39—7)

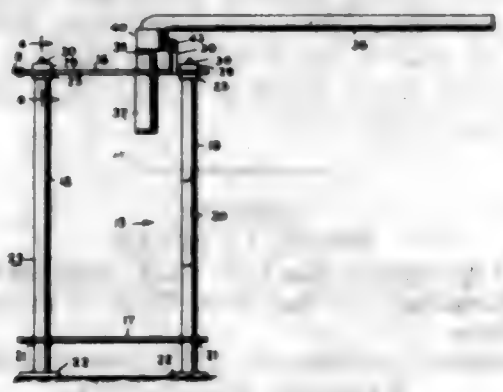
1. In combination with a gate having a hinged panel supported by and swingingly connected with a vertical gate post, a driving device comprising a motor, a slider

crank mechanism having a crank member driven by said motor and an oscillating swing member having a slot engaged by said crank member to perform an oscillating motion during each individual rotation of said crank member, said swing member having a stationary fulcrum



and a plane of oscillation parallel to the plane of the gate when closed, said swing member forming two leverage arms of different respective lengths, said slot being located in the shorter one of said two arms, and linking means joining the longer arm with said panel.

2,893,142
PORTABLE SELF CLOSING ELECTRIC GATE
Richard M. Logan, Mount Gilead, Ohio
Application February 1, 1957, Serial No. 637,731
11 Claims. (Cl. 39—92)



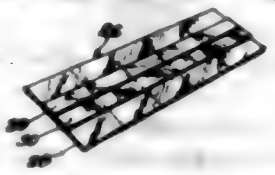
1. An electric gate for disposition in a gap in an electric fence, comprising, a portable stand adapted to rest in upright position on the ground and having a top structure electrically insulated from the remainder of the stand and adapted to be electrically connected to an associated electric fence, a gate bar pivotally mounted at one end on said top structure and extending outwardly from the upper end of said stand in substantially horizontal position, and spring means connected between said bar and said top structure resiliently urging said bar to a predetermined position relative to said top structure, said top structure comprising a metal plate having a bearing sleeve secured in perpendicular position thereto and said bar comprising an elongated metal tube having at one end a perpendicularly offset portion rotatably carried by said bearing sleeve.

2,893,143
IDENTIFICATION BRACELET
Walter W. Mosher, Jr., Burbank, and Arthur R. Goldammer, Glendale, Calif., assignors of 20.6 percent to Donald A. Long, Van Nuys, 20.6 percent to Stanley E. Charles, 2.8 percent to Joseph E. Long, 2.8 percent to Harold W. Neilly, and 12 percent to Arthur Knutson, all of California
Application March 12, 1957, Serial No. 645,637
4 Claims. (Cl. 40—21)

1. In an identification bracelet, the combination of: an elongated body having a tubular portion at one end and a strap at the other end, said tubular portion being open at its opposite extremities and said strap having fastened engageable openings therein; fastener mounting means dividing said tubular portion into identification and fastener receiving sections; and a fastener located in

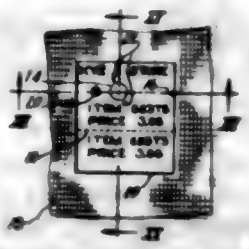
said fastener receiving section by said fastener mounting means and engageable with said openings in said strap.

2,893,144
INDEX TABS
Walter F. Cunningham, Chicago, Ill., assignor to Superior Tabbies, Inc., Chicago, Ill., an Illinois corporation
Application November 16, 1953, Serial No. 392,286
5 Claims. (Cl. 40—23)



5. A flexible flat index tab construction comprising a base member of transparent sheet material having pressure sensitive adhesive on one surface, and a pair of filler members adhesively attached to the base member on said surface by the adhesive thereof, said filler members being parallel and spaced from each other laterally of the base member a distance approximately equal to the sum of the thicknesses of said filler members, said base member being of a width extending laterally beyond the filler members to provide wings for attachment by the adhesive thereof to opposed surfaces of a marginal portion of a sheet, whereby such spacing of said filler members facilitates folding of the tab to effect such attachment to a sheet, avoids bulkiness, and assures flexibility.

2,893,145
PRICE INDICATING TICKETS
George S. Light, Winsted, Conn.
Application September 19, 1957, Serial No. 684,992
5 Claims. (Cl. 40—25)



1. A pricing ticket for soft goods, said ticket having a relatively small portion partially struck from the ticket material to define a telltale loosely held in the plane of the ticket material, and a pin piercing said telltale and the ticket itself in at least one place to secure the ticket to an article of soft goods.

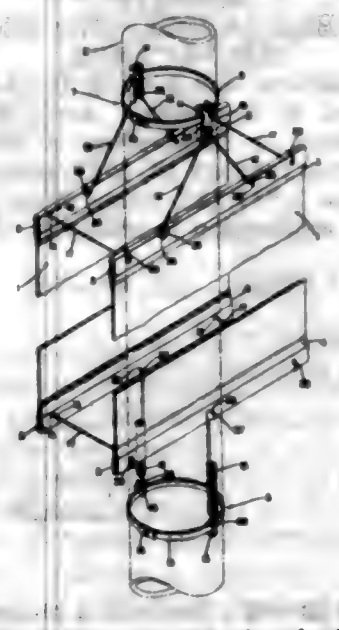
2,893,146
MOUNT-FEEDING MEANS FOR PROJECTION MACHINES
William N. Geiger, Glendale, Calif.
Application July 27, 1956, Serial No. 600,439
6 Claims. (Cl. 40—79)

1. Mount-feeding means comprising a housing having a passage fully open at one end and partly open at the other end, light-passing apertures in said housing intermediate its ends, a ram unit longitudinally movable in said passage and provided with a feed plate movable be-

tween a position extending through said fully open end of the housing, and a position in register with said apertures, said ram being provided with a handle extending from said feed plate through the partly open end of the housing, said handle closing said end of the housing when said feed plate is in the position beyond the fully open end of the housing, first dog means on said plate to engage an edge of a mount to move the same between a position outside and beyond the fully open end of said

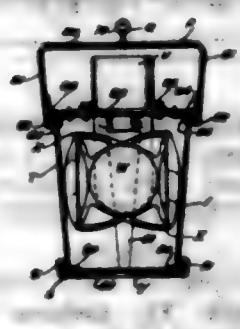
housing and a position within the housing and in register with said light-passing apertures, second dog means on said plate to engage an edge of a mount to move the same between a position within the housing and in register with said apertures and a position outside and beyond the fully open end of said housing, and a third dog means carried by the housing to retain one mount within said housing while another is being moved to an outer position.

2,893,147
BANNER MOUNTING CONSTRUCTION
Samuel J. Mollet III, Massillon, Ohio, assignor to The Massillon-Cleveland-Akron Sign Company, Massillon, Ohio, a corporation of Ohio
Application February 7, 1958, Serial No. 713,966
3 Claims. (Cl. 40—125)



1. Banner mounting construction including an upright support member, two banner components, upper mounting means for suspending the banner components on the upright support member, lower tension means for holding the banner components in tension, the upper suspending means including a pair of mounting brackets one each on opposite sides of and secured to the upright support member, a pair of banner hangers extending between and attached at opposite ends to the corresponding banner component and a single bracket, the upper ends of the hangers having hooked end portions, each bracket having aperture means in releasable engagement with a pair of hanger hooked end portions, each aperture means having the configuration of an inverted isosceles trapezoid, the upper hooked end portion of each banner hanger being disposed in a plane perpendicular to that of the aperture means, and the upper hooked end portion of each hanger having a length equal to the inclined sides of the isosceles trapezoid aperture means to enable insertion and removal of the hooked end portion radially of the upright support member.

2,893,148
ILLUMINATING FLUORESCENT HOUSE NUMBER FIXTURE
Murray Figman, Brooklyn, N.Y.
Application May 7, 1957, Serial No. 657,694
9 Claims. (Cl. 40—132)



1. An illuminating fluorescent house number fixture for outdoor use, with replaceable and selectable plastic indicia members to be mounted along the length of a fluorescent tube having an elongated enclosure with an elongated electrical component compartment receiving wiring, a transformer and a starter and an elongated illumination compartment having end sockets, a fluorescent tube, and plastic indicia mounted on the tube, said plastic indicia consisting of two oppositely facing, integrally joined, box-like enclosures having open ends with transverse upwardly and downwardly extending fins having concave upper and lower contact edges closely to conform to the top and bottom curvature of the tube and inwardly oppositely extending curved side fins tangentially to contact the side faces of the tube.

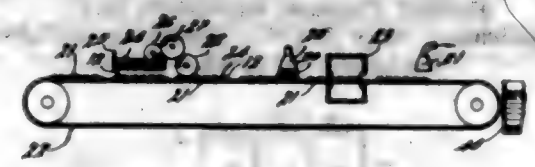
2,893,149
ARTIFICIAL TREE
Clarence D. Reece and Nathan Paul, Chicago, Ill., assignors, by mesne assignments, to Modern Coatings, Inc., Chicago, Ill., a corporation of Illinois
Application September 29, 1958, Serial No. 763,886
10 Claims. (Cl. 41—15)

1. An artificial tree comprising, an elongate, substantially cylindrical trunk member having a plurality of branch members of substantially equal length removably secured thereto at varying angles of inclination with respect to the longitudinal axis of the trunk member, the angles of inclination of the stems of said branches relative to said axis of the trunk decreasing in a direction approaching the apex of the tree, the outer extremities of the branch members cooperating to define a substantially uniform conical configuration simulating the configuration of a natural tree.

2,893,150
WIRING BOARD AND METHOD OF CONSTRUCTION
David Tann, Detroit, Mich.
Application December 22, 1955, Serial No. 554,817
6 Claims. (Cl. 41—24)

4. The method of constructing a board with wiring patterns thereon which includes the steps of: embossing

areas on the board the shape of said pattern, applying an adhesive to the top surface of the areas, and applying

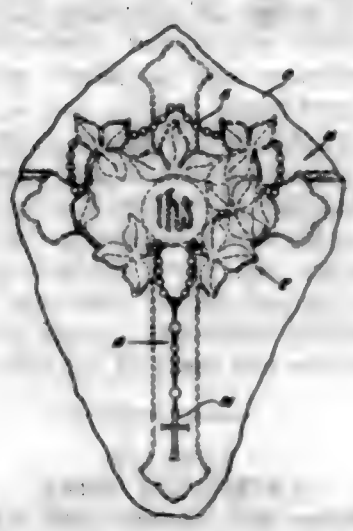


conductive particles to the adhesive in conducting relationship to each other.

2,893,151
MONUMENT ORNAMENT

Ezra L. White, Barre, Vt., assignor to Rock of Ages Corporation, Burlington, Vt., a corporation of Vermont

Application July 24, 1956, Serial No. 599,752
2 Claims. (Cl. 41—34)

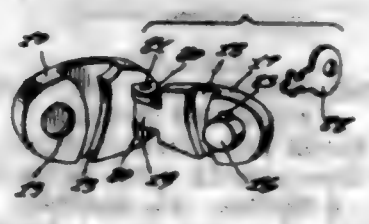


1. A stone monument having a rosary design cut in the surface thereof so as to provide a plurality of undercut pockets in the surface of said stone, a cement filling for said pockets, each of said cement fillings having downwardly and outwardly extending portions from the mouth of said pockets, a bead having a coefficient of thermal expansion substantially equal to that of said stone embedded in each cement filling, said beads comprising a rounded generally hemispherical head, a cylindrical shank depending therefrom, an anchoring member attached to said shank and of greater width than said shank, said anchoring member having a tapered shape having its larger end adjacent but longitudinally spaced from the underside of said head, the mouth of said pockets provided with an annular inwardly projecting lip to form a seat for the underside of said hemispherical head of said bead and to engage the downwardly and outwardly extending portions of said cement to lock said cement in position, and a countersunk portion exterior of said annular inwardly projecting lip adapted to receive at least a portion of said hemispherical head of said bead.

2,893,152
TRIGGER LOCK

Alphonse M. Polusz, Brooklyn, N.Y.

Application October 10, 1955, Serial No. 539,325
1 Claim. (Cl. 42—70)

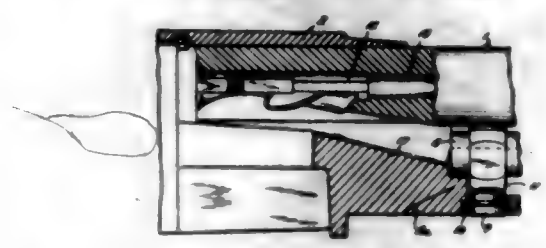


A trigger lock for a firearm having a trigger and a fixed trigger guard having a substantially elliptical opening for said trigger, said trigger lock including the combination of a correspondingly elliptical plate adapted to fit within said elliptical opening within said guard and having upon the inner face thereof a curved slot or recessed portion serving to receive the trigger in the same upon the inner side of said plate, the plate also having upon said inner side forwardly of said curved slot a lock recess, a releasable means for retaining the plate in place within said guard comprising a complementary plate of relatively smaller area than the area of the elliptical plate also having a slot for receiving the trigger in co-operation with that in said elliptical plate, the latter having a pair of hinge lugs spaced vertically apart upon the inner side thereof rearwardly of the curved slot thereof, a narrowed rear extension upon the rear end of the complementary plate fitting between said hinge lugs and having a pivot pin extending through the lugs and rear extension for hingedly connecting said complementary plate to the elliptical plate to swing about an upwardly and rearwardly inclined axis, and a lock upon the complementary plate projecting upon the inner side thereof forwardly of the slot thereon in effective position to fit into the lock recess of said elliptical plate, and said complementary plate having a key slot in the outer side thereof for opening and closing the lock and retaining or releasing said complementary plate at will, said elliptical plate fitting within the outline of the trigger guard and the complementary plate partially filling the opening in said trigger guard when the two are locked together and visually locking the trigger in immobile safe condition.

2,893,153
ADJUSTABLE BARREL AND RECEIVER CONNECTION

Ellis William Halliston and Harold L. Hanselaar, Ilion, N.Y., assignors to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware

Original application January 19, 1955, Serial No. 482,726, now Patent No. 2,751,702, dated June 26, 1956. Divided and this application February 8, 1956, Serial No. 564,248
2 Claims. (Cl. 42—75)



1. In a firearm having a receiver, a reciprocable breech bolt in said receiver movable to a fixed forward locking position, and a barrel longitudinally positionable in said receiver relative to said forward locking position of said breech bolt for adjustment of headspace, the improvement of adjustable means for securing said barrel to said receiver in desired longitudinal position comprising a threaded hanger dependent from said barrel, a forward extension on said receiver underlying said hanger and having a hole in substantial alignment with the dependent end of said hanger, a bushing rotatably disposed in said hole and having an opening therethrough which is eccentric to said hole, and a screw disposed in said bushing opening and engaged with said threaded hanger.

2,893,154
DECOY

Harold McKee, Midland, Mich.

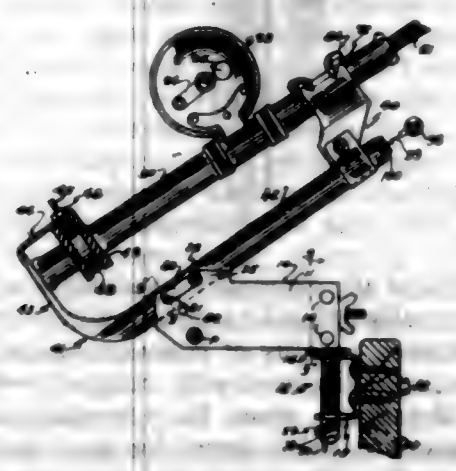
Application May 24, 1957, Serial No. 661,485
7 Claims. (Cl. 43—3)

1. A wildfowl decoy comprising a simulated wildfowl having a buoyant body, the upper part of said body con-

forming to the upper part of a wildfowl and the bottom part of said body including a flat part having a recess therein, said recess being symmetrically disposed with respect to the longitudinal axis of said body and extending longitudinally with respect to said body, the recess extending into the body from the bottom thereof and being of substantially uniform width throughout its length

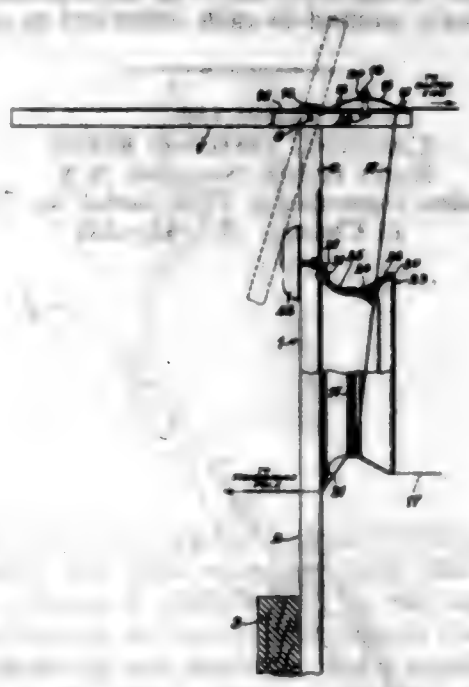
and depth, a plate-like keel having a forward end and a rear end, said keel being shaped to fit loosely within said recess in the body of the decoy and adapted to move vertically within said recess, said keel having vertical movement stop means, and rod-like means extending into said recess and adapted to engage said vertical movement stop means, said rod-like means extending transversely across the recess in said decoy body.

2,893,155
TROLLING JIG
William F. David, Whittier, Calif.
Application April 23, 1956, Serial No. 579,945
4 Claims. (Cl. 43—16)



1. In combination: a bracket including a hollow body having sides, a tubular bracket pivot pin having an upper portion secured to said body at one end thereof and having a depending portion formed with an opening adjacent the lower end thereof, said pivot pin being operably receivable in a socket, spring means in said pivot pin having a part adapted to releasably retain said pivot pin in said socket, the sides of said body having aligned openings formed therethrough and one of said sides having a plurality of lug receiving openings spaced radially from the axis of said aligned openings and arcuately spaced from each other; a frame member comprising a tubular portion having aligned openings and a lug receiving opening adjacent the lower end, a pivot pin in the aligned openings of said sides and operably received in the aligned openings of said tubular portion, the lug receiving opening of said tubular portion being registerable with said lug receiving openings of said one side, said tubular portion being flattened at the lower end and said flattened part being turned laterally upwardly and having a free end portion turned upwardly and parallel with said tubular portion; an annular rod handle receptacle secured to said free end portion and spaced in front of said free portion; a rod handle clamp on said tubular portion, said clamp being adjustable longitudinally on said tubular portion, and being adjustable for reception of handles of various size; yielding means urging said frame member toward an upright position; means for adjusting the effective force of said spring; a lug receivable in said lug openings; resilient means securing said lug to said body and normally positioning said lug out of said openings; a warning device warning when a fish has been caught; a rod having its handle removably secured in said receptacle and clamp; and a reel on said handle, said reel having brake means and means for adjusting the effectiveness of said brake means.

2,893,156
STERN LINE OUTRIGGER
Pickett L. Warren, Chicago, Ill.
Application October 3, 1955, Serial No. 538,045
3 Claims. (Cl. 43—17)

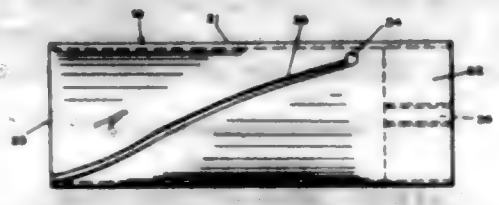


1. A fishing line outrigger assembly for holding a fisherman's line between the reel of a fisherman's rod and the end of the line that carries the fish hook, said outrigger assembly comprising a pivoted lever having a normal position and an operative position, pull-responsive line-holding means on said lever and including means for gripping a line by a clamping grip of a magnitude which will enable a pull on the line to actuate the lever to its operative position and will enable the fish's tug on the line to pull the line free of the holding means, means for delaying the transmission of the tug on the line by the fish to the fisherman after the release of the line from said holding means, said delaying means comprising a ring having a peripheral groove formed therein into which a portion of the fishing line behind the portion gripped by said holding means may be wound, the front defining wall of said groove being inclined with respect to the ring axis and having a smooth shape throughout to facilitate the unwinding of said line when the line has been pulled free of said holding means, and means for supporting said ring in position where the axis of said ring faces in the general direction in which the baited end of the fishing line extends, whereby the line will unwind from said ring when the line is released from said holding means and the pull of the fish on the line is not transmitted to the fisherman until the line unwinds from said ring, the portion of the line supported by the delaying means being between the line gripping means and the fisherman's reel and being free of mechanical connection with the outrigger so that when that portion of the line is payed out by the pull of a fish the line comes free of the outrigger.

2,893,157
PLUG RETRIEVER
Elden C. Foley, Columbus, Ohio
Application June 18, 1958, Serial No. 742,818
5 Claims. (Cl. 43—17.2)

1. A device for retrieving fishing equipment comprising in combination a tubular can having one end open

and one end closed by a threaded plug and having its sides formed with a round hole intermediate the ends thereof

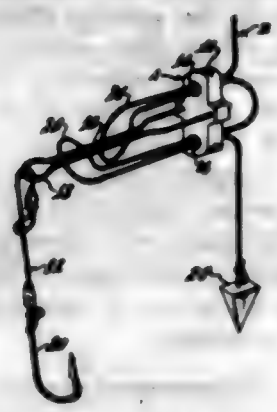


and with a helical slot leading from said hole to said open end and a rigid rod made up of a plurality of section threadedly secured to each other and to said can.

2,893,158
CASTING FISHING RODS
Harry Haber, Neponsit, N.Y.
Application December 5, 1958, Serial No. 778,435
11 Claims. (Cl. 43—24)

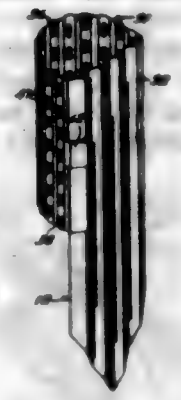
1. In a casting fishing rod, a pole, reel means, line guide means on said pole including a terminal guide member, a line operatively wound upon said reel means and in slidable engagement with said guide means and extending outwardly beyond said terminal guide member, a stop member secured to the line at a point beyond said terminal guide member and operatively engageable therewith, whereby the line is held against further inward movement towards said reel means, and magnetic means for releasably holding said members in engagement.

2,893,159
FISHING HOOK STAND-OFF
James S. Baird, Woodbury, N.J.
Application January 25, 1957, Serial No. 636,387
1 Claim. (Cl. 43—44.85)



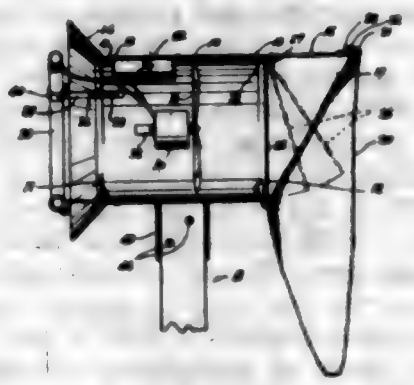
A fishing rig for mounting a fish hook and leader comprising, a fish line, a weight attached to the bottom of the line to maintain the line in a substantially vertical position, an elongated vertically extending flat base member adapted to be secured to the line in parallel relation with the line, an extension member fixed to the midpoint of the base and extending substantially perpendicular to the base and line, said extension member comprising a piece of bent wire having a loop at the end thereof remote from the base member to receive the fish hook leader and spaced leg portions at the other end thereof embedded in said base member, and means defining a pair of axially spaced openings at opposite ends of said base with the axes of the openings extending parallel to said extension member and equally spaced above and below said extension member, said base member being secured to said line at a point spaced from said weight with the extension member positioned at right angles to the line by doubling the line in a loop at two spaced portions thereof and passing each double portion through a respective opening, each double portion being then looped over said extension member and the line drawn taut.

2,893,160
SAFETY GUARD FOR INSECTICIDE CONTAINERS
Philip J. Grant, Oakland, Calif.
Application March 13, 1956, Serial No. 571,212
8 Claims. (Cl. 43—131)



1. In a device of the character described, a supporting standard of generally strip-like configuration, a receptacle adapted to contain a quantity of insecticide material positioned adjacent one surface of said standard and extending outwardly therefrom, means for mounting said receptacle on said standard, and a guard having a pair of legs and a curvate portion interconnecting said legs, said legs having end portions adapted for fixed engagement with longitudinally extending peripheral edge portions of the surface of said standard remote from said receptacle engaging surface.

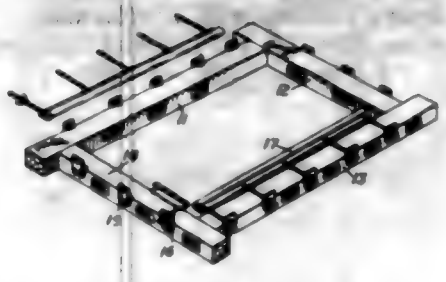
2,893,161
SUCTION-BLOWER TYPE ILLUMINATED INSECT TRAP
Frank S. Reid, Wilson, N.C.
Application April 10, 1958, Serial No. 727,713
6 Claims. (Cl. 43—139)



1. An insect trap including a tubular housing having an insect entrance end and an opposite end, an arcuate hood extending outwardly from said opposite end and having an upper portion and gradually decreasing in width from said upper portion of said hood, a circular

oscillatory trap door closing said opposite end when said trap door is in one position, hinge means for said trap door between the upper portion of said trap door and said hood; and a trapped insect receptacle hanging from said hood, the horizontal distance apart of the inner faces of said side walls being such that when said trap door is in its extreme open position it will contact said inner faces, and said trap door will be free of contact with said receptacle at all times.

2,893,162
TENSIONING ARRANGEMENT FOR FRAMED FLEXIBLE MATERIALS
Reginald Alfred Knowles, Moreton, Wirral, England
Application August 26, 1955, Serial No. 530,756
Claims priority, application Great Britain August 31, 1954
2 Claims. (Cl. 45—24)



1. A device for stretching a flexible material comprising a rectangular frame work constructed of four frame work members, each member having a projection at one of its ends thereof, said four frame work members being engageable together in a plurality of selected positions by means of a plurality of apertures in said frame work members each adapted to receive the projection at the end of an adjacent member whereby to enclose a space of variable size, four longitudinally extending members of U-section in said frame work, adjustable web tensioning means attached to said U-members in said frame work, said web tensioning means being adapted to pull said members in the direction in which the limbs of the U extend and four pairs of rectangular strips, one strip of each pair being adapted to be enwrapped by an end region of said web, said strips being of a length commensurate with that of said U-shape members and of such width and depth as to be capable of being accommodated together with the enwrapping in regions of the web in the space between said U-limbs, said pair of strips being detachably connected at their ends.

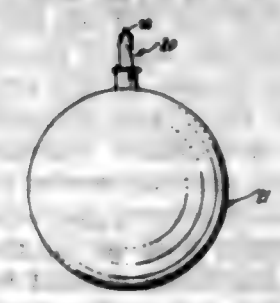
2,893,163
COASTER
Ernest Hazel, Jr., St. Louis, Mo., assignor to Ernest Hazel, Jr., Inc., St. Louis, Mo., a corporation of Missouri
Application May 20, 1957, Serial No. 660,359
2 Claims. (Cl. 45—68.4)

1. A coaster comprising a laminated body including a relatively thin intermediate layer of moisture impervious material, a lower layer having a smooth, flat central portion and an antifriction boundary integral with said portion in surrounding relationship thereto, and an upper layer having a central cavity, a relatively flat, smooth section defining the bottom of the cavity and a boundary integral with said section in surrounding relationship thereto, defining the side wall of said cavity, the layers being intimately fused together, there being a plurality of arcuate ribs within the cavity integral with said bottom, said boundaries and said ribs being of relatively soft, porous, spongy material; and a trough circumscribing said boundaries at the outermost edges thereof.

2,893,164
FURNITURE LEG BUILD UP
Robert Maunett Martin, Polk, Iowa
Application December 19, 1956, Serial No. 629,382
1 Claim. (Cl. 45—137)

In a furniture or like leg build up, a plurality of interlocking nesting foot plate members; each plate member comprising a plate, a shallow well in the top of said plate, a beveled rim at the top area of said shallow well extending outwardly and upwardly, and a beveled rim on the bottom of said plate extending inwardly and downwardly; said rim terminating in a flat bottom central area, whereby when said plate members are nested, the beveled inner rim of a lower plate member will engage the beveled outer rim of a plate member above it and with the flat central bottom area of such upper plate member engaging the bottom of the top shallow well of the lower plate member.

2,893,165
MORSE CODE BALLOON SIGNALING DEVICE
James R. Bailey, Chicago, Ill.
Application August 24, 1955, Serial No. 530,259
2 Claims. (Cl. 46—58)



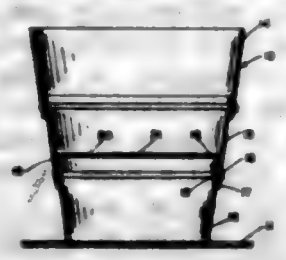
1. A toy signaling device to which a toy balloon may be attached to provide a source of air under pressure, said signaling device comprising a casing having means defining an air passageway adapted to be in open communication with said attached balloon, valve means comprising a plate normally engageable with a seat in said air passageway and operable to permit air entry into said balloon responsive to manual blowing but normally preventing escape of air from said balloon, said valve means being normally maintained in a closed position responsive to air pressure in said balloon, said valve means having a stem with one end thereof fixedly attached to said plate and the other end thereof projecting outwardly of said casing, said stem being manually movable axially in said air passageway whereby said valve means may be manually operated by movement of said stem inwardly of said

casing to move said plate from said seat to permit escape of air from said balloon through said air passageway, and a noise maker disposed in said air passageway and in the path of escaping air and operable to permit a da-dit noise assimilating dots and dashes of a telegraphic code controlled by the manual operation of said valve means.

2,893,166
STABILIZED SOIL AND METHOD OF PRODUCING IT WITH QUATERNARY NITROGEN SALT
George R. Benwin, Collinsville, Ill., and Frank X. Greul, St. Louis, Mo., assignors to Union Starch & Refining Company, Columbus, Ind., a corporation of Indiana
No Drawing. Application September 9, 1954
Serial No. 455,076
5 Claims. (Cl. 47—1)

5. A stabilized surface soil having improved structure adapted to permit water to infiltrate readily therein, allow excess water to be removed quickly therefrom and permit exchange of gases through the pores thereof comprising dispersed therein about 0.01% to about 0.1% based on the weight of the surface soil of a quaternary nitrogen salt having directly attached to the quaternary nitrogen two substituent groups each of which contains 6–22 carbon atoms in a straight chain.

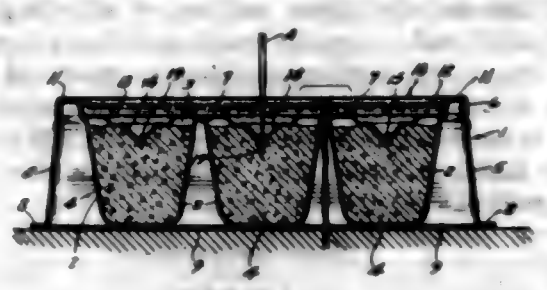
2,893,167
COLLAPSIBLE PLANT CONTAINER
Joe B. Davidson, Garden Grove, Calif.
Application August 17, 1956, Serial No. 604,701
2 Claims. (Cl. 47—37)



2. A collapsible plant container comprising a flat base portion, a first cup section having outwardly and upwardly tapered side walls attached to said base portion, a series of concentric interfitting, flexible plastic annular sections having correspondingly tapered walls, each of a height approximating the height of said cup section, an inner section of said series slidably mounted on the exterior periphery of said first cup section, the remainder of said series of sections slidably mounted on the exterior periphery of inner sections of said series, cooperating interlocking annular ridges and channels adjacent top and bottom edges of said annular sections to lock said first cup section and said series of annular sections in extended position, and a fixedly secured plant-holding bottom shelf mounted substantially flush across the top of said first cup section, said interfitting annular sections being slidable down over said cup section to allow for easy removal of an earth ball in said container.

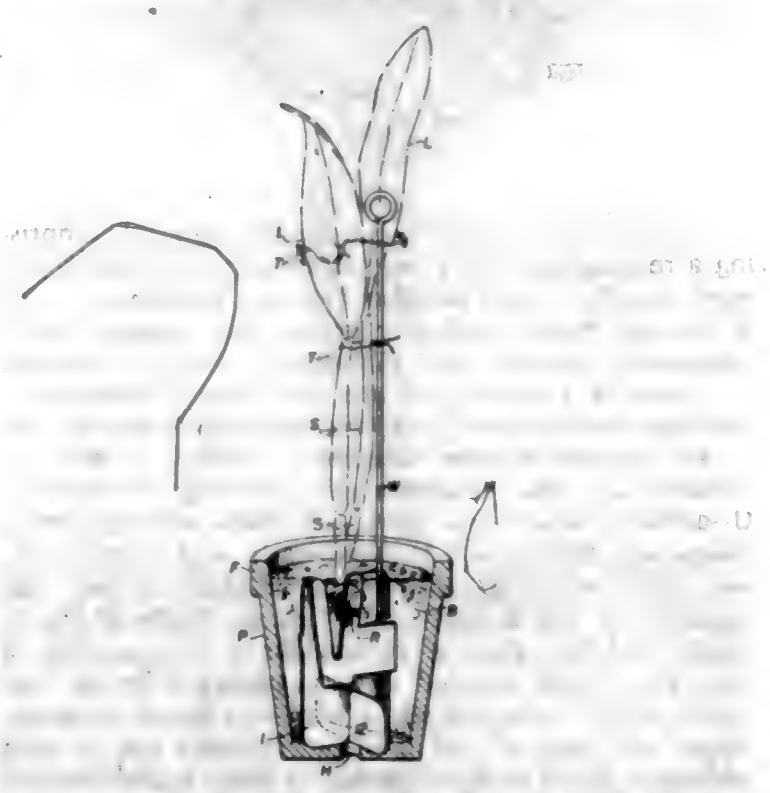
2,893,168
COMBINATION SEED MERCHANDISING AND GERMINATING PACKAGE
Roger D. Kobs, Minneapolis, Minn., assignor to Northrup, King & Co., Minneapolis, Minn., a corporation of Minnesota
Continuation of application Serial No. 642,871, February 27, 1957. This application May 5, 1958, Serial No. 733,801
11 Claims. (Cl. 47—37)

1. An open topped container having potting material therein, a top for said container formed from readily fracturable transparent sheet material, and a hollow dibble formed in said top in spaced relationship to the marginal edges thereof, said dibble projecting downwardly into said potting material and serving as a water re-



ceiving well, water within said well being released into said potting material upon puncturing of said dibble.

2,893,169
ORCHID PLANT HOLDER
Irving L. Shepherd, Elyria, Ohio
Application May 21, 1957, Serial No. 660,584
5 Claims. (Cl. 47—47)

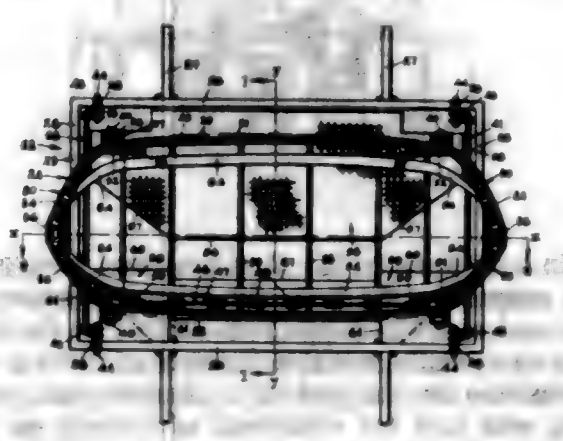


1. A device for supporting an orchid plant or the like in a pot while surrounded by material forming the equivalent of soil, said device comprising a substantially flat member, and laterally extending support elements at the lower part thereof, said member and support elements being adapted to rest on a flat surface, the upper portion of said member having an upwardly opening tapered recess adapted to receive and support the rhizome of a plant, and said member having resilient gripping means formed at one side thereof arranged to engage and support a vertically extending rigid rod member, and whereby the device with the vertical rod member in position may be seated in a flower pot and be surrounded by packed material forming the soil equivalent into which the roots may grow substantially unimpeded.

2,893,170
METHOD AND APPARATUS FOR BENDING GLASS SHEETS
Frank J. Carson and Herbert A. Leflet, Jr., Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Application March 27, 1956, Serial No. 574,329
17 Claims. (Cl. 49—67)

4. A method of bending glass sheets about both the longitudinal and transverse axes thereof, comprising locating a sheet above the shaping surface of a concave mold having a contour to which the marginal edges of

the sheet are to be bent while heating the sheet to bending temperature, lifting opposite ends of the sheet upwardly while bending a first longitudinal marginal edge of the sheet intermediate the ends thereof into contact with the mold shaping surface, maintaining the opposite longitudinal marginal edge of the sheet above the mold until after the first sheet edge has contacted the mold shaping surface whereby the sheet begins to bend laterally between the first edge portion which has contacted the shaping surface and the opposite longitudinal edge, and after the first marginal edge has contacted the mold shaping surface bending the remainder of the sheet into contact with said shaping surface.



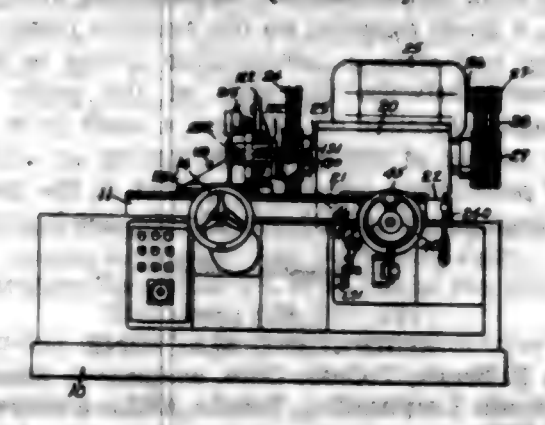
14. In a bending mold for bending glass sheets about both axes thereof, a curved shaping surface into conformity with which a glass sheet is to be bent, said shaping surface including movable end sections, means mounting said end sections for movement from an open spread-apart position to a closed position which defines the curvature to which the glass sheet is to be bent, sheet support means mounted for movement from a first position above the shaping surface in which a glass sheet is received prior to bending to a second position below the shaping surface to deposit the sheet thereon during bending, said sheet support means comprising first sheet-engaging means engageable with one longitudinal edge area of the sheet at spaced-apart points whereby the sheet when heated tends to sag between said points, second sheet-engaging means engageable with the opposite longitudinal edge area of the sheet along a substantial portion of the length thereof, and means connecting the sheet engaging means to the mold end sections for movement therewith.

2,893,171

GRINDING MACHINE

Herbert A. Silven, West Boylston, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts

Application August 12, 1957, Serial No. 677,569
7 Claims. (Cl. 51—3)



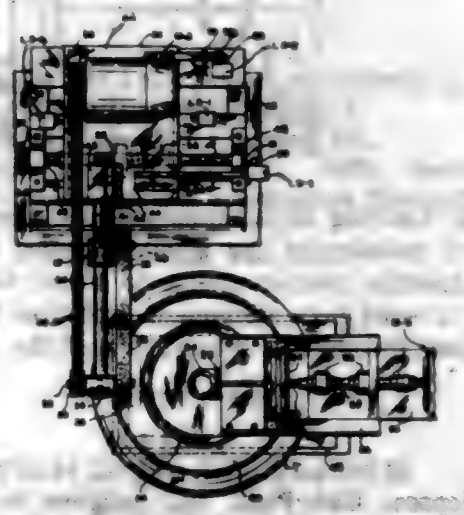
1. In a grinding machine having a transversely movable rotatable grinding wheel, said grinding wheel being arranged to grind a pair of opposed parallel faces and a partial internal cylindrical face on a work piece, an oscillatable work support, a pivot for said support which is arranged to oscillate said work support about an axis parallel to the axis of the grinding wheel and aligned with the axis of said internal face to be ground, and means simultaneously to cause a relative transverse feeding movement between the grinding wheel and the work piece so as to first grind the opposed faces and thereafter to grind the partial internal cylindrical surface.

2,893,172

SIDEWALL BUFFING MACHINE FOR PNEUMATIC TIRES

Edwin P. Schrank, Akron, Ohio, assignor to Selberling Rubber Company, Akron, Ohio, a corporation of Delaware

Application September 17, 1957, Serial No. 684,548
30 Claims. (Cl. 51—3)



1. Apparatus for buffing a sidewall portion of a rubber pneumatic tire, comprising means for rotating the tire about an axis, a sidewall buffing element, mounting means for supporting said buffing element to be swingable about a plurality of axes for movement of the element toward and from contact with the tire sidewall portion and for movement conforming the element to the radially transverse curvature of said sidewall portion, and supporting means supporting said mounting means to be shiftable for movement of the buffing element in direction substantially radially of said axis progressively to remove a predetermined amount of surface rubber from said sidewall portion, control means being provided for selectively moving said supporting means in forward and reverse said radially transverse directions, said control means including means operable by movement of said element away from said sidewall portion for reversing the movement of said supporting means.

2,893,173

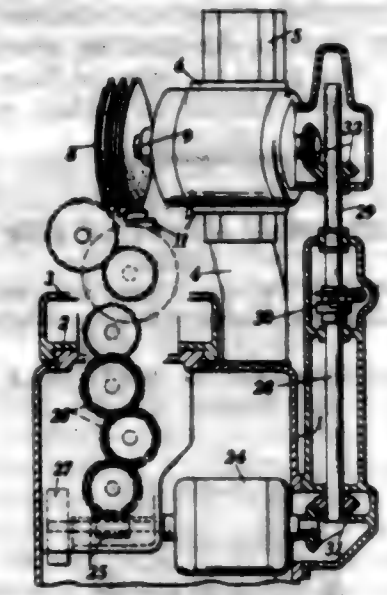
MEANS FOR FORMING THE TEETH OF SPUR GEAR WHEELS OR THE LIKE

William Henry Bateman, Overstreams, Leadwater, Ricksmansworth, England, assignor to Wickman Limited, Coventry, England

Application May 23, 1955, Serial No. 510,314
Claims priority, application Great Britain May 24, 1954
4 Claims. (Cl. 51—95)

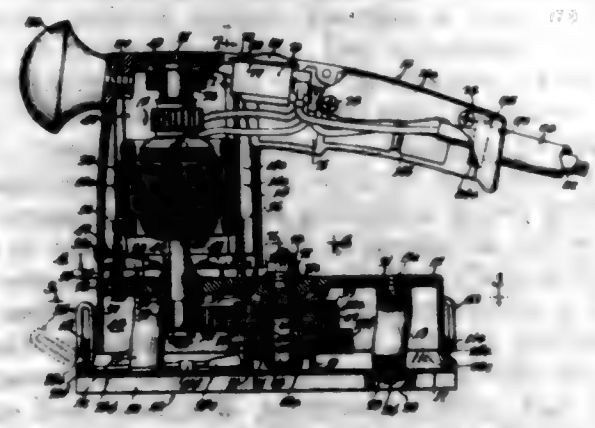
1. In a machine for grinding the teeth of spur gear wheels, splines and similar non-helical workpieces in which the teeth lie in the direction of their lengths parallel with the axis of the workpiece by a grinding wheel having an operative peripheral surface of helical form, the combination of a grinding wheel spindle, a work spindle, a work spindle supporting table, means for imparting linear movement to said table in a direction inclined to the axis of the work spindle and at a fixed angle to the axis of the grinding wheel spindle whereby planes containing the axes of both spindles together with the direction of movement of the table form a triangle,

interengaging gear members for inter-connectingly transmitting rotation from a driving source to the grinding wheel spindle and the work spindle including a gear slidable with the said table parallel with the axis of another



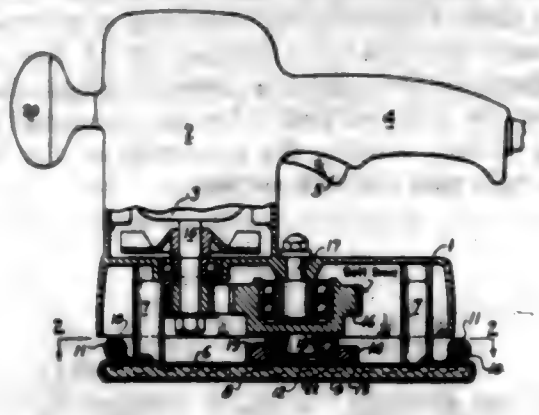
gear in meshing engagement, thereby providing relative rates of rotation of the grinding wheel spindle and the work spindle corresponding to rates which would result if a workpiece derived its rotation from the grinding wheel throughout movements of the said table.

2,893,174
SURFACE TREATING MACHINE
Ivar Jepson, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Application March 7, 1956, Serial No. 569,990
4 Claims. (Cl. 51—170)



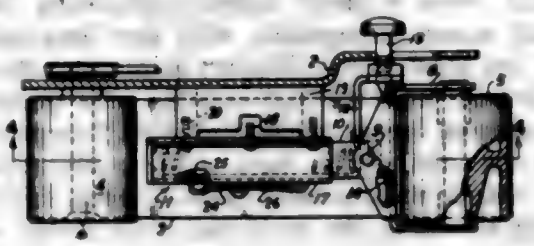
1. A surface treating machine comprising a base member, a base plate spaced from and resiliently supported from said member, motor means incuding a shaft journalled in said base member, a rotatable drive member driven by said shaft and having a first recess centered relative to the periphery of said drive member and opening on at least one face of said drive member, said drive member also having a second recess eccentric relative to said first recess and opening on the opposite face of said drive member from said one face, said recesses longitudinally overlapping one another, first bearing mounting means fixed to said base member and extending into said first recess, second bearing mounting means fixed to said base plate and extending into said second recess, first elongated bearing means positioned in said first recess and mounting said rotatable member rotatably on said first bearing mounting means, and second elongated bearing means mounted in said second recess and mounting said rotatable member rotatably on said second bearing mounting means, said first bearing means and said second bearing means overlapping one another to an extent such that the center of forces transmitted from said second bearing means is between the ends of said first bearing means.

2,893,175
SURFACING MACHINE
John P. Breck, Toledo, Ohio, assignor to American-Lincoln Corporation, Toledo, Ohio, a corporation of Ohio
Application December 19, 1957, Serial No. 703,970
10 Claims. (Cl. 51—170)



1. In a machine of the class described having a body, a pad supporting the body for relative vibratory movements, and a power mechanism carried by the body and having an orbitally movable member adjacent to the pad, the provision on the pad of a channel part, means attaching said part for rotational adjustment on the pad, a yoke block guided for reciprocatory movement in the channel and engaged by said member to cause orbital movements of the member to impart vibratory movements to the pad relative to said body.

2,893,176
POWER SURFACING MEANS
John P. Breck, Toledo, Ohio, assignor to American-Lincoln Corporation, Toledo, Ohio, a corporation of Ohio
Application April 24, 1958, Serial No. 730,617
1 Claim. (Cl. 51—170)

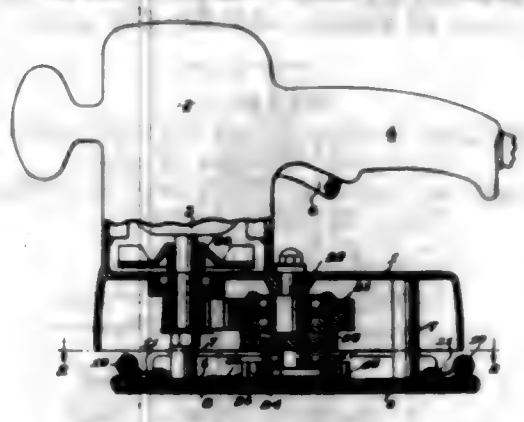


In a surface abrading machine having a frame, a power driven roll and an idler roll spaced parallel thereto, a yoke carried by the idler roll, a sanding belt connected and guided by said rolls, a stem projecting from said yoke towards the power roll, said stem being connected to the yoke by a pivotal connection, the stem being in channel form and having an arm projecting at right angles thereto, a guide mounted on the machine frame and surrounding said stem, a compression spring in said stem compressed between the ends of the guide and the right angle projection on the stem, a catch lever mounted on the outside of the guide and having an end portion thereof penetrating said guide, a notch in the stem and a spring urging said catch lever into the notch in the stem.

2,893,177
SURFACING MACHINE
John P. Breck, Toledo, Ohio, assignor to American-Lincoln Corporation, Toledo, Ohio, a corporation of Ohio
Application November 19, 1958, Serial No. 775,010
6 Claims. (Cl. 51—170)

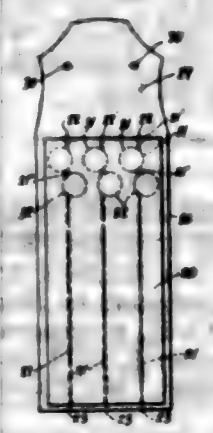
1. In a surfacing machine having a body, a pad supporting the body by means of a plurality of resilient posts

for relative vibrating movement, a power mechanism carried by the body and having an orbital movement member driven by the power mechanism adjacent the pad, the pad having a channel plate rigidly mounted on the top thereof, a yoke member supported by said channel plate



for slidable movement therein, said yoke member receiving said orbital movement member for vibratory movement of said pad, and means supported by said pad externally of said channel plate for locking said yoke member against movement in said channel plate for orbital movement of the pad.

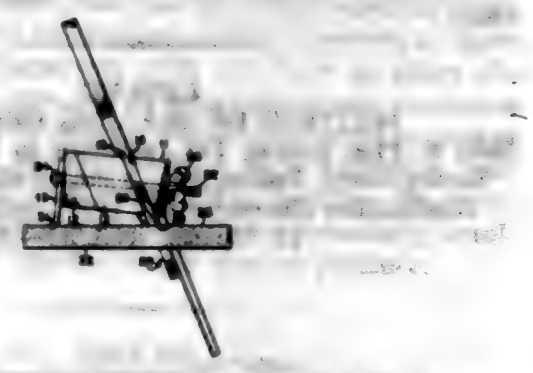
2,893,178
AUTOMATIC KNIFE SHARPENER AND HOLDER
John E. O'Riordan, Mission, Kans.
Application April 18, 1958, Serial No. 729,323
10 Claims. (Cl. 51—214)



5. In a knife holder and sharpener, a body portion having a guide slot therein open at one end thereof and having openings intersecting said slot, a metallic guard strip overlying said slot at one side thereof, and sharpening members mounted in said openings, each of said sharpening members comprising an abrasive member, mounting means therefor comprising a member mounted to swing across said slot and means for urging said mounting member transversely of said slot.

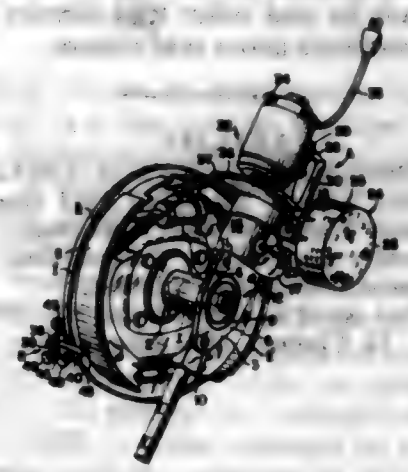
2,893,179
GAUGE CLAMP FOR SHARPENING TOOLS
James A. Sperow, San Francisco, Calif.
Application November 15, 1956, Serial No. 622,490
5 Claims. (Cl. 51—221)

2. A gauge clamp for holding objects that have beveled edges to be sharpened, said clamp comprising complementary block sections forming together a block having top and bottom sides in parallel planes, said sections having parallel adjacent faces inclined to the planes of said top and bottom sides, a plate carried by one of said sections at one end of the block, said plate having a straight edge normally projecting below the plane of the bottom side, and means for holding said plate and



said sections together and for releasibly securing the sections against objects placed between said faces.

2,893,180
METHODS AND MEANS FOR GRINDING AUTOMOTIVE BRAKE SHOES
Harry B. Barrett, Clayton, Mo.
Original application December 12, 1956, Serial No. 627,895. Divided and this application December 16, 1957, Serial No. 702,850
4 Claims. (Cl. 51—281)



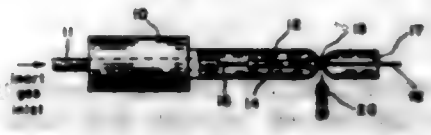
1. The method of surfacing the braking faces of brake shoes in automotive brakes of the full floating shoe type, which method comprises removing the wheel and brake drum to expose the backing plate and brake shoes operatively mounted thereon, holding only one shoe rigidly in properly aligned position with respect to the backing plate and thereby causing the other shoe to assume a properly aligned position with reference to the backing plate, and grinding the braking surface of said other shoe to form thereon a cylindrical surface which conforms to an arc that is concentric in relation to the axis around which the wheel and drum turn when the latter are in operative position.

2,893,181
HYDROGEN ELIMINATION IN TREATMENT OF METALS
William P. Burroughs, Bristol, Conn., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Application May 23, 1956
Serial No. 586,883
7 Claims. (Cl. 51—282)

1. The method of abrading an article made of a metal which is above hydrogen in the electromotive series of elements comprising the steps of placing the article in contact with an aqueous medium, adding to said aqueous medium an oxidizing salt having a cation selected from the group consisting of ammonium, sodium, potassium and lithium ions and an anion selected from the group consisting of nitrate, nitrite, permanganate, and chromate

ions, and abrading said metal article whereby the nascent hydrogen as formed from the reaction between the newly formed metal surface and the medium is oxidized to form water.

2,893,182
METHOD OF SEALING RESISTORS
John R. Pies, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Application December 26, 1957, Serial No. 704,053
11 Claims. (Cl. 53—22)

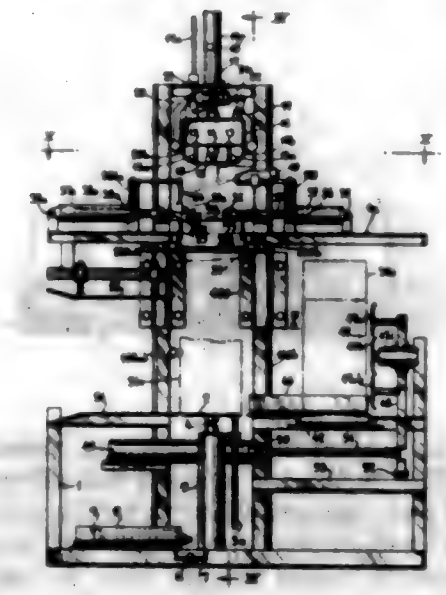


1. A method of sealing a resistor in an inert atmosphere which comprises placing a resistor with a pair of leads attached thereto within a tubular blank, expelling the air within said blank with an inert gas, heating said blank and sealing it to one of said leads on a side remote from the source of said inert gas while continuing the flow of said gas, heating said blank about the other of said leads adjacent said source of said inert gas and sealing said blank to said other lead thereby entrapping an inert gas atmosphere about said resistor.

2,893,183
CARTON FORMING APPARATUS AND METHOD
Grover Cleveland Currie, Bernard David Dunn, Maurice B. Dunn, and Joseph Robert Swoginnis, Charlotte, N.C., assignors to Ducom Corporation, Charlotte, N.C., a corporation of North Carolina
Application April 6, 1955, Serial No. 499,652
16 Claims. (Cl. 53—29)

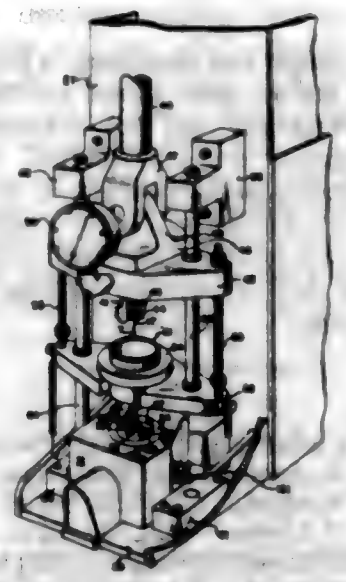
9. That method of forming a closed container from a flat blank having a rectangular base portion and first and second opposed side panels and first and second opposed end panels projecting outwardly from the four edges of said base portion and a relatively small tab projecting outwardly from each side edge of each side panel which comprises successively forcing the blank through a cross-shaped opening formed in a plate and through a rectangular tubular die to cause the tabs to project inwardly from the side panels and to then cause the side panels and end panels to project upwardly from said base portion, positioning the container thus formed in a rectangular pocket for maintaining the upright attitude of said side and end panels relative to said base portion, placing articles to be packaged in the container, applying liquid adhesive to the upper portion of the first side panel, successively folding the upper portions of the first and second end panels inwardly across the upper edges of the tabs to overlie said base portion, and then successively folding the upper portions of the second and first side panels over the inwardly folded portions of the first and second end panels whereby the upper folded portion of the first side panel will adhere to the upper folded portion of the second side panel.

2,893,184
APPARATUS FOR CLOSING OPEN MOUTH BAGS OR THE LIKE
Marcel Lienart, Brussels, Belgium, assignor to St. Regis Paper Company, New York, N.Y., a corporation of New York
Application February 18, 1957, Serial No. 640,852
Claims priority, application Belgium March 31, 1956
15 Claims. (Cl. 53—75)



1. Apparatus for closing filled open mouth bags and the like, comprising in combination: a member adapted to be moved responsive to pressure applied by the upper portion of the charge contained in the filled bag; devices for folding mouth portions of the bag to bag closing positions; mechanism for relatively moving the filled bag with respect to said member and devices, whereby such member is thus moved by such pressure; and mechanism actuated responsive to such pressure-responsive movement for then actuating said devices for closing the bag mouth with the closure at a position depending upon the effective height of the charge in the bag.

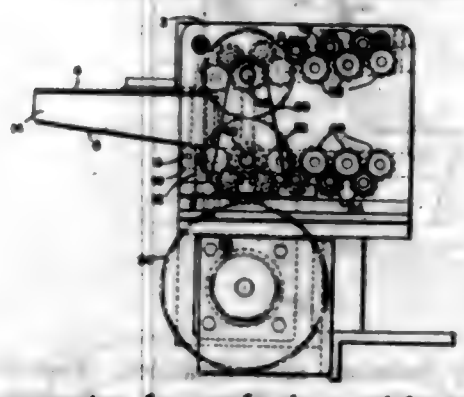
2,893,185
APPARATUS FOR JOINING AND SEALING ARTICLES UNDER PRESSURE
William B. Warren, Los Angeles, and Fred Wohlmann, Inglewood, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Application November 1, 1957, Serial No. 694,821
8 Claims. (Cl. 53—86)



1. Apparatus for joining objects to each other in an atmosphere under pressure comprising: a movable support for one of said objects, a fixed support for another of said objects, movable chamber-forming means disposed between and spaced from said supports in a first position,

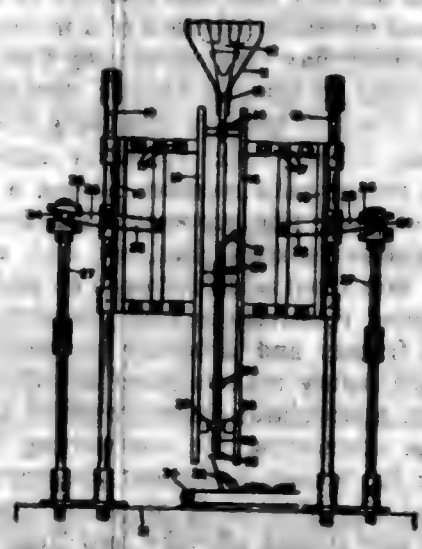
means for moving said movable support and said chamber-forming means to a second position whereby said objects are brought into contact with each other and said supports are brought into airtight contact with said chamber-forming means to form an airtight chamber around said contacted objects, means for establishing an atmosphere under pressure in said chamber, and means for integrally joining said contacted objects to each other.

2,893,186
FRANKFURTER PACKAGING MACHINE
John R. Litty, Goshen, N.J.
Application June 15, 1954, Serial No. 436,821
4 Claims. (Cl. 53—124)



1. In apparatus for packaging articles, means forming a passage substantially rectangular in transverse section and having walls converging from the inlet toward the outlet end of said passage comprising a plurality of rollers each extending across a wall of said passage, said rollers being arranged in four sets respectively lining the four walls at the inlet end of said passage, and a delivery snout including a plurality of plate members respectively lining the four walls at the outlet end of said passage and extending in longitudinal continuation respectively of said four sets of rollers, said plate members being adapted for receiving the open end of a bag fitted thereover, and means mounting said plate members for yielding movement outwardly relative to one another under the influence of an article moving therebetween, thereby to open said bag for receiving said article, said rollers and said plate members being conjointly operative to compress said article to a predetermined size progressively as the same moves through said passage to said bag.

2,893,187
PACKAGING OF LIQUIDS
Eric Tebbutt, Gainsborough, England, assignor to Rose Brothers (Gainsborough) Limited, Gainsborough, England, a British company
Application May 27, 1957, Serial No. 661,897
Claims priority, application Great Britain June 2, 1956
3 Claims. (Cl. 53—180)



1. Apparatus for packaging liquids in heat sealing materials, comprising means for forming a tube from a web of material, a pair of reciprocating carriers provided with pulling members, longitudinal sealing members and transverse sealing members, said carriers being movable transversely to cause the pulling and sealing members to move into operative engagement with the tube to effect the forwarding of the tube and its longitudinal and transverse sealing, and a pair of nipping members adapted to engage a filled portion of the tube prior to each transverse sealing operation to displace the liquid in the tube, the transverse sealing of the tube being effected substantially simultaneously with the release of the nipping pressure.

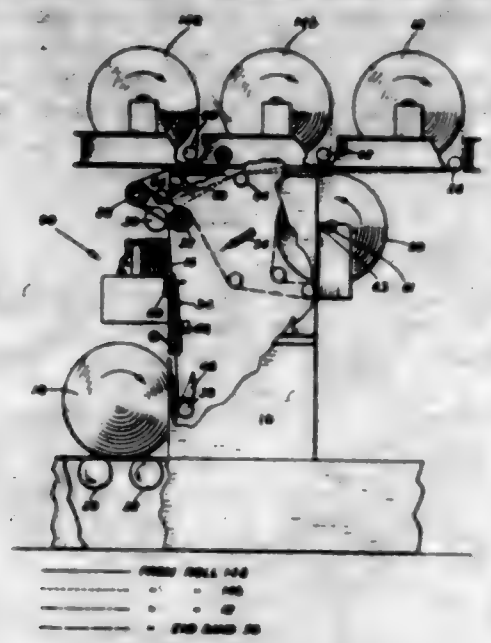
2,893,188
APPARATUS FOR TAPING PACKAGES
George O. Cook, Camp Hill, Pa.
Application July 29, 1954, Serial No. 446,686
2 Claims. (Cl. 53—198)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. Apparatus for use in applying vertically-spaced reinforcing tapes to a non-circular package, comprising a substantially horizontal roller conveyor table, a substantially horizontal rectangular turntable journaled upon the roller conveyor table and spaced somewhat above the tops of the rollers of the conveyor table to provide a fulcrum for manually pivoting said package about the near edge of said turntable onto the center of said turntable into proper position for taping as said package is advanced along the conveyor table, an upright standard positioned near one side of the turntable and extending above the turntable, a collar mounted on said standard, said collar being vertically movable on said standard for a distance approximately equal to the height of said package, and said standard being free from obstructions to the vertical adjustment of said collar on said standard for a distance at least as great as the height of the package, and a roll of pressure-sensitive adhesive tape journaled upon the standard above said collar and slidably contacting said collar; whereby upon vertical movement of said collar to a predetermined height above said turntable, and application of the free end of said adhesive tape to said package, said adhesive tape is unwound from said roll and applied about said package in a substantially horizontal band when said turntable and package are conjointly rotated, and whereby upon a second vertical positioning of said last-mentioned collar to a height different from said first height and re-application of the free end of said adhesive tape to said package, said adhesive tape is again unwound from said roll and applied about said package in a second substantially horizontal band vertically spaced from said first band when said turntable and package are again conjointly rotated.

2,893,189
WRAPPING PAPER SUPPLY MEANS
Arthur Wesley Lancaster, Orillia, Ontario, Canada, assignor, by mesne assignments, to Williams & Wilson Limited, Montreal, Quebec, Canada
Application February 8, 1956, Serial No. 564,320
3 Claims. (Cl. 53—198)

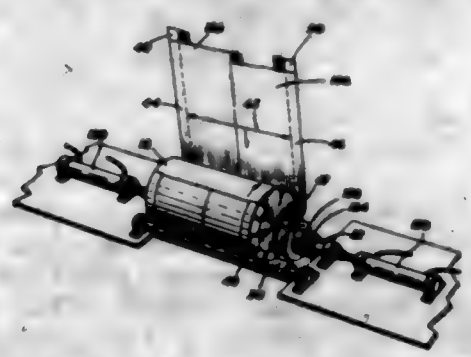
2. A roll wrapping machine including a frame having rolling surfaces thereon, a rail running parallel to and located intermediate said rolling surfaces, a pair of carriages

having means projecting from one side thereof movably mounting one side of said carriages on said rail, the opposite side being movably supported on a rolling surface, a means operatively connected to said carriages for synchronously shifting said carriages relatively to one another



to cause adjacent ends of said rolls to overlap one another to a predetermined variable degree, means for guiding strip from each of said rolls to be wrapped, said carriages and said strip being so arranged that said strip is overlapped to a predetermined degree, and gluing means for attaching said two strips in the overlapping region.

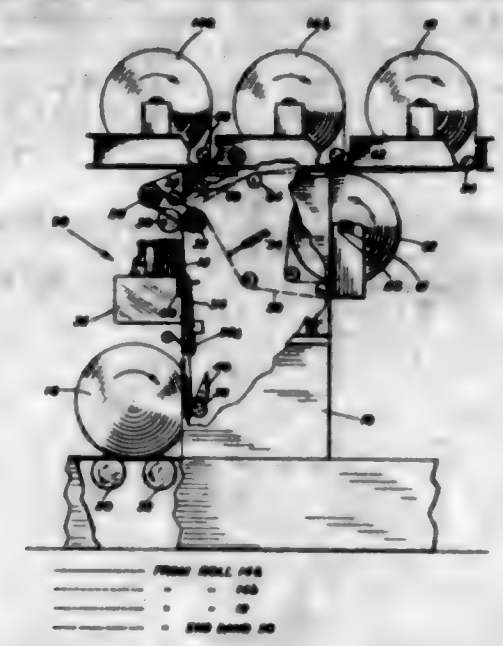
2,893,190
ROLL WRAPPING
Arthur W. Lancaster, Orillia, Ontario, Canada, assignor, by mesne assignments, to Williams & Wilson Limited, Montreal, Quebec, Canada
Application July 6, 1955, Serial No. 520,315
5 Claims. (Cl. 53—380)



1. In a roll wrapping machine: a pair of drive rollers for rotating and supporting said roll during wrapping; a pair of crimping means slidably mounted on one of the drive rollers, retractable means for moving said crimping means into contact with said rolls to perform the crimping operation, and means allowing helical retraction of said crimper blocks relative to said wrapped roll.

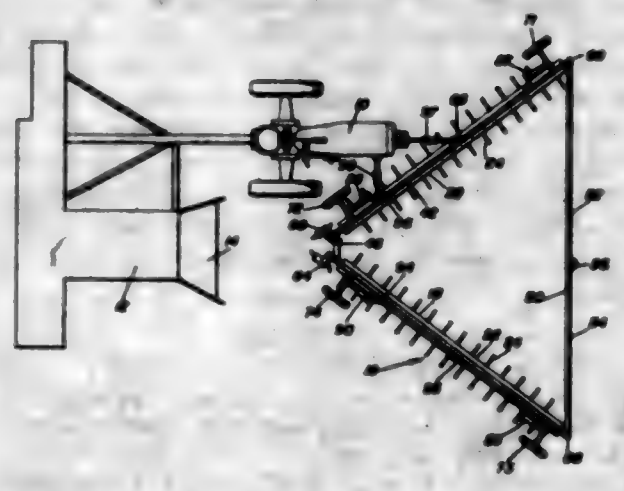
2,893,191
CUTTING AND GLUING MEANS FOR PAPER STRIP
Arthur W. Lancaster, Orillia, Ontario, Canada, assignor, by mesne assignments, to Williams & Wilson Limited, Montreal, Quebec, Canada
Application August 27, 1956, Serial No. 606,435
15 Claims. (Cl. 53—380)

1. In a roll wrapping machine, means for fielding a wrapping paper supply strip having a width not only to extend across the axial length of a roll to be wrapped but also to provide areas for crimping on each end of said roll, a track parallel to the plane of said strip, a carriage movable on said track, a pair of vertically spaced glue guns, each adapted to spray corresponding longitudinally disposed locations on said strip and a rotary cutter adapted to cut in the plane of the paper



longitudinally between said locations, flexible air and electrical connections to said carriage, a flexible glue connection to each gun, means for reciprocating said carriage on said track and means for actuating and deactuating said glue guns.

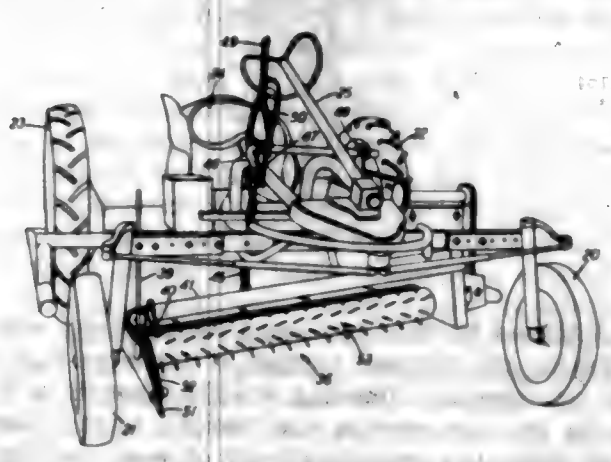
2,893,192
CENTRAL DELIVERY HAY RAKE
John Tallman, Ansmeen, Iowa
Application February 19, 1957, Serial No. 641,212
2 Claims. (Cl. 56—27)



1. A central delivery hay rake adapted to be propelled by a tractor and moved in advance of a trailing hay baler, said central delivery hay rake comprising a pair of frames, each frame having an elongated frame member with front and rear ends, a pair of hangers depending from said front and rear ends, rotary rake members carried by said frames, each rotary rake member having a plurality of tines and an elongate tine supporting member parallel to one of said frames, a front and rear end, spindles protruding from said front and rear ends of said rake member and mounted rotatively in said hangers, motors carried by said frames and drivingly connected with one spindle of each rotary rake member to drive said rotary rake members, a structural assembly which has a pair of parts, a hinge connecting the confronting ends of said parts together for hinged movement, the opposite ends of said structural assembly parts hingedly attached to the front ends of said frames whereby said front ends of said frames are movable toward each other as said parts of said structural assembly are hingedly moved with respect

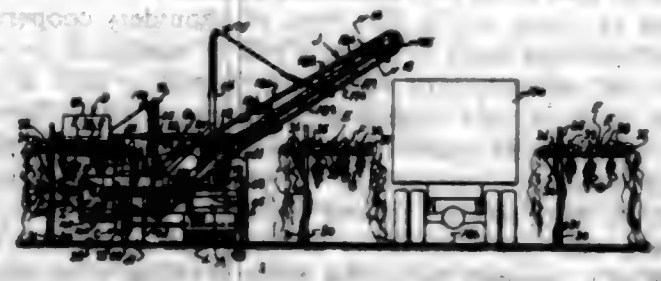
to each other, a hydraulic cylinder, means connecting said cylinder to the rear ends of said frames to extend and withdraw said rear ends of said frames and thereby alter the space between said rear ends of said frames, wheels to support said frames, steerable means mounting said wheels on said frames, and mounting means on one of said frames for attaching said one of said frames to a tractor.

2,893,193
CUCUMBER HARVESTING MACHINE
Lloyd Gilbert, Ravenna, Mich.
Application March 16, 1955, Serial No. 494,661
13 Claims. (Cl. 56—327)



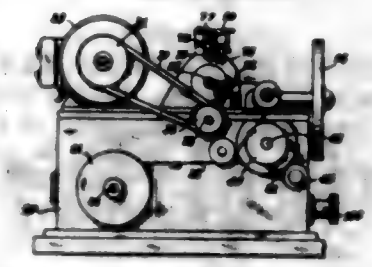
1. A cucumber-harvester, comprising: a main frame; ground-engaging means supporting said main frame; auxiliary frame means mounted on said main frame and extending laterally, from the point of connection of said auxiliary frame means to said main frame, to an end of said auxiliary frame means which is unsupported by said main frame means; vine-elevating and guiding means mounted on said auxiliary frame means for elevating and supporting vines as said auxiliary frame means moves underneath said vines, said vine-elevating and guiding means being disposed adjacent said unsupported end of said auxiliary frame means; picking means mounted on said auxiliary frame means and including at least one striking member moveably mounted with respect to said auxiliary frame means for movement underneath the vine position established by said vine-elevating and guiding means; receiver means mounted on said harvester and disposed adjacent the path of movement of said striking member in position to receive cucumbers removed from vines by said striking member; and drive means operatively associated with said picking means and with said harvester.

2,893,194
GRAPE HARVESTER
Lloyd H. Lamouria, Davis, Calif., assignor to The Regents of The University of California, Berkeley, Calif.
Application August 24, 1956, Serial No. 606,145
34 Claims. (Cl. 56—331)



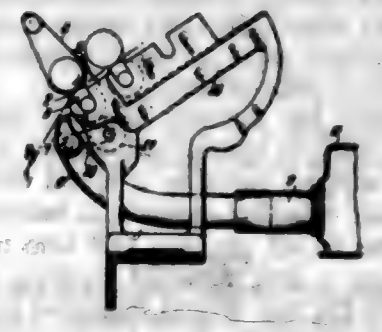
1. A machine for harvesting clustered fruit from vineyards where rows of vines are trained on a horizontal wire trellis so that the fruit clusters hang below the horizontal wires, said machine including in combination: a self-propelled supporting vehicle; an inclined chute supported by said vehicle for lifting higher than said trellis the vine shoots that hang beyond and below said trellis so that these vine shoots will not be cut off by said machine; a depressor supported by said vehicle at an elevated position yieldably urged downwardly and adapted to ride along and over said trellis and to depress the vine canes so as to lower the grape clusters into a more advantageous harvesting position; cutting means supported by said vehicle beneath said depressor and adapted to ride beneath and in contact with the lower surface of horizontal wires of said trellis and substantially directly beneath said depressor; and means on said vehicle for floatingly and yieldingly supporting said cutting means and simultaneously urging it upwardly.

2,893,195
COIL WINDING MACHINE
Arno Greiner, Irvington, N.J., assignor to Uwinco, Inc., Springfield, N.J., a corporation of New Jersey
Application June 17, 1958, Serial No. 742,675
12 Claims. (Cl. 57—3)



1. A coil winding machine comprising a tubular spindle, a revolvable frame having a path of rotation coaxial to said spindle, means for continuously advancing a mandrel through said spindle and out of a forward end thereof, a walking-beam actuating said means, said frame coiling a filament around said mandrel where advancing from said spindle, and means for shifting the fulcrum of said walking-beam and thereby varying the rate of advancement of said mandrel from said spindle for thereby varying the number of coils of filament applied to said mandrel per unit length of advancement of said mandrel.

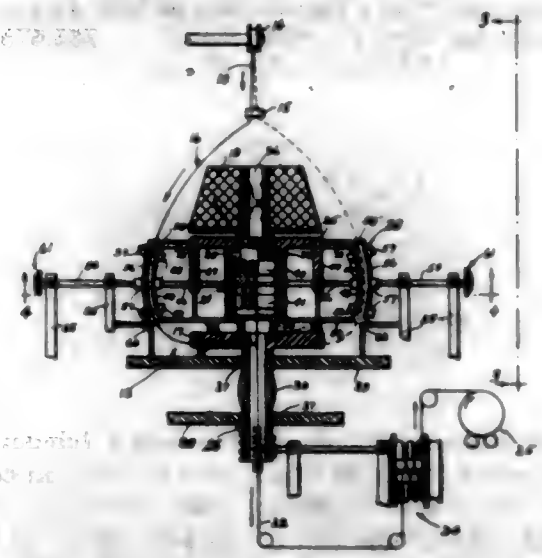
2,893,196
PNEUMATIC PLANT FOR REMOVING BROKEN ENDS ON SPINNING OR SIMILAR MACHINES
Franz Sträber, Augsburg, Germany
Application November 26, 1954, Serial No. 471,483
Claims priority, application Germany December 1, 1953
1 Claim. (Cl. 57—34.5)



A device for facilitating removal of broken threads from a spinning machine having spaced drawing frames provided with bearing brackets and in which separate threads are fed between respective cooperable guide means; comprising a conduit located below said guide means between said bearing brackets and extending in crosswise direction thereto, a support underclearer for said conduit, said underclearer being mounted between said brackets rearwardly of said guide means, a nozzle

head pear-shaped in cross-section, said nozzle head having spaced oval nozzle openings positionable directly adjacent said thread guide means, exhaust pipe means operatively and telescopically connected to said conduit and said nozzle head and providing communication therebetween, and a lever terminally pivotally secured to both said nozzle head and said underclearer and extending therebetween pivotally mounting said nozzle head for effectuating close positioning of said nozzle openings with respect to threads issuing from between said guide means and independently of and without displacing said exhaust pipe means.

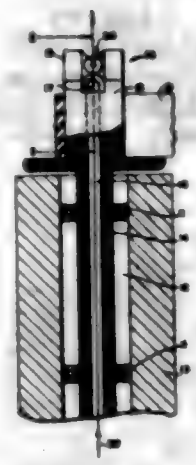
2,893,197
APPARATUS FOR AND METHOD OF TWISTING AND PLYING STRANDS
Alfred W. Vibber, Ridgewood, N.J.
Application September 5, 1956, Serial No. 608,137
33 Claims. (Cl. 57—58.3)



10. The method of plying together two strands to form a two-ply strand comprising feeding a first strand from a let-off strand package in a run extending to a plying junction, feeding a second strand from a source of strand supply into a balloon rotating about the strand package and then from the balloon to the plying junction, yieldingly retarding the first strand at a zone thereof in advance of the plying junction, yieldingly retarding the second strand at a zone thereof in advance of the balloon, taking up the plied strand under tension beyond the plying junction, such taking up serving to overcome the yielding retardation of the two strands, to forward the two strands to the plying junction, and to withdraw the plied strand from the plying junction, maintaining the sum of the retardations on the two strands constant, and exchanging energy between the two strands at their zones of retardation so that the two strands pass at equal speeds through their respective zones of retardation.

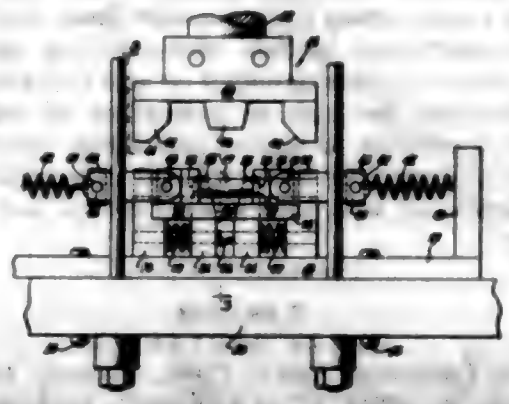
31. Mechanism for twisting together two strands so as to form a two-ply strand, comprising a source of a first strand, a support carrying a let-off strand package, a revolving shaft operable to rotate a balloon of the first strand about the let-off package and also to ply the two strands together, a first retarded feeding means driven by the travel of the first strand therepast for feeding the first strand into the balloon, a second retarded feeding means driven by the travel of the second strand therepast for feeding the second strand toward the plying junction where the two strands are plied together, means controlling the first and second feeding means to cause them to feed their respective strands at a predetermined speed ratio, and means operative upon a change in tension of one of the strands between its feeding means and the plying junction to change the sum of the retardations imposed on the two strands by their feeding means.

2,893,198
THREAD TWISTING APPARATUS
Hans Alwin Schrenk, Arnhem, and Pieter van Dijk, Velp (Gld.), Netherlands, assignors to American Enka Corporation, Enka, N.C., a corporation of Delaware
Application December 17, 1956, Serial No. 628,919
Claims priority, application Netherlands December 30, 1955
8 Claims. (Cl. 57—77.3)



1. A thread twisting apparatus comprising a rotatable tube having an entrance portion, a discharge end and a thread passageway extending axially through said tube from the entrance portion substantially to the discharge end, an elongated encircling body of wear-resistant material rigidly mounted on the discharge end of said tube, means defining a thread receiving bore extending longitudinally of the encircling body, the bore forming an angle with said axially extending thread passageway, and means defining a reduced wall section between said bore and the outer surface of said body for fixing the encirclement of thread therearound.

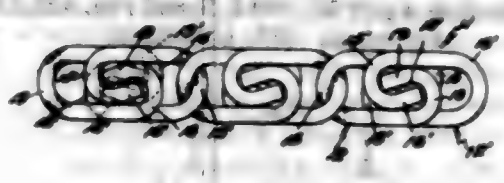
2,893,199
APPARATUS FOR INTERNAL FORGING OF CHAIN LINKS
James W. Sheehan, Pacific Palisades, Calif.
Application May 19, 1955, Serial No. 509,484
3 Claims. (Cl. 59—30)

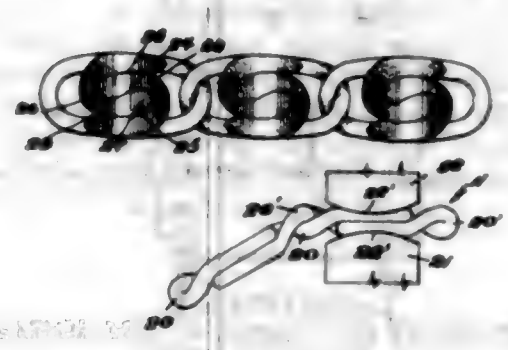


1. Apparatus for forging a pair of spherical sockets in the internal end surfaces of a conveyor chain link having end loops and thickened central arm portions the ends of which are in the form of shoulders cooperating with said end loops to define a pair of elongated openings the end extremities of which are defined by said internal end surfaces, said central arm portions defining between them a central space of less width than said openings, said apparatus comprising: a pair of end brackets; a pair of rails secured to and extending longitudinally between said end brackets in laterally spaced parallel relation in a common horizontal plane; a bridge plate secured to and extending longitudinally between said end brackets above said rails and parallel to said plane, said bridge plate having a slot extending along the longitudinal axis of the apparatus; a pair of guide rods secured to and extending longitudinally between said end brackets above

said bridge plate; a pair of male forging units each comprising a relatively broad cross head having a pair of laterally spaced bearing bores through which said rails extend for guiding said cross head for longitudinally approaching and receding movements; forging finger formed integrally with and extending upwardly from each respective cross head through said bridge plate slot and laterally supported and guided therein and having a forging head at its upper end; a pair of female die blocks each having a pair of laterally spaced bearing bores through which said guide rods extend for guiding said die blocks in approaching and receding movements; said forging heads each having a forging face corresponding to the shape of the socket to be forged and a thickness greater than the width of said central space of the link; said die blocks each having a U-shaped recess for shaping a respective external end surface of the link and each having, at the bottom of its recess a pair of laterally spaced supporting shoulders for supporting respective side portions of the link with said internal and external end surfaces thereof in registration with said forging heads and female die recesses respectively; yielding means acting between said end brackets and the respective cross heads for yieldingly urging the latter toward one another and normally maintaining said forging heads in position to pass through said end openings of the link as the latter is inserted into the apparatus; means acting yieldingly against said female die blocks for normally spreading them to positions for freely receiving the end loops of the link; and means for simultaneously spreading said forging heads and drawing said female die block inwardly for forging engagement with said internal and external end surfaces of the link respectively.

2,893,200
METHOD OF FORMING AN ORNAMENTAL CHAIN
Adolf Jaeger, Cranston, R.I., assignor to Federal Chain Company, a corporation of Rhode Island
Original application October 17, 1956, Serial No. 616,437. Divided and this application December 21, 1956, Serial No. 629,971
3 Claims. (Cl. 59—35)



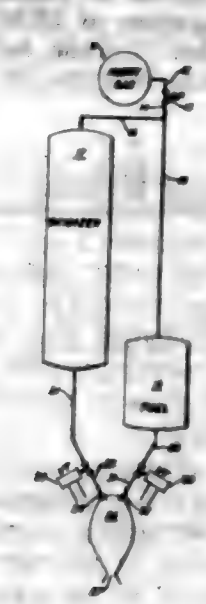


1. The method of forming a chain of U-shaped wire portions which comprises bending each of the legs of each U-portion into a hook, forming said hooks in spaced substantially parallel planes, providing two U-portions, overlapping said U-portions with a hook on one portion interlocked with a hook of the other portion in one plane and the other hook on said one portion interlocked with the other hook on the said other portion in a second plane substantially parallel to said one plane, whereby interlocks in superimposed relation are formed, curbing the bights of the U-portions and striking the center hooks to flatten and spread them widthwise of the links into locking relation.

2,893,201
LINK MADE UP OF TWO PARTS JOINED BY AN UPSETTING OPERATION
Adolf Jaeger, Cranston, R.I., assignor to Federal Chain Company, a corporation of Rhode Island
Application October 17, 1956, Serial No. 616,437
4 Claims. (Cl. 59—80)

1. A chain having links formed of two U-shaped wire portions with the legs of each of said portions extending in a lengthwise direction toward each other and in overlapping superimposed relation, each leg of each U portion being doubled back upon itself in hook form with the hooks of the legs of one portion interlocking in tight engagement with the hooks of the other of said U portion, the wire at the bight of each of said U portions being uniform in cross section and curbed and the hooks at the mid portion of the link being flattened in a tight mutual interlock.

2,893,202
ROCKET PROPULSION METHOD
Alex Zletz, Park Forest, and Don R. Carmody, Crete, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application December 15, 1953, Serial No. 398,245
2 Claims. (Cl. 60—35.4)



1. A method of rocket propulsion, which method comprises injecting separately and substantially simultaneously into the combustion chamber of a rocket motor a nitric acid oxidizer selected from the group consisting of white fuming nitric acid and red fuming nitric acid and a hypergolic liquid fuel consisting essentially of about equal volumes of mono(di-isobutyl)phosphine and diisobutylene, in an amount and at a rate sufficient to initiate a hypergolic reaction with and to support combustion of the fuel.

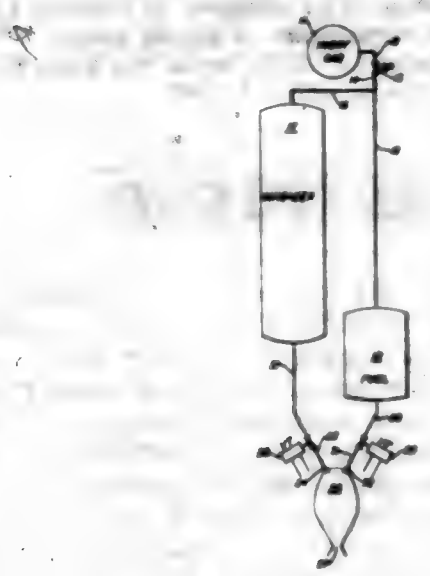
2,893,203
ROCKET PROPULSION METHOD
Don R. Carmody, Crete, Evan A. Mayerle, Chicago, and Alex Zletz, Park Forest, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application January 4, 1954, Serial No. 402,186
12 Claims. (Cl. 60—35.4)

1. A method for generating gas, which method comprises contacting, in a reaction chamber, a nitric acid oxidizer and a fuel having the general formula

$$R_2NP(OR)_2$$

wherein R is selected from the class consisting of alkyl

and alkenyl and the total number of carbon atoms in said fuel is not more than 16, under conditions of tem-



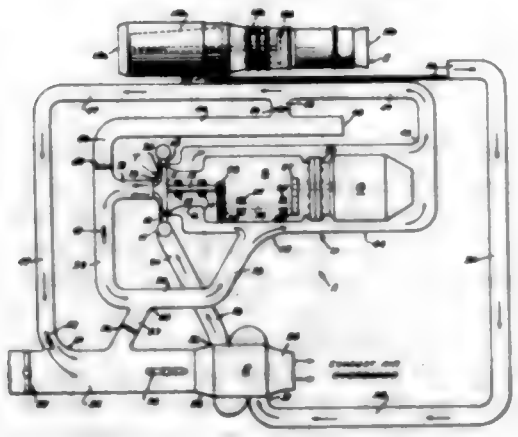
perature and oxidizer/fuel ratio such that a hypergolic reaction occurs to produce gaseous decomposition products.

2,893,204

SELF-COOLED TURBINE DRIVE

Robert J. Andersen, Wickliffe, and Joseph T. Hamrick, Parkview, Ohio, assignors to Thompson Ramo Wooldridge Inc., a corporation of Ohio

Application September 11, 1956, Serial No. 609,141
6 Claims. (Cl. 60—39.18)



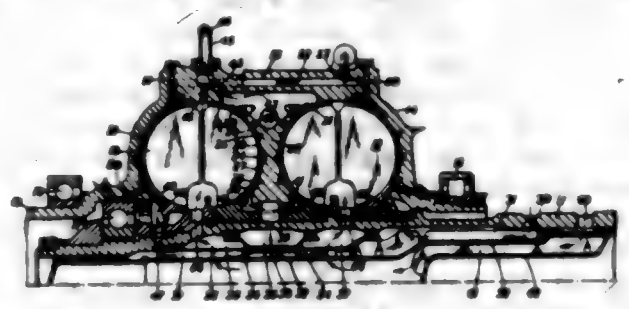
1. A turbine and cooling system for high altitude operation comprising an air turbine for operating aircraft accessory equipment and having an inlet and air exhaust, a cooling shroud for said accessory equipment, an exhaust conduit connected to receive a flow of exhaust air from the turbine and connected to direct the expanded cool exhaust air into the shroud, an operating air supply line leading to the turbine inlet for supplying air from a pressurized air supply, a heat exchanger in said air supply line, a first cooling conduit leading from the turbine exhaust to said heat exchanger, a second cooling conduit leading to said heat exchanger and open to receive ram air, and valve means positioned in said first and second conduits to control air flow through said first and second cooling conduits and selectively movable to a first position or a second position, said first conduit being closed and said second conduit being open in said first position whereby ram air is used for the heat exchanger and turbine exhaust air is used solely for the cooling shroud, said first conduit being open and said second conduit being closed in said second position whereby exhaust air is used for both the cooling shroud and the heat exchanger.

2,893,205

HYDRAULIC COUPLINGS

Geoffrey C. G. Mansfield, London, England, assignor to D. Napier & Son Limited, London, England, a company of Great Britain

Application November 14, 1956, Serial No. 622,187
Claims priority, application Great Britain December 5, 1955
6 Claims. (Cl. 60—54)



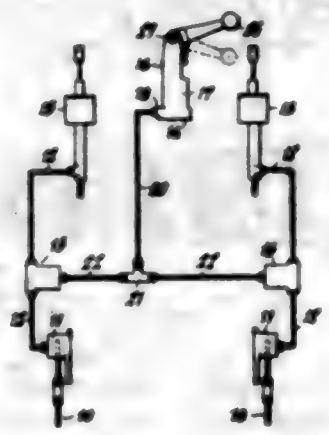
1. A hydraulic coupling comprising a vaned driving rotor mounted for rotation about an axis, a vaned driven rotor mounted coaxially with said driving rotor, a filling inlet to said rotors adjacent said axis, means for supplying hydraulic fluid through said filling inlet to said rotors for coupling said driving rotor to said driven rotor, an emptying outlet from said rotors remote from said axis for emptying hydraulic fluid from said rotors to disconnect said drive, each of said rotors consisting of a vaned cup member of semi-toroidal form and a vaned backing member having a semi-toroidal recess therein which receives said vaned cup member, means defining channels between adjacent surfaces of said vaned cup members and said backing members, coolant inlets to said channels adjacent said axis and separate from said filling inlet, means supplying cooling liquid to said channels through said coolant inlets, and coolant outlets from said channels remote from said axis.

2,893,206

PARKING BRAKE MECHANISM FOR AIRCRAFT

Ladislaus Gelb, Toronto, Ontario, Canada, assignor to John Gelb, Eggertsville, N.Y.

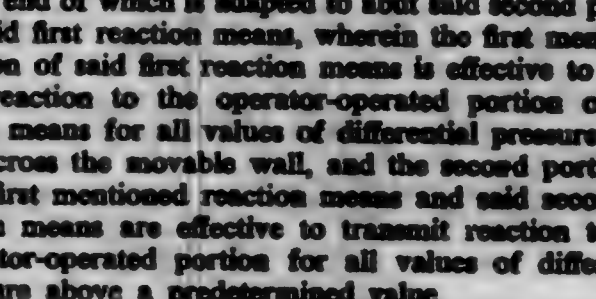
Application April 27, 1954, Serial No. 426,806
4 Claims. (Cl. 60—54.5)



4. A parking brake mechanism for aircraft having an hydraulic brake unit for each of the landing wheels thereof, comprising a fluid dynamic pressure transmitting means having an inlet at one end for pressurized fluid and an outlet at its other end in fluid communication with the brake unit for actuating it, and a fluid pressure creating means including a cylinder having a piston freely operable therein and a fluid outlet communicating with the inlet of said pressure transmitting means, a vertically-swinging piston-actuating lever fulcrumed axially of said cylinder, a telescoping, self-locking toggle connection between said lever and said piston, and a compression spring interposed between the telescoping elements of said toggle

connection for exerting a constant pressure on said piston in the locked contracted position of such connection for continuously applying dynamic pressure to said brake mechanisms.

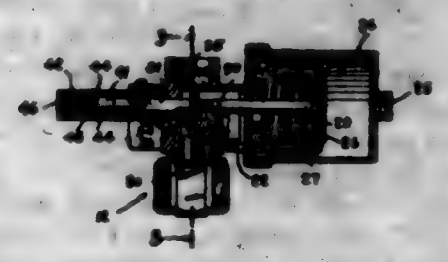
2,893,207
POWER ASSISTED ACTUATOR
Edward E. Hupp, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application October 22, 1954, Serial No. 464,099
9 Claims. (Cl. 60—54.6)



3. A hydraulic pressure producing device, in which physical force is supplemented by power assistance, comprising a differential pressure power cylinder, a hydraulic cylinder mounted on said power cylinder, said hydraulic cylinder including a pressure chamber and output pressure port, a pressure responsive movable wall reciprocable in the power cylinder and having a hollow pressure-transmitting portion one end of which extends into the hydraulic pressure chamber, said movable wall having a chamber therein, a reaction means dividing said chamber into two compartments, valve control means operative to control differential pressures on said movable wall and reaction means and having an operator-operated portion for actuating the same, said reaction means having first and second portions for independently applying reactive force to said operator-operated portion a counter-reaction spring biasing said second portion of said reaction means away from said operator-operated portion said first portion of said reaction means being in constant engagement with said operator-operated portion of said valve means, a second reaction means received in said hollow portion of said movable wall one end of which is subject to the pressure developed in said hydraulic cylinder and the other end of which is adapted to abut said second portion of said first reaction means, wherein the first mentioned portion of said first reaction means is effective to transmit reaction to the operator-operated portion of said valve means for all values of differential pressure existing across the movable wall, and the second portion of said first mentioned reaction means and said second reaction means are effective to transmit reaction to said operator-operated portion for all values of differential pressure above a predetermined value.

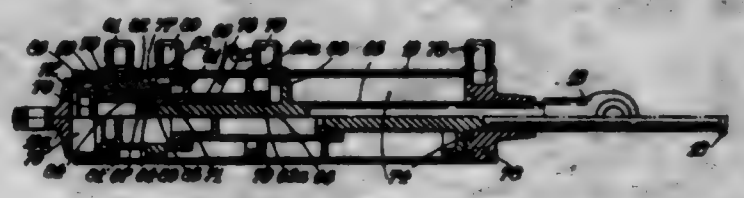
2,893,208
CONTROL MECHANISM FOR FLUID DISTRIBUTING SYSTEMS
Walter J. Olsen, Bloomfield, Floyd B. Parsons, Ridgewood, and George L. Schrenk, Teaneck, N.J., assignors to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Application October 14, 1955, Serial No. 540,432
6 Claims. (Cl. 60—62.5)

4. A pressure pulse transmitter comprising a body including a casing and a cylinder having one end adjacent said casing and having an outlet adjacent its opposite end, pressure pulse producing piston means in said cylinder, a spring for propelling said piston means towards said outlet, a rod connected to said piston means for movement therewith and extending through said casing with its free end disposed outwardly of said casing, said rod having a longitudinal slot in the portion thereof within said casing formed with a recess at one side providing a transverse face, and a latch element extending through said casing cross-wise with respect to said rod,



said element having a section extending through said slot and an enlarged section adjacent thereto for engaging said face to latch said rod in a position to maintain said piston means spring loaded.

2,893,209
MULTI PISTON RAM DEVICE
Rowan Herbert Colley, Derby, England, assignor to Rolls-Royce Limited, Derby, England, a British company
Application March 11, 1955, Serial No. 493,701
Claims priority, application Great Britain March 23, 1954
7 Claims. (Cl. 60—97)



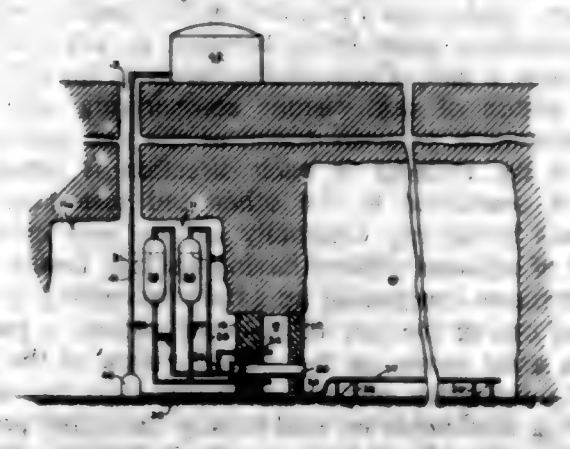
1. A ram device comprising a ram cylinder, at least three pistons within the cylinder and dividing the cylinder into two end spaces and a plurality of intermediate spaces, each intermediate space being between an adjacent pair of the pistons, a pair of spaced abutments on the cylinder, one end piston of said pistons co-operating with said pair of abutments whereby travel of the one end piston relative to the cylinder in each direction is limited, a piston rod connected to the other end piston of said pistons and projecting externally of the ram cylinder, each pair of adjacent pistons having coaxial, nested, telescoping portions comprising an axially extending portion on at least one of the pair of adjacent pistons, a portion having an axial recess on the second piston of the pair, the axially extending portion projecting into the recess, co-operating abutments on said axially extending portion and on the recessed portion respectively limiting relative movement in each direction of the pair of adjacent pistons, and pressure fluid supply means selectively connectible to supply pressure fluid to said intermediate spaces and to at least one of the end spaces.

2,893,210
MOTOR
Richard S. Muszynski, Easthampton, Mass.
Application June 17, 1958, Serial No. 742,606
2 Claims. (Cl. 60—97)

1. Motor apparatus comprising in combination, an elongated tubular outer shell, rear and forward caps se-

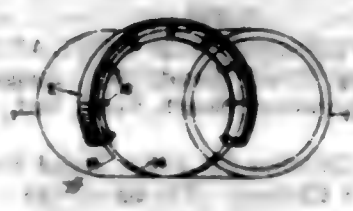
cured in opposite rear and forward ends of said shell, a bulkhead fixed in said shell between said caps having rear and forward ends forwardly and rearwardly of said caps cooperating therewith to provide separate rear and forward compartments, a divider in said forward compartment in abutment with rear and forward faces of said forward cap and bulkhead and being secured in said shell, an elongated sleeve having forward and rear portions oscillatable in said forward cap and forward portion of said bulkhead in oscillatable contact with said divider and provided with a vane extending radially therefrom in said forward compartment and in wiping contact with said shell, said shell and forward cap and divider being provided with pressure passage means from one side of said divider into said forward compartment at one side of said vane, said shell and divider and bulkhead provided with pressure passage means from an opposite side of said divider into said forward compartment at an opposite side of said vane, an elongated drive member extending through said sleeve and bulkhead and rear cap and being reciprocable and non-rotatable in said sleeve and reciprocable and rotatable in said bulkhead and rear cap, and a piston in said rear compartment fixed to said drive member, said shell and bulkhead being provided with pressure passage means into a forward portion of said rear compartment at one side of said piston, said shell and rear cap being provided with pressure passage means into said rear compartment at an opposite side of said piston.

2,893,211
UNDERGROUND STORAGE SYSTEM
Carl T. Brandt, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application May 16, 1955, Serial No. 508,523
12 Claims. (Cl. 61—0.5)



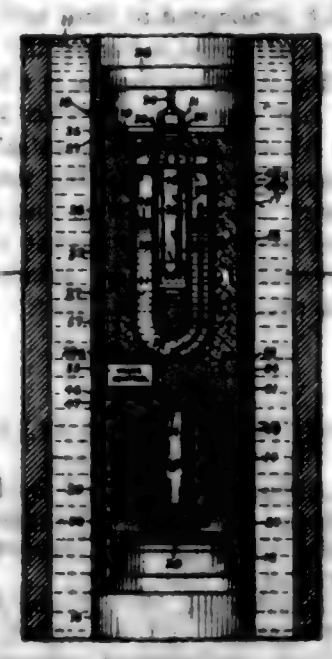
1. In an underground storage system, in combination, an underground storage cavern, a tunnel connected to said cavern, a pair of spaced fluid-tight barriers in said tunnel forming a seal chamber therein, a volatile liquid stored within said cavern under pressure, a viscous liquid immiscible with and having a greater specific gravity than the stored liquid occupying the chamber between the two barriers, said latter viscous liquid exerting a pressure against the inner barrier which is greater than the opposing pressure thereon so as to prevent leakage through the tunnel from the cavern, means for admitting and withdrawing liquid from both the cavern and the chamber, and pressure controlling means comprising a conduit having one end connected with the interior of the cavern and the other end connected with the interior of the seal chamber and an intermediate portion thereof positioned above the level of the barriers and external thereto, whereby the two liquids form an interface within said intermediate portion of the conduit, the liquid above the interface being the stored fluid, thereby effecting a small pressure differential between the two liquids.

2,893,212
DRAIN PIPE CONNECTOR
William F. Holicky, Cleveland, Ohio
Application January 7, 1955, Serial No. 480,523
7 Claims. (Cl. 61—11)



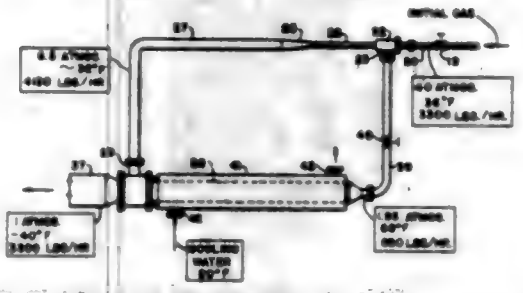
1. A connector for spacing and aligning drain pipe, comprising an arcuately curved rim defining in general the segment of a circle, a plurality of radial angularly spaced inwardly extending spacing members of substantially uniform axial dimension affixed to the rim, the spacing members being substantially T shaped sections, each T shaped spacing member including a head and a stem, the heads of the spacing members abutting and being affixed to the rim, the heads of the respective spacing members being of substantially uniform radial dimension from the center of curvature of the rim to permit uniform abutment of the surfaces of pipes to be spaced, and the stems projecting inwardly for location between ends of such pipes to prevent the pipes from abutting each other, said rim and said heads of the spacing members defining a plurality of relief passages which serve to permit the ingress and egress of water and to substantially prevent the ingress of soil into a spaced pair of such pipes, and an arcuate portion of an annular flange circumferentially disposed and inwardly extending from said rim, the flange and the rim forming a body which is substantially T shaped in cross section, and the flange supportably embracing the spacing members over substantially all of the radial dimensions of each of said spacing members.

2,893,213
REFRIGERATING METHODS AND APPARATUS
Sidney Soloway, Norwalk, Conn., assignor, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas
Application November 22, 1954, Serial No. 470,167
11 Claims. (Cl. 62—4)



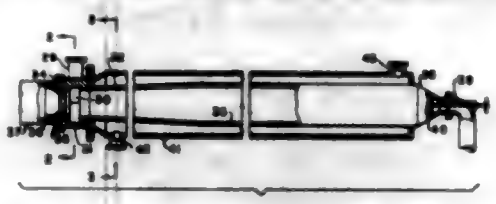
2. In apparatus for obtaining measurements at high temperatures, a measuring instrument, an evaporator proximate to at least a portion of said instrument for cooling said portion, a refrigerant composed of water in said evaporator, an absorber in vapor communication with said evaporator, and an absorbent in said absorber composed of an alkaline earth oxide.

2,893,214
GENERATION OF COLD BY EXPANSION OF A GAS IN A VORTEX TUBE
Willem Pieter Hendal, Amsterdam, Netherlands, assignor to Shell Development Company, New York, N.Y., a corporation of Delaware
Application June 5, 1956, Serial No. 589,422
Claims priority, application Netherlands June 10, 1955
11 Claims. (Cl. 62—5)



1. A method of producing cold in a gas stream which is initially under pressure comprising the steps of flowing said gas as the driving medium through a fluid-actuated compressing device and thereby effecting a first expansion; further expanding the gas in a vortex tube means by admitting the gas thereto with a gyratory motion and effecting a separation of the gas into a hot fraction in contact with the wall of said tube as a peripheral stream and a cold fraction rotating within said peripheral stream; separately discharging said fractions from the vortex tube means; feeding gas discharged in the hot fraction to said compressing device and compressing it therein; and expanding the resulting compressed gas in said vortex tube means by admission in the compressed state with gyratory motion to effect a separation into hot and cold parts.

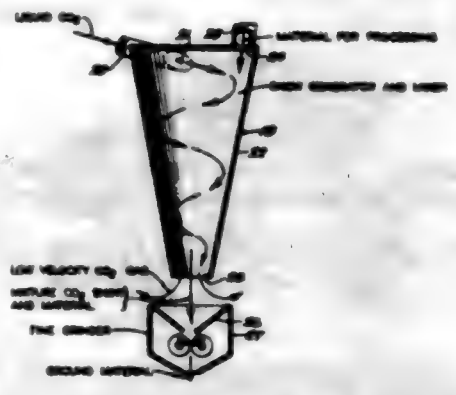
2,893,215
VORTEX TUBE WITH DIVERGENT HOT END
Willem Pieter Hendal, Amsterdam, Netherlands, assignor to Shell Development Company, New York, N.Y., a corporation of Delaware
Application June 5, 1956, Serial No. 589,423
Claims priority, application Netherlands June 10, 1955
7 Claims. (Cl. 62—5)



1. A vortex apparatus for separating a gas stream therein into hot and cold fractions by the heat-separation effect comprising: a chambered body enclosing a tube-shaped vortex chamber at least a part of which diverges with an angle of divergence between 2° and 6° for an axial distance of at least the initial diameter thereof; one or more inlets disposed tangentially to said chamber at the narrower end of said diverging part for admitting said gas stream with a gyratory motion and thereby separating said gas into a hot fraction which moves as a peripheral stream through said diverging part and a cold fraction forming a core within said peripheral stream; and means for discharging said gas from the chamber.

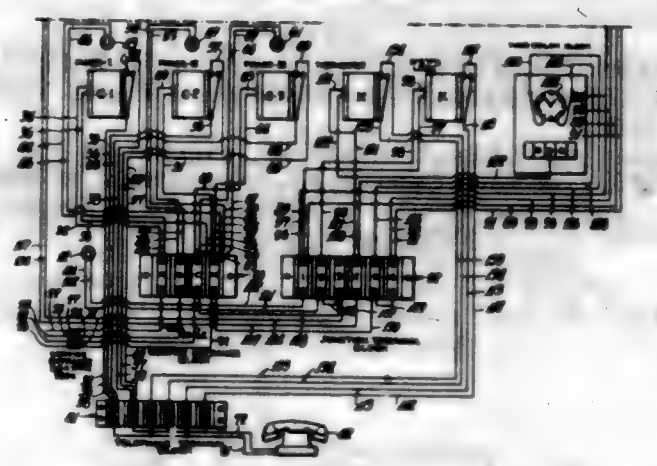
2,893,216
METHOD OF REFRIGERATING A FINELY-DIVIDED MATERIAL
Fred C. Seefeldt, La Grange, Ill., and Julius Rubin, Revere, Mass., assignors to General Dynamics Corporation, Chicago, Ill., a corporation of Delaware
Application February 1, 1956, Serial No. 562,803
2 Claims. (Cl. 62—63)

1. The method of refrigerating a subdivided material preparatory to further size reduction thereof, comprising expanding liquid carbon dioxide into the upper portion of a vessel having downwardly converging walls and an open bottom, the cross-sectional area of said vessel progressively decreasing from the upper to the lower portion thereof, forming a mixture of carbon dioxide gas and carbon dioxide snow in the upper portion of said vessel, introducing a subdivided material requiring refrigeration



to prepare it for further size reduction into the upper portion of said vessel in the path of said mixture of gas and snow, maintaining said mixture within said vessel until the velocity of said gas has been substantially reduced while at the same time refrigerating said material by contacting it with said snow, and then discharging the refrigerated material through the open bottom of said vessel together with the gas of reduced velocity.

2,893,217
AUTOMATIC REFRIGERANT CHARGING SYSTEM COUPLED WITH AN AUTOMATIC ALARM TO A CONVENTIONAL WARNING SYSTEM
Joseph G. Nigro, Oceanside, N.Y.
Application October 10, 1955, Serial No. 539,347
15 Claims. (Cl. 62—126)

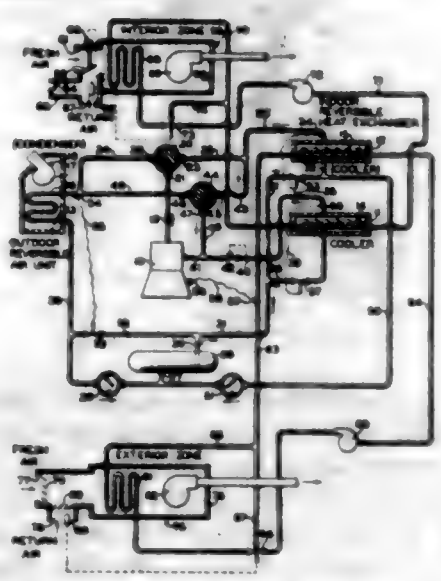


12. In combination with a refrigerating system having a refrigerated area, means connected with said area for controlling the temperature range therein, a second means for giving an alarm at the place of installation of said system when the temperature in said area rises above a predetermined setting, and a third means for energizing a conventional communication system to give an alarm at a station remotely distant from the place of installation of said refrigerating system when the temperature in said area rises above a predetermined setting.

2,893,218
AIR CONDITIONING SYSTEMS
James R. Harnish, York, Pa., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application February 21, 1958, Serial No. 716,653
15 Claims. (Cl. 62—180)

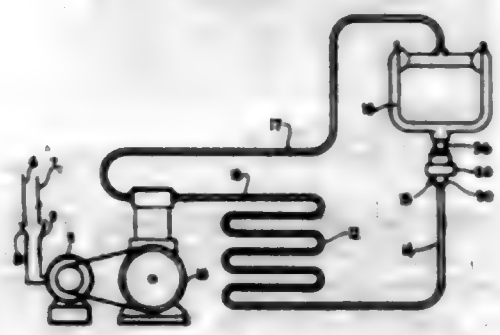
1. An air conditioning system for multi-room buildings having an interior zone and an exterior zone com-

prising an air treating unit, including a water coil, for said interior zone; an air treating unit, including a water coil, for said exterior zone; means for delivering air treated in said units to the respective zone rooms; a refrigerating system comprising a water cooler, an indoor reversible heat-exchanger and an outdoor reversible air unit connected in a closed refrigerant circuit; means connecting said interior zone unit water coil in a closed



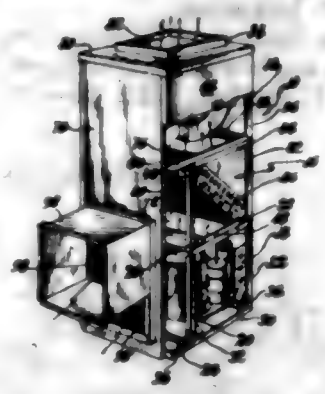
water circuit with said water cooler; means connecting said exterior zone unit water coil in a closed water circuit with said indoor reversible heat-exchanger; and means for operating said indoor reversible heat-exchanger as a water cooler and said outdoor reversible air unit as a condenser or for alternatively operating said indoor reversible heat-exchanger as a condenser and said outdoor reversible air unit as an evaporator.

2,893,219
REFRIGERATING SYSTEM AND THERMOSTATICALLY OPERATED CONTROL MEANS THEREFOR
Samuel G. Eskin, Chicago, Ill., assignor to The Dole Valve Company, Chicago, Ill., a corporation of Illinois
Application October 9, 1956, Serial No. 614,849
3 Claims. (Cl. 62—222)



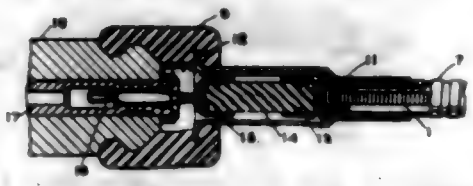
1. In a refrigerating system having a closed refrigerating circuit including compressing means, condensing means and evaporating means and thermally controlled flow regulating and throttling means for feeding refrigerant to said evaporating means and including resilient annular deformable flow regulating means for metering the flow of refrigerant to the evaporating means and providing a substantially uniform pressure drop in the refrigerant over a wide range of variations in head pressure at the compressing means, and thermally operated throttling means in series with said flow regulating means and throttling the supply of refrigerant to said evaporating means upon excessive temperature conditions thereof.

2,893,220
AIR CONDITIONER UNIT
Seymour H. Blum, Chicago, Ill.
Application May 22, 1956, Serial No. 586,416
3 Claims. (Cl. 62—404)



1. An air conditioner cabinet of the type in which there is an assemblage of sections within a single cabinet, including a compressor section, an evaporator section, and a blower section, each section being generally box-like and having framing members supporting the same, the cross sectional configuration of the compressor and evaporator sections being rectangular and congruent and the last two sections being mounted one on top the other, and the blower section being also rectangular in cross section but larger in one direction and mounted on top the other two whereby there is an overhang, means enclosing the assemblage including side panels and a top panel containing the air within the cabinet and forming substantially a monolithic form, there being a chamber beneath said overhang but outside said compressor and evaporator sections, an inlet in one side panel leading to said chamber and an outlet in the top panel leading from the blower section, and a substantially L-shaped cross-section bracket secured at the overhang and blocking passage of air directly from the chamber to the blower section.

2,893,221
SNAP-ON COUPLING FOR A FLEXIBLE SHAFT
William R. Bell, Skokie, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Application July 1, 1955, Serial No. 519,466
5 Claims. (Cl. 64—4)

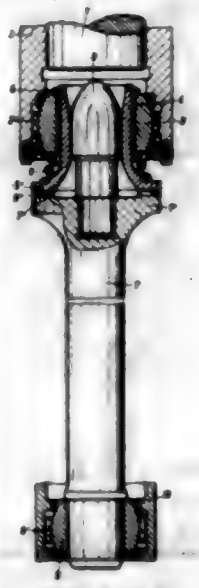


3. For use with a combination in which a rotary device is driven by a remote prime mover by means of a flexible shaft comprising a casing and a rotatable core operatively connecting said prime mover with a drive shaft of said device, a drive shaft sleeve secured to said device and having an axially irregular outer periphery; a coupling member of a material having the resilient and noise absorbing characteristics of firm rubber, having an axial aperture therethrough to receive said core and having an irregular inner surface at one end thereof complementary to the irregular perhiphery of said sleeve for locking engagement therewith; and means firmly securing said coupling member to said casing.

2,893,222
ARTICULATED COUPLING
Karl Albedyhl and Albert Bier, St. Ingbert, Saarland, Germany, assignors to Moeller & Neumann G.m.b.H., St. Ingbert, Saarland, Germany, a German firm
Application November 4, 1957, Serial No. 694,369
6 Claims. (Cl. 64—9)

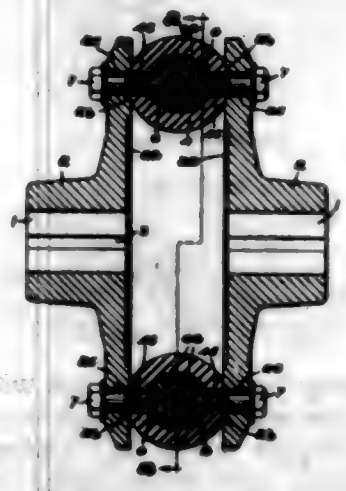
1. An automatically engageable and disengageable articulated coupling connecting a driving and a driven

member for rotation about a first axis, comprising an articulation member in the form of a segment of a sphere pivotally mounted about a second axis, transverse to said first axis, on one of said members and adapted to enter into operative engagement with the other one of said



members by means of teeth connections whereby said articulation member rotates about said first axis in unison with said driving and said driven members, a bell-mouthed extension with a center bore on one of said members, and a spigot pin tapered on its end and fitting into said center bore, provided on the other one of said members.

2,893,223
FLEXIBLE COUPLINGS
Karl Schlotmann and Claus Nitsche, Unna, Germany, assignors to Maschinenfabrik Stromag G.m.b.H., Unna, Germany
Application January 30, 1959, Serial No. 790,181
4 Claims. (Cl. 64—13)

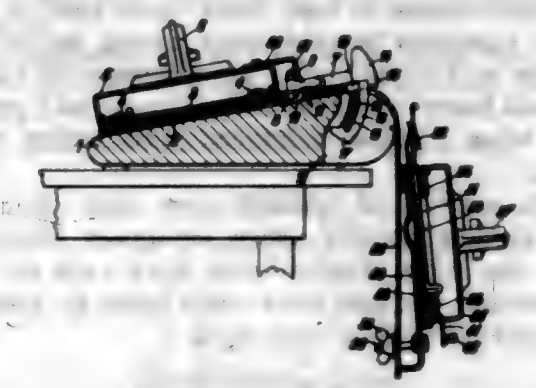


1. A flexible coupling comprising in combination a pair of coaxial shafts, a pair of spaced coupling members each including a flange portion and each fixedly mounted on one of said pair of shafts, a hollow torque-transmitting element in the shape of an endless tube of an elastomer arranged in coaxial relation with respect to said pair of shafts within the space bounded by said flange portion of each of said pair of coupling members, a first clamping means arranged inside said tube engaging the inner lateral wall thereof juxtaposed to said flange portion of one of said pair of coupling members, a second clamping means arranged inside said tube engaging the inner wall thereof juxtaposed to said flange portion of the other of said pair of coupling members, a first plurality of angularly displaced studs projecting transversely across said flange portion of said one of said pair of coupling members and said lateral wall of said tube into the inside of said tube and cooperating with said first clamping means to clamp said tube to said one of said pair of coupling members, a second plurality of angularly displaced studs projecting transversely across said flange portion of said other of said pair of coupling members and said lateral wall of said tube into the inside of said tube and cooperating with said second clamping means to clamp said tube to said other of said pair of coupling members, and a filler body of an elastomer softer than the elastomer of which said tube is made arranged inside of said tube and filling the space defined by said tube.

2,893,224
SHAFT COUPLING
Walter P. Schmitter, Wauwatosa, Wis., assignor to The Falk Corporation, Milwaukee, Wis., a corporation of Wisconsin
Application December 4, 1957, Serial No. 700,632
4 Claims. (Cl. 64—14)

1. In a coupling for a drive shaft and a driven shaft, the combination of a pair of externally toothed coupling members, one member for each shaft, a connecting member supported at its ends on said first named members and having internally toothed portions intermeshing in spaced relation with the teeth of said first named members, the teeth of all of said members being concavely curved, and flexible curvedly corrugated grid elements mounted in the spaces between the cooperative internally and externally toothed coupling members in driving relation between their convex surfaces and the concavely curved sides of the teeth of said coupling members.

2,893,225
FLAT KNITTING APPARATUS FOR MANUFACTURING RIB KNIT FABRIC
Josef Kuntz, Memmingen, Germany, assignor to Gerhard Kochheim, Hannover-Linden, Germany
Application April 6, 1956, Serial No. 576,743
Claims priority, application Germany April 28, 1955
3 Claims. (Cl. 66—64)

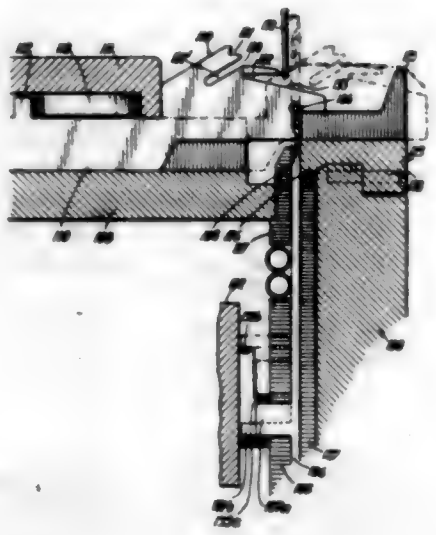


1. A flat knitting apparatus with a main needle bed and a supplemental needle bed, both having parallel guide grooves for the needles, a main needle row and a supplemental needle row, the needles of which being longitudinally slidably disposed in said guide grooves of the corresponding needle bed for reciprocated movement for manufacturing knit fabric, including means for actuating said needles in each needle row one after

another for knitting operation, holding down plates for the finished knitted fabric between the needles of the main needle row at the needle outlet side of the main needle bed, the supplemental needle bed being disposed with its needle outlet side before the needle outlet side of the main needle bed and angularly to the latter, the needles of the supplemental needle row being longitudinally slidably disposed in a plane somewhat spaced from the largest longitudinal extension of said holding down plates and staggered to said opposite holding down plates of the main needle bed, said means for actuating the needles of the supplemental needle row including a needle actuating slide slidably disposed upon the corresponding needle bed, a yieldable guide abutment for the supplemental needle row at the bottom side of the guide grooves of said supplemental needle bed to yieldably hold said needles in their position spaced from said main needle bed.

2,893,226
KNITTING MACHINES AND METHODS
Vincent Lombardi, South Miami, Fla.
Original application July 12, 1952, Serial No. 298,565, now Patent No. 2,774,233, dated December 18, 1956. Divided and this application May 25, 1956, Serial No. 587,250

33 Claims. (Cl. 66—93)

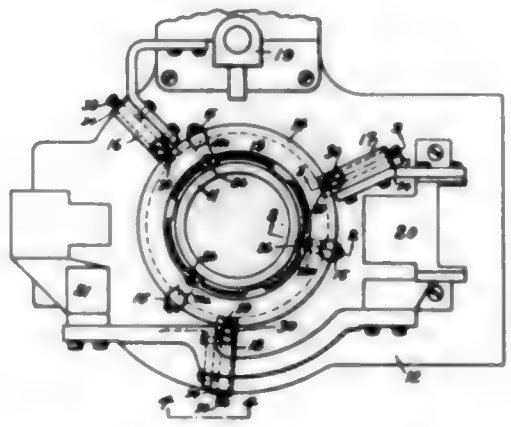


4. A knitting machine comprising a needle bed, a row of needles, sinkers having upper and lower yarn-receiving throats, means to feed front terry yarn at a given level for reception by said lower throat, means to feed body yarn at a higher level for reception by said upper throat, and means to support fabric above said given level at least when the first-mentioned yarn-feeding means is operative.

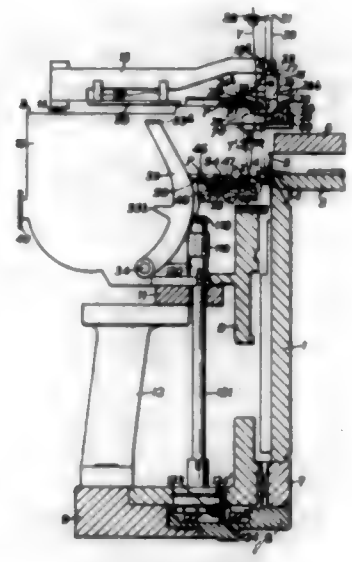
22. The method of forming terry cloth on a row of vertical knitting needles which comprises feeding body yarn on one level, feeding front terry yarn on a lower level, drawing out the front terry yarn to project forwardly, and knitting the body yarn.

2,893,227
SINKER CAP FOR CIRCULAR KNITTING MACHINES
Eugene St. Pierre, Pawtucket, R.I., assignor to Hemphill Company, Pawtucket, R.I., a corporation of Massachusetts
Application April 19, 1956, Serial No. 579,187
9 Claims. (Cl. 66—107)

2. For a circular knitting machine having a rotatable needle bearing cylinder, a sinker bearing head fixed to said cylinder, a sinker cap, and means for supporting said cap free of said head which comprises a plurality of vertical supporting members and a plurality of laterally effective bearing members.

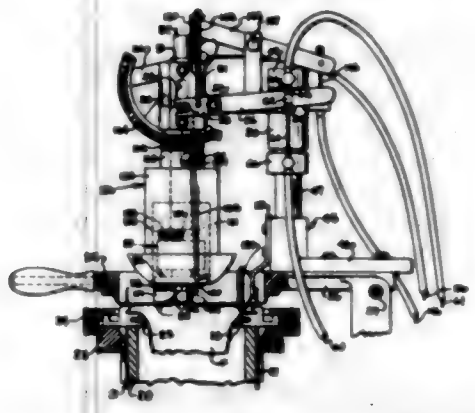


2,893,228
YARN OR THREAD SUPPLYING MEANS FOR KNITTING MACHINES
Arthur Shortland, Leicester, England
Application June 1, 1955, Serial No. 512,545
Claims priority, application Great Britain June 8, 1954
14 Claims. (Cl. 66—140)



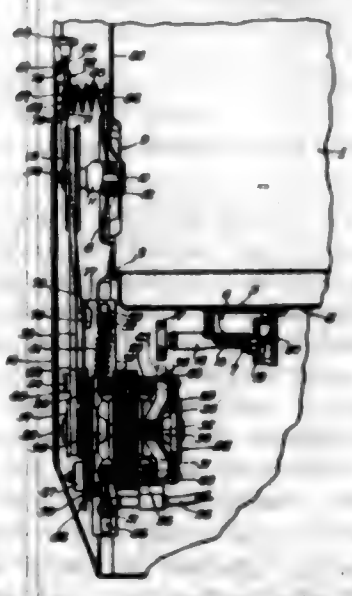
1. For a knitting machine equipped with at least one set of needles, yarn supplying mechanism comprising, in combination, a trapper device for holding a yarn in a non-feeding position, said device comprising two forked elements which are movable laterally with respect to each other and are normally urged together under spring influence to grip the yarn, whereby said forked elements provide two spaced pairs of trapper fingers between which a straight exposed length of the held yarn can be extended, a trapper actuating member operable in one sense to separate the said elements against the spring action and so release the said yarn, and in another sense to permit the elements to spring together again to grip the yarn, as occasion demands, a yarn picking device adapted to operate so as to engage said straight exposed length of held yarn between said spaced pairs of trapper fingers and thus pick a yarn presented in the non-feeding position by the said trapper device and take said yarn from that position towards the needles of the machine, means effecting and controlling the movements of the yarn picking device, and means automatically operating the trapper actuating member in timed relation with the controlled movements of said yarn picking device.

2,893,229
APPARATUS FOR CUTTING AND BINDING KNITTING YARNS AND METHOD
Salomao J. Haddad, Charlotte, N.C., assignor, by mesne assignments, to Southern Mill Equipment Corporation, Charlotte, N.C., a corporation of North Carolina
Application February 28, 1958, Serial No. 718,371
19 Claims. (Cl. 66—145)



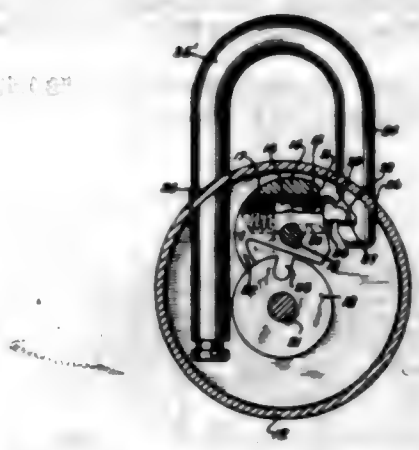
1. In a circular knitting machine provided with a needle cylinder, independent needles, sinkers and yarn feeding means, apparatus for clamping and cutting the yarns extending from the feeding means to the fabric being knit comprising lower and upper clamping bodies disposed within the needle circle and normally occupying closed position, means operable automatically upon a plurality of yarns being fed to the needles and being knitted thereby to open said clamping bodies and release the yarns therefrom, a yarn gathering element movable in a substantially circular path about and spaced from said clamping bodies, means operable after said clamping bodies are opened for actuating said gathering element whereby the gathering element engages the yarns extending from the yarn feeding means to the fabric and leads the yarns between said clamping bodies, means operable thereafter to return said bodies to closed position for clamping the yarn therebetween, and means operable automatically upon said yarns being clamped therebetween for severing the latter yarns at a point between the point at which they are clamped and the fabric.

2,893,230
WASHING MACHINE AGITATOR AND PUMP DRIVE MEANS
George M. Gibson, Bellevue, Iowa
Application July 8, 1955, Serial No. 520,671
20 Claims. (Cl. 68—131)



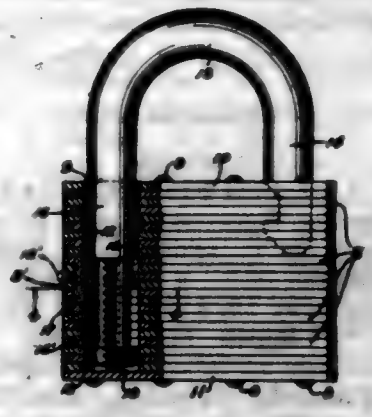
1. In a washing machine having a tub, a clothes agitator in said tub, a first drive member connected to drive said agitator, a pump having communication with said tub to handle the tub washing solution, a second drive member connected to drive said pump, and operative means to selectively drive said agitator and pump comprising a power unit having drive means to transmit motive power to said first and second drive members respectively, said power unit being carried for motion in a given relation with respect to said tub, and drive control mechanism connected with said power unit to bodily shift the position thereof and to selectively cause said drive means of said power unit to contact said first drive member to operate the agitator when shifted into one location with respect to the tub and to contact said second drive member to operate the pump when said unit is shifted into another location with respect to the tub.

2,893,231
SAFETY LOCKING LEVER AND LATCH ASSEMBLY FOR A PERMUTATION PADLOCK
Harry E. Soref, Milwaukee, and Daniel J. Foote, Waukesha, Wis., assignors to Master Lock Company, Milwaukee, Wis., a corporation of Wisconsin
Application December 31, 1956, Serial No. 631,826
5 Claims. (Cl. 70—25)



4. As a new article of manufacture, a padlock latch pin having a shank portion of frusto-conical formation with the reduced outer end portion of the shank having a shouldered head with a down-turned hooking nose projecting therebeyond, the outer end portion of the shank, outwardly of the upper portion of the shouldered head thereon, being formed with a transverse shouldered recess.

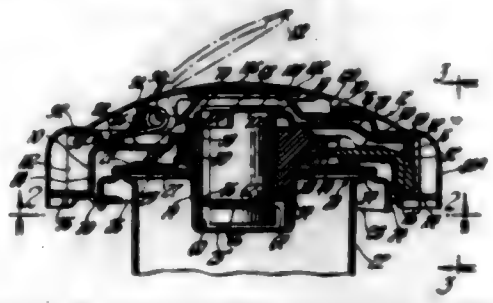
2,893,232
LAMINATED PADLOCK
Daniel J. Foote, Waukesha, Wis., and Harry E. Soref, deceased, late of Milwaukee, Wis., by Milton Soref, administrator, Milwaukee, Wis., assignors to Master Lock Company, Milwaukee, Wis., a corporation of Wisconsin
Original application October 27, 1955, Serial No. 543,182. Divided and this application July 16, 1957, Serial No. 672,167
1 Claim. (Cl. 70—38)



A laminated padlock casing comprising, a plurality of superimposed plates having aligned circular openings

therein which form a cavity transverse to the planes of the plates, a first intermediate plate having the opening of greater circumference than those of the plates thereadjacent, a second intermediate plate having a relatively deep, annular collar of eccentric contour surrounding its opening and projecting beyond a face of said plate into the opening in said first intermediate plate, a shackle leg extending into the cavity formed by the plate openings and having a reduced portion of circular cross-section within and completely surrounded by the collar of the second intermediate plate, an extremity of the reduced portion being shouldered, a portion of the collar of the second intermediate plate being offset inwardly into the cavity in an arc to embrace a substantial surface portion of the reduced portion of the shackle leg, said offset portion of the collar together with the adjoining collar portion forming an annular eccentrically shaped stop of greater thickness than said plate for engagement with the shouldered portion of the shackle leg to limit axial movement of the shackle leg relative to the casing cavity.

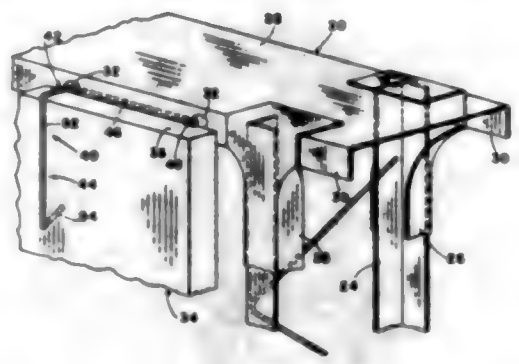
2,893,233
CAP DEVICE FOR A FILLER PIPE
Werner F. Schultz, Owosso, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 25, 1955, Serial No. 503,622
6 Claims. (Cl. 70—172)



1. A cap device for a filler pipe having an annular outwardly turned flange with a recess therein and means for securing said device in closed position upon relative rotation of the device and pipe, said device including means for cooperating with said securing means, a main frame supporting said cooperating means and having a radially extending opening, a lock cylinder journaled in said frame, a cover encompassing said frame and therewith defining an annular chamber of an inner diameter greater than the outer diameter of said flange, a latch member having an arcuate cam portion in said chamber and a locking portion extending inwardly through and beyond said radial opening, said arcuate cam portion extending along the length of said annular chamber, a shift arm arranged to rotate with said cylinder when the latter is released by a key, and an outer end of said shift arm being adapted upon rotation to engage said cam portion and tilt said latch member and move said locking portion in a path substantially parallel with the axis of said lock cylinder and into and away from said pipe flange recess when said device is in sealing relation on said pipe.

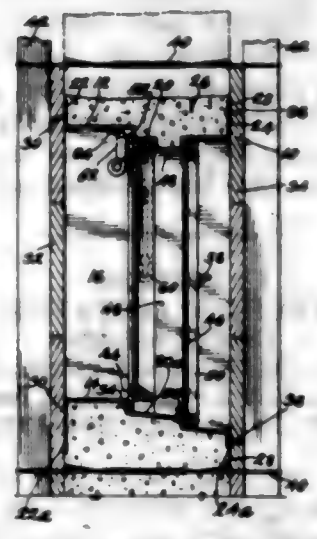
2,893,234
WALL LATH FINISHING CLIP
Joseph W. Schneller, Eggertsville, and Robert H. Slowinski, Tonawanda, N.Y., assignors to National Gypsum Company, Buffalo, N.Y., a corporation of Delaware
Application May 16, 1956, Serial No. 585,273
8 Claims. (Cl. 72—46)

1. In combination, an inverted U-shaped ceiling channel having downwardly extending side flanges at each side edge thereof with holes therein at spaced positions therealong, the top edge of a vertically disposed sheet of building lath disposed generally parallel adjacent at least one of said flanges and a lath finishing clip attached to said channel and to said lath, said clip comprising a single extent of formed wire which includes framework attaching elements and lath attaching elements, said framework attaching elements including an endmost hook engaging the side of one said hole, a back leg extending within the confines of said flanges from said hook to a second hole



in the same flange as said hook hole, and a perpendicular top leg extending outward through said second hole to the outer corner of the top edge of said lath, said lath attaching elements including a lath face leg extending downward from the outer extent of said top leg and disposed adjacent the lath outer vertical face and a lath piercing leg extending piercingly into said lath at an acute angle to a perpendicular to said outer vertical face.

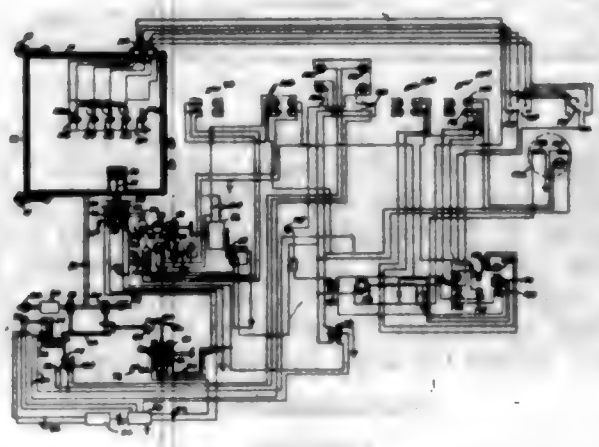
2,893,235
COMBINED WINDOW FRAME AND CONCRETE FORM
Harry H. Goldberg, Denver, Colo.
Application March 28, 1956, Serial No. 574,461
4 Claims. (Cl. 72—98)



1. In a combined window frame and concrete form for making a window opening in a concrete wall or the like, an elongated head member and an elongated spaced substantially parallel sill member, said head member and said sill member having the end portions thereof connected to one another by substantially parallel spanning elongated jamb members, each of said members having a substantially channel-shaped cross section formed by a web portion and outwardly extending spaced substantially parallel inner flanges and outer support flanges depending therefrom, said support flanges being provided with apertures adapted to receive fasteners for attaching said frame to a concrete wall form, the flanges of each of said members cooperating to provide a planar face at both the outside and inside of the frame adapted to fit flush against the opposed panels of a concrete wall form when placed therebetween, each of the web portions of said head member and said jamb members having a longitudinally extending step defining a first substantially planar surface facing toward the inner flanges

thereof for engaging one surface of a window sash, the web portion of said sill member having a longitudinally extending step defining a second substantially planar surface facing toward the outer flange thereof, said last mentioned surface being disposed in a plane closely spaced to the plane in which said aforementioned surfaces are disposed for engaging the opposite surface of the window sash, each of said jamb members and said head member having a longitudinal rib formed in the web thereof in spaced parallel relation to the steps thereof in position to provide a third planar surface facing toward the inner flanges thereof serving as an abutment and seal for three edges of the window sash on the inside thereof and providing a fourth planar surface facing toward the outer flanges thereof serving as an abutment and seal for three edges of a screen on the outside thereof.

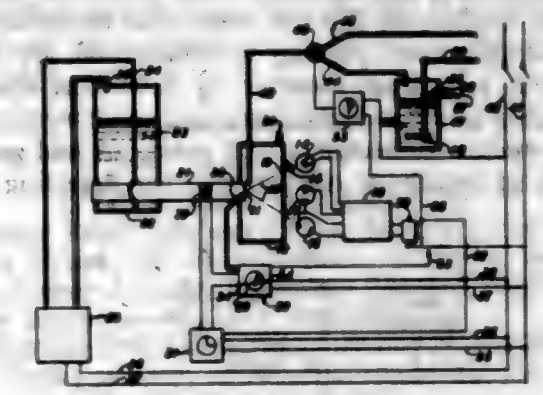
2,893,236
RATE OF CLIMB TESTER
Kenneth C. Coon, Minneapolis, Murray J. Harpole, St. Paul, and Edward R. Van Krevelen, Minneapolis, Minn., assignors to General Mills, Inc., a corporation of Delaware
Application April 23, 1956, Serial No. 579,967
12 Claims. (Cl. 73—4)



1. A rate of climb tester comprising a test chamber, valve means in communication with said test chamber for varying the pressure therein, power means for operating said valve means, control means movable at a preferred rate to produce a signal in accordance with a rate of pressure change desired within said chamber, means for producing another signal in accordance with the position of said valve means, and means for sensing any error between said signals to produce an error signal, said sensing means controlling said power means in accordance with any such error signal to cause positioning of said valve means in a direction such that the pressure within said chamber will be changed to that called for by said control means.

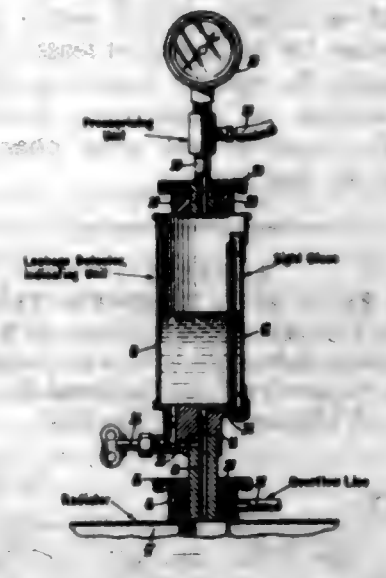
2,893,237
DEW POINT INDICATOR
Ernest G. de Coriolis, Ralph Hanna, and Arthur W. Peters, Toledo, Ohio, assignors to Surface Combustion Corporation, Toledo, Ohio, a corporation of Ohio
Application May 11, 1955, Serial No. 507,544
7 Claims. (Cl. 73—17)

1. Apparatus for determining the dew point of a vapor containing test gas comprising, in combination: a mirror exposed to the test gas; means for cooling the mirror to the dew point of said gas to deposit condensed vapor thereon; means for detecting when said mirror is at the dew point temperature of said gas and measuring the temperature thereof; means for additionally depositing on said mirror more condensed vapor than is condensed in the measuring process; means for heating said mirror after said additional condensed vapor is deposited thereon; and timing means operatively connected to said depositing means and said heating means for controlling the



length of times that additional vapor is deposited and said mirror is heated.

2,893,238
LEAKAGE DETECTOR
David L. Kayser, Kenmore, N.Y., assignor to Union Carbide Corporation, a corporation of New York
Application August 31, 1956, Serial No. 607,435
3 Claims. (Cl. 73—40)

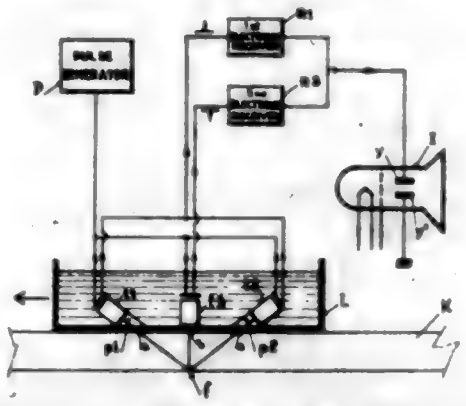


1. Leakage detector comprising a sight glass mounted on a base forming a cap for a filler opening, a passage in said base connecting said sight glass to the filler opening, means for filling said sight glass and passage with coolant liquid, means for isolating said sight glass and passage from said filling means, and means for applying air pressure to the top of the liquid in said sight glass to force coolant liquid out through any leak, the resultant decrease in liquid level in said sight glass indicating the leakage.

2,893,239
ULTRASONIC FLAW DETECTOR DEVICE
Paul Rossat, Saint-Maur, France, assignor to S.a.r.l. "Realisations Ultrasoniques," Saint-Maur, France, a corporation
Application December 24, 1954, Serial No. 477,447
Claims priority, application France February 4, 1954
6 Claims. (Cl. 73—67.7)

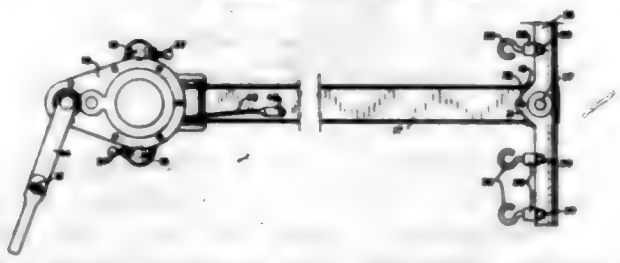
1. In an apparatus for the non-destructive flaw detection of test bodies having a front and a back surface, in combination, at least one pair of ultrasonic generating and pick-up members each having an input and an output and being adapted to be mounted adjacent said front surface of the test body; energizing means connected to said input of said ultrasonic generating and pick-up members, respectively, for energizing the same and to cause the same to generate directional ultrasonic impulses and transmit said impulses from each one of said generating and pick-up members along a predetermined path, re-

spectively, through at least a portion of the test body, in such a manner that said impulses transmitted from one of said members are reflected from an inside portion of said back surface of the test body into the other one of said generating and pick-up members and are reflected away from said other member by flaws that may be located within said test body along said predetermined path; detector means connected to said output of said generating and pick-up members, respectively, for detecting said re-



flected impulses and for generating at least two different types of signals corresponding respectively to said reflected impulses generated by said two ultrasonic generating and pick-up members; and means connected to said detector means for indicating at least said two different types of signals, the relative magnitude of said signals and the time relation of occurrences thereof being an indication of the location and other characteristics of flaws present in the test body.

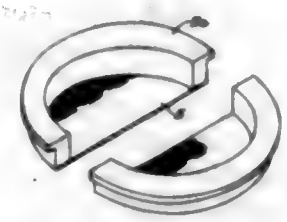
2,893,240
SAFETY BELT AND HARNESS TESTERS
Edward T. Able, Denver, Colo., assignor to B. K. Sweeney Manufacturing Co., Denver, Colo.
Application November 7, 1957, Serial No. 695,011
4 Claims. (Cl. 73—95)



1. A tension testing device comprising: an elongated base beam; an anchor member fixedly mounted on said base beam adjacent its one extremity; a drum shaft rotatably mounted on said base beam adjacent its other extremity; a winding drum fixedly mounted on said drum shaft; a flexible element; on extremity of said flexible element being fixedly secured to said drum so that said element will coil about said drum when the latter is rotated; means for securing an element to be tested between the other extremity of said flexible element and said anchor member; a torque-indicating wrench having a torque dial mounted thereon to indicate the pounds torque being applied by said wrench; and torque-multiplying gears transmitting torque from said torque wrench to said drum shaft.

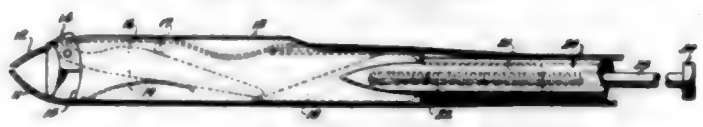
2,893,241
WET STRENGTH TESTER
Henry Thomas Fisher, St. Catharines, Ontario, and James Moran, Baie Comeau, Quebec, Canada, assignors to The Ontario Paper Company Limited, Thorold, Ontario, Canada
Application September 30, 1955, Serial No. 537,864
4 Claims. (Cl. 73—159)

3. The method of determining the substantially zero span wet tensile strength of a paper sheet which consists in forming a test sheet of substantially predetermined solids content on two separable sections of forming wire cloth, the wire cloth sections being positioned adjacent each other to provide a continuous forming surface, ap-



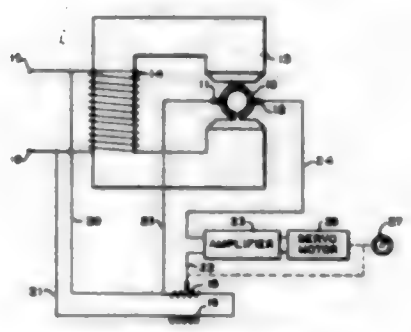
plying a force to the test sheet to cause its failure in tension substantially at the meeting line of the wire cloth sections while it is still positioned on the said sections and indicating the force required to effect such failure in tension.

2,893,242
PIVOT POINT PROBE
Wallace Milton Schulze, Mason, Ohio, assignor to General Electric Company, a New York corporation
Application November 17, 1955, Serial No. 547,367
8 Claims. (Cl. 73—188)



1. In an instrument for measuring the angle of flow of a stream of fluid, a pivot point probe including: a pair of pressure pickup tubes each having an end portion with an opening at the extremity thereof, said end portions extending towards each other with the openings positioned closely adjacent to each other in the same plane; and means operatively connected to at least one of said tubes for varying the angle between the openings.

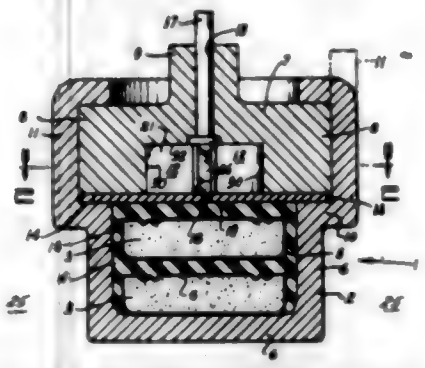
2,893,243
MAGNETIC FLOWMETER
James R. Hurley, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application September 28, 1956, Serial No. 612,694
2 Claims. (Cl. 73—194)



1. Flow measuring apparatus comprising a conduit adapted to pass the material to be measured, means including a coil to establish a magnetic field across said conduit, means to apply an alternating potential across said coil, a pair of spaced electrodes associated with said conduit to make electrical contact with fluid therein, an inductor and a potentiometer connected in series relationship with one another across said coil, the ratio of the reactance to the resistance of said inductor and said potentiometer being substantially equal to the ratio of the reactance to the resistance of said coil, voltage comparing means, means connecting one of said electrodes to one input terminal of said comparing means, means connecting the contactor of said potentiometer to the second input terminal of said comparing means, means connecting the second of said electrodes to one end terminal of said poten-

tiometer, and means responsive to the output of said comparing means to adjust the contactor of said potentiometer until the potentials at the two input terminals of said comparing means are equal, the amount of adjustment being representative of changes in flow through said conduit means.

2,893,244
POWER ELEMENT
Sergius Vernet, Yellow Springs, Ohio, assignor to Antioch College, Yellow Springs, Ohio, a corporation of Ohio
Application May 9, 1956, Serial No. 583,787
4 Claims. (Cl. 73—358)

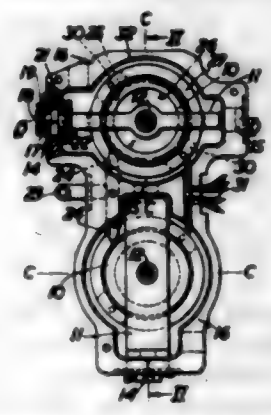


1. A power element comprising a housing; the interior surfaces of the housing walls forming a first relatively small chamber defined by two parallel wall surfaces and an interconnecting arcuate wall surface, and a second relatively large chamber in communication with the first chamber; a shaft extending into the housing along the axis defined by the arcuate wall surface; a vane carried by the shaft within the first chamber; pressure-producing material within the second chamber; and solid, deformable force-transmitting material in the first chamber acting to transmit the force of the pressure-producing material to the vane.

2,893,245
THERMOMETER
James W. Bradbury, Springfield, Ohio, assignor to Paul R. Poentis and Associates, Inc., Springfield, Ohio, a corporation of Ohio
Application December 23, 1957, Serial No. 704,518
5 Claims. (Cl. 73—363.3)

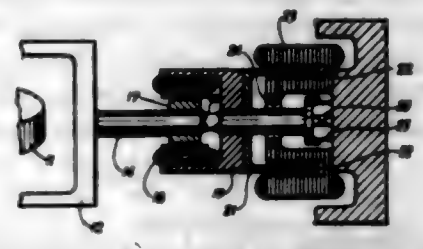
1. In a thermometer, for combination with a panel which is transparent and whereby the thermometer is viewable from both sides of the panel, a transparent housing having a base portion, projecting means on an outer face of the housing base portion disposed continuously around to enclose an area of the face of the base portion to form a dead air space with the panel thereby to thermally insulate the interior of the housing from the panel, a closure member on the face of the base portion opposite the projecting means, said closure member and base portion forming the said housing, temperature sensitive means mounted within the housing, opaque temperature graduations on the housing viewable from the exterior of the housing, an opaque pointer within the housing actuated by the temperature sensitive means movable along the graduations and also viewable from the exterior of the housing, and means comprising an aperture through the closure member of the housing forming a static air opening communicating the interior of the housing with the exterior whereby the temperature conditions of the exterior are presented to the temperature sensitive means.

2,893,246
GYROSCOPIC APPARATUS
John Arthur Ford, Michael Cullen Jackson, and Ronald Charles Crook, all of Middlesex, England, assignors to The Fairey Aviation Company Limited, Hayes, England, a company of Great Britain
Application October 23, 1953, Serial No. 388,036
Claims priority, application Great Britain October 27, 1952
17 Claims. (Cl. 74—5.6)



1. Gyroscopic apparatus including a support, a frame mounted in the support for angular deflection about an axis of deflection, a gyroscope rotor mounted in the frame for rotation about an axis of rotation perpendicular to the axis of deflection, spring restraining means for providing a restoring torque varying with deflection of the frame from an equilibrium position but independent of rotor speed, an electric generator having a rotor including a rotating permanent magnet forming part of the gyroscope rotor with a magnetic axis substantially perpendicular to the axis of rotation, and a stator carried by the support and comprising at least one pick-off coil carried by the support and co-operating with the generator rotor to produce at least one voltage which is a function of the angular deflection of the frame at a frequency which is proportional to the rotor speed.

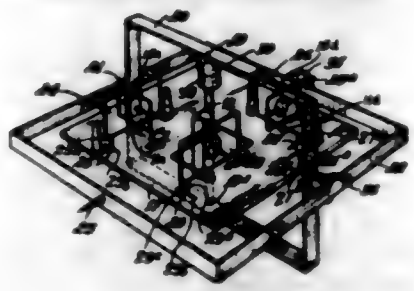
2,893,247
RATE GYRO WITH BUILT-IN VARIABLE WASHOUT
Howard H. Stern and John A. Turner, San Diego, Calif., assignors to General Dynamics Corporation (Convair Division), San Diego, Calif., a corporation of Delaware
Application August 19, 1957, Serial No. 678,772
5 Claims. (Cl. 74—5.6)



1. A rate gyroscope comprising an outer case, a rotor support, a power driven rotor positioned in said support, an electromagnetic pick-off, said pick-off having a first element connected to move with said support and a second element connected to move with said first element but variably restrained from so doing, means connected between said first and second elements for permitting rela-

tive motion between said elements, and variable electromagnetic damping means attached to said second element and said gyro outer case for variably restraining movement of said second element, said first element and said restrained second element cooperating to produce an output signal variably dependent on angular acceleration inputs to said gyro.

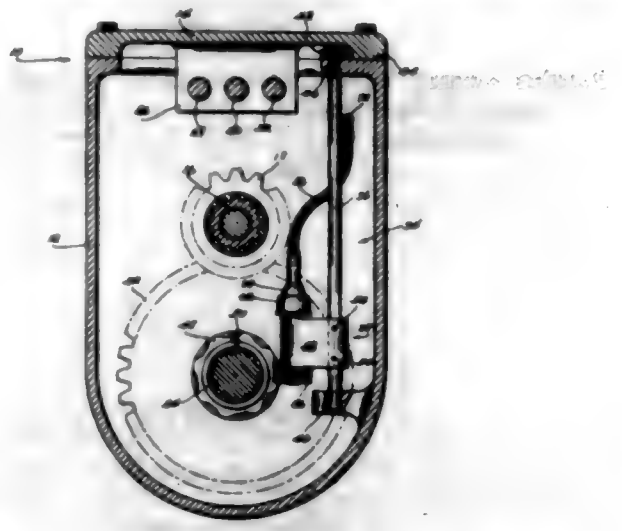
2,893,248
DEVICE FOR INDICATING THE TRUE VERTICAL
Charles Auguste Ecary, Paris, France, assignor to Societe Commerciale Eca, Asnieres, France
Application December 16, 1957, Serial No. 703,172
10 Claims. (Cl. 74—5.34)



1. In a device for indicating the true vertical of a place on board of a vehicle performing evolutions and of the type having a platform pivotally mounted about two axes set at right angles to each other and parallel to the lines tangent at said place to two orthogonal terrestrial characteristic circles respectively, and means for angularly displacing said platform about said two axes and, in order to maintain a fixed course, about a third axis at right angles to said two axes, the combination of two simultaneous detecting and double integrating units for detecting and twice integrating the accelerations imparted to the platform by the evolutions of the vehicle respectively along directions parallel to the lines tangent at said place to the two characteristic circles, each simultaneous detecting and double integrating unit comprising a gyroscope with two degrees of free action and having a rotor, a vertical balanced frame parallel to the line tangent at the place to the corresponding characteristic circle and pivotally carrying said rotor about an axis contained in a vertical plane parallel to said tangent line, a second frame disposed at right angles to the pivotal axis of said rotor, pivotally mounted about a horizontal axis perpendicular to said plane and pivotally carrying said vertical frame about an axis contained in said plane, a return device interposed between said frames, and acceleration-responsive means carried by said second frame for unbalancing the latter, the values of the kinetic moment of the rotor, of the return torque applied by the return device, of the acceleration-responsive means and of the distance between said acceleration-responsive means and the horizontal pivot axis of the second frame being determined in each simultaneous detecting and double integrating unit in order to obtain an inherent period equal to 84'20", and means for controlling the means for angularly displacing said platform about said first two axes in relation to the divergences indicated by the simultaneous detecting and double integrating units.

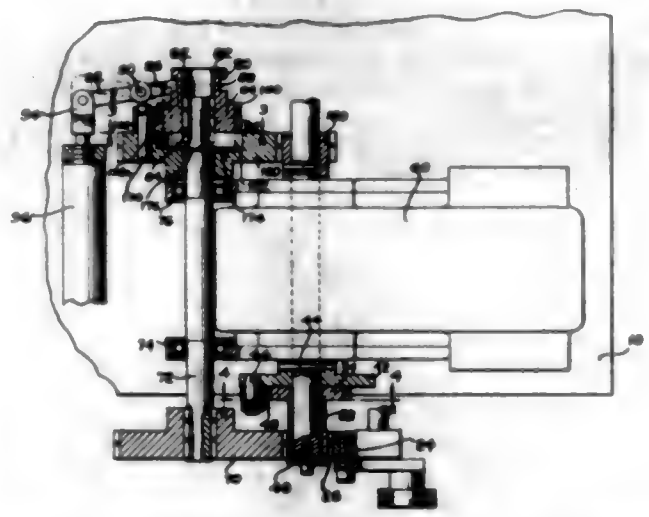
2,893,249
SPEEDOMETER DRIVE MEANS
Bruce C. Arnold, Rock Island, Ill., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Application October 23, 1956, Serial No. 617,733
3 Claims. (Cl. 74—12)

1. In a tractor having a transmission case and a drive shaft extending horizontally therethrough, and having a drive gear fixed to said shaft, in combination, a speedometer drive comprising an elongated support member disposed vertically in said case adjacent said drive gear, a lower lug portion within said case and integral therewith and provided with an aperture to slidingly receive said support member, upper lug portions spaced vertically from said lower lug portion, integral with said case and having horizontal surfaces, a bracket secured integrally to the



upper end of said support member and normal thereto, and threaded means to secure said bracket to said upper lug portions, a drive head fixed to said support member adjacent said drive gear, a driven shaft journalled in said head, a driven gear fixed on said driven shaft and so positioned as to engage said drive gear, and a flexible shaft keyed to said driven shaft.

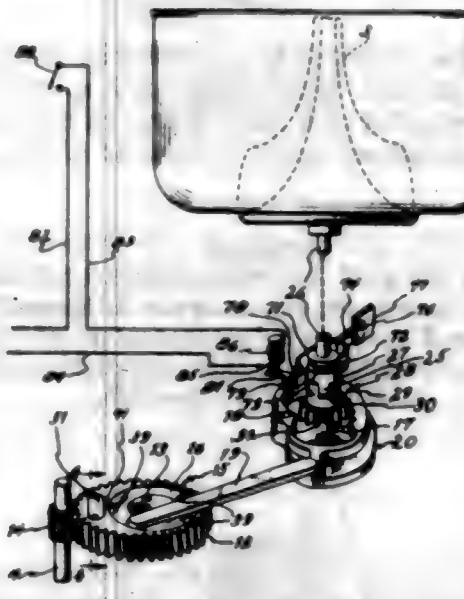
2,893,250
ROTARY TO OSCILLATING DRIVE
Harry W. Moore, Dayton, Ohio
Application January 7, 1955, Serial No. 480,547
5 Claims. (Cl. 74—29)



1. A driving mechanism for use in a coil winding machine, the combination including a motor, a speed reducing mechanism driven by said motor, said speed reducing mechanism having an outlet crank, a pitman driven by said crank, a rack mounted for reciprocatory movement, means for connecting the pitman to the rack, a pinion driven by the rack, driving means driven by said pinion, said driving means including a pawl member for driving a load only when the rack travels in one direction, a second driving means including a second pawl member for driving a load only when the rack travels in the opposite direction, said second driving means including a pair of gears having a gear ratio such that the load is driven at a speed different from that of the speed of the load driven by the first driving means so that the number of turns formed while rotating in one direction differs from the number of turns when rotating in the

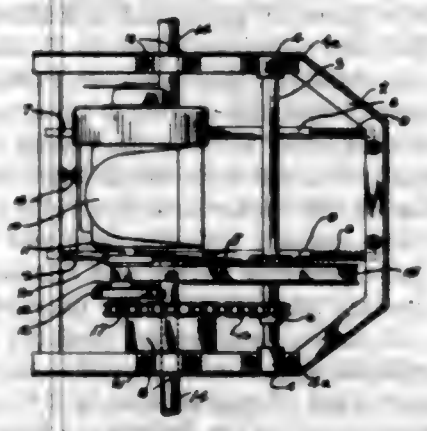
opposite direction, and means for ejecting the pawl member of the slower driving means when the coil winding machine is driven by the faster driving means.

2,893,251
WASHING MACHINE TRANSMISSION
Irvin E. McWethy, Cincinnati, Ohio, assignor to Midwest Manufacturing Corporation, Galesburg, Ill.
Application August 23, 1955, Serial No. 530,178
8 Claims. (Cl. 74—42)



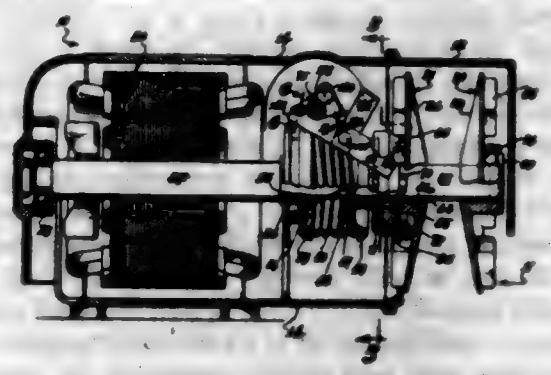
1. A transmission for converting a rotary motion to a reciprocatory motion including a rotary driven gear and means for driving said gear at a substantially constant speed, a pitman eccentrically connected to and reciprocated by said gear and means driven by said pitman, said connection for the pitman to said gear comprising an annular member rotatably journalled in an eccentric groove in said gear and formed with a socket for receiving a crank pin on the pitman, means for releasably coupling the annular member to the gear, and means to vary the position of the socket relative to the gear axis by interrupting the coupling between the gear and annular member comprising a follower supported by the gear and controlling the coupling between the gear and the annular member, and an actuator movable into the path of movement of said follower as the gear rotates to displace said follower to uncouple the gear from the annular member.

2,893,252
AUTOMATIC POWER TRANSMISSION FOR MINIATURE VEHICLES
Douglass R. Wade, Boyertown, Pa.
Application March 31, 1955, Serial No. 498,284
1 Claim. (Cl. 74—230.17)



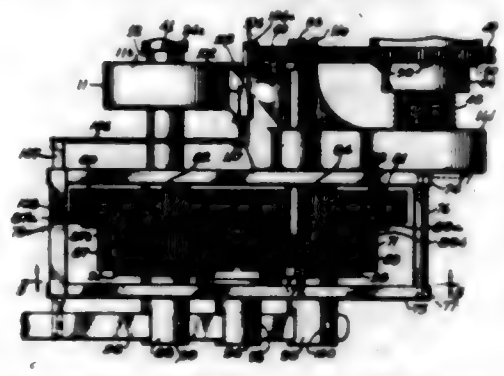
A vehicle drive comprising, in combination, a vehicle frame including a portion of substantially rectangular outline having vertical flanges, a pair of horizontal, support rods having end portions mounted on said vertical flanges, an internal combustion engine including a drive shaft extending at right angles to said rods, said engine being supported on said rods so as to enable free, horizontal sliding movement of said engine in the direction of said rods, helical springs surrounding said rods for yieldably resisting said sliding movement by compression of said springs, adjustable stop means for adjustably limiting sliding movement caused by said springs, a driven shaft stationarily mounted on said frame for driving said vehicle, said driven shaft having a pulley of larger diameter than that of the drive shaft and which is rigidly secured thereto, said drive shaft including a centrifugal, automatic, speed changing pulley having opposed cones, one of which is fixed to said shaft and the other being relatively slidable in an axial direction, said cones presenting opposed inclined conical faces with a spacing of substantially V-shaped cross-section, a belt of corresponding cross section to that of said spacing interconnecting said drive and driven shafts and looped between said cones in frictional driving relationship therewith so that upon an increase of speed of said engine, said slidable cone will move axially toward said fixed cone as the result of centrifugal force, forcing the belt radially outwardly so as to cause sliding movement of said engine toward said driven shaft so as to compress said springs to increase the speed of said driven shaft and vehicle, and whereby upon decrease in speed of said engine and pulley, the compressive force of said springs will push said engine in an opposite direction to allow said belt to move radially inwardly of said cones to decrease the speed of the driven shaft and vehicle.

2,893,253
VARIABLE PITCH PULLEY MECHANISM
Paul K. Beemer, Laguna Beach, Calif., assignor to Preco Incorporated, Los Angeles, Calif., a corporation of California
Application September 27, 1956, Serial No. 612,392
8 Claims. (Cl. 74—230.17)



1. Variable pitch pulley mechanism which comprises the combination of a shaft, a variable pitch pulley supported on said shaft and comprising a plurality of pulley members having frusto conical belt engaging portions, one of said pulley members being movable relative to another of said pulley members axially of said shaft and also rotationally movable relative to the shaft, spring means exerting a force axially relative to said shaft for resiliently urging said one pulley member toward said other pulley member, said spring means also providing the sole means of drivingly connecting said one pulley member to said shaft for rotation therewith, said spring means being rotationally yieldable whereby said one pulley member may limitedly rotate with respect to said shaft in response to variations in torque during operation of the mechanism, and control means for maintaining said one pulley member positively in a desired fixed position axially of said shaft during operation of the mechanism.

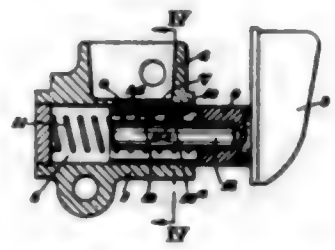
2,893,254
SPEED CHANGE DEVICE
Raymond B. Grover, Fairbury, Ill.
Application November 3, 1955, Serial No. 544,649
5 Claims. (Cl. 74—230.17)



1. A variable speed transmission comprising a supporting frame, a driving shaft mounted on said frame for rotation about a first axis, a driven shaft mounted on said frame for rotation about a second axis parallel to and spaced from said first axis, a pair of adjustable diameter pulleys mounted on said driving and driven shafts, means interconnecting said pulleys, a control shaft coacting with said frame for rotation about and for translatory movement along a third axis parallel to and disposed between said first and second axes, means connecting said control shaft with both of said pulleys so that rotation of said control shaft in one direction increases the diameter of one of said pulleys and decreases the diameter of the other of said pulleys and rotation of said control shaft in the opposite direction decreases the diameter of said one pulley and increases the diameter of said other pulley, said rotation of said control shaft in opposite directions causing oppositely directed translatory movement of said control shaft along said third axis, a driven element secured to said control shaft, a pair of interengaging driving elements rotating in opposite directions, a pair of clutch assemblies mounted on said frame and each including a clutch member movable toward and away from one of said driving elements along a line parallel to said third axis to selectively render different ones of said driving elements effective to drive the driven element on said control shaft while causing translatory movement of the control shaft and the driven element in opposite directions relative to said clutch assemblies during the rotation of said control shaft by a selected one of said driving elements, said control shaft being operatively connected to one of said driving elements through one of said clutch assemblies and said driven element and being both rotated and moved in a translatory manner relative to said frame and said clutch assemblies in response to the operative connection of said control shaft to one of said driving elements, and selector means for rendering one of said clutch assemblies effective.

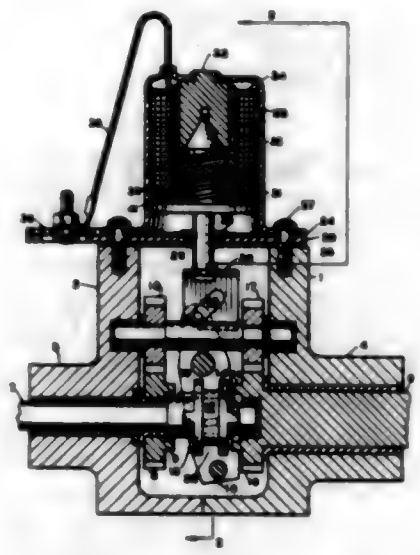
2,893,255
CHAIN OR BELT TENSIONING DEVICES
Cecil Thomas Bayliss, Tyseley, Birmingham, England, assignor to Perry Chain Company Limited, Birmingham, England, a British company
Application May 9, 1957, Serial No. 658,069
Claims priority, application Great Britain June 7, 1956
7 Claims. (Cl. 74—242.8)

1. A chain or belt tensioning device comprising a housing, a plunger slidably disposed within the housing, a recess in the rear end of the plunger, a spring in the housing operating to force the plunger outwards to tension the chain or belt, a liquid supply reservoir, a liquid supply aperture in the reservoir, an aperture in the wall of the plunger recess in communication with the supply reservoir aperture during all operative positions of the plunger, a clack-valve in the plunger recess controlling the flow of liquid through the said apertures into a space behind the plunger, so that the said space is kept filled with liquid as the plunger moves outwards, the liquid



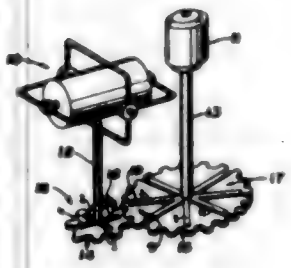
in the said space preventing any material return movement of the plunger, and a calibrated aperture in the clack-valve permitted of a slight escape of the liquid and a slight predetermined return movement of the plunger.

2,893,256
ACTUATOR FOR A TWO-SPEED ADAPTER
Peter Wargo, Maywood, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Application September 12, 1955, Serial No. 533,641
2 Claims. (Cl. 74—370)



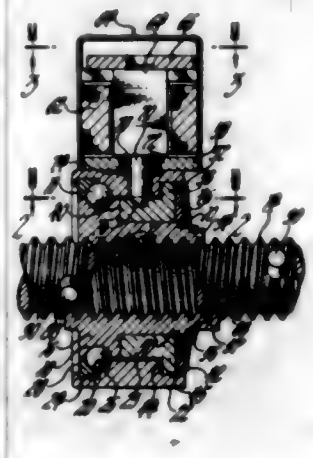
1. A two-speed adapter of the type in which a drive shaft and a driven shaft are journaled coaxially in a housing; in which a clutch member is keyed to the drive shaft for rotation therewith but for relative axial movement thereon so that, in one position thereof, the clutch is disposed for operative engagement with the driven shaft to cause the drive shaft to directly rotate the driven shaft at one speed, and in another position thereof, the clutch is disposed to rotate the driven shaft at a different speed by means of two spaced pairs of spur gears; and in which a rotatably mounted rocker arm is disposed within the housing between the pairs of gears and straddling the clutch member to shift the clutch member to its one and other positions; in combination therewith, an actuating mechanism comprising a solenoid having a core mounted integrally with said housing with its axis lying on a line extending radially from the drive shaft and intersecting the axis of rotation of the rocker arm at a right angle, a solenoid plunger arm coaxial with the core and reciprocably mounted at least partially within the housing, a shifting fork rigidly secured to the end of the plunger arm within the housing, spaced inclined wedge surfaces on the fork, each surface disposed partially on either side of and defining an acute angle of approximately 45° with a plane which is perpendicular to the shaft axes and which intersects the rocker arm axis, the wedge surfaces connected to the rocker arm for causing the arm to shift the clutch member incident to reciprocable movement of the solenoid plunger arm and the fork, and biasing means urging the plunger away from the core.

2,893,257
MAGNETIC BACKLASH ELIMINATOR
Fredrick E. Schulte, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application March 1, 1956, Serial No. 568,801
5 Claims. (Cl. 74—409)



1. Anti-backlash means for meshed gears comprising a first gear, a second gear, said first and second gears having an integral tooth ratio and means producing a magnetic field of alternating polarity circumferentially on each gear, poles of said magnetic means on said first gear being positioned differently along the circumference from like poles of said magnetic means on said second gear.

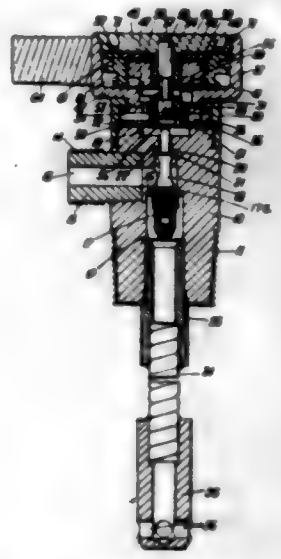
2,893,258
MECHANICAL MOVEMENT DEVICE
Barthold F. Meyer, St. Clair Beach, Ontario, Canada, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 16, 1956, Serial No. 622,565
15 Claims. (Cl. 74—424.8)



1. A mechanical movement device comprising, first and second rotatable members, means interconnecting said members for axial movement of said first member relative to said second member upon relative rotational movement therebetween, a non-rotatable member, and first and second means cooperatively interconnecting said non-rotatable member and said first member to secure said first member against rotation for axial movement thereof relative to said second member upon rotation thereof, said first and second means being disengageable independently of each other to release said first member against rotation and thereby prevent axial movement thereof.

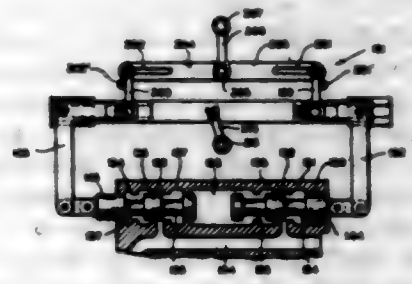
2,893,259
VALVE ACTUATING DEVICE
Henry Francis Callender, London, England, assignor to Sparklets Limited, a British company
Application October 22, 1957, Serial No. 691,586
2 Claims. (Cl. 74—424.8)

1. A valve actuating device comprising a rotatable actuating member, an intermediate member coupled to said actuating member by a screw thread of relatively coarse pitch, an actuated member coupled to said intermediate member by a screw thread of substantially finer pitch than said first-mentioned screw thread and arranged for axial movement, means for preventing rotation of said actuated member during the axial movement thereof, and means for preventing rotation of said intermediate member after a predetermined initial angular movement



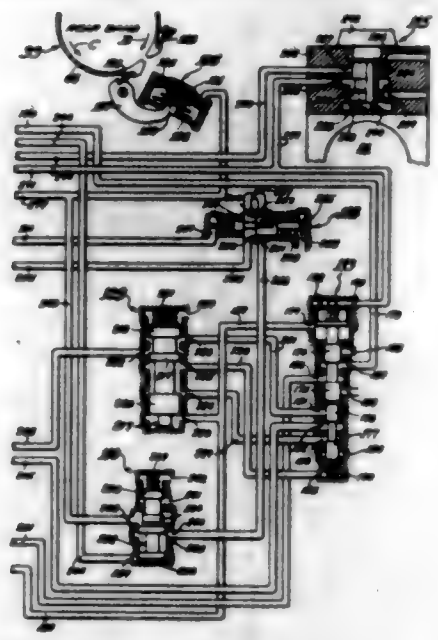
of said actuating member, whereby rotational movement of said actuating member is translated into axial movement of said actuated member so as to provide during said predetermined initial angular movement of said actuating member a large mechanical advantage between said actuating member and said actuated member and thereafter a lesser mechanical advantage.

2,893,260
CONTROL VALVE MECHANISMS
Robert Lapsley, Buchanan, Mich., assignor to Clark Equipment Company, Buchanan, Mich., a corporation of Michigan
Original application January 5, 1953, Serial No. 329,495, now Patent No. 2,807,935, dated October 1, 1957. Divided and this application February 23, 1954, Serial No. 415,649
4 Claims. (Cl. 74—471)



1. A control mechanism for actuating a pair of valves, comprising, a pair of levers each connected to a valve to be actuated, a bar, means mounting said far for rectilinear sliding movement, means pivotally joining said two levers to said bar, first control means for sliding said bar and simultaneously moving said levers unidirectionally, a pair of pivotal link means each slidingly connected to one of said levers for pivotally actuating the latter relative to said bar, second control means commonly connected to both said link means for independently pivoting its associated lever and operating the valve associated therewith, as selected; the sliding actuation of said bar serving simultaneously to motivate both the valves in like directions to effect both opening and closing operation thereof.

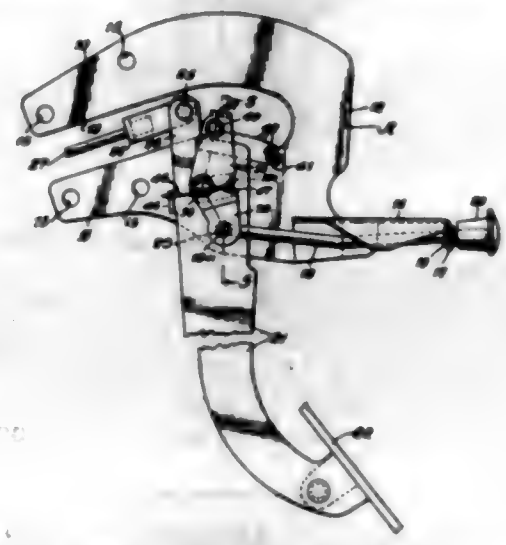
2,893,261
TRANSMISSION
George E. Flinn, Muncie, Ind., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application February 6, 1956, Serial No. 563,518
9 Claims. (Cl. 74—472)



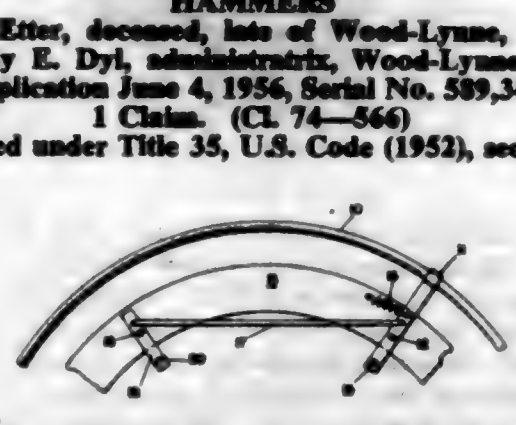
1. In transmission mechanism for an automotive vehicle, the combination of a drive shaft, a driven shaft, means for providing a high speed power train between said shafts, a control element for causing changes between said power trains and having a low speed drive position and a high speed drive position, a hydraulic governor driven from said driven shaft and providing a governor fluid pressure that increases with driven shaft speed and effective on said control element tending to hold the control element from movement from its high speed position to its low speed position, an accelerator for the vehicle, an additional manual control, said control element having large and small lands, a fluid pressure source providing an operating pressure of a predetermined value, valve means under the control of said accelerator for connecting said pressure source and said small land and applying said predetermined operating pressure on said small land when the accelerator is moved to an open throttle position tending to move the control element from its high speed position to its low speed position against the action of said governor pressure, and valve means under the control of said additional manual control for connecting said pressure source and said large land and applying said predetermined operating pressure on said large land tending to move said control element from its high speed position to its low speed position against said governor pressure and causing such movement due to said large land at a higher speed of said driven shaft as compared to the speed at which said small land is effective to move said control element to its low speed position.

2,893,262
EMERGENCY BRAKES AND RELEASES THEREFOR
Herbert Krause, Chicago, Ill., assignor to Chicago Forging and Manufacturing Company, Chicago, Ill., a corporation of Delaware
Application January 11, 1954, Serial No. 403,407
5 Claims. (Cl. 74—538)

1. In a locking and release mechanism for emergency brakes and the like, a main plate, a generally arcuate serrated gripping surface on said main plate, a brake lever rotatably mounted on said plate, a locking lever pivoted on and at a point intermediate the ends of said brake lever for rotation therewith, said locking lever having a generally U-shaped end portion, said end portion having a pair of spaced side walls paralleling and adjacent the opposite outer surfaces of said brake lever and said plate, said end portion having a cross wall joining said spaced walls and extending across and outwardly spaced from said serrated gripping surface, a cylindrical pin extending between and mounted in said spaced side walls paralleling said cross wall and spaced from said cross wall, yielding means connected to said brake lever and said locking lever and positioned to urge said locking lever in a clockwise direction to urge said cylindrical pin inwardly against said serrated surface, said cylindrical pin being dimensioned to seat within the serrations of said surface, means for releasing said locking lever from said serrated surface including a member connected to the opposite end portion of said locking lever beyond said pivot point, said brake lever being rotatable in a clockwise direction to move said cylindrical pin along said serrated surface to engage said brake, said releasing member being rotatable in a counterclockwise direction to release said cylindrical pin from said serrated portion.



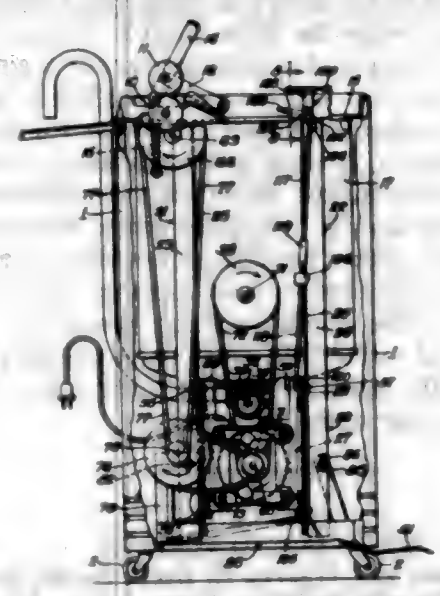
2,893,263
SAFETY LOCK FOR TREADLE OPERATED HAMMERS
Paul A. Etter, deceased, late of Wood-Lynne, N.J., by Dorothy E. Dyl, administratrix, Wood-Lynne, N.J.
Application June 4, 1956, Serial No. 589,349
1 Claim. (Cl. 74—566)
(Granted under Title 35, U.S. Code (1952), sec. 266)



In a power hammer having a treadle for controlling the same, said power hammer having a stationary base member, the combination therewith of the improvement whereby said treadle may be controlled by an operator in different angularly spaced positions and whereby said treadle may be locked against control of said power hammer when an operator is in any one of said different positions, said improvement including said treadle extending circularly around said power hammer stationary base member at least far enough to be controlled by an operator when in any one of said spaced positions, a stop carried by said base for holding the treadle against control movement thereof, said stop being swingable to a treadle unlocking position in which control movement of the treadle may occur, said treadle unlocking movement of said stop being in response to movement of an

operator's foot in a different direction from that in which an operator's foot moves in controlling said treadle for starting said power hammer, said unlocking movement being independent from the operation of the power hammer, a lever pivoted at one end to said stationary base member, said stationary base member being placed along side of the treadle, a spring adjacent the opposite end of said lever for cooperation with said stationary base member and lever, said lever having a plurality of spaced apart toe recess portions along one side thereof, said stop being attached to the other side of said lever, whereby upon movement of an operator's foot radially inward at one of said toe recess portions said stop moves out of the path of said treadle, and withdrawal of the operator's foot radially outward causes the spring to return the lever to its original position with said stop beneath the treadle in the locking position.

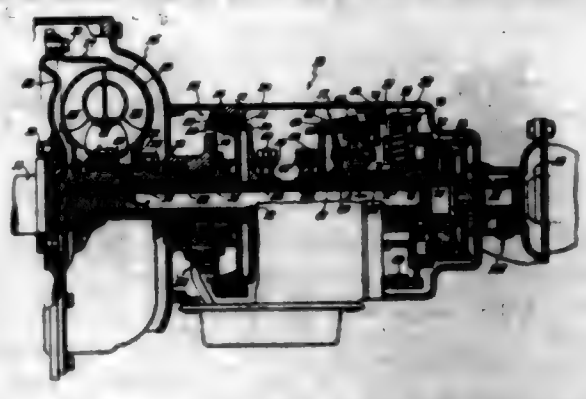
2,893,264
SELECTIVE DRIVE FOR WASHING MACHINE
George M. Gibson, Bellevue, Iowa
Application July 8, 1955, Serial No. 520,790
23 Claims. (Cl. 74—664)



1. A drive apparatus to selectively transmit driving power to certain of three independent operating elements comprising a motor connected with individual drive means constructed and arranged to selectively transmit motive power to each of said operating elements respectively, a guide structure for said motor, said motor being slidably carried upon said guide structure to move along one given path between a neutral and predetermined operative driving positions to cause operative power transmission through certain of said drive means to one or the other of two of the aforesaid operating elements respectively, and operative mechanism connected with the remaining of said operating elements and supported for bodily shifting movement along a path that is angularly disposed with respect to said path of movement of said motor to selectively transmit the drive through another of said motor drive means to said remaining operating element and to interrupt such drive to said latter operating element while said motor occupies a neutral position.

2,893,265
POWER TRANSMITTING MECHANISM
Everett R. Bartnett, China Lake, Calif., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application April 6, 1956, Serial No. 583,349
(Filed under Rule 47(b) and 35 U.S.C. 118)
4 Claims. (Cl. 74—677)

1. In a transmission, the combination of a drive shaft, an intermediate shaft, a driven shaft, a hydraulic torque converter having a driving member or impeller and a driven member or turbine and a stator or reaction member, said impeller being connected with said drive shaft and said turbine being connected with said intermediate shaft, a planetary gear system having two sets of planetary gears each set comprising a ring gear and a sun gear and planet gears in mesh with said ring and sun gears and a planet carrier, said carriers being connected to-



gether and to said driven shaft, a friction clutch for connecting together said sun gears, said ring gear of one of said gear sets being connected to and driven by said intermediate shaft and a positive brake for said ring gear of the other of said gear sets for taking reaction from the planetary gear system thereby completing a reverse drive through said torque converter and said planetary gear system between said drive shaft and said driven shaft.

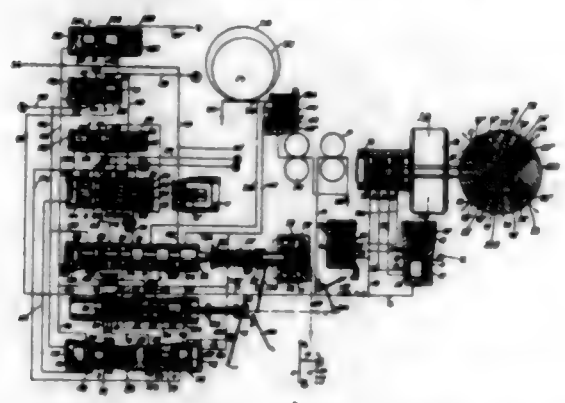
2,893,266
TRANSMISSION
Oliver K. Kelley, Bloomfield Hills, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 24, 1956, Serial No. 586,980
6 Claims. (Cl. 74—677)

1. A hydrodynamic transmission comprising in combination, an impeller for circulating liquid in a working space, an output shaft, a first axial flow turbine which transmits torque to the output shaft at a relatively high mechanical advantage through a one-way connection to an input sun gear which drives a planetary idler gear which drives a second planetary gear which walks around a reaction sun gear one-way braked to the frame of the transmission, which planetary gears are journalled on a carrier connected to the output shaft, a second axial flow of turbine connected to drive a ring gear meshing with the second planetary gear and driving the carrier at a lower mechanical advantage than the first turbine and a third turbine of radial inflow type connected to drive the carrier at a still lower mechanical advantage.

2,893,267
SPEED CHANGE TRANSMISSION
Hans-Joachim M. Förster, Stuttgart-Bad Cannstatt, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Application December 4, 1953, Serial No. 396,196
Claims priority, application Germany December 8, 1952
16 Claims. (Cl. 74—732)

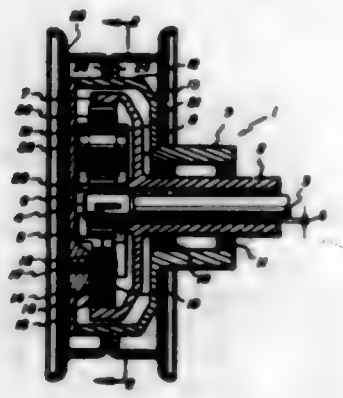
1. In a drive mechanism, a drive transmitting clutch means, a change speed gear means, at least one trans-

mission shaft connecting said clutch means with said change speed gear means, change speed clutches for said change speed gear means, hydraulic actuating means for actuating said change speed clutches, a casing including a first casing portion enclosing said clutch means, a second casing portion separable from said first casing portion and enclosing said change speed gear means, a transverse wall in said first casing portion and a transverse wall in said second casing portion spaced from said first-



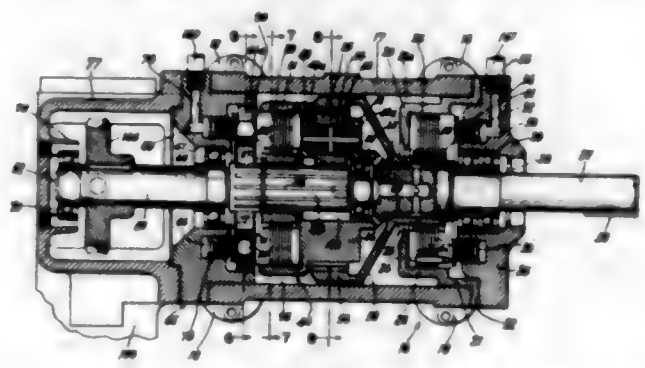
mentioned transverse wall, said transverse walls forming a chamber therebetween intermediate said clutch means and said change speed gear means with said casing portions connectingly assembled, said transmission shaft extending through said chamber, a control-housing within said chamber including a plurality of hydraulic control means and connecting means for connecting said hydraulic control means with said hydraulic actuating means, and securing means for securing said control-housing to one of said transverse walls.

2,893,268
PLANETARY GEAR
Julius Liebel, Nurnberg, Germany, assignor to M.A.N. Maschinenfabrik Augsburg-Nuernberg A.G., Nurnberg, Germany
Application April 29, 1957, Serial No. 655,651
Claims priority, application Germany May 9, 1956
6 Claims. (Cl. 74—801)



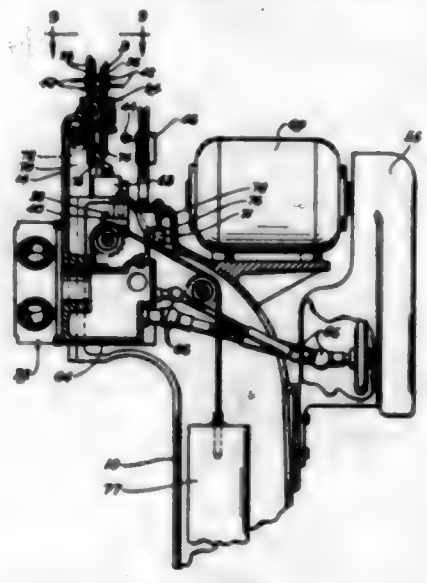
1. In a planetary gear driving arrangement for motor vehicles, a hollow axle shaft, a drive shaft mounted within said hollow axle shaft with there being a clearance between said drive shaft and housing for lateral movement of said drive shaft therein, a sun gear on said drive shaft, an internal gear surrounding said sun gear and attached to said hollow axle shaft, a carrier rotatably mounted on said hollow axle shaft, and a plurality of planet gears mounted for rotational movement on said carrier, the centers of said planet gears being mounted on said carrier for arcuate movement thereon, said planet gears drivingly engaging said internal gear and sun gear whereby the lateral movement of the sun gear and the arcuate movement of the centers of the planet gears equalize the pressures on the gear teeth.

2,893,269
MECHANISM FOR CONTROLLING MOVEMENT OF A MACHINE TOOL PART
Sigmund M. Morey and Secondo L. Casella, New York, N.Y., assignors to Morey Machinery Co., Inc., Astoria, N.Y., a corporation of New York
Application February 10, 1955, Serial No. 487,367
10 Claims. (Cl. 74—785)



1. In combination, a drive shaft, a driven shaft, means to drive the drive shaft in forward and reverse and at different speeds in forward and in reverse, means to cause the driven shaft to be driven in high speed range and in low speed range when the drive shaft is rotated either in forward or in reverse and at different speeds, a single manually actuated member and means controlled by the movement of said member to control the means for driving the drive shaft forward, reverse and at different speeds, and also to control the means for driving the driven shaft in high speed range and in low speed range when the drive shaft is rotated in either forward or reverse and at varying speeds, means controlled by said member for placing the driven shaft in idle condition, and means for braking the movement of said driven shaft upon stopping rotation of the drive shaft, when the driven shaft is in either high speed range or low speed range.

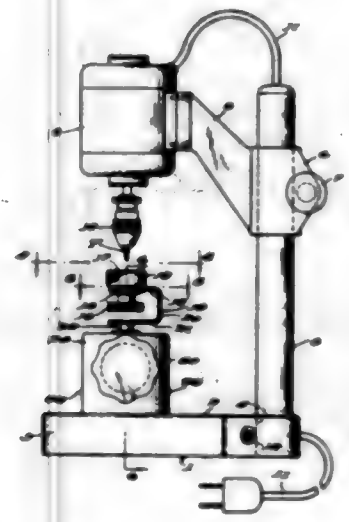
2,893,270
DRILLING MACHINE
Cecil L. Hodgson and Warren E. Breit, South Bend, Ind., assignors to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application December 9, 1957, Serial No. 701,534
3 Claims. (Cl. 77—25)



1. The combination, with a turret type drill press mechanism comprising a fixedly mounted column, a ram slidably mounted on said column, a tool mounting indexible turret head mounted on said ram and bodily movable therewith, a plurality of cutting tools mounted on the turret head, an indexible stop means mounted on the ram and bodily movable therewith, power means for indexing the stop means and turret head and for driv-

ing the tools mounted on said head, and means, including control means indexible by said power means, for controlling said power means; of power means for effecting four stages of operation of the ram with its turret head, that is a downward bodily movement thereof in two stages, a pause in said bodily movement while a tool mounted on the turret head is performing its cutting operation, and lastly an upward movement of the ram and turret head, said latter power means including a switch operating member mounted on the indexible control means and operable, with an operation of said means, to close a switch to effect a ram down operation of the four stage power means, and further including a switch actuated by the stop means to effect a ram up operation of the four stage power means, and also including control means, actuated by means mounted on the stop means, to effect the second stage operation ram down of the power means.

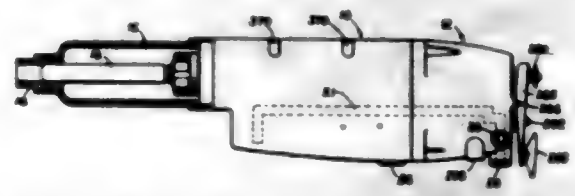
2,893,271
SENSITIVE DRILLING MACHINE
Martin D. Elledge, Monrovia, Calif.
Application February 3, 1958, Serial No. 713,015
8 Claims. (Cl. 77—32)



1. In a drilling machine, a base, a standard rising from said base, a vertical axis shaft and driving means therefor journaled on said standard at one side thereof, said shaft having a drill holding chuck at the lower end thereof, a work manipulating means disposed beneath said drill and including a member mounted for vertical movement in a line which is substantially equal in distance from said standard as is the axial line of said shaft, a work holding means detachably mounted on said work manipulating means, spring means constantly imposing a bias on said work manipulating means tending to move said work manipulating means downwardly, and manually operable means for moving said member upwardly comprising a horizontal shaft having a hand wheel at one end thereof and eccentric means at the other end thereof engagable with said work manipulating means and effective upon rotation of said shaft by said hand wheel through a half revolution to move said work manipulating means upwardly in opposition to the bias imposed by said spring means towards a drill carried by said chuck.

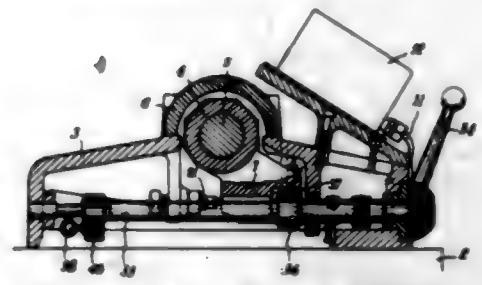
2,893,272
AUTOMATIC TOOL
Eugene Linsker, Dayton, Ohio, assignor to Buckeye Tools Corporation, Dayton, Ohio, a corporation of Ohio
Application March 18, 1957, Serial No. 646,722
12 Claims. (Cl. 77—32.5)

1. An automatic machine tool of the character described comprising a housing, a work spindle mounted in said housing, means for carrying a cutting tool at one end of said spindle, means for rotating said spindle, feeding means including parts connected to said spindle and rotatable relative thereto for feeding said spindle in an axial direction forward from a base position to advance the tool at a predetermined ratio with respect to its rate of rotation, means for limiting the forward feeding movement of said spindle to a predetermined outward travel with respect to said base position, means providing



a variable dwell of said spindle at the end of its forward feeding movement, means responsive to the cessation of forward feeding movement of said spindle for reversing the relative movement of said parts and said spindle to retract said spindle to its base position, and means operative in response to return of said spindle to its base position to disable said spindle rotating means and said retracting means.

2,893,273
SAFETY RELEASE SYSTEM FOR DRILLING MACHINES AND THE LIKE
Frederick Charles Gilbert Berthiez, Lamorlaye, France, assignor to Societe Anonyme des Anciens Etablissements Charles Berthiez, a French society of France
Application September 9, 1957, Serial No. 682,915
16 Claims. (Cl. 77—32.7)

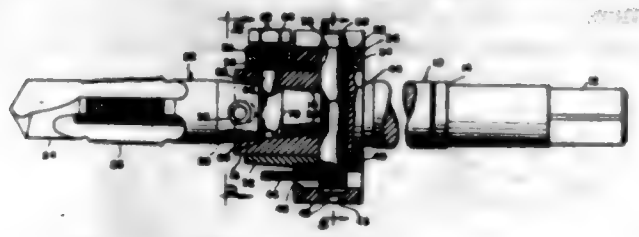


1. In a drilling machine having a work carrier rotatable on an axis, a drill bar, a drill bar support, and means for axially feeding said support towards the work in opposition to drilling reaction the combination therewith of means mounting the drill bar for limited helical displacement relative to the support, a pressure senser on said support engaging the drill bar to sense said drilling reaction, a spring engaging the support and the drill bar and tending to displace the bar relative to the support away from the work along an axial component of said helical displacement, a latch rotatably mounted on the support and engaging the drill bar to restrain the bar against a rotational component of said helical displacement, whereby the bar is blocked by the latch in an operative position in which said spring is stressed to bias said bar to apply pressure on said pressure senser, and means operatively connected with said pressure senser and to said latch to rotate the latch to a disengaging position in response to a predetermined drilling reaction pressure sensed by the senser, whereupon the drill bar is helically displaced to an idle position by said spring.

2,893,274
TOOL HOLDER
Frank H. Mueller and John J. Smith, Decatur, Ill., assignors to Mueller Co., Decatur, Ill., a corporation of Illinois
Application July 9, 1957, Serial No. 670,755
4 Claims. (Cl. 77—55)

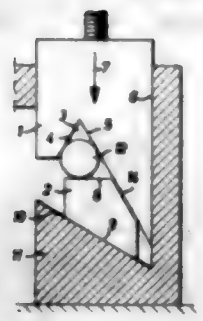
1. In a drilling machine the combination comprising: a boring bar having a tapered circular socket at one end

thereof to receive the shank of a tool and notch means in the rim of said socket; a tool having a tapered circular shank receivable in said socket and an endless circumferential groove in said shank; a lateral driving projection on said shank receivable in said notch means; and set



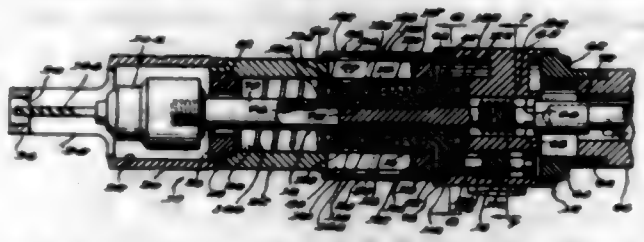
screw means on said bar extendible into said socket for tool-retaining engagement within said shank groove, that side wall of said groove which faces the work-engaging end of said tool being inclined for camming engagement by said set screw means in order to pull said shank into tight engagement within said socket.

2,893,275
CENTERING DEVICE FOR CLAMPING WORKPIECES
Hans Lindemann, Bielefeld, Germany, assignor to Th. Calow & Co., Bielefeld, Germany, a company of Germany
Application February 14, 1957, Serial No. 640,103
7 Claims. (Cl. 77—63)



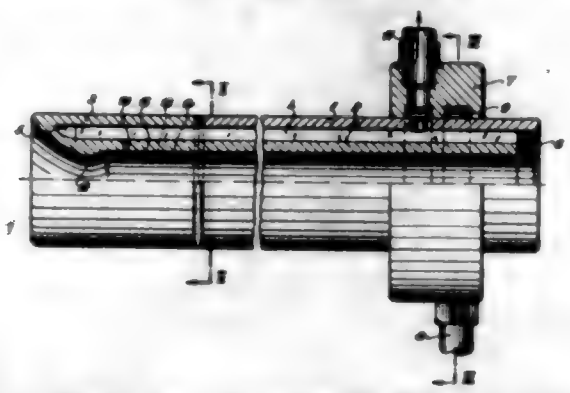
1. A device for clamping workpieces having circular cross-sections, comprising in combination, first guide means having a first straight guide surface; a first clamping member guided along said first guide surface for rectilinear movement in one direction, said first clamping member having a prismatic recess bounded by two clamping faces symmetrically inclined to a plane of symmetry extending in said direction, said clamping faces being adapted to abut on workpieces of different circular cross-sections with the axes of the workpieces located in said plane during movement of said first clamping member along said first guide surface, said first clamping member including a projecting portion adjacent said recess having a first guide face adjacent said recess and inclined to said plane; second guide means having a second straight guide face extending inclined to said first guide surface and to said first guide face and defining a space with the latter and with said recess; a second clamping member located in said space and having two guide faces slidably engaging said first and second guide faces, respectively, said second clamping member having a clamping face extending perpendicularly to said first guide surface and to said plane and being movable along said first and second guide faces to and from a position in which said clamping face thereof is located opposite said recess and adapted to abut on a workpiece located in said recess, said clamping faces forming in all positions of said first and second clamping members three sides of a triangle into which the circular circumference of a clamped workpiece is inscribed with the axes of all clamped workpieces in the same position with respect to said first and second guide means.

2,893,276
AUTOMATIC TOOL FEEDING DEVICE
Robert C. Quackenbush, San Fernando, Calif.
Application May 13, 1955, Serial No. 508,223
10 Claims. (Cl. 77—34.4)



1. In a device for longitudinally feeding a rotary tool into a work piece, said device being actuable by a source of power, the combination of: a housing; a main drive shaft in said housing having a longitudinally movable portion; a power take-off connected to said main drive shaft; an auxiliary drive shaft energizable by said power take-off; a clutch connected to said movable portion and engageable with said auxiliary drive shaft to cause longitudinal movement of said movable portion; and a control member on said housing for engaging said clutch with said auxiliary drive shaft to cause said longitudinal movement of said movable portion.

2,893,277
PROCESS AND TOOL FOR PERFORATING INGOTS
Karl Beisner, Dortmund-Lucklemberg, Germany
Application July 25, 1957, Serial No. 674,100
2 Claims. (Cl. 78—9)

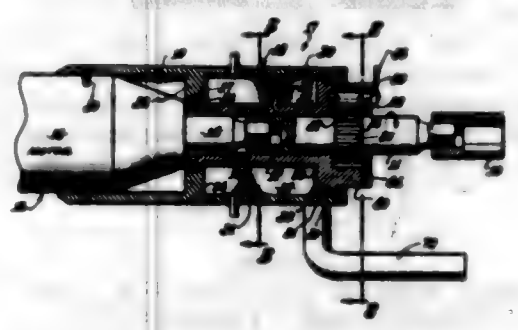


1. A punch for perforating hot ingots comprising a pair of spaced concentric tubes, a connection between said tubes at the outer working end thereof, means closing the inner end of the space between said tubes, a plurality of radial fins between said tubes and extending longitudinally thereof to provide channels for fluid coolant, alternate fins being spaced from said outer end connection, a union for coolant on the outer of said tubes in the region of the inner end thereof and having inlet and outlet pipes, an annular conduit in said union surrounding the outer tube and with which said inlet and outlet pipes communicate, and ports in said outer tube communicating with said conduit and certain of the channels, whereby coolant passes through the inlet pipe into the annular conduit and thence through said certain channels to the front of the tool and then through the space at the outer end between the tubes and thence to other channels back to the outlet pipe.

2,893,278
MULTIPLE STAGE, PREDETERMINED TORQUE RELEASE APPARATUS FOR TIGHTENING THREADED FASTENING ELEMENTS
Henry T. M. Rice, San Gabriel, Calif., assignor, by decree of distribution, to Adele M. Stevens, executrix of the estate of Dillon Stevens, deceased
Application October 28, 1952, Serial No. 315,793
12 Claims. (Cl. 81—52.4)

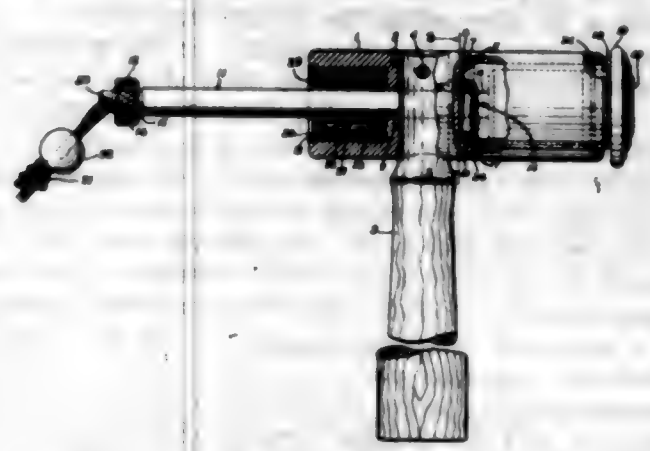
1. In apparatus for tightening a threaded fastening element: a device having a torque transmitting capacity

less than the torque required and adapted to tighten the element to a torque value lower than a desired higher torque value; a fluid motor having a greater torque trans-



mitting capacity than said device and connected to said device for tightening the element to the desired higher torque value; and means for reversing the direction of operation of said fluid motor.

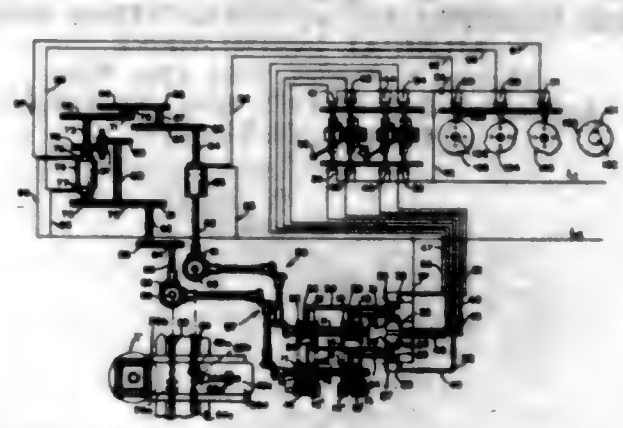
2,893,279
CARTRIDGE-POWERED IMPACT TOOL
Philip R. Haskell, Fairfield, Paul A. Ketchpel, Jr., Bridgeport, and Frank P. Knapik, Stratford, Conn., assignors to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Application October 18, 1957, Serial No. 691,017
13 Claims. (Cl. 81—52.35)



3. A rimfire propellant powder cartridge assisted impact tool comprising a tool frame defining a barrel and an interior barrel terminus, a piston rectilinearly movable in said barrel into proximity with said barrel terminus, said piston having a striking face protuberant from said barrel, means on said tool for supporting a rimfire propellant powder cartridge in abutment between said barrel terminus and said piston, with the rim of said cartridge disposed for impact by said barrel terminus.

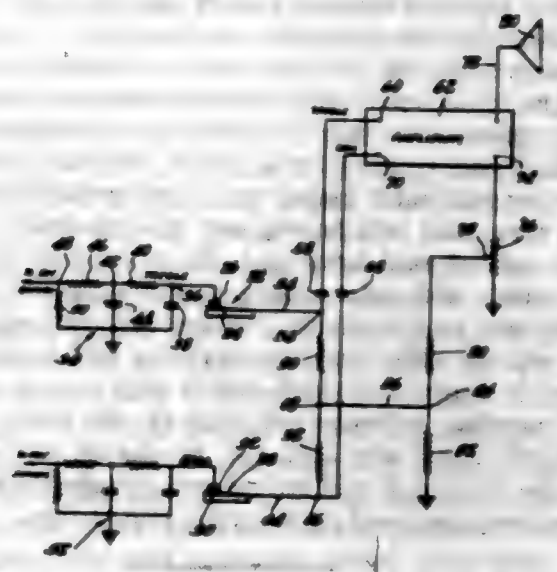
2,893,280
ANGULAR TURNING ATTACHMENT
James E. Ettorre, Bridgeport, Conn., assignor to The Bullard Company, a corporation of Connecticut
Application December 19, 1955, Serial No. 553,896
16 Claims. (Cl. 82—2)

8. An angular turning attachment for a lathe having separate rotatable shafts for effecting the movement of its tool head along intersecting paths, and a feedworks for rotating said shafts at a plurality of different rates of speed in opposite directions and controlled by a directionally-sensitive operating lever, the combination with said feedworks of a gear train between said shafts having a plurality of change-gears for establishing different gear ratios between said shafts, thereby to cause the tool head to move along a predetermined angular path when the directionally-sensitive operating lever is actuated; a first electro-magnetic clutch between one end of said gear train and one of said shafts; other electro-magnetic clutches between the other end of said gear train and said other shaft adapted to effect a reversing drive to said other shaft; a rotatable pointer and a non-rotatable dial indicator for indicating the predominating component of the selected angular path to thereby indicate the direction in



which the direction-sensitive operating lever is to be moved; and switch-actuating means rendered effective when said pointer is turned to succeeding quadrants of said dial to maintain said first electro-magnetic clutch energized, and alternatively to energize said other electro-magnetic clutches.

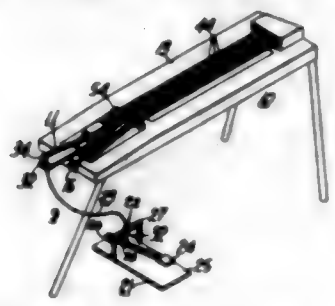
2,893,281
BACKGROUND NOISE ELIMINATOR
Roger J. McNerney, Buffalo, N.Y., assignor to The Rudolph Wurlitzer Company, North Tonawanda, N.Y., a corporation of Ohio
Application July 21, 1953, Serial No. 369,325
6 Claims. (Cl. 84—1.14)



2. In a continuous reed organ, the combination comprising a group of continuously vibrating wind driven treble reeds, a group of continuously vibrating wind driven bass reeds, a plurality of pick-ups each spaced from and capacitively cooperable with one of said reeds, static electric charges tending to accumulate between said reeds and pickups due to the wind which vibrates the reeds, means for individually and selectively applying a D.C. potential to said pick-ups, an amplifier having treble and bass inputs, means for connecting said treble reeds in parallel to said treble input, means for connecting said bass reeds in parallel to said bass input, means for transforming the electrical oscillations from said reeds amplified by said amplifier into audible organ tones, a negative feed-back circuit from said amplifier including a potentiometer, a voltage divider, means for connecting said voltage divider to the sliding tap on said potentiometer, resistance means electrically connected to said treble reeds for applying a feed-back bucking voltage from said voltage divider to said treble reeds, and resistance means electrically connected to said bass reeds for applying a

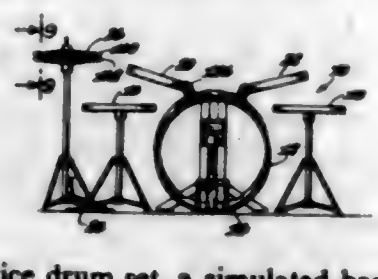
feed-back bucking voltage from said voltage dividers to said bass reeds, said bucking voltages reducing background noise.

2,893,282
TONE VARYING ATTACHMENT FOR A STRING MUSICAL INSTRUMENT
Thomas F. Searles, West Allis, Wis.
Application June 20, 1955, Serial No. 516,446
6 Claims. (Cl. 84—313)



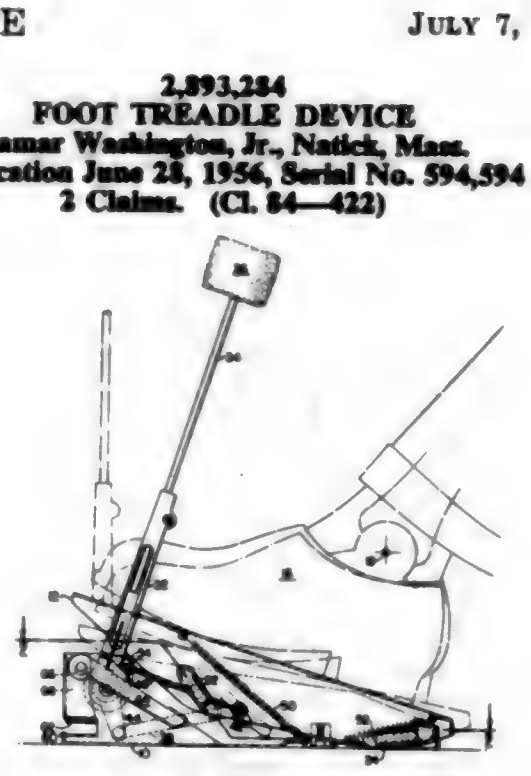
1. A tone varying attachment for a string musical instrument comprising a lever pivotably mounted on a base, said base being detachably mounted on said instrument and defining holes positionable above the strings of said instrument, a plurality of pegs mounted on the inboard end of said lever and extending through said holes, each of said pegs having an outwardly extending nib positioned to selectively engage a string of said instrument when said lever is pivoted, a bridge member mounted on the inboard end of said base and covering said inboard end of said lever, said bridge member defining an aperture through which said inboard end of said lever extends, resilient means positioned between the top of said bridge member and said inboard end of said lever for cooperating with said lever to provide an equal pull on said strings returning said pegs and nibs to their initial nonengaging position, a foot operated treadle comprising a pedal pivotably mounted on a standard and a cover mounted on said standard and bridging said pedal, flexible cable means comprising an outer casing and an independently movable inner core, said core having one end attached to the outboard end of said lever and the other end attached to said pedal, said outer casing surrounding said core and having one end connected to the outboard end of said base and the other end connected to said cover to form a flexible support through which said core is independently movable, whereby actuation of said pedal will pivot said lever and cause said nibs to engage said strings to vary the tension in said strings and thereby vary the pitch of the tone produced by vibrating said strings.

2,893,283
PRACTICE DRUM SET
Francis J. Ippolito, Forest Hills, N.Y.
Application August 30, 1956, Serial No. 607,163
7 Claims. (Cl. 84—411)



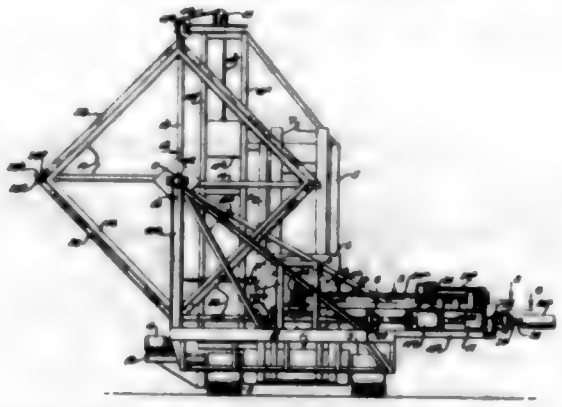
1. In a practice drum set, a simulated base drum comprising a cylindrical rim, a diametrically arranged supporting member extending across said rim, a practice pad mounted on said supporting member, and a foot pedal mounted on a lower part of said rim, said foot pedal having a beater ball cooperatively related to said practice pad.

2,893,284
FOOT TREADLE DEVICE
Lamar Washington, Jr., Natick, Mass.
Application June 28, 1956, Serial No. 594,594
2 Claims. (Cl. 84—422)



2. A foot treadle device for a drum, comprising a base having a transverse beater shaft adjacent the forward end, a drum beater carried by said shaft, a relatively movable treadle having a platform on which the operator's foot may be supported for actuation of the treadle by rocking motion of the foot, connections between the treadle and the base and disposed beneath the plane of the treadle platform for supporting the treadle thereon, there being independent supporting connections at the heel and toe ends of the treadle, the connections at the heel end of the treadle comprising rolling means below the treadle platform for guiding the heel end of the treadle in a substantially horizontal forward and back motion relative to the base, the connections at the toe end of the treadle having guiding means for causing the toe end of the treadle to move in a smoothly continuous path which slopes upwardly in a forwardly direction and downwardly in a rearward direction relative to the base, resilient means for yieldingly positioning the treadle in a position intermediate the limits of its guided motion relative to the base, and connections between the treadle and the beater shaft for rocking said shaft upon actuation of the treadle along its guided path.

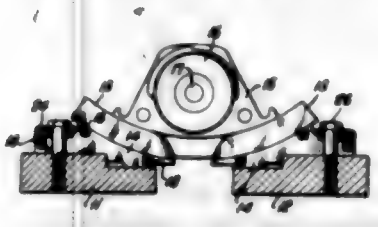
2,893,285
BLAST HOLE LOADER AND TAMPER
Hollis Sanders Payne, Boonville, Ind.
Application January 12 1956, Serial No. 558,668
12 Claims. (Cl. 86—20)



1. A blast-hole loader and tamper comprising a frame; a reel having polygonal peripheral sides and journaled on said frame; a ramrod comprising pole sections each of length substantially equal to the length of one side of the polygonal reel; two-position joints between said pole sections disengaged when the sections are in tension permitting the ramrod to articulate to wind up on the periphery of said polygonal reel but engaged to form rigid joints

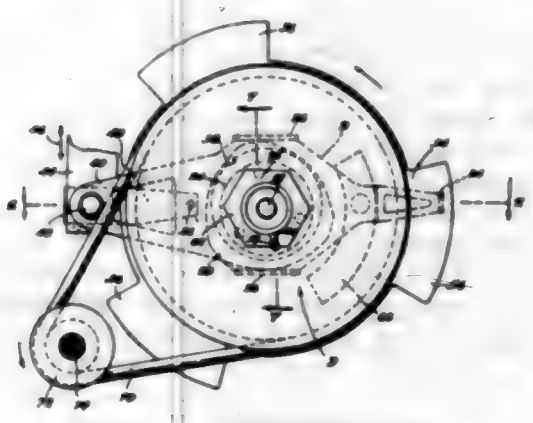
when the sections are under axial compression; at least one pair of frictional drive rollers on said frame and mutually spaced apart to permit the ramrod to pass therebetween; spring means yieldably urging the mutually spaced rollers toward each other to grip the ramrod therebetween; and motor means connected to power drive said rollers to reciprocate the ramrod; and torque means connected to said reel and yieldably urging the latter to rotate in a direction to wind up the ramrod on the reel.

2,893,286
COMB FOR GUIDING THE BOBBIN CARRIAGES IN BOBBINET MACHINES
Albin Otto Wagner, Dresden, Germany, assignor to VEB Tüllgardinen- und Spitzenwerke, Dresden, Germany
Application November 30, 1955, Serial No. 549,936
8 Claims. (Cl. 87—27)



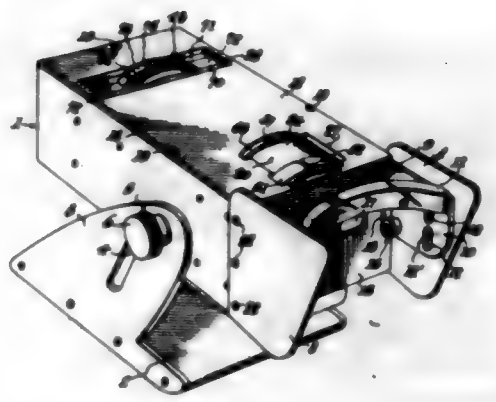
1. A comb sector for a bobbinet machine having a movable carriage comprising first and second planar guide plates arranged in alternate sequence, said first guide plates being spaced by the thickness of said second guide plates and defining at one side a bed surface for the movable carriage, said second guide plates being spaced at said side from the bed surface, and a base member detachably supporting said guide plates, the outer plates of said sequence defining round holes adapted to accommodate bolts for locking the plates together, the inner plates of said sequence defining square holes adapted to accommodate nuts for engaging the bolts.

2,893,287
MOTION PICTURE FILM DRIVE
Fredric A. Lunzer, New York, N.Y., assignor to DeJur-Amsco Corporation, Long Island City, N.Y., a corporation of New York
Application June 14, 1954, Serial No. 436,320
9 Claims. (Cl. 88—18.4)



1. A motion picture film drive comprising a movable film feeding device, a uniform diameter multiple-tip rotatable cam active on the film feeding device for imparting thereto a plurality of reciprocating cycles for each revolution of the cam, means active on the film feeding device for moving the same into and out of engagement with the film during only one of said plurality of cycles for each such revolution of the cam, a movable film shutter operable at a cycle speed of the same order of magnitude as the speed of revolution of the cam, and mechanism for synchronously operating said cam, said shutter and said means.

2,893,288
PORTABLE EYE-TESTING APPARATUS
John W. Sheridan, Silver Spring, Md.
Application July 1, 1955, Serial No. 519,685
3 Claims. (Cl. 88—22)
(Granted under Title 35, U.S. Code (1952), sec. 266)

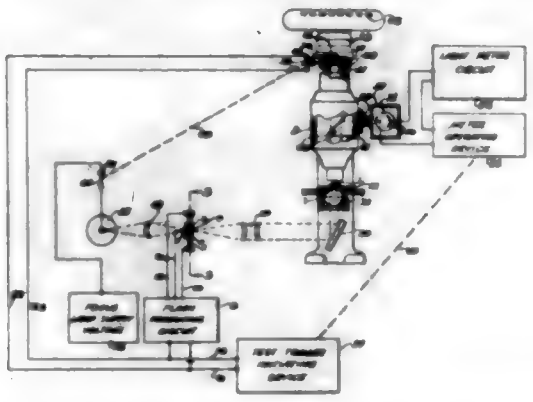


1. An eye-testing apparatus comprising a box having horizontally aligned viewing apertures in one end wall thereof, means adjustably supporting said box, headrest means adjustably supported externally on said box adjacent said viewing apertures, a unitary assembly removably supported transversely within said box adjacent one end thereof and including a rotatable target, means mounted within said box for illuminating said target, a unitary optical assembly removably supported transversely within said box rearwardly in spaced relation to said unitary assembly including the rotatable target, said unitary assembly and said unitary optical assembly having a common center line, said unitary optical assembly including a pair of similar rotors and stationary optical compensating means, means mounting said rotors coaxially for stepped rotation and said unitary optical assembly positioned to interpose said stationary optical compensating means between said rotatable target assembly and said pair of rotors, a pair of lenses mounted in spaced relation in each of said rotors along a diameter thereof and aligned for viewing said rotatable target through said viewing apertures, the lenses in a first one of said pair of rotors simulating a far test distance and angularly displaced a predetermined amount from the pair of lenses in a second one of said pair of rotors simulating a near test distance, said optical compensating means effecting a correction in the deviations of the optical centers of the near and far pairs of lenses and the geometric centers of the target from said common center line when said pairs of lenses are selectively rotated into registering position with said optical compensating means, whereby light rays from said target are directed through the selectively rotated lenses to said viewing apertures while maintaining said target a constant distance from said viewing apertures for near and far vision test distances.

2,893,289
MICROSCOPE FLASH-PHOTOGRAPHY SYSTEM AND APPARATUS
Harold E. Edgerton, Belmont, Mass.
Application March 9, 1953, Serial No. 341,181
2 Claims. (Cl. 88—40)

1. A microscope flash-photography system having, in combination, a microscope provided with means for mounting a sub-stage assembly at the region of the microscope lens aperture and a camera assembly at the microscope ocular region, a flash-producing apparatus comprising a flash tube having a light-transparent envelope containing a pair of spaced electrodes extending substantially completely across the cross-section of the envelope, the space between the electrodes being filled with gas at high

pressure, and the said space being of length ranging from substantially the electrode cross-dimension to several times the same, the said space defining a predetermined area bounded by the electrodes and the envelope walls therebetween in which is produced a gaseous discharge of uniform high intensity throughout, the field of view at the



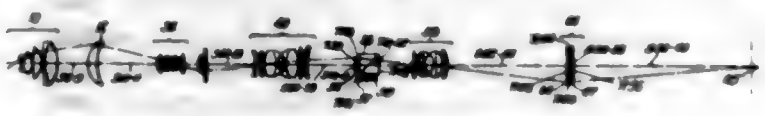
microscope specimen region having an area corresponding substantially to the said predetermined area, and an optical system for directing the light from the flash tube to produce an image having the said predetermined area for illuminating the said field of view uniformly throughout the same.

2,893,290

OPTICAL SIGHTING LENS SYSTEMS

John R. Miles, Glenview, Ill., assignor to Chicago Aerial Industries, Inc., Melrose Park, Ill., a corporation of Illinois

Application October 16, 1956, Serial No. 616,258
23 Claims. (Cl. 88—57)



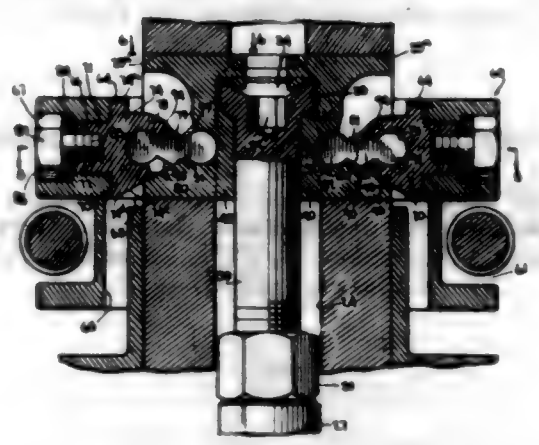
1. A periscope type optical system comprising: a wide angle objective lens assembly consisting of a double concave lens followed by two positive lenses, a second double concave lens and a third positive lens, said first double concave lens having at least five times the power of said second double concave lens, said lens assembly being substantially uncorrected for distortion; an aspheric field lens adapted to correct the distortion of said objective lens assembly and the spherical abberration of the stop; a first erector lens assembly consisting of two strongly meniscus components disposed between two positive components; a wide angle reticle aspheric field lens adapted to correct the distortion of the first erector lens assembly and the spherical aberration of the stop; a second erector lens assembly having a pair of juxtaposed thick double meniscus components having a strong concave inside surface disposed between two pairs of positive components, the outermost of said two positive components in each pair being of meniscus shape with the concave surface thereof furthermost from the convex surface of the thick double meniscus associated therewith; a second positive field lens; a third erector lens assembly consisting of a double Gauss system having two strongly bent double meniscus components disposed with their concave surfaces in adjoining relation, said two double meniscus components being preceded by a double convex lens and followed by a positive meniscus lens having the concave surface thereof disposed adjacent to the convex surface of the second double meniscus component; and an eye lens assembly consisting of two positive meniscus components.

2,893,291

DRAW TOGGLES FOR SPINDLE MALE TAPERS OF MILLING AND THE LIKE MACHINES

John C. Hollis, Long Island City, N.Y., assignor to Morey Machinery Co. Inc., Astoria, N.Y., a corporation of New York

Application July 20, 1956, Serial No. 599,134
6 Claims. (Cl. 90—11)



5. In combination, a spindle mounted for rotation about a longitudinal axis, said spindle being formed with a longitudinal opening and with a plurality of transverse slots intersecting said longitudinal opening, wedges slidable in said transverse slots, said wedges being formed with inward end surfaces and outward end surfaces, the outward end surface of each wedge formed with a transverse concave recess, the inward end of each concave transverse recess formed with a transverse part-cylindrical cavity, the portions of said transverse groove adjacent said transverse cavity being flat, a plurality of toggle links, said toggle links being formed with a central stem portion having two pairs of opposed parallel sides and part-cylindrical end portions, one portion of each toggle link being received within the part-cylindrical cavity of a wedge, a sleeve surrounding said spindle and concentric therewith, said sleeve formed with inwardly projecting portions adjacent said wedges, said inwardly projecting portions being formed with inwardly curved lips, a part-cylindrical cavity formed between said inwardly curved lips and said lips formed with flat portions adjacent said cavity, the outer rounded end of each toggle link opposite the end received in the wedge being received within the cavity of the inward sleeve projection thereadjacent and between the curved lips thereof, said curved lip portions of said inward sleeve projections being partially received within said concave transverse recesses of said wedges, and means to move said sleeve longitudinally relative to said spindle, whereby said wedges will be pushed or pulled in said transverse slots by said toggle links depending on the direction of movement of said sleeve, and the movement of said sleeve will be limited by the flat parallel walls of said toggle links bearing on the flat walls adjacent the transverse part-cylindrical cavities in said wedges and said inwardly projecting lip portions of said sleeve.

2,893,292

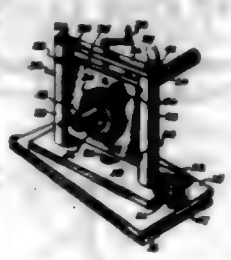
DEVICE FOR REMOVING THE EXCESS WELDING BEAD FROM THE EXTERIOR SURFACE OF WELDED SEAM TUBING

Joseph W. Naperola, Grand Rapids, Mich.

Application December 26, 1957, Serial No. 705,154
2 Claims. (Cl. 90—24)

1. A device for removing the excess welding bead from the exterior surface of welded seam tubing as the tubing emerges from a tube rolling mill comprising a frame disposed transverse to the longitudinal path of the tubing with the tubing passing through the frame, a block mounted in the frame and having an opening formed

therethrough through which the tubing passes, a cutter ring of greater diameter than the tubing mounted in said opening, said cutter ring having a substantially circular internal cutting edge adapted to contact the tubing tangentially adjacent the seam thereof for progressively removing the welding bead from the tubing, said cutter ring being rotatably supported by said block, means for continuously rotating said cutter ring during operation of the device, said block being slidably mounted in said



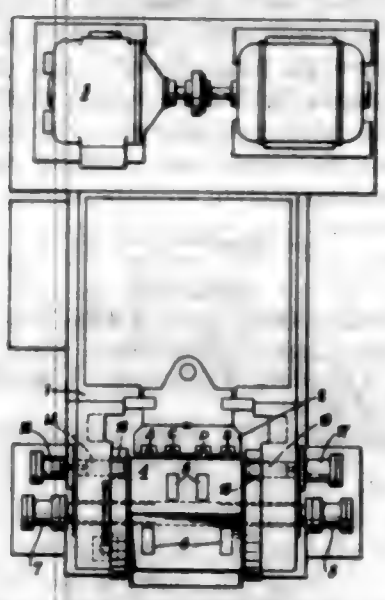
frame for vertical adjustment relative thereto to provide tangential contact of the cutting edge of the cutter ring with the seams of tubing of different diameters, means mounting said frame for turning adjustment about an axis perpendicular to the point of tangential contact of the cutter ring with the tubing so as to match the effective arc of the cutting knife to the curvature of the tubing, and means mounting the frame for tilting movement to effect the optimum shearing action of the cutting edge of the cutter ring to remove the excess welding bead.

2,893,293

BROACHING MACHINES

Cyril Edward Poynter, Biggleswade, England, assignor to Weatherley Pelgear Limited, Biggleswade, Bedfordshire, England

Application June 11, 1956, Serial No. 590,426
Claims priority, application Great Britain June 9, 1955
1 Claim. (Cl. 90—33)



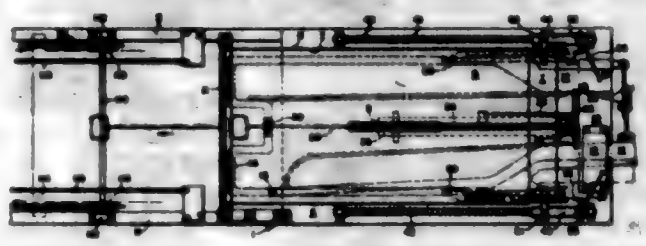
A broaching machine comprising a broach bar, a slide supporting said broach bar for longitudinal reciprocation, at least two broaching tools disposed in laterally spaced relation longitudinally on said broach bar, a drum shaped work-holding table mounted for rotation about an axis which is substantially at right angles to the line of movement of the broach bar and is substantially parallel to the face of the broach bar slide, means for intermittently indexing said table about its axis between strokes of said tool to bring adjacent peripheral areas of said table successively into operative relation with said broaching tools, work-holding means on said peripheral areas of said table with said holding means on alternate peripheral areas operatively aligned with one of the broaching tools, and the work-holding means on the intermediate areas operatively aligned with the other of the broaching tools.

2,893,294

BAG LINING AND CUFFING MACHINE

Lawrence V. Eaton, Wakan, and James A. Kane, Arlington, Mass., assignors to Colony Foods Products, Inc., Medford, Mass., a corporation of Massachusetts

Application May 2, 1958, Serial No. 732,473
10 Claims. (Cl. 93—8)



1. A bag lining and cuffing machine comprising spaced elongate bag-stretching arms relatively movable toward and away from each other from a normal retracted position, wherein inner and outer bags may be slipped about them, to an extended position, wherein said arms hold the nested bags in stretched fixed position with the mouth portion of the inner bag projecting beyond that of the outer bag, elongate guides juxtaposed to said arms, cuffing fingers longitudinally movable on said guides and engageable with the projecting inner end portions of the inner bag, and means for sequentially extending said arms, then moving said fingers inwardly to cuff said projecting ends about the end portion of the outer bag and moving said arms to retracted position to permit removal of the cuffed bag.

2,893,295

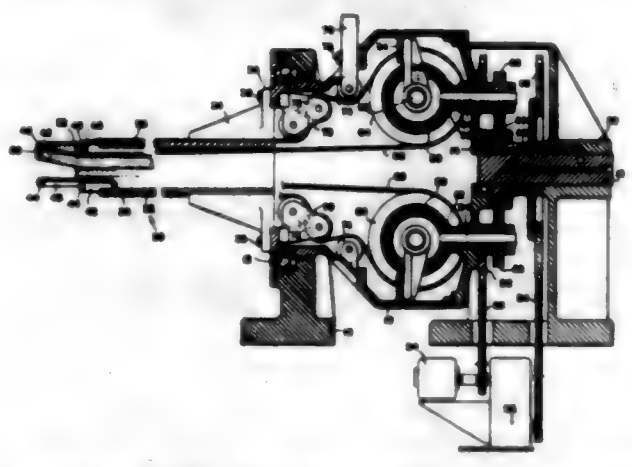
METHOD OF PREPARING A CONTAINER FOR SHIPMENT AND SUBSEQUENT USE

Donald G. Magill, Great Neck, N.Y., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Application October 24, 1955, Serial No. 542,335
1 Claim. (Cl. 93—36)

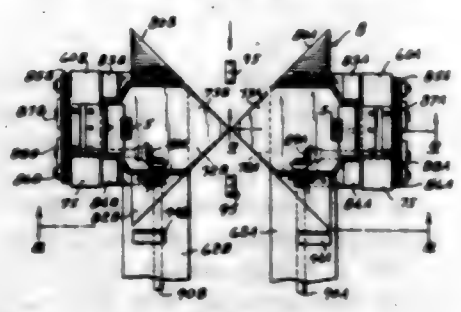
The method of preparing for storage and subsequent use, empty rectangular fibre containers having opposed rigid flat side walls and rigid flat connecting side walls all provided with scored fold lines, and having rigid flat top and bottom ends devoid of scored fold lines with a filling and dispensing opening of restricted size in the top end thereof, said method comprising the steps of compressing together two opposing side walls of said containers to overlap such side walls and to bend the remaining connected side walls along certain of said fold lines, and simultaneously bending the rigid top and bottom ends of said containers along certain other of said fold lines and inwardly against and overlapping said compressed overlapped side walls to collapse the containers into substantially flat units for stacking and handling, and thereafter restoring said collapsed container units to their original shape by injecting a gaseous medium under pressure into said restricted openings to expand and reform said containers for filling with a liquid, and simultaneously injecting with said gaseous medium, a mist of liquefied coating material and depositing the same on the inner wall surfaces of the containers to repair possible damage to said scored fold lines as a result of the aforesaid bending of the container walls therealong to collapse the containers.

2,893,296
APPARATUS FOR WINDING TUBES
Joseph T. Yovanovich, Rosemont, Pa.
Application May 17, 1956, Serial No. 585,497
3 Claims. (Cl. 93—80)



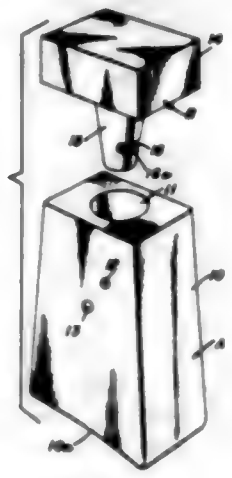
2. Tube winding apparatus comprising an elongated mandrel, means mounting said mandrel for rotation around its longitudinal axis, a plurality of parallel longitudinally extending belts mounted externally and movable longitudinally of said mandrel providing longitudinally movable external surfaces, driving means including a gear rotatable coaxially with said mandrel for rotating said mandrel, driving means including a second gear rotatable coaxially with said mandrel for moving said belts, said mandrel and belts rotating while overlapping strips of material are helically wound thereon and the helically wound strips forming a tube moving longitudinally over said mandrel on said longitudinally moving surfaces, and means driving said gears and including means for adjusting the relative speed thereof to adjust the relative speeds of said movable belts and said rotating mandrel for adjusting the helix angle of the strips being wound into a tube.

2,893,297
AUTOMATIC FOLDING AND BINDING MACHINE
Albert Soffa, Wynnewood, and Frederick W. Kulicke, Jr., Philadelphia, Pa., assignors to Walter S. Sachs & Co., Inc., Philadelphia, Pa., a corporation of Pennsylvania
Application February 25, 1957, Serial No. 642,223
4 Claims. (Cl. 93—84)



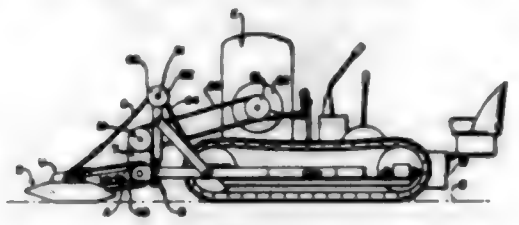
1. An automatic folding machine for plicating and assembling a foldable sheet and backer of the character described comprising a frame, a pair of opposed folding wings pivotally mounted on a horizontal axis in said frame, a platen secured to the upper portion of each of said wings, each of said platens having an apex conforming to diagonal scored lines of a sheet to be folded thereon, a sheet metal hold-down resiliently hinged to the outboard end of each of said wings and having a plan configuration respectively registering with said platens, a riser on each of said wings in detachable engagement with the respective hold-down and spacing said hold-down from the respective platen when said wings are horizontally aligned, a pair of opposed triangular tabs pivotally mounted upon respective lateral edges of each of said platens, and air jet means in said frame disposed along the fold line of said wings whereby the sheet of paper will be clamped snugly between said hold-downs and said platens, said wings being folded upwardly together as mirror images while the air jet is impressed upon the lower surface of said sheet and said tabs are pivotally urged into abutment with said hold-downs.

2,893,298
SHEEP FOOT TAMPER
Thomas P. Averette, Van Nuys, Calif.
Application February 10, 1956, Serial No. 564,694
3 Claims. (Cl. 94—48)



1. A sheep foot tamper, including: a shank one end of which is suitable for welding onto a cylindrical metallic roller, and the other end of which is flat, the shank having a tapered socket axially therein with its large and entrance end in said flat end; a tamping foot having one side thereof flat and symmetrical with said flat end of the shank; a tapered stem fixed at its large end to said side of said foot and received in the socket, said stem adjacent its inner end having a transverse groove therein one wall of which is flattened; said shank having a transverse opening therethrough aligned with said groove; and a locking pin removably fitted in said opening and said groove, said pin having a flattened and tapered side engaging said flattened wall for drawing said stem into frictional wedge engagement with the socket.

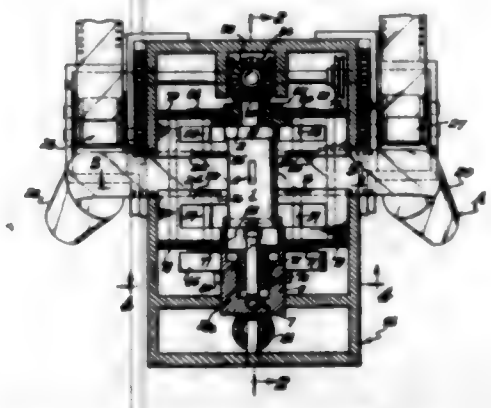
2,893,299
TAMPING CONSTRUCTION MACHINE
Vincent J. Moir, Gates Mills, Ohio, assignor to The International Vibration Company, Cleveland, Ohio, a corporation of Ohio
Application August 31, 1956, Serial No. 607,423
9 Claims. (Cl. 94—48)



1. In a tamping construction apparatus including a vehicle for operative traverse over a construction area to be compacted and tamping shoe means disposed across and liftably supported by one end of the vehicle, the combination comprising: a counterweight for the shoe means horizontally reciprocably mounted on the other end of the vehicle for movement in a direction longitudinal to the vehicle; power operated extensible and retractable means having one element thereof fixed to the vehicle frame and a second element movable with respect to the first named element, said second element being linked to the counterweight for extending and re-

tracting the same; and shoe lifting means reacting on the vehicle for applying a lifting force to the said tamping shoe means to raise the same from an operating ground contacting position to a lifted position for vehicle travel; means interconnecting the said second element of said power operated means to and as actuating means for said shoe lifting means, whereby the counterweight is extended or retracted respectively in the course of raising or lowering of the shoe means.

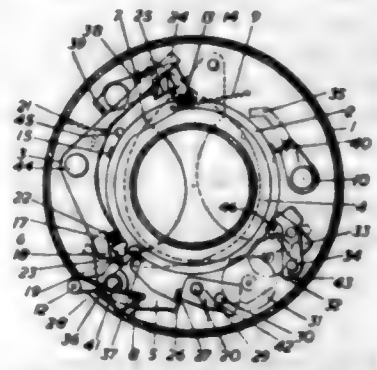
2,893,300
CAMERA
Luis A. Fajardo, Glendale, Calif.
Application July 11, 1955, Serial No. 521,170
7 Claims. (Cl. 95—16)



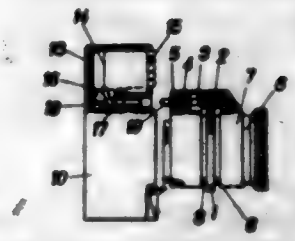
1. A camera of the type described comprising, a housing having a wide arched window in the front wall thereof, a cylinder vertically seated for rotation in the housing, the wall of the cylinder being concentric with and in contact with the window and the housing wall, the cylinder having narrow diametrically alined light inlet and outlet apertures vertically cut through the wall thereof for passage across the window of the housing during rotations of the cylinder, an objective in the cylinder between the apertures thereof, a film mounted for transverse movement in the housing directly behind the cylinder in alinement with the two apertures thereof, means for continuously rotating the cylinder to cause the light inlet thereof to pass across the window of the housing and in passing to admit a beam of light through the objective to the film, and connections from said cylinder rotating means for advancing the film a predetermined distance while the moving cylinder apertures are out of registration with the housing window, in which a partition is placed in the cylinder below the apertures thereof, a pivot centrally rising from said partition, shutter elements mounted for rotative movement on the pivot, and connections from said cylinder rotating means for moving the shutter elements on their pivot to close the inlet aperture of the cylinder while out of registration with the housing window.

2,893,301
PHOTOGRAPHIC LENS SHUTTER WITH A BRAKING MECHANISM FOR THE CONTROL OF THE EXPOSURE TIME
Johannes Weise, Oskar Fischer, and Werner Hahn, Dresden, Karl Krömer, Radebeul, and Rolf Noack, Dresden, Germany, assignors to VEB Zeiss Ikon, Dresden, Germany, a corporation of Germany
Application December 2, 1955, Serial No. 550,724
Claims priority, application Germany December 4, 1954
7 Claims. (Cl. 95—62)

1. A photographic lens shutter comprising in combination, an apertured housing, a plurality of shutter blades rotatably mounted within said housing capable of being rotated to open and close said aperture, an actuating lever for actuating said shutter blades, said actuating lever being also mounted within said housing and operatively connected with said blades, a striking lever arranged within the housing and engageable with the actuating lever for driving said actuating lever alternately in opposite directions for opening and closing the aperture, a first spring connected to the striking lever for continuously urging said striking lever towards one direction, a release lever which is engageable with said striking lever to drive the latter against the action of the first spring and which releases the striking lever to allow the latter to run down under the action of said first spring, a control element mounted in said housing and movable into the path of the striking lever to engage the latter to stop the running-down movement thereof, a second spring connected to the control element for moving the latter into the path of the striking lever, a driving lever mounted in said housing in driving connection with said control element for moving the latter out of the path of the striking lever, a third spring connected to the driving lever to urge it in a direction tending to move the control element out of the path of the striking lever, and a braking mechanism mounted in said housing and engageable with said driving lever to brake the movement thereof and consequently also to brake the movement of said control element, whereby on actuation of the release lever the striking lever is driven in one direction by said release lever and on continued actuation of said release lever the striking lever starts to run down under the action of the first spring, whereupon said striking lever is stopped by the control element in its running-down movement in a position which holds the actuating lever in such position as to hold the blades in the open positions, said striking lever remaining in this stopped position during an interval of time regulated by the braking mechanism, said driving lever under the influence of said third spring moving the control element to release the striking lever allowing it to continue its running-down movement so that it drives the actuating lever which moves the blades to close the shutter aperture.



2,893,302
EXPOSURE METER ADJUSTING DEVICE
Julius Durst, Brixen, Italy, assignor to AGFA Aktiengesellschaft
Application February 28, 1955, Serial No. 491,075
Claims priority, application Italy March 6, 1954
3 Claims. (Cl. 95—64)



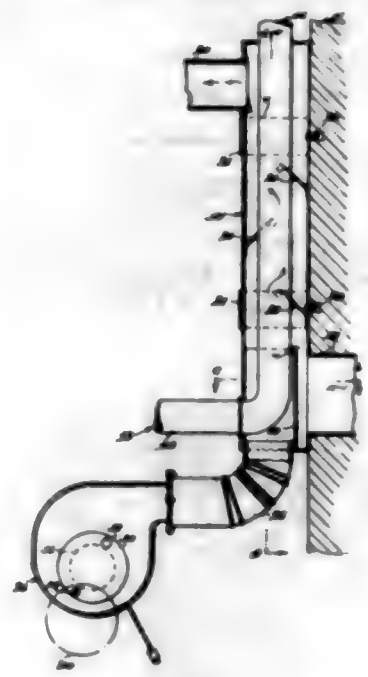
1. The combination of an interchangeable lens attachment with a photographic camera comprising a lens barrel, said camera including a housing, latch and recess means for mounting said lens barrel upon said housing, a dia-

phragm actuating ring operatively associated with said lens barrel, a gear segment disposed about the outer periphery of a rotatable portion of said lens barrel, a pinion gear means disposed in operative engagement with said gear segment and including a threaded shaft, said shaft being threaded within a stationary portion of said lens barrel and including an end protruding outwardly from the portion of said lens barrel disposed adjacent the front of said housing and extending in a direction parallel to the longitudinal axis of said lens barrel, a light sensitive means disposed within said camera housing, a control means for varying the output of said light sensitive means in accordance with the amount of opening of said diaphragm, said control means being disposed within said camera housing adjacent the position of the end of said shaft when said lens barrel is mounted upon said housing, said control means including a lever, said housing including an aperture disposed in line with one end of said lever, a pin disposed in said aperture with one of its ends in contact with said lever and the other of its ends in position to be contacted by said end of said shaft when said lens barrel is mounted upon said housing, resilient means reacting between said housing and said lever in a direction to maintain said lever urged into contact with said pin, and said pin including a head disposed within said housing which bears against a portion of said housing surrounding said aperture to retain said pin within said housing when said lens barrel and shaft are removed.

2,893,303
CAMERA MOUNT FOR STEREOSCOPIC PHOTOGRAPHY
Anthony John Geraci, Newark, N.J.
Application March 2, 1956, Serial No. 569,117
4 Claims. (Cl. 95—86)

1. A camera mount for stereoscopic photography comprising a base, a pair of camera guide members supported on the base in oppositely extending end to end relation in the same horizontal plane, and at least one of which is pivotally connected with the base so as to be adapted to be adjusted for selective divergent angular extension relative to the other, a camera carriage slidably supported on said guide members in bridging relation thereto for movement thereover through an approximate interocular distance, respective opposite ends of said carriage and the respective guide members having cooperative guide means adapted to direct and control endwise movement of said carriage upon the guide members, whereby a camera carried by said carriage in fixed non-pivotal attachment thereto is bodily movable along an arcuate path between extremes of the interocular distance, the radius of said path being determined by the selected degree of angular divergence of the guide members to conform in length to the distance at which the camera is spaced away from the object to be photographed, the base having means cooperative with the outer end of a pivoted guide member to indicate the selected adjusted relative angular disposition of the guide members in correspondance to the distance at which the camera is spaced away from the object to be photographed, and the outer end of said pivoted guide member and said base having cooperative means to releasably secure said pivoted guide member in selected angular relation to the other guide member.

2,893,304
AIR VENTILATOR
Alexander Samko, New York, N.Y.
Application March 6, 1956, Serial No. 569,775
1 Claim. (Cl. 98—45)

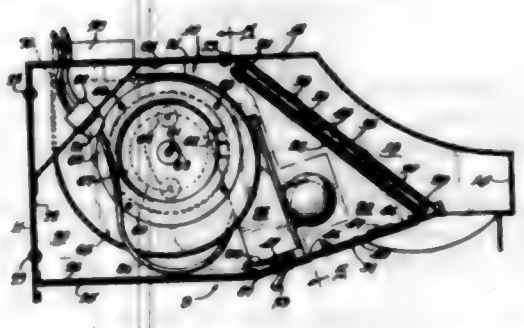


An air heating and ventilating mechanism comprising a first conduit for exhausting waste furnace gases, said first conduit embodying a horizontal section and a vertical section leading from the horizontal section, a closed housing surrounding the vertical section of the conduit and sealingly pierced by it, a second conduit connected to and opening into the lower end of said housing to convey fresh air from an outside source to the lower end of the housing, a third conduit connected to the upper end of the housing to convey the heated fresh air to a point of use, brackets securing said housing to a supporting structure, a fourth conduit connected to the lower end of the housing, a blower mechanism connected to said fourth conduit for introducing ambient air into the housing, said mechanism comprising a casing and fan therewithin, a motor connected to said casing and fan and adapted to be connected to a source of electrical energy, an inlet opening in said casing, a plate pivotally connected to said casing and mounted for movement into and out of closing relation with respect to said inlet opening, a vertical baffle in the lower end of said housing adjacent to but spaced from the discharge opening in said second conduit with its upper edge above said discharge opening so that the ambient air forced into the lower end of said housing will induce a flow of fresh air to be drawn into the housing through said second conduit and over the top of the baffle to mix with the ambient air, and a plurality of substantially crescent shaped, upwardly inclined, alternately superposed baffles mounted in said housing and contiguous to the housing and vertical section of the first conduit to promote heat transfer between the waste gases and fresh air.

2,893,305
VENTILATING HOOD
Kenneth S. Jenson and Mathias Roth, Wisconsin Rapids, Wis., assignors to Preway, Inc., a corporation of Wisconsin
Application May 23, 1956, Serial No. 586,763
9 Claims. (Cl. 98—115)

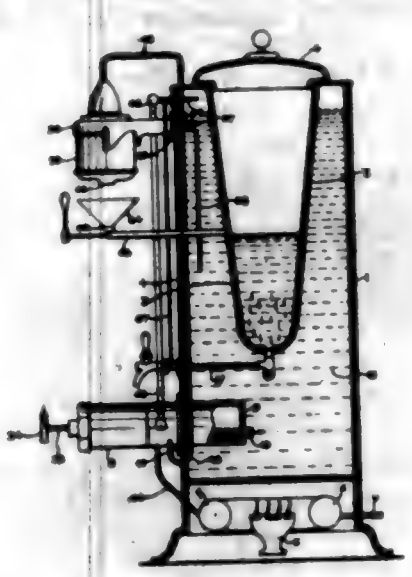
1. In a ventilating apparatus of the character described, an exhaust chamber formed of a rear wall, a top wall, depending side walls, and a bottom wall, and having a front entrance opening permitting installation of a blower unit and for admitting gases to be exhausted by the

blower unit, the top wall of said chamber being formed with an outlet opening for exhausting gases from the chamber, a blower unit adapted for installation in the exhaust chamber through said entrance opening including a motor driven fan for drawing gases into the exhaust chamber and an exhaust duct having a terminal portion adapted to register with said outlet opening for exhausting gases from the chamber, and means for releasably retaining the blower unit in position in said exhaust chamber comprising interengageable parts one on the blower unit duct and one on said top wall of the



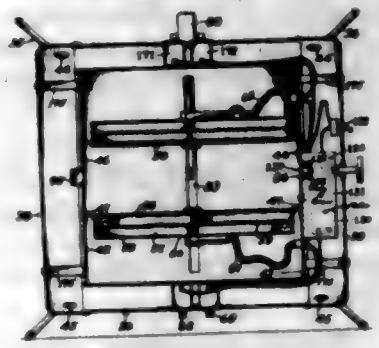
exhaust chamber forming a disengageable pivotal connection pivotally hanging and supporting the blower unit for pivotal movement thereof on said top wall in a forward direction for removal of the unit, and cooperating parts on the blower unit and at least one wall of the exhaust chamber other than said top wall forming a disengageable latch means releasably retaining the blower unit against the aforementioned pivotal movement including a latch part on one of the blower unit and said other wall and a pivotable latch member on the other of the blower unit and other wall.

2,893,306
COFFEE MAKERS
Juan Hernandez Herrera, Havana, Cuba
Application November 30, 1956, Serial No. 625,473
6 Claims. (Cl. 99—302)



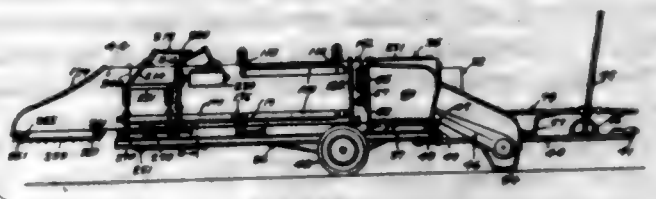
1. A pressure feeder device for feeding a predetermined volume of hot water from a steam boiler to a point of use, comprising in combination with a steam boiler, a closed container secured to said boiler having a portion projecting into the water space thereof through an opening in the wall of said boiler; means establishing communication between the water compartment of said boiler and the interior of said container, a vent pipe extending to the top of said boiler a partition in said container having a pair of valve seats secured thereto arranged in spaced apart relation with one of said seats in communication with said last named means and the other valve seat in said partition spaced from said first named valve seat being connected to said vent pipe extending to the top of the boiler, a control shaft mounted in said container, a control member operable by said shaft for reciprocating movement in said container, a pair of spring biased valve elements supported on said control member adapted to cooperate with said valve seats and arranged in one position to close the valve seat communicating with said vent pipe and in another position to open valve seat communicating with the vent pipe, said control member being adapted to move said valve elements into seating engagement with both of said valve seats, a spring biased valve mounted in said partition adapted to be unseated when said control member is in a position to close both of said valve seats, a strainer for coffee making attached to the upper end of said boiler and a pipe connected to a chamber on said partition extending upwardly to said strainer whereby when said spring biased valve is in its open position air under pressure will force the liquid in the control chamber upwardly to the strainer.

2,893,307
PORTABLE ELECTRIC COOKING DEVICE
Juan C. Latorre Rodriguez, Palmira, Colombia
Application October 14, 1957, Serial No. 689,887
12 Claims. (Cl. 99—421)



1. A portable electric cooking device comprising a body having a rectangular cooking compartment with an opening at the front leading to said compartment; the compartment having end walls leading from said opening rearwardly to a back wall; the back wall of the compartment having a straight vertical slot opening; an electric burner in the upper part of the compartment; another electric burner in the lower part of the compartment; slides movable on opposite sides of the straight slot opening; means to connect said slides with said burners; a source of electricity; flexible cables connecting the source of electricity with the two burners; and a mechanism including a lever mounted to swing on the outside wall of the back of the body for moving said slides along said slot opening and hence for adjusting the burners toward and from each other in said compartment.

2,893,308
BALING MACHINE
William F. Bodisch, Durango, Iowa
Application March 28, 1958, Serial No. 724,656
17 Claims. (Cl. 100—15)



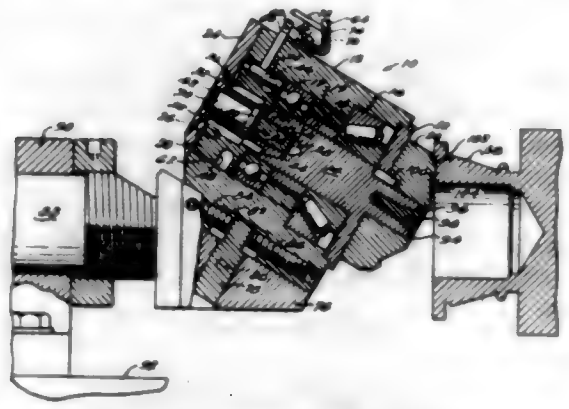
1. A baling machine comprising an elongated mobile support, an elongated tubular body supported by and disposed longitudinally of the mobile support and positioned with its axis in substantially a horizontal plane, said body including an open rear discharge end and a forward end, said body having an entrance opening in

one side thereof and adjacent its forward end for receiving material to be baled, the forward portion of said body constituting a forming chamber in which the material is received from the entrance opening, driven means contained in said forming chamber and forming the material into a rolled mass and for urging the rolled mass rearwardly through the body, said body including an intermediate portion defining a compressing chamber, compressing means contained in said compressing chamber for revolving and compressing the mass during its rearward movement through said compressing chamber, said body having a twining chamber disposed between the compressing chamber and the rear discharge end of the body for receiving the compressed mass of rolled material from the compressing chamber, a knife supported by said body between the compressing chamber and twining chamber and swingably movable to an operative position for cutting off a portion of the revolving mass within the twining chamber from the remainder of the mass, trigger means disposed in the twining chamber and engaged by the leading end of the mass for controlling the movement of the knife to an operative and inoperative position, intermittently driven means extending into the twining chamber for revolving the cut off portion of the mass at an accelerated r.p.m. relative to the remainder of the mass, means supported for swinging movement on said body and controlled by operation of said trigger means for supplying and anchoring twine to the cut off portion of the rolled mass while the mass is revolved by the intermittently driven means for binding said cut off mass portion to form a bale, and continuously driven ejector means extending into the bottom portion of the body adjacent said discharge end for ejecting the bound bale from the machine through said discharge end.

2,893,309
END-STAMPING DIE

Richard H. Norris, Oak Park, Mich., assignor to New Method Steel Stamps, Inc., Detroit, Mich., a corporation of Michigan

Application January 10, 1958, Serial No. 708,140
7 Claims. (Cl. 101—7)



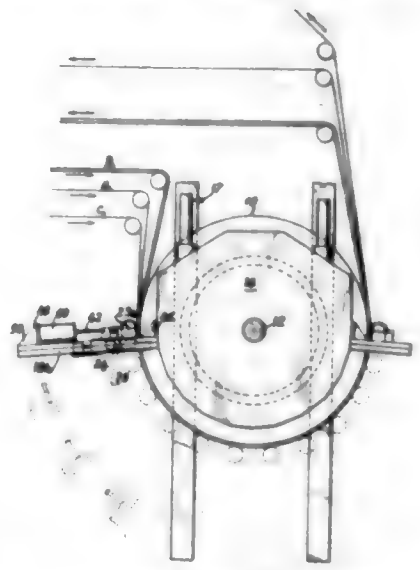
1. A marking tool comprising a housing, a spindle mounted for rotation in said housing, a marking die on the forward end of said spindle, a driven member at the rearward end of said spindle, at least one shearable element connecting said driven member to said spindle, a mounting base supporting said housing and a shearable element connecting said housing to said base.

2,893,310
ROLL MOVING MEANS FOR ROTARY PRINTING APPARATUS

James Reid Johnson, Providence, R.I.

Application August 11, 1954, Serial No. 449,176
25 Claims. (Cl. 101—182)

1. In a textile printing machine having one or more print rolls, bearing means for a print roll shaft mounted for movement toward and away from a backing cylinder, means for rotating a print roll including, a driven shaft, a first sleeve keyed on said driven shaft, a second sleeve rotatable around said first sleeve, said second sleeve having a spiral groove in its inner surface and said first sleeve having a projection extending into said

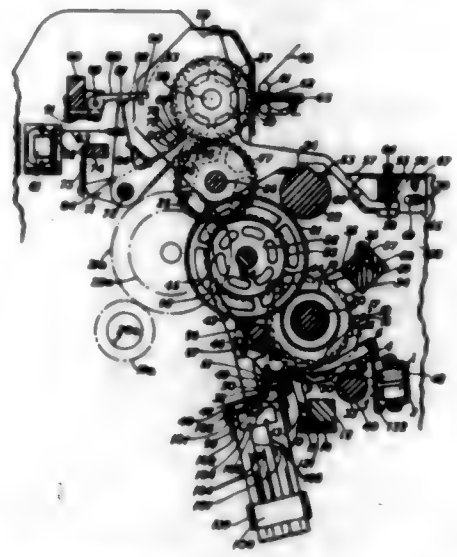


groove, a first bevel gear on said second sleeve, a pair of intermeshing gears aligned radially with respect to the backing cylinder, one of which gears is mounted on the print roll shaft, means for rotatatively supporting the other of said intermeshing gears and a second bevel gear carried by the other of said radially aligned gears meshing with the said first bevel gear.

2,893,311
PRINTING MECHANISMS

Thomas Oliver Wright and Ivor Vivian Rigby, Letchworth, England, assignors to International Computers and Tabulators Limited, a British company, London, England

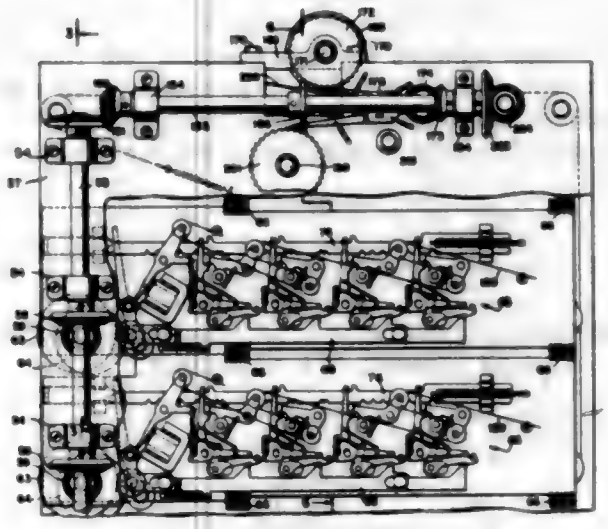
Application August 20, 1957, Serial No. 679,236
Claims priority, application Great Britain September 7, 1956
8 Claims. (Cl. 101—93)



1. A printing mechanism comprising a constant speed, continuously rotating drive shaft, a typewheel carrying sequentially arranged groups of type characters, said typewheel having a reset position associated with each said group of characters and normally being at rest in one of said reset positions, a normally disengaged clutch operatively connected between said drive shaft and said typewheel, means under control of a timed character-representing electrical impulse occurring in a first half of a printing cycle for effecting engagement and disengagement of said clutch to bring said typewheel to rest

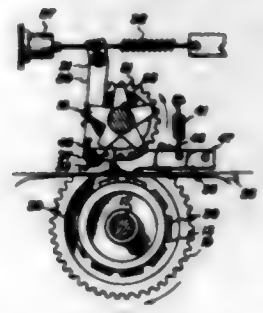
with the character represented by said timed impulse at a printing position, one revolution of said drive shaft corresponding to half a printing cycle and to the passage of all the characters of a group past said printing position, means operative to engage the clutch at a predetermined time in the second half of the cycle and resetting control means driven in synchronism with the movement of the typewheel and operative each time the typewheel reaches one of said reset positions to effect dis-engagement of the clutch to bring the typewheel to rest at the reset position following that from which the typewheel was driven.

2,893,312
CHARACTER SELECTION MECHANISM
Horace S. Beattie, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Original application August 25, 1954, Serial No. 452,156, now Patent No. 2,826,139, dated March 11, 1958. Divided and this application November 12, 1957, Serial No. 695,773
8 Claims. (Cl. 101—93)



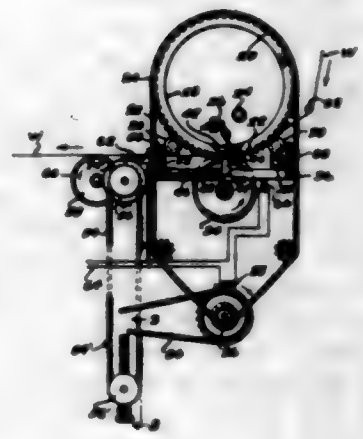
1. In a printing apparatus, a type carrier having a plurality of type elements arranged thereon, said type carrier being movable whereby said type elements move past a print position, means operable for moving said type carrier differential multiples of a predetermined increment to move differentially selected ones of said type elements to said print position, said means comprising a code bar, an actuating bar, means for reciprocating said code bar and said actuating bar in timed relation, a plurality of increment designated actuating bar engaging means interposable with said actuating bar for operation thereby, means corresponding to said actuating bar engaging means and operable selectively for interposing said actuating bar engaging means, a plurality of increment designated code bar engaging means, corresponding to respective said actuating bar engaging means, normally latching corresponding said selectively operable means in inoperative positions and interposable with said code bar for releasing said corresponding means to move said corresponding actuating bar engaging means to said interposed positions, an electromagnet, means operable by said electromagnet for interposing selected ones of said code bar engaging means in accordance with the type element to be selected, means operable by the interposed ones of said actuating bar engaging means for moving said type carrier differential numbers of increments in accordance with the increment designations of said interposed actuating bar engaging means, and means for energizing said electromagnet at differential times during the reciprocation of said code bar in accordance with the type element to be selected.

2,893,313
HIGH SPEED PRINTER
George H. Pekar, Arlington, and Arthur S. Osborn, Falls Church, Va., assignors to the United States of America as represented by the Secretary of the Air Force
Application March 17, 1958, Serial No. 722,105
7 Claims. (Cl. 101—93)



1. In a high speed printer for recording data, a rotating type wheel having a plurality of type characters embossed on the periphery thereof, a multilobe rotating cam member operated in mechanical relation to said type wheel, a pivotally mounted printing platen disposed between said cam member and said type wheel, and a lever having a spacer member pivotally attached to its lower end, said spacer member adapted to be inserted between said rotating cam member and said platen when said lever is actuated and operating to cause said cam member to move said platen downward with predetermined lead-time against said type wheel resulting in the printing of a selected character on a recording medium interposed between said type wheel and said platen.

2,893,314
TEXTILE FABRIC HAVING SPACED PORTIONS BEARING WEAR RESISTANT RESIN DOTS AND METHOD AND APPARATUS FOR PRODUCING SAME
Graves T. Gore, Trion, Ga., assignor to Riegel Textile Corporation, a corporation of Delaware
Application September 24, 1957, Serial No. 685,966
7 Claims. (Cl. 101—118)



1. Apparatus for producing a textile fabric having spaced portions thereof rendered wear resistant comprising a cylindrical applicator screen, means for rotating said screen about the cylindrical axis thereof, means for training said fabric in web form and causing said web to travel beneath said screen, said screen having a circumference greater than the dimension lengthwise of said web desired for the spaced fabric portions to be rendered wear resistant and having at least a substantial part of the excess circumferential area thereof formed imperforate, means for supplying interiorly of said screen for surface application to said web a thixotropic thermoplastic composition suited for rendering said spaced fabric portions wear resistant and having a relatively high viscosity by which said thermoplastic composition is prevented from flowing readily through the aper-

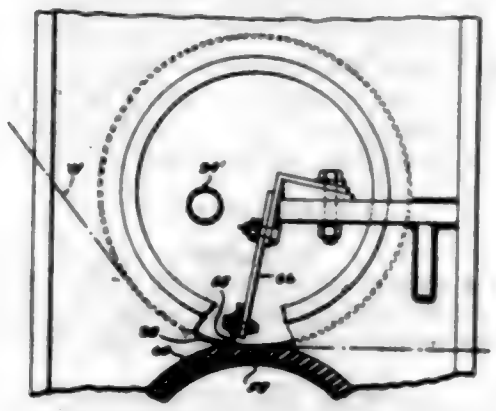
tures in said screen, means for doctoring said plastic composition into the apertures of said screen, a pressure roll arranged for disposition in opposed relation to said screen substantially at the point of doctoring and displaceably mounted under a bias normally maintaining it pressed against said screen, means carried by said screen for displacing said pressure roll from contact therewith at said imperforate circumferential area and for thereupon stopping the rotation of said screen, means for releasing said displaced pressure roll to its normal position and for restarting the rotation of said screen when the next spaced portion of said web to be rendered wear resistant is reached, and means driven by the travel of said web for controlling the functioning of said last named means.

2,893,315

MEANS FOR PRODUCING A TEXTILE FABRIC HAVING EXCEPTIONAL WEAR RESISTANCE

Linton C. Reynolds and Julian W. Shirley, Ware Shoals, S.C., assignors to Riegel Textile Corporation, a corporation of Delaware

Original application September 19, 1957, Serial No. 684,916. Divided and this application September 12, 1958, Serial No. 760,682
2 Claims. (Cl. 101—119)



1. Apparatus for producing a textile fabric having exceptional wear resistance and selectively incorporating other desirable surface characteristics, said apparatus comprising a cylindrical applicator screen, means for rotating said screen about the cylindrical axis thereof, means for training said fabric in web form past said screen in the direction in which the adjacent screen surface moves upon rotation of said screen, means for supplying interiorly of said screen for surface application to said web a thixotropic plastic composition suited for rendering said fabric wear resistant and having a relatively high viscosity by which said plastic composition is prevented from flowing readily through the apertures of said screen, means for doctoring said plastic composition into the apertures of said screen, and means for pressing said web against said screen over an arcuate surface area thereof extending in both directions from the point of doctoring, said pressing means comprising a pressure roll having a highly compressible, resilient covering thereon and disposed in opposing relation to said screen substantially at the point of doctoring under a pressure sufficient to deform said covering into nip relation with said screen over said extended arcuate surface area.

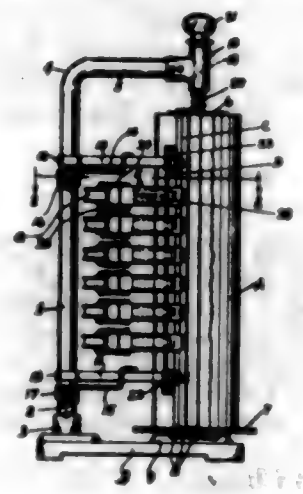
2,893,316

PAPER ROLL HOLDER AND CUTTER WITH PRINTING ATTACHMENT

Hugo A. Kunz, Bartlett, Tex.

Application January 17, 1958, Serial No. 709,509
7 Claims. (Cl. 101—226)

1. In an apparatus of the class described, a frame, an elongated roll of paper rotatably supported in the frame whereby the paper can be dispensed through rotation of the roll, an elongated cutter blade supported by the frame and bearing on the paper roll, a plurality of printing devices supported by the cutter blade support and disposed in spaced relationship along the length of the paper roll, said printing devices being mounted for individual oscillation for movement independent of one another into



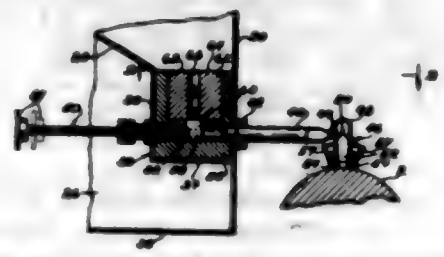
and out of engagement with the outer surface of the paper roll, each printing device including a rotatably mounted printing wheel adapted to be rotated by the rotation of the paper roll when the wheel is in engagement with the roll, and resilient means normally holding each of the printing wheels out of engagement with the paper roll.

2,893,317

PORTABLE INK FOUNTAIN

Solomon L. De Vore, Miami, Fla.

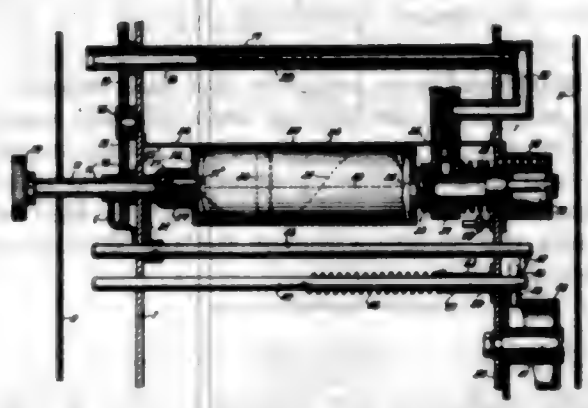
Application September 18, 1957, Serial No. 684,683
2 Claims. (Cl. 101—365)



1. An ink fountain for a printing press having a roller to be inked, comprising a box-like container providing a reservoir having front and rear side walls and end walls, a channel member adjacent the lower edge of the inner side of said front wall, said channel member having front and back walls and a bottom and extending from end wall to end wall of said reservoir, said reservoir having a sloping bottom wall interconnecting said rear wall of said channel and a side wall of said reservoir, a fixed valve member disposed in said channel and having a groove in the upper surface thereof extending from end wall to end wall and having therethrough a plurality of equi-spaced horizontal bores spaced below said groove, each connected with said groove by a vertical hole, a movable valve member slidably received in said groove and having a plurality of vertical holes therein corresponding in spacing and number to the vertical holes in said fixed valve member, said movable valve member being shorter than said groove to permit endwise movement of said movable valve member therein, a plurality of horizontal tubes extending laterally outwardly of the front side of said reservoir and having inner ends connected to said horizontal bores in said fixed valve member, a plurality of hand-operated valves extending rearwardly of said reservoir and each received in said horizontal bores in said fixed valve member, a bracket, means for attaching said bracket to one end wall of said reservoir, said bracket extending upwardly from said end wall, a horizontally ar-

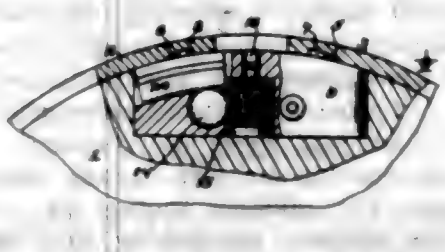
ranged solenoid and plunger connected to the upper end of said bracket, a lever having one end connected to said plunger and the other end connected to said movable valve member, a fulcrum pivotally fixed to said lever intermediate the ends thereof, a spring acting on said plunger to hold it and said lever in normal position in which said movable valve member is disposed in said groove with the holes thereof out of registry with the holes in said fixed valve member, said movable valve member being moved by said lever upon energization of said solenoid to a position in which the holes in said movable and fixed valve members register, a distributor tube connected to the outer ends of said horizontal tubes, said distributor tube having an open bottom adapted to be positioned adjacent an inking roll, and brushes co-extensive with said distributor tube and connected to the opposite sides thereof to extend below said opening into contact with an inking roll.

2,893,318
INK SUPPLY DEVICES FOR MANIFOLD PRINTERS
Rudolf Kreher, Hannover, Niedersachsen, Germany
Application December 7, 1953, Serial No. 396,632
Claims priority, application Germany December 8, 1952
21 Claims. (Cl. 101—366)



1. In an inking device for rotary stencil printers, an ink supply vessel, a reciprocally mounted ink applicator having ink discharge holes for applying ink to a stencil in the printer, reciprocally operated pump means for feeding ink under pressure from said supply vessel to said applicator, and drive means for simultaneously reciprocating said pump means and said applicator to transfer ink from said vessel to said applicator and to spread the ink linearly on a stencil as it is discharged from said applicator.

2,893,319
PRINTING PLATE TENSION LOCKUPS
Theodore R. Ziebell, Milwaukee, Wis., assignor to The Cottrell Company, Westerly, R.I., a corporation of Delaware
Application February 27, 1956, Serial No. 567,897
9 Claims. (Cl. 101—378)

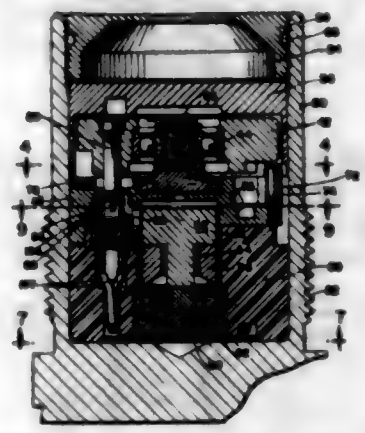


1. In a printing press plate tension lockup, the combination comprising a cylinder, at least one plate adapted to be secured thereto, radial inserts spaced across said cylinder, and a plurality of movable means based wholly in each of said inserts for engaging and holding a plate to the cylinder, said movable plate engaging means being removable without disturbing said inserts.

2,893,320
PRINTING OF CORRUGATED BOARD
Rexford W. Jones, Columbus, Ohio, assignor, by mesne assignments, to Fort Wayne Corrugated Paper Company, Fort Wayne, Ind.
Application March 29, 1956, Serial No. 574,647
8 Claims. (Cl. 101—426)

5. In the process of dry relief offset printing of corrugated board, the steps comprising: contacting an inked dry relief plate against the surface of an offset blanket having an effective surface hardness of about 20–40 durometer to transfer an ink image on said offset blanket and contacting corrugated board against said offset blanket to transfer the ink image thereon to the facing liner of the corrugated board without deleteriously affecting the strength of the corrugated board.

2,893,321
MAGNETIC IMPACT GENERATOR BASE FUZE
George N. Wienold and George S. Pfeiffer, Chicago, and Donald E. Hermansson, Palatine, Ill., assignors to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Application June 30, 1955, Serial No. 519,854
5 Claims. (Cl. 102—70.2)

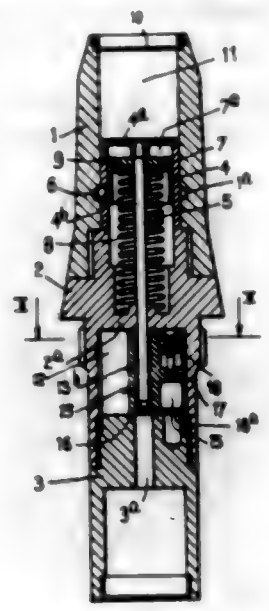


1. A mechanism for arming the fuze of a projectile comprising a body, a rotor mounted for rotation relative to said body on substantially the longitudinal axis of the projectile, resilient means between the rotor and the body biasing the rotor against rotation in response to its inertia as the projectile is angularly accelerated in the bore of the rifle, detent means normally engaging the rotor to hold it against rotation by the resilient means, said detent means being mounted for outwardly swinging movement in response to centrifugal force and having resilient means biasing the detent means into engagement with the rotor, stop means to limit the extent of rotary movement of the rotor in response to the force applied thereto by said resilient means, an electrically ignited primer and a booster lead-in charge mounted in alignment in the body, a detonator charge in the rotor positioned to be in alignment with the primer and booster lead-in charge when the rotor is arrested by said stop means, an impact operated electrical generator connected to said primer, a bridge connector normally short circuiting the output of the generator, and means carried by the rotor to sever the bridge connector shortly before the rotor moves to the position in which it is arrested by said stop means.

2,893,322
PERCUSSION FUSE
René Leroy, Le Locle, Switzerland, assignor to Dixi S.A., Le Locle, Switzerland
Application April 23, 1957, Serial No. 654,596
Claims priority, application Germany September 5, 1956
3 Claims. (Cl. 102—76)

1. A percussion fuse for ammunition, chiefly for mine thrower missiles, comprising a body provided with two coaxial cylindrical chambers communicating through a

coaxial bore, a carrier adapted to revolve in the rear chamber around an axis parallel with and at distance from the axis of the chamber and provided with an axial bore adapted to register with the bore in the fuse body for a predetermined angular position of the carrier, a striker and a detonator longitudinally aligned therewith and carried by said carrier in register with the bore in the fuse body for another angular position of the carrier, means urging the carrier into its second last-mentioned position, two coaxial pistons fitted slidingly one inside the other, the outer piston being slidingly fitted in the front chamber of the fuse body, means locking the outer piston in its rearmost position with reference to the fuse body, a piston rod rigid with the outer piston passing through the inner piston with a clearance therebetween and extending for the rearmost position of the outer piston through the bore in the fuse body and through the bore in the carrier to hold the latter in the first mentionad angular position, the outer piston including a central projection on its inner side engaging the outer surface of the inner piston to form a small chamber between the two pistons, the air pressure in said chamber being subjected to a reduction at the starting of the missile under the action of the acceleration of the latter urging the inner piston rearwardly, a washer slidingly fitted over the piston rod, a compression spring urging said washer into engagement with the inner surface of the inner piston to normally close the clearance between the latter and the piston rod, the rearward movement of the washer upon acceleration of the missile being higher than that of the inner piston which is braked by the said reduction in pressure and uncovering said clearance, means whereby the outer piston, when released, is projected forwardly after a short delay through inertia to release the carrier with reference to the piston rod, and resilient means for registering said striker and detonator with the bore in the fuse body and with the piston rod and thereby to make said piston rod hit the striker upon impact of the missile on the target.



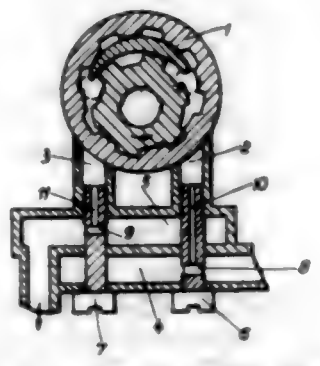
2,893,323

ROTARY PUMPS A DEVICE FOR REVERSING THE ROTATION OF THE PUMP WITHOUT REVERSING ITS DIRECTION OF SUCTION

Arne Fromm Enemark, Sonderborg, Denmark, assignor to Danfoss Ved Ingenior Mads Clausen Elsmark, Nordborg, Denmark, a Danish firm

Application January 2, 1957, Serial No. 632,186
Claims priority, application Denmark July 19, 1956
4 Claims. (Cl. 103—117)

1. In a rotary pump having a body defining a pump chamber and a rotor rotatable therein, a first conduit communicating with one portion of said chamber and a second conduit communicating with another portion of said chamber, each of said conduits being adapted for selective use as the suction and pressure conduits of the pump, means defining a first auxiliary chamber positioned to communicate with said pump chamber, means defining a second auxiliary chamber positioned to communicate with said pump chamber, first removable plug means received in said first conduit, second removable plug means received in said second conduit, said first plug means being provided with an internal passageway communicating with the conduit in which said first plug



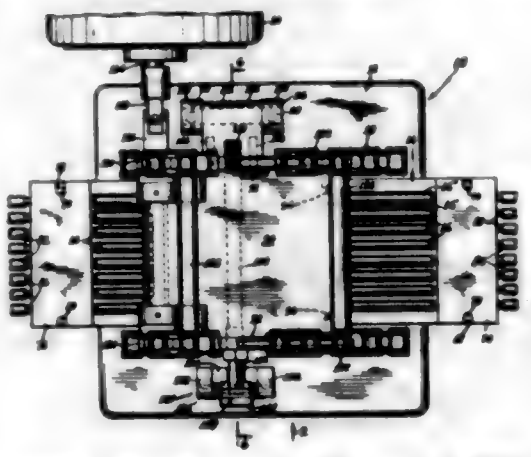
means is received and with said first auxiliary chamber, and said second plug means being formed with an internal passageway communicating with the conduit in which said second plug means is received and with said second auxiliary chamber, said first and said second plug means being interchangeable in said first and said second conduits for selectively connecting each of said conduits with said first auxiliary chamber and said second auxiliary chamber, and said auxiliary chambers being adapted to communicate selectively with the source of fluid to be pumped and the receiving means for the fluid pumped by said pump.

2,893,324

PUMPS

Jack Isreeli, Tuckahoe, and Andres Ferrari, Jr., Scarsdale, N.Y., assignors, by mesne assignments, to Technicon Instruments Corporation, Chauncey, N.Y., a corporation of New York

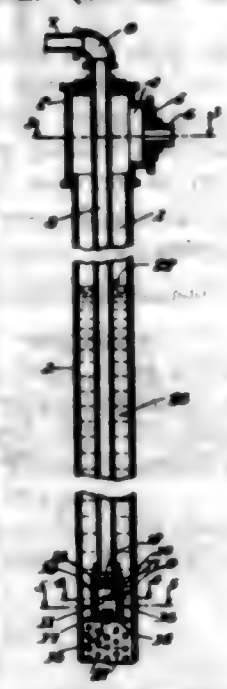
Application December 13, 1956, Serial No. 628,030
8 Claims. (Cl. 103—149)



1. In a pump having a plurality of flexible tubes, means disposed in said pump in engaging relation with said tubes for compressing the latter progressively along their lengths for moving fluids therethrough, a backing member on which said tubes are disposed, a support underlying said backing member, means mounting said backing member for universal motion on said support to equalize the pressure applied by said compressing means against tubes of different outer diameter, and means to stabilize said backing member relative to said support against movement longitudinally and laterally of said support, said backing member having a resilient mounting on said support, said stabilizing means comprising a first member pivotally connected to said support and to said backing member for pivotal movement

of said backing member about one axis and a second member carried by said first member and forming a bearing for said backing member for pivotal movement of said backing member about an axis at right angles to said one axis to permit rocking of said backing member on said resilient mounting about two angles at right angles to each other and to prevent planar movement of said backing member in the directions of the length and width thereof.

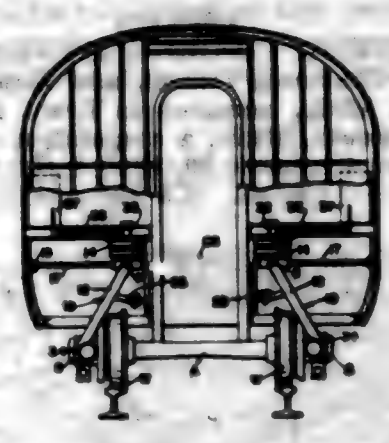
2,893,325
FLUID-PRESSURE PUMP
Viola V. Roberts, Harbor City, Calif.
Application October 1, 1956, Serial No. 613,212
1 Claim. (Cl. 103—234)



A fluid pump comprising a well casing, a fluid outlet pipe leading from the well fluid in said casing, means having fluid connection with the interior of said well casing for applying fluid under pressure downward to the level of well fluid in said casing to be pumped from said casing, a valve mounted on the lower end of said fluid outlet pipe comprising a vertical tubular valve casing having a plurality of upper and lower peripherally spaced rectangularly shaped apertures attached to the lower portion of said outlet pipe, said valve casing having interior integral shoulders adjacent the top and bottom thereof, an inner vertical tubular piston having a plurality of upper and lower rectangularly shaped apertures corresponding to said apertures in said casing and adapted to mate therewith slidably mounted in said valve casing, a spring in the upper part of said valve casing above said piston with the ends of said spring respectively bearing against said top integral shoulder in said valve casing, and against the top of said piston, said apertures in said inner piston and valve casing being normally out of alignment, said inner piston moving upwardly and aligning the corresponding upper and lower apertures in said inner piston and valve casing to allow fluid to pass into said outlet pipe through said aligned apertures when the pressure of said fluid is great enough to overcome the tension of said spring.

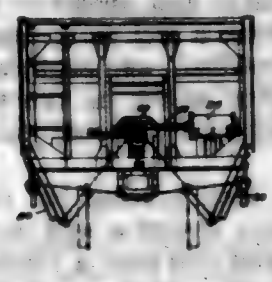
2,893,326
SUSPENSION FOR RAILWAY CARS AND THE LIKE
Kenneth A. Browne, Lakewood, and Sergei G. Guins, Olmsted Falls, Ohio, assignors to The Chesapeake and Ohio Railway Company, Cleveland, Ohio, a corporation of Virginia
Application June 9, 1953, Serial No. 360,454
6 Claims. (Cl. 105—4)

4. Suspension apparatus for a railway car having a car body with a frame, a wheel and axle assembly, and journal boxes on the ends of said axle, comprising, supporting struts mounted on and adapted to pivot relative to said journal boxes and extending upwardly therefrom, the upper ends of said struts being vertically spaced from the frame of said car above each of said journal boxes, spring means connected to and disposed between said upper ends of said struts and the frame of the car, the



height of the point of connection of said spring means to said struts above the axle normally being not greater than the height of the center gravity of the car body above the axle, and torsion springs between said struts and said journal box adapted to urge said struts to position said car body in a vertically upright neutral position.

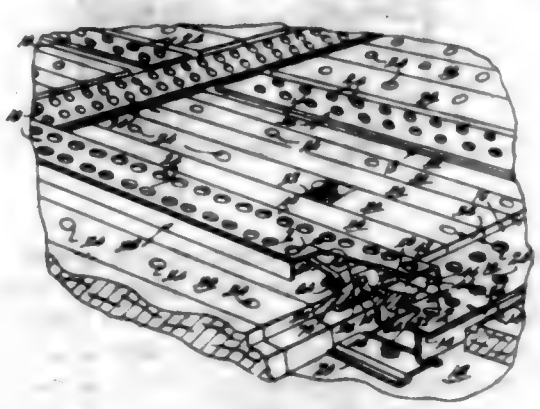
2,893,327
DOOR OPERATING MOTOR MEANS FOR GABLE BOTTOM CARS
Elmer O. Lunde, Wyckoff, N.J., assignor to Magor Car Corporation, New York, N.Y., a corporation of Delaware
Application September 30, 1953, Serial No. 383,200
3 Claims. (Cl. 105—240)



1. Means for operating a pair of laterally opposed outwardly swinging doors having their upper edges pivotally supported on a gable bottom car having a closed compartment at an end thereof; comprising, a frame supported by the car intermediate said doors and being disposed within said compartment, said frame including opposed spaced parallel walls extending transversely of the car, a cylindrical member rotatably supported in said walls, a shaft extending longitudinally of the car intermediate said doors and extending through said cylindrical member and having a non-rotational drive engagement therewith, a linkage between each door and said shaft comprising a pair of lever arms having corresponding ends thereof secured to said shaft with the free ends thereof on opposite sides of the shaft, and a bar having one end thereof pivotally connected to the free end of each lever arm and the opposite ends of the bars being pivotally connected at the respective doors, said cylindrical member being provided with a rigid radial extension, latch means pivotally supported by said frame engaging said extension in the closed position of the doors for retaining said cylindrical member against rotation, a gear journalled on said cylindrical member, lost motion drive means between said cylindrical member and said gear comprising an arcuate recess in said gear and a key projecting from said cylindrical member engaging one end of said recess in the closed position of the doors, a gear operating rack slidably supported on said frame,

means supported by said rack engageable with said latch means for releasing same during movement of said key from said one end of the recess toward the other end theerof whereafter the gear rotates said shaft with a resulting movement of said doors, and means for operating said rack.

2,893,328
FREIGHT LOADING APPARATUS
Harvey W. Chapman, Detroit, and Henry L. Dunlap, Dearborn, Mich., assignors to Evans Products Company, Plymouth, Mich., a corporation of Delaware
Application December 20, 1954, Serial No. 476,337
7 Claims. (Cl. 105—369)

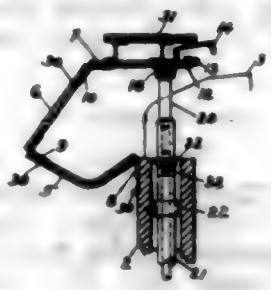


1. A combination of fixed and portable deck members comprising a plurality of spaced fixed structural members secured to each of two substantially parallel surfaces enclosing a freight storage area, said surfaces having openings therein extending along the side of said fixed members, each said fixed structural member having an outwardly-projecting anchor means on each side thereof, and a plurality of portable deck members having locking apertures along the length thereof and engaging said surfaces, each of said portable deck members having adjacent but inwardly of each end a lock lever extending through said openings in said surfaces and engaging the said outwardly-projecting anchor means on the said fixed structural members to attach the portable members to the fixed members.

7. A portable deck bracing bar comprising an elongated body member having a web portion with a pattern of holes therein and two legs, a support element secured between said legs adjacent to and inwardly of one end of said member, said support element having an outer surface extending substantially parallel to said web portion and facing in the same direction that said legs extend, a fixed pin projecting outwardly from said outer surface and adapted to extend through a hole in a supporting surface, a lock lever having one end thereof pivoted on said support element and extending over one side thereof so as to project beyond said outer surface, the projecting end of said lock lever having a hook portion thereon, said lock lever being pivoted on an axis extending transversely between said legs so that the pivotal movement thereof is limited in one direction by the side of the support element over which it extends, and spring biasing means acting between said web portion and said lock lever to normally urge the lock lever toward said support element.

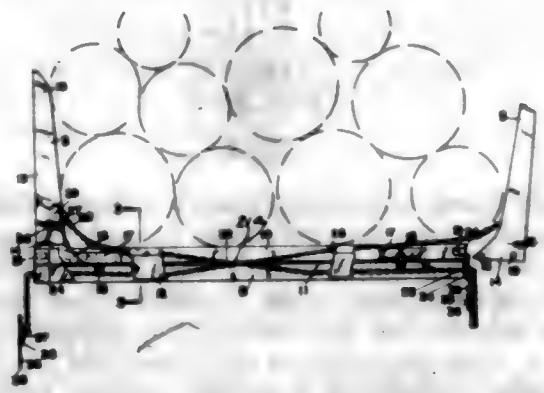
2,893,329
REMOVABLE SCETIONAL COVER FOR FREIGHT CAR
William A. Janeczko, Hammond, Ind.
Application February 18, 1954, Serial No. 411,047
4 Claims. (Cl. 105—377)

1. In combination: a box car having a bottom, side walls, end walls and an open top, a longitudinally extending first roof section having one longitudinal edge hinged to the upper edge of one of the side walls, a second longitudinally extending section having one longitudinal edge hinged to the other edge of the first section, a third longitudinally extending section having one longitudinal edge hinged to the other edge of the second section and provided with a straight guiding track, a vertical shaft rotatably mounted on said one side wall and provided with an angularly disposed arm adjacent its upper extremity,



said arm having an outer end slidably connected to the track, and means for rotating the shaft in one direction to cause the arm end to move with respect to the track and impart simultaneous relative movements to the sections to cover a part of the open top of the car or in a reverse direction to move the sections laterally to uncover a part of the open top.

2,893,330
STAKES FOR LOG BUNKS
Eugene C. Johnson, Albany, Oreg.
Application July 25, 1956, Serial No. 600,866
2 Claims. (Cl. 105—382)

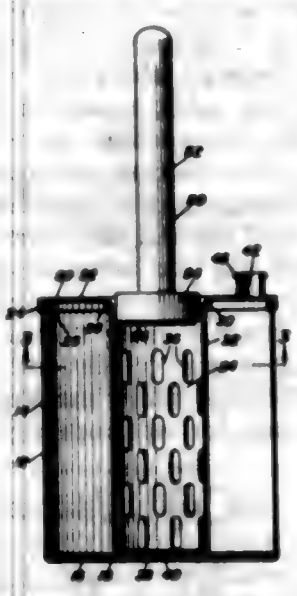


1. A log bunk comprising an elongated generally horizontal log support having opposed ends and a horizontal upper surface, a stake supported on said upper surface adjacent each end of said log support and extending upwardly therefrom, an inverted wedge hold down clamp secured to the upper surface of said log support adjacent each end thereof with the wedge portion of said clamp extending toward the adjacent end of said log support, a wedge toe formed on the lower end of each of said stakes releasably engaging under said inverted wedge hold down clamp, means on said log support for guiding each of said stakes for movement in a horizontal sliding path, and a chain connected to said stake adjacent the lower end thereof with the opposite end of said chain releasably connected to the end of said log support opposite said last named stake restraining said last named stake against movement away from said clamp.

2,893,331
UTENSIL
Alfred A. Medlock, Biloxi, Miss.
Application January 22, 1957, Serial No. 635,190
3 Claims. (Cl. 107—30)

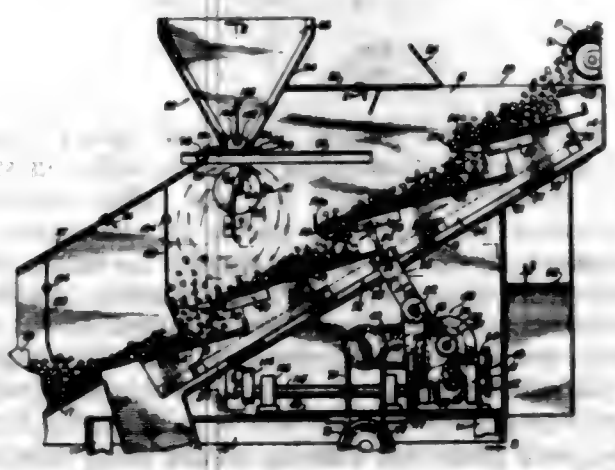
1. A utensil comprising a liquid container, an inner vessel having a chamber for a food product in said container, said vessel having a side wall provided with a plurality of openings establishing registry between the interior of the container and vessel, a plunger which includes a piston mounted for reciprocation in said vessel

chamber and adapted to express the food product through said openings in response to reciprocation thereof, said



piston having a working surface at the bottom thereof, and vanes on said piston surface to further admix the materials in said chamber with liquid in said container.

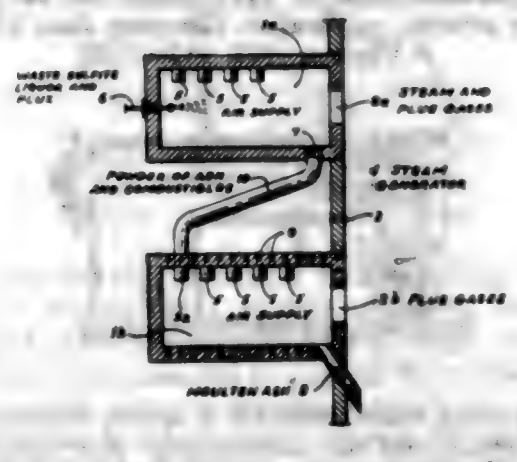
2,893,332
SEASONING APPLICATOR
Robert A. Roser and Everett W. Hodin, Hopkins, Minn., assignors to Dell Foods Specialties Co., Beloit, Wis., a corporation of Wisconsin
Application August 30, 1956, Serial No. 607,145
15 Claims. (Cl. 107—54)



1. The method of coating light weight pieces of food products with powdered seasoning comprising passing the food pieces along a support through a seasoning chamber, creating a zone of high air turbulence in the chamber above the support to agitate and move the pieces of food products relative to each other and along the support as they pass through the chamber and cause the pieces of food products to change position therein, and introducing the powdered seasoning into said zone for dispersion and circulation by the air turbulence.

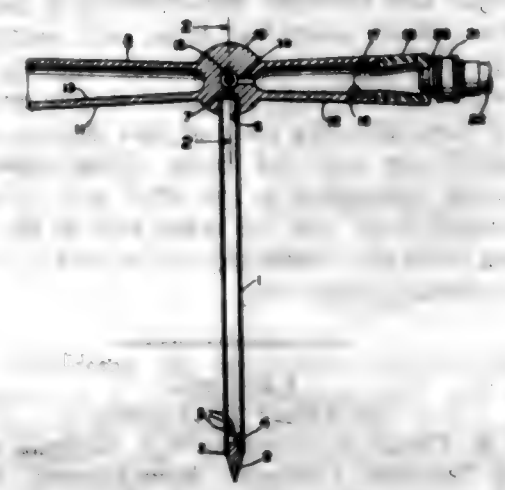
2,893,333
METHOD OF FIRING STEAM GENERATORS WITH EVAPORATED SULPHITE WASTE LIQUOR
Bengt Torsten Brunes, Djursholm, Sweden
Application October 29, 1957, Serial No. 693,193
1 Claim. (Cl. 110—1)

A method of firing steam generators with a firing system comprising two combustion chambers by burning dry substance of sulphite waste liquor at least partly containing calcium as cation and supplied with a flux agent to convert the ashes formed thereby into a molten liquid state, comprising the steps of burning incompletely in a first of said combustion chambers such liquor in a concentrated state thereby evaporating at least substantially the total water content of the liquor to produce a combustion residue in a solid powdered state, which contains ashes and a considerable amount of nonburned dry substance from the liquor, passing from said first combustion chamber the flue gases and the vapor formed therein as heating medium to the steam generator and passing the combustion residue to a second of said combustion chambers, supplying additional combustion air to said second combustion chamber so as to burn at least substantially



completely the nonburned dry substance of said residue, and supplying the flux agent in an amount sufficient to cause the residue of ashes passed from the first combustion chamber and ashes newly formed in the second combustion chamber to assume a molten liquid state in that second combustion chamber at the combustion temperature obtained therein, and passing from the second combustion chamber the flue gases formed therein as heating medium to the steam generator and passing the residue of molten ashes out of the firing system.

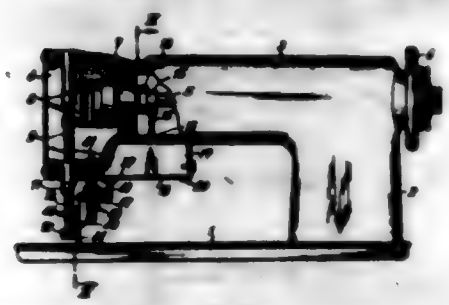
2,893,334
ROOT FEEDER NOZZLE
Clifford H. Snyder, Dormont, Pa.
Application January 11, 1954, Serial No. 403,126
1 Claim. (Cl. 111—7.1)



A root feeder comprising a handle having a stem with a vertical passage and depending from the handle for penetrating the soil to supply feeding solutions thereto, said handle including a central valve section and outwardly projecting grip sections extending in opposite directions forming a balanced handle, one of said grip sections having a horizontal passage connected to a liquid supply, said valve section having a transverse passage extending from one side of said valve section to the other and intersecting said horizontal passage connected through said grip to said liquid supply and also intersecting said vertical passage connected through said stem, and a valve member in said transverse passage operable to interrupt the flow of liquid from said lateral passage to said vertical passage and accessible for operation

from opposite sides of said handle while gripping and rotating said stem to force it to different depths in the soil for feeding the same.

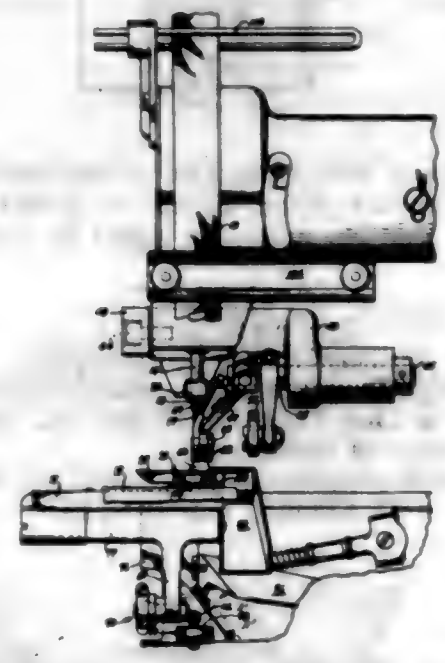
2,893,335
CUTTING DEVICE FOR SEWING MACHINE
Christiaan Josef Marinus Benink and Karl Kleemann, Kaiserslautern, Pfalz, Germany, assignors to G. M. Pfaff A.G., Kaiserslautern, Pfalz, Germany
Application June 25, 1957, Serial No. 667,929
Claims priority, application Germany June 26, 1956
6 Claims. (Cl. 112—125)



1. A cutting mechanism for a sewing machine having a drive shaft and an overhanging arm comprising a housing adapted to be supported on the arm of the machine, guiding linkage including a first and a second double armed lever pivotally supported in said housing each having one arm extending proximate an arm of the other, a cutter mounted for reciprocating movement at one end of and below said housing and operatively connected to said guiding linkage, cam operated driving means for said mechanism adapted to be linked to the drive shaft of the machine, an operating lever pivotally mounted in and extending with one end externally of said housing and having at its other end a rotatable member operatively connected with said proximate arms of said double armed levers, said linkage including a lever member pivotally supported at one end in said housing in axial alignment with the pivot axis of said first double armed lever, a shaft extending between said lever member and the other arm of said first double armed lever and movable therewith, said shaft presenting a first radially extending lever arm operatively connected to said cutter and a second radially extending lever arm, a pair of links of equal length pivotally connected at corresponding ends of said driving means, the other end of one said link being of the same length as and pivotally connected to the other arm of said second double armed lever and the other end of the other said link being pivotally connected to the end of said second radially extending lever arm.

2,893,336
SEWING MACHINE
Michael A. Chimnici, Teaneck, N.J., assignor to Peerless Sewing Machine Company Incorporated, New York, N.Y., a corporation of New York
Application June 29, 1956, Serial No. 594,724
4 Claims. (Cl. 112—132)

1. In a machine for ruffling a relatively narrow strip of material and sewing the ruffled material to a relatively wide work piece of sheet material, the combination of a work support, a needle adapted to reciprocate through an aperture in said work support, means including a feed dog for feeding said work piece across said support and under said needle, a pressure foot comprising a heel portion adapted to engage the upper surface of the work leaving the needle, a toe portion adapted to engage the upper surface of the work approaching the needle, and an outrigger fixed to said toe portion and extending therefrom forwardly and upwardly over the work piece approaching the needle, said foot having an aperture between the toe and heel portions to permit free passage of the needle, said toe portion and said outrigger defining a ruffling slot extending downwardly and rearwardly between them and adapted to receive said strip of materiel being ruffled, a leaf spring stripper blade fixed at one edge to said outrigger along said slot and self-biased to move its opposite edge across said slot toward engagement with the toe portion, pivot means mounting said pressure foot for rocking movement about an axis transverse to the direction of movement of the work and located between said toe and heel portions, said pressure foot being rockable on said pivot means to allow clearance for seams in the work piece, and means for feeding said strip of material being ruffled through said slot and between said stripper blade and said toe portion, said last-named feeding means including a resilient ruffling blade and means for reciprocating said ruffling blade

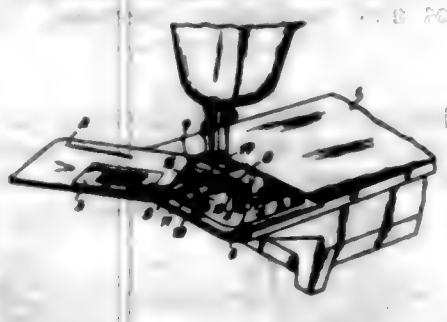


through said slot, said ruffling blade, leaf spring blade, and said toe portion cooperating to form ruffles in said strip as it passes through said slot, the ruffled material being thereafter fed under the needle by movement of the work piece, so that the needle stitches the ruffles and fastens the work piece and the ruffled material together, said reciprocating blade being sufficiently resilient to allow pivotal movement of the pressure foot without disturbing the ruffling operation, and means defining a vertically extending guide slot for said strip of material being ruffled, said guide slot defining means being fixed on the end of the outrigger farthest from the toe portion, said strip feeding means including means to feed said strip upwardly through said guide slot and thence over the outrigger and downwardly through the ruffling slot, so that the strip lies smoothly against the top of the outrigger in all pivotal positions of the pressure foot.

2,893,337
PIVOTABLE FEED DOG FOR DOUBLE CHAIN STITCH SEWING MACHINES
Walter Irmscher, Kaiserslautern, Pfalz, Germany, assignor to G. M. Pfaff A.-G., Kaiserslautern, Pfalz, Germany
Application July 15, 1957, Serial No. 671,969
Claims priority, application Germany July 16, 1956
3 Claims. (Cl. 112—199)

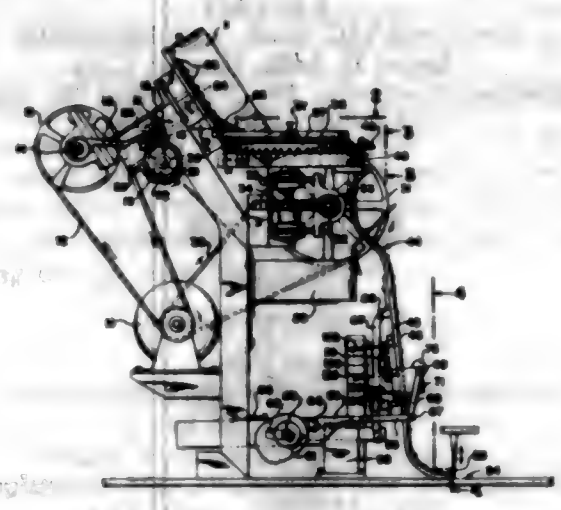
1. In a sewing machine of the double chain stitch type having a material feeding mechanism including a feed dog, and a looper supported on a shaft disposed below and movable relative to the material feed dog, said mechanism including a feed dog supporting bar, said feed dog pivotally mounted on said bar and extending generally at right angles to said looper, a vertically extending pivot member rigidly secured to said supporting bar and supporting said feed dog for pivotal move-

ment on said supporting bar, said feed dog being horizontally movable about said pivot member out of its



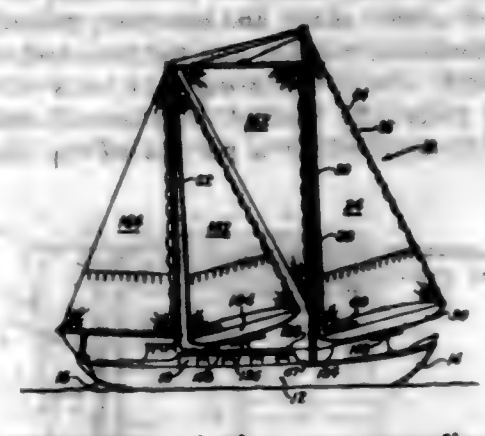
operative position to a position exposing said looper for threading operations.

2,893,338
HOOK FEEDING APPARATUS
Jack Fiedler, Bronx, and Garson Reiner, Irvington-on-the-Hudson, N.Y.
Application May 22, 1956, Serial No. 586,583
4 Claims. (Cl. 112—219)



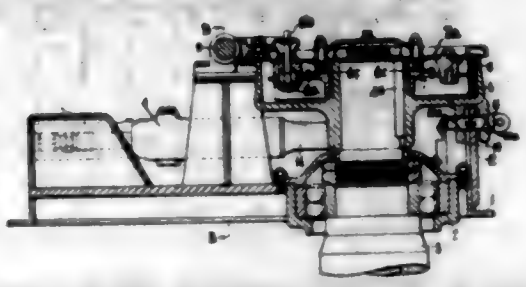
1. A hook feeding machine for delivering hooks to a working surface comprising a rotatable hopper for the storage of hooks in bulk, hook orienting means, a horizontally disposed turntable, a drive for said turntable, means for conveying hooks upon escape from said hopper to said turntable, deflector means above said turntable whereby upon rotation of said turntable, hooks upon the surface thereof will be brought into contact with said deflector means, and upon further rotation of said turntable, led from the surface of said turntable to said hook orienting means, chute means adjacent said hook orienting means for conducting hooks to said working surface, and transport means for delivering said hooks from said orienting means to said chute means, said transport means comprising a plurality of spaced lugs mounted on the peripheral surface of said turntable for rotation therewith, said lugs being positioned just above said orienting means, whereby upon rotation of said turntable, said lugs will sweep hooks engaged upon said orienting means to said chute, said orienting means positioning hooks so that they will fall freely into said chute means for transfer to sewing position on said working surface, guard means for the removal from the head of said chute of disoriented hooks carried thereto by said transport means, said guard means comprising a follower wheel situated above said chute and having a resilient circumferential surface, said wheel being spring loaded and bearing against the side of said turntable for rotation with said turntable, whereby disoriented hooks swept from said orienting means to chute and having a resilient circumferential surface, said the side of said turntable, until they are carried past said chute means.

2,893,339
RIGGING SYSTEM FOR SAILING CRAFT
Steven J. Ram, Chicago, Ill.
Application April 2, 1958, Serial No. 725,827
7 Claims. (Cl. 114—39)



1. In a sailing craft, a hull, a mast extending up from said hull, a sail mounted on said mast, the lower portion of said sail being supported by a boom, said boom being operatively connected to a pulley for rotation therewith, said pulley being so positioned relative to said hull that said boom is substantially inboard of said hull in all positions of rotation, and a cable passing around said pulley and around a second pulley, said second pulley being operatively connected to a control wheel for rotation therewith, said boom being provided with a boomkin adjacent one end thereof, said boomkin being pivotally connected to said boom for pivoted movement in both the vertical and horizontal direction, the clew of the sail being connected to said boomkin.

2,893,340
ROLL DAMPING APPARATUS FOR WATER-BORNE CRAFT
Peter Du Cane, Northampton, England, assignor to Vosper Limited, Portsmouth, England
Application December 26, 1956, Serial No. 630,550
Claims priority, application Great Britain December 30, 1955
2 Claims. (Cl. 114—126)

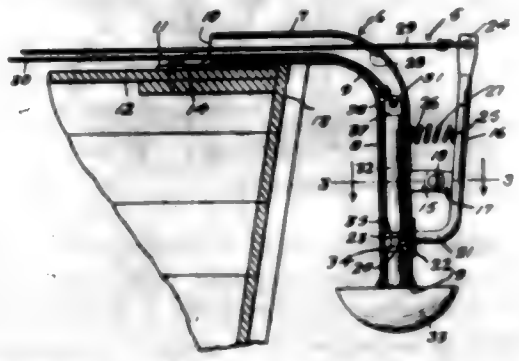


1. In a stabilising fin installation the combination which consists of a fin shaft, supporting and bearing means for the shaft, means mounted on the supporting means for oscillating the shaft, gear means mounted on the supporting means, brake securing means mounted for rotation around the shaft by the gear means and brake-co-operating means rotating with the shaft for engagement with the brake securing means for securing the shaft thereto and permitting its rotation by the gear means.

2,893,341
BOAT ANCHOR CONTROL
William G. Anderson, Kennedy, Miss.
Application June 9, 1958, Serial No. 740,744
6 Claims. (Cl. 114—218)

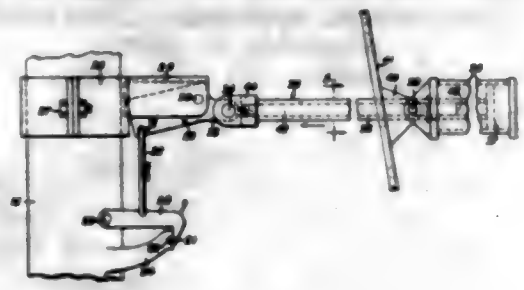
1. A boat anchor control comprising a rigid tubular member having first and second substantially straight ends and an arcuate intermediate portion connecting said straight ends, bracket means connected to the first straight end and adapted to be secured to a boat for positioning

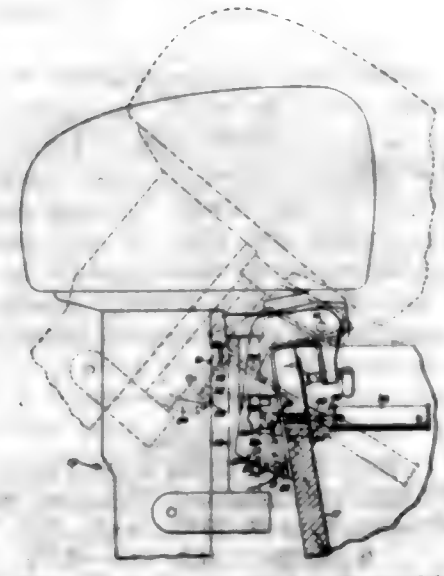
said intermediate portion and the other second straight end in an outboard position relative to the boat and with said second straight end extending downwardly from the intermediate portion, a boat anchor having a shank extending upwardly into said second end, an anchor rope connected to said shank and extending therefrom through said intermediate portion and the first end, a spring projected latch, means mounting said latch on said second end and externally thereof, said second end having an opening through which a portion of the latch is spring



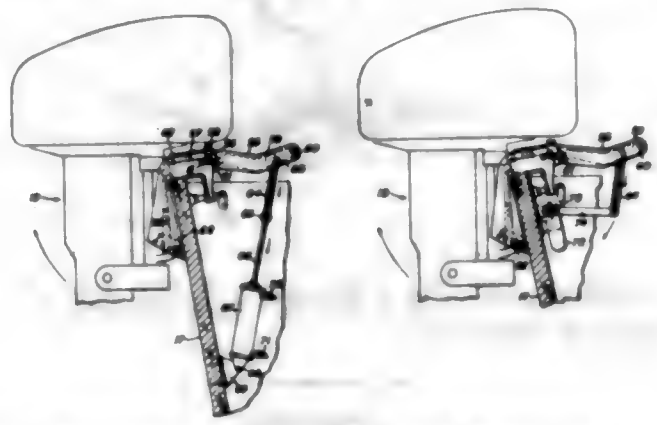
projected into said second end, said anchor shank having a restricted portion disposed to receive said latch portion for latching the anchor to the tubular member in a raised position of the anchor, said intermediate tube portion having an opening, and a flexible element extending through said first end and through said last mentioned opening and having one end connected to a part of said latch for moving the latch to a position for releasing the anchor when a pull is exerted on the opposite end of said flexible element.

2,893,342
OUTBOARD MOTOR TILTING UNIT
James V. Langford, Jensen Beach, Fla.
Application May 6, 1957, Serial No. 657,266
9 Claims. (Cl. 115—41)



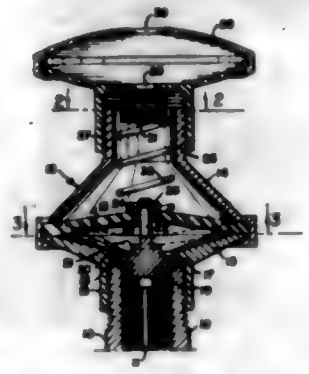


1. In an outboard motor mounting assembly including a mounting bracket for attachment to the transom of a boat, means for pivotally supporting an outboard motor on said bracket for tilting movement toward and away from said transom, and a latch device between said motor and bracket for normally locking said motor in operative position; a latch release and tilting unit comprising a prime mover, means securing the latter to the transom of said boat and mechanism interposed between said



prime mover and motor, operable by the action of said prime mover for tilting said motor on its pivot, including means operable by said prime mover upon the initiation of said action to release said latch device.

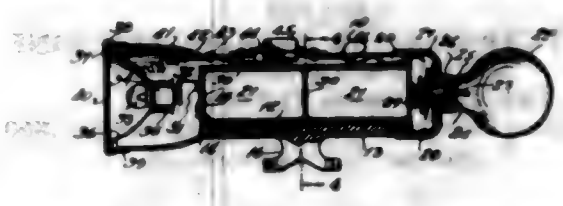
2,893,343
PNEUMATIC TIRE ACCESSORIES
Charles R. Judd, Denver, Colo.
Application November 29, 1956, Serial No. 625,025
2 Claims. (Cl. 116—34)



1. A pneumatic tire accessory automatically operable to signal reduction of adjustably-determined tire inflation pressures, comprising a hollow housing formed with coaxial, oppositely-directed open ends whereof one is externally threaded and the other is internally threaded for connection with the free end of a conventional tire inflation valve stem whereby to mount said housing on and as a flow passage continuing extension of the latter, said internally-threaded housing end being formed with an annular, interior shoulder at the inner end of its threaded portion, a perforated disc marginally engaging said shoulder transversely of the internally-threaded housing end, a boss centrally of said disc offset therefrom axially and outwardly of the internally-threaded housing end positioned for depressing engagement with and to hold open the conventional tire inflation valve of a stem with which the housing is connected, whereby to apply tire inflation pressure interiorly of the mounted housing, a post centrally of said disc fixedly projecting therefrom interiorly of the housing in opposition to said boss, a pair of complementary, annular valve seat elements spacedly circumscribing said post in spaced opposition axially thereof, a flexible, centrally-apertured diaphragm loosely embracing said post between said valve seat elements fixed marginally to and transversely of said housing for alternative sealing coaction with said valve seat elements as an incident of its flexure, a whistle generative of an audible signal in response to air flow therethrough threadedly mounted upon and for adjustment axially along the externally-threaded housing end, and an expansive coil spring within said housing and externally-threaded end thereof in end-bearing engagement between said whistle and the zone of

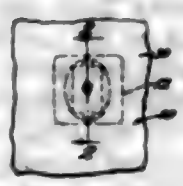
said diaphragm embracing said post, whereby to resiliently and adjustably urge the diaphragm to sealing coaction with the valve seat element more nearly adjacent said perforated disc.

2,893,344
COMBINATION HORN AND FLASHLIGHT
Milton M. Meyers, Fort Worth, Tex.
Application October 19, 1956, Serial No. 617,097
1 Claim. (Cl. 116—112)



A combined visual and audible signal device for attachment to a cane, for the use of blind persons, comprising a cylindrical casing, a clamp for attachment of the casing to a cane in transverse relation thereto, a battery-actuated lamp, and a lens and a reflector therefor, in one end of the casing, a battery chamber formed concentrically of the casing intermediate its ends, one or more batteries in the battery chamber for illuminating the lamp, an annular sound passage defined in the casing about the battery chamber, side openings in the end of the casing adjacent the lamp communicating with the sound passage, a reed tube aligned axially with the casing and positioned in the end thereof opposite the lamp, in communication with the sound passage, and a compressible bulb attached to the adjacent end of the casing and acting on the reed tube.

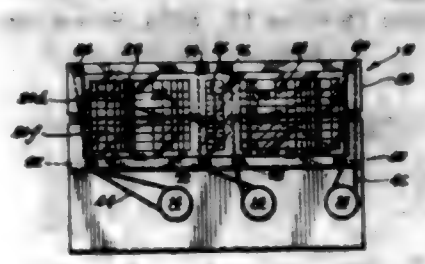
2,893,345
INDICATING MEANS FOR USE WITH PLASTERING
Harry E. Kaufmann, Chicago, Ill.
Application May 19, 1958, Serial No. 736,388
14 Claims. (Cl. 116—114)



1. A position indicating device for use with a service receptacle that is positioned within plastered walls; said indicating device comprising, in combination, indicator support means positioned adjacent said service receptacle and presenting an outer face over which wet plaster is adapted to be spread when the wall is plastered, and an indicator carried on said indicator support means and having its outermost portion positioned substantially in the plane of the outer face of said indicator support means and operating to indicate the position of the indicating device on the outer surface of the plaster after the plaster has been spread thereover.

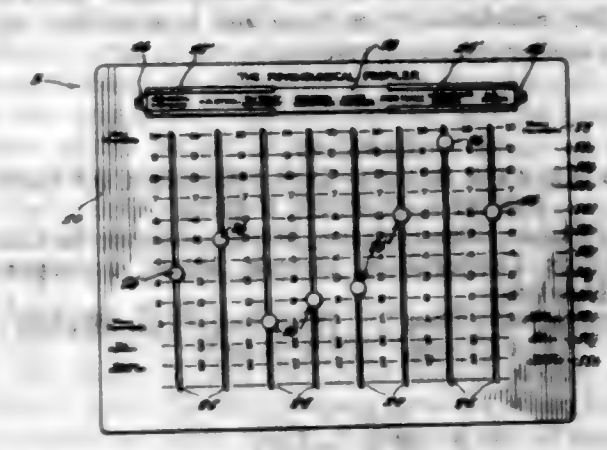
2,893,346
ROLL OFF CONTROL
Sam S. Romano, Northlake, and Arthur Rak, Chicago, Ill., assignors to Webcor, Inc., Chicago, Ill., a corporation of Illinois
Application March 28, 1957, Serial No. 649,243
8 Claims. (Cl. 116—124.1)

1. In a system for use with audio amplifiers and the like having sound, bass and treble level controls linked to indicating means to provide a visual indication of the sound level and the bass and treble sound-strengths in relation to the tonal frequencies thereof, two screens having bass and treble frequency and sound-strength scales respectively calibrated along axes of the screens normal to each other, a flexible wand for each of said paired scales and being oriented along the frequency axes thereof, an anchor bracket for each of said wands for rigidly holding one end of each wand to fixedly relate such ends to coextensive sound-strength positions on the respective scales, a pair of carrier brackets respectively movable along the sound-level axes of said scales at locations adjacent the low frequency end of the



bass scale and the high frequency end of the treble scale, said carrier brackets being respectively secured to the other and corresponding ends of said wands so as to afford relative movement between the brackets and wands along the longitudinal axes of the latter, means for moving each carrier bracket in a constrained path along the sound-level axis, a sound strength screen between said two screens having a sound strength scale of the sound level and means for adjusting said sound level control including an indicator movable between said rigidly held ends of the wands.

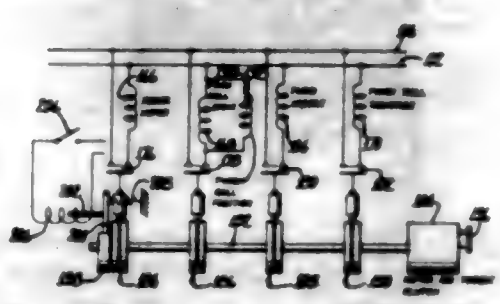
2,893,347
SCORE BOARD
Albert D. Freiberg, Greenwich, Conn.
Application June 3, 1957, Serial No. 663,222
1 Claim. (Cl. 116—135)



A score board of the character described including a score board panel, a reference card having printed thereon at least three indications of commodities, branches of industry and the like, a bracket for removably mounting said card to said panel so that said plurality of captions will be arranged in a horizontal series at the head of the panel, a vertical series of membered horizontal sub-divisions marked across said panel, panel wall means defining at least three substantially vertical elongated slots on the panel, each of said slots individually assigned to a caption and extending downwardly therefrom so as to intersect the horizontal reference sub-divisions, indicator means individually shiftable with respect to the elongated slots with one indicator movable with each caption, said indicator means including in each case an adjustable indicator, shiftable along one of the slots, said indicator means frictionally engaging opposite surfaces of said panel to be located in any numbered spaced portion in the vertical series at will, and each indicator including means for retaining said indicator in its attained position along said slots, said last-named means including a rivet extending through said slots, a bushing

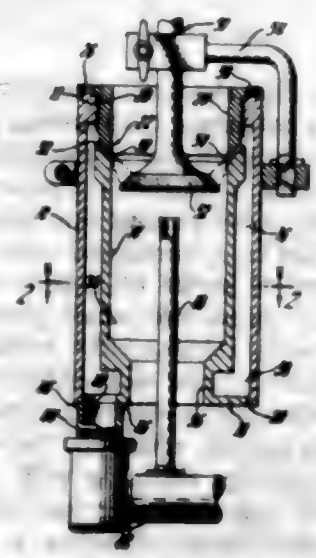
of resilient material positioned adjacent a face of said score board, a washer adjacent the opposite face, and a removable cap fitting over said bushing.

2,893,348
REMOVAL OF EXCESS SPELTER FROM THE INTERIOR OF FRESHLY GALVANIZED PIPE
William S. Pearson, Baltimore, Md., assignor to Clifton Conduit Corporation, Baltimore, Md., a corporation of Maryland
Application October 10, 1956, Serial No. 615,049
8 Claims. (Cl. 118—11)



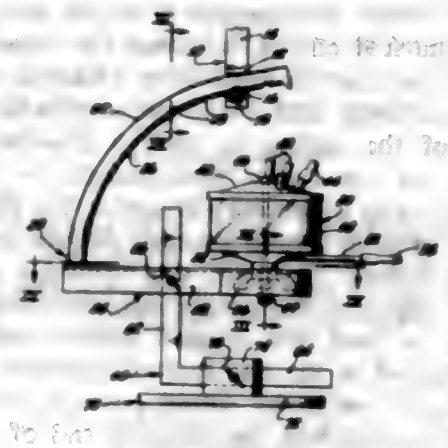
6. A mechanism for removing excess spelter from the inside lengths of pipe comprising a fluid discharge nozzle positioned at a spelter removing station, means for controlling the flow of pressurized fluid from said nozzle, a supply of freshly galvanized pipes located at a pipe pick-up station, an intermediate pipe support positioned at an intermediate station located between the pipe pick-up station and the spelter removing station, a pair of parallel horizontally extending transfer bars, means to oscillate said bars in an arcuate path, and pipe supporting elements on said bars spaced equal to the distance between said stations, certain pipe supporting elements carrying the individual pipes between the pipe pick-up station and the intermediate station and other elements carrying the individual pipes from the intermediate station to the spelter removing station.

2,893,349
APPARATUS FOR REMOVING EXCESS COATING FROM A POPPET VALVE
Dean K. Hanink, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 27, 1953, Serial No. 394,583
4 Claims. (Cl. 118—63)



1. A device for removing excess molten coating metal from surfaces of a coated poppet valve, said device comprising a housing having an inner wall defining a generally central chamber in which a poppet valve is adapted to be positioned, an annular orifice extending through said inner wall adapted to project an annular jet of fluid against the seating face of a poppet valve positioned within said chamber in a direction generally perpendicular thereto, wall means surrounding said wall defining an enclosed annular fluid passage outwardly of said orifice a tube extending into said chamber for directing a second jet of fluid against the head end face of said valve generally perpendicular thereto and centrally thereof, means for supplying said fluid under pressure to said orifice and said tube, and means for supporting said valve within said chamber.

2,893,350
COUNTERWEIGHTED MILKING MACHINE RECEPTACLE SUPPORT
Lawrence Bouma, Ontario, Calif.
Application February 27, 1958, Serial No. 717,860
7 Claims. (Cl. 119—14.12)

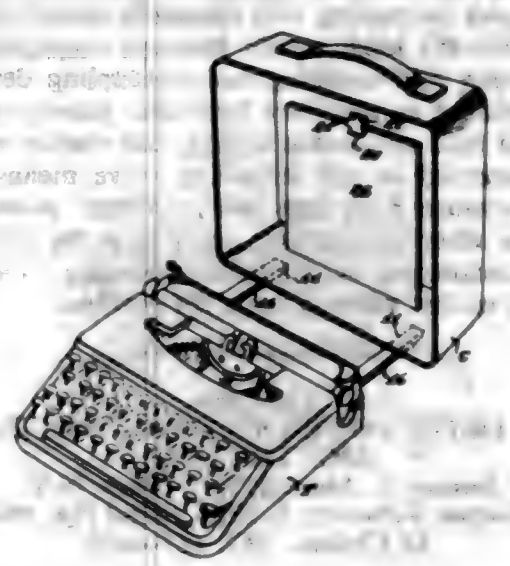


1. A support for a receptacle for receiving milk through flexible conduits from teat cups, comprising: a belt for surrounding the body of a cow somewhat forward of the udder and a horizontal crossbar supported by ends of the belt and extending transversely beneath the body of the cow; a support frame including a generally horizontally disposed beam and an arcuate rod extending upwardly and rearwardly from the forward end of the beam, the inner surface of the rod having formed therein a plurality of transverse bar-receiving recesses whereby the rod is pivotally carried by the crossbar; a milk-receiving receptacle carried by the other end of the beam; and an adjustable counterweight assembly including a bracket having angularly related arms and a support base adjustably positionable along one of the arms, the other arm being longitudinally adjustably connected to the beam.

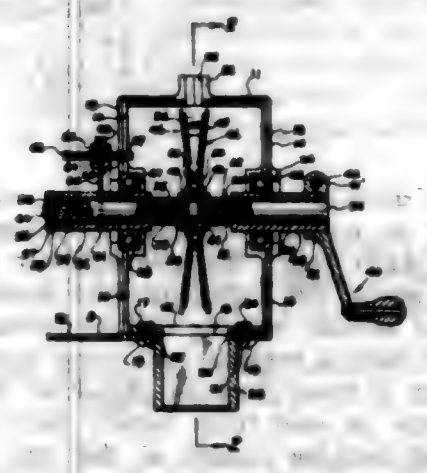
2,893,351
COPY HOLDER
Helen M. Wager, Verona, Ontario, Canada
Application December 11, 1956, Serial No. 627,654
1 Claim. (Cl. 120—28)

In combination with a typewriter and a combined cover and carrying case therefor, a copy holder comprising a pair of tubular members secured in spaced parallel relation to the underside of said typewriter and extending from the front portion thereof to the rear portion thereof, a shaft slidably positioned in each of said tubular members, each said shaft being substantially coextensive in length with one of said tubular members whereby it may be substantially completely housed therein, a handle member on the end of each shaft adjacent the rear portion of the typewriter for imparting reciprocal movement to said shaft in said tubular member, resilient detent means secured to each of said tubular members, each said shaft having recesses therein for reception of said detent means to retain said shaft in fully housed position and in withdrawn position with respect to a respective one of said tubular members, a second pair of spaced parallel tubular

members fixed to said combined cover and carrying case each in axially aligned relation to one of said first tubular members, resilient detent means secured to each of said second pair of tubular members for releasable engagement with one of said recesses in one of said shafts when in withdrawn position thereby to support said combined cover and carrying case in upright position rearwardly of said typewriter, and copy holding means mounted on said combined cover and carrying case.

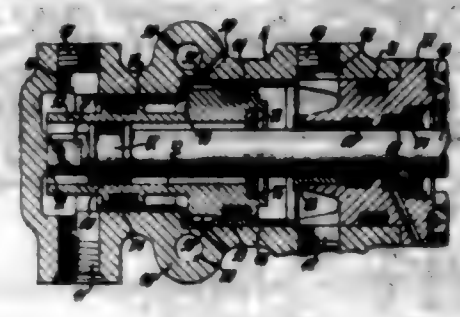


2,893,352
PENCIL SHARPENER
Lars O. Hedblom, Detroit, Mich., assignor of one-half to Larry Atlyeh, Detroit, Mich.
Application July 28, 1958, Serial No. 751,226
8 Claims. (Cl. 120—96)



1. A pencil sharpener comprising a housing including upright apertured end walls, a pair of aligned tubes each respectively journaled through an end wall and projecting into said housing with their inner ends in adjustable spaced relation, means loosely interconnecting the inner ends of said tubes for rotation in unison, a handle secured to one tube, a pair of spaced discs centrally secured to the inner ends of said tubes respectively, central portions of said discs being parallel and terminating in diverging outer portions, a circular series of inclined radial blades struck angularly inward from the central portion of each disc, a second circular series of elongated inclined radial blades struck angularly inward from the diverging portion of each disc, an apertured pencil receiving boss projecting from said housing with its longitudinal axis midway of said discs, means on said housing retainingly engaging one of said tubes against longitudinal movement, and an elongated shaft extending through said tubes and adjustably secured thereto respectively.

2,893,353
THREE POSITION ACTUATOR CYLINDER
Clair A. Short, Jr., Indianapolis, and William S. Castle, and David E. Schamble, Speedway, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application August 13, 1954, Serial No. 449,726
4 Claims. (Cl. 121—38)

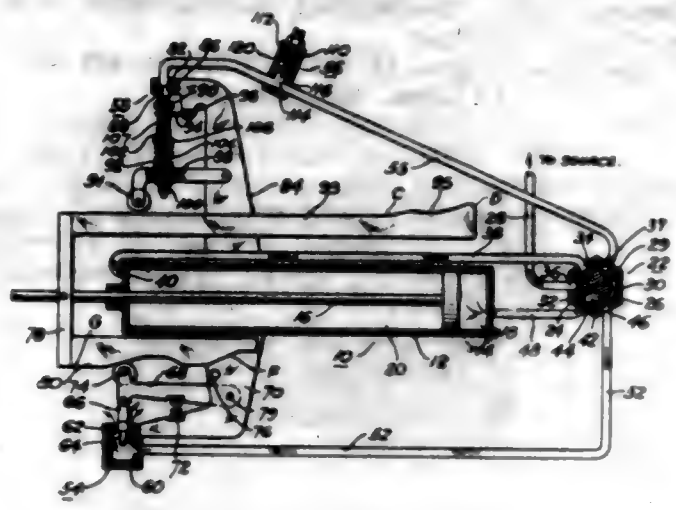


4. A fluid pressure actuator comprising, in combination, a body defining a cylinder having fluid ports at the ends thereof, the cylinder being a stepped cylinder having a first portion of larger area at the first end thereof and a second portion of smaller area at the second end thereof, an outer double piston having two piston heads, one reciprocable in each portion of the cylinder, the cylinder defining a vent port between the two piston heads, abutment means between the outer piston and cylinder defining limits of movement of the outer piston at each end of its range of movement, the outer piston having an internal bore therein axially of the piston, an inner piston reciprocable in the bore and having opposed faces exposed to pressure from the said ports through the said bore, abutment means between the outer and inner pistons engageable upon movement of the inner piston toward the first end of the cylinder, and means for connecting the inner piston to a device to be actuated, the difference of effective area of the piston heads of the outer piston being greater than the difference of effective area of the faces of the inner piston opposed thereto, and the stroke of the inner piston being longer than the stroke of the outer piston, the abutment means between the inner piston and cylinder defining a first position of the inner piston when fluid under pressure is supplied only to the first end of the cylinder, the abutment means between the two pistons defining a second, intermediate, position of the inner piston when fluid under pressure is supplied to both ends of the cylinder, and the inner piston having a further travel beyond the intermediate position when fluid under pressure is supplied only to the second end of the cylinder, thus moving both pistons toward the first end of the cylinder.

2,893,354
FLUID PRESSURE MOTOR
Leonard E. Austin and John H. Ettinger, South Bend, Ind., assignors to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application September 27, 1955, Serial No. 536,909
2 Claims. (Cl. 121—38)

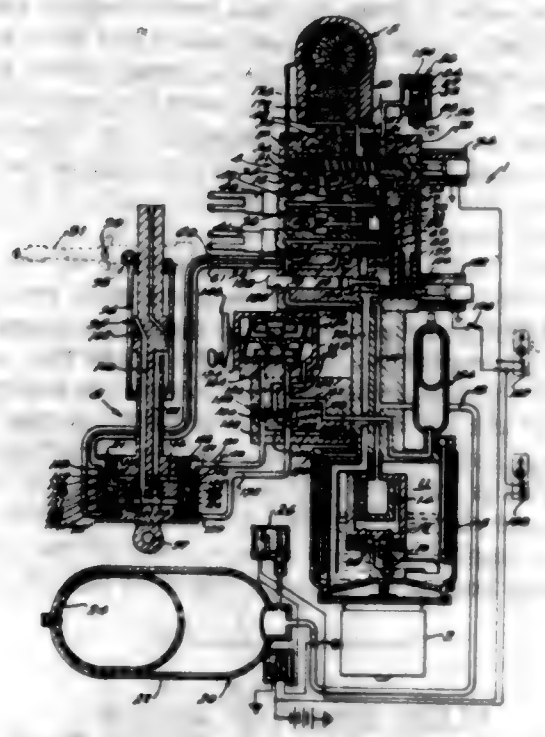
1. A motor mechanism for controlling the movement of a load in a plurality of directions said mechanism including a double acting pressure differential operated motor comprising a cylinder and a power element therein, means connected with the power element and adapted to be connected to the load the movement of which is to be controlled, and means for controlling the operation of the motor including a fourway valve for venting the motor and controlling the influx of power fluid into the motor to impose a force upon its power element thereby determining the direction of movement of the load to be moved, and further including other means, including a pressure sensitive valve member controlled in part by

a cam member connected with the power element, for controlling the rate of efflux of power fluid from either



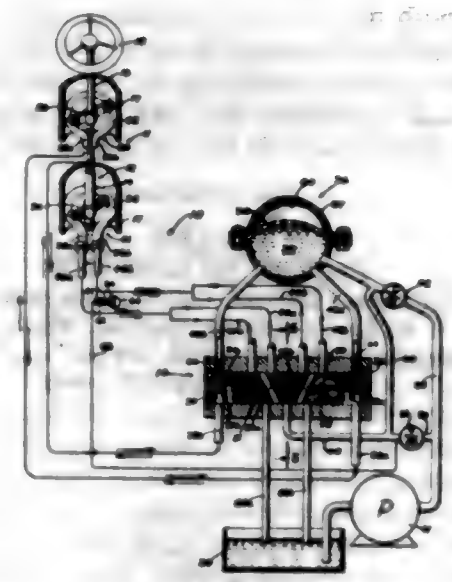
end of the motor and thereby control the mode of movement of the load as it is moved from one place to another.

2,893,355
HYDRAULIC CONTROL SYSTEM
Russell E. Bauer, Grosse Pointe Woods, Mich., assignor to Cadillac Gage Company, Roseville, Mich., a corporation of Michigan
Application January 12, 1953, Serial No. 330,871
3 Claims. (Cl. 121—39)



1. A hydraulic control system for interconnection between a pressure fluid source and a bi-directional fluid actuatable motor in apparatus of the type wherein a load is arranged to be driven alternatively by the motor and by a manually operatable device, said system comprising a four-way valve having first and second ports for connection to a pressure fluid source and to a drain, respectively, and third and fourth ports for connection to the motor, a master valve having a closable passage connected in series flow between said first port and the source and two other passages connected in series flow between said third and fourth ports, respectively, and the motor, said master valve being selectively movable between an On position and an Off position and being effective when in its On position to open all of said passages as separate fluid flow paths, said master valve being arranged when in its Off position to close said closable passage thereby cutting off pressure fluid from said control valve, and to open communication between said two other passages, a manually operatable device for driving the load, a releasable coupling device for coupling and decoupling said manually operatable device to and from the load, a fluid pressure actuatable device for actuating said coupling and decoupling device, and means defining an auxiliary hydraulic passage for energizing said fluid actuatable device, said master valve also being connected in and including valve means for admitting pressure fluid into said auxiliary passage from the source when said master valve is in its On position and for connecting said auxiliary passage to the drain when said master valve is in its Off position.

2,893,356
SERVO DRIVE POWER STEERING MECHANISM AND THE LIKE
Jerome L. Murray, New York, N.Y.
Application February 1, 1956, Serial No. 562,809
10 Claims. (Cl. 121—41)

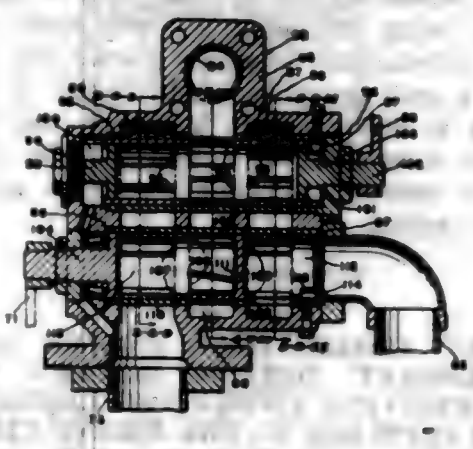


1. In a servo drive mechanism for rotating a drive shaft part in response to rotated manipulation of an actuating shaft part; the combination comprising a reversible power unit including rigid fixed casing means defining an arcuate backing surface concentric with the drive shaft part, a resilient tube lying against said backing surface, a rotor fixed on the drive shaft part, and roller means on said rotor locally flattening said tube against said backing surface so that the rotor is rotatably driven in a selected direction in response to the pumping of fluid through said tube in the corresponding direction; means for supplying fluid under pressure to said resilient tube including valve means operative to determine the direction of flow of the fluid under pressure through said tube; an actuating unit including rigid fixed casing means defining an arcuate backing surface concentric with the actuating shaft part, a resilient tube lying against said backing surface of the actuating unit, and roller means locally flattening said tube of the actuating unit and movable along the related tube in response to rotated manipulation of the actuating shaft part to pump fluid through the related tube in the direction of said manipulation; and control means connected between said tube of the actuating unit and said valve means and operating the latter in response to the pumping of fluid through said tube of the actuating unit to cause the flow of fluid under pressure through said tube of the power unit, and consequently rotation of said rotor and of the drive shaft part, in the same direction as the manipulation of the actuating shaft part.

2,893,357
CONTROLLING DEVICE FOR HOISTS

Bruce P. Clarke, Lennoxville, Quebec, Canada, assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey

Application March 19, 1954, Serial No. 417,365
6 Claims. (Cl. 121—46.4)

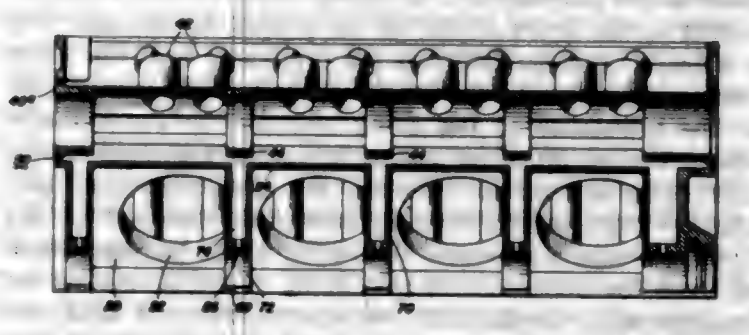


1. A pressure fluid controlling device for hoists comprising a valve casing having a pair of valve chambers and supply, inlet and discharge passages opening into said chambers, a valve in one of said chambers operable into one limiting position to communicate the supply passage with the inlet passage and cut off communication between the inlet passage and the discharge passage and movable into another limiting position to establish communication of the discharge passage with the inlet passage and cut off flow through the supply passage and movable into an intermediate position to cut off all communication between said passages, a valve in the other of said chambers normally positioned to permit such control by the first said valve and operable into another position to cut off flow through the supply passage and to establish communication between the inlet and discharge passages independently of the position of the first said valve, the first said valve being operable to communicate the inlet and discharge passages independently of the position of the second said valve.

2,893,358
DIE CAST V-TYPE ENGINE BLOCK

Alfred F. Bener, Toledo, Ohio, assignor to National Lead Company, New York, N.Y., a corporation of New Jersey

Application January 16, 1958, Serial No. 709,299
7 Claims. (Cl. 121—194)

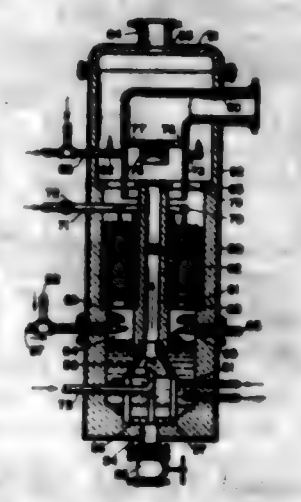


1. A V-type, die cast engine block for an internal combustion engine comprising a pair of obliquely positioned cylinder galleries including inner and outer side walls and end walls provided with means for attaching cylinder heads thereto, a crankcase with side and end walls having intermediate walls disposed transversely between said side walls and an oil gallery, formed by the casting operation, located between the inner walls of said cylinder galleries and extending the length of the engine block, each of said intermediate wall being of generally double-wall construction having solid webs interspersed between the two walls and being provided with a crankshaft bearing support of box-frame construction enclosing an oil pocket extending from said oil gallery to the crankshaft bearing journal, said engine block being characterized by the absence of any undercut portions.

2,893,359
APPARATUS FOR VAPORIZING LIQUIDS

Robert L. Magovern, El Cerrito, and Harold C. Ries, Berkeley, Calif., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

Application January 28, 1957, Serial No. 636,637
2 Claims. (Cl. 122—28)



1. Apparatus for vaporizing corrosive liquid comprising: a housing defining an upright flow passage; means for admitting corrosive liquid to be vaporized into said housing; a porous bed of corrosion-resistant bodies within said housing; said housing including walls forming a combustion chamber in direct communication with a lower part of said bed; a burner within said combustion chamber; said housing further including walls forming a liquid-collecting basin beneath the said bed; a lift tube rising from said basin through the bed; means for supplying a lift gas to the bottom of said lift tube for upward flow therethrough, the bottom of said lift tube being situated in relation to said basin so that liquid in the latter is entrained by the lift gas; means at the top of the lift tube for separating the entrained liquid from the lift gas and supplying the separated liquid to the upper part of the bed for trickle flow through at least a part thereof; means for discharging the lift gas substantially freed from liquid; and separate outlet means above said bed for discharging vapors of said liquid together with combustion gases rising from the bed, the said housing, basin and lift tube being formed of corrosion-resistant material.

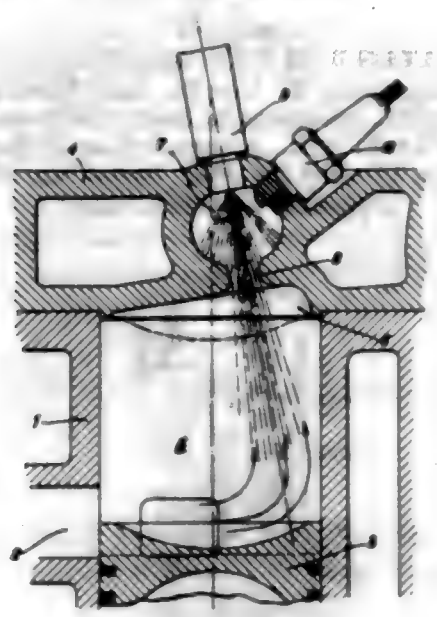
2,893,360
INTERNAL COMBUSTION ENGINE

Klaus Müller, Bad Neundorf, Germany

Application October 23, 1957, Serial No. 691,892
4 Claims. (Cl. 123—32)

1. A two-stroke cycle internal combustion engine with gasoline injection and scavenging in a direction opposite to that of said injection comprising a main combustion chamber and an auxiliary combustion chamber, a spark plug and an injection nozzle fitted in said auxiliary combustion chamber, means providing a flow ascending scavenging air in said main combustion chamber, said auxiliary combustion chamber communicating with said main combustion chamber through a channel of a smaller diameter than that of said auxiliary combustion chamber, said injection nozzle injecting the fuel into said main combustion chamber, and said auxiliary combustion chamber being dimensioned so that its volume corresponds to the volume of the mixture required for the idling engine, the longitudinal axis of said injection nozzle being inclined towards the longitudinal axis of said

main combustion chamber so that the axis of the jet of fuel injected is inclined towards said ascending flow of scavenging air, and a portion of the amount of fuel



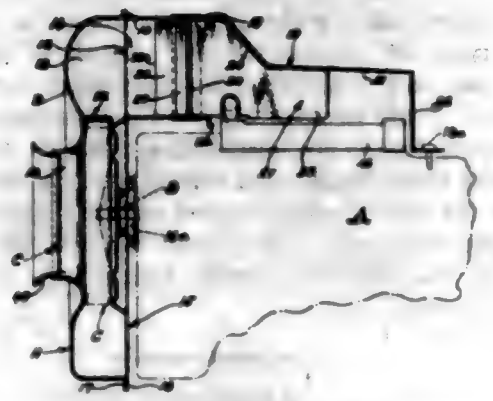
injected being retained by said auxiliary combustion chamber adjacent said spark plug to form an ignitable mixture in said auxiliary combustion chamber under all load conditions.

2,893,361

ENGINE SHROUD

Dana K. Badertscher, Grosse Pointe Park, Mich., assignor to American Motors Corporation, Kenosha, Wis., a corporation of Maryland

Application April 15, 1957, Serial No. 652,846
5 Claims. (Cl. 123—41.6)



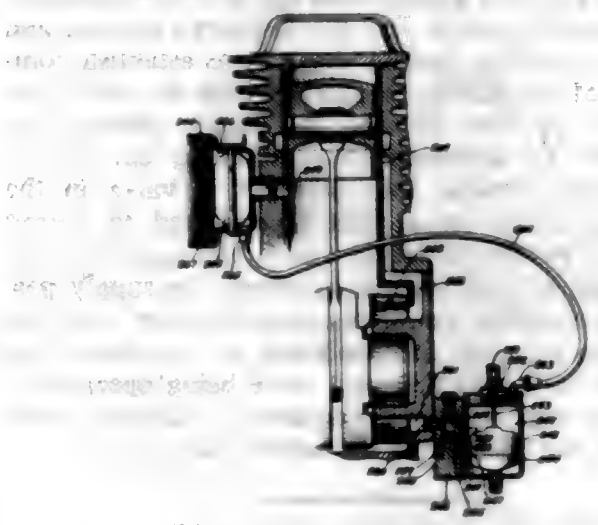
1. An air distribution device for an internal combustion engine comprising a blower housing having a forward wall and a rearward wall spaced from each other to provide a blower chamber, said blower housing being secured to and mounted ahead of the engine and having an air inlet opening in its forward wall, said housing including an air discharge duct secure with the rearward wall of the housing and projecting laterally outwardly therefrom and being superimposed over the engine, said air discharge duct being adapted for changing the direction of air flow as the air leaves the blower housing and travels into such laterally projecting discharge duct; an air distribution shroud secured to and positioned over the engine and rearwardly of the blower housing, said shroud being spaced from the engine and functioning to direct the air entering the shroud from the blower housing down onto the engine, said shroud including a forwardly projecting air inlet duct generally aligned with the air discharge duct of the blower housing and arranged in end to end fashion relative thereto; a connecting sleeve telescopically positioned over the adjacent duct ends to form a continuous air passage between the ducts; a baffle secured within the interior of the housing discharge duct and a second baffle secured within the interior of the air inlet duct of the shroud, said baffles being interconnected with each other and lying in a substantially common plane, such plane extending in a path generally longitudinally of the ducts, and serving to divide the air stream as the air travels through the ducts into the shroud whereby to provide substantially uniform distribution of such air to both sides of the engine.

2,893,362

INTERNAL COMBUSTION ENGINE HAVING CRANKSHAFT DRIVEN ROTARY MEANS FOR REMOVING ENTRAINED LIQUID FROM FLUID SUPPLIED TO THE FIRING CHAMBER

William P. Dalrymple, Rochester, N.Y., assignor to American Brake Shoe Company, Wilmington, Del., a corporation of Delaware

Application August 7, 1953, Serial No. 372,825
28 Claims. (Cl. 123—73)



1. A two cycle internal combustion engine including a crankcase, a crankshaft rotatable in the crankcase, a cylinder which communicates with the crankcase and a piston reciprocable in the cylinder, means for admitting fluid to the crankcase to be compressed therein as an incident to the down stroke of the piston, means affording a transfer passage between the crankcase and the firing chamber in the cylinder for directing the fluid compressed in the crankcase to the firing chamber in the cylinder above the piston, filter means rotatable with said crankshaft and interposed between the crankcase and said transfer passage for filtering entrained lubricant or the like from said compressed fluid prior to the passage thereof from the crankcase to said firing chamber, means for incorporating combustible constituents into said fluid, and means for igniting said combustible constituents of said fluid in said firing chamber.

2,893,363

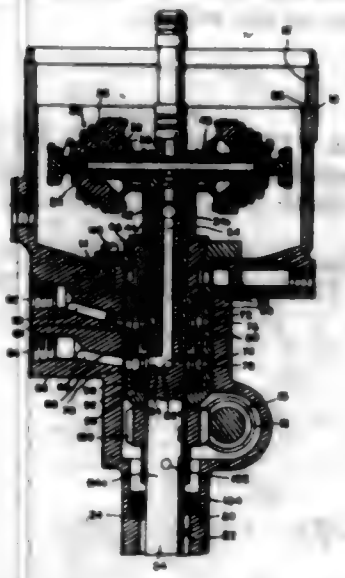
IGNITION DISTRIBUTOR, ENGINE GOVERNOR, TACHOMETER DRIVE UNIT

Eugene C. Bottoni, Birmingham, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan

Application January 28, 1957, Serial No. 636,824
9 Claims. (Cl. 123—97)

1. A distributor and tachometer drive assembly comprising a housing open at the top and terminating at the bottom in a reduced pilot shank, said housing having a

lateral enlargement adjacent its lower end for a driven gear element, a drive shaft having a tachometer drive

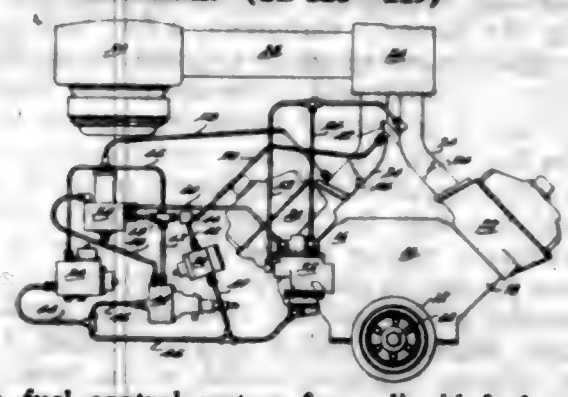


gear fixed thereto insertable as a unit from the open upper end of the housing.

2,893,364
FUEL INJECTION SYSTEM FOR AN INTERNAL COMBUSTION ENGINE

Clifton M. Elliott and Mearl E. Noftz, Birmingham, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Application April 10, 1956, Serial No. 577,627
25 Claims. (Cl. 123—119)



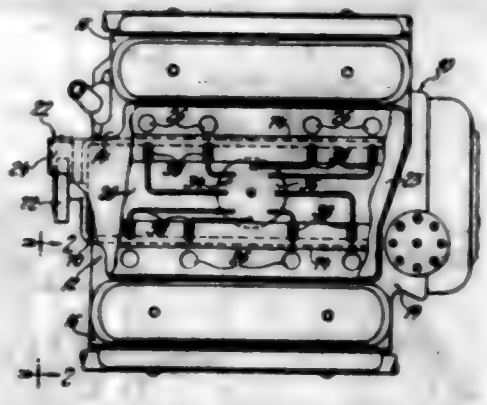
1. In a fuel control system for a liquid fuel engine having a fuel pressure source and a fuel delivery conduit extending from said source to said engine, an engine speed sensitive fuel metering unit including a fuel metering orifice forming a portion of said fuel delivery conduit, a movable fuel metering element registering with said orifice for progressively restricting the latter upon movement thereof, a first flexible diaphragm disposed within said unit and partly defining a first fuel chamber therein, said orifice communicating with said first fuel chamber, said metering element being adapted to be actuated by said first diaphragm, a second sealing diaphragm coupled to said first diaphragm and disposed adjacent thereto, said first and second diaphragms defining a second fuel chamber, said second fuel chamber communicating with said fuel delivery conduit at a downstream location, and a speed governor means having portions within said unit for deflecting said coupled diaphgrams to vary the degree of restriction of said metering orifice.

2,893,365
FUEL INJECTION MEANS

Raymond J. Haefner, Utica, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application May 31, 1956, Serial No. 588,451
3 Claims. (Cl. 123—119)

1. In an engine having a cylinder with an induction passage interconnected therewith by means of an intake valve, an injector assembly adapted to be mounted in a passage extending through a side wall of said induction passage for spraying metered quantities of fuel into said induction passage in the direction of said intake valve, said injector assembly comprising an elongated chamber having an orifice at the lower end thereof opening into said induction passage, said chamber being inclined to the horizontal to form a sump adjacent said orifice

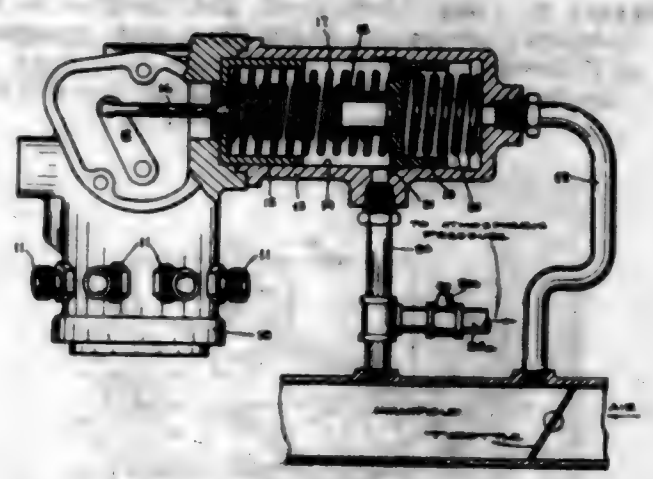


positioned to collect fuel therein, said sump tapering toward said orifice, a nozzle disposed in said chamber and being connected to a source of metered fuel for discharging a stream of said metered fuel therefrom, said nozzle being disposed in spaced relation to said opening for directing said stream of fuel therethrough and toward said intake valve, and a comparatively unrestricted air entrance into said chamber disposed above said sump for supplying air to said chamber.

2,893,366
FUEL INJECTION APPARATUS

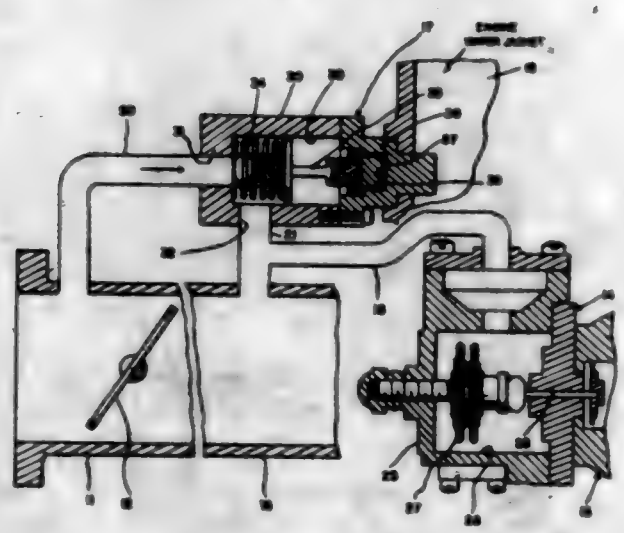
Carl H. Nystrom, West Springfield, Mass., assignor to American Bosch Arma Corporation, a corporation of New York

Application October 31, 1955, Serial No. 543,943
7 Claims. (Cl. 123—140)



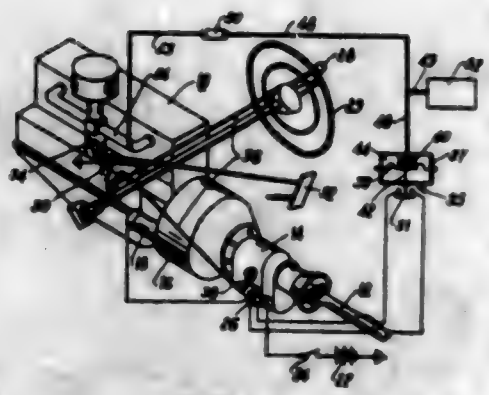
1. In a device for controlling the fuel pump for reducing the quantity of fuel supplied an internal combustion engine during deceleration thereof, said device being adapted to be operatively connected to the pump control and comprising, pressure operated means operatively connected to said control for setting said control to provide correct air/fuel ratio, said pressure operated means being adapted to actuate said control according to manifold pressure modified by an atmospheric bleed, resilient stop means and auxiliary pressure means operatively connected to manifold pressure or vacuum and actuated thereby for adjusting said stop means for allowing said control to move to a position outside its normal operating range during deceleration of the engine to thereby reduce the quantity of fuel supplied to the engine.

2,893,367
CONTROL FOR INTERNAL COMBUSTION ENGINE
Frank C. Druzynski, Detroit, Mich., assignor to Continental Aviation & Engineering Corporation, Detroit, Mich., a corporation of Virginia
Application February 18, 1957, Serial No. 640,650
8 Claims. (Cl. 123—140)



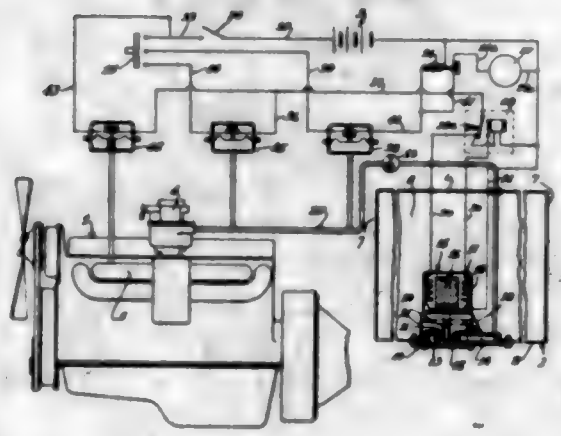
1. In an internal combustion engine having an air induction system, a throttle valve operable therein, and a fuel injection system including a fuel metering control means, a second means modifying the operation of said control means in response to pressures in said air induction system upstream of said throttle valve, and means constructed and arranged to inactivate the aforesaid second means in response to a predetermined increase in engine temperatures produced by and induced during engine operation.

2,893,368
STARTER CONTROL MECHANISM
Richard H. Long, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application December 2, 1954, Serial No. 472,668
7 Claims. (Cl. 123—179)



I. In an automotive vehicle provided with an accelerator, an internal combustion engine and a transmission mechanism which may be established in a neutral setting or in a setting to effect a bodily movement of the vehicle, means for cranking the engine including electrical means comprising a switch which is closed when the transmission is established in its neutral setting; and means, including a pressure differential and spring operated switch, supplementing the aforementioned means and cooperating therewith, and operative, after the engine has stalled, to make possible a recranking of the engine, the transmission, at the time, being established in the setting to facilitate a bodily movement of the vehicle.

2,893,369
FUEL PUMP CONTROL SYSTEM
Achilles C. Sampietro, Ann Arbor, Mich., assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Application April 6, 1955, Serial No. 499,667
12 Claims. (Cl. 123—179)

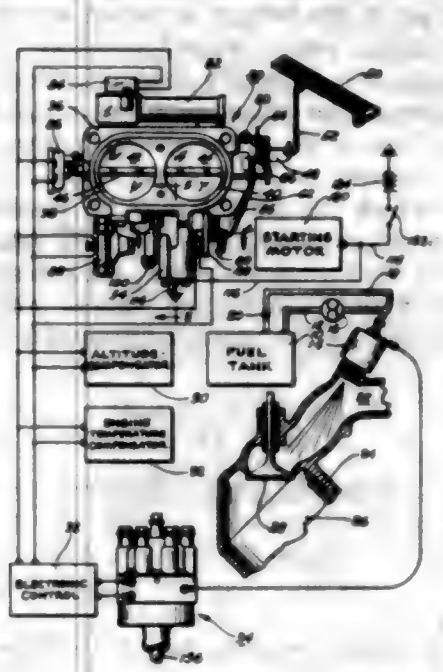


1. A fuel system for an internal combustion engine or the like having a carburetor, a fuel tank, a fuel line connecting the carburetor to said tank, an electric starter, a starter solenoid, and a direct current supply which comprises, a centrifugal pump disposed in the bottom of the fuel tank for pumping fuel through said line to the carburetor, an alternating current motor in the bottom of said fuel tank for driving said pump, a vibrator for converting a portion of the direct current to pulsating current for driving said motor, a normally closed pressure responsive switch in said fuel line, a normally open pressure responsive switch in said fuel line, a normally open vacuum responsive switch in the intake manifold of said engine, and an electrical circuit interconnecting the direct current supply source with the starter solenoid, the electric starter, the ignition switch, the starter switch, the vibrator, the pressure responsive switches, and the vacuum responsive switch, whereby upon closing of the ignition switch and starter switch the pump motor is energized through the normally closed pressure responsive switch and the vibrator until pressure is built up in the fuel line to close the normally open pressure responsive switch to energize the starter solenoid and starter, and whereupon the engine is started and the starter switch is opened, vacuum pressure in the manifold will close the normally open vacuum responsive switch to maintain the pump in operation.

2,893,370
FUEL SUPPLY SYSTEM
Albert H. Winkler, Elmira, N.Y., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application May 6, 1957, Serial No. 657,154
5 Claims. (Cl. 123—179)

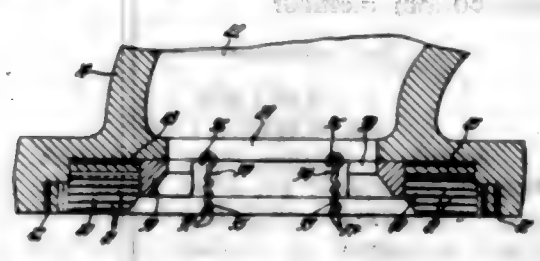
1. A fuel supply system for an engine having a starting circuit comprising a source of fuel under pressure, a conduit connecting said source to said engine, an electrically actuable valve in said conduit for controlling the time duration of fuel flow therethrough, an electrical timing device operatively connected to said valve for controlling the time duration of current flow to said valve, means

for controlling said device, a thermostat responsive to engine temperature operatively connected to said means,



and a solenoid actuable by said starting circuit operatively connected to said thermostat.

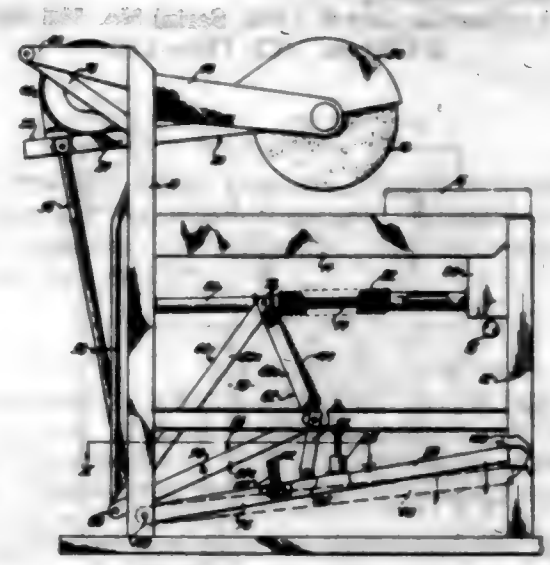
2,893,371
EXPANSION JOINT
Vernon Schafer, Jr., Livonia, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 2, 1957, Serial No. 650,249
17 Claims. (Cl. 123—188)



1. In a member of an internal combustion engine having a surface thereon defining at least a portion of a combustion chamber, said surface being subjected to the cyclic changes of temperatures occurring within said combustion chamber thereby subjecting a layer of said member adjacent said surface to severe cyclic thermal expansive and contractive conditions relative to the remainder of said member, an insert of sheet material non-fusibly cast within said member, said insert intersecting and extending substantially normally from said surface portion through said layer and terminating within said member in spaced relation to said surface, said insert under normal engine operating conditions effecting the formation of grooves adjacent said insert to the depth of said layer by the compressive upsetting of said layer, and said grooves being adapted to accommodate the subsequent expansive and contractive plastic flow of said surface and layer without imposing further compressive expansion and tensive contraction stresses on the portions of said layer adjacent said insert.

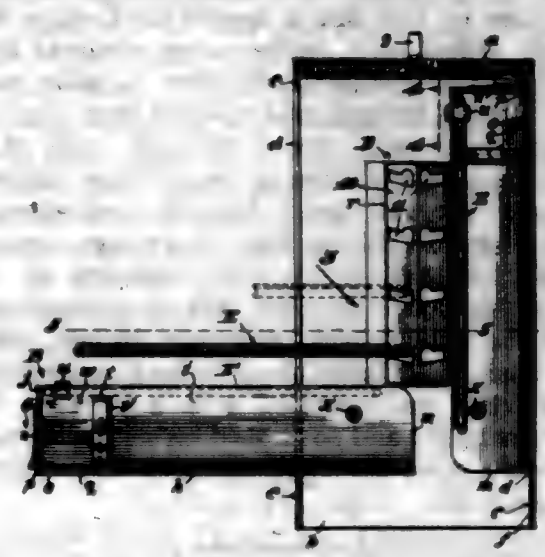
2,893,372
MASONRY SAW
John R. Harclerode, Kansas City, Mo., assignor to Everready Brikmow Company, Chicago, Ill., a corporation of Delaware
Application September 10, 1956, Serial No. 608,780
2 Claims. (Cl. 125—13)

1. In a machine of the kind described, a frame; shaft means carried by the frame for up and down movement with respect thereto; a cutter assembly carried by said shaft means for vertical swinging movement; structure for raising and lowering the cutter assembly including elongated linkage pivotally mounted at one end thereof on the frame for vertical swinging movement; means operably connecting said shaft means and said linkage at the opposite end of the latter; and mechanism for swinging the cutter assembly comprising a pair of superimposed levers, means mounting the levers on said frames for vertical swinging movement toward and away from



each other, an elongated bar, pivot means carried by said linkage intermediate the ends of the latter for swinging movement therewith and supporting the bar for vertical swinging movement relative to said structure, means pivotally connecting the bar with said cutter assembly, means pivotally connecting the bar with the uppermost of said levers, and yieldable means interconnecting the levers for limiting the extent of separation of the levers as the lowermost of said levers is depressed to swing the cutter assembly.

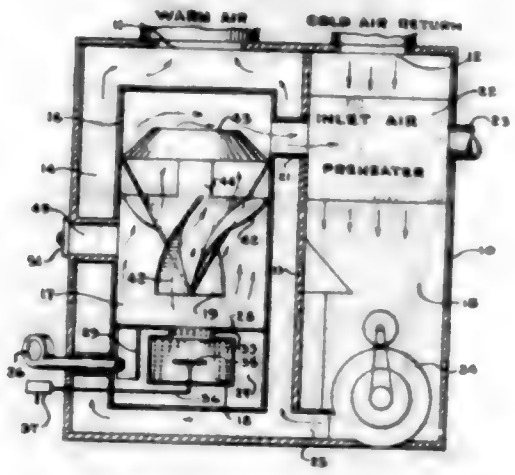
2,893,373
PORTABLE COOK STOVE
George William Rundle, Los Angeles, Calif.
Application July 5, 1955, Serial No. 519,941
1 Claim. (Cl. 126—9)



In a portable cook-stove, a box-like housing embodying a top wall, side walls and end walls, at least one of said side walls having an aperture, a fire-box pivotedly mounted on said housing to swing vertically through said aperture and embodying a bottom wall and side walls; a pair of frame supporting racks mounted on the inner faces of the housing end walls having lower ends disposed in the path of travel of upward movement of the lower ends of the fire-box side walls so as to form abutments limiting downward swinging movement of said fire-box,

and said racks having side walls forming abutments to limit upward swinging movement of the fire-box to an upright position; and releasable latch means for holding said fire-box in its upright position.

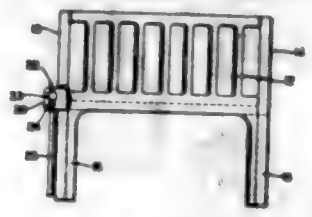
2,893,374
HOT-AIR LIQUID-FUEL FURNACE
Fred M. Wilson, Sr., Chicago, Ill., assignor of twenty-five percent to Paul E. Petrie and twenty-five percent to Bernard Braverman
Application July 9, 1956, Serial No. 596,480
2 Claims. (Cl. 126—110)



1. In a hot-air, liquid-fuel space heater, the combination comprising an elongated cylindrical fire box mounted with its long dimension vertically disposed, inlet means near the bottom of said fire box for introducing combustion air therein with a tangential component of velocity, whereby a swirling motion within said fire box is imparted to said combustion air, a generally cylindrical burner coaxially disposed in said fire box near its lower end, said burner comprising a dished plate mounted within a cylindrical perforated shield, said shield being relieved in a zone directly above said plate and being otherwise substantially closed save for a plurality of air-inlet perforations in its walls, said perforations being proportioned and positioned to permit said swirling combustion air to enter said burner without losing its said swirling motion, a transverse partition in said fire box closing off the space between its side walls and the relieved zone of said shield, means for feeding liquid fuel into said dished plate, baffle means mounted in said fire box above said partition operative to guide combustion products rising through said relieved zone into a swirling circumferential path around the side walls of said fire box in the same direction as the swirling motion of said combustion air, exit means for said combustion products near the top of said fire box, air-passage means outside said fire box, and means for circulating air from the space to be heated through said air-passage means for heating the same by heat exchange through the walls of said fire box, said baffle being formed in the shape of an inverted cone and provided with a plurality of curved fins proportioned and positioned on said baffle to give the combustion gases the same direction of rotation as said combustion air.

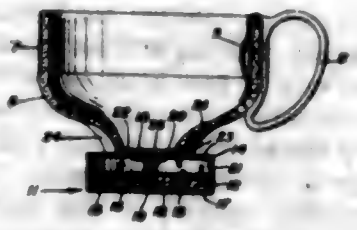
2,893,375
FIREPLACE BASKET CONSTRUCTION
Lehmen G. Emmons, near Alliance, Ohio
Application January 8, 1957, Serial No. 633,146
4 Claims. (Cl. 126—165)

1. A grated fireplace basket including a grated bottom member, leg means having lower extremities projecting downwardly beneath said bottom member providing a space between the front and side edges of the bottom member and said lower extremities, a plate member pivotally connected to the basket at the front edge of the bottom member and being selectively pivotal between a first position substantially closing off the space between the front edge of the bottom member and the leg means lower extremities and a second position extending substantially vertically upwardly from the front edge of the bottom member, the plate member in its first position limiting the flow of air to the grated bottom member beneath said bottom member front edge and a fireplace floor upon which the basket may be positioned and in its second position closing off a limited space above the front edge of the bottom member, the pivotal connection between the plate member and basket including a pair of lugs mounted on the plate member and a pair of lugs



connected to and extending forwardly from the basket member adjacent the front edge of the bottom member, the basket lugs each having a keyhole slot formed therein having a circular portion larger than the cross section of the plate member lugs and a parallel sided portion slightly larger than the plate member lugs cross section, the plate member lugs being received in and freely rotatable in the slot circular portions, the plate member lugs being selectively receivable in the slot parallel sided portions and retained against rotation when the plate member is in either one of its two positions, and the spaces beneath the bottom member side edges remaining substantially open at all times insuring at least a limited flow of air beneath said bottom member side edges to the grated bottom member.

2,893,376
BEVERAGE CUP
Angelo J. Pasqua, New York, N.Y.
Application September 21, 1956, Serial No. 611,117
1 Claim. (Cl. 126—261)

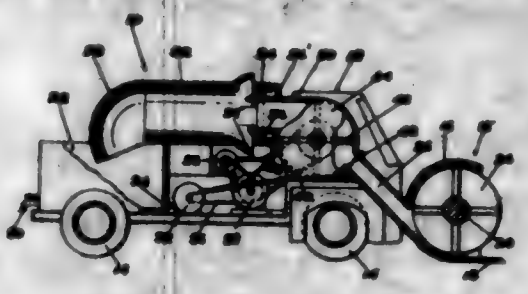


A beverage container comprising a cup of heat conducting material for the reception of a beverage, a heating unit mounted beneath the cup for heating the beverage therein and constituting a base therefor, said heating unit including a substantially cylindrical casing, a horizontal partition in said casing defining an upper combustion chamber and a lower fuel chamber, wicks extending through the partition from the fuel chamber into the combustion chamber, a removable carbon collecting plate slidably mounted in the casing above the wicks, the lower portion of the cup having channels therein extending to the bottom thereof, said casing having air passages therein communicating with the combustion chamber and with said channels.

2,893,377
SNOW DISINTEGRATOR
Ladik L. Janoscak, Gregory, S. Dak.
Application August 31, 1956, Serial No. 607,374
1 Claim. (Cl. 126—343.5)

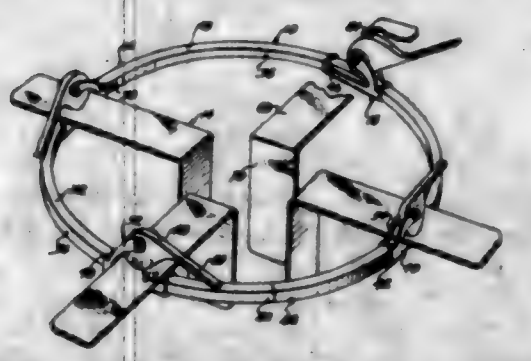
In a snow disintegrator, the combination which comprises an elongated tubular burner chamber having a

bell-shaped entrance end and a downwardly disposed outlet end, an impeller housing mounted on the disintegrator and positioned to discharge into the bell-shaped entrance end of the burner chamber, an impeller rotatably mounted in the impeller housing for discharging snow into the burner chamber, circumferentially spaced radially dis-



posed nozzles positioned around the inside of the bell-shaped end of the burner chamber, means for supplying fuel under pressure to the nozzles, means for rotating the impeller, means for supplying snow to the impeller housing, and a chassis mounted on wheels and upon which the impeller housing and burner chamber are positioned.

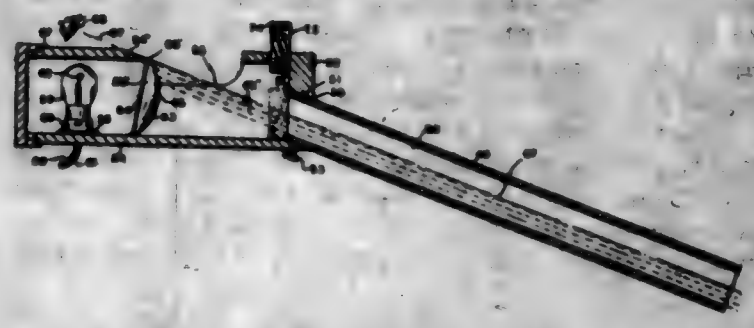
2,893,378
SURGICAL RETRACTOR APPARATUS
Robert Lee Cooper, Warrensburg, Mo.
Application July 26, 1956, Serial No. 600,277
3 Claims. (Cl. 128—20)



1. A device for releasably and adjustably clamping a surgical retractor element to an elongated member of rectangular cross-section, said device comprising an elongated rider assembly having a bottom wall adapted to slidingly engage the lower face of the member when the assembly is on the latter, a pair of side walls adapted to slidingly engage the side faces of the member when the assembly is on the latter, and an inturned ear on each side wall respectively adjacent each end thereof respectively, said ears being disposed in spaced, opposed pairs and adapted to slidingly engage the upper face of the member when the assembly is on the latter, there being an open space between said pairs of ears for exposing a stretch of the member and for receiving a part of the element upon said stretch of the member; and a cam lever mechanism swingably mounted on the assembly and having a cam surface adapted to clampingly engage said part of the element oppositely to the engagement of the latter upon the member when the element is received upon said stretch and the mechanism is swung to an operable position.

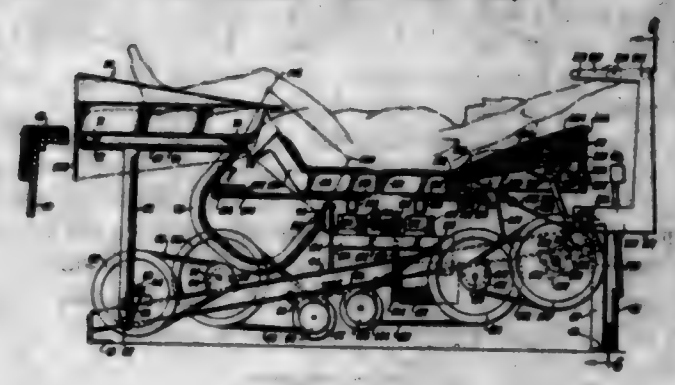
2,893,379
ILLUMINATING DEVICES
Henry A. Springer, Cincinnati, Ohio
Application February 15, 1956, Serial No. 565,571
2 Claims. (Cl. 128—23)

1. In a device of the class described and comprising a casing, an electric lamp in said casing, a plano-convex lens in said casing and through which light rays pass from said lamp, a proctoscope releasably fixed to the front end of said casing and having a tube extending downwardly and forwardly through which said light rays pass, the top of said casing being cut-a-way in close proximity to the top edge of said lens to enable a surgeon



to look over said casing into and through said tube, said tube being in longitudinal alignment with said surgeon's line of vision when he looks over said cut-a-way of said casing and into said tube.

2,893,380
MASSAGE AND EXERCISE MACHINE
Patrea Patrick Walker, Pacific Palisades, and Herman Laub III, Alhambra, Calif., assignors, by direct and mesne assignments, to Cecil Investment Company, a corporation of California
Application June 29, 1956, Serial No. 594,765
24 Claims. (Cl. 128—25)

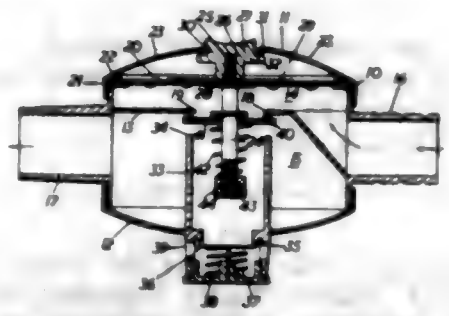


3. An exercise and massage machine comprising frame means, support means carried by said frame means for supporting the patient in a substantially horizontal position, a rotatable shaft supported by said frame means and positioned transverse of said support means, a pair of rotating arms connected to opposite ends of said shaft and extending therefrom, a foot attachment pivotally connected to each said arms for rotation in a plane transverse to said shaft, means for rotating said shaft and the arms for both foot attachments, and separate means secured to each foot attachment and slidably and pivotally connected with a fixed support spaced from the foot attachment so that said separate means can move with said foot attachment and simultaneously move each foot attachment and relative to its supporting arm to rock the foot forwardly and backwardly about the ankle joint.

2,893,381
VALVE MEANS
Geoffrey Donald Black, Tottenham, England, assignor to The British Oxygen Company Limited, a British company
Application March 26, 1958, Serial No. 724,894
7 Claims. (Cl. 128—29)

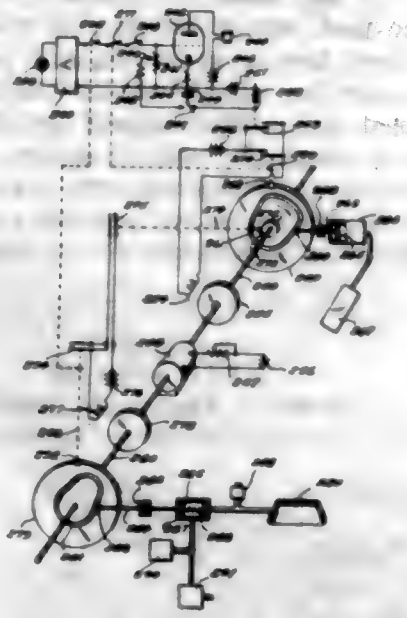
1. For controlling the flow of an inhalant gas to a face mask from means for supplying inhalant gas, alternatively continuously under at a positive pressure and according to the demand of a patient, valve means comprising a casing, a partition mounted within said casing to define with the walls thereof an inlet chamber and an outlet chamber, an inlet port in the wall of said inlet chamber arranged to be connected to said inhalant gas supply

means, an outlet port in the wall of said outlet chamber arranged to be connected to said face mask, a vent in said outlet chamber communicating with the atmosphere through a non-return valve, a valve port in said partition affording communication between said inlet and said outlet chambers, a pressure responsive member mounted within said inlet chamber and exposed on one side to the pressure within said inlet chamber and on the other to atmospheric pressure, a valve member carried by said pressure responsive member and movable between a position closing said valve port and a position closing said vent, and manually-operable means for moving said valve member in a direction to open said valve port and close said vent,



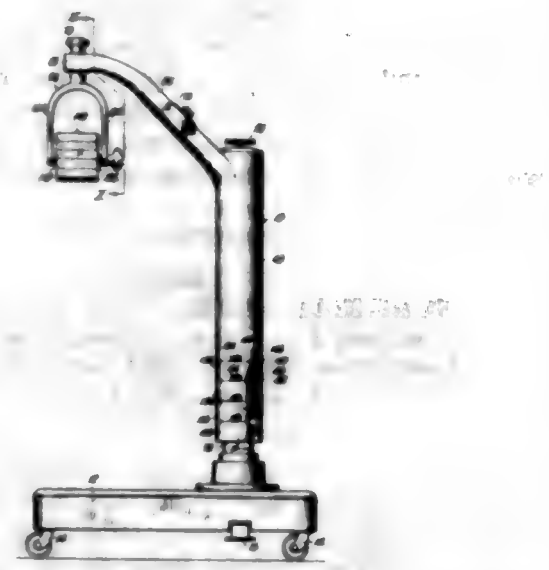
whereby under positive pressure conditions, said valve member is held in the position in which said valve port is closed and said vent is open by the pressure of the inhalant gas in said inlet chamber acting on said pressure-responsive member and is moved to the position in which said valve port is open and said vent is closed by operation of said manually-operable means during each inspiratory phase, and under demand conditions, on inhalation said valve member is moved to open said valve port and close said vent under the influence of a negative pressure acting on said pressure-responsive member and on exhalation said valve member is moved to close said valve port and open said vent under the influence of a positive pressure acting on said pressure-responsive member.

2,893,382
MASSAGE APPARATUS
Adam Demeny, London, England, assignor to Dr. Ing. F. L. Fenyves, Basel, Switzerland
Application August 31, 1953, Serial No. 377,645
Claims priority, application Switzerland September 1, 1952
11 Claims. (Cl. 128—38)



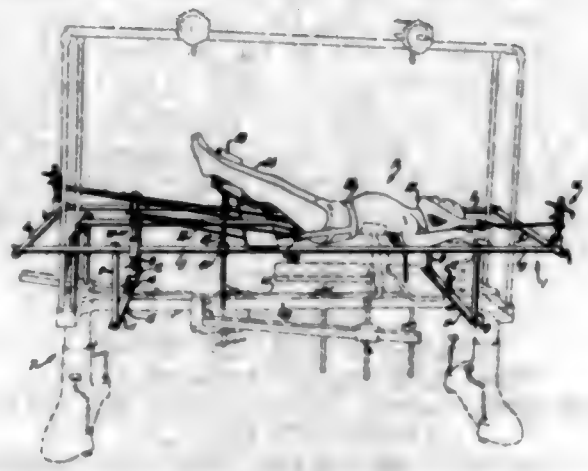
1. A device for aiding the circulation of the blood comprising a plurality of pressure exerting organs adapted to be applied to predetermined parts of the body to be treated, a control device cooperating with and subjecting the said pressure exerting organs to pressure variations in timely succession, the said control device being responsive to a physiological value dependent upon the heart action of the body to be treated, the said control device including means for adjustably retarding successively said pressure variations in said pressure exerting organs, and pick-up means determining said physiological value.

2,893,383
THERAPEUTIC, GRAVITY ACTUATED, SUSTAINED PRESSURE APPLICATOR
Marion A. Mulkin, Kirksville, Mo.
Application March 5, 1956, Serial No. 569,451
7 Claims. (Cl. 128—68)



4. In a therapeutic, gravity actuated, self-sustained, constant pressure applicator, a base; an upright post on the base; a sleeve slidably and rotatably mounted on the post for free rotation and vertical reciprocation relative to the latter; a laterally extending arm on the sleeve; and a patient-contacting, pressure-applying assembly on the arm and depending therefrom, said sleeve, arm and assembly being of predetermined weight, the pressure applied to the patient being developed by the applicator alone solely through the action of gravity.

2,893,384
CASTING ATTACHMENT FOR ORTHOPEDIC TABLES
Gilbert Hyde Chick, Oakland, Calif.
Application April 30, 1956, Serial No. 581,726
1 Claim. (Cl. 128—75)



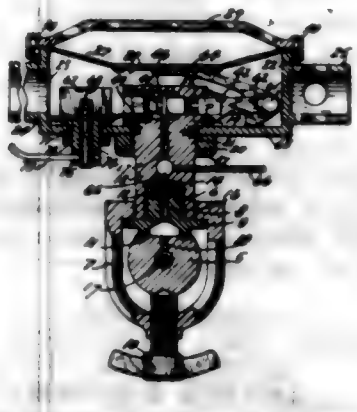
An attachment for orthopedic tables comprising: an open, tubular, generally rectangular, horizontally disposed

frame including opposed sides and opposed ends; a leg secured to and depending from said frame adjacent each corner thereof; a crossbeam secured to and between the lower ends of said legs at each end of said frame; means for quickly and detachably securing each of said crossbeams to an orthopedic table; and winches adjustably clamped on the sides and ends of said frame at any point thereon, normal thereto, and at any inclination relative to the plane of said frame.

2,893,385
INTRAVAGINAL OBTURATING DEVICE
Gerald W. Millar, Exshaw, Alberta, Canada
Application September 19, 1955, Serial No. 535,226
4 Claims. (Cl. 128—131)

1. An article of the class described comprising a closed hollow resilient form adapted to be gripped and held by the walls of the cervix, means associated with said form to maintain the shape thereof, the walls of said form being of a material dissolvable by internal body fluids, said means comprising an hygienic ointment or fluid contained within said form, and a stem extending from said form also made of a material dissolvable by internal body fluids, and a base on the other end of said stem adapted to facilitate the positioning and retention of said form within the cervix.

2,893,386
GAS DEMAND EQUIPMENT
George Sajeck, Milwaukee, Wis.
Application April 4, 1957, Serial No. 650,760
6 Claims. (Cl. 128—142)



1. In gas demand equipment, the combination of a housing having a breather tube opening and an open end, a breather tube communicating with said opening, a flexible diaphragm covering said open end, a supply of gas under pressure, conduit means connecting said gas supply with an outlet communicating with said housing, a valve controlling the passage of said pressure gas to said outlet, means operatively connecting said valve with said diaphragm to open and close said valve in response to differences in pressure on the inner and outer sides of said diaphragm, said outlet and breather tube opening arranged to produce a jet pump effect tending to keep said valve open after it has been opened by the operator's inhalation through said breather tube, and means, controlled by the operator, for varying said jet pump effect to suit the operating conditions of said equipment.

2,893,387
RESPIRATOR
Vernon F. Gongoll, Shillington, and Guy G. Klinger, Wernersville, Pa., assignors to The Electric Storage Battery Company, Philadelphia, Pa.
Application April 23, 1958, Serial No. 730,432
3 Claims. (Cl. 128—146)

1. A respirator comprising a face piece for providing an air-tight seal around the nose, cheeks and chin of the wearer, a filter box of flexible material extending forwardly of said face piece and having closed sidewalls, a filter retaining frame having an outline corresponding to that of said filter box and supporting a filter folded over said frame, said filter box having a pair of holes, one on the lower end portion of each of said sidewalls, said filter retaining frame having integral pins emerging from the lower end portions of opposite sidewall portions, which pins are adapted to fit into said holes to retain said frame and filter in position in said box.

2,893,388
SURGICAL DRESSING
Henry Ganz, West Englewood, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Application September 10, 1954, Serial No. 455,163
7 Claims. (Cl. 128—156)

1. A surgical dressing comprising an absorbent pad which includes a layer of absorbent material of generally rectangular shape with opposite lateral edge portions folded back upon themselves along parallel fold lines to provide, on the same face of the material, marginal side flaps of substantially constant width throughout their length, a portion including corresponding end portions of each of said marginal side flaps folded back along a fold line generally transverse to said parallel fold lines to provide a transverse marginal end flap with end portions of the marginal side flaps in engagement with underlying portions of said marginal side flaps, the fold lines at the opposite ends of the transverse end flap and which are continuations of the parallel fold lines of the marginal side flaps being located along lines angling inwardly from said parallel fold lines thereby to round off the transverse end fold line and present but a single fold along the said lateral and end edges of said pad, and a layer of material engaging the pad on the face thereof presenting the flaps and throughout the area of the pad as defined by its lateral and its end fold lines, whereby the marginal end flap is retained in its proper position relative to the lateral marginal flaps.

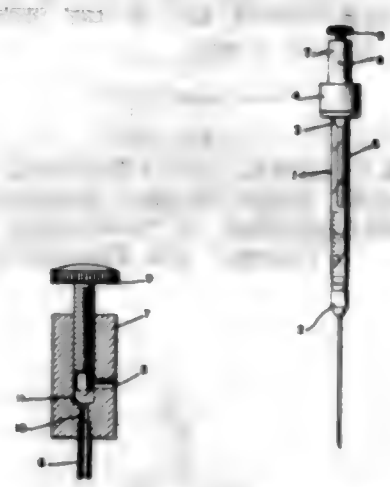
2,893,389
NEEDLE HUB SEAL
Maurice M. Nemet, Palatine, Ill., assignor to Baxter Laboratories, Inc.
Application March 31, 1955, Serial No. 498,160
3 Claims. (Cl. 128—214)

3. A needle assembly for a tubing and needle set, comprising a needle having a hub staked thereto adjacent the unsharpened end of said needle, and a grease, heat-flowable at ordinary sterilization temperatures, between said hub and said needle.

2,893,390
HYPODERMIC SYRINGES
Marshall Lee Lockhart, deceased, late of Rutherford, N.J., by Margaret La Nita Lockhart and Robert William Matthies, Rutherford, N.J., and Arthur Burton Kettle, Needham, Mass., executors, assignors of one-fifth each to Edgar H. Wilburn and Robert W. Matthies
Application April 28, 1954, Serial No. 426,122
9 Claims. (Cl. 128—218)

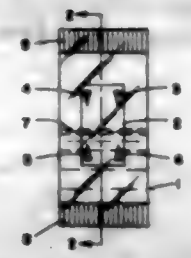
1. A hypodermic syringe structure comprising in combination, an elongated tubular barrel having a front end structure and an open back end defining therebetween a parenteral liquid rear compartment, a piston plug slidably fitted in said barrel and closing off its back end, said front end structure comprising a head having cannula-supporting means and a head compartment with which the bore of an injecting cannula communicates when supported on said head, means forming a constricted passage of certain length between said compartments to serve as a gate plug seat, and a gate plug slidably fitted in said seat in a rearmost flow-blocking position and there cooperating with said piston plug in confining in said rear compartment a body of parenteral liquid medicament, said gate plug being substantially longer than said seat with a flow way extending from the vicinity of its back end forward short of its head end to define a way-equipped back end section and a head end section with the latter blocking flow through said seat when said head end section is located in said seat, said gate plug being slidable forward hydraulically in said seat passage when the internal capacity of the rear compartment is reduced by forward thrust of said piston plug to locate said way-equipped back end section in said seat passage with the way permitting flow of parenteral liquid from the barrel rear compartment through the head compartment.

2,893,391
INJECTION APPARATUS
John G. Vlasic, Harvey, Ill., assignor, by mesne assignments, to Sinclair Research Laboratories, Inc., Harvey, Ill., a corporation of Delaware
Application August 19, 1953, Serial No. 755,959
1 Claim. (Cl. 128—218)



A syringe comprising a barrel, a plunger having a longitudinal bore, an annular collar rigidly sealing an end of said barrel and having a passage adapted to admit said plunger in sealing engagement, the plunger having a diameter substantially smaller than the internal diameter of the barrel, a valve affixed to the end of said plunger external of said barrel and having a vent communicating with the bore of said plunger when the valve is open.

2,893,392
ARTICLE OF MANUFACTURE FOR INTRACUTANEOUS INJECTIONS
Alan Richard Wagner, Park Ridge, and Murray Sam Cooper, Dumont, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
Application January 8, 1958, Serial No. 707,703
5 Claims. (Cl. 128—253)

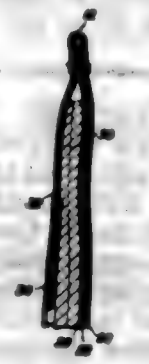


1. An article of manufacture comprising a sealed envelope containing a quantity of biological liquid and an injection device adapted to penetrate the envelope and the epidermis of an animal.

2,893,393
DIAPER HOLDER
Vivienne M. Pressley, Carson City, Nev.
Application October 21, 1957, Serial No. 691,463
3 Claims. (Cl. 128—287)

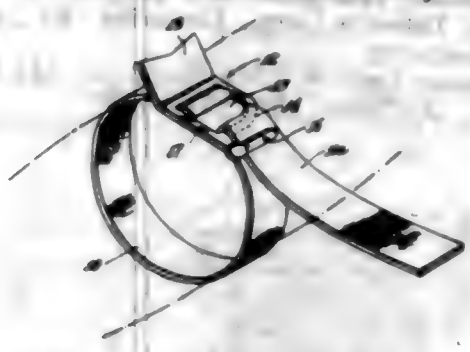
1. A diaper holder comprising a generally hourglass shaped main body panel having waist encircling end edges, fastening means on each end of each end edge for releasably retaining the end edges in waist encircling relation, said panel including an outer and inner layer of cloth material and an intermediate layer of waterproof material, said inner layer having an enlarged longitudinal slit, an open-sided envelope of waterproof material disposed in underlying relation to the inner layer with the edges of the envelope being attached to the edges of the slit with the envelope extending laterally outwardly of the edges of the slit, transverse end mem-

bers extending across said slit whereby the edges of the slit and the end members coact with the envelope to define a pocket for a diaper and whereby the diaper may be exposed through the slit, and coacting snap fasteners



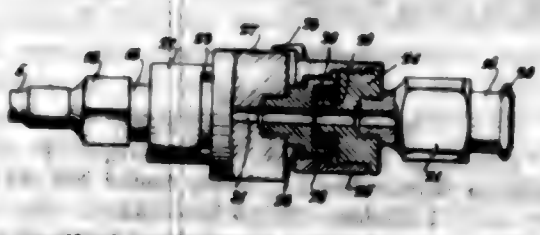
provided on the edges of the envelope and on the front of the diaper holder for holding the envelope open whereby to expose a larger area of the diaper disposed in the pocket.

2,893,394
TOURNIQUET
Wilhelm Thomsen, Bad Homburg vor der Hohe, Germany, assignor to George W. Fillmer, Sr., Chattanooga, Tenn.
Application August 16, 1957, Serial No. 678,507
5 Claims. (Cl. 128—327)



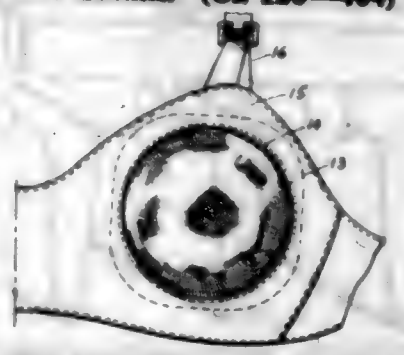
1. A tourniquet comprising a flexible strap adapted to encircle a limb; a buckle secured to one end of said strap, said buckle having an opening through which the strap passes from the inside to form a loop, and having a portion bordering said opening, over which the strap is folded to hold it against slippage; retention means on said buckle, engaging the folded portion of the strap at its outer surface, normally to keep the strap from unfolding; and finger-engageable means on and rigid with said buckle, to effect solely a tilting thereof in response to pressure on said means, thereby to render said retention means inoperative whereby the strap unfolds an extent and is enabled to slip through the said opening.

2,893,395
MEDICAL ASSEMBLY AND UNIT FOR LIQUID TRANSFER
James R. Buck, Jersey City, N.J., assignor to Becton, Dickinson and Company, Rutherford, N.J., a corporation of New Jersey
Application February 8, 1957, Serial No. 639,135
8 Claims. (Cl. 128—349)



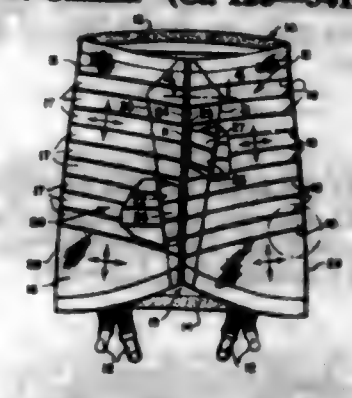
1. In a medical assembly in combination a cannula, a fluid-conducting tube to be connected to a source of liquid injectable through the cannula, a fitting assembly connected to said tube, coupling means associated with said assembly and cannula, connected and relatively rotatable parts providing an adapter, coupling means included in said adapter and engaged with the coupling means of said cannula and fitting respectively to furnish quick-detachable connections therewith and means accessible from the exterior of said adapter for causing relative rotation of its parts to turn said cannula around its axis and with respect to said fitting assembly.

2,893,396
BRASSIERE
Wirt L. Thompson, Jr., Fairfield, Conn.
Application June 3, 1957, Serial No. 663,176
8 Claims. (Cl. 128—464)



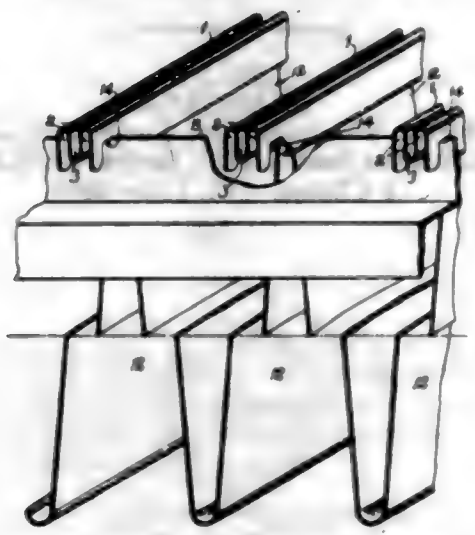
1. In a brassiere construction, a body portion, means to mount the body portion on a wearer, a pair of fabric cup portions each consisting of an integral single piece of molded fabric having generally right angularly disposed warp and filling yarns, at least a portion of which having preformed permanent distortions therein in addition to the distortions normally imparted by the weave, and means mounting the cup units in the body portion with their warp and filling yarns extending respectively along the horizontal and vertical.

2,893,397
GIRDLE
Henry M. Plohn, New York, N.Y.
Application July 1, 1958, Serial No. 745,884
4 Claims. (Cl. 128—541)



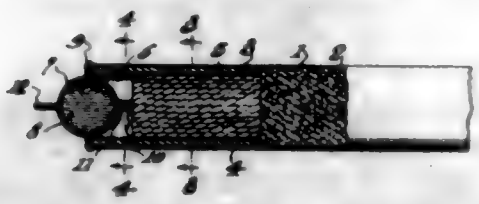
1. A girdle comprising rear and front portions formed from a unitary length of knitted strechable fabric having terminal edges, a substantially vertical seam in said girdle in which said terminal edges are joined, said girdle having top and bottom body encircling areas therein, and a medial body encircling area between said top and bottom body encircling areas, comprising a plurality of bands, said bands being defined on either side thereof by a wale wider than the wales in said band, the stretchability of said girdle being greater in said top and bottom body encircling areas than in said medial body encircling area, said substantially vertical seam being disposed substantially at the front center of said girdle between said front portions, said front portions being biased downwardly from the sides of said girdle to said seam, and including folds superposed upon said front portions of said girdle adjacent said terminal edges, said folds being biased downwardly from said seam toward the sides of said girdle.

2,893,398
FILE COVER SUPPORT DEVICES AS USED IN FILING SYSTEMS
William Norman Jones, Johannesburg, Union of South Africa
Application July 30, 1957, Serial No. 675,867
Claims priority, application Union of South Africa August 6, 1956
1 Claim. (Cl. 129—16.7)



A filing device comprising supporting rails, a plurality of suspension bars supported on said rails, each bar comprising four vertically positioned spaced parallel walls, the two inner walls having a vertical dimension less than the vertical dimension of the outer wall, top portions joining the tops of the outer walls to the tops of the inner walls to define two downwardly opening grooves, and a bottom portion joining the bottoms of the inner walls to each other to define an upwardly opening groove between the inner walls, a flange on the lower edge of each outer wall, said flange projecting inwardly towards the opposite outer wall, the inner edges of the flanges being substantially vertically below the inner walls and spaced downwardly therefrom and being spaced from each other, and a plurality of filing pocket forming folders each having the upper edges folded over in flaps, the flaps being in the downwardly opening grooves of the bars with the free edges of the flaps resting on said flanges.

2,893,399
SMOKING ARTICLE WITH FILTERING MEANS
Hans G. Jacoby, Massapequa, N.Y.
Application July 25, 1957, Serial No. 674,193
4 Claims. (Cl. 131—10)

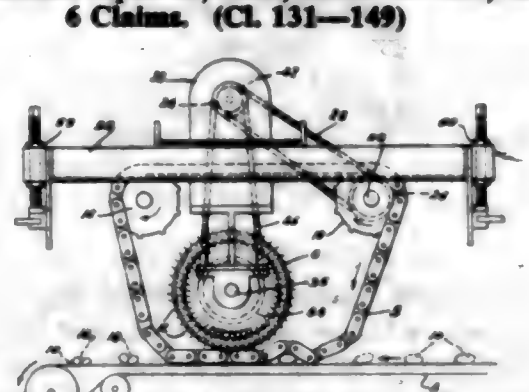


1. In a filter tip cigarette or the like smoking article, a burnable casing having an inlet end and an outlet end; smoke producing material within said casing between said inlet end and said outlet end terminating short of said outlet end; filtering material other than said smoke producing material within said casing between said smoke producing material and said outlet end; and a resilient container member having liquid therein contacting the inside of the container itself and being removably mounted on and supported by said casing at said outlet end thereof beyond said filtering material, extending across and substantially closing said outlet end, and having a discharge opening directed toward said filtering material for delivering liquid from said container to said filtering material upon compressing of said resilient container member, said discharge opening being of relatively very small size as compared to the cross section of said casing, and said container member being completely closed except for said discharge opening, the part of said container member opposite said discharge opening being exposed and uncovered at said casing outlet end.

2,893,400
TOBACCO FOILS AND METHODS OF MAKING SAME
Ernst-Rolf Detert and Will Buchholz, Lubbecke, Germany, assignors to Eduard Gerlach G.m.b.H., Lubbecke, Germany, a German company
No Drawing. Application December 10, 1957
Serial No. 701,709
Claims priority, application Germany December 13, 1956
5 Claims. (Cl. 131—15)

1. A method of producing tobacco foils, particularly for use as a covering of cigars and the like, comprising the steps of mixing finely pulverized tobacco with a viscous solution of a cellulose derivative, comprising highly methylated methyl cellulose of a degree of methylation of at least 1.6 and an anhydrous solvent, shaping the pasty mixture into foils, and drying the foils.

2,893,401
TOBACCO HAND TIE LEAF CUTTER
Walter B. Lauder, Lexington, Ky., assignor to Brown & Williamson Tobacco Corp., Louisville, Ky., a corporation of Kentucky
Application April 30, 1956, Serial No. 581,488
6 Claims. (Cl. 131—149)



1. A tobacco hand tie leaf cutter comprising a movable conveyor belt for carrying and conveying the tobacco hands to be cut, a member movable over and at the same speed as said belt for engaging and holding down the tobacco hands for the cutting operation, a rotary cutter mounted above said conveyor belt and at one side of said member and rotatable about an axis perpendicular to the direction of movement of the conveyor belt, said cutter being provided with peripherally mounted blades movable in the direction of movement of said conveyor belt into cutting engagement with the tie leaves of the tobacco hands, a cage loosely mounted about said cutter and rotatable by and with said cutter and provided with cross members arranged between and in alternation with said blades, said cage being free to move on said cutter to the limits of the clearance between the cross rods and the blades, and means for moving said member and rotating said cutter in timed relation.

2,893,402
SMOKER'S FILTER
Giuseppe F. Pinanti, New York, N.Y.
Application September 21, 1956, Serial No. 611,251
1 Claim. (Cl. 131—188)

In combination, a filter in the general form of a square prism and of soft elastic resilient and compressible foam material, and a holder for the filter comprising a length of wire of greater width than the thickness thereof and

having a relatively wide flat face, said wire being folded on itself to provide a pair of arms differing in length and spread slightly apart with the flat face of the wire on the inside, the width of the filter being greater than that of the flat face, the filter being frictionally held between the flat faces of the arms, said arms being substantially straight and parallel, that face of the length of wire opposite the flat faces being convex to allow passage only of filtered smoke, an end of one arm being integrally joined to the corresponding adjacent end of the other

arm by a bend, one end of the filter being adjacent said bend, the filter extending from said bend to the free end portion of the shorter arm and having the longitudinal middle part thereof at opposite sides of the surface thereof compressed from the initial width thereof to a substantially lesser width equal to the space between the arms, the remaining uncompressed parts of the filter adjacent the opposite sides thereof inwardly overhanging the arms, the shorter arm terminating in a free end portion flared outwardly and the longer arm terminating in a free end handle portion reduced in width.

2,893,403
HEADPIECE
Belle Turman, New York, N.Y.
Application March 14, 1957, Serial No. 646,111
1 Claim. (Cl. 132—46)

An article of head wear comprising an elongated flexible head encircling strap, means adjustably connecting the ends of the strap together thereby enabling the strap to be disposed on different size heads, a plurality of transverse arcuate frame members, a longitudinal arcuate frame member, means connecting the transverse and longitudinal frame members to the strap for permitting limited relative movement therebetween, a plurality of annular frame members disposed in mutually spaced parallel relation and generally parallel to the strap, said frame members being interwoven and constructed of generally rigid material for enclosing the hair covered portion of the head in spaced relation thereto thereby preventing disarrangement of the hair, said annular frame members decreasing in diameter away from the strap thereby forming a semi-spherical enclosure generally conforming to the shape of the head, said means for interconnecting the ends of the strap including a plurality of longitudinally spaced apertures in one end of the strap, and a hook on the other end of the strap for selective engagement with one of the apertures, said strap being in the form of a strip of foam rubber covered with a lining encircling the strip and reinforcing the same, said means interconnecting the strap with the frame members including a U-shaped hook on each end of each of the frame members, said strap having a plurality of downwardly extending recesses in the upper edge thereof, the outer wall of each recess having a slot therein receiving said hook with the length of the recess and slot being greater than the width of the frame member for permitting limited resilient relative movement between the strap and frame members.

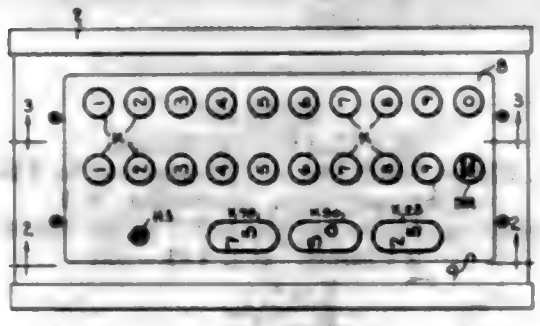
2,893,404
EYELASH CURLERS
John V. Flynn, Rochester, N.Y., assignor to The Kurlash Company, Inc., Rochester, N.Y.
Application November 19, 1957, Serial No. 697,443
2 Claims. (Cl. 132—32)

1. An eyelash curling device comprising a stationary handle formed with a yoke at one end, a jaw fixed on said yoke, a movable jaw slidable on the yoke to and from the fixed jaw, a lever pivoted on the stationary handle, a link connection between one end of the lever and the movable jaw, a movable handle pivoted on the lever at a point rearwardly of the pivot connecting the lever to the stationary handle, mean for detachably locking the movable handle to the lever whereby movement of the movable handle will move the lever and such movement will be transmitted to the movable jaw, the pivot for the movable handle permitting said handle to be swung to fit under the movable jaw upon disengagement of the locking means and when the movable jaw is moved to contact with the fixed jaw, the movable handle being notched to enable said notch to engage the under side of the movable jaw and establish a locking engagement with the movable jaw when said movable handle is positioned under the movable jaw.

2,893,405
DENTAL FLOSS CONTAINER
Charles Castelli, New Brunswick, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Application November 29, 1957, Serial No. 699,615
15 Claims. (Cl. 132—92)

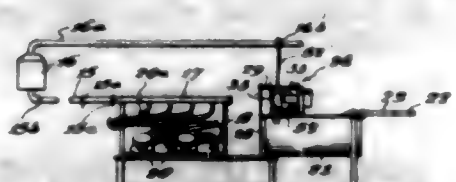
11. A dental floss container comprising a unitary molded plastic casing having a central spindle and flange wall and a floss spool carried rotatably on the spindle, the spool comprising a tubular and generally cylindrical barrel having an aperture and a flange fixed to the barrel at its end adjacent the tip of the spindle, a plurality of layers of dental floss wound on the said barrel and engaging against the spindle through the aperture, whereby rotation of the spool on the spindle is braked for preventing overrunning, and a metal closure plate having a snap fit in the flange wall of the casing and holding the spool in place on the spindle, the said closure plate having a centrally located floss cutter and an edge opening for passage of floss out of the container to the cutter.

2,893,406
COIN CHANGER APPARATUS
Arnold R. Buchholz and Frank Haben, Watertown, Wis., assignors to Brandt Automatic Cashier Company, Watertown, Wis., a corporation of Wisconsin
Application June 4, 1956, Serial No. 589,235
4 Claims. (Cl. 133—2)



1. In a coin dispensing apparatus having three penny channels, a five cent channel, two ten cent channels, a quarter channel, and a half dollar channel, electrically operated means to dispense a coin or coins from each channel, and an electro-responsive device for controlling the dispensing of a coin or coins from each channel by said electrically operated means, control apparatus for said devices comprising the combination of means for normally rendering all of said devices, except those for the penny channels active, to dispense coins, a keyboard having tens keys 1 to 9 and digit keys 1 to 9 and a zero key, electrically operated means controlled by said keys for selectively rendering certain of said devices for all but the penny channels inactive, and electrically operated means also controlled by said keys for selectively rendering one or more of said devices for the penny channels operative, if necessary, to make up the required change on a dollar tender basis.

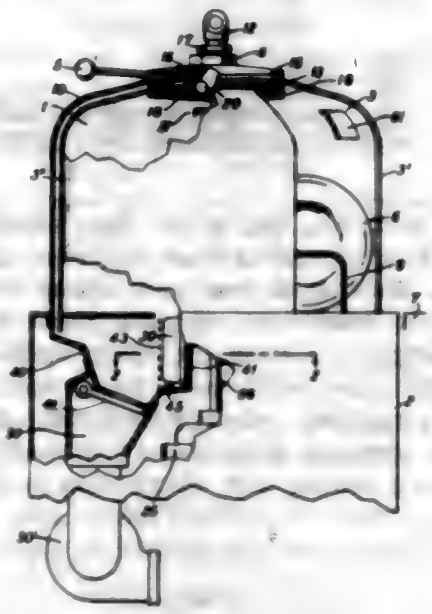
2,893,407
MILK PIPE LINE WASHING SYSTEM
Henry B. Babson, Chicago, Ill., assignor to Babson Bros. Co., a corporation of Illinois
Application December 14, 1955, Serial No. 553,865
7 Claims. (Cl. 134—56)



1. A milk pipe line washing system of the character described, comprising: means providing a source of water; means providing a supply of additive material; means for mixing said water and additive material for preparing a washing solution; means for circulating the washing solution through the pipe line; mechanical means for effecting operation of said water source and mixing means, and including latch means retaining said water source and mixing means in inoperative condition; and a control for said mechanical means including control portions for tripping said latch means to render operative said water source and mixing means, said control portions being readily adjustable in the field.

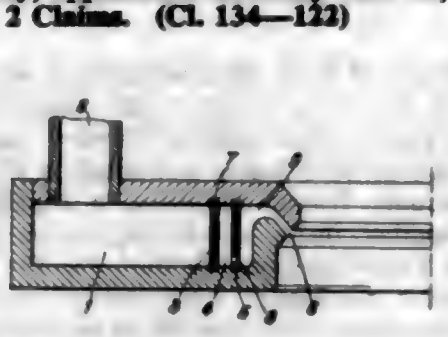
2,893,408
DISH WASHERS
Willard R. Walker, Syracuse, N.Y.
Application April 12, 1955, Serial No. 500,720
6 Claims. (Cl. 134—57)

1. In a dishwashing machine, the combination of a body in which dishes may be placed to be washed, said body comprising a fixed rear portion and a movable front portion serving as a door thru which dishes may be placed in the machine, said front portion being pivotally mounted at the top in relation to the fixed rear portion, a source of hot water, an intake water pipe leading from said source of hot water to said top, and a diffuser in the top of said body and below the water intake to throw the incoming water over the dishes for a preliminary



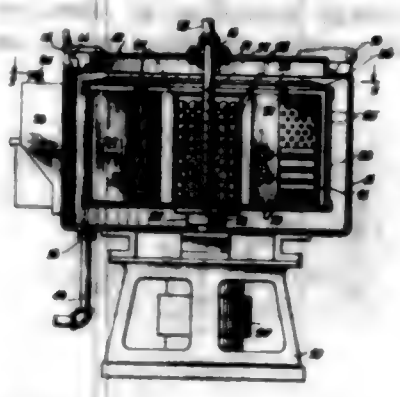
rinse, a drain valve in the bottom of the body which is normally closed, an electrical thermo-valve mechanism for holding said drain valve open during said preliminary rinse until the water temperature is hot enough for dishwashing, and an electrically operated dish washing mechanism operatively connected to said thermo-valve mechanism for taking over a dishwashing operation of the machine thereafter.

2,893,409
APPARATUS AND METHOD FOR COOLING OR QUENCHING
Carl-Adolf Wulf, Remscheid, Germany, assignor to Deutsche Edelstahlwerke Aktiengesellschaft, Krefeld, Germany
Application June 19, 1956, Serial No. 592,405
Claims priority, application Germany June 25, 1955
2 Claims. (Cl. 134—122)



1. Apparatus for distributing a cooling medium over the surface of a workpiece to be cooled, comprising at least one annular preliminary chamber wherein the medium is adapted to be subjected to only substantially static pressure and an annular discharge channel comprising an inlet from said preliminary chamber constituted by at least one opening and a delivery opening for discharge of the cooling medium, said channel comprising at least three constrictions, the first of which forms the said inlet and the last of which forms the said delivery opening, each said constriction in the direction of the discharge flow being greater in flow section than the preceding constriction, and each pair of constrictions being separated by an enlargement of the channel.

2,893,410
WASHING ELECTROLYTIC CAPACITOR SECTIONS
Eugene F. Frekin, Westfield, N.J., assignor to Cornell-Dubilier Electric Corporation, South Plainfield, N.J., a corporation of Delaware
Original application July 17, 1952, Serial No. 299,348, now Patent No. 2,767,110, dated October 16, 1956. Divided and this application December 27, 1955, Serial No. 555,647
1 Claim. (Cl. 134—144)

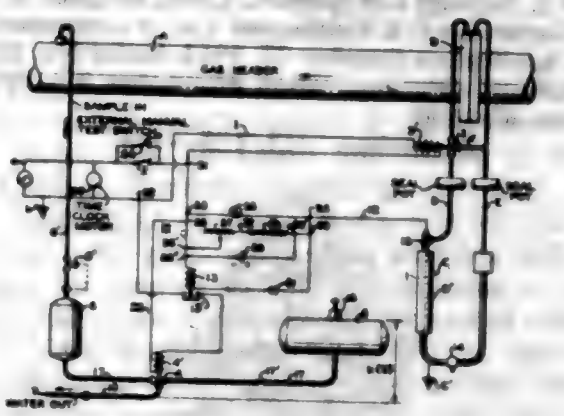


Apparatus for removing impurities from convolutely wound electrolytic capacitors prior to their impregnation with electrolyte comprising a liquid impervious stationary cylindrically shaped basket member having an upwardly directed open end, a manually displaceable cover member pivotally mounted on said stationary basket member for selectively closing the open end thereof, a liquid permeable cylindrically shaped basket member disposed concentrically within said stationary basket member and rotatable about its longitudinal axis, a non-rotatable cleaning agent spray pipe mounted on said cover member so as to be lineally displaceable relative thereto and selectively introducable axially of said rotatable basket member for directing liquid cleaning agent radially toward the periphery of said rotatable basket member, spaced triangularly shaped means disposed on the periphery of said rotatable basket member and extending inwardly toward the longitudinal axis thereof, each adjacent pair of said spaced triangularly shaped means providing two opposed parallel walls defining a capacitor holder receiving space disposed therebetween, a liquid permeable capacitor holder sized and shaped to be insertably mounted in each of said capacitor holder receiving spaces, each of said capacitor holders being shaped to support a plurality of wound capacitor units remote from said spray pipe with the axes thereof disposed substantially radially of the axis of rotation of said rotatable basket member, and means for effecting high speed rotation of said rotatable basket member relative to said spray pipe whereby cleaning agent emitted thereby impinges against the ends of said capacitors and is longitudinally forced therethrough by the forces generated by the rotation of said rotatable basket member.

2,893,411
TENT EAVE POLE CONSTRUCTION
Norman Edward Birch, Calgary, Alberta, Canada, assignor to Calgary Tent & Awning Ltd., Calgary, Alberta, Canada
Application December 10, 1956, Serial No. 627,317
1 Claim. (Cl. 135—15)

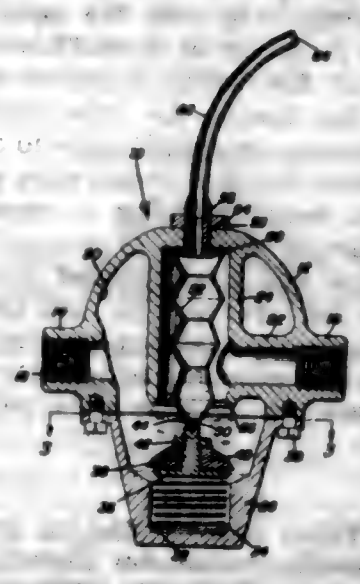
In a tent of the class described a plurality of substantially identical co-operating wooden eave poles adapted to be joined end to end to form a tent frame, each pole having a headless pin of smooth round surface projecting longitudinally from one end thereof and a substantially rectangular longitudinal slot of slightly greater width than the diameter of the pin and of sufficient depth to receive the pin in the outer end thereof, said slot being adapted to receive the pin of the adjoining pole in rotatable interlocking relationship, the tent material retaining the frame together in its interlocked position.

2,893,412
FLUID PROPORTIONING
Jack J. Fox, Phillips, Tex., and Royce M. White, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Application September 12, 1955, Serial No. 533,734
11 Claims. (Cl. 137—3)



1. A method for proportioning fluids comprising establishing a pressure differential across a stream of a first fluid; effecting action on a measuring agent to an extent commensurate with degree of said differential; terminating relation between said differential and measuring agent; establishing flow of a second fluid following termination of said relation between said differential and measuring agent; and maintaining said flow of said second fluid for a time interval commensurate with recovery of said measuring agent from said action of said differential.

2,893,413
HEAT SENSITIVE SHUT-OFF VALVE
Harold F. Nordahl, Columbus, Mont.
Application July 2, 1957, Serial No. 669,489
4 Claims. (Cl. 137—75)



1. A heat sensitive valve comprising a hollow body having an inlet and an outlet, an inwardly extending tubular portion forming said outlet, a tubuar member extending perpendicular to said tubular portion in intersection and communicating relation to the inner end thereof, said tubular member extending beyond the inner end of the tubular portion and terminating in an open

valve seat communicating with the inlet, a valve disk movably mounted in said body, spring means between the body and disk for urging the disk towards the valve seat, an inflatable bellows disposed in said tubular member and having one end engaged with said disk with the other end connected with a fitting extending through the body wall, an elongated tube connected with said fitting, and a fusible area forming a portion of said tube and forming a closure for the tube and bellows for retaining the bellows in inflated condition and holding the disk away from the valve seat whereby rupture of the fusible area by overheating will deflate the bellows for permitting collapse thereof and movement of the disk onto the valve seat for stopping flow through the valve.

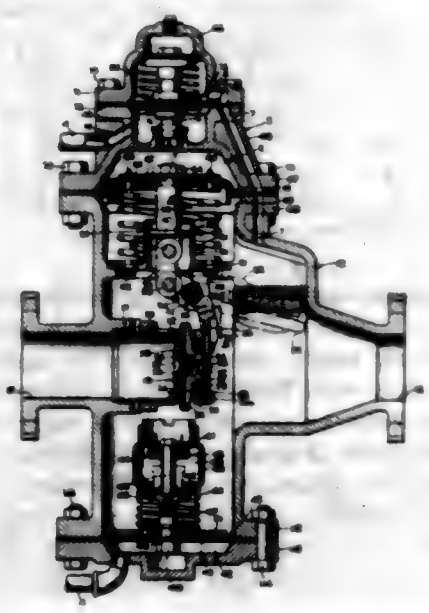
2,893,414

BACKFLOW PREVENTER

Leonard L. Snyder, Los Angeles, Calif., assignor to Backflow Engineering & Equipment Co., a copartnership

Original application October 27, 1951, Serial No. 253,481. Divided and this application November 27, 1956, Serial No. 624,636

26 Claims. (Cl. 137—116)



1. In a backflow preventer for preventing return flow from a service line to a supply line, the combination of: a housing interposed between the supply line and the service line, the housing having a valve opening, a valve member within the housing movable to close the opening and prevent flow through the housing, the valve member establishing a pressure drop from the supply line to the service line under conditions of normal flow therethrough and at cessation of flow acting to prevent reverse flow, yieldable means for moving the valve member toward closed position, pressure operated means to apply a force for moving the valve member toward open position, said pressure operated means including a movable element having one face thereof subjected to pressure in the supply line upstream from said valve member and acting in a direction to open the valve member, and means for subjecting an opposed face of said element to pressure downstream from the valve member and acting in concert with said yieldable means to close the valve member.

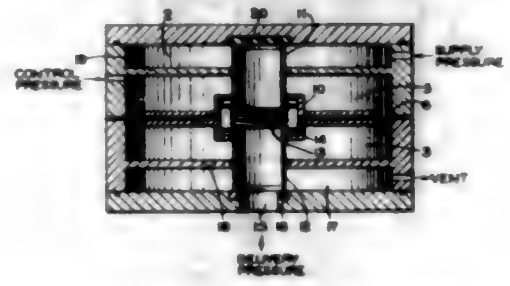
2,893,415

SELF-LAPPING RELAY VALVE DEVICE

Karl-Heinz Arenhold, Heidenheim (Brenz), and Walter Ortmann, Hannover, Germany, assignors to Westinghouse-Bremsen-Gesellschaft m.b.H., Hannover, Germany

Application February 15, 1957, Serial No. 640,500
Claims priority, application Germany April 13, 1956
8 Claims. (Cl. 137—116.5)

1. A pressure balanced self-lapping relay valve device comprising casing means providing a supply port charged with fluid under pressure, a control port chargeable with fluid at a selectable pressure, a delivery port and a vent port, annular movable abutment means operably mounted in said casing means and subject oppositely to pressures of fluid in said control port and delivery port, two coaxially arranged tubular valve members having aligned bores of equal diameter constantly open to the delivery port and projecting in opposite axial directions from said movable abutment means, each of said valve members being alternatively movable relative to or by said movable abutment means according to direction of axial movement of said movable abutment means, and a spring



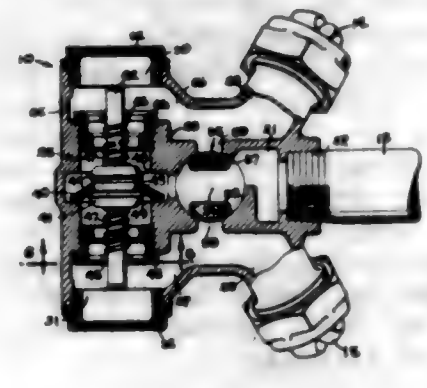
interposed between and acting on said valve members for biasing them in opposite directions to respective seated positions, one of said valve members controlling connection of the delivery port with the supply port, and the other of said valve members controlling connection of the delivery port with the vent port, said annular movable abutment means sealingly encircling said valve members and being operative responsively to an increase or decrease in pressure in the control port to operatively unseat said one valve member or said other valve member respectively while permitting the valve member not so unseated to be maintained seated by said spring.

2,893,416

PRESSURE RESPONSIVE REVERSING VALVE

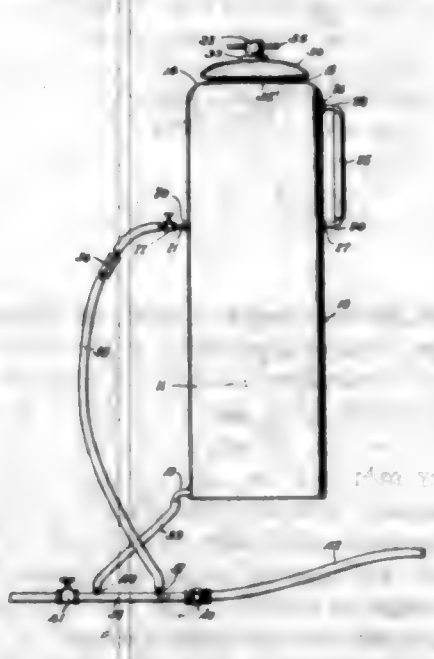
Lester O. Hegstad, Roscoe, Ill., assignor to Hanson Equipment Company, South Beloit, Ill., a corporation of Illinois

Application August 20, 1956, Serial No. 605,168
12 Claims. (Cl. 137—119)



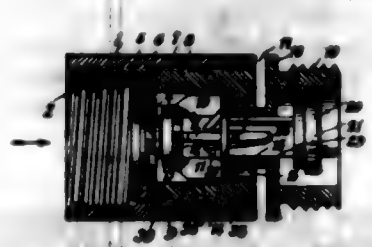
1. A pressure responsive reversible valve comprising a hollow body having two alined outlet passages and an inlet opening intermediate said outlet passages for admitting fluid under pressure to the interior of the body, a shiftable diaphragm adapted to seal either one of said passages, a shiftable support for carrying said diaphragm between said passages, said diaphragm being positionable on said support so as to condition the support and diaphragm for movement by fluid pressure toward one or the other of said passages, means to resiliently position said support between said outlet passages, and means cooperating with said support when the support and diaphragm are carried toward either one of said passages to reposition the diaphragm so that when the fluid pressure is interrupted, and said means resiliently positions the support, the support and diaphragm will be conditioned to move toward the opposite outlet passage.

2,893,417
DISPENSER FOR LIQUID ADDITIVES TO WATER HOSES
Joseph J. Bartolat, Tacoma, Wash.
Application February 8, 1957, Serial No. 639,134
1 Claim. (Cl. 137—205.5)



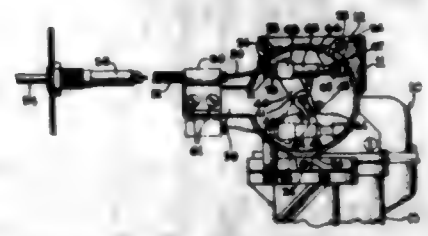
A device of the character described comprising a tank, a partition in said tank dividing the same into a relatively small upper compartment and a relatively large lower compartment, a vertical pipe extending from said partition to a point adjacent the upper end of said upper compartment, a water hose, a control valve in said water hose, a valved outlet at the lower end of said upper compartment, a pipe line interconnecting said valved outlet and said water hose subsequent in line of flow to said control valve, an inlet at the lower end of said lower compartment, and a pipe line interconnecting said last-mentioned inlet with said water hose likewise subsequent in line of flow to said control valve.

2,893,418
VACUUM BREAKERS FOR WATER SUPPLY SYSTEMS
Leon C. Leventhal, Oceanside, N.Y.
Application April 18, 1957, Serial No. 653,546
4 Claims. (Cl. 137—218)



1. A vacuum breaker for water supply lines comprising, a housing having an inlet end, a wall in said housing located inwardly of said end and provided with a central aperture, the housing having an outlet end and provided with an air vent near said outlet end, a centrally apertured partition in the housing through which the air vent is provided, a valve movable in the housing and adapted to be maintained in open position by normal water flow through the housing, said valve consisting of a hollow finned member provided with means at one end for closing the central aperture in the wall of the housing, means at the opposite end of the valve for closing the air vent during normal water flow through the housing, a supplemental valve member slidably coupled to the valve, a sealing element carried by the supplemental valve member for closing the aperture in the partition during back pressure and while the aperture in the wall of the housing is closed by the valve, said supplemental valve member having a forked shank slidably engaging with the valve between the fins thereon, said forked shank including legs terminating in enlarged ends which engage against the valve to maintain the valve and valve member in coupled but slidable relationship.

2,893,419
HAND-CHOKE CONVERSION UNIT
Albert L. Coulter, Chicago, Ill.
Application May 3, 1957, Serial No. 656,855
2 Claims. (Cl. 137—270)

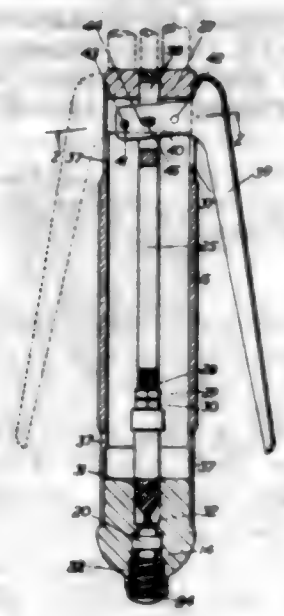


1. In a carburetor, a body, an air intake leading along said body, a valve shaft pivoted in said body and extending across said air intake and having a butterfly valve mounted thereon, controlling the flow of air through said intake, a choke crank arm on the outer end of said valve shaft, and means adapting said choke crank arm for manual operation comprising a housing enclosing said choke crank arm and the end of said valve shaft, a pivot shaft freely journalled in said housing and having a lever arm secured to the inner end thereof having operative engagement with said choke crank arm, a crank adjustably secured to the outer end of said pivot shaft, the connection from said crank to said pivot shaft being adjustable to accommodate said crank and lever arm to extend above or below the center of said shaft in accordance with the position of said choke crank arm, a Bowden wire operatively connected with said crank for pivoting said crank in a direction to open and close said butterfly valve, a flexible housing enclosing said Bowden wire, a support bracket for said flexible housing on said housing enclosing said choke crank arm, the mounting for said support bracket comprising a support arm extending radially from the wall of the first mentioned housing and adapted to be positioned horizontally thereof and so constructed and arranged as to accommodate mounting of said support bracket on said arm to extend above or below said arm and maintain said flexible housing and Bowden wire in substantial alignment with the end of said crank regardless of whether said crank is positioned to extend above or below the axis of said pivot shaft to conform to said choke crank arm.

2,893,420
BLOWPIPES
Charles Frederick Steventon, London, England, assignor to The British Oxygen Company Limited, a British company
Application November 14, 1955, Serial No. 546,754
3 Claims. (Cl. 137—271)

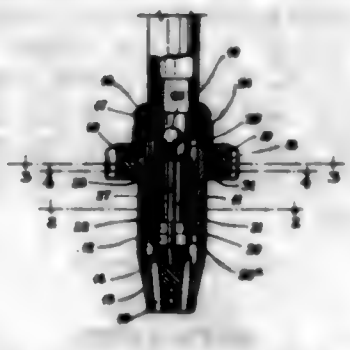
1. In a blowpipe having a body portion providing a hand grip, a valve block having a valve chamber provided with a valve seat, a closure member movable in said valve chamber and having a portion co-operating with said valve seat, an elongated control rod for operating said closure member and reversible means for operating said control rod, the combination of means mounting said control rod in said body portion for longitudinal sliding movement to operate said closure member, said control rod having a diametrical through slot adjacent each end thereof and a pivot pin hole intersecting each slot transversely, and said body portion having directly opposite openings at each end thereof in register with said through

slots in the control rod and also having two axis pin mounting holes transverse to said openings at each end thereof and disposed one on each side of the control rod, a hand lever having a lug part extending through one of said openings in the body portion and through a slot in the control rod, said lug part having a pivot pin slot therein



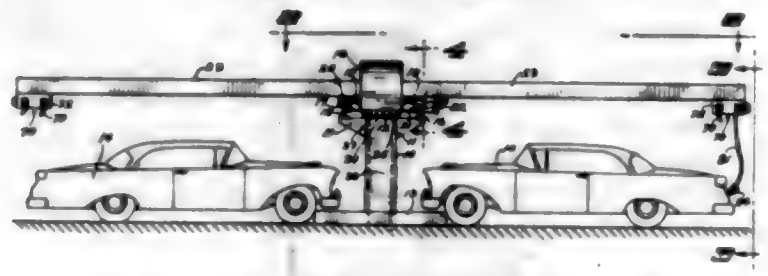
for registering with said pivot pin mounting hole in the control rod and an axis pin hole on each side of said pivot pin hole for registering with an axis pin mounting hole in the body, a removable axis pin for detachably pivoting said lug part to said body and a removable pivot pin for detachably pivoting said lug part to said control rod.

2,893,421
FLUID CONTROL TAP
Harry Brown, Spretborough, and John McPherson, Balby, England, assignors to Peglers Limited, Doncaster, England, a British company
Application March 11, 1958, Serial No. 720,757
Claims priority, application Great Britain March 18, 1957
9 Claims. (Cl. 137—329.3)



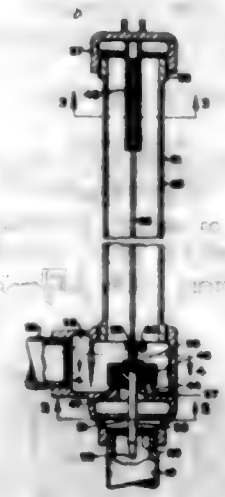
1. In a fluid control tap, in combination with a fixed inner hollow body having a flow passage therethrough, an auxiliary valve seat and valve member located in said passage to control the flow of fluid therethrough and an outer control sleeve with integral discharge nozzle rotatable upon the inner hollow body and a main valve member supported in said nozzle, an axially displaceable inner sleeve non-rotatably mounted on said body and in helically threaded engagement interiorly with the outer control sleeve, a main valve seat on the displaceable inner sleeve co-axial with the auxiliary valve seat and movable with said inner sleeve for co-operating with the main valve member in the discharge nozzle and means on said main valve projecting into the inner hollow body and normally retaining the flow responsive valve in the unseated position.

2,893,422
OVERHEAD TRAVELING DISPENSER UNIT
Bruce A. Schiltz, Wolsey, S. Dak.
Application February 3, 1958, Serial No. 712,789
21 Claims. (Cl. 137—355.17)



1. In a unit for dispensing a fluid, an elongated member, a carriage, devices supporting said carriage upon and for longitudinal movement along said elongated member, a rotatable element upon the carriage, a hose for fluid to lead from a source of supply thereof along the elongated member mounted on said rotatable element to be wound thereon and unwound therefrom, a conduit for the fluid extending from said hose, and means for selectively advancing said carriage in either of opposite directions along said elongated member and for causing said hose to be wound upon the rotatable element in response to advance of the carriage in one direction and unwound from said rotatable elment in response to advancement of said carriage in opposite direction.

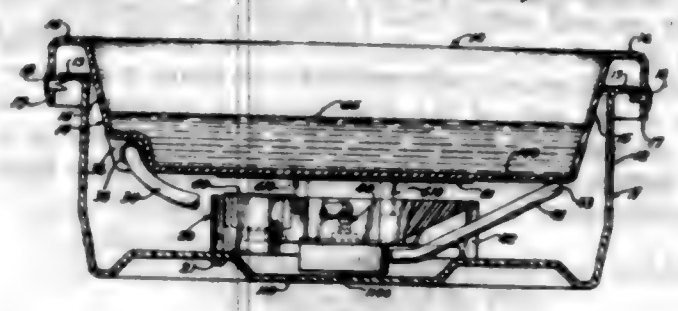
2,893,423
UNDERGROUND STORAGE TANK CHECK VALVE ARRANGEMENT
John H. Seney, Vancouver, British Columbia, Canada
Application March 23, 1956, Serial No. 573,354
4 Claims. (Cl. 137—364)



1. A check valve arrangement for underground storage tanks comprising a tubular casing having an inlet port at its lower end connected when the valve arrangement is in use to the outlet of a tank located underground, said casing being long enough to extend to the ground surface, an outlet port in the casing near and spaced from the inlet port thereof to be connected to a suction line of a pump for drawing liquid from the tank, a valve seat integrally connected to the casing at the inlet port thereof through which liquid must travel to the outlet port, a valve having a resilient surface normally resting on said seat and movable off it inwardly of the casing, a stem connected to the valve and extending upwardly to the top of the casing, a cover removably mounted on the upper end of the casing, a sleeve fixed to and projecting downwardly below the cover centrally of the casing and being open at its lower end, said valve stem extending into and being freely slidable within the sleeve and coming out of the latter when the cover is lifted off the casing, said chamber being exposed at the top of the casing when the

cover is removed so that the valve may be lifted out by means of said stem, and means for guiding the valve back on to the seat after it has been lifted therefrom.

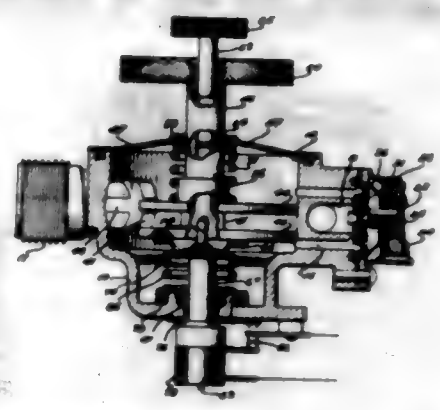
2,893,424
ANIMAL WATERING DEVICES
Gerald F. Lewis, Berkley, Mich., assignor of one-half to George A. Jarenko, Grosse Pointe, Mich.
Application November 26, 1957, Serial No. 699,020
5 Claims. (Cl. 137—406)



3. An animal watering device comprising a base element and an open top water receptacle mounted on said base for limited vertical reciprocating movement therover, a hub in said base limiting the downward movement of said receptacle, means supplying water under pressure to said receptacle through said hub, hydraulically opened reciprocating valve means in said hub controlling the flow of water into said receptacle, annularly disposed fulcrums in said hub, valve operating arms pivoted on said fulcrums supporting said receptacle on the outer ends thereof, a valve operating element reciprocatingly mounted on said hub adapted to be engaged by the inner ends of said pivoted arms to close said valve means responsive to the filling of said receptacle to a predetermined level, spring means acting on said pivoted arms constantly urging said receptacle to move toward its upper limit of movement simultaneously moving said reciprocating valve operating element to open said valve and permit said receptacle to fill with water to said predetermined level, the weight of said water entering said receptacle overcoming said spring means causing said pivoted arms to move the said reciprocating valve operating element in a direction to close said valve, permanent magnet means in said hub, a magnet armature fixed to the bottom of said receptacle in registry with said magnet means, the said magnet means pulling said receptacle downwardly in aid of the weight of water entering said receptacle when said receptacle has moved downwardly and the said armature becomes in close proximity to said magnet means whereby to accomplish a rapid and positive closing of said valve as said water receptacle becomes substantially filled.

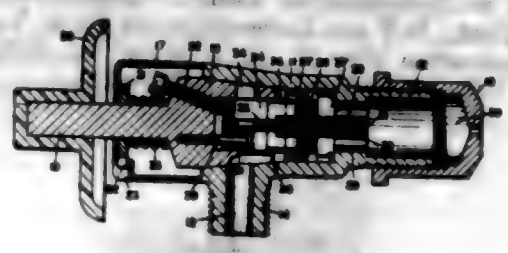
2,893,425
NON-THERMOSTATIC ADJUSTABLE MIXING VALVE
Victor E. Rinesha, Van Nuys, Calif., and Robert W. Conifer, Jr., Oak Park, Ill., assignors to The Dole Valve Company, Chicago, Ill., a corporation of Illinois
Application January 9, 1957, Serial No. 633,363
10 Claims. (Cl. 137—607)

1. In a mixing valve, a valve body having a mixing chamber therein, hot and cold water inlets into said valve body and mixing chamber, an outlet from said mixing chamber, valve means in said inlets movable toward closed positions by the pressure of water thereon flowing through said inlets, a first adjustable means accommodating the positions of said valve means to be changed and stopping said valve means in certain predetermined operative positions to vary the temperature of the water delivered through said outlet for one operation, a second adjustable means accommodating the positions of said valve means to be changed to vary the temperature of the water delivered through said outlet for a second operation, said first and second adjustable means each being adjustable independently of the other, and electrically energizable means for moving said first adjustable means



out of operative position after said one operation and bringing said second adjustable means into position to be effective during a second operation.

2,893,426
UNIVERSAL GAS VALVE
Isaac V. Brumbaugh, Clayton, Mo.
Application August 23, 1955, Serial No. 530,123
4 Claims. (Cl. 137—614.17)

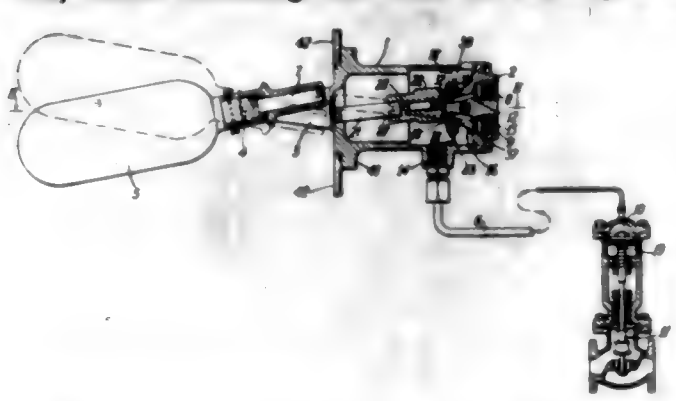


4. A valve for controlling a top burner of a gas cooking range comprising a casing having an inlet port and an outlet port; a member comprising an open ended hollow rotative tapered plug formed with a slot extending through a side wall thereof at times registering with said inlet port and at such times allowing passage of gas from said inlet port to the hollow of said plug; a member comprising an open ended cup shaped sleeve having a tapered port formed in a side wall thereof, having a portion thereof threaded, and being positioned at least partially in the hollow in said plug with its open end directed toward the closed end of said plug and longitudinally slidably mounted in said plug and said casing; a second threaded member positioned at least partially in the hollow of said plug and in threaded engagement with said cup shaped threaded member; means for preventing rotation of one of said threaded members relative to said casing; means responsive to rotation of the plug for rotating the other of said threaded members so as to cause the longitudinal movement of the non-rotatable threaded member; and one of said members other than said cup shaped member being formed with a metering edge which cooperates with said tapered port upon said longitudinal movement to effect a gradual adjustment of the flow of gas through said tapered port; and separate means for adjusting the relative longitudinal position of said tapered port and said metering edge.

2,893,427
VALVE STRUCTURE
Jack Folgate, Slough, England, assignor to Ronald Trist & Co. Limited, Slough, England
Application August 11, 1955, Serial No. 527,794
Claims priority, application Great Britain August 12, 1954
5 Claims. (Cl. 137—630)

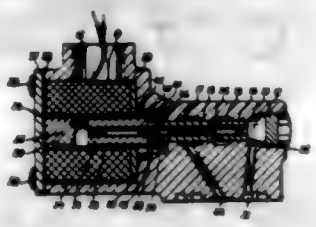
1. A valve for simultaneously controlling two passages each terminating in a valve seat comprising, a frame, two coaxial valve members mounted in said frame, arms

rotatably mounting said frame, said arms and frame being movable whereby as one valve member is carried off its seat the other valve member is carried onto its seat, means mounting said arms for rocking movement



relatively to one another about axes parallel to the rotating axis of said frame whereby the rocking movement of the arms and rotating of the frame assures axial alignment between the valve member and seat.

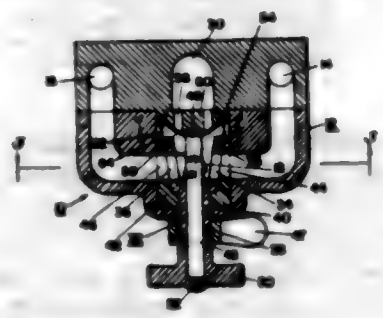
2,893,428
SOLENOID OPERATED PRESSURE BALANCED FLOW VALVE
John E. Collins, Akron, Ohio, assignor, by mesne assignments, to International Basic Economy Corporation, New York, N.Y., a corporation of New York
Application May 22, 1956, Serial No. 586,484
4 Claims. (Cl. 137—620)



1. A pressure-balanced control valve comprising in combination, a valve body having a valve chamber with a plurality of internal annular lands defining axially separated ports, a tubular valve spool disposed for axial reciprocation in said valve chamber on said lands to control the flow through the ports and having opposing end faces of equal effective area, said valve spool having a port extending through its tubular wall intermediate its ends, one of said chamber ports being a fluid delivery port and being located at one end of the valve chamber, said spool having the entire area of one of its end faces in constant communication with said fluid delivery port at every axial position of said spool, and said delivery port being in constant communication through the tubular interior of the valve spool with the opposing end face of said spool remote from said delivery port, the other of said valve chamber ports being respectively a pressure supply port and an exhaust port and being located on opposite sides of the valve spool port for selective communication through the spool port and the tubular interior of the valve spool with said delivery port in different axial positions of the valve spool, means biasing said valve spool axially toward said delivery port, and means engaged axially with the end of said spool remote from said supply port and adapted for actuation to displace said spool axially against said biasing means.

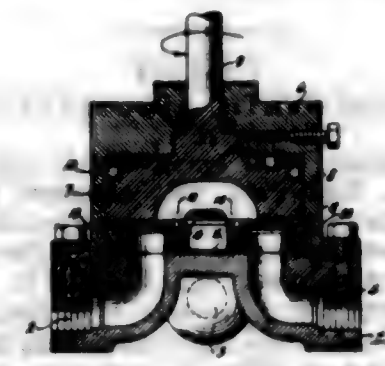
2,893,429
MIXER VALVE
Arthur Schaffer, Riverside, N.J.
Application May 24, 1956, Serial No. 587,125
4 Claims. (Cl. 137—625.41)

4. A mixer valve including a body having a pair of intake ports, said intake ports being joined together in the central portion of said body to form a central passageway, a discharge port extending through said body, said discharge port being in communication with said central passageway, a hollow plug rotatably disposed within said central passageway and extending without said body, said hollow plug including a frustro-conical portion disposed entirely within said passageway and an axially-extending cylindrical sleeve portion partially disposed without said passageway, means for rotating said plug carried on the part of the sleeve portion thereof disposed without said body, a sleeve of polymerized tetrafluoroethylene resin fixedly secured within said passageway intermediate the walls thereof and said plug, said sleeve having openings therein in alignment with each of said intake ports, apertures in the wall of the frustro-conical portion of said plug adapted to selectively register with the openings in said sleeve whereby the degree of blocking of the latter



may be varied upon rotation of the plug, a rotatable stem disposed within said plug and extending beyond both ends thereof, a perforated closure member fixedly carried on the end of said stem within said central passageway, a fixed perforated valve seat of polymerized tetrafluoroethylene resin surmounting said discharge port and operatively engaged with said closure member, the perforations in said closure member and valve seat being alignable upon rotation of said stem, a freely rotatable seat juxtaposed to the internal end of said plug, spring means intermediate said closure member and said freely rotatable seat for urging said closure member against said valve seat and operatively engaging said freely rotatable seat with the internal end of said plug, and handle means on said stem for rotating said stem closure member and varying the alignment of the openings in said closure member and valve seat.

2,893,430
NONINTERFLOW ROTARY VALVE
James W. F. Holl, Temple City, Calif.
Application September 16, 1954, Serial No. 456,434
9 Claims. (Cl. 137—625.42)



8. A multi-way noninterflow valve comprising a valve body having spaced-apart substantially parallel surfaces therein, each of said surfaces having a plurality of ports extending therethrough, the ports of one of said surfaces being selectively alignable with the ports of the other of said surfaces, a plurality of seal seat assemblies, each of said seal seat assemblies comprising a first pair of telescoping sleeves aligned with and fixed relative to one of the ports in said other surface, spring means for urg-

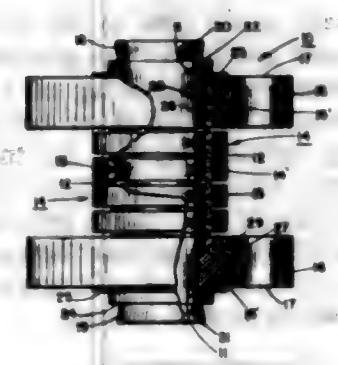
ing the ends of said sleeves into sealing engagement with said surfaces, a second pair of telescoping sleeves disposed about said first pair of sleeves, and spring means for urging the ends of said second pair of sleeves into sealing engagement with said surfaces, the ports of said one surface having a predetermined size so as not to simultaneously overlap the inner periphery of said first and the outer periphery of said second pair of telescoping sleeves in sealing engagement with said one surface whereby fluid is prevented from flowing into said valve body as a port in said one surface is being aligned with a port in said other surface.

2,893,431

REINFORCED EXPANSIBLE TUBE

Hoel L. Bowditch, Foxboro, Mass., assignor to The Foxboro Company, Foxboro, Mass., a corporation of Massachusetts

Application November 24, 1954, Serial No. 470,936
2 Claims. (Cl. 137—793)



2. A flexible, reinforced bellows-like unit comprising an integral transversely multiconvoluted tube and individual reinforcing ring bodies mounted on said tube between the convolutions thereof, said reinforcing ring bodies each having an inner anular ring as a base form thereof with said base lying deep in the valley of one of said convolutions, an outer anular ring as a top thereof with said top lying above the peaks of the adjacent convolutions of said tube, and a relatively narrow neck portion joining said base and top to form a joining leg on a radius of said convoluted tube, each of said convolutions having a transverse cross section of essentially circular form in a plane extending lengthwise of said tube, which is substantially greater than a semi-circle and which bulges lengthwise of said tube to lie, on radii of said tube, between portions of the bases of the adjacent rings and portions of the tops of said adjacent rings, said rings providing, with each adjacent pair of rings, an annular housing chamber for one of said convolutions with an operating clearance for said one of said convolutions sufficient to enable said convolution to maintain said circular cross section throughout the operating range of expansion of said tube, and said tops being formed and arranged for abutment with their adjacent tops as a limit stop system to limit the possible lengthwise compression of said convoluted tube.

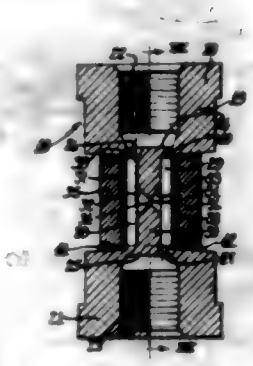
2,893,432

FLUID FLOW CONTROL

Thomas M. S. Gibson, Milwaukee, Wis., assignor to The Dole Valve Company, Chicago, Ill., a corporation of Illinois

Application December 31, 1953, Serial No. 401,673
2 Claims. (Cl. 138—26)

1. In a reversible fluid energy dissipating device adapted to reduce fluid flow rate and pressure, a housing having a plurality of right circular cylindrical chambers therein, said chambers having axially aligned cylindrical walls, parallel spaced outer end walls and a common inner end wall the opposite sides of which are parallel to said outer end walls, an inlet in said housing leading into a first of said cylindrical chambers substantially tangentially of the cylindrical wall thereof, a communicating passageway between said chambers leading through the common inner wall thereof coaxially with the axes of said cylindrical



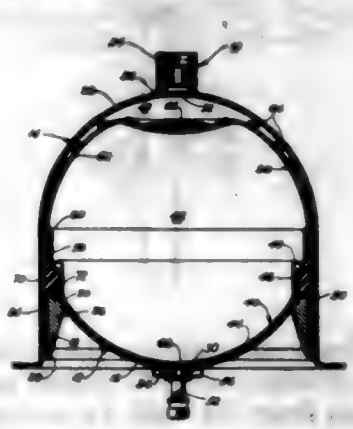
walls, and an outlet in said housing from said second cylindrical chamber leading therefrom substantially tangentially of the wall thereof, whereby said outlet serves as an inlet upon the reverse flow of fluid through said energy dissipating device.

2,893,433

HYDRO-PNEUMATIC ENERGY STORAGE DEVICE

Stanley I. MacDuff, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware

Application June 6, 1956, Serial No. 589,616
3 Claims. (Cl. 138—30)



3. A hydro-pneumatic energy storing device comprising two contacting shells, a retainer disposed therein, a bladder having a substantially rigid first portion formed to fit against one of said shells and a flexible portion adapted to telescope into the first portion when the bladder is collapsed, said bladder being confined along the first portion at the junction of said two shells by said retainer, said first portion having ridges formed thereon for preventing the escape of the hydro-pneumatic media as a result of leakage between said shells and said retainer.

2,893,434

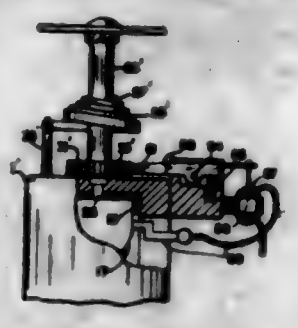
HYDRAULIC SYSTEM ACCUMULATOR MEANS

James W. Ballard, Miamisburg, and Hyman Brier, Dayton, Ohio, assignors to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio

Original application February 24, 1953, Serial No. 338,382, now Patent No. 2,724,411, dated November 22, 1955. Divided and this application June 4, 1958, Serial No. 751,584
3 Claims. (Cl. 138—30)

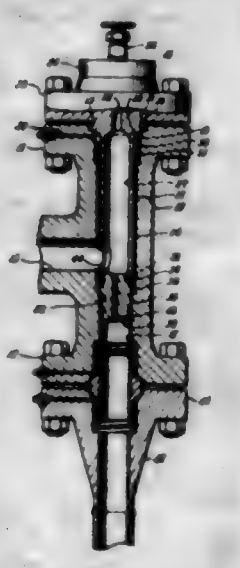
1. In combination with a variable volume accumulator actuable to produce volume variation in the accumulator by movement of a shaft in a housing supporting the accumulator, means for coupling the accumulator to a fluid line, a scroll spring secured to said shaft and housing, a

ratchet on said shaft, a stop member engageable with said ratchet, and means to selectively engage and dis-



engage said stop member in response to changes in pressure on said accumulator.

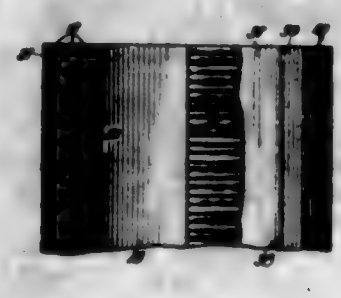
2,893,435
CHOKE
Robert Eichenberg, Houston, Tex., assignor, by mesne assignments, to McEvoy Company, Houston, Tex., a corporation of Texas
Application February 3, 1956, Serial No. 563,238
6 Claims. (Cl. 138—44)



1. A well flow choke device comprising a flow path having an intermediate smooth-walled portion, an inlet to said flow path from the well, an outlet from said flow path, separate access means to said smooth-walled portion of said flow path between said inlet and said outlet, flange connected closure means for said access means having an extension loosely receivable in said access means, replaceable flow constricting means removably connected only to said extension and not to said smooth-walled flow path portion in which it is disposed, means for sealing between said flow constricting means and said smooth-walled flow path portion, said extension holding said flow constricting means in said smooth-walled flow path portion when said access means is closed by said closure means, whereby flow through said flow path between said inlet and said outlet is choked by said flow constricting means, and whereby there are no interior flow path threads susceptible of galling.

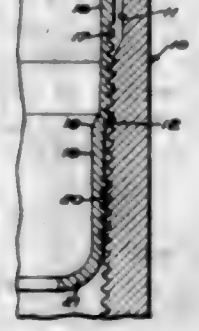
2,893,436
HORIZONTAL CORRUGATED PAPER TUBE AND METHOD OF MAKING THE SAME
Walter J. Mann, Mount Prospect, Ill., assignor of one-third to Ephraim H. Reden, Belvidere, and one-third to George C. Iches, Jr., Evanston, Ill.
Application October 12, 1954, Serial No. 461,858
8 Claims. (Cl. 138—78)

1. The method of forming tubes from paper stock which comprises: moving a web of paper longitudinally; moistening the moving web; forming in the web flutes which extend longitudinally of the web; applying glue to the crests of the flutes on the underside of the web; registering a second moving web of paper with the crests of the flutes on the underside of the first web; applying heat to the webs to dry the glue therein; cutting the webs into blanks of predetermined length; moistening the upper flutes and simultaneously applying heat to the second web to maintain intact the glue joints in the blank; forming the blank into a tube in which the facing ply is innermost and the fluted ply outermost and stretched around the perimeter of the tube at right angles to the axis thereof; and applying heat to the tube to dry the same down to commercial dryness and to dry the glue therein.



8. A large diameter tube consisting of a plurality of layers of fluted material spiraled layer upon layer, with the flutes extending spirally around the tube and with the flutes in alternate layers disposed at right angles to flutes in the intervening layers, and a plurality of layers of another material disposed one layer between each pair of adjacent fluted layers, each of said layers being fixed to the layers with which it is in contact.

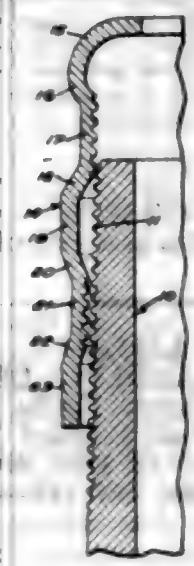
2,893,437
PROTECTOR NIPPLE
Clyde E. Richard, Pittsburgh, Pa., assignor to McDowell Manufacturing Company, Millvale, Pa., a corporation of Pennsylvania
Application November 13, 1957, Serial No. 696,259
10 Claims. (Cl. 138—96)



1. A protector for a tapered threaded end portion of a casing member which comprises, a substantially cylindrical body having a front guide wall portion and a back mounting wall portion, said back wall portion having threads to engage with the threads of the end portion of the member solely on and immediately adjacent to a common pitch cone therealong, said front wall portion having a radially-offset relation with respect to said back wall portion and with respect to the threads of the end portion of the casing member to guide said body over and along the end portion until the threads of said back portion engage the threads of the end portion wherein said front wall portion then loosely aligns with opposed threads of the casing member, and a protective radially-projecting flange on the back end portion of said body to extend across the wall thickness of the end of the casing

member and provide a grip portion for turning said body and the threads of said back wall portion into and out of a securely mounted position on the threads of the threaded end portion of the casing member.

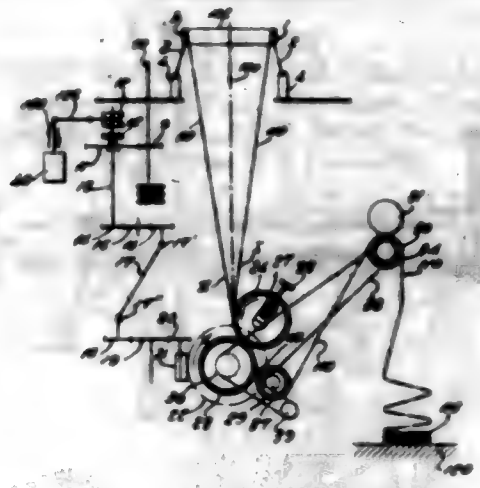
2,893,438
COLLAR PROTECTOR
Clyde E. Richard, Pittsburgh, Pa., assignor to McDowell Manufacturing Company, Millvale, Pa., a corporation of Pennsylvania
Application November 19, 1957, Serial No. 697,354
6 Claims. (Cl. 138—96)



1. A collar protector for a tapered externally-threaded end portion of a casing member which comprises, a substantially hollow housing body having a front guide wall portion and a back mounting wall portion, said back wall portion having internal threads to solely engage the threads of the end portion of the casing member on and immediately adjacent to a common pitch cone therealong, said front wall portion having a forwardly and radially-offset relation with respect to said back wall portion, internal threads formed in said front wall portion having a pitch cone offset from a pitch cone of said casing member to provide an initial slide-clearance relationship with respect to the threads of the end portion, so as to slide forwardly over the member until the threads of said back wall portion engage the threads of the end portion and to then form a loose cooperating relationship with the threads of the end portion as the protector is advanced on the taper, and said body having an intermediate connecting outwardly-offset wall portion positioned to provide a grip for rotating said body relative to the member.

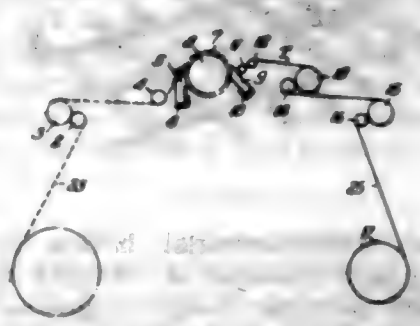
2,893,439
LOOM
Jean Rabeux, Paris, and Bernard Masson, Courbevoie, France, assignors to Societe d'Applications Generales d'Electricite & de Mecanique, Paris, France
Application January 4, 1954, Serial No. 402,188
5 Claims. (Cl. 139—13)

1. A loom comprising in combination: a main drive for the weaving implements of the loom, an actuable draw-off mechanism for drawing-off fabric woven by the implements of the loom, actuating means operatively connected with said draw-off mechanism, coupling means having a pair of engageable coupling elements, one of said coupling elements being connected with said actuating means, the other coupling element being connected with said main drive, automatic controlling means associated with said coupling means for engaging and disengaging the coupling elements of the latter, and delaying means associated with said controlling means, said delaying means being responsive to a start of said main drive for delaying an engaging action of said controlling means for a predetermined time after the start of said main drive, said automatic controlling means including an electro-



magnet for action on said coupling means, a switch electrically connected with said electromagnet, and said delaying means being associated with said switch.

2,893,440
RECTILINEAR LOOM
Giulio Brunodelli, Milan, Italy, assignor, by mesne assignments, to Developpement Textile Societe Anonyme (Detexta), Vaduz, Liechtenstein
Application March 23, 1955, Serial No. 496,289
Claims priority, application Italy January 15, 1955
6 Claims. (Cl. 139—28)

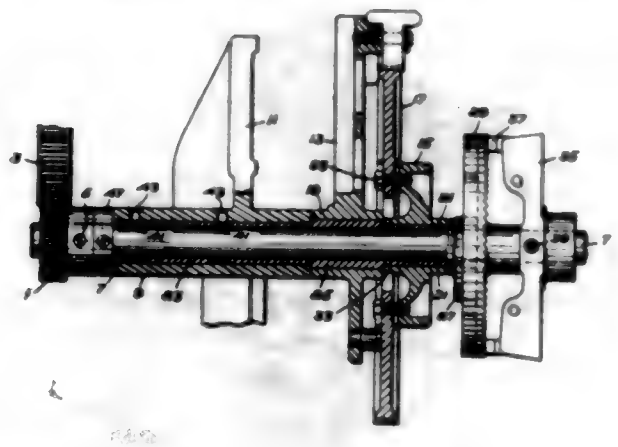


1. A continuous rectilinear loom of the class described comprising a drum adapted for constant and uniform rotation in the direction of movement of the warp, said drum being provided with two series of grooves perpendicular to each other, one series of grooves being formed by a succession of intermediate discs separated by central discs, said intermediate discs on each side of a central disc each having an undulating peripheral surface for receiving the warp with the undulations of one disc offset with respect to the undulations of the other disc, a second series of grooves formed in said central discs and comprising circumferentially spaced apart substantially obtuse angle L-shaped cuts for receiving the weft, said L-shaped cuts at their openings having a cut-out portion and a point opposed to said cut-out portion to define in effect a rabbit head profile to insure the beating up of the wefts, and a fabric extracting device engageable with one set of grooves in said drum for removing the fabric from said drum.

2,893,441
CONSTANT RATE LET-OFFS
Thomas J. Oliver, Wetumpka, Ala., assignor to H. F. Livermore Corporation, Boston, Mass., a corporation of Delaware
Application January 10, 1957, Serial No. 633,477
6 Claims. (Cl. 139—100)

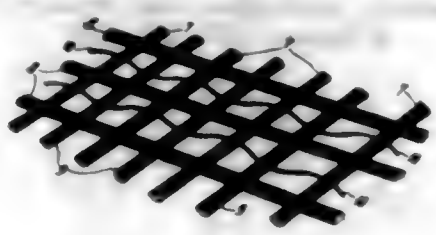
1. A warp let-off motion for looms having in combination a pinion gear, a pinion shaft, a let-off stand having

a hub supporting the pinion shaft, a pallet lever, a ratchet wheel, and a sleeve fixed within the let-off stand hub



and forming the bearing surface for the pinion shaft, pallet lever, and ratchet wheel.

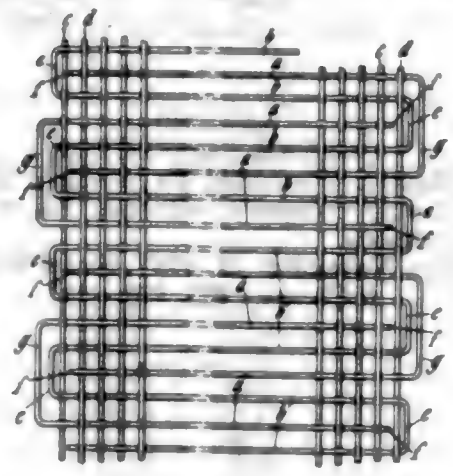
2,893,442
REINFORCING WOVEN MATERIALS FOR MAKING LAMINATED ARTICLES
Paul Genin, Paris, France
Application March 1, 1954, Serial No. 413,321
Claims priority, application France March 30, 1953
4 Claims. (Cl. 139—383)



1. A woven textile material having high tensile strength and a high modulus of elasticity for forming laminations with synthetic resins comprising weft reinforcing yarns extending substantially straight and parallel relative to one another, warp reinforcing yarns also extending substantially straight and parallel relative to one another, said warp reinforcing yarns being loosely positioned throughout their length superimposed on and extending substantially perpendicular to said weft reinforcing yarns, binding yarns extending in only one general direction and woven with said reinforcing yarns forming a sinuous partly wound pattern therearound for retaining said reinforcing yarns in their given position, said binding yarns being thin relative to said reinforcing yarns and said reinforcing yarns being formed of glass filament.

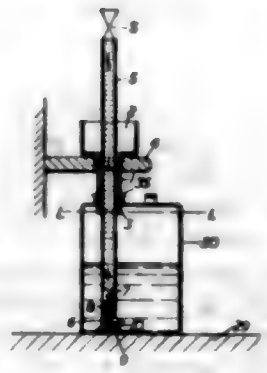
2,893,443
WOVEN TEXTILE FABRICS
Derrick Walter Shimwell, Jurby, Isle-of-Man, England, assignor to Weaving Research & Textile Commission Agents Limited, Jurby, Isle-of-Man, England, a British company
Application September 6, 1957, Serial No. 682,478
Claims priority, application Great Britain September 27, 1956
3 Claims. (Cl. 139—383)

1. A woven textile fabric comprising warp threads, a continuous weft thread passing back and forth across the warp threads thus providing loops in the selvedges at both sides of the fabric, and a second weft thread defined by a plurality of U-shaped lengths of thread, the said U-shaped lengths of thread being inserted alternately from opposite sides of the fabric whereby the ends of the legs of each U-shaped length come at least within the loops of the continuous thread, and each alternate



loop of the continuous weft thread at each selvedge coming at least within an alternate loop of the said U-shaped lengths.

2,893,444
FLUID HANDLING DEVICE
Rogor Strange Waddington, Epsom, and Bruce Duval, Ewell, England
Application February 28, 1957, Serial No. 643,129
4 Claims. (Cl. 141—89)

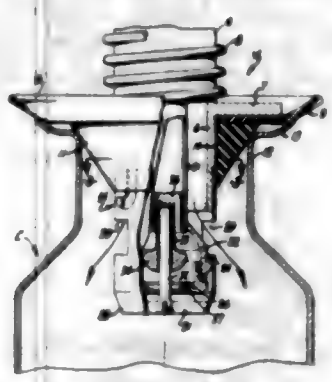


1. A device for filling a container with a liquid comprising a liquid delivery tube formed with a liquid-exit opening at its lowermost end, a sleeve mounted to surround said delivery tube and to be reciprocable axially relatively thereto, a stem pivotally mounted within said delivery tube, a sleeve-closure member mounted upon the lower end of said stem below the liquid-exit opening and adapted to engage with and seal the sleeve at the lower end thereof on relative movement between said sleeve and said delivery tube to position the lowermost end thereof within said sleeve, means for moving said delivery tube to extend beyond said sleeve and into a container, and means for controlling the delivery of liquid through said delivery tube.

2,893,445
CAN FILLER
Rudolph Geitner, Oakland, Calif., assignor to Creative Metals Corporation, Emeryville, Calif., a corporation of California
Application August 19, 1957, Serial No. 678,785
5 Claims. (Cl. 141—294)

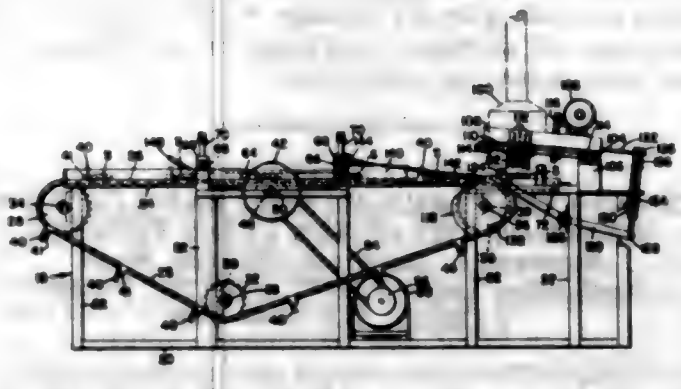
1. A can filler comprising: a tank; an open ended, hollow, longitudinally contractible and expandable valve operating member secured to and communicating at its upper end with said tank; a substantially rigid tubular member extending through said valve operating member coaxially therewith and fixed to said tank in communication therewith, said tubular member and said valve operating member together defining an annular chamber; an outwardly extending annular flange secured to the lower end of said tubular member for normally closing the

lower end of said annular chamber, said flange being provided at its periphery with a first valve seat for normally receiving the lower end of said valve operating member; a second valve seat provided on said annular flange in axial alignment with said tubular member; a tubular extension mounted on the lower end of said valve operating member and provided with at least one valve port normally located immediately below said first valve seat; an upwardly extending pin supported from said tubular ex-



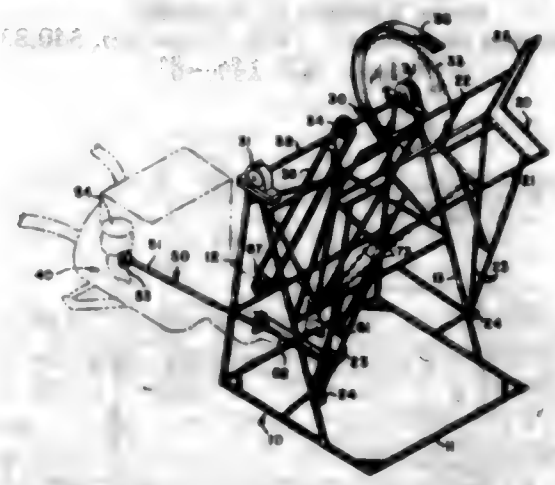
tension coaxially with said second valve seat; a sleeve surrounding the upper end of said pin, the upper end of said sleeve being closed and its lower end being provided with a valve closure member arranged normally to seat on said second valve seat thereby to close off the lower end of said tubular member; a resilient can closure plug fixed to and surrounding said valve operating member immediately above its lower end; and means for biasing said valve operating member towards an expanded position.

2,893,446
BARREL STAVE FORMING MACHINE
William T. Humphrey, New Hope, Ky., assignor to Bourbon Cooperage Company Incorporated, Campbellsville, Ky., a corporation of Kentucky
Application July 30, 1957, Serial No. 675,203
8 Claims. (Cl. 143—48)



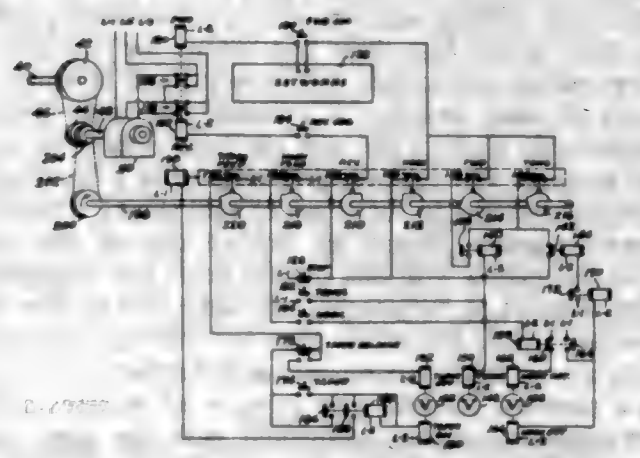
8. In a barrel stave finishing machine, conveyor means for advancing staves laterally in a common direction, means for sawing the ends of the staves to provide staves of equal lengths as they are advanced by the conveyor means, stave transfer table means disposed adjacent one end portion of said conveyor means for receiving staves advanced by the conveyor means, said transfer table means including a plurality of transfer rollers receiving said staves thereon, a transfer device for engaging said staves and propelling them at substantially right angles to the directional travel of said conveyor means, said transfer device comprising a carriage movable toward and away from said transfer rollers, and a plurality of friction discs rotatably supported by said carriage and arranged to rotate in planes substantially transverse to the line of conveyor advancement, said friction discs being of varying diameter to define a spool having a shape complementary to the convex face of a stave, and means operating in timed relationship to the movement of said conveyor means and arrival of staves at the transfer table means for moving said carriage and the supported friction discs toward and away from said transfer rollers to periodically engage staves on the transfer rollers.

2,893,447
CONVERSION KIT FOR CHAIN SAWS
Leland J. Showers, Muskegon, Mich.
Application May 4, 1953, Serial No. 352,603
2 Claims. (Cl. 143—58)



1. A circular saw attachment to a conventional standard chain saw motor comprising: an upright frame having a rotatable saw-bearing arbor at its upper portion, a work carriage movable on the frame to and from the saw, a forked plate at the rear bottom of the said main frame, said plate inter-fitting with the guide plate clamping support of said chain saw machine, a sprocket wheel on said saw arbor, and a second sprocket wheel adapted to be attached to the drive shaft of said chain saw motor, whereby an endless roller chain actuated by said second sprocket drives said first mentioned sprocket connecting and rotating the said circular saw by said chain saw motor.

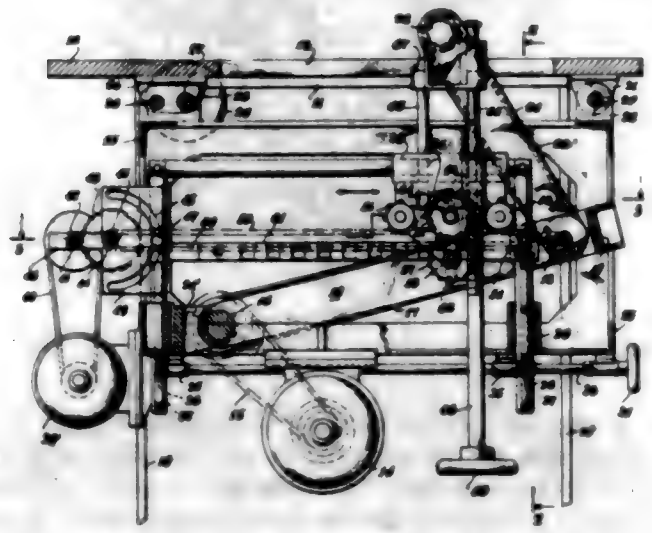
2,893,448
SAFETY SYSTEM FOR SAWMILL CARRIAGES
Bernard C. T. Elworthy, Vancouver, British Columbia, Canada, assignor to Elmer R. Worth, Sr., Salem, Oreg.
Application February 10, 1958, Serial No. 714,325
10 Claims. (Cl. 143—120)



1. For use with apparatus having a support assembly reciprocable relative to a reference point, and electrically actuated first drive means therefor, the support assembly including a plurality of reciprocable members, and electrically actuated drive means for reciprocating each member relative to the reference point independently of the first drive means: safety means for preventing extension across the reference point of said reciprocable members, said safety means comprising switch means in the circuit of the first drive means actuator, and switch actuator means operatively associated with the said reciprocable

members of the support assembly and operable by the first drive means for actuating the switch means when the forwardmost one of the said reciprocable members reaches a predetermined position relative to the reference point, whereby to stop the movement of the support assembly toward the reference point.

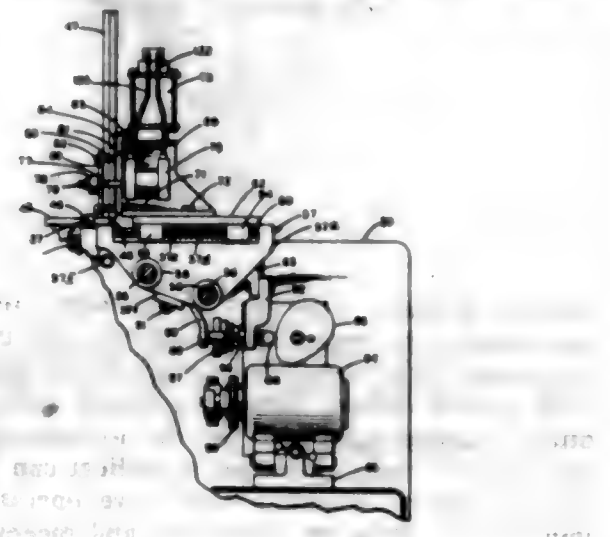
2,893,449
DOVETAILING MACHINE
Domokos Hadmegy, Rutherford, N.J., now by change of name Thomas D. Hadmegy
Application October 17, 1955, Serial No. 540,830
6 Claims. (Cl. 144—87)



1. A dovetailing machine including in combination a support to receive a pair of sheets with the edge face of the first disposed in contact with a side face of the second in a zone adjacent its edge and with the bodies of said sheets disposed at right angles with respect to each other, a rotatably mounted tool spindle having its axis disposed in a plane substantially parallel to that in which the second sheet is arranged, means for projecting said spindle in a plane normal to the body of the second sheet to cause a tool carried thereby to pass through the edge zone of that sheet and in a direction parallel to the body of the first sheet into the edge zone of the latter to provide tenons in the adjacent edge zones of both, means for retracting the spindle to withdraw the tool carried thereby to a point substantially adjacent that face of the second sheet which is opposite that in contact with the first sheet, means for thereupon shifting said spindle in a direction parallel to the edge of the first sheet and means for continuing the afore-recited projecting, withdrawing and shifting movements of said spindle, a carriage for said spindle, a reciprocable support for said carriage, means for guiding said carriage and reciprocable support in a direction substantially parallel to the edges of said sheets, a pair of cooperating gears, means for driving one of the same, a crank associated with one of said gears and engaging said latter support to reciprocate the same and further means associated with the other gear for moving said carriage along said guiding means, and said further means including a member formed with a series of recesses and support-advancing means associated with the other gear to sequentially engage said recesses.

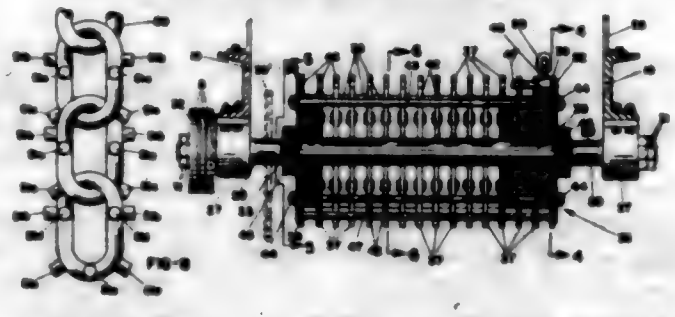
2,893,450
DOVETAILING MACHINE
Edwin A. Stouten, Grand Rapids, Mich., and Sylvester K. Beach, Gary, Ind., assignors to Alexander Dodds Company, Grand Rapids, Mich.
Application July 9, 1956, Serial No. 596,785
5 Claims. (Cl. 144—87)

5. A dovetailing machine comprising: a frame; a plurality of cutters mounted for rotation on parallel axes fixed with respect to said frame; guideway means mounted on said frame and disposed parallel to a plane perpendicular to the axes of said cutters; a first sliding member, said first sliding member being mounted for movement along said frame guideway means, and said first sliding member having guideway means disposed transversely with respect to said frame guideway means; a second sliding member, said second sliding member being mounted for movement on said first sliding member guideway means; first cam means, said first cam means being mounted for rotation with respect to said frame on an axis transverse to said frame guideway means; second cam means, said second cam means being mounted for rotation with respect to said frame on an axis transverse



to said first sliding member guideway means; power transfer means establishing a constant relationship between the angular positions of said first and second cam means; first and second cam follower means mounted on said first and second sliding members, respectively, and respectively engaging said first and second cam means, said second cam follower means being of sufficient length to remain in engagement with said second cam means over the full stroke of movement induced by said first cam means; and work-clamping means mounted on said second sliding member whereby rotation of said cams induces a movement of clamped workpieces in a predetermined path with respect to said cutters.

2,893,451
CHAIN-TYPE FLAILS HAVING BARK-CUTTING BOSSES ON THE OUTER LINKS THEREOF
Raymond L. Dickerson, Spokane, Wash.
Application August 1, 1957, Serial No. 675,657
2 Claims. (Cl. 144—208)



1. In a log-debarking device, a revolving-chain debarking head comprising an arbor adapted to be rotatably supported in a frame and having reduced end portions and an enlarged central portion; said central portion being threaded on its opposed marginal end portions; said central portion having a keyway; a key in said keyway; alternate discs and circumferentially reduced spacing wheels encircling said central portion intermediate said threaded ends and being keyed to said central portion by said key, the end ones of said discs each having an enlarged central aperture, washers encircling said central portion and dis-

posed within the apertures of said end discs, clamping nuts associated with the threads of said central portion and clamping said discs, spacing wheels, and washers together into a unitary structure; a number of tie bars extending through said discs and spacing wheels and secured thereto; circumferentially spaced anchor rods extending through the several discs in their marginal edge portions and outwardly spaced from said spacing wheels; said end discs having sockets to receive the ends of said anchor rods and said intermediate discs having aligned apertures through which said rods extend; swivel connectors carried by said anchor rods intermediate said discs and spirally arranged circumferentially of said drum; debarking chains carried by said connectors; and said chains having bark-cutting bosses on the links at the free ends thereof.

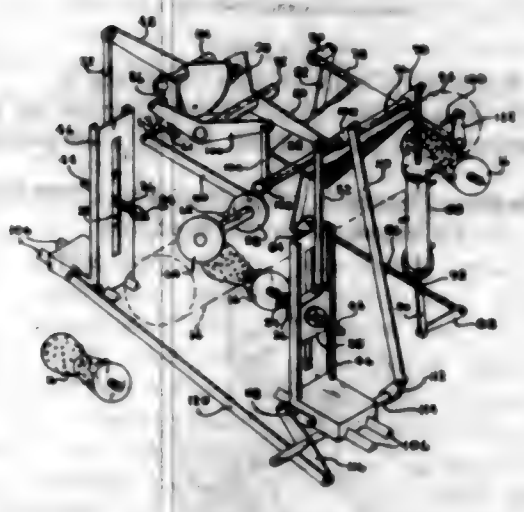
2. In a log-debarking device of the plural beating chain type the improvement comprising protruding bosses carried by a number of links at the free ends of each of said chains.

2,893,452

HYDRAULIC DEBARKER HAVING AUTOMATICALLY CONTROLLED LOG SPEED AND NOZZLE SPACING, STROKE AND SPEED

Ernest C. Shaw, Orville C. Frank, and Clifford C. Jackson, Milwaukee, Wis., assignors to The Filer & Stowell Company, Milwaukee, Wis., a corporation of Wisconsin

Application August 8, 1957, Serial No. 677,827
10 Claims. (Cl. 144—208)



1. A hydraulic log-debarking apparatus of the type in which logs of various diameters are translated longitudinally along a fixed plane comprising, a frame having a debarking station, a pair of spaced oppositely facing nozzles movably mounted on said frame at said station on opposite sides of logs passing therethrough, means for feeding liquid under pressure to said nozzles, actuating means for imparting reciprocable straight-line movement to said nozzles from said fixed plane so that the jets of liquid from said nozzles will move transversely over the surface of a log passing through said station, and control means for said actuating means including a log-diameter-sensing element to automatically adjust the amplitude of the reciprocal movement of said nozzles from said fixed plane.

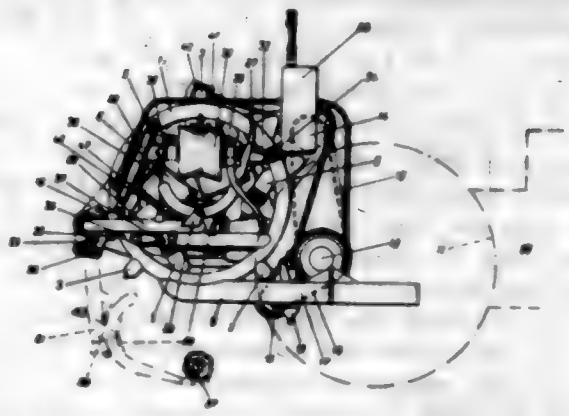
2,893,453

LOG HANDLING ARRANGEMENT FOR DEBARKING MACHINES

Per Gunnar Brundell and Karl-Erik Arnold Jonsson, Gavle, Sweden, assignors to Soderhamns Verkstader A.B., Soderhamn, Sweden

Application March 15, 1956, Serial No. 571,740
Claims priority, application Sweden March 16, 1955
12 Claims. (Cl. 144—242)

11. A log handling mechanism for lifting and then horizontally longitudinally displacing successive logs in approximate coincidence with a predetermined line of movement, said mechanism comprising log-lifting means including rotatable means mounted for rotation about an axis transverse to said line of movement, means mounting said log-lifting means for movement between a lower



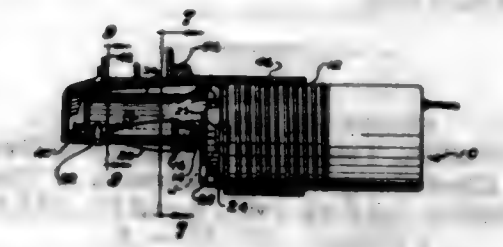
log-receiving position and an upper log-feeding position, and driven means supported above the upper position of said log-lifting means for movement in a direction along said line of movement and engageable by a log being lifted to effect horizontal longitudinal displacement thereof along said line of movement.

2,893,454

PORTABLE POWER PLANER WITH OUTBOARD SUPPORT FOR CUTTER

Wendell A. Addis, Deerfield, Mass., assignor to Millers Falls Company, Greenfield, Mass., a corporation of Massachusetts

Application May 7, 1957, Serial No. 657,688
5 Claims. (Cl. 145—4)



1. A portable hand held power planer comprising a power unit having a motor housing and a power shaft extending from one end of said housing, a cutter mounted on said power shaft, a bracket secured to said one end of the power unit motor housing, positioning means for accurately securing said bracket thereon, said bracket having a journal accurately disposed with respect to said positioning means for providing outboard support for said cutter, said journal being accurately positioned coaxially of said power shaft to provide an outboard support for said cutter, and a separate workpiece guide secured to the exterior of said power unit housing and having a workpiece engaging surface parallel to the axis of said power shaft.

2,893,455

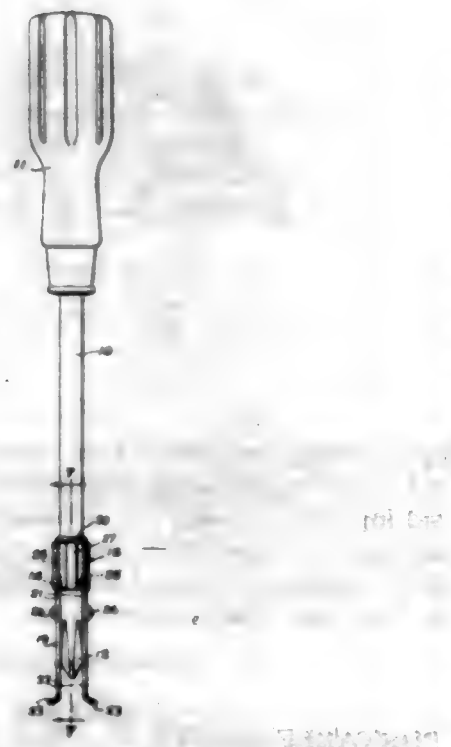
SCREW HOLDER FOR SCREW DRIVERS

Fritz L. Lindberg, Flint, Mich.

Application December 5, 1956, Serial No. 626,345
5 Claims. (Cl. 145—52)

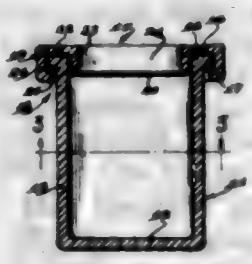
1. A device of the character described comprising, in combination, a screw driver having a handle, a shank, and a blade, said shank having an annular groove forming a shoulder in spaced relation to said blade, a split sleeve frictionally slidable on said shank and on that side thereof remote from said blade, means in said sleeve for engaging said shoulder whereby to limit the movement of said sleeve toward said blade, a pair of substantially parallel spaced spring legs carried by said sleeve and slid-

able for limited longitudinal movement relative to said sleeve and shank, said legs being arranged in close proximity to opposite sides of said shank and having end portions thereof projecting forwardly of said sleeve and along



side of said blade, screw head-engaging loops integrally formed at the forward ends of said legs and extending in planes parallel to the axis of said shank, and an angularly and outwardly extending lip integrally formed at the outer end of each loop.

2,893,456
CLOSURE ASSEMBLY
Robert T. Wallace, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application April 18, 1957, Serial No. 653,566
8 Claims. (Cl. 150—.5)

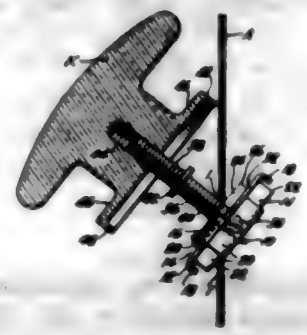


1. A closure assembly for a container having a dispensing opening defined by a peripheral rim formed from a resilient material and having a bead-like projection flaring outwardly adjacent said rim, said assembly comprising a resilient cap member adapted to enclose said rim and said projection, and having a central aperture at least partially coincident with said opening when said closure assembly is applied, said cap member including a top wall surrounding said aperture for abutting contact with the upwardly facing edge of said rim, a flange depending from said wall for abutting contact with the inner surface of said rim, a skirt depending from the outer margin of said wall and means on said skirt for cooperative snap-on engagement with said bead-like projection, and a flexible, film-like membrane peripherally adhered to said cap member to thereby span and close said central aperture.

2,893,457
REMOVABLE PURSE LINER AND METHOD OF FABRICATION
Helen M. Wilson, Oakland, Calif.
Application July 10, 1956, Serial No. 597,038
2 Claims. (Cl. 150—30)

1. A method for fabricating an interchangeable segmented liner for use with a succession of varyingly constructed handbags comprising the steps of cutting a first and second generally rectangular blank from flexible fabric, forming generally rectangular matching extensions having rounded corners along the two long edges of said blank by cutting spaced rounded indentations into said long edges thereof, folding said rectangular blank into equal subsections along lines parallel to the ends of said blank, folding said extensions along margin lines parallel to said long edges, securing together the long edges and one pair of rounded corners of adjacent ones of said extensions wherein said adjacent extensions define bellows folds throughout their length, and affixing disengageable fastener means to one shorter edge of each said blank whereby said folded blanks may be secured together in stacked relationship.

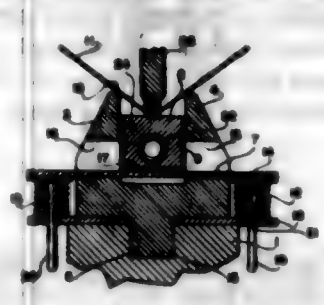
2,893,458
HANDLE MOUNTING DEVICE
Laurence H. Flora, Cleveland, Ohio, assignor to Timerman Products, Inc., Cleveland, Ohio, a corporation of Ohio
Application March 5, 1956, Serial No. 569,512
5 Claims. (Cl. 151—41.75)



1. A mounting device for assembly in an opening in a supporting panel from one side only of the panel comprising, a sheet metal clip having a generally flat base including abutment surfaces on opposite ends of said base and adapted to pass through the panel opening from the forward side of the panel to fastening position wherein said abutment surfaces are in engagement with marginal portions of the panel at the rearward side thereof, lateral wings on said base extending outwardly from side edge portions of said base for engaging the forward side of the panel adjacent the opening therein, a threaded member detachably secured to said base in non-rotatable relation and adapted to be retained by said clip in the panel opening, a pair of spaced shoulders projecting forwardly from the underface of said base between said lateral wings, said shoulders being disposed in inwardly spaced relation from the terminal edges of said base and in inwardly spaced relation from said lateral wings, said mounting device being adapted to be inserted in tilted position through the forward side of the panel opening with the leading one of the end portions of said base and an associated one of said shoulders being received through the panel opening and with said lateral wings bearing against the front surface of the panel, after which

the clip is adapted to be rotated to pass the trailing one of the end portions of the base through the opening and position the base of the clip generally parallel to the panel, and then the clip is adapted to be shifted in the direction of said trailing end portion whereby said shoulders are receivable in the panel opening in generally abutting relation to confronting edge portions of the opening to lock the mounting device in attached position in the panel opening, and outwardly extending cam surfaces on said end portions of said base and on said lateral wings for facilitating the movement of said mounting device to attached position.

2,893,459
POWER BRAKE HAVING WORK SUPPORTING PLATEN WITH HEATING MEANS FOR WORK
Joseph A. Kesek, Atlanta, Ga., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Application October 21, 1954, Serial No. 463,637
2 Claims. (Cl. 153—21)

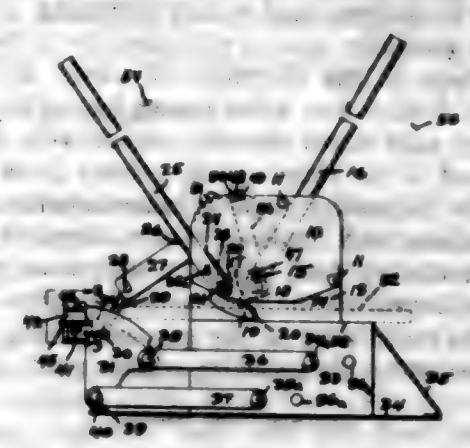


1. A power brake forming machine comprising, a base member, a pair of spaced die blocks secured to the base member, a movable punch member carried above said base member for reciprocating action relative to the base member, the plane of movement of said punch member being arranged to bisect said spaced die blocks whereby a workpiece interposed between the punch and said die blocks may be formed by pressure applied with said punch, a floating platen interposed between said die blocks, supporting means engaging said platen, spring means normally urging said platen and said supporting means toward said punch, said platen extending above the level of the highest points of said spaced die blocks when in its spring urged extended position whereby a flat sheet workpiece positioned between said die blocks and said punch member will contact said platen in the area opposite said punch, said spring means maintaining platen contact with said workpiece being formed substantially throughout the forming operation, and means carried by said platen for heating the same in the area of contact with said work piece whereby the material being formed is maintained at the desired temperature throughout the forming operation by heat transmitted to the workpiece by said platen.

2,893,460
CAM CONTROLLED STRETCH FORMER
Burt F. Raynes, Chula Vista, Calif., assignor to Rohr Aircraft Corporation, Chula Vista, Calif., a corporation of California
Application February 15, 1954, Serial No. 410,229
4 Claims. (Cl. 153—40)

2. A forming machine adapted to conform a long workpiece to a desired curvature comprising, in combination, a die having a face conforming to said curvature, means including a pair of jaws respectively gripped to the ends of the workpiece and spaced from said die for holding the unformed workpiece initially away from the die, a cylinder, a piston connected to one of said jaws and slidable in said cylinder, means supporting said cylinder and die for relative rotation therebetween sufficient to bring the workpiece into contact with the die and to wrap the workpiece along said face of the die, means for causing said relative rotation between said cylinder and die, and workpiece tensioning means including said piston and cylinder and a cam and follower therefor carried respectively by said die and said one of the jaws for resisting movement of said piston toward the die as said one of the jaws and the portion of the workpiece gripped thereby are drawn toward the die in response to movement of the workpiece into contact with the die and subsequent wrapping thereabout, said cam having a curved face and said follower being constrained by said tensioning means to contact and follow along said face of the cam as the workpiece is brought into contact with and wrapped along said face of the die, said cam face being shaped to control initial stretching of said workpiece by said tensioning means prior to contacting of the workpiece with the die, said cam face being further shaped to control continual elongation of the workpiece by said tensioning means in proportion to the length of the unwrapped portion of the workpiece as the workpiece is wrapped along the face of the die, said tensioning means including a valve carried by said one of the jaws and having a spring biased plunger movable under control of said follower to a first position for preventing release of fluid under pressure by said piston in said cylinder and to a second position for releasing said fluid from the cylinder to permit movement of the piston toward the die.

2,893,461
CONDUIT BENDER
Martin F. Pauling, Sioux Falls, S. Dak.
Application June 4, 1956, Serial No. 589,313
1 Claim. (Cl. 153—48)



A conduit bender comprising a framework including a horizontally positioned platform, said platform being adapted to receive a conduit thereon, means for firmly retaining said conduit on said platform, a movable member spaced from said framework including a channel portion for receiving an end of said conduit, a lever fulcrumed to said framework and secured to said movable member for raising the same to bend said conduit, a retaining member secured to said movable member for holding the end of said conduit, two pairs of opposed vertically spaced links pivotally secured to said framework and said movable member to maintain said retaining member and the end of said conduit in constant horizontal position during raising movement of said movable member, means for adjusting the extent of bending of said conduit including notches in the upper end of said framework adjacent to

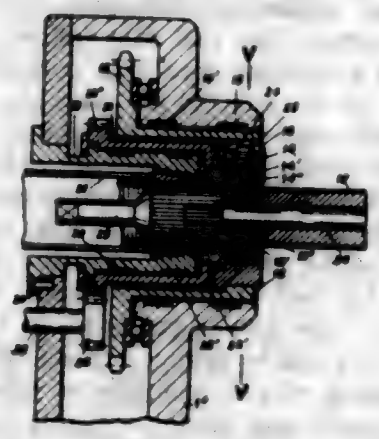
said lever, an adjustable limiting member including a lug received in any of said notches, said means for retaining said conduit on said platform including a further lever pivoted to said framework, a channel pivoted to said framework, said further lever member including an extension operating against said channel to tighten the same against said conduit.

2,893,462

DEVICE FOR MANUFACTURING CONTINUOUS, SPIRALLY GROOVED TUBING WOUND OF BAND MATERIAL

August Carl Hunziger, Zurich, Switzerland

Application December 1, 1953, Serial No. 395,531
Claims priority, application Switzerland January 23, 1953
8 Claims. (Cl. 153—72)



1. A device for manufacturing continuous, spirally grooved tubing wound of band material, comprising rotary grooving means including an outer nut member and an inner worm member in coaxial disposition, each of said members having at least one rotary grooving roll, guide means for guiding the tubing between said rolls, the said rolls coacting with each other for pressing spiral grooves in the tubing and each having a rotational axis slanted relative to the longitudinal axis of the tubing so as to transport the tubing through the guide means, rotary flattening means acting upon grooved tubing for smoothing the spiral grooves, said rotary flattening means being disposed in posterior spaced relationship to the grooving means as seen in the direction of travel of the tubing through the device, first drive means for rotating said nut member and said worm member respectively in the same direction and at the same speed, second drive means for rotating the flattening means independently from the grooving means, and retaining means disposed within the tubing posterior of said grooving means as seen in the direction of travel of the tubing through the device and engaging the inner wall of the grooved tubing to prevent rotation thereof by the grooving means.

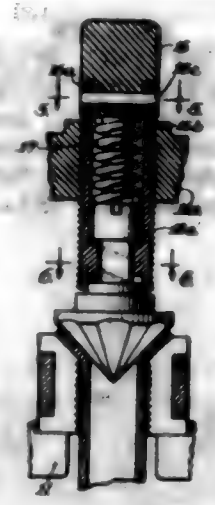
2,893,463

FLARING TOOL WITH LOST MOTION CONNECTION PROVIDING AUTOMATIC BURNISHING

Leonard J. Kowal, Chicago, Ill., assignor to The Imperial Brass Manufacturing Company, a corporation of Illinois

Application August 10, 1956, Serial No. 603,393
4 Claims. (Cl. 153—79)

1. A tube flaring and burnishing tool comprising a frame member having a threaded bore through one portion thereof and a support portion adapted to have a tube end supported therein in alignment with said bore, an externally threaded sleeve engaged in said bore for rotative movement relative to said frame member and for axial movement as an incident to such rotative movement, said sleeve having a bore extending longitudinally therethrough with a constricted, noncircular portion intermediate the ends thereof, tube flaring means including a carrying member mounted in the constricted portion of said sleeve for movement axially thereof and a flaring cone fixed on that end of said carrying member adjacent the support portion of said frame, said carrying member having a noncircular cross section conforming to the constricted, noncircular portion of the bore in said sleeve to be nonrotatable relative to said sleeve, means carried by the end of said carrying member opposite said flaring cone cooperating with the constriction in said sleeve bore to limit axial movement of said flaring means in a direction toward said tube support portion, means on said flaring means adapted to cooperate with the adjacent



sleeve end to limit relative axial movement away from said tube support portion, a handle extending transversely across and secured to said sleeve at the end opposite said flaring means, and a compression spring received in the bore in said sleeve and bearing at one end against said handle and at the other end against said tube flaring means constantly urging said tube flaring means in the direction of said tube support portion forcefully to maintain said cone urged against a tube that has been flared to effect a burnishing thereof during retracting rotation of said sleeve until said flaring means has traveled the limit of its axial movement relative to said sleeve.

2,893,464

FLARING AND BURNISHING TOOL WITH LOST MOTION CONNECTION

George E. Franck, Riverside, Ill., assignor to The Imperial Brass Manufacturing Company, a corporation of Illinois

Application August 10, 1956, Serial No. 603,425
9 Claims. (Cl. 153—79)

1. A tube flaring and burnishing tool comprising a frame member having a threaded bore through one portion thereof and a support portion adapted to have a tube end supported therein in alignment with said bore, an externally threaded sleeve engaged in said bore for rotative movement relative to said frame member and for

axial movement as an incident to such rotative movement, an abutment means carried by said sleeve, tube flaring means including a carrying member mounted in said sleeve for movement axially thereof and a flaring cone fixed on that end of said carrying member adjacent the support portion of said frame, means including a handle for simultaneously rotating said sleeve and said flaring means in either direction to advance or retract said sleeve, stop means associated with said sleeve and with said flaring means restricting to a desired amount the relative axial movement between said sleeve and said flaring means, said stop means including the end of said sleeve adjacent said cone and means on said flaring means adapted to be engaged by said sleeve end, after a predetermined advance of said sleeve by rotation in an advancing direction, for effecting positive axial movement of said flaring cone to effect a flaring operation upon continued rotation of said sleeve in an advancing direction, and compression spring means interposed between said abutment means and said flaring means forcefully maintaining said cone urged against a tube that has been flared to effect a burnishing thereof during retracting rotation of said sleeve until said flaring means has traveled the limit of its axial movement relative to said sleeve.

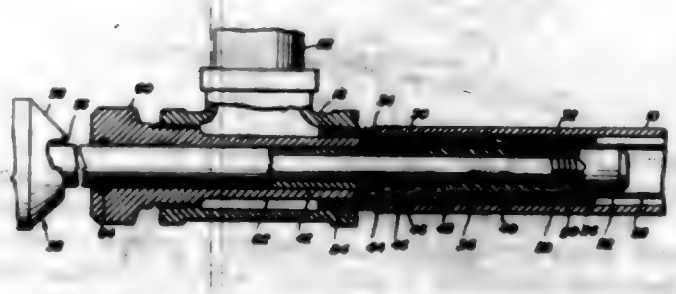
2,893,465

TOOL FOR INSTALLATION OF BY-PASS ASSEMBLY FOR SERVICE PIPE

Frank H. Mueller and Walter J. Bowan, Decatur, Ill., assignors to Mueller Co., Decatur, Ill., a corporation of Illinois

Original application January 27, 1955, Serial No. 484,394, now Patent No. 2,829,675, dated September 13, 1957. Divided and this application July 5, 1957, Serial No. 670,331

3 Claims. (Cl. 153—79)



1. An expanding tool for installation of a by-pass assembly to be inserted through a T and into a service pipe connected to one end thereof, the assembly having expansible portions adjacent both of its ends, comprising: a tubular member detachably securable to the other end of the T and having an extension adapted to extend through the T and into the pipe to serve as an abutment for the rear end of the by-pass assembly; a thrust tube slidably mounted in and extending through said tubular member for insertion into the by-pass assembly; a draw rod reciprocably mounted in said thrust tube and having an enlargement on its forward end beyond the forward end of said tube; and expansible element mounted on said rod between said enlargement and said tube forward end for expansion on compression therebetween by rearward movement of said rod, the inner diameter of the forward end of said extension being less than the minimum interior diameter of the by-pass assembly to form a forwardly facing abutment shoulder; and stop means on said rod between said expansible element and said tube and engageable against said shoulder to axially position said rod, element and tube.

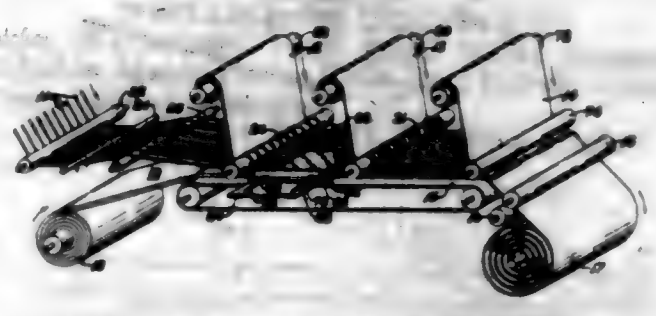
2,893,466

METHOD AND APPARATUS FOR MAKING CABLE REINFORCED CONVEYOR BELTS

Herbert H. Fink, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

Application October 1, 1954, Serial No. 459,707

3 Claims. (Cl. 154—4)



1. The method of building a flexible cable-reinforced conveyor belt which comprises assembling reinforcing cables in laterally spaced parallel relation to each other between a sheet of elastomeric belt material and a strip of belt carcass material, exerting localized pressure on said sheet in zones thereof between adjacent cables while maintaining the cables and the portion of the sheet overlying said cables substantially free of pressure to corrugate said sheet about the cables and to engage said zones of the sheet with the opposing portions of said strip thereafter covering the assembly of said sheets and cables with elastomeric belt covering material, and finally fusing the resulting assembly into an integral finished belt.

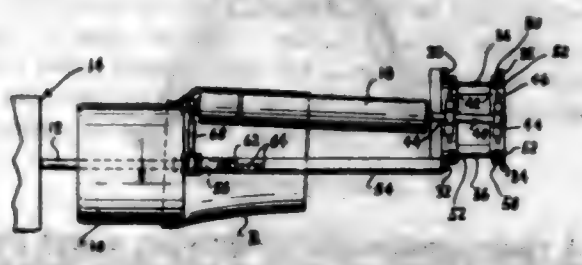
2,893,467

TIRE BUILDING APPARATUS

Herman S. Fortner, South Norwalk, Conn., assignor to The Armstrong Rubber Company, West Haven, Conn., a corporation of Connecticut

Application April 16, 1956, Serial No. 578,338

4 Claims. (Cl. 154—9)



1. Apparatus for mounting endless bands of elastic material on a rotatable cylindrical drum of a tire building machine wherein one end of the drum is free, said apparatus comprising a frame movable adjacent to and away from the free end of the rotatable drum, a single band supporting and applying roller mounted on said frame for rotation about its own axis, the diameter of said roller being relatively large but less than half than the diameter of said tire building drum, said roller being positioned on said frame so that it is movable into adjacent end-to-end band-applying position relative to the free end of said drum, said roller being located in said band-applying position adjacent the periphery of said drum and with the periphery of said roller lying partially within and partially outside an imaginary extension of the cylindrical surface of said drum, whereby an endless band may be spun from said roller onto said drum.

2,893,468

PLASTIC HEAT-SEALING APPARATUS

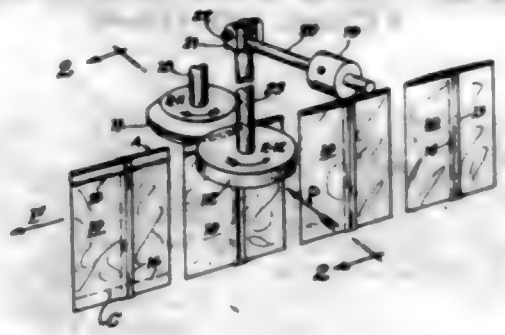
William R. Fleroh, Chicago, Ill.

Application August 31, 1955, Serial No. 531,671

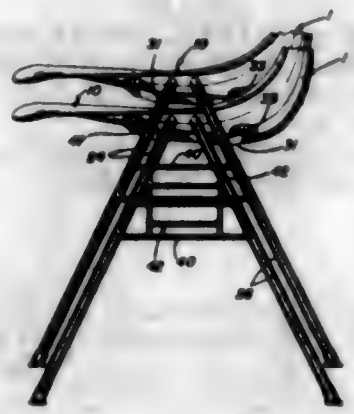
14 Claims. (Cl. 154—42)

1. Apparatus for continuously heat-sealing thermoplastic sheet material, comprising a heater and back-up roll

assembly formed by at least two rolls, means for continuously feeding thermoplastic sheeting to be sealed through the space between the two rolls; a stationary bearing for one of the rolls; a movable bearing mounting the other roll for swinging movement in a plane substantially radial of the first-named roll; a counterweight on the other roll mounting for yieldingly gravitationally biasing said other roll in said plane against the thermoplastic sheeting material and the first-named roll and drive means for rotating said rolls.



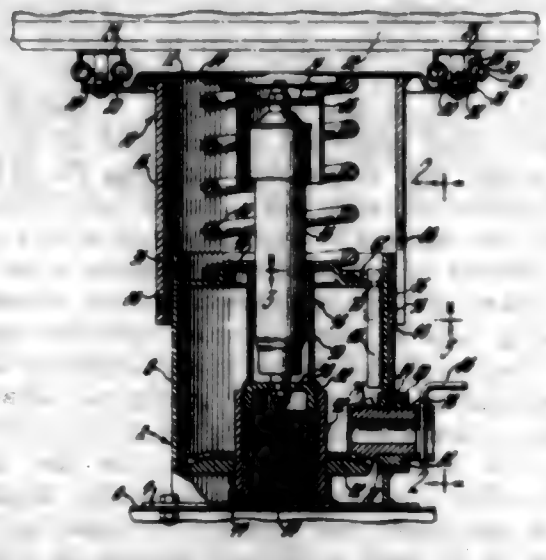
2,893,469
NESTING CHAIR
Charles Eames and Don Albinson, Venice, and Dale W. Besser, Los Angeles, Calif., assignors to Herman Miller Furniture Company, Zeeland, Mich., a corporation of Michigan
Application March 5, 1956, Serial No. 569,424
11 Claims. (Cl. 155—2)



10. A chair construction comprising: a seat having a pair of legs on each side thereof extending therefrom to support said seat; said legs in a front and back direction converging toward said seat and laterally of said seat being parallel; said legs having outer and inner sides; a pair of leg braces, one of said braces extending between and secured to both legs of each of said pairs of legs between said seat and the lower ends of said legs; said leg braces having vertically spaced upper and lower bearing surfaces extending outwardly beyond said outer sides of said legs, said upper bearing surfaces forming supports on which the lower bearing surfaces of leg braces of an identical chair seat when two of the chairs are stacked with the legs and seats of the chairs slightly spaced vertically.

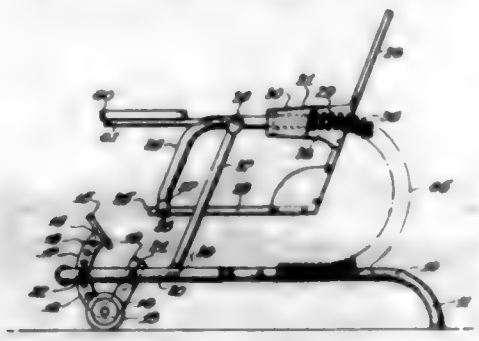
2,893,470
ADJUSTABLE SEAT
Henry A. Peller, Cleveland, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 7, 1957, Serial No. 688,648
17 Claims. (Cl. 155—9)

1. A vertically adjustable seat assembly comprising an upstanding base, an upstanding vertically adjustable seat support telescopically mounted on said base, mechanism for yieldably supporting and adjusting said seat support on said base, said mechanism comprising vertically adjustable height-controlling means, spring means extending between said height-controlling means and said seat support, and means for controlling vertical movement of said height-controlling means, said last named means



including a threaded rotatable driving member, driven means on said height-controlling means threadably engaging said driving member, and cooperating reaction means on said base and height-controlling means for restraining the latter from rotation as said driving member is rotated.

2,893,471
ROCKER SUPPORT DEVICE AND THE LIKE
Howard McClellan, Chicago, Ill.
Application May 9, 1956, Serial No. 583,707
7 Claims. (Cl. 155—56)

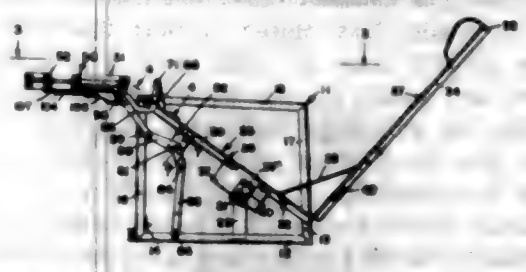


1. A rocking support and the like, comprising a frame, a rigid rockable means pivoted to said frame; a body support pivotally connected to said rigid rockable means; a rearwardly curved coil spring under continuous tension secured to said frame and said body support and supporting said body support in positions opposed to said rockable means, coils of said spring being successively compressible longitudinally of said frame.

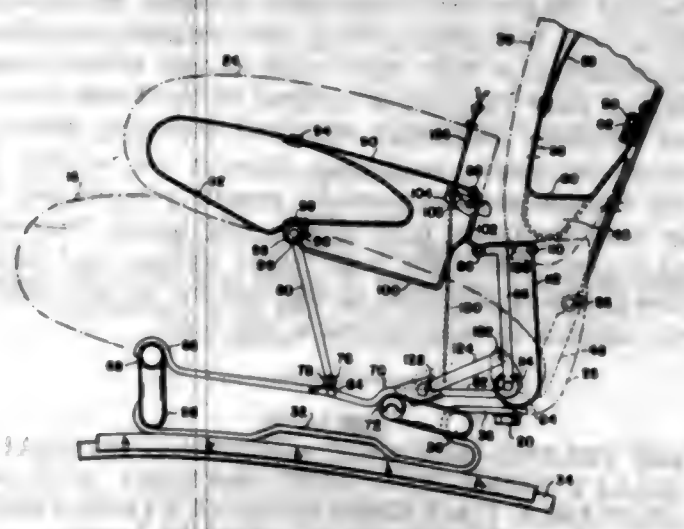
2,893,472
LOUNGE CHAIR WITH LEG REST
Steve J. Repaich, Los Angeles, Calif., assignor to Call-Quilt Furniture Corporation, Los Angeles, Calif., a corporation of California
Application June 25, 1956, Serial No. 593,462
2 Claims. (Cl. 155—106)

1. In a tilting chair construction, a base, a seat frame mounted on the base for tilting movement about a horizontal axis, a leg rest having a rear frame hingedly secured to the forward edge of said seat frame, a pair of bell cranks pivotally mounted on opposite sides of said seat frame, a pair of normally vertical first links pivotally connected at their lower ends to opposite sides of said base and pivotally connected adjacent their upper ends to one of the ends of said bell cranks, said first links having ver-

tical extensions at their upper ends in alignment with and adapted to act as abutments for opposite sides of said seat frame whereby to equally support and limit forward tilting movement of the seat frame, and a second pair of links pivotally connected at their inner ends to the other ends of said bell cranks and pivotally connected at their outer ends to said leg rest frame.

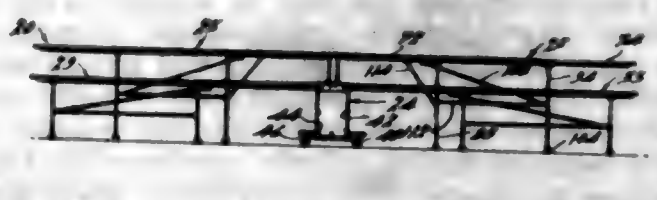


2,893,473
JOINTED ARM REST
Kennard Pitts, Detroit, and Elmer A. Herider, Dearborn Township, Wayne County, Mich., assignors to Rockwell-Standard Corporation, a corporation of Pennsylvania
Application February 15, 1957, Serial No. 640,432
15 Claims. (Cl. 155—112)



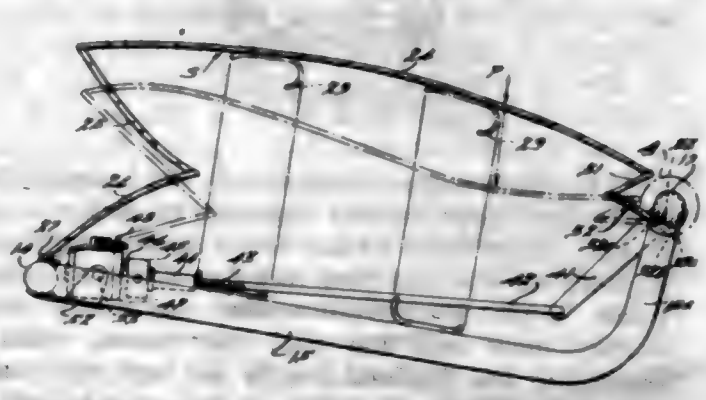
11. A seat assembly having outer seat sections arranged with a main seating frame therebelow and with a back rest structure supported therebehind, said back rest structure having a relieved intermediate portion therein, said assembly further including a subframe mounted on an intermediate portion of the main seating frame between the outer seat sections, an arm rest member carrying an arm rest cushion and forming the upper link in at least approximately a parallelogram linkage swingable on the subframe, a forwardly disposed bent rod member forming the front links of the parallelogram linkage and passing through side slots in the walls of a cushion element retaining tube which is secured to the arm rest member, means forming a joint between said front links and said retainer tube enabling the former to turn in said slots, a rearwardly disposed bent rod member forming the rear links of said parallelogram linkage for lifting and supporting the arm rest in a level position, said rear member carrying a secondary cushion adapted to protrude into a concealed position in said relieved back rest portion when the arm rest is lifted, a first joint between the rear member and said arm rest member comprising hinge leaves having a downwardly offset hinge axis for normally concealing the hinge, a second joint between the rear member and said subframe including biasing means effective to lift the arm rest, and means for locking said linkage at its first and second joints comprising a latch between said hinge leaves effective to hold said arm rest cushion and said secondary cushion flush with said outer seat sections and a separate latch for the second joint cooperating with said biasing means to support the arm rest in its lifted position, and means effective to lift said latches in tandem and having a common actuator therefor connected to one of said latches.

2,893,474
PORTABLE FOLDING TABLE
Charles W. Bobbish, Hazel Park, Mich., assignor to Schieber Manufacturing Company, Detroit, Mich., a corporation of Michigan
Application April 13, 1956, Serial No. 578,039
1 Claim. (Cl. 155—124)



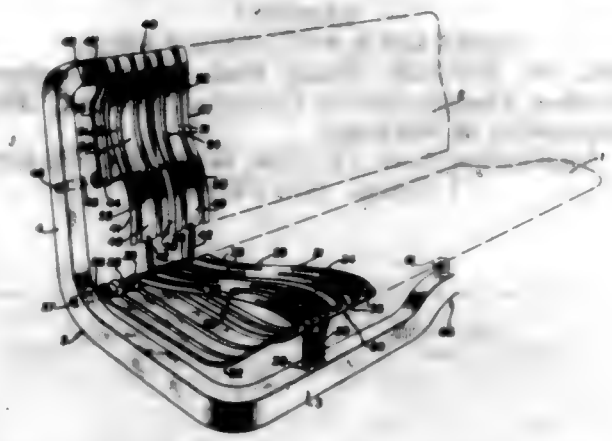
A folding table and bench assembly comprising, in combination, a support, a table top and a bench top each including a pair of sections pivotally connected together intermediate the ends of the top, a fixed pivotal connection between one end of said table top and said support located at table top height, a fixed pivotal connection between one end of said bench top and said support located at bench top height, the axes of said pivotal connections being parallel and being located in approximately the same vertical plane so that the table and bench when in operative position extend alongside each other for cooperative use and the two tops may be folded with the two sections of each lying in vertical planes in back-to-back relationship with the pivotal connections between each pair of sections uppermost, folding legs on said tops for supporting the outer ends of said sections in operative position, the section of said bench top which is pivoted to said support being longer than the section of said table top which is pivoted to said support by an amount equal to the difference in vertical elevation of said pivotal connections to said support, and the outer section of the table top being longer than the outer section of the bench top so that the two tops are of approximately the same length when in operative position.

2,893,475
VARIABLE RATE SPRING SUSPENSION
John J. Fodermaier, Birmingham, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application April 5, 1955, Serial No. 499,307
11 Claims. (Cl. 155—179)



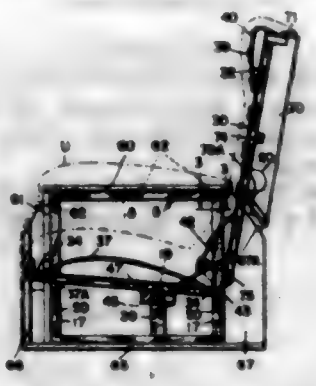
1. A spring cushion unit including opposed frame rails one of which is rotatable relative to the other about an axis extending longitudinally thereof, longitudinally extensible, load supporting, spring strip means extending between and anchored to said opposed rails, and means to cause rotation of said rotatable rail to effect variation in the effective length of the spring strip and thereby vary the deflection rate of the spring strip.

2,893,476
SEAT CONSTRUCTION
Curtis P. Liljengren, Miami, Fla.; Shirley S. Liljengren, sole legatee of said Curtis P. Liljengren, deceased
Application September 10, 1956, Serial No. 609,015
18 Claims. (Cl. 155—179)



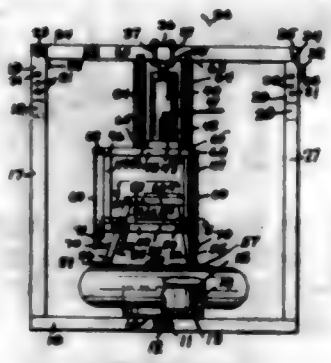
1. A seat construction comprising a support, a seat cushion unit comprising a plurality of strip means arranged in side by side assembly, each strip means having an outer portion providing an occupant-supporting surface, said strip means being arranged with the ends of said outer portions of all of them at one edge of the assembly disposed in substantially continuous laterally directed alignment, means resiliently connecting said end of each outer portion to the support, the opposite ends of the outer portions being mutually independently spring connected to the support with restraint against lengthwise and lateral movement and freedom for movement substantially normal to the general plane of said occupant-supporting surface of the assembly.

2,893,477
FURNITURE CONSTRUCTION
Steve J. Repnich, Los Angeles, Calif., assignor to Cali-Quilt Furniture Corporation, Los Angeles, Calif., a corporation of California
Application December 12, 1955, Serial No. 552,528
3 Claims. (Cl. 155—191)



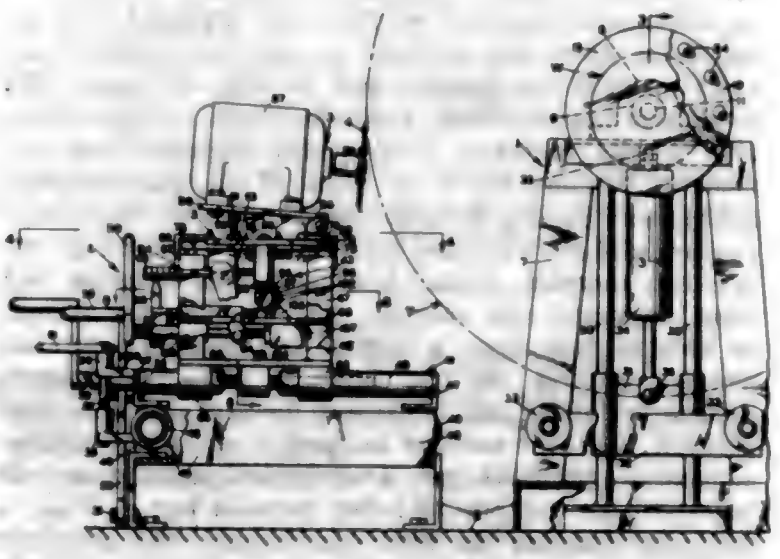
1. In chair frame construction, the combination of angle iron strips welded together to define a unitary metallic inner base frame, wood strips secured to and disposed outside said base frame to define an outer base frame, angle iron strips welded together to define a unitary inner seat and back rest frame, wood strips secured to and disposed outside the back rest portion of said latter frame to define an outer back rest frame, means supporting said inner seat and back rest frame from said inner base frame, said latter means comprising a bar of round cross-section disposed transversely of said inner base frame, posts supporting said bar from said base frame, bosses depending from said inner seat and back rest frame and resting against said bar and plates rotatably carried by said bar and secured to said bosses.

2,893,478
TRUCK TIRE BEAD BREAKER
Donald D. Crawford, Ute, Iowa
Application July 3, 1957, Serial No. 669,878
3 Claims. (Cl. 157—1.2)



1. A truck tire bead breaker comprising a framework, said framework including a pair of end supports, a longitudinally positioned bar attached to the tops of said end supports, means for pivoting said bar to one of said supports, and means for locking the other end of said bar to the other of said supports, an expansible hydraulic jacking unit dependingly attached at one end to said bar, a second framework dependingly attached to the other end of said hydraulic jacking unit, vertically positioned rods attached at their upper ends to said second framework, a third framework secured to the lower ends of said vertically positioned rods and including rollers, a fourth framework positioned between the second and third frameworks, substantially angularly positioned further bars pivoted at their tops to said fourth framework and bearing with their outer edges against said rollers, shoes pivotally attached at the bottom of said further bars adapted to bear against a tire bead.

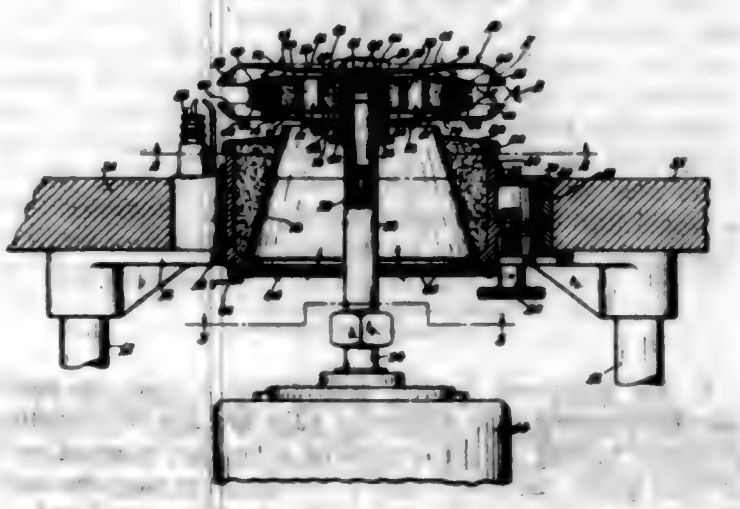
2,893,479
TIRE TRUING DEVICE COMPRISING HYDRAULICALLY OPERATED TIRE SUPPORT AND ADJUSTABLE CAM OPERATED CUTTING TOOL
James V. Sheridan and Orval M. Lewis, Sweet Home, Oreg.
Application November 19, 1956, Serial No. 623,287
13 Claims. (Cl. 157—13)



1. A tire truing apparatus comprising a base, a wheel supporting pedestal on said base; means for removably mounting a wheel and tire on said pedestal and comprising a tubular shaft journaled on said pedestal, a radial annular flange on one end of said shaft, a plurality of spaced dowels on the outer face of said flange and dis-

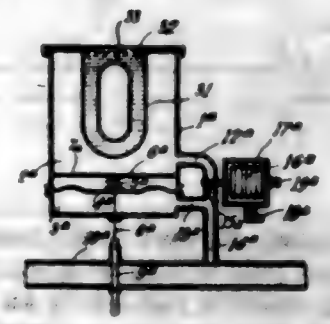
posed in a circle concentric with the axis of said shaft for mating in the bolt or lug holes of a wheel, an inner shaft removably mounted in said tubular shaft, a disc on the outer end of said inner shaft and corresponding substantially with said annular flange, and means for releasably securing said inner shaft in said tubular shaft to clamp a wheel between said annular flange and said disc; and a tire trimming apparatus including an adjustable support mounted on said base laterally of said pedestal and substantially aligned with the periphery of a wheel mounted on said pedestal, a carriage slidably mounted on said adjustable support, a trimming device mounted on said carriage and including a knife for trimming the tread of a tire on a wheel mounted on said pedestal, and means for moving said carriage to move said trimming knife transversely of the tire tread and imparting a compound movement thereto corresponding to the desired transverse contour of the tread of the tire; drive means connected with said tubular shaft for rotating a wheel supported by said mounting means; means on said pedestal for raising or lowering a wheel and tire relative to said mounting means; said means for releasably securing said inner shaft in said tubular shaft comprising a second inner shaft slidably mounted in said tubular shaft and extending beyond the end of said tubular shaft opposite said flange, means for releasably securing the inner ends of said inner shafts together, and means on the outer end of said second inner shaft for sliding said inner shafts longitudinally within said tubular shaft for moving said disc toward or away from said annular flange to release or clamp a wheel between said flange and disc.

2,893,480
ROTARY OIL BURNERS
John J. McGillis and Hugh D. McGillis, Brockton, Mass.
Application June 29, 1956, Serial No. 594,747
4 Claims. (Cl. 158—77)



1. A rotary oil burner for operating within a combustion chamber, comprising a first pair of dished plate elements secured together in spaced relation with their dished sides toward each other to provide an atomizer chamber between them, a second pair of dished plate elements fixed relative to said first mentioned pair, one plate element of said second pair being spaced above and the other spaced below said first mentioned pair of plate elements, and all of said plate elements being concentric on a common vertical axis for rotation as a unit on said axis, means for delivering oil into the said atomizer chamber, said oil moving outwardly in response to rapid rotation of said plate unit and discharging annularly and centrifugally as a stream of atomized oil from between said first pair of plate elements, means defining flow passages connecting the space between the lower plate elements of said first and second pairs of plate elements with the space between the upper plate elements of said first and second pairs of plate elements, means defining a plurality of radially inner openings and a plurality of radially outer openings through the lower one of said second pair of plate elements, means rotatable in unison with said first pair of plate elements for inducing flow of relatively fresh air through said radially inner openings and thence in substantial part through said connecting passages to and outward within said space between the upper plate elements of said first and second pairs of plate elements for constituting an upper outwardly flowing air stream, another part of said induced fresh air being induced outwardly within the space between the lower plate elements of said first and second pairs of plate elements for constituting a lower outwardly flowing air stream, said flow-inducing means and said lower air stream acting to draw heated air through said radially outer openings into said lower air stream, means providing an annular series of openings through the upper plate element of said second pair of plate elements for entrance of heated air from above the burner into said upper air stream, the lower and upper plate elements of said second pair of plate elements having annular marginal portions inclined respectively upwardly and outwardly and downwardly and outwardly for directing said streams of air in directions to intersect each other and said stream of oil discharging from between said first pair of plate elements.

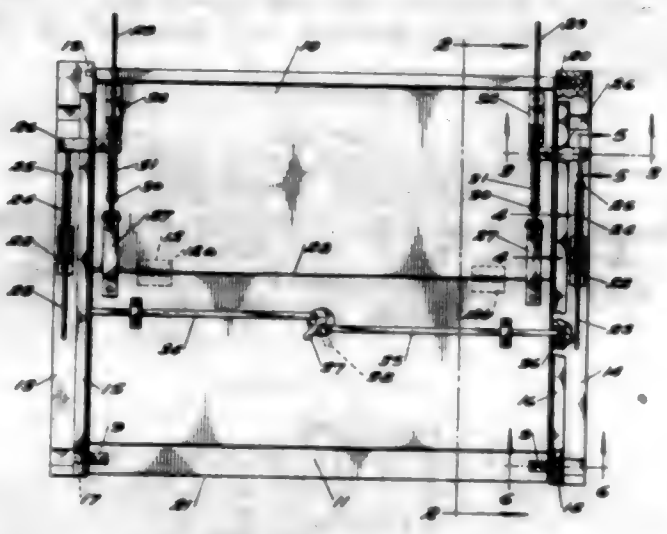
2,893,481
SYSTEM FOR SUPPLYING FUEL FOR TURBOJET ENGINES
Joseph Szydlowski, Usine Turbomeca, Bordes, France
Application May 31, 1957, Serial No. 662,916
Claims priority, application France June 15, 1956
3 Claims. (Cl. 158—36)



1. In a liquid fuel supply system for engines, more particularly for turbojet engines, having a fuel feed line adapted to connect a fuel pump to the feed nozzles of the engine, an adjustable valve in said feed line normally open for a stable flow of fuel therethrough, a container, a flexible diaphragm defining two chambers in said container and one side of which is operatively connected to said adjustable valve, a perforated partition in said container disposed on the other side of said diaphragm, a spring disposed between said other side of the diaphragm and said partition, a by-pass interconnecting said two chambers in said container and having a restricted flow passage, and a pipe interconnecting the part of said by-pass which is connected to the chamber on said one side of the diaphragm with the adjustable valve and the feed line downstream of said valve; the improvement which comprises a vessel having an elastic wall and housed in the second chamber of the container remote from the diaphragm relatively to the partition, a fluid filling said vessel, and a sealed air-filled elastic bladder immersed in said fluid, the materials of said wall and bladder being chemically insensitive to said fluid, thereby to resist dissolution thereof in and modification of the air impermeability thereof by said fluid.

2,893,482
TWO PIECE GARAGE DOOR
Kermit H. Burgin, Whitestown, Ind.
Application October 29, 1957, Serial No. 693,858
4 Claims. (Cl. 160—191)

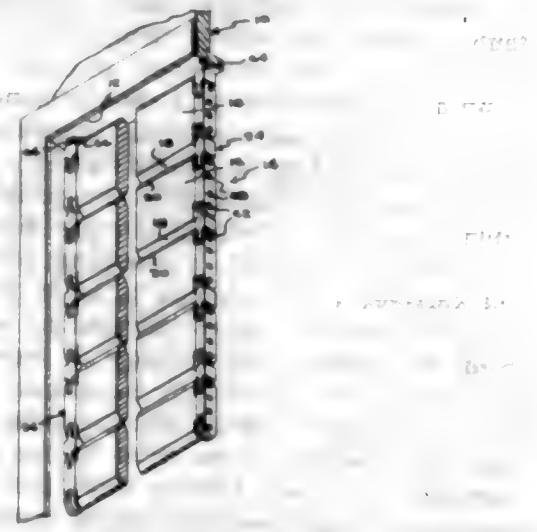
1. An upper and lower section door construction for opening and closing a space between horizontally spaced apart jambs wherein said upper section by an upper end is rockably interconnected with said jambs at the upper end of said space and said lower section is hingedly interconnected by an upper edge with a lower edge of said upper section, both sections swinging upwardly to a folded overhead position for opening the space and swinging downwardly into substantially a vertical plane for closing the space, in combination with a leverage system for assisting said door opening and closing, said system comprising a pair of spaced apart rods each by an upper end being rockably carried by an upper end portion of said upper door section; a pair of spaced apart brackets fixed respectively one to each of said jambs a spaced distance below the upper end of each rod, said brackets slidingly guiding and retaining said rods; a tensioning member carried by each of said rods adjacent the said rod upper end; a coil spring surrounding each of said rods



compressibly bearing between said members and said brackets; a second pair of spaced apart rods each by a lower end being rockably carried by an upper end portion of said lower door section; a second pair of spaced apart brackets each fixed to said upper end portion of said upper door section at a spaced distance above the lower ends of the respective second pair of rods, said second brackets slidingly guiding and retaining said second rods; a tensioning member carried by each of said second rods adjacent the said second rod's lower ends; a coil spring surrounding each of said second rods compressibly bearing between said tensioning members and said second brackets; and means interengaging opposite sides adjacent the lower end of said lower door section with said jambs confining complete upward and downward travel of that end to within approximately said vertical plane.

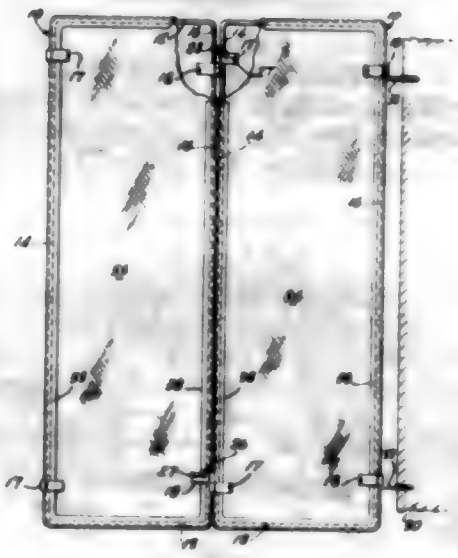
2,893,483
FOLDING DOORS
Eugene J. Holdemann, Freeport, and William T. Green, Apple River, Ill.
Application March 15, 1957, Serial No. 646,487
7 Claims. (Cl. 160—220)

1. A folding door comprising a plurality of elongated rigid slats having ends and longitudinal edges, said longitudinal edges being double beveled to provide bevel surfaces and apices between related bevel surfaces, and hinge chains having links secured along the ends of the slats and providing for hinging of adjacent slats relative to each other from a coplanar relation in which the apices of adjacent slats abut so as to eliminate spaces



between adjacent slats, the bevel surfaces providing clearance for hinging of adjacent slats relative to each other.

2,893,484
SCREEN PANEL
Murray A. Gordon, Brooklyn, N.Y., assignor to Berkeley Industries, Jersey City, N.J., a corporation of New Jersey
Application January 30, 1958, Serial No. 712,116
5 Claims. (Cl. 160—229)

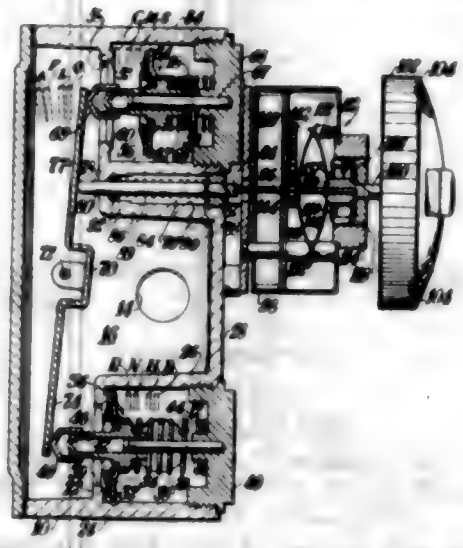


1. An improved screen comprising a pair of panel members arranged in adjoining edge-to-edge relationship, a sheath having a face extending over the front of each of said panel members and a border engaging the edge thereof, an arm spaced rearwardly of and secured to each of said panel members and extending laterally across the area of said panel member adjoining edge, said sheath border being disposed between said arm and said frame, and means hinge-connecting the free ends of said arms.

2,893,485
CONTROL DEVICES FOR FLUID FUEL BURNERS
Russell F. Garner, Youngwood, Pa., assignor to Robertshaw-Fulton Controls Company, Greensburg, Pa., a corporation of Delaware
Application August 16, 1955, Serial No. 528,763
4 Claims. (Cl. 161—9)

3. In a control device, the combination comprising a casing having an inlet passage, a first outlet passage and a second outlet passage, a main valve member having open and closed positions for controlling a flow of fuel into said casing though said inlet passage, a second valve member having open and closed position for controlling

the flow of fuel from said casing through said second outlet passage, a pivoted lever having one free end to cooperate with said main valve member and an opposite free end to cooperate with said second valve member, a main biasing spring exerting a force on said main valve member in opposition to the one free end of said lever, a second biasing spring exerting a force on said second valve member in opposition to the opposite free end of said lever, said main biasing spring exerting a greater force than said second biasing spring so that said lever is pivoted to a position where said main valve member is biased to said closed position and said second valve member is biased to said open position, an actuating member engaging said lever to cause pivotal movement



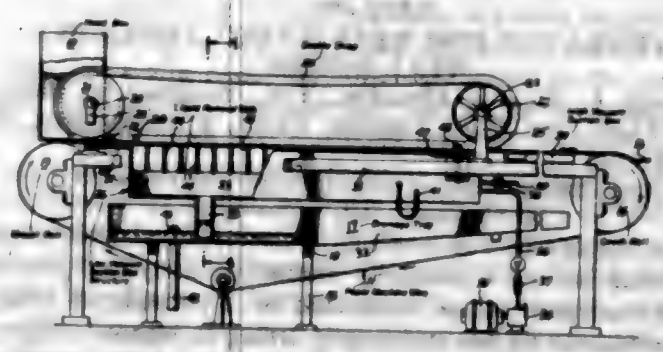
thereof, a shaft operatively connected to said actuating member and having manual means thereon for moving said shaft in one direction whereby said actuating member pivots said lever so that said main valve member is actuated to said open position and said second valve member is actuated in said open position and said second valve member is actuated in said closed position, cam means operably associated with manual means for controlling the movement of said shaft in another direction, and follower means movable with said shaft and engageable with said cam means for controlling the movement of said shaft in said other direction whereby said actuating member causes pivotal movement of said lever so that said main valve member and said second valve member both assume their open positions.

2,893,486

FOURDRINIER PAPER MAKING MACHINE

Reuben A. Marti, Vancouver, Wash., assignor to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada

Application February 27, 1956, Serial No. 567,899
11 Claims. (Cl. 162—352)



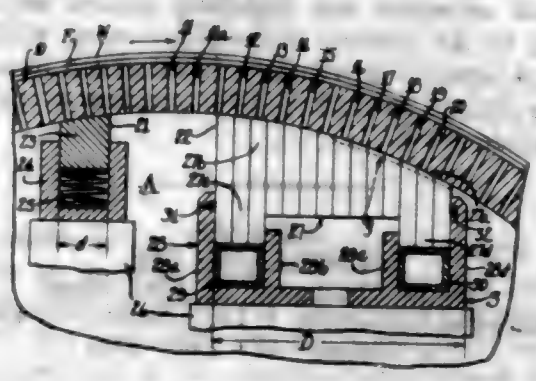
1. In a Fourdrinier paper making machine having a breast roll, a couch roll spaced from said breast roll, an endless conveyor foraminous drainage support about said rolls, and means adjacent said breast roll for feeding pulp stock onto the upper reach of the support; apparatus for enhancing formation of paper on said support comprising an elongated non-rotatable suction box structure located between said rolls and having side and end walls the upper edges of which lie in substantially the same horizontal plane and engage the underside of said upper reach, said suction box structure occupying not substantially less than about one-fifth the length of said upper reach, means for applying a relatively light suction to said box to effect removal of liquid from said pulp on said support, and means cooperable with said suction means to enhance said liquid removal without effecting throwback of liquid on said support, said means including a plurality of relatively narrow spaced apart slats in said box, said slats extending transversely with respect to said support and upon which said upper reach rides, the upper edges of said slats being in contact with the underside of said upper reach and the spacing between said slats being such that the total area occupied by all of the upper edges of said slats is relatively small compared to the total area under said upper reach occupied by said box structure whereby substantially uninterrupted relatively light suction is maintained on said stock as it passes over said box structure.

2,893,487

SILENCERS FOR SUCTION ROLLS

Carl R. Dahl and Edgar J. Justus, Beloit, Wis., assignors to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin

Application January 6, 1956, Serial No. 557,787
2 Claims. (Cl. 162—371)



1. The combination in a suction roll of a rotatably mounted perforate shell having a plurality of holes, a stationary suction box for applying reduced pressure to said holes, a seal between the suction box and the inner surface of the shell defining areas of pressure change in said holes, and means located at the areas of pressure change in the holes presenting a grooved surface with land portions urged flush against the inner surface of the shell and grooves extending from the central portion of the surface outwardly to the trailing edge at an angle to the direction of travel of the shell for progressively effectuating equalization of pressure between the holes.

2,893,488

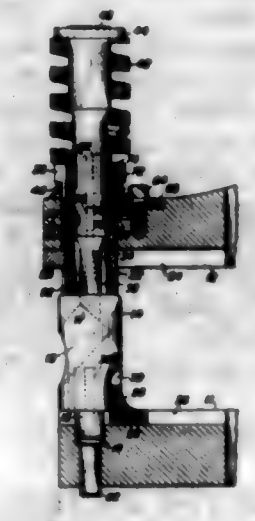
PERFORATING IMPLEMENT HAVING MEANS TO ALIGN THE PUNCH AND DIE

Arthur K. Schott, Kenmore, N.Y., assignor to George F. Wales, Kenmore, N.Y.

Application August 31, 1956, Serial No. 607,444
11 Claims. (Cl. 164—110)

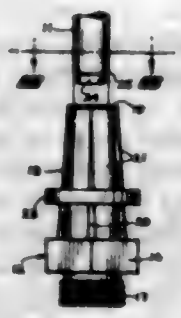
1. A self-contained punching apparatus for use between the bed and ram of a press comprising a holder having a lower base and an arm over said base, a shaped die mounted on said base, a punching and stripping assembly including a guide sleeve reciprocably mounted and guided in a guide opening in said arm, a punch having a cylindrical shank and a shaped bit, said shank being reciprocably mounted and guided in said guide sleeve with said shaped bit in alignment with said die, and a key seated in said punch and adapted to slide in a keyway in said guide sleeve, said punch having two key seats angularly dis-

placed from each other and each adapted to receive and seat said key, whereby said punch may be selectively positioned relative to said guide sleeve in either of two fixed angular positions for cooperation with a die of like shape which can be correspondingly selectively positioned, said punch having a peripheral axially extending recess, a set-screw seated in a threaded aperture in said reciprocably



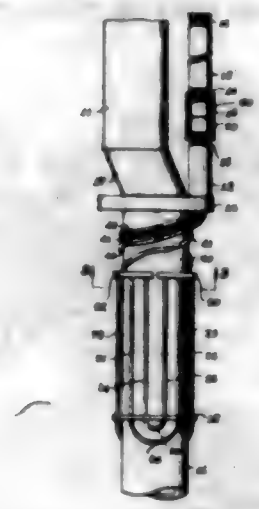
movable guide sleeve and engaging in said recess, said sleeve having two threaded apertures each adapted to receive said set-screw and angularly spaced apart corresponding to the spacing of said key seats, whereby the reciprocal outward movement of said punch in said guide sleeve is limited in each angular position of said punch in said guide sleeve.

2,893,489
PUNCH AND DIE
Jay D. Thompson, St. Paul, Minn.
Application November 1, 1957, Serial No. 694,035
2 Claims. (Cl. 164—118)



1. The combination with a female element constituted as a die of rigid material consisting of a supporting member and flexible elongated bars integral with and extending outwardly from said supporting member in adjacent relation to each other, side edges of outer end portions of said elongated bars which are in adjacent relation being tensioned into engaged relation with each other, said outer end portions and outer ends of internal surfaces of the elongated bars together defining a closed punch receiving opening and providing a circumferentially extending severing edge in bounding relation to said opening, of a male element constituted as a punch consisting of a body member to be forcibly inserted into the opening provided by said elongated bars and including a circumferentially extending severing edge complementary to the severing edge of the elongated bars, there being a divergent surface adjacent to and disposed exteriorly of the severing edge of one of said elements and the outer end portions of said elongated bars being capable of flexing away from each other in response to forcible insertion of said punch into said die.

2,893,490
OIL WELL HEATER
Ernest E. Williams, Van Nuys, and Bertrand M. Ward, San Fernando, Calif., assignors to Petro-Flow Corporation, Pacoima, Calif., a corporation of California
Application April 4, 1957, Serial No. 650,672
5 Claims. (Cl. 166—60)

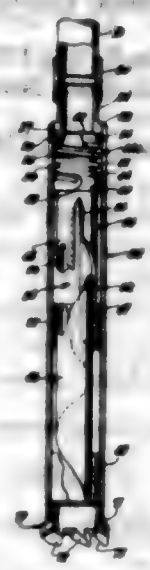


1. An oil well heater of the class described comprising: a length of oil well tubing; an offset heater shell connected to said tubing by an upper flange to form a sealed, water-tight, annular heating space, said heater shell surrounding said tubing at a spaced radial distance therefrom; finely divided aluminum powder packed within said space; electric heater elements formed from metal encased, magnesium oxide insulated Nichrome wire suspended in said space, said heater elements connected in pairs to one another and formed in a U-shape extending along said tubing, said elements being firmly attached to said flange independent of said shell; a plurality of sections of threaded rigid metal conduit adapted to be attached to said flange; a metallic threaded sleeve interconnector adapted to be fastened between said sections of conduit; and lengths of semi-rigid copper-sheathed cable encased in a slidable relationship within said sections of conduits; each of said cables consisting of three semi-rigid copper-sheathed conductor wires having a rigid, non-resilient type male connector with three prongs on one end and a rigid, non-resilient type female connector with three sockets capable of receiving said prongs of said male connector on the other end.

2,893,491
APPARATUS FOR RETRIEVING TOOLS IN WELL BORES
Talmadge L. Crowe, Houston, Tex., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Application May 3, 1957, Serial No. 656,795
10 Claims. (Cl. 166—183)

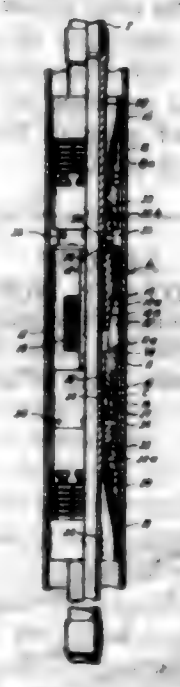
1. In apparatus for moving a device in a well bore, the device having a laterally extending coupling pin: a member adapted to be connected to a running-in string to be rotatable by the running-in string in opposite directions and adapted to be moved over the device and its coupling pin; a slotted structure rotatable within said member and adapted to receive the coupling pin; a one-way clutch interconnecting said structure and member for rotation together in one direction, said clutch releasing to permit relative rotation between said structure

and member in the opposite direction; said slotted structure including a retaining slot portion into which the



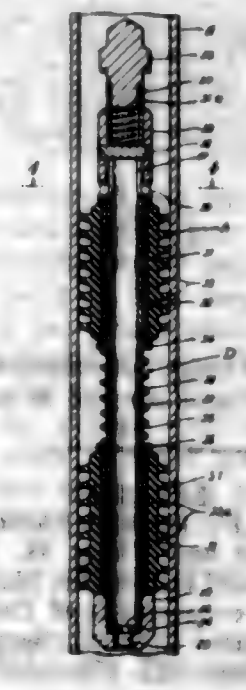
coupling pin is movable to couple the structure and member to the device.

2,893,492
WELL PACKERS
Cicero C. Brown, Houston, Tex.
Application November 15, 1954, Serial No. 468,653
4 Claims. (Cl. 166—119)



1. A well tool assembly comprising a mandrel adapted to be connected to a pipe; a packer slidably supported on said mandrel; a slip assembly including a slip carrier, slips and a slip expander slidably carried by the mandrel and operable to support the packer in a well casing; means for setting and releasing said slip assembly including; a double threaded segmental nut having sets of internal threads formed of opposite pitch; resilient means maintaining said nut assembled; said nut being mounted on a member of said slip assembly; oppositely facing left and right hand sets of buttress threads positioned at spaced points on said mandrel and alternately engageable with said nut upon longitudinal movement of the mandrel relative to said nut to position a selected set of threads in alignment with the threads of the nut and releasable from said nut by right hand rotation of said member; and spaced shoulders on said mandrel alternately engageable with stop means on a member of said slip assembly when the nut is alternately engaged by said threads on the mandrel and maintaining said slip assembly in expanded position when the nut is engaged by one set of said threads, and in retracted position when the nut is engaged by the other set of said threads.

2,893,493
TRAVELING SEAL AND PARAFFIN SCRAPER DEVICE
James I. Copes, Oklahoma City, Okla.
Application February 17, 1955, Serial No. 488,848
6 Claims. (Cl. 166—170)



1. A combined sealing and paraffin scraper device adapted to be inserted within a well pipe and including, a tubular mandrel having an external abutment on its lower end and a radially-directed opening at its upper end, the upper end of the mandrel being closed, a piston element supported on the abutment, an annular actuating member slidable on the mandrel and spaced above said piston element, said member having means engageable with the wall of the pipe in which the device is disposed for creating a frictional drag, a sleeve valve encircling the mandrel above the actuating member element and engageable by said actuating member, said sleeve valve co-acting with the opening in the mandrel to open and close the same in accordance with the position of the valve on the mandrel, and stop means for limiting the upward movement of both the sleeve valve and actuating member on the mandrel, the sleeve valve being in open position when in its uppermost position on the mandrel, the piston element being acted upon by pressure from below, a higher pressure below the piston element moving the device upwardly in the well pipe and causing the piston element and mandrel to be moved upwardly relative to the actuating member and sleeve valve to effect a downward movement of the sleeve valve to close the opening in the mandrel.

2,893,494
PARAFFIN CUTTER
Dael J. McDuffie, Plaquemine, La.
Application March 11, 1957, Serial No. 645,156
6 Claims. (Cl. 166—176)

1. A paraffin cutter for oil well tubing comprising an arbor, means for connecting said arbor to a means for vertical reciprocation in said tubing, a plurality of resilient cutters secured to said arbor in longitudinally spaced position thereon, said arbor having a pair of substan-

tially perpendicular, diametrically spaced bores for each cutter, each cutter comprising a separate substantially

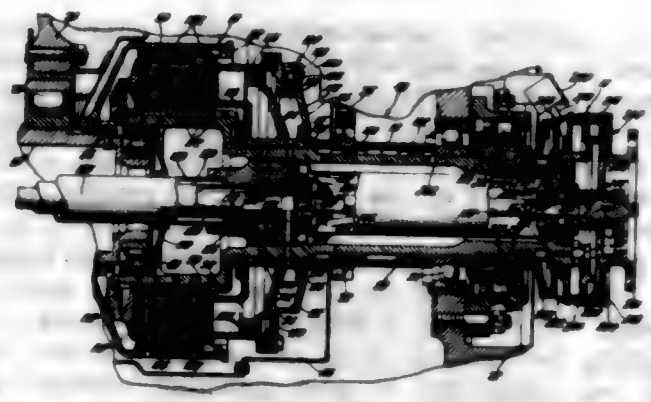
circular wire having a single convolution about said arbor and having a pair of ends secured in said pair of bores.

2,893,496

AIRCRAFT POWER SYSTEMS

Charles J. McDowall and Victor W. Peterson, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application December 12, 1952, Serial No. 325,562
11 Claims. (Cl. 170—135.75)



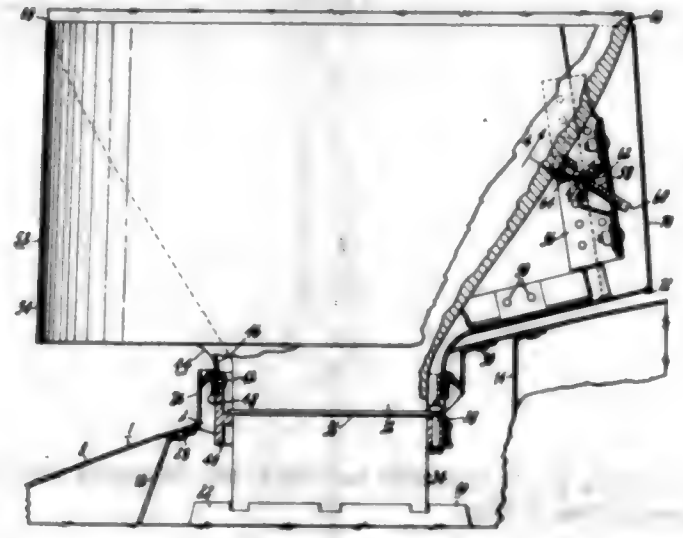
3. An aircraft propulsion plant comprising a propeller assembly, a gas turbine engine requiring a certain horsepower to be motored to starting speeds and requiring a substantially greater horsepower to be motored to higher operational speeds, and an automatic safety clutch coupling said engine and propeller assembly, said safety clutch comprising a pair of engageable torque transmitting members, spring means normally biasing said members into engagement with a spring force that progressively increases and decreases under progressive deflection in disengagement direction, and means carried by said members responsive to a predetermined torque transmitted through said members for biasing said members out of engagement and into slipping disengagement on motoring said engine through said safety clutch by a horsepower that lies between said first and second mentioned horsepowers so that said engine may be started by said propeller assembly without causing disengagement of said safety clutch, said spring means being arranged to provide an appreciably diminished spring force during slipping disengagement to lessen slipping wear on said members.

2,893,496

PROPELLER CUFF ASSEMBLY

Wallace Blanchard, Jr., Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Original application March 13, 1952, Serial No. 276,312. Divided and this application November 15, 1956, Serial No. 626,567
5 Claims. (Cl. 170—159)



4. In combination with an aircraft propeller blade having an airfoil portion and a shank portion, means perfecting the airfoil contour of a part of said shank portion, said means comprising a cuff element having a bracket carrying clamping means for engaging a trailing edge of said blade and for drawing a leading edge of said cuff element against a leading edge of the blade, said clamping means including a nut anchored to said bracket attached to said cuff element, a bolt threadedly engaging said nut, and a grooved resilient member of elastomeric material carried by said bolt and adapted for resiliently engaging the trailing edge of said blade.

2,893,497

ROTARY HOE

Hans Peter Vellemer, Plochingen, Germany

Application November 28, 1956, Serial No. 624,916
2 Claims. (Cl. 172—42)

1. In an agricultural implement, including an agricultural tool, a housing, a working shaft carrying said tool for rotation therewith and rotatably mounted in said housing, a motor secured to said housing substantially vertically over said working shaft and having a drive shaft, means operatively connecting said drive shaft with said working shaft, a supporting wheel disposed immediately in advance of said working shaft, the improvement comprising an upwardly inclined bar carrier support fitted to the rear side of said motor and having an axial boring, a head mounted on the upper end of said support, a sector-shaped swivel head rotatably mounted on said

support head and having a plurality of peripheral locking holes over an arc of 270°, a spring-loaded catch-bolt reciprocable within said boring of said support and co-operating with said swivel head for locking the latter in a plurality of angularly spaced apart positions, a hand lever operating said catch bolt, a bar forking into handle bars extending from said swivel head, a carrying handle fitted coaxially into the apex of the fork, said bar forming a support for carrying said implement in one of said positions of said swivel head, forming together with said wheel a three-point stand raising said tool off the ground in another of said positions of said swivel head, and forming together with said swivel head a three-point stand raising said tool and said wheel off the ground in a third of said positions of said swivel head.

2,893,498

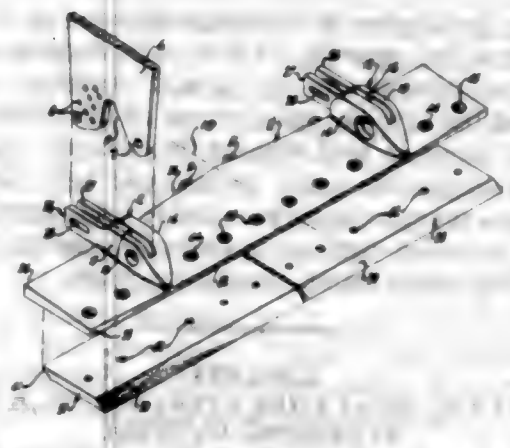
WITHDRAWN

2,893,499

BLADE MOUNTING FOR A TILLAGE TOOL

William G. Shollenberger, Gilroy, Calif.

Application September 21, 1955, Serial No. 535,681
1 Claim. (Cl. 172—740)



A blade mounting for a tillage tool adapted to be trailed behind a tractor comprising a plate member symmetrical about a central plane and having a leading edge and a trailing edge and formed with a substantially planar bottom face to receive a blade, the top face of said plate member having on each side of said central plane an upstanding bifurcated pivot mounting extending across said top face from said leading edge and formed with a smooth envelope contour flaring outwardly and upwardly from said leading edge and having a transverse bore and sockets for the reception of a bolt and nut within said envelope contour and with transverse perforations for the reception of a positioning bolt, said leading edge being thin between said pivot mountings and being thickened from said pivot mountings toward the ends of said plate member, and said trailing edge being relatively thick and further thickened toward said central plane, and said plate member having a transverse row of apertures near said leading edge for the reception of fastening bolts for said blade disposed against said bottom face.

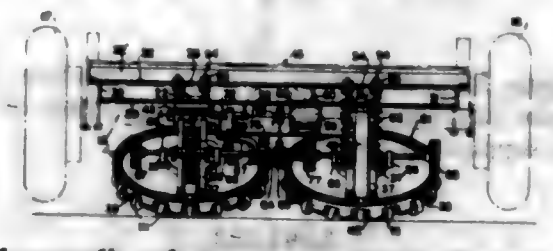
2,893,500

COMBINED ANTI-SKID AND PARKING DEVICE

John E. DeBaun, Ridgewood, and Andrew E. Friedrich, Princeton, N.J., said Friedrich assignor to said DeBaun

Application August 22, 1956, Serial No. 605,508
8 Claims. (Cl. 188—1)

1. In a vehicle parking device, a pair of ground engaging drive wheels each having upper and lower sides including a rear gear formation on each of said upper sides with teeth directed upwardly with respect to said upper side, means pivotally attached to said vehicle and extending longitudinally thereof for tilting movement of a portion of said means between a lowered lifting position and a retracted raised position with respect to said vehicle, means rotatably mounting said drive wheels on said portion to move therewith whereby said wheels rotate in a plane parallel to said portion and whereby when said portion is tilted to a lowered lifting position said wheels are inclined for engagement of their lower ends with the ground, a common power operated shaft journalled on said portion, above said ring gear forma-



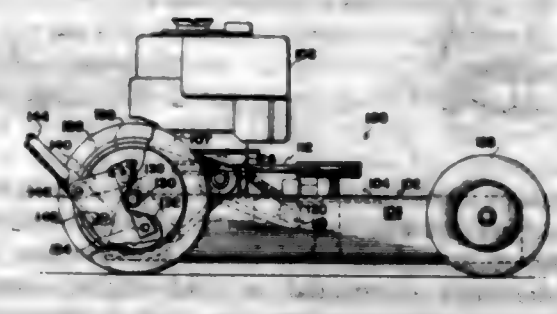
tions and extending thereacross and including means for the axial displacement thereof, gears secured on said shaft and adapted to simultaneously engage a corresponding opposite side of each of said ring gear formations to drive the wheels in the same direction, said axially shifting means when actuated effecting the engagement of said gears with either one side or the other side of said ring gear formations for driving said wheels in either one direction or the other to effect the parking movement of the vehicle either to the right or left relative to the longitudinal axis of the vehicle.

2,893,501

WHEEL DRIVING ARRANGEMENT FOR POWER MOWERS

William R. Smith, Atlanta, Ga., assignor to McDonough Power Equipment, Inc., a corporation of Georgia

Application October 8, 1954, Serial No. 461,256
2 Claims. (Cl. 180—19)



1. A mobile power unit comprising a housing, a power drive means carried by said housing, a wheel support lever pivotally mounted on opposite sides of said housings, a drive wheel supported by each of said levers, a shaft extending between and connected to each of said levers, a crank member rigidly connected to said shaft member intermediate the length thereof, a handle connected to said housing for directing said unit, an operating member mounted on said handle, and link means connecting said operating member to said crank member to effect movement of said shaft and said wheel support levers whereby driving engagement between said drive wheels and said power drive means is controlled.

2,893,502

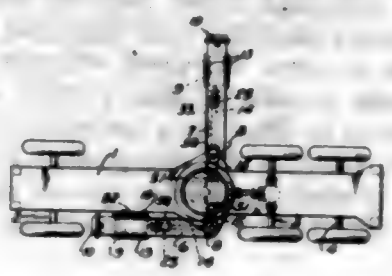
VEHICLE WITH MOTOR MOUNTED ON SWINGABLE ARM

Hans Schoenpflug, Nuremberg, Germany, assignor to Maschinenfabrik Augsburg-Nürnberg A.G., Nuremberg, Germany

Application February 15, 1956, Serial No. 565,722
Claims priority, application Germany February 18, 1955
8 Claims. (Cl. 180—64)

1. A vehicle having a rotary crane mounted thereon comprising pivoted supporting arms pivotally secured to

said vehicle for movement for driving the vehicle to an outward position for supporting the crane on the ground, at least one supporting arm carrying a driving engine,



and means for establishing driving connection between the engine and the vehicle in either position of the respective supporting arm.

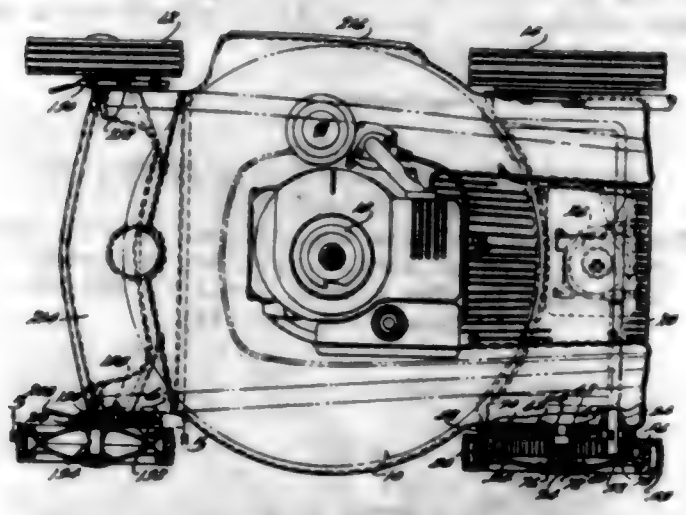
2,893,503

VARIABLE SPEED ROTARY MOWERS

William C. Wehner, Grosse Pointe, Mich., assignor, by mesne assignments, to Moto-Mower, Inc., a corporation of Delaware

Original application April 4, 1955, Serial No. 498,997, now Patent No. 2,868,473, dated November 18, 1958. Divided and this application April 12, 1957, Serial No. 652,533

1 Claim. (Cl. 180—75)



In a power lawnmower, in combination, a deck having a horizontal portion and a downwardly turned skirt portion, an engine mounted on said horizontal portion, driving wheels drivingly connected to said engine, means for mounting said driving wheels on said deck comprising, reinforcing plates secured to said skirt portion adjacent said wheels, a second plate having a wheel supporting stub axle secured thereto, means for securing said plates together and an outwardly facing annular seal member carried by said first plate and adapted to engage a wheel mounted on said stub axle in sealing relation.

2,893,504

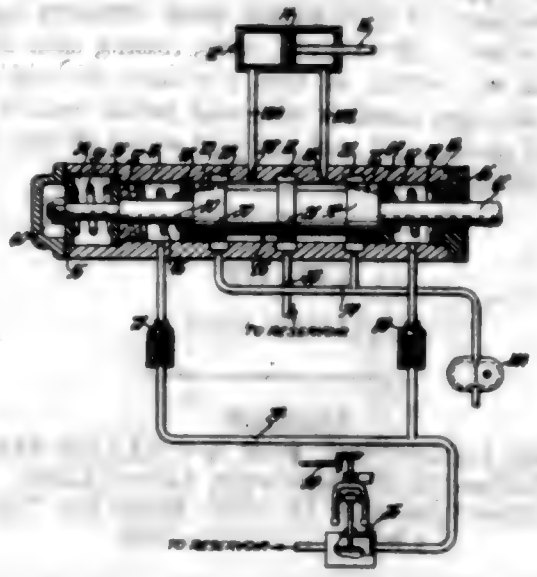
HYDRAULIC STEERING SYSTEM WITH CONTROL MEANS FOR VALVE REACTION PRESSURES

George W. Jackson, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application December 30, 1954, Serial No. 478,720

6 Claims. (Cl. 180—79.2)

5. A fluid power steering gear for automotive vehicles and the like, including a source of fluid pressure, a fluid motor adapted for operative connection to a steering part and a valve for controlling fluid flow between said source and said motor, said valve including a pair of telescopically related members one of which is movable relative to the other the movable member being operably connected to a manually actuated steering part, means defining a chamber adapted to receive pressure fluid from said source operating to provide a resistance to movement of said movable member, conduit means for supplying pressure fluid to said chamber, an exhaust line connected to said chamber, a governor-controlled throttle valve in said exhaust line, means driven by the vehicle at a rate bearing a fixed relation to vehicle speed operatively connected to said governor to rotate the same, said throttle valve controlling the pressure in said chamber



and hence the degree of resistance imposed to movement of said movable member so that such resistance is rendered proportionate to the actual steering resistance throughout the cruising speed range of the vehicle, and a ball check valve in said exhaust line mediate said chamber and said throttle valve means, said ball check valve determining the maximum pressure in said chamber when the fluid supplied thereto is under maximum pressure, said throttle valve being then fully open.

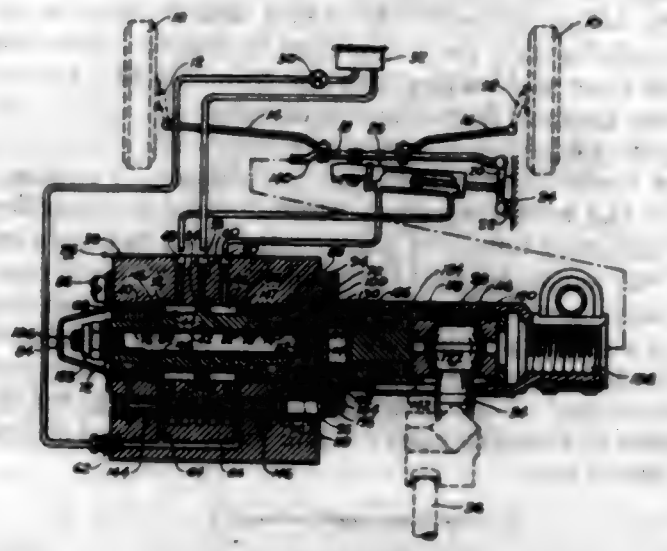
2,893,505

HYDRAULIC REACTION CONTROL IN A POWER STEERING SYSTEM

Harold B. Schultz, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware

Application June 7, 1955, Serial No. 513,834

16 Claims. (Cl. 180—79.2)

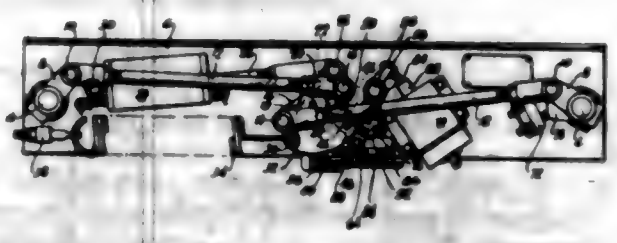


1. In a control valve having a housing member and valve means located therein, pressure reaction means associated with said valve means having first and second reaction areas subject to a variable pressure for opposing movement of said valve means from a neutral position, said pressure acting on said areas in the same direction, and pressure regulating valve means limiting the pressure acting on one of said reaction areas to a predetermined value.

2,893,506
DOOR CONTROLLING LINKAGE

Kristapas Dauginikas, Dorchester, Mass., assignor to National Pneumatic Co., Inc., Boston, Mass., a corporation of Delaware

Application March 11, 1953, Serial No. 728,772
17 Claims. (Cl. 189—32)

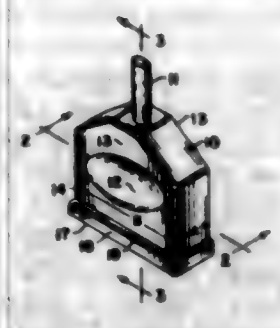


1. A door control assembly comprising a door adapted to be moved between first and second positions, a latch movable between operative and inoperative positions, a linkage operatively connected to said door for movement therewith and including an element adjacent said latch and operatively engaged by said latch when the latter is in operative position and when the door is in its first position so as to prevent movement of said element beyond a predetermined position corresponding to a door position intermediate between said first and second positions and only a limited distance from said first position, said latch when in inoperative position operatively disengaging from said element so as to permit said element to move beyond said predetermined position, a lost motion connection in said linkage, and biasing means active on said lost motion connection to urge it to extended position, said lost motion connection being of limited operative length corresponding to the distance between said first position and said intermediate position of said door, whereby said door may be moved for a limited distance only from its first position to its intermediate position when said latch operatively engages said element, said door being movable to its second position when said latch is operatively disengaged from said element.

2,893,507
STETHOSCOPE HEAD

Nathan H. Friedman, Stratford, Conn.

Application October 16, 1956, Serial No. 616,168
2 Claims. (Cl. 181—24)

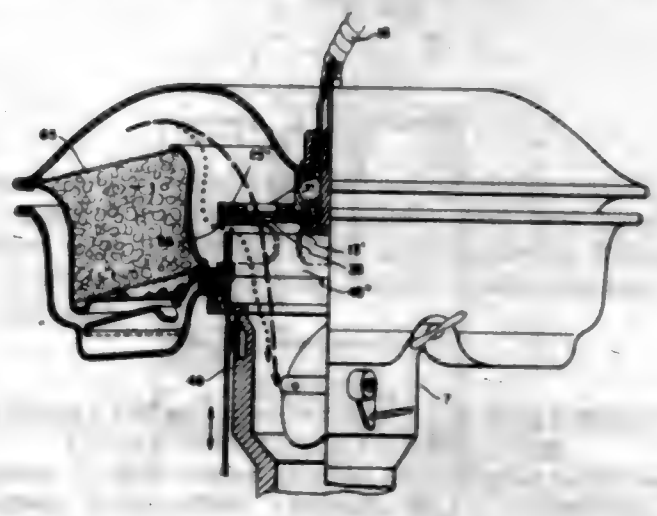


1. A stethoscope head comprising a base having a body-contacting portion leading to a sound-receiving chamber, the area of said body-contacting portion as well as a transverse section of the chamber within a plane parallel to said body-contacting portion being of non-circular form wherein one of the dimensions of each is several times that of the other dimension of each, and the dimension of the sound-receiving chamber transversely of the plane including the body-contacting portion is more nearly equal to said one of said dimensions of said non-circular transverse section than said other dimension thereof; and a sound-conveying means integral with said base for attachment to the ear pieces of a stethoscope.

2,893,508
METHOD OF AND APPARATUS FOR ACOUSTIC SILENCING

Jordan J. Baruch, Newton, and Clayton H. Allen, Wellesley, Mass., assignors to Bolt Beranek and Newman Inc., Cambridge, Mass., a corporation of Massachusetts

Application July 14, 1955, Serial No. 522,153
43 Claims. (Cl. 181—46)



1. A method of eliminating sound produced by pressure variations at a predetermined region of a fluid medium the flow of which varies with time at sound frequencies in accordance with some function, that comprises, increasing and decreasing at the rates of the said sound frequencies the impedance to the fluid flow at the predetermined region in accordance with substantially the said function while maintaining an auxiliary path providing continuous flow of fluid medium through said predetermined region, and synchronizing the impedance increasing and decreasing with the said pressure variations of sound-frequency rates.

17. Apparatus of the character described having, in combination, means for passing a fluid medium the flow of which may vary with time at sound frequencies in accordance with some function to produce undesirable corresponding sound-frequency pressure variations, means disposed at a predetermined region of the medium and operable at the said sound frequencies for increasing and decreasing the impedance to the fluid flow at the predetermined region in accordance with substantially the said function, and means for synchronizing the operation of the impedance increasing-and-decreasing means with the said sound-frequency pressure variations, said second-mentioned means including by-pass means providing an auxiliary flow path for maintaining a minimum fluid flow.

2,893,509
VIBRATION FREE APPARATUS

Raymond C. Baird, Santa Monica, Calif., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware

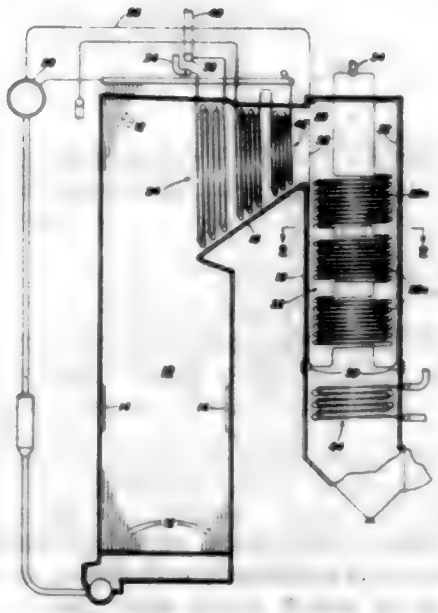
Application March 28, 1956, Serial No. 574,536
1 Claim. (Cl. 181—46)

In combination a tube bundle disposed within a duct through which a gaseous stream is conveyed and wherein the tube runs of said bundle are disposed generally transversely of the direction of flow of said stream, with there being numerous tube runs arranged in ranks across the gas stream in spaced side by side relation and in aligned files and accordingly spaced in the direction of flow of the gas stream with the tube runs in each respective file being parallel to each other a sufficient number of adjacent side by side tube runs being disposed in angular relation to each other such that the vortex energy created by the fluid flowing over the runs is distributed through a range of frequencies and is not sufficiently concentrated at a single frequency to establish

a standing wave in resonance with the chamber formed by the duct, with the approximate relative angular disposition of these adjacent tube runs being defined by

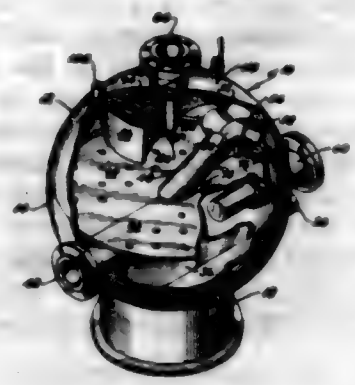
$$\tan^{-1}K\frac{x-d}{L}$$

where L is the length of the shortest of the adjacent tube runs, d is the diameter of the tube runs, x is the distance



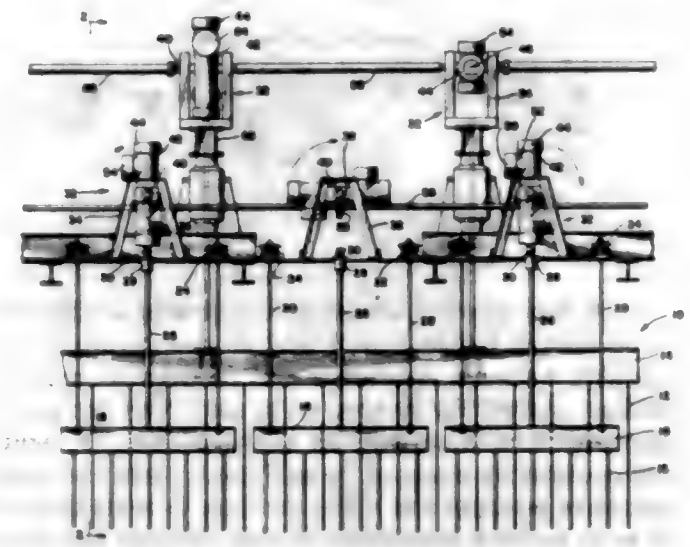
between the centers of the two consecutive tube runs in the same file and $K \cong 1$.

2,893,510
SPHERICAL SEPARATOR
Delroy O. Spann, Baton Rouge, La., assignor to Delta Tank Manufacturing Company, Baton Rouge, La., a corporation of Louisiana
Application January 18, 1957, Serial No. 635,067
11 Claims. (Cl. 183—2.7)



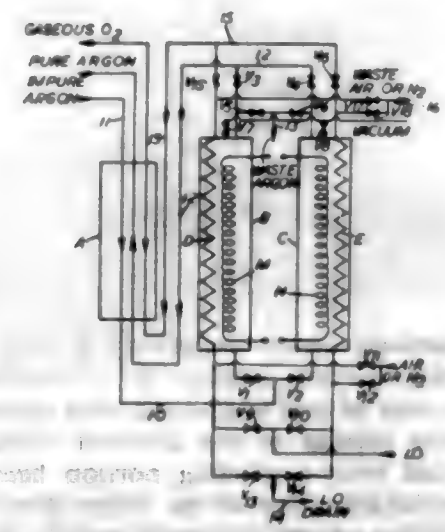
1. A liquid and gas separator comprising a spherical tank, a liquid and gas inlet in the wall of said tank in close proximity to a horizontal plane passing through the center of the tank, an inlet conduit connected to said inlet and extending across said tank, a flow diverter associated with said conduit and defining a pair of arcuate discharge paths for discharging liquid and gas tangentially onto the internal surface of said tank in opposite directions, said discharge paths being smoothly curved about centers of curvature, one said center on each side of a vertical plane through the axis of said inlet conduit, said centers of curvature being on the same side of said internal surface against which said liquid and gas is discharged as said inlet conduit, so that in passing through said discharge paths and in flowing onto said internal surface said liquid and gas is subjected to a centrifugal force in the same general direction, a liquid outlet in the lower portion of said tank, and a gas outlet in the upper portion of said tank.

2,893,511
RAPPING DEVICE
Richard T. Egan, Basking Ridge, N.J., assignor to Research-Cottrell, Inc., Bridgewater, N.J., a corporation of New Jersey
Application April 12, 1957, Serial No. 652,560
6 Claims. (Cl. 183—7)



4. In an electrical precipitator an electrode rapping device including an elongated tubular member having restricted end openings, a captive weight freely movable within said tubular member from a partially extended position through one restricted end opening thereof to a like position at the remote end, said tubular member being rotatably supported about a horizontal axis intermediate its length, power means for rotating said tubular member about its axis an anvil member positioned vertically below said tubular member and adapted to be struck by the portion of said weight extending through the end openings as the tubular member is rotated, said anvil member being in vibration transmitting association with electrodes to be rapped.

2,893,512
PURIFICATION OF ARGON
John Walter Armond, Surrey, England, assignor to The British Oxygen Company Limited, a British company
Application August 26, 1957, Serial No. 680,284
Claims priority, application Great Britain August 29, 1956
5 Claims. (Cl. 183—114.2)



1. The method of effecting the substantial removal of at least one gaseous impurity selected from the group consisting of methane and nitrogen constituting up to 0.5% by weight of an impure argon comprising passing the impure argon through an adsorbent bed consisting of a material selected from the group consisting of (*a*) a dehydrated crystalline sodium calcium aluminium silicate

having a composition expressed in terms of oxides as follows:

$$1.0\pm0.2\ M_{2/n}O:Al_2O_3:1.85\pm0.5\ SiO_2.YH_2O$$

wherein M is in part sodium and in part calcium, the percentage of calcium being at least 40% by weight of the total sodium and calcium, *n* is the average valency of M (calculated from the formula:

$$n=2\left(\frac{\%\ Ca\ in\ M)}{100}+\frac{\%\ Na\ in\ M}{100}\right)$$

and Y in the hydrated form is a number not above 6, the atoms of the material being arranged in a unit cell in such a manner that the X-ray diffraction pattern of the material shows at least the lines listed in Table A; and (*b*) a dehydrated crystalline sodium aluminium silicate having a composition expressed in terms of oxides as follows:

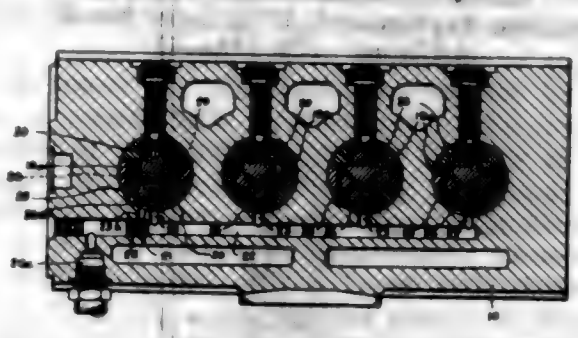
$$0.9\pm0.2\ Na_2O:Al_2O_3:2.5\pm0.5\ SiO_2.YH_2O$$

wherein Y in the hydrated form is a number not above 8, the atoms of the material being arranged in a unit cell in such a manner that the X-ray diffraction pattern of the material shows at least the lines listed in Table B.

2,893,513
LUBRICATING ARRANGEMENT FOR FUEL INJECTION PUMP

Walter J. Gewinner, East Longmeadow, Mass., assignor to American Bosch Arma Corporation, a corporation of New York

Application May 1, 1957, Serial No. 656,318
4 Claims. (Cl. 184—6)



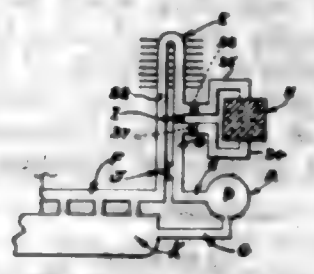
1. In a device of the character described, a housing having a plurality of aligned bores, a piston mounted for reciprocation in each of said bores, cam means for effecting reciprocation of said pistons in said bores, a tappet intermediate each of said pistons and said cam means, a lubricant duct in said housing substantially normal to said bores, said duct communicating with each of said bores, said housing having passage means communicating with said lubricant duct for supplying lubricant to said lubricant duct at a point between the end of said duct and the adjacent tappet, passage means for directing lubricant received in said lubricant duct from said supply passage only to said adjacent tappet, supply passage means for supplying lubricant from said adjacent tappet to said lubricant duct and passage means for delivering lubricant from said lubricant duct to each of the remaining tappets.

2,893,514
LUBRICATION SYSTEM FOR AN ENGINE

Dana K. Badertscher and James H. Meech, Grosse Pointe Park, Mich., assignors to American Motors Corporation, Kenosha, Wis., a corporation of Maryland

Application November 25, 1957, Serial No. 698,475
7 Claims. (Cl. 184—6)

1. A lubricating system for an internal combustion engine comprising: an oil pan; a crankcase; a lubricant route leading from and returning to the oil pan; a pump in the route for inducing the flow of a lubricant therethrough; a lubricant cooling device in the route; a lubricant distribution tower carried on the crankcase and having a feed passage and a return passage formed therein and opening through one end thereof, said feed and return passages serving as portions of the lubricant route; a cover secured to the tower and having transfer

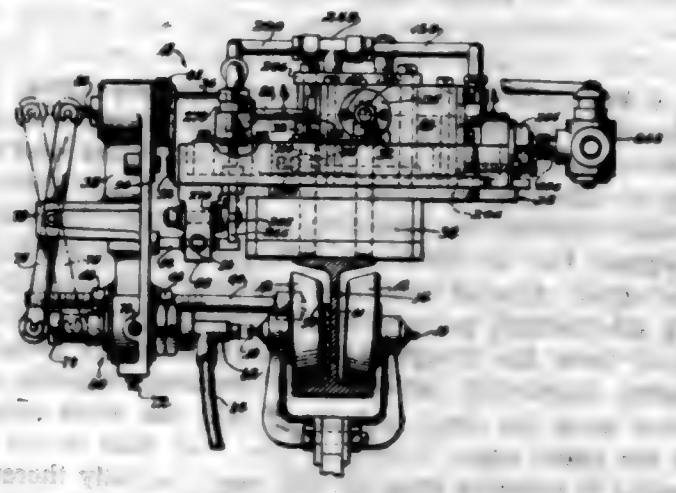


passages therethrough; said oil cooling device having an inlet opening and an outlet opening and said transfer passages separately establishing communication between the oil cooling device openings and the tower feed and return passages.

2,893,515
AUTOMATICALLY CONTROLLED PNEUMATICALLY POWERED LUBRICATOR

Frederick G. Schweisthal, Skokie, Ill., assignor to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia

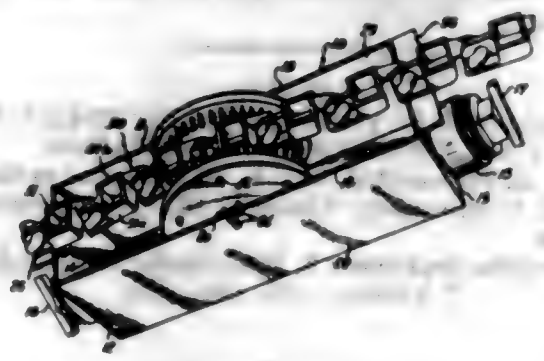
Application September 8, 1955, Serial No. 533,962
7 Claims. (Cl. 184—15)



1. Pneumatic powered apparatus for automatically injecting lubricant quietly into lubricant fittings on the successive components of passing machine structure such as an endless conveyor, comprising, in combination, a lubricant ejector, pivoted means supporting said ejector swingably alongside the path of movement of the structural components to be lubricated to seek a starting position, said ejector supporting means including rider means engageable with each successive structural component to be lubricated for movement by the latter to swing said supporting means and said ejector away from said starting position until the rider means moving in an arcuate path clears the structural component thus carrying the ejector through a limited distance in general alignment with the component, a pneumatic actuator including a piston mounted in a cylinder and interconnected with said ejector for advancing the latter toward the structure to be lubricated upon admission of air under pressure to one end of the cylinder, resilient cushioning means mounted adjacent opposite ends of said piston to quietly terminate translation of said piston at opposite ends of said cylinder, an outwardly open breather passage connected to the end of said cylinder opposite said one end, means restricting the outlet end of said breather passage to form therein a muting chamber for minimizing sound incident to breathing of said cylinder through said passage upon reciprocation of said piston, means forming a supply of operating air under pressure, an inlet and exhaust valve connected to estab-

lish communication between said one end of said cylinder and said air supply means and exhaust alternately, said valve including mechanical control means therefor, and mechanical valve operating means mounted on said swingable ejector supporting means and positioned for coaction mechanically with said valve control means as an incident to swinging movement of said ejector supporting means away from said starting position to effect operation of said valve to connect said air supply means to said cylinder for actuation of said ejector.

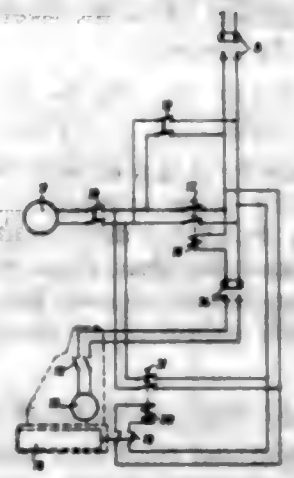
2,893,516
CHAIN LUBRICATOR
Joseph J. Bocchino, Rockaway, N.J.
Application September 6, 1957, Serial No. 682,353
1 Claim. (Cl. 184—17)



A lubricator for a continuously moving chain, said lubricator comprising an open trough having elongated side walls and front and rear walls, said front wall having an inlet port and said rear wall having an outlet port formed therein for transferal of lubricant, leaf-shaped supports for the chain, said supports being carried by the upper edges of said front and rear walls and extending substantially perpendicularly thereto in the directions away from the trough, two recessed carrying members, means supporting said recessed members opposite each other upon the inner surfaces of said side walls adjacent to the upper edges thereof, a pipe, two discs firmly connected to opposite ends of said pipe coaxially therewith, said discs having central openings formed therein, an axle extending through said central openings and said pipe and having ends carried by said recessed carrying members, brush holder ring segments, means removably carrying said brush holder ring segments upon opposed inner surfaces of said two discs, and bristles carried by said brush holder ring segments and extending substantially parallel to said axle, the bristles upon the two discs being spaced to provide for the passage of the chain and for engagement of the bristles with the side surfaces of the chain.

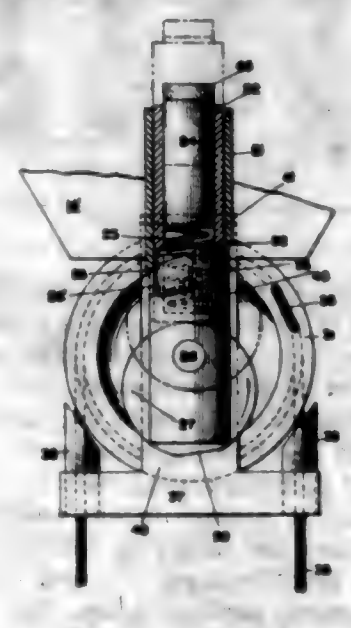
2,893,517
CHECK-OUT COUNTERS FOR SELF-SERVICE-STORES
Bengt O. Sundberg, Vallingby, Sweden
Application November 1, 1957, Serial No. 693,869
Claims priority, application Sweden November 5, 1956
1 Claim. (Cl. 186—1)

In a check-out counter for self-service-stores supporting a cash register, the combination of an endless conveying band defining a part of the upper plane of said counter, an electric driving motor for said conveyor, a first circuit for said motor including first switch means operable between two positions for closing and respectively breaking the said first circuit, first control means operatively connected to said first switch means and to said cash register and adapted to be actuated by the operation of the cash register entering an item therein to close said first switch means, timing means in said first circuit for limiting the closing period of said first switch means to a predetermined value, a second circuit for said motor parallel to said first circuit and including second switch means operable between two positions for closing and respectively breaking the said second circuit, second control means operatively connected to said second switch



means and to said cash register and adapted to be actuated upon operation of said cash register for total taking to close said second switch means, and timing means in said second circuit for limiting the closing period of said second switch means to a predetermined value longer than that of said first switch means.

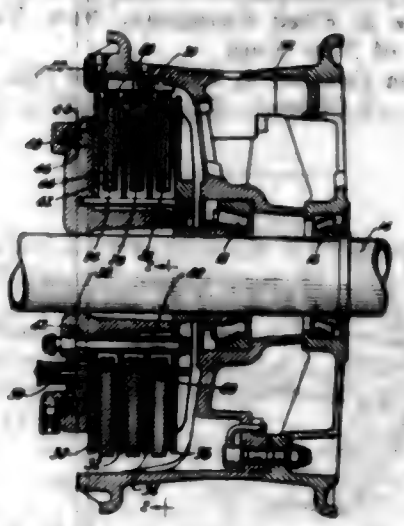
2,893,518
TROLLEY ANCHORING DEVICE
Alfred G. Vanderbeck, Wayne, Pa.
Application September 4, 1956, Serial No. 607,863
4 Claims. (Cl. 188—42)



1. In combination with an overhead flanged rail, a trolley having a vertical side plate with wheel means journalled thereto and rotatable along the upper face of the rail flange, a vertically disposed cylindrical housing fixedly mounted to said side plate and having an upper open end disposed below and adjacent the lower face of the rail flange, a vertically movable plunger within the housing having an upper anchoring end disposed adjacent the open end of the housing and a lower end providing a space with the lower end of the housing, a transverse shaft rotatably mounted to the housing providing an inner end portion which is movable within the housing adjacent its lower end and an outer end portion, means within said space for urging the anchoring face of the plunger in contact with the lower face of the flange rail, said means comprising a compressible coil spring having its upper end positioned in abutting relation with the lower end of the plunger and a movable actuator, said actuator being positioned on and supported by said inner

end portion of the transverse shaft and supporting said compressible coil spring and operator means secured to said outer end portion of the transverse shaft whereby rotative movement of the shaft is effected to compress the coil spring through said actuator to urge the plunger upwardly and maintain the achoring face of the plunger in engagement with the lower face of the rail flange.

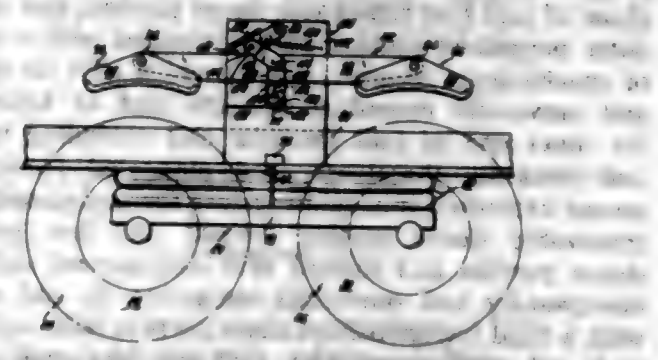
2,893,519
BRAKE ASSEMBLY
John G. Martin, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application September 27, 1954, Serial No. 458,361
4 Claims. (Cl. 188—71)



1. A wheel and brake assembly comprising a rotatable wheel a plurality of circumferentially spaced axially extending driving keys carried by said wheel, a plurality of brake rotors, a plurality of brake stators engageable with the rotors and prevented from rotation by anchoring on a non-rotatable member, said brake rotors each comprised of an annular retainer, a plurality of circumferentially spaced radially diverging projections extending from said retainer, said projections being flared at the ends to provide said projections with a cross-sectional area which is largest at the flared ends thereof, said flared ends having a slot formed therein, a plurality of circumferentially arranged rotor segments peripherally mounted on said retainer between said projections, said segments being slotted on the bottom and ends so that each end slot receives one edge of a respective projection and the bottom receives the edge of the annular retainer thereby retaining said segments in lateral position, a plurality of slotted segment-fastening members located at the flared outer end of each of said projections, and means securing said fastening members to said projections to limit radial movement of said segments and thereby overcome the effect of centrifugal force which tends to throw the segments outwardly towards the wheel, said key members operatively engaging said fastening members and said flared ends in their slotted portions with a clearance being provided at all times between the key members and the bottom of the slots thereby preventing binding due to high bearing load, said flared ends transmitting both the driving force and the centrifugal force exerted by said key members and said rotor segments, respectively, to said circumferentially spaced projections.

2,893,520
AIR SPRING EMERGENCY BRAKE
Willard F. Rockwell, Pittsburgh, Pa., assignor to "Rockwell-Standard Corporation," a corporation of Pennsylvania
Application May 22, 1956, Serial No. 586,693
6 Claims. (Cl. 188—176)

1. In an automotive vehicle, a tandem axle assembly supported at its outer ends by ground engaging wheels, a vehicle frame, a pneumatic suspension operatively interconnected between said frame and axle assembly and supporting said frame upon said axle assembly, a longitudinally extending brake shoe support mounted on said frame at each side thereof above the fore and aft wheels of said assembly, a brake shoe pivotly mounted on each said support adjacent each of said wheels, means mounting each of said supports on said frame for movement between first positions in which said shoes are supported thereby in spaced relation from said wheels so as to prevent engagement between said shoes and the wheel peripheries during normal articulation of said axle assembly relative to said frame and second positions in which said shoes are closely adjacent the top of the



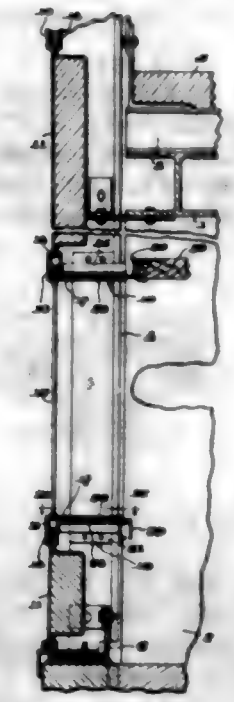
peripheries of the respective ones of said wheels, means resiliently biasing said supports from their said first toward said second positions, latch means for retaining said supports in said first positions in opposition to said biasing means, manually controlled means for releasing said latch means to permit simultaneous movement of said supports to their said second positions under the influence of said biasing means, and means including an actuator disposed in the path of movement of each of said supports from said first to said second positions and rendered operative upon movement of said supports to said second position for exhausting air from said pneumatic suspensions to effect braking engagement between said shoes and the respective ones of said wheels under the influence of the weight of said vehicle frame.

2,893,521
SLEEVE JOINT
Enoch Wheeler Austin, Ardmore, Okla., assignor of fifty percent to Eli Hugh Austin, Oklahoma City, Okla.
Application June 13, 1955, Serial No. 515,198
1 Claim. (Cl. 189—19)

In combination with at least two upwardly-extending adjacent supports, each including a plurality of upwardly extending support sections with each two adjoining sections in end-to-end face abutment at an end part of each of said two sections and each provided with an eye intermediate its ends, an interlocking sleeve joint for each two adjoining sections, each joint including a peripheral enlargement upon one of said end parts, gradually increasing in diameter from the abutting face thereof, a first removable sleeve portion surrounding said end parts and in frictional contact with the peripheries thereof and having opposite upper and lower end faces and an axial bore gradually increasing in diameter from one of said end faces of said sleeve portion to the other of said end faces thereof, the smallest diameter of said bore being very

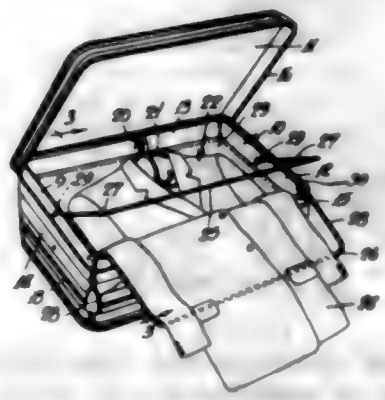
slightly greater than the diameter of the other of said end parts and the greatest diameter of said bore being less than the greatest diameter of said enlargement, said first removable sleeve portion being provided with a plurality of spaced-apart radially-extending openings, extending inwardly from the outer periphery of said first removable sleeve portion toward said axial bore and also extending to the upper end face of said first removable sleeve portion, a second removable sleeve portion above said enlargement and surrounding an upper portion of said outer periphery and having radially-extending spaced-apart lugs snugly extending into said openings, said second removable sleeve portion being a disc with its outer peripheral portion extending outwardly of the vertical plane of said first removable sleeve portion, and with said outer peripheral portion being provided with a plurality of spaced-apart recesses each provided with an upwardly and outwardly extending shoulder and an abutment at the inner end of said shoulder and extending upwardly and inwardly therefrom, and elongated tensioned tie means extending into said recesses for urging said second removable sleeve portion toward said first removable sleeve portion and toward said enlargement including a downwardly and outwardly extending tie rod assembly with a rigid bayonet-shaped end portion, with one part of said end portion engaging said shoulder and a second part thereof in abutment with said abutment and said tie means including a second end portion secured to the eye of a support section carried by an adjacent support and disposed below the horizontal plane of the disc carrying the first-named end portion of said tie means.

2,893,522
CURTAIN WALL
Emil K. Geyser, Pittsburgh, Pa., assignor to E. K. Geyser Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application October 16, 1956, Serial No. 616,313
1 Claim. (Cl. 189—34)



In a building, a building framework, a plurality of laterally spaced vertical curtain wall members secured to the outside of said framework, a plurality of vertically spaced horizontal members extending across the front of the vertical members and secured thereto, the horizontal members being spaced from the framework by said vertical members and being provided with upper and lower channels for holding the tops and bottoms of vertical panels and glass panes to enclose the vertical members and framework, horizontal metal plates at predetermined levels projecting rearwardly between the vertical members from the back of the horizontal members to the framework, the back of the horizontal members being provided with rearwardly opening horizontally extending grooves receiving the front edges of said plates, and brackets secured to the sides of the vertical members at said levels and forming laterally opening horizontal grooves receiving the ends of said plates, whereby the space between said vertical members at said levels is closed by the brackets and plates.

2,893,523
TRAVELLING BAG CONSTRUCTION
Horace Greeley Mitchell, New York, N.Y., assignor to Abercrombie & Fitch Company, New York, N.Y., a corporation of New York
Application October 1, 1956, Serial No. 613,012
2 Claims. (Cl. 190—41)

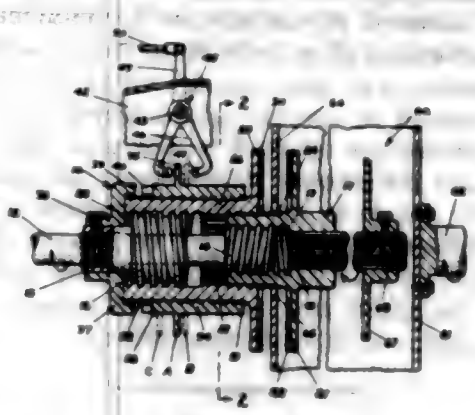


1. In a suitcase, a compartment having four upstanding stiff sides and a bottom all defining a rectangular box-like structure, a clothes hanger fixture secured to the inside of one of said sides, a U-shaped retaining bar having the free ends of the legs of the U pivotally supported in opposite sides of said compartment adjacent the side opposite to said hanger fixture, said ends of said legs being pivoted below the tops of the sides of said compartment, the said legs adjacent said pivoted ends being offset so as to clear the said side opposite the said hanger fixture and extend generally parallel to the bottom of and on the outside of said compartment to sustain part of a garment on the outside of the compartment while packing, and a second generally U-shaped bar member in said compartment and having the legs of the U pivoted to said opposite sides of said compartment at points removed from said side opposite said hanger to swing adjacent to the inside of said side opposite to said hanger to hold down a part of a garment on said hanger and resting on the bottom of said compartment, said first mentioned retaining bar being swingable into said compartment to hold down a part of a garment adjacent to said hanger.

2,893,524
CLUTCHES
Peter Ferrier, Vancouver, British Columbia, Canada
Application November 18, 1958, Serial No. 774,765
6 Claims. (Cl. 192—3.2)

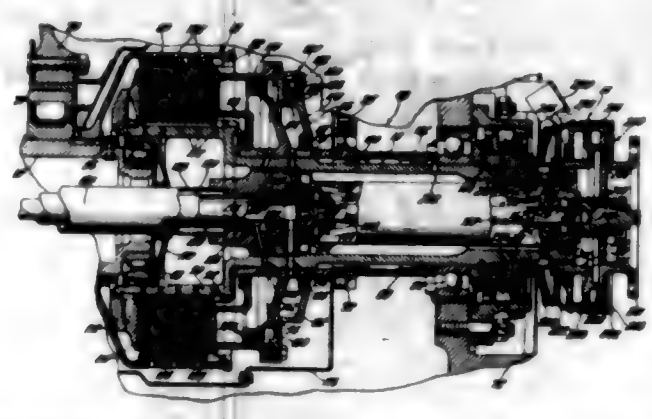
1. The combination of a fluid drive coupling having a drive member and a driven member, a clutch comprising an output shaft having opposed threads, an inner clutch sleeve engaging one of the opposed threads and being operatively connected to the driven member, an outer clutch sleeve slidably and non-rotatively mounted on the inner clutch sleeve, said outer clutch sleeve engaging the second of the opposed threads, a clutch element secured to the drive member, said outer and inner clutch sleeves each having a clutch member, said clutch members being normally spaced on either side of the clutch element of

the drive member, said clutch members being moved into driving engagement with the clutch element in response



to rotation of the output shaft within the inner and outer sleeves.

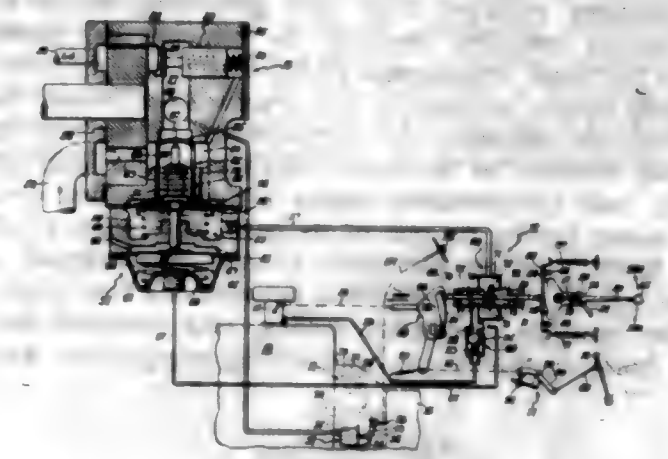
2,893,525
AIRCRAFT POWER SYSTEMS
Charles J. McDowall and Victor W. Peterson, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application December 12, 1952, Serial No. 325,562. Divided and this application April 14, 1954, Serial No. 423,024
8 Claims. (Cl. 192—48)



1. A power transmission unit comprising a normally driven shaft, a normally driving shaft adapted to drive said driven shaft through a clutching mechanism comprising an intermediate shaft, an automatic clutch having engageable members for connecting said intermediate shaft with said driving shaft, and a manually controllable clutch having engageable members for connecting said intermediate shaft with said driven shaft, said automatic clutch being biased to engagement by resilient means and being self-biased to slipping disengagement against said resilient means by a predetermined torque application to said driving shaft from said driven shaft, said resilient means providing a variable force that diminishes appreciably as said automatic clutch moves from engagement to disengagement to lessen slipping wear.

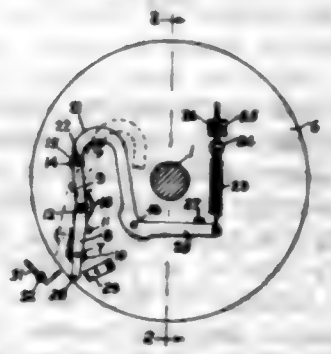
2,893,526
AUTOMATIC CLUTCH CONTROL
Richard L. Smirl, La Grange Park, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application October 22, 1952, Serial No. 316,133
72 Claims. (Cl. 192—.052)

1. Mechanism for controlling engagement of a friction engaging device arranged to provide for transmission of torque between a drive member and a driven member, comprising means for supplying pressurized fluid, a casing having a control chamber for receiving the pressure fluid, a control device for regulating the fluid pressure in said chamber, means for applying engaging force to the engaging device graduated in accordance with the fluid pressure in said chamber, and manually controlled



means for applying opening force on said control device to relieve the pressure in the chamber.

2,893,527
CLUTCH AND THE LIKE
Joseph M. Kalafsky, Cleveland, Ohio
Application June 12, 1957, Serial No. 665,182
3 Claims. (Cl. 192—56)

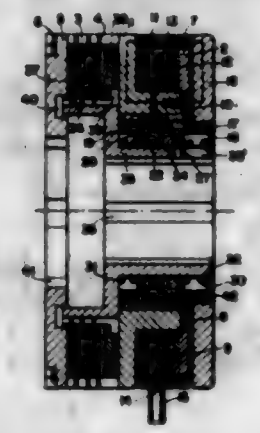


1. In an automatic overload clutch, the combination of a driving member; a driven member; a toggle linkage comprising a pair of links pivotally connected together to provide a knee joint, one link thereof being pivotally mounted on one member, a yieldable arm on the other member having a portion thereof engaged by the free end of the other link of said toggle linkage, means supporting said arm for yielding, upon predetermined force application through said linkage, in a direction such that the knee joint of said toggle linkage is moved from one side of dead center to the other side, thereby collapsing the toggle and freeing said driving member from said driven member.

2,893,528
FRICTION COUPLING
Anton Ryba, Bolzano, Italy, assignor of thirty percent to Joseph Reinisch and thirty percent to Ernst Viantner, both of Bolzano, Italy
Application September 13, 1956, Serial No. 609,586
Claims priority, application Austria September 19, 1955
10 Claims. (Cl. 192—111)

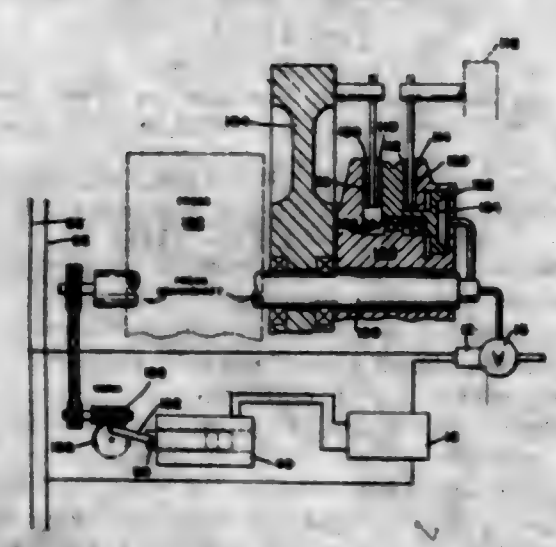
1. A frictional coupling for releasably coupling a driving and a driven rotary component, said coupling comprising a friction disc assembly including two sets of coacting friction discs, a first rotary coupling member adapted to receive one of said components, one set of said discs being fixedly secured to said coupling member for rotation in unison therewith, a second rotary coupling member adapted to receive the other component, the other set of discs of said disc assembly being fixedly secured to the second coupling member for rotary and axial movement in unison therewith, said second coupling member being axially displaceable for movement

of the two sets of the disc assembly into and out of frictional engagement, coupling pressure generating means, transmission means for transmitting the generated coupling pressure from said generating means to said second coupling member to displace the latter toward frictional engagement of the disc assembly, compensating means included in said transmission means for automatically adjusting the displacement of the second coupling member to the axial thickness of the disc assembly, said compensating means including a first coupling sleeve having on one of its peripheral walls a left hand thread and on the other a right hand thread, a second coupling sleeve disposed between the first sleeve and the pressure generating means, said threaded first sleeve being in movement transmitting engagement with



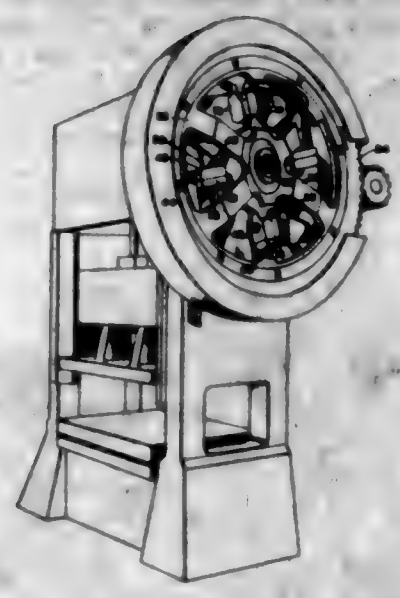
corresponding threads on the second sleeve and the second coupling member, and coacting locking means between the first sleeve and the second sleeve and the second coupling member respectively, said locking means being actuated by the occurrence of a slippage of the coupling members relative to each other for positively and immediately locking the first sleeve to the second sleeve and the second coupling member respectively depending upon the rotational direction of a slippage of the second coupling member relative to the first coupling member whereby such slippage causes an axial displacement of the second coupling member always in the direction of a frictional engagement of the discs of the disc assembly when the pressure generating means is activated thus tightening the frictional grip between the discs.

2,893,529
DIFFERENTIAL TRANSFORMER PRESS CONTROL
Robert W. Hadley, Toledo, Ohio, assignor to E. W. Bliss Company, Canton, Ohio, a corporation of Delaware
Application May 28, 1956, Serial No. 587,591
8 Claims. (Cl. 192—142)



1. In a control system for a power press of the type having a crankshaft, a flywheel drivingly connectable to said crankshaft, a clutch adapted to drivingly connect said flywheel to said crankshaft, solenoid means to engage and disengage said clutch, and an electrical control circuit adapted to energize said clutch during predetermined portions of a cycle of operation of said press, the combination with said control circuit of a magnetic amplifier adapted to actuate said solenoid means; a differential transformer adapted to energize said magnetic amplifier, said differential transformer including an adjustable core; means to vary the engagement of said core with said differential transformer responsive to the angular position of said crankshaft, whereby said solenoid means are energized and de-energized responsive to the position of said core in said transformer.

2,893,530
PULL TYPE MAGNETIC TORQUE LIMITER
Richard L. Cartner, Canton, Ohio, assignor to E. W. Bliss Company, Canton, Ohio, a corporation of Delaware
Application May 28, 1956, Serial No. 587,879
10 Claims. (Cl. 192—150)

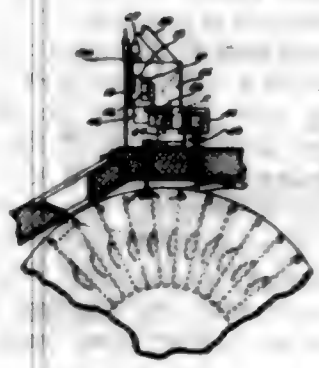


1. An overload coupling comprising a hub adapted to be drivingly connected to a crankshaft; a first lug rigidly secured to said hub and projecting radially outwardly therefrom; a gear adapted to be idly mounted on said crankshaft concentric with said hub; a second lug rigidly secured to said gear and projecting radially inwardly from the periphery of said gear to overlap said hub lug, said second lug being forward of said first lug as determined by the direction of rotation of said coupling; an electromagnetic coil secured to one of said lugs; means to energize said coil to produce a magnetic attraction between said overlapping lugs; and means to rotate said gear in a direction whereby said gear lug pulls said hub lug to rotate said crankshaft when said electromagnetic coil is energized.

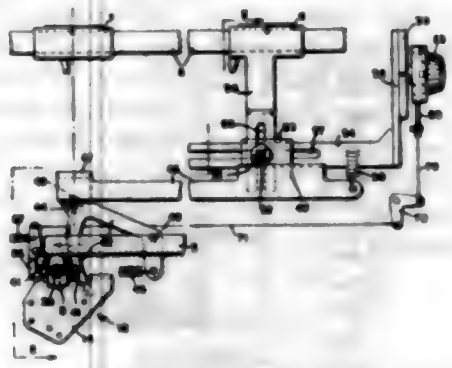
2,893,531
IMPACT DISCONNECT ASSEMBLY
Fred Hobel, Wilmette, Ill., assignor to Fred Hobel Corporation, Addison, Ill., a corporation of Illinois
Application November 7, 1957, Serial No. 694,957
4 Claims. (Cl. 194—97)

4. An impact disconnect assembly comprising mounting means, control relay means on said mounting means having an energizing coil, electrically operated switch means having first and second pairs of contacts and having an element mounted in operative relation to said energizing coil and movable between a normal and actuated position and controlling said pairs of contacts, an external circuit, said first pair of contacts controlling said external circuit and normally closing said circuit,

energy storage means, said external circuit normally supplying energy to said energy storage means, an energy delivery circuit comprising said energy storage means in series with said energizing coil under the control of said second pair of contacts, and said element being responsive to an impact force applied to said mounting means to move to actuated position thereby closing said second pair of contacts to complete said energy delivery circuit for maintaining said electrically operated switch element in actuated position.



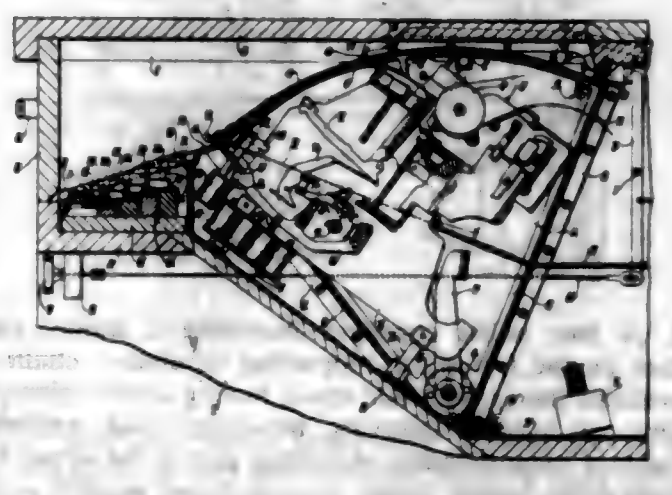
2,893,532
JUSTIFYING MECHANISM FOR TYPEWRITERS AND THE LIKE
Herbert Heinze, Vienna, Austria, assignor to Ing. C. Olivetti & C., S.p.A., Ivrea, Italy, a corporation of Italy
Application December 5, 1958, Serial No. 778,472
Claims priority, application Austria, December 5, 1957
8 Claims. (Cl. 197—84)



1. In a typewriting machine having a machine frame, a movable carriage and an escapement mechanism for normally letter spacing said carriage, said escapement mechanism comprising an escapement wheel rotatably mounted on said machine frame, means engageable with said wheel for controlling rotation thereof, and a support for said means, a justifying mechanism comprising means for rotatably mounting said support on said machine frame coaxially with said wheel, and settable means for gradually rotating said support during the letter spacing movement of said carriage to variably increase the amount of said movement, said wheel being adapted to directly combine the normal angle of rotation according to the letter spacing movement with the variable angle of rotation according to said increase.

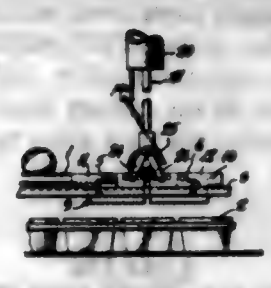
2,893,533
TYPEWRITER AND SOUND ENVELOPING FURNITURE THEREFOR
Henry B. Childs, Elmwood, Conn., assignor to Underwood Corporation, New York, N.Y., a corporation of Delaware
Application July 27, 1956, Serial No. 600,544
16 Claims. (Cl. 197—186)

3. The combination in a desk having a flat top at a normal desk top level suitable for a person seated at the desk to perform clerical work thereon, of two spaced vertical desk walls rising to said flat top to accommodate therebetween operatively a typewriter just therebelow, means supplementing said vertical walls to provide in conjunction therewith a sound deadening compartment for said typewriter and including, extending between said vertical walls below the flat desk top, a movable compartment cover of which at least a portion is transparent for observation of typing done in said compartment, said



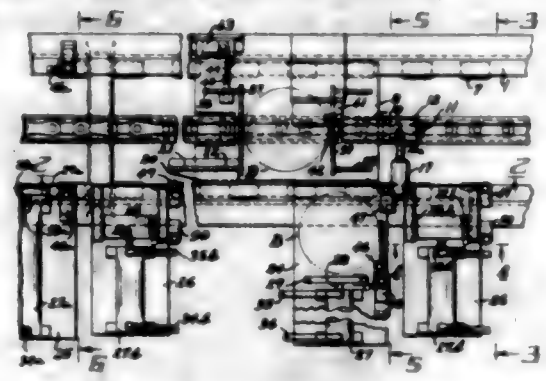
supplementing means leaving underneath said compartment, between said walls, a kneehole for a person seated at the desk, and means to mount at least a part of said flat top for movement from over said compartment to condition the desk for typewriting use, said cover, when the desk is conditioned for typewriting use, being movable so as to open and close said compartment respectively to facilitate access to the typewriter or to render the sound deadening compartment closed.

2,893,534
PANNER FOR TWISTED BREAD
William O. Sommer, Dallas, Tex., assignor to The J. H. Day Company, Incorporated, Norwood, Ohio, a corporation of Ohio
Application November 4, 1954, Serial No. 466,884
10 Claims. (Cl. 198—21)



1. Panner for twisted bread comprising a loaf dumping unit, said unit including a pair of gates hinged on spaced parallel axes, normally bridging the space between said axes, said gates each including a set of loaf-supporting rollers, at least one roller being coaxial with one of the hinged axes, the rollers of both sets being normally tangent to a common plane, a driven belt conveyor having the upper surface thereof substantially in the plane to which said rollers are normally tangent, said belt conveyor passing about the roller which is coaxial with the hinge axis, in driving relation thereto, connections between said last named roller and the other rollers of said sets for driving them at the same peripheral speed as said belt conveyor and in the same direction, means operative responsive to the presence of a loaf when the latter reaches substantially mid-position with respect to the adjacent end rollers of said sets for suddenly and simultaneously tilting said gates downward out of the path of descent of the loaf thus left unsupported.

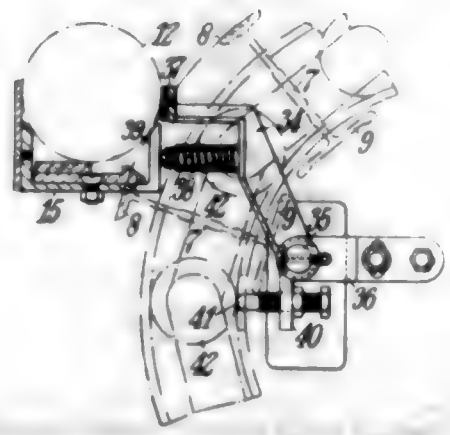
2,893,535
FREE PALLET CONVEYORS
John G. Kay, Detroit, Mich., assignor to F. Jos. Lamb Company, Warren Township, county of Macomb, Mich., a corporation of Michigan
Application April 26, 1957, Serial No. 660,436
7 Claims. (Cl. 198—21)



1. A free pallet conveyor including a frame, guide means on the frame for supporting an endless chain for movement therealong, said chain having carrier pins projecting at spaced intervals therefrom and extending through a longitudinally extending slot in the upper face of said guide means, tracks on said frame parallel and in spaced relation to the guide means, pallets on the tracks for movement therealong, pallet locking bars mounted on said frame parallel to said tracks and in spaced relation thereabove, a latch pivoted on each pallet, means tending to retain each latch in position to be engaged by one of the carrier pins, whereby its pallet is advanced along the tracks, a lever connected to each latch for turning it clear of the path of movement of the carrier pins, a cam plate mounted for movement transversely of the frame which at its inward position is adapted to coact with the lever on an approaching pallet to turn the latch thereon clear of the path of movement of the carrier pins and stop the approaching pallet, a loading platform extending laterally outward from the frame having a pusher plate mounted for transverse movement thereon, whereby a workpiece on the platform is adapted to be pushed therefrom onto the stopped pallet, an actuating switch mounted on said frame operated by a passing pallet, means connected with said actuating switch for moving the cam plate inward to stop said pallet, means associated with said cam plate for actuating the pusher plate to deliver the workpiece onto the pallet, means associated with said pusher plate for actuating the return of the pusher plate to its initial position, and for returning the cam plate to its initial position to release the latch.

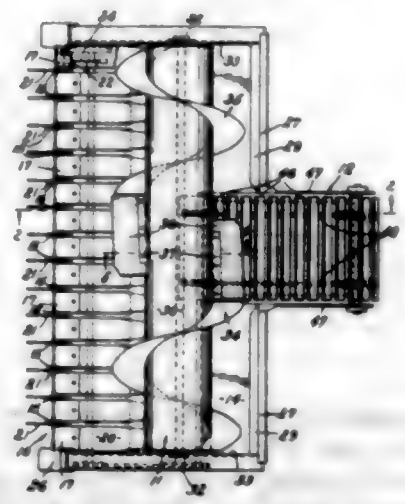
2,893,536
CONVEYOR MECHANISMS FOR USE IN STERILISING OR PRESERVING CONVEYOR
Thomas Marsden Jones, Hove, England, assignor to Mitchell Engineering Limited, London, and R. W. Webster & Company Limited, Waltham Cross, England
Application September 27, 1954, Serial No. 458,634
2 Claims. (Cl. 198—31)

2. Apparatus for processing material encased in containers, comprising an endless conveyor, a plurality of carrier bars for supporting said containers rigidly secured to said conveyor in spaced positions, each of said bars extending transversely across substantially the full width of said conveyor, and projecting substantially perpendicularly from said conveyor, each of said bars having retaining means remote from said conveyor upstanding from both sides of said bar, adapted to retain containers on said bar, the retaining means of adjacent supports having spaces between them for effecting the admission or discharge of said containers at a loading position, feed conveyor means for delivering the containers into said loading position, means for synchronising the respective speeds of the conveyors whereby a complete row of containers may be automatically loaded into each accommodating space provided by the successive pairs of bars, and a pivotally arranged stop operatively associated with said conveyor, and means for swinging said



stop into the feed path of the containers between the positioning of successive pairs of bars of the conveyor in the loading position in front of the feed conveyor so as to stop the supply of containers between each successive loading movement.

2,893,537
CROP PICKUP MECHANISM
Vincent F. Krahn, Birmingham, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application January 8, 1957, Serial No. 633,127
9 Claims. (Cl. 198—104)

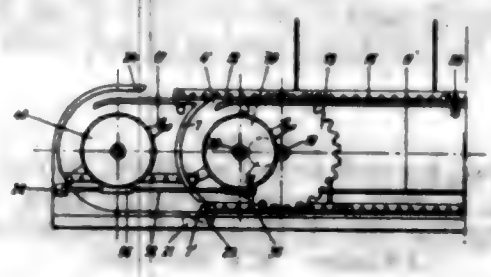


3. In a crop pickup; an elongated, transversely extending crop receiving platform having a generally horizontal portion and a rear wall extending upwardly from the rear of the horizontal portion and provided with an outlet opening, a rotary member extending longitudinally of the platform and mounted a short distance thereabove, means for driving the rotary member, and a flexible, rubberlike flap mounted on the rotary member and extending generally axially thereof, the flap being located in front of the opening and projecting outward generally radially of the rotary member.

2,893,538
REVERSIBLE CONVEYOR SYSTEM
Giovanni Buttironi and Angelo Giavarini, Bergamo, Italy
Application April 19, 1955, Serial No. 502,351
Claims priority, application Germany April 22, 1954
3 Claims. (Cl. 198—110)

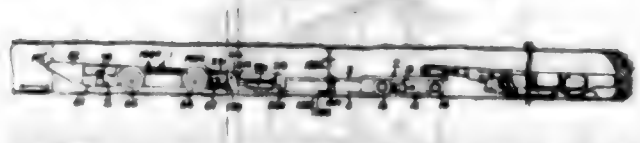
1. A conveyor system comprising a pair of upper and a pair of lower spaced horizontal rails, a plurality of disconnected abutting platforms on said rails, means for driving said platforms along said track rails, each plat-

form having a pair of long and a pair of short laterally projecting front and rear studs adapted to support it on said track rails, the long studs being of a length to extend beyond the outer faces of said track rails and arranged at diagonal corners of each platform, the short studs being of a length to extend no farther than the outer faces of said track rails and arranged at the other diagonal corners of each platform, pairs of arcuate guide means at each end of said track rails spaced by a distance corresponding to the spacing of said studs, said upper rails being interrupted adjacent their outer ends to provide spaces slightly greater than the diameter of a stud, said upper track rails having a pair of laterally, outwardly offset portions spanning a pair of diagonally opposite spaces corresponding to the diagonal arrangement of said long studs, the upper ends of the innermost of said guide means being adjacent the upper rails at the outer ends of



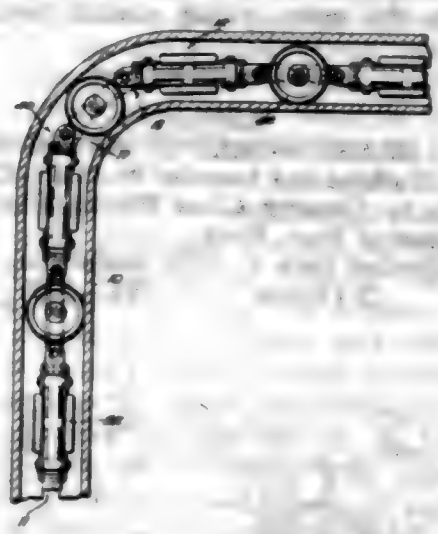
said spaces, the lower ends of said innermost guide means being spaced above said lower track a distance slightly greater than the diameter of a stud, the upper ends of the outermost of said guide means overlapping the outer ends of said upper track rails and spaced therefrom by a distance slightly greater than the diameter of a stud, the lower ends of said outer guide means being adjacent the lower track rails, whereby said long studs will ride over said offset rail portions and said short studs will pass through said offset rail portions, gripper means on each end of said track rails adapted to engage the studs of each platform for transferring said platform from one track to the other, and reversible power means for operating said drive means and said gripper means to complete the track-to-track transfer in the time required for the platforms on the track to advance by the length of a platform.

2,893,539
PORTABLE EXTENSIBLE BELT CONVEYOR
George Baschil, New Philadelphia, Ohio, assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Continuation of abandoned application Serial No. 225,791, May 11, 1951. This application October 11, 1956, Serial No. 616,117
29 Claims. (Cl. 198—139)



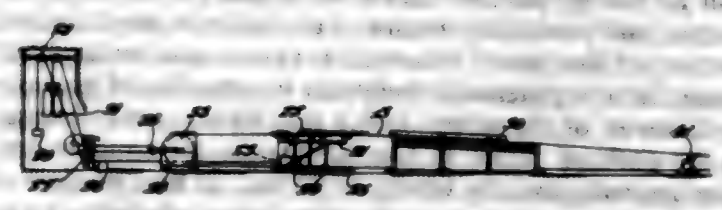
1. A belt conveyor comprising, an endless conveyor belt having a variable length looped portion to allow for extensibility, generally horizontally extending guiding means, a carriage movable along said guiding means, at least one belt-guiding pulley mounted on said carriage, pressure fluid operable means operatively connected with said carriage for exerting a predetermined force on said carriage to move the same in a direction to increase the length of said looped portion of said belt, a source of fluid under pressure, conduit means for connecting said pressure fluid operable means with said source, a return line, and means for connecting said conduit means with said return line including a back pressure providing device for maintaining a predetermined resistance to flow from said conduit means to said return line.

2,893,540
CONVEYOR CHAIN
Harry Freeman, Providence, R.I.
Application November 16, 1956, Serial No. 622,641
2 Claims. (Cl. 198—177)



1. A conveyor chain comprising a plurality of link sections, each of said link sections having a body portion with a wheel axle disposed thereon substantially midway of the longitudinal extent thereof, wheels rotatably mounted on said axle, pivot means disposed at each end of said body portion on axes parallel to said wheel axle, a connector positioned between adjacent sections, said connector comprising two U-shaped elements with flat face bight and ear portions, said ear portions having bearing openings therein, the bight portions of each element being normally in face engaging relation, said pivot means engaging said bearing openings whereby said connector pieces have a limited amount of movement freedom therebetween, the bight portions thereof separating to give additional bending freedom between sections in two axes.

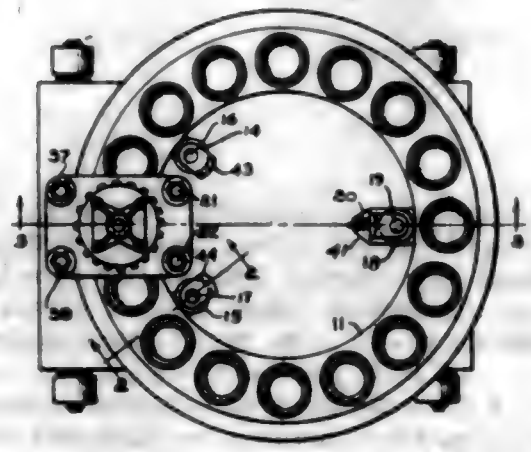
2,893,541
CABLE BELT CONVEYORS
John R. Walker, Inverness, Scotland, assignor to Cable Belt Limited, Inverness, Scotland
Application September 9, 1957, Serial No. 682,650
2 Claims. (Cl. 198—191)



1. A cable belt conveyor comprising an endless belt, end drums over which the said belt passes, a pair of cable circuits one on each side of the endless belt, a pair of coaxial surge wheels mounted beyond one end drum and each having the cable of one cable circuit wrapped round it, means for driving said surge wheels, a pair of tension pulleys beyond the other end drum and each having the cable of one cable circuit passing around it, means acting on the said tension pulleys to tension the cables, cable engaging means on the belt whereby the belt, between the end drums, is supported by the said cables, roller sets to support the upper run of the belt adjacent the end drums and to deflect said upper run of the belt upwardly away from the cables, and guide pulley means comprising pulleys mounted to turn about substantially vertical axes and co-operating with the upper runs of the cables to deflect them laterally; there being, for the upper run of each cable circuit, guide pulley means within the length of the roller set adjacent each end drum, and other guide pulley means beyond the

said end drum, whereby the cables are deflected from positions of parallelism between the end drums to more widely spaced positions of parallelism beyond the end drums, said surge wheels and said tension pulleys being mounted with at least their upper parts spaced to correspond with the more widely spaced positions of the cables.

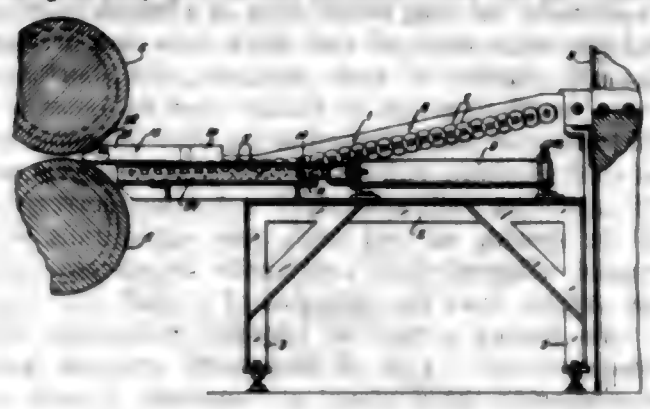
2,893,542
GLASS WORKING MACHINE
George E. Watkins and Leander N. Pond, Corning, N.Y., assignors to Corning Glass Works, Corning, N.Y., a corporation of New York
Application June 6, 1955, Serial No. 513,363
3 Claims. (Cl. 198—209)



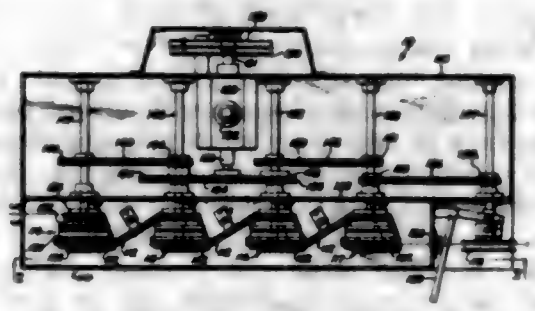
1. In a conveyor, an annular turret carrying a circular row of glass pressing molds uniformly spaced from one another on its top side, means providing a rotary path of travel for said turret, said means including a support having a horizontal top surface upon which the turret slidably rests in a plane normal to its axis, turret guide means associated with the support within the bore of the turret adjacent its bore wall and located at the respective ends of a relatively short arcuate portion of such top surface over which the turret is arranged, and means associated with the support wholly within the bore of the turret adjacent the center of the remaining arcuate portion of the support surface over which the turret is arranged and constantly urging the relatively short arcuate portion of the turret arranged between said turret guide means into engagement therewith irrespective of changes in diameter of the turret during use, whereby the changes in the path of travel of the turret over the support surface are substantially wholly restricted to that portion of the turret arranged over its remaining relatively large arcuate portion and a pressing mold occupying the arcuate portion of the turret between said guides is maintained the same distance from the center of the support surface irrespective of changes in diameter that occur in such turret during its use.

2,893,543
CONVEYOR AND FEEDER
Ovid L. Ervin, Bunker Hill, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Application October 7, 1955, Serial No. 539,180
3 Claims. (Cl. 198—221)

1. A conveying and feeding mechanism comprising a conveyor bed having an inclined portion and a substantially horizontal portion, a bar extending through a gap in the inclined portion of said bed parallel to and above the plane of the horizontal portion of said bed, said bar being retractable in said gap in and behind the inclined portion of said bed to permit the conveyed material to pass down the inclined portion of the bed and onto the horizontal portion, and means to move said bar in a substantially horizontal plane in the direction of the longitudinal axis of the horizontal portion of said conveyor bed.

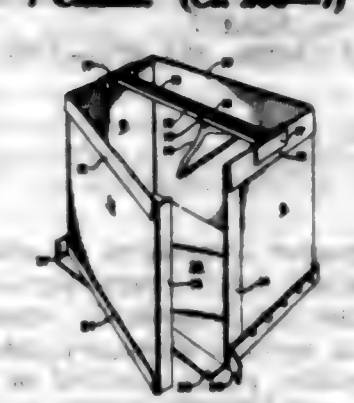


2,893,544
APPARATUS FOR DRAWING WIRE
Kenneth F. Russell, Claremont, Calif.
Application May 3, 1954, Serial No. 427,668
2 Claims. (Cl. 205—20)



1. In wire-drawing apparatus: a unitary wire-receiving capstan having a plurality of cylindrical steps of different diameters, each of said steps being provided with a plurality of separate circumferential tracks, each track being adapted to receive only a single strand of wire, and track-separating means between adjacent tracks on each step.

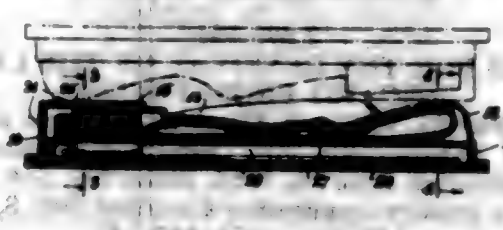
2,893,545
SHIPPING CONTAINER FOR CLOTHING
Jack Garfunkel, Flushing, N.Y., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Application March 25, 1957, Serial No. 648,046
7 Claims. (Cl. 206—7)



7. In a paper product shipping container for clothing, a body section of the type comprising side, back and front wall panels connected to one another at three corners of the body and initially unconnected at the fourth corner to provide a hinged front wall panel, the several wall panels having a flap extending uninterruptedly along the upper edge of the body and folded downwardly against the outside of the body and wrapped around the three corners at which the side, back and front wall panels

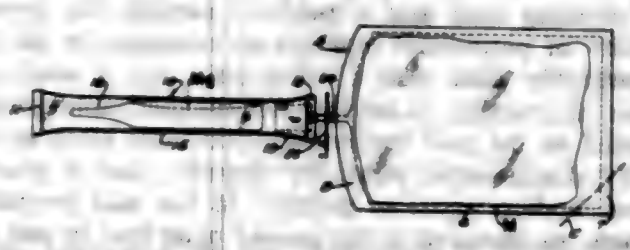
are connected to one another, complementary attaching and reinforcing flaps extending from the meeting edges of the front wall panel and adjacent side wall panel at said fourth corner, that one of said complementary attaching flaps which extends from said adjacent side wall panel being folded over and held against the outside of the body by engagement of the end of said one attaching flap by the flap that is folded downwardly against the outside of the body, and the other of said complementary attaching flaps having an end which is slidable into the pocket formed between said one attaching flap and said downwardly folded flap.

2,893,546
PACKAGE AND PACKAGED ARTICLE
Charles O. Kendall, Waldwick, and Gerry Powell, Bergenfield, N.J., and Stanley S. Friedman, Lynbrook, N.Y.
Application August 8, 1957, Serial No. 677,917
6 Claims. (Cl. 206—45.34)



1. A package assembly comprising in combination a hollow article formed of substantially air-impervious material and having a closed and an open end, a cover, a base mounting the same, said article being disposed between said cover and base and containing an amount of air such that it is distended, the edge zone of the article being folded upon itself to entrap such amount of air, the folded edge zone being disposed adjacent one end of said cover and base and the spacing of the parts being such that said cover and base yieldingly bear against such zone of the article to cause the surfaces thereof to substantially sealingly engage with each other.

2,893,547
KIT AND PACKAGING, MIXING AND DISPENSING MEANS FOR MIXTURE INGREDIENTS
Robert P. Earl, Ashland, and Edward Sohler Welch, Jr., Framingham, Mass., assignors to Fenwal Incorporated, Ashland, Mass., a corporation of Massachusetts
Application May 1, 1957, Serial No. 656,328
1 Claim. (Cl. 206—47)



A shipping, mixing and dispensing package of a thixotropic epoxy resinous mass to be adhesively and hard-curably activated in situ by a chemically active fluid additive curing agent to ready the mass for cementing purposes, said package comprising a tough and distortably flexible transparent plastic pouch having a marginal zone of sealing, a mass of such resinous substance in the pouch, a rigid frangible chemically inert transparent glass ampoule apart from said pouch, an activating volume of chemically active additive fluid curing agent segregated in the ampoule, a separate tough semi-rigid flexible and resilient transparent plastic tubular container enclosing the ampoule and being seal closed at the ends, said container having the capacity for deformation and return to shape under application and release of external compressive force, flexible transparent plastic tubular wall means of internal diameter substantially less than the parallel dimensions of the tubular container and of the pouch and extending through one sealed end of the container and through an opposite portion of the marginal seal zone of the pouch so as to provide a communicating flow passage between the container and the pouch, and a mesh screen element in the container between the ampoule and the adjacent end of said passage, whereby the glass ampoule is protected and the resinous mass and the curing agent are kept inactively segregated for shipment yet readied for dispensing as an admixed adhesive self-curing coating at the point of use upon deliberate fracture of the ampoule by application of force on and through the container wall to release the additive fluid and whereby under application of external pressure upon said container the released fluid is forcibly flowed through the communicating passage and into the pouch for distribution throughout the resinous mass by kneading of the latter under flexure manipulation of the pouch wall prior to exit-porting thereof and whereby on release of such external pressure on the container air is relieved from the pouch, the wall means of the connecting flow passage between the container and the pouch being of a length to enable the ampoule container to be folded over onto and disposed centrally along and upon the pouch and then side portions of the pouch to be folded enclosantly about the ampoule container for cushioning thereof in shipment.

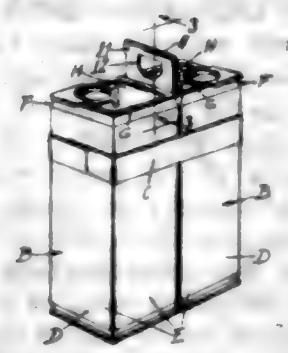
2,893,548
SURGICAL LIGATURE DISPENSER
Gordon M. Carver, Jr. and William Barber, Durham, N.C., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
Application December 28, 1956, Serial No. 631,302
4 Claims. (Cl. 206—63.3)

1. A two-piece readily sterilizable ligature dispenser package comprising in combination: a dispenser casing having a cylindrical body which has an open end, and a partially closed end having a central hole therein, having rigidly attached to said body at approximately the center thereof a finger ring of a size adapted to surround an adult, human middle finger and oriented so that the plane of the ring is substantially parallel with the longitudinal axis of the casing, said casing having a longitudinal slot in the cylindrical body thereof, a ligature on a reel in said casing, with the end of the ligature extending through said slot, and a spindle having a cylindrical body portion of a size adapted to be fitted into the ligature reel and fitted in said reel, said spindle having a flange at one end inserted in the casing and fitting snugly in the open end thereof, said spindle having a groove at the end opposed to the flange, and an axial slot extending part way along the said cylindrical body portion from said grooved end, said groove snap fitting into the central hole in the restricted end of the casing.

2,893,549
CARRYING HANDLE WITH LOCKING FEATURE
Stephen F. Jensen, City Island, N.Y., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Application May 9, 1955, Serial No. 506,746
2 Claims. (Cl. 206—65)

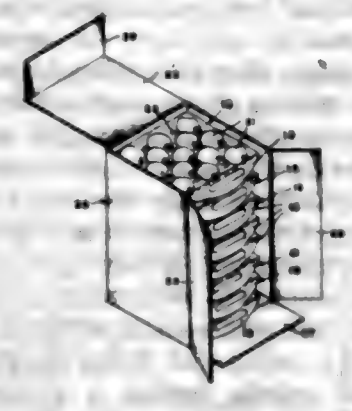
1. A unitary carrying package comprising a pair of juxtaposed rectangular containers having a circumfer-

ential tie band extending therearound to hold the containers in side by side relation, said containers having laterally projecting peripheral ledges at their upper ends with opposed portions of said ledges disposed in parallel contiguous relation, and an upstanding carrying handle of double thickness disposed between said containers and extending above and below said parallel ledge portions, one of said handle thicknesses terminating at its lower end in an outwardly curled support bead of multiple thickness disposed between said containers adjacent one thereof, the other of said handle thicknesses terminating at its lower end in an elonagted inclined outwardly curled toggle bead of multiple thickness resting at its outer end



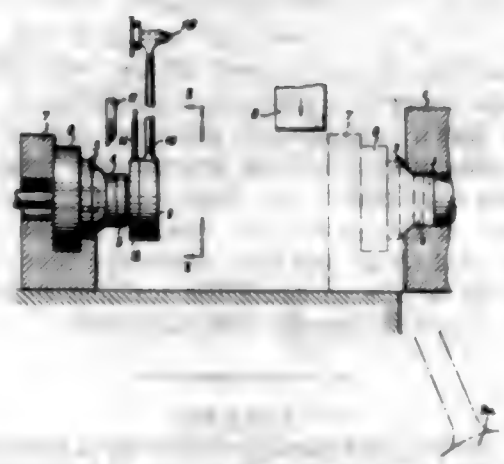
on said support bead and substantially bridging the space between said containers beneath said parallel ledge portions thereof, the inner end of said inclined toggle bead abutting against the adjacent of said containers, whereby the weight of the containers when suspended by and from said handle, rocks said toggle bead upwardly on said support bead from inclined to substantially horizontal position to completely bridge the space between and to wedge at its opposite ends against the opposed container body walls beneath said parallel ledge portions to compensate for the resulting increase of spacing between the upper ends of the suspended containers and to lock said handle in carrying position.

2,893,550
PACKAGE FOR GLOBULAR ARTICLES AND METHOD OF FORMING SAME
Ernest R. Sundmeyer, Yakima, Wash.
Application June 7, 1956, Serial No. 589,981
3 Claims. (Cl. 206—65)



3. A package for holding generally globular articles, comprising a plurality of generally flat bag-like containers having substantially the same vertical and horizontal dimensions and each container being formed of highly flexible transparent material, each container being provided with spaced pockets filled with the articles and being unstretched and having relatively large recesses between the pockets, the pockets of each container being arranged in a single layer and in vertical and horizontal and diagonal rows, the sides of each container being secured together at attaching points, the attaching points being arranged in vertical and horizontal and diagonal rows, the attaching points in the vertical and horizontal rows being arranged between the corresponding pockets in the vertical and horizontal rows of each container, the attaching points being arranged in a single layer and forming two opposed layers of recesses, one container being arranged in overlapping contacting relation with the other container and having the vertical and horizontal edges of the overlapping containers register, the filled pockets of one container partly entering the recesses of the other container and the filled pockets of both containers contacting, the arrangement being such that space is saved when the filled containers are arranged in overlapping assembled contacting relation and the maximum number of articles are held in the flexible containers with respect to the overall vertical and horizontal dimensions of the containers when their vertical and horizontal edges substantially register, and a box receiving the overlapping containers and holding the containers so that their vertical and horizontal edges substantially register.

2,893,551
DEVICES FOR THE REMOVAL OF THE CUT-OFF DISCARD FROM PRESSES
Wilhelm Pirwitz, Ratingen, Germany, assignor to Schloemann Aktiengesellschaft, Duesseldorf, Germany
Application June 20, 1955, Serial No. 516,585
Claims priority, application Germany July 8, 1954
4 Claims. (Cl. 207—1)

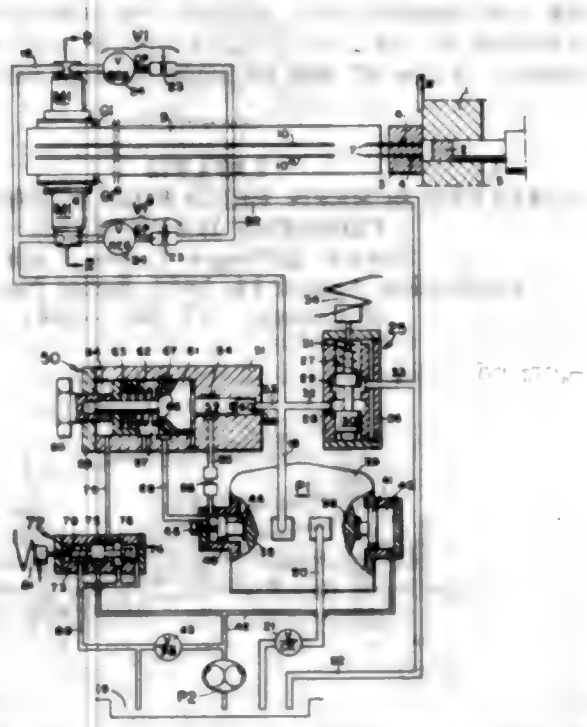


1. Means for removing from an extrusion press a severed discard adhering to an iron pressing disc comprising: a plate of non-magnetizable material displaceable in a plane substantially perpendicular to the axis of the press, between a position facing and close to the iron pressing disc and a position outside the press, a plurality of permanent magnets so mounted in the non-magnetizable plate that a north pole and a south pole appear alternately, a second non-magnetizable plate so mounted on the said first non-magnetizable plate as to be slightly displaceable relatively thereto, and a plurality of iron bodies, equal in number to the said permanent magnets, so mounted in the second plate that in one relative position of the two plates each of the iron bodies is in contact with one only of the permanent magnets, whereas in another relative position of the two plates each of the iron bodies is in contact with the north pole of one permanent magnet and with the south pole of another permanent magnet.

2,893,552
TENSIONING APPARATUS FOR EXTRUSION PRESSES
Enoch D. Davies, Wild Rose, Wis., assignor to The Oilgear Company, Milwaukee, Wis., a corporation of Wisconsin
Application October 27, 1955, Serial No. 543,103
5 Claims. (Cl. 207—1)

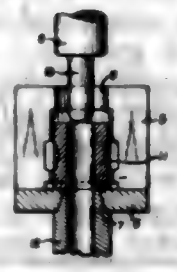
1. In combination with an extrusion press including a die having a plurality of holes through which a billet of

material is pushed to emerge in a plurality of extrusions at lineal rates that tend to differ from one another, tensioning means comprising a hydraulic pump, a plurality of hydraulic motors, means connecting said hydraulic motors hydraulically in parallel with each other and with said pump, valve means connected in series with each of said hydraulic motors to limit the maximum rate of fluid



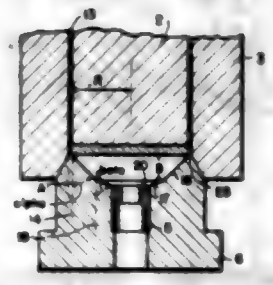
flow therethrough for limiting the maximum speeds of said hydraulic motors to a value greater than the corresponding rate said extrusions emerge from said die, a plurality of driven members each operatively connected to a shaft of a different one of said hydraulic motors, and means attaching said driven members to different said extrusions so that said apparatus applies and maintains an equal pull on each of said extrusions.

2,893,553
APPARATUS FOR THE PRODUCTION OF HOLLOW METALLIC ARTICLES
Alfred Kreidler, Stuttgart, Germany
Application October 5, 1956, Serial No. 614,261
Claims priority, application Germany December 27, 1951
1 Claim. (Cl. 207—3)



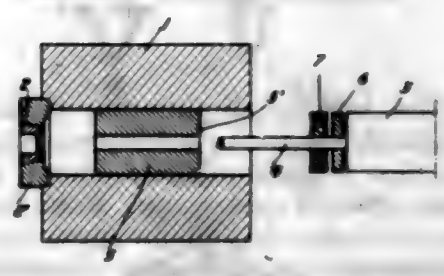
An apparatus for the production of bodies of metal having a formed laterally extending projection and at least one extruded tubular extension comprising a multi-part first tubular die defining a die-pressing inner contour complementary to the shape of said bodies to be produced including at least one laterally extending cavity, said die being open at one end and having an extrusion opening at the opposite end, said first die receiving a tubular blank, an extrusion plunger having a mandrel adapted to be received in said blank, and a second tubular die having an inner diameter identical with the outer diameter of said mandrel, so that the movement of said plunger through said open end towards said extrusion opening will project its mandrel through said blank and said second tubular die to close the extrusion opening and upon application of pressure by said plunger on said blank the laterally extending cavities are filled by said blank and upon removal of said second tubular die and continued application of pressure a tubular extrusion through the free space defined by the opening of said first tubular die and said mandrel takes place.

2,893,554
METHOD OF EXTRUDING METALS
Jacques Sejournet, Paris, and Jean Bonnemieux, Les Fontaines d'Ugine, France, assignors to Comptoir Industriel d'Etirage et Profilage de Metaux, Paris, France, a corporation of France
Application November 7, 1952, Serial No. 319,348
Claims priority, application France November 10, 1944
2 Claims. (Cl. 207—10)



1. In a method wherein a heated metal billet is extruded from a container having a concave bottom and a die located at the lowest part of the concave bottom, the improvement which comprises placing on said concave bottom prior to extrusion, a layer of glass-like lubricating material, heating the billet to extrusion temperature in a bath of molten salt capable of sticking to the billet, removing the billet from the salt bath, placing the heated salt-coated billet in the container with the layer of glass-like lubricating material interposed between the billet and die, forcing the billet through the die while melting at least partially the glass-like lubricating material, and guiding the billet in at least its substantially initial movement from the container toward the die so that its surface moves at an angle of 30–60° with the longitudinal axis of the billet.

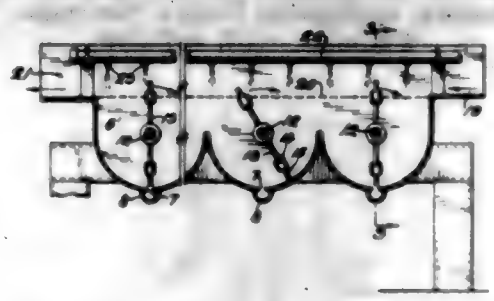
2,893,555
LUBRICATION IN THE HOT EXTRUSION OF METALS
Jean Buffet, Beaumont-sur-Oise, and Joseph Merieux, Pisle-Adam, France, assignors to Comptoir Industriel d'Etirage et Profilage de Metaux, Paris, France, a corporation of France
Application April 13, 1956, Serial No. 578,137
Claims priority, application France April 20, 1955
1 Claim. (Cl. 207—10)



In a method of extruding a heated metal billet from an extrusion chamber through a die located at one end thereof, the steps comprising heating the billet to a predetermined extrusion temperature, placing, immediately behind the billet, a mass of vitreous substance melting at least partially and remaining viscous at the extrusion temperature, placing behind said vitreous substance a cold push-out disc of metal having a melting point relative to the predetermined extrusion temperature such that it would melt in the extrusion operation if placed adjacent the heated billet and which disc is more readily deformable in the extrusion operation than the billet, applying

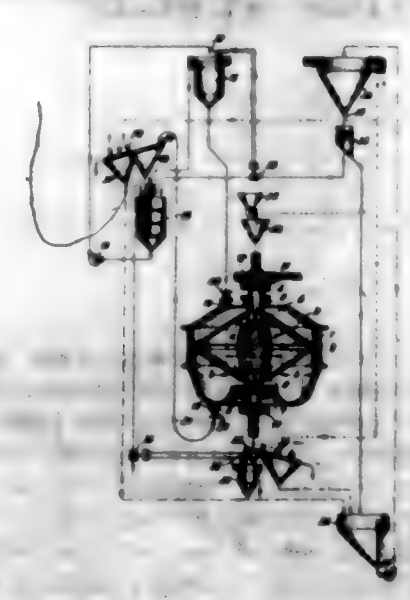
pressure to said disc until all of the billet is extruded through the die and said disc is deformed to conform substantially to the shape of the die, and stopping the application of pressure to said disc when said deformed disc has pushed the rear of the billet from the die.

2,893,556
ORE CONCENTRATORS
George Okay, Denver, Colo.
Application January 10, 1956, Serial No. 558,213
3 Claims. (Cl. 209—162)



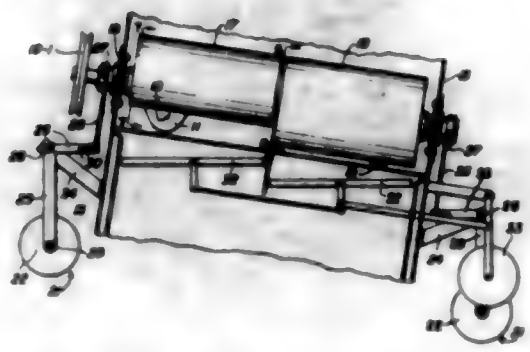
1. An ore concentrator comprising: a plurality of serially connected cells having semi-cylindrical bottoms of substantially equal radii, the axes of the cells being substantially horizontal and arranged in horizontally spaced coplanar relation, the bottom of each cell having a longitudinal slot therein, the first cell of the series having an intake opening located above the plane of the axes, the last cell of the series having a discharge opening po..tioned at substantially the same height as the intake opening, a shaft journaled for rotation in each cell about the axis thereof, radial arms depending from each shaft, a brush mounted on the end of the arms in position to sweep the bottom of the cell, drive means operatively connecting each shaft for rotation in a direction to sweep material therein downstream across the slot and into the succeeding cell of the series, and an inclined trough positioned beneath each slot.

2,893,557
APPARATUS AND METHOD FOR CENTRIFUGAL SEPARATION
Rudolf Teutsberg, Dortmund, Germany, assignor to SKB Schachtbaumann & Kramer-Bonn Aktiengesellschaft für Aufbereitung, Dortmund, Germany, a corporation of Germany
Application January 6, 1954, Serial No. 402,449
Claims priority, application Germany January 10, 1953
17 Claims. (Cl. 209—172.5)



1. Method for the working up of granular materials in heavy liquid with centrifugal force, which comprises, establishing a substantially volume-confined, pressure-restricted zone of heavy liquid, rotating and maintaining an annular field of heavy liquid within said zone only in peripheral communication with the rest of the heavy liquid in said volume-confined zone, rotating and maintaining within said annular field of heavy liquid a central field of light liquid of lower specific gravity than said heavy liquid, conveying granular material in a conveying liquid stream to said field, and centrifugally separating said material into at least two specifically differing fractions by the centrifugal action of said field and the passage of one of said fractions through said field.

2,893,558
CHAFFER SCREEN FEED FOR AGRICULTURAL COMBINE HARVESTER
Ezra J. Zellinger, Logan, Utah
Application August 14, 1957, Serial No. 678,127
10 Claims. (Cl. 209—254)

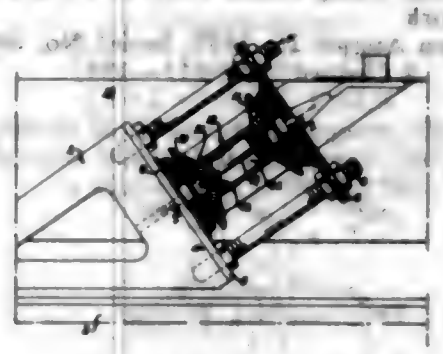


1. In a combine harvester having a chaffer screen for receiving a flow of mixed grain and chaff, a grain-distributing feed device positioned adjacent the feed end of said chaffer screen, said grain-distributing feed device comprising a conveyor screw extending transversely of the chaffer screen along said feed end thereof and having mutually reverse flights extending along opposite end portions thereof; baffle means extending along said screw and normally positioned in non-cooperative relationship therewith, but having opposite end portions respectively positionable in cooperative relationship therewith between said screw and the chaffer screen and along that conveyor screw end portion which is lowermost when the combine slants sideways, so as to restrain forward flow of mixed grain and chaff from such lowermost portion of the conveyer screw and render it operative to convey the restrained grain and chaff upwardly along said lowermost end portions of the screw to the normally positioned, non-cooperative end portion of said baffle means; and means responsive to the slope of the combine for selectively positioning said opposite end portions of the baffle means.

2,893,559
SHAKING SCREEN, PARTICULARLY RESONANCE SCREEN
Rudolf Teutsberg, Dortmund, Germany, assignor to Schachtbaumann & Kramer-Bonn Aktiengesellschaft für Aufbereitung, a corporation of Germany
Application July 8, 1957, Serial No. 670,555
Claims priority, application Germany July 10, 1956
6 Claims. (Cl. 209—365)

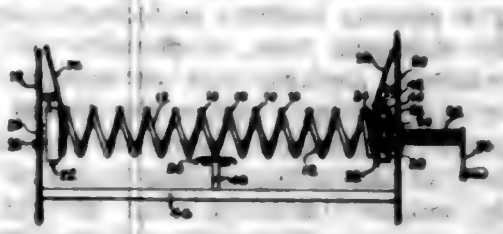
1. In a shaking screen comprising a screen frame serving as a counterweight, a screen box and mounting means including stops and buffers operatively interconnected between the screen frame and screen box for aiding in defining shaking of the screen box relative to the screen frame, the improvement which comprises pairs of elastic recoil buffers mounted on the screen frame, a pair of stops mounted in a holding member, the stops of each pair being axially aligned and in oppositely dis-

posed relationship, an extension for each holding member fixedly securing the holding member to the screen box with the stops of the holding member operatively



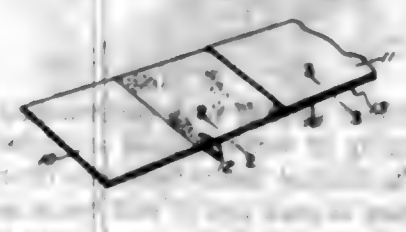
disposed with play between the buffers of a pair of said elastic recoil buffers, and means for detaching the stops from the holding members.

2,893,560
SCREEN
Kenneth R. Bixby, Galesburg, Ill.
Application June 21, 1956, Serial No. 592,831
9 Claims. (Cl. 209—394)



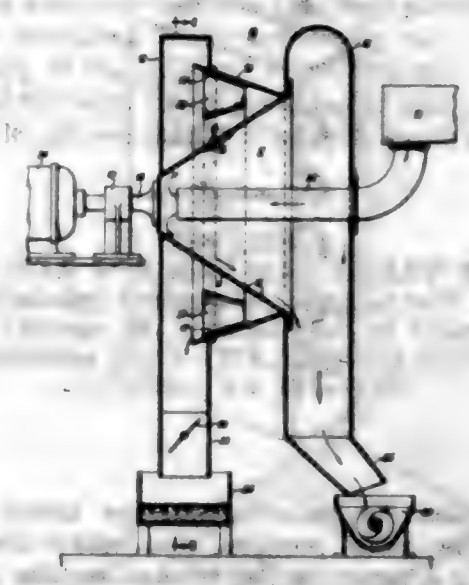
1. A screen including a plurality of similar spiral springs arranged in spaced parallel relation, a plurality of spaced rods extending transversely of said springs, and means including a plurality of eyelets one projecting from each convolution of each said spring and pivotally secured thereto for pivotally securing said rods to said springs, the eyelets of each spring being spaced one convolution apart and the rods being secured by said eyelets to adjacent convolutions of each spring so as to be spaced one convolution apart, said eyelets slidably engaging said rods.

2,893,561
MAGNETIC FILTER ELEMENTS
John J. Dunich, Pawtucket, R.I., assignor to Fram Corporation, Providence, R.I., a corporation of Rhode Island
Application March 7, 1958, Serial No. 719,860
8 Claims. (Cl. 210—223)



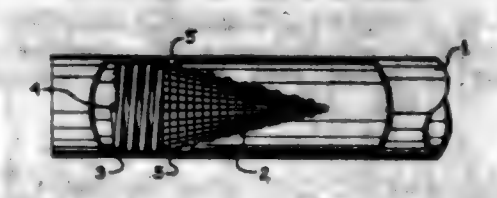
1. A filter for filtering liquids containing fine particles of ferrous metal, comprising a porous sheet formed of organic fibers and having disposed in close relation to each other over one face thereof small particles of magnetic material that are secured to the sheet, said small particles being magnetized to form minute magnets distributed over the sheet at the upstream side thereof, so that ferrous particles in the liquid being filtered will be trapped and held by these minute magnets.

2,893,562
CONTINUOUSLY FED CENTRIFUGAL MACHINE
Alexander H. McPhee, Manhasset, N.Y., Charles A. Olcott, Hewlett, N.J., Thomas H. Reid, Brooklyn, N.Y., and Frederick Stindt, Cliffside Park, N.J., assignors to Hepworth Machine Company, Inc., Long Island City, N.Y., a corporation of New York
Application June 22, 1953, Serial No. 363,242
6 Claims. (Cl. 210—380)



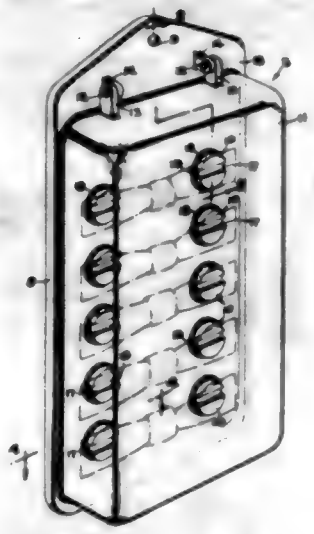
1. A sugar-drying centrifugal machine comprising a rotatable basket having a multiplicity of apertures therein, means for continually feeding magma to the interior of said basket, means including a circular skirt surrounding and adapted to rotate with said basket for directing away from the basket liquid from said magma thrown off during the sugar drying process, means for producing a pressure lower than atmospheric pressure in the region between said basket and said skirt, and means separate from said last-mentioned means for varying said pressure.

2,893,563
STRAINER
Edward W. Bettum, Detroit, Mich.
Application July 12, 1954, Serial No. 442,804
1 Claim. (Cl. 210—448)



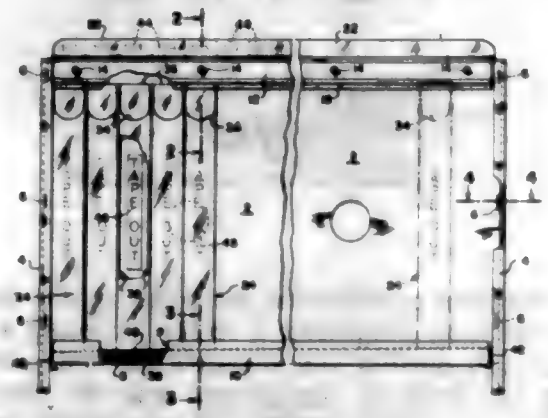
In a strainer construction including a fluid flow tube, the combination comprising a screen including a strainer-forming wall portion and a cylindrical wall portion extending therefrom in engagement with the tube interior surface; a coil spring within said cylindrical screen portion and torsionally stressed to act expansively in outwardly radiating directions so as to frictionally lock the screen within the tube; said coil spring having a plurality of convolutions, with the endmost convolution adjacent the strainer-forming wall portion of the screen being slightly smaller than the other endmost convolution; the extreme end portion of said other endmost convolution being turned inwardly toward the tube interior to form a tool-engageable arm; said spring being located in the screen with said arm turned from the position it occupies when out of screen so as to torsionally stress said other endmost convolution and reduce its size for accommodation of the spring in the screen and expansion of said screen against the tube interior surface.

2,893,564
HOLDER FOR BOW TIES AND THE LIKE
Olin L. Gearhart, La Salle, Ill.
Application July 25, 1957, Serial No. 674,132
3 Claims. (Cl. 211—13)



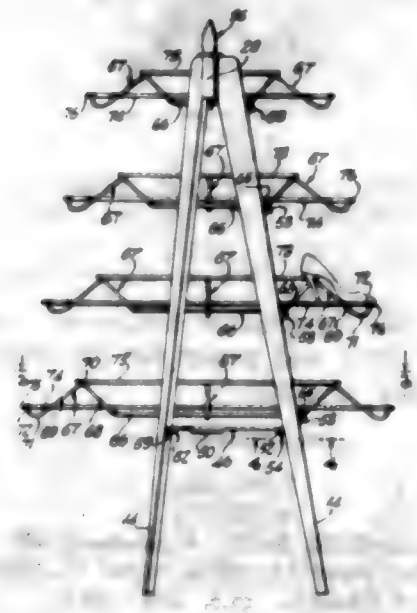
3. A holder for an article having alined and elongated narrow metal portions, said holder comprising a base having a generally flat vertical surface, and a plurality of permanent magnets rigidly fastened to said base and projecting outwardly beyond the plane of said surface, said magnets being arranged in pairs with the magnets of each pair horizontally alined and each of said magnets having a horizontal slot formed in its outer face and having its full depth disposed beyond said plane, the slots of each pair of magnets being alined to receive the elongated metal portions of said article.

2,893,565
TAPE HOLDER
Herbert Weston, New York, and Romeo T. Proulx, Copiague, N.Y., assignors to Visirecord, Inc., New York, N.Y., a corporation of New York
Application May 13, 1957, Serial No. 658,875
5 Claims. (Cl. 211—60)



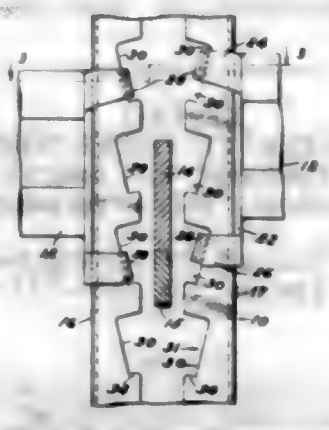
1. Apparatus for filing tapes, containing recorded data including a panel member to be received in a filing cabinet or drawer, said panel comprising a sheet of material of a suitable width to be received in the drawer, and end members secured to the opposite side edges of said sheet, the improvement which consists of a pocket formed on the lower edge of the sheet, a strip secured to the sheet near its upper edge, the lower edge of the strip being spaced from the sheet, and sleeves to contain the tapes, the bottom portions of the sleeves being received in the pocket, the sleeves having rear walls extending upwardly beyond the rest of the sleeve and being received between said sheet and the spaced portion of said strip to hold the sleeves in place.

2,893,566
ARTICLE SUPPORT AND DISPLAY DEVICE
Joseph Shenker, Great Neck, N.Y., assignor to Shenker Displays, Inc., Long Island City, N.Y., a corporation of New York
Application August 26, 1957, Serial No. 680,135
9 Claims. (Cl. 211—129)



1. An improved article support and display device comprising a pedestal member including a plurality of downwardly diverging legs, a plurality of vertically spaced horizontal coplanar sets of support elements mounted on said diverging legs, a plurality of vertically spaced apertured platform members encircling said pedestal member and having circular tracks of upwardly successively smaller diameters, each of said circular tracks resting upon and being freely movable along a corresponding coplanar set of said support elements.

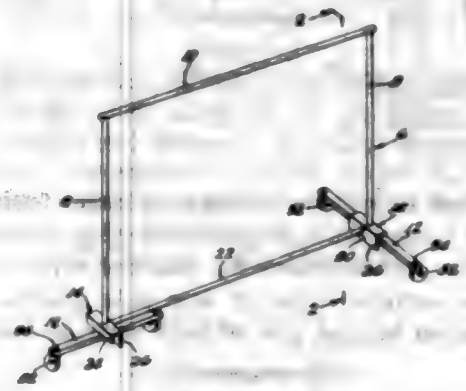
2,893,567
STORAGE RACK CONSTRUCTION
Glen R. Steele, Plymouth, Mich., assignor to Bathey Manufacturing Company, Plymouth, Mich., a corporation of Michigan
Application July 11, 1958, Serial No. 747,877
8 Claims. (Cl. 211—147)



1. An adjustable storage rack construction of the type wherein a plurality of vertical posts are detachably interconnected by horizontal beam members characterized by connecting means at each end of said beam members, said connecting means each including a reaction plate secured to a beam member transversely of the length thereof, tab means rigidly carried by said beam member, said tab means extending longitudinally thereof and projecting outwardly of said reaction plate, said tab means including a post engaging surface inclined downwardly and outwardly relative to said reaction plate, said posts each being provided with beam supporting means comprising a vertical reaction surface extending parallel to said beam reaction plate and a ramp surface inclined downwardly and outwardly relative to said post reaction surface, said ramp

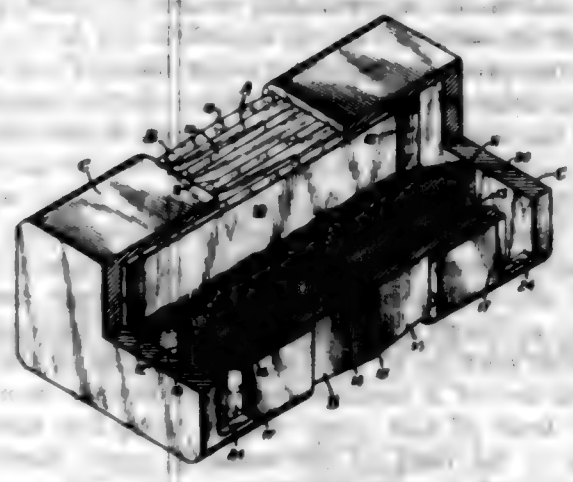
surface being engageable by said beam tab means to produce wedging contact between said connecting means and beam supporting means on downward movement of said beam relative to said post.

2,893,568
COLLAPSIBLE RACK
Edwin R. Scholz, Los Angeles, Calif.
Application March 5, 1956, Serial No. 569,633
3 Claims. (Cl. 211—178)



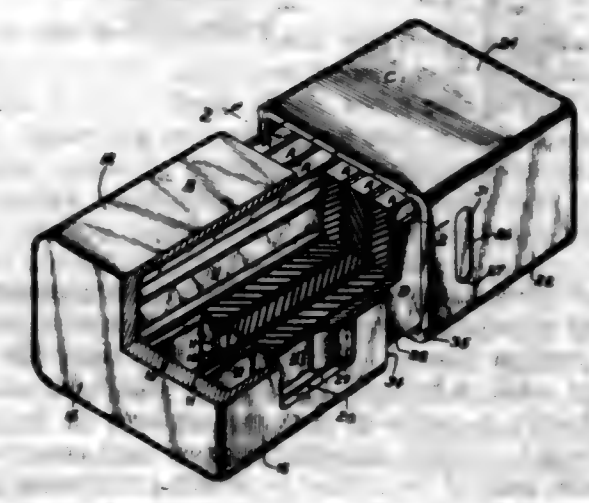
3. A collapsible rack including a substantially vertical frame having spaced uprights, a base member pivotally secured to a lower portion of each of said uprights and swingable in a horizontal plane from one position in general alignment with a vertical plane longitudinally through the vertical frame, to a second position transversely of said vertical plane, a base locking member at the lower end of each upright and freely movable vertically relative to said uprights, means for maintaining each of said base locking members against rotation about the axes of said uprights, each base locking member having a portion engageable with a portion of its respective base member to releasably lock said base members against swinging movement in a horizontal plane from their positions transversely of and in alignment with said vertical plane, the base locking members being held in locking position solely by gravity.

2,893,569
DRAFT GEARS FOR RAILWAY DRAFT RIGGING
Harry W. Mulcahy, Chicago, Ill., assignor to W. H. Miner, Inc., Chicago, Ill., a corporation of Delaware
Application June 15, 1956, Serial No. 591,744
1 Claim. (Cl. 213—44)



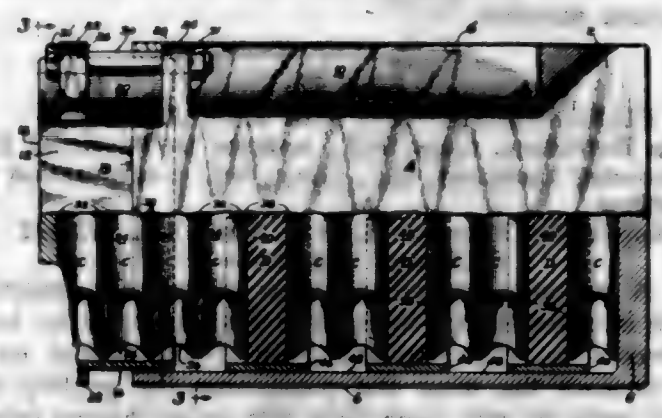
A rubber friction draft gear comprising: a plurality of spaced apart metal plates disposed parallel to each other and extending longitudinally of the gear, alternate ones of said plates being offset with respect to the intervening plates, the outer surfaces of the outer ones of said plates tapering from thicker portions at the centers of the plates to thinner portions at the front and rear ends thereof; lugs projecting outwardly from said outer plates at the ends thereof; a plurality of rubber pads, each pad being disposed between and bonded to an adjacent pair of said plates; a front cap for said gear, having a front wall against the rear face of which the offset ends of the alternate plates abut and rearwardly extending walls projecting from the edges of said front wall, the side wall portions of said rearwardly extending walls containing slots elongated longitudinally of the gear and into which the lugs at the front ends of the outer plates project; and a rear cap for said gear, having a rear wall against the front face of which the offset ends of the intervening plates abut and forwardly extending walls projecting from the edges of said rear wall, the side wall portions of said rearwardly extending walls containing slots elongated longitudinally of the gear and into which the lugs at the rear ends of the outer plates project, said end caps having an internal length less than one-half the length of an inner plate.

2,893,570
DRAFT GEAR FOR RAILWAY DRAFT RIGGING
Harry W. Mulcahy, Chicago, Ill., assignor to W. H. Miner, Inc., Chicago, Ill., a corporation of Delaware
Application July 3, 1956, Serial No. 595,656
4 Claims. (Cl. 213—44)



2. A rubber unit for a draft gear, consisting of a rubber mass disposed between and bonded to a pair of longitudinally offset, parallel plates having stiffener elements extending substantially longitudinally of the plates.

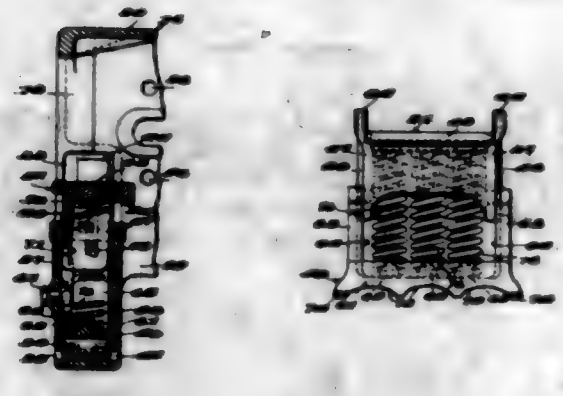
2,893,571
RUBBER DRAFT GEARS
Harry W. Mulcahy, Chicago, Ill., assignor to W. H. Miner, Inc., Chicago, Ill., a corporation of Delaware
Application August 27, 1956, Serial No. 606,241
6 Claims. (Cl. 213—45)



1. In a shock absorbing mechanism having a friction shell and a plunger telescopically movable within one end thereof, the combination therewith of a plurality of rubber cushioning units within the shell and capable of absorbing compressive forces applied through said plunger, a plurality of friction shoes bonded to certain intervening ones of said units and in frictional engagement with the inner longitudinal surface of said shell, each of said

friction shoes consisting of a strip of metal formed to follow the lateral contour of the inner shell surface and bonded to the edge surface of a rubber unit.

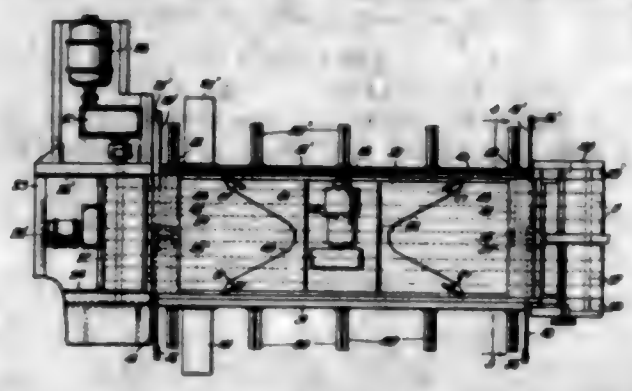
2,893,572
STRIKER AND CARRIER FOR RAILWAY COUPLERS
Carl D. McClure, Columbus, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio
Application March 26, 1954, Serial No. 418,823
14 Claims. (Cl. 213—60)



12. A draw bar support for a draft rigging comprising, a trough structure integral with the striker at a forward lower portion thereof having generally vertically front and rear walls, a bottom wall joining said front and rear walls having a series of concave surfaces in the upper face thereof, a roller engaging each of said concave surfaces with ends of the rollers in abutting relationship with said front and rear walls, a spring abutment member having a series of downwardly facing concave surfaces thereon each of which rests on one of said rollers, a carrier iron, upstanding lugs carried by the carrier iron adapted to be engaged by opposite sides of the draw bar, springs between an under surface of the carrier iron and an upper face of said spring abutment member, means carried by the carrier iron and the spring abutment member limiting upward movement of the carrier iron with respect to the spring abutment member in response to action of said springs, and means on said front wall within said trough structure in position to be engaged by said spring abutment member limiting upward movement of the spring abutment member.

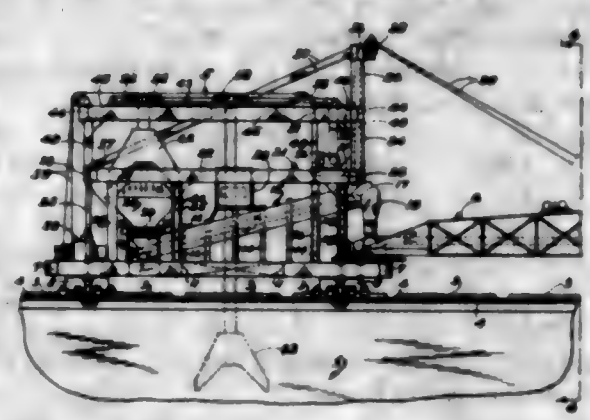
2,893,573
PILER MECHANISM FOR METAL SHEETS
Dario Buccicone, Gary, Ind., assignor to Buccicone Engineering Company, Inc., Gary, Ind., a corporation of Indiana
Application February 2, 1956, Serial No. 563,892
9 Claims. (Cl. 214—6)

1. A machine for piling sheets of metallic material which is characterized by an overhead sheet carrier having means to release successive sheets for deposit on a pile beneath the same and mechanism for guiding the sheets onto the pile comprising side guides having oppositely disposed vertical faces in parallel planes, means for mounting said side guides for movement to adjust the distance between said faces, a sheet support mechanism movably mounted on each of said side guides, said sheet support mechanism comprising finger forming members adapted to extend horizontally inwardly of a guide face, a supporting frame for said finger forming members, brackets extending from said supporting frame, rollers journalled on said brackets, track members mounted on the side guide for receiving said rollers, an equalizing shaft journalled in said supporting frame, pinions on the ends of said shaft, cooperating racks on the ends of said side guide, and means for reciprocating said supporting



frame between a position where said finger forming members extend beneath a side marginal edge portion of said sheets as they are released by said conveyor for deposit between the vertical faces of said side guides, and a retracted position behind one of said vertical faces.

2,893,574
UNLOADING UNIT FOR CARGO VESSEL
Wilford G. Bertenfeld, Lakewood, Ohio
Application October 22, 1956, Serial No. 617,414
9 Claims. (Cl. 214—15)



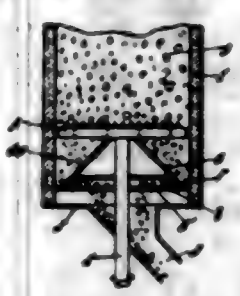
1. An unloading unit for a cargo vessel designed for loading from an overhead shore installation comprising a framework having a base adapted to extend over an opening in the deck of the vessel; means by which the framework may be moved parallel to the longitudinal axis of the vessel; a boom extending from the framework, said boom incorporating means for moving cargo from the inboard end to the outboard end of the boom; means for pivotally supporting the inboard end of the boom; a conveyor extending parallel to the longitudinal axis of the vessel to a discharging zone above the boom from a receiving zone at the opposite end of the framework, the receiving end of said conveyor being mounted on the base; transversely extending hopper means above the receiving end of the conveyor; and, supported from a level above that of the top of said hopper means, a plurality of cargo scoops each of which is susceptible of movement parallel to the longitudinal axis of the vessel into and out of a position over said hopper means, the support level of said cargo scoops being low enough in relation to the deck of the vessel to avoid interference with overhead shore installations.

2,893,575
LOADING MACHINE FOR REACTORS
Sidney L. Simon, Cleveland, Ohio, assignor to the United States of America as represented by the United States Atomic Energy Commission
Application January 17, 1956, Serial No. 134,959
3 Claims. (Cl. 214—18)

3. In a material loading or handling machine, in combination, means comprising a loading tube having a right

angle delivery portion, a flexible ram disposed within the tube, drive means for the flexible ram, a carriage for reception of the loading tube and ram, means for actuating the carriage to bodily move the loading tube and ram to adjust the position of the delivery end of the tube, and additional means for moving the delivery end of the tube in an arcuate path without relative movement of the ram itself to provide for adjustment of the delivery end of the tube, said last named means including a gear carried by a portion of said carriage and driven from an external power source.

2,893,576
SOLID MATERIAL WITHDRAWING ARRANGEMENTS FOR VERTICAL FURNACES
Francis Paul Szonegyi, London, England
Application November 23, 1956, Serial No. 624,043
Claims priority, application Great Britain November 25, 1955
4 Claims. (Cl. 214—18)



1. Arrangement for controlling the discharge of relatively loose solid material from the lower end of a vertical sintering furnace into an extraction shaft comprising in combination at the lower end of the furnace above said extraction shaft a rotatable crushing grate provided with openings of a size insufficient to retain the material on said grate, an upwardly pointed conical member rotatably mounted adjacent to and below said grate and adapted to receive the solid material passing through the said grate and to guide its flow outwardly and downwardly to an annular gap between the edge of the base of said conical member and the furnace walls, thereby intercepting a direct passage of the material from the grate into said extraction shaft, a stationary annular shelf provided with a central aperture and arranged adjacent the furnace walls below said gap and extending radially inwardly beyond the edge of the base of the conical member to receive the solid material passing through said gap and to guide its flow inwardly to fall through said central aperture into said extraction shaft, said annular shelf being of a radial width sufficient to retain the material received thereon in its static angle of repose, but insufficient to retain the same in its dynamic angle of repose, and means for rotating said conical member.

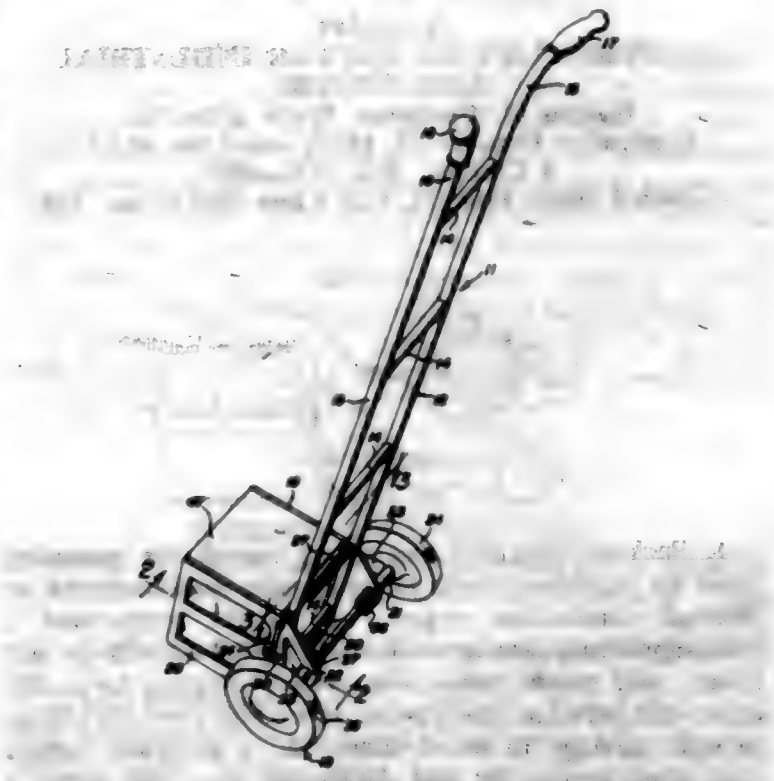
2,893,577
LIFTING DEVICE
Arthur G. Swanson, Valparaiso, Ind.
Application April 16, 1956, Serial No. 578,238
2 Claims. (Cl. 214—372)

1. A table lifting device comprising a hand truck having a bed frame with a handle end and a toe plate mounted on the lower end of said bed frame at substantially a right angle thereto, an extension frame secured to said toe plate and projecting therefrom at substantially the same angle to said bed frame, and a lever frame hinged at one end to said extension frame with the free end of said lever frame swingable over said handle end and movable with respect to said handle end to be kept in a horizontal plane as said hand truck is tilted.

2,893,578
LOAD LEVELING CART
Hal F. Paul, San Francisco, Calif.
Application March 1, 1957, Serial No. 643,398
6 Claims. (Cl. 214—378)

1. A cart to transport a tub which has a laterally protruding rim at the upper end thereof, said cart comprising a chassis, a pair of front wheels and a pair of rear wheels, means supporting said wheels on said chassis, a generally U-shaped upwardly opening cradle attached to said chassis, handles protruding rearwardly from said chassis, means bracing said U-shaped cradle by being attached to said cradle and said handles, a sway bar support for the tub, said support having arms mounted for oscillation in said cradle and above said chassis and about a transverse axis, a second pair of arms, and means on said second pair of arms beneath said transverse axis to engage the flange of the tub and hold it supported within said cradle but capable of oscillating with said support about said axis.

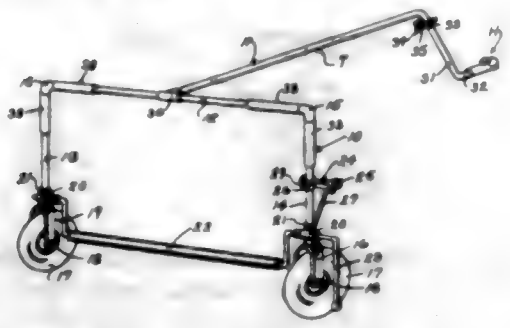
2,893,579
COMPRESSION HAND TRUCK
Duncan T. McLeod, Flint, Mich., assignor to Charles W. White, Flint, Mich.
Application February 26, 1958, Serial No. 717,764
5 Claims. (Cl. 214—379)



1. A compression hand truck comprising an upright framework, hand grips secured to the upper end of said framework, a pair of plates positioned respectively ad-

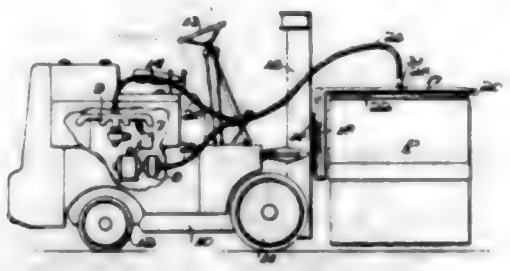
jacent the opposite side edges of said framework, means securing said plates to said framework for swinging movement about an axis parallel to said framework, means extending between said plates adjacent one end thereof for swinging said plates and for latching said plates in adjusted position, and a pair of ground engaging wheels pivotally mounted on said plates adjacent the means for swinging said plates.

2,893,580
BOAT TRAILER
Fulton W. Fischer, Oconto Falls, Wis.
Application May 9, 1956, Serial No. 583,698
1 Claim. (Cl. 214—3.54)



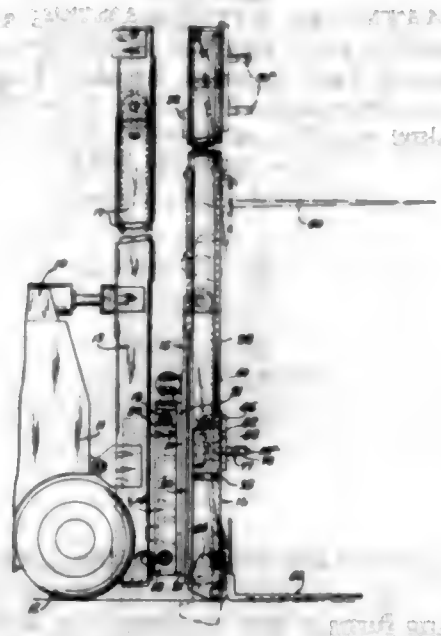
A trailer comprising a transversely extending main frame and a forwardly extending reach pole, the transversely extending frame being U-shaped and adapted to straddle a boat, said U-shaped main frame including an upper frame bar and depending side leg members, wheels carried by said side leg members, and a crank shaped lower supporting bar rotatably carried by the main frame and movable to a raised position toward the top frame bar for holding a boat in an elevated position therebetween, a roller sleeve carried by said crank portion of said supporting bar, a manipulating handle for turning the supporting bar to a raised and lowered position, and means carried by the forward end of the pole for pivotal connection with the bow of a boat, whereby, there are no frame or supporting members adjacent or under the sides or bottom of a boat held therein except said supporting bar and respective portions of said side leg members.

2,893,581
SUCTION LIFT MEANS FOR INDUSTRIAL LIFT TRUCKS
Walton W. Cushman, Webb City, Mo.
Application October 31, 1957, Serial No. 693,790
3 Claims. (Cl. 214—651)
(Granted under Title 35, U.S. Code (1952), sec. 266)



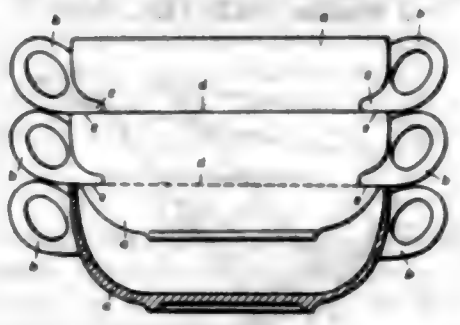
1. Package engaging and lifting means for mounting upon an industrial truck in which the truck includes an internal combustion engine, an upright frame and a load-supporting carriage slidably mounted on said upright frame, said means comprising arms projecting forwardly from said carriage and having depending portions affixed to said carriage to move therewith, a generally square steel plate carried by and depending from said arms, a flexible continuous sealing member bonded to the underside of said plate following the generally square outline of the plate and disposed adjacent the four edges thereof whereby to provide a suction area of substantial size between said plate and the package, and a flexible conduit interconnecting the steel plate and the intake manifold of the internal combustion engine.

2,893,582
INDUSTRIAL TRUCK
Russell W. Parcell, Solon, Ohio, assignor, by mesne assignments, to Otis Elevator Company, New York, N.Y., a corporation of New Jersey
Application January 2, 1958, Serial No. 706,700
9 Claims. (Cl. 214—651)



1. In a material-handling apparatus, an elevatable load-handling member comprising a generally vertical frame, a plurality of crate-handling fingers, means supporting said fingers on said frame in operative positions, carton-handling blade means comprising a generally vertical plate-like member, means connecting said blade means to said frame and supporting said blade means for limited movement with respect to said frame about a generally vertical axis, a pair of fork members, means connecting said fork members to frame and supporting said fork members for movement between generally horizontal positions extending forwardly from said frame adjacent the lower portion thereof to a generally vertical inactive position.

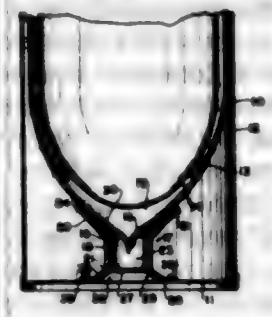
2,893,583
SOUP CUP
Christoph Achtziger, Weiden, Oberpfalz, Germany, assignor to Porzellanfabrik Weiden Gebr. Bauscher, Zweigniederlassung der Lorenz Hutschenreuther Aktiengesellschaft, Selb, Weiden, Oberpfalz, Bavaria, Germany, a firm
Application June 2, 1954, Serial No. 434,042
Claims priority, application Germany June 16, 1953
3 Claims. (Cl. 215—10)



1. A ceramic bowl-shaped soup cup comprising a body having a horizontal rim and vertical band-shaped handles with horizontal finger apertures therein, said handles being made of essentially the same material as said body

and being irremovably attached to said body at substantially equally spaced distances from each other, each of said handles being provided with horizontal extensions broadening the lower ends thereof along the lateral outer surface of the cup body, said handle with said extensions having a bottom surface forming a horizontal bearing surface of considerably greater length than the width of said handles for cooperation with the rim of a similar cup when a plurality of such cups are built up to form a pile, the outer surface of said cup below a plane defined by said bearing surfaces converging downwardly and being of smaller size than the inner surface of said cup adjacent the rim to permit piling of said cup upon and beneath respective similar cups in said pile with the bearing surfaces and rim of said cup engaging the rim and bearing surfaces of said respective similar cups, said bearing surfaces being of such length as to provide stable support for said cup in said pile.

2,893,584
COMBINATION TIP PROTECTOR AND SHOCK ABSORBER FOR VACUUM BOTTLES
John Paul Parker, Toronto, Ontario, Canada, assignor, by mesne assignments, to The American Thermos Products Company, a corporation of Ohio
Application September 19, 1955, Serial No. 535,184
5 Claims. (Cl. 215—13)



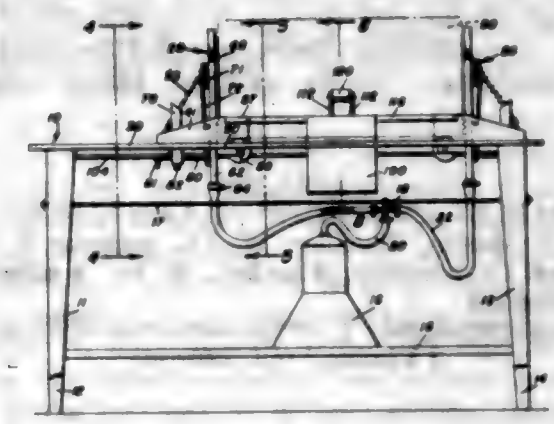
1. A vacuum bottle combination comprising an outer casing having a side wall and an end wall, a double-walled evacuated glass filler having an exhaust tip, said filler being mounted in the casing, means for retaining the filler in the casing and a combination one-piece tip proetctor and shock absorber molded from a stiff resilient and locally-distortable material, said combination tip protector and shock absorber having a hollow central portion of relatively thick section and relatively non-flexible, a first flange of relatively thick section and therefore relatively non-flexible integral with said hollow central portion and inclined axially and radially outwardly from one end thereof, said first flange being adhered to the base of the filler around the exhaust tip and said hollow central portion being of a length sufficiently great to extend a substantial distance beyond the outer end of the exhaust tip, and a second flange of substantially thinner section than both the hollow central portion and said first flange and therefore being relatively flexible, said second flange being integral with the end of said hollow central portion opposite the end from which said first flange extends and inclined axially and radially outwardly therefrom and engaging the end wall of the outer casing.

2,893,585
BOTTLE CAP
William A. Hoef, Oak Park, Mich.
Application December 10, 1956, Serial No. 627,431
1 Claim. (Cl. 215—41)

A bottle cap for temporarily closing and tightly sealing the top of a bottle of the type having an annular bead formed on the top thereof, comprising a body formed in the shape of an upper and a lower frustro-conical portion, both integrally joined at their large bases and both being flattened, thus providing a cross-sectional shape in the form of two trapezoids, one inverted relative to the other and joined at their large bases with the conical wall surfaces each extending away from the large bases at a sharp acute angle and with the angle formed by the two conical walls meeting being an acut angle also, and with the altitudes being considerably smaller than the base daimeters; a continuous annular groove formed in the lower conical portion at the area where the small base would otherwise joint the side wall, the groove being of a

cross-sectional shape which corresponds to the cross-section of a bottle bead, the plane passing through the widest point of the groove being within the upper portion and slightly above the large bases, and the groove forming a narrowed cross-section of body material between the groove bottom and the wall of the upper conical portion near the junction between this wall and the small base of the upper conical portion; the body being formed of a relatively stiff, but slightly flexible, plastic material.

2,893,586
LABEL APPLYING MACHINE
Richard L. Dixon, Lebanon, Oreg., assignor of fifty per cent to Victor B. Dixon, Lebanon, Oreg.
Application June 20, 1956, Serial No. 592,659
18 Claims. (Cl. 216—12)

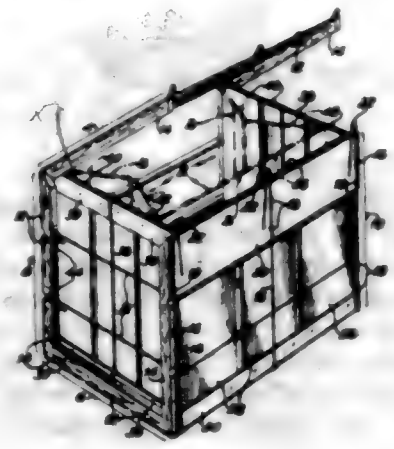


1. In a machine to apply gummed labels onto opposite surfaces of an article, the combination of a support having a labeling station, a pair of confronting presses, means pivotally mounting said presses on said support for movement toward said station, mechanical means on said presses and protruding into said station to pivot said presses toward said surfaces of the article in response to the movement of the article into said labeling station, means including a source of suction for holding labels on said presses, and suction valves carried by said presses and arranged to open as the labels on said presses come to bear on said article.

2,893,587
WIREBOUND CONTAINER
Guilford B. Peters, Mendham, N.J., assignor to Stapling Machines Co., Rockaway, N.J., a corporation of Delaware
Application January 9, 1956, Serial No. 557,993
2 Claims. (Cl. 217—43)

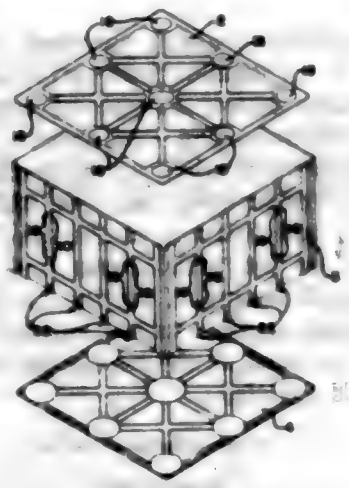
1. In a wirebound container, a blank of the type having four container sections formed by side material with reinforcing cleats at the inner face thereof and foldably secured together by binding wires, an auxiliary blank assembly comprising a center section having a width approximately equal to that of the front and rear sections of said first-named blank and a length approximately

equal to the space between the inner faces of the cleats on the front section of said first-named blank, and a pair of end sections, one at each end of said center section, each of said end sections having a height approximately equal to the width of said front and rear sections of said first-named blank and an overall width approximately equal to the width of the top and bottom sections of said first-named blank, each of said end sections being divided into two separate, vertically extending panels of



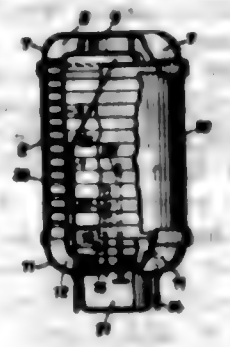
approximately equal width, with one or more binding wires extending the length of said auxiliary blank assembly and attached to each of the sections and panels thereof and securing the same together in foldable relationship each such binding wire being provided at its opposite ends with fastener portions which engage opposite ends of the rear section of the first-named blank to secure said auxiliary blank to said first-named blank while permitting it to be collapsed against said rear section.

2,893,588
PALLET AND SHIPPING CONTAINER
George E. Martin, Wheeling, W. Va., assignor to Wheeling Steel Corporation, Wheeling, W. Va., a corporation of Delaware
Application July 1, 1955, Serial No. 519,534
2 Claims. (Cl. 220—4)



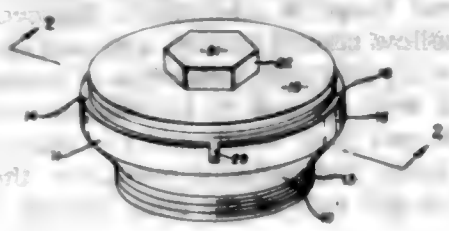
1. A shipping container comprising a pallet-like bottom having an upwardly open peripheral channel for receiving the bottom rim of a container body and a vertically ribbed body adapted to have its bottom rim received in said channel, the outer wall of the channel having openings therethrough at intervals therealong and the body having outwardly projecting feet adjacent its bottom rim substantially perpendicular to the body adapted to pass through said openings to maintain the bottom rim of the body in the channel, the feet being welded to the body at the vertical ribs thereof.

2,893,589
HOT WATER STORAGE TANK
Otto P. Brenn, Stuttgart, Germany
Application October 16, 1953, Serial No. 386,625
3 Claims. (Cl. 220—5)



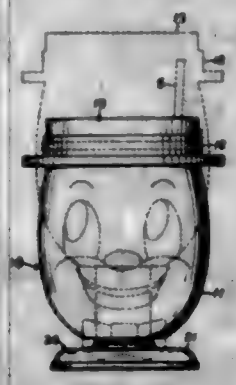
1. A hot water storage tank particularly of the type which is electrically heated comprising a plurality of annular ring members each with inner and outer circumferential sections arranged one on each other to form a double-walled container, each of said annular members forming by its inner circumferential section an annular part of the inner wall of the container and by its outer circumferential section an outer wall part of the container, and the inner and outer wall part of each annular member being interconnected by a substantially radial wall, the inner, outer and radial walls of each annular member forming an integral structure open on at least one axial side, the open side of each member being closed by the radial wall member of the next annular member in axial direction, so that hollow annular spaces are formed between each two subsequent annular members, each annular ring member having a portion of a smaller annular configuration to telescopically interfit with an adjacent ring member in overlapping relationship, means to hold said annular ring members in the overlapping relationship, a top cover for the tank telescopically mounted on the top-most annular ring member and composed of inner and outer casings spaced from each other, a bottom cover composed of inner and outer casings and telescopically mounted on the bottom-most annular ring member, the top and bottom covers each having an outer rim member, and an outer sheath connected to the outer rim members to cover the annular ring members.

2,893,590
CAP FOR SOIL PIPE CLEAN-OUTS
Dorr H. Buckley, Vienna, Ohio
Application July 22, 1957, Serial No. 673,310
1 Claim. (Cl. 220—39)



A cap for a soil pipe clean-out comprising a conical body member having a depending annular flange on its lower end and an upstanding annular flange of larger diameter than said depending annular flange on its upper end, said flanges being threaded externally and internally respectively, a cap having a depending flange about its peripheral edge and conical flange thereon, said depending flange having external threads and said conical flange having an annular groove in its outer surface and a lead gasket disposed in said annular groove.

2,893,591
EDUCATIONAL AND TRAINING DEVICE FOR CHILDREN
George Berrodin, Stamford, Conn., assignor to Consolidated Molded Products Corporation, Scranton, Pa., a corporation of Delaware
Application August 2, 1955, Serial No. 525,992
6 Claims. (Cl. 220—69)

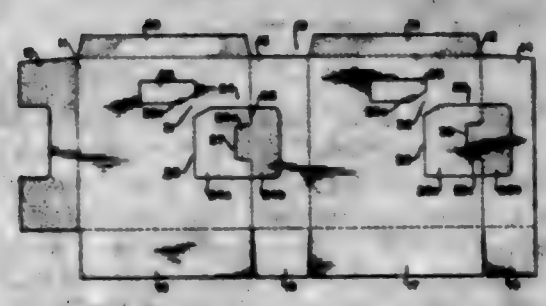


1. A receptacle comprising a hollow container having an opening in one end for introduction of a product into and discharge of said product from said container, a tubular portion extending inwardly from the opposite end of said container and disposed substantially entirely within said container, said tubular portion having its interior substantially isolated from the interior of said container to prevent escape of said product into said tubular portion, a base for supporting said container, a stem extending from said base into said tubular portion and in sliding engagement therewith, means interposed between said stem and said closed inner end of said tubular portion normally urging said container away from said base, the strength of said urging means being sufficient to lift the container substantially to the upper end of said stem when said container is substantially empty and to be compressed and thereby lower the container substantially completely to the bottom of said stem when the container is full, and means limiting the movement of said container relative to said base.

2,893,592
CONTAINER WITH IMPROVED SIDE SEAM
Reid G. Atkinson, Atherton, Calif., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Application June 22, 1956, Serial No. 593,077
1 Claim. (Cl. 220—77)

A sealed container comprising a tubular sheet metal body having opposed end members hermetically sealed thereon in rolled double seamed end seams, said body having a soldered lock and lap side seam with the overlapped lap portions disposed at opposite ends thereof and incorporated in said end seams, a said overlapped side seam lap portion including an inner lap provided with an angular notch at an end of said body, said notch including an inclined edge terminating in a sharp point enclosed within a said end seam, said overlapped lap portion further including an outer lap provided with a convex angularly clipped multi-sided edge at the end of said body underlying said inner lap and said notch thereof, said multi-sided edge being embraced by said inner lap with the sharp point thereof projecting therepast in said end seam with said inclined notch edge crossing one of the sides of said multi-sided edge and positioning said sharp point thereover in locking engagement therewith, whereby to prevent separation of said laps and solder disrupting crawl back of said inner lap on and relative to said outer lap as a result of the outward flanging of said tubular container body and the double seaming of a said end member thereon.

2,893,593
CARRIER CARTONS
Patrick A. Tessmanier, Hamden, Conn., assignor to The New Haven Board & Carton Company, New Haven, Conn., a corporation of Connecticut
Application June 19, 1957, Serial No. 666,618
4 Claims. (Cl. 229—15)

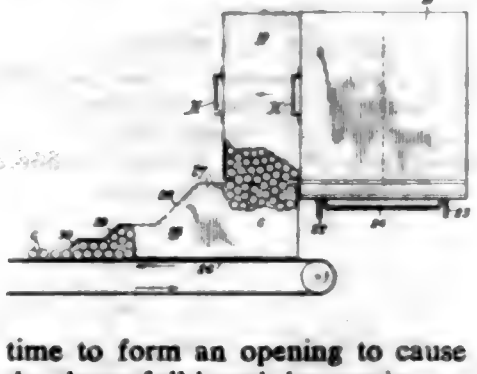


1. A carton for carrying a plurality of like articles in a row, which comprises a pair of side walls, end walls connecting vertical edges of the side walls and with the side walls forming a tube, a bottom closure for the tube made up of flaps connected to the lower edges of the walls and overlying one another, and a pair of partitions having vertical hinge connections to respective side walls inward from the upper and lower edges thereof, the connections of the partitions to the side walls lying spaced a distance substantially equal to the diameter of an article from respective end walls and each partition having a length less than twice the diameter of an article and being severed in part from the side wall, to which it is connected, and in part from the end wall adjacent the connection of the partition to its side wall, each partition including a root section extending from its hinge connection to its side wall across the interior of the carton to the opposite side wall and an end section connected to the free end of its root section along a fold line and adhesively secured to the inner face of said opposite side wall, the side walls having finger openings in their upper central portions and positioned opposite one another, the opening formed in one of said side walls by the severance of a part of one partition therefrom lying mainly to one side of the finger opening in said side wall and the opening formed in the opposite side wall by the severance of a part of the other partition therefrom lying mainly to the opposite side of the finger opening in said opposite side wall.

2,893,594
BULK STORAGE OF CANS FOR DELIVERY TO AN OPERATING UNIT
Howard J. Burt, Haverstown, Pa., and Louis F. Jonesuk, Baltimore, Md., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Application February 7, 1956, Serial No. 564,029
3 Claims. (Cl. 221—1)

3. The method of storing, transporting, and discharging cans in a single line to an operating unit with their axes disposed parallel and across the delivery line comprising the steps of placing a plurality of rectangularly shaped storage sleeves, having open tops and bottoms, side by side in an upright position on a pallet provided with a platform for transportation, with the open bottoms resting on the platform, filling said storage sleeves

through their open tops with cans arranged side by side in superimposed rows with the axes of the cans extending horizontally so that the ends of the cans are disposed adjacent to the side walls of the sleeves, placing the pallet with the stored cans on an elevated support with the sleeves extending transversely of the support, withdrawing the sleeves from the pallet endwise



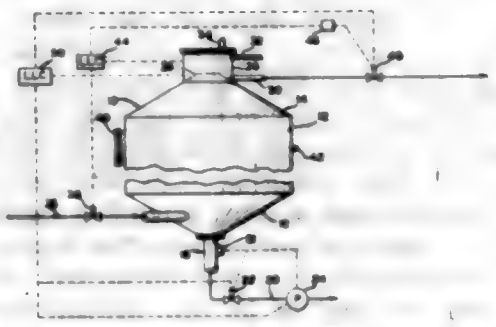
one at a time to form an opening to cause the cans to fall from the sleeve full length by gravity, at a rate determined by the extent of the opening, into a hopper positioned near the elevated support and beneath said opening, and delivering said cans from the hopper in a single line to an operating unit with the axes of the cans disposed parallel to each other and across the line of delivery.

2,893,595

METERING SYSTEM

Glen G. Hebard and Marvin A. Remke, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Application November 19, 1956, Serial No. 622,863
14 Claims. (Cl. 222—1)



11. A method of metering liquids which comprises introducing the liquid to be metered into a confined metering zone having a horizontal overflow aperture in its uppermost section and a fixed drain-down level in its lower section so as to fill said zone and overflow said aperture; catching the overflow in an overflow zone adjacent said aperture; cutting off the flow of liquid into said metering zone when the level of liquid in said overflow zone rises above said aperture; thereafter, draining said liquid directly from said overflow zone thru a drain outlet therein to a level below said aperture, thereby leaving in said metering zone a fixed volume of liquid between said aperture and said drain-down level; and thereafter, dispensing said fixed volume of liquid from said metering zone.

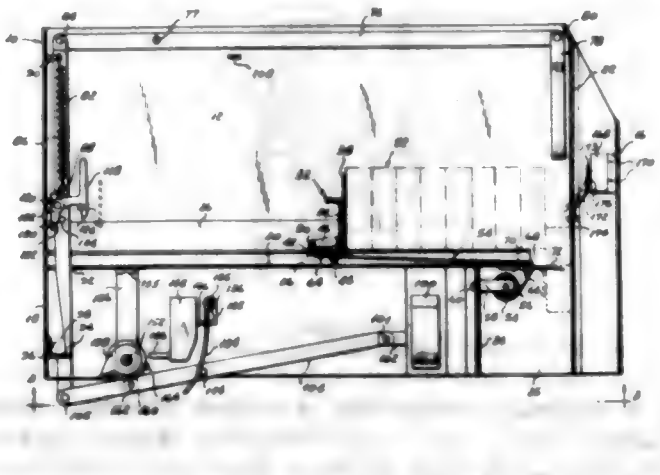
2,893,596

SANDWICH MERCHANDISING MACHINE

Christian Gabrielsen, Mountain Lakes, N.J., assignor to Rowe Manufacturing Co., Inc., Whippany, N.J., a corporation of New York

Application March 4, 1953, Serial No. 340,247
2 Claims. (Cl. 221—129)

1. A merchandising machine for sandwiches or the like including in combination a plurality of horizontally extending guides to receive articles of merchandise to be dispensed, a plurality of dispensing means associated respectively with said guides and adapted when rendered operative to deliver an article of merchandise, each of said dispensing means including a separate ejector, a plurality of feeders each mounted adjacent one of said guides, means for urging each feeder and its associated merchandise in a direction toward the corresponding ejector, means for selectively rendering said dispensing



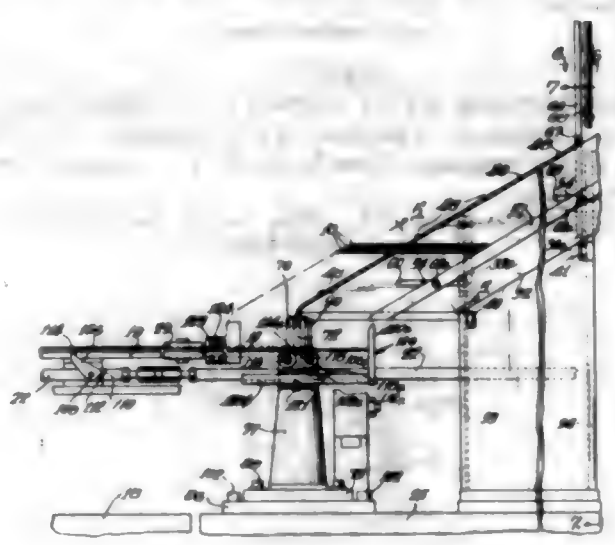
means operative to deliver an article of merchandise, a motor, a shaft driven by said motor, a plurality of reset cams fixed on said shaft for rotation therewith, said dispensing means including levers having means thereon for engagement with said cams to reset said dispensing means and means operated by said dispensing means for starting said motor to reset the dispensing means when the dispensing operation is complete.

2,893,597

HOPPER CONSTRUCTION FOR AUTOMATIC ASSEMBLY APPARATUS

Carl F. Carlzen, Buffalo, N.Y., assignor to Sylvania Electric Products, Inc., a corporation of New York

Application April 13, 1955, Serial No. 501,101
3 Claims. (Cl. 221—238)

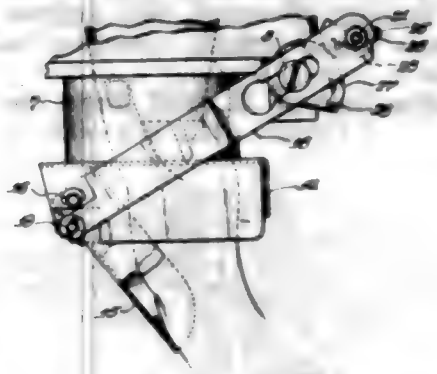


1. A hopper for feeding baseboards having centrally located notches in the opposite edges thereof to a step-by-step transfer mechanism having at least one finger member which is adapted to be inserted within one of said notches for slidably moving the engaged baseboard from one station to another, comprising, first and second guide tracks one parallel to the other, said tracks being inclined to the horizontal and adapted to be received in said notches, means adapted to slidably engage said boards to maintain them in a horizontal position when they are located in said hopper, support means, said tracks being downturned at the lower ends thereof above said support means and said finger member, thereby to accurately position the boards on said support means with one of said notches opposite said finger member.

2,893,598
AUTOMATIC ARTICLE DISPENSER

Donald S. Reynolds and Robert J. Thorn, Chicago, Ill., assignors to Automatic Canteen Company of America, Chicago, Ill., a corporation of Delaware

Application November 25, 1955, Serial No. 549,099
8 Claims. (Cl. 221—248)

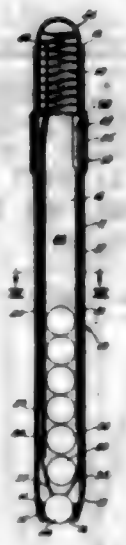


1. A closure mechanism for an article dispenser comprising a means forming a frame including a housing forming a passageway through which said articles are dispensed in sequence, a combination door-chute pivotally secured to said housing for closing said passageway when in closed position and forming a chute for guiding said articles in a predetermined path when in open position, a control cam journalled for a predetermined cycle of rotation about an axis in said frame, an operating arm pivotally connected at one end to said door-chute and journalled for reciprocating and oscillatory movement about a pivot in said frame, a lever follower pivotally secured to said arm and adapted to engage said cam, spring means biasing said follower in a predetermined normal position with respect to said arm, means on said cam cooperating through said follower to lock said door-chute in its said normal closed position by said cam and said follower and said arm when said cam is in its rest position and whereby the rotation of said cam will permit said door-chute to move to its open position to discharge one of said articles in a predetermined path, said spring means bias being of a force that external restraint of the movement of said door-chute during its movement will permit said cam to rotate said lever-follower against the restraining action of said spring means and permit said cam means to complete its said cycle of rotation.

2,893,599
PILL DISPENSER

Richard S. Kay, Chicago, Ill.

Application November 30, 1954, Serial No. 471,983
5 Claims. (Cl. 221—260)

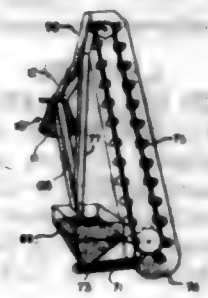


1. A pocket pill dispenser comprising a tubular body, a guide member in said body comprising two channels, one of said channels disposed to retain pills therein in edgewise relation, a second channel disposed to retain a pill ejector, an ejector formed of resilient strip slidably arranged in said second channel and normally out of engagement with the pills and operative to engage the lowermost pill and eject it from said body, a single resilient retaining means secured to the lower end of said guide to restrict ejection of said pills by said ejector to a single pill on each occasion of manipulation of the ejector, a thumb depressible cap slidably arranged in the upper end of said body, and an actuator spring means disposed between said guide member and said cap and compressible by depression of said cap into said body, said ejector being so secured at its upper end to one of the uppermost coils of said actuator spring means so that compression thereof manipulates said ejector so that the lower end thereof will eject the lowermost pill from said guide member and said body.

2,893,600
SYSTEM AND APPARATUS FOR MEASURING LOOSE MATERIAL

Harry A. Barber and James F. Sauer, Aurora, Ill., assignors to Barber-Greene Company, Aurora, Ill., a corporation of Illinois

Application September 9, 1955, Serial No. 533,285
3 Claims. (Cl. 222—1)



1. In a measuring apparatus particularly adapted to measure mineral fines for mixture with asphalt and aggregate, a measuring bin for fines, a storage bin for fines, an elevator for elevating fines from said storage bin, a supply chute in material receiving relation with respect to said elevator and in material discharge relation with respect to said measuring bin, a sliding gate, power means for operating said gate to control the flow of fines from said supply chute to said measuring bin, a return chute for returning fines discharged by said elevator to said storage bin upon filling of said supply chute with a volume of fines in excess to that required to fill said measuring bin, and an overflow chute leading from said measuring bin from the top thereof for returning mineral fines overflowing said measuring bin to said storage bin.

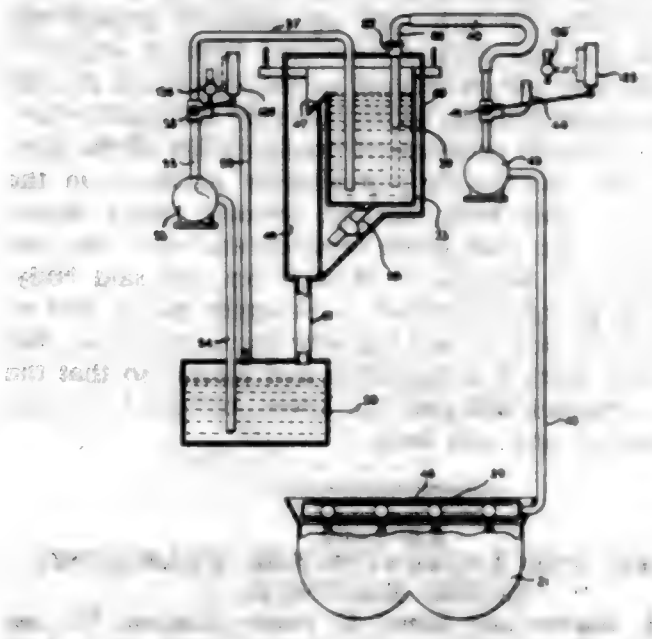
2,893,601
SYSTEM AND APPARATUS FOR MEASURING BITUMEN AND THE LIKE

Harry A. Barber and James F. Sauer, Aurora, Ill., assignors to Barber-Greene Company, Aurora, Ill., a corporation of Illinois

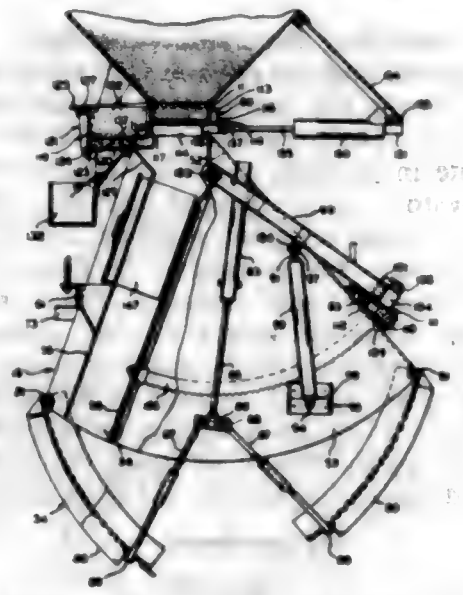
Application September 9, 1955, Serial No. 533,471
11 Claims. (Cl. 222—1)

11. A method of measuring fluid material comprising the steps of first filling a weigh bucket to overflow the top thereof, stopping the filling operation upon overflow of the material from the top of the weigh bucket, withdrawing fluid material from the weigh bucket by suction and during withdrawal of the fluid material weighing the fluid material withdrawn and thereby establishing a depth to which a given weight of material may be withdrawn from the weigh bucket, discontinuing the withdrawing operation upon the withdrawal of a given weight of fluid material from the weigh bucket and thereby determining a level in the weigh bucket to which a given weight of material may be withdrawn from the weigh bucket for

a next succeeding series of measuring operations, and during the next succeeding measuring operations first filling the weigh bucket to overflowing, and then withdrawing to the level established for a given weight of fluid material to be withdrawn from the weigh bucket.

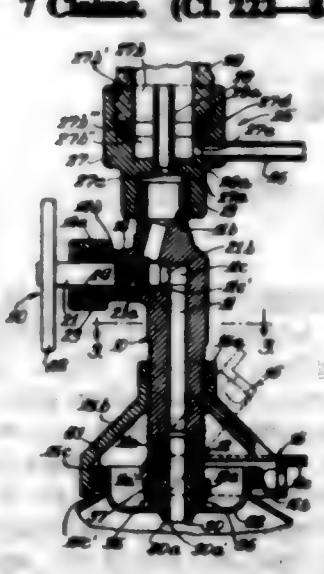


2,893,602
APPARATUS FOR MEASURING AGGREGATE FOR MIXTURE WITH ASPHALT
Harry A. Barber, James F. Sauer, and Roy C. Hencock, Aurora, Ill., assignors to Barber-Greene Company, Aurora, Ill., a corporation of Illinois
Application September 9, 1955, Serial No. 533,284
16 Claims. (Cl. 222—77)



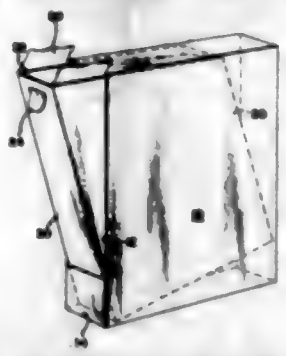
9. In a bituminous batch plant, aggregate supply and measuring means therefor comprising a plurality of aggregate supply bins arranged in side by side relation with respect to each other and having downwardly opening discharge ends, strike-off gates disposed beneath the discharge ends of the supply bins and each having an open portion accommodating the flow of aggregate from a supply bin and a closure plate closing off the flow of aggregate from said supply bin, a weigh hopper supported beneath said supply bins and having plurality of compartments, each forming a measuring bin in material receiving relation with respect to an associated supply bin, scale means supporting said weigh hopper for weighing the aggregate in said measuring bins, each of said compartments having a movable side wall movable to vary the volumetric capacity thereof in accordance with a predetermined required weight of aggregate to be contained therein, power means operable to open said side walls to a wide open position, and other means independently operable to limit closing movement of said side walls to vary the volumetric capacity of said bins.

2,893,603
FLUID CHARGE DISPENSER
George E. Franck, Riverside, Ill., assignor to The Imperial Brass Manufacturing Company, a corporation of Illinois
Application January 31, 1955, Serial No. 485,019
7 Claims. (Cl. 222—83)



4. A fluid charge dispenser of the character described, for use with a container having a projecting lip and containing fluid under pressure, comprising: a body member with a bore therethrough and having an exteriorly threaded end; a securing clamp for mounting the body member on the container lip and having an interiorly threaded end in engagement with the threaded end of the body member, and a flange and a bail for securing the clamp to the container lip; a tubular piercing element carried on the body member, communicating interiorly with the body member bore, and having an outer piercing edge adapted to be disposed between the body member and the container so that movement of the body member toward the container will cause the piercing edge to pierce the container and allow fluid contained therein to flow through the piercing element and into the body member bore; a sealing ring for sealing the container wall to the piercing element and the body member adapted to surround a performation made in the container by the piercing element; a measuring reservoir mounted on the body member and having a measuring container communicating with the body member bore and having a discharge outlet; and valve means for closing and opening the body member bore between the measuring reservoir and the piercing element.

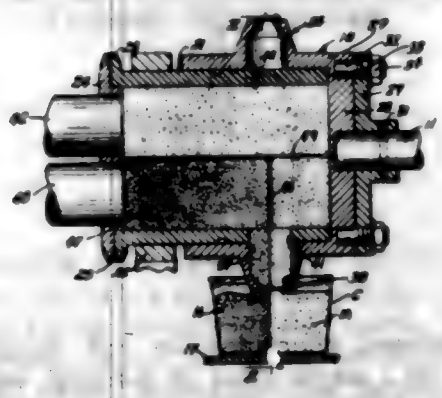
2,893,604
MULTIPLE COMPARTMENT CONTAINER
James T. Critchlow, Los Angeles, Calif.
Application July 23, 1957, Serial No. 673,731
10 Claims. (Cl. 222—129)



5. A container for flowable materials comprising: a substantially rectangular outer carton, said outer carton hav-

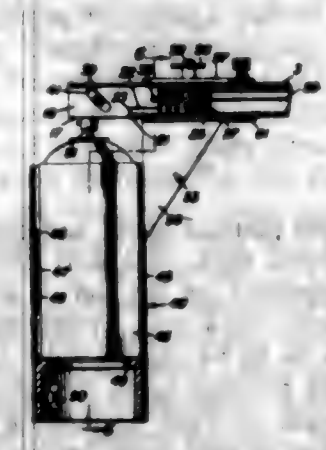
ing an aperture along one of the narrow sides thereof; and a substantially rectangular inner carton having edges defining an open end portion which is normally within said outer carton on a side adjacent the aperture, said inner carton being slanted at said open end and fitting within said outer carton so that said inner carton can be tilted with respect to said outer carton through said aperture to project a portion of said inner carton outside said outer carton and to expose a part of the open end of said inner carton through the aperture in said outer carton.

2,893,605
DISPENSING VALVE
Ralph F. Anderson, Rockford, Ill.
Application May 26, 1958, Serial No. 737,766
8 Claims. (Cl. 222—145)



1. A multiple material rotary container filling device comprising an annular stationary valve member having the axis thereof disposed substantially horizontal, said stationary valve member having discharge orifice means at the underside thereof intermediate its ends, a partition in said valve member extending transverse to the longitudinal axis thereof and crosswise of said orifice means, means defining separate passages in said stationary valve member opening adjacent one end thereof and respectively communicating with said orifice means at opposite sides of said partition, means communicating with said passages at said one end of said valve member for feeding different materials to said passages, a rotary valve member disposed around said stationary member and supported thereon for rotation about the axis of said stationary member, said rotary member having a plurality of delivery ports in the side thereof and each arranged to communicate with said orifice means whereby to dispense a plurality of different materials through each port in side-by-side relation into a container.

2,893,606
ACTUATOR FOR PRESSURIZED DISPENSERS
Jacob W. Hawkins, Pueblo, Colo.
Application November 19, 1957, Serial No. 697,433
2 Claims. (Cl. 222—174)

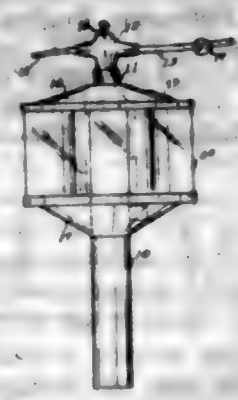


1. An actuator for use with a pressurized can of liquid having a depressible spray nozzle head comprising an elongated barrel having a hand-grip at one end and an elongated bottom slot in its other end, an elongated blade endwise longitudinally slidable in opposite directions, respectively in the other end and longitudinally of said barrel and transversely movable bodily outwardly of said slot, coengaging camming devices on said barrel, and said blade, respectively, for moving the blade outwardly of said slot in response to movement of said blade in one direction, a trigger on said barrel means extending from said trigger into said barrel and operatively connecting the trigger to the blade to slide the same in said one direction, spring means in said barrel acting in conjunction with said camming devices to yieldingly hold said blade against the top of the barrel and within the barrel in out-of-the-way protected position, and a holder on said barrel beneath said slot for supporting a pressurized can of liquid with its spray nozzle head beneath said blade for depression of said head by said blade in response to movement of said blade outwardly of said slot.

2,893,607
DEVICE FOR FEEDING LIQUID TO A WORKING TOOL
Peter S. Voshikas and Thomas S. Voshikas, Melrose, Pa.
Application December 3, 1957, Serial No. 700,428
4 Claims. (Cl. 222—191)

1. A tubular handle, a closure at the front end of the handle, said handle having a discharge port extending laterally through its side wall near the front end of the handle, a resilient valve sleeve encircling the handle and covering the handle discharge port, said sleeve having end portions sealed on the handle and having intermediate its end portions a discharge port adjacent to but longitudinally offset from said handle discharge port, and a valve actuating member mounted on the handle and connected with said valve sleeve to expand the sleeve portion at the ports away from the handle and effect communication between said ports.

2,893,608
DENTAL SPRAY BOTTLE
Edgar W. Barksdale, Atlanta, Ga.
Application May 14, 1956, Serial No. 584,484
6 Claims. (Cl. 222—193)



1. In a device of the character defined, a conventional elongate cylindrical spray bottle constituting a manipulating handle and including an air intake and spray discharge head, an annular liquid supply receptacle surrounding said bottle, valve means providing communication between the interior of said bottle and said receptacle, said

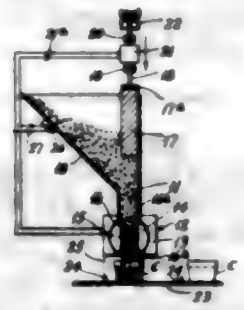
valve means being pressure responsive to permit the flow of liquid from said receptacle to said bottle when atmospheric pressure is applied within the bottle and to automatically preclude such flow when pressure above atmospheric is applied within said bottle, together with a second pressure responsive valve for permitting the passage of air from said bottle to said receptacle.

2,893,609

CHEESE CURD METERING APPARATUS

Newton E. Spiess, Jr., Oakdale, and Martin J. Zenk, Jr., West Islip, N.Y., assignors, by mesne assignments, to National Dairy Products Corporation, New York, N.Y., a corporation of Delaware

Application September 26, 1955, Serial No. 536,400
8 Claims. (Cl. 222—219)



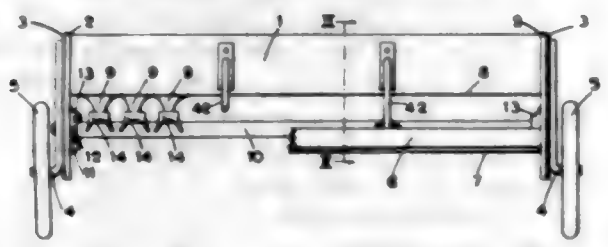
1. Apparatus for metering compressible masses of granular material such as cheese curd comprising a hopper to hold a supply of cheese curd terminating in a tubular feed portion, a measuring member formed with at least one cavity having substantially the same cross-sectional size as the tubular portion and communicable therewith to receive cheese curd therefrom, means for pressing the curd into the cavity to establish a substantially uniform curd density therein including a piston disposed coaxially of the tubular portion having a cross-sectional size corresponding generally thereto, means to draw the piston away from the tubular portion to permit curd to enter therein, means to support the piston to partake of travel toward the tubular portion under predetermined controlled compression forces whereby the travel of the piston is controlled by the resistance imposed by the curd in the cavity and in the tubular portion so that the cheese curd is compressed to a predetermined density and a measured quantity of cheese curd occupies the cavity, and means to expel the measured quantity of curd from the cavity.

2,893,610

MECHANICAL DISTRIBUTORS FOR APPLYING ARTIFICIAL MANURES AND OTHER GRANULAR MATERIALS TO LAND

Gilbert Spencer Hartley and Marian Jennifer Hartley, Fulbourn, England

Application January 23, 1957, Serial No. 635,751
Claims priority, application Great Britain January 25, 1956
5 Claims. (Cl. 222—410)



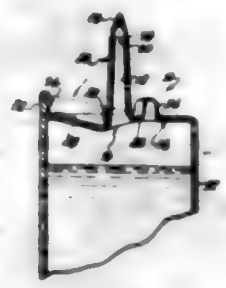
1. A distributor for applying artificial manures and other granular material to land comprising a hopper adapted to contain material to be distributed, a discharge funnel leading from said hopper, a distributor roller rotatable about an axis transverse to the direction of travel of the distributor, a hollow member having an open top through which said funnel extends and urged by gravity into contact with the surface of said roller, said member having walls shaped to fit said roller surface and to form edges defining a bottom discharge opening having side edges which contact the surface of said roller and converge towards an apex pointing away from the direction of movement of said roller surface and another edge spaced from said roller surface.

2,893,611

COMBINED SPOUT AND CLOSURE STRUCTURE

Edward G. Akers, Bell, Calif., assignor, by mesne assignments, to Stauffer Chemical Company, a corporation of Delaware

Application December 24, 1956, Serial No. 630,398
11 Claims. (Cl. 222—536)



1. A combined pouring spout and closure structure formed out of a single piece of material, said structure including: a relatively rigid pouring spout having a passage extending therethrough from one end of said spout to the other end of said spout; a membrane attached to said spout so as to extend around said spout, said membrane being capable of being deformed from its normal configuration by movement of said pouring spout; an edge portion attached to said membrane so as to hold the periphery of said membrane during movement of said pouring spout; means for holding said pouring spout when said pouring spout has been moved so as to deform said membrane, said means for holding said pouring spout being located on said edge portion; and means for closing said passage in said pouring spout when said pouring spout is held by said means for holding.

2,893,612

COMBINED POURING SPOUT AND CLOSURE STRUCTURES

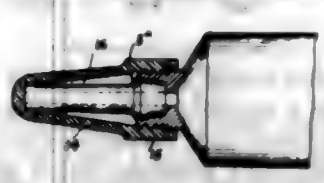
Edward G. Akers, Downey, Calif., assignor, by mesne assignments, to Stauffer Chemical Company, a corporation of Delaware

Application December 31, 1956, Serial No. 631,944
5 Claims. (Cl. 222—536)

1. A combined pouring spout and closure which comprises: a peripheral skirt, said skirt having top; resilient latch means supported on the top of said skirt; and upstanding relatively rigid wall projecting from one part of said skirt so as to be spaced from said latch means; a relatively rigid pouring spout mounted on said top of said skirt adjacent to said upstanding wall, said latch means and the top of said spout having mutually cooperating portions, and said wall and the bottom of said spout having mutually cooperating portions; and resilient

diaphragm means connecting said spout, part of said peripheral portion of said skirt and said latch means whereby said spout may be moved by virtue of the resiliency of said diaphragm means so that the bottom thereof rests against said upstanding wall and whereby the top thereof is held by engagement with said latch means, said latch means serving to resiliently hold said spout in said position so as to establish a seal between said spout and said wall.

2,893,613
COLLAPSIBLE TUBE FOR OINTMENTS AND THE LIKE
Walter T. Davis, Wheeling, W. Va., assignor to Wheeling Stamping Company, Wheeling, W. Va., a corporation of West Virginia
Application March 28, 1956, Serial No. 572,659
2 Claims. (Cl. 222—566)



1. A collapsible tube comprising a tubular body with a shoulder at one end, a neck at the center of the shoulder, the neck having threads on the exterior thereof and having a tapered socket therein of inwardly decreasing diameter, said socket having the base thereof defined by a partition wall extending transversely of said neck, and a separate resilient plastic nipple member having a tapered plug-like base portion and a nozzle portion of less diameter than the base portion with a shoulder at the junction of the nozzle portion and the base portion, the base portion being received in the socket of the neck upon said partition wall and being of a size and tapered shape to form a tight plug in said socket, the neck having a lip extending beyond the threads and turned in over the shoulder on the nipple member, the nipple member having an axial discharge passage therethrough and the neck of the tube having an opening through said partition wall at the inner end of the socket through which the contents of the tube may flow into said discharge passage.

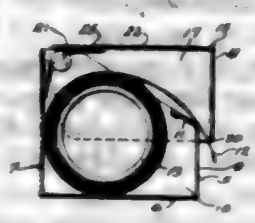
2,893,614
TROUSERS HANGER
Sylvester J. Rowe, Chicago, Ill.
Application January 7, 1959, Serial No. 785,407
2 Claims. (Cl. 223—96)

1. A trousers hanger including a pair of clamping bars adapted to clamp therebetween the legs of a pair of trousers, a hinge means including a plate pivotally connected to each bar on one side thereof adjacent the rear ends of the bars and a further hinge plate pivotally connected to each bar on the opposite side thereof adjacent the rear ends of the bars, said hinge means providing for swinging movement of the bars and limited relative axial movement thereof, one of said bars being provided with a transverse groove therein extending thereacross between said hinge plates, a control pin fixed to said hinge plates and extending therebetween and within said groove, said control pin being dimensionally reduced relative to the groove, and spring means mounted in said bar with the groove and in engagement with said control pin to constantly bias it rearwardly to urge one bar rearwardly relative to the other bar, and further means on the forward ends of said bars coactive to releasably lock the bars in operative clamping position when one of the bars is moved axially rearwardly relative to the other bar.

2,893,615
PISTOL HOLSTER
John R. Cooper, Westminster, Colo.
Application May 23, 1957, Serial No. 661,206
5 Claims. (Cl. 224—2)

1. A holster comprising a hinged clip having two sections interconnected by a hinge along the forward edge thereof, said sections being formed to receive a pistol therebetween, a spring clip having side walls interconnected by a transverse wall to form a channel, one side wall being pivotally interconnected to one section of the hinged clip between adjacent lower edges thereof, the hinged clip being movable between an open position in which the sections lie outside the channel and are free to spread apart to release a pistol placed therebetween, and a closed position in which the sections are within the channel and squeezed between the side walls of the spring clip to maintain the pistol within the holster.

2,893,616
WEB DISPENSER
George H. Stell, Elmhurst, Ill., assignor to Precision Metal Workers, Chicago, Ill.
Application October 25, 1957, Serial No. 692,349
3 Claims. (Cl. 225—52)

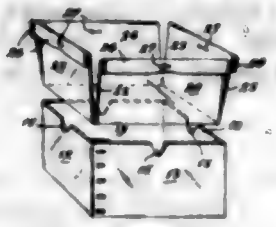


1. In a dispenser comprising the combination with a tray for supporting a rolled web and having a front wall constituting a relatively fixed web clamping jaw, a cover in pivotal connection with the tray and extending outwardly across the front wall and provided with a depending tear-off flange constituting a movable clamping jaw engageable with the front wall of the tray when subjected to force effective pivotal movement of the cover downwardly upon its pivotal connection with the tray, and resilient supporting means providing bias for yieldably holding the cover normally in a raised position with respect to the tray, in which position the depending jaw flange of the cover is spaced outwardly from the relatively fixed jaw provided by the front wall of the tray to provide a dispensing slot through which a web may be withdrawn from a roll supported within the tray beneath the cover, the edge of the tear-off flange of the cover being adapted to clamp a portion of said web when the cover is depressed against the bias of said resilient supporting means to engage said web portion against the front wall of the tray, whereby said clamped portion will be retained while the portion of the web projecting beyond the flange can be severed along the flange, retractive cover jaw movement in an upward direction from the position of web engagement being adapted to expose the end of the web.

2,893,617
NON-BULGING FRUIT BOX

Walter C. George, St. Louis, Mo., assignor, by mesne assignments, to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada

Application October 15, 1955, Serial No. 541,400
2 Claims. (Cl. 229—14)

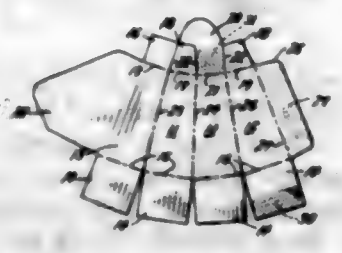


1. In a container for packaging and shipping a commodity, the container comprising a body section and a unitary liner section nested within the body section, the liner section including a closed bottom and upstanding opposed side walls foldably connected thereto, upper marginal end portions of at least a pair of opposed liner side walls being outwardly and downwardly turned on a fold line into substantial parallelism with the adjacent portion of the side wall and each forming a supporting flange for the liner section, separate fastening means between the ends of each downturned flange and securing a portion of each downturned flange in face engagement with the respective liner side wall, the unsecured portion of each flange being spaced from its side wall and forming pockets therewith, the body section comprising connected together upstanding wall panels integral with a substantially flat bottom, at least a pair of opposed body wall panels having cut-outs in their upper marginal portions forming notches and adjacent edge portions, said adjacent edge portions being received in said pockets, and said face contacting portion of the flange and part of the securing means being received in said notches wherein said liner section is supported on said body section by said flanges and in locked condition with said body walls.

2,893,618
INDIVIDUAL CONDIMENT CONTAINERS

Frank Robert Hill, San Diego, Calif.

Application May 27, 1957, Serial No. 661,888
1 Claim. (Cl. 229—17)

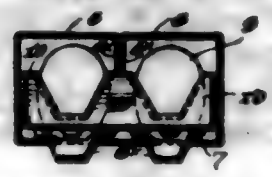


An individual condiment container comprising: a vertically elongated, four-sided enclosure of sheet material having a tapered front portion, a tapered back portion, and two tapered side portions joined together on fold lines; an extending flap on one of said side portions cemented to the inner side of said rear portion to form said enclosed container, a bottom flap formed on the lower extremity of each portion, the four bottom flaps being folded horizontally in laminated relation to form a bottom in said enclosure, the lowermost bottom flap being cemented to the next above bottom flap; a top flap formed on the upper extremity of each portion, the four top flaps being folded over each other in laminated relation to form a top on said enclosure, the uppermost top flap being cemented to the next below top flap, said uppermost top flap having a greater length than the other three top flaps so as to extend beyond the sides of said enclosure and being provided with an offset end portion to form a finger grip thereon for tearing said top flaps from said enclosure; and an integral handle flap corresponding in height to the height of said enclosure and being a continuation of the back portion beyond one side of said enclosure to provide a handle for lifting said enclosure, said first mentioned extending flap extending along the inner side of said handle flap to provide a reinforcement therefor.

2,893,619
EGG CARTONS

Walter J. Schwertfeger, Englewood, N.J.

Application February 1, 1957, Serial No. 637,843
1 Claim. (Cl. 229—29)

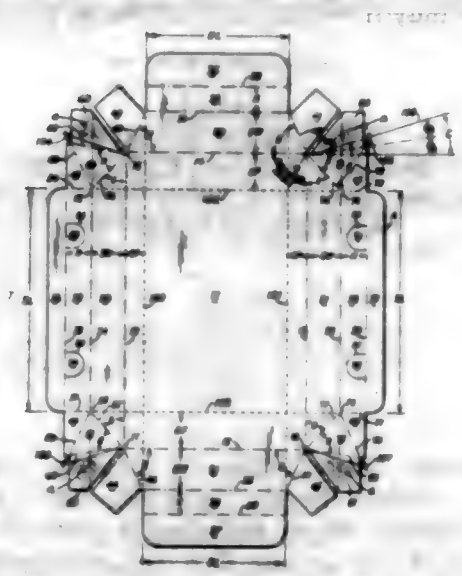


An egg carton for retail sale consisting of a cardboard cover member and a molded pulp egg container, the pulp container being formed with downwardly extending parallel rows of egg receiving pockets which are open at their tops, and the said container also being formed with spaced hollow posts downwardly extending to end positions located below base egg-bearing contact portions of said pockets, the cover member embodying a base wall of approximately the width of the molded pulp container, side walls and areas adapted to cover the top of the said container, said cover member being formed with apertures in its bottom wall and the hollow posts of the said molded pulp fitting said apertures and extending downwardly therethrough, whilst restraining the base egg-bearing contact areas of said pockets from passing below the cover bottom wall.

2,893,620
HOLLOW WALLED FOLDING BOXES

Marshall I. Williamson, New Haven, Conn.

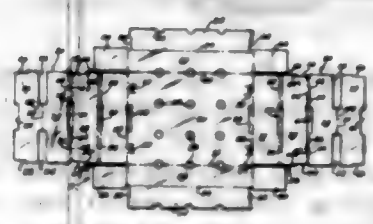
Application October 30, 1953, Serial No. 389,363
3 Claims. (Cl. 229—34)



1. A blank for forming a hollow walled folding box having walls of triangular cross-section comprising a bottom panel; an outer side wall panel hinged to the bottom panel along an outer side bottom fold line, an inner side wall panel hinged to the outer side wall panel along a side ridge fold line, and a side bottom flap articulated to the inner side wall panel along an inner side bottom fold line; an outer end wall panel articulated to the bottom panel along an outer end fold line, an inner end wall panel articulated to the outer end wall panel along an end ridge fold line, and an end bottom flap articulated to the inner end wall panel along an inner end fold line,

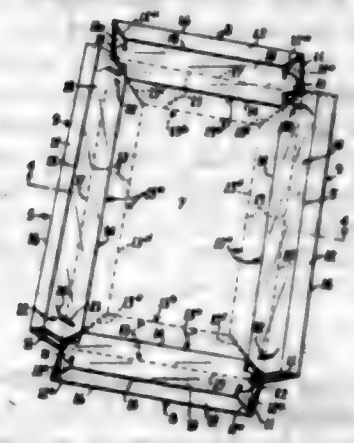
said inner wall panels being of substantially equal height, the outer side wall panel having a slanted side edge along which a side corner flap is articulated, the outer end wall panel having a slanted side edge along which an end corner flap is articulated, the side corner flap being bordered by a radial fold line extending to the corner of the bottom panel, a securing flap articulated to the side corner flap along said radial fold line, said end corner flap being adapted to be secured to said securing flap before setting up of the blank into hollow box form characterized in that the angle R between the radial fold line and the tapered side edge of the outer side wall panel equals one half of the total obtained by first adding to the corner angle of the bottom panel the angle included, in the flat blank, between the tapered side edge of the outer end wall and the outer end fold line, and then subtracting from the added angles the angle included between the tapered side edge of the outer side wall panel and the outer side fold line.

2,893,621
NESTABLE BERRY TRAY
Don P. Harnish, Orinda, Calif., and Robert W. Brukardt, St. Louis, Mo., assignors, by mesne assignments, to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Application May 25, 1955, Serial No. 511,006
6 Claims. (Cl. 229—34)



1. In a one-piece nestable tray having a bottom panel and an opposed pair of side walls with upper marginal flaps reversely folded inwardly in flatwise relation to the inner face of the side walls; integral end extensions of the bottom panel folded to form rigid multi-ply end walls connected in right angular relation to the side walls, the end extensions of the bottom panel being transversely scored to form an inner wall forming section integrally connected to the end of the bottom panel, second and third sections connected to each other and to the first section, an elongated slot in the end margin of the bottom panel positioned substantially midway between the side edges thereof, elongated slots between the first and second panels and the second and third panels in alignment with the slot in the end margin of the bottom panel and a flap on the outer edge of the third section in alignment with the said slots reversely foldable about a score intermediate its length, in the fully assembled position of the end extension of the bottom panel, the first-mentioned section forming the outer ply of the end wall, the second section forming the inner ply, the third section forming an intermediate ply, the flap attached to the outer edge of the third ply forming a portion of a second intermediate ply positioned between the inner and outer plies of the end wall, the reversely folded portion of the flap forming a locking tongue extending upwardly above the top edge of the end walls through the slot between the first and second sections, the slot between the second and third sections forming a recess positioned in the lower margin of the end wall in vertical alignment with the slot in the end margin of the bottom section, the locking tongue of the end wall of one tray extending through the slot in the margin of the bottom panel into the recess in the lower margin of the end wall of a superimposed tray when a plurality of the said trays are vertically stacked.

2,893,621
DISPLAY PACKAGE
Samuel Fogel, Montreal, Quebec, Canada
Application March 14, 1957, Serial No. 646,031
1 Claim. (Cl. 229—34)

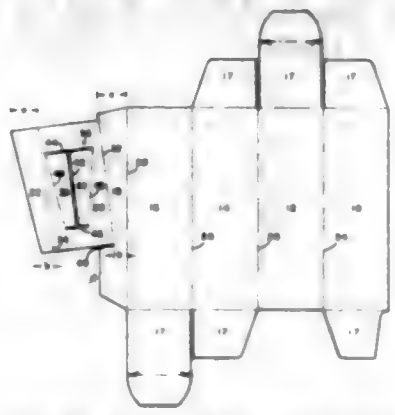


A display package comprising a body portion formed from a single blank of cardboard folded along predetermined lines to provide a bottom wall and hollow rectangular side walls, each of said side walls including an outer and an inner spaced sidewall section, an upper wall section hingedly interconnecting the upper ends of said outer and inner sidewall sections, the lower end of said outer sidewall section being hingedly connected to an adjacent margin of said bottom wall, and a flap hingedly connected to the lower end of said inner sidewall section, said flaps extending from said inner sidewall sections and being secured to the upper surface of marginal portions of said bottom wall located within the area defined by said inner sidewall sections, the outer and inner sidewall sections and upper wall sections of one pair of opposed side walls being coextensive with the bottom wall, the outer sidewall sections of the other pair of opposed side walls being coextensive with the bottom wall, the upper wall sections and inner sidewall sections of the other pair of opposed side walls being undercut so that the said one pair of side walls fits within the undercut portions of the said other pair of side walls, and locking means for interlocking the inner sidewall sections of adjacent side walls with each other as said side walls are raised from a collapsed to a set-up condition, said locking means comprising hook-shaped locking tongues formed integral with the end edges of the inner side wall sections of the said other pair of opposed side walls and adapted to be forced outwardly through tongue-receiving slots formed in the inner sidewall sections of the said one pair of opposed side walls, each of said slots being formed with a relatively wide, vertical, lower portion and a relatively narrow, upwardly diverging, upper portion, the latter being of a height equal to the length of the hook portion of said locking tongue.

2,893,623
RADIO TUBE CARTON
Charles K. Bates, Emporium, Pa., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application July 2, 1958, Serial No. 746,294
3 Claims. (Cl. 229—39)

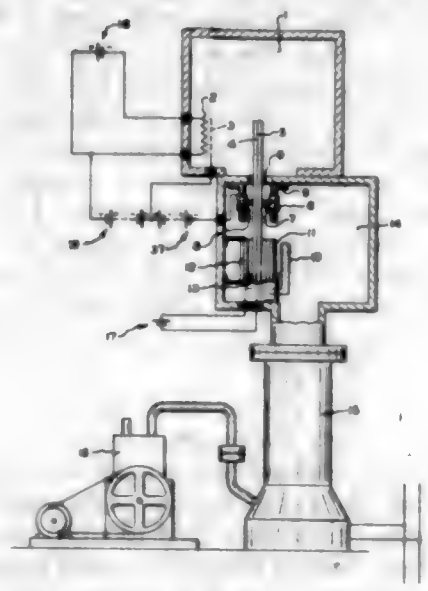
1. A collapsible radio tube carton formed from a folded single blank comprising seven adjacent panels joined together by fold lines said panels being divided into two groups with the fold line which forms the dividing line between the two groups at an acute angle with respect to the fold lines of the first group, said first group comprising a front panel, a back panel and two side panels forming the exterior of the erected carton, a transitional panel having a fold line of said first group of panels as one side thereof and having the fold line of said second group of panels as the opposing side thereof, said second group of panels consisting of an end panel

and a second panel having a tube restraining pocket therein, said second panel being inclined within the erected



carton, and serving to restrain a tube between said second panel and the front panel.

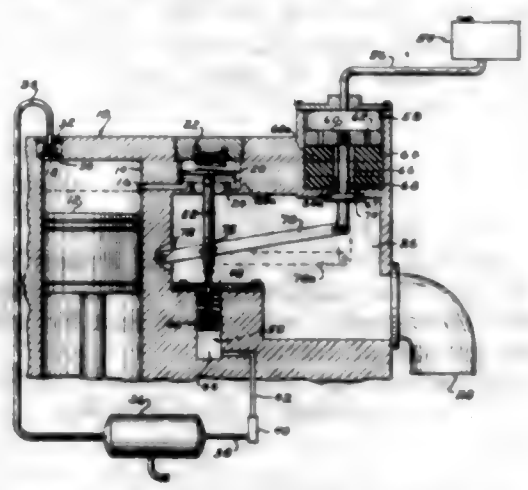
2,893,624
HIGH VACUUM
Gerhard Fricke, Heidelberg, Germany, assignor to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts
Application April 2, 1957, Serial No. 650,263
Claims priority, application Germany April 5, 1956
3 Claims. (Cl. 230—69)



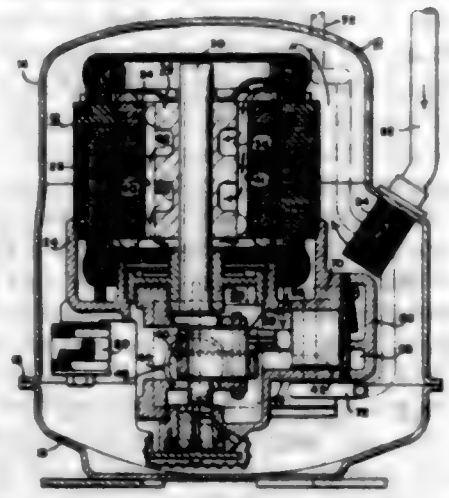
1. Apparatus for producing a high vacuum in a closed chamber which comprises in combination, a first vacuum tight chamber to be evacuated to a high vacuum, means for ionizing residual gas molecules in said first chamber, a second vacuum tight chamber, pumping means connected to said second chamber for evacuating said second chamber, an opening between said first and second chambers which is less than the free path of residual gas molecules, a disc of a ferromagnetic metal with a low Curie point within said opening and rotatable between said chambers, said disc having an absorptive surface for residual gas ions, magnet means within said second chamber and positioned about a portion of said disc so that the magnetic field lines cross the disc substantially at right angles, and heating means spaced from said magnetic means for releasing gas from the absorptive surface and for locally demagnetizing said disc.

2,893,625
ANTI-FREEZE CONTROL MECHANISM
Raymond S. Gresko, Elyria, Ohio, assignor to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware
Application April 7, 1958, Serial No. 726,963
8 Claims. (Cl. 230—202)

7. In combination, a fluid pressure supply system of the type having a reservoir, an air compressor having a discharge connection connected to the reservoir, an inlet connection connected to a source of supercharging air pressure greater than atmospheric, an unloader having an actuator movable between loading and unloading positions in response to predetermined pressures in said reservoir, and anti-freeze supply mechanism for supplying anti-freeze to the inlet connection comprising an anti-freeze dispensing cavity having a port connected to said inlet connection, an anti-freeze supply container for continuously supplying said cavity with anti-freeze, compressible spongy material in said cavity having one side adjacent said port, said material being adapted to absorb anti-freeze when in expanded condition and to eject the absorbed anti-freeze through said port when said material is compressed, a piston in said cavity overlying the side of said compressible material opposite said port, a valve movable between open and closed positions for controlling said port, a rod-like member extending through said port and said compressible material to connect said piston to said valve so that when said valve is moved to open position said piston is moved against said material to compress the same, said material being adapted when compressed to form a fluid seal around said rod and between said port and cavity to prevent the uncontrolled flow of anti-freeze in one direction and the flow of supercharged air in the opposite direction between said inlet and said cavity, and means operatively connecting said valve to the actuator of said unloader so as to open said valve only when said actuator is in loading position and to close said valve when said actuator is in unloading condition.



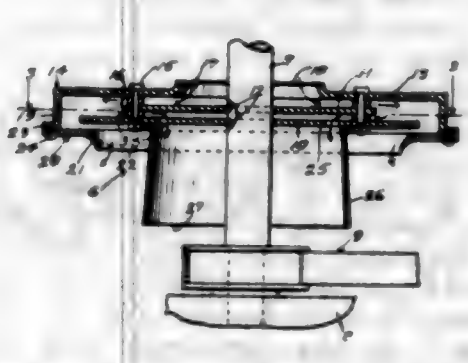
2,893,626
REFRIGERATING APPARATUS
John Weibel, Jr., Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 27, 1956, Serial No. 630,821
2 Claims. (Cl. 230—232)



2. In a sealed motor-compressor unit, a main frame including a compressor having a suction inlet, a motor

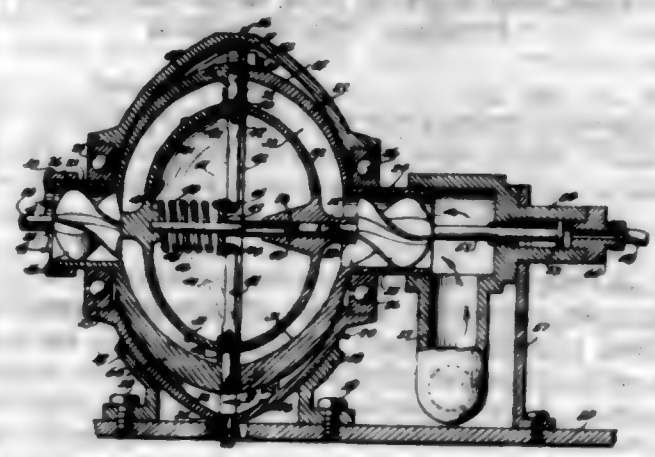
supported by said frame and including a drive shaft operatively connected to said compressor, said motor comprising a stator carried by said frame and a rotor disposed within said stator, said rotor having a plurality of internal muffling chambers therein, said rotor comprising an outer laminated portion provided with a pair of oppositely disposed axially extending passages in its inner periphery and an inner core portion having said internal muffling chambers formed in its outer periphery in communication with said axially extending passages, means for closing the upper end of one of said axially extending passages and means for closing the bottom end of the other of said axially extending passages, said core portion having a central aperture receiving said drive shaft, and means including a housing surrounding said motor-compressor unit directing a gas to be compressed through said muffling chambers and thereafter into said inlet.

2,893,627
CENTRIFUGE
Cecil H. Wilkinson, Jr., Victorville, Calif.
Application November 27, 1957, Serial No. 699,297
2 Claims. (Cl. 233—14)



1. A centrifuge for effecting separation of particles contained in a liquid mixture comprising, a rotary driven shaft, a first plate, a second plate, said plates being mounted on said shaft, at least one of said plates being fixed to the shaft for rotation therewith, a shell in which said plates are disposed having a wall disposed parallel to the plates and having a centrally disposed opening constituting the inlet of the centrifuge, means engaging said wall and plates and connecting the plates to one another and to the shell and spacing the plates from one another and said second plate from said shell wall and cooperating with the plate secured to the shaft for mounting the plates and shell concentrically around the shaft and rigidly with respect thereto, said second plate being disposed between the first plate and said shell wall and being of smaller diameter than the first plate, said inlet opening being disposed concentrically around and spaced from the shaft and being of smaller diameter than the second plate, said shell having a cylindrical outer wall extending from the periphery of the first mentioned shell wall and disposed concentrically around and spaced outwardly from the periphery of the first plate, said shell having an annular wall extending inwardly from said cylindrical wall and having an inner edge terminating inwardly with respect to the periphery of said first plate and of larger diameter than said second plate, the peripheral portion of said first plate being disposed between and spaced from the first mentioned and last mentioned shell walls, the outer portion of the first mentioned shell wall combining with the last mentioned shell wall and said cylindrical wall to form an inwardly opening annular chamber into which the peripheral portion of the first plate extends, portions of said plates and a portion of the first mentioned shell wall forming an annular passage connecting the annular chamber to said inlet, and parts of the last mentioned shell wall and the first plate forming an annular inwardly opening outlet of the centrifuge, a heavy liquid retained by centrifugal force in said annular chamber and in which the periphery of the first plate is submerged, said first plate having a ring of spaced openings forming a circle of lesser diameter than the second plate and constituting water separating ports, and a frusto-conical shield having a restricted end secured to said first plate around the openings thereof, said shield being of substantially smaller diameter than the inner diameter of the last mentioned shell wall and extending from the first plate in a direction away from said second plate and having a larger opposite end defining a water discharge outlet of the centrifuge, said water discharge outlet being spaced a substantially greater distance from the plane of said first plate than said annular inwardly opening outlet.

2,893,628
SOLID BOWL CENTRIFUGE
Thomas Anthony Herman, Grand Prairie, Tex.
Application December 7, 1954, Serial No. 473,514
12 Claims. (Cl. 233—20)

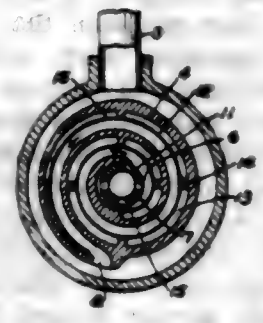


1. In combination, a base, a motor supported on said base and adapted to be connected to a source of electrical energy, a pump mounted on said base and driven by said motor, a centrifugal booster and separator unit connected to said pump, means for supplying fluid to the centrifugal booster and separator unit, said centrifugal booster and separator comprising a pair of brackets secured to said base, a hollow housing secured to said brackets, a pipe communicating with the interior of said housing for the egress therethrough of impurities, foreign matter and the like, a casing rotatably mounted in said housing and including a first and second annular collar extending from each end thereof, ball bearings mounted on each collar and interposed between the collar and housing, a hub extending from said casing and positioned within said first collar, there being a socket in said hub, a drive shaft extending into said hub for rotating said casing, there being arcuate channels in said casing communicating with said collars for the passage therethrough of fluid, there being arcuate grooves in the outer portion of said casing communicating with said channels, a plurality of blades, and valve means for controlling discharge of material from said grooves.

2,893,629
FUEL FILTER
Rex C. Darnell, Dexter, Mich., assignor to Michigan Wire Cloth Company, Detroit, Mich., a corporation of Michigan
Application June 11, 1956, Serial No. 590,756
3 Claims. (Cl. 233—27)

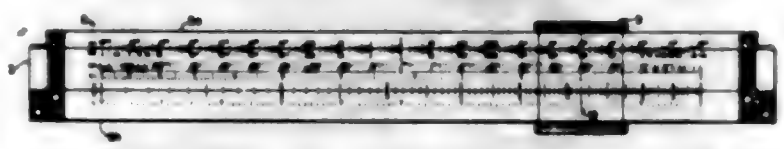
1. A centrifuge filter or separator comprising, a housing having an inlet at one end of its axis to receive the fluid from a pressure source and an outlet, a rotating conduit supported in the housing on an axis coincidental with the axis of the housing of spiral form through which fluid must pass in its transit from the supply end to the outlet

end of said housing, said conduit having on its inside a spiral ribbon and pockets behind the ribbon to receive



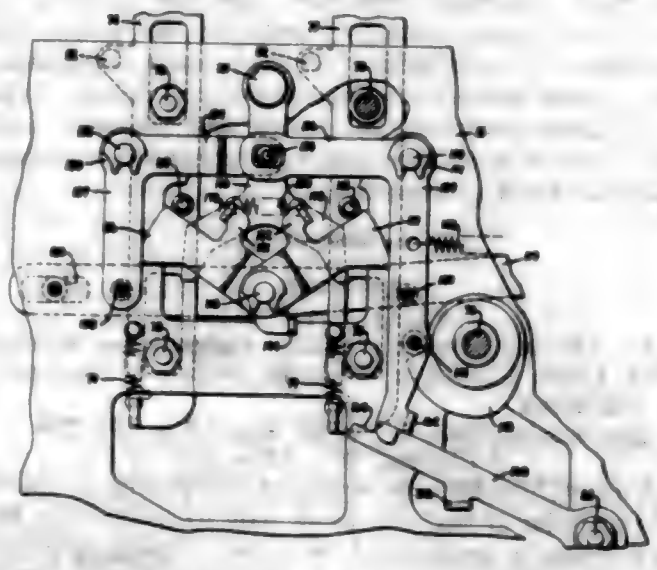
and retain particles thrown out of the stream and through the holes in the ribbon, and means for rotating this conduit.

2,893,630
AUTOMATIC DECIMAL POINT SLIDE RULE
Lawrence J. Kamm, Silver Spring, Md.
Application April 30, 1956, Serial No. 581,575
5 Claims. (Cl. 235—64.3)



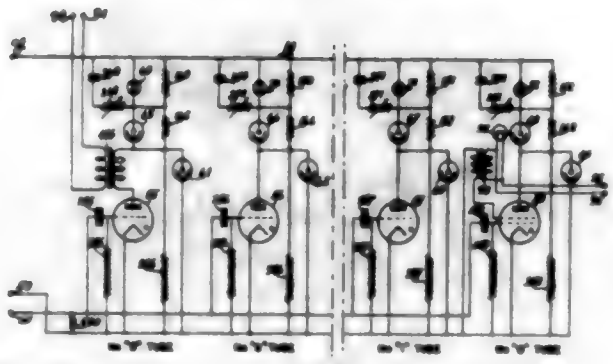
1. A slide rule comprising a body portion, a first multiple scale comprising a series of identical logarithmic decimal subscales linearly arranged on said body portion, each successive subscale being marked to represent the range of one successive decimal order of magnitude, the successive subscales of said series being sufficient in number and range to cover substantially the entire range of engineering magnitudes from at least 10^{-6} to 10^{6}, a slider portion movable in a fixed path with respect to the body portion and bearing a second series of logarithmic subscales in cooperating relationship with said first series of scales and on the same scale of magnitude, and a cursor bearing a reference line extending across both multiple scales and movable in a fixed path with respect to both multiple scales.

2,893,631
POWER OPERATED SIGN CONTROL MECHANISM
Nils H. Bergfelt, San Francisco, Calif., assignor to Friden, Inc., a corporation of California
Application September 28, 1954, Serial No. 458,883
8 Claims. (Cl. 235—73)



3. In a calculating machine, a register, actuating means for said register, means adjustable to control the sign character of registrations on said register by said actuating means, a power-operated means, a cyclically operable means for controlling the operation of said actuating means and said power-operated means, a normally inactive means positionable relative to said power-operated means to control the adjustment of said adjustable means, control means operable to actively position said positionable means, means for latching said control means in operative position and enabling operation of said cyclically operable means, a latch for maintaining said power-operated means in the operated position thereof, and means controlled by said cyclically operable means at the conclusion of each cycle thereof to release said latching means and said latch.

2,893,632
REGISTERS
Philip H. Allen, Los Gatos, Calif., and Benjamin J. Chromy, Washington, D.C.
Original application January 11, 1946, Serial No. 640,464, now Patent No. 2,727,683, dated December 20, 1955. Divided and this application December 16, 1955, Serial No. 553,639
12 Claims. (Cl. 235—92)

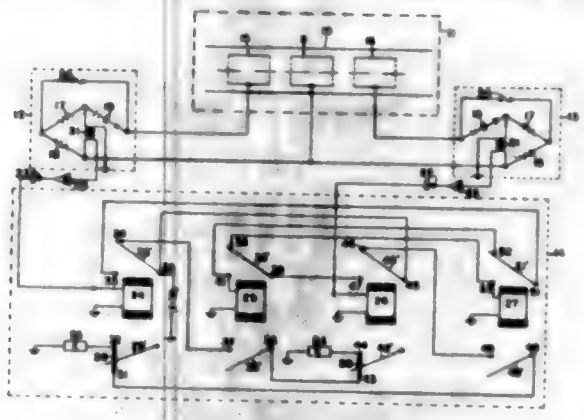


1. Electrical register and computing apparatus comprising an electrical device having a group of electric discharge paths, said paths being designated as the "0," "1" and "2" paths, each of said paths including an electric discharge device having an anode and a cathode, a light sensitive device connected in series with each said electric discharge device, a second light sensitive device connected across at least a part of the discharge path of each of said electric discharge devices, a common circuit for applying electric pulses to all of said electric discharge devices, means for firing the electric discharge device of the "0" path, said last mentioned device being adapted to produce luminous radiation to energize the light sensitive device connected in series with the electric discharge device of the "1" path so as to condition this discharge device path for firing upon the receipt of the next electric pulse by said common circuit whereby the discharge device of said "1" path is selectively fired by the said next pulse, the discharge device of said "1" path when fired producing luminous radiation for energizing the light sensitive device connected across the electric discharge device of the "0" path to quench the firing of this device, the luminous radiation produced by the discharge device of said "1" path also energizing the light sensitive device connected in series with the electric discharge device of the "2" path so as to condition this path for firing by the second pulse received by said common circuit, the electric discharge device of the "0" path having a reset electrode and means connected to said reset electrode for resetting the apparatus.

2,893,633
BI-DIRECTIONAL ELECTRIC COUNTING SYSTEM

Richard H. Van Hangen, Kirkland, Wash., assignor to the United States of America as represented by the Secretary of the Interior

Application October 10, 1957, Serial No. 689,457
5 Claims. (Cl. 235—98)
(Granted under Title 35, U.S. Code (1952), sec. 266)

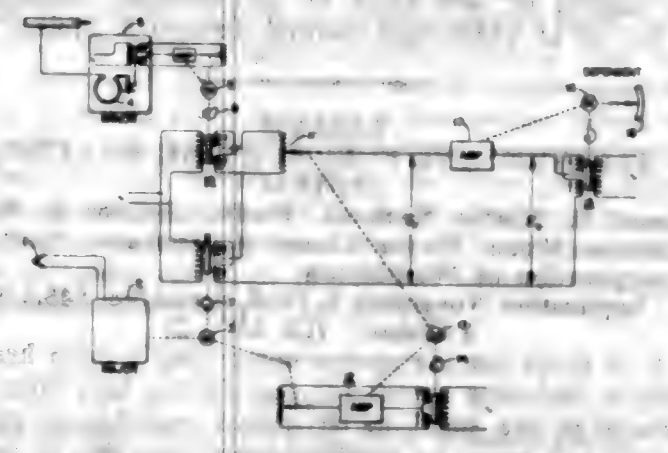


5. A bi-direction electric counting system comprising a restricted insulated passage through which the objects to be counted must pass; a plurality of electrode pairs in sequential central axis alignment along the longitudinal axis of the passage and having a common electrode between each two pair, a plurality of detector means incorporating the electrode pairs as elements thereof for bi-directional entry detection to the passage; a relay system coupled to the detector means output and consisting of a plurality of similar detector relays wherein there is an armature to close the associated circuitry momentarily immediately upon energization and again immediately upon de-energization thereof, a plurality of similar holding relay means with armature transfer rates relatively slower than those of the detector relay means; and two electric recording counters; the respective relay means arranged in bi-lateral symmetry to correlate the detector output and actuate the specific electric counter means to enumerate the traffic through the restricted passage in either of two directions.

2,893,634
THREE DIMENSIONAL CALCULATOR

Howard T. Hoffman, Mentor, Donald K. Speed, Painesville, and Richard F. Janofsky, Willoughby, Ohio, assignors to Bailey Meter Company, a corporation of Delaware

Application November 15, 1956, Serial No. 622,399
5 Claims. (Cl. 235—151)

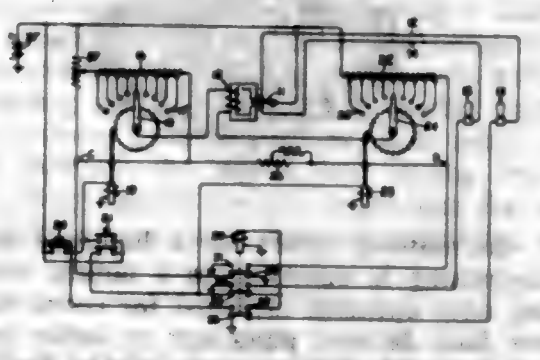


1. A system for continuously manifesting a variable dependent upon a plurality of independent variables comprising, a balanceable electric network, a first transformer having a primary winding structure connected to an alternating voltage source, a secondary winding structure connected in said balanceable network, and a core member movable for varying the voltage induced in the secondary winding structure from the source, a first measuring device responsive to a first of the independent variables for positioning said core member to establish a first voltage across said secondary winding structure in accordance with a function of said first independent variable, a second transformer having a primary winding structure connected to the source of alternating voltage, a secondary winding structure connected in said balanceable network, and a core member movable for varying the voltage induced in the secondary winding structure, a second measuring device responsive to a second of the independent variables for positioning said core member of said second transformer to establish across said secondary winding structure of said second transformer a voltage which is in series adding relationship with said first voltage and proportional to a first function of said second variable, a potentiometer shunted across said secondary winding structure of said first transformer and having a movable contact, means associated with said second measuring device for actuating said contact to position said contact in accordance with a second function of said second variable to modify said first voltage in accordance with said second function of said second variable and to render said first voltage proportional to the product of said function of said first variable and said second function of said second variable, and means responsive to the sum of said first and second voltages to effect balance of said network to continuously manifest the dependent variable as the sum of the first function of said second independent variable and the product of the function of said first independent variable and second function of said second variable.

2,893,635
QUALITY CONTROL SEQUENTIAL ANALYZER

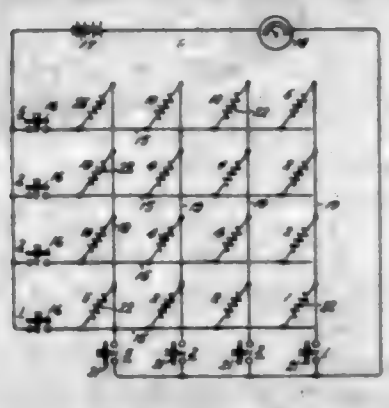
Louis G. Gittenbanner, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Application September 12, 1952, Serial No. 309,349
11 Claims. (Cl. 235—168)



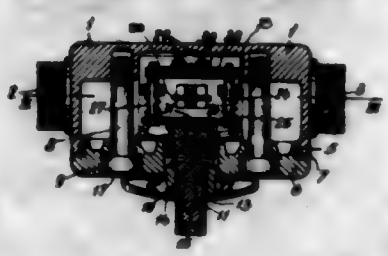
1. A sampling analyzer comprising a pair of impedances adapted to be connected across a source of potential and having movable intermediate output terminals, means to move the output terminal on one impedance in accord with the number of units sampled to provide a voltage proportional thereto, means to move the output terminal on the other impedance in accord with samples rejected to provide a voltage proportional thereto, and means to provide a reference voltage representing minimum boundary conditions for acceptability and rejectability of said samples, said last named means being connected in series with said one impedance in response to the rejection of a unit and in series with said other impedance for all other units sampled, means connected between the output terminals to compare the polarity and magnitude of said voltages, and a pair of indicating means selectively actuated by said comparing means.

2,893,636
MULTIPLYING NETWORK
Herman D. Parks, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Application December 3, 1952, Serial No. 323,915
8 Claims. (Cl. 235—194)



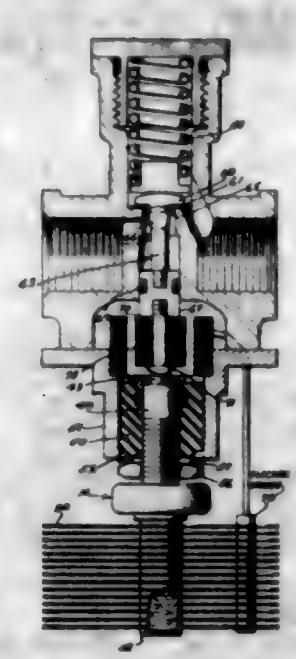
1. A network for effecting mathematical multiplication including in combination a matrix of inert impedances having mathematically related values arranged in horizontal rows and vertical columns between a pair of output terminals, first digitally operable electric switch means arranged in a vertical column for connecting selected ones of said inert impedances into partial electric circuit relationship in accordance with the value of the multiplier, second digitally operable electric switch means arranged in a horizontal row for connecting the selected ones of said inert impedances into complete electric circuit relationship across said output terminals in accordance with the value of the multiplicand, the impedance of said matrix across said output terminals being determined by the settings of said first and second switch means and representing the product of the multiplier and multiplicand.

2,893,637
THERMOSTATIC MIXER WITH DETACHABLE MECHANISM
René Trubert, Vireflay, France
Application September 14, 1956, Serial No. 609,826
Claims priority, application France, September 20, 1955
5 Claims. (Cl. 236—12)



1. A thermostatic mixer for a hot fluid and a cold fluid comprising in combination a hollow body having opposing inlet openings arranged for connection to hot and cold fluid delivery pipes and an outlet opening for connection to a feeding pipe, said body further having a pair of seat-forming faces each provided at the inner end of one of said inlet openings and a front aperture, a cover tightly and detachably mounted on said body closing said front aperture, a fluid mixing mechanism, an open end hollow barrel containing said entire mixing mechanism and mounted within said body with its ends each tightly abutting one of said seat-forming faces, said barrel also having an outlet opening into said body, a thermostatic bimetallic strip connected at one end to said mixing mechanism for operating the same, control means in two separable parts of which one part has the other end of said bimetallic strip connected thereto is mounted on said barrel and the other part is mounted through said cover for being exteriorly actuated, and an adjusting means within said body connected to said barrel and said other end of said bimetallic strip and capable of pre-setting said bimetallic strip.

2,893,638
THERMOSTATIC CONTROL VALVE
Victor E. Rimsha, Van Nuys, Calif., assignor to The Dole Valve Company, Morton Grove, Ill., a corporation of Illinois
Application August 9, 1957, Serial No. 677,240
3 Claims. (Cl. 236—68)

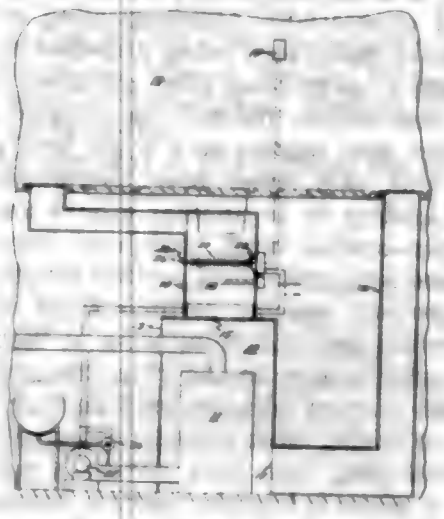


1. In a thermostatically controlled modulating valve, a valve body, an inlet into said valve body, an outlet from said valve body, an orifice between said inlet and said outlet, an annular flat valve seat extending about said orifice, a poppet valve having a valve face cooperating with said seat, spring means engaging said valve with said seat, a thermal element moving said valve away from said seat upon predetermined rises in temperature, said valve having a contoured stem extending through said orifice and cooperating with said orifice to increase the rate of flow of fluid therethrough upon predetermined temperature rises, said thermal element having a casing on the outside of said valve body containing a thermally expansible material for sensing the temperature of air flowing about said valve, a cylinder extending from said casing within said valve body, a power member extensible from said cylinder within said valve body upon fusion of the thermally expansible material within said casing, means mounting said thermal element on said valve body, electrically energizable means associated with said thermal element to heat said thermal element and effect the extensible movement of said power member and opening of said valve, a switch completing an energizing circuit to said electrically energizable means when said power member is in a retracted position and operated by extensible movement of said power member to deenergize said electrically energizable means and to accommodate the control of said valve by the ambient temperature of the air to which said thermal element is subjected.

2,893,639
ELECTRIC AND FUEL BURNING HEATING SYSTEM
Armor B. Martin, Spokane, Wash., assignor to Washington Water Power Company, Spokane, Wash., a corporation of Washington
Application November 7, 1955, Serial No. 545,239
5 Claims. (Cl. 237—2)

1. A space heating system comprising a main heating furnace including means for transferring heat from the furnace to the space to be heated operable to supply heat to said space, an auxiliary heater operable to supply heat to said space, thermostatic control means for said main heating furnace operatively responsive to temperature variations in said space to cause said furnace to supply heat to said space when the space temperature drops

below a predetermined level and operable to cause said furnace to substantially cease supplying heat when the space temperature exceeds a predetermined level, second thermostatic control means for said auxiliary heater operably responsive to temperature variations in said space to cause said heater to supply heat when the space temperature drops below a predetermined level above the level at which said first named thermostatic control means causes said main furnace to supply heat and to



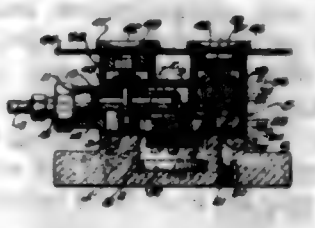
cause said auxiliary heater to cease supplying heat when the space temperature exceeds a predetermined level at least as high as said last named predetermined level, and third thermostatic control means for said auxiliary heater operably responsive to temperature variations in the heat transferring means of said furnace to render said auxiliary heater inoperative when the temperature in said heat transferring means exceeds a predetermined level due to operation of the furnace.

2,893,640
RAIL BOND AND METHOD OF INSTALLING THE SAME
Ralph T. Lowerre, Bedford, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey
Application March 4, 1954, Serial No. 414,100
4 Claims. (Cl. 238—14.13)

1. The method of making and attaching a rail bond to a rail comprising placing a thin metal buffer plate against the rail with a soldering material between the plate and rail, placing a mold against the plate and around an electrical conductor, flowing molten metal into said mold to form a terminal fitting integral with the buffer plate and the conductor, said soldering material having a melting point lower than the melting points of said buffer plate and said molten metal, and correlating the heat of the molten metal, the heat penetration through the buffer plate and the melting temperature of the soldering material to cause the heat from the molten metal to solder the plate to the rail without changing the metallurgical structure of the rail.

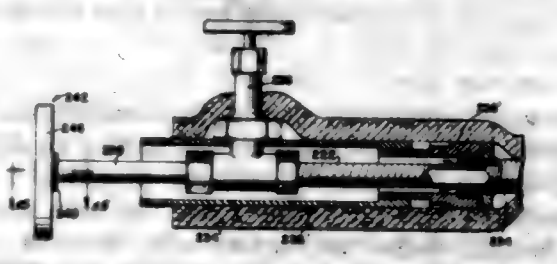
2,893,641
AUTOMATIC CONTROL FOR IRRIGATION SYSTEMS
Edwin J. Hunter, Riverside, Calif.
Application October 11, 1954, Serial No. 461,336
10 Claims. (Cl. 239—64)

1. An automatic irrigation control device, comprising: a porous cell adapted to be placed in moisture transfer relation with soil and having a cavity adapted, when water filled, to develop a vacuum pressure corresponding to the depletion of soil moisture; a pilot valve including a vacuum operable element connected with said porous cell cavity, a water inlet and a water outlet, said inlet adapted



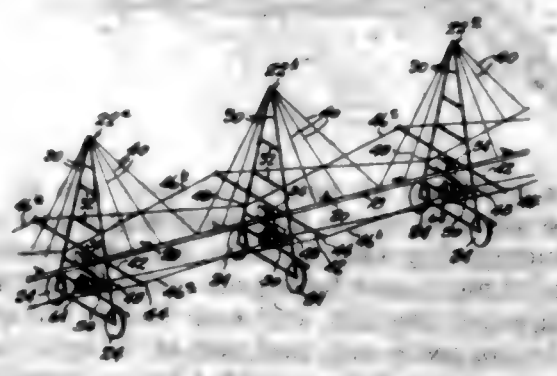
to be connected to an irrigation valve to be controlled; a drain tube connected with the outlet of said pilot valve; and means interposed between said outlet and drain tube defining a passageway at least partially walled by said porous cell to permit seepage into said cavity of a portion of the water flowing to said drain tube.

2,893,642
APPARATUS FOR APPLYING BITUMEN COATING TO METALLIC SURFACES
Charles Hylton Callery, New Orleans, La., assignor to American Anti Corrosion Corporation, New Orleans, La., a corporation of Louisiana
Application February 8, 1956, Serial No. 564,156
3 Claims. (Cl. 239—132)



3. In an apparatus for applying a coating of high melting point material, an outer conduit, an inner conduit for conveying hot liquified materials disposed within said outer conduit in spaced relation thereto so as to form a passageway therebetween for receiving a heated fluid, said inner conduit extending outwardly beyond one end of said outer conduit and having a discharge nozzle connected thereto, said discharge nozzle having a pressure-atomizing spray orifice therein, and baffle-like means extending generally radially outwardly from the end of said inner conduit adjacent said nozzle in a position to maintain the heated fluid issuing from the end of said outer conduit out of contact with the heated material issuing from said pressure atomizing spray orifice.

2,893,643
AMBULANT DISCHARGE IRRIGATING DEVICE
Allen J. Gordon, Petersburg, Ind.
Application June 18, 1956, Serial No. 591,826
18 Claims. (Cl. 239—177)



1. An irrigating device comprising an elongated irrigation conduit, a swivel coupling connecting one end

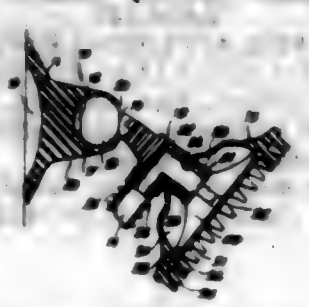
of said conduit to a water source, a plurality of spaced wheeled structures, means freely suspending said conduit from said structures at spaced intervals, each structure including means responsive to water pressure for propelling the structure, means interconnecting said conduit and said propulsion means for modulating each propulsion means, and control means connected to said modulating means and to each of the two next adjacent structures to be responsive to change in the relation of its supporting structure to the adjacent structures and independent of said conduit for actuating the modulating means for the propulsion means of its supporting structure when subject to such change of relation.

2,893,644

COMBINATION WALL SHOWER AND SHAMPOO SPRAY

Orloff W. Holden, Chicago, Ill., assignor to Orloff W. Holden and Marguerite H. Holden, doing business as Knickerbocker Rubber Company, not Inc.

Application January 25, 1957, Serial No. 636,277
5 Claims. (Cl. 239—282)



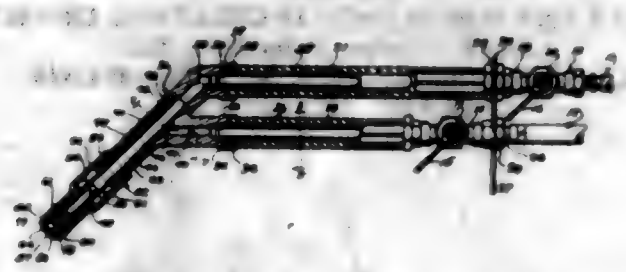
1. Spraying apparatus having, in combination, a base adapted to be mounted on a wall and having an outwardly opening socket defined by resilient material, a hollow body having a ball projecting from one side and fitting tightly in said socket to support said body in different positions of adjustment relative to said base while permitting detachment of the body from the base, a sprayer projecting rigidly from the side of said body opposite said one side for movement with the body relative to said base and communicating with the interior of the body for the discharge of liquid therefrom, and a conduit secured to said body intermediate said ball and said sprayer for movement with the body relative to said base, said conduit communicating with the interior of said body to introduce liquid under pressure for discharge through said sprayer.

2,893,645

AIR AND LIQUID PRESSURE SPRAY GUN FOR CLEANING DIESEL ENGINES AND THE LIKE

Edward Sevander Johnson, Chicago, Ill.

Application December 13, 1957, Serial No. 702,559
2 Claims. (Cl. 239—288)



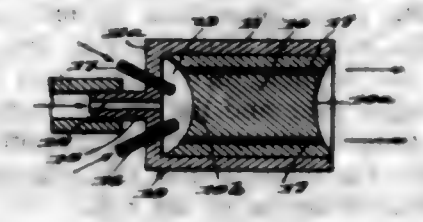
1. In a combined air and liquid spray gun for cleaning greasy surfaces, a gun housing having a pair of inlet fittings surrounding two inwardly threaded conduits, a pair of metal pipes, each having one end threaded into one of said threaded conduits, and each having threaded fittings at their opposite ends, and each of the latter threaded fittings supporting a valve provided with a laterally projecting handle, a substantially rectangular shield plate having a pair of apertures in alignment with said pipes, the said latter fittings passing through said apertures, and having threaded nuts clamping the shield plate with the valves on opposite sides of the shield plate, the said shield plate being of sufficient size to have its edges projecting beyond the valves and valve handles to prevent anything from engaging the handles when the spray gun is dropped, said gun housing having an obtuse bend in its liquid conduit, which is provided with an enlarged counterbore communicating with said air inlet conduit, and said liquid conduit being internally threaded and provided with a metal liquid pipe defining an annular air space in said counterbore communicating with the air conduit, the said liquid pipe being provided with internal threads, having a spray head plug threaded therein and forming a continuation thereof, said spray head plug having an inner bore leading to a small bore terminating at a closed end, said small bore communicating with lateral bores leading to an annular groove and said plug having a frusto-conical head, said head having a plane end surface and a frusto-conical surface which is provided with spiral grooves opening at their front ends at said plane end surface and communicating at their rear ends with said annular groove in the plug, the said plug having a threaded portion adjacent said annular groove, an inner spray cap having inner threads engaging the threaded portion of said plug, said plug having a pair of radial flanges with a partially circular groove between them, a resilient O ring located in the latter groove and projecting from it slightly to effect a seal with an inner cylindrical surface of said spray cap, said spray cap having a sealing sleeve portion sliding back and forth on the O ring as the cap progresses on said plug threads, said cap having a bore larger than said frusto-conical head beyond its threads, and having an inner frusto-conical surface opposing the frusto-conical surface on said plug, said cap having a centrally located cylindrical discharge opening for passing a whirling spray coming from said spiral grooves, the said cap terminating at its end in an outer partially cylindrical annular surface, an outer cap comprising a cylindrical member having an inner bore of cylindrical shape surrounding the inner cap and terminating at an end wall provided with an inner frusto-conical surface to engage the partially spherical surface on the inner cap, said outer cap having a cylindrical outlet bore in its end which is larger than the outlet bore of the inner cap for passing both air and liquid, said outer cap having an open internally threaded end provided with a larger bore adapted to be threaded on the body of the spray gun and adjusted to the point of closing or throttling the passage of air between the inner cap and the outer cap.

2,893,646

FLUID SPRAY NOZZLE

Charles C. Batts, Hampton, Va.

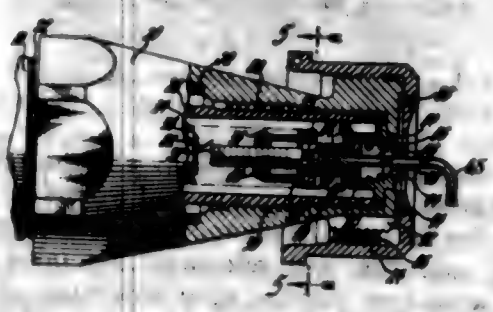
Application October 7, 1958, Serial No. 765,812
4 Claims. (Cl. 239—419)



1. A fluid spray nozzle comprising a metal body having a shank portion and a hollow cylindrical sleeve portion colinearly arranged with respect to said shank portion, said shank portion having an axial inlet bore extending longitudinally therethrough and terminating in an orifice opening having a smaller diameter than the internal diameter of said sleeve portion, and a cylindrical plug contiguously mounted coaxially within said body sleeve

portion, said cylindrical plug having concave recesses at each end thereof and a plurality of parallel outlet passages extending longitudinally therethrough, said passages being arranged in a circle about the longitudinal axis of said plug, said axial inlet bore terminating opposite the solid central portion of the adjacent concave recess wall of the plug so that fluid directed against the solid central portion of said plug from said inlet bore will be diverted radially outwardly in said concave recess.

2,893,647
ADJUSTABLE FUEL NOZZLE
Donald E. Wertanen, Grand Rapids, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 6, 1957, Serial No. 657,121
6 Claims. (Cl. 239—464)

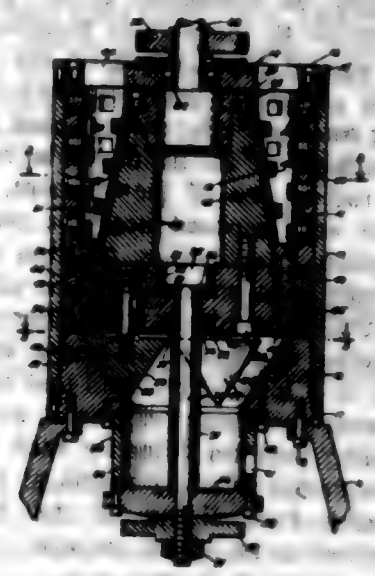


4. A liquid spray nozzle that is adapted for adjustment by a tool that is insertible in the discharge orifice of the nozzle, the nozzle comprising a body having a discharge orifice therein, said body having a passage formed therein for supplying liquid to said orifice, a valve in said body for controlling said passage, an adjustable abutment means in said body including a head portion aligned with said orifice in spaced relation thereto, and a spring in said body connecting said abutment means and said valve, said head portion being accessible through said orifice for engagement by the insertible tool to move said abutment means and vary the spring load on said valve.

2,893,648
SHOWER CONTROL ATTACHMENT IN COMBINATION WITH A SHOWER HEAD
Blanche Berry, Washington, D.C.
Application August 12, 1958, Serial No. 755,770
3 Claims. (Cl. 239—499)

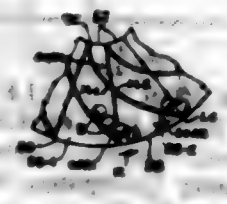
1. In a shower control attachment for a bath shower head, said attachment comprising a frustum of a cone, said frustum at its smaller end being resilient and expansible and adapted to snap over said shower head and be suspended therefrom, said frustum having a yieldable gripping action on said head and thereby provides for a limited oscillating movement to divert and have a limited control of the flow of water to a limited area on the bather, said frustum having a small coefficient of enlargement from its smaller upper end to its larger lower end whereby the water is guided and confined to a limited area at and adjacent its lower end.

2,893,649
GRINDING MILL
Myron S. Mischanski, Clifton, N.J.
Application February 17, 1958, Serial No. 715,646
6 Claims. (Cl. 241—162)



1. In a grinding mill, a cylindrical casing arranged on a vertical axis and having inwardly projecting elements on the inner periphery thereof, a grinding member having outwardly projecting elements on the outer periphery thereof, said grinding member being mounted for rotation within said casing for breaking up and pulverizing material between the elements on said grinding member and casing, said casing including a lower portion having a central opening therethrough provided with a peripheral inner face extending downwardly and inwardly in angular relation to the vertical axis of the casing, a plurality of radially arranged inverted conical shaped members mounted on shafts depending from said grinding member for relative rotation of said conical shaped members with reference to said grinding member and disposed within the central opening in said lower portion, each of said conical shaped members having a narrow portion of its peripheral face disposed in engagement with the inner face of said lower portion with said narrow portions of said conical shaped members being arcuately spaced apart, and said conical shaped members rotating with said grinding member and having independent rotation by engagement of the peripheral faces thereof with the inner face of said lower portion for crushing material between said conical shaped members and said lower portion.

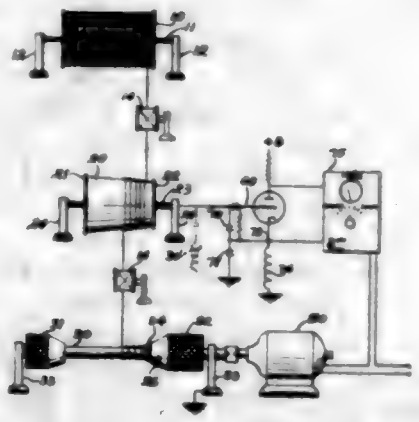
2,893,650
GRINDING MILL END LINERS
Norman E. Maclean, San Marino, Calif., assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Application October 8, 1957, Serial No. 688,968
3 Claims. (Cl. 241—181)



1. In rotary grinding mill apparatus of the kind described having a substantially cylindrical shell mounted for rotation about a substantially horizontal axis, and affording a chamber in which the grinding media and the charge to be comminuted are to be confined, end liner means arranged at one end of the shell in a substantially vertical plane for rotation with the shell, said end liner means being in the form of a plurality of

identical segments extended for 360° about the end of said shell and each having a wear surface facing inwardly of said chamber so as to be subjected to the action of the grinding media in said chamber, said end liner segments each having inner and outer peripheral edges lying substantially on respective circles extending substantially concentric to the axis of rotation of the mill, and at least a pair of ribs formed on the wear surfaces of each of said segments, one being an outer rib and the other being an inner rib, each of said ribs on a segment being inclined at an acute angle relative to the corresponding radius line of the segment, the outer rib having an outer end disposed near the outer peripheral edge of its segment in a leading position and having an inner end disposed at a point along one side edge of the segment in a trailing position, the inner rib having an outer end disposed at a point along the other side edge of the segment in a leading position and having an inner end disposed near the inner peripheral edge of the segment in a trailing position whereby each of said ribs in travelling through the grinding media at the end of said chamber impedes back-sliding of the grinding media against said wear surface and imparts rotation to the grinding media about their own axes.

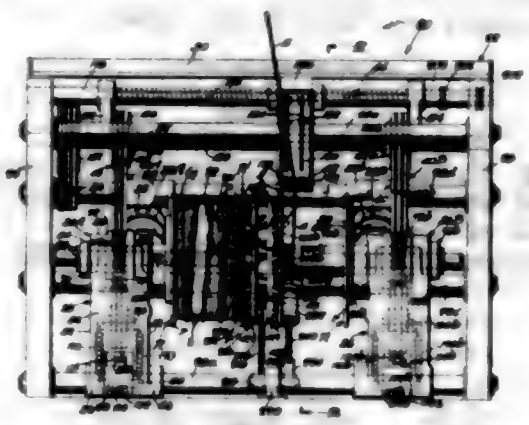
2,893,651
METHOD AND APPARATUS FOR MAKING ANTENNAS WITH FERRITE CORES
Fred E. Singelmann, Palatine, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware
Application April 27, 1955, Serial No. 504,255
13 Claims. (Cl. 242—9)



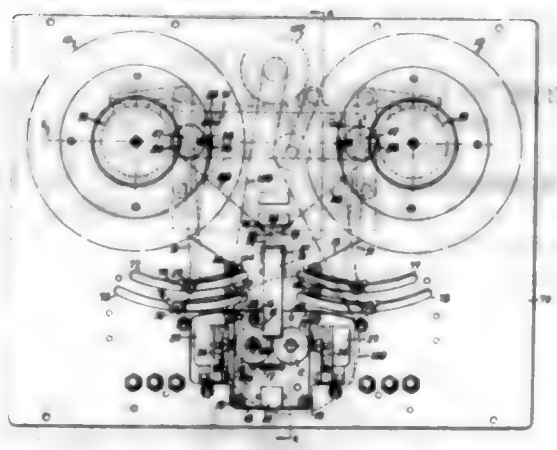
1. The method of winding antenna assemblies comprising a ferrite core and a wire inductance which comprises passing the wire in proximity to a metallic element to provide a predetermined capacity between the element and the wire, winding the wire on the core to provide an inductance which is in series with the capacity to form a series resonant circuit, utilizing the series resonant circuit so formed to control a frequency indicating circuit, and winding wire on the core until a predetermined frequency is attained.

2,893,652
STOCK ANCHOR FOR SNAGLESS CONTINUOUS STOCK REELING OPERATIONS
Benjamin H. Davis, Noank, Conn., assignor to The Standard Machinery Company, Mystic, Conn., a corporation of Connecticut
Application April 3, 1956, Serial No. 575,909
21 Claims. (Cl. 242—25)

1. In continuous stock winding apparatus, the combination with a pair of spaced reel stands having spindles projecting from their adjacent sides, rotary reels removably mounted on said spindles in spaced end-to-end relation with each other, separate drives connectible with and disconnectible from said reels, respectively, a guide operable to lead flexible stock onto either reel and cross the stock from either reel over to the other reel, and a knife operable to project into the path of crossover stock to sever the same, of stock anchors on and turning with the adjacent ends, respectively, of said reels on opposite sides of the projected knife, each anchor having a peripheral rim, a peripheral track in wind-on relation with crossover stock and arranged to lead wound-on stock onto said rim for its wind thereon, and means engaging the stock on said rim and releasably retaining it on the latter in wound-on fashion after severance of the crossover stock, said track being also arranged to lead the wound-on stock thereon past said stock engaging means.



2,893,653
MAGNETIC TAPE MACHINE
Eugene W. Schultheis, Berkeley, and Robert M. Brumbaugh, Menlo Park, Calif., assignors to Ampex Corporation, Redwood City, Calif., a corporation of California
Application May 24, 1956, Serial No. 587,119
6 Claims. (Cl. 242—55.12)

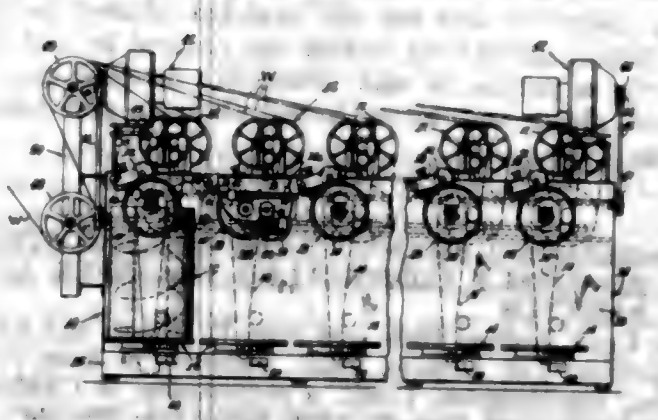


1. In a magnetic tape machine, a tape transport means including a pair of rotatable tape reel holders and capstan means for driving the tape, two pairs of stationary and movable tape engaging elements over which the two lengths of the tape extending from the reels to the capstan means are looped, two movable members serving to mount the movable elements of each pair, yieldable means for urging said members to lengthen the tape loops associated with the same, each of said members being movable against said yieldable means to a limiting position in which the tape may be positioned between the stationary and movable elements of the associated pair without looping, a single hand lever, and means connecting said hand lever to said members for moving both said members to said limiting positions responsive to movement of the hand lever to facilitate quick threading of the tape with respect to said elements.

2,893,654
MULTIPLE COILER

Thomas E. Lewis, Jr., Trumbull, Conn., assignor to The Coulter & McKenzie Machine Co., Inc., Bridgeport, Conn., a corporation of Connecticut

Application August 17, 1956, Serial No. 604,677
6 Claims. (Cl. 242—83)

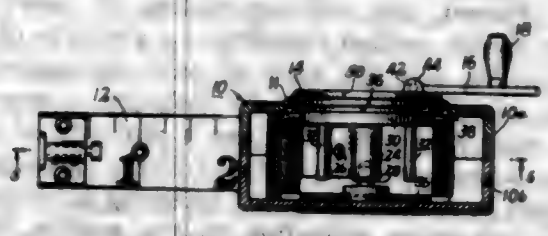


1. A wire handling mechanism comprising a common frame having a bank of feeding and coiling stations tandemly mounted thereon, each station comprising means including a capstan rotatably mounted on a horizontal axis about which a strand of wire is adapted to be looped for feeding the same from a source of supply to a container and for applying a cast to the wire to cause the wire to form coils in the container, means for rotating the container receiving the wire about an axis perpendicular to the axis of said rotary means, said wire being adapted to be fed into the container from the top of the capstan, means connecting said capstan in driving relationship with its respective container rotating means, and drive means common to all of said stations for driving said capstan and its respective connected container rotating means at relative rotative speeds, said connecting means including means for independently connecting and disconnecting the container rotating means from driving relationship with its respective capstan to facilitate removal of a container without interrupting the operations of the other stations.

2,893,655
TAPE REEL

Frederick O. Carlson, Monrovia, Calif., assignor, by mesne assignments, to H. K. Porter Company, Inc., of Pittsburgh, Pittsburgh, Pa., a corporation of Pennsylvania

Application January 24, 1955, Serial No. 483,498
6 Claims. (Cl. 242—84.8)

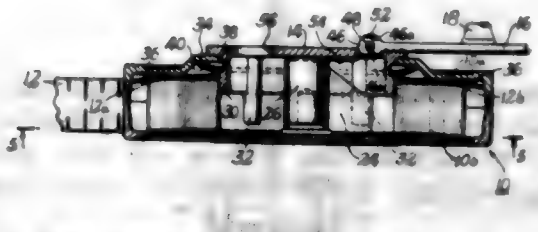


1. In a measuring ruler, the combination comprising a compact casing adapted to be held in one hand and having an opening in one side thereof, a face plate mounted over said opening and bearing against the outer surface of said one side for rotary motion with respect to said casing, a drum mounted in said casing for carrying a coiled tape blade, support means extending through said opening for securing said drum to said face plate for rotation therewith, said support means being provided with a flange extending around the periphery thereof and in a plane parallel to the plane of said one side, and a retaining ring positioned between said flange and the interior surface of said one casing side to secure said drum to said casing, said retaining ring being shaped to apply pressure to both said flange and said interior surface whereby to produce a moderate amount of frictional resistance to oppose the rotation of said drum.

2,893,656
RULER CONSTRUCTIONS

Frederick O. Carlson, Arcadia, Calif., assignor, by mesne assignments, to H. K. Porter Company, Inc., of Pittsburgh, Pittsburgh, Pa., a corporation of Pennsylvania

Application December 16, 1955, Serial No. 553,540
7 Claims. (Cl. 242—84.8)



2. In a tape measure, the combination comprising a case adapted to be held in one hand and having an opening therein, a drum rotatably mounted in said case, a relatively long tape wound in a coil on said drum and having a portion thereof extending through said case opening, wind-up means interconnected with said drum for rotating said drum to draw said tape into said case, and a resilient control plate positioned in said case and disposed along one side of the tap coil wound on said drum, said control plate being curved in the form of a cylindrical surface that is arched to press against said tape coil in diametrically opposite regions thereof.

2,893,657
DELIVERING WIRE OR LIKE FLEXIBLE ELEMENT FROM A COIL

Pieter A. van de Bilt, Maartensdijk, Netherlands, assignor by mesne assignments, to Package Sealing Co. (Export) Limited, Ealing, London, England, a British company

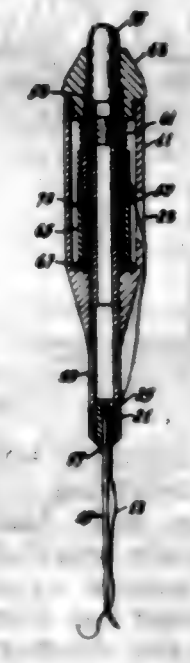
Application November 27, 1956, Serial No. 624,534
Claims priority, application Netherlands December 8, 1955
9 Claims. (Cl. 242—128)

6. Mechanism for delivering wire from a coil to an associated machine comprising a shaft rotated intermittently corresponding to the demand of said machine for wire, a drum for the wire freely mounted on said shaft, a shuttle arm mounted on said shaft and driven positively thereby around said drum to pick up a predetermined length of wire therefrom, and spring means operatively connecting said drum and said arm to said shaft and adapted to rotate said drum in a direction opposite to the rotation of said arm when said shuttle delivers a length of wire less than the demand of said machine.

2,893,658
YARN HOLDER
Katherine M. Giblin and Elly C. Fischer, Manchester, Conn.
Application August 10, 1954, Serial No. 448,864
3 Claims. (Cl. 242—129.53)

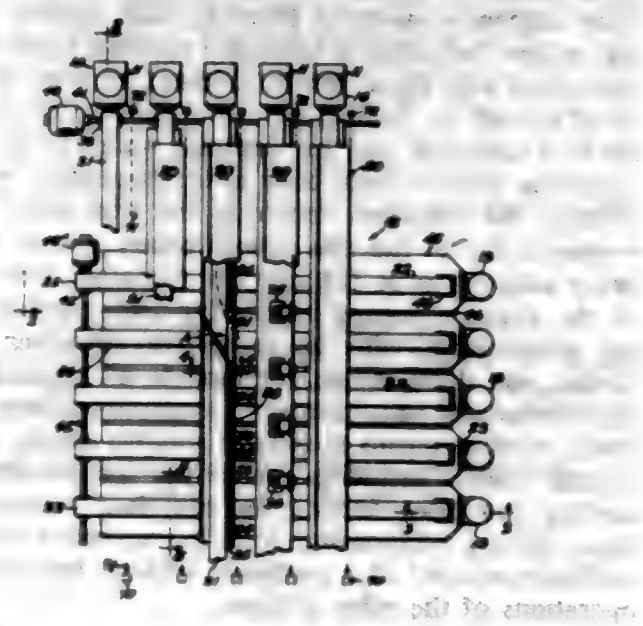
2. In a knitting device of the type having a plurality of knitting yarn carrying spools suspended by the yarn from a piece of fabric being knitted, said device having a spool with side flanges having radially extending stop ribs on the outside faces thereof and axial pivot connections between said stop ribs, a rectangular yoke with inturned side legs having elongated projection elements engaging said axial pivot connections and the stop ribs of said spool with sufficient resiliency to prevent unwinding unless the yarn is drawn upwardly, and a guide tube extending upwardly to guide the yarn from the spool to the fabric, said yoke having an opening in the base thereof to receive the yarn and a tubular projection to receive the yarn and the end of the tube, said axial pivot connections consisting of openings in the ends of the spool and said elongated projection elements extending radially in respect to said openings and acting as stops in respect to said stop ribs.

2,893,659
BOBBIN
Robert W. Thayer, Greensboro, N.C.; Edna C. Thayer, executrix of said Robert W. Thayer, deceased
Application July 19, 1955, Serial No. 523,009
6 Claims. (Cl. 242—130)



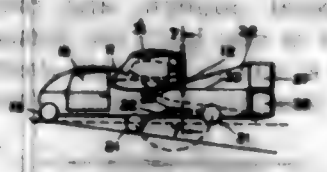
1. A holder for a supply of thread like member comprising in combination a section of round rod, a screw thread on one end of said rod, a rotatable helical spring of uniform diameter on at least a portion of said screw thread, the outside diameter of at least a part of said rod being greater than the outside diameter of said screw thread and greater than the inside diameter of said helical spring, the inside diameter of said helical spring being greater than the outside diameter of said screw thread, and a nut for said screw thread, said nut forming a collar for said rod and said nut adapted to hold said helical spring over threads not covered by said nut, whereby a portion of said thread like member may be wound about said screw thread through said helical spring.

2,893,660
PNEUMATIC TRANSIT TUBE SYSTEM WITH REMOTELY CONTROLLED TRANSFER APPARATUS
Ross Cook, Rolling Hills, and John D. Capers and Albert Martens, Los Angeles, Calif., assignors to Ross Cook, Inc., Los Angeles, Calif., a corporation of California
Application June 29, 1956, Serial No. 594,924
9 Claims. (Cl. 243—16)



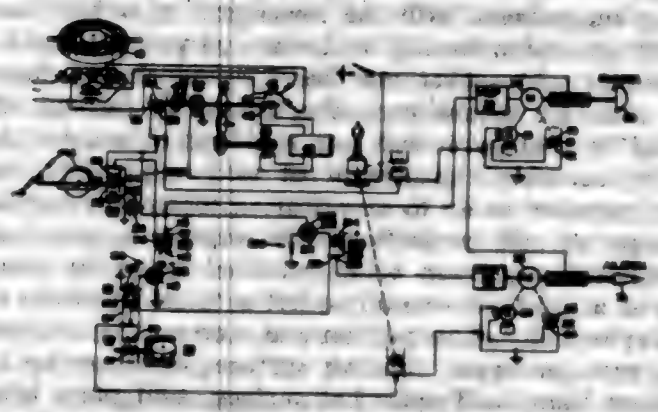
1. In a transit tube system: a plurality of pneumatic dispatching tubes leading from respective dispatching stations, said tubes each having means providing a plurality of delivery outlets; a plurality of pneumatic destination tubes having respective suction inlets and leading to respective destinations; and a transfer apparatus comprising a plurality of delivery conveyors, one for each of said dispatching tubes, said conveyors being disposed closely adjacent said delivery outlets in positions for receiving article emitted therefrom; a plurality of receiving conveyors, one for each of said destination tubes, disposed closely beneath said delivery conveyors in crossed relation thereto to define a plurality of transfer crossings where articles on the delivery conveyors can be dropped by gravity onto said receiving conveyors, said receiving conveyors extending to the suction inlets of the respective destination tubes and arranged to deliver such articles to said suction inlets in positions to be sucked into said destination tubes through said inlets, a plurality of reflector gates, each disposed at a respective transfer crossing and pivotally mounted for swinging movement from a normal position in non-obstructing relation thereto, to a position extending across the path of movement of articles in the respective dispatching line, for deflecting laterally therefrom for gravity drop onto a respective receiving conveyor, an article being carried thereby; servo-motors for actuating said gates; and a control means at each of the respective dispatching stations controllable for selectively energizing the servo-motor for the gate at the crossing of its respective dispatching line.

2,893,661
AIRPLANE STRUCTURE
Elmo E. Ayler, Galesburg, Ill.
Application December 27, 1954, Serial No. 477,685
11 Claims. (Cl. 244—36)



1. A combined airplane and road vehicle comprising a fuselage, the forward portion of said fuselage being formed as an airfoil having a high camber, a driven propeller disposed to the rear of the point of the fuselage having the highest camber, said fuselage being provided with rearwardly extending fins the upper edges of which are spaced from the center line of the vehicle and substantially parallel, a curved surface extending from said fins downward and forming a keel, said propeller operating partially within the confines of said fins and the upper surface of said keel.

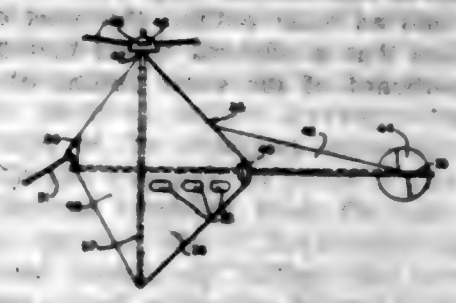
2,893,662
AUTOMATIC PILOT SYSTEM
Paul A. Nesses, Teaneck, N.J., assignor to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Application December 18, 1953, Serial No. 399,167
13 Claims. (Cl. 244—77)



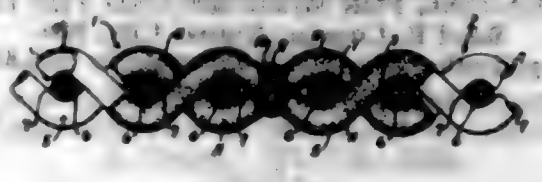
1. In a steering apparatus for aircraft having aileron and a rudder surfaces, a roll control channel for the craft including means for producing a control effect on the aileron surfaces in response to the extent of deviation of said aircraft from a predetermined angular position with respect to the roll axis, a yaw control channel for the craft including means for producing a control effect on the rudder surfaces in response to the rate of deviation of said aircraft from a predetermined angular position with respect to the yaw axis, and means connected with each control effect producing means for inserting a portion of the control effect from one channel to the other channel to give an action on the craft that is equal and opposite to the action normally experienced by the craft about one axis as a result of the action of the aircraft about the other axis.

2,893,663
HELICOPTER KITE
Emil L. Wilson, Los Angeles, Calif.
Application November 7, 1957, Serial No. 694,958
3 Claims. (Cl. 244—154)

1. A helicopter kite comprising a longitudinal strut, a conical main body portion partially encircling said longitudinal strut and having a base spaced inwardly from the front end of said strut, a transverse strut connected to said longitudinal strut adjacent to said base and the ends of said transverse strut connected to diametrically opposite sides of said base, a rotor secured to one end of said transverse strut, and a rear stabilizer secured to the rear end of said longitudinal strut, said conical main body portion having a conical flexible sheet, and said base having a substantially rigid hoop, a tail section intermediate said main body section and said rear stabilizer, said main body portion includes a plurality of ports communicating with the interior and exterior of the body portion permitting the passage of air therethrough to obtain lift.



2,893,664
SEAM FOR WIRE FABRIC AND METHOD OF MAKING SAME
John P. Gerkensmeyer, Appleton, Wis., assignor, by mesne assignments, to Appleton Wire Works Corp., Appleton, Wis., a corporation of Wisconsin
Application March 16, 1955, Serial No. 494,709
4 Claims. (Cl. 245—10)



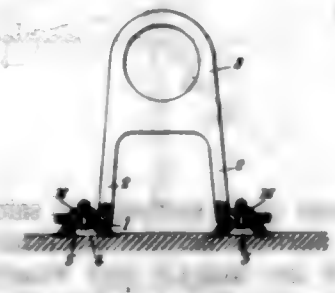
1. The method of producing a seam in a Fourdrinier wire formed of copper content threads coated with tin, which method comprises: applying a thin coating of copper over portions of the threads forming the margins along the edges to be joined by the seam; bringing the edges to be joined close to one another; placing a silver solder along the edges to be joined; and heating the solder to cause the solder to flow upon the threads to produce a firm bond upon cooling, wherein the copper coating acts as a jacket about the threads which inhibits flow of the tin coat beneath such jacket.

4. In a seam for a Fourdrinier wire that is composed of warp and weft threads of copper content coated with a metal from the group consisting of tin, zinc and aluminum the combination comprising: a thin layer of metal selected from the group consisting of copper and silver deposited over the warp and weft threads adjacent the seam and extending inwardly from the seam to cover a plurality of rows of crossover knuckles between warp and weft threads; and a silver solder joining edges of the Fourdrinier wire to define the seam, which silver solder is confined to margin areas of the edges that are on the seam side of said rows of crossover knuckles.

2,893,665
RESILIENT SUSPENSION DEVICES
Jean Felix Panisset, Paris, France, assignor to Société Luxembourgeoise de Brevets et de Participations Lubrepa, Luxembourg, Luxembourg
Application April 23, 1954, Serial No. 425,218
Claims priority, application France April 25, 1953
7 Claims. (Cl. 248—24)

1. A flexible suspension device which comprises, in combination, a first rigid attaching member constituted by a strictly flat plate, a second rigid attaching member constituted by a strictly flat plate parallel to the first one, and an annular mass of a resilient material interposed between the respective faces of said plates that are turned

toward each other, the whole of said mass being located between the respective planes of the two other faces of said plates, said mass having two parallel annular edge surfaces adhered to said first mentioned plate faces respectively, each of said annular edge surfaces having an inner outline and an outer outline, the inner outline of the edge surface that is adhered to the first mentioned plate being outboard of the outer outline of the edge

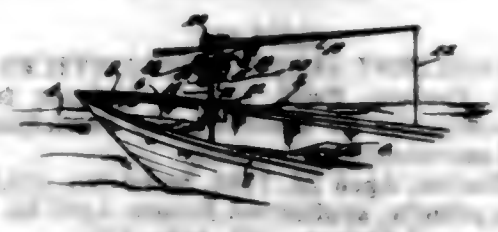


surface that is adhered to the other plate and each of the inner and outer side surfaces of said annular mass being vault-shaped, the above characteristics relative to the shape of said annular resilient mass applying to the state of rest thereof, the thickness of the device, from one plate to the other, being substantially smaller than its maximum dimension in the direction parallel to said plates.

2,893,666
MOUNTING FOR MIRRORS AND THE LIKE
Boyd E. Cousins, Kansas City, Mo.
Application May 9, 1956, Serial No. 583,834
5 Claims. (Cl. 248—28)

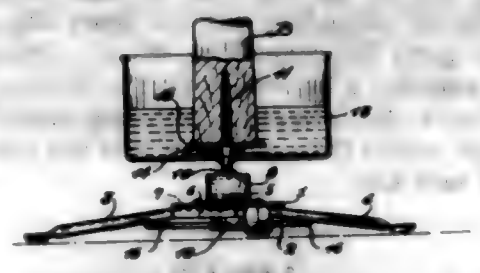
1. In a mirror mounting of the class described, a standard comprising an elongated channel having outturned flanges along the open side thereof, and a bracket comprising a strap having coplanar end sections adapted to be affixed to the backing of said mirror and an intermediate section offset outwardly from said end sections and connected thereto by outwardly divergent legs, said standard being inserted slidably between said legs in outwardly opening relation and having a width across the flanges thereof intermediate the maximum and minimum spacing between said inclined legs, and a clamp member carried movably by the intermediate section of said bracket and operable to be forced into abutting contact with the web of said standard channel.

2,893,667
FISHING ROD HOLDER
Samuel O. Shoemaker, Merchantville, N.J.
Application January 6, 1954, Serial No. 402,522
12 Claims. (Cl. 248—40)



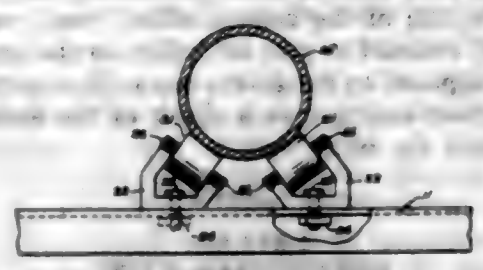
9. A fishing rod holder comprising, in combination, a shaft adapted to be disposed in a substantially vertical position, a rod holder bracket structure mounted on the upper end of said shaft, a rod holding clamp plate having a depending lockable tab, said tab having a latch notch therein, a socket member carried by said bracket structure and receiving said tab, latch means including a pivoted latch carried by said socket member, spring means for biasing said latch into locking engagement with said latch notch in said tab to lock said clamp plate to said bracket structure for holding said rod in a substantially horizontal position, and manually operable means connected to said latch for disengaging said latch from said notch at will to free said clamp plate and said rod for quick detachment thereof from said bracket structure.

2,893,668
BOLE-SUPPORTING DEVICE
Walter M. Applegate, Sharon, Pa.
Application October 29, 1954, Serial No. 465,599
1 Claim. (Cl. 248—44)



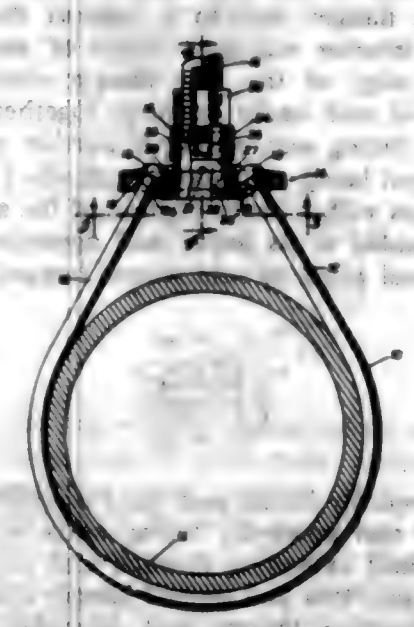
A holder for a bole, comprising a base having a central opening therethrough and having spaced elevating legs adapted to rest upon the floor, a socket member affixed to and extending upwardly from said base and being located over said central opening so as to be open through said base, an upward projection adapted for supporting engagement with the lower end of a bole, said upward projection having its lower end provided with a ball within said socket member for cooperation therewith, rotatable means extending upwardly through the opening in said base and into said socket member for effecting securing engagement of said ball within said socket member so as to constitute a means for varying the angle of said projection with respect to said base, said upward projection being provided co-axially thereabout at a point above said socket with an upwardly exposed spherical surface portion and a co-axially upturned plate, with an upper concave surface, in centering engagement upon said spherical surface, said plate being of a diameter substantially greater than that of said upward projection and being adapted for engagement between the lower end of the bole and said spherical surface upon engagement of said upward projection within the bole.

2,893,669
SUPPORT FOR EXPANSIBLE CONDUIT
Orlen C. Kinderf, Piedmont, Calif.
Application November 23, 1956, Serial No. 623,985
3 Claims. (Cl. 248—55)



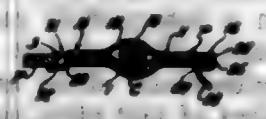
3. A device to support an expansible conduit with respect to a stationary bracket disposed below and extending transversely of the conduit which comprises a pair of track plates supported by the bracket and extending parallel to the conduit and arranged at opposite sides of the longitudinal center line of the conduit, and two rollers on each track plate supporting the conduit at opposite sides of the bracket, the surfaces of said rollers at their point of contact with the conduit being substantially tangentially to the conduit.

2,893,670
PIPE HANGER
Charles Adams, Jr., Croton-on-Hudson, N.Y.
Application April 28, 1954, Serial No. 426,201
9 Claims. (Cl. 248—59)



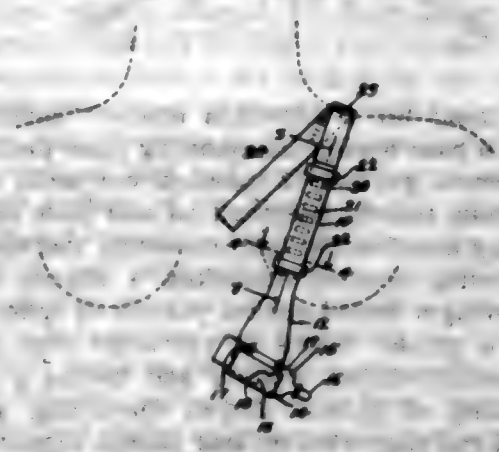
9. A pipe hanging assembly for use with a suspension means comprising a circular loop of wire forming a pipe enclosing part and straight ends extending tangentially with respect to the loop and converging upwardly therefrom, a head on each straight end projecting symmetrically around the end and having a flat lower surface extending at right angles to the straight end, a yoke having a central opening and opposite extension openings receiving said straight ends, upwardly and outwardly inclined seats for said heads on said yoke on each side of said extension openings, the inclined seats corresponding with the angle of the flat surface of the head of the loop when in assembled relation, each extension opening having an end surface inclined downwardly and outwardly so as to engage said upwardly converging straight ends below said heads, and a central member having means for attachment on said suspension means, the central member extending upwardly through the central opening of said yoke and engaging the lower side thereof and having a clamping surface extending at an angle corresponding to the straight end of the loop when assembled to engage the inner side of each straight end of the loop and holding them in said extension openings in the yoke and clamping each straight end between the end surface and the clamping surface of the central member.

2,893,671
CABLE MOUNTING
Lawrence H. Flora and John Bolint, Cleveland, Ohio, assignors to Thuserman Products, Inc., Cleveland, Ohio, a corporation of Ohio
Original application March 6, 1951, Serial No. 214,184, now Patent No. 2,712,917, dated July 12, 1955. Divided and this application June 22, 1955, Serial No. 517,152
4 Claims. (Cl. 248—73)



3. A mounting assembly for an elongate article comprising in combination, a pair of plate members disposed on opposite sides of the elongate article and being releasably secured together to clamp the article therebetween, one of said plate members being a supporting member provided with a hole spaced a predetermined amount from one edge portion thereof and having an elongate depression on its surface in the space between said hole and said one edge portion, said depression seating the underside of said elongate article with the upper side of said elongate article projecting above the surface of said supporting member, the other plate member comprising a sheet metal element having a body portion extending across and overlying said elongate article, said body portion being formed with a partially severed area having an inverted substantially U-shaped bend defining an article clamping surface corresponding substantially to the shape of the projecting upper side of the elongate article and engaging the latter, a pair of spaced securing elements extending from the ends of said body portion at opposite sides of the inverted substantially U-shaped bend respectively, one of said securing elements comprising a hook releasably secured in the hole in said supporting member, said hook including an outwardly flared lip thereon for facilitating the application of the hook over the marginal edge of said hole, the other of said securing elements comprising a resilient shoulder co-acting in overlapping fastening engagement with said one edge portion of said supporting member, said shoulder including a slanting guide portion extending outwardly from said shoulder for flexing said other of said securing elements during movement of said plate members into final assembled position whereby said shoulder can move across said one edge portion of the supporting member and snap into said overlapping fastening engagement with said one edge portion.

2,893,672
BOTTLE HOLDER
Ann H. Vardan, North Sacramento, Calif.
Application June 4, 1958, Serial No. 739,928
4 Claims. (Cl. 248—102)

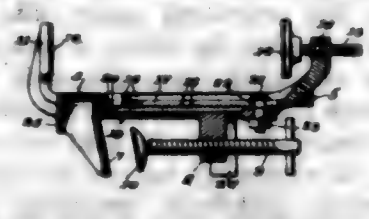


2. In a nursing bottle holder, the combination of a front strap having an upwardly reverted lower edge forming a bottle holder, said holder being inclined obliquely relative to its length of the front strap and a front portion back strap including an arcuate shoulder portion and a depending portion, means for adjustably securing said front portion and said front strap together, said last mentioned means including a plurality of spaced coacting detents in the front of said front portion and the back of said first strap, and bands encircling said front portion and said front strap to secure said coacting detents in engagement.

2,893,673
TACKLE BOX SUPPORT AND CLAMP
Leslie Maly, Anderson, Ind.
Application March 17, 1955, Serial No. 494,943
1 Claim. (Cl. 248—126)

A tackle box support and clamp adapted for mounting on the gunwale of a boat, comprising a plate having a pair of spaced lugs centrally depending therefrom at opposite sides of the plate, a clamping screw carried by one lug and directed toward the other lug in horizontal relation to the plate for clamping the plate on a boat gunwale, and

legs depending from the plate and cooperating with said other lug to support the plate in horizontal position, a channel in the upper side of said plate, a forward and rearwardly shiftable slide mounted in said channel below the upper surface of the plate and being longitudinally slotted, interengaging ratchet teeth on the opposed faces of the plate and slide, a nut and bolt combination extending through the slide slot for holding the slide against



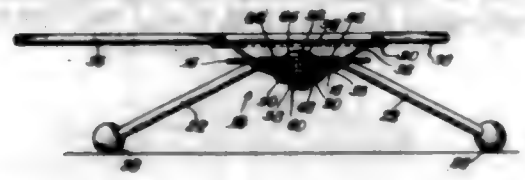
movement with the upper end thereof terminating below the upper surface of the plate, a lug rising from the outer end of the plate, a lug rising from the outer end of the slide and a clamping screw threaded through the slide lug and being horizontally arranged with respect to the slide and plate and directed toward the upstanding plate lug for clamping a tackle box therebetween that flatly rests upon the upper surface of the plate.

2,893,674

STAND FOR TELEVISION RECEIVER

Anthony T. Monaco, Skokie, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Application December 28, 1956, Serial No. 631,126
3 Claims. (Cl. 248—183)



1. A rotary stand for a television receiver including in combination, a base having a supporting plate member with a dished central portion of spherical curvature with an aperture therein, four legs secured on said plate member and extending downwardly and outwardly therefrom, a chassis supporting member including a chassis supporting plate having a dished central portion of spherical curvature with a greater radius of curvature than said first named spherical dished portion and having a slot therein, a plurality of hairpin shaped supporting arms formed of metal rod supported on said chassis supporting plate and having outer rebent end portions lying in a common plane and adaptable to receive the supporting feet of a television receiver, said chassis supporting plate being positioned with its spherical dished portion positioned on and rotatable in the dished portion of said base supporting plate member, supporting means including a post extending through said plate members and resilient means securing said plate members together for relative rotary movement therebetween, and said chassis supporting member being rotatable on said supporting post and said slot permitting said chassis supporting member to be tipped forward or backward from a horizontal position.

2,893,675

BEVERAGE HOLDER

Robert W. Smith, Mound, and Merrill B. Wilcox, Minneapolis, Minn., assignors to Aladdin Manufacturing Company, Minneapolis, Minn., a corporation of Minnesota

Application August 27, 1956, Serial No. 606,261
4 Claims. (Cl. 248—223)

1. A hanger unit constituted as a single piece of rigid material bent to general inverted U-shape to provide a base and spaced apart, first and second hanger elements extending downwardly from said base in spaced, parallel relation, said first hanger element being cut away to provide a first opening bounded at its opposite sides by a pair of wings of the first hanger element for attachment of the hanger unit to a support therefor, upper portions of interior marginal edges of said wings and a marginal edge of the first hanger element between upper ends of said upper portions together providing a downwardly facing seat, an upper portion of said second hanger element being cut away to provide a second opening contiguous with a lower portion of the second hanger element bounded at its lower and opposite sides by interior marginal edges of said second hanger element pro-

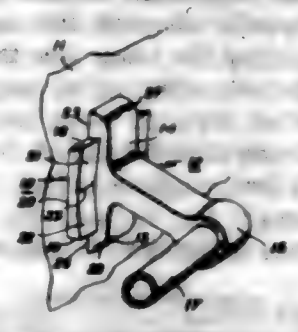
viding an upwardly facing seat, the circumferences of said downwardly and upwardly facing seats being in alined relation, a shaft extending through said first and second openings in said first and second hanger elements in perpendicular relation thereto and rotatably mounted on the downwardly and upwardly facing seats, a frame fixed on said shaft at a side of the second hanger element opposite the first hanger element, and means on said shaft engageable against a surface of said first hanger element opposite said second hanger element to maintain said frame in adjacent relation to a surface of the second hanger element opposite the first hanger element when said shaft is mounted on said downwardly and upwardly facing seats.

2,893,676

WALL FIXTURE SUPPORT

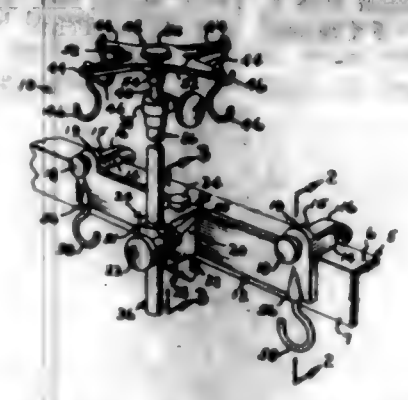
James J. Connors and Charles W. Ehrenheimer, Meriden, Conn., assignors to The Charles Parker Company, Meriden, Conn.

Application July 6, 1956, Serial No. 596,291
6 Claims. (Cl. 248—225)



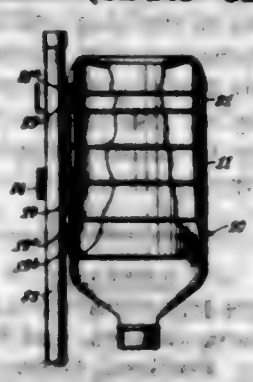
1. A fixture support comprising a substantially rectangular fastening plate having a front face and a substantially flat rear face, the latter being adapted to engage the face of a rigid member when said plate is fastened thereto, at least one edge of said plate being bevelled and the inclination of said bevel being outwardly from said rear face, said front face being formed with a slight cavity bordered by two surfaces respectively tapering from said bevelled edge and the opposite edge of said plate toward a center zone where said surfaces meet along a line which is substantially parallel with respect to said bevelled edge, a fixture post having in its rear a channel of complementary shape and of substantially the profile dimensions of said plate, and screw means in said fixture post opposite to and cooperating with said opposite edge of said plate to clamp said fixture post on said plate thereby causing a friction fit between the respectively opposite tapering surfaces on said front face of said plate and in said channel of said fixture post and also between said bevelled edge of said plate and the opposite bevelled edge in the complementarily shaped channel of said fixture post.

2,893,677
HOSPITAL BED STANDARD SUPPORT
Noemi L. Dannenberg, Oklahoma City, Okla.
Application August 12, 1957, Serial No. 677,561
1 Claim. (Cl. 248—228)



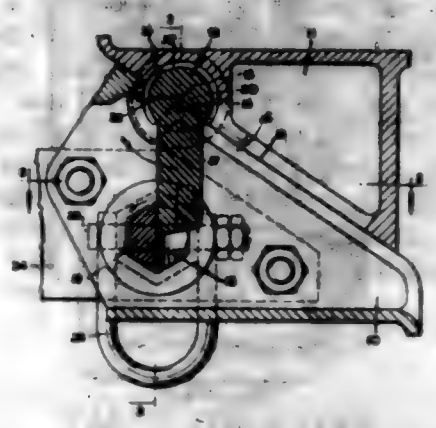
A support for connecting a standard to a hospital bed having horizontal angular side rails, including: a substantially rectangular base member flatly contacting a longitudinal portion of the outer surface of said side rail; said base member having a width less than the vertical extent of said outer surface of a normal bed side rail; an upstanding ear carried by each end of said base member; a pair of spaced-apart guide lugs connected to each said ear and co-operatively projecting laterally therefrom for limiting downward movement of said base member relative to said side rail; a thumb screw carried by each respective said ear and projecting laterally therefrom between said respective pairs of guide lugs; an elongated hook-shaped clamp slidably disposed between each pair of guide lugs and threadedly engaged with said thumb screw for releasably gripping the inner edge of the upper portion of said side rail; a laterally projecting boss centrally carried by the side of said base member opposite the side rail; said boss having a downwardly open vertical recess adjacent said base member; an elongated hook-shaped member slidably carried by the recess in said boss; a hand screw carried by said boss and threadedly engaged with said hook-shaped member for releasably engaging the latter with the lowermost edge of a bed side rail; a tubular clamp carried by the free end of said boss; and a standard rod rotatably and slidably carried by said tubular clamp.

2,893,678
PARENTERAL SOLUTION EQUIPMENT
John F. Homan and Theodore H. Gewecke, Glenview, and Cyrus R. Brennan, Evanston, Ill., assignors to Baxter Laboratories, Inc.
Application January 27, 1956, Serial No. 561,711
3 Claims. (Cl. 248—311)



1. Parenteral solution equipment, comprising a vertical standard, an upwardly-extending hook mounted on said standard, a sleeve mounted on said standard and spaced below said hook, and a cylindrical glass parenteral solution bottle having its outer wall interrupted by a longitudinally-extending slot and an annular recess adjacent to but spaced from the base of said bottle, said longitudinally-extending slot extending from the base of said bottle only partway along the length of said bottle, a circular band mounted in said annular recess, said hook being received in said recess in said slot under said band and said sleeve being received in said slot, whereby said bottle is mounted on said standard secure against accidental lateral displacement.

2,893,679
CHOCK RELEASE
Angus Wellesley Duncan, Leigh Sinton, near Malvern, England, assignor to The Mining Engineering Company Limited, Worcester, England, a British company
Application October 7, 1955, Serial No. 539,227
5 Claims. (Cl. 248—351)

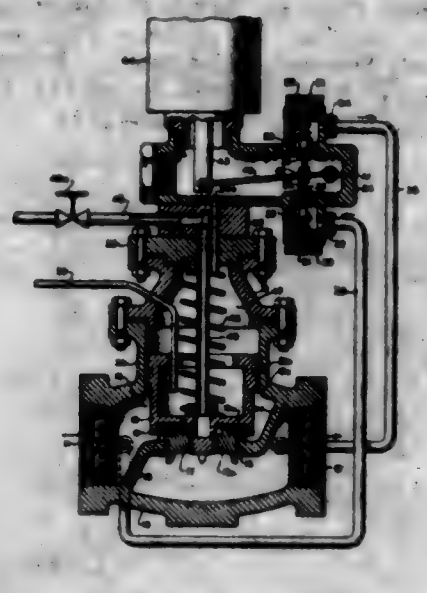


5. A chock release incorporating two co-operating wedge members having oppositely inclined surfaces in sliding engagement with each other and having means for normally preventing relative sliding movement between the wedge members, said means comprising a transverse part-cylindrical recess in the inclined surface of one wedge member with the axis of the recess closely adjacent to the inclined surface thereof, a transverse key shaft journaled in said recess and having a key portion of semi-circular cross-section with a flat surface on one side and a semi-cylindrical surface of the same radius as said recess on the other side, bearings in said recessed wedge member for the ends of said key, a transverse abutment in the inclined surface of the second wedge member and having a flat surface substantially at right angles to said inclined surface, and releasable locking means for holding said key shaft in an angular position in which the flat surface of the key portion is substantially at right angles to the inclined surfaces of the wedge members and a part of said flat key surface projects from the inclined surface of the first wedge member and bears over its whole area extending substantially from said inclined surface as far as the circumference of said semi-cylindrical portion against said flat surface of said abutment, whereby, owing to the closeness of said key shaft axis from said inclined surfaces, the major portion of the load on the key shaft is taken as a journaled load between said shaft and the recess in the first wedge member and a minor portion is applied to the shaft as a torque which tends to rotate the key shaft about its axis and is resisted by said locking means.

2,893,680
VALVE
Robert Rudolph Freund, Idaho Falls, Idaho, assignor to Phillips Petroleum Company, a corporation of Delaware
Application January 10, 1955, Serial No. 480,717
1 Claim. (Cl. 251—30)

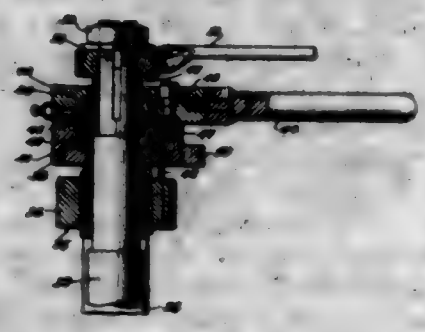
A valve comprising, in combination, a valve body including a valve seat, a main valve head movable into and out of engagement with said seat, a piston attached to said valve head and movable in a piston chamber formed in the valve body, a spring connected between said piston and a stationary part of the valve body, a housing for

receiving pressure fluid communicating with the interior of said piston chamber, a rod movable in said housing carrying an inlet valve head and an outlet valve head, each of said last-mentioned valve heads cooperating with a separate seat formed in said housing, thereby defining an inlet pilot valve and an outlet pilot valve, a line connecting the inlet pilot valve with a portion of the valve body upstream of the main valve head, an exhaust line connecting the exhaust pilot valve with a portion of the



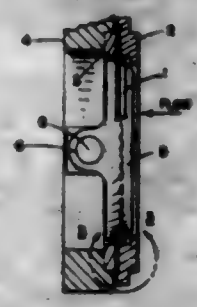
valve body downstream of the main valve head, a solenoid connected to said rod and arranged to open said outlet pilot valve and close said inlet pilot valve upon actuation thereof, a tube positioned axially of said spring and extending to a point near the bottom of said piston chamber, and a bleed conduit communicating with said tube and extending through the valve body, whereby condensate accumulating in the piston chamber is expelled through said bleed conduit.

2,893,681
PLUG VALVE OPERATING MECHANISM
Daniel Raymond McNeal, Abington, Pa., assignor to Audale Company, Philadelphia, Pa., a corporation of Pennsylvania
Application May 4, 1956, Serial No. 582,825
3 Claims. (Cl. 251—161)



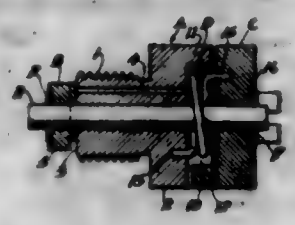
1. Mechanism for operating a tapered plug valve comprising in combination with the plug valve and the body in which it is housed; a valve stem projecting outwardly of the body; a hollow jack screw surrounding the stem and threaded into a supporting member which is fixed with relation to the body; a cup-like recess in the jack screw; a bushing surrounding and keyed to the stem; a flange on the bushing and projecting into said recess; anti-friction bearing means above and below said flange upon which bearing means the bushing is adapted to turn; a jacking handle secured to the jack screw by means of which the screw can be turned, interengaging means between the bushing and the stem whereby the stem with its valve can be raised or lowered when the screw is turned; and a handle for turning the stem and the bushing.

2,893,682
BUTTERFLY VALVE AND SEAL
John L. Hintemann, South Gate, Jack C. Hoagland, Pasadena, and Edward Pruna, Glendale, Calif., assignors to North American Aviation, Inc.
Application July 6, 1953, Serial No. 366,164
5 Claims. (Cl. 251—173)



1. An improved butterfly valve comprising fluid conduit means, shaft means rotatably mounted in the walls of said fluid conduit means, butterfly means eccentrically attached to said shaft means, and integral seal means attached to the wall of said fluid conduit means adjacent said butterfly means said seal means continuously divergently extending from said walls in the upstream direction, a contact surface upon said butterfly means being in sliding contact with a contact surface upon said seal means, said surfaces being inclined within said conduit means, said seal means and said contact surfaces adapted to cause upstream pressure to press said seal means against said butterfly means to increase the sealing effectiveness thereof.

2,893,683
BLEEDER VALVES
Donald Bruce Lane, Roslyn Heights, N.Y.
Application June 22, 1953, Serial No. 363,157
3 Claims. (Cl. 251—189)

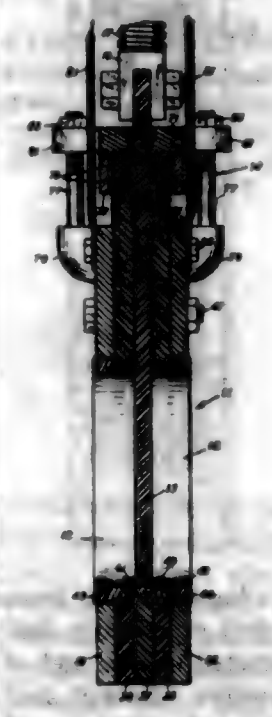


1. A rotative disk bleeder valve comprising in combination, a ported plug having a valve seat at one end, a discharge passage extending through the plug, an intermediate threaded section and an enlarged section at its other end, an operating shaft rotatably mounted in the plug, a valve disk carried by one end of the shaft in cooperating relation to the valve seat, an operating cap attached to the other end of the shaft, and a coil spring having its ends fixed to the plug and cap respectively and preloaded in compression and torsion for holding the disk against its seat and urging it toward a closed position, the cap being of less diameter than the enlarged section of the plug to permit gripping the plug with a wrench without gripping the cap.

2,893,684
CORROSION RESISTANT GATE VALVE
John L. Williams, Oswego, and Stanley L. Knox, Portland, Oreg.
Application June 11, 1957, Serial No. 664,981
7 Claims. (Cl. 251—328)

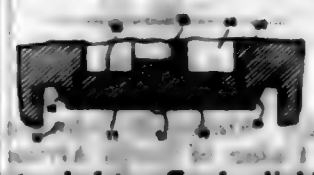
1. A bonnetless gate valve comprising a fabricated valve body including a relatively flat plate-like body unit of rigid plastic material, said body unit being formed with a flow passage therethrough in a direction normal to the plane thereof, said body unit being formed with a slot-like gate guideway extending parallel to the plane of said body unit and intersecting said flow passage, a gate

blade movably positioned in said guideway and projecting from said body unit, a metal bolting flange secured to each of the opposite faces of said body, unit said body unit having portions surrounding said blade at the place said blade projects from said body unit, said portions projecting beyond the confines of said bolting flanges in the direction of movement of said gate blade, said body including a metal band clamped about said portions to reinforce the same against fracture, an inverted packing



box having a recess which is wider and longer than said portions and which is defined in part by an endless flange which surrounds at least the edge of said band remote from said flow passage, packing contained within said recess and forming a seal with said blade and said body at said place, and means connecting said box and bolting flanges and serving to draw said box toward said body to apply pressure between said packing and said blade and body.

2,893,685
VALVE HAVING RESILIENT WAFER-LIKE DISC CLOSURE
Roscoe C. Van Camp, Madison, N.J., assignor to Automatic Switch Co., Florham Park, N.J., a corporation of New York
Application July 3, 1957, Serial No. 669,841
5 Claims. (Cl. 251—334)

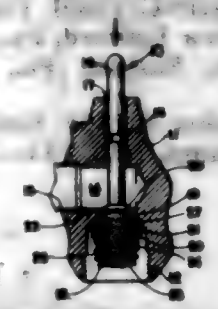


4. In a valve intended to afford reliable metal-to-metal shut-off of fluid flow, an annular metallic valve seat facing upstream, a wafer-like deflectable elastic metallic valve disc, means for supporting said disc for reciprocatory movement so that its marginal region will seat and unseat itself with respect to the valve seat, said means including a rigid disc support of reduced diameter on the downstream side concentrically underlying all but said marginal region of the disc, said disc support having a toroidal concavity on the face adjacent to said disc, said disc being rigidly secured at its center to said support, the remainder of the disc being free to deflect toward said concavity when said marginal region encounters said valve seat, the extent of such deflection being limited by said concave face, and a stop for limiting the movement of the disc support in the seating direction, the degree of said concavity and the location of said stop being such that the disc deflection is restricted to a range within the elastic limit of the disc.

2,893,686
VALVE WASHER
John R. Snyder, Detroit, Mich.
Application February 1, 1955, Serial No. 485,467
2 Claims. (Cl. 251—357)

1. In combination with a valve spindle having a washer-receiving recess with said recess in turn being defined by a generally planar cylindrical peripheral wall, a valve washer snugly mounted in said recess, said valve washer comprising a disc element of rubber-like material, the opposing end faces of said disc element being of a preformed larger diameter than the medial portion of the disc element and the side wall of said disc element being tapered inwardly from both of the said faces towards the said medial portion of the said disc element, said disc faces being of larger diameter than said recess, and one of the faces of the disc element being in immediate contact with the bottom wall of said recess when the disc element is emplaced in the spindle recess.

2,893,687
VALVE STRUCTURE
Charles K. Hutheing, Sr., Culver City, Calif.
Application June 6, 1956, Serial No. 589,884
4 Claims. (Cl. 251—357)

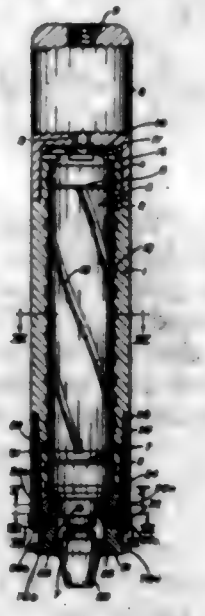


1. A plunger assembly comprising in combination: a cylindrical rod having a first O ring located generally midway in its length; a reduced diameter stem extending from one end of said rod; a plastic seal provided with a bore to receive said stem with a force fit, said bore being closed off at one end within said seal, said seal being generally cylindrical and having increased diameter base portions, at least one of said base portions forming an annular shoulder; and, a generally cylindrical metallic retainer at least a portion of which is adapted to resiliently encircle said seal, said portion of said retainer having a maximum width slightly less than that of said one of said base portions, whereby said retainer may be snapped into position over said one of said base portion onto said annular shoulder.

2,893,688
FLUID POWER MOTOR VALVE
Joseph J. Shada, Grand Rapids, Mich., assignor, by mesne assignments, to Bellows Electric Sign Corporation, Akron, Ohio, a corporation of Ohio
Application July 2, 1956, Serial No. 595,182
5 Claims. (Cl. 253—3)

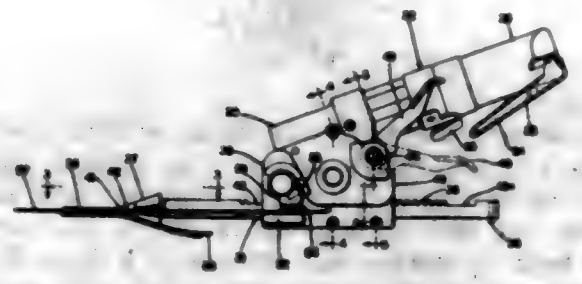
1. An air prime mover including a stator and a rotor, air inlet means for permitting air to actuate said rotor, and air exhaust means for exhausting said air, the improvement comprising: said stator having a cylindrical cap at its forward end; said cap having a plurality of circumferential spaced ports in its face, said ports providing said exhaust means; and a plate rotatably mounted

on the face of said cap; said plate having a plurality of ports arranged to align with predetermined ports of said cap depending upon the angular position of said plate whereby the exhaustion of air from said cap can be con-



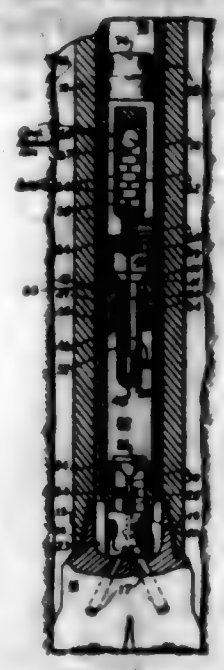
trolled to regulate the rotor speed; a locating pin extending from said face; an annular slot in said plate receiving said pin; and spring means for retaining said pin in one position in said slot.

2,893,689
STRAP STRETCHING TOOL CONSTRUCTION
Donald L. Hepler, New Bedford, Pa., assignor to Sharon Steel Corporation, Sharon, Pa., a corporation of Pennsylvania
Application October 4, 1955, Serial No. 538,394
8 Claims. (Cl. 254—51)



1. A strap stretching tool construction including a main frame member, strap tensioning means operably mounted on the main frame member for being actuated to contract and tension a length of strapping around an object to be strapped, the strap tensioning means including a rack operably mounted on the main frame member movable forwardly and rearwardly with respect to the main frame member and having gear teeth formed thereon, the rack being movable forwardly of the main frame member to tension the length of strapping, gear means, pivot means mounting the gear means on the main frame member for selective pivotal movement of said gear means toward the rack gear teeth for engagement with said rack gear teeth and for pivotal movement of said gear means at least slightly rearwardly and away from the rack gear teeth for disenggement from said rack gear teeth, means operably connected with the gear means for rotating the gear means to move the rack forwardly of the main frame member to contract the strapping when the gear means is engaged with the rack gear teeth, the tension developed in the strapping urging the rack rearwardly and thereby urging the gear means to pivot rearwardly and away from the rack, and means operably connected with the rear means for at least selectively controlling the engagement of the gear means with the rack.

2,893,690
FORMATION SAMPLER DEVICE
Lawrence S. Chambers, Pasadena, Calif.
Application June 4, 1954, Serial No. 434,474
17 Claims. (Cl. 255—1.4)



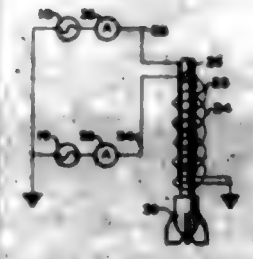
12. A sampler adapted to be introduced into a drill string including a drill pipe and a drill bit containing circulating ports connected to one end of the drill pipe, for positioning said sampler adjacent said drill bit, comprising a sample, receiving chamber in said sampler, a packer mounted externally of said sampler and adapted to engage said drill string, said packer closing communication between said ports and the drill string above said sampler, a fluid by-pass conduit in said sampler from one side of said packer to the other side of said packer, a valve in said bypass conduit, means operable in response to receipt of a sample of bit cuttings in said chamber to open said valve, a fluid communicating passageway to said chamber and adapted to receive fluid passing through said ports when said sampler is in position adjacent said bit, a valve in said passageway, said valve opening on the imposition of external pressure greater than the pressure in said passageway, to permit flow of fluid through said passageway into said chamber from a zone exteriorly of said sampler, and to close said valve to prevent flow of fluid through said passageway and exteriorly of said sampler in the opposite direction.

2,893,691
CORE DRILLING
Theodore Charles Whitcomb Johnson, Johannesburg, Union of South Africa
Application March 13, 1956, Serial No. 571,232
Claims priority, application Union of South Africa March 17, 1955
5 Claims. (Cl. 255—1.4)

5. Apparatus for obtaining cores comprising an outer member and inner member accommodated within the outer member and defining, at an end of the outer member, an annular chamber; said inner member comprising: a slidable piston portion defining a bore communicating with said annular chamber, an end portion at the end of

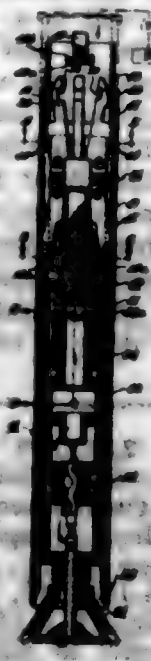
the outer member, and at least one collapsible tube between said piston and end portions, said portions and tube defining a space to accommodate a core of material to be sampled, a movement of the piston portion toward the end portion and pressure applied in the annular chamber via said bore collapsing said tube to trap a core.

2,893,692
VIBRATORY IMPACT TOOL
John W. Marx, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application January 3, 1955, Serial No. 479,365
14 Claims. (Cl. 255—4)



8. A vibratory tool for permanently deforming a workpiece comprising a first source of fluctuating electrical energy of a first frequency; a second source of fluctuating electrical energy of a second frequency; transducer means including a vibratory member, said transducer means being constructed and arranged for simultaneously receiving fluctuating electrical energy from said first and second sources and for converting the said received energy to vibratory movement of said member and deforming tool means connected to said member for delivering the vibratory movement thereof to the workpiece, thereby to permanently deform the workpiece.

2,893,693
DOWN-HOLE MOTOR POSITIONING DEVICE
Wallace Clark, Indianapolis, Ind.
Application September 11, 1957, Serial No. 683,425
7 Claims. (Cl. 255—4)



1. A structure for positioning a down-hole motor and drill in a well casing at the bottom of a hole, comprising a body of dimensions to pass through said casing, means on said body for the attachment of a motor to the lower end thereof, a set of upwardly extending fingers symmetrically disposed about said body and pivoted thereto at their lower ends, a set of downwardly extending fingers symmetrically disposed about said body below said upwardly extending fingers and pivoted to said body at their upper ends, a plunger axially slidably mounted in said body, spring means urging said plunger upwardly, said plunger having means abutting said upwardly extending fingers to urge them to swing outwardly, and also having means abutting said downwardly extending fingers to urge them to swing outwardly; and means at the upper ends of said upwardly extending fingers for alternatively attaching a lowering tool or a raising tool.

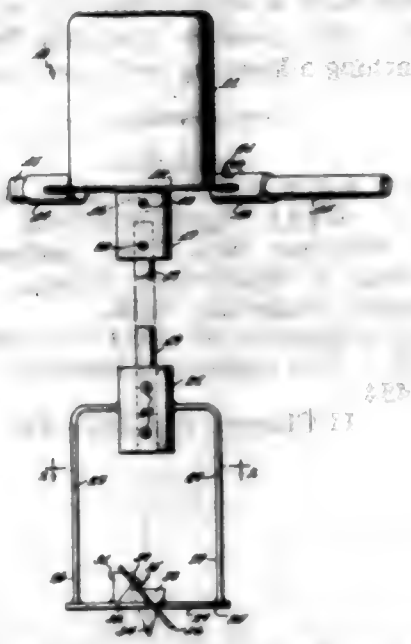
2,893,694
TORQUE, RELEASING, SAFETY JOINT FOR WELL TOOL STRINGS
Kenneth E. Waggener, Brea, Calif., assignor of one-third each to Ross A. McClintock, Orange, and Raymond E. Thompson, Fullerton, Calif.
Continuation of application Serial No. 390,321, November 5, 1953. This application January 27, 1958, Serial No. 711,454
11 Claims. (Cl. 255—28)

1. A torque, releasing, safety well string joint, including: a housing having a bore within which are circumferentially spaced locking keys; a mandrel having a portion slidably received in the lower end of the housing and having fixed longitudinally extending, circumferentially spaced, external lugs each of which is recessed in one side and into which recesses said keys are movable by relative rotation of the housing and the mandrel in one direction to interlock against end play and detachably secure the housing to the mandrel for lowering or raising same by the respective string; releasable locking means slidable in the housing to a position, when the keys are in the lug recesses, wherein said housing and mandrel are held thereby against relative rotation in the opposite direction; and releasable latching means for said locking means to hold the latter against releasing movement.

2,893,695
APPARATUS FOR DRILLING HOLES IN ICE
Norbert J. Gerlikowski, Green Bay, Wis.
Application May 13, 1957, Serial No. 658,621
1 Claim. (Cl. 255—70)

An ice drill comprising a yoke having a pair of elongated spaced apart parallel legs, a one piece flat circular horizontal plate secured to the lower ends of said legs adjacent the peripheral edge of said plate, said plate having an axial bore formed therein, a triangular cutting blade projecting through said bore and fixedly secured to said plate, said plate having a diverging slot communicating with said bore and opening through the peripheral edge of said plate, a block fixedly secured to said plate adjacent one edge of said slot and having the

side toward said slots sloping outwardly away from said slot, a second blade having a plurality of spaced parallel slots formed therein, means engaged through said slots in said second blade detachably securing said blade to



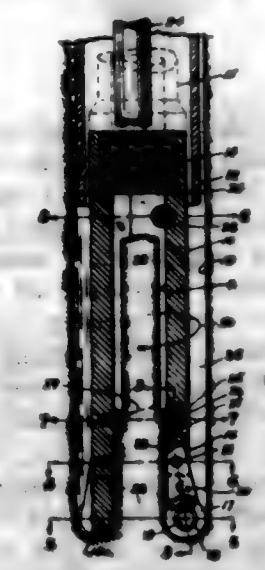
said block for adjustment thereon with said blade projecting through the diverging slot in said plate terminating below said plate, and a cutting edge on the lower end of said blade with said cutting edge arranged parallel to said plate.

2,893,696

ROTARY, EARTH TREPANNING TOOLS

Lee R. McGuire, Newark, Del.

Application June 6, 1956, Serial No. 589,687
5 Claims. (Cl. 255—72)



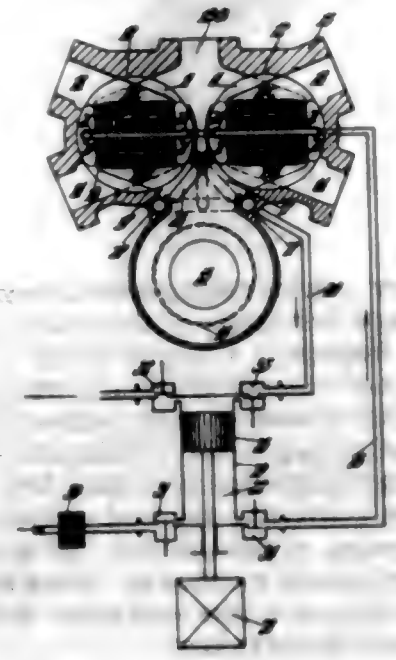
1. A rotary, earth trepanning tool including a tubular body with a plurality of elongated slots extending upward from is lower end through the wall of said body between rigid body fingers, a hinge pin extending across each slot with its ends bearing within the adjacent body fingers, a retractive lever slidably positioned in each of said slots with its upper end pivoted on a hinge pin and its free end swingable in an arcuate path inward and outward from the longitudinal axis of the tubular body, a spring actuated ball detent recessed within each body finger with the detent partially movable into the slot, a concave indentation positioned near the free end of each retractive lever to engage the detent when said lever is at its inner position, a stub shaft rigidly secured near the free end of each retractive lever with its longitudinal axis at right angles to the plane in which said lever is retractable, and a core forming cutter of circular disk shape axially positioned on each stub shaft with its peripheral cutting edge extending below all other components of the assembly to form a cylindrical earthen core within the tubular body.

2,893,697

HEAT EXCHANGERS

Waldemar Hryniszak, Newcastle-upon-Tyne, England, assignor to C. A. Parsons & Company Limited, Newcastle-upon-Tyne, England

Application December 23, 1952, Serial No. 327,628
Claims priority, application Great Britain
June 19, 1952
9 Claims. (Cl. 257—1)



9. A recuperative heat exchanger having relatively stationary heat exchange passages and inlet and outlet passages, said heat exchanger comprising one or more heat exchange elements, each element consisting of a number of cells arranged in the form of a column or stack, each cell consisting of a flat base sheet and side walls which define a flow channel, said flow channel being further subdivided into a number of flow passages by two corrugated strips spaced apart from each other in the direction of flow therethrough, cells containing hot fluid alternating with cells containing cold fluid, means for filtering the heat exchanging fluids prior to their entry into the flow passages and means for introducing a cleaning fluid into the space separating said corrugated strips causing said fluid to flow in opposite directions through each strip towards the inlet and outlet ends of said passages to remove any unfiltered dust or other particles adhering thereto.

2,893,698

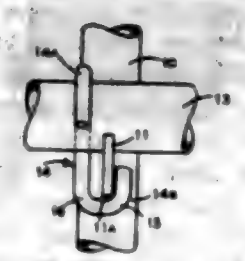
SUPERHEATER TUBE SUPPORT

Heinrich Nünninghoff, Oberhausen, Germany, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Application March 18, 1957, Serial No. 646,882
1 Claim. (Cl. 257—1)

A tube support subject to high temperature heating gases in combination comprising a fluid cooled support tube, a support fin rigidly connected to said fluid cooled support tube, a superheater tube extending perpendicularly of said fluid cooled support tube, said fin having a recessed portion to form a tube seat conforming to the diameter of said superheater tube, said superheater tube being adapted to rest in the tube seat of said fin, and an anchoring means for detachably securing and anchoring said superheater tube to said fin, said anchoring means including an S-shaped member having opposed hook-end

portions, said hook end portions being disposed at substantially right angles relative to each other, one hook end portion being adapted to engage said superheater tube and said other hook end portion being adapted to engage an edge of said fin, said tube engaging hook end portion comprising an arcuate section conforming substantially to the outside diameter of said superheater tube for em-



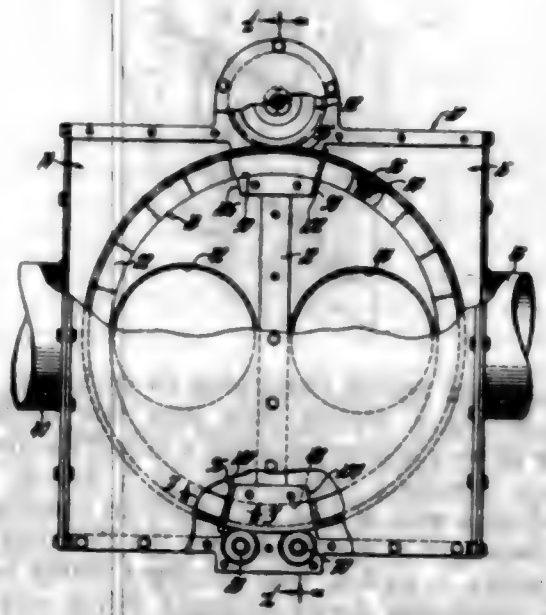
bracing the same, and said fin engaging hook end portion being substantially squared by a pair of right angle bends, the length of said substantially S-shaped member being such that with the arcuate hook end portion positioned over said supported superheater tube, the opposite hook end portion can be readily positioned over the edge of said supporting fin so that said S-shaped member can be rotated between operative and inoperative position.

2,893,699

REGENERATOR AND SEAL THEREFOR

William C. Bubniak, Warren, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application December 28, 1956, Serial No. 629,746
7 Claims. (Cl. 257—6)



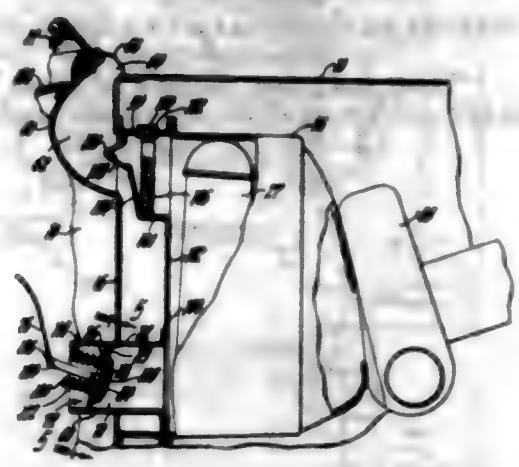
1. A regenerative heat exchanger comprising a housing forming a pair of fluid transfer chambers separated from each other by intermediate wall structure, a matrix in the housing having one portion located in one of the chambers and another portion located in the other chamber, the matrix passing through closely fitting passages in the wall structure, means for shifting the matrix portions through the passages from one chamber to the other at regular intervals and for providing matrix rest periods between shifts, the matrix rest periods being of greater duration than the matrix shift periods, and sealing structure secured to each matrix portion at a local area thereof to forcibly engage the wall structure proximate the passages at the termination of each shift to prevent fluid leakage between the chambers during the matrix rest periods, said sealing structure being disengaged from said wall structure during the matrix shift periods.

2,893,700

HEATING, VENTILATING AND AIR CONDITIONING SYSTEMS FOR VEHICLES

Henry W. Boylan, Harry C. Doane, and Armaan E. McManama, Flint, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application September 21, 1955, Serial No. 535,611
1 Claim. (Cl. 257—7)



An air conditioning and heating system for an automotive body having a windshield, fire wall, engine compartment and a passenger compartment, said system including primary duct means extending downwardly from forward of the windshield base and then forwardly toward said engine compartment for receiving outside air by ram effect or blower suction, secondary duct means including an evaporator core and a heater core arranged in series with a multi-speed blower, a metering port connecting said primary duct means to one end of said secondary duct means for admitting outside air to said evaporator and heater cores in quantity adequate in use for cooling by said evaporator core when supplemented by recirculated air but insufficient for use in heating by said heater core, the other end of said secondary duct means communicating with said passenger compartment for discharging cooled or heated air into the latter, an intermediate portion of said secondary duct means having a recirculation air inlet port leading from said passenger compartment and adapted to supply recirculated air to said cores, valve means arranged to control the flow of air through said recirculation air inlet port for either heating or cooling, said valve means including a valve spring loaded to seat against the pressure of air in said passenger compartment with low speed operation of said blower and to open with higher speed operation of the blower when said heater core effects heating of the air.

2,893,701

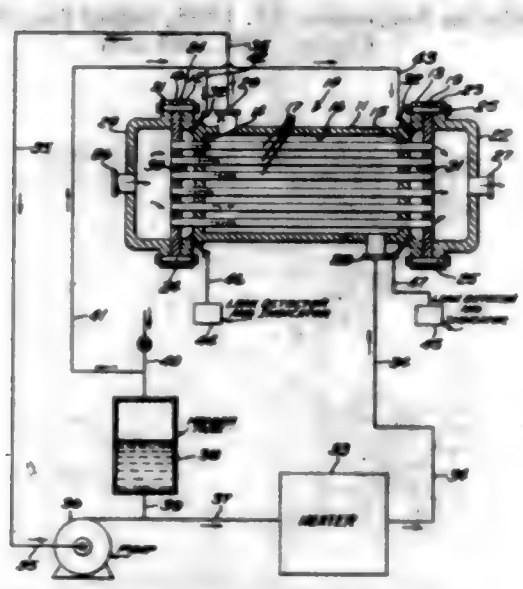
PRESSURIZED TUBE PLATE

Alan Bell, Sutton Courtenay, England, assignor to Foster Wheeler Corporation, New York, N.Y., a corporation of New York

Application February 7, 1956, Serial No. 564,000
3 Claims. (Cl. 257—215)

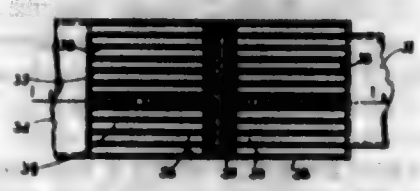
1. In a heat exchange system, a heat exchanger comprising a shell member having two spaced pairs of closely spaced tube sheets disposed therein in a fluid-tight manner, the innermost tube sheet of each pair defining a first fluid chamber within said shell member adapted to receive therethrough a heated liquid, a plurality of tubular members disposed in said first fluid chamber for conducting fluid to be heated in indirect heat exchange relationship with the heated fluid flowing through said fluid chamber, each pair of tube sheets being adapted to receive the opposite end portions of each of said tubular members in a fluid-tight manner to support the tubular members in the first fluid chamber, the heat exchanger in combination with a pressurizer having a gas space and

a liquid space therein, said pressurizer being in communication with a source of gas under pressure to receive gas in said gas space and in communication with said first fluid chamber to receive liquid in said liquid space to maintain the liquid under a predetermined pressure, conduit means communicating with the space between the



tube sheets of each pair of tube sheets and with the gas space of said pressurizer to provide gas in said space between the tube sheets of each pair of tube sheets at a pressure substantially equal to the heated liquid within the first fluid chamber to provide substantially zero pressure drop across each inner tube sheet of said pairs of tube sheets.

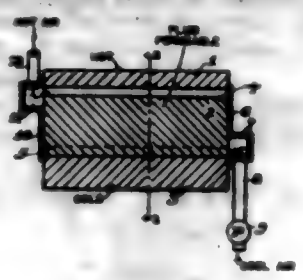
2,893,702
HEAT EXCHANGE APPARATUS
Edward Adams Richardson, Bethlehem, Pa.
Original application December 12, 1947, Serial No. 791,200, now Patent No. 2,774,566, dated December 18, 1956. Divided and this application September 28, 1956, Serial No. 610,922
4 Claims. (Cl. 257—245)



1. In a heat exchanger, a plurality of passages with adjacent passages adapted to carry hot fluids and cool fluids respectively, a common wall of heat conducting material separating adjacent passages, a partition of a rigid body of permeable material dividing each passage, said partitions being bonded in good thermal contact to their adjacent walls in substantial alignment with each other and supporting said walls, means to introduce hot fluids and cool fluids respectively into the passages adapted to carry hot fluids and cool fluids respectively and means to exhaust said fluids after they have passed through the permeable partitions in said passages, whereby heat is exchanged between the hot fluids and the cool fluids through adjacent permeable bodies and their common walls.

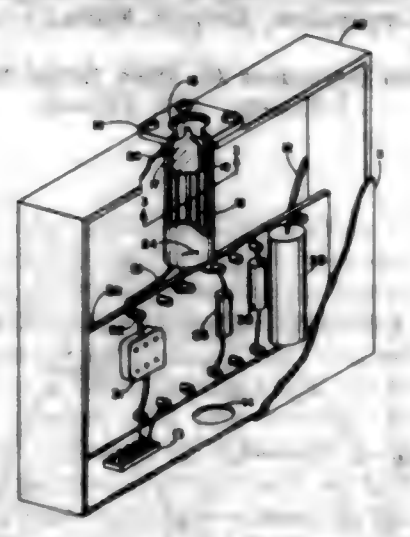
2,893,703
COOLING AND SUPPORTING STRUCTURE
Edward Adams Richardson, Bethlehem, Pa.
Original application December 12, 1947, Serial No. 791,200, now Patent No. 2,774,566, dated December 18, 1956. Divided and this application September 28, 1956, Serial No. 611,848
4 Claims. (Cl. 257—250)

1. In combination, a structural part subject to heating, a body of fluid permeable material of good thermal conductivity abutting said structural part and forming with said structural part a common interface, said permeable body having a face opposite said interface, means to introduce a cooling fluid under pressure to said face opposite the interface, means to exhaust the cooling fluid from the



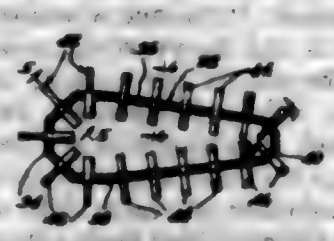
interface including passages in the interface whereby the cooling fluid flows through the permeable body in the direction from the face opposite the interface to the interface to provide a substantially uniform cooling of the permeable body and the structural part.

2,893,704
COOLING SYSTEM
Harry M. Passman, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application May 20, 1957, Serial No. 660,136
4 Claims. (Cl. 257—250)



1. A cooling system comprising an enclosure, said enclosure having a cooling fluid inlet and containing a plurality of heat sources including a cylindrical thermionic device, a mounting shell which is a hollow cylinder mounted on a wall of said enclosure, an opening formed in said enclosure in alignment with the shell and forming a fluid outlet, a cooling liner mounted within said shell, and the thermionic device mounted within said liner so that heat may be removed therefrom.

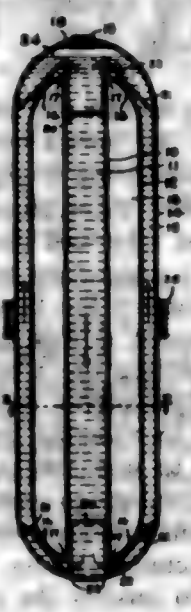
2,893,705
HEAT EXCHANGER
Anthony A. Fennell, Homewood, Ill.
Application July 5, 1957, Serial No. 670,829
7 Claims. (Cl. 257—262.15)



1. A heat exchanger comprising tube means for a first fluid stream which enters at a first temperature, said

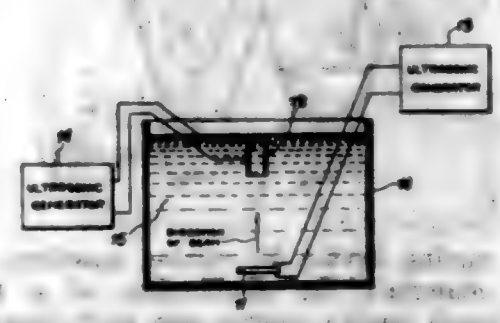
tube means being disposable in a second fluid stream which approaches a leading portion of the tube means at a second and different temperature, one of said temperatures being sufficiently high to cause injury to the heat exchanger in the absence of cooling thereof, and a plurality of elements secured to said tube means and spaced on the tube means in the direction of flow of the high temperature fluid stream, each of said elements passing through a wall of the tube means and including oppositely extending portions respectively for projecting into said high temperature fluid stream and the other of said fluid streams, each of said elements having a predetermined ratio between the surface areas of said portion projecting into the other of said fluid streams and the portion projecting into the high temperature fluid stream, said ratio for certain of said elements located upstream of the high temperature fluid stream being greater than said ratio of other of said elements located downstream of the high temperature fluid stream so as to reduce any possibility of injury to the elements while promoting efficient operation of the heat exchanger.

2,893,706
CAPSULE TYPE HEAT EXCHANGER
Arthur Leroy Smith, Seattle, Wash.
Application November 29, 1955, Serial No. 549,615
1 Claim. (Cl. 257—263)



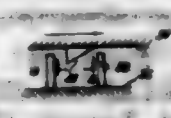
A heat exchange unit comprising an innermost tube forming an axial fluid passageway of uniform area from end to end thereof for descending cooled fluid; an intermediate tube of larger cross sectional size than said innermost tube disposed around said innermost tube in spaced relation therefrom and having inwardly curved end portions sealed to the end portions of said innermost tube providing a heat insulating chamber between said innermost tube and said intermediate tube; an outermost tube of larger cross sectional size and greater length than said intermediate tube disposed around and spaced from said intermediate tube and having tightly closed curved end portions extending over and around both ends of said two other tubes relatively close to but spaced from the ends of said two other tubes, said outermost tube being a closed shell completely enclosing said other two tubes and cooperating in forming an annular fluid passageway between said intermediate tube and said outermost tube, said annular passageway communicating at both ends with the axial passageway of the innermost tube providing a continuous sealed fluid circulation passageway entirely within said outermost tube; spacer members disposed between the end portions of said outermost tube and said two other tubes maintaining said outermost tube in longitudinal and transverse spaced relation from said intermediate tube; and heat exchange medium substantially filling the communicating passageways in said tubes, whereby when said unit is supported upright with its lower end portion in a heated area and its upper end portion in fluid to be heated heat exchange medium therein will first receive its heat and then give up its heat while it is moving upwardly in said annular passageway.

2,893,707
METHOD OF ULTRASONIC TREATMENT AND DEVICE
Leslie K. Gulton, Metuchen, N.J.
Application August 29, 1955, Serial No. 531,089
6 Claims. (Cl. 259—1)



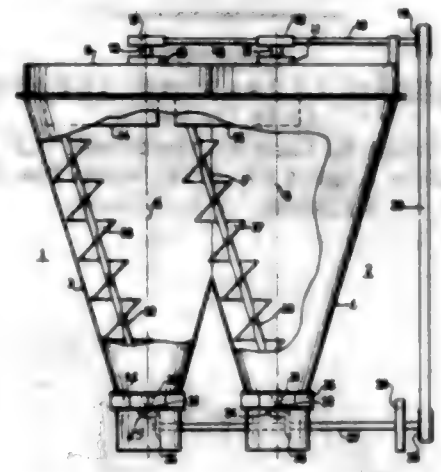
1. The method of ultrasonic treatment of a liquid which comprises simultaneously applying ultrasonic excitation at at least two ultrasonic frequencies and thereby producing high level agitation of the liquid being treated, the source of one of said ultrasonic excitation frequencies being located in the beam of the source of a second of said ultrasonic excitation frequencies.

2,893,708
GLASS HOMOGENIZER
Harvey L. Peuberthy, Kenneth P. Hornley, and Henry W. Lohmann, Seattle, Wash.; said Hornley and said Lohmann assignors to Peuberthy Electromelt Company, Seattle, Wash., a corporation of Washington
Application March 17, 1955, Serial No. 494,892
4 Claims. (Cl. 259—43)



1. In a glass homogenizer, a rotor mounted for rotation about an axis, a plurality of splitter members mounted on a surface of said rotor, said splitter members being disposed in a circle around said axis, a stator adjacent said surface of said rotor and having an outlet aperture therein, and a plurality of radially disposed plate members arranged substantially in a circle on said stator concentric with said splitter members, said plate members defining generally radial passages therebetween, said splitter members having a leading edge which is forwardmost on rotation of said rotor, the leading edge of each splitter member being at an acute angle to said surface of said rotor so that said leading edge extends rearwardly from its point of attachment to said rotor surface in relation to rotation of said rotor, each splitter member having a side face which diverges rearwardly from said leading edge toward said plate members so that when a splitter member is athwart one of said passages said leading edge is at an acute angle to adjacent plate members and is spaced radially from said circle and is spaced from the nearest plate member so that said rearwardly extending leading edge and said diverging face permits free access to said passage.

2,893,709
DEVICE FOR WORKING MATERIAL IN AT LEAST TWO CONICAL VESSELS
Johannes Ewerdus Nauta, Overveen, Netherlands
Application October 25, 1956, Serial No. 618,301
Claims priority, application Netherlands December 20, 1955
6 Claims. (Cl. 259—64)

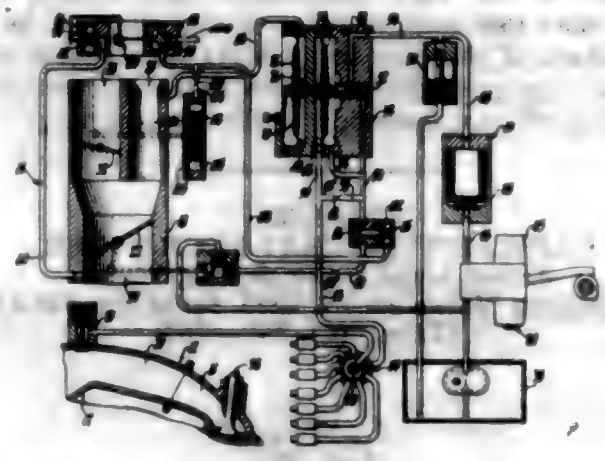


1. In a mixing device for mixing powdery, granular or plastic materials; the combination of at least two identical vessels having conical side walls decreasing in diameter from the top to the bottom thereof, said vessels being mounted side by side with their central axes parallel and said conical side walls of adjacent vessels intersecting along a hyperbolic line to define a common opening establishing communication between the adjacent vessels, at least one stirring member in each vessel having a longitudinal axis extending parallel to the generatrix of said conical side wall of the related vessel, each stirring member projecting above the level of the bottom of said intersecting line defining the common opening between the adjacent vessels, and means mounting each stirring member in the related vessel for rotation about said longitudinal axis of the stirring member and for bodily movement about the central axis of the related vessel so that, as each stirring member passes said common opening, the stirring member will project through said common opening into the adjacent vessel for ensuring intermixing of materials in said adjacent vessels.

2,893,710
TUBE CONTAINER FOR PAINT
Henry Goodman, Toronto, Ontario, Canada
Application November 6, 1957, Serial No. 694,768
3 Claims. (Cl. 259—72)

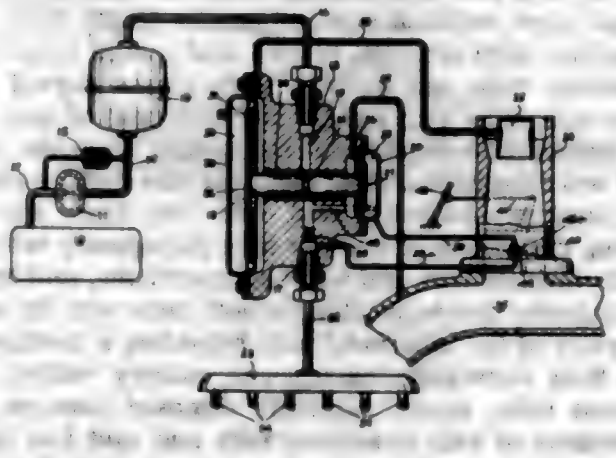
1. In combination a collapsible tube for packaging ready mixed paints and enamels of the type comprising a pigment and a vehicle for said pigment, said tube being permanently sealed at one end and having a neck formed with an opening at its other end, a removable cap for closing the opening in said neck, an agitating slug within said tube, said slug being larger than said opening, said slug being devoid of a spherical surface capable of substantial continuous co-operation with the edge of the opening formed in said neck whereby the practical flow of a liquid from said tube through said opening is not stopped by said slug resting over said opening.

2,893,711
CHARGE FORMING MEANS
Archie D. McDuffie, Berkley, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 18, 1957, Serial No. 634,915
8 Claims. (Cl. 261—23)



1. Charge forming means for an engine having an induction system with an intake comprising a first inlet having means for producing a signal indicative of the quantity of air flowing therethrough, a second inlet in parallel with said first inlet and being free of any metering means therein, a secondary valve disposed in said secondary inlet to control the flow of air therethrough, a throttle valve disposed downstream of said inlets for simultaneously controlling the total amount of air flow through said inlets, fuel supply means responsive to said signal and effective to atomize metered fuel into said charge in proportion to said charge, means responsive to the vacuum in said induction system posterior to said throttle valve for simultaneously opening said secondary valve when said vacuum is less than some predetermined amount and to modify the responsiveness of said fuel means in proportion thereto.

2,893,712
FUEL INJECTION APPARATUS
Arthur E. Hase, Springfield, Mass., assignor to American Bosch Arma Corporation, a corporation of New York
Application March 16, 1956, Serial No. 571,981
8 Claims. (Cl. 261—37)



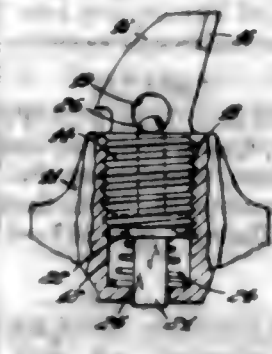
1. In a device of the character described, a fuel pump, fuel flow divider means adapted to receive fuel from said

fuel pump and supply said fuel separately from the air to a plurality of separate outlets, fuel metering means in the fuel path between said fuel pump and said flow divider means, a fuel measuring orifice in the fuel path between said metering valve and said flow divider means, and means for providing additional fuel at wide open throttle condition, said means comprising a valve operatively connected to the air throttle lever and actuated thereby.

2,893,713
BUBBLE CAP ASSEMBLY
Alfred Holtmeier, Leverkusen-Bayerwerk, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Application April 10, 1956, Serial No. 577,235
6 Claims. (Cl. 261—114)

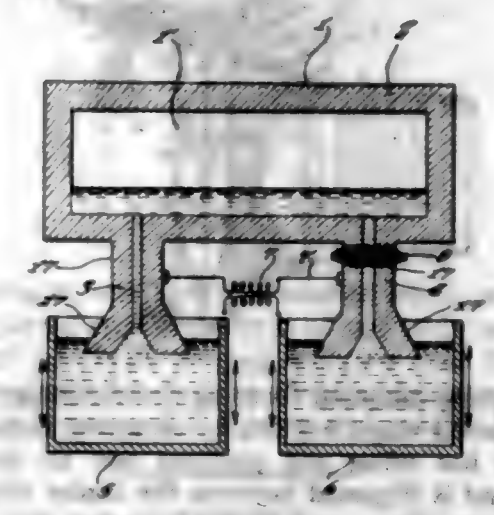
1. A bubble cap assembly for use on a distilling column tray comprising a bubble cap, a guide ring concentrically positioned about said bubble cap defining a turbulence chamber surrounding the bubble cap, at least one helical guide vane having a downwardly deflected outer rim positioned adjacent the outer surface of said bubble cap oblique with respect to the bubble cap axis to admit gases obliquely into the turbulence chamber and means concentrically positioned with respect to said bubble cap to deflect gases passing under said bubble cap upwardly against the lower side of said helical vane into the turbulence chamber.

2,893,714
CUTTER BIT HOLDER
Sidney Ernest Procter, Saunderton, High Wycombe, England, assignor to Austin Hoy and Company Limited, High Wycombe, England, a British company
Application June 27, 1957, Serial No. 668,386
Claims priority, application Great Britain June 27, 1956
5 Claims. (Cl. 262—33)



1. In a coal cutter, the combination of a pick-box having a screw-threaded pick-supporting aperture therein, a pick having a cutter portion and a screw-threaded shank adjustable by rotation in said aperture, a spring and a locking member in the aperture below the shank having a stem extending through the shank into the cutter portion, said spring normally biasing said locking member into engagement with said shank, the cutter portion having a transverse hole intersecting the axis of the stem so that on insertion of a bar the shank is unlocked, becomes rotatable by said bar into adjusted position and relocks on removal of the bar.

2,893,715
EQUIPMENT FOR DEGASSING METALS IN PARTICULAR STEEL MELTS
Fritz Harders, Schwerte-Ruhr, Helmut Knuppel, Dortmund-Nette, and Karl Bretzmann, Dortmund, Germany, assignors to Dortmund-Horder Hüttenunion Aktiengesellschaft, Dortmund, Germany
Application September 4, 1956, Serial No. 607,615
Claims priority, application Germany September 5, 1955
2 Claims. (Cl. 266—34)

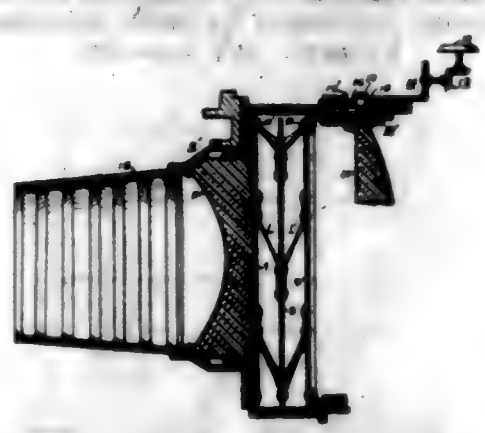


1. A device for the degassing of metal melts which comprises, in combination, a vacuum chamber for holding said metal; a pair of supply vessels, one of said vessels being filled with degassed melt, the other with melt to be degassed, each of said vessels being adjustable in height; an inlet pipe and an outlet pipe, each hermetically sealed at one end to said chamber and connected at the other end to an opening in one of the vessels and extending into said melt, the upper ends of said inlet pipe and outlet pipe being flush with the bottom of said vacuum chamber; said inlet pipe and outlet pipe being made of refractory material, and the pipes as well as the vacuum chamber being enclosed in a metal sheath which at the end of the inlet and outlet pipes is covered by a ring of refractory material, the terminals of a secondary winding of a transformer being connected to the sheath of the inlet and outlet pipes; one of said pipes being electrically insulated from the sheath of the vacuum chamber, whereby a closed electrical circuit is formed by the metal sheaths of the two pipes, the metal melt within said pipes, and the metal melt within the vacuum chamber.

2,893,716
GUN NOZZLE FOR ADDING LEAD PELLETS TO LIQUID STEEL
Phillip Hartley Smith, Ogden Dunes, Ind., assignor to Inland Steel Company, Chicago, Ill., a corporation of Delaware
Application January 14, 1958, Serial No. 708,856
7 Claims. (Cl. 266—34)

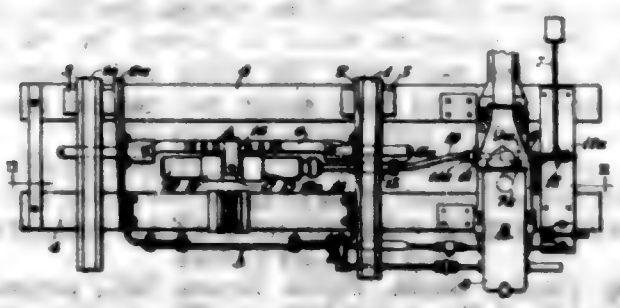
1. A gun nozzle for supplying granular material under head pressure at a constant mass flow velocity comprising a nozzle smoothly converging internally between the receiving end and a mouth which is smaller than the receiving end, the cross-sectional shape of the inside of the nozzle being the same throughout the tapered length, and said nozzle having in the converging area a transverse fixed member which substantially inhibits fluttering in the flow of granular material from the nozzle.

2,893,717
SPRING MOUNTED FOCUSING DEVICE
Arthur B. Simmons, Rochester, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force
Application June 28, 1955, Serial No. 518,696
2 Claims. (Cl. 267—1)



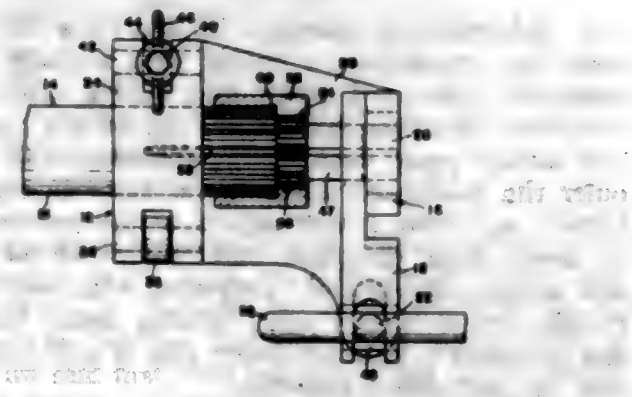
1. A spring mounted focusing device, comprising three axially spaced rings, a plurality of spring members each of which has offset end portions and an intermediate portion and is disposed between the center ring and one of the outer rings, and means securing the offset end portions of each of said spring members to the adjacent pair of said rings to provide a three ring assembly adapted to yieldingly resist compression forces directed axially at the rings and with substantially no rotary force components appearing at the end rings of the three ring assembly.

2,893,718
FORCE REVERSING BUFFER MECHANISMS
Kenneth J. J. McGowan, Pittsburgh, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Original application September 30, 1950, Serial No. 187,789, now Patent No. 2,747,860, dated May 29, 1956. Divided and this application October 19, 1955, Serial No. 541,429
12 Claims. (Cl. 267—1)



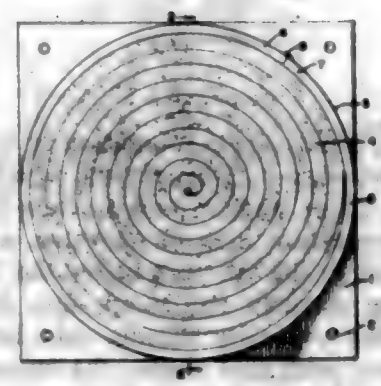
1. A buffer mechanism comprising two cylinders interconnected in tandem and containing a fluid, a cylindrical piston assembly reciprocable in each cylinder said piston assemblies being telescoped in fluid tight arrangement, resilient means interposed between said piston assemblies for biasing said assemblies to initial positions, a piston rod including relieved portions thereon being receivable within said cylindrical piston assemblies, a piston reciprocable in each cylindrical piston assembly fixed in spaced relation on said piston rod, said piston assemblies having a cavity formed therein, each piston assembly having a relief port interconnecting said cavity with said cylinders, first and second relief valves on each of said piston assemblies controlled by the movement of said pistons and piston assemblies, said first relief valve of one piston assembly and said second relief valve of the other piston assembly sealing the associated port and a portion of said cavity in front of one of said pistons, the movement of said piston rod and pistons in a given direction increasing the fluid pressure in front of said one piston having a portion of said cavity sealed in front thereof to move its associated piston assembly in the same direction additional increments of the distance the pistons are moved to bias said resilient means, said first and second relief valves in said second piston assembly controlled by the movement in the given direction of said pistons, and cooperating with said relieved portions on said rod means to decrease the pressure in front of said one piston to permit the associated piston assembly to return to its initial position under the influence of the biased resilient means, valve means controlling fluid flow from the front to the back of each of said piston assemblies, the return of said piston assembly increasing the pressure behind said one piston to move said piston an additional distance in the given direction it was moved.

2,893,719
SPRING STRESSING DEVICE
Albert F. Gattiker, Jr. and Harold C. Reynolds, Athens, Pa., assignors to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Application December 27, 1955, Serial No. 555,395
4 Claims. (Cl. 267—1)



1. A device for applying torsional force to a spring assembly including a spring, comprising clamping means adapted to hold one end portion of the spring against rotation in one direction, a mounting held in fixed relation with respect to said clamping means, a member rotatably mounted on said mounting for rotation in said direction and adapted to engage the opposite end portion of said spring for rotation, and fine adjusting means operatively connected with said member and said mounting and manually adjustable for rotating said member against the resistance of said spring to apply a torsional force thereto.

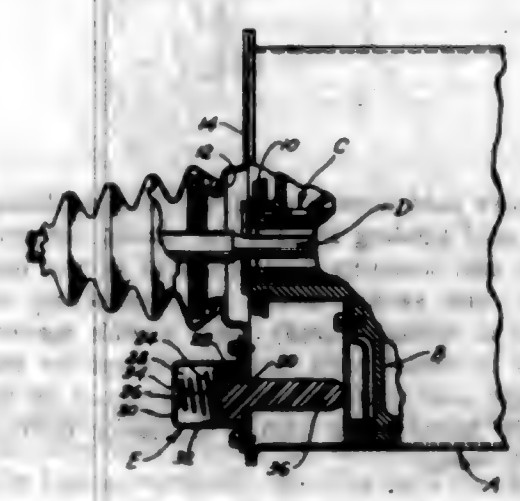
2,893,720
TRUCK DOCK BUMPER
Richard H. Bair, Camp Hill, Pa., assignor to Weiss Bros., Harrisburg, Pa.
Application November 23, 1956, Serial No. 624,104
5 Claims. (Cl. 267—1)



1. A bumper for truck loading docks or the like comprising a strip of resilient sheet material wound into a spiral form, a retaining band secured about said spirally

wound material and holding said material under compression to form an assembly, the said band having a width less than the width of the material, and means connected with said retaining band to facilitate securing of the assembly to a loading dock.

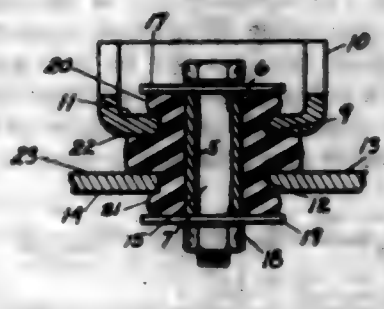
2,893,721
DASHPOT MECHANISM
Edward E. Hupp, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application December 27, 1956, Serial No. 630,959
6 Claims. (Cl. 267—1)



1. In a dashpot apparatus and the like: a housing having a variable volume fluid pressure chamber; a movable wall for said variable volume chamber, said movable wall having a normal position in said fluid pressure chamber from which it is moved in a first direction when retarding an externally applied force and during which movement a high fluid pressure is applied to a first face of the movable wall and a lower fluid pressure is applied to the opposite face of the movable wall; said movable wall having a flow restricting groove in its first face subjected to the higher pressure which groove starts at one point on said face and extends to a second point on said face which communicates with said opposing face of said movable wall; a cover member for said face in which said groove is formed, said cover member overlying all but the beginning portion of said groove and being constructed and arranged to abut said first face when said movable wall is moved in said first direction and cause fluid to flow through said groove; and means for biasing said movable wall toward its normal position, said means being positioned against said cover member to bias it against said face of said movable wall.

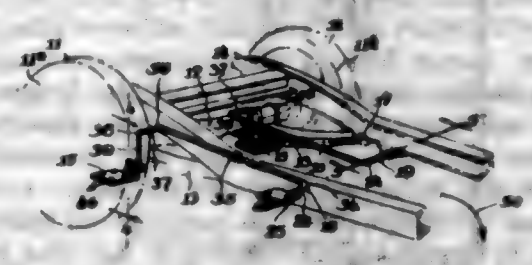
2,893,722
RESILIENT MOUNTING
Merrill G. Beck, Erie, Pa., assignor to Lord Manufacturing Company, Erie, Pa., a corporation of Pennsylvania
Application September 6, 1957, Serial No. 682,490
1 Claim. (Cl. 267—1)

In a resilient mounting, spaced supporting and supported members with aligned holes therein, a one piece generally tubular body of resilient material having between its ends an outwardly projecting collar-like portion interposed in load carrying relation between said members, said collar-like portion being of greater diameter than the holes in said members and engaging the adjacent surfaces of said members around said holes, the ends of the body respectively in the unstressed condition being of substantially the diameter of and projecting through the holes in said members and beyond the outer surfaces of said members around said holes, a rigid sleeve fixed at the center of the body likewise projecting through the holes in said members and beyond said outer surfaces but to a lesser extent than the ends of the



body, a through bolt having a washer means at each of its ends squeezed against the ends of said body and sleeve, the ends of said body bulging out over said outer surfaces and providing a cushion shoulder between each of said outer surfaces and the associated washer means.

2,893,723
VEHICLE SWAY INHIBITING DEVICE
Edwin Bogusli, Chicago, Ill.; Margaret L. Gilmer, ingatee under the will of Edwin Bogusli, deceased
Application July 7, 1955, Serial No. 520,435
2 Claims. (Cl. 267—11)

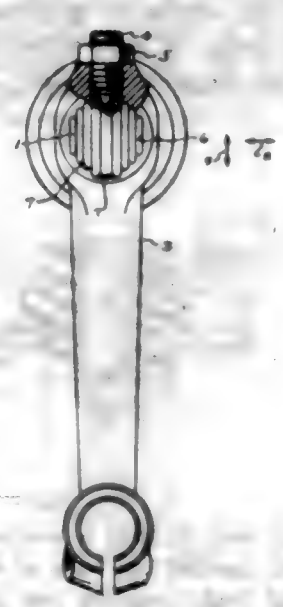


1. Side sway inhibiting means for vehicles, comprising an axle member and a body member spring mounted thereon, an integral resilient metal bar connected at its outer ends only to said axle member and body member respectively for movement therewith respectively in relative movement thereof, said bar having at least three angularly related portions extending in at least three different directions and lying in at least two different planes, an intermediate one of said portions being angular to two of the other portions, said intermediate portion being free of attachment except to said other portions, said bar having means at its outer ends attaching the bar to said axle and body members respectively in a manner such that said bar provides torque means resisting sway of the body member with respect to the axle member while being free to conform to vertical stroke of spring suspension.

2,893,724
TORSION BAR CONSTRUCTION
Josef Kales and Albert Gretowski, Wolfsburg, Niedersachsen, Germany, assignors to Volkswagenwerk G.m.b.H., Wolfsburg, Germany
Application October 26, 1955, Serial No. 542,982
1 Claim. (Cl. 267—57)

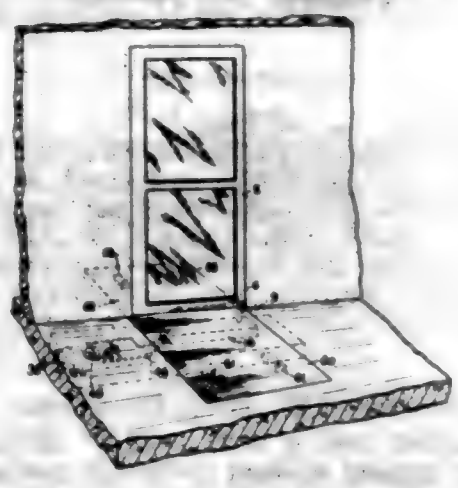
A torsion bar assembly comprising a plurality of flat layered spring leaves; adjacent ones of said leaves varying substantially in width from one another, with the leaf width decreasing from the center of the assembly outwardly to provide a stepped configuration; a lever arm having a bore conforming to the stepped configuration of the spring leaves and engaging the exposed lateral areas

of the flat leaf surfaces to rigidly anchor the lever arm and adjacent portions of the spring leaves together; the



individual leaves being of different thickness, decreasing generally from the inner to the outer leaves.

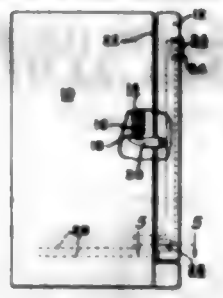
2,893,725
FLUID PRESSURE RESPONSIVE DOOR OPERATOR
Robert Katz, Great Neck, N.Y.
Application December 23, 1958, Serial No. 782,552
6 Claims. (Cl. 268—66)



1. A door actuating device comprising, in combination, a sealed device defining a pressurized fluid storage vessel, a cylinder pivotally supported at one end within said vessel, a piston slidably supported within said cylinder, a piston rod connected at one end to said piston and extending outwardly through the opposite end of said cylinder, a rocker arm pivotally supported intermediate the opposite ends thereof within said vessel, the opposite end of said piston rod being pivotally connected to one end of said rocker arm, a rod secured at one end within said vessel and having an opposite end pivotally connected to the opposite end of said rocker arm, a helical spring encircling said rod in abutment at one end with a stationary part of said vessel and at the opposite end with a portion of said rod, a driving shaft carried by said rocker arm for concentric rotation therewith, and an operating arm secured at one end to said driving shaft for rotation by and about said driving shaft.

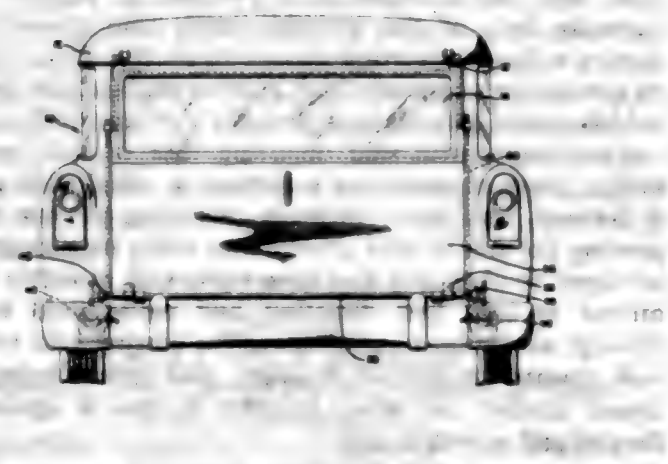
2,893,726
REFRIGERATOR DOOR CONTROL
Verlon G. Sharpe, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application July 19, 1956, Serial No. 598,877
1 Claim. (Cl. 268—72)

A refrigerator comprising, a cabinet having an opening, a door provided with an elastic door seal about its periphery arranged to engage the front of said cabinet for closing said opening, yieldable holding means associated with said door and cabinet for yieldably holding said door in engagement with said cabinet and for compressing said door seal when said door is in a closed position, a solenoid having a movable actuating part associated with said door and cabinet, said solenoid operating when energized to overcome said yieldable holding means



and to move said door toward an open position thereby releasing said holding means, the elastic compression of said door seal assisting said solenoid in the opening of said door, and switch means for connecting said solenoid with a voltage supply, said switch means including a pair of metal parts located without the interior of said cabinet and actuating means actuated by the bridging of said metal parts with a resistance having a relatively high value.

2,893,727
POWER ACTUATED CLOSURES
Richard P. Barnard, Alexandria, Va., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 27, 1956, Serial No. 581,685
17 Claims. (Cl. 268—74)

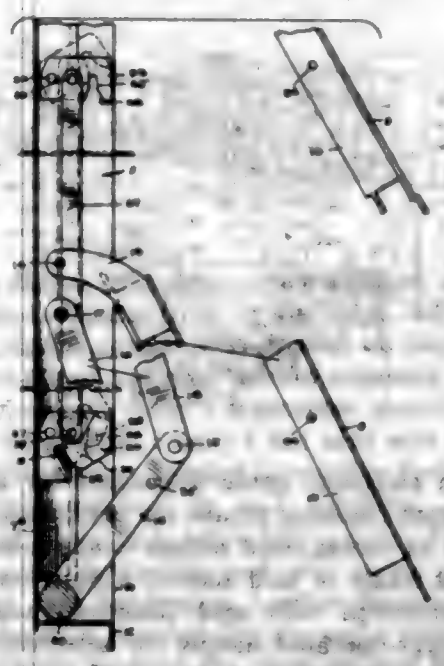


1. A tailgate operating mechanism including a support, a pair of vertically swinging tailgates pivotally mounted on said support, an operating element mounted proximate the pivotal edge of the first of said tailgates and fixed thereto, said element extending outboard of said tailgate, a motor mounted on the support and operatively connected to the outboard extension of said element, means operatively connecting said motor and said element permitting said motor to rotate said element to arcuately translate the associated tailgate about its pivotal mounting, a telescoping linkage member connected at one end to the second of said tailgates, and means operatively connecting the other end of the telescoping linkage member to the operating element for movement therewith, said linkage member including a lost motion connection permitting a limited initial opening movement of said first tailgate prior to the opening of the second tailgate.

2,893,728
VENT LOCKING MEANS FOR AWNING TYPE WINDOWS

Morton Tucker, Hialeah, Fla.

Application June 25, 1958, Serial No. 744,411
2 Claims. (Cl. 268—111)



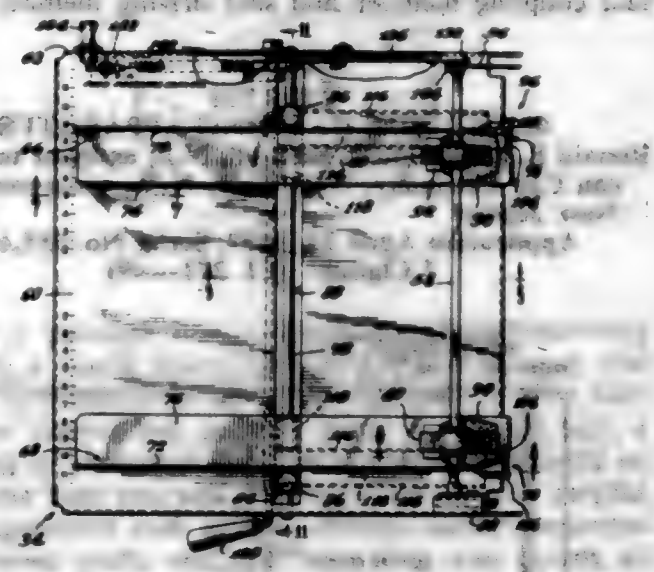
1. A window construction comprising a main frame, upper and lower vent frames for movement into and out of the main frame, vertically movable bars mounted upon the sides of the main frame, hinge elements secured to the vent frames near their upper ends and pivotally connected with the vertically movable bars, vertically swinging cranks arranged near the lower end of the main frame, links pivotally connecting the upper ends of the cranks with the vertically movable bars, means to swing the cranks, upper vertically swinging disc-latches arranged near the lower end of the upper vent frame and disposed adjacent to the sides of such vent frame, lower vertically swinging disc-latches arranged near the lower end of the lower vent frame and disposed adjacent to the sides of the lower vent frame, each upper disc-latch being provided with an upstanding first recess which passes downwardly through the lower edge of such disc-latch, each lower disc-latch being provided upon its inner face next to the lower vent frame with an upstanding second recess which passes downwardly through the lower edge of such lower disc-latch, each lower disc-latch being provided upon its outer face with an upstanding third outer recess extending through the lower edge of such lower disc-latch, each lower disc-latch having a cam face leading to the third outer recess, means to pivotally mount the upper and lower disc-latches upon the main frame, upstanding links pivotally connecting the upper and lower disc-latches, pins secured to the sides of the upper vent frame near its lower end and arranged to enter the first recesses of the upper disc-latches, pins secured to the lower vent frame and arranged to enter the second inner recesses of the lower disc-latches, and pins secured to the cranks near their upper ends to enter the third outer recesses of the lower disc-latches.

2,893,729
SHEET SEPARATING MECHANISM FOR DUPLICATORS

Thomas R. Pernenkis, Niles, Ill., assignor to A. B. Dick Company, Chicago, Ill., a corporation of Illinois

Application April 29, 1957, Serial No. 655,915
12 Claims. (Cl. 271—31)

1. In a printing machine, the combination comprising a feed table for supporting a stack of sheets, a pair of side rails mounted on said feed table for lateral adjusting movement to position and guide the edges of the paper sheets, means for advancing the topmost sheets from the stack on the feed table, a pair of corner separators including narrow generally vertical front stops disposed generally in front of said side rails and extending inwardly therebetween for engagement with the front edges of the sheets adjacent to the front corners thereof, each of said stops having a rearwardly projecting lip engageable with the upper side of the topmost sheet at one front corner thereof, each of said lips having a diagonal inner edge adapted to extend across the corner of the topmost sheet, a pair of arms supporting said front stops and lips

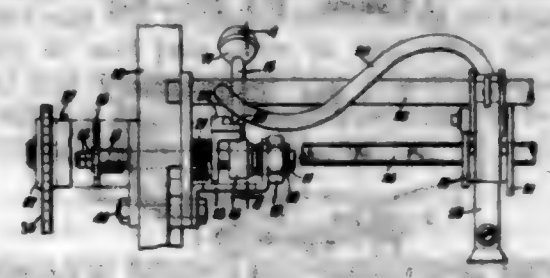


for generally vertical swinging movement, means pivotally mounting said arms on said feed table rearwardly of said stops, means connecting each of said corner separator stops to one of said side rails for lateral adjusting movement therewith to maintain said stops and lips in constant relation to said side rails, a manually swingable control lever mounted on said feed table and having a crank portion for swinging said arms upwardly and thereby raising said lips to provide for placement of a paper stack on said feed table and under said lips, and means operable by said control lever for lifting said sheet advancing means clear of said feed table simultaneously with the raising movement of said lips.

2,893,730
CLUTCH FOR PRINTING MACHINE

Leonard Mischoff, Brooklyn, N.Y., assignor to Davidson Corporation, a corporation of New York

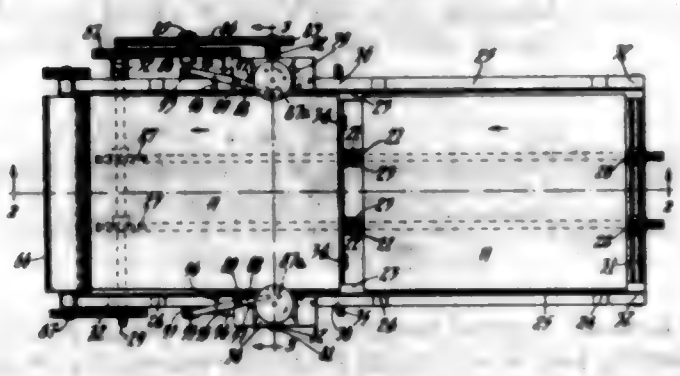
Application October 29, 1957, Serial No. 693,296
1 Claim. (Cl. 271—26)



In a printing press having a suction feeder wherein a suction foot is reciprocated from a sheet grasping position to a sheet feed position, and means for actuating said suction foot including a rotatable shaft having means associated therewith for reciprocating said suction foot a clutch adapted to be disengaged at a single predetermined point only in the printing cycle, said clutch comprising, a rotating driving member, a coupling member slidably mounted for engagement and disengagement with said driving member, a second coupling member fixedly secured to said aforementioned shaft, a plate fixedly mounted with respect to said afore-mentioned shaft and being provided with a detent in a fixed predetermined position,

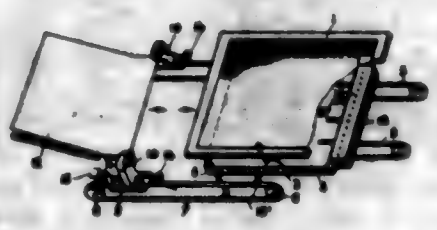
a lug member, spring means for urging said coupling member out of engagement with said driving means and said lug member toward said plate whereby as the coupling members continue to rotate and said lug becomes aligned with the detent in said plate said spring will be permitted to slide said coupling to introduce said lug into the detent and to disengage the driving connection between said driving member and said coupling member so that said shaft and the suction foot reciprocated thereby are brought to a halt in a predetermined position, and manually actuated means for sliding said coupling member against the force of said spring to permit engagement of said coupling member and said driving member.

2,893,731
SHEET SIDE GAUGING APPARATUS
Ronald E. J. Nordquist, Summit, N.J., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Application April 26, 1957, Serial No. 655,415
7 Claims. (Cl. 271—49)



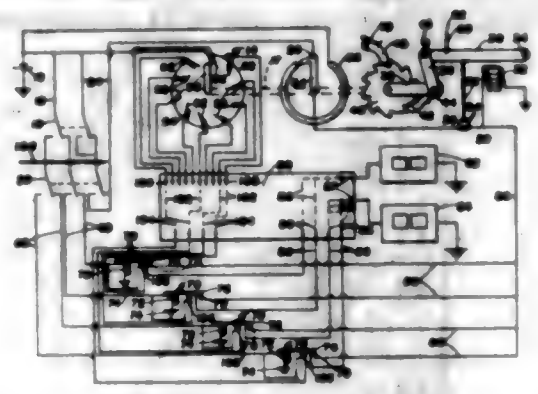
1. A sheet gauging apparatus, comprising conveyor means for continuously advancing a sheet along a path of travel, a pair of rotatable gauge members disposed on opposite sides of the path of travel of the sheet for engaging the opposed sides of the sheet as it passes between said gauge members, and actuating means including a normally disengaged clutch for intermittently rotating said gauge members through a single continuous rotation only at a predetermined point along the side edge of said sheet for side gauging said sheet.

2,893,732
SHEET TRANSFER DEVICES FOR THE RECIPROCATING TABLE OF A PRINTING MACHINE
Wilhelm Christian Hauck, Mannheim, Germany
Application July 23, 1957, Serial No. 673,738
Claims priority, application Germany July 31, 1956
7 Claims. (Cl. 271—54)



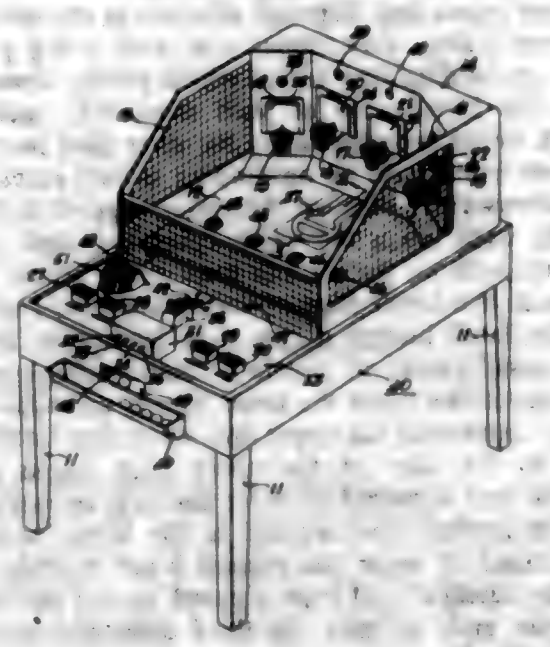
1. A sheet transfer apparatus for a printing machine comprising a reciprocating table means having an edge which faces the direction of printing, and including a movable sheet-engaging ledge, spring means normally biasing said ledge in a retracted lower position, and ram and stop means operative during the time said table means is being moved toward a sheet-receiving position for overcoming the action of said spring means, whereby said ledge can be raised relative to said table means so that the sheet previously deposited thereon may be released from said table means and a new sheet fed to said table means.

2,893,733
ELECTRICAL GAME APPARATUS
Neil W. O'Rourke, La Jolla, Calif.
Application January 3, 1956, Serial No. 557,978
4 Claims. (Cl. 273—1)



1. In an electrical game apparatus for a plurality of players: score counting means for arithmetically counting a plurality of scores, said means continuously displaying the current totals of said scores; a plurality of principal circuits connected with said counting means; multiple-choice, player-operated means for selectively connecting said principal circuits to a source of power, one of said player-operated means being available to each player; means to shield said player-operated means from observation by the other players; and circuit modifying means, to be chosen at random by the players, to modify said principal circuits and connect different principal circuits to different counting means.

2,893,734
GAME APPARATUS
Franklin E. Tarte, Jr., Media, Pa.
Application July 31, 1953, Serial No. 371,545
5 Claims. (Cl. 273—35)



1. In a basketball game apparatus, at least one basket constituting a target with a horizontally disposed opening, a vertical rectangular backboard positioned proximate to said basket, a foul member of inverted "U" shape bordering the top and sides of said backboard and pivoted at the lower ends of its sides so that it provides a generally planar vertically arranged surface positioned to be struck by an inaccurately thrown ball, and means operable by a ball striking the surface of said foul member to indicate that a foul throw has been made.

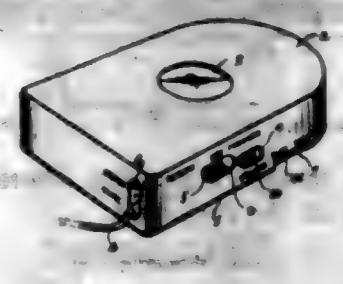
2,893,735
GAME DEVICE
Robert R. Trunter, Jr., Franklin, Ind.
Application October 23, 1957, Serial No. 691,888
4 Claims. (Cl. 273—144)

1. A game device of a type which delivers randomly-selected marked objects from a bin to a delivery area comprising a closed container including an inclined base and having an access opening therein adjacent said base, a plate overlying said base, a transverse partition within the container separating it into a bin area and a delivery area, said plate having a circular depression formed therein in underlying relation to said partition, a channel formed in said plate and extending across the delivery area between said depression and said access opening, a disc occupying said depression having diametrically opposed circumferential notches therein and a conical crown extending upwardly beyond the plane of said plate, manually operable means extending exteriorly of said container for rotating the disc within said depression, and a plurality of marked objects within the bin area sized to fit singly within the disc notches, each rotation of said disc thereby transporting a randomly-selected one of said objects from the bin area to said channel for delivery to said access opening.

2,893,736
GOLFER'S AID
Julius M. Tosi, Yorkville, Ohio
Application November 22, 1957, Serial No. 696,132
3 Claims. (Cl. 273—188)

1. A device for aiding in the training of golfers comprising a flat platform for positioning alongside a golf ball to be struck, an upwardly extending non-stretchable flexible member attached to the platform, a pair of upwardly extending non-stretchable flexible lines connected to the upper end of said flexible member and extending in diverging relation, and means at the upper end of each line for detachable engagement with opposite sides of the waist of a garment worn by a golfer for limiting the swiveling movement of the hips of the golfer.

2,893,737
PORTABLE MAGNETIC SOUND RECORDERS
Albert C. Travis, Jr., Richmond Hill, N.Y.
Application November 3, 1954, Serial No. 468,453
3 Claims. (Cl. 274—4)

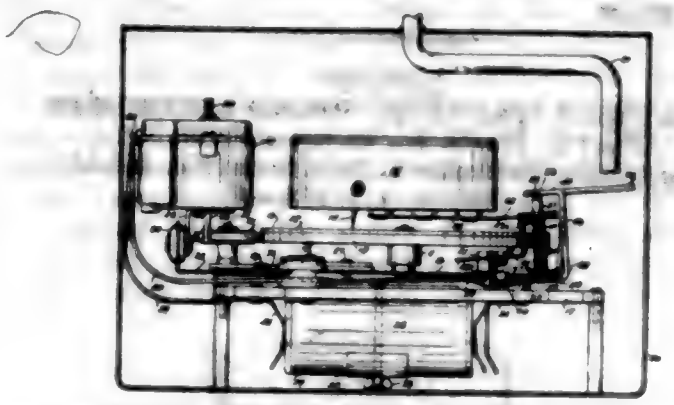


1. In a portable device for magnetically recording sound on a linear sound carrier, a frame, take-up and take-off reels supported on said frame stacked upon each other for independent rotation about a common axis, a base plate of elongated shape and rotatably supported on said frame near one end thereof about an axis parallel to said common reel axis, a driving motor supported on said base plate, and said base plate also having an extension intermediate its ends; there being also supported on said frame, reel braking means operated by said extension of said base plate so as to control said braking means selectively in predetermined positions of said base plate, a speed reduction mechanism coupled to said driving motor and also supported on said base plate between said motor and said output wheel, and guiding means for said sound carrier supported on said frame; said speed reduction mechanism including means for driving said take-up reel in one position of said base plate, and further including a sound carrier engaging wheel and a reel engaging wheel coaxially arranged one above the other; the other end of said base plate being used to support said sound carrier and reel engaging wheels; said sound carrier engaging wheel being arranged upon movement of said base plate in said one position to press said sound carrier against said guiding means to permit said sound carrier to be driven by said sound carrier wheel; and in another position of said base plate to be disengaged from said guiding means, thereby preventing said guiding means to press said sound carrier into driving contact with said sound carrier engaging wheel; and said reel engaging wheel being arranged upon movement of said base plate in said other position to be moved into driving engagement with said take-off reel, and in said first position of said base plate to be moved out of driving engagement with said take-off reel.

2,893,738
AUTOMATIC SOUND REPRODUCING DEVICE
Allen H. Kent, New York, N.Y.
Application August 7, 1953, Serial No. 372,595
4 Claims. (Cl. 274—9)

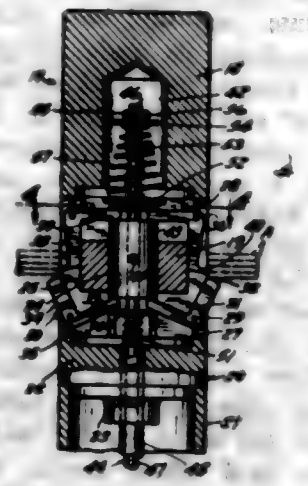
1. A sound reproducing device comprising a support plate; a tone arm; a tone member mounted on the tone arm; a stylus mounted on the tone member; a bracket pivotally mounted on the support plate for movement in a plane normal to said support plate; said bracket pivotally supporting said tone arm and tone member for movement in a plane substantially parallel to the plane of the support plate; the pivotal mounting of the tone arm and tone member comprising a pin extending substantially normal to the support plate and rotatable on its axis in the bracket; the tone arm extending normally

to the axis of said pin; a turntable extending parallel to said support plate; means carried by said pin biasing



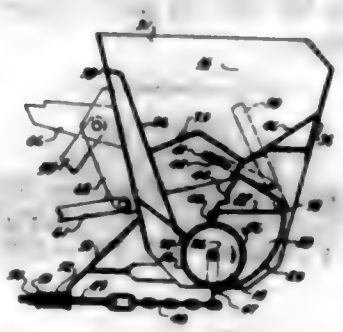
said tone arm toward a position where the stylus is at the outer edge of the turntable.

2,893,739
SPINDLE FOR AUTOMATIC PHONOGRAPH RECORD CHANGER
Andrew Maxim, Cleveland, Ohio, assignor, by direct and mesne assignments, to Imperial Manufacturing Corporation, a corporation of Massachusetts
Application March 20, 1956, Serial No. 572,651
9 Claims. (Cl. 274—10)



1. A record supporting and changing cylindrical spindle structure for an automatic phonograph record player having, a turntable, a pivotally mounted tone arm, a stylus equipped transducer carried thereby, a motor for imparting rotation to the turntable and positioning said tone arm, and an actuator for said spindle structure, said spindle structure extending axially upwardly from said turntable and having a diameter only slightly less than that of the central apertures in the records to be played to permit axial sliding movements of the records thereon, a plurality of circumferentially spaced primary record supporting elements mounted in said spindle structure in upwardly spaced relation to said turntable for common movements between operative positions wherein portions of said elements are disposed radially outwardly of the cylindrical surface of said spindle structure to engage bottom surface portions of a record on said spindle structure, and inoperative positions wherein said portions are disposed radially inwardly with respect to the operative positions thereof to permit downward axial movement of said record, a plurality of circumferentially spaced secondary record separating and supporting elements mounted in said spindle structure for common movements between operative positions wherein portions of said secondary elements are disposed radially outwardly of the cylindrical surface of said spindle structure to engage spaced portions of a record on said spindle structure, and inoperative positions wherein said portions of the secondary elements are disposed radially inwardly with respect to said operative positions thereof to release the record, said record engaging portions of the primary elements being downwardly spaced from the corresponding portions of said secondary elements a distance substantially equal to the thickness of the record to be played, whereby, when a plurality of records are stacked on said spindle structure, said portions of the primary elements are adapted to engage bottom surface portions of the lowermost record in the stack thereof, said portions of the secondary elements being adapted to engage the adjacent record of the stack overlying said lowermost one thereof to support said adjacent overlying record and the records thereabove when said primary elements are moved to their inoperative positions, yielding means urging said primary and secondary elements toward their operative record supporting positions, an operating element mounted in said spindle structure for movements in one direction to positively move said primary elements toward their inoperative positions and in the opposite direction to positively move said secondary elements toward their inoperative positions, both against bias of said yielding means, and means operatively coupling said operating element to said actuator to be moved thereby.

2,893,740
MATERIAL DISTRIBUTING DEVICE
Roy Geddis, Jr., Cedar Rapids, Iowa, assignor to Highway Equipment Company, Cedar Rapids, Iowa, a corporation of Iowa
Application January 5, 1955, Serial No. 479,941
4 Claims. (Cl. 275—2)

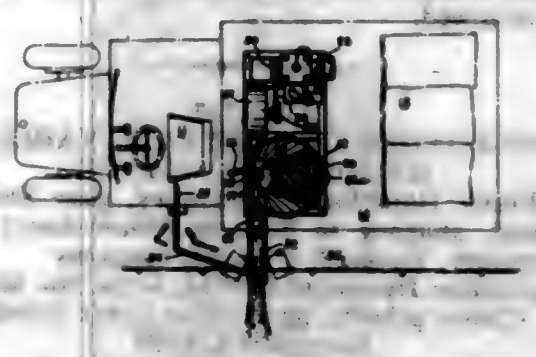


1. In combination with a truck type vehicle, an elongated hopper mounted on the rear end thereof, a longitudinally-extending feed roll rotatably mounted in the bottom of said hopper, means on said hopper for driving said feed roll, said driving means being effective to rotate said feed roll relatively slowly compared with the forward speed of said vehicle to deposit material from said hopper in a pattern of diagonal stripes when said vehicle is advancing, a feed gate in said hopper adjustably positionable relative to the upper portion of said feed roll, and a longitudinally-extending, transversely arcuate distribution gate in said hopper with a lower portion of said distribution gate extending downwardly and beneath the feed roll to provide a discharge edge generally beneath the axis of the feed roll and in contact therewith, the discharge edge of the said distribution gate being resiliently connected to the longitudinal wall of the hopper opposite the said discharge gate, whereby the said discharge gate is urged against said roll, said roll being equipped with a scraper bar affixed to the surface thereof and extending longitudinally and circumferentially thereof in a single pitch spiral.

2,893,741
POULTRY FEEDING APPARATUS OR THE LIKE
Chester W. Pilch, Hazardville, Conn.
Application June 16, 1955, Serial No. 515,963
4 Claims. (Cl. 275—3)

4. In a device to distribute granular material such as chicken feed or the like, a vehicle having a self contained source of power for actuation of said vehicle, a hopper

carried by said vehicle, a conduit member extending beneath said hopper connected to said hopper and having an elevated end portion terminating in a nozzle directed generally laterally of said vehicle whereby material delivered through said conduit may be distributed from an elevated position into a poultry range while the vehicle is moving along a fence forming a boundary for said range, said conduit member having its nozzle portion adjustable in a horizontal plane whereby the lateral direction of delivery may be varied, and control means adjacent the position of the vehicle operator and operatively connected to said adjustable nozzle whereby the lateral direction of said nozzle portion of said conduit member



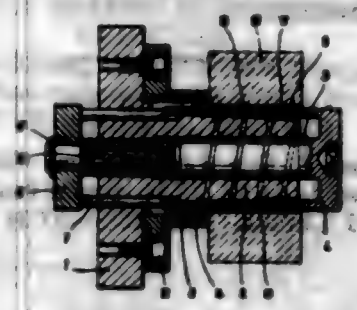
may be varied by the vehicle operator without leaving his position while operating the vehicle, a blower mounted on said vehicle discharging air into said conduit member for effecting the passage of material from said hopper through said conduit member and motive means for effecting operation of said blower, a screen in a wall of said hopper for eliminating finely pulverized materials from said hopper and means for controlling the passage of finely pulverized materials from said hopper through said screen, auxiliary passage means in the side wall of said nozzle portion and deflector means extending through said auxiliary passage means for increasing the area of distribution of the granular materials in the range.

2,893,742

CLAMPING DEVICES OR COUPLINGS

Johann Baptist Frölmer, Mannheim-Feudenheim, Germany

Application April 26, 1955, Serial No. 503,932
Claims priority, application Germany April 30, 1954
5 Claims. (Cl. 279—2)



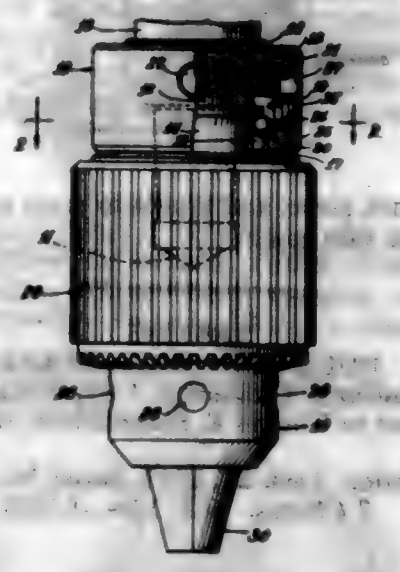
1. An arbor for clamping a cylindrical part, said arbor comprising a body having a coaxial frusto-conical surface, a radially distortable clamping sleeve having a frusto-conical surface of the same apex angle as the first-mentioned frusto-conical surface and mounted on said body with said frusto-conical surfaces in face-to-face contact, said clamping sleeve having a cylindrical gripping surface coaxial of the second-mentioned frusto-conical surface and at least one helical separating slit extending from end to end of the sleeve and entirely through the wall of the sleeve, whereby turns are formed in said sleeve, means to displace the body and the sleeve axially relative to each other to distort the sleeve radially and thereby grip the part and at least one insertion bridging the interspace between the individual turns in said sleeve, said insertion spacing said turns apart by a constant distance.

2,893,743

CHUCK WITH BALL LOCKING MEANS

Elmer J. Ondeck, Brookfield, Ill., assignor, by mesne assignments, to Supreme Products Corporation, Chicago, Ill., a corporation of Illinois

Application July 27, 1953, Serial No. 370,446
4 Claims. (Cl. 279—9)



1. In combination with a spindle having an elongated, tapered end portion of reduced cross section and having also external threads adjacent thereto, a chuck assembly removably secured to said spindle and comprising a chuck body having a tapered opening removably seating said end portion therein, a lock ring having an inwardly threaded annular section releasably engaging the threads of said spindle and having adjacent said inwardly threaded section an internal annular recess concentric with the longitudinal axis of said lock ring, said lock ring being concentrically mounted with respect to said body and being both axially and rotatably movable relative thereto, said body having adjacent said ring an external annular channel concentric with the longitudinal axis of said body and upper and lower annular shoulders respectively defining the marginal edges of said channel, said lower shoulder being enlarged and having a portion thereof disposed beneath said ring for engagement thereby to force said chuck assembly from said spindle when the ring is rotated in one direction, said upper shoulder having a downwardly and outwardly facing arcuate surface defining an annular bearing race, said ring adjacent the lower edge of said annular channel having an upwardly and inwardly facing arcuate surface defining an annular bearing race, and a plurality of ball bearings of substantially equal diameter disposed between said races to force said chuck assembly onto said spindle and lock the same thereon when said ring is rotated in a direction opposite the aforesaid one direction, the respective distances between said channel and the race equipped end portion of said ring and between said annular recess and said upper shoulder being less than the diameter of said ball bearings to prevent escapement thereof from between said races.

2,893,744

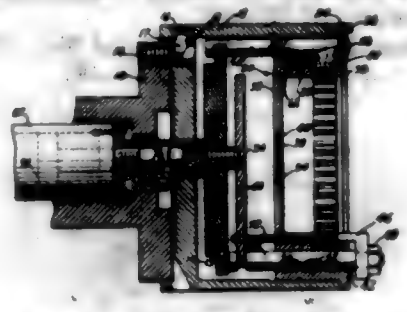
CENTERING CHUCK

Raoul W. Anthony, Detroit, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan

Application November 4, 1957, Serial No. 694,225
7 Claims. (Cl. 279—123)

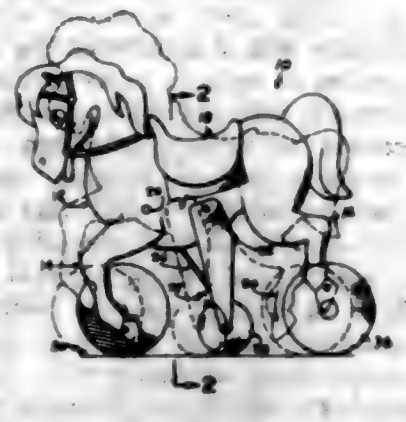
1. A locating chuck comprising a locator seat, clamp bars having clamping heads movable into and out of registration with a work piece in said chuck and movable toward and away from said seat, radially movable locator plugs, and power means operable first to move said clamping heads into registration with a work piece on

said seat and to move said work piece onto said seat, and operable thereafter to move said plugs radially to



center the work piece, and finally to press said work piece firmly against said seat.

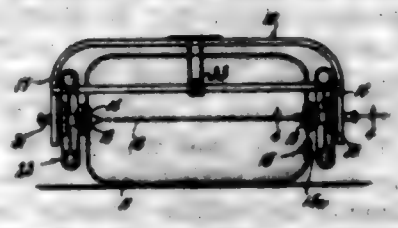
2,893,745
ROCK AND ROLL HORSE
Clarence Stanford, Oklahoma City, Okla., assignor of fifty percent to George E. Stubblefield, Oklahoma City, Okla.
Application April 25, 1957, Serial No. 655,081
7 Claims. (Cl. 280—1.184)



1. A rocking horse, including: a supporting wheel having a horizontal axle; a body adapted to support the weight of a rider; supporting arms rigidly connected at one of their ends to said body adjacent its center of gravity and pivotally connected at their opposite ends to the ends of said supporting wheel axle for rocking movement of said horse; a front wheel and two rear wheels for supporting the respective front and rear legs of said horse; a first crankshaft having said two rear wheels mounted on the ends thereof for rotation therewith, said crankshaft having a throw intermediate its ends, said throw of said first crankshaft journaling thereon the depending ends of the rear legs of said horse; a second crankshaft having a throw intermediate its ends, said throw having said front wheel journaled thereon, the ends of said second crankshaft journaling the depending ends of the front legs of said horse; and ratchet means carried by the axle of each of said front and rear wheels permitting oscillating movement of said horse about the axis of said supporting wheel.

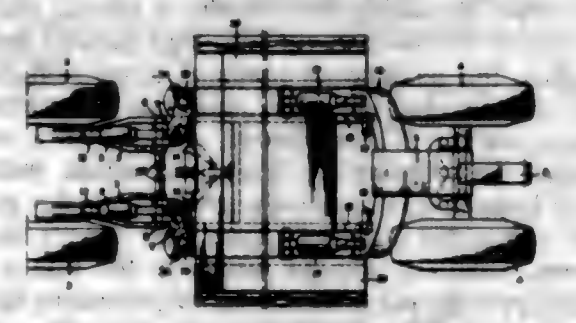
2,893,746
TOWING RIG FOR COLLAPSIBLE CONTAINERS
Marion M. Cunningham, Providence, R.I., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Application February 5, 1953, Serial No. 713,382
3 Claims. (Cl. 280—29)

1. A rig for converting generally cylindrical shaped collapsible containers into rollable units comprising, a bifurcated frame adapted to straddle the container endwise with the bifurcations thereof extending down each end of the container, connecting means carried by each bifurcation adapted to be connected to the ends of the container, means for moving said connecting means carried by each bifurcation away from each other so that tension can be applied to means interconnecting the ends of the container to thereby increase the resistance of the



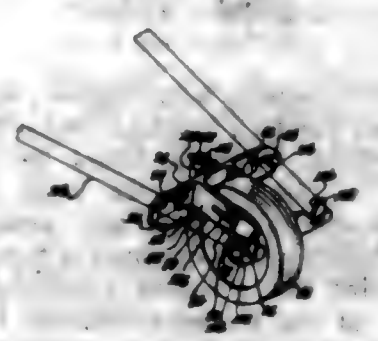
container to lateral bending and buckling, and a draw bar connected to said frame by which the frame and container may be towed.

2,893,747
LOW-LOADER TRAILER WITH VARIABLE GROUND CLEARANCE
Leslie Frank Hamblin, Marchamley, near Shrewsbury, England, assignor to Sentinel (Shrewsbury) Limited, Shrewsbury, England, a British company
Application December 4, 1956, Serial No. 626,131
Claims priority, application Great Britain December 7, 1955
1 Claim. (Cl. 280—44)



A low-loader trailer vehicle comprising a platform having front and rear ends, first and second brackets, said brackets being pivotally connected to the rear end of said platform about respective vertical axes, first and second trailing arms, said trailing arms being pivotally connected to said brackets respectively about horizontal axes, load-supporting wheels mounted for rotation on said trailing arms, first fluid pressure means acting between each of said brackets and said platform and second fluid pressure means acting between each of said trailing arms and its corresponding bracket.

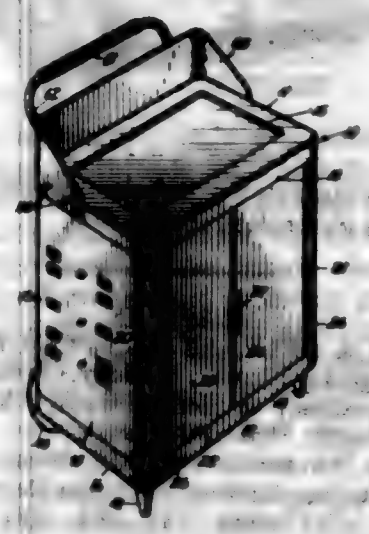
2,893,748
GAME CARRIER
Frank B. Coe, Los Angeles, Calif.
Application June 18, 1956, Serial No. 592,030
2 Claims. (Cl. 280—47.3)



1. In a game carrier, the combination of: a yoke having a substantially U-shaped portion having spaced, axially extending legs provided with parts having a first pair of pole receiving receptacles therein, said yoke having a second pair of receptacles disposed in spaced relationship with said first pair, said legs having axle receiving bores adjacent said second pair of receptacles; an axle in said bores; a wheel mounted on said axle;

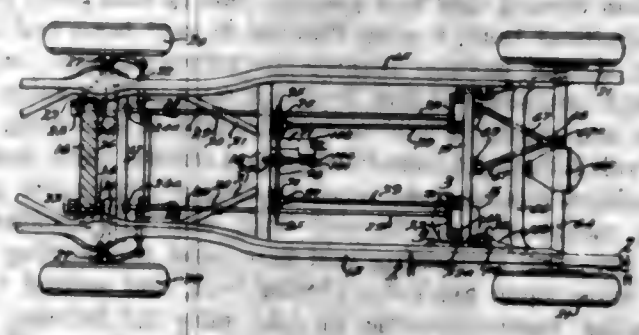
and a single fastening means extending transversely on said yoke for forcing said poles into said receptacles and for maintaining them in operative relationship therewith.

2,893,749
TOOL CABINET
Edward H. Simonsen, Elmwood Park, Ill., assignor to Simonsen Metal Products Company, Chicago, Ill., a corporation of Illinois
Application October 25, 1956, Serial No. 618,282
3 Claims. (Cl. 280—47.19)



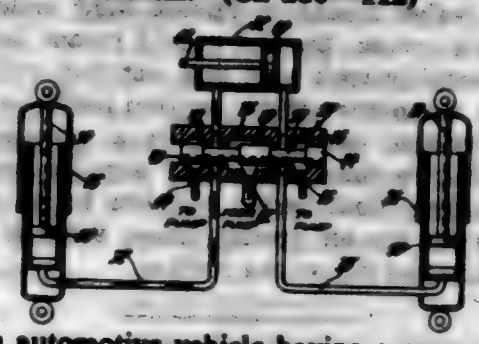
1. In an upright cabinet structure formed from metal plate members which are bent and connected together to provide a top, a bottom, a back wall and adjoining side walls, a wheel assembly for said cabinet comprising a one piece bracket forming member of generally U-shape which is bent to provide a pair of oppositely disposed wheel housings and a connecting web member, a pair of wheels supported on axles which are journaled in said housings in aligned relation, said cabinet bottom and back wall having aligned apertures at their adjoining edges which are spaced inwardly of the side walls and said wheel assembly being secured on said cabinet with the wheel housings extending through the apertures in said cabinet bottom and back wall and enclosed within the cabinet.

2,893,750
TORSIONAL SPRING SUSPENSION FOR VEHICLES
William D. Allison, Grosse Pointe Farms, Mich.
Application September 6, 1956, Serial No. 608,396
23 Claims. (Cl. 280—104)



1. In a spring suspension for a vehicle having a frame and front and rear wheels, vertically swingable lever means connected at its inner end to the frame and at its outer end to the front wheel, vertically swingable lever means for the rear wheel pivotally connected at its inner end to the frame, spring means common to the front and rear wheels connected to said lever means and extending longitudinally of the vehicle, swinging lever means pivotally mounted on the frame and connected to the wheel and to said second named lever means to swing the same in a vertical direction opposite to the vertical direction of swinging of the first named lever means upon vertical movement of the front and rear wheels in corresponding directions, said spring means being effective upon vertical swinging motion of either of said first and second named lever means to transmit vertical forces in corresponding directions to opposite ends of the frame, compensating spring means connected to one of said first two named lever means, and means operatively connected to said compensating spring means to deflect the same and thereby vary the spring resistance adjacent one end of the frame relative to the opposite end of the frame to compensate for varying load conditions.

2,893,751
VEHICLE ANTI-ROLL DEVICE AND POWER STEERING CONTROL THEREFOR
Charles R. Hegler, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 27, 1954, Serial No. 477,638
7 Claims. (Cl. 280—112)



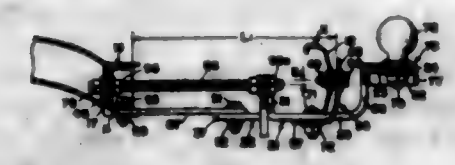
1. In an automotive vehicle having a suspension comprising a pair of springs located at opposite sides of the center line of the vehicle, said vehicle being equipped with a power steering system including an actuator operably connected to a steering part, a source of power for said actuator, and control means therefor, the combination of a pair of fluid pressure-responsive devices individually associated with said springs and adapted on a pressure change therein to resist deflection of such springs, means for so changing the pressure in said device through said control means, whereby on the negotiation of a turn the device positioned in association with the spring located most outward on the radius of curvature is selectively activated to prevent deflection of such spring, said last-mentioned device on restoration of said control means to its normal position becoming automatically deactivated.

2,893,752
CONTROL VALVE DEVICE FOR VEHICLE AIR SPRINGS
Harry C. May, East McKeesport, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Application December 16, 1957, Serial No. 703,013
5 Claims. (Cl. 280—124)

1. A control valve device for so controlling pressure of fluid in an air spring interposed between a sprung portion and an unsprung portion of a vehicle as to support the sprung portion at a substantially constant preselected height relative to the unsprung portion irrespective of the load carried by the sprung portion, said control valve device comprising casings means secured to the sprung portion, valve means reciprocably mounted

in said casing means for controlling pressure of fluid in the air spring, cam means rockably carried within said casing means for controlling operation of said valve means and having two spaced effective surfaces separated by a recess, cam actuator means journalled within said casing means and normally disposed within said recess and controlling rocking of said cam means, said cam actuator means, so long as it is disposed within said recess, being ineffective to rock said cam means out of a position in which it causes said valve means to operate to bottle up fluid under pressure in the air spring, link means operatively connecting the unsprung portion with said cam actuator means and moved responsively to an increase in load on the sprung portion to rock said cam actuator means into engagement with one of said effective surfaces for causing said cam means to rock so as to cause said valve means to supply fluid under pressure to the air spring, and moved responsively to a decrease in load on the sprung portion to rock said cam actuator means into engagement with the other of said effective surfaces for causing said cam means to rock so as to cause said valve means to release fluid under pressure from the air spring, the last-named means being operative to reversibly rock said cam actuator means within said recess when the sprung portion oscillates vertically during movement of the vehicle in a substantially horizontal path at a time while load remains constant, for thereby causing fluid under pressure to be maintained bottled up in the air spring unless there is an actual change in load on the sprung portion.

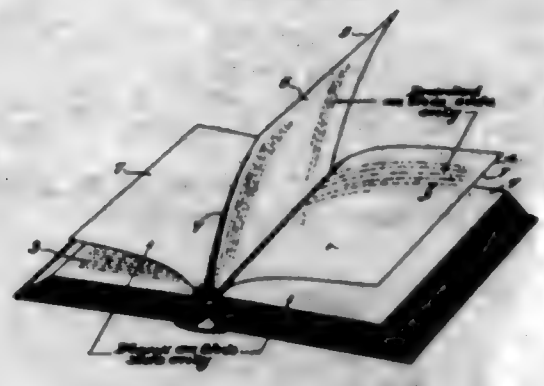
2,893,753
ADJUSTABLE TRAILER HITCH
Robert N. Baker, Hayward, Calif., assignor of one-half to Independent Iron Works, Inc., Oakland, Calif., a corporation of California
Application December 9, 1957, Serial No. 701,437
5 Claims. (Cl. 280—501)



1. A trailer hitch comprising a drawbar having a rearward part and a forward part, said parts being detachably connected together in abutting relationship in a plurality of different positions of adjustment to vary the elevations of said parts relative to each other, and means for attaching said forward part to a vehicle frame member, said last-mentioned means including an elongated threaded rod secured at one end to said forward part and at the opposite end to said frame member, and a pair of links on opposite sides of said drawbar, a first end of each said link being secured to said forward drawbar part and a second end to said frame member, said links being swingable from a position with said second end directly forward of said first end to a position with said second end at least slightly rearward of said first end.

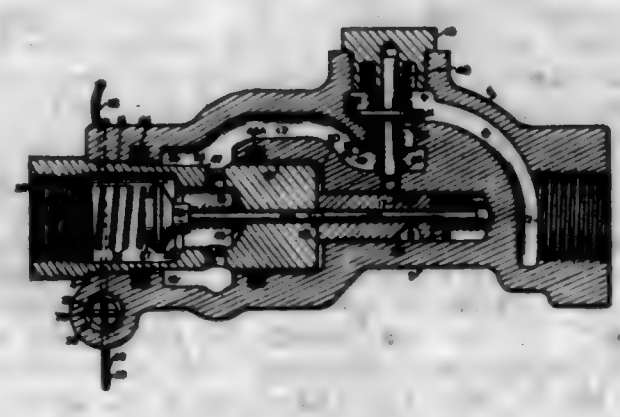
2,893,754
SPECIAL PAPERS
George A. Richter, Rochester, N.Y., and Arthur B. Lamb, Cambridge, Mass., assignors to the United States of America as represented by the Secretary of the Navy
Application February 29, 1944, Serial No. 524,476
5 Claims. (Cl. 281—38)

5. A book assembly comprising a plurality of leaves of cellulosic sheet material of high wet-expansion bound together, said leaves being coated on one surface only with a water-dispersible oil-impervious colloidal film and arranged so that the coated surface of each leaf is in face-to-face relation to the coated surface of an adjacent leaf,



and inked disintegratable indicia disposed on the outer surface of said water-destructible film.

2,893,755
QUICK RELEASE HOSE COUPLING
Malcolm Thomas Flower, Sydney, New South Wales, Australia, assignor to Hedley Ward Alderson, Balgowlah, New South Wales, Australia
Application November 26, 1956, Serial No. 624,294
Claims priority, application Australia December 20, 1955
3 Claims. (Cl. 284—18)



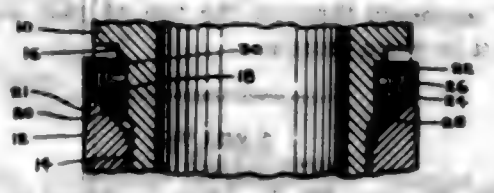
1. A quick release hose coupling comprising a body having a first passage extending through it having inlet and outlet ports near the respective ends of said first passage, a first valve and valve seat means in said first passage spaced from each end of said first passage, first valve biasing means biasing said first valve toward a position closing said first passage, one of said ports being a cylindrical bore, a plug slidable in said bore and having a second passage formed therethrough, said second passage connected to said first passage, a second valve and valve seat means in said second passage in said plug, second valve biasing means biasing said second valve toward a position closing said second passage, first valve actuating means slidable in said body and displaceable by said plug and contacting said first valve for holding said first valve open against a closing bias, and second valve actuating means slidable in said plug for holding said second valve open against a closing bias when said plug is fully inserted in said bore, third means on said body and engaging said plug for detachably retaining said plug in said bore in the fully inserted positon, and fourth means in said body and bearing on said first valve actuating means for displacing said first valve actuating means from its position holding said first valve open when said plug is partly withdrawn from said bore, said first and second valve biasing means actuating said first and second valves to close said first and second passages when said plug is partly withdrawn from said bore.

2,893,756

PACKED COUPLING WITH DEFORMABLE RINGS FOR RELATIVE ORIENTATION OF THE MEMBERS

Savin L. Sundstrom, Chicago, Ill., assignor to The Barton-Blessing Company, Chicago, Ill., a corporation of Illinois

Application June 7, 1956, Serial No. 590,023
6 Claims. (Cl. 285—18)



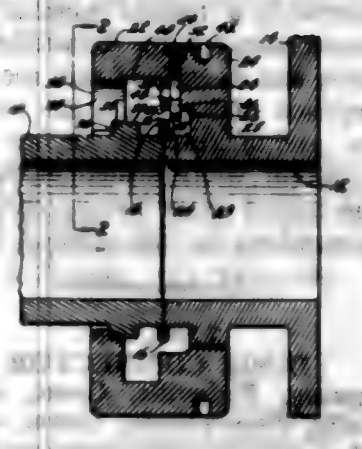
1. A coupling comprising male and female elements having mating straight threads and radially spaced annular shoulders of different diameters facing towards each other and disposed in parallel planes, the shoulder having the major diameter being on the female element, a pair of flat ring members between said shoulders to be engaged thereby and having aligned openings receiving said male element therethrough, one of said members having an axially directed upstanding portion between said members at the outer periphery thereof and disposed substantially in line with the shoulder having the major diameter, said portion spacing said flat ring members a distance substantially equal to the lead of one turn of said threads upon initial contact between said shoulders and ring members, the ring member engaging the shoulder of minor diameter having the strength of hot rolled steel or the like and being crushed towards the other ring member within the shear strength of said threads as measured in an axial direction for at least one additional turn of said threaded elements after said initial contact to provide rotational orientation of said elements in locked relationship, and sealing means between said elements engaged under compression by one of said ring members while said shoulders and ring members are in contact with one another.

2,893,757

PIPE COUPLING WITH SEAL WELD CUTTER MEANS

Trent H. Holmes, Rocky Hill, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware

Application July 2, 1957, Serial No. 669,661
8 Claims. (Cl. 285—21)



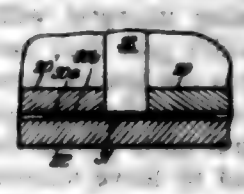
1. In combination, a disconnectible assembly including two sections, a seal weld joining said sections, means providing a structural connection between said sections including a rotatable connecting member having threaded engagement with one of said sections and having abutting engagement with the other of said sections, and means carried by said connecting member which is operative only when the latter is rotated in a direction to disconnect said sections for automatically cutting said weld.

2,893,758

FIRELESS WELDED TIE-IN COUPLING FOR GAS MAINS

Raymond J. Dufour and Donald B. Miller, Wheaton, Ill.

Application October 13, 1954, Serial No. 462,829
2 Claims. (Cl. 285—286)



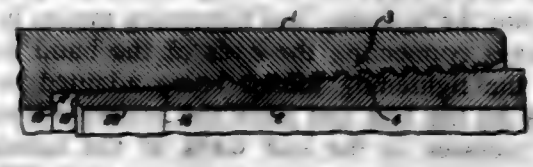
1. An improved method for effecting a fireless "hot tie-in" coupling between sections of pipe carrying gas under pressure, comprising the steps of, placing the pipe sections in near end-to-end coaxial relationship, covering the gap between said pipe ends with a length of fire-proof flexible glass tape, placing a flexible metal band circumferentially over the gap between said pipe sections and radially outward of said tape, tensioning said band to tightly compress said tape, securing said band in position over said tape in a manner to retain its said tensioned condition, coating said band with a heat resistant lubricant, mounting a split metal collar member over said band, compressing said collar member radially to place the same under tension, welding the circumferential edges of said collar, each to one of said pipe sections, and welding the free ends of said collar together to thereby effect a gas-tight seal.

2,893,759

CONICALLY TAPERED SCREW-TYPE CASING JOINT WITH METAL-TO-METAL SEAL

Thomas L. Blose, Houston, Tex., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Application May 6, 1957, Serial No. 657,187
1 Claim. (Cl. 285—334)



In a well casing joint embodying male and female members having engageable threads disposed on a taper with the threads having crest and root portions, a first conical sealing surface provided on the female member axially inwardly of said threads and disposed on a taper paralleling the taper of said threaded portions and offset radially inwardly from the thread crests of the threaded portion on the female member, and a substantially complementary second conical sealing surface having an axial length equal to at least twice the pitch of said threads provided on the male member and adapted to engage substantially throughout its length with the first sealing surface to seal the joint, said second conical sealing surface having a faster taper than that of the first sealing surface whereupon initial contact between the sealing surfaces during make-up of the joint is on a circumferential line, and upon continued make-up of the joint said line contact generates into an area contact with radial deformation between the sealing surfaces.

2,893,760

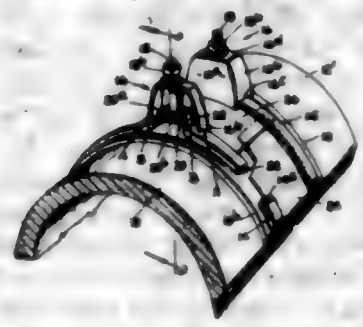
PIPE COUPLING INCLUDING ELASTOMERIC COVERED CLAMPING MEANS

Howard William Jewell, Islington, Ontario, Canada

Application August 15, 1957, Serial No. 678,315
2 Claims. (Cl. 285—369)

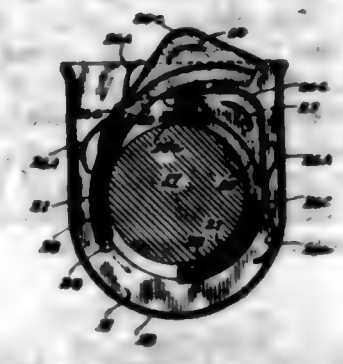
1. A coupling for the joint between adjacent ends of two sections of pipe in end-to-end abutment, comprising a belt of resiliently compressible material encircling the circumferential surface of the adjacent pipe ends, two

parallel hollow ridges integral with and spaced apart on the belt and providing passages within the material of the belt for substantially all its annular length, each of the ridges being disposed near one of the outer edges of the belt, the ridges being spaced radially from the belt for a part of their width inward of the inner, mutually-facing edges and being intergral with the belt for the remainder of their width near their outer edges, a stiffening web extending into the spaces between the ridges and the belt and overlying the flat surfaces of the belt between the said integral parts of the ridges, the stiffening web being interrupted to leave uncovered a part of the belt, the ridges being unconnected to the belt over the length of the uncovered part of the belt and over the ends of the stiffening web, a relatively rigid load-distributing member overlying the ends of the stiffening web and the uncovered part of the belt between them, hous-



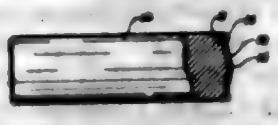
ings disposed on the load-distributing member and having walls extending outwardly from the belt assembly, the load-distributing member extending axially of the pipe sections under the unconnected parts of the ridges at least as far as the axially outer surfaces of the housings, the end walls of the housing having recesses for the unconnected parts of the ridges under the end walls, the passages in the ridges opening into the housings, a clamping band extending through each passage whereby it extends under the end walls of the housing within the passage and projects into the housing, and tightening means in each of the housings connecting the ends of the band inside the housing, the tightening means being adapted to tighten the bands on the belt and draw the housings inwardly so that the recesses in the end walls of the housings will engage the resiliently compressible material and the end walls will force the material of the belt against the bands in the passages.

2,893,761
DUST-GUARD ASSEMBLY
James Post, West Mifflin, Pa., assignor to Cardwell Westinghouse Company, a corporation of Delaware
Application May 19, 1958, Serial No. 736,173
8 Claims. (Cl. 286—6)



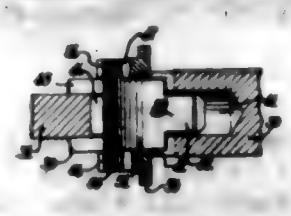
1. The combination with a journal box that includes generally parellel, spaced apart walls flanking a dust-guard well having an open top, with a journal projecting through said walls and well and having a given minimum radial clearance dimension relative to the journal box; of a dust-guard assembly for mounting in the well in surrounding relation with the journal, said assembly comprising complementary, generally arcuate segments having adjacent ends thereof of mating, interengaging construction to definite a ring-like frame having a central opening of circular form for the journal, said segments being resiliently flexible in the plane of curvature thereof, with the portions of the segments disposed beneath the horizontal center line of the journal being of less radial dimension than said minimum radial clearance dimension to accommodate insertion and assembly of said segments through the top of said well while the journal is in place therein.

2,893,762
WELDING STUD
Clyde H. Haynes, Elyria, Ohio, assignor to Gregory Industries, Inc., Detroit, Mich., a corporation of Michigan
Application December 29, 1953, Serial No. 401,839
3 Claims. (Cl. 287—20.2)



3. A weldable member adapted to be end-arc-welded to work by melting an end of said member with an arc established between said end and the work and then seating said member in the melted-end material and against the work, a screen of flux material consisting of mesh having a large surface-covering area in proportion to small cross-sectional area covering said end surface, and means holding said screen over said end surface.

2,893,763
SHAFT KEYING MEANS
William J. Pankuch, Cleveland, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Application July 16, 1953, Serial No. 368,462
18 Claims. (Cl. 287—52.05)

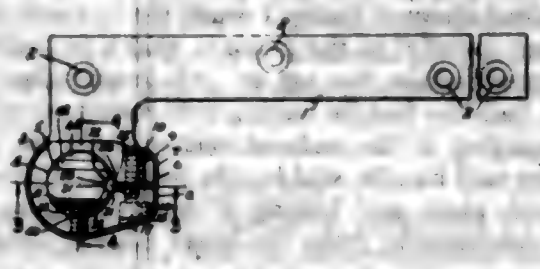


1. A system for resiliently keying a plurality of concentric members arranged for resilient corotation comprising, a male-female rotatable member, a male rotatable member disposed within said male-female member for corotation therewith, a female member disposed about said male-female member for corotation therewith, an axially extending slot in each of said members, said slots being superimposed and of different widths in each of said members, and a resilient keying member having portions of different width seated in said superimposed slots and being bowed in the axial direction for engaging each of said members in line contact individually.

2,893,764
DOOR CONNECTOR
Paul R. Ferguson, Plainville, Conn., assignor to The Stanley Works, New Britain, Conn., a corporation of Connecticut
Application February 2, 1956, Serial No. 562,958
5 Claims. (Cl. 287—53)

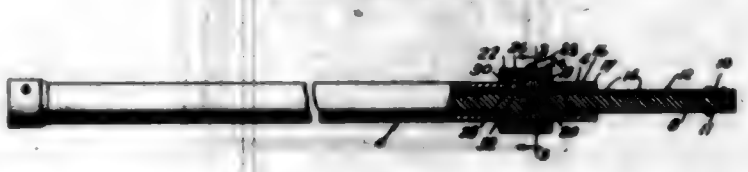
1. A connection between a door and a door operator and the like comprising a vertically disposed pintle having a longitudinally extending keyway in the upper end thereof, said keyway having sides inclined inwardly of said pintle and toward each other, a hinge arm having means for mounting it on a door and having a collar with a pintle receiving aperture, said collar having a

keyway disposed axially of and in communication with said aperture, the collar keyway having sides diverging inwardly of said aperture, a key constructed to be engaged between the inclined sides of said keyways, a slot



in said collar extending longitudinally thereof and extending between the diverging sides of said collar keyway and radially of said aperture, and means on said collar to move the sides of said collar keyway toward each other to wedge said key into said pintle keyway.

2,893,765
EXTENSIBLE TORQUE ROD
Chester S. Lyon, Boise, Idaho
Application August 18, 1955, Serial No. 529,238
3 Claims. (Cl. 287—58)

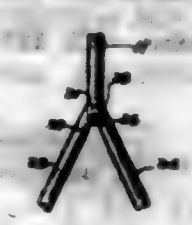


1. An extensible torsion rod comprising a sleeve, a rod telescopingly fitting in said sleeve, a keyway extending lengthwise on the exterior of the rod and comprising relatively narrow portions interspersed with relatively wide portions constituting ball sockets, an opening through the wall of said sleeve, a ball fitting in said opening, said ball being substantially larger in diameter than the width of the narrow keyway portions, a collar on the exterior of said sleeve surrounding the ball, said collar having a recess in the inner side thereof for accommodating said ball and comprising contiguous shallow and deep portions, said collar being slidable on said sleeve so as selectively to dispose the shallow and deep portions of the recess over said ball, the height of the deep portion being such as to permit said ball to ride up on the edges of the narrow keyway portions, the height of the shallow portion being such as to lock said ball in a ball socket, and a key affixed in said sleeve, said key slidably engaging in said keyway for preventing relative rotation between the sleeve and rod.

2,893,766
CLAMPING DEVICES
Cornelis A. Meyer, Bloemendaal, Netherlands
Application August 23, 1955, Serial No. 530,157
Claims priority, application Netherlands August 24, 1954
6 Claims. (Cl. 287—58)

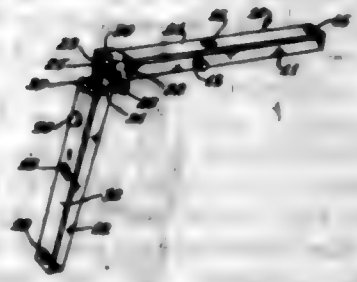
1. A device for clamping two rod-like members together, comprising a helically wound wire surrounding at least a portion of each of said members, and a casing accommodating said wire and at least a portion of one of said members, the latter-mentioned member being longitudinally fixed relative to said casing and being adapted to stress said wire about said members and to release said wire.

2,893,767
FOLDING GUEST RACK
Henry Buchman, Detroit, Mich.
Application May 20, 1955, Serial No. 509,828
1 Claim. (Cl. 287—96)



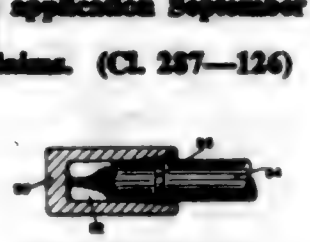
A hinge coupling comprising an upright tubular support, a pair of tubular downwardly diverging legs pivotally mounted at their upper ends upon the lower end of said support, said legs lying in the plane of said support, the lower end of said support being formed into substantially oval-shape with flat opposed sides, the respective upper ends of the legs being bifurcated in opposed overlapping relation with each other and engaging around opposite sides of the flattened lower end of said support, and means pivotally connecting the legs to each other and to the lower end of the support, engagement of the upper portions of the legs with opposite sides of the support limiting angular opening movements of said legs, said legs being collapsible into parallel engaging relation in alignment with said support.

2,893,768
LAMP SUPPORTS
Gunther Selig, Chicago, Ill., assignor to Rommel Industries, Inc., Chicago, Ill., a corporation of Illinois
Application December 30, 1955, Serial No. 556,553
1 Claim. (Cl. 287—99)



In a foldable lamp support of the kind described including a pair of housings each having an upper wall and pivotally related at adjacent inner ends thereof so as to be unfolded to extended position when said inner ends are brought together, a leaf spring secured to the underside of the wall of one of said housings, means connected with said spring and having a dog projecting through an opening in said wall of said one housing adjacent said inner end thereof, said spring normally disposing the dog outwardly of said opening in an unreleased position, the upper wall of the other of said housings adjacent the inner end thereof including an extension part adapted to embrace at least a portion of the inner end of said one housing, said extension part being provided with an opening therein adapted to receive said dog to latch said housings together in a fully extended condition, said extension part having a lower face forwardly of said opening engaging said dog and camming the dog and spring to released position when said housings are brought together at their inner ends until the opening in said part registers with said dog whereupon the spring recovers to dispose the dog in said opening, and a button connected to the spring and projecting through the upper wall of said one housing and adapted normally to flex the spring to dispose the dog in a released position.

2,893,769
SOCKET AND ROD COUPLING
John Dolico, Worcester, Mass.
Original application July 20, 1956, Serial No. 599,224, now Patent No. 2,862,746, dated December 2, 1958. Divided and this application September 26, 1958, Serial No. 763,501
2 Claims. (Cl. 287—126)



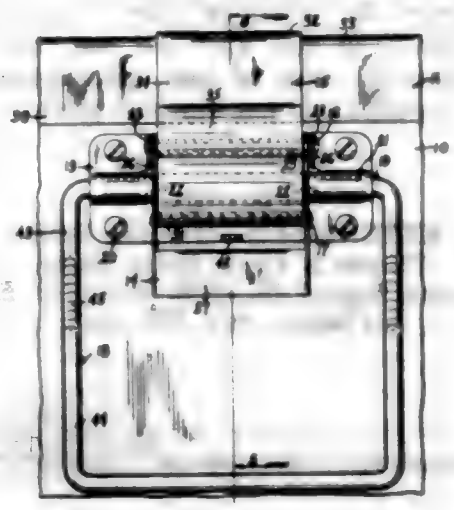
1. A releasable coupling comprising a socket member and a rod to be axially applied thereto and releasably secured therein, said rod having a non-circular rotatively driving portion thereon for entry into the socket member, and a corresponding non-circular rotatively driving portion in the socket for reception thereof whereby the rod or socket member is selectively used to rotatively drive the other, said socket and rod also having generally cylindrical non-driving portions adapted to correspond when the non-circular portion of the rod is seated with respect to the non-circular portion of the socket, and a ring-like resilient member mounted on the cylindrical portion of the rod and positioned to frictionally grip the corresponding interior surface of the socket member when the rotatively driving portions are engaged.

2,893,770
OIL SEALS
Pierre Poncet, Lyon, France, assignor of one-half to Elie Picat, Lyon (Rhone), France
Application June 2, 1952, Serial No. 291,100
Claims priority, application France June 5, 1951
1 Claim. (Cl. 288—3)

An oil seal to prevent oil leakage around a relatively rotating shaft, comprising a metallic annular retaining member having an inner substantially cylindrical portion for passage of said shaft, said portion terminating in a free circular end of increased outer diameter with respect to the adjacent zone of said portion; and a substantially frusto-conical sleeve made of polyamide material, having its larger base directly secured by molding to said free end which is embedded thereinto, said sleeve being of decreasing thickness from its larger base to its smaller base which is in the form of a thin circular end lip adapted to bear elastically on said shaft along the whole periphery thereof, and said lip being of lesser inner diameter than the next adjacent portion of said sleeve and being separated therefrom by a diameter reducing shoulder disposed close to said lip.

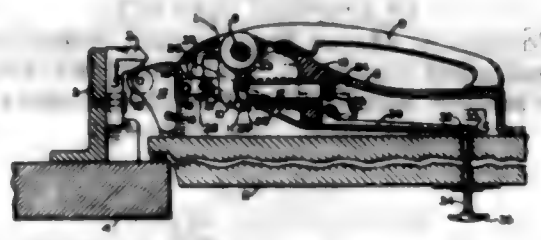
2,893,771
HANDLE-EQUIPPED LID FASTENER
Arthur Claud-Mantle, Trumbull, Conn., assignor to The Bostick Company, Bridgeport, Conn., a corporation of Connecticut
Application November 6, 1956, Serial No. 620,653
1 Claim. (Cl. 292—113)

In a lid fastener for a box having a lid to be drawn downwardly against the upper end of a box body, a long and narrow attaching plate for mounting on the wall of the box body adjacent the upper end of the box, said plate having at the upper part thereof a pair of outstanding lugs spaced from each other and defining a horizontal plane, said plate having below said lugs a continuous longitudinal channel facing toward the box and extending in a plane parallel to the plane of said lugs, said channel being intermediate the upper and lower edges of said plate, a bail-like handle having side members with upper ends engaging in the ends of said channel for pivotally mounting said handle, said handle being normally pendent from said plate and having a lower grasping portion spaced downwardly from the lower edge of said plate, a



toggle lever pivoted at one end between said lugs and having a free end, a resilient plate pivoted to said lever between the ends of the latter and adapted to engage the margin of a box lid to pull the lid downwardly, the length of said channel being substantially greater than the width of said lever and said resilient plate and in which the handle is wider than the length of the attaching plate, whereby said toggle lever in the fastened position has its free end extended downwardly beyond the lower edge of said attaching plate to an extent such that the end of said lever is spaced upwardly from said lower grasping portion of said handle and is readily accessible for releasing the fastener.

2,893,772
LOCK FOR REFRIGERATOR DOORS
Chester P. Edwards, South San Francisco, Calif.
Application September 23, 1954, Serial No. 457,816
5 Claims. (Cl. 292—223)



1. A lock for refrigerator doors and the like, comprising an elongated lock housing adapted to be fixed to the outside of a door, an elongated handle, pivoted at one end to said housing, swingable outwardly of said housing, and having a finger directed inwardly from said one end, a rod reciprocable longitudinally of said housing and having one end in engagement with said finger, a latch pivoted at a point to said housing, a pair of pivotally connected, generally longitudinally extending links, one of which is pivoted to said latch at other than said

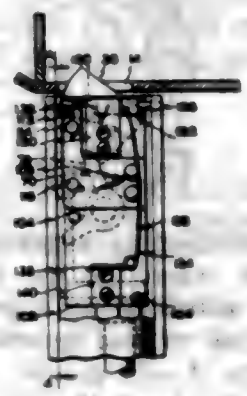
point and the other of which is pivoted to said one end of said rod, whereby when said handle is swung outwardly from said housing said finger moves said rod rearwardly and thereby rotates and retracts said latch, a lever pivoted to said housing and having one end in engagement with the pivot between said links for moving said pivot inwardly upon rotation of said lever and thereby retracting said latch independently of said handle and said rod.

2,893,773

LATCH AND DETENT ASSEMBLY

Walter L. Clifton, Jr., Atlanta, Ga., assignor to American Art Metals Company, Atlanta, Ga., a corporation of Delaware

Application July 25, 1955, Serial No. 524,872
3 Claims. (Cl. 292—223)



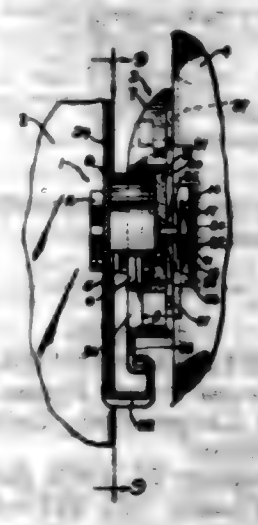
1. For use in combination with a door movable to and from a closed position and having a movably mounted latch member and a latch operating mechanism for moving the latch member in a single plane to and from a latching position; a mounting plate fixed to said door to lie in a plane paralleling and adjacent to the plane of movement of the latch member, a flat substantially planar plate resiliently deflectible in a direction substantially normal to the plane thereof and having one edge secured to said mounting plate, said flat plate normally lying in face-to-face engagement with the mounting plate, the mounting plate being interposed between the flat plate and the latch member, a second edge of the flat plate spaced from the one edge being movable upon deflection of said flat plate in a direction substantially normal to the plane of movement of the latch member, a detent mounted upon said flat plate adjacent the second edge thereof, said detent projecting into the path of movement of said latch member when said flat plate is in face-to-face engagement with said mounting plate and said latch member is in locked position, first cam means on said flat plate engageable with said latch operating mechanism during unlatching movement thereof to deflect the flat plate so as to move said second edge thereof away from said mounting plate, thereby retracting said detent from the path of said latch member, second cam means movably mounted upon said mounting plate, spring means anchored to said mounting plate and connected to said second cam means normally biasing said second cam means when the latch is in unlocked position to a first position wherein said second cam means retains said flat plate deflected and said detent out of the path of movement of said latch member, and means connected to said second cam means and actuated upon movement of the door to its closed position for moving said second cam means against the bias of said spring means to a second position wherein said second cam means frees said flat plate for return to its normal position in face-to-face engagement with said mounting plate and with said detent interposed in the path of movement of said latch member.

2,893,774

AUTOMOBILE DOOR LOCK MECHANISM

Tracy L. Carpenter, Oceanside, N.Y., assignor to Tracy Accessories, Inc., Oceanside, N.Y., a corporation of New York

Original application July 13, 1955, Serial No. 521,694. Divided and this application July 30, 1956, Serial No. 600,964
12 Claims. (Cl. 292—200)



4. In an automobile door lock mechanism comprising first and second coating members, each of said members being attached to a separate automobile member, one of said automobile members being a door and the other of said automobile members being the body associated with said door, said first member including a laterally arranged, rotatably mounted roller gear having external teeth thereon, and a locking mechanism to controllably prevent rotation of said roller gear, and said second member including a striker plate having laterally arranged restrained gear teeth thereon, said restrained gear teeth being adapted and positioned to mesh with said roller gear teeth thereby exerting lateral restraint on said automobile door with respect to said automobile body, the improvement which comprises a plunger associated with said first member, said plunger comprising a shaft and overhanging head, said shaft being supported adjacent said first member and extending longitudinally therefrom plunger head first otward said second member, a bracket associated with said second member, said bracket being laterally arranged, longitudinally behind said striker plate at a distance from the said restrained teeth on said striker plate slightly less than the distance from said restrained teeth to the head of said plunger so that the head of said plunger passes behind said bracket and will contact said bracket before there is longitudinal disengagement of said meshed gear teeth, said bracket having a slot therein positioned in the path of said plunger head and having a receiving open end to permit entry of said shaft, the width of said slot being larger than that of said plunger shaft but smaller than that of said plunger head, and a recess within the automobile member to which the said second member is attached, positioned longitudinally behind the slot in said bracket for the accommodation of said plunger head.

2,893,775

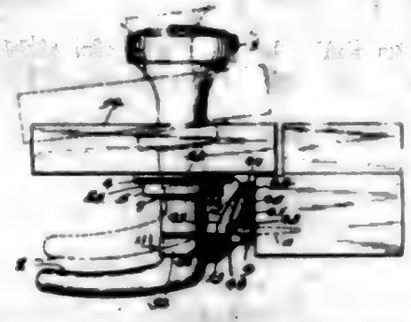
LATCHING MECHANISM

Harry F. George, Park Ridge, Ill.

Application April 1, 1957, Serial No. 649,840
2 Claims. (Cl. 292—341.17)

2. A striker plate for door latching mechanism, comprising, a supporting frame having a base member formed at each of its ends with an upstanding flange, a swing plate between said flanges, each of the longitudinal edges of the swing plate having bent-under portions having fixed therein projecting rods arranged two on each of said longitudinal edges, each of said flanges having a hole and a slot spaced from said hole, two of said rods being

mounted in said holes for fulcrums, and the other two of said rods being mounted in said slots to swingably ride



therein, and spring means for normally urging the swing plate to its outermost position.

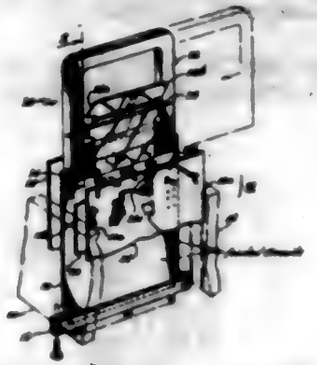
2,893,776

BUMPERETTE MOUNTING MEANS

Harley J. Earle, Grosse Pointe Farms, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application November 23, 1953, Serial No. 393,852
3 Claims. (Cl. 293—63)

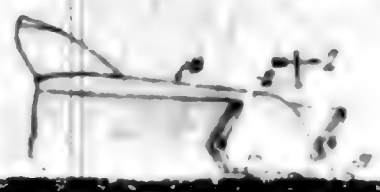
configuration identical to that of said pluralities of holes, said locking member being mounted to occupy either a locked position in which said plurality of metal locking pins extend through the plurality of holes in one wall of said groove, across said groove, and into the plurality of holes in the other wall of said groove, or an unlocked position in which said plurality of metal locking pins are fully withdrawn from said groove; spring means normally retaining said locking member in said locked position; and means operable when said locking member is in said unlocked position and the outer edge of the plate is inserted into said groove for



automatically establishing a predetermined position of the handle with respect to the plug-in unit, said last-named means including an aligning pin permanently bridging a portion of said groove spaced, between the longitudinal ends of said groove, and between the ends of the legs of the U of the groove and a portion of said groove opposite said leg ends of said groove, with said aligning pin being adapted to mate with a passageway in said unit constructed to receive said aligning pin during insertion of said unit into said handle for de-

posite said swinging link mounting means with said axis parallel to said swinging link mounting means, said latch arm being disposed in substantially the same plane as the swinging link, latch arm engaging means on the free end of said swinging link, means on the free end of the latch arm positioned to be releasably engageable with said latch arm engaging means, a flexible cable fixed at one end to the frame and at its other end to one of said tongs at a point outwardly from and below the point of pivotal joining, the length of said cable being shorter than the distance the tongs move downward with the downward movement of the swinging link whereby the tongs are caused to open when the swinging link moves downward, the combined length of the swinging link and the latch arm being greater than the distance between the latch arm mounting means and the swinging link mounting means so that when the free ends thereof are engaged they are respectively upwardly inclined and the locking engagement of the latch arm engaging means with the means on the free end on the latch arm adapted to retain the swinging link in an upward position whereby the cable is ineffective and the tongs are permitted to close.

2,893,779
FILLER ACCESS MECHANISM
George R. Bayley, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 17, 1956, Serial No. 610,111
5 Claims. (Cl. 296—1)



disposed floor, vertically disposed side walls terminating in outwardly inclined portions provided with rolled edges, a housing telescopically connected to said body, and including a horizontally disposed base and vertically disposed side members, a clamp operatably connected to each of said rolled edges, a support member operatably connected to each clamp and including an L-shaped beam, a plurality of rollers extending outwardly from the side members of said housing, said rollers engaging the upper edge of said beams, there being opposed cutouts in said side members, a hollow casing adjustably mounted in each of said cutouts and each casing including an outer vertically disposed web and substantially horizontal spaced parallel flanges extending inwardly from said web and secured thereto, said casing being of substantial size so as to permit enlargement of the usable living space in the housing, a horizontally disposed brace secured to the inner surface of each of said side members and positioned below said casing, each of said braces being provided with a recess, and doors hingedly connected to said casings and mounted for movement into and out of registry with the recesses in said braces said doors being in a vertical position when the casings are in retracted position, and said doors being in a horizontally disposed position when the casings are in extended position, said casings being adjustable in a horizontal plane.

2,893,781
WINDOW GUIDE MECHANISM
William G. Hoag, Grosse Pointe, and Robert C. Lion, Livonia, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application March 8, 1957, Serial No. 644,943
4 Claims. (Cl. 296—44.5)

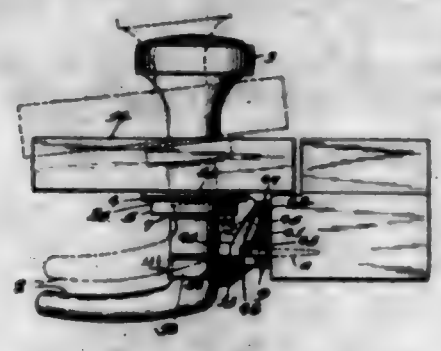
movement of the latch member, a flat substantially planar plate resiliently deflectible in a direction substantially normal to the plane thereof and having one edge secured to said mounting plate, said flat plate normally lying in face-to-face engagement with the mounting plate, the mounting plate being interposed between the flat plate and the latch member, a second edge of the flat plate spaced from the one edge being movable upon deflection of said flat plate in a direction substantially normal to the plane of movement of the latch member, a detent mounted upon said flat plate adjacent the second edge thereof, said detent projecting into the path of movement of said latch member when said flat plate is in face-to-face engagement with said mounting plate and said latch member is in locked position, first cam means on said flat plate engageable with said latch operating mechanism during unlatching movement thereof to deflect the flat plate so as to move said second edge thereof away from said mounting plate, thereby retracting said detent from the path of said latch member, second cam means movably mounted upon said mounting plate, spring means anchored to said mounting plate and connected to said second cam means normally biasing said second cam means when the latch is in unlocked position to a first position wherein said second cam means retains said flat plate deflected and said detent out of the path of movement of said latch member, and means connected to said second cam means and actuated upon movement of the door to its closed position for moving said second cam means against the bias of said spring means to a second position wherein said second cam means frees said flat plate for return to its normal position in face-to-face engagement with said mounting plate and with said detent interposed in the path of movement of said latch member.

improvement which comprises a plunger associated with said first member, said plunger comprising a shaft and overhanging head, said shaft being supported adjacent said first member and extending longitudinally therefrom plunger head first otward said second member, a bracket associated with said second member, said bracket being laterally arranged, longitudinally behind said striker plate at a distance from the said restrained teeth on said striker plate slightly less than the distance from said restrained teeth to the head of said plunger so that the head of said plunger passes behind said bracket and will contact said bracket before there is longitudinal disengagement of said meshed gear teeth, said bracket having a slot therein positioned in the path of said plunger head and having a receiving open end to permit entry of said shaft, the width of said slot being larger than that of said plunger shaft but smaller than that of said plunger head, and a recess within the automobile member to which the said second member is attached, positioned longitudinally behind the slot in said bracket for the accommodation of said plunger head.

2,893,775
LATCHING MECHANISM
Harry F. George, Park Ridge, Ill.
Application April 1, 1957, Serial No. 649,840
2 Claims. (Cl. 292—341.17)

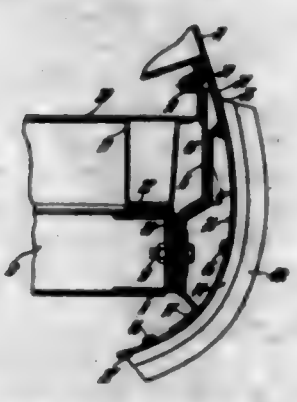
2. A striker plate for door latching mechanism, comprising, a supporting frame having a base member formed at each of its ends with an upstanding flange, a swing plate between said flanges, each of the longitudinal edges of the swing plate having bent-under portions having fixed therein projecting rods arranged two on each of said longitudinal edges, each of said flanges having a hole and a slot spaced from said hole, two of said rods being

mounted in said holes for fulcrums, and the other two of said rods being mounted in said slots to swingably ride



therein, and spring means for normally urging the swing plate to its outermost position.

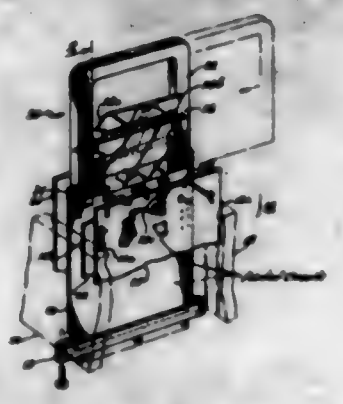
2,893,776
BUMPERETTE MOUNTING MEANS
Harley J. Earle, Grosse Pointe Farms, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 23, 1953, Serial No. 393,852
3 Claims. (Cl. 293—63)



1. In combination in an automobile, a chassis, a main body structure formed of sheet material mounted on said chassis and including a rear body brace transverse to the chassis, rearwardly thereof and adjacent thereto, a rear transverse body panel forming a transverse portion of the main body structure at the rear of the chassis, at least one bumperette mounted on the rear outer surface of said rear transverse body panel, a backing plate secured to said rear transverse body panel and having a main portion spaced forwardly of said rear transverse body panel and rearwardly of said chassis, means securing the main portion of the backing plate to said rear body brace, means connecting the main portion of the backing plate to the chassis, and a yieldable block between the main portion of the backing plate and the chassis.

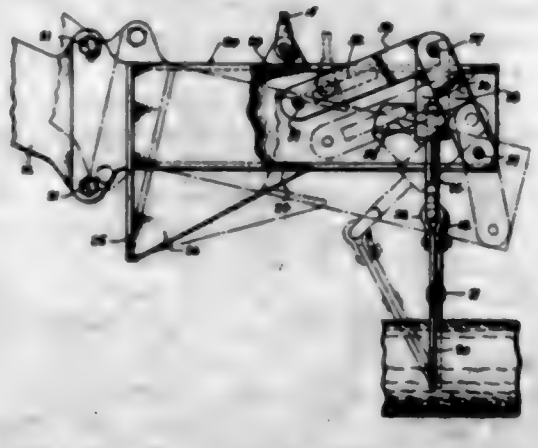
2,893,777
ELECTRONIC PLUG-IN UNIT HANDLE
Richard J. O'Neill, Fullerton, and Donald L. MacIntyre, El Monte, Calif., assignors, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Application January 15, 1957, Serial No. 634,186
4 Claims. (Cl. 294—1)

1. A detachable handle for an electronic plug-in unit including a thin plate having a perforated outer edge, said handle comprising: a body portion adapted to be gripped by hand and having an elongated, substantially U-shaped groove at one end thereof for engaging said thin plate, each of the opposing walls of said groove having a plurality of holes therein respectively aligned with the corresponding holes in the opposite wall; a locking member hinged to and movably mounted on said body portion and having a plurality of metal locking pins mounted thereon opposite said holes and in a configuration identical to that of said pluralities of holes, said locking member being mounted to occupy either a locked position in which said plurality of metal locking pins extend through the plurality of holes in one wall of said groove, across said groove, and into the plurality of holes in the other wall of said groove, or an unlocked position in which said plurality of metal locking pins are fully withdrawn from said groove; spring means normally retaining said locking member in said locked position; and means operable when said locking member is in said unlocked position and the outer edge of the plate is inserted into said groove for



automatically establishing a predetermined position of the handle with respect to the plug-in unit, said last-named means including an aligning pin permanently bridging a portion of said groove spaced, between the longitudinal ends of said groove, and between the ends of the legs of the U of the groove and a portion of said groove opposite said leg ends of said groove, with said aligning pin being adapted to mate with a passageway in said unit constructed to receive said aligning pin during insertion of said unit into said handle for determining the position of said unit relative to said handle.

2,893,778
AUTOMATIC TONGS
Ernest E. Eckstein, Elgin, Oreg.
Application February 5, 1957, Serial No. 638,359
5 Claims. (Cl. 294—116)



1. A tong mechanism comprising a longitudinally elongated, box-like, steel frame structure mounted in fixed position on the outer end of a dipper stick, or the like, a pair of crossed and pivotally joined tongs, said tongs having upper ends extending above the point of pivotal joining and lower ends adapted to engage a log, a swinging link, a transversely disposed mounting means on the outer end of said frame, one end of said swinging link pivotally mounted on said mounting means, means pivotally connecting the upper ends of said tongs and the free end of said swinging link, a latch arm having one end thereof pivotally mounted and the other end free, means for pivotally mounting said latch arm on an axis transverse of the steel frame at the end thereof op-

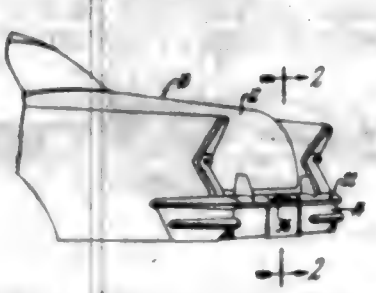
posite said swinging link mounting means with said axis parallel to said swinging link mounting means, said latch arm being disposed in substantially the same plane as the swinging link, latch arm engaging means on the free end of said swinging link, means on the free end of the latch arm positioned to be releasably engageable with said latch arm engaging means, a flexible cable fixed at one end to the frame and at its other end to one of said tongs at a point outwardly from and below the point of pivotal joining, the length of said cable being shorter than the distance the tongs move downward with the downward movement of the swinging link whereby the tongs are caused to open when the swinging link moves downward, the combined length of the swinging link and the latch arm being greater than the distance between the latch arm mounting means and the swinging link mounting means so that when the free ends thereof are engaged they are respectively upwardly inclined and the locking engagement of the latch arm engaging means with the means on the free end on the latch arm adapted to retain the swinging link in an upward position whereby the cable is ineffective and the tongs are permitted to close.

2,893,779

FILLER ACCESS MECHANISM

George R. Bayley, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application September 17, 1956, Serial No. 610,111
5 Claims. (Cl. 296—1)



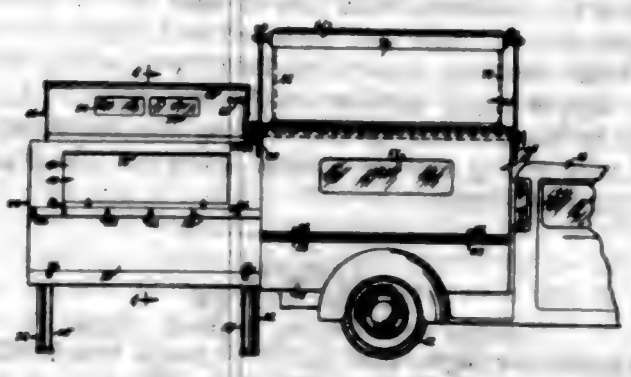
1. In combination, a vehicle body having a frame and body panels, a bumper having a face plate, said bumper being secured to said frame and spaced from said body panels, a storage area, a rear deck and a rear deck lid cooperating with said panels and frame to provide a closure for said storage area, a filler neck for a fluid-containing tank extending under said storage area and into said bumper, said bumper face plate having an aperture therein, and an access door hinged to said bumper face plate whereby said filler neck may be exposed adjacent said face plate aperture.

2,893,780

PICKUP TRUCK TELESCOPING CABIN UNIT

William Ervine, Billings, Mont.

Application September 27, 1956, Serial No. 612,463
6 Claims. (Cl. 296—23)



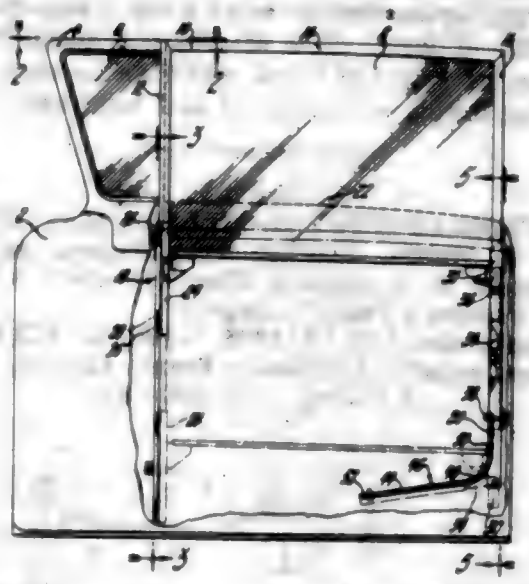
1. In combination with a vehicle of the pickup type including a body, said body including a horizontally disposed floor, vertically disposed side walls terminating in outwardly inclined portions provided with rolled edges, a housing telescopically connected to said body, and including a horizontally disposed base and vertically disposed side members, a clamp operatably connected to each of said rolled edges, a support member operatably connected to each clamp and including an L-shaped beam, a plurality of rollers extending outwardly from the side members of said housing, said rollers engaging the upper edge of said beams, there being opposed cutouts in said side members, a hollow casing adjustably mounted in each of said cutouts and each casing including an outer vertically disposed web and substantially horizontal spaced parallel flanges extending inwardly from said web and secured thereto, said casing being of substantial size so as to permit enlargement of the usable living space in the housing, a horizontally disposed brace secured to the inner surface of each of said side members and positioned below said casing, each of said braces being provided with a recess, and doors hingedly connected to said casings and mounted for movement into and out of registry with the recesses in said braces said doors being in a vertical position when the casings are in retracted position, and said doors being in a horizontally disposed position when the casings are in extended position, said casings being adjustable in a horizontal plane.

2,893,781

WINDOW GUIDE MECHANISM

William G. Hoag, Grosse Pointe, and Robert C. Liem, Livonia, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

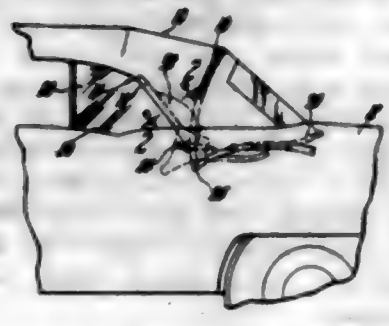
Application March 8, 1957, Serial No. 644,943
4 Claims. (Cl. 296—44.5)



1. In combination, a vehicle door of the type terminating vertically at the belt line of the vehicle, a wing window assembly mounted on said door at the forward top edge thereof, a first vertical guide member of C-shaped cross section mounted in said door in alignment with the rear edge of said wing window, a second vertical guide member of U-shaped cross section mounted in said door in longitudinally spaced relation from said first member, a main window disposed in said door and movable from a recessed position therein to an elevated position above said belt line, a frame for said window comprising a forward, rearward and top portion, a depending leg rigidly secured to said forward portion, a plurality of transversely spaced rollers secured to the forward edge of said depending leg and slidably engaging said first guide member, a strut pivotally connected to the lower end of said rearward portion for swinging movement about an axis transverse to the plane of said window, a forwardly directed curved track

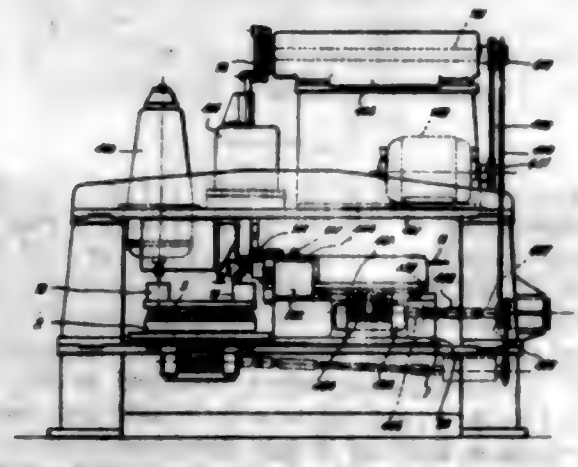
extending between said second guide and the base of said door, and a pair of rollers attached to the lower end of said strut and engaging said track to guide said strut from a generally horizontally forwardly directed position when said window is in recessed position to a generally vertical position within said U-shaped guide when said window is in elevated position.

2,893,782
ATTACHMENT OF CONVERTIBLE TOP FABRIC TO SIDE RAIL
Samuel C. Pollock, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 1, 1955, Serial No. 550,267
6 Claims. (Cl. 296—107)



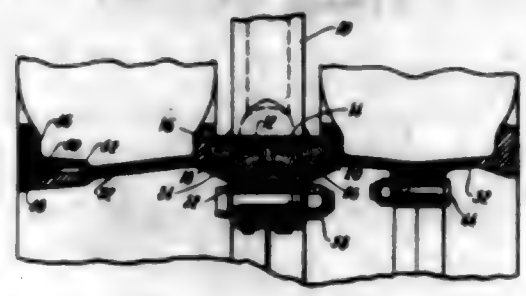
1. In a vehicle body, the combination comprising, a foldable top frame mounted on said body for movement between raised and lowered positions and including a pair of spaced foldable side rails, each having a rear rail section, a convertible top supported by said frame for movement therewith and including a rear quarter edge portion located adjacent said rear rail section, and means operatively interconnecting said rear rail section and said edge portion and permitting relative movement therebetween during movement of said top frame to thereby respectively produce slack in said top during lowering movement of said top frame and take up slack in said top during raising movement of said top frame.

2,893,783
AUTOMATIC BRUSH-FILLING MACHINE
Jean P. P. Martin, Beauvais, Oise, France, assignor to La Brosse & J. Dupont Reunis (Société Anonyme), Paris, France, a French company
Application July 18, 1955, Serial No. 522,645
Claims priority, application France July 24, 1954
8 Claims. (Cl. 300—9)



1. A feeding head for a machine for filling brush-heads with continuous synthetic fibres arriving at the said head in the form of a layer and which feeds into the filling device of the said machine hanks of pre-determined lengths severed from the said layer, said feeding head comprising two pairs of gripping jaws through which the said layer of fibres is arranged to pass and which are disposed for clamping individually the layer by means of electro-dynamic control members, one of the said pairs of jaws being fixed and the other pair movable during the major part of the period comprised between the filling of two successive hanks; a further electro-dynamic member being adapted so as to displace the movable pair of jaws once with a to-and-fro movement parallel to the direction of the continuous fibres layer during said period; a rear stop member for preventing further movement of the said movable pair of jaws during its displacement; a cam coupled to the rear stop so as to determine the position of the said rear stop; a second cam coupled to the said fixed pair of jaws in order to set the distance between this fixed pair of jaws and the axis of said filling device extending at right angles with respect to the direction of movement of said movable pair of jaws; and, to sever the hanks from the said layer of fibres, a shearing device comprising a plate carried by the said fixed jaws and a U-shaped shearing knife carried by said filling device arranged and adapted to move laterally on said filling device and urged against said plate for sliding thereon, said plate and said shearing knife having holes extending therethrough which are in registration during the feeding period of the fibre layer into said feeding device.

2,893,784
CO-ROTATING DUAL WHEEL CONSTRUCTION
Thomas C. Deliker, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application January 15, 1954, Serial No. 404,327
2 Claims. (Cl. 301—36)

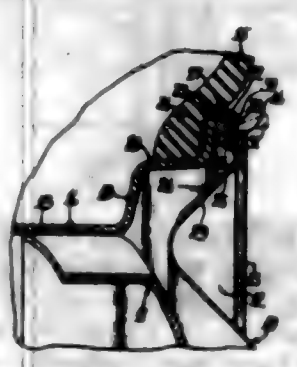


1. In an aircraft undercarriage, a turnable tubular strut member, and a dual wheel assembly carried at the end of said strut and comprising a vertically supported annular bearing housing carried at the lower extremity of said tubular strut member, tapered bearing means carried within said housing, and a pair of hubless co-rotating wheels rotatably supported on said bearing means, each of said wheels comprising a tire-supporting rim section having an inside diameter substantially the same as said bearing housing and an axially extending annular flange integral with one side of said rim section, said flange being carried on the inner periphery of said bearing an inflatable ground-engaging tire supported on each of said wheels and distortable by the weight of said aircraft, said tires being caused to scuff in ground engagement during differential rotation of the tires to thereby resist shimmying of the wheel assembly, and means for connecting said flanges in adjacent relationship, said connecting means comprising an axially extending sleeve having its one end flanged for abutment with one of said axially extending flanges and its other end threaded to receive a packing nut which abuts the other of said axially extending flanges, said flanges being thereby constructed and arranged to resist by force couple the side loading imposed thereon by said tires during scuffing thereof when the wheel assembly tends to shimmy.

2,893,785
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application September 26, 1956, Serial No. 536,711
9 Claims. (Cl. 301—37)

1. In a wheel structure including a rim having a generally radially extending annular flange connected to a

generally axially outwardly extending annular terminal flange with the junction of the flanges providing an annular seat, a circular cover member for disposition on the outer side of the wheel including a generally radially outwardly extending cover portion having an outer marginal edge disposed radially inwardly of the terminal rim flange, and a plurality of circumferentially spaced retaining spring clips attached to said cover portion each including a generally radially extending attachment and clip back up portion with an outwardly depending portion terminating in an angular return bent generally axially outwardly extending terminal capable of snap-on, pry-off engagement in the annular rim seat, said return bent terminal being disposed between said terminal rim flange and said outer marginal edge spaced radially outwardly of said outer marginal edge.



2,893,706

BRACKET TYPE SCAFFOLDING, ADJUSTABLE IN HEIGHT, SLIDINGLY, FOR CONCRETE WALL ERECTION

Louis Faye, Paris, France

Application February 11, 1957, Serial No. 639,470
Claims priority, application France February 10, 1956
8 Claims. (Cl. 304—14)

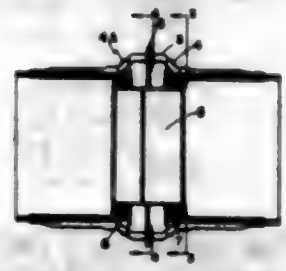
1. An apparatus for forming a bracket type scaffolding mounted slidingly on the built portion of a wall to be built by casting successive concrete courses in a planking held by columns of superposed pole elements in which the lowermost element is removed after the casting of one course for securing this element above the uppermost element and holding the planking of the next course to be cast, said apparatus comprising rectilinear elements of a roller runway to be secured vertically, end to end, against the working face of the wall to be erected for forming a runway extending downwards along the pole elements, an upright for each one of these runways, a pair of rollers mounted on each one of these uprights, said pair of rollers to be engaged for rolling inside the runway, a bearing for each upright, said bearing to be attached against the working face for supporting the weight of the upright while holding said upright at the proper height for the construction of the course to be cast, and platforms to be mounted at various levels between two consecutive bearings for serving as work stations.

2,893,787

OVERLOAD SPROCKET FOR TRACK LAYING VEHICLES

William Bruce Nedwell, Calgary, Alberta, Canada

Application May 29, 1958, Serial No. 738,811
5 Claims. (Cl. 305—1)



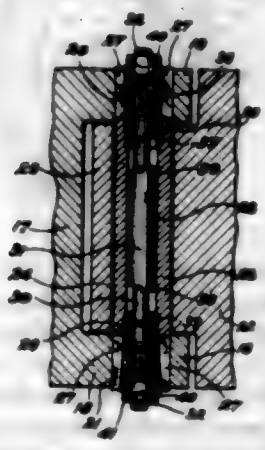
1. A self laying track mechanism for tracked vehicles comprising a driving wheel and a track adapted to be driven thereby, said driving wheel comprising a pair of axially spaced apart sprockets having axially alined driving teeth thereon adapted to engage grouser bars on the tracks, an overload sprocket having overload teeth thereon, said overload teeth being so designed and disposed so as not to engage the grouser bars under normal driving conditions but to assume the load of the grouser bars under overload conditions under which the track stretches.

2,893,788

MASTER PIN FOR AN ENDLESS TRACK

Harold William Yerian, Cumberland, Ohio

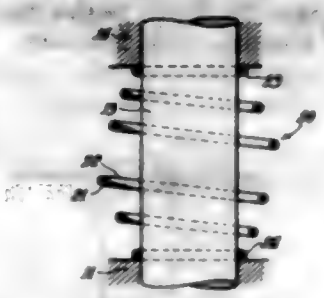
Application February 20, 1956, Serial No. 566,417
5 Claims. (Cl. 305—10)



1. A master pin for joining links including a hollow pin extending transversely through said links and having a slotted expansible portion adapted to fit within a hole in a link member, said slotted portion having a frusto-conical interior surface, a hollow wedging member having a frusto-conical exterior surface fitting within the interior surface of said slotted portion, said frusto-conical surface tapering at a small angle to the axis of said pin, a bolt adapted to be positioned within said pin with a threaded end projecting through said hollow wedging member, a nut on said threaded end, said nut and said hollow wedging member having cooperating bearing surfaces arranged at a greater angle to the axis of said pin than said frusto-conical surfaces and means securing the other end of said bolt within the other end of said pin, whereby tightening said nut on said threaded end is effective to drive said wedging member into said slotted portion of said pin and exert an expand-

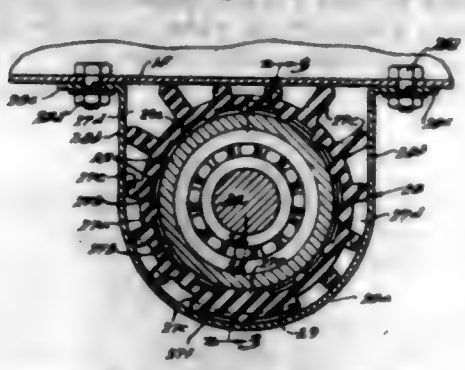
ing force on said slotted portion exceeding the force applied to said bearing surfaces of said nut and wedging member.

2,893,789
LUBRICATORS
William V. Heinz, La Salle, Ill.
Application June 20, 1955, Serial No. 516,653
4 Claims. (Cl. 308—5)



2. A device for lubricating a rod on which a member is adapted to reciprocate comprising a helix of spring material surrounding said rod and an absorbent covering loosely surrounding said spring material whereby said covering may be moved along said helix, said helix being arranged to be compressed as said member reciprocates whereby a portion of said absorbent covering slides on said rod.

2,893,790
CENTER BEARING MOUNTING FOR VEHICLE PROPELLER SHAFT
Oscar M. Rees, Utica, and Eugene Kleemann, Fraser, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application March 27, 1956, Serial No. 574,262
11 Claims. (Cl. 308—184)



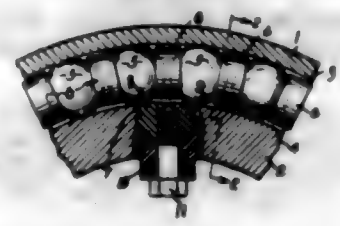
1. In an automotive vehicle having a frame and a propeller shaft, a bearing housing having said shaft extending therethrough and journaled therein, said housing having an exterior cylindrical portion coaxial with said shaft, an insulator of resilient deformable material comprising a body extending around said portion and having a plurality of circumferentially spaced alternate inner and outer ribs extending axially of said body, the inner ribs engaging said portion and spacing the latter from the body, and an outer housing fixed with respect to said frame and extending around said insulator, said outer ribs engaging the interior of said outer housing and spacing the same from said body, the axially opposite ends of said outer ribs having notches in their radially outer portions, each notch extending the full circumferential width of its rib and partially the radial depth thereof.

2,893,791
BALL BEARING
Oswald von Mehren, Lorain, Ohio, assignor to The Thew Shovel Company, Lorain, Ohio, a corporation of Ohio
Application May 21, 1957, Serial No. 660,594
4 Claims. (Cl. 308—199)

1. A ball bearing comprising bearing members formed with complemental raceways; a series of balls engaged in such raceways; and resiliently deformable spacers disposed between successive balls; said spacers each comprising a pair of annular spring elements having radially inner ball-contacting portions, and an intervening member for positively arresting the extent of resilient deformation of said elements under the crowding influence of the

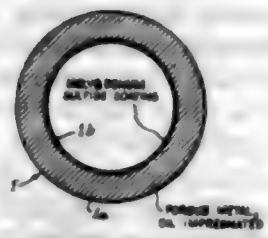
respective balls, said intervening member having opposite end faces that contact the peripheral portions of the respective elements and that are out of contact with the radially inner portions of the respective elements except when the latter have been resiliently deformed to such predetermined extent.

2,893,792
BALL BEARING
Ramon F. Wikoff, Amherst, and Carrol G. Turk, Elyria, Ohio, assignors to The Thew Shovel Company, Lorain, Ohio, a corporation of Ohio
Application May 21, 1957, Serial No. 660,595
3 Claims. (Cl. 308—199)



3. A ball bearing spacer comprising a rigid circumferentially continuous tubular housing formed with coaxial annular concave ball seats at its ends, and a resiliently deformable component in said housing also having coaxial annular concave ball seats at its ends which are located concentrically within and axially beyond the seats of said housing and which are adapted to yieldably oppose crowding movement of balls engaged therewith, the ball seats at the ends of said housing constituting stops engaged by the adjacent balls upon predetermined crowding action thereof to arrest the extent of deformation of said component.

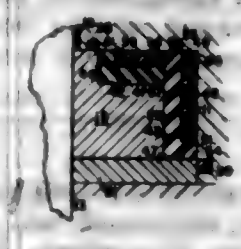
2,893,793
OIL-IMPREGNATED BEARING HAVING MOLYBDENUM SULFIDE COATING AND METHOD OF MAKING SAME
Rudolph L. Ryshavy, North Plainfield, N.J., assignor to Bound Brook Oil-Less Bearing Company, Bound Brook, N.J., a corporation of New Jersey
Application March 9, 1954, Serial No. 415,102
4 Claims. (Cl. 308—240)



1. The method of making an oil-impregnated porous bearing having a porous molybdenum sulfide coating, comprising the steps of compressing a quantity of metal powders free of molybdenum sulfide to form an over-

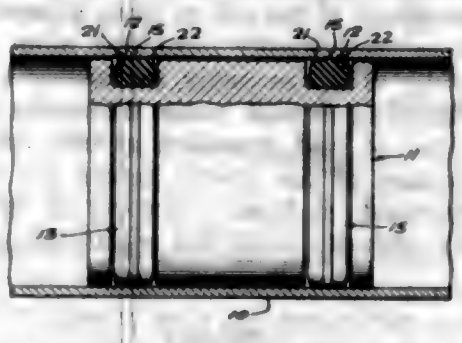
size bearing element, sintering said element, dipping said element, sintered and dry, in an oil suspension of pulverized molybdenum sulfide for a time not greater than five seconds, so that some of the oil flows into the pores of the element, thereby depositing on the surfaces of the element a coating of molybdenum sulfide sufficient to fill a portion only of the surface pores of the element, and then compressing said element to a substantially smaller size by the application of pressure and rubbing action to the working surfaces of said element, thereby welding said coating of molybdenum sulfide to said working surfaces.

2,893,794
FLUID SEAL
Karlis Ilens, Kalamazoo, Mich., assignor to Cleveland Pneumatic Industries, Inc., a corporation of Ohio
Application August 27, 1957, Serial No. 680,570
4 Claims. (Cl. 309—22)



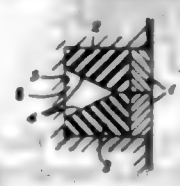
1. A fluid device having a pair of relatively movable parts, one of said parts being formed with first and second surfaces intersecting at a corner, the other of said parts being movable along said surfaces, a channel in said other part open adjacent to said first and second surfaces, an elongated relatively rigid element positioned in said channel engaging and sealing against a portion of the length of said first surface to said corner and terminating in a first end engaging and sealing against said second surface adjacent to said corner, a resilient member in said channel between the bottom thereof and said element exerting a sealing force on said element and extending into sealing engagement with said second surface adjacent to said element first end, and into sealing engagement with another portion of the length of said first surface adjacent to the other end of said element.

2,893,795
SEALING RING
Russell F. Dooling, Los Angeles, Calif.
Application January 12, 1959, Serial No. 786,261
3 Claims. (Cl. 309—23)



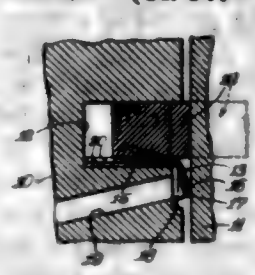
1. In combination, first and second relatively movable members, the first member having an annular rectangular ring groove therein open toward the second, an elastomeric annular sealing member in said groove arranged loosely with respect to the sides of the groove but radially compressed between the members, said sealing member being of generally rectangular cross-section when relaxed and having an annular lip arranged intermediate its sides on that face of the ring disposed toward the second member, the sides of the sealing member being approximately equal in thickness to the distance between the back of the groove and the second member, and the lip being depressed into the body of the sealing ring forming grooves on both sides of the lip in the face of the sealing member disposed toward the second member.

2,893,796
SEALING RINGS
John W. Howlett and Kenneth Arthur Blackleck, Lymington, England, assignors to Wellworthy Limited, Lymington, England, a British company
Application November 15, 1954, Serial No. 468,943
Claims priority, application Great Britain November 18, 1953
5 Claims. (Cl. 309—43)



5. A sealing arrangement comprising a piston having a sealing ring groove formed therein, a pair of sealing rings disposed side-by-side in said ring groove, each of said sealing rings comprising a metal ring, a rubber ring bonded onto the peripheral face of said metal ring which faces the bottom of the groove, said rubber ring extending substantially entirely across said face, but not extending axially beyond said face and radially over the metal ring, at least one radially-directed split extending through said metal ring and said rubber ring, the two rubber rings being chamfered partly across the axially-extending face of each ring to form a circumferentially extending cavity therebetween within the sealing ring groove and said sealing rings being arranged in said groove such that the splits in the two sealing rings are displaced out of alignment.

2,893,797
PISTON RING ASSEMBLY
Arthur M. Brownoke, Hagerstown, Ind., assignor to Perfect Circle Corporation, Hagerstown, Ind., a corporation of Indiana
Application August 8, 1956, Serial No. 602,776
12 Claims. (Cl. 309—44)



1. A combined compression and oil ring assembly for use in a piston ring groove of a piston, comprising an oil ring member having two angularly related flanges, one flange being adapted to extend into the groove and tending to swing upwardly and the other flange extending downwardly, and a compression ring member adapted to be mounted in the groove to force said one flange downwardly and thereby swing said other flange outwardly for engaging the cylinder wall, said one flange being slitted to permit it to be readily forced downwardly by said compression ring member.

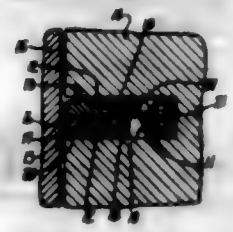
2,893,798
PISTON RING AND EXPANDER
Holly M. Olson, Muskegon, Mich., assignor to Sealed Power Corporation, Muskegon, Mich., a corporation of Michigan
Application October 22, 1956, Serial No. 617,505
8 Claims. (Cl. 309—44)

1. A piston ring comprising two thin, metal, circular parted rails and a corrugated, metal, parted circumferen-

tially compressible spacer between the rails, said spacer having circumferentially spaced inner crowns and circumferentially spaced outer crowns, each inner crown being connected with the next adjacent outer crowns on opposite sides thereof by a pair of legs, said legs and the outer crowns being slotted between the upper and lower edges thereof, each of said slots extending continuously from one vertical side edge of one inner crown to

the adjacent vertical side edge of the adjacent inner crown so that the spacer is slotted between its upper and lower edges substantially throughout its circumferential extent except at said inner crowns, whereby the portions of said spacer lying radially outwardly of the inner crowns are vertically flexible and yieldable and adapted to resiliently press the outer portions of the rails against the sides of a piston ring groove in which the piston ring is placed.

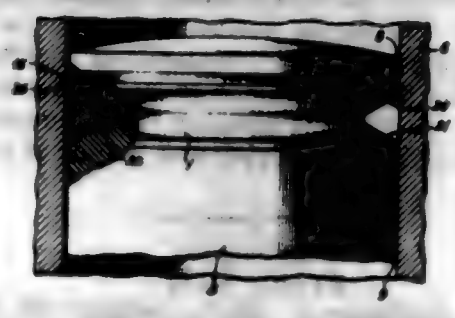
2,893,739
CIRCUMFERENTIAL EXPANDER TYPE PISTON RING ASSEMBLY
Melvin W. Marien, Brentwood, Mo., assignor to Ramsey Corporation, St. Louis, Mo., a corporation of Ohio
Application May 24, 1957, Serial No. 662,090
8 Claims. (Cl. 309—44)



1. An expander ring for providing biasing forces to the sealing rings in a ring groove of a piston reciprocably disposed in a cylinder, comprising, a split annular member having a series of U-shaped radial cross-sections; the open end of the U being inwardly directed; the legs of the U-shaped sections defining a pair of substantially flat parallel oppositely directed surfaces each adapted to engage the sides of the ring groove; and the bights of the U-shaped sections jointly defining a generally tubular surface for engaging the sealing rings; said tubular surface having a plurality of spaced slots extending transversely thereof and therethrough, one end of each of said slots further extending alternately through said parallel surfaces; whereby when said ring is radially constrained, it provides an outward radial force.

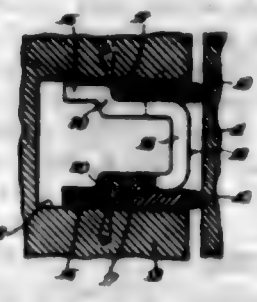
2,893,800
V-SHAPED SEALING RING
Karl-Heinz Schmidt, Burscheid (Koln), Fulleichel, and Richard Heep, Burscheid (Koln), Grossberg, Germany, assignors, by mesne assignments, to Rand-Goetze Corporation, Cleveland, Ohio, a corporation of Ohio
Application November 22, 1957, Serial No. 698,287
6 Claims. (Cl. 309—44)

1. A torsion ring adapted for use upon a piston mounted in a cylinder of an internal combustion engine, said ring comprising an annular element, said element being V-shaped in cross-sectional configuration and comprising a peripheral web and two legs, said web being substantially semi-circular in configuration, said legs being angularly disposed to each other and forming two opposed flanges each of which terminates in a cylinder wall contacting face, a ring groove in said piston of a shape complementary to the shape of the inner periphery of said web, said web being mounted for independent movement with respect to said groove whereby said ring



may rotate to press said faces against the cylinder wall, said element being of a resilient material to permit flexing thereof upon the application of pressure thereto, said flexing and said rotation causing both of said legs to come into tighter sealing contact with the wall of said cylinder.

2,893,801
PISTON RING ASSEMBLY
Robert W. Held, Jr., Richmond, Ind., assignor to Perfect Circle Corporation, Hagerstown, Ind., a corporation of Indiana
Application June 11, 1956, Serial No. 590,517
3 Claims. (Cl. 309—45)

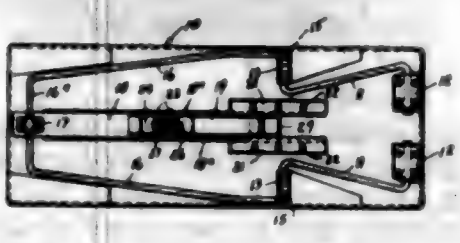


1. A piston ring assembly adapted to be mounted in a groove in a piston and comprising a cylinder-engaging rail, and positioning and expanding means comprising a U-shaped member formed from a strip of uniform thickness having its arms extending inwardly with one arm engaging the rail to hold it on one side of the groove, said one arm having an offset portion formed by bending the arm axially and then radially inward to provide a shoulder spaced from its free end and engaging the inner periphery of the rail to force it outwardly, said one arm extending inwardly from said offset to increase the radial width of the assembly, the inward extension of said one arm being of such radial dimension that, when the inner edge of said extension at one point thereon abuts the bottom of the groove before the ring assembly is compressed, at least a portion of the rail at a diametrically opposite point lies within the groove.

2,893,802
CAR INTERIOR SNACK TRAY
Emory M. Bittner, Columbia City, Ind.
Application October 30, 1958, Serial No. 770,782
5 Claims. (Cl. 311—22)

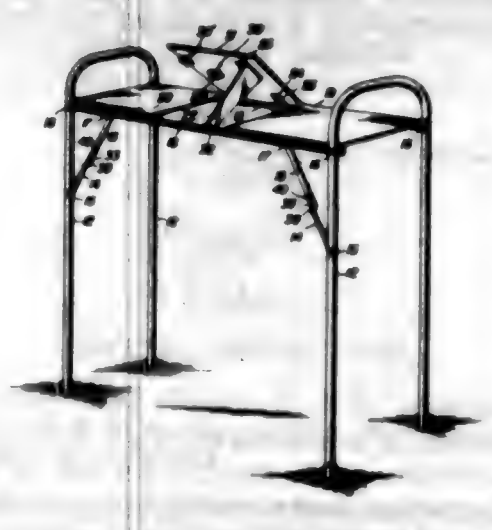
1. A curb service tray having a supporting structure adapted to detachably connect the tray to an automobile window ledge, said supporting structure including two support elements pivotally mounted on the under face of the tray at positions equally spaced from the axial center line of the tray, said support elements being pivotally movable in planes normal to the plane of the tray and being formed so as to converge toward the axial center line of the tray, the free ends of said elements being

reversely bent to provide portions extending parallel to the axis of pivotal support of said elements, rubber sleeves carried by said portions and adapted to engage the auto door surface when the tray is installed, a U-shaped support member having the extremities of its legs pivotally attached to said extending portions, a slide assembly supported on the under face of the tray and adapted to be slidably movable along the axial center line of the tray, means pivotally connecting the base of said U-shaped member to said slide assembly, said slide assembly comprising overlapping elongated elements, the end of one of said elements being formed to extend away from the



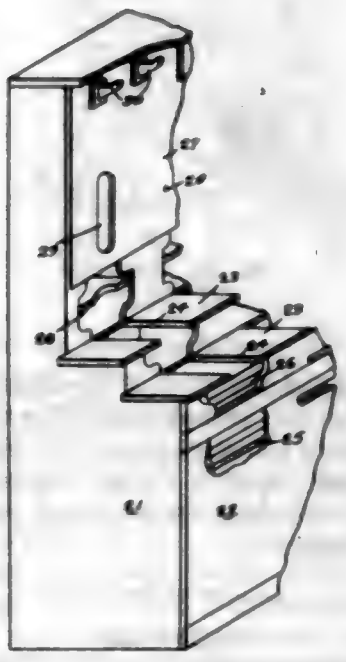
plane of the tray and thereby being adapted to engage an auto window ledge, an axial slot in said one element and a clamping screw extending through said slot and through an aperture in said other element to permit adjustable variation in the amount of overlap of said elements, movement of the legs of said U-shaped element downwardly and away from said tray serving to position the extending end of said one overlapping element beyond the margin of the tray and in auto window ledge engaging position, the extending portions of said support elements being thereby positioned for supporting engagement with an auto door surface.

2,893,803
COLLAPSIBLE OVERBED TABLE
Edwin L. Zivi, Severna Park, Md.
Application January 31, 1958, Serial No. 712,518
3 Claims. (Cl. 311—28)



1. A collapsible foldable utility table to be used spanning a bed, comprising a pair of tubular spacer members extending horizontally over the top of the bed, pairs of leg members formed by tubing bent in an inverted U-shape pivotally mounted on the ends of said spacer members adjacent the bend in said tubing, collapsible bracket members mounted on said spacer members and said leg members to stabilize the assembly when in use and to facilitate folding said assembly of leg members and spacer members into a substantially flat arrangement for storage, table top sections secured to said spacer members, said sections extending side by side between said leg members, one central top section having means to swivel on one edge of said top section about one of said spacer members, the other edge of said top member having a slotted link means having one end thereof pivoted to the edge of said top section, spring-biased guide means on said other spacer member to engage said slotted member to maintain said top section in a desired angular position.

2,893,804
MERCHANDISE CABINET
Robert F. Palmer, Belmont, Calif.
Application May 1, 1957, Serial No. 656,412
1 Claim. (Cl. 312—71)

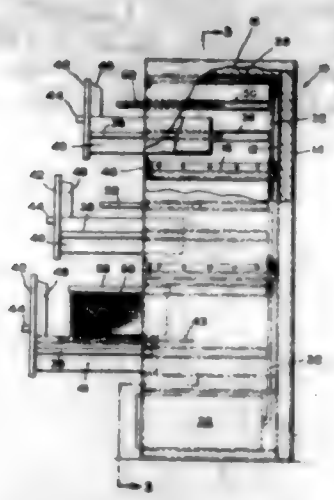


In a merchandise display and dispensing device, a cabinet having a flat horizontal portion, an opening in said flat portion, an elevator positioned beneath said opening and including a shelf adapted to have merchandise positioned thereon, means normally biasing said shelf towards said opening for display of merchandise, said shelf being positioned for movement between two vertical partitions, said partitions having channels therein, flexible means in said channels comprising wires, a U-shaped bracket disposed laterally and having one leg secured to the top of said shelf on each side thereof, lugs struck from the bight portion of each U-shaped bracket, and openings in the upper leg of each bracket, each wire extending through an opening and being attached to a lug to secure said wires to opposite sides of said shelf and extending upwardly from the top of said shelf, said biasing means including a spring reel at the top of said channel biasing said wire upwardly, and guide means comprising spring-biased ball casters extending from said shelf into said channel for guiding said shelf in a fixed vertical path.

2,893,805
DRAWER-TYPE REFRIGERATOR DEVICE
James T. Ferguson, Shreveport, La.
Application July 30, 1956, Serial No. 601,070
2 Claims. (Cl. 312—214)

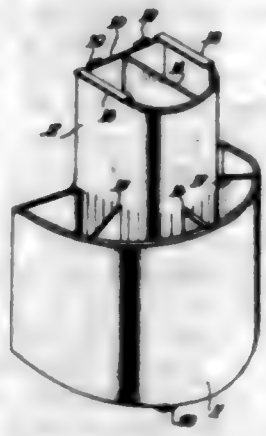
1. A refrigerator cabinet device comprising an insulated housing having a plurality of vertically arranged refrigerator compartments, each compartment being defined by the side and rear walls of said housing and an upper and lower refrigerator partition, there being an opening in the front wall of said housing, each refrigerator partition comprising a hollow casing having upper and lower spaced apart walls between which a refrigerator coil may extend, two pairs of oppositely disposed supporting rails in one of said compartments, one pair of rails being arranged vertically above the other pair within the compartment, a drawer extendable into the

compartment having oppositely disposed flanges slidably received on the lower pair of said pair of rails, the drawer having opposite side walls and a rear wall extending to at least the height of said lower pair of rails but substantially less than the height of the upper pair of



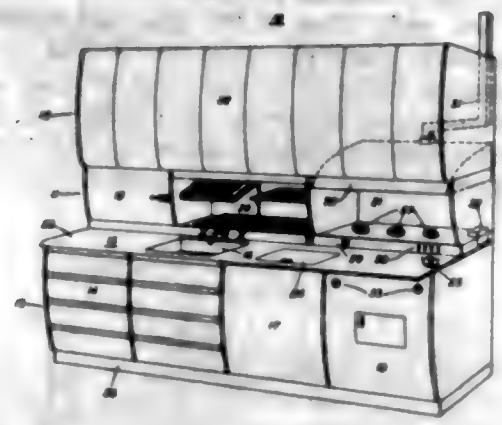
rails and a front insulating wall extending above and below the edges of the compartment opening in the front wall of the housing to thereby seal the compartment when in closed position, and a flanged foraminated support member slidably received on the upper pair of rails within the compartment.

2,893,806
CONTAINERS FOR CABINETS
Pearl Joseph, Morton Grove, Ill.
Application March 21, 1958, Serial No. 722,938
7 Claims. (Cl. 312—249)



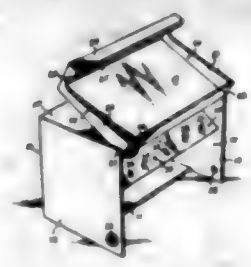
5. A container for the storage of different materials comprising an integrally molded back wall, a bottom wall, a first curved front and side walls, and a second curved front and side walls, said back wall and said first curved front and side walls extending upwardly from said bottom wall a certain distance thereabove, said second curved front and side walls having a radius of curvature greater than the radius of curvature of said first curved front and side walls and extending upwardly from said bottom wall a distance less than said certain distance, a pair of tracks securable in a cabinet, a pair of slides integrally molded on said container and having a shape for cooperation with said tracks in a longitudinal sliding relationship, said pair of slides being molded on the upper marginal edges of the side wall portions of said first curved front and side walls, so that said tracks are securable in a cabinet with said slides mountable on said tracks for said sliding movement of said container relative to said tracks in a depending relationship therefrom in a cabinet.

2,893,807
KITCHEN-UTILITY UNITS
Guyon L. C. Earle, New York, N.Y.
Application January 16, 1956, Serial No. 559,292
1 Claim. (Cl. 312—279)



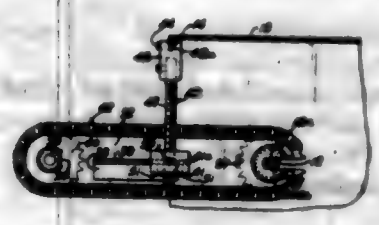
A kitchen-utility unit comprising a lower or base cabinet, an intermediate set-back cabinet positioned above and to the rear of said base cabinet, a table-top member above the portion of the base cabinet in front of said intermediate cabinet, and an upper cabinet having a hood and flue therein positioned above said intermediate cabinet, said intermediate cabinet having a plurality of burners therein positioned below said hood for venting through said hood and said flue, and said lower cabinet including a clothes drying machine which gives off warm, moist exhaust air and means for venting from said machine into said intermediate cabinet below said flue and positioned so that said exhaust air can be carried off by said hood and flue, said venting means having a lint trap therein.

2,893,808
PORTABLE ILLUMINATED COLLAPSIBLE SPEAKER'S STAND
Robert C. Waterman, Des Moines, Iowa
Application July 9, 1956, Serial No. 596,521
1 Claim. (Cl. 312—316)



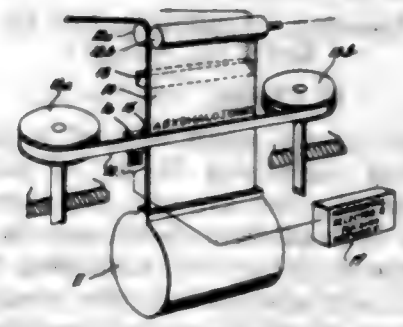
In combination, a housing container having two sides, a front, a bottom and a top, the last two of which terminates forward of the rear vertical plane of the housing container; said rear edge of said top forming a bar stop, a flat member hinged between the two upper rear portions of said two sides, respectively, and capable of being swung in one direction into engagement with said bar stop edge of said top and to extend over said top at an angle thereto whereby a speaker's platform over the container is formed and capable of being swung more than one hundred and eighty degrees in the other direction to a closed position for closing the rear side of said housing container, a flange on the inner hinged end of said flat member for closing the remainder of the top of said housing container when said flat member is in a closed position and a flange member for closing the remainder of the bottom of said housing container when said flat member is in a closed condition; said flange on the outer end of said flat member having a hood portion for retaining a light means.

2,893,809
MONITORING SYSTEM FOR WAVE SIGNAL RECEIVERS
Henry A. Rahmel, Evanston, Ill., assignor to A. C. Nielsen Company, Chicago, Ill., a corporation of Delaware
Application November 29, 1955, Serial No. 549,685
1 Claim. (Cl. 346—37)



An apparatus for monitoring the tuning condition of a television receiver of the type including an infinitely rotatable tuning shaft, comprising, a support bracket adapted to be secured to the chassis of said television receiver, first and second gears spatially supported and journaled in said bracket, said first gear being slotted from the periphery thereof to a central aperture therein, said bracket being slotted from the periphery thereof to the portion thereof which provides the journal for said gear, supporting means for securing said support bracket on said shaft in a desired position, said supporting means being adjustable in one direction to move the slotted portions of said first gear and said bracket into alignment with but spaced from said tuning shaft and being adjustable in a second direction perpendicular to said first direction to move said bracket toward said tuning shaft so that said tuning shaft is received in said slotted portions, means for fixedly securing said first gear to said tuning shaft, connecting means between said first and second gears such that said gears rotate infinitely in unison in either direction, rotary switch means having a wiper and a plurality of individual contact members, said wiper being adapted to selectively contact respective ones of said contact members, said switch means being operatively connected to said second gear such that the angular position of said second gear is determinative of which of said contact members is in engagement with said wiper, and a recorder connected to said switch means and having a plurality of electrically operated styli selectively controlled by the setting of said wiper relative to said individual contact members.

2,893,810
RECORDER MECHANISM
Burton F. Miller, Pacific Palisades, and William H. Fides, Torrance, Calif., assignors, by mesne assignments, to Thompson Ramo Wooldridge Inc., Cleveland, Ohio, a corporation of Ohio
Application January 3, 1958, Serial No. 706,962
21 Claims. (Cl. 346—74)



1. A recorder for printing information on an electrochemical printing medium in response to electrical signals representing the information, said recorder comprising: an insulative element having at least two lines of current-conductive material mounted thereon, said element being positioned in such a manner that said lines are contiguous to one surface of the printing medium; electrode means positioned contiguous to the other surface of the printing medium and of such configuration and orientation as to form a plurality of points of intersection with said conductive lines at each position on the printing medium whereat information is to be printed; and means for selectively energizing said lines of current-conductive material and said electrode means in accordance with the applied electrical signals, electrical current being caused to flow between said energized lines of conductive material and said electrode means at the points of intersection thereof, whereby a visible pigment is formed on the printing medium at the last-mentioned points of intersection to print the information corresponding to the electrical signals.

CHEMICAL

2,893,811
DYEING OF LEATHER
Joseph S. Kirk, East Greenbush, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Application December 30, 1955
Serial No. 556,439
4 Claims. (Cl. 8—12)

1. In a process for dyeing leather which has been tanned with a member of the group consisting of vegetable tanning agents and aqueous solutions of formaldehyde and a polyhydric phenol of the group consisting of resorcinol and pyrogallol, the improvement comprising dyeing such leather with a direct dyestuff from an aqueous dyebath at a pH of about 5½ to 7 containing about 0.1 to 5%, based on the weight of the leather, of a water-soluble non-ionic surface active agent having the formula $R—NH—(CH_2CH_2O)_nH$, wherein R is a straight chain aliphatic hydrocarbon radical of from 16 to 18 carbon atoms and n has a value of about 12 to 18.

2,893,812
DYEING OF MIXED TEXTILE MATERIALS
Yves Henri Guyonnet, Villefranche-sur-Saone (Rhone), France, assignor to Societe Rhodiaceta, Paris, France, a corporation of France
No Drawing. Application December 2, 1955
Serial No. 550,782
Claims priority, application France December 8, 1954
19 Claims. (Cl. 8—24)

1. A process for the level dyeing of textile materials containing both fibres of a cellulose derivative selected from the class consisting of the water-insoluble esters and ethers of cellulose and fibres of an acrylonitrile polymer selected from the class consisting of acrylonitrile homopolymer and copolymers of acrylonitrile with other vinyl compounds copolymerisable therewith, which copolymers contain at least 85% of acrylonitrile units, which comprises incorporating in said cellulose derivative fibres a colourless organic nitrogenous monomeric compound selected from the group which consists of (1) saturated heterocyclic compounds having 3–7 members in the ring, of which one is a single nitrogen atom, (2) cycloaliphatic amines, (3) amides obtained by the con-

densation of an aliphatic monocarboxylic acid having at least 12 carbon atoms in the chain with a polymethylene diamine, and (4) complexes of these compounds.

2,893,813

INDO-CARBON BLACK DYESTUFF COMPOSITIONS

Harvey Gurien, Cranford, and Robert E. Brouillard, and Charles W. C. Stein, Westfield, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application July 31, 1956
Serial No. 601,124

12 Claims. (Cl. 8—37)

1. A ready to dye sulfur dyestuff in stable aqueous emulsion form comprising 20 to 30 parts by weight of an indophenol sulfur dye of p-hydroxyphenyl-β-naphthylamine in reduced form, 5–15 parts by weight of an aliphatic hydroxy compound containing from 1 to 10 carbon atoms and selected from the group consisting of aliphatic mono- and di-alkanols, alkoxy alkanols, ethylene glycol monoalkyl ethers and diethylene glycol monoalkyl ethers, 5–20 parts by weight of a surface active agent selected from the class consisting of ionic and non-ionic surface active agents, and from 2 to 10 parts by weight of sodium sulfide.

7. A process of preparing a ready to dye fluid sulfur dyestuff in stable emulsion form which comprises heating at reflux 35–55 parts by weight of p-hydroxyphenyl-β-naphthylamine in the presence of 40–60 parts by weight of water, 40–60 parts by weight of an aliphatic hydroxy compound containing from 1 to 10 carbon atoms and selected from the group consisting of aliphatic mono- and di-alkanols, alkoxy alkanols, ethylene glycol monoalkyl ethers and diethylene glycol monoalkyl ethers, 5–60 parts by weight of caustic soda, 10–30 parts by weight of sodium sulfide, 75–100 parts by weight of sulfur and from 5–20 parts by weight of a surface active agent selected from the class consisting of ionic and non-ionic surface active agents, cooling the heated mass and diluting two parts by weight thereof with 1 part by weight of 10% aqueous sodium sulfide solution.

2,893,814

METHOD OF METALLIZING AZOIC DYEINGS

Clemens Streck, Londonville, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application December 28, 1956
Serial No. 631,062

17 Claims. (Cl. 8—42)

1. The process of producing metallized azoic prints and dyeings in situ which comprises treating a celluloseic fibrous material selected from the class consisting of cotton and regenerated cellulose with an azoic coupling component devoid of solubilizing groups and a diazo component derived from an amine base devoid of solubilizing groups to yield an azoic dye component capable of yielding an o,o'-dihydroxy azo configuration at elevated temperatures in the presence of a coordinating agent selected from the class consisting of lower alkylolamines and aliphatic amino- and hydroxy-carboxylic acids, and a metallizing copper compound consisting of soluble and dispersible salts and hydroxides of copper, and an oxidizing agent equivalent to 10–100% based on the weight of the metallizing agent, selected from the class consisting of alkali perborates, alkali chromates, hydrogen peroxide, alkali peroxides and nitrobenzenesulfonic acids and their alkali salts.

2,893,815

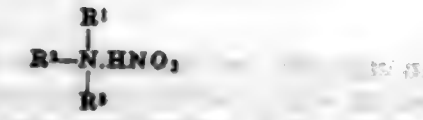
DIAZOTIZABLE AMINE COMPOSITIONS

Lester N. Stanley and Frederick W. Fossett, Delmar, N.Y.

No Drawing. Application December 31, 1956
Serial No. 631,478

15 Claims. (Cl. 8—44)

1. A composition having a pH of at least about 7, comprising, by weight, about 5 to 35% of a diazotizable primary amine compound devoid of solubilizing groups, a nitrite component selected from the group consisting of nitrous acid salts stable and soluble in neutral and alkaline solution and characterized by the formula



wherein R^1 and R^2 are selected from the group consisting of lower alkyl, cycloalkyl, aralkyl, and when taken together with each other, the carbon atoms necessary to complete with the central N atom, a 5 to 6 membered heterocycle; R^3 is selected from the group consisting of hydrogen, lower alkyl, cycloalkyl, and aralkyl; and R^1, R^2 and R^3 contain a total of no more than about 16 carbon atoms, and at least 50% mixtures thereof with an alkali metal nitrite, the total nitrite being in an amount at least sufficient to diazotize said diazotizable primary amine compound upon acidification, and an amount of an inert, organic, water-miscible solvent for said diazotizable primary amine compound within the range of about 5 to 45% by weight of the composition and sufficient to yield a substantially stable liquid dispersion.

2,893,816

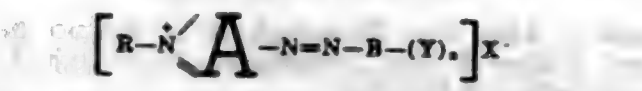
POLYACRYLONITRILES DYED WITH QUATERNIZED HETEROCYCLIC AZO DYES

Sien Moo Tsang, Middlesex, Charles E. Lewis, Somerville, and Albert P. Paul, New Brunswick, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application March 1, 1957
Serial No. 643,231

19 Claims. (Cl. 8—55)

1. Polyacrylonitrile containing at least 50% of acrylonitrile, colored by compounds which have the structure:



in which A is the remainder of an aromatic ring system, in which aromatic ring system the quaternary nitrogen is an integral part of a heterocyclic ring to which not more than one other ring is fused in the case where the said heterocyclic ring is fused to any other ring of said aromatic ring system, in which all rings between the quaternized nitrogen and the azo bridge which are not fused to the heterocyclic ring are linked in a continuous chain of conjugation, and through which aromatic ring system the said quaternary nitrogen is conjugated with the azo group, R is a non-aromatic organic radical, B is a carbocyclic aromatic radical of less than three rings, Y is an unionized substituent whose bond to an aromatic ring has a dipole moment greater than 1.00 Debye units with the negative end of said dipole at the ring, said substituents being conjugated with the azo bridge, *n* is a positive integer less than 3 and X^- is an anion.

2,893,817
DIAZOAMINO COLORING COMPOSITIONS ADAPTED FOR NEUTRAL STEAM DEVELOPMENT

Pierre Petitcolas, Rouen, André Paul Richard, Oissel, Robert Frederic Michel Sureau, Enghien, Rene Pierre Victor Roe, Rouen, and Jean Ernest Devolette, St. Etienne-du-Rouvray, France, assignors to Compagnie Francaise des Matieres Colorantes, Paris, France, a corporation of France

No Drawing. Application June 10, 1957
Serial No. 664,467
Claims priority, application France June 11, 1956
10 Claims. (Cl. 8—71)

1. Process of printing a material selected from the group consisting of natural and regenerated cellulosic material which comprises applying a printing paste containing at least one coupling component and a water soluble salt of a diazoamino derivative selected from those having the general formula:

$$\left(\text{HOOC}-\text{A}-\text{NX}-\text{N}=\text{N}-\right)_n\text{R}$$

in which A represents a member selected from the group consisting of the halogen substituted o-phenylene group, the alkyl substituted o-phenylene group, and the alkoxy substituted o-phenylene group, X represents a carboxy substituted alkyl, *n* represents a positive integer from 1 to 2, and R represents the radical of an aromatic amine having a more strongly basic character than 2:5-dichloraniline, and in developing the dyestuff by neutral steaming.

2,893,818
SOUR-BLUE FORMULATION

William A. Millenpa, Philadelphia, and Julian L. Stanbly, Oreland, Pa., assignors to Pennsalt Chemicals Corporation, a corporation of Pennsylvania

No Drawing. Application January 23, 1957
Serial No. 635,628
4 Claims. (Cl. 8—77)

1. A laundry sour-blue comprising commercial sodium fluosilicate, a blue dyestuff selected from the group consisting of Blue Dye-Colour Index 707 and Blue Dye-Color Index 698 and 0.1 to 3.0% of an alkali selected from the group consisting of sodium carbonate, sodium hydroxide, sodium orthosilicate, sodium metasilicate, sodium pyrophosphate and sodium tetraborate.

2,893,819
BLEACHING A PAPER WEB WITH PEROXIDE

Alfred T. Hawkinson, Niagara Falls, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application August 8, 1955
Serial No. 527,129
2 Claims. (Cl. 8—111)

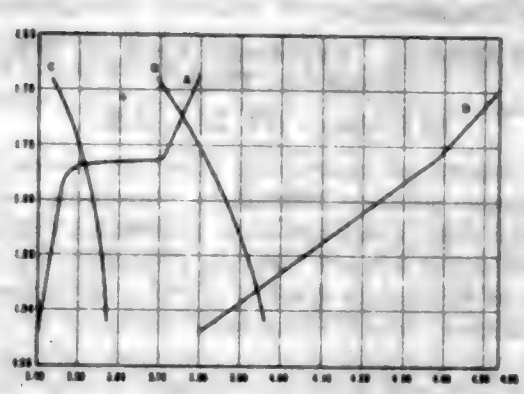
1. A bleaching process comprising separately applying to a moving paper web an aqueous alkaline liquid and hydrogen peroxide and drying the so-treated web by bringing it into contact with at least one rotating heated roll, while pressing the paper web against the heated roll surface by means of a taut, vapor permeable web constructed of polyethylene terephthalate fiber.

2,893,820
PROCESS FOR THE PRODUCTION OF REGENERATED CELLULOSE FILAMENTS

Philip S. Calvo, Jr., Richmond, Va., and William C. Moser, Seaford, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application July 16, 1956, Serial No. 598,175
5 Claims. (Cl. 18—54)

1. A process for the production of a regenerated cellulose filament which comprises extruding a viscose into a coagulating and regenerating bath containing an aqueous solution of sulfuric acid and from 10 to 20% by weight, based on the weight of the bath, of a mixture of sodium sulfate and zinc sulfate, the ratio of zinc sulfate to sodium sulfate being at least 0.4 and at least 1.0% sodium sulfate being present, sufficient sulfuric acid being present to provide an acid/alkali factor of from 1.0 to 1.76 and there being present during the coagulation and regeneration an organic coagulation modifier which limits the gel swelling ratio to a value no greater than 0.9.



2,893,821
PRODUCTION OF YARNS OF REGENERATED CELLULOSE HAVING IMPROVED PROPERTIES

Hugo Elling, Oberbruch-Grebben, Richard Elsner, Aachen, and Kurt Heuer, Obernburg (Main), Germany, assignors to American Enka Corporation, Enka, N.C., a corporation of Delaware

No Drawing. Application August 28, 1956
Serial No. 606,548
Claims priority, application Germany September 3, 1955
6 Claims. (Cl. 18—54)

1. In a method for the manufacture of regenerated cellulose yarns from viscose, the step which comprises adding to viscose a small amount of mono-isopropanol amine.

2,893,822
SEPARATION OF URANIUM FROM OTHER METALS

Herbert H. Hyman, Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application August 16, 1949
Serial No. 110,600
9 Claims. (Cl. 23—14.5)

1. A process for extracting uranium from an acid aqueous solution of a uranium salt, comprising adding hydrazine to said solution, extracting said uranium salt by means of a substantially water-immiscible ketone, and separating a ketone extract phase from an aqueous phase.

2,893,823
SEPARATION OF URANIUM FROM THORIUM

Nixon N. Hellman, Peoria, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application January 17, 1950
Serial No. 139,137
9 Claims. (Cl. 23—14.5)

1. A process for separating uranium from its mixture with thorium in which the ratio of thorium to uranium is at least 100 to 1, comprising dissolving said mixture in nitric acid, adjusting the concentration of total nitrate to from 4 to 8 N, thoroughly contacting said solution with a substantially water-immiscible ether, and separating an ether phase from an aqueous phase.

2,893,824

URANIUM RECOVERY PROCESS

Herbert H. Hyman, Chicago, Ill., and John L. Dreher, El Cerrito, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application April 19, 1950
Serial No. 156,938
15 Claims. (Cl. 23—14.5)

1. The process of recovering uranium values from an acidic aqueous solution containing phosphoric acid, sulfuric acid, a uranyl salt and salts of fission products, said solution resulting from a bismuth phosphate carrier-precipitation of plutonium from a solution of neutron-irradiated uranium, which comprises partially neutralizing said acidic solution with sodium hydroxide, adding to said partially neutralized solution sufficient sodium carbonate to effect a pH of about 11, contacting the resultant solution containing carbonate-complexed uranium values with a titanated silica gel adsorbent, separating said adsorbent from an aqueous medium, acidifying said aqueous medium to a pH between 4 and 5 with a lower aliphatic acid to form a precipitate containing uranium values, separating said precipitate and an aqueous medium, dissolving said precipitate in nitric acid to provide a uranyl nitrate solution, contacting said solution with a substantially water-immiscible organic solvent, and separating an organic solvent extract phase containing uranium values and an aqueous phase.

2,893,825

SEPARATION OF PROTACTINIUM FROM CONTAMINANTS

John G. Malm and Sherman Fried, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application April 11, 1951
Serial No. 220,532
5 Claims. (Cl. 23—14.5)

1. A method for recovering protactinium values from a thorium composition containing protactinium values, which comprises chlorinating said composition with an aluminum chloride chlorinating agent at a temperature between 100° and 600° C., and then distilling the volatile protactinium chloride thus formed from the chlorinated composition at a temperature in the range of 75° to 150° C.

2,893,826

PLATINUM HEXAFLUORIDE AND METHOD OF FLUORINATING PLUTONIUM CONTAINING MIXTURES THEREWITH

John G. Malm, Naperville, Bernard Weinstock, Western Springs, and Howard H. Claassen, Wheaton, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application September 17, 1957
Serial No. 684,622
6 Claims. (Cl. 23—14.5)

1. A process of separating plutonium values from mixtures containing said values, comprising reacting platinum with fluorine gas at from 900 to 1100° C. whereby platinum hexafluoride is formed, contacting the platinum hexafluoride with the plutonium-containing mixture at room temperature whereby plutonium hexafluoride forms, and isolating the plutonium hexafluoride by distillation from said mixture.

6. The compound platinum hexafluoride.

2,893,827

SEPARATION OF AMERICIUM FROM PROMETHIUM

Roscoe E. Pressly, Loudon, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application March 27, 1958
Serial No. 724,485
3 Claims. (Cl. 23—14.5)

1. The method of separating promethium from americium which comprises contacting an acidic aqueous solution containing promethium and americium with a solution of fluosilicic acid, heating the resulting mixture until the formation of a promethium fluoride precipitate results, separating said promethium fluoride precipitate from the resulting supernatant liquid, effecting a dissolution-precipitation cycle comprising dissolving the promethium fluoride resulting from the preceding precipitation in a solution of boric acid and concentrated nitric acid, contacting the resulting solution with a solution of fluosilicic acid, heating the resulting mixture until the formation of a promethium fluoride precipitate results and separating said promethium fluoride precipitate from the resulting supernatant liquid, repeating said dissolution-precipitation cycle a plurality of times, and recovering the promethium fluoride precipitate resulting from the final cycle.

2,893,828

LITHIUM VALUES RECOVERY PROCESS

John A. Peterson, Highland Park, and Gunter H. Gloss, Lake Bluff, Ill., assignors to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Application August 9, 1954
Serial No. 448,742
6 Claims. (Cl. 23—27)

1. A process for recovering lithium values from spodumene which comprises preparing a finely divided mixture comprising spodumene, a quantity of potassium chloride equal to at least about 7 molar equivalents of the lithium values in the spodumene, and an added quantity, between about 40 and about 100% by weight based on the spodumene, of a refractory material substantially inert toward the reaction between alkali metal halide and the lithium compounds in said spodumene and having a melting point at least as high as that of spodumene, heating the mixture at a temperature between about 980 and about 1100° C. until substantially all of the lithium therein has been converted to lithium chloride, cooling the treated mixture, and leaching lithium chloride therefrom.

2,893,829

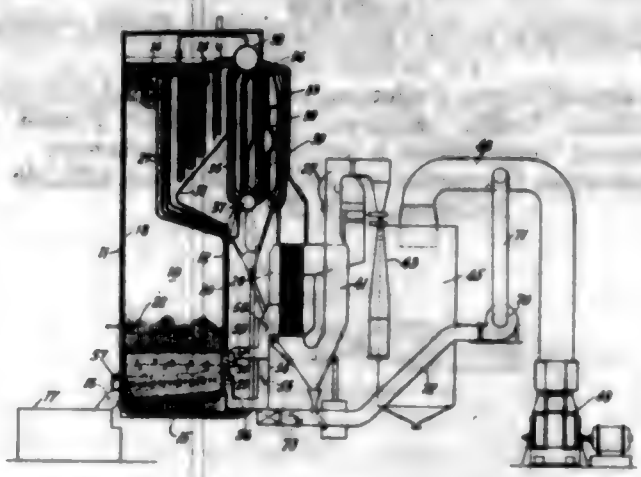
PROCESS AND APPARATUS FOR THE RECOVERY OF HEAT AND CHEMICALS FROM PULP LIQUOR

Frank E. Hutton, Wyckoff, N.J., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Application May 19, 1953, Serial No. 355,910
6 Claims. (Cl. 23—48)

1. A continuous self-sustaining process of recovering chemicals and heat from pulp residual liquor containing chemicals and combustible organic matter, which comprises spraying the liquor into a preheated furnace in contact with an ascending stream of high temperature heating gases, the liquor spray being so directed as to cause the liquor to remain in the upper section of the furnace in heat absorbing relation with the heating gases for an interval sufficient to effect substantially complete dehydration of the liquor and to cause a substantially dry char to deposit and form a char bed on the furnace hearth, supplying a series of spaced streams of primary combustion air under a superatmospheric pressure to the lower section of the furnace below the normal upper level of the char bed for the penetrating and burning of the bed of dry char therein, directing the heating gases generated

in the lower section upwardly through the upper section for dehydrating the liquor being sprayed thereinto, supplying secondary combustion air directly to the upper section for the burning therein of any combustible gases distilled from the liquor while in the upper section and any unconsumed combustibles escaping from the lower section, and controlling the average temperature within the



char bed on the hearth of said furnace to minimize the sublimation of chemicals, said control being effected by introducing relatively cool gaseous products of combustion mixed with said primary combustion air streams into intimate contact with said char bed to effect an endothermic reducing reaction of said char with at least one of the reducible gaseous constituents of said heating gases.

2,893,830

FERROMAGNETIC MATERIAL OF THE FORMULA $BaFe_3O_3F$ AND ITS PREPARATION

Lothar Heinrich Brixner, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application July 19, 1957
Serial No. 672,883
5 Claims. (Cl. 23—50)

1. As a composition of matter, a ferromagnetic material of the chemical formula $BaFe_3O_3F$.

2,893,831

TERNARY SULPHIDES, SELENIDES AND TELLURIDES OF BISMUTH AND THALLIUM AND THEIR PREPARATION

Tom A. Bither, Jr., Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application October 10, 1957
Serial No. 689,265
8 Claims. (Cl. 23—50)

5. Process for preparing ternary compounds of the formula $TlBiX_2$ wherein X is a member of the group consisting of sulfur, selenium and tellurium which comprises heating for a period of from two to thirty hours at a temperature within the range of 250° to 100° C. thallium and bismuth in contact with an element selected from the group consisting of sulfur, selenium and tellurium, said thallium, bismuth and said element being present in the reaction mixture in such proportions as to provide in the resultant ternary composition a gram atom ratio of thallium:bismuth:said element of 1:1:2.

2,893,832

PURIFICATION OF TUNGSTATES

Pai Yen Loung, Glen Cove, N.Y., assignor to Wah Chang Corporation, New York, N.Y., a corporation of New York

No Drawing. Application November 18, 1957
Serial No. 696,929
4 Claims. (Cl. 23—51)

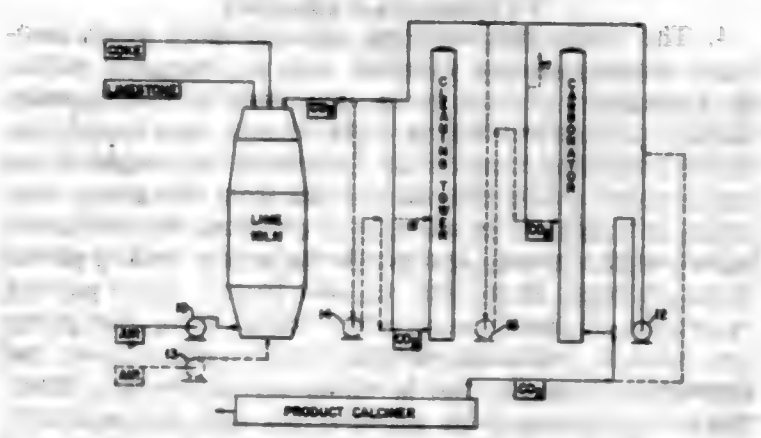
1. The method of removing arsenic and phosphorus impurities from alkali metal tungstates containing such impurities in which the alkali metal tungstate is dissolved in water together with an amount of alkali metal hydroxide which hydroxide, in amount, constitutes about 0.4 to about 4 percent by weight of the final solution, adjusting the pH of the solution to a value of 12 to 14 and, thereafter, heating said solution to cause evaporation of its aqueous content to a point where substantial amounts of alkali metal tungstate crystals are precipitated therefrom and filtering the heated solution to remove said crystals.

2,893,833

EVOLVING CARBON DIOXIDE UNDER PRESSURE FOR USE IN THE AMMONIA-SODA PROCESS

Zola G. Deutsch, Hackettstown, N.J., assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

Application July 26, 1955, Serial No. 524,584
1 Claim. (Cl. 23—65)



In the ammonia-soda process wherein carbon dioxide is introduced into ammoniated sodium chloride brine in a carbonating tower to form sodium bicarbonate which is subsequently calcined to form sodium carbonate and carbon dioxide, and limestone is calcined with air and coke to form lime and carbon dioxide, and the carbon dioxide evolved from both of the calcined products is then subjected to step-wise compression and introduced into said carbonating tower, the improvement which includes separately calcining both said sodium bicarbonate and said limestone at a pressure of at least 30 p.s.i. (gauge), and introducing the evolved carbon dioxide into said carbonating tower at a substantially elevated pressure above atmospheric pressure afforded by the pressure of the calcination of both said bicarbonate and said limestone, whereby the intermediate step-wise compression of said carbon dioxide from the calcination of said bicarbonate and said limestone introduced into said carbonating tower is substantially eliminated, and power requirements for compressing said carbon dioxide are substantially reduced.

2,893,834

PROCESS FOR PRODUCING DEFLUORINATED CALCIUM PHOSPHATES

Woodrow W. Richardson, Auburndale, Fla., assignor to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Application February 18, 1957
Serial No. 640,608
4 Claims. (Cl. 23—109)

1. The improved process for producing a calcium phosphate animal feed ingredient containing less than 0.1% fluorine which comprises mixing comminuted phosphate rock with volatile salts of alkali metals, whose negative radical is selected from the group consisting of carbonate, nitrate, formate, chlorate and sulfate, and with phosphoric acid so that for the final product the mole

ratio represented by the following formula is between 2.5 and 3.8,

$$\frac{\text{Moles}}{\text{Moles}} = \frac{CaO+MgO+Na_2O+K_2O-SO_3-F_2}{P_2O_5-Fe_2O_3-Al_2O_3}$$

and the mole ratio of alkali metal oxide to P_2O_5 is higher than about 0.2 and calcining the mixture at a temperature of not less than 1900° F. while actively agitating the same in contact with a gaseous atmosphere containing between about 5 mole percent and 30 mole percent of water vapor and quenching the calcined product before the temperature of the product falls below 1900° F.

2,893,835

PROCESS FOR PREPARING THIOCARBONATES

Bobbie D. Stone, Miamisburg, and Morris L. Nielsen, Centerville, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application March 17, 1955
Serial No. 495,064
9 Claims. (Cl. 23—114)

1. The method of preparing thiocarbonates which comprises reacting carbon disulfide with an inorganic sulfide of a member of the group consisting of ammonium, alkali metals, and alkaline earth metals, in a liquid medium comprising from 97 to 70 percent by weight of an inert organic liquid diluent selected from the group consisting of aliphatic paraffin, cycloparaffin, aromatic and halogenated aliphatic hydrocarbons having boiling points in the range of 30 to 100° C., and from 3 to 30 percent by weight of levelling solvent selected from the group consisting of methanol, ethanol, isopropanol, diðxane and dimethylformamide, said levelling solvent being characterized by a measurable solvency for said inorganic sulfide and being further characterized by a substantial miscibility with said inert organic liquid diluent.

2,893,836

PROCESS FOR PRODUCING SUBSTANTIALLY WHITE SODIUM BISULFATE

Walter M. Davis, Winchester, and Arthur L. Fisher, Belmont, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application December 6, 1954
Serial No. 473,480
8 Claims. (Cl. 23—121)

5. In the process of producing substantially odor-free, white, globular sodium bisulfate the steps comprising the reaction of sodium chloride and sulfuric acid in a mole ratio of from about 1.03:1 to about 1.15:1 at an elevated temperature; the addition of from about 0.02 to about 0.1 percent zinc, as a zinc compound selected from the group consisting of zinc sulfate, zinc oxide, zinc hydroxide, zinc carbonate, zinc chloride, zinc nitrate, and mixtures thereof, to a molten mass of sodium bisulfate at a temperature of from about 200 to about 225° C.; maintaining the mixture of the zinc compound and the sodium bisulfate in the molten state for at least about 15 minutes; projecting droplets of the molten sodium bisulfate in a cooling air medium and providing a sufficient volume of cooling air for a given suspension time to effect solidification of the droplets while air-borne; and thereafter blending from about 0.1 to about 0.5 percent of finely divided sodium carbonate with the globular sodium bisulfate; wherein all percents are by weight based on the sodium bisulfate.

2,893,837

PRODUCTION OF ALUMINA

Kenneth K. Kearby, Watchung, and George R. Gilbert, Elizabeth, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application March 25, 1955
Serial No. 496,908
11 Claims. (Cl. 23—142)

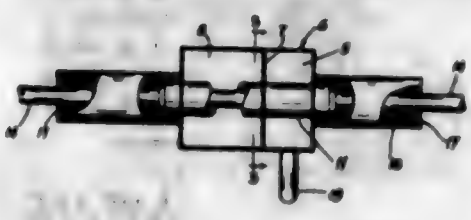
1. A method of preparing alumina of high surface area which comprises reacting dry solid granules of an alkali metal aluminate compound with anhydrous gasiform acidic material, then water washing the so treated compound to remove water soluble salt formed by the reaction, then drying and calcining the solid residue to produce alumina.

2,893,838

CONTINUOUS ELECTROTHERMIC PRODUCTION OF BORIC OXIDE

David Russell Stern, Fullerton, and Alji Alvin Uchiyama, Pasadena, Calif., assignors to American Potash & Chemical Corporation, a corporation of Delaware

Application December 14, 1956, Serial No. 628,346
3 Claims. (Cl. 23—149)



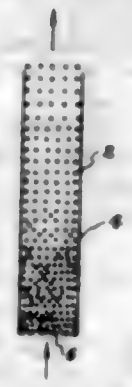
1. A continuous process for producing boric oxide comprising maintaining a first and a second dehydration zone in a side-by-side relationship and at a temperature of 320–1000° C. with a common radiant heating element extending across the bottom of both zones, the zones being separated by a common wall having an aperture therein through which the heating element extends, feeding solid boric acid into the first zone at a rate sufficient to maintain said element covered by and substantially surrounded with said boric acid and produce a mixture of boric oxide and water, and passing said mixture of boric oxide and water through said aperture into said second zone wherein the water is driven off and molten boric oxide is removed as a product.

2,893,839

PROCESS FOR TREATING COMMINUTED SOLIDS WITH GASES

Franz Schytil, Frankfurt am Main, Germany, assignor to Metallgesellschaft Aktiengesellschaft

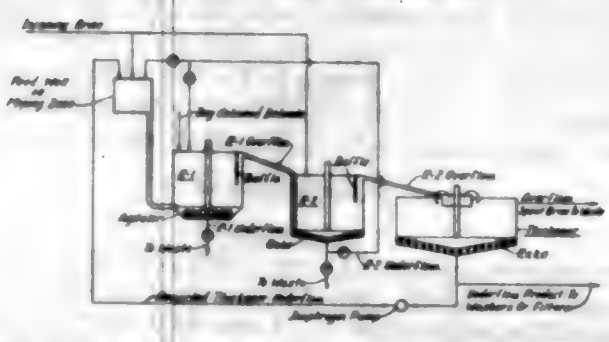
Application March 5, 1957, Serial No. 644,172
2 Claims. (Cl. 23—177)



1. A process for the exothermic roasting of comminuted sulphidic ores such as pyrite, comprising continuously introducing raw and roasted recycled ore particles into a stream of a gas reactive to said sulphidic ores having a velocity greater than permissible to form a fluid bed of said particles and feeding particles into said stream at a rate greater than that permissible for pneumatic conveyance, the feed rate of raw sulphidic ore particles being in stoichiometric balance with the reactive gas and the balance of solid feed being composed of recycled roasted ore particles, so that a suspension of solid particles in gas is formed in which the solids concentration decreases upwardly from the beginning of said gas stream through the reactive area to the top discharge point, and with the amount of re-

cycled roasted particles forming a solids concentration greater than that corresponding to the stoichiometric ratio of raw unroasted particles to the gas stream.

2,893,840
PRODUCTION OF MAGNESIUM COMPOUND
Arthur W. Vettel, Watsonville, Calif., and Robert D. Israel, Baton Rouge, La., assignors to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Application December 15, 1955, Serial No. 553,268
12 Claims. (Cl. 23—201)



12. In the process for making magnesium hydroxide of high purity and rapid settling wherein incoming magnesium chloride solution is mixed with magnesium hydroxide seed crystals and is reacted with dry calcined dolomite of particle size not less than 200 mesh in a series of reaction zones, and impurites-enriched underflows are withdrawn from the reaction zones and magnesium hydroxide slurry is withdrawn as overflow from said zones, the improvement wherein concentrated aqueous magnesium chloride solution is mixed with magnesium hydroxide seed crystals in an amount of from 5 to 35 times the amount of magnesium hydroxide being precipitated in a first reaction zone and then the mixture is vigorously agitated with calcined dolomite in a first reaction zone, said dolomite being present in amount greater than will react stoichiometrically with the magnesium chloride of said solution, an overflow comprising an aqueous slurry of magnesium hydroxide crystals and unreacted dolomite in spent brine is withdrawn to a second reaction zone, a minor amount of magnesium chloride solution sufficient to react stoichiometrically with said unreacted dolomite is admixed in said second zone with gentle agitation, an overflow is withdrawn therefrom, said overflow comprising a magnesium hydroxide slurry in spent brine, the magnesium ion content of the spent brine of each said overflow not exceeding 0.3 gram per liter, calculated as MgO, and the total solids content in each reaction zone being at least 40 grams per liter, and separating magnesium hydroxide from the overflow from the second zone.

2,893,841
MAGNESIUM TETRABORIDE
Aden J. King, Syracuse, N.Y., assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Application January 29, 1954
Serial No. 407,149
8 Claims. (Cl. 23—204)

1. Magnesium tetraboride having the formula MgB_4.

2,893,842
PRODUCTION OF ELEMENTAL BORON
Wilhelm J. Kroll, Corvallis, Oreg., and Nelson P. Nies, Altadena, and Edgar W. Fajans, Los Angeles, Calif., assignors, by mesne assignments, to United States Borax & Chemical Corporation
No Drawing. Application October 27, 1954
Serial No. 465,148
8 Claims. (Cl. 23—209)

1. The process for removing contaminating magnesium from elemental boron produced by reaction of boron oxide and magnesium, said process comprising leaching the elemental boron in hot aqueous acid solution to remove any magnesium that is leachable in such solution, then heating the contaminated elemental boron at a temperature between about 300° C. and about 1000° C. in the presence of between about 10% and about 200% of its weight of a reagent composition selected from the group consisting of boron fluoride, alkali metal fluorides, anhydrous gaseous hydrogen fluoride and combinations of the same, to transform non-leachable magnesium to leachable form, and then leaching the product in hot aqueous acid solution to remove the converted magnesium.

2,893,843
COMPOSITION OF MATTER
Ernest C. Adams, Jr., Elkhart, Ind., assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana
No Drawing. Application February 3, 1956
Serial No. 563,181
7 Claims. (Cl. 23—253)

1. A composition for detecting glucose which comprises glucose oxidase, a member of the group consisting of blood, red blood cells, lyophilized whole blood, lyophilized blood cells, and mixtures of lyophilized blood and lyophilized plasma, which after being freed from glucose as a result of contact with said glucose oxidase, has then been admixed with a compound which undergoes a color reaction when contacted with hydrogen peroxide and a member of the group consisting of blood, red blood cells, lyophilized whole blood, lyophilized blood cells, and mixtures of lyophilized blood and lyophilized plasma, and a buffer for maintaining the pH of the aforesaid mixture at about 5.4 in the presence of urine.

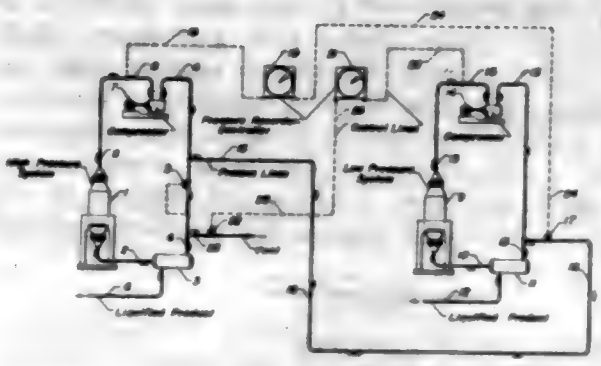
2,893,844
COMPOSITION OF MATTER
Marion H. Cook, Elkhart, Ind., assignor to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana
No Drawing. Application January 8, 1957
Serial No. 632,969
15 Claims. (Cl. 23—253)

1. A diagnostic composition for detecting concentrations of glucose above a predetermined amount, comprising an enzyme system which has oxidase activity for glucose, contains peroxidase, and results in peroxide formation when contacted with glucose; an indicator which undergoes a color reaction caused by peroxide in the presence of peroxidase; and a composition which is (*a*) reactable with hydrogen peroxide, (*b*) is present in a predetermined quantity only sufficient to react with the hydrogen peroxide producible by the action of the said enzyme system on the said predetermined amount of glucose, (*c*) reacts preferentially over the indicator and (*d*) does not undergo a color change during such reaction.

2,893,845
PRESSURE CONTROL SYSTEM
Robert W. Erickson, Chicago, Ill., assignor to Universal Oil Products Company, Chicago, Ill., a corporation of Delaware
Application March 24, 1958, Serial No. 723,570
4 Claims. (Cl. 23—260)

1. A pressure control system which comprises in combination a first pressure-sensing means sensing the pressure in a low-pressure zone and operating a first pressure-controlling means within a high-pressure reaction zone, a second pressure-sensing means sensing the pressure in said high-pressure zone and operating a second pressure-controlling means within said low-pressure zone whereby at least a portion of the gaseous reaction products from said low-pressure zone are passed through said second

pressure-controlling means into said high-pressure zone, and at least a portion of the gaseous reaction products



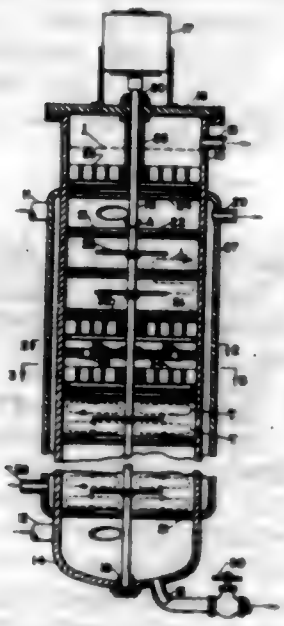
are removed from said high-pressure zone through said first pressure-controlling means.

2,893,846

FLUID MIXER WITH ROTATING BAFFLES

Harry A. Wistrich, Walnut Creek, and Richard B. Olney, Oakland, Calif., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

Application June 21, 1956, Serial No. 592,947
6 Claims. (Cl. 23—270.5)



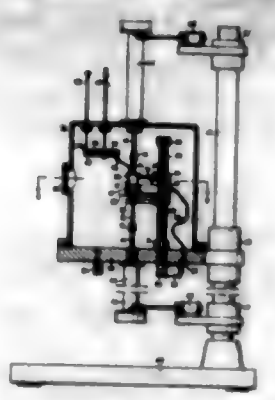
1. A fluid mixing apparatus comprising: an axially elongated vessel one end of which is higher than the other; a plurality of transverse, axially spaced, annular stator baffles fixed within said vessel, having central openings, and defining a series of compartments which are in consecutive communication through said openings; means for admitting a fluid to be contacted at one end of said series for flow through the compartments and for discharging the fluids after such flow; a rotor including a rotatably mounted shaft extending through said openings and carrying fast for rotation therewith a plurality of generally flat rotor baffles distributed among said compartments and situated therein in axially spaced relation to said stator baffles, said openings being large in relation to the cross section of the shaft for the free flow of fluid through the openings; and a calming structure situated between a pair of said compartments and including a plurality of baffles having surfaces that are elongated in the general direction of the axis of the vessel for arresting lateral fluid currents and are spaced apart so as to provide a multiplicity of open passages for the free flow of fluid between the compartments of said pair.

2,893,847

APPARATUS FOR PREPARING ROD-SHAPED, CRYSTALLINE BODIES, PARTICULARLY SEMICONDUCTOR BODIES

Hans Schweickert and Joachim Haus, Pretzfeld, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a German corporation

Application February 18, 1955, Serial No. 489,177
Claims priority, application Germany February 23, 1954
24 Claims. (Cl. 23—273)



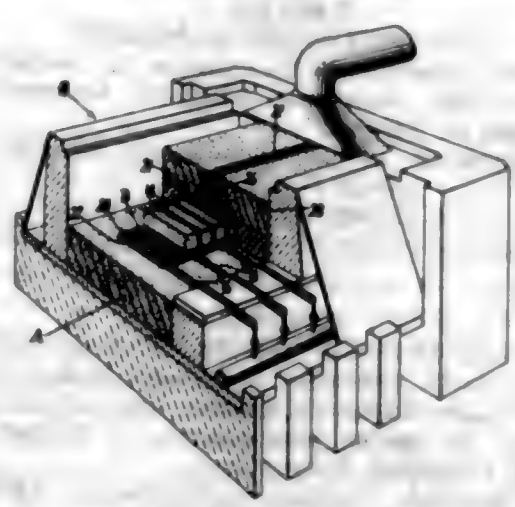
1. Apparatus for preparing a material in the form of a crystalline body, particularly a semiconductor body, by pulling a crystal from a melt, which comprises a stand, an air-tight compartment mounted on said stand, means for adjusting the atmospheric conditions within said compartment, a melting crucible containing said melt therein and having a bottom discharge opening mounted within said compartment, an annular main heating device positioned about the lower portion of said crucible, an auxiliary annular heating device positioned about the upper portion of said crucible, a clamping support for a rod-shaped body of said material having an end facing said discharge opening, means for reciprocating said clamping support to and from said discharge opening, means for rotating said clamping support about its axis independently of its reciprocating movement, means for supplying said melting crucible with adjustable amounts of principal material, means for supplying said melting crucible with adjustable amounts of additional material intended to change the composition of the melt, and leads connecting said main heating device and said auxiliary heating device to a source of electric energy.

2,893,848

FURNACE CONSTRUCTION FOR HIGH TEMPERATURE PURIFICATION OF CARBONACEOUS BODIES IN HALOGEN-CONTAINING GASES

Victor C. Hamister, Lakewood, Ohio, assignor to Union Carbide Corporation, a corporation of New York

Application October 16, 1956, Serial No. 616,271
5 Claims. (Cl. 23—277)



1. In an elongated electric graphitizing furnace of the type wherein purifying gases are passed to remove

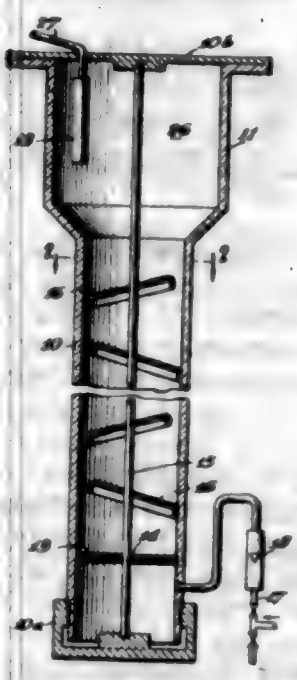
volatilizable impurities from the carbonaceous articles under heat treatment therein, a furnace bed composed of a low mass permeability, non-siliceous mixture of carbon having a high resistance to gas flow; graphite contact material intermediate said carbonaceous articles under treatment and having a higher permeability than said carbon mixture; a tubular assembly for conveying purifying gas into said furnace, said assembly including an expansion chamber therein; means for concentrating and segregating impurities from said carbonaceous articles under heat treatment by reaction with said purifying gases, said means comprising a first cover member section extending lengthwise in said furnace covering said carbonaceous articles under treatment, and a second cover member section to either side of said first section, said first section consisting of carbonaceous particles of a larger size and greater mass permeability than said second section.

2,893,849

FLUIDIZED SOLIDS CONTACTING APPARATUS

John R. Krebs, Indianapolis, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Application May 1, 1956, Serial No. 582,828
5 Claims. (Cl. 23—284)



1. An apparatus for effecting uniform, non-slugging, intimate contact between gasiform fluid and finely divided solids suspended therein comprising a vertically elongated chamber, first conduit means discharging into the lower portion of said chamber, second conduit means in fluid communication with the upper portion of said chamber, a plurality of perforated baffles extending upwardly and transverse to the vertical axis of said chamber, said baffles extending across substantially the full flow area of said chamber and having uniform interstices to provide a great number of fluid jets above each upwardly transverse baffle, whereby slugging is avoided and uniform contact between solids and gasiform fluid is obtained, said baffles comprising pyramidal units having converging planar surfaces, the perimeter of each unit being in contact with the wall of said chamber.

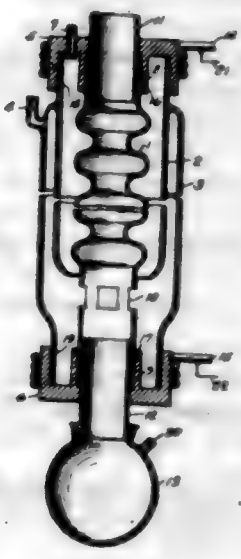
2,893,850

APPARATUS FOR THE PRODUCTION OF ELEMENTAL SILICON

Foord von Bichowsky, Wilmington, Del.

Original application August 3, 1956, Serial No. 601,978. Divided and this application July 1, 1957, Serial No. 670,613
6 Claims. (Cl. 23—284)

1. In an apparatus for the production of elemental silicon in the form of non-adhesive curved pieces; the combination of means for interacting silicon tetrachloride and hydrogen, at substantially atmospheric pressure and at a temperature below the melting point of that metalloid while those reagents are present in essentially stoichiometric proportions, the apparatus comprising a laterally enterable, slightly deformable, tubular metallic reactor means, composed at least in part of tantalum, whose ratio of internal diameter to length varies throughout a considerable portion of its extent, the tubular metallic reactor being centered within and longitudinally traversing a gas-tight, electrically non-conductive, cylindrical, refractory housing with constricted ends closable by contact cap means partitioned for a part of its length by a cylindrical refractory septum partitioning the zone within said refractory housing into two concentric preheating chambers, each of these preheating chambers being equipped above and on each side of the septum with inlet means for the admission of the respective reagents and in which apparatus the end portions of the tubular metallic reactor are furnished with close fitting refractory bushings which pass through the contact caps, the lower bushing being fitted below with removable collector means which has a gas introduction means connected thereto for collecting and withdrawing the curved pieces of silicon and for the admission of gas to the collecting means and the upper bushing with means for the escape of gaseous materials, the apparatus also embodies means for cooling the contact caps which means likewise serve for supplying the electrical energy for the resistance heating of the tubular metallic reactor while the upper contact cap has means for reagent ingress.



2,893,851

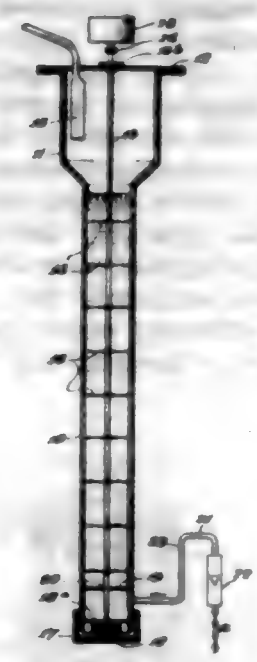
POWDERED CATALYST CONTACTING UNIT

Carl C. Georgian, La Marque, Tex., assignor to The American Oil Company, Texas City, Tex., a corporation of Texas

Application December 29, 1955, Serial No. 556,286
7 Claims. (Cl. 23—288)

1. An apparatus adapted to the contacting of gases and fluidized solids which comprises a vertically elongated contacting chamber adapted to contain a fluidized body of the finely divided solids, conduit means for introducing gasiform fluids into the lower end of said chamber, conduit means for withdrawing gasiform fluids from the upper end of said chamber, longitudinally disposed shaft means extending within said chamber, said shaft being provided with radially extending perforated planar circular discs which have a lateral extent corresponding substantially to the cross-sectional flow area of the chamber, and mechanical means for imparting ro-

tary motion to the shaft and perforated discs, said discs when rotated providing recurrent and random jetting



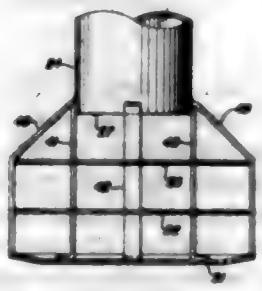
of upflowing gasiform fluid at a plurality of levels in said chamber.

2,893,852

FIXED BED REFORMER VAPOR DISTRIBUTOR

William J. Montgomery, Texas City, Tex., assignor to The American Oil Company, Texas City, Tex., a corporation of Texas

Application April 16, 1956, Serial No. 578,306
2 Claims. (Cl. 23—288)



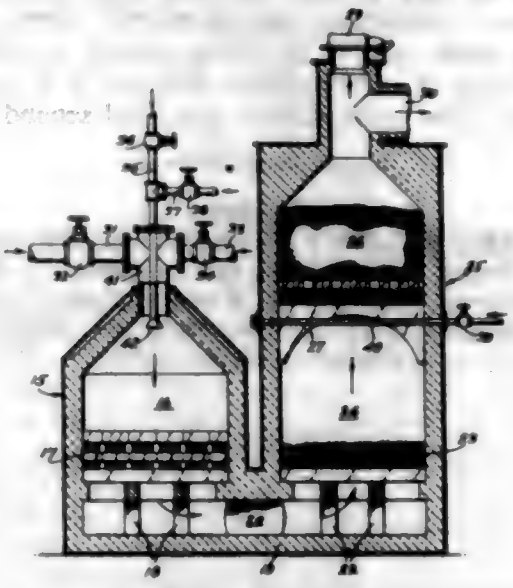
1. A reactor for use in downflow fixed bed catalytic reforming, which reactor comprises a substantially cylindrical vessel provided with end-closures, the axis of the cylindrical portion being substantially vertical, an inlet vapor conduit of substantially circular cross section positioned in said upper end-closure, the axis of said inlet conduit being substantially parallel to the axis of said vessel, an outlet vapor conduit positioned in said lower end-closure, a distributor means positioned at and below the vessel-end of said inlet conduit, said distributor means comprising at least three substantially circular plates in vertical spaced relationship, the axis of said plates being substantially co-incident with the axis of said inlet conduit, said plates being of substantially equal diameter, the relationship of said plate diameter to the internal diameter of said inlet conduit being between about 2 and 2.5, the lowermost plate being imperforate, the other plates being provided, respectively, with a substantially centrally located aperture, the relationship between the cross-sectional area of said inlet conduit to the aperture area in the plate immediately adjacent the vessel-end of said inlet conduit being between about 1.2 and 1.55 and the aperture area decreasing as the aperture plate is positioned farther from the vessel-end of said inlet conduit, the relationship between the aperture area of one apertured plate and the aperture area of the apertured plate immediately below being between about 1.3 and 1.7 and means for positioning said plates at and below a vessel-end of an inlet conduit and lowermost plate in spaced vertical relation to the top of a fixed bed of solid particles positioned within said vessel.

2,893,853

METHOD FOR CATALYTIC CONVERSION HYDROCARBONS

Charles Gordon Milbourne, Lansdowne, Pa., assignor, by mesne assignments, to The United Gas Improvement Company, Philadelphia, Pa., a corporation of Pennsylvania

Application July 12, 1956, Serial No. 597,470
12 Claims. (Cl. 48—211)



1. The cylic catalytic method for the manufacture of oil gas involving alternating heating and gas-making portions which comprises, (A) during the heating portion of the cycle, (1) introducing a primary fluid hydrocarbon fuel and an oxygen-containing gas into a refractory lined path having a zone of catalyst material therein in the downstream portion thereof, combusting said primary fuel and passing the hot products of combustion through said refractory lined path and through said zone of catalyst material to store heat therein; and (2) thereafter reducing by more than 75% the rate of introduction of said primary fuel, while continuing introduction of said oxygen-containing gas, and (3) substantially immediately after the products of primary combustion formed just prior to reducing the rate of introduction of said primary fuel have passed at least through that portion of said refractory lined path preceding said zone of catalyst material, introducing a substantially ash free secondary fluid hydrocarbon fuel into said oxygen-containing gas, combusting said secondary fuel in said oxygen-containing gas and passing all hot products of combustion through said zone of catalyst material to store heat therein, the point of introduction of said secondary fuel being substantially adjacent said zone of catalyst material and the point of introduction of said primary fuel and said oxygen-containing gas being upstream from said point of introduction of said secondary fuel, the rate of introduction of said oxygen-containing gas and combustion of said primary fuel and said secondary fuel maintaining throughout the cycle in said catalyst zone an average temperature of from about 1300° to 1900° F. and in the refractory lined path upstream of said catalyst zone an average temperature of from about 1000° to 1700° F.; and (B) in the gas-making portion of the cycle, vaporizing a hydrocarbon oil in said refractory lined path upstream from said catalyst zone and passing said vaporized oil through said refractory lined path upstream from said catalyst zone, to heat said oil to about reaction temperature with substantially no thermal cracking, and then through said zone of catalyst material wherein conversion of said vaporized oil to oil gas takes place, and leading the resulting oil gas to storage.

2,893,854

COATED ABRASIVE ARTICLE AND METHOD OF MANUFACTURE

Royden C. Rinker, Alliance, and Herbert W. Schnabel, Homeworth, Ohio, assignors to Armour and Company, Chicago, Ill., a corporation of Illinois

No Drawing. Application December 31, 1956
Serial No. 631,450
11 Claims. (Cl. 51—298)

5. An improved abrasive article consisting of a flexible base comprising a paper impregnated with from 4 to 20 weight percent of a butadiene-acrylonitrile copolymer latex, said paper base having on one side an adherent flexible adhesive with embedded abrasive grains therein, and a coating thereover of a continuous film of a resin selected from the group consisting of cellulose ether resins, polyacrylic ester resins, and vinyl resins having uniformly dispersed therein solid particles of zinc stearate, said continuous film containing from 1 to 20 parts by weight of said zinc stearate per part of resin, said abrasive article containing from 1 to 40 milligrams of film containing zinc stearate per square inch of surface area.

2,893,855

N-1-NAPTHYLCHLOROPHTHALAMIC HERBICIDES

Allen E. Smith, Oxford, and Albert W. Feldmann, New Haven, Conn., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Application February 24, 1953
Serial No. 338,613
16 Claims. (Cl. 71—2.6)

4. A herbicidal composition comprising an aqueous suspension of N-1-naphthylmonochlorophthalamic acid.

2,893,856

DEFOLIATING COMPOSITIONS

Philip C. Hamm, Webster Groves, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application March 23, 1956
Serial No. 573,335
10 Claims. (Cl. 71—2.6)

1. The method of defoliation which comprises applying to foliage in concentration sufficient to effect defoliation, a member of the group consisting of ethyl p-anisylthionocarbamate, ethyl p-phenetylthionocarbamate, ethyl p-tolylthionocarbamate, methyl phenylthionocarbamate and ethyl phenylthionocarbamate.

2,893,857

AMINOLEAD COMPOUND AND HERBICIDAL COMPOSITION CONTAINING SAME

David O. De Prez, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application May 29, 1953
Serial No. 358,527
2 Claims. (Cl. 71—2.7)

2. A herbicidally active composition consisting essentially of at least about 0.1 percent by weight of triethyl-N-sec-butylaminolead, a liquid hydrocarbon carrier therefor, said hydrocarbon having a boiling range below the kerosene distillation range and as a non-ionic dispersing agent, a polyethylene glycol having a molecular weight of above 1200 in amount sufficient to assist in dispersing said triethyl-N-sec-butylaminolead.

2,893,858

GRANULATION OF FERTILIZERS

Robert A. MacDonald, Highland Park, Ill., and Thomas H. Stewart, Atlanta, Ga., assignors to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Application August 25, 1955
Serial No. 530,617
8 Claims. (Cl. 71—64)

1. The process of granulating complete fertilizers wherein the entire nitrogenous content added in liquid form is introduced by means of an aqueous nitrogenous solution having at least one substance selected from the group consisting of a mixture of urea and ammonia, and urea alone, which comprises mixing solid fertilizer components comprising predominantly phosphate and potash constituents, thereafter introducing simultaneously but separately, said aqueous nitrogenous solution and an aqueous sulfuric acid solution consisting essentially of sulfuric acid and water into direct contact with the mixing solids, said sulfuric acid being added in sufficient amount to neutralize and react with the unreacted nitrogeneous compounds present, maintaining the moisture content of the mixing solids between about 2% and about 15%, whereby the material discharged from the conditioning step remains substantially as wetted particles and crumbly aggregates of particles, and directly thereafter heating the conditioned material while tumbling same in a drying atmosphere, whereby substantially all of the added urea constitutent is retained, without substantial hydrolysis, in the final product.

2,893,859

METHOD OF MANUFACTURE OF HOMOGENEOUS COMPOSITIONS

Bernard H. Triffleman, Fairlawn, N.J.

No Drawing. Application February 21, 1956
Serial No. 566,767
9 Claims. (Cl. 75—.5)

1. In a method for manufacturing homogeneous compositions of alloy metals, cermets and ceramics the steps of preparing a homogeneous solution of the several elements in the composition in a volatile solvent including constituents selected from the group consisting of nitric acid, sulfuric acid, ammonia and water, subjecting said solution to quick drying to drive off substantially all of said volatile solvent under conditions selected to preclude segregation of the several elements and to assure the formation of a homogeneous molecular mixture of said several elements in solid form, further heating said molecular mixture to drive off any residue of said volatile solvent, and recovering said volatile solvent driven off during at least said quick drying for reuse.

2,893,860

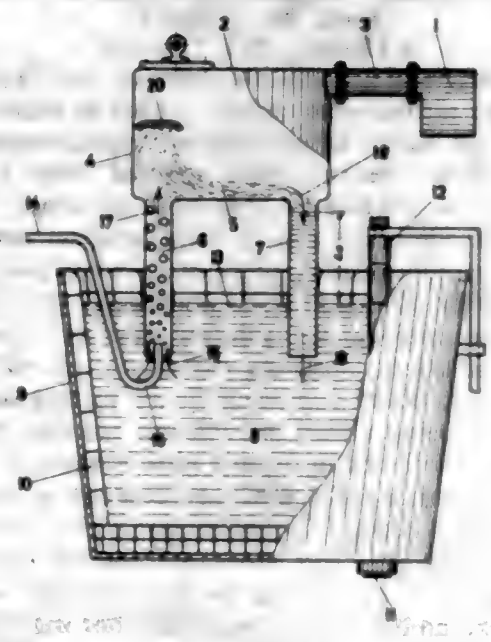
METHOD AND APPARATUS FOR CONTINUOUSLY DEGASSING MOLTEN METALS, PARTICULARLY STEEL, BY EVACUATION

Albert Lorenz, Hanau am Main, Germany, assignor to W. C. Heraeus G.m.b.H., Hanau am Main, Germany, a corporation of Germany

Application August 5, 1957, Serial No. 676,131
Claims priority, application Germany February 21, 1957
4 Claims. (Cl. 75—49)

4. A method of continuously degassing molten metals comprising the steps of continuously evacuating a chamber disposed above a container and directly communicating with a body of molten metal in said container by a pair of conduits disposed coaxially around each other, connected to the bottom of said chamber and partly immersed into said body of metal, conducting the metal through the inner conduit into said chamber to be degassed therein, and rotating at least the outer conduit about its axis so that the degassed metal within said outer conduit will be subjected to a centrifugal force

and by the action of said force be continuously withdrawn from said chamber and ejected into said body of metal, wherein said centrifugal force is produced by the lower end portion of the rotating outer conduit which



is submerged in said body of molten metal and separates the metal within said end portion into a plurality of substantially radially extending bodies and then passes the metal to a plurality of streams into said main body of molten metal.

2,893,861

METHOD OF REFINING CRUDE IRON

Rudolf Franz Rinesch, Frauchberg, Linz, Austria, assignor to Bot Brunnert Oxygen Technik A.G., Zurich, Switzerland, a company of Switzerland

Application July 12, 1957, Serial No. 671,459
Claims priority, application Austria May 18, 1957

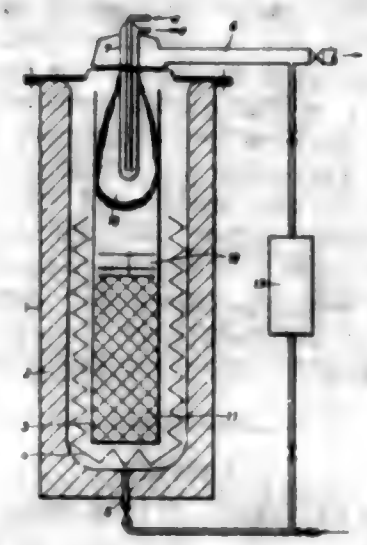
reforming, which reactor comprises a substantially cy-
lindrical vessel with [illegible] of
the cylindrical portion being vertical, an
inlet vapor conduit of substantially circular cross section
positioned in said upper end-closure, the axis of said inlet
conduit being substantially parallel to the axis of said
vessel, an outlet vapor conduit positioned in said lower
end-closure, a distributor means positioned at and below
the vessel-end of said inlet conduit, said distributor
means comprising at least three substantially circular
plates in vertical spaced relationship, the axis of said
plates being substantially co-incident with the axis of
said inlet conduit, said plates being of substantially equal
diameter, the relationship of said plate diameter to the
internal diameter of said inlet conduit being between
about 2 and 2.5, the lowermost plate being imperforate,
the other plates being provided, respectively, with a
substantially centrally located aperture, the relationship
between the cross-sectional area of said inlet conduit to
the aperture area in the plate immediately adjacent the
vessel-end of said inlet conduit being between about 1.2
and 1.55 and the aperture area decreasing as the aper-
ture plate is positioned farther from the vessel-end of
said inlet conduit, the relationship between the aperture
area of one apertured plate and the aperture area of the
apertured plate immediately below being between about
1.3 and 1.7 and means for positioning said plates at and

2,893,862

PROCESS FOR THE PRODUCTION OF ALKALINE-EARTH METALS

Engelbert Wainschewski, Köln-Bayenthal, and Dieter Goerrig, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Application September 19, 1956, Serial No. 610,812
Claims priority, application Germany September 26, 1955
8 Claims. (Cl. 75—67)



2. In the process for the production of an alkaline-earth metal having an atomic number between 20 and 56 by thermally splitting an alkaline-earth metal hydride into hydrogen and the respective alkaline-earth metal and distilling the alkaline-earth metal the step which comprises fixing the nitrogen present in the starting material in the form of aluminum nitride by performing the process in the presence of such an amount of aluminum which is at least chemically equivalent to the nitrogen amount present

[illegible] fuel have passed at least through that portion of the refractory lined path preceding said zone of catalyst material, supplying a substantially ash free secondary fuel hydrocarbon fuel into said oxygen-containing gas, combusting said secondary fuel in said oxygen-containing gas and passing all hot products of combustion through said zone of catalyst material to store heat therein, the point of introduction of said secondary fuel being substantially adjacent said zone of catalyst material and the point of introduction of said primary fuel and said oxygen-containing gas being upstream from said point of introduction of said secondary fuel, the rate of introduction of said oxygen-containing gas and combustion of said primary fuel and said secondary fuel maintaining throughout the cycle in said catalyst zone an average temperature of from about 1300° to 1900° F. and in the refractory lined path upstream of said catalyst zone an average temperature of from about 1000° to 1700° F.; and (B) in the gas-making portion of the cycle, vaporizing a hydrocarbon oil in said refractory lined path upstream from said catalyst zone and passing said vaporized oil through said refractory lined path upstream from said catalyst zone, to heat said oil to about reaction temperature with substantially no thermal cracking, and then through said zone of catalyst material wherein conversion of said vaporized oil to oil gas takes place, and leading the resulting oil gas to storage.

1. The method of defoliation which comprises applying to foliage in concentration sufficient to effect defoliation, a member of the group consisting of ethyl p-anisylthionocarbamate, ethyl p-phenetylthionocarbamate, ethyl p-tolylthionocarbamate, methyl phenylthionocarbamate and ethyl phenylthionocarbamate.

2,893,857

AMINOLEAD COMPOUND AND HERBICIDAL COMPOSITION CONTAINING SAME

David O. De Pree, Royal Oak, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application May 29, 1953
Serial No. 358,527

2 Claims. (Cl. 71—2.7)

2. A herbicidally active composition consisting essentially of at least about 0.1 percent by weight of triethyl-N-sec-butylaminolead, a liquid hydrocarbon carrier therefor, said hydrocarbon having a boiling range below the kerosene distillation range and as a non-ionic dispersing agent, a polyethylene glycol having a molecular weight of above 1200 in amount sufficient to assist in dispersing said triethyl-N-sec-butylaminolead.

formation of a homogeneous molecular mixture of said several elements in solid form, further heating said molecular mixture to drive off any residue of said volatile solvent, and recovering said volatile solvent driven off during at least said quick drying for reuse.

2,893,860

METHOD AND APPARATUS FOR CONTINUOUSLY DEGASSING MOLTEN METALS, PARTICULARLY STEEL, BY EVACUATION

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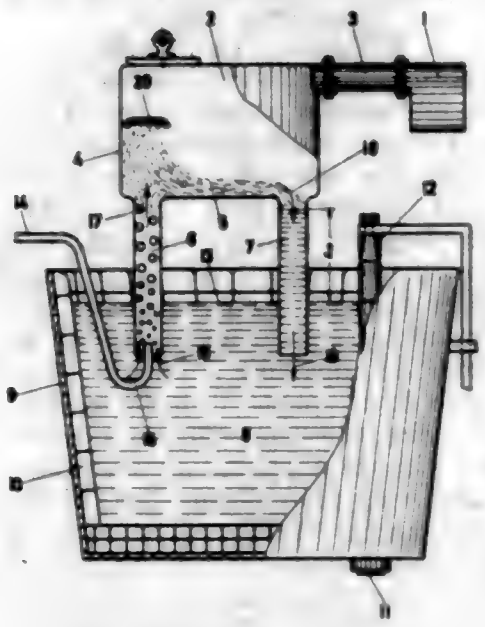
Application August 5, 1957, Serial No. 676,131
Claims priority, application Germany February 21, 1957
4 Claims. (Cl. 75—49)

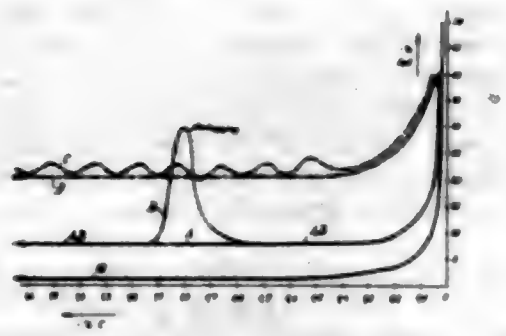
4. A method of continuously degassing molten metals comprising the steps of continuously evacuating a chamber disposed above a container and directly communicating with a body of molten metal in said container by a pair of conduits disposed coaxially around each other, connected to the bottom of said chamber and partly immersed into said body of metal, conducting the metal through the inner conduit into said chamber to be degassed therein, and rotating at least the outer conduit about its axis so that the degassed metal within said outer conduit will be subjected to a centrifugal force

and by the action of said force be continuously withdrawn from said chamber and ejected into said body of metal, wherein said centrifugal force is produced by the lower end portion of the rotating outer conduit which



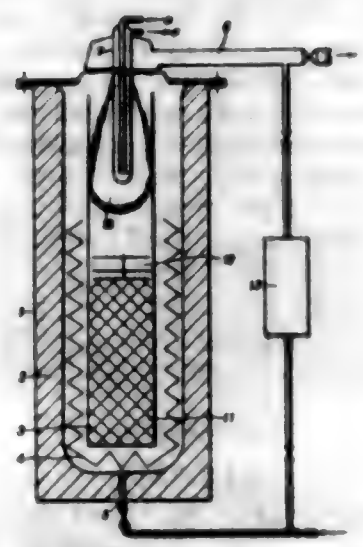
is submerged in said body of molten metal and separates the metal within said end portion into a plurality of substantially radially extending bodies and then passes the metal to a plurality of streams into said main body of molten metal.

2,893,861
METHOD OF REFINING CRUDE IRON
Rudolf Franz Rinesch, Froschberg, Linz, Austria, assignor to Bot Brassert Oxygen Technik A.G., Zurich, Switzerland, a company of Switzerland
Application July 12, 1957, Serial No. 671,459
Claims priority, application Austria May 10, 1957
6 Claims. (Cl. 75—52)



1. A method of refining molten crude iron containing more than 0.5% phosphorus in a refractory-lined converter, which comprises blowing oxygen onto the surface of the molten crude iron to produce a reaction zone in which the oxygen reacts with the carbon and other impurities accompanying the iron in the presence of a basic slag, adding an iron oxide carrier to the bath when a carbon content between 2.0% and 0.8% in the molten charge has been reached to increase the iron oxide content of the slag at least 50% and form thereby a reactive slag and allowing said slag to react with the bath for a period not substantially in excess of one minute to extract at least the major portion of the phosphorus, skimming off the slag and continuing the blowing until a steel having the desired content of carbon and a content of less than 0.030% phosphorus is produced.

2,893,862
PROCESS FOR THE PRODUCTION OF ALKALINE-EARTH METALS
Engelbert Walaschewski, Koln-Bayenthal, and Dieter Goerrig, Lohmar, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany
Application September 19, 1956, Serial No. 610,812
Claims priority, application Germany September 26, 1955
8 Claims. (Cl. 75—67)



2. In the process for the production of an alkaline-earth metal having an atomic number between 20 and 56 by thermally splitting an alkaline-earth metal hydride into hydrogen and the respective alkaline-earth metal and distilling the alkaline-earth metal the step which comprises fixing the nitrogen present in the starting material in the form of aluminum nitride by performing the process in the presence of such an amount of aluminum which is at least chemically equivalent to the nitrogen amount present in the starting material and filtering the earth-alkaline metal vapour so as to prevent the entraining of nitrogen containing dust into the distillate.

2,893,863
PROCESS FOR REMOVING ALUMINUM COATINGS
Jack Flex, Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application May 13, 1949
Serial No. 93,185
11 Claims. (Cl. 75—101)

1. A process for removing aluminum coatings from uranium metal articles, comprising treating said coated articles with an aqueous solution having initial concentrations by weight of 9% to 20% sodium hydroxide and 35% to 12% sodium nitrate and separating the treated article from said solution.

2,893,864
TITANIUM BASE ALLOYS
Geoffrey Thomas Harris, Sheffield, and Henry Cave Child, Rotherham, England
No Drawing. Application June 2, 1958
Serial No. 738,955
Claims priority, application Great Britain February 4, 1958
19 Claims. (Cl. 75—175.5)

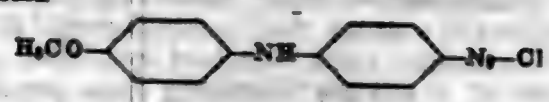
7. Creep resistant titanium alloys consisting essentially of 2–10% aluminum, 1–8% molybdenum, and 0.1–2% silicon, balance titanium and impurities.

2,893,865
SINGLE POWDER PHOTOGRAPHIC DEVELOPERS
Lawrence G. Wolliver and Jerry S. Krisko, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Application December 26, 1956
Serial No. 630,426
11 Claims. (Cl. 96—66)

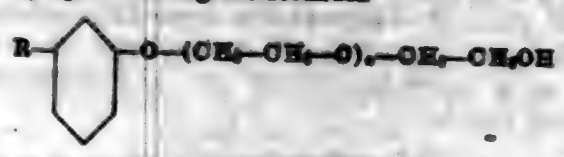
1. A stable single powder photographic developer containing, an organic silver halide developing agent, an alkali, a preservative, an anti-fogging agent and a stabilizing amount of anhydrous lithium hydroxide.

2,893,866
PHOTOSENSITIVE MATERIAL AND A PROCESS OF MAKING SAME
Theodor Haefeli, Emmenbrücke, Switzerland, assignor to Cinetechnik A.G., Zurich, Switzerland
No Drawing. Application March 15, 1955
Serial No. 494,547
Claims priority, application Germany March 15, 1954
5 Claims. (Cl. 96—75)

1. A process of making light sensitive cinematographic and photographic material, said process comprising in combination, the steps of embedding the light sensitive substance consisting of a chloride of nitroso-free diazo compound of 4'-methoxy-4-amino-diphenylamine having the formula



in a superficially saponified cellulose hydrate layer, said layer having been saponified by caustic soda with an equalizing agent having the formula



wherein R is an alkyl radical having from 12–14 C-atoms and *n* an integer from 3–19, and ripening the embedded diazo compound by storage during a period of one to three months, whereby film of constant low contrast characteristics is produced.

2,893,867
COMPOSITIONS FOR USE IN THE MANUFACTURE OF LIGHT-SENSITIVE PHOTOGRAPHIC MATERIALS
Fred Dawson, Clifford Ronald Hinley, John Lewis Mollet, and Hans Werner Gustav Ziegler, Blackley, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
No Drawing. Application November 7, 1955
Serial No. 545,556
13 Claims. (Cl. 96—87)

4. A new composition for use in the manufacture of light-sensitive photographic materials which comprises an emulsion containing, as the discontinuous phase, a light-sensitive aqueous gelatino-silver halide emulsion, and as the continuous phase a solution of a water-insoluble, water-permeable cellulose ether in a water-immiscible organic solvent.

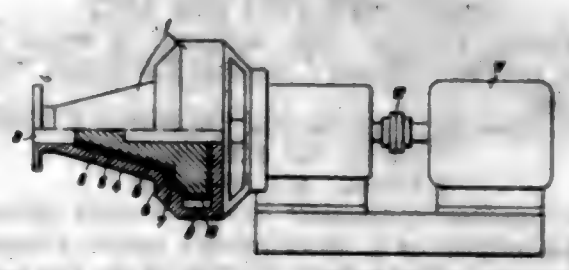
2,893,868
POLYMERIZABLE COMPOSITIONS
Arthur Livingston Barney, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application August 22, 1955
Serial No. 529,903
15 Claims. (Cl. 96—115)

1. An addition polymerizable composition comprising as three different essential ingredients (*a*) an addition polymer having a molecular weight of at least 2500, a wholly carbon chain, and a plurality of one type of extralinear salt-forming group selected from the class consisting of the acidic carboxylic, sulfonic, phosphonic, sulfate, and phosphate type and the basic primary, secondary and tertiary amino type, (*b*) at least one ethylenically unsaturated, addition polymerizable monomer capable of forming a high polymer by photoinitiated addition polymerization in the presence of an addition polymerization initiator therefor activatable by actinic light and having at least one complementary salt-forming group from the aforesaid class, and (*c*) an addition polymerization initiator activatable by actinic light in an amount from 0.1 to 5.0%, by weight, of said composition; the amount of said salt-forming groups in the polymer being at least 1.0%, on a molar basis, of all combined monomer units thereof, and the amount of said salt-forming monomer being at least 10%, on a molar basis, of the said complementary extralinear salt-forming groups in the polymer.

2,893,869
BROMINATED SESAME OIL
Karl M. Bock, Lake Bluff, Ill., and Noble Stermont, Plymouth, Mich.; said Bock assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois
No Drawing. Application October 18, 1956
Serial No. 616,625
4 Claims. (Cl. 99—28)

1. A weighting oil for citrus oil emulsions used in the manufacture of soft drinks comprising a brominated sesame oil having a specific gravity at 25° C. of about 1.34 and having an acid content which requires a maximum of about 2 cc. of N/10 sodium hydroxide to neutralize 10 grams of the said brominated oil.

2,893,870
HOPPING OF BEER
Kurt Ritter, Köln-Deutz, Germany, assignor to Heinr. Auer Mühlenwerke Kommanditgesellschaft, auf Aktien, Köln-Deutz, Germany
Application April 3, 1957, Serial No. 650,474
Claims priority, application West German Republic April 7, 1956
7 Claims. (Cl. 99—50.5)

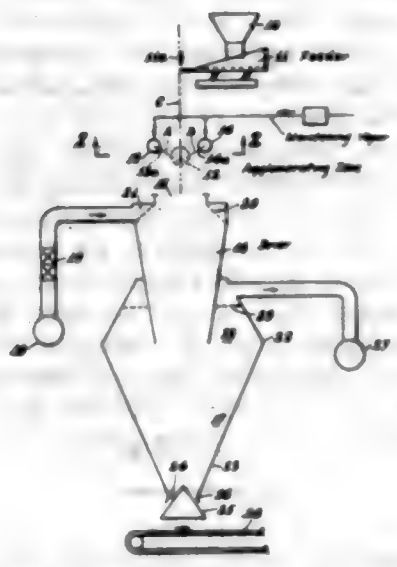


1. In the brewing of beer, the steps comprising suspending the hops in an aqueous medium, subjecting said hops suspension to a gyratory disintegration to dissolve the hops resins and to disperse the insoluble components into a very fine dispersion, adding said dispersion containing the dissolved hops resins to the wort, subjecting the hopped wort to fermentation and removing said insoluble components only after fermentation.

2,893,871
AGGLOMERATION PROCESS AND APPARATUS
Harry L. Griffin, River Edge, N.J., assignor to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Application November 12, 1956, Serial No. 773,387
23 Claims. (Cl. 99—86)

1. A process of agglomerating a powdered material capable of being self-adherent when superficially moistened which comprises forming two balanced straight-line sheet-like jets of moistening fluid and directing them

against each other in converging relation while passing the powdered material in a sheet-like body into the apex of the trough between said jets whereby its particles are



superficially moistened and are tumbled in a confined zone of turbulence to form agglomerates by self-adhesion.

2,893,872
SANDWICH SPREAD AND A PROCESS FOR ITS MANUFACTURE
Roger Gaston Pernot, Dole du Jura, France, assignor to Amil Aliments Modernes Intégraux Lactés X. Rudloff, R. Pernot, P. Berger & Cie, Brazey-en-Plaine, Department of Cote-d'Or, France, a corporation of France
No Drawing. Application September 10, 1954
Serial No. 455,351
9 Claims. (Cl. 99—117)

1. A sandwich spread comprising the product obtained by heating to pasteurizing temperature, in the presence of water an admixture of fresh uncured curds with dry yeast, and with a salt selected from the group consisting of phosphates, citrates and mixtures thereof.

2,893,873
FONDANTS AND THE LIKE
Leo J. Novak, Dayton, Ohio, assignor, by mesne assignments, to The Midland Chemical Company, Wilmington, Del.
No Drawing. Application December 6, 1956
Serial No. 626,606
1 Claim. (Cl. 99—134)

A sucrose-free confection having a solid phase consisting essentially of a water-soluble native substantially linear dextran in which 94% to 97% of the linkages joining the anhydroglucose units are 1,6 linkages, and a liquid phase consisting essentially of water having dissolved therein a sucrose-free sweetening agent.

2,893,874
SALAD DRESSING
Ira M. Le Baron, Evanston, Ill., assignor to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Application February 27, 1957
Serial No. 642,662
7 Claims. (Cl. 99—144)

1. A dressing for salads which comprises essentially an edible oil, seasonings, and between about 0.05 and about 0.5% by weight of L-glutamic acid, based on the complete mixture, in the form of an aqueous solution of L-glutamic acid and an edible inorganic acid salt of L-glutamic acid, said solution having a pH between about 2 and about 2.6.

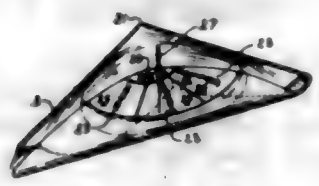
2,893,875
FATTY ACID-EPICHLOROHYDRIN ADDUCTS
Ralph J. Chamberlain, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Application April 30, 1958
Serial No. 731,868
6 Claims. (Cl. 99—166)

4. A stable wax-like stable chemical adduct obtained by heating at above about 50° C. a mixture containing from about 3.0 to about 3.3 mol parts of epichlorohydrin, and an aqueous mixture comprising about one mol part of an alkali metal soap of a long chain fatty acid, from about 275 to about 550 mol parts of water and at least two mol parts of available alkali metal ions, whereby said soap is converted to a water-immiscible oil, and collecting and solidifying said oil.

5. A strong-flexible film comprising a thin layer of a stable wax-like chemical adduct obtained by heating at above about 50° C. a mixture containing from about 3.0 to about 3.3 mol parts of epichlorohydrin, and an aqueous mixture comprising about one mol part of an alkali metal soap of a long chain fatty acid, from about 275 to about 550 mol parts of water and at least two mol parts of available alkali metal ions, whereby said soap is converted to a water-immiscible oil, and collecting and solidifying said oil.

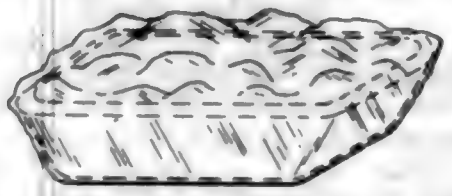
6. A composition of matter comprising an edible food stuff enclosed in a strong, flexible, easily-peeled protective layer of a chemical adduct obtained by heating at above about 50° C. a mixture containing from about 3.0 to about 3.3 mol parts of epichlorohydrin, and an aqueous mixture comprising about one mol part of an alkali metal soap of a long chain fatty acid, from about 275 to about 550 mol parts of water and at least two mol parts of available alkali metal ions, whereby said soap is converted to a water-immiscible oil, and collecting and solidifying said oil.

2,893,876
WRAPPED SANDWICHES AND WRAPPER THEREFOR
Patrick James Murphy, Jennings, Mo., assignor to Schnelthorst Catering Company, St. Louis, Mo., a corporation of Missouri
Application April 2, 1957, Serial No. 650,269
5 Claims. (Cl. 99—171)



5. A sandwich package comprising a wrapper made of grease-resistant sheet material and having two superposed generally rectangular walls, said walls being joined together along one side of the wrapper at an integral fold of the sheet material of the wrapper and secured together along a second side of the wrapper extending at right angles to the fold, and said wrapper being open at the other two sides thereof, one of said walls of the wrapper having at the one corner thereof located diagonally opposite the corner where said fold and said second side intersect spaced markings which are visible from the outside of said one wall for identifying various types of sandwiches that may be wrapped in the wrapper, a sandwich packaged in the wrapper between said superposed walls, the marked corner of said one wall being lapped over the corresponding corner of the other wall, and a toothpick pierced through said walls and through the marking identifying that particular sandwich and acting both to secure the wrapper walls together and to identify the sandwich contained in the wrapper.

2,893,877
METHOD FOR PACKAGING MEAT
Kenneth R. Nickolls, Wilbraham, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
Application July 2, 1958, Serial No. 746,140
1 Claim. (Cl. 99—174)

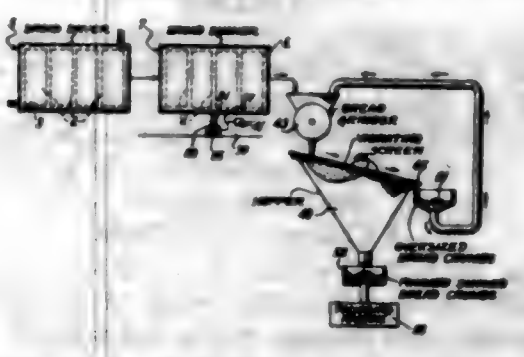


A method for packaging a fresh meat product which comprising placing a fresh meat product in a lightweight plastic tray and tightly enveloping and sealing said fresh meat product and tray in a thin, transparent, heat-sealable thermoplastic film having low vapor transmission characteristics; said lightweight plastic tray consisting of a laminar sheet in which the core is a sheet of styrene polymer foam having a density of less than about 10 lbs./ft.^{3} and a closed cell structure in which the majority of cells have a diameter of less than about 0.02" and the top and bottom skins are a styrene polymer having a density of at least 20 lbs./ft.^{3}; said top and bottom skins of said laminar sheet being about 0.0001–0.003" thick, the foamed styrene polymer core of said laminar sheet being about 0.050–0.200" thick.

2,893,878
PROCESS FOR RETARDING NON-ENZYMATIC BROWNING OF POTATOES
Morris Simon, Chicago, and Joseph R. Wagner, Downers Grove, Ill., assignors to the United States of America as represented by the Secretary of the Army
No Drawing. Application June 11, 1956
Serial No. 590,796
4 Claims. (Cl. 99—207)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. Process of retarding the non-enzymatic discoloration of enzymatically deactivated potatoes during prolonged periods of storage, comprising spraying said potatoes with calcium chloride and a water-soluble sulfiting agent dissolved in water so as to deposit on said potatoes at least about .1 part by weight of calcium ions and at least about .015 part by weight of sulfite ions per 100 parts by weight of said potatoes on a dehydrated basis, and dehydrating said sprayed potatoes; whereby a dehydrated potato product capable of prolonged storage without substantial discoloration and of being reconstituted into a natural-appearing and natural-tasting potato dish is produced, said product being further characterized by the presence of natural potato flavors including sugars and amino compounds.

2,893,879
COLD SMOKING FOOD PRODUCTS
Thad T. Huckabee, Albany, Ga.
Application February 19, 1958, Serial No. 716,225
9 Claims. (Cl. 99—229)



1. In a process for smoke-flavoring a food product, the steps, consisting of: placing the food product to be smoked in an enclosed zone; and introducing cold smoke of heavy concentration into said zone for a period of about 5 to 30 minutes to impart the desired smoke flavor to said food.

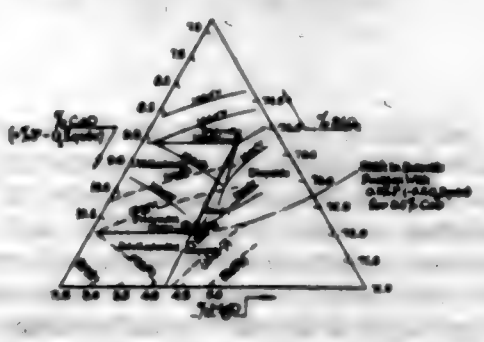
2,893,880
RUST PREVENTIVE COMPOSITION
Edgar A. Diemunn, Crown Point, Ind., and Alf T. Swanson, Chicago Heights, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Application October 30, 1956
Serial No. 619,130
6 Claims. (Cl. 106—14)

1. A rust preventive composition consisting essentially of from about 2% to about 30% of a normal wax selected from the class consisting of sperm wax, hydrogenated sperm wax and mixtures thereof, from about 0.5% to about 10% of a surfactant selected from the class consisting of an alkaline earth soap of a preferentially oil-soluble petroleum sulfonic acid and a fatty acid ester of an anhydroalkitol, and from about 60% to about 97.5% of a hydrocarbon normally liquid diluent.

2,893,881
IMPREGNATING COMPOSITION
Songe S. Sakornbut, Kirkwood, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application June 1, 1954
Serial No. 433,834
19 Claims. (Cl. 106—15)

1. Preserving, water-repellent and fire-retardant composition for cellulosic compositions consisting essentially of a solvent oil boiling between 110° C. and 220° C., from 3 to 8 percent by weight of a normally solid chlorinated phenol, from 8 to 20 percent of a normally solid chlorinated hydrocarbon containing at least 40 percent chlorine, from 3 to 10 percent of a hydrocarbon triester of phosphoric acid and from 0.1 to 2 percent of petroleum wax, the balance of said solution being the said solvent oil, all said percentages being based on the weight of the resulting solution, said solvent oil being present as the principal component.

2,893,882
GLASS COMPOSITION
Howard R. Swift, Toledo, and Donald E. Sharp, Maumee, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
Application December 17, 1953, Serial No. 398,711
8 Claims. (Cl. 106—52)



1. A glass composition consisting essentially of the following ingredients within the ranges given:

Percent SiO_2	69.8 to 73.4
Percent MgO	3.8 to 4.2
Percent CaO	6 to 12
Percent Na_2O	12 to 15
Percent Al_2O_3	0 to 2
Percent Fe_2O_3	0 to .6
Percent minor ingredients	0 to 1
Percent F	0.15 to 1.1

with the above composition having the SiO_2 and F in a

fixed relative relation substantially as determined by the following equation:

$$\text{Percent } SiO_2 = 73.7 \pm 0.2 - 3.4(\text{percent F})$$

2,893,823

DEFOAMER MATERIALS

John Thomas Stephen, Seattle, Wash.

No Drawing. Application February 7, 1955
Serial No. 486,721

15 Claims. (Cl. 106—124)

1. A defoamer composition for abatement of foam in an aqueous adhesive solution, said composition comprising a tri-alkoxy-phosphate having only one ether-oxygen linkage and at least six carbon atoms in each side chain, said tri-alkoxy-phosphate being dissolved in a water insoluble, substantially non-volatile hydrocarbon oil solvent therefor.

2,893,884

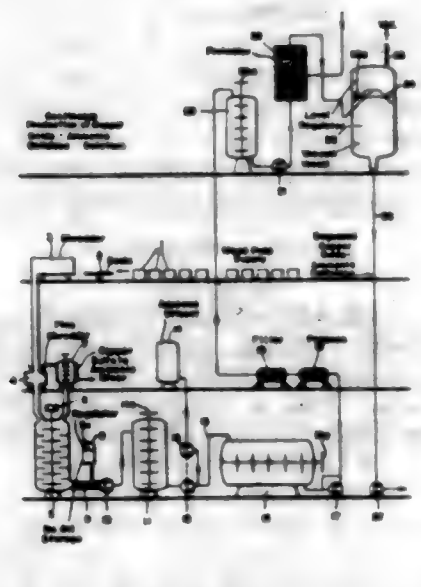
CONTINUOUS PRODUCTION OF CELLULOSE SOLUTION

Paul Schubert, Wuppertal-Oberbarmen, Germany, assignor to J. P. Bemberg Aktiengesellschaft, Wuppertal-Oberbarmen, Germany

Application October 27, 1955, Serial No. 543,238

Claims priority, application Germany October 30, 1954

4 Claims. (Cl. 106—167)



3. A continuous process for producing copper oxide-ammonia-cellulose solution which comprises continuously mixing together small successive increments of cellulose and a mixture of basic copper sulfate and ammonia in a mixing zone, continuously conveying the resulting mixture from said mixing zone as it is produced at a rate of flow equivalent to the rate of said mixing, continuously mixing together small successive increments of sodium hydroxide and said mixture from said mixing zone as said mixture is conveyed therefrom at a rate equivalent to the rate of said conveying, continuously mixing together small successive increments of the resulting solution as it is produced and aqueous diluent at a rate equivalent to the rate of said mixing with sodium hydroxide, and continuously filtering the resulting dilute solution as it is produced, supplying the filtered solution as it is produced in the form of a film to an evacuation zone, and degassing the solution film as it is formed, each at a rate of flow equivalent to the rate of said mixing with diluent.

2,893,885

COMPOSITION COMPRISING ESTERS OF HYDROXYLATED POLYBUTADIENE AND PROCESS OF PREPARING SAME

William M. Hutchinson, Bartlesville, Okla., and Howard W. Best, Austin, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application April 25, 1952
Serial No. 284,452
25 Claims. (Cl. 106—318)

1. A composition comprising linseed oil and an ester of a polymer of butadiene which has been hydroxylated and linseed oil acid.

2,893,886

IRON BLUE PIGMENT COMPOSITION AND PROCESS FOR ITS MANUFACTURE

Archibald M. Erskine, Berkeley, and Richard M. Lydon, Richmond, Calif., assignors to The California Ink Company, Inc., San Francisco, Calif., a corporation of Delaware

No Drawing. Application September 24, 1957
Serial No. 685,804
8 Claims. (Cl. 106—272)

1. The method of preparing a solid homogeneous pigment composition which comprises adding an oil soluble surface active agent selected from the group consisting of long chain alkyl oxazolines and long chain alkyl imidazolines to water wet iron blue, flushing water from said iron blue and surface active agent by including mineral oil which preferentially wets the pigment to provide a separate phase of an oil-surface active agent-iron blue mixture and displaces the water, separating the water from the oil-surface active agent-iron blue mixture, and mixing a molten wax having a melting point above 65° C. with said oil-surface active agent-iron blue mixture, said wax being selected from the group consisting of carnauba, sugar cane, montan, candelilla, and microcrystalline waxes, and the relative amounts of said iron blue, mineral oil, surface active agent and wax ingredients employed in said method based on the total weight of said ingredients being from about 60 to 80 percent by weight of said iron blue, from about 10 to 20 percent by weight of said mineral oil, from about 1 to 5 percent by weight of said surface active agent, and at least about 5 percent by weight of said wax.

2,893,887

LONG FLOW CARBON

Andries Vest, Borger, Tex., assignor to J. M. Huber Corporation, Borger, Tex., a corporation of New Jersey

No Drawing. Application May 3, 1954
Serial No. 427,340
16 Claims. (Cl. 106—307)

1. A process for enhancing the flow imparting characteristics of relatively short flow carbon black which comprises contacting said carbon black with a solution of an alkaline earth salt of mahogany sulfonic acid in an oily solvent for said salt.

2,893,888

METHOD OF PROTECTING REFRACTORY LINING OF A HIGH TEMPERATURE FURNACE

Michael F. Yaretsky, Chicago, Ill., assignor to United States Steel Corporation, a corporation of New Jersey

No Drawing. Application July 8, 1955
Serial No. 520,969
3 Claims. (Cl. 117—6)

1. The method of protecting an inner surface of the previously heated refractory lining of a high temperature furnace from damage due to atmospheric conditions during shutdowns which comprises spraying a mixture of a plastic material, plasticizer and solvent over said re-

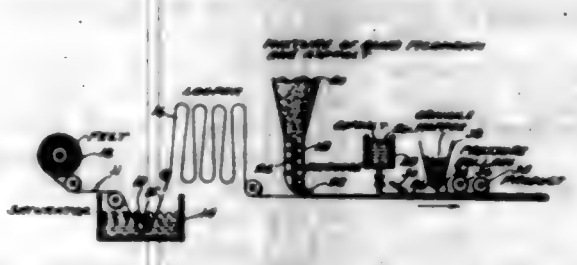
fractory lining to provide a first coating, permitting the coating to set, and then spraying a mixture of a plastic material, plasticizer, solvent and pigment over said first coating, said mixtures being limited to materials safe for the refractory.

2,893,889

INTUMESCENT FIRE-RETARDING BITUMINOUS COATING COMPOSITION AND ROOFING MADE THEREFROM

Clyde C. Schuetz, Prospect Heights, and Richard Ericson, Park Ridge, Ill., assignors to United States Gypsum Company, Chicago, Ill., a corporation of Illinois

Application April 2, 1956, Serial No. 575,476
6 Claims. (Cl. 117—36)



4. Process of making a fire-retarding building covering material which comprises the step of applying to a bitumen-saturated base sheet a layer of a bituminous coating composition containing from about one-quarter percent to not substantially more than five percent by weight of interfelted drawn glass filaments of a length not substantially less than three millimeters, said latter percentage being based on the combined weight of said bituminous binder and glass filaments, each filament having a substantially uniform diameter within the range of from about one-half to not substantially more than about four microns.

2,893,890

COPYING PAPER AND METHOD OF MANUFACTURE

Edmund N. Harvey, Jr., Brighton, N.Y., assignor to Kee Lox Manufacturing Company, Rochester, N.Y., a corporation of New York

Application October 25, 1957, Serial No. 692,263
2 Claims. (Cl. 117—36)

1. The method of producing a copying paper consisting in coating a substrate on at least one surface with a color transfer composition including from 10 to 50 parts by weight of a polyvinyl chloride plastisol dispersion resin, from 10 to 20 parts by weight of a non-volatile plasticizer for said resin, from 5 to 75 parts by weight of a colorant, and from 10 to 50 parts by weight of a non-volatile, non-plasticizing oily diluent color carrier in a volume at least as great as the volume of plasticizer, and which acts to exude color from the coating when pressure is applied, and heating the composition to approximately 350° F. for at least approximately 5 seconds.

2,893,891

HIGH SURFACE AREA COATING PRODUCTION

Samuel W. Bradstreet and James S. Griffith, Chicago, Ill., assignors to Armour Research Foundation of Illinois Institute of Technology, Chicago, Ill., a corporation of Illinois

No Drawing. Application May 19, 1954
Serial No. 431,004
1 Claim. (Cl. 117—62)

A method of preparing a high surface area metal coating, which comprises applying an adherent thin cryptocrystalline coating of an oxide of the metal to a catalyst carrier and then exposing the coating to a gaseous reducing atmosphere to reduce the metal oxide to the metal.

2,893,892

METHOD FOR THE COATING OF GLASS THREADS AND TESSUES WITH ARTIFICIAL RESIN

Jules Plate, Maurice Cosper, and Paul Roches, Lyon, France, assignors to Centre Technique Industriel dit: Institut Textile de France, Paris, France

Application December 7, 1954, Serial No. 473,736
Claims priority, application France December 10, 1953
3 Claims. (Cl. 117—72)

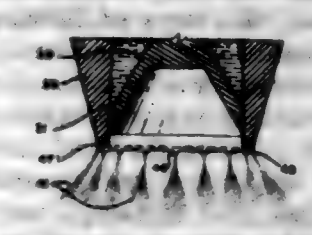
1. A method of applying coatings of artificial resins to glass threads and fabrics which comprises treating the glass threads and fabrics with a diethyleneurea and then treating the glass threads and fabrics with the artificial resin in admixture with said diethyleneurea and with an organic diisocyanate.

2,893,893

METHOD AND APPARATUS FOR ELECTROSTATIC COATING

William W. Crouse, Carmel, Ind., assignor to Ransburg Electro-Coating Corp., Indianapolis, Ind., a corporation of Indiana

Application January 31, 1950, Serial No. 141,589
12 Claims. (Cl. 117—93)



1. A method of electrostatically distributing liquids as a coating on an article, comprising the steps of flowing a stream of liquid coating material from a supply source including an orifice and positively deforming it into a thin annular flowing film, advanced without subdivision along a supporting surface to an atomizing zone to provide a thin circular film edge substantially spaced from the article and having an extent many times its thickness and many times the minimum dimension of said orifice, the material being uniformly distributed along the entire extent of said edge and projecting beyond said supporting surface, creating between the article and the leading edge of such film an electrical potential creating an electrostatic field of sufficient strength to form such leading edge into a series of spaced cusps, to affect the spacing of said cusps and to electrostatically atomize, disperse and deposit on said article while still in liquid state finely divided particles of liquid from the tips of such cusps, the cusps being so closely spaced as to provide a sub-

stantially continuous atomizing zone and the distance between the article and the atomizing zone being great enough to permit substantial dispersion of the liquid spray particles as they proceed toward the article, the atmosphere at the article and between it and the atomizing zone being quiescent whereby electrostatic forces will effect deposition on the article of a substantial number of particles which otherwise would not have been deposited thereon, and supplying additional coating material to said film in rear of its leading edge to maintain the flow of the film to such leading edge.

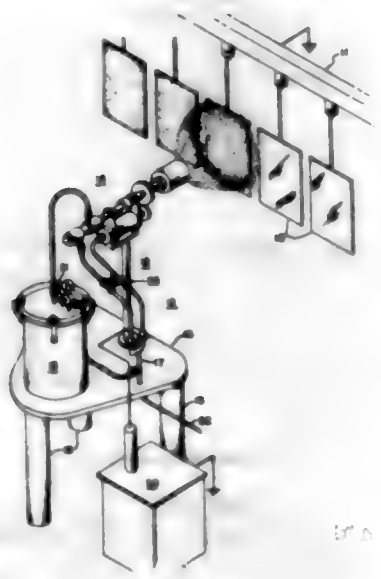
2,893,894

METHOD AND APPARATUS FOR ELECTROSTATICALLY COATING

Edwin M. Ransburg, Indianapolis, Ind., assignor to Ransburg Electro-Coating Corp., Indianapolis, Ind., a corporation of Indiana

Continuation of application Serial No. 143,994, February 13, 1950. This application November 3, 1958, Serial No. 771,585

8 Claims. (Cl. 117—93)



1. In a method of electrostatically spray coating the surface of an article with liquid atomized from an annular atomizing zone, the steps of flowing liquid coating material at a controlled rate from a source of supply to a rotatable head, forming it into a thin film supported on said head and advancing said supported film toward said atomizing zone by rotating the head, said film having a uniform edge of an extent many times its thickness, establishing between said film-edge and said article an electrostatic field of sufficient strength to form said film-edge into a series of spaced cusps and to electrostatically atomize finely divided discrete particles of liquid as a spray from said cusps, and electrostatically dispersing and depositing said particles on the article surface while still in liquid state, said article surface being in a substantially quiescent atmosphere and at a distance from said atomizing zone sufficient to permit substantial dispersion of the liquid spray particles as they proceed toward the article.

2,893,895

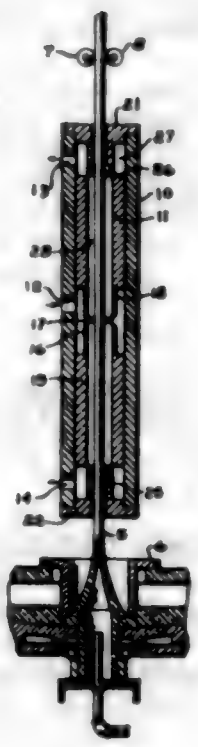
METHOD OF VAPOR COATING

Walter F. Clausen, Corning, N.Y., assignor to Corning Glass Works, Corning, N.Y., a corporation of New York

Application May 4, 1956, Serial No. 582,772

3 Claims. (Cl. 117—106)

1. The method of externally coating a linear body which includes moving such body in a direction parallel to its linear dimension through a tubular space, subjecting the body to a vaporous coating material by directing such a material into a region of such space intermediate its ends and exhausting some of such material from such space in regions between the region of introduction of



such material thereinto and the ends of such space whereby any air entering the ends of such space about the body is diverted from such space with the exhausted material.

2,893,896

METHOD OF TREATING ORIENTED POLYETHYLENE TEREPHTHALATE FILM WITH AN HALOGENATED FATTY ACID

Allan Robert Andrew Beeber, Elizabeth, N.J., and Daniel S. Spechler, Brooklyn, N.Y., assignors to Keuffel & Esser Company, Hoboken, N.J., a corporation of New Jersey

No Drawing. Application May 2, 1957
Serial No. 656,513
6 Claims. (Cl. 117—118)

1. The method of pre-treating a high molecular weight oriented polyethylene terephthalate film to make it receptive to coatings of organic materials comprising the steps of coating said film with a solution of an halogenated fatty acid in an inert organic solvent compatible therewith which wets the surface of said polyethylene terephthalate film, the concentration of said halogenated fatty acid in said solution being in the range from 0.2% to a completely saturated solution.

2,893,897

METHOD OF COATING

Augusto Uccelli, Como, Italy

No Drawing. Application February 14, 1956
Serial No. 565,318
Claims priority, application Switzerland February 17, 1955
1 Claim. (Cl. 117—137)

The method of forming a resistant protective covering on a surface, which comprises the steps of forming a dry powder mixture consisting of about 70 parts by weight of quartz sand together with 3 to 6 parts by weight of asbestos fibers and about 28 parts by weight of a bonding agent, said bonding agent comprising a mixture of about 25 parts by weight of calcium carbonate

with about 25 parts by weight of barium oxide together with about 3 parts by weight of titanium oxide and with about 50 parts by weight of barium sulphate, separately forming a solution of from about 26 to 40 parts by weight of sodium silicate and about 26 to 60 parts by weight of potassium silicate together with about 2.5 parts by weight of glycerine in about 35 to 64 parts by weight of water, stirring about 50 to 60 weight parts of said dry powdered mixture into a paste with about 40 to 50 weight parts of said solution, immediately applying said paste to said surface, then allowing said paste-covered surface to stand, whereby said paste sets and dries.

2,893,898

METHOD OF RENDERING MATERIALS WATER-REPELLENT

John Gwynant Evans, Menston-in-Wharfedale, and William Salkeld Meals, Bradford, England, assignors to Bradford Dyers' Association Limited, Bradford, England, a company of Great Britain

No Drawing. Application April 30, 1956
Serial No. 581,341
17 Claims. (Cl. 117—161)

1. A method of rendering material water repellent comprising contacting said material with both (1) at least one organosilicon compound selected from the group consisting of the product obtainable by hydrolysis of hydrolyzable organosilanes containing organic groups linked to the silicon through carbon-silicon linkage and containing hydrolyzable substituents directly attached to silicon and (2) at least one isocyanate compound selected from the group consisting of polyisocyanates, polyisothiocyanates and adducts thereof, said compounds having organic radicals directly linked to isocyanate groups by C–N linkages.

2,893,899

METHOD OF FORMING A BIBULOUS COATING ON A METALLIC ANODE

Rodolfo Rodriguez Beloqui, Union de Reyes, Cuba, assignor to J. D. Hedges and Company Limited Partnership, Matanzas, Cuba, a limited partnership of Cuba

No Drawing. Application May 23, 1957
Serial No. 660,998
14 Claims. (Cl. 117—230)

1. The method of forming a bibulous coating on a metallic anode element which is subsequently to be assembled into a primary battery, comprising the steps of forming a starch containing solution, heating said anode element to a temperature lying within the range bounded by the low temperature at which the heated anode in contact with the starch in said solution will cause said starch to gel and the temperature at which said solution will boil when in contact with said heated anode, immersing said heated anode element in said solution for a time interval just sufficient to form a gel coating of desired thickness on said anode, and maintaining said solution at a temperature at which the heat transferred thereto from said anode element is insufficient to raise the temperature of said solution, except where said solution is in contact with said anode element, to a value at which the starch in said solution will gel.

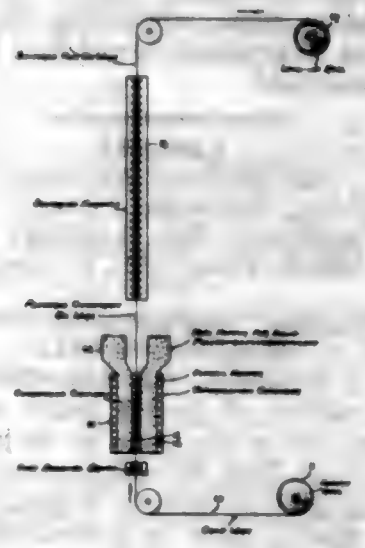
2,893,900

PROCESS OF CONDENSING POLYTETRAFLUOROETHYLENE VAPORS ONTO A SUBSTRATE AND SINTERING THE CONDENSATE

Eugene S. Machlin, Croton-on-Hudson, N.Y.

Application January 9, 1956, Serial No. 557,871
16 Claims. (Cl. 117—232)

14. The continuous process of producing an insulating coating on magnet wire comprising the continuous condensation of polytetrafluoroethylene vapors onto the magnet wire passing through a chamber containing said vapors to form a condensate including a layer of powdered poly-



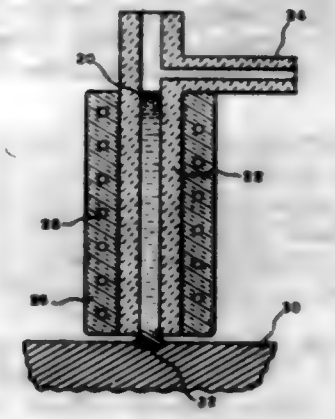
tetrafluoroethylene thereon, and subsequent continuous sintering of said condensate in situ.

2,893,901

SEMICONDUCTOR JUNCTION

Kurt Lehovec, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts

Application January 28, 1957, Serial No. 636,821
1 Claim. (Cl. 148—1.5)



A process for producing an alloy junction in a semiconductor body comprising providing a reservoir of a molten metal or metal alloy capable of changing the conductivity of a semiconductor body to the opposite type when brought into solid solution in the semiconductor body, forcing a small amount of the molten metal or metal alloy from the reservoir through a restricted column and contacting a portion of the semiconductor body with said small amount of the molten metal or metal alloy, dissolving the contacted portion of the semiconductor body in said small amount of the metal or metal alloy, recrystallizing the liquid phase consisting of said small amount of the molten metal or metal alloy and said dissolved portion of the semiconductor body, whereby a pn-junction is produced.

2,893,902

HEAT TREATMENT OF STEEL

George A. Roberts and John C. Hamaker, Jr., Latrobe, Pa., assignors to Vanadium-Alloys Steel Company, Latrobe, Pa.

Continuation of abandoned application Serial No. 679,227, August 20, 1957. This application February 4, 1959, Serial No. 793,797
10 Claims. (Cl. 148—12)

1. An improved process of heat treating air hardening martensitic structure steels to improve the transverse

mechanical properties thereof which comprises the steps of initially hot working and subsequently annealing the material and, intermediate of such hot working and subsequent annealing steps, submitting the material to a homogenization treatment followed by a low temperature normalizing treatment.

2,893,903

METHOD OF BRAZING

Donald E. Wernz, Baltimore County, and Melvin M. Schwartz, Baltimore, Md., assignors to The Martin Company, Middle River, Md., a corporation of Maryland

No Drawing. Application June 24, 1955
Serial No. 517,922
4 Claims. (Cl. 148—26)

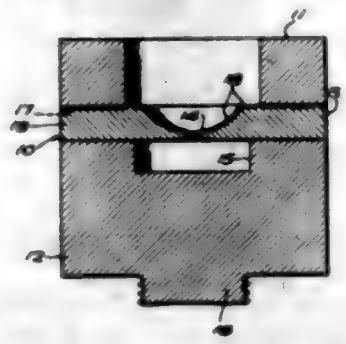
1. In the method of joining metal parts by brazing where at least one of the parts to be joined is a metal containing at least 70% by weight of aluminum, which comprises the steps of mixing 1 part by weight of a chloride-free fluxing agent in particulate form and consisting essentially of aluminum fluoride with approximately 4 to 12 parts by weight of an aluminum base alloy consisting essentially of about 88% by weight of aluminum and about 12% by weight of silicon, in the presence of sufficient aqueous vehicle to form a paste, applying the paste near the line of proposed juncture of the metal parts, and bringing the metal parts to the brazing temperature in the presence of a fluxing agent to effect the brazing operation.

2,893,904

THERMAL ZENER DEVICE OR THE LIKE

Donald C. Dickson, Jr., Phoenix, Ariz., assignor to Hoffman Electronics, a corporation of California

Application October 27, 1958, Serial No. 769,637
10 Claims. (Cl. 148—33)



1. A semiconductor device including: a wafer of semiconductor material having a thick portion, a relatively thin portion integral therewith, said thick and thin portions having a continuous upper surface and a continuous lower surface, and at least one p-n junction disposed in said material between said upper and lower surfaces substantially over the extent of said wafer; and first and second contact means in electrical and mechanical connection to only said thick portion at said upper and lower surfaces, respectively, at least one of said contact means having high thermal conductivity relative to said semiconductor material to constitute a heat sink for said thick portion.

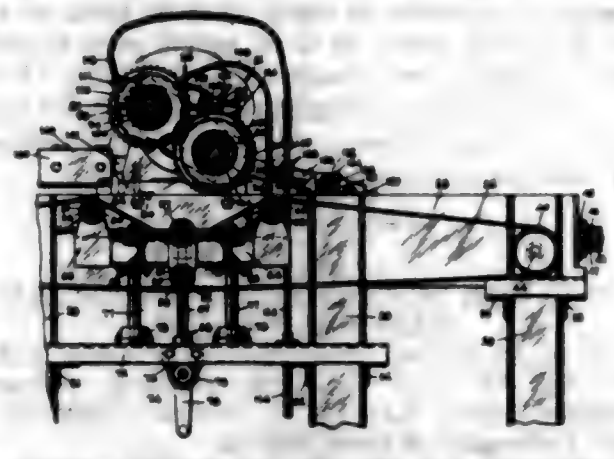
2,893,905

APPARATUS FOR PRESSING CURVED GLASS LAMINATIONS

Frank J. Makovic, Jr., and Arthur W. Geraldes, Toledo, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Application December 30, 1952, Serial No. 328,672
12 Claims. (Cl. 154—2.7)

1. In apparatus for pressing together the sheets of a curved glass-plastic sandwich, the combination with means for conveying the sandwich in a defined path transversely to an axis of curvature thereof, of a pair of substantially parallel rolls disposed transversely of said path and providing a confined passage therebetween to receive said sandwich, means for mounting said rolls as a unit about an axis parallel to said rolls for rocking movement of said unit relative to said conveying means from a first position for receiving the forward end of said sandwich in said confined passage along a tangential



plane common to both of said rolls to a second position for releasing the rearward end of said sandwich from said passage, and means for rotating said rolls in opposite directions for simultaneously moving said sandwich therebetween during the rocking thereof from said first to said second position.

2,893,906

DIMENSIONALLY THERMOSTABLE POLYSULFIDE COMPOSITIONS CONTAINING METAL OXIDES AND METAL SULFATES AND ARTICLE COATED THEREWITH

Wallace F. Taylor, Los Angeles, Calif., assignor to Minnesota Mining & Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Application July 13, 1954
Serial No. 443,150
14 Claims. (Cl. 154—43)

1. A liquid polyalkylene polysulfide polymer composition capable of autogenously curing to a tough and rubbery, heat-resistant product exhibiting dimensional stability as its temperature is raised from room temperature up to at least about 300–350° F., said composition being a blend of components comprising a polyalkylene polysulfide polymer, a curing agent therefor, and a thermostability-promoting particulate inorganic anhydrous water-accepting compound selected from the group consisting of calcium oxide, strontium oxide, barium oxide, calcium sulfate, zinc sulfate and cadmium sulfate.

2,893,907

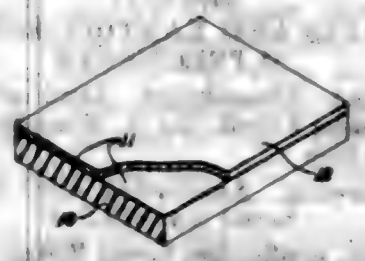
COVERING AND WATERPROOFING MATERIAL

Pierre Bove, Paris, France

Application February 17, 1955, Serial No. 488,935
Claims priority, application France March 5, 1954
3 Claims. (Cl. 154—50)

1. A waterproof covering material for buildings, comprising a succession of superposed alternate layers of bituminous material and thin continuous flexible sheets of synthetic resin selected from the group consisting of polystyrene, polyethylene, and polyvinyl chloride, said sheets having a thickness of substantially 0.2 mm., said sheets being incorporated between the layers of the bituminous material and by virtue of being impermeable to gases makes the entire covering material waterproof, rotproof, and impervious to chemical action.

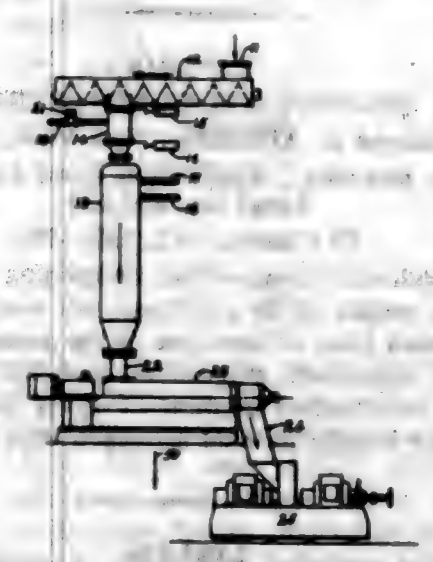
2,893,908
NOVEL BARRIER LAYER IN LAMINATED STRUCTURE
George J. Antlfinger, Avon Lake, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Application August 27, 1956, Serial No. 606,290
6 Claims. (Cl. 154—139)



1. A composite structure comprising a base material containing migratory ingredients, an outer coating of a material subject to passage of said migratory materials therein and a barrier layer of a vinylidene cyanide polymer between said base and outer coating material.

6. The method for preventing migration of migratory ingredients from a base material containing migratory ingredients and to an adjacent material pervious to said migratory ingredients which comprises interposing between said materials a barrier layer comprising a vinylidene cyanide polymer.

2,893,909
COMBINED DIGESTION AND REFINING OF PAPER PULP
Joseph C. Shouvlin and Marvin E. Gleaves, Springfield, Ohio, assignors to The Bauer Bros. Company, Springfield, Ohio, a corporation of Ohio
Application June 9, 1954, Serial No. 435,466
10 Claims. (Cl. 162—17)



1. In the art of pulping and refining a coarse fibrous material, a method of treating the fibrous material including the steps of cooking the material at an elevated temperature on the order of 212° and higher and at a pressure on the order of 150 p.s.i. and higher, transferring the cooked material under continued conditions of elevated temperature and pressure to a press, and in said press squeezing said material for extraction of cooking liquid and partly defibering said material.

2,893,910
TOXIC REACTION PRODUCTS OF ORGANOSULFINYLAMINES WITH DIALKYL PHOSPHITES
Gail H. Birum and Samuel Allen Heininger, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application March 29, 1957
Serial No. 649,293
19 Claims. (Cl. 167—22)

1. A method comprising reacting a sulfinylamine of the formula R—N=S=O with a phosphite of the formula $(R'O)_2POH$ in the presence of a catalyst selected from the class consisting of alkali metals and lower-alkoxy compounds thereof, R being a radical selected from the class consisting of phenyl, halophenyl, naphthyl, and alkyl and alkylated phenyl radicals having not more than 20 carbon atoms, R' being lower alkyl, to produce a new and useful reaction product.

8. The reaction product of a sulfinyl amine of the formula R—N=S=O wherein R is selected from the class consisting of phenyl, halophenyl, naphthyl, and alkyl and alkylated phenyl radicals having not more than 20 carbon atoms, with a phosphite of the formula $(R'O)_2POH$ wherein R' is a lower alkyl radical.

16. A parasiticidal toxicant composition comprising an inert carrier and as the essential effective ingredient a parasiticidally effective amount of product of claim 8.

2,893,911
1,2-BIS(ALKYLSULFOXY)-1,2-DIHALOETHYLENES AND FUNGICIDAL COMPOSITIONS COMPRISING THEM
Maynard S. Raasch, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application September 12, 1957
Serial No. 683,469
14 Claims. (Cl. 167—22)

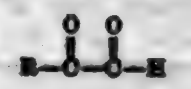
1. A compound of the formula

$$RSO_nC{=}C{-}SO_nR'$$
$$\quad\;\; X \quad\; Y$$

wherein the indicated oxygen atoms are attached only to the indicated sulfur atoms which sulfur atoms otherwise are attached only to carbon, R and R' are each an alkyl radical having from 1 to 12 carbon atoms, *m* and *n* are each an integer up to 2, and X and Y are each a halogen.

2,893,912
ANTI-VIRAL COMPOSITION COMPRISING A CYCLIC GLYOXAL AND METHOD OF USE
Samuel J. Musser, Kalamazoo Township, Kalamazoo County, and Gerald E. Underwood, Charleston Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
No Drawing. Application April 30, 1956
Serial No. 581,271
12 Claims. (Cl. 167—30)

1. A method for virus prophylaxis and decontamination of materials and areas comprising treating said materials and areas with a cyclic glyoxal, said cyclic glyoxal having the following general structural formula:

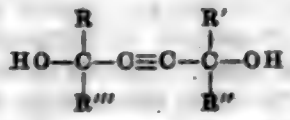


wherein R is selected from the group consisting of (1) cyclopentyl, cyclohexyl, benzyl, furyl, thienyl, hydroxyphenyl, dihydroxyphenyl, methoxyphenyl, dimethoxyphenyl, hydroxy- and methoxyphenyl, carboxyphenyl, carbomethoxyphenyl, nitrophenyl, chlorophenyl, and bromophenyl; (2) sodium and potassium bisulfite addition compounds; and (3) hydrates thereof.

2,893,913
WETTING AND DISPERSING AGENTS CONTAINING A WATER-SOLUBLE LIGNOSULFONIC ACID SALT
James C. Wiedow, Creve Coeur, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application August 29, 1955
Serial No. 531,281
11 Claims. (Cl. 167—42)

1. The wetting and dispersing agent comprising 30 to 80 percent by weight of condensation product of one mole of rosin acid and from 5 to 20 moles of ethylene

oxide, from 10 to 35 percent of an acetylenic glycol having the formula



wherein R, R', R'' and R''' are alkyl radicals having up to six (6) carbon atoms, and from 10 to 35 percent of a water soluble lignosulfonic acid salt.

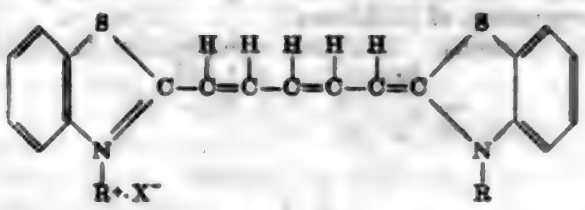
2,893,914

THIADICARBOCYANINE ANTHELMINTIC COMPOSITIONS AND METHODS OF USING THEM

Max C. McCowen and Paul F. Wiley, Indianapolis, Ind., assignors to Eli Lilly and Company, Indianapolis, Ind., a corporation of Indiana

No Drawing. Application September 18, 1958
Serial No. 761,681
11 Claims. (Cl. 167—53)

1. A broad-spectrum anthelmintic medicated feed composition in dosage unit form, comprising a thiadicarbocyanine represented by the following formula



wherein R is a lower alkyl radical and X is a physiologically compatible anion, dispersed in a utilizable feedstuff.

2,893,915

PHARMACEUTICAL COMPOSITIONS CONTAINING QUATERNARY AMMONIUM COMPOUNDS AND A STEROID

Chester J. Cavallito, Decatur, Ill., assignor to Irwin, Neisler and Co., Decatur, Ill., a corporation of Illinois

No Drawing. Application December 15, 1955
Serial No. 553,280
7 Claims. (Cl. 167—55)

1. A composition of matter having enhanced pharmacologic action upon oral administration comprising: a physiologically-active, non-surface-active, quaternary ammonium compound per se pharmacologically effective upon oral administration in intimate mixture with a compound selected from the group consisting of cyclopentanopolyhydrophenanthrenes having a moiety attached at the 17-position, said moiety comprising a carboxyl group, and hydrolyzable salts of said cyclopentanopolyhydrophenanthrenes.

ERRATUM

For Class 167—58 see:
Patent No. 2,894,023

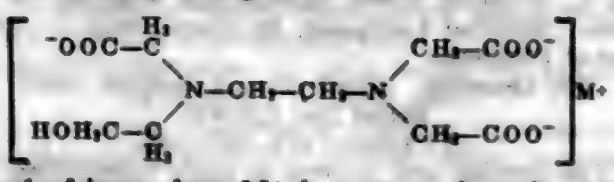
2,893,916

IRON CONTAINING COMPOSITIONS

Martin Rubin, Silver Spring, Md.

No Drawing. Application May 28, 1956
Serial No. 587,499
7 Claims. (Cl. 167—68)

1. A composition comprising a ferric complex stoichiometrically corresponding to the formula



per mol of iron where M^+ is a non-toxic cation selected from the group consisting of Na, K, ½Mg, ½Ca, procaine, dibenzylamine, 1 phenyl-2 methyl amino propanol, 1-N-methyl 1,2 diphenyl-2-hydroxy ethyl amine, N,N dibenzyl ethylene diamine, and N,N bis (dihydro abietyl) ethylene diamine, said composition as a whole being about neutral electrically.

2,893,917

21-XANTHATES AND XANTHOGENIC ACIDS OF Δ^4 PREGNENES

Poul Borrevang, Copenhagen, Denmark, assignor to Løvens kemiske Fabrik ved A. Kongsted, Copenhagen, Denmark, a firm

No Drawing. Application April 18, 1957
Serial No. 653,544
Claims priority, application Great Britain April 23, 1956
14 Claims. (Cl. 167—77)

1. A compound selected from the group consisting of 21-xanthogenates and 21-xanthogenic acids of Δ^4-pregnenes and $\Delta^{1,4}$-pregnadienes having keto groups in the 3- and 20-positions and a hydroxy group in the 17α-position a group in the 11-position selected from the groups consisting of oxygen and hydroxy, and a group in the 6α-position selected from the groups consisting of hydrogen and methyl, but no other substituents.

9. Therapeutic dosis unit for intravenous injection of the substances according to claim 1 consisting of a therapeutic dose of a solid 21-xanthogenic acid as set forth in claim 1 and containing an aqueous solution of the equivalent amount of a base selected from the group consisting of ammonia, potassium hydroxide, calcium hydroxide, zinc hydroxide, and an aliphatic monoamine having not more than 7 carbon atoms and not more than one alcoholic hydroxyl group and no other substituents, forming therewith a clear aqueous solution.

2,893,918

DEODORANT COMPOSITION

Harold A. Abramson, New York, N.Y.

No Drawing. Application April 24, 1957
Serial No. 654,634
13 Claims. (Cl. 167—90)

1. A deodorant composition comprising about 1 to 10 percent by weight of an astringent salt wherein the metal ion is selected from at least one of the group consisting of aluminum, zirconium, magnesium and zinc, a substantially smaller compatible amount of silver protein, and an inert carrier vehicle for said astringent salt and silver protein.

2,893,919

METHOD FOR PRODUCING ALCOHOL FROM WASTE SULPHITE CELLULOSE LIQUORS

Fritz Opderbeck, Friedrichshafen-Windhag, Erwin Franke, Einfeld, near Neumuenster, and Günter Trapp, Okriftel (Main), Germany, assignors to Flurix-Werke Aktiengesellschaft, Hamburg, Germany, a corporation of Germany

No Drawing. Application August 23, 1955
Serial No. 530,287
Claims priority, application Germany August 25, 1954
7 Claims. (Cl. 195—39)

1. A process for the production of alcohol from waste sulphite cellulose liquor which comprises the successive steps of adjusting the pH of a waste sulphite liquor to between 4.5 and 7.0, adding to the liquor an enzyme preparation the enzymes of which are derived from fungi of the Aspergillus mold type to effect hydrolysis of the polysaccharides contained in the liquor, fermenting the liquor by means of yeast, and distilling off the alcohol formed.

2,893,920

PRO-ELASTASE AND PREPARATION THEREOF

Norman H. Grant and Kenneth C. Robbins, Chicago, Ill., assignors to Armour and Company, Chicago, Ill., a corporation of Illinois

No Drawing. Application October 3, 1955
Serial No. 538,241
11 Claims. (Cl. 195—62)

1. An elastolytic enzyme substance characterized by being an inactive elastase precursor derived from elastase-bearing tissue substantially free from tryptic activity, being substantially free from tissue cells, and being capable of conversion to elastase by the action of trypsin to demonstrate a potency of at least 0.02 elastolytic unit per mg. of protein.

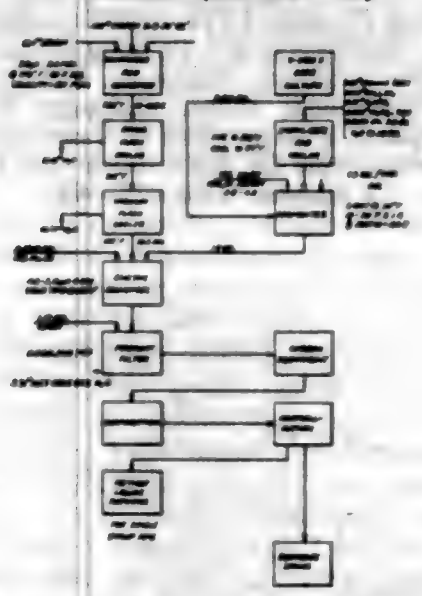
7. The process for preparing an elastolytic enzyme substance, which is an elastase precursor, comprising contacting an aqueous, substantially elastase free, pro-elastase concentrate with elastin at a pH of from 4.0 to 10.0 to adsorb the pro-elastase on said elastin, and then eluting said pro-elastase from the elastin.

2,893,921

PRODUCTION OF AMYLOGLUCOSIDASE

David P. Langlois and Willard Turner, Decatur, Ill., assignors to A. E. Staley Manufacturing Company, Decatur, Ill., a corporation of Delaware

Application January 12, 1955, Serial No. 481,376
2 Claims. (Cl. 195—66)



1. In the process of producing amyloglucosidase the improvement which comprises: (1) preparing an active inoculum of *Aspergillus phoenicis* selected from the group consisting of ATCC 13156 and ATCC 13157, transplanting and cultivating said fungus under conditions of submerged cultivation in an inoculum broth and serially transplanting, incubating, agitating and aerating the resulting vegetative culture in additional quantities of inoculum broth on each of at least two consecutive days; and (2) transplanting and cultivating said culture under conditions of submerged cultivation in a nutrient medium having a pH in the range of about 5.8–6.2 prior to inoculation and after having decreased to about 3.8–4.2 maintaining the pH in this latter range by additions of alkali, said nutrient medium consisting essentially of a relatively large amount of ground corn and small concentrations of salts providing the ammonium, magnesium, potassium and phosphate ions.

2,893,922

CONTINUOUS AUTOMATIC COKER

Paul L. Alspough, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

Application December 9, 1954, Serial No. 474,147
10 Claims. (Cl. 202—22)

1. A method for continuously coking pitch-like material which comprises maintaining a pool of molten pitch at a coking temperature, said pool having a free surface continuously introducing molten pitch into said pool, continuously removing from below said free surface of said pool by mechanical entrapment all solids formed in said pool and that portion of said molten pitch which have descended below said free surface by the action of gravity on the polymerized particles which have increased in weight during their partial polymerization, and simultaneously progressing said removed solids and partially polymerized pitch along an upwardly inclined path, while permitting the unpolymerized liquid to flow back into said pool, said upwardly inclined path being through an additional coking zone wherein said partially polymerized pitch is fully coked, and continuously discharging fully polymerized pitch from said additional coking zone as coke product.

2. An apparatus for continuously producing coke from pitch-like material which comprises an elongated inclined enclosed coking vessel; an inlet positioned at the lower end of said inclined vessel for receiving hot molten pitch material to maintain in said lower end a pool of molten pitch having a free surface; a coke outlet for coke product positioned at the higher end of said inclined vessel; a vapor outlet; conveyor means in scraping relationship with the bottom interior surface of said vessel below said free surface of said pool of molten pitch and extending from below said free surface of said pool of molten pitch and along the length of the interior of said inclined vessel and out through said coke outlet, a portion of said conveyor means contacting the bottom and lower walls of said interior of said vessel and said conveyor means serving to collect solids and partially polymerized pitch material from below said free surface of said pool of molten pitch in said inlet end of said inclined vessel, whereby said partially polymerized pitch material is fully polymerized to form coke, and to discharge said coke through said coke outlet as product; heating means positioned along the length of said inclined vessel for maintaining said pitch material at coking temperature for the duration of its stay in said vessel; and coke removal means positioned at said coke outlet of said vessel and adapted to dislodge coke product from said conveyor means as said conveyor means discharges coke product through said coke outlet.

2,893,923

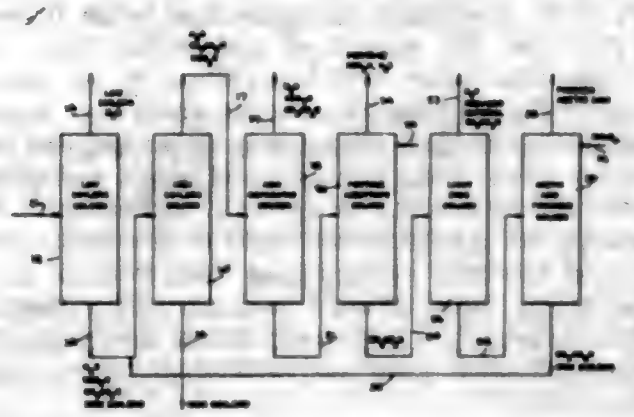
PURIFICATION OF ACETIC ACID BY AZEOTROPIC DISTILLATION

Oren V. Luke, Jr., Corpus Christi, George B. Ulvild, Robstown, and James S. MacKenzie, Corpus Christi, Tex., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

Application May 28, 1954, Serial No. 433,096
8 Claims. (Cl. 202—42)

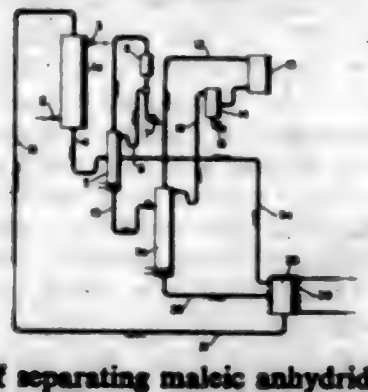
1. Process for the purification of acetic acid containing water, low and high boilers, formic acid and reducing materials whose boiling point is below that of acetic acid and which reducing materials exist in equilibrium with their condensation products whose boiling point is above that of acetic acid, which comprises subjecting the acetic acid in the absence of azeotroping agents to two distillations in separate columns to remove low boiling and high boiling materials therefrom, subjecting the resulting acetic

acid to two later distillations to remove light ends and additional high boiling materials therefrom, and, prior to said two later distillations subjecting the acetic acid to



a distillation to remove a dilute aqueous acetic and formic acid solution therefrom and to an azeotropic distillation to remove water and formic acid therefrom.

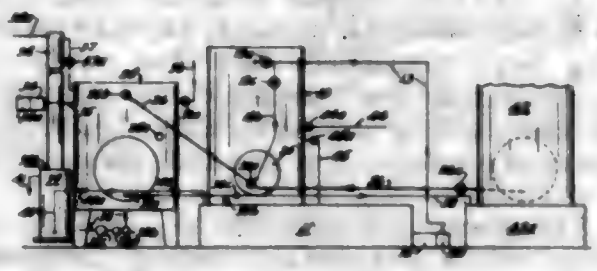
2,893,924
SEPARATION AND PURIFICATION OF ANHYDRIDES OF ORGANIC DIACIDS
Armand Jean Courtier, Meudon, France, assignor to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de St. Gobain, Chauny & Cirey, Paris, France
Application April 17, 1956, Serial No. 578,821
1 Claim. (Cl. 202—42)



The process of separating maleic anhydride from a gas in which such anhydride is entrained, which comprises washing such gases with tricresyl phosphate and thereby forming a solution of anhydride in tricresyl phosphate, first distilling the solution thus obtained so as to eliminate head fractions therefrom, then submitting the liquid remaining after the first distillation to a second distillation in the presence of an aliphatic hydrocarbon fraction having a boiling range between 205–215° C. under atmospheric pressure, and the conditions in such second distillation being so chosen that the vapor resulting from the second distillation consists almost entirely of a mixture of maleic anhydride and aliphatic hydrocarbon and the residual liquid resulting from the second distillation consists almost entirely of aliphatic hydrocarbon, tricresyl phosphate and impurities, condensing such vapor, collecting the resultant liquid, separating anhydride from such liquid, and separating by decantation the aliphatic hydrocarbon and the tricresyl phosphate from the residual liquid.

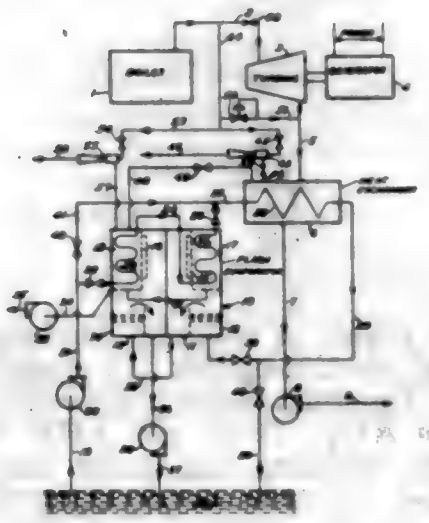
2,893,925
METHOD AND APPARATUS FOR RECLAIMING SOLVENT FROM A CLEANSING WASH
Irving Victor, Minneapolis, Minn., assignor, by direct and mesne assignments, of one-half to Vic Manufacturing Company, Minneapolis, Minn., a corporation of Minnesota, and one-half to Butler Manufacturing Company, Kansas City, Mo., a corporation of Missouri
Application April 19, 1957, Serial No. 653,904
11 Claims. (Cl. 202—46)

1. In a process of reclaiming solvent from a cleansing wash containing solvent and impurities, embodying separating impurities from said wash in a closed vessel, and thereafter steam distilling said impurities in a separate vessel to recover the residual solvent therein; the improvement comprising the steps of forming a slurry comprising said impurities within the first vessel, trans-



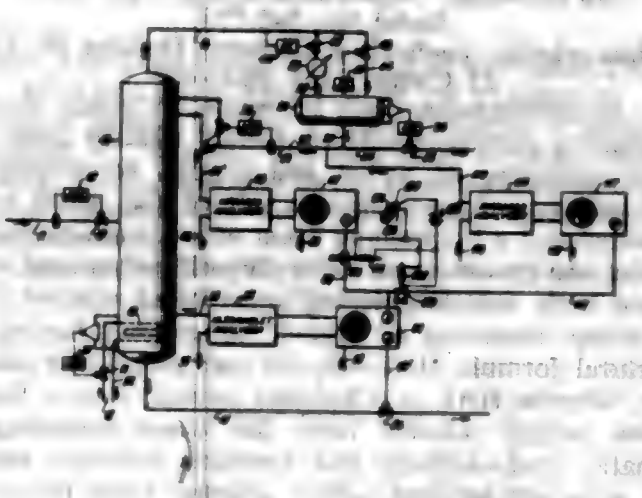
ferring said slurry from said first vessel to the second vessel in a confined condition and out of contact with the atmosphere, and separating the impurities from the slurry within the second vessel prior to steam distillation of the impurities to thereby prevent evaporative loss of solvent entrained in the impurities.

2,893,926
COMBINED FLASH TYPE DISTILLING PLANT AND BACK-PRESSURE TURBO-GENERATOR
Eugene Porter Worthen, Braintree, and Fenner Smith Barbour, Wollaston, Mass., assignors to Bethlehem Steel Company, a corporation of Pennsylvania
Application June 13, 1957, Serial No. 665,420
2 Claims. (Cl. 202—82)



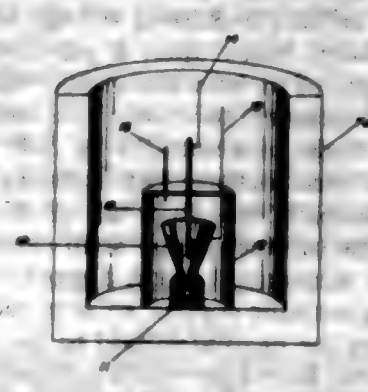
1. Apparatus for the distillation of sea water and the production of electricity, comprising steam-generating means, a back-pressure steam turbine, an electrical generator driven by said steam turbine, a heat exchanger comprising a first side and a second side, a flash evaporator comprising a flash chamber and a condenser, first means to pass steam from said steam generating means to said back pressure steam turbine, second means to pass steam exhaust from said turbine to the first side of said heat exchanger, third means to pass sea water to the second side of said heat exchanger, fourth means to pass the sea water from the second side of said heat exchanger to the flash chamber of said flash evaporator, fifth means to pass steam from said steam generating means to said first side of said heat exchanger, and sixth means to regulate the amount of steam flowing through said fifth means to maintain the pressure in the first side of said heat exchanger at a predetermined value independent of fluctuations in electrical load.

2,893,927
PROCESS CONTROL SYSTEM
Clyde W. Mertz, Bartlesville, Okla., and Willis M. Zoller, Borger, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware
Application July 15, 1954, Serial No. 443,544
1 Claims. (Cl. 202—160)



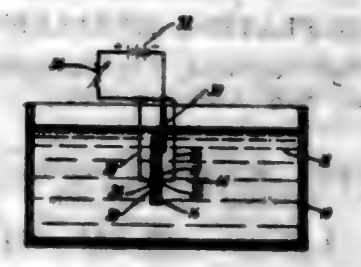
In a system to separate a fluid mixture comprising butadiene, butene-2, vinyl acetylene and ethyl acetylene into a first product stream comprising a major percent of butadiene and a second product stream comprising a major percent of butene-2; separating apparatus comprising, in combination, a fractionation column, an inlet line communicating with said column to supply such a fluid mixture to be separated, means to supply heat to the lower portion of said column, first conduit means communicating with the upper portion of said column to remove such a first product stream, means to return a portion of the fluid removed through said first conduit means to said column as reflux, second conduit means communicating with the lower portion of said column to remove such a second product stream, a first sample line communicating with a first region in said column, first analysis means to analyze fluid removed from said column through said first sample line to determine the concentration of butadiene therein, first control means to control the rate of fluid flow through said second conduit means responsive to said first analysis means to tend to maintain the concentration of butadiene in said first sample line constant by decreasing the rate of fluid flow through said second conduit means if the measured butadiene concentration exceeds a predetermined value and by increasing the rate of fluid flow through said second conduit means if the measured butadiene concentration becomes less than a predetermined value, a second sample line communicating with a second region in said column, second analysis means to analyze fluid removed from said column through said second sample line to determine the concentration of butene-2 therein, means responsive to said second analysis means to reset said first control means to control the rate of fluid flow through said second conduit means to maintain the concentration of butene-2 within preselected limits in said second sample line by increasing the rate of fluid flow through said second conduit means if the measured concentration of butene-2 exceeds a predetermined value and by decreasing the rate of fluid flow through said second conduit means if the measured concentration of butene-2 becomes less than a predetermined value, a third sample line communicating with a third region in said column, third analysis means to analyze fluid removed from said column through said third sample line to determine the concentration of acetylenes therein, and third control means responsive to said third analysis means to disconnect said second control means from said first control means and to reset said first control means responsive to said third analysis means to maintain the concentration of acetylenes within preselected limits in said third sample line by increasing the rate of fluid flow through said second conduit means if the measured concentration of acetylenes exceeds a predetermined value and by decreasing the rate of fluid flow through said second conduit means if the measured concentration of acetylenes becomes less than a predetermined value.

2,893,928
PREPARATION OF PLUTONIUM
Morris Kolodney, New York, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application April 28, 1948, Serial No. 23,863
7 Claims. (Cl. 204—1.5)



1. The process which comprises electrodepositing plutonium under non-oxidizing conditions from a fused bath consisting essentially of from 5 to 75 percent plutonium halide, said plutonium halide being thoroughly dry and free from oxyhalides, and at least one halide of a metal of the class consisting of alkali metals and alkaline earth metals, said fused bath being at a temperature between 600° C. and 850° C.

2,893,929
METHOD FOR ELECTROPLATING SELECTED REGIONS OF n-TYPE SEMICONDUCTIVE BODIES
George L. Schnable, Lansdale, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application August 3, 1955, Serial No. 526,203
16 Claims. (Cl. 204—15)



1. The method of gold-plating an n-type semiconductive body, to one area of which has been applied an ohmic contacting element and to another area of which has been applied a rectifying contacting element, said method comprising the steps of: applying between said ohmic and rectifying elements a potential difference such that said rectifying element is more positive than said ohmic element, thereby to create a non-platable region surrounding said rectifying element and extending a predetermined finite distance beyond the perimeter of said rectifying element; and applying an electrolytic solution containing gold ions to an area of said body extending into said non-platable region, said potential difference having a magnitude exceeding the deposition potential in said solution of said ions.

2,893,930

PROCESS OF MAKING A CERAMIC ELEMENT USABLE IN SURFACE-GAP IGNITERS

Shay J. Sheheen, Ithaca, N.Y., assignor to General Laboratory Associates, Inc., Norwich, N.Y., a corporation of New York

No Drawing. Application October 3, 1956
Serial No. 613,598

2 Claims. (Cl. 204—29)

1. In the process of making ceramic elements usable in surface gap igniters capable of use at temperatures up to about 2000° F., in which each of said elements has a semi-conductive portion which is formed in part of a copper oxide and along which a spark is to pass in the normal use of the device; and wherein some of said elements have an initial breakdown voltage along said semi-conductive portion, based upon a gap distance of about 0.03 to 0.04 inch, of at least about 800 volts; the process of treating said elements to reduce said initial breakdown voltage to the range of about 200 to 500 volts, comprising the steps of electrochemically reducing at least about half and substantially less than all of the copper oxide accessible to the surface of the semi-conductive portion of said ceramic elements to form a more conductive portion comprising metallic copper, so as to reduce the breakdown voltage on the basis aforesaid to the range of about 500 to 800 volts; thereafter electrochemically depositing additional metallic copper on the surface portion having the reduced metallic copper thereon by passing a direct current of electricity through an electrolytic cell having an electrolyte containing copper ions, and wherein said semi-conductive surface portion of said elements are connected as cathodes, so as to cause some of the copper ions of the electrolyte to deposit onto the semi-conductive portion of said elements, and thereby to reduce their breakdown voltage on the basis aforesaid to the range of about 200 to 500 volts; and stabilizing the electrical resistance in use of said ceramic elements so as to maintain the breakdown voltage thereof substantially unchanged, even when exposed to relatively high temperatures in an oxidizing environment, by electrodepositing a metal selected from the group consisting of nickel and rhodium onto the metallic copper on the semi-conductive surface portion of said elements.

2,893,931

METHOD OF PLATING METALLIC SURFACES

C. B. Boyett, San Antonio, Tex., assignor to Terry Industries, Inc., San Antonio, Tex., a corporation of Texas

No Drawing. Application February 18, 1955
Serial No. 489,288

3 Claims. (Cl. 204—33)

1. The method of successively cleaning, deoxidizing and plating the surface of a metal comprising the sequential steps of directing a wet blast containing a suspension of a finely divided, cohesive abrasive against the surface to hone the latter until all foreign substances and oxides have been removed; continuing the wet blasting until a substantially air impervious layer of abrasive is formed on the surface to seal the latter from the ambient atmosphere; transferring the coated metal to a plating solution without interfering with said layer of abrasive on the metal and before any oxidation of the surface takes place; traversing the solution with an electric current sufficient only to cause enough gas to be evolved from the solution to thereby dislodge the abrasive on the surface of the metal; and after complete dislodgment of the abrasive, increasing the amperage of said current to plate the surface in said solution.

2,893,932

PRODUCTION OF METAL ELECTRODEPOSITS

Hermann Haas, Duesseldorf-Holthausen, Alfred Kirstahler, Duesseldorf, Wolfgang Gündel, Duesseldorf-Oberkassel, and Wennemar Strauss, Duesseldorf-Holthausen, Germany, assignors to Dehydag, Deutsche Hydrierwerke G.m.b.H., Duesseldorf, Germany, a corporation of Germany

No Drawing. Application October 25, 1955
Serial No. 542,773
Claims priority, application Germany October 30, 1954
11 Claims. (Cl. 204—49)

1. An electroplating bath for producing bright, ductile, non-porous electrodeposits of metals selected from the group consisting of nickel and copper, comprising an acid solution of an inorganic salt of the metal to be deposited and a brightening agent which produces bright, ductile, non-porous metal electrodeposits when used alone in said bath, said brightening agent being selected from the group consisting of organic compounds having the structural formula HAL—R—Q and their water-soluble salts, wherein HAL is a halogen radical, R is a hydrocarbon radical selected from the group consisting of aliphatic, cycloaliphatic and aromatic radicals, and Q is a water-solubilizing radical selected from the group consisting of sulfuric acid ester, phosphoric acid ester, phosphonic acid, phosphinic acid, hydroxyl, ether alcohol and polyether alcohol radicals, said organic compound being dissolved in said bath in sufficient quantity to produce bright metal electrodeposits therefrom.

2,893,933

NICKEL PLATING COMPOSITIONS AND METHOD

John B. Winters, Cleveland, and Leon R. Westbrook, Solon, Ohio, assignors to Incar, Inc., Cleveland, Ohio, a corporation of Ohio

No Drawing. Application October 1, 1956
Serial No. 612,937
7 Claims. (Cl. 204—49)

1. In the process of electroplating bright nickel from an aqueous solution of a nickel salt, the step comprising adding polyacrylamide to said solution in amount corresponding to between about 0.05 and about 0.5 gram per liter.

2,893,934

ACID CADMIUM PLATING

Leon R. Westbrook, Solon, Ohio

No Drawing. Application September 13, 1957
Serial No. 683,691
12 Claims. (Cl. 204—50)

1. An aqueous cadmium fluoborate electroplating bath containing in sufficient amount to provide a uniform and bright cadmium deposit a bath-soluble, non-ionic surfactant which is a polyethylene oxide condensation product, the hydrophobic portion of which is selected from the group consisting of alkyl phenols, aryl phenols, fatty alcohols, fatty acids and rosin amines.

2,893,935

ELECTROLYTIC PROCESS FOR PRODUCING METALLIC TITANIUM

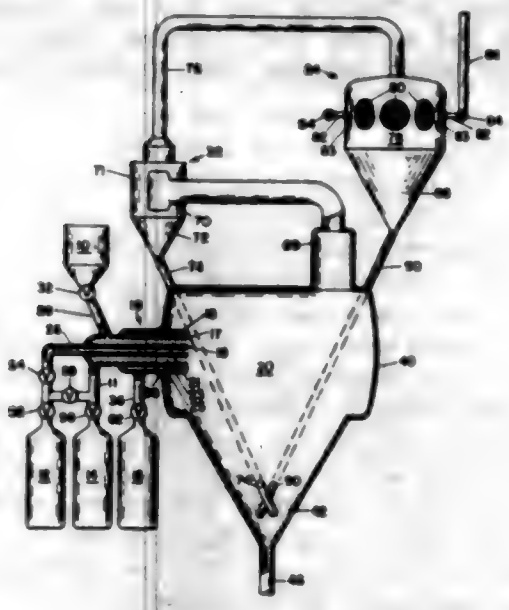
Iral B. Johns, Marblehead, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application November 18, 1955
Serial No. 547,824
2 Claims. (Cl. 204—64)

1. A method for electrolytically producing Ti from $TiCl_4$, which method comprises passing $TiCl_4$ as the sole gaseous reactant into a molten salt bath comprising a mixture of salts selected from the group consisting of alkali metal and alkaline earth metal halides containing at least about 10 atom percent of chloride and at least 0.6 atom percent of fluoride while passing a direct cur-

rent between an anode and a cathode immersed in said bath, the relative rates of current and $TiCl_4$ introduction being controlled to maintain the dissolved titanium concentration between about 0.1 and about 6 atom percent and to maintain the atomic ratio of fluoride to titanium dissolved in said bath substantially in excess of 6.

2,893,936
PROCESS FOR CONTINUOUSLY SEPARATING IRRADIATION PRODUCTS OF THORIUM
Lorenus P. Hatch, Francis T. Miles, Thomas V. Sheehan, Richard W. Wiswall, and Raymond J. Hess, Suffolk County, N.Y., assignors to the United States of America as represented by the United States Atomic Energy Commission
Application May 27, 1955, Serial No. 511,804
6 Claims. (Cl. 204—154.2)

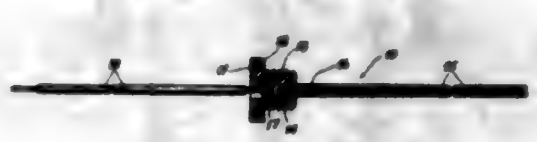


2. The method of extracting uranium 233 from thorium which comprises forming finely divided thorium fluoride, dispersing said thorium fluoride in a fluorine-containing gas to form a stream, combining and mixing the stream with a stream of hydrogen-containing gas to form a flame, subjecting the thorium fluoride passing from said flame to neutron irradiation by flowing it as a moving bed through a region of high neutron flux proximate a nuclear reactor, passing the irradiated fluoride again through a flame formed by burning hydrogen and fluorine wherein said fluorine is in excess, and separating the volatile from the non-volatile substances passing from said flame.

2,893,937
METHOD OF MAKING POLYMERS
Robert Dow, Austin, Tex., assignor to George S. Nalle, Jr., Austin, Tex.
No Drawing. Application February 8, 1957
Serial No. 638,899
4 Claims. (Cl. 204—158)

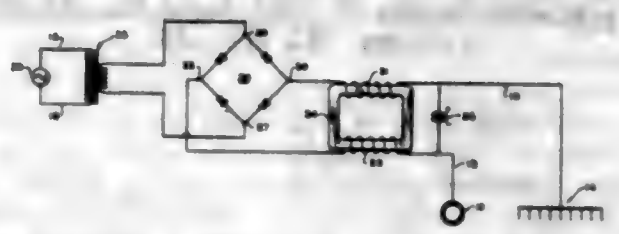
1. The process of making a polymer which comprises irradiating, with light having a wavelength component of from 1800 to 7200 angstroms, a photopolymerizable unsaturated organic compound containing at least 0.01 percent by weight of ethyl methyl ketone peroxide, said organic compound being from the group consisting of monomeric styrene, monomeric methyl styrene, monomeric methyl methacrylate, mixtures of monomeric styrene and butadiene, mixtures of monomeric styrene with monomeric acrylonitrile, and mixtures of monomeric styrene with mixtures of monomers and polymers of any of the materials in the group.

2,893,938
ELECTROLYTIC STABILIZATION APPARATUS FOR WATER SYSTEMS
Eugene S. Bremerman, Brentwood, Mo.
Application December 30, 1955, Serial No. 556,727
10 Claims. (Cl. 204—196)



10. An electrode assembly for use in metallic water processing apparatus, said electrode assembly comprising a plug made of an electrical insulating material, an elongated rigid tubular electrode element extending freely from the interior of the plug in insulated relation to the exterior of said plug, said electrode being supported at its rear end within said plug, said tubular electrode element being open at the forward end opposed to said plug and being provided with an opening in the tubular wall adjacent the plug for the passage of water through said electrode element and means for connecting an electrical conducting cable to the rear end of said electrode element.

2,893,939
CATHODIC PROTECTION SYSTEM
Harvey K. Reid, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application August 21, 1957, Serial No. 679,415
2 Claims. (Cl. 204—196)

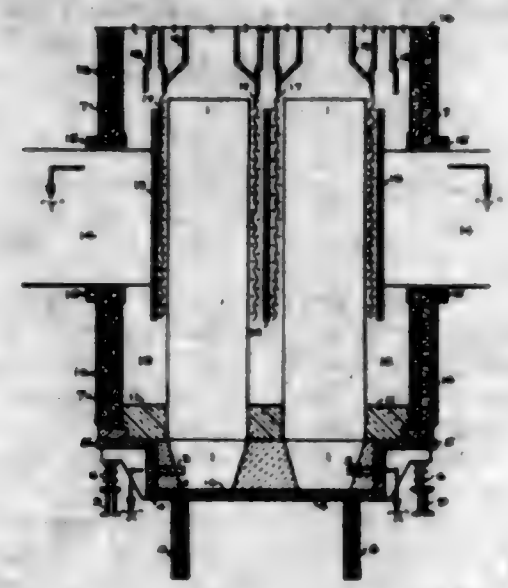


1. A cathodic protection system for a buried pipeline located in close proximity to a one-wire telephone system comprising an electrode buried in the ground adjacent the pipeline to be protected, a source of alternating current, a voltage step-down transformer, means connecting said source of alternating current to the primary winding of said transformer, a full wave rectifier, means connecting the secondary winding of said transformer to the input of said rectifier, a closed loop of magnetic material, first and second coils mounted on said closed loop, means connecting the first terminals of said first and second coils to the positive and negative output terminals of said rectifier, respectively, means connecting the second terminal of said first coil to said electrode, means connecting the second terminal of said second coil to the pipe to be protected, and an electrolytic capacitor connected between the second terminals of said first and second coils.

2,893,940
FUSED SALT ELECTROLYTIC CELL
Frank E. Smith, Niagara Falls, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application February 20, 1957, Serial No. 641,290
4 Claims. (Cl. 204—243)

1. In a fused salt electrolytic cell the combination comprising a bottom entrant carbonaceous cylindrical anode, the lower end of said anode fastened integrally into a carbonaceous rectangular base block, said block having horizontal dimensions greater than the cylindrical diameter of said anode, the lower end of said anode being anchored directly within said block, said block providing

a firm support adapted to hold said anode in vertical position, said block adapted to serve as an effective electrical



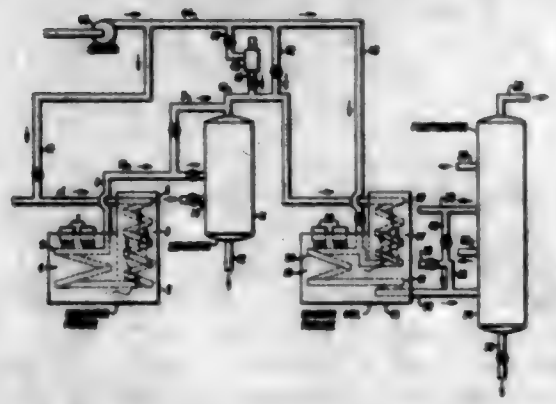
conductor between said anode and the source of electrical power for said cell.

2,893,941

REMOVING AND PREVENTING COKE FORMATION IN TUBULAR HEATERS BY USE OF POTASSIUM CARBONATE

Walter Clarence Kohfeldt and Frederick Joseph Hebert, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application January 27, 1955, Serial No. 484,408
4 Claims. (Cl. 208—48)



1. In a process for treating liquid hydrocarbon materials which includes the steps of passing a stream of said materials through a confined flow path including a thermal cracking zone externally heated to produce thermal cracking temperatures in said stream of materials, thermally cracking said hydrocarbon materials in the presence of potassium carbonate and also in the presence of steam added to said stream during passage through said flow path, the step which comprises injecting said potassium carbonate into said stream and flow path at least at a point in said flow path upstream from said thermal cracking zone as an aqueous solution thereof and in a proportion of from about 5 to about 100 parts of said potassium carbonate per million parts of said liquid hydrocarbon materials.

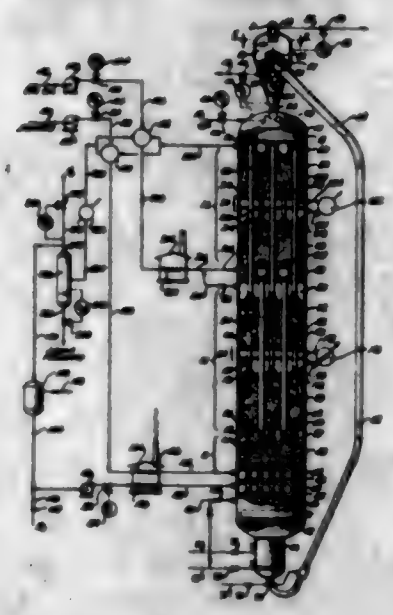
2,893,942

HYDROCARBON CONVERSION PROCESS AND APPARATUS

Clyde H. O. Berg, Long Beach, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

Application March 22, 1954, Serial No. 417,567
9 Claims. (Cl. 208—66)

1. A process for the simultaneous contacting of two fluid streams of substantially different physical properties with moving beds of granular solid contact material in a single conversion zone which comprises dividing a stream of granular solid contact material into a first and a second stream at the top of said conversion zone, passing the first solids stream downwardly as a moving bed through a first treating zone maintained at a relatively low contacting temperature and in direct contact with fluids passing therethrough, then passing said first solids stream downwardly therefrom through and in indirect heat exchange relation with a subjacent second treating zone maintained at a relatively high contacting temperature and out of direct contact with fluids passing therethrough whereby said solids stream is indirectly heated, simultaneously passing said second solids stream downwardly as a moving bed through and in indirect heat exchange relation with said first treating zone and out of contact with fluids passing therethrough, then passing said second solids stream therefrom downwardly through and in direct contact with fluids passing through said second treating zone, combining said first and second solids streams in and passing them together through a third treating and solids stripping zone, further stripping the



combined solids stream with a stripping gas prior to removal of said solids from said conversion zone, transferring the spent stripped solids thus formed through a regeneration zone and regenerating said solids therein, elutriating fines from the regenerated solids, contacting said regenerated solids with a treating gas immediately prior to introducing said solids into said conversion zone for repassage therethrough, passing the higher boiling fluid stream at said relatively low contacting temperature through said first treating zone, passing the lower boiling fluid at said relatively higher temperature first through said third treating and stripping zone in direct contact with the combined first and second solids streams to effect an initial fluid conversion and to strip residual quantities of said higher boiling fluid from the combined solids stream therein, then passing the lower boiling fluid through said second treating zone to contact said second solids stream for further conversion, and then passing said lower boiling fluid through said first treating zone at said relatively low temperature to contact said first solids stream together with said higher boiling fluid, and removing a combined converted fluid effluent from the top of said conversion zone.

7. An apparatus for the contacting of two fluid streams with a recirculating stream of granular solid contact material which comprises an elongated vertical contact column adapted to the downward passage by gravity of a moving bed of solid granular contact material and provided at successively lower levels therein with a solids hopper and seal section, a first treating section, a second treating section, a third treating and stripping section, a

solids inlet conduit opening into the top of said column, an inlet conduit for a first solids stream opening from said hopper into the top of said first treating section, at least one elongated conduit for a second solids stream opening from said hopper and extending entirely through said first treating section into the top of said second treating section, a solids outlet conduit therefrom opening into said third treating and stripping section, at least one elongated conduit for said first solids stream opening from the bottom of said first treating section and extending entirely through said second treating section and into said third treating and stripping section, means disposed between said second and third sections for controlling the relative flow rates of said first and second solids streams, a solids outlet conduit opening from the bottom of said column, a solids conveyance-regenerator conduit communicating at its lower end with said solids outlet, an upper solids-receiving vessel communicating with the top of said conveyance-regenerator conduit and connected in solids delivery relation to the top of said column, means for depressuring a fluid through said conveyance-regenerator conduit at a rate sufficient to convey said solids, means for introducing an oxygen-containing gas into said fluid, means within said solids-receiving vessel to apply a force against solids emerging from said conveyance-regenerator conduit to maintain solids therein during conveyance at substantially their static bulk density, said solids-receiving vessel being provided in its upper end with (1) a plurality of angularly disposed baffles intersecting along the vertical axis of said vessel and sealed at their outer and upper edges against the inner walls of said vessel and having their lower edges submerged in emerging solids defining a plurality of sealed individual elutriation chambers of pie-shaped cross section therein, and (2) controllable fluid outlet means to remove elutriation fluid from at least one of said elutriation chambers whereby said fluid is disengaged from said emerging solids through the surface thereof in each of said individual chambers to elutriate solids fines therefrom, means for introducing one fluid stream for passage upwardly through said third treating and stripping section and said second treating section in succession, means for introducing another fluid stream for upward passage through said first treating section, effluent outlet conduit means for removing a fluid effluent at the top thereof, cooling and condensing means communicating with said effluent outlet means and communicating with vapor-liquid separator means, and a vapor recycle conduit and pump means communicating from said separator means and opening into the bottom of said column through a vapor heating means.

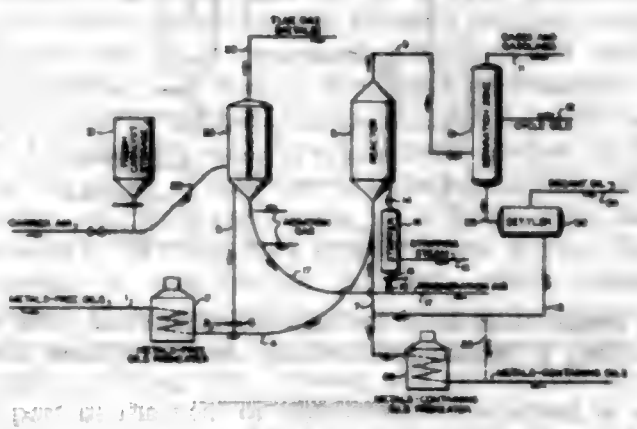
8. A method for transferring granular solids and separating solids fines therefrom which comprises introducing said solids and a conveyance fluid at relatively high pressure into an elongated conveyance zone, maintaining the outlet of said zone at a relatively low pressure so as to maintain a flow of said conveyance fluid therethrough at a rate sufficient to generate a pressure differential which overcomes forces of gravity and friction opposing solids movement therein, discharging the solids from said conveyance zone upwardly at a central point in a solids-receiving zone, applying a fluid-impervious flow-restricting force against the discharging solids at a point slightly above the outlet of said conveyance zone to (1) maintain said solids during conveyance as a dense moving mass in which the solids are substantially at their static bulk density, and (2) to deflect said solids as a compact mass flowing downwardly and transversely from said flow-restricting force and submerging the outlet of said conveyance zone, disengaging the conveyance fluid from beneath the surface of the discharged compact mass of solids in said solids receiving zone, controlling the area of said solids mass therein through which said fluid is disengaged to control elutriation of solids fines therefrom by the conveyance fluid, removing disengaged fluid and solids fines from said solids-receiving zone, and withdrawing solids of reduced fines content therefrom.

2,893,943

CONVERTING METALS-CONTAINING OILS

Barney Vignovich, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

Application April 3, 1956, Serial No. 575,793
7 Claims. (Cl. 208—78)



1. In the catalytic cracking of an oil containing metals which upon contact with a catalyst deposits metal contaminants thereon resulting in an undesirable alteration of the activity and selectivity of said catalyst at least with respect to the type of reaction it will cause to occur when it has been regenerated and is again used, the improvement which comprises laying down coke upon said catalyst by contacting the same with a substantially metals-free cokable material under cracking conditions of time and temperature so as to cause immediate cracking to be initiated so as to cause a coke lay-down upon said catalyst to begin immediately, continuing said contacting until a substantial and desirable total coke lay-down of about 1 percent by weight of the catalyst is obtained upon said catalyst and then contacting said metals-containing oil with said catalyst having said coke lay-down thereon under oil conversion conditions and effecting conversion of said metals-containing oil with concomitant lay down of metals and a further amount of coke on said catalyst.

2,893,944

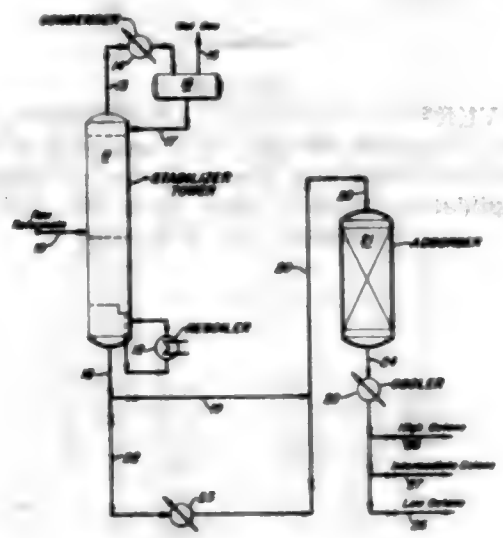
PROCESS FOR SEPARATION OF GASOLINE FRACTIONS OF DIFFERENT OCTANE NUMBER BY CYCLIC ADSORPTION

Robert J. Hengstebeck, Valparaiso, and Joseph E. Wolf, Munster, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Application April 19, 1955, Serial No. 502,393
14 Claims. (Cl. 208—95)

1. In the production of a plurality of octane grades of gasoline from available refining stocks including reformate, the process which comprises subjecting reformate to a four-phase adsorption cycle which includes saturating a body of solid particle-form adsorbent which is selective for aromatics by flowing a stream of reformate at adsorption temperature through an adsorption zone and collecting an effluent which is relatively low in octane compared to the reformate feed, purging saturated adsorbent in the adsorption zone by flowing a stream of reformate at an elevated desorption temperature through the zone while collecting an intermediate octane effluent, thereafter effecting desorption of adsorbed aromatics from adsorbent in the adsorption zone by continuing the flow of reformate at elevated desorption temperature through the zone while collecting separately an effluent which is relatively high in octane compared to the ref-

ormate feed, and purging desorbed adsorbent of desorption fluid by flowing a stream of reformate at the adsorption temperature level through the adsorption zone while collecting a second intermediate octane effluent stream.

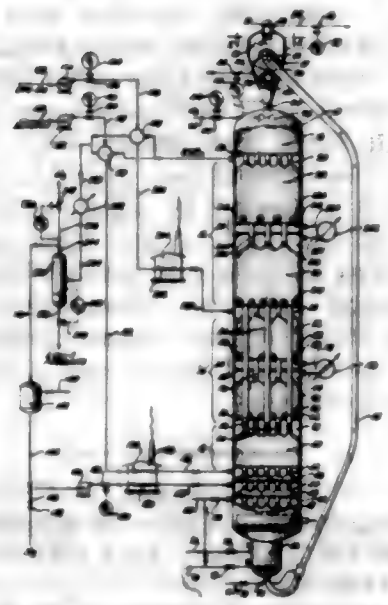


2,893,945

COMBINED HYDRODESULFURIZATION AND REFORMING PROCESS

Clyde H. O. Berg, Long Beach, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

Application March 22, 1954, Serial No. 417,569
9 Claims. (Cl. 208—99)



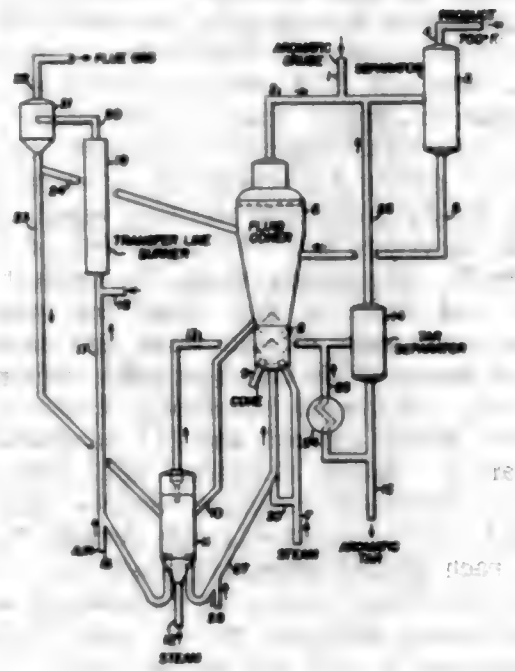
1. In a moving-bed isobaric catalytic contacting process wherein granular reforming and desulfurization catalyst is circulated downwardly through an upper low-temperature desulfurization zone and then through a subjacent high-temperature reforming zone, and wherein naphtha plus hydrogen is contacted countercurrently with the catalyst in said reforming zone, and the reformed naphtha is then admixed with a gas oil and the resulting mixture of gas oil, naphtha and hydrogen is then passed upwardly through said desulfurization zone to effect desulfurization, the improved method for obtaining controlled relative catalyst treating capacity in each of said contacting zones while still effectively utilizing said naphtha feed to strip residual gas oil from all of said catalyst prior to regeneration, which comprises passing a controlled first portion of the catalyst from said desulfurization zone through the upper major portion of said reforming zone in indirect heat-exchange therewith and out of contact with the major stream of naphtha flowing therethrough, passing the remainder of said catalyst from the desulfurization zone through the entire reforming zone in contact with said naphtha, and recombining said first portion of catalyst with said remainder of catalyst in the lower portion of said reforming zone, whereby the relative amount of catalytic reforming capacity is readily controllable in response to variations in quantity and nature of feeds, and the entire catalyst stream is effectively stripped of residual gas oil by the naphtha and hydrogen vapors in said lower portion of the reforming zone.

2,893,946

FLUID COKING PROCESS

James W. Brown, Mountainside, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application April 8, 1954, Serial No. 421,786
4 Claims. (Cl. 208—100)

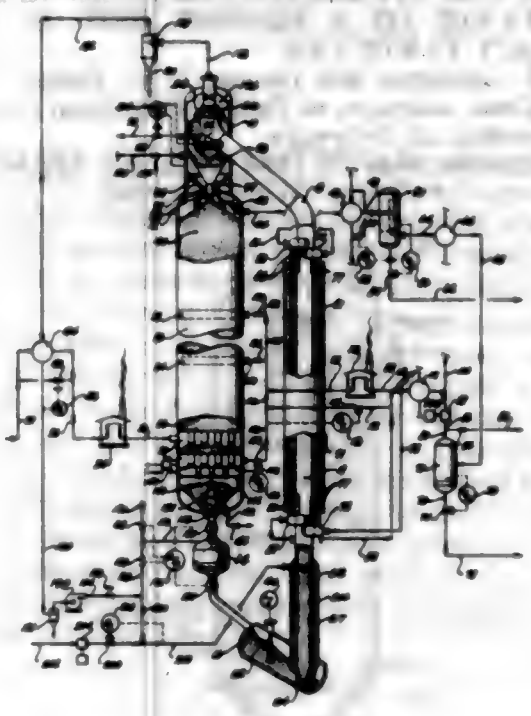


1. In a hydrocarbon oil upgrading process wherein a heavy highly aromatic oil is injected into a coking zone containing a fluidized bed of high temperature inert particulate solids, wherein a portion of said solids is continuously circulated to an external heating zone and back to maintain said bed at a coking temperature in the range of 850° to 1100° F., wherein coke produced in the process is removed as product, wherein vapors are removed from said coking zone and said vapors are separated in the separation zone to obtain product boiling below a specified endpoint in the range of 500° to 900° F., the improved method for obtaining maximum production of middle distillates while substantially eliminating the necessity for recycling the higher boiling portions of said vapors, which comprises operating said coking zone under a pressure in a range of 25 to 400 p.s.i.g. sufficient to maintain substantially all hydrocarbons boiling above said endpoint as liquids at said coking temperature, passing said portion of solids to an external stripping zone along with liquid hydrocarbons adhering thereto prior to transferring said portion to said heating zone, passing a gasiform medium upwardly through said stripping zone to maintain solids therein in a relatively dense fluidized mass, maintaining said mass at a higher temperature in the range of 1000° to 1200° F. than said reaction temperature, withdrawing effluent from the upper portion of said mass recovering from said effluent a heavy tar boiling above said specified endpoint and passing the remainder of said effluent to said separation zone.

2,893,947
HYDROCARBON CONVERSION PROCESS AND APPARATUS

Clyde H. O. Berg and Robert C. Oliver, Long Beach, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California

Application October 4, 1954, Serial No. 460,140
14 Claims. (Cl. 208—134)



8. In a solids-fluid contacting process wherein a granular solid contact material is recirculated through a fluid contacting zone and then upwardly as a dense bed through a solids regeneration zone, a fluid to be contacted is passed through said contacting zone in direct contact with said solid contact material therein and undergoes reactions whose heat effects normally cause the fluid temperature to change during the contact, a conveyance-regeneration fluid is passed upwardly through said conveyance-regeneration zone at a rate controlled to maintain a substantial pressure gradient therein sufficient to convey said material therethrough and to regenerate it substantially completely without further treatment, and a restriction is applied against the mass of regenerated material discharging at the outlet of said conveyance-regeneration zone to maintain said material therein as a dense mass having substantially the static bulk density of said solid material when at rest, the improvement in combination therewith which comprises the steps of recirculating said conveyance-regeneration fluid from the outlet of said conveyance-regeneration zone through a cooling zone, cooling said fluid therein to dissipate part of the heat of regeneration contained as sensible heat of said fluid, admixing fresh regeneration fluid with the cooled fluid, passing the fresh regeneration fluid mixture back into said conveyance-regeneration zone where it absorbs heat of regeneration as sensible heat in said fluid, passing at least part of said fluid to be contacted through a radiant exchange zone spaced outwardly from and around a substantial portion of the upper walls of said conveyance-regeneration zone, whereby the fluid in said radiant heat exchange zone does not contact the walls of said conveyance-regeneration zone but is heated by radiation thereby cooling the walls of said conveyance-regeneration zone and heating said fluid by radiation, and injecting the thus heated fluid into said contacting zone to contact said solid contact material therein.

9. A process according to claim 8 in combination with the step of controlling the temperature of said conveyance-regeneration zone at values below about 975° F. by controlling the rate of flow of said fluid through said radiant heat exchange zone.

10. In a hydrocarbon conversion process wherein a granular solid hydrocarbon conversion catalyst is recirculated through a hydrocarbon conversion zone and then upwardly as a dense mass through a catalyst regeneration zone, said hydrocarbon is passed under conversion conditions of temperature, pressure, and composition through said conversion zone in direct contact with said catalyst forming a spent hydrocarbonaceous catalyst and a converted hydrocarbon and wherein the conversion reactions occurring normally cause changes in the conversion zone temperature, an oxygen-containing conveyance-regeneration gas is passed upwardly through said conveyance-regeneration zone at a rate controlled to maintain therein a substantial pressure gradient sufficient to convey said spent catalyst therethrough and burn the hydrocarbonaceous deposit therefrom substantially completely without further treatment, and a restriction is applied against the mass of regenerated catalyst discharging at the outlet of said conveyance-regeneration zone to maintain said catalyst therein as a dense mass having substantially its static bulk density when at rest, the improvement in combination therewith which comprises the steps of recirculating said conveyance-regeneration gas from the outlet of said conveyance-regeneration zone through a cooling zone, cooling said gas therein to dissipate part of the heat of regeneration contained as sensible heat of said gas, adding a controlled amount of oxygen to the cooled gas, passing the resulting conveyance-regeneration gas mixture into the inlet of said conveyance-regeneration zone for passage upwardly therethrough, passing at least part of a fluid to be contacted with said catalyst in said conversion zone first through a radiant heat exchange zone spaced outwardly from and surrounding a substantial portion of the upper walls of said conveyance-regeneration zone whereby the fluid in said radiant heat exchange zone does not contact the walls of said conveyance-regeneration zone but is heated by radiation thereby cooling the walls of said conveyance-regeneration zone and heating said fluid by radiation, controllingthe flow rate of fluid in said radiant heat exchange zone to maintain the walls of said conveyance-regeneration zone below about 975° F. and to heat said fluid, and passing the heated fluid into said conversion zone whereby a substantial portion of the heat of regeneration is recovered and utilized in said conversion zone.

11. In an apparatus for contacting a fluid with a recirculating stream of granular solid contact material which comprises a solids-receiving and fluid disengaging chamber, a contacting column, a solids pressuring chamber, and a solids induction chamber disposed at successively lower levels, and an elongated conveyance-regeneration conduit communicating at its inlet with a low point in said induction chamber and at its outlet with said solids-receiving and fluid disengaging chamber, means adjacent said outlet to apply a force against solids discharging therefrom to maintain them in said conduit substantially at their static bulk density, inlet and outlet means for passing a fluid through said contacting column, a fluid outlet for disengaged fluid from said fluid disengaging chamber, and means communicating with said solids pressuring chamber for the introduction and removal of fluids, the improvement which comprises in combination therewith a primary heat exchanger surrounding at least the part of said conveyance-regeneration conduit nearest its inlet opening and having an inlet at the top thereof and an outlet opening adjacent and communicating with said inlet opening of said conveyance-regeneration chamber, a cooling means communicating in fluid-receiving relation with said fluid outlet from said fluid disengaging chamber, means for passing fluid from said cooling means back into said inlet of said primary heat exchanger, a secondary heat exchanger disposed along a substantial portion of said conveyance-regeneration conduit above said primary heat exchanger, a fluid inlet opening into said secondary heat exchanger, a fluid outlet

opening therefrom into said contacting column, and fluid flow control means to maintain the temperature of the wall of said conveyance-regenerator conduit adjacent said secondary heat exchanger at a value below about 975° F., said secondary heat exchanger comprising a plurality of elongated tubes disposed around the outer wall of said conveyance-regenerator conduit, hemi-toroidal header manifolds at the upper and lower ends of said tubes forming therewith a pair of hemi-cylindrical tube cages fitted around said conveyance-regenerator conduit, and support means for attaching said cages to said conduit.

2,893,948

HIGH TEMPERATURE ACTIVATION OF A PALLADIUM-ALUMINA REFORMING CATALYST

William P. Hettinger, Jr., Dolton, Ill., assignor, by mesne assignments, to Engelhard Industries, Inc., a corporation of New Jersey

No Drawing. Application January 10, 1955
Serial No. 481,824
9 Claims. (Cl. 208—138)

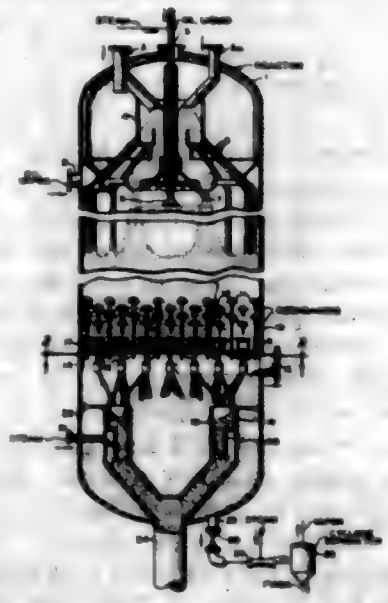
5. A process for reforming a petroleum hydrocarbon material which comprises contacting said hydrocarbon under reforming conditions of elevated temperature and pressure in the presence of hydrogen and a palladium-alumina reforming catalyst, said catalyst being previously heated to a temperature of at least about 1200° F. in an atmosphere of a free oxygen-containing gas for about 15 hours.

2,893,949

MINIMIZING CATALYST FINES CARRYOVER IN A HYDROCARBON CONVERSION UNIT

Robert Theodore Prater, Okmulgee, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application February 28, 1955, Serial No. 490,771
14 Claims. (Cl. 208—150)



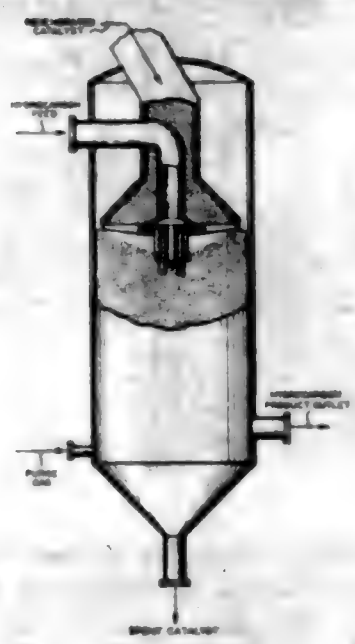
1. In a hydrocarbon conversion process wherein catalyst gravitates as a compact moving bed through a reaction zone and an underlying stripping zone, spent catalyst is withdrawn from the stripping zone, product vapors admixed with stripping gas are withdrawn as effluent from a vapor space between the aforesaid zones, and catalyst fines tend to become entrained in said effluent and be withdrawn therewith from the system, the improvement comprising introducing said product vapors from said reaction zone into said vapor space in such a manner as to impart a predetermined uniform swirling motion to the mixture of said product vapors and stripping gas with respect to the periphery of said vapor space to effect precipitation of the major portion of said fines and cause them to deposit in a selected locale below said vapor space separate from said spent catalyst, separately withdrawing the resulting deposited precipitated fines from the system, and separately withdrawing said spent catalyst from the system.

2,893,950

METHOD AND APPARATUS FOR FEEDING FLUID REACTANTS TO A MOVING BED OF SOLID CONTACT PARTICLES

Kenneth L. Johnston and George F. L. Bishop, Woods Cross, Utah, assignors to Phillips Petroleum Company, a corporation of Delaware

Application June 29, 1956, Serial No. 594,992
15 Claims. (Cl. 208—166)



1. A method for feeding a mixed vapor and liquid reactant to be converted in a downwardly moving contact bed into said bed in a conversion zone which comprises feeding said fluid to a distributing zone located substantially axially at the upper end of said bed in said conversion zone, from said distributor zone feeding said fluid into radially disposed downwardly feeding zones, each of said feeding zones having a continuously increasing feeding discharge outlet along its underneath portion in the line of flow of fluid therein from said distributing zone toward the end of said feeding zone and said feeding zones extending substantially to the periphery of said contact bed, said discharge outlet increasing in capacity as the amount of contact mass fed by any point of said feeding zones increases, and discharging fluid downwardly substantially along the entire lengths of said feeding zones as a continuous film of gradually increasing thickness, thereby evenly distributing said fluid into and across said bed of contact material.

6. A method according to claim 1 wherein said fluid is a mixture of liquid and vaporous hydrocarbons.

2,893,951

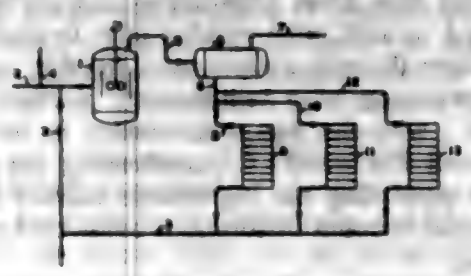
SWEETENING PETROLEUM HYDROCARBONS AND METHOD FOR REGENERATING THE TREATING SOLUTION

Willem J. Pieters and Cornelis D. Ten Have, Amsterdam, Netherlands, assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

Application May 28, 1956, Serial No. 587,633
Claims priority, application Netherlands May 31, 1955
6 Claims. (Cl. 208—204)

1. In a process for removing mercaptans from a light hydrocarbon oil through intimate liquid contacting of the oil in presence of oxygen with an aqueous treating solution of an alkali metal hydroxide and an alkali metal phenolate to effect an oxidation of the mercaptans to disulfides with an accompanying formation of water of reaction which causes an objectionable dilution of the

treating solution, the improvement comprising utilizing in the process a treating solution initially saturated in the



alkali metal phenolate, recovering the water-diluted treating solution from the light hydrocarbon oil, passing said recovered treating solution into contact with a solid mass of the alkali metal phenolate with the mass initially containing less than the amount of water of crystallization that it is capable of retaining, holding the treating solution in contact with said mass until a heterogeneous equilibrium is reached therebetween and there has been a transfer of the excess water from the treating solution to the solid mass where it is retained as water of crystallization, said transfer of said excess water from the diluted treating solution being achieved without resort to distillation, separating the regenerated treating solution saturated in the alkali metal phenolate from the solid mass, and recycling said treating solution into contact with additional amounts of the light hydrocarbon oil.

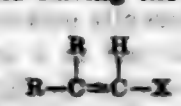
2,893,952

SWEETENING OF HYDROCARBON DISTILLATES

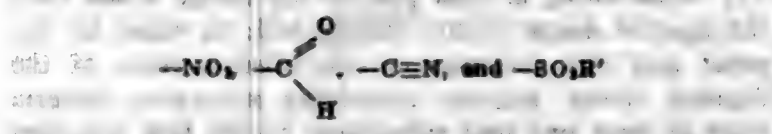
Joseph A. Chenicek, Prairie View, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application October 31, 1957
Serial No. 693,561
7 Claims. (Cl. 208—204)

1. A method of sweetening a sour hydrocarbon distillate containing mercaptans which comprises incorporating in said distillate and reacting with the mercaptans contained therein from about 0.0001% to about 2% by weight of a compound having the general formula:



where R is selected from the group consisting of hydrogen, alkyl, aryl, aralkyl, alkaryl and cycloalkyl, and X is selected from the group consisting of



and R′ is selected from a group consisting of hydrogen, alkyl, aryl, aralkyl, alkaryl, cycloalkyl, hydroxy and alkoxy, effecting said reaction at a temperature of from about atmospheric to about 220° F. and recovering a sweetened distillate.

2,893,953

EQUILIBRIUM PRESSURE AUTOFINING WITH A SILICA-ALUMINA BASE AUTOFINING CATALYST

Roy Turner and Eric Arthur White, Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a British joint-stock corporation

No Drawing. Application August 7, 1956
Serial No. 602,522
Claims priority, application Great Britain August 17, 1955
2 Claims. (Cl. 208—214)

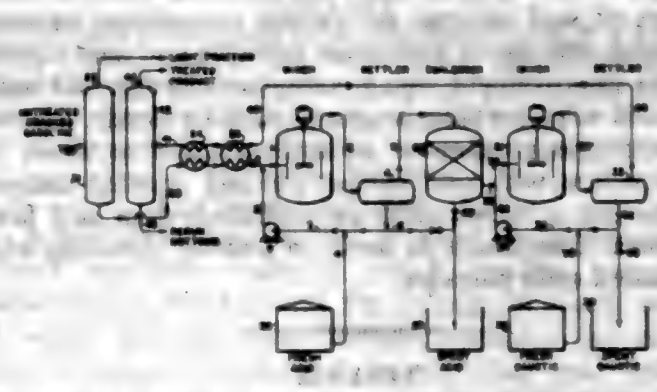
1. A process for the catalytic desulphurisation of petroleum hydrocarbons under equilibrium pressure autofining conditions comprising contacting the petroleum hydrocarbon in a reaction zone with a dehydrogenation-hydrogenation catalyst and hydrogen derived solely from the petroleum hydrocarbon at a temperature between about 650–900° F., and allowing the pressure to rise above 100 p.s.i. ga. to an equilibrium pressure at which the amount of hydrogen evolved equals the hydrogen consumed, said catalyst consisting essentially of the oxides of cobalt and molybdenum supported on a mixed silica-alumina base in which the silica content is within the range 1–40% by weight, and recovering a petroleum hydrocarbon of reduced sulphur content.

2,893,954

TREATING PROCESS

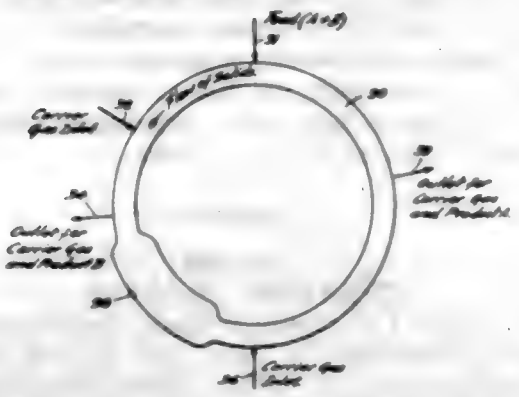
Cornelis David Ten Have, Weigert Cecurnel Buningh, Jacobus Wilhelmus Le Nobel, and Willem Johan Pieters, Amsterdam, and Willem Elias Löwer, The Hague, Netherlands, assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

Application May 8, 1957, Serial No. 657,796
Claims priority, application Netherlands May 11, 1956
7 Claims. (Cl. 208—224)



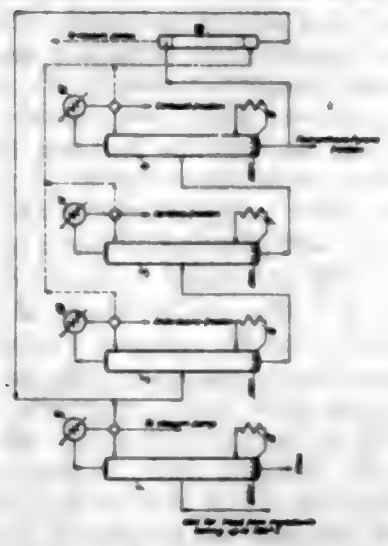
1. In a treating process employing sulfuric acid to effect the removal of sulfur-containing compounds from a normally liquid, cracked hydrocarbon oil containing an appreciable amount of thiophenes and olefinic materials, including gum-forming diolefins, the improvement comprising intimately mixing the hydrocarbon oil and a recycled sulfuric acid phase through the application of mixing energy at a rate of at least 0.1 kilowatt per cubic meter of the mixture and during said mixing achieving a nearly complete desulfurization of the hydrocarbon oil with the thiophenes being substantially reacted with at least a part of the diolefins to form higher molecular weight materials dispersed in the oil phase, said recycled sulfuric acid phase being present in the mixture in the volume ratio of acid phase to oil phase of at least 10:100 and said recycled acid phase being further characterized by containing at least 15% by weight of oleaginous components derived from the repeated contacting of the acid and hydrocarbon oil, separating the oil phase and the acid phase from each other, recovering from the separated oil phase a treated hydrocarbon oil of reduced sulfur content by distilling said oil phase to remove the treated hydrocarbon oil as an overhead product and leaving as bottom product the reaction products of the thiophenes and diolefins, recycling the separated acid phase into contact with further quantities of the sulfur-containing oil and during said recycling adding to the acid phase fresh sulfuric acid to maintain the concentration of sulfuric acid in the acid phase from about 60 to about 93% by weight, on a sulfuric acid water basis, and withdrawing a portion of the recycled acid in a sufficient amount to maintain the foregoing ratio of acid phase to oil phase.

2,893,955
CONTINUOUS SEPARATION PROCESS
Norman D. Coggeshall, Verona, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Application May 11, 1956, Serial No. 584,367
7 Claims. (Cl. 208—310)



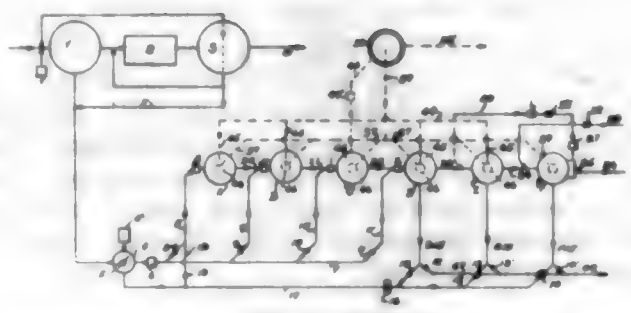
7. In the separation of fluid mixtures by partition chromatography in which a fluid mixture is introduced into a body of solid particles having thereon a liquid coating and in which a carrier gas is caused to flow through said body of coated solid particles whereby components of said mixture are caused to partition between the liquid coating of said solid particles and said carrier gas, the improvement which comprises causing said body of coated solid particles to move with a velocity selected to cause one component of said mixture to move in one direction with said carrier gas and another component having a higher partition coefficient than said first-mentioned component to move in another direction with said coated solid particles.

2,893,956
PROCESS FOR THE RECOVERY OF HIGH-BOILING INGREDIENTS FROM COAL TAR BY DISTILLATION
Julius Geller and Richard Schumacher, Bad Homburg vor der Hohe, and Karl Friedrich Lang, Frankfurt am Main, Germany; said Geller and said Schumacher assignors to Rütgerswerke-Aktiengesellschaft, Frankfurt am Main, Germany
Application August 27, 1956, Serial No. 606,240
Claims priority, application Germany August 29, 1955
7 Claims. (Cl. 208—366)



1. A process for the recovery of high-boiling ingredients from coal tar by distillation, comprising (*a*) removing by distillation from coal tar the ingredients having under atmospheric pressure boiling points below 300° C.; subjecting the residual tar resulting from step (*a*) to a first fractional distillation under vacuum in order to separate said residual tar into a vaporized collective fraction containing ingredients having under atmospheric pressure boiling points in the range of 300°–400° C. and a pitch residue which has a solidification point of 75°–85° C. and is substantially free from anthracene and carbazol, heat being supplied to said pitch residue only by causing part of it to circulate through an elongated heating zone of restricted cross-section at a temperature in the range of 370°–410° C., whereby the pitch residue in the sump is heated to about 350°–380° C.; condensing the collective fraction and separating the ingredients thereof by subsequent fractional vacuum distillations connected with each other in series.

2,893,957
SEWAGE SLUDGE DIGESTION PROCESS
Albert L. Genter, Baltimore, Md., and Richard R. Kennedy and Robert M. Kennedy, San Francisco, Calif.
Application January 18, 1955, Serial No. 482,625
16 Claims. (Cl. 210—5)



1. A multi-stage process of treating fresh sludge whereby it is converted into processed sludge suitable for delivery to sludge beds, comprising the steps of (1) conducting fresh sludge to a sludge receiving and distributing unit, (2) mixing the fresh sludge with at least partially processed sludge containing anaerobic bacteria to form an inoculated fresh sludge with an alkaline pH (3) feeding the inoculated fresh sludge from said distribution unit to a first stage series of at least two digestion units wherein the sludge is heated, progressively turbulently agitated and digested while traveling therethrough so as to form a digested sludge mixture, including a sludge liquor and sludge solids (4) subsequently moving the digested sludge mixture to at least one unit in a second stage wherein the velocity and turbulence of the digested sludge mixture is reduced by dilution with water purer than the sludge liquor and the gaseous products are separated by gravity from the digested sludge mixture diluted with the water (5) withdrawing at least part of the sludge solids from the digested sludge mixture diluted with the water for disposal and (6) returning a controlled portion of the digested sludge mixture containing anaerobic bacteria from at least one unit subsequent to the first digestion unit to the only sludge receiving and distribution unit for inoculation of fresh sludge with anaerobic bacteria and for maintaining the inoculated fresh sludge with an alkaline pH.

2,893,958
REDUCTION OF OBJECTIONABLE ODORS OF MATERIALS
Walt Phillips, Point Pleasant, N.J., assignor to 44 Trinity Place Corporation, a corporation of New York
No Drawing. Application June 7, 1954
Serial No. 439,873
(Filed under Rule 47(b) and 35 U.S.C. 118)
4 Claims. (Cl. 252—1)

1. An odor reducing composition consisting essentially of from 10–90% by weight of an aliphatic alcohol selected from the group consisting of normal alcohols of from 6–9 carbon atoms, and from 10–90% by weight of an aliphatic ketone selected from the group consisting of methyl ketones ranging from hexyl to nonyl.

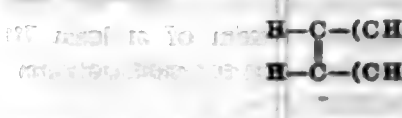
2,893,959

LUBRICANT COMPOSITION HAVING NON-RUSTING AND DETERGENCY PROPERTIES

Ellis K. Fields, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application November 29, 1956
Serial No. 624,962
7 Claims. (Cl. 252—32.7)

1. A lubricant composition comprising a major proportion of an oleaginous lubricating vehicle and from about 0.5% to about 20% of an oil-soluble alkaline earth-containing neutralized acidic mixture consisting of from about 80% to about 90% of a hydrolyzed reaction product of a phosphorus sulfide and a normally liquid hydrocarbon, other than a medial olefin, and from about 10% to about 20% of a hydrolyzed reaction product of a phosphorus sulfide and a medial olefin having the general formula



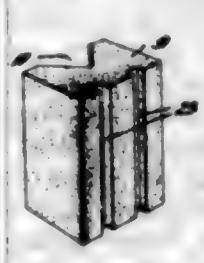
wherein *n* is an integer of from about 8 to about 20 inclusive, said neutralized hydrolyzed phosphorus sulfide-hydrocarbon reaction products being obtained by reacting about two moles of the hydrocarbon with about one mole of the phosphorus sulfide at a temperature of from about 200° F. to about 600° F., hydrolyzing the resultant reaction products at a temperature of from about 220° F. to about 500° F., and neutralizing said hydrolyzed reaction products in admixture with a basic alkaline earth compound.

2,893,960

SOAP BAR

Edward M. McNally, Red Hook, N.Y., assignor to Voorhis-Tiebout Co., Incorporated, Red Hook, N.Y., a corporation of New York

Original application September 27, 1954, Serial No. 458,575, now Patent No. 2,792,863, dated May 21, 1957. Divided and this application December 17, 1956, Serial No. 628,924
3 Claims. (Cl. 252—134)



1. A rectangular soap bar for use in a shredding dispenser, said bar having in one face thereof a relatively deep groove, and in the opposite face a pair of parallel shallow recesses, said groove and recesses extending lengthwise of the bar, said groove having its deepest portion located centrally of the width of the face in which it is formed, and said recesses being disposed one at each side of the central portion of the face in which they are formed.

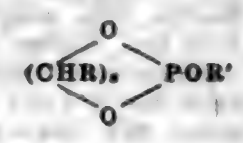
2,893,961

PHOSPHORUS-CONTAINING POLYMERS

Robert J. McManimie, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application November 18, 1955
Serial No. 547,838
12 Claims. (Cl. 260—2)

1. A linear resinous polymer containing phosphorus atoms within the polymer chain, obtained by heating at a temperature in the range of 100°–300° C. a cyclic phosphite ester of the formula



where *x* is an integer of from 2 to 4, R is a radical free of non-benzenoid unsaturation, consisting of hydrogen, less than six carbon atoms, and less than two oxygen atoms, and R′ is a hydrocarbon radical free of non-benzenoid unsaturation and containing from 1 to 8 carbon atoms, with a catalyst selected from the class consisting of monomeric organometallic halide catalysts and halogen-containing Friedel-Crafts catalysts which are the reaction products of magnesium and an alkyl halide, aluminum and an alkyl halide, zinc and an alkyl halide, lead and an alkyl halide, tin and an alkyl halide, antimony and an alkyl halide, cadmium and an alkyl halide, gallium and an alkyl halide, germanium and an alkyl halide and tellurium and an alkyl halide.

2,893,962

WATER-IMPERMEABLE, GAS-PERMEABLE COATING COMPOSITIONS, METHOD OF PREPARATION AND ARTICLES COATED THEREWITH

Floyd E. Bartell, Ann Arbor, Mich.

No Drawing. Application November 10, 1951
Serial No. 255,880
22 Claims. (Cl. 260—2.5)

1. A flexible continuous film or sheet comprising compounded synthetic material which readily transmits moisture vapor but prevents the passage of liquid water and which includes silica aerogel particles the entire fibular structure of which is hydrophobic, said hydrophobic aerogel particles possessing substantially the same porous gel structure and surface structure as hydrophilic aerogel particles and being bonded together with the solid constituent of a latex having rubber-like properties, said aerogel being incorporated in said material in a greater volume proportion than the solid latex constituent.

2,893,963

PROCESS FOR THE PRODUCTION OF PARTICULATE FOAMABLE STYRENE POLYMERS

William James Cleland, Robert George Thomas, and Ernest Seljo, Manchester, England, assignors to Styrene Products Limited, London, England, a British company

No Drawing. Application November 23, 1956
Serial No. 623,771
Claims priority, application Great Britain December 2, 1955
5 Claims. (Cl. 260—2.5)

1. A process for the production of a thermoplastic product capable of being expanded to a porous foam upon application of heat which comprises wetting a thermoplastic polymeric solid material selected from the group consisting of polystyrene and copolymers of styrene with another mono-vinylidene compound in the form of minute discrete particles with from about 1% to 5% by weight of the thermoplastic material of a non-reactive liquid selected from the group consisting of non-reactive liquid solvent and non-reactive liquid swelling agents for said thermoplastic polymeric material, which is sufficient to cause swelling thereof while retaining their discrete form, and then introducing a paraffinic hydrocarbon non-solvent for the material, which non-solvent is gaseous at 15° C. and 760 mm. Hg pressure, can be liquefied under pressures no greater than 40 lbs./sq. in., and is soluble in said non-reactive liquid solvent, into the swollen particles at superatmospheric pressure.

2,893,964
WAX FORTIFIED PAINT AND VARNISH COMPOSITIONS

Edward A. Wilder, Racine, Wis., assignor to S. C. Johnson & Son, Inc., Racine, Wis.

No Drawing. Application December 10, 1954
Serial No. 474,588
2 Claims. (Cl. 260—19)

1. A permanent protective coating composition comprising organic paint and varnish resins dissolved in an organic solvent therefor, characterized by improved water repellency and mar and abrasion resistance and having dissolved therein 0.5 to about 10% by weight, based on the coating content, of a synthetic wax compatible with said resins, said synthetic wax being an ester of an acyclic alkanol of 16–30 carbon atoms and β-carboxy adipic acid.

2,893,965
COMPOSITIONS OF POLYCARBOXYLIC ACID AMIDES, POLYEPOXIDES, AND PHENOL-ALDEHYDE CONDENSATES

Sylvan O. Greenlee, Racine, Wis., assignor to S. C. Johnson & Son, Inc., Racine, Wis.

No Drawing. Application November 7, 1956
Serial No. 620,814
11 Claims. (Cl. 260—19)

1. A composition of matter obtained by heating a mixture consisting essentially of (A) a polycarboxylic acid amide obtained by heating in the presence of alkali (1) an amide of 4,4-bis(4-hydroxyphenyl)-pentanoic acid containing not more than about 4 >NH groups and (2) an alpha-monohalo, monocarboxylic saturated aliphatic acid containing up to about eight carbon atoms; (B) a a fusible phenol-aldehyde condensate; and (C) an organic polyepoxide containing an average of more than one oxirane group and being free of groups reactive with said amide (A) and said condensate (B) other than hydroxyl, carboxyl and oxirane.

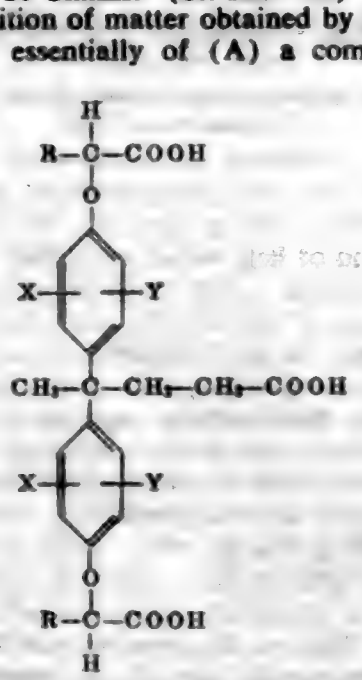
6. The composition of claim 1 wherein (C) is a polyfunctional epoxidized ester of an ethylenically unsaturated natural fatty oil acid containing about 15–22 carbon atoms, and being free of groups reactive with said acid amide (A) and said condensate (B) other than oxirane.

2,893,966
RESIN COMPOSITIONS CONTAINING TRICARBOXYLIC OXY-ACIDS

Sylvan O. Greenlee, Racine, Wis., assignor to S. C. Johnson & Son, Inc., Racine, Wis.

No Drawing. Application November 7, 1956
Serial No. 620,816
10 Claims. (Cl. 260—19)

1. A composition of matter obtained by heating a mixture consisting essentially of (A) a compound having the formula:



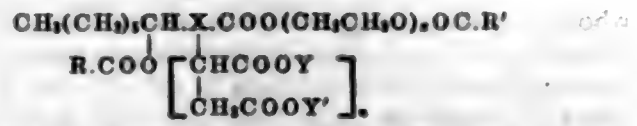
where R is selected from the group consisting of hydrogen and alkyl groups having from 1–6 carbon atoms and X and Y are selected from the group consisting of hydrogen and alkyl groups of from 1–5 carbon atoms, and (B) an organic polyepoxide containing an average of more than one oxirane group and being free of groups reactive with said compound (A) other than hydroxyl, carboxyl and oxirane.

2,893,967
POLYVINYL CHLORIDE PLASTICIZED WITH ACYLRICINOLEATE-FUMARATE ADDUCTS

Joachim Dazzi, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Original application March 4, 1953, Serial No. 340,413, now Patent No. 2,802,016, dated August 6, 1957. Divided and this application February 7, 1957, Serial No. 638,676
4 Claims. (Cl. 260—31.8)

1. A resinous composition comprising a vinyl chloride polymer having a vinyl chloride content of at least 70 percent by weight and, as a plasticizer for said polymer, a polycarboxylate having the formula



in which R, R', Y and Y' are alkyl radicals of from 1 to 5 carbon atoms, X is an acyclic hydrocarbon radical of 10 carbon atoms containing a single ethylenically unsaturated double bond as the only unsaturation therein and having a valence of $n+2$, n is an integer of from 1 to 3, and x is an integer of from 1 to 5.

2,893,968
COMPOSITION OF POLYCARBOXYLIC ACID AMIDES, POLYEPOXIDES AND AMMONIA DERIVATIVE-ALDEHYDE CONDENSATES

Sylvan O. Greenlee, Racine, Wis., assignor to S. C. Johnson & Son, Inc., Racine, Wis.

No Drawing. Application November 7, 1956
Serial No. 620,813
13 Claims. (Cl. 260—45.2)

1. A new composition of matter comprising the condensation product of (A) a polycarboxylic acid amide obtained by heating in an alkaline medium (1) an amide of a pentanoic acid containing not more than about 4 >NH groups, wherein said pentanoic acid consists essentially of 4,4 bis(4-hydroxyaryl)pentanoic acid wherein the hydroxyaryl radical is a hydroxyphenyl radical and is free from substituents other than alkyl groups of from 1–5 carbon atoms and (2) an alpha-monohalo monocarboxylic saturated aliphatic acid containing up to about 8 carbon atoms; (B) a fusible aldehyde-organic ammonia derivative condensate, wherein the organic ammonia derivative is at least one member of the group consisting of urea, thiourea, melamine, p-toluenesulfonamide and alkyl substituted derivatives thereof and (C) an organic polyepoxide containing an average of more than one oxirane group per molecule and being free of groups reactive with said amide (A) and said condensate (B) other than hydroxyl, carboxyl and oxirane.

2,893,969
COMPOSITION CONTAINING DIISOCYANATE-MODIFIED POLYESTER, POLYMERIZED VINYL HALIDE, FILLER AND AROMATIC DIISOCYANATE

Galen E. Graham, East Hempfield Township, Lancaster County, and John A. Parker, Lancaster Township, Lancaster County, Pa., assignors to Armstrong Cork Company, Lancaster, Pa., a corporation of Pennsylvania

No Drawing. Application January 13, 1956
Serial No. 558,834
9 Claims. (Cl. 260—45.4)

1. A composition of matter comprising (1) about 85%–25% by weight of an intimately blended mixture

comprising about 30%–75% by weight diisocyanate-modified polyester and about 70%–25% by weight polymerized vinyl halide, (2) about 15%–75% by weight filler, and (3) about 0.38 to about 4 parts by weight of aromatic diisocyanate having an alkyl group ortho to each isocyanate group per each 100 parts by weight of said mixture, said diisocyanate-modified polyester being the reaction product of just sufficient organic diisocyanate with unmodified polyester to form an incipient gel, said unmodified polyester having an acid number in the range of about 2–15 and a hydroxyl number in the range of about 20–55 and being formed from a saturated glycol having 4 carbon atoms, a saturated dibasic acid having 6–10 carbon atoms, and a dibasic acid possessing a single unsaturated bond and no more than 8 carbon atoms, said saturated acid and said unsaturated acid being present in a mole ratio of about 2:1.

2,893,970

MELT-SPUN POLYMERIC FIBERS CONTAINING PIGMENTS OF CROSS-LINKED POLYMERIZED UNSATURATED AMIDES AND MELT SPINNING COMPOSITION THEREFOR

John R. Caldwell, Russell Gilkey, and Clarence C. Donnelly, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application November 21, 1956
Serial No. 623,533
20 Claims. (Cl. 260—45.4)

1. A melt spinning composition adapted for use in preparing readily dyeable oriented highly polymeric synthetic fibers by the melt spinning process, said composition comprising a uniform mixture of (A) a highly polymeric thermoplastic fiber-forming synthetic resin selected from the group consisting of (*a*) linear condensation polyesters of dicarboxy acids and glycols and (*b*) crystallizable polymers of α-mono-olefinic hydrocarbons containing from 2 to 8 carbon atoms, and (B) from about 2% to about 30% based on the weight of the fiber-forming synthetic resin of a polymeric pigment comprising a cross-linked high polymer of (1) at least 30% by weight of a monoethylenically unsaturated aliphatic amide selected from the group consisting of maleic amides, fumaric amides, itaconic amides, citraconic amides and acrylamides wherein the amino groups of all of these amides have the formula —NR_2 and the α-position of acrylamide contains an R substituent wherein each R represents a member selected from the group consisting of lower alkyl and hydroxyalkyl radicals containing from 1 to 6 carbon atoms and a hydrogen atom, and (2) from about 0.1% to about 20% by weight of a cross-linking agent selected from the group consisting of the divinyl and diallyl organic compounds containing from 5 to 20 carbon atoms, the pigment being characterized by (1) being infusible at temperatures used in melt spinning the fiber-forming polymer (2) being insoluble both in water and in the fiber-forming polymer at melt spinning temperature, and (3) having particle sizes of less than 10 microns.

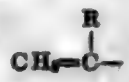
2,893,971

BLEND OF BUTADIENE-STYRENE COPOLYMER AND BUTADIENE-UNSATURATED HETEROCYCLIC NITROGEN BASE COPOLYMER AND METHOD OF PRODUCING THE CURED PRODUCT THEREOF

Thomas J. Kennedy, Borger, Tex., and John L. Holst, Boulder, Colo., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application May 13, 1957
Serial No. 658,522
8 Claims. (Cl. 260—45.5)

1. A rubber composition comprising a rubbery copolymer prepared by polymerizing a major amount of a conjugated diene containing not over 6 carbon atoms and a minor amount of a monomer selected from the group consisting of styrene, alpha-methylstyrene, vinyltoluene, acrylonitrile, methacrylonitrile, ethylacrylonitrile, methyl acrylate, and ethyl acrylate; and a small quantity of a second polymer prepared by polymerizing a major amount of a conjugated diene containing not over 6 carbon atoms and a minor amount of a copolymerizable



substituted heterocyclic nitrogen base of the pyridine and quinoline series where R is selected from the group consisting of hydrogen and methyl, the amount of said second polymer being sufficient to provide 0.001 to 0.3 weight percent nitrogen based upon the total weight of the polymers in the composition.

2,893,972

STABILIZATION OF POLYOXYMETHYLENE WITH UREAS AND THIOUREAS

Michael Andrew Kubico, Newark, and Robert Neal MacDonald, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application November 23, 1956
Serial No. 624,175
7 Claims. (Cl. 260—45.8)

1. The thermally stabilized polyoxymethylene composition which comprises a normally solid, synthetic, high molecular weight polyoxymethylene selected from the group consisting of (1) polyoxymethylenes having a degree of toughness of at least 1, said degree of toughness of at least 1 being determined by the consecutive steps of compression-molding said polyoxymethylene into a film 3 to 7 mils in thickness, heating said film in air at 105° C. for 7 days, cooling said film to room temperature, and, while maintaining said film at room temperature, manually folding and creasing said film along a line, and manually folding and creasing said film in the reverse direction along the same line without a break occurring in the film along said line, and (2) polyoxymethylenes failing to exhibit a degree of toughness of at least 1, but having a reaction rate constant for thermal degradation at 222° C. of less than 1% by weight per minute, measured by thermally degrading said polyoxymethylene in a vessel open to the atmosphere; and 0.001%–10% by weight of said polyoxymethylene of a thermal stabilizing compound from the group consisting of urea, thiourea, hydrocarbon-substituted urea, alkoxyhydrocarbon-substituted urea, cyanohydrocarbon-substituted urea, halohydrocarbon-substituted urea, heterocyclic oxahydrocarbon-substituted urea, hydrocarbon-substituted thiourea, alkoxyhydrocarbon-substituted thiourea, cyanohydrocarbon-substituted thiourea, halohydrocarbon-substituted thiourea, and heterocyclic oxahydrocarbon-substituted thiourea; said thermally stabilized polyoxymethylene composition being characterized in that said composition exhibits a greater degree of thermal stability than does said polyoxymethylene in the absence of said thermal stabilizing compound.

2,893,973

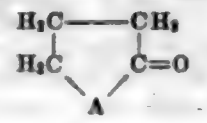
LIQUEFIED M-PHENYLENEDIAMINE COMPOSITIONS FOR CURING EPOXY ETHER RESINS

Robert Steckler, Russell, Ohio, Frederick A. Hessel, Upper Montclair, N.J., and Jesse Werner, Hollywood, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

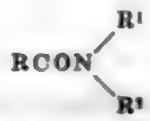
No Drawing. Application December 10, 1954
Serial No. 474,689
18 Claims. (Cl. 260—47)

1. A heat curable liquid composition comprising a glycidyl polyether of a dihydric phenol having an

epoxide equivalent ranging from 140 to 290, 50 to 90 parts of m-phenylenediamine and 10 to 50 parts of at least one liquefier compound selected from the group consisting of compounds having the following general formulae:



and



wherein A represents a member selected from the group consisting of O, NH, N-vinyl and N-alkyl groups, R represents a member selected from the group consisting of hydrogen and alkyl groups, R^1 represents a member selected from the group consisting of hydrogen, allyl and alkyl groups, and R^2 represents an alkyl group.

2,893,974

COMPOSITIONS OF 4,4 BIS(HYDROXYARYL) PENTA-n-AMIDE-ETHER ACIDS AND POLYEPOXIDES

Sylvan O. Greenlee, Racine, Wis., assignor to S. C. Johnson & Son, Inc., Racine, Wis.

No Drawing. Application November 7, 1956
Serial No. 620,815
11 Claims. (Cl. 260—47)

1. A composition of matter comprising the condensation product obtained by heating (A) a polycarboxylic acid amide obtained by heating in the presence of alkali (1) an amide of a pentanoic acid containing not more than 4 >NH groups, said pentanoic acid consisting essentially of 4,4 bis(4-hydroxyaryl)pentanoic acid wherein the hydroxyaryl radical is a hydroxyphenyl radical and is free from substituents other than alkyl groups of from 1–5 carbon atoms and (2) a monohalo, monocarboxylic saturated aliphatic acid containing from 2 to about 8 carbon atoms, the reaction of (1) and (2) occurring through the phenolic hydroxyl of the pentanoic acid and the halo groups of the monohalo acid, forming an ether bond and (B) a polyepoxide containing an average of more than one oxirane group per molecule wherein said polyepoxide is composed of the elements carbon, hydrogen and oxygen and having oxygen present only in the groups selected from the group consisting of —OH, —COO—, ethereal oxygen and oxirane groups; proportions of (A) to (B) being from 1:10 to 10:1 on an equivalent weight basis.

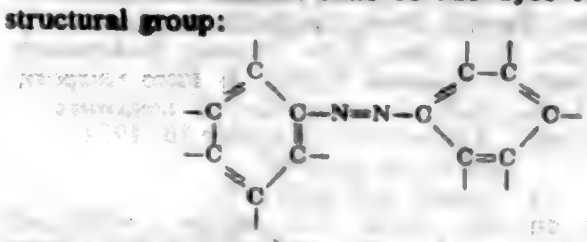
2,893,975

AZO DYE CONTAINING BLENDS OF STYRENE POLYMERS AND RUBBERY DIENE POLYMERS OF ENHANCED COLOR STABILIZED WITH BORIC ACID

Daniel A. Popielski, Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application March 28, 1957
Serial No. 648,995
2 Claims. (Cl. 260—4)

1. A plastic composition comprising (1) 100 parts of a blend of a major amount of a styrene polymer and a minor amount of a rubbery diene polymer that is colored with an azo dye of the group consisting of calcium, strontium and barium salts of azo dyes containing the structural group:



where at least one of the valances on each of the benzene rings is satisfied with a radical of the group consisting of —COOH, —OH and —SO_3H, and (2) 0.05–2.0 parts of boric acid.

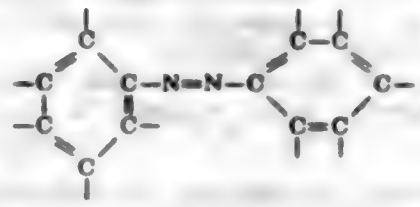
2,893,976

COLOR STABLE BLENDS OF STYRENE POLYMERS AND RUBBERY DIENE POLYMERS CONTAINING AZO DYES AND TEREPHTHALIC OR ISOPHTHALIC ACID

Daniel A. Popielski, Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application March 28, 1957
Serial No. 648,996
2 Claims. (Cl. 260—4)

1. A plastic composition comprising (1) 100 parts of a blend of a major amount of a styrene polymer and a minor amount of a rubbery diene polymer that is colored with an azo dye of the group consisting of calcium, strontium and barium salts of azo dyes containing the structural group:



where at least one of the valences on each of the benzene rings is satisfied with a radical of the group consisting of —COOH, —OH and —SO_3H, and (2) 0.05–2.0 parts of an acid selected from the group consisting of isophthalic acid, terephthalic acid and mixtures thereof.

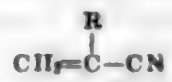
2,893,977

TRIPOLYMER AND STARCH CLAY ADHESIVE COMPOSITION CONTAINING SAME

Tzeng Jiueq Suen, New Canaan, and William Norman Russell, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

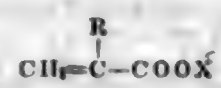
No Drawing. Application November 10, 1955
Serial No. 546,281
12 Claims. (Cl. 260—17.4)

5. An adhesive composition comprising (1) about 2 to 40 parts of a tripolymer comprising the polymerization product of a mixture of (*a*) from about 55 to 82.5 mole percent of a monomer having the general formula



(*b*) from about 10 to 35 mole percent of a monomer having the general formula

(*c*) from about 7.5 to 25 mole percent of a monomer having the general formula



wherein "R" is a member selected from the group consisting of "H" and "CH_3" and "X" is a member selected from the class consisting of "H," "Na," "K," "Li," "NH_4," and "hydrogen in combination with water-soluble tertiary amines"; (2) from about 20 to about 98 parts of kaolinitic non-alkaline, clay; and (3) up to about 40 parts of unswollen starch, said parts being parts by weight and the total parts of the main constituents being 100.

2,893,978

EPOXIDE RESINS, ETC.

Harold G. Cooke, Jr., Louisville, Ky., assignor to Devoe & Raynolds Company, Inc., Louisville, Ky., a corporation of New York

No Drawing. Application May 2, 1957
Serial No. 656,516
15 Claims. (Cl. 260—47)

1. The method of making resinous products which comprises heating a mixture of triglycidyl cyanurate and a dihydric phenol to a reaction temperature in proportions between about 1 mol of dihydric phenol to 2 mols of triglycidyl cyanurate and about 3 mols of dihydric phenol to 1 mol of triglycidyl cyanurate in admixture with an organic base as a catalyst.

2,893,979

REDUCED POLYMERS OF METHACROLEIN

Earl C. Chapin and Raymond I. Longley, Jr., Springfield, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application November 14, 1955
Serial No. 546,774
5 Claims. (Cl. 260—73)

1. A hydrogenated copolymer of methacrolein and a vinylidene aromatic compound of the group consisting of styrene, alpha-methyl styrene, o-, m-, and p-methyl styrenes, alpha-methyl-p-methyl styrene, and mixtures thereof, said hydrogenated copolymer having been prepared by subjecting a tetrahydrofurane-soluble copolymer of methacrolein and the vinylidene aromatic compound to the action of a reducing agent capable of reducing aldehyde groups to alcoholic hydroxyl groups under mild conditions in an organic solvent inert to the hydrogenation reaction to hydrogenate the copolymer only at the aldehyde groups, said tetrahydrofurane-soluble copolymer having a molecular weight of 700–10,000 and a combined methacrolein content of 20–60% by weight and having been prepared by subjecting a reaction mixture to temperatures of 140–250° C. under autogenous pressure and then removing low-boiling by-products, said reaction mixture being a member of the group consisting of: (*a*) a mixture consisting of 20–80 parts by weight of methacrolein and, correspondingly, 80–20 parts by weight of the vinylidene aromatic compound, (*b*) a mixture consisting of 100 parts by weight of (*a*) and 20–80 parts by weight of an aromatic hydrocarbon solvent, (*c*) a mixture consisting of (*a*) and a catalytic amount of a free radical-producing catalyst, and (*d*) a mixture consisting of (*b*) and a catalytic amount of a free radical-producing catalyst.

2,893,980

HIGH-MELTING INTERPOLYMERS FROM EPSILON-CAPROLACTAM

George E. Hass and Robert L. Sublett, Decatur, Ala., assignors to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware

No Drawing. Application March 23, 1955
Serial No. 496,334
16 Claims. (Cl. 260—78)

1. An interpolyamide containing in polymerized form substantially equimolar amounts of benzidine and an aliphatic dicarboxylic acid containing at least four carbon atoms between the carboxyl groups and from 50 percent to 95 percent by weight of epsilon aminocaproic acid, said interpolyamide having a melting point in the range of 212° to 315° C.

2,893,981

RECOVERING OLEFIN POLYMERS

John L. Ernst, Augustus B. Small, and Lawrence W. McLean, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application June 29, 1954
Serial No. 440,252
4 Claims. (Cl. 260—94.8)

1. In a process of manufacturing polyisobutylene having a Staudinger molecular weight of above 180,000 up to about 500,000 by Friedel-Crafts polymerization at about —100° to —160° F., in an inert diluent, the improvement which comprises discharging the cold dispersion of polyisobutylene formed in said diluent into a hot aqueous liquid; maintaining the resulting mixture at a temperature level of at least about 140° F. and a pH of above 8.5 and agitating the mixture formed sufficiently to produce a slurry of discrete polyisobutylene particles essentially of the 4 to 20 mesh size range.

2,893,982

PROCESS FOR DECOLORIZING HYDROGENATED BUTADIENE POLYMERS WITH A SATURATED CARBOXYLIC ACID

Paul E. Campbell, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application December 27, 1954
Serial No. 477,827
14 Claims. (Cl. 260—85.1)

1. A method of decolorizing a polymer prepared by emulsion polymerization selected from group consisting of homopolymers of butadiene and copolymers of butadiene and styrene, prepared from monomer mixtures containing not over thirty parts by weight of styrene per 100 parts by weight of monomers, said polymers having a gray color as a result of the reduction of the residual unsaturation by at least 50 percent by hydrogenating same in the presence of a nickel catalyst, said method comprising contacting the polymer with an acid selected from the group consisting of saturated unsubstituted carboxylic acids containing 2 to 8 carbon atoms.

2,893,983

COPOLYMERS OF DICHLOROHEXAFLUOROBUTENE

Elizabeth S. Lo, Elizabeth, N.J., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Application April 23, 1956
Serial No. 579,718
19 Claims. (Cl. 260—87.5)

1. A process which comprises polymerizing a monomeric mixture of a dichlorohexafluorobutene selected from the group consisting of 2,3-dichlorohexafluorobutene-2 and 4,4-dichlorohexafluorobutene-1 and a monochloroethylene having not more than 1 fluorine atom as the only other halogen substituent, said mixture containing between about 5 mole percent and about 90 mole percent dichlorohexafluorobutene and the remaining major constituent being the monochloroethylene, at a temperature between about —20° C. and about 100° C. in the presence of a polymerization promoter selected from the group consisting of a water soluble peroxy promoter and an organic peroxy promoter.

2,893,984

POLYMERIZATION OF ALPHA OLEFINS

Charles W. Seelbach, Cranford, and William John Gilbert McCulloch, Plainfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application April 2, 1956
Serial No. 575,370
10 Claims. (Cl. 260—93.7)

1. The process for polymerizing alpha olefins having the general formula $R—CH=CH_2$, in which R is a

hydrocarbon group, in the presence of a catalyst consisting essentially of (*a*) a partially reduced titanium halide, (*b*) 0.1 to 1.0 mols of unreacted titanium metal per 4 mols of titanium halide, and (*c*) an aluminum alkyl-compound in amount sufficient to give an Al/Ti molar ratio of 0.1 to 20.0.

2,893,985

POLYMERIZATION OF OLEFINS

Roger Van Nest Powelson, Ambler, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Application May 15, 1956
Serial No. 584,892
2 Claims. (Cl. 260—94.9)

1. A process for the production of polyethylene which comprises dissolving a reagent selected from the group consisting of anthrahydroquinone, alkylated anthraquinone, and durahydroquinone in a substantially oxygen-free solvent which is miscible with liquid ethylene, charging the solution to a reaction vessel, adding ethylene to the solution at a temperature below its critical temperature while maintaining sufficient pressure in the reaction vessel to keep the ethylene in liquid phase, introducing oxygen to the reaction vessel in an amount sufficient to react with the reagent to produce free radicals, whereby to initiate a polymerization reaction, and recovering a polyethylene reaction product.

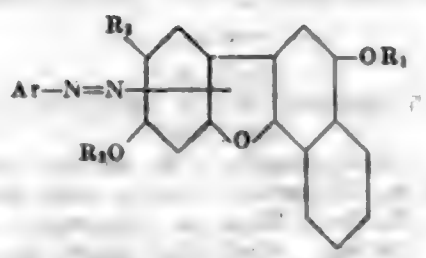
2,893,986

AZO DYES CONTAINING THE BENZONAPHTHOFURANOL NUCLEUS

Robert S. Long and Bennett G. Buell, Bound Brook, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application March 8, 1957
Serial No. 644,732
10 Claims. (Cl. 260—152)

1. Azoic coloring matters having the following formula



in which R_1 and R_2 are selected from the group consisting of hydrogen and the lower alkyl radicals and R_3 is selected from the group consisting of hydrogen, carboxy, and RNHCO— wherein R is the residue of a mononuclear aromatic carbocyclic primary amine, and Ar is the residue of a diazotized aromatic carbocyclic primary amine having a residual cyclic structure selected from those of the group consisting of benzene, naphthalene, diphenyl and anthraquinone.

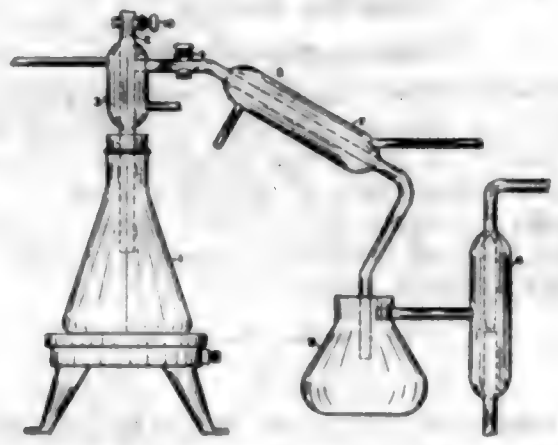
2,893,987

DEXTRAN FORMALS

Earl H. Foote, Jr., Atwater, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio

Application February 16, 1956, Serial No. 565,990
1 Claim. (Cl. 260—209)

A method of making a water-insoluble dextran formal which comprises admixing methanol, water-soluble dextran having a molecular weight between 1000 and that of native dextran and methylal in the ratio of at least one mole of methylal to two moles of dextran, acidifying the resultant suspension with the addition of sulfuric acid, heating the acidified suspension to 30° C. to 35° C., maintaining the suspension at said temperature for 2 to 3 hours at atmospheric pressure, thereafter reducing the pressure to 20 to 25 mm. and distilling off the methanol and methylal at a rate such that 100 gms. of methanol are removed per half hour, the distillation being continued until at least 100 gms. of methanol are removed while



the mass is maintained at the temperature in the range of 30° C. to 35° C., introducing calcium hydroxide into the resultant reaction mixture to neutralize the same, filtering the reaction mass, mixing the mass on the filter with toluol and filtering to recover a toluol solution of water-insoluble dextran formal.

2,893,988

THERAPEUTICALLY VALUABLE SUBSTANCES PERTAINING TO THE GROUP OF VITAMINS B_{12}

Konrad Bernhauer and Wilhelm Friedrich, Aschaffenburg, and Hanswerner Dellweg and Elisabeth Becher, Stockstadt (Main), Germany, assignors to Aschaffenburger Zellstoffwerke Aktiengesellschaft, Redenfelden, Upper Bavaria, Germany, a German corporation

Application January 11, 1955, Serial No. 481,234
Claims priority, application Germany, January 11, 1954
16 Claims. (Cl. 260—211.5)

8. A process for the biosynthetic production of vitamin B_{12} and analogs thereof, comprising the step of causing live strains of microorganisms present in fermented sewage sludge containing *Escherichia coli*, and capable of synthesizing vitamin B_{12} to act, in an aqueous medium containing a phosphate buffer and having a pH between 6 and 7, on ctiocobalamine and a vitamin B_{12} nucleotide moiety-builder selected from the group consisting of benzimidazole and those members of the benzimidazole series which are at least substituted in 6(5)-position and having their 2-position free from non-oxidized alkyl-groups and their 7(4)-position unsubstituted and those orthophenylene diamine derivatives from which said strains are capable of producing the corresponding member of the benzimidazole series, in the presence of d-ribose.

2,893,989

PROCESS FOR PRODUCING CYANO COBALAMINES

Konrad Bernhauer and Siegfried Spaude, Aschaffenburg (Main), Germany, assignors to Aschaffenburger Zellstoffwerke Aktiengesellschaft, Redenfelden (Obb.), Germany

Application January 23, 1957, Serial No. 635,853
Claims priority, application Germany January 26, 1956
11 Claims. (Cl. 260—211.5)

1. In a process of producing vitamins of the B_{12} group from a raw material containing the same and comprising a first sequence of steps involving larger liquid volumes, of separating the major portion of said vitamins from

the bulk of the impurities containing the vitamins, including formation of at least one adsorbate of the vitamins to an adsorbent, and a final elution step, of concentrating the resulting eluates by evaporation of the eluting agent in vacuum, and a second sequence of steps, involving smaller liquid volumes, extracting the vitamins from the resulting concentrate with the aid of an organic solvent, and isolating, precipitating and finally crystallizing said vitamins, the improvement of (I) carrying out the first sequence and up to the aforesaid extraction step of the second sequence of steps under addition of solutions of sulfite ions to at least one of said steps, while adjusting the pH during the aforesaid step to about 6.5, thereby converting said vitamins to their sulfito complexes, and maintaining sulfite ions present in the treated materials to preserve these sulfito complexes until the volume of the vitamins-containing liquid has been substantially reduced to about 1/250 part of the starting volume of the raw material, converting the vitamins of the B_{12} group from the form of their sulfito complexes to the form of cyano complexes during the aforesaid extraction step, by addition of solutions containing a (CN)-group containing compound capable of forming (CN)-ions upon dissolution, and selected from the group consisting of the alkali metal salts of hydrocyanic acid, complex cyanide salts and organic nitriles, while still maintaining the aforesaid pH of about 6.5, thereby converting said sulfito complexes to the corresponding cyano complexes, and then (II) carrying out the remaining steps of the second stage under addition of solutions of the aforesaid (CN)-group containing compound so as to maintain the presence of cyanide ions to preserve said cyano complexes being vitamins of the B_{12} group proper, up to the final precipitation and crystallization steps.

2,893,990

PROCESS FOR PRODUCING SUGAR ESTERS

Henry B. Hass, Summit, N.J., and Foster D. Snell, New York, William C. York, Westbury, and Lloyd I. Osipow, Brooklyn, N.Y., assignors to Sugar Research Foundation, Inc., New York, N.Y., a corporation of New York

No Drawing. Application December 12, 1955
Serial No. 552,281

18 Claims. (Cl. 260—234)

1. A process for producing an ester of a fatty acid containing between about 6 and 30 carbon atoms and a saccharide selected from the group consisting of sucrose and raffinose, which comprises treating a member of the group consisting of sucrose and raffinose with an ester of a fatty acid containing between about 6 and 30 carbon atoms and a non-saccharide alcohol, in the presence of an alkaline catalyst, at a temperature in the range from between about 20 and 180° C., and in the presence of a solvent.

2,893,991

NEW HYDROXY-QUINONES AND PROCESS FOR PREPARING SAME

Adrian Marxer, Basel, Switzerland, assignor to Ciba Pharmaceutical Products Inc., Summit, N.J.

No Drawing. Application November 29, 1957
Serial No. 699,463

Claims priority, application Switzerland
December 21, 1956

9 Claims. (Cl. 260—239)

1. A member selected from the group consisting of 2,5-bis-ethyleneimino-3,6-dihydroxy - para - benzoquinones and alkali metal and alkaline earth metal salts thereof.

2,893,992

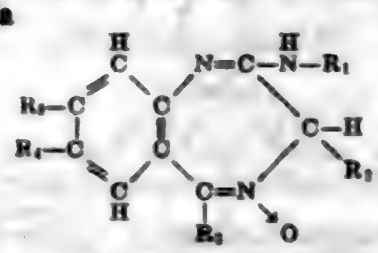
1,4-BENZODIAZEPINE 4-OXIDES

Leo Henryk Sternbach, Upper Montclair, N.J., assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Application May 15, 1958
Serial No. 735,381

19 Claims. (Cl. 260—239)

1. A compound selected from the group represented by the formula



wherein R_1 represents a member of the group consisting of hydrogen, lower alkyl, lower alkenyl, hydroxy-lower alkyl and lower alkoxy-lower alkyl, R_2 represents a member of the group consisting of hydrogen and lower alkyl, R_3 represents a member of the group consisting of phenyl, halophenyl, nitrophenyl and lower alkoxyphenyl, and R_4 and R_5 each represents a member of the group consisting of hydrogen, halogen and lower alkyl, and acid addition salts thereof.

2,893,993

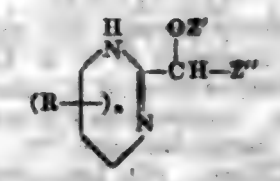
2-ARYLOXYARALKYL-1,4,5,6-TETRAHYDRO-PYRIMIDINES

Clinton A. Dornfeld, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Application June 17, 1958
Serial No. 742,476

9 Claims. (Cl. 260—251)

1. A compound of the formula



wherein R is a lower alkyl radical; *n* is selected from the group consisting of 0 and positive integers amounting to less than 5; and Z' and Z'' are selected from the group consisting of phenyl, (lower alkyl)phenyl, halophenyl, (lower alkoxy)phenyl, and benzyl radicals.

3. 1,4,5,6 - tetrahydro - 5,5 - dimethyl - 2 - (α - phenoxybenzyl)pyrimidine.

7. 1,4,5,6 - tetrahydro - 2 - [α - (o - tolyloxy)benzyl]-pyrimidine.

2,893,994

PROCESS FOR PRODUCING FINELY DIVIDED VAT DYE PIGMENTS

Bertram M. Heffner, New York, and Frederic L. Stevenspiper, Alden, N.Y., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

Application July 30, 1956, Serial No. 600,853

10 Claims. (Cl. 260—281)

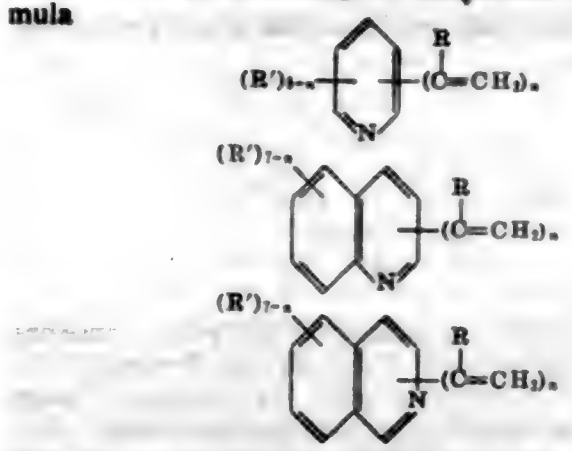
1. The improvement in the process of producing a vat dye pigment by reacting a leuco compound of a vat dye with an oxidizing agent which comprises dispersing an aqueous alkaline solution of a leuco compound of a vat dye into fine droplets, and oxidizing the leuco compound to the vat dye and precipitating the resulting vat dye in finely divided form by contacting the droplets of solution, while in dispersed form, with a liquid oxidizing medium.

2,893,995
STABILIZATION OF VINYLPYRIDINES

John E. Mahan, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application March 30, 1953
Serial No. 345,730
10 Claims. (Cl. 260—290)

3. A method for inhibiting during distillation the polymerization of heterocyclic nitrogen compounds selected from the group consisting of compounds having the formula



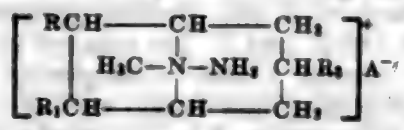
wherein *n* is an integer selected from the group consisting of 1 and 2, R is selected from the group consisting of H, CH_3 and C_2H_5, and each R′ is individually selected from the group consisting of H and an alkyl group, not more than 12 carbon atoms being present in the total of said R′ groups, which comprises introducing into said heterocyclic nitrogen compounds an inhibiting amount of an addition product of an oxide of nitrogen and a tertiary amine, said oxide of nitrogen being selected from the group consisting of nitric oxide, nitrogen dioxide, and nitrogen trioxide, and said tertiary amine being selected from the group consisting of pyridine, alkyl-substituted pyridine and vinyl-substituted pyridine.

2,893,996
N-AMINO DERIVATIVES OF TROPINE ALKALOIDS

Bernard Radner, Silver Spring, and Aristotle G. Prapas, Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Application October 14, 1957
Serial No. 689,779
8 Claims. (Cl. 260—292)

1. New chemical compounds having the general formula:



wherein R and R_1 taken individually are hydrogen and R and R_1 taken collectively are oxygen completing the oxirane ring; R_2 is a member selected from the group consisting of benzoyloxy, cinnamoyloxy, phenyllower-alkanoyloxy, diphenylloweralkanoyloxy and phenylhydroxyloweralkanoyloxy; and A is a pharmaceutically neutral anion.

2,893,997
SYNTHESIS OF INDOLYLMETHYL-HYDANTOIN

James N. Coker and Melvin Fields, Wilmington, Del., and Arthur O. Rogers, Lewiston, N.Y., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application February 21, 1958
Serial No. 716,550
3 Claims. (Cl. 260—309.5)

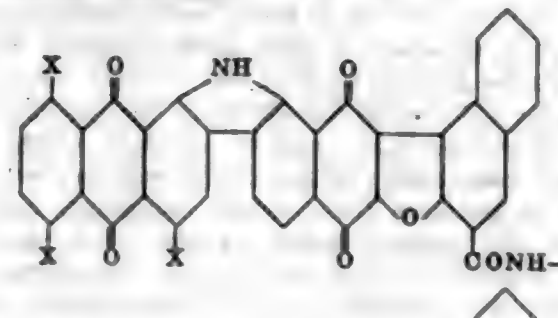
1. The process for producing 5-(3-indolylmethyl)-hydantoin which comprises reacting a compound selected from the group consisting of 1,3-diphenyl-2-(3′-indolylmethyl)-imidazolidine and 1,3-diphenyl-2-(1′-acetyl-3′-indolylmethyl)-imidazolidine, with ammonium ions, carbonate ions and cyanide ions in an inert polar liquid solvent at 40° to 220° C.

2,893,998
ANTHRAQUINONE VAT DYES

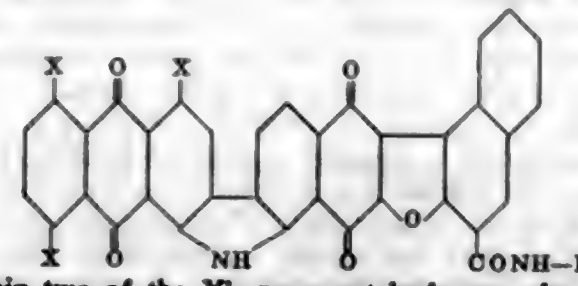
Mario Francesco Sartori, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application May 28, 1958
Serial No. 736,445
4 Claims. (Cl. 260—316)

1. A vat dye being a mixture of the two isomeric compounds of the formulas



and



wherein two of the X's represent hydrogen, the third X is a member of the group consisting of hydrogen and homocyclic, monocyclic aroylamino radicals, while R is the radical of a homocyclic aromatic compound having not more than 10 C-atoms and being free of water-solubilizing groups.

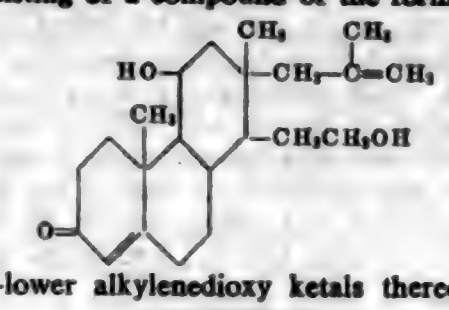
2,893,999
2,4b-DIMETHYL-1-(2-HYDROXYETHYL)-2-METHALLYL DODECAHYDROPHENANTHRENE COMPOUNDS AND PROCESSES OF PREPARING THE SAME

Lewis H. Sarett, Princeton, N.J., and William F. Johns, Morton Grove, Ill., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Application January 8, 1957
Serial No. 632,985
4 Claims. (Cl. 260—340.9)

1. 2,4b-dimethyl-1-(2-hydroxyethyl)-2-methallyl-7-ethylenedioxy-1,2,3,4,4a,4b,5,6,7,8,10,10a-dodecahydrophenanthrene-4-ol.

4. A dodecahydrophenanthrene compound from the group consisting of a compound of the formula:



and the 7-lower alkylenedioxy ketals thereof.

2,894,000
2,4b-DIMETHYL-1-ACETALDEHYDO-2-(β-KETOPROPYL)-1,2,3,4,4a,4b,5,6,7,9,10,10a-DODECAHYDROPHENANTHRENE-4,7-DIONE AND METHODS OF PREPARING THE SAME

Lewis H. Sarett, Princeton, N.J., George I. Poos, Philadelphia, Pa., and William F. Johns, Morton Grove, Ill., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Original application September 9, 1953, Serial No. 379,282, now Patent No. 2,837,516, dated June 3, 1958. Divided and this application March 4, 1957, Serial No. 643,886
2 Claims. (Cl. 260—340.9)

1. 2,4b-dimethyl-1-acetaldehydo-2-(β-ketopropyl)-7-ethylenedioxy-1,2,3,4,4a,4b,5,6,7,8,10,10a-dodecahydrophenanthrene-4-one.

2,894,001

2,4b-DIMETHYL - 1 - ACETALDEHYDO-2-(β,γ-DIHYDROXYISOBUTYL)-1,2,3,4,4a,4b,5,6,7,9,10,10a - DODECAHYDROPHENANTHRENE-4,7-DIONE AND METHODS OF PREPARING THE SAME

Lewis H. Sarett, Princeton, N.J., George I. Poos, Philadelphia, Pa., and William F. Johns, Morton Grove, Ill., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Original application September 9, 1953, Serial No. 379,282, now Patent No. 2,837,516, dated June 3, 1958. Divided and this application March 4, 1957, Serial No. 643,887

2 Claims. (Cl. 260—340.9)

1. 2,4*b* - dimethyl - 1 - acetaldehydo - 2 - (β,γ - dihydroxyisobutyl) - 7 - ethylenedioxy - 1,2,3,4,4*a*,4*b*,5,6,7,8,10,10*a*-dodecahydrophenanthrene-4-one.

2,894,002

2,4b - DIMETHYL -1- ACETALDEHYDO -2- METHALLYL - 1,2,3,4,4a,4b,5,6,7,9,10,10a - DODECAHYDROPHENANTHRENE-4,7-DIONE AND METHODS OF PREPARING THE SAME

Lewis H. Sarett, Princeton, N.J., George I. Poos, Philadelphia, Pa., and William F. Johns, Morton Grove, Ill., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Original application September 9, 1953, Serial No. 379,282, now Patent No. 2,837,516, dated June 3, 1958. Divided and this application March 4, 1957, Serial No. 643,888

2 Claims. (Cl. 260—340.9)

1. 2,4b - dimethyl - 1 - acetaldehydro - 2 - methallyl - 7-ethylenedioxy - 1,2,3,4,4a,4b,5,6,7,8,10,10a - dodecahydrophenanthrene-4-one.

2,894,003

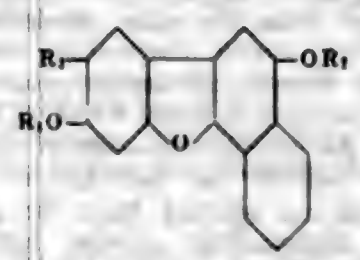
BENZONAPHTHOFURANOLS

Robert S. Long and Bennett G. Buell, Bound Brook, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application March 8, 1954
Serial No. 414,866

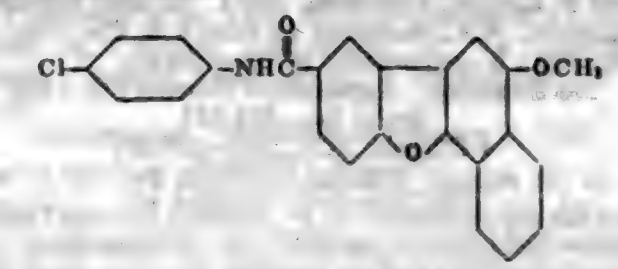
9 Claims. (Cl. 260—346.2)

4. Substituted benzo(b)naphtho(2,1-d)furans represented by the formula



in which R_1 is selected from the group consisting of hydrogen and acetyl, R_2 is selected from the group consisting of R_1 and lower alkyl, R_3 being hydrogen when R_1 and R_2 are identical and when R_2 is lower alkyl, R_3 being selected from the group consisting of COOH and RNHCO— wherein R is selected from the group consisting of mononuclear aryl and chlorine-substituted mononuclear aryl radicals, R_4 being hydrogen only when R_1 and R_2 are identical.

9. A substituted benzo(b)naphtho(2,1-d)furan represented by the formula



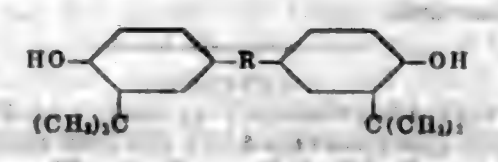
2,894,004

BISPHENOLS

Andrew J. Dietzler, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application August 13, 1956
Serial No. 603,839
5 Claims. (Cl. 260—395)

1. A bisphenol having the structure



wherein R is a structure containing a cyclic radical and selected from a group consisting of benzylidene, cyclohexylidene and cyclopentylidene and alkyl substitution products thereof, containing from 1 to 4 carbon atoms, inclusive, in the alkyl group.

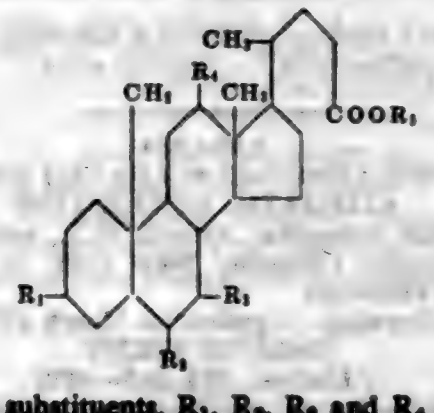
2,894,005

PROCESS FOR DEGRADING SIDE-CHAINS OF CHOLIC ACID MATERIALS

Leon J. Rubin, North York Township, Ontario, and Gloria C. Buckley, Toronto, Ontario, Canada

No Drawing. Application June 24, 1955
Serial No. 517,907
6 Claims. (Cl. 260—397.1)

1. In the preparation of steroid substances, the step of contacting an ester having the formula



wherein the substituents, R_1, R_2, R_3 and R_4 are each selected from the group consisting of a hydroxyl radical and a hydrogen atom and wherein R_5 is selected from the alkyl radicals of the lower monohydric alcohols, with an aryl Grignard reagent selected from the group consisting of phenyl magnesium chloride and phenyl magnesium bromide in a solvent medium consisting of tetrahydrofuran.

2,894,006

TESTOSTERONE-2'-ACETOXY-4'-METHYL-PENTANOATE

Douglas S. Irvine, Montreal, Quebec, and Roger Gaudry, Mount Royal, Quebec, Canada, assignors to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application June 26, 1958
Serial No. 744,667
6 Claims. (Cl. 260—397.4)

1. Testosterone 2'-acetoxy-4'-methyl-pentanoate.

2,894,007

PROCESS FOR PREPARING 9α-FLUORO STEROIDS

Robert P. Graber, Elizabeth, and C. Stewart Snoddy, Jr., Plainfield, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Application February 3, 1955
Serial No. 486,022
4 Claims. (Cl. 260—397.45)

1. In the process wherein hydrogen fluoride is reacted with a 9β,11β-oxido-steroid to produce the corresponding 9α-fluoro-11β-hydroxy-steroid, the improvement which comprises carrying out the reaction in an aqueous solvent medium and in the presence of a non-oxidizing acid selected from the group consisting of perchloric acid, sulfuric acid, trichloroacetic acid, the lower alkanesulfonic acids p-nitrobenzenesulfonic acid and 2-4 dinitrobenzenesulfonic acid.

4. A process which comprises reacting 9β,11β-oxido-4-pregnene-17α,21-diol-3,20-dione 21-acetate with aqueous hydrogen fluoride at approximately 0° to 5° C. in the presence of a mixture of chloroform and perchloric acid to produce 9α-fluoro-4-pregnene - 11β,17α,21 - triol - 3,20-dione 21-acetate.

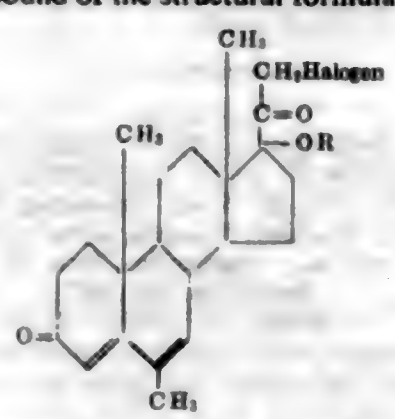
2,894,008

6-METHYL-17-HYDROXY-21-HALO-4,6-PREGNADIENE-3,20-DIONES AND ESTERS THEREOF

Paul R. Sollman, Skokie, Ill.

No Drawing. Application November 28, 1958
Serial No. 776,734
4 Claims. (Cl. 260—397.47)

1. A compound of the structural formula



wherein R is a member of the class consisting of hydrogen and radicals of the type —CO-lower alkyl.

2,894,009

PURIFICATION OF SULFATED HIGHER ALIPHATIC ACID ESTERS

Irving Rudolf Schmolka, Astoria, N.Y., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

No Drawing. Application March 27, 1957
Serial No. 648,770
6 Claims. (Cl. 260—400)

1. A process for the purification of an impure water-soluble sulfated partial higher fatty acid ester of a polyhydric alcohol admixed with higher fatty acid which comprises contacting an aqueous solution of said impure sulfate ester material with an anion exchange resin to remove preferentially said higher fatty acid, and separating said sulfate ester in purified form from said resin.

2,894,010

ORGANIC ACID AND PROCESS THEREFOR

Herman A. Bruson, North Haven, and Jack Rockett, New Haven, Conn., assignors to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia

No Drawing. Application February 28, 1957
Serial No. 642,961
1 Claim. (Cl. 260—404)

Process for preparing aminoundecanoic acid comprising mixing carbamylundecanoic acid and sodium hypochlorite solution at a temperature between 0° and about 28° C. and gradually warming the said mixture to substantially 75° C. in about four hours.

2,894,011

PRODUCTION OF CONJUGATED-UNSATURATED ALDEHYDO CARBOXYLIC ACID ESTERS

Horst Pommer, Ludwigshafen (Rhine), Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Application January 17, 1956
Serial No. 559,517
Claims priority, application Germany January 25, 1955
8 Claims. (Cl. 260—410.9)

2. A process for the production of a conjugated-unsaturated aldehydo carboxylic acid alkyl ester of the general formula

$$R'OOC-CH=\underset{\displaystyle CH_3}{\underset{|}{C}}-CH=CH-(CH=\underset{\displaystyle CH_3}{\underset{|}{C}})_n-CH=O$$

in which R' represents a lower alkyl group and *n* represents a number selected from zero and one, which process comprises adding while excluding water a vinyl ether of the general formula R—CH=CH—OR' in which R in a member of the group consisting of hydrogen and methyl and R' is a lower alkyl group in the presence of an acid catalyst selected from the class consisting of hydrogen halides, boron trifluoride, sulfonic acids of the benzene series and zinc chloride to an ester of the general formula

$$R'OOC-CH=\underset{\displaystyle CH_3}{\underset{|}{C}}-A-CH(OR')_2$$

in which R' represents a lower alkyl group and A stands for a member of the class consisting of a direct link and a —CH=CH— and a —CH(OR')—CH_2— group, R' having the same meaning as above, and heating the resultant addition product with about the equivalent amount of water and a sulfonic acid of the benzene series until no more alcohol of the general formula R'OH is split off.

2,894,012

GRIGNARD REACTIONS IN PRESENCE OF CYCLIC ETHERS

Hugh E. Ramsden, Metuchen, and Sanders D. Rosenberg, Plainfield, N.J., assignors to Metal & Thermit Corporation, New York, N.Y., a corporation of New Jersey

No Drawing. Application November 28, 1955
Serial No. 549,556
6 Claims. (Cl. 260—448.2)

1. A method of preparing organosilanes which comprises reacting, at a temperature of about 20 to 80° C., a compound Q solution of an organomagnesium chloride reagent selected from the class consisting of arylmagnesium chlorides, vinylic magnesium chlorides, active-hydrogen free heterocyclic magnesium chlorides with a silicon compound of formula AA'A''SiX, wherein X is selected from the group consisting of halogen and OR groups, A, A' and A'' are the same or different from each other, and are selected from the class consisting of hydrogen, hydrocarbon groups, halogen and OR groups, wherein R is a hydrocarbon radical in the presence of an inert hydrocarbon solvent, and recovering said silanes, said compound Q being an ether containing from 5 to 6 atoms in the ring and wherein (*a*) there is only one oxygen atom in the ring, (*b*) the other ring atoms are carbon, (*c*) one ring carbon separated from the oxygen atom in the ring by two carbon atoms may be replaced by an alkyl substituted nitrogen atom, (*d*) the ring contains not more than one double bond, (*e*) at least one carbon atom adjacent the oxygen atom in said ring

being free of any substituents other than hydrogen, (*f*) said ether contains no substituent which reacts with organomagnesium chlorides or with other components or products of the reaction mixture.

2,894,013

PROCESS FOR PREPARING ALIPHATIC ISOTHIOCYANATES

Horst Werres, Berlin-Charlottenburg, Germany, assignor to Schering A.G., Berlin, Germany, a corporation of Germany

No Drawing. Application February 24, 1958
Serial No. 716,895
Claims priority, application Germany March 18, 1957
6 Claims. (Cl. 260—454)

1. Method for the preparation of lower aliphatic isothiocyanates which comprises reacting a soluble salt of an N-alkyldithiocarbamic acid with phosgene in an aqueous medium wherein alkyl is lower alkyl.

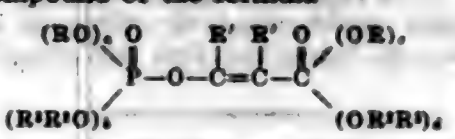
2,894,014

COMPLEX ESTERS OF BETA-PHOSPHATO-ALPHA, BETA-OLEFINICALLY UNSATURATED MONOCARBOXYLIC ACIDS

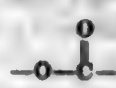
Alan R. Stiles and Richard R. Whetstone, Denver, Colo., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

No Drawing. Application December 28, 1955
Serial No. 555,753
11 Claims. (Cl. 260—461)

11. A compound of the formula



wherein R′ represents a member of the group consisting of hydrogen and alkyl radicals to 1 to 8 carbon atoms, R represents an alkyl radical of 1 to 8 carbon atoms, R^2 represents an alkylene group of not more than 10 carbon atoms, R^3 represents a functional group involving oxygen having not more than 10 carbon atoms selected from the group consisting of —OR^4 and



wherein R^4 is an alkyl radical, *a* represents an integer selected from the group consisting of 0, 1 and 2, with the provision that $a+b=2$, and *c* is an integer selected from the group consisting of 0 and 1, with the provision that $c+d=1$, and with the further provision that $b+d=$at least 1.

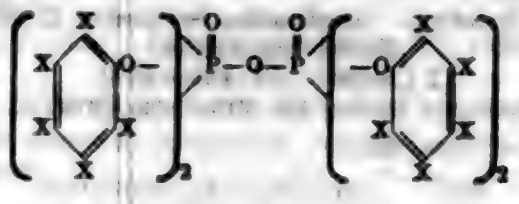
2,894,015

FUNGICIDAL COMPOSITIONS AND THEIR USE

Glendon D. Kyker, Chattanooga, Tenn., assignor to Pennsalt Chemicals Corporation, a corporation of Pennsylvania

No Drawing. Application March 30, 1956
Serial No. 574,963
9 Claims. (Cl. 260—461)

7. A compound having the structural formula



in which X is halogen.

8. Process for preparing tetrakis(pentahalophenyl)-pyrophosphate which comprises heating alkali metal pentahalophenate with phosphorus oxyhalide in the temperature range from about 65° C. to about the temperature of reflux.

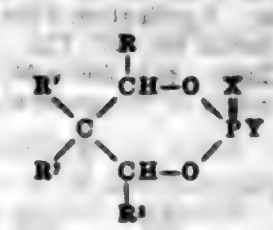
2,894,016

HETEROCYCLIC PHOSPHORUS-CONTAINING COMPOUNDS AND THEIR PRODUCTION

William M. Lanham, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Application January 7, 1957
Serial No. 632,666
12 Claims. (Cl. 260—461)

1. As new compounds, aryl hydrocarbon-substituted heterocyclic phosphorus-containing compounds having at least one aryl hydrocarbon residue attached to a corresponding carbon atom of the heterocyclic ring, and having the structure



wherein R designates a member of the class consisting of hydrogen and the phenyl and lower alkyl radicals; R′ designates a member of the class consisting of hydrogen, chlorine, bromine, and the phenyl and benzyl radicals; R^2 designates a member of the class consisting of hydrogen, chlorine, bromine, and the lower alkyl radicals; R^3 designates a member of the class consisting of hydrogen and the phenyl radical; and at least one of the R, R′ and R^3 is an aryl-hydrocarbon substituent; X is a member of the class consisting of oxygen and sulfur; and Y is a member of the class consisting of the chlorine, bromine, and mercapto radicals; and when Y is mercapto, X represents sulfur.

5. Process for making aryl hydrocarbon-substituted heterocyclic phosphorus-containing compounds which comprises reacting (1) a phosphorus compound of the class consisting of phosphorus pentasulfide, phosphoryl chloride, phosphoryl bromide, thiophosphoryl chloride, and thiophosphoryl bromide with (2) an aryl-substituted alkane-1,3-diol having the structure

HOCHRCR′R^2CHR^3OH

wherein R is of the class consisting of hydrogen and the phenyl and lower alkyl radicals; R′ is of the class consisting of hydrogen, chlorine, bromine, and the phenyl and benzyl radicals; R^2 is of the class consisting of hydrogen, chlorine, bromine, and the lower alkyl radicals; and R^3 is of the class consisting of hydrogen and the phenyl radicals; and at least one of the R, R′ and R^3 is an aryl-hydrocarbon substituent; and separately recovering from the resultant reaction mixture the said aryl hydrocarbon-substituted heterocyclic phosphorus-containing compound thus produced.

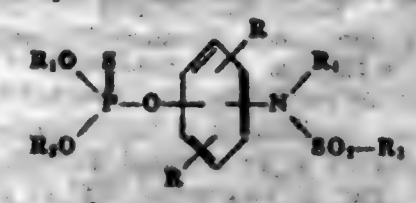
2,894,017

THIOPHOSPHORIC ACID ESTERS AND THEIR PRODUCTION

Ernst Schegk, Wuppertal-Elberfeld, and Gerhard Schrader, Wuppertal-Cronenberg, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application April 17, 1957
Serial No. 653,284
Claims priority, application Germany April 26, 1956
6 Claims. (Cl. 260—461)

1. A thiophosphoric acid ester of the formula:



in which R stands for a member selected from the group consisting of hydrogen and chloro, R_1 and R_2 stand for alkyl radicals having from 1–4 carbon atoms, R_3 stands

for a member selected from the group consisting of lower alkyl, chloro-substituted lower alkyl, phenyl and chlorophenyl radicals, and R_4 stands for a member selected from the group consisting of hydrogen and the radical SO_2R_3, in which R_3 again has the same significance as described above.

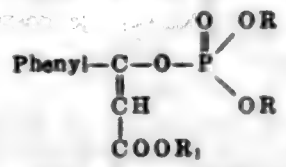
2,894,018

DI(LOWER ALKYL)-MONO(α-PHENYL-β-CARBALKOXY-VINYL) PHOSPHATE ESTERS

Walter Lorenz, Wuppertal-Elberfeld, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application July 16, 1957
Serial No. 672,122
1 Claim. (Cl. 260—461)

Phosphoric acid esters of the general formula



wherein R and R_1 stand for a lower alkyl radical.

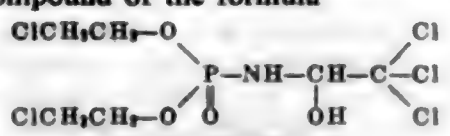
2,894,019

PHOSPHORUS COMPOUNDS

Arthur Maeder, Therwil, Bl, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Application January 27, 1958
Serial No. 711,124
Claims priority, application Switzerland February 15, 1957
4 Claims. (Cl. 260—461)

1. The compound of the formula



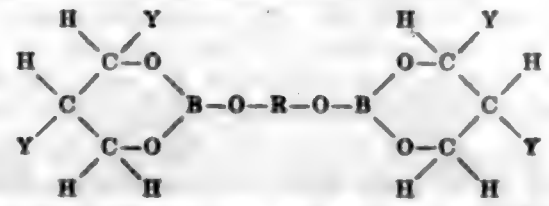
2,894,020

BORATES

Robert J. McManimie, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application October 30, 1957
Serial No. 693,269
6 Claims. (Cl. 260—462)

1. A compound of the formula



in which R is selected from the class consisting of the bivalent alkyleneoxyalkylene, alkenylene, alkinylene and alkylenethioalkylene radicals of from 4 to 18 carbon atoms and the isopropylidenedicyclohexylene radical, and Y is an alkyl radical of up to 3 carbon atoms.

2,894,021

PROCESS FOR PURIFICATION OF DIMETHYL TEREPHTHALATE

Erhard Siggel, Laudenbach am Main, Germany, assignor to Vereinigte Glanzstoff-Fabriken, A.G., Wuppertal-Elberfeld, Germany

No Drawing. Application December 11, 1956
Serial No. 627,576
Claims priority, application Germany December 12, 1955
6 Claims. (Cl. 260—475)

1. A process for purification of dimethyl terephthalate which comprises condistilling a liquid molten crude dimethyl terephthalate at an elevated distillation temperature of at least 200° C. and below 285° C. with an inert aromatic compound selected from the group consisting of aromatic and hydroaromatic hydrocarbons passed in vapor phase through the crude dimethyl terephthalate.

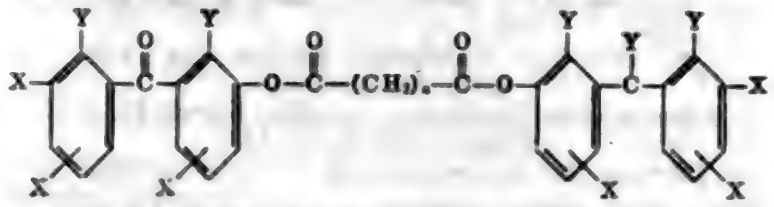
2,894,022

DIESTERS OF ALIPHATIC DICARBOXYLIC ACIDS AND HYDROXY BENZOPHENONES

Carl B. Havens, Hope, and Gerald A. Clark, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application August 2, 1956
Serial No. 601,644
2 Claims. (Cl. 260—479)

1. As a new organic compound a diester having the following general formula:



wherein *n* is a positive whole number from 2 to 8, X is selected from the group consisting of hydrogen, chlorine, and alkyl having from 1 to 8 carbon atoms, and one Y in each benzophenone group is hydrogen and the other Y in each such group is hydroxyl.

2,894,023

SALTS OF THE TRI-ETHYL ESTER OF N-HYDROXYETHYL ETHYLENE DIAMINE TRIACETIC ACID

Martin Rubin, Silver Spring, Md.

No Drawing. Application July 12, 1956
Serial No. 597,328
3 Claims. (Cl. 167—58)

1. The water soluble non-toxic mono-acid salts of the tri-ethyl ester of N-hydroxyethyl ethylene diamine triacetic acid.

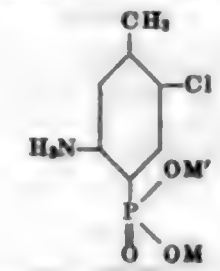
2,894,024

2-AMINO-5-CHLORO-4-TOLYL PHOSPHONIC ACID

Karl C. Whitehouse, Somerville, and Hans Z. Lecher, Plainfield, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application March 12, 1957
Serial No. 645,409
5 Claims. (Cl. 260—500)

1. A compound of the following formula



in which M is a cation and M′ is a cation.

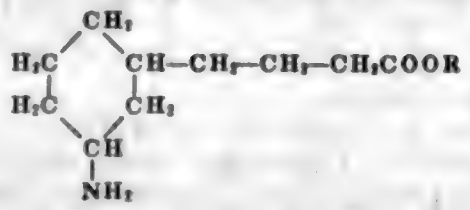
2,894,025

GAMMA-(3-AMINOCYCLOHEXYL) BUTYRIC ACID AND ESTERS

Arthur William Anderson and Warren John Brehm, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

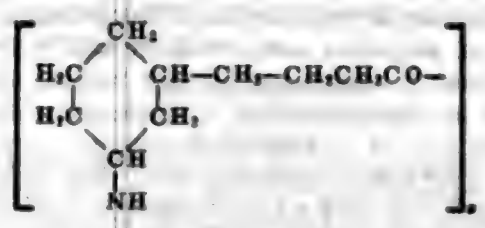
No Drawing. Application September 7, 1955
Serial No. 533,011
2 Claims. (Cl. 260—514)

1. A monomer having the structural formula:



wherein R is of the group consisting of hydrogen, methyl, ethyl, n-, and isopropyl, and n-, and isobutyl groups, and

polymerizable to a linear polymer having a high softening point, an excellent thermal stability and a low melt viscosity at molding temperature, that has the repeating structural unit:



2,894,026

PURIFICATION OF LYSINE

Norman L. Hause, West Chester, Pa., William R. Schmitz and Marcus A. Stevens, Wilmington, Del., and Walter L. Sutor, Grand Island, N.Y., assignors to E. I. du Pont de Nemours & Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application August 1, 1956
Serial No. 601,344
13 Claims. (Cl. 260—534)

1. The method of purifying an aqueous solution of lysine containing amine impurities including the secondary and tertiary amines, di-(5-amino-5-carboxypentyl)amine and tri-(5-amino-5-carboxypentyl)amine, said method comprising passing said solution through a bed of a strongly acidic cation-exchange resin, whereby said lysine and said secondary and tertiary amine impurities are loaded on the bed, selectively eluting said secondary and tertiary amine impurities from the resin with aqueous ammonia of 0.01 to 2% strength, and subsequently eluting the lysine from the resin.

2,894,027

PURIFICATION OF LYSINE

Walter L. Sutor, Grand Island, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application August 1, 1956
Serial No. 601,362
5 Claims. (Cl. 260—534)

1. The method of purifying an impure aqueous solution of lysine containing amine impurities including the secondary and tertiary amines, di-(5-amino-5-carboxypentyl)amine and tri-(5-amino-5-carboxypentyl)amine, said method comprising passing said impure solution through a bed of the ammonium form of a strongly acidic cation-exchange resin until the bed is substantially completely loaded with lysine, then eluting lysine from said bed and collecting the resulting effluent solution in which the weight ratio of lysine to said secondary and tertiary amines is substantially greater than the corresponding ratio for said impure solution.

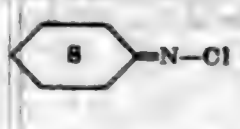
2,894,028

CYCLOHEXYLIDENEIMINO COMPOUNDS

Bernard Rudner, Baltimore, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Application October 12, 1956
Serial No. 615,504
4 Claims. (Cl. 260—551)

1. A new chemical compound, cyclohexanechlorimine, of the formula:



having a melting point of about 20° C. and decomposing at about 90° C.

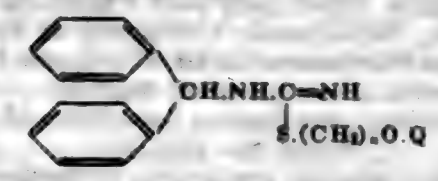
2,894,029

S-SUBSTITUTED-N-BENZHYDRYL PSEUDOTHIOUREAS AND THEIR PSEUDOTHIOURONIUM SALTS

Stanley O. Winthrop, Montreal, Quebec, Canada, assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application March 11, 1958
Serial No. 720,531
6 Claims. (Cl. 260—564)

1. A compound selected from the group which consists of bases of the formula



where Q is selected from the group which consists of hydrogen and lower alkyl, and *n* is an integer from 2 to 3; and hydrohalide salts of said bases.

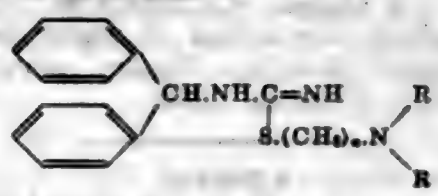
2,894,030

N-BENZHYDRYL-S-(ω-DILOWER ALKYLAMINOALKYL) PSEUDOTHIOUREAS AND THEIR PSEUDOTHIOURONIUM SALTS

Stanley O. Winthrop, Montreal, Quebec, Canada, assignor to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application March 11, 1958
Serial No. 720,532
7 Claims. (Cl. 260—564)

1. A compound selected from the group which consists of bases of the formula



where R represents lower alkyl and *n* is an integer from 2 to 3; and hydrohalide salts of said bases.

2,894,031

PROCESS FOR CYCLOHEXANONE HYDRAZONE HYDRATE

Bernard Rudner, Pittsburgh, Pa., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Application September 16, 1958
Serial No. 761,285
3 Claims. (Cl. 260—566)

1. A method of preparing cyclohexanone hydrazone hydrate which comprises contacting an aqueous solution of chloramine containing at least 5 mols of ammonia per mol of chloramine therein with an aqueous suspension of cyclohexanone to initially form cyclohexanechlorimine, the number of mols of said chloramine present exceeding the number of mols of said cyclohexanone added, maintaining in the reaction mixture a temperature between the freezing point and the boiling point of said mixture, continuing the reaction until all of said reactive cyclohexanechlorimine has been consumed and recovering said hydrazone hydrate therefrom.

2,894,032

METHOD OF PRODUCING KETAZINES

Bernard Rudner, Pittsburgh, Pa., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Application September 16, 1958
Serial No. 761,296
9 Claims. (Cl. 260—566)

1. A method of preparing cyclohexanone azine which comprises contacting a dilute aqueous solution of chloramine and ammonia with an aqueous suspension of excess cyclohexanone in the presence of sufficient

inorganic base to maintain alkaline conditions therein and recovering the cyclohexanone azine thus formed from the reaction mixture.

2,894,033

ANTISPASMODIC 1,1-DIPHENYL-3-DIALKYLAMINOPROPANE, AND ITS TERTIARY AND QUATERNARY SALTS

Paul A. J. Janssen, Turnhout, Belgium, and David K. de Jongh, Haarlem, Netherlands, assignors to N. V. Nederlandsche Combinatie voor Chemische Industrie, Amsterdam, Netherlands, a company of Belgium, and Laboratoria Pharmaceutica Dr. C. Janssen, N.V., Turnhout, Belgium, a company of Belgium

No Drawing. Application September 10, 1956
Serial No. 608,710
Claims priority, application Netherlands November 15, 1955
4 Claims. (Cl. 260—567.6)

1. A compound selected from the group consisting of 1,1-diphenyl-3-diisopropylaminopropane, and its hydrochloride, hydrobromide, hydroiodide, methiodide, methobromide and methochloride.

4. 1,1-diphenyl - 3 - diisopropylamino-propane methiodide.

2,894,034

STABILIZED PHENYLENE DIAMINES

Peter O. Shull, Elizabeth, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application July 31, 1956
Serial No. 601,126
9 Claims. (Cl. 260—578)

1. A stabilized composition of matter consisting of an unsubstituted phenylene diamine containing from 0.01% to 4% of elemental sulfur.

2,894,035

PREPARATION OF M-CHLOROANILINE

Harold K. Latourette, South Charleston, W. Va., Oscar H. Johnson, New Canaan, Conn., and John W. Getz, St. Albans, W. Va., assignors to Food Machinery and Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application July 27, 1953
Serial No. 370,632
6 Claims. (Cl. 260—580)

1. A process for preparing substantially pure metachloroaniline from crude metachloronitrobenzene containing substantial amounts of isomeric impurities which comprises heating an aqueous solution of sodium hydrosulfide with said crude mixture until the reaction is substantially complete, allowing the reaction mixture to stratify, and separating the thus formed organic liquid layer and distilling substantially pure meta-chloroaniline from the said organic liquid layer.

2,894,036

CATALYTIC REDUCTION OF AROMATIC POLYNITRO COMPOUNDS

David E. Graham, Westfield, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application February 6, 1956
Serial No. 563,411
18 Claims. (Cl. 260—580)

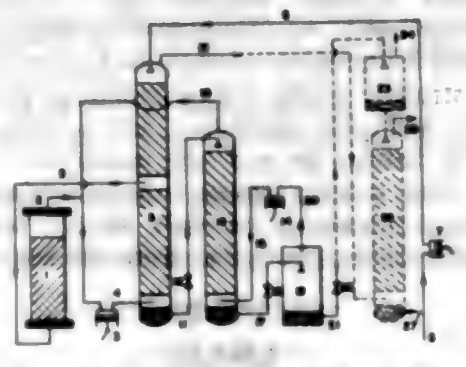
1. In a process for the catalytic hydrogen reduction of aromatic polynitro compounds to form the corresponding polyamine compounds, wherein a polynitro compound and hydrogen are introduced into a hydrogenation zone, and therein reacted in the presence of a hydrogenation catalyst selected from the group consisting of nickel and the platinum group of metals, to thereby form an amino compound corresponding to the polynitro compound introduced; the improvement which comprises introducing in the said hydrogenation zone a solution, liquid at the temperature and pressure maintained in such zone, of said polynitro compound in an inert solvent therefor, said solvent being also a solvent for the polyamine and water formed in the hydrogenation, the concentration of polynitro compound in said solvent being such that there is maintained in said hydrogenation zone throughout the hydrogenation, a single-phase liquid solution of said solvent, polynitro compound, corresponding polyamine and water, removing from said hydrogenation zone a solution in said solvent containing the polyamine and water formed therein, and recovering the polyamine from said solution.

2,894,037

RECOVERY OF GASEOUS INITIAL MATERIALS OF CHEMICAL REACTIONS FROM THE WASTE GAS

Hubert Kindler, Ludwigshafen (Rhine), Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

Application September 6, 1957, Serial No. 682,407
Claims priority, application Germany September 7, 1956
15 Claims. (Cl. 260—583)



1. In a process for the recovery and reutilization of an initial gaseous reactant emerging from a chemical reaction zone in admixture with at least two other gaseous substances of which one component (*a*) has a greater solubility and the other component (*c*) has a smaller solubility in a selective solvent than the initial gaseous reactant (*b*), the steps comprising: leading the gaseous mixture from said reaction zone through a first absorption zone for contact with an amount of a selective solvent sufficient to absorb component (*a*) at a pressure of 5–300 atmospheres and temperature of −50° to +100° C.; withdrawing from said first absorption zone and returning to said reaction zone one part of the unabsorbed gaseous mixture containing components (*b*) and (*c*); leading the other part of said unabsorbed gaseous mixture through a second absorption zone for contact with said selective solvent to absorb component (*b*), the solvent containing absorbed component (*b*), being introduced into said first absorption zone as at least a portion of the solvent required therein; withdrawing the unabsorbed component (*c*) from said second absorption zone; and withdrawing solvent containing absorbed component (*a*) from said first absorption zone.

2,894,038

PREPARATION OF BIFUNCTIONAL CYCLOALKANES

Jeffrey H. Bartlett, Westfield, and Vincent L. Hughes, Clark Township, Union County, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application February 24, 1956
Serial No. 567,441
3 Claims. (Cl. 260—598)

1. A method of preparing a bifunctional cyclic compound which comprises reacting a cycloalkene possessing a formyl group attached to the ring by a carbon to carbon bond in a non-conjugated system with carbon monoxide and hydrogen at elevated pressures and tempera-

tures within the range of 60 to 200° C. in the presence of a catalytic amount of a composition containing from 0.3 to 2 mole percent of cobalt containing catalyst and from 0.0005 to 0.05 mole percent rhodium containing catalyst to produce a cycloalkane compound possessing two formyl groups attached to the ring.

2,894,039
PROCESS FOR THE PRODUCTION OF BIS(CHLOROMETHYL)DISULPHIDE

Maurice Joullie, Saint-Germain-en-Laye, Michel Lamrre, Chatillon-sous-Bagneux, Gabriel Maillard, Puteaux, and Pierre Muller, Paris, France, assignors to Recherches et Propagande Scientifiques (Societe a Responsabilite Limitee), Paris, France, a company of France

No Drawing. Application June 4, 1957
Serial No. 663,361
12 Claims. (Cl. 260—608)

1. In a process for the production of bis(chloromethyl) disulphide from s-trithiane and a member of the class consisting of sulphur monochloride and sulphuryl chloride, the improvement which consists in the step of adding to the reaction mixture bis(chloromethyl) monosulphide.

2,894,040
ISOMERIZATION OF TERPENIC ALCOHOLS

Joseph P. Bain, Albert B. Booth, and Wilbur Y. Gary, Jacksonville, Fla., assignors to The Glidden Company, Cleveland, Ohio, a corporation of Ohio

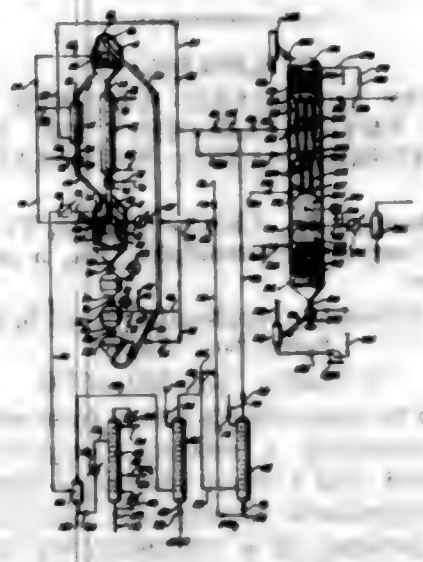
No Drawing. Application September 28, 1953
Serial No. 382,839
15 Claims. (Cl. 260—631.5)

1. The process of preparing a Δ^1-3-hydroxy secondary alcohol of the p-menthane series which consists essentially in subjecting a compound of the p-menthane series having a hydroxyl group at the 1-position and a single, non-conjugated ring double bond in the 2–3 position to the influence of water at a hydrogen ion concentration at least as great as that formed on boiling distilled water at a temperature of about 22° C. to 100° C. and under conditions conducive to allylic rearrangement for a time sufficient to bring about a substantial conversion of the Δ^2-1-hydroxy compound to its Δ^1-3-hydroxy isomer and recovering the thus formed Δ^1-3-hydroxy compound.

2,894,041
PROCESS AND APPARATUS FOR HIGH TEMPERATURE REACTIONS

Clyde H. O. Berg, Long Beach, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

Application October 14, 1954, Serial No. 462,343
18 Claims. (Cl. 260—644)



1. A process for the vapor phase exothermic nitration of a hydrocarbon with a fluid nitrating agent at controlled reaction times of short duration which comprises withdrawing a stream of warm granular solid contact material from a quenching zone, conveying said solids to an elevated solids receiving zone, passing a primary stream of solids therefrom through a primary cooling zone into a nitration zone and a secondary stream of solids therefrom through a secondary cooling zone into a quenching zone which surrounds and communicates with the outlet of said nitration zone whereby said stream of warm solids is formed by admixture of said primary and secondary streams, cooling said secondary solids stream to a temperature sufficient to quench the nitration product, cooling said primary solids stream to a temperature below the desired nitration temperature, passing a reactant fluid consisting essentially of preheated hydrocarbon and nitrating agent downwardly through said reaction zone forming a product fluid mixture while absorbing liberated heat of reaction at the nitration temperature in said primary solids stream, passing said product fluid therefrom into said quenching zone and upwardly therethrough countercurrent to said secondary solids to quench the fluid and stop the nitration, removing the quenched product fluid containing unreacted reactant and recovering the desired product therefrom.

13. An apparatus for conducting high temperature exothermic reactions at short reaction times which comprises an elevated solids receiving chamber, a subjacent primary solids cooler and a subjacent secondary solids cooler each connected at its upper extremity to the lower extremity of said chamber in solids-receiving relation thereto, a reaction chamber positioned below said primary cooler and having a downwardly opening outlet, said reaction chamber being connected at its upper end to the lower portion of said primary cooler in solids-receiving relation thereto, a quenching chamber surrounding said reaction chamber and connected at its upper end to the lower portion of said secondary cooler in solids-receiving relation thereto, a solids conveyor communicating at its inlet with the bottom of said quenching chamber and at its outlet with said elevated solids receiving chamber, a reactant inlet opening into said reaction chamber, a product outlet opening from said quenching chamber, fluid fractionator means connected in fluid-receiving relation to said product outlet and adapted to separate the desired product of said exothermic reactions from unreacted reactant and undesirable by-product fluids, and means for recirculating a recycle fluid containing unreacted reactant from said fractionator means to said reactant inlet.

2,894,042
PREPARATION OF HEXAFLUOROBUTADIENE

William T. Miller, Ithaca, N.Y.

No Drawing. Application July 13, 1955
Serial No. 521,899
4 Claims. (Cl. 260—653.5)

1. A method of preparing hexafluorobutadiene-1,3 which comprises reacting sym-dichlorodifluoroethylene with fluorine at a temperature of less than 10° C. to produce 1,2,3,4-tetrachloroperfluorobutane and dichlorinating at a temperature between about 50° C. and about 250° C. said butane to leave hexafluorobutadiene-1,3.

2,894,043
PREPARATION OF VINYLIDENE CHLOROFLUORIDE

Erhard J. Prill, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application February 16, 1956
Serial No. 565,776
3 Claims. (Cl. 260—653.5)

1. The method of preparing vinylidene chlorofluoride which comprises pyrolyzing 1,1-dichloro-1-fluoroethane at

a temperature of 465 to 535° C. to convert a substantial portion of said 1,1-dichloro-1-fluoroethane to vinylidene chlorofluoride.

2,894,044

PREPARATION OF 1,1-DICHLORO-1-FLUOROETHANE

Erhard J. Prill, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application February 16, 1956
Serial No. 565,777
8 Claims. (Cl. 260—653.7)

1. A process for the preparation of 1,1-dichloro-1-fluoroethane in which anhydrous hydrogen fluoride and methyl chloroform are passed over a catalytic material heated to a temperature of 60 to 125° C., the said catalytic material comprising a catalyst selected from the group consisting of stannic fluoride on activated carbon, and aluminum fluoride.

2,894,045

PRODUCTION OF CHLORINATED ETHYLENE

Edmond G. Carley, Niagara Falls, and Jesse M. Wainscott, Lewiston, N.Y., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application April 25, 1957
Serial No. 654,992
7 Claims. (Cl. 260—654)

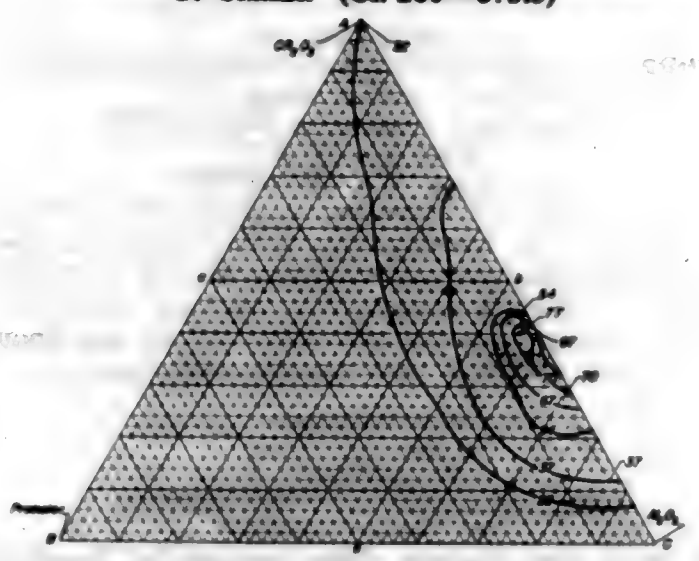
6. In the production of a chlorinated ethylene selected from the group, consisting of trichlorethylene, perchlorethylene and mixtures thereof, by the thermal dehydrochlorination of a crude polychlorethane selected from the group consisting of tetrachlorethane, pentachlorethane and mixtures thereof produced by catalytic chlorination in the presence of ferric chloride, the steps comprising removal of impurities by reducing the ferric chloride content of the polychlorethane to 50 p.p.m. or less by thorough dispersion with water followed by separation of the water phase, drying the treated polychlorethane and simultaneously freeing it of volatile impurities by distillation and thereafter subjecting the polychlorethane to thermal dehydrochlorination.

2,894,046

MANUFACTURE OF PARA-XYLENE

Herman S. Bloch, Skokie, and Edward M. Geiser, Downers Grove, Ill., assignors, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Application April 12, 1957, Serial No. 652,545
16 Claims. (Cl. 260—673.5)



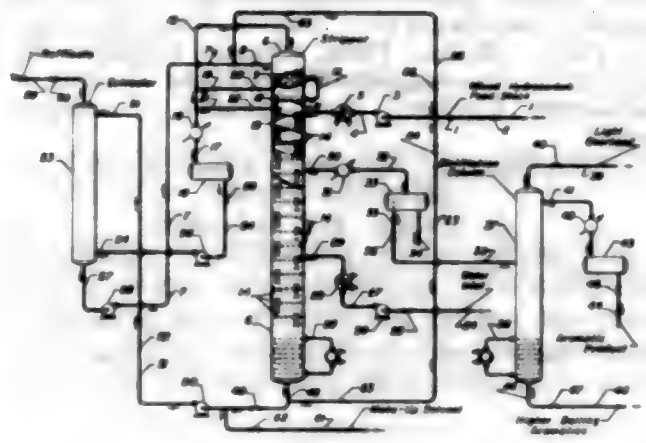
1. A process for producing para-xylene which comprises subjecting 2-ethylhexene at dehydrocyclization conditions to the action of a catalyst comprising an inorganic refractory oxide carrier material, from about 26% to about 43% by weight of a chromium component and from about 0.01% to about 6% by weight of a potassium component.

2,894,047

SOLVENT EXTRACTION PROCESS FOR TREATMENT OF HIGHLY AROMATIC FEED STOCKS

Kenneth D. Uitti, Westmont, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Application July 1, 1955, Serial No. 519,317
9 Claims. (Cl. 260—674)



1. A process for recovering an aromatic hydrocarbon from a hydrocarbon mixture containing aromatic and non-aromatic hydrocarbons of which the aromatic content is at least 75% by weight of said mixture, which comprises introducing said mixture and a solvent composition, formed as hereinafter set forth, to the upper portion of a stripping column and therein subjecting the mixture to extractive distillation while maintaining the solvent composition at a temperature above the boiling point of said mixture and below the boiling point of the solvent, forming thereby a rich solvent phase containing a substantial proportion of the aromatic components of said mixture, removing a vapor overhead comprising the non-aromatic hydrocarbons present in said mixture from the upper portion of the distillation column, vaporizing an aromatic fraction and from said rich solvent phase in and removing the same from an intermediate portion of the column, removing a lean solvent residue from the lower portion of the column, condensing said vapor overhead and subjecting the resultant condensate to liquid phase solvent extraction by countercurrent contact with said lean solvent residue in an independent extraction zone, and introducing the resultant enriched solvent from said independent zone to the upper portion of the distillation column as said solvent composition.

2,894,048

SEPARATION OF MIXED XYLENES BY FRACTIONAL CRYSTALLIZATION OF REFORMED AND HYDROGENATED PETROLEUM FRACTION

Frank R. Shuman, Jr., Chester Springs, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Application April 6, 1956
Serial No. 576,541
7 Claims. (Cl. 260—674)

1. Process for separating p-xylene from mixtures which comprises contacting a mixture comprising p-xylene, isomers thereof, and a minor amount of compounds containing hydrogenatable nonaromatic groups with hydrogen in the presence of a hydrogenation catalyst under hydrogenating conditions providing primarily (1) a decrease in aromatic hydrocarbon content within the approximate range from 0 to 10 weight percent, and (2)

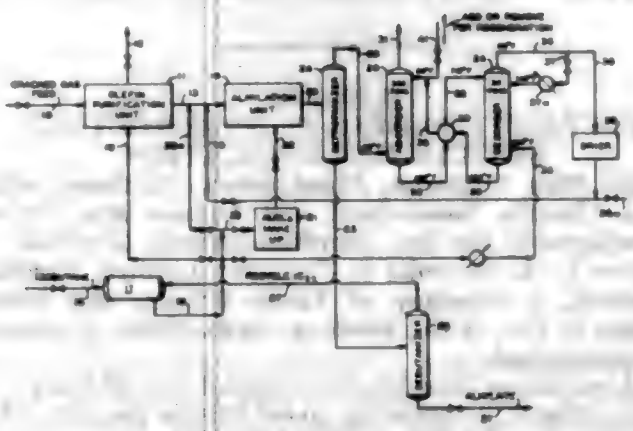
substantial hydrogenation of nonaromatic groups; and fractionally crystallizing the resulting hydrogenated mixture to separate p-xylene, the initial crystallization temperature being higher as a result of said hydrogenation the first-named mixture having previously been obtained by contacting a straight run petroleum fraction with a reforming catalyst under reforming condition.

2,894,849

PROCESS FOR THE RECOVERY OF OLEFIN HYDROCARBONS

Gardner C. Ray and Harold J. Hepp, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Application June 10, 1955, Serial No. 514,506
10 Claims. (Cl. 260—677)



1. A process for the recovery of a normally gaseous olefin from an aqueous solution comprising a copper salt-monoethanolamine complex and said olefin which comprises intimately contacting said solution with a gaseous saturated hydrocarbon inert under the conditions of contacting at a pressure not above 4 atmospheres absolute and at an elevated temperature not above 130° F. at which deposition of metallic copper is substantially avoided; and recovering a gaseous effluent comprising said olefin and said hydrocarbon.

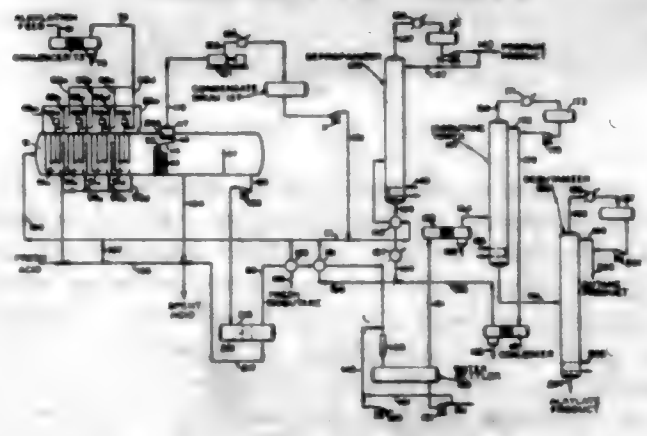
2,894,050

ALKYLATION OF HYDROCARBONS

Samuel R. Stiles, Creeskill, N.J., assignor to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

Application April 5, 1957, Serial No. 651,893
11 Claims. (Cl. 260—683.58)

1. An improved method for effecting the alkylation of olefins with isoparaffins in the presence of a liquid acid catalyst to produce an alkylation effluent substantially free of entrained acids and esters and recovery of said alkylation effluent, which comprises contacting said olefins with said isoparaffins in a contacting zone in the presence of a liquid acid catalyst under conditions to vaporize a portion of said hydrocarbon reactants, acid and esters formed during said reaction to produce a liquid alkylation hydrocarbon product mixture containing hydrocarbon, acid and esters, separating said liquid hydrocarbon from said acid and esters by passing the same through a liquid coalescing zone to effect stratification of said liquid in a settling zone into a hydrocarbon layer

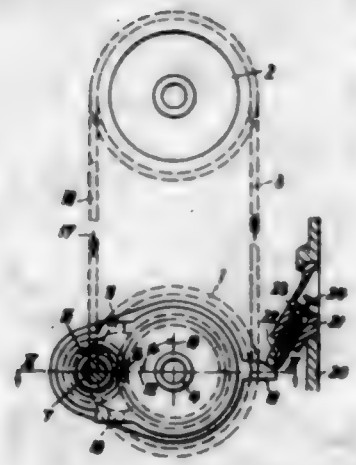


and a layer containing said acids and esters, withdrawing said vaporized material from the upper portion of said contacting zone and passing the same through a vapor-liquid coalescing zone, said vapor-liquid coalescing zone adapted to prevent flow of vapors over said hydrocarbon layer in said settling zone, withdrawing coalesced acids and esters from said vapor coalescing zone and passing the same to said liquid entering said liquid coalescing zone and recovering said hydrocarbon layer from said settling zone substantially free of entrained acids and esters.

6. An apparatus comprising in combination an elongated horizontally disposed alkylation reactor, a plurality of vertically disposed sequentially connected reaction zones in one end of said reactor, a liquid settling zone disposed in the opposite end of said reactor, and a baffle separating the last of said reaction zones from said settling zone and connecting a liquid-liquid coalescing zone disposed in the lower portion of said reactor with a vapor liquid-coalescer zone disposed in the upper portion of said reactor, said baffle adapted to prevent flow of vapors from said last reaction zone to said settling zone and return of liquid separated in said vapor-liquid coalescer zone to said liquid-liquid coalescing zone and said liquid-liquid coalescing zone adapted to convey liquid to said settling zone.

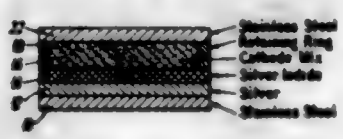
ELECTRICAL

2,894,851
CHAIN DRIVE
Johannes Gassmann, Altbach, near Esslingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Application June 13, 1955, Serial No. 515,174
Claims priority, application Germany June 14, 1954
6 Claims. (Cl. 123—146.5)



1. In combination with an internal combustion engine having a drive shaft, an ignition timer, and a chain drive connecting said drive shaft with the control shaft of said timer, said chain drive comprising a rocker pivotably mounted on said drive shaft, a driving sprocket rotatably mounted on said rocker, a set of gears connecting said drive shaft with said driving sprocket, a driven sprocket mounted on said timer shaft, and a chain connecting said sprockets, the two planes containing the axes of both of said sprockets and the axes of said driving sprocket and said drive shaft, respectively, enclosing a substantially right angle.

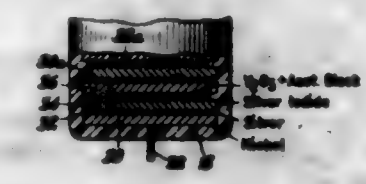
2,894,852
NON-AQUEOUS PRIMARY CELL AND METHOD OF MAKING THE SAME
George E. Evans, Rocky River, Ohio, assignor to Union Carbide Corporation, a corporation of New York
Application January 23, 1957, Serial No. 635,790
4 Claims. (Cl. 136—83)



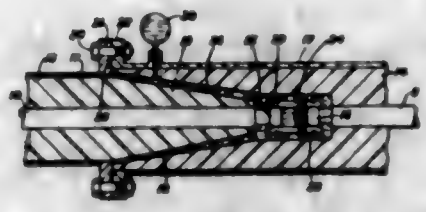
1. In a substantially non-aqueous primary galvanic cell having a silver anode, a solid silver iodide electrolyte, a cathode comprising an oxide of a polyvalent metal in the higher valence state and a cathode collector; the improved construction which comprises said solid electrolyte being chemically adhered to said anode and said cathode collector being stainless steel.

2,894,853
SOLID ELECTROLYTE BATTERY SYSTEM
Demetrius V. Lounes, Glenview, Ill., assignor to Union Carbide Corporation, a corporation of New York
Application September 8, 1955, Serial No. 533,140
14 Claims. (Cl. 136—87)

1. A substantially nonaqueous electric cell having a metal anode composed of a metal selected from the group consisting of silver and metals above silver in the electromotive series of the elements, a solid, ionically, conductive silver halide electrolyte and a depolarizer mix comprising an oxide of a polyvalent metal in a higher valence state.



2,894,854
VOLTAGE GRADING IN HIGH-VOLTAGE SWITCHGEAR INSULATION
Alasdair Blair Cameron, Monkseaton, Northumberland, John Christie, Sunderland, and Thomas Rae Manley, Newbiggin-by-the-Sea, Northumberland, England, assignors to A. Reyrolle & Company Limited, Hebburn, England, a company of Great Britain, and Moser-Glaser & Co., A.G., Muttenz, Switzerland, a company of Switzerland
Application June 23, 1955, Serial No. 517,602
Claims priority, application Great Britain June 25, 1954
6 Claims. (Cl. 174—21)

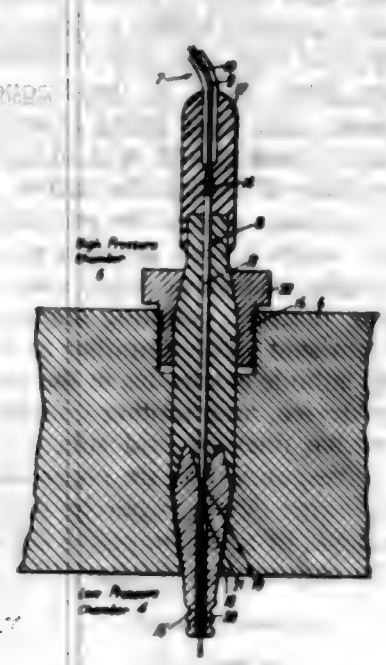


1. A pair of aligned elongated high-voltage electrical conductors each embedded in a separate sleeve of solid insulation enclosed in an outer earthed metal casing, the conductors being semi-permanently connected together at their adjacent ends and the adjacent ends of the solid insulation sleeve being respectively formed as a plug and as a co-operating socket into which the plug is inserted, and an elongated liquid voltage-grading resistor of high resistivity and of high dielectric strength contained in a hollow tubular interstice between the opposed surfaces of the plug and the socket, and in electrical contact with the interconnected conductors at one end of the interstice and with the outer earthed metal case at the other end of the interstice, the liquid resistor having such electrical conductivity as to pass between the interconnected conductors and the outer metal casing a small in-phase leakage current of the same order of magnitude as the quadrature current.

2,894,855
SUBMARINE CABLE REPEATER HOUSINGS
George William Clarke, deceased, late of London, England, by Barclays Bank Limited, executor, London, England, and William Kirby Weston and Robert James Maddock Andrews, London, England, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Application January 18, 1954, Serial No. 404,543
Claims priority, application Great Britain January 20, 1953
10 Claims. (Cl. 174—31)

8. A moisture tight seal for an electric conductor passing through a bulkhead separating a comparatively low

pressure chamber from a region of much higher pressure comprising an insulating bush provided with a bore, the bore having different size openings, one of said openings being smaller than the cross-sectional dimension of a

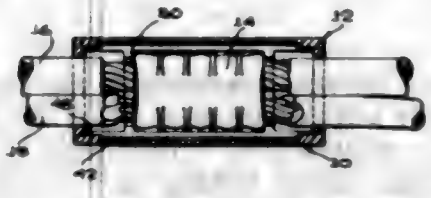


portion of said electric conductor, and means sealing said bush in a passage in said bulkhead, whereby a portion of the conductor passing through said bore is reduced in cross-sectional size to the size of the smaller opening to form a sealing fit with said bore.

2,894,056
PROTECTIVE SHEATH FOR A CABLE CONNECTOR

Stephen B. Bogese, Roanoke, Va., assignor to Virginia Plastics and Chemical Company, Inc., Roanoke, Va., a corporation of Virginia

Application May 28, 1957, Serial No. 662,257
1 Claim. (Cl. 174—92)

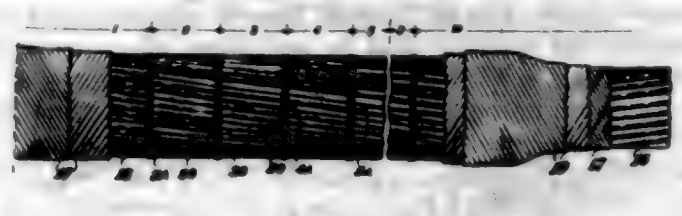


The combination with a trunk line cable of relatively large cross section and having a portion of the core exposed, a branch cable of smaller cross section in contact with said line cable and having a portion of the core exposed, said cables being juxtaposed with the exposed portions of the cores in alignment with each other, and a connector extending about and embracing the two aforesaid exposed sections and electrically connecting said portions together, of a protective sheath encasing and completely housing said connector, said sheath embodying a pair of half sections each fabricated of dielectric material, each section having opposed end walls provided with a pair of arcuately curved notches and receiving therein the adjacent portions of said trunk and branch cables, a pair of spaced U-shaped formations positioned within each section intermediate the ends thereof and extending transversely across the inner surface of each section, the formations of each section being engaged by the ends of said connector, and cooperating tongues and grooves on the facing portions of said sections for securing the sections together.

2,894,057
SUBMARINE CABLES HAVING ANTI KINK ARMOURING

Arthur Lennox Meyers, Herne Hill, London, England, assignor to Submarine Cables, Limited, London, England, a company of Great Britain

Application October 10, 1955, Serial No. 539,561
Claims priority, application Great Britain October 15, 1954
5 Claims. (Cl. 174—108)

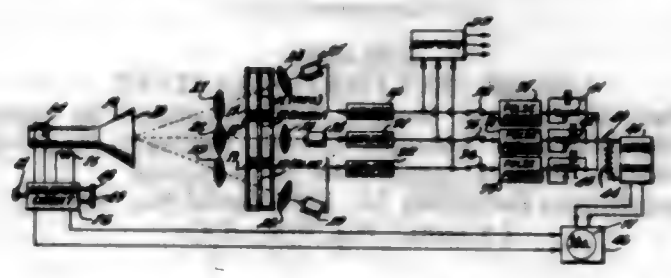


1. A submarine cable comprising a conductor, an insulation for the conductor and an armouring surrounding the insulated conductor, and in which electrical repeater apparatus are provided at intervals in the cable length, in which the armouring comprises a stranded inner layer of wires applied continuously over those sections of the cable between the repeater apparatus and adjacent to the ends of each of such repeater apparatus, an outer stranded layer of wires, the wires in the outer layer being of opposite lay to the wires of the inner layer and extending from the respective repeater apparatus towards the next repeater apparatus to provide a double armoured cable portion adjacent to the repeater apparatus, but terminating short of the next adjacent repeater apparatus to leave an intervening single layer armoured cable section, the number of wires in one of said layers decreasing in stages each at least ten yards long from the repeater apparatus to the adjoining single layer armoured portions of the cable, whereby the tendency of the cable to twist increases progressively in stages from a substantially zero tendency to twist in the fully double armoured portions adjacent to the repeater apparatus to the single armoured portions of said cable.

2,894,058
REGISTRATION SYSTEM

Louis Shapiro, Erlton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Application February 1, 1955, Serial No. 485,426
14 Claims. (Cl. 178—5.2)



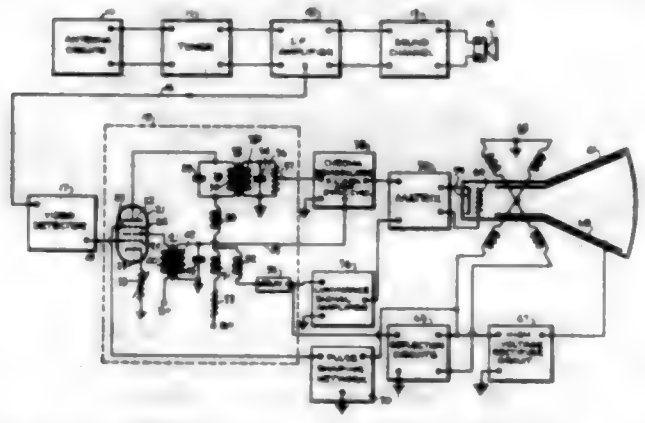
7. A system for use in registering a plurality of photographic records comprising a different plurality of index means for each of said records corresponding respectively to two orthogonal axes of registration of the associated record, means for producing and directing a moving light spot to scan all of said index means over the same scansion line, separate light sensitive means associated with each of said records and with said light spot means for producing electrical signals when said light spot crosses said index means, and additional means to which said electrical signals are applied for producing signals in accordance with the relative time occurrence of said electrical signals.

8. A system as recited in claim 7 wherein said index line means are formed photographically on said record.

2,894,059
SCREEN GRID, COLOR BURST SEPARATION CIRCUIT

Joseph E. Davis, Buffalo, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Application December 16, 1954, Serial No. 475,641
3 Claims. (Cl. 178—5.4)

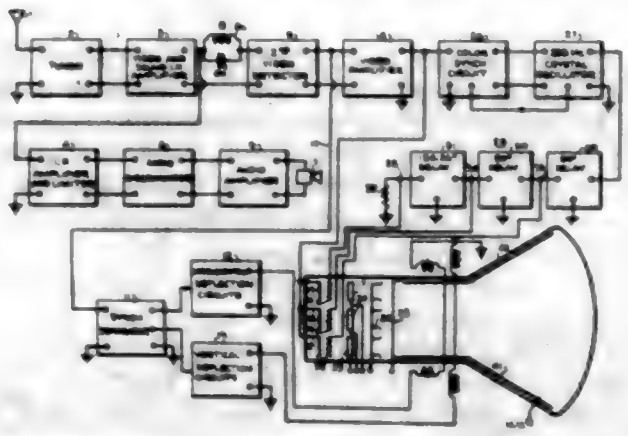


1. In a color television receiver, a control device having an anode electrode, a cathode electrode, a control electrode, a screen electrode and a suppressor electrode; means for applying composite electrical impulses, having luminance, chrominance, synchronizing and burst components, to said control and cathode electrodes; a tuned circuit, tuned to said chrominance component, coupled to said anode electrode; a source of anode potential; a resistance; a coil connected in series with said resistance, said series connected coil and resistance being connected to and between said source of anode potential and said tuned circuit; a chroma demodulator coupled to said tuned circuit; a cathode ray color tube; beam deflection circuits, coupled to said coil, for deflecting the electron beam of said cathode ray color tube; means for deriving negative gating pulses from said deflection circuits; means for applying the negative gating pulses derived from said deflection circuits to said suppressor electrode; a burst transformer coupled to said screen grid; a subcarrier synchronizing circuit connected with said chroma demodulator; means coupling said burst transformer to said subcarrier synchronizing circuit; a luminance amplifier coupled to said coil; and means for varying the electron beam of said cathode ray tube with electrical pulses derived from said chroma demodulator and said luminance amplifier.

2,894,060
COLOR TELEVISION RECEIVER

William K. Squires, Snyder, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Application December 16, 1954, Serial No. 475,710
1 Claim. (Cl. 178—5.4)

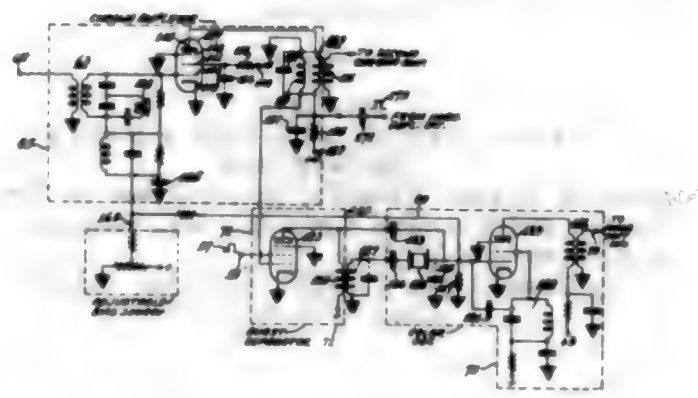


A color television receiver circuit for reproducing an image in simulation of its natural colors on the screen of a three-gun color television type cathode ray discharge device in response to a transmitted composite signal including a video modulated carrier wave spaced apart in the frequency spectrum from an audio modulated carrier wave, said receiver circuit comprising means for receiving said composite signal, a video amplifier connected to be supplied with said video modulated carrier wave, a rejection filter tuned to the frequency of said audio carrier wave, said filter being interconnected between said receiving means and said video amplifier to prevent the translation of said audio carrier through said video amplifier, oscillator means for providing three subcarrier frequency waves spaced apart in phase by predetermined phase angles one phase angle spacing being 90° and another being 124.26°, coupling means for connecting the output from said video amplifier to corresponding beam controlling cathode electrodes in the respective guns of said discharge device, and another coupling means for connecting respective ones of said subcarrier frequency waves to other corresponding beam controlling grid electrodes in said discharge device, whereby demodulation of the color components of said composite signal is effected in the guns of the cathode ray discharge device.

2,894,061
COLOR TELEVISION APPARATUS

Charles B. Oakley, Hamilton Square, N.J., and Roland N. Rhodes, Levittown, Pa., assignors to Radio Corporation of America, a corporation of Delaware

Application May 1, 1956, Serial No. 581,989
10 Claims. (Cl. 178—5.4)



1. In a color television receiver of the type adapted to process either a color television signal which includes periodic color synchronizing components or a monochrome television signal lacking such component and having a chrominance signal channel for operating upon such a color signal, means for disabling such channel during the reception of such monochrome signal, said means comprising: a controlled electron flow path device in said channel and having an input, an output and a common circuit electrode; circuit means connecting said device as an amplifier having a constant current characteristic; means for applying a received signal to said input circuit electrode for controlling current conduction through said device; means for deriving an output signal from said output circuit electrode; a source of automatic control voltage which varies in amplitude as a function of the amplitude of such color synchronizing component in a received signal; and means for applying voltage from said source to said device to control current conduction of said device an as inverse function of such synchronizing component amplitude; said circuit means connecting said device as an amplifier including a resistor connected in series with said output circuit electrode, which resistor is of such value as to cause said device to operate below the knee of its characteristic curve in response to control voltages applied to said device when such color synchronizing components fall be-

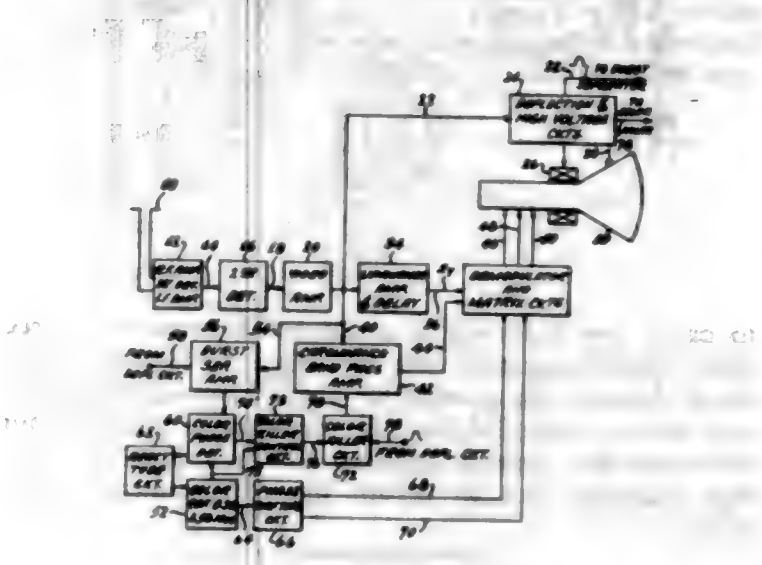
low a predetermined amplitude value to render said device ineffective to amplify received signals applied thereto.

2,894,062

SIGNAL OPERATED AUTOMATIC CONTROL CIRCUITS

Gordon F. Rogers, Lincolnwood, Ill., assignor to Radio Corporation of America, a corporation of Delaware

Application June 11, 1956, Serial No. 590,607
5 Claims. (Cl. 178—5.4)



1. In a color television receiver of the type adapted to operate upon either a color television signal which includes periodic synchronizing bursts of color subcarrier energy or a monochrome television signal lacking such bursts, the combination comprising: phase detector means comprising an electron tube having a cathode, a control electrode and an anode; a first source of wave corresponding to received bursts; a second source of wave to be synchronized with such bursts; means for applying a wave from one of said sources to said cathode; means for applying a wave from the other of said sources to said anode; circuit means connected to said control electrode for producing a control signal voltage indicative of the phase relation between the wave from said second source and a wave from said first source; a chrominance amplifier in said receiver adapted to process color television signals; and means responsive to said control voltage and connected to said channel to disable said channel in the absence of bursts from a received signal or when the waves from said first and second sources bear other than a predetermined phase relationship to each other.

2,894,063

FACSIMILE TICKET AND MESSAGE SYSTEM

Garvice H. Ridings, Summit, Raleigh J. Wise, Arlington, and Charles Jelinek, Jr., Verona, N.J., assignors to The Western Union Telegraph Company, New York, N.Y., a corporation of New York

Application June 13, 1955, Serial No. 514,959
16 Claims. (Cl. 178—6.6)

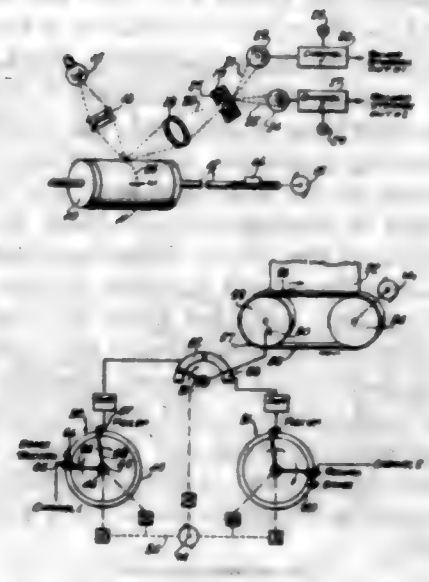
1. A facsimile system comprising a transmitter and a recorder and a transmission circuit for interconnecting the transmitter and recorder, said transmitter and recorder respectively having drums and wrapper means coacting therewith for wrapping transmitting and recording blanks around the drums in position for scanning operations, and having wrap motors for rotating said drums in one direction to wrap the blanks and for rotating the drums in the opposite direction to unwrap the blanks, said transmitter having a scanning system including a scanning element and a scan motor for rotating said element to scan the subject matter on a wrapped transmitting blank to produce facsimile message signals, and said recorder having a scanning system including a scanning element and a scan motor for rotating said element to scan a recording blank for recording an incoming message, electrical start contacts at said transmitter and circuit means responsive to the actuation of said contacts for energizing its wrap motor in a direction to wrap a transmitting blank and also for energizing its scan motor preparatory to a scanning operation, means also responsive to the actuation of said start contacts for sending a signal over the transmission circuit to said recorder to indicate that a message is to be transmitted, said recorder having start contacts and circuit means responsive to the actuation of the last named contacts for energizing its wrap motor in a direction to wrap a recording blank and for energizing its scan motor preparatory to a scanning operation, and means including contacts automatically operative upon the completion of the scanning operations at the transmitter and recorder, respectively, for causing the wrap motors to rotate said drums in said opposite direction to unwrap and eject said blanks.

2,894,064

HIGH SPEED FACSIMILE TRANSMISSION SYSTEMS

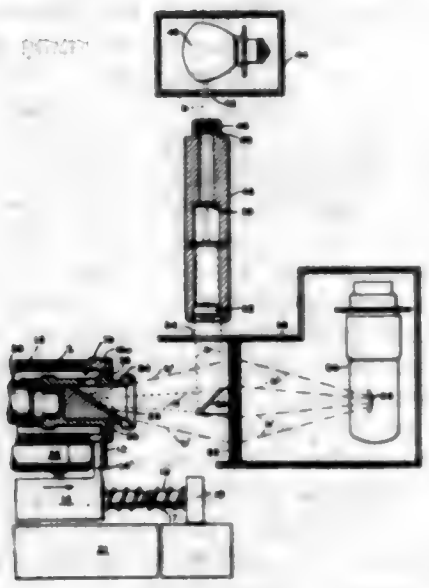
Austin G. Cooley, New York, N.Y., assignor to Digital Control Systems, Inc., Beverly Hills, Calif., a corporation of California

Continuation of application Serial No. 268,642, January 28, 1952. This application March 11, 1958, Serial No. 720,619
16 Claims. (Cl. 178—6.6)



1. A facsimile system having in combination, a facsimile transmitter for simultaneously scanning different elemental areas of a subject matter to produce a respective plurality of simultaneous facsimile signals for each set of simultaneously scanned elemental areas, respective multiplex transmission channels for said signals for transmitting said signals simultaneously to a facsimile receiver, said receiver having a plurality of recorder elements arranged to scan in alternate sequence successive respective linear elements of a recording surface, respective signal storage means for said recorder elements, and means to energize successively and recurrently each of said recorder elements under control of its respective storage means.

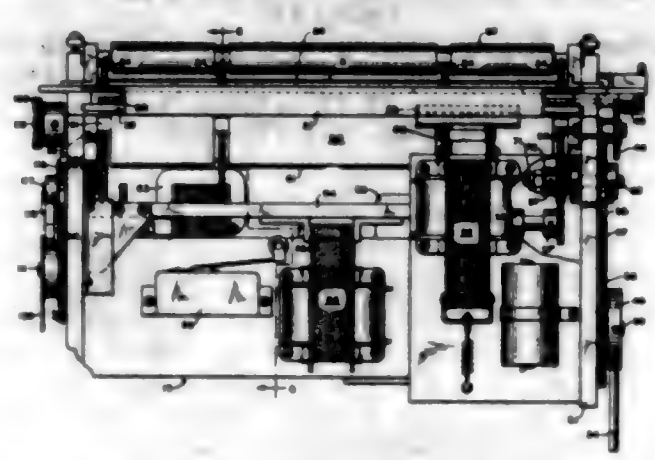
2,894,865
FACSIMILE OPTICAL SCANNING SYSTEM
Raleigh J. Wise, Arlington, N.J., John H. Hackenberg, Flushing, N.Y., and Garvice H. Ridings, Summit, N.J., assignors to The Western Union Telegraph Company, New York, N.Y., a corporation of New York
Application June 28, 1955, Serial No. 516,578
7 Claims. (Cl. 178—7.1)



1. Facsimile optical scanning apparatus comprising means for wrapping a transmitting blank into cylindrical form with the subject matter thereon facing inwardly for inside scanning, a rotatable drive shaft concentric with and extending into the cylindrical blank at one end thereof, a mirror shield mounted on the end of the drive shaft and a scanning mirror mounted within the mirror shield, means located outside of the other end of said cylindrical blank for producing a scanning light beam, means for directing said scanning beam into said other end of the cylindrical blank and onto the scanning mirror, said shield having an opening adjacent to said mirror whereby rotation of the mirror and shield will cause the scanning light beam reflected by the mirror to describe a circle upon the inner curved face of the transmitting blank, a line-feed carriage for causing relative longitudinal movement between the transmitting blank and the scanning mirror during a scanning operation, said scanning mirror being oriented relative to the incoming scanning light beam to cause the beam to impinge on said blank at an angle of incidence such that the mirror reflections from the blank are directed away from said scanning mirror, said mirror causing diffused light reflected from the blank to be directed back through said other end of the cylindrical blank and along the path of the incoming scanning light beam, and a short-focus collector lens spaced from said other end of the cylindrical blank for collecting said diffused light and focusing it onto a photosensitive element for producing facsimile signals in accordance with the subject matter scanned.

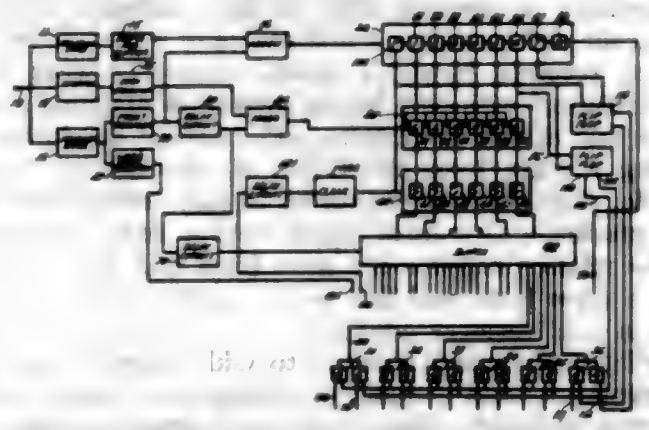
2,894,866
FACSIMILE TRANSMITTER FOR TELEGRAPH MESSAGE BLANKS AND THE LIKE
William D. Buckingham, Southampton, Guy H. Ridge, Water Mill, Lawrence D. Root, Southampton, and Frank T. Turner, Hampton Bays, N.Y., assignors to The Western Union Telegraph Company, New York, N.Y., a corporation of New York
Application December 29, 1955, Serial No. 556,197
19 Claims. (Cl. 178—7.1)

1. In a facsimile transmitter in which the subject matter on a message blank is scanned by a scanning light beam that repeatedly travels transversely across the blank in a predetermined linear scanning path as the blank is advanced, structure forming a message receiving slot into which a message blank may be inserted, sheet-positioning members extending into the slot for engaging the leading edge of the inserted message blank to locate it in proper starting posiiton, sheet feeding mechanism including an electromagnet and reciprocable structure actuatable thereby, a feed roller controlled by said reciprocable structure, means for applying a start signal to said electromagnet



to cause the reciprocable structure to actuate the feed roller into engagement with said blank for advancing the blank through the transmitter for a scanning operation, and means controlled by said reciprocable structure for retracting said sheet-positioning members from the message receiving slot to permit the advancement of the blank.

2,894,867
CODE TRANSLATOR
Arthur H. Haussman, Hyattsville, Md.
Application May 28, 1954, Serial No. 433,314
13 Claims. (Cl. 178—26)
(Granted under Title 35, U.S. Code (1952), sec. 266)

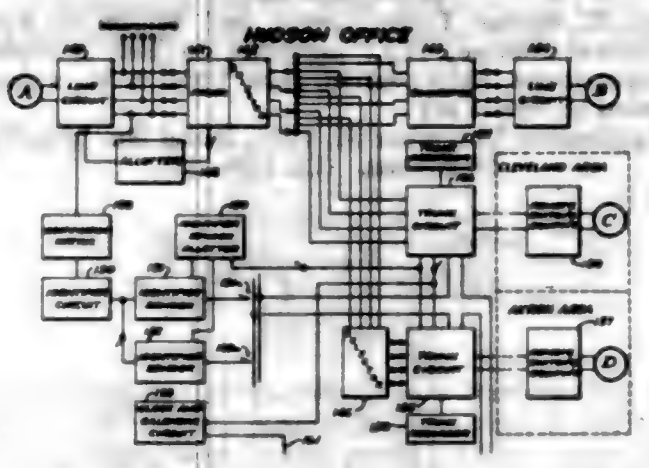


1. An apparatus of the nature described including means for receiving signals each normally comprising a succession of dot and dash elements, terminated by a print element, means for translating a said succession into a unique binary number including means responsive to any dot element for generating a corresponding binary digit of one value and means responsive to any dash element for generating a corresponding binary digit of the other value, means responsive to the succeeding print element for generating a binary digit of one of said values, a plurality of output leads, pulse producing means, and means responsive to said number for selecting a said lead for energization by said pulse producing means.

2,894,868
AUTOMATIC SUBSCRIBER IDENTIFICATION SYSTEM
Frank A. Morris, Milton A. Clement, and Ben A. Harris, Rochester, N.Y., assignors to General Dynamics Corporation, a corporation of Delaware
Application September 26, 1955, Serial No. 536,572
24 Claims. (Cl. 179—7.1)

14. In a telephone system, a calling line having an individual designation, line extending means for extend-

ing a connection from said calling line, register means connected to said line extending means for storing items of information pertaining to a toll call completed over said connection, a plurality of sender means common to said register for providing signals representing the designation of the calling line, switching means for connecting one of said sender means to said register to operate said register to store the designation of the calling line, timing means rendered effective in response to the connection of said one of said sender means to said register means, and means controlled by said timing means and operated by the failure of said connected sender means to provide signals for the register within a predetermined time interval for preventing the use of said extended connection for a toll call.



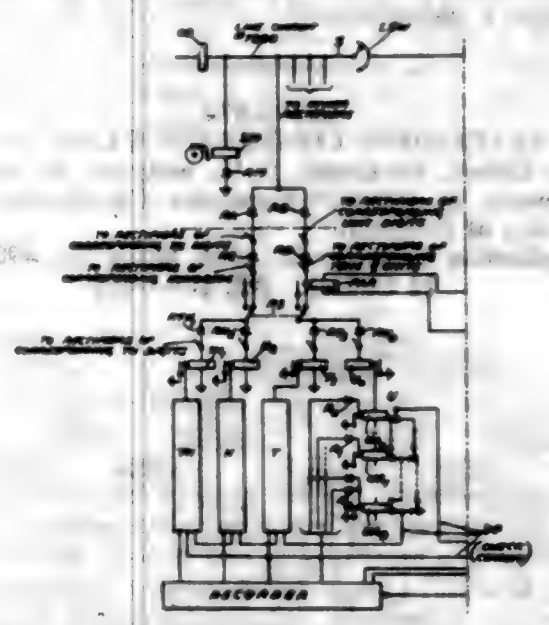
19. In combination with a dialing device operable to transmit switch directing signals and control signals, a circuit forming a portion of an extended telephone connection and associated with said dialing device, a relay in said circuit, and means for operating said relay in accordance with said control signals and for releasing said relay in accordance with switch directing signals.

2,894,069

CALLING STATION IDENTIFICATION

Raymond C. P. Hinton, Teaneck, and Boris Drula, Clifton, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Application June 29, 1956, Serial No. 594,756
8 Claims. (Cl. 179—8.5)



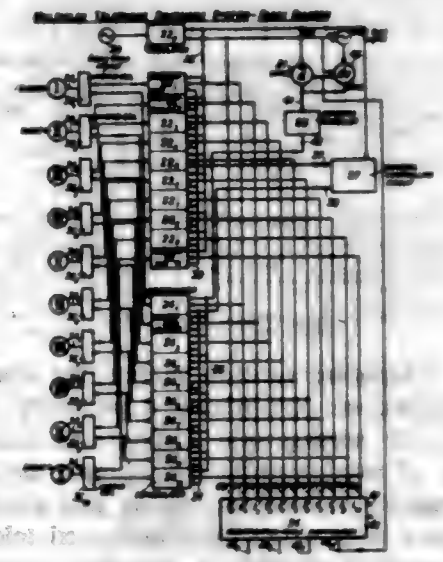
1. In an automatic message recording system having a recorder for recording the identity designation of a calling line that has seized a trunk line to make a call; an identifying circuit coupled to said calling line in accordance with the identity designation thereof, a plurality of trunk lines, a seized trunk detector adapted to test said trunk lines successively for detecting a trunk line which has been seized by a calling line, a release circuit having a predetermined timing period, a control circuit activated upon seizure detection by said seized trunk detector to apply an identification potential to said calling line for application to said identifying circuit and to said release circuit to initiate the timing period thereof, said control circuit having means to check the condition of said identifying circuit and when a satisfactory check is obtained to apply the identity designation thereon to said recorder and means responsive to said release circuit to deactivate said control circuit upon termination of said predetermined time period.

2,894,070

MULTIPLEX TELEPHONE SWITCHING SYSTEM

François Jacques Denis Duyonnet and Paul François Marie Gloess, Paris, France

Application May 2, 1956, Serial No. 582,251
Claims priority, application France May 4, 1955
4 Claims. (Cl. 179—15)



1. In a telecommunication system, a plurality of lines, an exchange at which said lines terminate comprising a multiplex telephone switching system over which calling lines and called lines may communicate, means defining time intervals forming multiplex channels, there being at least as many of said channels as there are simultaneous communications to be established by said switching system, means defining time sub-intervals forming sub-channels, there being at least as many sub-channels per channel as there are subscribers to be interconnected, a sampling modulator and a sampling demodulator for each sub-channel serving each subscriber, said sampling modulator converting continuous conversation signals of said subscriber into short amplitude modulated conversation pulses, triggering means rendering said modulator and demodulator serving each subscriber operative during the time sub-interval of the sub-channel reserved on all channels to cause the transmission of said short amplitude modulated conversation pulses in the sub-channel reserved for the calling subscriber to a free channel, a rectangular wave form transformer storage means and converter circuit for converting said short amplitude modulated conversation pulses from said sampling modulator into long pulses occupying nearly the whole of the time interval of the channel subsequent to said free channel, the amplitude of said long pulses being the same as the amplitude of said short conversation pulses except during the time sub-interval reserved for the calling subscriber when the amplitude of said long pulse is zero, said wave form transformer being connected in parallel at its input to the sampling modulator for all of the subscribers and at its output

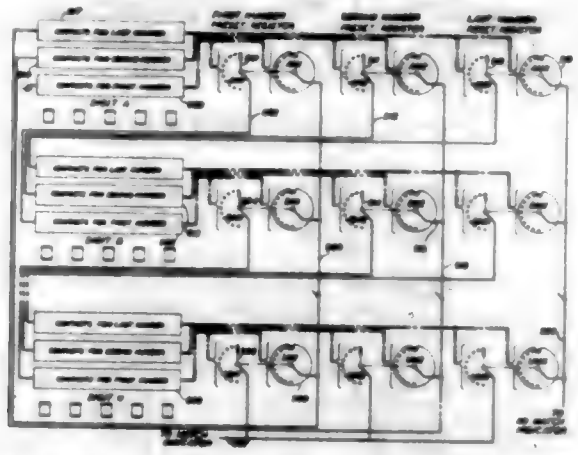
to the sampling demodulators for all of the subscribers, said sampling demodulator receiving only durnig the time sub-interval in which said triggering means renders it operative and thereby receiving, in said operative sub-interval the part of said long pulses which coincides with the sub-interval of said sub-channel which has been reserved for a called subscriber and said sampling demodulator integrating said coinciding part of said long pulses into continuous conversation signal whereby the modulation transmitted by a given subscriber may be received by each other subscriber but not by himself.

2,894,871

NUMBER MATCHING CIRCUIT

Orfeo Cesareo, Washington Township, Bergen County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application January 16, 1957, Serial No. 634,467
7 Claims. (Cl. 179—18)



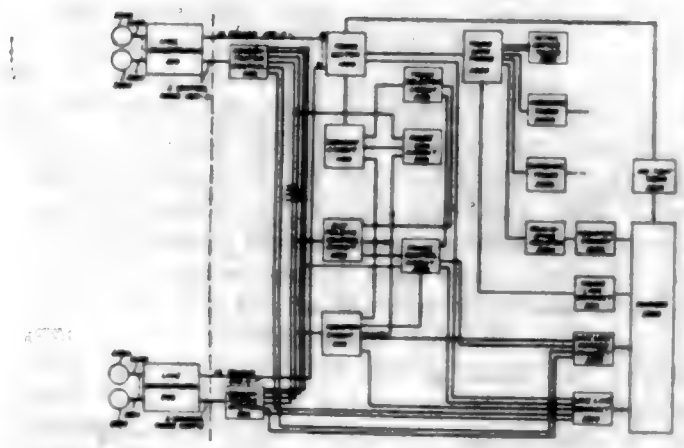
5. In a telephone system, means for comparing telephone designations comprising a plurality of first registers, means for setting said registers in accordance with a plurality of predetermined telephone designations, an auxiliary register, means for setting said auxiliary register in accordance with a randomly selected telephone designation, a match indicator, a no-match indicator, means controlled jointly by said auxiliary register and any one of said first registers to operate said match indicator, and means controlled jointly by said auxiliary register and all of said first registers to operate said no-match indicator.

2,894,872

CENTRALIZED MEMORY LINE CONCENTRATOR SYSTEM

George F. Abbett, Jr., Pearl River, N.Y., and Myron E. Krom, Convent Station, Arthur C. Mehring, Summit, and Wiley Whitney, Madison, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application December 31, 1957, Serial No. 706,342
29 Claims. (Cl. 179—18)



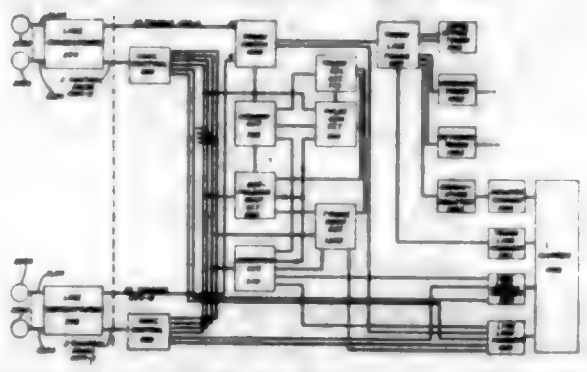
1. In a line concentrator telephone system, a plurality of lines, a central office, a plurality of trunks less in number than said plurality of lines extending from said central office, a line concentrator connecting said lines to said trunks, a memory circuit at said central office for registering the condition of said lines, means effective during a call to any one of said lines for making a busy test of said called line at said central office memory circuit, means effective when said memory circuit indicates that said called line is idle for operating said line concentrator to connect said called line to one of said trunks, and means effective when said memory circuit indicates that said called line is busy for releasing said initiating means.

2,894,873

LINE CONCENTRATOR CHECKING ARRANGEMENT

Frank E. Blount, Cedar Grove, and Myron E. Krom, Convent Station, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application December 31, 1957, Serial No. 706,371
10 Claims. (Cl. 179—18)



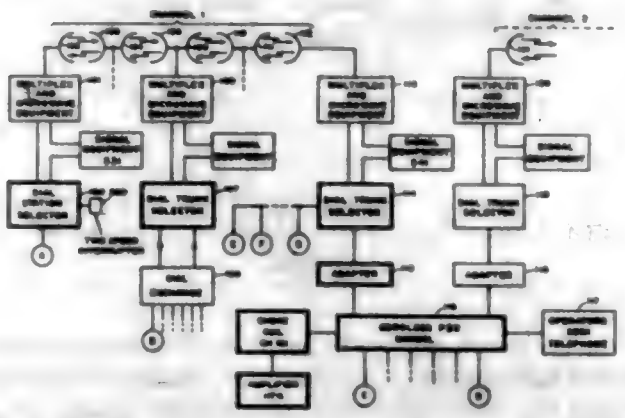
1. In a line concentrator telephone system, a central office; a plurality of subscriber lines; a smaller plurality of trunks extending from said central office; a concentrator unit for establishing connections between said lines and said trunks; a signaling circuit at said central office including means for supplying to said concentrator unit the identity of said lines and the identity of said trunks between which connections are to be established, and means for supplying to said concentrator unit the identity of said lines and the identity of said trunks between which connections are to be discontinued; and means at said concentrator unit for supplying to said central office a closure check indication when a connection is established and a disconnect check indication when an established connection is disconnected.

2,894,874

TELEPHONE CONFERENCE CIRCUIT

George Elliott, Rochester, N.Y., assignor, by mesne assignments, to General Dynamics Corporation, a corporation of Delaware

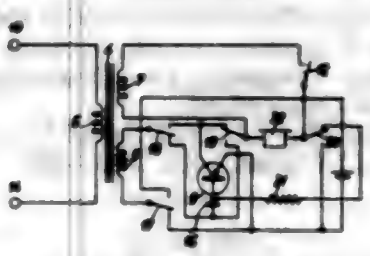
Application February 25, 1955, Serial No. 490,582
12 Claims. (Cl. 179—41)



1. In a telephone system, a network comprising a first impedance including a plurality of telephones connected

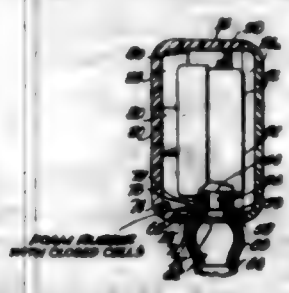
in parallel, a second impedance connected in parallel with said first impedance and including a resistance in series therewith for deriving a signal, amplifier means including output means for amplifying said signal, a control resistance, means for connecting said signal amplifying output means and said control resistance in series circuit, and positive feedback circuit means for connecting said series circuit in parallel with said two impedances, whereby said feedback circuit including said series circuit provides a negative impedance characteristic variably operable under the control of said control resistance.

2,894,075
TELEPHONE SET
Heinz Knuckel, Berlin-Dahlem, Germany
Application March 27, 1956, Serial No. 574,215
Claims priority, application Germany April 5, 1955
5 Claims. (Cl. 179—81)



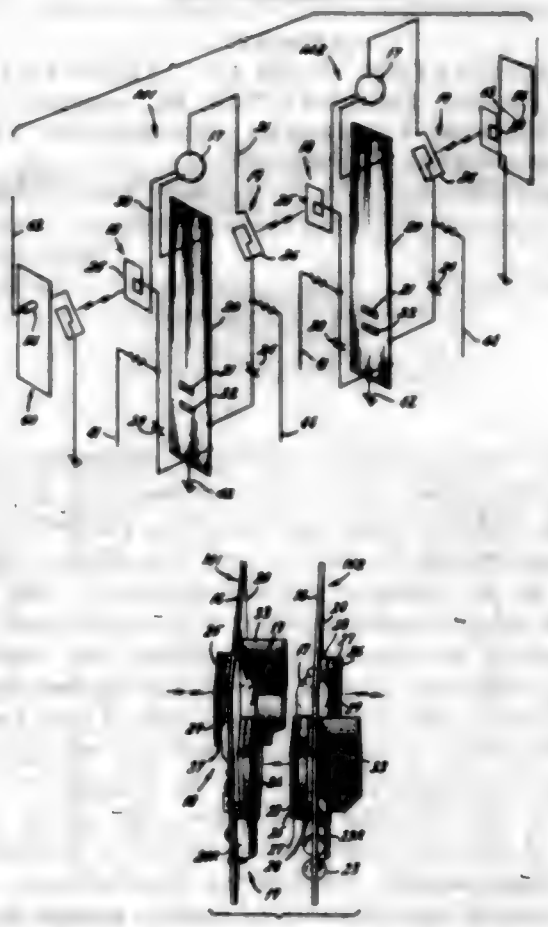
1. A telephone circuit comprising a transistorized amplifier circuit, a sound powered microphone, a local battery, a repeating coil, a first switch, a first means; said microphone being connected to the input of said amplifier circuit; said repeating coil connected to the output of said amplifier circuit; said first switch operable to a first and a second position; said first means being operatively connected to said first switch; said switch when in said first position operatively connecting said first means to said amplifier circuit and when in said second position operatively disconnecting said first means from said amplifier circuit; said first means when connected to said amplifier circuit causing said amplifier to generate an audio frequency oscillation for ringing purposes as long as said first switch remains in said first position; said battery being operatively connected by connection means to said transistorized amplifier circuit to supply all operating power for said telephone circuit during both amplification and ringing.

2,894,076
EYEGLASS HEARING AID CONSTRUCTION
Sam Posen, Chicago, Ill., assignor to Beltone Hearing Aid Company, Chicago, Ill., a corporation of Illinois
Application February 7, 1957, Serial No. 638,727
8 Claims. (Cl. 179—107)



1. In an eyeglass hearing aid the improvement comprising in combination: a temple member having walls defining a cavity therein, one of said walls having a sound output opening; a tubular fitting fixedly received in said opening and protruding outside the temple member to receive a sound tube; said fitting coacting with said opening to define a socket in communication with the tube of the fitting and otherwise sealing the temple member; a receiver in the cavity having a sound output opening in registered spaced relation with the socket, the sound output opening having a protruding tube in spaced aligned relation to the fitting; a cushioning tube spanning the space between the protruding tube and the fitting to define a sound passage extending from the receiver to the protruding portion of the fitting and out of acoustical contact with the interior of the temple member, said cushioning tube being of low mechanical vibration conducting and low acoustical conducting material.

2,894,077
MODULAR CIRCUITRY
Claudius T. McCoy, Upper Darby, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application November 21, 1955, Serial No. 548,103
12 Claims. (Cl. 179—171)

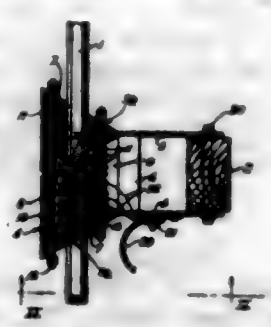


1. An energy transmission module, comprising: a carrier panel; flat input circuit means carried by the panel on one side thereof; flat output circuit means carried by the panel on the opposite side thereof; shield means on the panel shielding the input circuit means from the output circuit means; and signal transfer means carried by the panel, between said flat circuit means, for coupling the flat input circuit means to the flat output circuit means; said flat input circuit means being arranged for signal transfer by reactive coupling to the output circuit means of a similar module and said flat output circuit means being arranged for signal transfer by reactive coupling to the input circuit means of another similar module.

2,894,078
CONTACT SHOE FOR CONDUCTOR RAIL
Edison A. Harkins, Jr., Bordentown, N.J.
Application May 17, 1956, Serial No. 585,454
5 Claims. (Cl. 191—45)

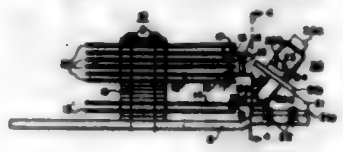
1. A contact shoe assembly for collecting current from a conductor rail comprising a bracket of conductive material, a pair of spaced parallel rods carried by said bracket, a plurality of conductor straps extending transversely of said rods and having openings in the ends thereof through which said rods project to support said straps on said bracket, said openings being larger than said rods in a direction generally normal to the plane

through the axes of said rods so that said straps have limited movement relative to each other and to said



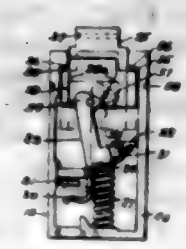
bracket, a support, flexible means for conductively interconnecting said conductor straps, and means mounting said bracket on said support.

2,894,079
COMBINATION PUSH AND TURN KEY
Robert E. Spitler, Downers Grove, Ill., assignor to General Telephone Laboratories, Incorporated, Chicago, Ill., a corporation of Delaware
Application April 26, 1957, Serial No. 655,382
6 Claims. (Cl. 200—1)



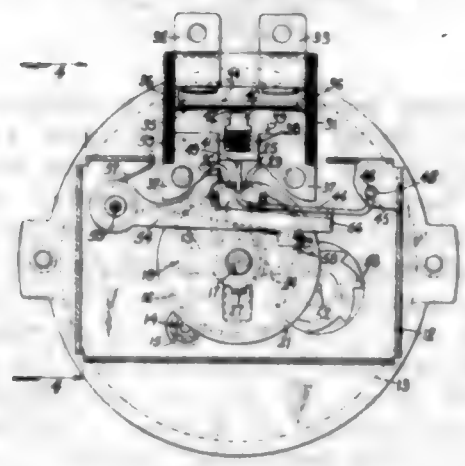
1. In a manual contact actuating mechanism, a base plate, a plurality of contact springs mounted in a single pile-up on said base plate and including a transfer spring, a mounting bracket secured to said base plate, a cylinder mounted at an obtuse angle with respect to said spring pile-up on said mounting bracket, a key positioned within said angularly mounted cylinder, means for commonly limiting the manual turning of said key in one direction and for limiting the manual depression of said key in a second direction, a portion of said key engaging said transfer spring responsive only to the manual turning of said key in one direction to actuate a first group of said plurality of contact springs in an operative direction due to the obtuse angular relationship therebetween, and a second group of said plurality of contact springs actuated responsive to the manual depression of said key in said second direction, and means dependent upon the angular position of said key with respect to said transfer spring for preventing actuation of said first group of said plurality of contact springs by said transfer spring when said key is depressed regardless whether the key is turned or not.

2,894,080
100 AMPERE DISCONNECT PUSH SWITCH
John A. Herrmann, Grosse Pointe Farms, and Joseph A. Messing and Jonah Wittenberg, Detroit, Mich., assignors, by mesne assignments, to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Application December 24, 1956, Serial No. 630,149
5 Claims. (Cl. 200—6)



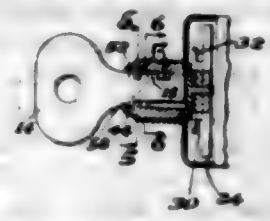
1. A disconnect switch being comprised of a first contact, a second contact, an operating handle and a contactor; said first contact being spaced from said second contact; said operating handle operatively connected to said contactor to control the position of said contactor; said contactor comprising a first and a second arm and a follower leg; a biasing means urging both of said arms into butt contact with said contacts; said operating handle having a cam slot operatively engaging said follower leg; said arms bridging a gap between said contacts when said handle is in a first position; said contactor being pivoted about said first contact against the force of said biasing means when said handle is moved in a first linear direction to a second position; said second arm of said contactor being moved in said first linear direction when said handle is moved in said first linear direction and thereby being separated from said second contact; said cam slot being effective to defeat the force of said biasing means when said handle is in second position.

2,894,081
SWITCH-ACTUATING MECHANISMS
Ivan Trepanier, Waterbury, Conn., assignor to Lux Clock Manufacturing Company, Inc., Waterbury, Conn., a corporation of Connecticut
Application May 13, 1957, Serial No. 658,808
13 Claims. (Cl. 200—38)



1. A set and trip mechanism comprising a generally circular cam member having a recess in its periphery, a movably mounted cam follower having a portion engaging the periphery of the cam and adapted to be received in said recess, means for rotating said cam, a resilient member attached to the cam and having a movable free-end portion extending into said recess to be engaged by the follower when the cam is rotated, said member being deflected by the follower when the cam is rotated in one direction to permit the follower to ride on the periphery of the cam out of said recess and thereafter returning to its original position to form a continuation of the periphery of the cam and require the follower to drop from the end of said member into said recess when the cam is rotated in the other direction.

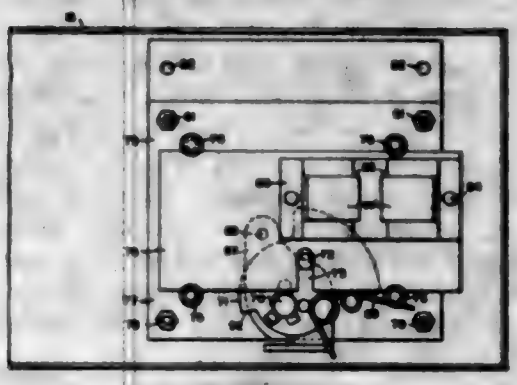
2,894,082
ELECTRICAL SWITCH
Albert J. Colletta, Roslindale, Mass., assignor to Ark-Les Switch Corporation, Watertown, Mass., a corporation of Massachusetts
Application October 9, 1957, Serial No. 689,150
1 Claim. (Cl. 200—44)



A key-operated electrical switch including: a key barrel having a radial shoulder providing an aperture therein

for receiving a flat key with at least one bit along one edge of the key shank, said aperture being a circular opening with a rectangular slot extending radially therefrom; a cylindrical shaft rotatably mounted within said barrel and having a slot in one end adapted to receive said key, said shaft being adapted at its other end to operate upon a rotary contact switching means; and means for substantially preventing unauthorized operation of said switch including: in combination, a cylindrical cavity in the center of said cylinder axially coextensive with said slot therein and of same diameter as said circular opening in said radial shoulder, said shaft thus being rotatable only by an instrument acting against edges of said slot provided only at the periphery of said shaft; and a disc rotatably mounted in said barrel between said shaft and said radial shoulder and having a slot of rectangular cross-section of width slightly greater than the thickness of said key and of depth slightly greater than the width of the key shank and bit, said means thus requiring an instrument of predetermined shape to act upon the slot edge in the periphery of said shaft and simultaneously limiting, by operation of the slotted disc, the configuration of the instrument which is permitted to have access to said shaft.

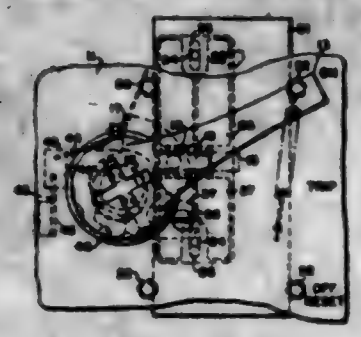
2,894,083
ENCLOSED ELECTRIC SWITCH
Thomas F. Brown, Belleville, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application December 11, 1957, Serial No. 702,629
8 Claims. (Cl. 200—50)



1. In an enclosed circuit interrupter, in combination, a cabinet having an openable cover, an external operating handle mounted on the cover, an actuating handle for the interrupter disposed inside the cabinet, an operating member slidably mounted on the inside of the cover, spaced blocks of resilient material carried by the operating member, said material having a durometer hardness of approximately 70, said actuating handle being disposed between said spaced blocks when the cover is closed, and said operating member being reciprocated by said external handle to operate the circuit interrupter.

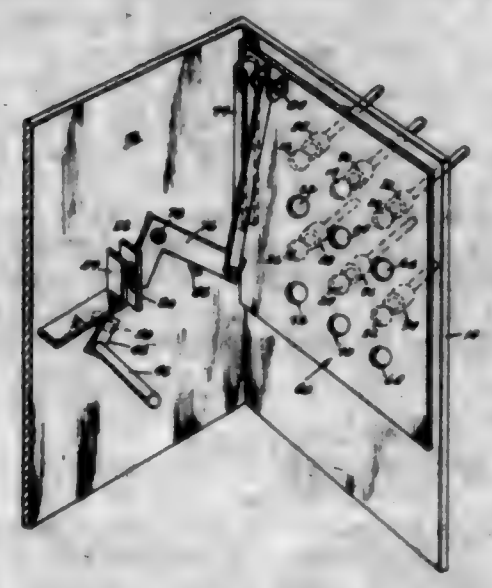
2,894,084
OPERATING MECHANISM FOR ENCLOSED CIRCUIT INTERRUPTERS
James O. Renreed and William F. Bora, Beaver, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application December 11, 1957, Serial No. 702,630
11 Claims. (Cl. 200—50)

1. In an operating mechanism for a circuit interrupter having an actuating handle and mounted in an enclosure having an openable cover, in combination, an operating member movably mounted inside of the cover, an external handle having a portion extending through the cover, an integral member composed of a material having a modulus of elasticity higher than rubber but less than steel attached to said operating member, said integral member having an opening therein for receiving the actuating handle of the interrupter when the cover is



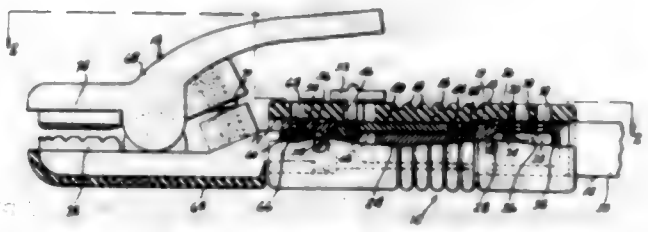
closed, and means driven by said external handle for reciprocating the operating member and the integral member to operate the circuit interrupter.

2,894,085
SHUTTER OPERATING MECHANISM
George A. Wilson, Media, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Application December 17, 1957, Serial No. 703,304
3 Claims. (Cl. 200—50)



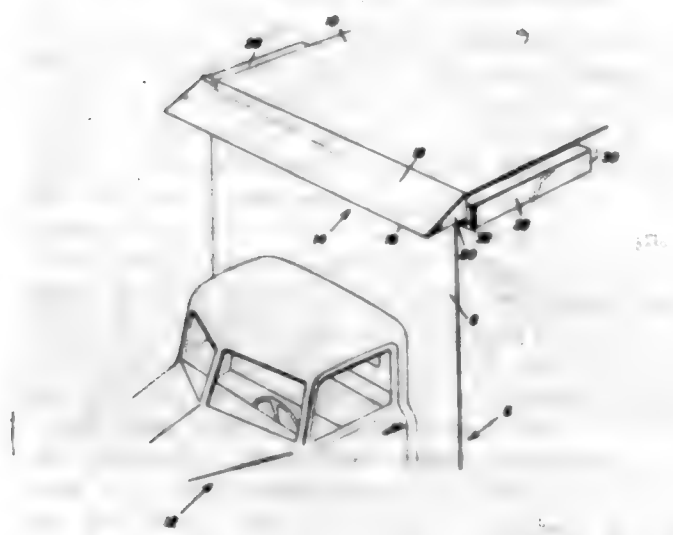
1. A shutter operating mechanism for a cubicle having a circuit breaker movable therein; said cubicle having a stationary disconnect contact mounted with respect thereto, said circuit breaker having a disconnect contact for cooperating with said stationary contact; a shutter of dielectric material normally interposed between said cooperating disconnect contacts when said cooperating contacts are disengaged, said shutter being movable to expose said stationary disconnect contact to said circuit breaker disconnect contact when said circuit breaker and said circuit breaker disconnect contact is moved toward the engaged position; racking means for moving said circuit breaker toward said engaged position; said shutter operating mechanism being operatively connected between said shutter and said racking mechanism; said shutter operating mechanism converting the motion of said racking mechanism into a motion to move said shutter from said interposed position to said exposing position, said shutter being operated independently of the forward motion of said circuit breaker; said circuit breaker racking mechanism including a protruding rotatable member carried by said circuit breaker engageable with a stationary slot carried by said cubicle; said shutter operating mechanism including a member normally extending into said stationary slot; said member being cammed out of said slot when said protruding rotatable member engages said slot to operate said shutter to said exposing position.

2,894,086
ARC WELDING ELECTRODE HOLDER WITH SAFETY SHUTOFF
Floyd R. Rizer, Detroit, Mich., assignor of twenty percent to Leo Vigne, Detroit, Mich.
Substituted for abandoned application Serial No. 500,132, April 8, 1955. This application November 29, 1957, Serial No. 699,803
3 Claims. (Cl. 200—51)



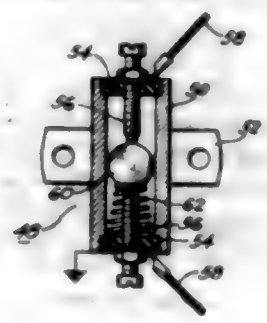
1. In a welding device, a handle portion comprising an insulated tubular sleeve having forward and rearward ends, said sleeve having an axial bore opening through said ends, a cable securing element engaged in said bore at the rear end of the sleeve, means locking said cable securing element in place, said securing element having a reduced axial extension projecting forwardly therefrom, an annular shoulder on said securing element between said element and said extension, a conductive contact bushing slidably engaged in the sleeve bore in front of the securing element, said bushing having a forward end and a rearward end, the rearward end of the bushing having an axial socket slidably receiving said extension, a helical spring circumposed on said extension and compressed between said shoulder and the rearward end of the bushing and urging said contact bushing forwardly, and conductive jaw mounting element secured in the sleeve bore in front of said contact bushing and normally contacted by the forward end of the contact bushing.

2,894,087
VEHICLE ROOF CLEARANCE SIGNAL MEANS
Andrew E. Kramer, Oak Park, Ill.
Application November 19, 1957, Serial No. 697,428
3 Claims. (Cl. 200—61.44)



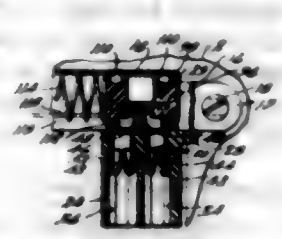
1. In combination, a vehicle body having a forward end portion and a roof portion, a horizontally elongated actuator member having a leading edge in a plane below the plane of said roof portion and a trailing edge in a plane above the plane of said roof portion, that part of said actuator being rigid and having an inclined plane, a housing disposed at right angles to said member, at least one arm connected to said actuator and extending into and pivotally mounted in said housing, stationary contact elements mounted in said housing, and a relatively movable contact element carried by the pivoted end of said arm and movable toward and from said stationary contact elements, and a coil spring interposed between a wall of the housing and the cooperating portion of said arm.

2,894,088
SWITCH MECHANISM
Edwin Eugene Prather, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Original application March 1, 1954, Serial No. 413,842. Divided and this application November 10, 1955, Serial No. 546,201
2 Claims. (Cl. 200—61.45)



1. A ball type inertia switch mechanism comprising a tubular shaped casing member, an insulator member mounted in each end of the casing member, two cylindrically shaped switch contact members, one mounted in the insulator member in one end of the casing member and extending lengthwise of said member and the other mounted in the insulator member at the other end of the casing member and also extending lengthwise of said member, an electrically conductive yieldable member housed within the casing and encircling one of the switch contact members, a ball contact member adapted to seat on the yieldable member, biased by the yieldable member to a position between the two switch contact members and spaced from said members, and adapted, with a bodily reciprocatory movement of the casing, to successively momentarily contact the two switch contact members.

2,894,089
SWITCH
Harley M. Newcomb, Sturgis, Mich., assignor to Wade Electric Products Co., Sturgis, Mich., a corporation of Michigan
Application December 15, 1954, Serial No. 475,430
5 Claims. (Cl. 200—61.54)



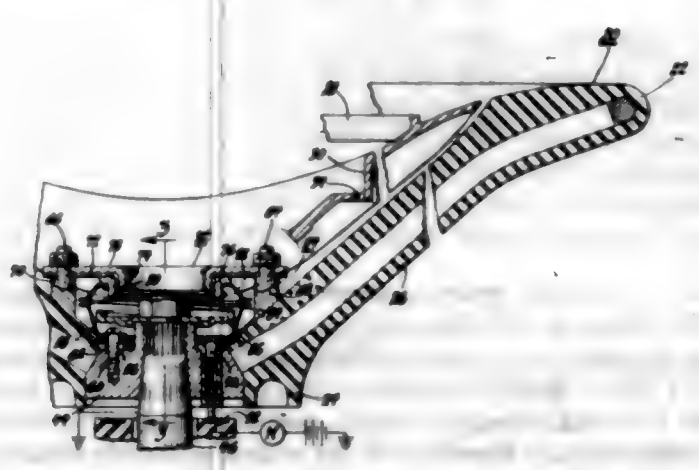
1. In a combined starter and back-up light switch adapted to be mounted on the exterior cylindrical surface of the steering column of an automobile, in which column there is housed a transmission shifting member, the improvement comprising an arc-shaped housing, a plurality of stationary electrical contacts arranged in an arc-shaped passageway defined by said arc-shaped housing, each of said stationary contacts being a surface of a flat spade terminal connector-contact, each said connector-contact having one connector element having a detent for engaging a cooperating hole in a flat spade terminal and projecting lugs for firmly anchoring it in position, a slide

block of insulating material disposed in said passageway and arranged to move back and forth therein, bridging means carried by said slide block to slidably engage said stationary contacts, a switch lever attached to said slide block adapted to be engaged by a slot in said transmission shifting member, and a helically-coiled compression spring arcuately supported and confined in said arc-shaped passageway operative on one end of said slide block, said spring biasing said slide block toward one end of said passageway so as to take up the slack in the connection between said switch lever and said transmission shifting member during movement of the latter.

2,894,090
HORN BLOWING MECHANISM

George T. Timoff, Drayton Plains, and William K. Jensen, Royal Oak, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application September 26, 1957, Serial No. 686,476
2 Claims. (Cl. 200—61.56)

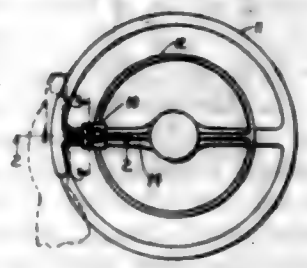


1. A horn blowing switch mechanism for use with a deep dish steering wheel having a metallic hub, comprising, a support member having a base portion which is centrally apertured to pass over the hub, an insulating washer positioned between the base portion of said member and a top surface of the hub, a first contact pan placed in inverted position upon the base portion of said support member, insulated fastener means securing said first contact pan and said support member as well as said insulating washer relative to the metallic hub, at least a pair of upwardly disposed extension portions provided by said support member and located radially outwardly from said first contact pan, a centrally apertured insulating member placed over said extension portions and having a central downwardly extending flange, a horn blowing ring means including a central annular portion adapted to fit snugly around the outside of said flange, a clamping plate means adapted to be held fixedly to said extension portions of said support member and separated from said central annular portion of said horn blowing ring means by said centrally apertured insulating member, a second contact pan adapted to fit directly on said central annular portion of said horn blowing ring means, an annular plate attached to the metallic hub, and spring means normally serving to maintain predetermined spacing between said first and second contact pans and adapted to be compressed relative to said annular plate until said central annular portion of said horn blowing ring means is moved sufficiently to permit closure of electrical contact of said first and second contact pans relative to each other, said central annular portion of said horn blowing ring means being fulcrumed relative to said clamping plate means held fixedly to said extension portions of said support member located radially outwardly from said first contact pan.

2,894,091
AWAKENING ALARM MECHANISM FOR VEHICLES

Burton H. Locke, Framingham, Mass.

Application November 13, 1957, Serial No. 696,082
4 Claims. (Cl. 200—61.57)

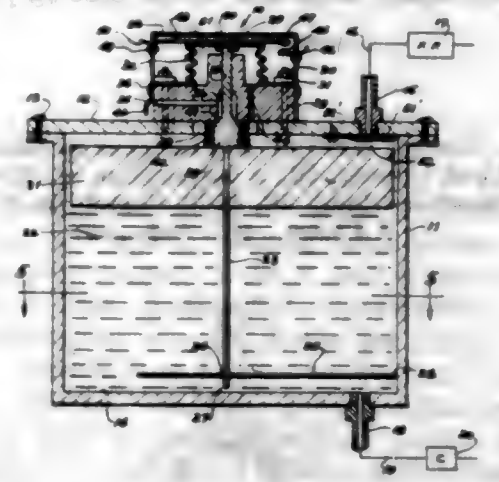


1. An awakening alarm mechanism for motor vehicles comprising resilient means normally disposed to cause pressure actuation of a pressure operative horn switch on a vehicle, manual operative means substantially at the periphery of the steering wheel on the vehicle disposed to cancel the pressure actuation of said resilient means when operated, individual manual operative means disposed to cooperate with the last said means to positively prevent the operation of said resilient means when the same is not required.

2,894,092
FLUID LEVEL INDICATOR

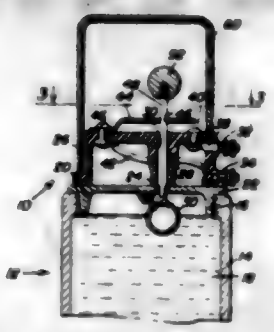
Jack E. MacGriff and Marilyn L. Bacon, Detroit, Mich.

Application November 17, 1955, Serial No. 547,424
6 Claims. (Cl. 200—84)



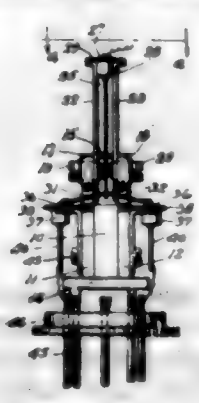
1. A liquid level indicator comprising a closed fluid container having a fluid inlet and outlet, a vertically movable float extending substantially across the width of said container, an air bleed and switch unit, including a body mounted upon said container having an upright aperture therethrough, a portion of which defines an air passage terminating in a valve seat in communication with the interior of said container, there being an air inlet in the body joining said air passage, a valve engaging and projecting above said float adapted to seat on said valve seat normally closing said air passage, and having a valve stem slidable through said aperture and above the body, and a normally open switch upon and above said body, including a pair of spaced closable contacts, the valve stem normally engaging one of said contacts at a predetermined fluid level in said container for maintaining said contacts in spaced relation, failure of the supply of fluid to said inlet with continued flow through said outlet causing a falling of said fluid level and downward unseating movement of said valve to permit closing of said contacts, and bleeding of air through said air inlet and passage venting further flow through said outlet, reactivation of said fluid supply to said fluid inlet adapted to cause filling of said container, excess air being bled out through said air passage and air inlet.

2,894,093
BRAKE FLUID SIGNAL
Gerard G. Frey, Pulaski, N.Y.
Application October 11, 1957, Serial No. 689,708
1 Claim. (Cl. 200—84)



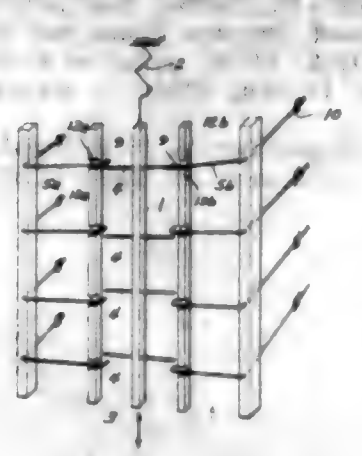
A fluid level signal for master brake cylinder reservoirs, said signal comprising: a filler plug on the reservoir, an elongated platform on said plug, a stationary electric contact on said platform, a resilient electric contact on the platform engageable with said stationary contact, a cover substantially enclosing the platform and the contacts, said cover having an opening in its lower portion exposing one end portion of the platform, a pair of binding posts mounted on the exposed end portion of the platform and electrically connected to the contacts, a vertical rod slidable through the plug, the platform and the resilient contact, a float on the lower end of said rod operable in the reservoir, a ball on the upper end of the rod engageable with the resilient contact for engaging same with the stationary contact, and a signal device electrically connected to the binding posts.

2,894,094
CHOPPER
Hugh A. Howell, Berwyn, Ill., assignor to Oak Mfg. Co., Cook County, Ill., a corporation of Illinois
Application March 19, 1958, Serial No. 722,438
1 Claim. (Cl. 200—90)



A chopper comprising a pair of ferromagnetic members, a permanent magnet disposed between said members, said members having opposed pole pieces, a long thin armature, means for supporting one end of said armature with the other end thereof free to vibrate between said pole pieces, said supporting means including a glob of glass into which the supported end of the armature is sealed, said supported end of said armature having a current lead therefrom, said supporting means including metal fused to the outside of said glass glob, said chopper including a winding disposed around said armature and adapted to be supplied with alternating current for causing armature vibration, support members rigidly attached to said ferromagnetic members, each ferromagnetic member having one support member, a glass glob fused to each support member, each glass glob having sealed therein a metal contact member, the two metal contact members being disposed on opposite sides of the armature and being spaced from each other to function as stationary contacts for cooperation with the armature, said metal contact members having current leads connected thereto whereby when said chopper operates in a high impedance circuit, the separate but rigid glass supports for the three current carrying metal members render said chopper substantially free of potential spikes due to contact action.

2,894,095
CONTACT DEVICE
Bengt Ludvig Wijkman, Stockholm, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden
Application June 22, 1955, Serial No. 517,188
Claims priority, application Sweden July 8, 1954
7 Claims. (Cl. 200—104)

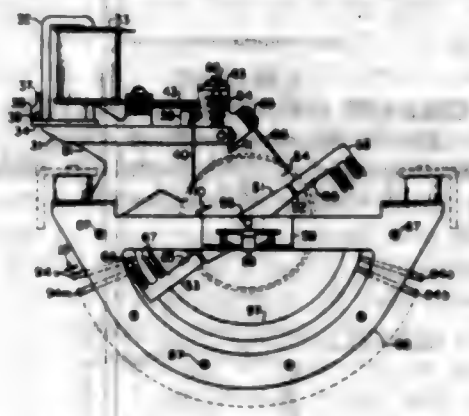


1. A contact spring assembly for an electromagnetically actuated switching device, said assembly comprising sets of make and break contact, each of said sets including a pair of flexible stationary contacts connected in series and a mated movable contact member adapted to bridge the two contact elements of the pair, a common actuating member joining all said contact members for simultaneously moving the same between positions closing each set of make contacts and opening each set of break contacts, and a limit stop for each stationary contact, each of said stops being fixedly mounted relative to the respective stationary contact at a distance therefrom more than the distance of movement at which the associated movable contact member becomes disengaged from the respective engaged contacts, but less than the distance of movement at which the contact member of another set closes its associated contacts, each of said stops being disposed to abut against the corresponding stationary contacts upon flexing thereof to an extent in excess of said distance of disengagement, whereby upon a stationary flexible contact being fused to its associated contact member resulting in the abutment of the fused contact against the respective stop during movement from a closed toward an open circuit relationship is operative to limit movement of said common actuating member to prevent movement of other contacts in an open circuit relationship toward a closed circuit relationship.

2,894,096
ROTARY SWITCH
Gunter H. Schacht, Vestal, N.Y., assignor to General Telephone Laboratories, Incorporated, Chicago, Ill., a corporation of Delaware
Application June 25, 1957, Serial No. 667,933
12 Claims. (Cl. 200—105)

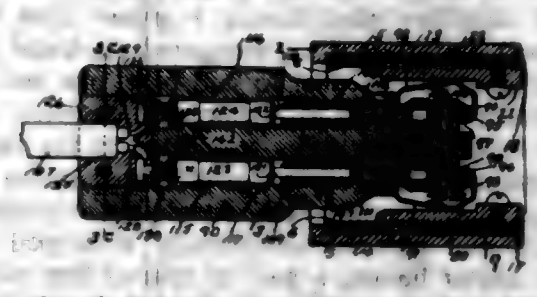
1. In an indirect drive rotary stepping switch, a rotatable wiper assembly and driving means for rotating said wiper assembly, said driving means including an energizable electromagnet, an armature actuated in response to energization of said electromagnet, a driving pawl secured astraddle said armature, said driving pawl comprising a U-shaped length of longitudinally stiff, transversely flexible music wire, said rotatable wiper assembly

including a ratchet wheel having a plurality of teeth spaced equally around its periphery, the base of said U-shaped driving pawl being impelled against one of said teeth on deenergization of said electromagnet to cause said ratchet wheel to rotate, means for holding said ratchet wheel stationary between impellations of said driving pawl, said holding means comprising a U-shaped



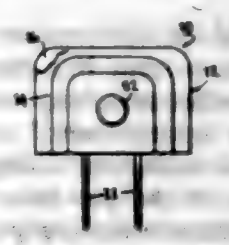
length of music wire disposed to contact said wheel between said teeth, means coupled to said driving pawl for stopping said ratchet wheel after said wheel has rotated through a predetermined acute angle, said coupled means comprising a rigid tooth, said driving pawl compensatorily flexible for misadjustments in said tooth-to-pawl distance when said ratchet wheel is stopped by said rigid tooth.

2,894,897
ELECTRICAL JUNCTION BOX AND ELECTRICAL FUSED PLUG CONNECTIONS
Norman L. Bassin, Los Angeles, Calif.
Application September 17, 1956, Serial No. 610,852
3 Claims. (Cl. 200—115.5)



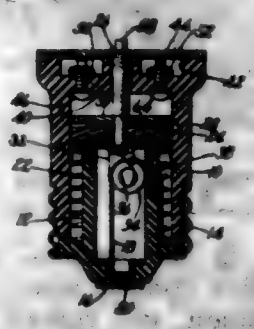
1. An electrical plug connection for junction boxes including an electrical junction box constructed and arranged with electrical contacts to receive electrical plug connections, an electrical plug connection comprising a plug body, electrical contacts on said plug body to engage said electrical contacts in said junction box when said plug connection is plugged into said junction box, spring cages connected to said plug body contacts, respectively, springs in said cages, respectively, cage plungers extending through the rear ends of said cages, respectively, heads on the forward ends of said cage plungers, respectively, with said heads in the rear ends, said cages bearing against the rear ends of said springs in said cages, respectively, heads on the rear ends of said plungers, respectively, fuses in the rear portion of said plug body engaging at their forward ends the heads on the rear ends of said cage plungers, respectively, an insulation block in the rear end of said plug body, into the rear end of which insulation box extends a cable, insulated electrical wires extending forwardly through said electrical cable, and said insulation block, to the forward side of said insulation block, screws threaded into the forward side of said insulation block, heads on the rear ends of said screws engaging and clamping the ends of said cable wires against the forward side of said insulation block for engaging the rear ends of said fuses, respectively, a cap fitted over the rear end of said plug body, and over said insulation block, opposite side walls of said cap, at opposite sides of the rear end of said plug body and said insulation block being provided with registering screw apertures, and a single screw extending transversely through the rear end of said plug and through said screw apertures, with the head on one end of said screw engaging one side wall of said cap, and the other end of said screw being threaded in the opposite side wall of said cap for detachably holding said cap on the rear end of said plug body, and for detachably holding said insulation block, cable, cable wires and wire clamp screw heads in position with said screw heads engaging the rear ends of said fuses, and holding the forward ends of said fuses in spring-pressed electrical contact with the rear heads of said cage spring plungers, all of which parts in the rear part of said plug body rearwardly of said cages, including said fuses, being removable from the rear end of said plug body by removing said single screw from said rear cap, rear end of said plug body and said insulation block.

2,894,898
OUTLET WINKER
Louis Ludwig, New York, N.Y.
Application November 8, 1956, Serial No. 621,145
6 Claims. (Cl. 200—115.5)



1. In a winker including a casing, a male contact prong having a shank of oblong cross-section and an internal stationary contact fixed in said casing in spaced relationship to said shank: that improvement comprising the combination of walls within the casing forming a groove, a thermoblade adapted to flex into and out of engagement with said stationary contact, means positively and securely affixing the thermoblade to the shank in exact angular relationship and position with respect thereto, bosses in one piece with the casing and extending from said walls into the groove, said bosses tightly frictionally engaging the broad surfaces of the shank whereby to positively and firmly hold the prong in a set position and thereby locate the thermoblade in an exact predetermined position within the casing with respect to said stationary contact.

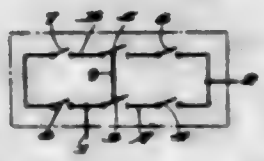
2,894,899
FUSES FOR ELECTRIC CIRCUITS
Roger W. Cabell, Providence, R.I.
Application October 8, 1956, Serial No. 614,570
6 Claims. (Cl. 200—117)



1. A fuse adapted for insertion in an electric circuit comprising a hollow body member, a piston dividing

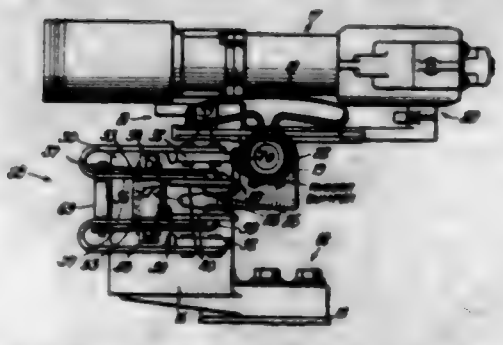
said body member into a pair of chambers, a fusible circuit controlling element in one of said chambers, a pair of contact members in the other of said chambers, a switch member carried by said piston and arranged for engagement with said contact members to complete a circuit therethrough, means urging said piston in a direction to engage the switch member with the contact members, means connecting said fusible element to said piston whereby the piston is held in a position in which the switch member is spaced from the contact members, and a sheet of noncombustible flexible material associated with said piston providing a gas-tight seal between said chambers.

2,894,100
CIRCUIT BREAKER
Raimund Hoffmann, Dachau, Munich, Germany, assignor to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint-stock company
Application September 16, 1957, Serial No. 684,358
Claims priority, application Switzerland September 22, 1956
5 Claims. (Cl. 200—146)



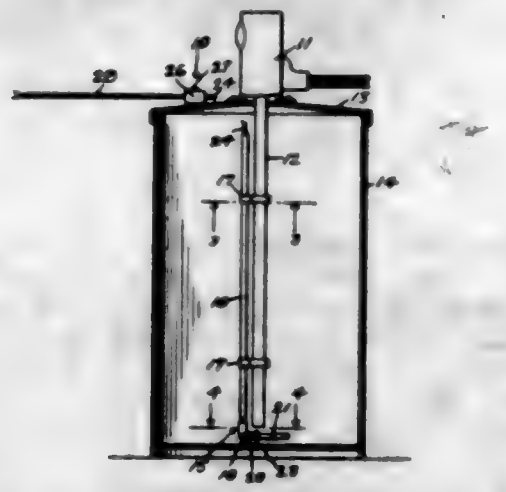
1. In an electrical circuit breaker for use on a high potential, alternating current line the combination comprising first and second switching branches arranged in parallel between an input terminal and an output terminal, said first branch including a single power interrupting switching point of the gas blast actuated type and a voltage disconnecting switching point of the movable blade type connected in series and said second branch including a plurality of power interrupting switching points of the gas blast actuated type and a voltage disconnecting switching point of the movable blade type connected in series, said power interrupting switching point of said first branch being arranged to open first thereby to transfer the load to said second branch for interruption by the power interrupting switching points therein and means for actuating said movable blades of said voltage disconnecting points simultaneously to open and closed position.

2,894,101
SWITCH CONTACT CONSTRUCTION
Sigurd I. Lindell, Chicago, and John S. Ferguson, Glenview, Ill., assignors to S & C Electric Company, Chicago, Ill., a corporation of Delaware
Application January 28, 1958, Serial No. 709,868
44 Claims. (Cl. 200—166)



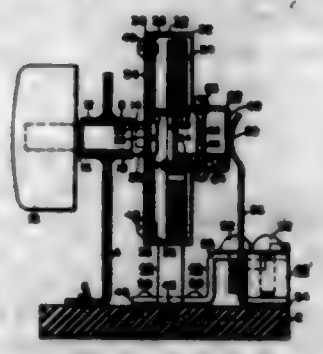
1. In a switch, in combination, a switch blade and a relatively movable contact assembly mounted in insulated spaced relation, said contact assembly including a pair of U-shaped flexible resilient conductors having the ends of their outer branches rigidly supported in spaced relation and their inner branches facing each other with contact means extending lengthwise thereof at their outer ends for engaging opposite sides of said switch blade therebetween, means baising said contact means into high pressure contact engagement with said switch blade, and means limiting the movement of said contact means toward each other to a distance apart slightly less than the distance between the opposite sides of said switch blade engaged by said contact means in switch closed position.

2,894,102
GREASE DISPENSER HEATER
Ray R. Morris, Portland, Oreg.
Application June 7, 1957, Serial No. 664,234
1 Claim. (Cl. 219—19)



A portable grease heating grease dispensing attachment for grease barrels comprising a portable cover adapted to be detachably supported on said grease barrel, a grease pump mounted on said cover, an elongated dispenser pipe depending vertically from said pump and said cover to extend into the grease in said barrel, said elongated dispenser pipe having a grease inlet opening at the lower end thereof, an elongated electrical conduit extending generally parallel to said pipe, one end of said conduit being connected to a source of electrical energy, a pair of diverging branches connected to the other end of said conduit, a pair of vertically spaced spring clamps secured to said conduit and detachably engaging said grease dispenser pipe, a substantially W-shaped electric resistance heater having a pair of spaced free ends, said free ends of said heater being connected to said branches of said conduit to support said heater on the lower end of said conduit in laterally extending relation underlying the lower end of said pipe, whereby grease adjacent the lower inlet end of said pipe is heated to facilitate easy flow thereof.

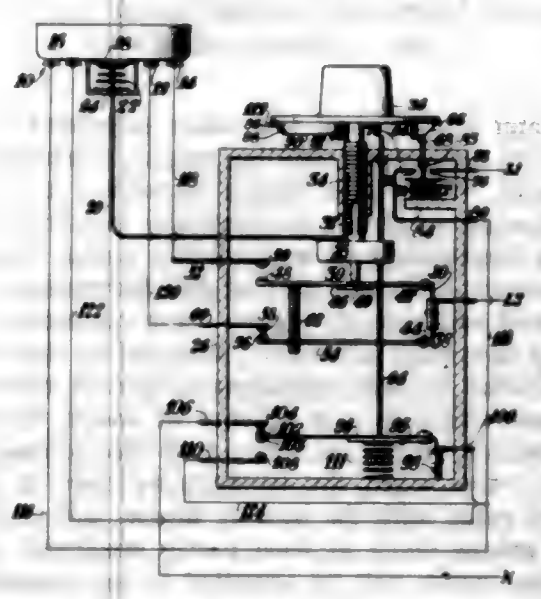
2,894,103
ELECTRIC HEATER CONTROL
Owen L. Taylor, Easton, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a corporation of Connecticut
Application April 12, 1955, Serial No. 500,763
7 Claims. (Cl. 219—20)



2. Electrical heating apparatus comprising, a heating element, a bimetallic element, a pair of separable electrical

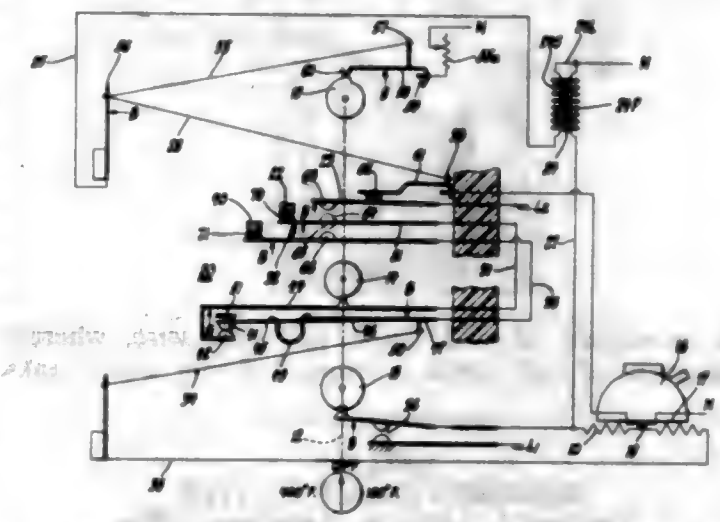
contact means at least one of which is mechanically and electrically connected to said bimetallic element so as to be movable with said bimetallic element to an open position and to a plurality of different closed circuit positions relative to the other contact means, means for electrically connecting said contacts, said bimetallic element and said heating element in series to a source of electrical energy, manually movable means supporting said bimetallic element and at least said one contact means for bodily movement thereof from said open circuit position to any one of the aforesaid closed circuit positions so that a current will flow through said bimetallic element, means for releasably retaining said movable means at said closed circuit positions so that said current flow through said bimetallic element causes it to deflect with relation to said movable means in a direction opposite to the direction of said bodily movement a distance corresponding to the adjustment of said manually operable member from its "off" position so as to move at least said one contact back to its open circuit position, said bimetallic element being cooled when said contacts are in an open circuit position so as to deflect a lesser distance to a closed circuit position, and thereafter will cycle back and forth through said smaller distance to alternately energize and deenergize the heating element.

2,894,104
TEMPERATURE RESPONSIVE CONTROL
Victor Weber, Greensburg, Pa., assignor to Robertshaw-Fulton Controls Company, Greensburg, Pa., a corporation of Delaware
Application July 12, 1955, Serial No. 521,549
7 Claims. (Cl. 219—20)



1. In an electric heater assembly having a plurality of surface heating elements for heating a cooking vessel and a source of electric energy, the combination comprising circuit means for connecting said heating elements to a source of electric energy and including a plurality of switches connected in series with the heating elements and the source for controlling energization of said elements respectively, means responsive to the temperature of the vessel for sequentially opening said switches when a predetermined temperature is attained to supply electric energy at a predetermined rate under the control of one of said switches, means operable over a first range of movement and a second range of movement for adjusting said predetermined temperature at which said temperature responsive means will respond, and control switch means connected in the series circuit of said one switch and operatively connected to said adjustment means to be movable from one position to another during movement of said adjustment means from said first range of movement to said second range of movement and operative to supply electric energy to said one switch and the heating element controlled thereby at a predetermined rate in said one position and at a different rate in said other position.

2,894,105
DOMESTIC APPLIANCE
George B. Long and Ray E. Clever, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 10, 1956, Serial No. 615,193
7 Claims. (Cl. 219—20)

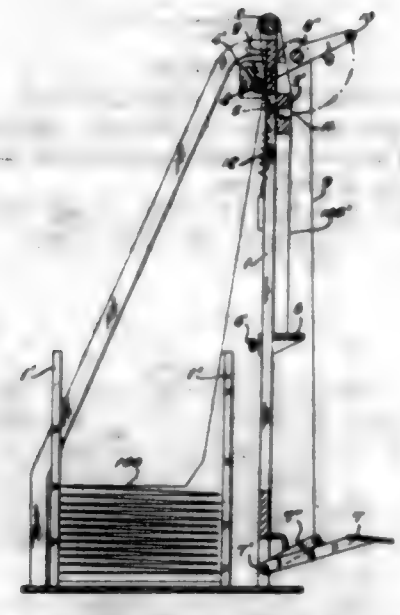


1. In combination: an on-off switch element; a heater element; a hot wire, wattage controlling, adjustable, pulsating relay element; a temperature controlling yieldable contact element biased against an arresting stop; a temperature controlling movable contact element engaging said yieldable contact and moving it toward and away from said arresting stop, said elements being in electrical series between two high voltage connectors; a bypass around said pulsating relay element including a bypass contact engaging with said yieldable contact element when moving away from said stop; a transformer providing a source of low voltage power from at least one of said connectors; a low voltage temperature controlling hot wire and a thermistor directly in series across said source of low voltage, said thermistor being heated and cooled in response to the temperature of a utensil being heated by said heater and said last named hot wire operating said temperature controlling contact in response to increase and decrease in length of said wire due to current fluctuations through said wire and thermistor; an on-off cam opening and closing said on-off switch; a wattage controlling cam adjusting the frequency of pulsation of said pulsating relay to vary the wattage input into said heater; a temperature cam adjusting the operation of said low voltage controlling hot wire to open and adjust said temperature controlling movable contact; and a manual control for adjusting said cams.

2,894,106
DEVICE FOR HOT CUTTING OF WOVEN OR KNITTED MATERIALS OF SYNTHETIC THERMO-FUSIBLE FIBERS
Raymond Jacob, Essonne, and Bernard Masson, Courbevoie, France, assignors to Societe d'Applications Generale d'Electricite & de Mecanique, Paris, France
Application March 25, 1957, Serial No. 648,424
Claims priority, application France April 6, 1956
6 Claims. (Cl. 219—29)

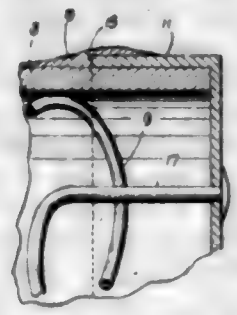
1. A cutting device for woven or knitted fabric of synthetic thermo-fusible fibers, comprising an electrically heatable wire, means to hold said wire stretched in a direction substantially transverse to the plane of said fabric, said means urging the ends of said wire away from each other, means for moving said fabric past

said wire, and means responsive to a predetermined increase in the distance of said wire ends for stopping



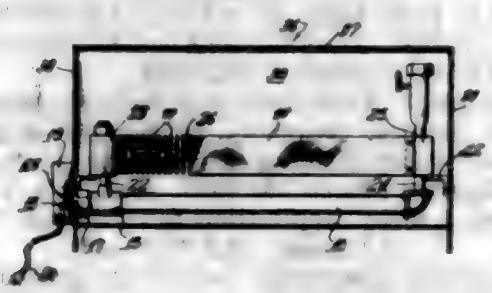
the movement of said fabric past said wire, whereby movement of said fabric is stopped if said wire breaks.

2,894,107
IGNITION PROOF HEATER
Fredrick L. Lefebvre, Twinsburg, Ohio
Application February 9, 1956, Serial No. 564,415
4 Claims. (Cl. 219—34)



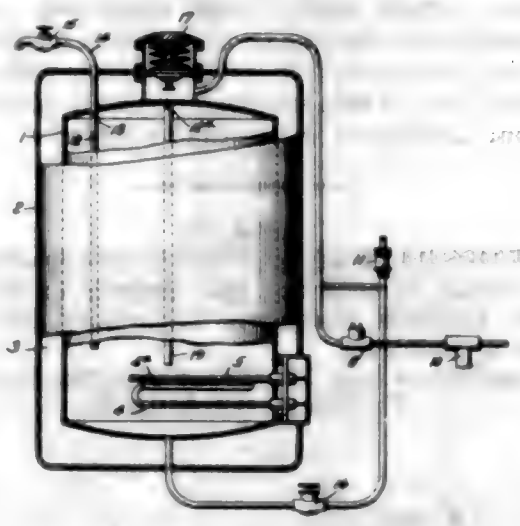
1. In a radiant heater of the class described, in combination, a tubular quartz sheath, an electric heating element therein and cap members seated on each end of the sheath so as to close the same, said members being sealingly engaged with the sheath by metal spray material to prevent ignition of material by said heating element, at least one of said cap members comprising an electric contact, the heating element being connected thereto.

2,894,108
ELECTRIC HOT LIQUID HEAT CONVECTOR
Walter Brand, Merrick, and Irving Hoffman, New York, N.Y.
Application December 18, 1956, Serial No. 629,026
7 Claims. (Cl. 219—38)



1. An electrically heated hot liquid heat convector, comprising a closed liquid circulating system, including a tubular conduit portion of relatively large cross section, said conduit portion closed at one end and having an electric immersion heater unit extending thereinto through its open end and sealing the same, a riser at each end of said conduit portion connected directly thereto, a header connected to the free end of each of said risers, and a plurality of relatively narrow tubes connected between said risers, and an expansion chamber having a safety valve connected to said liquid circulating system at an upper portion thereof, said unit having means projecting from said conduit portion whereby it may be connected in an electric circuit.

2,894,109
COMMERCIAL WATER HEATER
Owen Murray Kendon, Remuera, Auckland, New Zealand, assignor to Kendon Developments Limited, Auckland, New Zealand
Application August 22, 1957, Serial No. 679,691
Claims priority, application New Zealand August 22, 1956
10 Claims. (Cl. 219—38)

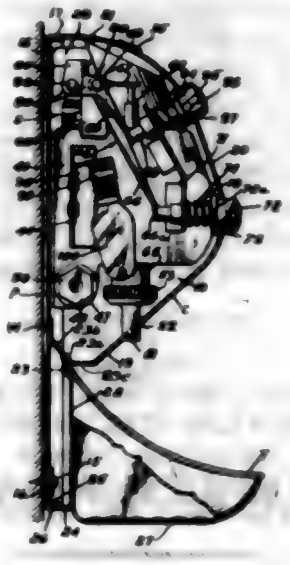


1. Water heating and hot water supplying apparatus comprising a container, heating means, thermostatic control means, water inlet means connected to said container having an electro-magnetically actuable valve associated therewith, and controllable outlet means from the container, at least a part of said thermostatic control means and said heating means being connected to each other by thermally conducting material so that heat will be conducted to said thermostatic control means at all times and when there is absence of water, the thermostatic control means actuating said electro-magnetically actuable valve when the temperature rises to a predetermined value with the heating means and thermostatic control means being at least partly immersed in water, whereafter water will be admitted to the container, and when the temperature falls below a predetermined value the admission of water is prevented or reduced to a low rate.

2,894,110
WATER-HEATING APPARATUS FOR USE IN MAKING HOT BEVERAGES
Charles H. Brown, San Diego, Calif., assignor to Morning Coffee, Inc., San Diego, Calif., a corporation of California
Application November 4, 1957, Serial No. 694,416
3 Claims. (Cl. 219—38)

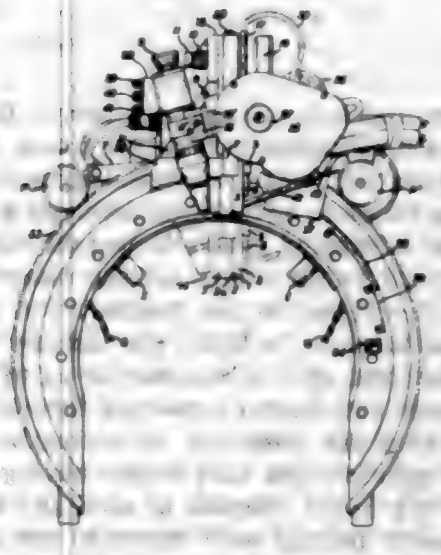
1. A water-heating apparatus, including: a casing; a tank for water within the casing; an electrical heating element within the tank; a switch within the casing and electrically connected to said element; a member operable to close the switch; a thermostat for opening the switch; a bell-crank lever fulcrumed on the tank; another lever fulcrumed on the tank and operatively connected to one arm of the bell-crank lever and to the member; a plunger; means mounting the plunger in the casing for axial movement and so that when moved in one direction it actuates

the other arm of the bell-crank lever thereby moving the first-mentioned arm thereof to actuate said other lever and thereby move the member to close the switch; a spring for urging the plunger in the other direction; and



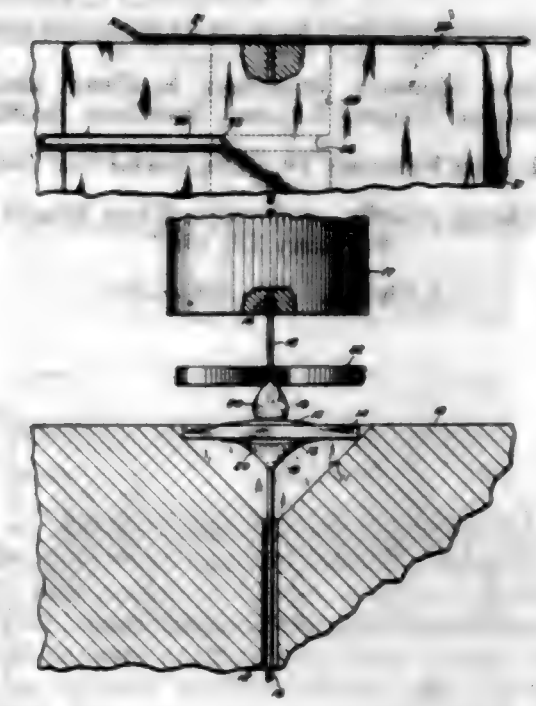
a button on the plunger projecting from the casing in the urged position of the plunger so that it can be pressed inwardly of the casing and against the tension of the spring to move the plunger in the first-mentioned direction.

2,894,111
PIPE WELDING APPARATUS
Louis C. McNutt, West Chester, Pa.
Application March 26, 1957, Serial No. 648,537
19 Claims. (Cl. 219—60)



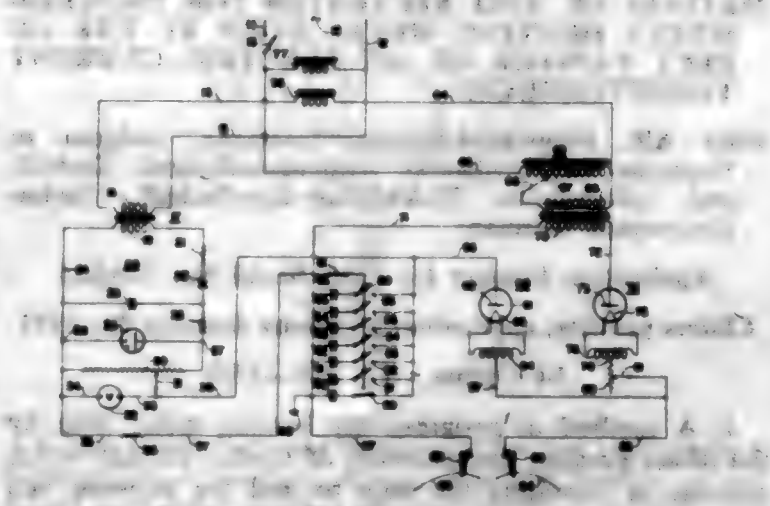
1. A welding structure for welding large pipes together, comprising a gear wheel having an opening large enough to pass the gear wheel into welding position around the pipe, means for holding the structure securely to the pipe, said means including an arcuately formed framework to fit onto the pipe with means for anchoring it to the pipe, gear means carried by said framework and having parts to drivingly engage said gear wheel and move it around the pipe, an electric motor for operating said gear means, and mechanism carried by the gear wheel for holding a tungsten electrode in arc position and further mechanism carried by the gear wheel for carrying a welding rod into arc operative position with said tungsten electrode and means for automatically changing the starting and stopping place of the welding arc wherein the material as it is applied to the pipe joint will follow a predetermined overlapping plan.

2,894,112
APPARATUS FOR ATTACHING LEADS TO CRYSTALS
Rudolph S. Breecin, Irvington, Robert L. Moore, Elizabeth, and Henry W. Schaufelberger, Union, N.J., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application August 27, 1958, Serial No. 757,612
7 Claims. (Cl. 219—85)



1. An apparatus for mounting solder surrounded headed ends of wire leads to deposits of silver on surfaces of crystals comprising a nest to support the crystals singly and to locate selected surfaces thereof in a given plane, a holder for receiving the wires singly mounted with respect to the nest for movement between a loading position away from the nest and a mounting position where a lead wire therein will be held perpendicular to the selected surface and in engagement with the silver deposit, a heating element mounted for movement between a position away from the nest to a position over the selected face of the crystal and partially around the lead adjacent the headed end to heat the solder until it melts and to heat the silver to a wetting temperature for the solder.

2,894,113
WELDING METHOD AND DEVICE
William M. Wakeley, Milwaukee, Wis., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application March 13, 1957, Serial No. 645,823
5 Claims. (Cl. 219—96)



1. In a method of welding articles having a low rigidity comprising the steps of: simultaneously impressing a

first and a second electric source across said articles while they are in spaced relationship; moving the articles into proximity with one another; said first electric source being high enough to create an electrostatic field to align the articles to be welded; and the second electric source effecting the weld.

2,894,114

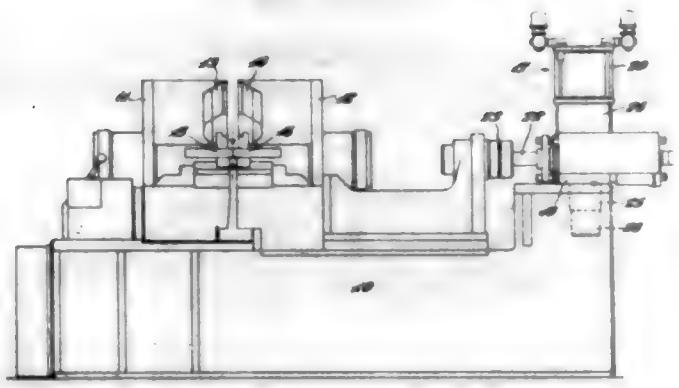
FLASH-BUTT RESISTANCE WELDING MACHINES

David Gray Morison, Inverness, Scotland, assignor to Resistance Welders Limited, Inverness, Scotland

Application February 19, 1958, Serial No. 716,187

Claims priority, application Great Britain February 28, 1957

6 Claims. (Cl. 219—101)



1. In a flash-butt resistance welding machine comprising a frame including a fixed head, a moving head, a ram cylinder mounted on the frame, a ram in said cylinder acting on the moving head, a liquid reservoir, and a compressed-air actuated pressure-multiplying device for placing under pressure liquid acting in the ram cylinder to displace the ram and thereby move the moving head towards the fixed head, provision of a pressure-multiplying device comprising two plungers operating respectively in two pressure chambers, common pneumatic means acting simultaneously on both said plungers, conduit means connecting said pressure chambers to said ram cylinder, and valve means in said conduit means operable to effect selectively simultaneous connection of both pressure chambers to the ram cylinder or connection of one of the said pressure chambers to the ram cylinder and of the other of said pressure chambers to the liquid reservoir.

2,894,115

METHOD OF AND APPARATUS FOR PROGRESSIVELY HEATING METAL STRIP BY THE DIRECT PASSAGE OF AN ELECTRIC CURRENT THERETHROUGH

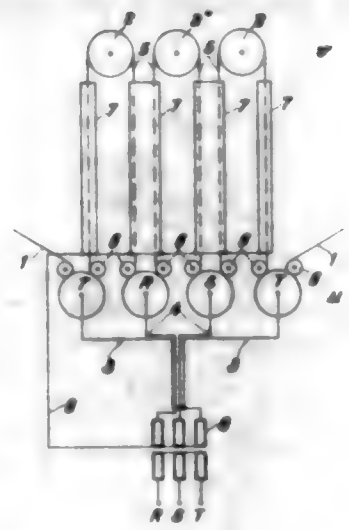
Fritz Alf, Remscheid-Hasten, Germany, assignor to Deutsche Edelstahlwerke Aktiengesellschaft, Krefeld, and Allegemeine Elektricitats-Gesellschaft, Berlin-Grunewald, Germany

Application January 16, 1958, Serial No. 709,255

Claims priority, application Germany January 22, 1957

14 Claims. (Cl. 219—155)

1. A method of progressively heating metal strip by the direct passage therethrough of electrc current which consists in travelling the strip to and fro between two oppositely located groups of deflecting rolls of which one group constitutes the current supply rolls and consists of four juxtaposed rolls of which three are each connected with one phase of the secondary of a high current transformer and of which two rolls constituting



outside rolls of the said group are electrically directly interconnected.

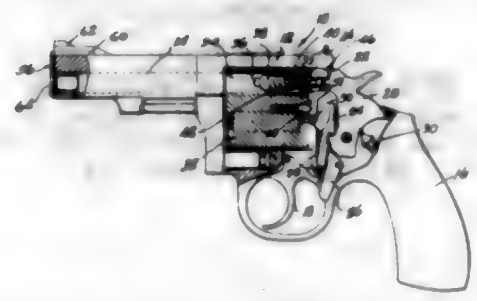
2,894,116

LIGHT PROJECTING UNIT FOR CONVERTING A REVOLVER FOR PRACTICE FIRING

Arthur H. Koskey, Anchorage, Alaska

Application October 18, 1957, Serial No. 691,003

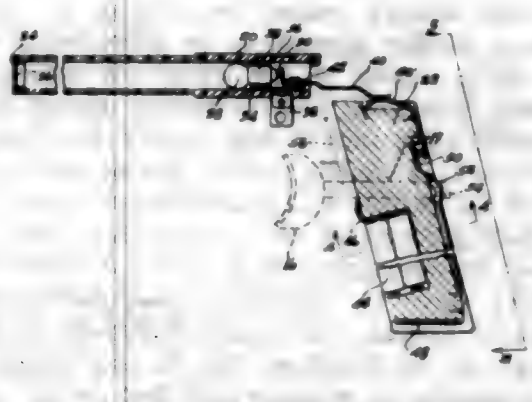
2 Claims. (Cl. 240—6.41)



1. For use with a revolver comprising a frame, a barrel extending longitudinally from the frame, a hand grip depending from the frame, a trigger operatively projecting from the frame in advance of the hand grip and having a cylinder advancing pawl attached thereto, a hammer pivotally carried by the frame, a firing means operatively connecting the trigger to the hammer for cocking and releasing the hammer, a firing pin slidably mounted in the frame in front of the hammer so as to be engaged by the hammer and moved forwardly thereby and spring means engaging the firing pin to normally retain it in a rearward position and said frame having a recess at the base of the barrel adapted to normally rotatably receive a cylinder formed with cartridge containing bores selectively alignable axially with the bore of the barrel and with the firing pin as the cylinder is rotated by the pawl; a light projecting unit for converting the revolver for practice firing; said unit comprising an electrically conductive cylinder having means mounting it in place in the recess with the cylinder being adapted to remain in a stationary position, said cylinder having opposing ends, one of said ends facing the firing pin and having an uninterrupted surface so as not to be reactive to movements of the cylinder advancing pawl, said cylinder having a first longitudinal bore formed therein and through the ends and the first bore being in alignment with the bore of the barrel and the firing pin, an insulated socket mounted in the bore adjacent the end facing the firing pin, an incandescent bulb fitted in the socket and facing toward the barrel and having a base contact, said socket having an axial bore exposing the base contact of the bulb to the firing pin, a coil spring conductor housed axially in the socket bore and extending from engagement

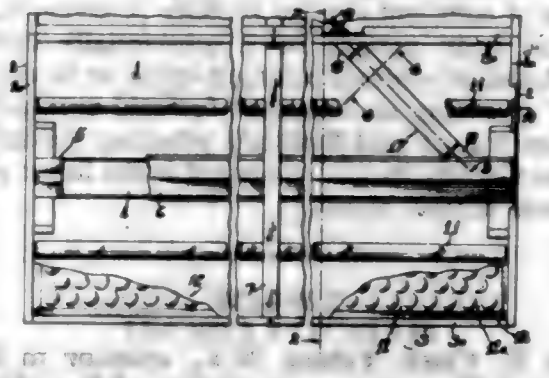
with the base contact of the bulb to the said end of the cylinder, said bulb having a shell contact, said cylinder having at least one further longitudinal bore, a dry cell battery mounted in said further bore and having a contact terminal at the end of the cylinder facing the firing pin, a conductive element mounted in said end of the cylinder and connecting the contact terminal of the battery with the shell contact of the bulb, said battery having a base contact electrically connected to the cylinder which is in electrical contact with the portion of the frame supporting the firing pin so that when the firing pin engages the coil spring conductor in the socket bore, a circuit is completed through the firing pin to illuminate the bulb and means mounted in the barrel for concentrating and focusing the light rays from the bulb.

2,894,117
LIGHT PROJECTING UNIT FOR CONVERTING AN AUTOMATIC PISTOL FOR PRACTICE FIRING
Arthur H. Koskey, Anchorage, Alaska
Application October 18, 1957, Serial No. 691,004
3 Claims. (Cl. 240—6.41)



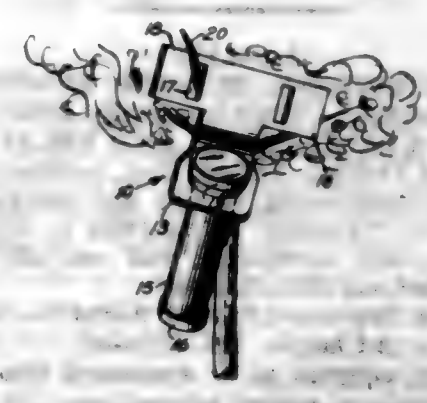
1. For use with an automatic pistol having a handle portion and frame adapted to support a barrel and the handle portion being provided with a chamber adapted to receive a removable clip and the pistol having a trigger mechanism including a trigger and a trigger bar extending rearwardly from the trigger into the handle portion and adapted to be operatively connected to a hammer of the pistol; a light projecting unit for converting said pistol for practice firing, said unit comprising a member of a shape and size substantially equivalent to the shape and size of the chamber and removably fitted in the chamber, said member having a top wall and a rear wall and having a cavity formed therein to releasably receive a dry cell battery assembly, and the member having a grounding means extending from the cavity for contact with the battery assembly to ground the battery assembly to the frame, a first conductive element extending from the cavity and carried by the member, said first conductive element having a contact end disposed at the rear wall and being normally urged outwardly from the rear wall, a second conductive element carried by the member and having a contact end overlying the contact end of the first conductive element, means cooperatively provided between the trigger bar and the first conductive element for retaining the said contact end of the first conductive element out of engagement with the contact end of the second conductive element when the trigger is in its normal forward position and said means releasing the contact end of the first conductive element for automatic rearward movement into engagement with the contact end of the second conductive element when the trigger is pulled and the trigger bar is moved rearwardly, said second conductive element overlying the top wall of the member, a barrel mounted on the frame and handle portion, an illumination means mounted in the barrel and including a bulb having a contact element extending into the top of the chamber and engaged with the second conductive element and an imperforate member fitted in the barrel forwardly of the bulb and formed with a center opening to expose the illuminating rays from the bulb when the said contacts of the conductive elements are in engagement.

2,894,118
FLUORESCENT FIXTURE
Robert Thallon, San Francisco, Calif., assignor, by mesne assignments, to All-Brite Fluorescent Fixtures, Inc., a corporation of California
Application February 21, 1955, Serial No. 489,426
9 Claims. (Cl. 240—9)



1. In an electrical light fixture, an enclosure having a top side, depending opposed lateral sides and opposed ends, the said enclosure having a bottom opening and the sides and ends having inwardly protruding flanges, a longitudinal wire enclosing channel member mounted against the top side of the enclosure and having longitudinal sides, fluorescent tube supporting sockets arranged to opposite sides of the channel member and adjacent the ends of the enclosure, one side of the channel member and an adjacent lateral side of the enclosure having side openings therein, apertured fittings secured within the side openings of the channel member and the enclosure, the fitting secured within the opening in the side of the enclosure having means securing such side to a side of a similar enclosure, an elongated wire supporting channel element extending between the fittings and having depending end flanges secured to and supported by the fittings, the said channel element having a lower longitudinal bight-providing side and an enclosed elongated channel arranged in communication with the apertures of the fittings, and one or more translucent panels supported on the flanges of the ends and lateral sides of the enclosure, in an enclosing position with respect to the bottom opening of the enclosure.

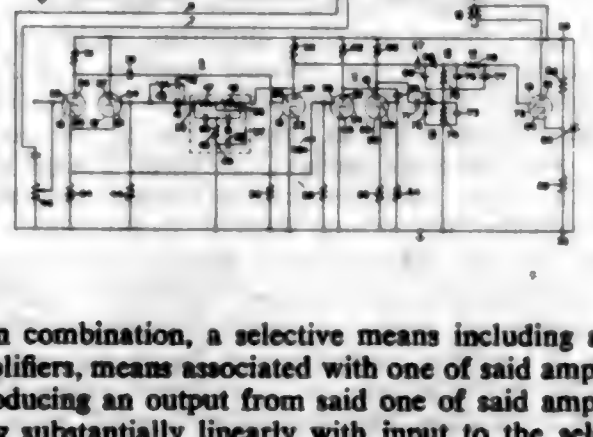
2,894,119
FLASHLIGHT HOLDER
Victor J. Stenger, Arcola, Ill.
Application September 25, 1957, Serial No. 686,079
1 Claim. (Cl. 240—52.5)



A one piece T-shaped flexible holder for supporting a substantially cylindrical shaped flashlight having an enlarged lens collar portion adjacent the light emitting end thereof, solely by a circular abutment formed by a circular opening therein comprising, in combination, a T-

shaped blank of substantially flexible material, said blank having a longitudinal section with a substantially square base portion at its lower end of greater width than its intermediate portion thereof and a transverse rectangular shaped portion at its upper end thereof of a length at least twice the width of said intermediate portion, said base having a single circlular opening centrally located therein, said transverse rectangular portion having a rectangular shaped slot arranged adjacent each end thereof and extending substantially parallel to the longitudinal axis of said longitudinal section, said slots providing means for slidably receiving means for securing said blank to a supporting object, said circular opening in said base of sufficient size for slidably receiving the lower cylindrical body portion of a substantially cylindrical shaped flashlight with an enlarged collar at its upper lens end and providing an abutment for said enlarged collar upper lens end of said flashlight effecting yieldable support thereof solely by said abutment in the lower end portion of said flexible blank.

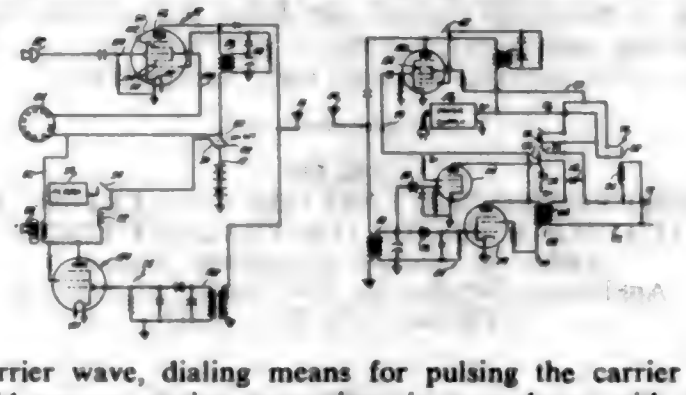
2,894,120
SELECTIVE CIRCUIT
Welmon D. Clark, Fulton, N.Y., assignor to General Electric Company, a corporation of New York
Application December 16, 1955, Serial No. 553,491
9 Claims. (Cl. 250—6)



1. In combination, a selective means including a pair of amplifiers, means associated with one of said amplifiers for producing an output from said one of said amplifiers varying substantially linearly with input to the selective means for signals up to a predetermined amplitude and thereafter producing an output which increases with input at a decreasing rate, means associated with the other of said amplifiers for producing an output from said other of said amplifiers varying substantially linearly with input to said selective means for signals up to and beyond said predetermined amplitude, means for differentially combining said outputs for producing a differential output which increases in one polarity with applied signal and thereafter decreases, and means responsive to said differential output above a predetermined amplitude.

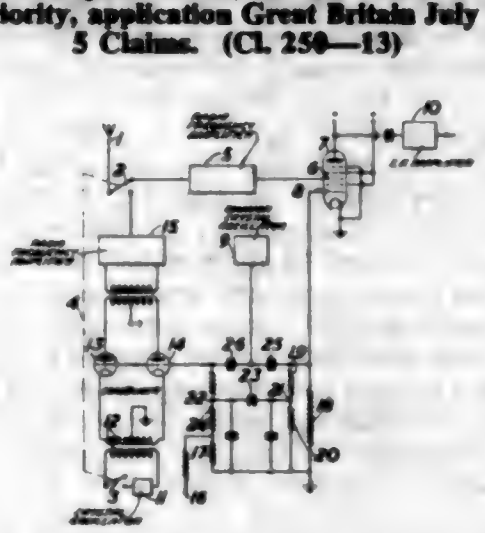
2,894,121
RADIOTELEPHONE SYSTEM FEATURING SWITCHING CIRCUIT FOR PORTABLE RADIO TRANSMITTER AND RECEIVER
Raymond Paul Phillips, Terrell, Tex., assignor, by direct and mesne assignments, of one and one-half percent to Warrick D. Morison, Jr., or Ollie L. Morison, Detroit, Mich., and ninety-eight and one-half percent to E. V. Mitchell and Billie S. Estes
Application February 28, 1956, Serial No. 568,402
3 Claims. (Cl. 250—6)

3. Apparatus adapted to be connected into a conventional dial telephone system comprising: a fixed station having a transmitter for producing a first modulated carrier wave, and a receiver; and a remote station including a transmitter for producing a second modulated carrier wave, a receiver tuned to receive said first carrier wave including an alarm and a speaker, a master on-off switch, first circuit means including terminals of said on-off switch for connecting said alarm to said remote station receiver to energize said alarm concomitantly with transmission of said first carrier wave by said fixed station transmitter when said on-off switch is in its "off" position, second circuit means including terminals on said on-off switch connecting said speaker to said remote station receiver to energize said speaker with the modulated signal from said fixed station transmitter when said on-off switch is in its "on" position, said second circuit means also including a circuit connection for energizing said remote station transmitter to produce said second



carrier wave, dialing means for pulsing the carrier of said remote station transmitter in accordance with the number to be called on the telephone system, and a microphone connected to said remote station transmitter for modulating said second carrier wave; said fixed station receiver including a first circuit device responsive to just the carrier of a second carrier wave for producing dialing impulses on the telephone line, a second circuit device responsive to modulation on said second carrier wave for supplying said modulation into the telephone system, and means responsive to the ringing voltage on the telephone line to energize said fixed station transmitter to produce said first carrier wave.

2,894,122
TRANSCEIVER WITH AUTOMATIC BIAS CONTROL OF MODULATOR
Clifford Edward Tate and Peter John Gordon Freeman, Chelmsford, England, assignors to Marconi's Wireless Telegraph Company Limited, London, England, a British company
Application September 12, 1955, Serial No. 533,665
Claims priority, application Great Britain July 13, 1955
5 Claims. (Cl. 250—13)



1. A radio transmitter of the kind in which a transmitted frequency is derived by combining oscillations of two locally generated radio frequencies in a combiner comprising a pair of balanced valves each including at least a cathode, a control grid and an anode, said transmitter including rectifier means for deriving a bias voltage for said control grids of said combiner from one of said two locally generated radio frequencies for applying the derived bias to the grids of said combiner, a resistance bridge connected with said rectifier means and including two balanced resistance portions, one resistance portion

constituted by two resistors connected in series through a junction point, and the other resistance portion including other resistors connected in a series circuit with a tap therebetween, a fixed bias source connected to one of the resistors in said last mentioned series circuit, the ratio of said resistors in the first mentioned resistance portion of said bridge being such that the potential at said junction point equals the potential at the tap between the other resistors in said second mentioned resistance portion when the amplitude of the oscillations of said one of said two locally generated radio frequencies is of such value that the potential at said tap biases the grids of said combiner substantially to the middle of the linear portion of the characteristic of said valves.

2,894,123

RADIO TRANSMITTER WITH FIXED TUNE AMPLIFIER STAGES

Clarence Weston Hansell, Port Jefferson, N.Y., assignor to Radio Corporation of America, a corporation of Delaware

Application December 31, 1953, Serial No. 401,581
3 Claims. (Cl. 250—17)

1. A transmitter comprising the following components all located adjacent each other at a common transmitting site: a source of carrier frequency waves, means for modulating said waves in accordance with intelligence to be transmitted, to thereby produce a modulated carrier frequency wave, a source of waves of a frequency substantially higher than said carrier frequency, a modulation circuit receptive of said modulated carrier frequency wave and of waves from the last-mentioned source and operating to modulate said modulated carrier frequency wave onto the higher frequency wave, an amplifier fixed-tuned to the frequency of said last-mentioned source and connected to the output of said modulation circuit, a detector circuit connected to the output of said amplifier to demodulate the output of said amplifier so as to derive said modulated carrier frequency wave, a tunable filter network connected to the output of said detector circuit to pass only multiples, including unity, of frequencies found in said modulated carrier frequency wave, terminals connected to the output of said tunable filter network for transferring such output to a transmitting antenna, and common means for adjusting the frequency of said first-named source and for varying the tuning of said filter network.

2,894,124

BROAD BAND OMNI-POLARIZED MULTIPLE ANTENNA SYSTEM WITH EACH ANTENNA HAVING INDIVIDUAL DETECTOR AND LOW FREQUENCY COUPLING NETWORK

Leon Himmel, Cedar Grove, and Henry F. Kuras, Fairlawn, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Application January 7, 1954, Serial No. 402,672
3 Claims. (Cl. 250—20)

3. A broad band omni-polarized antenna system comprising a plurality of angularly disposed rhomboidal shaped metal sheet antennas, a metal reflector member in spaced relation to said plurality of antennas, the spacing between said reflector member and the metal sheet forming each antenna being varied between the terminals of the antenna to introduce vertical and horizontal polarization radiation characteristics, a plurality of crystal detector means each coupled to one end of each of said antennas, means to terminate each of said antennas in a resistive

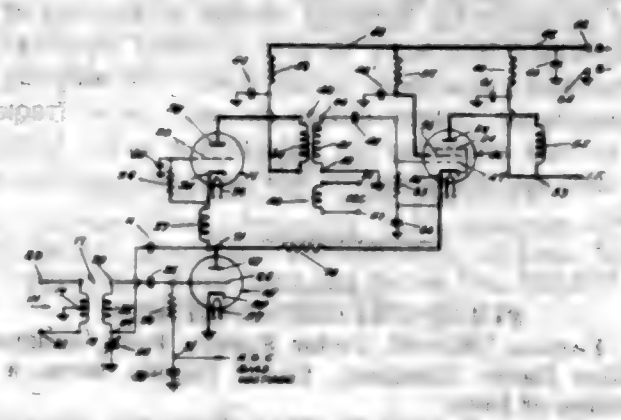
load at the opposite end of each of said antennas, an equalizing network in series with each of said antennas, each of said equalizing networks comprising a resistor and capacitor in parallel, said network being coupled to one end of said resistive load, a capacitor and means to couple said capacitor between ground and the junction of said equalizing network and said resistive load, and means coupling the outputs of said antennas in parallel.

2,894,125

CASCODE TELEVISION TUNER WITH STAGES HAVING INTER-RELATED SPACE DISCHARGE CURRENTS AND COMMON GAIN CONTROL

Cleon F. Frey, Pasadena, Calif., assignor to Standard Coil Products Co. Inc., Los Angeles, Calif., a corporation of Illinois

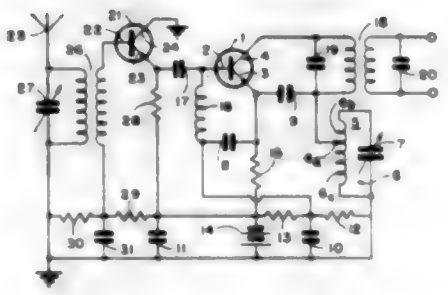
Application May 25, 1955, Serial No. 510,934
3 Claims. (Cl. 250—20)



3. In a television tuner, a first grounded cathode triode, a second triode, a coupling impedance connecting the anode of the first triode to the cathode of the second triode, a tunable circuit connected to the input grid of said first triode, circuit connections to the grid of the first triode applying automatic gain control thereto, a mixer electron tube, a coupling impedance connecting the anode of said second triode to a control electrode of said mixer electron tube, a D.C. circuit connection from the anode of said first triode to the cathode of said mixer electron tube, a source of D.C. supply, and D.C. circuit connections extending from said source to the anode of said mixer electron tube and the anode of said second triode, said D.C. source flowing to the anode of said first triode from both the second triode and the mixer electron tube through the D.C. connections thereto, whereby an

overall automatic gain control is effected while maintaining the tuned characteristics of said tuned circuit effectively uniform over a wide range of gain control.

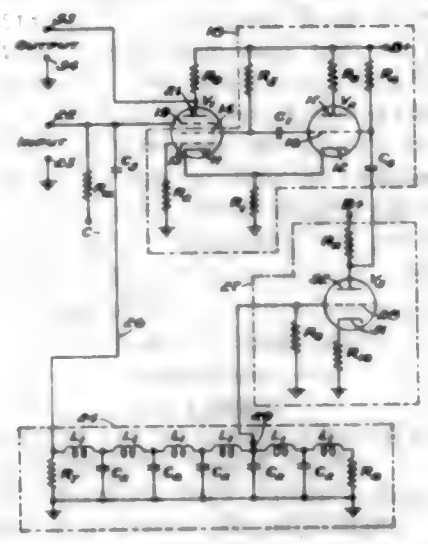
2,894,126
RADIO FREQUENCY AMPLIFIER AND CONVERTER
Thomas B. Horgan, Cincinnati, Ohio, assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Application January 24, 1957, Serial No. 636,037
6 Claims. (Cl. 250—20)



1. In a superheterodyne receiver, the combination comprising: a high impedance antenna; an untuned radio frequency stage comprising a transistor having a high impedance input circuit and a low impedance output circuit; a self-excited, low impedance, high power converter for converting a radio frequency signal to an intermediate frequency signal comprising a transistor having a base electrode, an emitter electrode and a collector electrode, a capacitive voltage divider connected between said collector and base electrodes, said capacitive voltage divider comprising a first condenser connected between said base and said emitter electrodes, and a second condenser connected between said emitter and said collector electrodes, and a network resonant at a predetermined frequency which is the difference between said radio frequency and said intermediate frequency, said network being connected across said capacitive voltage divider and comprising a series resonant circuit and an inductive shunt having a low impedance at said predetermined frequency, biasing means for the electrodes of said transistor for inducing current oscillations at said predetermined frequency in said resonant network; and low impedance aperiodic circuit means for coupling said low impedance output circuit of said radio frequency stage to said converter for injecting a radio frequency signal into said transistor to mix with said current oscillations.

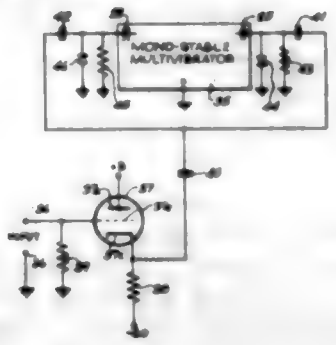
2,894,127
PULSE DECODING MEANS
Harry Folsom Stillwell, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application October 26, 1954, Serial No. 464,692
6 Claims. (Cl. 250—27)

1. A circuit which provides an output only when pulses with a predetermined time-spacing are received, comprising a single-shot multivibrator having a normally conducting electron control means and a normally non-conducting electron control means, said normally non-conducting control means having additional control elements not utilized by the multivibrator, a first of the additional elements controlling the conduction of a second of the additional elements, the first additional element connected to receive the input pulses, means for delaying the pulses by an amount substantially equal to said time-spacing, said delay means connected between the first additional control element of said non-conducting control means and one of the control elements of the normally conducting electron means, whereby output pulses are provided at the second additional element of the normally non-conducting means when it receives



pulses having substantially the predetermined time-spacing.

2,894,128
MONO-STABLE MULTIVIBRATOR
Melvin G. Wilson, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application December 24, 1954, Serial No. 477,571
3 Claims. (Cl. 250—27)

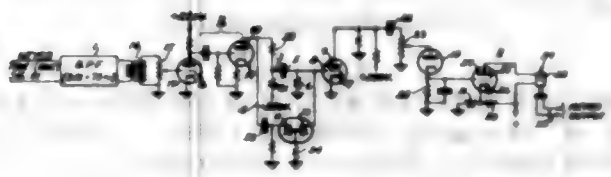


1. A mono-stable multivibrator comprising a first discharge device, a second discharge device, each of said devices having at least a plate, conductance-control electrode, and cathode, a source of energizing potential, a load impedance for said first discharge device to said source, a load impedance for said second device to said source, said last-mentioned impedance being of a value less than said first mentioned impedance, a common impedance connecting the cathodes of both said devices to said source, means for applying to the conductance-control electrode of said first discharge device a steady-state bias potential from said source of a value rendering said first discharge device normally conductive independent of the conductivity of either device, means including said source and said load impedance of said first discharge device for rendering said second discharge device normally non-conductive when said first discharge device is conductive, means for applying only the change of potential at the plate of said second discharge device to the conductance-control electrode of said first discharge device, means for applying a switching pulse to at least one of said control electrodes to initiate a switching cycle of said multivibrator, whereby said first devise is additionally biased off by rise of its cathode to a higher potential, said steady-state bias means for the control electrode of said first device being adapted to draw said latter control electrode toward a potential higher than said higher cathode potential, timing circuit means to delay the rise of potential of the control electrode of said first device for a predetermined time, and at least one output circuit coupled to an individual load impedance of one of said discharge devices.

2,894,129
TONE MULTIPLEX CIRCUIT WITH NARROW BANDWIDTH CHANNEL-SEPARATING FILTERS

Leland E. Thompson, Merchantville, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Application January 19, 1955, Serial No. 482,719
2 Claims. (Cl. 250—27)

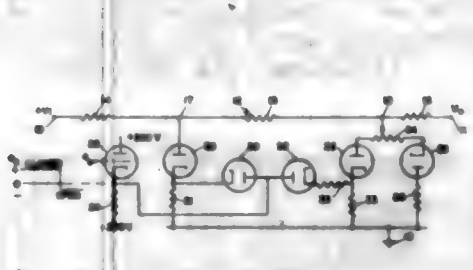


1. In a translating circuit for wave pulses having short rise and fall times, a narrow bandpass filter having rise and decay times which are long compared to the rise and fall times of said pulses and which therefore produces distortion in wave pulses applied to the input thereof, means for applying said pulses to the input of said filter, an amplifier tube having at least an anode, a cathode, and a grid, a resistance-capacitance coupling between the output of said filter and said grid, said coupling having a time-constant which is long compared to the decay time of said filter, said tube being biased to draw grid current during the rise time of the pulse voltage wave in the output of said filter, a diode having one electrode connected to said capacitance to provide a fast discharge circuit therefor, means responsive to the output of said filter for biasing said diode to conduct only between pulses appearing in the output of said filter, and a signal utilization circuit coupled to said anode.

2,894,130
SWITCHING CIRCUITS

Gunther J. Martin, Ridgefield, Conn., assignor, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas

Application June 24, 1955, Serial No. 517,771
11 Claims. (Cl. 250—27)

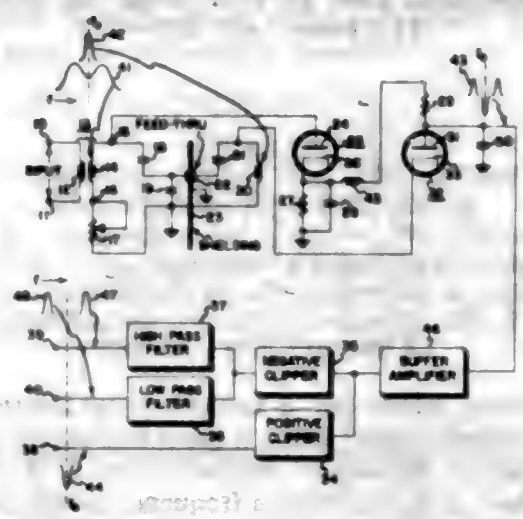


1. In a signal switching circuit, the combination comprising a plurality of resistors forming a series circuit having a signal input terminal and a signal output terminal, at least two switching diodes and a series resistor for each, similar first electrodes of said switching diodes being connected at spaced points along said circuit intermediate said terminals, said resistors for said switching diodes connecting the second electrode of each switching diode to a point of fixed reference potential, a direct current signal source having one terminal connected to said input terminal and the other treminal connected to said point to produce forward conduction in said switching diodes, and means for selectively driving said switching diodes to a reverse point in their characteristic.

2,894,131
ELECTRONIC SELECTIVE CIRCUIT OR THE LIKE

Hollice A. Favers, Tarzana, Calif., assignor to Hoffman Electronics Corporation, a corporation of California

Application July 18, 1955, Serial No. 522,566
2 Claims. (Cl. 250—27)

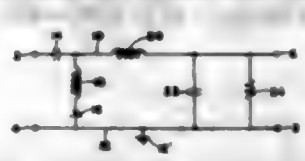


2. In combination, a transformer having a primary winding and a secondary winding, said primary winding being adapted for coupling to a modulated carrier signal source, first and second capacitively coupled parallel resonant circuits tuned to the frequency of said carrier signal, a magnetic shield interposed between said parallel resonant circuits, said first resonant circuit being resonant within a central frequency band symmetrical about the frequency of said carrier, said second resonant circuit including said secondary winding, said first and second parallel resonant circuits being slightly over-coupled whereby said second resonant circuit is resonant within side frequency bands above and below said central frequency band, a first detector coupled to said first resonant circuit for detecting and exhibiting as an output signal modulation component excursions of one polarity within said central frequency band, a second detector coupled to said second resonant circuit for detecting and exhibiting as an output signal modulation component excursions of opposite polarity within said side frequency bands, and output circuit means coupled to said first and second detectors for exhibiting a composite output signal comprising the modulation component excursions of a plurality of said frequency bands.

2,894,132
SECOND DETECTOR CIRCUIT

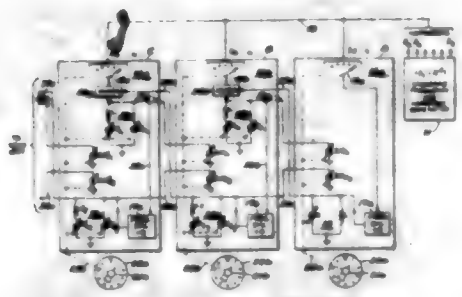
Robert Skyten, North Syracuse, N.Y., assignor to General Electric Company, a corporation of New York

Application April 23, 1956, Serial No. 580,035
5 Claims. (Cl. 250—27)



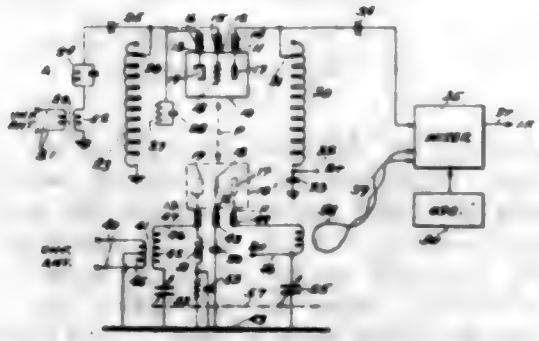
1. A circuit for detecting an input amplitude modulated carrier signal and for reducing the radiation of the harmonics generated during the detection process, said circuit comprising: first and second terminals to which the input amplitude modulated carrier signal is to be applied, a rectifier, means for providing a low impedance to frequencies in the range of said carried signal and for presenting a high impedance to harmonics of these frequencies, a lead that is short compared to the wavelengths of said harmonics for connecting said means and said rectifier in series, leads for connecting the series combination of said rectifier and means between said first and second terminals, and a load circuit connected in shunt with said series combination.

2,894,133
TUNING SYSTEM FOR FREQUENCY SYNTHESIZING MEANS
Victor W. Bolie, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application April 24, 1957, Serial No. 654,913
11 Claims. (Cl. 250—27)



1. Tuning means for a frequency synthesizer having plural adjacent digital units, a generator means providing a plurality of harmonics coupled to each of said units, each of said units including a frequency mixer having one input connected to the frequency output of its adjacent prior unit, and means connecting its other input to a selected one of the harmonics of said generator means; any given one of said units having, a first parallel-resonant filter connected to the output of its mixer; said first filter including, an inductance, and a first adjustable capacitance connected in series, a second adjustable capacitance connected across said series-connected inductance and capacitance, said first and second capacitances coupled to the tuning shaft of the digital unit having their respective filter, and a third adjustable capacitance connected across said second capacitance and coupled to the tuning shaft of the adjacent prior unit; a frequency divider of the given unit having an input connected to the output of said first filter; and a second parallel-resonant filter of the given unit connected to the output of the frequency divider of said unit, said second filter including, an inductance, and a first capacitance connected in series with the divider output, a second adjustable capacitance connected across said series-connected inductance and capacitance, said first and second capacitances coupled to the tuning shaft of the given unit, and a third adjustable capacitance coupled to the tuning shaft of the adjacent prior unit, whereby the frequency output of said given unit is the output of said second filter.

2,894,134
MULTI-BAND HIGH FREQUENCY CIRCUITS
Harold Rieth, Pasadena, Calif., assignor to Standard Coil Products Co. Inc., Los Angeles, Calif., a corporation of Illinois
Application June 20, 1956, Serial No. 592,536
2 Claims. (Cl. 250—40)

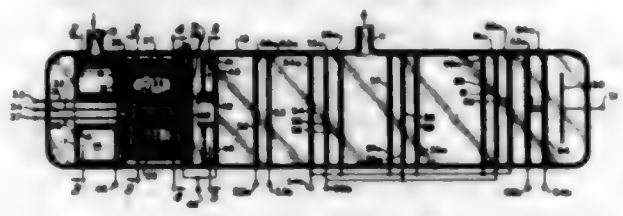


2. A high frequency electronic system having more than two individual circuit sections with at least one circuit section of high frequency, a vacuum tube of cylindrical shape with a plurality of electrodes therein, spaced annular connectors arranged along the tube body and in individual connection with said electrodes, stationary contact sets in circuit with the respective sections for individual connection with said connectors to establish an operative circuit section therewith in the system with said tube, said contact sets being arranged in an arcuate path, said tube being operative at the high frequency of said one circuit section as well as at the frequencies of the other circuit sections, a carrier supporting said tube, structure for selectively transporting said carrier and tube for direct engagement of its connectors with any one of said contact sets and thereby establish operation of the selected circuit section in the system, and a utilization circuit in common circuit relation with all of said circuit sections.

2,894,135
CHARGE BOTTLE FOR A MASS SEPARATOR
Philip H. Davidson, Millbrae, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application September 23, 1948, Serial No. 50,722
10 Claims. (Cl. 250—41.9)

1. A charge bottle for retaining the evaporative source material within a mass separator, comprising a vertically disposed cylindrical portion, a closure hermetically sealing the lower open end of said portion, an inner re-entrant cylindrical portion and extending axially and downwardly into the same from the upper end thereof, an apertured closure for said upper end, a heat-fusible wall for sealing said apertured closure, and evaporative source material in the form of a chemical compound compacted within the upper annular portion of said charge bottle formed by said re-entrant cylindrical portion, said chemical compound surrounding said re-entrant portion, whereby vapor from said chemical compound will pass outwardly from said charge bottle through said apertured closure.

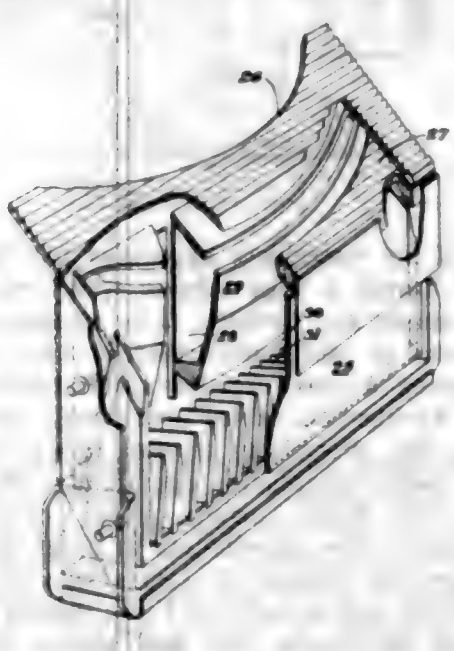
2,894,136
ION SOURCE
Marvin E. Reinecke, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application October 7, 1954, Serial No. 460,946
11 Claims. (Cl. 250—41.9)



2. An ion source comprising an electron emitting filament, a first cylindrical screen enclosing said filament, a second cylindrical screen concentric with and enclosing said first screen in spaced relation, a third cylindrical screen concentric with and enclosing said second screen in spaced relation thereby defining an annular ionization chamber between said second and third screens, a cylindrical wall concentric with and enclosing said third screen, means defining a second chamber adjacent one end of said ionization chamber, means to introduce molecules to be ionized into said second chamber, the wall of said second chamber adjacent said ionization chamber having an annular opening therein, an ion impermeable generally circular plate spaced from the end of said

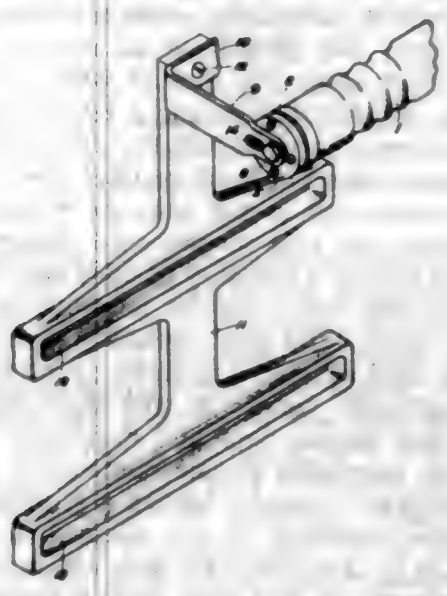
filament on the side of said ionization chamber opposite said second chamber, and an annular screen surrounding said plate, the plane of said annular screen and said plate being substantially perpendicular to the axis of said first cylindrical screen.

2,894,137
CALUTRON RECEIVER
Herbert F. York, Berkeley, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application May 14, 1946, Serial No. 669,537
4 Claims. (Cl. 250—41.9)



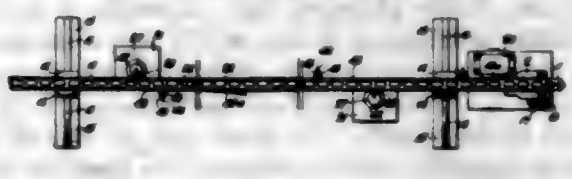
3. A multiple receiver unit for electromagnetic isotope separating apparatus of the type in which a plurality of ion beams are projected from a plurality of closely adjacent aligned ion sources, comprising a plurality of closely adjacent aligned collecting pockets for receiving the respective ion beams, a plurality of face plates, each defining an opening to the associated pocket, the surface of each of said face plates having a number of upstanding ridges so disposed that one side only of each ridge is exposed directly to the incoming ion beam.

2,894,138
SLIT ADJUSTMENT CLAMP
Kenneth R. McKenzie, Richmond, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application October 8, 1946, Serial No. 701,908
7 Claims. (Cl. 250—49.5)



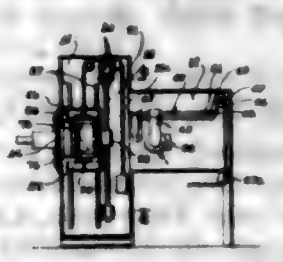
1. An electrode support of the character described comprising an insulator, a leveling plate carried by the insulator and having diametrically opposed attaching means secured to said plate and said insulator and diametrically opposed adjusting screws for bearing against said insulator, said attaching and adjusting screws being positioned in planes at substantially right angles to each other so as to provide adjustment about axes substantially perpendicular to each other, and an electrode associated with said plate for adjustment therewith.

2,894,139
APPARATUS FOR TREATING POLYETHYLENE CONTAINERS FOR PRINTING
William R. Magruder and Charles W. Gomerdinger, Kansas City, Mo., assignors to Injection Molding Company, Kansas City, Mo., a corporation of Missouri
Application July 18, 1956, Serial No. 596,971
9 Claims. (Cl. 250—49.5)



1. Apparatus for treating plastic containers in preparation for printing comprising continuous conveyor means, a plurality of container mountings spaced along a surface of said means and movable therewith, said mountings adapted to receive a plurality of plastic containers to be treated in preparation for printing thereon, means connected to said conveyor means to drive it at any predetermined velocity, a pair of devices for producing directional corona discharges into the atmosphere positioned on opposite sides of said conveyor means along the length thereof, at least one corona discharge element on each of said devices with the discharge ends thereof positioned at a level adjacent said container mountings and directed toward the conveyor, a source of electrical power for said corona discharge devices, and means contacting said containers during at least a portion of their travel on said continuous conveyor for fixing the position of the container surfaces to be printed relative the corona discharge elements.

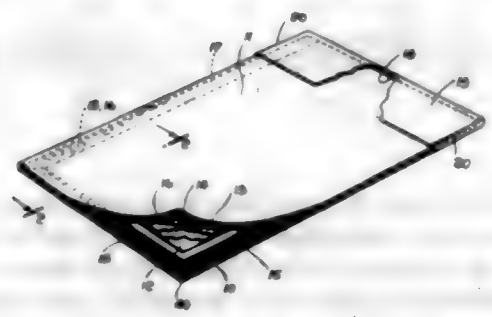
2,894,140
VERTICAL INDUSTRIAL X-RAY FLUOROSCOPE
Justin G. Schneeman, Rivera, Calif.
Application June 4, 1957, Serial No. 663,427
4 Claims. (Cl. 250—52)



4. Fluoroscopic inspection apparatus comprising: a radiation source for emitting a generally horizontal beam of penetrating radiation; support means positioned adjacent said radiation source and in general alignment with said beam for positioning a specimen in said beam, said support means having carriages capable of moving said specimen both vertically and horizontally, simultaneously, in a plane substantially perpendicular to and intersecting said beam; image-producing means for producing an image when activated by said beam, said image-producing means being positioned in said beam after said specimen; shielding means for protecting personnel from said radiation; power-operated drive means for driving said support means, said drive means being operable from a remote station; an elongated support frame mounted adjacent said

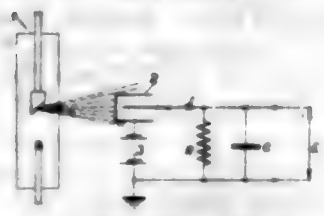
support means for supporting said radiation source; a holder carrying said radiation source with said beam directly toward said support means, said holder being mounted on said support frame for longitudinal movement thereon to carry said source toward and away from said support means; power-operated drive means for moving said holder on said support frame, said drive means being operable from a remote station; and a support arm on the opposite side of said support means from said support frame and supporting said image-producing means in said beam as aforesaid.

2,894,141
FILM HOLDER
Alan S. Kollock, New Hyde Park, N.Y.
Application May 8, 1957, Serial No. 657,797
8 Claims. (Cl. 250—68)



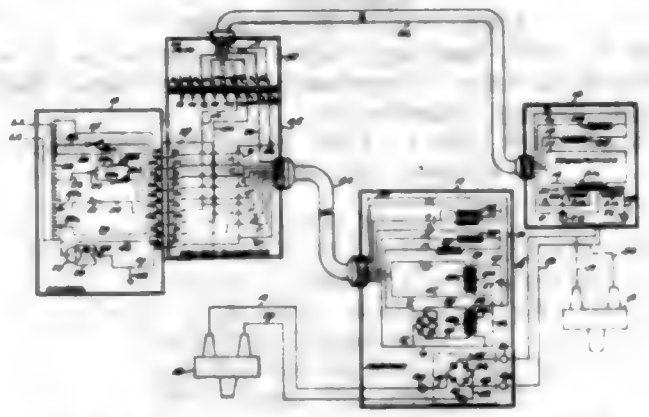
4. A film holder adapted to retain a negative without exposure to light comprising a pair of flat, sheet-like plate members positioned in overlying relation, fastener means secured along the longitudinal inner edges of said plates on three sides thereof and providing a longitudinal sliding relationship between the plates, and one of said sheet-like plates being shorter in length than the other, said fastener means comprising a substantially L-shaped tongue and groove cooperable to prevent the plates from separating.

2,894,142
APPARATUS FOR ASCERTAINING THE ANODE TEMPERATURE OF AN X-RAY TUBE
Jiří Oppelt, Prague, Czechoslovakia
Application August 14, 1956, Serial No. 603,895
2 Claims. (Cl. 250—83.6)



1. In a system for protecting against overheating of the anode of an intermittently operated X-ray tube; the combination of an X-ray tube, an ionization chamber exposed to the radiation of said X-ray tube, a source of electric potential, a discharge circuit including capacitance and resistance elements and having said ionization chamber interposed therein and connected to said source to be charged with an electric current from said source which depends upon the radiation received by said ionization during operation of the X-ray tube, said discharge circuit discharging during the intervals between successive periods of operation of the X-ray tube at a rate determined by said capacitance and resistance elements to be the same as the rate of cooling of the anode of the X-ray tube so that the voltage across said discharge circuit during charging and discharging thereof always corresponds to the actual heat conditions of the anode of the X-ray tube, said discharge circuit having an output, and means connected to said output and influenced by said voltage across said discharge circuit to indicate the actual temperature of the anode of the X-ray tube.

2,894,143
A.C.-D.C. X-RAY CONTROL CONNECTOR
Edward B. Graves, South Euclid, Ohio, assignor to Picker X-Ray Corporation Waite Manufacturing Division, Inc., Cleveland, Ohio, a corporation of Ohio
Application November 6, 1957, Serial No. 694,822
2 Claims. (Cl. 250—104)



1. In an X-ray energizing apparatus having a transformer case having a high tension transformer therein and having anode and cathode cable receptacles operatively connected to said transformer, and having a rectifier case having a wave rectifier with rectifier valves therein and having two cables operatively connected to said rectifier for alternating current input thereto and having two cable receptacles operatively connected to said rectifier for direct current output therefrom, and having said two cables terminating in plugs dimensioned to make electrical contact in said anode and cathode cable receptacles respectively, said first named anode and cathode cable receptacles and said second named two cable receptacles having the same dimensions for the anode and cathode cable connections respectively, whereby an X-ray tube may have its anode and cathode cable plugs connected to their corresponding receptacles in either said transformer or said rectifier as desired, and said apparatus including X-ray tube filament transformers in each of said cases, and including a rectifier valve filament transformer in said rectifier case having its secondary connected to the filaments of said valves, and including a control case having electricity sources for said high tension transformer primary and for said filament transformer primaries respectively, each of said sources being electrically connected with a plurality of female electrical contacts in said control case; the combination therewith of a first electrical cord having conductors connected to the primary of said tube filament transformer in said transformer case and having conductors connected to the primary of said high tension transformer, said first cord terminating in a connector plug having a plurality of male electrical contacts electrically connected with their respective conductors and positioned to connect said transformers to their respective sources when said male contacts engage said female contacts, a second electrical cord having conductors connected to the primary of said tube filament transformer in said rectifier case and having conductors connected to the primary of said valve filament transformers, said second cord terminating in an adapter plug having a plurality of male electrical contacts positioned in the same relative positions as the female contacts in said control case connected with their respective sources, said adapter plug having a plurality of male contacts electrically connected with their respective conductors in said second cord and positioned complementary to their respective female contacts in said control case, said adapter plug also having a plurality of female contacts complementary to and adapted to receive said male contacts of said connector plug which are connected with the primary of said high tension transformer, and first electrical jumper connections in said adapter plug between said last named female contacts and said adapter

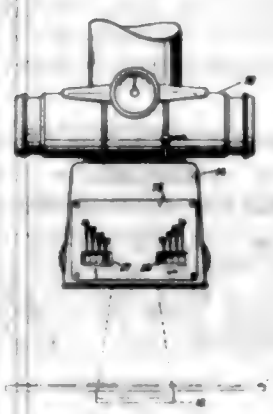
plug male contacts adapted to engage said control case female contacts connected with said high tension transformer primary electricity source.

2,894,144

DIAPHRAGM APPARATUS FOR X-RAY TUBES

David M. Barrett, Lyndhurst, Ohio, assignor to Picker X-Ray Corporation, Waite Mfg. Div., Inc., Cleveland, Ohio, a corporation of Ohio

Application October 21, 1957, Serial No. 691,220
5 Claims. (Cl. 250—105)



1. An X-ray diaphragm assembly comprising, a casing adapted to be mounted adjacent a source of X-rays and having openings at opposite ends for passing an X-ray beam therethrough toward a radiographic film, an adjustable diaphragm operatively disposed intermediate said openings for limiting the field of radiation, means for adjusting said diaphragm to vary the field of radiation at the film, and visible means coacting with said adjustable means throughout the range of operation to provide a direct indication of resultant field sizes for any selected target distance, said diaphragm adjusting means including a cable and pulley system and a cable controlling wheel, said visible means including field dimensional indications on the wheel and target distance indications on the casing adjacent the wheel.

2,894,145

DOUBLE MODULATOR UTILIZING PHOTO EMISSIVE MATERIAL

Kurt Lehovec, Williamstown, Mass., assignor to the United States of America as represented by the Secretary of the Army

Application November 18, 1952, Serial No. 321,254
3 Claims. (Cl. 250—210)

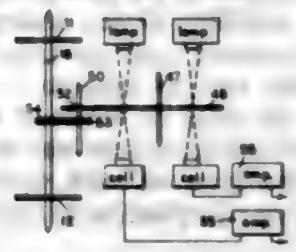
1. A photon modulation system including a semi-conductor light source, a light-sensitive cell for producing a photo current dependent upon applied electrode potential and incident light, an impedance network, means providing a potential having a band of frequency components for modulating the intensity of the light emitted from said light source, means for providing a potential across said light-sensitive cell of a fixed frequency and adjustable amplitude whereby said cell produces a photo current in said network which is proportional to the instantaneous summation of said modulations said impedance network including phase shifting means and a square law detector to detect any band frequency component at said fixed frequency.

2,894,146

IMPULSE GENERATING DEVICE

Harold F. Crotty, Dover, and John F. Scammon, Somersworth, N.H., assignors to General Electric Company, a corporation of New York

Application May 26, 1955, Serial No. 511,211
2 Claims. (Cl. 250—231)



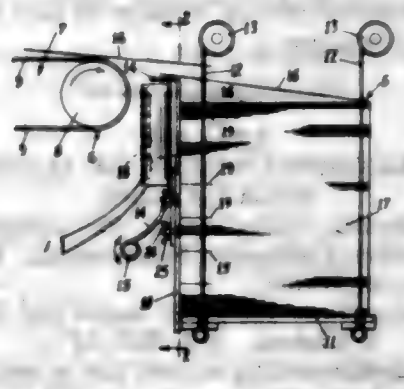
1. An impulse generating device for a watthour meter comprising a compact cage assembly which includes, in combination: a pair of flat spaced supporting plates which are secured together and removably mounted on the frame of an associated watthour meter; a lightweight opaque shutter in the form of a disc which is rotatably mounted between said support plates, said disc having an elongated arcuate slot therein; a pair of photocells mounted on one side of the disc, said photocells being diametrically disposed on opposite sides of and at equal radial distances from the axis of rotation of the disc, said photocells being mounted on a common base plate which is removably mounted on one of the support plates; a pair of lamps mounted on the other side of the disc, said lamps being mounted in a common housing which is secured to the other of said support plates, said lamps being positioned within said housing so that each lamp is opposite a corresponding photocell, said housing having a pair of apertures therein through which respective light beams are directed from the lamps to their corresponding photocells; said disc intercepting said light beams except when said arcuate slot lies in their path; and rotatably mounted gear means adapted to be driven by an associated watthour meter removably mounted between said support plates for driving said disc whereby said arcuate slot sequentially traverses said light beams, said cells being adapted for connection into electrical circuits from which may be derived electrical impulses each time the slot traverses a light beam.

2,894,147

LOAD LEVELLER

George Benson Munroe Siddall, Cornwall, Ontario, Canada, assignor to Howard Smith Paper Mills Limited, Montreal, Quebec, Canada

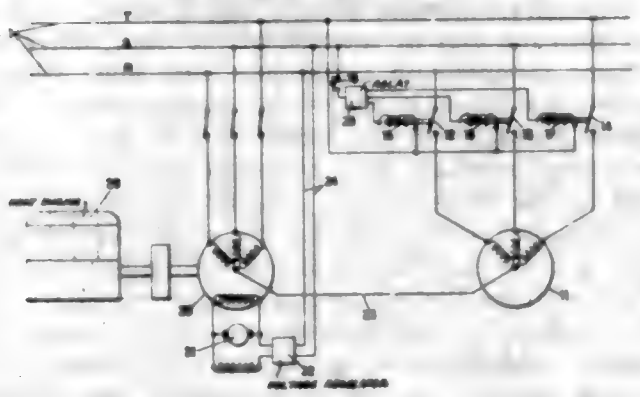
Application November 26, 1956, Serial No. 624,291
5 Claims. (Cl. 250—234)



1. In a device for continuously loading and counting sheets of paper or the like, means for maintaining the top of the constantly increasing load of sheets at or below a maximum predetermined level, a platform supporting the constantly increasing load, said platform being carried by platform raising and lowering mechanism, fixed level feeding means directing the sheets onto said

platform, a source of light directed onto the edge of the sheets being loaded and onto the vertical face of the rising load at a predetermined level below the said feeding means, a light sensitive device activated by the increasing degree of light sensitivity on the edges of the sheets on the face of the rising load, the said source of light and said light sensitive device being mounted on a common support bracket on said platform, the activation of said light sensitive device setting in motion the lowering of said raising and lowering mechanism to lower said platform and its load to a point where the light intensity on the face of the load is decreased and the light sensitive device ceases to be activated, and means to adjust the level of said source of light and said light sensitive device relative to said feeding means.

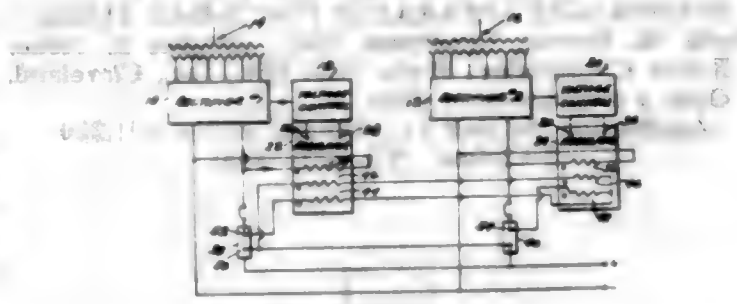
2,894,148
PLURAL GENERATORS HAVING HIGH SAFETY INTERCONNECTIONS
Jean Emile Trottier, Neuilly-sur-Seine, France, assignor to Societe a Responsabilite Limitee dite: Societe Gram-Electric, Pantin, Paris, France, a corporation of France
Application April 8, 1957, Serial No. 651,350
Claims priority, application France April 12, 1956
13 Claims. (Cl. 307—47)



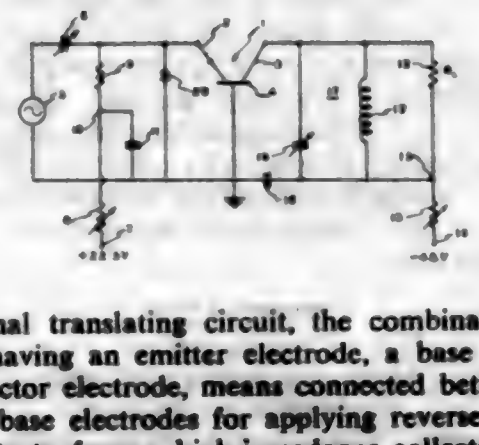
4. Apparatus for connecting in parallel two polyphase electro-magnetic machines having Y connected output terminals, each machine having a neutral terminal and said neutral terminals being connected together, said apparatus comprising automatic voltage regulating means connected across a pair of the output terminals of one of said machines and across the exciting circuit of the same machine to regulate the excitation thereof, single phase contactors connected between each output terminal of one machine and the corresponding output terminal of the other machine, contactor actuating solenoids for each contactor, and a clockwork controlled relay connected across a different pair of the output terminals of one of said machines and across each of said contactor solenoids which is adapted to successively actuate said contactors at time intervals greater than the length of time required to establish normal voltage in said line after the closing of a contactor.

2,894,149
CROSS-COMPOUNDING OF MACHINE REGULATORS
Isadore K. Dortort, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Application June 19, 1958, Serial No. 743,189
8 Claims. (Cl. 307—57)

1. A cross-compounding circuit for a first and second regulator of a first and second parallel connected machine respectively; each of said first and second regulators having a respective input for receiving an input signal to control the output of their respective machine; a first circuit means for measuring the average current delivered by said first and second means and imposing a signal functionally related to said average output on said input means of said first and second regulator; a second circuit means for each of said first and second regulators for measuring the current delivered by its respective machine and imposing a signal functionally related to the output current of each respective machine on the input of its respective regulator; said signals functionally related to average current and to the current of each respective machine being connected to said inputs of said regulators to oppose one another; the difference between said signals forming a compounding signal at the input of said regulator to cause said first and second regulators to maintain their respective machines at some predetermined load division.



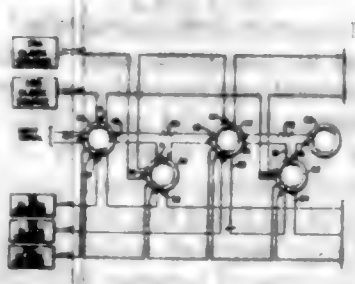
2,894,150
TRANSISTOR SIGNAL TRANSLATING CIRCUIT
Calvin C. Bopp, Cincinnati, Ohio, assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Application October 7, 1953, Serial No. 384,745
1 Claim. (Cl. 307—88.5)



In a signal translating circuit, the combination of a transistor having an emitter electrode, a base electrode and a collector electrode, means connected between collector and base electrodes for applying reverse-direction bias currents to form a high-impedance collector-to-base circuit, said means comprising an inductance, capacity and load impedance in parallel, a resistance in series with said load impedance and a current source in series with said resistance and said load impedance, means connecting said base electrode directly to a point of reference potential, a capacity connected between said point of reference potential and a point between said resistance and load impedance, a source of alternating current having a range of values of magnitude, a source of forward bias current and two resistors in series connected between said point of reference potential and said emitter and providing emitter current of approximately one tenth milliampere, a condenser connected between said point of reference potential and the junction of said last named two resistors, said last named two resistors and said condenser comprising a time constant circuit, means for capacitively coupling said source of alternating current to an input circuit comprising said emitter and base, said last named two resistances and said source of forward bias current having a resistance of approximately 250,000 ohms and thereby constituting a constant-current bias network for said emitter, said time constant circuit having a time constant long in comparison with the period of said alternating current but short in comparison with the period of expected amplitude variations in said alternating current and being proportioned to develop a voltage

linearly related to the peak value of said alternating current by rectification in said emitter-base circuit while the emitter bias current remains constant, said parallel inductance and capacity comprising a tuned circuit connected between said collector and base, across which tuned circuit appear output signals at the frequency of said alternating current, the amplitude of the voltage of said output signals being limited to a single predetermined value for said range of values of magnitude of said first-mentioned alternating current, and a varistor diode connected directly between the emitter electrode and the base electrode and having its anode connected to the emitter electrode for clipping the positive peaks of the alternating current signal from said source of alternating current, said varistor diode having a smaller forward impedance than the emitter-base impedance of said transistor.

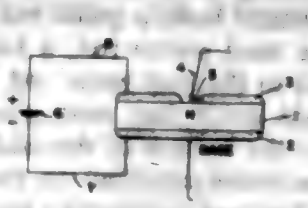
2,894,151
MAGNETIC CORE INVERTER CIRCUIT
Louis A. Russell, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application December 20, 1956, Serial No. 629,631
8 Claims. (Cl. 307—88)



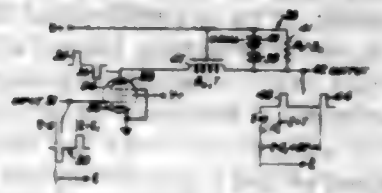
1. In a binary information handling system, a "not" circuit comprising a storage magnetic core, control winding means on said core; a first and a second coupling core associated with said storage core; input and output winding means on each said coupling core; circuit means including a resistor series connecting the control winding on said storage core with the output winding of said first coupling core and the input winding of said second coupling core; a first, second, third and fourth clock pulse source adapted to deliver a series of pulses in sequence displaced in time; winding means on said first coupling core and said storage core connected with said first clock pulse source so as to cause said first coupling core to shift to zero and said storage core to shift to one remanence state when energized; winding means on said second coupling core and said storage core connected with said second clock pulse source so as to cause said second coupling core and said storage core to shift to zero remanence state when energized; winding means on said second coupling core connected with said third clock pulse source so as to cause said second coupling core to shift to zero when energized; winding means on said first coupling core connected with said fourth clock pulse source so as to cause said first coupling core to shift to zero when energized.

2,894,152
CRYSTAL DIODE WITH IMPROVED RECOVERY TIME
Richard L. Anderson, Syracuse, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application May 16, 1955, Serial No. 508,548
9 Claims. (Cl. 307—88.5)

1. A semi-conductor diode having improved recovery time comprising a semi-conductor crystal, a rectifying electrode in contact with one surface of said crystal, a first soldered ohmic contact applied to said one surface so as to be spaced from and at least partially surrounding said rectifying electrode, a second soldered ohmic contact applied to another surface of said crystal, a source of potential, and means connecting said source of potential between said first and said second ohmic contacts in proper polarity to influence carriers injected into said crystal by said rectifying electrode away from said rectifying electrode.

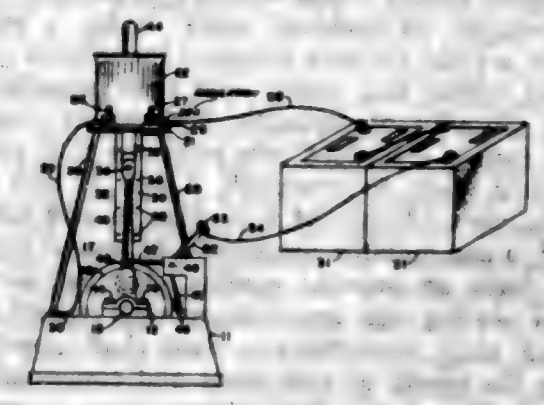


2,894,153
TIME DELAY CIRCUIT
Walter L. Glomb, Clifton, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Application October 10, 1955, Serial No. 539,530
10 Claims. (Cl. 307—106)



10. A time delay circuit comprising a delay line having a given time delay, a series circuit including a normally non-conductive diode and a resistance equal in value to the characteristic impedance of said delay line terminating one end of said delay line, said series circuit terminating said delay line in said characteristic impedance upon incidence of negative pulse energy thereon by conduction of said diode and to reflect positive pulse energy without inversion by non-conduction of said diode, a short circuit terminating the other end of said delay line to reflect and invert pulse energy incident thereon, input means coupled to said one end of said delay line to inject negative pulse energy on said delay line, and output means coupled intermediate said diode and said resistance to remove pulse energy therefrom at the instance of injection of negative pulse energy and negative pulse energy reflected from said short-circuit termination.

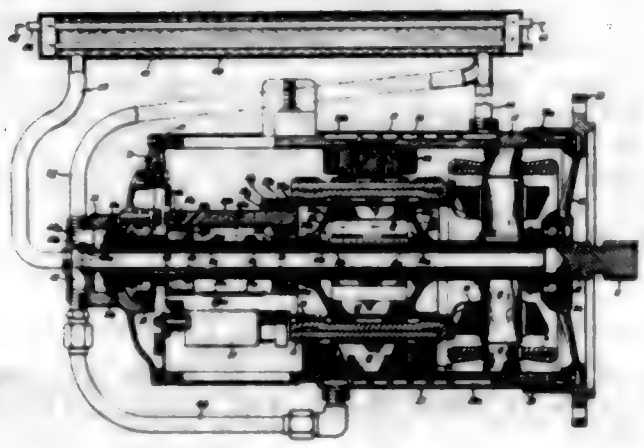
2,894,154
ELECTRIC ENGINE
Vincen P. McVoy, Hammond, La.; by decree of distribution to Sue M. Dixon, Margaret M. Rodell, and Garner M. Allen
Application January 4, 1954, Serial No. 401,787
3 Claims. (Cl. 310—23)



2. In an electric engine, a cylinder, said cylinder composed of a plurality of electric coils encased in a shell,

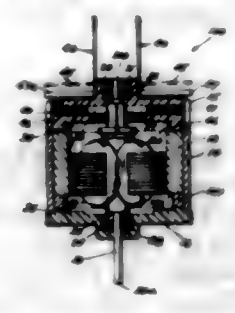
a vertical hole placed centrally of the coils, said coils connected one to the other, a ground plate connected to one terminal of said coils, a retainer plate supporting said ground plate and said cylinder, a steel piston rod working within said vertical hole, a guide rod fixedly attached to the base of the steel piston rod, a laterally extending guide bar attached to the said guide rod, a grooved guide plate receiving said guide bar, said grooved guide plate fixedly attached to the bottom of the said retainer plate, a connecting rod movably attached to the bottom of the said guide rod, a flywheel, connecting means provided between the said connecting rod and the said flywheel at a predetermined point between the center and the outer rim of the said flywheel, a shaft fixedly attached at one end centrally within the said flywheel, a supporting base, bearings attached to the said supporting base, said shaft rotatably mounted within the said bearings, a disc shaped commutator fixedly mounted on the said shaft, a wire connecting said ground plate with the said base, a second wire connecting the other terminal of said coils with a source of electricity, a third wire attached at one end to the source of electricity and at the other end provided with means whereby contact may be made as desired between the source of electricity and circumferential edge of the said commutator, said commutator provided with a predetermined portion of its circumferential edge composed of conductive material projecting inward and making contact with the said shaft, a second predetermined portion of the said commutator composed of non-conductive material, means of support provided for the cylinder, said support connected to and supported by the said base, and means provided to allow the various working parts to operate together with ease and at the proper time.

2,894,155
LIQUID COOLED DYNAMOELECTRIC MACHINE
Albert H. Labastie, Medford, Mass., assignor to General Electric Company, a corporation of New York
Application March 21, 1955, Serial No. 495,643
4 Claims. (Cl. 310—54)



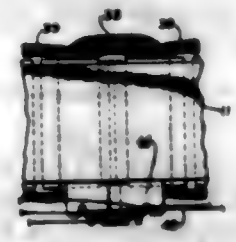
1. A liquid cooled dynamoelectric machine having a frame providing an enclosed stator cavity, a stator in said cavity, a rotor member mounted for relative rotation on a shaft within said stator, said rotor member comprising a plurality of magnetic laminations sealed together to form a leakproof core provided with generally axial cooling ducts therethrough, a pair of end flanges sealing the exposed ends of said ducts in said core with said shaft, a commutator concentrically spaced from said shaft to form an annular cooling chamber therewith, means for sealing said commutator with respect to said shaft, said shaft comprising a dual shaft construction extending the length of said rotor and commutator and having a hollow inner shaft spaced from a concentric hollow outer shaft, ports in the outer shaft, axially spaced rings on the peripheral surface of said inner shaft in contact with the interior surface of the outer shaft, said rings and said ports being located along the length of said shafts to direct flow of coolant from the space between said concentric shafts first into the axial ducts in the rotor core and secondly in the chamber beneath said commutator to provide a counterflow coolant path wherein the incoming and outgoing coolant is in a heat exchange relationship.

2,894,156
MINIATURE MOTOR
Allen H. Kent, New York, N.Y., assignor to Minitone, Inc., New York, N.Y., a corporation of New York
Application September 12, 1957, Serial No. 683,641
3 Claims. (Cl. 310—154)



1. A miniature motor being comprised of a housing, a field piece, and an armature; said housing comprising an open ended central section and a pair of end brackets positioned over the ends of said central section; said armature including a shaft and a plurality of armature segments symmetrically disposed about said shaft; bearings mounted to each of said end bracket; said field piece and said armature being disposed within said housing; said field piece being interposed between said plurality of armature segments and said central section; said shaft being supported by said bearings and projecting through one of said end brackets beyond the confines of said housing; an individual winding associated with each of said plurality of armature segments; a commutator carried by said shaft in axial alignment therewith and electrically connected to said windings; a pair of brushes and individual coil springs biasing said brushes into engagement with said commutator; said commutator being of lesser diameter than said armature; said brushes and said coil spring extending radially from said commutator; an individual contact member in operative engagement with each of said coil springs; a common fastening means, including an insulating member, maintaining said contact members in operative engagement with said coil springs and securing said end brackets to said central section.

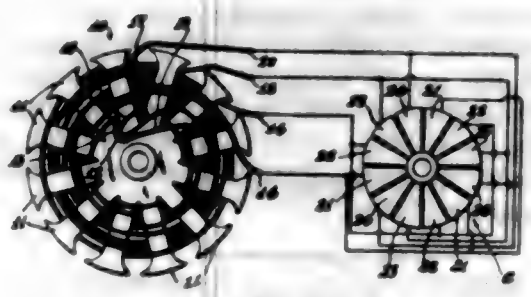
2,894,157
WINDING FORMS FOR DYNAMOELECTRIC MACHINES
Wayne J. Merrill, Garrett, Ind.
Application July 20, 1956, Serial No. 599,132
6 Claims. (Cl. 310—179)



4. In a dynamoelectric machine having a laminated stator having slots forming inwardly extending teeth, inward ends of said teeth forming a rotor bore, means securing the stator laminations together, coils extending through selected slots and wound around selected teeth, and lengths of wire uniting said coils; a winding form residing on at least one selected tooth, said winding form

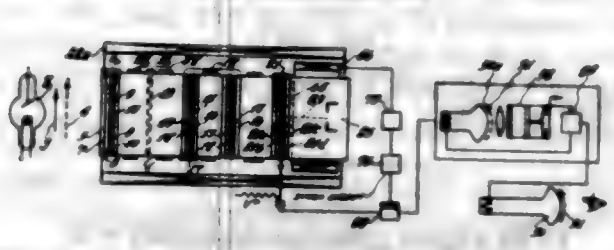
including first and second wall members, said first and second wall members connected by a transverse member which extends generally radially of said stator, said first wall member resting on said selected tooth closer said bore than said second wall member, said first wall member being of greater height and shorter length than said second wall member, a supporting rib on said first wall member on a side opposite said transverse member extending from the top portion of said first wall member and tapering outwardly toward the bottom portion of said first wall member and engaging said selected tooth, wall means defining an arcuate surface on said second wall member on a side opposite said transverse member which engages said means for securing said stator laminations together to keep said form from outward movement, a portion of said coil extending around said transverse member and between said first and second wall members, a notch on each said first and second wall members extending laterally of the extent of said wall members for anchoring said lengths of wire, and apertures extending through said second wall member through which the end portions of said lengths of wire extend to prevent slack therein.

2,894,158
MOTOR WINDING
Camio Pace, Waterbury, Conn.
Application August 31, 1956, Serial No. 607,395
1 Claim. (Cl. 310—180)



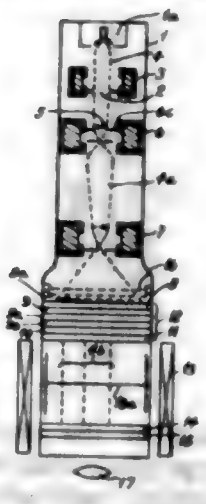
In a rotor for an electromotive machine, a circular magnetic element mounted on a central shaft, said element being provided with a plurality of radial salient poles arranged successively around the axis of said shaft and lying in a common plane, and a plurality of winding conductors connected together at their inner ends and arranged circumferentially about said element and woven in succession over two adjacent poles and under the next two adjacent poles, throughout the circumference of said element, each of said winding conductors being successively angularly offset with respect to the preceding winding conductor.

2,894,159
ELECTRONIC SYSTEM FOR X-RAY IMAGES
Edward Emanuel Sheldon, New York, N.Y.
Application June 1, 1951, Serial No. 229,496
6 Claims. (Cl. 313—65)



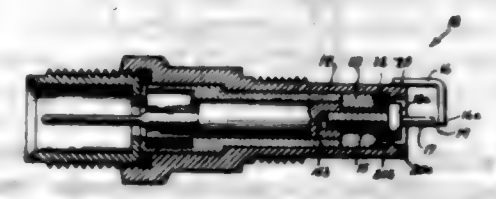
1. A vacuum tube having in combination a screen for receiving an image and converting said image into a current of electrons and a composite target for receiving said electrons, said target comprising luminescent means, a light transparent layer of conducting material and a photoconductive layer having an exposed surface.

2,894,160
ELECTRON MICROSCOPES
Edward Emanuel Sheldon, New York, N.Y.
Application September 9, 1954, Serial No. 454,981
9 Claims. (Cl. 313—65)



1. A vacuum tube comprising in combination a source of a beam of atomic particles, an examined specimen within said tube, means for supporting said examined specimen, means for irradiating said specimen with said beam, said beam being non-scanning in relation to said examined specimen, a screen for converting said beam after irradiation of said specimen into an electrical pattern corresponding to said specimen, said beam being furthermore non-scanning in relation to said screen, and means for producing an electron beam for irradiating said electrical pattern on said screen.

2,894,161
METHOD AND APPARATUS FOR ELECTRIC IGNITION
Shay J. Sheheen, Ithaca, N.Y., assignor to General Laboratories Associates, Inc., Norwich, N.Y., a corporation of New York
Application December 6, 1955, Serial No. 551,380
3 Claims. (Cl. 313—131)

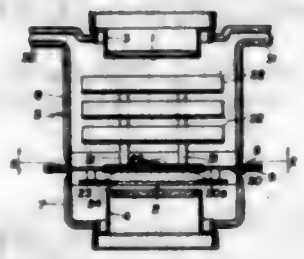


1. Apparatus for producing a spark in either electrically conductive or non-conductive fluid media, comprising two spaced electrodes, a member having at least a surface layer of semi-conductive material extending between and in electrical contact with said electrodes, said electrodes and said surface layer of semi-conductive material defining a first electrical energy discharge path having a predetermined breakdown potential when said electrodes are immersed in said electrically non-conductive fluid medium, and a pair of points remote from said member, respectively electrically connected to said electrodes and spaced apart by a distance substantially smaller than the spacing between said electrodes and constituting a jump gap, said jump gap having a breakdown potential in said non-conductive medium substantially greater than that of said discharge path, said jump gap being effective when said points are immersed in said electrically conductive fluid medium to provide a second electrical energy discharge path between said electrodes of lower impedance than said first path, said jump-gap having a limited cross-sectional area and being effective upon a discharge of current therethrough to change a portion of said conductive medium adjacent said gap to a gaseous state, and to create a spark discharge within said changed portion of the medium.

2,894,162
SPARK PLUG FOR INTERNAL COMBUSTION ENGINES
Feodor Ignatjev, East Norwalk, Conn.
Application November 18, 1957, Serial No. 697,192
4 Claims. (Cl. 313—141)

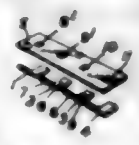
1. In a spark plug of the character described for igniting the fuel charge of an internal combustion engine and having a cylindrical shell of conducting material supporting a longitudinal coaxially disposed electrode insulated therefrom, a second electrode connected to said shell and radially disposed to complete a spark circuit with a terminal end of said first mentioned electrode, said second electrode being furcated to form laterally spaced electrode tips each longitudinally spaced beyond and defining a spark gap of substantially the same width with said terminal end of the first mentioned electrode.

2,894,163
ELECTRON DISCHARGE DEVICES
Richard K. Orthuber and Charles V. Stanley, Fort Wayne, and Cyril L. Day, Huntington, Ind., assignors to International Telephone and Telegraph Corporation
Application October 21, 1955, Serial No. 541,996
5 Claims. (Cl. 313—149)



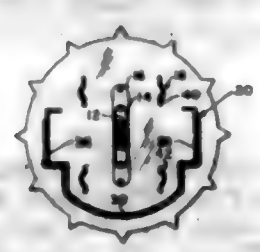
1. An electron discharge device comprising an envelope, two chemically-sensitive electrodes spaced apart in the envelope, a partition transversely across the envelope between the two electrodes and respectively spaced therefrom, an enlarged window in the partition through which the two electrodes can operatively interact, and a flat shutter mounted on the partition and abutting one side thereof, said shutter being selectively movable in a plane parallel to the plane of said partition across the opening.

2,894,164
GAS-FILLED ELECTRIC DISCHARGE TUBE
George Francis Klepp, London, England, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Application August 10, 1954, Serial No. 448,813
Claims priority, application Great Britain August 27, 1953
2 Claims. (Cl. 313—188)



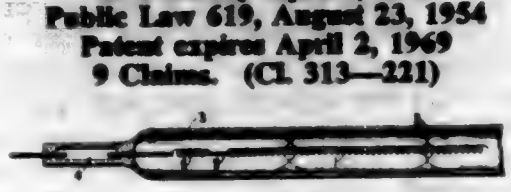
1. A cold cathode gas-filled electric glow discharge tube having therein a plurality of spaced cathodes and a common anode spaced therefrom and defining an array of discharge gaps therewith, said anode having a plurality of spaced apertures, each aperture cooperating with a different one of said cathodes, each cathode being positioned closer to the edge of its associated aperture than any other part of said anode, the wall of each aperture constituting the anode terminus of a discharge in the gap constituted by said anode and its cooperating cathode when a firing potential is applied across said anode and cooperating cathode, each aperture serving to localize the anode end of such discharge thereby preventing same from migrating across the surface of said anode.

2,894,165
FLANGED ANODE FOR BEAM POWER TUBES
Donald Say, Brookville, Pa., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application October 17, 1956, Serial No. 616,471
4 Claims. (Cl. 313—217)



1. An electron tube comprising a cathode, a control grid, a screen grid, a beam confining plate and an anode, the beam confining plate having laterally spaced apart portions and the anode being of a width slightly less than the spacing between said spaced apart portions and having at least one flange extending toward the grids, said flange being in the projection of the space between said spaced apart portions.

2,894,166
HEAT RADIATION DEVICES
Heinrich Mohn, Haller, Kreis Gelnhausen, Germany, assignor to W. C. Heraeus G.m.b.H., Hanau (Main), Germany, a German body corporate
Application May 18, 1955, Serial No. 509,335
In Germany April 2, 1949
Public Law 619, August 23, 1954
Patent expires April 2, 1969
9 Claims. (Cl. 313—221)

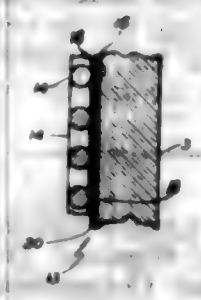


2. A heat radiation device adapted to radiate at least 1.5 watt per square centimetre of its surface, comprising an elongated electric heat conductor, a hermetically sealed tube arranged to enclose the electric heating conductor concentrically at a small distance therefrom, the tube being of a silicon dioxide material selected from the group consisting of milky opalescent quartz and quartz ware, and a gas mixture filling said tube, the gas mixture comprising 85 to 99% of rare gases, the remainder being gases selected from the group consisting of nitrogen and hydrogen, and the total gas pressure being above 500 mm. Hg.

2,894,167
ELECTRON DISCHARGE DEVICE
Cyril L. Day, Huntington, Ind., assignor to International Telephone and Telegraph Corporation, a corporation of Maryland
Application March 30, 1953, Serial No. 345,332
5 Claims. (Cl. 313—291)

1. An electron flow-controlling assembly for an electron discharge device comprising an insulating support,

a layer of conductive material provided on said support, a conductive control-grid element supported on said layer and comprising a screen-like member having apertures, insulation adhered to one side only of said screen-like member, said insulation contacting said layer and constituting a support and spacer for said screen-like member, and electron-emissive material provided only on the elemental areas of said layer which are not contacted by said insulation thereby providing intimately close but insulated spacing between such areas and said control-grid element.

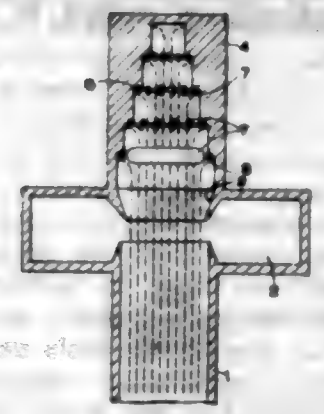


2,894,168
DIRECTIONAL POWER DIVIDERS
Arthur K. Wing, Jr., and John H. Bryant, Nutley, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Application November 20, 1953, Serial No. 393,404
3 Claims. (Cl. 315—3.6)

1. In a traveling wave electron discharge device having a housing, an electron gun disposed in the forward end of said housing for projecting a beam of electrons along a given path toward the rearward end thereof, and a helical wave propagating structure disposed within said housing coaxially of said given path for interaction between the wave energy and the electrons of said beam, helical input means disposed within said housing coaxially of and in coupled relation with the forward end of said propagating structure for launching wave energy into said propagating structure, helical output means disposed within said housing coaxially of and in coupled relation with the rearward end of said propagating structure for removal of the interacted wave energy from said propagating structure, and directional coupling means disposed within said housing intermediate to and distinct from said input and output means in coaxial coupled relation with said propagating structure for removal of reflected energy from the field of the wave energy traveling on said propagating structure.

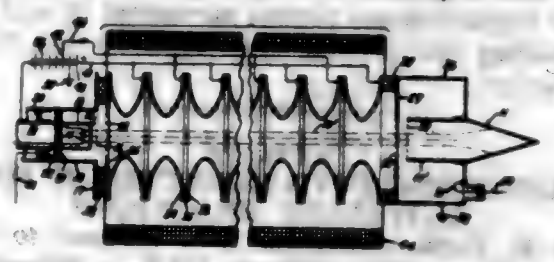
2,894,169
ELECTRON DISCHARGE DEVICES
Karl Heinz Kroschel, Hounslow, England, assignor to Electric & Musical Industries Limited, Hayes, England, a British company
Application March 23, 1954, Serial No. 418,198
Claims priority, application Great Britain March 24, 1953
8 Claims. (Cl. 315—5.38)

1. An electron discharge device comprising means for generating a beam of primary electrons a hollow elongated collecting electrode having a beam entry opening at one end thereof and means for directing said electron beam through said opening into said electrode, said electrode having arranged therein at least one barrier comprising a plurality of slats disposed transversely of said electrode disposed at a position within the hollow of said electrode set back from said beam entry opening at a distance of not less than ¾ of the width of said opening so as to leave an unobstructed hollow portion



defined by the wall of said electrode extending from said barrier to said beam entry opening said unobstructed hollow portion serving substantially to prevent secondary electrons released from said barrier from escaping from said hollow portion.

2,894,170
ELECTRON BEAM AMPLIFICATION APPARATUS
Joseph A. Rich, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Application April 28, 1955, Serial No. 504,519
4 Claims. (Cl. 315—5.41)

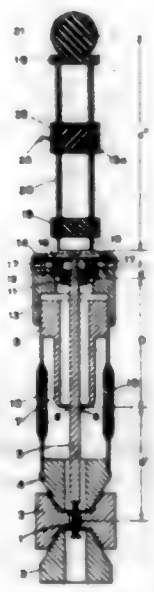


4. A high frequency electron beam amplifier comprising spaced electrodes, means for impressing a direct voltage current difference between said electrodes to establist an elongated electron beam therebetween, input circuit means coupled to the beam near one end thereof, a plurality of conductors encircling the beam along its length, means supporting adjacent conductors in mutually insulated and spaced relation, the width of said conductors and the spacing between adjacent conductors being small compared to the diameter thereof, means energizing alternate conductors respectively with voltages above and below the direct current voltage of the beam to provide a voltage having substantially sinusoidal variation with distance along the axis of the beam, means for producing a magnetic field in a direction parallel to the direction of said beam to maintain said beam focused and of substantially uniform cross-section along its length in the presence of said substantially sinusoidal voltage variation, and output circuit means coupled to said beam near the opposite end thereof.

2,894,171
MAGNETRONS
James Rodney Mitchell Vaughan, Stoke Poges, and Robert Henry Bright, London, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Application July 29, 1957, Serial No. 674,715
Claims priority, application Great Britain September 19, 1956
8 Claims. (Cl. 315—39.63)

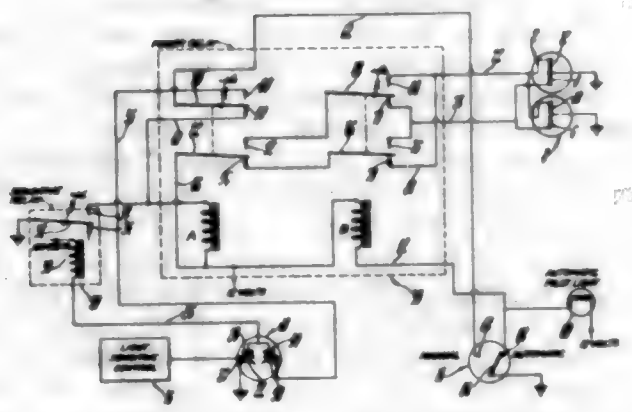
1. A magnetron comprising a cathode disposed within an aperture in an anode, wherein said cathode is mounted

at one end of an elongated support, which support is pivotably mounted about a point intermediate its ends and is provided near its end remote from said cathode with a collar having a part spherical outer surface which engages with a complementary spherical inner surface of an actuating member having a part spherical outer surface engaging a complementary surface in a bearing and



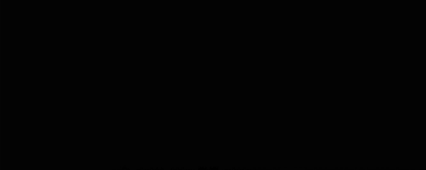
wherein the centre of curvature of the outer surface of said actuating member is not coincident with the centre of curvature of the outer surface of said collar so that tilting of said actuating member with respect to the axis of said cathode support causes pivotal movement of said support thus enabling said cathode to be centered with respect to said aperture.

2,894,172
REVERSING SWITCHING CIRCUIT FOR AUTOMATIC HEADLIGHT
Harold E. Todd, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 18, 1956, Serial No. 610,545
3 Claims. (Cl. 315—83)



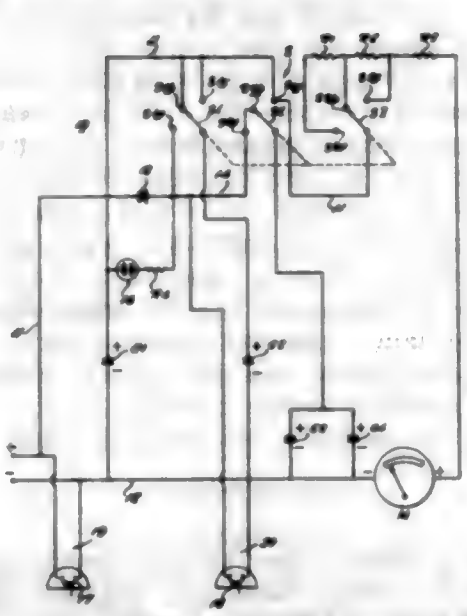
1. In a control system for vehicle headlamps, upper and lower beam filaments, a voltage source, a selector relay and a two position selector switch actuated thereby and connected with the voltage source, a reversing relay and a two position reversing switch actuated thereby and connected between the selector switch and the filaments, a dimmer switch movable between "automatic" and "manual" positions and being connected with the reversing relay whereby each actuation of the dimmer switch causes a different filament to be connected to the voltage source through the reversing switch, a light sensitive control circuit including a control relay and a control switch actuated thereby and connected with the selector relay to cause actuation of the selector switch in accordance with incident light intensity and selectively connect one of the filaments with the voltage source through the reversing switch when the dimmer switch is in the "automatic" position, and auxiliary switch actuated by the selector relay and being connected with the dimmer switch, a holding circuit for the selector relay including said dimmer switch in the "manual" position and the auxiliary switch when the selector switch is in one position, and a holding circuit for the control relay including the dimmer switch in the "manual" position and the auxiliary switch when the selector switch is in the other position.

2,894,173
SOLAR POWERED LIGHT SOURCE OR THE LIKE
Maurice E. Paradise, Highland Park, Ill., assignor to Hoffman Electronics Corporation, a corporation of California
Original application October 3, 1955, Serial No. 538,229. Divided and this application September 22, 1958, Serial No. 762,320
3 Claims. (Cl. 315—86)



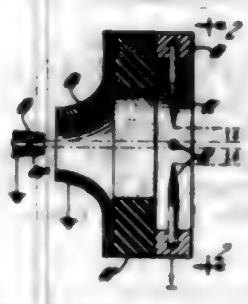
1. In combination, a storage battery, a solar cell coupled across said battery, a transformer having a primary winding and a secondary winding, means intercoupling said battery with said primary winding of said transformer and responsive to the voltage exhibited by said battery for generating a series of intermittent current surges through said primary winding, and a gas tube coupled across said secondary winding of said transformer.

2,894,174
ELECTRICAL PHOTOFLASH DEVICE
Harold Schankler, Brooklyn, N.Y., assignor to The FR Corporation, New York, N.Y., a corporation of New York
Application April 28, 1958, Serial No. 731,266
13 Claims. (Cl. 315—230)



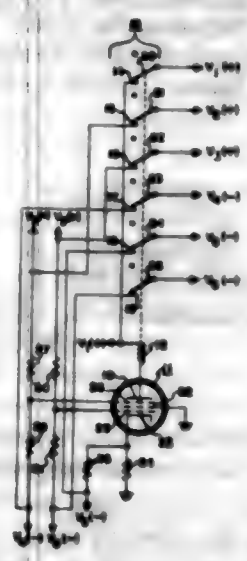
1. An improved circuit network comprising a first gaseous discharge tube having a pair of principal electrodes and a triggering electrode, a first storage condenser connected between said principal electrodes, means connecting said first storage condenser to a source of direct current, a unilateral impedance, a second storage condenser, and means connecting said second storage condenser across said first storage condenser through said unilateral impedance.

2,894,175
APPARATUS FOR SPRAY PAINTING
Lewis J. Lamm, Harrison Township, Macomb County, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Original application March 25, 1949, Serial No. 83,505. Divided and this application April 19, 1954, Serial No. 424,130
4 Claims. (Cl. 317—3)



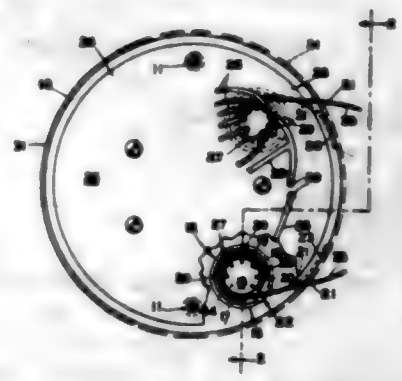
1. Apparatus for charging particles of coating material, comprising: a spray gun having an atomizing portion including an elongated spray tube with a bore for the passage of air and liquid; a current collecting electrode formed of electrically conductive material and located adjacent and forwardly of said spray tube and comprising a venturi shaped annulus having a bore of large surface area relative to the bore of said spray tube, the bore of said annulus being concentric with said spray tube and flaring outwardly as it extends forwardly; a discharge electrode comprising a ring of electrically conductive material located forwardly of said collecting electrode and an array of attenuated discharge members extending radially inwardly from said ring into and positioned generally normal to the path of travel of atomized particles issuing from said spray tube; and a ring of insulating material between said current collecting electrode and said discharge electrode.

2,894,176
LOAD PROTECTION CIRCUITS OR THE LIKE
James M. Hegarty, Alhambra, and Murray J. Hillman, San Gabriel, Calif., assignors to Hoffman Electronics Corporation, a corporation of California
Application November 4, 1954, Serial No. 466,712
8 Claims. (Cl. 317—46)



1. A load protection circuit including, in combination, a vacuum tube exhibiting a sharply rising, step-shaped transfer characteristic and having anode, cathode, limiter, accelerator, and quadrature electrodes, said accelerator electrode being maintained at a common reference potential; a relay having a solenoid with first and second end-terminals, a plurality of "energized condition" contacts, and a plurality of switching arms associated therewith adapted for coupling to a plurality of load circuits and normally closed when said vacuum tube is in its conductive state; first, second and third positive potential sources and first, second and third negative potential sources each being coupled to one of said relay contacts; said first end-terminal of said relay solenoid being coupled to said anode electrode of said vacuum tube; said second end-terminal of said relay solenoid being coupled to said first positive potential source; a first voltage divider circuit coupled between said common reference potential and said first negative potential source and consisting of first and second series-connected resistors the junction therebetween being coupled to said cathode electrode of said vacuum tube; a second voltage divider circuit coupled between said second positive potential source and said second negative potential source and consisting of third and fourth series-connected resistors the junction therebetween being coupled to said quadrature electrode of said vacuum tube; and a third voltage divider circuit coupled between said third positive potential source and said third negative potential source and consisting of fifth and sixth series-connected resistors the junction therebetween being coupled to said limiter electrode of said vacuum tube.

2,894,177
VACUUM TUBE MOUNTING
Arthur Francis Clarke, Jr., Cedar Grove, N.J., assignor to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Application July 23, 1953, Serial No. 369,929
10 Claims. (Cl. 317—101)

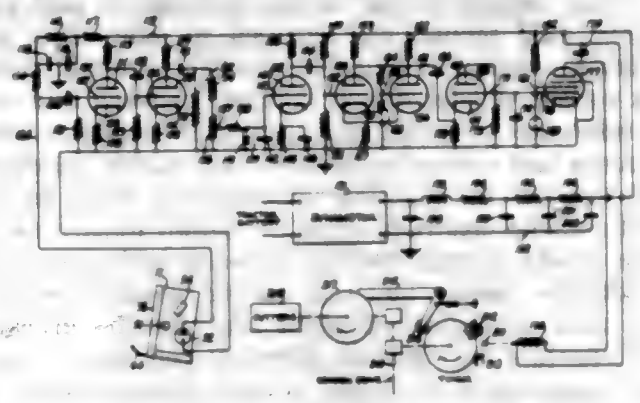


1. A mounting for an electronic component, comprising a metal enclosure, a support located within said enclosure, and a metal casing for the component mounted on the support and including a heat conducting projection extending into position for heat transferring contact with the enclosure said contact defining an area substantially larger than the cross-sectional area of the conducting projection to facilitate the transfer of heat by conduction to the enclosure.

2,894,178
PHOTOELECTRIC SYSTEM
James A. Cheseborough, Los Altos, David R. Scott, Palo Alto, and Harold F. Elliott, Menlo Park, Calif., assignors, by mesne assignments, to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Application January 18, 1956, Serial No. 559,936
5 Claims. (Cl. 317—130)

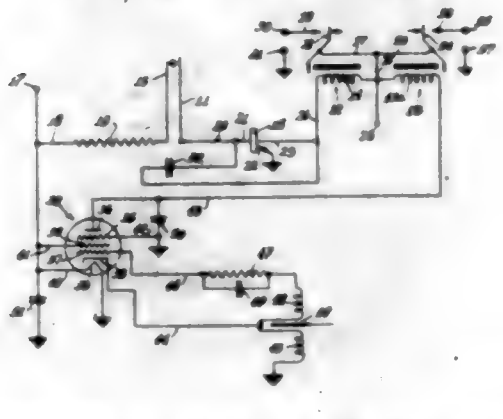
1. In a photoelectric system for effecting operation in response to light responses from plants, a box-like enclosure having a window of light transparent material in one wall of the same, means to move said enclosure along a row of plants, a source of light carried by said enclosure, rotating means serving to carry a plurality of reflecting surfaces adapted to receive and reflect said light whereby it is successively scanned across the window at a predetermined rate, said reflecting surfaces being so arranged that as the light is leaving one side of the window it is entering the other whereby the window is con-

tinuously illuminated by a constant amount of light, photoelectric means carried by said enclosure and serving to form pulses in response to light reflected by said plants, electronic means connected to said photoelectric means



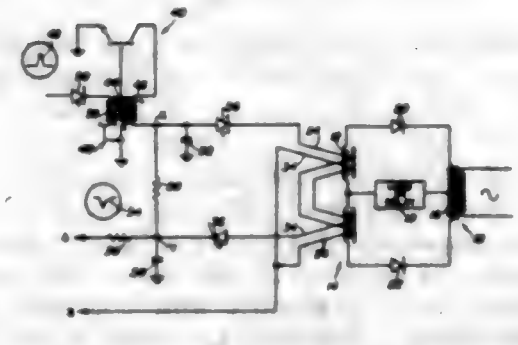
and forming an output signal responsive to the pulses having the scanning frequency, and electromagnetic means connected to receive the output of said electronic means and serving to effect said operation.

2,894,179
INSTRUMENT RELAY
Knud J. Knudsen, Woodbury, Conn., assignor to The Lewis Engineering Company, Naugatuck, Conn., a corporation of Connecticut
Application September 14, 1955, Serial No. 534,347
1 Claim. (Cl. 317—146)



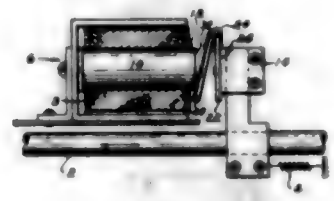
An instrument for giving an indication for a range of movement of the instrument and for giving a second indication at an end of the range of movement comprising a first means connectible to an external electrical indicating mechanism, and including a switch actuated by a solenoid for controlling energization of the indicating mechanism, and circuit means for controlling energization of the solenoid comprising a thermionic tube having a control grid, a cathode and a plate, means connecting the cathode and plate to a source of direct current to provide a potential difference therebetween with said solenoid being in series with the plate, an oscillatory circuit connected to the control grid and cathode including a pair of spaced inductance coils for reducing normal current flow in the tube between the cathode and plate and a vane operated by the instrument for passing between the coils to limit inductance therebetween and provide for normal current flow through the tube to energize the solenoid; and a second means connectible to an external electrical indicating device, and including a second switch actuated by a second solenoid for controlling energization of the indicating device, and a circuit for controlling energization of the second solenoid including an indicator actuated by the instrument and an electrical contact positioned in the path of movement of the indicator and constituting with the indicator a switching means, a transistor having an emitter, collector and a base with the base connected to the contact, leads interconnecting the emitter and collector in series with the second solenoid and the source of direct current for energizing the solenoid and an input lead connected to the contact and the source of direct current whereby upon engagement between the indicator and the contact current flows in the base-emitter of the transistor causing the resistance of the collector-emitter path of the transistor to be lowered to permit sufficient current to flow between the emitter and collector to cause energization of the second solenoid.

2,894,180
TRANSISTOR-SATURABLE REACTOR RELAY WITH OVER-FREQUENCY CUTOUT
Robert J. Price, Lakeside, Calif.
Application October 28, 1955, Serial No. 541,870
10 Claims. (Cl. 317—148)
(Granted under Title 35, U.S. Code (1952), sec. 266)



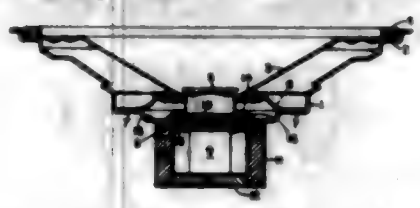
1. In a device of the class described, a load circuit, a voltage source for said circuit, means for establishing a first impedance in said circuit, a source of repetitive trigger pulses, means responsive to each pulse of a train of input trigger pulses for decreasing the impedance in said circuit, and means responsive to the repetition rate of said trigger pulses for establishing a second impedance in said circuit of the same polarity as the first impedance, when the repetition rate of said pulse train reaches a predetermined value.

2,894,181
ELECTROMECHANICAL DEVICE AND IMPROVED ARMATURE THEREFOR
Claire N. Brewer, Indianapolis, Ind., assignor, by mesne assignments, to International Typographical Union of North America, Indianapolis, Ind.
Application March 8, 1957, Serial No. 644,868
1 Claim. (Cl. 317—165)



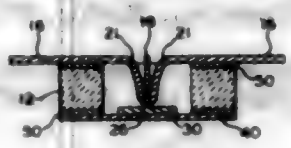
A device for imparting linear movement to a movable part, comprising a fixed electromagnet normally disposed in spaced relation to the movable part and operative when energized to cause the part to move linearly toward the electromagnet, and an armature disposed between and operatively connecting the electromagnet and the movable part, said armature comprising two hinged parts formed of magnetic material, means constantly urging the parts of said armature away from each other about their hinged connection, one of the parts of said armature being rigidly connected to the movable part, and the second of the parts of said armature when the electromagnet is de-energized being angularly related to the first part at their hinged connection and freely engaging and angularly positioned with respect to the electromagnet.

2,894,182
ELECTRO-ACOUSTIC TRANSDUCER
Siegfried J. Zaorker, Pennellville, and Benjamin J. Seggese, Liverpool, N.Y., assignors to General Electric Company, a corporation of New York
Application October 19, 1955, Serial No. 541,436
2 Claims. (Cl. 317—201)



1. A magnetic assembly comprising a cup of one magnetic material, one end of said cup defining a first opening, the other end of said cup defining a second opening, a bottom plate of another magnetic material mounted on said cup so as to close said second opening, a magnet mounted on said bottom plate inside said cup and extending in the direction of said first opening, the magnetic material of said cup being such that it would be saturated by flux emanating from an end of said magnet, and the material of said bottom plate being such that it can carry the flux produced at the end of said magnet without saturating.

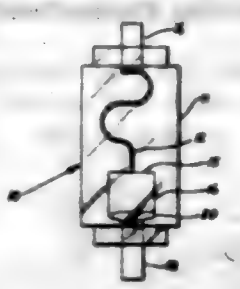
2,894,183
TRANSISTOR SUB-ASSEMBLY
Armen Fermanian, Stamford, Vt., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Application May 1, 1956, Serial No. 581,911
5 Claims. (Cl. 317—235)



1. An electrode subassembly for semiconductor devices comprising a pair of point contact electrodes each consisting of a flat metal resilient strip of foil having a punched-out point, insulating means supporting said electrodes, said insulating means having means for defining an aperture, said electrodes secured to a surface of said insulating means, each of said metal foil electrodes having a body portion and a terminal portion projecting at right angles to the main body of the respective foil into the aperture, a pair of plane surfaces and a pair of sides arranged at a bevel to the plane of said surfaces to form each terminal portion, the respective terminal portions positioned in the aperture with the broadest dimensions of the said shaped terminal portions facing each other and a spacer held between said portions by the resiliency of said metal.

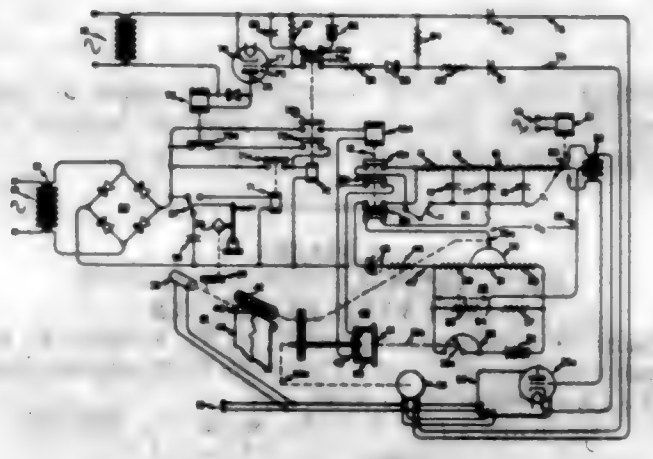
2,894,184
ELECTRICAL CHARACTERISTICS OF DIODES
Carlos W. Veach, Los Angeles, Calif., and Robert L. Crone, Tucson, Ariz., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Application June 29, 1955, Serial No. 518,882
12 Claims. (Cl. 317—236)

1. A semiconductor device of the point contact type comprising: a germanium crystal of one conductivity type having a doped region of the opposite conductivity type in a first face thereof; a whisker element doped with an active impurity of the conductivity type of said doped region and being welded at one end thereof to said doped region; and a continuous coating of germanium dioxide



extending over and surrounding said doped region and said welded one end of said whisker.

2,894,185
MEASURING AND RECALIBRATING SERVOSYSTEM
Wilbert E. Chope and Leo G. Mamas, Columbus, Ohio, assignors to Industrial Nucleonics Corporation
Application February 21, 1957, Serial No. 641,694
12 Claims. (Cl. 318—28)

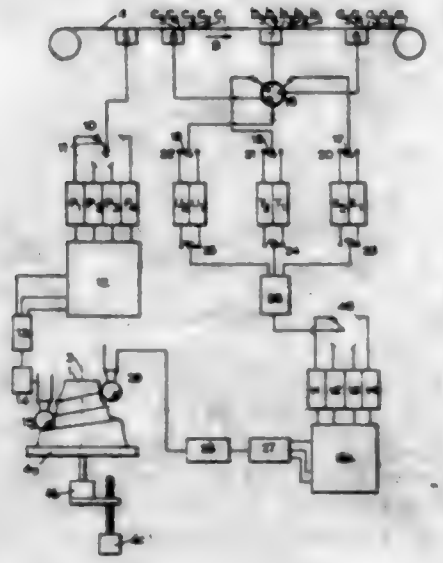


2. A standardizing circuit for a measuring system having a balancing voltage in opposition to the voltage derived from its measuring operation comprising: means for periodically interrupting the measuring operation of said system, a reference voltage, circuit means connecting said balancing voltage in opposition to said reference voltage during said periodic interruptions, driving means energized by the difference voltage between said balancing voltage and said reference voltage, means connecting said driving means to said circuit means to restore the value of said balancing voltage to that of said reference voltage, and means also connected to said driving means for disconnecting said circuit means and returning said system to its measuring operation when said balancing voltage is of a value equal to said reference voltage.

2,894,186
AUTOMATIC TOOLS AND OTHER APPARATUS FOR SHAPING WORKPIECES
Roland Allan Call, Slough, and George Ernest Evans Warder, Stamford Brook, London, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Application August 22, 1955, Serial No. 529,771
Claims priority, application Great Britain August 25, 1954
10 Claims. (Cl. 318—39)

1. Control mechanism, suitable for controlling an automatic machine in response to a record of discrete signals representing values of one co-ordinate of relatively widely spaced points on a desired locus in which there are a plurality of spaced substantially co-extensive lengths, comprising means for deriving discrete signals in succession from said record, first interpolating means responsive to said signals for generating interpolated signals represent-

ing values of said co-ordinate of closer points on said locus, and second interpolating means responsive to said discrete signals for deriving further interpolated signals rep-



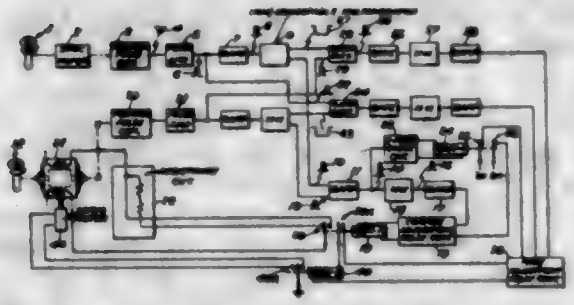
resenting values of said co-ordinate of points in another locus in which there are a plurality of lengths which interlace with said lengths of the first locus.

2,894,187

SYNCHRONIZATION OF MOTOR ROTATED ELEMENTS

Richard F. Chapman, Glendale, N.Y., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Application July 9, 1956, Serial No. 596,765
7 Claims. (Cl. 318—71)



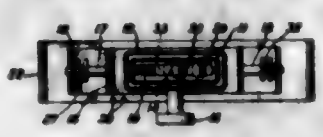
7. A system for synchronizing rotating elements comprising first and second rotating elements, first and second synchronous motors to respectively drive said elements, said second motor having a rotor and a stator wherein the stator is rotatably adjustable, first and second position pulse generating devices responsive respectively to said first and second motor rotor positions in order to produce position indicative pulses thereof, a coarse synchronization adjustment circuit including means to effect a slipping operation of said second motor, a fine synchronization adjustment circuit to effect rotatable adjustment of said stator, parallel circuitry means to couple said coarse adjustment circuit to each of the outputs of said pulse generating device for coincidence comparison and in the absence thereof to operate said coarse synchronization adjustment and parallel circuitry means to couple said fine adjustment circuit to each of the outputs of said pulse generating device for coincidence comparison and in the absence thereof to operate said fine synchronization adjustment.

2,894,188

TUNING FORK WITH ITS FREQUENCY IMMUNE TO THE EFFECTS OF GRAVITATION AND ACCELERATION

Frank Dostal, Great Neck, N.Y., assignor to American Time Products, Inc., New York, N.Y., a corporation of Delaware

Application February 9, 1956, Serial No. 564,497
7 Claims. (Cl. 318—127)



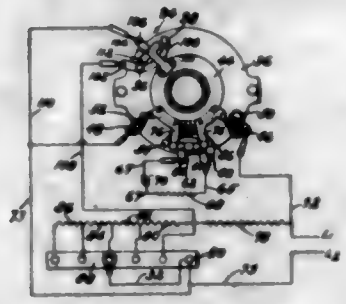
1. A tuning fork oscillator comprising a tuning fork, a fork driving coil, a pick-up coil, an enclosure within which the fork and both coils are integrally supported, a first ring, a first means pivotally supporting the enclosure within the first ring and permitting unobstructed rotation of the enclosure thereabout, the tuning fork being coplanar with the first pivot means, a mass weighting the enclosure to position its center of gravity below the first pivot means, a second ring, a second means pivotally supporting the first ring within the second ring and coplanar with and perpendicular to the first pivot means and permitting unobstructed rotation of the first ring within the second ring thereabout, a frame, a third means pivotally supporting the second ring within the frame and coplanar with and perpendicular to the second pivot means and permitting unimpeded rotation of the second ring within the frame thereabout, and individual connections, electrically isolated from but supported by the rings, from the frame to the driving and pick-up coils.

2,894,189

VARIABLE STALL-TORQUE ELECTRIC MOTOR

James H. Enright, Racine, Wis., assignor to In-Sink-Erator Manufacturing Company, Racine, Wis., a corporation of Wisconsin

Application December 28, 1956, Serial No. 631,246
7 Claims. (Cl. 318—287)



1. A variable stall-torque induction motor comprising in combination a main running winding, a starting winding in phase-shifted relation to the running winding, means for varying the stall torque of said motor, said means comprising an auxiliary impedance winding electrically connected to the running winding and having a plurality of adjustable taps, and a centrifugal reversing switch arranged to connect the starting winding in circuit with the running winding, alternately for one and then the other direction of rotation when the motor speed drops below a predetermined value.

2,894,190

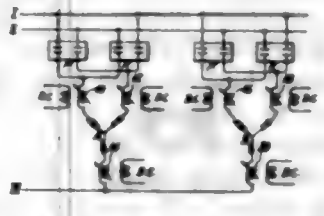
REACTOR CONTROLLED DUAL WINDING INDUCTION MOTOR

Philip L. Alger, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Application April 29, 1957, Serial No. 655,706
7 Claims. (Cl. 318—228)

1. A polyphase induction motor comprising a rotor supported for operation in a stator having three phase

primary windings arranged in two independent substantially identical half windings with alternate pole connections wherein the circuits for one of said half windings comprises only north poles and the other only south poles, magnetic amplifiers of the type having alternating and direct current coils mounted on a core thereof for providing adjustable alternating current voltages to said windings, each of said amplifiers being connected between each phase of said windings and a power source so that

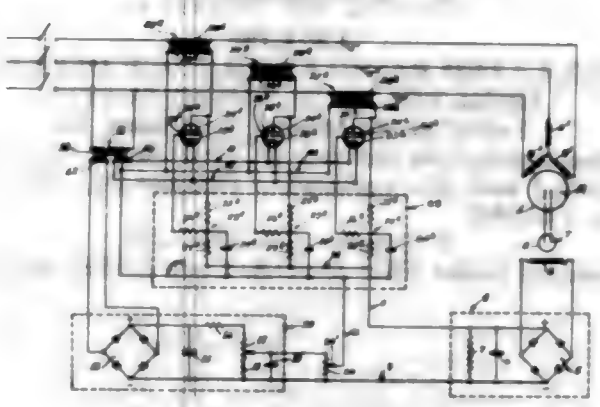


with rated voltage applied to said windings with said amplifiers fully saturated, said motor will deliver maximum torque at a desired speed, and by adjusting the magnitude of control currents in said coils, adjustable constant speed performance of the motor is obtainable over a speed range extending to a maximum in either the forward or the reverse direction, while simultaneously supplying the torque requirements of a connected load over a full range of motoring and braking torque.

2,894,191
SPEED CONTROL FOR ALTERNATING-CURRENT INDUCTION MOTORS

Wilson A. Charbonneaux, Dayton, Ohio, assignor to WacLine, Inc., Dayton, Ohio, a corporation of Ohio

Application May 27, 1957, Serial No. 661,869
8 Claims. (Cl. 318—229)

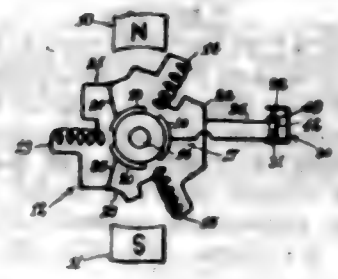


1. For use with polyphase alternating-current induction motors and the like; control means comprising reactors each having a primary winding and a secondary winding, each primary winding being interposed in one phase of the motor current-supply, means for producing a stable reference voltage, means for producing a sensory voltage, the value of which varies responsive to the variation in speed of the motor means for combining said reference and sensory voltages whereby to produce a control voltage which is the algebraic sum of the reference and sensory voltages, a resistance and a capacitance connected in series with the secondary winding of each reactor, an electron tube means for each reactor, said electron tube means having a plate-to-cathode circuit and a grid-to-cathode circuit, the secondary winding of the reactor associated with the tube means being series connected in the plate-to-cathode circuit, said capacitance being series connected in the grid-to-cathode circuit, and the control voltage being impressed on the grid of each tube means for causing said tube means to fire for a greater or lesser portion of each current cycle depending upon the instantaneous value of said control voltage.

2,894,192
MOTOR GOVERNOR

Henry A. Sherwood, Woodbridge, Conn., assignor to Minitone Inc., New York, N.Y., a corporation of New York

Application February 24, 1956, Serial No. 567,559
5 Claims. (Cl. 318—325)

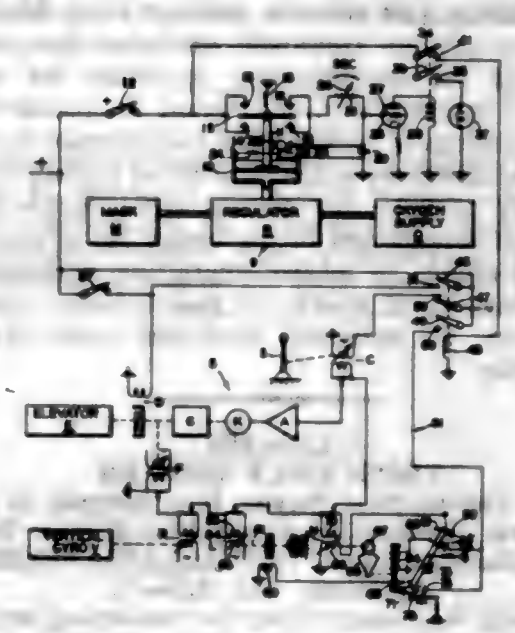


1. An electric motor comprising a rotor having electromagnetic means including circuits therefor; sets of electrical contacts, some of which are fixedly carried by the rotor; and means including a control member movable in response to centrifugal force, said member being movably mounted on the rotor and carrying other contacts of said sets, for continuously making and breaking one of said circuits through said electromagnetic means when the rotor is turning at a rate within a relatively low speed range, and for maintaining closed said circuit when the rotor is turning at a higher rate of speed, said electromagnetic means comprising three armature coils, said rotor having a commutator and said one circuit comprising a connection between two of the armature coils and a commutator segment.

2,894,193
EMERGENCY AIRCRAFT ALTITUDE CONTROL SYSTEM

Lester J. Reitman, New York, N.Y., assignor to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware

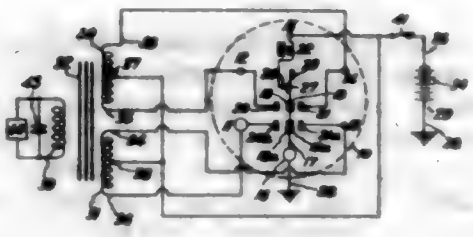
Application February 3, 1956, Serial No. 563,256
6 Claims. (Cl. 318—450)

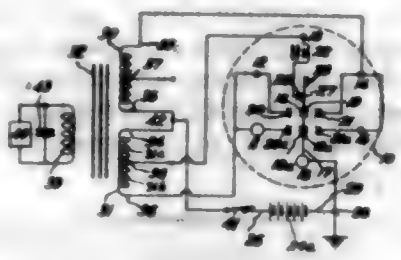


5. A safety device for use in an aircraft adapted to fly at an altitude at which the human pilot must use oxygen equipment, comprising an automatic control system for controlling the pitch attitude of the craft, a system for supplying oxygen to the pilot, said oxygen system including a breathing switch movable in response to the breathing of said pilot, a capacitor, means tending to charge and discharge said capacitor upon movement of said breathing switch, means actuated when said capacitor is abnormally charged to cause said craft to descend for a predetermined length of time, means actuated after said predetermined length of time for maintaining said

craft at the altitude level at that time, and means for determining the length of time required to charge said capacitor, whereby said capacitor is not charged as long as the pilot breathes at a predetermined rate but is charged when the pilot ceases to breathe at this predetermined rate.

2,894,194
ELECTRICAL POWER SUPPLY SYSTEMS
Reginald Francis Joseph Flood, Blakehurst, near Sydney, New South Wales, Australia, assignor to Amalgamated Wireless (Australasia) Limited, Sydney, New South Wales, Australia, a corporation of New South Wales
Application August 30, 1954, Serial No. 453,011
Claims priority, application Australia October 28, 1953
6 Claims. (Cl. 321—2)

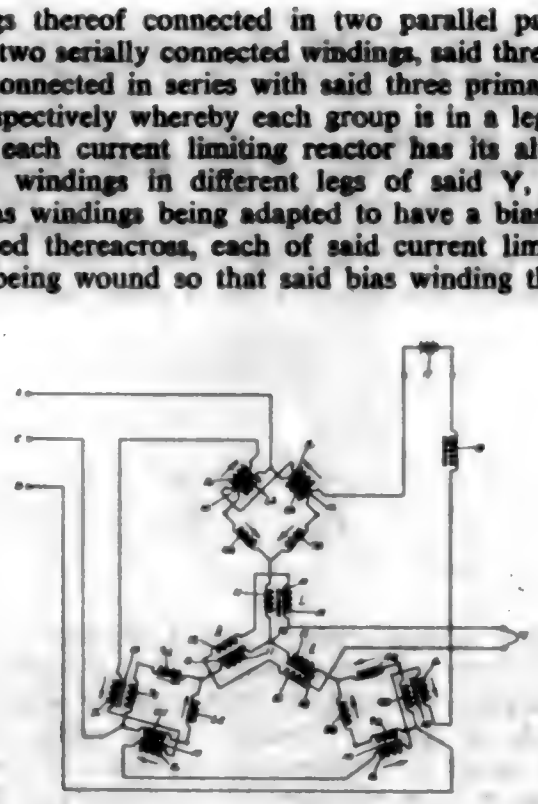




1. In an electrical power supply system employing an electrical vibrator of the non-synchronous or interrupter type and normally adapted for operation by a primary direct current source of low voltage, a vibrator transformer having two primary windings and a high voltage secondary winding, said primary windings being designed for parallel energization from said source of low voltage, a driving coil for intermittently operating the vibrating member of said vibrator, and means for connecting said primary windings in series and to said vibrator to be energized alternatively by a primary direct current source of low voltage of twice the normal value, means for connecting said driving coil to the center tap of one of said primary windings to receive energizing potentials from said last mentioned source of low voltage, and means for rectifying the potentials developed across the secondary winding.

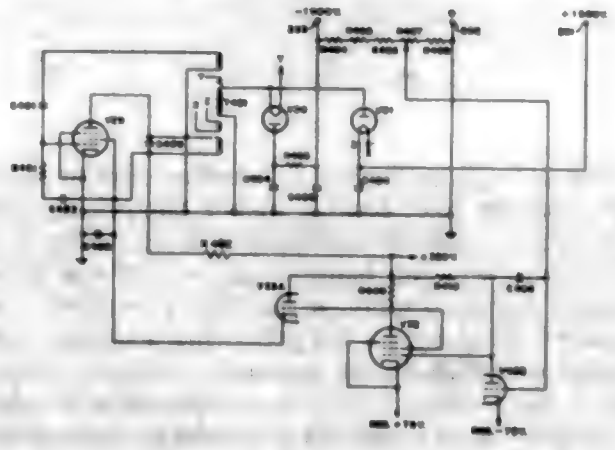
2,894,195
FREQUENCY TRIPLER
Luther L. Gemmit, Fort Wayne, Ind., assignor to General Electric Company, a corporation of New York
Application July 1, 1957, Serial No. 669,096
4 Claims. (Cl. 321—7)

1. A static frequency tripler for converting three phase alternating current having a predetermined frequency into single phase alternating current having a frequency three times said predetermined frequency comprising: three output saturable core reactors each having primary and secondary windings, said primary windings being connected in a Y, said secondary windings being connected in series and being adapted to be connected across a load; and six current limiting saturable core reactors each having a bias winding and two alternating current windings; said twelve alternating current windings being divided into three groups each having four alternating current windings from four different current limiting reactors respectively, each said group having said four windings thereof connected in two parallel pairs each having two serially connected windings, said three groups being connected in series with said three primary windings respectively whereby each group is in a leg of said Y and each current limiting reactor has its alternating current windings in different legs of said Y, each of said bias windings being adapted to have a bias voltage impressed thereacross, each of said current limiting reactors being wound so that said bias winding thereof is



aided by positive current in the first alternating current winding thereof and by negative current in the second alternating current winding thereof, each of said pairs of each of said groups including said first alternating current winding of one current limiting reactor and said second alternating current winding of another current limiting reactor, the two of said current limiting reactors which have alternating current windings in one of said pairs of a group having their other alternating current windings in different groups respectively.

2,894,196
REGULATED RADIO FREQUENCY OPERATED HIGH VOLTAGE POWER SUPPLY
Lester M. Bernheim, Levittown, Pa.
Original application October 28, 1953, Serial No. 387,329. Divided and this application October 31, 1955, Serial No. 544,095
5 Claims. (Cl. 321—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)



3. A regulated high voltage power supply comprising, in combination, oscillator means including a multi-grid stage having a screen grid and a resonant load for producing radio-frequency oscillations, said resonant load including a radio-frequency transformer having a primary and a secondary winding of predetermined turns ratio operable to step-up said radio-frequency oscillations to a relatively high voltage level, including a tickler winding and a pair of relatively low voltage heater windings, voltage doubler rectifier means operably electrically connected to said secondary winding of said transformer for rectifying the radio-frequency oscillations including a pair of

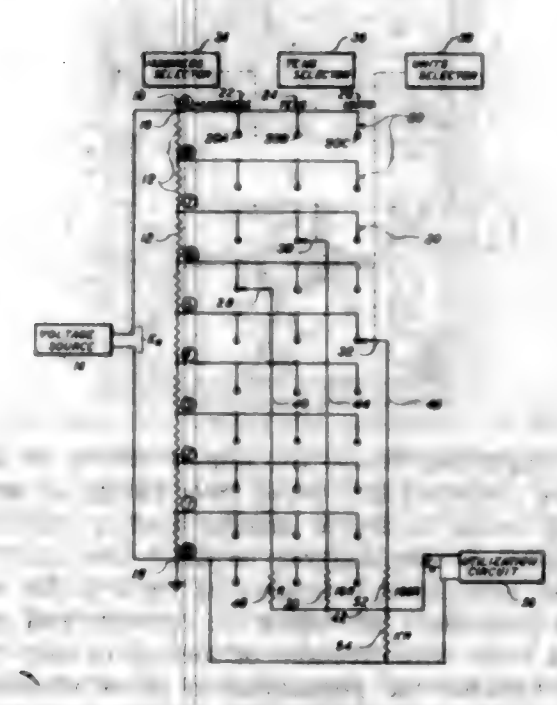
high voltage output terminals for supplying thereto a rectified direct current high voltage output of respective negative and positive polarity relative to zero ground potential, said voltage doubler rectifier means including a pair of diodes each having a filamentous cathode electrically connected to respective heater windings of said transformer, resistive bleeder means including a potentiometer in series therewith electrically connected between the negative high voltage output terminal and ground of said rectifier means, inverter means including a substantially resistive impedance responsive to incremental potential fluctuations occurring in said resistive bleeder means, said inverter means including at least a triode stage having a control grid connected to said potentiometer, a cathode connected to a constant negative potential source, and an anode connected to a positive potential source through said resistive impedance, a capacitor connected between the control grid and the anode of the triode stage of said inverter means, control amplifier means directly coupled through a conductive connection to said inverter means, and variable impedance means including at least a triode stage responsive to the control amplifier means to effect a variable impedance proportional to the incremental potential fluctuations, the triode stage of the variable impedance means being electrically operably connected in series with the screen grid of said oscillator means and the positive potential source to control the amplitude of said radio-frequency oscillations, thereby regulating the direct current high voltage output of said power supply.

2,894,197

POTENTIOMETER APPARATUS

Clifford E. Berry, Altadena, Calif., assignor, by mesne assignments, to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California

Application July 25, 1955, Serial No. 523,977
4 Claims. (Cl. 323—79)



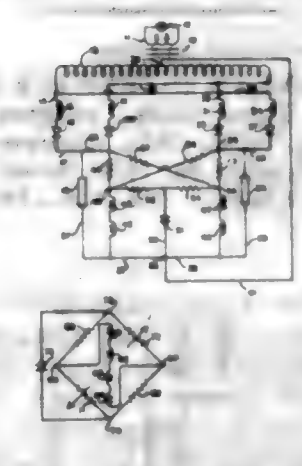
1. Apparatus for providing a selection of voltage levels proportional to decimal numbers comprising electrical resistance means for receiving a reference voltage, a decade of electrical taps dividing the resistance means into a plurality of nine equal resistances arranged in electrical series, an output terminal, a plurality of output circuits corresponding to the number of higher and lower order decades of decimal digits to be represented, the output circuits being coupled selectively to the decade of taps and coupled commonly to the output terminal for producing a combined voltage output at said terminal, each output circuit having a different amount of resistance in it, with the resistances of the several output circuits being in ratio to one another approximately as 1:10:100: etc., going from the higher to the lower order decades of values represented by the output circuits, and a load resistance coupled between the output terminal and one end of the equal resistance series.

2,894,198

MAGNETIC AMPLIFIER CIRCUIT

Lyell J. McDonald, Elkhart, Ind., assignor to Penn Controls Incorporated, Goshen, Ind., a corporation of Indiana

Application May 18, 1956, Serial No. 585,728
5 Claims. (Cl. 323—89)



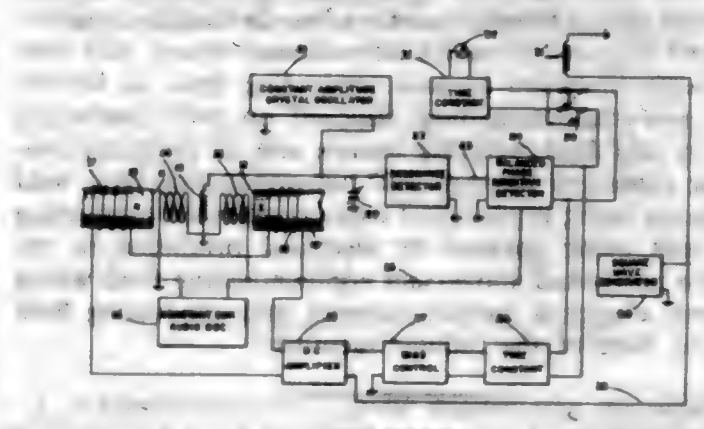
1. A stabilized magnetic amplifier system comprising a pair of magnetic amplifier elements each including a saturable reactor element, each of said amplifier elements having a load winding, control winding and an output circuit, said control windings being connected for differential operation of said amplifier elements, an additional winding for each of said amplifier elements connected in the output circuit thereof and degeneratively coupled to its corresponding amplifier element, and means for controlling the level of energization of each of said additional windings as a function of the sum of the outputs of both of said amplifier elements, said last mentioned means comprising a cross-over circuit network connecting each of said additional windings with the output circuit of said other magnetic amplifier element.

2,894,199

MAGNETIC RESONANCE APPARATUS

Francois F. Kirchner, Ridgefield, Conn., assignor, by mesne assignments, to Schlumberger Well Surveying Corporation, Houston, Tex., a corporation of Texas

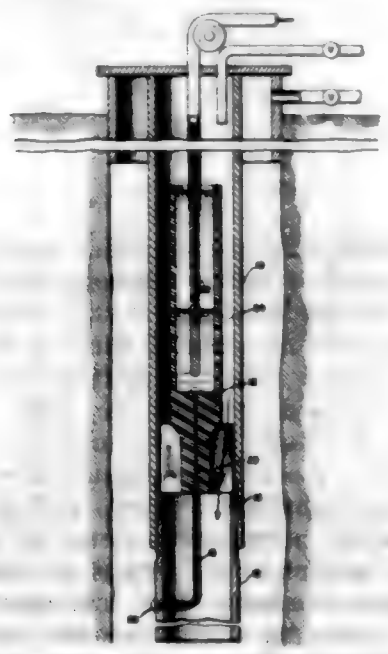
Application December 12, 1955, Serial No. 552,402
4 Claims. (Cl. 324—.5)



1. Magnetic resonance apparatus comprising means for applying an alternating magnetic field of predetermined frequency to a sample of material to be investigated, means for applying a unidirectional magnetic field perpendicularly to said alternating magnetic field through said sample, means for controlling said unidirectional magnetic field such that said unidirectional field has a first substantially constant intensity during first time in-

tervals and a second substantially constant intensity different from said first intensity during second time intervals between said first time intervals, the duration of said first time intervals being substantially equal to the duration of said second time intervals, means for adjusting said unidirectional magnetic field such that the average intensity thereof is substantially equal to the intensity at which the magnetic resonance frequency of particular paramagnetic particles in said sample is substantially equal to said predetermined frequency, means for modulating said unidirectional field at a given frequency, and means for detecting magnetic resonance phenomena in said sample during said time intervals at said given frequency.

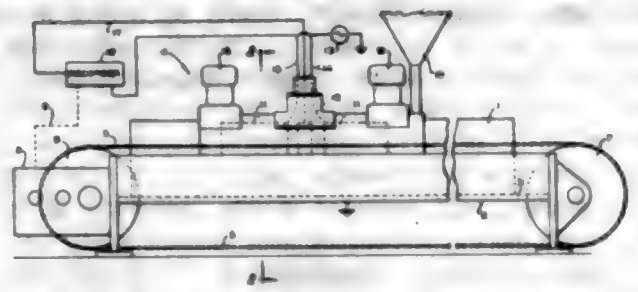
2,894,200
SUBTERRANEAN INTERFACE LOCATOR
Stefan E. Szasz, Tulsa, Okla., assignor to Sinclair Oil & Gas Company, Tulsa, Okla., a corporation of Maine
Application October 26, 1956, Serial No. 618,583
9 Claims. (Cl. 324—10)



1. An apparatus of the type described comprising a tubular member having an electrically non-conducting lower portion and an electrically conducting upper portion, an electrically non-conducting fluid receiving means mounted within the tubular member, an electrode disposed on the outside surface of the non-conducting portion of said tubular member, an electrical contact in the fluid receiving means which is in electrical communication with said electrode and electrically insulated from the bore of the tubular member, an electrically conducting fluid disposed in said fluid receiving means, said contact being contacted by said conducting fluid, an electrically non-conducting fluid disposed on said conducting fluid in said fluid receiving means, and an electrical conductor extending through said non-conducting fluid, said conductor being in electrical contact with said conducting fluid and being covered by electrical insulation in the portion positioned above said non-conducting fluid which prevents electrical contact between said conducting fluid and the bore of the tubular member.

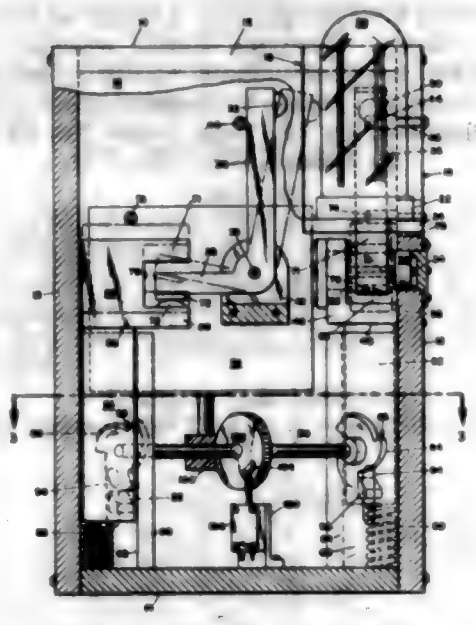
2,894,201
CORE LOGGING METHOD AND APPARATUS
Raymond G. Piety, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application August 27, 1954, Serial No. 452,518
14 Claims. (Cl. 324—13)

2. A method of electrically logging a drill core which comprises placing said core on a conducting surface, contacting said core with an elongated electrode, setting up an electrical potential between said electrode and said conducting surface whereby current flows between said electrode and said conducting surface, contacting the said core with an exploring electrode intermediate the ends of said elongated electrode and being electrically insulated therefrom; setting up an electrical potential between said exploring



electrode and said conducting surface whereby current flows between said exploring electrode and said conducting surface; simultaneously moving the elongated electrode and the exploring electrode in fixed relation one to the other along said core, and simultaneously measuring the current flowing between said exploring electrode and said conducting surface as the electrode moves along said core.

2,894,202
TUBE KNOCKER
Stanley J. Gartner, Emporium, Pa., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application September 28, 1955, Serial No. 537,083
6 Claims. (Cl. 324—20)

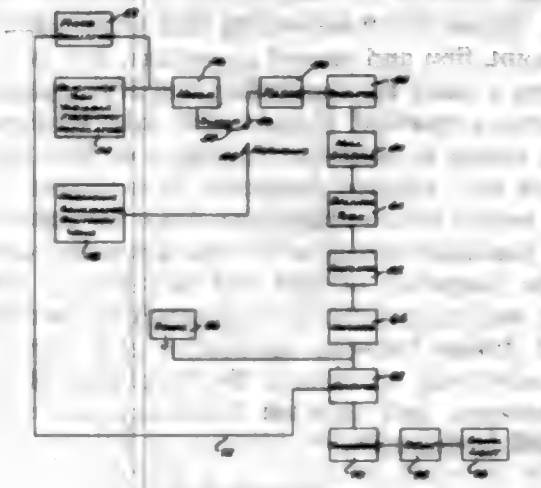


4. An impacting device for impact testing an article comprising a pivoted bell crank lever having at one end of the cell crank an article striking head, a rectilinearly reciprocatable driving member having a post and a pair of parallel projections extending at right angles to the post, said projections straddling the opposite end of said bell crank lever with freedom of motion of said end of the lever between the projections to allow vibration of said lever end in the space between the projections, means for imparting sudden forward movement to the post to repeatedly bring the striking head against the article, and means to retract the post.

2,894,203
MULTIPLE FREQUENCY EDDY CURRENT TESTING APPARATUS
Robert W. Cory, Ravenna, Ohio
Application April 11, 1957, Serial No. 652,121
9 Claims. (Cl. 324—40)

1. Eddy current testing apparatus including a pair of opposed coils, said coils being adapted to be positioned

in inductive relationship with a work piece to be tested, a high frequency oscillator, automatic means for continuously and repeatedly varying the frequency of the oscillator over a relative wide range, means connecting



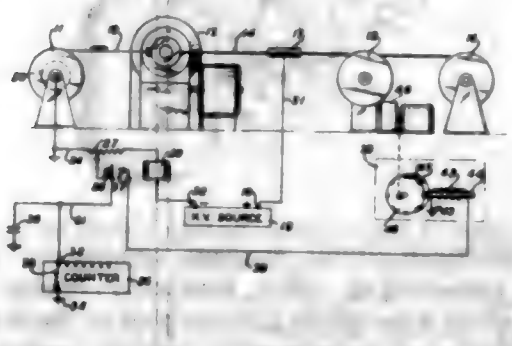
the output of the high frequency oscillator to the coils and continuously subjecting the work piece to the plurality of different and varying high frequencies of eddy current flow, and means connected to the opposed coils for indicating a flaw in the work piece tested.

2,894,204

INSULATION TESTING APPARATUS

Richard D. Gambrill, Idlewylde, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Application October 21, 1957, Serial No. 691,507
4 Claims. (Cl. 324—54)



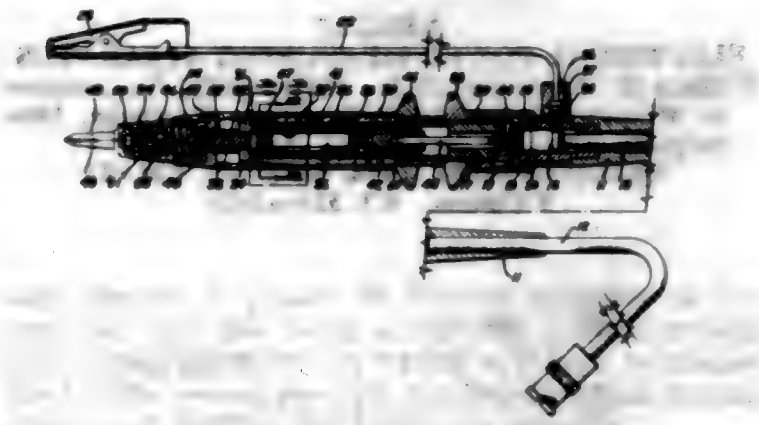
1. Apparatus for testing the continuity of the insulation on an insulated wire, which comprises means for applying a test potential between portions of the insulation and the wire, means for causing relative movement between said test potential applying means and the portions of the insulation to which the test potential is applied, a pulse counter associated normally with said test potential applying means and responsive to a pulse of current between the insulation and the wire for indicating a fault in the insulation, independent means for generating a series of pulses of a frequency proportional to the rate of relative movement between said test potential applying means and the portions of the insulation to which the test potential is applied, and means responsive to a fault in the insulation longer than a preselected length for disassociating said pulse counter from said test potential applying means and for associating said pulse counter with said independent pulse generating means, whereby said pulse counter counts once for every fault in the insulation and counts an additional number of times proportional to the length of a fault longer than the preselected length.

2,894,205

PROBE ASSEMBLY

Norman B. Schrock, Los Altos, and Carl J. Clement, Jr., and Glenn O. Herreman, Palo Alto, Calif., assignors to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California

Application January 8, 1957, Serial No. 632,992
8 Claims. (Cl. 324—72.5)



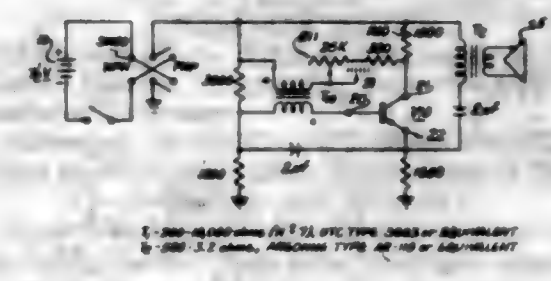
7. A probe assembly comprising a conductive body, a shielded electrical cable having a center conductor and a shield, said body being adapted to receive said cable with the shield in electrical contact therewith and the central conductor extending through and insulated therefrom, a resistor having one end electrically connected to said central conductor, an inner shield concentric with said resistor and electrically connected to the conductor end thereof, an outer shield spaced from and surrounding said inner shield, said outer shield being electrically connected to said body, a member adapted to receive the other end of said resistor, a dielectric sleeve carried by said member, means to slide said member and said dielectric sleeve within the inner shield, said member forming one plate of a capacitor, the adjacent end of the shield forming the other plate and said dielectric means serving to capacitively couple the two plates, a first sleeve engaging said member and having its other end threaded to said body to move the member to control the capacitance, means for releasably connecting said member to associated electrical apparatus, and a second sleeve serving to engage and control said connecting means, said sleeve concentric with and slidably carried by the first sleeve.

2,894,206

TRANSISTOR BETA TESTER

George Franklin Montgomery, Washington, D.C., assignor to the United States of America as represented by the Secretary of Commerce

Application March 18, 1958, Serial No. 722,362
3 Claims. (Cl. 324—158)



1. An instrument for rapidly determining the usability of n-p-n and p-n-p junction transistors by measuring the short-circuit, grounded-emitter current amplification thereof comprising an oscillator including a transformer having at least two windings, means for incorporating the transistor under test into said oscillator including means for connecting the base and the emitter electrodes respectively of the test transistor to opposite terminals of one of said transformer windings, feedback means includ-

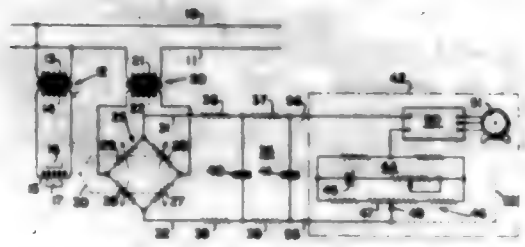
ing an adjustable resistor connecting the collector electrode of said test transistor to the other of said transformer windings, a source of D.C. power, means connecting the electrodes of said test transistor to said D.C. source and oscillation indicating means connected across the collector and emitter electrodes of said test transistor.

2,894,207

ELECTRICAL POWER MEASURING APPARATUS

William H. Wannemacher, Jr., Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application July 1, 1954, Serial No. 440,721
9 Claims. (Cl. 324—142)



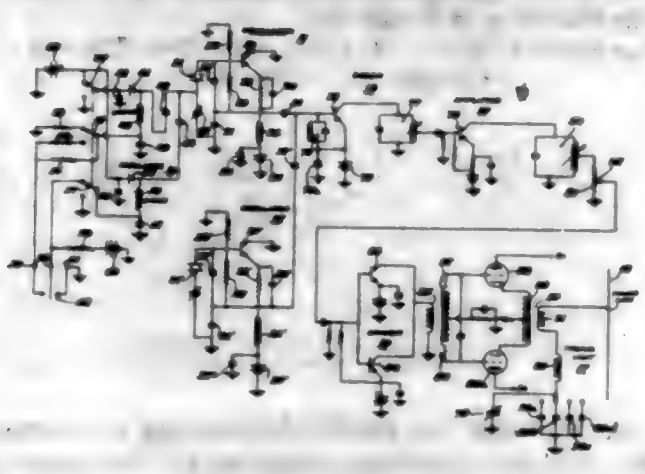
1. Apparatus for producing a unidirectional signal proportional to alternating current power in an electrical circuit comprising, a first connection to said circuit for providing a first signal representative of the current in said circuit, a second connection to said circuit for providing a second signal representative of the voltage in said circuit, an electro-mechanical device connected by one of said first and second connections to be energized by the corresponding one of said first and second signals, and a strain responsive resistance network having an input and an output adapted to have the resistors thereof alternately stressed and strained by said device in accordance with said corresponding one of said signals, and having its input connected by the other of said first and second connections to be energized by the other, corresponding one of said first and second signals such that said network will have an electrical signal on said output that varies in a series of unidirectional electrical pulses of an average magnitude proportional to the magnitude of said alternating current power.

2,894,208

FREQUENCY SHIFT TRANSMITTER

Robert P. Crow, Park Ridge, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Application September 6, 1955, Serial No. 532,691
8 Claims. (Cl. 331—40)



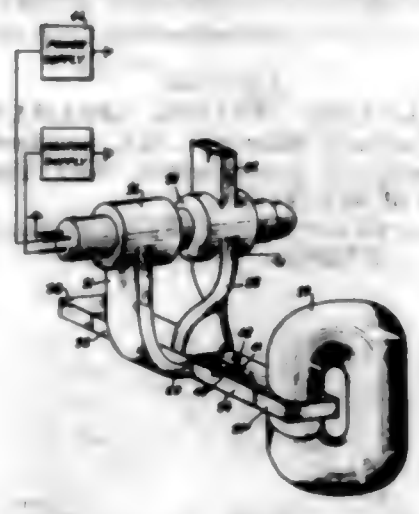
1. A frequency-shift transmitter including in combination, a first transistor oscillator including a frequency-determining circuit having a piezo-electric crystal and a series-connected capacitor therein, said first oscillator developing a first signal of a selected frequency, a second crystal-controlled transistor oscillator for developing a second signal of a different selected frequency, with the frequency of said first signal differing from the frequency of said second signal by an amount small as compared with the individual frequencies of said signals, a mixer for heterodyning said first and second signals to produce a third signal having a frequency corresponding to the difference between the frequencies of said first and second signals, means for transmitting said third signal to a remote point, first and second capacitors, first switch means including a diode for connecting said first capacitor across said series-connected capacitor in said frequency-determining circuit to shift the frequency of said first oscillator from said selected frequency to a second frequency, second switch means including a diode for connecting said second capacitor across said series-connected capacitor to shift the frequency of said first oscillator to a third frequency, and contact means for controlling the conductivity of said diodes between conductive and non-conductive states selectively to control the frequency of said oscillator between said selected frequency and said second and third frequencies.

2,894,209

GYROMAGNETIC RESONANCE APPARATUS

Marvin Chodorow, Menlo Park, and Russell H. Varian, Cupertino, Calif., assignors to Varian Associates, San Carlos, Calif., a corporation of California

Application July 13, 1953, Serial No. 367,538
13 Claims. (Cl. 331—94)



1. An electrical circuit element comprising a wave guide for transmitting radio frequency energy therethrough, a shunt wave guide arm coupled to the first wave guide, a volume of paramagnetic material positioned in said shunt arm comprising electrons having the properties of magnetic moment and gyroscopic moment, and means for producing a unidirectional magnetic field enveloping the material within the shunt arm, whereby variation in the ratio of the strength of the unidirectional magnetic field to the frequency of the radio frequency energy produces a variation in the effective electrical length of the shunt arm due to the electron resonance therein.

2,894,210

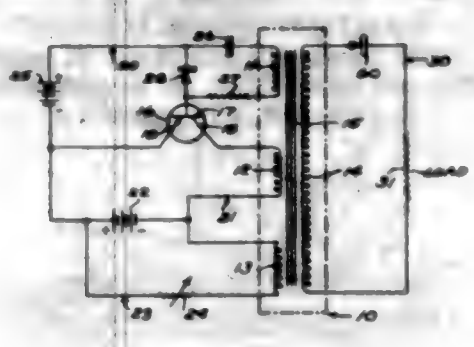
MAGNETIC COUPLED MULTIVIBRATOR

Theodor Erb, Forest Hills, N.Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N.Y., a corporation of Delaware

Application January 31, 1957, Serial No. 637,382
6 Claims. (Cl. 331—113)

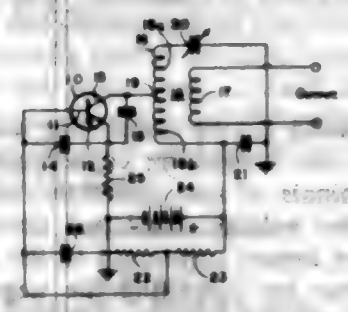
1. A multivibrator comprising an electronic conduction control device having a first, second and control electrode, an input circuit connected across the said first and said control electrodes, a magnetic circuit, a holding winding, a load winding, a reset winding and an output winding inductively disposed on said magnetic circuit, said input circuit including in series connection a condenser and

said holding coil, a load circuit connected across said first and said second electrodes, said load circuit including in series connection a direct current source and said load winding, a control circuit connected across said direct current source and comprising a variable resistor in series connection with said reset winding, and an out-



put circuit coupled across said output winding, the direct current source having a polarity to forward bias said first and said second electrodes, said load and said reset windings being poled to induce opposing fluxes in said magnetic circuit, said holding coil being poled to generate a voltage by the increasing flux of said load winding for forward biasing said first and said second electrodes.

2,894,211
STABLE TRANSISTOR OSCILLATOR SYSTEM
Ramsey J. H. Bassard, Cincinnati, Ohio, assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Application November 28, 1956, Serial No. 624,877
12 Claims. (Cl. 331—117)

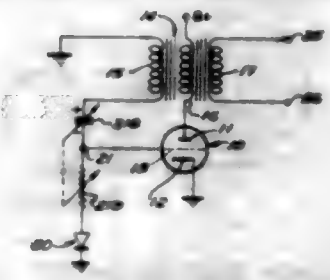


3. An oscillator system comprising a transistor having a base, a common emitter and a collector, a capacitive voltage divider network consisting of two condensers, one of said condensers being connected between said collector and said emitter, the other of said condensers being connected between said emitter and said base, a series resonant tank circuit connected from said collector to said base, a low impedance inductor shunted across said series resonant tank circuit, means for biasing said transistor elements to cause current flow from said emitter through said collector, said resonant tank circuit and said low impedance inductor, whereby signals are fed back to said capacitive divider network to positively start and sustain oscillations of said system.

2,894,212
BLOCKING OSCILLATOR
Dalton L. Kamm, Scottsdale, Ariz., assignor to Hoffman Electronics Corporation, a corporation of California
Application July 28, 1958, Serial No. 751,322
9 Claims. (Cl. 331—148)

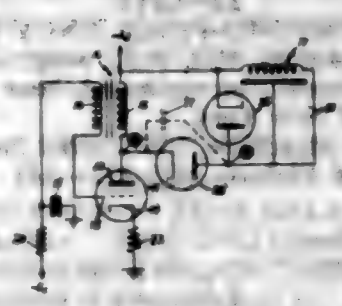
1. A blocking oscillator including a translating device having anode, cathode and control electrodes, said cathode electrode being coupled to a common reference potential, a saturable core transformer having at least first and second windings, said first winding intercoupling said anode electrode and a source of potential which is positive with respect to said common reference potential, a capacitor coupled between said control electrode and

one end of said second winding, the remote end of said second winding being coupled to said common reference potential, and a series-coupled resistor and semiconductor diode coupled between said control electrode and said common reference potential, said diode being direction-



ally disposed to present its forward resistance to current flow from said common reference potential towards said control electrode and having a voltage breakdown level in the reverse direction that is greater than the current cut-off level for said translating device.

2,894,213
WAVEFORM GENERATORS
Glenn E. Whitham, Wayland, Mass., assignor to Raytheon Company, a corporation of Delaware
Application April 19, 1957, Serial No. 653,988
4 Claims. (Cl. 331—151)

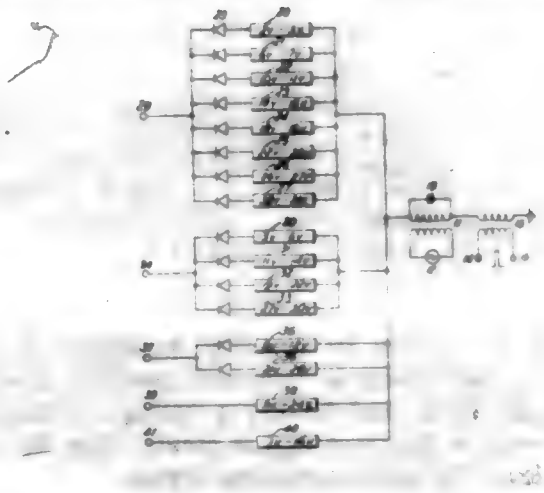


1. In an oscillator for generating pulses of shorter duration than its natural period of oscillation, said oscillator being of the type comprised by an electron tube, a transformer having windings coupling the grid and anode circuits associated with said tube, a delay line, and means for coupling a signal from said delay line to said transformer for terminating a cycle of pulse generation of said oscillator, the improvement comprising a termination for said delay line to cause reflection and inversion of incident wave energy, and a unidirectionally conductive device connected in series with said delay line and arranged to inhibit energy reflected from said delay line from initiating a pulse generating cycle of said oscillator.

2,894,214
CODING CIRCUIT
Emile Touraton, Paris, France, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Application August 27, 1953, Serial No. 376,957
Claims priority, application France August 28, 1952
7 Claims. (Cl. 332—11)

1. An amplitude discriminating circuit for producing a predetermined output only when the input signal voltage falls between two predetermined limits comprising an input control pulse source of variable amplitude, a relatively high frequency source having an amplitude intermediate the two limits, and a tuned circuit coupled to said frequency source and tuned to said high frequency, an electrical transmission path having an input and output, means coupling said control pulse source and said high frequency source in series to said input, a pair of rectifiers, a pair of biasing potential sources, one at the higher of said limits and the other at the lower of said limits, a pair of shunting circuits each connected across

said path and each including one of said rectifiers in series with one of said biasing potential sources, the lower potential source being poled so as to bias its associated rectifier in a conducting direction, the higher potential



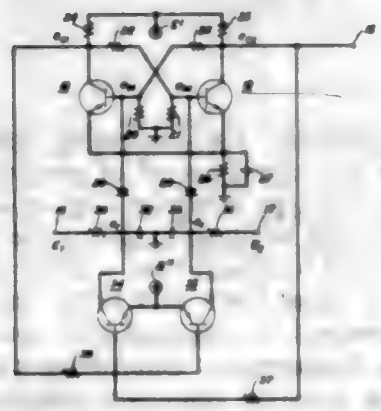
source being poled so as to bias its associated rectifier in its non-conducting direction and means in series in said path between said shunting circuits and said output for blocking direct current potentials while passing the potentials from said high frequency source.

2,894,215

LINEAR VOLTAGE-TO-FREQUENCY CONVERTER

Wing N. Toy, Murray Hill, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application March 14, 1957, Serial No. 646,124
6 Claims. (Cl. 332—14)



1. In combination with a regenerative circuit having at least one stable state of equilibrium and timing means for triggering said regenerative circuit from said stable state of equilibrium after an interval substantially proportional to the amplitude of an external signal, means comprising a reference potential source and a transistor switch connected between said source of reference potential and said timing means for returning said timing means to its condition at the beginning of said interval substantially simultaneously with the triggering of said regenerative circuit.

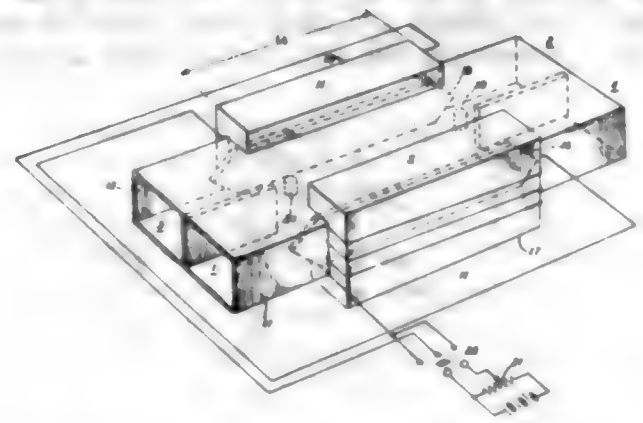
2,894,216

NON-RECIPROCAL WAVE TRANSMISSION

William J. Crowe, Hanover Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application June 11, 1956, Serial No. 590,555
10 Claims. (Cl. 333—7)

9. A nonreciprocal electromagnetic wave transmission device comprising first and second electromagnetic wave transmission lines mutually coupled over a common length and adapted to support along said length first and second distinct electromagnetic modes of wave propagation having different phase constants, and means for providing a difference between the phase constants of said first and second modes for a given direction of propagation through said device along said length that is dif-



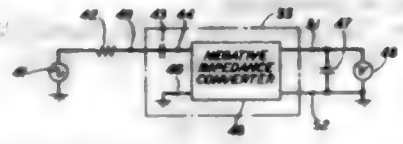
ferent from the difference between phase constants for said first and second modes in the reverse direction of propagation through said device along said length.

2,894,217

COMPUTING CIRCUITS

John G. Linvill, Whippany, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application March 3, 1955, Serial No. 491,898
7 Claims. (Cl. 333—19)



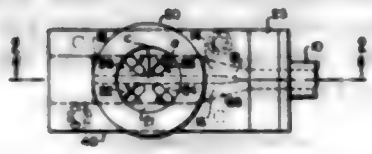
5. An integration circuit comprising a negative impedance converter, an integrating capacitance connected to the output terminals of said converter, utilization means responsive to the voltage developed across said capacitance, capacitive means connected to the input terminals of said converter for annulling the negative capacitive reactance presented by said converter at said input terminals, and a signal source and a resistance connected in series with said capacitive means.

2,894,218

TRANSITION FOR WAVEGUIDE

Daniel A. Lanciani, West Medford, Mass., assignor to Microwave Associates, Inc., Boston, Mass., a corporation of Massachusetts

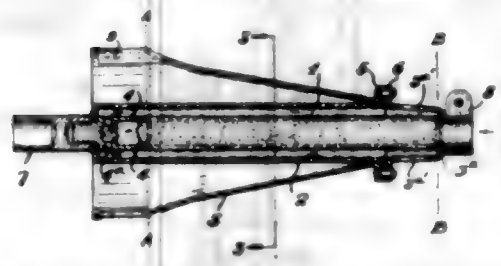
Application January 3, 1955, Serial No. 479,285
9 Claims. (Cl. 333—21)



1. A microwave transition for coupling parallelepipedal and cylindrical waveguides, which comprises: a parallelepipedal waveguide; at the end of said parallelepipedal guide a power dividing partition parallel to a pair of walls of the guide, for establishing two resonant chambers; a cylindrical waveguide ending at a wall common to both chambers, with the longitudinal axis of the cylindrical guide in the plane of said partition and at right angles to the longitudinal axis of the parallelepipedal guide; and a plurality of slots in said common wall, said slots being radially inclined substantially 45° to the plane through said guide axes, and with the midpoints of pairs of adjacent slots spaced an odd multiple

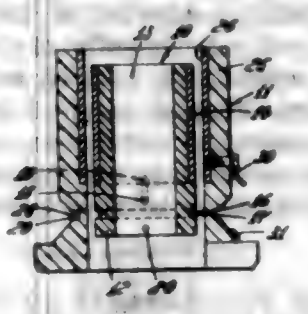
half guide wavelength at the design center frequency of said chambers, for directly coupling the ending of the cylindrical guide to the chambers.

2,894,219
CO-AXIAL RESISTIVE LOAD
Bloxsy D. Frederico, Cleveland, Ohio
Application March 18, 1955, Serial No. 495,129
4 Claims. (Cl. 333—22)



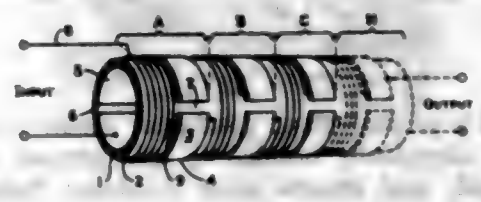
4. An absorber of electrical energy comprising an element, that is predominantly electro-resistive, and co-axially arranged separate and diametrically spaced tubular bodies surrounding said electro-resistive element and adapted to contain two different fluids, respectively, one of which fluids is adapted predominantly to serve as a dielectric and the other of said fluids is adapted predominantly to serve as a thermal carrier, the outermost of said tubular bodies being electro-conductive and being in the form of a logarithmic horn whose specific shape is a function of said fluids, said electro-resistive element being of hollow form and open at one end thereof and having means of communication at the other end thereof with the corresponding end of the inner one of said tubular bodies, and the inner one of said tubular bodies having an opening at the other end thereof so as to permit passage of a fluid between said electro-resistive element and said inner tubular body.

2,894,220
RADAR APPARATUS
Charles Edward Sydney Ridgers and Ronald Herbert Briggs, London, England, assignors to The Decca Record Company Limited, London, England, a British company
Application March 26, 1956, Serial No. 573,870
Claims priority, application Great Britain March 30, 1955
12 Claims. (Cl. 333—24)



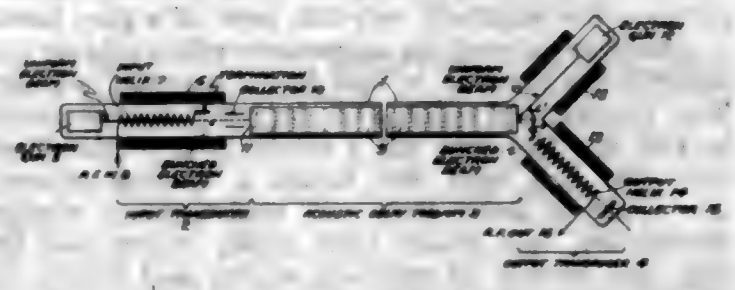
2. A rotatable coupler comprising primary and secondary windings inductively coupled and arranged to be relatively rotatable with constant mutual inductance, one end of one winding being coupled to one end of the other winding by a connection of substantially zero impedance and the other ends of the two windings being connected respectively to relatively rotatable plates of a rotatable capacitive connection, the plates being arranged to be relatively rotatable with constant capacitance between them, and input and output circuits connected across said primary and secondary windings respectively.

2,894,221
ARTIFICIAL TRANSMISSION LINES
Carl E. Coy, Glen Burnie, Md.
Application October 11, 1955, Serial No. 539,953
2 Claims. (Cl. 333—29)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An artificial, lumped-constant, electromagnetic signal delay line comprising, a single hollow cylindrical winding form of dielectric material and having substantially uniform cross section, a plurality of spaced inductance windings each comprised of a plurality of turns of electrical conductor circumferentially wound on said cylindrical winding form, a first plate of current conductive material disposed on the internal periphery of said winding form substantially the entire length thereof, a plurality of second plates of current conductive material shorter in length than said first plate disposed on the outer periphery of said cylindrical form, the number of second plates being equal in number to the number of said inductance windings with a second plate being adjacent to each of said inductance windings, and means for connecting the ends of said inductance windings to adjacent second plates thereby providing a plurality of low-pass, series connected filter sections.

2,894,222
MICROWAVE ENERGY TIME DELAY DEVICES
Theodore J. Goldau, Nutley, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Application November 7, 1956, Serial No. 620,982
11 Claims. (Cl. 333—30)



2. A time delay device comprising within an envelope, means for generating a beam of charged particles, an acoustic medium of predetermined length, means for directing said beam to impinge upon one end of said medium to establish a physical wave for travel therealong, means for density modulating said beam at a predetermined frequency, and means in coupled relation to the other end of said medium to convert the physical wave at said other end to electrical energy time delayed with respect to said density modulation by an amount proportional to said predetermined length.

2,894,223
ELECTRICAL DELAY LINES
John G. Sinclair, Jr., Manhattan Beach, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Application March 30, 1956, Serial No. 575,696
2 Claims. (Cl. 333—31)

1. An electrical delay line comprising: a ground plane conductor card covered with a high dielectric constant, high permeability medium; a signal conductor coil wound about said card, said signal conductor coil being covered with said high dielectric constant, high permeability me-

dium, said signal conductor coil being insulated from said card by said medium; and each turn of said conductor coil being insulated from its adjacent turns by said me-

dium; and a ground plane conductor sheath encasing said coil, and electrically bonded to said ground plane conductor card, said sheath being insulated from said coil by said medium.

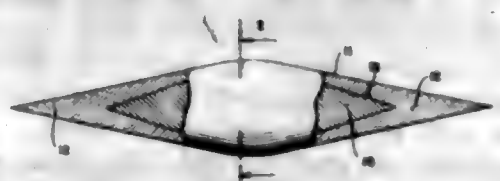
2,894,224

FERROMAGNETIC MICROWAVE DEVICE

Arthur H. Iversen, Santa Monica, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Original application May 19, 1954, Serial No. 430,841. Divided and this application December 12, 1956, Serial No. 627,930

2 Claims. (Cl. 333—34)



1. A device for rotating the plane of polarization of an electromagnetic wave comprising: an elongated figure of revolution ferrite compact slug having a cylindrical mid-portion and tapered end portions, said compact slug being composed of a ferromagnetic ferrite material having predetermined moisture sensitive and heat sensitive physical characteristics; and a multi-layer protective glass coating disposed over the entire exposed surface of said slug for hermetically sealing said slug, said coating comprising a first relatively very thin layer of a glass having a predetermined working temperature which is lower than temperatures harmful to said ferrite material, said first layer substantially sealing said slug while not appreciably soaking into said slug, and a second layer of glass fused over said first layer and having a working temperature which is lower than said predetermined working temperature, said second layer totally sealing said first layer and thereby hermetically sealing said ferrite slug without appreciable soaking of said second layer of glass into said ferrite slug.

2,894,225

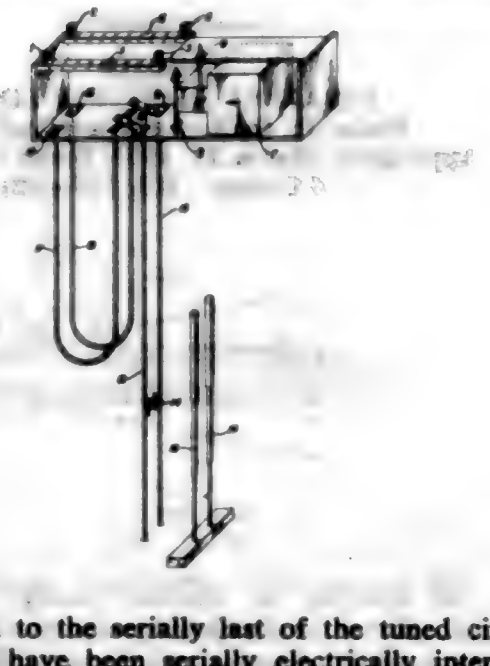
TUNING APPARATUS

James Elmer Myers, Jr., Hammonton, N.J.

Application October 29, 1956, Serial No. 618,822

3 Claims. (Cl. 333—82)

1. Apparatus for controllably varying the resonant length of a tuned circuit, comprising: a plurality of tuned circuit sections arranged in electrically serially adjacent relationship; normally open switching means serially interconnected between the serially adjacent tuned circuit sections and positioned along a path of travel; and a switching-means-closing member mounted for switching-means-closing movement along said path of travel in a first direction into abutting switching-means-closing contact with said switching means for closing and maintaining said switching means in closed relationship, and for switching-means-opening movement along said path of travel in a second direction opposite to said first direction out of abutting switching-means-closing contact with said switching means for returning said switching means to normal open relationship, said switching-means-closing member being provided with electrical contact means adapted to be electrically connected to applied circuitry which is to be effectively tuned and also electri-



cally connected to the serially last of the tuned circuit sections which have been serially electrically interconnected by corresponding closure of said switching means.

2,894,226

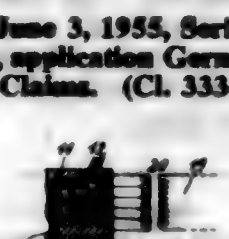
SYMMETRICAL CABLES, MORE PARTICULARLY COAXIAL OR SYMMETRICAL PLANE CABLES FOR TRANSMISSION OF HIGH FREQUENCY CURRENT

Walter Wild, Munich, and Walter Eberl, Berlin-Wilmersdorf, Germany, assignors to Siemens & Halske Aktiengesellschaft, Munich and Berlin, Germany, a joint-stock company

Application June 3, 1955, Serial No. 513,051

Claims priority, application Germany June 4, 1954

11 Claims. (Cl. 333—96)



1. In a high frequency current transmission system, a symmetrical cable comprising a pair of conductors connected in said system to carry said current, and an intermediate dielectric, said conductors and said dielectric being symmetrical with respect to at least one longitudinal plane of said cable, a number of conductive layers in said dielectric and equidistantly spaced from one another and said conductors, each of said layers having a thickness of from about ⅛ to ½ of the thickness of the skin depth or equivalent conductive stratum effective at the maximum transfer frequency and the number of said spaced conductive layers being not greater than four.

2,894,227

R-F COUPLING ARRANGEMENTS FOR TRAVELING WAVE TUBES

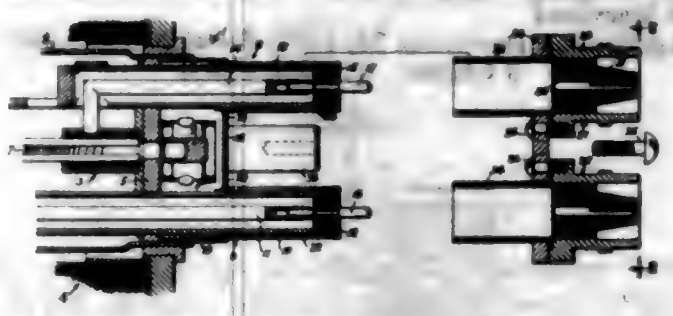
John H. Bryant and Albert G. Peifer, Nutley, and Robert W. Wilmarth, Rutherford, N.J., assignors to International Telephone and Telegraph Corporation, a corporation of Maryland

Application August 21, 1952, Serial No. 305,538

14 Claims. (Cl. 333—97)

1. In an electron discharge device having a housing with a pair of coaxial radio frequency terminals extending in parallel relation through a wall thereof, each of said terminals including a vacuum seal between their inner and outer conductors; a coupling adapter for said terminals comprising a plate carrying radio frequency

transmission line couplers on one side and a pair of sleeves on the other side thereof, each sleeve being in communication with one of said couplers and means spaced from said sleeves and said couplers to removably



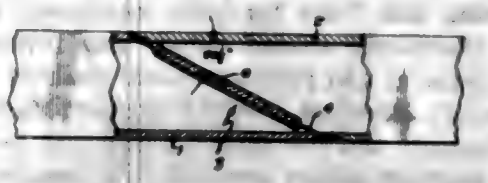
secure said plate to said housing wall in a fixed rigid position with said sleeve and said terminals in slidable telescoped relation to thereby protect said vacuum seals and said terminals.

2,894,228

RADIO FREQUENCY WINDOW

Wilson S. Geisler, Jr., Atherton, Calif., assignor to Varian Associates, San Carlos, Calif., a corporation of California

Application November 2, 1953, Serial No. 389,568
6 Claims. (Cl. 333—98)



1. In combination, a rectangular waveguide, a radio frequency window comprising a rectangular metallic frame member extending transversely of said guide and inclined with respect to the longitudinal axis of said guide with its outer edge portions secured to the walls of the guide and sealed thereto in vacuum tight relation, said frame member having a circular opening therewithin extending across the major portion of said frame member and said waveguide with the center of said opening substantially coinciding with the longitudinal axis of said waveguide, said frame member having a flexible flange attached thereto and extending around the periphery of its opening, said flange having a portion curving away from the main body of the said frame member and a cylindrical portion to provide a flexible support, a window of low loss dielectric material within said frame member opening and having its periphery cemented in sealed relation to said flange cylindrical portion, the said flange providing a yieldable support for said window permitting relative thermal expansion and contraction of the window with respect to its supporting frame member, said window and frame member forming an airtight seal within said guide enabling a vacuum to be maintained on one side of said window and frame member while atmospheric pressure may exist on the other side thereof, said window permitting the transmission of relatively large power of broad frequency band without electrical breakdown.

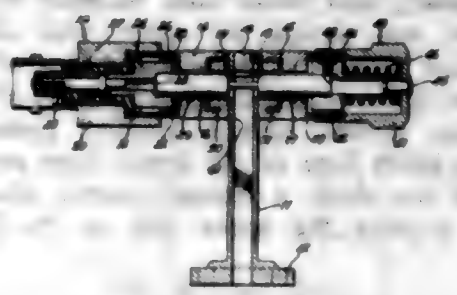
2,894,229

MICROWAVE COMPONENT MOUNT

Giusto Fonda-Bonardi, Pasadena, Calif., assignor to De-Mornay-Bonardi, Inc., Pasadena, Calif., a corporation of California

Application October 28, 1954, Serial No. 465,213
2 Claims. (Cl. 333—98)

1. In a microwave component and mount therefor adapted to be connected to a waveguide, the combination of: a housing having an opening therein for electromagnetic coupling to said waveguide; a conductor termination connected to said housing, said termination having a first support means in a predetermined position relative to said opening; a cap removably connected to said housing, said cap having a second support means resiliently disposed relative thereto; a microwave component comprising an operative element and a dummy element coupled together in end-to-end relation, said elements having identical mounting surfaces adapted to be reversibly received by said first and second support means whereby said microwave component may be disposed within said housing by



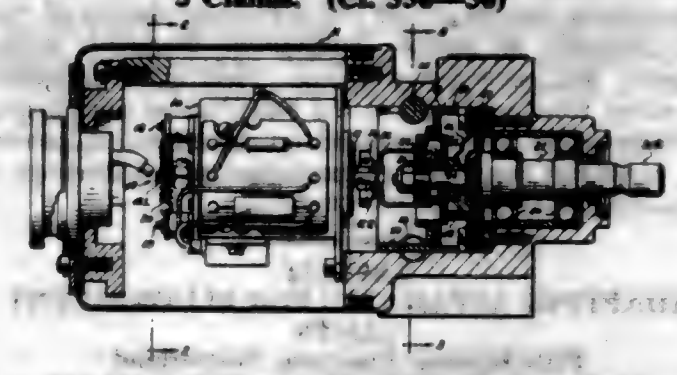
said first and second support means, said second support means resiliently urging said microwave component into engagement with said first support means, and said operative element being geometrically symmetrically positioned relative to said opening irrespective of the orientation of said mocrawave component in said support means.

2,894,230

SIGNAL TRANSMITTER WITH MANUAL CONTROL COMPRISING INDUCTIVE DEVICE

Norman B. Murphy, Tenafly, N.J., assignor to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware

Application February 18, 1955, Serial No. 489,238
5 Claims. (Cl. 336—30)



1. A signal developing device comprising an inductive device having a rotor and a stator relatively rotatable from a reference position to develop an output signal, a housing for said inductive device, said stator being fixed with said housing and said rotor being rotatable relative thereto, a control shaft in said housing for rotatably adjusting said rotor relative to said stator to vary said output signal, clutch means for connecting and disconnecting said rotor and control shaft, a pair of rods movable into and out from said housing, axially movable rotatable means for operably connecting one of said rods and said clutch for engaging said shaft and said rotor, and said axially movable rotatable means for operably connecting said other rod and said clutch for disengaging said rotor and said shaft, and means for biasing said rotor to said reference position relative to said stator upon such disengagement of said rotor and control shaft whereupon the control shaft may be freely angularly adjusted relative to the rotor and stator in said reference position.

2,894,231

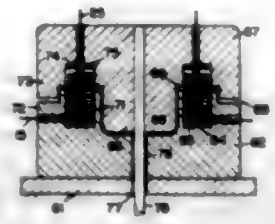
SIGNAL COUPLING DEVICE

Maxwell R. Krause, Chicago, Ill., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Original application December 1, 1953, Serial No. 395,630. Divided and this application March 29, 1956, Serial No. 577,433
1 Claim. (Cl. 336—83)

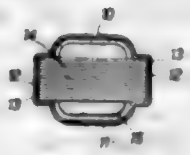
A magnetic coupling comprising a horizontal support, a rotatable shaft having an upper end portion extending through an aperture in said support, an upper cylindrical

magnetic core member having an axial passageway therein fixedly received by the upper end portion of the shaft for rotation therewith and positioning the core member with its lower face providing a space with the support, a lower stationary cylindrical magnetic core member having an axial passageway therein and freely mounted about the shaft, said lower core member reposing on said support and having its upper face disposed in slightly spaced relation with the lower face of the upper core member to pemit independent rotation of the upper core member, a first annular channel communicating through the lower face of the upper core member and coaxial with the shaft, a second annular channel communicating through the upper face of the lower core



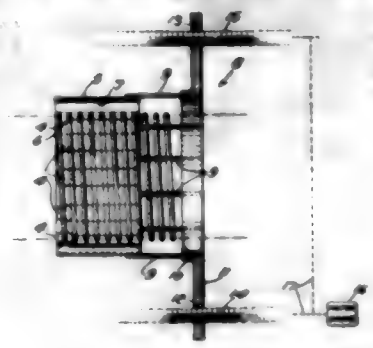
member coaxial with the shaft and vertically aligned with the first annular channel, a pair of spaced annular coils secured in one of said channels and extending into the other channel, a cooperating annular coil secured in the other of said channels and extending between said pair of spaced annular coils in spaced relation with each of said coils to provide an air gap therewith, each of said spaced coils and said cooperating coil being of substantially the length of the combined depths of both said channels to provide substantial magnetic surface coupling area between the coils, electrical connections extending from said coils in the one channel and through the supporting core member and an electrical connection extending from said cooperating coil and through its supporting core member.

2,894,232
ADAPTING APPARATUS FOR FLUORESCENT LAMPS
Fritz Knobel, Ennenda, Switzerland
Application May 24, 1954, Serial No. 431,986
Claims priority, application Switzerland May 27, 1953
1 Claim. (Cl. 336—90)



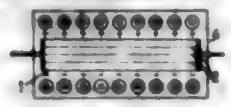
An adapting apparatus for fluorescent lamps comprising a casing formed by a single piece of profiled steel tube, the profile of said steel tube forming two channels disposed opposite each other, a magnetic core disposed within said tube, said magnetic core being constructed of a plurality of magnetizable layers arranged to form a laminated assembly, the opposite ends of the laminate assembly being disposed in said channels, said laminate assembly having a dimension in the direction perpendicular to the plane of said layers which is substantially equal to the inside corresponding dimension of portions of the side walls of said channel so that said wall portions exert pressure on the laminate and urge the layers thereof into intimate contact, the walls of said tube being bent outwardly between the channels and receiving the winding of a coil on said core, said wall portions including depressions formed in the channel side walls, the inner surfaces of which engage the magnetic core and press the laminations thereof tightly together, an end plate having the shape of the profile of the steel tube closing one end of said tube, and a terminal formed on said end plate.

2,894,233
SLIDING CONTACT DEVICE FOR TUNING COILS
Robert T. Adams, Short Hills, N.J., and Jack B. Harvey, New York, N.Y., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Application December 20, 1954, Serial No. 476,416
3 Claims. (Cl. 336—149)



1. A tuning arrangement comprising an inductive tuning coil and a sliding contact device including a band of conductive material surrounding said coil, said band having alternately spaced ridges and furrows running axially of the coil, and a plurality of contact elements disposed on certain of said ridges facing said coil in a plane perpendicular to the axis of said coil, and means for mounting said band for axial movement along said coil, the alternately spaced ridges and furrows giving said band a radial and circumferential resilient characteristic to insure constant contact pressure between said contact elements and the turns of said coil as said contact elements slide across one turn into engagement with the adjacent turn.

2,894,234
ELECTRIC VARIABLE RESISTANCE DEVICES
Herbert Weiss, Nurnberg, and Heinrich Welker, Erlangen, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a German corporation
Application November 19, 1954, Serial No. 470,092
Claims priority, application Germany November 21, 1953
29 Claims. (Cl. 338—32)

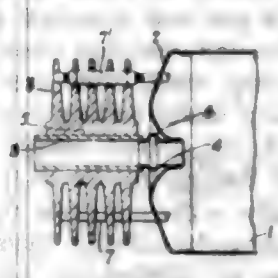


19. A variable-resistance device, comprising magnet means having a magnetic field, a resistance member formed of an integral body of semiconductor substance having an original minimum carrier mobility of about 6000 cm.²/volt second being normally subject to formation of a Hall effect voltage, two current supply terminals joined with said body at respective places fixedly spaced from each other in a direction transverse to that of said field, the spacing between said two terminals being smaller than a certain dimension of said member, said member being disposed in said field with said dimension transverse to said field, whereby the formation of the Hall field is minimized.

2,894,235
ELECTROMAGNETIC CARBON-PILE REGULATORS
Andrew Stamberger, Brockley, London, England, assignor to J. Stone & Company (Deptford) Limited, Deptford, London, England
Application October 22, 1956, Serial No. 617,560
Claims priority, application Great Britain October 26, 1955
3 Claims. (Cl. 338—52)

1. In an electromagnetic carbon-pile regulator, a tubular pile enclosure wall, a magnet system, a magnet system

housing, a tube extending from one end of said pile enclosure wall and connecting said pile enclosure wall with said system housing, said tubular extension having at least



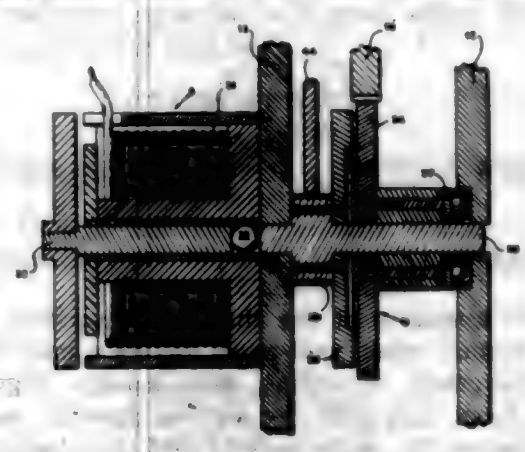
one circumferential corrugation-like formation between said pile enclosure and said system enclosure for increasing the length of the path of heat conduction from said pile enclosure wall to said system housing.

2,894,236

RADIO REMOTE CONTROLLER FOR AIRCRAFT

Howard B. Jopson, Hatboro, Pa., assignor to the United States of America as represented by the Secretary of the Navy

Application November 2, 1953, Serial No. 389,899
6 Claims. (Cl. 338—116)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A remote controller unit for use in directing the flight of drone aircraft, including a continuously running drive motor, at least one potentiometer arranged to insert voltage bias into a surface operating channel of an autopilot, at least one centering switch connected to and movable with said potentiometer at least one reversible clutch mechanism to selectively transfer the rotary motion of said motor to said potentiometer, a first solenoid control means arranged to actuate said clutch mechanism to produce rotation of said potentiometer in one direction, a second solenoid control means arranged to actuate said clutch mechanism to produce rotation of said potentiometer in the other direction, and a centering control means arranged to actuate said clutch mechanism to produce rotation of said potentiometer to a centered position, whereby a remotely generated actuating signal is effective through the selected solenoid, the clutch mechanism and the potentiometer to introduce the desired sense and magnitude of voltage bias into a surface operating channel of an autopilot, and a remotely generated centering signal is effective through the clutch mechanism to return the potentiometer to a centered null position.

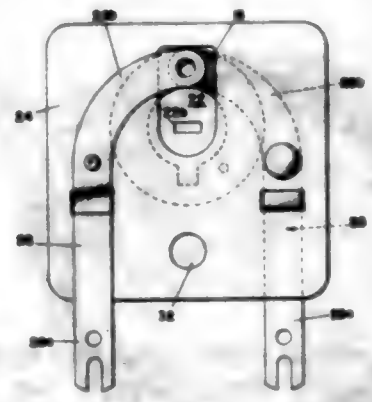
2,894,237

VARIABLE ELECTRICAL RESISTOR

Alexandre Haymann, Copenhagen-Vanlose, Denmark, assignor to International Resistance Company, Philadelphia, Pa., a corporation of Delaware

Application March 25, 1958, Serial No. 723,869
12 Claims. (Cl. 338—150)

1. A variable electrical resistor comprising the combination of a plate of electrical insulating material having a circular opening therethrough, a circular disc of electrical insulating material rotatably fitting in the opening in said plate, opposed arcuate paths of electrical resistance material on opposite surfaces of said disc, means electrically connecting said resistance paths, means on



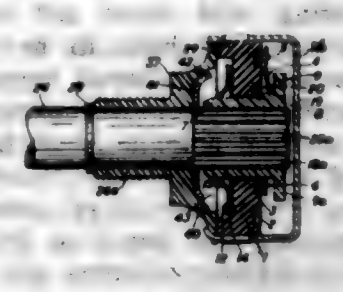
each side of said plate holding said disc in the opening, a contact of electrical conducting material mounted on each side of said plate, each of said contacts slidably engaging one of said resistance paths and a terminal connected to each of said contacts.

2,894,238

VARIABLE RESISTORS AND POTENTIOMETERS

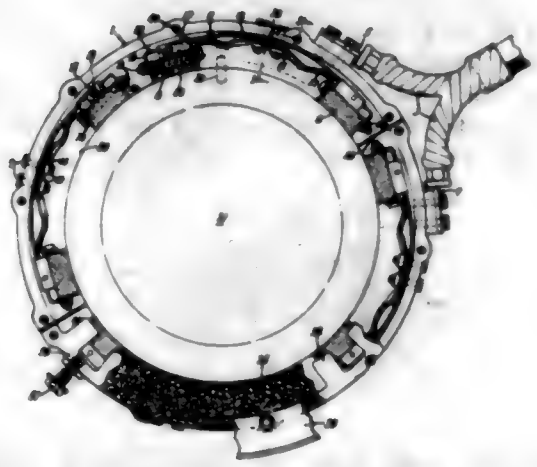
James Henry Burden, Swindon, England, assignor to The Plessey Company Limited, Ilford, England, a British company

Application January 24, 1958, Serial No. 711,101
Claims priority, application Great Britain February 25, 1957
4 Claims. (Cl. 338—174)



1. A rotary type variable resistor device comprising a support member having a journal bearing, a self-contained variable-resistor unit including a stator equipped with a resistor track and having a central bore, a rotor body of insulating material having a boss extending through and journalled in said central bore of the stator, a wiper member mounted for rotation with the rotor relative to the stator and co-operating with the resistor track, and means for axially locating the rotor relative to the stator, said boss having a longitudinal bore of non-circular cross-section, means for securing the stator on the support member, a shaft rotatably mounted in the journal bearing of the support member and projecting therefrom at both ends of said bearing, one end of said shaft having a non-circular cross-section which with a sliding fit engages the bore of the rotor, a stop member mounted with an interference fit on the non-circular portion of the shaft between the bearing and the rotor for rotation with the shaft, and locating means holding the shaft against axial displacement, the support member being provided with an abutment co-operating with the stop member to limit the rotation of the shaft in the bearing.

2,894,239
BRUSH MECHANISM
Herman W. Schaffer, Erie, and William Speicher, North East, Pa., assignors to General Electric Company, a corporation of New York
Application June 6, 1955, Serial No. 513,266
6 Claims. (Cl. 339—8)

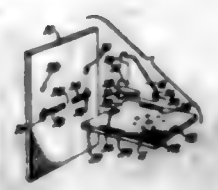


1. A brush mechanism comprising a collector surface on a rotatable conductive wheel, a non-rotatable conductive housing surrounding said collector surface, means mounted on said housing and contacting said wheel for preventing dirt from entering said housing to foul said collector surface, an electric terminal adapted to be connected to a source of current mounted on said housing, a leaf spring within said housing, a U-shaped copper shunt on said spring with a bifurcaction on each side thereof, a brush terminal within said housing, a pair of bolts for securing said spring, said shunt and said brush terminal to said housing so that said shunt is in electrical contact with both said housing and said brush terminal, a lock washer connected below the assembly of said spring, said shunt and said brush terminals for allowing said bolts to be tightened from outside said housing, a U-shaped supporting member having its bifurcations pivotally mounted on one end of said spring, a metal graphite brush having a curved surface adapted to contact said collector surface, a copper clamping harness member connected to said brush and connecting said brush to the bight portion of said supporting member whereby said brush is pivotally supported by said spring to have its curved surface contact said collector surface, a braided cable connected between said brush terminal and said harness whereby current flows from said electric terminal on said housing to said collector surface, said housing being provided with an aperture for inspecting said brush, and means for closing said aperture to prevent admission of dirt therethrough.

2,894,240
SOCKETS FOR PRINTED ELECTRICAL CIRCUITS
Robert S. Mautner, Amityville, N.Y.
Application December 23, 1955, Serial No. 554,968
3 Claims. (Cl. 339—17)

1. A printed circuit structure comprising an insulating panel having at least on one surface thereof longitudinal conducting traces forming electrical connections, at least one opening in said panel passing through at least one of said conducting traces, an eyelet-shaped socket for receiving a connector pin and attached to said panel and conducting trace through openings therein, and projecting from said conducting trace; said eyelet shaped socket being made of spring metal having a cylindrical portion substantially completely closed except at the top; said cylindrical portion having in its wall indentations arranged symmetrically with respect to the axis of the cylinder and projecting substantially toward the inside of said cylinder so as to receive the connector pin with spring pressure; and a conducting layer applied over said closed end of said eyelet-shaped socket and over at least adjacent portions of said conducting trace.

2,894,241
RIGHT-ANGLE PRINTED WIRE CONNECTOR
William H. McKee, Prospect Heights, Ill., assignor, by mesne assignments, to United Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Application March 28, 1956, Serial No. 574,507
7 Claims. (Cl. 339—17)

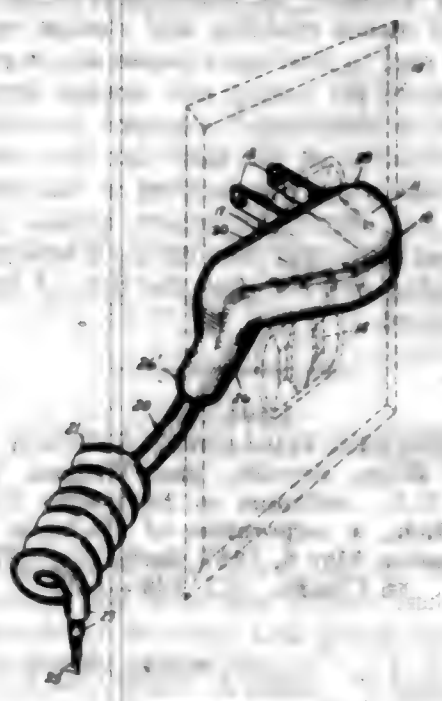


7. In an assembly of the character described, a panel carrying printed wires, said panel having a pair of spaced apart transversely extending slots axially aligned and separated from each other by a guide element, said panel having adjacent the outer ends of said slots locking openings therethrough, said panel having also in spaced alignment with said openings hook-receiving apertures therethrough, a second panel having printed wires for connection with said wires of said first panel, said panel having a recess alignable with said guide element and defining a pair of panel segments adapted to be projected through said transversely extending slots, and a pair of connector brackets equipped with hooks adapted to be projected through said apertures and having ears adapted to be projected through said locking openings, said ears being spaced apart and being adapted to be spread apart to a greater extent by said second mentioned panel when said ears are projected through said openings and the segments of said panel are projected through said transversely extending slots.

2,894,242
SELF-LOCKING ELECTRIC PLUGS
John H. Bickford, Middletown, and Donald E. Lipfert, Meriden, Conn., assignors to Raymond Engineering Laboratory, Inc., Middletown, Conn., a corporation of Connecticut
Application January 4, 1957, Serial No. 632,495
5 Claims. (Cl. 339—195)

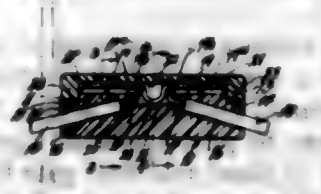
1. An electric plug and cord assembly of the type for use with a conventional receptacle comprising a plug body having two prongs on said body arranged in spaced parallel relationship and insertable within a receptacle in electrical connection therewith and a power cord electrically connected to said prongs within the plug body, said power cord being secured to the plug body at a point displaced longitudinally and laterally from a zone bounded at opposite ends by the said prongs whereby an outward pull on the cord imparts a twisting action to the plug

binding the prongs in the receptacle and preventing its withdrawal therefrom, said body having a bevel edge area



adjacent said zone opposite said point where the power cord is secured to the plug body.

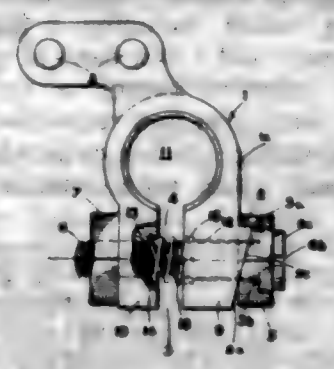
2,894,243
MECHANICAL AND ELECTRICAL WIRE CONNECTOR
Charles Pat Hayes, Spokane, Wash.
Application April 25, 1955, Serial No. 503,653
1 Claim. (Cl. 339—206)



In an electrical circuit, a wire connector comprising in combination with a base member of insulating material having longitudinally extending bores disposed at an oblique angle relative to each other and opening midway the length of said base member intermediate a flat surface, whereby to receive the ends of wires through said bores with their bared ends bent in acute bends and their terminal bared end portions overlaying said flat surface in opposed directions; a contact element of conductive material substantially coextensive with said flat surface and adapted to overlay the terminal end portions of said wires; of a cap having depending side walls adapted to be releasably secured to the base member with the cap in covering relation to said contact element for applying clamping pressure to said contact element toward said surface; and said cap having means associating with said base member to seal therewith.

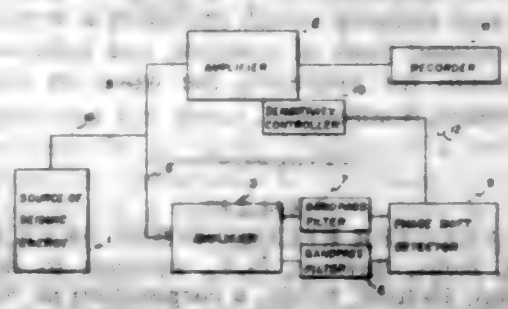
2,894,244
QUICK CONNECT AND QUICK DISCONNECT BATTERY TERMINAL CLAMP
Jakob Ringhof, Viernheim, Hessen, Germany, assignor of one-half to Paul O. Tobeler, doing business as Trans-Oceanic, Los Angeles, Calif.
Application January 18, 1956, Serial No. 560,015
2 Claims. (Cl. 339—236)

1. A battery terminal clamp comprising a body portion, two substantially parallel legs extending from said body, a throat between said legs, an adjustment screw extending across said throat, a threaded portion on one end of said screw, said threaded portion threadedly engaged in one of said legs, the other end of said screw extending through the other of said legs, a tightening nut loosely and rotatably mounted on said screw, said tightening nut being adjacent said other end of said screw externally of said other leg, a flanged head on said other end of said screw, said head retaining said tightening nut on said screw, said



screw rotatable in said legs, a plane surface wedge-shaped indentation in said tightening nut, and a plane surface wedge-shaped protrusion extending from said other leg, said wedge indentation in said nut being slidably engaged on wedge protrusion on said other leg.

2,894,245
SEISMIC SURVEYING METHOD
James F. Johnson, Tulsa, Okla., assignor to Sinclair Oil & Gas Company, Tulsa, Okla., a corporation of Maine
Application August 18, 1953, Serial No. 375,007
6 Claims. (Cl. 340—15)

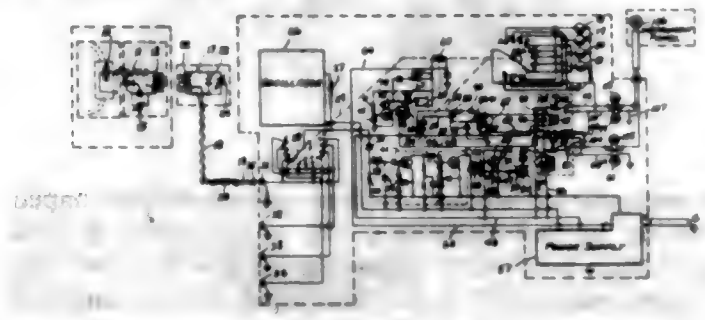


1. In a method of seismic surveying in which seismic waves are initiated in an elastic medium at an induction point and in which desired reflected or refracted waves and undesired surface waves travel to and are detected by a geophone at a receiving station, the improvement which comprises locating the geophone at a distance from the induction point such that two selected and spaced-apart frequencies of the desired seismic waves initiated at the induction point have a measurable difference in travel time separating from the output of the geophone two frequencies corresponding to the selected frequencies of the seismic wave, detecting the difference in travel time between the two separated frequencies of the geophone output, controlling the amplitude of the geophone output to vary the output materially only when the detected difference in travel time between the selected frequencies is substantially greater than the difference in travel time between the corresponding frequencies of the seismic surface waves detected by the geophone.

2,894,246
TIRE ALARM SYSTEM
Albert L. De Graffenried, Waterford, N.Y., assignor to Raymond J. Stockholm and Robert Q. Stockholm, individually, and Seth R. Stockholm and Margaret V. Stockholm, jointly, a partnership
Application May 6, 1957, Serial No. 657,875
8 Claims. (Cl. 340—52)

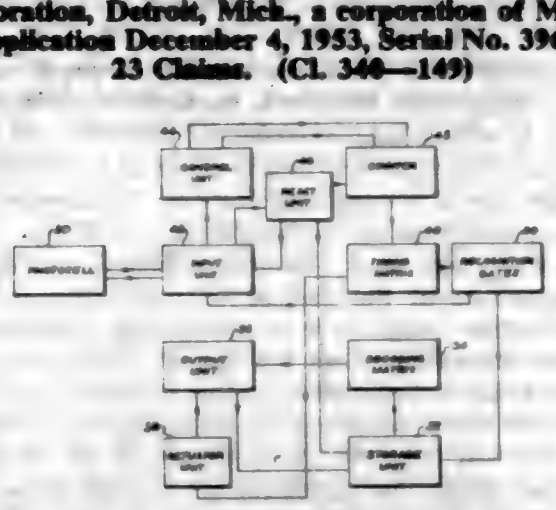
1. A system for indicating a condition existing in each wheel apparatus of a multi-wheeled vehicle comprising a source of alternating voltage, a plurality of inductive energy absorption circuits each of which is mounted on a wheel of said vehicle and includes condition responsive

switch means normally holding said circuit in condition to absorb electrical energy, inductive means mounted on said vehicle adjacent to each wheel thereof in inductive relation to each said absorption circuit to establish an inductive coupling period between said source and each said absorption circuit during each revolution of each wheel, a stepping switch including a first rotary arm coupled to said source and a first bank of spaced contacts coupled to each inductive means, a rectifying means coupled to said switch arm and responsive to reduction of said oscillating voltage during each wheel revolution for providing signal pulses representative of a normal



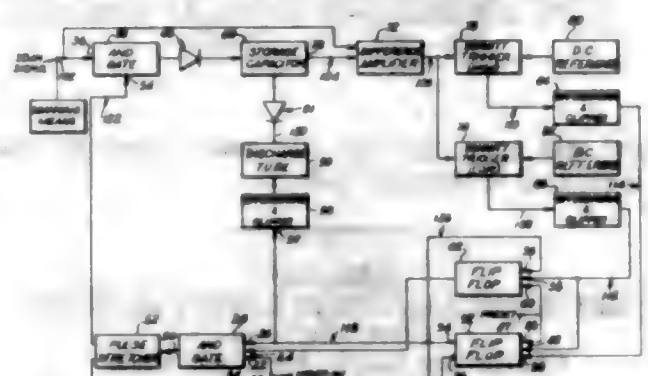
condition, a signal relay coupled to said rectifying means and having a time characteristic such that it is energized by each pulse when said condition is normal, an indicating circuit responsive to said relay for indicating a normal condition or an abnormal condition, a stepping switch operating relay circuit controlled from said indicating circuit for operating said stepping switch through successive cycles of operation so long as said signal relay is energized, said stepping switch including a second rotary arm and a second bank of contacts, and indicator lamps coupled thereto for indicating the wheel to which said rectifying means is connected.

2,894,247
CHARACTER RECOGNITION DEVICE
Matthew J. Relis, Bayside, N.Y., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Application December 4, 1953, Serial No. 396,280
23 Claims. (Cl. 340—149)



1. In a device for recognizing one or more characters recorded upon a medium, the combination of scanning means including a source of light flux and means adapted to utilize the same during a sequence of line scanning periods for scanning said medium successively along a plurality of lines thereon in the neighborhood of each character, distributor means adapted to be operated intermittently through a progression of phases in response to intermittent control signals, input means controlled by said scanning means for generating input signals that represent the variations in the light flux from said medium as it is scanned along said lines in succession, said input means also including provisions for supplying to said distributor means a control signal for initiating operation thereof each time a predetermined edge portion of said character is detected by said scanning means during its successive line scans, said distributor means being capable of operating progressively for a predetermined time within a respective one of said line scanning periods in response to each of said control signals, storage means comprising a plurality of individually settable storage elements, and means enabling said storage means to be controlled in part by said input means and in part by said distributor means for setting said storage elements individually in a predetermined sequence according to the respective intensities of the light flux from those points on said medium which are scanned at the respective instants when said distributor means attains certain preselected phases of its operation during a selected plurality of line scanning periods after the first of said control signals is received.

2,894,248
BORDER FOLLOWER SYSTEM
Matthew J. Relis, Bayside, and William Yuni, East Meadow, N.Y., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Application May 6, 1957, Serial No. 657,124
16 Claims. (Cl. 340—149)

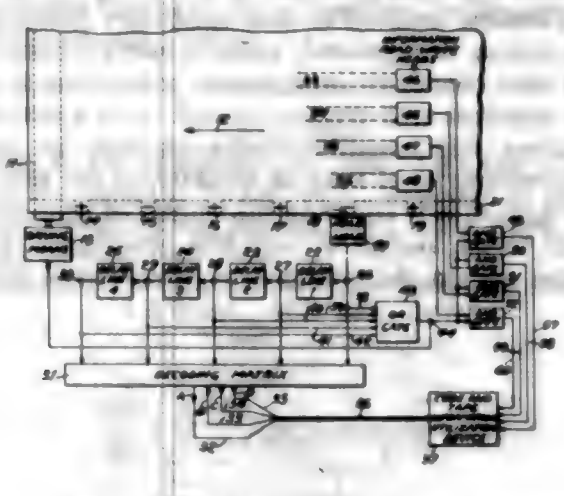


16. A border follower comprising a sensing means to scan an area of a document that contains a contrasting border and a printed character, a first And gate fed by said sensing means to pass a border signal, a first multivibrator coupled to close said first gate immediately after said border signal is passed, a second And gate coupled to said sensing means, a second multivibrator fed by said first multivibrator and coupled to open said second gate for a specific interval of time to pass signals from said sensing means, a third And gate fed by said second multivibrator, a third multivibrator interposed between said third And gate and said first And gate, a source of start-stop pulse signals coupled to said third gate to control operation, and a source of synchronizing pulse signals coupled to said third multivibrator to close said first And gate.

2,894,249
DATA PROCESSING CONTROL SYSTEM
Robert W. Hughes, Mountain Lakes, and Hans K. Flesch, Nutley, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Application May 16, 1957, Serial No. 659,714
8 Claims. (Cl. 340—174)

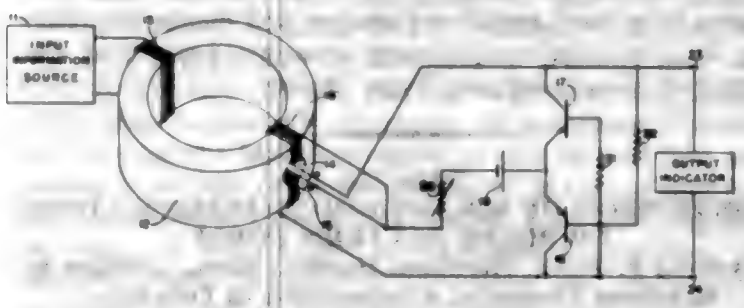
1. A control system for controlling a data processing system adapted to read binary information bits from a record, said binary bits representing clock pulses which are necessary for the data processing operation timing of said system and whose presence and absence on said record further represent programing information for said data processing operations comprising a record having binary information bits located thereon in predetermined positions, a reading device sensitive to the presence and absence of said binary information disposed adjacent said record, driving means to effect a relative motion between said record and said reading device, a pulse delaying means with a plurality of taps thereon each representing

a different delay value coupled to said reading device, and switching circuitry coupled to said plurality of taps and responsive to the delayed pulses passed therefrom, to



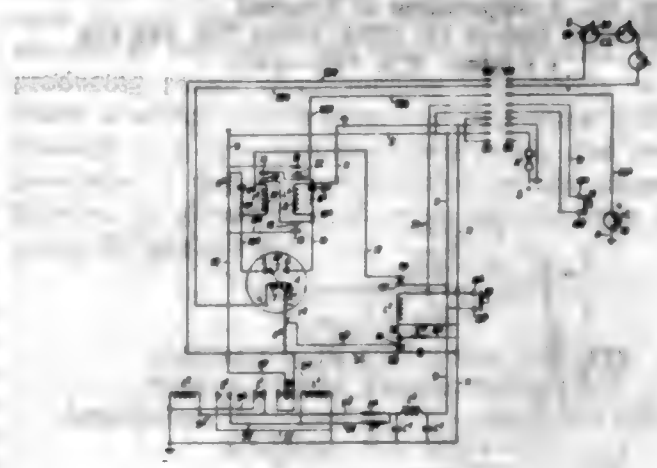
direct said pulses to said driving means to control the timing thereof, said switching circuits including means for simultaneously decoding said pulses for programing said data processing operations.

2,894,250
VARIABLE FREQUENCY MAGNETIC MULTIVIBRATOR
Robert W. Rochelle, Bucknell Manor, Va., and Roland L. Van Allen, Butler, Pa.
Application January 21, 1958, Serial No. 710,375
8 Claims. (Cl. 340—174)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A magnetic storage device for the storage and read-out of desired information comprising a first winding on a magnetic core of the type having a substantially rectangular hysteresis loop characteristic, said magnetic core having a toroidal ring configuration and a radially aligned aperture in a first section of the toroidal ring, said first winding being wound on said toroidal ring core through the center thereof and encircling a second section of said toroidal ring core; first electrical energy means connected to said first winding and operative to change the flux level in the flux path around said toroidal ring in accordance with the desired information; a second winding wound on said toroidal ring core through said aperture therein and encircling the portion of said core to one side of the aperture; a third winding wound on said toroidal ring core through the aperture therein and encircling the portion of said core to the other side of said aperture; said second and third windings being wound in opposite rotational sense with respect to each other; second electrical energy means; plus first and second on-off switching means; said second winding, said second energy means and said first on-off switching means being serially connected to form a first current conductive loop; said third winding, said second energy means and said second on-off switching means being serially connected to form a second current conductive loop; said first and second current conductive loops being operative to change the flux level in the flux path around said aperture in opposite directions; means connecting said first switching means to said third winding and means connecting said second switching means to said second winding such that said first and second switching means are rendered alternately conductive in accordance with the voltage across said third and second windings, respectively; and frequency responsive output means operative in accordance with the frequency of the alternate operation of said first and second switching means.

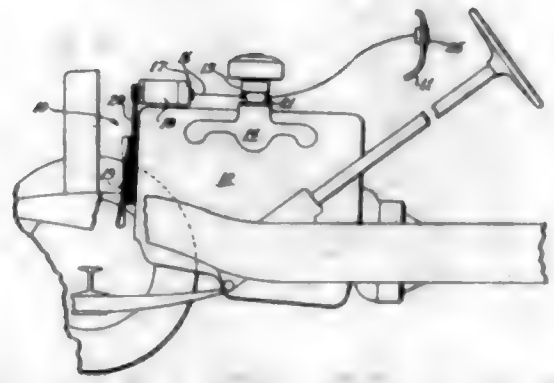
2,894,251
TEMPERATURE CHANGE RESPONSIVE MEANS FOR CONTROLLING ELECTRIC CIRCUITS
William Harry Ruffle, Hove, England, assignor to Speed Development Company Limited, Hove, England
Application October 11, 1955, Serial No. 539,909
Claims priority, application Great Britain October 18, 1954
4 Claims. (Cl. 340—227)



1. Apparatus for giving a signal of a sudden change in temperature in, or in the vicinity of a power unit or other apparatus susceptible to variations in temperature range, comprising a very sensitive switch in the form of a moving coil relay having a pair of contacts one of which is engaged by a moving contact in the normal position of the switch and the other of which is engaged by said moving contact when said switch is actuated by energizing said moving coil, a thermo-couple type of detector for detecting the sudden change of temperature having a connection to said moving coil to energise it, a normal current source, a warning device electrically operable from said normal source, a first miniature relay and a second miniature relay independent operable and the first one of which comprises a master relay, a holding circuit for said first miniature relay fed from said normal source, a circuit for energizing said warning device which circuit is made and broken by said first miniature relay when energised and de-energised respectively, means operated by the second miniature relay when energised for releasing the first relay to effect deenergization of the warning device, a warning initiating circuit controlled by said holding circuit and comprising an electrical connection to said first miniature relay from that contact of said switch which is engaged by the moving contact when said moving coil is energized and an electrical connection from said moving contact to said normal source of electrical energy, pulsing means in said latter electrical connection producing only a momentary flow of current through said switch from said normal source during the bringing in of said holding circuit, a manually controlled test relay, a resistance in series parallel with the thermo-couple and the coil of said switch, a pair of normally closed contacts on said test relay shorting said resistance and normally maintaining the connection through said normal source to the means actuating said moving contact of said switch, a further contact on said test relay and normally in open relationship with said latter contacts, a resistance of higher value than the preceding resistance connected between said last-named normally

open contact and the normal source and brought in by making of said latter contact with one of said pair of normally closed contacts upon operation of said test relay thus reducing the voltage on the moving coil of said switch to approximately that of the output of the thermocouple, and a further pair of normally closed contacts on said test relay in series with the winding of said second miniature relay and said normal source and opened by energising of said test relay to isolate said second miniature relay from said normal source during testing.

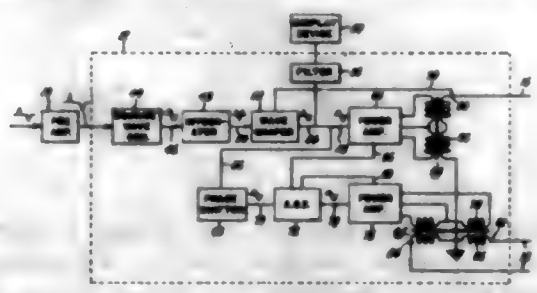
2,894,252
ENGINE PERFORMANCE METER
Roger W. Lawborn, Elvanton, and Charles A. Woodcock and Sherman E. Wesnack, Springfield, Ill., assignors, by mesne assignments, to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Application March 18, 1955, Serial No. 495,174
1 Claim. (Cl. 340—282)



In combination with an engine having a throttle, a governor connected to said throttle and responsive to engine speed to decrease the opening of said throttle when said engine speed increases above a predetermined value and to increase the opening of said throttle when said engine speed decreases below the predetermined value, sensing means for determining the degree of opening of said throttle and indicator means controlled by said sensing means and positioned in view of the engine operator for indicating on a dial during operation of the engine the degree of throttle opening required to maintain a predetermined governor controlled engine speed, said dial having indicia thereon indicating approximately 0% to 20% of throttle opening as an "idle" range, approximately 20% to 80% of throttle opening as an "economy" range and approximately 80% to 100% of throttle opening as a "caution-overload" range.

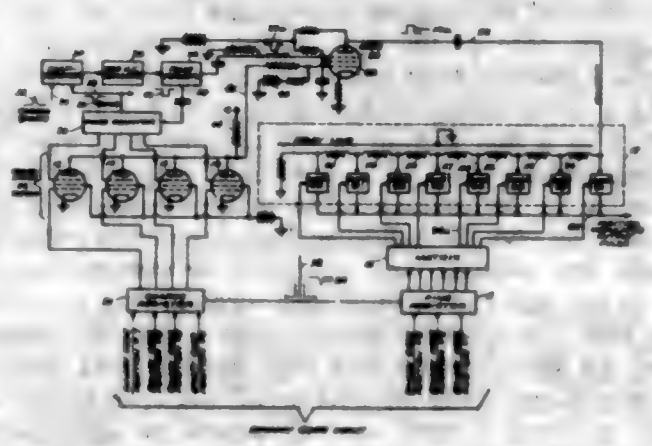
2,894,253
SELSYN EXCITER FOR POSITION PROGRAMMING CONTROL SYSTEM
Lawrence R. Penslee and Murray Rosenblatt, Waynesboro, Va., assignors to General Electric Company, a corporation of New York
Application December 10, 1956, Serial No. 627,492
4 Claims. (Cl. 340—345)

1. In a program control system wherein a reference pattern is stored in a data storage medium the improvement comprising, means for deriving a reference signal from said data storage medium, means for developing a square-wave alternating signal from said reference signal, means for integrating said square-wave alternating signal, wave-shaping means comprising a source of positive potential and a source of negative potential, a conductor connecting said positive and negative sources to ground, a first plurality of rectifying devices having their cathodes coupled to said conductor between said positive source and ground, a second plurality of rectifying devices having their anodes coupled to said conductor between said negative source and ground, potentiometer means interposed in said conductor, and means connecting a potentiometer adjacent said positive source with a potentiometer adjacent said negative source whereby an over-all operating voltage level may be established for said rectifying devices; means coupling the output of said integrating means to the anodes of said first plurality of rectifying devices and to the cathodes of said second plurality



of said rectifying devices, a first amplifying device, means coupling the output of said wave-shaping means to said first amplifying device, phase-shifting means coupled to the output of said wave-shaping means, a second amplifying device coupled to the output of said phase-shifting means, means responsive to the relative amplitudes of the outputs of said amplifying devices to maintain the output of said phase-shifting means at a predetermined value of amplitude relative to the output of said first amplifying device, means for deriving an output of at least two phases from said amplifying devices and means for feeding back to said wave-shaping means a portion of the output of one of said amplifying devices.

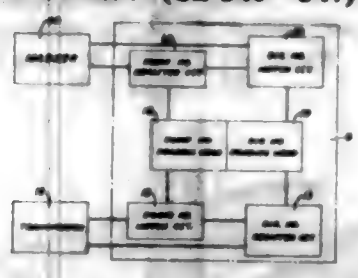
2,894,254
CONVERSION OF BINARY CODED INFORMATION TO PULSE PATTERN FORM
Raymond P. Mork, Needham Heights, Mass., assignor to Raytheon Company, a corporation of Delaware
Application December 10, 1953, Serial No. 397,292
6 Claims. (Cl. 340—347)



6. In a system for handling associated binary digits which are progressively coarser when read in one order of association, and progressively finer when read in the opposite order of association, for representation of a decimal number in binary code, means including a pulse counter for receiving actuating pulses at regularly recurring intervals, means for holding the coarser digits of said number, means for identifying the coarser digits held on said holding means, means for transmitting an identifying pulse representative of the digits held on said coarse digit holding means after identification of said coarse digits, means including a series of pulse gates for controlling the path followed by said identifying pulse in accordance with the value of the fine digits held on a fine

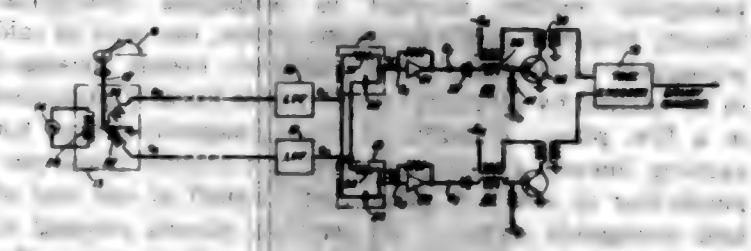
digit register, and means for opening a particular one of said pulse gates, said opening means comprising electronic tubes arranged in a pattern conforming to the finer digits of said number.

2,894,255
TWO-WAY PHOTOELECTRIC TRANSLATOR
Richard P. Murphy, Nyack, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application November 29, 1954, Serial No. 471,819
6 Claims. (Cl. 340—347)



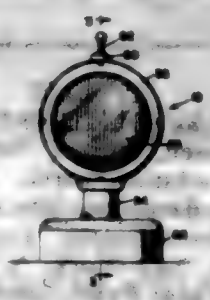
6. A two-way translator comprising a continuous perforated tape having a longitudinally arranged first and corresponding second set of groups of information perforations; a first and a second photoelectric reading head continuously sensing and positioned respectively adjacent said first and said second sets; synchronizing means; means for providing a continuous relative motion between said tape and said reading heads such that said heads read respective corresponding information at the same time; a first and a second input circuit; a first matching circuit jointly controlled by said first reading head and said first input circuit; a second matching circuit jointly controlled by said second reading head and said second input circuit, each of said matching circuits comprising a plurality of groups of coincidence amplifiers having one input connected to one of said first and second heads and one input connected to one of said first and second input circuits respectively, a control amplifier for each of said groups of coincidence amplifiers responsive to the operation of any one of said coincidence amplifiers in said group, and an output coincidence amplifier having one input multipled to said control amplifiers and a second input connected to said synchronizing means; a first register circuit comprising a plurality of triggering devices, each of said triggering devices having an enabling lead connected to said second reading head and an operate lead connected to said output coincidence amplifier in said first matching circuit; a second register circuit comprising a plurality of triggering devices, each of said triggering devices in said second register circuit having an enabling lead connected to said first reading head and an operate lead connected to said output coincidence amplifier in said second matching circuit.

2,894,256
DUAL PHASE SHIFT CONVERSION CIRCUITS
Gerald Kronacher, Newark, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application July 31, 1956, Serial No. 601,270
6 Claims. (Cl. 340—347)



1. In an analog-to-digital converter, a standard frequency source, a resolver having an analog input shaft and having input terminals coupled to said standard frequency source, said resolver also including means for producing output signals having amplitudes proportional to the sine and cosine of the angle of said analog input shaft, extended transmission lines connected to the sine and cosine output circuits of said resolver, low pass filters connected to said transmission lines, a first phase shifting network for producing an output voltage which has a phase shift in one sense with respect to the phase of said standard frequency source in accordance with the ratio of the amplitudes of the output signals from said low pass filters, a second phase shifting network independent of said first phase shifting network for producing an output voltage which has a phase shift in the opposite sense with respect to the phase of said standard signal source in accordance with the ratio of the amplitudes of the output signals from said low pass filters, each of said phase shifting networks comprising a simple pair of resistance and reactance elements, means for producing pulses corresponding respectively to the instants at which signals from said two phase shifters pass through zero in a predetermined sense, and means for producing a digital representation of the elapsed time between the occurrence of pulses derived from said two phase shifting circuits.

2,894,257
EMERGENCY CAUTION LIGHTS
William John J. Crooks, Bronx, N.Y.
Application December 4, 1956, Serial No. 626,170
1 Claim. (Cl. 340—366)

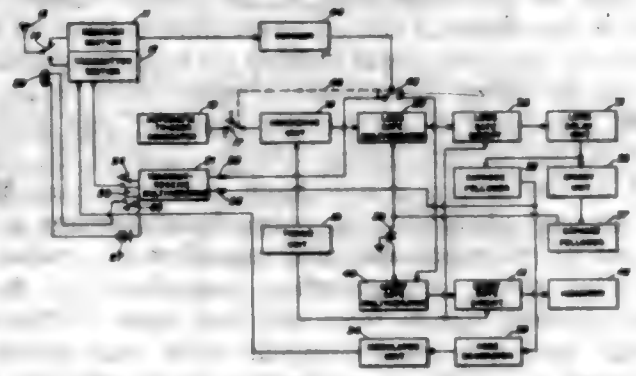


A signal lamp system comprising a housing, a bracket on said housing adapted to be fixedly attached to a support in the trunk of an automobile, a reel rotatably connected to said housing and positioned internally thereof, spring means connected to said reel to rotatably bias said reel in one direction to wind up a cable thereon, a first opening in said housing to permit passage of the cable connected to and leading from a source of electrical energy in the automobile, said cable being wound around said reel and extending out of said housing through a second opening perpendicular to the first opening, said cable being connected to an emergency caution lamp device at that end of said cable which is opposite the end connected to said source of electrical energy, said lamp device having oppositely extending faces, one face indicating "danger," the other face indicating "caution," means to effect an intermittent activation and deactivation of said lamp device, and a stop means on said cable adjacent to but spaced from the lamp device end thereof limiting movement of said cable toward said reel and closing said second opening with said lamp device resting on the automobile trunk floor.

2,894,258
TRANSPONDER-INTERROGATOR RANGEFINDER
Harry Vantine, Jr., Abington, and Elmer C. Johnson, Hatboro, Pa.
Application May 8, 1956, Serial No. 583,602
17 Claims. (Cl. 343—6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

17. An interrogator system for operation with a communications system having a transmitter and a receiver, said interrogator system comprising: control means when pulsed at a "start" terminal for causing said communications system to switch to transmitter operation and when

pulsed at a "stop" terminal for causing said communications system to switch to receiver operation, generator means for applying trigger pulses at said "start" terminal, means for modulating the carrier from said transmitter with a code a predetermined time after said generator means applies a trigger pulse at said "start" terminal and for applying a trigger pulse at said "stop" terminal after this predetermined time, indicating means responsive to said code producing means for starting a



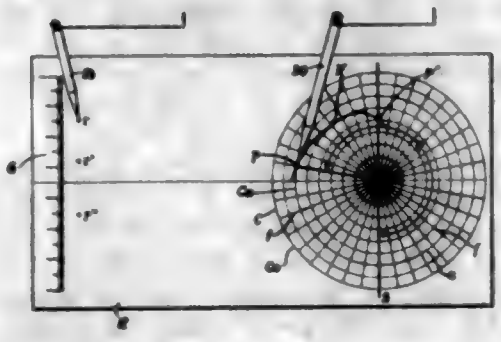
timing operation a time equal to said predetermined time after the operation of said code producing means, decoder means for detecting signals received by said receiver and for producing a trigger pulse in response to received code signals, and conduction means for connecting the output of said decoder means to apply trigger pulses at an input to said indicating means to stop said timing operation.

2,894,259

RADIO LOCATIONS SYSTEMS

Arthur Korn, deceased, late of Newark, N.J., by Elizabeth P. Korn, administratrix, Hoboken, N.J., and Joseph W. Hess, deceased, late of Hoboken, N.J., by Adele Hess, administratrix, Los Altos, Calif., and Simon L. Ruskin, New York, N.Y.; Dan Ruskin, Milton Reder, and Carol Fahri, executors of the estate of said Simon L. Ruskin, deceased

Application May 31, 1952, Serial No. 292,756
7 Claims. (Cl. 343—11)



7. In a radio location system, at least one cathode ray tube, means for controlling a cathode ray to produce at least one fluorescent screen spot corresponding to the object to be located in space, means for continuously following said screen spot including means for marking its position and means under control of time for rhythmically disabling and enabling said marking means thereby to cause markings to occur at predetemined time intervals only thereby to permit evaluation of the movement of said object in terms of the rhythm of said markings.

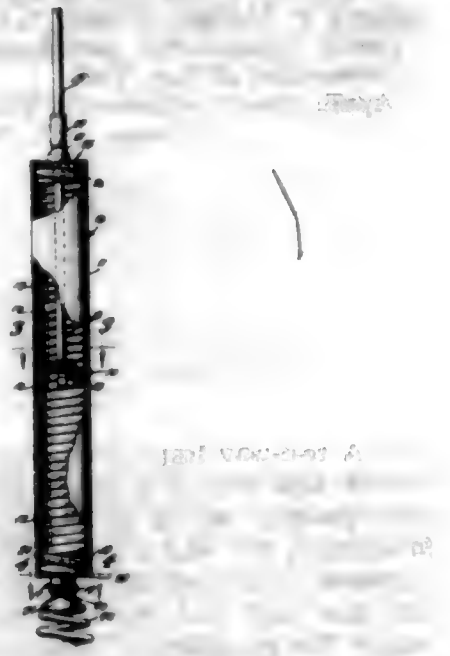
2,894,260

VARIABLE LOADED WHIP ANTENNA

Glenn R. Ellis, Bay City, Tex.

Application April 15, 1958, Serial No. 728,707
3 Claims. (Cl. 343—745)

1. In a device of the character described, a tubular form, a coil of wire arranged in said tubular form and providing an inductance, a whip antenna extending into the tubular form, a sliding contact connected to the inner end of the antenna and said contact engaging the exposed surface of the inductance, a metal bottom piece having a first threaded portion threadedly engaging the lower end of the inductance, there being air openings in said bottom piece, said bottom piece being provided with a stud of reduced diameter for engagement with a mount, a metal top piece



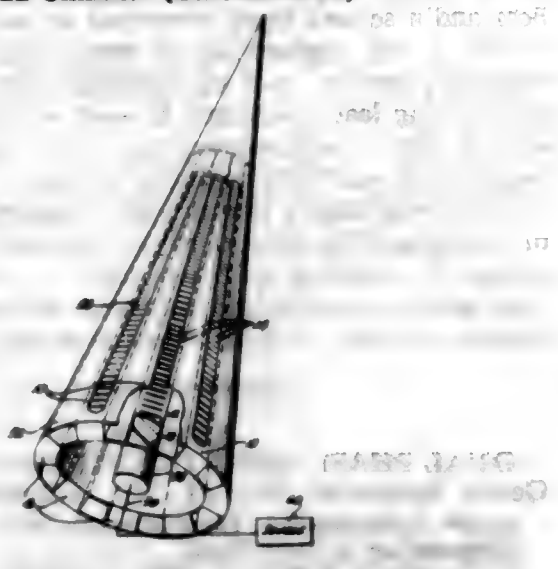
having a first section threadedly engaging the upper portion of the inductance, there being a central bore in said top piece for the projection therethrough of the antenna, said top piece further including an upstanding stem which is threaded externally, a knurled collar engaging said threaded stem, and a locking ferrule positioned within said collar.

2,894,261

ANTENNA ARRAY

Nicholas Yaru, Santa Monica, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Application November 1, 1957, Serial No. 695,185
11 Claims. (Cl. 343—771)

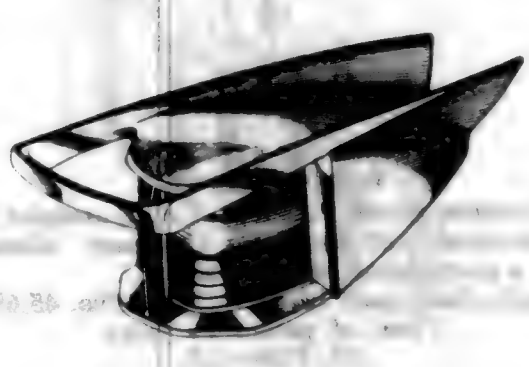


1. A reverse end-fire waveguide array comprising: a waveguide section adapted to propagate orthogonal linearly polarized electromagnetic waves, one wall of said waveguide section including radiation means arranged to be excited by electromagnetic waves linearly polarized in a first plane; a source of electromagnetic waves for exciting linearly polarized waves in a second plane perpendicular to said first plane and coupled to one end of said waveguide section; and terminal means coupled to the other end of said waveguide section for rotating the linearly polarized waves excited by said source from parallelism with said second plane to parallelism with said first plane and totally reflecting said rotated waves.

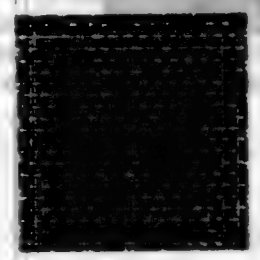
DESIGNS

JULY 7, 1959

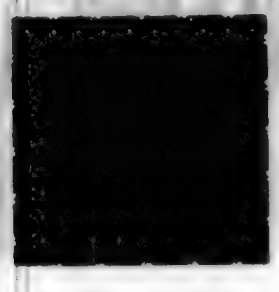
185,621
MARINE LIGHT
Donald J. Behnk and Glenn W. Monigle, Pittsburgh, Pa., assignors to Attwood Brass Works, Inc., Grand Rapids, Mich., a corporation of Michigan
Application May 15, 1958, Serial No. 50,897
Term of patent 14 years
(Cl. D48—32)



185,622
SAFETY PAPER OR SIMILAR ARTICLE
Burton C. Berg, Dayton, Ohio, assignor to The Mead Corporation, Dayton, Ohio, a corporation of Ohio
Application December 2, 1958, Serial No. 53,614
Term of patent 14 years
(Cl. D59—6)

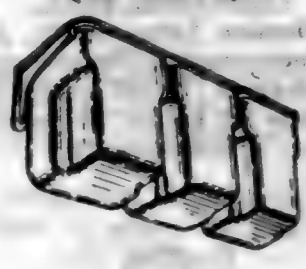


185,623
SAFETY PAPER OR SIMILAR ARTICLE
Burton C. Berg, Dayton, Ohio, assignor to The Mead Corporation, Dayton, Ohio, a corporation of Ohio
Application December 2, 1958, Serial No. 53,615
Term of patent 14 years
(Cl. D59—6)

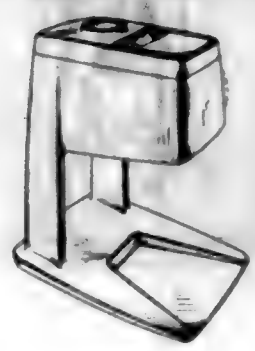


185,624
TEXTILE FABRIC
Sidney E. Blumenthal, New Orleans, La., assignor to Blumenthal Print Works, Inc., New Orleans, La., a corporation of Louisiana
Application December 23, 1957, Serial No. 48,993
Term of patent 7 years
(Cl. D92—1)

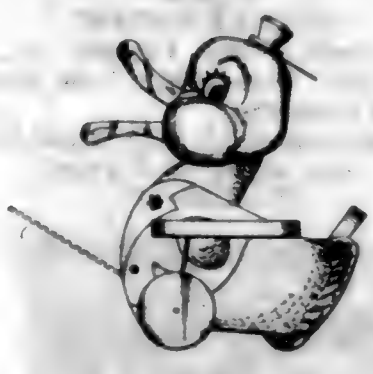
185,625
COMBINED CONTAINERS AND RACK THEREFOR
William Edward Cole, London, England, assignor to Craxfords Limited, London, England
Application December 30, 1958, Serial No. 53,986
Claims priority, application Great Britain July 1, 1958
Term of patent 14 years
(Cl. D44—1)



185,626
TABLET DISPENSER
Burnie M. Craig, Pasadena, Thomas K. Hale, Glendale, and Henry C. Keck, Pasadena, Calif.
Application November 17, 1958, Serial No. 53,391
Term of patent 14 years
(Cl. D52—2)



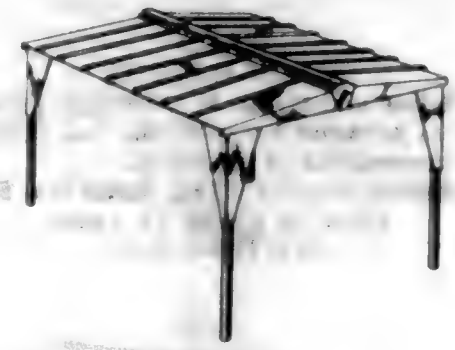
185,627
ACTION TOY
Ralph W. Crawford, East Aurora, N.Y., assignor to Fisher-Price Toys, Inc., East Aurora, N.Y.
Application January 15, 1958, Serial No. 49,260
Term of patent 14 years
(Cl. D34—15)



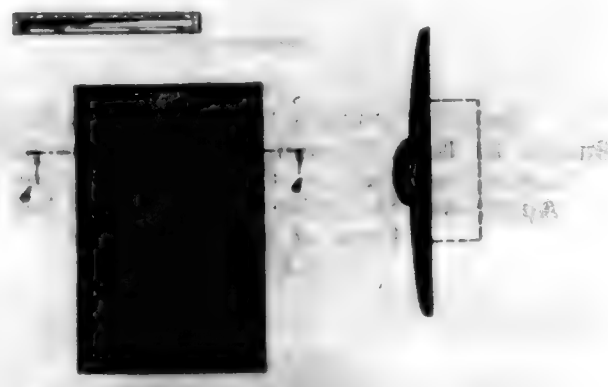
185,628
FOOD PACK OR SIMILAR ARTICLE
John De Augustine, East Syracuse, N.Y.
Application November 25, 1958, Serial No. 53,531
Term of patent 14 years
(Cl. D58—13)

185,629
CRIMPING TOOL
Henry W. Demler, Lebanon, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Application August 7, 1957, Serial No. 47,256
Term of patent 14 years
(Cl. D54—13)

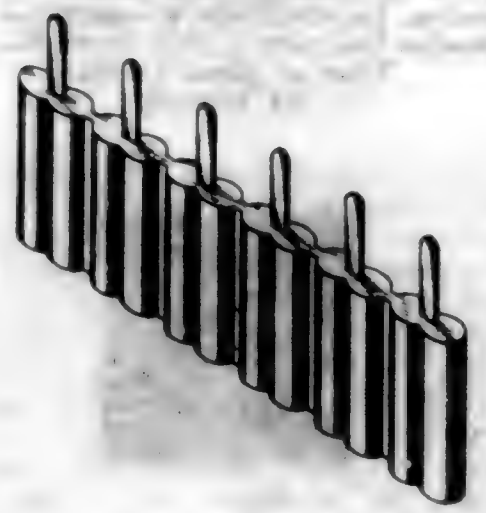
185,630
CANOPY
Victor W. Dorstewitz and Frank W. Sherrod, Paw Paw, Mich.
Application August 18, 1958, Serial No. 52,278
Term of patent 3½ years
(Cl. D13—1)



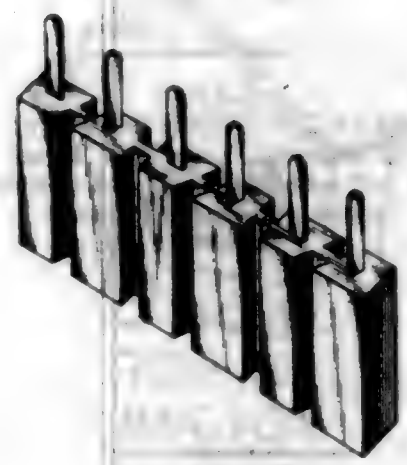
185,631
WALL SWITCH
Henry Dreyfuss, South Pasadena, Calif., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application April 10, 1957, Serial No. 45,658
Term of patent 14 years
(Cl. D26—13)



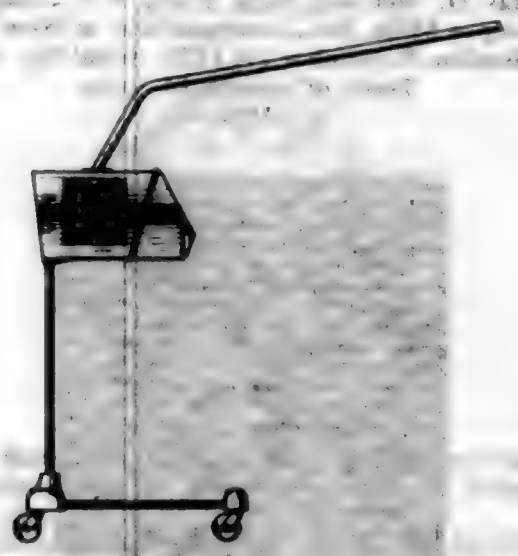
185,632
FROZEN CONFECTION
Arthur S. Easler, Scarsdale, and Aaron Friedman, New York, N.Y., assignors to Joe Lowe Corporation, New York, N.Y., a corporation of Delaware
Application October 23, 1956, Serial No. 43,473
Term of patent 14 years
(Cl. D82—2)



185,633
FROZEN CONFECTION
Arthur S. Ensler, Scarsdale, and Aaron Friedman, New York, N.Y., assignors to Joe Lowe Corporation, New York, N.Y., a corporation of Delaware
Application October 23, 1956, Serial No. 43,482
Term of patent 14 years
(Cl. D82—2)

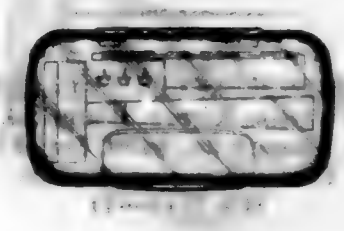


185,634
COMBINED OXYGEN TENT SUPPORT AND AIR CONDITIONING UNIT
Frank J. Fegan and William Harold Smith, Norwalk, Conn., assignors to O.E.M. Corporation, East Norwalk, Conn., a corporation of Connecticut
Application September 8, 1958, Serial No. 52,561
Term of patent 14 years
(Cl. D83—1)

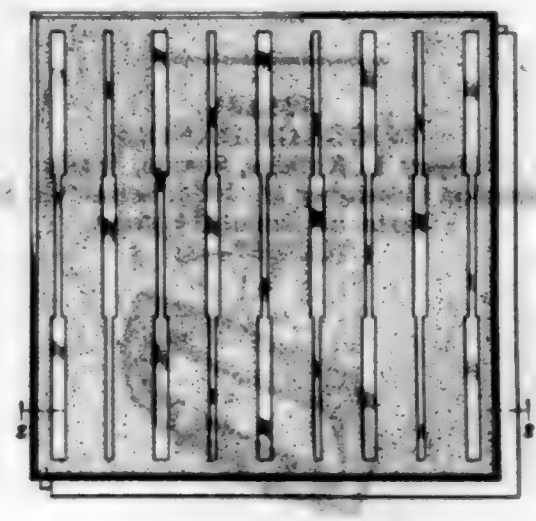


185,635
KNOB
John R. Gerlach, Los Angeles, Calif., assignor, by mesne assignments, to The American Hardware Corporation, New Britain, Conn., a corporation of Connecticut
Application April 10, 1958, Serial No. 50,415
Term of patent 14 years
(Cl. D50—3)

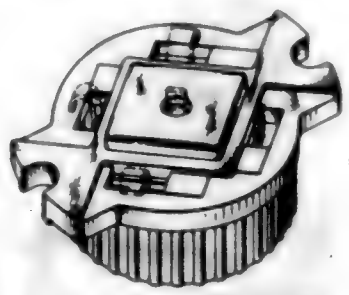
185,636
SAFETY RAZOR CASE
Martin Glaberson, Ardsley, N.Y., assignor to Eversharp, Inc., Chicago, Ill., a corporation of Delaware
Application August 27, 1953, Serial No. 26,605
Term of patent 14 years
(Cl. D58—12)



185,637
TILE OR SIMILAR ARTICLE
John S. Griswold, Greenwich, Conn., assignor to Wood Conversion Company, St. Paul, Minn., a corporation of Delaware
Application August 18, 1958, Serial No. 52,249
Term of patent 14 years
(Cl. D18—3)

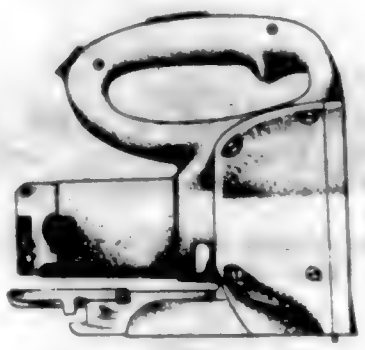


185,638
MOTOR PROTECTOR SWITCH OR SIMILAR ARTICLE
Burton O. Haun, Jr., and Walter H. Mokas, Attleboro, Mass., and Paul Wrablica, Jr., Corona, N.Y., assignors to Metals & Controls Corporation, Attleboro, Mass., a corporation of Massachusetts
Application August 18, 1958, Serial No. 52,253
Term of patent 14 years
(Cl. D26—13)

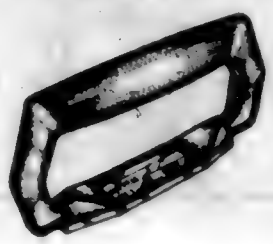


185,639
TAPE DISPENSER OR THE LIKE
Ernst Horst Hofmann-Igl, Munich, Germany, assignor to P. Beiersdorf & Co., A.G., Hamburg, Germany
Application October 17, 1956, Serial No. 43,378
Term of patent 14 years
(Cl. D74—1)

185,640
CARTON STAPLING MACHINE
Joseph Mason Kirton, Bountiful, Utah
Application January 26, 1959, Serial No. 54,325
Term of patent 7 years
(Cl. D74—1)

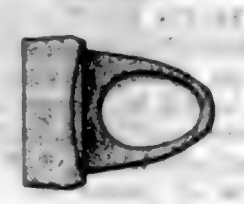


185,641
LUGGAGE HANDLE
Henry L. Kotkins, Seattle, Wash.
Application December 16, 1958, Serial No. 53,789
Term of patent 14 years
(Cl. D87—2)

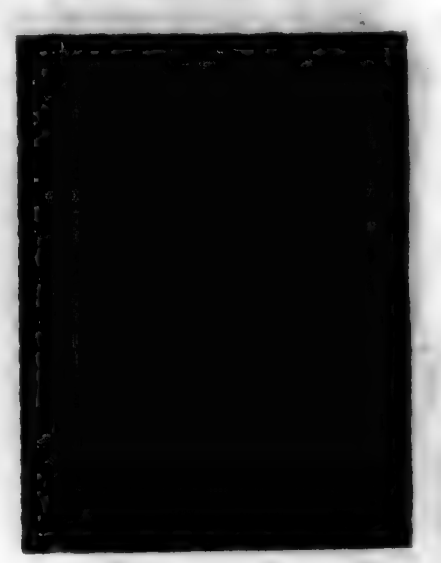


185,642
NOVELTY BAROMETER
Raymond B. Kruskopf, St. Paul, Minn., assignor to Payne Enterprises, Incorporated, St. Paul, Minn., a corporation of Minnesota
Application July 14, 1958, Serial No. 51,768
Term of patent 14 years
(Cl. D52—7)

185,643
WATER CLOSET
Hyman S. Magid, Morrisville, Pa., and William H. McKinney, Lisbon, Conn., assignors to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Application April 23, 1958, Serial No. 50,584
Term of patent 14 years
(Cl. D4—5)

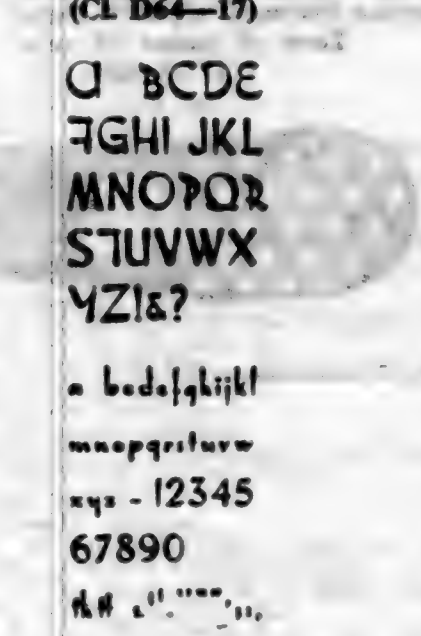


185,644
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N.Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application September 17, 1957, Serial No. 47,760
Term of patent 14 years
(Cl. D92—1)



185,645
COMBINED DEBURRING AND METAL POLISHING MACHINE
Haskell J. Miller, Glendale, Calif.
Application May 22, 1957, Serial No. 46,294
Term of patent 14 years
(Cl. D37—1)

185,646
FONT OF PRINTING TYPE
Ray F. Morgan, Northfield, Ill.
Application July 7, 1958, Serial No. 51,685
Term of patent 14 years
(Cl. D64—17)

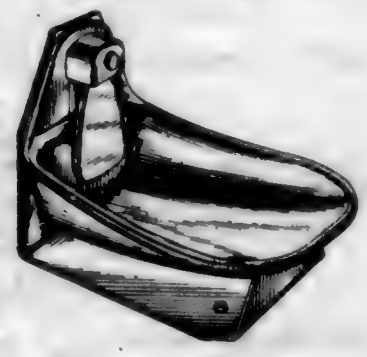


185,647
MODEL TRAIN TRANSFORMER OR SIMILAR ARTICLE
David Rabinow, Cheshire, Conn.
Application February 9, 1959, Serial No. 54,524
Term of patent 14 years
(Cl. D26—14)

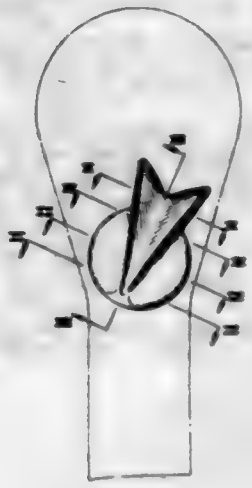
185,648
COVER HANDLE
Wayne F. Radebeck, Manitowoc, Wis., assignor to Mirro Aluminum Company, Manitowoc, Wis., a corporation of New Jersey
Application May 19, 1958, Serial No. 50,949
Term of patent 3½ years
(Cl. D44—29)

185,649
DRINKING GLASS OR SIMILAR VESSEL
Peter Schlumbohm, New York, N.Y.
Application May 2, 1957, Serial No. 45,990
Term of patent 14 years
(Cl. D36—8)

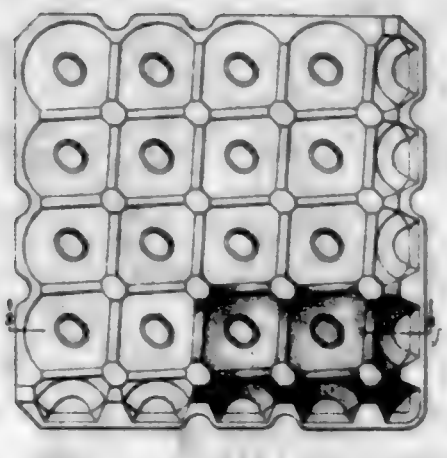
185,650
WATER FOUNTAIN FOR LIVESTOCK
Maynard K. Voorhees and Robert W. Voorhees, Cedar Falls, Iowa
Application October 30, 1958, Serial No. 53,205
Term of patent 14 years
(Cl. D12—2)



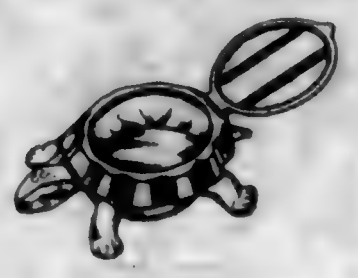
185,651
OPERATING LEVER FOR A RATCHET WRENCH
Robert W. Voss, West Springfield, Mass., assignor to Moore Drop Forging Company, Springfield, Mass., a corporation of Massachusetts
Application February 19, 1959, Serial No. 54,682
Term of patent 14 years
(Cl. D54—15)



185,652
MOLDED PULP TRAY
Philip M. Williams, Oakland, Maine, assignor to Keyes Fibre Company, Portland, Maine, a corporation of Maine
Application March 26, 1958, Serial No. 50,196
Term of patent 14 years
(Cl. D58—13)



185,653
ASH TRAY
Charles A. Woods, Burbank, Calif.
Application May 19, 1958, Serial No. 50,982
Term of patent 14 years
(Cl. D85—2)



185,654
SHOE SOLE
Albert Zerkowitz, New York, N.Y.
Application February 25, 1959, Serial No. 54,744
Term of patent 14 years
(Cl. D7—5)

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PATENTS WERE ISSUED ON THE 7TH DAY OF JULY, 1959

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Draghi, André. Tampon. Re. 24,666, 7–7–59, Cl. 128—283.
Ruckstuhl, Konrad. Extrusion press. Re. 24,665, 7–7–59, Cl. 18—12.

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AMP Inc.: *See*—
Demler, Henry W. 185,629.
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Gerlach, John R. 185,635.
American Radiator & Standard Sanitary Corp.: *See*—
Magid, Hyman S., and McKinney. 185,643.
Attwood Brass Works, Inc.: *See*—
Behnk, Donald J., and Monigle. 185,621.
Behnk, Donald J., and G. W. Monigle, to Attwood Brass Works, Inc. Marine light. 185,621, 7–7–59, Cl. D48—32.
Beiersdorf, P., & Co., A.G.: *See*—
Hofmann-Igl, Ernst H. 185,639.
Berg, Burton C., to The Mead Corp. Safety paper or similar article. 185,622, 7–7–59, Cl. D59—6.
Berg, Burton C., to The Mead Corp. Safety paper or similar article. 185,623, 7–7–59, Cl. D59—6.
Blumenthal Print Works, Inc.: *See*—
Blumenthal, Sidney E. 185,624.
Blumenthal, Sidney E., to Blumenthal Print Works, Inc. Textile fabric. 185,624, 7–7–59, Cl. D92—1.
Chicopee Mills, Inc.: *See*—
McCord, Douglas D. 185,644.
Cole, William E., to Craxfords Ltd. Combined containers and rack therefor. 185,625, 7–7–59, Cl. D44—1.
Craig, Burnie M., T. K. Hale, and H. C. Keck. Tablet dispenser. 185,626, 7–7–59, Cl. D52—2.
Crawford, Ralph W., to Fisher-Price Toys, Inc. Action toy. 185,627, 7–7–59, Cl. D34—15.
Craxfords Ltd.: *See*—
Cole, William E. 185,625.
De Augustine, John. Food pack or similar article. 185,628, 7–7–59, Cl. D58—13.
Demler, Henry W., to AMP Inc. Crimping tool. 185,629, 7–7–59, Cl. D54—13.
Dorstewitz, Victor W., and F. W. Sherrod. Canopy. 185,630, 7–7–59, Cl. D13—1.
Dreyfuss, Henry, to Minneapolis-Honeywell Regulator Co. Wall switch. 185,631, 7–7–59, Cl. D26—13.
Ensler, Arthur S., and A. Friedman, to Joe Lowe Corp. Frozen confection. 185,632, 7–7–59, Cl. D62—2.
Ensler, Arthur S., and A. Friedman, to Joe Lowe Corp. Frozen confection. 185,633, 7–7–59, Cl. D62—2.
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Glaberson, Martin. 185,636.
Fegan, Frank J., and W. H. Smith, to O. E. M. Corp. Combined oxygen tent support and air conditioning unit. 185,634, 7–7–59, Cl. D83—1.
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Ensler, Arthur S., and Friedman. 185,633.
Gerlach, John R., to The American Hardware Corp. Knob. 185,635, 7–7–59, Cl. D50—3.
Glaberson, Martin, to Eversharp, Inc. Safety razor case. 185,636, 7–7–59, Cl. D58—12.
Griswold, John S., to Wood Conversion Co. Tile or similar article. 185,637, 7–7–59, Cl. D18—2.
Hale, Thomas K.: *See*—
Craig, Burnie M., Hale, and Keck. 185,626.
Haun, Burton O., Jr., W. H. Moksu, and P. Wrablica, Jr., to Metals & Controls Corp. Motor protector switch or similar article. 185,638, 7–7–59, Cl. D26—13.
Hofmann-Igl, Ernst H., to P. Beiersdorf & Co., A.G. Tape dispenser or the like. 185,639, 7–7–59, Cl. D74—1.
Keck, Henry C.: *See*—
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Keyes Fibre Co.: *See*—
Williams, Philip M. 185,652.
Kirton, Joseph M. Carton stapling machine. 185,640, 7–7–59, Cl. D74—1.
Kotkins, Henry L. Luggage handle. 185,641, 7–7–59, Cl. D87—2.
Kruskopf, Raymond B., to Payne Enterprises, Inc. Novelty barometer. 185,642, 7–7–59, Cl. D52—7.
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Ensler, Arthur S., and Friedman. 185,632.
Ensler, Arthur S., and Friedman. 185,633.
Magid, Hyman S., and W. H. McKinney, to American Radiator & Standard Sanitary Corp. Water closet. 185,643, 7–7–59, Cl. D4—5.
McCord, Douglas D., to Chicopee Mills, Inc. Puffed textile fabric. 185,644, 7–7–59, Cl. D92—1.
McKinney, William H.: *See*—
Magid, Hyman S., and McKinney. 185,643.
Mead Corp., The: *See*—
Berg, Burton C. 185,622.
Berg, Burton C. 185,623.
Metals & Controls Corp.: *See*—
Haun, Burton O., Jr., Moksu, and Wrablica. 185,638.
Miller, Haskell J. Combined deburring and metal polishing machine. 185,645, 7–7–59, Cl. D37—1.
Minneapolis-Honeywell Regulator Co.: *See*—
Dreyfuss, Henry. 185,631.
Mirro Aluminum Co.: *See*—
Rudebeck, Wayne F. 185,648.
Moksu, Walter H.: *See*—
Haun, Burton O., Jr., Moksu, and Wrablica. 185,638.
Monigle, Glenn W.: *See*—
Behnk, Donald J., and Monigle. 185,621.
Moore Drop Forging Co.: *See*—
Vose, Robert W. 185,651.
Morgan, Ray F. Font of printing type. 185,646, 7–7–59, Cl. D34—17.
O. E. M. Corp.: *See*—
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Payne Enterprises, Inc.: *See*—
Kruskopf, Raymond B. 185,642.
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Rudebeck, Wayne F., to Mirro Aluminum Co. Cover handle. 185,648, 7–7–59, Cl. D44—29.
Schlumbohm, Peter. Drinking glass or similar vessel. 185,649, 7–7–59, Cl. D38—8.
Sherrod, Frank W.: *See*—
Dorstewitz, Victor W., and Sherrod. 185,630.
Smith, William H.: *See*—
Fegan, Frank J., and Smith. 185,634.
Voorhees, Maynard K. and R. W. Water fountain for livestock. 185,650, 7–7–59, Cl. D12—2.
Voorhees, Robert W.: *See*—
Voorhees, Maynard K. and R. W. 185,650.
Vose, Robert W., to Moore Drop Forging Co. Operating lever for a ratchet wrench. 185,651, 7–7–59, Cl. D54—15.
Williams, Philip M., to Keyes Fibre Co. Molded pulp tray. 185,652, 7–7–59, Cl. D56—13.
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Woods, Charles A. Ash tray. 185,653, 7–7–59, Cl. D85—2.
Wrablica, Paul, Jr.: *See*—
Haun, Burton O., Jr., Moksu, and Wrablica. 185,638.
Zerkowitz, Albert. Shoe sole. 185,654, 7–7–59, Cl. D7—5.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 7TH DAY OF JULY, 1959

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Agfa Akt.: *See*—
Durst, Julius. 2,893,302.

Abbott, George F. Jr., M. E. Krom, A. C. Mehring, and W. Whitney, to Bell Telephone Laboratories, Inc. Centralized memory line concentrator system. 2,894,072, 7–7–59, Cl. 179—18.

Abbott Laboratories: *See*—
Beck, Karl M., and Stormont. 2,893,869.

Abercrombie & Fitch Co.: *See*—
Mitchell, Horace G. 2,893,523.

Aberer, Frank E., and H. J. Tnige, to J. C. Hockery. Power-operated can opener. 2,893,[illegible], [illegible]–5–59, Cl. [illegible]—4.

Able, Edward T., to B. K. Sweeney Mfg. Co. Safety belt and harness testers. 2,893,240, 7–7–59, Cl. 73—95.

Abramson, Harold A. Deodorant composition. 2,893,918, 7–7–59, Cl. 167—90.

Achtziger, Christoph, to Porzellanfabrik Weiden Gebr. Bauscher, Zweigniederlassung der Lorenz Hutschenreuther Akt. Soup cup. 2,893,583, 7–7–59, Cl. 215—10.

Adams, Charles, Jr. Pipe hanger. 2,893,670, 7–7–59, Cl. 248—59.

Adams, Ernest C., Jr., to Miles Laboratories, Inc. Composition of matter. 2,893,843, 7–7–59, Cl. 23—253.

Adams, Robert T., and J. B. Harvey, to International Telephone and Telegraph Corp. Sliding contact device for tuning coils. 2,894,233, 7–7–59, Cl. 336—149.

Addis, Wendell A., to Millers Falls Co. Portable power planer with outboard support for cutter. 2,893,454, 7–7–59, Cl. 145—4.

Admiral Corp.: *See*—
Gagnon, George A. 2,893,008.
Singelman, Fred E. 2,893,651.

Alleo, Jackson A.: *See*—
Finken, Walter S., and Alleo. 2,893,011.

Akers, Edward G., to Stauffer Chemical Co. Combined spout and closure structure. 2,893,611, 7–7–59, Cl. 222—536.

Akers, Edward G., to Stauffer Chemical Co. Combined pouring spout and closure structures. 2,893,612, 7–7–59, Cl. 222—536.

Aktiebolaget Elektrolux: *See*—
Dalbec, Eric. 2,893,045.

Aktiengesellschaft Brown, Boveri & Cie: *See*—
Hoffmann, Raimund. 2,894,100.

Aladdin Mfg. Co.: *See*—
Smith, Robert W., and Wilcox. 2,893,675.

Albedyhl, Karl, and A. Bier, to Moeller & Neumann G.m.b.H. Articulated coupling. 2,893,222, 7–7–59, Cl. 64—9.

Albertine, Albert W.: *See*—
Johnson, Dean T., Albertine, Lippert, and Sheets. 2,893,068.

Albinson, Don: *See*—
Eames, Charles, Albinson, and Bauer. 2,893,469.

Alderson, Hedley W.: *See*—
Flower, Malcolm T. 2,893,755.

Alf, Fritz, to Deutsche Edelstahlwerke Akt., and Allegemeine Elektricitats-Gesellschaft. Method of and apparatus for progressively heating metal strip by the direct passage of an electric current therethrough. 2,894,115, 7–7–59, Cl. 219—155.

Alger, Philip L., to General Electric Co. Reactor controlled dual winding induction motor. 2,894,190, 7–7–59, Cl. 318—228.

All-Brite Fluorescent Fixtures, Inc.: *See*—
Thallon, Robert. 2,894,118.

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Baruch, Jordan J., and Allen. 2,893,508.

Allen, Garner M.: *See*—
McVoy, Vincen P. 2,894,154.

Allen, Philip H., and B. J. Chromy. Registers. 2,893,632, 7–7–59, Cl. 235—92.

Allied Chemical Corp.: *See*—
Helfaer, Bertram M., and Sievenpiper. 2,893,994.

Alling, John F., and A. R. Fleischer; said Fleischer assor. of ⅓ to said Alling. Portable training device for electric accounting machine operators. 2,893,137, 7–7–59, Cl. 35—19.

Allis-Chalmers Mfg. Co.: *See*—
Terry, William M., Jr. 2,893,061.

Allison, William D. Torsional spring suspension for vehicles. 2,893,750, 7–7–59, Cl. 280—104.

Alspaugh, Paul L., to Union Carbide Corp. Continuous automatic coker. 2,893,[illegible], 7–7–59, Cl. 202—22.

Aluminium-Industrie-Aktien-Gesellschaft: *See*—
Gerster, Max. 2,893,081.

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American Art Metals Co.: *See*—
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American Bosch Arma Corp.: *See*—
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American Brake Shoe Co.: *See*—
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Maclean, Norman E. 2,893,650.

American Can Co.: *See*—
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Jensen, Stephen F. 2,893,540.
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Long, Robert S., and Buell. 2,893,986.
Long, Robert S., and Buell. 2,894,003.
Suen, Tzeng J., and Russell. 2,893,977.
Tsang, Sien M., Lewis, and Paul. 2,893,816.
Wagner, Alan R., and Cooper. 2,893,392.
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Winthrop, Stanley O. 2,894,030.

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Bruck, John P. 2,893,176.
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American-Marietta Co.: *See*—
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American Motors Corp.: *See*—
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American Oil Co., The: *See*—
Georgian, Carl C. 2,893,851.
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American Potash & Chemical Corp: *See*—
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American Time Products, Inc.: *See*—
Dostal, Frank. 2,894,188.

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Anderson, Arthur W., and W. J. Brehm, to E. I. du Pont de Nemours and Co. Gamma-(3-aminocyclohexyl) butyric acid and esters. 2,894,025, 7–7–59, Cl. 260—514.

Anderson, John R., and J. P. Remeika, to Bell Telephone Laboratories, Inc. Barium titanate as a ferroelectric material. 2,893,107, 7–7–59, Cl. 29—25.35.

Anderson, Ralph F. Dispensing valve. 2,893,605, 7–7–59, Cl. 222—145.

Anderson, Richard L., to International Business Machines Corp. Crystal diode with improved recovery time. 2,894,152, 7–7–59, Cl. 307—88.5.

Anderson, Robert J., and J. T. Hamrick, to Thompson Ramo Wooldridge Inc. Self-cooled turbine drive. 2,893,204, 7–7–59, Cl. 60—39.18.

Anderson, William G. Boat anchor control. 2,893,341, 7–7–59, Cl. 114—210.

Andrews, Robert J. M.: *See*—
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Anthony, Russel W., to National Broach & Machine Co. Centering chuck. 2,893,744, 7–7–59, Cl. 279—123.

Antioch College: *See*—
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Antifinger, George J., to The B. F. Goodrich Co. Novel barrier layer in laminated structure. 2,893,908, 7–7–59, Cl. 154—139.

Applegate, Walter M. Bole-supporting device. 2,893,668, 7–7–59, Cl. 248—44.

Appleton Wire Works Corp.: *See*—
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Arenhold, Karl-Heinz, and W. Ortmann, to Westinghouse-Bremsen-Gesellschaft m.b.H. Self-lapping relay valve device. 2,893,415, 7–7–59, Cl. 137—116.5.

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Armour Research Foundation of Illinois Institute of Technology: *See*—
Bradstreet, Samuel W., and Griffith. 2,893,891.

Armstrong Cork Co.: *See*—
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Armstrong Rubber Co., The: *See*—
Fortner, Herman S. 2,893,467.

Arnold, Bruce C., to J. I. Case Co. Speedometer drive means. 2,893,249, 7–7–59, Cl. 74—12.

Aschaffenburger Zellstoffwerke Akt.: *See*—
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Bernhauer, Konrad, and Spaude. 2,893,989.

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Bach, Willi, and Brackertz. 2,893,123.

Atiyeh, Larry: *See*—
Hedblom, Lars O. 2,893,352.

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Austin, Eli H.: *See*—
Austin, Enoch W. 2,893,521.

Austin, Enoch W., 50% to E. H. Austin. Sleeve joint. 2,893,521, 7–7–59, Cl. 189—10.

Austin Hoy and Co. Ltd.: *See*—
Proctor, Sidney E. 2,893,714.

Austin, Leonard E., and J. H. Ettinger, to Bendix Aviation Corp. Fluid pressure motor. 2,893,354, 7–7–59, Cl. 121—38.

Automatic Canteen Co. of America: *See*—
Reynolds, Donald S., and Thorn. 2,893,598.

Automatic Switch Co.: *See*—
Van Camp, Roscoe C. 2,893,685.

Automotive Safety Associates: *See*—
Harper, William W., and Saylor. 2,893,088.

Avco Mfg. Corp.: *See*—
Bopp, Calvin C. 2,894,150.
Bussard, Emmery J. H. 2,894,211.
Horgan, Thomas B. 2,894,126.

Averette, Thomas P. Sheep foot tamper. 2,893,298, 7–7–59, Cl. 94—48.

Averna, Carl J. Paint roller wiping and saturating devices. 2,893,030, 7–7–59, Cl. 15—121.2.

Aylor, Elmo E. Airplane structure. 2,893,661, 7–7–59, Cl. 244—36.

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Babson, Henry B. 2,893,407.

Babson, Henry B., to Babson Bros. Co. Milk pipe line washing system. 2,893,407, 7–7–59, Cl. 134—56.

Bach, Willi, and E. Brackertz, to Askania-Werke A.G. Cinetheodolites. 2,893,123, 7–7–59, Cl. 33—40.

Backflow Engineering & Equipment Co.: *See*—
Snyder, Leonard L. 2,893,414.

Bacon, John H. Device for coupling plastic elements and beaded chains. 2,893,089, 7–7–59, Cl. 24—116.

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Badertscher, Dana K., and J. H. Meech, to American Motors Corp. Lubrication system for an engine. 2,893,514, 7–7–59, Cl. 184—6.

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Baechli, George, to Joy Mfg. Co. Portable extensible belt conveyor. 2,893,539, 7–7–59, Cl. 198—139.

Bagnall, Edwin, deceased; M. L. Gilmer, legatee under the will of E. Bagnall. Vehicle sway inhibiting device. 2,893,723, 7–7–59, Cl. 267—11.

Bailey, James R. Morse code balloon signaling device. 2,893,165, 7–7–59, Cl. 46—88.

Bailey Meter Co.: *See*—
Hoffman, Howard T., Speed, and Janofsky. 2,893,634.

Bain, Joseph P., A. B. Booth, and W. Y. Gary, to The Glidden Co. Isomerization of terpenic alcohols. 2,894,040, 7–7–59, Cl. 260—631.5.

Bair, Richard H., to Weiss Bros. Truck dock bumper. 2,893,720, 7–7–59, Cl. 267—1.

Baird, James S. Fishing hook stand-off. 2,893,159, 7–7–59, Cl. 43—44.85.

Baird, Raymond C., to Combustion Engineering, Inc. Vibration free apparatus. 2,893,509, 7–7–59, Cl. 181—46.

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Baker, Robert N., ¼ to Independent Iron Works, Inc. Adjustable trailer hitch. 2,893,753, 7–7–59, Cl. 280—501.

Balaguer, Rodolfo R., to J. D. Hedges and Co. Ltd. Partnership. Method of forming a bibulous coating on a metallic anode. 2,893,899, 7–7–59, Cl. 117—230.

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Barber, Harry A., and Sauer. 2,893,600.
Barber, Harry A., and Sauer. 2,893,601.
Barber, Harry A., Sauer, and Heacock. 2,893,602.

Barber, Harry A., and J. F. Sauer, to Barber-Greene Co. System and apparatus for measuring loose material. 2,893,600, 7–7–59, Cl. 222—1.

Barber, Harry A., and J. F. Sauer, to Barber-Greene Co. System and apparatus for measuring bitumen and the like. 2,893,601, 7–7–59, Cl. 222—1.

Barber, Harry A., J. F. Sauer, and R. C. Heacock, to Barber-Greene Co. Apparatus for measuring aggregate for mixture with asphalt. 2,893,602, 7–7–59, Cl. 222—77.

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Worthen, Eugene P., and Barbour. 2,893,926.

Barclays Bank Ltd.: *See*—
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Barney, Arthur L., to E. I. du Pont de Nemours and Co. Polymerizable compositions. 2,893,868, 7–7–59, Cl. 96—115.

Barradas, George, to Consolidated Molded Products Corp. Educational and training device for children. 2,893,591, 7–7–59, Cl. 220—69.

Barrett, David M., to Picker X-Ray Corp., Waite Mfg. Div., Inc. Diaphragm apparatus for X-ray tubes. 2,894,144, 7–7–59, Cl. 250—105.

Barrett, Harry B. Methods and means for grinding automotive brake shoes. 2,893,180, 7–7–59, Cl. 51—281.

Bartell, Floyd E. Water-impermeable, gas-permeable coating composition, method of preparation and articles coated therewith. 2,893,962, 7–7–59, Cl. 260—2.5.

Bartenfeld, Wilford G. Unloading unit for cargo vessel. 2,893,574, 7–7–59, Cl. 214—15.

Bartlett, Jeffrey H., and V. L. Hughes, to Esso Research and Engineering Co. Preparation of bifunctional cycloalkanes. 2,894,038, 7–7–59, Cl. 260—598.

Bartolat, Joseph J. Dispenser for liquid additives to water hoses. 2,893,417, 7–7–59, Cl. 137—205.5.

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Bassick Co., The: *See*—
Claud-Mantle, Arthur. 2,893,771.

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Bastian-Blessing Co., The: *See*—
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Steele, Glen R. 2,893,567.

Batts, Charles C. Fluid spray nozzle. 2,893,646, 7–7–59, Cl. 239—419.

Bauer, Alfred F., to National Lead Co. Die cast V-type engine block. 2,893,358, 7–7–59, Cl. 121—194.

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Bayliss, Cecil T., to Perry Chain Co. Ltd. Chain or belt tensioning devices. 2,893,255, 7–7–59, Cl. 74—242.8.

Beach, Sylvester K.: *See*—
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Beemer, Paul K., to Preco Inc. Variable pitch pulley mechanism. 2,893,253, 7–7–59, Cl. 74—230.17.

Beens, Hendrik J., to Pieter Schoen & Zoon N.V. Film applicator. 2,893,040, 7–7–59, Cl. 15—236.

Beisner, Karl. Process and tool for perforating ingots. 2,893,277, 7–7–59, Cl. 78—9.

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Anderson, John R., and Remeika. 2,893,107.
Blount, Frank E., and Krom. 2,894,078.
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Beltone Hearing Aid Co.: *See*—
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Benink, Christiaan J. M., and K. Kleemann, to G. M. Pfaff, A.-G. Cutting device for sewing machine. 2,893,335, 7–7–59, Cl. 112—125.

Berg, Clyde H. O., to Union Oil Co. of California. Hydrocarbon conversion process and apparatus. 2,893,942, 7–7–59, Cl. 208—66.

Berg, Clyde H. O., to Union Oil Co. of California. Combined hydrodesulfurization and reforming process. 2,893,945, 7–7–59, Cl. 208—99.

Berg, Clyde H. O., to Union Oil Co. of California. Process and apparatus for high temperature reactions. 2,894,041, 7–7–59, Cl. 260—644.

Berg, Clyde H. O., and R. C. Oliver, to Union Oil Co. of California. Hydrocarbon conversion process and apparatus. 2,893,947, 7–7–59, Cl. 208—134.

Bergfelt, Nils H., to Friden, Inc. Power operated sign control mechanism. 2,893,631, 7–7–59, Cl. 235—73.

Bergsland, Charles H., T. R. James, R. S. Karinen, G. A. Kwasniewski, and K. E. Neumeier, to General Mills, Inc. Machine for assembling circuit components. 2,893,009, 7–7–59, Cl. 1—106.

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Bernhauer, Konrad, and S. Spande, to Aschaffenburger Zellstoffwerke Akt. Process for producing cyano cobalamines. 2,893,989, 7–7–59, Cl. 260—211.5.

Berry, Blanche. Shower control attachment in combination with a shower head. 2,893,648, 7–7–59, Cl. 239—490.

Berry, Clifford E., to Consolidated Electrodynamics Corp. Potentiometer apparatus. 2,894,197, 7–7–59, Cl. 323—79.

Berthiez, Frederick C. G., to Societe Anonyme des Anciens Etablissements Charles Berthiez. Safety release system for drilling machines and the like. 2,893,273, 7–7–59, Cl. 77—32.7.

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Birum, Gail H., and S. A. Heininger, to Monsanto Chemical Co. Toxic reaction products of organosulfinylamines with dialkyl phosphites. 2,893,910, 7–7–59, Cl. 167—22.

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Bittner, Emory M. Car interior snack tray. 2,893,802, 7–7–59, Cl. 311—22.

Bixby, Kenneth R. Screen. 2,893,560, 7–7–59, Cl. 209—394.

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Bliss, E. W., Co.: *See*—
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Blose, Thomas L., to A. O. Smith Corp. Conically tapered screw-type casing joint with metal-to-metal seal. 2,893,759, 7–7–59, Cl. 285—334.

Blount, Frank E., and M. E. Krom, to Bell Telephone Laboratories, Inc. Line concentrator checking arrangement. 2,894,073, 7–7–59, Cl. 179—18.

Blum, Seymour H. Air conditioner unit. 2,893,220, 7–7–59, Cl. 62—404.

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Bocchino, Joseph J. Chain lubricator. 2,893,516, 7–7–59, Cl. 184—17.

Bodisch, William F. Baling machine. 2,893,308, 7–7–59, Cl. 100—15.

Bogese, Stephen B., to Virginia Plastics and Chemical Co., Inc. Protective sheath for a cable connector. 2,894,056, 7–7–59, Cl. 174—92.

Bolie, Victor W., to Collins Radio Co. Tuning system for frequency synthesizing means. 2,894,133, 7–7–59, Cl. 250—27.

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Bottum, Edward W. Strainer. 2,893,563, 7–7–59, Cl. 210—448.

Bouma, Lawrence. Counterweighted milking machine receptacle support. 2,893,350, 7–7–59, Cl. 119—14.12.

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Breecka, Rudolph S., R. L. Moore, and H. W. Schaufelberger, to Western Electric Co., Inc. Apparatus for attaching leads to crystals. 2,894,112, 7–7–59, Cl. 219—85.

Brewer, Claire N., to International Typographical Union of North America. Electromechanical device and improved armature therefor. 2,894,181, 7–7–59, Cl. 317—165.

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Brixner, Lothar H., to E. I. du Pont de Nemours and Co. Ferromagnetic material of the formula $BaFe_2O_4F$ and its preparation. 2,893,830, 7–7–59, Cl. 23—50.
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Brown, Harry, and J. McPherson, to Peglers Ltd. Fluid control tap. 2,893,421, 7–7–59, Cl. 137—329.3.
Brown, James W., to Esso Research and Engineering Co. Fluid coking process. 2,893,946, 7–7–59, Cl. 208—100.
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Browne, Kenneth A., and S. G. Guins, to The Chesapeake and Ohio Railway Co. Suspension for railway cars and the like. 2,893,326, 7–7–59, Cl. 105—4.
Bruck, John P., to American-Lincoln Corp. Surfacing machine. 2,893,175, 7–7–59, Cl. 51—170.
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Brumbaugh, Isaac V. Universal gas valve. 2,893,426, 7–7–59, Cl. 137—614.17.
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Schultheis, Eugene W., and Brumbaugh. 2,893,653.
Brundell, Per G., and K.-E. A. Jonsson, to Soderhamns Verkstader A. B. Log handling arrangement for debarking machines. 2,893,453, 7–7–59, Cl. 144—242.
Brunes, Bengt T. Method of firing steam generators with evaporated sulphite waste liquor. 2,893,333, 7–7–59, Cl. 100—1.
Brusadelli, Giulio, to Developpement Textile Societe Anonyme (Detesta). Rectilinear loom. 2,893,440, 7–7–59, Cl. 139—28.
Bruson, Herman A., and J. Rockett, to Olin Mathieson Chemical Corp. Organic acid and process therefor. 2,894,010, 7–7–59, Cl. 260—404.
Bryant Electric Co., The : *See*—
Taylor, Owen L. 2,894,103.
Bryant, John H. : *See*—
Wing, Arthur K., Jr., and Bryant. 2,894,168.
Bryant, John H., A. G. Peifer, and R. W. Wilmarth, to International Telephone and Telegraph Corp. R-F coupling arrangements for traveling wave tubes. 2,894,227, 7–7–59, Cl. 333—97.
Bubniak, William C., to General Motors Corp. Regenerator and seal therefor. 2,893,699, 7–7–59, Cl. 257—6.
Buccicone, Dario, to Bucciconi Engineering Co., Inc. Plier mechanism for metal sheets. 2,893,573, 7–7–59, Cl. 214—6.
Bucciconi Engineering Co., Inc. : *See*—
Buccicone, Dario. 2,893,573.
Buchholz, Arnold R., and F. Haban, to Brandt Automatic Cashier Co. Coin changer apparatus. 2,893,406, 7–7–59, Cl. 133—2.
Buchholz, Willi : *See*—
Detert, Ernst-Rolf, and Buchholz. 2,893,400.
Buchman, Harry. Folding guest rack. 2,893,767, 7–7–59, Cl. 287—96.
Buck, James R., to Becton, Dickinson and Co. Medical assembly and unit for liquid transfer. 2,893,395, 7–7–59, Cl. 128—349.
Buckeye Steel Castings Co., The : *See*—
McClurg, Carl D. 2,893,572.
Buckeye Tools Corp. : *See*—
Linsker, Eugene. 2,893,272.
Buckingham, William D., G. H. Ridge, L. D. Root, and F. T. Turner, to The Western Union Telegraph Co. Facsimile transmitter for telegraph message blanks and the like. 2,894,066, 7–7–59, Cl. 178—7.1.
Buckley, Duer H. Cap for soil pipe clean-outs. 2,893,590, 7–7–59, Cl. 220—39.
Buckley, Gloria C. : *See*—
Rubin, Leon J., and Buckley. 2,894,005.
Buell, Bennett G. : *See*—
Long, Robert S., and Buell. 2,893,986.
Long, Robert S., and Buell. 2,894,003.
Buffet, Jean, and J. Meriaux, to Comptoir Industriel d'Etirage et Profilage de Metaux. Lubrication in the hot extrusion of metals. 2,893,555, 7–7–59, Cl. 207—10.
Bullard Co., The : *See*—
Ettorre, James E. 2,893,280.
Buningh, Weigert C. : *See*—
Ten Have, Cornelis D., Buningh, Le Nobel, Pieters, and Lower. 2,893,954.
Burden, James H., to The Plessey Co. Ltd. Variable resistors and potentiometers. 2,894,238, 7–7–59, Cl. 338—174.
Burgin, Kermit H. Two piece garage door. 2,893,482, 7–7–59, Cl. 160—191.
Burroughs Corp. : *See*—
Relis, Matthew J. 2,894,247.
Relis, Matthew J., and Yuni. 2,894,248.
Burroughs, William P., to General Motors Corp. Hydrogen elimination in treatment of metals. 2,893,181, 7–7–59, Cl. 51—282.
Burt, Howard J., and L. F. Janecek, to Continental Can Co., Inc. Bulk storage of cans for delivery to an operating unit. 2,893,594, 7–7–59, Cl. 221—1.
Burtnett, Everett R., to Borg-Warner Corp. Power transmitting mechanism. 2,893,265, 7–7–59, Cl. 74—677.
Bussard, Emmery J. H., to Avco Mfg. Corp. Stable transistor oscillator system. 2,894,211, 7–7–59, Cl. 331—117.
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Victor, Irving. 2,893,925.
Buttironi, Giovanni, and A. Giavarini. Reversible conveyor system. 2,893,538, 7–7–59, Cl. 198—110.
Cabell, Roger W. Fuses for eelctric circuits. 2,894,099, 7–7–59, Cl. 200—117.
Cable Belt Ltd. : *See*—
Walker, John R. 2,893,541.
Cadillac Gage Co. : *See*—
Bauer, Russell E. 2,893,355.
Call, Roland A., and G. E. E. Warder, to Electric & Musical Industries Ltd. Automatic tools and other apparatus for shaping workpieces. 2,894,186, 7–7–59, Cl. 318—39.
Caldwell, John R., R. Gilkey, and C. C. Dannelly, to Eastman Kodak Co. Melt-spun polymeric fibers containing pigments of cross-linked polymerized unsaturated amides and melt spinning composition therefor. 2,893,970, 7–7–59, Cl. 260—45.4.
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California Ink Co., Inc., The : *See*—
Erskine, Archibald M., and Lydon. 2,893,886.
Cali-Quilt Furniture Corp. : *See*—
Repaich, Steve J. 2,893,472.
Repaich, Steve J. 2,893,477.
Callery, Charles H., to American Anti Corrosion Corp. Apparatus for applying bitumen coating to metallic surfaces. 2,893,642, 7–7–59, Cl. 239—132.
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Calvo, Philip S., Jr., and W. C. Moser, to E. I. du Pont de Nemours and Co. Process for the production of regenerated cellulose filaments. 2,893,820, 7–7–59, Cl. 18—54.
Cambell, Lewis, Jr. : *See*—
Sacher, William S. 2,893,133.
Cameron, Alasdair B., J. Christie, and T. R. Manley, to A. Reyrolle & Co. Ltd. and Moser-Glaser & Co. A.G. Voltage grading in high-voltage switchgear insulation. 2,894,054, 7–7–59, Cl. 174—21.
Campbell, Paul E., to Phillips Petroleum Co. Process for decolorizing hydrogenated butadiene polymers with a saturated carboxylic acid. 2,893,982, 7–7–59, Cl. 260—85.1.
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Peat, James. 2,893,761.
Carley, Edmond G., and J. M. Wainscott, to E. I. du Pont de Nemours and Co. Production of chlorinated ethylene. 2,894,045, 7–7–59, Cl. 260—654.
Carlson, Frederick O., to H. K. Porter Co., Inc. Tape reel. 2,893,655, 7–7–59, Cl. 242—84.8.
Carlson, Frederick O., to H. K. Porter Co., Inc. Ruler constructions. 2,893,656, 7–7–59, Cl. 242—84.8.
Carlson, Harry N., and R. L. Pitchford, to Standard Gage Co., Inc. Adjustable setting master for dial bore gages. 2,893,128, 7–7–59, Cl. 33—143.
Carlsen, Carl F., to Sylvania Electric Products, Inc. Hopper construction for automatic assembly apparatus. 2,893,597, 7–7–59, Cl. 221—238.
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Carpenter, Tracy L., to Tracy Accessories, Inc. Automobile door lock mechanism. 2,893,774, 7–7–59, Cl. 292—280.
Carson, Frank J., and H. A. Lefiet, Jr., to Libbey-Owens-Ford Glass Co. Method and apparatus for bending glass sheets. 2,893,170, 7–7–59, Cl. 49—67.
Carver, Gordon M., Jr., and W. Barber, to American Cyanamid Co. Surgical ligature dispenser. 2,893,548, 7–7–59, Cl. 206—63.3.
Casablancas High Draft Co. Ltd. : *See*—
Noguera, Joseph. 2,893,065.
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Arnold, Bruce C. 2,893,249.
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Celanese Corp. of America : *See*—
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Centre Technique Industrial dit: Institut Textile de France: *See*—
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Cesareo, Orfeo, to Bell Telephone Laboratories, Inc. Number matching circuit. 2,894,071, 7–7–59, Cl. 179—18.

Chamberlain, Ralph J., to American Cyanamid Co. Fatty acid-epichlorohydrin adducts. 2,893,875, 7–7–59, Cl. 99—166.

Chambers, Lawrence S. Formation sampler device. 2,893,690, 7–7–59, Cl. 255—1.4.

Chapin, Earl C., and R. I. Longley, Jr., to Monsanto Chemical Co. Reduced polymers of methacrolein. 2,893,979, 7–7–59. Cl. 260—73.

Chapman, Harvey W., and H. L. Dunlap, to Evans Products Co. Freight loading apparatus. 2,893,328, 7–7–59, Cl. 105—369.

Chapman, Richard F., to International Telephone and Telegraph Corp. Synchronization of motor rotated elements. 2,894,187, 7–7–59, Cl. 318—71.

Charbonneaux, Wilson A., to Wac Line, Inc. Speed control for alternating-current induction motors. 2,894,191, 7–7–59, Cl. 318—229.

Charles, Stanley E.: *See*—
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Charlton, Richard E., Jr., and V. L. Payne, to West Point Mfg. Co. Vacuum extraction tube. 2,893,043, 7–7–59, Cl. 15—306.

Chemstrand Corp., The: *See*—
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Chenicek, Joseph A., to Universal Oil Products Co. Sweetening of hydrocarbon distillates. 2,893,952, 7–7–59, Cl. 208—204.

Chesapeake and Ohio Railway Co., The: *See*—
Browne, Kenneth A., and Guins. 2,893,326.

Chesebrough, James A., D. R. Scott, and H. F. Elliott, to Hewlett-Packard Co. Photoelectric system. 2,894,178, 7–7–59, Cl. 317—130.

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Chicago Development Corp.: *See*—
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Chick, Gilbert H. Casting attachment for orthopedic tables. 2,893,384, 7–7–59, Cl. 128—75.

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Childs, Henry B., to Underwood Corp. Typewriter and sound enveloping furniture therefor. 2,893,533, 7–7–59, Cl. 197—186.

Chinnici, Michael A., to Peerless Sewing Machine Co. Inc. Sewing machine. 2,893,336, 7–7–59, Cl. 112—132.

Chodorow, Marvin, and R. H. Varian, to Varian Associates. Gyromagnetic resonance apparatus. 2,894,209, 7–7–59, Cl. 331—94.

Chope, Wilbert E., and L. G. Mamas, to Industrial Nucleonics Corp. Measuring and recalibrating servosystem. 2,894,185, 7–7–59, Cl. 318—28.

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Cameron, Alasdair B., Christie, and Manley. 2,894,054.

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Allen, Philip H., and Chromy. 2,893,632.

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Elliott, Clifton M., and Nofts. 2,893,364.
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Raes, Oscar M., and Kleemann. 2,893,790.

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Ciba Pharmaceutical Products Inc.: *See*—
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Cipolla, Laurence. Midsole skiving and trimming machine. 2,893,025, 7–7–59, Cl. 12—88.

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Malm, John G., Weinstock, and Claassen. 2,893,826.

Clark Equipment Co.: *See*—
Lapsley, Robert. 2,893,260.

Clark, Gerald A.: *See*—
Havens, Carl B., and Clark. 2,84,022.

Clark, Wallace. Down-hole motor positioning device. 2,893,693, 7–7–59, Cl. 255—4.

Clark, Welmon D., to General Electric Co. Selective circuit. 2,894,120, 7–7–59, Cl. 250—6.

Clarke, Arthur F., Jr., to Bendix Aviation Corp. Vacuum tube mounting. 2,894,177, 7–7–59, Cl. 317—101.

Clarke, Bruce P., to Ingersoll-Rand Co. Controlling device for hoists. 2,893,357, 7–7–59, Cl. 121—46.4.

Clarke, George W., deceased (by Barclays Bank Ltd., executor), W. K. Weston, and R. J. M. Andrews, to International Standard Electric Corp. Submarine cable repeater housings. 2,894,055, 7–7–59, Cl. 174—31.

Claud-Mantle, Arthur, to The Bassick Co. Handle-equipped lid fastener. 2,893,771, 7–7–59, Cl. 292—113.

Claussen, Walter F., to Corning Glass Works. Method of vapor coating. 2,893,895, 7–7–59, Cl. 117—106.

Cleland, William J., R. G. Thomas, and E. Seljo, to Styrene Products Ltd. Process for the production of particulate foamable styrene polymers. 2,893,963, 7–7–59, Cl. 260—2.5.

Clement, Carl J., Jr.: *See*—
Schrock, Norman B., Clement, and Herreman. 2,894,205.

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Cleveland Pneumatic Industries, Inc.: *See*—
Iliens, Karlis. 2,893,794.

Clever, Ray E.: *See*—
Long, George B., and Clever. 2,894,105.

Clifton Conduit Corp.: *See*—
Pearson, William S. 2,893,348.

Clifton, Walter L., Jr., to American Art Metals Co. Latch and detent assembly. 2,893,773, 7–7–59, Cl. 292—223.

Coallier, Maurice. Drawing instrument. 2,893,126, 7–7–59, Cl. 33—103.

Coe, Frank B. Game carrier. 2,893,748, 7–7–59, Cl. 280—47.3.

Coggeshall, Norman D., to Gulf Research & Development Co. Continuous separation process. 2,893,955, 7–7–59, Cl. 208—310.

Coker, James N., M. Fields, and A. O. Rogers, to E. I. du Pont de Nemours and Co. Synthesis of indolylmethyl-hydantoin. 2,893,997, 7–7–59, Cl. 260—309.5.

Colgate-Palmolive Co.: *See*—
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Colley, Rowan H., to Rolls-Royce Ltd. Multi piston ram device. 2,893,209, 7–7–59, Cl. 60—97.

Collins, John E., to International Basic Economy Corp. Solenoid operated pressure balanced flow valve. 2,893,428, 7–7–59, Cl. 137—620.

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Bolie, Victor W. 2,893,138.
Passman, Harry M. 2,893,704.
Schulte, Frederick E. 2,893,257.
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Collotta, Albert J., to Ark-Les Switch Corp. Electrical switch. 2,894,082, 7–7–59, Cl. 200—44.

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Combustion Engineering, Inc.: *See*—
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Commonwealth Engineering Co. of Ohio, The: *See*—
Ballard, James W., and Brier. 2,893,434.
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Compagnie Francaise des Matieres Colorantes: *See*—
Petitcolas, Pierre, Richard, Sureau, Roe, and Develotte. 2,893,817.

Comptoir Industriel d'Etirage et Profilage de Metaux: *See*—
Buffet, Jean, and Meriaux. 2,893,555.
Sejournet, Jacques, and Bonnassieux. 2,893,554.

Connors, James J., and C. W. Eisenheimer, to The Charles Parker Co. Wall fixture support. 2,893,676, 7–7–59, Cl. 248—225.

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Berry, Clifford E. 2,894,197.

Consolidated Molded Products Corp.: *See*—
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Continental Aviation & Engineering Corp.: *See*—
Druzynski, Frank C. 2,893,367.

Continental Can Co., Inc.: *See*—
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Cook, George O. Apparatus for taping packages. 2,893,188, 7–7–59, Cl. 53—198.

Cook, Marion H., to Miles Laboratories, Inc. Composition of matter. 2,893,844, 7–7–59, Cl. 23—253.

Cook, Ross, J. D. Capers, and A. Martens, to Ross Cook, Inc. Pneumatic transit tube system with remotely controlled transfer apparatus. 2,893,660, 7–7–59, Cl. 243—16.

Cook, Ross, Inc.: *See*—
Cook, Ross, Capers, and Martens. 2,893,660.

Cooke, Harold G., Jr., to Devoe & Raynolds Co., Inc. Epoxide resins, etc. 2,893,978, 7–7–59, Cl. 260—47.

Cooley, Austin G., to Digital Control Systems, Inc. High speed facsimile transmission systems. 2,894,054, 7–7–59, Cl. 178—6.6.

Coon, Kenneth C., M. J. Harpole, and E. R. Van Krevelen, to General Mills, Inc. Rate of climb tester. 2,893,236, 7–7–59, Cl. 73—4.

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Cooper, Robert L. Surgical retractor apparatus. 2,893,378, 7–7–59, Cl. 128—20.

Copas, James I. Traveling seal and paraffin scraper device. 2,893,493, 7–7–59, Cl. 138—170.

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Cory, Robert W. Multiple frequency eddy current testing apparatus. 2,894,203, 7–7–59, Cl. 324—40.

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Couper, John R. Pistol holster. 2,893,615, 7–7–59, Cl. 224—2.

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Courtier, Armand J., to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de St. Gobain, Chauny & Cirey. Separation and purification of anhydrides of organic diacids. 2,893,924, 7–7–59, Cl. 202—42.

Cousins, Boyd E. Mounting for mirrors and the like. 2,893,666, 7–7–59, Cl. 248—28.

Coy, Carl E. Artificial transmission lines. 2,894,221, 7–7–59, Cl. 333—29.

Crawford, Donald D. Truck tire bead breaker. 2,893,478, 7–7–59, Cl. 157—1.2.

Crawley, Arthur, T. E. Dugle, and R. W. Wagner, to Crawley Book Machinery, Inc. Single station book pressing and creasing machine. 2,893,023, 7–7–59, Cl. 11—1.

Crawley Book Machinery, Inc.: *See*—
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Geitner, Rudolph. 2,893,445.
Creaswell, Stephen G., to Sylvania Electric Products Inc. Exhaust tip shield. 2,893,027, 7–7–59, Cl. 15—21.
Critchlow, James T. Multiple compartment container. 2,893,604, 7–7–59, Cl. 222—129.
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Crotty, Harold F., and J. F. Scamman, to General Electric Co. Impulse generating device. 2,894,146, 7–7–59, Cl. 250—231.
Crouse, William W., to Ransburg Electro-Coating Corp. Method and apparatus for electrostatic coating. 2,893,893, 7–7–59, Cl. 117—93.
Crow, Robert P., to Motorola, Inc. Frequency shift transmitter. 2,894,208, 7–7–59, Cl. 331—40.
Crowe, Talmadge L., to Baker Oil Tools, Inc. Apparatus for retrieving tools in well bores. 2,893,491, 7–7–59, Cl. 166—103.
Crowe, William J., to Bell Telephone Laboratories, Inc. Nonreciprocal wave transmission. 2,894,216, 7–7–59, Cl. 333—7.
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Harnish, Don P., and Brukardt. 2,893,621.
Cullender, Henry F., to Sparklets Ltd. Valve actuating device. 2,893,259, 7–7–59, Cl. 74—424.8.
Cunningham, Jess B. Detachable mopheads and frames therefor. 2,893,038, 7–7–59, Cl. 15—229.
Cunningham, Marion M., to United States Rubber Co. Towing rig for collapsible containers. 2,893,746, 7–7–59, Cl. 280—29.
Cunningham, Walter F., to Superior Tabbies, Inc. Index tabs. 2,893,144, 7–7–59, Cl. 40—23.
Currie, Grover C., B. D. Dans, M. B. Dunn, and J. R. Sweginnis, to Dacam Corp. Carton forming apparatus and method. 2,893,183, 7–7–59, Cl. 53—29.
Curtner, Richard L., to E. W. Bliss Co. Pull type magnetic torque limiter. 2,893,530, 7–7–59, Cl. 192—150.
Cushman, Walton W. Suction lift means for industrial lift trucks. 2,893,581, 7–7–59, Cl. 214—651.
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Gassmann, Johannes. 2,894,051.
Dalbec, Eric, to Aktiebolaget Elektrolux. Cord-carrying structure for suction cleaner. 2,893,045, 7–7–59, Cl. 15—323.
Dalrymple, William P., to American Brake Shoe Co. Internal combustion engine having crankshaft driven rotary means for removing entrained liquid from fluid supplied to the firing chamber. 2,893,362, 7–7–59, Cl. 123—73.
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Darnell, Rex C., to Michigan Wire Cloth Co. Fuel filter. 2,893,629, 7–7–59, Cl. 233—27.
Daugirdas, Kristupas, to National Pneumatic Co., Inc. Door controlling linkage. 2,893,506, 7–7–59, Cl. 180—82.
David, William F. Trolling jig. 2,893,155, 7–7–59, Cl. 43—16.
Davidson Corp.: *See*—
Miaskoff, Leonard. 2,893,730.
Davidson, Joe B. Collapsible plant container. 2,893,167, 7–7–59, Cl. 47—37.
Davidson, Philip H., to United States of America, Atomic Energy Commission. Charge bottle for a mass separator. 2,894,135, 7–7–59, Cl. 250—41.9.
Davies, Enoch D., to The Oilgear Co. Tensioning apparatus for extrusion presses. 2,893,552, 7–7–59, Cl. 207—1.
Davis, Benjamin H., to The Standard Machinery Co. Stock anchor for snagless continuous stock reeling operations. 2,893,652, 7–7–59, Cl. 242—25.
Davis, Joseph E., to Sylvania Electric Products Inc. Screen grid, color burst separation circuit. 2,894,059, 7–7–59, Cl. 178—5.4.
Davis, Walter M., and A. L. Fisher, to Monsanto Chemical Co. Process for producing substantially white sodium bisulfate. 2,893,836, 7–7–59, Cl. 23—121.
Davis, Walter T., to Wheeling Stamping Co. Collapsible tube for ointments and the like. 2,893,613, 7–7–59, Cl. 222—566.
Dawson, Fred, C. R. Illsley, J. L. Moilliet, and H. W. G. Ziegler, to Imperial Chemical Industries Ltd. Compositions for use in the manufacture of light-sensitive photographic materials. 2,893,867, 7–7–59, Cl. 96—97.
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Sexauer, William O. 2,893,534.
Dayonnet, Francois J. D., and P. F. M. Gloess. Multiplex telephone switching system. 2,894,070, 7–7–59, Cl. 179—15.
Dazzi, Joachim, to Monsanto Chemical Co. Polyvinyl chloride plasticised with acyliricinoleate-fumarate adducts. 2,893,967, 7–7–59, Cl. 260—31.8.
De Baun, John E., and A. E. Friedrich; said Friedrich assor. to said De Baun. Combined anti-skid and parking device. 2,893,500, 7–7–59, Cl. 180—1.
Decca Record Co. Ltd., The: *See*—
Ridgers, Charles E. S., and Briggs. 2,894,220.
De Coriolis, Ernest G., R. Hanna, and A. W. Peters, to Surface Combustion Corp. Dew point indicator. 2,893,237, 7–7–59, Cl. 73—17.
Dedekind, Lowell W. Rotary cutter. 2,893,111, 7–7–59, Cl. 29—105.
De Graffenried, Albert L., to R. J., R. Q., S. R., and M. V. Stockholm, jointly. Tire alarm system. 2,894,246, 7–7–59, Cl. 340—52.
Dehydag, Deutsche Hydrierwerke G.m.b.H.: *See*—
Haas, Hermann, Kirstahler, Gündel, and Strauss. 2,893,932.
De Jongh, David K.: *See*—
Janssen, Paul A. J., and de Jongh. 2,894,083.
De Jur-Amsco Corp.: *See*—
Lunzer, Frederic A. 2,893,287.
Delliso, John. Socket and rod coupling. 2,893,769, 7–7–59, Cl. 287—126.
Delker, Thomas C., to Bendix Aviation Corp. Co-rotating dual wheel construction. 2,893,784, 7–7–59, Cl. 301—36.
Dell Foods Specialties Co.: *See*—
Roser, Robert A., and Hedin. 2,893,332.
Dellwag, Hanswerner: *See*—
Bernhauer, Konrad, Friedrich, Dellweg, and Becher. 2,893,988.
Delta Tank Mfg. Co.: *See*—
Spann, Delroy O. 2,893,510.
Demeny, Adam, to Dr. Ing. F. L. Fenyves. Massage apparatus. 2,893,382, 7–7–59, Cl. 128—38.
De Mornay-Bonardi, Inc.: *See*—
Fonda-Bonardi, Giusto. 2,894,229.
Dengler, Rudolf. Disposable head tooth brush. 2,893,031, 7–7–59, Cl. 15—123.
Denim Maid Mfg. Co., Inc.: *See*—
Weaver, John H., and Houdeshell. 2,893,035.
De Peu, Evans A. Pipe cutting indicator. 2,893,131, 7–7–59, Cl. 33—174.
De Pree, David O., to Ethyl Corp. Aminolead compound and herbicidal composition containing same. 2,893,857, 7–7–59, Cl. 71—2.7.
Detert, Ernst-Rolf, and W. Buchholz, to Eduard Gerlach, G.m.b.H. Tobacco foils and methods of making same. 2,893,400, 7–7–59, Cl. 131—15.
Deutsch, Zola G., to Diamond Alkali Co. Evolving carbon dioxide under pressure for use in the ammonia-soda process. 2,893,833, 7–7–59, Cl. 23—65.
Deutsche Edelstahlwerke Akt.: *See*—
Alf, Fritz. 2,894,115.
Wulf, Carl-Adolf. 2,893,409.
Developpement Textile Societe Anonyme (Detesta): *See*—
Brusadelli, Giulio. 2,893,440.
Develotte, Jean E.: *See*—
Petitcolas, Pierre, Richard, Sureau, Roe, and Develotte. 2,893,817.
Devoe & Raynolds Co., Inc.: *See*—
Cooke, Harold G., Jr. 2,893,978.
De Vore, Solomon L. Portable ink fountain. 2,893,817, 7–7–59, Cl. 101—365.
De Windt, Herbert J., to Ton-Tex Corp. Covered hinge joint for conveyor belts. 2,893,007, 7–7–59, Cl. 1—66.
Diamond Alkali Co.: *See*—
Deutsch, Zola G. 2,893,833.
Dick, A. B., Co.: *See*—
Perzentka, Thomas R. 2,893,729.
Dickerson, Raymond L. Chain-type flails having bark-cutting bosses on the outer links thereof. 2,893,451, 7–7–59, Cl. 144—208.
Dickson, Donald C., Jr., to Hoffman Electronics. Thermal sener device or the like. 2,893,904, 7–7–59, Cl. 148—33.
Dieman, Edgar A., and A. T. Swanson, to Standard Oil Co. Rust preventive composition. 2,893,880, 7–7–59, Cl. 106—14.
Dietzler, Andrew J., to The Dow Chemical Co. Bisphenols. 2,894,004, 7–7–59, Cl. 260—395.
Digital Control Systems, Inc.: *See*—
Cooley, Austin G. 2,894,064.
Dixi S.A.: *See*—
Leroy, René. 2,893,322.
Dixon, Richard L., 50% to V. B. Dixon. Label applying machine. 2,893,586, 7–7–59, Cl. 216—12.
Dixon, Sue M.: *See*—
McVoy, Vincen P. 2,894,154.
Dixon, Victor B.: *See*—
Dixon, Richard L. 2,893,586.
Doane, Harry C.: *See*—
Boylan, Henry W., Doane, and McManama. 2,893,700.
Dodds, Alexander, Co.: *See*—
Stouten, Edwin A., and Beach. 2,893,450.
Dohn, Leo F., to Guild Arts & Crafts, Inc. Plastic jewelry finding device made of two parts integrally joined. 2,893,095, 7–7–59, Cl. 24—265.
Dole Valve Co., The: *See*—
Eskin, Samuel G. 2,893,219.
Gibson, Thomas M. S. 2,893,432.
Rimsha, Victor E. 2,893,638.
Rimsha, Victor E., and Couffer. 2,893,425.
Donnelley, R. R., & Sons Co.: *See*—
Schoenberger, Robert L., Jr. 2,893,022.
Dooling, Russell F. Sealing ring. 2,893,795, 7–7–59, Cl. 309—22.

Dornfeld, Clinton A., to G. D. Searle & Co. 2-aryloxyaralkyl-1,4,5,6-tetrahydropyrimidines. 2,893,993, 7-7-59, Cl. 260—251.

Dortmund-Horder Huttenunion Akt.: *See*—
Harders, Fritz, Knuppel, and Brotzmann. 2,893,715.

Dortort, Isadore K., to I-T-E Circuit Breaker Co. Cross-compounding of machine regulators. 2,894,149, 7-7-59, Cl. 307—57.

Dostal, Frank, to American Time Products, Inc. Tuning fork with its frequency immune to the effects of gravitation and acceleration. 2,894,188, 7-7-59, Cl. 318—127.

Douglas Aircraft Co., Inc.: *See*—
Johnson, Dean T., Albertine, Lippert, and Sheets. 2,893,068.

Dow Chemical Co., The: *See*—
Dietzler, Andrew J. 2,894,004.
Havens, Carl B., and Clark. 2,894,022.

Dow, Robert, to G. S. Nalle, Jr. Method of making polymers. 2,893,937, 7-7-59, Cl. 204—158.

Dr. Ing. F. L. Fenyves: *See*—
Demeny, Adam. 2,893,382.

Dreher, John L.: *See*—
Hyman, Herbert H., and Dreher. 2,893,824.

Druzynski, Frank C., to Continental Aviation & Engineering Corp. Control for internal combustion engine. 2,893,367, 7-7-59, Cl. 123—140.

Du Cane, Peter, to Vosper Ltd. Roll damping apparatus for water-borne craft. 2,893,340, 7-7-59, Cl. 114—126.

Dufour, Raymond J., and D. B. Miller. Fireless welded tie-in coupling for gas mains. 2,893,758, 7-7-59, Cl. 285—286.

Dugle, Thomas E.: *See*—
Crawley, Arthur, Dugle, and Wagner. 2,893,023.

Duncan, Angus W., to The Mining Engineering Co. Ltd. Chock release. 2,893,079, 7-7-59, Cl. 248—351.

Dunlap, Henry L.: *See*—
Chapman, Harvey W., and Dunlap. 2,893,328.

Dunn, Maurice B.: *See*—
Currie, Grover C., Dana, Dunn, and Sweginnis. 2,893,183.

Du Pont de Nemours, E. I., and Co.: *See*—
Anderson, Arthur W., and Brehm. 2,894,025.
Barney, Arthur L. 2,893,868.
Bither, Tom A., Jr. 2,893,831.
Brixner, Lothar H. 2,893,830.
Calvo, Philip S., Jr., and Moser. 2,893,820.
Carley, Edmond G., and Wainscott. 2,894,045.
Coker, James N., Fields, and Rogers. 2,893,997.
Hause, Norman L., Schmitz, Stevens, and Sutor. 2,894,026.
Hawkinson, Alfred T. 2,893,819.
Kubisco, Michael A., and MacDonald. 2,893,972.
Lauterbach, Herbert G. 2,893,103.
Raasch, Maynard S. 2,893,911.
Sartori, Mario F. 2,893,998.
Smith, Frank E. 2,893,940.
Sutor, Walter L. 2,894,027.

Durst, Julius, to AGFA Akt. Exposure meter adjusting device. 2,893,302, 7-7-59, Cl. 95—64.

Duval, Bruce: *See*—
Waddington, Rogor S., and Duval. 2,893,444.

Duzich, John J., to Fram Corp. Magnetic filter elements. 2,893,561, 7-7-59, Cl. 210—223.

Dyl, Dorothy E.: *See*—
Etter, Paul A. 2,893,263.

Dzula, Boris: *See*—
Hinton, Raymond C. P., and Dzula. 2,894,069.

Eagle Pencil Co.: *See*—
Young, Marshall B. 2,893,109.

Eames, Charles, D. Albinson, and D. W. Bauer, to Herman Miller Furniture Co. Nesting chair. 2,893,469, 7-7-59, Cl. 155—2.

Earl, Harley J., to General Motors Corp. Bumperette mounting means. 2,893,776, 7-7-59, Cl. 293—63.

Earl, Robert P., and E. S. Welch, Jr., to Fenwal Inc. Kit and packaging, mixing and dispensing means for mixture ingredients. 2,899,547, 7-7-59, Cl. 206—47.

Earle, Guyon L. C. Kitchen-utility units. 2,893,807, 7-7-59, Cl. 312—279.

Eastman Kodak Co.: *See*—
Caldwell, John R., Gilkey, and Dannelly. 2,893,970.

Eaton, Lawrence V., and J. A. Kane, to Colony Foods Products, Inc. Bag lining and cuffing machine. 2,893,294, 7-7-59, Cl. 93—8.

Eberl, Walter: *See*—
Wild, Walter, and Eberl. 2,894,226.

Ecary, Charles A., to Societe Commerciale Eca. Device for indicating the true vertical. 2,893,248, 7-7-59, Cl. 74—5.34.

Eckstein, Ernest E. Automatic tongs. 2,893,778, 7-7-59, Cl. 294—110.

Edgerton, Harold E. Microscope flash-photography system and apparatus. 2,893,289, 7-7-59, Cl. 88—40.

Edwards, Chester P. Lock for refrigerator doors. 2,893,772, 7-7-59, Cl. 292—223.

Egan, Richard T., to Research-Cottrell, Inc. Rapping device. 2,893,511, 7-7-59, Cl. 183—7.

Eichenberg, Robert, to McEvoy Co. Choke. 2,893,435, 7-7-59, Cl. 138—44.

Eichner, Joseph. Safety razor with blade retaining means on the razor cap and blade adjusting means. 2,893,119, 7-7-59, Cl. 30—54.

Eisermann, Friedrich, to Sulzer Freres, Societe Anonyme. Casting mold and method of casting carbon-containing alloys. 2,893,084, 7-7-59, Cl. 22—214.

Electric & Musical Industries Ltd.: *See*—
Call, Roland A. and Warder. 2,894,186.
Kreuchen, Karl H. 2,894,169.
Vaughan, James R. M., and Bright. 2,894,171.

Electric Storage Battery Co., The: *See*—
Gongoll, Vernon F., and Klinger. 2,893,387.

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Johansson, Erik, and Helin. 2,893,085.

Elledge, Martin D. Sensitive drilling machine. 2,893,271, 7-7-59, Cl. 77—32.

Elling, Hugo, R. Elsner, and K. Heuer, to American Enka Corp. Production of yarns of regenerated cellulose having improved properties. 2,893,821, 7-7-59, Cl. 18—54.

Elliott, Clifton M., and M. E. Nofts, to Chrysler Corp. Fuel injection system for an internal combustion engine. 2,893,364, 7-7-59, Cl. 123—119.

Elliott, George, to General Dynamics Corp. Telephone conference circuit. 2,894,074, 7-7-59, Cl. 179—41.

Elliott, Harold F.: *See*—
Chesebrough, James A., Scott, and Elliott. 2,894,178.

Ellis, Glenn R. Variable loaded whip antenna. 2,894,260, 7-7-59, Cl. 343—745.

Ellison, Thomas, and H. Mulhall, to British Celanese Ltd. Apparatus for treatment of textile materials. 2,893,103, 7-7-59, Cl. 26—1.

Elsenheimer, Charles W.: *See*—
Connors, James J., and Elsenheimer. 2,893,676.

Elsner, Richard: *See*—
Elling, Hugo, Elsner, and Heuer. 2,893,821.

Elworthy, Bernard C. T., to Elmer R. Worth, Sr. Safety system for sawmill carriages. 2,893,448, 7-7-59, Cl. 143—120.

Emmons, Lehman G. Fireplace basket construction. 2,893,375, 7-7-59, Cl. 126—165.

Enemark, Arne F., to Danfoss Ved ingenior Mads Clausen. Rotary pumps a device for reversing the rotation of the pump without reversing its direction of suction. 2,893,323, 7-7-59, Cl. 103—117.

Engelhard Industries, Inc.: *See*—
Hettinger, William P., Jr. 2,893,948.

Enright, James H., to In-Sink-Erator Mfg. Co. Variable stall-torque electric motor. 2,894,189, 7-7-59, Cl. 318—207.

Erb, Theodor, to Sperry Rand Corp., Ford Instrument Co. Division. Magnetic coupled multivibrator. 2,894,210, 7-7-59, Cl. 331—113.

Erdmann, Hans, to Waldes Kohinoor, Inc. Slide fasteners. 2,893,093, 7-7-59, Cl. 24—205.11.

Erickson, Robert W., to Universal Oil Products Co. Pressure control system. 2,893,845, 7-7-59, Cl. 23—260.

Ericson, Richard: *See*—
Schuetz, Clyde C., and Ericson. 2,893,889.

Erneman, Hans G., to Lite Vent Industries, Inc. Awning vertical column connector. 2,893,077, 7-7-59, Cl. 20—95.

Ernst, John L., A. B. Small, and L. W. McLean, to Esso Research and Engineering Co. Recovering olefin polymers. 2,893,981, 7-7-59, Cl. 260—94.8.

Erskine, Archibald M., and R. M. Lydon, to The California Ink Co., Inc. Iron blue pigment composition and process for its manufacture. 2,893,886, 7-7-59, Cl. 106—272.

Ervin, Ovid L., to Olin Mathieson Chemical Corp. Conveyor and feeder. 2,893,543, 7-7-59, Cl. 198—221.

Ervine, William. Pickup truck telescoping cabin unit. 2,893,780, 7-7-59, Cl. 296—23.

Eskin, Samuel G., to The Dole Valve Co. Refrigerating system and thermostatically operated control means therefor. 2,893,219, 7-7-59, Cl. 62—222.

Esso Research and Engineering Co.: *See*—
Bartlett, Jeffrey H., and Hughes. 2,894,038.
Brown, James W. 2,893,946.
Ernst, John L., Small, and McLean. 2,893,981.
Kearby, Kenneth K., and Gilbert. 2,893,837.
Kohfeldt, Walter C., and Hebert. 2,893,941.
Seelbach, Charles W., and McCulloch. 2,893,984.

Estes, Billie S.: *See*—
Phillips, Raymond P. 2,894,121.

Ethyl Corp.: *See*—
De Pree, David O. 2,893,857.

Etter, Paul A., deceased; by D. E. Dyl, administratrix. Safety lock for treadle operated hammers. 2,893,263, 7-7-59, Cl. 74—566.

Ettinger, John H.: *See*—
Austin, Leonard E., and Ettinger. 2,893,354.

Ettorre, James E., to The Bullard Co. Angular turning attachment. 2,893,280, 7-7-59, Cl. 82—2.

Evans, George E., to Union Carbide Corp. Non-aqueous primary cell and method of making the same. 2,894,052, 7-7-59, Cl. 136—83.

Evans, John G., and W. S. Meals, to Bradford Dyers' Association Ltd. Method of rendering materials water-repellent. 2,893,893, 7-7-59, Cl. 117—161.

Evans Products Co.: *See*—
Chapman, Harvey W., and Dunlap. 2,893,328.

Evans, Richard D. Block molding device. 2,893,100, 7-7-59, Cl. 25—41.

Eveready Brikraw Co.: *See*—
Harclerode, John R. 2,893,372.

FR Corp., The: *See*—
Schankler, Harold. 2,894,174.

Fahri, Carol: *See*—
Korn, Arthur, Hess, and Ruskin. 2,894,259.

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Fairey Aviation Co. Ltd., The: *See*—
Ford, John A., Jackson, and Crook. 2,893,246.

Fajans, Edgar W.: *See*—
Kroll, Wilhelm J., Nies, and Fajans. 2,893,842.

Fajardo, Luis A. Camera. 2,893,300, 7-7-59, Cl. 95—16.

Falk Corp. The: *See*—
Schmitter, Walter P. 2,893,224.

Farbenfabriken Bayer Akt.: *See*—
Haltmeier, Alfred. 2,893,713.
Hoppe, Peter. 2,893,063.
Lorenz, Walter. 2,894,018.
Schegk, Ernst, and Schrader. 2,894,017.
Walaschewski, Engelbert, and Goerrig. 2,893,862.
Farrel-Birmingham Co. Inc.: *See*—
Wenzel, Robert H. 2,893,055.
Favors, Hollice A., to Hoffman Electronics Corp. Electronic selective circuit or the like. 2,894,131, 7–7–59, Cl. 250—27.
Faye, Louis. Bracket type scaffolding, adjustable in height, slidingly, for concrete wall erection. 2,893,786, 7–7–59, Cl. 304—14.
Federal Chain Co.: *See*—
Jaeger, Adolf. 2,893,200.
Jaeger, Adolf. 2,893,201.
Federal-Mogul-Bower Bearings, Inc.: *See*—
Wurtz, John W., and Bowker. 2,893,058.
Feldman, Albert W.: *See*—
Smith, Allen E., and Feldman. 2,893,855.
Felgate, Jack, to Ronald Trist & Co. Ltd. Valve structure. 2,893,427, 7–7–59, Cl. 137—620.
Fennell, Anthony A. Heat exchanger. 2,893,705, 7–7–59, Cl. 257—262.15.
Fenwel Inc.: *See*—
Earl, Robert P., and Welch. 2,893,547.
Ferguson, James T. Drawer-type refrigerator device. 2,893,805, 7–7–59, Cl. 312—214.
Ferguson, John S.: *See*—
Lindell, Sigurd I., and Ferguson. 2,894,101.
Ferguson, Paul R., to The Stanley Works. Door connector. 2,893,764, 7–7–59, Cl. 287—53.
Fermanian, Armen, to Sprague Electric Co. Transistor subassembly. 2,894,183, 7–7–59, Cl. 317—235.
Fernberg, Eric B. Fastener structure. 2,893,096, 7–7–59, Cl. 24—265.
Ferrari, Andrea, Jr.: *See*—
Isreeli, Jack, and Ferrari. 2,893,324.
Ferrier, Peter. Clutches. 2,893,524, 7–7–59, Cl. 192—3.2.
Fiden, William H.: *See*—
Miller, Burton F., and Fiden. 2,893,810.
Fiedler, Jack, and G. Reiner. Hook feeding apparatus. 2,893,338, 7–7–59, Cl. 112—219.
Fields, Ellis K., to Standard Oil Co. Lubricant composition having non-rusting and detergency properties. 2,893,959, 7–7–59, Cl. 252—32.7.
Fields, Melvin: *See*—
Coker, James N., Fields, and Rogers. 2,893,997.
Fieroh, William R. Plastic heat-sealing apparatus. 2,893,468, 7–7–59, Cl. 154—42.
Figman, Murray. Illuminating fluorescent house number fixture. 2,893,148, 7–7–59, Cl. 40—132.
Filer & Stowell Co., The: *See*—
Shaw, Ernest C., Frank, and Jackson. 2,893,452.
Fillauer, George W., Sr.: *See*—
Thomsen, Wilhelm. 2,893,394.
Filler, Edward Z., and J. J. Kelter. Single-use toothbrush. 2,893,036, 7–7–59, Cl. 15—176.
Fink, Herbert H., to The B. F. Goodrich Co. Method and apparatus for making cable reinforced conveyor belts. 2,893,466, 7–7–59, Cl. 154—4.
Finken, Walter S., and J. A. Alleo, to L. P. Frieder. Sound attenuator helmet. 2,893,011, 7–7–59, Cl. 2—3.
Fischer, Elly C.: *See*—
Giblin, Katherine M., and Fischer. 2,893,658.
Fischer, Falton W. Boat trailer. 2,893,580, 7–7–59, Cl. 214—394.
Fischer, Oskar: *See*—
Weise, Johannes, Fischer, Hahn, Kromer, and Noack. 2,893,301.
Fisher, Arthur L.: *See*—
Davis, Walter M., and Fisher. 2,893,836.
Fisher, Henry T., and J. Moran, to The Ontario Paper Co. Ltd. Wet strength tester. 2,893,241, 7–7–59, Cl. 73—159.
Fleischer, Alfred R. *See*—
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Flinn, George E., to Borg-Warner Corp. Transmission. 2,893,261, 7–7–59, Cl. 74—472.
Flood, Reginald F. J., to Amalgamated Wireless (Australasia) Ltd. Electrical power supply systems. 2,894,194, 7–7–59, Cl. 321—2.
Flora, Laurence H., to Tinnerman Products, Inc. Handle mounting device. 2,893,458, 7–7–59, Cl. 151—41.75.
Flora, Laurence H., and J. Balint, to Tinnerman Products, Inc. Cable mounting. 2,893,671, 7–7–59, Cl. 248—73.
Flower, Malcolm T., to H. W. Alderson. Quick release hose coupling. 2,893,755, 7–7–59, Cl. 284—18.
Flox, Jack, to United States of America, Atomic Energy Commission. Process for removing aluminum coatings. 2,893,863, 7–7–59, Cl. 75—101.
Flynn, John V., to The Kurlash Co., Inc. Eyelash curlers. 2,893,404, 7–7–59, Cl. 132—32.
Fodermaier, John J., to Chrysler Corp. Variable rate spring suspension. 2,893,475, 7–7–59, Cl. 155—179.
Fogel, Samuel. Display package. 2,893,622, 7–7–59, Cl. 229—34.
Fonda-Bonardi, Giusto, to De Mornay-Bonardi, Inc. Microwave component mount. 2,894,229, 7–7–59, Cl. 333—98.
Foley, Eldon C. Plug retriever. 2,893,157, 7–7–59, Cl. 43—17.2.
Food Machinery and Chemical Corp.: *See*—
Latourette, Harold K., Johnson, and Getz. 2,894,035.
Foote, Daniel J.: *See*—
Soref, Harry E., and Foote. 2,893,231.
Foote, Daniel J., and H. E. Soref, deceased (by M. Soref, administrator), to Master Lock Co. Laminated padlock. 2,893,232, 7–7–59, Cl. 70—38.
Foote, Earl H., Jr., to The Commonwealth Engineering Co. of Ohio. Dextran formals. 2,893,987, 7–7–59, Cl. 260—209.
Ford, John A., M. C. Jackson, and R. C. Crook, to The Fairey Aviation Co. Ltd. Gyroscopic apparatus. 2,893,246, 7–7–59, Cl. 74—5.6.
Ford Motor Co.: *See*—
Krahn, Vincent F. 2,893,537.
Forster, Hans-Joachim M., to Daimler-Benz Akt. Speed change transmission. 2,893,267, 7–7–59, Cl. 74—732.
Fort Wayne Corrguated Paper Co.: *See*—
Jones, Rexford W. 2,893,320.
Fortner, Herman S., to The Armstrong Rubber Co. Tire building apparatus. 2,893,467, 7–7–59, Cl. 154—9.
Foster Wheeler Corp.: *See*—
Bell, Alan. 2,893,701.
44 Trinity Place Corp.: *See*—
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Fox, Borothea D. Adjustable panty skirt. 2,893,015, 7–7–59, Cl. 2—212.
Fox, Jack J., and R. M. White, to Phillips Petroleum Co. Fluid proportioning. 2,893,412, 7–7–59, Cl. 137—3.
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Bowditch, Hoel L. 2,893,431.
Fram Corp.: *See*—
Dusich, John J. 2,893,561.
Francisco, Allen C.: *See*—
Maxwell, William A., Gurnick, and Francisco. 2,893,102.
Franck, George E., to The Imperial Brass Mfg. Co. Flaring and burnishing tool with lost motion connection. 2,893,464, 7–7–59, Cl. 153—79.
Franck, George E., to The Imperial Brass Mfg. Co. Fluid charge dispenser. 2,893,603, 7–7–59, Cl. 222—83.
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Shaw, Ernest C., Frank, and Jackson. 2,893,452.
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Opderbeck, Fritz, Franke, and Trapp. 2,893,919.
Frederico, Blossy D. Co-axial resistive load. 2,894,219, 7–7–59, Cl. 333—22.
Freeman, Harry. Conveyor chain. 2,893,540, 7–7–59, Cl. 198—177.
Freeman, Peter J. G.: *See*—
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Freiberg, Albert D. Score board. 2,893,347, 7–7–59, Cl. 116—135.
Frekko, Eugene F., to Cornell-Dubilier Electric Corp. Washing electrolytic capacitor sections. 2,893,410, 7–7–59, Cl. 134—144.
Freund, Robert R., to Phillips Petroleum Co. Valve. 2,893,680, 7–7–59, Cl. 251—30.
Frey, Cleon F., to Standard Coil Products Co. Inc. Cascode television tuner with stages having interrelated space discharge currents and common gain control. 2,894,125, 7–7–59, Cl. 250—20.
Frey, Gerard G. Brake fluid signal. 2,894,093, 7–7–59, Cl. 200—84.
Fricke, Gerhard, to National Research Corp. High vacuum. 2,893,624, 7–7–59, Cl. 230—69.
Friden, Inc.: *See*—
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Hegstad, Lester O., to Hanson Equipment Co. Pressure responsive reversing valve. 2,893,416, 7–7–59, Cl. 137—119.
Heid, Robert W., Jr., to Perfect Circle Corp. Piston ring assembly. 2,893,801, 7–7–59, Cl. 309—45.

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Heinze, Herbert, to Ing. C. Olivetti & C., S.p.A. Justifying mechanism for typewriters and the like. 2,893,532, 7–7–59, Cl. 197—84.
Helfaer, Bertram M., and F. L. Stevenpiper, to Allied Chemical Corp. Process for producing finely divided vat dye pigments. 2,893,994, 7–7–59, Cl. 260—281.
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Hendal, Willem P., to Shell Development Co. Vortex tube with divergent hot end. 2,893,215, 7–7–59, Cl. 62—5.
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Herrmann, John A., J. A. Messing, and J. Wittenberg, to I-T-E Circuit Breaker Co. 100 ampere disconnect push switch. 2,894,080, 7–7–59, Cl. 200—6.
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Korn, Arthur, Hess, and Ruskin. 2,894,259.
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Hill, Frank R. Individual condiment containers. 2,893,618, 7–7–59, Cl. 229—17.
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Hyman, Herbert H., to United States of America, Atomic Energy Commission. Separation of uranium from other metals. 2,893,822, 7–7–59, Cl. 23—14.5.

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Ignatjev, Feodor. Spark plug for internal combustion engines. 2,894,162, 7–7–59, Cl. 313—141.

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Irvine, Douglas S., and R. Gaudry, to American Home Products Corp. Testosterone-2'-acetoxy-4'-methyl-pentanoate. 2,894,006, 7–7–59, Cl. 260—397.4.

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Jacob, Raymond, and B. Masson, to Societe d'Applications Generales d'Electricite & de Mecanique. Device for hot cutting of woven or knitted materials of synthetic thermofusible fibers. 2,894,106, 7–7–59, Cl. 219—29.

Jacoby, Hans G. Smoking article with filtering means. 2,893,399, 7–7–59, Cl. 131—10.

Jaeger, Adolf, to Federal Chain Co. Method of forming an ornamental chain. 2,893,200, 7–7–59, Cl. 59—35.

Jaeger, Adolf, to Federal Chain Co. Link made up of two parts joined by an upsetting operation. 2,893,201, 7–7–59, Cl. 59—80.

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Johnson, Edward S. Air and liquid pressure spray gun for cleaning diesel engines and the like. 2,893,645, 7–7–59, Cl. 239—288.

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Johnson, Eugene C. Stakes for log bunks. 2,893,330, 7–7–59, Cl. 105—382.

Johnson, James F., to Sinclair Oil & Gas Co. Seismic surveying method. 2,894,245, 7–7–59, Cl. 340—15.

Johnson, James R. Roll moving means for rotary printing apparatus. 2,893,310, 7–7–59, Cl. 101—182.

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Johnson, Theodore C. W. Core drilling. 2,893,691, 7–7–59, Cl. 255—1.4.

Johnston, Kenneth L., and G. F. L. Bishop, to Phillips Petroleum Co. Method and apparatus for feeding fluid reactants to a moving bed of solid contact particles. 2,893,950, 7–7–59, Cl. 208—166.

Jones, John C. Broom construction. 2,893,034, 7–7–59, Cl. 15—146.

Jones, Rexford W., to Fort Wayne Corrugated Paper Co. Printing of corrugated board. 2,893,320, 7–7–59, Cl. 101—426.

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Jones, William N. File cover support devices as used in filing systems. 2,893,398, 7–7–59, Cl. 129—16.7.

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Judd, Charles R. Pneumatic tire accessories. 2,893,343, 7–7–59, Cl. 116—34.

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Justus, Edgar J., and R. A. Daane, to Beloit Iron Works. Paper machine dryer condensate control. 2,893,136, 7–7–59. Cl. 34—119.

Kahn, Leon G., to The Kaynee Co. Expansible shirt collars. 2,893,012, 7–7–59, Cl. 2—141.

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Kalafsky, Joseph M. Clutch and the like. 2,893,527, 7–7–59, Cl. 192—56.

Kales, Josef, and A. Grotewohl, to Volkswagenwerk G.m.b.H. Torsion bar construction. 2,893,724, 7–7–59, Cl. 267—57.

Kamm, Lawrence J. Automatic decimal point slide rule. 2,893,630, 7–7–59, Cl. 235—64.8.

Kampel, Everett. Line holding device for bricklaying. 2,893,125, 7–7–59, Cl. 33—85.

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Katz, Robert. Fluid pressure responsive door operator. 2,893,725, 7–7–59, Cl. 268—66.

Kaufman, Harry E. Indicating means for use with plastering. 2,893,345, 7–7–59, Cl. 116—114.

Kay, John G., to F. Jos. Lamb Co. Free pallet conveyors. 2,893,535, 7–7–59, Cl. 198—21.

Kay, Richard S. Pill dispenser. 2,893,599, 7–7–59, Cl. 221—260.

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Kayser, David L., to Union Carbide Corp. Leakage detector. 2,893,238, 7–7–59, Cl. 73—40.

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Kelter, Joseph J.: *See*—
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Kendon, Owen M., to Kendon Development Ltd. Commercial water heater. 2,894,109, 7–7–59, Cl. 219—38.

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Kennedy, Thomas J., and J. L. Holst, to Phillips Petroleum Co. Blend of butadiene-styrene copolymer and butadiene-unsaturated heterocyclic nitrogen base copolymer and method of producing the cured product thereof. 2,893,971, 7–7–59, Cl. 260—45.5.

Kent, Allen H. Automatic sound reproducing device. 2,893,738, 7–7–59, Cl. 274—9.

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Kessler, Ward P., to Tusco Corp. Shower bath frame leveling device. 2,893,069, 7–7–59, Cl. 20—11.

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Kindler, Hubert, to Badische Anilin- & Soda-Fabrik Akt. Recovery of gaseous initial materials of chemical reactions from the waste gas. 2,894,037, 7–7–59, Cl. 260—583.

Kindorf, Orlan C. Support for expansible conduit. 2,893,669, 7–7–59, Cl. 248—55.

King, Aden J., to Olin Mathieson Chemical Corp. Magnesium tetraboride. 2,893,841, 7–7–59, Cl. 23—204.

Kirchner, Francois F., to Schlumberger Well Surveying Corp. Magnetic resonance apparatus. 2,894,199, 7–7–59, Cl. 324—.5.

Kirk, Joseph S., to General Aniline & Film Corp. Dyeing of leather. 2,893,811, 7–7–59, Cl. 8—12.

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Klepp, George F., to International Standard Electric Corp. Gas-filled electric discharge tube. 2,894,164, 7–7–59, Cl. 313—188.

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Potchen, Joseph A., and Kloote. 2,893,075.

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Knobel, Fritz. Adapting apparatus for fluorescent lamps. 2,894,232, 7–7–59, Cl. 336—90.

Knowles, Reginald A. Tensioning arrangement for framed flexible materials. 2,893,162, 7–7–59, Cl. 45—24.

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Kollock, Alan S. Film holder. 2,894,141, 7–7–59, Cl. 250—68.

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Korn, Arthur, deceased, by E. P. Korn, administratrix, and J. W. Hess, deceased, by A. Hess, administratrix, and S. L. Ruskin, deceased, by D. Ruskin, M. Reder, and C. Fahri, executors. Radio locations systems. 2,894,259, 7–7–59, Cl. 343—11.

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Koskey, Arthur H. Light projecting unit for converting a revolver for practice firing. 2,894,116, 7–7–59, Cl. 240—6.41.

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Kowal, Leonard J., to The Imperial Brass Mfg. Co. Flaring tool with lost motion connection providing automatic burnishing. 2,893,463, 7–7–59, Cl. 153—79.

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Lewis, Harold C. 2,893,118.

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Krasno, Maxwell R., to United States of America, Navy. Signal coupling device. 2,894,231, 7–7–59, Cl. 336—83.

Krause, Herbert, to Chicago Forging and Mfg. Co. Emergency brakes and releases therefor. 2,893,262, 7–7–59, Cl. 74—538.

Krebs, John R., to Standard Oil Co. Fluidized solids contacting apparatus. 2,893,849, 7–7–59, Cl. 23—284.

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Kreidler, Alfred. Apparatus for the production of hollow metallic articles. 2,893,553, 7–7–59, Cl. 207—3.

Kreuchen, Karl H., to Electric & Musical Industries Ltd. Electron discharge devices. 2,894,169, 7–7–59, Cl. 315—5.38.

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Kuntz, Josef, to G. Kochheim. Flat knitting apparatus for manufacturing rib knit fabric. 2,893,225, 7–7–59, Cl. 66—64.

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Lancaster, Arthur W., to Williams & Wilson Ltd. Roll wrapping. 2,893,190, 7–7–59, Cl. 53—380.
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Landry, William J., to J. C. Hockery, as trustee. Can opener latch and cutter assembly. 2,893,117, 7–7–59, Cl. 30—9.
Lane, Donald B. Bleeder valves. 2,893,683, 7–7–59, Cl. 251—180.
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Langford, James V. Outboard motor tilting unit. 2,893,342, 7–7–59, Cl. 115—41.
Langlois, David P., and W. Turner, to A. E. Staley Mfg. Co. Production of amyloglucosidase. 2,893,921, 7–7–59, Cl. 195—66.
Lanham, William M., to Union Carbide Corp. Heterocyclic phosphorus-containing compounds and their production. 2,894,016, 7–7–59, Cl. 260—461.
Lapsley, Robert, to Clark Equipment Co. Control valve mechanisms. 2,893,260, 7–7–59, Cl. 74—471.
Latourette, Harold K., O. H. Johnson, and J. W. Getz, to Food Machinery and Chemical Corp. Preparation of M-chloroaniline. 2,894,035, 7–7–59, Cl. 260—580.
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Lehovec, Kurt, to United States of America, Army. Double modulator utilizing photo emissive material. 2,894,145, 7–7–59, Cl. 250—210.
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Leroy, René, to Dixi S.A. Percussion fuse. 2,893,322, 7–7–59, Cl. 102—76.
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Tsang, Sien M., Lewis, and Paul. 2,893,816.
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Lewis, Gerald F., ½ to G. A. Jaroske. Animal watering devices. 2,893,424, 7–7–59, Cl. 137—400.
Lewis, Harold C., 15% to E. and S. Krajewski. Magazine type safety razor. 2,893,118, 7–7–59, Cl. 30—40.
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Liebel, Julius, to M.A.N. Maschinenfabrik Augsburg-Nuernberg AG. Planetary gear. 2,893,268, 7–7–59, Cl. 74—801.
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Light, George S. Price indicating tickets. 2,893,145, 7–7–59, Cl. 40—25.
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Lilly, Eli, and Co. : *See*—
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Lindberg, Fritz L. Screw holder for screw drivers. 2,893,455, 7–7–59, Cl. 145—52.
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Lindemann, Hans, to Th. Calow & Co. Centering device for clamping workpieces. 2,893,275, 7–7–59, Cl. 77—63.
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Locke, Burton H. Awakening alarm mechanism for vehicles. 2,894,091, 7–7–59, Cl. 200—61.57.
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Lockhart, Marshall L., deceased, by M. Le N. Lockhart, R. W. Matthies, and A. B. Kettle, executors, ⅓ each to E. H. Wilburn, and R. W. Matthies. Hypodermic syringes. 2,893,390, 7–7–59, Cl. 128—218.
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Long, Robert S., and B. G. Buell, to American Cyanamid Co. Azo dyes containing the benzonaphthofuranol nucleus. 2,893,986, 7–7–59, Cl. 260—152.
Long, Robert S., and B. G. Buell, to American Cyanamid Co. Benzonaphthofuranols. 2,894,003, 7–7–59, Cl. 260—346.2.
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Lorenz, Albert, to W. C. Heraeus, G.m.b.H. Method and apparatus for continuously degassing molten metals, particularly steel, by evacuation. 2,893,860, 7–7–59, Cl. 75—49.
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Ludwig, Louis. Outlet winker. 2,894,098, 7–7–59, Cl. 200—115.5.
Luke, Oren V., Jr., G. B. Ulvild, and J. S. MacKenzie, to Celanese Corp. of America. Purification of acetic acid by azeotropic distillation. 2,893,923, 7–7–59, Cl. 202—42.
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Mahan, John E., to Phillips Petroleum Co. Stabilization of vinylpyridines. 2,893,995, 7–7–59, Cl. 260—290.
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Marchbank, John, to Frederick Braby and Co. Ltd. Window assembly. 2,893,072, 7–7–59, Cl. 20—52.4.
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Martin, Armor B., to Washington Water Power Co. Electric and fuel burning heating system. 2,893,639, 7–7–59, Cl. 237—2.
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Maxim, Andrew, to Imperial Mfg. Corp. Spindle for automatic phonograph record changer. 2,893,739, 7–7–59, Cl. 274—10.
Maxwell, William A., R. S. Gurnick, and A. C. Francisco, to United States of America, Navy. Article fabrication from powders. 2,893,102, 7–7–59, Cl. 25—156.
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Rickard, Clyde E. 2,893,438.
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McGillis, John J. and H. D. Rotary oil burners. 2,893,480, 7–7–59, Cl. 158—77.
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McNutt, Louis C. Pipe welding apparatus. 2,894,111, 7–7–59, Cl. 219—60.
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Morey, Sigmund M., and S. L. Casella, to Morey Machinery Co., Inc. Mechanism for controlling movement of a machine tool part. 2,893,269, 7–7–59, Cl. 74—785.
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Mulcahy, Harry W., to W. H. Miner, Inc. Draft gear for railway draft rigging. 2,893,570, 7–7–59, Cl. 213—44.
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Palmer, Robert F. Merchandise cabinet. 2,893,804, 7–7–59, Cl. 312—71.

Pankuch, William J., to Thompson Ramo Wooldridge Inc. Shaft keying means. 2,893,763, 7–7–59, Cl. 287—52.05.

Paradise, Maurice E., to Hoffman Electronics Corp. Solar powered light source or the like. 2,894,173, 7–7–59, Cl. 315—66.

Parcell, Russell W., to Otis Elevator Co. Industrial truck. 2,893,582, 7–7–59, Cl. 214—651.

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Parks, Herman D., to General Electric Co. Multiplying network. 2,893,636, 7–7–59, Cl. 235—194.

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Paskaly, Constantine G. Guide for facilitating removal of paint from glazing of windows, doors and the like. 2,893,042, 7–7–59, Cl. 15—257.

Pasqua, Angelo J. Beverage cup. 2,893,876, 7–7–59, Cl. 126—261.

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Pauling, Martin F. Conduit bender. 2,893,461, 7–7–59, Cl. 153—48.

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Peifer, Albert G.: *See*—
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Phillips, Raymond P., 1⅓% to W. D. Morison, Jr., or O. L. Morison, and 98⅔% to E. V. Mitchell and B. S. Estes. Radiotelephone system featuring switching circuit for portable radio transmitter and receiver. 2,894,121, 7–7–59, Cl. 250—6.
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Pinsuti, Giuseppe F. Smoker's filter. 2,893,402, 7–7–59, Cl. 131—188.
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Sarett, Lewis H., Poos, and Johns. 2,894,001.
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Prill, Erhard J., to Monsanto Chemical Co. Preparation of 1,1-dichloro-1-fluoroethane. 2,894,044, 7–7–59, Cl. 260—653.7.

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Rodriguez, Juan C. L. Portable electric cooking device. 2,893,307, 7–7–59, Cl. 99—421.

Roe, Rene P. V.: *See*—
Petitcolas, Pierre, Richard, Sureau, Roe, and Develotte. 2,893,817.

Rogers, Arthur O.: *See*—
Coker, James N., Fields, and Rogers. 2,893,997.

Rogers, Gordon F., to Radio Corp. of America. Signal operated automatic control circuits. 2,894,062, 7–7–59, Cl. 178—5.4.

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Colley, Rowan H. 2,893,209.

Romano, Sam S., and A. Rak, to Webcor, Inc. Roll off control. 2,893,346, 7–7–59, Cl. 116—124.1.

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Buckingham, William D., Ridge, Root, and Turner. 2,894,066.

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Rosenbaum, Harry S. Apparatus for assembling Venetian blinds. 2,893,106, 7–7–59, Cl. 29—24.5.

Rosenberg, Sanders D.: *See*—
Ramsden, Hugh R., and Rosenberg. 2,894,012.

Rosenblatt, Murray: *See*—
Peaslee, Lawrence R., and Rosenblatt. 2,894,253.

Roser, Robert A., and E. W. Hedin, to Dell Foods Specialties Co. Seasoning applicator. 2,893,332, 7–7–59, Cl. 107—54.

Roth, Mathias: *See*—
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Rowe, Sylvester J. Trousers hanger. 2,893,614, 7–7–59, Cl. 223—96.

Rubin, Julius: *See*—
Seefeldt, Fred C., and Rubin. 2,893,216.

Rubin, Leon J., and G. C. Buckley. Process for degrading side-chains of cholic acid materials. 2,894,005, 7–7–59, Cl. 260—397.1.

Rubin, Martin. Iron containing compositions. 2,893,916, 7–7–59, Cl. 167—68.

Rubin, Martin. Salts of the tri-ethyl ester of N-hydroxyethyl ethylene diamine tri-acetic acid. 2,894,023, 7–7–59, Cl. 260—482.

Rudner, Bernard, and A. G. Prapas, to W. R. Grace & Co. N-amino derivatives of tropine alkaloids. 2,893,996, 7–7–59, Cl. 260—292.

Rudner, Bernard, to W. R. Grace & Co. Cyclohexylideneimino compounds. 2,894,028, 7–7–59, Cl. 260—551.

Rudner, Bernard, to W. R. Grace & Co. Process for cyclohexanone hydrazone hydrate. 2,894,031, 7–7–59, Cl. 260—566.

Rudner, Bernard, to W. R. Grace & Co. Method of producing ketazines. 2,894,032, 7–7–59, Cl. 260—566.

Ruffle, William H., Speed Development Co. Ltd. Temperature change responsive means for controlling electric circuits. 2,894,251, 7–7–59, Cl. 340—227.

Rundle, George W. Portable cook stove. 2,893,373, 7–7–59, Cl. 126—9.

Rusca, Ralph A., and R. C. Young, to United States of America, Agriculture. Self-feeding and self-doffing opener cleaner for textile fibers. 2,893,064, 7–7–59, Cl. 19—76.

Ruskin, Dan: *See*—
Korn, Arthur, Hess, and Ruskin. 2,894,259.

Ruskin, Simon L.: *See*—
Korn, Arthur, Hess, and Ruskin. 2,894,259.

Russell, Kenneth F. Apparatus for drawing wire. 2,893,844, 7–7–59, Cl. 205—20.

Russell, Louis A., to International Business Machines Corp. Magnetic core inverter circuit. 2,894,151, 7–7–59, Cl. 307—88.

Russell, William N.: *See*—
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Geller, Julius, Schumacher, and Lang. 2,893,956.

Ryba, Anton, 30% to J. Reinisch, and 30% to E. Vinatzer. Friction coupling. 2,893,528, 7–7–59, Cl. 192—111.

Ryshavy, Rudolph L., to Bound Brook Oil-Less Bearing Co. Oil-impregnated bearing having molybdenum sulfide coating and method of making same. 2,893,793, 7–7–59, Cl. 308—240.

S.a.r.l. "Realisations Ultrasoniques": *See*—
Renaut, Paul. 2,893,239.

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Lindell, Sigurd L., and Ferguson. 2,894,101.

SKB Schuchtermann & Kremer-Baum Akt. fur Aufbereitung: *See*—
Teuteberg, Rudolf. 2,893,557.

Sacher, William S., 50% to L. Cambell, Jr. Layout instrument. 2,893,133, 7–7–59, Cl. 33—192.

Sachs, Walter S., & Co., Inc.: *See*—
Soffa, Albert, and Kulicke. 2,893,297.

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St. Pierre, Eugene, to Hemphill Co. Sinker cap for circular knitting machines. 2,893,227, 7–7–59, Cl. 66—107.

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Lienart, Marcel. 2,893,184.

Sajeck, George. Gas demand equipment. 2,893,386, 7–7–59, Cl. 128—142.

Sakornbut, Songe S., to Monsanto Chemical Co. Impregnating composition. 2,893,881, 7–7–59, Cl. 106—15.

Salomone, Alessandro. Machine for the production of books and the like having centrally uninterrupted double pages. 2,893,024, 7–7–59, Cl. 11—1.

Samko, Alexander. Air ventilator. 2,893,204, 7–7–59, Cl. 98—45.

Sampietro, Achilles C., to Thompson Ramo Wooldridge Inc. Fuel pump control system. 2,893,369, 7–7–59, Cl. 123—179.

Sandmeyer, Ernest R. Package for globular articles and method of forming same. 2,893,550, 7–7–59, Cl. 206—65.

Sarett, Lewis H., and W. F. Johns, to Merck & Co., Inc. 2,4b-dimethyl-1-(2-hydroxyethyl)-2-methallyl dodecahydrophenanthrene compounds and processes of preparing the same. 2,893,999, 7–7–59, Cl. 260—340.9.

Sarett, Lewis H., G. I. Poos, and W. F. Johns, to Merck & Co., Inc. 2,4b-dimethyl-1-acetaldehydo-2-(β-keto-propyl)-1,2,3,4,4a,4b,5,6,7,9,10,10a-dodecahydrophenanthrene-4,7-dione and methods of preparing the same. 2,894,000, 7–7–59, Cl. 260—340.9.

Sarett, Lewis H., G. I. Poos, and W. F. Johns, to Merck & Co., Inc. 2,4b-dimethyl-1-acetaldehydo-2-(β,ε-dihydroxyisobutyl)-1,2,3,4,4a,4b,5,6,7,9,10,10a - dodecahydrophenanthrene-4,7-dione and methods of preparing the same. 2,894,001, 7–7–59, Cl. 260—340.9.

Sarett, Lewis H., G. I. Poos, and W. F. Johns, to Merck & Co., Inc. 2,4b-dimethyl-1-acetaldehydo-2-methallyl-1,2,3,4,4a,4b,5,6,7,9,10,10a-dodecahydrophenanthrene-4,7-dione and methods of preparing the same. 2,894,002, 7–7–59, Cl. 260—340.9.

Sartori, Mario F., to E. I. du Pont de Nemours and Co. Anthraquinone vat dyes. 2,893,998, 7–7–59, Cl. 260—316.

Sauer, James F.: *See*—
Barber, Harry A., and Sauer. 2,893,600.
Barber, Harry A., and Sauer. 2,893,601.
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Scamman, John F.: *See*—
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Scaramucci, Domer. Piston type soluble plug injector. 2,893,028, 7–7–59, Cl. 15—104.06.

Schacht, Gunter H., to General Telephone Laboratories, Inc. Rotary Switch. 2,894,096, 7–7–59, Cl. 200—105.

Schafer, George. Windshield wiper with magnetically actuated flexible blade. 2,893,041, 7–7–59, Cl. 15—253.

Schafer, Vernon, Jr., to General Motors Corp. Expansion joint. 2,893,371, 7–7–59, Cl. 123—188.

Schaffer, Arthur. Mixer valve. 2,893,429, 7–7–59, Cl. 137—625.41.

Schaffer, Herman W., and W. Speicher, to General Electric Co. Brush mechanism. 2,894,239, 7–7–59, Cl. 339—8.

Schankler, Harold, to The F R Corp. Electrical photoflash device. 2,894,174, 7–7–59, Cl. 315—230.

Schaufelberger, Henry W.: *See*—
Brescka, Rudolph S., Moore, and Schaufelberger. 2,894,112.

Schegk, Ernst, and G. Schrader, to Farbenfabriken Bayer Akt. Thiophosphoric acid esters and their production. 2,894,017, 7–7–59, Cl. 260—461.

Schering A.G.: *See*—
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Scheuerpflug, Hans, to Maschinenfabrik Augsburg-Nurnberg A.G. Vehicle with motor mounted on swingable arm. 2,893,502, 7–7–59, Cl. 180—64.

Schieber Mfg. Co.: *See*—
Bobbish, Charles W. 2,893,474.

Schiltz, Bruce A. Overhead traveling dispenser unit. 2,893,422, 7–7–59, Cl. 137—356.17.

Schlichting, Karl F., to Nordischer Maschinenbau Rud. Baader. Tool and guide control apparatus for fish dressing machines. 2,893,052, 7–7–59, Cl. 17—3.

Schloeman Akt.: *See*—
Pirwitz, Wilhelm. 2,893,551.

Schlotmann, Karl, and C. Nitsche, to Maschinenfabrik Stromag G.m.b.H. Flexible couplings. 2,893,223, 7–7–59, Cl. 64—13.

Schlumberger Well Surveying Corp.: *See*—
Kirchner, Francois F. 2,894,199.
Martin, Gunther J. 2,894,130.
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Schmidt, Karl-Heins, and R. Heep, to Rand-Goetze Corp. V-shaped sealing ring. 2,893,800, 7–7–59, Cl. 309—44.

Schmitter, Walter P., to The Falk Corp. Shaft coupling. 2,893,224, 7–7–59, Cl. 64—14.

Schmitz, William R.: *See*—
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Schmolka, Irving R., to Colgate-Palmolive Co. Purification of sulfated higher aliphatic acid esters. 2,894,009, 7–7–59, Cl. 260—400.

Schnable, David E.: *See*—
Short, Clair A., Jr., Castle, and Schnable. 2,893,353.

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Schnabel, Herbert W.: *See*—
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Schneeman, Justin G. Vertical industrial X-ray fluoroscope. 2,894,140, 7–7–59, Cl. 250—52.

Schnellhorst Catering Co.: *See*—
Murphy, Patrick J. 2,893,870.

Schneller, Joseph W., and R. H. Slowinski, to National Gypsum Co. Wall lath finishing clip. 2,893,234, 7–7–59, Cl. 72—46.

Schoen, Pieter & Zoon N.V.: *See*—
Beens, Hendrik J. 2,893,040.

Schoenberger, Robert L., Jr., to R. R. Donnelley & Sons Co. Machine for forming hinge joints in cased books. 2,893,022, 7–7–59, Cl. 11—1.

Schols, Edwin R. Collapsible rack. 2,893,568, 7–7–59, Cl. 211—178.

Schott, Arthur K., to G. F. Wales. Perforating implement having means to align the punch and die. 2,893,488, 7–7–59, Cl. 164—110.

Schrader, Gerhard: *See*—
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Schrank, Edwin P., to Seiberling Rubber Co. Sidewall buffing machine for pneumatic tires. 2,893,172, 7–7–59, Cl. 51—3.

Schrank, George I.: *See*—
Olson, Walter J., Parsons, and Schrank. 2,893,208.

Schrenk, Hans A., and P. van Dijk, to American Enka Corp. Thread twisting apparatus. 2,893,198, 7–7–59, Cl. 57—77.3.

Schrock, Norman B., C. J. Clement, Jr., and G. O. Herreman, to Hewlett-Packard Co. Probe assembly. 2,894,205, 7–7–59, Cl. 324—72.5.

Schubert, Paul, to J. P. Bemberg Akt. Continuous production of cellulose solution. 2,893,884, 7–7–59, Cl. 106—167.

Schuchtermann & Kremer-Baum Akt. Fur Anfbereitung: *See*—
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Schuetz, Clyde C., and R. Ericson, to United States Gypsum Co. Intumescent fire-retarding bituminous coating composition and roofing made therefrom. 2,893,889, 7–7–59, Cl. 117—30.

Schulte, Frederick E., to Collins Radio Co. Magnetic backlash eliminator. 2,893,257, 7–7–59, Cl. 74—409.

Schultheis, Eugene W., and R. M. Brumbaugh, to Ampex Corp. Magnetic tape machine. 2,893,653, 7–7–59, Cl. 242—55.12.

Schultz, Harold B., to Bendix Aviation Corp. Hydraulic reaction control in a power steering system. 2,893,505, 7–7–59, Cl. 180—79.2.

Schultz, Werner F., to General Motors Corp. Cap device for a filler pipe. 2,893,233, 7–7–59, Cl. 70—172.

Schulze, Wallace M., to General Electric Co. Pivot point probe. 2,893,242, 7–7–59, Cl. 73—188.

Schumacher, Richard: *See*—
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Schwartz, Jacob D. Dental setup. 2,893,054, 7–7–59, Cl. 18—5.7.

Schwartz, Melvin M.: *See*—
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Schweickert, Hans, and J. Haus, to Siemens-Schuckertwerke Akt. Apparatus for preparing rod-shaped, crystalline bodies, particularly semi-conductor bodies. 2,893,847, 7–7–59, Cl. 23—273.

Schweisthal, Frederick G., to Stewart-Warner Corp. Automatically controlled pneumatically powered lubricator. 2,893,515, 7–7–59, Cl. 184—15.

Schwertfeger, Walter J. Egg cartons. 2,893,619, 7–7–59, Cl. 229—29.

Schytil, Franz, to Metallgesellschaft Akt. Process for treating comminuted solids with gases. 2,893,839, 7–7–59, Cl. 23—177.

Scott, David R.: *See*—
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Sealed Power Corp.: *See*—
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Searles, Thomas F. Tone varying attachment for a string musical instrument. 2,893,282, 7–7–59, Cl. 84—313.

Seefeldt, Fred C., and J. Rubin, to General Dynamics Corp. Method of refrigerating a finely-divided material. 2,893,216, 7–7–59, Cl. 62—63.

Seelbach, Charles W., and W. J. G. McCulloch, to Esso Research and Engineering Co. Polymerization of alpha olefins. 2,893,984, 7–7–59, Cl. 260—93.7.

Seiberling Rubber Co.: *See*—
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Sejournet, Jacques, and J. Bonnassieux, to Comptoir Industriel d'Etirage et Profilage de Metaux. Method of extruding metals. 2,893,554, 7–7–59, Cl. 207—10.

Selig, Guenther, to Remsel Industries, Inc. Lamp supports. 2,893,768, 7–7–59, Cl. 287—99.

Selmer, Alois. Corn buttering device. 2,893,032, 7–7–59, Cl. 15—131.

Seney, John H. Underground storage tank check valve arrangement. 2,893,423, 7–7–59, Cl. 137—364.

Sentinel (Shrewsbury) Ltd.: *See*—
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Sexauer, William O., to The J. H. Day Co., Inc. Panner for twisted bread. 2,893,534, 7–7–59, Cl. 198—21.

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Shapiro, Louis, to Radio Corp. of America. Registration system. 2,894,058, 7–7–59, Cl. 178—5.2.

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Sharp, Donald E.: *See*—
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Sharpe, Verlos G., to General Motors Corp. Refrigerator door control. 2,893,726, 7–7–59, Cl. 268—72.

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Shea, Reeford P., and C. Raudenbush, to Preco Inc. Automatic leveling control and clinometer. 2,893,134, 7–7–59, Cl. 33—206.

Sheehan, James W. Apparatus for internal forging of chain links. 2,893,199, 7–7–59, Cl. 59—30.

Sheehan, Thomas V.: *See*—
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Sheheen, Shay J., to General Laboratory Associates, Inc. Process of making a ceramic element usable in surface-gap igniters. 2,893,930, 7–7–59, Cl. 204—29.

Sheheen, Shay J., to General Laboratories Associates, Inc. Method and apparatus for electric ignition. 2,894,161, 7–7–59, Cl. 313—131.

Sheldon, Edward B. Electronic system for X-ray images. 2,894,159, 7–7–59, Cl. 313—65.

Sheldon, Edward E. Electron microscopes. 2,894,160, 7–7–59, Cl. 313—65.

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Hendal, Willem P. 2,893,215.
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Pieters, Willem J., and Ten Have. 2,893,951.
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Ten Have, Cornelis D., Buningh, Le Nobel, Pieters, and Lower. 2,893,954.
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Shenker, Joseph, to Shenker Displays, Inc. Article support and display device. 2,893,566, 7–7–59, Cl. 211—129.

Shepherd, Irving L. Orchid plant holder. 2,893,169, 7–7–59, Cl. 47—47.

Sheridan, James V., and O. M. Lewis. Tire truing device comprising hydraulically operated tire support and adjustable cam operated cutting tool. 2,893,479, 7–7–59, Cl. 157—13.

Sheridan, John W. Portable eye-testing apparatus. 2,893,288, 7–7–59, Cl. 88—22.

Sherwood, Henry A., to Minitone Inc. Motor governor. 2,894,192, 7–7–59, Cl. 318—325.

Shimwell, Derrick W., to Weaving Research & Textile Commission Agents Ltd. Woven textile fabrics. 2,893,443, 7–7–59, Cl. 139—383.

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Shollenberger, William G. Blade mounting for a tillage tool 2,893,499, 7–7–59, Cl. 172—740.

Short, Clair A., Jr., W. S. Castle, and D. E. Schnable, to General Motors Corp. Three position actuator cylinder. 2,893,353, 7–7–59, Cl. 121—38.

Shortland, Arthur. Yarn or thread supplying means for knitting machines. 2,893,228, 7–7–59, Cl. 66—140.

Shouvlin, Joseph C., and M. E. Ginaven, to The Bauer Bros. Co. Combined digestion and refining of paper pulp. 2,893,909, 7–7–59, Cl. 162—17.

Showers, Leland J. Conversion kit for chain saws. 2,893,447, 7–7–59, Cl. 143—58.

Shull, Peter O., to General Aniline & Film Corp. Stabilized phenylene diamines. 2,894,034, 7–7–59, Cl. 260—578.

Shumaker, Samuel O. Fishing rod holder. 2,893,667, 7–7–59, Cl. 248—40.

Shuman, Frank R., Jr., to Sun Oil Co. Separation of mixed xylenes by fractional crystallisation of reformed and hydrogenated petroleum fraction. 2,894,048, 7–7–59, Cl. 260—674.

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Siggel, Erhard, to Vereinigte Glanzstoff-Fabriken, A.G. Process for purification of dimethyl terephthalate. 2,894,021, 7–7–59, Cl. 260—475.

Sillars, Frederick S., and H. C. Pavian, deceased (D. S. Pavian, administratrix), to United Shoe Machinery Corp. Methods of bonding by thermoplastic adhesives. 2,893,026, 7–7–59, Cl. 12—142.

Silven, Herbert A., to Norton Co. Grinding machine. 2,893,171, 7–7–59, Cl. 51—3.

Simmons, Arthur B., to United States of America, Air Force. Spring mounted focusing device. 2,893,717, 7–7–59, Cl. 267—1.

Simon, Morris, and J. R. Wagner, to United States of America, Army. Process for retarding non-enzymatic browning of potatoes. 2,893,878, 7–7–59, Cl. 99—207.

Simon, Sidney L., to United States of America, Atomic Energy Commission. Loading machine for reactors. 2,893,575, 7–7–59, Cl. 214—18.

Simonsen, Edward H., to Simonsen Metal Products Co. Tool cabinet. 2,893,749, 7–7–59, Cl. 280—47.19.

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Szasz, Stefan E. 2,894,200.

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Singelman, Fred E., to Admiral Corp. Method and apparatus for making antennas with ferrite cores. 2,893,651, 7–7–59, Cl. 242—9.

Skyten, Robert, to General Electric Co. Second detector circuit. 2,894,132, 7–7–59, Cl. 250—27.

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Smith, Allen E., and A. W. Feldman, to United States Rubber Co. N-1-napthylchlorophthalamic herbicides. 2,893,855, 7–7–59, Cl. 71—2.6.
Smith, Arthur L. Capsule type heat exchanger. 2,893,706, 7–7–59, Cl. 257—263.
Smith, Frank E., to E. I. du Pont de Nemours and Co. Fused salt electrolytic cell. 2,893,940, 7–7–59, Cl. 204—243.
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Smith, Thomas R., to The Maytag Co. Unitary tub washer-drier. 2,893,135, 7–7–59, Cl. 34—75.
Smith, William R., to McDonough Power Equipment, Inc. Wheel driving arrangement for power mowers. 2,893,501, 7–7–59, Cl. 180—19.
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Soffa, Albert, and F. W. Kulicke, Jr., to Walter S. Sachs & Co., Inc. Automatic folding and binding machine. 2,893,297, 7–7–59, Cl. 93—84.
Sollman, Paul B. 6-methyl-17-hydroxy-21-halo-4,6-pregnadiene-3,20-diones and esters thereof. 2,894,008, 7–7–59, Cl. 260—397.47.
Soloway, Sidney, to Schlumberger Well Surveying Corp. Refrigerating methods and apparatus. 2,893,213, 7–7–59, Cl. 62—4.
Somogyi, Francis P. Solid material withdrawing arrangements for vertical furnaces. 2,893,576, 7–7–59, Cl. 214—18.
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Soref, Harry E., and D. J. Foote, to Master Lock Co. Safety locking lever and latch assembly for a permutation padlock. 2,893,231, 7–7–59, Cl. 70—25.
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Spitler, Robert E., to General Telephone Laboratories, Inc. Combination push and turn key. 2,894,079, 7–7–59, Cl. 200—1.
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Springer, Henry A. Illuminating devices. 2,893,379, 7–7–59, Cl. 128—23.
Squires, William K., to Sylvania Electric Products Inc. Color television receiver. 2,894,060, 7–7–59, Cl. 178—5.4.
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Dieman, Edgar A., and Swanson. 2,893,880.
Fields, Ellis K. 2,893,959.
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Akers, Edward G. 2,893,612.
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Stern, Howard H., and J. A. Turner, to General Dynamics Corp. Rate gyro with built-in variable washout. 2,893,247, 7–7–59, Cl. 74—5.6.
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Strong, Joy R. Floor scrubbing appliance. 2,893,037, 7–7–59, Cl. 15—180.

Struber, Franz. Pneumatic plant for removing broken ends on spinning or similar machines. 2,893,196, 7–7–59, Cl. 57—34.5.

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Swihart, Glen W. Sweeping device. 2,893,047, 7–7–59, Cl. 15—347.

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Szlachetka, Stella, to Stanley Home Products, Inc. Cleaning device and frame therefor. 2,893,039, 7–7–59, Cl. 15—229.

Szydlowski, Joseph. System for supplying fuel for turbojet engines. 2,893,481, 7–7–59, Cl. 158—36.

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Tarte, Franklin E., Jr. Game apparatus. 2,893,734, 7–7–59, Cl. 273—85.

Tate, Clifford E., and P. J. G. Freeman, to Marconi's Wireless Telegraph Co. Ltd. Transceiver with automatic bias control of modulator. 2,894,122, 7–7–59, Cl. 250—13.

Taylor, Owen L., to The Bryant Electric Co. Electric heater control. 2,894,103, 7–7–59, Cl. 219—20.

Taylor, Wallace F., to Minnesota Mining & Mfg. Co. Dimensionally thermostable polysulfide compositions containing metal oxides and metal sulfates and article coated therewith. 2,893,906, 7–7–59, Cl. 154—43.

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OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

July 7, 1959 Volume 744 Number 1

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 86,516 (ROCK OF AGES AND DESIGN), Rock of Ages Corp., Granite blocks and monumental stones; Reg. No. 324,626, same Granite monuments and memorials; Reg. No. 324,622, same, Polished blocks or slabs of granite, etc., filed Apr. 30, 1959, D.C., S.D. Ohio (Columbus), Doc. 4431, *Rock of Ages Corp. v. Ed and Bob Estepp, doing business as Portsmouth Monument Co.*

Reg. No. 223,549 (HAIRPINS MADE OF SPRING METAL), filed Aug. 29, 1958, DC., S.D.N.Y., Doc. 137/172, *Estelle D. Sachs v. The Gillette Co., Inc.* Consent judgment; dismissed with prejudice Apr. 29, 1959.

Reg. No. 324,526. (See Reg. No. 86,516.)

Reg. No. 326,622. (See Reg. No. 86,516.)

Reg. No. 261,572 (CBS WITH DESIGN), Columbia Broadcasting System, Inc., Phonograph records; Reg. No. 570,421 (CBS HYTRON), same Electronic tubes; Reg. No. 567,267 (CBS RADIO SPOT SALES), same, Representing independent radio broadcasting stations in the sale of radio time, talent and program materials; Reg. No. 668,999 (CBS TELEVISION), same, Clay modeling and handicraft kits, doll and doll dress designer and cut out kits, crayons, coloring and painting sets and books, puzzles, costumes, masks and accessories, and assembly toys and kits; Reg. No. 699,578 (RCA), Radio Corporation of America, Maintenance, repair and inspection service for radiotelephone and radiotelegraph apparatus for marine use and for marine electronic apparatus; Reg. No. 326,217 (CBS—COLUMBIA), Columbia Broadcasting System, Inc., Radio and television receiving sets, electric phonographs and combinations of the same, etc.; Reg. No. 666,111 (CBS—TELEVISION), same, mechanically grooved phonograph records, filed Apr. 27, 1959, D.C., S.D. Calif. (Los Angeles), Doc. 1952-ND, *Columbia Broadcasting Co., Inc. v. Consumers Buying Service of Fresno, Calif.*

Reg. No. 515,137 (SURGE), Babcox Bros. Co., Lubricating oil for vacuum pumps and pulsators used with milking machines, filed Feb. 11, 1958, D.C., W.D. Wash. (Seattle), Doc. 4777, *Babcox Bros. Co. v. Kenneth M. Rader, doing business as Power Surge Oil Co.* Consent decree entered Apr. 30, 1959, enjoining defendant after Apr. 1, 1960.

Reg. No. 617,778 (COLUMBIAKNIT), Columbiaknit, Inc., Sweaters, bathing suits, ladies suits and dresses, filed Apr. 28, 1959, D.C., N.D. Calif. (San Francisco), Doc. 36211, *Kenneth R. Hartman v. General Foods Corp. et al.*

Reg. No. 570,421. (See Reg. No. 261,572.)

Reg. No. 596,317. (See Reg. No. 261,572.)

Reg. No. 567,267. (See Reg. No. 261,572.)

Reg. No. 595,695 (DRI—FRI—), E. F. Drew and Co., Inc. Vegetable fat for edible purposes, filed Apr. 20, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c695, *E. F. Drew Co., Inc. v. Pem Industries, Inc.*

Reg. No. 592,621 (SLENDERELLA), Slenderella Systems, Inc., Posture correction and slenderizing service, filed Aug. 31, 1956, D.C., W.D. Mo. (Kansas City), Doc. 10575, *Slenderella Systems, Inc. and Slenderella Systems of Kansas*

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1959

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	10,387
Date of oldest new application	Nov. 3, 1958
Date of oldest amended application	Jan. 8, 1959

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 16, 19, 21, 23, 24, 25, 26, 30, 31, 32, 33, 34, 35, 36, 44, 50	1-12-59	2-16-59
(II) R. F. SHEYOCK, Classes 6, 18, 27, 28, 45, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks Class 200	12-24-58	2-1-59
(III) K. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 20, 22, 29, 37, 38, 39, 40, 41, 42, 43, 45, 47, 48, 49, 52; and Certification Marks	11-3-58	1-8-59
Renewals (All Classes)	4-30-59	5-25-59
Sec. 12 (c) Publications (All Classes)	5-4-59	5-4-59

Applications filed during the month of May 1959—2,129

Registrations Issued	341—No. 681,296 to No. 681,636
Renewals Issued	69

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

City, Inc. v. *Torr Systems, Inc.* Service mark valid and infringed; complaint dismissed without prejudice; defendants enjoined Jan. 5, 1959.

Reg. No. 602,421 (LANOLIZED), W. F. Doyle, Hosiery for men, women and children; **Reg. No. 600,883**, same, Lanolized, Inc., Hosiery, underwear, handkerchiefs, etc., filed May 2, 1956, D.C., S.D.NY., Doc. 109—191, *Richard Hudnut, Inc.* v. *Lanolized, Inc.* Order of discontinuance filed Apr. 29, 1959.

Reg. No. 606,879 ("NUT-SHELF"), the Kelling Nut Co., Plain and salted nut meats, filed Apr. 15, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c676, *The Kelling Nut Co.* v. *Johnson Nut Co. et al. and Gardner Johnson Co.* Trademark valid and infringed; consent judgment; defendants enjoined Apr. 24, 1959.

Reg. No. 600,883. (See Reg. No. 602,421.)

Reg. No. 612,997. (PYRAMID), V. J. Judson, doing business as Judson Wholesale Nurseries, Parts and accessories for terraced gardens, filed Jan. 23, 1959, D.C. Minn. (St. Paul), Doc. 4/59–C–14, *Judson Nurseries, Inc.* v. *V. A. Johnson, etc.* Order of dismissal May 1, 1959.

Reg. No. 624,266 (JEENIE WITH DESIGN), J. S. Conley, doing business as Jay S. Conley & Co., Materials for conditioning metal, concrete, bricks and painted surfaces of all kinds to receive paint cover, wall paper remover, and wood bleach, filed Apr. 29, 1959, D.C., N.D. Calif. (San Francisco), Doc. 38213, *Jay S. Conley etc.* v. *Colgate Palmolive Co.*

Service by Publication

A petition to cancel each of the registrations identified below having been filed, and the notice of such proceedings sent by registered mail to each registrant at the last known address having been returned by the post office as undeliverable, notice is hereby given that unless the registrants listed herein, their assigns or legal representatives, shall enter an appearance within thirty days from the date of this publication, the cancelation will be proceeded with as in the case of default.

James Lawrence Co., Inc., New York, N.Y., Reg. No. 378,625, Canc. No. 7277.

Robert M. Opisso, New York, N.Y., Reg. No. 437,405, Canc. No. 7285.

Joseph Silvers, Brooklyn, N.Y., Reg. No. 435,931, Canc. No. 7290.

DAPHNE LEEDS,
Assistant Commissioner of Patents.

Receipt of Mail

In view of reports that there have been delays in the receipt by the U.S. Patent Office of mail having due dates (amendments, motions, etc.), it is appropriate to set forth the arrangements which have been made with the Washington City Post Office for the handling of mail addressed to the Patent Office.

Regular Mail

The mail addressed to Washington 25, D.C., upon receipt at the Washington City Post Office is sorted and distributed, and that portion addressed to the Patent Office is placed in Patent Office mail pouches. A pouch is kept open until midnight of each weekday, except Saturdays, and holidays in the District of Columbia, closed and locked at that hour, and delivered to the Patent Office the following day. The contents are stamped as received in the Patent Office on the day the pouch was closed and locked.

Mail received in the Post Office between midnight Friday and midnight Sunday is stamped in the Patent Office as received in the Patent Office as of the following weekday (not a holiday).

Mail received in the Post Office on a holiday is stamped in the Patent Office as received in the Patent Office as of the following weekday (not a Saturday).

Special Delivery Mail

Special delivery mail received in the Washington City Post Office is sorted, distributed, and placed in vehicles for delivery within two or three hours after arrival. Such mail is not usually dispatched for delivery after 10:00 p.m. Special delivery mail which is received before midnight on a weekday, except Saturdays and holidays in the District of Columbia, but too late for 10:00 p.m. dispatch to the Patent Office, is placed in the Patent Office pouch which is closed and locked at midnight.

Special delivery mail received in the Post Office after midnight is delivered the next day to the Patent Office and is stamped as received that day, if not a Saturday, Sunday, or holiday.

Special delivery mail received in the Post Office on a Saturday, Sunday or holiday is stamped in the Patent Office as received in the Patent Office as of the following weekday, following the practice for regular mail.

C. A. KALK,
June 8, 1959. *Director of Administration.*

Notice of Tentative Recordation of a Trade Name

[T.D. 54,862]

Tentative recordation of trade name under section 42, Trademark Act of July 5, 1946, and section 11.16, Customs Regulations

TREASURY DEPARTMENT,
OFFICE OF THE COMMISSIONER OF CUSTOMS,
Washington, D.C., June 3, 1959

To Collectors of Customs and Others Concerned:

An application has been filed in the Treasury Department for the recordation of the following described trade name under the provisions of section 42, Trademark Act of 1946, and section 11.16, Customs Regulations:

"ABWOOD MACHINE TOOLS LTD.," located and doing business at Princes Road, Dartford, Kent, England, which trade name is used in connection with the production and marketing of machine tools and small tools.

Since the trade name is owned by a foreign corporation, merchandise manufactured or sold by this firm bearing the name may be imported by anyone.

Any person who desires to file an opposition to the recordation of this trade name shall notify the Commissioner of Customs, Bureau of Customs, Washington 25, D.C., before the expiration of 30 days after July 15, 1959, of his intent to oppose the recordation. If a notice of opposition is filed, the opposer will be furnished with a copy of the application for recordation of the trade name, together with its supporting documents and instructions as to the procedure to be followed. The customs officers concerned will be given notice within 45 days after July 15, 1959, of any opposition proceeding.

Until 45 days after July 15, 1959, all articles of foreign manufacture bearing names or marks which copy or simulate the above-mentioned trade name shall be detained, but not seized, and thereafter, shall receive the treatment provided for in section 11.17, Customs Regulations, unless a notice is received that an opposition has been filed, in which case such articles shall continue to be detained until a final determination is made concerning the right of the applicant to the trade name.

(Signed) D. B. STRUBINGER,
Acting Commissioner of Customs.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 21 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 32,911. Chemieprodukte G.m.b.H., Leverkusen-Rheindorf, Germany. Filed July 1, 1957.

DENSOTEC

Owner of German Reg. No. 695,502, dated Oct. 3, 1956.
For Caoutchouc, Synthetic Rubbers, Pitch, Asphalt, and Tar.

SN 38,019. Cee Bee Mfg. Co. Inc., Brooklyn, N.Y. Filed Sept. 30, 1957.

CEE-BEE

Owner of Reg. No. 650,113.
For Extruded Vinyl and Polyethylene Belting, Moldings, and Strips for Use in the Industrial Arts.
First use January 1943.

SN 47,061. Kerr Manufacturing Company, Detroit, Mich Filed Mar. 13, 1958.

FERROMOLD

Owner of Reg. No. 427,255.
For Investment Compound.
First use Jan. 21, 1956.

SN 51,003. Farmers Union Grain Terminal Association, St. Paul, Minn. Filed May 5, 1958.

GTA

For Farm Seeds.
First use in June 1942.

SN 51,552. Christmas Farms, Oquawka, Ill. Filed May 13, 1958.

Christmas Farms

For Christmas Trees, Wreaths, Grave Blankets, Door Swags, and Evergreen Sprays.
First use Nov. 22, 1957.

SN 55,784. Cooperative Verkoop- en Productievereniging van Aardappelmeel en Derivaten "Avebe" G.A., Veendam, Holland. Filed July 22, 1958.

AMYLOPHANE

Owner of Dutch Reg. No. 130,065, dated Feb. 7, 1958.
For Films, Foils and Sheeting Made From Starches and Starch Products.

SN 62,549. Germain's Inc., d.b.a. Aggeler & Musser Seed Co., Los Angeles, Calif. Filed Nov. 17, 1958.

BEST-YET

For Lawn Seed—Namely, Clover and Mixtures of Clover and Dichondra Seed.
First use at least as early as 1951.

SN 64,457. Davoe Corporation, New York, N.Y. Filed Dec. 17, 1958.

BARATEX

Owner of Reg. No. 368,215.
For Lamination of Tanned and Reconstituted Leather With Plastic Sheet Material.
First use on or about Dec. 15, 1957.

Class 2—Receptacles

SN 45,011. Bennett & Northrop, Inc., Boston, Mass. Filed Jan. 31, 1958.

VACUUM COOKER

For Flexible Plastic Bags in Which Food May Be Placed for Cooking.
First use Jan. 13, 1958.

SN 52,088. Dorman Products, Inc., Cincinnati, Ohio. Filed May 21, 1958.

ADD-A-BIN

For Small Parts Containers Which May Be Interlocked To Form a Cabinet.
First use in April 1938.

SN 53,445. Vanpac Carriers, Inc., Richmond, Calif. Filed June 12, 1958.

VANPAC

For Shipping Containers of the Box-Like Type.
First use Apr. 15, 1957.

SN 64,631. Hamilton-Skotch Corporation, Hamilton, Ohio. Filed Dec. 19, 1958.

SKYLANDER

Owner of Reg. No. 584,389.
For Insulated Containers Including Picnic Jugs and Chests.
First use Nov. 5, 1958.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 59,781. A. J. Sirls Products Corp., New York, N.Y. Filed Sept. 29, 1958.

TEEN-GLO

For Wallets, Purses, and Clutch and Hand Bags.
First use Sept. 26, 1958.

Class 4—Abrasives and Polishing Materials

SN 32,140. The Gerson Stewart Corporation, Cleveland, Ohio. Filed June 17, 1957.

SAFESHEEN

For High Gloss Anti-Slip Wax Floor Finish.
First use in September 1954.

SN 66,916. Minneapolis-Honeywell Regulator Company, Minneapolis, Minn. Filed Feb. 2, 1959.

D'ARTAGNAN

For Sharpening Stones.
First use Oct. 29, 1958.

Class 5—Adhesives

SN 61,862. Sears Stanley Smith, d.b.a. Unique Products, Chicago, Ill. Filed Nov. 3, 1958.

NU-SEW

Owner of Reg. No. 671,978.
For Adhesive Preparation for Mending Various Materials Such as Leather, Paper, and Fabrics.
First use Sept. 26, 1958.

SN 66,196. American Cyanamid Company, New York, N.Y. Filed Jan. 21, 1959.

CYANAMID

Owner of Reg. Nos. 667,921 and 669,198.
For Adhesives and Laminating Resins.
First use February 1957 on adhesives.

SN 67,079. Penick & Ford, Ltd., Incorporated, New York, N.Y. Filed Feb. 4, 1959.

PRE-GEL

For Adhesive Binder Used in the Manufacture of Paper and Fiberboard Products.
First use Apr. 15, 1958.

Class 6—Chemicals and Chemical Compositions

SN 37,077. De Mert & Dougherty, Inc., Chicago, Ill. Filed Sept. 12, 1957.

FRIG-I-GAS

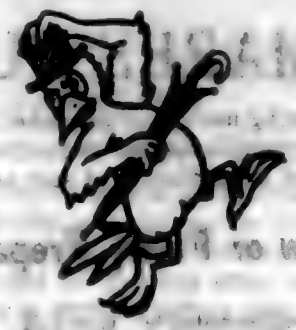
For Dichlorodifluoromethane Used as a Refrigerant.
First use on or about Aug. 12, 1957.

SN 42,971. Farbenfabriken Bayer Aktiengesellschaft (German corporation), Leverkusen-Bayerwerk, Germany, assignee of Chemagro Corporation (New York corporation), New York, N.Y. Filed Dec. 24, 1957.

DI-SYSTON

Assignee is owner of U.S. Reg. No. 651,907.
For Systemic Insecticide To Be Applied to Cotton and Alfalfa Seed Before Planting and on Growing Crops.
First use Apr. 26, 1957.

SN 45,155. Joseph H. Fink, d.b.a. National Bird Control Laboratories, Skokie, Ill. Filed Feb. 3, 1958.



For Chemical Compounds To Repel Birds and Rodents.
First use November 1955.

SN 45,404. National Polychemicals, Inc., Wilmington, Mass. Filed Feb. 6, 1958.

EXPANDEX

For Organic Blowing Agents Useful in Production of Cellular Rubber and Plastic Compositions.
First use Nov. 14, 1957.

SN 45,998. Organic Development Corporation, Garden Grove, Calif. Filed Feb. 17, 1958.

VYNA-KOTE

For Solvent for Joining and Encapsulating Polyvinyl Chloride Articles.
First use June 19, 1956.

SN 49,679. Capital Regraining Corporation, Washington, D.C. Filed Apr. 15, 1958.

DUROLITH

For Chemical Coatings and Compositions Used in Making Lithographic Plates.
First use Mar. 10, 1952.

SN 56,390. Dearborn Chemical Company, Chicago, Ill. Filed July 31, 1958.

ALKAMEEN

For Preparations for Inhibiting Corrosion in Return Lines of Steam Systems and the Like.
First use Feb. 8, 1950.

SN 56,407. Neville Chemical Company, Pittsburgh, Pa. Filed July 31, 1958.

NEVILLE

The drawing is lined for a green background but applicant makes no claim to any particular color. Owner of Reg. Nos. 351,507, 353,172, and others.
For Fluid and Solid Organic Materials Such as Synthetic Polymers and Resins, and Solutions Thereof, Including but Not Limited to Resins of the Coumarone-Indene Type; Modified Resins, for Example, Phenol Modified Courmarone-Indene Type Resins; Cyclo-Paraffin Resins; Polymers of Unsaturated Cyclic Hydrocarbons Such as Cyclopentadiene and Dicyclopentadiene and the Like; Rubber Compounding Chemicals Such as Antioxidants; Aromatic Hydrocarbons and Oils, Useful for or as Ingredients of Solvents, Plasticizing Materials, Rubber Reclaiming Oils and for Various Industrial Purposes.
First use on or about Nov. 1, 1938.

SN 57,850. Spencer Chemical Company, Kansas City, Mo. Filed Aug. 25, 1958.

POLY-PRO

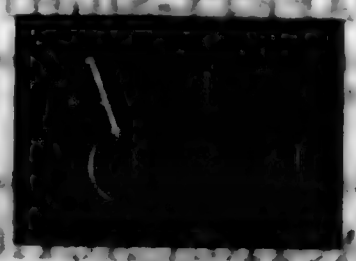
For Raw Thermoplastic Synthetic Resins.
First use Aug. 14, 1958.
Subj. to Intf. with SN 62,042.

SN 58,798. Hercules Powder Company, Wilmington, Del. Filed Sept. 11, 1958.

HERCOLUBE

Owner of Reg. No. 538,235.
For Synthetic Esters.
First use July 18, 1958.

SN 60,200. Allied Chemical Corporation, New York, N.Y. Filed Oct. 7, 1958.



For Acids, Anhydrides, Esters, Ethers and Salts, Chlorine Chemicals, Nitrogen Chemicals, Sulfur Chemicals, Chromium Chemicals, Fluorine Chemicals, Metals for Use as Reagents, Alcohols, Amines, Hydrocarbons, Phenolic Compounds, Polyethylene and Polyethylene Derivatives, Isocyanates and Isocyanate Prepolymers, Amide and Polyamide Compounds, Alkali Metal and Alkaline Earth Metal Compounds, Carbonyl Compounds, Synthetic Waxes, Synthetic Polymer Products, Synthetic Resin Products, Organic Condensation Products, Dyestuffs, Insecticides, Fungicides, Herbicides, Antioxidants, Plasticizers, Solvents, Flotation Agents, Rubber Softeners, Pickling Compounds, Inhibitors.
First use 1953 on polyethylene.

SN 61,110. Esso Standard Oil Company, New York, N.Y. Filed Oct. 22, 1958.

ESCON

For Thermoplastic Polyolefins—Namely, Polypropylene.
First use Sept. 10, 1958.

SN 61,554. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Oct. 29, 1958.

EUTECTIC

Owner of Reg. No. 502,614.
For Chemical Welding Aids—Namely, Fluxes, Masking Compositions, Anti-Capillary Compositions, Quenching Compositions and Compositions for Temporarily Holding Metal Parts.
First use in November 1950 on fluxes.

SN 62,251. Wittichen Chemical Company, Birmingham, Ala. Filed Nov. 10, 1958.

WITCLOR

For Chemical Preparation Used as a Bleach, Sanitizer and Disinfectant-Deodorant.
First use on or about Oct. 1, 1954.

SN 63,616. Topco Associates, Inc. (Cooperative), Chicago, Ill. Filed Dec. 8, 1958.

TOPCO

Owner of Reg. No. 667,516.
For Bleach for Household Purposes.
First use Oct. 15, 1958.

SN 63,650. Irwin Hoffman, Cedarhurst, N.Y. Filed Dec. 4, 1958.

Chlor-O-Drop

For Chloride Test Papers.
First use Oct. 15, 1958.

SN 63,726. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Dec. 5, 1958.

THERMO-FAX

Owner of Reg. Nos. 560,096, 577,845, and 601,804.
For Liquid Chemical Composition Useful in Connection With Coated Sheet Material Which Has Been Adapted To Produce Copies of Information Contained on Microfilm.
First use Oct. 16, 1958.

SN 65,007. Oxo Limited, London, England. Filed Dec. 29, 1958.

LAB-LEMCO

Owner of U.S. Reg. Nos. 563,377, 577,315.
For Extract of Beef, Specially Prepared for Use in Microbiological and Biochemical Laboratories.
First use 1928; in commerce Mar. 31, 1949.

SN 65,078. Franklin Research Company, Philadelphia, Pa. Filed Dec. 30, 1958.

ACE

For Preparation for Application to the Hands and/or Application to the Handles of All Types of Equipment That Is Held or Gripped by the Hand, Such as Sporting Equipment, To Obtaining a Non-Slip Grip Thereon.
First use Nov. 12, 1958.

SN 65,818. Cahill Chemical Corporation, Providence, R.I. Filed Jan. 14, 1959.

RENIDIZE

For Electro-Less Nickel Plating Concentrate.
First use Dec. 31, 1958.

SN 66,498. Sel-Rex Corporation, Nutley, N.J. Filed Jan. 26, 1959.

TEMPEREX

For Electroplating Composition.
First use Jan. 2, 1959.

SN 67,535. Engelhard Industries, Inc., Newark, N.J. Filed Feb. 11, 1959.

RD-150

For Catalysts.
First use Sept. 16, 1954.

SN 69,324. Ditto, Incorporated, Chicago, Ill. Filed Mar. 11, 1959.

PERMA-COPY

For Direct Process Copy Fluid.
First use Feb. 11, 1959.

SN 69,499. The Dow Chemical Company, Midland, Mich. Filed Mar. 13, 1959.

ETHRON

For Polyethylene Resins in the Form of Molding Powder and Granules.
First use Dec. 11, 1958.

Class 7 — Cordage

SN 48,281. M. Hausman & Sons, Inc., New York, N.Y. Filed Mar. 24, 1958.

CUT N' TIE

For Ribbons for Gift Tying.
First use Mar. 11, 1958.

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 64,817. Comoy's of London, Inc., New York, N.Y. Filed Dec. 23, 1958.

AIR-PAC

For Tobacco Pouches.
First use on or about Jan. 30, 1956.

Class 10 — Fertilizers

SN 46,858. Trump Products, Inc., New York, N.Y. Filed Feb. 28, 1958.

For Soil Conditioners.
First use December 1957.

SN 46,859. Trump Products, Inc., New York, N.Y. Filed Feb. 28, 1958.

TRUMP

For Soil Conditioners.
First use May 15, 1940.

SN 62,960. Puget Sound Pulp & Timber Company, Bellingham, Wash. Filed Nov. 21, 1958.

Multi-Tracin

Owner of Reg. No. 672,035.
For Material for Supplying Trace Minerals to Trees and Shrubs in the Nature of Plant Stimulants or Fertilizer.
First use in about June 1957.

SN 62,961. Puget Sound Pulp & Timber Company, Bellingham, Wash. Filed Nov. 21, 1958.

Fe-Tracin

Owner of Reg. No. 672,035.
For Material for Supplying Trace Minerals to Trees and Shrubs in the Nature of Plant Stimulants or Fertilizer.
First use Dec. 11, 1956.

Class 11 — Inks and Inking Materials

SN 55,029. Lawter Chemicals, Inc., Chicago, Ill. Filed July 24, 1958.

"SAFETY-SIGHT"

For Inks and Pigments for Use in Coating Compositions.
First use July 9, 1958.

SN 65,451. Scripto, Inc., Atlanta, Ga. Filed Jan. 7, 1959.

TRACTION ACTION

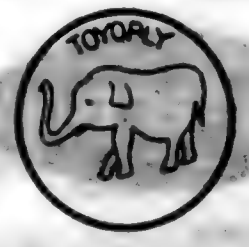
For Inks.
First use Nov. 25, 1958.

Class 12 — Construction Materials

SN 31,835. Florida Tile Industries, Inc., Lakeland, Fla. Filed June 12, 1957.

No exclusive claim is made to the word "Tile" apart from the mark as shown.
For Ceramic Tiles.
First use Oct. 1, 1951.

SN 50,122. Toyo Plywood Co., Ltd., Nagoya, Japan. Filed Apr. 21, 1958.



For Plywood.
First use Feb. 1, 1955; in commerce Feb. 1, 1955.

SN 50,761. American-Marietta Company, Chicago, Ill. Filed May 1, 1958.

SPIKE-GRIP

For Cementitious Composition Containing Metallic Aggregate for Solidly Embedding Spikes in Railroad Ties To Prolong the Life of the Ties.
First use Feb. 25, 1958.

SN 51,130. Johns-Manville Corporation, New York, N.Y. Filed May 6, 1958.

DECROBORD

For Wall and Ceiling Plank and Panels.
First use on or about Mar. 28, 1958.

SN 52,401. Theodore Efron Mfg. Co., Chicago, Ill. Filed May 27, 1958.

EL DORADO

For Bath Tub and Shower Enclosures.
First use Jan. 23, 1958.

SN 52,402. Theodore Efron Mfg. Co., Chicago, Ill. Filed May 27, 1958.

TRIPLEX

For Bath Tub and Shower Enclosures.
First use Jan. 23, 1958.

SN 52,403. Theodore Efron Mfg. Co., Chicago, Ill. Filed May 27, 1958.

PACER

For Bath Tub and Shower Enclosures.
First use Jan. 23, 1958.

SN 52,792. Air Master Corporation, Philadelphia, Pa. Filed June 3, 1958.

GOLD BUTTON LEADER

For Aluminum Windows and Screens.
First use Apr. 14, 1958.

SN 53,562. The Aber Company, Inc., Houston, Tex. Filed June 16, 1958.

ABCO

For Insulation Material Including Pipe Insulation, Vessel Insulation, and Fitting Insulation, Together With Insulating Cement Which Is Sold Together With the Insulating Material for Use in Applying Such Insulation Material.
First use June 1, 1952.

SN 54,239. Kompolite Co. Inc., Long Island City, N.Y. Filed June 25, 1958.

GRANITCAP

For Resurfacing Material, Formed of Granite Aggregate for Floors, and for Cementing and Grouting Joints of Tile.
First use May 11, 1956.

SN 56,895. E. A. Nord Company, Incorporated, Everett, Wash. Filed Aug. 11, 1958.

NORDCO-DOORS

For Construction Materials, Principally Doors.
First use Jan. 1, 1930.

SN 61,056. Hoenig Plywood Corporation, New York, N.Y. Filed Oct. 21, 1958.

LIGNORA

For Plywood and Veneers.
First use Sept. 22, 1958.

SN 65,519. Russell Reinforced Plastics Corporation, Lindenhurst, N.Y. Filed Jan. 8, 1959.

CIRCLET TROPIGLAS

Owner of Reg. No. 606,188.
For Glass Fiber Reinforced Plastic Panels and Slats Utilized in Wall Openings of Buildings and Wall Sections or Partitions.
First use Sept. 16, 1958.

SN 65,571. Klemp Metal Grating Corporation, Chicago, Ill. Filed Jan. 9, 1959.

HI HEX

For Median Strips and Separators Made of Steel for Use in Roads and Bridges.
First use Dec. 20, 1958.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 52,902. Parker-Hannifin Corporation, Cleveland, Ohio. Filed June 19, 1958.

BRAZE-LOK

For Brazed Type Tube Fittings.
First use Oct. 25, 1957.

SN 58,020. Elkay Manufacturing Company, Chicago, Ill. Filed Aug. 28, 1958.

STARLITE

For Kitchen Sinks, Dishtables, Scullery Sinks, Stainless Steel Specialty Hospital Equipment and Stainless Steel Table Tops.
First use Nov. 7, 1957.

SN 58,022. Elkay Manufacturing Company, Chicago, Ill. Filed Aug. 28, 1958.

ELKAY

For Kitchen Sinks, Drainboards, Dishtables, Scullery Sinks, Stainless Steel Specialty Items, Hospital Equipment, and Stainless Steel Table Tops.
First use Nov. 29, 1957.

SN 58,024. Elkay Manufacturing Company, Chicago, Ill. Filed Aug. 28, 1958.

ELKAY

For Sinks, Sink Bowls and Attaching Rims Therefor.
First use July 30, 1957.

SN 58,025. Elkay Manufacturing Company, Chicago, Ill. Filed Aug. 28, 1958.

PACEMAKER

For Sink Bowls.
First use Nov. 8, 1957.

SN 61,362. Chicago Forging and Manufacturing Company, Chicago, Ill. Filed Oct. 27, 1958.

RUBBERNEK

For Anchorage Fittings for Smooth-Surfaced Tubes.
First use Oct. 17, 1958.

SN 67,337. Whittet-Higgins Company, Providence, R.I. Filed Feb. 16, 1959.

BEAR-HUG

For Locknuts.
First use Dec. 18, 1957.

SN 68,246. Francis, Gifford & Lee, Inc., Chicago, Ill. Filed Feb. 24, 1959.

"Slyde-O-Matic"

For Bracket for Supporting Kitchen Utensils Such as Can Openers.
First use Mar. 21, 1958.

SN 68,317. Puritan Specialties Co., Inc., Chicago, Ill. Filed Feb. 24, 1959.

ZIP

For Shower.
First use Dec. 22, 1958.

SN 68,332. Wm. Steinen Mfg. Co., Newark, N.J. Filed Feb. 24, 1959.

SPAN-JET

For Spraying Nozzles for Industrial Agricultural and Processing Purposes.
First use Oct. 31, 1958.

SN 68,423. Premier Industrial Corporation, Cleveland, Ohio. Filed Feb. 25, 1959.

SUPERTANIC

Owner of Reg. Nos. 653,655 and 651,377.
For Fasteners—Namely, Cap Screws and Bolts.
First use in September 1957.

SN 68,431. Rockwell Manufacturing Company, Pittsburgh, Pa. Filed Feb. 25, 1959.

ROCKWELL

Owner of Reg. Nos. 553,232, 564,099, and others.
For Plug Valves, Ball Valves, Check and Stop Valves, Globe Valves, Gate Valves, Relief Valves, Angle Valves, and Pressure Regulating Valves.
First use Dec. 13, 1945.

SN 68,456. Armco Steel Corporation, Middletown, Ohio. Filed Feb. 26, 1959.

A-to-Z

For Fence and Barbed Wire Products.
First use Jan. 29, 1959.

Class 14—Metals and Metal Castings and Forgings

SN 46,806. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Feb. 26, 1959.

2101

For Metallic Welding Electrode for Aluminum.
First use Nov. 23, 1940.

SN 46,810. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Feb. 26, 1959.

680

For Metallic Welding Electrode for Dissimilar Alloy Steels.
First use Nov. 15, 1940.

SN 46,811. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Feb. 26, 1959.

2-24

For Metallic Welding Electrode for Cast Iron.
First use Dec. 4, 1952.

SN 46,812. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Feb. 26, 1959.

2-25

For Metallic Welding Electrode for Cast Iron.
First use Nov. 11, 1955.

SN 46,813. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Feb. 26, 1959.

185

For Metallic Welding Rod for Joining and Overlaying Cast Iron, Steel, Copper, and Nickel Alloys.
First use Nov. 15, 1940.

SN 46,814. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Feb. 26, 1959.

16

For Metallic Welding Rods for Joining Steel and Other Metals.
First use Nov. 15, 1940.

SN 46,815. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Feb. 26, 1959.

88

For Metallic Welding Rod Containing Hard Carbide Fragments for Overlaying Equipment Parts and Tools.
First use Nov. 16, 1956.

N.Y. Filed Feb. 23, 1956.

24-X

For Metallic Welding Electrode for Cast Iron.
First use Nov. 15, 1940.

SN 54,489. The Brush Beryllium Company, Cleveland, Ohio. Filed June 30, 1958.

QMV

For Beryllium Metal in Powder, Chip, Pebble, Porous, Compacted, Sintered, Compressed, Rolled, Forged, Wrought, and Extruded Forms.
First use June 2, 1950.

SN 66,125. Unitcast Corporation, Toledo, Ohio. Filed Jan. 19, 1959.

UNITCAST CORPORATION

Owner of Reg. No. 671,406.
For Miscellaneous Steel Castings.
First use on or about Mar. 12, 1928.

Class 15—Oils and Greases

SN 35,737. Sampson T. Darby, d.b.a. Minnesota Oil Additives, St. Joseph, Mo. Filed Oct. 11, 1957.

PISTON COAT

No claim is made to the words "Piston Coat" apart from the mark.
For Oil Additive for Motor Vehicles.
First use July 11, 1957.

SN 52,345. Ralph Shrader, Inc., Whittier, Calif. Filed May 26, 1958.

SPEEDYTUNE

For Fuel Additive.
First use Mar. 24, 1958.

SN 55,280. Socony Mobil Oil Company, Inc., New York, N.Y. Filed July 14, 1958.

MOBILGARD

Owner of Reg. Nos. 337,002, 637,352, and others.
For Oils.
First use in or about April 1958.

SN 56,902. Socony Mobil Oil Company, Inc., New York, N.Y. Filed Aug. 7, 1958.

MOBILUX

Owner of Reg. Nos. 129,237, 536,703, and others.
For Petroleum Products—Namely, Greases.
First use on or about June 1957.

SN 63,701. Famm Refining Products Company, Hobbs, N. Mex. Filed Dec. 5, 1958.

FAMAS

For Gasoline.
First use Oct. 14, 1958.

S-200

Owner of Reg. No. 539,338.
For Lubricating Oil Additive.
First use Dec. 15, 1958.

Class 16—Protective and Decorative Coatings

SN 27,443. C. Elwood Mackey & Co., Inc., Birmingham, Ala. Filed Apr. 3, 1957.

CEM PAINT

No claim is made to the word "Paint" apart from the mark as shown.
For Paints and Paint Supplies.
First use Mar. 12, 1957.

SN 60,753. The Martin-Senour Company, Chicago, Ill. Filed Oct. 16, 1958.

BLUE BOND

The drawing is lined for blue, but no exclusive rights are claimed to such color apart from the mark as shown.
For Lacquer Thinner.
First use Nov. 22, 1957.

SN 69,948. Buckeye Industries, Inc., Cleveland, Ohio. Filed Mar. 20, 1959.

BUCKRUST

For Rust Inhibiting Coating Compound.
First use Nov. 7, 1958.

SN 70,103. Printing Arts Research Laboratories, Inc., Santa Barbara, Calif. Filed Mar. 23, 1959.

FLUORO-COLOR

Owner of Reg. Nos. 406,023, 695,851, and others.
For Artists' Colors.
First use Mar. 5, 1950.

SN 70,324. The Sherwin-Williams Company, Cleveland, Ohio. Filed Mar. 26, 1959.

KEMACRYL

Owner of Reg. No. 275,775.
For Paints.
First use Aug. 27, 1958.

Class 17—Tobacco Products

SN 52,004. Philip Morris Incorporated, New York, N.Y. Filed May 20, 1958.

YARDLEY

Owner of Reg. No. 373,780.
For Cigarettes.
First use Nov. 2, 1938.

SN 61,531. De Erven de Wed. J. van Nelle N.V., Rotterdam, Netherlands. Filed Oct. 23, 1958.

COASTER

Owner of Dutch Reg. No. 124,011, dated Jan. 27, 1956.
For Smoking Tobacco and Shag Tobacco.

Class 18—Medicines and Pharmaceutical Preparations

SN 14,220. American Home Products Corporation, New York, N.Y., assignee, by mesne assignments, of Ernest Braun, Portland, Maine. Filed Aug. 20, 1956.

ALLICINOL

For Allium Sativum Extract Incorporated as an Ingredient in Compositions for the Treatment of Skin Disorders.
First use Aug. 1, 1956.

SN 27,730. Walter Ratner, d.b.a. Du-X, Division of Grant Company, Chicago, Ill. Filed Apr. 8, 1957.

DU-X

For Pharmaceutical Preparation for Application to Pimples and Acne.
First use Sept. 12, 1956.

SN 30,301. Campbell Pharmaceuticals, Inc., New York, N.Y., assignee of Campbell Pharmaceutical Company, New York, N.Y. Filed May 20, 1957.

CAMPBELL

For Pharmaceutical Preparations.
First use Feb. 11, 1954.

SN 40,796. Allen Associates, Inc., Memphis, Tenn. Filed Nov. 18, 1957.

Darolite

For Food Supplement in Tablet Form Containing Vitamins and Minerals.
First use Jan. 8, 1957.

SN 41,123. Vitaminerals, Inc., Glendale, Calif. Filed Nov. 21, 1957.

NU-PREVEN

For Multiple Vitamin and Mineral Preparation.
First use Sept. 26, 1957.

SN 46,078. Dr. Karl Thomae G.m.b.H., Biberach an der Riss, Germany. Filed Jan. 14, 1958.

COHORTAN

Owner of German Reg. No. 394,019, dated Nov. 7, 1928.
For Preparation for the Treatment of Hepatic and Biliary Disorders.

SN 46,928. G & J Distributors, Inc., Berkeley, Calif. Filed Mar. 3, 1958.

FAM-PAK

For Food Supplement Containing Vitamins and Minerals.
First use Sept. 3, 1957.

SN 47,170. American Home Products Corporation, d.b.a. Wyeth Laboratories, New York, N.Y. Filed Mar. 6, 1958.

EQUONIUM

Owner of Reg. No. 632,115.
For Tranquilizer and Antispasmodic Preparation in Combined Dosage Form.
First use Jan. 15, 1958.

SN 47,546. American Home Products Corporation, d.b.a. Ayerst Laboratories, New York, N.Y. Filed Mar. 12, 1958.

PMB

For Tranquilizing Agent and Estrogenic Preparation in Combined Dosage Form.
First use Feb. 5, 1958.

SN 50,335. American Home Products Corporation, d.b.a. Wyeth Laboratories, New York, N.Y. Filed Apr. 25, 1958.

EQUALYSEN

Owner of Reg. No. 632,114.
For Anti-Hypertensive Preparation.
First use Dec. 3, 1957.

SN 50,666. American Home Products Corporation, d.b.a. Ayerst Laboratories, New York, N.Y. Filed Apr. 30, 1958.

VANAY

For Fungicidal Preparation in Topical Dosage Form.
First use Apr. 16, 1958.

SN 50,667. American Home Products Corporation, d.b.a. Wyeth Laboratories, New York, N.Y. Filed Apr. 30, 1958.

EQUAPRIN

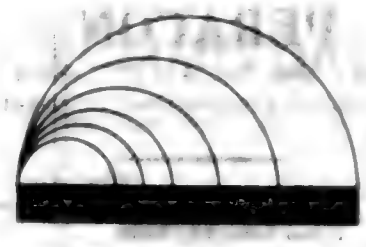
Owner of Reg. Nos. 632,115 and 643,508.
For Analgesic Preparation.
First use Apr. 22, 1958.

SN 51,245. Abbott Laboratories, North Chicago, Ill. Filed May 8, 1958.

RAOLEIC ACID

The word "Acid" is disclaimed apart from the mark as shown.
For Radioactive Fatty Acid for Diagnostic Use in the Human Body.
First use Jan. 14, 1958.

SN 52,624. G. O. Spanner, Inc., New York, N.Y. Filed May 20, 1958.



For Vitamin and Mineral Capsules.
First use June 22, 1950.

SN 53,044. Olin Mathieson Chemical Corporation, New York, N.Y. Filed June 6, 1958.

RUBRATOPE

For Pharmaceutical Preparations Containing Radioactive Cobalamin.
First use Dec. 6, 1957.

SN 53,189. Novo Terapeutisk Laboratorium A/S, Copenhagen, Denmark. Filed June 9, 1958.

LENTE

Owner of Danish Reg. No. 404/1958, dated Mar. 1, 1958.
For Preparation for the Treatment of Diabetes.

SN 53,190. Novo Terapeutisk Laboratorium A/S, Copenhagen, Denmark. Filed June 9, 1958.

SEMILENTE

Owner of Danish Reg. No. 1157/1957, dated July 20, 1957.
For Preparation for the Treatment of Diabetes.

SN 53,756. Aktiengesellschaft Hermes, d.b.a. "Hermes" Ltd., Zurich, Switzerland. Filed June 18, 1958.

Hermesetas

For Saccharine for Pharmaceutical Use, Particularly in the Treatment of Diabetes, Cases of Obesity, Cases of Diseases of the Digestive Tract, in the Care of Convalescents and New Born Infants, and Other Cases Where the Use of Sugar Is Inadvisable Because It Is Apt To Cause Fermentation.
First use Mar. 1, 1932; in commerce Feb. 14, 1957.

SN 53,757. Aktiengesellschaft Hermes, d.b.a. "Hermes" Ltd., Zurich, Switzerland. Filed June 18, 1958.

HERMESETAS

For Saccharine for Pharmaceutical Use, Particularly in the Treatment of Diabetes, Cases of Obesity, Cases of Diseases of the Digestive Tract, in the Care of Convalescents and New Born Infants, and Other Cases Where the Use of Sugar Is Inadvisable Because It Is Apt To Cause Fermentation.
First use Mar. 1, 1932; in commerce Feb. 14, 1957.

SN 54,001. George A. Breon & Company, New York, N.Y. Filed June 23, 1958.

ISOPYKNIC

For Pharmaceutical Aqueous Vehicle for Suspension of Hormones.
First use May 27, 1958.

SN 54,021. Dome Chemicals, Inc., New York, N.Y. Filed June 23, 1958.

NEO-CORT-DOME

Owner of Reg. No. 583,764.
For Medicinal Preparation for External Use in the Treatment of Skin Infections and Other Skin Irritations.
First use June 1957.

SN 55,110. Carrtone Laboratories, Inc., New Orleans, La. Filed July 11, 1958.

CALZIR

For Medical and Pharmaceutical Products—Namely, a Lotion for the Prevention and Treatment of Poison Ivy, Poison Oak, and Sumac.
First use May 18, 1956.

SN 55,240. Morris W. Hillinger, d.b.a. Nutritional Products Co., East Pasadena, Calif. Filed July 14, 1958.

ULTRA VIM

For Vitamin and Mineral Dietary Food Supplement.
First use Mar. 6, 1958.

SN 55,850. Hiss Pharmacal Company, Inc., New Hartford, N.Y. Filed July 23, 1958.

VASOTRATE

For Drugs and Medicines Containing Penta-Erythritol Tetranitrate.
First use June 1958.
Subj. to Intf. with SN 72,773.

SN 60,861. Synodyne Corporation, Memphis, Tenn. Filed Oct. 17, 1958.

SYNODYNE

For Nasal Spray.
First use May 1, 1958.

SN 62,458. The G. F. Harvey Company, Inc., Saratoga Springs, N.Y. Filed Nov. 14, 1958.

FERRICUNATE

For Preparation for the Treatment of Iron-Deficiency Anemia.
First use in October 1955.

SN 62,459. The G. F. Harvey Company, Inc., Saratoga Springs, N.Y. Filed Nov. 14, 1958.

MATERCAPS

For Vitamin and Mineral Pharmaceutical Preparation.
First use October 1954.

SN 62,460. The G. F. Harvey Company, Inc., Saratoga Springs, N.Y. Filed Nov. 14, 1958.

BETHILE

For Pharmaceutical Nutritional Supplement.
First use February 1958.

SN 62,461. The G. F. Harvey Company, Inc., Saratoga Springs, N.Y. Filed Nov. 14, 1958.

CALMATONE

For Dermatological Preparation Useful in the Treatment of Minor Skin Irritations.
First use January 1943.

SN 62,869. Northrup Pharmaceutical Co., Minneapolis, Minn. Filed Nov. 20, 1958.

ROTASE

For Sedative, Anti-Convulsant and Anti-Spasmodic Drug.
First use Nov. 10, 1958.

SN 62,887. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed Nov. 20, 1958.

SINUTAB

For Sinus Headache Tablets.
First use Nov. 4, 1958.

SN 62,888. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed Nov. 20, 1958.

DOLBAN

For Analgesic Tablet.
First use Nov. 12, 1958.

SN 62,965. Service Industries, Philadelphia, Pa. Filed Nov. 21, 1958.

7/ELEVEN

For Vitamin and Mineral Tablets.
First use Dec. 5, 1957.

SN 63,077. Eli Lilly and Company, Indianapolis, Ind. Filed Nov. 24, 1958.

MICRO-PEN

For Antibiotic-Containing Animal Feed Supplement.
First use Nov. 3, 1958.

SN 63,137. The Wander Company, d.b.a. Smith-Dorsey, Chicago, Ill. Filed Nov. 24, 1958.

LIPORIDE

For Preparation for Peripheral Vascular Disease.
First use May 9, 1958.

SN 63,208. Joh. A. Benckiser GmbH Chemische Fabriek, Ludwigshaven (Rhine), Germany. Filed Nov. 26, 1958.

QUANTO

Owner of German Reg. No. 697,176, dated Nov. 15, 1956.
For Chemical Products for the Restoration and Preservation of Health Especially Vitamin Preparation (Dietetic Remedy).

SN 63,274. American Cyanamid Company, New York, N.Y. Filed Nov. 28, 1958.

PIGDEX

For Hematinic for Veterinary Use.
First use Oct. 15, 1958.

SN 63,455. Kirkman Pharmacal Company, Seattle, Wash. Filed Dec. 1, 1958.

MULTI-JET

For Flavored Multiple Vitamin Tablets.
First use Nov. 17, 1958.

SN 63,986. The Dollar Vitamin Plan, Inc., New York, N.Y. Filed Dec. 10, 1958.

DOLLAVIM

For Encapsulated Vitamin Preparation in the Nature of Dietary Supplements.
First use Dec. 4, 1958.

SN 64,060. Kali-Chemie Aktiengesellschaft, Hannover, Germany. Filed Dec. 11, 1958.

PERACON

Owner of German Reg. No. 470,227, dated Oct. 27, 1934.
For Medicines and Pharmaceutical Preparations—Namely, Antitussive Agent.

SN 64,155. August C. Erspamer, d.b.a. Pioneer Drug Co., Tacoma, Wash. Filed Dec. 12, 1958.

RIDAGERM

For Athlete's Foot Remedy.
First use Jan. 15, 1955.

SN 64,179. International Latex Corporation, Dover, Del. Filed Dec. 12, 1958.

QUIK-STIK

For Medicated Applicators.
First use Oct. 4, 1958.

SN 64,258. Ciba Limited, Basel, Switzerland. Filed Dec. 15, 1958.

LISSIDON

Owner of Swiss Reg. No. 167,146, dated Sept. 10, 1957.
For Muscle Relaxant.

SN 64,510. Vitamin Council Incorporated, St. Paul, Minn. Filed Dec. 17, 1958.

SEVOURON

For Tranquilizer Tablets.
First use Nov. 12, 1958.

SN 66,268. Skjelskor Frugtplantage A/S, Skelskor, Denmark. Filed Dec. 22, 1958.

GREENOSAN

Owner of Danish Reg. No. 486/1937, dated May 22, 1937.
For Pharmaceutical Preparations Including an Iron and Vitamin Preparation.

SN 66,463. Mead Johnson and Company, Evansville, Ind. Filed Jan. 26, 1959.

COMBINACE

For Pharmaceutical Preparation Used in the Prevention and Treatment of Constipation.
First use Oct. 24, 1958.

SN 66,477. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Jan. 26, 1959.

NOSCOMEL

For Antitussive Preparations.
First use Nov. 20, 1958.

SN 66,478. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Jan. 26, 1959.

MYCOLOG

For Steroid-Antibiotic Preparations.
First use Nov. 11, 1958.

SN 66,482. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Jan. 26, 1959.

RAPIGAIN

For Veterinary Hormone Preparation.
First use Oct. 29, 1958.

SN 66,934. Schieffelin & Co., New York, N.Y. Filed Feb. 2, 1959.

CYCLOMYDRIL

For Sterile Ophthalmic Solution for Use in Inducing Mydriasis.
First use Jan. 13, 1959.

SN 66,935. Schieffelin & Co., New York, N.Y. Filed Feb. 2, 1959.

HYDRO-TAR

For Ointments for Treating Diseases of the Skin.
First use July 18, 1958.

SN 67,214. Geigy Chemical Corporation, Ardsley, N.Y. Filed Feb. 6, 1959.

INDALITON

For Anticoagulants.
First use Jan. 24, 1959.

SN 67,286. Barnes-Hind Laboratories, Inc., Sunnyvale, Calif. Filed Feb. 9, 1959.

FUL-DAY

For Dietary Supplement for Treatment of Vitamin Deficiencies.
First use Sept. 12, 1958.

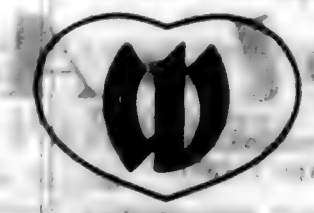
SN 72,773. Kay Pharmacal Company, Tulsa, Okla. Filed May 4, 1959.

VASOTRATE

For Hypertensive Tablet.
First use Jan. 25, 1946.
Subj. to Intf. with SN 55,850.

Class 19—Vehicles

SN 59,764. Power Brake Equipment Company, Portland, Oreg. Filed Sept. 29, 1958.



Owner of Reg. No. 663,711.
For Pneumatic Controls for Wheel Brakes, Exhaust Brakes, Truck Scales, Boat Transmissions, Brake Coolers, and Other Valve and Fitting Accessories for Vehicles.
First use on or before Apr. 10, 1958.

SN 64,629. Griffin Wheel Company, Chicago, Ill. Filed Dec. 19, 1958.

ANCHOR

For Railway Brake Shoes.
First use Nov. 6, 1958.

SN 66,216. Ralph Hall, d.b.a. Bremen Coach & Cabinet Co., Bremen, Ind. Filed Jan. 21, 1959.

Cavalier

For House Trailers or Mobile Homes.
First use Nov. 14, 1958.

SN 66,404. Arnold, Schwinn & Co., Chicago, Ill. Filed Jan. 26, 1959.

FAIR LADY

For Bicycles.
First use Dec. 24, 1958.

SN 66,510. Trailer Industries, Inc., El Monte, Calif. Filed Jan. 26, 1959.

For House Trailers.
First use in 1953.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 48,115. Spectralab Instruments, Monrovia, Calif. Filed Mar. 20, 1958.

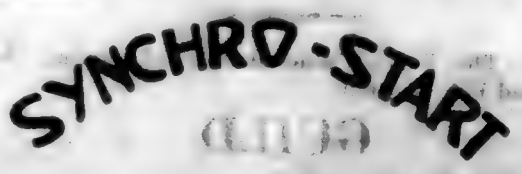
SPECTRALAB

For Electronic Control Panels, UHF Cavities, Electronic Instrumentation, Signal Generators, Unit Oscillators, HF, VHF, and UHF Amplifiers, Frequency Multipliers, and TV Transmitters.
First use June 18, 1956.

SN 51,643. Livingston Electronic Corporation, Livingston, N.J. Filed May 14, 1958.

For Panel Mounted Loudspeaker.
First use Mar. 28, 1958.

SN 53,062. Synchro-Start Products, Inc., Skokie, Ill. Filed June 6, 1958.



Owner of Reg. No. 218,094.
For Electrical Systems for Energizing, Actuating or Controlling Various Industrial Devices Such as Motors, Pumps, Engines and the Like and Parts Thereof.
First use Feb. 1, 1933.

SN 58,878. Ramco Manufacturing and Engineering, Portland, Oreg. Filed Sept. 12, 1958.

Applicant disclaims the words "Automatic Electric Heat" apart from the mark as shown.

For Fin-Type Electrical Baseboard Heating Equipment and Replacement Parts Therefor.

First use June 1, 1958.

SN 62,001. Engelhard Industries, Inc., Newark, N.J. Filed Nov. 6, 1958.

BIMINI

For Ultraviolet Lamps.
First use June 25, 1958.

SN 66,894. International Rectifier Corporation, El Segundo, Calif. Filed Feb. 2, 1959.

For Metallic and Semi-Conductor Rectifiers.
First use in November 1956.

SN 66,895. International Rectifier Corporation, El Segundo, Calif. Filed Feb. 2, 1959.

UNISTAC

For Metallic and Semi-Conductor Rectifiers.
First use in June 1957.

SN 66,896. International Rectifier Corporation, El Segundo, Calif. Filed Feb. 2, 1959.

ZENIAC

For Diode Substitution Box Comprising a Group of Silicon Zener Diodes With Switching Means.
First use June 30, 1958.

SN 66,898. International Rectifier Corporation, El Segundo, Calif. Filed Feb. 2, 1959.

For Metallic and Semi-Conductor Rectifiers.
First use in July 1953.

SN 67,108. The Porter-Cable Machine Company, Syracuse, N.Y. Filed Feb. 4, 1959.

GUILD

Owner of Reg. No. 570,114.

For Portable Hand-Manipulable Electric Power Operated Tools, Consisting of Sanding Machines, Saws, Routers, Planes, Shapers, Drills and Cutters for Such Tools, Grass Trimmers, Cultivators, and Hedge Trimmers.

First use October 1938.

SN 67,120. Electric Machinery Mfg. Company, Minneapolis, Minn. Filed Feb. 5, 1959.

BEMAC

For Alternating Current Generators With Built-In Voltage Regulators.
First use Nov. 22, 1958.

SN 67,260. Vacuum-Electronic Mfg. Corp., New Hyde Park, N.Y. Filed Feb. 6, 1959.

EVAPATROL

Owner of Reg. Nos. 619,030 and 666,893.
For Manual Link Switch for Controlling Electric Current.
First use on or about Dec. 16, 1958.

SN 67,326. Duro-Test Corporation, North Bergen, N.J. Filed Feb. 9, 1959.

CRYSTALIER

For Electric Lamps, Including Particularly Incandescent Lamps.
First use Jan. 7, 1959.

SN 67,415. Westmoreland Plastics Company, Inc., Latrobe, Pa. Filed Feb. 9, 1959.

WES-LOC

For Fluorescent Lamp Holders and Wire Grip Insulators.
First use on or about Sept. 8, 1958.

SN 67,604. Gesellschaft für Multiblitz-Geräte Dr. Ing. D. A. Mannesmann m.b.H., Porz-Westhoven, Germany. Filed Feb. 12, 1959.

For Electronic Flashlight Units for Use in Photography, and Parts Therefor.

First use on or about Apr. 1, 1952; in commerce on or about Apr. 1, 1953.

SN 67,638. I. J. Scharf Co., Inc., New York, N.Y. Filed Feb. 12, 1959.

Bel-Art

For Electric Lamps and Shades.
First use about Apr. 1, 1957.

SN 67,810. Motorola, Inc., Chicago, Ill. Filed Feb. 16, 1959.

VOLUMATIC

For Radio Receivers.
First use in December 1954.

SN 68,065. Herbert I. Keroes, d.b.a. Acro Products Company, Philadelphia, Pa. Filed Feb. 19, 1959.

ULTRA-LINEAR

For Amplifiers.
First use Oct. 25, 1957.

SN 68,762. U.S. Industries, Inc., New York, N.Y. Filed Mar. 2, 1959.

ROBODYNE

For Magnetic Clutches.
First use Dec. 16, 1958.

SN 68,782. The Williamson Company, Cincinnati, Ohio. Filed Mar. 2, 1959.

WATERMATIC

For Electric Hot Water Heaters.
First use Oct. 1, 1958.

SN 68,844. Rolee Hospital Television, Inc., d.b.a. Rolee Hospital TV, Inc., Dallas, Tex. Filed Mar. 3, 1959.

"MUSIC-TENNA"

For Radio, Television, and Intercom System, Their Component and Replacement Parts.
First use on or about Oct. 1, 1958.

SN 69,527. Hehr Manufacturing Company, Los Angeles, Calif. Filed Mar. 13, 1959.

SHOO-FLY

Owner of Reg. No. 671,769.
For Air Circulating Fans.
First use May 29, 1956.

SN 69,614. Carter Motor Company, Chicago, Ill. Filed Mar. 16, 1959.

CLASSIC

For Electric Motors, Particularly Fraction of a Horsepower Motors.
First use Mar. 10, 1959.

SN 69,886. Graham Manufacturing Corporation, Needham Heights, Mass. Filed Mar. 19, 1959.

SUPER V 6

For Electrical Welding Apparatus and Equipment, Parts and Components.
First use Jan. 27, 1959.

Class 22—Games, Toys, and Sporting Goods

SN 46,510. Venus Pen & Pencil Corporation, Hoboken, N.J. Filed Feb. 24, 1958.

PARADISE

Owner of Reg. No. 593,903.
For Toy Presketched Coloring Sets Comprising Outlined Uncolored Sketches and Colored Pencils, and Toy Air Line Stewardess Sets Comprising Dishes, Cap and Ring.
First use Jan. 12, 1953, on toy coloring sets.

SN 46,511. Venus Pen & Pencil Corporation, Hoboken, N.J. Filed Feb. 24, 1958.

VENUS

Owner of Reg. Nos. 40,060, 573,311, and others.
For Toy Presketched Coloring Sets Comprising Outlined Uncolored Sketches and Colored Pencils, and Toy Air Line Stewardess Sets Comprising Dishes, Cap and Ring.
First use Jan. 12, 1953, on toy coloring sets.

SN 51,410. Ames Harris Neville Co., San Francisco, Calif. Filed May 12, 1958.

TRI-TEMP

For Sleeping Bags for Outdoor and Sportsmen's Use.
First use Feb. 1, 1958.

SN 62,609. Pro-Care Corporation, North Riverside, Ill. Filed Nov. 17, 1958.

CLUB
pro-tec

Applicant disclaims exclusive use of the word "Club" apart from the mark as shown.
For Kit Containing Articles and Preparations To Clean and Maintain Golfers' Clubs and the Like.
First use May 30, 1958.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 35,811. Ranney Method Water Supplies, Inc., Columbus, Ohio. Filed Aug. 19, 1957.

RANNEY

Owner of Reg. No. 613,034.
For Wells, and Water Storage Devices, Particularly Such Devices Utilizing Horizontal Infiltration Tubes Extending Radially From a Caisson and Parts Thereof.
First use in 1955.

SN 40,468. Ideal Industries, Inc., Sycamore, Ill. Filed Nov. 12, 1957.

The drawing is lined for gold.
For Live Centers.
First use Oct. 12, 1956.

SN 44,576. J. M. Voith Gesellschaft mit beschrankter Haftung, Heidenheim, Brenz, Germany. Filed Jan. 28, 1958.

Owner of German Reg. No. 687,482, dated Feb. 13, 1956.

For Fluid Flow Machines Especially Centrifugal Pumps With Fixed and Adjustable Blades, Multi-Stage Centrifugal Pumps, Displacement Pumps Including Piston Pumps; Water Actuated Turbines; Weirs, Gates, Bear Trap Gates, Rack Cleaning Machines, Pipe Systems, Pipe Shutoff Apparatuses, Regulator Valves and Governors, Machines for the Production of Mechanical Wood Pulp, Cellulose, Cardboard and Paper; Transmissions, Gears and Couplings, Especially Fluid Drives, Hydrodynamic Torque Converters and Couplings as Well as Hydromechanical Compound Drives; and Blade Wheel Ship Propellers.

SN 47,957. Mixing Equipment Co., Inc., Rochester, N.Y. Filed Mar. 18, 1958.

Lightnin
CMContactor

Owner of Reg. Nos. 227,991 and 407,155.
For Continuous Processing Columns.
First use Jan. 24, 1958.

SN 52,080. Wallace Silversmiths, Inc., Wallingford, Conn. Filed May 21, 1958.

ANCESTRAL

Owner of Reg. No. 366,217.
For Fire Sets Comprising Shovels, Tongs, and Pokers.
First use Aug. 12, 1938.

SN 52,466. Robert Blohm, Hamburg-Bergedorf, Germany. Filed May 28, 1958.

FINIMATIC

Owner of German Reg. No. 710,819, dated Feb. 7, 1958.

For Machine Tools, Grinding Machines, Electromechanical Devices for Adjusting and for Stopping the Feed of Grinding Machines.

SN 54,432. Pyles Industries, Inc., Detroit, Mich. Filed June 27, 1958.

Pyles

For Viscous and Liquid Material Flow Guns and Parts Thereof; Cement Guns and Parts Thereof; Guns for Applying Catalyst and Adhesive Chemical Materials, and Parts Thereof; Mixers and Blenders for Chemical Materials; Hose Coupling Machines and Parts Thereof; and Conveyor Lubricator Mechanism.

First use in 1944.

SN 58,919. G & G Manufacturing Company, Omaha, Nebr. Filed Sept. 15, 1958.

WELDASPROCKET

For Roller Chain Sprocket and Hub Assembly.
First use in July 1957.

SN 58,920. G & G Manufacturing Company, Omaha, Nebr. Filed Sept. 15, 1958.

WELDAJOINT

For Universal Joint, Bushing and Shafting.
First use in August 1954.

SN 60,886. Bonas Bros., Ltd., Castle Gresley, near Burton-on-Trent, England. Filed Oct. 20, 1958.

"WEAVEMATIC"

For Textile Machinery.
First use in October 1956; in commerce in October 1956.

SN 64,293. Harris-Intertype Corporation, Cleveland, Ohio. Filed Dec. 15, 1958.

SABER

Owner of Reg. No. 629,917.
For Machines for Cutting Paper and Other Non-Metallic Materials.
First use on or about Sept. 28, 1955.

SN 64,941. Monte B. Adams, La Mesa, Calif. Filed Dec. 29, 1958.

DiSCo

For Garden Tools.
First use Dec. 8, 1954.

SN 65,344. Whitin Machine Works, Whitinsville, Mass. Filed Jan. 5, 1959.

MASTERLITH

Owner of Reg. No. 670,256.
For Duplicating Machines.
First use May 25, 1956.

SN 65,493. George Gorton Machine Co., Racine, Wis. Filed Jan. 8, 1959.

MULTI-SPACER

For Indexing Fixture.
First use July 1, 1947.

SN 67,434. Automobiles M. Berliet, Lyons, Rhone, France. Filed Feb. 10, 1959.

MAGIC

Owner of French Reg. No. 81,329, dated Oct. 15, 1956 (Lyons); Natl. Inst. No. 114,860.
For Motors for Motor Vehicles.

SN 67,495. Tretred Tire Molds, Los Angeles, Calif. Filed Feb. 10, 1959.

TT

For Tire Retreading Machinery and Equipment—Namely, Molds, Mold Heaters, Matrix Shells, and Rims, Tire Spreaders and Tire Bead Aligners and Ejectors.
First use Dec. 29, 1957.

SN 67,846. American Saw and Tool Company, Louisville, Ky. Filed Feb. 17, 1959.

KROMEDGE

For Metal and Wood Cutting Tools.
First use Oct. 31, 1955.

SN 67,925. Borg-Warner Corporation, Chicago, Ill. Filed Feb. 18, 1959.

DURA-LOK

Owner of Reg. Nos. 629,905, 649,652, and 656,099.
For Earth Cutting and Pulverising Discs for Plows, Harrows, and Like Agriculture Implements and Machines and Parts Thereof for Replacement and Repair.
First use on or prior to Nov. 27, 1958.

SN 67,968. Oneida Ltd., Oneida, N.Y. Filed Feb. 18, 1959.

TAPER

For Stainless Steel Flat Tableware.
First use Dec. 24, 1958.

SN 68,396. Henry Noel Dillon Fuge, d.b.a. Master Key Service, Travelrain, Sharpomatic, Beverly Hills, Calif. Filed Feb. 25, 1959.

SHARPOMATIC

For Drill and Tool Sharpener.
First use Feb. 10, 1959.

SN 68,430. Harry A. Robinson, Elkhart, Ind. Filed Feb. 25, 1959.

KLEEN TINE
ROBBIE RAKE

No claim is made to the word "Rake" as the name of the goods.
For Tractor Lawn Rake.
First use Feb. 4, 1958.

SN 69,724. Crane Carrier Corporation, Tulsa, Okla. Filed Mar. 17, 1959.

"FLYWHEEL PTO"

No claim is made to the word "Flywheel" apart from the mark.
For Power Take-Off Units.
First use Dec. 23, 1957.

SN 69,812. Journal Box Servicing Corporation, Indianapolis, Ind. Filed Mar. 18, 1959.

JBS

The drawing is lined for yellow, but no claim is made to color.
For Machinery, Including Vats, Tanks, Filters, Stills, and Waste Washing, Reclaiming, and Oiling, All Utilized in a System of Handling New and Used Journal Box Waste, Railway Journal Box Axle Stops, and Journal Brass Trimmers.
First use on or about Apr. 1, 1938.

SN 69,912. Red Star Yeast and Products Company, Milwaukee, Wis. Filed Mar. 19, 1959.

YEASTOMATIC

For Automatic and Semi-Automatic Machines for the Rehydration of Active Dry Yeast.
First use Jan. 15, 1959.

SN 69,946. Brown & Sharpe Manufacturing Company, Providence, R.I. Filed Mar. 20, 1959.

THRIFTMILL

For Rotary Cutting Tools.
First use Jan. 13, 1959.

SN 69,951. Chainveyor Corporation, Los Angeles, Calif. Filed Mar. 20, 1959.

GARMENTVEYOR

For Garment Conveyor Systems.
First use Mar. 11, 1958.

SN 69,952. Colt Packaging Machinery Co., Cranston, R.I. Filed Mar. 20, 1959.

RITE SIZE

For Box Making Machinery.
First use 1949.

SN 69,994. Roy A. Schacht, d.b.a. Defiance Machine and Tool Co., St. Louis, Mo. Filed Mar. 20, 1959.

AUTOMARK
SAVES TIME

The words "Saves Time" are disclaimed apart from the mark as shown.
For Industrial Marking Equipment—Namely, Marking Machines and Tools for Marking Metal, Wood, Plastic, Paper, Cloth, and Allied Materials and Parts Thereof.
First use at least as early as Aug. 24, 1944.

SN 70,266. Whitin Machine Works, Whitinsville, Mass. Filed Mar. 25, 1959.

WHITIN

For Duplicating Machines.
First use May 25, 1956.

Class 25—Locks and Safes

SN 37,635. J. Chesler & Sons, Inc., Brooklyn, N.Y. Filed Sept. 23, 1957.

Reddi-Mount

Owner of Reg. No. 603,439.
For Locks.
First use on or about Aug. 5, 1952.

Class 26—Measuring and Scientific Appliances

SN 65,065. Compagnie Francaise Thomson-Houston, Paris, France. Filed Dec. 30, 1958.

VAPODYNE

Priority claimed under Sec. 44(d) on French Reg. No. 475,281, dated Oct. 23, 1958 (Paris); Natl. Inst. No. 114,690.
For Machines and Apparatus for Cooling Electronic Tubes and Nuclear Reactors as Well as Electrical Apparatus and Devices Functioning by Means of Semi-Conductors.

Class 27—Horological Instruments

SN 62,684. Hallmark, Inc., Chicago, Ill. Filed Nov. 18, 1958.

CYCLOMATIC

For Watches.
First use Sept. 1, 1958.

Class 28—Jewelry and Precious-Metal Ware

SN 62,495. Trifari, Krussman & Fishel, Inc., New York, N.Y. Filed Nov. 14, 1958.

Trifari by Trifari

Owner of Reg. Nos. 413,507, 612,161, and others.
For Perfumed Bracelets Made From Non-Precious Metals.
First use Sept. 15, 1958; Dec. 20, 1937, as to "Trifari."

SN 64,758. S & E of California, Incorporated, Los Angeles, Calif. Filed Dec. 22, 1958.

AWARD

For Diamond Rings.
First use May 23, 1958.

SN 64,905. Rogers, Lunt & Bowlen Company, d.b.a. Lunt Sterling, Greenfield, Mass. Filed Dec. 24, 1958.

RAINDROP

For Knives, Forks, Spoons, Butter Spreaders, Butter Picks, Cake Separators, Ladles, Sugar Tongs, Servers and Carving Sets, All Made of Sterling Silver.
First use Nov. 26, 1958.

SN 65,858. Oneida, Ltd., Oneida, N.Y. Filed Jan. 14, 1959.

FLIRTATION

For Silverplated Flat Tableware.
First use Oct. 22, 1958.

SN 65,988. De Natale Jewelry Company, d.b.a. De Natale Bros., New York, N.Y. Filed Dec. 31, 1958.

DENATALE

Owner of Reg. No. 364,670.
For Bracelets, Necklaces, Brooches, Finger Rings, Anklets, Compacts, Cigarette Cases, Buckles, Charms, Fobs, Scarf Pins, Ornaments, Clips, All Made of Precious Metal or Plated Therewith, and Costume Jewelery, Not Including Watches.
First use 1923.

Class 30—Crockery, Earthenware, and Porcelain

SN 50,414. Stetson China Co., Inc., Lincoln, Ill. Filed Apr. 25, 1958.

ENGLISHTOWN

For China Dinnerware.
First use Mar. 31, 1958.

Class 31—Filters and Refrigerators

SN 68,095. Zero Manufacturing Company, Inc., Washington, Mo. Filed Feb. 19, 1959.

The drawing is lined for the color yellow but no claim is made for color.
For Refrigerating Milk Tanks.
First use in May 1953.

SN 69,406. Johnson & Johnson, New Brunswick, N.J. Filed Mar. 12, 1959.

J&J FIBRE-BONDED

For Filter Disks, Rolls, and Strips.
First use Aug. 22, 1957.

SN 70,224. The Hilliard Corporation, Elmira, N.Y. Filed Mar. 25, 1959.

TUFLITE

For Filter Materials.
First use on or about Dec. 31, 1954.

SN 70,312. Pall Corporation, Glen Cove, N.Y. Filed Mar. 26, 1959.

MAGNAMESH

For Filters.
First use Sept. 30, 1958.

Class 32—Furniture and Upholstery

SN 23,812. Lorike, Inc., Yonkers, N.Y. Filed Feb. 5, 1957.

the OXFORD HOLLYWOOD

Applicant disclaims the representation of the bed frame and the word "Hollywood," apart from the mark as shown.
For Tubular Metal Bed Frames.
First use Sept. 25, 1956.

SN 56,820. Opal Lucille Dodd, d.b.a. Ming of California, Calabasas, Calif. Filed July 21, 1958.

For Hand Decorated Wood Furniture—Namely, Tables, Chairs, Commodes, Headboards, Dressers, Cabinets.
First use in November 1954.

SN 63,729. Modern Products Co., Inc., Seymour, Ind. Filed Dec. 5, 1958.

BEAUTI-GLIDE

For Bed-Frames and Parts.
First use Mar. 28, 1958.

SN 65,768. Hupp Corporation, Cleveland, Ohio. Filed Jan. 13, 1959.

LIBRARIAN

For Magazine Racks.
First use Aug. 9, 1938.

SN 66,960. Stylecrest, Inc., Kansas City, Mo. Filed Feb. 2, 1959.

For Furniture.
First use Jan. 14, 1959.

SN 68,778. The Westwood Corporation, San Antonio, Tex. Filed Mar. 2, 1959.

LIFE LINER

For Upholstered Sofa Beds.
First use July 1, 1958.

SN 71,605. Phillips-Brooks Atlanta Company, Atlanta, Ga. Filed Apr. 15, 1959.

Acoustiphonic

For Telephone Booths.
First use Feb. 20, 1959.

SN 71,694. Simmons Company, New York, N.Y. Filed Apr. 16, 1959.

VIVANT

For Furniture—Namely, Bed Side Cabinets, Night Tables, Benches, Headboards for Beds, and Cases With Drawers.
First use Jan. 5, 1959.

SN 71,754. Schafer Bros., Los Angeles, Calif. Filed Apr. 17, 1959.

The drawing is lined for brown.
For Furniture—Namely, Chairs, Sofas, Bar Stools, and Ottomans.
First use Feb. 1, 1959, on sofas and chairs.

SN 71,897. The Standard Mattress Company, Hartford, Conn. Filed Apr. 20, 1959.

AMERICAN DREAM

For Mattresses.
First use Mar. 26, 1959.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 34,566. Tesco, Incorporated, Tulsa, Okla. Filed July 29, 1957.

flu-bonnet

For Chimney Caps.
First use Jan. 2, 1957.

SN 41,238. Chattanooga Royal Company, Chattanooga, Tenn. Filed Nov. 25, 1957.

Chattanooga

For Central Heating Systems and Central Heating and Air Conditioning Systems.
First use November 1956.

SN 52,079. Wallace Silversmiths, Inc., Wallingford, Conn. Filed May 21, 1958.

ANCESTRAL

Owner of Reg. No. 364,432.
For Andirons, and Fire Screens.
First use Aug. 12, 1938.

SN 52,254. United Lighting and Ceiling Co., Oakland, Calif. Filed May 23, 1958.

CEILCELL

For Components of Combined Ceiling and Lighting Systems Installed in Buildings To Provide Ceilings and Illumination, More Specifically for Louvers Employed as Light Diffusers in Such Systems.
First use on or about Mar. 15, 1958.

SN 52,618. Allis-Chalmers Manufacturing Company, Milwaukee, Wis. Filed May 12, 1958.

ACL

For Industrial Pyro-Processing Apparatus for Drying, Preheating and Burning Inorganic Material.
First use about Oct. 1, 1957.

SN 52,939. American Machine and Metals, Inc., East Moline, Ill. Filed June 5, 1958.

DE BOTHEZAT

For Fans and Roof Ventilators.
First use in 1929.

SN 68,228. Chesley Industries Inc., Detroit, Mich. Filed Feb. 24, 1959.

QUICNIC

For Portable Cooking Grills.
First use Jan. 30, 1959.

SN 68,801. The Coleman Company, Inc., Wichita, Kans. Filed Mar. 8, 1959.

CRESTLINE

For Wall Space Heaters and Hot Water Heaters.
First use July 10, 1958.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 51,184. The Gates Rubber Company, Denver, Colo. Filed May 7, 1958.

The mark consists of a green stripe extending the length of the hose. The drawing is lined for green.
For Radiator Hose.
First use Oct. 19, 1955.

SN 51,109. Esso Standard Oil Company, New York, N.Y. Filed May 22, 1958.

HAPPY MOTORING!

Owner of Reg. No. 361,822.
For Pneumatic Tires, Tubes, and Fan Belts.
First use at least as early as April 1958.

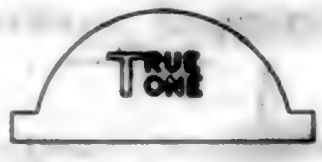
SN 61,770. Bearfoot Airway Corporation, Wadsworth, Ohio. Filed Nov. 3, 1958.

THRIFTRIM

For Rubber Sidewall Assemblies for Automobile Tires.
First use in March 1958.

Class 36 — Musical Instruments and Supplies

SN 36,563. Edward J. Chittenden, d.b.a. Dixieland Music Publishers, New Orleans, La. Filed Sept. 3, 1957.



For Phonograph Records.
First use June 15, 1957.

SN 52,317. Kostler & Co., Nauheim Kr. Gross Gerau, Germany. Filed May 26, 1958.

HARMOPHON

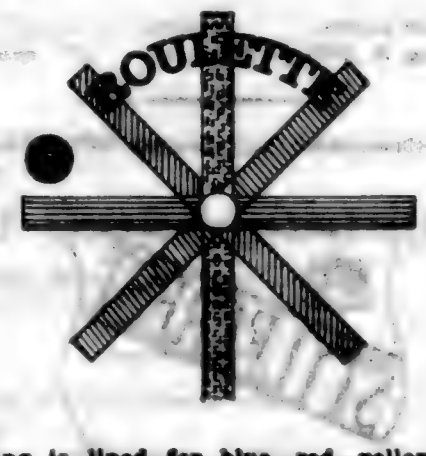
Owner of German Reg. No. 706,200, dated Sept. 11, 1957.
For Organs, Harmoniums, Mouth Harmonicas, Accordions.

SN 55,027. Roulette Records, Inc., New York, N.Y. Filed July 9, 1958.

ROULETTE

Owner of Reg. No. 658,814.
For Grooved Phonograph Records.
First use May 17, 1957.

SN 55,418. Roulette Records, Inc., New York, N.Y. Filed July 16, 1958.



The drawing is lined for blue, red, yellow, and green.
Owner of Reg. No. 658,814.
For Grooved Phonograph Records.
First use Jan. 11, 1958.

SN 64,678. Audiofidelity, Inc., New York, N.Y. Filed Dec. 22, 1958.

TECHNISOUND

For Mechanically Grooved Phonograph Records.
First use Dec. 16, 1958.

SN 64,821. Walt Disney Music Company, Burbank, Calif. Filed Dec. 23, 1958.

Vista

For Phonograph Records.
First use Sept. 9, 1958.

SN 65,472. Belock Instrument Corporation, College Point, N.Y. Filed Jan. 8, 1959.

EVEREST

For Phonograph Records and Recorded Tapes.
First use June 1958.

SN 66,217. M. Hohner Inc., New York, N.Y. Filed Jan. 21, 1959.

TEDDY

For Harmonicas.
First use Jan. 12, 1959.

Class 37 — Paper and Stationery

SN 63,427. Crown Zellerbach Corporation, San Francisco, Calif. Filed Dec. 1, 1958.

Shopmaster

For Paper Wipes.
First use June 7, 1958.

SN 63,812. Eberhard Faber Pencil Company, Wilkes-Barre, Pa. Filed Dec. 8, 1958.

MICROLAR

For Pencils, Ball Pens, Leads, Lead Holders, and Erasers.
First use Nov. 24, 1958.

SN 64,167. Joe H. Friedman, d.b.a. Holdbak Company, Amarillo, Tex. Filed Dec. 12, 1958.

Holdbak

For Memo Pad Holder.
First use Sept. 1, 1958.

SN 64,509. Venus Pen & Pencil Corporation, Hoboken, N.J. Filed Dec. 17, 1958.

COL-ERASE

For Colored-Lead Pencils.
First use Nov. 26, 1958.

SN 64,542. The Fay Paint Company, Inc., Cincinnati, Ohio. Filed Dec. 18, 1958.

JON-A-WAL

For Wallpaper.
First use Oct. 15, 1958.

SN 64,571. Sperry Rand Corporation, New York, N.Y. Filed Dec. 18, 1958.

REM-A-DEX

For Visible Card and Strip Holders Forming Card Indexes.
First use July 1, 1958.

Class 38 — Prints and Publications

SN 44,400. Maco Magazine Corporation, New York, N.Y. Filed Jan. 21, 1958.

SPORTS ALL STARS

For Series of Magazines Published at Seasonal Intervals.
First use Dec. 31, 1957.

SN 46,576. Super Market Publishing Co., Inc., New York, N.Y. Filed Feb. 25, 1958.

Common

Ground

The drawing is lined for red.
For Feature Articles Appearing in a Trade Journal Published Monthly.
First use Jan. 8, 1958.

SN 50,545. Edwin W. Stolsenberg, d.b.a. Forever Portrait, Cincinnati, Ohio. Filed Apr. 28, 1958.

FOREVER PORTRAIT

No claim is made to the exclusive right to the use of the word "Portrait" separate and apart from the mark as shown.
For Colored Portraits Prepared From Negatives or Other Likenesses, Processed and Finished To Inhibit All Forms of Deterioration.
First use July 26, 1956.

SN 53,323. The Miller Publishing Company, Minneapolis, Minn. Filed June 13, 1958.

For Trade Magazines.
First use 1897.

SN 57,917. Morningside Pictures International, Inc., Los Angeles, Calif. Filed Aug. 26, 1958.

DYNAMATION

For Series of Motion Pictures.
First use Aug. 1, 1958.

Class 39—Clothing

SN 38,261. Capezio Inc., New York, N.Y. Filed Oct. 3, 1957.

STEMWEAR

Owner of Reg. No. 546,042.
For Women's and Girls' Hosiery.
First use May 28, 1957.

SN 40,160. Harlow Products Corporation, Middletown, Conn., assignee of United Papers Corporation, Conshohocken, Pa. Filed Nov. 5, 1957.

Pandees

For Baby Pants.
First use Sept. 18, 1956.

SN 42,764. J. & J. Crombie Limited, Aberdeen, Scotland. Filed Dec. 20, 1957.

CROMBIE

Owner of British Reg. No. 682,282, dated Sept. 7, 1949.
For Cloth or Fabric Sold in Finished Apparel—Namely, Men's and Boys' Coats, Suits, Jackets, Waistcoats, and Trousers, and Women's and Children's Coats, Suits, Frocks, and Skirts.
First use in 1805; in commerce in or about the year 1890.

SN 43,163. Hayakawa Rubber Co. Ltd., Fukuyama, Hiroshima, Japan. Filed Dec. 30, 1957.

HAYAKAWA ★ Santa ★

For Footwear for Men, Women, and Children—Namely, Sandals, Slippers, Boots and Galoshes Composed Principally of Rubber and/or Vinyl.
First use Dec. 20, 1951; in commerce in July 1957.

SN 45,772. Heel Panteys Co., Indianapolis, Ind. Filed Jan. 28, 1958.

heel panteys
by phyllis layman

For Shoe Heel Covers for Wear While Driving.
First use Apr. 7, 1957.

SN 49,090. I. Spiewak & Sons, Inc., Jersey City, N.J. Filed Apr. 4, 1958.

POLAR PLY

For Jackets.
First use on or about Mar. 15, 1958.

SN 52,923. Joseph G. Walser, Jr., d.b.a. Walser Hosiery Company, High Point, N.C. Filed June 4, 1956.

CAMPUS BEAUTY

For Hosiery.
First use in March 1956.

SN 53,865. Etablissements J. Savoure, Paris, France. Filed June 19, 1958.

JS

Owner of French Reg. No. 346,425, dated July 20, 1943 (Paris); Ntl. Inst. No. 347,360 (Renewed).
For Hosiery.

SN 54,624. Maid-Rite Novelty Corp., Long Island City, N.Y. Filed July 1, 1958.

Laminite

For Shoulder Straps for Corsets, Brassieres, and Slips and for Belts.
First use May 15, 1958.

SN 56,230. Etablissements Tremblot Matheron & Cie, Anciens Etablissements Tremblot & Cherest, A. Matheron & G. Strauss Reunis, Société Anonyme Francaise, Paris, Seine, France. Filed July 8, 1958.

carrey
★★★

Owner of French Reg. No. 469,397, dated Jan. 8, 1958 (Seine); Natl. Inst. No. 100,910.
For Men's Clothing—Namely, Outer Shirts and Underwear, Hosiery, Caps and Hats.

SN 56,315. Etablissements Tremblot Matheron & Cie, Anciens Etablissements Tremblot & Cherest, A. Matheron & G. Strauss Reunis, Société Anonyme Francaise, Paris, France. Filed July 30, 1958.

CARREY

Owner of French Reg. No. 452,726, dated Sept. 9, 1955 (Seine); Natl. Inst. No. 61,590.
For Men's Clothing—Namely, Outer Shirts and Underwear, Hosiery, Caps and Hats.

SN 59,722. Gustinettes, Inc., Long Island City, N.Y. Filed Sept. 29, 1958.

CANTATAS

For Men's, Women's, and Children's Shoes and Slippers.
First use Aug. 2, 1958.
Subj. to Intf. with SN 60,926.

SN 60,926. The May Department Stores Company, St. Louis, Mo., assignee of The Hecht Company, Washington, D.C. Filed Oct. 20, 1958.

Cantata

For Ladies' and Misses' Shoes.
First use Aug. 20, 1958.
Subj. to Intf. with SN 59,722.

SN 62,092. Shirley Lurie, d.b.a. Name On Company, Hawthorne, Calif. Filed Nov. 7, 1958.

THE MATCH POINT

For Cotton Tennis Shirts.
First use Jan. 25, 1957.

SN 62,133. Jomac, Inc., Philadelphia, Pa. Filed Nov. 5, 1958.

NORTHPROOF

For Protective Clothing Including Jackets, Pants, Coats, Parkas, Aprons, Capes, Sleeves, Spats, Leggings, Hats, Caps, and Cap Covers and Coveralls.
First use Aug. 6, 1957.

SN 62,265. The Bliss Manufacturing Company, Grand Rapids, Mich. Filed Nov. 12, 1958.

BABY BLISS

For Baby Clothing—Namely, Sleeping Bags, Kimonos, Receiving Squares, Sleep and Play Sets, Sleeper-Walkers, and Bibs.
First use on or before Jan. 1, 1950.

SN 62,304. Kayser-Roth Corporation, New York, N.Y. Filed Nov. 12, 1958.

WONDERLON

Owner of Reg. No. 580,260.
For Ladies' Lingerie, Slips, Petticoats, Gowns, and Briefs and Hosiery for Women.
First use May 12, 1952.

SN 62,404. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Nov. 13, 1958.

FIRST IMPRESSION

For Brassieres.
First use Nov. 1, 1958.

SN 62,690. Jomac, Inc., Philadelphia, Pa. Filed Nov. 18, 1958.

NORTH-GRIP

For Work Gloves and Household Gloves.
First use July 25, 1957.

SN 63,069. Johnson & Johnson, New Brunswick, N.J. Filed Nov. 24, 1958.

JOHNSON & JOHNSON

Owner of Reg. Nos. 568,161, 652,112, and others.
For Ladies' Hosiery and Elastic Stockings.
First use January 1955.

SN 64,045. Blue Bonnet Shoe Co. Inc., Lawrence, Mass. Filed Dec. 11, 1958.

NATURFIT

For Children's Shoes.
First use Dec. 1, 1958.

SN 64,172. Hamilton Shoe Company, St. Louis, Mo. Filed Dec. 12, 1958.

"HALF-PINTS"

For Shoes.
First use in June 1958.

SN 64,587. Wilh. Bleyle O.H.G., Stuttgart, Germany. Filed Dec. 18, 1958.

Owner of German Reg. No. 714,994, dated June 19, 1958; and U.S. Reg. No. 639,042.
For Bathing Suits.

SN 65,240. Carmi-Ainsbrooke Corporation, New York, N.Y. Filed Jan. 2, 1959.

THE VIRILE LOOK

For Men's Shorts and Pajamas.
First use Dec. 30, 1958.

SN 65,631. The William Carter Company, Needham Heights, Mass. Filed Jan. 12, 1959.

CARTER-SET

Owner of Reg. Nos. 65,969, 572,462, and others.
For Men's, Women's, Children's and Infants' Under and Night Wear—Namely, Men's and Boys' Shirts, Shorts and Pajamas, Men's and Women's Union Suits, Women's and Children's Vests, Pants, Pajamas and Nightgowns; and Infants' Under and Outerwear—Namely, Infants' Shirts, Sleepers, Nightgowns, Kimonos, Sleeping Bags, Creepers, Jackets, Dress Sets, and Sun Suits.
First use Sept. 4, 1951.

SN 65,846. Jaunty Dress Shops, Inc., Newark, N.J. Filed Jan. 14, 1959.

JAY-SHIRE

For Men's and Children's Suits, Coats, and Sport Jackets.
First use on or about Aug. 1, 1957.

Class 40—Fancy Goods, Furnishings, and Notions

SN 62,365. Bac-A-Brand Products, Inc., New York, N.Y. Filed Nov. 13, 1958.

SELF-CRAFT

For Belt Backing.
First use Oct. 21, 1953.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 700,255. Princeton Knitting Mills, Inc., New York, N.Y. Filed Dec. 19, 1958.

Matation

For Knitted Pile Fabrics.
First use Nov. 4, 1955.

SN 66,603. Maurice David, Brooklyn, N.Y. Filed Jan. 28, 1959.

STYLETEX

For Baby Blankets.
First use December 1958.

SN 66,732. Hugh Nelson-Columbia Carpet Mills, Inc., Philadelphia, Pa. Filed Jan. 29, 1959.

CHAMPION

For Textile Rugs and Carpets.
First use Dec. 24, 1958.

Class 43—Thread and Yarn

SN 62,042. Syn-Pro Inc., Annapolis, Md. Filed Nov. 6, 1958.

PoLY-PRO

For Filament Synthetic Yarns Produced From Polymers of Polyethylene, Polypropylene or Any of the Polyolefin Series Type Resins, or Any Combination Thereof.
First use Apr. 3, 1958.
Subj. to Intf. with SN 57,850.

SN 66,122. H. I. Thompson Fiber Glass Co., Los Angeles, Calif. Filed Jan. 19, 1959.

HI_CO

For Thread and Yarn.
First use Apr. 27, 1951.

Class 44—Dental, Medical, and Surgical Appliances

SN 25,195. Hans Schwarzkopf, Hamburg-Altona, Germany. Filed Feb. 27, 1957.

SCHWARZKOPF

Owner of German Reg. No. 85,675, dated Feb. 26, 1906.
For Mechanical Preparations for Dental Cleaning, Devices and Apparatus for Bathing, Washing, Showering, Pouring and Sweating for Medicinal Purposes, Thermo-Massage Apparatus, Apparatus for Washing, Drying and Rinsing of Hair, Apparatus for the Care of the Scalp, Hair Washing Basins, Head Massage Apparatus, Manicure and Pedicure Devices and Apparatus, Therapeutic Hot Water and Air Pillows, Infra-Red Therapeutic Lamps, Ultraviolet Ray Lamps, Sprayer for Disinfectant.

SN 24,454. Pascal Company, Inc., Seattle, Wash. Filed July 26, 1957.

BREATHEASY

For Kit Consisting Primarily of a Refillable Nebulizer, Together With an Epinephrine Solution, for Use in the Inhalation Treatment of Asthma.
First use Sept. 21, 1954.

SN 26,846. Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. Filed Sept. 9, 1957.

FLOPACK

For Device for Use in Administering Injectable Fluids.
First use Aug. 19, 1957.

SN 49,662. Louis Joseph Christina, Flushing, N.Y. Filed Apr. 7, 1958.

INJECTRAY

For Tray Specifically Designed To Hold Ampuls and Vials.
First use Jan. 17, 1958.

SN 59,267. Helene Curtis Industries, Inc., Chicago, Ill., assignee of Central Stamping and Manufacturing Company, Polo, Ill. Filed Sept. 22, 1958.

TAHITIAN

For Electric Hair Dryers and Hair Vaporizers.
First use June 2, 1958.

SN 63,466. McKesson Appliance Co., Toledo, Ohio. Filed Dec. 1, 1958.

McKESSON

For Dental, Medical, Surgical, and Hospital Equipment, Appliances, and Supplies and Parts Thereof.
First use in 1910.

SN 63,481. Profile, Inc., Northvale, N.J. Filed Dec. 1, 1958.

AQUAPEUTIC

For Portable Vibrating Foot Bath Device for Therapeutic Purposes.
First use Aug. 4, 1958.

SN 66,880. Hamilton Manufacturing Company, Two Rivers, Wis. Filed Feb. 2, 1959.

AMERICAN MODULAR

Owner of Reg. Nos. 396,226 and 547,426.

For Cabinets and Bench Assemblies for Use by Dentists and Dental Surgeons.

First use June 23, 1958.

Class 45—Soft Drinks and Carbonated Waters

SN 66,638. Robert H. Patterson, Jr., Atlanta, Ga. Filed Jan. 28, 1959.

BAMBOO

For Concentrate for Making a Non-Alcoholic, Maltless Soft Drink.

First use Jan. 8, 1959.

Class 46—Foods and Ingredients of Foods

SN 9,954. Dairymen's League Co-Operative Association, Inc., New York, N.Y. Filed June 11, 1956.

The phrase "Direct From Our Farms to You" is disclaimed.

Owner of Reg. Nos. 173,135, 235,552, 344,443, and others.

For Fluid Milk, Cream, Sweet Cream, Sour Cream, Chocolate Milk and Buttermilk, and Powdered Milk, Dried Skim Milk, Ice Cream, Pot Cheese and Cottage Cheese.

First use in or about December 1933; Apr. 17, 1932, as to the pictorial matter.

SN 11,607. Pikle-Rite Company, Inc., Pulaski, Wis. Filed July 5, 1956.

For Bottled Pickles.

First use Nov. 21, 1939.

SN 22,602. Cal-Pride Packing Company, Oakland, Calif. Filed Jan. 15, 1957.

For Prepared and Processed Foods, Specifically Mayonnaise, Salad Dressings, Pickle Relishes, Prepared Mustard, Imitation Flavored Syrups and Imitation Flavorings for Food Purposes; Seafood Appetizers—Namely, Shellfish Cocktails; Meat Sauces, Spices for Food Purposes, Cooked and Prepared Vegetables and Fruits, Vegetable and Fruit Juices, Jams and Jellies, Vegetable Oil and Vegetable Oil Products, Specifically Margarine.

First use Apr. 7, 1934.

SN 46,963. Reddi-Wip, Inc., Los Angeles, Calif. Filed Mar. 3, 1958.

dressit

Owner of Reg. No. 415,707.

For Whipped Cheese-Flavored Dressing for Use on Salads, Vegetables, Hors d'Oeuvres and the Like.

First use Sept. 14, 1944.

SN 47,253. B. Heller & Company, Chicago, Ill. Filed Mar. 7, 1958.

The words "Uniformity," "Integrity," and "Purity" are disclaimed apart from the mark as shown.

For Food Preservatives; Food Flavorings; Binders for Meat Products; Food Colorings; a Base for a Chocolate Flavored Dairy Drink; Preparations for Pickling and Curing Meats; Thickening Preparations for Soup, Gravy, Custard and the Like; Baking Powder; a Preparation for Purifying and Treating Lard and Tallow; Food Flavoring Extracts; Spices; Seasonings for Meat and Meat Products; Ice Cream Stabilizers; a Preparation for Making Meringues, Frosting and Icings; Preparations for Making Puddings, Cake Fillings and Dessert Fillings; Powdered Gelatins; a Meat Product Emulsifier and Stabilizer; Cocoa; and a Chicken Soup Base.

First use Jan. 11, 1956, on chicken soup base.

SN 47,504. Knorr Nahrmittel Aktiengesellschaft Thayngen, Thayngen, Schaffhausen, Switzerland. Filed Mar. 11, 1958.

Knorr

Owner of U.S. Reg. No. 596,183.

For Dehydrated, Granulated, Concentrated and Canned Soups and Broths, Flours, Seasonings—To Wit, Vinegar, Mustard, Table Salt and Seasoned Salt, Tapioca, Oat Flakes and Bouillon and Vegetable Cubes.

First use 1885; in commerce Oct. 23, 1913.

SN 47,658. Walter H. Johnson Candy Company, Chicago, Ill. Filed Mar. 13, 1958.

DINNER BELL

For Candy.

First use Dec. 10, 1957.

SN 49,688. Dairymen's League Co-Operative Association, Inc., New York, N.Y. Filed Apr. 15, 1958.

DAIRYLEA

Owner of Reg. Nos. 173,135, 344,443, and others.

For Chocolate Flavored Syrup for Food Purposes.

First use May 16, 1951.

SN 51,985. Pacific Trading Co., Inc., San Francisco, Calif. Filed May 19, 1958.

PRIDE-PAC

For Canned Fish.
First use June 30, 1934.

SN 52,101. Corn Products Company, New York, N.Y., by merger Corn Products Refining Company, New York, N.Y. Filed May 22, 1958.

HI-CAL

Owner of Reg. No. 537,036.
For Dietary Food Spreads Containing Fats, Sugar, and/or Syrups.
First use at least as early as Apr. 30, 1957.

SN 52,122. Kanematsu New York, Inc., New York, N.Y. Filed May 22, 1958.

SPRUCE

For Canned Fish, Shell Fish, Fruit, Vegetables, and Mushrooms, and Frozen Fish, Shell Fish, Frog Legs, and Fruit.
First use Mar. 3, 1958.

SN 52,350. Standard Milling Company, Kansas City, Mo. Filed May 26, 1958.

STAN-JELL

For Jelly Powder.
First use on or about Apr. 28, 1958.

SN 52,493. Hill and Marhoefer, Pittsburgh, Pa. Filed May 28, 1958.

HILMAR

For Fresh Fruit.
First use July 20, 1957.

SN 52,752. Kai Munthe, Oslo, Norway. Filed June 2, 1958.

NORWAY'S DELIGHT

Owner of Norwegian Reg. No. 50,807, dated Oct. 15, 1957.
For Flat Bread, Biscuits and Canned Meat, Canned Fruit, Canned Fish and Canned Shellfish.

SN 52,823. New York Banana Supply Inc., New York, N.Y. Filed June 3, 1958.

The English equivalent of "Del-Pais" is "of the country."
For Fresh Fruit, Fresh Vegetables, Canned Vegetables, Canned Fish, Tropical Crackers, Shelled and Unshelled Nuts, Jellies, Jams, Spices and Herbs.
First use Mar. 3, 1958.

SN 53,029. Gordon Johnson Company, Kansas City, Mo. Filed June 6, 1958.

CHIL-PAK

For Fresh and Frozen Dressed Poultry.
First use Mar. 27, 1958.

SN 53,647. Salinas Lettuce Farmers Cooperative, Salinas, Calif. Filed June 16, 1958.

For Lettuce.
First use May 24, 1957.

SN 54,311. J. A. & P. Holland Limited, d.b.a. Arthur Holland, Southport, Lancashire, England. Filed June 26, 1958.

Applicant disclaims the expression "Best on Earth" except as shown.
For Toffee.
First use July 25, 1955; in commerce July 25, 1955.

SN 55,413. The Quaker Oats Company, Chicago, Ill. Filed July 16, 1958.

LIFT

For Breakfast Cereal.
First use June 30, 1958.

SN 55,759. Thomas J. Webb Company, Chicago, Ill. Filed July 21, 1958.

For Coffee.
First use Apr. 25, 1958.

SN 57,440. Sun-Maid Raisin Growers of California, Fresno, Calif. Filed Aug. 18, 1958.

Owner of Reg. Nos. 511,237, 111,183, and others.
For Raisins and Raisin Products—Namely, Raisin Bread, Raisin Syrup for Food Purposes, Salad Oil Containing Raisin Oil, Pie Fruit Filling Containing Raisins, Mincemeat Containing Raisins, Raisin Juice, Chocolate Coated Raisins, Canned Raisins, Raisins and Nuts Combined in Their Natural State.
First use September 1957.

SN 60,214. Eskimo Pie Corporation, Richmond, Va. Filed Oct. 7, 1958.

ESKIMO

LA MODE

The meaning of "La Mode" is "fashion."
Owner of Reg. Nos. 300,055 and 400,973.
For Ice Cream.
First use Jan. 5, 1958.

SN 61,428. Nutritional Service, Inc., Cedar Rapids, Iowa. Filed Oct. 27, 1958.

'TWILL

For Supplemental Concentrated Food for Dietary Purposes.
First use Oct. 9, 1958.

SN 61,468. Anderson, Clayton & Co., d.b.a. Anderson, Clayton & Co. Foods Division, Dallas, Tex. Filed Oct. 28, 1958.

CUE

Owner of Reg. No. 647,597.
For Barbecue Sauce.
First use Oct. 1, 1958.

SN 61,978. Winter Garden Citrus Products Cooperative, Winter Garden, Fla. Filed Nov. 5, 1958.

The drawing is lined for orange but no exclusive color is claimed. Owner of Reg. No. 567,360.
For Frozen Concentrated Citrus Juices and Blends Thereof.
First use June 15, 1950, on frozen concentrated orange juice.

SN 62,049. Bowey's, Inc., Chicago, Ill. Filed Nov. 6, 1958.

DARI VIM

For Skimmed Milk Product Fortified With Vitamins and Minerals.
First use Oct. 17, 1958.

SN 62,108. Pest-Guard Products, Inc., d.b.a. Thema Products, Dallas, Tex. Filed Nov. 7, 1958.

dial a flavor

No claim is made to the word "Flavor," such word being the name of the goods.
For Flavors To Be Added to Milk and Other Food Beverages.
First use Apr. 21, 1958.

SN 62,634. Texas Farm Products Company, Nacogdoches, Tex. Filed Nov. 17, 1958.

LONE STAR

Owner of Reg. Nos. 295,169 and 278,243.
For Fresh Eggs.
First use Oct. 1, 1954.

SN 63,095. Bealemon-Puritan Co., Chicago, Ill. Filed Nov. 24, 1958.

REGENCY

Owner of Reg. Nos. 653,830, 626,642, and 519,479.
For Bottled Juices—Namely, a Combination of Prune and Fig Juice, and Reconstituted Lime Juice.
First use Feb. 10, 1954.

SN 63,353. Rosenthal Produce Co., Inc., Mercedes, Tex. Filed Nov. 28, 1958.

GOLD TRAY

For Fresh Vegetables.
First use in 1942.

SN 63,588. Lever Brothers Company, New York, N.Y. Filed Dec. 3, 1958.

SUMMER COUNTY

For Oleomargarine.
First use on Sept. 30, 1958.

SN 65,863. Refrigerated Dough Products Inc., Jeffersonville, Ind. Filed Jan. 14, 1959.

Ye Olde South

For Refrigerated Dough for Making Biscuits.
First use May 28, 1958.

SN 65,865. San Senter Farms Inc., Belle Glade, Fla. Filed Jan. 14, 1959.

SAM-BO

For Radishes.
First use on or about June 1, 1955.

SN 69,010. Meletio Company, St. Louis, Mo. Filed Mar. 3, 1959.

BREAD-ALL

For Breading.
First use Nov. 1, 1958.

SN 69,049. Chula Vista Farms, National City, Calif. Filed Mar. 6, 1959.

MISTER K

For Fresh Vegetables.
First use Feb. 4, 1959.

Class 47 — Wines

SN 48,140. T. G. Bright & Co. Limited, Niagara Falls, Ontario, Canada. Filed Mar. 21, 1958.

Bright's

Owner of U.S. Reg. No. 561,667.
For Wines.
First use about Apr. 10, 1911; in commerce Mar. 23, 1949.

Class 48 — Malt Beverages and Liquors

SN 66,186. Wurzburger Hofbrau Aktiengesellschaft, Wurzburg, Germany. Filed Jan. 20, 1959.

For Beer.
First use June 2, 1887; in commerce June 2, 1887.

Class 50 — Merchandise Not Otherwise Classified

SN 43,736. Canvas Products Company, St. Louis, Mo. Filed Jan. 10, 1958.

CANVAS KID

Owner of Reg. No. 592,838.
For Tents, Tarpaulins, Air Conditioner Covers, Wrestling, Tumbling and Gymnastic Mats, Ground Sockers, Awnings, Canvas Curtains, Lawn Chair Recovers, Automobile Covers, Boat Covers, Cot Covers, Canvas Porch Curtains, and Canvas Sun Shades.
First use in March 1945.

SN 43,917. Bishop-Stansell Company, West Carrollton, Ohio. Filed Jan. 14, 1958.

KUT-ART

For Laminated Sheets of Foil and Paper for Making Decorative Cut-Outs.
First use Sept. 23, 1957.

SN 53,077. United States Plywood Corporation, New York, N.Y. Filed June 6, 1958.

KOVERITE

Owner of Reg. Nos. 572,439 and 561,566.
For Coated Paper, i.e., Pyroxylin Coated, Non-Woven Latex Saturated Cellulose, To Resemble Leather for Use as Covers for Presentation Folders, Sample Books, Manuals, Check Books, Bibles, Etc.
First use Dec. 13, 1957.

SN 56,491. Margio, Inc., New Britain, Conn. Filed July 17, 1958.

Trimbrite

The lines on the drawing represent lines on the specimens.
For Metallized Plastic Decorating Tape on Rolls, With Adhesive Backing.
First use June 6, 1958.

SN 64,496. Shaw & Slavsky, Inc., Detroit, Mich. Filed Dec. 17, 1958.

BUTCH-CUT GREENS

For Decorative Dividers for Super-Market Display Cases.
First use on or about Oct. 1, 1957.

Class 51 — Cosmetics and Toilet Preparations

SN 22,076. Fernand Albert Joseph Aubry, Paris, France. Filed Jan. 4, 1957.

FERNAND AUBRY "VISAGISTE"

Owner of French Reg. No. 412,869, dated June 15, 1951 (Paris); Natl. Inst. No. 495,685.
For Perfumes, Rouge, Cream for Coloring the Eyelids, Foundation and Cleansing Cream, Dentrifices, Paste and Oil for Softening and Conditioning the Skin, Body and Hair Lotions, Toilet Water.

SN 44,489. Shulton, Inc., Clifton, N.J. Filed Jan. 22, 1958.

3 WAY

For Hair Spray.
First use Jan. 10, 1958.

SN 45,974. Jack P. Honore, Jr., d.b.a. Jack Honoré, Princeton, N.J. Filed Feb. 17, 1958.

OLEAQUA

For Hair and Scalp Tonic.
First use 1916.

SN 52,046. Richard Hudnut, Morris Plains, N.J. Filed May 21, 1958.

ROYAL WHITE DEW

For Facial Moisturising Lotion.
First use May 6, 1958.

SN 56,040. Orchard Paper Company, d.b.a. Rich Products Company, St. Louis, Mo. Filed July 25, 1958.

PREV

For Body Deodorant Impregnated in Paper Tissues.
First use July 16, 1958.

SN 60,890. Hattie Carnegie, Inc., New York, N.Y. Filed Oct. 20, 1958.

Hattie Carnegie

Owner of Reg. No. 362,102.
For Cosmetics—Namely, Lipsticks, Rouge, Face Powder, Eyelash and Eyebrow Mascara and Creams for the Hands and Face, Bath Oils, Bath Salts, Perfumes, Toilet Water and Astringents.
First use Jan. 1, 1919.

SN 61,025. A-Trol Laboratories, Topeka, Kans. Filed Oct. 21, 1958.

I.D.

For Medicated Denture Adhesive.
First use Sept. 2, 1958.

SN 61,906. Yvette Denchet, d.b.a. Anne de Rouere, Paris, France. Filed Nov. 4, 1958.

ANNE DE ROUERE

Owner of French Reg. No. 412,898, dated June 18, 1951 (Seine); Natl. Inst. No. 495,967.
For Perfume.

Class 52—Detergents and Soaps

SN 51,756. Viking Resin Products Incorporated, Waverly, N.Y. Filed May 15, 1958.

For Castor Oil Type Detergent for Use on Floors, Walls, Upholstery, Rugs, Ovens and Burners, Automobiles and for Laundering.
First use Jan. 29, 1958.

SN 57,835. The Procter & Gamble Company, Cincinnati, Ohio. Filed Aug. 25, 1958.

PINK RIBBON DRENE

Owner of Reg. Nos. 389,815 and 406,680.
For Shampoo.
First use July 8, 1958.

SN 62,476. National Disinfectant Company, Dallas, Tex. Filed Nov. 14, 1958.

CHEMSEARCH

For Cleaning Compositions for Building Floors and Walls.
First use Oct. 9, 1958.

SN 64,612. Caled Products Company, Inc., Brentwood, Md. Filed Dec. 19, 1958.

PACEMAKER

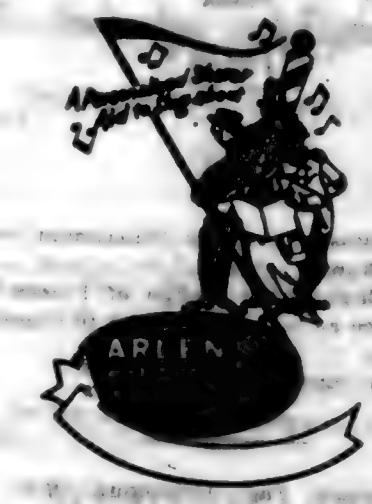
Owner of Reg. No. 378,349.
For Dry Cleaning Detergents.
First use May 9, 1956.

SN 65,965. Magnaflo Company, Inc., Youngstown, Ohio. Filed Jan. 16, 1959.

Lifetime

Owner of Reg. No. 657,609.
For Chrome Cleaner.
First use Jan. 3, 1959.

SN 66,686. Arlen, Inc., Portland, Oreg. Filed Jan. 29, 1959.



The words "A Personalised Shaver Aid To Sing About" are disclaimed apart from the mark.
For Shaving Supplies—Namely, Cleansing Fluids for Cleaning and Lubricating Shaver Heads.
First use June 23, 1958.

SN 66,752. Luzier Incorporated, Kansas City, Mo. Filed Jan. 30, 1959.

LUZIER

For Shampoo.
First use Apr. 1, 1957.

SN 66,854. Columbia Wax Company, Glendale, Calif. Filed Feb. 2, 1959.

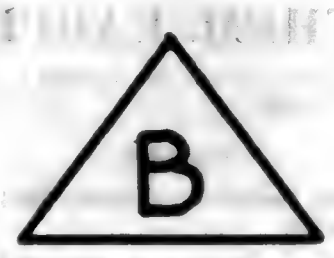
COLCO

For Liquid Cleaner for All Washable Surfaces and for Removing Surface Soil From Floors.
First use Mar. 16, 1953.

SERVICE MARKS

Class 100—Miscellaneous

SN 27,252. Arthur T. Bode, d.b.a. Bode Inspection, Oswego, Oreg. Filed Mar. 21, 1957.



For Inspection of Treated and Untreated Poles, Piling, Crossties, Crossarms, and Lumber.

First use Apr. 1, 1951.

SN 51,582. Powermax, Inc., Pittsburgh, Pa. Filed May 13, 1958.

Applicant disclaims the words "Maximum Power" apart from the mark as shown.

For Electrical Engineering Design of Power Circuits and Consultation Service as to Such Circuits to Commercial Users of Electrical Power.

First use Feb. 19, 1957.

SN 52,009. Photronix, Inc., Columbus, Ohio. Filed May 20, 1958.

PHOTRONIX

For Aerial Photogrammetry, Ground Surveys by Use of Photogrammetry and Computation of Earthwork Quantities, Roadway Templates, Bridge Design and the Like.

First use Mar. 19, 1957.

SN 60,117. Directomat, Inc., New York, N.Y. Filed Oct. 6, 1958.

DIRECTOMAT

For Leasing or Renting Machines Which Selectively Dispense Printed Information.

First use Apr. 30, 1956.

TM 30

SN 65,517. Laurence S. Rockefeller, New York, N.Y. Filed Jan. 8, 1959.

The word "Hotel" is disclaimed apart from the mark as shown.

For Services in Connection With the Operation and Management of a Resort Hotel—Namely, Providing Lodging, Food and Beverages, and Providing Facilities and Equipment for Swimming, Sun Bathing, Sports and Games.

First use Dec. 1, 1958.

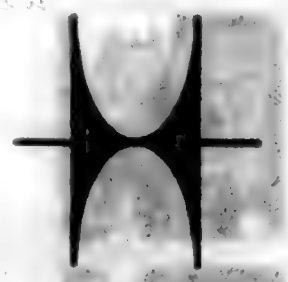
SN 67,065. Lassie Leaguers, Inc., Norristown, Pa. Filed Feb. 4, 1959.

For Promoting and Developing Sportsmanship, Team Play, and Athletic Ability Through the Medium of Organized Juvenile Baseball Teams for Girls.

First use summer of 1958.

Class 101—Advertising and Business

SN 31,760. Hamilton Watch Company, Lancaster, Pa. Filed June 11, 1957.



For Advertising Services for Watches—Namely, the Design and Production of Mat Advertising and Display for Others.

First use May 15, 1957.

SN 56,747. WSTV, Incorporated, d.b.a. WBOY-TV and KODE-TV, Steubenville, Ohio. Filed Aug. 6, 1958.

The notation of "Channel 12" is used subject to the control and regulation of the Federal Communications Commission and, to the extent that applicant's rights to use said notation are limited or abridged by said Commission, the notation is disclaimed by the applicant.

For Promotion of the Sales of Its Clients' Products by the Use of Direct Mail Service Advertising, In-Store Displays, Placement of Point of Sale Materials, Checking on Prices, Surveying Exposure and Activities of Major Competitor, Obtaining Comments From Grocers, and Highlighting Products on Applicant's Own Shows.

First use June 1, 1958.

SN 56,748. WSTV, Incorporated, d.b.a. WSTV-TV, Steubenville, Ohio. Filed Aug. 6, 1958.

The notation of "Channel 9" is used subject to the control and regulation of the Federal Communications Commission and, to the extent that applicant's rights to use said notation are limited or abridged by said Commission, the notation is disclaimed by the applicant.

For Promotion of the Sales of Its Client's Products by the Use of Direct Mail Service Advertising, In-Store Displays, Placement of Point of Sale Materials, Checking on Prices, Surveying Exposure and Activities of Major Competitor, Obtaining Comments From Grocers, and Highlighting Products on Applicant's Own Shows.

First use Mar. 1, 1958.

SN 59,382. Daitch Crystal Dairies, Inc., New York, N.Y. Filed Sept. 23, 1958. COLLECTIVE MARK.

DAITCH Shopwell

Owner of Reg. Nos. 600,552, 634,423, and 634,424.

For Grocery Store Service.

First use Nov. 1, 1956.

SN 59,960. Gold Bell Gift Stamps Cooperative, Inc., Detroit, Mich. Filed Oct. 2, 1958.

Owner of Reg. No. 622,320.

For Promoting the Sale of Goods and Services of Others Through the Medium of Trading Stamps Which Are Redeemable in Merchandise.

First use Mar. 14, 1955.

SN 60,117. Oklahoma Title Association, Inc., Hobart, Okla. Filed Dec. 30, 1958.

For Abstracting of Real Estate Titles.

First use February 1926.

Class 102—Insurance and Financial

SN 62,894. Zurich Insurance Company, Chicago, Ill. Filed Nov. 6, 1958.

ZA

For Insurance Services, Such as the Writing and Underwriting as an Insurer of Casualty, Fire, Life, Accident, and Health Insurance.

First use Sept. 17, 1958.

SN 62,896. Zurich Insurance Company, Chicago, Ill. Filed Nov. 6, 1958.

MERITMATIC

For Insurance Services, Such as the Writing and Underwriting as an Insurer of Liability, Casualty, and Fire Insurance.

First use Sept. 17, 1958.

Class 103—Construction and Repair

SN 699,576. Dresser Industries, Inc., Dallas, Tex., assignee of Lane-Wells Company, Los Angeles, Calif. Filed Dec. 7, 1955.

CORGUN

For Technical Services in the Oil Fields, Comprising the Taking of Samples of Earth Formations From the Walls of Oil and Gas Wells and the Like Earth Boreholes.

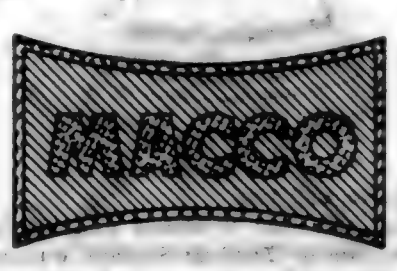
First use Nov. 19, 1954.

SN 26,635. Donald R. Newar, d.b.a. Ark Laboratory, Chicago, Ill. Filed Mar. 21, 1957.

E-N-A

Owner of Reg. No. 444,305.
For Porcelain Enamel Refinishing Service.
First use September 1950.

SN 46,327. Macco Corporation, Paramount, Calif. Filed Feb. 21, 1958.



The drawing is lined for orange and green.
For Services Including Design, Development, Construction, Maintenance, Repair and Remodeling in the Field of Construction Including General and Specialized Commercial, Industrial and Public Works Construction, Pipe Line Installations, Derrick and Tower Construction and All Crane and Rigging Services.
First use June 15, 1929.

SN 53,540. Staples Floorcraft Company, New York, N.Y. Filed June 13, 1958.

MONO-REZ

For Contracting Services—Namely, Laying of Floors and Flooring.
First use Feb. 24, 1958.

SN 61,479. Carter-Reid, Inc., Knoxville, Tenn. Filed Oct. 28, 1958.

SPEC-TRA-SUN

For Leasing and Repair of Electrically Operated Sterilisers for Grocery Carts.
First use Aug. 27, 1958.

Class 105—Transportation and Storage

SN 44,765. Abraham Stein, d.b.a. Glass Dome Tours, New York, N.Y. Filed Jan. 27, 1958.

FRIENDLY TOUR

For Operating Package Tours and Sightseeing Tours.
First use Jan. 8, 1958.

SN 62,962. Riddle Airlines Inc., Miami, Fla. Filed Nov. 21, 1958.

Applicant disclaims the term "Airlines" apart from the mark as shown.
For Air Transportation of Freight of Others.
First use June 17, 1956.

SN 63,978. Brownell Travel Bureau, Inc., Birmingham, Ala. Filed Dec. 10, 1958.

HOSPITALITY TRAVEL

For Travel Agency Services.
First use Sept. 2, 1958.

Class 106—Material Treatment

SN 30,548. Associated Chemists, Inc., Cleveland, Ohio. Filed May 23, 1957.

For Conditioning Water.
First use Oct. 15, 1956.

Class 107—Education and Entertainment

SN 50,644. Glenn O. Rowell & Alfred C. McDonald, Rapid City, S. Dak. Filed Apr. 29, 1958.

FUN WAGON

For Title of a Series of Television and Radio Broadcasted Programs—Namely, a Show Primarily for Children.
First use Mar. 1, 1953.

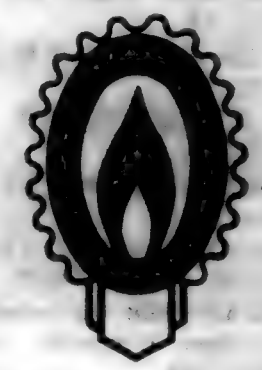
COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 60,300. National Education Association of the United States, Washington, D.C. Filed Oct. 8, 1958.

For Indicating Membership in the Applicant Organization.
First use Oct. 14, 1928.

SN 68,134. Gas Appliance Engineers Society, Rocky River, Ohio. Filed Feb. 20, 1959.



For Indicating Membership in Applicant.
First use Nov. 30, 1954.

CERTIFICATION MARKS

Class B—Services

SN 35,900. National Wiring Bureau, New York, N.Y. Filed Aug. 18, 1957.

The mark certifies that the electrical wiring installations conform to standards adopted by applicant.
For Electrical Wiring Installations.
First use Feb. 12, 1938.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1 — Raw or Partly Prepared Materials

681,296. VIRON. Industrial Vinyls, Inc. SN 45,685. Pub. 4–21–59. Filed 2–11–58.

681,297. PLATIL. Dr. Plate, G.m.b.H. SN 54,214. Pub. 4–21–59. Filed 6–25–58.

681,298. PLATIL. Dr. Plate, G.m.b.H. SN 54,215. Pub. 4–21–59. Filed 6–25–58.

681,299. KOLORCOAT. Germain's, Inc. SN 57,790. Pub. 4–21–59. Filed 8–25–58.

681,300. GLASDRAMATIC. Polygon Plastic Company. SN 59,641. Pub. 4–21–59. Filed 9–26–58.

681,301. FANCIFUL LETTER "A." Armour and Company, d.b.a. Armour Leather Company. SN 61,024. Pub. 4–21–59. Filed 10–21–58.

681,302. ELKHART. Armour and Company. SN 61,351. Pub. 4–21–59. Filed 10–27–58.

681,303. EUROPRENE. Anic S.p.A. SN 61,469. Pub. 4–21–59. Filed 10–28–58.

681,304. SNO KIST AND DESIGN. Nicholas Lentini, d.b.a. Lentini Tree Farms. SN 61,494. Pub. 4–21–59. Filed 10–28–58.

681,305. AUTO-BOND. Magnet Cove Barium Corporation. SN 61,640. Pub. 4–21–59. Filed 10–30–58.

681,306. LUBE-KOTE. Magnet Cove Barium Corporation. SN 61,641. Pub. 4–21–59. Filed 10–30–58.

681,307. SOUTHERN STAR AND DESIGN. Magnet Cove Barium Corporation. SN 61,642. Pub. 4–21–59. Filed 10–30–58.

681,308. LUXURY PATENT AND REPRESENTATION OF SHIP. Colonial Tanning Company, Inc. SN 61,692. Pub. 4–21–59. Filed 10–31–58.

681,309. STA-KLEEN. Stone Mountain Grit Co., Inc. SN 61,745. Pub. 4–21–59. Filed 10–31–58.

681,310. WEST BEST. Peter J. Booy Rose Nursery. SN 61,940. Pub. 4–21–59. Filed 11–5–58.

Class 2 — Receptacles

681,311. SNACK-O-MAT. Sidney A. Tarrson Co. SN 61,871. Pub. 4–21–59. Filed 11–3–58.

681,312. SURLOK. The B. F. Goodrich Company. SN 37,353. Pub. 4–21–59. Filed 9–17–57.

681,313. SAYFORD. Frank M. Sayford Company. SN 51,293. Pub. 4–21–59. Filed 5–8–58.

681,314. "FLIP-'N-DIP." American Can Company. SN 57,734. Pub. 4–21–59. Filed 8–25–58.

681,315. SAN-EQUIP. Vega Industries, Inc. SN 57,988. Pub. 4–21–59. Filed 8–27–58.

681,316. REM LINE. Advertising Metal Display Co. SN 61,238. Pub. 4–21–59. Filed 10–24–58.

681,317. SKID-MASTER. Olin Mathieson Chemical Corporation. SN 61,317. Pub. 4–21–59. Filed 10–24–58.

681,318. POLY-SHEEN. Sutherland Paper Company. SN 61,450. Pub. 4–21–59. Filed 10–27–58.

681,319. BONDALUM. Craig Systems, Inc. SN 61,695. Pub. 4–21–59. Filed 10–31–58.

681,320. DUPLI-SEAL. Fill-Rite Corporation. SN 62,752. Pub. 4–21–59. Filed 11–19–58.

681,321. ALTON AND DESIGN. Alton Box Board Company. SN 62,819. Pub. 4–21–59. Filed 11–20–58.

681,322. TRAYTALKER. Sutherland Paper Company. SN 63,123. Pub. 4–21–59. Filed 11–24–58.

681,323. TANDEM. Bankers Box Company. SN 63,405. Pub. 4–21–59. Filed 12–1–58.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

681,324. CRUSADER. Amity Leather Products Co. SN 57,738. Pub. 4–21–59. Filed 8–25–58.

681,325. OUTDOORSMAN. Amity Leather Products Co. SN 57,739. Pub. 4–21–59. Filed 8–25–58.

681,326. SOF-HYDE. Associated Lerner Shops of America, Inc. SN 59,161. Pub. 4–21–59. Filed 9–19–58.

681,327. HATTIE CARNEGIE. Hattie Carnegie, Inc. SN 59,691. Pub. 4–21–59. Filed 9–29–58.

Class 4 — Abrasives and Polishing Materials

681,328. DRI-POWR. Clarence M. Wynn, d.b.a. Dri-Powr Co. SN 49,995. Pub. 4–21–59. Filed 4–18–58.

Class 5 — Adhesives

681,329. FORMULA 404. The Mutual Paper Co., Inc. SN 47,511. Pub. 4–21–59. Filed 3–11–58.

Class 6 — Chemicals and Chemical Compositions

681,330. AQUAGENE. Aquagene, Inc. SN 15,754. Pub. 4–21–59. Filed 9–17–56.

681,331. HHH. Hans Heinrich Hütte G.m.b.H. SN 38,606. Pub. 4–21–59. Filed 10–9–57.

681,332. MERCEDES-BENZ. Daimler-Benz Aktiengesellschaft. SN 45,141. Pub. 4–21–59. Filed 2–3–58.

681,333. V–10. Vineland Chemical Sales Corporation. SN 45,292. Pub. 4–7–59. Filed 2–4–58.

681,334. SHISEIDO. Shiseido Company, Limited. SN 46,651. Pub. 4–21–59. Filed 2–26–58.

681,335. ATLANTIC, ETC. AND DESIGN. Atlantic Chemicals & Metals Company. SN 48,822. Pub. 4–21–59. Filed 4–1–58.

681,336. KATEON. Yadro Chemical Company. SN 50,584. Pub. 4–21–59. Filed 4–28–58.

681,337. METHOLENE. Emery Industries, Inc. SN 50,781. Pub. 4–21–59. Filed 5–1–58.

681,338. SUPERALC. Trojan Powder Company. SN 53,439. Pub. 4–21–59. Filed 6–12–58.

681,339. SUCARYL ACID. Abbott Laboratories. SN 55,625. Pub. 4–21–59. Filed 7–21–58.

681,340. WINNOFIL. Imperial Chemical Industries Limited. SN 55,921. Pub. 4–21–59. Filed 7–24–58.

681,341. EASY BRIGHT. Blue Magic, Inc. SN 58,900. Pub. 4–21–59. Filed 9–15–58.

681,342. EPTAM. Stauffer Chemical Company. SN 59,352. Pub. 4–21–59. Filed 9–22–58.

681,343. DERMALIGHT. Sandoz, Inc. SN 61,509. Pub. 4–21–59. Filed 10–28–58.

Class 7 — Cordage

681,344. REPRESENTATION OF TWO ADJACENT GRAY COLORED STRANDS OF ROPE. The Colorado Fuel and Iron Corporation. SN 39,517. Pub. 10–7–58. Filed 10–25–57.

Class 9—Explosives, Firearms, Equipments, and Projectiles

681,345. HELICOPTER. Zenith Corporation. SN 60,089. Pub. 4-21-59. Filed 10-3-58.

Class 10—Fertilizers

681,346. COLLIER. Collier Carbon and Chemical Corporation. SN 56,763. Pub. 4-21-59. Filed 8-7-58.

681,347. RIS-VAN AND DESIGN. Ris-Van, Incorporated. SN 57,168. Pub. 4-21-59. Filed 8-13-58.

681,348. OLD CORRAL. Avis C. Black, d.b.a. Old Corral Cattle Co. SN 57,671. Pub. 4-21-59. Filed 8-22-58.

Class 12—Construction Materials

681,349. HQ. Independent Screen Company. SN 47,950. Pub. 4-21-59. Filed 3-18-58.

681,350. SECURITY. Security Fire Door Co. SN 49,623. Pub. 4-21-59. Filed 4-14-58.

681,351. TITEWALL. Servicised Products Corporation. SN 52,014. Pub. 4-21-59. Filed 5-20-58.

681,352. BILDRITE. Minnesota and Ontario Paper Company. SN 52,232. Pub. 4-21-59. Filed 5-23-58.

681,353. ESPRO. Union Asbestos & Rubber Company. SN 52,360. Pub. 4-21-59. Filed 5-26-58.

681,354. PIN MARK. Insular Lumber Company. SN 52,728. Pub. 4-21-59. Filed 6-2-58.

681,355. SELFTITE. Eternit Societe Anonyme. SN 53,935. Pub. 4-21-59. Filed 6-20-58.

681,356. WOOD-N-TITE. East Coast Millwork Company, Incorporated. SN 54,842. Pub. 4-21-59. Filed 7-7-58.

681,357. AMBRIDGE. United States Steel Corporation. SN 55,753. Pub. 4-21-59. Filed 7-21-58.

681,358. GREEK LETTERS BETA AND GAMMA AND DESIGN. Raytherm Corporation. SN 58,453. Pub. 4-21-59. Filed 9-5-58.

681,359. STRONGWALL. Sherman Steel & Wire Co. SN 59,138. Pub. 4-21-59. Filed 9-18-58.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

681,360. TAP/TRAP. Calumet & Hecla, Inc. SN 50,969. Pub. 4-21-59. Filed 5-5-58.

681,361. UNIMIX. Eclipse Fuel Engineering Co. SN 59,176. Pub. 4-21-59. Filed 9-19-58.

681,362. POWASERT. United Shoe Machinery Corporation. SN 61,598. Pub. 4-21-59. Filed 10-23-58.

681,363. KLEENEX. Kimberly-Clark Corporation. SN 61,813. Pub. 4-21-59. Filed 11-3-58.

681,364. AUTOFLO. Speakman Company. SN 62,615. Pub. 4-21-59. Filed 11-17-58.

681,365. ZIP-MASTER. L.M.B. Manufacturing Co. SN 62,694. Pub. 4-21-59. Filed 11-18-58.

681,366. BONDFAST. Coats & Clark Inc. SN 62,742. Pub. 4-21-59. Filed 11-19-58.

681,367. HIDDENFLO. Sears, Roebuck and Co. SN 62,799. Pub. 4-21-59. Filed 11-19-58.

681,368. STRESS-FLEX. Flexonics Corporation. SN 62,850. Pub. 4-21-59. Filed 11-20-58.

681,369. VIEW-ALL. Kenneth H. Gutner, d.b.a. Kenlin Enterprises. SN 65,091. Pub. 4-21-59. Filed 12-30-58.

Class 14—Metals and Metal Castings and Forgings

681,370. LFM. LFM Mfg. Co., Inc. SN 60,060. Pub. 4-21-59. Filed 11-4-57.

681,371. METALITE. Adams Hard-Facing Company. SN 61,150. Pub. 4-21-59. Filed 10-23-58.

Class 15—Oils and Greases

681,372. RA. National Aluminate Corporation. SN 45,990. Pub. 4-21-59. Filed 2-17-58.

681,373. YUCCA. The Southwestern Petroleum Company. SN 58,963. Pub. 4-21-59. Filed 9-15-58.

681,374. MOTOR-ZOOM AND DESIGN. Wilco Company, d.b.a. Commonwealth Industries. SN 60,068. Pub. 4-21-59. Filed 10-3-58.

681,375. FLO-POWER. Hood Oil Company, Inc. SN 61,059. Pub. 4-21-59. Filed 10-21-58.

Class 16—Protective and Decorative Coatings

681,376. GILKOTE. American Gilsonite Company. SN 52,184. Pub. 4-21-59. Filed 5-23-58.

681,377. MIRALON. Acme Quality Paints, Inc. SN 65,919. Pub. 4-21-59. Filed 1-16-59.

681,378. CYANAMID AND DESIGN. American Cyanamid Company. SN 66,197. Pub. 4-21-59. Filed 1-21-59.

Class 18—Medicines and Pharmaceutical Preparations

681,379. GELTABS. The Upjohn Company (Delaware corporation), assignee of The Upjohn Company (Michigan corporation). SN 695,586. Pub. 5-15-56. Filed 9-29-55.

681,380. GLY-OXIDE. International Pharmaceutical Corporation, assignee of Edgar C. B. Kirsopp, d.b.a. Delaware Valley Research Company. SN 33,976. Pub. 4-21-59. Filed 7-18-57.

681,381. SEDATRAN. Elmorene Company. SN 34,676. Pub. 3-18-58. Filed 7-31-57.

681,382. TONSIL POPS. Greenwood Labs, Inc. SN 43,940. Pub. 4-21-59. Filed 1-14-58.

681,383. TROLENE. The Dow Chemical Company. SN 45,547. Pub. 4-21-59. Filed 2-10-58.

681,384. SPA. Delancey Chemical Co., Inc. SN 45,955. Pub. 4-21-59. Filed 2-17-58.

681,385. QUIST AND DESIGN. Richard O. Winquist. SN 46,682. Pub. 4-21-59. Filed 2-26-58.

681,386. NEBU-PHEDRIN. Thomas J. Mahon, Inc. SN 47,200. Pub. 4-21-59. Filed 3-6-58.

681,387. SUPPOZ. Dumas Milner Corporation, assignee of Taylor Laboratories, Incorporated. SN 48,594. Pub. 4-21-59. Filed 3-27-58.

681,388. BABY WIPE AND BLOCK DESIGN. Valden Chemical Co. SN 54,118. Pub. 4-21-59. Filed 6-23-58.

681,389. ERGOMAR. Nordson Pharmaceutical Laboratories, Inc. SN 59,362. Pub. 4-21-59. Filed 9-25-58.

681,390. HEPTAMIDE. Pharmaceutical Industries, Inc. SN 59,812. Pub. 4-21-59. Filed 10-1-58.

681,391. ABMINTHIC. Chas. Pfizer & Co., Inc. SN 59,984. Pub. 4-21-59. Filed 10-2-58.

681,392. ATHROMBIN. The G. F. Harvey Company, Inc. SN 60,035. Pub. 4-21-59. Filed 10-3-58.

681,393. ANATHROMBIN. The G. F. Harvey Company, Inc. SN 60,036. Pub. 4-21-59. Filed 10-3-58.

681,394. ANGITET. The G. F. Harvey Company, Inc. SN 60,037. Pub. 4-21-59. Filed 10-3-58.

681,395. NARTATE. The G. F. Harvey Company, Inc. SN 60,038. Pub. 4–21–59. Filed 10–3–58.

681,396. HARVAMINE. The G. F. Harvey Company, Inc. SN 60,039. Pub. 4–21–59. Filed 10–3–58.

681,397. PARAFON. McNeil Laboratories, Incorporated. SN 60,046. Pub. 4–21–59. Filed 10–3–58.

681,398. RETORAL. The Upjohn Company (Delaware corporation), assignee of The Upjohn Company (Michigan corporation). SN 60,064. Pub. 4–21–59. Filed 10–3–58.

681,399. ABUNDAVITA. Abundavita Corporation of America. SN 60,076. Pub. 4–21–59. Filed 10–6–58.

681,400. ABUNDALAX. Abundavita Corporation of America. SN 60,077. Pub. 4–21–59. Filed 10–6–58.

681,401. CLARIN. Thos. Leeming & Co., Inc. SN 60,133. Pub. 4–21–59. Filed 10–6–58.

681,402. RHINALL. Rhinopto Company. SN 60,184. Pub. 4–21–59. Filed 10–6–58.

681,403. V-KOR. Eli Lilly and Company. SN 60,419. Pub. 4–21–59. Filed 10–10–58.

681,404. HEMOANTIN. Ormonoterapia Richter S.p.A. SN 60,429. Pub. 4–21–59. Filed 10–10–58.

Class 19—Vehicles

681,405. CASE MASTER AND DESIGN. Continental Body, Inc. SN 42,636. Pub. 4–21–59. Filed 12–18–57.

681,406. TARP-ON. Tarp-On of California. SN 46,507. Pub. 4–21–59. Filed 2–24–58.

681,407. FLOTE BOTE AND DESIGN. Harris Manufacturing Corporation. SN 50,055. Pub. 4–21–59. Filed 4–21–58.

681,408. ELECTRIC. The Firestone Tire & Rubber Company. SN 61,381. Pub. 4–21–59. Filed 10–27–58.

681,409. CORVAIR AND DESIGN. Standard Railway Equipment Manufacturing Company. SN 61,448. Pub. 4–21–59. Filed 10–27–58.

681,410. DOVER. Ventoura Corp. SN 61,603. Pub. 4–21–59. Filed 10–29–58.

681,411. NEWPORT. Atlantic Marine Industries, Inc. SN 61,608. Pub. 4–21–59. Filed 10–30–58.

681,412. LEACH. Leach Company. SN 61,819. Pub. 4–21–59. Filed 11–3–58.

Class 20—Linoleum and Oiled Cloth

681,413. SCOTCH-TRED. Minnesota Mining and Manufacturing Company. SN 55,076. Pub. 4–21–59. Filed 7–10–58.

681,414. VELVETEX. E. I. du Pont de Nemours and Company. SN 55,465. Pub. 4–21–59. Filed 7–17–58.

Class 21—Electrical Apparatus, Machines, and Supplies

681,415. LA-OVER. Jayco Products. SN 34,704. Pub. 4–21–59. Filed 7–31–57.

681,416. UNIFONE. North Electric Company. SN 46,239. Pub. 4–21–59. Filed 2–20–58.

681,417. IMPROV-A-LITE. General Electric Company. SN 48,472. Pub. 4–21–59. Filed 3–26–58.

681,418. DYNA-COIL. Trio Manufacturing Co. SN 56,204. Pub. 4–21–59. Filed 7–28–58.

681,419. NO-STRIP. Trio Manufacturing Co. SN 56,205. Pub. 4–21–59. Filed 7–28–58.

681,420. PORTA MARINE. Aerosonic Marine, Incorporated. SN 57,992. Pub. 4–21–59. Filed 8–28–58.

681,421. INSUL 8 HEVI-BAR AND DESIGN. Insul-8-Corp. SN 61,632. Pub. 4–21–59. Filed 10–30–58.

681,422. STATHAM. Statham Instruments, Inc. SN 61,866. Pub. 4–21–59. Filed 11–3–58.

681,423. RAYBOARD AND DESIGN. George P. Deacon, d.b.a. The Rayboard Company. SN 61,998. Pub. 4–21–59. Filed 11–6–58.

681,424. H.E.P. Franklin Manufacturing Co., Inc. SN 62,006. Pub. 4–21–59. Filed 11–6–58.

Class 22—Games, Toys, and Sporting Goods

681,425. CAPITAL AIR RACE. Howard W. Pyles. SN 19,062. Pub. 4–21–59. Filed 11–9–56.

681,426. TRU BALANCE. The Brunswick-Balke-Collender Company. SN 47,726. Pub. 4–21–59. Filed 3–14–58.

681,427. CONOLOCK. Narmco Conolon Co. SN 48,194. Pub. 4–21–59. Filed 3–21–58.

681,428. P WITH CONCENTRIC CIRCLES. The Porter Chemical Company. SN 49,517. Pub. 4–21–59. Filed 4–11–58.

681,429. SHOR-BET. Pataskala Tackle Company. SN 54,887. Pub. 4–21–59. Filed 7–7–58.

681,430. COFFEEHOUSE AND DESIGN. Coffeehouse, Inc. SN 55,646. Pub. 4–21–59. Filed 7–21–58.

681,431. OWL DESIGN. Mills Bell-O-Matic Corporation. SN 56,153. Pub. 4–21–59. Filed 7–28–58.

681,432. THUNDERBIRD. H. Wenzel Tent & Duck Co. SN 57,039. Pub. 4–21–59. Filed 8–11–58.

681,433. ESKIMO-YO. James Bradshaw Jamieson, d.b.a. Creative Capers Manufacturing Company. SN 58,035. Pub. 4–21–59. Filed 8–28–58.

681,434. DR. JIG. South Bend Tackle Company, Inc. SN 58,959. Pub. 4–21–59. Filed 9–15–58.

681,435. SALTY JIG. South Bend Tackle Company, Inc. SN 58,960. Pub. 4–21–59. Filed 9–15–58.

681,436. BRINY JIG. South Bend Tackle Company, Inc. SN 58,961. Pub. 4–21–59. Filed 9–15–58.

681,437. SUPER K. The Seamless Rubber Company. SN 59,136. Pub. 4–21–59. Filed 9–18–58.

681,438. MICRO-FLITE. Laminex, Inc. SN 59,306. Pub. 4–21–59. Filed 9–22–58.

681,439. JOHNSON. Nestor Johnson Manufacturing Company. SN 59,755. Pub. 4–21–59. Filed 9–29–58.

681,440. JIFFY-POOL. Flex-O-Glass, Inc., d.b.a. Warp Brothers. SN 59,819. Pub. 4–21–59. Filed 9–30–58.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

681,441. NATIONAL. The National Supply Company (Ohio corporation), assignee of The National Supply Company (Pennsylvania corporation). SN 40,485. Pub. 4–21–59. Filed 11–12–57.

681,442. JOWE ETC. AND DESIGN. Johann Weiss Maschinenfabrik und Apparatebau G.m.b.H. SN 47,164. Pub. 4–21–59. Filed 1–16–58.

681,443. GENI. Universal Engineering Company. SN 48,806. Pub. 4–21–59. Filed 3–31–58.

681,444. BLUE JET AND REPRESENTATION OF JET. Draper Corporation. SN 59,099. Pub. 4–21–59. Filed 9–18–58.

681,445. TORNADO. F. J. Stokes Corporation. SN 63,494. Pub. 4–21–59. Filed 12–1–58.

681,446. HEELARAMA. The Auto-Soler Company. SN 63,919. Pub. 4–21–59. Filed 12–9–58.

681,447. NYMPH. Souplex Limited. SN 65,787. Pub. 4–21–59. Filed 1–13–59.

681,448. KINGSTONE. Continental Rubber Works. SN 65,825. Pub. 4–21–59. Filed 1–14–59.

681,449. TEXALON. J. E. Rhoads & Sons. SN 65,908. Pub. 4–21–59. Filed 1–15–59.

681,450. ADHES-A-PLY. Dennison Manufacturing Company. SN 65,941. Pub. 4–21–59. Filed 1–16–59.

Class 26—Measuring and Scientific Appliances

681,451. MEC AND DESIGN. Milgo Electronic Corporation. SN 45,336. Pub. 4–21–59. Filed 2–5–58.

681,452. GAMMATRON. J. F. Cresfield Limited. SN 56,307. Pub. 4–21–59. Filed 7–30–58.

681,453. SAMASTRONIC. Powers-Samas Accounting Machines Limited. SN 56,656. Pub. 4–21–59. Filed 8–5–58.

681,454. ADD-A-TANK. Bar-Ray Products, Incorporated. SN 59,020. Pub. 4–21–59. Filed 9–17–58.

681,455. ELECTROMATIC. Sylvania Electric Products Inc. SN 59,071. Pub. 4–21–59. Filed 9–17–58.

681,456. BALUMINUM. Bausch & Lomb Optical Company. SN 59,251. Pub. 4–21–59. Filed 9–22–58.

Class 27—Horological Instruments

681,457. LE MEY. Meyers Jewelers, Inc. SN 44,405. Pub. 4–21–59. Filed 1–21–58.

681,458. MARKLIN. Precision Time Corporation. SN 59,334. Pub. 3–3–59. Filed 9–22–58.

Class 28—Jewelry and Precious-Metal Ware

681,459. MOTHER'S RING. Guertin Bros., Jewelers. SN 46,618. Pub. 4–21–59. Filed 2–26–58.

Class 29—Brooms, Brushes, and Dusters

681,460. NIAGARA SOFT MAID AND DESIGN. General Mills, Inc., d.b.a. Niagara Sponge. SN 39,869. Pub. 4–21–59. Filed 10–31–57.

681,461. CERTIFYD. B. Morris Manufacturing Co. SN 59,014. Pub. 4–21–59. Filed 9–2–58.

681,462. CASTLE DESIGN. Rubon Incorporated. SN 61,662. Pub. 4–21–59. Filed 10–30–58.

Class 31—Filters and Refrigerators

681,463. WAGNER. The E. L. Wagner Company, Incorporated. SN 47,534. Pub. 2–17–59. Filed 3–11–58.

681,464. WAGNER AND DESIGN. The E. L. Wagner Company, Incorporated. SN 47,536. Pub. 2–10–59. Filed 3–11–58.

681,465. SUNSET AND DESIGN. Sunset Equipment Co. SN 63,899. Pub. 4–21–59. Filed 12–8–58.

681,466. TURBO-FILTARATOR. Dynacrafts, Inc. SN 65,646. Pub. 4–21–59. Filed 1–12–59.

Class 32—Furniture and Upholstery

681,467. VERTO-REST AND DESIGN. Holman-O. D. Baker Co., Inc. SN 53,155. Pub. 4–21–59. Filed 6–9–58.

681,468. STRATO LOUNGER IMPERIAL. Futorian-Stratford Furniture Company. SN 61,801. Pub. 4–21–59. Filed 11–3–58.

681,469. KIK STEP AND DESIGN. Cramer Posture Chair Company, Inc. SN 65,070. Pub. 4–14–59. Filed 12–30–58.

681,470. SIMCREST. Simmons Company. SN 66,107. Pub. 4–21–59. Filed 1–19–59.

681,471. BULMAN ETC. AND DESIGN. The Bulman Corporation. SN 66,201. Pub. 4–21–59. Filed 1–21–59.

681,472. LADY DIANA. The Stearns & Foster Company. SN 66,504. Pub. 4–21–59. Filed 1–26–59.

681,473. SUN COAST. Drexel Furniture Company. SN 66,536. Pub. 4–21–59. Filed 1–27–59.

Class 34—Heating, Lighting, and Ventilating Apparatus

681,474. CADILLAC. Clements Mfg. Co. SN 59,171. Pub. 4–21–59. Filed 9–19–58.

681,475. C IN A. Henry F. Riley, d.b.a. Associated Contractors. SN 59,566. Pub. 4–21–59. Filed 9–25–58.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

681,476. FLEXICON. Flexicon Limited. SN 54,466. Pub. 4–21–59. Filed 6–24–58.

Class 36—Musical Instruments and Supplies

681,477. "MAGIC-MIND." Webcor, Inc. SN 27,156. Pub. 4–21–59. Filed 6–3–57.

681,478. PHONO-MOVIE. C. & P. Phonoproducts, Incorporated, assignee of Close and Patenaude. SN 42,379. Pub. 4–21–59. Filed 12–17–57.

681,479. HI FI AND DESIGN. Decca Records, Inc. SN 49,660. Pub. 4–21–59. Filed 4–7–58.

681,480. STANDEL. Robert C. Crooks, d.b.a. The Standel Company. SN 54,827. Pub. 4–21–59. Filed 7–7–58.

681,481. FLAGSHIP RECORDING CO. AND DESIGN. Vincent Sardo, d.b.a. Flagship Recording Co. SN 60,436. Pub. 4–21–59. Filed 10–10–58.

681,482. MASTER TOUCH. Piano Action & Key Corp. SN 61,735. Pub. 4–21–59. Filed 10–31–58.

681,483. PERMA CROWN. Winter & Company, Inc. SN 61,755. Pub. 4–21–59. Filed 10–31–58.

Class 37—Paper and Stationery

681,484. WORLD'S BEST PENCIL VALUE AND DESIGN. Hassenfeld Bros., Inc. SN 21,807. Pub. 4–21–59. Filed 12–28–56.

681,485. PLASTIKRAFT. Adams Paper Converting Company. SN 52,085. Pub. 4–21–59. Filed 5–22–58.

681,486. RIEGELEASE. Riegel Paper Corporation. SN 56,352. Pub. 4–21–59. Filed 7–30–58.

681,487. REPEAT-O-RITE. Standard Manifold Company. SN 57,435. Pub. 4–21–59. Filed 8–18–58.

681,488. MATE. Paper Mate Manufacturing Company. SN 60,954. Pub. 4–21–59. Filed 10–20–58.

681,489. THE KEY BRAND AND DESIGN. Skogsägarnas Cellulosa Aktiebolag. SN 63,493. Pub. 4–21–59. Filed 12–1–58.

Class 38—Prints and Publications

681,490. WORLD WIDE. Billy Graham Evangelistic Film Ministry, Inc., d.b.a. World Wide Pictures. SN 22,183. Pub. 7–15–58. Filed 1–7–57.

681,491. WORLD WIDE PICTURES AND DESIGN. Billy Graham Evangelistic Film Ministry, Inc., d.b.a. World Wide Pictures. SN 22,184. Pub. 7–15–58. Filed 1–7–57.

681,492. THE COWCATCHER CONFIDENTIAL AND DESIGN. Feed Service Corporation. SN 39,462. Pub. 4–21–59. Filed 10–24–57.

681,493. HELP WANTED TREND. B. K. Davis & Bro. Advertising Service. SN 52,651. Pub. 4–21–59. Filed 5–26–58.

681,494. ETCETERA. Electro Tec Corporation. SN 55,844. Pub. 2–17–59. Filed 7–23–58.

681,495. CAKE LORE AND DESIGN. Cake Craft Publications Inc. SN 57,940. Pub. 4–21–59. Filed 8–27–58.

681,496. PF REPORTER. Howard W. Sams & Co., Inc. SN 58,254. Pub. 4–21–59. Filed 9–2–58.

681,497. UNITED PRESS INTERNATIONAL. United Press International, Inc. SN 59,657. Pub. 4–21–59. Filed 9–26–58.

681,498. STRATOFLEX. Stratoflex, Inc. SN 59,924. Pub. 4–21–59. Filed 10–1–58.

681,499. MUSICALLY YOURS. Norman S. Weiser. SN 59,930. Pub. 4–21–59. Filed 10–1–58.

681,500. THE SALEMAKER ETC. AND DESIGN. The Salemaker Press. SN 59,991. Pub. 4–21–59. Filed 10–2–58.

681,501. THE HUNTER GUARDIAN. Savannah News-Press, Inc. SN 60,057. Pub. 4–21–59. Filed 10–3–58.

681,502. FONOSCOPE AND DESIGN. Fonoscope Limited. SN 60,128. Pub. 4–21–59. Filed 10–6–58.

681,503. TRACE MINERAL NEWS. Hardy Salt Company. SN 60,136. Pub. 4–21–59. Filed 10–6–58.

681,504. SCIENCE AND SECURITIES. Harris, Upham & Co. SN 60,521. Pub. 4–21–59. Filed 10–13–58.

681,505. PAW PRINTS AND REPRESENTATION OF DOG FOOT PRINTS AND DOG HOUSES. Ben Richter Co., Inc. SN 60,681. Pub. 4–21–59. Filed 10–15–58.

681,506. THE AMERICAN NATURALIST. Jaques Cattell. SN 60,799. Pub. 4–21–59. Filed 10–17–58.

681,507. SPACE SPEAKS THROUGH SPUTNIK. Joseph G. Ussery. SN 61,002. Pub. 4–21–59. Filed 10–20–58.

681,508. TRUE. Fawcett Publications, Inc. SN 61,047. Pub. 4–21–59. Filed 10–21–58.

681,509. POPULAR HOMECRAFT. General Publishing Company, Inc. SN 61,114. Pub. 4–21–59. Filed 10–22–58.

681,510. DELL. Dell Publishing Company, Inc. SN 61,365. Pub. 4–21–59. Filed 10–27–58.

Class 39—Clothing

681,511. PINK MINK. S. D. Arrowood & Co., Incorporated. SN 26,150. Pub. 4–21–59. Filed 3–14–57.

681,512. CONTOUR BRIEFS. Queen Knitting Mills, Inc. SN 44,411. Pub. 4–21–59. Filed 1–21–58.

681,513. STAGE DOOR. Danita Hosiery Manufacturing Co., Inc. SN 47,738. Pub. 10–28–58. Filed 3–14–58.

681,514. EDWARD ABBOTT. Miss America Corporation. SN 48,040. Pub. 4–21–59. Filed 3–19–58.

681,515. SOVEREIGN FURS AND DESIGN. Hausner, Blum & Kusens. SN 48,381. Pub. 4–21–59. Filed 3–3–58.

681,516. JAN JURI. Leslie Fay Corporation. SN 48,552. Pub. 4–21–59. Filed 3–27–58.

681,517. JUNE POWER. Power Sportswear Co., Inc. SN 48,787. Pub. 4–21–59. Filed 3–31–58.

681,518. "SELECTIOR." Etablissements P. Chaumont. SN 49,360. Pub. 4–21–59. Filed 4–9–58.

681,519. IMPERIAL CAMELDOWN. A. Davis & Sons, Inc. SN 54,389. Pub. 4–21–59. Filed 6–27–58.

681,520. KERMESS. G. & R. Garment Mfg. Co. SN 55,231. Pub. 4–21–59. Filed 7–14–58.

681,521. ACTIV–8. Burlington Industries, Inc. SN 56,243. Pub. 4–21–59. Filed 7–29–58.

681,522. KITTEN X. Peter Pan Foundations, Inc. SN 56,496. Pub. 4–7–59. Filed 8–1–58.

681,523. STERNALOX. George W. Davis. SN 56,931. Pub. 4–21–59. Filed 8–11–58.

681,524. GOODI-MADE 400. Goodheim Glove Co., Inc. SN 56,931. Pub. 4–21–59. Filed 8–28–58.

681,525. BETTY NATCO. National Laboratories, Inc. SN 58,744. Pub. 4–21–59. Filed 9–10–58.

681,526. SIOUX MOX. Tru-Stitch Moccasin Corporation. SN 59,149. Pub. 3–17–59. Filed 9–18–58.

681,527. DUO MAGIC. Elaine of Hollywood Brassiere Co. SN 59,285. Pub. 4–21–59. Filed 9–22–58.

681,528. GREAT LADY. Parfums Evyan Inc. SN 59,329. Pub. 4–21–59. Filed 9–22–58.

681,529. SUN-DANA. Davis & Catterall. SN 59,607. Pub. 3–31–59. Filed 9–29–58.

681,530. WEST CREST. White Stag Manufacturing Co., d.b.a. West Crest. SN 61,013. Pub. 4–21–59. Filed 10–20–58.

681,531. FLIP TOP. Cherie Brassiere Co., Inc. SN 61,167. Pub. 4–21–59. Filed 10–23–58.

681,532. PARTY TOPPER. Gladys D. Whitney, d.b.a. Whitney Studio Custom Design. SN 61,343. Pub. 4–21–59. Filed 10–24–58.

681,533. INTRODUCTION. Maiden Form Brassiere Company, Inc. SN 61,496. Pub. 4–21–59. Filed 10–28–58.

681,534. SNO SKINS. Air Baby, Inc. SN 61,537. Pub. 4–21–59. Filed 10–29–58.

681,535. MISS EMPIRESSE. Diana Foundations, Inc. SN 61,700. Pub. 4–21–59. Filed 10–31–58.

681,536. NANCY STEELE. The Salem Company, Inc. SN 61,737. Pub. 4–21–59. Filed 10–31–58.

681,537. ACETRIQUE. I. Schneierson & Sons, Inc. SN 61,741. Pub. 4–21–59. Filed 10–31–58.

681,538. YOUNG ACCENT. Young Accent, Inc. SN 65,606. Pub. 4–21–59. Filed 1–9–59.

Class 40—Fancy Goods, Furnishings, and Notions

681,539. READY. I. B. Kleinert Rubber Company. SN 60,833. Pub. 4–21–59. Filed 10–20–58.

681,540. CHIFFOM. California Forms, Inc. SN 61,258. Pub. 4–21–59. Filed 10–24–58.

681,541. GENTAPE. General Plastics Corporation. SN 61,284. Pub. 4–21–59. Filed 10–24–58.

681,542. LIVE-LACE. Pepperell Braiding Company Incorporated. SN 61,586. Pub. 4–21–59. Filed 10–29–58.

Class 41—Canes, Parasols, and Umbrellas

681,543. RAINBOW. Colon Umbrella-Parasol Co. SN 23,129. Pub. 4–21–59. Filed 1–24–57.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

681,544. KILCAR AND DESIGN. Gaeltarra Eireann. SN 9,807. Pub. 4–21–59. Filed 6–7–56.

681,545. DESIGN OF FAIRY. Joseph Bancroft & Sons Co. SN 40,201. Pub. 4–21–59. Filed 11–7–57.

681,546. CROMBIE. J. & J. Crombie Limited. SN 42,765. Pub. 4–21–59. Filed 12–20–57.

681,547. JANUS. Deering, Milliken & Co. Inc. SN 51,977. Pub. 4–21–59. Filed 5–19–58.

681,548. AQUA VISA. Deering, Milliken & Co. Inc. SN 51,978. Pub. 4–21–59. Filed 5–19–58.

681,549. LEG BEAR. Charles A. Mureau. SN 56,035. Pub. 4–21–59. Filed 7–25–58.

681,550. SQUARE BEAR. Charles A. Mureau. SN 56,036. Pub. 4–21–59. Filed 7–25–58.

681,551. ACRI-CORD. Dyersburg Cotton Products, Inc. SN 60,490. Pub. 4–21–59. Filed 10–13–58.

681,552. THORN CRAFT. Thorndike Mills, Inc. SN 60,697. Pub. 4–21–59. Filed 10–15–58.

681,553. THORNGLO. Thorndike Mills, Inc. SN 60,698. Pub. 4–21–59. Filed 10–15–58.

681,554. THORNDALE. Thorndike Mills, Inc. SN 60,690. Pub. 4–21–59. Filed 10–15–58.

681,555. PREVIEW. Monarch Rug Mills, Inc. SN 61,068. Pub. 4–21–59. Filed 10–21–58.

681,556. STERIL-FOAM. Triangle Manufacturing Company. SN 61,221. Pub. 4–21–59. Filed 10–23–58.

Class 43—Thread and Yarn

681,557. MYPACA. Clarence L. Meyers & Co. SN 60,823. Pub. 4–21–59. Filed 10–10–58.

681,558. SOF-BRITE. Bear Brand Hosiery Co. SN 60,795. Pub. 4–21–59. Filed 10–17–58.

Class 44—Dental, Medical, and Surgical Appliances

681,559. SLIM-CYCLE. Clifford R. Arnold, d.b.a. Arnold Health Equipment Company. SN 40,921. Pub. 7–1–58. Filed 11–19–57.

681,560. HOT AND DESIGN. Dr. Federico Wehrli. SN 41,871. Pub. 4–21–59. Filed 12–5–57.

681,561. SURGIDENT. Surgident, Ltd. SN 44,849. Pub. 4–21–59. Filed 1–28–58.

681,562. AMSCO. American Sterilizer Company. SN 51,408. Pub. 4–21–59. Filed 5–12–58.

681,563. FOLPAK AND DESIGN. Gordon E. Carraway, d.b.a. Twirl-A-Suture Mfg. Co. SN 53,580. Pub. 4–21–59. Filed 6–16–58.

681,564. ELECTRICATOR. Engelhard Industries, Inc. SN 58,712. Pub. 4–21–59. Filed 9–10–58.

681,565. MAGNETROL. The Fargo Corporation. SN 62,002. Pub. 4–21–59. Filed 11–6–58.

681,566. EPOXOLON. Surgident, Ltd. SN 62,236. Pub. 4–21–59. Filed 11–10–58.

681,567. CAREFREE. Personal Products Corporation. SN 62,700. Pub. 4–21–59. Filed 11–18–58.

681,568. STEPHAN. Crescent Dental Manufacturing Company. SN 63,003. Pub. 4–21–59. Filed 11–24–58.

Class 45—Soft Drinks and Carbonated Waters

681,569. H AND D AND DESIGN. The Red Rock Corporation. SN 43,554. Pub. 4–21–59. Filed 1–7–58.

681,570. BRIO. Pure Spring (Canada) Limited, assignee of Stock Products, Inc. SN 55,539. Pub. 4–21–59. Filed 7–17–58.

Class 46—Foods and Ingredients of Foods

681,571. SUSSY'S. Sussy's Frozen Italian and Exotic Foods, Inc. SN 35,301. Pub. 4–21–59. Filed 8–9–57.

681,572. R. Ryette Company. SN 40,883. Pub. 4–21–59. Filed 11–18–57.

681,573. STARDUST. Limpert Brothers, Incorporated. SN 43,038. Pub. 4–21–59. Filed 12–26–57.

681,574. OLD HOMESTEAD. Corn Products Company, by merger from The Best Foods, Inc. SN 43,524. Pub. 4–21–59. Filed 1–7–58.

681,575. JULIUS MEINL ETC. AND DESIGN. Julius Meinl Aktiengesellschaft. SN 46,625. Pub. 4–21–59. Filed 2–26–58.

681,576. FF DELUXE ETC. AND DESIGN. Food Fair Stores, Inc. SN 46,718. Pub. 4–21–59. Filed 2–27–58.

681,577. GOURMANDISE. Alfred Schratter, d.b.a. The Schratter Import Co. SN 46,854. Pub. 4–21–59. Filed 2–28–58.

681,578. LICO-LOGS. Geo. Bassett & Co. Limited. SN 47,094. Pub. 4–21–59. Filed 3–5–58.

681,579. ESPADA. O. H. Lanier. SN 47,767. Pub. 4–21–59. Filed 3–14–58.

681,580. SUPER PIG. Arthur B. Maurer, assignee of Maurer-Neuer Meat Packers. SN 47,877. Pub. 4–21–59. Filed 3–17–58.

681,581. "SONNETS." Robertson & Woodcock Ltd. SN 52,432. Pub. 4–21–59. Filed 5–27–58.

681,582. OLD MISSION. A. Arena & Co., Ltd. SN 53,005. Pub. 4–21–59. Filed 6–6–58.

681,583. NUGGET. Frank M. Wilson Company. SN 58,283. Pub. 4–21–59. Filed 7–29–58.

681,584. SMOKESHIRE. Continental Specialties Co., Inc. SN 56,693. Pub. 4–21–59. Filed 8–6–58.

681,585. PAJIMAR. Pajimar, Inc. SN 57,564. Pub. 4–21–59. Filed 8–20–58.

681,586. HERITAGE. Fine Products Corporation. SN 57,609. Pub. 4–21–59. Filed 8–21–58.

681,587. COURIER. Fine Products Corporation. SN 57,610. Pub. 4–21–59. Filed 8–21–58.

681,588. EVERBEST. The Maryland Baking Company, d.b.a. Maryland Baking Co., Inc. SN 58,309. Pub. 4–21–59. Filed 9–3–58.

681,589. CHEESECUIT. Cheesecuit Limited. SN 58,402. Pub. 4–21–59. Filed 9–5–58.

681,590. GOLDEN DIPT. Meletio Company. SN 58,741. Pub. 4–21–59. Filed 9–10–58.

681,591. MIRA-JEL. A. E. Staley Manufacturing Company. SN 59,999. Pub. 4–21–59. Filed 10–2–58.

681,592. D-12. R. T. Vanderbilt Company, Inc. SN 60,779. Pub. 4–21–59. Filed 10–16–58.

681,593. LAZY DAYS. Jack Pope Fullilove, Jr., d.b.a. Fullilove Farms. SN 60,812. Pub. 4–21–59. Filed 10–17–58.

681,594. SUMMER ISLES. California Packing Corporation. SN 61,030. Pub. 4–21–59. Filed 10–21–58.

681,595. COMET. Comet Rice Mills. SN 61,032. Pub. 4–21–59. Filed 10–21–58.

681,596. KING CHEF. American Home Products Corporation, d.b.a. American Home Foods. SN 61,245. Pub. 4–21–59. Filed 10–24–58.

Class 47—Wines

681,597. ZIZZ. Schenley Industries, Inc. SN 61,231. Pub. 4–21–59. Filed 10–23–58.

681,598. OLD SAN FRANCISCO. Wine Growers Guild, d.b.a. Ceremony Wine Cellars. SN 61,462. Pub. 4–21–59. Filed 10–27–58.

681,599. SILVER SPUR. United Vintners, Inc., d.b.a. Petri Wineries. SN 61,751. Pub. 4–21–59. Filed 10–31–58.

681,600. CANASTA. Williams & Humbert, Limited. SN 62,123. Pub. 4–21–59. Filed 11–7–58.

Class 49—Distilled Alcoholic Liquors

681,601. TRAFALGAR. Mr. Boston Distiller Inc. SN 60,232. Pub. 4–21–59. Filed 10–7–58.

681,602. COFFEE COUNTY. Schenley Distillers, Inc. SN 61,212. Pub. 4–21–59. Filed 10–23–58.

Class 50—Merchandise Not Otherwise Classified

681,603. POROTHENE. The Electric Storage Battery Company. SN 50,780. Pub. 4–21–59. Filed 5–1–58.

681,604. TRAILER TREE. Maynard S. Grunder, d.b.a. Northwest Leaf Products Co. SN 54,036. Pub. 4–21–59. Filed 6–23–58.

681,605. TENDER CARE. Delphi Products Company, Inc. SN 59,454. Pub. 4–21–59. Filed 9–24–58.

681,606. LADDER-CADDY. Edwin H. Dammeyer, d.b.a. B D & D Mfg. Co. SN 60,805. Pub. 4–21–59. Filed 10–17–58.

681,607. BOARD OF EDUCATION. Thomas S. Duff. SN 61,037. Pub. 4–21–59. Filed 10–21–58.

681,608. PP PALMER PANN CORP. AND DESIGN. Palmer Pann Corporation. SN 61,322. Pub. 4–21–59. Filed 10–24–58.

Class 51—Cosmetics and Toilet Preparations

681,609. 'GALA' "EL MOROCCO" AND DESIGN. El Morocco Corporation, assignee, by mesne assignment, of Geoffrey M. T. Jones. SN 12,632. Pub. 4–21–59. Filed 7–23–56.

681,610. SILK SHEEN. Helena Rubinstein, Inc. SN 29,956. Pub. 4–21–59. Filed 5–13–57.

681,611. COSMEDICAKE. Kay Preparations Co. SN 36,083. Pub. 4–21–59. Filed 8–23–57.

681,612. SUDDEN YOUTH. Julie Kellar. SN 49,699. Pub. 4–21–59. Filed 4–15–58.

681,613. PAU. Browny of Honolulu, Ltd. SN 53,693. Pub. 4–21–59. Filed 6–17–58.

681,614. TOPPS. Brown Laboratories, Incorporated. SN 56,385. Pub. 2–17–59. Filed 7–31–58.

Class 52—Detergents and Soaps

681,615. ONE DER AND DESIGN. Surf Chemical Corporation. SN 699,932. Pub. 4–21–59. Filed 12–13–55.

681,616. EASY BRIGHT. Blue Magic, Inc. SN 58,008. Pub. 4–21–59. Filed 8–28–58.

681,617. GAHNS. Henrik Gahns Aktiebolag. SN 58,285. Pub. 4–21–59. Filed 9–3–58.

681,618. IODET. The Du Bois Co., Inc. SN 59,524. Pub. 4–21–59. Filed 9–25–58.

681,619. N-DIT. J. I. Holcomb Manufacturing Company, Inc. SN 61,631. Pub. 4–21–59. Filed 10–30–58.

Service Marks

Class 101—Advertising and Business

681,620. ITEMS UNLIMITED AND DESIGN. James R. Bauguess, d.b.a. Items Unlimited Club. SN 45,851. Pub. 4–21–59. Filed 2–14–58.

Class 105—Transportation and Storage

681,621. GOLDEN ARROW SERVICE. Continental Air Lines, Inc. SN 54,208. Pub. 4–21–59. Filed 6–25–58.

Class 106—Material Treatment

681,622. PERMABRUSH. Oxford Textile Finishing Co., Inc. SN 46,563. Pub. 4–21–59. Filed 2–25–58.

Class 107—Education and Entertainment

681,623. COMEX. Crosley Broadcasting Corporation. SN 29,437. Pub. 4–21–59. Filed 5–6–57.

681,624. THE BIG PICTURE AND DESIGN. Department of the Army. SN 42,637. Pub. 4–14–59. Filed 12–18–57.

Collective Membership Marks

Class 200

681,625. AMERICAN INSTITUTE OF ULTRASONICS IN MEDICINE. American Institute of Ultrasonics in Medicine. SN 14,206. Pub. 4–21–59. Filed 8–20–56.

681,626. ASSN. OF SHRINE MOTOR CORPS AND DESIGN. Association of Shrine Motor Corps. SN 43,806. Pub. 4–21–59. Filed 1–13–58.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 10—Fertilizers

681,627. Frank Goldthwaite, d.b.a. Goldthwaite's Texas Toro Co., Fort Worth, Tex. SN 61,179. Filed 10–23–58.

GOLDTHWAITE'S GARDENERS SPECIAL

For Fertilizer.
First use Apr. 20, 1957.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

681,628. General Aluminum Supply Company, Kansas City, Mo. SN 51,448. Filed P.R. 5–12–58. Am. S.R. 4–29–59.

The words "Aluminum Elbows" are disclaimed apart from the mark as shown.
For Jackets for Enclosing Insulation on Pipes.
First use Dec. 6, 1957.

681,629. Harold S. Hilton, d.b.a. Hilton Products Company, Seattle, Wash. SN 55,673. Filed P.R. 7–21–58; Am. S.R. 4–30–59.

HILTON

For Fluid Flow Control Valves.
First use Aug. 30, 1956.

Class 18—Medicines and Pharmaceutical Preparations

681,630. Weco Products Company, Chicago, Ill. SN 27,360. Filed P.R. 4–1–57; Am. S.R. 1–12–59.

HEAL 'N' SEAL

For Liquid Plastic Antiseptic Dressing for Wounds.
First use Feb. 26, 1957.

Class 30—Crockery, Earthenware, and Porcelain

681,631. The Hope Chest Company, Inc., Minneapolis, Minn. SN 55,674. Filed P.R. 7–21–58; Am. S.R. 4–27–59.

CATALINA

For Dinnerware Made of China.
First use on or before Nov. 15, 1955.

Class 37—Paper and Stationery

681,632. Curtis 1000, Incorporated, West Hartford, Conn. SN 29,791. Filed P.R. 5–10–57; Am. S.R. 5–11–59.

"TUCK-N-MAIL"

For Mailing Envelopes of Paper.
First use Apr. 1, 1957.

Class 38—Prints and Publications

681,633. St. Regis Publications, Inc., New York, N.Y. SN 33,439. Filed P.R. 7–9–57; Am. S.R. 5–11–59.

High Fidelity
TRADE NEWS

For Monthly Magazine.
First use Jan. 1, 1957.

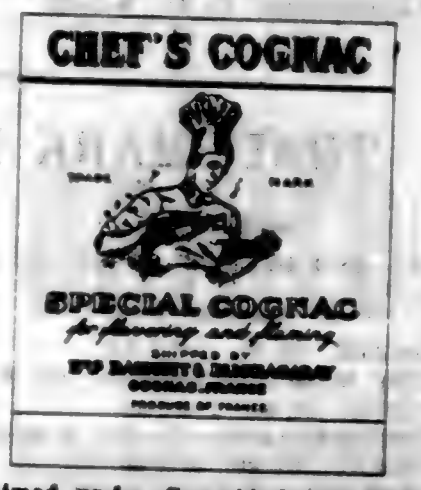
Class 46—Feeds and Ingredients of Feeds

681,634. A. E. Staley Manufacturing Company, Decatur, Ill. SN 36,541. Filed P.R. 8–30–57; Am. S.R. 5–4–59.

The drawing is lined for red, but no claim is made to color as a feature of the mark.
For Soybean Oil Meal Used as a Feed for Livestock.
First use Mar. 2, 1957.

Class 49—Distilled Alcoholic Liquors

681,635. Société Anonyme: Etablissements Barnett & Ellchagaray, Cognac, Charente, France. SN 49,726. Filed P.R. 4–11–58; Am. S.R. 3–16–59.



Priority claimed under Sec. 44(d) on French Reg. No. 13,734, dated Feb. 12, 1958 (Cognac); Natl. Inst. No. 108,487.
For Flavoring and Flaming Brandies.

681,636. Reid Wright & Holloway (Distillers) Limited, London, England. SN 52,764. Filed P.R. 6–2–58; Am. S.R. 5–25–59.

Owner of British Reg. No. 770,580, dated Oct. 29, 1957; and U.S. Reg. No. 306,810.
For London Dry Gin.
First use May 5, 1958; in commerce May 5, 1958.

TRADEMARK REGISTRATIONS RENEWED

125,358. LACONIA 250. Cl. 42. 5–13–19.
125,991. WONDERSPUN. Cl. 42. 7–22–19.
126,125. APOLLO AND DESIGN. Cl. 14. 7–29–19.
126,244. MO-KO. Cl. 46. 8–19–19.
126,400. BUTTERFLY AND DESIGN. Cl. 39. 9–26–19.
126,640. TWO-IN-ONE. Cl. 37. 9–30–19.
126,941. PRESTOLOG. Cl. 26. 10–14–19.
127,059. HOOD. Cl. 39. 10–21–19.
127,084. ROCKBESTOS. Cl. 21. 10–21–19.
127,109. P AND DESIGN. Cl. 14. 10–21–19.
364,449. MERITONE. Cl. 50. 1–31–39.
364,450. NEPTONE. Cl. 50. 1–31–39.
366,122. GELOCAST. Cl. 44. 3–28–39.
366,808. M.V.M. AND DESIGN. Cl. 18. 5–2–39.

366,844. CAL-MAG-NA. Cl. 16. 5-2-39.
366,910. TRAP-ADOR. Cl. 8. 5-2-39.
366,974. WEMBLEY AND DESIGN. Cl. 39. 5-2-39.
367,025. DRILLMASTER. Cl. 21. 5-9-39.
367,496. DRAPEROY. Cl. 42. 5-16-39.
367,605. KROMFAX. Cl. 6. 5-23-39.
367,718. BOTTIE BABE. Cl. 22. 5-30-39.
367,770. CORONET AND DESIGN. Cl. 2. 5-30-39.
367,869. MILLING PRODUCTION. Cl. 38. 5-30-39.
367,932. MERCEDES AND DESIGN. Cl. 35. 6-6-39.
368,104. PENEGLO. Cl. 6. 6-6-39.
368,196. TWO TONE NIB. Cl. 37. 6-13-39.
368,207. CADET. Cl. 26. 6-13-39.
368,208. MERCEDES AND DESIGN. Cl. 34. 6-13-39.
368,257. KONQUEST. Cl. 22. 6-13-39.
368,407. MERCEDES AND DESIGN. Cl. 21. 6-20-39.
368,580. BLUE DIAMOND BRAND. Cl. 52. 6-27-39.
368,606. PERMAGLO. Cl. 42. 6-27-39.
368,730. LUCKY CAT AND DESIGN. Cl. 51. 6-27-39.
368,794. JUNIOR DEB. Cl. 22. 6-27-39.
368,851. SELECTED VATS. Cl. 42. 7-4-39.
368,916. CHROMAT. Cl. 26. 7-4-39.
369,025. THURMADUKE. Cl. 13. 7-11-39.
369,168. GUAI-A-PHENE. Cl. 6. 7-18-39.
369,197. MICK'S RHEUMATISM RUB AND DESIGN. Cl. 18. 7-18-39.
369,777. HIS EXCELLENCY. Cl. 27. 8-1-39.
369,778. HIS HIGHNESS. Cl. 27. 8-1-39.
369,812. ROCK-A-BYE. Cl. 22. 8-1-39.
369,901. LITTLE MAJESTY. Cl. 39. 8-8-39.
369,943. KROMOTONE. Cl. 26. 8-8-39.
370,074. YORPAL. Cl. 42. 8-15-39.
370,277. REPRESENTATION OF HERCULES. Cl. 1. 8-22-39.
370,278. HERCULES. Cl. 1. 8-22-39.
370,317. BIRTHSTONE. Cl. 27. 8-22-39.
370,318. PEG O' MY HEART. Cl. 27. 8-22-39.
370,701. CERFLEX. Cl. 37. 9-5-39.
370,767. PLI-CRAFT. Cl. 39. 9-5-39.
370,860. ALPHA. Cl. 39. 9-12-39.
371,140. GREEN ACRE. Cl. 46. 9-19-39.
371,327. HUSH-A-BYE. Cl. 22. 9-19-39.
371,435. ORTHOL. Cl. 6. 9-26-39.
371,457. SKILD CRAFT. Cl. 39. 9-26-39.
371,558. APRIS. Cl. 44. 9-26-39.
371,577. TRIOTEX. Cl. 2. 9-26-39.
371,637. FARMADE. Cl. 39. 10-3-39.
371,716. DOUBLE-DUTY. Cl. 11. 10-3-39.
371,746. READEX. Cl. 26. 10-3-39.
371,755. SUCCESS WITH ROSES. Cl. 38. 10-3-39.
371,925. CHEROKEE. Cl. 15. 10-17-39.
371,926. CONTEMPORA. Cl. 21. 10-17-39.
371,965. SUPERBA. Cl. 43. 10-17-39.
371,983. PLATEAU WORSTEDS. Cl. 42. 10-17-39.
372,137. LIFTIES. Cl. 6. 10-24-39.
372,172. VERITAS. Cl. 18. 10-24-39.
372,224. HYGEA. Cl. 1. 10-24-39.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

582,707. RUBY AND DESIGN. Cl. 37. 11-24-53.

Section 8

87,859. SAXOLITE. Cl. 51. 8-13-12.
150,166. BETSY ROSS AND DESIGN. Cl. 46. 12-27-21.
301,376. EUROPA. Cl. 46. 2-28-33.
375,541. BELPHEDRIBARB. Cl. 18. 2-20-40.
380,026. LULLABY. Cl. 46. 8-6-40.
381,004. IOZANTHAL. Cl. 18. 9-10-40.
394,351. DOVASAC. Cl. 18. 3-31-42.
394,374. DUOSULFON. Cl. 18. 3-31-42.
412,011. ALINESE. Cl. 18. 2-13-45.

The following registrations issued May 19, 1953

574,472. HOE'S CELEBRATED SAUCE ETC. AND DESIGN. Cl. 46.
574,474. CLOVERLAND. Cl. 46.
574,475. FLAVO-FRESH. Cl. 46.
574,476. PICNIC SWEETS. Cl. 46.
574,482. PARROT DESIGN. Cl. 16.
574,484. PACKARD. Cl. 52.
574,488. BEAN. Cl. 23.
574,491. PADDOCK PECOT POOLS AND DESIGN. Cl. 12.
574,496. SENTINEL. Cl. 44.
574,509. GERBER'S AND DESIGN. Cl. 46.
574,512. TIDYSKIN AND DESIGN. Cl. 51.
574,514. POCKET BOOK, JR., AND DESIGN. Cl. 38.
574,520. FRAT HOUSE. Cl. 46.
574,525. FIVE STAR AND REPRESENTATION OF 5 STARS. Cl. 46.
574,528. MERCURY COMPOUND ETC. AND DESIGN. Cl. 4.
574,530. SUMMIT. Cl. 23.
574,533. CRINOLINE. Cl. 37.
574,535. BLOSSOM BOUQUET. Cl. 13.
574,537. AMPHITRITE MARINE CO. Cl. 19.
574,539. SPE-DE-SHYNE. Cl. 4.
574,541. S & A CO. LD AND DESIGN. Cl. 46.
574,543. SYNC. Cl. 26.
574,544. KEESET. Cl. 42.
574,545. HORSE SHOE FOR LUCK AND DESIGN. Cl. 46.
574,557. LITTLE RED SCHOOL HOUSE ETC. AND DESIGN. Cl. 46.
574,559. PYROBLENDER. Cl. 13.
574,560. EUREKA AND DESIGN. Cl. 22.
574,561. MYSTIC NET. Cl. 51.
574,565. DEAN WOODWALL AND DESIGN. Cl. 12.
574,577. CLOROSIN. Cl. 46.
574,578. LILI-RICH. Cl. 46.
574,580. BOATEX. Cl. 44.
574,581. DRYDOCK. Cl. 44.
574,582. LIFEBOAT. Cl. 44.
574,583. TALLBOAT. Cl. 44.
574,588. PERSYLMA. Cl. 18.
574,590. LEKTR O PAK. Cl. 8.
574,594. KON-TIKI. Cl. 38.
574,596. ARLITE. Cl. 12.
574,597. PINO GIN. Cl. 22.
574,601. "LILLIPUTS." Cl. 12.
574,607. MOULD-TECK. Cl. 44.
574,608. BK AND DESIGN. Cl. 5.
574,612. DALLAS SMITH. Cl. 32.
574,617. JIM JON. Cl. 22.
574,618. TEE-A-EFF. Cl. 42.
574,622. KIDDY KADDY. Cl. 13.
574,627. KLOK CRAFTSMAN GUILD DESIGN. Cl. 32.
574,628. ROTO BLAST. Cl. 23.
574,629. KAYDET. Cl. 42.
574,633. CYCLEWELD. Cl. 12.
574,637. ELITE CHAMOIS AND DESIGN. Cl. 1.
574,641. GENIE CRAFT WORKS LIKE MAGIC AND DESIGN. Cl. 13.
574,643. TERRYROLLS. Cl. 39.
574,644. CHIPPAMAT AND DESIGN. Cl. 37.
574,645. "PRESSON." Cl. 38.
574,655. COLONIAL. Cl. 39.
574,656. OUTLOOK. Cl. 39.
574,657. CRUSADER FROM MARS. Cl. 38.
574,658. WEIRD THRILLERS. Cl. 38.
574,660. LAMPLIGHTER. Cl. 26.
574,664. FLO. WEIGHT. Cl. 44.
574,671. MYSTERY PRINCE. Cl. 22.
574,680. WA GENUINE NYLON AND DESIGN. Cl. 29.
574,682. NYLOPUFF. Cl. 42.
574,690. "GLAMOUR-GLOVE." Cl. 39.
574,693. IPSO FATSO. Cl. 37.
574,705. PRINCESS GAIL. Cl. 39.
574,709. FEDERAL. Cl. 13.
574,710. MY-LOCKS. Cl. 22.
574,711. LORDCASTLE. Cl. 39.
574,713. Q.A. #25. Cl. 6.
574,721. CROMWELL. Cl. 31.
574,723. WINDSOR FELT AND DESIGN. Cl. 31.
574,734. FRANCIS—THE TALKING MULE. Cl. 38.
574,735. THE BUDGETEER. Cl. 32.
574,740. WINNERS CIRCLE. Cl. 22.

574,743. BEAGID. Cl. 6.
574,745. DRAWIRIT. Cl. 6.
574,749. ESPERANTO. Cl. 42.
574,750. VOODOO. Cl. 42.
574,755. RGV. Cl. 13.
574,756. AMLON. Cl. 42.
574,760. STAYCIN. Cl. 6.
574,762. REPRESENTATION OF FANCIFUL CHARACTER. Cl. 6.
574,764. DAGANO. Cl. 46.
574,765. LITTLE DORRIT. Cl. 46.
574,771. STRIETTE. Cl. 42.
574,776. SYNTUSSA. Cl. 43.
574,784. MOTHPROTEXED. Cl. 106.
574,790. ITSADUZZY. Cl. 22.
574,794. THREE FOR TWO 342 AND DIAMOND DESIGN. Cl. 26.
574,795. TURKI-JACKET AND DESIGN. Cl. 50.

Section 15

310,202. SKYSCRAPER AND DESIGN. Cl. 46. 2-13-34.
395,520. CHAMPLIN'S LIQUID PEARL. Cl. 6. 5-26-42.
400,207. TALK-A-LETTER. Cl. 36. 2-16-43.
429,079. VOGUE. Cl. 36. 4-15-47.
444,529. MEDICO AND DESIGN. Cl. 51. 7-17-51.
534,855. LORD MAXWELL. Cl. 45. 5-2-50.
546,032. BLACK PANTHER. Cl. 6. 7-31-51.
546,051. BLACK PANTHER. Cl. 6. 7-31-51.
583,603. ROMA TEX BRIX. Cl. 12. 12-15-53.
597,087. KEN-GLO AND DESIGN. Cl. 22. 10-19-54.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

149,891. CONTINENTAL. Cl. 2. 12-7-21. Continental Paper & Bag Mills. International Paper Company, New York, N.Y. Amended: In the certificate, line 10, and in the statement, column 1, line 9, before "egg" *and* is inserted; in the certificate, lines 10 and 11, "and merchandise-envelops" is deleted, and in the statement, column 1, line 9, "and merchandise-envelops" is deleted.

299,928. SPEEDIBILLER. Cl. 23. 1-3-33. American Sales Book Company, Limited. Moore Business Forms, Inc., Niagara Falls, N.Y. Amended to appear:

SPEEDIBILLER

421,818. STEROX. Cl. 4. 6-19-46. Monsanto Chemical Company, St. Louis, Mo. Amended: In the statement, column 1, line 7, "solid" is deleted.

575,823. DRYSHOD. Cl. 39. 6-16-53. United States Rubber Company, New York, N.Y. Amended to appear:

DRYSHOD

584,813. OAKITE AND DESIGN. Cl. 52. 1-19-54. Oakite Products, Inc., New York, N.Y. Amended: In the statement, column 2, lines 2, 3, and 4, "the lower panel being broken by a white parallelogram-and-arrow device in the lower right hand corner" is deleted, and the drawing is amended to appear:

oakite

652,818. LITTLE RED BARN AND DESIGN. Cl. 46. 10-6-57. Edwin H. Eichler, doing business as E. H. Eichler, Dundee, Ill. Amended: In the certificate, column 2, line 5, "grape jelly" is deleted and before "pre" *and* is inserted, and line 6, "and fresh apples" is deleted.

670,849. FPE AND DESIGN. Cl. 21. 12-9-58. Federal Pacific Electric Company, Newark, N.J. Amended to appear:

FPE

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 6—Chemicals and Chemical Compositions

369,462. July 25, 1939. E. I. du Pont de Nemours and Company, Wilmington, Del. Pub. by registrant.

BUTACITE

For Polyvinyl Acetal Resins.

Class 11—Inks and Inking Materials

366,850. May 2, 1939. E. I. du Pont de Nemours and Company, Wilmington, Del. Pub. by registrant.

DU PONT

For Ink Pigments.

Class 12—Construction Materials

416,548. Sept. 18, 1945. Douglas Fir Plywood Association, Tacoma, Wash. Pub. by registrant.

SILVALOCK
PLYWOOD
SHEATHING

For Plywood Sheathing.

Class 14—Metals and Metal Castings and Forgings

366,561. Apr. 18, 1939. The United States Smelting Refining and Mining Company, Boston, Mass. Pub. by registrant.

For Zinc in Slabs or Pigs.

TM 44

442,176. Mar. 8, 1949. National Cast Products Company, to National Cast Products Company, Inc., Providence, R.I. Pub. by National Cast Products Company, Inc., Providence, R.I.

NATIONAL CAST PRODUCTS

For Unfinished or Partly Finished Precision Castings for Jewelers, Silversmiths, and Model Makers.

442,177. Mar. 8, 1949. National Cast Products Company, to National Cast Products Company, Inc., Providence, R.I. Pub. by National Cast Products Company, Inc., Providence, R.I.

For Unfinished Castings of Precious and Non-Precious Metals.

Class 18—Medicines and Pharmaceutical Preparations

365,342. Mar. 7, 1939. C.S.O. Laboratories, Dallas, Tex. Pub. by Carbisulphoil Company, Dallas, Tex.

FOILLE

For Medical Emulsion for External Application for Burns and Affections of the Skin.

Class 19—Vehicles

364,872. Feb. 14, 1939. Rolls-Royce Limited, Derby, England. Pub. by registrant.

PHANTOM

For Automobiles.

364,873. Feb. 14, 1939. Rolls-Royce Limited, Derby, England. Pub. by registrant.

WRAITH

For Automobiles.

Class 20—Linoleum and Oiled Cloth

371,674. Oct. 3, 1939. Samuel D. Moore, d.b.a. Sam Moore & Co., Cleveland, Ohio. Pub. by Samuel Moore & Company, Mantua, Ohio.

RUB-BUB

For Composition Flooring and Step Tread Coverings of the Linoleum Type.

Class 21—Electrical Apparatus, Machines, and Supplies

319,475. Nov. 27, 1934. Monark Battery Company, Inc., Chicago, Ill. Pub. by Price Battery Corporation, Hamburg, Pa.

CHALLENGER

For Storage Batteries.

429,776. May 20, 1947. Radio Receptor Company, Inc., New York, N.Y. Pub. by Willcox & Gibbs Sewing Machine Company, New York, N.Y.

Thermatron

For Electronic High Frequency Generators for Heating Dielectric Materials, and Other Equipment.

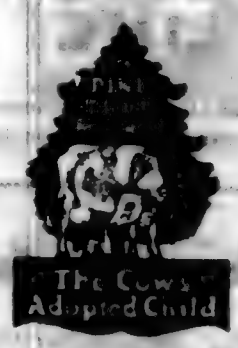
Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

125,437. May 20, 1919. C. & J. Hampton Limited, Sheffield, England. Pub. by registrant.

RECORD

For Vises.

125,500. May 20, 1919. Pine Tree Milking Machine Co., Chicago, Ill. Pub. by Babcock Bros. Co., Chicago, Ill.



For Milking Machines.

193,088. Dec. 16, 1924. The Cushman Chuck Company, Hartford, Conn. Pub. by registrant.

CUSHMAN

For Chucks.

389,980. Aug. 8, 1939. Hewitt Rubber Corporation, Buffalo, N.Y. Pub. by Hewitt-Robins Incorporated, New York, N.Y.

DURA-BOND

For Rubber Covered Rolls and Pulleys and Motor Mountings Made of Metal With Rubber Vulcanized Thereto.

Class 28—Jewelry and Precious-Metal Ware

222,781. Jan. 11, 1927. Schlees-Harwood Co., New York, N.Y. Pub. by Feature Ring Co., Inc., New York, N.Y.

ACCEPTANCE

For Finger Rings.

399,084. Dec. 15, 1942. Cohn & Rosenberger, Inc., New York, N.Y. Pub. by Coro, Inc., New York, N.Y.

For Necklaces and Bracelets, Finger Rings, Earrings, Jewelry Clips, Brooches, Lockets and the Following Goods Made in Whole or in Part of Precious Metal or Plated With the Same: Beads, Pins, Hat Ornaments, Hair Ornaments, Holders for Face Powder Compacts, Comb Cases, Cigarette Cases, Cigarette Boxes, Fancy Buckles, and Jewelry Initials.

Class 34—Heating, Lighting, and Ventilating Apparatus

417,346. Oct. 23, 1949. The Vulcan Radiator Company, Hartford, Conn. Pub. by registrant.

VULCAN-HARTFORD

For Heating Radiator Units Comprised of Metal Pipes or Tubes Upon Which Thin Radiating Plates or Fins Are Fastened and Radiating Fins for the Same.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

360,828. Aug. 1, 1939. International Metallic Packing Corporation, Chicago, Ill. Pub. by registrant.

For Metallic Packing.

Class 39—Clothing

361,431. Oct. 18, 1938. J. Schoeneman, Inc. (Maryland corporation), Baltimore, Md. Pub. by J. Schoeneman, Inc. (Delaware corporation), Baltimore, Md.

For Coats, Vests and Trousers for Men, Youths, and Boys.

369,616. Aug. 1, 1939. Herbert George Myers, d.b.a. My-Len Sales Company, Chicago, Ill. Pub. by My-Len Wholesale Distributors, Inc., Chicago, Ill.

For Hosiery.

Class 40—Fancy Goods, Furnishings, and Notions

364,772. Feb. 14, 1939. Mervin Wave Clip Co., Inc., New York, N.Y. Pub. by Gaylord Products, Incorporated, Chicago, Ill.

For Non-Electrical Hair Wavers.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

94,149. Nov. 11, 1913. American Felt Company, Glenville, Conn. Pub. by registrant.

For Felt in the Piece.

288,359. Oct. 27, 1931. I. B. Kleinert Rubber Company, New York, N.Y. Pub. by registrant.

SOFTEX

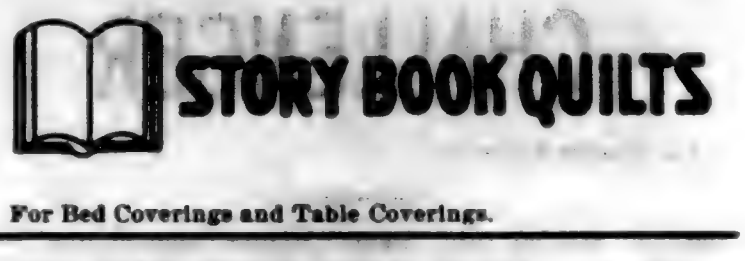
For Shower Curtains and Window Drapes in Sets of Waterproofed Fabrics.

367,226. May 9, 1939. Cold Spring Bleachery, Yardley, Pa. Pub. by registrant.

SPUNDURIZED

For Spun Rayon in the Piece and Spun Rayon Mixtures.

390,694. Sept. 30, 1941. Marion W. Newton, New York, N.Y. Pub. by registrant.



For Bed Coverings and Table Coverings.

Class 43—Thread and Yarn

369,479. July 25, 1938. E. I. du Pont de Nemours and Company, Wilmington, Del. Pub. by registrant.

For Thread and Yarn.

Class 45—Soft Drinks and Carbonated Waters

369,889. Aug. 8, 1939. Seminole Flavor Company, Chattanooga, Tenn. Pub. by registrant.

THE DOUBLE LINE

For Carbonated, Nonalcoholic, Noncereal, Maltless Beverages Solds as Soft Drinks, and Syrups for Compounding the Same.

Class 46—Foods and Ingredients of Foods

28,095. Apr. 7, 1896. The Capital City Dairy Company, Columbus, Ohio. Pub. by The Capital City Products Company, Columbus, Ohio.

Buckeye

For Oleomargarine.

209,079. Feb. 16, 1926. Chili Products Corporation, Los Angeles, Calif. Pub. by Chili Products Corporation Ltd., Los Angeles, Calif.

PIMIEXO

For Dry Sweet Pepper in Flaked and Powdered Form.

301,811. Mar. 14, 1933. Deerfoot Farms Company, Southboro, Mass. Pub. by Hygrade Food Products Corporation, Detroit, Mich.

For Sausages, Sausage Meat, Bacon, and Lard.

364,285. Jan. 24, 1939. The West Indian Produce Association, Limited, London, England. Pub. by Davison Newman & Company, Limited, London, England.

BAWSTONABA

For Tea.

365,166. Feb. 28, 1939. Polar Ice Cream and Creamery Company, Inc., Pensacola, Fla. Pub. by registrant.

BANK ACCOUNTS

For Ice Cream Bars and Candy Bars.

367,779. May 30, 1939. George W. Horner and Company, Limited, Chester-le-Street, England. Pub. by registrant.

For Toffee, Chocolate Covered Toffee, and Boiled Sweets—Namely, Candy.

367,780. May 30, 1939. George W. Horner and Company, Limited, Chester-le-Street, England. Pub. by registrant.

For Toffee, Chocolate Covered Toffee, and Boiled Sweets—Namely Candy.

369,056. July 11, 1939. Shawnee Milling Company, Shawnee, Okla. Pub. by registrant.

For Poultry Feeds, Mill Feeds, Dairy Feeds, Horse and Mule Feeds.

399,207. Dec. 22, 1942. Giumarra Bros., Bakersfield, Calif. Pub. by registrant.

For Fresh Deciduous Fruits and Vegetables.

441,835. Jan. 18, 1949. Chili Products Corporation Ltd., Los Angeles, Calif. Pub. by registrant.

DON

For Chili Powder, Chili Peppers (Ground), Chili Peppers (Whole Pods), Ground or Flaked Dehydrated Onion, Ground or Flaked Dehydrated Garlic, Paprika, and Spices.

Class 49—Distilled Alcoholic Liquors

364,982. Kraus Bros. & Co. Inc., New York, N.Y. Pub. by Vera Zwack, executrix of the estate of Jean Zwack, deceased, New York, N.Y.

ZWACK

For Alcoholic Liqueurs, Bitters, and Brandies.

Class 51—Cosmetics and Toilet Preparations

387,283. May 13, 1941. Hylo Company, Incorporated, Houston, Tex. Pub. by Hylo Company, Inc. of Houston, Houston, Tex.

Joy Suds

For Preparation Used in the Bath Having Water Softening and Skin Beautifying Properties.

Class 52—Detergents and Soaps

375,850. Mar. 5, 1940. Hyle Company, Incorporated, Houston, Tex. Pub. by Hyle Company, Inc. of Houston, Houston, Tex.

HyLo

For Cleaning Compounds for General Household Cleaning Purposes.

395,735. June 9, 1942. Carhoff Company, Cleveland, Ohio. Pub. by registrant.

NO-FOG

For Preparation for Use on Glass, Lenses, Reflectors, Windshields, Goggles, Physicians' or Dentists' Instruments, Eye Glasses, Gas Masks, Windows, Mirrors and the Like, for Preventing the Formation of Fog, Steam, Frost, or Perspiration Thereon.

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Wynn, Clarence M.
Du Bois Co., Inc., The, Cincinnati, Ohio. 681,615, pub. 4–21–59. Cl. 52.
Duff, Thomas S., El Paso, Tex. 681,607, pub. 4–21–59. Cl. 50.
Duke Laboratories, Inc., South Norwalk, Conn. 366,122, ren. 7–7–59. Cl. 44.
Duke Mfg. Co., St. Louis, Mo. 369,025, ren. 7–7–59. Cl. 13.
Dumas Milner Corp., Jackson, Miss., from Taylor Laboratories, Inc., Houston, Tex. 681,387, pub. 4–21–59. Cl. 18.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 366,850, 12(c) pub. 7–7–59. Cl. 11.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 369,462, 12(c) pub. 7–7–59. Cl. 6.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 369,479, 12(c) pub. 7–7–59. Cl. 43.
Du Pont de Nemours, E. I., and Co., Wilmington, Del. 681,414, pub. 4–21–59. Cl. 20.
Dyersburg Cotton Products, Inc., Dyersburg, Tenn. 681,551, pub. 4–21–59. Cl. 42.
Dynacrafts, Inc., Glendale, Calif. 681,466, pub. 4–21–59. Cl. 31.
East Coast Millwork Co., Inc., Queens Village, N.Y. 681,356, pub. 4–21–59. Cl. 12.
Eclipse Fuel Engineering Co., Rockford, Ill. 681,361, pub. 4–21–59. Cl. 13.
Eichler, E. H.: *See*—
Eichler, Edwin H.
Eichler, Edwin H., d.b.a. E. H. Eichler, Dundee, Ill. 652,818. Am. 7(d). Cl. 46.
Elaine of Hollywood Brassiere Co., Los Angeles, Calif. 681,527, pub. 4–21–59. Cl. 39.
Electric Storage Battery Co., The, Philadelphia, Pa. 681,603, pub. 4–21–59. Cl. 50.

Electro Tec Corp., South Hackensack, N.J. 681,494, pub. 2–17–59. Cl. 38.
Electro-Technical Products, Inc., Nutley, N.J., to Sun Chemical Corp., New York, N.Y. 364,449, ren. 7–7–59. Cl. 50.
Electro-Technical Products, Inc., Nutley, N.J., to Sun Chemical Corp., New York, N.Y. 364,450, ren. 7–7–59. Cl. 50.
Elmerene Co., Chicago, Ill. 681,381, pub. 3–10–59. Cl. 15.
Emery Industries, Inc., Cincinnati, Ohio. 681,337, pub. 4–21–59. Cl. 6.
Empire Silk Co., Wilmington, Del., and New York, N.Y., to Burlington Industries, Inc., Greensboro, N.C. 125,991, ren. 7–7–59. Cl. 42.
Engelhard Industries, Inc., Newark, N.J. 681,364, pub. 4–21–59. Cl. 44.
Etablissements P. Chaumont, Paris, France. 681,518, pub. 4–21–59. Cl. 39.
Eternit Societe Anonyme, Kapelle-op-den-Bos, Belgium. 681,255, pub. 4–21–59. Cl. 12.
Europa Sales Corp., New York, N.Y. 301,376, canc. Cl. 46.
Fae Mfg. Co.: *See*—
Wentzel, Robert A.
Famous Products Co.: *See*—
Neumann, Morton G.
Fargo Corp., The, South Glastonbury, Conn. 681,565, pub. 4–21–59. Cl. 44.
Farmstead, Inc., New York, N.Y. 310,202, canc. Cl. 46.
Fawcett Publications, Inc., Greenwich, Conn. 681,508, pub. 4–21–59. Cl. 38.
Feature Ring Co., Inc.: *See*—
Schlese-Harwood Co.
Federal Fence Mfg. Co., Inc., Westerville, Ohio. 574,709, canc. Cl. 13.
Federal Pacific Electric Co., Newark, N.J. 670,849. Am. 7(d). Cl. 21.
Feed Service Corp., Crete, Nebr. 681,492, pub. 4–21–59. Cl. 38.
Fill-Rite Corp., New York, N.Y. 681,320, pub. 4–21–59. Cl. 2.
Fine Products Corp., Augusta, Ga. 681,586–7, pub. 4–21–59. Cl. 46.
Fireside Marshmallow Co., Chicago, Ill. 574,557, canc. Cl. 46.
Firestone Tire & Rubber Co., The, Akron, Ohio. 681,408, pub. 4–21–59. Cl. 19.
Fischer Film Laboratories, Chicago, Ill. 574,542, canc. Cl. 26.
Flagship Recording Co.: *See*—
Sarde, Vincent.
Flexicon Ltd., Bradford, York, England. 681,476, pub. 4–21–59. Cl. 35.
Flex-O-Glass, Inc., d.b.a. Warp Brothers, Chicago, Ill. 681,440, pub. 4–21–59. Cl. 22.
Flexonics Corp., Maywood, Ill. 681,368, pub. 4–21–59. Cl. 13.
Fonoscope Ltd., Bristol, England. 681,502, pub. 4–21–59. Cl. 38.
Food Fair Stores, Inc., Philadelphia, Pa. 681,576, pub. 4–21–59. Cl. 46.
Food Machinery and Chemical Corp., San Jose, Calif. 574,488, canc. Cl. 23.
Franklin Mfg. Co., Inc., Westmont, N.J. 681,424, pub. 4–21–59. Cl. 21.
Fullilove Farms: *See*—
Fullilove, Jack P., Jr.
Fullilove, Jack P., Jr., d.b.a. Fullilove Farms, Shreveport, La. 681,592, pub. 4–21–59. Cl. 46.
Futorian-Stratford Furniture Co., Chicago, Ill. 681,468, pub. 4–21–59. Cl. 32.
G. & R. Garment Mfg. Co., St. Louis, Mo. 681,520, pub. 4–21–59. Cl. 39.
Gaeltarra Eireann, Dublin, Ireland. 681,544, pub. 4–21–59. Cl. 42.
Gaylord Products, Inc.: *See*—
Mervin Wave Clip Co., Inc.
General Aluminum Supply Co., Kansas City, Mo. 681,628. Cl. 13.
General Binding Corp.: *See*—
Cercla, Inc.
General Electric Co., Bridgeport, Conn. 681,417, pub. 4–21–59. Cl. 21.
General Mills, Inc., d.b.a. Niagara Sponge, Buffalo, N.Y. 681,460, pub. 4–21–59. Cl. 20.
General Plastics Corp., Paterson, N.J. 681,541, pub. 4–21–59. Cl. 40.
General Publishing Co., Inc., Chicago, Ill. 681,509, pub. 4–21–59. Cl. 38.
Genie-Craft Corp., Washington, D.C. 574,641, canc. Cl. 13.
Gerber Products Co., Fremont, Mich. 574,509, canc. Cl. 46.
Germain's, Inc., Los Angeles, Calif. 681,299, pub. 4–21–59. Cl. 1.
Gethner, Max M., d.b.a. Peruvina Co. and Gethner Drugs, Chicago, Ill. 574,588, canc. Cl. 18.
Gidding, Joseph M., to Horseshoes, Inc., New York, N.Y. 574,545, canc. Cl. 46.
Gillett Canning Co., Gillett, to Country Gardens Inc., Milwaukee, Wis. 371,140, ren. 7–7–59. Cl. 46.
Gizmarra Bros., Bakersfield, Calif. 390,207, 12(c) pub. 7–7–59. Cl. 46.
Glidden Co., The, Cleveland, Ohio. 389,163, ren. 7–7–59. Cl. 6.
Gloeckler, H., Associates, Inc., New York, N.Y. 574,577, canc. Cl. 46.
Golden State Brush Co., North Hollywood, Calif. 574,680, canc. Cl. 29.
Goldthwaite, Frank, d.b.a. Goldthwaite's, Fort Worth, Tex. 681,627. Cl. 10.
Goldthwaite's: *See*—
Goldthwaite, Frank.
Goodheim Glove Co., Inc., Gloversville, N.Y. 681,524, pub. 4–21–59. Cl. 39.
Goodrich, B. F., Co.: *See*—
Hood Rubber Co.
Goodrich, B. F., Co., The, Akron, Ohio. 681,212, pub. 4–21–59. Cl. 2.
Gowen, Howerton, Co., Inc., Roanoke Rapids, to R. D. Smith, Jr., Sanford, N.C. 546,032, canc. Cl. 6.
Graham, Billy, Evangelistic Film Ministry, Inc., d.b.a. World Wide Pictures, Sherman Oaks, Calif. 681,490–1, pub. 7–15–58. Cl. 38.
Greenwood Labs, Inc., Red Bank, N.J. 681,382, pub. 4–21–59. Cl. 18.
Grader, Maynard S., d.b.a. Northwest Leaf Products Co., Puyallup, Wash. 681,604, pub. 4–21–59. Cl. 50.
Guertin Bros., Jewelers, Hyannis, Mass. 681,480, pub. 4–21–59. Cl. 28.
Gutner, Kenneth H., d.b.a. Kealia Enterprises, Highland Park, Ill. 681,368, pub. 4–21–59. Cl. 13.
Hampton, C. & J., Ltd., Sheffield, England. 125,437, 12(c) pub. 7–7–59. Cl. 28.
Hans Heinrich Hutte G.m.b.H., Langelsheim, Harz, Germany. 681,281, pub. 4–21–59. Cl. 6.
Hardy Salt Co., St. Louis, Mo. 681,562, pub. 4–21–59. Cl. 23.
Harris Mfg. Corp., Fort Wayne, Ind. 681,407, pub. 4–21–59. Cl. 19.
Harris, Upham & Co., New York, N.Y. 681,504, pub. 4–21–59. Cl. 38.
Harvey, G. F., Co., Inc., The, Saratoga Springs, N.Y. 681,393–6, pub. 4–21–59. Cl. 18.
Haskell, Charles C., & Co., Inc., Richmond, Va. 378,541, canc. Cl. 18.
Haskell, Charles C., & Co. Inc., Richmond, Va. 381,004, canc. Cl. 18.
Haskell, Charles C., & Co., Inc., Richmond, Va. 394,351, canc. Cl. 18.
Haskell, Charles C., & Co., Inc., Richmond, Va. 394,374, canc. Cl. 18.
Haskell, Charles C., & Co., Inc., Richmond, Va. 412,611, canc. Cl. 18.
Hassenfeld Bros., Inc., Central Falls, R.I. 681,484, pub. 4–21–59. Cl. 37.
Hausner, Blum & Kusens, Los Angeles, Calif. 681,515, pub. 4–21–59. Cl. 39.
Hawse, Raymond B., West Palm Beach, Fla. 574,526, canc. Cl. 46.
Hearn Department Stores, Inc., to Diversified Stores Corp., New York, N.Y. 368,580, ren. 7–7–59. Cl. 52.
Henrik Gahns Aktiebolag, Uppsala, Sweden. 681,617, pub. 4–21–59. Cl. 52.
Hercules Powder Co., Wilmington, Del. 370,277, ren. 7–7–59. Cl. 1.
Hercules Powder Co., Wilmington, Del. 370,278, ren. 7–7–59. Cl. 1.
Hewitt-Robins Inc.: *See*—
Hewitt Rubber Corp.
Hewitt Rubber Corp., Buffalo, by Hewitt-Robins Inc., New York, N.Y. 369,980, 12(c) pub. 7–7–59. Cl. 28.
Hilltop Farm Feed Co., Minneapolis, Minn. 574,525, canc. Cl. 46.
Hilton, Harold S., d.b.a. Hilton Products Co., Seattle, Wash. 681,629. Cl. 13.
Hilton Products Co.: *See*—
Hilton, Harold S.
Hoe & Co. (1931) Ltd., Stretford, Manchester, Lancashire, England. 574,472, canc. Cl. 46.
Holcomb, J. I., Mfg. Co., Inc., Indianapolis, Ind. 681,619, pub. 4–21–59. Cl. 52.
Holt, Elizabeth B., New York, N.Y. 574,794, canc. Cl. 28.
Hood Oil Co., Inc., Atlanta, Ga. 681,375, pub. 4–21–59. Cl. 15.
Hood Rubber Co., Watertown, Mass., to The B. F. Goodrich Co., Akron, Ohio. 127,050, ren. 7–7–59. Cl. 39.
Hope Chest Co., Inc., The, Minneapolis, Minn. 681,631. Cl. 30.
Horner, George W., and Co., Ltd., Chester-le-Street, England. 367,779, 12(c) pub. 7–7–59. Cl. 46.
Horner, George W., and Co., Ltd., Chester-le-Street, England. 367,780, 12(c) pub. 7–7–59. Cl. 46.
Horseshoes, Inc.: *See*—
Gidding, Joseph M.
House of Swansdown, Inc., The, New York, N.Y. 574,749, canc. Cl. 42.
Hygrade Food Products Corp: *See*—
Deerfoot Farms Co.
Hylo Co., Inc. of Houston: *See*—
Hylo Co., Inc.
Hylo Co., Inc., by Hylo Co., Inc. of Houston, Houston, Tex. 375,850, 12(c) pub. 7–7–59. Cl. 52.
Hylo Co., Inc., by Hylo Co., Inc. of Houston, Houston, Tex. 387,282, 12(c) pub. 7–7–59. Cl. 51.
Imperial Chemical Industries Ltd., London, England. 681,340, pub. 4–21–59. Cl. 6.
Independent Screen Co., Oklahoma City, Okla. 681,349, pub. 4–21–59. Cl. 12.
Industrial Vinyls, Inc., Miami, Fla. 681,296, pub. 4–21–59. Cl. 1.
Insular Lumber Co., Philadelphia, Pa. 681,354, pub. 4–21–59. Cl. 12.
Insul-8-Corp., San Carlos, Calif. 681,421, pub. 4–21–59. Cl. 21.
International Metallic Packing Corp., Chicago, Ill. 369,823, 12(c) pub. 7–7–59. Cl. 25.
International Paper Co.: *See*—
Continental Paper & Bag Mills.
International Pharmaceutical Corp., from E. C. B. Kirsopp, d.b.a. Delaware Valley Research Co., Philadelphia, Pa. 681,380, pub. 4–21–59. Cl. 18.
Items Unlimited: *See*—
Baugness, James R.

Jamieson, James B., d.b.a. Creative Capers Mfg. Co., Claremont, Calif. 681,433, pub. 4–21–59. Cl. 22.
Jayco Products, Lovington, Ill. 681,415, pub. 4–21–59. Cl. 21.
Jim-Jon Toy Co., Highland Park, Ill. 574,617, canc. Cl. 22.
Joannes Brothers Co., d.b.a. Northwest Warehousing Co., Green Bay, Wis. 574,474, canc. Cl. 46.
Johann Weiss Maschinenfabrik und Apparatebau G.m.b.H., Berlin, Germany. 681,442, pub. 4–21–59. Cl. 23.
Johnson, Axel L.: *See*—
Walker, H. O.
Johnson, Nestor, Mfg. Co., Chicago, Ill. 681,439, pub. 4–21–59. Cl. 22.
Juilliard, A. D., & Co., Inc., to United Merchants and Manufacturers, Inc., New York, N.Y. 367,496, ren. 7–7–59. Cl. 42.
Kagran Corp., New York, N.Y. 574,671, canc. Cl. 22.
Katz, Irving, Inc., Brooklyn, N.Y. 574,735, canc. Cl. 32.
Kay Preparations Co., New York, N.Y. 681,611, pub. 4–21–59. Cl. 51.
Kellar, Julie, New York, N.Y. 681,612, pub. 4–21–59. Cl. 51.
Kempenich, Henry, Portland, Oreg., to W. A. Kempenich, San Carlos, Calif. 126,941, ren. 7–7–59. Cl. 26.
Kempenich, William A.: *See*—
Kempenich, Henry.
Kenlin Enterprises: *See*—
Gutner, Kenneth H.
Killian Mfg. Co., The, to The Akwell Corp., Akron, Ohio. 371,558, ren. 7–7–59. Cl. 44.
Kimberly-Clark Corp., Neenah, Wis. 681,363, pub. 4–21–59. Cl. 13.
Kiroopp, Edgar C. B.: *See*—
International Pharmaceutical Corp.
Kleinert, I. B., Rubber Co., New York, N.Y. 288,359, 12(c) pub. 7–7–59. Cl. 42.
Kleinert, I. B., Rubber Co., New York, N.Y. 681,539, pub. 4–21–59. Cl. 40.
Klok, John H., Grand Rapids, Mich. 574,627, canc. Cl. 32.
Koret, Samuel, to Coronet Handbags, Inc., New York, N.Y. 367,770, ren. 7–7–59. Cl. 3.
Kraus Bros. & Co. Inc., by Vera Zwack, executrix of the estate of Jean Zwack, deceased, New York, N.Y. 364,982, 12(c) pub. 7–7–59. Cl. 49.
LFM Mfg. Co., Inc., Atchison, Kans. 681,370, pub. 4–21–59. Cl. 14.
L.M.B. Mfg. Co., Philadelphia, Pa. 681,365, pub. 4–21–59. Cl. 13.
Laminex, Inc., Costa Mesa, Calif. 681,438, pub. 4–21–59. Cl. 22.
Lanier, O. H., San Antonio, Tex. 681,579, pub. 4–21–59. Cl. 46.
La Peer Products Co.: *See*—
Mayenhoff, Mordecai N.
Leach Co., Oshkosh, Wis. 681,412, pub. 4–21–59. Cl. 19.
Leeming, Thos., & Co., Inc., New York, N.Y. 681,401, pub. 4–21–59. Cl. 18.
Lektrolite Corp., New York, N.Y. 574,590, canc. Cl. 8.
Lentini, Nicholas, d.b.a. Lentini Tree Farms, Cheboygan, Mich. 681,304, pub. 4–21–59. Cl. 1.
Lentini Tree Farms: *See*—
Lentini, Nicholas.
Leslie Fay Corp., New York, N.Y. 681,516, pub. 4–21–59. Cl. 39.
Lilly, Eli, and Co., Indianapolis, Ind. 681,403, pub. 4–21–59. Cl. 18.
Limpert Brothers, Inc., Vineland, N.J. 681,573, pub. 4–21–59. Cl. 46.
Lowell Mfg. Co.: *See*—
Lowell Specialty Co.
Lowell Specialty Co., also d.b.a. Lowell Mfg. Co., Chicago, Ill. 574,628, canc. Cl. 23.
Lyons, Claude L., London, England. 574,560, canc. Cl. 22.
Macon Shirt Co., Macon, Ga. 574,711, canc. Cl. 39.
Magnet Cove Barium Corp., Houston, Tex. 681,305–7, pub. 4–21–59. Cl. 1.
Mahon, Thomas J., Inc., Englewood Cliffs, N.J. 681,386, pub. 4–21–59. Cl. 18.
Maiden Form Brassiere Co., Inc., New York, N.Y. 681,533, pub. 4–21–59. Cl. 39.
Marlin-Rockwell Corp., New York, N.Y., to Rockbestos Products Corp., New Haven, Conn. 127,084, ren. 7–7–59. Cl. 21.
Maryland Baking Co., Inc.: *See*—
Maryland Baking Co., The.
Maryland Baking Co., The, d.b.a. Maryland Baking Co., Inc., Baltimore, Md. 681,588, pub. 4–21–59. Cl. 46.
Matthews, W. N., Corp., St. Louis, Mo. 574,660, canc. Cl. 26.
Mattingly, Spencer: *See*—
Ballard, Nicholas G.
Maurer, Arthur B., from Maurer-Neuer Meat Packers, Kansas City, Kans. 681,580, pub. 4–21–59. Cl. 46.
Mayehoff, Mordecai N., d.b.a. La Peer Products Co., Los Angeles, Calif. 574,512, canc. Cl. 51.
McLaurin Hosiery Mills, Asheboro, to Burlington Industries, Inc., Greensboro, N.C. 370,860, ren. 7–7–59. Cl. 39.
McNally, Rand, & Co., Chicago, Ill. 574,594, canc. Cl. 38.
McNeil Laboratories, Inc., Philadelphia, Pa. 681,397, pub. 4–21–59. Cl. 18.
Meinl, Julius, Aktiengesellschaft, Vienna, Austria. 681,575, pub. 4–21–59. Cl. 46.
Meletio Co., St. Louis, Mo. 681,590, pub. 4–21–59. Cl. 46.
Mercantile Stores Co., Inc., Wilmington, Del. 574,721, canc. Cl. 31.
Mervin Wave Clip Co., Inc., New York, N.Y., by Gaylord Products, Inc., Chicago, Ill. 364,772, 12(c) pub. 7–7–59. Cl. 40.
Meyenberg, J. P., Jr., d.b.a. J. P. Meyenberg, Jr., Sales Co., Salinas, Calif. 380,026, canc. Cl. 46.
Meyenberg, J. P., Jr., Sales Co.: *See*—
Meyenberg, J. P., Jr.
Meyers, Clarence L., & Co., Philadelphia, Pa. 681,557, pub. 4–21–59. Cl. 43.
Meyers Jewelers, Inc., Vallejo, Calif. 681,457, pub. 4–21–59. Cl. 27.
Milgo Electronic Corp., Miami, Fla. 681,451, pub. 4–21–59. Cl. 26.
Miller Publishing Co., The, Minneapolis, Minn. 367,869, ren. 7–7–59. Cl. 38.
Mills Bell-O-Matic Corp., Chicago, Ill. 681,431, pub. 4–21–59. Cl. 22.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 681,413, pub. 4–21–59. Cl. 2.
Minnesota and Ontario Paper Co., Minneapolis, Minn. 681,352, pub. 4–21–59. Cl. 12.
Miron Mills, Inc., Clinton, Mass. 574,771, canc. Cl. 42.
Miss America Corp., New York, N.Y. 681,514, pub. 4–21–59. Cl. 39.
Mr. Boston Distiller Inc., Boston, Mass. 681,601, pub. 4–21–59. Cl. 49.
Monarch Rug Mills, Inc., Dalton, Ga. 681,555, pub. 4–21–59. Cl. 42.
Monark Battery Co., Inc., Chicago, Ill., by Price Battery Corp., Hamburg, Pa. 319,475, 12(c) pub. 7–7–59. Cl. 21.
Monsanto Chemical Co., St. Louis, Mo. 421,818. Am. 7(d). Cl. 4.
Moore Business Forms, Inc.: *See*—
American Sales Book Co., Ltd.
Moore, Sam, & Co.: *See*—
Moore, Samuel D.
Moore, Samuel, & Co.: *See*—
Moore, Samuel D.
Moore, Samuel D., d.b.a. Sam Moore & Co., Cleveland, by Samuel Moore & Co., Mantua, Ohio. 371,674, 12(c) pub. 7–7–59. Cl. 20.
Morey La Rue Laundry Co., Elizabeth, Morristown and Asbury Park, N.J., Staten Island, N.Y., and Easton, Pa. 574,784, canc. Cl. 106.
Morocco Corp., from G. M. T. Jones, New York, N.Y. 681,609, pub. 4–21–59. Cl. 51.
Morris, E., Mfg. Co., Detroit, Mich. 681,461, pub. 4–21–59. Cl. 29.
Mould-Teck Research Laboratories, Inc., New York, N.Y. 574,607, canc. Cl. 44.
Murean, Charles A., Calabasas, Calif. 681,549–50, pub. 4–21–59. Cl. 42.
Mutual Paper Co., Inc., The, Brooklyn, N.Y. 681,329, pub. 4–21–59. Cl. 5.
Myers, Herbert G., d.b.a. My-Len Sales Co., by My-Len Wholesale Distributors, Inc., Chicago, Ill. 369,616, 12(c) pub. 7–7–59. Cl. 39.
My-Len Sales Co.: *See*—
Myers, Herbert G.
My-Len Wholesale Distributors, Inc.: *See*—
Myers, Herbert G.
My-Locks Dolls, Bremerton, Wash. 574,710, canc. Cl. 22.
Nalpak Knitting Mills, Inc., Brooklyn, N.Y. 574,705, canc. Cl. 39.
Narmco Conolon Co., Costa Mesa, Calif. 681,427, pub. 4–21–59. Cl. 22.
National Aluminate Corp., Chicago, Ill. 681,372, pub. 4–21–59. Cl. 15.
National Cast Products Co., Inc.: *See*—
National Cast Products Co.
National Cast Products Co., to National Cast Products Co., Inc., by National Cast Products Co., Inc., Providence, R.I. 442,176, 12(c) pub. 7–7–59. Cl. 14.
National Cast Products Co., to National Cast Products Co., Inc., by National Cast Products Co., Inc., Providence, R.I. 442,177, 12(c) pub. 7–7–59. Cl. 14.
National Distillers Products Corp., New York, N.Y. 574,762, canc. Cl. 6.
National Laboratories, Inc., Chicago, Ill. 681,525, pub. 4–21–59. Cl. 39.
National Supply Co., The, from The National Supply Co., Pittsburgh, Pa. 681,441, pub. 4–21–59. Cl. 23.
Nestler, Richard J., d.b.a. Unrivaled Hosiery Mill, New York, N.Y. 574,643, canc. Cl. 39.
Neumann, Morton G., d.b.a. Famous Products Co., to Valmor Products Co., Chicago, Ill. 368,730, ren. 7–7–59. Cl. 51.
Newman, Davison, & Co., Ltd.: *See*—
West Indian Produce Association, Ltd., The.
Newton, Marion W., New York, N.Y. 390,694, 12(c) pub. 7–7–59. Cl. 42.
Niagara Sponge: *See*—
General Mills, Inc.
Nordson Pharmaceutical Laboratories, Inc., Irvington, N.J. 681,389, pub. 4–21–59. Cl. 18.
North Electric Co., Galion, Ohio. 681,416, pub. 4–21–59. Cl. 21.
Northwest Leaf Products Co.: *See*—
Gruder, Maynard S.
Northwest Warehousing Co.: *See*—
Joannes Brothers Co.
Norton, John, Co.: *See*—
Norton, John J.
Norton, John J., d.b.a. John Norton Co., New York, N.Y. 574,740, canc. Cl. 22.
Oakite Products, Inc., New York, N.Y. 584,813. Am. 7(d). Cl. 52.
Old Colony Shoe Co., Brockton, Mass. 370,767, ren. 7–7–59. Cl. 39.
Old Colony Shoe Co., Brockton, Mass. 371,457, ren. 7–7–59. Cl. 39.
Old Corral Cattle Co.: *See*—
Black, Avis C.
Old Town Corp.: *See*—
Old Town Ribbon & Carbon Co., Inc.
Old Town Ribbon & Carbon Co., Inc., New York, to Old Town Corp., Brooklyn, N.Y. 371,716, ren. 7–7–59. Cl. 11.

Olin Mathieson Chemical Corp., East Alton, Ill. 681,317, pub. 4–21–59. Cl. 2.
Ormonoterapia Richter, S.p.A., Milan, Italy. 681,404, pub. 4–21–59. Cl. 18.
Oxford Textile Finishing Co., Inc., Oxford, N.J. 681,622, pub. 4–21–59. Cl. 106.
Pacific Mills, New York, N.Y. 371,983, ren. 7–7–59. Cl. 42.
Packard Motor Car Co., Detroit, Mich. 574,484, canc. Cl. 52.
Paddock Engineering Co., of Dallas, Texas, Dallas, Tex. 574,491, canc. Cl. 12.
Pajimar, Inc., Braintree, Mass. 681,585, pub. 4–21–59. Cl. 46.
Palmer Pann Corp., Toledo, Ohio. 681,608, pub. 4–21–59. Cl. 50.
Paper Mate Mfg. Co., Santa Monica, Calif. 681,488, pub. 4–21–59. Cl. 37.
Parfums Evyan Inc., New York, N.Y. 681,528, pub. 4–21–59. Cl. 39.
Pataskala Tackle Co., Pataskala, Ohio. 681,429, pub. 4–21–59. Cl. 22.
Patek Brothers, Inc., Milwaukee, Wis. 574,482, canc. Cl. 16.
Pelton Steel Casting Co.: *See*—
Pelton Steel Co.
Pelton Steel Co., to Pelton Steel Casting Co., Milwaukee, Wis. 127,109, ren. 7–7–59. Cl. 14.
Pepperell Braiding Co. Inc., East Pepperell, Mass. 681,542, pub. 4–21–59. Cl. 40.
Pepperell Mfg. Co., to Pepperell Mfg. Co., Boston, Mass. 125,358, ren. 7–7–59. Cl. 42.
Personal Products Corp., North Brunswick Township, N.J. 681,567, pub. 4–21–59. Cl. 44.
Persylma Co. and Gethner Drugs: *See*—
Gethner, Max M.
Peter Pan Foundations, Inc., New York, N.Y. 681,522, pub. 4–7–59. Cl. 39.
Petri Wineries: *See*—
United Vintners, Inc.
Pfizer, Chas., & Co., Inc., Brooklyn, N.Y. 681,391, pub. 4–21–59. Cl. 18.
Pharmaceutical Industries, Inc., Erlton, N.J. 681,390, pub. 4–21–59. Cl. 18.
Photiadis, F. J., d.b.a. Amphitrite Marine Co., Tokyo, Japan. 574,537, canc. Cl. 19.
Piano Action & Key Corp., Memphis, Tenn. 681,482, pub. 4–21–59. Cl. 36.
Pine Tree Milking Machine Co., by Babson Bros. Co., Chicago, Ill. 125,500, 12(c) pub. 7–7–59. Cl. 23.
Pocket Books, Inc., New York, N.Y. 574,514, canc. Cl. 38.
Polar Ice Cream and Creamery Co., Pensacola, Fla. 365,166, 12(c) pub. 7–7–59. Cl. 46.
Polygon Plastic Co., Walkerton, Ind. 681,300, pub. 4–21–59. Cl. 1.
Porter Chemical Co., The, Hagerstown, Md. 681,428, pub. 4–21–59. Cl. 22.
Power Sportswear Co., Inc., New York, N.Y. 681,517, pub. 4–21–59. Cl. 39.
Powers-Samas Accounting Machines Ltd., London, England. 681,453, pub. 4–21–59. Cl. 26.
Precision Time Corp., New York, N.Y. 681,458, pub. 3–3–59. Cl. 27.
Price Battery Corp.: *See*—
Monark Battery Co., Inc.
Princess Pat, Ltd., Chicago, Ill. 372,137, ren. 7–7–59. Cl. 6.
Pure Spring (Canada) Ltd., Ottawa, Ontario, Canada, from Stock Products, Inc., Brooklyn, N.Y. 681,570, pub. 4–21–59. Cl. 45.
Pyles, Howard W., Silver Spring, Md. 681,425, pub. 4–21–59. Cl. 22.
Queen Knitting Mills, Inc., Philadelphia, Pa. 681,512, pub. 4–21–59. Cl. 39.
R. R. Kellogg Advertising Services, Inc., Los Angeles, Calif. 574,645, canc. Cl. 38.
Radio Receptor Co., Inc., by Willcox & Gibbs Sewing Machine Co., New York, N.Y. 429,776, 12(c) pub. 7–7–59. Cl. 21.
Ransburg, Harper J., Co., Inc., Indianapolis, Ind. 574,535, canc. Cl. 13.
Rayboard Co., The: *See*—
Deacon, George P.
Raytherm Corp., Redwood City, Calif. 681,358, pub. 4–21–59. Cl. 12.
Readex Microprint Corp., to Readex Microprint Corp., New York, N.Y. 371,746, ren. 7–7–59. Cl. 26.
Red Rock Corp., The, Atlanta, Ga. 681,569, pub. 4–21–59. Cl. 45.
Reid Wright & Holloway (Distillers) Ltd., Clerkenwell, London, England. 681,636. Cl. 49.
Rhinopto Co., Dallas, Tex. 681,402, pub. 4–21–59. Cl. 18.
Rhoads, J. E., & Sons, Wilmington, Del. 681,449, pub. 4–21–59. Cl. 23.
Richman, Walter, Brooklyn, N.Y. 574,578, canc. Cl. 46.
Richter, Ben, Co., Inc., New York, N.Y. 681,505, pub. 4–21–59. Cl. 38.
Riegel Paper Corp., New York, N.Y. 681,486, pub. 4–21–59. Cl. 37.
Riley, Henry F., d.b.a. Associated Contractors, Boston, Mass. 681,475, pub. 4–21–59. Cl. 34.
Rilling Co., now by change of name The Rilling-Dermetics Co., New York, N.Y. 574,561, canc. Cl. 51.
Rilling-Dermetics Co., The: *See*—
Rilling Co.
Ris-Van, Inc., Belmond, Iowa. 681,347, pub. 4–21–59. Cl. 10.
Robertson & Woodcock Ltd., Ilford, Essex, England. 681,581, pub. 4–21–59. Cl. 46.
Robbins Textiles, Inc., High Point, N.C. 574,656, canc. Cl. 39.
Rockbestos Products Corp.: *See*—
Marlin-Rockwell Corp.
Rolls-Royce Ltd., Derby, England. 364,873, 12(c) pub. 7–7–59. Cl. 19.
Rolls-Royce Ltd., Derby, England. 364,872, 12(c) pub. 7–7–59. Cl. 19.
Roma Tex Brix Co., Portland, Oreg. 583,603, canc. Cl. 12.
Rootie Kazootie, Inc., New York, N.Y. 574,693, canc. Cl. 37.
Rosenberg Bros. & Co., Inc.: *See*—
Rosenberg Bros. & Co.
Rosenberg Bros. & Co., San Francisco, Calif., to Rosenberg Bros. & Co., Inc., Baltimore, Md. 574,475, canc. Cl. 46.
Roto-Gate Valves, Inc., Plainview, Tex. 574,755, canc. Cl. 13.
Royal Dalton, Ltd., St. Louis, Mo. 574,622, canc. Cl. 13.
Rubinstein, Charles L., Milwaukee, Wis. 582,707, canc. Cl. 37.
Rubinstein, Helena, Inc., New York, N.Y. 681,616, pub. 4–21–59. Cl. 51.
Rubon Inc., Independence, Mo. 681,462, pub. 4–21–59. Cl. 39.
Ryette Co., St. Louis, Mo. 681,572, pub. 4–21–59. Cl. 46.
St. Regis Publications, Inc., New York, N.Y. 681,633. Cl. 38.
Salem Co., Inc., The, Winston-Salem, N.C. 681,536, pub. 4–21–59. Cl. 39.
Salemaker Press, The, Marshfield, Mass. 681,500, pub. 4–21–59. Cl. 38.
Sams, Howard W., & Co., Inc., Indianapolis, Ind. 681,496, pub. 4–21–59. Cl. 38.
Sandos, Inc., New York, N.Y. 681,343, pub. 4–21–59. Cl. 6.
Sardo, Vincent, d.b.a. Flagship Recording Co., Ridgewood, N.J. 681,481, pub. 4–21–59. Cl. 36.
Savannah News-Press, Inc., Savannah, Ga. 681,501, pub. 4–21–59. Cl. 38.
Sav-Way Industries Inc.: *See*—
Sav-Way Industries.
Sav-Way Industries, to Sav-Way Industries Inc., Detroit, Mich. 429,079, canc. Cl. 36.
Sayford, Frank M., Co., Brooklyn, N.Y. 681,313, pub. 4–21–59. Cl. 2.
Schenley Distillers, Inc., New York, N.Y. 681,002, pub. 4–21–59. Cl. 49.
Schenley Industries, Inc., New York, N.Y. 681,597, pub. 4–21–59. Cl. 47.
Schlegel-Harwood Co., by Feature Ring Co., Inc., New York, N.Y. 222,781, 12(c) pub. 7–7–59. Cl. 28.
Schneierson, I., & Sons, Inc., New York, N.Y. 681,537, pub. 4–21–59. Cl. 39.
Schoeneman, J., Inc., by J. Schoeneman, Inc., Baltimore, Md. 361,431, 12(c) pub. 7–7–59. Cl. 39.
Schratter, Alfred, d.b.a. The Schratter Import Co., New York, N.Y. 681,577, pub. 4–21–59. Cl. 46.
Schratter Import Co., The: *See*—
Schratter, Alfred.
Schwab, S. M., Jr., & Co., to Catalan-Schwab, Inc., New York, N.Y. 368,851, ren. 7–7–59. Cl. 42.
Seamless Rubber Co., The, New Haven, Conn. 681,437, pub. 4–21–59. Cl. 22.
Sears, Roebuck and Co., Chicago, Ill. 681,367, pub. 4–21–59. Cl. 13.
Security Fire Door Co., St. Louis, Mo. 681,550, pub. 4–21–59. Cl. 12.
Seminole Flavor Co., Chattanooga, Tenn. 369,889, 12(c) pub. 7–7–59. Cl. 45.
Seneca Textile Corp., to United Merchants and Manufacturers, Inc., New York, N.Y. 368,606, ren. 7–7–59. Cl. 42.
Sentinel Knitting Corp., New York, N.Y. 574,496, canc. Cl. 44.
Serviciaed Products Corp., Chicago, Ill. 681,351, pub. 4–21–59. Cl. 12.
Shawnee Milling Co., Shawnee, Okla. 369,056, 12(c) pub. 7–7–59. Cl. 46.
Sheaffer, W. A., Pen Co., Fort Madison, Iowa. 368,196, ren. 7–7–59. Cl. 37.
Sherman Steel & Wire Co., Sherman, Tex. 681,359, pub. 4–21–59. Cl. 12.
Shiseido Co., Ltd., Chuo-ku, Tokyo, Japan. 681,334, pub. 4–21–59. Cl. 6.
Shriro Trading Corp., New York, N.Y. 574,750, canc. Cl. 42.
Simmons, O. H., Inc., New York, N.Y. 395,520, canc. Cl. 6.
Simons Co., New York, N.Y. 681,470, pub. 4–21–59. Cl. 32.
Simpson, Wm., Sons & Co. Inc., Philadelphia, Pa. 574,618, canc. Cl. 42.
Skogsagarnas Cellulosa Aktiebolag, Solfatfabriken, Monsteras, Sweden. 681,489, pub. 4–21–59. Cl. 37.
Smith, Benjamin D., Jr.: *See*—
Gowen, Howerton, Co., Inc.
Smith, Benjamin D., Jr., Sanford, N.C. 546,051, canc. Cl. 6.
Smith, Dallas, Corp., Indianapolis, Ind. 574,612, canc. Cl. 32.
Smokador Mfg. Co., Inc., Bloomfield, N.J. 366,910, ren. 7–7–59. Cl. 8.
Societe Anonyme; Etablissements Barnett & Elichagaray, Cognac, Charente, France. 681,635. Cl. 49.
Souplex Ltd., Morecambe, Lancaster, England. 681,447, pub. 4–21–59. Cl. 23.
South Bend Bait Co., South Bend, Ind. 574,790, canc. Cl. 22.
South Bend Tackle Co., Inc., South Bend, Ind. 681,434–6, pub. 4–21–59. Cl. 22.
Southwestern Petroleum Co., The, Fort Worth, Tex. 681,378, pub. 4–21–59. Cl. 15.
Spano: *See*—
Spano, Anthony T.
Spano, Anthony T., d.b.a. Spano, New York, N.Y. 444,529, canc. Cl. 51.
Speakman Co., Wilmington, Del. 681,364, pub. 4–21–59. Cl. 13.
Staley, A. E., Mfg. Co., Decatur, Ill. 366,104, ren. 7–7–59. Cl. 6.
Staley, A. E., Mfg. Co., Decatur, Ill. 681,591, pub. 4–21–59. Cl. 46.
Staley, A. E., Mfg. Co., Decatur, Ill. 681,634. Cl. 48.
Standard Manifold Co., Chicago, Ill. 681,487, pub. 4–21–59. Cl. 37.

Standard Railway Equipment Mfg. Co., Chicago, Ill. 681,409, pub. 4–21–59. Cl. 19.
Standel Co., The: *See*—
Crooks, Robert C.
Statham Instruments, Inc., Los Angeles, Calif. 681,422, pub. 4–21–59. Cl. 21.
Stauffer Chemical Co., San Francisco, Calif. 681,342, pub. 4–21–59. Cl. 6.
Stearns & Foster Co., The, Cincinnati, Ohio. 681,472, pub. 4–21–59. Cl. 32.
Stewart-Warner Corp., Chicago, Ill. 368,207, ren. 7–7–59. Cl. 26.
Stix, Baer and Fuller Co., St. Louis, Mo. 371,926, ren. 7–7–59. Cl. 21.
Stock Products, Inc.: *See*—
Pure Spring (Canada) Ltd.
Stokes, F. J., Corp., Philadelphia, Pa. 681,445, pub. 4–21–59. Cl. 23.
Stone Mountain Grit Co., Inc., Lithonia, Ga. 681,309, pub. 4–21–59. Cl. 1.
Stratoflex, Inc., Fort Worth, Tex. 681,498, pub. 4–21–59. Cl. 39.
Sun Chemical Corp.: *See*—
Electro-Technical Products, Inc.
Sunbeam Corp.: *See*—
Chicago Flexible Shaft Co.
Sunset Equipment Co., St. Paul, Minn. 681,465, pub. 4–21–59. Cl. 31.
Surf Chemical Corp., Burbank, Calif. 681,615, pub. 4–21–59. Cl. 52.
Surgident, Ltd., West Los Angeles, Calif. 681,561, pub. 4–21–59. Cl. 44.
Surgident, Ltd., West Los Angeles, Calif. 681,566, pub. 4–21–59. Cl. 44.
Susay's Frozen Italian and Exotic Foods, Inc., Oklahoma City, Okla. 681,571, pub. 4–21–59. Cl. 46.
Sutherland Paper Co., Kalamazoo, Mich. 681,318, pub. 4–21–59. Cl. 2.
Sutherland Paper Co., Kalamazoo, Mich. 681,322, pub. 4–21–59. Cl. 2.
Sylvania Electric Products Inc., New York, N.Y. 681,455, pub. 4–21–59. Cl. 26.
Tarp-on of California, Redondo Beach, Calif. 681,406, pub. 4–21–59. Cl. 19.
Tarrson, Sidney A., Co., Chicago, Ill. 681,310, pub. 4–21–59. Cl. 2.
Taylor Laboratories, Inc.: *See*—
Dumas Milner Corp.
Theobald Industries, The, Kearny, N.J. 574,528, canc. Cl. 4.
Thorndike Mills, Inc., Palmer, Mass. 681,552–4, pub. 4–21–59. Cl. 42.
Tie-Rite, New York, N.Y. 574,655, canc. Cl. 39.
Tileston and Hollingsworth Co., Boston, Mass. 574,533, canc. Cl. 37.
Triangle Mfg. Co., Baltimore, Md. 681,556, pub. 4–21–59. Cl. 42.
Trio Mfg. Co., Griggsville, Ill. 681,418–19, pub. 4–21–59. Cl. 21.
Trojan Powder Co., Allentown, Pa. 681,338, pub. 4–21–59. Cl. 6.
True-Stitch Moccasin Corp., Malone, N.Y. 681,526, pub. 3–17–59. Cl. 39.
Twirl-A-Suture Mfg. Co.: *See*—
Carraway, Gordon E.
Union Asbestos & Rubber Co., Chicago, Ill. 681,353, pub. 4–21–59. Cl. 12.
Union Carbide Corp.: *See*—
Carbide and Carbon Chemicals Corp.
United Feature Syndicate, Inc., New York, N.Y. 574,734, canc. Cl. 38.
United Merchants and Manufacturers, Inc.: *See*—
Juilliard, A. D., & Co., Inc.
Seneca Textile Corp.
United Press International, Inc., New York, N.Y. 681,497, pub. 4–21–59. Cl. 38.
United Shoe Machinery Corp., Boston, Mass. 681,362, pub. 4–21–59. Cl. 13.
United States Rubber Co., New York, N.Y. 575,823. Am. 7(d). Cl. 39.
United States Smelting Refining and Mining Co., The, Boston, Mass. 366,561, 12(c) pub. 7–7–59. Cl. 14.
United States Steel Corp.: *See*—
American Sheet & Tin Plate Co.
United States Steel Corp., Pittsburgh, Pa. 681,357, pub. 4–21–59. Cl. 12.
United Vintners, Inc., d.b.a. Petri Wineries, San Francisco, Calif. 681,599, pub. 4–21–59. Cl. 47.
Universal Engineering Co., Frankenmuth, Mich. 681,443, pub. 4–21–59. Cl. 23.
Unrivaled Hosiery Mill: *See*—
Nestler, Richard J.
Upjohn Co., The, from The Upjohn Co., Kalamazoo, Mich. 681,379, pub. 5–15–56. Cl. 18.
Upjohn Co., The, from The Upjohn Co., Kalamazoo, Mich. 681,396, pub. 4–21–59. Cl. 18.
Ussery, Joseph G., Auburn, Wash. 681,507, pub. 4–21–59. Cl. 38.
Valden Chemical Co., Minneapolis, Minn. 681,283, pub. 4–21–59. Cl. 18.
Valmor Products Co.: *See*—
Neumann, Morton G.
Vanderbilt, R. L., Co., Inc., New York, N.Y. 681,592, pub. 4–21–59. Cl. 46.
Vega Industries, Inc., Syracuse, N.Y. 681,315, pub. 4–21–59. Cl. 2.
Ventoura Corp., Elwood, Ind. 681,410, pub. 4–21–59. Cl. 19.
Veritas Products Co., Inc., New York, N.Y. 372,172, ren. 7–7–59. Cl. 18.
Vindobona Importing Co.: *See*—
Zelinka, Hans.
Vineland Chemical Sales Corp., Vineland, N.J. 681,333, pub. 4–7–59. Cl. 6.
Vulcan Radiator Co., The, Hartford, Conn. 417,346, 12(c) pub. 7–7–59. Cl. 34.
Wacker, Dr. Alexander, Gesellschaft fur Elektrochemische Industrie, G.m.b.H., Munich, Bavaria, Germany. 574,743, canc. Cl. 6.
Wacker, Dr. Alexander, Gesellschaft fur Elektrochemische Industrie, G.m.b.H., Munich, Bavaria, Germany. 574,745, canc. Cl. 6.
Wagner, E. L., Co., Inc., The, Darien, Conn. 681,463, pub. 2–17–59. Cl. 31.
Wagner, E. L., Co., Inc., The, Darien, Conn. 681,464, pub. 2–10–59. Cl. 31.
Walker, H. O., Phoenix, to A. L. Johnson, Tucson, Ariz. 368,257, ren. 7–7–59. Cl. 22.
Warner-Lambert Pharmaceutical Co.: *See*—
Waterbury Chemical Co., Inc.
Warp Brothers: *See*—
Flex-O-Glass, Inc.
Waterbury Chemical Co., Inc., New York, N.Y., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 366,844, ren. 7–7–59. Cl. 18.
Webcor, Inc., Chicago, Ill. 681,477, pub. 4–21–59. Cl. 36.
Weber, Harriette B., Saginaw, Mich. 574,795, canc. Cl. 50.
Weco Products Co., Chicago, Ill. 681,630. Cl. 18.
Wehrli, Dr. Federico, Muralto Locarno, Switzerland. 681,560, pub. 4–21–59. Cl. 44.
Weiser, Norman S., Harrisburg, Pa. 681,499, pub. 4–21–59. Cl. 38.
Wells Flour Milling Co., Wells, Minn. 150,166, canc. Cl. 46.
Wembley, Inc., New Orleans, La. 366,974, ren. 7–7–59. Cl. 39.
Wensel, H., Tent & Duck Co., St. Louis, Mo. 681,432, pub. 4–21–59. Cl. 22.
Wentzel, Robert A., d.b.a. Fae Mfg. Co., to Fae Mfg. Co., Palmyra, Pa. 371,837, ren. 7–7–59. Cl. 39.
West Crest: *See*—
White Stag Mfg. Co.
West Indian Produce Association, Ltd., The, by Davison Newman & Co., Ltd., London, England. 364,285, 12(c) pub. 7–7–59. Cl. 46.
White Stag Mfg. Co., d.b.a. West Crest, Portland, Oreg. 681,530, pub. 4–21–59. Cl. 39.
Whitney, Gladys D., d.b.a. Whitney Studio Custom Design, Summit, N.J. 681,532, pub. 4–21–59. Cl. 39.
Whitney Studio Custom Design: *See*—
Whitney, Gladys D.
Wilco Co., d.b.a. Commonwealth Industries, Boston, Mass. 681,374, pub. 4–21–59. Cl. 15.
Willcox & Gibbs Sewing Machine Co.: *See*—
Radio Receptor Co., Inc.
Williams & Humbert, Ltd., London, England. 681,600, pub. 4–21–59. Cl. 47.
Wilson, Frank M., Co., Stockton, Calif. 681,583, pub. 4–21–59. Cl. 46.
Wine Growers Guild, d.b.a. Ceremony Wine Cellars, Lodi, Calif. 681,598, pub. 4–21–59. Cl. 47.
Winquist, Richard O., Niagara Falls, N.Y. 681,385, pub. 4–21–59. Cl. 18.
Winter & Co., Inc., New York, N.Y. 681,483, pub. 4–21–59. Cl. 36.
World Wide Pictures: *See*—
Graham, Billy, Evangelistic Film Ministry, Inc.
Wynn, Clarence M., d.b.a. Dri-Powr Co., Azusa, Calif. 681,328, pub. 4–21–59. Cl. 4.
Yadro Chemical Co., Milwaukee, Wis. 681,336, pub. 4–21–59. Cl. 6.
Yett, J. W., Jr., Austin, Tex. 507,067, canc. Cl. 32.
Yorkshire Dyeing & Proofing Co. Ltd., The, Middleton, near Manchester, England. 370,074, ren. 7–7–59. Cl. 42.
Young Accent, Inc., New York, N.Y. 681,538, pub. 4–21–59. Cl. 39.
Zelinka, Hans, d.b.a. Vindobona Importing Co., New York, N.Y. 574,530, canc. Cl. 23.
Zenith Corp., Clinton, Mo. 681,345, pub. 4–21–59. Cl. 9.
Zwack, Jean: *See*—
Kraus Bros. & Co. Inc.

U. S. GOVERNMENT PRINTING OFFICE, C——1959

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NOTICES

Errata

All references to Patent No. 2,891,963 to Isidro Bultó Blajet and Juan Parés Corominas, assignors to Laboratoires OM Societe Anonyme, for Oxazolidone Compounds, appearing in the OFFICIAL GAZETTE of June 23, 1959, should be deleted as the application was withdrawn from issue and the patent was not issued.

Adjudicated Patents

(C.A. Ohio) Bros et al. Patent No. 2,610,557 (260—38), for pneumatic-tire roller compactor. Claims 1 to 4 *Held* valid and infringed. *Gibson-Stewart Co.* v. *Wm. Bros. Boiler & Mfg. Co.* 264 F.2d 770; 120 USPQ 352.

(C.C. Ohio) Firestone Patent No. 2,280,226 (73—8), for flaw detecting device and measuring instrument. Claims 2, 3, 4, 10, and 11 *Held* valid and infringed. *Sperry Products, Inc.* v. *Aluminum Co. of America.* 171 F. Supp. 901; 120 USPQ 364.

(D.C. Tex.) King Patent No. 2,339,487 (103—23), for time and volume control for gas intermitters. Claims 4 to 11 and 13 *Held* valid and infringed. *U.S. Industries, Inc.* v. *Camco Inc.*, 171 F. Supp. 606; 120 USPQ 394.

(D.C. Ohio) Firestone Patent No. 2,396,701 (73—67.9), for supersonic inspection device. Claims 16, 19, 20, 25, 26, 29, and 32 *Held* valid and infringed. Claim 7 *Held* invalid. *Sperry Products, Inc.* v. *Aluminum Co. of America.* 171 F. Supp. 901; 120 USPQ 364.

(D.C.N.J.) Wintermuth Patent No. 2,454,244 (310—8.9), for moisture proof housing for pieso-electric elements. Claims 6 and 14 *Held* invalid. *Wintermuth* v. *Hermetic Seal Corp.* 171 F. Supp. 770; 121 USPQ 31.

(D.C. Ohio) Firestone Patent No. 2,467,301 (73—67.9), for supersonic inspection for flaws lying near surface of part. Claims 1 to 3 *Held* valid and infringed. *Sperry Products, Inc.* v. *Aluminum Co. of America.* 171 F. Supp. 901; 120 USPQ 364.

(D.C. Calif.) Hansen Patent No. 2,552,673 (57—3.5), for means for interchanging cores in wire ropes. *Held* valid and not infringed. *Hansen* v. *Colliver.* 171 F. Supp. 803; — USPQ —.

(D.C. Nebr.) Blue and Johnston Patent No. 2,696,785 (103—11), for metering pump for liquid anhydrous ammonia or other liquids. Claims 1 to 3, 11, 13, and 16 to 21 *Held* invalid. *John Blue Co.* v. *Dempster Mill Mfg. Co.* 172 F. Supp. 23; 121 USPQ 19.

(D.C. Nebr.) Horton and Johnston Patent No. 2,771,846 (103—203), for metering pump for liquid anhydrous ammonia or other liquids. Claims 1 to 4 *Held* invalid. *Id.*

(D.C. Ala.) Brooks Reissue Patent No. 23,044 (19—67), for cotton cleaning apparatus. Claims 3 to 6 *Held* valid and infringed. *Continental Gin Co.* v. *Murray Co. of Texas.* 171 F. Supp. 730; 120 USPQ 421.

Disclaimers

2,778,732.—*Robert A. Ackerly*, Elmhurst, Ill., and *Ralph A. Clark*, Berkley, Mich. BORON-CONTAINING FERROSILICON. Patent dated Jan. 22, 1957. Disclaimer filed June 12, 1959, by the assignee, *Union Carbide Corporation.*

Hereby enters this disclaimer to claims 1, 4, and 6 of said patent.

2,795,776.—*Herman Epstein*, West Chester, Pa. BINARY COUNTERS. Patent dated June 11, 1957. Disclaimer filed June 10, 1959, by the assignee, *Burroughs Corporation.*

Hereby enters this disclaimer to claim 5 of said patent.

2,886,004.—*William A. Morrison*, Easton, Pa. FLUID ACTUATED PERCUSSIVE TOOL. Patent dated May 12, 1959. Disclaimer filed June 10, 1959, by the assignee, *Ingersoll-Rand Company.*

Hereby enters this disclaimer to the terminal portion of the term of said patent subsequent to Oct. 21, 1974.

Dedication

Reissue No. 24,439.—*George Benko*, Cleveland, Ohio. PUNCH AND DIE. Patent dated Mar. 4, 1958. Dedication filed June 15, 1959, by the assignee, *Allegheny Ludlum Steel Corporation.*

Hereby dedicates to the free use of the public the terminal portion of the term of said patent.

Patents Available for Licensing or Sale

2,814,473. Fluid Agitator (Fuel Mixer for Outboard Motors). Harold J. Kroll, Route 3, Woodstock, Ill.

2,851,143. Loading Machine. Kurt Rosetz, Berlin, Wittenau, Germany. Correspondence to: Michael S. Striker, 511 Fifth Ave., New York 17, N.Y.

2,877,058. Folding Platforms (Folding Double Decker Support or Scaffold for Auto Mechanics). James Foust, Centre Hall, Pa.

2,882,601. Measuring and Marking Ruler. Edward Humel, Longfellow Drive and Beacon Road, R.F.D. 3, Lake Carmel, N.Y.

2,887,241. Nailless Cleated Container. Jack R. MacKenzie, % Mid States Container Corporation, De Graff, Ohio.

General Electric Company is prepared to grant non-exclusive licenses under the following 11 patents upon reasonable terms to domestic manufacturers.

Applications for license may be addressed to: Patent Counsel, Major Appliance Division, General Electric Company, Appliance Park, Louisville 1, Ky.

New Applications Received During May 1959

Patents	6,777
Designs	415
Plant Patents	15
Reissues	25
Total	7,232

Issue

Patents	873—No. 2,894,262 to No.	2,895,134, incl.
Designs	37—No. 185,655 to No.	185,691, incl.
Plant Patents	3—No. 1,850 to No.	1,852, incl.
Reissues	1—No. 24,667	
Total	914	

2,724,242. Multiple Temperature Refrigerator Cabinet.

2,814,355. Electrostatic Gas Filter.

2,872,579. Automatic Clothes Dryer Control.

2,878,590. Control System for Clothes Dryers.

2,878,937. Combination Circuit Breaker and Dynamic Unbalance Switch for Clothes Washing Machines.

2,880,521. Laundry Machine Including Improved Heater and Condenser Arrangement.

2,882,610. Control System for Clothes Dryers.

2,883,101. Rotary Compressor.

2,883,503. Thermostatic Control System.

2,883,507. Heating Unit Control System.

2,883,564. Rotation Sensing Device.

CONDITION OF PATENT APPLICATIONS AS OF MAY 30, 1959

Total number of pending applications (excluding Designs)	198, 799
Total number of pending Design applications	6, 927
Total number of applications awaiting action (excluding Designs)	88, 848
Total number of Design applications awaiting action	1, 790
Date of oldest new application	May 27, 1958
Date of oldest amended application	Apr. 9, 1958

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 58, 86, 89, 93, 52, 64.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 69.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 32, 36, 40, 52, 60.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 29, 30, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 35, 50, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Excavating; Planting; Plant Husbandry; Scattering Unloaders; Harrows and Diggers; Plows	9-30-58	9-8-58
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	9-16-58	10-2-58
3. (VII) MARMELSTEIN, N. (WINDHAM, R. K., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Resistances and Rheostats	12-1-58	12-3-58
4. (VI) FALLER, E. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	11-3-58	11-6-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	7-24-58	8-26-58
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	11-3-58	11-3-58
7. (IV) GONSALVES, J. E. (ANDERSON, E. G., acting), Optics	10-13-58	10-1-58
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	9-23-58	8-5-58
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	10-27-58	10-27-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	11-3-58	11-3-58
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	11-3-58	10-7-58
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	10-20-58	10-17-58
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	10-31-58	10-13-58
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	7-3-58	8-3-58
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	11-4-58	11-3-58
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	9-18-58	9-18-58
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Association or Folding	12-1-58	12-2-58
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	11-14-58	11-5-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation	11-3-58	10-20-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	10-31-58	10-20-58
21. (III) MADER, R. C., Textiles	11-10-58	11-5-58
22. (VI) PAUL, E. (acting), Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	10-29-58	10-29-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators, Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	8-27-58	4-9-58
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	11-12-58	11-13-58
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	11-4-58	10-31-58
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	11-3-58	10-15-58
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	10-23-58	10-27-58
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Pressure Modulating Relays; Wheel Substitutes	9-9-58	9-15-58
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	11-7-58	11-19-58

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
30. (VII) O'LEARY, R. A., Illuminating Burners; Comminutors; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling; Refrigeration; Fluid Sprinkling, Spraying and Diffusing	8-1-58	8-11-58
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Polypropylenes, Polyisobutylenes); Mineral Oils	1-23-59	1-16-59
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Agitation; Fire Extinguishers	11-17-58	11-10-58
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs; Building Structures	10-29-58	10-1-58
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Separating and Assorting Solids (part)	5-23-58	5-19-58
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Sheet Feeding; Severing by Tearing or Breaking	1-6-59	1-5-59
36. (V) EVANS, R. L., Measuring and Testing (part)	7-1-58	7-1-58
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	11-3-58	10-13-58
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	11-17-58	11-5-58
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	12-1-58	11-13-58
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	12-1-58	12-1-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	11-10-58	11-13-58
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	9-15-58	9-15-58
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilising and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	11-10-58	11-5-58
44. (II) EVANS, N. H., Directive Radio Systems; Mass Spectrometers; Nuclear Batteries; Nuclear Resonant Devices; Neutron Detecting and Measuring; Radar; Sonar; Torpedoes	8-5-58	8-1-58
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	12-2-58	10-15-58
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e. g., fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	11-4-58	11-4-58
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	11-5-58	11-4-58
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	10-20-58	10-17-58
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass	10-16-58	10-1-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	9-23-58	9-10-58
51. (II) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas; Oscillators	10-7-58	10-6-58
52. (V) LE ROY, C. A., Supports and Racks	12-5-58	12-1-58
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators	1-12-59	1-12-59
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications	12-9-58	12-15-58
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	8-18-58	8-6-58
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	10-27-58	10-20-58
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting and Punching	9-2-58	9-4-58
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Punching	10-20-58	10-27-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	10-1-58	9-22-58
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	10-15-58	10-6-58
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	10-16-58	10-16-58
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Illumination; Photographic Apparatus	10-21-58	10-3-58
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e. g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	11-3-58	11-3-58
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	9-9-58	9-5-58
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	12-1-58	12-2-58
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	6-24-58	6-25-58
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators; Separating and Assorting Solids (part)	11-3-58	11-3-58
81. (III) MONCURE, J. A., Industrial Arts	2-6-59	2-12-59
82. (III) GRAY, M. A., Household, Personal and Fine Arts	2-11-59	2-13-59
91. BAILEY, J. S., Laminated Fabrics	11-4-58	11-3-58
92. GAUSS, H., Detectors, Miscellaneous Electron Tube Circuits	10-24-58	10-8-58
93. WAHL, R. A., Metal Bending; Web Feeding	10-1-58	10-3-58
94. BERLOWITZ, W., Earth Boring; Gas Separation	11-21-58	10-15-58
95. ANGEL, C. D., Masonry and Concrete Structures; Time-Controlling Apparatus; Packed Rod Joints; Joint Packings	11-3-58	10-21-58
M. E. DIV. A (I) LANHAM, B. E., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part), i. e., Polyethylenes	12-16-58	10-13-58

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1960, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1953*.

Patents..... Numbers 2,926,580 to 2,931,008, inclusive

Plant Patents..... Numbers 531 to 536, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

United States Court of Appeals
District of Columbia Circuit

ARMOUR RESEARCH FOUNDATION OF ILLINOIS INSTITUTE OF TECHNOLOGY *v.* ROBERT C. WATSON, COMMISSIONER OF PATENTS

No. 14,550. Decided May 7, 1959

[— U.S. App. D.C. —; — F.2d —; 121 USPQ 294]

PATENTABILITY—DOUBLE PATENTING—PARTICULAR SUBJECT MATTER—MAGNETIC MATERIAL AND METHOD OF MAKING.

No error found in the decision of the District Court concurring in the decision of the Patent Office that certain claims in appellant's application to a method of making magnetic material from iron oxides were unpatentable in view of a patent already issued to appellant's assignor and scientific publications and that "the product claim of the application was without patentable merit over claims of the patent previously issued to appellant's assignor."

APPEAL from the United States District Court for the District of Columbia.

AFFIRMED.

Benjamin H. Sherman (*William A. Smith, Jr.* of counsel) for Armour Research Foundation of Illinois Institute of Technology.

Clarence W. Moore (*Arthur H. Behrens* of counsel) for Robert C. Watson, Commissioner of Patents.

Before BAZELON, FAHY, and BURGER, *Circuit Judges*

PER CURIAM:

This is an appeal from a judgment of the District Court dismissing appellant's complaint in a suit instituted against the Commissioner of Patents, pursuant to 35 U.S.C. § 145 (1952),[1] to authorize issuance of a patent. Broadly, the claims in suit relate to a method of making magnetic material (suitable for use in high-fidelity tapes) from iron oxides containing a trivalent iron atom, and to the magnetic material formed thereby.

The Patent Examiner and, on appeal, the Patent Office Board of Appeals concluded essentially that the process revealed in the application was merely the aggregation of steps previously disclosed (1) in a patent already issued to appellant's assignor, teaching a process of making magnetic materials from iron oxides, and (2) in scientific publications dealing with the properties of iron oxides. The Patent Office found that this aggregation of steps produced no new or unexpected results, and accordingly rejected the process claims as unpatentable. The Patent Office also concluded that the product claim of the application was without patentable merit over claims of the patent previously issued to appellant's assignor.

The District Court concurred in the decision of the Patent Office and dismissed the complaint. We find no error.

AFFIRMED.

[1] 66 Stat. 808 (1952).

Commissioner's Decision

IN RE BENSON

Patent No. 2,887,918 of May 26, 1959. Decided January 29, 1959

APPLICATION—PERMANENT RECORD—"ERASE BOND" PAPER.

The Examiner's requirement that duplicate papers in permanent ink be filed in place of the original specification and claims which were presented on "Erase Bond," a paper having a special coating of such nature that ink impressed thereon by typewriter keys can readily be erased for an indeterminate period of time after such impression, *Held* not unreasonable; and a petition questioning the propriety of the Examiner's requirement, denied.

ON PETITION.

DENIED.

Munn & Liddy for Benson.

MAURICE A. CREWS, *Assistant Commissioner:*

The letters of March 5, 1958 and March 24, 1958 are being treated as a petition under Rule 181, questioning the propriety of the Examiner's requirement made in the action of February 28, 1958, that duplicate papers in permanent ink be filed in place of the original specification and claims which were presented on "Erase Bond." Subsequent thereto, duplicate papers, in the form of photocopies on ordinary bond paper, were filed.

Petitioner states that he has been using "Erase Bond" for a number of years for applications and amendments, and that this is the first time its use has been questioned. Samples of this type of paper with typed matter thereon were submitted along with the petition. Petitioner contends that the Manual of Patent Examining Procedure "does not prescribe any particular type of paper, except as to size and borders."

Rule 52(a) states in part: "All papers which are to become a part of the permanent records of the Patent Office must be legibly written or printed in permanent ink."

Rule 52(b) states in part: "Typewritten or printed papers suitable for use by the Office may be required if the papers originally filed are not correctly, legibly and clearly written."

It is understood that the product known as "Erase Bond" is paper having a special coating of such nature that ink impressed thereon by typewriter keys can readily be erased for an indeterminate period of time after such impression.

The Examiner reports that the clerk, in erasing pencil marks made by the Examiner, close to the typed matter on the papers originally presented, also erased the typed matter, as a result of which it was rendered indistinct, and that even after the application had been pending 19 months, matter typed on the papers which were originally presented was easily erased with an ordinary soft pencil eraser.

In this case, the Examiner is of the opinion that the paper per se, on which the application was originally presented, is not of such nature that the typed matter will constitute a permanent record for the purposes of this Office. An examination of such paper and a comparison thereof with other types of "Erase Bond"

and conventional bond paper demonstrates the correctness of the Examiner's opinion.

An examination of the erasing qualities of the sample, submitted along with the petition, has been made. Although the typed matter was found less easily erased than that appearing on the papers originally presented, it does not appear to have the permanence which is expected of records of this Office.

If applicant wishes to file patent applications on "Erase Bond" in the future, he should satisfy himself, by test or otherwise, that matter typed thereon will satisfy the requirement of Rule 52.

Since the Examiner's requirement for duplicate papers in this case was not unreasonable the petition is denied.

DENIED.

In the United States Patent Office
Before the Board of Appeals

EX PARTE JAEGER

Appeal No. 72—05. Decided December 31, 1958

1. PATENTABILITY—COMBINATION—INVENTION IN ELEMENT.

"* * * if invention rests in an element of a combination, applicant is not entitled to the combination involving that element unless such element coacts with other elements so as to bring about new, unexpected, and beneficial result flowing from the new combination. In the absence of a showing of a new, unexpected and beneficial result flowing from the new combination, the invention should be defined as the new element."

2. SAME—SAME—EVIDENCE.

The allegation that appellant's structure would insure a more faithful reproduction of a master pattern in a workpiece being machined than one produced by the structure of a reference patent *Held* not persuasive where there was no evidence, as by comparative tests of appellant's machine and that of the reference patent, using a number of identical patterns, workpieces of the same material, and cutting tools, to establish the asserted advantage.

3. SAME—SAME—INVENTION IN ELEMENT.

The rejection of claims covering a machine tool and a motor-clutch control mechanism element, is drawn to an old and unpatentable combination, *Held* proper where there was "no new and unexpected result flowing from the combination including the improved control mechanism element" and the element had "attained a separate and independent status in the arts."

4. APPEAL TO BOARD OF APPEALS—MATTER BEFORE BOARD.

"With respect to the patents to Caldwell et al. and Wilkie et al., these patents were not cited by the Examiner in his answer. Consequently, these patents are not a part of the issue presented to us by the Examiner, noting in this respect that the issue does not concern an art rejection of the claims. We will therefore not further consider these patents.

APPEAL from the Examiner. Serial No. 266,553.

AFFIRMED.

Joseph K. Schofield for Jaeger.

Before FRIEDMAN, MANION, and KEELY,
Examiners-in-Chief

MANIAN, *Examiner-in-Chief:*

This appeal is from the final rejection of claims 14 to 22, inclusive, the only claims remaining in the case.

Claim 14 is representative of the appealed claims and reads as follows:

14. A machine tool control system including at least one machine element adapted for translational displacement on a base thereof, comprising in combination, at least one continuously running electric motor, at least one clutch having engaged and disengaged positions, adapted respectively to engage and disengage the coupling of said motor and said machine element, a voltage varying means for supplying a voltage component algebraically additive to the instantaneous voltage at said continuously running electric motor terminals, a tracer means mounted on the machine tool, and displaceable in response to variations in the contours of a master pattern, said tracer means being operatively connected to energize and deenergize said clutch, a control means electrically interposed between said clutch and said voltage varying means for varying said latter means, whereby the said voltage component is an increment when the said clutch is engaged, and conversely.

The references relied on are:

Shaw I, 1,711,290, April 30, 1929.
Davis, 1,762,180, June 3, 1930.
Shaw II, 2,314,019, March 16, 1943.
Jaeger, 2,435,280, February 3, 1948.

The subject matter of the claims on appeal relates to a pattern-controlled machine tool. The machine tool disclosed is a lathe, similar to that shown in Shaw I. There is no disagreement between the appellant and the Examiner with respect to the difference between the control system in the present case and that shown in Shaw I. In essence, this difference includes the use in this case of a variable speed motor (for each movable member) and a control device in the electrical system connected to be operated by the clutch (which drivingly connects the motor to a machine element to be driven) to in turn operate a voltage varying means to provide a variable voltage component which is applied to the terminals of said motor whereby the speed of the motor (and hence the feed of the machine element) is increased when the clutch is engaged and decreased when the clutch is disengaged. The engagement and disengagement of the clutch are under the control of and in accordance with the movement of the tracer with respect to a pattern it traverses. In Shaw I there is disclosed no means in the control system for varying the speed of the motor, the motor speed being uniform for all operations of the clutch connected thereto.

The claims are finally rejected by the Examiner as being unpatentable for the reason that they are drawn to an old and unpatentable combination of elements, namely, a machine tool and a clutch control means therefor in view of Shaw I who, he states, shows this combination to be old and therefore exhausted. It is the Examiner's position that the novelty resides solely in the clutch control means element, that the latter element does not coact with the machine tool element to bring about new, unexpected and beneficial results flowing from the combination but coacts with the machine tool element in the same manner as in Shaw I. He states that the invention, if any, would appear to lie in the clutch control means which he states has independent status, is separately classified and searched in Class 192 as shown by Shaw II, Davis and Jaeger. The Shaw I patent to the combination is classified in Class 82.

The Examiner does not state in his answer the parts of the claimed structure he considers to be the machine tool and this should, accordingly, be first determined. Considering, by way of example, claim 14 as reproduced on page 1 of the brief, this claim recites in lines 1, 2 and 3 as an element of the combination "at least one machine element adapted for translational displacement on a base thereof." While claim 14 is by its introductory statement directed to a machine tool control system, the reference to the base in the above-quoted limitation in lines 1, 2 and 3 necessarily includes the base (of the machine tool) as an element of the combination in addition to the

machine element. In a similar manner other parts of the machine tool, for example the cross slide, are included as elements of the combination by the statement in lines 10 and 11 which defines the tracer means as "mounted on the machine tool." Accordingly, the element "machine tool," which the Examiner states to be one of the two elements of the combination he deems to be old and exhausted, includes the "at least one machine element," the base of the machine tool, the tracer, and the aforesaid other parts of the machine tool on which the tracer is mounted. It is apparent from the answer that the second element of the combination, namely, "clutch control means," necessarily includes the motor and this element will hereinafter be referred to as the motor-clutch control mechanism element.

The law applicable to the issue herein presented is well established. The law is that [1] if invention rests in an element of a combination, applicant is not entitled to the combination involving that element unless such element coacts with other elements so as to bring about new, unexpected, and beneficial result flowing from the new combination. In the absence of a showing of a new, unexpected and beneficial result flowing from the new combination, the invention should be defined as the new element. *In re Pinco*, 33 CCPA 1148, 1946 C.D. 486, 591 O.G. 329, 156 F.2d 173, 70 USPQ 230.

Appellant contends that he has a new and patentable combination. He states:

"The system as claimed contemplates varying the rate of displacement of a machine element or slide in response to variations in the slope of a master pattern over which a tracer member traverses. The speed of movement of the machine element or slide to be displaced is then a function of the rate of change in the slope of the pattern being traversed by the tracer, so that when a contour on the pattern is changing abruptly, the speed of movement of the machine element is accordingly reduced. This obviously insures a more faithful reproduction of the master pattern in the work piece being machined.

The invention as recited in the appealed claims calls for a combination of elements arranged to cooperate to produce a new and better result—a more accurate replica of the master pattern. This is a distinct and meritorious contribution to the art of contour machining."

It is not apparent to us why appellant's structure insures a more faithful reproduction of the master pattern in the workpiece being machined than one produced by the structure of Shaw I. There is no evidence of the same in the record file of this case as by comparative tests of the instant machine and that of Shaw I, using a number of identical patterns, workpieces of the same material and cutting tools, to establish the asserted advantage of a more faithful reproduction of a master pattern. In the absence of such evidence we are not persuaded by the mere allegation that such is the case.

We do not agree with the appellant that "the speed of movement of the machine element . . . is a function of the rate of change in the slope of the pattern." It appears that the relationship, if any, is with respect to the amplitude of the slope rather than to the rate of change in the slope, and this only up to the preset maximum speed of the motor which may be reached before the full amplitude of the slope is traversed.

With respect to the condition where the contour on the pattern is changing abruptly, it is not apparent to us why the speed of movement of the machine element in the combination recited in the claims is reduced to any greater extent than in Shaw I. In both structures the clutch is disengaged to immediately disconnect the drive from the motor to the machine element, in which case the reduction of the speed of movement of the machine element is the same for the two structures where the two elements are traveling at the same speed at the time the clutches are disconnected.

We have considered all of the arguments presented by the appellant in his brief, reply brief and at the oral hearing but are not convinced thereby of any error in the Examiner's holding.

The improvement over the Shaw I patent is in the motor-clutch control electrical system shown in Fig. 4 of the instant case. This system produces variations in the speed of each of the two motors, each time the clutches individual to the two motors are engaged and disengaged. With respect to the combination of this system and the aforesaid machine tool element that is set forth in the claims, this system coacts with said element in the same manner as the corresponding system in Shaw I coacts with its corresponding machine tool element. In both structures the clutch is engaged and disengaged, in response to movements of the tracer traversing the master pattern, to connect and disconnect, respectively, the motor to the machine element driven thereby. The fact that the machine element is moved with increasing speed in the instant case is not a new and unexpected result because the rate of movement of the machine element is a direct function of the speed of the motor to which the element is connected. A motor of constant speed, as in Shaw I, will drive its element at a constant speed and a motor of variable speeds, as in the instant case, will drive its element at a corresponding variable speed.

We are accordingly of the opinion that the motor-clutch control system element adds to the combination that is set forth in claims 14 to 22, inclusive, only its own inherent results or function and that there is no new and unexpected result flowing from the combination of the control system element with the aforesaid machine element.

The Examiner has shown by the patents to Davis, Jaeger and Shaw II that the subcombination element, namely, the motor-clutch control mechanism element is a field of inventive endeavor that is independent of the machine tool combination including that element, and is so recognized by the inventors in the field. These patents also show such subcombination is capable of being claimed per se without reference to or inclusion in combination therewith the heretofore mentioned machine tool element that is recited in the claims. These patents further show that this subcombination element has attained an independent status in the arts from the combination, the former being classified and searched in Class 192 and the latter in Class 82.

[3] Since there is no new and unexpected result flowing from the combination including the improved control mechanism element, and the improved element has attained a separate and independent status in the arts, the rejection of claims 14 to 22, inclusive, as being drawn to an old combination, and therefore unpatentable, is proper and we will accordingly sustain the same.

[4] With respect to the patents to Caldwell et al. and Wilkie et al., these patents were not cited by the Examiner in his answer. Consequently, these patents are not a part of the issue presented to us by the Examiner, noting in this respect that the issue does not concern an art rejection of the claims. We will therefore not further consider these patents.

The decision of the primary Examiner finally rejecting the appealed claims is affirmed.

AFFIRMED.

In the United States Patent Office
Before the Board of Appeals

EX PARTE BROWNLEE

Appeal No. 92—18. Reissue Patent No. 24,516 of August 12, 1958. Decided May 6, 1958

1. REISSUE—BROADENED CLAIMS.

"* * * if a claim of a reissue can hold something as an infringement which would not be an infringement of any of the claims of the original patent, then the reissue claim enlarges the scope of the claims of the original patent."

2. SAME—SAME.

"It is urged that 'the original patent claim must obviously be given a broad interpretation' and that hence the new claims are not broader. However, the language of the claim of the patent is clear, it is readily understood and is consistent with and uses the same terms as the description of the machine. We do not believe it appropriate or proper to speculate as to whether or not it would be given a scope beyond its express terms by interpretation or construction and as to what the limits of this expanded scope would be."

APPEAL from the Examiner. Serial No. 576,225.

AFFIRMED.

Messrs. Davis, Lindsey, Hibben and *Noyes* for Brownlee.

Before FEDERICO, DUNCOMBE, and ASP,
Examiners-in-Chief

FEDERICO, *Examiner-in-Chief:*

This is an application for reissue of a patent in which the Examiner has rejected claims 2 to 9, inclusive, which are all the new claims sought to be obtained by the reissue, and the applicant has appealed. The original patent is No. 2,498,523, which was issued on January 3, 1950, with one claim. The application for reissue was filed on April 4, 1956, over six years later. The Examiner's position is that the new claims are broader than the single claim of the original patent and, hence, are barred by the last paragraph of 35 U.S.C. 251 which reads:

"No reissued patent shall be granted enlarging the scope of the claims of the original patent unless applied for within two years from the grant of the original patent."

All the new claims of the reissue application involve the same issue and it is only necessary to take claim 2 as illustrative. In view of the nature of the rejection, both claim 1, the claim of the original patent, and claim 2 are copied in parallel columns:

Original Patent Claim	*Proposed New Claim 2*
In a machine for applying transfers to groups of articles simultaneously,	In a machine for applying transfers to groups of articles simultaneously,
means for moving groups of transfers into applying position,	means for moving groups of transfers into transfer applying position,
a movable cover carrying a plurality of applying means,	a roller for applying transfers to said articles and being movable to and from applying position, movable roller supporting means for rotatably supporting said roller and movable to and from transfer applying position, said roller having a plurality of sets of transfer applying elements arranged circumferentially about its periphery and adapted to be brought successively into operable position upon rotation of said roller for engagement with successive groups of transfers,
means operated by movement of said cover for moving said applying means into applying position,	means operable by movement of said roller supporting means for rotating said roller to move a successive set of transfer applying elements into operable position,
and means operable by movement of said cover after each of said applying means has performed an applying operation for moving additional groups of transfers into applying position.	and means operable by movement of said roller supporting means after each said set of applying elements has performed an applying operation for moving additional groups of transfers into applying position.

The subject matter of the patent and of the reissue application is a machine for applying transfers simultaneously to groups of articles. The machine illustrated and described is used to apply local tax stamps simultaneously to all the cigarette packages in a conventional ten-package carton. The stamp is a transferable imprint such as a decalcomania, carrying a heat activatable adhesive on its exposed surface, which is transferred from a web or sheet carrying it to the object to which it is applied by the application of heat. The machine is generally box shaped, having an opening through it through which a carton of cigarettes, with the top side opened up to expose the ends of the packages, is passed. The inside has a roll of the sheet which carries the transfers, which passes over the exposed ends of the packages. The sheet carries rows of transfers at spaced intervals to match the group of articles to which they are applied. A roller carries a flat face with a row of five electrically heated projecting surfaces, the applying means or elements, which are applied over the transfers. One feature of the machine is that the roller has three circumferentially spaced groups of these heating surfaces, each one of which carries the electrically heated projections in staggered arrangement with respect to the others. The area of the carrier sheet over the packages carries two rows of fifteen transfers each, sufficient for three cartons of cigarettes. When a carton is in place, one group of the applying surfaces is pressed down onto the sheet and transfers a stamp to each of the packages in the carton, each applying surface taking care of two packages. Without moving the carrier sheet, the carton is removed and a second carton of cigarettes is put in place, and the application of the second group of heaters transfers a second set of stamps to the ends of the packages: a third carton is then inserted and the third group of heaters presses a third set of stamps to the ends of the packages. The stamps on the packages in the three cartons are, of course, located on different portions of the ends of the packages. After the third operation, the carrier sheet is moved to place the next group of stamps in position, and the operations are

repeated. In the machine described and claimed in the patent, the roller which carries the three groups of heating surfaces is carried by the cover of the machine on its inner face. On the first application of stamps, the cover is moved down to press the applying surfaces onto the stamps and the packages. The cover is then raised and this raising of the cover operates means to rotate the roller one third of its circumference, placing the next row of applying surface in position. The cover is then lowered again to apply the second set of stamps. Raising the cover another time turns the roller for the third set of stamps. After the third set of stamps has been placed, the raising of the cover not only rotates the roller to position the next row of applying surfaces, but operates a mechanism to bring the next group of stamps into place.

The claim of the original patent calls for means for moving groups of transfers into applying position, a movable cover which carries a plurality of applying means, means operated by movement of the cover for moving the applying means into applying position, and means operable by movement of the cover after each of the applying means has performed an applying operation for moving additional groups of transfers into applying position. It is evident that the claim is directed throughout to the "movable cover" carrying the applying means and operating the movement of the applying means and the movement of the transfers.

Claim 2 of the reissue application differs from the claim of the patent in two respects. First, all references to the movable cover have been eliminated and replaced by movable "roller supporting means"; and second, certain additional details of the structure of the device have been added to the claim. The resultant claim is twice as long in number of words as the claim of the patent and some of the other claims are even longer.

While the claim has added a number of details to the mechanism recited, the broadening of the claim is asserted to consist in the substitution of a broader expression for the movable cover recited and referred to several times in the original claim. Appellant's position essentially is that the claim has not been broadened, and he agrees that if the claim has been broadened, it is barred by the last paragraph of Section 251. The statute prohibits a reissue "enlarging the scope of the claims of the original patent" which has been applied for more than two years after the granting of the original patent. In the usual case, this question is readily determined by comparison of the claims. A new claim may differ from the old claim solely in the addition of details or elements, or a new claim may differ from the old claim solely in the removal of a detail or element. In these instances, the conclusion that the claim has been narrowed in the one case or broadened in the other is self-evident. When the changes are more complex, as in cases in which the nature of the claim is changed, the matter must be determined by application of a general rule which has been expressed and applied in a number of instances and of which the simple illustrations which have been stated are obvious examples. This rule is that [1] if a claim of a reissue can hold something as an infringement which would not be an infringement of any of the claims of the original patent, then the reissue claim enlarges the scope of the claims of the original patent. The latest application of this principle is found in *Rohm and Haas Co.* v. *Roberts Chemicals, Inc.*, 245 F.2d 693, 113 USPQ 423 (CA 4, 1957), in which the court said "the usual test in determining such a disputed point [that the reissue enlarges the scope of the claims of the original patent] is whether the claims of the reissue could be infringed by any procedure which would not infringe the claim of the original patent." In this case, the claims of the original patent were all composition claims, and the claims of the reissue were process claims, and a study of the specific nature of the claims showed that there was nothing that would infringe the process claims of the reissue which would not at the same time infringe the claims of the original patent and, hence, the reissue was held not to be broadened. Other cases in which this question is considered, including several which are analogous to the one presented here, are: *Gage* v. *Kellogg*, 26 Fed. 242, 1886 C.D. 295, 36 O.G. 234 (The court stated that it does not aid the complainant to show that the claim has been narrowed at one end when it has been expanded at the other); *Fox Typewriter Co.* v. *Corona Typewriter Co.*, 282 Fed. 502, 1923 C.D. 440, 316 O.G. 445 ("The patentee cannot point to one narrowing limitation in his reissued claim, and thereby hide a broadening of the same claim, when that broadening serves to bring within the monopoly a structure which otherwise would have been free."); *Rancourt* v. *Panco Rubber Co.*, 5 F. Supp. 185 ("Even if some elements of the reissued claims were narrower than in the original, that does not save the claim if other elements were broadened."); *Ex parte Ruhmer*, Re. 17,158, 3 U.S. Daily 2582 (Board of Appeals, 1927); *Ex parte Russell*, 18 USPQ 29 (Board of Appeals, 1931); *Schenk* v. *United Aircraft Corp.*, 43 F. Supp. 679, 51 USPQ 519 ("a claim in a reissue is broadened if it could be infringed by any conceivable device which would not infringe any one of the original claims").

Considering the application of this principle to the present case, it is considered obvious that a machine can exist which would infringe the terms of the reissue claims and which, at the same time, would not infringe the terms of the claim of the patent. This is readily evident from a mere comparison of the language used in referring to the structure for carrying the roller and for operating the roller and the movement of the carrier sheet. The original claim requires the cover of the machine, whereas according to new claims of the application it could be any "means" whatsoever which would perform these functions.

Appellant has called attention to the following decisions as having some bearing herein: *Southern Saw Service, Inc.* v. *Pittsburgh-Erie Saw Corp.*, 239 F.2d 339, 111 USPQ 362; *Hazeltine Research Inc.* v. *Avco Mfg. Corp.*, 227 F.2d 137, 107 USPQ 187; *General Plastic Corp.* v. *Finkelstein*, 145 F. Supp. 862, 110 USPQ 192. The reissues involved in these cases were filed within four months, eleven months and eleven months, respectively, after the grant of the original patents and the issue involved here was not involved at all.

Much of appellant's argument attempts to justify the nature of the change made from the standpoint

that the new claims are for the same invention as the claim of the patent. This need not be disputed since claims directed to the same invention may still differ in scope.

[2] It is urged that "the original patent claim must obviously be given a broad interpretation" and that hence the new claims are not broader. However, the language of the claim of the patent is clear, it is readily understood and is consistent with and uses the same terms as the description of the machine. We do not believe it appropriate or proper to speculate as to whether or not it would be given a scope beyond its express terms by interpretation or construction and as to what the limits of this expanded scope would be.

The decision of the Examiner is affirmed.

AFFIRMED.

REISSUES

JULY 14, 1959

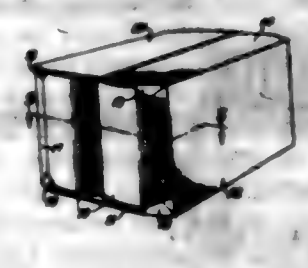
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,667
ARTICLE CARRIER

Francis W. Fielding, New Orleans, La., assignor to Lengsfield Brothers, Inc., New Orleans, La., a corporation of Louisiana

Original No. 2,849,111, dated August 26, 1958, Serial No. 540,981, October 17, 1955. Application for reissue November 3, 1958, Serial No. 774,797
6 Claims. (Cl. 206—65)

1. In combination, a carton and a plurality of cylindrical articles, said carton being formed of paper board or the like with interconnected top, bottom and side panels defining an open ended container in which the articles are received in side by side relationship, a foldable flap foldably joined to the end of at least one of the panels along a fold line spaced from and generally parallel to the end of the panel to fold back into the container between said one of the panels and an adjacent one of the articles in the container, and a web formed of a pair of generally triangular sections foldably joined to each other along a central fold line and foldably joined to one end of the flap and to an adjacent panel along angularly related fold lines, all of the fold lines meeting at a common point at one



corner of the carrier and the web extending across a corner of the open end of the container and contacting an end edge portion of the adjacent article to prevent accidental removal of articles from the container.

PLANT PATENTS

GRANTED JULY 14, 1959

Owing to the fact that almost all of the illustrations of the plant patents are in colors, it is not practicable to print a cut of the drawing.

1,850
ROSE PLANT

Eugene S. Boerner, Newark, N.Y., assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York

Application November 12, 1958, Serial No. 773,530
1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of heavy, dark green foliage, many thorns distributed on the stem, prolific flower production, very large flowers of hybrid tea form, and a distinctive color tonality of the flowers varying from Spectrum Red in the bud stage, through Rose Red, lightly overcast with Spinel Pink in the half-open bud stage, to Thulite Pink, lightly overcast with Cameo Pink in the fully open flowers.

1,851
DIANTHUS CARYOPHYLLUS PLANT

William Zombory and Sophia Zombory, Detroit, Mich., assignors to Jackson & Perkins Company, Newark, N.Y., a corporation of New York

Application November 12, 1958, Serial No. 773,532
1 Claim. (Cl. 47—60)

A new and distinct variety of *Dianthus caryophyllus* plant, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a compact plant habit, with Forest Green foliage, early blooming, winter-hardy and very long-lived habits, a repeating blooming habit in the fall, neat, compact and non-splitting form of the flowers, a distinctive Cameo Pink, lightly overcast with Rose Pink, general color tonality of the flowers, and a heavy flower fragrance.

1,852
CAMELLIA PLANT

John Lester Schwoerer, Oakland, Calif.

Application May 19, 1958, Serial No. 736,419
1 Claim. (Cl. 47—60)

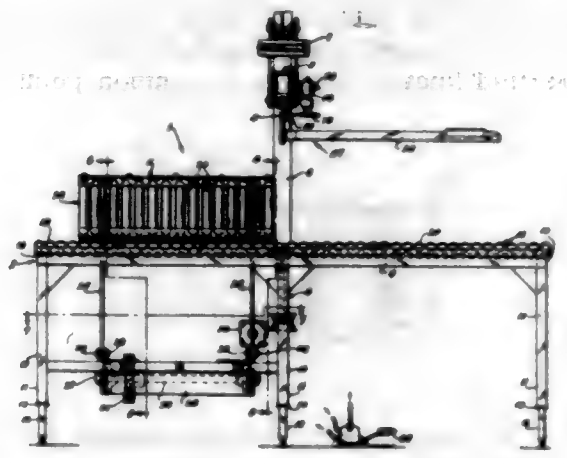
A new and distinct variety of Camellia plant substantially as illustrated and described, characterized by its flower of medium to large diameter but of exceptional depth, by its rose colored semi-double to anemone-peony form of flower, with center petals heavily convoluted with stamens and numerous petalloids intermixed and peony-like center of unusual depth, the outer guard petals usually being flat, in a single row, lightly veined and in slightly darker hue than the center part of the flower, and by its setting of many flower buds, said buds being exceptionally large size, approximating one and one-half inches in length from base of calyx and two and one-half to three inches in circumference at tip of calyx.

PATENTS

GRANTED JULY 14, 1959

GENERAL AND MECHANICAL

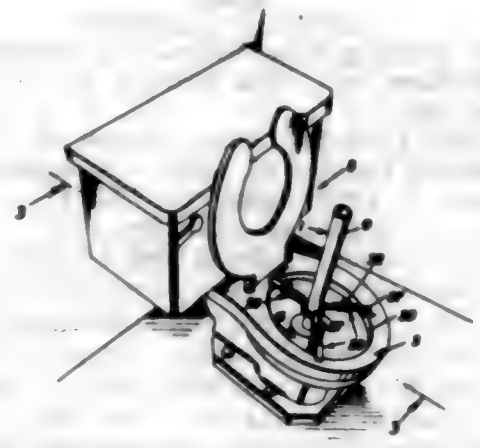
2,894,262
TABLE STAPLING MACHINE
Werner Schafroth, Herrin, Ill.
Application March 26, 1956, Serial No. 573,798
2 Claims. (Cl. 1—13)



1. A table stapling machine comprising a frame having detachable side and end units, a work surface supported by said units for supporting a carton to be stapled, means for orienting a carton on said work surface, an upstanding mast removably connected to one side unit of said frame and adapted to be secured to the other side unit if desired, a vertically movable bracket mounted on said mast above said work surface, a stapling head hingedly connected to said bracket, said stapling head having a stapling mechanism therein which is actuated by an air cylinder, an air valve connected to said air cylinder for controlling same, said stapling head having a trip mechanism thereon for actuating said air valve, air cylinders for actuating said carton orienting means and the movement of said bracket on said mast, and means for supplying air under pressure to each of said air cylinders and air valve.

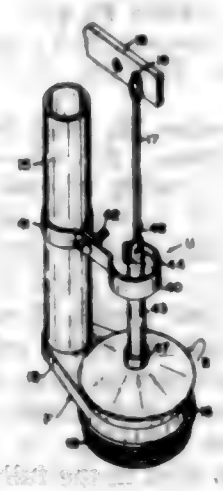
2,894,263
FLOODING CONTROL DEVICE FOR TOILET COMMODES
Gerhardt P. Kunkel, Bellwood, and Fred K. Koeppel, Forest Park, Ill.
Application July 25, 1958, Serial No. 750,968
1 Claim. (Cl. 4—1)

A device for preventing flooding of a toilet commode from backflow of sewage comprising a weight having a vertical bore and a resilient annular bottom gasket thereon and adapted to hold said gasket seated under pressure on the bottom of a toilet commode over and in sealing relation to a sewage discharge in said bottom while permitting backflow of sewage to rise through said discharge, gasket and bore, a standpipe fixed to and rising from said weight in vertical alignment with said bore for containing backflow sewage rising through said bore and preventing overflow from the standpipe into said commode, and means on said standpipe engageable with a rim of a commode to hold said weight and standpipe vertically aligned with said discharge and through which said standpipe is downwardly slidable to permit the gasket to be seated under pressure by said weight, comprising a washer slidably fitted on said standpipe, arms on said washer having right angled ends for overlying and straddling a commode rim, said arms being terminally pivoted on said washer and extensible for horizontal



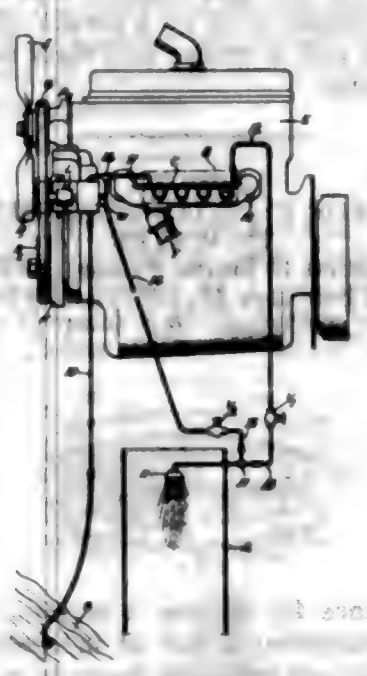
swinging and lengthening to adjust said right angled ends for overlying and straddling rims of commodes of different sizes with the arms radial to said washer in dead-center lock position.

2,894,264
FLUSH VALVE GUIDES
Adolph Walter, Westminster, Colo.
Application October 31, 1955, Serial No. 543,921
5 Claims. (Cl. 4—57)



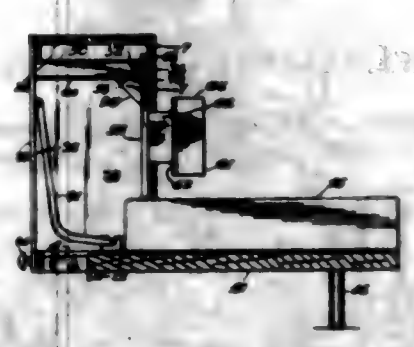
1. In a flush valve and the like for a water compartment provided with a fitting having an outlet and a seat, valve means cooperating with said seat and movable upwardly from said seat and downwardly to said seat, and means including a rod for guiding said valve means to and from said seat, the improvement comprising a device for maintaining said rod in a central position relative to said outlet and including a resilient ring-shaped member in flat strip form having spaced ends on one side so as to be open at said side and adapted to engage the inner surface of said outlet, said member having a hook at each end for engagement by a tool for inserting the same; and means extending inwardly from the side opposite said open side for engagement with said rod at a position centrally of said outlet.

2,894,265
WATER HEATING DEVICES
Paul H. Reardon, Torrance, Calif.
Application February 16, 1956, Serial No. 565,865
6 Claims. (Cl. 4—147)



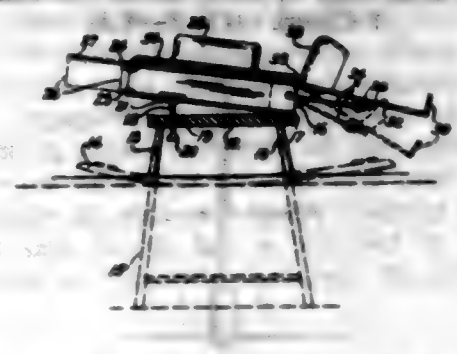
1. A means for obtaining a continuously flowing supply of hot water from an idling internal combustion engine, said means comprising a heat exchange coil adapted to be detachably mounted on and in heat exchange relation to the exhaust manifold of an internal combustion engine, said coil consisting of a plurality of reverse bends of tubular material of relatively high thermal conductivity each substantially of U-shape, a water pump and means detachably mounting the pump in a position relative to the said engine to be driven thereby at a determined rate at idling speed, and flexible conduit means connecting the said pump to a supply of water and connecting the pump and coil to feed the water through the coil and to a point remote from the said engine.

2,894,266
CONVERTIBLE SOFA BED
Norman J. Gran, Chicago, Ill.
Application June 25, 1953, Serial No. 364,002
7 Claims. (Cl. 5—12)



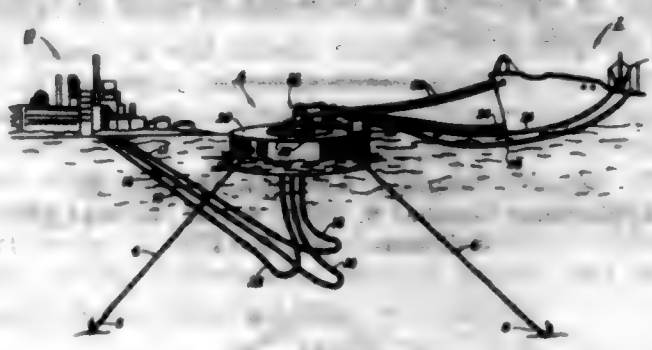
3. A portable sofa bed comprising a bed, an upright housing mounted on and disposed along one of the long sides of said bed, there being an opening on the wall of the housing adjacent the bed, a panel horizontally pivoted at the top opposite ends of the panel to the respective upper inside end walls of the housing so that the panel may be swung through the opening, an elongated sofa back bolster horizontally mounted on the face of the panel, and a bedding bail having the ends of its arms horizontally pivoted within the housing and of a size movable through the opening so that its cross bar may be laid across a bed.

2,894,267
FURNITURE FOR A PHYSICALLY HANDICAPPED PERSON
Delmer D. Owens, Durham, N.C.
Application November 9, 1956, Serial No. 621,339
3 Claims. (Cl. 5—68)



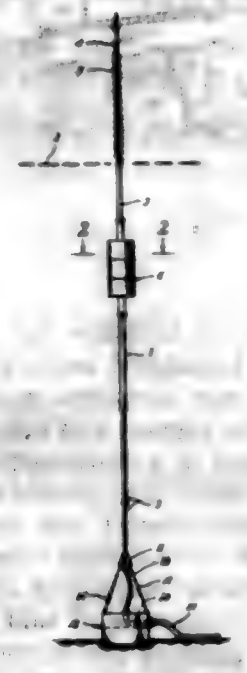
1. In an article of furniture for a physically handicapped person, a horizontal main support, an auxiliary support hinged at one transverse margin to a transverse margin of said main support and being adapted to receive the body of a person in a downwardly facing prone position, means to adjust the auxiliary support upwardly relative to the main support and to hold said auxiliary support at an angle to said main support, a board hinged to said one transverse margin of the auxiliary support above the hinged connection of said auxiliary support to the main support, coacting means connected between said one transverse margin of the auxiliary support and said board and being formed and arranged to support said board at an adjusted angle relative to said auxiliary support, said last named means being connected to the auxiliary support between the hinge connections of the board and the main support, said board being adapted to receive the person's legs, upstanding foot rest means on the free transverse margin of said board, an upstanding crotch-receiving member on said board located intermediate the side margins thereof, respective longitudinal guides at the respective sides of said auxiliary support, respective bar members slidably engaged with said longitudinal guides, an extension member supported transversely on said bar members and located forwardly adjacent said auxiliary support, and respective upstanding longitudinal retaining members adjustably secured to the longitudinal side margins of said auxiliary support.

2,894,268
FLOAT-SUPPORTED SEA TERMINAL
Erwin S. Griebe, Dover, N.J.
Application December 27, 1956, Serial No. 630,981
7 Claims. (Cl. 9—8)



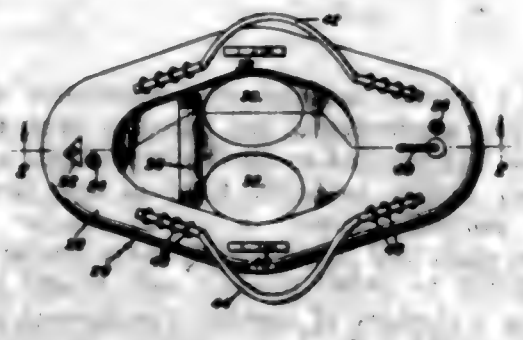
1. In a marine terminal, the combination of, an annular float, a connecting box mounted upon the top of said float and adapted to move thereabound, a relatively stationary header assembly fixed to said float at the central portion thereof, a swivel header assembly mounted upon said relatively stationary header assembly and adapted to swivel thereon, said header assemblies providing a plurality of separate passageways each from a stationary connection to a swiveling connection, means connecting each passageway of said swiveling connection to said connecting box, and anchor means for said float.

2,894,269
OFF-SHORE GAS FLARE LINE, AND ANCHOR AND FLOAT THEREFOR
Robert J. Dodge, Bellaire, Tex., assignor to Buoys, Incorporated, Houston, Tex., a corporation of Texas
Application May 4, 1956, Serial No. 582,791
1 Claim. (Cl. 9—8.3)



In combination with an off-shore gas flare line arranged to conduct waste gas as produced from wells some distance from the well or wells producing it, preparatory to burning the gas, a portion of the gas flare line consisting of a rigid mast-like structure comprising a pipe which, in its erected position, extends vertically from a point below the surface of a body of water to a point above the surface of the water, an anchor adapted to rest upon the bottom of the body of water, the anchor including a buoyant section consisting of an air and water tight compartment capable of being flooded with water to submerge it, mooring means flexibly connecting one end of the mast-like structure to the anchor in closely spaced relation thereto, the mooring means being relatively short as compared to the length of the mast-like structure whereby the mast-like structure is movable pivotally, in the vertical plane, about its connected end, a float connected to an intermediate portion of the mast-like structure, the position of the float with respect to the mast-like structure being such that, when the gas flare line is in use, the float is fully submerged and the arrangement being such that the float, acting upon the mast-like structure in conjunction with the mooring means, is capable of supporting the mast-like structure in substantially vertical position.

2,894,270
WATER SADDLE
Atlee G. Manthos, Arlington Heights, Ill.
Application October 9, 1956, Serial No. 614,958
4 Claims. (Cl. 9—17)

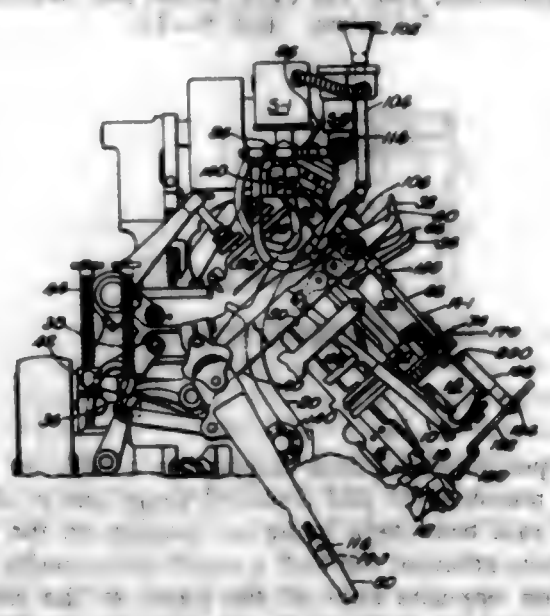


1. A water saddle comprising an inflated compartmented member having a deck formed in the inner portions of said member and having its level above half of the height of said member and below the top of said member, said member having a pair of spaced well openings extending through said deck, and a flexible imperforate waterproof sheet having an end secured to said deck, said sheet being of a size sufficient to completely overlie said openings and said deck adjacent said openings while enabling an occupant to sit on a portion of said sheet remote from said end to secure said sheet adjacent to said deck and openings.

2,894,271
APPLIANCE FOR FLOATING THE HUMAN BODY IN WATER
Robert B. Smith, Pelham, N.Y.
Application February 25, 1957, Serial No. 641,970
2 Claims. (Cl. 9—17)

1. An appliance for floating a person in water, comprising in combination: a pair of independent and generally elongated, non-inflatable buoyant members adapted for fitting about the waist of a person, said members being slotted longitudinally inwardly from their edges with right-angle terminations to afford a T-slot thereat, the termination being of greater width than the entrance portion width; and a pair of elastic, removable bands, of a thickness to fit an entrance slot, as the sole means for uniting the buoyant members to support the same on the wearer, the bands at their respective outer portions being thickened beyond the width of the entrance portion of a slot and additionally thickened at their respective extreme outer ends to fit snugly the termination of a T-slot.

2,894,272
MACHINES FOR SHAPING UPPERS OVER LASTS
Charles K. Woodman, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Application December 23, 1955, Serial No. 554,994
8 Claims. (Cl. 12—10.2)



4. In a machine for shaping uppers over lasts, a gripper for seizing the upper of a shoe and movable thereafter in a direction extending heightwise of a last to tension the upper over the last, said gripper being adjustable in a direction extending lengthwise of a shoe in the machine to accommodate shoes of different sizes, power operated means including a yieldable connection for impart-

ing movement to the gripper, means connected to the gripper and operable to arrest the movement of the gripper during the operation of the power operated means when the gripper has moved to a predetermined position, said means including a member movable in response to adjustment of said gripper to vary said predetermined position, and means under the control of the operator for selectively releasing and reengaging the gripper arresting means to effect a controlled additional movement of the gripper by said yieldable connection.

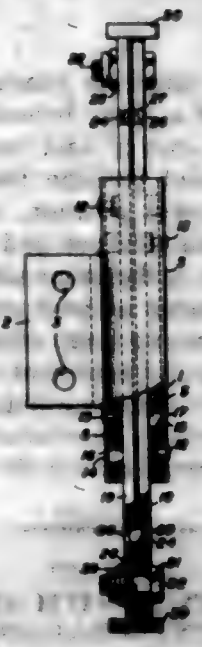
2,894,273
TOOL FOR REMOVING TYPE METAL FROM TYPE CASTING MACHINE MOUTHPIECES
Arthur Fritschle, St. Louis, Mo.
Application October 4, 1954, Serial No. 460,290
7 Claims. (Cl. 15—104.05)

1. A tool for removing type metal or dross from a type casting machine provided with a line of perforations extending along an edge of the mouthpiece and provided with recesses adjacent the respective perforations, comprising, a carrier, a perforating punch mounted for movement forwardly in said carrier, an edge gauge projecting forwardly from said carrier, spaced laterally of said punch and having a flat face formed to slidingly engage the edge of the mouthpiece, adapted to align said punch with a line of perforations, and a finder mounted on and projecting forwardly from said carrier and spaced transversely of and in right angular relation with said edge gauge, said finder being spaced from said punch, said finder being held by said gauge at right angles to the edge of the mouthpiece and being formed to successively drop into the recesses as said carrier is moved along the mouthpiece, adapted to successively align said punch with the perforations in the line, whereby said punch when so aligned and actuated may successively remove the type metal or dross from the perforations in the mouthpiece.

2,894,274
SUCTION CONTROL IN SURFACE CLEANING TOOL
Curtis C. Coons, North Canton, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Application October 29, 1956, Serial No. 618,754
5 Claims. (Cl. 15—431)

1. A suction cleaning tool comprising a nozzle body having an outlet communicating with a source of suction, means defining a nozzle mouth in said body communicating with said outlet and having lips for engagement with a yieldable surface to be cleaned whereby suction in said mouth draws the surface above the plane of said nozzle lips, means defining a port in said body for passage of outside air into said body to reduce the suction pressure at said nozzle mouth, valve means normally closing said port, surface engageable means movably mounted on said body and connected to said valve means, said surface engageable means disposed in said nozzle mouth substantially in the plane of said nozzle lips and of smaller area than the area of said nozzle mouth to at all times allow passage of air therepast into said mouth to thereby substantially eliminate the effects of suction pressure thereon, and said surface engageable means actuated by engagement with the yieldable surface, upon the latter being drawn inwardly of said nozzle lips, to shift said valve means to uncover said port for admission of outside air into said body, whereby the suction pressure at said nozzle lips is lessened to reduce the force required to move the tool over the surface being cleaned.

2,894,275
SNUBBING MEANS FOR RECIPROCATING ELEMENTS
Nicholas R. Guilbert, Jr., Chestnut Hill, Pa.
Application May 18, 1956, Serial No. 585,815
6 Claims. (Cl. 16—82)

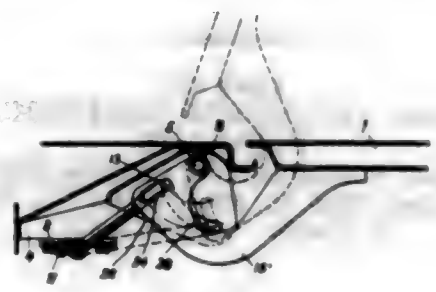


4. A snubber for a reciprocating element comprising a tubular element, opposed frictional linings disposed within said tubular element, a reciprocal unit extending into and oppositely beyond said tubular element comprising a pair of complementary spaced bars each having a surface engaging one of the linings, fulcrum means disposed between the bars, adjustable clamping means embracing the bars outwardly from said fulcrum means with respect to said tubular element for flexing the portion of the bars extending inwardly from the fulcrum means and thereby controlling the pressure exerted against said linings, means for mounting the tubular element in fixed relation to the reciprocating element, and means causing relative reciprocation of the bar unit with respect to the tubular element in correspondence to movements of the reciprocating element toward and in the vicinity of the respective limits of its travel.

2,894,276
CLOSURE FOR TRUNK COMPARTMENTS
Bernhard Wolff, Sindelfingen Kreis Boblingen, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Application March 31, 1955, Serial No. 498,362
Claims priority, application Germany April 1, 1954
1 Claim. (Cl. 16—139)

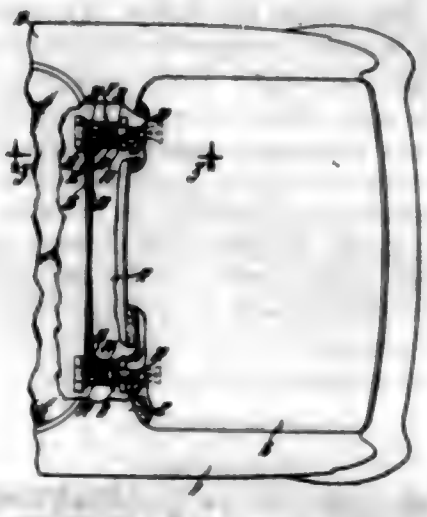
A spring-loaded hinge construction for opening and closing the lid of a trunk compartment of an automobile having an inner compartment wall, comprising a pair

of hinge arms, bracket means secured to said compartment wall, pivot means for pivotally mounting one end of each of said hinge arms thereto, means for rigidly securing the other end of each of said hinge arms to said lid, a bow-shaped beam spring of substantial curvature having two free ends and being disposed between said hinge arms, means for rotatably mounting said beam spring on said compartment wall intermediate said two hinge arms, each of said hinge arms and each of said bracket means being provided with a slot for simultaneous engagement with each of said spring ends to enable relative slidable movement of said ends in the direction parallel to the axis of said slots, said slots in said hinge



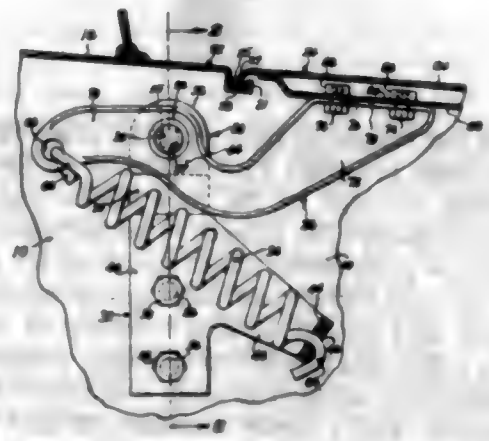
arms extending in a direction substantially parallel and slightly to one side of a plane including the axes of said pivot means, and the axis of said mounting means when said lid is in the closed position thereby tending to retain said lid in the closed position, each of said slots in said bracket means being curved and extending from said one side of said plane to the other side of said plane, said simultaneous engagement of said spring ends with said slots effecting an increasing lever arm of the ends of said spring with respect to the center of said pivot means to compensate for the decreasing tension of said beam spring and to substantially counteract the weight of said lid in all positions thereof during the opening movement of said lid.

2,894,277
DECK LID HINGE WITH ADJUSTABLE COUNTERBALANCE
John P. Bogater, Detroit, and La Verne B. Ragsdale, Dearborn, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 18, 1953, Serial No. 392,944
4 Claims. (Cl. 16—180)



4. In a vehicle body having a deck compartment and a deck lid therefor movable to open and closed positions, a hinge and counterbalance for the deck lid comprising, in combination, a pair of spaced hinge boxes mounted on said body, each having spaced walls, a hinge strap swingably mounted on each of said boxes between the walls thereof and secured to said lid, a pair of torsion rods extending between said boxes, each having a crank portion adjacent one end thereof swingably mounted between the walls of one of said hinge boxes and each having a bent portion at the other end thereof located adjacent the other of said hinge boxes, a pair of members, each being pivotally secured to one of said hinge straps and to the crank portion of one of said torsion rods, each of said members connected to said straps and said crank portions forming the sole members of a toggle interconnecting each of said hinge straps and each of said rods, first means for anchoring the bent portion of each said torsion rods on the adjacent other of said hinge boxes to obtain a first degree of torque, and second means located in fixed spaced relationship to said first means for anchoring said bent portions of each of said rods on said adjacent hinge boxes to obtain a predetermined different degree of torque.

2,894,278
AUTOMOBILE BODY COMPARTMENT HINGE
Otto C. Gensler, Detroit, Mich.
Application November 14, 1956, Serial No. 622,071
6 Claims. (Cl. 16—190)

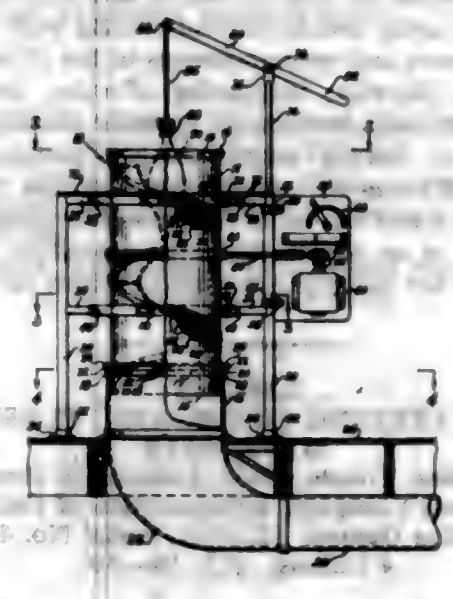


1. A vertically-mountable automobile trunk compartment lid hinge comprising a generally vertically-disposed hinge bracket of bent sheet material having a vertically-disposed mounting portion adapted to be secured to a vertical side wall of the compartment and a pivot-supporting portion projecting upwardly from said mounting portion nad a spring anchorage portion connected to and disposed to one side of said mounting portion and having a spring anchorage near the outer end thereof, a pivot element mounted in and transversely to said pivot-supporting portion, a hinge lever having thereon a pivot element bearing disposed intermediate its ends in pivotal engagement with said pivot element, said hinge lever having a lid attachment portion dispoeed on the same side of said pivot element as said spring anchorage and having a spring-engaging portion dispoeed on the opposite side of said pivot element from said spring anchorage, and a counterbalancing spring secured at one end to said spring-engaging portion and at its other end to said spring anchorage.

2,894,279
POULTRY FEATHER-PLUCKING DEVICE
Chastain G. Hancock, Norman, Okla.
Application December 27, 1957, Serial No. 705,549
5 Claims. (Cl. 17—11.1)

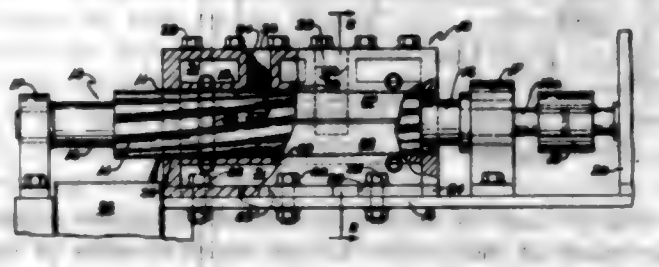
1. A poultry de-feathering device comprising a rotatable cylinder, a series of flexible feather plucking fins extending radially inward from the inner side wall surface of said cylinder and arranged in an axially-extending spiral formation defining a centrally-positioned axial path through said cylinder whereby said axial path is defined by the free ends of said fins, means for supporting

and moving a fowl to be de-feathered through said axial path, and a spiral fin supporting rod positioned in said



cylinder beneath said fins, said spiral rod encircling said axial path.

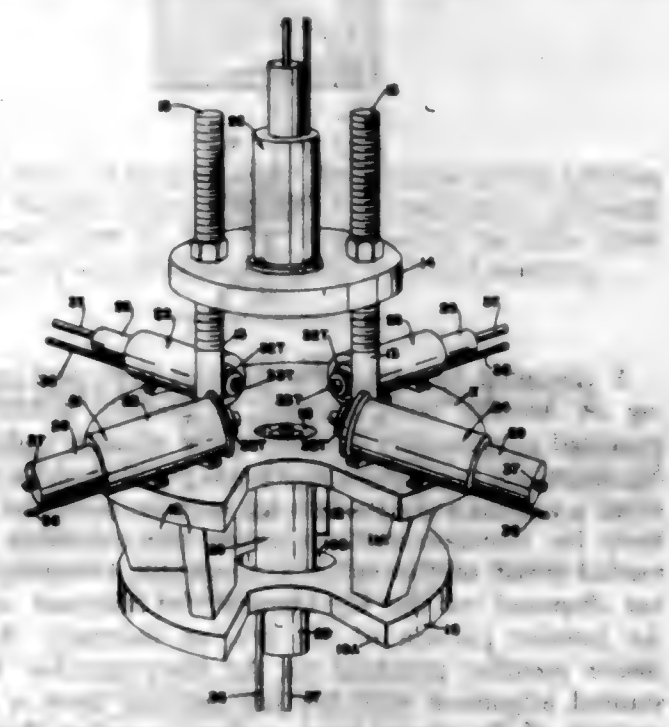
2,894,280
MIXING RUBBER
Arthur E. Juve, Akron, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Application September 8, 1953, Serial No. 378,975
15 Claims. (Cl. 18—2)



1. Apparatus for mechanically homogenizing and kneading plastic masses comprising a rotatable conical body and a closely adjacent surrounding conical sleeve forming a conical space which is of substantially uniform width throughout its length and is entirely open and unobstructed at its greatest diameter, means for introducing a plastic mass into the space between said body and said sleeve in the vicinity of the smaller diameter of said body, and space ribs on said rotatable conical body approximately filling the space between said body and said sleeve and extending in the general direction of the axis of said body.

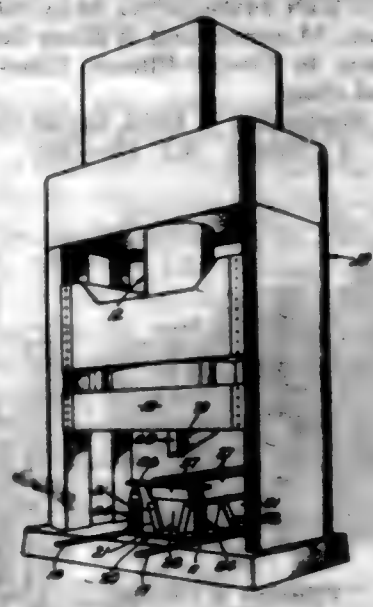
2,894,281
MOLDING PRESS
Vincent Anton Povse, Wickliffe, and George A. Zerby, Cleveland, Ohio, assignors to Bar Products Company, Cleveland, Ohio, a corporation of Ohio
Application May 5, 1955, Serial No. 506,286
5 Claims. (Cl. 18—16)

1. A workpiece molding press comprising a pair of horizontal table members, means mounting said table members in vertical separation so as to provide a space between them for mounting a workpiece to be molded, a plurality of substantially identical cylinder units mounted in opposed pairs of aligned units on said table members, each unit comprising a master cylinder and an after cylinder arranged in tandem alignment and disposed with the front end of the master cylinder adjacent the center of said space and the after cylinder extending away from said space, said pairs of cylinder units comprising at least one pair arranged in vertical alignment, with the master cylinders thereof directed toward said space through openings in said table members, and at least one pair of cylinder units arranged in horizontal alignment, and each of said units including a piston and a piston rod in each of the cylinders of the unit,



the master cylinder piston rod being hollow and the after cylinder piston rod extending through it and both piston rods having front ends adjacent said workpiece mounting space, work piece forming tool elements mounted on said piston rod front ends, and control means for selectively actuating the pistons of said pairs of cylinder units.

2,894,282
APPARATUS FOR MAKING ELECTRODE STICKS
Homer M. Harvey, Los Angeles, Calif.
Application February 25, 1957, Serial No. 641,952
7 Claims. (Cl. 18—16)

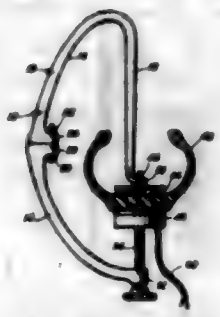


1. In apparatus for producing electrode sticks from metal in sponge, powder and like forms, the combination of a press including a bed and a power cylinder assembly having a vertically reciprocable platen, a pressing member carried on said platen, said pressing member having a plurality of stepped faces thereon, the risers between said stepped faces being concavely curved, a die assembly on said bed, said die assembly having an elongated cavity, and means for horizontally advancing said assembly to present successive longitudinal portions of said cavity to said pressing member.

2,894,283
CLAMPING APPARATUS

Clifton A. Salisbury, Tonkawa, Okla., assignor to H. B. Egan Manufacturing Company, Muskogee, Okla., a corporation of Oklahoma

Application May 24, 1956, Serial No. 587,115
1 Claim. (Cl. 18—18)

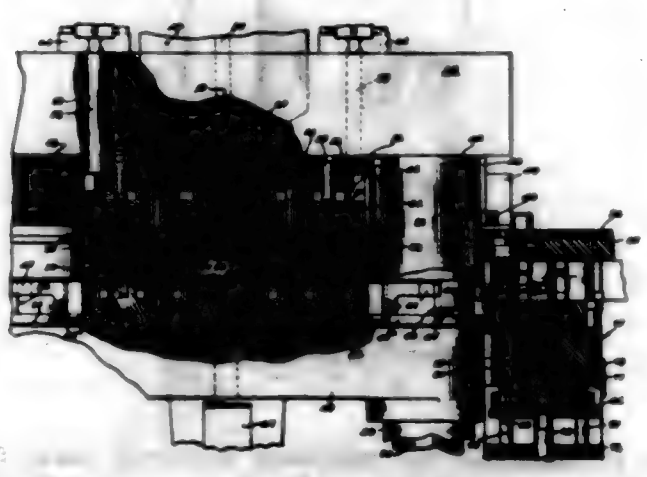


A clamping apparatus for tubeless tires, and comprising an arcuate body portion, a laterally pivotal joint provided substantially medial of the arcuate body, locking means for precluding accidental pivoting of the pivotal joint, a substantially straight leg member provided on the body for insertion within the tire and extending past a medial point of the body, a removable clamping member disposed on the leg member for disposal adjacent the interior portion of the tire, an internally threaded sleeve member provided on the body member in substantial alignment with the leg member upon a locked position of the pivotal joint, a shank member threadedly disposed within the sleeve member, a second removable clamping member disposed on the shank member for disposition adjacent the inner portion of the tire, said second clamping member adapted to move simultaneously with the shank member to alternately clamp the tire in the clamping apparatus and release the tire therefrom, one of said clamping members being a heating unit, and said clamping members interchangeable to position the heating clamp member on either the interior or exterior of the tire.

2,894,284
INJECTION MOLDING MACHINES

Blaine M. Allison, Maumee, and William Schmid, Toledo, Ohio, assignors to Owens-Illinois Glass Company, a corporation of Ohio

Application September 9, 1954, Serial No. 454,974
8 Claims. (Cl. 18—30)

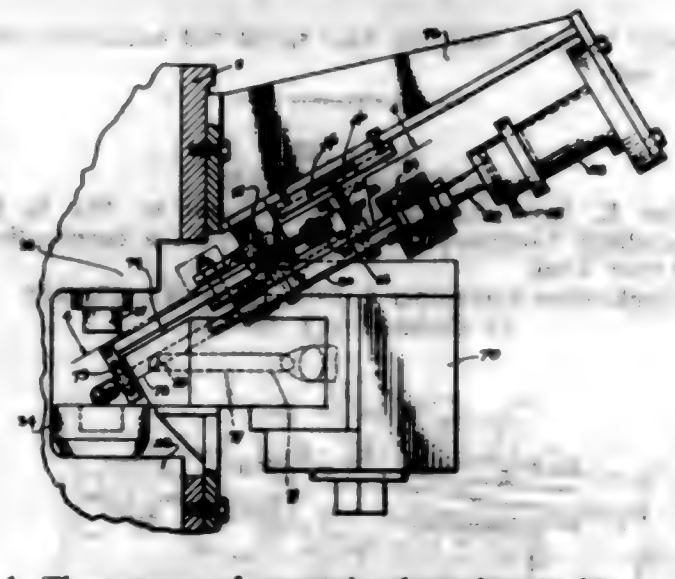


1. In an injection molding machine of the character described, a pair of disk-like carriers for threaded cores arranged side by side and positioned with their axes extending horizontally and arranged in parallel horizontal spaced relationship, two diametrically opposed sets of threaded cores on corresponding faces of each of the carriers, a nozzle common to the several sets of cores for delivering plasticized molding material, said nozzle positioned medially between the axes of said carriers, two sets of cavity molds wherein each set corresponds in number to one of the sets of threaded cores, and one each of the sets of cavity molds positioned in a zone generally disposed between the axis of one of said carriers and said nozzle, said cavity molds communicating with the nozzle through runners and sprue openings in the threaded cores and carriers therefor, means for effecting simultaneous oscillation of said carriers in opposite directions about their axes, to thereby simultaneously position two adjacent sets of cores for cooperation with the two sets of cavity molds while the other two remotely positioned sets of cores are in an article discharging position, and automatic means for removing the articles from said other set of cores.

2,894,285
GOB FEEDING OF ORGANIC PLASTIC MATERIALS

John G. Miller, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio

Application October 12, 1954, Serial No. 461,710
4 Claims. (Cl. 18—30)

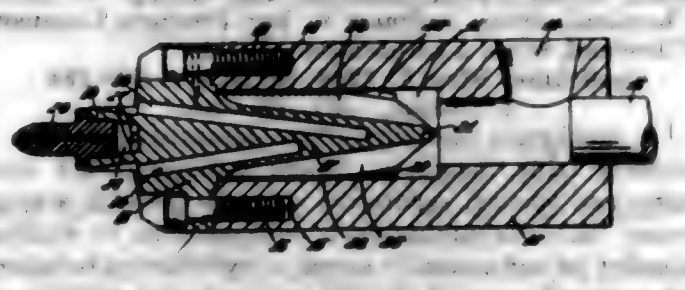


1. The process of separating heated moldable organic plastic material into mold charges which consists of supplying a source of such material under pressure, intermittently discharging severed measured quantities of such material through an outlet, suspending the said discharged material in successive masses beyond said outlet, and freely disposing each separate mass into the cavity of a mold.

2,894,286
INJECTION MOLDING HEATING CYLINDER

Emeric Gaspar, Michael George Munns, and Peter Franklin Harrison, London, England, assignors to The Projectile and Engineering Company Limited, London, England, a British company

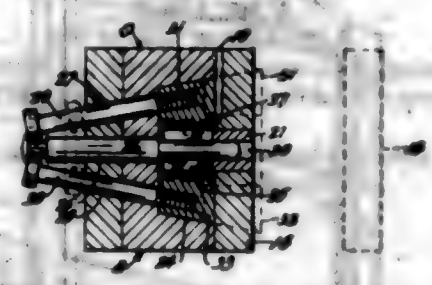
Application February 20, 1957, Serial No. 641,329
Claims priority, application Great Britain
February 21, 1956
5 Claims. (Cl. 18—30)



1. In a heating chamber for extrusion or moulding of plastics the provision of a spreader which has an external fluted conformation so that material to be plasticised may flow along the flutes, and wherein the flutes are connected to the outlet from the heating chamber through narrow circumferentially extending spaces formed

between the exterior surface of the spreader and the interior surface of the heating chamber and to longitudinally extending outlet passages into which the circumferentially extending passages open.

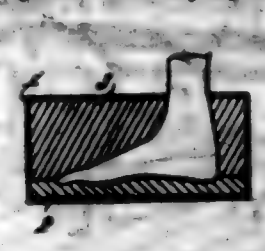
2,894,287
MOLD FOR MAKING FEED ROLLS FOR STAMP VENDING MACHINES
Kenneth C. Zeigle, Minneapolis, Minn., assignor to Electric Vendors, Inc., Minneapolis, Minn., a corporation of Minnesota
Application November 2, 1954, Serial No. 466,350
2 Claims. (Cl. 18—42)



1. A mold for forming a feed roll for stamp vending machines and the like, said mold comprising a base member having a recess formed in a surface thereof, said recess tapering inwardly from said surface to the bottom of said recess, a closure member adapted to extend across said recess to close off the same and to be secured to said base member, four separate matrix sections mounted within said recess and extending between said base member and said closure member and cooperatively defining a cylindrical cavity therebetween, said matrix sections having outer tapered surfaces complementary to the tapered surfaces of said recess, one of said members having a sprue hole formed therein connecting said cavity with the exterior for the introduction of molten material therethrough, each of said sections having a pair of opposite side surfaces each registering in tight-fitting substantially sealing relation with a side surface of one of the other of said sections and defining a break line therebetween, some of said sections having a plurality of minute conically shaped teeth-forming recesses formed in their cavity-defining surfaces and spaced along lines extending parallel to the axis of the cylindrical cavity, said recesses being in noncommunicating relationship with the portions of said sections which define said break lines and in noncommunicating relationship to each other, said base member having a pin receiving opening formed therethrough and communicating with said recess, a pin slidably positioned within said opening, said pin including a surface for engaging a portion of an article within said cavity, said base member having a plurality of openings formed therethrough extending an oblique angle to said first-mentioned opening and being in communication with said recess, a stripper bolt slidably positioned within each of said obliquely extending openings such that said stripper bolts extend obliquely of said pin, each of said stripper bolts being connected to one of said matrix sections, said pin and said stripper bolt having interengaging means formed thereon for causing the stripper bolts and pin to move in unison in a longitudinal direction with respect to the mold, whereby the pin and article move longitudinally in unison with said matrix sections while said matrix sections move radially outward away from the article to thereby eliminate strain on the molded teeth of the article and prevent damage thereto.

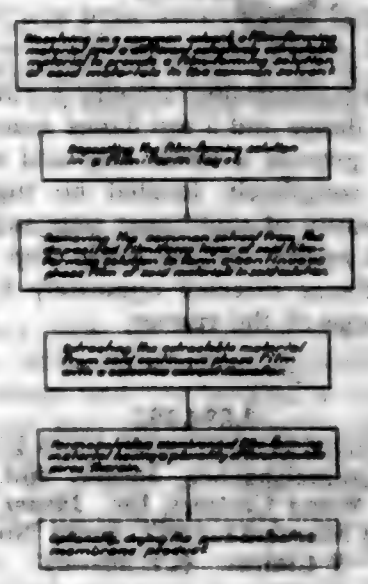
2,894,288
FOOT MOLDING
Marvin H. Brindle, Haverhill, Mass.
Application June 26, 1957, Serial No. 668,242
3 Claims. (Cl. 18—55.05)

2. The method of forming an accurate foot mold which comprises embedding the bottom of a foot in a layer of liquid material in one consistency which sets to form a stiff form-retaining mold, allowing the material to set, pressing the foot against said layer, covering the foot with



another layer of said material in a second which adheres to said bottom layer, more elastic consistency, allowing the second layer to set, and withdrawing the foot from the mold by elastically spreading the mold opening.

2,894,289
METHOD OF MAKING PERMESELECTIVE MEMBRANES
Billy Gene Harper, Lake Jackson, John Henry Brown, Jr., Freeport, and John Clarke Moore, Lake Jackson, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Application March 1, 1956, Serial No. 568,861
10 Claims. (Cl. 18—57)

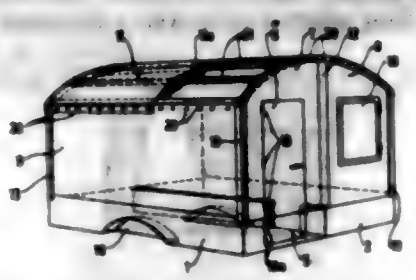


1. A process for the preparation of permeselective membranes which comprises dissolving at least two different materials, at least one of said materials being a film-forming material, in a common solvent to provide a film-forming solution thereof; depositing said solution in a filmiform layer; removing said common solvent from the filmiform layer of said film-forming solution to form a continuous phase film of said materials and extracting at least one of the materials from the film with a selective solvent for less than all the materials in the film, said selective solvent being substantially non-dissolvent of the film-forming materials constituting said continuous phase film.

2,894,290
COLLAPSIBLE CABIN
Margit Elisabeth Landstedt, Stockholm, Sweden
Application February 6, 1957, Serial No. 638,520
7 Claims. (Cl. 20—2)

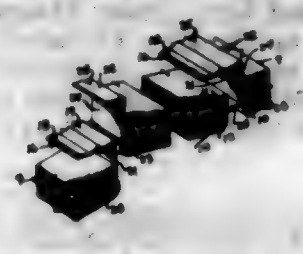
1. A collapsible cabin comprising a box-like structure having two halves of approximately equal size and height forming a base section and a lid respectively and hingedly connected along one of the longitudinal sides so as to be swingable into the same level for forming a cabin floor corresponding to about the double base area of said box-like structure and having a surrounding upright frame formed by surrounding frame portions of said box-halves, wall sections being hingedly connected to said frame portions of each of the box halves at three of the sides dif-

ferent from said longitudinal side, said wall sections being confined by said box in collapsed state and forming



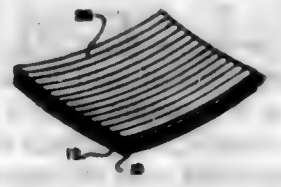
in erected position upright prolongations of said floor-surrounding frame so as to obtain vertical walls.

2,894,291
SUSPENDED CEILING SYSTEM
Stanley E. Sorenson, Seattle, Wash.
Application July 31, 1956, Serial No. 601,262
23 Claims. (Cl. 20—4)



1. In a ceiling suspension system, a runner having a bottom support flange and a top flange spaced thereabove and stepped to provide a lower step and an upper step, and a hanger completely located no higher than the uppermost extremity of said upper step, said hanger having a top flange resting on said lower step and a bottom panel support flange directed oppositely from said bottom support flange of the runner.

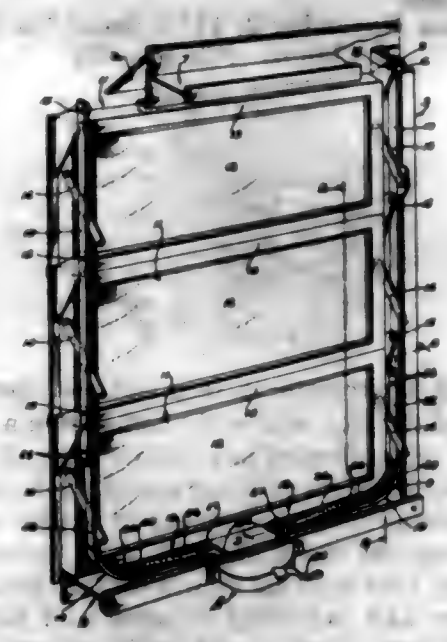
2,894,292
COMBINATION SUB-FLOOR AND TOP FLOOR
Clarence U. Gramelspacher, Jasper, Ind., assignor to Jasper Wood Crafters, Inc., Jasper, Ind.
Application March 21, 1957, Serial No. 647,577
9 Claims. (Cl. 20—5)



1. In a floor panel; a plywood surface layer having its upper ply of substantial thickness and of hardwood, a core layer applied to the back of said surface layer and off-set therefrom in two directions and adhesively connected to the top layer, and a backing layer in alignment with the top layer and adhesively bonded to the back of said core layer whereby integral tongues and grooves are formed about the panel, and said panel being characterized in that it is at least slightly concave upwardly whereby it bears against joists on which it is laid up with sufficient pressure to prevent squeaking and cracking.

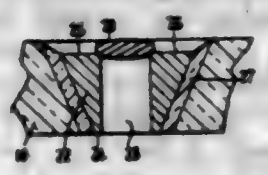
2,894,293
LOUVER TYPE WINDOW
Benoit M. Singleton, Marshall, Mich., assignor to Woodlin Metal Products, Marshall, Mich., a corporation of Michigan
Application April 18, 1955, Serial No. 501,798
5 Claims. (Cl. 20—42)

1. An operating mechanism for a substantially rectangular window structure having a head, sill, and jambs with a multiplicity of parallel louver type sash pivotally mounted on said jambs, which includes at least one substantially rigid slide bar movable along one jamb of said window structure and guided thereon in a fixed path, means operably connecting same to said louver type sash for pivotally opening and closing same in step with the endwise movements of said slide bar, and at least one unbroken flexible push-and-pull member, a substantially rigid unbroken means having an elongated portion along said sill and a curved portion for guiding and supporting



the sides as well as both front and back faces of said flexible push-and-pull member in its endwise movements to change its direction of motion from a side and face supported straight line in one direction lengthwise of said sill to a straight line in the lengthwise direction of said slide bar, means for operably connecting an end of said flexible member to said slide bar, and means operably connected to said push-and-pull member in its supported area lengthwise of said sill and adapted for connection, in turn, to an operator for moving said push-and-pull member in endwise direction.

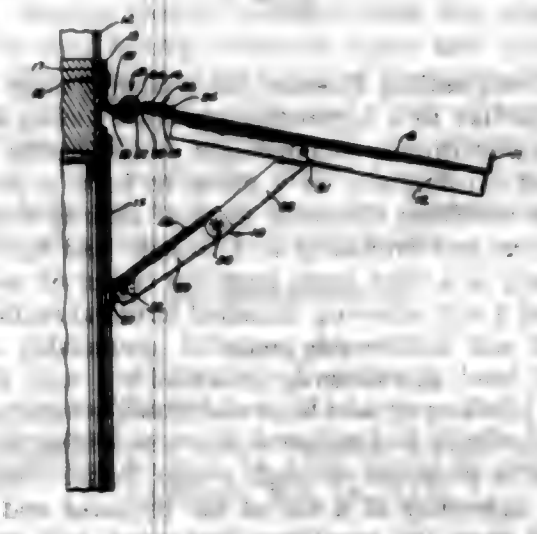
2,894,294
PORE CLOSURE STRUCTURE FOR MULTIPLE GLAZED UNIT
Frank R. Prescott, New Kensington, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Application April 8, 1955, Serial No. 500,859
2 Claims. (Cl. 20—56.5)



1. A pore hole seal for a multiplied glazed unit having two spaced sheets of glass hermetically sealed at their edges to enclose a chamber comprising in combination a tapered pore opening in one of the sheets, which pore opening extends from and connects the chamber to the atmosphere, an elongated, thick-walled, metal element having a cylindrical opening therein and having an outer oxidized periphery which conforms to the shape of the wall of the pore opening, the wall of the element varying in thickness and being greatest in thickness at one end and smallest at the other, a low fusion point glass hermeticaly adhered to the oxidized periphery of the element and to the wall of the pore opening to hermetically seal the element in the opening with the thickness of the wall of the element at the end adjacent the atmosphere being

sufficient to permit abrasive removal of an oxide coating on the interior wall surface of the element at that end of the element without damaging the glass seal between the element and the walls of the pore opening, and solder hermetically adhered to the inside, clean, metal surface of the element adjacent the end of the element nearest the atmosphere to act as the sole member to hermetically seal the opening in the element, said solder being confined to the clean, metal surface and thereby being out of contact with and spaced from the low fusion point glass by a portion of the wall thickness of the element.

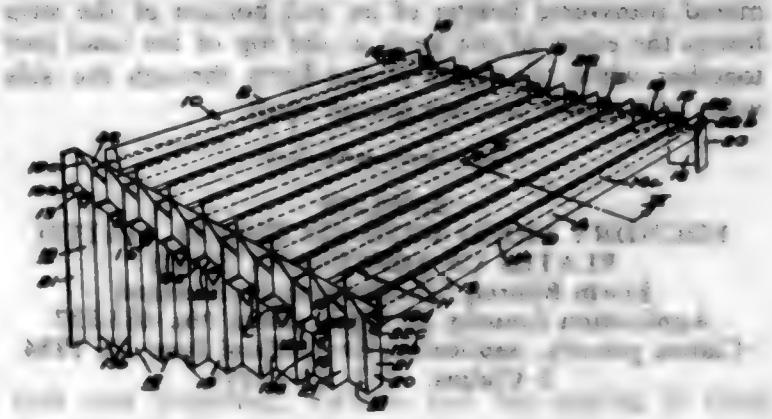
2,894,295
AWNING ASSEMBLY
Benoit M. Singleton, Marshall, Mich., assignor to Woodlin Metal Products, Marshall, Mich., a corporation of Michigan
Application July 6, 1954, Serial No. 441,468
3 Claims. (Cl. 20—57.5)



1. In an assembly including a movable member and a hinge mounting said member on a support for swinging movement from a normally extended position to a folded position; two links pivotally connected at adjacent inner ends and equidistantly therefrom pivoted at their outer ends to said movable member and said support respectively to normally hold the former in said extended position, the distances of the link pivots with respect to the axis of rotation defined by said hinge being such that the pivots at the outer ends of said links are alignable coaxially when said movable member is swung to said folded position, both links being simultaneously swingable to a reversed position about the pivots at said outer ends, and stop means on one of said links abuttingly engageable with the other of said links, holding said movable member against outward swinging when said links occupy said reversed position.

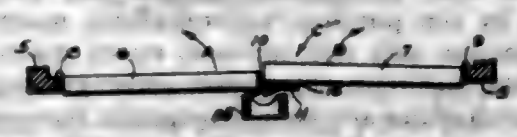
2,894,296
AWNING OR LIKE CONSTRUCTION
Arno Scocchi, Ellwood City, Pa.
Application October 4, 1957, Serial No. 688,811
15 Claims. (Cl. 20—57.5)

1. A Z-shaped slat-like longitudinally-endwise-extending facing member for use in a stationary awning construction, said member having a central body portion representing a major transverse width of the member, a front flange portion projecting in an angular relationship from a front edge of said body portion and defining an acute angle with one face of said body portion and an obtuse angle with the other face thereof, a back flange portion projecting in an angular relationship from a back edge of said body portion and defining an acute angle with one face of said body portion and an obtuse angle with the other face thereof; said back flange portion being in a spaced, oppositely-projecting and substantially parallel relation with said front flange portion; said front and back flange portions being of substantial equal transverse width; and the width of said front flange portion being equal to the distance between the body portions of adjacent members of the defined construc-



tion when they are in a mounted relationship with each other, multiplied by the sine of an angle defined between a line connecting front ends of the body portions of the adjacent members and a line perpendicular to said front flange portion.

2,894,297
WEATHER STRIP FOR SWINGING DOUBLE DOORS
Louis Viscelosi, Providence, R.I.
Application April 3, 1958, Serial No. 726,133
4 Claims. (Cl. 20—65)



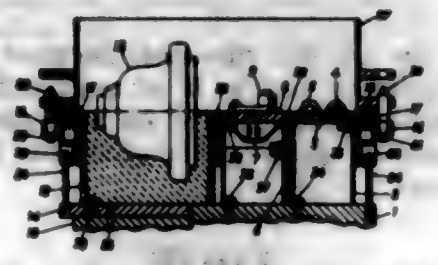
1. A weather strip for swinging double doors comprising a flat strip of material pivotally mounted on one of said doors and overlapping a crevice normally existing between said swinging double doors when the doors are closed, a cam secured to the door frame and engageable to hold said flat strip tightly against said crevice when the door is in closed position and to guide said flat strip into position against said crevice when said door to which said strip is pivotally mounted swings to closed position.

2,894,298
MATCHING AND SUPPORTING STRIP FOR HEADLINER PANELS
Lloyd E. Stahl, Monroe, Mich., assignor to Woodall Industries, Incorporated, Detroit, Mich., a corporation of Michigan
Application December 26, 1956, Serial No. 630,663
3 Claims. (Cl. 20—74)

1. A panel matching, reinforcing, and retaining strip having a configuration in cross section generally resembling a conventional railway rail and having a base part, a web part, and a head part surmounting the web part, and wherein said web part comprises two spaced side walls integrally connected at the top by the head part and wherein said side walls are provided at their bottoms with complementary flanges projecting outwardly substantially normal to the side walls, said flanges constituting said base part, said strip being formed of resilient material and resistingly transversely flexible to a limited extent, the end portions of the strip being provided with a plurality of linearly spaced-apart transverse kerfs extend-

ing through the head part and the web part but not through the base part, thereby increasing the flexibility of the end portions of the strip, said kerfs having a width through the side walls of the web part greater than the width through the top of the head part whereby determined transverse flexing of an end portion of the strip brings the edges of the kerfs at the top of the head part together while the edges of the kerfs through the side walls of the web part are spaced apart.

2,894,299
FOUNDRY MOLD WITH SECTIONAL MATCH PLATES OF DIFFERENT SIZES
Erwin Bührer, Schaffhausen, Switzerland
Application January 20, 1955, Serial No. 483,137
Claims priority, application Switzerland June 12, 1954
3 Claims. (Cl. 22—157)



3. A device for producing foundry molds, comprising a mold table, a plurality of sectional match plates mounted on said mold table, each of said match plates having at least one pattern on one side thereof surrounded by rim portions, and releasable means adapted for connection with said sectional match plates and said mold table, said releasable means encompassing said sectional match plates and being engageable from above with said rim portions, whereby said match plates are rigidly secured on said mold table upon connection of said releasable means between said mold table and said rim portions, said match plates being singly removable from said mold table for replacement with another match plate with pattern upon removal of said releasable means from said mold table.

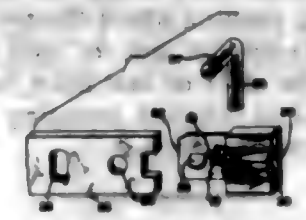
2,894,300
SAFETY CLIP OR HOLDER FOR A GARMENT ATTACHABLE IMPLEMENT
Eric Charles Treweek, Seacliff, Otago, New Zealand
Application September 3, 1957, Serial No. 681,831
1 Claim. (Cl. 24—11)

A clip for a two-part pen cap comprising an annular member positioned and clamped between the two parts of the cap and having an upwardly and outwardly projecting tongue at the outer periphery thereof, a clip member having at its upper end a pair of inwardly bent cheeks providing a closed hood with the facing upper end portion of the clip member and lying in a plane spaced from and parallel to the plane containing the major part of the clip member, the shape of the upper end of the hood and of the tongue being identical whereby both faces of the tongue and the enclosed upper edge thereof are in contact with the interior surfaces of the hood for effecting engagement between the tongue and hood to provide the clamping means therebetween, and a needle-shaped element located in the lower end of the clip member at right angles thereto, whereby material of a garment may be pierced by said needle-shaped element and effectively held between the cap and the clip member with no possibility of withdrawal of same.

2,894,301
FASTENER
Robert E. Scott, Detroit, Mich., assignor to Gagnier Fibre Products Company, Detroit, Mich., a corporation of Michigan
Application September 25, 1951, Serial No. 248,258
1 Claim. (Cl. 24—73)

A rigid self-sealing fastener for attaching strip moulding and the like to a supporting structure having a series of holes comprising a single length of stiff metal looped at one end substantially in a plane to form a relatively large rigid moulding clamping head of desired shape and with its other end projecting as a straight and rigid shank substantially at a right angle from the center of said head and having a nut receiving threaded terminal section, and a body of soft deformable material appreciably smaller than said head permanently mounted on said fastener about the juncture of said head and shank whereby, when said fastener head is disposed within a moulding strip and said shank is projected through a hole in the supporting structure, tightening of a nut of the threaded end of the shank will draw the moulding tight upon said structure and urge said deformable body to seal the hole surrounding said shank.

2,894,302
SPRING CLIP
Robert M. Fox, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 20, 1956, Serial No. 611,035
3 Claims. (Cl. 24—73)



1. A fastening device comprising in combination, a flat elongated base section, two arms upwardly standing from opposite sides and adjacent one end of said base section, said arms being inwardly bent toward each other, ends of the inwardly bent portions of said arms being in closely spaced relationship, said base section being provided with a slot substantially parallel with said sides and partially underlying the inwardly bent portions and aligned with the space therebetween, a resilient tang upwardly standing from said base section adjacent the other side of said base section, a substantially flat member containing a slot and a perforation, said slot receiving the resilient tang on said base section, and a rod-like member inserted through said perforation of said flat member, the slot on said fastening device and between the two upwardly extending arms on said fastening device.

2,894,303
MERCHANDISE SHELF ADAPTER AND METHOD OF MAKING SAME
Blair D. Armstrong, Allison Park, and John W. Wallace, Bradfordwoods, Pa., assignors to Armstrong Store Fixture Company, Glenshaw, Pa., a corporation of Pennsylvania
Application June 28, 1957, Serial No. 668,728
8 Claims. (Cl. 24—81)

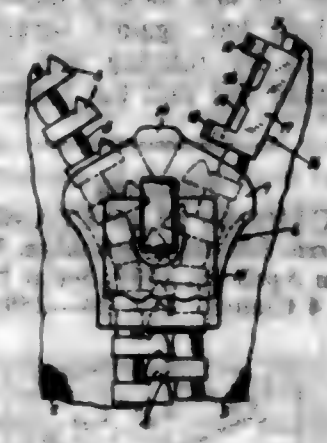
1. A shelf adapter of the class described comprising an integral sheet metal base member with an upstanding tongue thereon spaced inwardly from the edges of the base, the base having connected upper and lower spaced tongue-like portions at each side of the upstanding tongue forming shelf-engaging clips, and a pair of separate vertical channels with the base of one channel abutting across its full width the other channel extending upwardly from the base, at least one channel having one side face secured to the upstanding tongue.

2,894,304
FASTENING DEVICE
Leon Marcoff Moghadam, Washington, D.C.; now by change of name to Leo Markoff-Moghadam
Application January 14, 1955, Serial No. 481,868
5 Claims. (Cl. 24—113)

1. A fastening device of the class described for clamping a cord or the like, comprising a plurality of wire strands interconnected at their ends and forming a relatively large elongated completely closed loop converging at least at one end in an end portion of a series of relatively small substantially elliptical loops, said end portion being comprised solely of twisted strands resiliently biased toward each other and at least the extreme end thereof being inseparable, and at least the first twist adjacent the large loop being sufficiently resilient to pass the cord, whereby a cord passed through the large loop may be drawn in between the strands of the end portion to be clampingly engaged by said strands.

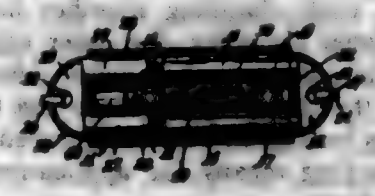
2,894,305
QUICK RELEASE END STOP
Alexander M. Brown, Conneaut Lake, Pa., assignor to Talon, Inc., a corporation of Pennsylvania
Application May 8, 1956, Serial No. 583,437
9 Claims. (Cl. 24—205.11)

1. In a slide fastener of the class described including a pair of stringer tapes having a series of spaced apart interlocking fastener elements attached to the opposed edges thereof, a releasing end stop comprising a body member attached to one of the stringer tapes adjacent the endmost fastener element thereof, a pair of spaced apart outwardly projecting portions carried by said body member and extending outwardly from the edge of the stringer to which the body member is attached, a resilient plate-like member extending between said projecting portions, and means carried by said body member for supporting said plate-like member in cooperation



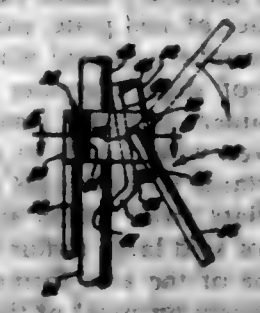
with said projecting portions and for spacing it from the edge of the stringer tapes.

2,894,306
CATCH FOR JEWELRY
Harry Hyman, Waterbury, Conn.
Application May 6, 1958, Serial No. 733,401
4 Claims. (Cl. 24—230)



1. A catch for releasably connecting together the ends of an article of jewelry comprising a first piece connectible to one end of the article, said piece including a U-shaped member and a tube on each leg with the tubes providing a pair of spaced, aligned, tubular passageways, a second piece connectible to the other end of the article, said piece being substantially U-shaped with the legs forming a pair of spaced, aligned rods, the rods being slidable into and out of the tubes, a latch including an arm having one end formed to provide ears which are pivotally supported in an aperture formed in each of the tubes and the other end of the arm providing an enlarged plug portion, a groove formed at the bight portion of the second piece and being larger than the space between the rods, said latch being operable between an open position in which it permits separation between the pieces and a closed position in which the plug portion is positioned in the groove to lock the two pieces together.

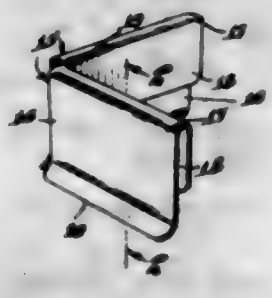
2,894,307
FORM BOARD SUPPORTING STAKE CLAMP
Eric E. Hogue and Robert S. Malloch, Riverside, Calif.
Application January 20, 1958, Serial No. 710,104
6 Claims. (Cl. 24—249)



6. A clamp comprising a body, having a vertical opening adapted to receive any of a plurality of smooth metal stakes varying substantially in diameter; rotatable eccentric locking means journalled on said body at right angles to said stake and spaced therefrom; a wedge shaped lock bar shiftable in said body parallel with said stake

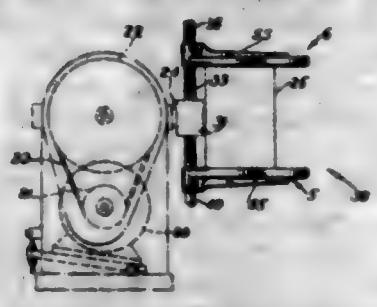
to simultaneously engage said stake and said eccentric means; means regardless of said differences in stake diameter, and prior to said locking means being actuated retaining said lock bar against separation from said clamp; and means for rotating said locking means to compress said stake and said bar together in said body.

2,894,308
CARTON FLAP CLAMP
Morris Eckstein, Brooklyn, N.Y.
Application April 15, 1957, Serial No. 653,017
4 Claims. (Cl. 24—259)



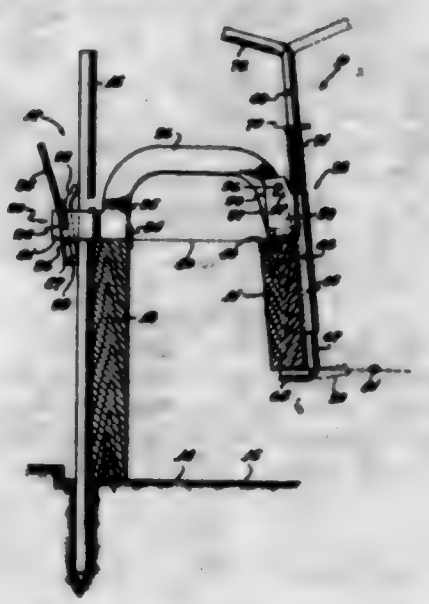
1. A packing carton removable corner clamp for clamping carton flaps against the carton side walls, comprising a pair of similar and inverted U-shaped resilient clamping members, each clamping member having an outer long and an inner short leg, the inner edge of the short leg of each clamping member being joined for angular disposition of the clamping members and the ends of the outer long legs having an outwardly flared offset to serve as a hand grasping means for application and removal of the corner clamp.

2,894,309
CONTAINER CLAMP FOR LIQUID MIXING APPARATUS
Harry S. Brzowski, South Milwaukee, Wis.
Application December 10, 1957, Serial No. 701,902
5 Claims. (Cl. 24—263)



1. In a clamp for a liquid mixing machine for securing cylindrical liquid containers of large sizes and of small sizes to the machine for agitation and having a pair of jaws movable toward and away from each other for clamping the liquid containers between them, each of said jaws comprising; a flat plate for receiving the containers; a plurality of relatively small radius ridges protruding from one surface of said plate, each of said ridges extending along the periphery of said plate in an arcuate path of a radius thereof slightly greater than the radius of the small size containers so that a small size container can be partially received within each of said arcs; and a plurality of relatively large radius ridges protruding from the surface of said plate from which said small radius ridges protrude, each of said large radius ridges extending from a terminal of one of the arcs formed by said small radius ridges to an adjacent terminal of the succeeding arc formed by said small radius ridges so that the terminals of the several arcs formed by said small radius ridges are connected together in series by said large radius ridges, each of said large radius ridges being spaced from each other and extending along the surface of said plate in an arcuate path of uniform radius with each of the arcs being of the same radius generated from the same center so that the arcs formed by the large radius ridges all lie along the periphery of the same circle, the circle being of a diameter slightly greater than the diameter of the large size containers; whereby several small size containers may be clamped between the jaws of the clamp simultaneously with each small container being partially contained within one of the arcs formed by said small radius ridges to confine them within the area of said plates or one large size container may be clamped between the jaws of the clamp with the large container being contained within the arcs formed by said large radius ridges to confine the large container.

2,894,310
ADJUSTABLE DEVICE FOR RELATING FACEBOARD OF CURB MOLD TO BACKBOARD THEREOF
Eric E. Hogan and Robert S. Malloch, Riverside, Calif.
Application June 27, 1957, Serial No. 668,543
1 Claim. (Cl. 25—118)



An adjustable device for optionally fixing the faceboard of a curb mold in any one of a plurality of precise angular relations with the backboard of said mold, said device comprising: a steel stake driven vertically a substantial distance into the soil, when in use, in flush contact with the back face of said backboard, a portion of said stake extending above said backboard; a stake clamp having a vertical opening for receiving said upwardly extending portion of said stake and manually operative to grip said stake so tightly as to render the clamp immovable relative to said stake; a spacer bar integrally united with said clamp and extending therefrom to a horizontal line parallel with said backboard and disposed just above the upper edge of said faceboard when the latter is located in any of said precise relations with said backboard; means on said device for engaging said backboard to hold the latter against said stake; a jig for gripping said faceboard, said jig including a body providing a guide against which an outer face of said faceboard rests when the latter is held in said jig, a jaw integral with said body against which an upper edge of said faceboard rests when the latter is held in said jig, a lower jaw shiftably provided on said body, and manually operable means on said jig for shifting said lower jaw between a position away from beneath said faceboard and a position therebeneath, and then toward said faceboard to clamp the same between said jaws, said means then retaining said faceboard so clamped; pivot means for pivotally uniting said jig body and said spacer bar on said horizontal line; and plural adjustment hole and bolt means for optionally uniting said jig body to said spacer bar in any one of a plurality of precise

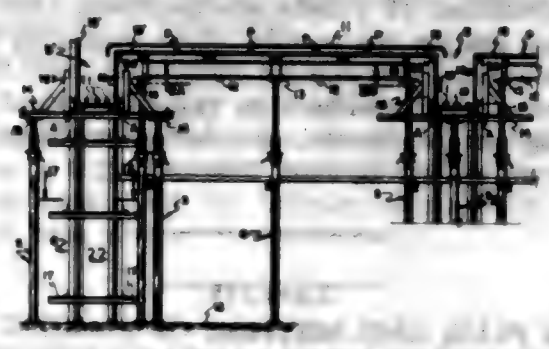
angular rotational positions about said line relative to said bar, each of said positions causing said jig to hold said faceboard in a particular one of said precise angular relations with said backboard.

2,894,311
MOLDS FOR PLASTIC MATERIALS
James A. Sinclair, Franklin, La.
Application January 17, 1956, Serial No. 559,600
1 Claim. (Cl. 25—130)

Mold apparatus for a hollow concrete casting such as an open-ended receptacle or the like, said apparatus comprising a supporting frame; a centrally disposed core member rigid with said supporting frame, the outer casting-contacting surface of said core member being substantially frusto-conical in configuration; an annular vertically displaceable bottom plate surrounding said core member and disposed in contact with the lower outer margins of said core member when the bottom plate is located at its lowermost operable position for casting; an outer mold wall member surrounding and spaced radially outwardly from said core member a distance equal to the wall thickness of the hollow casting desired, the lower edges of said outer wall member resting upon said bottom plate when the mold parts are in operative casting position; said bottom plate comprising an annulus of angle cross section having an outwardly extending horizontal flange upon which the casting and the outer mold wall member rest, and a radially inwardly disposed depending vertical flange which, in its lowermost position for casting, rests upon said supporting frame; first screw-jack means threaded through a portion of said supporting frame and disposed to contact the bottom surface of said bottom plate, exert upward pressure thereon, and thus force the casting-supporting bottom plate and the core member apart vertically, the tapered configuration of the core and casting serving to accomplish the effective separation of those parts through a relatively short movement of said first screw-jack means; radially outwardly projecting brackets secured to the lower portions of said outer wall member; second screw-jack means threaded through said brackets; radially outwardly projecting ledges formed on said bottom plate; said second screw-jack means disposed to contact upper portions of said ledges, exert a downward pressure thereon, and thus force said casting-supporting bottom plate and the outer wall member apart vertically; the tapered configuration of the wall member and casting serving to effect the prompt separation of the parts through a relatively short movement of the second screw-jack means, all whereby the hollow casting may be readily dislodged from the mold apparatus.

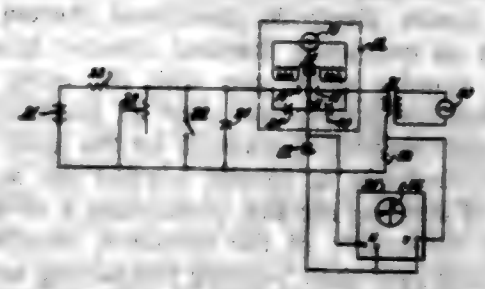
2,894,312
CONCRETE FORMS
Edward B. Jones, Denver, and Amoel A. Jones, Mount Morrison, Colo.
Application March 1, 1954, Serial No. 413,020
12 Claims. (Cl. 25—131.5)

6. A corner support for a form for concrete and the like, wherein flat wood members provide the concrete engaging sides and bottom of a rectangular horizontal beam form, the concrete engaging sides and ends of a rectangular vertical column form, or the adjacent edges at a corner of a wall form, said corner support comprising an elongated metal angle having perpendicular legs and a flange extending outwardly from each end of each leg; a pair of channels having a web and lateral flanges with said web of one channel attached to one said angle flange and the web of the other channel attached to the other said angle flange, an inner flange of each said channel forming a continuation of the adjacent leg of said angle, said inner flanges having spaced circular holes therein and the opposite flanges having elongated slots opposite said holes.



12. In a form for concrete and the like, at least two adjacent substantially coplanar panels, each comprising a flat, rectangular wood sheet, a metal frame attached thereto and extending around and enclosing the sides and ends thereof, said frame having a depending portion spaced inwardly from the outer edges thereof and providing a flange having a surface substantially parallel to said wood sheet, said flanges along the sides of said panels being provided with longitudinally spaced slots; and at least one clip having a relatively flat body, a flange at each side and a pair of spaced prongs extending angularly to said body and then substantially parallel to said body, for simultaneously engaging adjacent flanges of two said panels disposed in side by side relationship, with said clip body engaging said surfaces of said panel flanges, said clip flanges engaging the sides of said panel flanges and said prongs extending through said slots in said panel flanges.

2,894,313
METHOD AND APPARATUS FOR THE CONTROLLED AGING OF SEMICONDUCTOR DEVICES
Jacob W. Stineman, Jr., Villanova, and Samuel A. Robinson, Lansdale, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application April 29, 1954, Serial No. 426,466
5 Claims. (Cl. 29—25.3)



1. Apparatus for controlledly aging a point-contact rectifier, comprising an aging circuit for applying an aging potential to said rectifier to modify a predetermined characteristic thereof, a measuring circuit for measuring said characteristic, means for automatically connecting said rectifier alternately to said aging and measuring circuits, means for increasing the magnitude of said aging potential while said alternations are occurring, and means for discontinuing said application of said aging potential to said diode when said characteristic attains a predetermined value.

2,894,314

METHOD OF MAKING SELENIUM RECTIFIER

Jan Coenraad van Veenen, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N. Y., a corporation of Delaware

No Drawing. Application May 11, 1955
Serial No. 507,748
Claims priority, application Netherlands May 12, 1954
3 Claims. (Cl. 29—25.3)

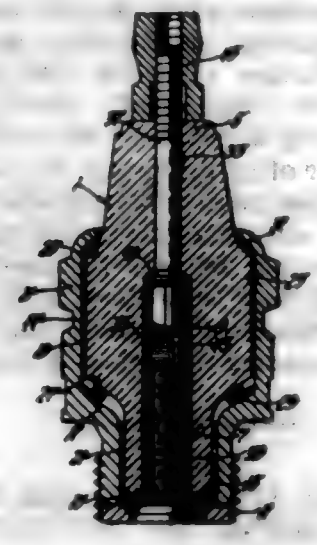
1. A method of making selenium rectifier plates comprising an annealed selenium layer and a counter-electrode constituted of a cadmium-containing alloy, which comprises heating the rectifier plate containing the annealed selenium layer and the counter-electrode in a protective environment without an appreciable electric voltage being applied thereto, and thereafter subjecting the plate to an electric forming treatment.

2,894,315

SPARK PLUG AND METHOD OF MAKING SAME

Alfred Candelise, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application July 8, 1955, Serial No. 520,734
2 Claims. (Cl. 29—25.12)



1. A method for forming a low voltage spark plug of the type comprising an elongated insulator within a metal shell having an inwardly directed flange the lower end thereof constituting an outer electrode, said insulator having a center electrode positioned therein and provided with an outwardly directed circular firing head to define an annular spark gap with the outer electrode, said method comprising the steps of positioning a preform of semi-conductive material on the inner surface of said outer electrode to extend beyond the annular surface thereof defining the gap, positioning a terminal screw within the centerbore of the insulator, locating said insulator within said shell, loading conducting seal material into said centerbore, positioning the center electrode within said centerbore with the inner surface of the firing head extending over said preform, applying heat to soften said seal material and said semi-conductive material, applying substantially axial pressure to said center electrode to hot press said materials, cooling the insulator and shell assembly to solidify said materials while maintaining the application of pressure, and completing the assembly of said insulator within said shell, said semi-conductive material being forced by said application of pressure into the annular space of the spark gap and into direct contact with the electrodes and insulator.

2,894,316

METHOD OF SPACING CAPACITOR LEADS

Anthony N. Genovese, Chicago, Ill., assignor to Chicago Condenser Corporation, Chicago, Ill., a corporation of Illinois

Application January 21, 1955, Serial No. 483,228
2 Claims. (Cl. 29—25.42)

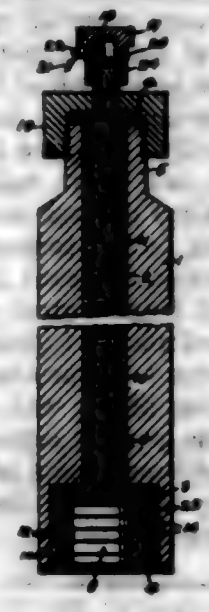
1. The method of producing a capacitor assembly having a cylindrical casing closed at one end and a cylindrical capacitor body of smaller diameter than the casing enclosed therein comprising the steps of providing an elongated cylindrical capacitor body having first and second wire terminals extending outwardly from opposite ends thereof in line with the longitudinal axis of the body, said second terminal extending from the body along the axis thereof and having a bend with a permanent set greater than 90 degrees and less than 180 degrees, inserting said capacitor body into said casing with the second terminal leading the capacitor body and against the resistive force of said second terminal bearing against the inside of said casing, whereby the second terminal abuts one side of the casing and spring biases the body against the opposite side of the casing, and permeating the space between the casing, capacitor body and terminals with a sealant.

2,894,317

METHOD FOR CONSTRUCTING A BARIUM TITANATE BLAST VELOCITY GAUGE

Spence T. Marks, Aberdeen, Md., assignor to the United States of America as represented by the Secretary of the Army

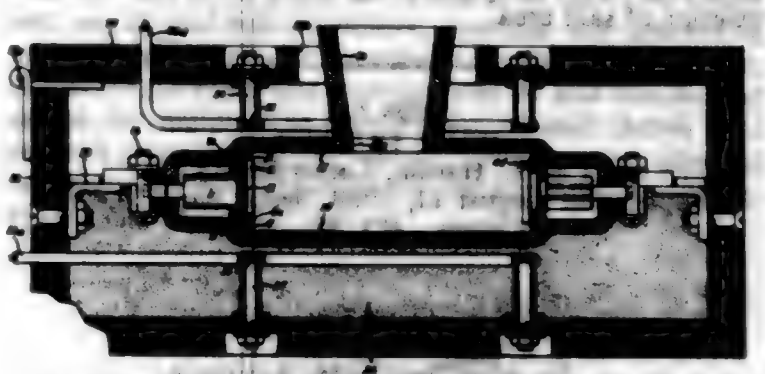
Application June 7, 1954, Serial No. 435,999
2 Claims. (Cl. 29—155.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. The method of making a repolarizable blast velocity gauge comprising a plurality of barium titanate crystals of uneven number, comprising the steps of coating the abutting faces of each successive crystal with a silver paste prior to placing it in stacked relation, inserting a first plurality of separate silver foil leads between even numbered interfaces and the end face of the first crystal to connect them in parallel on one side of said stack and alternately inserting a second plurality of separate silver

foil leads between odd numbered interfaces and the end face of the final crystal to connect them in parallel on the other side of the stack as said stack is built up, firing the stack at about 300° F. for one hour for preliminary consolidation, cleaning excess silver from the periphery of the stack, firing the stack gradually up to 1400° F. for final consolidation and allowing it to cool gradually, soldering a positive lead to the center of the top crystal, polarizing said stack, placing an insulated thimble on top of said stack surrounding said positive lead and spaced from said stack and said lead by a layer of potting compound, placing said stack and thimble within a gauge housing having a stack compartment, and filling the interstices between said stack compartment and said stack with said potting compound, heating said gauge at about 140° F. for one hour to set the potting compound and polarizing said stack in said gauge.

2,894,318
TURBOMACHINE BUCKET-WHEEL FABRICATED BY CASTING
David I. Bloomberg, Newton, Mass., assignor to General Electric Company, a corporation of New York
Application October 8, 1952, Serial No. 313,734
8 Claims. (Cl. 29—156.8)



1. The method of fabricating a turbomachine bucket-wheel which includes the steps of separately forming and inspecting individual buckets each having a blade secured to a base adapted to extend generally parallel to the axis of the wheel with an arcuate recess in either side thereof disposed to cooperate with adjacent bucket bases to form a transverse circular recess between each pair of adjacent buckets, each base having also a tapered fusion tang portion disposed immediately adjacent and radially inward from said recess, alternate tangs having at one side of the wheel a circumferentially extending welding lug, the remaining tangs having such a welding lug at the other side of the wheel, assembling a circumferential row of buckets with said welding lugs substantially abutting the adjacent bucket base at the respective sides of the wheel in alternating sequence thereabout with the tangs in uniform circumferentially spaced relation, tack-welding each lug to the respective abutting base portion whereby a serpentine electrical path is provided through all bucket bases in series, assembling the tack-welded ring of buckets in a mold having a main pouring gate adjacent the center of the wheel and a circumferential portion at either side of the wheel spaced axially from the circumferential row of bucket bases with a non-metallic refractory barrier member of circular cross-section disposed in each of said circular recesses between adjacent buckets and with a heat-resistant packing ring disposed at each side of the wheel between said circumferential mold portions and the end surfaces of the fusion tangs and barrier members, whereby the mold defines the shape of the side faces of the wheel disk portion while said barriers and tangs cooperate to define a substantially closed perimeter for the wheel web, said mold having also annular induction heating coils disposed adjacent the respective sides of the annular fusion area formed by the tangs, preheating the bucket bases by passing a current through said coils until the fusion tangs reach substantially welding temperature, pouring molten metal through said gate to fill the mold whereby the molten metal fuses with the preheated fusion tangs, cooling the mold, removing the wheel from the mold, and extracting the barrier members from the interbucket recesses.

2,894,319
SINTERED POWDERED ALUMINUM BASE BEARING
Robert F. Thomson, Grosse Pointe Woods, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Application December 28, 1954
Serial No. 478,485
9 Claims. (Cl. 29—182.5)

1. A sintered powdered aluminum base metal article consisting of 0.25% to 10% hard particles of crystalline aluminum oxide and the balance substantially all an aluminum base alloy.

2,894,320
COATING URANIUM FROM CARBONYLS
David H. Gurinsky, Center Moriches, N.Y., and Samuel Steingiser, Storrs, Conn., assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application May 9, 1949
Serial No. 92,250
18 Claims. (Cl. 29—196)

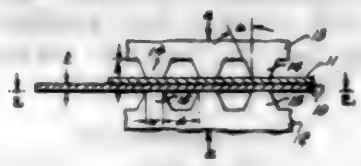
4. An article of manufacture which comprises a billet of uranium metal, a molybdenum coat around said billet, a ternary alloy of molybdenum, uranium and nickel, said ternary alloy layer being interposed between and adherently bonded to said molybdenum coat and said uranium billet.

2,894,321
COLD PRESSURE WELDING
William Dubilier, New Rochelle, N.Y., assignor, by mesne assignments, to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Original application April 18, 1950, Serial No. 156,541. Divided and this application April 19, 1954, Serial No. 424,030
3 Claims. (Cl. 29—470.1)

1. A method of joining in a T-butt joint a pair of elongated ductile cold pressure weldable metal members comprising producing a butt end at right angle to the plane of a first member to be joined to a second member, providing the areas of contact of said members to be joined with uncontaminated metallic surfaces, arranging said first member with its butt end in surface-to-surface contact with a planar surface of said second member, supporting the portion of said first member inwardly of the free end portion thereof adjacent to said second member against distortion, and applying, without the addition of external welding heat, to a localized area of said second member having a cross-sectional dimension of the order of the thickness of said second member and opposite to the end of said first member a pressure, to cause an indentation of said second member and to indent and laterally upset the adjoining end of said first member, thereby to produce and divert a metal flow of said first member in the direction of the initial interface of said

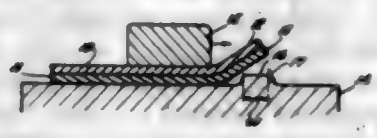
members such as to create an intense interfacial action between said members by the combined upsetting and indenting actions conducive to joining said members in a solid phase cold welding bond at the interface thereof.

2,894,322
METHOD OF COLD PRESSURE WELDING METAL FOIL
Verne Clair, Jr., Levittown, N.Y., assignor, by mesne assignments, to Kelsey-Hayes Company, Detroit, Mich., a corporation of Delaware
Original application July 12, 1954, Serial No. 442,558, now Patent No. 2,763,057, dated September 18, 1956. Divided and this application August 15, 1956, Serial No. 604,168
2 Claims. (Cl. 29—470.1)



1. A method of welding relatively thin members of ductile cold pressure weldable metal having a thickness of less than about 0.030 inch comprising superimposing said members with the portions to be joined in contacting relation, supporting one side of the superposed members by a plurality of spaced, parallel and strip-like supporting surfaces having a width equal to a multiple of the gauge thickness of said members, applying a pressure to the opposite side of the superposed members over a plurality of spaced, parallel and strip-like pressure areas having a width substantially equal to the width of said supporting surfaces, said supporting surfaces intersecting said pressure areas at a predetermined angle to each other, and continuing the pressure application to cause a stretching of the metals laterally of and an upflow around the edges of said areas, thereby to result in an intensified interfacial action by the added pressure at the intersecting portions of said areas conducive to producing a plurality of solid phase spot-like welding joints thereat, while distorting the areas exterior of said joints out of the planes of said members, to result in a mechanical strengthening of the total welded area of said members.

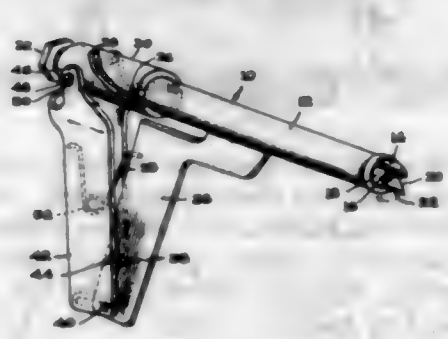
2,894,323
PRESSURE WELDING
Anthony Reginald Sowter, Ickenham, and Henry James Foxon, North Wembley, England, assignors to The General Electric Company Limited, London, England
Application February 20, 1953, Serial No. 338,098
9 Claims. (Cl. 29—481)



1. In a method of welding a pair of cold pressure weldable metal members, arranged with the edges of the superposed end portions of said members substantially in register with one another and with the members extending in the same direction from said edges, comprising initially applying welding pressure to the contacting surfaces of said end portions at a line remote from and substantially parallel to said edges, and coinciding with the inner edge of a desired marginal welding area of said members, and progressively increasing and advancing the welding pressure across said area in the direction towards said edges, to produce a predetermined reduction in the total thickness of the contacting end portions over said area of at least fifty percent by extrusion of said end portions outwardly toward said edges, thereby to create an intense interfacial metal flow conducive to joining of said members in a solid phase welding bond at said area.

8. A method of welding a cover to a hollow cylindrical member, both consisting of pressure weldable metal, comprising outwardly bending the end portions of both said container and cover, to provide interfitting frustoconical flanges, providing clean metallic areas of contact of said flanges to be joined, placing the interfitting container and cover between a pair of concentric tool faces conforming to said container and spaced from one another by a distance equal to the total thickness of said end portions, at least one of said tool faces having a projecting welding area of a width of the order of the total thickness of said end portions and a projecting height being at least fifty percent of said width, and relatively axially displacing said tool faces, to unbend and extrude said flanges outwardly towards said edges and to reduce the thickness thereof at a predetermined marginal area equal to said welding area, thereby to create an intense interfacial metal flow conducive to joining of said cover to said member by a solid phase welding bond at said area, and shearing off extruded excess metal exterior of said area.

2,894,324
WIRE CUTTER
Carl L. Hardin, Louisville, Ky.
Application August 11, 1958, Serial No. 754,479
4 Claims. (Cl. 30—240)

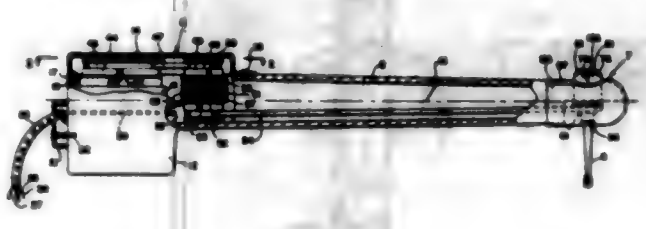


1. A wire cutter comprising a tubular barrel, a stationary cutting element on one end of said barrel, a rod rotatably disposed within said barrel, a movable cutting element on one end of said rod, a handle rigid with said barrel, said rod having a pair of pins extending radially from the other end of the rod, a cylinder slidably mounted on the other end of the barrel, said cylinder having a pair of spiral slots receiving said pins whereby longitudinal movement of the cylinder will cause rotation of the shaft, and a handle member connected with the cylinder for moving the cylinder longitudinally on the barrel, each of said cutting elements having a longitudinal cutting edge thereon spaced from the longitudinal axis of the barrel and normally disposed in arcuate spaced relation whereby rotation of the rod will move the cutting edge on the movable cutting element which will move past the cutting edge on the stationary cutting element.

2,894,325
SELF-CONTAINED DENTAL HANDPIECE
Lloyd P. Flatland, San Francisco, Calif.
Application April 26, 1957, Serial No. 655,349
1 Claim. (Cl. 32—27)

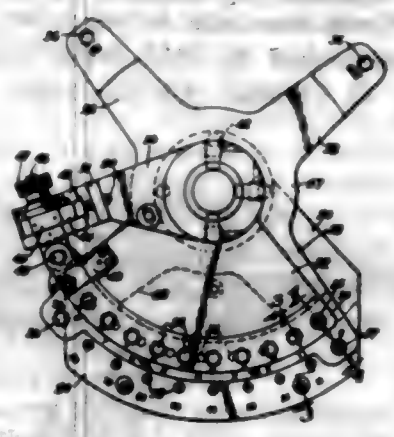
A self-contained dental handpiece comprising an elongated sheath tapered from a rear end to a forward end, a cylindrical housing mounted on one side of said rear end of said sheath, the axis of said housing being substantially

perpendicular to the axis of said sheath, an electric motor disposed in said housing, the axis of rotation of said motor being substantially coincident with the axis of said housing, a first pulley mounted on the shaft of said motor, a dental instrument rotating unit mounted on said forward end of said sheath, the axis of rotation of said unit being parallel to the axis of rotation of said motor, said unit including a central rotatable collet terminating at an opening in said sheath said opening being located on the same side of said sheath as said housing, said collet including a second pulley integrally formed therewith, an



intermediate pair of pulleys rotatably mounted in said sheath, said pair of pulleys being rotatable about an axis parallel to the axes of rotation of said motor shaft and said collet and lying in substantially the same plane as the plane of said axes, a first belt connecting said first pulley and one of said pair of pulleys, a second belt connecting said second pulley and the other of said pair of pulleys, means for covering said rearward end of said sheath, and means for maintaining the interior of said sheath at a pressure greater than atmospheric, said opening adjacent said collet forming substantially the only exit for the air within said sheath.

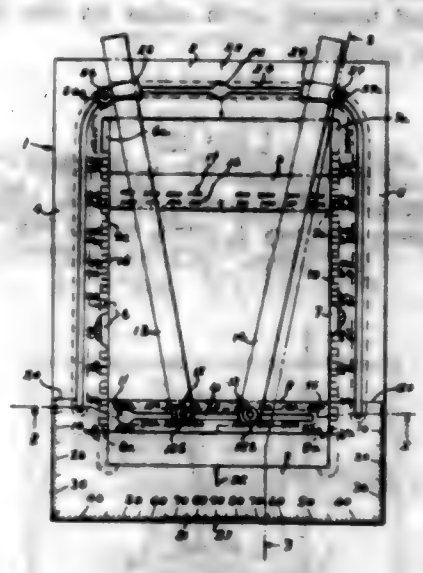
2,894,326
PROTRACTOR
George B. Marsden, Cicero, Ill.
Application February 25, 1957, Serial No. 642,092
6 Claims. (Cl. 33—1)



1. A protractor comprising a frame, three lever members pivotally connected to the frame on a common axis, means to connect a first of the lever members to the frame in any one of a plurality of different angular positions, means to connect the first of the lever members to a second of the lever members in any one of a plurality of relative angular positions, said angular positions defining different angular intervals, means including a micrometer type screw connecting the second of the lever members to the third of the lever members to provide a fine adjustment of the angle therebetween, means mounting the micrometer type screw on one of the second or third lever members for radial movement thereon, a radially slidable connection between the micrometer type screw and the other of the second or third members, and adjusting means to move the micrometer type screw radially on the member on which it is mounted.

2,894,327
OBLIQUE AERIAL PHOTOGRAPHIC PLOTTING TEMPLATE
Byron L. Schatzley, Dayton, Ohio, and Dunn C. Parker, St. Johns, Mich., assignors to the United States of America as represented by the Secretary of the Air Force
Application March 13, 1957, Serial No. 645,877
7 Claims. (Cl. 33—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A mapping template for plotting the limits of aerial photographs regardless of height, focal lengths and de-



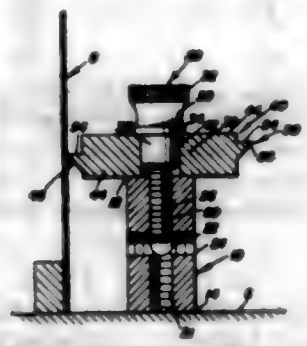
pression angles on mapping charts having standard scales comprising, an open frame for inclosing the photographed area to be mapped, a pair of elongated map scale members extending across said frame in parallel relation, both of said map scale members having corresponding map scale indicia along their adjacent edges each extending in opposite directions from central points in the lengths thereof, one of said map scale members being adjustably mounted on said frame for parallel adjustments relative to other map scale member to determine the distance of photographic coverage on a standard mapping chart in one direction, a pair of straight edge cursor members disposed on said frame in adjustable spaced relation to each other extending between said map scale members for the registration of their adjacent edges with said map scale indicia on both of said map scale members to determine the distance of photographic coverage on said standard mapping charts in a transverse direction, adjustable securing means between one end of each of said straight edge cursor members and said frame for securing said cursors in said adjusted positions across said map scale members, adjustable securing means between the opposite end of each of said cursor members and one of said map scale members, and a nautical milage distance scale on said frame extending between said map scale members for registration with said map scale members for determining photographic coverage on said chart between the adjacent edges of said map scale members in nautical milage.

2,894,328
CIRCULAR SCRIBER
Joseph W. Wojcik, Detroit, Mich.
Application August 23, 1957, Serial No. 679,912
2 Claims. (Cl. 33—27)

1. A circular scriber including a straight tubular member, a shaft axially disposed therein, a flat resilient member looped upon itself in a hairpin turn to form two blades, the member being axially secured at its looped portion to

one end of the shaft, but being adapted to project outwardly from one end of the tubular member, the blades being of the same length, each terminating with a sharp point, a stationary pin held diametrically within said end of the tubular member and fitting between said blades, the opposite end of the shaft being threaded and extending outwardly of said tubular member, and a knob seated axially upon the threaded end of the shaft to propel said shaft axially to move the blades outwardly and to cause them to be spread apart by said stationary pin or to withdraw the blades towards the tube and to cause the blades to be deflected towards each other by the inner surface of the tubular member.

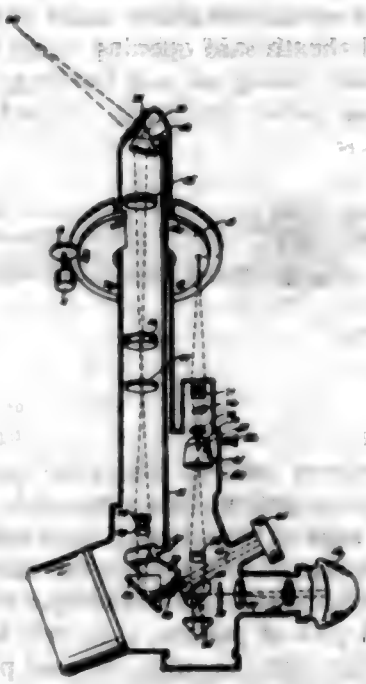
2,894,329
PROGRESSIVE SCRIBER
Henry L. MacDermid, Wayne, Mich.
Application January 3, 1958, Serial No. 706,675
2 Claims. (Cl. 33—41)



1. A measuring tool comprising a block having smooth flat surfaces, provided with a plurality of selectively usable screw-threaded sockets, certain of said sockets being axially aligned with each other and other sockets being not only axially aligned with each other but at right angles to the first-named sockets, said block constituting a base and a selected one of the flat surfaces being adapted to rest upon a support surface, an assembling, adjusting and clamping pin provided at one end with a finger grip, provided at its opposite end with a screw-threaded shank, having its intermediate portion enlarged in cross-section and providing a smooth-surfaced spindle, and that portion between the spindle and finger grip providing a stop shoulder, a tool head having flat surfaces, one of which may be caused to rest firmly upon a selected flat surface on said base, also having a centrally disposed hub provided with a bearing which may be aligned with a selected one of the sockets, said spindle being fitted telescopically into said bearing and the screw-threaded shank extending beyond the adjacent surface of the hub and being removably screwed in one of said sockets, said base being of a cross-section less than the top plan area of said tool head so that portions of the tool head may be caused to project at right angles beyond adjacent flat surfaces of said base, said tool head embodying a plurality of radial arms terminating at their outer ends in scribing points, said points each being at a predetermined height above a fixed datum plane supporting said base and the elevation of each point varying in respect to the elevation of the next adjacent point.

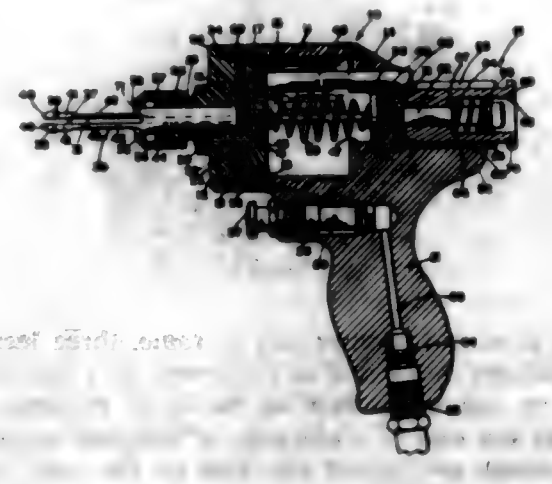
2,894,330
ASTROCOMPASS
Victor E. Carbonara, Manhasset, N.Y., assignor to Kollsman Instrument Corporation, Elmhurst, N.Y., a corporation of New York
Application July 23, 1952, Serial No. 300,482
12 Claims. (Cl. 33—61)

1. A true heading indicator comprising a sighting member rotatable on a vertical axis; a circular scale rotatable in a plane normal to said vertical axis and about said vertical axis; said sighting member having an optical system movable therewith for simultaneously viewing a celestial object to be sighted thereby and a portion of said scale; said optical system having a vertical optical axis coincident with the vertical axis about which the



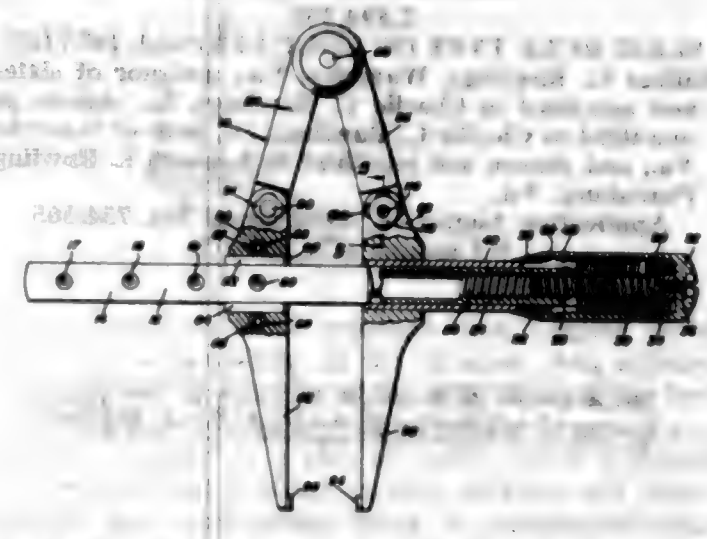
sighting member is rotatable; said sighting member having an index alignable simultaneously with the object sighted and a portion of the scale; said index being also visible in said optical system; said scale having a graduated series of numerical indicia arranged counterclockwise when viewed from above said scale.

2,894,331
PNEUMATIC GRIP GAUGE
William C. Stratman, Los Angeles, Calif., assignor to North American Aviation, Inc.
Application August 30, 1955, Serial No. 531,316
11 Claims. (Cl. 33—143)



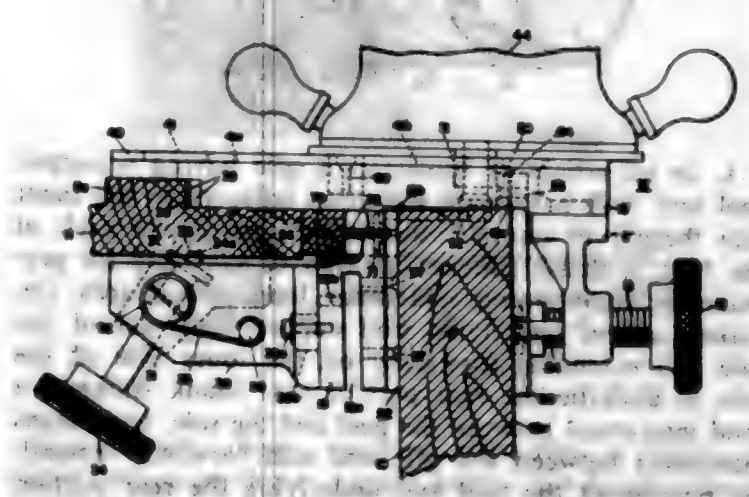
10. A gauging device for measuring the thickness of a composite element having surfaces interconnected by an aperture through the element comprising expansible means extending completely through said aperture and having exterior portions contacting said surfaces of the element for gripping the same over a small area on each surface coincident with the aperture; at least one of said exterior portions being placed in contact with its adjacent surface by expansion of said expansible means; and means operatively connected to said expansible means for indicating the gauge of the element between said annular areas.

2,894,332
COMBINATION CALIPER MICROMETER
Claude L. Brown and Eula R. Brown, Melbourne, Fla.
Application April 15, 1957, Serial No. 652,950
2 Claims. (Cl. 33—159)



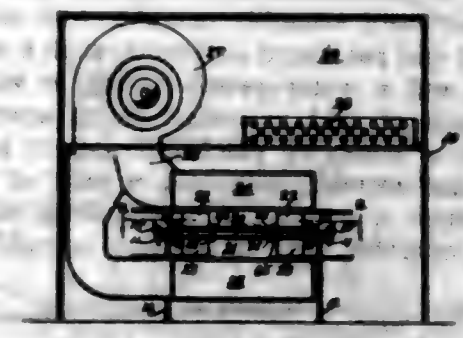
1. A micrometer caliper comprising a beam having a tubular end provided with internal threads, a sleeve reciprocably mounted on said tubular end and having external threads, a micrometer thimble, said thimble and said sleeve having cooperating graduations from which direct micrometer readings may be made, said thimble being internally threaded to fit on the external threads of said sleeve, a screw carried by said thimble and concentrically arranged therewith and threaded within said internal threads of said tubular end of said beam, a first frame having a caliper leg, means securing said first frame to said beam, a second frame having a caliper leg, said second frame being secured to said sleeve, an equalizing linkage pivotally connected to each of said frames, said means connecting said first frame to said beam including a rectangular passageway in said first frame, said beam having a flat rectangular cross-section of a size to fit within said passageway, shims in said passageway and bearing against edges of said beam, and means carried by said first frame and contacting said shims to exert a force thereon to press said shims against said beam, said beam having a plurality of holes that are spaced from each other, means carried by said first frame and engageable in a selected hole in said beam to locate said leg on said first frame in a predetermined spaced relationship to the leg on said second frame.

2,894,333
APPARATUS FOR ROUTING HINGE SEATS IN DOORS AND JAMBS HAVING AN INTEGRAL STOP
Warren B. Zorn, near Pottstown, Pa.
Application May 14, 1957, Serial No. 659,124
5 Claims. (Cl. 33—197)



4. Woodworking apparatus for guiding the movement of a routing tool during the routing of hinge seats in a door and a jamb comprising a template carrier including a template adapted to overlie the surface of the jamb and the hinge receiving edge of the door, means for clamping the door and jamb in spaced relation beneath said template carrier in predetermined relation with respect to said template, and a supporting unit for preventing chipping of the door and jamb during the routing operation comprising fixed means and movable means disposed between the door and jamb and in engagement therewith along the sides of the areas thereof which receive the hinge seats.

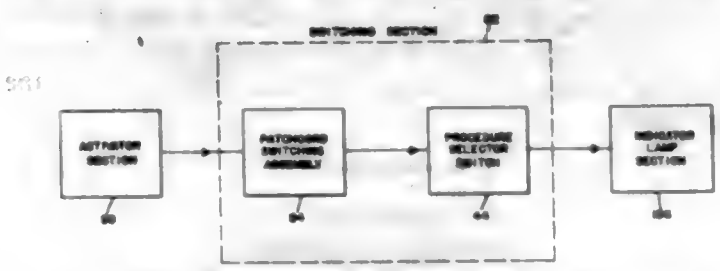
2,894,334
TENTER DRYERS
John R. Thygeson, Sr., Abington Township, Montgomery County, Pa., assignor to Proctor & Schwartz, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Application May 3, 1957, Serial No. 656,839
4 Claims. (Cl. 34—158)



1. In a tenter dryer having spaced chain rails, means mounting said rails for relative transverse adjustment toward and away from one another, web engaging elements slidably mounted on said chain rail for engaging a web therebetween and conveying the same through said dryer, and at least one nozzle box substantially coextensive in length with said side chain rails spaced apart from the same for transporting drying medium for said dryer, said nozzle box having means defining a plurality of transversely disposed elongated apertures therein, at least one aperture extending outwardly closely adjacent the outermost adjusted position of one of said side chain rails, nozzle means in fluid communication with said apertures having nozzle openings projecting intermediate said web engaging elements into close proximity to said web, said nozzle means including at least one movable section coextensive with said one aperture and mounted in registry with said aperture, means slidably mounting said movable section for relative movement transverse to said side chain rails, means on said movable nozzle section operable upon inward adjustment of said movable nozzle section to block the portion of said aperture which extends outwardly beyond the inwardly adjusted position of said movable nozzle sections, to prevent outward flow of drying medium beyond said nozzle section, a plurality of transversely-spaced vertical partitions in said nozzle section disposed longitudinally of said chain rails, and operable successively upon inward adjustment of said nozzle section to prevent flow of drying medium transversely inward beyond said aperture, and a bar having a lateral dimension corresponding to the spacing of said partitions, said bar being mounted on said nozzle box and spaced vertically therefrom a distance corresponding to the vertical dimension of said nozzle section so as to be disposed adjacent said opening of the movable nozzle with its outer edge in vertical alignment with the inner edge of said one aperture, whereby at least one of said partitions spans between said nozzle box and said bar to prevent flow of gaseous medium to said nozzles inwardly of the inner edge of said one aperture.

2,894,335
SWITCHING CIRCUIT FOR A TRAINING DEVICE

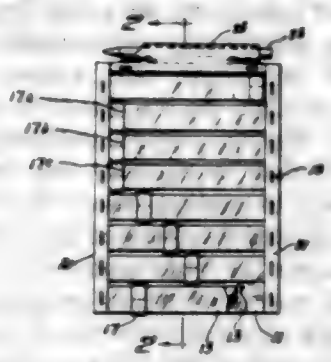
Harold R. Florea, Wantagh, N.Y.
Application May 2, 1956, Serial No. 582,302
1 Claim. (Cl. 35—12)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A switching circuit operable with a procedure trainer cockpit controls and instructor console indicator lamps comprising a first patchcord assembly having in banks of *n* rows of patchcord sockets, wherein *m* is equal to the number of procedural steps a trainee must perform, a second patchcord assembly operable with said cockpit controls and said patchcord sockets through a network of patchcords, and a wafer switch having *m* wafers of *n* contacts, each of said *m* wafers being operable with one of said *m* banks of patchcord sockets and said *n* contacts being operable with said *n* rows of patchcord sockets through a network of patchcords, said wafers each being operable with a separate console indicator lamp.

2,894,336
REMINDER DEVICE

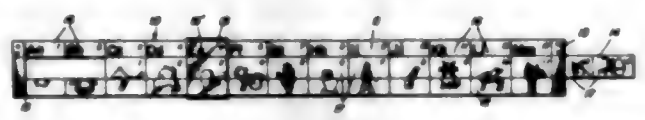
Robert H. Thorner, Detroit, Mich.
Application April 9, 1956, Serial No. 576,987
7 Claims. (Cl. 35—66)



2. In a reminder device, a base member having a relatively dark colored material thereon capable of being impressed, a plurality of separate semi-opaque impression strips arranged in parallel alignment on said base member with minimum space between said strips and adapted when impressed against said base member to adhere thereto along the lines of impression and where adherence occurs to become transparent so that the base member color shows therethrough, and a corresponding plurality of slidable erasing members, one erasing member for each of said strips, each of said erasing members including means projecting between its corresponding impression strip and said base member to separate same for erasing said lines when said erasing member is manually moved lengthwise along its respective strip, each of said erasing members being wrapped around its said strip to be solely carried and guided thereby for manual movements from the front side of the device, means to secure each of said strips at two opposite extremities thereof to said base member, protecting means covering said secured extremities to prevent the edges of said strips at said secured extremities from tearing or bending as a result of normal handling of the device, and each of said erasing members including portions contacting the base member adjacent the sides of the corresponding strip and holding the portion of the erasing member beneath the strip out of contact with the base member.

2,894,337
SLIDE RULE TYPE OF EDUCATIONAL DEVICE

Wallace G. Rawlings, Waverley, Va., assignor of sixteen and one-third to Charlie C. Rawlings, Sr., sixteen and one-third to Charlie C. Rawlings, Jr., both of Waverley, Va., and sixteen and one-third to Kenneth L. Rawlings, Pearisburg, Va.
Application August 11, 1958, Serial No. 754,365
5 Claims. (Cl. 35—75)



1. An educational device comprising in combination, an elongated body having first and second rails spaced apart along their lengths; a complemental slide received within and between the rails of said body for guided linear reciprocation between said rails; both said body and said slide being transversely marked off into a plurality of stations, the number of which stations corresponds to the number of letters in the alphabet; each said station on said body comprising, on a first rail thereof, the partial depiction of a familiar object; and the second rail of said body, within said station, containing the letter of the alphabet which corresponds to the first letter of the common name for the object which is partially depicted in said station; and the corresponding station of said slide containing, in random continuity, the complemental portion of the object already partially depicted in the corresponding station of said body; whereby upon matching a particular station of the slide with a corresponding station of the body, depiction of a completed object will be obtained, together with the corresponding letter of the alphabet comprising the first letter of the common name for said object.

2,894,338
STABILIZING AND FOOT SUPPORTING SANDAL

William M. Scholl, Chicago, Ill.
Application December 10, 1956, Serial No. 627,198
2 Claims. (Cl. 36—8.5)

1. In an article of footwear, a sole having a cupped heel seat with a forward elevation adjacent to the inner side thereof to underlie the inner longitudinal arch of the foot, a shank stiffener secured to said sole for permanently maintaining said inner longitudinal arch elevation, a heel underlying said cupped heel seat of the sole and extending forwardly on the inner side of the sole to underlie the rear part of said shank stiffener, a rand interposed between the heel and the sole, and means interposed between the sole and said forwardly extending portion of the heel and underlying the rear portion of said stiffener to give added height relative to said rand.

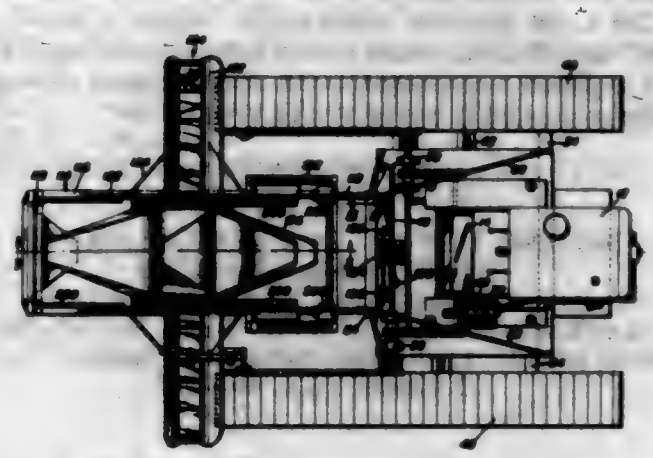
2,894,339
HEEL PROTECTOR
Viola E. Shapiro, Chicago, Ill.
Application November 6, 1958, Serial No. 772,349
1 Claim. (Cl. 36—72)

A heel protector for a woman's shoe adapted to be worn to prevent scuffing of the exterior rear surfaces of the heel and the counter of the shoe adjacent the heel while operating a vehicle, said protector comprising a unitary assemblage of a pair of textile fabric members and a resilient pad member secured between said fabric members, said assemblage being of exaggerated fan-shaped configuration having a bottom edge, an arcuate upper edge curved toward said bottom edge and a pair of lateral edges conjoining said upper and bottom edges at opposed extremities thereof and convergent toward said bottom edge, said assemblage being folded longitudinally with said lateral edges abutting one the other, said lateral edges being sewn together to form a tubular pocket having top and bottom edges and its axis parallel with the longitudinal axis of the protector, portions of said bottom edge being juxtaposed and sewn together to close off the bottom end of the pocket, a rigid heel plate disposed in said bottom end of the pocket, the top end of the pocket being open and substantially spaced below the midpoint of said arcuate edge whereby to provide an imperforate frusto-conical arcuate segment of the assemblage extending upwardly beyond the open end of the pocket, elastic means secured between spaced apart points adjacent said arcuate edge and adapted to be engaged around the ankle of the wearer for securing the protector in operative position with said arcuate segment engaged around said exterior surfaces of the heel and portions of the counter, the length of the said pocket being substantially less than the entire length of the protector so as to permit such operative positioning of the protector on any one of a plurality of heels the sizes of which range between high and low heels.

2,894,340
OYSTER DIGGER
Harry H. Thale, Olympia, Wash.
Application September 18, 1956, Serial No. 610,494
9 Claims. (Cl. 37—55)

1. An oyster digger machine comprising a frame, a digger section connected to said frame, said digger section including an upper and lower conveyor which are moving in such direction that the confronting flights thereof are propelled in the same direction to form therebetween a pocket within which to accommodate oysters, means in advance of said conveyors for digging the oysters and delivering them into said pocket, an endless conveyor having classifying openings therein and carried by said frame, the last mentioned conveyor being at the discharge end of said pocket so that oysters from said digging section are delivered onto said last mentioned conveyor and classified prior to dropping into a barge or other container, a plurality of bars located between the conveyors of said digger section, and said bars being spaced from each other and having teeth at the rear ends thereof in order to form a grate through which foreign matter may fall as the oysters are propelled thereover.

2,894,341
DIGGING MACHINE
William M. Anther, Walden, and Vincent Kenga, Pine Island, N.Y.
Application October 5, 1953, Serial No. 384,242
3 Claims. (Cl. 37—97)

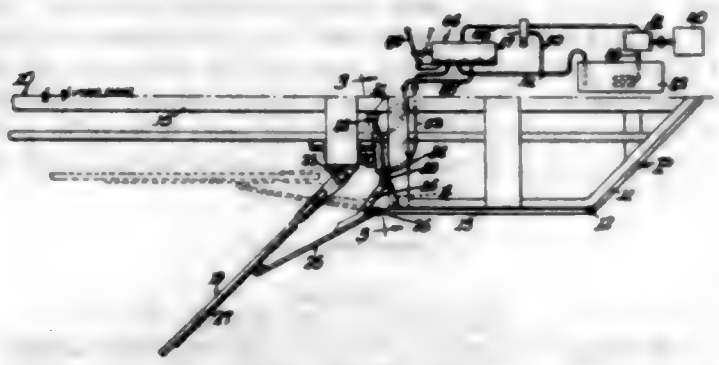


1. A trench digger comprising a frame, tracks located at opposite sides of the frame, transverse tubular members rigid with said frame, track supporting members slidably supported in said tubular members with the outer ends supporting said tracks, a pair of driven rotatable members mounted on said frame, each of said rotatable members having a central polygonal aperture, polygonal axles drivingly connected with the tracks and slidably received in the polygonal apertures whereby the tracks may be moved laterally a distance substantially equal to the length of the axles, and a fluid pressure actuated piston and cylinder arrangement interconnecting the tracks and the frame for laterally adjusting the tracks at any time by actuating the piston and cylinder arrangement, said tubular members, track supporting members, axles, and driven members being disposed in staggered relation whereby the entire length thereof is utilized in effecting adjustment of the tracks and support thereof after adjustment thereby enabling the use of a minimum width frame.

2,894,342
PLOW SMALL END WING CONSTRUCTION
Calvin W. Shipley, Munster, and Stuart D. McLean, Hammond, Ind., assignors to O. F. Jordan Company, East Chicago, Ind., a corporation of Indiana
Application September 30, 1954, Serial No. 459,243
5 Claims. (Cl. 37—105)

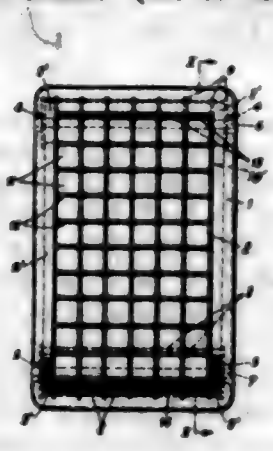
1. In a railroad spreader, the combination of a car, a main spreader wing having its inner end mounted at the side of the car upon a vertical pivot for swinging movement between a number of angular positions relative to the side of the car, a plow structure mounted on the car forwardly of said main spreader wing, said plow structure including a side wing member, a plow small end

wing having its forward end secured to the rear end of the said plow side wing, upon a vertical pivot for swinging movement between a number of angular positions relative to the car side, said plow small end wing being adapted to span a gap between the plow side wing and the main spreader wing, and fluid actuated power means



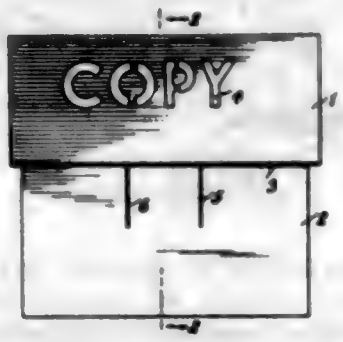
for automatically maintaining the rear end of the plow small end wing constantly in contact with the outer side of the main spreader wing in its various angular positions, said fluid actuated power means including a cylinder, a piston operating therein and a piston rod operatively connected to the small end wing.

2,894,343
NOTING DEVICE, IN PARTICULAR FOR TELEPHONE NUMBERS
Albert Zimmermann, Zurich, Switzerland
Application August 29, 1956, Serial No. 606,831
Claims priority, application Switzerland August 14, 1956
1 Claim. (Cl. 40—86)



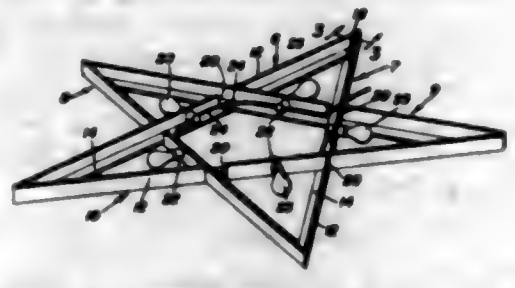
A noting device for telephone numbers and the like comprising the combination of a casing provided with a reading window in the front portion thereof, a plurality of individually mounted and movable bands disposed in side by side relationship within said casing, separate roll means for mounting each of said bands, each of said bands also being sub-divided into a plurality of individual number bearing sections, outwardly projecting finger engageable stops affixed to the front face of said bands and separating said number bearing sections from each other, a support plate disposed adjacent to and slidably supporting the unexposed surface of the endless bands, separate cancelling stop means fixedly secured to the front face of each of said bands and projecting outwardly a greater distance from the front face of the bands than said finger-engaging stops, said stop means being normally disposed at one extremity of said window when said stop means is in a normal position of rest, a pair of independent, flexible bands similar to the first mentioned bands and mounted on opposite sides thereof, and a cancelling beam being mounted at opposite ends on said independent flexible bands transversely of said first mentioned bands for engaging the separate cancelling stop means.

2,894,344
DISPLAY DEVICE
Jack Zuckerman, Sanford, N.Y., assignor to Einson-Freeman Co., Inc., Long Island City, N.Y., a corporation of New Jersey
Application July 2, 1958, Serial No. 746,174
6 Claims. (Cl. 40—130)



5. A display device comprising a sheet folded on itself to divide it into a front display panel and a rear reflector panel, the two panels being disposed at an acute angle to each other so that light from above will be directed forwardly toward said display panel by said reflector panel, an easel secured to the rear of the display panel and having wings foldable to positions in which they project rearwardly from said panel, the reflector panel having slots through which said wings project, locking means on the wings for engaging behind the reflector panel to hold said panel at a predetermined angle, and the wings having angular lower edges on which the device is rested, said edges serving to maintain the device upon a horizontal surface with the display panel disposed at a slight rearward inclination.

2,894,345
DECORATIVE STAR
William L. Bushnell, Roselle, N.J.
Application July 30, 1956, Serial No. 600,736
3 Claims. (Cl. 41—10)



3. A decorative star usable as an ornament during festive and holiday seasons comprising an open framework having complemental V-shaped portions each portion embodying duplicate angle irons, each angle iron having mitered outer ends and cooperating means whereby cooperating abutting mitered portions are connected together by detents joined with associated keeper holes, median portions of the vertical flanges of the angle iron being provided with notches through which horizontal and vertical flanges of adjacent cooperating angle irons are fast with the cooperating portions crossed and overlapped.

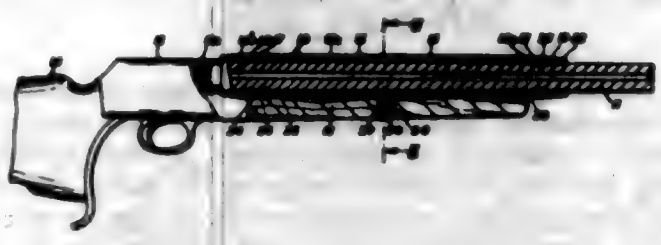
2,894,346
FIRING MECHANISM WITH A SINGLE SPRING FOR THE HAMMER, HAMMER CATCH MEANS AND TRIGGER
Walter H. B. Smith, New York, N.Y.
Application April 5, 1956, Serial No. 576,275
13 Claims. (Cl. 42—69)

1. A gun action firing mechanism comprising a receiver having a trigger housing attached thereto, a hammer pivotally mounted in said trigger housing on a pivot means, said hammer having a downwardly extending por-

tion having detent means on the front and back thereof, a trigger pivotally mounted in said housing on pivot means and having a first upwardly extending portion for engaging said front detent means on said hammer, said trigger having a second upwardly extending portion spaced from said first portion, hammer catch means pivotally mounted

on said second portion for engaging said back detent means, and a spring in said housing urging said hammer to rotate in one direction and urging said trigger and said hammer catch means to rotate in an opposite direction, said spring engaging the underside of said receiver to serve as a resilient stop to pull of the trigger.

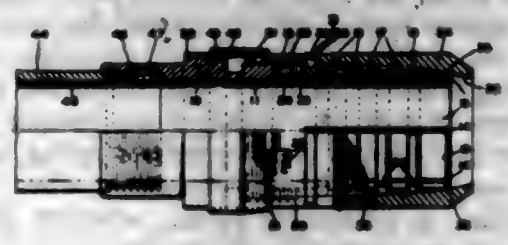
2,894,347
FLUID CYLINDER SURROUNDING A STATIONARY BARREL
Francis Henry Woodcock, Gloucester, England
Application June 22, 1956, Serial No. 593,080
Claims priority, application Great Britain June 25, 1955
3 Claims. (Cl. 42—75)



3. A small arm comprising in combination a fore-end, a barrel supported by the fore-end, and a liquid damper, interposed between the barrel and the fore-end and secured to the latter, to damp the vibration set up in the barrel when the weapon is fired and minimise the transmission of such vibration to the fore-end, said liquid damper comprising a rigid cylindrical member surrounding a rear portion of the length of the barrel to contain the liquid in a closed annular chamber between the cylindrical member and the barrel, and resilient locating means, in the form of a sealing ring arranged at each end of the cylindrical member and interposed between the latter and the barrel, which locate the respective ends of the cylindrical member both axially and radially relatively to the barrel and prevent relative sliding axial movement between the cylindrical member and the barrel, said resilient locating means closing the ends of said annular chamber to contain the liquid therein and also maintaining the barrel from contact with any rigid portion of the cylindrical member.

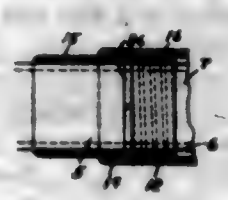
2,894,348
ADJUSTABLE MUZZLE CHOKE
Richard M. Cutts, The Plains, Va.
Application March 2, 1955, Serial No. 491,625
5 Claims. (Cl. 42—79)

1. In an adjustable muzzle choke for shotguns having a plurality of resilient axially extending circumferentially disposed segments and a sleeve longitudinally movable over said segments, means for flexing and uniformly supporting said segments along their length including an internal surface in said sleeve tapered in a curve of continuously increasing slope forwardly and inwardly toward the muzzle end thereof and a plurality of circumferentially disposed spaced substantially parallel raised contact surfaces on said segments of progressively decreasing heights toward the muzzle end of said segments, said segments having uniform thickness be-



tween said raised contact surfaces, said raised contact surfaces having their surfaces of contact rounded in cross section and engaging said internal surface in circumferential lines of contact which change position with each change of curve of the segments and for each degree of choke utilized.

2,894,349
AUTOMATIC CHOKE DEVICE FOR SHOTGUNS
Robert G. Hare, Sharon, Mass., assignor to Hartford Gun Choke Company, Inc., Newington, Conn., a corporation of Connecticut
Application November 9, 1955, Serial No. 545,931
7 Claims. (Cl. 42—79)



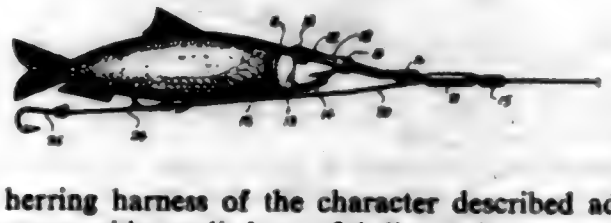
7. A choke for a shotgun barrel comprising a member threaded for attachment to said barrel and including resilient choke fingers, a unit slidably connected to said member and operable on forward movement thereof to constrict said fingers and including a sleeve, a stop threaded to the rear end of said member, and resilient, radially movable brake means housed by said sleeve and including first and second parts provided with coacting cam surfaces, said first part being longitudinally movable and said second part being actuated radially in response to such longitudinal movement for braking engagement with said sleeve.

2,894,350
STRIP CLIP FOR LOADING BOX MAGAZINES
Stefan Kenneth Janson, New Haven, Conn., assignor to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia
Application April 11, 1956, Serial No. 577,482
4 Claims. (Cl. 42—87)

1. A strip clip for loading box magazines from the top which comprises a generally U-shaped channel frame

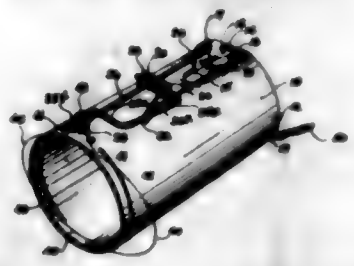
having two legs, a first spring mounted within one leg and projecting across the top of the clip into contact with the other leg, the channel frame having inwardly extending flanges spaced apart so as to receive therebetween two rows of cartridges in staggered relation, said first spring contacting the top cartridge of each row, a catch on one end of the spring for engaging the rim of the bottom cartridge, a second spring mounted upon the other leg for engaging the bullet of the bottom cartridge, said first spring being effective to apply pressure to the cartridges of each row to press the bullet of the bottom cartridge into secure engagement with the second spring, said catch and said second spring being releasable when said bottom cartridge is pushed upwardly, whereby all of the cartridges can be removed from the clip.

2,894,351
HERRING HARNESS
Wright Davis Doane, Port Townsend, Wash.
Application August 20, 1956, Serial No. 605,113
1 Claim. (Cl. 43—44.6)



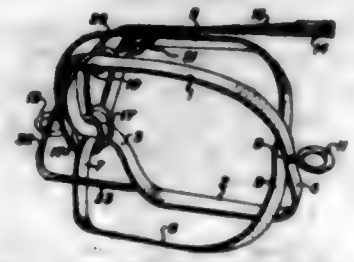
A herring harness of the character described adapted to be removably applied to a fish line, said harness being formed from a continuous strip of spring wire, a spiral coil formed at one end of the wire for freely passing the fish line therethrough, a substantially horizontal straight portion adjacent said coil, a pair of diverging jaw forming elements adjacent to and extending beyond said straight portion, the other end of said wire being formed into a spiral coil about said straight portion, a friction sleeve about the straight portion and fish line to retain the harness in releasably fixed position on the fish line, said jaws each comprising an angularly inclined leg portion and a head engaging portion extending downwardly from the outer ends of the legs at a substantial angle thereto, a forwardly directed, V-shaped portion connecting the lower ends of said head engaging portions, a slip sleeve applied about both of said legs and said sleeve being movable along said legs to draw them together so as to cause the head engaging portions to grip the opposite side of the head of a bait fish placed therebetween.

2,894,352
ANIMAL TRAP
Martin McDonald, Renton, Wash., assignor of one-half to Charles B. Ridlinghafer, Seattle, Wash.
Application April 4, 1957, Serial No. 650,736
1 Claim. (Cl. 43—87)



An animal trap comprising a tubular housing, open at its forward end for entrance of an animal and formed through its top wall near its rearward end with a longitudinal slot and near its forward end with two laterally spaced holes and in its opposite sidewalls, in alignment with said holes, with open slots leading from near said holes, respectively, to near the center line of the bottom of said housing, a lever arm having a transversely directed end portion pivoted on top of the housing between said longitudinal slot and holes and having an outer end portion extended forwardly and between said holes, a spring acting under tension against the mounting end portion of the lever and housing arm to swing the arm upwardly when released at its free end, a latch lever pivoted at one end to the forward end of said housing and extended across the free end of said lever arm to normally hold it in a "set" position against the force of said spring, a flexible wire strand formed into an open noose, connected at its ends, through said holes to the outer end of the lever arm and resting at its base against the top side of the bottom wall of said housing between the lower ends of said slots with its side portions extended outwardly through said slots and a trigger member extended through said longitudinal slot pivoted to said housing and having its top end releasably engaged with the swinging end of said latch lever and its lower end equipped for actuation by the entering animal to release its outer end from the latch lever.

2,894,353
ANIMAL TRAP
Clayton C. Mau, Genesee, N.Y.
Application March 24, 1958, Serial No. 723,243
6 Claims. (Cl. 43—88)

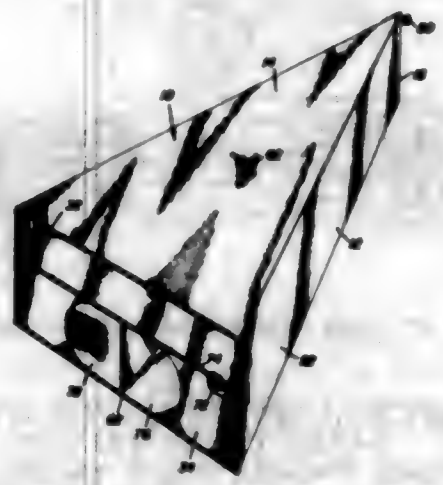


1. In an animal trap comprising a pair of cooperating loop-shaped jaws including end portions which are pivotally connected at their centers, a wire actuating spring including a coiled portion at its outer end and arms terminating at the inner end of the spring in connecting portions that embrace and are slidable on the end portions of the jaws on opposite sides of their pivotal connections, the improvement which consists in trigger and detent mechanism including an outwardly projecting detent positioned against the edge of one of the jaws at one end of the trap, a supporting element for the detent extending on opposite sides of the detent and engaging the edge of said jaw at spaced points from the detent whereby the detent is released from said edge by a rocking movement of the supporting element on said edge, a flexible connection between said supporting element and the other of said jaws, and a trigger comprising a vertical portion adjustably separably mounted on said supporting element to vary the angular relation of said vertical portion of the trigger, a horizontal portion at the bottom of the vertical portion, and fastening means retaining the vertical portion of the trigger in adjusted position.

2,894,354
V-TRAP
Franklin L. Thomas, Ava, Mo.
Application December 17, 1957, Serial No. 703,430
2 Claims. (Cl. 43—101)

1. A fish trap comprising a wedge-shaped container that has mesh top, bottom and side walls and an open front, a frame around said open front, a door having a door frame, means on said frames mounting said door in said open front and at one of said side walls for hinged movement, a latch connected with the opposite side wall and said door to hold said door in closed position, said door having an opening therein, a funnel attached to said door and in registry with said opening and directed inwardly of the container, said door and

funnel being of mesh material, a bait box located within said container and in alignment with said funnel, means separably holding said bait box fastened to one wall



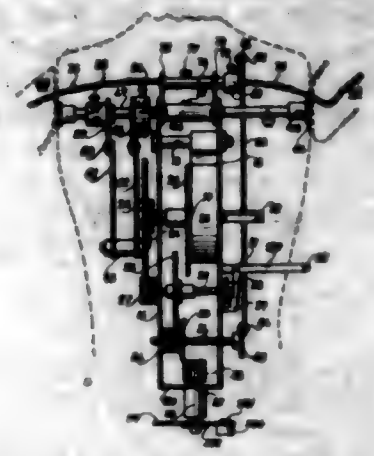
of said container, said bait box being smaller than said door so that when said door is open said bait box may be removed and returned through the open front of said container.

2,894,355
ENDLESS PAPER ROLL TYPE DRAFTING BOARD
Leslie Royce Huff, Westwood, N.J.
Application November 22, 1957, Serial No. 698,297
4 Claims. (Cl. 45—131)

1. An endless paper roll type drafting board comprising an assembly embodying bracket members disposed in parallel spaced relation with respect to each other, a pair of horizontally disposed rollers mounted on the ends of said brackets, said rollers being disposed in parallel spaced relation to each other, drafting boards secured to said bracket members, said drafting board being secured between said rollers, an endless sheet of drafting material extending about said rollers and over said drafting board, a frame supporting said assembly, means pivotally mounting said assembly centrally of said frame, and a latch for holding said assembly in position.

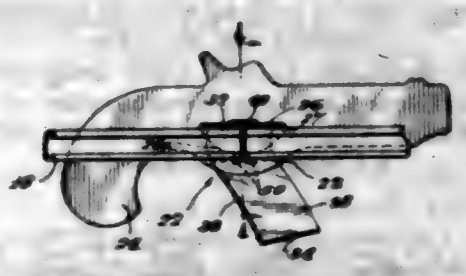
2,894,356
DANCING TOY PROVIDED WITH VIBRATING ACOUSTIC DEVICES
Luis Campdera Sala, Barcelona, Spain
Application March 12, 1958, Serial No. 721,019
Claims priority, application Spain November 8, 1954
8 Claims. (Cl. 46—118)

1. A dancing toy comprising a body having a plurality of points thereon on which the doll rests in stable equilibrium on a supporting surfaces, a prime mover mounted in said body, a vibrating device in said body for vibrating the toy on said points and connected to said prime mover, a plurality of limbs movably mounted on said body, means connecting said limbs to said prime mover for moving said limbs in a slow oscillating movement, vibrating acoustic devices on said limbs, and means connecting said vibrating acoustic devices to said prime



mover for vibrating said vibrating acoustic devices rapidly.

2,894,357
NOISEMAKING ATTACHMENT FOR BICYCLES
David C. Munro, Chicago, Ill.
Application October 4, 1955, Serial No. 538,321
2 Claims. (Cl. 46—175)

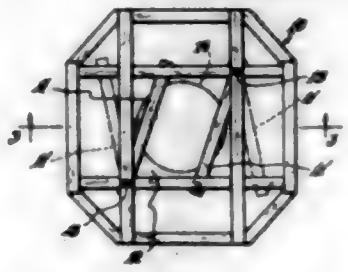


1. A noisemaking device adapted to be attached to a velocipede support adjacent a spoked wheel thereof comprising a relatively flat sheet of relatively inflexible material, means for securing said sheet to the support, said sheet when secured to said support being disposed in a plane that is substantially parallel to that of the wheel, said sheet being formed with an elongate opening having its major dimension extending generally parallel to the wheel spokes in their positions as they move by said sheet on rotational movement of the wheel, the margin of said opening being coextensive with said major dimension along one side of the opening, an abutment carried by said sheet, said abutment extending substantially parallel to the major dimension of said opening and substantially coinciding therewith, said abutment projecting generally laterally of said sheet, and a strip of relatively stiff resilient material secured to said sheet by having one end thereof received in said opening along said major dimension thereof, said strip including a portion that is of larger transverse dimension than said major dimension of said opening, said portion of said strip including substantially diametrically opposed notches formed in the longitudinally extending edges of the strip, the edge of said sheet defining the margin of said opening being received in said notches to retain said strip within said opening and adjacent said abutment, said strip being of sufficient length to project into the path of movement of the wheel spokes when said sheet is secured to said support.

2,894,358
READILY DETACHABLE POTTED PLANT PROTECTOR
Annchen H. Ward, Florham Park, N.J.
Application April 9, 1958, Serial No. 727,488
3 Claims. (Cl. 47—34)

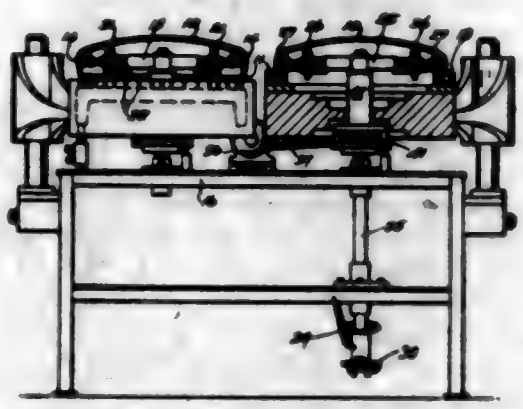
1. A detachable pot-supported protector for potted plants comprising: a flat platform of a material non-

injurious to plants adapted to be disposed in a horizontal applied position at a level slightly above the rim of a flower pot in supporting relation to the stems and leaves of a plant set therein to space the latter above the pot and soil contents, said platform having a central aperture of fixed diameter slightly in excess of the outside diameter of the rim of the pot whereby the platform may



be moved into and out of applied position from beneath the pot; and at least one rigid platform-supporting member movably connected to the platform for horizontal adjustment substantially radial to the vertical platform axis between an inoperative position in which it clears the platform aperture and an operative position in which it crosses said aperture to rest upon the rim of the pot.

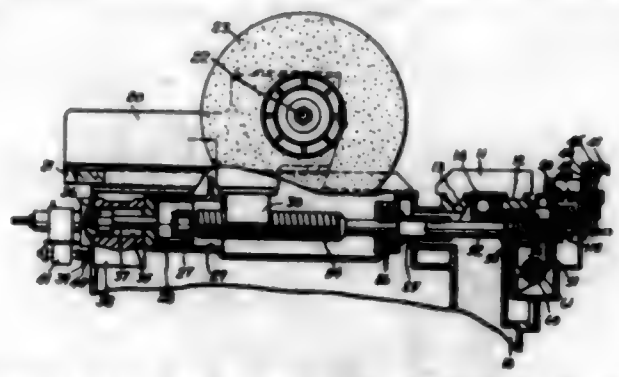
2,894,359
METHOD OF APPLYING SEALING COMPOSITIONS TO GLASS PARTS
Clarence D. Pawlicki, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application August 9, 1955, Serial No. 527,258
4 Claims. (Cl. 49—82)



1. The method of joining a low melting glass sealing composition to the open edge of a hollow article composed of a higher melting material, said method comprising the steps of preheating said article at a controlled rate to a temperature below its deformation temperature, maintaining said low melting composition in a molten condition, and immersing successive localized increments of said open edge progressively in said molten composition, the immersion being effected by imparting a gyratory motion to the article.

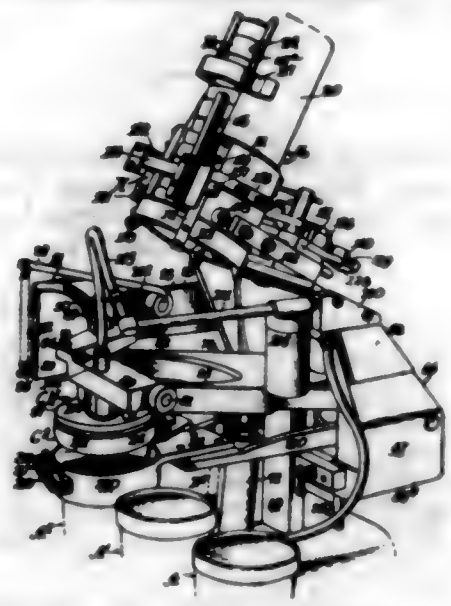
2,894,360
GRINDING MACHINE-WHEEL WEAR COMPENSATING MECHANISM
Charles C. Alvord, Worcester, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Application December 20, 1956, Serial No. 629,532
7 Claims. (Cl. 51—165)

1. In a grinding machine having a base, a transversely movable rotatable grinding wheel thereon, means including a nut and screw feeding mechanism operatively connected to feed said grinding wheel in either direction, feeding means to impart a rotary feeding movement to said feed screw so as to impart grinding feed to said wheel, and an independent feed compensating mechanism interposed between said feeding means and said feed screw to facilitate a predetermined incremental actuation of the



feed screw so as to automatically compensate for wheel wear.

2,894,361
PROCESS AND APPARATUS FOR APPLYING COVERS TO CONTAINERS
Fred E. Ullman, Winnetka, King L. Klopfenstein, Arlington Heights, and George F. Novotny, Chicago, Ill., assignors to Triangle Package Machinery Company, Chicago, Ill., a corporation of Illinois
Application April 15, 1955, Serial No. 501,658
6 Claims. (Cl. 53—40)

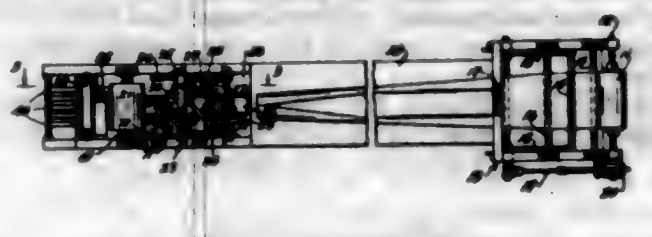


1. The process of applying a cover having a sheet portion and an annular flange portion to a container having an annular wall portion terminating in an open top and in such manner that the cover flange fits around the outer top marginal part of the container, comprising locating the container with the open top up and in approximate position for capping, providing a split ring, the opening of which includes an annular surface that tapers upwardly and inwardly from the lower face of the ring, an annular surface that tapers downwardly and inwardly from the upper face of the ring, and an intermediate vertical substantially untapered annular surface, lowering the split ring in open condition so that upper marginal rim portion of the container telescopes into the ring opening through said lower tapered part until the upper marginal rim portion of the container is, at least in part, within the confines of the opening defined by said intermediate annular surface of the ring, closing the split ring thereby locating the container in correct position for capping, if not initially sufficiently accurately so placed, pressing the cover downwardly so that the flange thereof passes through the top tapered opening in the split ring until the flange is positioned around the upper outer marginal portion of the container, thereby opening the split ring sufficiently to accommodate the cover flange between the top outer marginal portion of the container and the adjacent intermediate ring portion, opening the split ring, and then raising the split ring enough to free the container entirely from the split ring.

2,894,362
WRAPPING MACHINE

Sylvester H. Cargill, Excelsior, and William L. Harkess, Minneapolis, Minn.; said Harkess assignor to said Cargill

Application February 20, 1953, Serial No. 338,024
3 Claims. (Cl. 53—182)

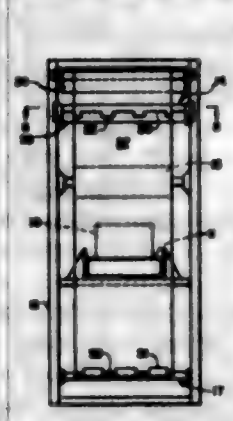


1. An article wrapping machine having in combination feeding mechanism for engaging an elongated strip of wrapping material with articles enclosed therein to progressively move said strip and articles through the machine, longitudinal sealing mechanism including means for folding the strip around the articles to be wrapped and for sealing the marginal edge portions of said strip to form a continuous tube around said articles, transverse sealing mechanism for individually sealing the tube at spaced apart points, a transverse severing mechanism actuated substantially simultaneous with the transverse sealing mechanism for separating the sealed wrappers, a rotary drive shaft connected with said feeding mechanism and said longitudinal sealing mechanism for positively driving the same, a rotary cam shaft driven independently of said rotary drive shaft and having releasable means for normally holding said cam shaft against rotation, control mechanism responsive for actuation to the position of articles within the wrapper strip relative to said transverse sealing and severing mechanisms and connected with the releasable stop means for said rotary cam shaft to release the same only when an article is not interposed between the transverse sealing and severing mechanisms, actuating apparatus interconnecting said transverse sealing and severing mechanisms with the cam shaft to actuate said mechanisms only when said cam shaft is permitted to rotate, and means in said drive shaft and controlled by said cam shaft for stopping said drive shaft when said cam shaft is permitted to rotate.

2,894,363
WRAPPING

Maarten Voogd, Long Beach, Calif., assignor to Shell Development Company, New York, N.Y., a corporation of Delaware

Application April 29, 1957, Serial No. 655,821
1 Claim. (Cl. 53—228)

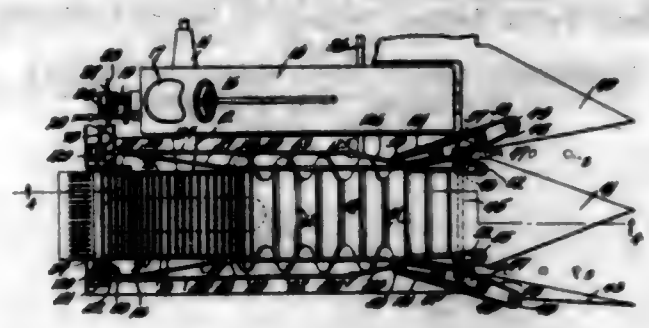


Apparatus for wrapping cubic shaped objects comprising means for supplying a continuous length of thermoplastic material having a planar section, a pusher means for advancing the objects against said planar section and in a path perpendicular to the plane thereof, an upper movable and separable clamping means for said thermoplastic material movable through a vertical path parallel to and on both sides of said planar section, a lower fixed clamping means for receiving the end of thermoplastic material from the movable clamping means at the lowermost point of its travel path interlocking fingers on the respective clamping means for effecting the transfer of the end of the thermoplastic film from the movable clamping means to the fixed clamping means and a heated wire element mounted parallel to said planar section at the top thereof whereby upon advancement of the objects against the thermoplastic film a panel of film is severed

2,894,364
CORN HARVESTER AND GATHERING CONVEYOR THEREFOR

Howard L. Ehler, Dewey, Ill.

Application August 3, 1956, Serial No. 602,042
13 Claims. (Cl. 56—15)



1. In a corn harvester adapted to be supported on a row crop tractor having a power take off, a frame structure, means for attaching the frame structure to a tractor to be powered thereby; a pair of harvesting means mounted in said frame structure and at the sides of said tractor, each harvesting means including a plurality of divider means, a plurality of cutting means, said dividers and cutters being located forwardly and at a low stalk-engaging position on the frame, a plurality of gathering means mounted forwardly on the frame, an endless conveyor extending upwardly and rearwardly from the cutting means, screw conveyors extending along the longitudinal edges of the endless conveyor, a floating conveyor adjacent and overlying the upper rear portion of the endless conveyor arranged with its forward portion floating, snapping rolls adjacent the upper end of the endless conveyor, a trough below the snapping rolls, a deflector plate forwardly of and below the snapping rolls to receive ears of corn and discharge them into the trough, conveying means in the trough receiving the snapped ears and conveying them to a discharge portion; and drive means adapted to be connected to the tractor power take-off for driving the gathering chains, the cutting means, the conveying means and the snapping rolls.

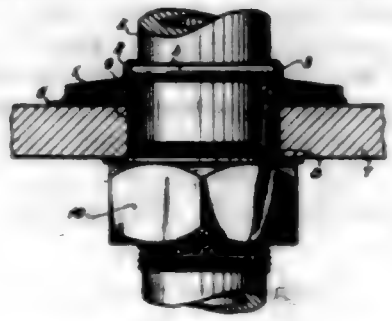
2,894,365
MOUNTINGS OF SPINDLES IN SPINNING OR THREAD TWISTING MACHINES

Gert Meyer-Buesche, Munich, Germany

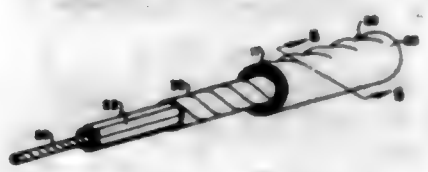
Application June 26, 1957, Serial No. 668,213
Claims priority, application Germany June 28, 1956
4 Claims. (Cl. 57—132)

1. A mounting for a spindle for use in spinning and like machines having a spindle rail with a bore; comprising a cup spring provided with a slotted collar, a spindle housing provided with an annular projection adapted for engagement with and abutment by said collar, said housing extending through said bore of said spindle rail with predetermined clearance, and an elastically deformable damping element located between said cup spring and said spindle rail and provided with a central part adapted to be deformed into a rim pressed into said

clearance provided between the spindle rail bore and the spindle housing to thereby secure the spindle when passing through said spindle housing in centering relation to said bore of said spindle rail.



2,894,366
LEAD LINES FOR FISH NETS
Claude Perrin Lockie, Vancouver, British Columbia, Canada
Application April 7, 1958, Serial No. 726,817
13 Claims. (Cl. 57—149)

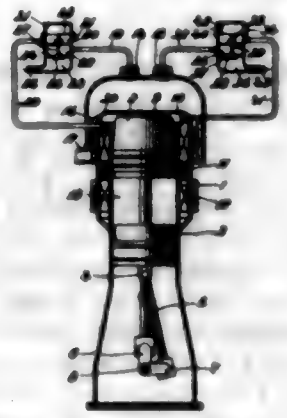


1. A lead line for a fish net of the type that is suspended from a cork line connected to an edge thereof, the lead line being attached to the other edge of the net to weight said edge to keep the net hanging substantially in a vertical position, comprising a thin flexible core of high-tensile strength, a plurality of thin strands of lead surrounding the core and extending substantially parallel therewith, said strands being movable relative to each other and the core when the line is flexed or bent, and a flexible tubular sheath surrounding the lead strands, said sheath being movable relative to the lead strands and being formed of a plastic material unaffected by sea water and exposure, highly resistant to abrasion, and having substantial tensile strength.

2,894,367
EPOXY RESIN CAST BALANCE WHEEL
Wilmer J. Gingrich, Lancaster, Pa., assignor to Hamilton Watch Company, Lancaster, Pa.
Application February 8, 1954, Serial No. 408,695
3 Claims. (Cl. 58—28)

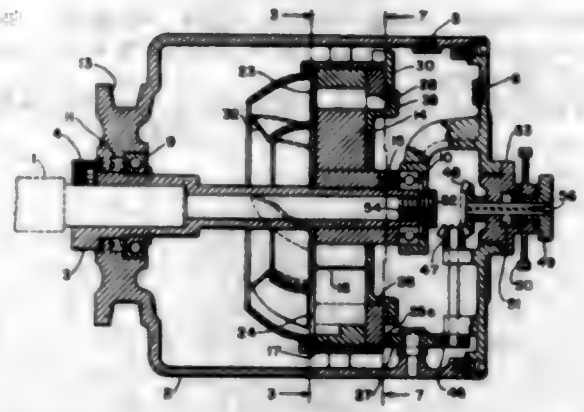
3. A balance wheel for an electric watch including an outer portion of solid epoxy resin, a skeleton body and an electric coil positioned within said outer portion and integrally bonded thereto.

2,894,368
HOT-GAS ENGINE COMPRISING MORE THAN ONE DEVICE FOR THE SUPPLY OF HEAT
Willem Jan van Heeckeren, Delft, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application March 19, 1953, Serial No. 343,344
Claims priority, application Netherlands February 6, 1946
5 Claims. (Cl. 60—24)



1. A hot-gas engine comprising: a cylinder, a heater head operatively associated with said cylinder, a plurality of separate means for supplying heat to said heater head, separate control means for each of said heat supply means, means responsive to the pressure inside the cylinder of the engine for actuating one of said separate control means, and means solely responsive to the temperature obtained in said cylinder for actuating another of said separate control means, both said means responsive to the pressure inside the cylinder of the engine and the means responsive to the temperature attained in said cylinder preventing said engine from being overheated.

2,894,369
HYDRAULIC CLUTCH AND TURBINE DRIVE
Ambrose E. Zierick, Bronx, N.Y.
Application February 7, 1955, Serial No. 486,559
10 Claims. (Cl. 60—54)



1. An improved hydraulic clutch comprising, in combination, a hydraulic vessel, a driving shaft centrally journalled in said vessel, a rotor affixed to said shaft, a plurality of radially-extending vanes disposed circumferentially of said shaft and slidably retained within radially-extending slots in said rotor, a cam ring having an internal cam fixed with respect to said vessel, the outer ends of said vanes being in sliding contact with the internal cam surface of said cam ring, a scoop impeller affixed to said shaft at one side of said rotor and including a plurality of circumferentially disposed scoop blades in alignment with said vanes, a port disc between said scoop impeller and

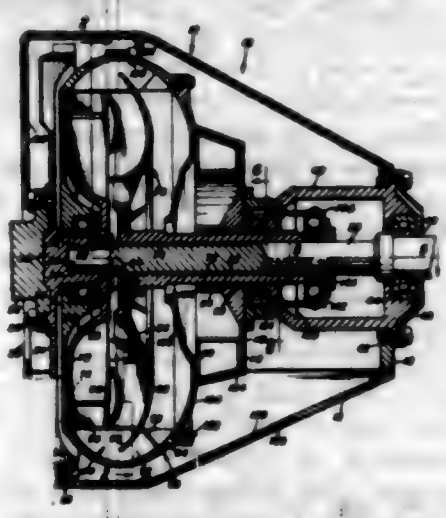
said rotor and comprising a wall at one side of said rotor, closure means at the other side of said rotor and cooperative with said port disc, said cam ring and said rotor to form expanding and contracting work chambers between said rotor vanes as said rotor is rotated with respect to said cam ring and said vessel, said port disc having an inlet passage for fluid communication between said vessel and work chambers during their expanding stage, a quantity of hydraulic fluid in said vessel, said scoop blades being in communication with said fluid and operative to deliver said fluid into said work chambers during their expanding stage, said closure means at the other side of said rotor comprising a turbine ring including a plurality of exhaust apertures extending through an arc of said turbine ring and defined by a plurality of arcuate turbine blades, said exhaust apertures being in communication with said work chambers during their contracting stage, said arcuate turbine blades being so curved as to direct the flow of discharge fluid opposite to the direction of rotation of said rotor to produce jet action, and manually adjustable means to rotate said turbine ring through a limited arc in register with the high point of said cam for closing off said apertures when said turbine ring is rotated with respect to said cam for controlling the rate of flow of fluid through said exhaust apertures, the torque of said driving shaft thereby being variably transmissible through said hydraulic fluid to said cam ring and means on the external periphery of said vessel for delivering transmitted torque.

2,894,370

REVERSIBLE ROTARY HYDRAULIC COUPLING

Warren E. Lewis, Kankakee, Ill.

Application August 11, 1955, Serial No. 527,771
6 Claims. (Cl. 60—54)



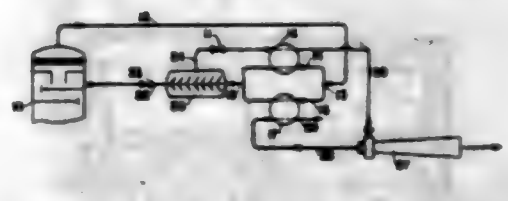
1. A rotary hydraulic coupling comprising axially fixed and aligned drive and driven shafts mounted for rotation relative to each other, an impeller carried by said drive shaft for rotation therewith, a turbine member carried by said driven shaft for rotation therewith, a casing surrounding said impeller and said turbine member, means mounting said turbine member for rotation about the axis of said drive and driven shafts, said casing including a reaction member, said impeller being disposed innermost relative to said axis and said reaction member being disposed outermost relative to said axis, said turbine member being disposed intermediate said impeller and said reaction member, said reaction member including fluid flow directing parts for radially reversing the flow of fluid circulated by said impeller and dividing said fluid into first and second streams, certain of said fluid flow directing parts further directing the flow of fluid of said second stream in circumferential direction reverse to that of said first stream, said turbine member including laterally adjacent first and second vane rings, means mounting said turbine member on said driven shaft for lateral movement relative to said impeller within said casing, shift means connected to said turbine member for longitudinally shifting the same between a forward drive position and a reverse drive position, said turbine member when in said forward drive position having said first vane ring radially aligned with said impeller and directly receiving fluid from said impeller and said second vane ring aligned with said first stream to supplement the action of said first vane ring and said second stream circulating about said turbine member, said turbine member when in said reverse drive position being disposed laterally of said impeller and having said first vane ring aligned with said first stream and said second vane ring aligned with said second stream to reverse the direction of drive of said turbine member, and means for controlling the rotation of said casing.

2,894,371

PREVENTING CONDENSATION INSIDE A VORTEX TUBE

Willem Ulrich Auer, Hendrik Groothuis, Willem Pieter Hendal, and Jacobus Vink, Amsterdam, Netherlands, assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

Application June 25, 1957, Serial No. 667,875
Claims priority, application Netherlands October 17, 1956
13 Claims. (Cl. 62—5)



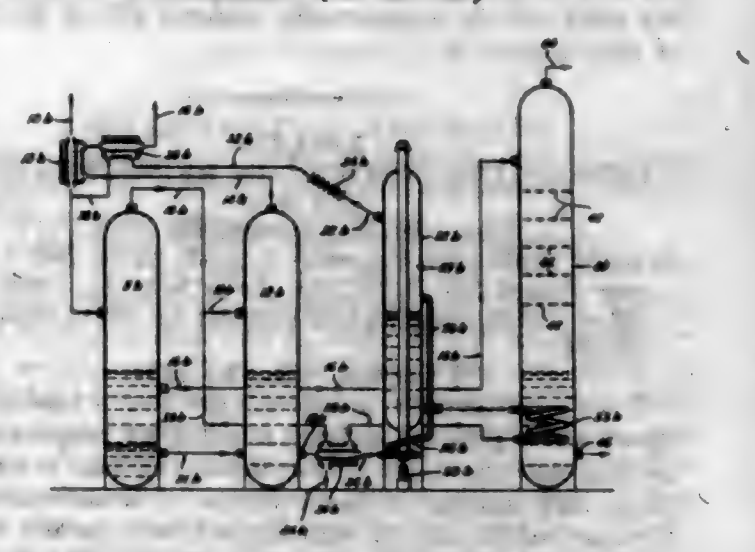
1. In a process for the separation of a fraction from a gaseous stream by cooling the stream to produce a condensate and a vapor phase and wherein a vortex tube is utilized to cool a portion of the vapor phase and which cooled vapor phase is circulated as a coolant for the aforementioned cooling of said stream, the improvement which comprises increasing the spread between the dew point temperature and the actual temperature of the vapor phase prior to its introduction to the vortex tube to a magnitude that forestalls any appreciable condensation within the tube, thereby significantly increasing the recovery of the condensate over that experienced with the occurrence of condensation within the tube.

2,894,372

METHOD OF AND MEANS FOR REMOVING CONDENSABLE VAPORS CONTAINED IN MIXTURES

Joel A. Newsome, Jr., Houston, Tex.

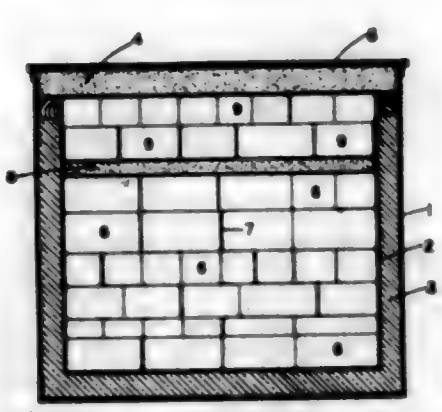
Application October 16, 1953, Serial No. 386,608
8 Claims. (Cl. 62—17)



5. A method of recovering condensable vapors contained in a gaseous mixture comprising the steps of in-

troducing refrigerant in liquid phase directly into the mixtures in quantities sufficiently to lower the temperature of the mixture and to condense at least a portion of the vapors by evaporation of the refrigerant, the refrigerant having a partial vapor pressure with respect to the vapors and having a latent heat of vaporization, removing uncondensed vapors from the mixture, separating condensed vapors and resulting liquid-refrigerant residue, separately removing the separated condensed vapors and liquid-refrigerant residue, separating the refrigerant from its liquid residue, liquefying the refrigerant and recycling the liquefied refrigerant for such introduction in liquid phase into the mixture as aforesaid.

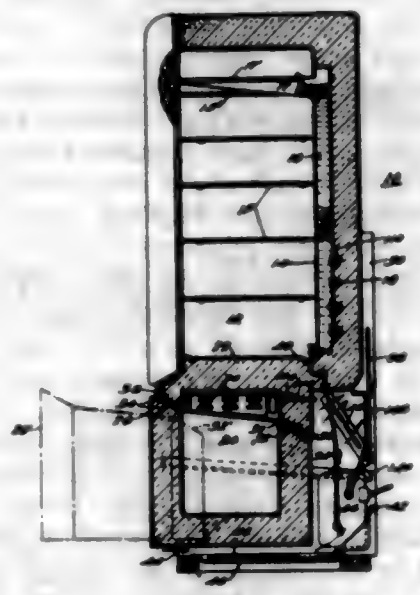
2,894,373
METHOD FOR STORING AND SHIPPING FOODSTUFFS AND THE LIKE
Willard L. Morrison, Lake Forest, Ill., assignor to The Union Stock Yard and Transit Company of Chicago, Chicago, Ill., a corporation of Illinois
Application February 28, 1956, Serial No. 566,477
6 Claims. (Cl. 62—64)



1. The method of storing foodstuffs for a predetermined time period which includes packing a mass of separate packages of frozen food, at temperatures in the order of zero degrees F. in an insulating zone, then while cooling the entire mass below zero degrees F. differentially cooling, those parts of the mass more exposed to heat infiltration, to temperatures below the temperatures of those less exposed and controlling such differential temperatures in consonance with the expected time of storage and rate of heat infiltration so that at the end of the time period, the temperature of the entire mass will be substantially uniform and in the order of zero degrees F.

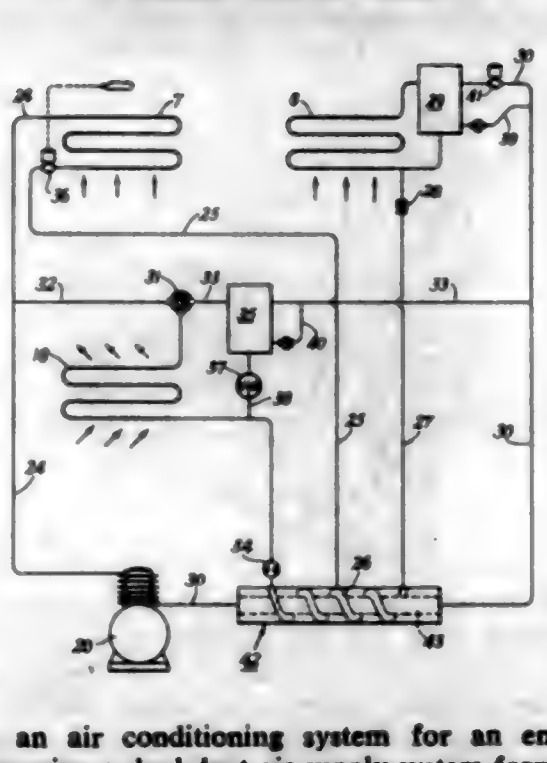
2,894,374
DEFROSTING CONTROL IN REFRIGERATION SYSTEM
Glenn Mullly, Springfield, Ohio
Original application February 4, 1949, Serial No. 74,528, now Patent No. 2,709,343, dated May 31, 1955. Divided and this application October 22, 1954, Serial No. 464,041
7 Claims. (Cl. 62—153)

1. In a refrigerator, a drawer providing a food storage space, a refrigerating system including an evaporator for cooling said space, means for defrosting said evaporator while said drawer is open, means so constructed and arranged as to reclose said drawer, and means for retaining said drawer in its open position, the last said means being releasable in response to a slight manually applied force and also in response to completion of a defrosting period, to allow said drawer to be reclosed by the second said means, and control means for re-



starting and cooling of said space in synchronism with the reclosing of said drawer.

2,894,375
AIR CONDITIONING AND HEAT PUMP SYSTEM
Robert W. Waterfill, Upper Montclair, N.J., assignor to Buensod-Stacey, Incorporated, New York, N.Y., a corporation of Delaware
Application February 14, 1956, Serial No. 565,497
7 Claims. (Cl. 62—196)



1. In an air conditioning system for an enclosure, means forming a dual-duct air supply system formed by a hot air duct and a cold air duct and means to direct a stream of air from a common source to said ducts thereby to maintain constant supplies of air in both of said ducts, a refrigeration system having a condenser in said hot air duct and an evaporator in said cold air duct and also having an auxiliary unit which is adapted to act alternately as an auxiliary condenser and evaporator, means to pass a heat interchange medium into heat interchange relationship with refrigerant in said auxiliary unit thereby to dissipate heat from the refrigerant when said auxiliary unit is acting as a condenser and to deliver heat to the refrigerant when said auxiliary unit is acting as an evaporator, said refrigeration system including refrigerant lines and valve means to connect said auxiliary unit alternately in parallel refrigerant flow relationship with said condenser or with said evaporator, restrictor means which acts an an expansion valve when said auxiliary unit is

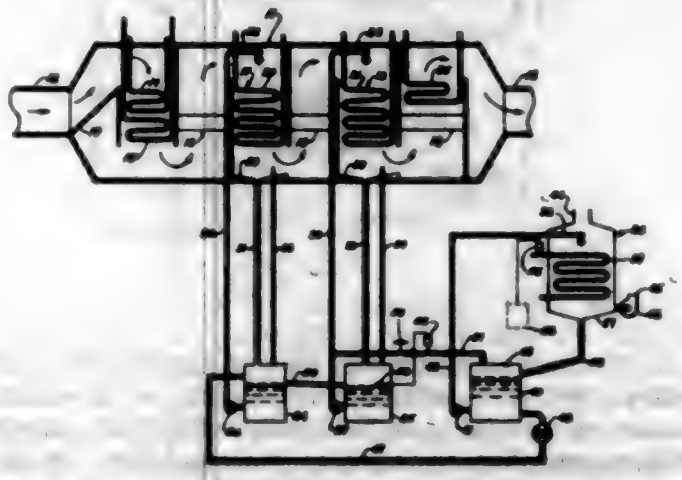
acting as an evaporator and which restricts the flow of liquid refrigerant from said auxiliary unit when said auxiliary unit is acting as a condenser, and said restrictor means comprising a fixed restrictor and a temperature responsive restrictor on the liquid outlet from said condenser responsive to the temperature of the air in said hot air duct.

2,894,376

AIR CONDITIONING APPARATUS AND METHOD

Gilbert A. Kelley, Toledo, Ohio, assignor to Surface Combustion Corporation, Toledo, Ohio, a corporation of Ohio

Application October 20, 1955, Serial No. 541,727
9 Claims. (Cl. 62—271)



4. Air conditioning apparatus for dehumidifying and cooling air subject to non-atmospheric pressure comprising, in combination: a pressure vessel; a cooling coil through which coolant is passed, located in said vessel; contactor spray means for spraying hygroscopic liquid over said coil; means for moving air to be conditioned through said vessel in contact with said cooling coil and hygroscopic liquid; a contactor sump located below said vessel; drain means for collecting in said contactor sump liquid from said contactor spray and for equalizing the pressure in said vessel and said contactor sump; a supply pipe for connecting said contactor sump to said contactor spray; a pump in said supply pipe; wall means forming a regenerator chamber located outside of said vessel; a heating coil located within said regenerator through which a heating medium is passed; means for controlling the flow of said heating medium in response to the concentration of said liquid; means for moving atmospheric scavenger air past said heating coil; regenerator spray means for spraying hygroscopic liquid over said heating coil; a regenerator sump for collecting hygroscopic liquid from said regenerator spray means; a circulating pipe connecting said regenerator sump to said contactor sump for conveying concentrated hygroscopic liquid from the regenerator sump to the contactor sump; means in said circulating pipe for pumping said hygroscopic liquid against the pressure differential between the regenerator sump and contactor sump; a return pipe connecting said supply pipe at a point downstream of said pump to said regenerator sump for conveying hygroscopic liquid from the contactor sump to said regenerator sump; and a flow control valve in said return pipe for controlling the flow therethrough responsive to the level of hygroscopic liquid in said contactor sump.

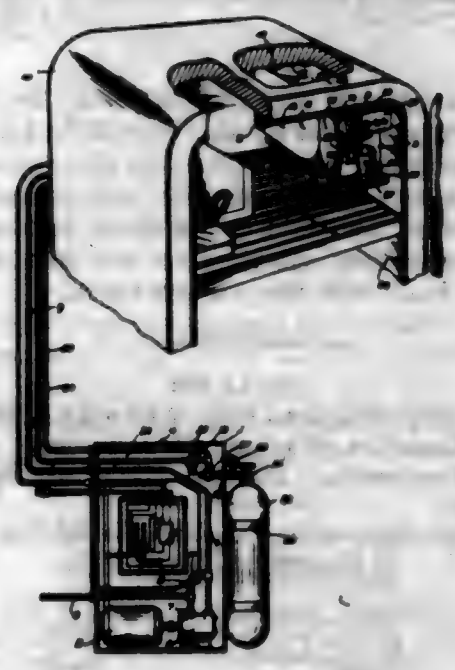
2,894,377

BEVERAGE DISPENSING APPARATUS

Horace E. Shikles, Jr., Leawood, Kans., and Loye E. Watts, Blue Springs, Mo.

Application December 3, 1956, Serial No. 625,779
5 Claims. (Cl. 62—396)

5. In a refrigerator having a door for access to a cold storage space, an apparatus for dispensing a cold drink through a dispensing nozzle and for maintaining the component parts of the drink in refrigerated condition prior to the dispensing operation, a cooled storage unit comprising, a housing having connected bottom, side, top and rear end walls of material having relatively high heat conductivity, means supporting said housing in the cold storage space of the refrigerator whereby the housing walls are maintained in cold condition, said housing being positioned with the front open end toward the refrigerator door, a carbonated water tank in the housing adjacent the rear end wall thereof, a carbonating gas and water supply, means connecting the gas supply to the carbonated water tank for supplying carbonating gas thereto, means connecting the water supply to the carbonated water tank for delivery of water thereto, a plurality of syrup tanks in the housing forwardly of the



carbonated water tank with said syrup tanks side by side with one wall of each facing the front end of said housing, means in the housing removably supporting said syrup tanks, interengaging means on said syrup tanks and housing holding said tanks against unintentional movement, a delivery unit removably connected to the storage unit housing and normally closing the front end thereof, nozzles supported on the delivery unit for delivering liquids therefrom, ducts extending into the delivery unit from the gas supply, syrup tanks and carbonated water tank, means in said ducts automatically closing same when the delivery unit is removed from housing closing position, and means including valves in the syrup and carbonated water ducts for controlling delivery of said syrup and carbonated water from the nozzles in the delivery unit.

2,894,378

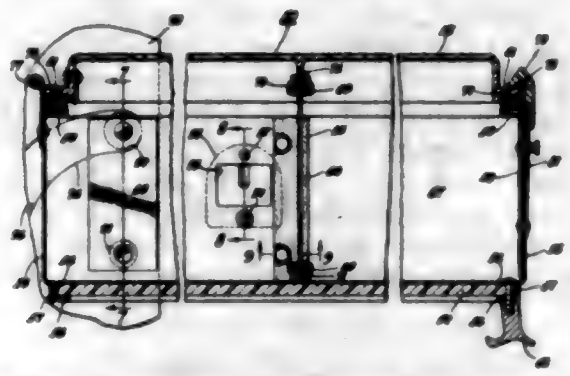
REFRIGERATING APPARATUS

Orson V. Saunders and Carl F. Petkwitz, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich, a corporation of Delaware

Application May 17, 1957, Serial No. 659,967
4 Claims. (Cl. 62—337)

1. In a refrigerator, a cabinet, said cabinet having walls defining a food storage chamber therein, a refrigerating system associated with said cabinet including an evaporator for cooling air in said chamber, a receptacle within said chamber, a partition extending across the interior of said receptacle and dividing same into a first compartment and a second compartment each having walls thereof directly exposed to the cool air in said chamber, said receptacle having an access opening leading to said compartments, a single cover for the opening in said receptacle common to both of said compartments and normally closing them, said cover being mov-

able relative to said receptacle for simultaneously opening said compartments, a resilient gasket extending along said partition and around the walls of said receptacle at the opening therein, latching means clamping said cover closed in compressive engagement with said gasket to prevent air in said chamber from circulating into said re-

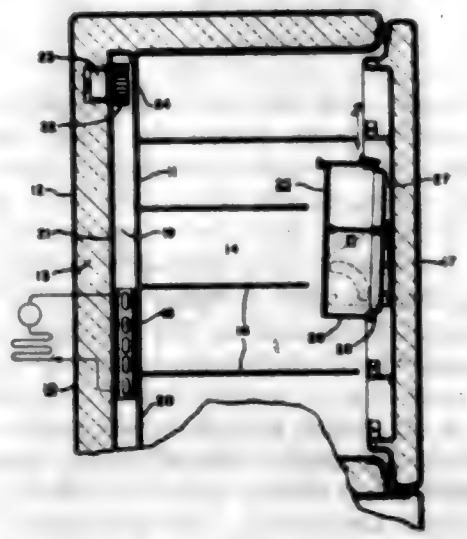


ceptacle and between said compartments therein, adjustable vent means carried by said receptacle for regulating venting of said first compartment to air in said chamber while said cover closes and seals said second compartment therefrom, and said closed cover also sealing said second compartment against flow thereinto of the ventilating air from said first compartment.

2,894,379
REFRIGERATING APPARATUS

Orson V. Saunders, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application September 16, 1957, Serial No. 684,190
9 Claims. (Cl. 62—377)

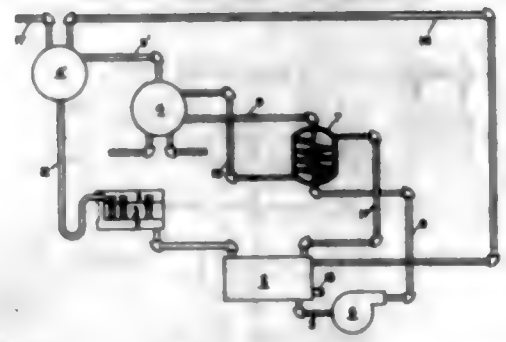


1. In combination, a refrigerator cabinet having walls defining a food storage chamber therein, a refrigerating system associated with said cabinet including an evaporator for cooling air within said chamber, a food storing hydrator structure within said cabinet exposed to the cool air in said chamber including a receptacle member, a cover member hingedly secured thereto for closing an access opening therein and a resilient gasket on one of said members engageable therebetween, a latch for said structure comprising a keeper on one of said members and a striker pivotally mounted on the other of said members for swinging movement relative thereto, said striker having a keeper receiving portion latchable with said keeper upon closing said cover member, a spring interposed between said other member and said swingable striker for biasing the keeper receiving portion thereof toward said keeper, the keeper receiving portion of said striker being so shaped as to engage said keeper and cam said members together into compressive contact with said gasket under the influence of force exerted by said spring for sealing the joint between said members, and the pivotal mounting of said swingable striker being adjustable to vary the distance between the keeper receiving and engaging portion thereof and said keeper.

2,894,380
EVAPORATOR CONTROL FOR ABSORPTION REFRIGERATION SYSTEMS

Everett Perry Palmatier, Solvay, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Original application July 16, 1953, Serial No. 368,355. Divided and this application November 1, 1954, Serial No. 466,864
9 Claims. (Cl. 62—476)

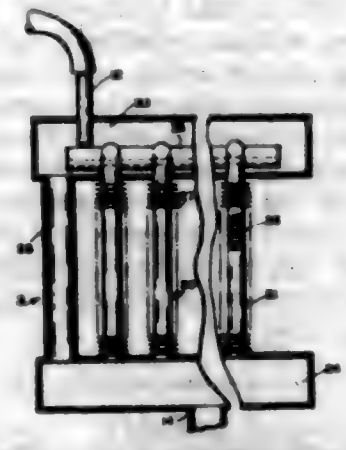


7. A device for regulating flow of liquid into an evaporator tube of a refrigeration system to be vaporized therein comprising a substantially cylindrical reservoir-defining member arranged to surround the top of an evaporator tube, liquid over-flowing from said reservoir into said evaporator tube, said member having at least one opening below the level of the top of the tube for the admission of liquid refrigerant, a second substantially cylindrical member arranged within the first cylindrical member with spaced portions thereof engaging the first cylinder to form at least one passageway for the induced flow of liquid refrigerant for return to the absorber, said induced flow being under the influence of a flow of vapor from the evaporator tube in excess of an amount indicative of a predetermined liquid refrigerant feed into the tube.

2,894,381
EVAPORATOR CONTROL FOR ABSORPTION REFRIGERATION SYSTEMS

Everett P. Palmatier, Solvay, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Original application July 16, 1953, Serial No. 368,355. Divided and this application April 23, 1956, Serial No. 579,981
4 Claims. (Cl. 62—515)



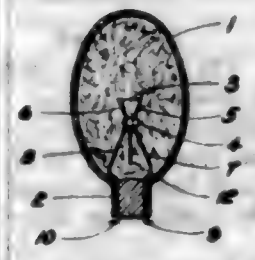
1. In combination with an evaporator including a plurality of substantially horizontally spaced tubes defining a passageway for the flow of refrigerant, means for supplying liquid refrigerant to the uppermost tube in relatively small quantities, means for vaporizing liquid

refrigerant flowing in the lower portion of the evaporator and means providing a path of flow, for said vaporized refrigerant, which includes the space adjacent the liquid refrigerant supply means whereby the vapor flow acts to oppose the supply of liquid refrigerant to the evaporator.

2,894,382
EVAPORATOR CONTROL FOR ABSORPTION REFRIGERATION SYSTEMS
Everett P. Palmatier, Solvay, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Application July 16, 1953, Serial No. 368,355
9 Claims. (Cl. 62—527)

1. A feed control for an evaporator tube, said tube having a vertical evaporating portion and an angular portion extending upwardly therefrom, means disposed adjacent the juncture of the angular and vertical portions of the tube to supply liquid refrigerant thereto, and means regulating the supply of liquid refrigerant in response to the quantity of refrigerant in the vertical portion of the tube.

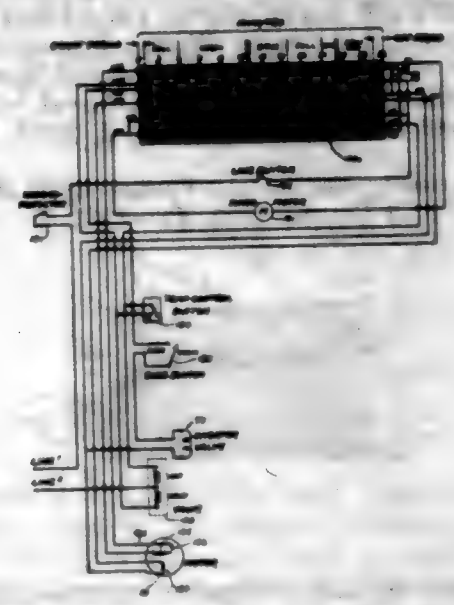
2,894,383
FLASHLAMP
Leo Henricus Verbeek, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application June 15, 1954, Serial No. 436,879
2 Claims. (Cl. 67—31)



1. An electrically ignited flashlamp having a bulb portion and a relatively narrow neck portion, comprising a filament wire, a pair of stay wires secured to said filament wire, and a supporting member of non-conductive material affixed to both said stay wires to maintain the said stay wires in spaced relationship in said bulb portion, each of said stay wires being bent at two points separated from each other by the length of said neck portion in a manner whereby the said stay wires resiliently engage at one of said points the inner surface of said bulb portion at an area adjacent said neck portion and engage at the other of said points the base area of the said neck portion thereby securely clamping the ignition mechanism of said flashlamp in a given position in the said bulb portion.

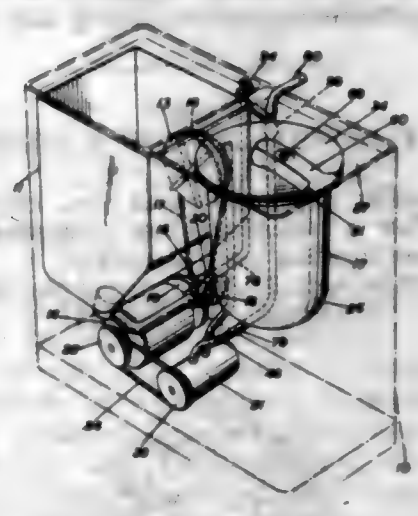
2,894,384
SUDS SAVING SYSTEM FOR WASHING MACHINE
Thomas R. Smith, Newton, Iowa, assignor to The Maytag Company, Newton, Iowa, a corporation of Delaware
Application May 28, 1956, Serial No. 587,720
23 Claims. (Cl. 68—12)

13. In a washing machine adapted to contain fluid and having mechanism for pumping said fluid to and from said machine respectively out of and into a storage reservoir, means including an electrical circuit controlling fluid flow out of and into said reservoir, timer means, a manually operable switch movable from a first position into a second position to condition said circuit for energi-



zation by said timer means, said timer means controlling the energization of said circuit and the operation of said mechanism, and means actuated by said timer means for shifting said switch from said second position into said first position to deenergize said circuit.

2,894,385
WASHING MACHINES
Frederick Roy Sibbald, Greenford, England, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Application November 30, 1953, Serial No. 395,221
Claims priority, application Great Britain December 1, 1952
3 Claims. (Cl. 68—21)



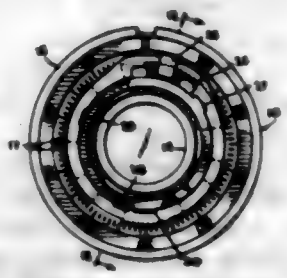
1. A washing machine comprising: a container for a washing liquid, a liquid pump having an inlet connected to said washing container for emptying the latter and also having a delivery conduit to discharge the water removed from said container, a suction squeeze drier, a suction pump having an inlet at all times connected to said drier to operate the latter and provided with a delivery conduit to discharge water removed from said drier, a motor permanently connected to said pumps, common conduit means connecting said delivery conduits, valve means controlling flow of liquid through said liquid pump delivery conduit to prevent undesired emptying of said washing container, said valve means arranged with respect to said common conduit means to prevent reverse flow of water from said suction pump delivery conduit into said liquid pump delivery conduit,

and means for relieving the suction in said drier to prevent flow of liquid through said suction pump delivery conduit.

2,894,386
APPARATUS FOR THE CONTINUOUS TREATMENT OF ARTIFICIAL FILAMENTS
Roland Brepson, La Voulte, Rhone, France, assignor to Societe Chimiotex, a corporation of Morocco
Original application April 26, 1955, Serial No. 504,039. Divided and this application May 2, 1957, Serial No. 656,730
Claims priority, application France April 30, 1954
3 Claims. (Cl. 68—205)

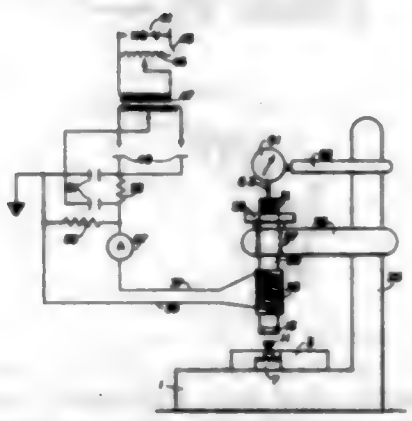
1. Apparatus for the continuous treatment of filaments by a liquid, comprising a roller having a raised flange at one end with a peripheral surface to receive filaments and guide means extending along and spaced from said roller, said roller and said guide means having relatively inclined axes, said filament being adapted to be fed in advancing convolutions around said roller and said guide means, the first of said convolutions being disposed on said flange whereby de-tensioning occurs as the filament advances from said flange to the roller surface, means for feeding the treating liquid onto the filament at the trailing end of said roller, said roller being inclined in a direction to cause the liquid to flow along the surface thereof to the leading end, said flange having openings in its radial surface to permit said liquid to drain therethrough, said guide means comprising a plurality of spaced parallel rods arranged to contact and rub the filament as the convolutions advance along said guide means.

2,894,387
CHANGEABLE TUMBLER FOR A COMBINATION LOCK
Robert D. Smith, King of Prussia, Pa., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Application June 19, 1957, Serial No. 666,629
9 Claims. (Cl. 70—323)



7. A combination tumbler of the class described having a circular bearing surface through which the tumbler is mounted to rotate in a predetermined axis, an outer peripheral portion formed integrally and concentrically with said bearing surface and having a gating for a fence, a separate fly for the tumbler, a part through which said fly is assembled to the tumbler in different angular positions about the tumbler axis whereby to change the angular relation between said fly and said tumbler gating, a fly cooperating lug formed on said part in position to coact with the fly of a juxtaposed tumbler, and means on said part and tumbler coacting to hold the part in the different angular positions in which it may be assembled relatively to the tumbler whereby to maintain said fly cooperating lug and said fly each in predetermined angular relation to the tumbler gating.

2,894,388
ELECTROMAGNETIC TESTING APPARATUS FOR MEASURING THE TACK OF FLUIDS
George R. Cook, Des Plaines, and Lynn E. Ellison, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Application May 3, 1956, Serial No. 582,561
5 Claims. (Cl. 73—58)



1. A testing device for determining the adhesive and cohesive properties of fluids comprising a test plug of a magnetizable metal having substantially identical cylindrical top and base portions connected by a neck of substantially smaller cross-section, a test plug positioning member, an electro-magnet with a vertically adjustable core, a sample holder, means for accurately positioning said sample holder and test plug positioning member beneath said magnet with said test plug aligned with the field of the magnet for non-slipping vertical movement thereby and means for adjusting the vertical distance of said magnet from said test plug.

2,894,389
TORQUEMETER
Frank Denison Brownhill, Rugby, and Rossl Duncan van Millingen, Ravensthorpe, England
Original application January 8, 1952, Serial No. 265,484, now Patent No. 2,768,525, dated October 30, 1956. Divided and this application May 3, 1956, Serial No. 585,602
6 Claims. (Cl. 73—136)

4. A torquemeter comprising an elastic torque-carrying shaft member, a bracket mounted in said shaft at a first location coaxially with the axis of rotation of the shaft to be angularly adjustable relative to the shaft at said first location, torsion-free means extending coaxially with the shaft member and connecting said bracket to said shaft member at a second location which is axially spaced from said first location, a pair of plane mirrors, one of said mirrors being mounted rigidly on said shaft at said first location and the other of said mirrors being rigidly mounted on said bracket, the mirrors having their centers in the same plane transverse to the axis of the shaft member and having their reflecting surfaces in planes parallel to the said axis, the plane of the reflecting surface of one mirror being approxi-

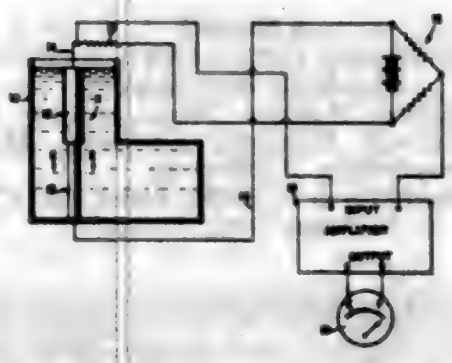
mately at right angles to the plane of the reflecting surface of the other of the mirrors, means directing a collimated beam of light towards said mirrors including a stationary collimating lens, a stationary source of light, a stationary graticule illuminated by said source of light and positioned at the focus of the collimating lens, the beam being reflected by one of said mirrors onto the second mirror which reflects the beam in turn, and image-receiving means optically aligned with said means directing the collimated beam towards the mirrors, said image-receiving means receiving the beam of light after reflection by said second mirror and including stationary measuring means permitting determination of the deflection of the image of the beam on angular rotation of said bracket relative to the shaft at said first location on variation of the torque transmitted through the shaft member.

2,894,390

LIQUID LEVEL SENSING MEANS

Warren Talbot, Columbia Heights, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application August 20, 1954, Serial No. 451,273
1 Claim. (Cl. 73—295)



Liquid level sensing apparatus for measuring the quantity of liquid in a container having an irregular cross-section, comprising; an electrical measuring network, a resistance probe adapted to be positioned longitudinally in the container so that when voltage is applied to said probe its resistance value varies in accordance with the height of liquid in the container, means connecting said resistance probe to said network, said resistance probe comprising a rod-like member having an inner high-resistance portion of uniform cross-section and having an outer low-resistance portion of varying cross-sectional area formed over the outer surface of the inner portion, said resistance probe being so formed as to have resistance variations along the length thereof which are a predetermined function of the cross-sectional area of the container.

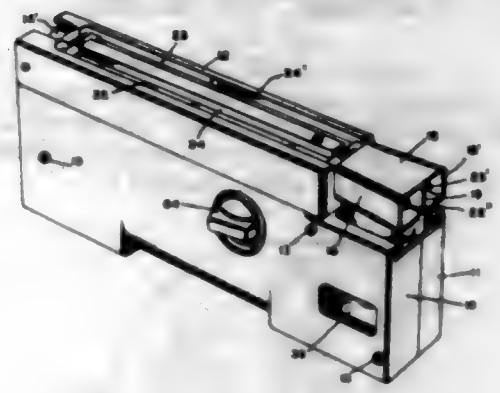
2,894,391

PORTABLE MOTOR-ASPIRATED PSYCHROMETER

Rutger B. Colt, Baltimore, and Alexander Uchuck, Randallstown, Md., assignors to Bendix Aviation Corporation, Baltimore, Md., a corporation of Delaware

Application July 2, 1956, Serial No. 595,459
9 Claims. (Cl. 73—338.6)

1. In a portable motor-aspirated psychrometer, an elongated case made up of removably-connected mating sections formed interiorly thereof with mating cavities which when the sections are joined define a plurality of compartments including a battery compartment housing a battery, a motor compartment having a motor therein, and an aspirating duct adjacent the motor compartment; a thermometer housing overlying and removably connected to said case and having a pair of longitudinally extending recesses therein, a dry bulb and a wet bulb thermometer fixed in said recesses with their bulb ends projecting over said aspirating duct, a duct member overlying said aspirating duct and defining air passages in substantial longitudinal alignment with said recesses into which passages said bulb ends project, said aspirating duct communicating with the atmosphere across said



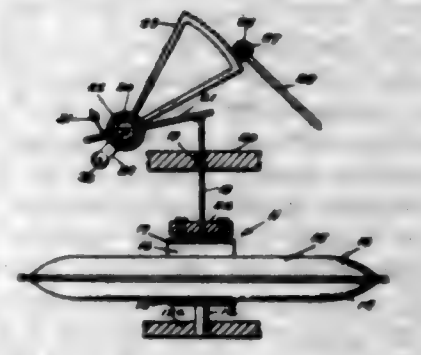
passageways, a fan driven by said motor and effective to produce a forced circulation of air through said passageways and said aspirating duct, an electrical circuit including a control switch electrically connecting said battery with said motor, and a control for said switch located exterior of said case.

2,894,392

ONE-WAY TEMPERATURE COMPENSATION FOR PRESSURE MEASURING INSTRUMENTS

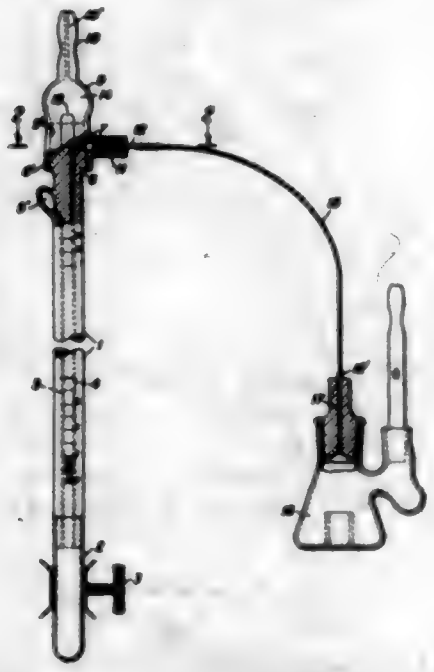
Robert McLaughlin, Elmhurst, N.Y., assignor to Kollsman Instrument Corporation, Elmhurst, N.Y., a corporation of New York

Application March 29, 1956, Serial No. 574,897
5 Claims. (Cl. 73—393)



1. In a pressure responsive system comprising a driving member movable in one direction in response to increase in pressure and movable in another direction in response to decrease in pressure; an element driven by said driving member; a temperature compensating connection between said driving member and said driven element; said driven element bearing against said temperature compensating connection; said temperature compensating connection bearing against said driving member; said temperature compensating connection comprising a bimetallic strip adapted to arc in one direction for variation in temperature from a predetermined median temperature and adapted to arc in the other direction for variation in temperature in the other direction from the predetermined median temperature; said bimetallic member extending substantially parallel to and in engagement with the driving member at the predetermined median temperature; the portion of the bimetallic strip against which the driven element bears remaining substantially tangent to the driving member on arcing of the bimetallic strip in one direction; said portion moving away from said driving member on arcing of the bimetallic strip in the opposite direction whereby the driving member extends substantially as a chord on the arc formed thereby.

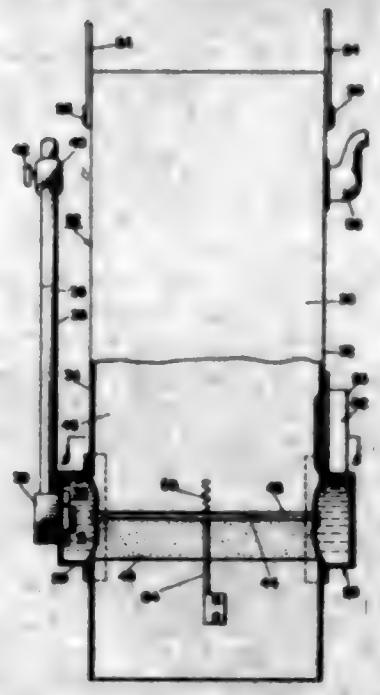
2,894,393
FLEXIBLE COUPLED MANOMETER
Otto Koelle, Meisenheim, Germany, assignor, by mesne assignments, to Wilt Corporation, Rochester, N.Y., a corporation of New York
Application November 20, 1956, Serial No. 623,403
Claims priority, application Germany November 26, 1955
6 Claims. (Cl. 73—401)



1. A manometer assembly comprising a rod having an axially-extending capillary duct therein, and having a portion of its outer surface at one end tapered to form the male member of a joint and having a radially-directed capillary passage interconnecting said axially-extending capillary with the periphery of said rod at said tapered portion thereof, a sleeve forming the female member of said joint and having a tapered internal surface rotatably mounted on said rod over said male tapered portion thereof in fluid-tight fashion, said sleeve having a capillary passage therethrough that opens at one end onto said tapered internal surface, one of said joint members having its tapered surface formed with an arcuate channel therein that opens into the capillary passage in said one joint member, the other of said members having its tapered surface formed with an axially-directed vent channel angularly spaced about the axis of said rod from the capillary passage of said other joint member, said arcuate channel extending about the axis of said rod through an angle not less than the angle between said axially directed vent channel and the capillary passage in said other member, whereby said axially directed vent channel opens at one end to the atmosphere and is adapted to register with the said arcuate channel at its other end in one position of rotary adjustment of said sleeve on said rod.

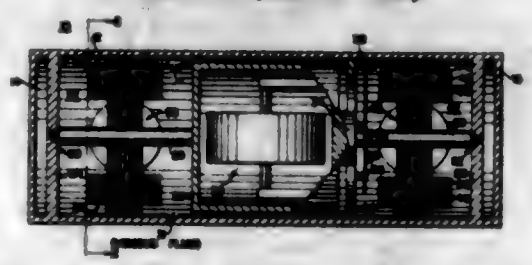
2,894,394
SAMPLER FOR FOAM BLANKET COVERED LIQUIDS
Harold A. Quist, Swarthmore, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Application June 12, 1956, Serial No. 590,865
10 Claims. (Cl. 73—425.4)

1. A liquid sampling device comprising an open elongate body having suspension means connected thereto, a hinge-connected shutter positioned at a depth in the body to retain a substantial sample therein, a liquid filled chamber normally pressure-extended to engage and retain the shutter in an open position subject to being compressed by pressure of the sampled liquid at a preselected depth, and means positioned to sealably engage



said shutter in a closed position after release by said liquid filled pressure response chamber.

2,894,395
APPARATUS FOR PRODUCING A NEGATIVE ELASTIC RESTRAINT
Hubert E. Seland, Hopkins, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application March 26, 1956, Serial No. 573,956
7 Claims. (Cl. 74—5.6)

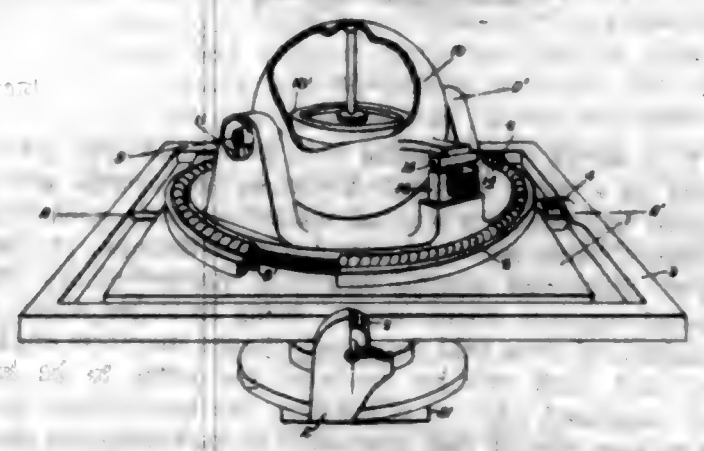


1. Apparatus of the class described comprising a frame; a sensitive instrument rotatably mounted on said frame and including electrically energizable means; electrical connection means between said frame and said instrument for energizing said energizable means, said connection means imparting a positive elastic restraint to rotation between said instrument and said frame; an inductive signal generator comprising a stator mounted on said frame, a rotor on said instrument and primary and secondary windings on said stator, said generator producing a signal voltage as a function of rotation between said instrument and said frame; means for applying an alternating current voltage to said primary windings of said signal generator; and means for imparting a negative elastic restraint to rotation between said instrument and said frame, said negative elastic restraint producing means comprising a capacitor connected to said secondary windings of said signal generator.

2,894,396
APPARATUS RESPONSIVE TO ANGULAR VELOCITIES OF A PLATFORM
Marcus Lionel Jofeh, Bonds Mill, Stonehouse, England, assignor to The Sperry Gyroscope Company Limited, Brentford, England, a company of Great Britain
Application September 8, 1949, Serial No. 114,534
Claims priority, application Great Britain
September 9, 1948
17 Claims. (Cl. 74—5.37)

1. Gyroscopic apparatus responsive to the component angular velocities of a platform about two predetermined

mutually perpendicular axes defined with reference to the platform comprising a turntable mounted on the platform for rotation about an axis perpendicular to the said axes, a rate-of-turn gyroscope mounted on the turntable for constrained precession of its rotor and supporting frame or housing about an axis normal to the turntable axis, so that, when the turntable is continuously rotated, the precession axis is also continuously rotated about the turntable axis, with the result that, during an angular velocity of the platform, the gyroscope will cyclically precess, a pickoff arrangement for detecting the angular movements of the gyroscope about its precession axis and



supplying a signal, a two-part sine-and-cosine resolving device that has one part rotating synchronously with the turntable and the other part fixed relatively to the platform, that is connected to receive the signal from the pickoff, and that is arranged to derive therefrom two component signals each dependent on the pickoff signal and on the angular position of one part of the resolving device relatively to the other in such a way that the average values of the two component signals over a rotation period of the turntable represent the component angular velocities of the platform about the predetermined axes.

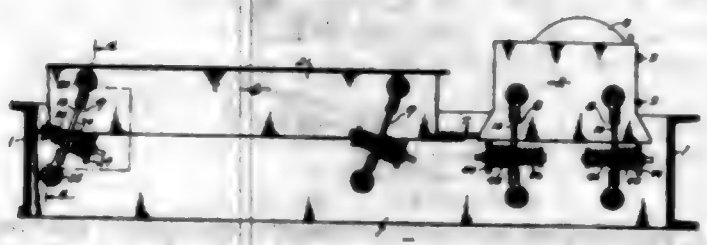
2,894,397

SUPPORTS FOR MECHANICAL VIBRATORS

Thomas H. Brunnegin, Westfield, N.Y., assignor to Ajax Flexible Coupling Co. Inc., Westfield, N.Y., a corporation of New York

Original application November 29, 1948, Serial No. 62,469, now Patent No. 2,678,720, dated May 18, 1954. Divided and this application January 18, 1954, Serial No. 404,517

3 Claims. (Cl. 74—51)



1. In a vibratory apparatus, a stationary main base; a cradle frame supported on the base by a plurality of elongated rigid links hingingly connected at their opposite end portions to the main base and cradle frame and arranged so that the cradle frame may have horizontal reciprocatory movement relative to the base; a power driven vibrator mounted on the cradle frame and producing vibrations of predetermined fixed periodicity in the direction of reciprocatory movement of the cradle frame to reciprocate the cradle frame, spring means arranged to react between the base and cradle frame and caused to store up and discharge tension by said reciprocatory movement of the cradle frame in each horizontal movement thereof; means to adjust the spring means tension to cause the cradle frame to have a natural free periodicity of reciprocatory movement in both directions substantially the same as that of the vibrations of the vibrator; and the cradle frame being provided with means for communicating vibratory movement to a load to be vibrated.

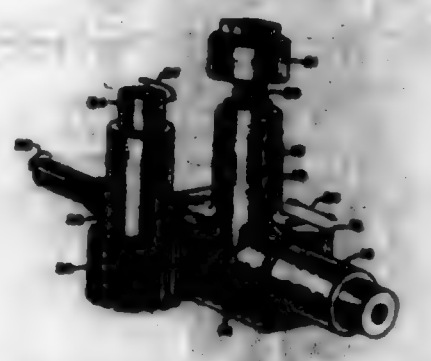
2,894,398

DRIVE MECHANISM

John O. Ayers, Centerville, Mich., assignor of one-half to David W. Van Story, South Bend, Ind.

Application September 16, 1954, Serial No. 455,170

3 Claims. (Cl. 74—76)



1. In a drive translating device of the class described, a rotatable cylinder having an endless groove thereon constituted by two reversely directed intersecting helical groove portions connected at their ends and having a curved and substantially uniform cross-sectional shape throughout, a member slidable longitudinally of said cylinder, a groove follower rotatably carried by said member, and an arcuate elongated guide portion projecting from said follower member and seating in said groove to substantially uniform depth throughout its length, said guide portion having a central portion of curved cross-section substantially complementary to the cross-sectional shape of said groove and a longitudinally tapered and curved shape for close fitting slidable relationship with said groove, said guide portion being longitudinally tapered from said central portion to its ends to provide reduced width end portions of curved cross-section and longitudinally curved sides on said guide portion whereby rotation of said cylinder causes traversal of said groove by said guide portion uniformly and substantially non-rotatively along each groove portion and at the points of intersection of said groove portions and whereby rotation of said follower in said member is limited to that caused by changes in the pitch of said helical groove portions.

2,894,399

ROTARY-STEM ACTUATING MEANS

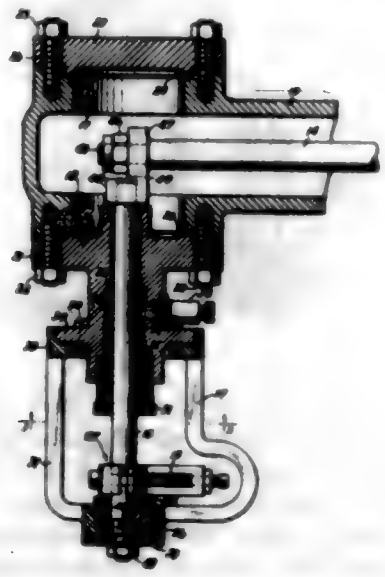
Preston Spence, Baton Rouge, La.

Application July 13, 1954, Serial No. 442,986

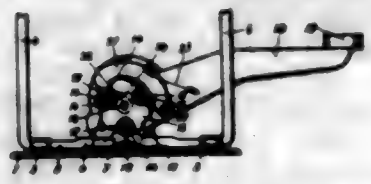
1 Claim. (Cl. 74—96)

In combination, a housing having opposed side walls, one of said walls having an opening therethrough bordered by a flange seat, a unit handling bonnet having a securing flange fitting said flange seat, a plurality of screw members equally spaced circumferentially of said flange and flange seat for securing said bonnet to said housing over said opening and provided for fastening said bonnet fluid tight to said housing in a plurality of angular positions, a swinging arm in said housing and extending to a point therein substantially over said opening, said bonnet having a bore therethrough substantially concentric therewith and with said opening, a pivot shaft extending through the bore in said bonnet, a fitting non-rotatable on the inner end of said pivot shaft and being within said housing, said fitting having a transverse aperture therein, the end of said swinging arm extending through said aperture and a nut on the end of said swinging arm to hold the latter in said transverse aperture, said bonnet having a

stuffing box and bearing for said pivot shaft, a yoke having a flange connection to said bonnet, said yoke having a ball bearing seat therein concentric with said pivot shaft and spaced substantially from the end of said bonnet and stuffing box, an outer bearing ring in said seat and means for holding the same against axial movement in both directions, an inner bearing ring on the end of said pivot shaft and secured thereon against axial movement thereon in both directions, bearing balls between said outer and inner bearing rings, said outer and inner bearing rings and bearing balls comprising a combined radial and thrust load bearing, whereby said radial and thrust load bearing serves as an outboard bearing for the outer end of said first shaft and holds the latter against axial movement in both directions, a lever device removably carried by said pivot shaft in the yoke and between the bonnet and the outboard bearing, said housing having a second opening in the wall opposite said first opening, a removable cover for said second opening, said second opening being of a size to give tool access to said fixture and nut holding said swinging arm and pivot shaft together, said first opening being of a size to permit axial withdrawal of said fixture when said bonnet, yoke and pivot shaft are removed as a unit in a direction axially of said pivot shaft.

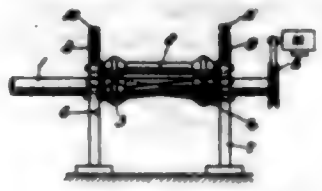


2,894,400
LOOSE LEAF BINDERS
Mathias Bonn, Bonn, Germany, assignor to F. Soennecken, Bonn, Germany, a firm
Application May 24, 1955, Serial No. 510,777
Claims priority, application Germany May 29, 1954
11 Claims. (Cl. 74—96)



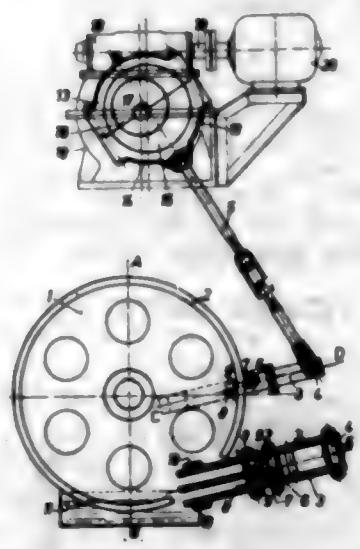
1. An opening and closing device for a loose-leaf binder or file for papers and the like in which the binder includes a base plate and a crank-type offset member pivotally mounted on the base plate, comprising a single-armed lever, a pawl having a tooth and ratchet wheel connected to be operated by the lever, a plurality of equidistant cams mounted on the ratchet wheel to act on the offset section of the member so that with a predetermined lever movement the ratchet wheel is advanced one half of a cam interval, and a spring mounted on the base plate and bearing against the offset section of the member the ratchet wheel being mounted in a plane at right angles to the base plate and the offset section of the member being moved through a distance equal to the stroke of the corresponding cam nearest the base plate when advanced.

2,894,401
DEVICE FOR IMPARTING AN AXIAL AND A ROTARY MOVEMENT TO A SHAFT
Henricus Petrus Stal, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application August 12, 1954, Serial No. 449,466
Claims priority, application Netherlands August 12, 1953
8 Claims. (Cl. 74—99)



1. A device for imparting both rotary and axial movement to a shaft member driven by an outside power source comprising a pair of spaced supports, said shaft member being loosely journalled therethrough, at least three dumb-bell shaped members journalled in said spaced supports, each member being rotatable about its longitudinal axes, said dumb-bell shaped members engaging said shaft member to cause the latter to be axially displaced while it is rotating, the longitudinal axes of at least two of said dumb-bell shaped members positioned askew relative to the center line of said displaceable shaft member, and a part of circumference of each dumb-bell shaped member engaging a portion of said shaft member.

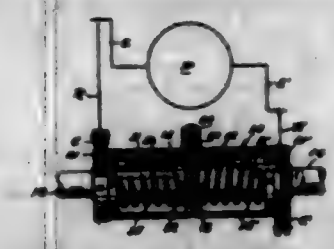
2,894,402
STEPLESS GEARING, SUITABLE FOR DRIVING TRAVELLING GRATES OR SIMILAR DEVICES
Emery Szasz, Montreal, Quebec, Canada, assignor of one-half to Saul Josephson, Montreal, Quebec, Canada
Application January 4, 1954, Serial No. 402,885
1 Claim. (Cl. 74—117)



A mechanical movement, comprising a wheel adapted to be coupled to a driving shaft, said wheel having a circumferential T-shaped flange, a fork-like lever provided with pawls adapted to co-operate with the circumferential flange of said wheel, at least one of said pawls co-operating with the outer surface of said flange and at least another of said pawls co-operating with the inner surface of said flange, inner and outer eccentrics having an eccentric rod, said lever being linked to said eccentric rod at its end remote from said wheel and being at its outer end supported solely by the engagement of its pawls with said flange, said pawls being directed so that the movement of said eccentric rod in one direction causes said flange to be clamped between said pawls and movement of said rod in the other direction causing free movement of said pawls relative to said flange, said lever carrying at least one counterweight on

its end remote from said end linked to said eccentric rod, the inner eccentric and the outer eccentric being angularly movable relatively to one another whereby to vary the eccentricity of said eccentrics, said inner eccentric having a peripheral frusto-conical surface and said outer eccentric having an internal frusto-conical surface adapted to contact the frusto-conical surface of said inner eccentric, the said two eccentrics being axially movable relatively to one another whereby to bring said frusto-conical surfaces into and out of clutching engagement, a coiled compression spring on said inner eccentric part and adapted to urge said frusto-conical surfaces into driving engagement with one another, said two eccentrics being capable of slipping relatively to one another in response to an overload, and a cover plate fixed on the outer eccentric, said spring bearing against an inner wall of said inner eccentric at one end and against said cover plate at the other end, and said outer eccentric being formed with at least one bore extending radially inwards from the periphery of said outer eccentric and adapted to cooperate with a bar adapted to be inserted into said bore whereby to turn said outer eccentric on said inner eccentric against the action of said spring.

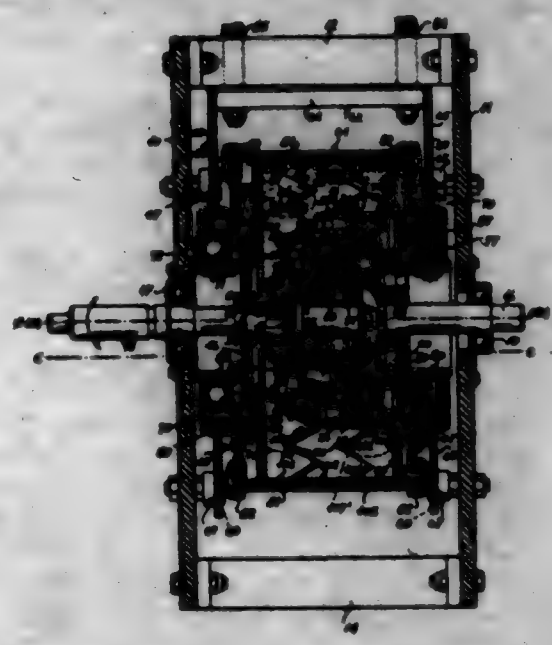
2,894,403
COIL CLUTCH MECHANISMS
Donald R. Tomko, Cleveland, Ohio, assignor to Curtiss-Wright Corporation, New York, N.Y., a corporation of Delaware
Application July 23, 1956, Serial No. 599,459
4 Claims. (Cl. 74—164)



1. An overrunning indexing coil clutch mechanism including coaxially arranged relatively adjacent and rotatable input and output members, the output member being a circular clutch drum, helical coil spring attached to the input member to turn therewith and having an end coil portion elastically preloaded against the output drum member and otherwise unconnected therewith, means capable of imparting cyclic oscillating movement to the input member, and normally stationary or non-rotating means capable of adjustment during cyclic movement of the input member and operable as a function of adjustment variably to cause intermittent release of said end coil portions from the output drum member on successive input cycles.

2,894,404
FRICTION GEARING
Ralph M. Werner, New York, N.Y.
Original application March 20, 1953, Serial No. 343,771, now Patent No. 2,800,030, dated July 23, 1957. Divided and this application June 28, 1957, Serial No. 668,786
2 Claims. (Cl. 74—209)

1. Friction gearing comprising the combination of two similar concentric end-thrust-sustaining bearings placed end to end in opposed relationship, each of said bearings having concentric annular inner and outer races and a plurality of bodies of revolution located between the races, the bodies of revolution of each bearing being individual to that bearing and separate from those of the other bearing, a multipart housing member separated on a transverse plane surrounding the outer races of the bearings, means pressing the parts of the housing toward each other to cause them to contact the respective outer races of the bearings to preload the bearings in an axial direction, a cage rotatable about the axis of each of the bearings to separate the bodies of revolution, means connecting the cages together to rotate in



unison, a torque-transmitting member connected to the inner races, a torque-transmitting member connected to the cage, and a torque-transmitting member connected to the multipart housing.

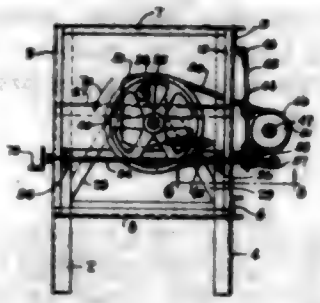
2,894,405
VARIABLE SPEED TRANSMISSION
Amos E. Carle, Detroit, Mich.
Application May 14, 1956, Serial No. 584,858
2 Claims. (Cl. 74—230.17)

1. A belt power transmission unit comprising spaced, substantially coplanar driving and driven pulleys, said driving pulley being provided with circumferentially spaced positive drive formations and said driven pulley being a variable pitch pulley having a relatively smooth circumferential drive surface, an endless belt trained about said pulleys to transmit power therebetween, said belt having opposed perimetral positive and frictional drive portions which are, respectively, in driving engagement on correspondingly oriented arcuate sides of pulleys with the drive formations and smooth drive surface of said respective pulleys, idler means about which said belt is trained to effect said belt and pulley engagements as described, and means to simultaneously adjust the pitch diameter of said variable pitch pulley and bodily shift said idler means in a direction to maintain constant belt pressure on the pulleys, said last named means comprising an adjustable mount for said idler means, a rotary actuator operatively connected to said variable pitch pulley to regulate the width thereof, and a mechanism interconnecting said mount and actuator for simultaneous adjustment.

2,894,406
SHOCK ABSORBING DRIVE FOR TUMBLING DRUMS AND THE LIKE
John F. Rampe, Cleveland Heights, Ohio
Application March 11, 1957, Serial No. 645,330
4 Claims. (Cl. 74—230.17)

1. In a machine having a frame, a relatively low speed driven shaft journaled in the frame and subject to irregu-

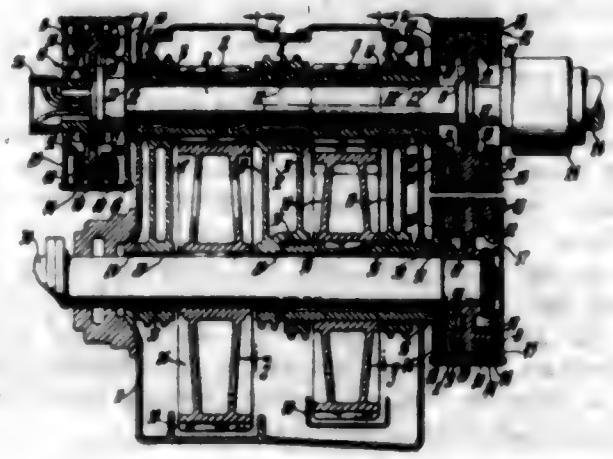
lar work loads and a prime mover supported by the frame and having a relatively high speed drive shaft, a drive system connecting said drive shaft to the driven shaft to actuate the latter; said system including a speed reducer comprising a gear train, housing means supporting the gear train and input and output shafts journaled in the housing for rotation about spaced parallel axes and operatively connected by the gear train for rotation in unison at a predetermined speed ratio; the output shaft being drivingly related to the driven shaft, the reducer being mounted for bodily swinging movement relative to the frame about the axis of the output shaft due to torque reaction, a pulley fast on the input shaft, a variable diameter pulley on the drive shaft, an endless belt trained about the pulleys to effect a driving connection between the drive and input shafts through the pulleys, said variable pulley being adapted yieldingly, automatically and progressively to decrease its effective diameter upon increase in belt tension and increase such diameter upon decrease in belt tension; the arrangement of the reducer with respect to its mount being such that under a work load the torque reaction swings the reducer in a forward direction increasing the effective distance between the input shaft and the drive shaft and increasing the belt ten-



sion to thereby effect said decrease in pulley diameter and, under a reverse load, the torque reaction swings the reducer in a reverse direction decreasing such distance and the belt tension to thereby effect said increase in pulley diameter, said decrease and increase in effective pulley diameter permitting increase and decrease in the distance between the drive and input shafts to accommodate said swinging of the reducer while maintaining said belt drive connection, and means connected between the frame and the reducer to control the swinging of the reducer, said connecting means including first resilient means tending to swing the reducer in said forward direction to augment the work load torque reaction on the reducer, and second resilient means opposing swinging motion of the reducer in said one direction and thereby acting in opposition to the torque reaction on the reducer resulting from such a work load whereby yielding of said first and second resilient means permits swinging of the reducer in automatically effecting variation of the belt tension and the driving ratio between the pulleys in response to work load variations manifested by changes in the imparted torque loads and said first and second resilient means also absorb shock loads by cushioning respectively the reverse and forward swinging of the reducer caused by work load variation.

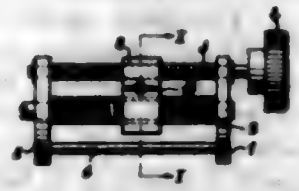
2,894,407
POWER TRANSMITTING MECHANISM
William E. Brill, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 25, 1956, Serial No. 593,582
13 Claims. (Cl. 74—361)

1. In a power transmitting mechanism, the combination comprising a reverse gear mechanism including a housing, two hollow shaft members rotatably mounted in said housing in spaced axial relation, the oppositely disposed ends of said shaft members projecting externally of said housing, an ahead drive pinion carried by one of said hollow shaft members, an astern drive pinion carried by the other of said hollow shaft members, a driving shaft rotatably mounted within said hollow shaft members and adapted to be driven by a prime mover, an output shaft rotatably mounted in said housing in spaced parallel relation to said driving shaft, a bull gear secured to said output shaft and having constant mesh with the ahead drive pinion, a third hollow shaft member con-



centrically embracing said output shaft and rotatably mounted with respect to said housing and said output shaft, a second bull gear carried by said third hollow shaft member and having a countershaft-mounted idler gear drivingly interconnecting said astern pinion and second bull gear, and magnetic particle coupling means mounted externally of said reverse gear housing for selectively interconnecting said driving and driven shafts with said gear carrying shafts.

2,894,408
SPEED-REDUCING MECHANISM
Jacob Verhoeff, Hilversum, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application July 20, 1955, Serial No. 523,145
Claims priority, application Netherlands August 23, 1954
2 Claims. (Cl. 74—424.8)

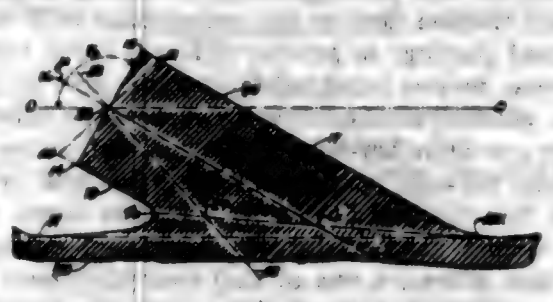


1. A speed reducing drive mechanism comprising a frame, two substantially parallel shafts mounted in said frame, one of said shafts being the driving shaft nad provided with a single thread, the other shaft being the driven shaft and provided with a multiplex thread, a coupling means for said two shafts including the two spaced parts, each part being provided with complementary threaded grooves in opposing surfaces of said parts whereby said shafts are positioned in the grooves of corresponding size, and means for retaining said parts in the proper speced relationship.

2,894,409
SCREW THREADS AND GEAR TEETH
Samuel J. Fuchs, New York, N.Y.
Application March 27, 1958, Serial No. 724,388
8 Claims. (Cl. 74—457)

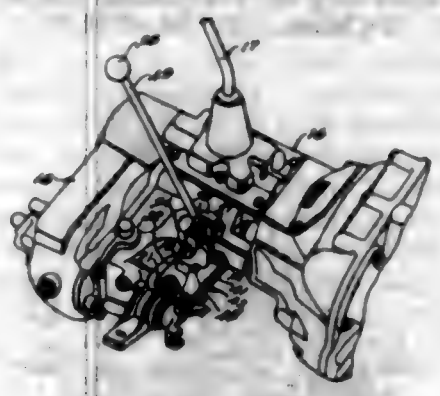
1. In a pair of mating pressure transmitting elements mounted for relative rotation one element being adapted to drive the other, a projection from the main body of at least one of the elements comprising four sides, considering the base of the projection substantially where it

joins the main body as a side, the others of said sides comprising two flank sides opposite each other extending outwardly from the main body at the opposite ends of the base, one of said flank sides being shorter than the other, and a crest side topping the flank sides opposite the base, said crest side being locatable with respect to



the mating element to receive the pressure exerted between the elements substantially normal to it when one element drives the other, and being inclined to the base so that the center line of said pressure taken in a plane normal to the edge between the crest and said short side passes through the projection to intersect the base.

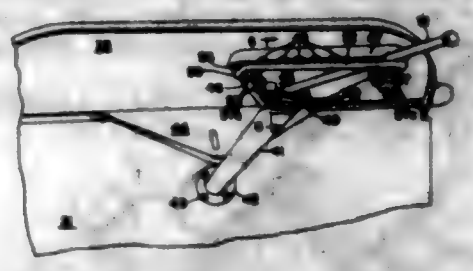
2,894,410
VEHICLE TRANSMISSION CONTROL
Edward W. Libby, Belleville, Mich., assignor, by mesne assignments, to Bank of America National Trust and Savings Association, a national banking association
Application September 6, 1956, Serial No. 608,361
5 Claims. (Cl. 74—473)



1. For use with a gear housing having a pair of gear actuating shafts arranged in a side by side relation therein and projected through said housing at one side thereof, with each of said shafts being mounted for axial movement relative to said housing between a pair of stop positions, a lever member arranged outwardly of said housing and pivotally connected to said shafts so that on swinging movement of said lever member in one direction from a first position one of said shafts is moved axially thereof relative to said housing and on swinging movement of said lever member in an opposite direction from said first position the other one of said shafts is moved axially thereof relative to said housing and means movably mounted on said housing for selective engagement with said shafts to maintain one shaft in a stationary position during axial movement of the other shaft.

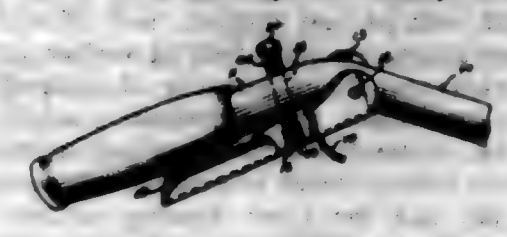
2,894,411
CONTROL MECHANISM FOR FARM IMPLEMENT
Merrill W. Reece and Orville P. Lance, Moline, Ill., assignors, by mesne assignments, to Deere & Company, a corporation of Delaware
Application December 10, 1953, Serial No. 397,406
4 Claims. (Cl. 74—491)

1. A remote control mechanism for a material unloader of the type having a mobile material containing body with a front uprightly and transversely disposed wall, and operating mechanism on the body adjustably responsive to rocking motion of a transverse shaft supported adjacent the front wall, said control mechanism comprising: a rigid and elongated tubular member having a rear end fixedly mounted to the front wall and a forward end remote from said wall; means forming a pivot adjacent the forward end; a swingable part mounted on the pivot; a relatively short hand operated control element adjacent the forward end of the tubular member and extending outwardly therefrom; means connecting said control element with the



swingable part to effect movement of said part on the pivot in response to adjustment of the element; a rock arm mounted on the transverse shaft adjacent to the rear end of the tubular member; and a force transmitting link contained within the tubular member and having its rear end connected to the rock arm and its forward end connected to the swingable part to effect rockable adjustment of the shaft in response to manipulation of the control element.

2,894,412
LEVER CONTROL MECHANISM
Arthur L. Knoner, Springfield, Ohio, assignor to Quick Manufacturing, Inc., Springfield, Ohio, a corporation of Ohio
Application June 11, 1957, Serial No. 664,992
7 Claims. (Cl. 74—531)

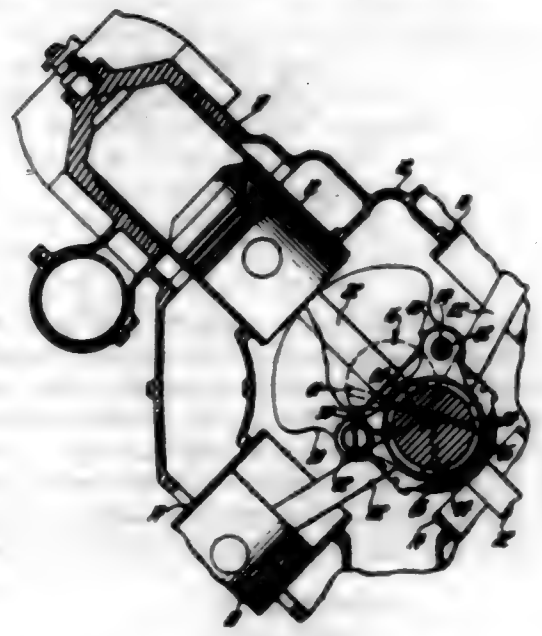


1. A handle control lock, including a handle grip portion, a control lever pivotally attached to said handle grip portion and adapted to be received with said portion within the grasp of an operator to be rocked toward and from said portion, a plunger mounted to reciprocate transversely of said handle grip portion and spring urged in one direction, and an opening in said control lever brought into and out of alignment with said plunger by pivotal motion thereof and of a size closely to receive said plunger.

2,894,413
STEERING WHEEL
Leopold Franz Schmidt, Stuttgart, Germany
Application May 9, 1956, Serial No. 583,704
Claims priority, application Germany December 13, 1955
8 Claims. (Cl. 74—552)

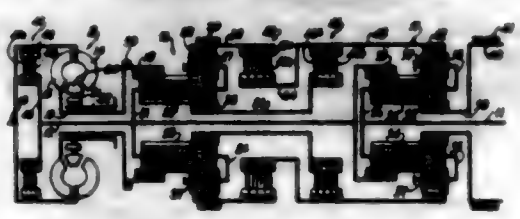
1. A steering wheel assembly for a vehicle having a steering column comprising a rim, resilient spokes coupling the rim to said column, and cantilevers normally spaced from the spokes and mounted on the column below the spokes, the cantilevers including free ends, said cantilevers being respectively in alignment with said spokes and positioned intermediate the rim and said column.

2,894,414
CONNECTING ROD MOUNTING
Ralph S. Johnson, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 26, 1955, Serial No. 511,249
11 Claims. (Cl. 74—600)



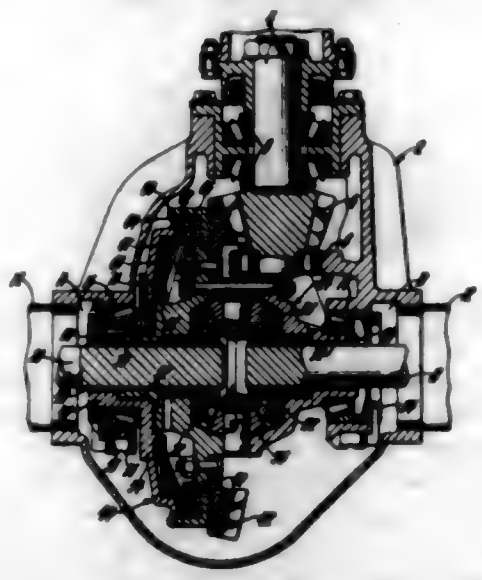
8. In combination, a crankshaft including spaced axially aligned main journal portions and paired crank portions interconnected eccentrically of the main journal axis by a crank pin, a connecting rod mounting member rotationally fixed on each of said crank portions adjacent said main journal portions, each of said mounting members having an inner bearing surface concentric with said crank pin, and a plurality of connecting rods each having an arcuate slipper projecting axially of the crank pin end thereof, said slippers having curved inner and outer bearing faces in bearing engagement with the crank pin and the inner bearing surfaces of the mounting members, respectively, lubricant supply passages in said crank portions connectable to a source of lubricant pressure and connected to lubricant supply passages in said mounting members terminating in nozzles for directing lubricant alternately onto the outer bearing faces of the slippers and onto the bearing surface of the crank pin.

2,894,415
FIVE SPEED PLANETARY TRANSMISSION
James A. Miller, Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Application December 31, 1956, Serial No. 631,895
11 Claims. (Cl. 74—688)



1. In a multispeed transmission, the combination of an engine shaft, an output shaft, an intermediate shaft disposed between said engine and output shafts, a torque converter including an impeller driven by said engine shaft and a turbine driving an input shaft, a first planetary gearing having a plurality of elements including an input element driven by said input shaft, at least one reaction element and an output element, a second planetary gearing having at least four elements including an output element connected to drive said output shaft, at least one reaction element, and at least one input element, the output element of said first gearing and the said input element of said second gearing being secured to said intermediate shaft, means including a first friction device for connecting said engine shaft directly to said intermediate shaft to bypass both the torque converter and the first gearing, means including at least four additional friction devices for cooperating with said first and second gearings to provide different speed ratios, the five friction devices being selectively operable in different pairs to provide at least five forward speed drive ratios and a reverse drive between said engine and output shafts, the highest forward speed ratio being effected by actuating said first friction device to drive the input element of the second gearing directly from said engine shaft and by also actuating one of said four additional friction devices to provide a direct drive from the intermediate shaft to the output shaft, and the second highest ratio being provided by actuating said first friction device to provide a direct drive from said engine shaft to said intermediate shaft and by also actuating another of said four additional friction devices to hold the said reaction element of the second gearing in order to provide a speed reduction between the intermediate shaft and the output shaft.

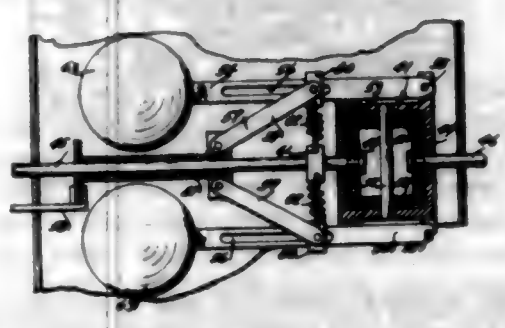
2,894,416
FLUID LOCK DIFFERENTIAL
Robert H. Scott, Cleveland, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application July 25, 1957, Serial No. 674,199
6 Claims. (Cl. 74—710.5)



1. In combination, a differential housing having oppositely disposed openings therein, coaxial wheel-driving shafts extending from the interior of said housing through and spaced from said openings, a differential drive mechanism disposed within said housing and including a differential cage rotatably mounted on the axis of said shafts, said cage having oppositely disposed bearing portions surrounding said shafts within said housing openings, means for supporting one end of said cage including bearing means interposed between one of said bearing portions and said housing within one of said openings, an annular wall adjacent the other end of said differential cage and including a shoulder splined to one of said wheel-driving shafts within said other housing opening, said shoulder including an interior recess adjacent said one wheel-driving shaft for receiving the other of said differential cage bearing portions, means for supporting said wall and said other cage bearing portion including bearing means interposed between said cage shoulder and said housing within said other opening, said wall being rotatable with said one wheel-driving shaft relative to said differential cage and forming with the

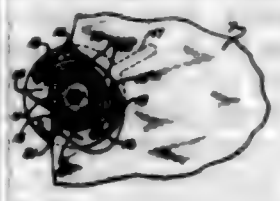
latter a clutch housing, a disc clutch disposed within said housing and including annular elements respectively connected to said cage and said wall, an annular piston disposed within said housing and forming with said wall a fluid pressure chamber, and fluid pressure means for selectively supplying fluid to said chamber to lock said differential.

2,894,417
VARIABLE SPEED TRANSMISSION
Virgil E. Boling, Lockhart, Tex.
Application November 8, 1957, Serial No. 695,360
2 Claims. (Cl. 74—751)



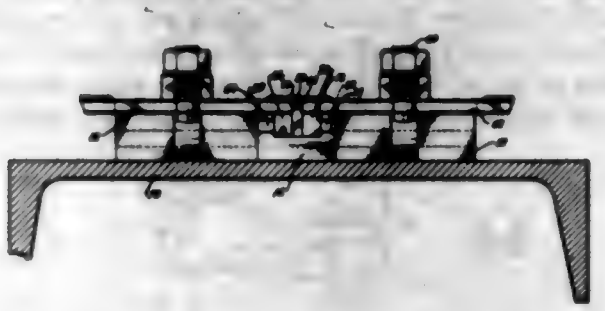
1. In a variable speed transmission, an input shaft and an output shaft, a differential unit connecting said input and output shafts together, said differential unit comprising first and second bevel gears, said first bevel gear being connected to said input shaft and said second bevel gear being connected to said output shaft, third and fourth bevel gears meshing with said first and second bevel gears, a gear carrier shaft connected to said third and fourth bevel gears, a carrier connected to said gear carrier shaft, a pair of arms pivotally connected to said carrier, weights connected to said arms, a sleeve slidably mounted on said input shaft, a control rod connected to said sleeve, brackets slidably connected to said arms, links extending between said brackets and sleeve, a body member slidably mounted on said input shaft, and coil springs extending between said body member and brackets.

2,894,418
SAW BLADE SHARPENERS
Clinton D. Jackson, Mondovi, Wis.
Application July 29, 1957, Serial No. 674,922
6 Claims. (Cl. 76—37)



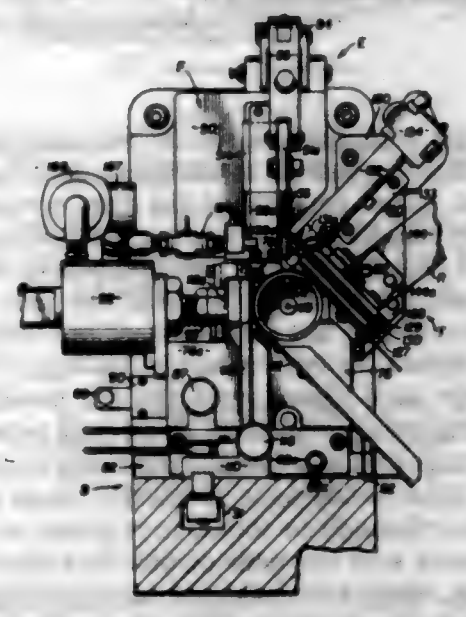
1. A sharpening unit for a circular gulleted saw blade while in position on a saw comprising a small rotatable grinding wheel of a diameter to be accommodated within a gullet of a saw blade with which it is to be used, means providing for mounting of said grinding wheel in a position which is a predetermined fixed distance radially outward from the axis of rotation of a saw blade, said mounting means also providing for lateral axial movement of the grinding wheel toward and away from the face of the saw blade into and out of grinding position in a gullet of a saw tooth, and a gauge member supported adjacent the periphery of said grinding wheel for adjustable movement around the axis of the grinding wheel and for lateral movement with the grinding wheel to a position within the gullet of a saw tooth where the gauge member is in the path of rotatable movement of an edge portion of the gullet of the saw tooth and between said gullet edge and the periphery of the grinding wheel and thereby serve as a stop after a predetermined amount of grinding to control the depth of grind on the saw tooth.

2,894,419
ADZING BITS
John M. Beyerstedt, West Allis, and Holmer E. Erickson, Milwaukee, Wis., assignors to Nordberg Manufacturing Company, Milwaukee, Wis., a corporation of Wisconsin
Application April 7, 1958, Serial No. 726,864
10 Claims. (Cl. 76—103)



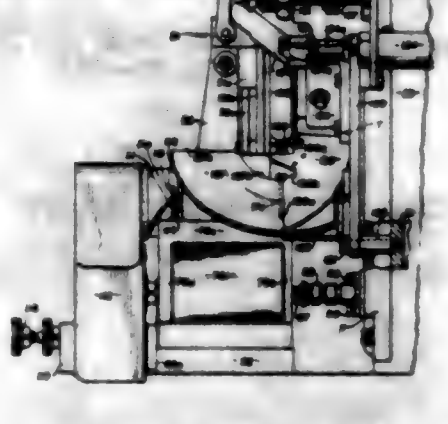
1. A method of forming adzer bits which includes arranging a plurality of the bits adjacent each other side by side in rows and end to end in at least two rows, depositing a thin layer of wear-resistant material across the junction of the ends of a plurality of the bits at a time that the bits are positioned end to end, allowing the layer of material to cool and solidify, and thereafter separating the bits by breaking the layer of material along the abutting edges of the bodies.

2,894,420
APPARATUS FOR AUTOMATIC DRILLING AND TAPPING OF HEADED WORKPIECES
James W. Batchelder, Ascutney, Vt.
Application July 24, 1957, Serial No. 673,878
14 Claims. (Cl. 77—5)

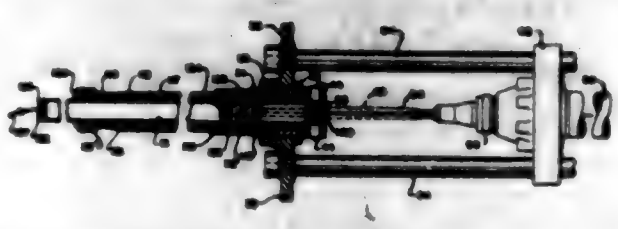


14. In a work head wherein a blank having a round shank portion and a shouldered enlargement, such as a headed blank or the like, is to be radially or axially clamped at a work station between a fixed jaw and a movable jaw, a clamping structure comprising: a jaw mounting frame with a fixed jaw rigidly secured thereon, a second jaw mounted for movement toward and away from the fixed jaw and spring biased toward the fixed jaw for yieldably retaining a blank between the jaws; said jaws having the opposed faces including a flat surface on one jaw and a V-notch on the other jaw providing three line-contacts and defining a work station for blanks of a range of shank diameters; said jaws having a plurality of parallel paired respective slots extend-

ing across the opposed faces through said notch and flat face providing pairs of coplanar axial clamping reaction surfaces for the shouldered enlargement whereby a range of blank lengths may be handled by one set of jaws, each pair of slots also providing radial clearance for the enlargement upon blank radial clamping whereby the radial clamping is effected on a blank shank; and means for applying an axial clamping force on a blank in said work station to hold the same against said reaction surfaces.



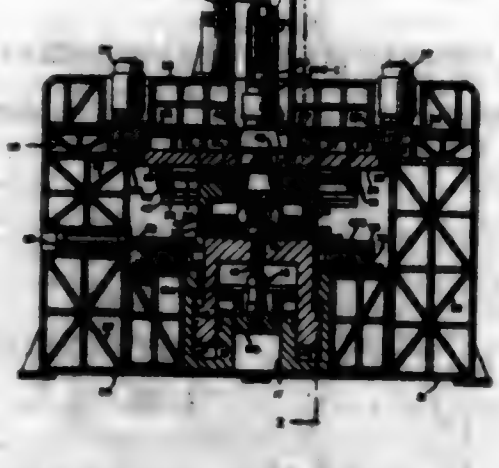
2,894,421
APPARATUS FOR STRAIGHTENING AND FOR RELIEVING STRESSES IN WORKPIECES
Gerhard H. Appel, Toronto, Ontario, Canada
Application January 12, 1956, Serial No. 558,750
3 Claims. (Cl. 78—14)



1. Apparatus comprising a set of dies arranged radially and oppositely to provide a workpiece girdling and receiving throat, means for guiding the dies to move radially only while inhibiting other motion thereof, means for intermittently moving the dies simultaneously and oppositely and radially inwardly towards the axis of such throat and plasticizing the increment of the workpiece in such throat, means for intermittently feeding a workpiece axially through such throat, with the die moving means and the feeding means operating in off-beat relation relatively and means for receiving the emerging increment of a workpiece immediately as it leaves the throat and guiding it thereafter through its travel, in response to the feed, in a path coaxial with the path of the workpiece through the die throat, while next adjacent increments are being plasticized and means for guiding the workpiece increment receiving means to move in said path coaxial with the die throat, and constructed to permit the receiving means to travel directly to the output end of the dies and thus receive the very first increment of the workpiece as it leaves the dies and thereafter to retreat from the dies with that first increment held therein in said path.

2,894,422
ROLLING MILL
Charles F. Hanton, Huntington Woods, Mich.
Application November 22, 1954, Serial No. 470,425
1 Claim. (Cl. 80—16)

A rolling mill for rolling tapered discs comprising a platen; means for moving the platen vertically; a rotatable roll support; means for rotating said support; a pair of rolls on said support; roll moving means for moving said rolls radially of said platen; a cam; means operated by said roll moving means for moving said cam in a predetermined relation thereto; a cam follower; and means operated by said cam follower for actuating said platen moving means, whereby the distance between the rolls and platen can be varied in accordance with said cam as said rolls move radially.



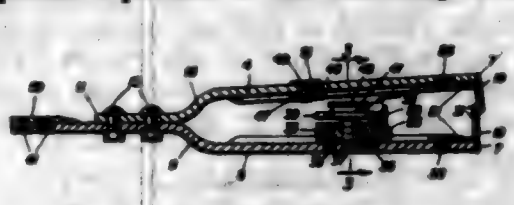
2,894,423
WORKING ROLL SUPPORTING STRUCTURE FOR FOUR-HIGH ROLLING MILLS
James C. Young, Middletown, Ohio, assignor to Armco Steel Corporation, Middletown, Ohio, a corporation of Ohio
Application September 30, 1952, Serial No. 312,196
2 Claims. (Cl. 80—45)

1. In a mill for rolling metallic alloys which are hard to reduce, and wherein a working roll is of very small diameter in relation to the backing roll, a working roll housing disposed between the backing rolls, said housing having a slot providing inner vertical walls which are exactly parallel to the axes of the backing rolls, and supporting means for a working roll providing outer parallel vertical walls and fitting snugly within said slot, and accurately positioned by the cooperative engagement of said vertical walls, said supporting means having a slot of a size to receive a work roll and providing inner work roll guiding walls which are exactly parallel to said first named walls and which engage and provide lateral support for the working surface of said working roll, and a working roll supported in said supporting means by said inner work roll guiding walls, whereby said working roll may be lifted vertically out of said supporting means, and said supporting means may be lifted vertically out of said working roll housing for roll changes.

2,894,424
TWEEZER TYPE WIRE STRIPPING TOOL HAVING AN ADJUSTABLE STOP AND STOP LATCHING MEANS
Charles Sweepe Vaughan, Jr., Tuscumbia, Ala.
Application April 24, 1958, Serial No. 730,628
2 Claims. (Cl. 81—9.5)

1. A tool for stripping insulation sheathing from a conductor of a conductor cable comprising a pair of op-

posed spaced apart handle bars connected together at one end, said handle bars being resilient for compressing them toward each other, a pair of transverse cutter blades between said handle bars fixed thereto transversely thereof and having opposite coacting V-shaped cutting edges for straddling a cable sheathing, said tool being operated in response to compression of and rotation of said handle bars to cut a ring transversely in said sheathing to separate a portion of the sheathing from the re-



mainder for stripping from said conductor by said blades by pulling said blades along said cable, settable screw feed stop means on one handle bar between said pair of handle bars for limiting compression of the handle bars whereby to prevent said blades from cutting into a conductor, and means on the other handle bar coacting with said stop means for locking said handle bars in compressed position, said position being limited by said stop means, said last named means comprising a slide on the other handle bar lockably engageable with said stop means.

2,894,425

ELASTIC RETAINING RING WITH TAB TO FACILITATE REMOVAL

George M. Rapata, Chicago, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois

Application June 22, 1954, Serial No. 438,588
3 Claims. (Cl. 85—8.8)

1. An elastic retaining ring of plastic material adapted to be mounted on an object having an enlargement adjacent one end thereof with a radially extending surface thereon providing a radially outwardly extending shoulder portion, comprising a continuous body member in the form of an annulus, said body member in cross-section presenting a surface which diverges outwardly axially of said ring to provide a cam surface substantially throughout one quadrant of the inner one-half portion of said ring, the other quadrant in cross-section of said ring on the inner one-half portion presenting a relatively abrupt shoulder portion to engage the radially extending surface of the enlargement on the complementary object to assure positive engagement of said ring on said object relative to the enlargement, and an integral tab portion spaced axially from the side of the body portion having the diverging surface and extending radially outwardly from said body member but of lesser thickness than said body member axially thereof and of sufficient circumferential extent so that it may be readily grasped to stretch the aforementioned body member and the abrupt shoulder portion thereon beyond the radially outwardly extending shoulder portion of the complementary object to facilitate dismounting of said elastic retaining ring.

2,894,426

STUD FASTENER WITH FRICTIONAL GRIPPING MEANS

George M. Rapata, Chicago, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois

Application January 5, 1954, Serial No. 402,326
5 Claims. (Cl. 85—36)

1. A one-piece plastic fastener for a stud or the like, including a substantially rigid cap having a central axial bore extending from a first face thereof to a point immediately adjacent an opposite face axially spaced therefrom, and a shank of deformable material provided with a stud accommodating axial opening, said shank extending axially from the second face of the cap co-extensive with and substantially equal in axial length to the bore in said cap, communication between the opening in the shank and the bore in the cap being closed by a relatively small transverse shank end wall portion, the outer periphery of which integrally joins said cap adjacent said second face along a circumferential area of limited cross section which may be readily fractured when force is applied, to telescopically assemble said shank and cap; the extremity of said shank oppositely disposed from the closed end thereof being longitudinally slotted so as to provide transversely yieldable shank sections with the exterior

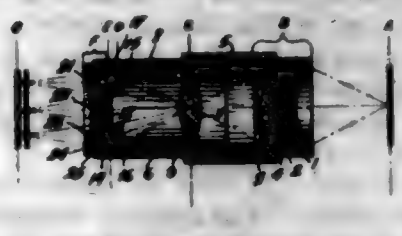
surfaces thereof initially presenting a peripheral dimension greater than at least a portion of the inner periphery of said bore and inclining inwardly from the greater peripheral dimension toward said bore, the axial opening in said shank being adapted to accommodate a complementary stud member so that after complete telescopic association of the stud within said shank, continued axial force applied to the shank and cap in opposed directions will cause fracture of the stock of limited cross section and the ultimate positioning of the exposed surface of said transverse wall in substantially flush relation with the first surface of the cap and resilient gripping of the shank within the cap and against the outer periphery of a telescopically associated stud by inward wedging of the exterior surfaces of the shank sections as they engage the reduced periphery of said bore.

2,894,427

PHOTOGRAPHIC APPARATUS FOR TAKING AND PROJECTING PICTURES WITH COLOR SEPARATION

Fernando Alvarez Sebeter, Caracas, Venezuela

Application January 3, 1956, Serial No. 557,134
3 Claims. (Cl. 88—16.4)



1. A photographic camera lens system comprising a first objective lens unit and a second objective lens unit spaced from one another and arranged coaxially in tandem, an intermediate convex lens disposed coaxially between said objective lens units, said first objective lens unit being focused on the median transverse plane of said intermediate convex lens so as to project on said plane a primary image of a scene being photographed, said first objective lens unit comprising an anamorphic element reducing one dimension of said image to a unit fraction of said dimension of a normal image of said scene, an opaque frame disposed in said plane and having an elongated opening defining the size and shape of said reduced image, the greater dimension of said opening being smaller than the diameter of said first objective unit and said second objective lens unit being focused on said plane and comprising means for producing a plurality

of secondary images of said primary image and for directing on a film said secondary images disposed edge-to-edge with the longer images of said secondary images contiguous, said secondary images having the same proportions as said primary image, and a plurality of monochromatic filters disposed so that the light forming each of said secondary images passes through a different filter.

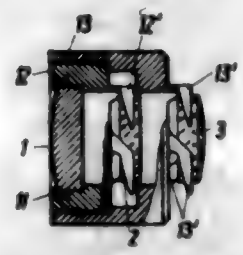
2,894,428
LIGHT PROJECTING ARRANGEMENT FOR PROJECTORS
Hans Eber, Freiburg, Breisgau, and Paul Ruf, Wasser uber Ennendingen, Germany, assignors to Lytak-Werke G.m.b.H., Breisgau, Germany
Application December 20, 1955, Serial No. 554,350
Claims priority, application Germany December 21, 1954
2 Claims. (Cl. 88—24)

1. In a light projecting arrangement, in combination, reflector means having an optical axis; projection gate means having an aperture located in said optical axis and extending in a plane transverse to said optical axis, said aperture having a predetermined area in said transverse plane; and an elongated coil-shaped incandescent filament located intermediate said reflector means and said projection gate means and having a longitudinal axis coinciding with said optical axis, said elongated coil-shaped incandescent filament having a longitudinal extension being a multiple of the transverse extension thereof and a transverse cross-sectional area smaller than said predetermined transverse area of said aperture so that said elongated coil-shaped incandescent filament is substantially point-shaped in transverse direction, said elongated coil-shaped incandescent filament having zones of different brightness along the length thereof and having a central portion and two end portions located in said optical axis and being positioned with respect to said reflector means to be imaged as conical-shaped reflected enlarged image passing through said aperture and having a transverse extension substantially equal to the greatest dimension of said aperture, the image of said central portion being substantially located in said transverse plane of said aperture, and the images of said two end portions of said elongated coil-shaped incandescent filament being respectively located before and behind said aperture so that the projection of the image of each turn of the coil-shaped filament on the plane of said gate aperture is located between the images of two other turns of said filament.

2,894,429
SPECTACLES
Georges Lissac, Paris, France
Application April 1, 1953, Serial No. 346,197
Claims priority, application France April 5, 1952
1 Claim. (Cl. 88—47)

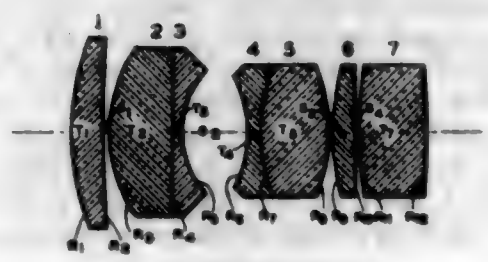
A pair of spectacles comprising a main bar adapted to extend from temple to temple of the wearer, an optical element-supporting member with substantial torsional flexibility extending parallel to, contiguous with and behind said main bar between two points spaced along said bar, one of said points being adjacent the wearer's nose and the other being adjacent the wearer's temple, means affixing said member to said bar at both of said points to retain said member and bar parallel and contiguous, an optical element, and means affixing said optical element to said member at two points on said member adjacent the mid-point thereof between said first-named points thereby to retain said optical element against swinging movement in its own plane, said first-named points being spaced by a major fraction of the dimension of said optical element parallel to said bar thereby to determine maximum torsional flexibility of said member, said member extending downwardly from said one of said first-named points for support of the spectacles from the wearer's nose.

2,894,430
MOUNTS FOR A COMPOSITE OPTICAL LENS COMBINATION
Kurt Schuch, Jena, Germany, assignor to VEB Carl Zeiss Jena, Jena, Germany
Application August 31, 1956, Serial No. 607,524
1 Claim. (Cl. 88—57)



A mount for a multi-element optical lens system comprising a cylindrically-shaped mounting tube, a plurality of short tubular shaped rings supported in coaxial relation in the said mounting tube, a plurality of axially extending elastic spring tongues uniformly distributed over the end of each of the short tubular shaped rings and adapted to contact the periphery of a lens element positioned axially of said mounting tube, cementing means attached at one point of the free ends of the said spring tongues and to the cylindrical bounding peripheral surface of the lens element, and means for securing each of said short tubular shaped rings in axial alignment and axially separated apart in said mounting tube whereby the lens elements of the composite multi-element optical objective may be adjusted and mounted therein in proper positions relative to each other and with the lens elements free from clamping forces and distortions.

2,894,431
OPTICAL OBJECTIVE
John R. Miles, Glenview, Ill., assignor to White-Rodgers Company, St. Louis, Mo., a corporation of Delaware
Application August 8, 1957, Serial No. 677,050
2 Claims. (Cl. 88—57)

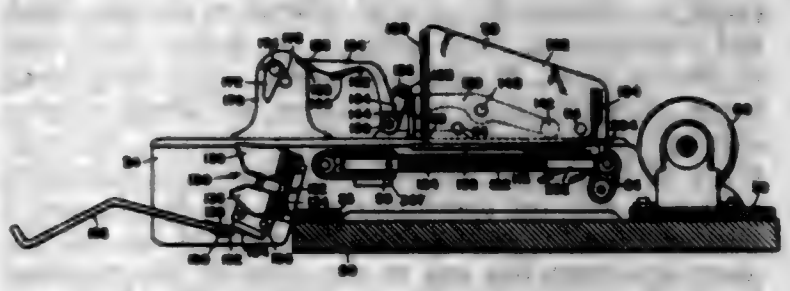


1. A photographic or projection objective of high luminosity corrected for spherical and chromatic aberration, coma, astigmatism, distortion, and field curvature comprising in combination seven lens elements in axial alignment; the first of said lens elements being a meniscus-shaped, positive lens element with its concave surface to the rear, the second and sixth of said lens elements being convex-plano positive lens elements, the third of said lens

elements being a plano-concave negative lens element, the fourth of said lens elements being a bi-concave negative lens element, and the fifth and seventh of said lens elements being bi-convex lens elements, and in which the thicknesses of the lens elements are, respectively; 10% to 13%, 22% to 26%, 3% to 5%, 5% to 6%, 25% to 27%, 8% to 10%, and 25% to 27% of the focal length of said objective, and in which the air spaces between said lens elements are substantially, respectively; 0% to 1.5%, 0% to .2%, 24% to 26%, 0% to .2%, 0% to .8%, and 0% to .8% of the focal length of said objective, and in which the second and third, as well as the fourth and fifth, of said lens elements may be cemented together for greater light transmission or other advantages, and in which the indices of refraction in sodium "D" light are from 1.610 to 1.625 for the first, second, fifth, sixth, and seventh lens elements, and in which the index of refraction in sodium "D" light is from 1.565 to 1.575 for said third lens element, and in which the index of refraction is from 1.650 to 1.660 for said fourth lens element, and in which the reciprocal dispersion ratio "V" is from 58 to 61 for said first, second, fifth, sixth, and seventh lens elements, and in which the reciprocal dispersion ratio "V" is from 47 to 49 for said third lens element, and in which the reciprocal dispersion ratio "V" is from 32 to 35 for said fourth lens element, and in which the first radius of curvature of said first lens element is from 95% to 99% of the focal length of the complete objective, and in which the second radius of curvature of said first element is from 450% to 460% of the focal length of the complete objective, and in which the first radius of curvature of said second lens element is from 51% to 55% of the focal length of the complete objective, and in which the second radius of curvature of said second lens element and the first radius of curvature of said third lens element are substantially infinity, and in which the second radius of curvature of said third lens element is from 31% to 35% of the focal length of the complete objective, and in which the first radius of curvature of said fourth lens element is from 44% to 47% of the focal length of the complete objective, and in which the second radius of curvature of said fourth lens element, the first radius of curvature of said fifth lens element, and the second radius of curvature of said fifth lens element are from 63% to 65% of the focal length of the complete objective, and in which the radius of curvature of the first surface of said sixth lens element is from 95% to 99% of the focal length of the complete objective, and in which the second radius of curvature of said sixth lens element is substantially infinity, and in which the first radius of curvature of said seventh lens element is from 135% to 139% of the focal length of the complete objective, and in which the second radius of curvature of said seventh lens element is from 270% to 290% of the focal length of the complete objective.

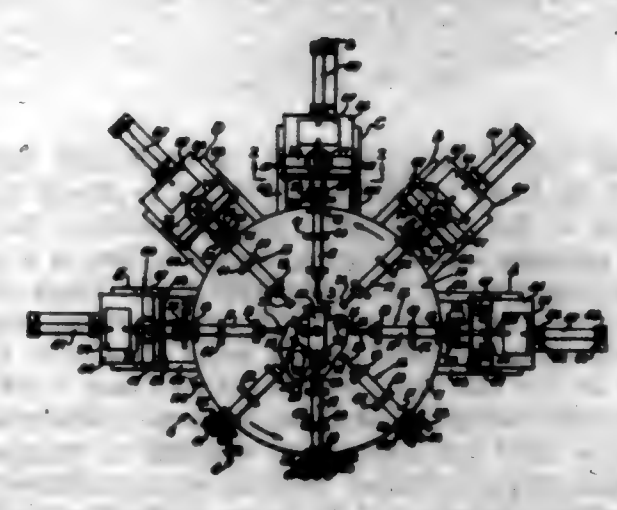
2,894,432
CARTON ERECTING MACHINE
Glenn B. Hatcher, Tulsa, Okla., assignor to Bloomer Bros. Company, Newark, N.Y., a corporation of New York
Application May 2, 1957, Serial No. 656,656
11 Claims. (Cl. 93—37)

1. A machine for setting up collapsible cartons of the type having front and rear walls hingedly attached to opposite sides of a bottom wall, and a top wall having transverse members adapted to be swung downwardly for forming a plurality of cells, said machine comprising a frame, a hopper movably mounted on said frame for holding a supply of collapsed cartons, erecting means having a plurality of cam shaped surfaces projecting into the path of the bottommost carton in said hopper for engaging the same and withdrawing it from said hopper, means for gripping said carton and pulling the same against said erecting means for moving said front wall transversely to the plane of said carton for initiating the opening of the same, means for forcing said cartons



against said erecting means for moving said transverse members to erected position and completing the erection of said carton, and means for ejecting said erected carton.

2,894,433
PARTITION ASSEMBLY MACHINE
Chester Peters and Floyd B. Seybold, Okmulgee, Okla.
Application July 16, 1957, Serial No. 672,273
6 Claims. (Cl. 93—38)

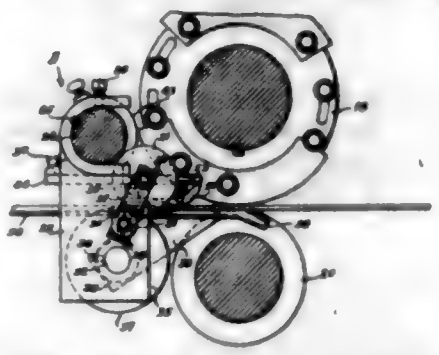


1. In a partition nesting apparatus, the combination of a horizontally disposed rotatable circular table, a plurality of radially disposed partition holding finger assemblies equidistantly spaced about the periphery of said table, said assemblies each comprising a grid, and a plurality of groups of four closely positioned fingers extending outwardly from said grid, two of the fingers of each group comprising rollers, and the other two fingers of each group comprising resilient strips having their ends outwardly flared relative to said rollers, said grid being mounted on a centrally positioned shaft, said shaft being rotatably mounted on said table means for rotating said table in step by step progression, a plurality of partition magazine and partition feeding units equidistantly positioned radially about the periphery of at least a portion of said table, said units being spaced from the rim of said table and means for moving a partition from said unit to an adjacent finger assembly when said assembly is juxtaposed in confronting relation to said unit.

2,894,434
PREFOLDING DEVICE
Maurice L. Bolton and Harold E. Rowand, Bogalusa, La., assignors, by mesne assignments, to Crown Zellerbach Corporation, San Francisco, Calif., a corporation of Nevada
Application January 6, 1955, Serial No. 480,248
4 Claims. (Cl. 93—49)

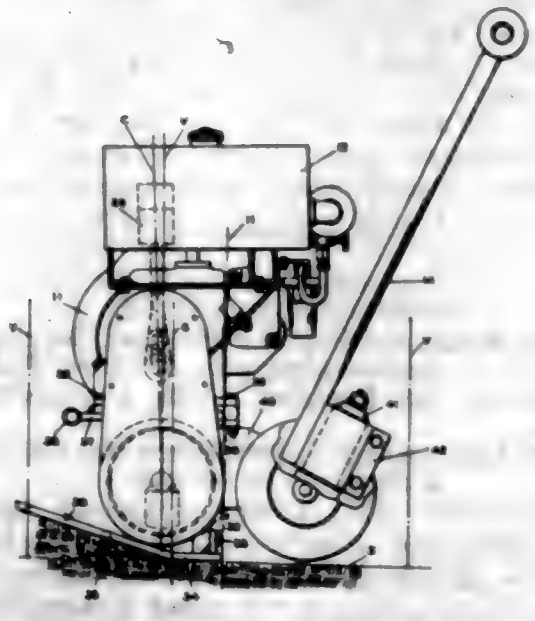
1. A machine having driving means for moving a sheet of fibreboard material substantially horizontally through the machine to form a box blank having an end flap hingedly connected thereto along a score line, the machine having a box blank output end with a pair of upper and lower transverse, substantially horizontal members disposed respectively above and below the box blank,

the combination of an end flap prefolding means comprising a folding wheel and a backing wheel, both wheels being freely, rotatably mounted on individual shafts disposed in substantially parallel relation to the box blank and positioned at right angles to the corner score lines of the box blank, the shaft supporting said folding wheel being adjustably fixed to the upper horizontal member disposed at the output end of the machine, the periphery of the folding wheel being disposed in contacting alignment with the upper face of the end flap in spaced relation from the corner score line to bend the end flap about the score line out of the plane of the container blank, the shaft supporting the backing wheel being adjustably fixed to the lower horizontal member disposed at the output end of the machine, the periphery of the



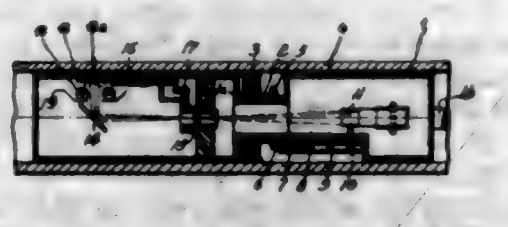
backing wheel being disposed in contacting relation against the lower face of the box blank in closely spaced relation to the corner score line to maintain the box blank portions adjacent the corner score line in a plane of the remainder of the box blank as the blank passes horizontally between the folding and backing wheels, the folding and backing wheels being adapted to freely rotate as the box blank passes therebetween, a pair of upper and lower guide members the lower guide member having a fixed horizontal part adapted to engage the underface of the container blank in spaced relation from the end flap thereon, and the upper guide member being vertically adjustable to slidably engage the top surface of the container blank in substantial vertical alignment with said backing wheel.

2,894,435
IMPACTING MACHINE
Gerald H. Brown, Columbus, Ohio, assignor, by mesne assignments, to J. Leukart Machine Co., Inc., Columbus, Ohio, a corporation of Ohio
Application December 16, 1955, Serial No. 553,590
2 Claims. (Cl. 94—43)



1. An impactor machine having an impactor blade for engaging the surface to be impacted and comprising a tubular weight housing extending transversely of the machine, transporting wheels carried by the housing, a manipulating and guiding handle attached to the housing, a weight shaft rotatably mounted within the housing substantially at the axis of the housing by bearings concentrically mounted therein and having an eccentric weight carried thereby, means for driving the weight shaft, said means comprising a piston-type engine having a cylinder attached to the housing and a reciprocable piston in said cylinder, said engine including a crankshaft spaced laterally from said weight shaft and said driving means comprising a driving connection between the two shafts, means for removably attaching said impactor blade to said tubular housing, said blade having a rear flat impactor heel portion and a pre-impacting angled portion extending forwardly and upwardly therefrom, said means for attaching the blade to said housing including a thrust bar connected to said housing and to said blade and extending parallel to the housing axis longitudinally between said housing and said flat impactor heel portion for supporting said blade with its angled portion in tangential relationship to said tubular housing so that the upper surface of the angled portion engages said housing for support against the thrust created on said angled portion during pre-impacting by material engaging its lower surface.

2,894,436
CAMERA FOR PHOTOGRAPHING THE INNER SURFACE OF A HOLLOW BODY
Hans Eber, Freiburg, and Paul Ruf, Emmendingen, Germany, assignors to Lytax-Werke G.m.b.H., Freiburg, Germany
Application September 9, 1954, Serial No. 454,867
Claims priority, application Germany September 18, 1953
4 Claims. (Cl. 95—11)



1. In a camera for photographing the inner surface of a hollow body, in combination, a camera housing adapted to be located within the hollow body and having an outer wall formed with an opening passing therethrough; a feeler member movably mounted in said camera housing and having an end portion extending through said opening to engage the surface to be photographed, said end portion being formed with an exposure aperture; means engaging said feeler member for urging said end portion thereof outwardly through said opening; an objective carried by said camera; a reflector carried by said camera for reflecting light passing through said aperture to said objective; and adjusting means interconnecting said feeler member and objective for automatically focusing the latter in accordance with the extent to which said end portion of said feeler member extends beyond said outer wall of said camera housing.

2,894,437
ATTACHABLE ROLLFILM CHANGING MAGAZINES
Paul Walter Hennig, Dresden, Germany, assignor to VEB Zeiss Ikon, Dresden, Germany
Application August 16, 1955, Serial No. 528,726
10 Claims. (Cl. 95—34)

1. In a film magazine for insertion into a camera and for detachable operative coupling of the film transport mechanism in said magazine to the drive and the mechanism of the camera, the combination of: a casing, a first rotatable coupling means arranged in said casing to engage said film transport mechanism, a second rotatable cou-

pling means arranged in said casing, means positively connecting said two rotatable coupling means with each other, each of said rotatable coupling means being movable between an inactive position wherein it is disengaged from a complementary coupling element arranged outside the magazine and an active position wherein it is ready for coupling engagement with said complementary coupling element, resilient means operatively engaged with said first and second rotatable coupling means for urging same into their active position, and adjustable controlling means capable of operative engagement with said first and second rotatable coupling means for urging same into their inactive position against the action of said resilient means.

2,894,438

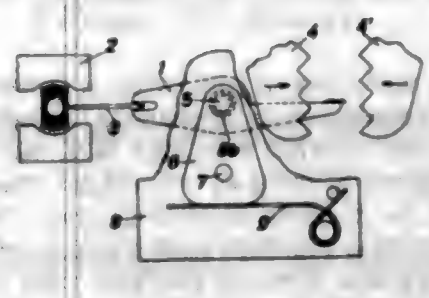
WITHDRAWN

2,894,439

TRACTIVE INDICATOR FOR AUTOMATIC APERTURE CONTROLLERS

Michael Burger and Erich Burger, Munich, Germany

Application March 1, 1954, Serial No. 413,324
Claims priority, application Germany March 12, 1953
9 Claims. (Cl. 95—64)



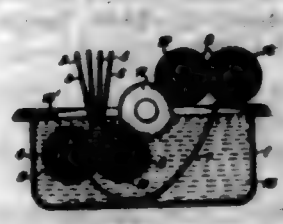
1. A transmission linkage for connecting a scanning device with a galvanometer pointer which is intermittently engaged by said scanning device in a photographic apparatus including an automatic exposure regulating device which incorporates said galvanometer and said scanning device, said linkage comprising scanning device, a galvanometer pointer, a lever, a spindle rotatably supporting said lever, a stationary support member, shock-absorbing bearing means rotatably mounting said spindle upon said stationary support member, said shock-absorbing bearing means including a fine bearing surface for precisely positioning said spindle prior to scanning of said lever by said scanning device and a rough bearing surface for restraining displacement of said spindle beyond a predetermined limit when a shock is applied to said lever by said scanning device, said shock-absorbing bearing means including a resilient means for normally maintaining said spindle engaged by means of said fine bearing surface, said lever being disposed between said galvanometer pointer and said scanning device, one end of said lever being disposed in the path of movement of said scanning device in position to be intermittently scanned and released by said scanning device, pin and elongated slot means operatively engaging said galvanometer pointer with the other end of said lever, the elongated walls of said slot being substantially perpendicularly disposed relative to the path of movement of the end of said pointer and disposed substantially in line with the direction of engaging movement of said scanning device to respectively permit said lever to be precisely positioned by said galvanometer pointer and to move freely relative to said galvanometer pointer when said lever and said spindle are displaced, and said rough bearing surface arresting said displacement of said spindle and lever before said pin can contact the end of said slot thereby preventing damage to said pointer.

2,894,440

DEVICE TO DEVELOP PHOTOGRAPHIC LAYER-CARRIERS BY THE DIFFUSION PROCESS

Marius Friedrich Wilhelm Böger, Hamburg, Germany

Application October 25, 1954, Serial No. 464,550
Claims priority, application Germany October 28, 1953
5 Claims. (Cl. 95—89)



1. A device for the development of photographic layer carriers comprising a receptacle for a photographic developing fluid, a plurality of inlet track means adapted to guide a plurality of said layer carriers during introduction thereof separated from one another directly into the developing fluid in said receptacle, said inlet tracks having outlet slots; first transporting roll means mounted in said receptacle under the level of said developing fluid in the region of said outlet slots of said inlet track means for receiving said introduced layer carriers after both faces of each layer carrier have been wetted by said developing fluid; second transporting roll means mounted spaced from said first transporting roll means; guide means mounted in said receptacle for guiding superimposed wetted layer carriers from said first transporting roll means; and driving means for rotating said transporting roll means so as to properly transport said superimposed wetted layer carriers received by said first transporting roll means to and past said second transporting roll means while guided by said guide means.

2,894,441

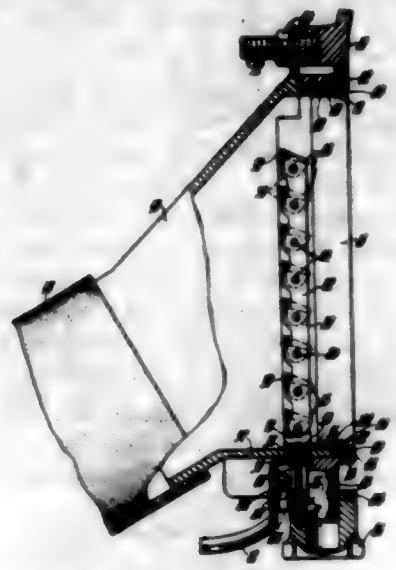
UNIVERSAL AIR DEFLECTOR OUTLET DEVICES

Henry W. Boylan, Flint, Mich., assignor to General Motors Corporation, Detroit, Michigan, a corporation of Delaware

Application September 13, 1955, Serial No. 534,012
3 Claims. (Cl. 98—2)

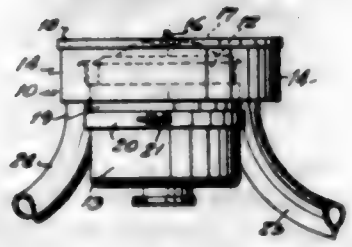
1. An air deflector outlet device adapted for use on a vehicle instrument panel, said device comprising a frame defining a horizontally directed opening, two sets of vanes pivotally mounted in said opening and in substantially parallel planes to form a grille across the opening, each vane of one of said sets extending in a plane transverse to each vane of the other set, a cylindrical shaft depending from and integral with said frame, a knob rotatably and slidably mounted on said shaft, and means connect-

ing each set of vanes to said knob whereby rotation of said knob rotates the vanes of one set and linear move-



ment of said knob by sliding of the latter on said shaft rotates the vanes of the other set.

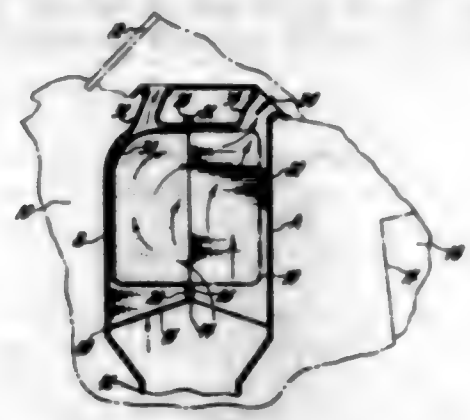
2,894,442
AIR CIRCULATING DEVICE FOR AUTOMOBILES
Samuel A. B. Hamilton, Fort Worth, Tex.
Application August 15, 1956, Serial No. 604,215
1 Claim. (Cl. 98—2)



In an automotive vehicle, the combination of a down draft carburetor having an upstanding air intake pipe, an air filter having a vertically disposed cylindrical casing positioned above the intake pipe and in fluid communication therewith, the lower end of the casing surrounding the upper end of the intake pipe and having means clamping it thereto whereby the casing is supported on the intake pipe, the casing having a removable top cover and inlet openings about its upper portion for the admission of air, a manifold surrounding the upper portion of the filter casing and in fluid communication with the inlet openings, the manifold having a bottom, a peripheral side wall and a removable top cover, a central opening in the bottom of the manifold having the filter casing received therein, an integral flange surrounding the central opening and depending from the bottom of the manifold, clamping means coacting with the flange to secure the manifold to the filter casing, a pair of ducts connected to the manifold and in fluid communication with the passenger compartment of the vehicle whereby the manifold may be supplied with air from the passenger compartment, a valve in each of the ducts operable from the passenger compartment, and an opening in the manifold in fluid communication with the engine compartment of the vehicle whereby the manifold may be supplied with air independently of the ducts.

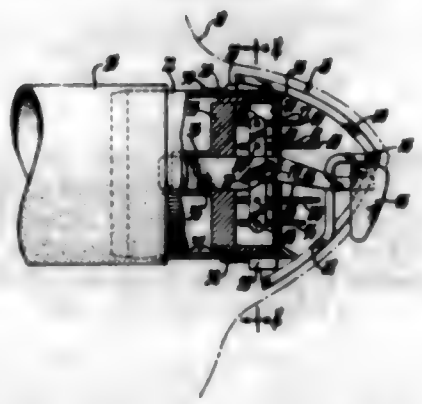
2,894,443
MULTIPLE PASSAGE SUPPLY DUCT
Carlton A. Rasmussen, Franklin, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 25, 1956, Serial No. 593,691
7 Claims. (Cl. 98—2)

1. A duct having an inlet and multiple open outlets, a flexible membrane partitioning the interior of said duct into separate multiple passages interposed between the said inlet and the said outlets and each leading from said inlet to at least one of said open outlets, said membrane being distortionable under pressure to vary the cross-



sectional dimensions of said passages, and valve means associated with said inlet controlling communication of said inlet to either side of said membrane to effect a direct flow of fluid through the duct.

2,894,444
AIR OUTLET DEVICES
Henry W. Boylan and James E. Mall, Flint, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 4, 1956, Serial No. 613,971
4 Claims. (Cl. 98—2)

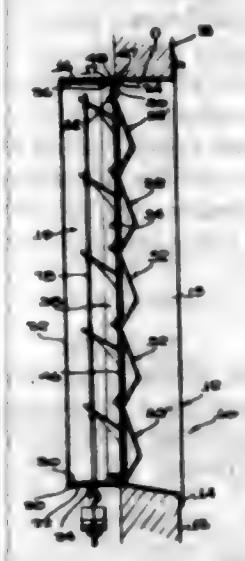


1. An air outlet device comprising a frame with a cylindrical wall defining an air passage, a cylindrical member contacting and coaxial with said wall and defining an aperture adapted to serve as a discharge opening for said air passage, a portion extending inwardly from said member and being provided with a slot, parallel vanes arranged across said aperture and journaled in said member, a link pivotally connected to each of said vanes, a flat element slidably mounted in said slot and extending through said aperture, and a pin and slot connection between said link and flat element whereby said vanes may be universally adjusted by manually actuating said flat element.

2,894,445
WIND-RESPONSIVE LOUVER CONSTRUCTION
Harvey F. Scheine, Sturgeon Bay, Wis.
Application November 23, 1956, Serial No. 623,899
3 Claims. (Cl. 98—95)

3. In a louver assembly, a rectangular main frame, a rectangular sub-frame telescoped in said main frame, a channel frame interlockingly seated in the sides and bottom of said subframe and comprising laterally inward and outward flanges and an outboard web connecting said flanges, said channel frame having vertical side members, horizontal louvers each carrying an arm extending between said side members, said louvers having side edges and upper and lower edges, inboardly offset

portions on the upper edges of the louvers, horizontal stubshafts on said offset portions journaled in the inner flanges of the channel frame side members at points spaced inboardly from the outboard webs of the side members, said offset portions having outboard sides having sealing strips thereon, said louvers having inboard portions at their lower edges with which said sealing strips are engageable only in the closed positions of the louvers, and means operatively connecting said arms to



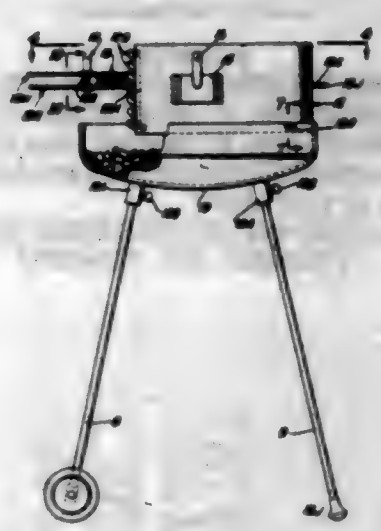
said louvers for moving the louvers between closed and open positions, said sub-frame having extending along the top a depending horizontal element having an inboard side with which the sealing strip of the uppermost louver is engageable only in the closed positions of the louvers, said channel frame having a bottom member having an outboard side and a sealing strip on said outboard side with which the lower edge of the lowermost louver is engageable only in the closed position of the louvers.

2,894,446
CONTINUOUS COOKER AND HEAT EXCHANGER
Alan C. Richardson, Berkeley, Calif., assignor to California Packing Corporation, San Francisco, Calif., a corporation of New York
Application November 2, 1953, Serial No. 389,583
3 Claims. (Cl. 99—361)

1. A continuous heat exchanger comprising: a tank adapted to hold water, a drum rotatably mounted in said tank below the water level therein, means dividing said drum into at least two compartments in abutting longitudinal relationship along the tank, means for directing heat transferring medium into said drum, means communicating said compartments and regulating the pressure differential therebetween, and means for progressing food-containing hermetically sealed containers to be processed longitudinally through said tank from one extremity of said drum to the other.

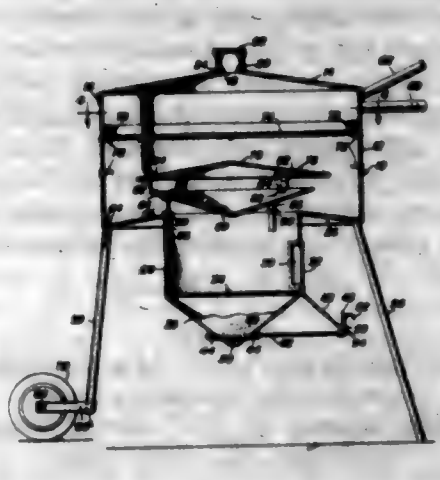
2,894,447
PORTABLE BARBECUE
Merle L. Persinger, Glendale, and Laverne O. Persinger, Burbank, Calif.
Application December 9, 1955, Serial No. 552,113
6 Claims. (Cl. 99—396)

1. A barbecue comprising a fire bowl having a peripheral edge, a screen secured on said peripheral edge, said screen having a pair of spaced edge portions, a plurality of hooks mounted on each of said edge portions, the central portion of said screen having a plurality of spaced apertured portions therein, a grill mount-



ed on said screen and having a pair of spaced hook portions engaging said screen hooked portions, and said grill having an extended rod portion engaging one of said screen apertured portions.

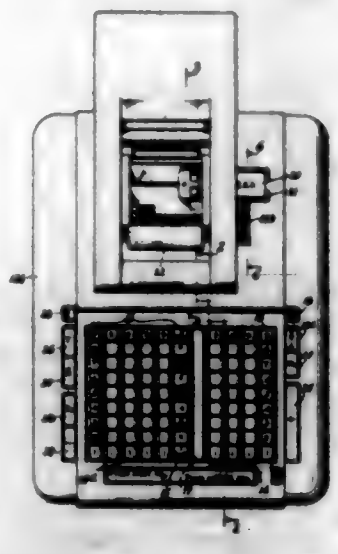
2,894,448
COMBINATION SMOKE OVEN AND ALL PURPOSE COOKER
Elmer Henderson and Annie Laurie Henderson, Jackson, Miss.
Application December 13, 1957, Serial No. 702,663
4 Claims. (Cl. 99—444)



1. A cooking device comprising a substantially imperforate housing having an open top, a removable lid on said open top, vent means on said lid, said vent means being adjustable from a closed position to various positions of open condition, a bottom wall on said housing, a central opening in said bottom wall defining the outer periphery of a substantially imperforate fire-box, said fire-box depending to a position below said bottom wall, said fire box being open at its top and closed at its bottom by a perforated grate, a substantially imperforate, conical ash-box depending from said fire-box below said grate, said ash-box having a base portion adjacent said grate and an apex portion below said base portion, an aperture in said ash-box adjacent said apex portion, and means to adjustably open and close said aperture in the ash-box, and a grease and heat deflecting unit supported by said fire-box, said unit comprising a lower imperforated inverted conical plate having its apex extending downwardly, and of a diameter in excess of the size of the fire-box, legs depending from the periphery of said plate, pins extending laterally from said legs for engagement with the rim of said fire-box, an upper imperforate conical plate of a greater diameter than said lower conical plate and having

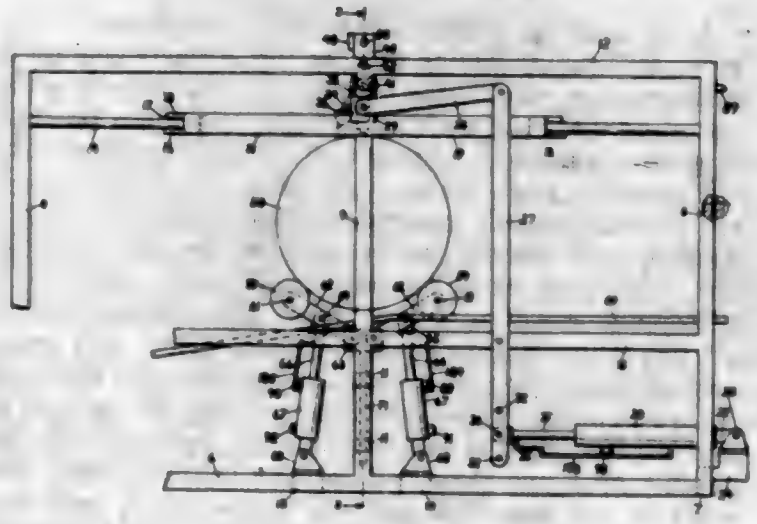
its apex extending upwardly, and annularly spaced brackets supporting said upper conical plate on said lower conical plate in spaced relation to provide an air space between said plates.

2,894,449
SALES TRANSACTION MACHINE
Robert E. Boyden, San Gabriel, Milton V. Scozzafava, Arcadia, and Alphons F. Stenzel, San Lorenzo, Calif., assignors to Clary Corporation, San Gabriel, Calif., a corporation of California
Application October 25, 1956, Serial No. 618,345
9 Claims. (Cl. 101—96)



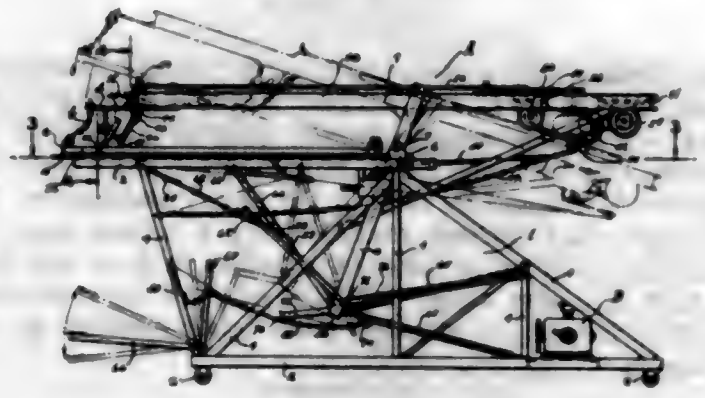
1. In a sales transaction machine, a data printer, means for setting said printer to print desired data on said record medium, a form printer comprising printer elements forming type characters, and an ink impregnated printing roller; means for guiding a record medium successively past said printers, means for moving said roller over said record medium to impress the same against said type characters; a depressible void key, and means responsive to said void key upon depression thereof for causing said roller to impress a portion of said record medium printed by said data printer against said type characters.

2,894,450
SCREENPRINTING MACHINES
Kurt Steinitz, Danbury, Conn.
Application January 25, 1957, Serial No. 636,303
7 Claims. (Cl. 101—124)



1. In a machine for screen-printing round surfaces of rollable work pieces, a horizontally movable screen, a squeegee positioned stationarily over said screen and operatively contacting the same along a line crossing the moving direction of said screen, a track for the support of a rollable work piece, said track extending under the way of said screen at a distance therefrom sufficient for support of said work piece out of contact with said screen, and recoprocatable means for lifting said work piece from said track into rolling contact with said screen, the line of said latter contact being parallel to and directly under said first mentioned line, said latter means comprising two rollers positioned under said screen at opposite sides of the vertical plane defined by said lines of contact, said rollers being supported rotatably and being movable between a position in which said rollers are adapted to support said work piece in said rolling contact with said screen and a position in which said rollers are lower than the level of said track, each of said rollers being movable individually whereby lowering of the roller at one side will allow a work piece to move on said track from one track end over the lowered roller as far as to the other roller, and lowering of the other roller will allow said work piece to move on said track to the other track end.

2,894,451
SCREEN PRINTING MACHINE
Eugene Landesman, University City, Mo.
Application September 4, 1956, Serial No. 607,867
19 Claims. (Cl. 101—126)

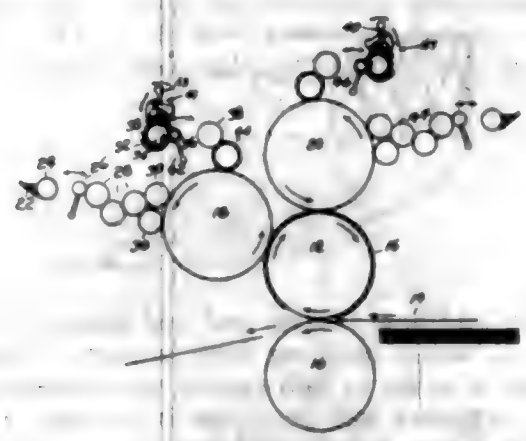


12. A screen printing machine comprising a support frame, a work-receiving member mounted on said support frame, an elongated frame rockably mounted on said support frame for movement within a vertical plane and above said work-receiving member between horizontal position and upwardly swung position, a screen member pivotally mounted on said work-receiving member, means connecting said screen member with said elongated frame for movement therewith, power means including a main shaft carried on said elongated frame, a crank mounted on said main shaft, a connecting rod engaged to said crank at one end, a cross-head mounted on said elongated frame for reciprocal traversing movement therealong, said cross-head being engaged to the other end of said connecting rod, latch means mounted on said cross-head for intermittent engagement by said connecting rod, a paint carrier suspended from said latch means for disposition beneath said cross-head, and for movement therewith, guide rods mounted on said cross-head for directing movement of said paint carrier, said paint carrier having downwardly and forwardly turned wing elements, and means for limiting upward movement of said paint carrier.

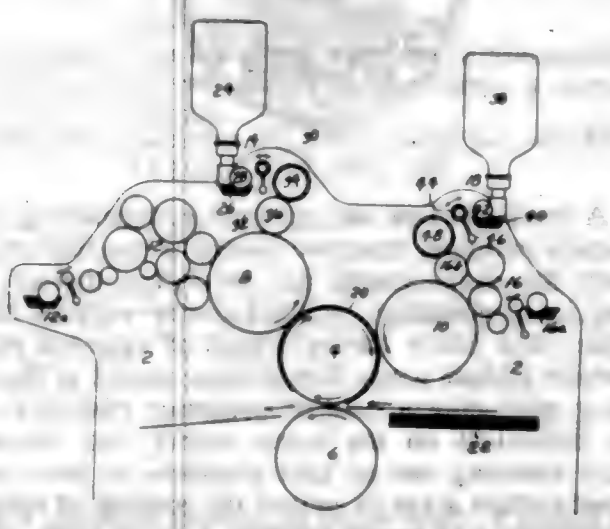
2,894,452
MOISTENING SYSTEM FOR ROTARY OFFSET MACHINE
Nelson W. Trisler, Des Moines, Iowa
Application May 2, 1956, Serial No. 582,122
6 Claims. (Cl. 101—136)

1. In a multi-color, single impression offset printing press having a blanket cylinder, an impression cylinder cooperating therewith, first and second plate cylinders cooperating with said blanket cylinder, first and second

inking systems each comprising, at least an ink fountain, ductor roller, transfer rollers and a form roll for depositing ink on a plate on said plate cylinders; and first and second moistening systems each comprising at least a fountain, a fountain roller, a ductor roller, a transfer roller, and a roller cooperating with the transfer roller and a plate on one of said plate cylinders; the improvement comprising having said second moistening system apply moisture to a plate on said second plate cylinder after the plate is inked and before it deposits ink on a blanket on said blanket cylinder in a normal printing cycle; and said first moisture system applies moisture to a plate on said first plate cylinder before the plate is inked and after it has deposited ink on said blanket cylinder in a normal cycle of printing.

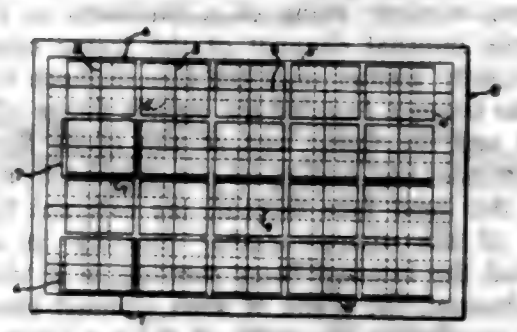


2,894,453
SINGLE IMPRESSION MULTICOLOR OFFSET PRINTING PRESS
Nelson W. Trisler, Des Moines, Iowa
Application December 7, 1955, Serial No. 551,559
5 Claims. (Cl. 101—175)



1. In an improved multi-color, offset printing press for printing on paper; the combination of; a frame, a blanket cylinder secured to said frame, an impression cylinder cooperating with said blanket cylinder, a paper feed, a power source, first and second plate cylinders geared to said blanket cylinder, and separate inking systems for said two plate cylinders; said inking systems including ink rolls in contact with plates on said plate cylinders when said press is in operation; combined with; moisture rollers contacting an ink roller for each of said plate cylinders; the one of said ink rollers being contacted by a moisture roller for said first plate cylinder being an ink roller that engages a plate on said first plate cylinder, remains free of contact with other ink rolls and is the first ink roll to engage a given portion of a plate on said first plate cylinder after such given portion of a plate has deposited ink on said blanket cylinder during a printing cycle; the other of said ink rollers contacted by a moisture roller being one that engages a plate on said second plate cylinder, contacts at least one second ink roller for said other plate cylinder and is the last ink roller to engage any portion of a plate of said second plate cylinder after such portion of a plate has deposited ink on said blanket during a printing cycle.

2,894,454
METHOD OF PREREGISTERING PRINTING PLATES IN MULTICOLOR PRINTING
Stanley K. Hiller, Chicago, Ill., assignor to W. F. Hall Printing Company, Chicago, Ill., a corporation of Illinois
Application August 1, 1957, Serial No. 675,646
4 Claims. (Cl. 101—211)



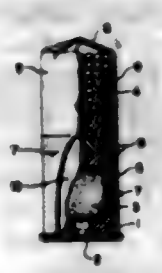
1. A method of registering a set of multicolor printing press plates including a key plate upon a corresponding set of substantially identical helically grooved printing cylinders for multicolor printing which comprises, inscribing substantially identical longitudinal and transverse pairs of parallel coordinate lines upon each printing cylinder, preparing a planar layout surface of one of said cylinders, said layout surface being substantially similar in dimensions to the developed surface of said cylinder, indicating trace lines on said layout surface corresponding to the lines on said cylinder, inscribing transverse and longitudinal coordinate lines on said layout surface midway between and respectively parallel to said trace lines, forming a transparent proof from said key plate, disposing the proof over said layout surface and indexing the proof in accordance with a pair of intersecting lines on said layout surface, disposing said indexed proof over each printing plate of said set and registering the printing on the proof with the printing conformations on each plate, indexing the edges of each printing plate of said set in spaced relationship to the indices on said proof, each printing plate index being spaced from a corresponding proof index a distance substantially equal to the distance of a corresponding line on said layout sheet from its corresponding trace lines, and mounting said plates on said printing cylinders with the indices on said plates in registration with the lines on said printing cylinders.

2,894,455
ADJUSTABLE SCREEN PRINTING FRAME
Daryl G. Lambert, Williamsport, Pa.
Application November 22, 1957, Serial No. 698,271
6 Claims. (Cl. 101—415.1)

1. An adjustable tension frame for screen printing including a rectangular main frame having side members of channel cross-section, screen-clamping members for reception within said channels for movement from side-to-side therewithin to modify the tension of the screen and a plurality of threaded means connecting the side frame members and the clamp-members to effect adjust-

ment wherein: in the frame channel: the inside flange has a rounded outer rim and is shorter than the outside flange; the outside flange is of generally triangular cross-section, the hypotenuse of said triangle extending from the rim of said flange to about the midpoint of the web of said channel; and an internal channel extends parallel to the web of the main channel and into the base of the triangular-shaped flange; and the clamp-member is of generally angular cross-section: the main flange thereof being of enlarged cross-section having a flange width somewhat less than the internal depth of the frame channel, having means on its rim along the length thereof for securing an edge of the screen; the side flange of the clamp-member being of a thickness to slide freely within the internal channel of the frame channel, of a width slightly greater than the free distance between the toe of the triangle forming the outside flange of the frame channel and the inner wall of the inside flange of the frame channel and having its rim sloping from the outer face to the inner face thereof; the external faces of the flanges of the clamp-member meeting in a rounded curve and the internal faces meeting in a triangular internal channel, the walls of such channel generally facing and paralleling the walls of the toe formed between the triangular outside flange of the frame channel and the internal channel thereof; whereby the clamp-member may move from side to side in the frame channel with the side flange of the clamp-member moving in and out of the internal channel of the frame to guide the clamp-member in substantial straight-line movement to stretch the screen; and whereby, when the screen is removed, the clamp-member may be canted out of the frame channel by rotating it, along its length, moving the rim of the main flange thereof out of the frame channel and toward the outer flange of said channel.

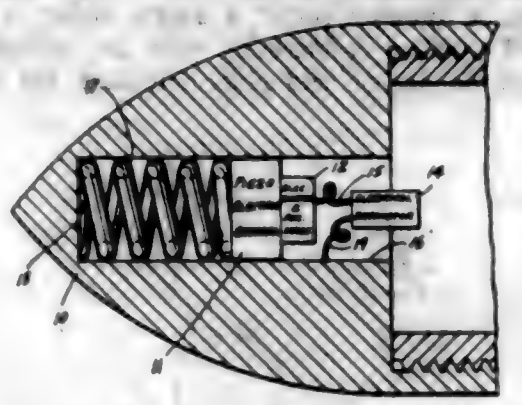
2,894,456
SHOT SHELLS
John M. Olin, Alton, Ill., assignor to Olin Mathieson Chemical Corporation, New Haven, Conn., a corporation of Virginia
Application January 24, 1956, Serial No. 561,005
1 Claim. (Cl. 102—42)



A shotshell cartridge comprising a thin-walled metal case, a charge of powder disposed in the base end of the case, a charge of shot disposed in the opposite end of the case and a jacket formed of a plurality of glass fibers bonded to each other and to the case in mutual stress-transmitting relation covering the end of the case in which the powder is received, the wall of said base end of the case being offset inwardly with respect to the wall of the end thereof receiving the shot charge so that the jacket blends with the case to define a straight-sided surface on the exterior of the composite shotshell wall.

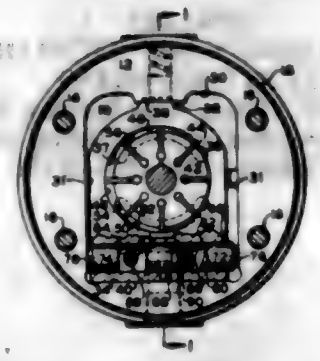
2,894,457
DETONATION DELAY DEVICE
Ralph H. Severance, Fort Wayne, Ind., assignor to The Magnavox Company, Fort Wayne, Ind., a corporation
Application March 18, 1955, Serial No. 495,278
5 Claims. (Cl. 102—70.2)

1. A detonation delay device for a projectile or rocket comprising the nose portion of said projectile or rocket, an electrical detonator mounted in and connected to the nose portion of said rocket or projectile, a piezo-electric crystal electrically connected to said detonator and mounted within said nose portion, and a coil spring in



contact with said nose portion and said crystal for transmitting shock waves resulting from impact of said nose portion with a target to said crystal with predetermined time delay, whereby said detonator is actuated a predetermined time period after said impact.

2,894,458
POWER TRANSMISSION
Russell H. Hallman, Royal Oak, Mich., assignor to Vickers Incorporated, Detroit, Mich., a corporation of Michigan
Application March 1, 1954, Serial No. 413,123
3 Claims. (Cl. 103—120)

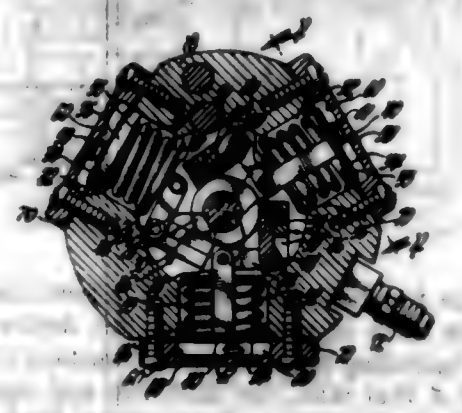


1. A combined flow and pressure compensating system for rotary pumping structure having a member shiftable to vary the displacement per revolution thereof, comprising in combination: a fluid motor coupled to said member, said motor having a pair of opposed pressure responsive surface areas; flow sensing means in the outlet line for producing a pair of pressures having a differential dependent on the pump output rate; means for directly applying one of said pressures to each of said opposed surface areas to control the position of said shiftable member; and means forming a relief valve, responsive to a predetermined maximum pump discharge pressure, for varying said directly applied pressure differential irrespective of output rate to shift said member to reduce pump displacement.

2,894,459
FUEL PUMP
Archie D. McDuffie, Berkley, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 4, 1957, Serial No. 632,472
1 Claim. (Cl. 103—150)

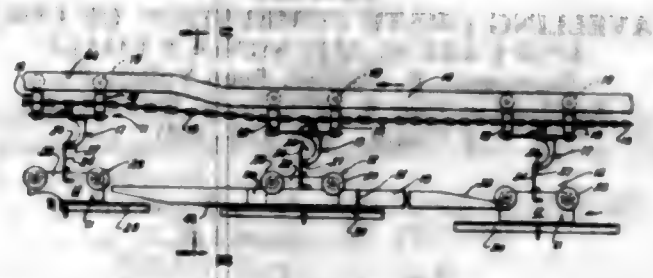
A pump comprising a housing having an axial passage with a rotating eccentric member therein a plurality of passages radially disposed about said eccentric member forming openings in the side of said housing a cover closing each opening to form a pumping chamber fuel inlet and outlet valves disposed within said chamber, a member reciprocably disposed in each of said radial

passages, a flexible diaphragm disposed in each of said chambers and peripherally clamped between said cover and said housing, said diaphragm having an imperforate center portion adapted to overlay said reciprocable member, pressure means adapted to act upon said diaphragm to maintain the latter in engagement with said reciprocable member, spring means in each of said radial passages for resiliently biasing the associated reciprocable member into said pumping chamber, and drive means for each reciprocable member comprising a bell crank lever,



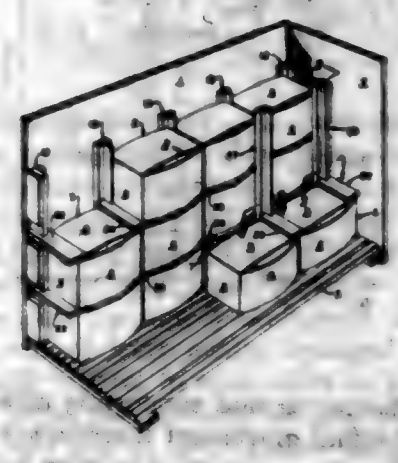
a pin articulated between one arm of said lever and said reciprocable member, a follower pivotally connected with the other arm of said lever, spring means biasing said follower into continuous engagement with said eccentric member, said bell crank lever being pivotally supported upon said housing intermediate said arms whereby rotation of the eccentric member causes said bell crank lever to compress said spring to draw fuel into said inlet valve into said pumping chamber, each of said drive means being equally spaced about the circumference of said eccentric.

2,894,460
CONVEYOR SYSTEM
Paul Klamp, Detroit, Mich., assignor to Mechanical Handling Systems, Inc., Detroit, Mich., a corporation of Michigan
Application September 28, 1954, Serial No. 457,026
3 Claims. (Cl. 104—88)



1. In a conveyor system, an upper track, a trolley supported by said upper track for movement therealong, driving means for moving said trolley along said upper track in one direction, a lower track supported in spaced relation to said upper track beneath the latter in a common vertical plane therewith and having a receiving end portion and a main portion extending in said one direction from said receiving end portion, said main portion being parallel to said upper track, a carriage adapted to be supported on and to move freely along said lower track, a pusher rigidly mounted on and depending from said trolley, a coupling member rigidly mounted on and extending upwardly from said carriage and into the path of travel of said pusher when said carriage is supported on said lower track, said coupling member having a hook at the upper end opening in a direction opposite said one direction, said pusher having a part at the lower end engageable with said hook to support said carriage and advance the same in said one direction toward said lower track, said part of said pusher having a noninterlocking bearing engagement with said coupling member at a point spaced below said hook when said carriage is supported on said main portion of said lower track for pushing said carriage therealong in said one direction, said hook and part being readily disengageable upon relative movement of said trolley and carriage toward each other, and said receiving end portion of said lower track and said upper track converging in said one direction to relatively move said carriage and trolley toward each other sufficiently to disengage said hook and part and to engage said part with said coupling member at said point spaced below said hook to continue the advance of said carriage along the main section of said lower track by said trolley.

2,894,461
CAR LOAD
Stanley E. Nagler, Greenville, Calif.
Application March 14, 1955, Serial No. 493,895
5 Claims. (Cl. 105—367)

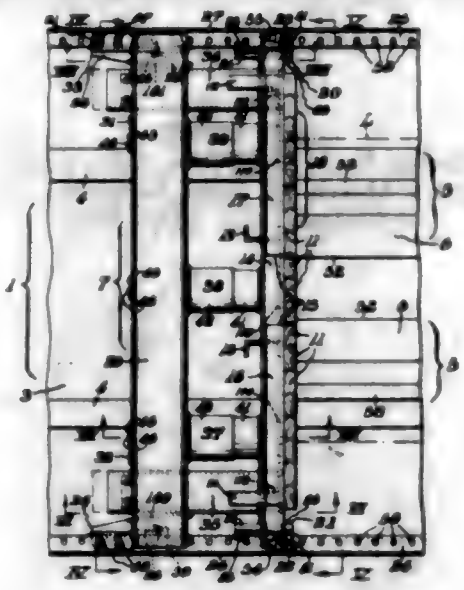


1. In combination with a car having longitudinal sidewalls and transverse endwalls, a car load comprising: a plurality of stacks of boxes arranged in transverse and longitudinal intersecting rows, longitudinally extending separators interposed between superposed boxes of said stacks along the longitudinally extending side edges thereof, with the length of said separators being substantially equal to the extent of said boxes in a direction longitudinally of said car and with the separators of one transverse row being in substantial coaxial alignment with the corresponding separators in the adjacent transverse row, elongated vertically disposed spacers interposed between adjacent ends of aligned separators with the adjacent aligned separators in abutment with opposite sides of said spacers whereby a longitudinally directed load applied to one separator due to longitudinal movement of said boxes is transferred through the adjacent spacer to the adjacent separator that is in alignment with said one separator.

2,894,462
LONGITUDINALLY SHIFTABLE BULKHEADS FOR FREIGHT CARS
Garfield H. Newcomer, Clifton Heights, and Lewis M. Showers, Lansdowne, Pa., assignors to The Pennsylvania Railroad Company, Philadelphia, Pa., a corporation of Pennsylvania
Application August 18, 1955, Serial No. 529,206
3 Claims. (Cl. 105—369)

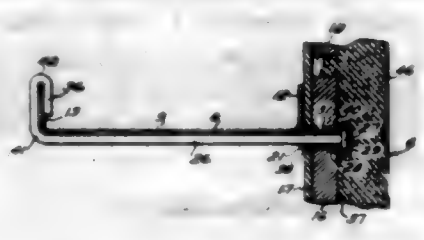
2. In load blocking apparatus, a railroad freight car having four sides and a floor, a load blocking bulkhead longitudinally movable within said freight car, said bulkhead having a front frame section and a rear frame section and shock-absorbing means operatively connected to and separating said sections and bracket means for limiting longitudinal movement of said bulkhead in one direction, bulkhead supporting means fixed to opposite

sides of said freight car for supporting said bulkhead in said freight car and above the floor thereof, said bracket means being disposed on said supporting means adjacent said bulkhead and comprising substantially parallel spaced flanges for mounting said bracket means on said supporting means, said supporting means including means engaging at least one of said flanges for preventing vertical movement between said bracket means and said supporting means, aligned openings in said flanges adapted to receive latch means, removable latch means



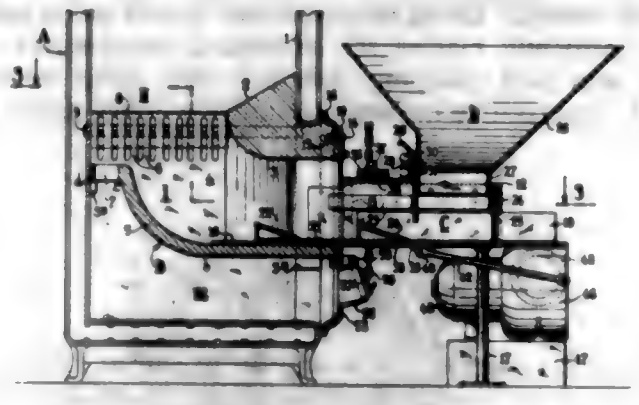
affixing said flanges to said supporting means preventing relative longitudinal movement therebetween, a web connecting said flanges, a retaining portion extending transversely toward said bulkhead from said web adapted to engage said bulkhead to limit the longitudinal movement of said bulkhead along said supporting means and a lug extending transversely toward said bulkhead from said web adapted to engage said bulkhead to limit the vertical movement of said bulkhead in said freight car.

2,894,463
FASTENING DEVICE FOR INSTALLING LEAD LINERS TO WALLS AND THE LIKE
Fred L. Ferro, Concord, Calif.
Application June 18, 1956, Serial No. 592,020
1 Claim. (Cl. 189—82)



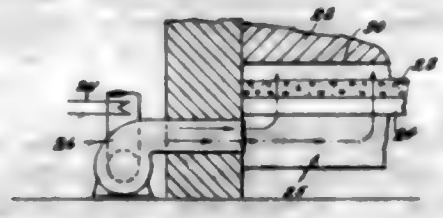
A lead lined wall construction comprising a metal support channel, a lead sheet positioned against a flange of said channel, a wall member positioned against the other side of said sheet, said sheet and said member having an aperture therethrough in close parallel relationship to the web of said channel, a fastening device having a shank portion positioned against the outer face of said web, said shank extending through said aperture and provided with a head, one end of said shank being deformable around the flange of said channel remote from said lead sheet, the other end of said shank having a lead sheath including a tapered portion wedged against the peripheral portions of said sheet at said opening, and a head on said shank positioned against the face of said wall member remote from said channel.

2,894,464
DEVICE FOR THE COMBUSTION OF SOLID FUELS
René Gauthé, Compiegne (Oise), France
Application September 27, 1955, Serial No. 536,890
Claims priority, application France October 6, 1954
9 Claims. (Cl. 110—44)



1. Device for the combustion of in particular soft solid fuels in the form of small pieces, this device comprising a furnace including a lower precombustion chamber provided with a fuel inlet, for distilling and coking at least partially the soft fuel, and an upper final combustion chamber adjoining the precombustion chamber, said precombustion and final combustion chambers being separated by at least one grate for admitting air to the final combustion chamber and completing the burning of the coked fuel, a fuel feed device comprising hopper adapted to contain a supply of fuel, a tunnel which connects said hopper with said fuel inlet and is provided with an air inlet aperture, and a conveyor extending through said tunnel from said hopper into said precombustion chamber, and a refractory heat-insulating element disposed within said furnace adjacent to said fuel inlet, above said conveyor and at a level not higher than that of said grate, said refractory heat-insulating element defining the top of said precombustion chamber whereby sufficient heat and air are provided in said precombustion chamber for ensuring proper distillation and coking of said fuel.

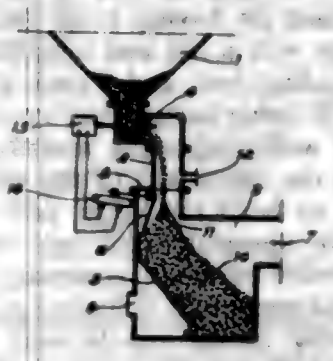
2,894,465
TRAVELLING GRATE COMBUSTION OF COKING AND CAKING BITUMINOUS COALS
Carrington B. Phillips, Penn Valley, Pa.
Application June 8, 1956, Serial No. 590,328
1 Claim. (Cl. 110—69)



In a furnace for burning coking and/or caking bituminous coals, a travelling grate adapted to transport a fuel bed in quiescent condition, a hopper supplying coal to the grate, means for preheating air to a temperature between 200 and 500 degrees F., means for introducing the preheated air beneath the travelling grate to pass through the fuel bed immediately after the fuel bed is fed from the hopper and before the fuel bed enters distillation and combustion zones of the furnace, an arch extending over the fuel bed for a length of from 15 to 30 inches longitudinally of the travelling grate and located between 2 and 6 inches above the top of the fuel bed, said arch extending above the position at which the preheated air is introduced, the lower side of said arch sloping upwardly toward the furnace at an angle of 5 to 10 degrees, said arch shielding the fuel bed from the intense furnace heat, whereby the fuel bed

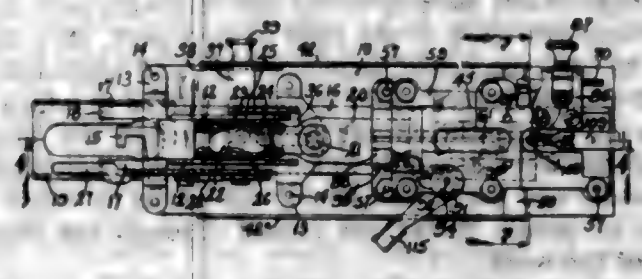
derives all of its heat immediately after it leaves the hopper from the preheated air and is preoxidized so that it will not coke or cake in distillation and combustion zones which follow, and any excess of preoxidizing air will flow into and mix with the furnace gases.

2,894,466
SOLID FUEL FLOW CONTROLLER
Roger Marie Léonce Martin, Boulogne-sur-Seine, France
Application December 1, 1953, Serial No. 395,548
Claims priority, application France December 2, 1952
3 Claims. (Cl. 110—101)



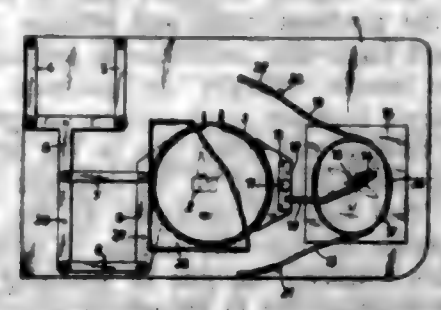
1. A furnace having a fuel distributor, a hopper, a conduit having an inlet communicating with said distributor and an outlet therebelow, means including a grate to which fuel is fed from said hopper via said conduit supporting said fuel in a heap with the top thereof in alignment with the outlet of said conduit and in outlet cross-section diminishing relationship therewith, and operated according to a multi-stage system of combustion as herein set forth, wherein a movable flap suspended inside said conduit and actuated in dependence upon the variations of the size of the heap of fuel resting on said grate, retains approximately constant the quantity of fuel undergoing combustion and at least some of the air supplied, said conduit housing said fuel distributor controlled by said flap and being formed with an air injection orifice, whereby not only the level of the summit of the fuel, but also the cross-section of the air passage remaining between said summit and said conduit opening, is retained approximately constant.

2,894,467
BUTTONHOLE ATTACHMENT
Charles R. Thomas, Wayland, Mass., assignor to The Geist Manufacturing Company, New Haven, Conn., a corporation of Connecticut
Application May 29, 1957, Serial No. 662,387
15 Claims. (Cl. 112—77)



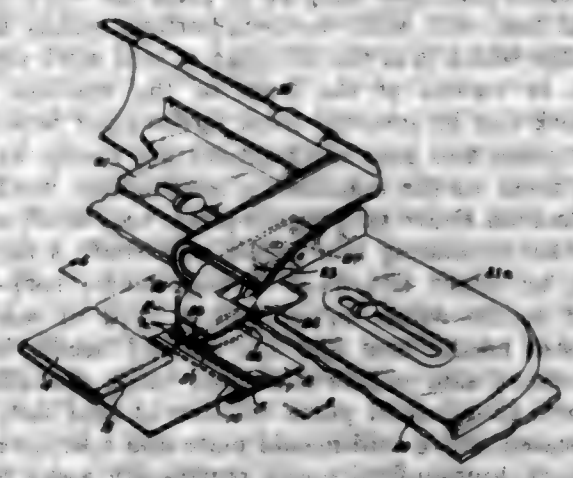
1. In a buttonhole attachment for sewing machines, a supporting plate, a feed blade mounted thereon for oscillatory and sliding movements, a lever pivotally mounted on the plate, a pinion rotatably mounted on said lever, a template structure carried by the feed blade, said structure comprising superposed main and auxiliary templates, said main template having an internal rack member of generally oblong shape, said auxiliary template having an internal rack member of arcuate shape, and disposed adjacent one end of said first rack member, said templates being mounted for relative movement in a linear path, means for effecting relative movement of said templates to cause said second rack member to move toward and from the remote end of said second rack member, said pinion being in mesh with the teeth of said rack members, means for rotating said pinion, and means for guiding said pinion around said rack members to effect movements of the feed blade.

2,894,468
COPYING DEVICE FOR SEWING-MACHINE
Walter Nobl, Winterthur, Switzerland
Application April 10, 1957, Serial No. 651,959
Claims priority, application Switzerland April 10, 1956
5 Claims. (Cl. 112—103)



1. A copying device for a sewing-machine adapted for embroidering, comprising a base plate, said base plate having an aperture adapted to form a passage for the sewing-machine needle, a holder for the material to be embroidered, said material holder being arranged for slidable movement on said base plate, a guiding device adapted to impart translatory movement to said material holder, two sets of lever guides arranged for transverse movement with respect to each other in a plane parallel to the base plate, said guiding device enclosing the two sets, one of said sets of lever guides being linked to the base plate, an intermediate member guided by said one set, the other set of lever guides being linked to said intermediate member and to said material holder, a tracing member connected with said material holder and adapted for manual tracing along lines of a pattern to be copied, a holder for a pattern to be copied, said holder including a frame provided with slip preventing means on its underside and being adapted for elastically pressing said pattern against said base plate, said base plate being provided with a graduated guide-rule for guiding said pattern.

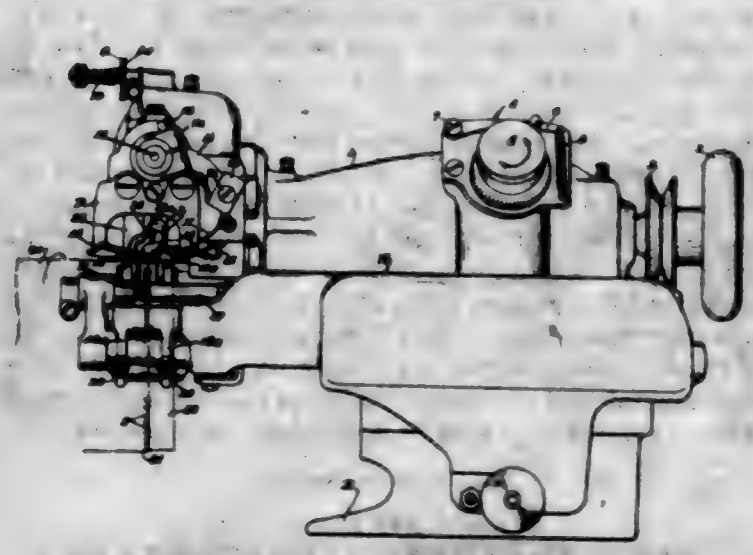
2,894,469
FASTENER GUIDING ATTACHMENT FOR SEWING MACHINES
William F. Van Amburg, Mondville, and Merrill D. Vincent, Connellsville, Pa., assignors to Talon, Inc., a corporation of Pennsylvania
Application September 27, 1955, Serial No. 536,868
6 Claims. (Cl. 112—136)



1. In an attachment for a sewing machine for guiding slide fastener stringers of the type having a series of spaced-apart interlocking fastener elements arranged along

one edge thereof and disposed in a plane transversely to a line of stitching by the sewing machine needle and movement of garment parts adapted to be sewed into and through the machine which are adapted to be sewed to the fastener stringer, a pair of resilient spaced-apart plate-like members adapted to be arranged forwardly of said needle, a finger-like member carried by each of said plate-like members in opposed relation on the inner side thereof and extending beyond the inner edge thereof, said finger-like members adapted to be positioned directly opposite and in alignment with said needle and extend to a point adjacent thereto, a pair of spaced-apart edge folders adapted to be positioned forwardly of the needle directly next to said plate-like members and to either side thereof to form folds in the garment material as the garment parts and stringer are fed at the end of said finger-like members in superimposed relation to the needle whereby the garment parts and stringer are sewn together, said stringer adapted to pass between said folders and either one or the other of said finger-like members adapted to be disposed in a space between any two fastener elements as the stringer is fed to the needle so that the needle is directly opposite said space whereby the line of stitching is assured to be located substantially in alignment with said space.

2,894,470
FELLING MACHINE
Mario Bucco, Port Washington, N.Y.
Application August 11, 1953, Serial No. 373,574
2 Claims. (Cl. 112—178)



1. In a chain-stitch sewing machine which has a frame and a front end and a longitudinal direction of feed of the work through said machine from front to rear, the combination of the elements later stated herein, namely: a fixed needle plate which is fixed to said frame and has a longitudinal slot; work-supporting means located below said needle plate and adapted to press the work upwardly against said slot, said work-supporting means having a free edge which is at the left edge of said work-supporting means as viewed at the front of the machine so that the work can be inserted from left-to-right between said needle plate and said work-supporting means as viewed at the front of the machine; a longitudinal needle rock-shaft located above said needle-plate; rock-shaft actuating means for oscillating said needle rock-shaft; a needle arm having an upper end fixed to said needle rock-shaft, a curved needle whose upper end is fixed to said needle arm, said needle arm and said curved needle being located above said needle-plate and being movable back-and-forth in a lateral plane relative to said slot; a feed-dog located above said needle plate and operative to feed said work longitudinally and rearwardly away from the front of the machine; feed-dog actuating means adapted to operate said feed-dog in intermittent feeding strokes; a looper which has a front long point and a short front point and which is turnable about a longitudinal axis and which is also longitudinally movable back-and-forth relative to said lateral plane and which is also movable in said lateral plane, and looper-actuating means for turning said looper and moving said looper longitudinally back-and-forth and laterally back-and-forth; a rib which is upwardly movable to an operative position to force the part of the work which is below said slot to a position above said slot, said rib being also downwardly movable to a lower idle position in which said part of said work is below the top of said slot; rib-actuating means for moving said rib between its said operative and its said idle positions; said rib having a top face which has an inverted V-shape with a left and longitudinal wall and a right and longitudinal wall and a peak at the top of said top face; said rib being located and its top being shaped relative to said work-supporting means to provide a V-shaped bight in the lower part of the work on both said walls and only to bend the upper part of the work at said left wall in upwardly bent legs when said rib is in its said operative position; common actuating means connected to said rock-shaft actuating-means and to said feed-dog actuating means and to said looper-actuating means and to said rib-actuating means, said common actuating means being operative and timed to produce a sequence of operations as follows:

(*a*) to operate the feed-dog in a respective feeding stroke while the rib is in its idle position and while the needle is out of the work;

(*b*) to move the rig upwardly to its upper position to form said bight and said upwardly bent legs;

(*c*) to move the needle from right-to-left in a piercing stroke to pass the needle through said bight and said upwardly bent legs and to the left of said peak to the extreme left position of said needle while said looper is at the left of the right end of said needle and said looper is laterally intermediate said right end and the left point of said needle and while said looper is located rearwardly of said needle;

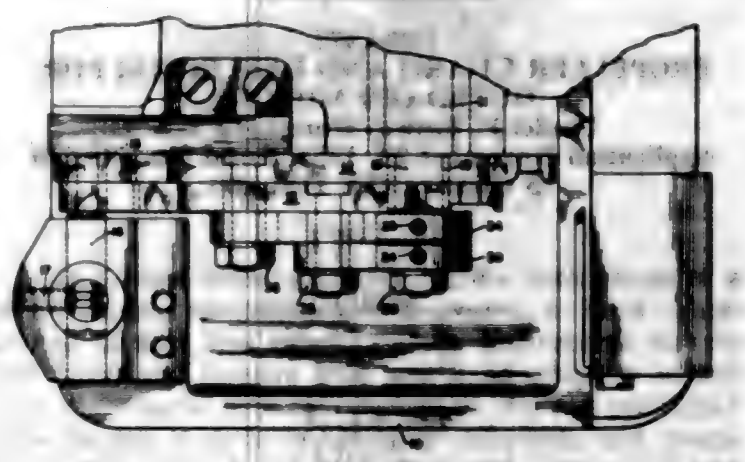
(*d*) to move said needle reversely in a part of its left-to-right reverse stroke while throwing out a new loop of needle-thread from the needle to the left and while moving said looper longitudinally forwardly and while passing only the long point of said looper through said new loop and while locating said long point to the left of said peak;

(*e*) shifting said looper from left to right in unison with said needle in the remainder of its reverse stroke to shift the looper from the left of said peak to the right of said peak while turning said looper to insert both of its points into said new loop and to shift said new loop into position to be engaged by the needle in the next right-to-left piercing stroke and removing said points from said new loop at the right of said peak, thus forming, by the successive sequences of said operation, a series of interchained loops of needle-thread in which the loops of needle thread are passed through the thicker part of the work at points which are spaced longitudinally forwardly and are to the left of the points at which the loops of needle thread are passed through the thinner part of the work.

2,894,471
SEWING MACHINE ADJUSTABLE ECCENTRIC MECHANISM
Joseph P. Pajor, Chicago, Ill., assignor to Union Special Machine Company, Chicago, Ill., a corporation of Illinois
Application August 16, 1957, Serial No. 678,640
8 Claims. (Cl. 112—269)

1. In a high speed sewing machine having a rotary drive shaft and means arranged to be driven thereby

through different extents of movement, the combination which comprises an eccentric mounted on said shaft and arranged to be driven by said shaft, a pitman having a strap at one end thereof surrounding said eccentric and having its opposite end connected with said means, a single adjustable screw of predetermined length carried by said shaft within the axial confines of said eccentric and cooperating with said eccentric to retain the same in a definite position in relation to the axis of said shaft,



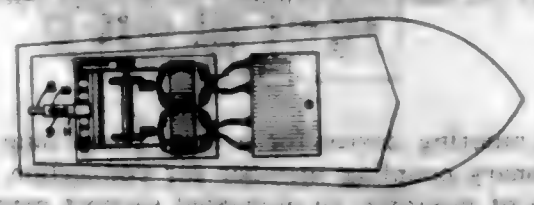
said screw having threaded engagement with said shaft and having its ends cooperating with opposed surfaces on said eccentric which face inwardly toward the axis of said shaft and are spaced apart a distance equal to the length of said screw to retain the eccentric in adjusted position in relation to the axis of said shaft, and locking means for retaining said eccentric in adjusted position comprising means for exerting a friction-creating force thereon in a direction parallel with the axis of said eccentric.

2,894,472
FLOATING DRY DOCKS
Christopher J. Foster, Sands Point, N.Y.
Application January 9, 1957, Serial No. 633,283
2 Claims. (Cl. 114—45)

1. In a floating dry dock a pontoon, said pontoon having a centrally longitudinally extending watertight bulkhead, longitudinally extending swash bulkheads disposed on each side of said center bulkhead and spaced from the sides of the pontoon, said swash bulkheads having an unobstructed opening substantially elevated from the pontoon bottom, a non-return valve at the bottom of the swash bulkheads permitting flow of water in one direction only, and towards a compartment formed by the swash bulkheads from which compartment all water is withdrawn from the pontoon, substantially as described and for the purpose set forth.

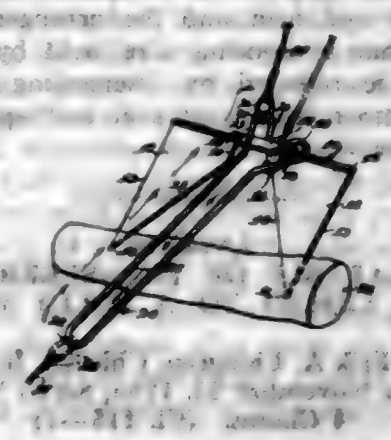
2,894,473
REMOTE CONTROL STEERING MECHANISM FOR BOATS
Carl J. Merl, Erie, Pa.
Application March 28, 1955, Serial No. 497,275
2 Claims. (Cl. 114—144)

1. In combination, a boat and a control therefor comprising a rudder disposed at the rear portion of said boat and having a shaft attached thereto to rotate said rudder, a crank on said shaft, a worm shaft, a nut on said worm shaft, the distal end of said crank being connected to said nut and movable therewith, means to rotate said worm selectively in either direction, said means comprising a shaft spaced from said worm shaft and parallel thereto, two spaced ring gears on said shaft, two motors disposed in said boat in side by side relation therein with their shafts disposed parallel to each other and perpendicular to said shaft having said ring gears



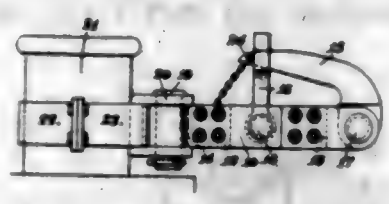
thereon, a pinion on the shaft of each said motor, each said pinion engaging one said ring gear, each said ring gear being operatively connected to a motor, one said motor adapted to be excited to drive said shaft in one direction and the other motor adapted to drive said shaft in the other direction, and a radio receiver mounted in said boat and connected to said motors, said radio receiver having means to selectively drive said motors in either direction of rotation, moving said rudder to control the direction of travel of said boat.

2,894,474
BOAT ANCHOR
Ralph Keller Donaldson, Houston, Tex.
Application March 28, 1956, Serial No. 572,679
1 Claim. (Cl. 114—208)



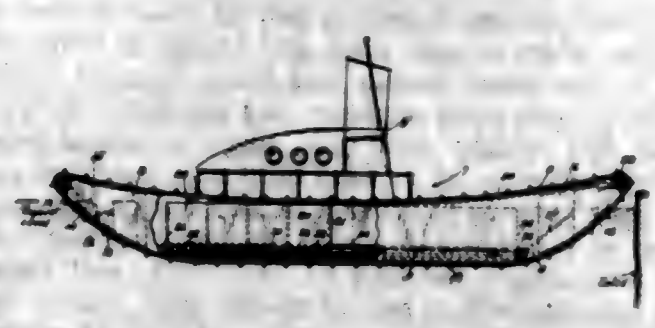
In a boat anchor, a stock, a pair of flukes secured at their rear edges to said stock and extending from said stock at right angles thereto, said flukes being of similar construction and being coplanar, and said flukes each including first straight outer side edges, a second inner edge terminating in an inclined third edge, said first and third edges coacting to define a pointed end on the outer portion of said flukes, a sleeve rotatably engaging said stock intermediate the ends of said stock, said sleeve being provided with a pair of spaced apart cutouts defining stop shoulders for engaging and limiting pivotal movement of said flukes, a shank including a first pair of portions extending in spaced apart relation with respect to each other and said first portions being interconnected together by an arcuate section, second straight portions extending outwardly and angularly from said first portions, each of said second portions terminating in a third curved portion, and a fourth straight portion extending from each of said third portions, said fourth portions secured to said sleeve, a ring slidably connected to said shank, and a cable connected to said ring, said fourth portions being arranged in divergent relation with respect to each other, and said first portions being arranged in spaced parallel relation with respect to each other.

2,894,475
MOORING DEVICES FOR SHIPS
William Miller Hutchison and Kenneth William Hopkins, London, England, assignors to Brown Lenox and Company Limited
Application May 7, 1956, Serial No. 583,131
Claims priority, application Great Britain May 11, 1955
1 Claim. (Cl. 114—230)



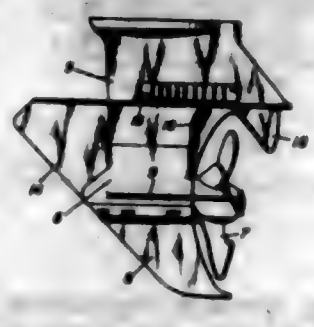
A mooring device for a ship, comprising a relatively stationary coupling member for connection fixedly to a place of mooring; an elongated support member extending horizontally outwardly from said stationary coupling member, said elongated support member, at its inner end, being cantilever-supported by and pivotally connected to said coupling member for swinging movement relative thereto on a vertical axis; an arm for engaging an eye in a mooring wire of the ship, said arm being pivotally connected to said horizontal support member at substantially the free end of the latter, for swinging movement relative thereto on a horizontal axis perpendicular to the length of said elongated support member; and, a U-shaped member whose closed end is readily engageable with and disengageable from said arm, for releasably retaining said arm in a position which prevents release of a mooring wire engaged thereby, said U-shaped retaining member being pivotally connected at its open end to said elongated support member, for swinging movement relative thereto on a horizontal axis perpendicular to the length of said elongated support member, the shape of said arm and the arrangement of parts being such that a mooring wire held by the mooring device may be released by disengaging the U-shaped retaining member from said arm and applying tension to the mooring wire.

2,894,476
VEHICLE CAPABLE OF TRANSFERRING ITSELF FROM A LIQUID TO A SOLID SUPPORTING MEDIUM
Erik A. Lindgren, Chicago, Ill.
Application November 23, 1953, Serial No. 393,809
4 Claims. (Cl. 115—1)



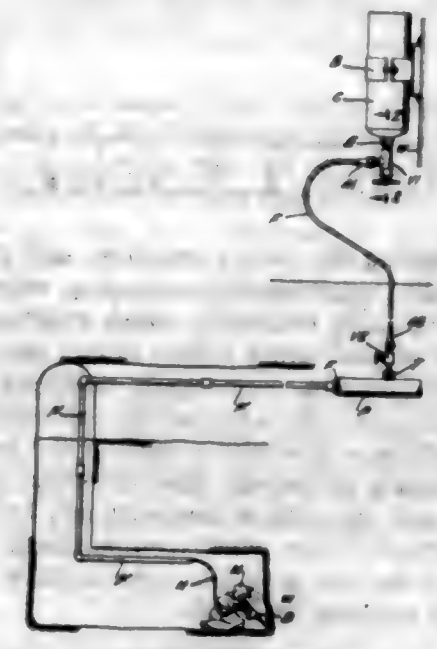
1. A vehicle capable of traveling while supported on either a solid or liquid medium and of transferring itself from one of said media to the other at the juncture thereof comprising a liquid-tight body, means for imparting translatory movement thereto in either medium comprising a propeller and endless Caterpillar tracks mounted on said body, prime movers for said means, said Caterpillar tracks further serving to transfer said vehicle from the liquid to the solid medium and from the solid medium to the liquid medium at the respective junctures thereof, a movable mass within the body of said vehicle and normally disposed so as to maintain a balanced fore-and-aft condition of said vehicle while in such liquid medium, and means for shifting the position of said mass substantially forward of the center of gravity of such vehicle to a point where said mass overcomes the preponderance of said vehicle aft of such center of gravity when said vehicle is moving from a liquid to a solid medium and for shifting the position of said mass substantially rearwardly of such center of gravity to a point where said mass balances the preponderance of said vehicle forward of such center of gravity when said vehicle is moving from a solid medium to a liquid medium.

2,894,477
PROPELLER GUARD AND DEFLECTOR FOR OUTBOARD MOTORS
Daniel P. Brown, Waresboro, Ga.
Application November 29, 1955, Serial No. 549,670
3 Claims. (Cl. 115—42)



1. In an outboard motor, the combination of a foot having a propeller mounted at its rear edge and a forwardly extending cavitation plate above said propeller, a pair of longitudinally straight arms supported at the sides of the foot and projecting in a rearward direction at opposite sides of the propeller in coplanar relation, and a vertical fin projecting forwardly at the front of the foot beneath said cavitation plate and joined to said foot and to said cavitation plate.

2,894,478
FLUID SIGNALING MEANS
William Wilson Reed, Los Angeles, Calif., and John Joseph Reed, Flat River, Mo.
Application August 31, 1956, Serial No. 607,501
2 Claims. (Cl. 116—114)



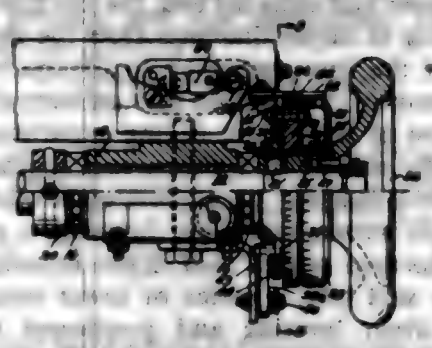
1. A signaling means for mines and the like comprising a compressed air line having an air operated tool on a terminal portion thereof, a pressurized container having therein a gaseous mercaptan stench compound such as ethyl mercaptan gas, conduit means interconnecting said container and said air line, and a valve means in said conduit means, whereby when said valve means is opened and the tool is in operation the mercaptan stench gas will issue from said tool giving the operator thereof an olefactory signal.

2,894,479

HAND WHEEL ASSEMBLY FOR BACK GAUGE OF PAPER CUTTERS

Carl Thomsen, Westbury, N.Y., assignor to E. P. Lawson Co. Inc., New York, N.Y., a corporation of New York

Application May 24, 1957, Serial No. 661,533
3 Claims. (Cl. 116—115)



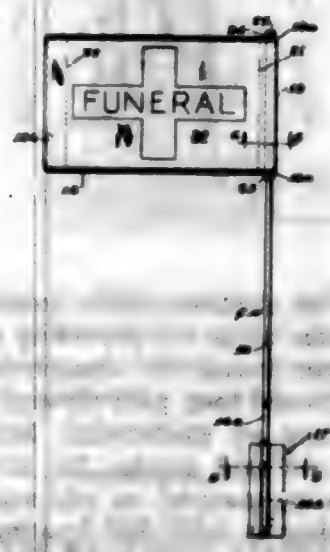
1. In a hand wheel assembly for the back gauge of a paper cutting machine, a lead screw, a hand wheel secured to said lead screw, a drum dial secured to said lead screw and rotative with said hand wheel, a second drum dial coaxial with said first drum dial and positioned close thereto so as to be readable therewith, and means for rotating said second drum dial with rotation of said lead screw at a reduced angular rate, said means comprising a cam bushing carried by said lead screw, an external gear carried on said cam and disposed for nonrotary, translational motion upon rotation of said cam bushing, an internal gear meshing with said external gear and having an unequal number of teeth with respect thereto, said second drum dial being secured to said internal gear.

2,894,480

EASILY DISASSEMBLED FLAG ASSEMBLIES

Carl R. Stephenson, Clare, Mich., assignor of one-half to Leo Grondo, Harrison, Mich.

Application April 22, 1957, Serial No. 654,358
9 Claims. (Cl. 116—173)



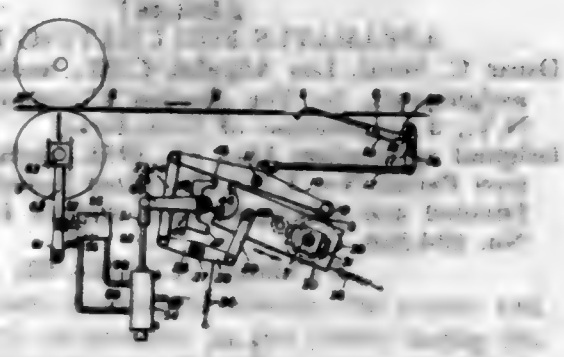
1. In an easily disassembled flag assembly; a mast; a flag having a loop portion at its end adjacent said mast through which said mast extends; a hollow frame for said flag open at the side thereof adjacent said mast, having ring like portions at its vertically spaced ends which rotatably receive said mast adjacent the upper and lower edges of said flag; and a loop portion for the outer edge of said flag receiving the outer portion of said frame and having sufficient diameter to pass at least one of said ring like portions; said upper and lower edges of said flag being free of the frame so that the flag can be easily slid off said frame once the flag and frame are removed from the mast, with the outer loop on said flag slipping off the outer section of the frame and one of the upper and lower sections thereof; and removable stop means for releasably holding said frame and flag in vertical position on said mast.

2,894,481

CONTROL DEVICES FOR APPARATUS FOR APPLYING COATINGS TO METAL SHEETS

Arthur Leslie Stechbery, Enfield, England, assignor to The Metal Box Company, Limited, London, England, a British company

Application June 25, 1954, Serial No. 439,384
Claims priority, application Great Britain June 26, 1953
12 Claims. (Cl. 118—1)



1. In apparatus of the character described and including cooperative rollers subject to being opened and closed; devices for controlling the opening and closing of said rollers, the movement of the rollers to an open or closed position being effected by mechanism operated by a power source which is independent of the drive of the machine, and the actuation of said mechanism to open or close the rollers being determined by the position of a detector member movable in response to the passage thereover and contact therewith of a sheet, the position of said detector member determining the position, relative to a control member for said independently operated mechanism, an actuating member, means for moving the actuating member continuously and in a regular path and in timed relationship with the rollers and the sheet and said actuating member also being shiftable as to position and arranged so as in one position, corresponding to the passage of a sheet or a predetermined regular succession of sheets, to move said control member to effect movement of said rollers to the closed position, and in another position, corresponding to an interruption in the passage of a sheet or said regular succession of sheets to move said control member to effect movement of said rollers to the open position.

2,894,482

TIME DELAY CONTROL DEVICE FOR TISSUE PROCESSING MACHINES

George Gerham, New York, N.Y., assignor to Technicon International Ltd., Chauncey, N.Y., a corporation of New York

Application April 8, 1957, Serial No. 651,211
23 Claims. (Cl. 118—11)

1. In apparatus of the character described having means for moving a material holder into and out of each of a plurality of receptacles, electrical means for actuating said moving means, timing means including a clock motor for controlling the normal operations of said electrical actuating means to provide predetermined

periods during which the material holder is positioned within the receptacles, respectively, and adjustable delay means operable to render said timing means ineffective for a predetermined period of time to control the operations of said electrical actuating means, said delay means comprising a master control switch for said electrical actuating means which is closed during the normal operations of said timing means, and which is open during said predetermined period of time and means driven by said clock motor at a speed different from that of the latter for closing said master switch upon the expiration of said predetermined period of time.

2,894,483

APPARATUS FOR COATING HOSE

Oscar C. Stahl, Los Angeles, Calif., assignor, by mesne assignments, to The Borden Company, New York, N.Y., a corporation of New Jersey

Original application May 31, 1955, Serial No. 511,849, now Patent No. 2,763,316, dated September 18, 1956. Divided and this application August 16, 1956, Serial No. 604,380

5 Claims. (Cl. 118—50)

1. In an apparatus for applying an outer layer of a plastisol to an inner core of a plastic hose having a reinforcing braid thereon to form an integral multi-layer hose, the combination of: reservoir means for containing a quantity of the plastisol; an elongated, U-shaped, vertically disposed conduit positioned above said reservoir means with the ends of said conduit beneath the surface of the plastisol in said reservoir means; means for creating a vacuum coupled to the bight of said conduit; a wiper die for removing excess plastisol from said braid covered inner core; a source of heat for curing the plastisol on said braid covered core; and drive means for guiding the hose into said reservoir means, through said conduit and back through said reservoir means, through said wiper die, and then past said heat source for removing air and entrapped gases from said plastisol wetted hose in said conduit, removing excess plastisol in said wiper die, and curing the remaining plastisol in place on the braid reinforced hose, said drive means including a rotating pulley positioned at said bight of said conduit adjacent said coupling of said vacuum means.

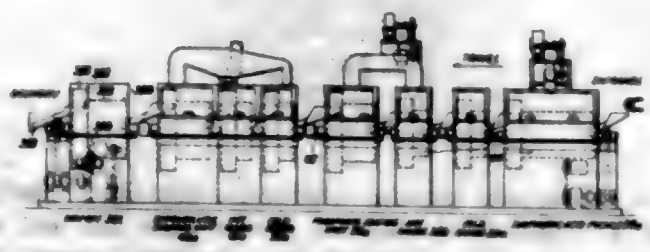
2,894,484

APPARATUS AND METHOD FOR FLUID TREATMENT OF METALLIC SLUGS OR THE LIKE

Thomas J. Kearney, Detroit, Mich., assignor to Detrex Chemical Industries, Inc., Detroit, Mich., a corporation of Michigan

Application October 1, 1956, Serial No. 613,018

8 Claims. (Cl. 118—58)



8. Apparatus for fluid treatment of metallic slugs or the like, comprising a housing with a tank in the bottom thereof for fluid, an open ended rotary drum supported within the housing and partly submerged in the fluid and having a loading end and a delivery end, a spiral feed flight positioned within the drum and operatively connected to the loading end of the drum, circumferentially spaced lift flights positioned within the drum intermediate said feed flight and said delivery end, a delivery chute positioned adjacent said delivery end, the lift flight portion of the drum being of larger diameter than the feed flight for supportion of the drum whereby to lift the treated slugs from the bottom of the drum to said delivery chute in one-half revolution of said drum, drying apparatus positioned at the delivery end of said chute, said drying apparatus comprising in a housing, an endless open mesh conveyor belt positioned within said dryer housing, a series of upper nozzles located within said dryer housing and positioned above said belt, a series of lower nozzles located within said dryer housing and positioned intermediate the upper and lower courses of said belt and directed toward said upper course, means for providing said nozzles with air at increased velocity, and means for heating said air with steam.

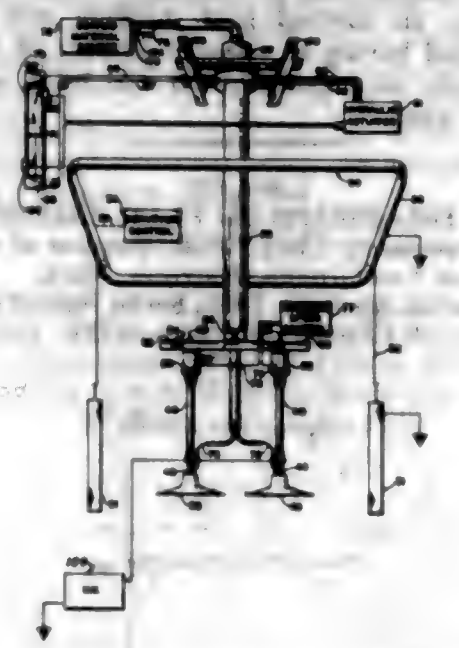
2,894,485

APPARATUS FOR ELECTROSTATICALLY APPLYING MULTI-COATINGS

John Sedlacsik, Jr., Garfield, N.J.

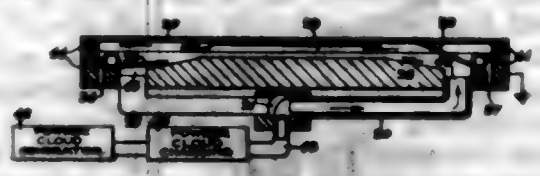
Application August 18, 1958, Serial No. 755,782

29 Claims. (Cl. 118—626)



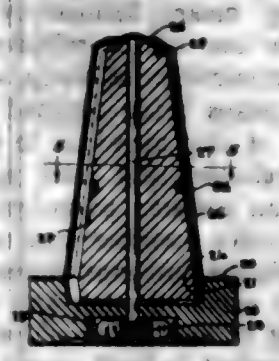
1. Apparatus for electrostatically coating articles comprising an atomizer array for providing spray of coating material, conveyor means for transporting said articles along a predetermined loop path through said spray, and means for creating an electrostatic field between said atomizer array and said articles for atomizing and depositing said coating material on said articles, said atomizer array including at least one rotating atomizer head with an atomizing edge and at least one rotating electrostatic deflector having an extended lateral edge, said rotating atomizer head and said rotating electrostatic deflector being spaced from each other and aligned normal to said predetermined loop path and having electrical interaction between said atomizer and said deflector for forming a fan-shaped spray pattern from the atomizing edge of the rotating atomizer head opposite the deflector, said rotating atomizer head and said rotating electrostatic deflector being relatively positioned to one another for electrostatically concentratedly directing said spray pattern and electrostatically coating said articles with the coating material of the fan-shaped spray pattern from said atomizing edge of the rotating atomizer head adjacent said articles.

2,894,436
APPARATUS FOR XEROGRAPHIC DEVELOPMENT
Earnest Paul Matthews, Alliance, Ohio, assignor, by mesne assignments, to Haloid Xerox Inc., a corporation of New York
Original application February 13, 1956, Serial No. 489,883. Divided and this application February 13, 1957, Serial No. 639,954
3 Claims. (Cl. 118—637)



3. Developing mechanism for electrostatic images comprising in combination a development electrode, means for positioning an electrostatic image-bearing member in uniform closely spaced relationship with said electrode to form a developing zone therebetween, walls defining two entrance chambers, each chamber communicating with said development zone through a narrow aperture through said walls at opposite ends of said electrode, means for producing and blowing a gas suspension of finely-divided electrostatically charged material, conduit means to feed said gas suspension to said entrance chambers and valve means in said conduit whereby said gas suspension is fed into each entrance chamber alternately.

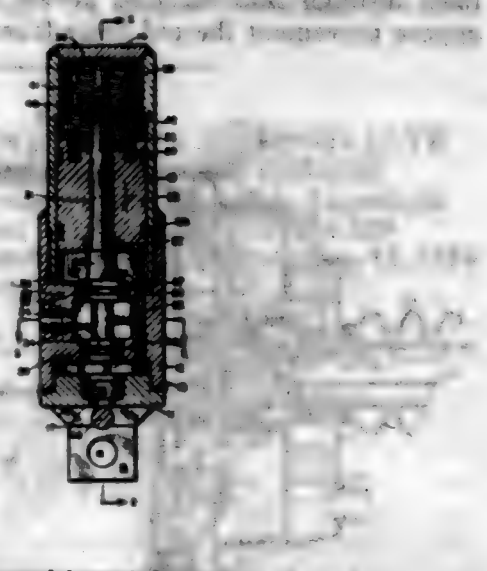
2,894,437
SCRATCH POST WITH RENEWABLE FABRIC COVER
Marvin Goldson, Bronx, N.Y.
Application September 21, 1956, Serial No. 611,145
6 Claims. (Cl. 119—1)



2. A scratch post for domestic pets and animals having a renewable, replaceable material sleeve, said material sleeve consisting of an outer facing material and an inner layer of cushioning material disposed immediately below.

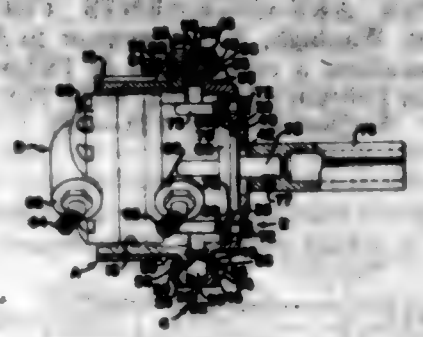
2,894,486
COMPRESSED AIR RECIPROCATORY VIBRATOR
Leo Berner, Pasadena, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Application November 16, 1956, Serial No. 622,654
9 Claims. (Cl. 121—38)

1. A compressed air operated reciprocatory vibrator comprising: a cylinder having a valve head portion at one end and a cylinder head closing the opposite end of said cylinder; inlet and exhaust ports arranged in said valve head; a piston having an axial bore therethrough in said cylinder; abutments carried by said cylinder against which said piston impacts at each end of its travel in the cylinder; a valve rod slidably mounted in the bore in said piston and permanently contained within said cylinder; valves mounted on said valve rod and immovable relative thereto; stops on said valve rod limiting relative movement of the piston and valve rod and arranged to insure that the valves carried by the valve rod are positioned so as to enable the piston to make a working stroke at the completion of each exhaust stroke;



and resilient means positioned between the piston and cylinder head and compressed by the piston during the working stroke thereof and effective to return the piston to starting position.

2,894,489
MOTOR MOUNTING
Jeff C. Clay, Fayetteville, W. Va., assignor to The Long Company, Oak Hill, W. Va., a corporation of West Virginia
Application December 3, 1957, Serial No. 700,488
7 Claims. (Cl. 121—36)

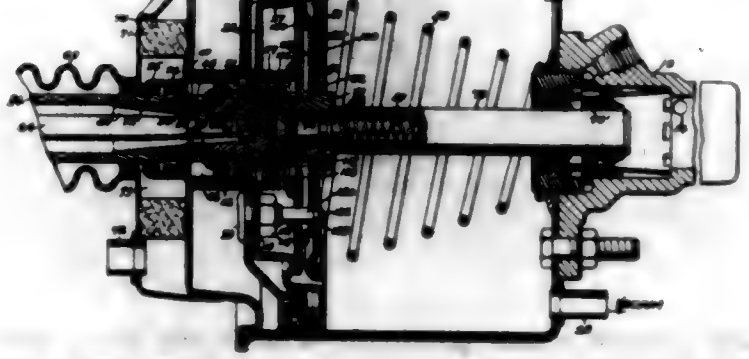


1. In a hand supported drill the combination of a bracket having a central motor receiving portion, a motor socketed within said motor receiving portion of said bracket, attaching means for fixedly securing said motor to said bracket, a handle receiving frame interfitting about said motor and spaced therefrom, a handle fixedly secured to said frame, and resilient attaching means for securing said frame to said bracket.

2,894,490
DIFFERENTIAL FLUID PRESSURE MOTOR
Jeanmot G. Ingres, Dearborn, Mich., assignor to Kelsey-Hayes Company, a corporation of Delaware
Application November 27, 1953, Serial No. 394,683
5 Claims. (Cl. 121—41)

1. A fluid motor comprising a casing having a pressure responsive unit therein, a force transmitting member in said motor, a member to be operated connected to said force transmitting member, a follow-up valve having fluid connection with the motor and with a source of pressure, said valve having a normal position disconnecting the motor from said source and being movable to connect the motor to said source to energize the motor, a reaction device in said motor having mechanical connection with said valve, and lever means comprising a plurality of segmental plates normally lying substantially in a common plane and rockably engaging at radially

spaced points with said pressure responsive unit, said force transmitting member and said reaction device to transmit forces from said pressure responsive unit to said force transmitting member and to simultaneously react through said reaction device against said valve to oppose movement thereof away from its normal position,



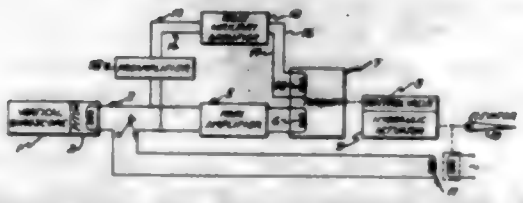
said reaction device comprising an axial head engaging said valve, said reaction device further comprising a reaction plate coaxial with said head and having lost motion connection therewith when said valve is in said normal position whereby said valve is initially movable from such position without transmitting any force to said reaction plate.

2,894,491

FAIL-SAFE SERVOMECHANISM SYSTEM AND AMPLIFIER ARRANGEMENTS THEREFOR

Herbert Hecht, Wantagh, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware

Application February 14, 1955, Serial No. 487,998
5 Claims. (Cl. 121—41)



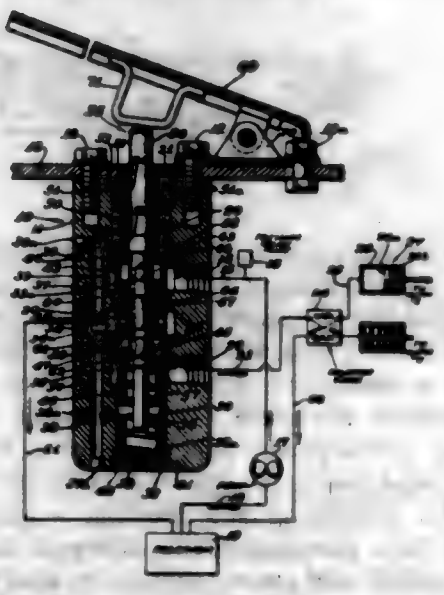
1. An autopilot system for controlling the attitude of an aircraft by a control surface positioning servomechanism energized from the output of a linear amplifier the signal input of which represents the difference between attitude error and control surface position signals of reversible phase, said system including an electromechanical amplifier having its input connected to receive said linear amplifier input, said electromechanical amplifier providing an output dependent in phase on the phase of its input and of one fixed magnitude for an input falling within a first range of magnitudes and of a larger fixed magnitude for an input exceeding the maximum value of said first range of magnitudes, there being no output from said electromechanical amplifier for values of said input less than the minimum value of said first range of magnitudes, said input normally remaining within a second range of magnitudes the maximum value of which is less than the minimum value of said first range of magnitudes, and means for energizing said servomechanism in accordance with the output of said electromechanical amplifier, whereby a system malfunction causing said input to increase beyond its normal or second range of magnitudes results in auxiliary energization of said servomechanism by said electromechanical amplifier in one of two amounts dependent upon the extent of said increase.

2,894,492

PRESSURE RESPONSIVE LIMITED MOVEMENT VALVE MECHANISM FOR HYDRAULIC SYSTEM

Joseph F. Zickal, Sprotborough, Doncaster, England, assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Application July 19, 1957, Serial No. 673,085
12 Claims. (Cl. 121—41)



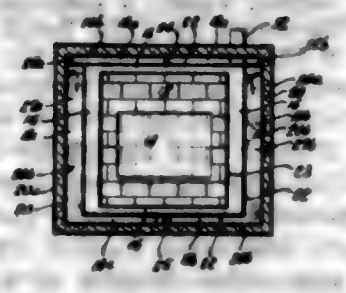
1. Fluid flow control mechanism, comprising: a casing having a chamber with inlet, exhaust and load ports spaced longitudinally thereof; inner and outer valve members disposed for movement in said chamber to establish communication between predetermined ports, said valve members being movable relative to said casing and to one another; said inner valve member being movable responsive to force externally applied thereto; said outer valve member being movable responsive to fluid pressure within said casing; means formed by said valve members and casing in one of the relative positions thereof to establish communication between said inlet and said load ports; said means being adapted in another of the relative positions of said members to establish restricted communication between said inlet port simultaneously with said load and exhaust ports; yieldable means between the outer valve member and said casing tending to maintain the relative positions thereof; yieldable means between the inner valve member and said casing opposing the movement of said inner valve member; and additional means formed in said casing to establish communication between said exhaust port and the end areas of said chamber in all relative positions of said valve members.

2,894,493

DEVICE FOR HEATING A HEAT TRANSFER MEDIUM

Michael J. De Leonardis, Valley Stream, N.Y.

Application June 7, 1956, Serial No. 589,991
2 Claims. (Cl. 122—135)



1. A boiler or water heater of the class described comprising a plurality of nesting chambers, including a first innermost chamber comprising a combustion chamber, an intermediate chamber for heat transfer medium, and

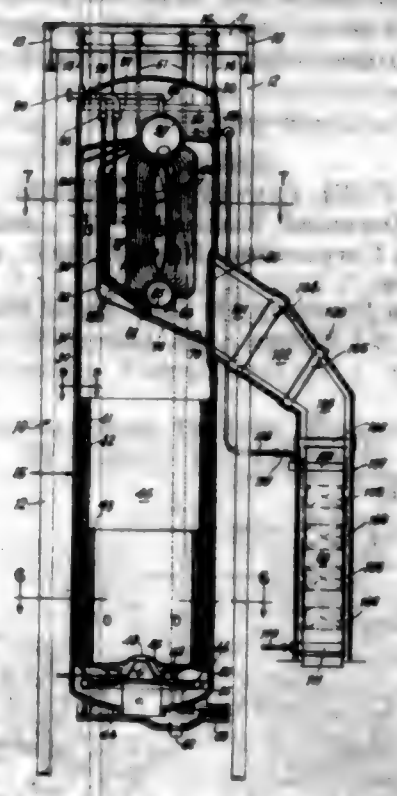
a third chamber surrounding the intermediate chamber and forming a flue gas chamber comprising, a rear portion and two side-and-front portions, the rear portion being parallel with and having a wall in common with the rear portion of the intermediate chamber and having means dividing said rear portion vertically into two separate parts, the said side-and-front portions each having a portion parallel with and having a wall in common with a side of the intermediate chamber and a portion parallel with and having a wall in common with one half of the front of the intermediate chamber, a passage for the flue gas extending from said first chamber to the said rear portion of the flue gas chamber, means providing communication between the said parts of said rear portion of the flue gas chamber and said two side-and-front portions respectively, and vent means communicating with said two side-and-front portions respectively to exhaust flue gas after it has passed from the combustion chamber down the rear portion of the flue gas chamber and up the two side-and-front portions respectively of the flue gas chamber.

2,894,494

PRESSURE SHELL ENCLOSED SYNTHESIS GAS GENERATOR WITH TUBULAR HEAT EXCHANGER

Ernest A. Brooks, Barberton, Ohio, Rolfe Shellenberger, Belvidere, N.J., and Theodore S. Sprague, Hewlett, N.Y., assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Application July 13, 1955, Serial No. 521,891
4 Claims. (Cl. 122—510)



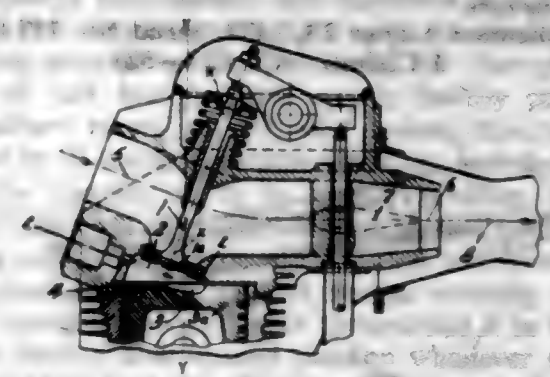
1. In a synthesis gas reactor, an upwardly extending circular row of steam generating tubes; a cylindrical metal casing laterally enclosing said tube row; a supporting framework; a support means interconnecting the upper ends of said tubes and said casing; means suspending said support means from said framework, whereby said casing and said tubes may expand downwardly independently of each other; a refractory-lined reaction chamber enclosed within the lower portion of said row of tubes, the lower ends of the tubes of said row being connected into an annular header, with alternate tubes being connected directly into said header and the intermediate tubes between said alternate tubes being bent radially inwardly, above said header, and then radially outwardly into said header to form, with the alternate tubes, cantilever truss supports for the refractory lining of the floor of said chamber, with the bending moments being absorbed at said header, the bights of inwardly bent intermediate tubes defining a slag passage having a diameter not greater than one-half that of said circular row; and burner means for introducing a mixture of pulverized fuel, steam, and an oxygen-containing gas into said chamber.

2,894,495

COMBUSTION CHAMBER IN A MONOVALVE DIESEL ENGINE WITH AIR COOLING

Slobodan M. Dobrosavljevitch, Beograd, Yugoslavia

Application June 7, 1957, Serial No. 664,428
Claims priority, application Yugoslavia February 15, 1954
4 Claims. (Cl. 123—32)



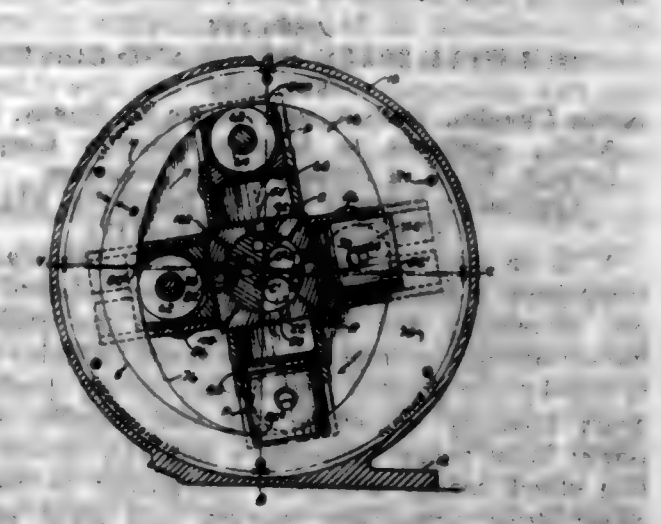
1. In a diesel engine, a cylinder; having a longitudinal axis and a plane of symmetry containing said axis and diametral in said cylinder; a cylinder head; a combustion chamber eccentrically located with respect to the axis of the cylinder and near the periphery of said cylinder and having its axis in the plane of symmetry of the cylinder; a valve in said combustion chamber and adapted to control the operation of said cylinder and having its axis contained in said plane of symmetry and inclined at an angle from the axis of the cylinder; a piston having a crown in said cylinder; said combustion chamber consisting of two parts: the first part in the cylinder head and in the form of a cylindrical cavity coaxial with the axis of the valve, and the second part in the piston crown and in the form of a second cylindrical cavity corresponding to and cooperating with the cavity in the cylinder head.

2,894,496

INTERNAL COMBUSTION ENGINE

Ray T. Townsend, Des Moines, Iowa, assignor to Townsend Engineering Company, Des Moines, Iowa, a corporation of Iowa

Application July 16, 1956, Serial No. 598,052
5 Claims. (Cl. 123—44)



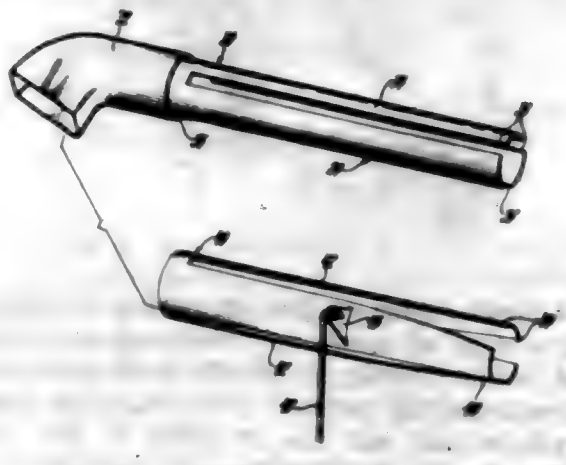
1. In a four cycle internal combustion engine, a stationary shaft, a rotor rotatable thereon, a cylinder carried by said rotor, a piston therein, a stationary cam for reciprocating said piston in said cylinder upon rotation

of said rotor, said shaft being provided with intake and exhaust ports for said cylinder, said rotor having a cylinder port for registry therewith during rotation of said rotor relative to said shaft, a spark plug port in said shaft to register with said cylinder port, a spark plug therein, and said rotor having a vent to atmosphere which registers with said spark plug port between successive firings of the plug to scavenge exhaust gas therefrom and reduce the temperature thereof.

2,894,497
MANIFOLD WITH VARIABLE LENGTH RAM PIPES

Charles P. Bolles, Jr., Dearborn, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application August 25, 1958, Serial No. 757,009
5 Claims. (Cl. 123—52)



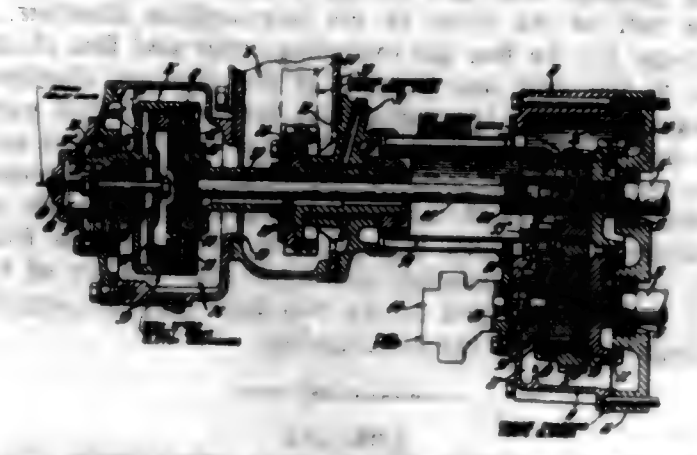
1. A manifold for an internal combustion engine comprising a plurality of ram pipe devices for respectively supplying air to the individual cylinders of the engine, each of said ram pipe devices comprising a first tubular member mounted upon said engine and communicating at one end with an engine cylinder and open at the other end to atmosphere, a plurality of longitudinally extending slots formed throughout at least a part of the length of said member, a sleeve member rotatably supported upon said first member, said sleeve member including a corresponding number of slots adapted to coact with the slots in said first member, and engine speed responsive means operatively connected to said sleeve members to rotate the latter to progressively move said sleeve slots into registry with the slots in said first member to vary the effective length of each ram pipe device in accordance with engine speed.

2,894,498
MULTIPLE SPEED DRIVE AND CONTROL SYSTEM

Alibi Chaplin, Detroit, and Virgin C. Reddy, Livonia, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application January 4, 1957, Serial No. 632,579
17 Claims. (Cl. 123—119)

1. In an internal combustion engine, the combination comprising a multiple impeller blower adapted to supply scavenging and charging air to the engine, said blower having two impeller drive shafts rotatably mounted in side-by-side parallel relation and having synchronizing gears drivingly interconnecting said impeller shafts, a power input means including a rotatably driven shaft, a first clutch means selectively energizable to establish a direct drive connection between said input shaft and one of said impeller shafts, an engine fuel supply control member shiftable between an engine idle and full speed and load fuel supplying positions, hydraulic control means for said first clutch means operable in accordance with the operative movement of said fuel supply control member relative to an intermediate fuel supply position, said control means being operable to energize said first clutch means when said fuel supply member is shifted between its intermediate and full speed and load fuel supply positions and being operable to de-energize said first clutch means when said fuel supply member is shifted between its intermediate and idle speed and load fuel supply positions, a reduction driving gear rotatably journaled on said one impeller shaft and drivingly connected to

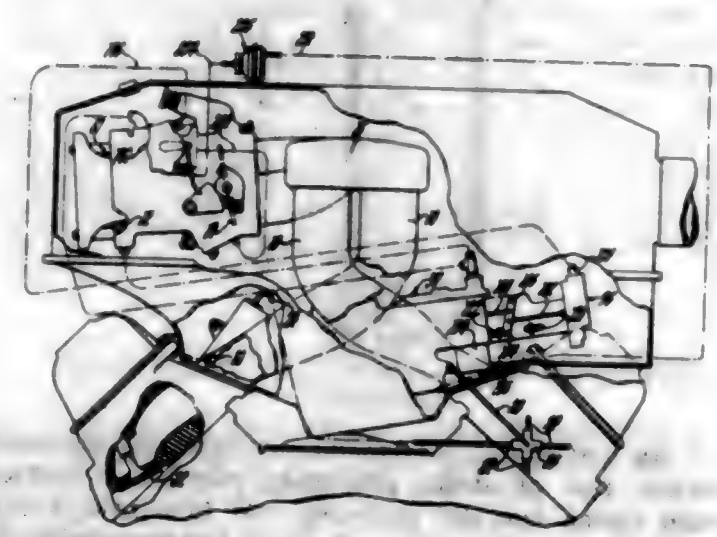


said input shaft, said reduction driving gear meshing with a reduction driven gear mounted in spaced concentric relation to the other of said impeller shafts, and a second clutch means intermediate said reduction driven gear and said other impeller shaft, said second clutch means being adapted to drivingly interconnect said reduction driven gear and said other impeller shaft when said first clutch mechanism is de-energized and adapted to permit said other impeller shaft to overrun said reduction driven gear when said first clutch mechanism is energized.

2,894,499
FUEL CONTROL SYSTEM

Lawrence C. Dermond, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

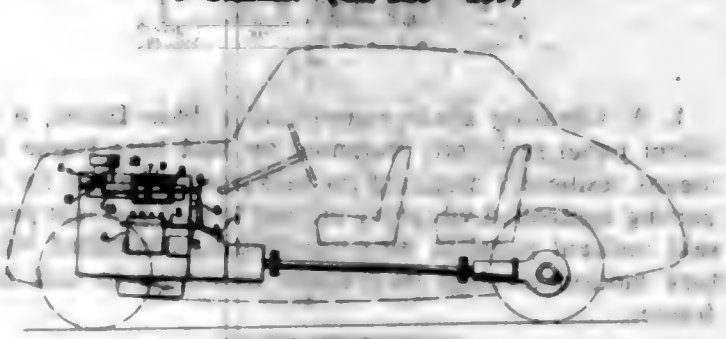
Application February 13, 1957, Serial No. 639,893
12 Claims. (Cl. 123—119)



1. A fuel induction system for an internal combustion engine comprising an air induction passage, a throttle valve for controlling the flow of air through the passage, a pump for supplying fuel under pressure, a metering valve for regulating the quantity of fuel under pressure delivered to the respective cylinders of the engine, means responsive to certain engine operating conditions for controlling said valve during normal operation, additional means for controlling said valve to enrich the fuel-air mixture when the engine is cold, a device for controlling said valve to enrich the fuel air mixture during accelera-

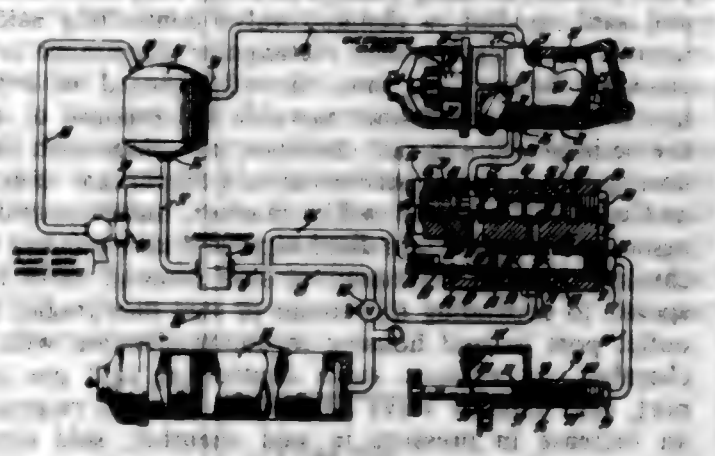
tion of the engine, and a mechanism for rendering said acceleration device inoperative after the engine reaches a given operating temperature.

2,894,500
MIXTURE COMPRESSING INTERNAL COMBUSTION ENGINE WITH FUEL INJECTION
Friedrich K. H. Nallinger, Stuttgart, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Application March 14, 1957, Serial No. 646,092
Claims priority, application Germany March 15, 1956
9 Claims. (Cl. 123—139)



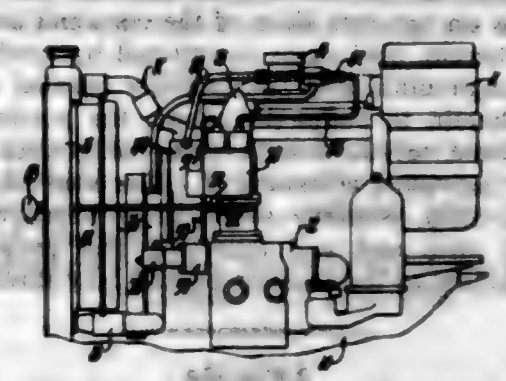
1. A motor vehicle driven by a mixture-compressing, injection-type internal combustion engine comprising actuating means for controlling the output of said engine, a fuel pump including adjusting means for varying the amount of fuel injected into said engine, means for controlling the quantity of combustion air supplied to said engine, connecting means for directly connecting said actuating means with said adjusting means, and further connecting means including delay means for connecting said actuating means with said control means for controlling the quantity of combustion air, said delay means being effective during acceleration as well as during deceleration of said engine.

2,894,501
CONTROL VALVE MECHANISM FOR PRESSURE OPERATED ACTUATING DEVICE
Morris J. Duer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 29, 1956, Serial No. 625,063
19 Claims. (Cl. 123—179)



1. In a fluid pressure system including a source of pressurized fluid, a pressure-operated actuator device, drive means for selectively and drivingly connecting said actuator device to a load mechanism, a valve mechanism operable to control the flow of pressurized actuating fluid from said source to said actuator device, said valve mechanism including a valve casing having a first and second valve chamber therein, each of said chambers having an inlet port and an outlet port opening thereon, a first passage means connecting the inlet port of said first chamber to said source, a second passage means connecting the outlet port of said first chamber to the inlet port of said second chamber, and a third passage means connecting the outlet port of said second chamber to said actuator device, a valve member mounted in each of said chambers and independently movable between a closed no-flow position and an open full-flow position, means for selectively actuating said first chamber valve member between its closed and opened positions, a resilient means biasing said second chamber valve member towards its open position, a first pressure means responsive to the fluid pressure of said source and operably associated with said second chamber valve member to bias it to its closed position in opposition to said resilient means whenever said first chamber valve member is in its closed position, and a second pressure means responsive to the fluid pressure intermediate said chambers in said second passage and operably associated with the second chamber valve member to counterbalance the closing biasing action of said first pressure means thereby permitting said resilient means to shift said second chamber valve member to its opened position whenever said first chamber valve member is in its opened position and said actuator device is drivingly coupled to said load mechanism by said drive means, and said first and second pressure means and said resilient means coacting on said second chamber valve member to maintain it in an intermediate limited flow opened position whenever said first chamber valve is in its opened position and said actuator device is disconnected from said load mechanism by said drive means.

2,894,502
ENGINE PROTECTIVE DEVICE
Michael H. O'Brien, Detroit, and Roger D. Wellington, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 7, 1956, Serial No. 608,470
15 Claims. (Cl. 123—198)



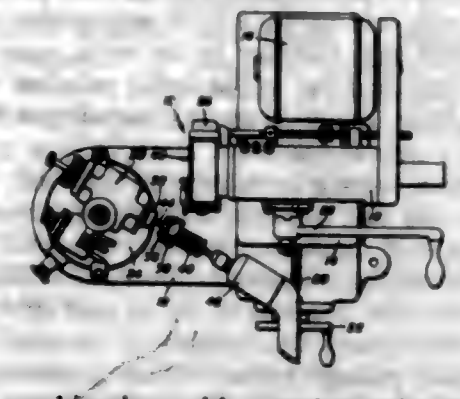
1. In combination with an internal combustion engine having an engine combustion air supply duct, an engine oil pressure lubricating system, a valve in said air supply duct normally stopping the flow of air therethrough but movable to an open position permitting such flow, a member movable with said valve, a latch engageable with said member to hold said member in its valve open position and movable into and out of latchable relation with said member, and latch actuating means including a first pressure responsive means operative in reponse to engine oil pressure supplied thereto to move said latch out of latchable relation with said member and biasing means yieldably opposing said pressure responsive means; the improvement comprising oil passage means including a flow restricting orifice for conducting oil to said first pressure responsive means from the engine oil pressure lubrication system, said passage means having a pressure relieving opening therein intermediate said orifice and said first pressure responsive means, a closure for said opening, yieldable means biasing said closure to its closed position, means operable in response to engine speed for opening said closure in opposition to said yieldable biasing means, and a second pressure responsive means operable in response to engine oil pressure supplied thereto by said passage means from the pressure supply side of said orifice

to modulate the biasing action of said yieldable means and thereby the engine speed at which said engine speed responsive means is operable to open said closure in accordance with engine oil pressure.

2,894,503
ARCHERY BOW
Ennis B. Pierson and Charles A. Pierson, Cincinnati, Ohio
Application August 4, 1955, Serial No. 526,453
3 Claims. (Cl. 124—23)

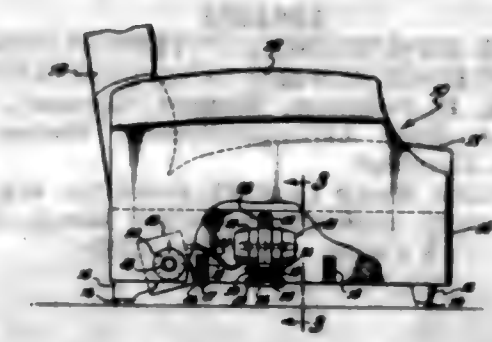
1. An archery bow stave comprising a centrally located handle portion, limbs extending from said handle portion one on each side thereof, each limb comprising a laminate including a core constituted by a synthetic resin reinforced by glass fibers extending in a plurality of directions in relation to one another, and back and face strips on opposite sides of the core and attached integrally thereto, said strips constituted by synthetic resin having longitudinal and substantially parallel fibers imbedded therein to stiffen the same, the portion of said core adjacent to said handle being of greater thickness than the individual thickness of either said face strip or said back strip, whereby said core is effective to space said back strip and said face strip and resist shearing forces incident to the bending of said bow stave.

2,894,504
VALVE SEAT STONE DRESSER
Emmett A. Tintinger, Vancouver, Wash., assignor of twenty percent to O. R. Clawson, Vancouver, Wash.
Application December 28, 1955, Serial No. 555,914
7 Claims. (Cl. 125—11)



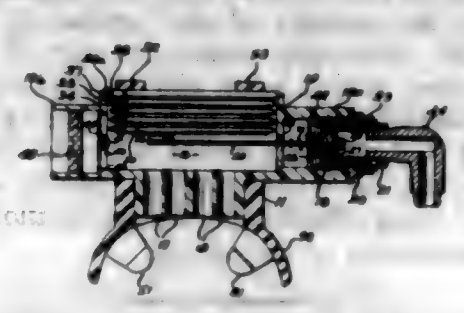
1. In combination with a valve refacing machine of the type including a grinder having a grinding wheel and a guard, and a valve stem chuck, a valve seat stone dressing tool including a dressing stone mounted on said guard, and a valve seat dressing tool pilot carried by said chuck, said dressing stone facing said pilot for dressing a valve seat stone mounted on said pilot.

2,894,505
VIBRATING ASSEMBLY
Bernard H. Mansson, Van Nuys, Calif.
Application February 18, 1957, Serial No. 640,962
13 Claims. (Cl. 128—33)



1. A vibrating chair comprising a base frame, a resilient panel resiliently mounted on said base frame and means resiliently mounted on said resilient panel for imparting controlled vibratory motion to said resilient panel, said resilient panel in turn transmitting controlled vibratory motion through its resilient mounting to said base frame.

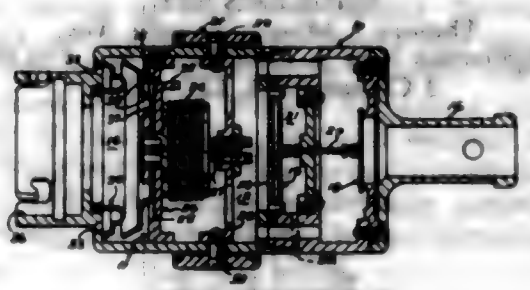
2,894,506
UNDERWATER BREATHING APPARATUS
Dudley B. Rose, Madison, Ohio
Application April 3, 1957, Serial No. 650,520
4 Claims. (Cl. 128—142)



1. A breathing apparatus comprising in combination a gas container, a housing having a chamber and a mouthpiece integrally associated therewith and adapted to be engaged by the mouth of the user, said mouthpiece having an opening communicating between said chamber and the mouth of the user, a single conduit connected between said housing and said gas container, a gas inlet port in said housing communicating with said chamber and said conduit, a demand valve controlling said gas inlet port, a substantially rectangular diaphragm in said chamber having one side thereof exposed to exterior hydrostatic pressure and movable in response to a decrease in pressure in said chamber, said diaphragm having corrugated sidewalls permitting said diaphragm to expand and contract in a bellow-like manner, means operatively associated between said diaphragm and said demand valve causing opening movement of said demand valve in response to expanding movement of said diaphragm, a gas outlet port in said housing in communication with said chamber, an exhaust valve controlling said gas outlet port, said exhaust valve adapted to open in response to an increase in pressure in said chamber, said external hydrostatic pressure being insufficient to cause said diaphragm to open said demand valve, reduced chamber pressure permitting said external hydrostatic pressure to expand said diaphragm thereby causing said demand valve to open, increased chamber pressure causing said diaphragm to contract thereby closing said demand valve and opening said exhaust valve, said chamber pressure being increased or decreased in response to exhalation and inhalation respectively by the user, said diaphragm and said exhaust valve being located in the same zone as the mouth of the user, thereby preventing differential hydrostatic head pressure therebetween and subjecting

the mouth of the user to the same internal and external hydrostatic pressure when in use thereby permitting relatively effortless breathing by the user of said apparatus.

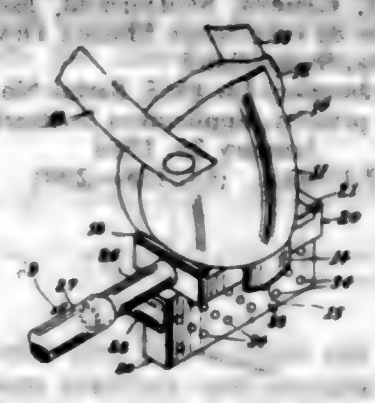
2,894,507
REDUCING AND DILUTING ADAPTER
Henry W. Seeler, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force
Application December 23, 1957, Serial No. 704,847
11 Claims. (Cl. 128—142)
(Granted under Title 35, U.S. Code (1952), sec. 266)



5. An adapter for supplying diluted or pure oxygen to a breathing mask or the like from an oxygen source having a pressure above ambient atmospheric pressure including a housing having an inlet conduit connected to the oxygen source and an outlet conduit connected to the breathing mask, means in said housing to form an inlet chamber communicating with the inlet conduit and an outlet chamber communicating with the outlet conduit, said means having a passage connecting the inlet chamber and the outlet chamber for flow of oxygen from the inlet chamber to the outlet chamber, valve means to control flow of oxygen through the passage from the inlet chamber to the outlet chamber, means to maintain the pressure above ambient pressure of the oxygen in the inlet chamber at a predetermined ratio with respect to the pressure above ambient pressure of the oxygen from the oxygen source, said maintaining means including a valve member controlling flow of oxygen from the inlet conduit to the inlet chamber, a second valve member connected to the first valve member, said second valve member being responsive to the pressure in the inlet chamber with respect to the ambient pressure to move the first valve member to an open position when the pressure in the inlet chamber drops below the predetermined ratio and to a closed position when the pressure in the inlet chamber exceeds the predetermined ratio, said valve means controlling oxygen flow through the passage in response to the ambient pressure, said housing having openings in its wall for flow of ambient air into the outlet chamber to mix with oxygen therein for supply of breathing air to the breathing mask through the outlet conduit, and means to manually stop flow of ambient air through said openings.

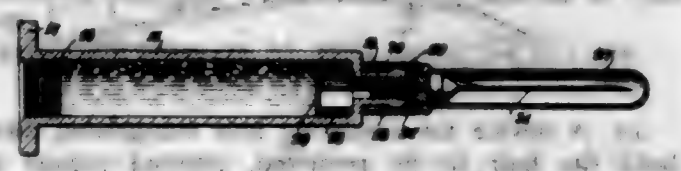
2,894,508
RESPIRATOR
Robert L. Miles, Glen Burnie, and Wainwright Dawson, Pikesville, Md.
Application May 18, 1956, Serial No. 585,762
12 Claims. (Cl. 128—146)

1. In an oronasal respirator including a cup and means for supplying air under pressure to said cup, said means including an air line; the improvement comprising a tubular fitting operatively connected to said air line, said fitting having two tubular branch conduits, one of said branch conduits being operatively connected to said cup to supply air to the interior thereof, a manifold carried by the other branch conduit, means readily detachably connecting said manifold to said cup forwardly thereof,



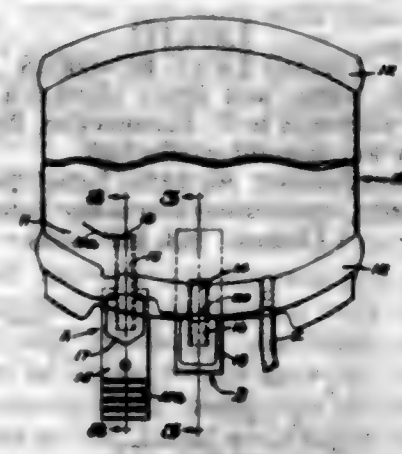
and said manifold being formed with means for forming an air screen forwardly of said cup.

2,894,509
HYPODERMIC SYRINGE
Edward W. Beimarz, Rutherford, N.J., assignor to Becton, Dickinson and Company, Rutherford, N.J., a corporation of New Jersey
Application January 18, 1952, Serial No. 267,043
19 Claims. (Cl. 128—218)



19. For use with a syringe barrel, a needle assembly, such assembly comprising a cup-shaped, substantially rigid hub, a hypodermic needle permanently affixed to the base of said hub and a pawl formed in the side wall of said hub and extending inwardly therefrom into the cup bore in the direction of the base of the latter.

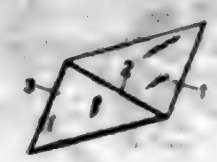
2,894,510
SEALING CLOSURES FOR FLUID CONTAINERS
David Bellamy, Jr., Framingham, Mass., assignor to Fenwal Laboratories, Inc., Ashland, Mass., a corporation of Massachusetts
Application February 25, 1954, Serial No. 412,549
13 Claims. (Cl. 128—272)



1. In combination, a fluid carrying tube and a sealing sheath for an end thereof comprising flexible sheet strips juxtaposed and detachably joined about the tube end and having separable tabs adapted to be pulled apart to expose the tube end.

8. Means adapting the outlet-inlet tube of a fluid container for sterile sealed coupling to a fluid conductor comprising a sheath for the outer tube portion and a tear tab sealed over the inner tube end, said tab having a portion projecting within and manipulable from without the container for tearing the same away from said tube.

2,894,511
SWATHING MEANS FOR INFANTS
Charles Devaud, Geneva, Switzerland, assignor to Societe Anonyme de l'Ancienne Maison Devaud, Knuttel & Co., Geneva, Switzerland
Application January 19, 1955, Serial No. 482,845
Claims priority, application Switzerland January 26, 1954
2 Claims. (Cl. 128—290)

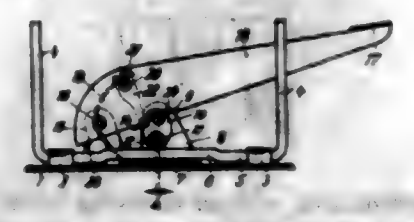


1. Swathing means for infants comprising an inner layer of looped fabric made from polyvinyl chloride fiber material.

2,894,512
EPILATION DEVICE
Robert Tapper, Los Angeles, Calif.
Application October 7, 1957, Serial No. 688,512
19 Claims. (Cl. 128—303.18)

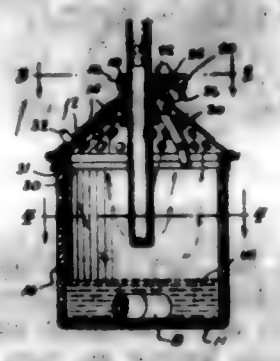
14. A device for removing hair comprising means to hold the hair to be removed, pointed means axially resiliently mounted at an extremity of said means to hold, a member attached to said means to hold opposite that extremity mounting said needle, a slot in said means to hold behind said pointed means, said member disposed and proportioned to progressively eject the point of said pointed means from the extremity of said means to hold as the latter more tightly holds said hair, electrical means upon said member to contact said pointed means when the latter is relatively fully ejected, and an electrical source, said source connected to said electrical means; the recited structure adapted for manipulation by the user to engage a hair with said means to hold, enter the pointed means into the root of said hair, destructively alter and remove said root and said hair in a one hand operation.

2,894,513
LOOSE LEAF BINDERS
Erich Gempe, Bonn, and Ernst Helmlich, Bessel-Vilich, Germany, assignors to F. Soennecken, Bonn, Germany, a German kommanditgesellschaft
Application January 30, 1956, Serial No. 562,326
Claims priority, application Germany February 8, 1955
4 Claims. (Cl. 129—11)



1. In a loose leaf binder for papers and the like having a base plate with rigid filing pins and pivotally mounted arched closing members connected by a crank-type angular member relative to the base plate and pivotally mounted under tension from a leaf spring, an opening and closing mechanism actuated by pressure applied in the direction of the base plate on the angular section of the pivoting member, comprising a single-armed lever pivotally mounted on the base plate on a fixed pivot pin, a crank pivotally mounted about a fixed pivot pin on the base plate and having a crank pin mounted at the free extremity of the crank opposite to the fixed pivot pin, the said lever being pivotally mounted on the fixed pivot pin on the base plate at right angles thereto, said crank having a shoulder in its edge, and a pawl pivotally mounted on the said lever, said pawl contacting said shoulder for opening the said closing members upon actuation of said lever, and said lever having a cam surface provided on the under side facing said base plate and cooperating with said crank pin of said crank for closing the said closing members upon actuation of said lever.

2,894,514
SMOKER'S SET
Thomas J. Moore, Temple, Tex.
Application May 2, 1958, Serial No. 732,552
3 Claims. (Cl. 131—174)



2. A cigarette receiver comprising: a cylindrical, upright receptacle for cigarette residues, formed open at its upper end and having adjacent said upper end a continuous internal groove; a cover removably supported on the receptacle at said upper end thereof and having a cigarette holding center opening; and a plurality of leaf spring latch members angularly spaced about and secured to the underside of the cover in positions extending radially thereof, said members being formed with free outer end portions having tongues inclined upwardly and outwardly of the cover and adapted to engage in the groove to lock the cover to the receptacle; and buttons secured to and projecting upwardly from the respective members through the cover for depression by a user, said buttons being adapted to shift the members against the spring pressure thereof to positions disengaging the tongues from the groove to free the cover for removal.

2,894,515
PIPE PICK AND TAMPER
Eli F. Wismer, Jr., Havertown, Pa.
Application August 11, 1955, Serial No. 527,836
3 Claims. (Cl. 131—243)

1. A hand operated implement comprising a hollow cylindrical housing with another end thereof open, an inner end wall fixed to the end of said housing opposite said open end, a hollow plunger adapted to be telescoped through the open end of said housing into said housing end arranged for reciprocation into and out of said housing, said plunger having opposed inner and outer end walls, a coil spring in said housing normally biasing said plunger in a direction out of said housing, the inner end wall of said housing and of said plunger each having identically shaped openings therein with said openings each comprising a first axial bore sector and a second axial bore sector communicating therewith with said second axial bore sector having a diameter substantially greater than said first bore sector, means securing said plunger

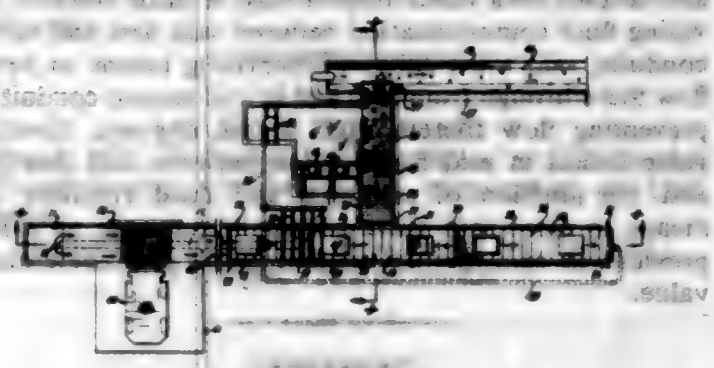
to said housing for sliding movement relative thereto with said openings in said inner end wall of said housing and said plunger having the respective second axial bore sectors thereof displaced circumferentially substantially 180°, an elongated member having a transverse cross-section of a shape the same as said openings and sufficiently smaller to permit free movement of said member through said openings, a cylindrical head fixed to one end of said elongated member said member having a transverse slot formed between said head and said one end thereof and a second slot formed adjacent the opposite end thereof for selective engagement with the respective end walls of said housing and said plunger upon rotation of said member releasably locking said member selectively to said housing and to said plunger, said member having an axial bore formed therein, and an elongated rod mounted on said plunger and slidably movable in the bore in said member whereby said rod may be projected from said member by moving said plunger inwardly of said housing with said member locked to said housing and when locked to said plunger said member and said rod being simultaneously projected from said housing on moving said plunger inwardly of said housing.

2,894,516

HYDRAULIC DUMPING APPARATUS

Charles W. Froehlich, Fullerton, Calif., assignor to Hunt Foods, Inc., Los Angeles, Calif., a corporation of Delaware

Application April 9, 1957, Serial No. 651,652
5 Claims. (Cl. 134—62)



1. A device of the character described comprising an open top elongated tank adapted to be filled with a fluid and having a fluid inlet at one end thereof and a fluid outlet at the other end thereof, said tank being adapted to have containers with articles contained therein dumped into said tank adjacent the inlet end thereof, means to cause fluid flow through said tank from said inlet end to said outlet end, a first endless conveyor means extending into said tank below the level of fluid when filled and intermediate the ends thereof to remove the containers therefrom, said first conveyor means having openings therethrough of greater size than said articles, and a second endless conveyor means extending into said tank intermediate said first conveyor means and said outlet to remove said articles from said tank, said second conveyor means having openings of smaller size than said articles.

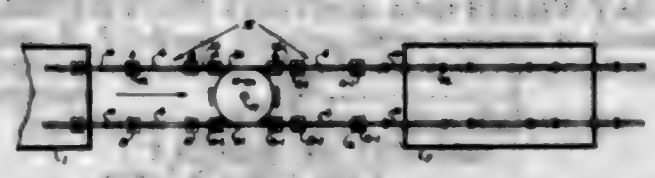
2,894,517

WORK-HANDLING APPARATUS

John V. Davis, Detroit, Mich., assignor to The Udylite Corporation, Detroit, Mich., a corporation of Michigan

Application March 29, 1956, Serial No. 497,784
8 Claims. (Cl. 134—77)

1. In a work-handling apparatus which includes a rail system having fixed aligned rails, and work-carrying means for pairs of workpieces, the workpieces in each pair being spaced apart transversely of said system, said work-carrying means being mounted on the rail system for movement therealong, a movable rail segment interposed in said system between fixed aligned rails, means movably mounting said movable rail segment for rotatable movement between two stop positions disposed 180 degrees apart for interchanging the positions of the workpieces in a pair supported thereon, means operatively associated with said movable rail segment for defining said stop positions, said movable rail segment in both of said stop positions being disposed in alignment with said last-mentioned fixed aligned rails so that workpieces are movable onto and off said movable rail segment from and to, respectively, said fixed aligned rails.

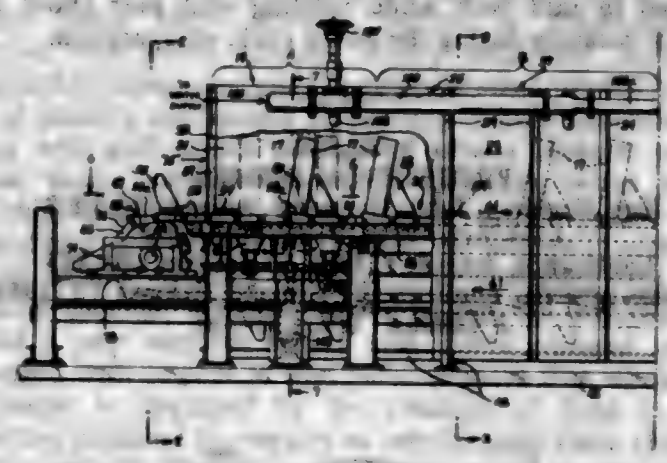


2,894,518

APPARATUS FOR HANDLING AND COOLING CAST METAL CAKES

Rhys E. Ryan, New York, N.Y., and Frank L. Tocher, Morris Plains, N.J., assignors to M. H. Treadwell Company, Inc., New York, N.Y., a corporation of New York

Application February 27, 1956, Serial No. 567,896
2 Claims. (Cl. 134—131)



2. In apparatus for handling and cooling cast metal cakes, the combination of a housing, a horizontal, intermittently movable conveyor extending within said housing and adapted to receive and move such cakes therewithin, and means for directing cooling fluid upon such cakes on said conveyor and within the housing; said conveyor having upright, cake-supporting members fixed thereto at spaced intervals therealong, and the combination, further, comprising a vertically movable cake-receiving mechanism within said housing, adapted to receive thereon such a cake moved into the housing, horizontally and laterally of said conveyor and between two of said cake-supporting members and to lower a cake thereon onto said conveyor, and means for controlling the intermittent movement of said conveyor and the vertical movement of the cake-receiving mechanism to cause said conveyor to remain at rest during such lateral movement of a cake between two of said cake-supporting members and during such lowering of said cake onto the conveyor.

2,894,519

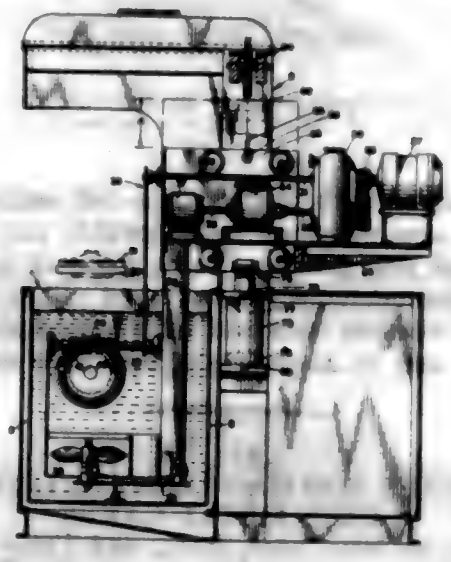
APPARATUS FOR QUENCHING RING GEARS AND SIMILAR ARTICLES

Hendrick J. Gregg, Arlington Heights, Ill.

Application May 5, 1954, Serial No. 427,709
8 Claims. (Cl. 134—147)

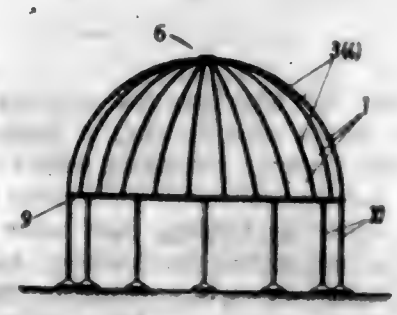
1. A gear quenching machine comprising a tank adapted to have a quenching bath therein, a rotatably

mounted support for supporting a hot gear to be quenched, means operatively connected with said support for moving said support into said bath to a position where the gear is completely immersed, means for rotating said gear about its axis of rotation while in said bath, and



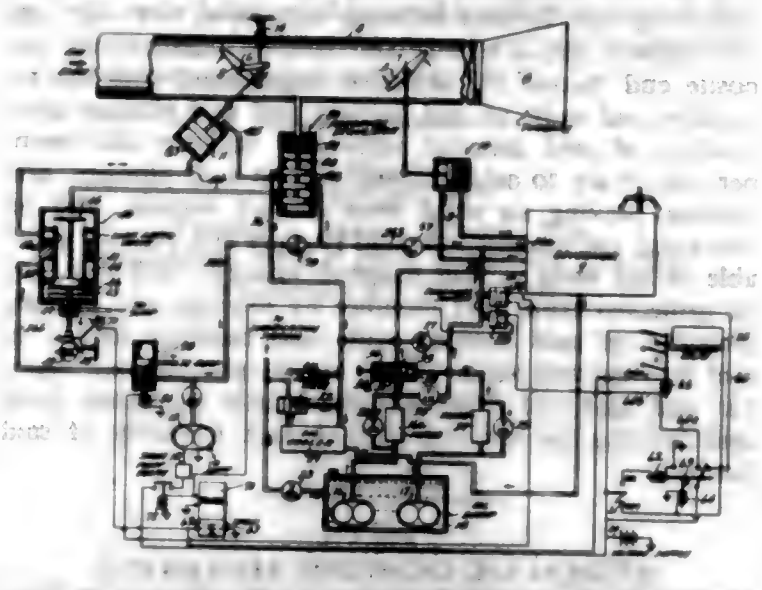
means for shifting the axis of rotation of said gear from a vertical charging position outside of said bath to a horizontal quenching position with the gear fully immersed in said bath while rotating said gear about its axis of rotation during the entire cycle of operation.

2,894,520
PROJECTION DOMES
Karl Roschke, Jena, Germany, assignor to VEB Carl Zeiss Jena, Jena, Germany
Application August 1, 1956, Serial No. 601,853
Claims priority, application Germany January 12, 1956
3 Claims. (Cl. 135—4)



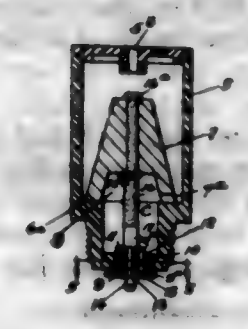
1. A projection dome for planetaria comprising an annular supporting means in combination with a foldable projection screen made of flexible material, said foldable projection screen when completely open forming an hemispherical projection dome having an equator about its lower edge and a zenith at the top, said projection dome having on its outer surface a plurality of runners disposed along meridian lines beginning near the zenith and running to the equator of the hemispherical projection dome, nonfoldable straight flexible rods disposed in said runners, said rods having ends which are detachably securable to said annular supporting means at about the equator of said hemispherical projection dome and the other ends of the rods being movably secured to a weighted supporting means at about the zenith of said hemispherical projection dome, said weighted supporting means being sufficiently heavy to flex said rods when said screen is open in viewing position to keep said screen in a hemispherical dome configuration which is maintained by the configuration of the screen.

2,894,521
CONTROL SYSTEM FOR TURBINE DRIVES
Granville E. Carleton, Beverly Farms, John W. Harrison, Danvers, Arnold M. Heitmann, Swampscott, and Philip Dantowitz, Mattapan, Mass., assignors to General Electric Company, a corporation of New York
Application May 31, 1955, Serial No. 512,024
7 Claims. (Cl. 137—17)



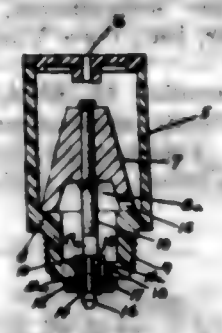
3. A fluid pumping arrangement comprising first and second pumps, a supply of fluid for each of said pumps, first and second fluid conduits connected to direct pressurized fluid from said first and second pumps to first and second fluid loads respectively, a third conduit providing fluid communication between said first and second conduits, said third conduit comprising means to permit flow therethrough from said first to said second conduit but preventing flow therethrough in the opposite direction, valve means in said first conduit between said first load and the junction of said first and third conduits, and means to close said valve means in response to a fluid pressure in said second conduit below a predetermined value.

2,894,522
VENT CAPS FOR AIRPLANE BATTERIES
Walter L. Gill, Redlands, Calif., assignor to Gill Electric Manufacturing Corporation, a corporation of California
Application November 4, 1955, Serial No. 544,934
6 Claims. (Cl. 137—43)



1. A low pressure valve of the character described formed as a one piece structure of rubber and comprising a central vertical tubular portion and a transversely disposed concavo-convex disc-like portion of much greater diameter than the tubular portion and located at the lower end of said tubular portion, the bore of the tubular portion being continued through the disc-like portion and terminating in a small area tapering valve seat at the bottom of and centrally of the disc-like portion, and a plurality of spaced, integral ribs extending lengthwise of the tubular portion and radially with respect thereto.

2,894,523
AUTOMATIC VENT CAP FOR AIRCRAFT STORAGE BATTERIES
Walter L. Gill, Redlands, Calif., assignor to Gill Electric Manufacturing Corporation, a corporation of California
Application January 9, 1956, Serial No. 557,922
3 Claims. (Cl. 137—43)

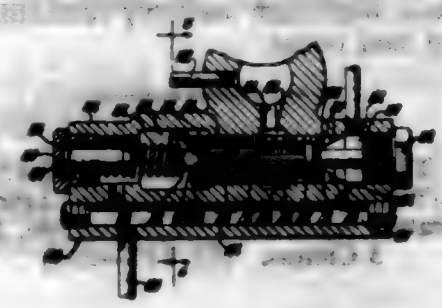


1. In a low pressure valve assembly an integral rubber element comprising a stem having a vertical channel formed axially therethrough having a high pressure valve seat at its lower end, a plurality of radial guide ribs upon the outer face of the stem, a circumferential notch formed around the stem adjacent its lower end to leave a protuberant head upon the lower end of the stem, and a disc like valve carried by the stem having its upper face slightly concave, and a washer-like, rigid member held to the stem by the protuberant head and underlying the disc like valve, said rigid member serving, upon upward movement of the stem, to compress the disc like valve and then limit the upward movement of the low pressure valve stem.

2,894,524
SAFETY VENT CAPS
Walter L. Gill, Redlands, Calif., assignor to Gill Electric Manufacturing Corporation, a corporation of California
Application February 6, 1956, Serial No. 563,522
3 Claims. (Cl. 137—43)

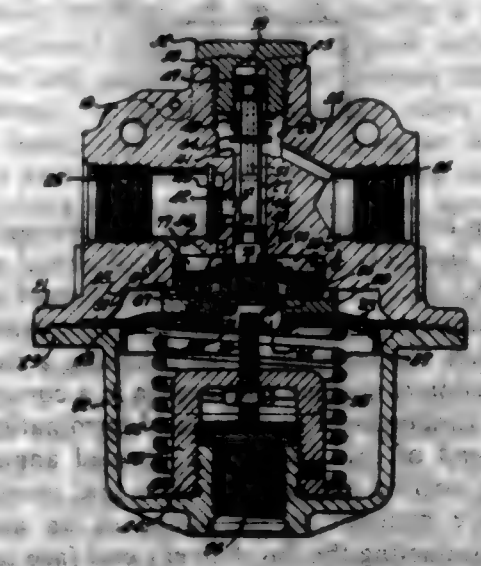
3. A vent cap of the character described comprising a casing, a tiltable weight therein, a high pressure valve of small area and a low pressure valve of larger area, said casing having a hole or more formed therein which extends from the underface of the casing to the interior of the casing, the low pressure valve seating upon the underface of the casing and controlling said bore, said low pressure valve having a port extending vertically therethrough and having a valve seat at its lower end with which the small area high pressure valve engages, means connecting the high pressure valve with the weight through which tilting of the weight moves the high pressure valve to its seat upon the low pressure valve and then draws upon both valves to move the low pressure valve to its seating position by the tipping of the weight, a safety gas escape port, a safety valve element which seats upon and controls the safety gas escape port, and means operable by movement of the low pressure valve under excess pressure upon the underside of the low pressure valve and which pressure is great enough to hold the weight elevated against gravity, to effect movement of the safety valve element to uncover said safety gas escape port and permit the escape of such excess pressure.

2,894,525
COMBINED FLOW CONTROL AND RELIEF VALVE
William F. Erickson, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 15, 1954, Serial No. 423,303
2 Claims. (Cl. 137—108)



1. A combined flow control and relief valve assembly comprising with a body member including an inlet chamber, a return passage, and an outlet passage in communication with said inlet chamber having a restriction therein, a sleeve element subject to the pressure of fluid in said inlet chamber and displaceable to interconnect said chamber and said return passage when such pressure reaches a predetermined value, said sleeve element having associated therewith yieldable means operating to bias the same toward a normal position and having an opening therein communicating with said return passage, a tubular plunger within said sleeve element biased by yieldable means therewithin, said plunger being subject to the pressure of fluid in a second chamber provided by said body member, said second chamber having communication with said outlet passage, a valve element seated by said plunger, and a stop member within said sleeve element so arranged with respect to said valve element that when said plunger is displaced by the pressure of fluid in said second chamber it operates to remove said valve element from its seat, thereby to interconnect said second chamber and said return passage via said opening.

2,894,526
PRESSURE REGULATING VALVE
Harry T. Booth, Dayton, and Thomas L. Lord, Middletown, Ohio, assignors to United Aircraft Products, Inc., Dayton, Ohio, a corporation of Ohio
Application July 26, 1954, Serial No. 445,584
3 Claims. (Cl. 137—116.5)



1. A pressure regulating valve, including a valve body having an inlet, an outlet and a vent opening, passages

respectively interconnecting said inlet and said outlet and said outlet and said vent, a diaphragm assembly installed across said vent to respond to pressure differences between said outlet and said vent, sealing means forming a part of said diaphragm assembly and separable from the diaphragm proper to permit flow from the outlet to the vent at a predetermined high pressure difference, disc valve means forming a part of said diaphragm assembly and separable from the diaphragm proper to permit flow from the vent to the outlet in response to a predetermined drop in outlet pressure beneath vent pressure, and a throttling valve movable by and under the control of said diaphragm assembly controlling flow from said inlet to said outlet.

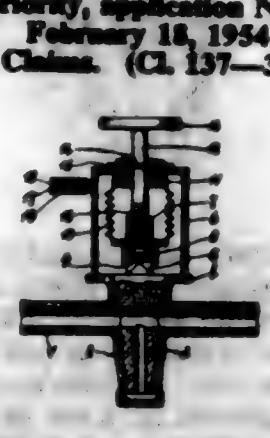
2,894,527
TWIN-ARCH PIPE LINE SPAN
Walter E. Riley, Scottsdale, Ariz.
Application April 30, 1956, Serial No. 581,714
3 Claims. (Cl. 137—236)

1. In a pipe line span for crossing an obstruction including a pair of curved pipes extending across the obstruction and disposed in the form of adjacent arches to be vertically movable with respect to each other, at least one strut extending between the two pipes and having a horizontal transverse bore in each end, a separate mounting plate on each pipe adjacent a respective end of the strut, each plate having a bore adapted to register with a respective bore in the strut, and a separate linking member in each bore at each end of the strut and in a respective bore in a plate which connect the two pipes together to form a system having one internal dampening capacity and natural frequency of vibration, the combination with said pipe line span of a compression spring disposed around at least one of the linking members at one end of the strut, and means for compressing the spring to urge that end of the strut and the adjacent plate together and increase the internal dampening capacity of the span and thereby alter its natural frequency of vibration.

2,894,528
FLAPPER VALVE
Robert E. Sykes, Evanston, Ill., assignor to Bell & Gossett Company, Morton Grove, Ill., a corporation of Illinois
Application December 3, 1954, Serial No. 472,988
3 Claims. (Cl. 137—238)

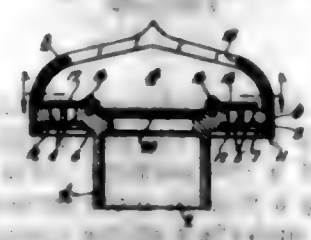
1. A non-lubricated, self-seating, positive-sealing flapper valve unit assembly comprising a cylindrical valve body having a flat face at the delivery end thereof with a plurality of circumferentially spaced passages extending endwise through the body, said body having a threaded external attachment surface engageable in a correspondingly threaded cylinder head member and terminating adjacent the inner end of said body in a beveled annuar surface for sealing, seating engagement with said member, a flat, flexing valve member in the shape of an annulus and normally contacting the flat delivery end face to mask the delivery ends of said passages, and means securing a limited portion of the member to the flat face at a point spaced from the passages means, said body having a wrench-receiving socket opening centrally through the outer end face thereof.

2,894,529
DEGASIFYING DEVICE
Jan Horseling, Emmasingel, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application December 30, 1954, Serial No. 478,779
Claims priority, application Netherlands February 18, 1954
3 Claims. (Cl. 137—315)



1. A degasifying device including a plug cock, comprising a housing having an open end, said housing having a flow passage therethrough and a tapered bore intersecting said passage and opening to the exterior of said housing through said open end, a plug having a flow passage therethrough, said plug being shaped to seat in said bore and rotatable selectively to flow enabling and preventing positions, enclosing means cooperable with said open end of said housing to cover the opening of said bore, said enclosing means being releasably secured to said housing by atmospheric pressure on the exterior thereof when the interior thereof is evacuated through said flow passage, and means for axially moving said plug and for rotating said plug while said enclosing means is secured to said housing thereby to provide communication between said flow passage of the said housing and said enclosing means.

2,894,530
VENT CAP FOR GASOLINE TANKS AND THE LIKE
Harold A. Stevens, Bala-Cynwyd, and Frank E. Mitchell, Sr., Churchville, Pa.
Application June 7, 1955, Serial No. 513,702
1 Claim. (Cl. 137—493.7)



A vent valve for gasoline and like bulk containers, said valve comprising an elongated base member and means adapted for mounting said base member on a vent pipe, the base being adapted, when mounted on a vertical pipe, to have its elongated dimension extend substantially horizontally, and a domed top forming with the base a normally sealed chamber having a flow path thereinto through said mounting means, said base member only slightly exceeding the diameter of the said mounting means widthwise, and materially exceeding said diameter in the lengthwise direction so as to extend beyond the mounting means, a port in the extended portion of the base member opening from the said chamber to atmosphere, and a check valve cooperating with the said port

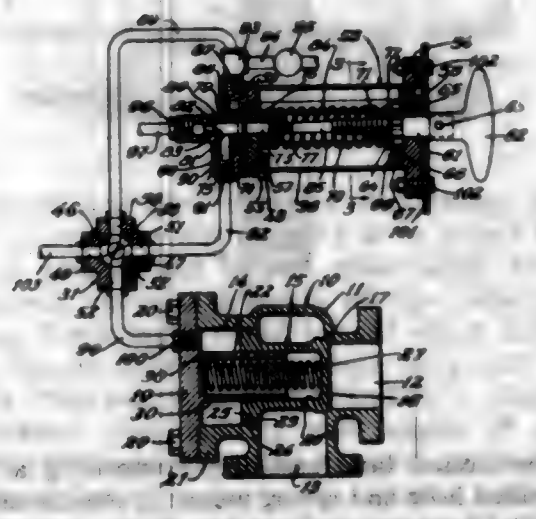
so as to permit flow from atmosphere to the chamber, while precluding flow in opposite direction, said top being composed of resilient material and having upwardly converging exterior surfaces and a normally closed slit at the juncture of said surfaces, said slit extending completely through the wall and lengthwise of the cover and terminating at each end within the body of the resilient top and thereby forming a normally sealed vent port adapted to open under a predetermined fluid pressure within the said chamber to relieve said pressure solely by spreading-apart of the confronting and normally contacting surfaces defining said slit without other relative displacement of said slit-defining surfaces, the said exterior surfaces of the top declining sharply from said slit-defining surfaces so as to shed water from extraneous source away from the slit.

2,894,531

PRESSURE RELIEF VALVE

David F. Thomas, West St. Paul, and Robert A. Hill, Minneapolis, Minn., assignors to Waterous Company, St. Paul, Minn., a corporation of Minnesota

Application July 11, 1956, Serial No. 597,153
1 Claim. (Cl. 137—489)



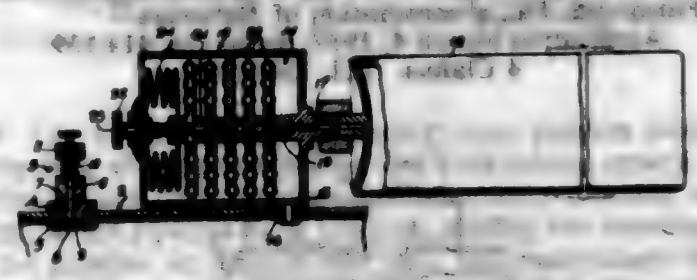
A remote control operated relief valve structure including a relief valve housing having an inlet and an outlet, a movably supported valve element within said housing and normally closing said inlet, a remotely located pilot valve including a pilot valve housing, a first fluid chamber and a second fluid chamber within said pilot valve housing, means connecting the first pilot valve chamber to said relief valve inlet, means connecting said second fluid chamber to said relief valve housing to subject one side of said movably supported valve element therein to substantially the same pressure as that existing in said second fluid chamber, the other side of said valve element in said relief valve housing being subjected to relief valve inlet pressure and being of less area than said one side thereof, said second fluid chamber having an outlet, a pilot valve element movably supported in said pilot valve housing and operable to close said second fluid chamber outlet, resilient means normally urging said pilot valve element into outlet closing position, fluid pressure in said first fluid chamber urging said pilot valve element into outlet opening position and operable when said first fluid chamber is subjected to abnormal pressures to operate said pilot valve element to open said second fluid chamber outlet, and a bleed passage between said chambers, whereby fluid pressure on opposite sides of said relief valve element normally holds this relief valve element closed, and whereby opening of said pilot valve element by an abnormal pressure relieves pressure on one side of said relief valve element whereby this element will open, and valve means in said means connecting said first chamber to said relief valve inlet and in said means connecting said second fluid chamber to said relief valve housing operable to disconnect said second fluid chamber from said relief valve and to connect said relief valve housing at a point in said one side of said valve element directly to said relief valve inlet.

2,894,532

VACUUM PACK AND CONTROL UNIT

John A. Gaylord, Pacific Palisades, Calif., assignor of one-half to Rocket Jet Engineering Corp., Glendale, Calif., a corporation of California

Application September 28, 1953, Serial No. 382,633
4 Claims. (Cl. 137—565)



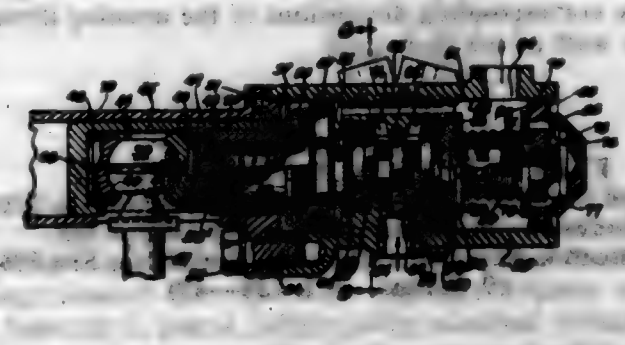
1. A vacuum pack control unit comprising, a combination with a vacuum pack container of a relief valve for admitting air into the container when the differential of pressure between atmospheric and that within the container exceeds a predetermined value, and a vacuum producing means comprising a vacuum tank, a valve member independent of said relief valve for controlling the withdrawal of air from the vacuum pack to said vacuum tank, and a diaphragm for controlling said valve member actuated by a differential in pressure between atmospheric and a pressure within said vacuum pack.

2,894,533

CLOSED CENTER VALVE AND SYSTEM

Oscar H. Banker, Evanston, Ill., assignor to New Products Corporation, Skokie, Ill., a corporation of Delaware

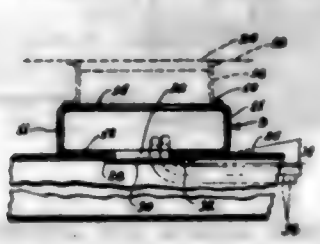
Application August 26, 1955, Serial No. 530,703
6 Claims. (Cl. 137—622)



3. A valve for controlling the operation of a double acting hydraulic cylinder or the like having a pressure differential operated element therein, said valve comprising a valve body movable with the pressure differential operated element, a manually operable valve slidable in the valve body, said valve body having an inlet port and an outlet port on each side axially of the inlet port, means establishing hydraulic communication between the outlet ports and each side of the pressure differential operated element, a land on the valve normally closing the inlet port, peripheral grooves one on either side of the land and each in substantial alignment with an outlet port, said valve upon axial movement thereof in the valve body bringing a peripheral groove into alignment with both the inlet and one outlet port, an abutment on the valve, an axially movable abutment on the valve body adapted to be engaged by the abutment on the valve, and means for subjecting the axially movable abutment to the pressure of the fluid in the peripheral groove in an axial direction to exert a force on the movable abutment

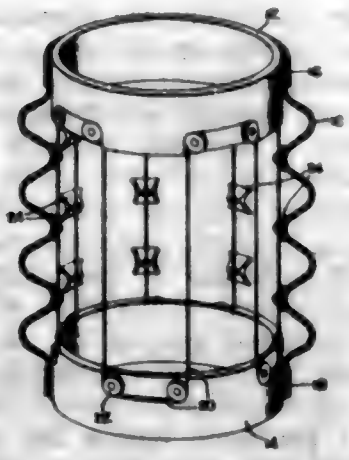
in opposition to the manual force thereon, said movable abutment comprising a ring, means for sealing the ring with respect to the valve body, a fixed abutment on the valve body, resilient means compressed between the ring and fixed abutment urging the ring toward the abutment on the valve, said valve and ring having cooperating surfaces for establishing a fluid tight seal therebetween.

2,894,534
HEADER DUCT WITH OUTLET FOR CELLULAR FLOORING
Frank J. Kennedy, Mount Lebanon, Pa., assignor, by mesne assignments, to H. K. Porter Company, Inc., Pittsburgh, Pa., a corporation of Delaware
Application March 4, 1954, Serial No. 414,139
4 Claims. (Cl. 138—48)



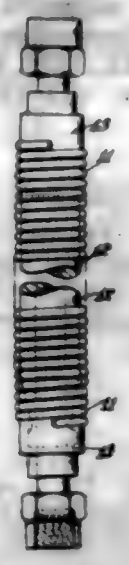
1. The combination, with a cellular floor duct having an opening in its top wall, of an electric wiring duct located on top of the cellular floor duct and extending longitudinally in a direction transverse of the direction in which the cellular floor duct extends and in a plane generally parallel to the direction of the cellular floor duct, said wiring duct having a top wall with an opening therein and a bottom wall having an opening therethrough for access to the interior of the cellular floor duct, the bottom wall having portions surrounding the opening therethrough, said portions extending downwardly through the opening in the top wall of the cellular floor duct for a distance greater than the thickness of the top wall of the floor duct and then extending outwardly to form a peripheral groove around the downwardly extending portions and between the bottom of the duct and the outwardly extending portions, the maximum dimensions across said outwardly extending portion of the bottom wall being less than the corresponding dimensions of the opening through the top wall of the floor duct.

2,894,535
FLEXIBLE PRESSURIZED CONDUIT
Siegfried Hansen, Los Angeles, Calif., assignor to Litton Industries of California, Beverly Hills, Calif.
Application September 26, 1955, Serial No. 536,596
19 Claims. (Cl. 138—49)



19. A flexible pressurized conduit which retains its flexibility when the internal pressure exceeds the external pressure, said conduit comprising: a flexible bellows section having first and second ends and a substantially constant mean cross-sectional area; a pair of annular end members affixed to opposite ends of said flexible section; a plurality of guide means positioned around said section at evenly spaced intervals along the length thereof, and linkage means intercoupling said guide means and said annular end members for maintaining constant the lateral area of said section when said section is subjected to bending moments along two orthogonal axes whereby the volume defined by said section is maintained constant in response to a bending moment in any direction.

2,894,536
HOSES
Alfred Erwin Reginald Arnot, Basingstoke, England, assignor to Emmanuel Kaye and John Reginald Sharp, both of Basingstoke, England
Application September 24, 1957, Serial No. 685,919
Claims priority, application Great Britain September 24, 1956
9 Claims. (Cl. 138—56)



1. A prestressed hose assembly comprising a flexible smooth-walled hose and spring means in tension along the length of the hose and anchored to the hose to maintain it in a state of longitudinal compression sufficient to substantially prevent stretching of the hose during use.

2,894,537
VENT PIPE
John H. Carr, Mountain View, Calif., assignor to Dura-Vent Corporation, a corporation of Delaware
Application September 27, 1957, Serial No. 686,767
2 Claims. (Cl. 138—63)

1. A section of a double-walled pipe having respective male and female ends whereby like sections are adapted to be telescopically fitted to one another, said sections comprising in combination an outer wall, an inner wall spaced from the outer wall and concentric therewith, the inner wall being somewhat the shorter and terminating longitudinally inwardly of the outer wall at, at least, the female end of the section, a first perforated collar recessively positioned between said walls adjacent the female end of the section and a second perforate collar recessively mounted at the other section end in abutting relation to the end of the inner wall, said section having the terminal portion of the outer wall extending beyond said first collar and expanded outwardly to form an annular female fitting between the walls, and at

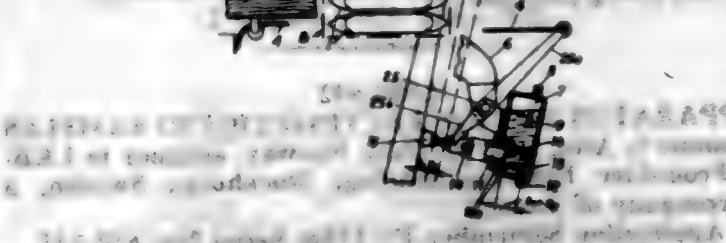
the male end having a terminal portion of the inner wall expanded outwardly, each of said collars comprising an annular, perforate, spacing element extending between the section walls, and having an inner peripheral flange depending from said element which parallels the inner wall of the section and frictionally engages the same and an oppositely directed outer peripheral flange which parallels the outer section wall and is mechanically secured thereto, and the inner flange at the male end of section line adjacent the interior surface of the expanded section of the inner wall.

2,894,538
COMPOSITE FABRICATION PIPE
Jack L. Wilson, Azusa, Calif., assignor to Temploc, Inc., Baldwin Park, Calif., a corporation of California
Application August 29, 1955, Serial No. 531,123
2 Claims. (Cl. 138—64)

1. A composite pipe structure comprising, in combination: a length of pipe adapted to be joined to other lengths of pipe in end to end relationship; formation discs disposed about said length of pipe adjacent ends thereof; an insulating material formed about said length of pipe, intermediate said formation discs and radially outwardly from said pipe to substantially a diameter of said formation discs, ends of said lengths of pipe extending beyond said insulating material and said discs; a continuous layer of laminated, flexible sealing material disposed about said insulating material, said sealing material integrally extending about axial ends of said insulating material and being bonded to said length of pipe remote from ends thereof; and integral axially extending portions formed from said sealing material disposed about said axial ends of said discs, said end portions extending axially along said pipe for a substantial distance terminating remote from ends of said pipe whereby, when lengths of said pipe are joined, a space is defined between axially adjacent ends of said insulating and sealing material about adjacent ends of said pipe thereby sealing said composite pipe structure against moisture intrusion into said insulating material, said laminations in said sealing material comprising at least one thickness of fibreglass cloth impregnated with a suitable resin.

2,894,539
PIPE SEALING APPARATUS AND METHOD
Robert W. Cook and Lee McBride, Decatur, Ind., assignors to Anthony Wayne Improvement Company, Fort Wayne, Ind.
Application December 6, 1954, Serial No. 473,402
15 Claims. (Cl. 138—97)

1. Mechanism of the character described comprising electrical means for locating abutting ends of adjacent pipe sections from the interior of said pipeline, storage means structurally associated with said electrical means for holding a quantity of sealing material and movable in the pipeline, material-applying means movable in the pipeline and having a supply connection with said storage means whereby a quantity of sealing material may be applied to a localized area of the interior of the pipeline, means operatively associated with said storage means and said applying means for effecting application of a predetermined measured quantity of said material to said located section ends, and means for moving said locating means and said material-applying means, in correlative position, in the pipeline whereby said abutting ends may first be located and said material-applying means then positioned in registry therewith for applying sealing material thereto.



4. The method of coating underground pipeline joints comprising the steps of making two excavations, spaced a predetermined distance apart and spanning a plurality of joints, to the pipeline to be serviced, making two openings in the pipeline in registry with said two excavations respectively, introducing a joint-locating and sealing apparatus through one opening into the pipeline, moving said apparatus through said pipeline from one of said excavations, alternately locating and locally coating each joint as it is traversed by said apparatus under control from said one excavation, and removing said apparatus from said other pipeline opening.

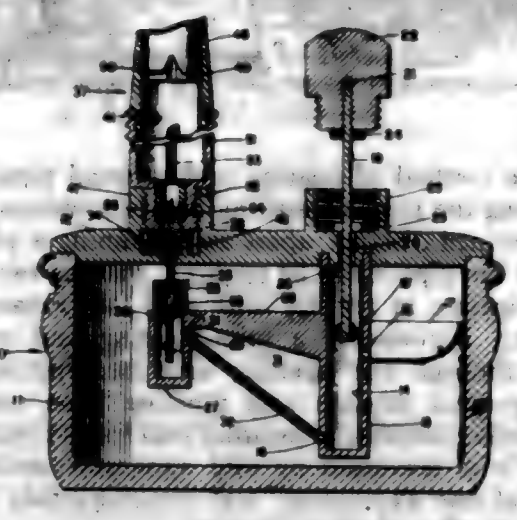
2,894,540
HYDRAULIC CHECK DEVICE FOR LOOMS
Adolphe Emile Zurn, Wurenlos, Switzerland
Application February 4, 1957, Serial No. 638,038
Claims priority, application Switzerland February 4, 1956
6 Claims. (Cl. 139—161)

1. On a loom having a lay, a shuttle, and a picker stick: a hydraulic check device cushioning movement of the picker stick, said device comprising: a fluid containing housing beneath the lay of the loom; a cylinder within said housing; a piston reciprocably mounted within said cylinder to move through a stroke with a checking portion and a shuttle releasing portion, said piston having a free end extending from said cylinder; a buffer on the free end of said piston, said buffer contacting the picker stick; and a linkage between said piston and the loom for moving the piston through the shuttle releasing portion of its stroke after it has completed the checking portion of its stroke, whereby the shuttle will be released from the picker stick.

2,894,541
FILLING DEVICE FOR FOUNTAIN PENS
Julian Gutierrez Marban, Havana, Cuba
Application December 13, 1956, Serial No. 628,170
10 Claims. (Cl. 141—30)

5. A device for filling a fountain pen of the type having a writing element, a refillable reservoir, and a member providing a self-sealing passageway in communication with said reservoir, comprising a fluid container, an auxiliary well disposed within said container having a

longitudinal bore communicating with said container through a fluid intake and terminating in a discharge aperture, a piston slidable in said longitudinal bore, a rod secured to said piston and extending to the exterior of said container through an opening in the upper wall thereof, a gasket associated with said rod and adapted to seal said opening, an open ended tube reciprocably mounted through an aperture in said container and disposed in a spaced relation with said piston, a socket carried by said container for detachably securing said fountain pen thereto in axial alignment with said tube, said



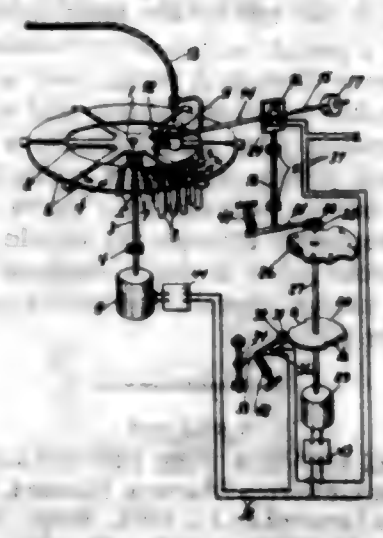
tube projecting outwardly from said container in one position for detachable engagement with said self-sealing passageway for filling said reservoir and being movable to an extended second non-filling position, means carried by said tube exteriorly of said container for sealing said aperture when said tube is in said filling position, a closure element carried within said container by said tube, and means communicating with said discharge aperture and providing a seat, said seat cooperating with said closure element for directing communication between said tube and said discharge aperture when said tube is in said filling position.

2,894,542

APPARATUS FOR COLLECTING LIQUID SAMPLES

Rasmus S. Alm, Ljan pr. Oslo, Norway, assignor to LKB-Produkter Fabriksaktieboleg, Stockholm, Sweden, a company of Sweden

Application September 17, 1956, Serial No. 610,145
Claims priority, application Great Britain September 30, 1955
5 Claims. (Cl. 141—130)



1. An automatic liquid sample collector comprising a table mounted in fixed bearings for rotation about a vertical axis, a plurality of substantially sector-shaped elements removably connected to said table, each of said elements having means for holding a plurality of receptacles arranged in a plurality of rows outwardly extending with respect to said vertical axis of rotation, a movable delivery device movable successively over all of the receptacles of a first outwardly extending row to deposit sample liquid therein, and means for subsequently rotatably indexing said table to position a subsequent row of receptacles adjacent said delivery device, said delivery device then moving to fill said subsequent row.

2,894,543

MITERING ATTACHMENT FOR POWER SAWS

Hyrle A. Ivy, Jr., Fort Wayne, Ind.

Application May 16, 1957, Serial No. 659,609
2 Claims. (Cl. 143—170)

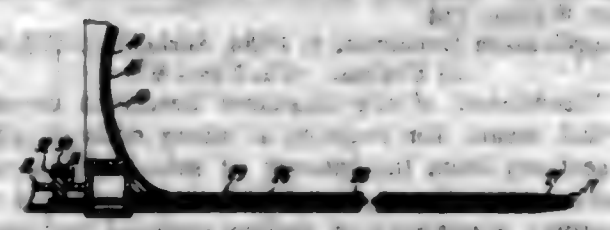
1. For a power saw of the type having a circular saw blade and a table intersected by the plane of said saw blade, an attachment comprising a base plate slidable in guided relation over the table and spanning said saw blade, dual work-carrying means mounted on the base plate, said work-carrying means comprising dual elongated members pivotally mounted about vertical axes on said base plate on opposite sides of said saw blade and adjustably movable about their pivotal mountings to determine their angular relation with said saw blade, a vertically extending plate mounted on each of said elongated members and adjustably shiftable along said elongated members, a depending plate hingedly joined along its upper margin to the upper margins of each of said vertically extending plates, means for adjustably fixing the angle between each of said vertically extending plates and its corresponding depending plate, a work carrying platform supported on each of said depending plates adjacent their lower margins, and means for adjustably raising or lowering one of said platforms along the face of its corresponding depending plate, whereby adjustment of the angular relation of said elongated members to said saw blade and adjustment of the angle between said extending and depending plates determines the compound angle of cut in work-pieces carried by said platforms, the raising of said one of said platforms on its corresponding depending plate permitting simultaneous sawing of work pieces carried on each of said platforms.

2,894,544

TREE AND BRUSH CUTTING ATTACHMENT FOR BULLDOZERS

Thomas A. Billings, Orlando, Fla.

Application October 11, 1957, Serial No. 689,595
3 Claims. (Cl. 144—34)



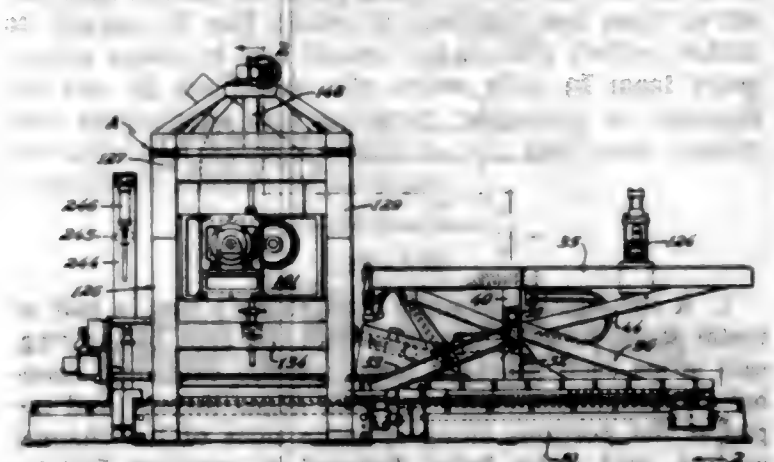
1. A saw unit for clearing forest growth and the like comprising a bulldozer blade adapted to be mounted forwardly of a tractor, a saw supporting member secured to the lower edge of said bulldozer blade and projecting forwardly therefrom in a substantially horizontal plane,

toothed saw means movably supported on said supporting member at the forward edge thereof extending substantially the full width of said bulldozer blade, driving means for said saw member for moving the teeth thereof relative to said supporting member and said bulldozer blade, and a plurality of elongated means on said supporting member projecting in rising and depending relation from said supporting member forming oppositely directed guide edges lying in parallelism with the longitudinal axis of the tractor extending from said bulldozer blade substantially to said saw means for biting into the cut bounding surfaces of objects being cut for resisting lateral displacement of the saw unit from a selected axis of movement paralleling said longitudinal axis, and for progressively spreading the surfaces of a cut made by said saw means as the saw means advances through objects being cut.

2,894,545
SCARFING MACHINE

Raymond E. Wirth, St. Paul, Minn., assignor to Rilco Laminated Products, Ramsey County, Minn., a corporation of Minnesota

Application December 15, 1955, Serial No. 553,241
21 Claims. (Cl. 144—125)



14. A board scarfing machine including an elongated table, means movably supporting said table for longitudinal movement thereof, a table top forming a part of said table, means tiltably supporting said table top on said table on a transverse axis, tilting means for tilting said table between horizontal position and a tilted position, cutter means in the path of movement of a board on said tilted table top, board clamping means engageable with a board on said table top to hold the board thereupon, means controlling said tilting means and operable by movement of said clamping means into clamping position to tilt said table, and means connected to said table to reciprocate the same while tilted beneath said cutter means between a starting position to a terminal position.

2,894,546
COMBINATION SAW, JOINTER, AND SANDER TOOL

William A. Eschenburg, South Beloit, Ill., assignor to Yates-American Machine Company, Beloit, Wis., a corporation of Delaware

Application November 23, 1955, Serial No. 548,614
3 Claims. (Cl. 144—251)

1. In a power driven combination tool having an upright supporting frame and a work table provided with adjoining portions which are at different elevations, individual tool accommodating slots in said table portions, a bracket pivotally mounted on said frame and a pair of tool carrying members rotatably mounted on said bracket, said tool carrying members being mounted for rotation about axes which are spaced from each other and from the pivotal mounting for said bracket whereby when said bracket is swung in one direction about its pivotal mounting the tool on one of said tool carrying members is moved into operative position in one of said tool slots and when said bracket is swung in the opposite direction about its pivotal mounting the tool on the other of said tool carrying members is moved into operative position in another of said tool slots, and a relatively thin plate-like cover member for the tool slot in the portion of the

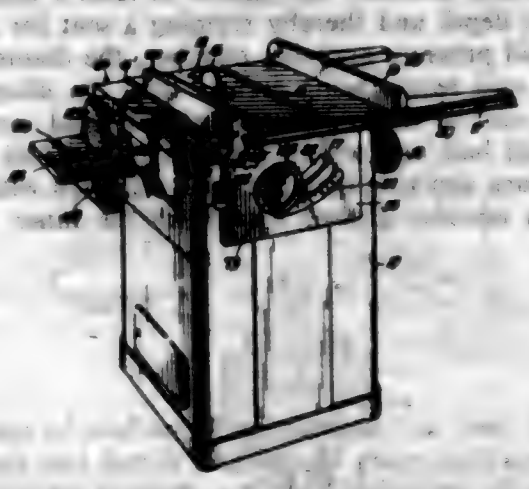
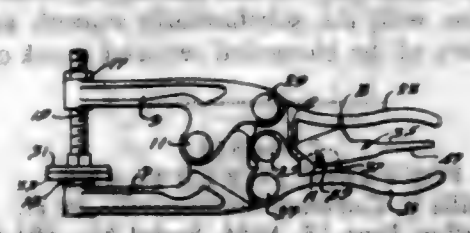


table which is at the lower elevation, said cover member having a mounting pivot, and a socket for said pivot at the edge of said table which socket is below the surface of said table whereby said cover member may be swung on its pivot from a position resting on said table to a lateral position clear of said table and depressed below the plane of the surface of said table for unobstructed movement of the work across said table.

2,894,567
LEVER UNLOCKING MEANS IN TOGGLE ACTION CLAMPING DEVICES

Friedrich W. Lampe, Detroit, Mich., assignor to Lapeer Manufacturing Company, Lapeer, Mich., a corporation of Michigan

Application May 1, 1957, Serial No. 656,321
2 Claims. (Cl. 144—302)



1. In a manually operated toggle action clamping device having a pair of clamping jaws, toggle linkage means connecting the jaws together, and a pair of handles connected to said linkage means for movement toward and away from each other to move said jaws toward and away from each other, respectively; an unlocking lever pivotally mounted intermediate the ends thereof on one of said handles so that said lever is between said handles, said lever having a first portion engageable with the other one of said handles for moving said handles apart in response to swinging movement of the lever in one direction, said lever having a second portion engageable with said linkage means in an open position of said jaws for moving said jaws toward closed positions on swinging of said lever in said one direction.

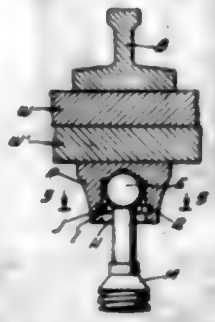
2,894,568
CLAMP WITH INTERCHANGEABLE PRESSURE PAD

Rudolph Peck and Malcolm N. Rich, Los Angeles, Calif.

Application January 9, 1956, Serial No. 557,886
1 Claim. (Cl. 144—303)

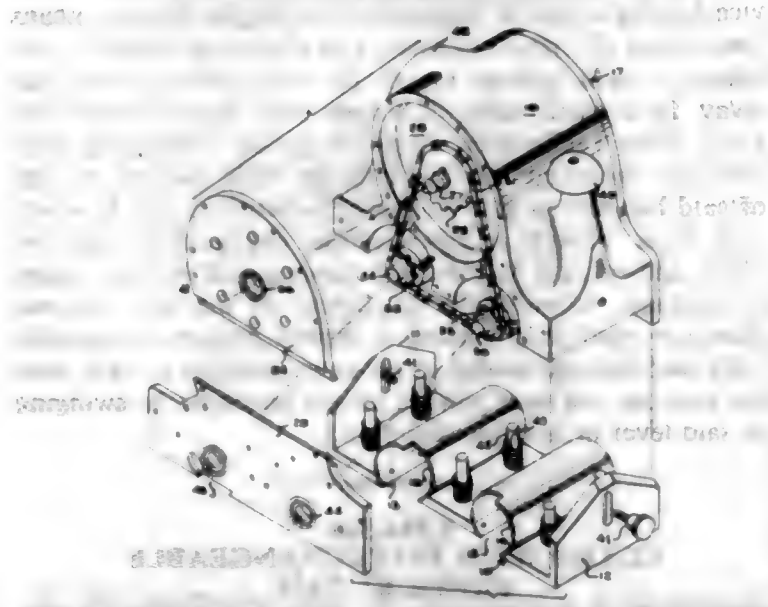
In a clamp having a ball-ended pressure applying member and a pressure plate detachably mounted on the ball

end thereof, said pressure applying member having a substantially smooth and unobstructed elongated reduced diameter shank extension thereon terminating at said ball end, the diameter of said ball end being materially greater than the diameter of said reduced shank extension, said pressure plate having a work engaging front face and a rear face, the rear face of said pressure plate being provided with an inwardly extending recess of substantially uniform diameter throughout at least a major portion of its depth and thereby forming a seat for the ball end of said pressure applying member, the diameter and depth of said recess being greater than the diameter of said ball end so as to allow a limited axial movement of the said ball end within the recess, said ball end of said pressure applying member being received within said recess, an annular groove formed in the inner wall of



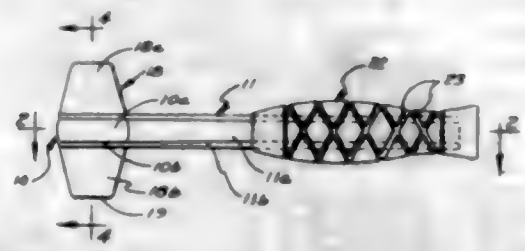
said recess adjacent the open end thereof and a split ring having a normal inside diameter substantially less than the diameter of said ball and an expanded diameter greater than the diameter of the ball disposed in said groove to thereby detachably retain the ball end of the pressure applying member within the recess, said recess having a depth less than the length of said elongated reduced shank extension, said recess also having a diameter materially greater than the diameter of said shank extension, the said pressure plate being thereby detachably affixed to said pressure applying member so as to allow limited axial movement as well as substantially free universal movement of said pressure plate, said universal movement being limited only by contact of the inner edge of the said recess with the substantially smooth and unobstructed surface of the elongated reduced shank extension.

2,894,549
PORTABLE POWER PLANE
Willis F. Garland, Sanbornville, N.H.
Application June 15, 1956, Serial No. 591,643
2 Claims. (Cl. 145—4)



1. A portable power plane comprising a base having an upstanding flange at each end thereof, there being a slot extending transversely thereof intermediate said flanges, a transversely disposed tunnel member bridging said slot and connected in communication therewith, a planer assembly including an upstanding housing having a bottom and spaced sides, and a horizontally disposed rotatable cutter extending transversely across the bottom of said housing within said tunnel member and spaced from the sides of said housing positioned so that the cutter has a peripheral portion projecting through said slot with said sides bearing against said flanges, a horizontally disposed drive shaft in said planer assembly and rotatably supported in the sides of said housing, a sprocket wheel carried by said drive shaft, another sprocket wheel carried by said cutter, a chain drivably engaged with said sprocket wheels, and means carried by each of said flanges and engaging with means formed in the housing sides for adjusting said housing relative to said base to thereby regulate the depth of cut of said cutter.

2,894,550
HAMMER
Howard W. Clay, Rockford, Ill., assignor to John R. Sussmann, Rockford, Ill.
Application June 19, 1957, Serial No. 666,522
3 Claims. (Cl. 145—36)

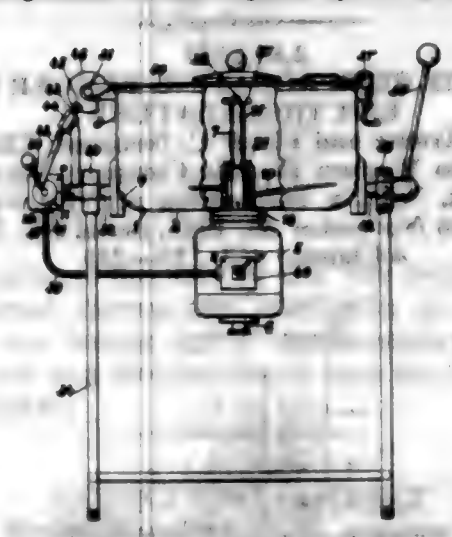


1. A soft-headed hammer comprising a ring, a pair of metal strips formed integrally with the ends of the ring, said strips each having a longitudinally extending channel portion intermediate the side edges thereof and coplanar flat portions along opposite sides of the channel portion, said strips being disposed in opposing face-to-face relation with the flat portions on one strip abutting the flat portions on the other strip, a soft metal head mounted in said ring, said ring having an arched cross-section with the concave side thereof facing inwardly to define a recess for retaining the head thereon, a hand grip surrounding one end portion of said strips to thereby retain strips in abutting relation, and means rigidly securing said strips to each other adjacent said ring to prevent spreading of the ring as the soft metal head deforms during use.

2,894,551
MEAT CUTTER
Fritz Otto, Hameln (Weser), Germany, assignor to A. Stephan u. Sohne, Hameln (Weser), Germany, a corporation of Germany
Application March 14, 1957, Serial No. 646,102
10 Claims. (Cl. 146—68)

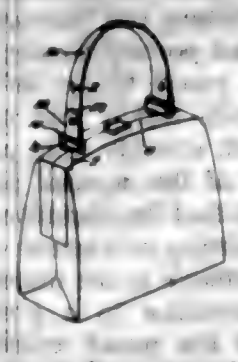
1. Cutter for cutting meat to small size for use in sausage and the like, comprising a bowl having a bottom, a side wall of circular cross section and a curved portion uniting said side wall and bottom in a smooth curve, a shaft extending up through a central hole in said bottom and projecting upwardly in said bowl, a plurality of elongated cutter blades fixedly mounted on said shaft and radiating from said shaft, said blades being near the bottom of said bowl and extending almost to the circular side wall thereof, each of said blades having a sharp leading edge and being inclined downwardly and rearwardly from said leading edge, means for varying said inclination of the cutter blades and driving means comprising a motor mounted on the under side of the bottom of said bowl and driving connections between said motor and shaft to rotate said shaft at high speed and force

said cutter blades through meat in said bowl to sever said meat into smaller pieces, the inclination of said blades and their position near the bottom of said bowl cooperating to force said meat downwardly toward said bottom and then radially outwardly above the bottom by centrifugal force, said meat being thereupon guided by said curved portion to flow upwardly along said side wall



and then radially inwardly and downwardly into the zone of rotation of said blades to resubject said meat to the cutting action of said blades and thereby further reduce the size of the pieces, the entire mass of meat being thus recirculated and subjected uniformly to repeated cutting action of said blades to cut said meat rapidly to small size suitable for sausage.

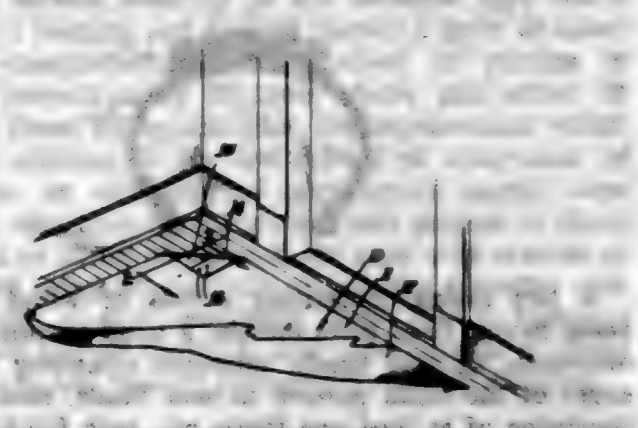
2,894,552
STRAP MOUNT
Bernard B. White, Shrewsbury, N.J.
Application April 11, 1958, Serial No. 727,918
1 Claim. (Cl. 150—12)



As an article of manufacture, a lady's handbag having a mouth with a pair of coacting side panels, a pair of parallel mounting sleeves positioned respectively near the lateral edges of the mouth and secured to the same side panel, said sleeves extending at right angles to said mouth, a carrying strap having reversely bent end portions secured to define loops, a substantially U-shaped link associated with each of said loops, each of said links having a pair of legs with a connecting cross piece joining one of the ends of each of the legs and formed integral therewith, each of said cross pieces extending through an associated loop, a sleeve rotatably mounted on each of said cross pieces, the free ends of the legs of each of said links being inwardly bent at substantially right angles to the legs to define mounting portions, the mounting portions of each of said links extending into the ends of an associated mounting sleeve pivotally to mount the links.

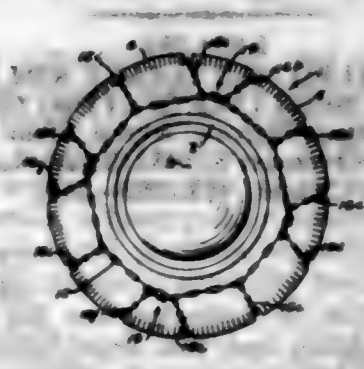
2,894,553
PLASTIC RUG COVER
Ezethel H. Carey, Gary, Ind.
Application October 8, 1957, Serial No. 688,960
1 Claim. (Cl. 150—52)

A rug and plastic cover therefor consisting of a rug, a single sheet of transparent plastic, said sheet being proportioned to overlie the length and width of the rug and provide side flap portions reversely folded beneath the rug from parallel sides, end flap portions reversely folded beneath the rug at parallel end portions thereby defining a double thickness of plastic at the extremities of each end flap, a pair of male snaps secured in the double thick portion of the end flaps and adjacent the



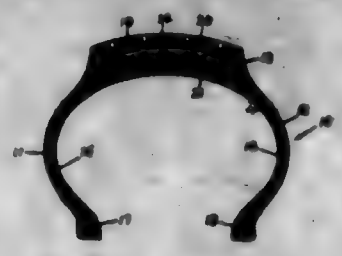
outer edge of said end flap positioned to point upwardly when said end flap is folded into place, said male snaps being secured through a double thickness of plastic, a pair of female snaps secured in the side flap portion to engage the male snaps on the overlapping end portions, and reinforcing tabs of plastic at each female snap to provide a double thickness of plastic to anchor the female snaps.

2,894,554
TRACTION MEANS FOR AUTOMOTIVE VEHICLES
Lacey Laughlin, Detroit, Mich.; Naomi Ruth Laughlin, executrix of said Lacey Laughlin, deceased
Application September 22, 1954, Serial No. 457,657
1 Claim. (Cl. 152—208)



Traction means for an automotive vehicle comprising in combination, a tire having a tread for operating upon the surface of a road or other way, said tire having a plurality of grooves positioned crosswise in the tread substantially perpendicular to the mid-circumferential plane of the tire, a tire chain having a stringer for extending along one side of the tire and a stringer for extending along the opposite side of the tire, a plurality of cross chains of substantially the same length interconnecting the stringers and disposed in a manner spaced relative to each other, a plurality of take-up devices in one stringer adjustable to extended position to thereby provide a circumferential extent of said stringer increased relative to the circumferential extent of said tire so that all cross chains freely pass over the tread, said take-up devices being adjustable to shorten said one stringer and draw the ends of the cross chains connected thereto radially inwardly relative to the tire to hold the cross chains in said grooves of the tire, each of said take-up devices being disposed in said stringer between two adjacent cross chains so that corresponding ends of said adjacent cross chains are drawn generally circumferentially toward each other upon shortening said stringer, there being at least one neutral cross chain between each of said two cross chains.

2,894,555
PNEUMATIC TIRE CASINGS
Pierre Marcel Bourdon, Paris, France, assignor to Compagnie Generale des Etablissements Michelin (Robert Puiseux & Cie), Clermont-Ferrand, France
Application February 17, 1955, Serial No. 488,946
Claims priority, application France September 29, 1954
1 Claim. (Cl. 152—361)

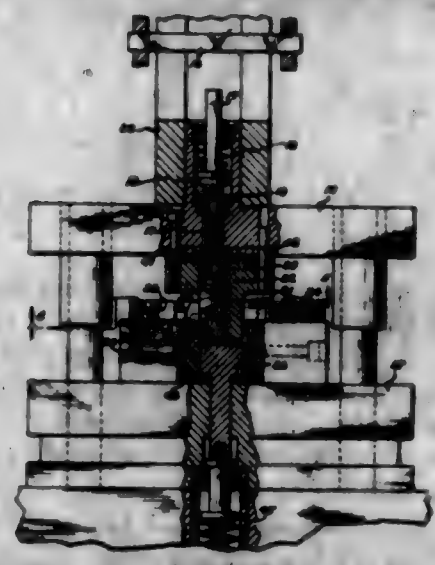


A tire casing comprising a pair of wheel engaging beads having bead wires therein, a tread portion disposed outwardly of said beads, sidewalls extending from the edges of the tread portion to said beads, each sidewall consisting of at least one fabric ply, each fabric ply consisting of cords embedded in rubber and arranged closely and uniformly side by side in the corresponding ply, said cords being anchored at one end to a bead wire and extending radially outwardly from the bead into the tread portion, said cords extending beyond the center line of the tread portion and terminating within the tread portion and thereby overlapping within the tread portion in such a manner that the overlap is confined within the limits of the tread portion of the tire casing, and at least two separate superimposed layers of cords within said tread portion and substantially coextensive with said tread portion and substantially parallel to the ground-contacting surface of said tread portion, the cords in each layer being substantially parallel and the cords of each of two layers extending in different directions and being inclined to the side wall ply cords in said tread portion.

2,894,556
PRESSURE SEALED MULTI-PART RIM WITH CONFINED RUBBER-LIKE SEALING GASKET
Burgess Darrow, Akron, Ohio
Application November 5, 1952, Serial No. 318,881
3 Claims. (Cl. 152—410)

1. An airtight multi-part rim for a large tubeless pneumatic tire, such as a truck, bus, or earth mover tire, and comprising an endless rim base, an endless side ring axially movable over at least a portion of the rim base, a split locking ring, one side of the rim base having a gutter removably receiving the locking ring and holding the locking ring so that a portion of it projects radially outwardly of the rim base, a first cylindrical portion on the side ring having axial sliding engagement with the rim base, a second cylindrical portion on the side ring offset radially and axially outward from the first cylindrical portion and encircling the projecting portion of the locking ring, a generally radially extending wall portion joining the first and second cylindrical portions of the side ring, said second cylindrical portion on the side ring passing over the radially outer portion of the locking ring with a close sliding fit, said generally radially extending wall portion, the second cylindrical portion, the rim base, and the locking ring defining a fully enclosed endless pocket of appreciable cross section, and an endless rubber-like gasket positioned in and substantially filling the pocket and engaging with the generally radially extending wall portion, the second cylindrical portion, the rim base and the locking ring, said second cylindrical portion of the side ring having an axial length greater than the axial thickness of the gasket.

2,894,557
SPLIT DIE RECIPROCATING BENDER WITH EJECTION FEATURE
William F. Krause and Elmer C. Neuhaus, Chicago, Ill., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application November 23, 1953, Serial No. 393,766
4 Claims. (Cl. 153—21)

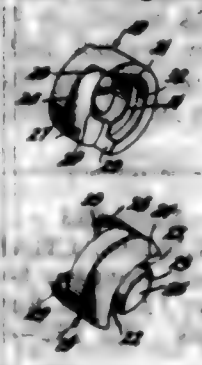


2. An apparatus for forming recesses in blanks having a transverse projection at one end thereof such that the projection projects inwardly over the recess when the recess is formed therein, which comprises a punch longitudinally split including one portion having no notch therein and a second portion having a notch therein on one side thereof, a punch holder holding the unnotched portion of the punch rigidly and holding the notched portion of the punch slidably, said punch holder serving to limit movement of the notched portion of the punch in one direction such that the operative ends of the punches are flush and permitting movement of the notched portion of the punch relative to the unnotched portion thereof in the other direction to a position in which the notched portion of the punch extends beyond the unnotched portion thereof a substantial amount, means for moving the notched portion of the punch toward the last-mentioned position, a backing rod mounted slidably in the die, means urging the backing rod toward a position flush with the opening of the die and permitting movement of the backing rod to a position in which the end of the rod is flush with the bottom of the die, said last-mentioned urging means being sufficiently strong with respect to the moving means that the notched portion of the punch is kept flush with the unnotched portion thereof until the formed article is ejected completely from the die.

2,894,558
INTERLOCKING RING-TYPE MANDREL
Francis J. Fuchs, Jr., Winston-Salem, N.C., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application July 28, 1954, Serial No. 446,313
4 Claims. (Cl. 153—63)

2. A mandrel which comprises a stem and a flexible body having one end attached to the stem, the flexible body including two interlocked rows of interconnected circular links having central apertures, the outer side of each link having a pair of arcuate grooves and a tongue, the inner side of each link having an arcuate notch

diametrically opposite the tongues, in each row the tongues of the links being fitted into the central apertures of adjacent links and portions of the links adjacent the notches being fitted into the grooves of adjacent links,



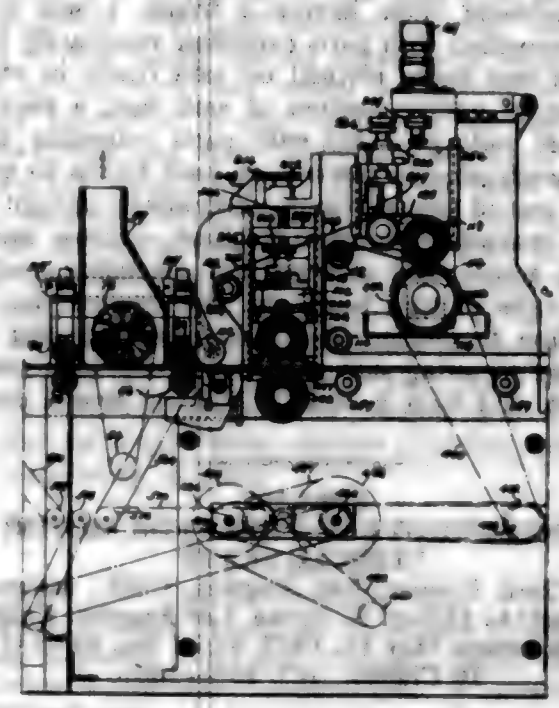
the inner sides of the links of one row having engaging means formed thereon, the inner sides of the links of the other row having means complementary to the engaging means and coupled thereto such that the two rows are interlocked.

2,894,559

LAMINATING MACHINE

Oreste B. Eccher, Brooklyn, N.Y., assignor to Potdevin Machine Co., Teterboro, N.J., a corporation of New York

Application February 21, 1957, Serial No. 641,568
20 Claims. (Cl. 154—1.6)



20. In a machine for applying a continuous length of flexible sheet material to one face of a plurality of flat workpieces as the workpieces are advanced successively through the machine, the combination of a loading station or magazine; work-feeding means for moving the workpieces successively from said magazine and advancing them successively in spaced relation; means in the path of the workpieces for successively receiving the workpieces from said feeding means and continuing their advance at an accelerated speed while effecting application of the sheet material to the workpieces, the accelerated speed of the workpieces gradually increasing the gap between successive workpieces; gap-sensing means in the path of the advancing workpieces for intermittently accelerating the work-feeding means when the gap between workpieces reaches a predetermined width, to reduce the gap between succeeding workpieces to a predetermined minimum width; cut-off mechanism beyond the point of application of the flexible sheet material to the workpieces; and a roller engaged and driven by the accelerated workpieces for bringing the speed of the feeding means and cut-off mechanism into synchronism with work speed, to effect operation of the cut-off mechanism at the gap between successive workpieces.

2,894,560

SURFACE COVERING PRODUCT AND PROCESS THEREFOR

Melvin C. Nelsen, Nutley, and Paul S. Hess, West Orange, N.J., assignors to Congoleum-Nelsen Inc., Kearny, N.J., a corporation of New York

Application April 15, 1955, Serial No. 501,642
10 Claims. (Cl. 154—39)

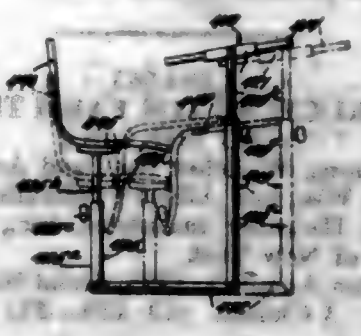
1. In a surface covering of the linoleum type which comprises a backing and bonded thereto a layer of cured linoleum composition containing about 20 percent to about 50 percent cured linoleum binder and about 50 percent to about 80 percent filler, the improvement which comprises utilizing as the sole drying oil component of said binder an oxidized and polymerized partial ester of tall oil, said ester having a resin acid content of about 10 percent to about 30 percent, the fatty acid content of said tall oil being substantially completely esterified with a polyhydric alcohol containing from 3 to 6 hydroxyl groups, said tall oil having a resin acid content of about 15 percent to less than 35 percent prior to esterification.

2,894,561

NESTING DESK-CHAIR COMBINATION

Charles Mackintosh, Los Angeles, Calif.

Application August 3, 1955, Serial No. 526,244
1 Claim. (Cl. 155—2)



A nestable combination chair and desk comprising a desk having a desk panel and desk legs on opposite sides of said panel, said panel sloping downwardly from front to rear, said panel and said desk legs defining an opening for nesting reception of a similar desk and chair combination, a folding chair comprising leg means, a generally horizontal platform supported at the upper end of said leg means, a generally horizontal seat normally resting on and supported by said platform at a level substantially below said desk panel, said seat being hingedly connected to the forward edge of said platform for forward and downward swing about a horizontal axis to a folded position in a substantially vertical plane, and a normally substantially vertical chair back rigidly secured to the rear of said seat for swinging with said seat to a folded position at a level below said desk panel wherein the said chair back is inclined downwardly and rearwardly from its upper end to its juncture with the said seat, connecting means joining said desk legs with said chair leg means, said connecting means inclining inwardly from front to rear, whereby the desk and the folded chair of said combination may be passed over both the desk and the folded chair respectively of a second identical combination without lifting either combination.

2,894,562

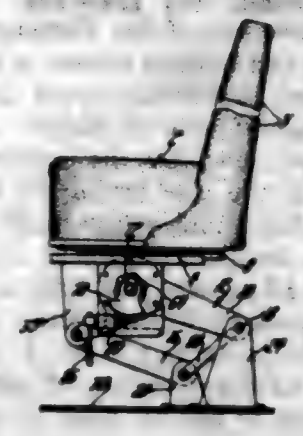
VEHICLE SEATS

Henry A. Peller, Euclid, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application June 6, 1955, Serial No. 513,454
4 Claims. (Cl. 155—51)

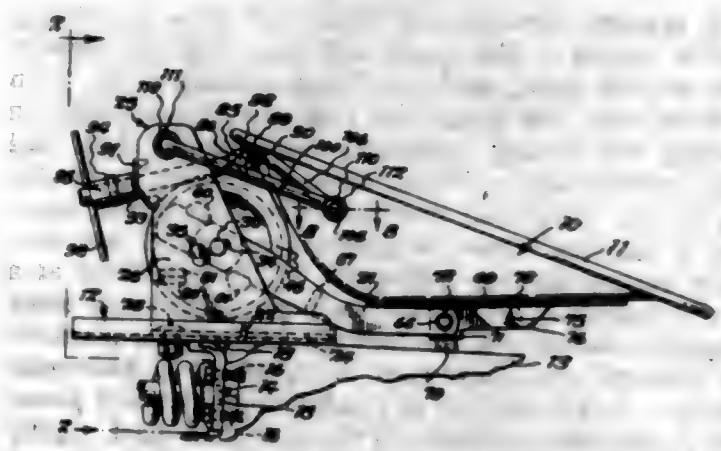
3. In a vehicle seat structure of the type including parallelogram guiding linkage for varying the vertical position of said seat, fore and aft adjustment means inter-

posed between said seat and said guiding linkage, means providing yielding support for said seat in any of its positions of adjustment, said means comprising a rubber torsion spring, said spring having an inner cylindrical member journalled on said seat, and an outer cylindrical member secured at the forward end of one of said links,



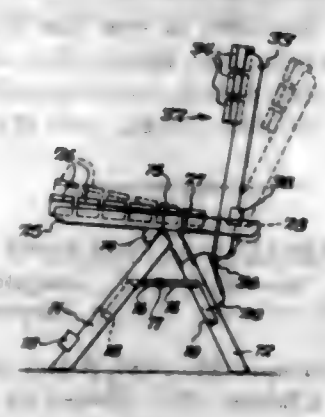
said inner cylindrical member having an end thereof formed to receive a gear segment, axially separable angular interlocking means retaining said cylindrical member and segment in engagement, and a worm drive operatively engaging said segment, said worm drive being supported on said seat and being manually rotatable to adjust the vertical position of said seat.

2,894,563
SEAT STRUCTURE FOR FARM TRACTORS AND THE LIKE
Allison K. Simons, Whitefish Bay, and Arthur O. Radke, Wauwatosa, Wis., and Albert F. Hickman, Eden, N.Y., assignors to Hickman Industries, Inc., Eden, N.Y., a corporation of New York
Application August 1, 1955, Serial No. 525,639
3 Claims. (Cl. 155—51)



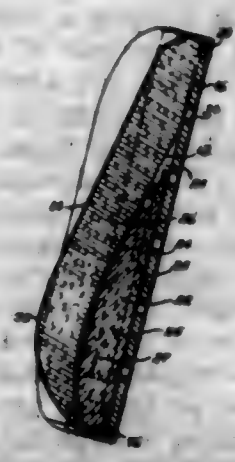
2. A seat structure, comprising a seat part, a base part arranged in rear of said seat part, a cross pin journalled in said base part to swing about a generally horizontal axis extending transversely of said seat part, a pair of relatively long lever arms severally fast to the opposite ends of said cross pin and extending in horizontally spaced side-by-side relation to extend fore-and-aft with reference to said seat part, bearing means pivotally connecting the front ends of said lever arms to said seat part and having an axis arranged generally parallel with said first generally horizontal axis, a pair of relatively short links arranged in horizontally spaced side-by-side relation generally parallel with and above said lever arms, bearing means journalling the rear ends of said links on said base part to swing about an axis generally parallel with said first generally horizontal axis, bearing means pivotally connecting the front ends of said links to said seat part and having an axis arranged generally parallel with said first generally horizontal axis, and means yieldingly resisting movement of said seat part with reference to said base part, comprising a rubber body surrounding said cross pin, a disk vulcanized to one side of said rubber body and having an opening through which said cross pin extends, lugs on diametrically opposite sides of said disk and projecting axially to embrace one of said lever arms and thereby compel said disk and said one of said lever arms to oscillate in unison, and means securing the opposite side of said rubber body to said base part.

2,894,564
RECLINING CHAIR
Anton Lorenz, Boynton Beach, Fla.
Application October 12, 1956, Serial No. 615,526
8 Claims. (Cl. 155—117)



1. A reclining chair having a frame, a seat having side rails provided with parts extending rearwardly therefrom, said seat being pivoted on said frame in rear of the transverse middle portion of said seat, a back rest having side rails provided with parts extending downwardly therefrom and pivoted on said frame to enable said back rest to swing from a substantially upright position to a rearwardly inclined position, a cross member extending across said downwardly extending parts of said side rails of said back rest and beyond the same into position to engage the rearwardly extending parts of said seat to swing said seat about its pivotal connections when said back is swung about its pivotal connections.

2,894,565
CONTOURING BACK REST FOR MOTOR VEHICLE SEATS
Lyman Clark Conner, Los Angeles, Calif., assignor of one-half to Hubert R. Crane, Los Angeles, Calif.
Application May 17, 1957, Serial No. 659,933
10 Claims. (Cl. 155—158)



10. In a vibration absorbing back rest for a vehicle seat, in combination, a frame including a rigid back panel and a pair of side rails projecting forwardly therefrom along the respective side margins thereof; a flexible padded cushion extending from top to bottom of said back rest, a web of smooth tough flexible sheet material having upper and lower ends secured to the respective upper and lower ends of said back panel and having side margins secured to said rails, said web extending across and bear-

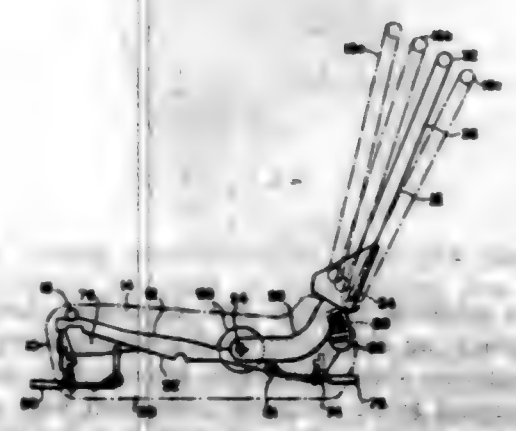
ing against the forward faces of said rails and bridging therebetween in forwardly spaced relation to said back panel to define a slide cavity extending uninterruptedly from the top to the bottom of said back rest; said cushion including a body of soft compressible resilient material extending the full height and width of said frame across said cavity and over the forward faces of said rails and a cover sheet attached to said rails extending forwardly around the sides of said cushion body and thence over the forward face thereof, said cover sheet being attached to the top and bottom of said frame and stretched under vertical tension but relatively slack transversely so as to provide a forward concavity in the upper area of said cushion; a contouring member having a height intermediate the full height and half the height of said cushion, interposed between said web and said forward face of the panel and slidably adjustable vertically between limit positions in the upper one of which its upper end is near the top of the back rest and in the lower one of which its lower end is near the bottom of the back rest, for effecting a forward bulge in the padded area of said cushion at a selected height above said seat; said contouring member including a rigid flat back plate slidably bearing against the forward face of said back panel, a core of compressible cushioning material supported against said back plate, and a retainer sheet of tough flexible substantially non-stretchable material secured to the upper and lower ends of said back plate and stretched therebetween over said cushioning core, said retainer sheet having sliding bearing engagement against the rear face of said web; and means for transmitting vertical sliding movement to said contouring member, said last means comprising studs rigidly secured to said back plate in laterally spaced relation, said back panel having vertical slots in laterally spaced relation corresponding to that of said studs, through which said studs extend to the back side of said back panel, and an actuator bar projecting transversely adjacent said back side of the back panel, secured to the rear ends of said studs and projecting laterally beyond the side margins of said frame to provide a pair of handles adapted to be grasped by an occupant of the seat for transmitting vertical adjusting movement to said contouring member.

2,894,566

SEAT STRUCTURE

Elmer A. Herider, Dearborn Township, Wayne County, and Kennard Pitts, East Detroit, Mich., assignors to Rockwell-Standard Corporation, a corporation of Pennsylvania

Application September 19, 1955, Serial No. 534,972
11 Claims. (Cl. 155—163)



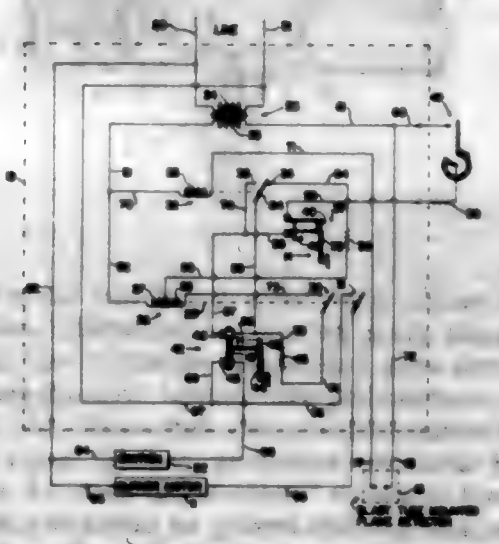
1. In a seat support construction including a seat frame, a back rest mounted thereto, and a locking device having a normally advanced plunger for locking the back rest in adjusted positions, the improvement comprising actuator pedal means of a construction which by means of first and second fixed support members is adapted to be operatively mounted on a supporting structure, said pedal means including a plunger release cable, a horizontally disposed pedal connected to the release cable at a first portion of the pedal intermediate its opposite ends, a first Z-bar support member fixed with one end in depending relation and supporting one of the ends of the pedal thereat to provide for swinging movement of the latter laterally and vertically spaced therebelow, a second guide support member fixed in depending relation at a location laterally spaced from the Z-bar member, and a vertically disposed element slidably related to the guide member and connected to a second portion of the pedal to guide the same to conform to a generally vertical path of travel, said first and second portions of the pedal being located in closely spaced proximity to one another.

2,894,567

BURNER CONTROL APPARATUS

Carl J. Bisbofberger, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

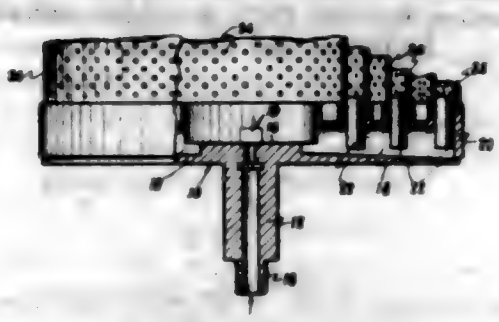
Application June 28, 1957, Serial No. 668,654
5 Claims. (Cl. 158—28)



1. Burner control apparatus for use with a fuel burner unit having means responsive to the need for operation of the fuel burner unit, comprising; a control relay having a tapped winding and an armature including switch means controlled thereby, one end terminal and the tap of said relay winding defining a first portion of the winding and the other end terminal and the tap of the winding defining a second portion of the winding; a safety lockout switch having an electrically energizable actuator and a normally closed switch controlled thereby, a timer having an electrically energizable actuator and a normally closed switch controlled thereby, flame responsive means including means adapted to be positioned to sense the presence of flame at the fuel burner unit and including a first switch which is closed in the absence of flame and a second switch which is closed in the presence of flame, a source of voltage; circuit means adapted to be controlled by the means responsive to the need for operation of the fuel burner unit connecting said first portion of said relay winding, said safety switch actuator, said first flame responsive switch, said timer switch, and said safety switch in a series circuit to said source of voltage to thereby energize said control relay; circuit means controlled by said control relay switch means arranged to energize said fuel burner unit; circuit means connecting said second portion of said relay winding and said timer actuator in series with each other and in parallel with the series connected safety switch actuator and first flame responsive means switch, the relative impedances of said safety switch actuator and said timer actuator and the position of said tap on said relay winding being such that so long as said first flame responsive

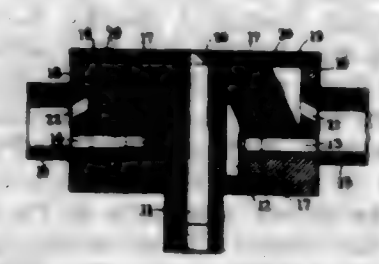
means switch is closed said safety switch actuator is operatively energized and said timer actuator is operatively de-energized; and further circuit means connecting said second flame responsive means switch in parallel with said timer switch; said flame responsive means being operative upon flame being established at the fuel burner unit to open said first flame responsive means switch and thereby de-energize said safety switch actuator and operatively energize said timer actuator, and to subsequently cause said timer switch to open, and to thereafter maintain said control relay continuously energized through both said first and second portions of said control relay winding so long as a flame continues to be present at the fuel burner unit.

2,894,568
LIQUID FUEL BURNER PLATE
Lynn O. Selby, Old Saybrook, Conn.
Application July 19, 1955, Serial No. 522,982
4 Claims. (Cl. 158—88)



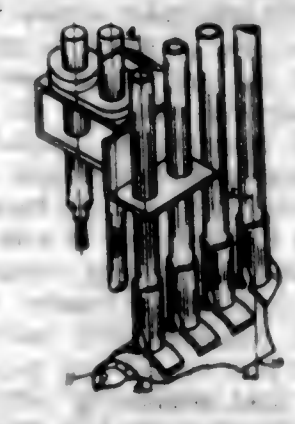
1. A burner plate for a liquid fuel burner comprising an integral plate having a substantially horizontal and flat central area, fuel supply means to said area, annular grooves surrounding said central area adapted to receive wicks therein, continuously outwardly and downwardly inclined channels extending radially from said center area, said channels intercepting each of said annular grooves, said grooves having an outwardly increased distance from the bottoms of said channels, and said central area being above any portion of the bottom surfaces of said grooves.

2,894,569
BURNER FOR GAS GENERATORS
Leon Jacolev, Upper Montclair, N.J., assignor to The Texas Company, New York, N.Y., a corporation of Delaware
Application January 25, 1952, Serial No. 268,194
2 Claims. (Cl. 158—99)



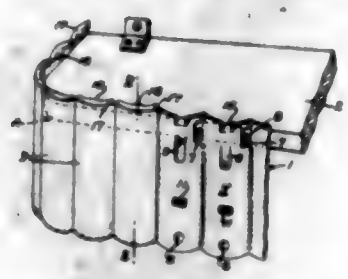
2. An annular type burner head, for use in a synthetic gas generator, having a flame exposed flat surface with openings which are the ends of passageways providing reactants separately for said gas generation, said passageways comprising a central axial passageway for the provision of one of said reactants and a plurality of passageways spaced in concentric relationship thereto for providing the other of said reactants, cooling chambers for said head comprising an inner chamber located between said central axial passageway and said plurality of passageways, and an outer chamber located concentrically exteriorly of said plurality of passageways, means for supplying coolant such as water to said chambers, said outer chamber having outlets to said flame exposed surface defined as passageways angularly disposed at an acute angle with respect to the axis of the burner and with respect to a radial plane of the burner to provide coolant tangentially into the reaction zone with swirling motion about the axis of the burner head to form a protective blanket of steam between the flame of the reaction zone of said generator and said flame exposed flat surface.

2,894,570
GAS BURNER
Joseph M. Downing, Dayton, Ohio
Application May 24, 1954, Serial No. 431,659
5 Claims. (Cl. 158—115)



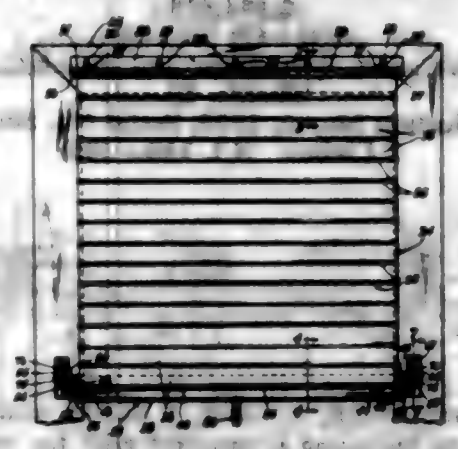
5. A gas burner including a pipe open at one end to receive gas under pressure and closed at its opposite end, there being a series of holes in the wall of said pipe for discharge of the gas in radial longitudinally spaced apart jets; characterized by burner tube mounts having cut out portions permanently mounted to said pipe over each of said holes, in alignment therewith, a burner tube telescopically received by each of said mounts having cooperating means to selectively limit the telescoping relation therebetween, bracket means mounted on adjacent burner tubes including a slotted wall portion and igniter means having connector means fixed thereto slidably engageable in the slotted wall portion of said bracket means for quick detachment therefrom as required, said igniter means being adapted to discharge a pilot flame between said adjacent tubes.

2,894,571
WINDOW CORNICE BOX FACIA
Andrew J. Teti, Modesto, Calif.
Application February 20, 1956, Serial No. 566,574
8 Claims. (Cl. 160—38)



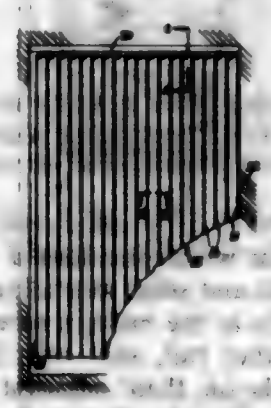
1. In a window cornice box extending horizontally when in place, an elongated flexible transversely rollable facia foundation sheet extending horizontally and forming the vertical front normally concealed wall and ends of the box, said sheet formed with a series of vertical corrugations across the sheet, said corrugations taking the form of outwardly transversely arched convex portions meeting at their vertical junctures along weakened scored lines formed transversely in said sheet to facilitate rolling and bending the sheet transversely without deforming the arched portions.

2,894,572
ROLL-UP AWNING
Harry Nelson, McKeesport, Pa., assignor to Artcraft Venetian Blind Manufacturing Company, St. Louis, Mo., a corporation of Missouri
Application January 27, 1956, Serial No. 561,900
4 Claims. (Cl. 160—62)



1. A roll-up article of the kind described, comprising a hollow winding cylinder; an end cap thereon, the end cap having a center bearing therein, a rod rotatably supported in the bearing and projecting into and out of the cylinder, the cylinder having an integral portion therein to render it non-circular, the portion extending along the length of the cylinder, a spring retaining device within the cylinder engageable over the non-circular integral portion, whereby it is slidable along the interior of the cylinder, but not rotatable therein, a torsion spring in the cylinder attached at one end to the rod and at the other end to the spring retaining device, a looped cotter key through the rod inside of the end cap to prevent withdrawal of the rod from the cylinder when the end cap is in place, a hole through the end cap opposite the loop in the key, and a removable pin engageable through the hole and the loop to prevent relative rotation between the rod and the cylinder, and bracket means attachable to a wall, or the like, to which the outer end of the rod is attached.

2,894,573
ACCORDION-TYPE DOORS AND THE LIKE
Joseph Rosenfeld, New York, N.Y.
Application March 19, 1958, Serial No. 722,414
5 Claims. (Cl. 160—84)



1. In a folding accordion-type door and the like, a closure member arranged to fold zig-zag into vertical panels of equal width, an elongated track member adapted to be secured near the closure member along the top edge thereof, a series of elements positioned in succession along the track member and independently slidable therealong thereon; each of said elements presenting a downward shank respectively; each panel of a series of successive panels, depending from one of said shanks respectively; the axes of alternate shanks being in one plane and the axes of the remaining shanks being in a second plane; said planes being spaced and parallel, all of said shanks being axially turnable in relation to said track member; the respective distances between the axes of turn of the shanks which are on any two successive panels and the respective distances between the vertical center lines of successive panels, being all equal to each other when measured along the closure member spread flat; the vertical center line of each panel being a predetermined distance from the axis of turn of its associated shank.

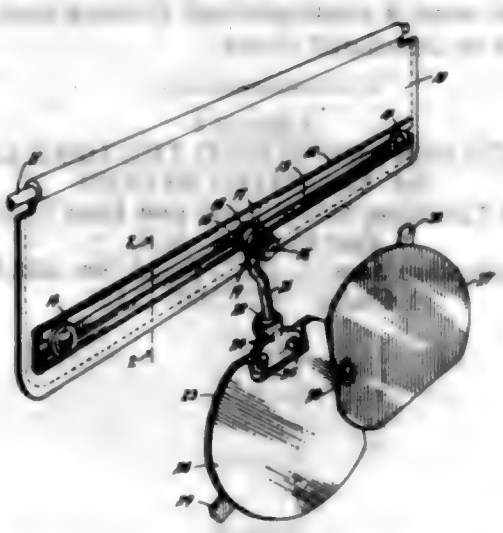
2,894,574
DEVICE FOR MODIFYING THE OPERATION OF VENETIAN BLINDS
Frank Miccichè, Floral Park, and John L. David, East Meadow, N.Y.
Application June 7, 1957, Serial No. 664,383
1 Claim. (Cl. 160—115)

The combination with a Venetian blind having at least two dual vertically disposed tapes, each formed of a pair of confronting interconnected strips of flexible material and a plurality of slats supported in spaced horizontal relationship by said tapes, of a plurality of spaced eyelets on at least one strip of each tape and a clip carried by and engaging at least two eyelets on each of the last said strips, each of said clips comprising an elongated member having its ends bent upon themselves to form two hooks in spaced relationship, each of said hooks extending through and engaging an eyelet with the engaged eyelets on each strip being spaced apart a distance greater than the distance between said hooks to shorten one strip of each tape relative to the other strip of each tape.

2,894,575
CURTAIN CONSTRUCTIONS
Milton Kalder, Brooklyn, N.Y.
Application March 21, 1957, Serial No. 647,656
2 Claims. (Cl. 160—124)

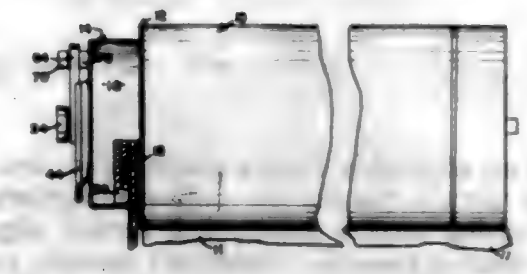
2. In an adjustable curtain construction, two laterally adjacent curtain panels, the adjacent portions of said panels having vertical longitudinal beaded edges, and a tubular fastening member detachably securing said panels together, said tubular member having a vertical longitudinally disposed slitted portion flanked by two inwardly and rearwardly extending longitudinal walls, said walls converging inwardly towards each other, whereby a longitudinal indenture with angularly disposed walls is provided along said member, said tubular member being internally proportioned to slidably receive therein and frictionally engage said two laterally adjacent beaded edges on opposite sides of said inwardly extending walls, said slitted portion being proportioned to receive therethrough the two adjacent panels of said respective beaded edges, the innermost edges of said inwardly extending angularly disposed walls being in engagement with said beaded edges.

2,894,576
ADJUSTABLE GLARE SHIELDS AND MIRROR ATTACHMENTS FOR AUTOMOBILE VISORS
Albert Williams, Lafayette, Colo.
Application June 3, 1957, Serial No. 663,179
1 Claim. (Cl. 160—220)



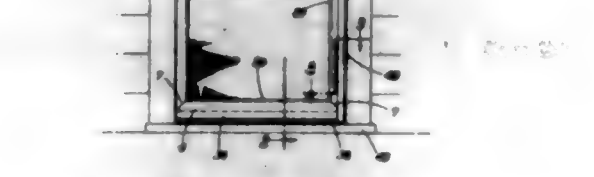
An adjustable glare shield comprising: a movable automobile visor horizontally pivoted at its upper edge; a channel track member having a longitudinally extending open slot in its outer face; means securing said track member horizontally on the rear face of and extending along the lower edge of said visor, with the slot therein facing rearwardly; a slide member mounted to move longitudinally in said channel track member; a mounting screw threaded through said open slot and into said slide member; a bracket arm rotatably mounted on said mounting screw; a glare shield plate connected by a ball and socket universal joint to said bracket arm; a spring-loaded friction element acting to both frictionally resist rotation of said bracket arm on said mounting screw and to simultaneously and resiliently maintain the bracket arm at any desired angle on said mounting screw and the slide member at any desired preset position along said track member, and a cover plate pivotally mounted on on side of said shield plate for swinging movement to expose or cover a selected area of said shield plate.

2,894,577
SHADE ROLLERS
Blanchard D. Smith, Atlanta, Ga.
Application February 18, 1958, Serial No. 715,966
11 Claims. (Cl. 160—299)



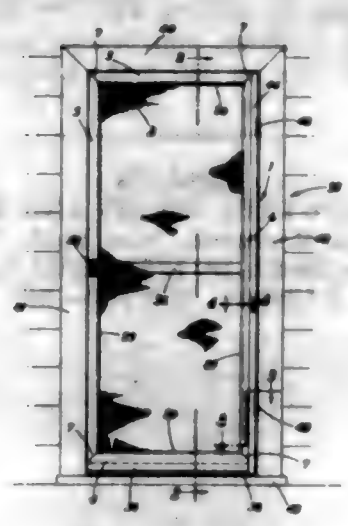
1. In a shade roller to be supported on a rigidly mounted bracket, a shade roller, a roller shaft on one end of said roller for rotation with said roller, a first friction means mounted on said shaft for rotation therewith, a bracket attachment member adapted to be attached to the mounted bracket, second friction means on said bracket attachment member engageable when said shade is at rest with said first friction means, resilient means between said roller shaft and said bracket attachment member normally resiliently and movably mounting said first and said second friction means in engagement with each other thereby preventing movement of said roller relative to the mounting bracket, said resilient means being flexible in response to movement of said shade roller to disengage said first and second friction means so that said roller can be rolled to adjust said shade height, said friction means returning to engagement at selected position to hold said roller in place.

2,894,578
ROLLER SHADE
Orville S. Caesar, Barrington, and Joseph G. Stieber, Skokie, Ill.
Application May 6, 1955, Serial No. 506,469
2 Claims. (Cl. 160—308)



1. In combination, a roller, a shade wound on said roller, means including a sprocket gear for rotating said roller, an endless chain meshing with said sprocket gear and depending therefrom, a stop member pivoted on the axis of said sprocket gear and movable between two positions, and stationary means engageable by said stop member in each of said positions, said stop member being engageable with said chain in one of said positions and being adapted to hold said sprocket gear against rotation in one direction when in the other of said positions.

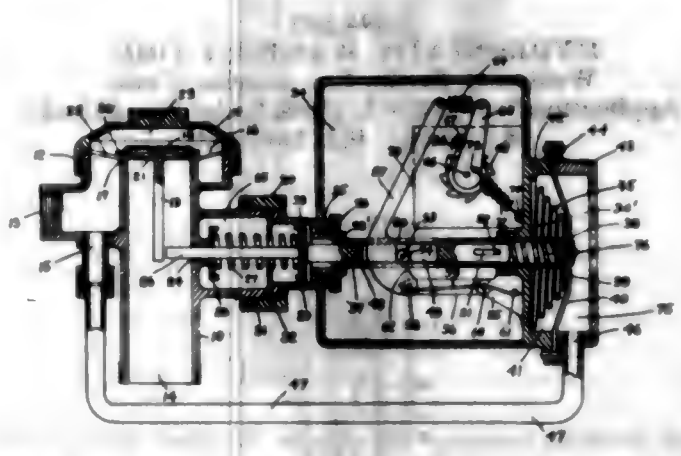
2,894,579
SCREEN DOOR WITH METALLIC FRAME
David Jordan Rust and Jack H. Jensen, San Leandro, Calif., assignors to Rylock Company, Ltd., San Leandro, Calif., a corporation of California
Application July 22, 1954, Serial No. 444,948
1 Claim. (Cl. 160—378)



In a screen door which includes a frame having vertically spaced rails and stiles extending between and connected to said rails at the ends; a screen extending from one rail to the other rail, said rails being formed with full-width channels on their adjacent edges, said channels opening toward each other and each being defined by a pair of spaced inwardly projecting flanges, the ends of the screen being cradle-folded and engaged in corresponding channels, horizontal screen securing and tensioning bars extending inwardly of the corresponding rails and said bars having vertical flanges projecting into the channels within said cradle-folded ends of the screen, and screws adjustably securing the bars to corresponding rails whereby tightening of the screws causes relative separation of the bars and tensioning of the screen, the stiles including vertical members lapping the adjacent side edge portions of the screen and said side edge portions remaining free; said vertical members on the

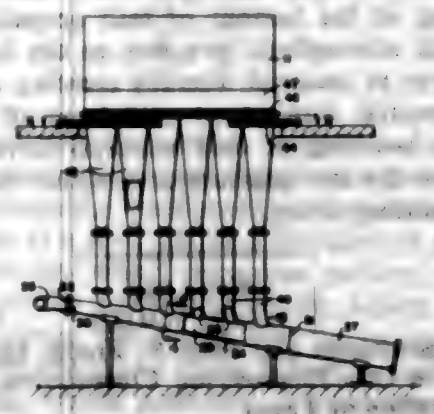
stiles being inwardly projecting vertical flanges; the screen securing and tensioning bars being notched at the ends, and said vertical flanges engaging in the notches.

2,894,530
FLUSH VALVE CONTROL FOR PLUMBING FIXTURES
Lyman Becker, Milwaukee, Wis.
Application April 27, 1955, Serial No. 504,138
4 Claims. (Cl. 161—7)



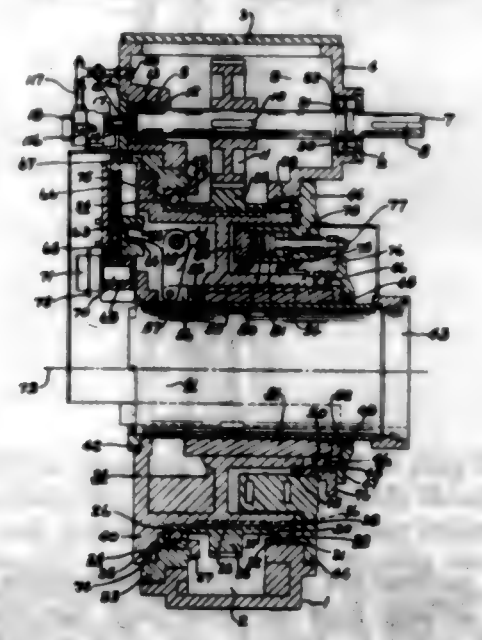
1. A control device for use in combination with a flush valve of the diaphragm type, including a valve stem movable for opening said valve, said control device including an enclosure supported adjacent said flush valve, pusher rod means slidably supported within said enclosure with one end extending therefrom into position for engagement with said valve stem to open the valve, yieldable means normally urging said pusher rod means out of engagement with said valve stem, a pressure chamber supported on said enclosure having a movable diaphragm connected to one end of said pusher rod means and responsive to variations in the pressure in said chamber, for moving said pusher rod means into engagement with said valve stem against said yieldable means, lost motion means interconnected with said movable diaphragm and said pusher rod means, a by-pass tube leading from the inlet of said flush valve to said pressure chamber, and a spring-actuated timing unit including an escapement mechanism for restraining the movement of said pusher rod means toward said valve stem under delayed action of said escapement mechanism.

2,894,581
FLUID STOCK DISTRIBUTOR
Glob I. Gouncelock, West Vancouver, British Columbia, Canada, assignor to Rice Barton Corporation, Worcester, Mass.
Application March 26, 1957, Serial No. 648,558
16 Claims. (Cl. 162—339)



1. A distributor for transforming fluid stock from pipe flow to smooth even sheet flow, comprising an elongated distributor chamber having an inlet opening at one end extending across the longitudinal axis thereof, a stock supply pipe substantially axially aligned with the chamber and connected to the chamber inlet opening, whereby stock from the supply pipe enters the chamber axially thereof substantially without turbulence, said chamber diminishing in cross sectional area from the entrance and towards the opposite end thereof and having a wall gently angled relative to the inlet direction and across the path of flow of the stock, and outlet means completely in said angled wall extending substantially the length of the chamber through which stock flows laterally from said chamber, whereby the pressure of the stock in the chamber and the inertia of the stock in the inlet direction without the necessity of mechanical means create a resultant even flow laterally from the outlet means which is substantially constant through the width of the discharge from the distributor.

2,894,582
ROTARY CUTOFF MACHINE WITH RADIALLY MOVABLE CUTTERS
Arthur H. Long, Mount Lebanon, Pa., assignor to Wm. K. Stemets Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application May 14, 1956, Serial No. 584,597
10 Claims. (Cl. 164—68)

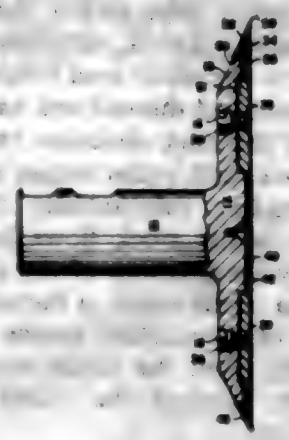


1. A machine, including tool slide means and an actuating sleeve therefor, a servomotor with an annular housing having two end walls and enclosing two spaced annular chambers connected by a plurality of cylinder bores in uniform spaced relation to each other, a piston in each bore selectively operated by the fluid pressure in said annular chambers, a piston rod on each piston the end of which passes through one chamber and out through sealed openings in one end wall, a bearing carrier ring secured to the ends of all of said piston rods, an antifriction bearing having one race mounted in said bearing carrier ring and its other race mounted on the tool slide actuating sleeve to reciprocate the latter.

2,894,583
HONEYCOMB CUTTER
Dorfin Johnstad, Libertyville, Ill., assignor to Onsrud Cutter Manufacturing Company, Libertyville, Ill., a corporation of Illinois
Application September 15, 1958, Serial No. 761,193
14 Claims. (Cl. 164—70)

1. A rotary cutting tool comprising a shank, an annular flange at one end of said shank concentric with and at right angles to the shank axis, a radially project-

ing cutting ring seating against said annular flange, and detachable means concentric with and recessed below

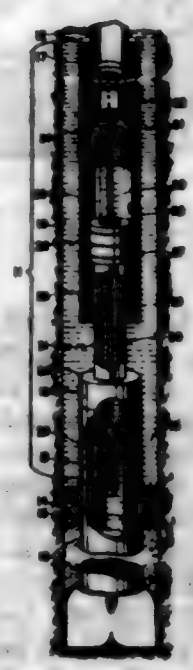


the face of said ring for clamping said ring axially onto said flange and concentric with the axis thereof.

2,894,584
WELL COMPLETION
Bertie F. Birdwell, Austin, and Gerald G. Priest and Bryan E. Morgan, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Application December 24, 1956, Serial No. 630,266
4 Claims. (Cl. 166—42)

1. A method for completing and servicing a well containing drilling fluid in which high temperatures of the order of 200° to 250° F. are encountered which comprises placing in said well an emulsion, containing from about 5% to about 95% by volume of an aqueous medium, from about 5% to about 95% by volume of an oily medium, a weighting agent in an amount within the range between about 1% by weight to about saturation dissolved in at least one of said media, and an emulsifying agent selected from the alkali metal salts of purified lignin sulfonic acids, in which sugars, hemicelluloses, and other degradation products have been removed, containing from about 3% to about 33% by weight sulfonate groups and ammonium and alkali metal salts of lignin sulfonic acids containing from about 38% to about 57% lignin sulfonic acid groups in an amount in the range between 0.2 and about 20 grams per 100 ml. of the external phase of the emulsion, said emulsion having a density in the range from about 7 to about 18 pounds per gallon and different from that of the drilling fluid and a viscosity at 60° F. in the range from about 10 to about 4,000 centipoises, displacing a portion of said drilling fluid in said well from a point adjacent a selected subsurface interval penetrated by said well, contacting an exposed face of said selected subsurface earth interval at said point with said emulsion to protect said exposed face against contamination with said drilling fluid such that the emulsion is the first fluid other than hydrocarbons which contacts said exposed face, performing an operation in said well, said emulsion being subjected to said temperatures of the order of 200° to 250° F. in said well and being maintained in contact with said exposed face while said operation is being performed, said emulsion being characterized by having a low filtration rate and by not damaging said earth interval, said emulsion being stable at said temperature, removing said emulsion from said exposed face after completion of said operation, and then producing hydrocarbons from said exposed face.

2,894,585
HYDROSTATIC WASHOUT TOOL
Weldon C. Erwin, Los Angeles, Calif.
Application September 1, 1954, Serial No. 453,693
6 Claims. (Cl. 166—43)

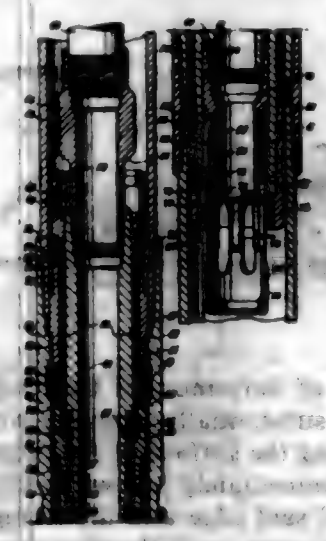


1. In well drilling and producing operations, a method for loosening and removing a layer of material which has become impacted in the annular cavity between a portion of the operating string and the encircling bore hole wall, wherein the upper surface of said layer of material is subjected to the hydrostatic pressure of a fluid column normally maintained in the bore hole, comprising the steps of: separating the free portion of the operating string which is not in contact with said layer of material from the stuck portion of the operating string which is in contact with said layer of material; removing said free portion from its position within the bore hole; closing off said free portion near its bottom end; repositioning the free portion within the bore hole and sealably connecting said free portion to the top end of said stuck portion thereby maintaining substantially atmospheric pressure within the free portion; and instantaneously opening said free portion to transmit said atmospheric pressure downwardly through said stuck portion to a bit opening at the bottom of said operating string and expose said atmospheric pressure to the bottom surface of said layer of material, thereby creating a sudden pressure differential throughout said layer of material and effecting a washing of said material through the stuck portion into the low pressure area within the free portion of the operating string.

2,894,586
WELL TOOLS
Harry B. Schramm and John V. Fredd, Dallas, Tex., assignors to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas
Application February 2, 1955, Serial No. 485,732
8 Claims. (Cl. 166—125)

1. A locking means for well tools comprising: a packer having means for anchoring it in place in a well flow con-

ductor and having a longitudinal bore; an elongate sealing-nipple body adapted to be connected to a well flow conductor, said body being slidably insertable in the bore of said packer; expansible means carried on said body and engageable with a downwardly facing shoulder of said packer when in expanded position to hold said body in



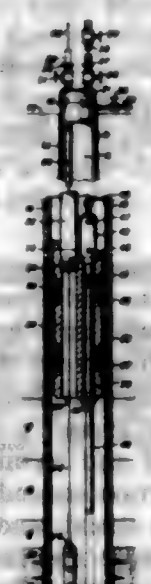
place in the bore of said packer against upward movement therefrom; and locking means slidable on said body and movable upwardly between the body and said expansible means into engagement with said expansible means to lock said expansible means in expanded position holding said body in place in the bore of said packer.

2,894,587

PERMANENT WELL COMPLETION APPARATUS

Thomas B. McCulloch, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

Application June 5, 1956, Serial No. 590,193
9 Claims. (Cl. 166—183)



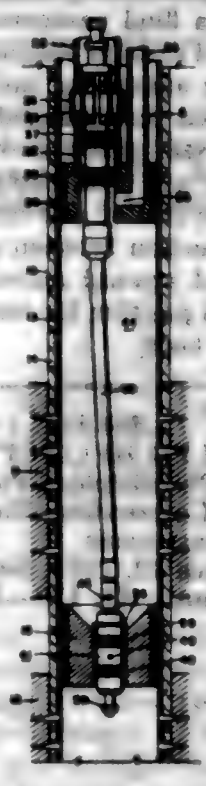
1. Permanent well completion apparatus for use in a well having a casing arranged therein and provided with a tubing permanently positioned in the casing with its lower open end at a level above a plurality of productive subsurface intervals which comprises packing means arranged adjacent the lower end of the tubing to isolate the annulus between the tubing and the casing from the casing below the lower end of the tubing, a conduit means in said packing means providing a passageway free of obstructions through said packing means between the annulus and the casing below the packing means, and a retrievable elongated tubular member having an open lower end and having its wall free of openings, said retrievable tubular member being lowerable through the annulus and being retrievably and sealingly arranged in said passageway and projecting a substantial distance below said packing means and the lower open end of the tubing to provide fluid communication between the annulus and the casing below the packing means, the retrievable tubular member extending into the annulus a distance substantially less than the length of the tubing.

2,894,588

PERMANENT WELL COMPLETION APPARATUS

Gilbert H. Tausch, Charles B. Carley, Jr., and John W. Kennedy, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

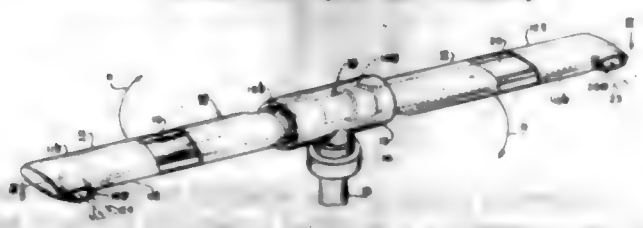
Application December 13, 1957, Serial No. 702,585
4 Claims. (Cl. 166—192)



1. A retrievable plugging tool adapted to plug the bore of a packer comprising a mandrel extensible through said packer bore and provided with an opening intermediate the length thereof; spaced apart first sealing means arranged on said mandrel adapted to seal off the annulus between said mandrel and said packer bore wall above and below said mandrel opening; a tubular member having first and second positions slidably arranged in said mandrel and adapted to be connected to a tubing; said tubular member being provided with spaced-apart first and second openings and a shoulder; said tubular member second opening fluidly communicating with said mandrel opening when said tubular member is in said first position; upper and lower second sealing means adapted to seal off the annulus between said tubular member and said mandrel above and below, respectively, said tubular member second opening when said tubular member is in said first position; by-pass means provided on said tubular member adapted to fluidly communicate said tubular member-mandrel annulus above and below said lower second sealing means when said tubular member is in said second position, said upper second sealing means being above said mandrel when said tubular member is in said second position whereby pressures are equalized above and below said packer when said tubular member is in said second position; a fluid pressure movable piston having first and second positions slidably arranged in said tubular member; said piston being provided with a fluid passageway fluidly communicating the upper end exterior and the exterior intermediate the length thereof; third sealing means arranged on said piston adapted to seal off the an-

mulus between said piston and said tubular member and positioned so that fluid circulation through said tubular member first opening is prevented and fluid communication between said fluid passageway and said tubular member second opening is permitted when said piston is in said first position and fluid circulation through said tubular member first opening is permitted and fluid communication between said fluid passageway and tubular member second opening is prevented when said piston is in said second position; frangible means interconnecting said tubular member and said mandrel and said tubular member and said piston adapted to releasably secure said tubular member in said first position and said piston in said first position; means arranged on said piston and said tubular member cooperating to lock said piston in said second position; stop means arranged on said mandrel above said packer bore adapted to prevent movement of said mandrel through said bore; said tubular member being provided with a fluid passageway fluidly communicating the interior and exterior thereof below said tubular member first opening and above said mandrel to permit release of fluid trapped between said piston and said tubular member when said piston moves from said first to said second position; and said shoulder engagedly connecting with the lower end of said mandrel upon fracture of the frangible connection between said tubular member and said mandrel and upward movement of the tubular member to its second position for removing said plugging tool from said packer bore.

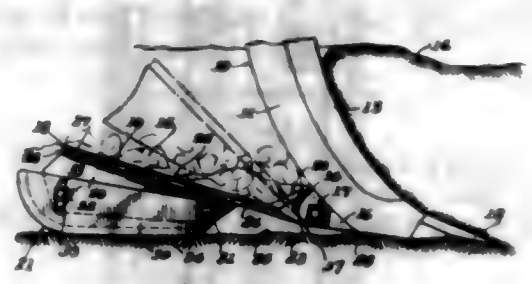
2,894,589
JET PROPELLED HELICOPTER ROTOR
Fredric F. Ehrich, Philadelphia, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application August 12, 1955, Serial No. 528,038
5 Claims. (Cl. 170—135.4)



1. A helicopter rotor having a central hub portion, a pair of blades supported at said hub portion and extending radially outwardly therefrom, a jet propoulsion engine having an air inlet and a gas discharge outlet, said jet propulsion engine being disposed in a central position in said hub portion and jointly rotatable therewith, each of said blades being of substantially air-foil shape and having a leading edge and a trailing edge, means providing an air intake opening in the leading edge of one of said blades, means providing an exhaust outlet in the trailing edge of the other of said blades, means providing a longitudinal passage in each of said blades, means including one of said passages providing a communication between the intake opening in said leading edge and said engine inlet, and means including the other of said passages providig a communication between said engine discharge outlet and the exhaust outlet in said trailing edge, said engine being disposed with its longitudinal axis in subetantial alignment with the longitudinal axes of said passages.

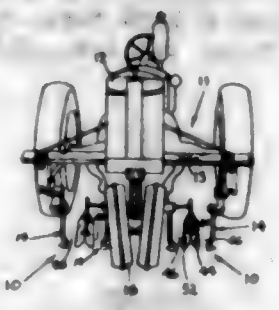
2,894,590
SOIL BREAKER
Forrest A. Johnson, Orosi, Calif., assignor to Double-J Breaker Co., Bell, Calif., a corporation of California
Application May 22, 1957, Serial No. 660,948
12 Claims. (Cl. 172—194)

1. A soil breaker comprising a flat, generally triangular plate member having a forwardly directed ground-penetrating apex, a hinge part adjacent to said apex and adapted for pivotal connection to a rooter or ripper, cutting a trench to a predetermined depth to hold said plate member in position to trail freely behind the rooter or ripper during soil-ripping movement of the latter, and a heel carried by and beneath said triangular plate member at the bottom of such trench and disposed longitudinally



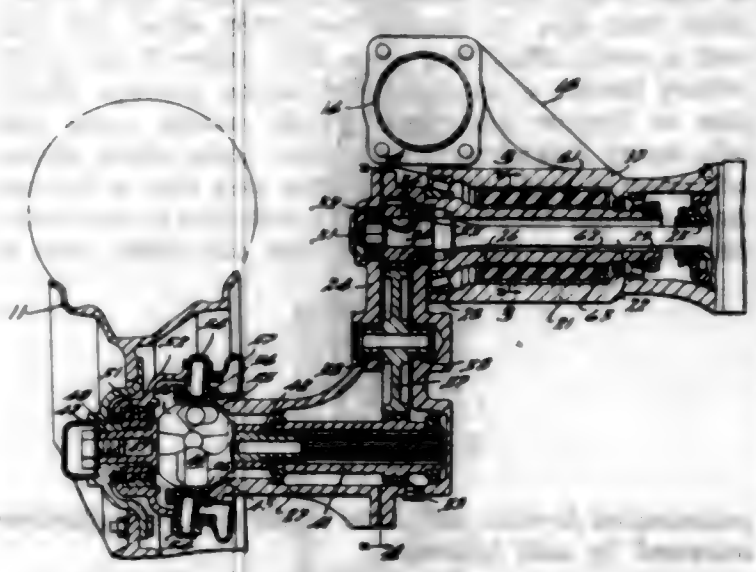
of the direction of movement of the rooter or ripper, said heel having a substantially straight wear edge to ride horizontally along the surface of the ground at the bottom of such trench immediately below the soil loosened by the rooter or ripper, said edge and the triangular plate member including an acute angle therebetween, for causing the member, while trailing, to assume a soil-breaking forwardly inclined angle with respect to said ground surface.

2,894,591
CULTIVATOR TOOL UNIT AND PLANT SHIELD ASSEMBLY
John A. Bradshaw, Gowrie, Iowa
Application March 19, 1956, Serial No. 572,345
1 Claim. (Cl. 172—512)



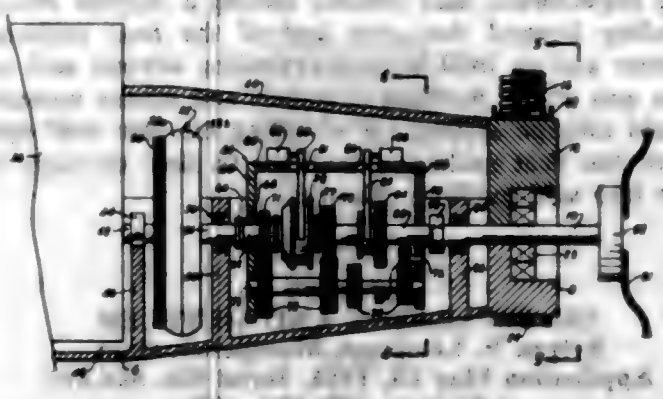
A cultivator attachment comprising a frame and a shield member secured to and depending from said frame, a soil working cultivator unit including a support bar secured to and depending from said frame, said support bar having an upper section thereof extended vertically downwardly from said frame in a spaced relation with one side of said shield and terminating in a lower section having a first portion extended inwardly at an obtuse angle toward said shield, and a second shorter portion extended downwardly and forwardly from said first portion at a position closely adjacent to the lower end of said one side of the shield, said lower section being entirely within the vertical confines of said shield, and a tool member mounted on said second portion of the supporting bar in subetantially the same spaced relation with said one side of the shield as said second portion of the bar, said tool member having only a single sweep leg member at the side of the bar remote from the shield and a short leg attached to the forward side of the second portion of the bar to form a continuous extension thereof, said short leg being extended upwardly and rearwardly whereby a lesser part of the soil moved by said tool travels over said short leg and second portion and between the upper section of said bar and said shield, and with the greater part of the soil moved by said tool traveling over said single sweep leg member.

2,894,591
VEHICLE SUSPENSION SYSTEM
Miguel A. Orderica, Toledo, Ohio, assignor, by mesne assignments, to Bank of America National Trust and Savings Association, a national banking association
Application October 1, 1956, Serial No. 613,009
1 Claim. (Cl. 180—45)



In a vehicle having a main frame which includes a pair of frame members extended transversely of the vehicle, a ground wheel positioned outwardly of each end of each of said frame members, a power transmitting shaft corresponding to and extended outwardly of each end of each of said frame members, a gear housing corresponding to and inclined downwardly from each of said power transmitting shafts, with the housings on each side of said vehicle being arranged in a downwardly diverged relation, a tubular extension on each of said housings positioned about the corresponding shaft and within a frame member to provide for pivotal movement of said housing relative to said frame member, a gear mechanism arranged within each housing in an operative relation with the corresponding shaft and wheel for driving the wheel from the shaft, resilient sleeve members positioned about said tubular extensions and arranged within said frame members, and means securing said sleeve members to said tubular extensions and said frame members for yieldably resisting said pivotal movement of said housings to provide for an individual support of said wheels on said main frame.

2,894,593
REAR DRIVE ASSEMBLY
Virgil H. Waterman, Ponca City, Okla.
Application February 18, 1953, Serial No. 714,100
3 Claims. (Cl. 180—56)

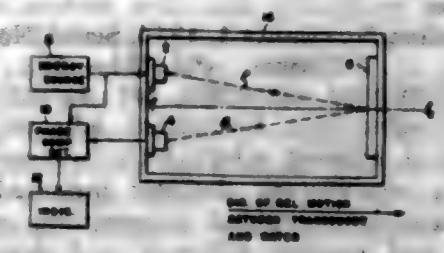


1. A rear drive assembly for a vehicle having side frame members, comprising an elongated housing U-shaped in cross-section extending transversely across the vehicle, blocks formed on the opposite ends of said housing below the vehicle side frame members, a hub secured on top of each block, bearings secured in mating apertures in said hubs and blocks, the bearings at the opposite sides of the vehicle being aligned, springs anchored between each of said hubs and the respective vehicle side frame to impose the weight of the rear portion of the vehicle on said blocks and hubs, an engine having a drive shaft extending from the opposite ends thereof secured in the central portion of said housing with its drive shaft extending transversely with respect to the vehicle, said engine having its lower end portion extending into said housing and its upper portion positioned above said housing, a fluid drive assembly coupled to each end of the engine drive shaft, a transmission drivingly connected to each fluid drive assembly, an axle drivingly connected to each transmission, the axle at each end of said housing being extended through the respective bearing in the respective hub and block, and covers secured to said housing between the ends of said engine and said blocks over said fluid drive assemblies and transmissions.

2,894,594
ANTI-TILT VEHICLE AXLE DRIVE
William M. Fenston, Shreveport, La.
Application January 17, 1958, Serial No. 709,599
4 Claims. (Cl. 180—82)

1. An anti-tilt axle drive including a drive shaft, a pinion on the shaft, an axle, a gear on the axle having external teeth meshing with the pinion and an inner peripheral portion concentric with its external teeth, a housing surrounding the gear and pinion and having said axle and shaft journaled therein, means engaging the inner peripheral portion of said gear for binding said gear and pinion against rotation when said pinion attempts to walk around said gear, the binding means being pivotally mounted on said shaft for movement about its axis and eccentrically of the axis of rotation of said gear, and stationary means in the housing engageable by said binding means for limiting its pivotal movement.

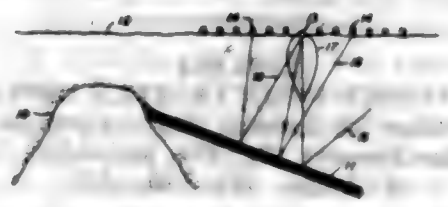
2,894,595
MEASUREMENT OF THE VELOCITY OF SOUND IN FLUIDS
Richard K. Brown, Ann Arbor, Mich., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application June 24, 1953, Serial No. 363,892
3 Claims. (Cl. 181—5)



1. In a method of determining the velocity of sound in a liquid medium from a body moving through the medium, the steps of arranging a reflector equidistant and at a known fixed distance from a pair of transducers,

exciting one of the transducers with an electric signal, moving the body in a liquid medium in a direction substantially parallel to a line bisecting the angle between the sound beam from the excited transducer to the reflector and the sound beam reflected to the other transducer, and detecting the phase difference between the exciting signal and the signal emitted by said other transducer.

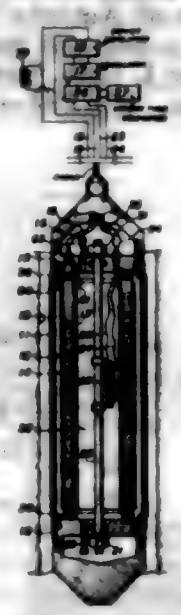
2,894,596
METHOD OF DETERMINING SEISMIC REFLECTING SUBSURFACES
Tobias Finlow and Charles H. Carlisle, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Application October 5, 1955, Serial No. 538,582
2 Claims. (Cl. 181—.5)



1. A method of obtaining the effect of directing shot energy which includes the steps of: causing the generation of seismic waves from a given point; detecting said seismic waves with seismic detectors at at least a first detecting point and a second detecting point spaced from one another, said detecting points and the given point of generation of seismic waves lying along a straight line, said detecting points being spaced from said seismic wave generation point; recording the signals thus produced by said seismic detectors as a plurality of traces, one trace being recorded for each detector; subsequently causing the generation of seismic waves from at least one other point spaced from said given point of seismic wave generation and from said detecting points, and lying on said straight line; detecting said seismic waves at said detecting points and recording the voltages thus produced as a plurality of traces, one trace being recorded for each detector; combining all of the traces recorded from signals produced at said first detecting point; combining all of the traces recorded from signals produced at each of the other detecting points; and shifting the phase relationship between the traces being combined until the phase relationship at which recorded resultant electrical signals are maximized is found so as to indicate the approximate dip of said boundary.

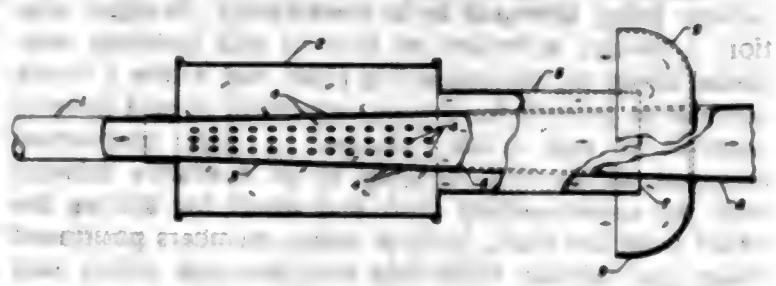
2,894,597
ACOUSTIC WELL LOGGING APPARATUS
Clare H. Kenn, deceased, late of Houston, Tex., by Lucile Kenn, executrix, Houston, Tex., and Frank N. Tullos and Harold C. Hougen, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Application November 1, 1954, Serial No. 466,114
5 Claims. (Cl. 181—.5)

4. An improved apparatus for acoustic impedance logging of subsurface formations adjacent a borehole comprising; a housing adapted to be lowered into the borehole; a piezoelectric detector mounted within said housing; piezoelectric sound transmitting means mounted within said housing adjacent said detector and including at least one piezoelectric transmitter, the arrangement being such that the longitudinal extremities of the sound transmitting means extend above and below the longitudinal extremities of the piezoelectric detector; means for causing the continuous expansion and contraction of said piezoelectric sound transmitting means; and means for obtaining an electrical signal from said



piezoelectric detector indicative of the type of formations traversed by said housing.

2,894,598
EXHAUST BURNING MUFFLER
Donald J. Bergman, Kenilworth, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Application November 14, 1955, Serial No. 546,471
4 Claims. (Cl. 181—43)

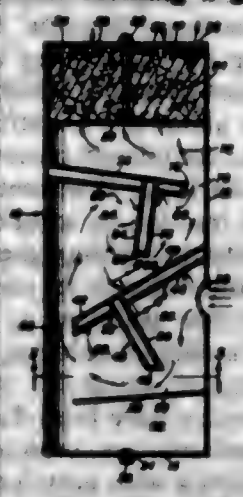


1. An exhaust burning muffler assembly comprising a heat exchange chamber open to the atmosphere at one end thereof, a muffling chamber having one end thereof connected to the other end of the heat exchange chamber, a closure for the opposite end of said muffling chamber, an exhaust gas conduit extending longitudinally through said chambers and through said closure and spaced from the walls of said chambers, the portion of said conduit within the muffling chamber being perforated throughout its length in the last-named chamber and the portion thereof in the heat exchange chamber being imperforate, said conduit having a tailpipe section extending beyond the open end of the heat exchange chamber and an inlet section extending beyond said opposite end of the muffling chamber, and means mounted on said tailpipe section for diverting air into said open end of the heat exchange chamber to flow through the latter into said muffling chamber.

2,894,599
OIL SEPARATOR AND MUFFLER
Sylvan V. Leininger, Montpelier, Ohio
Application May 18, 1956, Serial No. 585,692
3 Claims. (Cl. 183—34)

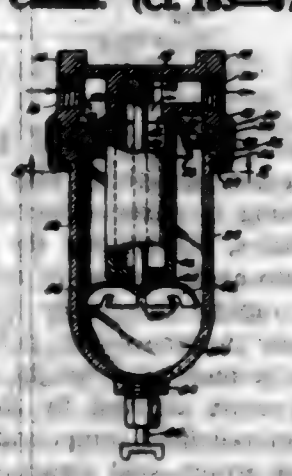
1. An oil separator and muffler for exhaust gases comprising a casing having a top wall, a bottom wall and a side wall, said casing having a longitudinal central axis, said side wall having a gas inlet between said top and bottom walls with the lower part of said side wall and said bottom wall constituting a sediment chamber, a

downwardly inclined first baffle plate secured to said side wall within said casing and located above said inlet and sloped downwardly toward the central axis of said casing, a support fixed to said first baffle plate, a perforated panel secured to said support and to said side wall and located parallel to and beneath said first baffle plate, said perforated panel and first baffle plate being spaced from each other, a second baffle plate fixed to said first baffle plate and normal to said first baffle plate and forming with said first baffle plate a forwardly opening pocket for the gases, a second perforated panel spaced slightly from and secured to said second baffle plate, said second perforated panel also secured to said first baffle plate, the space between the outer edge of said first baffle plate and the opposing part of said casing side wall forming a gas passage, a third



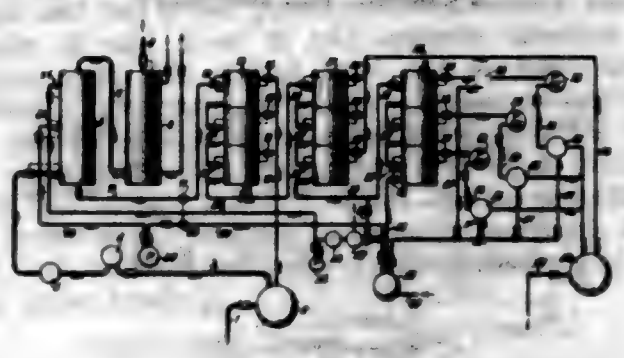
baffle plate secured to the side wall of said casing and located above said first and second baffle plates and said passage, a third perforated panel, a support secured to said third baffle plate, said third perforated panel secured to the support on said third baffle plate of said casing, a fourth baffle plate secured to said third baffle plate and normal to said third baffle plate, a support attached to said fourth baffle plate, a perforated panel parallel to said fourth baffle plate and secured to said third baffle plate and the support on said fourth baffle plate respectively, said third and fourth baffle plates forming therebetween a pocket which faces said passage, and the outer edges of said fourth baffle plate being spaced from the surface of said first baffle plate to form a second passage, and the outer edge of said third baffle plate being spaced from the opposite part of said side wall to form a third passage.

2,894,600
AIR FILTERING DEVICE
Edward W. Veres, Chicago, Ill., assignor to Arrow Tools, Inc., Chicago, Ill., a corporation of Illinois
Application June 1, 1954, Serial No. 433,562
3 Claims. (Cl. 183—67)



1. In a filter unit, a housing equipped with an elongated receptacle removably secured thereto and depending therefrom, said housing having both an inlet port and a chamber communicating with said inlet port and with the interior of said receptacle, said housing having also both an outlet port and a flow passage communicating with said outlet port and being provided with a mouth communicating with the interior of said receptacle whereby a flow path is defined from said inlet port through said chamber and into said receptacle and outwardly therefrom through said flow passage and to said outlet port, a porous filter secured to said housing in covering relation with the mouth of said passage and extending downwardly therefrom into said receptacle, a baffle trap mounted within said receptacle and extending transversely thereacross adjacent the lower end of said porous filter, said baffle trap having an arcuate outer portion curved downwardly toward the bottom of said receptacle in spaced relation with the side walls thereof and having also a plurality of spaced openings in the curved portion thereof, an outwardly and downwardly inclined baffle extending across said chamber between said inlet port and receptacle and having a plurality of louver-equipped openings thereabout to enforce a fluid flow into said receptacle of turbulent character and in a direction toward the side walls thereof, and a downwardly and outwardly inclined deflection baffle overhanging said porous filter and underlying said inclined baffle, said deflection baffle having a greater angle of inclination than that of said inclined baffle and terminating at its lower end in spaced adjacency with the side walls of said receptacle to further direct the fluid flow thereagainst at an increased velocity.

2,894,601
PROCESS FOR RECOVERING LOW BOILING POINT HYDROCARBONS
Josef Schmidt and Heinrich Weber, Recklinghausen, Westphalia, Germany, assignors to Firma Carl Still, Westphalia, Germany
Application December 22, 1955, Serial No. 554,814
Claims priority, application Germany December 23, 1954
1 Claim. (Cl. 183—114.6)



A process for recovering low boiling point hydrocarbons which are gaseous at normal temperatures from a coke over gas containing only small concentrations of said hydrocarbons as well as undesired accompanying substances including hydrogen sulphide with relatively high vapor pressures; comprising the steps of taking a fluid absorption medium from a source thereof, then subjecting said fluid adsorption medium to a relatively high super-atmospheric pressure, bringing said absorption medium into contact with said coke oven gas to effect absorption of the desired constituent gaseous hydrocarbons of said coke oven gas by said medium, reducing to a first predetermined value the pressure on said medium and said gas absorbed thereby without adding any external heat thereto to effect partial liberation therefrom of a quantity of gases made up of a small concentration of said low boiling point hydrocarbons and of a predominant concentration of said undesired accompanying substances, returning a portion of said liberated quantity of gases to said coke oven gas, reducing the pressure on the remaining quantity of said absorption medium from said first value to a second predetermined value

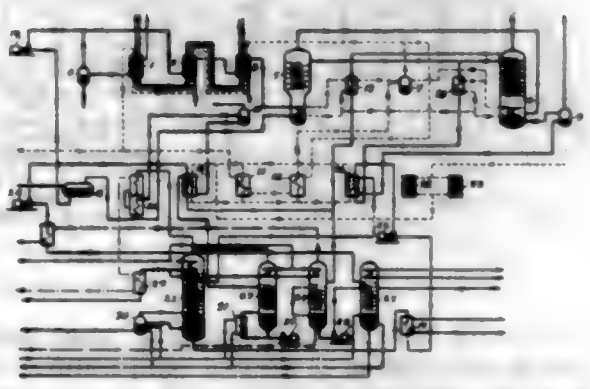
without adding any external heat to effect removal of some absorbed gases from said remaining quantity to form liberated gases, thereafter transferring said liberated gases including some of said hydrocarbons by virtue of their own inherent pressure gradients into a gas-receiving container, reducing the pressure of the remaining absorption medium to a third predetermined value without any addition of external heat to effect substantially complete separation of said desired constituent gaseous hydrocarbons from said absorption medium, cooling said desired constituent gaseous hydrocarbons, then pumping said latter into said container, the mass of gases collected in said container then being fractionally distilled to separate said mass into its pure constituent fractions, subjecting said remaining absorption medium again to said relatively high super-atmospheric pressure, returning said medium to said source for re-use with further coke oven gas, said contact between said absorption medium and said coke oven gas being brought about in an absorption column, diverting a part of said absorption medium from said first quantity thereof prior to the return of said medium to said source, purifying said diverted part of said absorption medium from said undesired accompanying substances including hydrogen sulphide, introducing said diverted part of said absorption medium in purified condition into said absorption column adjacent the upper part thereof, and introducing the remainder of said absorption medium directly from said source into said absorption column below the upper part thereof.

2,894,602

SEPARATION OF ACETYLENE FROM METHANE CRACKING GASES BY MEANS OF A SELECTIVE SOLVENT

Giacomo Fauser, Novara, Italy, assignor to Montecatini Societa Generale per l'Industria Mineraria e Chimica, a corporation of Italy

Application February 23, 1956, Serial No. 567,400
Claims priority, application Italy September 24, 1955
2 Claims. (Cl. 183—120)



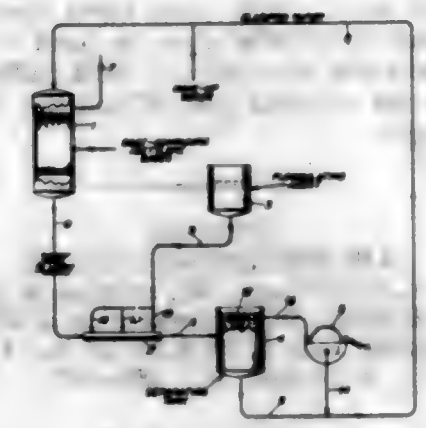
1. The improvement in a process for the separation and recovery of pure acetylene from a gaseous mixture obtained upon partial combustion of methane and comprising C_2H_2, H_2 and CO as major constituents and CO_2, C_2H^4, CH_4, N_2, O_2 and higher acetylenes as minor constituents, said improvement comprising compressing the gaseous mixture to about 13 atm. at about 25° C., scrubbing with ammonia and sodium hydroxide solutions to substantially remove CO_2 and higher acetylenes, boiling above 64° C., cooling the compressed gaseous mixture to 3° to 4° C. in a first heat exchange, removing condensed moisture, adding methanol, cooling to —25° C. in a second heat exchange, separating methanol in excess of the saturation point and therewith additional moisture, methylacetylene, monovinylacetylene, ethylacetylene and some diacetylene, cooling to —70° to —80° C. in a third heat exchange, removing all remaining higher acetylenes and part of the acetylene in a first scrubbing step with methanol at about —80° C., absorbing all of the remaining acetylene in a second scrubbing step using regenerated methanol at about —80° C. and a portion of newly added methanol at about —85° C., fractionating the resulting tail gas comprising H_2, CO, CH_4 and small amounts of N_2, O_2 and C_2H_4, utilizing the low temperature of the H_2 and CO fraction and of the residual gases in said three heat-exchanges, compressing the H_2 and CO fraction to about 250 atm. for methanol synthesis, preheating the methanol fraction containing all higher acetylenes and part of the acetylene obtained from said first scrubbing step to —26° C. in a heat exchange with recovered acetylene saturated with methanol, decompressing said methanol fraction from 13 atm. to about 1.4 atm. to remove H_2, CO and CH_4 which may be dissolved therein, further preheating said methanol fraction to about 0° C., regenerating said methanol fraction by exposing to heat of 70° C., removing and recovering vaporized acetylene, cooling the methanol fraction which still contains the higher acetylenes to about 27° C., stripping with nitrogen of about —26° C. to completely remove higher acetylenes having a boiling point lower than methanol, further purifying said methanol fraction by scrubbing with water and simultaneously rectifying, cooling the regenerated methanol to —80° C. and using it in said second scrubbing step wherein all of the acetylene is absorbed, reducing the pressure of the methanol solution obtained from said second scrubbing step to about 1.2 atm. to separate H_2, CO and CH_4 which may have been dissolved therein, preheating said methanol solution, separating and recovering acetylene and combining with acetylene separated and recovered from said methanol fraction obtained from said first scrubbing step.

2,894,603

REMOVAL OF SOOT FROM ACETYLENE GASES

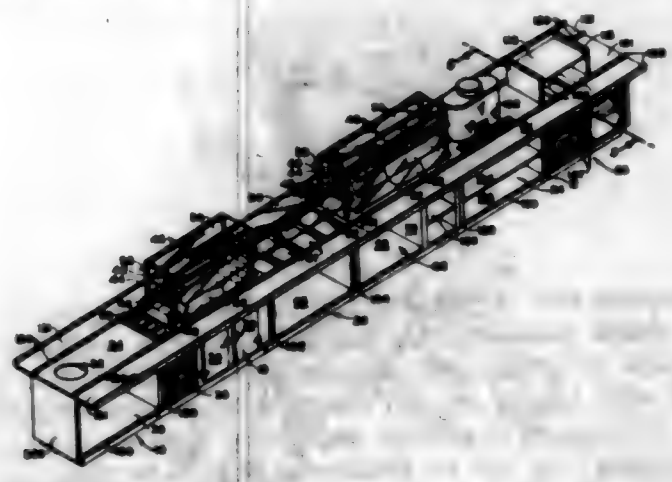
Conjeevaram D. Srini Vasan, Brooklyn, N.Y., assignor to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware

Application January 16, 1956, Serial No. 559,448
5 Claims. (Cl. 183—121)



1. A method of recovering finely divided soot from gases which comprises scrubbing said gases with water and thereby forming a water suspension of the finely divided soot particles, flocculating the soot particles in said suspension into agglomerates of relatively large size capable of rising rapidly therein by flotation by adding thereto a synthetic water-soluble polyelectrolyte having a weight average molecular weight of at least 10,000 and having a structure derived by the polymerization of at least one monoolefinic compound through the aliphatic unsaturated group, said structure being substantially free of cross-linking, separating the resulting slurry into an upper layer containing the soot aggregates and a lower layer of clarified water, and drawing off and dewatering the upper layer.

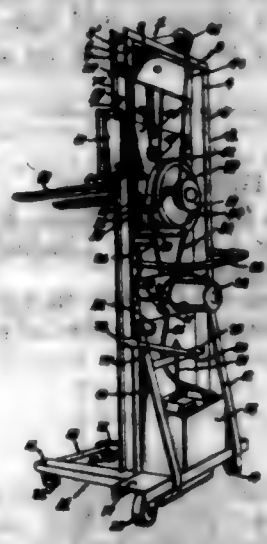
2,894,604
RESTAURANT EQUIPMENT
James O. McMillan, Wichita, Kans., assignor to Frank J. Ablah, Wichita, Kans.
Application March 16, 1956, Serial No. 572,041
4 Claims. (Cl. 186—1)



1. Restaurant equipment for self-serving persons comprising, an elongated cabinet structure having a generally horizontal top and generally vertical sides, generally horizontal pans mounted upon the cabinet structure adjacent to its top and extending throughout substantially the entire width of the cabinet structure and having two oppositely disposed edges terminating close to said sides of the cabinet structure, said pans having their tops open and adapted for receiving foods to be served by the persons, generally horizontal tray guiding devices extending longitudinally of the cabinet structure and arranged upon opposite sides of the cabinet structure adjacent to its top, each tray guiding device comprising an imperforate plate and a pair of upstanding rails leading to the plate, the inner and outer rails of each tray guiding device being transversely spaced and extending above said plate for a substantial distance, each inner rail being arranged above and disposed inwardly of the open tops of said trays, and serving trays slidably mounted upon the rails, each serving tray including a body portion and side flanges adjacent to the top of the body portion, the body portion extending below the side flanges, the side flanges being mounted upon said rails and the body portion being held by the flanges spaced from and out of contact with said plate, one side flange of each tray being disposed above and in overlapping relation with one of the aforementioned oppositely disposed edges of the pan, the arrangement being such that when food is spilled in transferring the same from the pan to the serving tray such food will be caught within the pan.

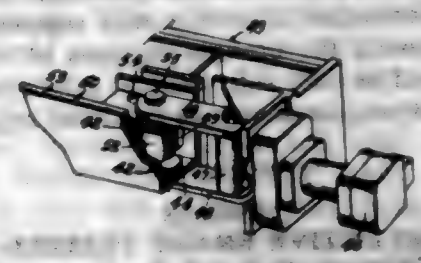
2,894,605
PORTABLE FORK LIFT TRUCK
Lester W. Leavitt, Jacksonville, Fla.
Application October 2, 1956, Serial No. 613,671
2 Claims. (Cl. 187—11)

2. A portable fork lift truck comprising a frame and fork lift carriage movably engaging said frame, a spindle rigidly mounted on said frame, a brake drum having a reel attached thereto rotatably mounted on said spindle, a brake-lined band having two ends, a pivot fixed to said frame pivotally anchoring one said end externally of and adjacent said drum, said band extending from said pivot and engagingly encircling said drum in a predetermined direction, a tension spring having its ends respectively connected to a portion of said frame and a portion of said second end of said band urging said band end in said direction into braking engagement with said drum, an adjustable attachment element interposed between one end of said spring and its respective connected portion, a pivot member mounted on said frame, a brake handle pivoted at one end to said pivot member and having an intermediate portion pivotally attached to said second band end, said band being selectively looseable and tightenable about said drum by manual operation of said handle in respective selected directions, a cable supportingly connected to said carriage, electric motor means, a flexible drive connection connecting said motor means with said drum, a source of electric power, a control switch, electrical connections connecting said power source in circuit with said switch and with said electric motor means, said control switch being mounted on said frame adjacent said brake release handle and biased into position to disconnect said power source from said motor means and manually operable to connect said power source with said motor means, said electrical and flexible



drive connections being oriented to operate said motor means in a direction to rotatably drive said drum and reel in the direction opposite to said predetermined direction, said cable being wound on said reel in the direction to wind further thereon in response to rotation of said reel in said opposite direction and to unwind upon rotation of said reel in said predetermined direction, whereby rotation of said drum in said opposite direction frictionally urges said second band end to move against the force of said spring to loosen said band on said drum and rotation of said drum in said predetermined direction tends frictionally to tighten said band brakingly about said drum, and a U-shaped handle mounted on said frame and protruding horizontally rearwards therefrom and passing outwardly protectingly beyond said drum brake handle.

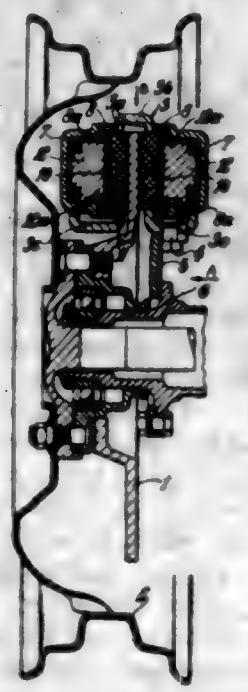
2,894,606
FRICTION BRAKE FOR CATAPULTS
Harold Blem, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Application January 10, 1957, Serial No. 633,512
6 Claims. (Cl. 188—62)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A braking device for arresting the movement of a shuttle member or the like adapted for movement in a predetermined direction along a fixed path comprising a plurality of opposed brake shoes carried by said shuttle member on opposite sides thereof and extending substantially transversely thereof, a plurality of spaced support

members mounted outwardly of and on opposite sides of said fixed path of movement of said shuttle member and extending substantially parallel thereto, cam means mounted on each of said support members, roller means contacting with each of said cam means and being movable transversely of said path of movement of said shuttle member upon reciprocation thereof relative to said cam means, a braking rail operatively connected to each of said roller means on opposite sides of said path of movement of said shuttle member and extending substantially parallel to said path of movement of said shuttle member, and separate power means operatively connected to said roller means on opposite sides of said path of movement of said shuttle member for reciprocating each of said roller means relative to each of said cam means to thereby move said opposed braking rails transversely of said path of movement of said shuttle member and into braking engagement with said brake shoes carried by said shuttle member.

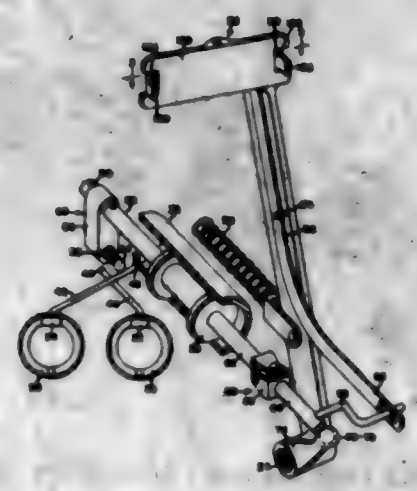
2,894,607
DISC BRAKES
Henry James Butler, Sutton Coldfield, England, assignor to Dunlop Rubber Company Limited, London, England, a British company
Application February 25, 1957, Serial No. 642,110
11 Claims. (Cl. 188—73)



1. A disc brake comprising a rotatable disc; a non-rotatable housing straddling a periphery of the disc, said housing comprising a pair of spaced side walls of segmental shape having a chordwise edge, an arcuate wall integrally connecting the arcuate outer edges of said side walls from one end of said chordwise edge to the other end thereof, and a pair of reinforcing ribs one for each said side walls and integral therewith and extending chordwise alongside the chordwise edge of said side walls to define a segmental area between said reinforcement and said arcuate wall; pads of friction material within said segmental area to engage frictionally the braking surfaces of the disc and means mounted on said side walls of said housing within said segmental area to effect said frictional engagement.

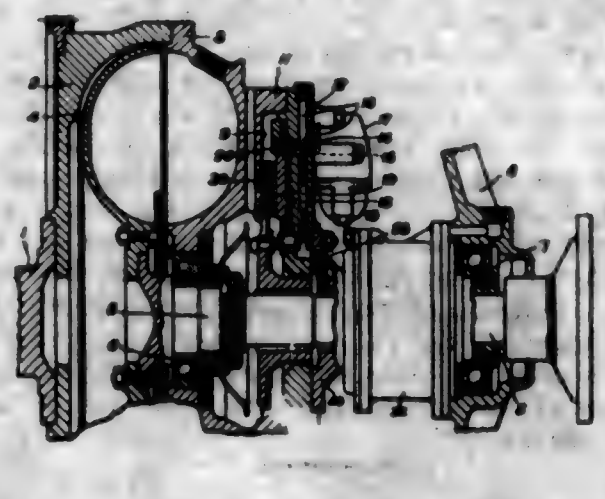
2,894,608
SELECTIVE BRAKE SYSTEM
Richard A. Wittren, Cedar Falls, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware
Application June 24, 1955, Serial No. 517,824
15 Claims. (Cl. 188—152)

15. A vehicle brake system, comprising: first and second brake cylinders; a master cylinder having first and second fluid ports connected respectively to the first and second brake cylinders; a piston movable in the cylinder for moving fluid through said ports; settable valve means having a neutral setting enabling fluid flow through both ports, a first active setting blocking only the first port and a second active setting blocking only the second port;



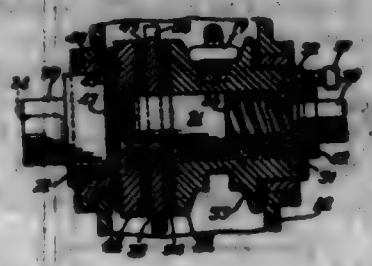
piston-actuating means connected to and for moving the piston; and selection means mounted on the piston-actuating means and including a valve-means operating member coaxial with the piston and connected to the valve means for selecting any of the aforesaid valve means settings.

2,894,609
MOTOR VEHICLE DRIVING GEAR
Norman Tattersall, Leyland, England, assignor to Leyland Motors Limited, London, England, a British company
Application October 14, 1953, Serial No. 386,869
2 Claims. (Cl. 192—3.2)



1. In a motor road vehicle transmission gear the combination of a driving shaft, a housing for a fluid coupling fast upon said shaft, forming the driving part of said coupling and presenting an external friction surface and a flange surrounding said surface, a tunnelled annulus attached to said flange, an annular diaphragm clamped on the inner face of said annulus covering an opening of a tunnel in said annulus, a pressure plate carried by said diaphragm, a driven shaft, a fluid coupling driven part upon said driven shaft within said housing, a driven friction clutch part upon said driven shaft located between said friction surface of the coupling housing and said pressure plate, and a valve structure mounted eccentrically upon the outer face of said tunnelled annulus operating under centrifugal force to admit air through said annulus to said diaphragm to cause said driven friction clutch part to be gripped between said friction surface of the housing and said pressure plate.

2,894,610
CHAIN HOIST
John A. Harrington, Whitemarsh, Pa., assignor to The Harrington Company, Plymouth Meeting, Pa., a corporation of Pennsylvania
Application June 5, 1957, Serial No. 663,727
6 Claims. (Cl. 192—16)

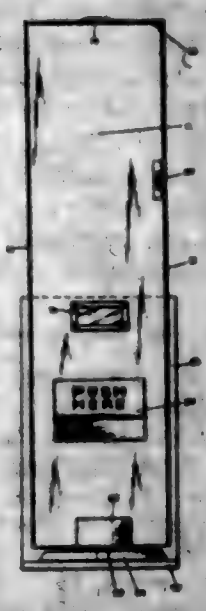


1. A chain hoist to lift and lower a load comprising a housing, a drive shaft rotatably mounted within said housing, a load wheel mounted on said drive shaft for rotatable movement with and relative to said drive shaft, brake mechanism within said housing in engagement with said load wheel and actuatable to an "on" position to prevent rotation of said load wheel, brake actuating mechanism operable upon relative rotation of said load wheel in one direction with respect to said drive shaft to actuate said brake to said "on" position and upon relative rotation of said load wheel in the opposite direction with respect to said drive shaft to actuate said brake mechanism to an "off" position, load supporting and lifting means carried by said load wheel operable to normally urge said load wheel to rotate in said one direction relative to said drive shaft, drive means operable to rotate said drive shaft and said load wheel in a direction opposite to said one direction of rotation of the load wheel to lift the load and to rotate said drive shaft in the same direction as said one direction of rotation of the load wheel to release said brake actuating means, and resilient means interconnected with said brake mechanism and said brake actuating mechanism operable to resiliently exert pressure on said brake mechanism and resiliently urge said brake mechanism to said "on" position to cause said brake mechanism to be actuated to its on and off positions gradually and cause said load wheel to stop and start rotation in said one direction gradually.

2,894,611
FREE WHEEL COUPLING, CHIEFLY FOR WATCHES
Erwin Kurth-Chappuis, Granges, Switzerland, assignor to Kurth Freres S.A. Fabriques de Montres Cortina, Granges, Switzerland
Application November 9, 1955, Serial No. 545,906
Claims priority, application Switzerland August 30, 1955
2 Claims. (Cl. 192—41)

1. A free wheel coupling chiefly for the oscillating mass of self-winding watches and the like timepieces comprising a first rotary member to be driven into rotation in a predetermined forward direction, said member being provided with a coaxial circular recess, a rotary driving member revolubly and coaxially mounted with reference to the first rotary member, a cam having a generally arcuate outline rigid with said second rotary member, adapted to revolve inside the recess in the first member and including a boss merging in said predetermined forward direction through the succession of a line forming an angle somewhat less than 90° with the cam radius and directed slightly inwardly of the cam of a convex line facing the radius passing through the boss and of a concave line facing rearwardly into the general outline of the cam, and a slightly elastic arcuate member housed inside said recess in the first rotary member, slidingly engaging the outer cylindrical wall of said recess on the outside of the cam and the outline of which includes near its front end facing said predetermined forward direction an inner oblique line adapted to match the oblique line on the cam for a predetermined relative angular setting of the arcuate member with reference to the cam, said oblique line merging into a front terminal line substantially radial with reference to the axis of the rotary members, facing the convex line on the cam outline and lying to the rear thereof in the said forward predetermined direction, the rotation of the cam in unison with the second rotary member in said predetermined direction engaging and wedging together the cam and the arcuate member along their corresponding oblique lines and thereby urging said arcuate member into frictional engagement with the first rotary member to provide synchronous movement of both rotary members and arcuate member and the rotation of the second rotary member and cam in the opposite rearward direction producing an impact of the cam section bounded by the convex line against the front terminal surface of the arcuate member to release the latter.

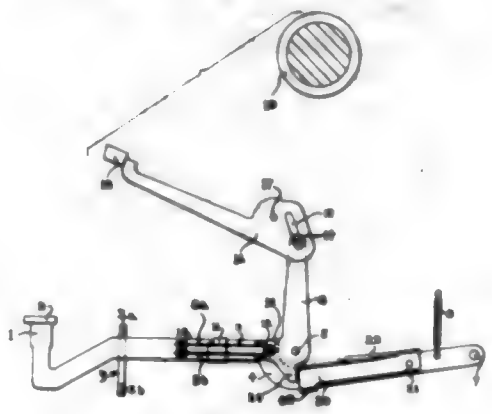
2,894,612
DISPENSING MACHINE
Richard L. Carr, Rumford, R.I., assignor, by mesne assignments, to Grant Development Company, Providence, R.I., a corporation of Rhode Island
Application November 2, 1954, Serial No. 466,285
18 Claims. (Cl. 194—3)



17. In a dispensing device, a collecting compartment, a magazine adapted to contain articles to be dispensed, means mounting said magazine above said compartment, an opening at the bottom of said magazine in communication with said compartment, blocking means associated with said magazine and movable between a first position wherein said opening is blocked and a second position wherein said opening is unblocked, said articels being maintained within said magazine when the blocking means is in said first position and being released for downward descent to said compartment upon movement of the blocking means to said second position, a receptacle removably mounted in said compartment for receiving said articles when they are released, a cover for said receptacle movable between an open and a closed position, means automatically moving said cover to its said open position responsive to insertion of said receptacle into

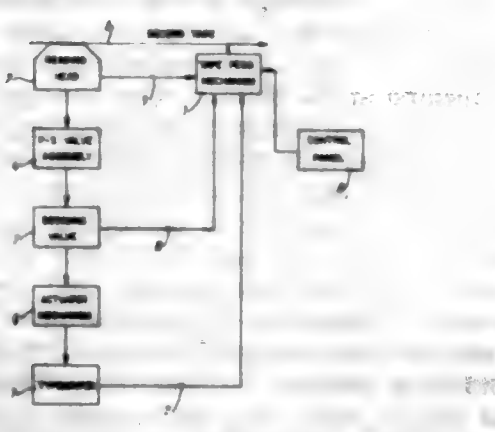
said compartment and automatically closing said cover responsive to removal of the receptacle therefrom, and means extending from said blocking means for releasably locking the receptacle in said compartment, said locking means being operative when said blocking means is in its said first position and being inoperative when said blocking means is in said second position, whereby the receptacle remains open and cannot be withdrawn until said blocking means is moved to its said second position, thus insuring that all undispensed articles are released from said magazine to said receptacle before removal of the latter.

2,894,613
EVEN PRINTING MANUAL TYPEWRITER
Waldemar A. Ayres, Fort Lauderdale, Fla.
Application January 19, 1956, Serial No. 560,218
20 Claims. (Cl. 197—17)



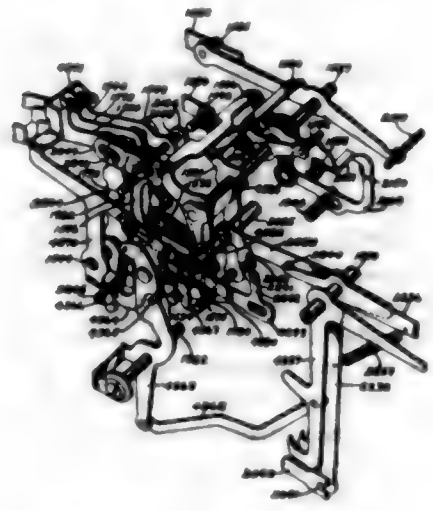
1. In a manually powered printing device, a character selecting means and a printing means, mechanism operatively connecting said character selecting and printing means for operation of the latter by actuation of the character selecting means, said mechanism including an energy storing means connected to said character selecting means to operate said printing means subsequent to the initial actuation of said character selecting means, and restraining means mounted on said character selecting means and in engagement with said printing means at the initiation of the actuation of said character selecting means to prevent operation of said printing means, said restraining means being disengaged from said printing means subsequent to the initial actuation of the character selecting means.

2,894,614
AUTOMATIC APPARATUS FOR OPERATING BUSINESS MACHINES
Harry L. Lambert, West Hartford, and Paul F. Page and Alton G. Snyder, Newington, Conn., assignors to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Application October 14, 1957, Serial No. 690,099
31 Claims. (Cl. 197—20)



1. Automatic apparatus for operating the control linkages of a business machine in accordance with the coded pattern of distribution of holes in each of a plurality of transverse rows of holes punched in a record tape; comprising, a reading head, means for intermittently feeding said record tape over said reading head, valve means operated in timed relation to said tape feeding means for periodically enabling said reading head to sense said record tape and to initiate successive groups of coded pneumatic pressure impulses in accordance with the respective coded distributions of holes in said rows, means for decoding said impulses and for initiating a plurality of pneumatic pressure impulses which respectively correspond to the various individual control linkages of said machine, and means controlled by said last mentioned means for respectively actuating said linkages.

2,894,615
CARRIAGE MOVEMENT CONTROLS FOR ACCOUNTING MACHINES
Byron A. Rande, Farmington, and Irvin William Boruszka, Detroit, Mich., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Original application July 18, 1955, Serial No. 522,430. Divided and this application January 30, 1957, Serial No. 637,282
3 Claims. (Cl. 197—177)

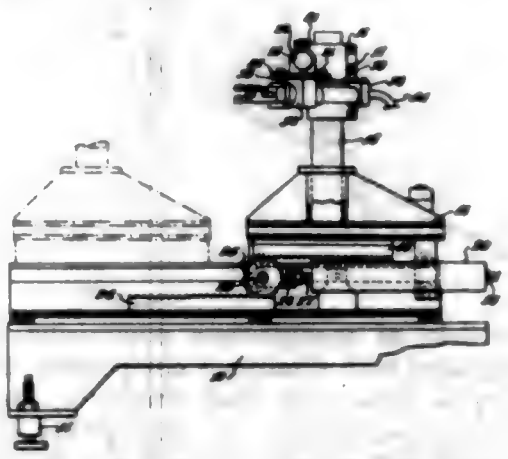


1. An accounting machine having a drive means, a plurality of cycle initiating means each operable to cause said drive means to drive the machine through a cycle of operation, a traveling carriage movable to any of a plurality of positions, means normally operating in each machine cycle to tabulate the carriage, means controlled by said carriage and rendered effective in a machine cycle performed with the carriage in a predetermined one of its positions to disable said tabulating means, and means controlled by one of said cycle initiating means to render said carriage-controlled means ineffective to disable said tabulating means.

2,894,616
AUTOMATIC MATERIAL HANDLING MECHANISM
John R. Young, Hamilton, Ohio
Application July 6, 1955, Serial No. 520,206
3 Claims. (Cl. 198—218)

1. Mechanism for moving workpieces from one position to another comprising a base frame, a pair of horizontal tracks mounted in said frame, a carriage movable on said tracks, reciprocable jaw mechanism mounted in said carriage, means to move said carriage, means to move said jaw mechanism into clamping engagement about a work piece, said carriage moving means including a cylinder, piston and piston rod, conduits connecting each end of said cylinder with a source of fluid power, a valve for alternately admitting fluid to either end of said

cylinder through said conduits whereby to reciprocate said carriage, said jaw mechanism including a cylinder, piston and piston rod, another conduit connecting said last mentioned cylinder with a source of fluid power, another valve controlling admission of fluid to said other cylinder, admission of fluid to said other cylinder serving to move said jaw mechanism into clamping engagement about a work piece, and including a first electric circuit, a solenoid in said circuit, a control member for said first mentioned valve, said control member being connected to said solenoid, a spring connected to said control member, a second electric circuit, a second solenoid in said second circuit, said second solenoid actuating said other valve, a first limit switch in said first circuit, a second limit switch in said second circuit, a third limit switch in said first circuit, a pair of switch engaging means on said carriage, and other switch-engaging means on said jaw mechanism, said first limit switch being responsive to a master



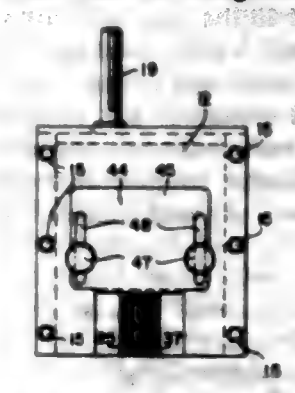
machine, said circuits arranged so that on closing of said first limit switch said solenoid will move said valve control member in opposition to said spring whereby to admit fluid within one end of said first cylinder and thus move said carriage along a path of travel, one of said pair of switch-engaging means engaging said second limit switch upon said carriage reaching the end of its path of travel to actuate said second valve and move said jaw mechanism into clamping engagement about a work piece, said other switch engaging means engaging said third limit switch upon clamping of said jaw mechanism to break said first electric circuit and de-energize said first solenoid so that said spring will move said valve member to admit fluid within the other end of said first cylinder and return said carriage to its original position, the other of said pair of switch engaging means engaging said second limit switch upon the carriage reaching its original position so as to de-energize said second solenoid and permit said jaw mechanism to release the work piece.

2,894,617
APPARATUS FOR FEEDING A PRESELECTED LENGTH OF WIRE

Harold K. Embree, Hamilton, Ontario, Canada, assignor to Ovalstrapping Inc., Hoquiam, Wash., a corporation of Washington

Application May 28, 1957, Serial No. 662,033
6 Claims. (Cl. 203—249)

1. An apparatus for feeding a preselected length of wire comprising a case, a pair of rolls of similar diameter rotatably mounted adjacent one another within said casing, resilient means urging said rolls into tangential contact with one another, similarly sized but oppositely directed helical grooving on each of said rolls, said grooving being suitably sized for co-operative gripping between the rolls of the wire which is to be fed, means for driving said rotatably mounted rolls in opposite directions but at the same speed, and shielding means adjustably mounted on said casing, said shielding means being adjustable longitudinally of the line of tangential contact of the

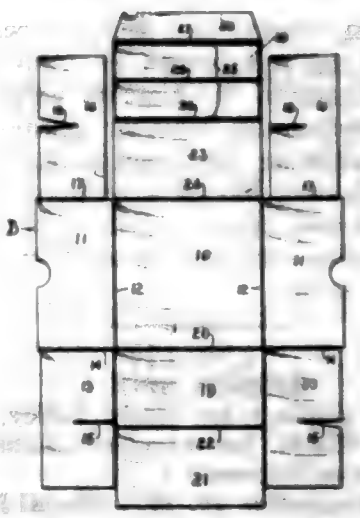


pair of rolls to limit the length of said line of contact which is exposed for insertion of a wire between said rolls.

2,894,618
BOX OR CARTON WITH ADJUSTABLE DISPLAY COVER

Joel S. Matteson, Marshall, Mich.

Application January 28, 1957, Serial No. 636,715
3 Claims. (Cl. 206—45.28)



3. A blank for constructing the herein described box cover, said blank comprising a top panel, two side wall panels connected by fold lines with two opposite edges of said top panel, two back wall panels connected by fold lines with the rear ends of said side wall panels and slitted midway their ends for connection with each other, two front wall panels connected by fold lines with the front ends of said side wall panels and slitted midway their ends for connection with each other, an outer back-wall-reinforcing-panel connected by a fold line with the rear edge of said top panel, an inner back-wall-reinforcing-panel connected by a fold line with said outer back-wall-reinforcing-panel, an inner front-wall-reinforcing-panel connected by a fold line with the front edge of said top panel, an outer front-wall-reinforcing-panel connected by a fold line with said inner front-wall-reinforcing-panel, and a terminal flap connected by a fold line with said outer front-wall-reinforcing-panel, said outer front-wall-reinforcing-panel having a fold line between and parallel with the fold lines which connect this panel with said terminal flap and said inner front-wall-reinforcing-panel, and said two front wall panels being narrower than the back wall panels to facilitate folding of the inner and outer front wall reinforcing panels and interfitting engagement thereof.

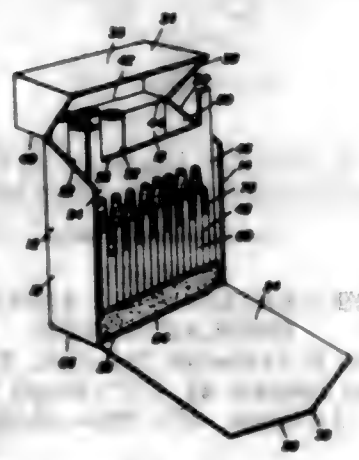
2,894,619
CIGARETTE AND MATCH PACKAGE

Alfredo Gallo, Miami, Fla.

Application April 7, 1958, Serial No. 726,756
3 Claims. (Cl. 206—48)

3. A combination cigarette and match package comprising a container that has side walls, a bottom wall and an open front, an integral closure attached to the forward

edge of said bottom wall and adapted to overlie and close said open front, said closure having an upper locking edge, a top hinged to the back wall of said container and having a front wall which overlies said locking portion of said closure to hold said closure in the closed position, a partition in said container and substantially parallel to the back wall of said container and separating said container into a cigarette compartment and a match compartment, matches in said match compartment, said



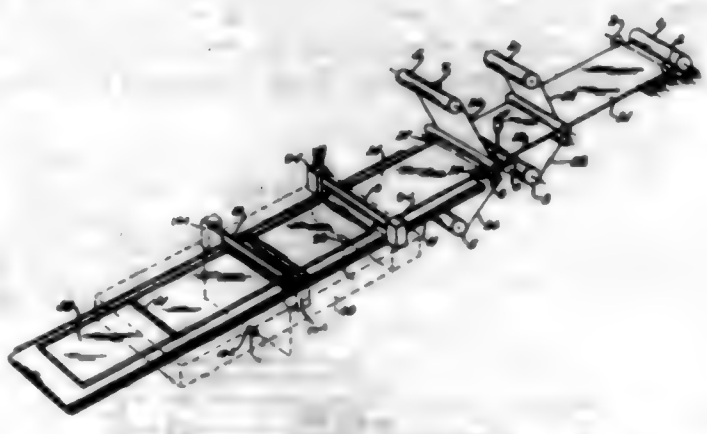
matches including stems, said matches being alternately long and short in comparison to each other thereby staggering the heads of the matches vertically, and said heads being substantially coplanar in said compartment to occupy a minimum thickness in said compartment, said each match stem having a reduced upper end, the striking head on said upper end adhered to said reduced upper end and being substantially no wider than the lower part of a match stem.

2,894,620
RIBBON SPOOL
Ernest Calvin Campbell, Jr., Grain Valley, Mo., assignor to Hallmark Cards, Incorporated, Kansas City, Mo., a corporation of Missouri
Application December 19, 1956, Serial No. 629,280
4 Claims. (Cl. 206—53)

4. A ribbon spool of the character described having a substantially flat circular body member having flanges extending outwardly from each side thereof providing an annular surface around which the ribbon is wound, said body member having spaced side flanges extending radially outwardly from the side edges of the annular surface of said body member and having a plurality of openings therein for illustrating the ribbon therethrough, the inner edge of the outer perpihery of the side flanges having inwardly tapered surfaces terminating in inwardly directed beads and forming shoulders, and a strip member engaging a portion of the surface of the ribbon and underneath said beads for retaining the free end of said ribbon confined between said flanges.

2,894,621
PROCESS OF MAKING REINFORCED PLASTIC PANELS AND ARTICLE PRODUCED THEREBY
Francis X. Ambrose, San Diego, Calif., assignor to Alsynite Company of America, San Diego, Calif., a corporation of California
Application August 17, 1956, Serial No. 604,738
13 Claims. (Cl. 206—60)

1. A method of making a reinforced plastic panel of a resinous composition capable of polymerizing to form rigid, solid structures, comprising impregnating a continuous mat of a porous fibrous base with said resinous composition, enclosing the impregnated base in an envelope of flexible relatively nonporous material secured together along its lengthwise marginal edges and forming a laminate, progressively compressing said laminate to expel excess liquid and entrapped air from said base, converting said resinous composition to a relatively immobile and tacky state in narrow stripe across the width of said laminate, and then severing the laminate into lengths at an intermediate line in said stripe, whereby each said length is enclosed within an envelope sealed across at least two ends thereof by said immobile and tacky resinous composition.



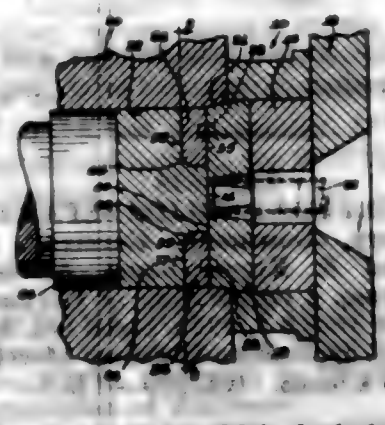
9. An article of manufacture comprising a fibrous base impregnated with a resinous composition capable of polymerizing to form rigid, solid structures, cover sheets about said impregnated base secured together along their marginal edges and sealing said base and resinous composition from a substantial contact with air, said cover sheets being sealed along at least two ends thereof by a narrow strip only of said resinous composition converted to a relatively immobile state, the entire article being sufficiently flexible for subsequent shaping and curing of the resinous composition.

2,894,622
CAN CARRIER CLIP
Onufjem Jules Pospitch, Itasca, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Application February 28, 1957, Serial No. 642,983
4 Claims. (Cl. 206—65)

1. A can package comprising at least four cylindrical cans, each having an end rim which projects radially beyond the side wall thereof and axially beyond a closed end thereof, said cans including a first pair of closely adjacent cans having slightly spaced apart side walls and end rims and a second pair of relatively widely spaced cans respectively disposed at opposite sides of said first pair and closely adjacent to each can of said first pair and having side walls and end rims slightly spaced apart from the side walls and end rims of the cans of said first pair, and a one-piece sheet material clip disposed between said cans and interconnected with the rims thereof, said clip including an elongated body portion disposed axially inwardly of free axially outer edges of the said rims, opposite arcuately disposed side marginal portions of said body portion engaging the side walls of the cans of said first pair beneath the rims thereof and opposite arcuately

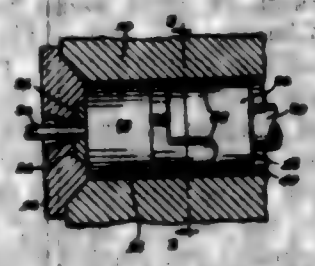
disposed end marginal portions of said body portion engaging the side walls of the cans of said second pair beneath the rims thereof, said clip also including laterally extending thin arcuately disposed outer flange portions extending upwardly from said marginal portions and over the rims and having arcuate wall portions fitted against inner sides of the rims thus locking the cans against separation and enabling the cans to be handled as a unit, outermost portions of said clip being in substantially the same plane as the axially outer edges of the associated rims.

2,894,623
EXTRUSION APPARATUS
Richard A. Walton, Edwardsville, Ill., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Application March 9, 1956, Serial No. 570,586
1 Claim. (Cl. 207—3)



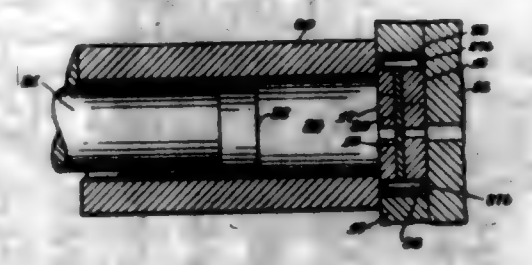
In extrusion apparatus which includes an extrusion press having an extrusion die including a die opening, said die communicating with and having a flat surface facing into a cylindrically shaped container bore having a generally cylindrical ram moveably disposed therein, the improvement comprising a pair of blocks disposed within said bore, each of said blocks having two parallel opposed surfaces, one of said parallel opposed surfaces of each block abutting against said flat die surface, each block having a peripheral surface which is disposed against said cylindrical bore in close fitting relationship therewith, each of said blocks having a plurality of means for maintaining said blocks in predetermined position within the bore and against said die surface, the blocks being disposed opposite to one another and on opposite sides of the die opening, the spacing between the blocks being less than sixty degrees of arc as measured radially from the center of the bore along the bore wall between the blocks, whereby the general shape of the container adjacent to the die is changed from a cylindrical to a substantially rectangular cavity which conforms generally to the outline configuration of the die opening.

2,894,624
DUMMY BLOCK
Derris G. Leonard, Ferguson, Mo., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Application January 4, 1957, Serial No. 632,487
1 Claim. (Cl. 207—9)



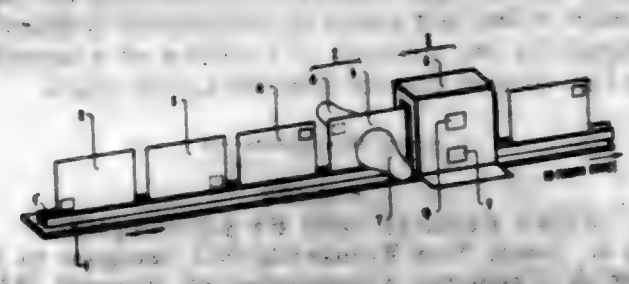
A dummy block for use in extrusion apparatus including a container having a cylindrical bore and a ram adapted to be inserted into said bore, comprising a generally cylindrical body having a billet end, a ram receiving end and a side wall, said body having a transversely disposed land encircling the billet end of said side wall, the width of the transversely disposed land being a minor fraction of the overall length of the dummy block, and at least three longitudinally disposed lands, said longitudinally disposed lands being integral with said transversely disposed land and extending from said transversely disposed land towards said ram receiving end of said body, the width of the longitudinally extending lands being relatively narrow as compared with the distance between adjacent lands.

2,894,625
EXTRUSION DIE ASSEMBLY WITH FLOW-CORRECTING BAFFLE PLATE
Clare S. Harris, Midland, Mich., and Clifton J. Huffman, Ferguson, Mo., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Application December 18, 1953, Serial No. 398,972
1 Claim. (Cl. 207—17)



A composite die assembly for extrusion comprising a die plate of uniform thickness, a die aperture in said plate having parallel walls perpendicular to said plate, said aperture being of differential width, a baffle plate of uniform thickness ahead of said die plate through which the metal is extruded toward said die aperture, an aperture in said baffle plate having parallel walls perpendicular to said baffle plate, said baffle plate aperture being of the same general configuration as said die aperture but larger in opening by spacing the walls of said baffle aperture away from the walls of said die aperture, the spacing being greater in the locations where said width of said die aperture is smallest, said die plate being formed of die material and said baffle plate being formed of inexpensive material.

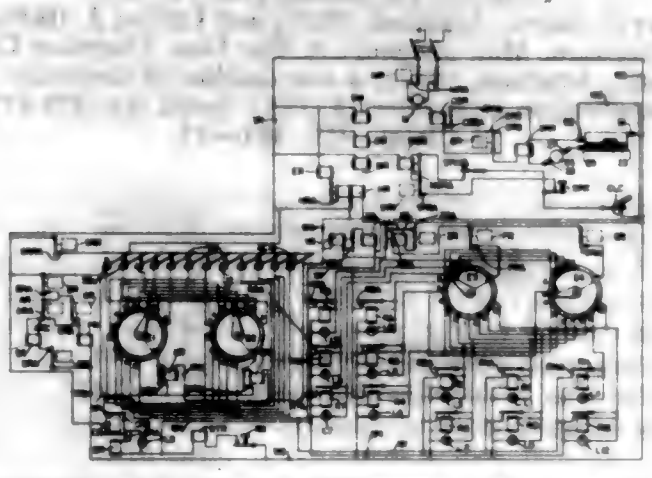
2,894,626
PACKET POSITION DETECTING SYSTEM
Cornelis Emilius Mulders, The Hague, and Bertus Visser, Rotterdam, Netherlands, assignors to Staatsbedrijf der Posterijen Telegrafie en Telefonie, The Hague, Netherlands
Application April 12, 1956, Serial No. 577,848
10 Claims. (Cl. 209—111)



1. A system for detecting the position of similar packets having a phosphorescent marking in the same predetermined location on each packet, comprising: a conveyor means for moving said packets in succession past first and second spaced stations, means for irradiating said phosphorescent markings on each packet at said first station to produce an afterglow from each of said markings, means for shielding said second station

from said radiations including a tunnel through which said packets are passed, and separate photoelectric responsive means in different positions at said second station for detecting afterglow from said markings corresponding to different positions of said packets on said conveyor means.

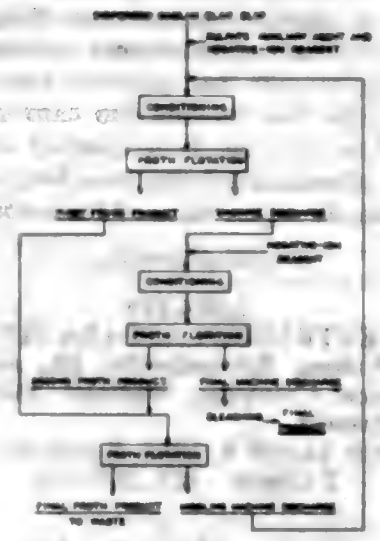
2,894,627
RECORD CONTROLLED MACHINE
Ulrich Kölm, Berlin-Wannsee, Germany, assignor to I.B.M. Deutschland-Internationale Buro Maschinen Gesellschaft m.b.H., Wurttemberg, Germany, a corporation of Germany
Application December 21, 1951, Serial No. 262,865
10 Claims. (Cl. 209—110)



1. In a sorting machine having a series of sorting blades for diverting records having data representations to any one of a plurality of different destinations, means for feeding the records past the ends of said blades, means for moving said blades at right angles to said record at different times during the progress of the records past the ends of said blades whereby selectively to open a passage for each record to one of said destinations, the combination of means for detecting the actual destination of a record including a series of contact elements over which each record passes during its progress past said blades, each of said elements normally making electrical contact with the end of one of said blades, said elements being progressively separated from said blades during the passage of the record past the ends of said blades, a series of destination test circuits, means to selectively connect a group of said test circuits to the contact element corresponding to a selected destination and the immediately adjacent elements, means to complete the group of test circuits through said blades when the record has reached the end of the blade corresponding to a selected destination, and means rendered effective by said test circuits for indicating the actual destination when said group of test circuits is selectively interrupted by the presence of a portion of a record between the selected contact element and its blade.

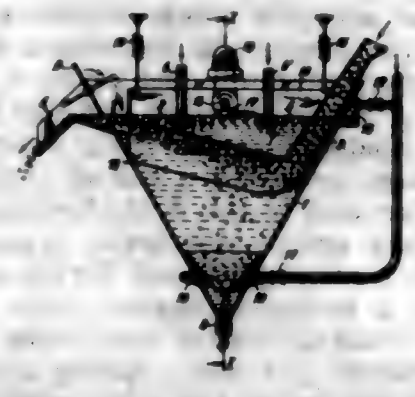
2,894,628
CLAY BRIGHTNESS BY FLOTATION
James B. Duke, New Brunswick, N.J., assignor to Minerals & Chemicals Corporation of America, Menlo Park, N.J., a corporation of Maryland
Application July 13, 1956, Serial No. 597,587
11 Claims. (Cl. 209—166)

1. A method for improving the brightness of dispersed kaolin clay including the subjecting of said kaolin clay to negative-ion froth flotation treatment in an aqueous pulp, with a negative-ion reagent and an auxiliary agent from the group consisting of ammonium sulfate, magnesium sulfate and potassium sulfate, to thereby produce a froth-product material which is a concentrate of the



colored impurities in the original clay and a machine-discharge clay product of improved brightness.

2,894,629
SINK AND FLOAT SOLIDS SEPARATORS
Rudolf Teuteberg, Dortmund, Germany, assignor to Schüchtermann & Kremer-Baum Aktiengesellschaft für Aufbereitung, a corporation of Germany
Application March 5, 1956, Serial No. 569,435
Claims priority, application Germany March 10, 1955
14 Claims. (Cl. 209—172.5)

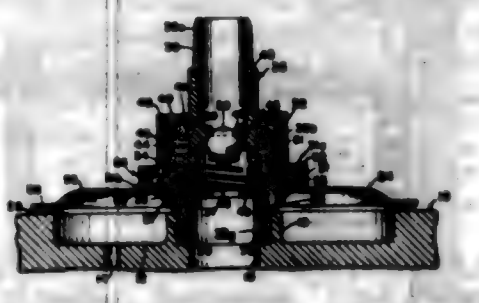


1. A sink separator comprising a container for heavy liquid defining an outlet for sink material at the bottom portion thereof and an outlet for float material at the upper portion thereof, partition means defining a multiple number of openings therethrough positioned in the upper portion of said container below the normal liquid level thereof, inlet means for passing divided material to be separated into said container below said partition means, and at least one inlet conduit for heavy liquid terminating in said container above said partition means and below the normal liquid level of said container.

2,894,630
MOUNTING AND ADAPTER FOR SCREW NECK TYPE FILTER
Kingsley E. Humbert, Jr., Gastonia, N.C., assignor to Wix Corporation, Gastonia, N.C., a corporation of North Carolina
Application March 29, 1955, Serial No. 497,605
16 Claims. (Cl. 210—133)

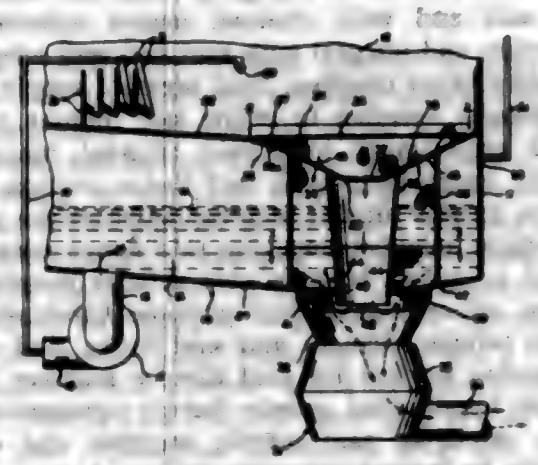
1. A filter mounting comprising a pair of axially aligned communicating first and second tubular members joined in end to end relation, means at the free outer end of the first member for coupling a filter with the first member, an elongate valve tube having one end portion slidably mounted in the second member and having an axially extending opposite end portion projecting through and beyond the free end of the said first member, said first member being radially spaced from the portion of

the valve tube therein providing a fluid passage therebetween, means for conducting fluid into said passage for discharge into a filter coupled to the first member, coacting valve elements carried by said first member and the valve tube for closing said passage when the tube is in one position in the members, resilient means within said passage connected to and between the valve tube and the members and urging movement of the tube to the



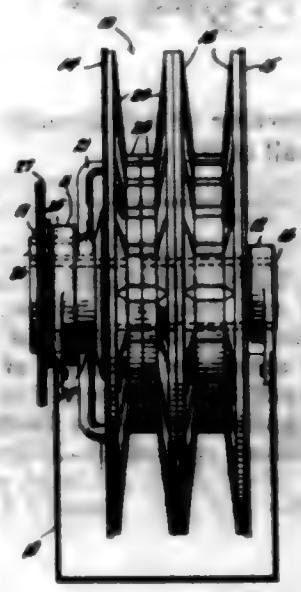
said one position, means carried by the extended end portion of the tube for receiving thrust in a direction to move the tube away from said position by a part of a filter coupled to the said one member, and means at the free end of the second member for securing the mounting in operative position.

2,894,631
FILTRATION APPARATUS
Edward C. Levit, St. Joseph, and Charles R. Lepp, Benton Harbor, Mich., assignors to Whirlpool Corporation, a corporation of Delaware
Application January 17, 1956, Serial No. 559,573
10 Claims. (Cl. 210—152)



1. In combination, upper and lower containers providing vertically spaced generally horizontal first and second walls, respectively, said first wall having a first opening therein, a first downwardly inverted conical foraminous strainer member having its upper outer peripheral edge abutting against the edges of said opening, and its lower inner peripheral edge extending towards said second wall, said second wall having a second opening subjacent said opening in said first wall, means forming a disposer sump subjacent said second opening, a disposer unit connected to said disposer sump, liquid pumping means taking a suction on the lower container and recirculating liquid to said upper container, and a tubular chute positioned generally uprightly, said tubular chute having an upper generally circular edge portion of larger diameter than said lower inner peripheral edge of said first strainer member and butting against the bottom surface of said first strainer member, said tubular chute depending through the center of said second opening and into said disposer sump, and a second foraminous strainer member of generally annular configuration in said second opening around said tubular chute, whereby filtered liquid flows directly into said lower container through said first strainer member and also flows from said disposer sump through said second strainer member into the lower container while foreign particles are discharged from the upper container through said tubular chute and are trapped in the disposer sump for selective removal by said disposal unit.

2,894,632
DRUM DISC FILTER
Robert B. Myers, North Branch Depot, N.J., assignor to Komline-Sanderson Engineering Corporation, Peapack, N.J., a corporation of New Jersey
Application April 11, 1957, Serial No. 652,260
9 Claims. (Cl. 210—331)

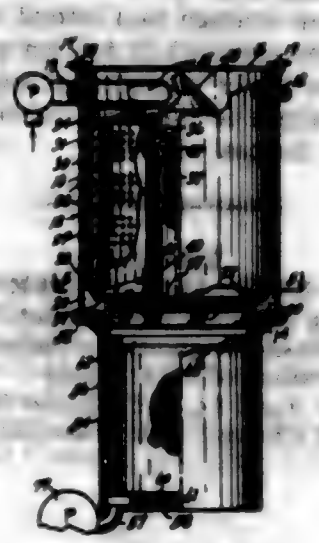


1. A rotary filter comprising a pair of rigid discs, a plurality of rings of filter segments of similar diameter clamped between said discs in coaxial relation with said discs and with each other, each said ring comprising a similar plurality of annularly arranged segments, each said segment including at the radially inner end a hub portion integral therewith and projecting axially beyond the remainder of said segment to maintain the remainder thereof in axially spaced relation from an adjoining segment, the segments of the respective rings being in angular registry with each other, tie rods axially interconnecting said discs through the hub portions of the respective segments and maintaining the angular and radial positions of said segments while maintaining said discs and the hub portions of said segments in axially contiguous relation, each set of axially adjoining angularly registering segments having an axial filtrate passage formed through and defined solely by the hub portions thereof and establishing communication axially through said hub portions, each said segment being formed with an opening communicating with said filtrate passage, and a filter media normally fixed across said opening.

2,894,633
FOOD STRAINER
Lowell J. Collins, Oakland, Calif.
Application May 27, 1957, Serial No. 661,858
16 Claims. (Cl. 210—341)

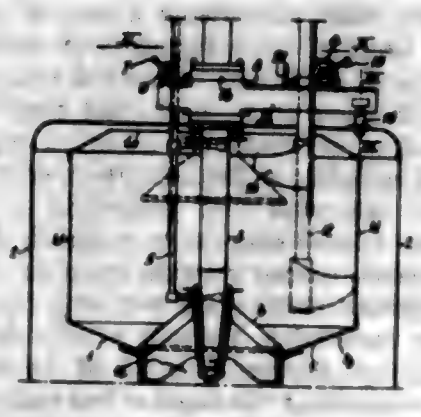
1. A food strainer, in combination, a shell having a removable cover and having gate supporting and guiding means at the lower end, a screen within said shell and slightly spaced from the walls of the shell and having a flange at the upper end cooperative with the wall of the shell in spaced relation below said cover, an intake passage for food material entering tangentially and located between the cover and said flange, said screen being sup-

ported by said gate supporting means, and a convertible screen and gate supportable by said supporting and guid-



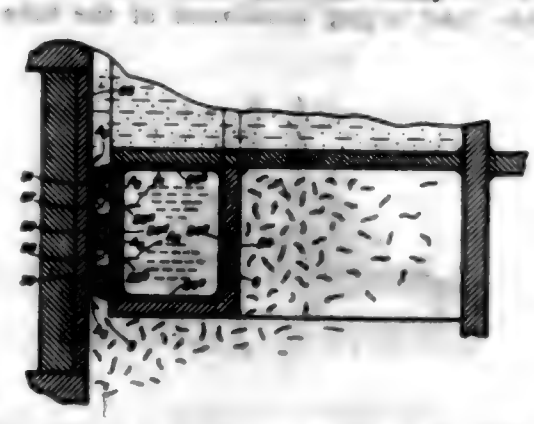
ing means and removable at will through a passage provided through the wall of the shell.

2,894,634
CENTRIFUGES
Raymond Lepoutre and Auguste Gautier, Paris, France, assignors to Societe des Raffineries & Sucreries Say, Paris, France, an anonymous society of France
Application April 8, 1957, Serial No. 651,200
Claims priority, application France January 30, 1957
7 Claims. (Cl. 210—375)



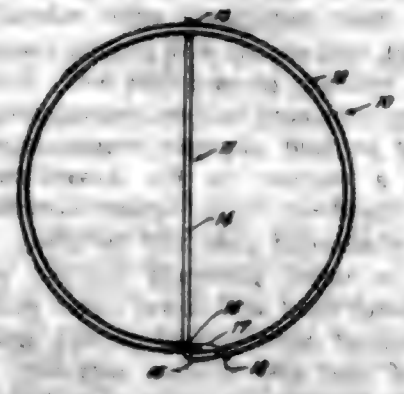
1. In a centrifuge having a rotatable centrifuge unit composed of a basket member symmetrically mounted on a rotating shaft member for rotation therewith and for movement therewith in radical direction, in combination, scraper means located in said basket member for scraping the inner wall surface thereof; mounting means mounting said scraper means exclusively on said rotatable centrifuge unit only for sliding movement in a direction parallel to the axis of said shaft member and for turning movement about said shaft member without any possibility of tilting relative thereto, whereby the relative position between said scraper means and said basket member will not be changed during movement of the latter in radial direction so that damaging of said basket member by said scraper means during such movement is avoided; and locking means preventing rotation of said mounting means about said axis, said locking means engaging said mounting means only along faces substantially parallel to said axis, whereby during movement of said basket member in radial direction any straining of said shaft member and said mounting means is avoided.

2,894,635
SEALING MEANS FOR ROTARY DRUM FILTERS
Harold J. Ibbson, San Leandro, and Frederick L. Scheiter, Alameda, Calif., assignors to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware
Application July 23, 1956, Serial No. 599,480
1 Claim. (Cl. 210—402)



In a continuous rotary drum filter having a vat adapted to be filled with pulp to be dewatered, a drum filter element rotatably mounted in said vat, and filtrate discharge passage means for removing filtrate liquid from the interior of said drum through the open end thereof and directly through the adjacent end wall of the vat, which discharge passage means comprises sealing means effective between said end wall of the vat and the adjacent open end of the filter drum along the submerged peripheral portion thereof; the combination with an improved sealing means comprising a flexible tubular sealing member disposed to extend along said submerged peripheral portion and having terminal portions extending to respective localities above the pulp level in the vat, an annular terminal flange portion for said drum adjacent said end wall, channel means adjacent said flange portion and integral with said end wall adapted to receive said tubular member, fluid pressure supply means for said tubular member to inflate said tubular member into fixed engagement with said channel means and into sealing engagement with said flange portion, weephole means in said tubular member adjacent the portion of said tubular member engaging said flange member to allow fluid to escape between said tubular member and said flange whereby said fluid provides lubrication between said tubular element and said flange, and a reinforced wearing portion for said tubular member having at least one longitudinal groove therein coextensive with the linear extent of said tubular member and defined substantially by lands coextensive with said groove.

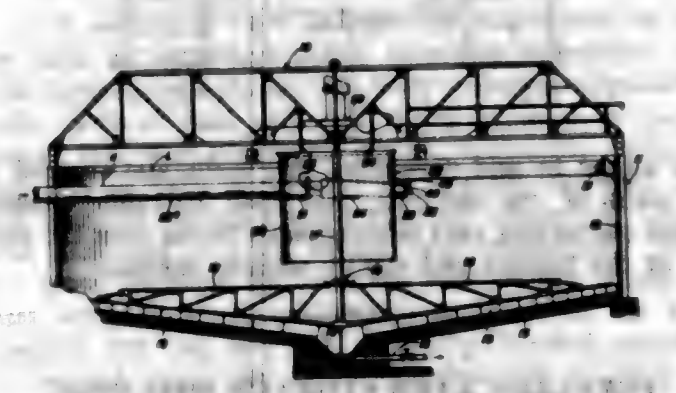
2,894,636
FRAME OR HOLDER FOR A COFFEE BAG
Emanuel Dick, New York, N.Y.
Application May 22, 1957, Serial No. 660,822
6 Claims. (Cl. 210—471)



1. A holder ring for coffee urn bags comprising an integrally formed length of heavy, resilient wire, said wire length being formed with a vertically-extending

handle portion, a horizontal circular ring portion integrally joined with one end of said handle portion and substantially encompassing said handle portion, means at the end of said circular ring portion for hooking interconnection with said ring portion at the juncture of said ring portion with said handle portion, said interconnection means comprising a hump adapted to fit over said one end of said handle portion, a short forwardly-extending portion extending from said hump, and an obliquely outwardly-extending portion adapted to fit under said circular ring portion at a point near said juncture, and means at the open end of said handle portion for connection with said circular ring portion at a position therealong opposite said juncture.

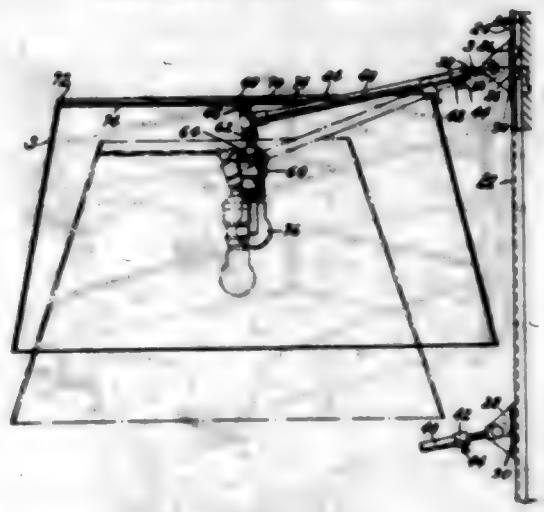
2,894,637
FEEDWELLS FOR SEDIMENTATION TANKS
Charles A. Schreiber, Springdale, Conn., assignor to Dorr-Oliver Incorporated, Stamford, Conn., a corporation of Delaware
Application January 11, 1956, Serial No. 558,576
8 Claims. (Cl. 210—519)



1. In a sedimentation tank adapted to hold a body of liquid and provided with centrally disposed means for introducing solids carrying feed liquid into said body for clarification, and having sludge collecting and sludge discharge means at the tank bottom as well as overflow means for clarified liquid at the top; a feedwell structure for introducing said feed liquid which comprises a cylindrical feed member having along its circumference and spaced from one another a plurality of normally submerged influent openings including a first and a last opening adjacent to one another, and a feed distributing conduit surrounding said feedwell from said first to said last opening and branchwise connected with said feedwell member to supply to said feed openings split streams for feed liquid, whereby said influent split streams are directed inwardly from all directions into a horizontal zone of mutual interference within said feedwell member so that the liquid from said zone of interference is adapted to pass downwardly through the cylindrical feedwell member as a substantially equalized velocity throughout the cross-sectional area thereof.

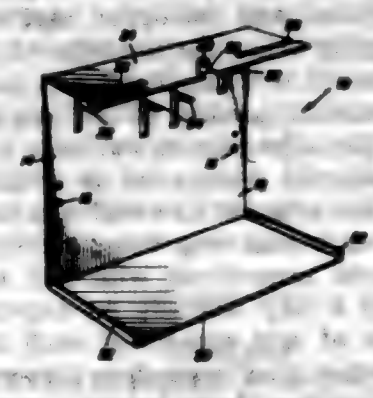
2,894,638
LAMP SHADE DISPLAY
Stanley E. Northover, Detroit, Mich.
Application January 9, 1956, Serial No. 558,001
13 Claims. (Cl. 211—13)

13. A device for displaying a plurality of lamp shades each having a supporting spider arranged adjacent the upper rim thereof comprising: a support, a plurality of lamp shade supporting arm members each connected at one end to said support at spaced-apart intervals and extending at the other end laterally away from the support, a ball member mounted in upstanding relation on the free end of each arm, each of said arms adapted to extend over the upper rim of a lamp shade and downwardly between spokes of the spider thereof with the ball member disposed below and received upwardly within the hub portion of the spider with the spherical surface



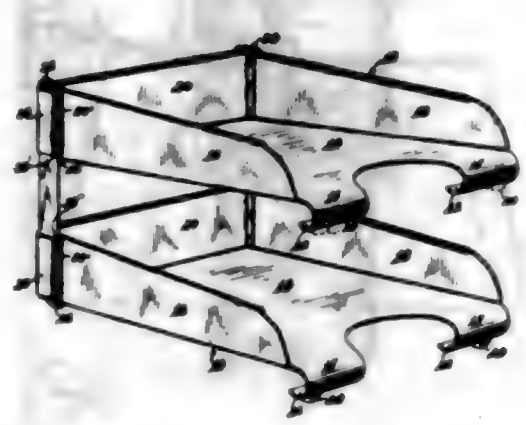
of the ball member rockably supporting the shade, whereby a plurality of spaced-apart shades may be suspended in laterally spaced relation from said support with the axis of each shade lying in a vertical plane.

2,894,639
TOILET UTILITY BRACKET
Antonio G. Caporicci, Buffalo, N.Y.
Application June 13, 1958, Serial No. 741,849
8 Claims. (Cl. 211—60)



8. A toilet utility bracket comprising a plate to be attached to a vertical supporting surface, a bottom shelf projecting from said plate of sufficient depth to accommodate a plurality of jars, bottles, and tubes thereon, a pair of tabs protruding from an upper portion of said plate for supporting a toothbrush thereon, an upper shelf projecting from said plate for supporting a hair brush thereon, means on said upper shelf for supporting collapsible tube containers in depending fashion adjacent said tube whereby the toothbrush will be prevented from falling from the tabs by the depending tubes, said means including horizontal slots in said upper shelf disposed forwardly of said tabs, a pair of projections protruding from said plate and so spaced as to accommodate a safety razor thereon, said projections being disposed below said tabs, said slots being formed in the outer ends of said upper shelf, and said projections disposed therebetween whereby said tubes will not interfere with the projections, an upwardly extending flange on said upper shelf for supporting a mirror and also preventing the hair brush from falling from said upper shelf, said bottom shelf having side flanges for preventing accidental removal of articles thereon, said bracket being constructed of a single sheet of metal with the various elements thereof being struck therefrom.

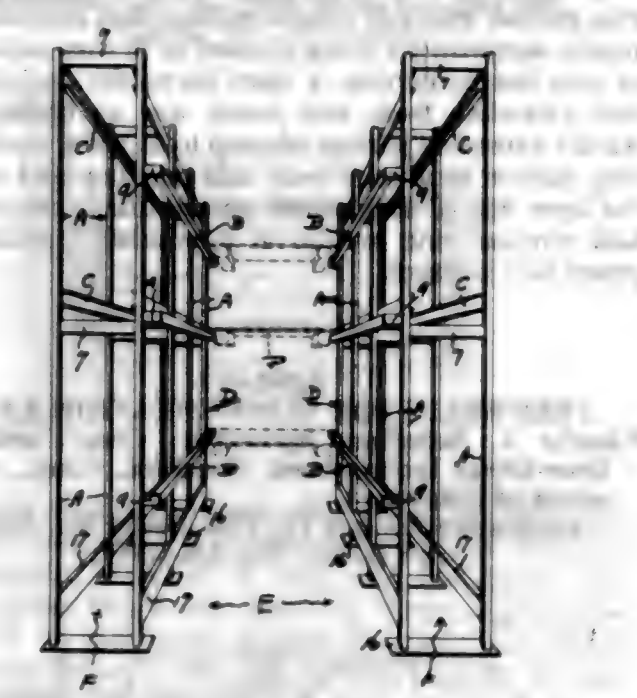
2,894,640
DESK TRAYS AND THE LIKE
Bryant Bigelow, Boston, Mass.
Application December 19, 1955, Serial No. 553,850
1 Claim. (Cl. 211—126)



A desk tray unit comprising a plurality of generally rectangular trays in generally parallel spaced relation, one above another, each said tray having a bottom wall, two generally parallel side walls, and a single end wall connecting the side walls and forming therewith two corners of the tray, said side and end walls of each tray having substantial vertical extent at the said corners and having plane exterior surfaces throughout their said vertical extent, a strip of rigid material extending exteriorly around each of the two said corners of each tray, each said strip having width only slightly less than the height of said side and end walls at said corners of the trays, and the lower edge of each strip being located slightly above the plane of the bottom surface of the tray with which it is associated, and the upper edge of each strip being located slightly below the top edge of the end wall of the tray with which it is associated, and each said strip having one substantial portion of its length in spaced parallelism with the adjacent side wall of a tray and having another substantial portion of its length in spaced parallelism with the adjacent end wall of a tray, opposite end portions of each said strip being rigidly secured in flatwise engagement respectively with said adjacent side and end walls of a tray whereby an angular socket is provided at each of said corners of each tray, a rigid post extending between corresponding corners of a lower and an upper tray, each said post having a cross-sectionally angular end part fitting snugly in a said angular socket, and each having a pair of shoulders adjacent each said end part for coaction each with an edge of a different one of said rigidly secured flatwise engaged end portions of a said strip thereby to limit the permissible extent of a said end part of a said post within a said socket to not more than one half of the width of a said strip and to stabilize the corner supports of each post-supported tray.

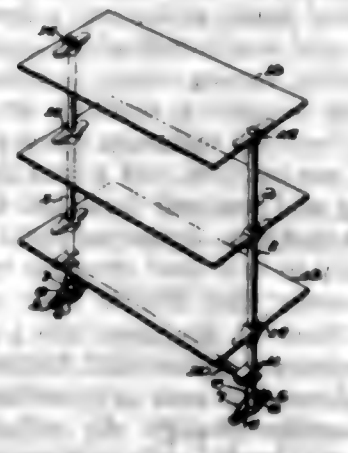
2,894,641
STORAGE RACK
Landon B. Edwards, Jr., Richmond, Va.
Application August 16, 1957, Serial No. 678,632
3 Claims. (Cl. 211—134)

2. In a merchandising storage rack assembly, a pair of skeleton frame elements laterally spaced apart from each other and cooperating to provide an open ended aisleway therebetween, each of said frame elements including a series of upright supports spaced longitudinally of said frame elements and of a cross-sectional shape to provide a medial channel having a bottom wall whose outer face is disposed toward said aisleway, and whose side walls connect with said bottom wall and project at right angles thereto, webs connected to the terminal portions of said side walls and disposed at right angles thereto, inverted channel shaped brackets each comprising a horizontal web portion and vertical depending side flanges having portions adjacent the side walls of the upright to embrace the same, and foot portions disposed at



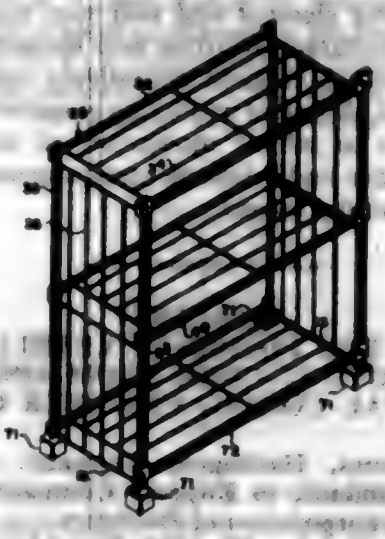
right angles to said depending side walls and secured to the webs of the uprights, and load carrying channel shaped supporting rails telescopically fitting over the aisle end of the bracket and rigidly secured thereto.

2,894,642
PREFABRICATED STORAGE SHELVING
Merton L. Clevett, Jr., East Natick, and Frank W. Lewis, Framingham Center, Mass.
Application July 28, 1954, Serial No. 444,676
2 Claims. (Cl. 211—148)
(Granted under Title 35, U.S. Code (1952), sec. 266)



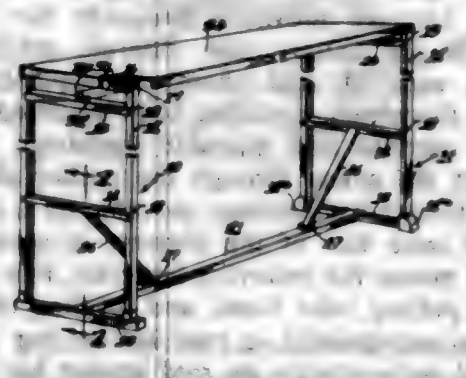
1. Prefabricated shelving comprising a pair of laterally spaced uprights including a pair of vertically arranged pipes of uniform external diameter, a bracket mounted on the lower end of each pipe, each bracket comprising a symmetrical, substantially oval-shaped body portion having a flat bearing face provided with screw-receiving openings, a collar centrally arranged on each bracket, said body portion and collar provided with an opening extending therethrough and in which the lower end of the pipe is positioned with the end substantially flush with the flat bearing face of the bracket, other brackets of identical construction spaced vertically on the pipes with their bearing faces directed upwardly, set screws mounted in the collars for securing them in various fixed positions on the pipes, and shelves having their respective ends positioned on the upwardly directed bearing faces of said last-mentioned brackets.

2,894,643
SHELVING UNIT
Louis Maslow, Brooklyn, N.Y.
Application January 27, 1955, Serial No. 484,465
3 Claims. (Cl. 211—148)



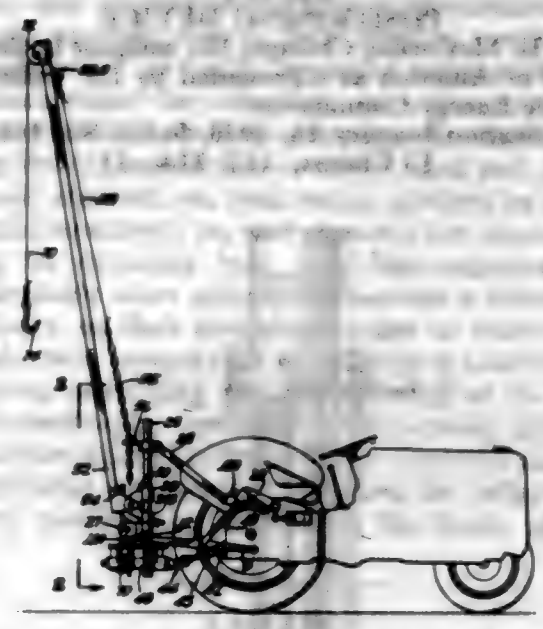
1. A structural unit adapted for connection to similar units to form collapsible furniture assemblies, each unit comprising a planar thin body including opposite end rods, both of said end rods being secured to parallel spaced side bars projecting equally outwardly from each end rod in axial alignment, the spaced side bars from one end rod having a plate secured tangentially thereto and including a hole whose axis transversely bisects the space between the bars, the ends of the spaced side bars being in alignment with a diameter of the holes, whereby the unit side bars including the said plates can be secured removably to the side bar ends of other similar units both longitudinally and transversely.

2,894,644
GARMENT RACK
Raymond A. Magnuson and Nels M. Christiansen, Chicago, Ill., assignors to Vogel-Peterson Co., Chicago, Ill., a corporation of Illinois
Application November 18, 1955, Serial No. 547,644
3 Claims. (Cl. 211—177)



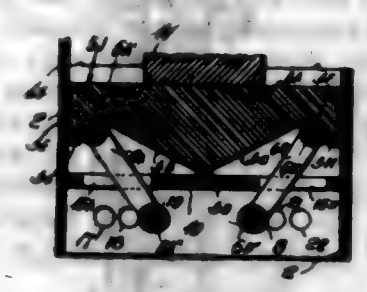
3. In a knock-down garment rack having a pair of spaced and substantially vertical end frames each including a horizontal cross bar, a horizontal rail for detachably joining said cross bars at substantial right angles thereto in a manner to permit limited swinging movement of said end frames relative to the rail, and including a brace member interposed between and connected to each end frame and a point intermediate the ends of the rail; a disengageable connection interposed between one end of the rail and one of the end frame cross bars; said connection including means for positively locking the rail end and respective end frame to prevent inadvertent disengagement of the connection when the end frame undergoes limited swinging movement outwardly with respect to the rail.

2,894,645
HOISTING MECHANISM
Floyd McCall and Lloyd McCall, Redmond, Calif.
Application November 16, 1956, Serial No. 622,577
6 Claims. (Cl. 212—8)



1. Hoisting mechanism of the character described comprising in combination a tractor chassis, a pair of arms pivotally mounted on said chassis, power operated means associated with said tractor for raising said arms, a generally horizontally extending shaft interconnected between the ends of said arms, a casing pivotally mounted on said shaft, a winch rotatably mounted in said casing, a vertically extending tubular post extending upwardly from said casing, a bracket member rotatably mounted on said vertical post, a boom pivotally mounted on said bracket, a cable wound on said winch and extending upwardly through said boom, a cable attached to the upper end of said boom and adjustably secured to the tractor chassis, and a manually operated clutch for connecting the power take off shaft of the tractor to said winch to effect a selective driving of the same.

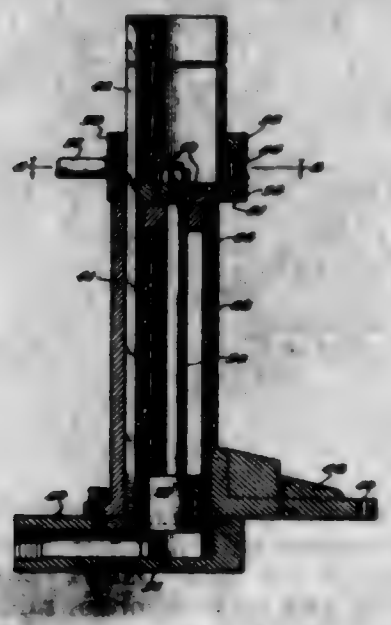
2,894,646
WELDED TYPE STRIKER AND DRAFT LUG WITH COUPLER HEIGHT ADJUSTMENT
Harold H. Hicks, Evansville, Ind., assignor to International Steel Company, Evansville, Ind., a corporation of Indiana
Application March 28, 1956, Serial No. 574,454
5 Claims. (Cl. 213—21)



1. A striking casting including a draft gear device, a wearing member supporting said draft gear device, an anchor member extending transversely of the striking casting, a pair of groups of transversely aligned apertures in said anchor member with transverse pins extending through selected aligned apertures in said anchor member and wherein there are link members pivotally mounted on said transverse pins and supporting the lower portion of

said wearing member for raising and lowering said wearing member uniformly at each end thereof with respect to said draft gear device.

2,894,647
POSITIONING DEVICE
Willard H. McCorkle, Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application January 26, 1950, Serial No. 140,684
13 Claims. (Cl. 214—1)

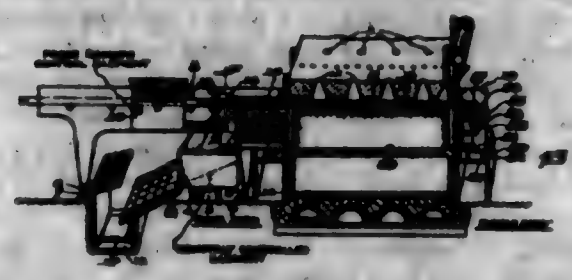


1. A positioning device comprising in combination: a support member, a guide member having a slot therethrough supported by the support member and rotatable with respect thereto, means to rotate the guide member mounted upon the support member, a positioning member provided with a protruding key slideably keyed to the slot in the guide member, said positioning member being adapted to position a load, and means mounted upon the support member coupled to the key to adjust the position of the positioning member along the slot.

2,894,648
STACKING DEVICE
Clarence W. Mussett, Paris, Ky.
Application April 11, 1957, Serial No. 652,193
7 Claims. (Cl. 214—6)

1. In a stacking device an upward extending guideway, a carriage arranged for vertical movements therein, resilient means comprising a counterweight operatively arranged to urge said carriage upwardly, a parcel receptacle tiltably arranged within said carriage, said parcel receptacle having an inclined surface, an actuating element adapted for coaction with the inclined surface of said parcel receptacle whereby said parcel receptacle will be tilted, a stop element arranged in the downward path of movement of the said carriage, an abutment mounting member adapted to be upwardly repositioned and mounting said actuating element and said stop element, a suspended weight suitable for lifting said abutment mounting member upward, an element operatively connecting said weight and said abutment mounting member, restraining means actuable to inhibit movement of said abutment mounting member and releasing means operative to deactuate said restraining means.

2,894,649
APPARATUS FOR COMBINED LEVELLING COAL AND REMOVING COKE FROM ONE SIDE OF HORIZONTAL COKING CHAMBER OVEN BATTERIES
Walter Mallmann, Hattingen, Germany, assignor, by mesne assignments, to Koppers Company, Inc., Pittsburgh, Pa., a corporation of Delaware
Application October 27, 1955, Serial No. 543,217
4 Claims. (Cl. 214—23)



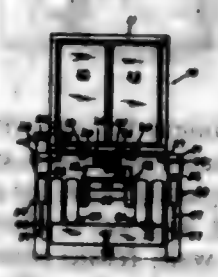
1. Apparatus for combined levelling coal charges in, and pushing the finished coke cakes out of, horizontal coking chambers comprising: the combination with a battery of horizontal high coking chambers that are very narrow relative to their height and are arranged side by side in a row each having removable doors at their opposite horizontal ends, and a means alongside the coke side of said battery for sequentially receiving at different positions alongside the ends of different coking chambers hot coke therefrom for quenching the coke, of a pusher head carriage movable alongside the opposite pusher side of the battery into different positions for registry with each of said chambers sequentially for pushing coke therefrom, a pusher head mounted on said pusher head carriage and movable therefrom into the pusher end of the ovens through the pusher side doorways, a coal leveler bar carriage movable on a trackway alongside the coke side of the battery, in spanning relation to said means for receiving hot coke, into different positions for pulling coke from, and leveling of coal in said chambers sequentially, a coal leveler bar mounted for horizontal reciprocation on said leveler bar carriage at a level for insertion into and reciprocation into and out of each of said coking chambers at the level of the tops of said horizontal chambers with actuating means and driving means for said leveler bar on said leveler bar carriage, said leveler bar being extendable completely through said chambers to have its free terminal end emerge at the pusher side of the battery, and means for detachably interconnecting the free terminal end of the leveler bar with the pusher head while the latter is on the pusher head carriage for pulling the pusher head completely off the carriage, and along the bottom of the coking chambers against the resistance of the coke cakes therein, for pushing the coke cakes out to the means for receiving hot coke on the opposite coke side of the battery by means of the same mechanism for levelling a new coal charge in said coking chambers.

2,894,650

CARGO AND FREIGHT TRANSPORTING SYSTEMS

James J. Black, Cincinnati, Ohio, Wallace B. Brian, Virginia Beach, Va., Meyer J. Freedle, Philadelphia, Pa., William R. Hummel, Cincinnati, Ohio, Alan McIlhenny, Newtown Square, Pa., Fred H. Raike, Little Neck, N.Y., and Robert W. Simms, Hatboro, Pa., assignors to American-Hawaiian Steamship Company, New York, N.Y., a corporation of Delaware

Application December 21, 1956, Serial No. 629,810
5 Claims. (Cl. 214—38)



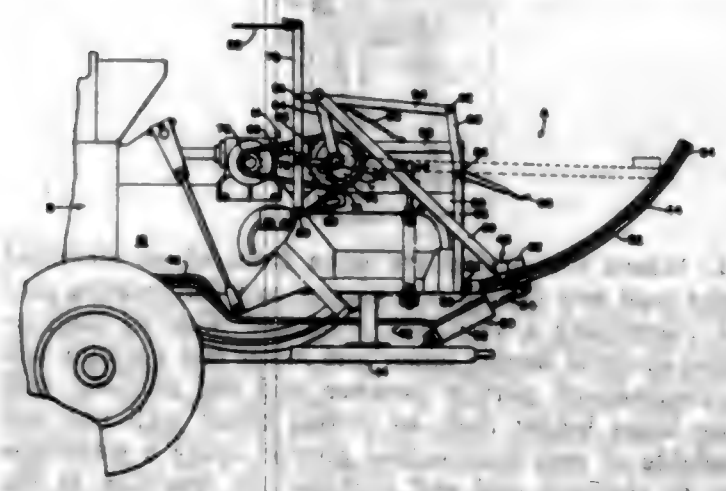
1. A loading and unloading device for a vehicle having a wheel-supported chassis and a detachable cargo-carrying body having wheels thereon, comprising an elevated platform having means thereon to support said body for rolling on its wheels, a lower platform for supporting said vehicle, lifting means connecting said upper and lower platforms and supporting said lower platform for lateral and up and down movement, and power means for actuating said lifting means to move said lower platform up and down.

2,894,651

BALE THROWER VARIATIONS

Murray W. Forth and Harvey R. Adams, Moline, Ill., assignors, by mesne assignments, to Deere & Company, a corporation of Delaware

Application December 6, 1957, Serial No. 701,839
17 Claims. (Cl. 214—83.3)



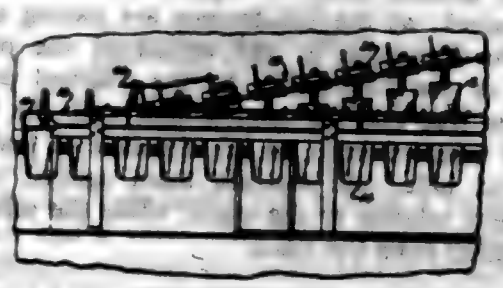
4. For a baler having bale-forming means including a generally horizontal bale-discharge portion from which individual bales emerge in succession as the baler operates: bale-throwing apparatus for throwing each emerging bale distantly from the bale-discharge portion of the baler, comprising supporting structure having means thereon for connection thereof to the baler; means at and for receiving and supporting a bale from the discharge portion and having opposite side portions respectively flanking the received bale and extending generally in the direction in which the bale is ultimately thrown; means hingedly supporting the bale-receiving means at said discharge portion for vertical swinging adjustment to vary its angle to the horizontal relative to said discharge portion; means for selectively fixing an adjusted angular position of said bale-receiving means; track means on and along said side portions; a pair of bale-throwing elements, one carried by each track means to run lengthwise of said track means on a throwing stroke from a starting position proximate to said discharge portion and on a successive return stroke back to said starting position; power-operated mechanism on the supporting structure and including a driving connection to the bale-throwing elements, said mechanism having a demobilized status while said elements are in their starting positions and being mobilizable for cyclic operation terminated by said demobilized status for affording successive acceleration and deceleration of the bale-throwing elements on their throwing strokes and successive acceleration and deceleration of said elements on their return strokes; bale-engaging means respectively on said elements for receiving and engaging an emerging bale, said bale-engaging means being releasable when said elements reach a substantially high velocity on their throwing strokes to enable departure of the bale beyond said elements; and control means for effecting mobilizing and demobilizing of the power-operated mechanism, including a bale-sensing device operative automatically, in response to a bale-forming condition including emergence of a bale to the bale-receiving means, to mobilize the mechanism for cyclic operation thereof.

2,894,652

CONTINUOUSLY MOVING APPARATUS FOR WITHDRAWING FROZEN CONFECTION FROM MOLDS

Robert Taylor Glass, Austin, Tex.

Original application December 14, 1953, Serial No. 398,100. Divided and this application July 3, 1957, Serial No. 669,728
5 Claims. (Cl. 214—309)



1. A confection making machine including a first endless conveyor carrying a plurality of molds, said molds adapted to contain an edible substance with a stick extending upwardly therefrom and a second endless conveyor carrying a plurality of clamps, said clamps each comprising a fixed jaw secured to said second conveyor and a pivoted jaw pivoted to said fixed jaw, said pivoted jaw having an operator bar, said clamp including biasing means biasing said clamp in a closed attitude, said first conveyor operating adjacent said second conveyor at at least one point, said conveyors diverging beyond said point, means at said point to allow said clamps to close on such sticks whereby as said conveyors diverge beyond said point said clamps withdraw such confections from their molds by such sticks, means to open said clamps after such confections are withdrawn from said molds to release said confections, the means to open said clamps and the means which allows said clamps to close being a stationary cam bar positioned in the vicinity of said point and adapted to be engaged by said operator bars.

2,894,653

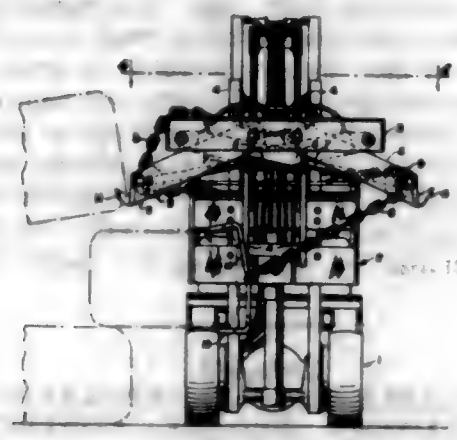
COTTON BALE EXTRACTOR

Jack N. Garrett, McGregor, Tex.

Application December 31, 1957, Serial No. 706,610
1 Claim. (Cl. 214—620)

In combination with a lift truck having a lift carriage, a normally horizontally disposed, substantially rectangular frame attached to the lift carriage, a pair of substantially rectangular sub-frames arranged transversely rela-

tive to the frame, the sub-frames being pivotally connected at one end to intermediate portions of the frame, in spaced apart relation to each other, and each being rotatable about a horizontal axis parallel to the ends of the frame and normally depending from the frame, a pair of hydraulic cylinders each pivotally connected at one end to one end of the frame and having a piston therein acting on a piston rod pivotally connected at its opposite end to the free end of the sub-frame nearest the opposite end of the frame, whereby the sub-frames are capable of being swung outwardly in opposite directions by the action of the pistons, and a chain connected at one end

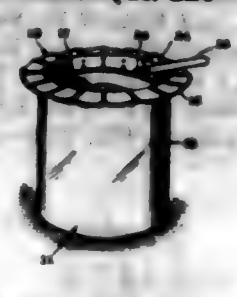


to the frame and looped about a pair of rollers carried by the free ends of the sub-frames, the chain having a pair of hooks connected to its opposite end for engagement with a selected bale of cotton or the like comprising one of several bales arranged in a stack, to pull it from the stack, as the sub-frames are swung outwardly in opposite directions by the action of the pistons, at least one of the sub-frames having toothed projections adjacent its free end for engagement with the bale next above the selected bale, to lift the bale or bales above the selected bale, and restrain them against horizontal displacement relative to the stack, while the selected bale is being pulled from the stack.

2,894,654
CLOSING DEVICE OF ELASTIC MATERIAL FOR BOTTLES, TUBES AND SIMILAR CONTAINERS
Hardy Löhrer, Wiesbaden, Germany
Application September 17, 1958, Serial No. 761,585
Claims priority, application Germany September 20, 1957
9 Claims. (Cl. 215—41)

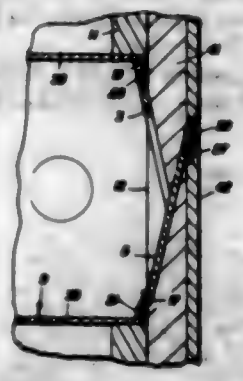
1. A closing device of elastic material for bottles, tubes and similar containers having a mouth, comprising a retaining ring adapted to be fitted on the mouth of the container, a closing cap having a top, an outer annular part depending from said top and adapted to the external shape of the container mouth, said outer annular part having a lower annular edge adapted to be brought into sealing engagement with the retaining ring, an inner hollow stopper part depending from the top of said closing cap and adapted, in the closing position, to project into the container mouth in sealing engagement therewith, said stopper part being open at the bottom, a resilient link integrally connecting said retaining ring with said closing cap, and a tear-off strip separably connected with said retaining ring and arranged, in undamaged state, to tightly embrace the outer annular part of said closing cap.

2,894,655
ASH CONTAINER TRAY TOP ATTACHMENT
Christian K. Bergan, Chicago, Ill., assignor to Gustave Miller, Washington, D.C.
Application December 7, 1956, Serial No. 626,871
1 Claim. (Cl. 220—1)



An ash tray attachment for use with a sheet metal can having a closed lower end and a cylindrical side wall terminating in a completely open top end, said ash tray attachment comprising a tray, a downwardly depending slightly tapered side wall, frusto-conical in shape, having a plurality of struck-out grater-like projections spaced vertically and circumferentially thereabout, a bottom wall on said tray extending from said frusto-conical side wall, having a central flap valve and ash disposing opening therein, whereby said tray is adapted to be forcibly inserted and stably yet removably retained in an open top cylindrical walled can.

2,894,656
GUARDS AND LOCATORS FOR ELECTRICAL OUTLET WALL BOXES
Frederick M. Tomlin, Detroit, Mich.
Application August 13, 1958, Serial No. 754,836
4 Claims. (Cl. 220—3.4)

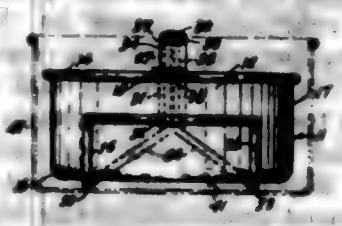


1. Means for closing the open front of an electrical outlet wall box behind wet plaster and for locating said box comprising a vertically elongated plate of semi-resilient material having upper and lower end portions and an intermediate portion between said end portions, said plate being longer than an oblong outlet wall box and bendable at said intermediate portion along a transverse line to contract said end portions for insertion in the front and ends of such a box, said plate having a coplanar pull tab cut out of the same for pulling the plate out of an outlet box through wet plaster, said tab being attached to said intermediate portion below said line for swinging out of the plane of the plate into forwardly inclined position in response to bending of said plate whereby said tab will project close to the outer surface of wet plaster covering the plate, said tab having a free edge impregnated with a dry soluble dye for marking wet plaster to indicate the location of the box and plate behind wet plaster.

2,894,657
BABY FOOD WARMER
Dorothea A. Griffin, Oakland, Calif.
Application October 1, 1957, Serial No. 687,439
4 Claims. (Cl. 220—23.4)

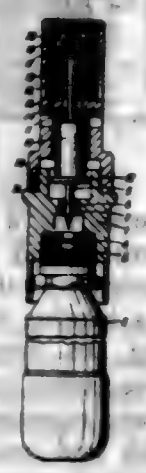
3. A baby food warmer comprising a pair of substantially semi-cylindrical pans each having an arcuate front

wall and a back wall, and a carrier having a guard cooperative with the front wall of each pan and each spanning an angle of approximately ninety degrees and including bottom supports terminating in guard members cooperative with the back walls to retain the pans against lateral or rotational movement, and an axial spindle for said guard extending upwardly between the adjacent back



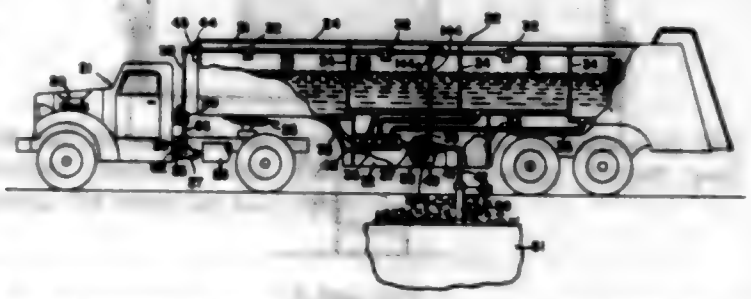
walls of the pans, and gripping means rotatable on said spindle and having a pair of fingers cooperatively related to the tops of the back walls and fixed to the gripping means and movable thereby to three positions, in one of which the fingers secure the pans against floating or removal and in the two others of which the pans are selectively released for removal.

2,894,658
INFLATOR WITH WATER SOLUBLE RELEASE
Alexander Ronald Spidy, Datchet, Bucks, England, assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Application November 5, 1956, Serial No. 620,532
1 Claim. (Cl. 222—5)



An inflator comprising in combination a body member providing a chamber having an inlet opening, an outlet gas passage adapted to be connected to an inflatable device, and an opening for a pin opposite said inlet opening; means adjacent said inlet opening for securing the neck of a gas capsule provided with a rupturable diaphragm; a second body member providing a chamber therein secured to said first body member adjacent said pin opening; a striker pin in said second chamber extending through said pin opening into said first chamber; means providing a seal between said pin and said pin opening; an annular shoulder in said chamber between the ends of said pin; a spring bearing against said shoulder to urge said striker pin in a direction to rupture the diaphragm; a cylindrical abutment on said striker pin on the opposite side of said shoulder; and a water soluble plug positioned between said abutment and said shoulder for restraining said striker pin from movement in the diaphragm rupturing direction, said cylindrical abutment having a transverse groove on the outer surface thereof and said second body member having a pair of apertures aligned with said groove for receiving a locking pin and having an aperture adjacent said soluble plug for permitting access of water to said soluble plug upon immersion of said member in water.

2,894,659
TANK UNLOADING APPARATUS
Henry Robert Billeter and George R. Richards, Deerfield, Ill., assignors, by mesne assignments, to Liquid Controls Corporation, North Chicago, Ill., a corporation of Illinois
Application December 16, 1955, Serial No. 553,592
4 Claims. (Cl. 222—72)



1. Apparatus for discharging liquid from a tank comprising an internal combustion engine, means including a take-off conduit connecting the exhaust of said engine to the tank, a flame arrestor in said take-off conduit, a discharge conduit leading from the tank, a meter in said discharge conduit, and means actuated by the presence of gas in said discharge conduit ahead of said meter for closing said conduit.

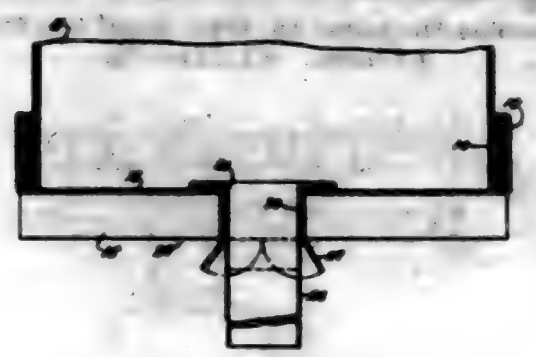
2,894,660
DISPENSER CAP
Edward L. Gordon, Pittsburgh, Pa.
Application May 13, 1958, Serial No. 734,981
1 Claim. (Cl. 222—108)

In a cap for a pressure can having a valved closure in its head and a valve stem projecting thereabove, said cap including a cylinder the lower end of which fits tightly over said head, a spout extending laterally from said cylinder and a deflectable disc mounted transversely in said cylinder having a passage therein communicating with said spout and a seat on its under side fitting over said stem and provided with an opening into said passage, the combination therewith of a dome-shaped, flexible, resilient diaphragm fitted in the top of said cylinder and overlying said disc, adapted to be deformed by finger pressure applied to deflect said disc, and a port in said disc communicating with said passage whereby the return of the diaphragm to normal condition, on release of finger pressure, exerts a suction tending to withdraw from the end of the spout any material remaining therein on release of said disc.

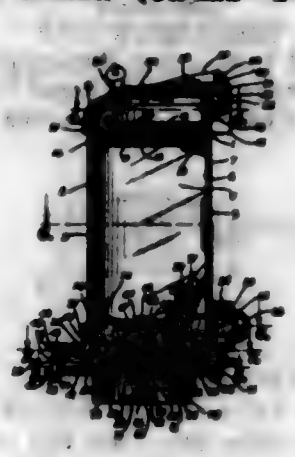
2,894,661
POURING DEVICE FOR BULK CONTAINERS
Daniel Simkins, Mount Vernon, Ohio, assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Application December 6, 1957, Serial No. 701,624
10 Claims. (Cl. 222—176)

10. In a bulk container having an opening in the bottom thereof and elongate supporting runners in spaced relation on said bottom, one of said runners being cut away to expose said opening, a pouring device comprising a tubular carton and an open ended pouring sleeve of flexible material secured in said carton, said carton having foldable flaps at opposite ends and being secured in the space provided by cutting away said runner with one end extending through the opening in the container

bottom, said pouring sleeve having marginal portions at one end reversely folded over the flaps at the end of the carton which extends into the container and said flaps being secured to the inside wall of the container, said pouring sleeve being housed in said carton when collapsed and said carton being of a depth relative to the depth of the cut-away runner so that the flaps at the other end of the carton are adapted to overlap to form a bottom closure therefor which is substantially flush with the bottom of the cut-away runner.

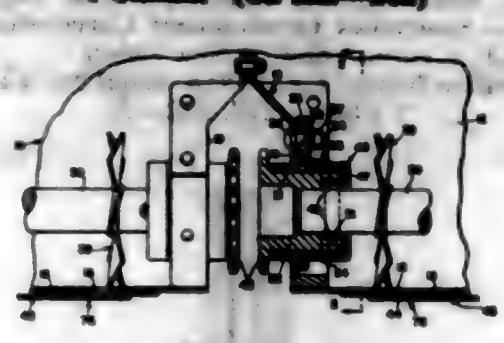


2,894,662
SOAP DISPENSER
Richard C. Mansperger, Kansas City, Mo.
Application June 5, 1957, Serial No. 663,662
4 Claims. (Cl. 222—242)



4. A dispenser for powdered soap and the like comprising, a container having a bottom plate with a central bearing opening and an elongated port radially spaced from said opening, a dispensing plate under the bottom plate in vertically spaced relation thereto, cooperative guide means on the bottom plate and dispensing plate for guiding said dispensing plate for vertical movement toward the bottom plate and retaining said dispensing plate and bottom plate against relative rotation, said bottom plate and dispensing plate having parallel adjacent faces, a valve plate having opposite parallel faces between the bottom plate and dispensing plate, a shaft rotatably supporting the valve plate for rotation on the axis of the bearing opening in the bottom plate, said shaft extending through the respective bearing openings into the container and below the dispensing plate, a plurality of spaced metering openings in the valve plate equally spaced from the axis of rotation thereof whereby rotation of the valve plate moves the metering opening into registry with the port in the bottom plate, said dispensing plate having a dispensing port therein registrable with the metering ports in the valve plate in response to rotation of said valve plate, said dispensing port being on the opposite side of the valve plate axis relative to the port in the bottom plate with the circumferential spacing such that the metering openings register with ports in the bottom and dispensing plates only at different points during rotation through a complete turn of the valve plate, radially extending lugs on the valve plate corresponding in number to the number of metering openings therein, spaced means on the bottom plate and dispensing plate between which a finger lug moves when a metering opening is in registry with the port in the dispensing plate and another finger lug is exposed for the next rotative movement of the valve plate, an agitator secured on said shaft in the container adjacent the bottom plate whereby the agitator is keyed to the valve plate for rotation therewith, seal means between said agitator and said bottom plate, a deflector in the container, cooperative means on the agitator and deflector for breaking soap lumps in response to rotation of said agitator, resilient means on said shaft below the dispensing plate for urging the dispensing plate and valve plate toward the bottom plate, an annular depending flange on the dispensing plate around the dispensing port therein, spaced concentric gaskets between the valve plate and bottom plate, and spaced concentric gaskets between the valve plate and dispensing plate, said concentric gaskets between the respective plates having adjacent edges spaced from the metering openings in said valve plate.

2,894,663
FERTILIZER DISTRIBUTOR ATTACHMENT FOR GRAIN DRILLS
Robert E. Loesmans, Horicon, Wis., assignor, by mesne assignments, to Deere & Company, a corporation of Delaware
Application July 22, 1957, Serial No. 673,313
4 Claims. (Cl. 222—282)

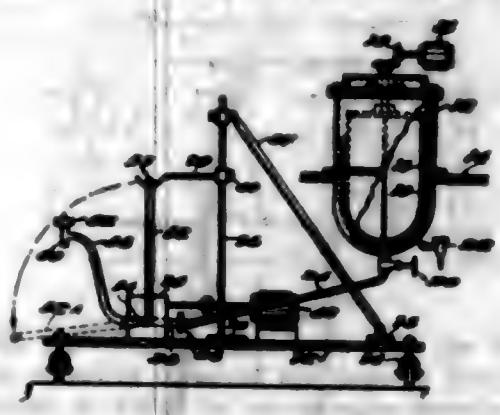


1. In a fertilizer distributor, a hopper having a center drive housing, an apertured end wall opposite said drive housing, the latter having a wall section provided with an enlarged opening, a bearing support member fixed in said enlarged opening, an inwardly disposed bearing means having a shaft-receiving socket, disposed rotatably in said bearing support member, means in said drive housing connected with said bearing means to drive the latter, a shaft carrying feed means, one end of said shaft being detachably disposed in said socket and the other end disposed in the aperture in said hopper wall, axially extending pin and slot means on said bearing means and said one end of said shaft whereby the latter is driven by rotation of said bearing means and said shaft is separable from said bearing means by axially outward movement relative thereto, said aperture being sufficiently large to permit the passage of both said shaft and said feed means out through said hopper end wall, a bearing member having a flange overlying said aperture and a journal portion receiving said other end of said shaft, and means detachably mounting said bearing member on the outer side of said hopper wall, said bearing mounting means including means providing for adjustment of said bearing member along said hopper end wall toward and away from the bottom of the hopper.

2,894,664
FLUID DISPENSING APPARATUS
Edmund A. J. Mroz, Stoneham, Mass.
Application September 13, 1957, Serial No. 683,885
5 Claims. (Cl. 222—318)

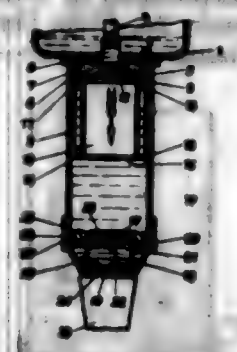
1. Apparatus for dispensing fluids which comprises a pump having an inlet means and an outlet means, a circulatory system defining a closed path connecting said

inlet means and said outlet means and containing means for rotating said circulatory system about said pump, means for introducing fluid to the circulatory system on



the inlet side of said pump, means for discharging fluid from the circulatory system on the outlet side of said pump and means for controlling the flow of fluid through the discharge means.

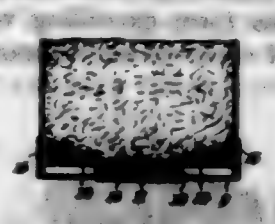
2,894,665
MECHANISM FOR DISPENSING LIQUID
Hans Zerlin, Duesseldorf, Germany, assignor to Jagenberg-Werke Akt.-Ges., Duesseldorf, Germany
Application April 4, 1957, Serial No. 650,717
Claims priority, application Germany May 18, 1956
6 Claims. (Cl. 222—378)



1. In a liquid dispensing mechanism of the type including a measuring chamber means and a piston reciprocable therein to dispense liquid therefrom, outlet valve means for the chamber operable to open in response to pressure exerted on the liquid when the piston moves in one direction and, to close when the piston moves in the opposite direction, means for reciprocating the piston to effect dispensing of liquid, said piston having an inlet opening therein through which liquid can flow to enter said chamber, a float valve body independent of the piston and movable in the chamber for controlling said inlet opening during movement of the piston, said float valve body being entrained by the piston when it is moving in said one direction and when the piston moves in the opposite direction said float valve body following the piston in normal spaced relation thereto, and said chamber and float valve body having facing cooperative surfaces constituting means for guiding the float valve body to freely move longitudinally of the chamber.

2,894,666
BULK DISPENSING CONTAINER
Claude N. Campbell, Jr., Edgewater Park, N.J.
Application March 5, 1956, Serial No. 569,563
6 Claims. (Cl. 222—528)

1. In a container, material dispensing means comprising an opening through the bottom of said container, a plurality of geometrically shaped pieces disposed with respect to each other and the bottom of said container to form a sloping floor biased in the direction of said opening, a flexible plastic nozzle coincident with said opening having flange portions integrally attached thereto, said flange portions being at least partially disposed between said geometrically shaped pieces, said nozzle being folda-



ble and adapted to be held within said container by the bottom thereof over said opening when folded and means for covering said opening

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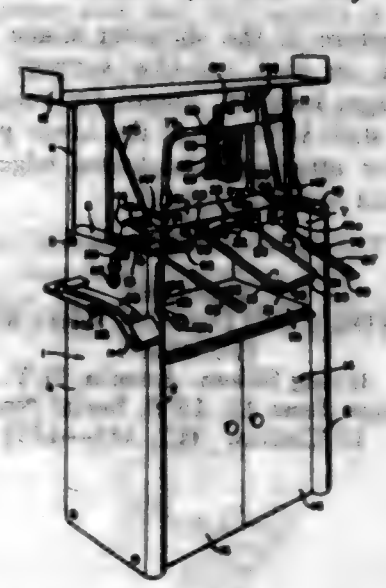
2,894,667
METHOD OF AND DEVICE FOR FOLDING SHIRTS AND SIMILAR GARMENTS
Rollin E. Campbell and Harry D. Ferse, Anderson, Ind., said Campbell assignor to said Ferse
Application April 30, 1954, Serial No. 426,826
19 Claims. (Cl. 223—37)



18. In combination in a garment-folding apparatus: a garment support having a central portion and two side portions, said side portions being selectively foldable toward or away from said central portion, frame means, supporting means tiltably mounted in said frame means and supporting said garment support in cantilever manner, first pressure fluid operable cylinder piston means operatively connected to said tiltable supporting means for selectively tilting the same, second fluid pressure operable cylinder piston means operatively connected with said side portions for selectively folding the latter toward or away from said central portion, a pressure fluid supply system arranged for selectively supplying pressure fluid to said first and second cylinder piston means, an exhaust conduit system arranged for selectively exhausting said first and said second cylinder piston means, a band supply system supported by said frame and arranged to hold a supply of bands to be placed around a garment folded on said garment support, a nozzle communicating with said exhaust conduit system, and a band feeder movably mounted in said frame and operable to feed a band from said band supply system to said nozzle.

2,894,668
METHOD OF MAKING INDIVIDUALIZED DRESS FORMS AND DRESS FORM CONSTRUCTION
Grace S. Hiscock, New York, N.Y.
Application May 2, 1956, Serial No. 582,216
14 Claims. (Cl. 223—66)

11. In a dress form, a flexible self-sustaining shell structure extending from the neck portion to below the hips, a molded cellular rubber shoulder shape secured

within the upper portion of said shell structure and extending from shoulder to shoulder and from front to rear of said shell structure, resilient packing material within said shell structure below the shoulder shape, a rod-like support for the dress form extending vertically thereof, the upper portion of said rod-like support being received

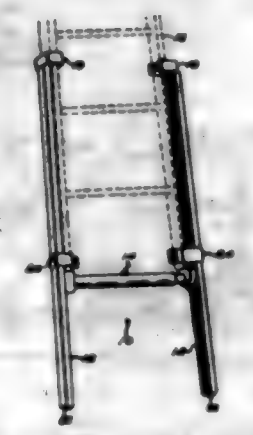
within an aperture in the shoulder shape, a plate structure mounted on said rod-like support approximately at the diaphragm location, means for reinforcing the interior of said shell structure at the lower portion thereof, and means for attaching the lower edge of said shell structure to said rod-like support.

2,894,669
DEVICE FOR PUTTING ON AND REMOVING HOSIERY
Irving Silken, Astoria, N.Y.
Application June 13, 1955, Serial No. 515,071
13 Claims. (Cl. 223—111)

1. In a device of the character described, an elongated hollow body, a generally C-shaped hosiery holder fixedly carried on said body adjacent to the lower end thereof, said holder being adapted to support said hosiery between the extremities of said hosiery, hosiery engaging means detachably mounted on said body adjacent to said holder, guide means for said last means, clamping means within said body for forcing said engaging means toward said holder and clamping said hosiery therebetween, screw means for forcing said clamping means axially within said body, handle means cooperating with said screw means for forcing said engaging means toward said holder and clamping said hosiery therebetween, or for moving said engaging means away from said holder to release said hosiery.

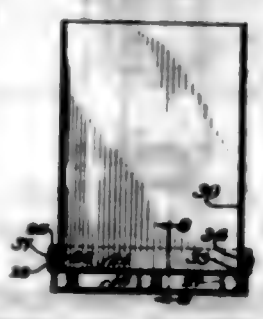
2,894,670
SELF-LEVELING LADDER ATTACHMENT
Kermit F. Anderson and Lewis O. Sinder, Jackson, Mich.
Application May 13, 1958, Serial No. 735,036
11 Claims. (Cl. 228—63)

1. In combination with a ladder having substantially vertical rung supporting members a self leveling attachment adapted to be affixed to the ladder, said attachment including, a leg member affixed to each of the vertical ladder members for axially slidable movement relative thereto, a rack member carried by each of said leg members, a gear engaging each of said rack members, means rotatably mounting said gears to the ladder, drive



means interconnecting said gears, a gear lock affixed to the ladder adjacent each of said gears, said means mounting said gears to the ladder permitting relative engaging movement between said gears and gear locks upon application of a predetermined weight to the ladder.

2,894,671
PALLETIZED CONTAINER
Herbert C. Nicholls, Wisconsin Rapids, Wis., assignor to Consolidated Water Power & Paper Co., Wisconsin Rapids, Wis., a corporation of Wisconsin
Application January 26, 1956, Serial No. 561,526
3 Claims. (Cl. 229—14)

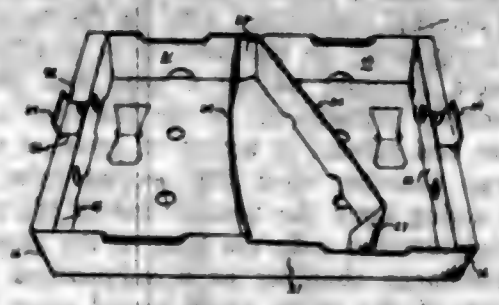


1. In a palletized container, a pallet component comprising a pair of paperboard rectangular facing panels and a plurality of load supporting members disposed and secured between said panels and arranged for lift truck fork entry therebetween in paths at right angles to each other, a rectangular tubular paperboard container component supported on said pallet, and means interengaging said components comprising flaps in hinged engagement with the lower edges of said rectangular tube return folded against the outer faces thereof, flaps in hinged engagement with opposed edges of the upper pallet facing panel folded upwardly therefrom in embracing relationship with an opposed pair of container panels, and flaps in hinged engagement with opposed edges of the lower pallet facing panel folded upwardly therefrom in embracing engagement with the other opposed pair of container panels.

2,894,672
SHIPPING CONTAINER
Robert A. Bamberg, West Monroe, La., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Application July 30, 1957, Serial No. 675,096
4 Claims. (Cl. 229—37)

1. A shipping container folded from a single blank of sheet material comprising a bottom, a pair of opposed sidewalls and a pair of opposed end walls, said sidewalls including a pair of panels each and one panel of each pair having a flap formed integral therewith and disposed

oppositely across the interior of the container to divide the container into two compartments, each flap having a locking tab adapted to be tucked between opposed pairs



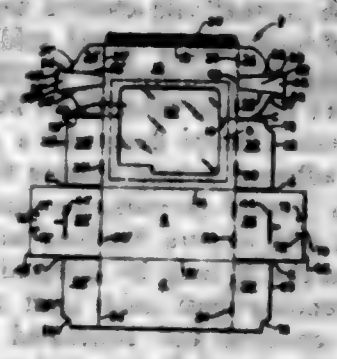
of panels, said flaps being longer than the width of the container effective to cause the flaps to bow away from one another to define an air passage thereby creating a shock absorber.

2,894,673
CARDBOARD BOXES
Robert P. Vuillemenot, Orndell, N.J., assignor to Maiden Form Brassiere Co., Inc., New York, N.Y.
Application September 11, 1953, Serial No. 760,476
2 Claims. (Cl. 229—36)

1. A box of cardboard or the like composed of two triangular sections as to the side walls thereof, the sections being hinged together and having, when closed together, a front V-shaped formation formed by the two halves of the box joined at said hinge line, one half telescoping into the other, the first half of the box being formed of a front wall which is inwardly inclined and which merges into a downwardly inclined section, the latter merging into an outwardly inclined section which in turn merges into a foot section parallel with a major face of the box, each side wall of said first box half being extended upwardly, thence inwardly and downwardly and thence with a footing section parallel with the major face of said box half; the second box half being formed with a front wall which is inclined inwardly and which merges into an area bent downwardly and inwardly and which merges into a section bent outwardly, the sides of said second box half being bent upwardly, thence downwardly and thence parallel with the major face of said box half as a footing thereupon, one box half telescoping into the second box half.

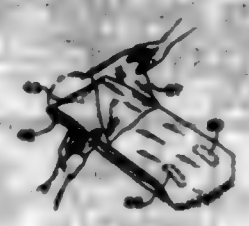
2,894,674
RECLOSABLE CARTON END CONSTRUCTION
Merle L. Wagaman, Lynwood, Calif., assignor to Fiberboard Paper Products Corporation, San Francisco, Calif., a corporation of Delaware
Application July 11, 1958, Serial No. 747,892
10 Claims. (Cl. 229—43)

1. End closure and reclosure structure for a carton of flexible material comprising a pair of cover flaps hingedly connected to body walls of said carton and overlappable in the closed condition of said carton, said flaps including interengageable means for maintaining said flaps overlapped initially, a tear out section in one of said flaps whereby said interengageable means after interengagement may be disengaged by severing said section to permit disengagement of said overlapped flaps and opening of said structure for removing contents of said



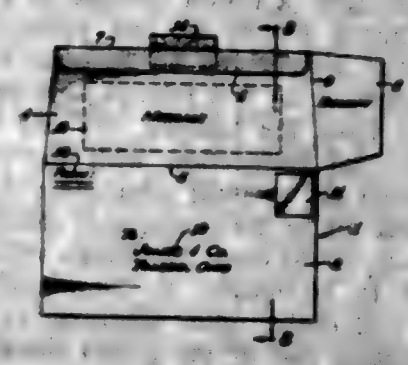
carton, said tear-out section providing an aperture in said one flap when severed therefrom, the other of said flaps including additional means lockingly insertable into said aperture when said tear-out section is severed from said one flap and said other flap is folded to overlie said one flap, said additional means being adapted for maintaining said carton reclosed to protect unused contents thereof.

2,894,675
SELF-ATTACHING DISPOSABLE LITTER BAG
Sam Stein, Hoboken, N.J.
Application July 5, 1957, Serial No. 670,134
1 Claim. (Cl. 229—53)



An open top self-attaching disposable flat paper bag having a closed bottom formed with a single transverse fold with the folded portion being adhesively secured to one side of said bag, at least one patch of pressure-sensitive adhesive on the opposite side of said bag from said folded bottom, a removable sheet of treated paper covering the adhesive side of said bag and having its lower end folded around the bottom of said bag and terminating substantially along the edge of said folded bottom, said sheet being secured to said bag only by said pressure-sensitive adhesive.

2,894,676
ENVELOPE CONSTRUCTION
Charles Bruce Lindeke, Glendale, Calif., assignor of one-half to Charles Alpin Bowen, Pasadena, Calif.
Application August 20, 1956, Serial No. 605,050
2 Claims. (Cl. 229—73)



1. A two-way envelope comprising: an envelope body having a front wall and a rear wall joined to form there-

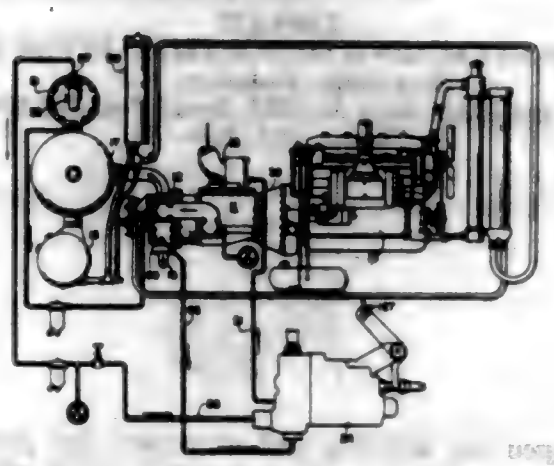
between a pocket that is open along one edge of the body; a closure flap joined to said front wall on a fold lines so that it may be folded to overlie either of said walls; said closure flap covering the major portion of either of said walls when folded thereover; a sealing flap joined to said closure flap on a fold line; said sealing flap being gummed on one side and foldable under said closure flap when the latter overlies said front wall; said sealing flap being operable to seal said closure flap to said rear wall when said closure flap overlies said rear wall; a tear-off portion joined by a line of weakness to a side edge of said closure flap and foldable to lie between said sealing flap and said closure flap; and a gummed label having a portion adhered to said closure flap so that the remaining portion thereof extends over and beyond said fold line between said closure flap and said sealing flap to a position whereby it may be adhered to said front wall without extending past said joint of said walls; said label being covered and concealed by said flaps when said sealing flap is adhered to said rear wall.

2,894,677

ROTARY COMPRESSOR CONTROL

Richard L. Nash, Franklin, Pa., assignor to Chicago Pneumatic Tool Company, New York, N.Y., a corporation of New Jersey

Application October 16, 1956, Serial No. 616,289
7 Claims. (Cl. 230—3)



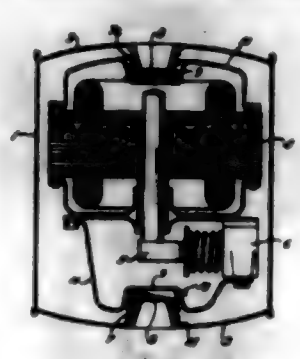
1. In an engine driven rotary air compressor including a compressor chamber communicating with a discharge chamber, a receiver having a non-return flow connection with the discharge chamber, an oil system for charging the compressor chamber with cooling oil through a pump powered by the engine, the oil system being of a type that is continuously subject to back pressure of receiver air so as to cause oil flooding of the compressor chamber when the engine is stopped, an intake valve operable by receiver pressure air to close off intake air to the compressor, and throttling linkage operable to throttle the engine; a regulator comprising: a housing; a plunger operable in a plunger chamber of the housing and having a stem projecting through the housing in association with the throttling linkage for operating the same upon movement of the plunger; a piston slidable in a wall of the housing, the piston having an end projecting into the plunger chamber and having an opposite end normally closing off a pressure air first inlet passage in the housing from an outlet from the housing, the said inlet passage having an external connection with the receiver, and the outlet having an external connection for conveying receiver pressure air to the compressor chamber and also receiver pressure air to close the intake valve, the piston being adapted to be moved to communicate the said inlet passage and outlet upon abutment of the plunger with the projecting end of the piston subsequent to the plunger having been moved a specific distance; valve means for communicating operating pressure air from a branch passage of the inlet passage to the plunger to move the latter; an unloader valve chamber in the housing having connection with the first inlet passage, with the outlet, and with a second inlet to the housing that has a direct external connection with the discharge chamber of the compressor; an unloader valve slidable in the unloader valve chamber having a head end subject to action of receiver pressure air in the first inlet and having a bottom end subject to action of pressure air from the discharge chamber over the second inlet; and a spring load acting upon the bottom end of the unloader valve adapted together with the load of the pressure air from the discharge chamber as a supplement to hold the head end of the latter valve seated over the said outlet against a counteracting load of receiver pressure air in the first inlet.

2,894,678

VIBRATION REDUCING SUPPORTING ARRANGEMENT

Rudolf Hintze, Neuenhain, über Bad Soden (Taunus), Germany, assignor to Stempel-Hermetik G.m.b.H., Frankfurt am Main, Germany

Application July 19, 1955, Serial No. 523,074
Claims priority, application Germany July 21, 1954
7 Claims. (Cl. 230—58)



1. Vibration reducing supporting arrangement for a compressor unit comprising, in combination, a motor-compressor unit including a rotary shaft and two supporting transverse end members having first abutment portions located opposite the ends of said shaft; a closed casing enveloping said motor-compressor unit and including two opposite end walls extending transverse to said shaft, each of said end walls having a second abutment portion located opposite and spaced from one of said first abutment portions so that pairs of first and second abutment portions are located opposite each other, one abutment portion of each pair of first and second abutment portions being a depressed portion, and the other abutment portion of each pair of abutment portions including a projecting portion projecting into the respective associated depressed abutment portion spaced from the same; and a pair of prestressed resilient coil spring means, each of said coil spring means abutting at one end thereof against one of said depressed abutment portions and surrounding at the other end thereof the projecting portion of the associated abutment portion, abutting against the latter, said coil spring means being fixedly secured with their respective ends to the abutment portions, respectively, against which they abut, and exerting opposite axial forces and opposite torques on said motor-compressor unit.

2,894,679

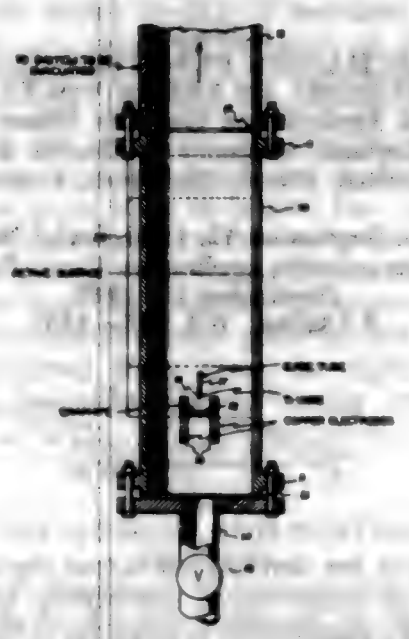
PUMP

Raymond G. Herb, Madison, Wis., assignor to Wisconsin Alumni Research Foundation, Madison, Wis., a corporation of Wisconsin

Application November 23, 1953, Serial No. 393,836
4 Claims. (Cl. 230—69)

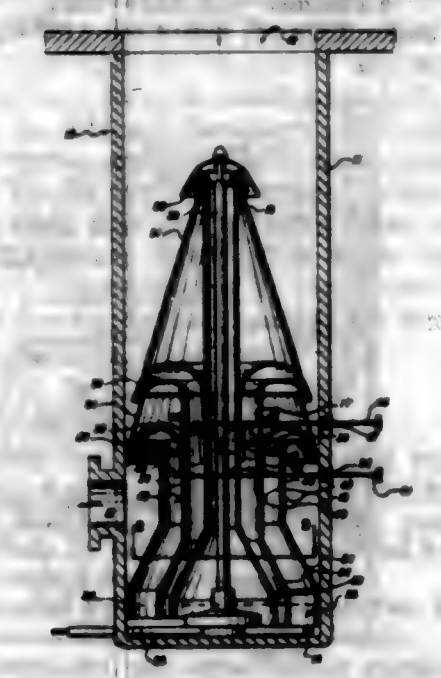
1. Vacuum producing apparatus for use with a co-operating vacuum producing device, comprising a hous-

ing defining a chamber, means for coupling one end of the chamber to a system to be evacuated, means for coupling the other end of the chamber to said cooperating vacuum producing device, and means located inside the chamber for the continued evaporation of a getter material and located to cause the evaporated getter to condense on a surface inside the chamber to trap gas



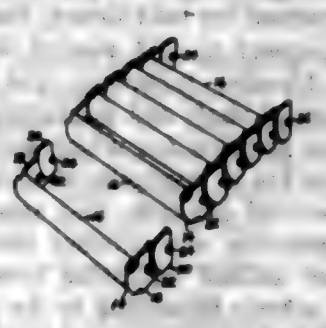
molecules, so that the gettering action assists said cooperating vacuum producing device in the evacuation of the system, and so that the gettering action in the chamber serves as a trap between the system to be evacuated and said cooperating vacuum producing device to prevent any vapors which may be emitted from said cooperating vacuum producing device from entering the system which is to be evacuated.

2,894,680
DIFFUSION PUMPS
Leopold Hiesinger, Wachenbuchen, Kreis Hanau am Main, Germany, assignor to W. C. Heraeus, G.m.b.H., Hanau, Germany
Application May 11, 1956, Serial No. 584,390
Claims priority, application Germany July 28, 1955
9 Claims. (Cl. 230—101)



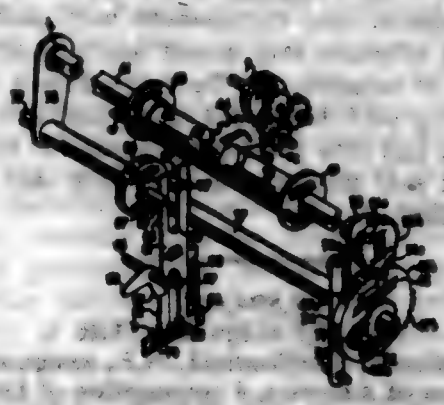
1. A multi-stage diffusion pump including a casing having an inlet and an outlet, a boiler for vaporizing a pumping fluid, a plurality of vapor jets disposed in the casing between the inlet and outlet to direct vapor from the inlet to the outlet, a separate chimney connected to each jet and extending to the boiler for delivering vapor to its respective jet, and means above the pumping fluid in at least one of the chimneys for adjusting the cross-sectional flow area to direct a portion of the vapor flow in the chimney to at least one other chimney and jet.

2,894,681
CENTRIFUGAL BLOWER WHEEL STRUCTURE
Elmer Lunde and William T. Nichols, La Crosse, Wis., assignors to The Trane Company, La Crosse, Wis.
Application April 15, 1955, Serial No. 501,484
3 Claims. (Cl. 230—134)



1. An assembly for incorporation in a centrifugal blower wheel comprising a plurality of blades, each of said blades having a vane portion and flanges extending from each end of the vane portion and lying in planes which are substantially at right angles to said vane portion, each of said flanges having a base portion and an outwardly offset end portion, said base portions and said outwardly offset end portions having substantially circular indentations, the outwardly offset end portions of the flanges of a blade receiving therebetween the base portions of the flanges of the next adjacent blade, with the substantially circular indentations of the end portions extending into the substantially circular indentations of the base portions.

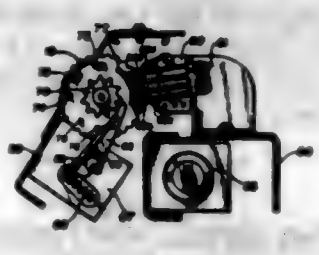
2,894,682
ACTUATOR MECHANISM FOR A TEN-KEY MACHINE
Tibor Arvai, Geneva, Switzerland, assignor to Arva S.A., Geneva, Switzerland, a limited-liability stock company of Switzerland
Application June 29, 1953, Serial No. 364,691
Claims priority, application Switzerland October 7, 1952
22 Claims. (Cl. 235—60)



22. In a calculating machine for carrying out the four basic arithmetical operations, the combination comprising frame means, a keyboard for control of the different operations, a keyboard of ten keys to introduce a number in the machine, mounted in the frame, a carriage adapted to travel in the frame to the left in a step-by-step movement in response to the settings of said keys, a set of key driven members displaceably mounted in said carriage and responsive to said key settings, a set of registering and transfer members mounted in said carriage and driven by said key driven members, the combination of a totalizer controlled by said registering and transfer members and comprising a set of numeral wheels indicating the result of an operation, first and second actuating means con-

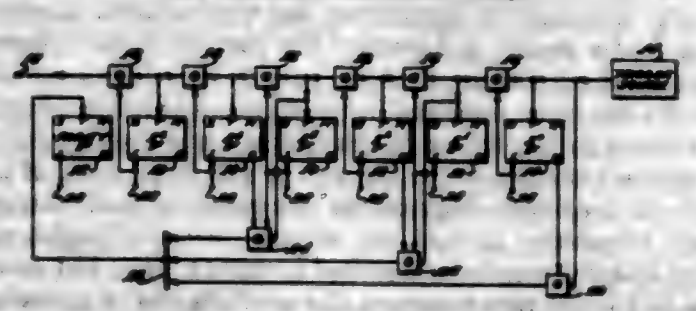
nected to each of said numeral wheels, said first actuating means being connected to drive said numeral wheels in a positive direction and said second actuating means being connected to drive said numeral wheels in a negative direction, means for displacing said totalizer in front of said registering and transfer members from a first and adding position for which said registering and transfer members engage said first actuating means, to a second and subtracting position for which said registering and transfer members engage said second actuating means, a control shaft, a sleeve mounted in said carriage and slidable along said shaft, said registering and transfer members being each loosely mounted on said sleeve, lock means to lock angularly with respect to said control shaft each of said registering and transfer members, and swingable arms carrying said control shaft and displacing said shaft from a first registering position for which said registering and transfer members are in engagement with said key driven members to a second position, said second position permitting said registering and transfer members to engage said first or said second actuating means, respectively, of said numeral wheels according to the position assumed by said totalizer.

2,894,683
MECHANICAL INDICATING APPARATUS FOR COMPUTING MACHINES
Edwin P. Davis, Denver, Colo., assignor, by mesne assignments, to Van Norman Industries, Inc., New York, N.Y.
Application October 24, 1955, Serial No. 542,251
5 Claims. (Cl. 235—61)



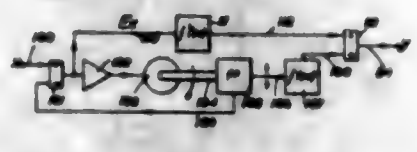
1. A mechanical indicating apparatus comprising a rotatable indicating wheel, means biasing said wheel to an initial position, a toothed wheel secured to said indicating wheel concentrically therewith, a pivoted detent mounted adjacent said toothed wheel and having a projection movable into engagement therewith, means for biasing said detent into engagement with said wheel, a cam mounted adjacent said detent and movable from a position out of engagement therewith into a first position for moving said detent out of engagement with said toothed wheel and into a second position for forcing said detent against said toothed wheel to lock said indicating wheel in position.

2,894,684
PARITY GENERATOR
David L. Nettleton, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application September 28, 1956, Serial No. 612,778
10 Claims. (Cl. 235—92)



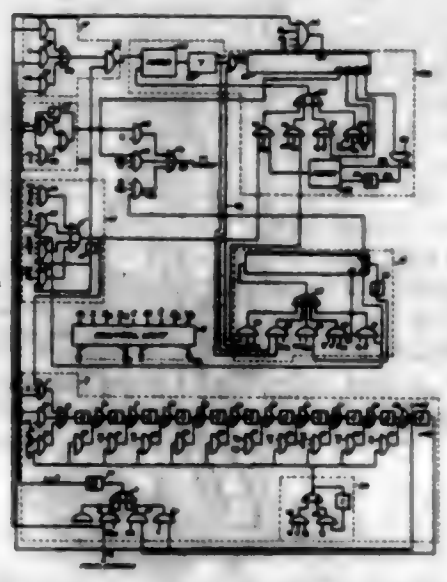
1. A parity system comprising a binary counter having a plurality of counter stages in order and a parity stage having two states, means for receiving input signals to be counted, and means responsive to each successive pair of counter stages and to said input signal receiving means for changing the state of said parity stage when only one stage of any pair of said successive pairs of said counter stages changes state in response to one of said input signals to be counted.

2,894,685
SERVO-MECHANISM FUNCTION GENERATOR UTILIZING AN ERROR VOLTAGE
Rolf Edmund Spencer and Geoffrey Hasen Stephenson, London, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a British company
Application September 12, 1950, Serial No. 185,664
Claims priority, application Great Britain
September 12, 1949
9 Claims. (Cl. 235—150)



1. Apparatus for deriving an output signal variable in response to an input signal, comprising a servo-motor, follower means displaceable in response to the servo-motor for setting up a function signal, means for setting up a signal representative of the displacement of said follower means, means for comparing the last-mentioned signal with the input signal, said servo-motor being responsive to the difference between the compared signals to displace said follower means in a sense tending to reduce said difference, means for forming the product of the difference between the compared signals and a signal dependent upon the function signal to generate a correcting signal, and means for adding said correcting signal to said function signal to correct said function signal for differences between said displacement and said input signal.

2,894,686
BINARY CODED DECIMAL TO BINARY NUMBER CONVERTER
Thomas G. Holmes, Melbourne, Fla.
Application September 1, 1954, Serial No. 453,708
6 Claims. (Cl. 235—155)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Apparatus for converting a binary coded *n*-digit decimal number into a true binary number, said numbers being in the form of a serial pulse code having a fixed digit interval and being containable in a fixed repeating time span, said apparatus comprising: a first delay loop having a delay exceeding said time span by four digit

intervals; a two-input serial binary adder; a second delay loop connected between the output of said adder and one of its inputs, said second delay loop having a delay equal to said time span and containing means for multiplying a binary number in said form by ten; gating means connected between a predetermined delay point in said first delay loop and the other input of said adder; means for admitting said binary coded decimal number to said first delay loop during the first of said time spans; means connected to said gate and operative at the same predetermined instant in each of n succeeding time spans to open said gate for four consecutive digit intervals thereby gating the four digits appearing at said predetermined point in said first delay line to said adder, said predetermined point being so located that the four pulses gated in each time span are the four most significant of the ungated pulses; and means operative during the $(n+1)^{th}$ time span for removing the binary digits occurring at a predetermined delay point in said second delay loop, said removed digits being the digits of a binary number corresponding to said binary coded decimal number.

2,894,687

ELECTRIC ADDING AND SUBTRACTING DEVICES

François Henri Raymond, Le Vesinet, and Roger Robert Dussine, Paris, France, assignors to Societe d'Electronique et d'Automatisme, Courbevoie, France

Application March 14, 1952, Serial No. 276,602
Claims priority, application France March 17, 1951
8 Claims. (Cl. 235—176)

1. In an electric computer device, comprising a first half-adder operator and a second half-adder operator, each having first and second actuation inputs, means in each of said operators for sequentially registering the input pulses received in said actuation inputs and means controlled from said registering means for forming from said input pulses a pulse train representing the logical function of restricted union, and second means controlled from said registering means for forming from said input pulses a gating pulse train, means for transferring the restricted union pulse train from the first operator to a first actuation input of the second operator, means including delaying means for transferring both gating pulse trains from the first and the second half-adder operators to a first actuation input of the first, an output channel, means for transferring the restricted union pulse train from the second operator to said output channel; and means for impressing signal pulse trains coded according to binary representation of two numerical quantities on the second actuation inputs of the first and second half-added operators, respectively.

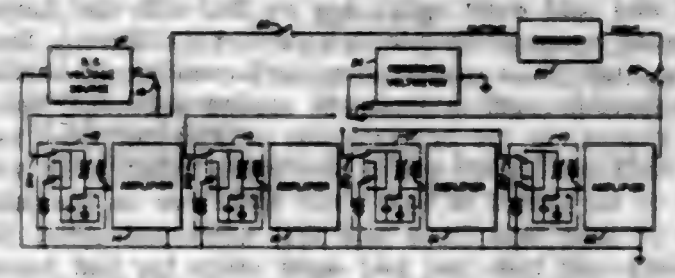
2,894,688

ELECTRONIC ANALOG COMPUTER FOR DETERMINING RADIOACTIVE DISINTEGRATION

Herman P. Robinson, Lafayette, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application April 28, 1955, Serial No. 504,699
4 Claims. (Cl. 235—184)

1. In a computer, the combination comprising a plurality of resistance-capacitance networks connected in a cascade and having adjustable time constants each adjustable in proportion to the decay rate constant of an element in a radioactive chain, the last one of said resistance-capacitance network in said cascade having a series connected capacitance and a parallel connected resistance across the output, the others of said resistance-capacitance networks in said cascade having a series connected resistor and a parallel connected capacitance across the output, a plurality of unity gain isolating amplifiers, said amplifiers being alternated with said resist-



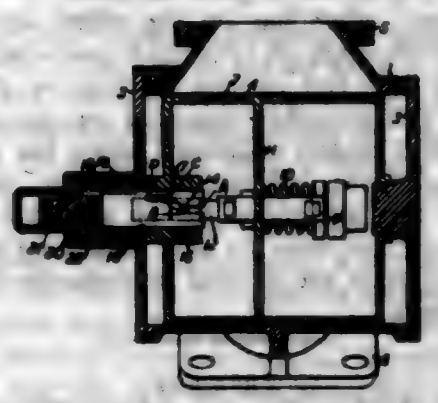
ance-capacitance networks in series arrangement therewith, a voltmeter, switch means for coupling said voltmeter to a selected one of said resistance-capacitance networks, and a direct current voltage supply connectable to the first of said series connected resistance-capacitance networks in said cascade.

2,894,689

THERMALLY SENSITIVE VALVES

Harold Evan Spicer, Eastbourne, Robert Crosby, St. Albans, and Frederick Arnold Simpson, Beaconsfield, England, assignors to Waiten Engineering Company Limited, London, England, a British company

Application November 29, 1957, Serial No. 699,684
Claims priority, application Great Britain December 3, 1956
5 Claims. (Cl. 236—34.5)



2. A thermally controlled valve comprising, in combination, a housing having a cylindrical bore therein, said housing having three angularly spaced ports in the wall of the bore, a rotor member rotatably mounted in said bore and having shutter members thereon controlling two of said ports, said rotor member being movable from a position in which one of said two ports is obscured through intermediate positions in which both of said two ports are partially obscured to a position in which the other of said two ports are obscured, a linearly expanding thermosensitive actuator of the type having an actuator member which commences movement at a predetermined temperature mounted axially of said rotor member, a sleeve member mounted axially of the bore in said housing, said sleeve having a helical cam groove therein, a cam follower member on said actuator member engaging said cam groove, and means on said housing for adjusting the longitudinal position of said sleeve member relative to said housing, whereby the position of the rotor may be adjusted to correspond to a given temperature.

2,894,690

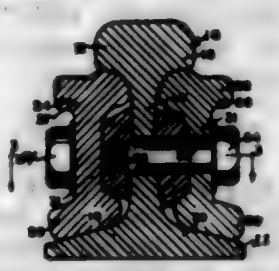
DOUBLE SPLICE BAR RAIL JOINT

William Rufus Hedrick, Knoxville, Tenn., assignor to Hedrick Rail Joint Trust (George P. Dillard, trustee), Atlanta, Ga.

Application February 1, 1957, Serial No. 637,701
6 Claims. (Cl. 238—244)

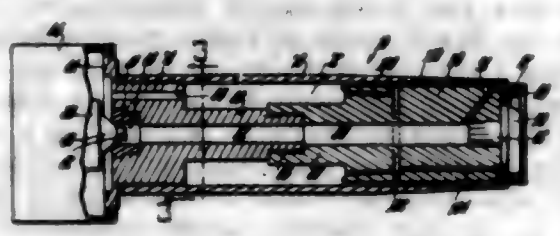
1. In a double splice bar rail joint for connecting the terminal ends of two rails together and including an

outer splice bar on each side of the rail each overlapping the terminal ends of said two rails on a respective side thereof, at least one first additional inner splice bar positioned coextensive with part of the length of one of said outer splice bars on one side of said rails between said rails and said outer splice bar on that side and having threaded openings therein to receive bolts therein, there being openings at said inner splice bar to permit bolts to pass therethrough, at least one second additional splice bar located on the opposite side of said rail from said first additional splice bar in coextensive relationship with part of the length of said outer splice bar on the other side of said rails from said first additional splice bar between said rails and said outer splice bar and having threaded openings therein, there being openings at said inner splice bar to permit bolts to pass therethrough, said



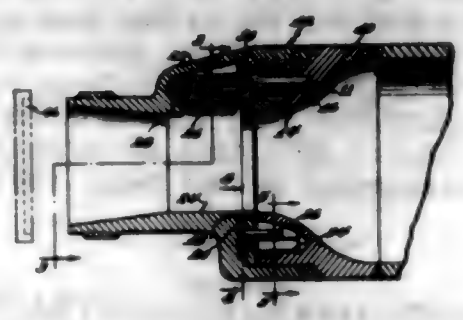
outer splice bars and said rail having aligned openings therein to accommodate bolts therethrough, and bolts inserted through an opening in said outer splice bar on one side, through an aligned opening in said rail and threadily engaging an aligned threaded opening in said first additional splice bar on the other side, and other bolts inserted through an opening in said outer splice bar on the other side and passing through an aligned opening in said rail threadily engaging an aligned threaded opening in said second additional splice bar on the other side from said first additional splice bar, whereby said outer splice bars are connected on said rail under pressure from opposite sides by said bolts, and the heads of some of said bolts are located on opposite sides of said rail from others.

2,894,691
ELECTROSTATIC DEPOSITION
John Sedlacsik, Garfield, N.J.
Application January 11, 1955, Serial No. 481,162
2 Claims. (Cl. 239—15)



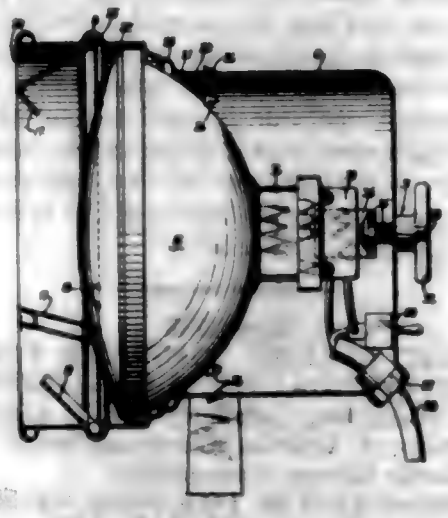
1. In an aero-electrostatic atomizing device attachable to a spray device receiving and discharging a supply of a fluent material and a motive agent and being adapted to electrically charge particles of the fluent materials discharged therefrom toward an electro-conductive surface for deposition thereon comprising in combination, an outermost cylindrical shell-like member provided with a forward-most opening and having a rearmost extremity attachable to the spray device, an insert member having a plurality of motive agent passages extending longitudinally therethrough and terminating at their forward-most extremities in an innermost annular primary motive agent discharge mouth and having a fluent material passage extending longitudinally therethrough terminating at and communicating with a plurality of passages terminating at their forward-most extremities in an outer annular fluent material discharge mouth concentric with and exteriorly surrounding the innermost annular motive agent discharge mouth, said insert member being spaced relative to said shell-like member to provide an annular secondary motive agent passageway terminating in an outermost motive agent discharge mouth concentric with and exteriorly surrounding the annular fluent material discharge mouth.

2,894,692
NOZZLE
James D. Ledbetter, Cedar Grove, Hartmann J. Kircher III, Sparta, and Raymond J. Novotny, Rockaway, N.J., assignors, by mesne assignments, to Thiokol Chemical Corporation, a corporation of Delaware
Application January 25, 1957, Serial No. 636,427
4 Claims. (Cl. 239—75)



1. An apparatus for varying the throat area of a nozzle body having a plurality of circumferentially spaced, axially extending recesses formed therein and opening on the throat area thereof, comprising a plurality of restrictors arranged in and filling the recesses and each having an end pivotally mounted in a recess, an annulus rotatably mounted in the nozzle body and having its inner periphery flush with and forming a part of the nozzle throat area adjacent said restrictors, said annulus having a plurality of circumferentially spaced, cam slots formed therein, and a pin formed on the other end of each of said restrictors and projecting into one each of the cam slots whereby rotation of said annulus effects pivoting of said restrictors radially into and out of the nozzle throat area.

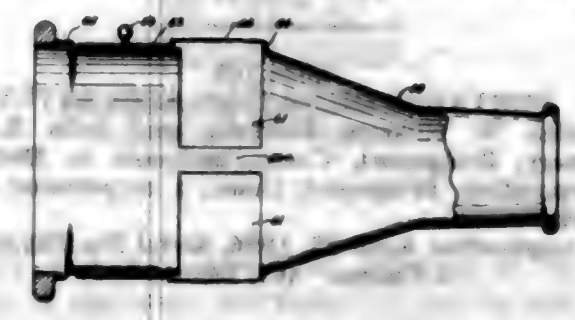
2,894,693
LAMP
David V. Howarth, La Crescenta, Calif., assignor to Natural Lighting Corporation, Glendale, Calif., a corporation of California
Application September 24, 1957, Serial No. 685,982
11 Claims. (Cl. 240—41)



2. A lighting structure comprising in combination: a case having an open end, said case having a lamp-receiving zone spaced from and communicating with said open end; a lamp directly supported by said housing in said zone and positioned therein to direct light through said open end; a generally circular split retaining clip, said clip being resiliently biased against and supported by an

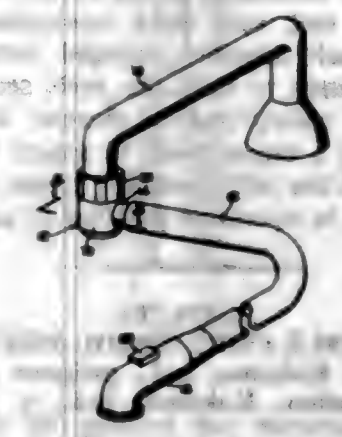
integral portion of said case, said portion being intermediate said open end and said lamp-receiving zone, said clip having a plurality of fingers extending radially of said open end and engaging the face of said lamp in an axial direction, said clip comprising the sole means precluding axial displacement of said lamp from said zone toward said open end of said case; an electrical connector attached to and supported by said lamp; and means rotatably journalled in and extending through said case, the inner end of said means having axially slidable rotational driving engagement with said connector for selective manual rotation of said lamp.

2,894,694
MODIFIED FOAM NOZZLE
Hyman Lacks and Milton Lambert, New York, N.Y.
Application December 6, 1954, Serial No. 473,494
12 Claims. (Cl. 239—443)
(Granted under Title 35, U.S. Code (1952), sec. 266)



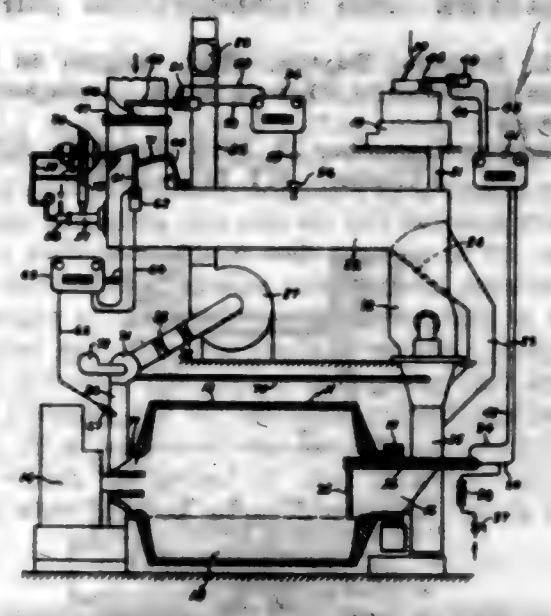
1. A nozzle for selectively producing solid foam streams having selected patterns comprising a tubular member having a bore with a substantially continuous contour and a plurality of openings around said tube intermediate the ends of said member, screening means over said openings, and tubular closure means engirdling said tubular member and having openings similar to the openings in the tubular member, said closure means being mounted to be turned about said member whereby in a first open position, the openings in said member and said closure means are in registration and in a second closed position the openings in said member and said closure means are out of registration, said closure means excluding said screening means when in a closed position.

2,894,695
SPOUT FITTING
Ralph Edwin Bletcher and Irving A. Ward, Los Angeles, Calif., assignors of small percentages to various assignees
Application August 16, 1955, Serial No. 528,678
12 Claims. (Cl. 239—443)



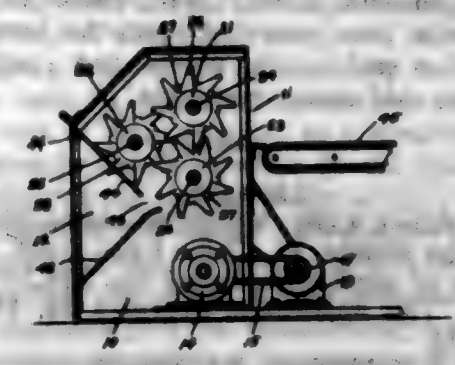
1. A device attaching a remote hand spray having a valve thereon to a spout comprising a housing, a web in said housing having an unobstructed flow passage therethrough, a further flow passage in said web communicating with said hand spray, and nozzle means upstream from said web directing flow of water into said last-mentioned flow passage, whereby flow therethrough terminates flow through said unobstructed flow passage.

2,894,696
COAL PULVERIZING APPARATUS
Earle C. Miller, Worcester, Mass., assignor to Riley Stoker Corporation, Worcester, Mass., a corporation of Massachusetts
Application August 23, 1957, Serial No. 679,834
6 Claims. (Cl. 241—43)



1. A coal pulverizing apparatus, comprising a comminuting mill, a coal feeder, an air duct, a crusher-drier, the feeder and the duct being connected to mix the air and coal, the crusher-drier connecting the feeder and duct to the mill for drying the coal, a by-pass conduit also joining the duct and feeder to the mill, means for causing the coal-air mixture to pass either through the crusher-drier or through the by-pass conduit, a burner mounted to fire directly into the duct, a tempering damper in the said duct, and means controlled by the temperature of the coal-air mixture leaving the mill to regulate the rate of firing of the burner and the amount of tempering air admitted by the tempering damper.

2,894,697
SHREDDER
Martin H. Penning and Bruce R. Curry, Thiensville, Wis., assignors to Blower Application Company, Milwaukee, Wis., a corporation of Wisconsin
Application January 9, 1958, Serial No. 708,848
5 Claims. (Cl. 241—154)



1. A shredding device comprising an enclosure having an inlet and outlet, a pair of shredding members disposed on parallel horizontal axes within said enclosure and adjacent said inlet, and a third shredding member disposed on an axis parallel to the first named pair of shredding members adjacent said outlet, said axes being triangularly arranged, each of said shredding members having a plurality of discs thereon with outwardly extending spurs, said discs being mounted in spaced relation

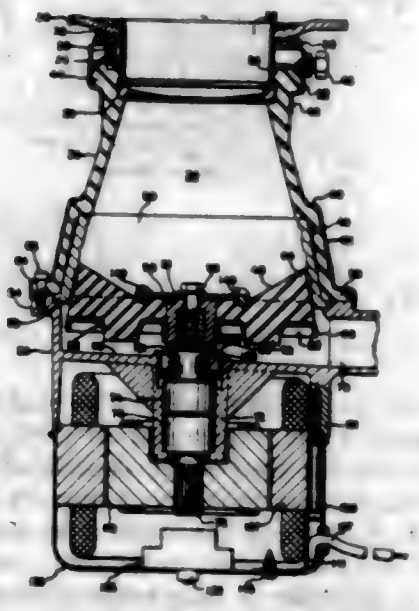
along said members and in staggered relation to the discs of the adjacent members, and the spurs on all of said members being disposed in spiral relation along their respective axes, the spurs of each member being in lapped, interfitting relation with the spurs of each of the other members, and means for rotating said members at differential peripheral speeds and the first pair of members in different directions to each other.

2,894,698

VERTICAL SUPPORT SHAFT FOR MOTOR ROTOR ARMATURE AND COMMINUTOR IMPELLER DISC

Byron L. Bracken, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application September 29, 1955, Serial No. 537,358
2 Claims. (Cl. 241—257)



1. Commisuting apparatus including a housing enclosing a cutting chamber containing a shredder ring, a motor mounting beneath said housing provided with a laterally extending wall forming the bottom of the housing, said wall in its central portion being provided with a long downwardly extending centrally located bearing recess having a substantially vertical axis, said recess being provided with a shoulder of reduced diameter at the bottom, dual bearing means having directly adjacent upper and lower portions coaxially arranged and located in said recess above said shoulder, a cantilever mounted shaft having its intermediate portion rotatably mounted in said dual bearing means constituting its sole support having end portions projecting therefrom, an impeller mounted upon the upper end of said shaft above said bearing means, a motor rotor mounted upon the lower end of said shaft below said bearing means, and a motor stator mounted upon said motor mounting.

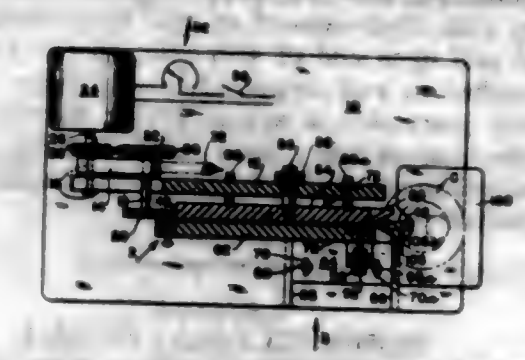
2,894,699

TOROIDAL COIL WINDING MACHINE

John Onisko, Jr., China Lake, Calif.

Continuation of application Serial No. 314,237, October 10, 1952. This application February 16, 1956, Serial No. 566,851
6 Claims. (Cl. 242—4)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The method of winding a flexible member, such as a wire or the like, about a closed loop member, such as a toroidal core in a plurality of continuous coils with each coil extending transversely of the loop member, comprising the steps of forming a circular supply of the flexible member passing through the aperture of the loop member and rotating said supply in a certain direction until a desired annular amount of the supply is formed, linking the free end of said flexible member to said closed loop member and rotating said supply in said certain direction, and effecting a running kink in a portion of said flexible member extending between



said supply and said loop member during the period the flexible member is being payed off from said annular supply, and locking said kink to said supply during a non-pay-off portion of its revolution.

2,894,700

PORTABLE DICTATION APPARATUS

Frederick W. Roberts, Fairfield, and John R. Montgomery, Bridgeport, Conn., assignors to Dictaphone Corporation, Bridgeport, Conn., a corporation of New York

Application April 30, 1956, Serial No. 581,601
14 Claims. (Cl. 242—55.13)

1. For portable recording equipment of the type adapted to be hand-carried and having a self-contained source of operating power, and wherein means are provided for driving linear recording media past a recording head to form impressions on the media in accordance with sound signals developed by a microphone, apparatus comprising, in combination, a casing, a recording magazine removably secured to said casing, one side wall of said magazine being formed with a pair of apertures, a supply reel and a take-up reel positioned adjacent one another in said magazine having central portions extending outwards through said apertures to serve as loose-fitting bearings to hold said reels approximately in place when the magazine is removed from the casing, each of said central portions being formed with a recess coaxially aligned with the corresponding reel, and a drive mechanism secured to said casing and arranged to move a strip of linear recording media from said supply reel to said take-up reel, said drive mechanism including a pair of hubs each drivably engaged with a respective one of said recesses to hold the reels securely in place and to transmit rotary motion thereto, at least one of said hubs having a tapered end to assure easy and rapid engagement with the corresponding recess when the magazine is secured in operative position to said casing.

2,894,701

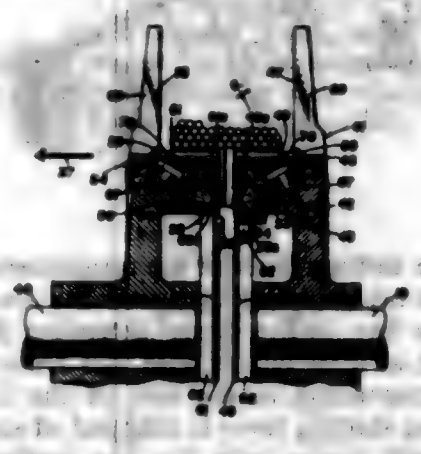
COLLAPSIBLE CORE SPOOL MECHANISM

James P. Loop, Kokomo, Ind., assignor to Continental Steel Corporation, Kokomo, Ind., a corporation of Indiana

Application April 15, 1955, Serial No. 501,646
9 Claims. (Cl. 242—72.1)

4. An expansible and collapsible spool mechanism for winding or unwinding coils of wire and the like comprising, a pair of individually mounted axially aligned rotatable spool ends, an axially extending seat member

on the inner side of each of said spool ends, said seat members having tapered side surfaces providing a pair of axially tapered seats, an interdrive connecting means on the free end of each of said seat members, a pair of separate substantially cylindrical core-halves disposed respectively about said seats, each core-half being comprised of a plurality of core segments slidable on the tapered surface of that seat about which the core-half is disposed, said segments being displaced radially on said seats when moved axially thereon, key means cooperatively arranged between each of said segments and its



respective seat for guiding said segments in an axial direction on said seats, and means for moving said spool ends relatively toward each other to bring said interdrive connecting means into driving contact with each other and to bring the ends of the segments of one of said core-halves forcefully against the corresponding ends of the segments of the other core-half, thereby providing an assembled spool rotatable as a single unit and at the same time moving the segments of both of said core-halves axially upon said seats to displace said segments radially to increase the diameters of said core-halves.

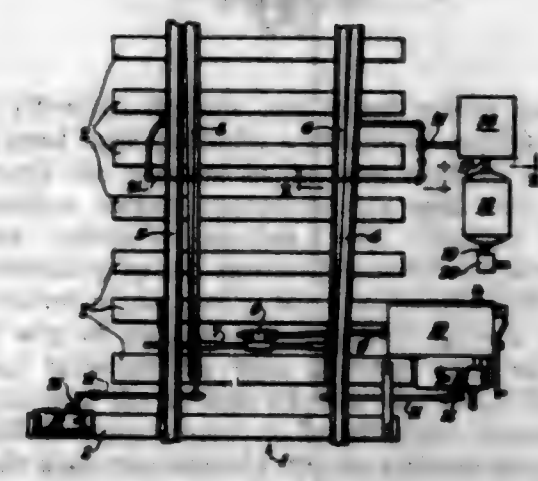
2,894,782
GIMBALED ROLLER
Roy T. Heath, Temple City, and Donald L. Burdorf, Duarte, Calif., assignors to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Application August 13, 1956, Serial No. 603,724
7 Claims. (Cl. 242—76)

1. A device for guiding the movement of long flat material comprising a stationary member adapted to be attached to a fixed support, a cylindrical member pivotally mounted upon the stationary member inwardly of the free end of said stationary member, and a rotatable member supported by and disposed around the pivoted member.

2,894,783
BOUNDARY LAYER CONTROL SYSTEM
David C. Hazen, Princeton, and Friedrich O. Ringleb, Woodbury Heights, N.J., assignors to Research Corporation, New York, N.Y., a corporation of New York
Application May 27, 1954, Serial No. 432,655
3 Claims. (Cl. 244—42)

3. In an air foil adapted to be presented to a flow of air including a leading edge and a trailing edge connected by spaced extended surface members, boundary layer control means comprising a cusp in one of said extended surface members followed by a smoothly curved depression extending into said air foil between the spaced extended surface members with the axis of the smoothly curved depression extending substantially parallel to one of the edges of the air foil and transversely to the flow of air over said extended surface members, a source of reduced pressure, and means connecting said source of reduced pressure and the smoothly curved depression for drawing off a portion of the air therein whereby a stabilized vortex is formed in said smoothly curved depression when there is a flow of air over the air foil.

2,894,784
SNOW BLOWER CONTROL SYSTEMS
Herbert L. Bass, Forest Hills, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Application January 12, 1955, Serial No. 481,467
4 Claims. (Cl. 246—428)

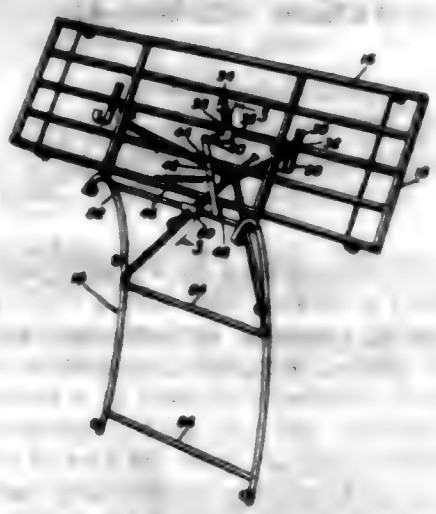


1. A fluid pressure operated blower comprising at least one nozzle directed toward a predetermined area, a source of fluid pressure, a reservoir connected by a first conduit to said source and by a second conduit to said nozzle, a throttling valve in said first conduit for controlling the charging rate of said reservoir to a predetermined pressure, a pressure switch actuated by the fluid pressure in said reservoir of the predetermined value, a control valve in the second conduit, means including an electromagnet for opening said control valve upon actuation of said pressure switch, and means including a time delay circuit for said electromagnet for maintaining said valve open a predetermined period after the pressure in said reservoir falls below the predetermined value.

2,894,785
FLOWER RACK FOR CASKET
Alfred M. Ewing, Hamvorton, Ohio
Application June 14, 1956, Serial No. 515,315
2 Claims. (Cl. 248—37.5)

1. A flower rack comprising a pair of laterally spaced rails having an intermediate interconnecting rod and

means thereon for attaching the same to a casket, a pair of arms extending upwardly from said rails and pivoted thereto for angular adjustment thereon, pairs of side-by-side toggle links for adjusting said arms operatively pivoted to said arms and to said rails, a screw



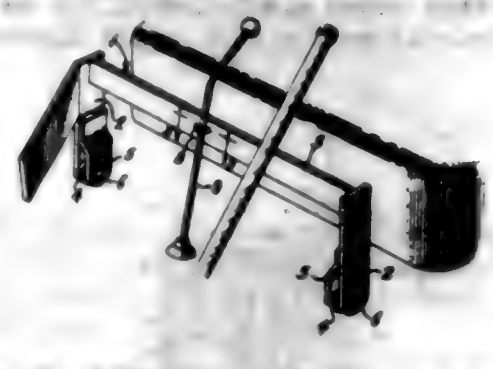
feed sleeve intermediate said pairs of links pivoted thereto for operating the links, a rotatable threaded rod operatively connected to said intermediate rod and sleeve, respectively, for feeding the sleeve, and an open flower supporting frame on said arms angularly adjustable thereby laterally.

2,894,706
HOSE SUPPORT
Peter Cappio, Great Neck, N.Y.
Application September 3, 1957, Serial No. 681,532
3 Claims. (Cl. 248—87)

1. A hose support formed of a single piece providing a standard having at its lower end a ground penetrating portion including a bent out laterally extending offset for resisting axial turning of the standard in the ground, and at its upper end a pair of spaced substantially parallel U-shaped loops open at their upper ends, a substantially horizontal portion connecting one of said loops to said standard at one side of said pair of loops, and a substantially horizontal portion connecting the said loops together at the opposite side of said pair of loops, said loops extending downwardly and below the upper end of said standard.

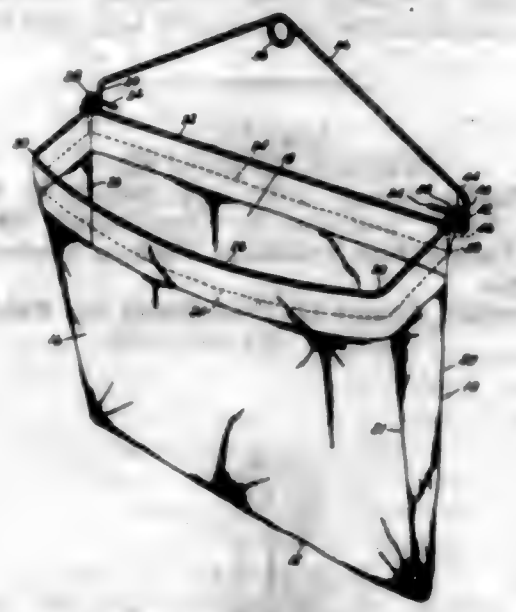
2,894,707
TRANSMISSION SUPPORTING DEVICE
Rhea Moore, Walters, Okla.
Application September 24, 1954, Serial No. 458,899
2 Claims. (Cl. 248—323)

1. A carriage for travel along a vehicle chassis frame for supporting a transmission having a shifting lever during removal of the transmission from the chassis assembly, after removal and during replacement comprising, an inverted open U-frame including straight legs spaced apart to span said chassis frame and a bridge bar extending horizontally between the tops of the legs, rollers mounted at the bottom of said legs to ride on said chassis frame, said rollers having axes lying in a vertical plane which includes said bridge bar when said leg is in vertical position, means centrally of the bridge



bar to clamp the shifting lever of the transmission against one side of the bridge bar to suspend the transmission from the bridge bar, and a brace extending diagonally downward from at least one of said legs from that side of the leg corresponding to the side of the bridge bar against which the shifting lever is clamped of such length as to support said device with the legs inclined in the direction of the side of the bridge bar against which the shifting lever is clamped.

2,894,708
FOLDABLE CONTAINER
Sholom E. Kaplan, Hartford, Conn., assignor to The S. and F. Company, Hartford, Conn., a partnership
Application June 30, 1958, Serial No. 745,584
3 Claims. (Cl. 248—99)



1. A foldable hanging fixture for a collapsible bag comprising a wire-like hanger, each end of which is formed with a depending leg having a portion reversed to provide an arm extending upwardly from the lower end of the leg, the upper end of each arm being looped to form a bearing positioned above the lower end of the leg, a first wire-like bag supporting element having reversely bent end portions, with each end portion extending through one of the hanger bearings for pivotal support of said first element by said hanger, and having a portion thereof engageable with the legs of the hanger to limit pivotal movement of the supporting element, and a second wire-like bag supporting element including a central portion and arm portions disposed in generally U-configuration and terminating in substantially closed loops, said second element being resilient and being mounted with the loops thereof encircling the free ends

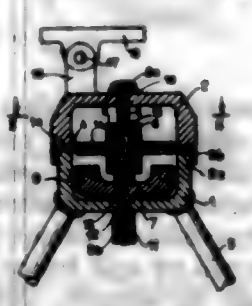
of said reversely bent end portions and with the arm portions providing a biasing force outwardly against the bearing defining ends of said hanger to retain the elements in assembled position, said arm portions of the second element being engageable with said first element to limit pivotal movement of the second element for supporting said second element in angular relationship to the hanger when the fixture is suspended by means of the hanger.

2,894,709

PANORAMIC MOUNT FOR CINEMATOGRAPHIC CAMERAS

Carlo Alisari, Turin, Italy

Application March 12, 1958, Serial No. 720,956
Claims priority, application Italy March 16, 1957
6 Claims. (Cl. 248—186)



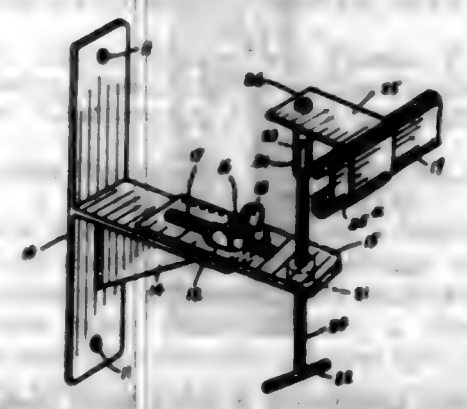
1. In a panoramic mount for motion picture cameras of the type having a stationary, dished, mount portion, a movable dished camera mount portion movably supported on said stationary portion in inverted position jointly defining a housing with said stationary portion, an inertia governor mechanism in said housing comprising, a centrally disposed shaft in said stationary portion extending axially therein in a direction toward the movable mount portion, a pinion rotatably mounted on said shaft, a flywheel fixed to said pinion disposed radially spaced inwardly of said stationary portion for pivotally rotating around said shaft, a pair of diametrically disposed support pin rollers rotatably supported on the stationary portion for rotatably supporting the movable portion on said stationary portion and extending radially inwardly toward said shaft, each of said rollers having a crown fixed thereon having axially extending teeth engaging said pinion.

2,894,710

ADJUSTABLE DRAPERY SUPPORT

George Edward Shields, Martinsville, Ind.

Application May 31, 1957, Serial No. 662,841
1 Claim. (Cl. 248—265)



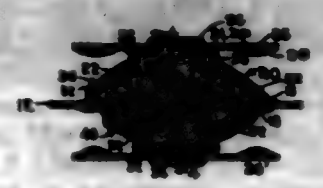
A drapery hanging fixture for supporting a drapery for adjustment vertically and horizontally continuously between relatively widely spaced limits comprising a wall bracket having an elongated vertical base member for attachment to a wall structure and a horizontal plate member formed integrally with said base member approximately midway between the ends thereof, a screw fixed adjacent the outer end of said plate member and extending upwardly thereof, an adjustable plate disposed on said horizontal plate member and forming an extension of said horizontal plate member, said extension plate having an elongated longitudinal slot for receiving said screw, a nut threaded on said screw in clamping relation to said extension plate, said extension plate being rotatable with respect to said screw and movable longitudinally of said horizontal plate member to provide adjustment transversely of said horizontal plate member and longitudinally thereof, a screw threaded shaft threaded to the outer end of said extension plate vertically thereof for adjustment in a vertical plane, said shaft including a smooth, cylindrical upper end portion, and a rod receiving hanger having a block depending therefrom, said block having a bore for rotatably receiving the said upper end portion of said shaft whereby said shaft may be rotated within said extension plate and within said block for adjusting said hanger upwardly or downwardly relative to said extension plate.

2,894,711

VIBRATION ISOLATOR AND SHOCK MOUNT

William F. Wingard, Newtonville, and Raymond A. Gosselin, Cambridge, Mass., assignors of one-half to A. Wells & Company Limited, London, England, a British company, and one-half to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware

Application May 11, 1956, Serial No. 584,217
6 Claims. (Cl. 248—358)



1. A vibration isolator and shock mount comprising an apertured base member, a columnar member extending through the aperture in the base member and vibration isolation means interconnecting said base member and said columnar member, said vibration isolation means including spring carriers mounted at opposite ends of the columnar member in free rotational relation thereto, two sets of closely coiled helical springs, each set extending between the base member and one of the spring carriers, the springs of each set, when the mount is unloaded, being under no longitudinal tension, lying with their axes substantially on the surfaces of two identical opposed cones and having their points of attachment to the spring carriers offset circumferentially and to a uniform extent in relation to their points of attachment to the base member when the mount is unloaded.

2,894,712

REPEATED ACTION INJECTOR DEVICE

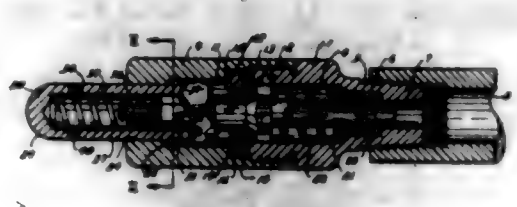
Harry T. Booth, Dayton, and Thomas J. Lord, Middletown, Ohio, assignors to United Aircraft Products, Inc., Dayton, Ohio, a corporation of Ohio

Application April 16, 1956, Serial No. 578,461
6 Claims. (Cl. 251—13)

1. In a device of the kind described, a body providing a fluid flow passage, means creating a pressure drop

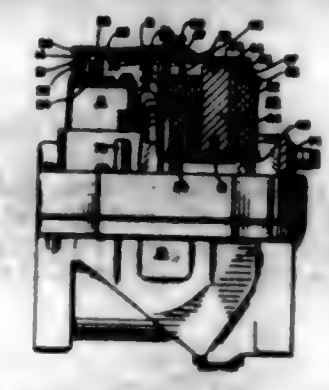
in said passage, a piston reciprocable in said body, means for applying said pressure drop across said piston for movement thereof in one direction, a valve for closing off flow through said passage, yielding means tending to open said valve, said valve being movable by said piston to closed position at a predetermined point in the travel of said piston in said one direction, means creating an unbalance of fluid pressure forces acting on said valve in the closed position thereof in a direction to close said valve, yielding means compressed by movement of said piston in said one direction for returning said piston in the opposite direction upon closing of said valve, and yielding means compressed by movement of said piston in a return direction tending to open the valve, the sum of the yielding means tending to open said valve exceeding the pressure unbalance acting on said valve at a predetermined point in the return of the piston whereupon said valve opens with a snap action.

2,894,713
IMPULSE VALVE
Kenneth W. Savage, Grandville, and Leonard H. Savage, Grand Rapids, Mich., assignors to The Lithibar Company, Holland, Mich., a corporation of Michigan
Application April 16, 1958, Serial No. 728,935
3 Claims. (Cl. 251—21)



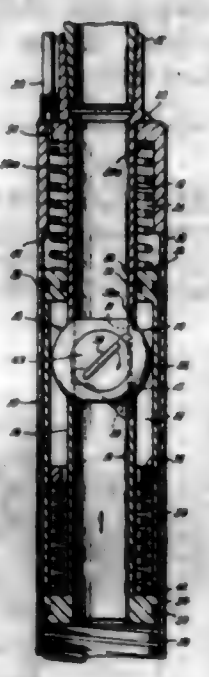
3. A valve structure, comprising in combination: an elongated housing having a first chamber at one axial end thereof and a second chamber at the other axial end thereof; a valve seat between said chambers; an inlet for pressure fluid connected to said first chamber and an outlet for pressure fluid connected to said second chamber; an elongated valve element in said first chamber and axially movable therewithin; first force means acting on said valve element for urging same into closed position against said valve seat, said valve element having an extension extending into said second chamber; a valve actuating element positioned within said second chamber and movable axially therewithin; a ball disposed within said second chamber and positioned between the adjacent ends of said extension and said valve actuating element; means defining a recess of larger size than said ball within said housing and communicating with said second chamber and means in said recess for normally positioning said ball out of axial alignment with said recess and in driving contact with said valve actuating element and said extension when same are spaced apart from each other the maximum distance, said ball when out of axial alignment providing a mechanical connection between said valve actuating element and said extension such that axial movement of said valve actuating element toward said extension effects a corresponding axial movement of said extension and said valve element to move same into an open position; deflecting means adjacent said valve seat for moving said ball into axial alignment with said recess when said valve actuating element is adjacent said valve seat and means for moving said ball into said recess at that time so that the mechanical connection between the valve actuating element and the extension provided by said ball is removed whereupon said valve element is urged into closed position against said valve seat by said first force means.

2,894,714
RESILIENTLY MOUNTED ELECTROMAGNETIC ACTUATOR FOR VALVES AND THE LIKE
Eric B. Ander, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application June 6, 1955, Serial No. 513,299
4 Claims. (Cl. 251—30)



1. An electric operator of the class described: a base; an operated device mounted upon said base; an electromagnetic actuator including a coil and a magnetic frame; armature means including connection means having a resilient member operatively connected to said device and pivotally supported on said frame; resilient mounting means on said base to support said frame; and said device including the resilient member and the resilient mounting means exerting substantially the same relative restraining torques on said frame and said armature means; said frame and said armature means moving substantially simultaneously toward each other and relative to said base to operate said device upon energization of said coil.

2,894,715
VALVE
James H. Bostock, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas
Application September 5, 1956, Serial No. 608,881
18 Claims. (Cl. 251—58)



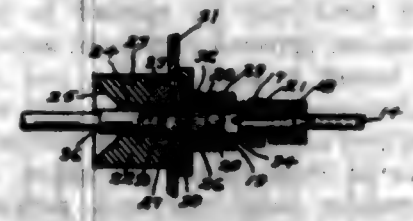
18. A valve, comprising a valve body connectable in a flow line and having a passageway therethrough, a pair of oppositely facing and spaced apart seats in surrounding relation to an intermediate portion of said passageway, a valve member having an opening therethrough said seatable between said seats for opening and closing said passageway upon the rotation about an axis transverse to the opening therethrough, a control frame movable in a path longitudinally within said valve body

concentrically outwardly of the passageway therethrough, means connecting said valve member to said control frame for rotation between opened and closed positions upon movement of the control frame in opposite longitudinal directions, means for urging said control frame in said opposite directions, and means for maintaining said seats in seating engagement with said valve member with a lesser force than is exerted upon said control frame by said urging means.

2,894,716
ENGINE PRIMING LINE ATTACHMENT FOR DASHBOARDS

Charles P. Orr, Camden, N.J., assignor to Spray Products Corporation, Camden, N.J., a corporation of New Jersey

Application September 28, 1955, Serial No. 537,188
2 Claims. (Cl. 251—148)



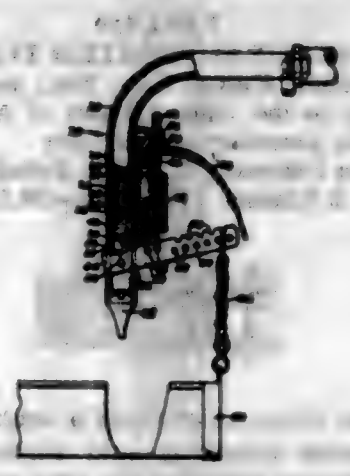
1. A valve member for detachably connecting a conduit having a restricted terminal orifice therein to a second conduit comprising a coupling, said coupling having a conical bore extending axially therein from one end thereof and connected with a linearly extending passage including a first axial bore and a second axial bore of a diameter greater than said first axial bore extending from the other end of said coupling and connected with the first axial bore with the junctures of said axial bores forming a shoulder internally of said coupling, a check valve fitting secured at one end to said second conduit and at its opposite end to said coupling, a check valve in said fitting, and a tubular seal positioned in the larger diameter second axial bore in said coupling having one end engaging the shoulder at the junctures of said larger and smaller diameter bores in said coupling and the other end engaging in sealing relation said check valve fitting, said conical bore forming a mouth opening in said coupling providing a guiding and receiving opening for said orificed conduit in said coupling with the inner end of said orificed conduit establishing sealing engagement with the end of said seal adjacent the shoulder at the junctures of the larger and smaller diameter bores in said coupling.

2,894,717
DOUBLE ACTION AUTOMATIC WATERING VALVE

Dempsie C. Camp, Dunlap, and Charles T. Robinson, Chattanooga, Tenn., assignors to The Cumberland Case Company, Chattanooga, Tenn., a corporation of Tennessee

Application December 8, 1954, Serial No. 473,977
9 Claims. (Cl. 251—263)

1. A valve mechanism comprising a housing defining an upper inlet chamber, a lower discharge chamber and an intermediate port connecting said chambers, said port and chambers being axially aligned, a valve member mounted in said inlet chamber adjacent said port, means in said inlet chamber biasing said valve member toward said port, a plunger mounted for movement within said port, said plunger having an upper end for engagement with said valve member and a lower end portion disposed within said discharge chamber, a cam follower mounted within said discharge chamber adjacent said plunger lower end portion, a control lever pivoted to said housing having one end portion thereof extending within said discharge chamber through slot means formed therein below said cam follower, said lever including an arcuate surface having a convex cam projection extending upwardly therefrom, said cam follower presenting a curved convex surface engaging said cam projection, gasket means adjacent said slot means for engaging said arcuate surface and means biasing said lever into a first extreme position wherein said cam projection is

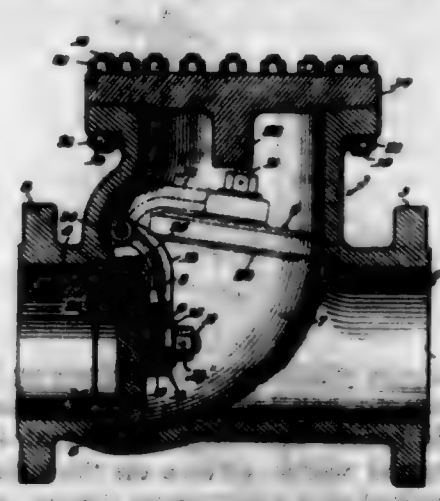


operable to permit said valve member to close said port, said lever being movable into an intermediate position wherein said cam projection is operable to move said cam follower, plunger and valve member upwardly to open said port and a second extreme position wherein said cam projection is operable to permit said valve member to close said port.

2,894,718
VALVE SEAT CONSTRUCTION

Joseph A. Englert, Chicago, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois

Application March 30, 1955, Serial No. 498,076
6 Claims. (Cl. 251—357)



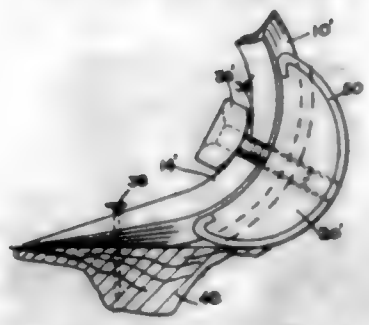
1. In a valve, the combination of a seat, a closure member therefor, sealing means interposed between the seat and the said closure member, the said sealing means comprising a resilient annular member with a tapered annular surface and having a rigid annular core therewithin defining at least a portion of an outer transverse surface of said resilient annular member, the said resilient member and core being receivable in an annular recessed portion of the said closure member, the said resilient member and annular core making end contact in the same plane in said annular recessed portion of the closure member, annular retaining means for said sealing means mounted in shouldered relation to said closure member against an annular end surface of the said recessed portion, and having a tapered annular surface parallel to the tapered annular surface of said resilient annular member whereby to define a space therebetween to receive a portion of said resilient annular member, the said resilient member and the core completely filling an annular space defined respectively by

said annular retaining means, the outer annular surface of said annular recessed portion and the surface of said recessed portion which defines the depth thereof, the said tapered annular surface of the retaining means bearing against the tapered annular surface of said resilient member so as to deform said resilient member.

2,894,719
IMPROVED STRUT SUPPORTED TURBINE BLADE
Douglas V. Foster, Kansas City, Mo., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application February 21, 1956, Serial No. 567,040
2 Claims. (Cl. 253—39.15)

1. A turbine blade comprising a central tubular strut; a shroud; means attaching said shroud to said strut whereby the shroud encircles the strut and forms a space between said strut and said shroud; a wall within said space disposed parallel to the strut and spaced from both the shroud and the strut; spaced fins connecting said wall to said strut so that cooling pockets are formed adjacent the strut; means for introducing a cooling fluid into the cooling pockets defined by the wall, the fins and the strut so that the central strut is cooled.

2,894,720
PINCH BAR
Raymond W. Bennett, Ilion, N.Y.
Application June 4, 1956, Serial No. 589,036
2 Claims. (Cl. 254—25)

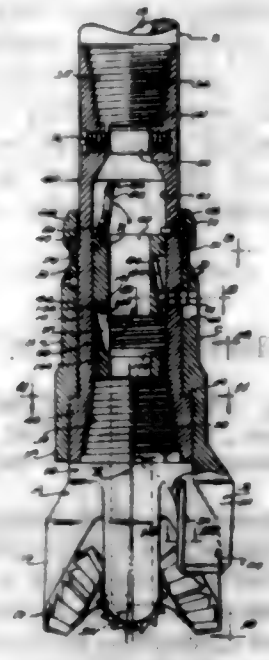


1. A multipurpose pinch bar tool comprising in combination an elongated handle, a claw wedge surface on one end of said handle bent back thereon at a substantial angle, a second wedge surface on the other end of said handle disposed at a slight angle thereto, a leverage block assembly detachably mounted about said bar adjacent said claw wedge surface, said assembly comprising a smoothly curving semi-cylindriform outer block member adapted to be mounted on the convex side of said curved bar surface, said block member having a transverse width at least twice the width of the bar to which it is to be attached and a length along said bar of at least twice the width of said bar, a thin protective surface covering member detachably secured about the outer surface of said semi-cylindriform block member, a clamping member adapted to be mounted on the inner side of said curved bar surface, a groove cut on the inner concave surface of said outer member adapted to receive therein the outer surface of the bar to which it is to be attached, a pair of threaded holes in the outer block member, a pair of countersunk holes in the inner block member, and a pair of threaded bolts adapted to extend through the holes in the inner block into threaded engagement with the holes in the outer block to clamp said blocks about the pinch bar adjacent said wedge surface in cooperating relationship thereto whereby a pinch bar having a substantially constant mechanical advantage and a wide non-marring fulcrum surface is obtained.

2,894,721
PRINTERS' FRICTION-LOCKING QUOIN
Milton Bliss Gardner, Ivyland, Pa.
Application May 19, 1958, Serial No. 736,400
1 Claim. (Cl. 254—42)

A printer's quoin comprising; first and second quoin members located in generally parallel juxtaposed relation and having flat generally parallel outer sides and inclined inner faces, said members having cooperating portions against which force may be applied to cause relative longitudinal motion between said quoin members, a channel member having a back portion and side portions enclosing said second quoin member and operably connected to said first quoin member to confine said second quoin member to longitudinal movement between said first quoin member and said back portion, a rectangular strip mounted between said second quoin member and said back portion and anchored to said back portion, said second quoin member and said strip having cooperating faces provided with interengaging matching elongated teeth on their adjoining surfaces which interlock under pressure and produce resistance to sliding movement between said strip and said second quoin member, thus holding the expanded quoin immovably in locked-up position.

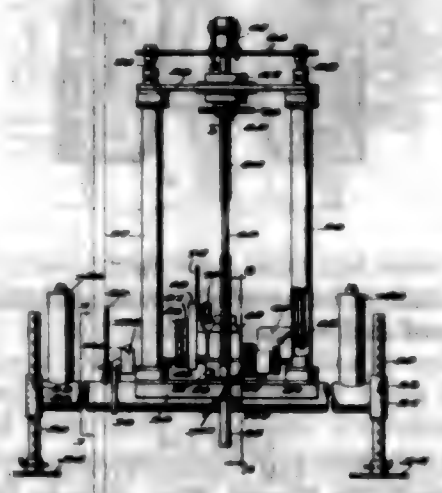
2,894,722
METHOD AND APPARATUS FOR PROVIDING A WELL BORE WITH A DEFLECTED EXTENSION
Ralph Q. Buttolph, Whittier, Calif.
Application March 17, 1953, Serial No. 342,788
19 Claims. (Cl. 255—1.6)



12. The method of extending a well bore in a predetermined direction compriaing the steps of lowering a drill bit having guide means rotatably mounted thereon to the bottom of said bore, moving said drill bit relative to said guide means to form a seat for said guide means, raising said drill bit and said guide means from said seat, locking said guide means against rotation relative to said bit, rotating said bit to orient said guide means to guide said bit in the desired direction, lowering said drill bit and said guide means to reseat said guide means

within said seat formed by said drill while said guide means is locked against rotation relative to said bit, unlocking said guide means from said bit and advancing said bit and said guide means to extend said bore in the desired direction.

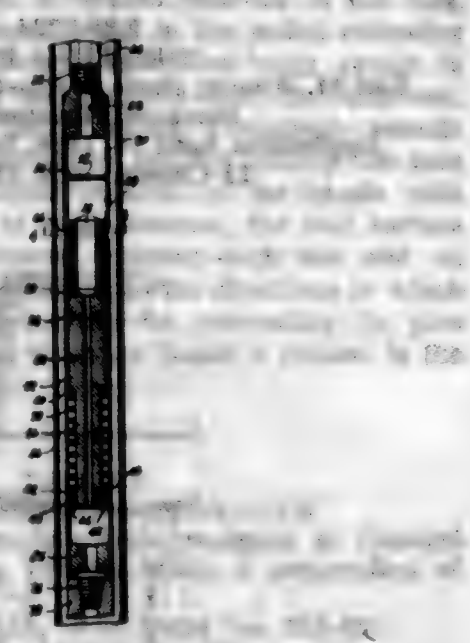
2,894,723
DRILLING APPARATUS
August W. Gustafson, Corpus Christi, Tex.
Application August 8, 1957, Serial No. 677,107
3 Claims. (Cl. 255—22)



2. In drilling apparatus, a frame including a transverse member, legs depending from said frame, means for adjusting the vertical positions of the legs with reference to the frame for supporting the frame in a substantially horizontal plane, two cylinders spaced transversely of said frame, means pivotally connecting lower ends of said cylinders to said transverse member, power operated means for swinging said cylinders on said pivotal connections to vertical positions with reference to the plane of the frame, pistons movable in said cylinders with piston rods extending from upper ends thereof, a cross header connecting upper ends of said piston rods, a kelly bar depending from said cross header, a thrust bearing carried by said cross header supporting an upper end of the kelly bar for rotation, a plate connecting upper ends of said cylinders, a socket member mounted for rotation on said plate and having an opening therethrough through which the kelly bar extends and may move while maintaining a driving relationship between the socket member and the kelly bar, means for driving said socket member, and a clamp assembly carried by said transverse member having an opening therethrough through which the kelly bar extends.

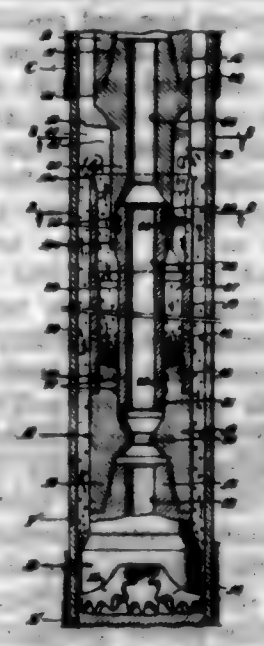
2,894,724
HYDRAULIC VIBRATORY JAR
Thomas A. Andrew, Newport Beach, Calif.
Application September 7, 1956, Serial No. 608,612
10 Claims. (Cl. 255—27)

1. In a vibratory jar, a sleeve closed at one end, a piston slidable in the sleeve, said one end of the sleeve having a fluid inlet through which pressure fluid may flow into the interior space of the sleeve between said one end of the latter and the adjacent end of the piston, the wall of the sleeve having a port through which said fluid may flow from said space, means including a spring acting between said sleeve and piston for biasing the latter in the direction of said one end of the sleeve to a normal position wherein said adjacent end of the piston overlies said port, said piston being movable toward the other end of said sleeve against the action of said spring to a second position wherein said port is uncovered, there being a passage including said port communicating said space to the outside of said sleeve when said piston is in said normal position, and valve means



carried on the piston for closing said passage in response to fluid flow through the passage from said space to the outside of said sleeve.

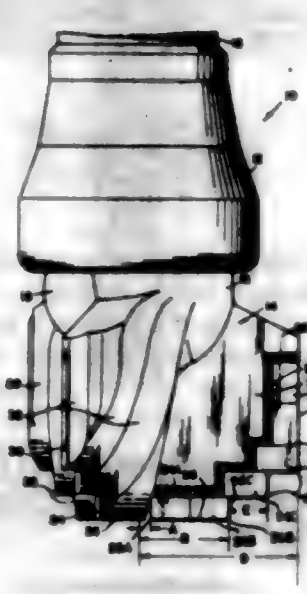
2,894,725
JUNK BASKET FOR WELL BORES
Reuben C. Baker, Cealings, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Application July 20, 1956, Serial No. 599,259
5 Claims. (Cl. 255—28)



1. In a junk basket to be disposed above and secured to a rotary drill bit: a tubular mandrel adapted to be connected to a drill string to be disposed in a well bore; a cylinder encompassing said mandrel and having an upper terminus substantially below the upper end of said mandrel; circumferentially spaced, lateral ribs extending substantially below said upper terminus and attaching said mandrel to said cylinder, said ribs extending substantially above said upper terminus and providing inlet openings therebetween through which debris can pass downwardly into said cylinder; and means secured to and closing the lower portion of said cylinder and adapted to be connected to the rotary drill bit, where-

by drilling torque can be transmitted from said mandrel through said ribs to said cylinder, and then through said closing means to the drill bit.

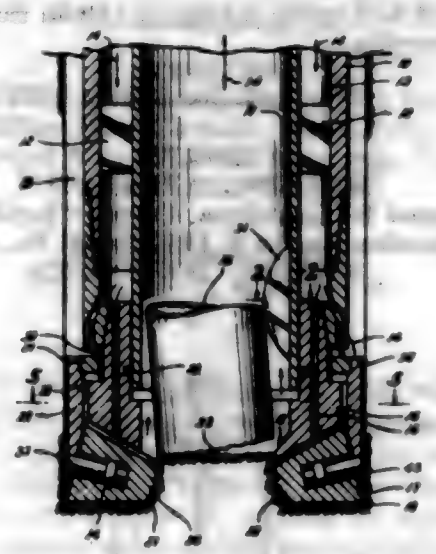
2,894,726
DRILLING BIT
Earl M. Weaver, Burle C. Hawthorne, and Jesse L. Stockard, Houston, Tex.
Application April 10, 1956, Serial No. 577,233
13 Claims. (Cl. 255—61)



1. A blade for a rotary drilling bit assembly rotatable about a longitudinal axis, said blade comprising a cutting section in the lower end thereof of a hard material having generally radially extending leading surface means, the radially inwardly disposed portion of the cutting section having downwardly facing bottom engaging surface means intersecting with the associated leading surface means to define a pilot cutting edge extending, between an inward terminal position spaced radially outwardly from the axis of rotation and an outward terminal position disposed radially substantially one-half of the entire radial extent of the cutting portion of said blade, such that no point on said pilot cutting edge disposed radially inwardly from a given point thereon substantially midway of the radial extent of said pilot cutting edge to said inward terminal position is disposed below said given point and all points on said pilot cutting edge disposed radially outwardly from said given point are disposed progressively above said given point radially outwardly to said outward terminal position, the outermost portion of said pilot cutting edge defining portion of said cutting section including a stabilizing surface extending upwardly from said outward terminal position, the remaining portions of the blade cutting section including bottom engaging surface means and stabilizing surface means extending upwardly from the outer ends of said bottom surface means, said bottom engaging surface means intersecting with said leading surface means to define a plurality of stepped cutting edges extending upwardly and outwardly with respect to said pilot cutting edge.

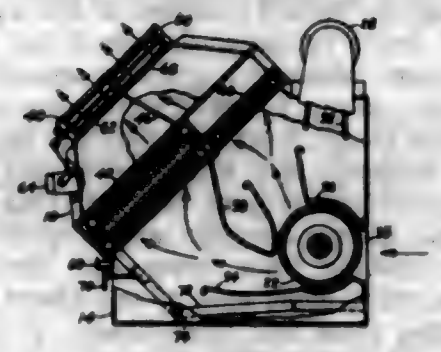
2,894,727
DRILLING BIT
Homer I. Henderson, San Angelo, Tex.
Application May 17, 1955, Serial No. 508,837
6 Claims. (Cl. 255—72)

6. A drill bit comprising a bit body adapted to be secured onto the lower end of a drill pipe so as to be rotated thereby, a pair of toothed cutters rotatably supported on said body, common gear means on said body having teeth thereon in continuous mesh simultaneously with said pair of toothed cutters, said gear means and said toothed cutters being rotatable relative to each other, the teeth of



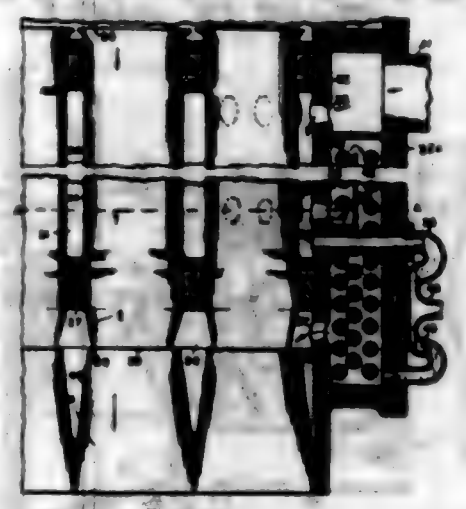
one of said cutters being of different pitch than the teeth of the other of said cutters.

2,894,728
MULTI-ZONE AIR CONDITIONING UNIT
James R. Davis, La Crosse, Wis., assignor to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
Application February 6, 1957, Serial No. 638,497
3 Claims. (Cl. 257—9)



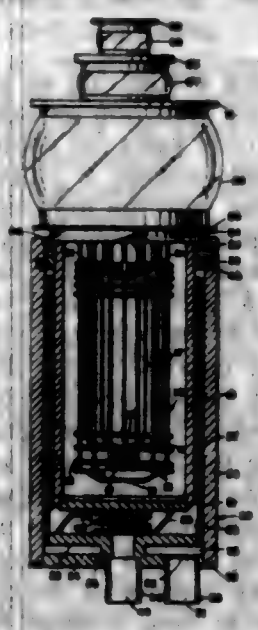
1. An air conditioning unit comprising a rectangular casing, one end of said casing having a longitudinal rectangular inlet opening extending substantially the entire length of said one end of said casing, a cross-flow fan wheel in said casing, means rotatably mounting said cross-flow fan wheel on said casing, said cross-flow fan wheel having its length greater than its diameter and being positioned adjacent the inlet opening in said one end of said casing and having its major axis extending substantially the entire length of the inlet opening, a first block-off member secured to said casing and extending inwardly from one side of said inlet opening and surrounding a portion only of the periphery of said cross-flow fan wheel along substantially its entire length, a second block-off member secured to said casing and extending inwardly from the other side of the inlet opening and surrounding a second portion of the periphery of said cross-flow fan wheel along substantially its entire length, a partition secured to said casing and extending between the sides of said casing to form with said casing two air passageways, said partition extending substantially to the periphery of said cross-flow fan wheel at a portion of the periphery between and spaced from said first and said second block-off members to divide the air delivered from said cross-flow fan into two streams, a heating coil secured to said casing and being positioned in one of said passageways and a cooling coil secured to said casing and being positioned in the other of said passageways.

2,894,729
GAS TURBINE CONDENSERS
Douglas K. Warnes, Sarasota, Fla.
Application July 23, 1952, Serial No. 300,533
3 Claims. (Cl. 257—24)



1. A condenser comprising: inner and outer shells forming a closed space therebetween; an end plate within and at each end of said inner shell; straight tubes supported by said plates in spaced parallel relation to each other and to said inner shell; an annular space being thus formed between said inner shell, end plates, and tubes; said tubes having a flared entrance portion beyond the end plate at the inlet end of said tubes and an inwardly contracted exit portion beyond the end plate at the outlet end of the tubes; narrow openings surrounding the contracted ends of the tubes, said openings communicating with the space between said shells; diffusers extending outwardly from said narrow openings and communicating with contracted ends of the tubes; a steam and gas entrance at one end of said outer shell and apertures in said inner shell communicating with such inlet sealed from the space between the shells; exhaust openings at the other end of said inner shell exhausting gases from the annular space in the inner shell to the space between shells; a drain pipe; a trap beneath said outer shell communicating with said pipe and with the interior of the outer shell; and another trap beneath said outer shell and communicating with said drain pipe and the interior of the inner shell.

2,894,730
COOLING DEVICES FOR ELECTRON TUBES
George J. Agule, Stamford, Conn., assignor to Machlett Laboratories, Incorporated, Springdale, Conn., a corporation of Connecticut
Application June 21, 1955, Serial No. 517,005
5 Claims. (Cl. 257—250)



3. A device for securing a hollow open-ended water jacket in sealed enclosing relation to an anode of an electron discharge device comprising an annular circumferential ring carried on the outer surface of the anode adjacent one end thereof and adapted to receive thereover the open end of the jacket, a plurality of radially extending pins disposed at spaced intervals in the ring, a corresponding number of slots in the jacket extending from the open end thereof, each slot being angled in one direction inwardly and laterally from the open end, said open end of the jacket having a relatively smooth end surface for engagement by and for guiding the pins into respective slots upon rotation of the anode with respect to the jacket in one direction, the end surface further having stop means adjacent each slot and on the sides thereof corresponding to the directions in which the slots are laterally inclined for preventing the pins from engaging the slots when the jacket is rotated in the opposite direction.

2,894,731
REFRIGERATING APPARATUS
Clifford H. Wurtz, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application July 18, 1955, Serial No. 522,481
1 Claim. (Cl. 257—256)

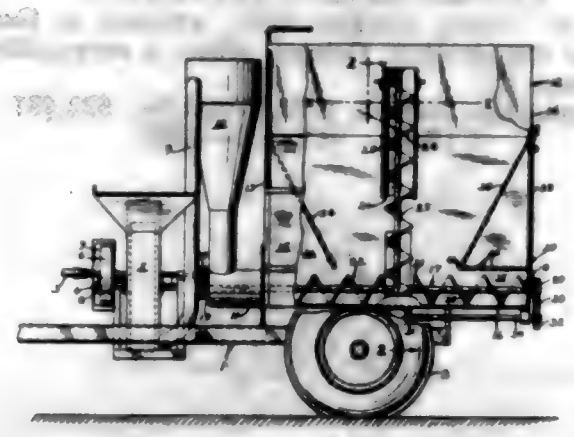
In a tube and fin type heat exchange device, a one piece sheet metal element having a plurality of integrally formed aligned finger-like projections extending away from one edge portion of said element and forming a plurality of parallel fins between which air may flow, said projections being arranged in side by side relationship and having refrigerant passage means formed directly in said projections, said one edge portion being foreshortened by having a plurality of corrugations formed therein with the sides of said corrugations arranged substantially in alignment with said projections.

2,894,732
FLUID MIXING DEVICE
Robert E. Tabor, Berkeley, and Donald R. Hawkinson, Kensington, Calif., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware
Application September 29, 1955, Serial No. 537,447
10 Claims. (Cl. 259—4)

5. A disposable mixing unit for forming a homogeneous mixture of a convertible resin with a hardening agent comprising a tube of plastic material having inlet means adapted to be coupled detachably to conduit means providing separate passages for the separate admission of the resin and hardening agent, an outlet for the resulting ho-

mogeneous mixture, a perforated retaining member near said outlet, and contacting material composed of small, curved plates packed within said tube between said retaining member and said inlet means throughout a distance equal to several times the diameter of the tube and providing small, repeatedly intercommunicating flow passages, said plates being shaped to leave flow channels through the bulk thereof and having rigidity sufficient to maintain their shapes against compaction when liquid is forced through the flow channels with a pressure drop of over 30 lbs. per sq. in.

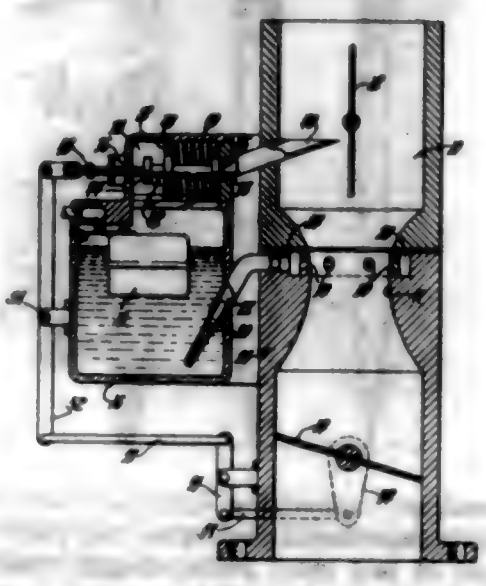
2,894,733
PORTABLE GRINDING AND MIXING DEVICE FOR STOCK FEED
Raymond Wosmek, Glencoe, Minn.
Application March 7, 1958, Serial No. 719,965
1 Claim. (Cl. 259—23)



In a device of the class described, a portable frame, a mixing bin on said frame, said bin having substantially vertical end walls and converging side walls which provide a hopper bottom extending longitudinally of the direction of travel of said frame, a horizontally disposed screw conveyor extending through the lower portion of said bin in overlying relation to said hopper bottom and having front and rear flights which are spaced apart centrally of said bin and which feed material toward their spaced apart adjacent ends, a vertically disposed screw conveyor having its lower end in closely spaced relation to the flights of said horizontal conveyor, downwardly converging baffles carried by the end walls and converging side walls of said mixing bin, said baffles terminating at their lower ends in closely spaced overlying relationship to said horizontal conveyor in spaced relation to said on opposite sides of said vertical conveyor and creating voids at opposite ends of said horizontal conveyor, an ingredient inserting door in the rear end wall of said mixing bin opening into the void created by the adjacent baffle, and a perforate grid below the level of said door extending longitudinally between said rear end wall and the adjacent baffle and laterally between said converging side walls.

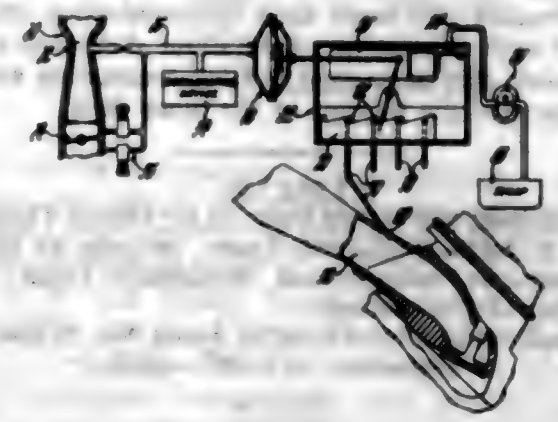
2,894,734
CARBURETOR VENTING DEVICE
Joseph T. Wentworth, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 12, 1957, Serial No. 695,798
3 Claims. (Cl. 261—43)

1. A carburetor comprising an air intake passage, a fuel reservoir, means for supplying fuel from said reservoir to said air passage in accordance with the quantity of air flow through said passage, a throttle valve in said air passage controlling the quantity of combustible charge flowing therethrough, a first port means in said fuel reservoir for venting the reservoir to the atmosphere, a second port in said reservoir, a tube connecting said second port with said induction passage, valve means mounted in said reservoir for selectively opening one of said ports and at the same time closing the other of



said ports, throttle control means for actuating said valve means to open said first port and block said second port when the throttle is in an idling position, and means normally biasing said valve means to a position in which said first port is blocked and said second port is uncovered.

2,894,735
FUEL METERING SYSTEM
Albert J. Zapancic, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application February 25, 1957, Serial No. 642,290
4 Claims. (Cl. 261—69)



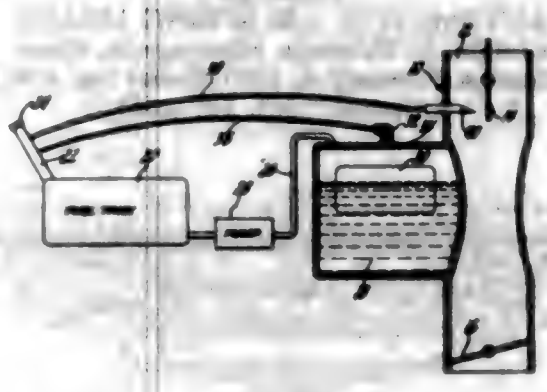
1. A fuel metering system for an internal combustion engine comprising an induction passage for supplying air to the engine, a throttle valve for controlling the quantity of flow through said passage, a plurality of intake passages communicating with the induction passage for supplying air to the individual engine cylinders, a fuel reservoir, a fuel conduit connecting each intake passage with the reservoir, a float controlled valve for controlling the quantity of fuel in the reservoir, valve means disposed in the reservoir for controlling the flow of fuel through the conduits, servo means operatively connected to the valve means, a venturi in the induction passage, a conduit communicating the venturi with said servo conveying thereto a control force which is proportional to the mass of air flowing through the induction passage, each of the fuel conduits having an end projecting within an intake passage immediately anterior of the cylinder whereby the force causing fuel to flow through the fuel conduits is proportional to the manifold vacuum in the intake passages.

2,894,736

CARBURETOR VENT SYSTEM

Joseph T. Wentworth, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application March 26, 1958, Serial No. 724,892
8 Claims. (Cl. 261—72)



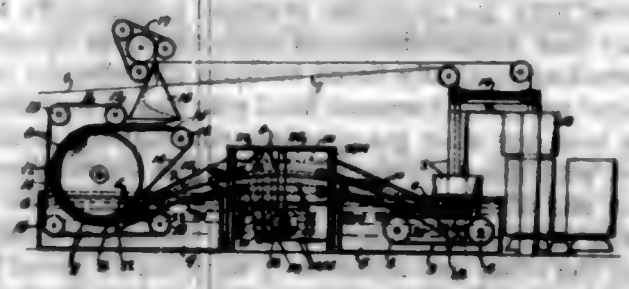
1. A charge forming device for an internal combustion engine comprising an air induction passage, a fuel bowl associated with said induction passage, a fuel tank for supplying fuel to said fuel bowl, said fuel tank including a filler pipe extending therefrom, a first conduit communicating said fuel bowl above the fuel level with said filler pipe, and a second conduit communicating said filler pipe with said induction passage.

2,894,737

CONVEYER SYSTEM FOR HEAT TREATMENT

Otto Haagwitz, La Celle Saint Cloud, France, assignor to Société Anonyme Geoffroy-Delore, Paris, France, a French company

Application December 13, 1957, Serial No. 702,704
Claims priority, application France December 15, 1956
3 Claims. (Cl. 263—6)



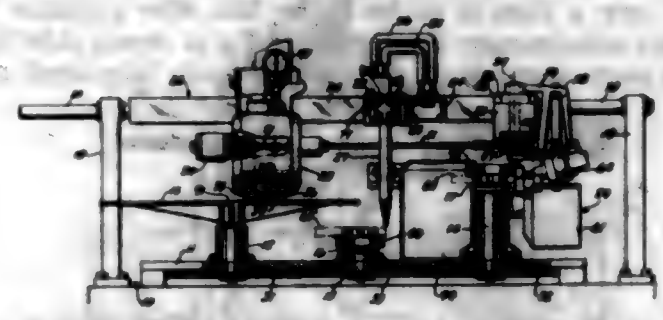
1. In a heat treating system in combination, at least two bar assemblies each comprising a set of transversely spaced bars having an arcuate configuration in a vertical plane with the apex of the arcs directed upward, means supporting said assemblies in parallel intersected relation whereby all the bars define a generally part-cylindrical supporting surface having a substantially flat apical portion intermediate the ends of the assemblies and end portions drooping down from said flat apical portion towards the ends of the assemblies, liquid container means into which said drooping end portions project, tunnel-like extensions projecting from the ends of said enclosure into said container means in surrounding relation with said bar assemblies whereby to define a sealed space within said enclosure and tunnel extensions, a charging station at an input end of said assemblies for placing articles to be treated on said supporting surface, means imparting to the respective assemblies time-displaced generally elliptical cyclic motions in a vertical plane to advance said articles over said surface through said enclosure, and a discharging station at the opposite end of the assemblies for removing the treated articles.

2,894,738

CONTOUR-FOLLOWING HEAT-TREATING MEANS

Charles A. Pelkybridge, New Britain, Conn., assignor to The New Britain Machine Company, New Britain, Conn., a corporation of Connecticut

Application February 7, 1956, Serial No. 564,656
13 Claims. (Cl. 266—23)



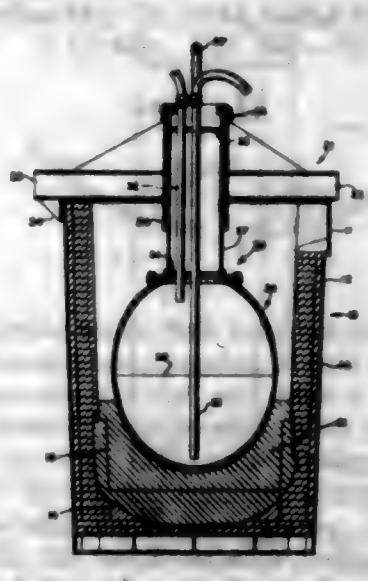
1. In a profile-following device of the character indicated, a frame, a platen journalled for rotation on a first fixed axis in said frame, a work-supporting spindle journalled for rotation on a second fixed axis in said frame, means coupling said platen and spindle for 1:1 rotation, elongated guide means oriented substantially parallel to the plane including both said fixed axes, drive means guided by said guide means and including a friction wheel in rolling friction contact with said platen off the axis thereof, means continuously driving said wheel, steering mechanism for steering said wheel about an axis perpendicular to said platen, tool-supporting means guided by said guide means in unison with guided movement of said drive means, said tool-supporting means including a rotatable tool-supporting head pivoted on an axis substantially parallel to said steering axis, and means connecting said steering mechanism to said rotatable tool-supporting head for unitary rotation.

2,894,739

LADLE RELINING METHOD

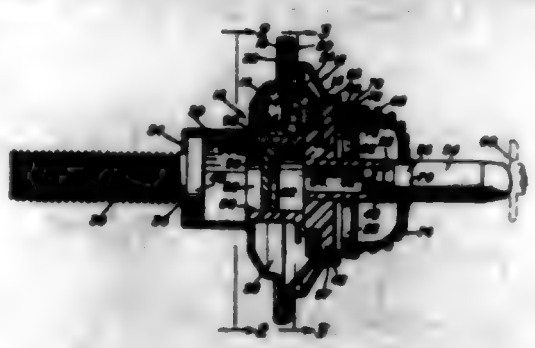
Donald B. Spencer, Portland, Oreg., assignor to Guy F. Atkinson Company, South San Francisco, Calif., a corporation of Nevada

Application December 27, 1955, Serial No. 555,590
3 Claims. (Cl. 266—43)



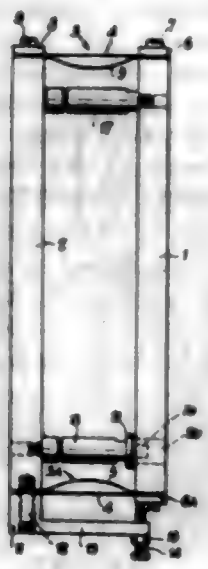
1. A method for repairing a worn refractory lining of a ladle comprising introducing a quantity of molten refractory material into the ladle, molding the molten refractory material to a desired inner contour in situ around a rigid molding form between the inner surface of the worn ladle lining and the rigid molding form, and chilling the inner molded surface of the molten refractory material so as to solidify the same by directly cooling said molten refractory material substantially only from the inner surface thereof.

2,894,740
DASHPOT
John R. Emerson, Golden W. Fuller, and Audley G. Richards, Flint, Mich.
Application April 2, 1956, Serial No. 575,383
18 Claims. (Cl. 267—1)



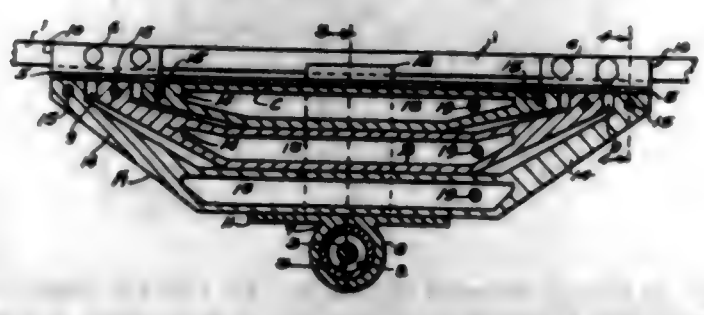
1. In a fluid dashpot including a hollow casing, a diaphragm secured in said casing and separating said hollow casing into two chambers, a plunger in said casing connected with said diaphragm to flex the latter, said plunger having a passageway extending therethrough in which there is a tapered fluid metering groove, a smooth walled metering plug frictionally held in said passageway by binding against the walls thereof and coacting with said metering groove to provide a metered fluid orifice in said plunger whose effective area is selected by selecting the position of said plug in said passageway and in relation to said groove, and means on opposite sides of said diaphragm for constraining the movement of said plunger while it is being actuated so that there may be a deviation from alignment of the means which actuates the plunger and the plunger.

2,894,741
MECHANICAL GUIDING DEVICES
John Lexham, Cranfield, Bletchley, England, assignor to The Sigma Instrument Company Limited, Hertfordshire, England, a British company
Application November 3, 1958, Serial No. 771,529
Claims priority, application Great Britain November 1, 1957
3 Claims. (Cl. 267—1)



1. A mechanical guiding device arranged for guiding the movement of a movable member with respect to a fixed member, the movable member being maintained in relation to the fixed member through the intermediary of first and second spring strip arrangements, wherein each spring strip arrangement comprises two spring strips one end of each of which is secured to the fixed member and the other end of each strip being secured to the movable member, one of the spring strips being effectively shorter than the other spring strip so that the latter assumes an arcuate form and maintains said one strip in tension, wherein said arcuate strips are between said one strips, and wherein that side of each said one strip that is remote from the other spring strip arrangement faces away from all the remaining spring strips of the device.

2,894,742
AUTOMOTIVE AIR SPRING MEANS
Adolphe C. Peterson, Minneapolis, Minn.
Application February 4, 1957, Serial No. 638,169
9 Claims. (Cl. 267—65)

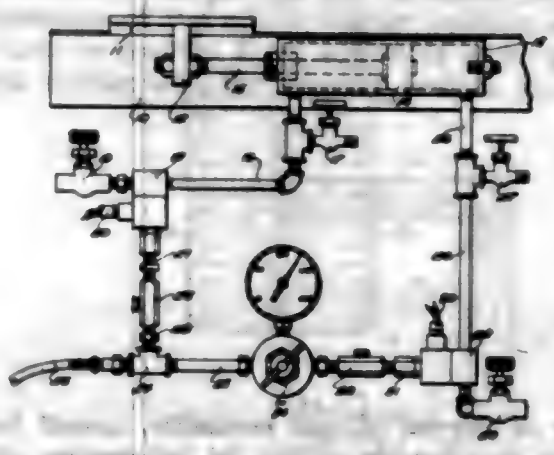


1. In a yieldable support means for a vehicle: an axle unit associated with the vehicle and rotatably mounting a wheel on the vehicle; a shelf fixed on the vehicle, a second shelf fixed on the axle unit, the said shelves being substantially horizontal and parallel each to the other and vertically tiered; a pair of container mounting elements fixed securely with the first named one of said shelves and located horizontally remote each from the other and with the first named shelf intermediately thereof; an elongated gas container formed of a flexible material and having a wall formed to surround a gas space therewithin the wall enclosing the gas space on all sides, and having at each of two horizontally opposite ends of the elongated container a securing part formed therewith in the extended container end; a securing means for each said securing part affixing the securing part to one of said container mounting elements so that said securing parts are horizontally and remotely located each away from the other with gas container extended substantially horizontally and intermediately of said container mounting elements and vertically tiered between said shelves; other container mounting elements fixed with one of said shelves and at least one other gas container substantially similarly formed with space and securing parts, one securing means at each end of said other gas container to secure the two opposite ends to the other container mounting elements so that the other gas container is mounted in tiered relation with said first named gas container and extended horizontally between said other container mounting elements and between said first named gas container and one of said shelves; and a guiding means formed vertically at each side of said tiered gas containers and fixed to one of said shelves and spaced laterally away from the tiered gas containers to permit some lateral extension of the gas containers but to restrain the gas containers and retain them in the tiered relation.

2,894,743
PNEUMATIC EDGE GUIDER
Milton Dubinsky, Providence, R.I., assignor to Milton Dubinsky, Sanford Kroll, and George Kroll, all of Providence, R.I., copartners
Application January 23, 1956, Serial No. 560,772
14 Claims. (Cl. 271—3.6)

1. A device for shifting material in response to a two-pole switch at the edge of the material comprising means for supporting the material, a horizontally disposed pneumatic cylinder, a piston horizontally slidable in said cylinder, a piston rod extending from said piston and out of one end of said cylinder, said piston rod being connected to said material supporting means, a pneumatic pipe line

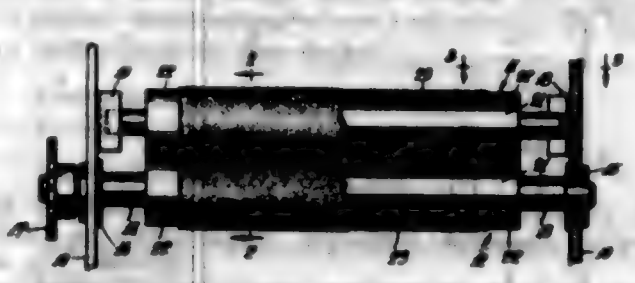
connected to said cylinder adjacent each end of each side of said piston, said pipe lines being connected to a common source of pneumatic pressure for applying a constant equal pressure on each side of said piston, a solenoid controlled valve in each pipe line for relieving or applying the pressure on either side of said piston in response to the movement of the two-pole switch, and an adjustable needle valve on the exhaust side of each solenoid valve for controlling the rate of movement of said piston in response to the decrease in pressure.



2,894,744
FEED ROLLERS FOR PHOTO-CONDUCTIVE INSULATING MATERIAL

John J. Schulze, Prospect Heights, Ill., assignor to Charles Bruning Company, Inc., Chicago, Ill., a corporation of Delaware

Application December 18, 1956, Serial No. 629,069
6 Claims. (Cl. 271—51)



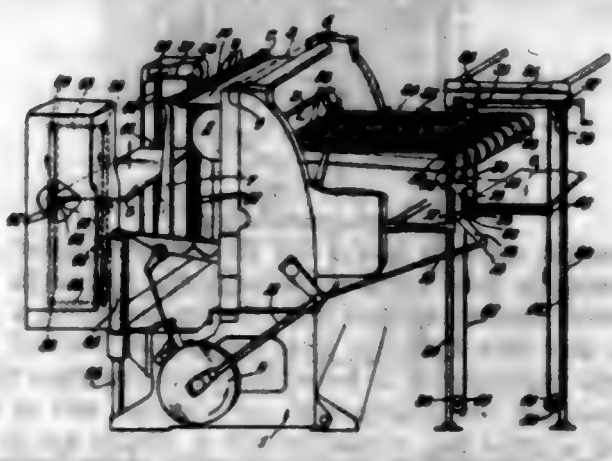
2. A pair of feed rollers for feeding photo-conductive insulating material having an image covered with a developer powder, said rollers having near one end a relatively narrow peripheral portion of material having a high coefficient of friction maintaining the said rollers in driving engagement with the longitudinal axes of said rollers spaced apart the desired distance to maintain pressure on the insulating material fed by said rollers, the periphery of said rollers adapted to engage said insulating material being of a nap material to provide a soft, firm drive for the said insulating material, the said nap material being of a material in the triboelectric series which is located in said series remote from the position in said series of the material of which said developer powder is constituted.

2,894,745
LETTERPRESS MACHINES OR CUTTING AND CREASING MACHINES, OF THE VERTICAL TYPE

Arthur Harold Holmes, Solihull, Warwickshire, Fred Holmes, Tilberry Green, near Wythall, Warwickshire, and Annes Leslie Holmes, Solihull, Warwickshire, England

Application February 7, 1957, Serial No. 638,856
1 Claim. (Cl. 271—62)

In a machine of the kind referred to having two ends, one of said ends being the deep pile delivery end of said machine, in combination, vertical chain transmission means disposed at least at said deep pile delivery end; a plurality of roller means fixed to said transmission means in a common horizontal plane; means for driving said transmission means in a predetermined direction whereby to cause ascent or descent of said roller means; table means including carrier means fixed to the underside thereof, said carrier means having a plurality of seats for engaging with said roller means in such a way that said table means is supported by said transmission means in a horizontal plane and ascends or descends when said



transmission means is set in motion; a bed and conveyor means intermediate the deep pile delivery end and said bed, said conveyor means having a shaft, said transmission means having a sprocket shaft, and said means for driving said transmission means comprising a bell crank lever having an oscillating arm operatively connected with said sprocket shaft; and one-way clutch means operatively connected with said gear segment and with the shaft of said conveyor means, respectively, for driving said conveyor means at a predetermined rate when said transmission means is driven.

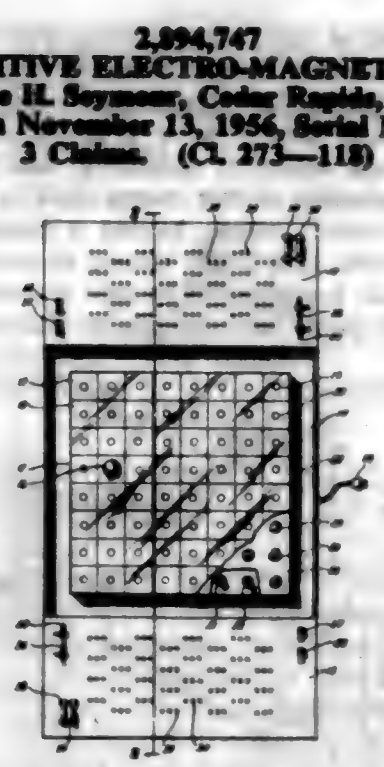
2,894,746
TETHER BALL

John C. Clapp, Sandusky, Ohio, assignor to The Barr Rubber Products Company, Sandusky, Ohio, a corporation of Ohio

Application May 22, 1956, Serial No. 586,579
3 Claims. (Cl. 273—58)

1. An inflatable tether ball structure comprising an air envelope, a housing body bonded to said air envelope and extending inwardly thereof and over a fraction of the inside area thereof, said housing body having an inner surface and an outer face, said housing body having a cavity formed therein and communicating with said outer face, said housing body also having a plug chamber formed therein, the cross-sectional conformations of said plug chamber being substantially similar along the length thereof, said plug chamber communicating with said outer face through a relatively restricted opening, securing means embedded in said housing body and extending transversely across said cavity in spaced relation with the bottom thereof, and a plug of resilient material positioned within said plug chamber in tightly gripped relationship to constitute a self-sealing valve for an inflating needle, whereby when said securing means is fastened to a flexible line and said ball is used, gas leakage through said valve will be minimized by exploiting the constraints to which the tether ball is naturally subjected.

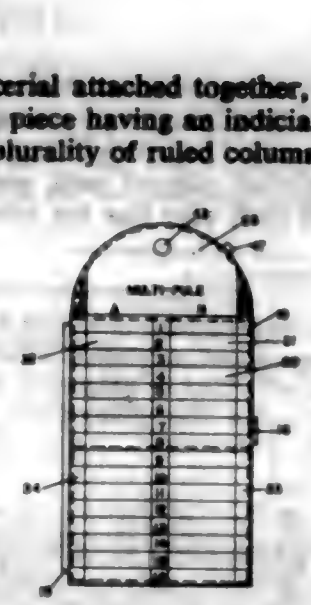
2,894,747
COMPETITIVE ELECTRO-MAGNETIC GAME
Clyde H. Seymour, Cedar Rapids, Iowa
Application November 13, 1956, Serial No. 621,628
3 Claims. (Cl. 273—118)



1. In a competitive electro-magnetic game device to be played by two opposed players, a playing surface, a steel ball adapted to be positioned thereon, a plurality of electromagnets positioned beneath said playing surface, a portion of said magnets being operatively connected to individual double-throw switches positioned on one side of said playing surface under the control of one of said players, an equal portion of said magnets operatively connected to like switches positioned on the opposite side of said playing surface under the control of the other of said players, an alternating current transformer, the secondary winding thereof being divided into two portions, a rectifier operatively connected to one of said two portions to secure direct current therefrom, the other portion thereof being adapted to provide alternating current, said secondary portions, said magnets, and said switches being operatively connected to form a plurality of separate electrical circuits adapted to be actuated separately by said opposed plungers, switch means positioned in each of said circuits adapted to selectively connect either of said winding portions to the respective magnets associated therewith, a second sub-division of each of said portions operatively connected to said magnets, and a third switch means in each of said circuits adapted to selectively alternately connect said portions or sub-divisions to said magnets, said double-throw switch means being adapted to permit the rapid making and breaking of said electrical circuits, whereby each player may selectively vary current conditions to offset variations effected by his opponent to control movement of the steel ball.

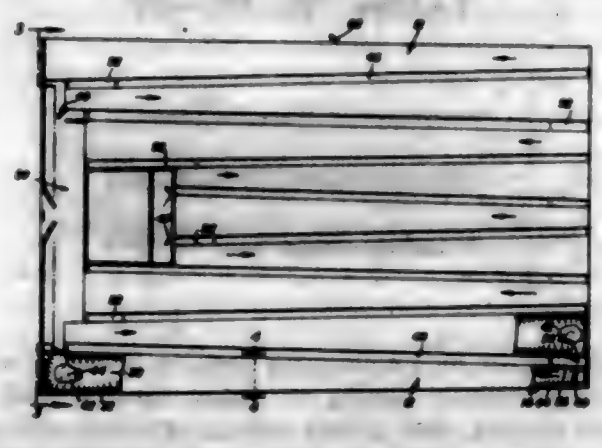
2,894,748
GAME
Harold E. Curtis, Lawrence Park Township, Erie County, Pa.
Application July 7, 1953, Serial No. 366,573
1 Claim. (Cl. 273—148)

A game comprising, in combination, a body member and a plurality of indicia carrying devices comprising a container having sides, a bottom, and a lid, said container being relatively shallow and having a transversely extending partition separating said container into a first and a second compartment, said container having an enclosed space at one end thereof defined by said lid, said sides, and said bottom, a battery enclosed in said enclosed space, a light supported on said container, said light having means thereon to electrically attach it to said battery, and wafers in said first compartment, said wafers being made of two pieces of thin transparent material attached together, the inside surface of one said thin piece having an indicia member inscribed thereon, and a plurality of ruled columns inscribed on the



outside of the lid of said container, spaced horizontal lines on said outside of the lid intersecting said ruled columns to have the names of players inscribed thereon, said wafers being adapted to be removed from said first compartment, held up to said light source to be identified, and then deposited in said second compartment, some of the indicia on each of said wafers selected being inscribed in said ruled columns opposite the name of a player by an operator.

2,894,749
ENCLOSED GOLF COURSE
Louis W. Rook, Carrizo Springs, Tex.
Application July 22, 1955, Serial No. 523,786
2 Claims. (Cl. 273—176)

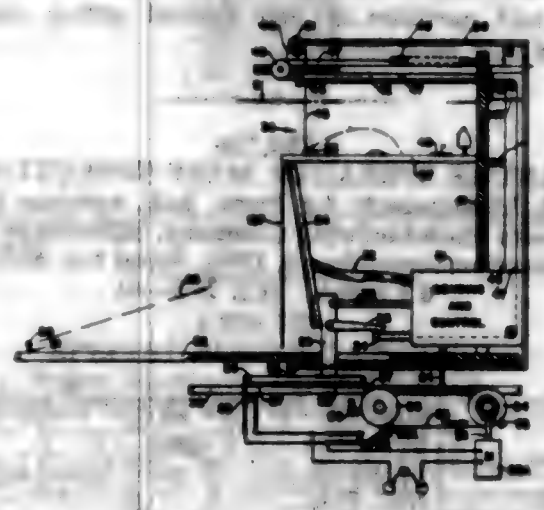


1. An enclosed golf course comprising a plurality of elongated building sections arranged in side-by-side relation, a fairway in each building section, each fairway including a tee at one end and a green at the other end, a baffle curtain extending substantially throughout the entire length of each fairway, each of said curtains including a plurality of inwardly extending projections forming obstacles for a golf ball being driven from the tee towards the green when the ball deviates excessively from an intended path, the tees and greens being arranged alternately with the tee of a fairway disposed adjacent the green of an adjacent fairway, a waiting room interconnecting the tee and green of adjacent fairways, and indicating means in each waiting room actuated in response to egress of players from the succeeding fairway for indicating that the succeeding fairway is vacant.

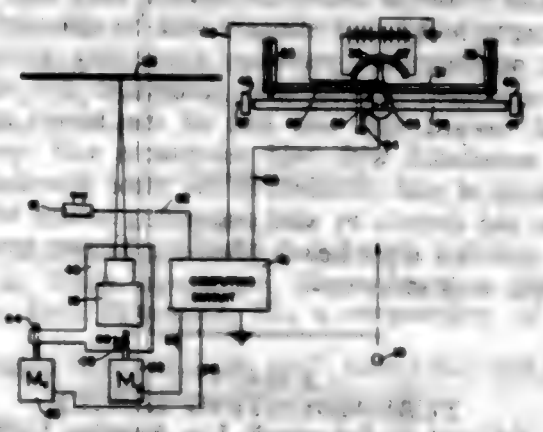
2,894,750
GOLF GAME APPARATUS
Luther G. Simjian, Greenwich, Conn., assignor to The Reflectone Corporation, Stamford, Conn., a corporation of Connecticut
Application October 18, 1955, Serial No. 539,328
6 Claims. (Cl. 273—181)

1. A game apparatus of the character described comprising; a bodily movable target adapted to intercept a

propelled missile and to be displaced from a starting position by the impact of the missile thereupon; position sensing means on the target which sense the impact position of the missile thereon; control means selectively set, responsive to the actuation of the position sensing means, to positions representing the horizontal and vertical components of the missile impact position on the target; a cam, its position being adjustable so as to vary its effective contour and this adjusted position being effected in response to the displacement of the target from its starting position; power driven means actuated in response to the displacement of the target; a display means positioned by said control means and said display means engaging also the effective contour of said cam; said display means being driven by said power driven means to follow the contour of the cam which thereby determines the path of said display means, and the path of said display means being a curve simulating the trajectory of said missile in free flight.

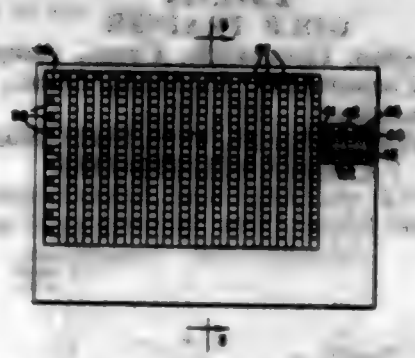


2,894,751
GOLF GAME
Luther G. Simjian, Greenwich, Conn., assignor to The Reflectone Corporation, Stamford, Conn., a corporation of Connecticut
Application September 22, 1953, Serial No. 381,601
5 Claims. (Cl. 273—185)



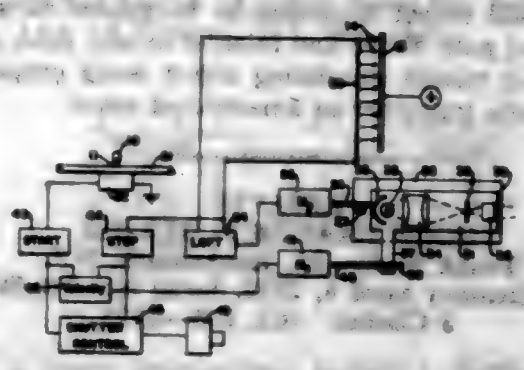
1. A device of the character described comprising, a bodily movable target mounted for rotation about a horizontal and vertical axis, said target adapted to receive a propelled missile and be rotated thereby an amount which is proportional to the missile's horizontal and vertical direction, variable resistance means coupled to the target for changing the characteristics of an electrical circuit in proportion to the displacement of the target, a display system which produces a visual display proportional to the motion of the target, and a control circuit containing said resistance means which energizes the display system and controls its movement.

2,894,752
GOLF PRACTICE DEVICE
Luther G. Simjian, Greenwich, Conn., assignor to The Reflectone Corporation, Stamford, Conn., a corporation of Connecticut
Application January 7, 1955, Serial No. 480,529
4 Claims. (Cl. 273—185)



4. A target construction for a golf practice device or similar apparatus comprising; a target area adapted to receive a propelled missile and impede further forward motion thereof; said target area provided with two substantially coplanar arrays disposed at substantially ninety degrees to one another for determining the position of impact of the missile in the horizontal and vertical plane respectively; each array including a plurality of fluid charged resilient elongated sensing elements; each of said elements coupled to an associated electrical circuit means disposed outside of the sensing area and said circuit means being actuated in response to the displacement of fluid in the associated sensing element thereby producing actuation of electrical circuit means in two planes in response to the horizontal and vertical impact positions of the missile on the target, each of said sensing elements comprising a hollow fluid filled tubing which is closed at one end and is equipped at the other end with an expansible bellows the motion of which actuates the electrical circuit means, and said electrical circuit means connected to controlled instrumentalities.

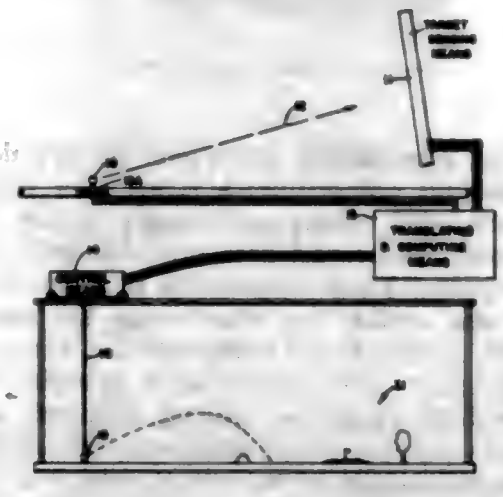
2,894,753
INDICATOR FOR GOLF PRACTICE
Luther G. Simjian, Greenwich, Conn., assignor to The Reflectone Corporation, Stamford, Conn., a corporation of Connecticut
Application August 15, 1955, Serial No. 528,349
8 Claims. (Cl. 273—185)



1. A means for showing the motion of a missile comprising; a signal generating means which produces a primary electrical signal responsive to the displacement of a missile from a starting position; a target disposed for receiving and impeding further forward motion of the missile; said target including a single array of sensing means which produces a secondary electrical signal responsive to the impact height of the missile on the target; electrical computing means which receive the primary and secondary signals and produce output signals proportional to the velocity of the missile and to the height the missile would have traveled in free space; a display device having means for receiving said output signals and for caus-

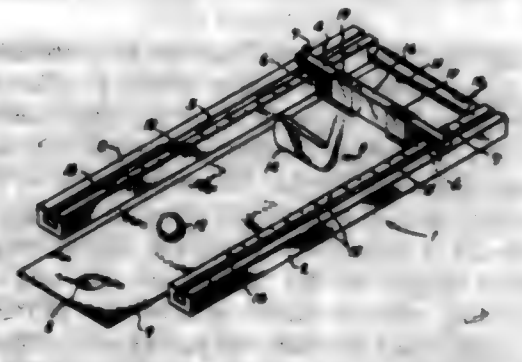
ing said display device to show a path of said missile in free flight in response to said output signals, and said path being a curve of said missile in free flight as viewed laterally to the path of the missile.

2,894,754
GOLF TRAINER
Luther G. Simjian, Greenwich, Conn., assignor to The Reflectone Corporation, Stamford, Conn., a corporation of Connecticut
Application September 16, 1955, Serial No. 534,854
7 Claims. (Cl. 273—185)



1. A game apparatus comprising in combination: means to support a missile which upon receipt of a propelling force is caused to traverse a restricted space; a target disposed to intercept the path of the missile through said space; said target equipped with sensing means determining the impact position of the missile thereupon, and said impact position being related to the trajectory of said missile in said restricted space; translating and computing means connected to said sensing means and to said support means and being actuated in response to the operation of said sensing means and the missile leaving said support means; said computing means producing signals proportional to the trajectory of said missile in unrestricted space along the three normal axes in space; means mounting a missile simulating object above a miniature playing field; a plurality of actuating means connected to said mounting means and receiving said signals proportional to the trajectory of said missile whereby said object is caused to be guided in a three-dimensional path above and relative to said field, and the path of said missile simulating object being proportional to the missile trajectory in unrestricted space.

2,894,755
GOLF PRACTICE DEVICE
Frank Scelso, Jr., Hackensack, N.J.
Application April 6, 1956, Serial No. 576,582
6 Claims. (Cl. 273—192)



3. A golf practice device comprising a pair of spaced parallel guide members, a track extending along the upper side of each of the guide members, a partition extending transversely between said guide members and removably attached thereto, said partition being adapted to hold the guide members in fixed parallel relationship such that the head of a golf club may be inserted therebetween parallel to said partition, a runner attached to each end of said partition adapted to slide along said tracks, said partition incorporating a means for adjusting its length such that the spacing between said guide members may be varied to accommodate golf club heads of various sizes therebetween, and clamping means for positioning said partition at any desired setting along the length of said members.

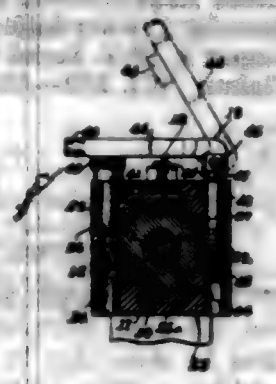
2,894,756
MANURE SPREADER BODY STRUCTURE
Edgar R. McDonough, La Porte, Ind., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application September 4, 1956, Serial No. 607,816
6 Claims. (Cl. 275—6)

1. A manure spreader comprising, in combination, a receptacle, a pair of vertically spaced shredding cylinders rotatably mounted at one end of said receptacle in opposite side members of the latter, a pair of transversely spaced rotary slingers mounted on and in parallel relation to a transverse, vertical wall structure of said receptacle at said one end of the latter and opposite to the lower of said shredding cylinders; a bottom wall between said receptacle side members spaced from said transverse wall structure so as to provide a bottom opening in underlying relation to said slingers; said transverse wall structure having an upper portion rigidly connected with upper portions, respectively, of said side members, and lower portions of said side members being separated by vertical recesses at opposite sides, respectively, of said receptacle from a lower portion of said transverse wall structure so that a continuous, unobstructed gap for the ejection of material from the bottom and both sides of said receptacle by said slingers will be afforded by said bottom opening and recesses; conveying means operatively mounted within said receptacle for advancing material toward said one end of the latter; and drive means associated with said receptacle and operable to rotate both of said cylinders in the same direction so that material fed thereto by said conveying means will be delivered over the top of each of said cylinders toward said transverse wall structure.

2,894,757
TUBE-MOUNTING DEVICE
Edward H. Schustack, Los Angeles, Calif.
Application October 21, 1957, Serial No. 691,291
4 Claims. (Cl. 279—5)

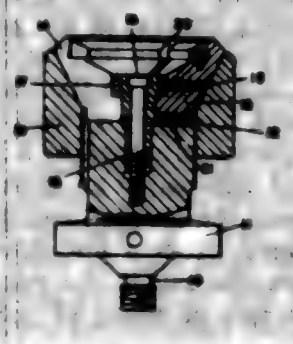
1. A tube-mounting device comprising a chuck body provided with radially movable chuck jaws for internally gripping a tubular member, said body being provided with a cylindrical part laterally offset from said jaws, a two-part housing around said cylindrical part forming a split seat for said part, said cylindrical part having at least two circumferentially spaced indentations, one of the housing parts being provided with a spring-biased detent to enter said indentations, selectively, to locate the chuck body and a tube gripped by the jaws thereof, means carried by the housing to bias the parts thereof toward each other and to tightly clamp the cylindrical

part of the chuck body to, thereby, firmly hold the chuck body, as located by an indentation and detent, against



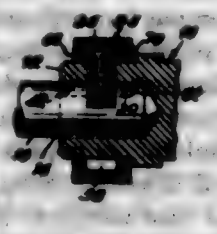
turning relative to the housing, and a support bracket for said housing.

2,894,758
SPECIAL PURPOSE CHUCK
Walter Minsterer, Philadelphia, Pa.
Application March 28, 1955, Serial No. 724,779
3 Claims. (Cl. 279—56)
(Granted under Title 35, U.S. Code (1952), sec. 266)



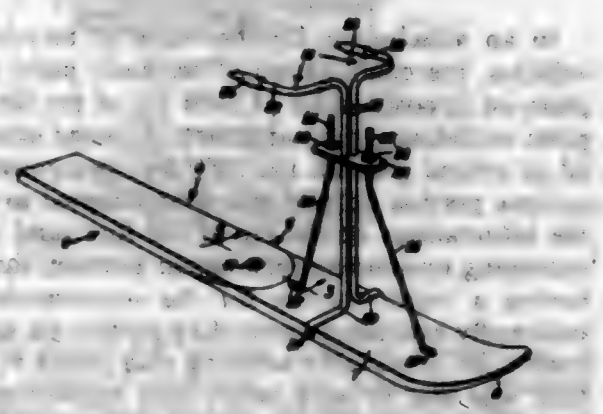
1. In an adjustable chuck for holding optical blanks, the combination of an adapter arranged at one of its ends for attachment to a spindle shaft and having an external thread near its other end, a plurality of jaws each slidably coupled to said adapter and each having an inwardly extending projection and an outwardly sloping exterior surface, a pin fixed to said adapter with its head engaging the projections of said jaws and having a circumferential groove in said head, a collar threaded to said adapter for slidable engagement with the exterior of said jaws, and a plurality of pins each mounted in a different one of said jaws and spring biased into engagement with said circumferential groove.

2,894,759
CHUCK FOR DRILL OR THE LIKE
Hugo J. de Bruin, Sycamore, Ill., assignor to Ideal Industries, Inc., Sycamore, Ill., a corporation of Delaware
Application November 25, 1957, Serial No. 698,562
12 Claims. (Cl. 279—97)



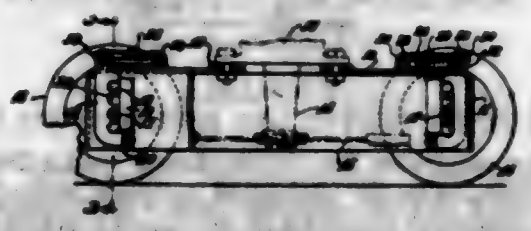
1. In a chuck structure, a chuck having a generally central bore for receiving the shank of a drill bit, a lateral slot across the chuck intersecting the bore over a substantial peripheral extent, a key in the slot on an axially disposed pivot, at least a portion of the outer surface of the key projecting outside of the chuck when the key is fully closed, a sleeve rotatably mounted on the chuck with an internal channel accepting the key, the sleeve having an inwardly disposed circular flange on each side of the channel of less radius than the radial extent of the key in its closed position, and an eccentric area between the inner surface of the channel and the outer surface of the key.

2,894,760
SCOOTER SLED WITH ADJUSTABLE HANDLE BARS
Oscar Kolstad, Salt Lake City, Utah
Application September 27, 1957, Serial No. 686,631
2 Claims. (Cl. 280—22)



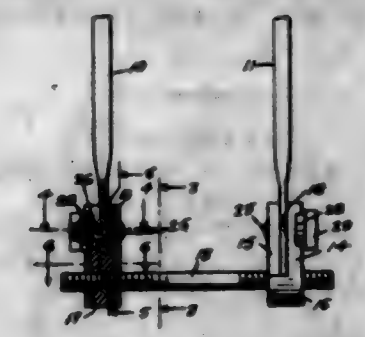
1. A scooter of the character described comprising: a ski including front and rear sections pivotally connected at one end, a pair of handle bars pivotally mounted for forwardly and rearwardly swinging adjustment on said front section, and means for securing said handle bars in adjusted position, said means including an apertured plate fixed on the handle bars, a pair of rods fixed on said front section forwardly and rearwardly of said handle bars, and comprising end portions extending slidably through the plate, and nuts threaded on said rods and engaged with the plate.

2,894,761
QUICK ADJUSTMENT MEANS FOR ROTARY LAWN MOWERS
Herman C. Knerr, Richmond, Ind., assignor to Dille & McGuire Mfg. Co., Richmond, Ind., a corporation of Indiana
Application March 25, 1957, Serial No. 648,974
8 Claims. (Cl. 280—44)



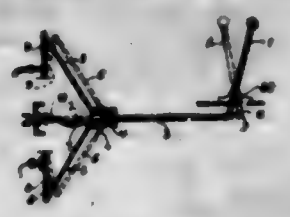
1. In a rotary lawn mower having a skirted housing and a pair of wheel carrying axles, the improvement which comprises: a regulating arm pivoted to the skirted housing adjacent each end of each of said axles, said skirted housing having a vertical slot adjacent each of said regulating arms to receive a said axle end, each of said regulating arms having a recess to receive a said axle end, and means to maintain said axle ends in said recesses, said last mentioned means comprising a rod connected between a pair of said regulating arms parallel to a said axle, abutments for said regulating arms, and resilient means connected between said skirted housing and said rod to hold said regulating arms against said abutments.

2,894,762
REMOVABLE AXLE PROTECTING UNIT FOR CYCLES
Raymond D. Randel, Frankfort, Kans.
Application September 17, 1957, Serial No. 684,581
1 Claim. (Cl. 280—281)



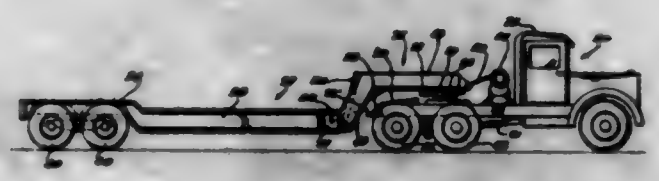
In an attachment for the forks of bicycles or similar vehicles, the combination of an inner plate and an outer plate on opposite sides of each leg of the fork, said outer plate including a right angularly disposed extension adapted to extend beneath the fork leg, an upwardly extended arcuate portion on said extension adapted to seat between the bifurcations on the leg of the fork, and an outwardly extending upstanding rectangular portion, said inner plate having a recess therein for the accommodation of said outwardly extending upstanding portion on said extension, means for removably securing said plates to each of said fork legs and to each other, axle supporting means carried by one of said inner and outer plates, said means removably securing said plates to each other and to said fork legs and comprising a bolt and a manually removable nut, said plates carrying said axle supporting means being provided with vertical slots whereby upon release of said manually removable nut, said plates, the axle carried thereby and its associated wheel may be removed from the fork as a unit.

2,894,763
APPARATUS FOR DISCONNECTING TRAILER SERVICE AND MECHANICAL COUPLINGS
Kürth Karnath and Klaus-Jürgen Karnath, Wiesbaden, and Günther Karnath, Kiel, Germany; said Kürth Karnath and said Günther Karnath assignors to said Klaus-Jürgen Karnath
Application May 23, 1956, Serial No. 586,794
Claims priority, application Germany September 27, 1955
16 Claims. (Cl. 280—421)



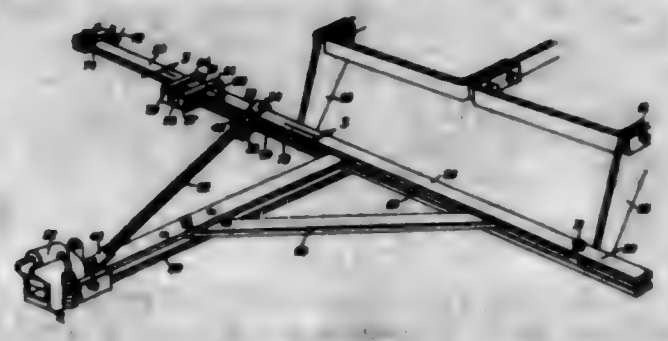
1. An apparatus for uncoupling a trailer from a towing vehicle initially connected to each other by means of a mechanical coupling on the towing vehicle engaging a towing shaft with a horizontal eye on the trailer, said mechanical coupling having a release means, and air-brake and lighting couplings of standard type provided with release levers on said towing vehicle, characterized by an operating means located in the vicinity of the driver's seat and connected through the intermediary of a common pull member and connecting elements therefrom to said release levers of the lighting and brake couplings and to said release means, the connecting elements between the pull member and said release levers consisting of links and the connecting element between said pull member and said release means of the mechanical coupling consisting of a normally slack line, so that said release means of the mechanical coupling will be operated only after the lighting and brake couplings have been released.

2,894,764
TRAILER-TRACTOR ASSEMBLY WITH REMOVABLE GOOSENECK
George T. Renk, Cedar Rapids, Iowa, assignor to Transport Trailers, Inc., Cedar Rapids, Iowa
Application August 9, 1956, Serial No. 603,133
5 Claims. (Cl. 280—425)



1. For a trailer and tractor unit in which the trailer has a coupling means at the forward end and in which the tractor has a winch means on the rearward end portion, a power means for operating the winch means and a fifth wheel, a gooseneck for coupling the trailer to the tractor comprising a frame having a rearwardly extending portion and means on the end of the rearwardly extending portion for engagement with the coupling means on the trailer, a forwardly extending portion at a higher level than the rearwardly extending portion, bail means extending upwardly from the rearwardly extending portion of the gooseneck frame to a higher level than the forwardly extending portion of the gooseneck and means on the upper portion of the bail for operative connection with the winch, and means on the tractor for cooperating with the gooseneck including a ramp on the rearward end portion of the tractor mounted at a lower level than the winch means and disposed at an angle which, at the point of contact between the forward end portion of the gooseneck and the ramp, from a line drawn from the means of attachment on the bail to the point of contact on the ramp, makes an agle of about 90°±8° with the ramp.

2,894,765
FARM IMPLEMENT HITCH
Elvin F. Maxwell, Fessenden, N. Dak.
Application September 24, 1957, Serial No. 685,892
3 Claims. (Cl. 280—472)

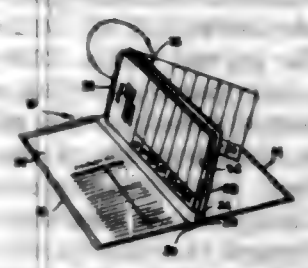


1. In a pony drill which includes an implement drawn behind and to one side of a plow wherein the plow has a plow drawbar and a tongue connected to the plow drawbar intermediate the ends of the plow drawbar, and further wherein the tongue has a coupling which connects to a tractor drawbar, means for reducing side draft comprising an elongate element, a drawbar plate pivoted near one end to said plow drawbar on the side of the plow opposite to the implement, means attaching one end of said element to said drawbar plate, means for anchoring the opposite end of said elongate element to said tongue, means that are laterally displaceable along the length of the plow drawbar for limiting the extent of pivotal movement of said drawbar plate and for transmitting some of the pull of the implement to said plow drawbar, and an implement tongue attached to said drawbar plate by which to pull the implement.

2,894,766
HITCH
Anton H. Habrign, South Milwaukee, Wis.
Application June 20, 1958, Serial No. 743,290
2 Claims. (Cl. 280—482)

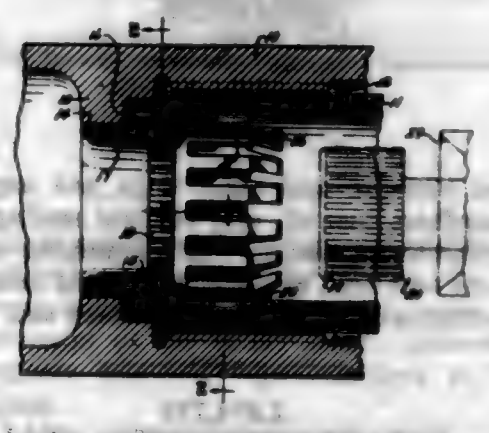
1. An extensible vehicle hitch comprising an elongated substantially rectangular slide bar having a pair of opposed ends, one of said ends of said bar having clevis means for connection with a vehicle, one side of said bar having a series of teeth thereon, said slide bar being telescoped within an elongated substantially tubular slide bar housing having a pair of opposed ends, stop means on the other end of said slide bar projecting laterally from opposite sides thereof, said other end of said housing having a pair of substantially rectangular opposed plates secured thereto, said plates having substantially rectangular projections secured within said end of said housing disposed in the path of movement of said stop means of said slide bar to prevent the removal of said bar from said housing, said plates having coaligned openings formed therein adjacent said projections, said slide bar having a plurality of apertures formed therein for selective alignment with said openings, and a locking pin for extension through said openings and a selected one of said apertures to lock the slide bar and slide bar housing against relative axial movement, an axle rotatably supported on said plates, a pinion mounted for rotation with said axle and disposed between said plates and meshing with said teeth on said slide bar, and a crank handle secured to effect rotation of said pinion and consequent relative movement between said slide bar and said housing.

2,894,767
PAD BOOKS
Harry J. Friedman, Great Neck, N.Y.
Application September 13, 1957, Serial No. 683,842
2 Claims. (Cl. 281—15)



1. A pad book comprising a front cover and a rear cover, each cover constituting a stiffening panel, a ply of sheet material covering the outer surfaces of both said stiffening panels and bridging a space between said panels so as to form a hinge section that connects the front and rear covers, adhesive means securing the ply to the stiffening panels, a fly sheet covering the inner surfaces of both said stiffening panels, adhesive means securing said fly sheet to said stiffening panels, said fly sheet being approximately four times the width of each said stiffening panel, the side edges of said fly sheet being located substantially at the side edges of the stiffening panels, the central portion of said fly sheet being doubled at a distal fold to form a two ply sheet that is hinged to the book internally at proximate folds adjacent the aforesaid hinge section and internally of the pad book, said two ply sheet having a linear set of perforations adjacent its upper edge, a stack of paper sheets having a linear set of perforations adjacent its upper edge and registered with the perforations in the two ply sheet, and a helix threaded through all said perforations to hingedly join the stack of paper sheets to the two ply sheet.

2,894,768
PIPE COUPLING HAVING A RADIALLY EXPANSIBLE POSITIVE LOCK
David Robert Davis, Hamilton, Ohio, assignor to General Electric Company, a corporation of New York
Application April 5, 1956, Serial No. 576,468
2 Claims. (Cl. 285—39)

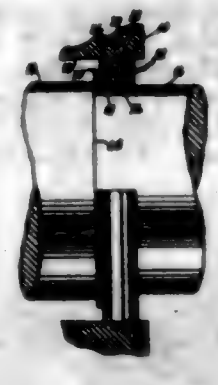


2. Coupling means for tubular members comprising, a first circular tubular member, an inwardly directed shoulder thereon, screw threads on the inner surface of said shoulder, a second internally differently threaded tubular member disposed concentrically within said first member and having a radius larger than the radius of the internal surface of said shoulder for abutment thereagainst, longitudinal spline means between said members locking said members against rotation relative to one another, a sleeve within said members having external threaded sections matching said tubular threads and in engagement therewith, means on the inner surface of said sleeve member to impart rotation thereto to draw said differentially threaded members into tight engagement thereon into abutting relation at said shoulder, a plurality of narrow peripherally arranged longitudinally extending cantilevered flexible fingers carried by said sleeve and extending within said second member, said fingers being spaced in close relation about the entire periphery of the sleeve, locking means carried by said fingers on the outer surface thereof, internal locking means on said second member in engagement with said finger locking means to hold said sleeve against rotation, and cam means on said fingers operative to force said fingers radially inwardly to disengage said locking means.

2,894,769
SEALING DEVICE FOR RELATIVELY ROTATING PARTS
Nelson R. Richmond, Thompsonville, and Walter N. Stone, Bloomfield, Conn., assignors to The Kaman Aircraft Corporation, Bloomfield, Conn., a corporation of Connecticut
Application November 5, 1954, Serial No. 467,148
7 Claims. (Cl. 286—11.13)

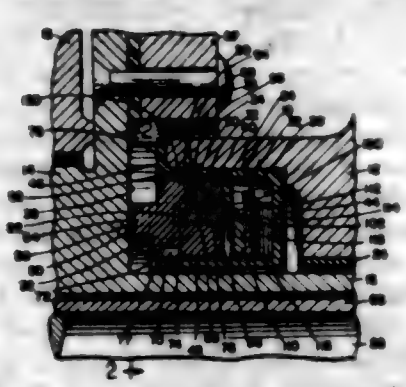
1. In a sealing device for use with a housing having a cylindrical opening and a rotatable shaft extending through said opening and concentric therewith, the combination of first and second rigid rings closely spaced longitudinally and adapted to be positioned adjacent the housing opening and surrounding the shaft which rings respectively have outwardly diverging annular surfaces that are integral therewith and that face each other with the included angle between them on the order of 45°, said first ring being constructed and arranged for interior sealing engagement with the shaft so as to be rotated by said shaft with all portions of said first ring spaced

from the housing and said second ring being constructed and arranged for exterior sealing engagement with the housing so as to be held stationary by said housing with all portions of said second ring spaced from the shaft, and a sealing ring formed of resilient flexible material



interposed between said rigid rings and engaging said annular surfaces thereof, said resilient sealing ring being under a substantial tension which maintains it in pressed engagement with said annular surfaces of said rigid rings so as to effect a liquid-tight seal between said rings.

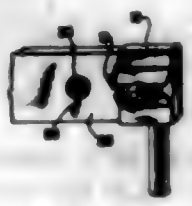
2,894,770
ROTARY MECHANICAL SEAL
Frank E. Payne, Glencoe, Ill., assignor to Crane Packing Company, Chicago, Ill., a corporation of Illinois
Application November 22, 1955, Serial No. 548,337
5 Claims. (Cl. 286—11.14)



1. In a seal for relatively rotatable elements including a retainer fixed to one element and having a cylindrical inner surface and a radially disposed abutment, a washer having a radially disposed surface adjacent the inner cylindrical surface of the retainer and a cylindrical surface in close proximity to and concentric with the cylindrical surface on the retainer; the combination of a packing element having a tapered lip extending into the space between the concentric cylindrical surfaces on the washer and retainer and a body portion extending across the said radially disposed surface on the washer, a filler ring disposed between the body portion and the washer and filling the space therebetween in an axial direction and also giving radial support to the lip, and resilient means compressed between the abutment and the packing element to urge the lip into wedging sealing engagement between the washer and retainer and urging the washer through said packing element against the other relatively rotatable element.

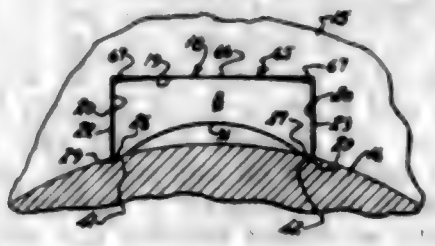
2,894,771
SPRING CLIP
Nelson E. Putnam, Livonia, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 11, 1956, Serial No. 609,212
2 Claims. (Cl. 287—20.5)

1. A one-piece connecting member comprising an elongated base having a rod receiving aperture at one end of said base, a pair of depending flanges extending from the sides of said end of the base, said flanges being folded toward each other to define a rectangular envelope, a portion of the extremities of said flanges forming a wall of the rectangular envelope substantially parallel to said base and a further portion of said extremities extending at an angle inclined to the planes of said base and said



wall, said extremities defining a uniform elongated slit forming a resilient catch, said slit being coaxially aligned with said aperture and extending the length of said extremities, the other end of said base extending away from and bent towards said envelope and a coacting tang protruding toward said slit from the base at said other end opposite the envelope and aperture.

2,894,772
SELF SEATING KEY
George F. Hitt, Arcata, Calif.
Application September 27, 1956, Serial No. 612,408
2 Claims. (Cl. 287—52.05)

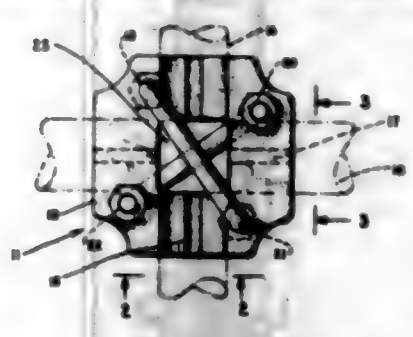


1. A key to lock a hub member mounted on a shaft member against relative rotational movement where only a first one of said members is provided with a keyway in axial alignment with the longitudinal axis of the shaft member and having continuous unbroken side and base walls; said key comprising: an elongated tapered body having two longitudinal side faces spaced to fit between the side walls of the keyway; a top face arranged to abut the base wall of the keyway and a bottom face; said bottom face having two parallel cutting edges projecting outwardly therefrom with each cutting edge being parallel to and adjacent a respective one of the side faces; said top face of the body formed with a raised portion midway between the longitudinal side edges of the top face positioned and arranged to space the side edges of the top face in spaced relation with the base wall of the keyway.

2,894,773
CLAMP
Harold C. Noe, Upper Montclair, N.J., assignor to Kidde Textile Machinery Corporation, a corporation of Delaware
Application June 12, 1956, Serial No. 590,830
1 Claim. (Cl. 287—54)

A clamp for securing a pair of crossed elements having a circular cross-section, the clamp comprising a plate having a pair of groove means each adapted for receiving one of the elements, one of said groove means extending across the upper surface of said plate and the other of said groove means extending across the lower surface of said plate at right angles to said upper groove means, said plate having a set of four holes extending perpendicularly therethrough and being positioned so that the centers of the holes define the corners of a square and the centers of one pair of diagonally opposite holes are in a plane intersecting said upper groove means at an angle of

less than forty-five degrees, the holes of said pair of diagonally opposite holes being closely adjacent said upper groove means at opposite sides thereof and adjacent opposite ends thereof and being further removed from said lower groove means than from said upper groove means; first U-bolt means having parallel shanks extending through said pair of diagonally opposite holes from the



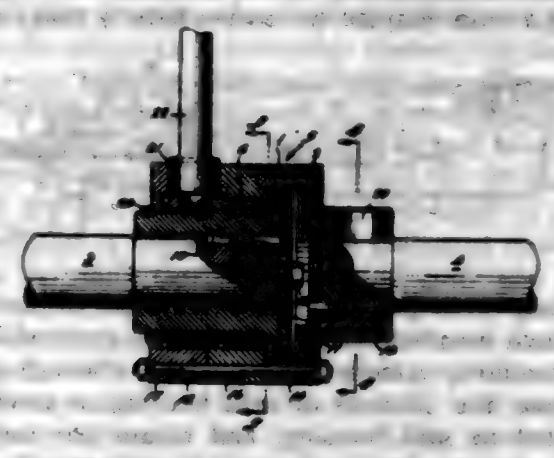
upper surface; second U-bolt means having parallel shanks extending through the other pair of diagonally opposite holes from the lower surface; said U-bolt means having an intermediate elliptical section connecting the shanks thereof dimensioned from continuous engagement with elements having a circular cross-section; and means applied to the end of each of said shanks for causing said U-bolt means to hold the crossed elements on said plates.

2,894,774
ADJUSTABLE LENGTH LINKAGE
Michael A. Dudash, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 25, 1957, Serial No. 686,230
1 Claim. (Cl. 287—58)

A variable length linkage including, a pair of V-shaped metal members having superposed end portions, said members being longitudinally slidable relative to each other, and a member locking device comprising a generally V-shaped leaf spring having normally diverging legs, each leg having an elongated aperture therein of a length exceeding the combined thickness of the superposed end portions of the members, each aperture being defined by sharp edges and having a plurality of points adjacent the bight of the leaf spring, the superposed ends of said members being inserted through the apertures of both legs so that when the legs of the leaf spring are oblique to the longitudinal axes of said members the sharp edges dig into the edges of the inner V-shaped member and the points dig into the outer V-shaped member adjacent the apex thereof to lock said members in assembled relation.

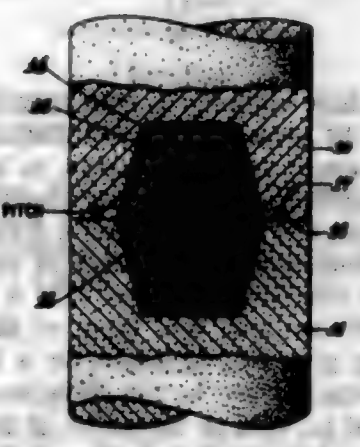
2,894,775
ROTARY SHAFT CLUTCH
Charles A. Harless, Riverside, Conn., assignor to R. Hoe & Co., Inc., New York, N.Y., a corporation of New York
Application March 20, 1952, Serial No. 277,641
6 Claims. (Cl. 287—108)

1. In a rotary shift positive clutch, and in combination, a spur spline gear having means for fixing it to a shaft end and a hub for carrying a rotary sleeve, a rotary sleeve carried on the hub, an axially slidable sleeve carried on the rotary sleeve, an internal ring spline gear carried on the axially slidable sleeve and movable thereby between an engaging position extending beyond the said spur spline gear for meshing with another spur spline gear and a disengaging position in which it is retracted toward the said spur spline gear, the internal ring spline gear meshing with the first mentioned spur spline gear in both the said engaging and disengaging positions, and



cooperating cam means on the rotary and slidable sleeves forming a driving connection for sliding the slidable sleeves between engaging and disengaging positions upon rotative movement of the rotary sleeve between predetermined angular positions with reference to the said spur spline gear.

2,894,776
ELECTRODE JOINT
Harry V. Johnson, Niagara Falls, N.Y., assignor to Union Carbide Corporation, a corporation of New York
Application August 12, 1954, Serial No. 449,374
6 Claims. (Cl. 287—127)

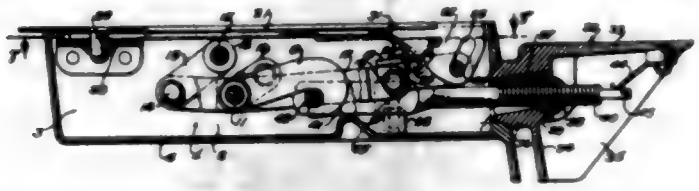


1. In a connecting joint between sections of an electric furnace electrode comprising electrode sections, a nipple threaded into a socket in each section holding abutting faces of said sections in contact, the improvement comprising at least one electrode section being provided on its face with a reservoir containing a predetermined amount of liquefiable pitch, positioned substantially concentrically with the electrode circumference, said pitch being adapted upon heating to liquefy and flow from said reservoir, inwardly and outwardly through pores and crevices in the contiguous end faces of said joint, and upon continued heating to carbonize and to bond such end faces and to maintain them in abutting engagement while leaving clearance spaces between said nipple threads and said socket largely unfilled by said pitch.

2,894,777
PRELOAD LATCH
John E. Hogan, Los Angeles, Calif., assignor to Clark Hartwell, Los Angeles, Calif., doing business under the fictitious name and style of Hartwell Aviation Supply Company
Application December 3, 1956, Serial No. 626,830
7 Claims. (Cl. 292—113)

1. A preload latch, comprising: a housing defining a channel and having an end wall defining a centering

aperture; a body member including a centering member adapted to enter said aperture and engage the walls thereof to dispose said housing and body member in predetermined alignment; a latch member universally mounted in said body member said centering member having a bore adapted to receive loosely said latch mem-



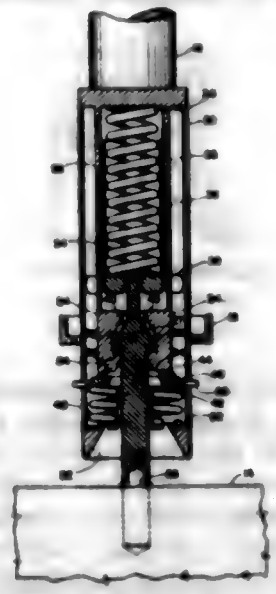
ber thereby to permit limited universal displacement of said latch member, said latch member protruding beyond said centering member and guidable through said aperture into the channel of said housing; a catch element mounted in said housing; and means for moving said catch element into and out of engagement with said latch member.

2,894,778
MAGNETIC DOOR LATCH
Josef E. Lundholm, Lidingo, near Stockholm, Sweden
Application October 6, 1953, Serial No. 384,415
Claims priority, application Sweden December 31, 1952
1 Claim. (Cl. 292—251.5)

A magnetic door latch for a door member mounted to close relatively to a door frame member, said latch comprising a permanent magnet adapted to be mounted on one of said members and including two projecting poles whose pole faces are coplanar, and a flattened armature adapted to be mounted on the other of said members in such a manner that when the door is in a closed position it is attracted by the two pole faces of the magnet, said armature being pivotally mounted on a shaft extending substantially transversely to the direction in which the door closes and parallel to the plane of the magnet pole faces when the door is closed, the shaft mounting the armature being positioned considerably closer to one pole of the magnet than to the other pole and supporting the armature in such position as the armature approaches the magnet that in closing the door the armature will swing into contact with the magnet pole more remote from the shaft before the door is completely closed causing a decrease of the total length of air-gap and a consequent increase of the force of magnetic attraction, the pivotal mounting of the armature being formed with clearance between the shaft and the armature to provide that on closing of the door sliding of the armature on the magnet pole surface which first attracts it is minimized.

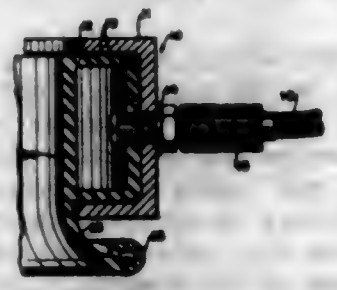
2,894,779
AUTOMATIC COUPLING
Milton N. Kushner, Valley Stream, and Robert A. Chapellier, Whitestone, N.Y., assignors to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Application March 6, 1956, Serial No. 569,924
11 Claims. (Cl. 294—83)

1. In an organization of the type described the combination of a movable body member moved along a given path and having locking jaws biased to a locking position, a keeper insertable in said body member and when inserted a predetermined distance lockingly engaging the jaws, means operative in response to insertion of said keeper a further distance to move said jaws against their bias to an unlocking position with respect to said keeper, locking means independent of said keeper and responsive to the positioning of the jaws in said unlocking position to retain said jaws in said unlocking position after



being so moved by said means to permit free withdrawal of said keeper from said jaws, and means disposed along the path of movement of the body member operative in response to movement of the member therealong to engage said locking means and move it to a position where it is ineffective to retain said jaws in said unlocking position.

2,894,780
MATERIAL HANDLING APPARATUS
Louis Preston Hollander, Patterson, and Raymond A. Schroth, Pawling, N.Y., assignors to The Prosray Corporation, Pawling, N.Y., a corporation of New York
Application September 23, 1955, Serial No. 536,152
2 Claims. (Cl. 294—93)

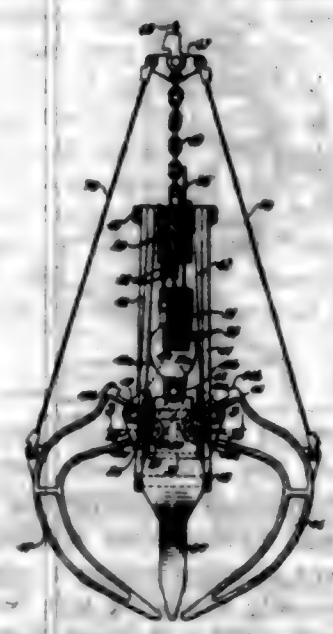


1. A lifting unit for an article handling apparatus comprising an endless expandable tube-like inflatable member formed of resilient material and defining an annulus, said member having front, back and side walls integrally connected to form a substantially rectangular cross section, and a channel member of annular form confining the expansion of said expandable member to a direction towards an article to be lifted, said channel member having axially spaced arms extending radially to confine the side walls of said expandable member and forming the sole means of supporting said expandable member, the side walls of the expandable member engaging said axially spaced arms substantially throughout their radial extent.

2,894,781
JAW SUSPENSION FOR GRAPPLE
Robert J. Takacs, Cleveland, Ohio, assignor to The Owen Bucket Company, Cleveland, Ohio, a corporation of Ohio
Application October 23, 1953, Serial No. 387,918
23 Claims. (Cl. 294—107)

1. In a grappling device, a head, two pairs of coacting grab members pivotally connected for relative move-

ment to said head with one pair movable in one plane and the other pair movable in another plane angularly disposed thereto, a first actuating means movable in said first plane and connected to said one pair of grab members to aid in operating them, and a second actuating means connecting said first actuating means and said other pair of grab members for independently operating



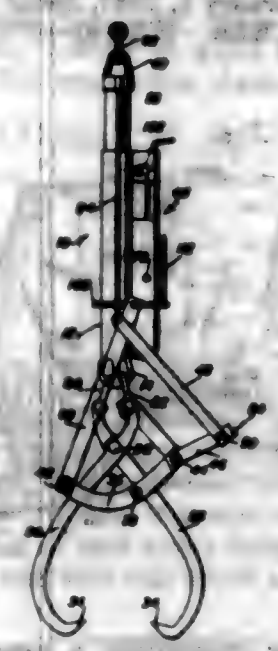
each grab member in turn, said second actuating means including means constructed for free swinging movement of at least a portion of this last mentioned means through an arc into the line of action of the closing force applied to said grappling device so that this force acts generally through the connection between the second actuating means and said other pair, said arc lying in a plane angularly disposed with respect to said other plane.

2,894,782

LOG HANDLING TONGS

Ralph Q. Puckett, Parma, Idaho, and Lorna E. Ashlock, Hines, Oreg.

Application September 20, 1954, Serial No. 457,118
16 Claims. (Cl. 294—116)



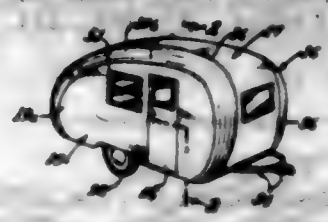
16. Log tongs comprising an elongate hollow body member having a pair of tong members carried at the lower end thereof, said tong members being pivotally interconnected for opening and closing movement with connection between the tong members and the body member freely permitting of such movement of the tong members, an elongate plunger member received within said body member in substantially coaxial relationship thereto and longitudinally slidable with respect to the body member for movement between collapsed and extended positions with respect thereto, said plunger being of such length as to have its upper end portion projecting from the upper end of said body member in either the collapsed or extended positions of the plunger with respect thereto, the upper portion of said plunger being provided with means for attaching a lifting line thereto, stop means rigid with said plunger and said body for preventing movement of said plunger beyond its extended position, means connected to and extending between said tongs and said plunger for opening said tongs when the plunger is in extended position while permitting said tongs to close when the plunger is moved toward its collapsed position, a latch dog pivotally carried within said body and having a portion engageable within a recess in said plunger when the same is substantially in the collapsed position preventing upward movement of the plunger with respect to the body towards its extended position with respect thereto, a lever rigid with said dog extending beneath the lower end of said plunger when the same is substantially in a collapsed position and disposed in the path of movement thereof when the plunger is moved to its fully collapsed position to move said dog out of the path of movement of said plunger, locking means engageable with said dog for retaining the same out of the path of movement of said plunger and including mechanism extending laterally outwardly from the upper end of said body member for engagement by an element rigid with said plunger when the plunger is disposed in the fully extended position for actuation thereby to withdraw the lock means and permit the dog to assume its operative position, means normally urging said dog towards its operative position.

2,894,783

AUTOMOBILE HOUSE AND CAMPING TRAILER, AND METHOD OF MANUFACTURING THE SAME

Walter Bird, Costa Mesa, Calif., assignor to William S. Correll, Costa Mesa, Calif.

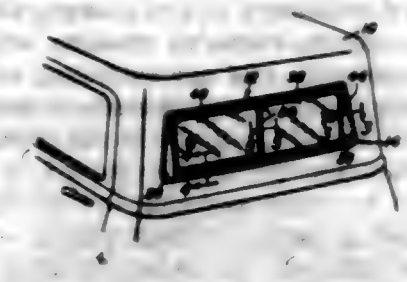
Application September 24, 1956, Serial No. 611,471
1 Claim. (Cl. 296—23)



A relatively small house and camping trailer for towing behind an automobile or other motor vehicle, which comprises left and right obloid panels each formed of fibers and synthetic bonding resin, each of said panels comprising at least a complete side of the trailer, each of said panels having a relatively large, inwardly-extending edge portion which extends in a continuous obloid curve around the entire panel except at the lower portion thereof, the extreme ends of said continuously curved edge portions being gradually return-bent so as to converge downwardly, each of said edge portions having a rim which merges through a smooth, large-radius curve with the generally vertical side portion of the associated panel, a center section comprising at least one relatively long, generally rectangular sheet or strip of sheeting having sufficient flexibility to permit bending thereof into the shape of said rims of said edge portions and having sufficient stiffness and rigidity to maintain a relatively firm and supporting connection between said panels, said sheet or strip extending longitudinally of the trailer, said center section forming both the central portion of the roof of said trailer and the central portions of both ends of said

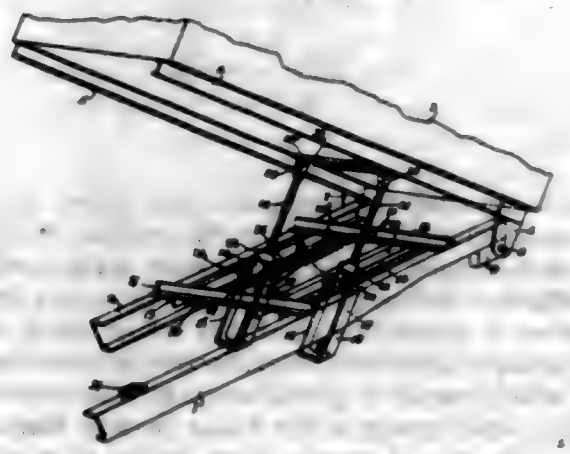
trailer, joint means connecting the longitudinal side edges of said center section to said rims of said edge portions and in sealing relationship, a floor element disposed at the lower portions of said panels and over the downwardly-convergent ends of said center section, floor joint means to secure said panels and said center section to said floor element, and wheel means to support said floor element.

2,894,784
WINDOW UNIT FOR MOTOR VEHICLE
Eugene L. Howard, Oklahoma City, Okla., assignor of one-half to Walter C. Miller, Oklahoma City, Okla.
Application May 22, 1956, Serial No. 586,461
3 Claims. (Cl. 296—47)



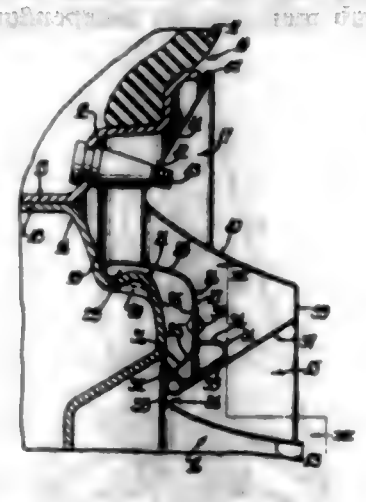
1. For use on a motor vehicle that has a stationary window provided with a weather seal around the edges thereof, a replacement window unit for said stationary window, said replacement window unit comprising upper and lower double run channels, side channels, clips connecting said double run channels to said side channels, said clips and said channels having aligned drain holes, spacers secured to said channels and protruding laterally therefrom, a frame fitted in at least a part of said weather seal and connected to said spacers in order to support said channels, and window panes slidably mounted in said channels.

2,894,785
TRUCK BOX DUMPING DEVICES
Otto Yackel, Yorkton, Saskatchewan, Canada
Application July 8, 1953, Serial No. 366,839
3 Claims. (Cl. 298—22)



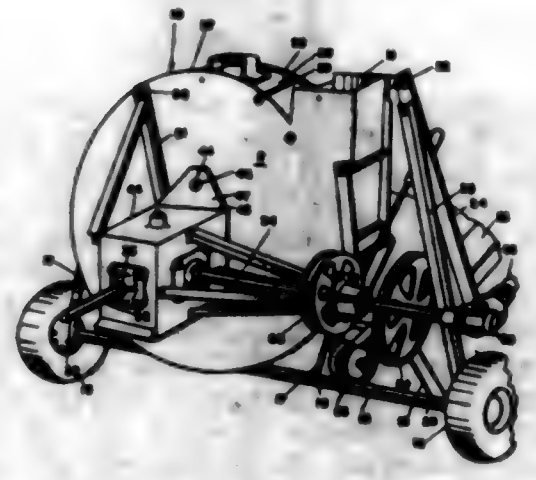
1. The combination with a truck chassis frame and a box normally rested thereon and pivotally mounted to the frame for tilting movement about its pivoted end, of a secondary frame secured to the chassis frame in a location in advance of the pivoted axis of the box, a pair of pendant side arms having their upper ends pivotally secured to said secondary frame for forward and rear sway, a base member permanently interconnecting the lower ends of said arms and a hydraulically actuated ram interposed between the said arms and having its one end pivotally connected to said base member and its other end pivotally connected to the underside of the box.

2,894,786
WHEEL STRUCTURE
George Albert Lyon, Detroit, Mich.
Application June 8, 1955, Serial No. 513,951
8 Claims. (Cl. 301—37)



1. In a wheel structure including rim and body parts with said body part having cover retaining means thereon, an inner cover member having a relatively deep annular axially inwardly extending side wall merging into an outer marginal portion defining together an axially inset channel and having a terminal for snap-on-off engagement with the cover retaining means on said body part, spring clip means on said inner cover member extended into the axially inset channel, and an outer cover member having a relatively deep annular axially inwardly extending side wall spaced radially of said side wall on the inner cover member defining a gap and with said side wall on the outer cover member having a terminal for bottomed retaining engagement with said clips in said axially inset channel with the gap providing an accessible area for a pry-off tool.

2,894,787
FORAGE BLOWER
Glen W. Stoddard, Rainbeck, Iowa
Application February 1, 1957, Serial No. 637,661
1 Claim. (Cl. 302—37)



A forage blower comprising a generally cylindrical casing having a discharge opening in the side thereof and an inlet in one end, conveyor means for conveying forage to said inlet, an impeller supported inside said cylindrical casing and having a first shaft extending from one side thereof generally perpendicular to the central axis of said cylindrical casing, a gear box supported on one end of said casing, said gear box having a second shaft extending through said casing and supporting said impeller, driving means for attaching a driving member to said gear box, means in said gear box operatively

connecting said driving means to said second shaft, plate means on said gear box engaging the rear wall of said casing, holes in said plate means registering with holes in said rear wall of said casing, and bolts extending through said holes in said plate means and said casing locking said gear box to said casing, said holes in said rear wall of said casing being considerably larger than said bolts extending through said holes in said plate means whereby said gear box can be adjusted relative to the central axis of said cylindrical casing and the clearance between the impeller blades at the side thereof can be adjusted, said impeller having blades extending radially from the axis thereof, said blades being plate shaped and being inclined in the direction of said first shaft at an angle of approximately ten degrees to the central axis of said first shaft whereby said impeller blades urge forage toward said rear wall of said casing.

2,894,788
HANDLING OF SODIUM DISPERSIONS
William R. Birchall, Sharonville, and Lloyd M. Watson, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Application October 22, 1956
Serial No. 617,219
6 Claims. (Cl. 302—66)

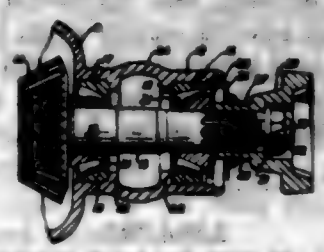
1. A method for transporting finely divided sodium at a temperature below the melting point of sodium without substantially increasing the particle size characteristics of the finely divided sodium which comprises mechanical pumping said finely divided sodium as a dispersion in an inert liquid medium in which the average particle size of the sodium particles does not exceed about five microns and substantially devoid of sodium particles exceeding about ten microns.

2,894,789
MEANS AND TECHNIQUES APPLICABLE TO BEARINGS AND ROD END BEARINGS
Ward D. Tracy, Glendora, Calif., assignor to Southwest Products Co., Duarte, Calif., a corporation of California
Original application August 23, 1954, Serial No. 451,373, now Patent No. 2,804,679, dated September 3, 1957. Divided and this application August 24, 1956, Serial No. 606,141
5 Claims. (Cl. 308—72)

1. A self-aligning bearing comprising a race having an inner indented portion, a ball, and a one piece insert of malleable material between said race and said ball with a portion of said insert being deformed in said indented portion and with said insert being coined around said ball.

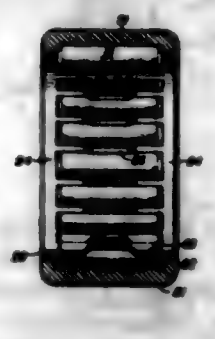
2,894,790
AXLE CONSTRUCTION
William E. Radnicki, Detroit, and Albert O. Roberts, Dearborn, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application December 13, 1956, Serial No. 628,626
2 Claims. (Cl. 308—207)

1. In an axle construction for a motor vehicle, a housing, a spindle in said housing, a gear on said spindle, a pair of axially spaced tapered roller bearings mounted in said housing and rotatably supporting said spindle, said housing having a pair of axially spaced shoulders engaging said pair of bearings respectively and forming stops therefor, the portion of said housing intermediate said shoulders being bowed radially outwardly and radially



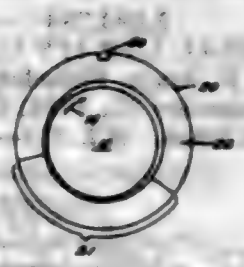
unsupported, and adjustable means associated with said spindle to apply an axial force to said housing axially distorting the unsupported bowed portion of said housing to maintain a predetermined preload on said bearings.

2,894,791
CAGED ROLLER BEARING ASSEMBLY
Robert H. White, Torrington, John H. Cowles, Forestville, and Sidney F. Clark, Torrington, Conn., assignors to The Torrington Company, Torrington, Conn., a corporation of Maine
Application October 10, 1956, Serial No. 615,191
11 Claims. (Cl. 308—212)



1. A roller bearing comprising an outer race, a generally cylindrical cage within said race and having a series of parallel resilient bars of uniform and constant cross-section and perpendicular sides, each of said bars having a central portion offset inwardly from the cylindrical surface of the cage and capable of lateral deflection, and a series of rollers resiliently held between said bars.

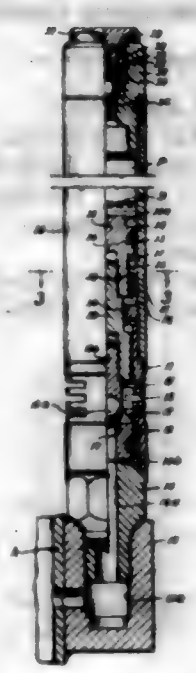
2,894,792
POROUS LUBRICANT-IMPREGNATED BEARINGS
Franz Brill, Vienna, Austria, assignor to Schwarzkopf Development Corporation, a corporation of Maryland
Application February 21, 1955, Serial No. 489,565
Claims priority, application Austria February 23, 1954
4 Claims. (Cl. 308—240)



1. In a bearing for a rotating shaft, a bearing body of sintered metal particles having a cylindrical bearing surface along which the shaft rotates, said bearing body having pores in at least a major segmental part of the entire length thereof impregnated with a liquid lubricant for supplying a lubricant film to said bearing surface, a segmental surface section of a bearing section of said bearing extending over the entire length of said bearing body being arranged to maintain thereon a compressed lubricant film under high pressure for supporting the rotating shaft on said compressed lubricant film while it

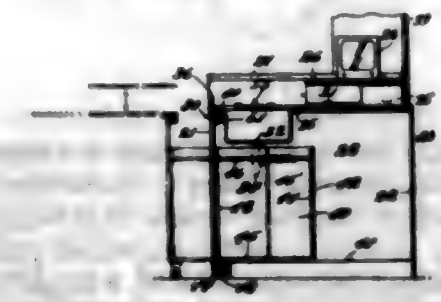
separates said shaft from said segmental surface section, at least one segmental region of said bearing body adjoining said bearing section having its pores filled with said lubricant for supplying lubricant to the lubricant film maintained between said segmental surface section and the shaft, said bearing section being of a lower order of porosity than said adjoining segmental region for suppressing escape of liquid lubricant from said compressed lubricant film along the entire length of said bearing section.

2,894,793
WELL FLOW VALVE DEVICES
Art L. Robinson, Dallas, Tex., assignor to Merla Tool Corporation, Dallas, Tex., a corporation of Texas
Application August 23, 1955, Serial No. 529,984
6 Claims. (Cl. 309—23)



1. In a flow valve device having a well fluid control valve, an operating piston assembly for actuating said valve comprising, a cylinder, a piston comprising a substantially cylindrical body slidable within the cylinder, a head portion on the body formed with a groove, a sealing ring within the groove and having sealing contact with the wall of the cylinder, the external surface of the body below the sealing ring having an annular recessed portion, a lubricant within the annular space between the recessed portion and the cylinder wall, and a plurality of annular retaining rings mounted within the lower end of said recessed portion and contacting the cylinder wall to retain the lubricant therein.

2,894,794
HOSPITAL UTILITY CABINET
James R. Mays, Philadelphia, Pa.
Application September 17, 1956, Serial No. 610,237
3 Claims. (Cl. 312—313)

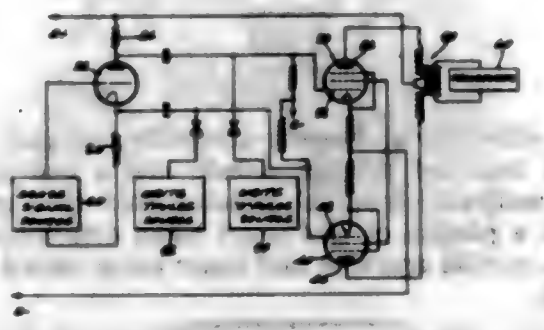


1. A table combination comprising a piece of furniture having a drawer opening, and a drawer slideable in the drawer opening, having a rear drawer portion and a front drawer support, in combination with a swivel mounting on the front drawer support, a swivel swingable in the swivel mounting, a horizontal journal arm mounted on the swivel, a bearing journaled on the journal arm, a platform mounted on the journal arm bearing and having a retracted position in which the platform extends in a vertical position across the front of the drawer and a horizontal position in which the platform forms a table top, and latching means interconnecting the journal arm and the journal arm bearing in selected positions of the platform.

2,894,795
AUTOMATIC EVACUATION SYSTEM FOR ELECTRON TUBES
Charles P. Marsden, Jr., Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy
Application May 23, 1955, Serial No. 510,593
9 Claims. (Cl. 316—30)
(Granted under Title 35, U.S. Code (1952), sec. 266)

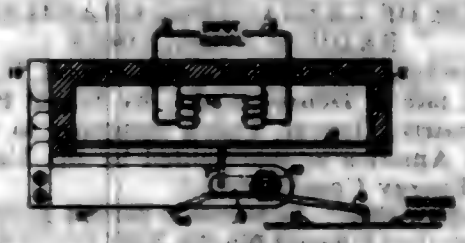
1. An evacuation system comprising an elongated tube having a uniform square cross-section throughout its length, said tube being unobstructed and having open ends, a plurality of elongated article carrying jigs therein being of uniform square cross-section, the cross-sectional area of each of said jigs being slightly less than the cross-sectional area of the opening of said tube whereby air may enter said tube between said jigs and said tube, and a plurality of vacuum pumps connected to said tube at spaced points therealong the length of said tube serviced by said pumps being sufficient to span a series of said jigs, said pumps producing stations of progressively increasing vacuum proceeding from the vicinity of the ends of said tube toward the intermediate portion thereof, whereby to produce a high vacuum interiorly of said tube the highest vacuum being produced at said intermediate portion the pressure therein being less than 1 mm. of mercury.

2,894,796
MAGNETIC RECORDING SYSTEM
Donald K. Reynolds, Palo Alto, Calif., assignor, by mesne assignments, to General Electric Company, New York, N.Y., a corporation of New York
Application November 9, 1953, Serial No. 390,988
7 Claims. (Cl. 346—74)



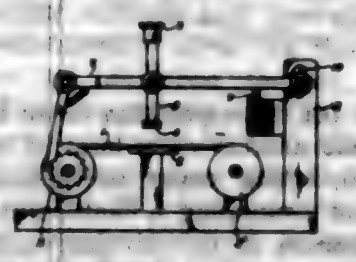
1. Apparatus for recording signals with a magnetic transducer on a moving magnetic medium comprising means to generate alternating current erasing signals, means to apply said alternating current erasing signals to said magnetic transducer, and means to prevent a portion of said alternating current signals from being applied to said transducer by said means to apply for a desired interval while said means to apply applies to the remainder of said alternating current signals to said transducer to thereby record a signal.

2,894,797
RECORDING SYSTEM
Robert A. Kirby, Clarence S. Clay, Jr., and Henry B. Ferguson, Tulsa, Okla., assignors, by mesne assignments, to Jersey Production Research Company
Application November 30, 1954, Serial No. 472,032
6 Claims. (Cl. 346—74)



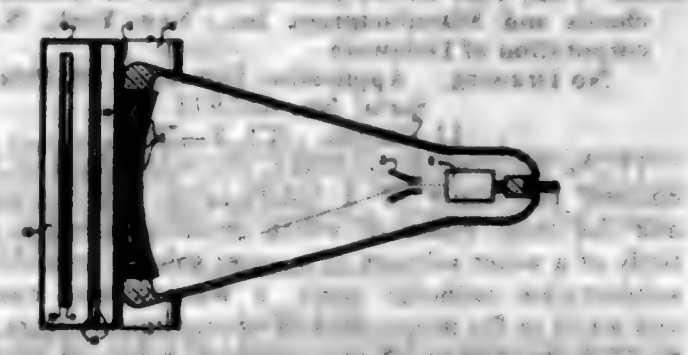
1. An apparatus for recording a substantially constant amplitude sinusoidal-type electrical signal which comprises in combination a recording pen element, a recording medium arranged to move relative to said pen, electrical circuit means responsive to a portion of the sinusoidal signal occuring at substantially the same phase angle in each cycle of the sinusoidal signal and adapted to develop a square-wave pulse for each said portion, each said pulse having substantially constant amplitude and duration, electromagnetic means arranged to effect contact between said pen and said recording medium in response to each square-wave pulse, and means for adjusting the amount of energy within each said pulse to obtain positive contact between said pen and said medium.

2,894,798
MAGNETIC PRINTER
Ralph K. Potter, Brookside, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application January 27, 1956, Serial No. 561,887
4 Claims. (Cl. 346—74)



4. In apparatus for magnetic recording, the combination which comprises a rigid body having on a substantially planar surface thereof more than two discrete magnetic regions polarized at differing magnetic intensity levels and disposed in mutually influencing space-coded arrangement, whereby said regions in excess of two in number comprise a space-coded and an intensity-coded pattern of interacting magnetic flux fields substantially parallel to said planar surface, a recording medium having a substantially planar magnetizable surface, means operable to bring said first-named surface into magnetizing proximity with an area of said recording surface, thereby to print a magnetic record of said dually coded space patterns on said magnetizable record surface and means for presenting a different area of said magnetizable surface to said rigid body for each successive operation of said first-named means.

2,894,799
HIGH SPEED RECORDER SYSTEM
Harold J. McCreary, Lombard, Ill., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware
Application August 23, 1956, Serial No. 605,785
2 Claims. (Cl. 346—74)

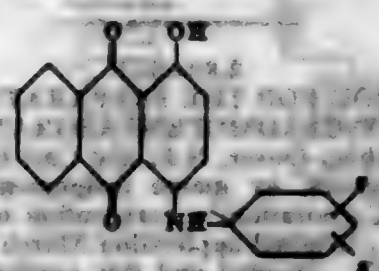


1. A high speed printing device comprising a web of dielectric material electrostatically charged in one polarity, means for periodically sweeping a modulated electron beam along a predetermined path on one side of said web to reverse said polarity of charge in accordance with the modulations of said beam, means for dispensing a finely dispersed printing medium, electrostatically charged in the same polarity as said web, through an elongated orifice adjacent to said web on the other side thereof, said orifice positioned opposite said electron beam and having its long dimension lying in the same plane as said predetermined path, and means for moving said web transversely to said orifice and said predetermined path at a speed synchronized with the sweep frequency of said beam, whereby said printing medium is deposited on the last-mentioned side of said web in a two-dimensional pattern corresponding to the modulations of said beam as said web moves past said orifice.

CHEMICAL

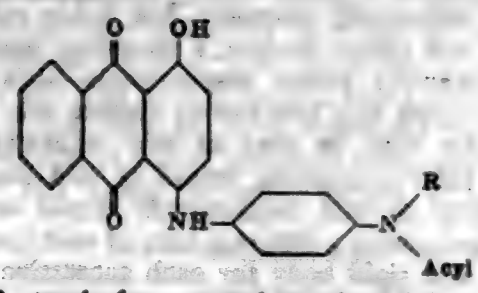
2,894,800
DYESTUFF MIXTURES
Jacques Guenthert, Basel, and Alfdis Peter, Binningen, Switzerland, assignors, by mesne assignments, to Sandoz & Co., Newark, N.J., as nominee of Fidelity Union Trust Company, executive trustee under Sandoz Trust
No Drawing. Application December 3, 1956 Serial No. 627,036
Claims priority, application Switzerland January 26, 1954
6 Claims. (Cl. 8—39)

1. As a composition of matter a dyestuff mixture of 1-hydroxy-4-phenylaminoanthraquinone dyestuffs which correspond to the formula



wherein each of y and z stands for a member selected from the group consisting of hydrogen, chlorine, methyl, hydroxyethyl, hydroxy, methoxy, amino and phenylamino,

said mixture containing at least ⅓ by weight of 1-hydroxy-4-phenylaminoanthraquinone dyestuff corresponding to the formula



wherein R stands for a member selected from the group consisting of hydrogen and methyl, and Acyl stands for a member selected from the group consisting of the radical $-COO.CH_3$, $-COO.C_2H_5$, $-CO.H$ and $CO.CH_2Y$, Y being chosen from the group consisting of hydrogen, chlorine and lower alkoxy.

2,894,801

TEXTILE PRINTING EMULSIONS

Julien Paul, Fall River, Mass., assignor to United Merchants and Manufacturers, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Application November 29, 1956
Serial No. 624,973
13 Claims. (Cl. 8—70)

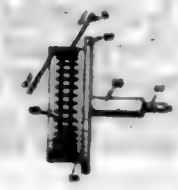
11. An oil-in-water emulsion, the inner phase of which consists essentially of a volatilizable hydrocarbon oil and the outer phase of which emulsion consists essentially of a water solution of a water-soluble formaldehyde sulphoxylate reducing agent, a water-soluble caseinate and alkali in the proportions of approximately from 0.5% to 15% by weight of water-soluble caseinate based on the weight of the emulsion, from 4% to 20% of said water-soluble formaldehyde sulphoxylate based on the weight of the emulsion, and from 2% to 12% by weight of alkali based on the weight of the emulsion.

2,894,802

METHOD OF FORMING CRIMPED ARTIFICIAL FILAMENTS

Richard H. Brumlich, West Chester, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

Application November 16, 1955, Serial No. 547,180
8 Claims. (Cl. 18—54)



3. The method of forming crimped artificial filaments including the steps of extruding a viscose solution into an aqueous coagulating bath to form a tow of filaments, heating spaced areas along the tow length to produce uneven regeneration, and passing the tow through an aqueous regenerating bath to complete regeneration thereof.

2,894,803

METHOD FOR THE PREPARATION OF MONOBROMOPENTABORANE-9

Murray S. Cohen, Dover, N.J., and Carl E. Pearl, Azusa, Calif., assignors, by mesne assignments, to Thiokol Chemical Corporation, a corporation of Delaware

No Drawing. Original application March 1, 1956, Serial No. 568,702. Divided and this application April 30, 1956, Serial No. 581,806
5 Claims. (Cl. 23—14)

1. A method for the prepartion of monobromopentaborane-9 of the formula B_5H_8Br which comprises reacting pentaborane-9 and bromine while the reactants are in admixture with a catalytic amount of a halide selected from the group consisting of aluminum chloride and aluminum bromide.

2,894,804

PROCESS OF EXTRACTING URANIUM AND RADIUM FROM ORES

Carl W. Sawyer, Butte, Mont., and Robert W. Handley, deceased, late of Denver, Colo., by Mabel P. Handley, administratrix, Denver, Colo., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application March 2, 1949
Serial No. 79,302
7 Claims. (Cl. 23—14.5)

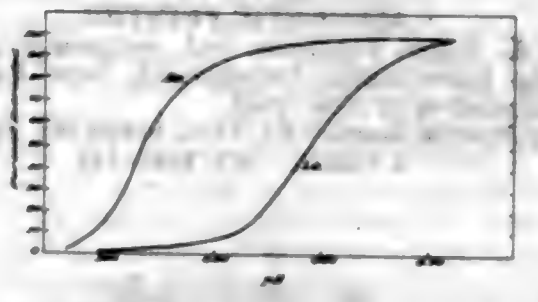
1. A process of recovering uranium values from a uranium ore which comprises leaching the ore with a ferric chloride solution; separating the leaching solution from the ore residue and precipitating the uranium present in the filtrate by adding a uranium precipitant to the separated leaching solution.

2,894,805

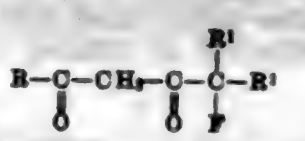
SEPARATION PROCESS FOR ACTINIDE ELEMENTS AND COMPOUNDS THEREOF

Louis B. Werner, Isadore Perlman, and Melvin Calvin, Berkeley, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission

Application December 6, 1949, Serial No. 131,266
11 Claims. (Cl. 23—14.5)



1. A process for the separation of an actinide element having an atomic number of at least 95 from its mixture with lanthanum, which comprises contacting an acidic aqueous solution containing a lanthanum salt, a salt of the actinide element in the trivalent state and a strong inorganic acid to provide a pH for the solution of 2 to 4.8 with a solution in a substantially water-immiscible organic solvent of a fluorinated β-diketone having the general formula:



wherein R is a member of the group consisting of alkyl, aryl, aralkyl, alkaryl and heterocyclic radicals and R^1 and R^2 are members of the group consisting of hydrogen and fluorine, and separating the resultant aqueous phase and organic solvent extract phase containing a compound of the fluorinated β-diketone and the trivalent actinide element.

2,894,806

RECOVERY OF PROTACTINIUM FROM AQUEOUS SOLUTIONS

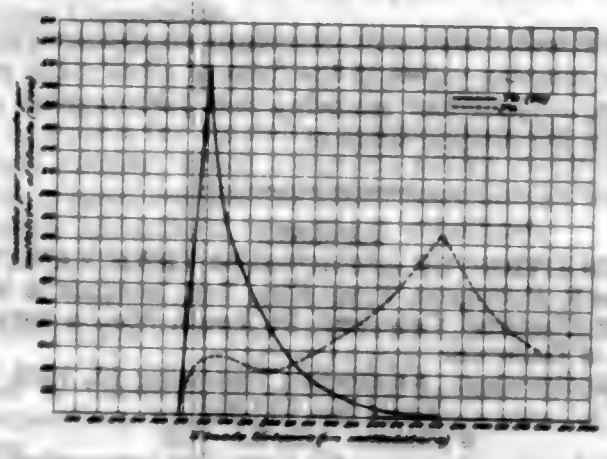
Robert E. Elson, Park Forest, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application April 11, 1951
Serial No. 220,531
5 Claims. (Cl. 23—14.5)

1. The method of recovering fluoride-complexed protactinium values from an aqueous acidic solution, which

comprises mixing said solution with an organic solvent of the group consisting of alcohols, ketones and esters having at least six carbon atoms, fluorinated β-diketones and alkyl phosphates having at least twelve carbon atoms, and mixtures of these organic solvents, adjusting the acidity of said mixture to a 0.3–0.9 M hydrogen ion concentration, contacting said mixture with a source of aluminum ions whereby the protactinium fluoride complex is decomposed and the resulting protactinium ions are taken up by the organic phase, and separating the organic phase.

2,894,807
CATION EXCHANGE METHOD FOR THE RECOVERY OF PROTACTINIUM
James C. Sullivan and Martin H. Studier, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission
Application April 30, 1951, Serial No. 223,744
3 Claims. (Cl. 23—14.5)



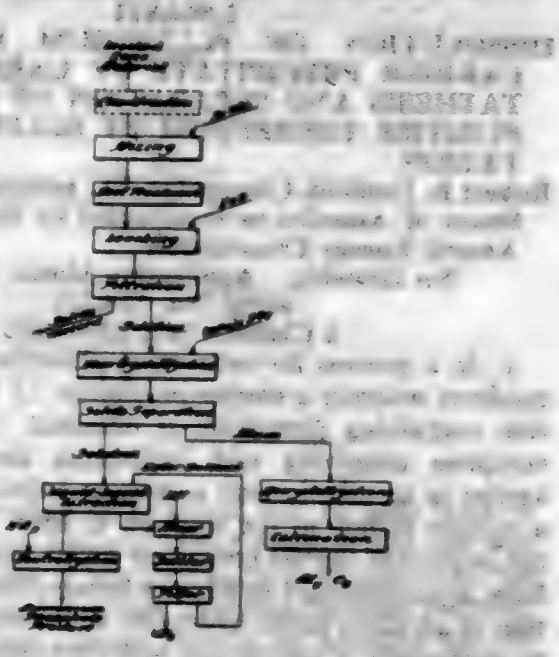
1. The process of separating protactinium values from thorium values, which comprises passing an aqueous 0.1–2 N nitric acid solution containing protactinium and thorium values through a cation exchange column containing a nuclear sulfonic acid type cation exchange resin whereby substantially all of the thorium and protactinium values are adsorbed thereon, then passing through said column a quantity of 0.1–1 N ammonium sulfate solution having a pH of 3–4, sufficient to elute substantially all thorium values adsorbed thereon, and then passing a 0.1–0.4 M oxalate solution through the column whereby substantially all protactinium values adsorbed thereon are eluted.

2,894,808
METHOD FOR RECOVERING URANIUM FROM OILS
Leon H. Gooch, Norris, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application January 18, 1952
Serial No. 267,184
11 Claims. (Cl. 23—14.5)

1. An improved method of recovering uranium values from a uranium-contaminated hydrocarbon liquid which comprises contacting said hydrocarbon liquid with acetone and separating the resulting solid uranium values from the resulting, substantially uranium-free, supernatant mixture.

2,894,809
METHOD OF RECOVERING MINERAL VALUES
Robert F. McCullough, Glenview, Ill., and Joseph R. Adams, Lakeland, Fla., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Application July 6, 1955, Serial No. 520,376
13 Claims. (Cl. 23—14.5)

1. In a method of recovering mineral values from low grade phosphate ore, the steps which comprise acidulating the ore with sulfuric acid under conditions of strong agitation to form a pasty slurry, heat treating the acid mix at temperatures in the range between about 250° C. and about 700° C. while drying the acid mix to produce dry

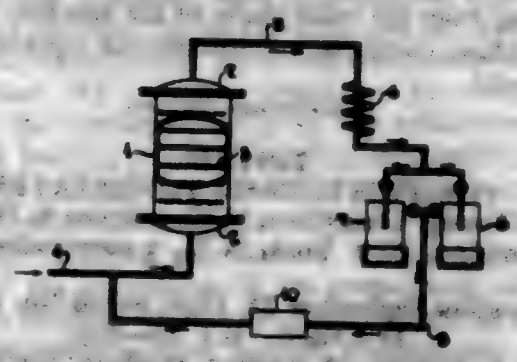


solids therefrom, and leaching the water soluble reaction products from said dry solids, whereby a leach solution is obtained containing phosphorus, aluminum and uranium values.

2,894,810
COLUMBIC OXIDE ADSORPTION PROCESS FOR SEPARATING URANIUM AND PLUTONIUM IONS
Ray H. Boston, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application August 29, 1944
Serial No. 551,771
11 Claims. (Cl. 23—14.5)

1. A process of separating uranium ions and plutonium ions from solutions containing uranium ions and plutonium ions which comprises passing a solution containing uranium ions and plutonium ions through a porous bed containing columbic oxide whereby at least a portion of said plutonium ions is adsorbed on said columbic oxide, and then desorbing at least a portion of said adsorbed plutonium ions from the columbic oxide.

2,894,811
PROCESS FOR MAKING URANIUM HEXAFLUORIDE
Raphael Rosen, Elizabeth, N.J., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application September 13, 1944, Serial No. 553,923
6 Claims. (Cl. 23—14.5)



6. An improved process for manufacturing uranium hexafluoride which comprises reacting a chloride of uranium which is substantially uranium hexachloride with hydrogen fluoride at a temperature below the de-

composing temperature of the chloride and under substantially anhydrous conditions and recovering the uranium hexafluoride.

2,894,812

DISSOLUTION OF PLUTONIUM CONTAINING CARRIER PRECIPITATE BY CARBONATE METATHESIS AND SEPARATION OF SULFIDE IMPURITIES THEREFROM BY SULFIDE PRECIPITATION

Robert B. Duffield, Champaign, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application March 12, 1947
Serial No. 734,219
2 Claims. (Cl. 23—14.5)

1. In a process for recovering plutonium from foreign products wherein a carrier precipitate of lanthanum fluoride containing plutonium is obtained, the steps which comprise dissolving said lanthanum fluoride-plutonium carrier in an alkali metal carbonate solution, then adding a soluble sulfide to the solution to form a precipitate of the impurities therein contained which form insoluble sulfides, separating said sulfide precipitate, then adding a solution of an alkali metal hydroxide to the supernatant liquid to precipitate a lanthanum hydroxide-plutonium carrier, separating the resulting hydroxide precipitate, washing the precipitate, then dissolving said hydroxide precipitate in a solution of a strong inorganic acid which will form water-soluble salts with lanthanum and plutonium.

2,894,813

PREPARATION OF WATER-SOLUBLE INORGANIC METAL SALTS AND HCl ACID BY DOUBLE DECOMPOSITION

Abraham Beniel, West Romema, Haifa, and Ruth Blumberg, Mount Carmel, Haifa, Israel, assignors to Makhteavei Israel, Tel Aviv, Israel, a company of Israel

No Drawing. Application April 1, 1957
Serial No. 649,635
Claims priority, application Israel June 26, 1956
4 Claims. (Cl. 23—50)

1. A process for the prepartion of water-soluble inorganic salts in a biphase solid-liqud reaction system, comprising the reaction by double decomposition of a solid inorganic chloride selected from the group consisting of ammonium chloride and metal chlorides, with an inorganic reactant acid, whose anion it is desired to bind to the cation of said chloride, and simultaneous extraction of acid formed in said reaction, by mixing said chloride which is in the solid state, with a single phase homogeneous solution which does not appreciably dissolve the inorganic chloride and the salt to be formed therefrom, and consists of the solution of an aqueous inorganic reactant acid in a solvent selected from the group consisting of butanols and pentanols and their mixtures, said reaction and simultaneous extraction being carried out at a temperature below the boiling point of said solvent, and separating from the solid phase of the reaction mixture a solvent phase comprising a solution of aqueous HCl in said solvent.

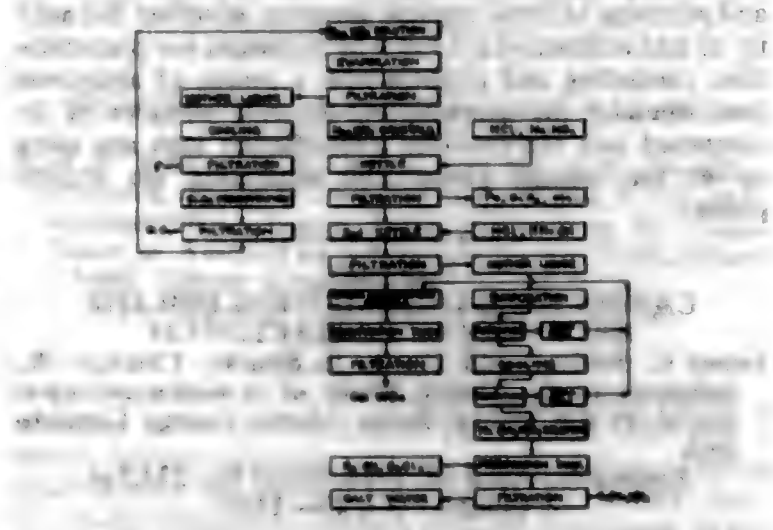
2,894,814

PURIFICATION OF TUNGSTATES

Pui Yee Leung, Glen Cove, N.Y., assignor to Wah Chang Corporation, New York, N.Y., a corporation of New York

Application September 28, 1956, Serial No. 612,613
19 Claims. (Cl. 23—51)

1. In a process of treating tungsten compounds to reduce the molybdenum impurity content thereof, the steps comprising forming the tungsten values into an alkaline mixture of a saturated solution of alkali metal tungstate and undissolved crystals of alkali metal tungstate, lowering the alkalinity of said mixture to form a substantially clear solution of alkali metal paratungstate and alkali metal tungstate, thereafter acidifying said solu-



tion to a feebly acid state to induce precipitation therefrom of tungsten values in the form of alkali metal paratungstate crystals and removing said paratungstate crystals from the residual solution.

2,894,815

PRODUCTION OF AMMONIUM THIOCYANATE

William R. Rollingson, Texas City, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application September 12, 1956
Serial No. 609,405
6 Claims. (Cl. 23—75)

1. An improved process for producing ammonium thiocyanate which comprises reacting together anhydrous hydrocyanic acid, anhydrous ammonia and sulfur in a reaction medium consisting of a solution of ammonium thiocyanate in anhydrous ammonia.

2,894,816

SOLVENT EXTRACTION OF RUTHENIUM

Herbert H. Hyman, Chicago, Ill., and Gordon R. Leader, Lexington, Ky., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application September 27, 1950
Serial No. 187,148
9 Claims. (Cl. 23—101)

1. A process of extracting ruthenium values from an aqueous solution containing ruthenium in the form of mineral acid salt, comprising adding to said aqueous solution a nitrite selected from the group consisting of alkali nitrite and alkaline earth nitrite in an at least equimolecular quantity with regard to the quantity of ruthenium present, contacting the resulting solution with a substantially water-immiscible organic solvent, and separating an aqueous phase and a solvent phase containing ruthenium values.

2,894,817

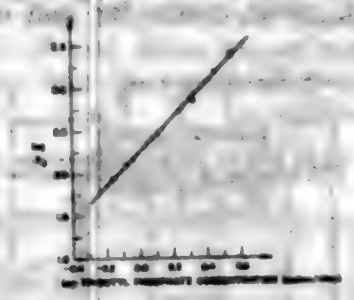
POLONIUM SEPARATION PROCESS

David G. Karraker, Berkeley, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application December 13, 1950, Serial No. 200,655
7 Claims. (Cl. 23—102)

1. In a method for separating polonium values from lead and bismuth impurities, the steps comprising contacting an acidic aqueous chloride phase containing said polonium values and impurities with an organic ether phase containing tributyl phosphate to preferentially extract the polonium values into the organic ether phase, separating said phases, then contacting said organic

phase with an aqueous hydrochloric acid phase to remove remaining impurities, and finally recovering said



polonium from the organic phase by extracting said phase with an acidic aqueous nitrate solution.

2,894,818

SEPARATION OF RUTHENIUM FROM AQUEOUS SOLUTIONS

Morris Bodermann, Seymour Vogler, and Herbert H. Hyman, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application December 20, 1950 Serial No. 201,886 16 Claims. (Cl. 23—140)

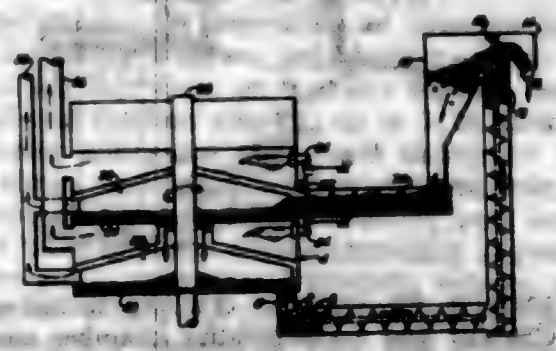
1. A process for separating ruthenium values from an aqueous solution, which comprises adding nitrite anions to said solution and passing ozone therethrough whereby ruthenium tetroxide is formed and volatilized.

2,894,819

METHOD FOR DECOMPOSING SULFURIC ACID SLUDGE

Arthur E. Catanach, Groves, Tex., assignor to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Delaware

Application April 30, 1956, Serial No. 581,623 9 Claims. (Cl. 23—177)



1. Method for recovering acid values from sulfuric acid sludge which comprises coating hot coked material while the same is moving in a generally helical path with sulfuric acid sludge, passing said coated hot coked material along a generally helical path to a decomposition zone in less than about one minute, maintaining the temperature in said decomposition zone sufficiently high to substantially coke the major portion of the hydrocarbon material in said sludge and obtain gaseous decomposition products, removing said gaseous decomposition products from said decomposition zone, removing coked material from said decomposition zone, and recycling a portion of said latter coked material to constitute the hot coked material coated with the sulfuric acid sludge.

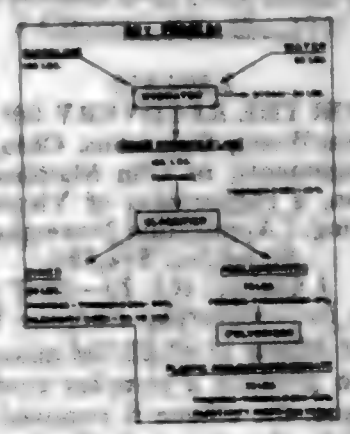
2,894,820

METHOD OF PRODUCING AGGLOMERATED LIME HYDRATE

Mack Albert Rikard, Eugene Alton Bartlett, and Robert Solomon Coleman, Jr., Birmingham, Ala., assignors, by mesne assignments, to American-Marietta Company, Chicago, Ill., a corporation of Illinois

Application January 2, 1953, Serial No. 329,236 2 Claims. (Cl. 23—133)

1. The method of producing an agglomerated lime hydrate, composed of discrete particles of less than 5 microns diameter which are clustered into agglomerates essentially in the size range of 5 to 44 microns, which consists of hydrating quick lime to produce a large proportion of agglomerates coarser than 44 microns in size, pulverizing said agglomerates so that substantially all of



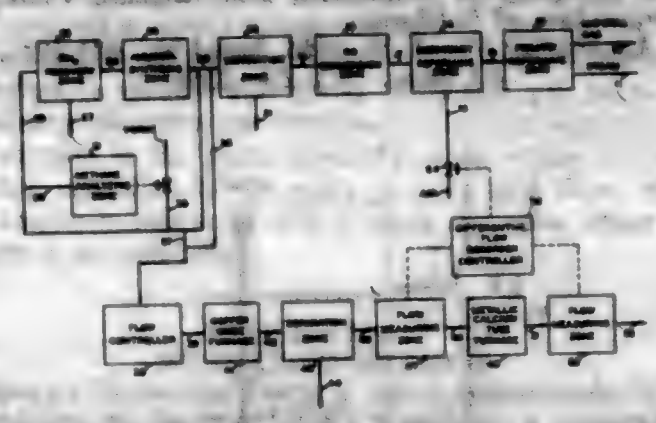
the pulverized product so produced will be finer than 44 microns, separating said pulverized product into two size fractions, one being a less plastic finer fraction and the other being a coarser fraction, rejecting the finer fraction, and pulverizing the coarser fraction to produce the desired agglomerated lime hydrate.

2,894,821

CONTROL OF NITROGEN IN AMMONIA SYNTHESIS

Earl W. Jordan, Dumas, Tex., and Weller R. Pierce, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Application January 2, 1951, Serial No. 203,868 11 Claims. (Cl. 23—199)



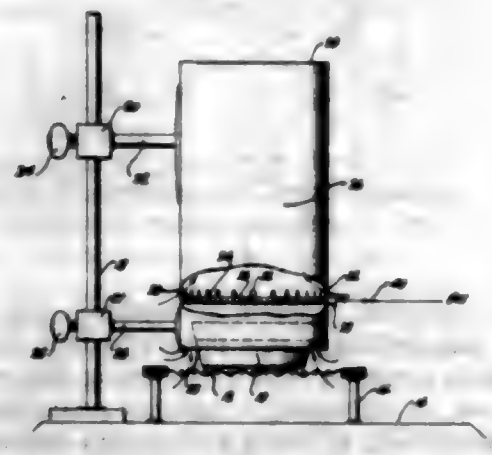
1. In a process wherein a synthesis gas comprising nitrogen and hydrogen in a predetermined ratio is fed to an ammonia synthesis zone and wherein said synthesis gas is prepared by reforming a methane containing gas with steam, introducing nitrogen and oxygen-containing gas to the reformation product thereby oxidizing a portion of said products and supplying nitrogen, removing the resulting oxidized products, passing the thus prepared gas to said ammonia synthesis zone, removing the resulting ammonia and recycling the unconverted gas, the improvement comprising continuously withdrawing a controlled volume of gas from the recycling converted gas, continuously metering the methane content of the withdrawn stream, venting a portion of said recycling unconverted gas responsive to changes in the metered methane content from a predetermined value so as to maintain the methane content of the recycling gas constant, withdrawing a second stream of gas subsequent to the preparation of the synthesis gas having a known methane content so as to provide a controlled volume thereof, continuously removing the combustible from said stream of gas, continuously metering the flow of the resulting stream of gas in terms of decreased flow from said second controlled volume withdrawn, removing nitrogen from last said resulting

stream, metering the flow of gas after nitrogen removal in terms of the difference in flow before and after nitrogen removal, metering the ratio of the two differences and adjusting said oxygen-containing gas input responsive to changes in the ratio of said differences to maintain a constant nitrogen to hydrogen ratio in said synthesis gas.

2,894,822
PROCESS FOR THE RECOVERY OF DIBORANE
George E. MacWood, Columbus, Ohio, assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia
No Drawing. Application November 2, 1955
Serial No. 544,595
1 Claim. (Cl. 23—204)

In a process for recovering diborane from a mixture of diborane and ethane in which the mixture is contacted with pyridine to produce a complex compound of pyridine and diborane, the ethane is removed from the complex compound by fractional distillation, and the complex is reacted with boron trifluoride whereby diborane is freed, the improvement which comprises reacting a molten complex of pyridine and diborane with pure gaseous boron trifluoride to produce gaseous diborane containing some boron trifluoride, contacting the freed gaseous diborane containing some boron trifluoride with a material consisting essentially of liquid 1,4-dioxane to produce a boron trifluoride-1,4-dioxane complex compound, fractionally condensing the 1,4-dioxane passing overhead with the diborane and separating the gaseous diborane from the condensed 1,4-dioxane.

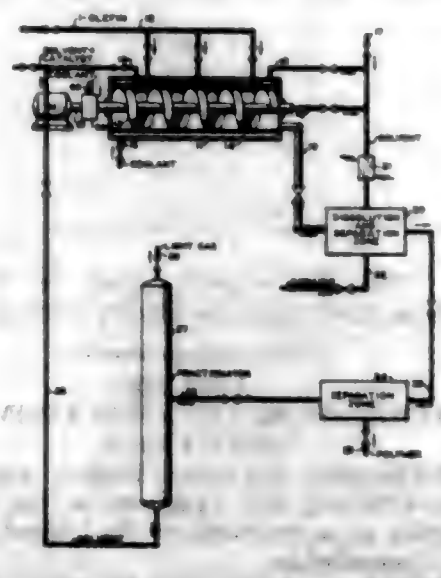
2,894,823
METHOD FOR BURNING OILS
Ralph W. Chapin, Long Beach, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Application March 26, 1956, Serial No. 573,672
4 Claims. (Cl. 23—230)



1. A method for burning oils which comprises burning the oil in a draft of air supplied at the bottom of a vertical burning zone, supplying additional air to said burning zone at a point above the burning oil, changing the relative position of the burning oil with respect to the lower open end of said burning zone to maintain smokeless burning of said oil, and introducing a controlled amount of additional fuel to said zone between the burning oil and the point of supply of said additional air.

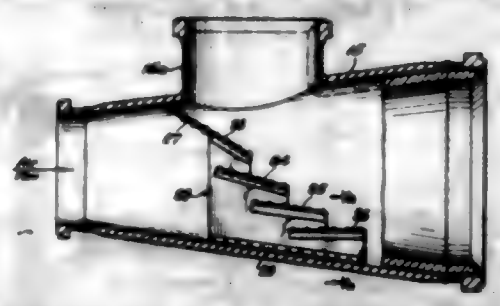
2,894,824
POLYMERIZATION APPARATUS
William C. Lanning, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application February 11, 1955, Serial No. 487,515
6 Claims. (Cl. 23—285)

1. A reactor comprising, in combination: an elongated reaction chamber being jacketed by a cooling chamber, conveying and kneading means positioned within said reaction chamber; means for driving said conveying and kneading means; outlet means for said chambers; fluid



inlet means for said chambers; a dissolution chamber in communication with said reaction chamber; and conduit means establishing communication between said cooling chamber and said dissolution chamber.

2,894,825
APPARATUS FOR DISPERSING SOLIDS IN GASES IN THE CATALYTIC TREATMENT OF HYDROCARBON OILS
David K. Beavon, Los Angeles, Calif., assignor to Texaco Inc., a corporation of Delaware
Application December 30, 1954, Serial No. 478,563
2 Claims. (Cl. 23—288)

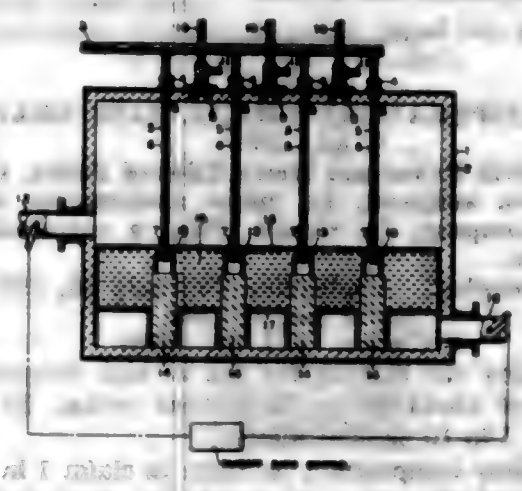


2. Apparatus for catalytic cracking including a reaction chamber and a regenerating chamber comprising a standpipe adapted for withdrawing catalyst from the reaction chamber, a conduit disposed at the lower end of the standpipe to receive catalyst therefrom and extending to the regenerating chamber, and a plurality of overlapping baffles in said conduit extending transversely of the vertical conduit and inclined downwardly in the direction of flow through said conduit at successively decreased angles to the horizontal from the top downwardly the downstream edge of each baffle overlapping the upstream edge of the baffle below it.

2,894,826
APPARATUS FOR REFORMING HYDROCARBONS
Leonard A. Stengel, Terre Haute, Ind., assignor to Commercial Solvents Corporation, Terre Haute, Ind., a corporation of Maryland
Application December 9, 1957, Serial No. 701,676
3 Claims. (Cl. 23—288)

1. An apparatus for reforming hydrocarbon gases comprising a furnace, a plurality of burners disposed within the upper portion of said furnace, exit means for withdrawing flue gases from the said furnace, means associated with the said exit means to control the rate of withdrawal of said flue gases, a catalyst bed disposed within the lower portion of the furnace, direct heated reforming catalyst tubes disposed within the upper portion of said

vessel, inlet means for introducing gases to be reformed into the upper ends of said direct heated catalyst tubes, the lower ends of said direct heated tubes projecting in slidable relation into fixed perforated tube guides, positioned within a catalyst bed, means positioned at the base of said furnace for withdrawing said reformed gases from the said furnace, means associated with said reformed gas exit to control the rate of withdrawal of said reformed gases.



2,894,827

URANIUM SEPARATION PROCESS

Earl K. Hyde, Berkeley, Calif., and Leonard I. Katzin, Chicago, and Michael J. Wolf, Peoria, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application October 10, 1949
Serial No. 120,604
13 Claims. (Cl. 23—312)

1. A process for the separation of uranium from a mixture containing uranium and thorium, which comprises forming therefrom an aqueous solution containing uranyl and thorium nitrates, up to 3 N nitric acid, and a nitrate salting-out agent, said salting-out agent, thorium nitrate and nitric acid providing a maximum nitrate concentration of 8 N, contacting said aqueous solution with an aliphatic oxygen-containing organic solvent of the group consisting of alcohols, ketones, esters, and polyglycol ethers, and mixtures thereof, said solvent being substantially immiscible with said solution, and separating the resultant aqueous phase and organic solvent extract phase containing uranyl nitrate.

2,894,828

HYDROCARBON COMPOSITIONS CONTAINING THE WATER-INSOLUBLE NITRIC ACID OXIDATION PRODUCT OF NAPHTHENIC ACIDS

Peter B. Kelly, College Station, Tex., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Application March 15, 1956
Serial No. 571,668
5 Claims. (Cl. 44—72)

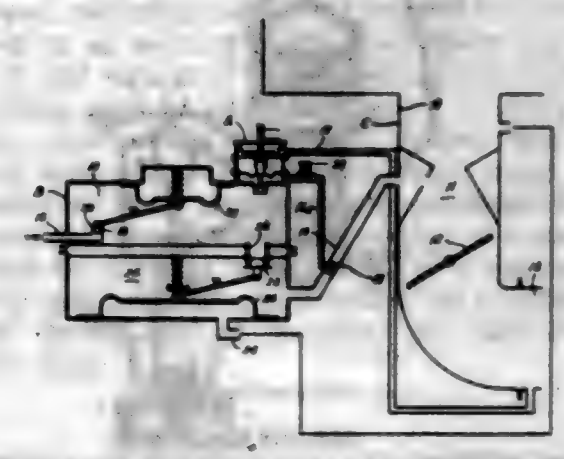
1. A hydrocarbon composition comprising a major amount of a normally liquid hydrocarbon normally tending to rust ferrous metals when contaminated with water and a small amount, sufficient to substantially retard such rusting, of the water-insoluble nitrogen-containing reaction product obtained by oxidizing at about 70° to about 150° C. one part by weight of a naphthenic acid having a boiling range of about 390° to about 660° F. at atmospheric pressure and a molecular weight of about 128 to about 480 in the presence of at least two parts by weight of nitric acid having a concentration of about 30 to about 100 percent, the oxidizing period being sufficient to produce a water-soluble dibasic carboxylic acid and said water-insoluble nitrogen-containing reaction product.

2,894,829

GAS REGULATORS FOR GAS ENGINES

John W. Harrison and John R. L. Middleton, Corsicana, Tex.

Application December 3, 1953, Serial No. 396,822
3 Claims. (Cl. 48—184)



1. In combination with regulating apparatus for gas engines which includes a pressure chamber, a gas inlet conduit connected to the chamber, a gas conductor between the chamber and the engine carburetor, and pressure-responsive means in said chamber operated by engine vacuum for controlling the gas supply to the carburetor; a flow control device for controlling the supply of gas to the engine during the starting and idling periods comprising; a housing having a chamber therein; said housing having a gas inlet; a movable valve associated with the inlet for opening and closing said inlet; a gas supply conductor extending from the control device chamber to the carburetor supply conductor, said gas supply conductor having its outlet terminating in a jet nozzle in the carburetor supply conductor and pointed toward the outlet of the carburetor supply conductor; whereby a jet effect is created and draws additional gas from the regulating apparatus gas chamber; and means operable by the vacuum in the intake manifold of the engine for controlling operation of the valve to open said valve when the engine is operating and to close the valve when the engine is not operating.

2,894,830

FUEL COMPOSITIONS

Anthony J. Nerad and Dallas T. Hurd, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

No Drawing. Application November 30, 1948
Serial No. 62,786
6 Claims. (Cl. 52—.5)

1. A gaseous fuel consisting of a mixture of a gaseous fuel and up to 20% by volume of boron hydride.

2,894,831

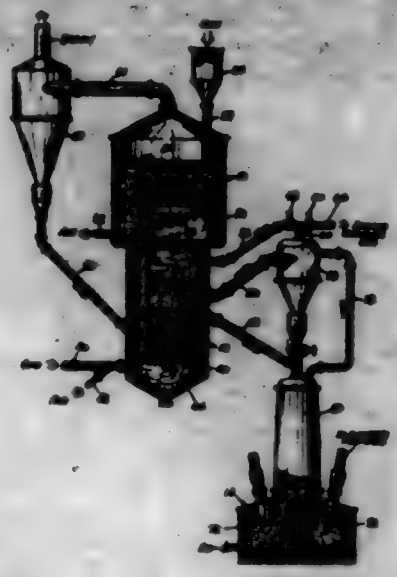
PROCESS OF FLUIDIZED BED REDUCTION OF IRON ORE FOLLOWED BY ELECTRIC FURNACE MELTING

Bruce Scott Old, Concord, and Richard Warren Hyde, Lexington, Mass.

Application November 28, 1956, Serial No. 624,861
9 Claims. (Cl. 75—13)

8. A process for the production of a metal from finely divided particles of a reducible compound thereof, which comprises preheating said particles in a preheating zone, conducting said preheated particles to a reducing zone wherein said particles are suspended in a stream of reducing gas at a temperature and for a time sufficient to reduce the major part of said particles to metal, the conditions in said reducing zone being those of a fluidized reducing bed, introducing gases emerging from said reducing zone into a combustion zone intermediate said preheating and reducing zones, burning said gases in said

combustion zone and introducing the combustion products into said preheating zone to heat the particles therein



and thereafter consolidating the hot reduced particles into molten metal while maintaining the particles out-of-contact with the atmosphere.

2,894,832
PROCESS OF PRODUCING ACTINIDE METALS
Theodore T. Magel, Cambridge, Mass., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application April 12, 1949
Serial No. 87,149
7 Claims. (Cl. 75—84.1)

1. A method of preparing thorium in a compacted, ductile form which comprises heating a mixture of thorium oxide and thorium halide with an alkaline earth metal in the presence of iodine to a temperature sufficiently elevated to effect reduction of the mixed thorium compounds.

2,894,833
STAINLESS STEEL FOR WELD
George E. Linnert, Tinsculum, and Robert M. Larrimore, Jr., Baltimore, Md., assignors to Armco Steel Corporation, a corporation of Ohio
No Drawing. Application February 9, 1955
Serial No. 487,213
9 Claims. (Cl. 75—128)

1. A weld electrode for making a non-magnetic, crack-resistant weld, said electrode essentially consisting of 19% to 21% chromium, 10% to 12% nickel, 8.5% to 20% manganese, and remainder substantially all iron.

6. Submerged-arc welding electrode wire for making a non-magnetic, crack-resistant weld, said wire essentially consisting of 12% to 30% chromium, 7% to 35% nickel, 14.7% to 23.1% manganese, 0% to 3% silicon, 0% to 4% molybdenum, 0% to 5% copper, 0% to 1.5% columbium and tantalum, 0% to 1.5% titanium, and remainder substantially all iron.

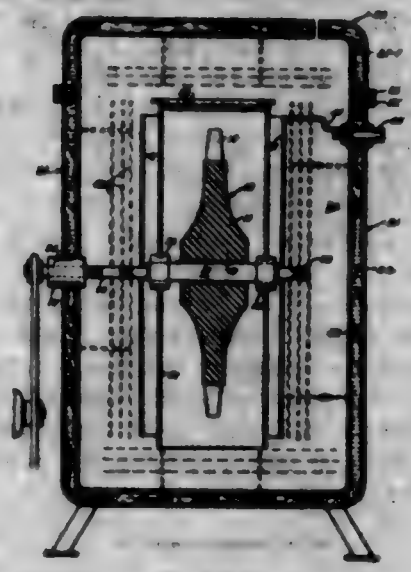
2,894,834
METHOD FOR PRODUCING FERROUS METAL
pretreated melt in proportions such that the percentage of zirconium introduced into said melt is within the range from 0.01 percent to 0.3 percent, mechanically mixing the cast iron melt, and pouring the resulting molten composition into a mold.

2,894,835
HIGH-TEMPERATURE NICKEL BASE BRAZING ALLOYS
Robert Melvin Evans and Henry Edward Patten, Columbus, Ohio, assignors, by mesne assignments, to The Trane Company, La Crosse, Wis., a corporation of Wisconsin
No Drawing. Application February 26, 1953
Serial No. 717,569
5 Claims. (Cl. 75—170)

1. An alloy for brazing for use at high temperatures consisting of about 60 to 70 percent nickel, 20 to 30 percent tin, 3 to 10 percent silicon.

3. The alloy composition set forth in claim 1 in which 0 to 6 percent chromium by weight is substituted for a substantially equal amount of weight of the silicon content of said alloy.

2,894,836
SINTERING OF SHAPED CEMENTED METAL BODIES
Franz Kolbl and Karl Mesmer, Reutte, Tirol, Austria, assignors to Schwarzkopf Development Corporation, New York, N.Y., a corporation of Maryland
Application November 19, 1957, Serial No. 697,449
5 Claims. (Cl. 75—200)



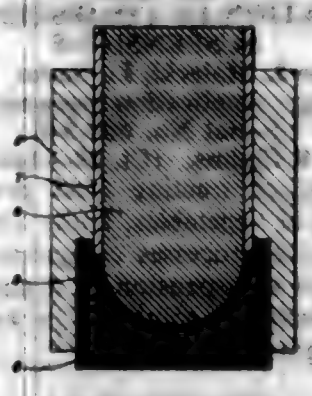
1. The method of sintering a homogeneous cemented body consisting of cemented refractory particles selected from the group consisting of the refractory metals, the carbides, the borides and the silicides of refractory metals and mixtures thereof, which body contains ingredients which form a liquid phase at the sintering temperature, the procedure comprising rotatably supporting said body along an axis, subjecting said body while so supported to sintering for at least 10 minutes at a sintering temperature of at least about 1100° C. at which a liquid phase is formed of some of its ingredients, tending to

2,894,837

METHOD FOR PRODUCING CEMENTED CARBIDE ARTICLES

Edward I. Onstott, Le Roy, Ill., and George D. Cremer, Pelham Manor, N.Y., assignors to the United States of America as represented by the United States Atomic Energy Commission

Application January 16, 1946, Serial No. 641,619
5 Claims. (Cl. 75—201)



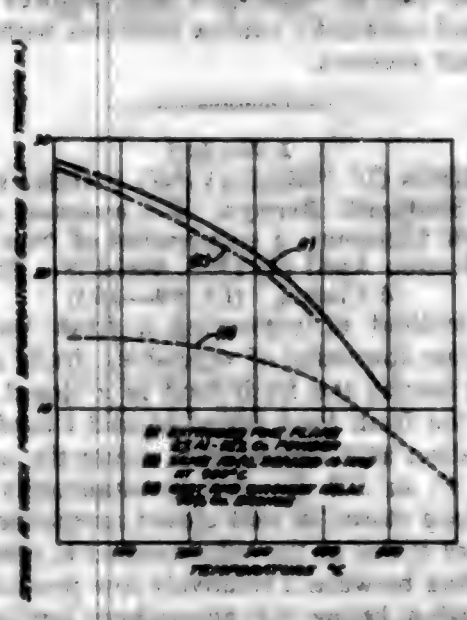
1. In a process for producing hollow shell-like articles of metal-bonded refractory metal compounds, the steps of incorporating at least one finely comminuted refractory metal compound together with at least one finely comminuted metallic bonding agent into a slurry with a volatile organic liquid containing in solution a major proportion of an organic lubricant whose melting point lies in the range from about 50° C. to about 70° C., said incorporation taking place at a temperature at which said organic system is liquid and below the boiling point of said volatile organic liquid; placing said slurry in a mold, at least one surface of which is porous to said fluid organic system; compacting said slurry by the application of pressure in increments, said placing and compacting steps being carried out at a temperature similar to that of said incorporating step; removing at least a portion of said mold from contact with the formed compact, and heating said compact to remove remaining organic matter and to sinter said compact.

2,894,838

METHOD OF INTRODUCING HARD PHASES INTO METALLIC MATRICES

Eric Gregory, Hastings on Hudson, N.Y., assignor to Sintercast Corporation of America, Yonkers, N.Y., a corporation of New York

Application October 11, 1956, Serial No. 615,336
11 Claims. (Cl. 75—206)



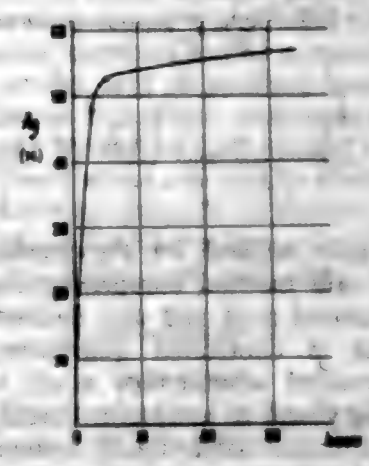
1. A method of introducing a hard slip inhibiting phase into a ductile matrix metal, an oxide of which has a negative free energy of formation at about 25° C. of below 70,000 calories per gram atom of oxygen which comprises providing a powder of said ductile matrix metal of melting point above 750° C. having mixed therewith a refractory oxide-yielding metal powder of melting point below that of the matrix metal and having a refractory oxide coating which is substantially stable at elevated temperatures and has a negative free energy of formation at about 25° C. of over 90,000 calories per gram atom of oxygen, subjecting said mixed powder to liquid phase sintering at an elevated temperature above the melting point of said refractory oxide-yielding metal and below the melting point of said matrix metal, whereby the refractory oxide-yielding metal melts, escapes from beneath its oxide shell and alloys with said matrix metal powder, the refractory oxide shell becoming associated with said alloy powder, consolidating said powder to a solid compact and hot forming said compact to a desired shape, whereby said shape is characterized by a uniform dispersion throughout of particles of said hard refractory oxide.

2,894,839

PROCESS FOR PRODUCING COMPOSITE POWDER OF SILVER AND CADMIUM OXIDE

Tatuo Matsukawa, Shimomiyoji, Amki-ku, Osaka, Japan

Application December 18, 1957, Serial No. 703,532
Claims priority, application Japan January 18, 1957
3 Claims. (Cl. 75—212)



1. A process for producing silver-cadmium oxide powder suitable for manufacturing electric contact materials, said process comprising mixing cadmium oxide powder with an aqueous solution of silver nitrate, agitating the mixture until the surfaces of the cadmium oxide powder are coated with a substantial quantity of silver oxide which results from contact of the silver nitrate and cadmium oxide and which is deposited with any silver produced by contact of the solution of silver nitrate with the cadmium oxide and silver oxide, separating the particles of cadmium oxide coated with silver oxide by filtration, washing the separated particles with water, drying the washed particles and heating the dried particles to a temperature from about 300° C. to 500° C. thereby reducing the silver oxide to silver.

2,894,840

METHOD FOR FIXING XEROGRAPHIC IMAGES

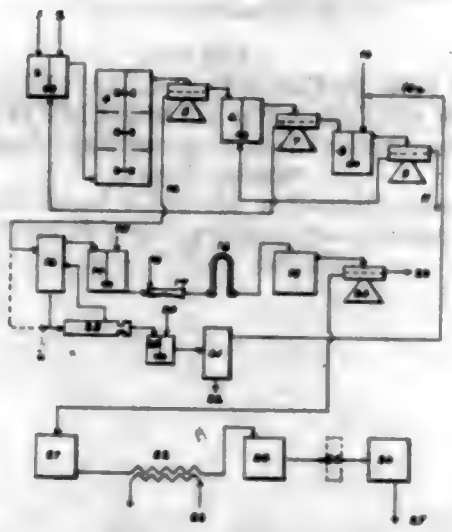
John H. Dessauer, Pittsford, Robert W. Gundlach, Spencerport, and George R. Mott, Rochester, N.Y., assignors to Haloid Xerox Inc., a corporation of New York

No Drawing. Application June 24, 1955
Serial No. 516,536
9 Claims. (Cl. 96—1)

1. The method of fixing a xerographic powder image on its support, wherein the powder particles comprising the xerographic powder image have a residual electrostatic charge, said method comprising the steps of producing an atmosphere of electrostatically charged finely di-

vided particles of image fixing material which is a solvent for the xerographic powder image particles, the electrostatic charges on said particles being of opposite polarity to the residual electrostatic charge on said powder image, and exposing said xerographic powder image to said atmosphere, whereby said image fixing material particles are electrostatically attracted to the xerographic powder image particles and are combined therewith to effect image fixing solely by electrostatic attraction of the fixing particles to the image particles.

2,894,841
PROCESS FOR THE PRODUCTION OF WORT
John Compton and Kenneth Hartley Geiger, London, Ontario, Canada, assignors to John Labatt Limited, London, Ontario, Canada, a company of Canada
Application July 11, 1957, Serial No. 671,165
15 Claims. (Cl. 99—52)



1. A continuous method for the production of sweet brewer's wort, said method comprising continuously delivering comminuted malt and any desired adjuncts to a slurrying vessel in controlled quantities; continuously delivering controlled amounts of mash make-up liquid to said slurrying vessel to maintain therein a mash slurry of desired constitution; continuously delivering said slurry to a mash vessel including a plurality of superposed mash zones; maintaining a predetermined desired temperature and hold-up time in each of said mash zones; continuously delivering mash slurry from the uppermost of said zones to a mechanical separator arranged to separate the slurry into a solids fraction containing husk and coarse solids and a liquid fraction containing the liquid and fines solids; continuously clarifying the liquid fraction and delivering the same as a clear sweet wort; continuously subjecting the solids fraction to counter-current extraction in a plurality of stages each of which comprises reslurrying with wash effluent from a succeeding stage under controlled temperature conditions, and mechanical separation of the coarse solids, whereby finally to produce substantially fully exhausted coarse solids waste; the make-up water for the system being delivered to the last of said stages, and the liquid fraction from the mechanical separation of the first stage being delivered to said slurrying vessel as the mash make-up liquid.

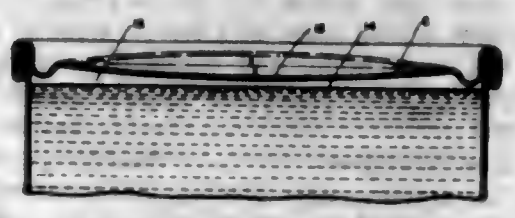
2,894,842
THERMOSTABLE ACTIVE DRY YEAST COMPOSITIONS
Jack H. Mitchell, Jr., Park Forest, and John Joseph Enright, Chicago, Ill.
No Drawing. Application May 10, 1957
Serial No. 658,470
16 Claims. (Cl. 99—96)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A thermostable active dry yeast composition, said yeast composition essentially consisting of yeast having a moisture content not exceeding about 6%, and a lipophilic long-chain aliphatic acid partial ester of the heterocyclic compound sorbitan in a proportion of from about .25% to about 5% of the weight of dry yeast solids, whereby said yeast composition is rendered quickly rehydratable.

2,894,843
PRESERVATION OF COMESTIBLES WITH SUSPENSIONS
George J. Maiocki, Le Sueur, Minn.
No Drawing. Application September 13, 1956
Serial No. 609,548
19 Claims. (Cl. 99—166)

1. The method of treating food products from the group consisting of vegetables, fruits and sea foods subject to deteriorative processes comprising contacting the food product with a suspension of a non-toxic ingestible reducing agent having a solubility in water of less than 5 percent by weight.

2,894,844
CANNING PROCESS AND PRODUCT
James G. Shakman, Wilmette, Ill., assignor to Pabst Brewing Company, Chicago, Ill., a corporation of Delaware
Application October 31, 1956, Serial No. 619,518
5 Claims. (Cl. 99—182)

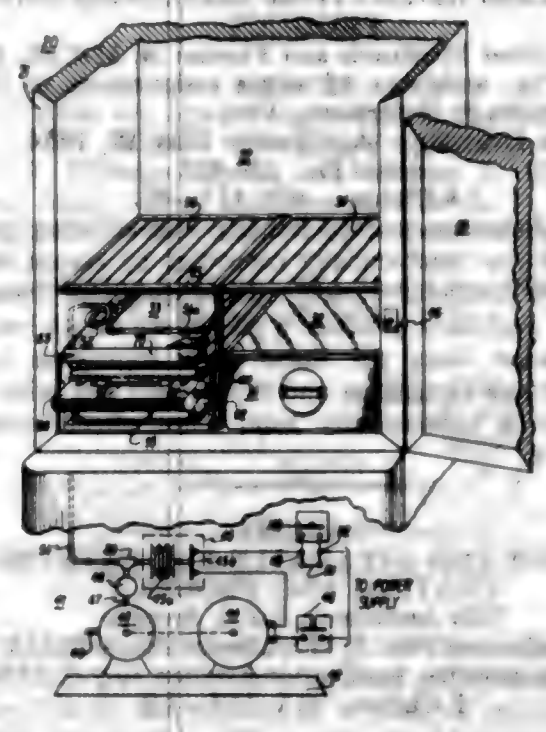


4. A canned product comprising a sealed can having recessed ends with end closures extending substantially thereacross, said end closures being flexible between an inwardly concave position and an outwardly convex position within the confines of said recesses, and a material in said can capable of developing internal pressure therein, said material being in said can in sufficient quantity to fill said can therewith from one of said ends to a level adjacent to said end closure of the other of said ends when said can is disposed in upright position on said one end and said end closures are disposed in said concave positions, said material having pressure-developing capabilities of such a nature as to cause sufficient pressure in said can to cause said end closures to be disposed in said outwardly convex positions within the confines of said recesses.

2,894,845
METHODS OF PRESERVING FRESH FOODS
Edgar S. Stoddard, Berwyn, Ill., assignor to General Electric Company, a corporation of New York
Application April 18, 1955, Serial No. 503,991
4 Claims. (Cl. 99—193)

1. The method of preserving a fresh food selected from the class consisting of vegetables, fruits and berries, comprising storing the fresh food in a closed receptacle, subjecting the fresh food stored in said closed receptacle to refrigeration at a temperature within the approximate range 35° F. to 50° F., and simultaneously subjecting the fresh food stored in said closed receptacle to successive pressure cycles in the subatmospheric pressure range and extending between a relatively low pressure disposed only somewhat below 0.9 atmosphere and a relatively high pressure disposed only somewhat above 0.9 atmosphere while continuously admitting fresh air into said closed receptacle at an established low rate, wherein each of said pressure cycles includes a falling pressure phase that is produced by pumping air from said closed re-

ceptacle at an established high rate and overriding said admission of the fresh air into said closed receptacle at the established low rate and a complementary rising pressure phase that is produced substantially entirely by said admission of the fresh air into said closed receptacle at the established low rate, wherein said pumping of air from said closed receptacle in the falling pressure phase of each of said pressure cycles is initiated in response to the relatively high pressure in said closed receptacle and



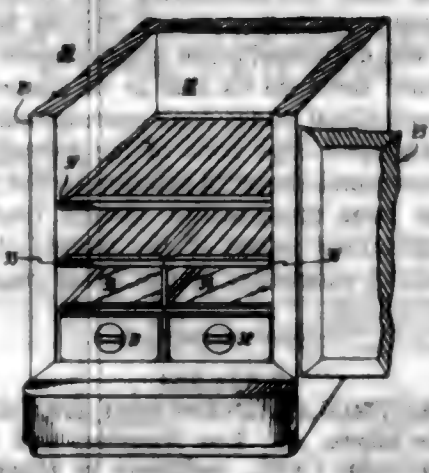
is terminated in response to the relatively low pressure in said closed receptacle, and wherein the established high rate of said air pumping and the established low rate of said air admission are so correlated that several of said pressure cycles are effected each hour and so that in each of said pressure cycles the time interval of the falling pressure phase thereof is substantially shorter than the time interval of the rising pressure phase thereof.

2,894,846

METHODS OF AND APPARATUS FOR PRESERVING FRESH FOODS

Edgar S. Stoddard, Berwyn, Ill., assignor to General Electric Company, a corporation of New York

Application March 30, 1955, Serial No. 497,970
26 Claims. (Cl. 99—217)



1. The method of preserving a fresh food selected from the class consisting of vegetables, fruits and berries, comprising storing the fresh food within a receptacle arranged within the refrigerated storage compartment of a household refrigerator, and simultaneously subjecting the stored fresh food to irradiation with highly diffused gamma rays emitted from a well distributed and highly dispersed source carried by the interior walls of the receptacle, wherein the dosage rates throughout the interior of the receptacle fall within a band extending from about 10 milliroentgens per hour to about 20 milliroentgens per hour.

2,894,847

WATER-RESISTANT ADHESIVE COMPOSITIONS

Roy E. Wright, Oakland, Calif., assignor to Philadelphia Quartz Company of California, Berkeley, Calif., a corporation of California

No Drawing. Application April 22, 1955
Serial No. 503,319
4 Claims. (Cl. 106—79)

1. A novel adhesive comprising: (A) from about 5–25% by weight of a water-extracted isolated protein fraction derived from a protein-rich vegetable oil-seed flour, (*a*) said protein fraction containing over 90% protein as calculated from its nitrogen content (*b*) said protein fraction being free from carbohydrates, ligniferous matter, products of denaturation and products of hydrolysis (*c*) said protein fraction being free from compounds soluble in water at the isoelectric point of the protein (B) said protein fraction being dispersed in from about 5–75% of aqueous sodium silicate having a weight percent ratio of Na_2O/SiO_2 within the range from about 1:15 to 1:4 (C) sufficient water being present to produce operable viscosity at operating temperatures, said adhesive having the following novel combination of properties: (D) capable of setting in the cold to produce bonds having wet strength (E) being free from extraneous alkali other than that present in the sodium silicate (F) having a working life of from about one day to several weeks (G) having the characteristic property of forming a bond which has a wet strength and produces tear extension both when wet and when dry under both cold and hot setting conditions.

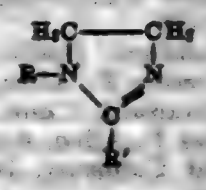
2,894,848

JOINT SEALING COMPOUNDS CONTAINING ATTAPULGITE

Manfred E. Goodwin, Haddonfield, Edgar W. Sawyer, Jr., Metuchen, and Homer A. Smith, Berkeley Heights, N.J., assignors to Minerals & Chemicals Corporation of America, Menlo Park, N.J., a corporation of Maryland

No Drawing. Application October 29, 1956
Serial No. 618,695
13 Claims. (Cl. 106—278)

1. A composition for filling joints, which is substantially free from sag at elevated temperatures consisting essentially of from about 25 to about 70 parts by weight of bitumen; an amount less than about 50 parts by weight of a plasticizing oil; from about 0.3 to about 12.5 parts by weight of a naturally occurring colloidal clay having a surface area of at least 50 square meters per gram, colloidally dispersed therein; and from about 0.15 to about 5.0 parts by weight of an imidazoline of the following structural formula:



where R is selected from the group consisting of alkylol groups containing from 2 to 18 carbon atoms, radicals containing an alkyl amino group and having from 2 to 18 carbon atoms, and alkyl and alkylene groups containing from 2 to 18 carbon atoms, and R′ is selected from the group consisting of alkyl and alkylene groups of from 11 to 21 carbon atoms.

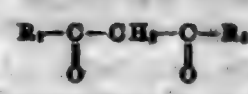
2,894,849

ALPHA, GAMMA DIKETONES IN COMBINATION WITH METALLO-ORGANIC DRIERS AS DRYING ACCELERATORS FOR SICCATIVE COATINGS

Oliver J. Greenwitt and James A. Stearns, Cleveland, Ohio, assignors to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Application May 20, 1957
Serial No. 660,072
23 Claims. (Cl. 106—310)

1. A composition of matter, useful in catalytic quantity to accelerate the drying rate of siccative films, which composition consists essentially of an oil soluble metal soap paint drier and an alpha, gamma diketone to the general structure



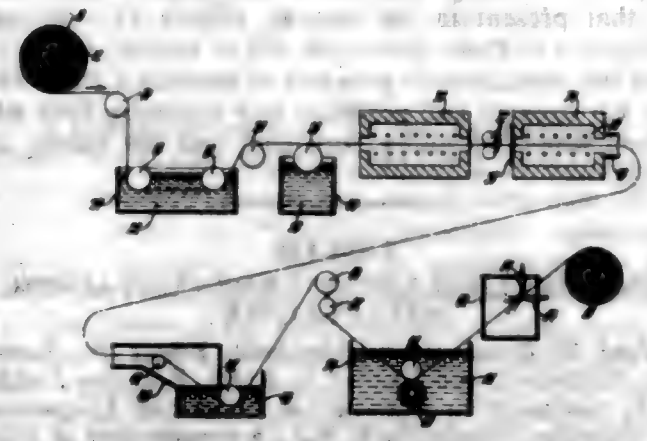
where R_1 and R_2 are selected from the group consisting of organic single ring radicals and organic lower aliphatic radicals where, when R_1 is a single ring group R_2 is a halogen substituted lower aliphatic group, but where R_1 is a lower aliphatic group R_2 is also a lower aliphatic group.

2,894,850

METHOD OF GALVANIZING FERROUS METAL STRIP

Joseph L. Greene, Royal Oak, and James C. Holzwarth, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application May 14, 1958, Serial No. 735,316
7 Claims. (Cl. 117—5.5)



1. A process for galvanizing a portion only of a ferrous metal article, the steps comprising applying an alkali metal aluminate solution to the portion of the article which is not to be galvanized, drying said coating, surrounding said article by a reducing atmosphere and subjecting said article to heat in a temperature range of from about 1250° F. to 1450° F. while surrounded by said reducing atmosphere for a time sufficient to reduce the oxides on said ferrous metal, and dipping said article in a galvanizing bath while still under said reducing atmosphere.

2,894,851

METHOD OF FORMING A PROTECTIVE COATING ON CYANIDATION TAILINGS AND THE RESULTING PRODUCT

Robert B. Booth, Stamford, Godfrey B. Walker, Old Greenwich, and Charles F. Allen, Stamford, Conn.; Erma G. Allen, Stamford, Conn., executrix of the estate of said Charles F. Allen, deceased; assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application June 2, 1953
Serial No. 359,206
Claims priority, application Great Britain December 15, 1952
3 Claims. (Cl. 117—6)

1. The combination with a mass of cyanidation tailings of a thin layer of said cyanidation tailings and a compound selected from the group consisting of water-soluble, ionic, linear addition polymers of polymerizable monoethylenically unsaturated compounds having an average molecular weight of at least 10,000, and salts thereof, in amounts of from 0.2 to 15 pounds per 100 square feet of surface area, said layer forming a protective crust on the surface of said cyanidation tailings.

2,894,852

PROCESS OF COATING ALUMINUM AND PRODUCT

Herschel Greer McMorris and Florian H. McCall, Clearwater, Fla., assignors, by mesne assignments, to Myron P. Laughlin, St. Petersburg, Fla.

No Drawing. Application May 17, 1954
Serial No. 430,422
4 Claims. (Cl. 117—8)

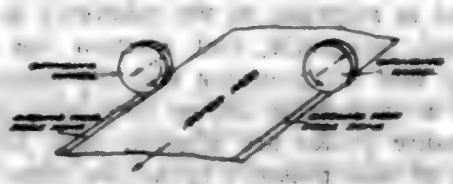
1. An aluminum surface treating and coloring process which includes mechanically removing by means of impelled hard particles closely spaced particles from the aluminum surface to produce a pit pattern of not less than 60 depression lines per linear inch transverse to the longest surface dimension and filling such pits with color to produce a substantially solid color effect upon the viewing eye.

2,894,853

METHOD AND APPARATUS FOR EXTRUSION COATING AND PRODUCT

Nils Andersson, Lund, Sweden

Application July 5, 1957, Serial No. 669,923
Claims priority, application Sweden July 5, 1956
2 Claims. (Cl. 117—11)



1. In a method of applying full width extrusion films of synthetic linear polymers of sharp melting point to sheets of at least equal width and of substantially uniform thickness wherein a molten film the longitudinal edge zones of which are bead-shaped and thicker than the other portions of the film owing to the surface tension of the molten film and its extrusion conditions is extruded to contact with the sheet to be coated whilst still in molten condition, the molten film is pressed against said sheet and the surface of the molten film remote from the sheet is chilled to a temperature below the solidification point of the molten film, the contacting and pressing of said molten film against said sheet and its chilling being effected substantially simultaneously, the improvement which consists in that said sheet on its side to be coated is thinned along two longitudinal zones each corresponding to an individual bead-shaped edge zone of the extruded film into such a cross-sectional shape in relation to the corresponding film edge zone cross-section profile that the corresponding longitudinal zones of the coated sheet will be of a thickness not exceeding that of other coated portions of the sheet.

2,894,854

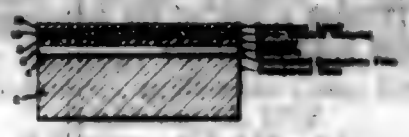
ELECTROLUMINESCENT DEVICE

Alfred J. MacIntyre, Jr., Los Angeles, and Richard A. Martel, Gardena, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Application July 29, 1953, Serial No. 751,680
10 Claims. (Cl. 117—33.5)

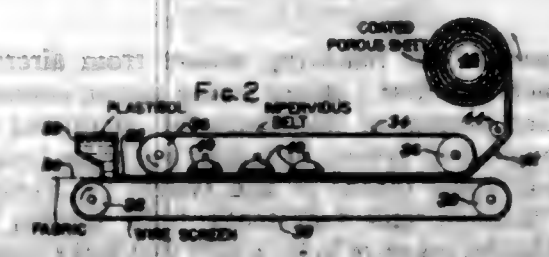
4. An electroluminescent device comprising a base member, a transparent layer of electrically conductive material disposed on said base member, a layer of electroluminescent material disposed on said transparent

layer, a layer of barium titanate disposed on said layer of electroluminescent material, and a layer of electri-



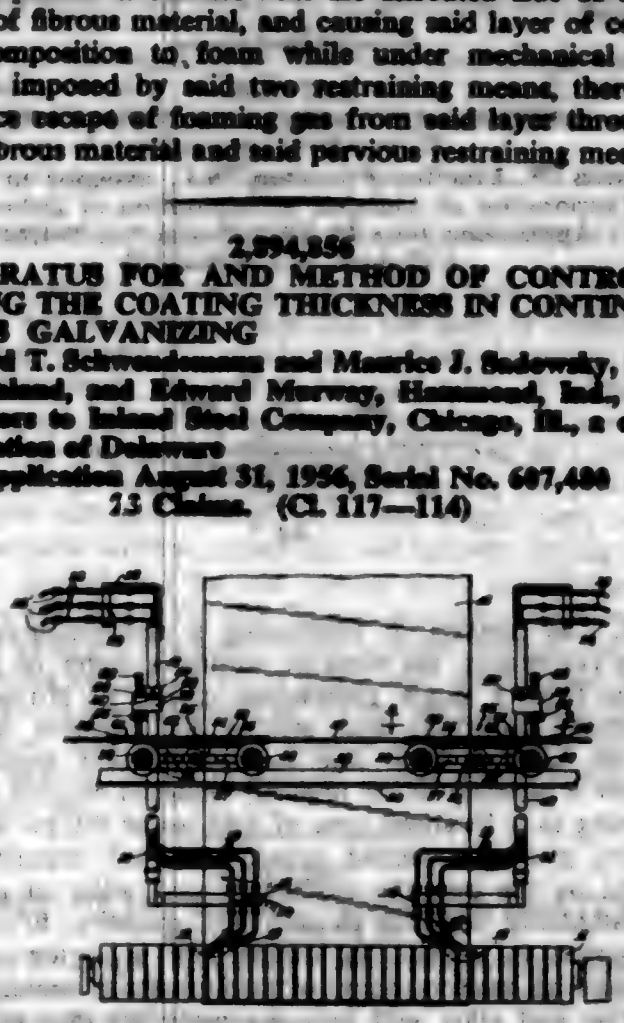
cally conductive material disposed on said layer of barium titanate, said layers of electrically conductive material being electrically independent.

2,894,855
METHOD OF MAKING BREATHABLE VINYL RESIN COATED FABRIC
Robert J. Wilhelm, Elyria, and Charles A. Wangemann, Avon Lake, Ohio, assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Application April 19, 1956, Serial No. 579,297
8 Claims. (Cl. 117—103)



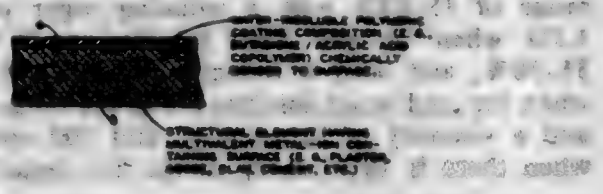
1. A method for making a breathable sheet material which comprises applying a layer of a foamable coating composition to one surface of a sheet of porous fibrous material, interposing said coated sheet between two restraining means, one of said means being impervious and is placed in direct contact with said layer of coating composition and the other of said means being pervious and is placed in contact with the uncoated side of said sheet of fibrous material, and causing said layer of coating composition to foam while under mechanical restraint imposed by said two restraining means, thereby to force escape of foaming gas from said layer through said fibrous material and said pervious restraining means.

2,894,856
APPARATUS FOR AND METHOD OF CONTROLLING THE COATING THICKNESS IN CONTINUOUS GALVANIZING
Edward T. Schwendeman and Maurice J. Sadowsky, Jr., Highland, and Edward Murway, Hammond, Ind., assignors to Inland Steel Company, Chicago, Ill., a corporation of Delaware
Application August 31, 1956, Serial No. 607,480
13 Claims. (Cl. 117—114)



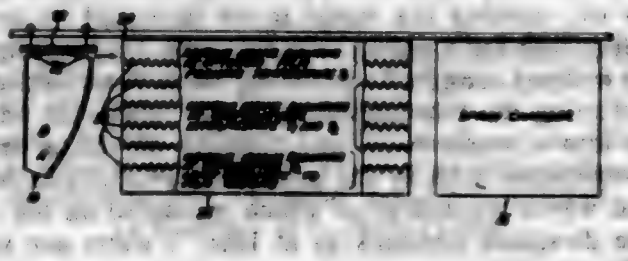
18. In the continuous metal coating of a strip wherein the strip is passed through a bath of molten metal and thence upwardly between a pair of coating rolls partially submerged in the bath with an elongated pool of molten metal being formed in the nip between the rolls, the improvement comprising directing gaseous material at an angle downwardly and outwardly toward the longitudinal edges of the strip against the surface of the pool at the opposite ends thereof with sufficient velocity to prevent the pool from rising to a higher level adjacent the edges of the strip whereby to maintain the level of the pool substantially uniform at least for the entire width of the strip, and confining contact of said gaseous material substantially entirely to the surface of the pool without substantial contact with the strip.

2,894,857
PROCESS OF APPLYING RESINOUS WATERPROOF COATING TO MULTIVALENT METAL ION-CONTAINING SURFACES AND RESULTANT ARTICLE
Carl A. Uraneck, Phillips, Tex., and Richard J. Sommerfeld, Norman, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Application February 5, 1954, Serial No. 408,534
36 Claims. (Cl. 117—118)



1. In a process for forming a waterproof coating on a surface containing multivalent metal ions, the improvement comprising applying to said surface a high molecular weight polymer formed by a process which comprises polymerizing a mixture containing an acidic monomer and a conjugated diene, said applied polymer reacting with said surface to form a water-insoluble polymeric salt.

2,894,858
METHOD OF PRODUCING TRANSPARENT ELECTROCONDUCTIVE ARTICLES
William O. Lytle, New Kensington, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Application December 1, 1953, Serial No. 398,673
7 Claims. (Cl. 117—211)



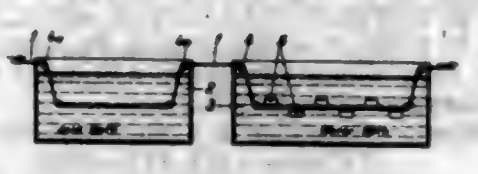
1. In the method of coating a non-rectangular refractory base with a transparent electroconductive coating of non-uniform surface electroconductivity by applying a metal compound to a heated base, the steps which comprise heating the base to a non-uniform temperature above 400° F. but below the temperature at which the base becomes molten by imparting different amounts of heat to different areas of the base so that the temperature of the base in the region of its greatest width is within a desired temperature range relatively close to the temperature at which a metal oxide film of maximum surface electro conductivity is formed from the metal compound applied, and the narrowest portion of the base is within another temperature range relatively separated from the temperature range at which a film of maximum surface electroconductivity is formed, and substantially uniformly applying a metal compound upon said non-uniformly

heated base to form an electroconductive metal oxide coating whose surface electroconductivity is greatest across the widest portion of the base and least across the narrowest portion of the base.

2,894,859
ART OF MANUFACTURING COLD WATER DISPERSIBLE ADHESIVES
Ernest L. Wimmer and Frank Meindl, Milwaukee, Wis., assignors to Chas. A. Krause Milling Co., Milwaukee, Wis., a corporation of Wisconsin
No Drawing. Application May 3, 1957
Serial No. 656,765
3 Claims. (Cl. 127—33)

1. The method of manufacturing a cold water dispersible adhesive comprising partially depolymerizing a pregelatinized and dried starch product in the dry state by treatment with sufficient mineral acid to give a ten percent test suspension of said starch product in water a pH value in the range of 3.5 to 2.0, heating said acidified product to a temperature of 70° to 250° F. with sufficient heating time as determined by the amount of acid and temperature to give the product when in a dry state the following characteristics: cold water solubles in the range of 35–80% with a reducing sugar value of .25–1.5% when the cold water solubles are in the range of 35–50%, and with a reducing sugar value of .50–3% when the cold water solubles are in the range of 50–80%; and a viscosity of between 10 and 100 cps. at 25° C. when there is 10% slurry of the dry material in water.

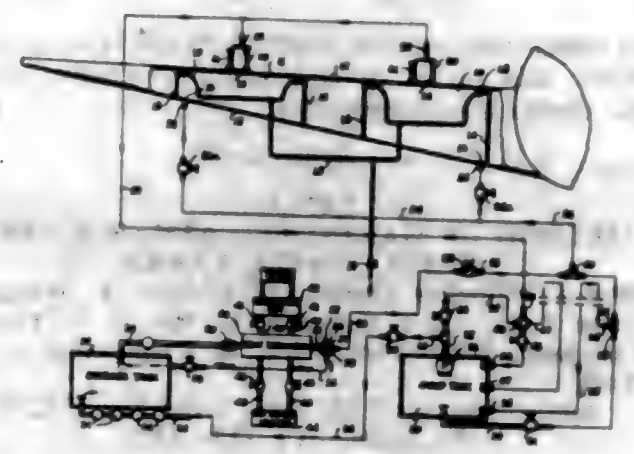
2,894,860
METHOD OF DE-SCALING OF METALS BY PICKLING
Erwin A. Engelhardt, Gelsenkirchen, Germany, assignor to Capito & Klein Aktiengesellschaft, Duesseldorf-Benrath, Germany
Application July 29, 1954, Serial No. 446,530
Claims priority, application Germany July 30, 1953
6 Claims. (Cl. 134—1)



1. A method of de-scaling metals, which includes the steps of: treating the metal to be de-scaled in an acid pickling bath for a period sufficient only for loosening the scale without completely removing same from said metal, transferring the thus pretreated metal from said pickling bath into a water bath, and treating the metal in said last mentioned bath by the action of cavitation caused by sound waves the energy of which measured on the metal to be de-scaled amounts to at least 2 watts per square centimeter.

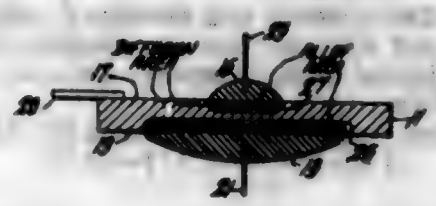
2,894,861
METHOD AND APPARATUS FOR REMOVING TANK SEALANTS
Archy F. Slover, Arcadia, and George L. Harbour, Lakewood, Calif., assignors, by mesne assignments, to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application September 9, 1954, Serial No. 455,849
5 Claims. (Cl. 134—22)

1. The method of removing sealant from aircraft fuel tanks which consists of venting said tanks from the top; filling said tanks with solvent from the bottom until the vents overflow and said tanks are completely full; closing said vents; circulating said solvent through said tanks from bottom to top under sufficient pressure to keep said tanks completely full; externally passing said solvent through a reversible heat exchanger to maintain said solvent at an optimum working temperature; and reversing the direction of flow of said solvent; and circulating said solvent through a part of the circulating system isolated from said heat exchanger.



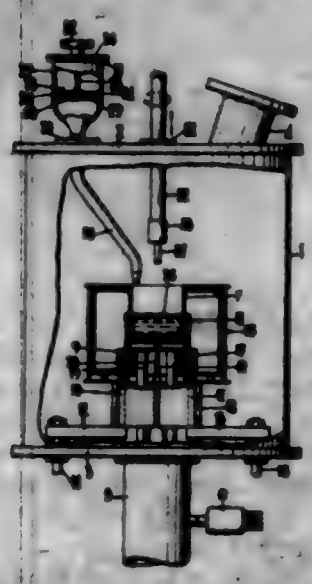
2. Apparatus for removing sealant from aircraft fuel tanks which includes: a closed piping system connected to the top and bottom of said tanks for circulating solvent therethrough, said system including a storage tank and a sump tank; pump means in said system for forcing said solvents through said fuel tanks from bottom to top under sufficient pressure to keep said fuel tanks completely full; and a reversible heat exchanger in said system for maintaining said solvent at an optimum working temperature; pump means in said sump tank for pumping said solvent out of said sump tank to said storage tank; and by-pass valve means in said system for reversing the flow of solvent through said fuel tanks and by-passing said heat exchanger and said storage tank, said sump pump means being used to force the flow of solvent in the reverse direction.

2,894,862
METHOD OF FABRICATING P-N TYPE JUNCTION DEVICES
Charles W. Mueller, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application June 20, 1952, Serial No. 294,741
6 Claims. (Cl. 148—1.5)



1. The method of fabricating a semiconductive device comprising the steps of cutting a wafer of germanium from a single germanium crystal of N-type conductivity, polishing and etching the surfaces of said wafer, melting onto one surface of said germanium wafer a quantity of an impurity material capable of imparting to a localized area of said wafer P-type conductivity, placing a second quantity of said impurity material on the opposite surface of said wafer at a point substantially opposite to said first quantity, firing said materials in a reducing atmosphere at a temperature above the melting point of said impurity materials to diffuse and alloy said impurity materials into said germanium, and etching said diffused and alloyed materials to define at said surfaces high resistance rectifying barriers formed between said wafer and said quantities of impurity materials diffused therein.

2,894,863
PRODUCTION OF SEMI-CONDUCTOR BODIES
Stanley Edwin Bradshaw, Harrow Weald, and Abraham Isaac Mlavsky, London, England, assignors to The General Electric Company Limited, London, England
Application November 27, 1956, Serial No. 624,614
Claims priority, application Great Britain December 15, 1955
6 Claims. (Cl. 148—1.5)



1. In a method of producing a semiconductor body in which a molten mass of silicon is progressive solidified: the improvement including the step of forming in the resultant body at least one transition between a region having N-type conductivity and a region having P-type conductivity by evaporating during the solidification from the molten silicon an appreciable quantity of antimony which has previously been incorporated in the molten silicon.

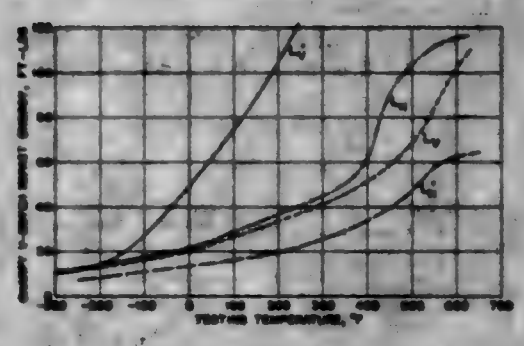
2,894,864
METHOD FOR INACTIVATING METALLIC POWDER
Stig Yngve Ek, Sundbyberg, and John Alex Dorge Eldh, Enskede, Sweden, assignors to Carlfors Bruk, E. Bjerklund & Co. Kommanditbolag, Huskvarna, Sweden, a company of Sweden
No Drawing. Application September 3, 1953
Serial No. 378,406
Claims priority, application Sweden September 19, 1952
1 Claim. (Cl. 148—6.3)

A method of inactivating aluminum powder for pyrotechnics and explosives comprising the steps of oxidizing aluminum powder in which the individual grains are mainly free from any surface layer of oxide, by heating said powder in a gas containing free oxygen to a temperature of 400 to 600° C., during a time of 2 to 3 hours cooling the powder thus treated, suspending the powder in a 10% solution of high molecular weight fatty acid in an organic solvent, removing said solvent, drying the powder, and storing the said powder at an elevated temperature not exceeding 60° C., said aluminum powder as a result being provided with superimposed coatings, an inner coating consisting of an aluminum oxide layer and an outer coating consisting of a fatty acid and fatty acid soap layer, said aluminum powder being capable of resisting attacks from atmospheric humidity and water or salt solutions.

2,894,865
METHOD OF IMPROVING CHEMICAL COATING ON ALUMINUM
Michael J. Pryor, Spokane, Wash., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
No Drawing. Application June 21, 1957
Serial No. 667,295
5 Claims. (Cl. 148—6.16)

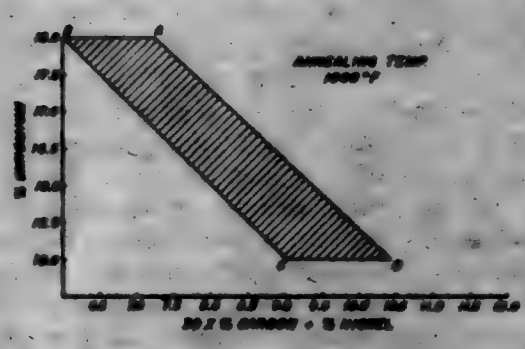
1. In a process for chemically coating aluminum and aluminum alloy products, of a nature such that entrapment corrosion presents a major problem, wherein said products are subjected to the action of an acid aqueous solution containing chromate ions, phosphate ions and fluorine ions as active coat-forming constituents to produce a coating on said surfaces, the improvement comprising the step of treating said coating with a rinsing solution containing a reducing agent that does not give insoluble oxidation products, said solution having a pH of about 3.0 to 7.0.

2,894,866
METHOD FOR ANNEALING AND ROLLING ZIRCONIUM-BASE ALLOYS
Marion L. Picklesimer, Knoxville, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application January 21, 1958, Serial No. 710,369
5 Claims. (Cl. 148—11.5)



1. In the art of fabricating a work-piece consisting of a zirconium-base alloy containing a minor proportion of alpha-stabilizing alloy additions, the method which comprises performing major size reduction at a malleableizing temperature excluding the alpha-plus-beta range, heating the work-piece to a temperature in the beta range and maintaining the work-piece at said temperature for at least approximately thirty minutes, cooling said work-piece rapidly, reducing the cross-sectional area of said work-piece by at least twenty per cent while maintaining said work-piece at a temperature of under approximately 500° C., annealing the resulting article for at least fifteen minutes at a temperature in the upper extent of the alpha range, and cooling said article rapidly.

2,894,867
METHOD OF PRODUCING TRANSFORMATION HARDENABLE STAINLESS STEEL AND ARTICLES PRODUCED THEREFROM
Raymond Smith, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Application July 11, 1957, Serial No. 671,213
12 Claims. (Cl. 148—21.55)



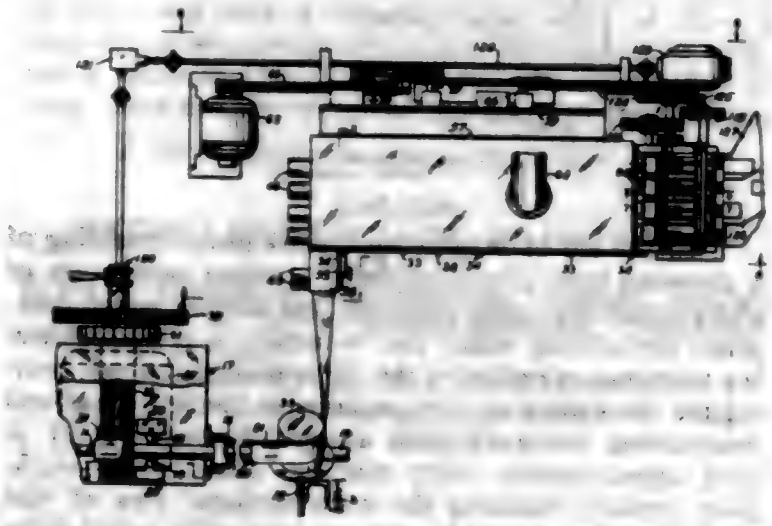
1. Stainless steel characterized by being transformable to a hard martensitic structure by sub-zero treatment from a soft austenitic structure in the annealed condi-

tion which can be tempered to improve the ductility thereof, said steel containing

	Percent
Carbon	.03 to .30
Manganese	.50 to 2.00
Silicon	.20 to 1.5
Nickel	3.0 to 7.5
Chromium	15.0 to 18.0
Vanadium	.55 to 1.75

the ferrite formers being balanced to provide an M_s temperature between about 0° F. and −50° F. with the remainder iron and other elements in amounts which do not adversely affect the properties.

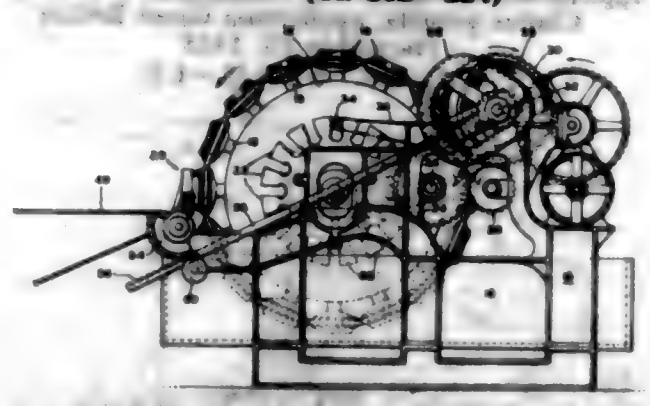
2,894,868
METHODS AND APPARATUS FOR RECLAIMING CABLE SHEATHS
William J. Hyde, Baltimore, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application October 7, 1955, Serial No. 539,867
11 Claims. (Cl. 154—3.21)



1. The method of reclaiming composite cable sheaths, which comprises the steps of slitting the composite sheath longitudinally of the cable, stripping the slitted sheath from the cable in composite strips, separating the elements of the stripped composite strips into individual strips, cleaning the individual separated strip surfaces, and maintaining the individual strips flat during the cleaning thereof.

3. Apparatus for reclaiming cable sheaths from cables being advanced along the longitudinal axis thereof in an elongated path, which comprises cutting means positioned adjacent the path with at least one cutting edge projecting into said path for slitting the sheath longitudinally of the cable, movable means synchronized with the movement of the advancing cable and in frictional engagement with the slitted sheath for assisting in stripping the slitted sheath from the cable in strips, means synchronized with said stripping means for removing the slitted sheath from the stripping means, means positioned adjacent the path of the stripped, slitted sheath for cleaning the strips of the sheath, means for supporting the strips of the sheath during the cleaning thereof, means for advancing the strips successively from the stripping means, past the means for removing the slitted sheath from the stripping means, through the cleaning means and over the means for supporting the strips of sheath during the cleaning thereof, and means for overdriving the advancing means with respect to the stripping means so that the strips are held intimately against the supporting means during the cleaning thereof.

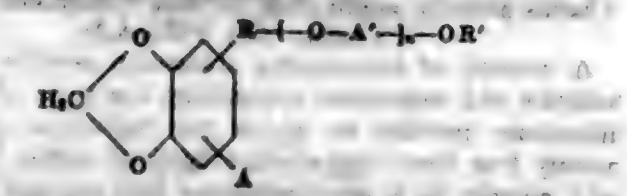
2,894,869
MOLDING PULP ARTICLES
James E. Foote, Westport, Conn., assignor to Diamond Gardner Corporation, a corporation of Delaware
Application August 6, 1956, Serial No. 602,372
4 Claims. (Cl. 162—224)



1. A method of molding pulp articles, comprising the steps of immersing into a liquid pulp slurry a formainous mold under suction to deposit a layer of wet pulp thereon which initially forms a molded pulp article, removing the mold from the slurry while continuing the suction to reduce the moisture content of the deposited pulp article to about 70% to 75% by weight free drying the wet pulp article to reduce its moisture content down to about 45% to 55% by weight without compressing the article, and then subjecting the partially dried article to compression between heated dies to remove the remaining moisture and impart a smooth surface finish to the article.

2,894,870
METHOD OF PREPARING OIL FREE SYNERGIZED PYRETHRIN COMPOSITION
Herman Wachs, Baltimore, Md., assignor to Food Machinery and Chemical Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Application May 9, 1955
Serial No. 507,176
3 Claims. (Cl. 167—24)

1. A method of preparing an insecticidal composition comprising pyrethrins dissolved in a synergist therefor, comprising: extracting pyrethrins from pyrethrum with a volatile solvent; adding to the extract so obtained a synergist which is a non-volatile solvent for pyrethrins and has the generic formula:



in which R is a saturated, bivalent, aliphatic, hydrocarbon radical, A is a substituent selected from the group consisting of a hydrogen atom and alkyl radicals, R′ is a substituent selected from the group consisting of alkyl, cycloalkyl, aralkyl, aryl and heterocyclic radicals, A′ is a saturated, bivalent, aliphatic, hydrocarbon radical having from two to three carbon atoms and n is an integer from one to three; and subsequently removing the volatile solvent from the solution of pyrethrins in said synergist.

2,894,871
ALKYL HYDRAZONES OF CYCLOHEXIMIDE
Maxten F. Murray, Kalamazoo Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
No Drawing. Application April 4, 1957
Serial No. 650,926
14 Claims. (Cl. 167—33)

1. Lower-alkylhydrazone of cycloheximide.

6. A method for the control of fungal organisms which comprises contacting said organisms with lower-alkylhydrazone of cycloheximide.

10. A composition for the control of fungal organisms which comprises as an essential active ingredient lower-alkylhydrazone of cycloheximide, carrier therefore, selected from the group consisting of a powder carrier and an aqueous carrier contain a surfactant.

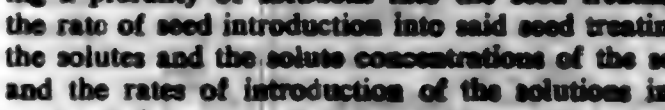
2,894,872

CYCLOHEXIMIDE β-KETO-CARBOXYLIC ACID ESTERS

Maxton F. Murray, Kalamazoo Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application April 17, 1957
Serial No. 653,292
16 Claims. (Cl. 167—33)

1. A lower-beta-keto ester having the following general structural formula:



wherein R is a lower-beta-keto hydrocarboncarbonyl group containing not more than ten carbon atoms.

5. A method of protecting plants from damage caused by fungal disease which comprises applying to said plants, in fungicidal toxic amount, lower-beta-keto ester of cycloheximide in a dispersed state.

10. A composition for the control of plant disease fungi which comprises, as an essential active ingredient, lower-beta-keto ester of cycloheximide dissolved in a water-miscible solvent.

2,894,873

CONTINUOUSLY TREATING SEEDS BY INTERACTION THEREUPON TO PRODUCE DESIRED WEIGHT OF SEED TREATING AGENT

Raymond P. Seven, Wheaton, Ill., assignor, by mesne assignments, to Morton Chemical Company, Chicago, Ill., a corporation of Delaware

No Drawing. Application February 18, 1957
Serial No. 640,583
9 Claims. (Cl. 167—38)

1. The method of treating seeds including continuously introducing seed into a seed treating zone provided with agitating means, simultaneously but separately introducing a plurality of solutions into the seed treating zone, the rate of seed introduction into said seed treating zone, the solutes and the solute concentrations of the solutions and the rates of introduction of the solutions into said seed treating zone all being so concatenated that the solutes of said solutions interact in the presence of the seeds in the seed treating zone to produce a predetermined weight percentage, based on the seed, of a desired seed treating agent, and continuously removing treated seed from said seed treating zone at a rate essentially the same as the rate of introduction of seeds thereto.

2,894,874

CYCLOSERINE-PYRIDOXINE COMPOSITION

Michael G. Malinow, Westfield, N.J., assignor to Commercial Solvents Corporation, Terre Haute, Ind., a corporation of Maryland

No Drawing. Application November 26, 1956
Serial No. 624,226
6 Claims. (Cl. 167—65)

1. A composition for combating cycloserine-susceptible diseases which comprises as the essential active ingredients, the antibiotic cycloserine and pyridoxine.

2,894,875

METHOD OF PRODUCING THE HIGHLY PURIFIED LUTEINIZING GONADOTROPIC FACTOR

Henri Meier-Heuser and Roland Beaurillon, Paris, France, assignors to Societe de l'Institut de Seryotherapie, Paris, France, a body corporate of France

No Drawing. Application May 20, 1957
Serial No. 660,879
Claims priority, application France May 22, 1956
8 Claims. (Cl. 167—74)

1. In a process of producing highly active luteinizing hormone preparations, the steps comprising adjusting the pH-value of an aqueous-alcoholic solution containing the luteinizing hormone and impurities at a temperature of about +2° C. to a pH of about 5.8, adding to said solution at said temperature of about +2° C. the salt of a metal selected from the group consisting of magnesium, calcium, strontium, zinc, and cadmium, said salt being soluble in said aqueous-alcoholic solution at said pH of 5.8, separating the resulting inactive precipitate, adjusting the pH-value of the remaining solution to a pH between about 7.9 and about 9.0 while maintaining the temperature of the solution at about +2° C., allowing the solution to stand at said temperature of +2° C. until precipitation is completed, separating the resulting precipitate from the solution and isolating the luteinizing hormone from said solution.

2,894,876

DEODORANT COMPOSITION

James J. Scanlan, Hillsdale, N.J., and Joseph W. E. Harrisson, Lansdowne, Pa., assignors to American Chicle Company, Long Island City, N.Y., a corporation of New Jersey

No Drawing. Application July 17, 1956
Serial No. 598,241
2 Claims. (Cl. 167—93)

1. A confectionery solid dosage unit as a deodorant for the oral cavity, comprising copper gluconate and a non-reactive carrier therefor, including sugar, the amount of the copper gluconate by weight being about 0.075 mg. relative to a dosage unit weight of about 1.53–1.75 grams.

2,894,877

WIDE RANGE AEROSOL SAMPLER

Frank W. Sinden, Stirling, N.J.

Application August 29, 1955, Serial No. 758,162
7 Claims. (Cl. 195—103.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

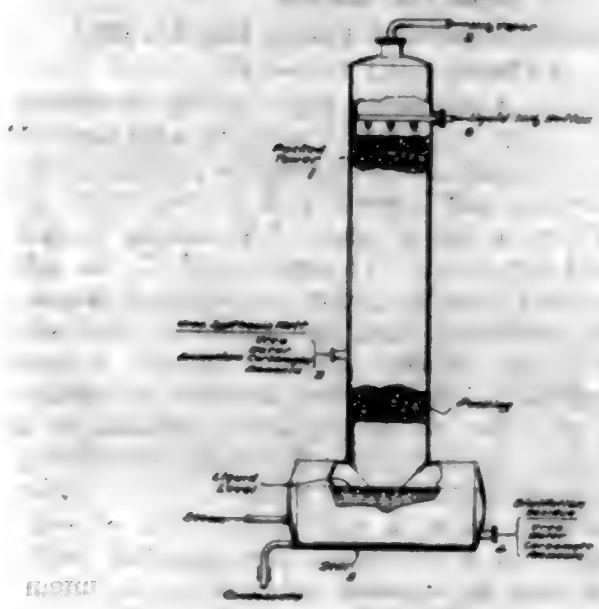
1. An aerosol sampler comprising a casing, having top and bottom openings, a perforated plate positioned transversely of said casing, said plate having small radial openings positioned at spaced distances from the center of said plate, a nutrient covered plate positioned beneath said perforated plate and adapted to be rotated with respect to said perforated plate and means for exhausting an aerosol into the top opening of said sampler through said perforated plate and onto said nutrient medium and out through the bottom opening of said casing.

2,894,878

RECOVERY OF CARBON DIOXIDE FREE AMMONIA IN THE PRODUCTION OF UREA

Lucien H. Cook, Port Washington, N.Y., assignor to Chemical Construction Corporation, New York, N.Y., a corporation of Delaware

Application March 25, 1953, Serial No. 344,521
3 Claims. (Cl. 202—40)



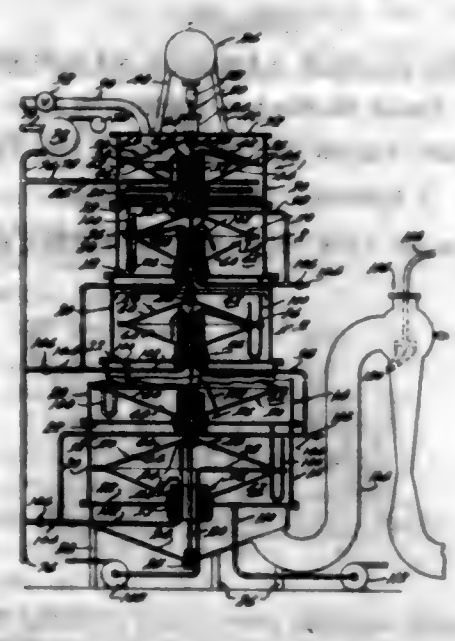
1. In a process for the production of urea the improvement in the recovery of ammonia from the high ammonia synthesis melt consisting essentially of urea, ammonium carbamate, water and ammonia which comprises feeding the molten melt into an intermediate portion of a distillation column, supplying heat to the bottom of the column to drive out substantially all the ammonia from the residue, returning liquid ammonia to the top of the column, the quantity of reflux being sufficient to remove all the carbon dioxide from the overhead vapor discharge.

2,894,879

MULTIPLE EFFECT DISTILLATION

Kenneth C. D. Hickman, Rochester, N.Y.

Application February 24, 1956, Serial No. 567,612
19 Claims. (Cl. 202—45)



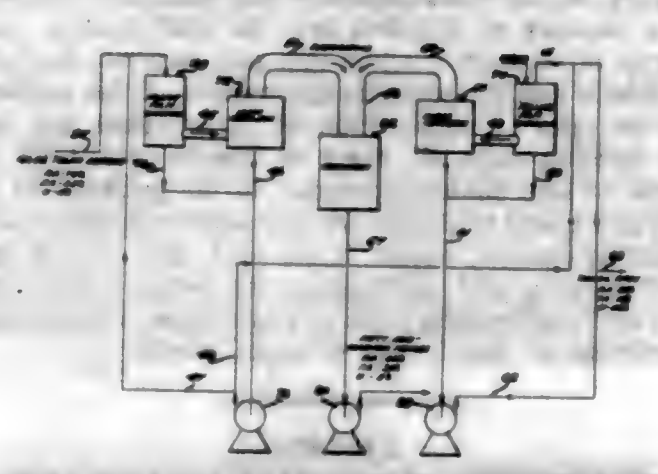
14. In a multiple effect still having a series of successive distilling stages, a series of rotary heat exchange and phase separation barriers of high thermal conductivity, one for each stage, each barrier having an integral evaporating and condensing surface disposed in heat exchange relation and so that upon the rotation thereof centrifugal force will be applied to liquid disposed on said surfaces, means for continuously supplying distilland to the evaporating surfaces of said heat exchangers at a rate in excess of that required to wet said evaporating surfaces, said evaporating surfaces being arranged so that upon rotation thereof such distilland will be free to spread and flow on such surfaces under the forces applied to such distilland, means for rotating said barriers at a speed sufficient to continuously spread and flow distilland on each of said evaporating surfaces in a film substantially thinner than that which can be secured by a flow of such distilland of the same throughput on the same surface under the influence of gravity alone; to maintain the distilland on each of said evaporating surfaces continuously under forces many times greater than gravity; and to centrifugally discharge the residue from each of said evaporating surfaces, said means for supplying distilland to said evaporating surfaces including provisions for conveying residue discharged from the evaporating surface of each of said barriers to the evaporating surface of the next one of said barriers in the series, means for transferring vapor evolved by each of said flowing films of distilland into heat exchange relation with the condensing surface of the next of said rotating barriers of said series so as to condense said vapor on said condensing surface and to transfer the heat of condensation thereof to said flowing film on said evaporating surface of said next barrier to effect the evolution of vapor therefrom, said barriers being constructed so that such rotation thereof separates such condensate from said condensing surface as it condenses thereon so as to prevent the accumulation of condensate thereon and to maintain such condensate on said condensing surface in a film substantially thinner than a film of such condensate of the same throughput on the same surface flowing under the influence of gravity alone, means for supplying heat to the first barrier in said series to promote the evaporation of distilland supplied to the evaporating surface thereof, and means for withdrawing heat from the vapor evolved in the last stage in the series.

2,894,880

METHOD OF FRACTIONATING TALL OIL INTO FATTY ACIDS AND ROSIN ACID PRODUCTS

Edmond F. Simon, Richard F. Cole, and Jacob P. Krumbein, Pensacola, Fla., assignors, by mesne assignments, to Hayden Newport Chemical Corporation, New York, N.Y., a corporation of Delaware

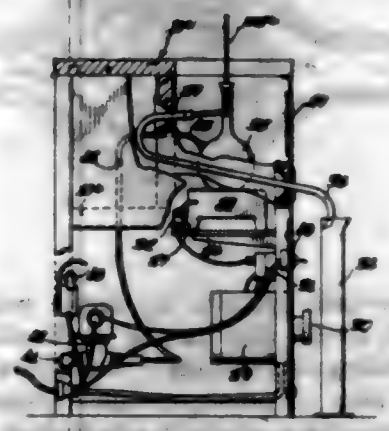
Application September 12, 1955, Serial No. 533,704
10 Claims. (Cl. 202—52)



4. In a method of fractionating a mixture of rosin acids, fatty acids and neutrals, a vaporization method comprising introducing a liquid stream of said mixture into a first falling film exaporating zone to partially vaporize said liquid under reduced pressure, conducting said partially vaporized product into a first vapor separator zone, combining liquid streams from the lower portions of said first evaporator and separator zones, recycling through said first evaporator zone a portion

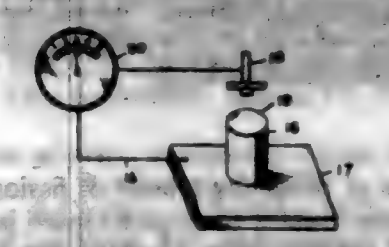
of said first combined liquid streams, introducing the balance of said combined liquid streams into a second falling film evaporator zone, conducting a partially vaporized product from said second evaporator zone into a second vapor separator zone, combining liquid streams from the lower portions of said second evaporator and separator zones, recycling through said second evaporator zone a portion of said second combined streams and removing the balance thereof, combining overhead vapors from both said first and second vapor separator zones and passing said combined vapors through a common condensing zone, and collecting the condensate therefrom to obtain a product having a higher resin acids and higher fatty acids content than said mixture.

2,894,881
LABORATORY DISTILLATION TESTING APPARATUS
Clinton M. Wolston, Jr., and George W. Jack, Dickinson, Tex., assignors to The American Oil Company, Texas City, Tex., a corporation of Texas
Application November 29, 1955, Serial No. 549,640
9 Claims. (Cl. 202—172)



1. Laboratory distillation testing apparatus having a condenser tank, a flask, a flask supporting means, a heating means, a condenser tube passing through the said tank, and a light diffusing panel, the improvements which comprise a recess in said condenser tank, a shield means disposed within said recess, adjustable shelf means carried by said shield means for supporting said flask, conduit means below said tank, and solenoid valve means on said conduit means, the discharge end of said conduit means projecting forwardly of the rear wall of said recess below said condenser tube inlet and arranged to discharge forwardly and downwardly towards said shelf means.

2,894,882
POLAROGRAPHIC METHOD AND APPARATUS FOR DETERMINING THE WEIGHT OF OXIDE FILMS
Norman H. Strobe, Western Springs, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Application September 19, 1956, Serial No. 610,752
5 Claims. (Cl. 204—1)



1. A method for sorting tinplate by measuring the thickness of an oxide coating on the surface of tinplate without substantially changing the surface thereof, which comprises contacting the oxide coated surface with a pad composed of a fibrous material saturated with an electrolytic solution, attached to an oxide free reference sheet of tinplate, and measuring the potential difference between the oxide coated tinplate and the reference tinplate.

2,894,883
METHOD OF ELECTROPOLISHING URANIUM
David E. Walker, Chicago Heights, and Robert A. Noland, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application July 18, 1949
Serial No. 105,456
4 Claims. (Cl. 204—1.5)

1. The method of electropolishing a uranium article, comprising assembling an electrical circuit including said article as the anode, a cathode, and an electrolyte containing from 35 to 65% by volume of sulfuric acid, from 1 to 20% by volume of glycerine, and from 25 to 55% by volume of water, and passing an electrical current through said circuit to polish the surface of said uranium article.

2,894,884
METHOD OF APPLYING NICKEL COATINGS ON URANIUM
Allen G. Gray, Lewiston, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Original application January 9, 1945, Serial No. 572,893. Divided and this application October 17, 1950, Serial No. 190,671
7 Claims. (Cl. 204—1.5)

1. The method of protectively coating uranium, which comprises anodically etching the uranium in an etch in an aqueous phosphoric acid solution containing chloride ions, cleaning the etched uranium in aqueous nitric acid solution, and promptly electroplating the cleaned uranium in a nickel sulfate electroplating bath.

2,894,885
METHOD OF APPLYING COPPER COATINGS TO URANIUM
Allen G. Gray, Lewiston, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Original application January 6, 1945, Serial No. 571,673. Divided and this application October 17, 1950, Serial No. 190,672
7 Claims. (Cl. 204—1.5)

1. The method of protecting metallic uranium, which comprises anodic etching of the uranium in an aqueous phosphoric acid solution containing chloride ions, cleaning the etched uranium in aqueous nitric acid solution, promptly electroplating the cleaned uranium in a copper electroplating bath, and then electroplating thereupon a metal selected from the group consisting of lead, tin, zinc, cadmium, chromium, and nickel from an aqueous electroplating bath.

2,894,886
FUSED SALT BATH FOR ELECTRODEPOSITION OF TRANSITION METALS
Eugene Wainer, Cleveland Heights, Ohio, assignor, by mesne assignments, to Horizons Titanium Corporation, Princeton, N.J., a corporation of New Jersey
No Drawing. Application July 16, 1954
Serial No. 443,969
12 Claims. (Cl. 204—64)

1. The method of producing a fused salt electrolyte containing a soluble halide of a transition metal of the group consisting of titanium, zirconium, hafnium, niobium, vanadium and tantalum which comprises forming a fused salt bath composed of at least one halide of the group consisting of alkali metal halides and alkaline earth

metal halides, introducing into the fused salt bath a solid transition metal carbide of the group consisting of the carbide of the transition metal and a mutual solid solution of the carbide and the monoxide of the transition metal, and introducing into the solid-containing fused salt bath a halogenating gas produced externally of the fused salt bath and selected from the group consisting of fluorine, chlorine, carbonyl chloride, bromine, carbonyl bromide, and iodine while maintaining said bath under a non-contaminating atmosphere and continuing the introduction of the halogenating gas into the bath until the transition metal content of said solid carbide has been substantially completely converted to the halide thereof in solution in the fused salt bath.

2,894,807
PRODUCTION OF TITANIUM TRIHALIDES
Anthony J. Kolk, Jr., South Euclid, and Dwight E. Davis, Hudson, Ohio, assignors, by mesne assignments, to Horizons Titanium Incorporated, Princeton, N.J., a corporation of New Jersey
No Drawing. Application February 13, 1956
Serial No. 564,890
5 Claims. (Cl. 204—64)

1. A process for preparing a fused salt composition containing a trihalide of titanium from the group consisting of titanium trichloride and titanium trifluoride and adapted to be electrolyzed to produce titanium metal which comprises: forming an anhydrous melt consisting of at least one halide salt from the group consisting of alkali metal halides and alkaline earth metal halides and which is stable at temperatures above 350° C.; charging particles of finely divided titanium carbide into said melt while it is maintained molten at a temperature below about 600° C.; and introducing a halide from the group consisting of HF and HCl into said carbide-containing melt wherein it reacts with the carbide to form the corresponding titanium trihalide in said melt.

2,894,888
ELECTROPHORETIC COATINGS AND COMPOSITIONS
James J. Shyne, Caldwell, N.J., and Wilson D. Fletcher, Mary Esther, Fla., assignors to Vitro Corporation of America, New York, N.Y.
No Drawing. Application September 7, 1956
Serial No. 608,620
16 Claims. (Cl. 204—181)

1. The method of producing an inorganic coating of high wet strength on a conductive surface which comprises contacting said surface with a suspension of finely divided particles of said inorganic substance in a liquid vehicle selected from the group consisting of nitromethane, nitroethane and nitropropane and derivatives thereof in which hydrogen is replaced by halogen and electrophoretically depositing said particles from said suspension, said inorganic substance being capable of being deposited electrophoretically from said liquid vehicle.

2,894,889
JACKETED URANIUM SLUGS AND METHOD
Samuel H. Paine, Jr., Oak Park, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application July 19, 1949
Serial No. 105,667
4 Claims. (Cl. 204—193.2)

1. A process comprising the steps of lining the entire surface of a mold with a composite liner of nickel-plated molybdenum, the molybdenum being in contact with the mold, filling the mold with molten uranium, and cooling the mass to below the melting point of the uranium.

3. An article of manufacture comprising a body of uranium having its entire surface except one end covered with a composite coating of nickel and molybdenum, the nickel being contiguous to the uranium.

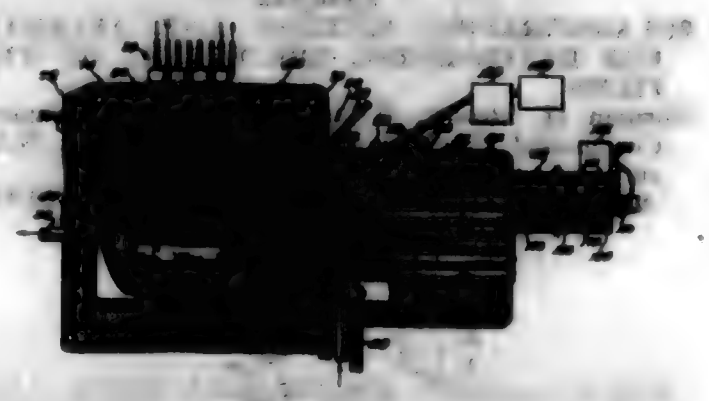
2,894,890
JACKETING URANIUM
Henry A. Saller and John R. Keeler, Columbus, Ohio, assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application July 28, 1949
Serial No. 105,907
11 Claims. (Cl. 204—193.2)

7. A shaped article comprising a uranium core, a sheath thereonround consisting of a material based on at least one metal selected from the group consisting of iron, cobalt, nickel and alloys thereof, and an intermediate metallic bonding layer consisting substantially of a silver base metal.

2,894,891
NUCLEAR REACTOR
John J. Grebe, Midland, Mich., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application December 15, 1949, Serial No. 133,122
5 Claims. (Cl. 204—193.2)

1. In a neutronic reactor, an active portion containing fissionable nuclei and having a plurality of coolant channels extending therethrough, said active portion comprising a plurality of adjacent zones arranged generally along the temperature gradient established in said active portion during operation, each of said zones being characterized by a particular active material of construction individual to that zone, the respective active materials for the respective zones having successively better moderating properties in the direction of negative temperature gradient.

2,894,[illegible]
NEUTRONIC REACTOR CHARGING AND DISCHARGING
Walter H. Zinn, Winnetka, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application May 15, 1951, Serial No. 226,341
9 Claims. (Cl. 204—193.2)



1. A method of removing a body of fissionable material from a neutronic reactor through a closed isolation chamber connected thereto while blocking the escape of substantial amounts of cooling fluid comprising the steps of withdrawing the body into the chamber, freezing the fluid at the end of the chamber adjacent the reactor, opening the chamber, and removing the body.

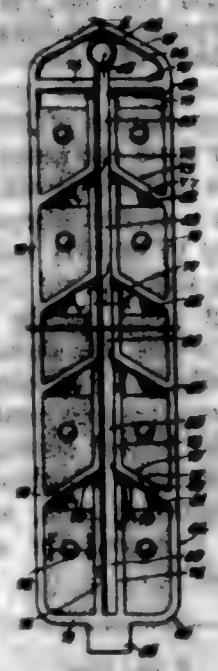
7. A neutronic reactor comprising an active portion having a plurality of horizontal process tubes, each tube having an open end adapted to accommodate bodies of fissionable material, a cooling liquid in each tube, a liquid inlet near one end of each tube, a liquid outlet near the other end, means for circulating the liquid through the tubes, a refrigeration coil around a segment of the tube adjacent the open end and adapted to freeze the cooling liquid within the segment, an isolation chamber attached to the open end of each tube extending longitudinally therefrom, and a shaft slidably disposed through the chamber, one end of the shaft being attachable to the body in each tube and being adapted to move said body between the tube and the chamber, said refrigeration coil being operable to freeze the cooling liquid.

2,894,893

FUEL ELEMENT FOR NUCLEAR REACTOR

Kriegh G. Carney, Jr., Sterlo, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application May 28, 1953, Serial No. 357,269
8 Claims. (Cl. 204—193.2)



1. In combination, fuel members containing thermal-neutron-fissionable material, and a casing comprising elongated mating halves having ribs engaging one another so as to form chambers containing the fuel members, the ribs being composed and having portions oblique to the length of the halves so as to provide a slanting top for each chamber and longitudinal portions extending along the length of the halves so as to define a channel disposed between chambers on either side thereof, the ribs also having spaced openings between each chamber and the channel at a point adjacent the slanting top.

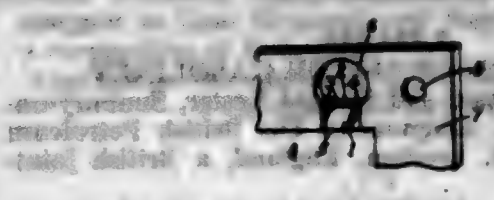
2,894,894

ELECTROLYTIC CELLS

Theodore Roger Ernest Kressman, Frank Lawrence Tye, and Hugh Randall Bell, all of London, England

Continuation of application Serial No. 618,618, October 26, 1956. This application March 19, 1958, Serial No. 722,513
Claims priority, application Great Britain
November 9, 1955
8 Claims. (Cl. 204—301)

1. An electrodialysis cell comprising two electrodes, a series of ion-exchange membranes between two electrodes dividing the space therebetween into compartments, spacers around the edges of the membranes in the shapes of open frames separating the membranes, said membranes and spacers each having consecutively communicating holes through them cooperating to form conduits through the cell at right angles to the membranes, some of said holes extending to the inside edges of said spacers to form passage means through them substantially rectangular in plan connecting said conduits to said compartments, said passage means extending across a substantial part of the length of the edges to which they extend, and rectangular insert means fil-



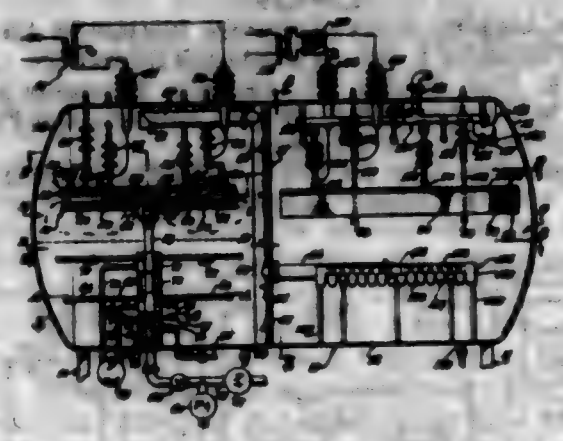
ing each passage means, each said insert means being substantially equal in thickness to the spacer and having parallel side walls of a length equal to the width of such passage means and means extending between the side walls holding them in spaced relation, said insert means defining a plurality of openings spaced longitudinally of the side walls to permit the flow of liquid therethrough and supporting the adjacent membranes across the width of the passage means.

2,894,895

DUAL ELECTRIC TREATER FOR EMULSIONS

Delbert W. Turner, Houston, Tex., assignor to Petrolite Corporation, Wilmington, Del., a corporation of Delaware

Application February 11, 1955, Serial No. 487,551
12 Claims. (Cl. 204—302)



1. An electric treater for emulsions having a continuous phase of oil and a dispersed phase of oil-immiscible particles therein, said electric treater including in combination: a closed container; a set of electrodes in said container comprising a first electrode assembly having a plurality of depending equally-spaced electrodes and a second electrode assembly having upstanding electrodes of the same spacing substantially bisecting the spaces between the electrodes of the first electrode assembly to define a plurality of upright side-by-side open-ended treating spaces each bounded on opposite sides by electrode surfaces of said first and second electrode assemblies; a high-voltage unidirectional source of potential and means for connecting same to said electrode assemblies to establish unidirectional electric fields in said treating spaces; a distributor unit in said container below said set of electrodes and providing a top wall and peripheral walls depending therefrom; pipe means opening on the interior of said distributor unit below said top wall thereof for delivering thereto the emulsion to be treated, said peripheral walls providing openings spaced horizontally for exuding the emulsion as small streams at the periphery of said distributor unit, said small streams combining above said distributor unit, the combined stream rising to said set of electrodes and being thereby divided into individual streams rising through said treat-

ing spaces and rejoining thereabove in the upper interior of said container, said electric fields coalescing the dispersed particles into masses of sufficient size to settle against the rising combined stream and collect in the lower interior of said container; and means for separately withdrawing treated oil and the collected dispersed phase material from the upper and lower interiors of said container.

2,894,896

PRODUCTION OF MOTOR GASOLINES

Ernest Carlton Housam and Ronald Lester, Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a British joint-stock corporation

No Drawing. Application March 12, 1957
Serial No. 645,412
Claims priority, application Great Britain March 22, 1956
6 Claims. (Cl. 208—17)

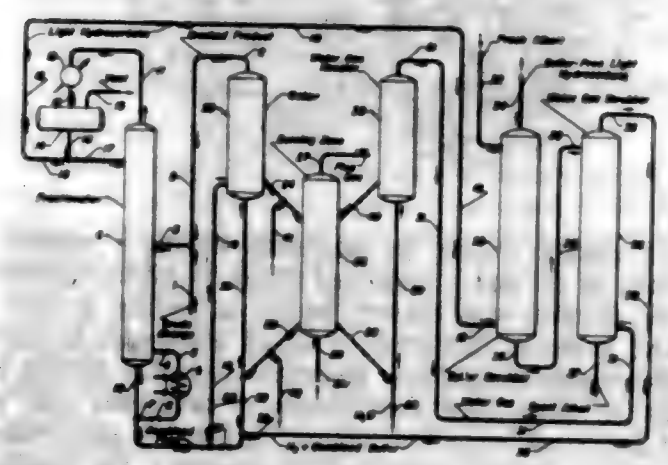
1. A high octane motor gasoline of adequate volatility, said motor gasoline having a Research octane number with 1.5 ml. TEL/IG of at least 100, a volatility of not less than about 44% volume recovered at 100° C. and consisting essentially of a blend of two components, one being a high octane, low volatility gasoline recovered from the products produced by catalytically destructively hydrogenating an aromatic extract derived from the petroleum and boiling above the gasoline range, and the other being a high octane, high volatility gasoline fraction consisting of the lower boiling fraction of catalytically cracked gasoline having an end boiling point between 80° and 120° C.

2,894,897

HYDROCARBON CONVERSION PROCESS IN THE PRESENCE OF ADDED HYDROGEN

Howard E. Post, Skokie, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Application May 28, 1954, Serial No. 433,818
8 Claims. (Cl. 208—111)



2. A process for converting hydrocarbon which comprises contacting said hydrocarbon with hot solid contact material in a coking zone at coking conditions in the presence of hydrogen obtained as hereinafter set forth and converting said hydrocarbon to a cracked product and coke which deposits on said contact material, passing said contact material to a burning zone wherein it is contacted with oxygen-containing gas to oxidize a portion of the coke therefrom thereby raising the temperature of said contact material, returning a portion of the resultant hot contact material from the burning zone to the coking zone as the aforesaid hot contact material, passing another portion of said hot contact material from said burning zone to a water gas producing zone and therein contacting the material with H_2O at conditions to produce water gas, returning the resulting contact material from said water gas producing zone to said burning zone, passing said cracked product to a fractionation zone wherein a light fraction is separated from a heavy fraction, returning said heavy fraction into contact with said hot contact material, passing said light fraction into contact with an alkaline medium, separating a substantially sulfur-free light hydrocarbon fraction from a resulting sulfur-containing alkaline medium, passing said water gas from the water gas producing zone into contact with said sulfur-containing alkaline medium to remove carbon oxides therefrom and to displace combined sulfur from said alkaline medium, separating a substantially neutralized alkaline medium stream and a combined sulfur and hydrogen-containing gas stream and passing the latter stream into said coking zone as the aforesaid hydrogen.

2,894,898

METHOD OF TREATING HYDROCARBONS WITH AN ALUMINA CONTAINING CATALYST COMPOSITE

Willi Oettinger and Wilhelm von Fuener, Ludwigshafen (Rhine), and Otto Geehre, Heidelberg, Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Application May 2, 1955
Serial No. 505,538
Claims priority, application Germany May 7, 1954
6 Claims. (Cl. 208—112)

1. A process for carrying out hydrocarbon reactions with hydrogen, at temperatures of 200 to 600° C., in the presence of a member from the group consisting of catalytically active metals and metal compounds which are applied to alumina as a carrier wherein the catalyst carrier has been prepared by quickly and intimately mixing an aluminate solution with an acid precipitant, the quantity of the precipitant added to the aluminate solution being such that the whole of aluminum hydroxide is precipitated immediately, the precipitated aluminum hydroxide is removed from the precipitation zone as rapidly as it is formed to avoid further contact of the precipitated aluminum hydroxide with additional quantities of the reactants in the precipitation zone, and the precipitated aluminum hydroxide is heated for at least about one-half hour at about 100° C.

2,894,899

METHOD OF CONTACTING FEED OIL WITH COKE IN THE FLUID CONTACT COKING OF RESIDUAL OILS

Carrell L. Crawley, Port Arthur, Tex., assignor to Texaco Inc., a corporation of Delaware

Application April 12, 1955, Serial No. 500,845
2 Claims. (Cl. 208—127)

1. In a fluid coking process wherein a heavy residual oil is contacted with pulverulent coke particles and crack-

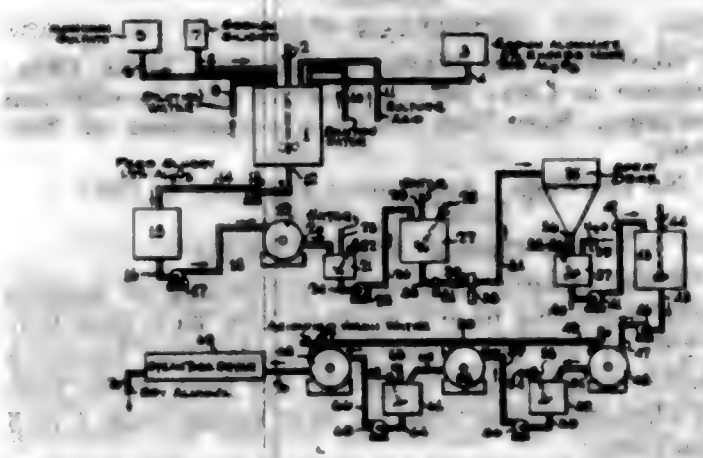
ing and coking are effected in a fluidized bed of coke particles in a cracking and coking zone, cracked products are separated and withdrawn as a vapor from said cracking and coking zone, coke particles from said fluidized bed are separately withdrawn from said cracking and coking zone and subjected to combustion to form highly heated coke particles, the improvement which comprises forming a free falling column of said highly heated coke particles, initially contacting said oil with said highly heated coke particles by dispersing said oil over said highly heated coke particles in said free falling column forming oil-wetted coke particles, maintaining said oil-wetted coke particles at a temperature within the range of 1000 to 1100° F. in the form of a free falling column for a time within the range of about 1 to 5 seconds effecting conversion of said oil-wetted coke particles to vapor and non-agglomerating coke particles, and merging said non-agglomerating coke particles with said fluidized bed of coke particles.

2,894,900

HYDROFORMING PROCESS USING IMPROVED SILICA-ALUMINA CATALYST BASE

Charles E. Hemminger, Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application December 21, 1954, Serial No. 476,702
7 Claims. (Cl. 208—135)



1. The process of hydroforming hydrocarbon fractions boiling within naphtha boiling range which comprises contacting feed naphtha vapors in admixture with a hydrogen-containing gas with a fluidized bed of finely divided catalyst comprising a carrier containing a major proportion of alumina and a minor proportion of silica upon which a hydroforming catalyst is distributed in a hydroforming reaction zone, said carrier being prepared by reacting together sodium aluminate, aluminum sulfate, and sodium silicate in an aqueous medium maintained at a pH of from 9 to 10 followed by filtering of the resultant precipitate, washing and drying the precipitate, maintaining the reactants and catalyst in said reaction zone under active hydroforming conditions of temperature, pressure, and residence time and recovering from said reaction zone a hydroformed naphtha product of improved octane rating.

2,894,901

HYDROFORMING PROCESS AND CATALYSTS

George R. Gilbert, Elizabeth, and Isidor Kirshenbaum, Union, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application March 1, 1955
Serial No. 491,527
15 Claims. (Cl. 208—136)

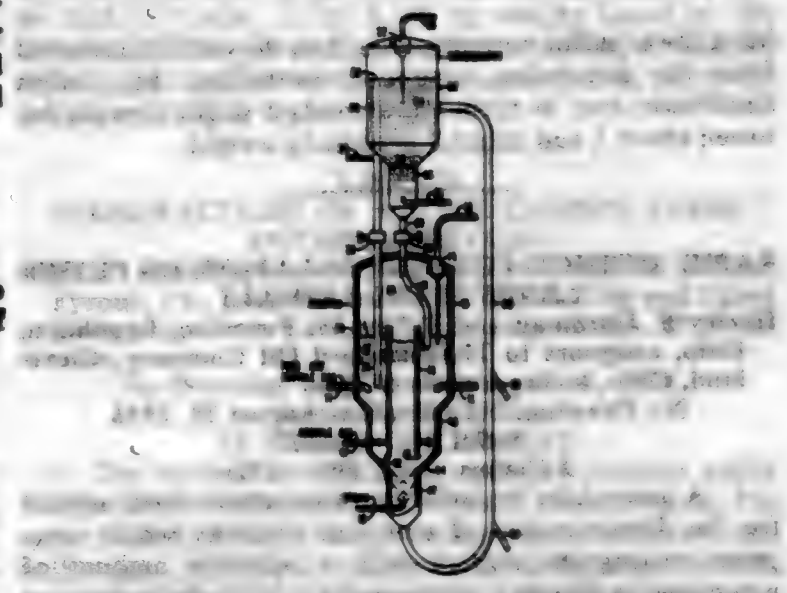
8. A method of hydroforming naphthas which comprises contacting naphtha at an elevated temperature and pressure in the presence of added hydrogen and a catalyst prepared by hydrolyzing a solution of butyl titanate and an aluminum alcoholate with water to produce a slurry of alumina and titania, separating alumina and titania from the slurry and drying and calcining the separated alumina and titania, then impregnating the calcined alumina and titania with ammonium molybdate and drying and calcining the impregnated alumina and titania.

2,894,902

FLUID SOLIDS SYSTEM EMPLOYING A MIXTURE OF CATALYST AND INERT PARTICLES

Edward Woolcock Steele Nicholson, Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application December 30, 1954, Serial No. 478,709
6 Claims. (Cl. 208—149)



1. In a fluid catalytic process in which shot particles are circulated with catalyst to facilitate heat transfer, the improvement which comprises maintaining a dense, fluidized bed of a major proportion of catalyst particles and a minor proportion of shot in the hydrocarbon conversion zone through which the shot particles settle more rapidly than the catalyst, continuously withdrawing shot and catalyst from the reaction zone, the amount of shot withdrawn being substantially greater than the amount of catalyst, passing the withdrawn shot and catalyst to a regeneration or heating zone, maintaining a dense, fluidized bed of catalyst and shot in the latter zone by the passage of oxygen-containing regeneration gas therethrough, withdrawing a stream consisting essentially of shot from the bottom of the regeneration zone and passing it substantially vertically downward into the hydrocarbon conversion zone and discharging the shot into the top portion of the dense fluidized bed in the hydrocarbon conversion zone, withdrawing a stream consisting essentially of regenerated catalyst from the upper part of the dense fluid bed in the regeneration zone, passing the stream of regenerated catalyst substantially vertically downward into the hydrocarbon conversion zone and discharging the freshly regenerated catalyst into the bottom portion of the dense fluidized bed in the hydrocarbon conversion zone.

2,894,903

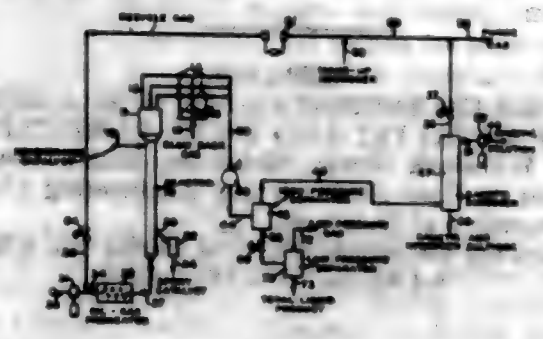
FLUIDIZED DESULFURIZATION OF HYDROCARBON OILS WITH SULFUR CONTAINING CATALYST

Henry G. McGrath, Union, and Joseph A. Kranz, Packsack Lake, N.J., assignors to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

Application November 7, 1955, Serial No. 545,444
10 Claims. (Cl. 208—216)

1. A hydrodesulfurization process for sulfur containing hydrocarbon oil which comprises contacting said oil with a fluidized finely divided mass of molybdenum oxide-sulfur containing catalyst in a conversion zone in the

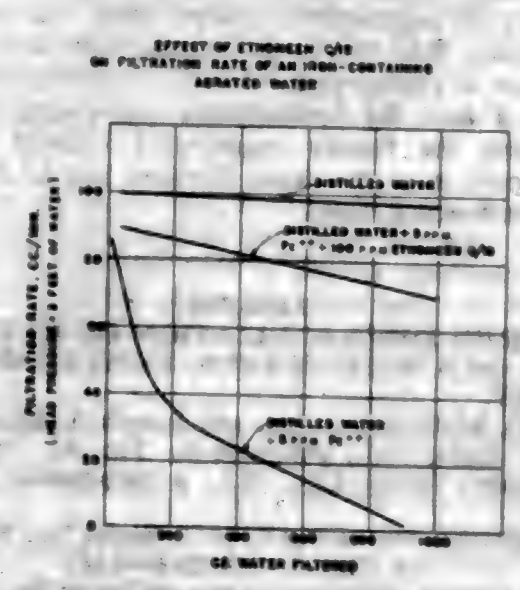
presence of hydrogen under suitable conditions to desulfurize said oil, removing catalyst from the conversion zone, introducing into said conversion zone catalyst having a lower sulfur concentration than the catalyst removed from the conversion zone and controlling the catalyst circulation rate to maintain a catalyst sulfur content between about 1 and about 7 percent by weight.



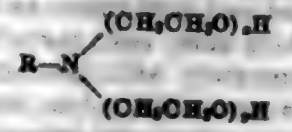
2,894,904
RAPID METHOD FOR THE ISOLATION OF PETROLENES FROM ASPHALT
Harley F. Hardman and Robert W. Foreman, Lyndhurst, Ohio, assignors to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
No Drawing. Application August 28, 1956
Serial No. 606,579
2 Claims. (Cl. 208—337)

1. A process for the isolation of petrolenes from asphalt for the determination of petrolene viscosity which comprises mixing the asphalt with a sufficient amount of n-pentane to dissolve substantially all of the petrolenes in the asphalt, refluxing the asphalt with the n-pentane for a time sufficient to effect complete solution of the petrolenes, flowing the petrolene-pentane solution in a thin film over a surface heated to from 200 to 600° F. at a slow rate under a vacuum of at least 375 mm. to effect removal of the bulk of the pentane and directing a flow of inert gas at a temperature within the range from about 250 to about 600° F. across the surface of the residual petrolene pentane solution to effect substantially complete removal of the residual pentane.

2,894,905
INHIBITING PRECIPITATION OF IRON OXIDE FROM IRON-CONTAINING WATERS
George G. Bernard, Crystal Lake, Ill., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Application May 2, 1958, Serial No. 732,669
8 Claims. (Cl. 210—58)



1. A method of inhibiting precipitation of iron oxide from water, containing dissolved ferrous compounds, upon exposure to air, which comprises adding to said water 1–15 mols per mol of soluble ferrous compound of at least one polyethoxyamine of the formula:



where R is a C_{16}–C_{22} aliphatic radical, and x and y are small integers, with $x+y$ being in the range from 2 to 7.

2,894,906
DRILLING FLUID COMPOSITION FOR POROUS FORMATIONS
James E. R. Sheeler, Odessa, Tex., assignor to Shell Development Company, New York, N.Y., a corporation of Delaware
No Drawing. Application December 23, 1953
Serial No. 400,140
29 Claims. (Cl. 252—8.5)

1. In the drilling of oil wells, the method of overcoming loss of circulation comprising the steps of adding small pieces of rubberized fiber to the drilling fluid, circulating the resultant composition in the well in contact with the face of a porous formation and causing said composition to form a substantially fluid-impervious sheath on the face of said formation.

2,894,907
ACIDIZING WELLS
Jack Newcombe and Wayne S. Fallgatter, Tulsa, Okla., assignors to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey
No Drawing. Application February 6, 1957
Serial No. 638,451
19 Claims. (Cl. 252—8.55)

1. A well treating composition comprising an aqueous solution containing from 1 to about 25% HCl, from 0.01 and 2% of an acid soluble bis-imidazoline having a molecular weight from 166 to 860 and from 0.5 to 25% of an aliphatic monocarboxylic acid having from 1 to 5 carbon atoms.

2,894,908
ACIDIZING WELLS
Jack Newcombe and Wayne S. Fallgatter, Tulsa, Okla., assignors to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey
No Drawing. Application February 6, 1957
Serial No. 638,452
19 Claims. (Cl. 252—8.55)

1. A well treating composition comprising an aqueous solution containing from 1 to about 25% HCl, from 0.01 to 2% of an acid soluble imidazoline-imidazolidine having a molecular weight from 168 to 680 and from 0.5 to 25% of an aliphatic monocarboxylic acid having from 1 to 5 carbon atoms.

2,894,909
SYNTHETIC LUBRICANT
Charles E. Saunders, Silver Spring, Md., assignor to United States of America as represented by the Secretary of the Navy
No Drawing. Application August 9, 1956
Serial No. 603,196
3 Claims. (Cl. 252—34.7)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A water soluble lubricating composition comprising a water soluble polymerized alkylene oxide oil consisting of ethylene oxide and propylene oxide, and substantially 2 percent by weight of ammonium linoleate.

2,894,910

WATER-IN-OIL EMULSION LUBRICANTS

Charles E. Francis, Martinez, and Norman Bolman, Berkeley, Calif., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

No Drawing. Application July 23, 1956
Serial No. 599,329
5 Claims. (Cl. 252—42.7)

1. A lubricant and hydraulic fluid consisting essentially of a water-in-oil emulsion in which the water phase constitutes from about 30 to about 40% of the emulsion and the oil phase constitutes from about 70% to about 60% of the emulsion, said emulsion containing from about 1 to about 10% by weight of hydrolyzed copolymer of a hydrocarbon α-olefin containing from 10 to 40 carbon atoms and a vinyl ester of a lower fatty acid having up to 5 carbon atoms in the mol ratio of from 1/1 to 1/5, respectively and having a molecular weight of from 4,000 to 50,000 and from about 0.01% to about 10% of an oil soluble polyvalent metal C_{8-36} alkyl phenate of the metal of group II of the periodic table having an atomic number of from 12 to 56.

2,894,911

FIRE-RESISTANT HYDRAULIC FLUID

Douglas H. Morston, Pacific Palisades, Calif., assignor to Douglas Aircraft Company, Inc., Santa Monica, Calif.

No Drawing. Application December 16, 1957
Serial No. 702,764
7 Claims. (Cl. 252—78)

1. The composition consisting essentially of a monoalkyl diaryl phosphate in which the aryl groups are members of the group consisting of phenyl, cresyl and xylyl radicals and the monoalkyl group is a saturated alkyl radical having from 4 to 10 carbon atoms, and from 0.2 to 10 percent of poly alkyl methacrylate compatible therewith and effective to increase the viscosity index to above 100 and increase the viscosity at elevated temperature of said phosphate in which the alkyl radical is saturated and has from 2 to 12 carbon atoms.

2,894,912

ISETHIONATE DETERGENT BAR

Robert C. Geitz, Demarest, N.J., assignor to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Application September 21, 1954
Serial No. 457,525
14 Claims. (Cl. 252—121)

1. A detergent bar consisting essentially of from 30 to 70% of water-soluble alkali metal detergent salts of esters of isethionic acid with mixed aliphatic fatty acids having from six to eighteen carbon atoms and an iodine value of less than 20, of which mixed acids at least 75% have from twelve to eighteen carbon atoms and up to 25% have from six to ten carbon atoms, from 2 to 10% of at least one water-soluble suds-boosting detergent salt selected from the group consisting of alkali metal and organic amine higher aliphatic fatty alcohol sulfates, alkyl aryl sulfonates, and higher aliphatic fatty acid taurides, from about 1% to about 9% water, from about 2.5% to about 25% of water-soluble higher fatty acid soap, and from 10 to 40% of at least one higher fatty acid having from about twelve to about twenty-five carbon atoms as a binder and plasticizer, said bar having a pH within the range from 6 to 8, measured as a 10% aqueous solution of the bar composition at 35° C.

2,894,913

ANTIFOAM EMULSION

Robert E. Sullivan, Bay City, and William T. Gregory, Midland, Mich., assignors to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Application February 20, 1958
Serial No. 716,261
2 Claims. (Cl. 252—358)

1. An oil-in-water type emulsion consisting essentially of (1) from 0.5 to 50% by weight based on the weight of the emulsion of a benzene-soluble methylpolysiloxane of at least 50 cps. viscosity at 25° C. containing from 2 to 10% by weight of a filler selected from the group consisting of silica and carbon black and having a particle size no greater than two microns, (2) water and (3) from .03 to 6.5% by weight based on the weight of the water of methylcellulose having a viscosity of at least 400 cps. at 25° C. as measured in a 2% by weight solution in water.

2,894,914

MANUFACTURE OF ACTIVE CARBON FROM ANTHRACITE COAL

John W. Hassler, Oren A. Woolley, and Joseph G. Filicky, Tyrone, Pa., assignors to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware

No Drawing. Application April 30, 1957
Serial No. 655,964
16 Claims. (Cl. 252—445)

1. The method of producing multiple purpose active carbon from anthracite coal which comprises, in the order stated, initially steam activating a batch of raw anthracite coal in pulverulent form at 800° to 900° C. for a sufficient time to increase the porosity and to increase the iodine value of the coal to about 80%, soaking the coal until adequate penetration is had, in a solution of chemical chosen from the group consisting of sodium hydroxide, sodium carbonate and sodium sulfate, in a ratio of about 3.5 to 5 moles of chemical per kilogram of coal, evaporating the solution with the contained coal to dryness, roasting the coal at a sufficient temperature and for a sufficient time to convert a substantial portion of any silica contained in the coal into soluble sodium silicate and the remainder to an insoluble form which admits of ready physical separation, removing from the roasted coal the major portion of the chemical, drying the coal, and steam activating the dried coal in the temperature range of 750° C. to 800° C. for a period of about ninety minutes.

2,894,915

ALUMINA PREPARATION

Carl D. Keith, Munster, Ind., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Application June 24, 1952
Serial No. 295,343
3 Claims. (Cl. 252—463)

1. In the production of hydrous alumina by precipitation from an aqueous solution of a soluble aluminum compound, the method of preventing peptization and of stabilizing the hydrate in the form of alumina monohydrate which comprises contacting with carbon dioxide gas an aqueous suspension of hydrous alumina including hydrous alumina corresponding to the monohydrate form upon drying.

2,894,916

POLYMERS OF HYDROCYANIC ACID

James C. Burleson, Texas City, Tex., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application October 25, 1955
Serial No. 542,779
3 Claims. (Cl. 260—2)

1. A hydrolyzed polymer of hydrocyanic acid prepared by refluxing with at least equimolecular amounts of water

and an alkali at a temperature in the range from about 100° C. to about 160° C. for a period of at least six hours the product obtained by polymerizing hydrocyanic acid in the presence of an alkaline catalyst.

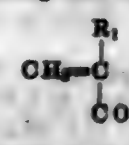
2,894,917

CARBOXYLIC ACID TYPE CATION EXCHANGE RESINS OF LARGE DIMENSIONS

Yoshio Tsunoda, Shibuya-ku, Tokyo, Masumi Seko, Okatomi, Nobeoka-shi, and Masaaki Watanabe, Ryo Ehara, and Teruyuki Misumi, Tsunetomi, Nobeoka-shi, Japan, assignors to Asahi Kasei Kogyo Kabushiki Kaisha, Osaka, Japan

No Drawing. Application April 16, 1956
Serial No. 578,162
Claims priority, application Japan April 20, 1955
7 Claims. (Cl. 260—2.2)

1. A solid unfractured cation exchange resin composition having at least two dimensions each in excess of one cm. and comprising a three dimensionally crosslinked polymer matrix bonded to carboxylic cation exchange groups; said matrix being a polymerization product of a solution mixture of (I) 20–80% by weight of a monoolefinic compound having the structure of



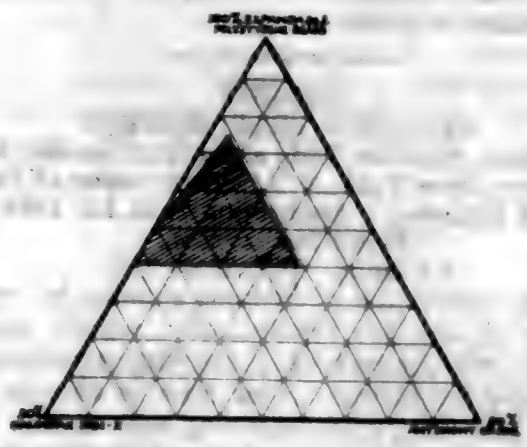
where R_1 is a member selected from the group consisting of hydrogen, halogen and methyl radicals (II) 1–10% by weight of polystyrene (III) 3–10% by weight of divinyl benzene and (IV) 20–40% by weight of dialkylphthalate as a plasticizer, said percentages by weight being based on the total solution mixture; said cation exchange groups being bonded to said matrix.

2,894,918

PARTICULATE FOAMABLE POLYMER COATED WITH FLAME RETARDANT MATERIAL AND METHOD OF MAKING SAME

John J. Killoran and Gaetano F. d'Alelio, Pittsburgh, Pa., assignors to Koppers Company, Inc., a corporation of Delaware

Application February 17, 1954, Serial No. 410,761
9 Claims. (Cl. 260—2.5)



1. A storable composition capable of being expanded and concomitantly coalesced to produce a flame-retardant integral polymeric structure characterized by small voids and a density of approximately 2–3 lbs. per cubic foot consisting essentially of at least 70 parts by weight of polymer beads, said polymer beads being a polymer of a hydrocarbon monomer selected from the group consisting of ethylene, styrene, nuclear dimethylstyrene, isobutylene and vinyl naphthalene, having integrated therewith from 5 to 30 parts of aliphatic hydrocarbon boiling in the range of 30 to 100° C. per 100 parts polymer, containing a surface coating of from 10 to 30 parts by weight of a chlorinated non-volatile hydrocarbon containing at least 65% chlorine selected from the group consisting of chlorinated paraffins and chlorinated naphthalene; and a minor portion of antimony oxide ranging from 2.5 to 20 parts by weight.

2,894,919

FLEXIBLE RESILIENT CELLULAR POLYURETHANE RESIN PRODUCTS

Eli Simon, Los Angeles, and Frank W. Thomas, Burbank, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.

No Drawing. Application August 2, 1954
Serial No. 447,428
8 Claims. (Cl. 260—2.5)

1. The flexible resilient elastomeric cellular material which is the product of reaction of a composition comprising on an approximate percentage by weight basis from 0.4 to 15% of an alkaline catalyst selected from the group consisting of potassium ricinoleate, potassium oleate, sodium tetradecanoate, lithium stearate, cesium laurate, potassium laurate, sodium linoleate, lithium caprylate, quinoline, melamine, morpholine, methylmorpholine, thialdine, N-hydroxy ethyl morpholine, N-hydroxy butyl morpholine, tetraethanol ammonium hydroxide, triethanolamine, and hydrazine, from 0.4 to 15% of water as a gassing agent component, and from 82 to 99% of a prepolymer resin having an amine equivalent from 150 to 1000 prepared from, on a mol percent basis, a polyurethane intermediate prepared by reacting a polyisocyanate and, on a mol percent basis, from 2.5 to 23.5% of a diol alcohol selected from the group consisting of 1,4 butanediol, 2 methylbutanediol, 1,4 hexanediol, 1,3 propylene glycol, butynediol and polypropylene glycol having a molecular weight range of 400 to 10,000, the polyisocyanate being in the proportion of from 64 to 84% of the total resin and being selected from the group consisting of 2,4 toluene diisocyanate, 2,6 toluene diisocyanate, dianisidene diisocyanate, p-p' diisocyanato diphenyl methane and 2,5 naphthalene diisocyanate, from 2.5 to 23.5% of a bifunctional acid selected from the group consisting of malonic acid, succinic acid, sebacic acid, adipic acid, pimelic acid, azelaic acid, ricinoleic, glycolic, hydroxy propionic and 1-hydroxy-decanoic reacted with said intermediate, and from 1 to 16% of a polyhydric alcohol having more than two OH groups reacted with the resultant intermediate selected from the group consisting of glycerol, polyglycerol, mannitol, sorbitol, pantaerythritol, dipentaerythritol, 1,2,6 hexanetriol, and 1,2,4 butanetriol, trimethylpropane and from 0.5 to 8.5% water added subsequent to the addition of the bifunctional acid component.

2,894,920

RESINOUS COMPOSITION COMPRISING EPOXY RESIN, CURING AGENT AND MIXTURE OF DEXTRINES, MALTOSE AND DEXTROSE AND PROCESS FOR PREPARING

Thomas Ramos, New York, N.Y.

No Drawing. Application February 12, 1957
Serial No. 639,624
9 Claims. (Cl. 260—9)

1. Process for the production of synthetic compositions having the properties of an elastomer, which comprises mixing together a resinous epoxide prepared by reacting dihydroxy diphenyl dimethyl methane with epichlorhydrin, a curing agent and a mixture of dextrins, maltose and dextrose at atmospheric temperature.

2,894,921

STABILIZED HYDROPHILIC POLYMERS

John F. Jones, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Application February 28, 1955
Serial No. 491,223
12 Claims. (Cl. 260—17.4)

1. A mixture having improved viscosity stability in aqueous dispersions and solutions comprising water-swellable derivatives selected from the class consisting of (A) linear copolymers of copolymerized monomers consisting essentially of (1) alpha-beta olefinically unsaturated aliphatic dicarboxylic anhydrides, (2) vinyl alkyl ethers having from 1 to 10 carbon atoms in the alkyl group and (3) from 0 to 20% by weight, based on the combined weights of (1) and (2) of a different monoolefinically unsaturated monomer copolymerizable with said anhydrides and vinyl alkyl ethers, and (B) cross-linked copolymers of (1), (2) and (3) with from about 0.5 to about 10% by weight based on (1), (2) and (3) of a monomer having a plurality of $CH_2{=}C<$ groups which is copolymerizable with (1) and (2), said derivatives being selected from the class consisting of salts of monovalent inorganic cations formed by converting at least a portion of the anhydride groups to salts, partial ester-partial salts in which a portion of the anhydride groups are converted to esters of monohydric aliphatic alcohols having from 1 to 18 carbon atoms and a portion of the carboxyl groups are converted to monovalent inorganic salts, and partial amides-partial salts in which a portion of the anhydride groups are converted to amides of ammonia and amines having from 1 to 18 carbon atoms and a portion to monovalent inorganic salts, and from about 3% to about 120% based on the weight of said copolymers of 8-hydroxy quinoline as a stabilizing ingredient.

2,894,922

FATTY ACID ESTERS MODIFIED BY ETHYLENICALLY UNSATURATED SILANE COMPOUNDS

Melvin M. Olson, Milwaukee, and Roger M. Christensen, Whitefish Bay, Wis., assignors to Pittsburgh Plate Glass Company, a corporation of Pennsylvania

No Drawing. Application July 13, 1954
Serial No. 443,134
4 Claims. (Cl. 260—18)

1. A method of forming a coating material, which comprises the steps of agitating and heating to a temperature in a range of about 150° C. to about 350° C. in the substantial absence of oxygen a mixture containing as the sole reactive ingredients about 25 to 80 percent of an ester of a drying oil acid and an aliphatic alcohol, and a hydrolyzable compound of the class consisting of vinyl trihalosilane and vinyl trialkoxy silane, thereby obtaining an unhydrolyzed addition interpolymer of the two and then hydrolyzing the interpolymer to obtain a polysiloxane which is soluble in xylene and toluene and is adapted when spread as a film and heated, to cure to a hard durable state.

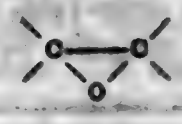
2,894,923

LIGHT STABLE HALOGEN-CONTAINING RESINS

Paul R. Graham, Richmond Heights, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application June 17, 1955
Serial No. 516,312
19 Claims. (Cl. 260—23)

1. A composition resistant to the deteriorating effects of heat and light comprising a vinylidene halide polymer in which at least 50% of the monomer units are vinylidene halide units, any balance being units of an ethylenically unsaturated monomer, and as a stabilizer therefor (*a*) a terphenyl in light stabilizing amounts in the range of 0.5 to 10 parts by weight per 100 parts by weight of vinylidene halide polymer and (*b*) in heat stabilizing amounts a mixture of a cadmium salt of a carboxylic acid and an epoxy compound characterized by the grouping



2,894,924

SYNTHETIC ELASTOMERIC COMPOSITION CONTAINING BUTADIENE-STYRENE AND A ROSIN SOAP

Joseph Reckoff, Dayton, Ohio, assignor to The Dayton Rubber Company, a corporation of Ohio

No Drawing. Application June 19, 1953
Serial No. 362,963
5 Claims. (Cl. 260—27)

1. A fast-curing, non-blooming solid elastomeric composition comprising a butadiene-styrene polymer to which has been added 20 parts by weight of a disproportionated rosin soap and from ½ to 2 parts by weight of potassium hydroxide based upon 100 parts of the copolymer, said soap and hydroxide being intimately admixed with and incorporated into said composition.

2,894,925

POLYETHYLENE CONTAINING ADHESIVE

Thomas C. Morris, Lexington, and Eric C. Johnson, Somerville, Mass., assignors to B. B. Chemical Co., Boston, Mass., a corporation of Massachusetts

Application June 24, 1954, Serial No. 439,122
7 Claims. (Cl. 260—27)

1. A solvent-free thermoplastic adhesive cement comprising thermoplastic components melted together and cooled to form a dry, substantially tack-free body, solid at normal temperatures but softenable by heat to fluid activated condition, said thermoplastic components being composed of a mixture of from 15% to 60% by weight of resinous polyethylene having a molecular weight of from about 7,000 to about 21,000, from 10% to 35% by weight of high molecular weight isobutylene polymeric material from the group consisting of sulphur vulcanizable rubbery copolymers of isobutylene and a diolefin in approximately the proportions of 98:2 and rubbery polyisobutylene having a molecular weight of the order of 100,000 and from 20% to 60% by weight of an essentially hydrocarbon resin having a softening point of at least about 85° C. possessing in heated condition at least limited solvent power toward said polyethylene, said resin being selected from the group consisting of polyterpene resins having a softening point of 85° C. to 125° C., the resin separated from Utah resin-bearing

coal and the resinous polymerization product obtained by catalytic polymerization of a mixture of unsaturated monomers derived from deep cracking petroleum and having a softening point (B.R.) of approximately 100° C., a specific gravity at 25° C. of .970 to .975, a refractive index at 20° C. of 1.5116, an acid number less than one, an iodine value (Wijs) of 120, a bromide number of 7.3 and a molecular weight of approximately 1100.

2,894,926

RUBBERY DIENE SYNTHETIC ELASTOMER COMPOSITION

Larry Jacobson, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Application August 2, 1954
Serial No. 447,397
23 Claims. (Cl. 260—28.5)

1. A synthetic elastomer composition of improved processing qualities, high tensile strength and improved tear resistance, including a vulcanizable rubbery diene synthetic elastomer material, a vulcanizing agent for said elastomer, a vulcanization accelerator for said agent, an inert inorganic loading material having an average particle size substantially within the range of from 0.02 micron to 15 microns, the weight ratio of said loading material to said elastomer material being substantially within the range of from 1:1 to 3.5:1, and a solid chlorinated paraffin wax having between 69% and 71%, inclusive, of chemically combined chlorine, the weight ratio of said chlorinated paraffin wax to said elastomer portion being substantially within the range of 1:20 to 1:1.

2,894,927

IMPROVED FILM-FORMING LATEXES OF CHLOROETHYLENE COPOLYMERS AND PROCESS FOR PREPARING SAME

Max E. Elder, Midland, Roland E. Gunderman, Clare, William G. MacPherson, Bay City, and Clarence D. Parker, Gladwin, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application November 1, 1956
Serial No. 619,669
5 Claims. (Cl. 260—29.6)

1. A process for preparing latexes having improved drying characteristics when deposited as films comprising as essential sequential steps the forming of a first aqueous emulsion of a first monomeric material composed of a chloroethylene monomer selected from the group consisting of vinylidene chloride and vinyl chloride and an acrylic monomer selected from the class consisting of alkyl acrylates having from 1 to 4 carbon atoms in the alkyl group, alkyl methacrylates having from 1 to 4 carbon atoms in the alkyl group, and acrylonitrile and in which said acrylic monomer is present in an amount of at least 10 percent of the weight of said first monomeric material, in an aqueous phase; polymerizing the first emulsion of first monomeric material, while the emulsion is being agitated, to form a first polymer latex; then dispersing into said first latex from 10 to 30 percent of the total weight of monomers used of a second monomeric material composed of a chloroethylene monomer, selected from the group consisting of vinylidene chloride and vinyl chloride, and an acrylic monomer selected from the group consisting of alkyl acrylates having from 1 to 4 carbon atoms in the alkyl group, alkyl methacrylates having from 1 to 4 carbon atoms in the alkyl group, and acrylonitrile, and wherein said acrylic monomer constitutes less than 10 percent of the weight of said second monomeric material; then polymerizing the second monomeric material in the presence of said first polymer latex, while said mixture is being agitated, until polymerization is complete.

2,894,928

SIMULATED SNOW COMPOSITION CONTAINING MINERAL FILLER

Jack T. Holmstine, Short Hills, John A. Verzechi, South Plainfield, and Frank L. Stechbahn, East Orange, N.J., assignors, by mesne assignments, to American Home Products Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application March 23, 1953
Serial No. 344,247
2 Claims. (Cl. 260—33.8)

1. In a quick-drying simulated snow composition comprising a liquid propellant having a superatmospheric vapor pressure at room temperature and a solid organic snow-simulating material, said composition being adapted, when sprayed on a solid surface, to leave a deposit of discrete snow-simulating particles, the improvement which consists in the inclusion in said composition of 0.5–42 percent of a comminuted mineral filler passing a 100-mesh sieve and selected from the class consisting of talc, micaceous talc, mica and mixtures thereof.

2,894,929

RUBBERY COMPOSITIONS REINFORCED WITH SOLID, SUBSTANTIALLY FIBROUS SILICON DIOXIDE

Edwin B. Newton, Akron, Ohio, and Daniel S. Sears, Henrico County, Va., assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Application May 28, 1954
Serial No. 433,289
6 Claims. (Cl. 260—41.5)

1. A composition of matter comprising a major amount of rubbery polyisoprene and, as a reinforcing pigment for said polyisoprene, a minor amount of substantially fibrous, particulate, solid silicon dioxide.

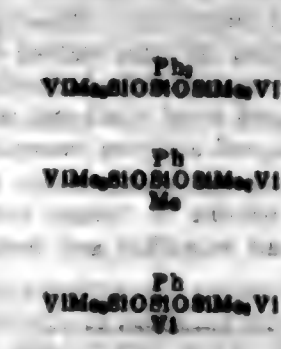
2,894,930

SILOXANE CASTING RESINS

Harold A. Clark, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Application July 17, 1956
Serial No. 598,264
2 Claims. (Cl. 260—42)

1. A composition of matter consisting essentially of (1) from 5 to 75% by weight of a compound of the group consisting of symmetrical dimethyldiphenyldivinyldisiloxane,



and

where Me, Ph and Vi represent the methyl, phenyl and vinyl radicals respectively, and (2) from 25 to 95% by weight of a polysiloxane in which the polymer units are selected from the group consisting of monovinylsiloxane, phenylvinylsiloxane, monophenylsiloxane, phenylmethylsiloxane, monomethylsiloxane and diphenylsiloxane and up to 20 mol percent siloxane units of the formula $R_2SiO_{.5}$ in which R is of the group consisting of vinyl, methyl and phenyl radicals, in said polysiloxane (2) at least 10 mol percent of the units being vinylsiloxane units and in said polysiloxane (2) the phenyl to silicon ratio being from .25:1 to 1.1:1 and (3) a peroxide curing agent.

2,894,931

COMPOSITIONS CONTAINING POLYHYDROXY ETHERS OF PHENOL-ALDEHYDE RESINS AND POLYMETHYLOL PHENOL ETHERS

George R. Somerville, Morris Plains, and Henry W. Howard, South Orange, N.J., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

No Drawing. Application September 23, 1955
Serial No. 536,290
5 Claims. (Cl. 260—43)

1. A curable composition comprising a mixture of (1) a polyol consisting of a fusible phenol-formaldehyde resin having from 3 to 12 phenolic units separated by $—CH_2—$ groups wherein at least two of the phenolic OH groups have been converted to $—OR_1OH$ groups wherein R_1 is an alkylene group containing up to 4 carbon atoms, and (2) an 2-alkenyloxybenzene containing a single alkenyloxy group and being substituted on from 1 to 3 of the ring positions 2, 4 and 6 relative to the alkenyloxy group with $—CH_2OH$ groups, the components defined in (1) and (2) above being combined in a weight ratio of 9:1 to 1:9.

2,894,932

ADHESIVE COMPOSITION COMPRISING AN ACRYLATE MONOMER, AN UNSATURATED POLYESTER AND POLYVINYL METHYL ETHER

Erich Bilder, Hanau, and Hubert Koert, Gross-Auheim, Germany, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany

No Drawing. Application April 11, 1957
Serial No. 652,083
Claims priority, application Germany April 19, 1956
10 Claims. (Cl. 260—45.4)

1. An adhesive composition containing as essential binding agent a combination of at least one lower aliphatic ester of an acrylic acid selected from the group consisting of acrylic, methacrylic and ethacrylic acids, at least one unsaturated polyester resin obtained by the esterification of a short chained aliphatic dihydric alcohol and a short chained ethylenically unsaturated aliphatic dicarboxylic acid and at least one polyvinyl methyl ether compatible with the polyester resin and also containing a catalytic organic peroxide as a hardening catalyst the proportion of acrylic compound to polyester to polyvinyl alkyl ether being 25–90%:5–50%:10–60%.

2,894,933

VINYL AROMATIC POLYMERS STABILIZED WITH UREIDES

William K. Schweitzer, Jr., Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application July 2, 1956
Serial No. 595,867
7 Claims. (Cl. 260—45.9)

1. A composition of matter consisting essentially of a polymeric body consisting of a polymerized monovinyl aromatic hydrocarbon of the benzene series and as a stabilizing agent for inhibiting discoloration and embrittlement, from 0.5 to 5 percent, based on the weight of the polymer, of a urea derivative selected from the group consisting of biuret and urea derivative having the general formula:

wherein X represents a member of the group consisting of hydrogen, alkyl radicals containing from 1 to 4 carbon atoms, alkenyl radicals containing from 3 to 4 carbon atoms, acetyl and the phenyl radical, and Y is a member of the group consisting of the phenyl and alkyl radicals containing from 1 to 4 carbon atoms.

2,894,934

SYNTHETIC RESIN AND INSULATED ELECTRICAL CONDUCTOR

Charles A. Burkhard, Alplaus, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Application April 13, 1956
Serial No. 578,148
15 Claims. (Cl. 260—75)

1. A polyester resin prepared by heating at a temperature of about 50 to 250° C. a mixture of ingredients consisting of an alkoxybenzene dicarboxylic acid, a dihydric alcohol, and a polyhydric alcohol containing at least three hydroxyl groups, the proportions of ingredients being selected to provide from 1 to 6 hydroxyl groups per carboxyl group and from 0.1 to 7.0 equivalents of polyhydric alcohol per equivalent of dihydric alcohol.

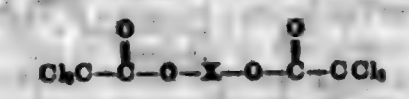
2,894,935

METHOD FOR THE PREPARATION OF POLYURETHANES

William F. Tousignant, Midland, and Huey Plodger, Jr., Freeland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application March 21, 1956
Serial No. 572,813
7 Claims. (Cl. 260—77.5)

1. Method for the preparation of polyurethanes which comprises mixing a bis (trichloroacetoxy) ester of a linear diol having the general formula:



wherein the unit —O—X—O— is a bivalent organic radical obtained by removing the terminal hydrogen atoms from a diol, with a disecondary diamine selected from the group consisting of heterocyclic diamines, N,N'-bis substituted diamines of the formula:

HNZ—R—ZNH

wherein Z is an alkyl group having from 1 to 4 carbon atoms and R is selected from the group consisting of alkylene, arylene and aralkylene radicals and mixtures thereof; and subjecting the mixture of the ester and the diamine with formation of chloroform to heat a temperature between about 25 and 150° C. until substantial portions of the reactant materials are condensed and converted to a polyurethane.

2,894,936

REACTION PRODUCTS OF 1,3,4-TRIMETHYLENECYCLOHEXANE WITH ALPHA,BETA-ETHYLENICALLY UNSATURATED COMPOUNDS, THEIR PREPARATION AND HOMOPOLYMERS THEREOF

Richard E. Benson, Claymont, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application October 22, 1956
Serial No. 617,236
23 Claims. (Cl. 260—78.4)

1. A 6-methylene-1,2,3,4,5,6,7,8-octahydronaphthalene having on at least one of the carbon atoms in the 2- and 3-positions at least one substituent which is selected from the class consisting of —CN, $—NO_2$, —CHO, —COR, —COOH, —COOR, $—CONH_2$, —COCl, $—SO_2R$, $—C_6H_5$, $—CH=CH_2$, and, together with a substituent on one of the adjacent carbon atoms in the 2- and 3-positions, —CO—O—CO—, R in said substituents being hydrocarbon free from aliphatic unsaturation of 1 to 6 carbon atoms, any other substituents on the carbon atoms in the 2- and 3-positions being hydrocarbon free

from aliphatic unsaturation and having from 1 to 6 carbon atoms.

2. A homopolymer of a 6-methylene-1,2,3,4,5,6,7,8-octahydronaphthalene as set forth in claim 1.

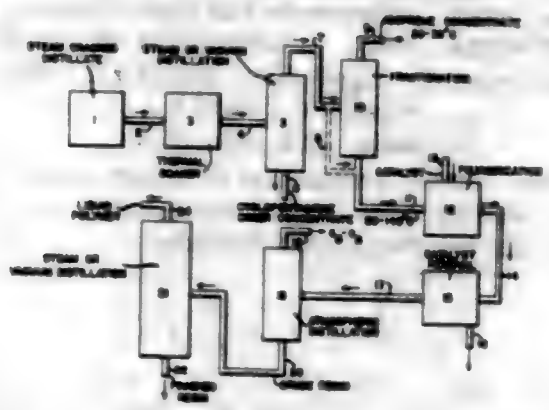
2,894,937

PROCESS FOR PREPARING PETROLEUM RESINS II

Fred W. Banes and Joseph F. Nelson, Westfield, and Robert F. Leary, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Continuation of application Serial No. 318,222, November 1, 1952. This application May 1, 1956, Serial No. 581,943

1 Claim. (Cl. 260—82)



In a process for the preparation of improved petroleum resins, the combination which comprises isolating a steam cracked hydrocarbon petroleum fraction boiling between about 20 and 140° C., heating said steam cracked fraction to a temperature sufficient to dimerize substantially all cyclodienes, stripping the resulting mixture to a temperature sufficient to separate an overhead product from the dimerized cyclodienes, said overhead product containing more than 3.5 wt. percent isoprene, fractionating said overhead product to reduce the isoprene content to below about 3.5 wt. percent, recovering a fraction reduced in isoprene content and having the following distillation analysis and composition:

Distillation

	Weight percent
I.B.P.–38° C.	0–15
38–70° C.	25–50
70–130° C.	35–70
130°+	<5

Composition

Dioelfins, Conj.	11–25
Isoprene	0–3.5
Piperylene	7–12
Cyclopentadienes	0–2
Others	4–7.5
Aromatics	18–41
Benzene	15–30
Toluene	3–10
C_8 aromatics	<1
Paraffins	0–5
Olefins	35–70

and polymerizing said latter fraction in the presence of an aluminum halide catalyst at a temperature between −40 to +70° C. to produce a resinous product.

2,894,938

COPOLYMER OF A STYRENE COMPOUND AND AN UNSATURATED ALCOHOL

Earl C. Chapin, Springfield, and Richard F. Smith, Ludlow, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application January 12, 1955 Serial No. 481,476

5 Claims. (Cl. 260—88.1)

1. A process for preparing a copolymer of an unsaturated alcohol and a styrene compound in which copolymer the unsaturated alcohol is combined to the extent of from 2 to 30% by weight, which comprises mixing 30–70% by weight of the styrene compound with, correspondingly, 70–30% by weight of the unsaturated alcohol, and a free radical peroxide catalyst in an amount up to 5% by weight of the monomer mixture, purging the reaction vessel of substantially all the oxygen therein to produce substantially oxygen-free conditions and heating the resulting mixture in such oxygen-free conditions at from 180 to 300° C. under at least autogenous pressure for from 10 to 60 minutes, said unsaturated alcohol being a member of the group consisting of allyl alcohol, methallyl alcohol and mixtures thereof, and said styrene compound being a member of the group consisting of styrene, ring-substituted alkyl styrenes, ring-substituted chlorostyrenes, ring-substituted alkyl chlorostyrenes and mixtures thereof.

2,894,939

PROCESS FOR UPGRADING POLYMERIZED FATTY ACID MIXTURES

Burt L. Hampton, Port St. Joe, Fla., assignor to The Glidden Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Application September 23, 1957 Serial No. 685,376

14 Claims. (Cl. 260—97.7)

1. A process for treating a polymerized fatty acid mixture, said mixture containing added halogen substances, which consists of treating said mixture was zinc to remove said added halogen substances and recovering therefrom a polymerized fatty acid mixture substantially free from said added halogen substances.

2,894,940

PRODUCTION OF SYNTHETIC RESINOUS MATERIALS BY ACID CHARRING OF LIGNINS

Russell L. Sperry, Ojai, Calif.

No Drawing. Application March 30, 1956 Serial No. 574,992

23 Claims. (260—124)

1. A method for producing high molecular-weight synthetic organic acid materials, including: charring lignin materials with an acid selected from the group consisting of sulfuric acid, sulfur trioxide and hydrochloric acid in amount between about 0.2 part and an excess of acid on a water-free basis per part of lignin material, such charring being produced at charring temperatures below about 350° F. to yield a black resin-like product which is substantially insoluble in boiling alkali metal hydroxide solutions, but reacts with and becomes soluble in alkali metal hydroxides at temperatures above about 450° F. to yield water-soluble alkali metal salts of high molecular-weight organic acids; and digesting said resin-like char with alkali metal hydroxide at temperatures above about 450° F. and thereby forming alkali metal salts of said high molecular-weight organic acids.

2,894,941
PROCESS FOR DIAZOTIZING PRIMARY AROMATIC AMINES

Gustave B. Bachman, Lafayette, and Takeo Hokama, West Lafayette, Ind., assignors to Purdue Research Foundation, Lafayette, Ind., a corporation

No Drawing. Original application October 3, 1956, Serial No. 613,611, now Patent No. 2,829,029, dated April 1, 1958. Divided and this application January 24, 1958, Serial No. 710,863
8 Claims. (Cl. 260—141)

1. A process for diazotizing primary aromatic amines which comprises contacting a primary aromatic amine with the complex of boron trifluoride and dinitrogen trioxide having the formula $BF_3 \cdot N_2O_3$.

2,894,942
METHOD OF PREPARING AROMATIC AZOAMINO COMPOUNDS

William R. Hydre, New Kensington, Pa., and Theodore L. Willard, Minneapolis, Minn., assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Application December 19, 1956
Serial No. 629,212
18 Claims. (Cl. 260—205)

1. A method for preparing aromatic aminoazo compounds comprising diazotizing at a temperature between about 0 and 50° C. an aromatic monoamine having a hydrogen atom on the carbon atom para to the amino group, said monoamine being selected from the class consisting of unsubstituted aromatic monoamines, halogen substituted aromatic monoamines and lower alkyl substituted aromatic monoamines of the benzene series, with a nitrite and from about 1.03 to about 1.3 molar equivalents based on the nitrite of a mineral acid, said monoamine being present in a ratio of at least 2.5 and not more than about 11 moles for each mole of nitrite to thereby form a diazoamino compound and rearranging the diazoamino compound in the presence of from about 0.06 to about 1.3 moles based on the nitrite of a Friedel-Crafts catalyst at a temperature up to about 75° C.

2,894,943
ERYTHROMYCIN RECOVERY PROCESS

Harrison A. Nelson, Charles M. Large, Malcolm E. Bergy, and Herman Hoeksema, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application August 16, 1954
Serial No. 450,228
12 Claims. (Cl. 260—210)

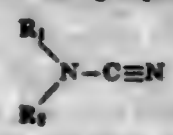
1. A process for the recovery of erythromycin from a solution of erythromycin free base in a water-immiscible solvent which comprises extracting said solution with an aqueous solution of a saturated polycarboxylic acid having at least four carbon atoms, said solution having a pH between about 5 and about 6.5.

2,894,944
NITROGEN CONTAINING STARCH DERIVATIVES

Eugene F. Paschall, Orland Park, Ill., assignor to Corn Products Company, a corporation of Delaware

No Drawing. Application November 14, 1956
Serial No. 621,990
6 Claims. (Cl. 260—233.3)

2. A process for preparing starch imino disubstituted carbamate which comprises reacting starch with a disubstituted cyanamide, the pH being above 7 during the reaction, said cyanamide being represented by the formula



wherein R_1 and R_2 are from the group consisting of alkyl, alkene and aryl.

2,894,945
DICARBOXYL STARCHES AND METHOD OF PREPARATION

Bernard T. Hofreiter, Ivan A. Wolff, and Charles L. Mehltretter, Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application December 19, 1956
Serial No. 629,425
3 Claims. (Cl. 260—233.3)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for preparing dicarboxyl starch comprising reacting periodate-oxidized starch with a water-soluble inorganic salt of chlorous acid in an aqueous medium at a pH from about 3 to 5 at a temperature from about 0° C. to 50° C., the salt of chlorous acid being employed in an amount of at least 3 moles per aldehyde group of the starch, whereby all the aldehyde groups of the starch are oxidized to carboxyl groups without appreciable depolymerization of the starch.

2,894,946
2-AROYLMETHYL-3-OXO-3,4-DIHYDRO - 1,4,2-BENZOTHIAZINES AND THEIR PREPARATION

Frederick K. Kirchner, Delmar, N.Y., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Application June 28, 1956
Serial No. 592,483
16 Claims. (Cl. 260—243)

11. A process for preparing 2-aroylmethyl-3-oxo-3,4-dihydro-1,4,2-benzothiazine wherein the aryl portion of the aroyl radical is a phenyl radical having from one to three substituents selected from the group consisting of alkyl, lower-alkoxy, lower-alkylmercapto, lower-alkylsulfonyl, amino, lower-acylamino, nitro, hydroxy and halogen, which comprises heating a β-benzoylacrylic acid with 2-aminobenzenethiol in an inert solvent at a temperature between about 50° C. to 125° C.

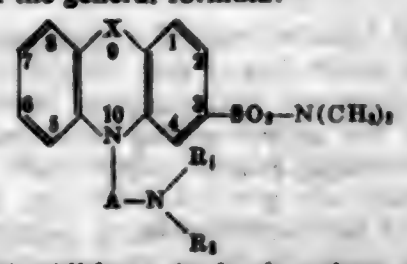
14. 2-aroylmethyl-3-oxo-3,4-dihydro-6X-1,4,2 - benzothiazine wherein the aryl portion of the aroyl radical is a phenyl radical substituted by from one to three substituents selected from the group consisting of higher alkyl, lower-alkoxy, lower-alkylmercapto, lower-alkylsulfonyl, amino, lower-acylamino, nitro, hydroxy and halogen and X is selected from the group consisting of hydrogen and halogen atoms.

2,894,947
PHENTHIAZINE DERIVATIVES

Robert Michel Jacob, Ablon-sur-Seine, and Gilbert Louis Regnier, Paris, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a corporation of France

No Drawing. Application July 22, 1957
Serial No. 673,152
Claims priority, application France August 1, 1956
6 Claims. (Cl. 260—243)

1. A member of the class consisting of phenthiazine derivatives of the general formula:



and their acid addition salts having pharmaceutically acceptable anions where X is selected from the class consisting of a sulphur atom and an SO and SO_2 group, R_1 and R_2 when individual groups each is a member of the class consisting of lower alkyl groups and a hydrogen atom with at least one representing a lower alkyl group and R_1 and R_2 when taken together with the adjacent

nitrogen atom collectively represent a mononuclear heterocyclic group selected from the class consisting of pyrrolidino, piperidino, morpholino, piperazino, 4-lower alkyl piperazino, 4-ω-lower hydroxyalkyl piperazino and 4-ω-acetoxyalkyl piperazino groups, and A represents a divalent, saturated, wholly aliphatic hydrocarbon group containing two to five carbon atoms of which at least two constitute a chain between the nitrogen atoms to which the group A is connected.

2,894,948

3,7-DISULFAMYL-BENZOTHIADIAZINE 1,1-DIOXIDES

George De Stevens, New Providence, and Lincoln Harvey Werner, Summit, N.J., assignors to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey

No Drawing. Application December 20, 1957
Serial No. 703,998

7 Claims. (Cl. 260—243)

1. 6 - R-3,7 - disulfamyl - 1,2,4-benzothiadiazine-1,1-dioxides, in which R stands for a member of the group consisting of halogen and halogeno-methyl.

4. 3-mercapto-6-R-7-sulfamyl-1,2,4-benzothiadiazine-1,1-dioxide, in which R stands for a member of the group consisting of halogen and halogeno-methyl.

2,894,949

THERAPEUTIC COMPOSITION

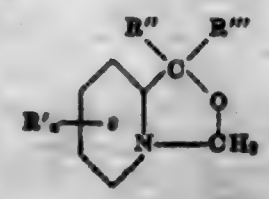
Charles H. Tilford, Cincinnati, Ohio, Frederick J. McCarty, Ann Arbor, Mich., and Marcus G. Van Campen, Jr., Berkeley, Calif., assignors to The Wm. S. Merrell Company

No Drawing. Application January 6, 1958
Serial No. 707,445

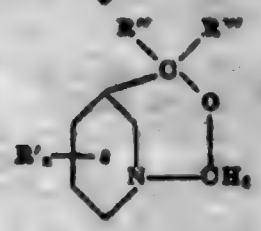
6 Claims. (Cl. 260—244)

1. The compounds of the formulas selected from the group consisting of

(a)

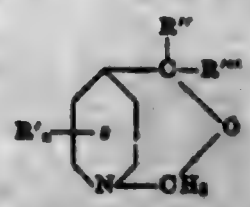


(b)



and

(c)



in which *s* signifies that the rings are saturated, *n* represents an integer from 1 to 4 inclusive, R′ represents a substituent selected from the group consisting of the hydrogen atom and the methyl and ethyl radicals and R″ and R‴ represent substituents selected from the group consisting of the phenyl, phenyl lower alkyl, lower alkylphenyl, lower alkoxyphenyl, halophenyl and thienyl radicals and in which R″ and R‴ when taken together with the carbon atom to which they are attached represent 9(10)-anthranylidene.

6. 2,2-di-(o-tolyl)-3-oxa-5-azabicyclo[3.2.2]nonane.

2,894,950

METHOD OF PRODUCING TRIALLYL ISOCYANURATE

Billy E. Lloyd and Fred L. Kelly, Chester, Va., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Application July 2, 1957
Serial No. 669,437

3 Claims. (Cl. 260—248)

1. A method of producing triallyl isocyanurate by reaction between cyanuric acid, caustic alkali and allyl chloride which comprises, forming a mixture of cyanuric acid and caustic alkali in an aqueous reaction medium, the mol ratio of caustic alkali to cyanuric acid being at least 0.7:1, gradually adding allyl chloride to said mixture in a total amount equal to a mol ratio to cyanuric acid of at least 5:1, adding caustic alkali to said mixture in amounts proportioned to the addition of allyl chloride so as to maintain the alkalinity of the reaction mixture between pH 9.5 and pH 11 substantially throughout the reaction period, maintaining the temperature of the reaction mixture between 60° and 100° C., and recovering triallyl isocyanurate from the resulting reaction product.

2,894,951

HETEROCYCLIC POLYAMINE SALTS OF PHOSPHORODITHIOIC ACID ESTERS AND COMPOSITIONS CONTAINING THE SAME

Allen F. Millikan, Crystal Lake, and Gifford W. Crosby, River Forest, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Application April 25, 1957
Serial No. 655,811

10 Claims. (Cl. 260—248.5)

1. A composition consisting essentially of a mixture of (1) an ammonium salt of a diester of phosphorodithioic acid of the formula $(RO)_2P(S)SH$, where R is a C_4–C_{20} radical selected from the group consisting of alkyl, phenyl, alkylphenyl, and phenylalkyl radicals, and (2) a heterocyclic polyamine salt of a diester of the formula $(RO)_2P(S)SH$, where R is as hereinbefore defined, said heterocyclic polyamine being selected from the group consisting of hexamethylenetetramine, tri-lower alkyl cyclotrimethylenetriamines, piperazine, lower alkyl-substituted piperazines, and lower alkyl isomelamines, including sufficient amount of compound (2) to prevent decomposition of the mixture and evolution of hydrogen sulfide.

6. A heterocyclic polyamine salt of a phosphorodithioic acid ester of the formula $(RO)_2P(S)SH$, where R is a C_4–C_{20} radical selected from the group consisting of alkyl, phenyl, alkylphenyl, and phenylalkyl radicals, and where the heterocyclic polyamine is selected from the group consisting of hexamethylenetetramine, tri-lower alkyl cyclotrimethylenetriamines, piperazine, lower alkyl-substituted piperazines, and lower alkyl isomelamines.

9. A method of preparing stable derivatives of phosphorodithioic acid which comprises mixing a phosphorodithioic acid ester of the formula $(RO)_2P(S)SH$, where R is a C_4–C_{20} radical selected from the group consisting of alkyl, phenyl, alkylphenyl, and phenylalkyl radicals, with formaldehyde and passing ammonia through the mixture to produce a stable composition as defined in claim 1.

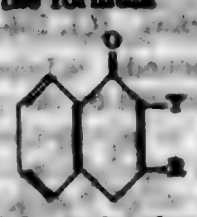
2,894,952

INDENONES SUBSTITUTED BY QUINOLYL, PYRIDYL AND BENZIMIDAZOLYL RADICALS

Edward D. Amstutz, Bethlehem, Pa., and Geraldine Lynch Krueger, Cincinnati, Ohio, assignors to The Wm. S. Merrell Company

No Drawing. Application September 11, 1957
Serial No. 683,214
7 Claims. (Cl. 260—289)

1. Compounds of the formula



wherein R is selected from the class consisting of phenyl, lower alkylphenyl, lower alkoxyphenyl and halophenyl radicals and Y is selected from the class consisting of 2-pyridyl, 2-quinolyl and 2-benzimidazolyl radicals.

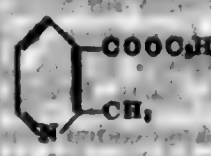
2,894,953

PROCESS FOR THE PRODUCTION OF PYRIDINE DERIVATIVE

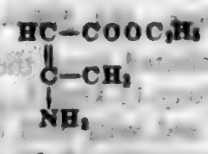
Yoshinobu Sato and Hiroshi Mishima, Nishishinagawa, Shinagawa-ku, Tokyo-to, Japan, assignors to Sankyo Company, Ltd., Tokyo-to, Japan

No Drawing. Application November 20, 1956
Serial No. 623,200
Claims priority, application Japan December 16, 1955
2 Claims. (Cl. 260—295.5)

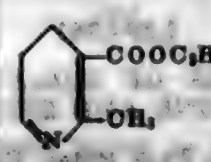
1. Process for the production of a pyridine compound having the formula



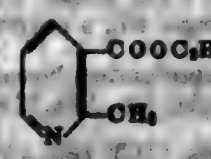
which comprises reacting acrolein with a compound having the formula



in absolute alcohol in the presence of a catalyst of piperidine, whereby a mixture of compounds having the general formulas



and



are obtained, and then oxidizing said mixture with sodium nitrate and sulfuric acid.

2,894,954

METHOD OF SELECTIVELY EXTRACTING AMINO ACIDS

Clyde C. DeWitt, Lansing, and Merlyn W. Fogle, Midland, Mich., assignors to Eagle Ottawa Leather Company, Grand Haven, Mich., a corporation of Michigan

Application April 25, 1957, Serial No. 655,048
10 Claims. (Cl. 260—309)

2. A method of separating an amino acid from a solution of a plurality of amino acids, including the steps of flowing an aqueous solution of a solvent acid in a strength less than 15% selected from the class consisting of hydrochloric acid and hydrobromic acid downwardly countercurrent to an alcohol selected from the class consisting of normal butyl alcohol, isobutyl alcohol, normal amyl alcohol and isoamyl alcohol in a plurality of liquid-to-liquid contacting zones, introducing an aqueous solution of a plurality of amino acids containing less than about 20% of such acids into an intermediate zone, removing an alcohol solution of a desired amino acid from adjacent an upper contacting zone, separating the alcohol from the desired amino acid solute, removing a remaining amino acid from adjacent a bottom of a liquid-to-liquid contacting zone, separating the solvent acid from its solute and removing the desired amino acid from said separating step.

2,894,955

ORGANIC COMPOUNDS

Brooke D. Aspergren and Robert B. Moffett, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application November 19, 1956
Serial No. 622,806
5 Claims. (Cl. 260—313)

1. 2,2 - dimethyl - α-phenyl-α-isopropyl-1-pyrrolidinebutyronitrile free base.

5. A compound selected from the group consisting of 2,2 - dimethyl - α-phenyl-α-isopropyl-1-pyrrolidinebutyronitrile free base and 2,2-dimethyl-α-phenyl-α-isopropyl-1-pyrrolidinebutyramide free base.

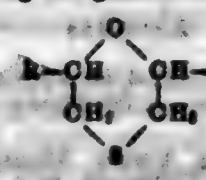
2,894,956

PREPARATION OF 1,4-OXATHIANE

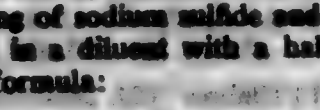
James M. Whisenhunt, Freeport, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application April 2, 1956
Serial No. 575,302
9 Claims. (Cl. 260—327)

1. In a process for preparation of 1,4-oxathiane and its derivatives having the general formula:



where R and R_1 represent a radical selected from the group consisting of hydrogen and alkyl groups having less than 4 carbon atoms, wherein a sulfide selected from the group consisting of sodium sulfide and potassium sulfide is intermixed in a diluent with a halogenated ether having a general formula:



where X represents a halogen selected from the group consisting of Cl, Br, and I, and where R and R_1 represent a radical selected from the group consisting of hydrogen and alkyl groups having less than 4 carbon atoms and wherein the mixture is heated to react the sulfide with said ether to form the oxathiane product and the oxathiane product is recovered from the reacted mass, the improvement which comprises intermixing the sulfide and the ether in a solution consisting essentially of 30 to 70 percent by volume of an unsubstituted glycol having a boiling point in the range of 150 to 350° C. and the remainder water as said diluent and heating the sulfide and the said ether in the diluent to react the sulfide and said ether to form the oxathiane product at a temperature ranging from 80 to 180° C.

2,894,957

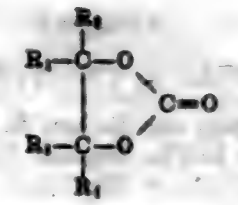
REFINING OF CYCLIC ORGANIC CARBONATES

John R. Anderson, Pittsburgh, Pa., and Werner C. Von Dohlen, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

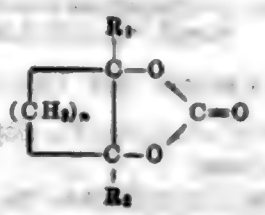
Application October 18, 1954, Serial No. 462,814

8 Claims. (Cl. 260—340.2)

1. A process for separating water from admixture with a cyclic organic carbonate having a formula selected from the group consisting of



and



wherein R_1, R_3, R_3 and R_4 are each selected from the group consisting of hydrogen, lower alkyl groups and lower alkenyl groups and n is a whole number not exceeding 4, which comprises adding to a water mixture of said carbonate a water-insoluble aromatic hydrocarbon primary solvent in which said carbonate is soluble, thereby forming a primary solvent-carbonate phase and a water phase immiscible with one another, separating from the mixture said primary solvent-carbonate phase, adding to said primary solvent-carbonate phase a non-aromatic hydrocarbon secondary solvent in which said primary solvent is miscible but in which said carbonate is immiscible, thereby forming a primary solvent-secondary solvent phase and a carbonate phase immiscible with one another, and separating and recovering said carbonate.

2,894,958

2-ACETYL-7-OXO - 1,2,3,4,4A,4B,5,6,7,9,10,10A - DODECAHYDROPHENANTHRENE AND PROCESS

Moses Wolf Goldberg, Upper Montclair, and William Edwin Scott, North Caldwell, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Application February 21, 1957
Serial No. 641,480

13 Claims. (Cl. 260—340.9)

3. Cyclic ethylene acetal of 2-acetyl-7-methoxy-1,2,3,-4,9,10-hexahydrophenanthrene.

8. A process which comprises heating 1-vinyl-6-methoxy-3,4-dihydronaphthalene with methyl vinyl ketone in an inert solvent, isomerizing the 2-acetyl-7-methoxy-1,2,3,9,10,10a-hexahydrophenanthrene thus obtained in acid solution to produce 2-acetyl-7-methoxy-1,2,3,4,9,10-hexahydrophenanthrene, refluxing the last named compound with ethylene glycol and p-toluene sulfonic acid to produce the cyclic ethylene acetal of said compound, reducing said cyclic ethylene acetal with lithium and lower alkanol in liquid ammonia at a low temperature to obtain the cyclic ethylene acetal of 2-acetyl-7-methoxy-1,2,3,4,4a,5,8,9,10,10a-decahydrophenanthrene, and hydrolyzing the last named compound in acid solution to obtain 2-acetyl-7-oxo-1,2,3,4,4a,4b,5,6,7,9,10,10a-dodecahydrophenanthrene.

2,894,959

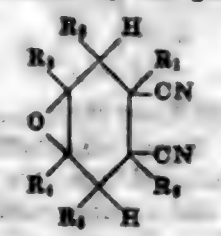
4,5-EPOXYCYCLOHEXANE-1,2-DICARBONITRILES AND PROCESS OF PREPARING THE SAME

Benjamin Phillips, Charleston, and Paul S. Starcher, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application December 17, 1956
Serial No. 628,552

4 Claims. (Cl. 260—348)

1. As new compounds, 4,5-epoxycyclohexane-1,2-dicarbonitriles characterized by the general formula:



wherein R_1 through R_6 represent hydrogen atoms and lower alkyl groups containing from one through eight carbon atoms.

3. A process for preparing a 4,5-epoxycyclohexane-1,2-dicarbonitrile which comprises reacting a 4-cyclohexene-1,2-dicarbonitrile and peracetic acid at a temperature in the range of from 10° C. to 100° C.

2,894,960

3α-SUCCINOXY-11-HYDROXY-12-KETO-$\Delta_{9,(11)}$-CHOLENIC ACID AND ITS DERIVATIVES

Julien Warnant, Neuilly-sur-Seine, Gerard Nomine, Noisy-le-Sec, and Genevieve Rousseau, Enghien-les-Bains, France, assignors to Les Laboratoires Francais de Chimiotherapie, Paris, France, a body of France

No Drawing. Application February 26, 1957
Serial No. 642,331

Claims priority, application France February 29, 1956

3 Claims. (Cl. 260—397.1)

1. A compound selected from the group consisting of 3α-succinoxy-11-hydroxy-12-keto-$\Delta_{9,11}$-cholenic acid and its alkali metal salts and salts with lower alkanol amines and ethylene diamine, said salts being tolerated by the human system.

2,894,961

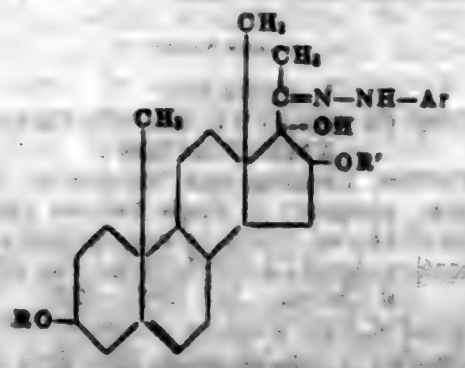
ARYLHYDRAZONES OF 3,16α,17α-TRIHYDROXY-5-PREGNEN-20-ONE AND ESTERS THEREOF

Raymond M. Dodson, Park Ridge, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Illinois

No Drawing. Application November 22, 1955
Serial No. 548,529

6 Claims. (Cl. 260—397.5)

1. A compound of the structural formula



wherein the acyl radical is derived from a lower alkanoic hydrogen and acyl radicals derived from lower alkanoic acids, and Ar is an aromatic hydrocarbon radical containing fewer than 10 carbon atoms.

2,894,962

OXIDATION OF PSEUDOSAPOGENINS

Monroe E. Wall, Oreland, and Samuel Serota, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application October 31, 1957
Serial No. 693,784
19 Claims. (Cl. 260—397.45)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for oxidizing a pseudosapogenin to its corresponding 16β-acyloxypregnane comprising dissolving said pseudosapogenin in an inert water soluble organic solvent not attacked by an alkaline oxidizing system, and oxidizing said pseudosapogenin by mixing therewith an aqueous solution containing, based upon weight of pseudosapogenin, about a 2 to 8 molar ratio of a water soluble alkali metal metaperiodate salt, about 0.10 to 0.15 molar ratio of a water soluble alkali metal permanganate salt, and an alkaline agent to maintain a pH above 7.0.

2. The process of claim 1 in which the pseudosapogenin is selected from the group consisting of pseudosarsasapogenin, pseudosmilagenin, pseudodiosgenin, 11-oxo-pseudodiosgenin, 12-oxo-pseudodiosgenin, pseudotigogenin, 11-oxo-pseudotigogenin, and pseudohecogenin.

6. The process of claim 1 in which the pseudosapogenin is 11-oxo-pseudodiosgenin.

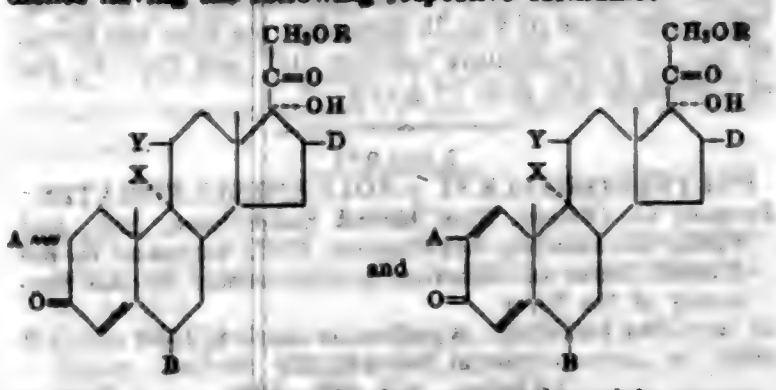
2,894,963

9,11-DIHALOGENO-4-PREGNENES AND 1,4-PREGNADIENES

David H. Gould, Leonia, Hans Reimann, Bloomfield, and Lawrence E. Finckenor, Lyndhurst, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Application June 20, 1958
Serial No. 743,491
21 Claims. (Cl. 260—397.45)

1. Compounds of the group consisting of 17α,21-dihydroxy-3,20-diketo-9,11-dihalogeno pregnenes and pregnadienes having the following respective formulae:



wherein X is a halogen having an atomic weight greater than 19, Y is a halogen having an atomic weight less than 126 and being at least as electronegative as X, R is a member of the group consisting of hydrogen and acid radicals of the group consisting of hydrocarbon monocarboxylic acids having up to 8 carbon atoms, dibasic organic acids having up to 8 carbon atoms, sulfate and phosphate, A and B are members of the group consisting of H and methyl and D is a member of the group consisting of H, α-lower alkyl, β-lower alkyl, α-hydroxy and α-lower alkanoyloxy, at least two of A, B and D being H.

2,894,964

9,12-DIKETO-10-HYDROXYSTEARIC ACID AND METHOD FOR PREPARING SAME

Joseph Nichols, Princeton, and Edgar S. Schipper, Highland Park, N.J., assignors to Ethicon, Inc., a corporation of New Jersey

No Drawing. Application July 18, 1957
Serial No. 672,548
9 Claims. (Cl. 260—406)

1. As new chemical compounds, the group which consists of 9,12-diketo-10-hydroxystearic acid and salts thereof, said salts being members of the group which consists of sodium, potassium, ammonium pyridine, diethanolamine, and triethanolamine salts of 9,12-diketo-10-hydroxystearic acid.

7. A method for the preparation of 9,12-diketo-10-hydroxystearic acid comprising oxidizing 12-ketoelaidic acid with a member of the group which consists of potassium permanganate in basic solution and hydrogen peroxide in the presence of a catalytic amount of osmium tetroxide.

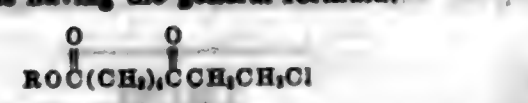
2,894,965

OCTANOIC ACID ESTERS AND METHOD OF PREPARING THE SAME

Milon W. Bullock, Pearl River, N.Y., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application July 22, 1957
Serial No. 673,165
6 Claims. (Cl. 260—488)

1. Compounds having the general formula:



in which R is a lower alkyl radical.

4. A method of preparing a lower alkyl ester of 8-chloro-6-oxooctanoic acid which comprises reacting a lower alkyl adipyl chloride with ethylene in the presence of at least 2 moles of aluminum chloride for each mole of acid chloride.

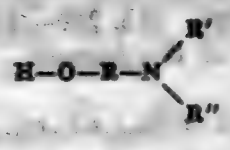
2,894,966

PROCESS FOR THE PREPARATION OF STABILIZED ORGANOTITANIUM COMPOUNDS

Charles A. Russell, Fair Haven, N.J., assignor to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Application July 10, 1956
Serial No. 596,833
6 Claims. (Cl. 260—429.5)

1. Method for the preparation of a new stabilized composition of matter which comprises reacting an aminoalcohol ester of a metal selected from the group consisting of titanium and zirconium with a compound selected from the group consisting of inositol, sucrose and a saturated polyhydroxy straight chain aliphatic alcohol containing from 3 to 6 alcoholic hydroxy groups and from 3 to 7 carbon atoms, the number of alcoholic hydroxy groups not exceeding the number of carbon atoms, said polyhydroxy alcohol selected from the group consisting of unsubstituted polyhydroxy alcohol and substituted polyhydroxy alcohol, the substituent in said substituted polyhydroxy alcohol being an aldehydo group substituted for one terminal carbinol group of said polyhydroxy alcohol, said aminoalcohol of said aminoalcohol ester having the formula:



wherein R is selected from the group consisting of ethylene and alkyl-substituted ethylene radicals, and R' and R'' are selected from the group consisting of hydrogen, alkyl hydrocarbon groups, β-aminoalkyl and β-hydroxyalkyl radicals, the alkyl group in the alkyl-substituted ethylene radicals, the alkyl hydrocarbon groups, the β-aminoalkyl and the β-hydroxyalkyl radicals being lower alkyls.

2,894,967

ORGANOSILICON-CHROMIUM COORDINATION COMPLEXES

John W. Gilkey, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Application August 2, 1956
Serial No. 601,622
10 Claims. (Cl. 260—438)

1. A composition comprising a coordination complex of the group consisting of (1) a complex formed by reacting $Cr(OH)Cl_2$ with an organosilicon compound containing units of the formula

$$R_nSi(R'COOH)O_{\frac{3-n}{2}}$$

where R is a monovalent hydrocarbon radical free of aliphatic unsaturation and having a maximum of 18 carbon atoms, R' is a divalent alkylene radical of from 2 to 18 inclusive carbon atoms with the carboxyl group being at least 2 carbon atoms removed from the Si, and n is an integer of from 0–3 inclusive, and (2) the hydrolyzed and ammoniated derivatives thereof.

2,894,968

PREPARATION OF ORGANOSILICON COMPOUNDS

James A. Webster, Pittsburgh, Pa., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Application March 26, 1956
Serial No. 573,644
6 Claims. (Cl. 260—448.2)

1. In a process for the production of an organosilicon compound containing at least one carbon to silicon bond by the reaction of a silicon compound of the general formula $R_xH_ySiX_{4-x-y}$ where R is a monovalent hydrocarbon radical, X is a halogen atom, x has a value of from 0 to 3 inclusive, y has a value of from 1 to 2 inclusive, and $x+y$ equals from 1 to 4 inclusive, with an organic compound containing at least one pair and not more than two pairs of aliphatic carbon atoms linked by multiple bonds, selected from the group consisting of alkenes, cycloalkenes, alkynes, and unsaturated organic esters of a carboxylic acid and an alcohol, in the presence of a vinyl polymerization peroxy catalyst for the reaction, the improvement which comprises conducting the reaction in the presence of a promoter selected from the group consisting of tin, stannous oxide, stannic oxide, stannous chloride, stannic chloride, and mixtures thereof.

2,894,969

FLUORINATED ALKYL ORGANOSILICON COMPOUNDS

Ogden R. Pierce, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Application March 7, 1957
Serial No. 644,679
10 Claims. (Cl. 260—448.2)

1. A composition of the formula

$$[H(\overset{Y}{C}H-CH_2)_a]_mSiR_nCl_{4-m-n}$$

where Y is a perfluoroalkyl radical of from 1 to 3 inclusive carbon atoms, R is selected from the group consisting of monovalent hydrocarbon radicals, their halogenated derivatives and hydrogen, n is an integer from 2 to 4 inclusive, a is an integer from 1 to 3 inclusive, m is an integer from 0 to 2 inclusive and $m+a$ is not more than 3.

6. A siloxane comprising at least one mol percent of (1) units of the formula

$$[H(\overset{Y}{C}HCH_2)_a]_mSiR_nO_{\frac{4-m-n}{2}}$$

any remaining units being of the formula

$$Z_bSiO_{\frac{4-b}{2}}$$

where Y is a perfluoroalkyl radical of from 1 to 3 inclusive carbon atoms, R is selected from the group consisting of monovalent hydrocarbon radicals, their halogenated derivatives and hydrogen, n is an integer from 2 to 4 inclusive, a is an integer from 1 to 3 inclusive, m is an integer from 0 to 2 inclusive, $m+a$ being not greater than 3, Z is selected from the group consisting of hydrogen and monovalent organic radicals attached to the silicon through C—Si linkages and b is an integer from 0 to 3 inclusive.

2,894,970

ESTER-TYPE WAX OXIDATE OF MACROCRYSTALLINE WAX AND PROCESS FOR PRODUCING SAME

John K. McKinley, Hopewell Junction, N.Y., and Roy F. Nelson and Gordon S. Bright, Port Arthur, Tex., assignors to The Texas Company, New York, N.Y., a corporation of Delaware

No Drawing. Application January 30, 1958
Serial No. 712,873
7 Claims. (Cl. 260—451)

1. A process for producing a wax oxidate characterized by a neut. number of 70–100, a sap. number above 170, a sap. number to neut. number ratio of between 0.25 and 0.5, and an unsaponifiable content less than about 40% which comprises reacting, for about 1–10 hours, a deoiled macrocrystalline paraffin wax of 20 to 33 carbon atoms, said wax containing less than 5% oil and isolated from a distillate lubricating oil, with air at an air velocity of 1.5 to 6 feet per second and at an air rate in the range of 4 to 38 cubic feet per hour per pound of wax, at a temperature between 300° and 350° F., and at a pressure less than 25 p.s.i.a.

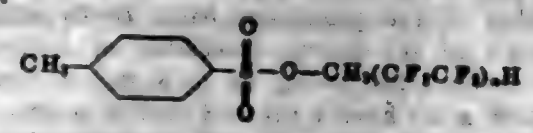
2,894,971

POLYFLUOROALKYL p-TOLUENESULFONATES

Jacques G. O'Rear, Stan Haven Subdivision, Md., and Phillip D. Faurote, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Navy

No Drawing. Application April 8, 1957
Serial No. 651,559
3 Claims. (Cl. 260—456)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A polyfluoroalkyl-p-toluenesulfonate of the general formula:



wherein n is an integer from 3 to 10.

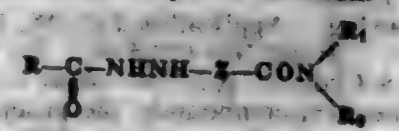
2,894,972

ISONICOTINYLHYDRAZINO ALKANOIC AMIDES

Barry M. Bloom, Kew Gardens, and Robert E. Carnahan, Massapequa, N.Y., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware

No Drawing. Application December 31, 1958
Serial No. 784,983
16 Claims. (Cl. 260—235)

4. A compound selected from the group consisting of compounds represented by the formula:



wherein Z is alkylene containing 1 to 5 carbon atoms;

R_1 is selected from the group consisting of hydrogen and lower alkyl; R_2 is selected from the group consisting of alkyl and alkenyl each containing up to 5 carbon atoms; cycloalkyl containing 3 to 6 carbon atoms, pyridyl, pyridylalkyl, furylalkyl and thienylalkyl in which the alkyl group is lower alkyl, and ring-substituted derivatives thereof in which each ring substituent is lower alkyl; aryl and aralkyl each represented by the formula:

wherein X is selected from the group consisting of hydrogen, lower alkyl and halogen, Y is selected from the group consisting of hydrogen, lower alkyl, lower alkoxy, halogen, trifluoromethyl, cyano and alkanoyl containing 2 to 4 carbon atoms, and n is an integer from 0 to 4; R is selected from the group consisting of 4-pyridyl and ring-substituted derivatives thereof in which each substituent is lower alkyl; and the acid addition salts thereof.

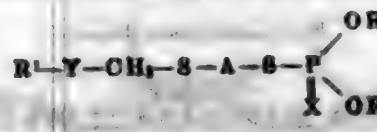
2,894,973

THIOPHOSPHORIC ACID ESTERS AND THEIR PRODUCTION

Gerhard Schrader, Opladen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application September 5, 1956
Serial No. 607,996
Claims priority, application Germany September 7, 1955
4 Claims. (Cl. 260—461)

1. A thiophosphoric acid ester of the following formula:



in which R and R^1 stand for a member selected from the group consisting of lower alkyl and phenyl-radicals, X and Y stand for a group VI element having a molecular weight between 16 and 32 and A stands for an ethylene chain.

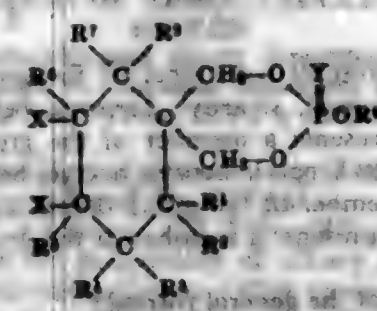
2,894,974

NEUTRAL ESTERS OF SPIRO HETEROCYCLIC PHOSPHORIC ACIDS AND THIONO PHOSPHORIC ACIDS

William M. Lanham, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Application October 24, 1956
Serial No. 617,915
15 Claims. (Cl. 260—461)

1. As new compounds, spiro heterocyclic phosphorus-containing esters having structures corresponding to the formula:



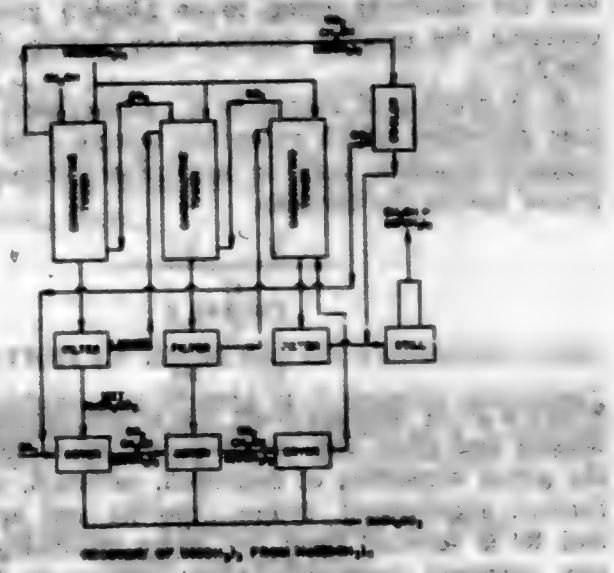
wherein R^1 to R^8, respectively, represents a member of the class consisting of hydrogen and the phenyl, chlorine, bromine and alkyl radicals having 1 to 6 carbon atoms; each X designates hydrogen, and the two X's collectively designate a second bond between the adjacent carbon atoms; Y represents a member of the class consisting of oxygen and sulfur; and R^9 designates a member of the class consisting of the alkyl radicals having 1 to 17 carbon atoms and the lower alkenyl, alkoxy lower alkyl, halo lower alkyl, lower alkylmercapto lower alkyl, phenyl, tolyl, xylyl, benzyl, chlorophenyl and nitrophenyl radicals.

2,894,975

METHOD FOR RECOVERY OF TRIALKYL BORATES FROM METAL TETRAALKOXYBORATES

George L. Cunningham and Frank Proska, Cleveland, Ohio, assignors to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania

Application December 21, 1955, Serial No. 554,506
3 Claims. (Cl. 260—462)



1. A method of recovering tri-lower alkyl borates from metal tetra-lower alkoxyborates which comprises passing an alcoholic solution of a compound selected from the group consisting of alkali and alkaline earth metal tetra-lower alkoxyborates into a first reaction zone, treating said alcoholic solution with dry carbon dioxide whereby tri-lower alkylborate and a solid lower alkyl carbonate are produced, filtering the resulting reaction mixture to obtain a filtrate and then passing said filtrate to a reaction zone, adding more of said tetra-lower alkoxyborate to said filtrate, then treating the resulting mixture with dry carbon dioxide to further enrich the liquid mixture in tri-lower alkylborate, filtering the resulting enriched liquid mixture and recovering tri-lower alkylborate from the then resulting filtrate by distillation.

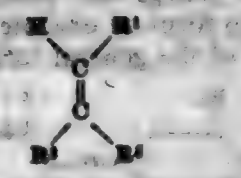
2,894,976

BICYCLOHEPTENE CARBOXYLATES AND THEIR PRODUCTION

Fred W. Bennett, Westfield, and Herbert K. Wiese, Crawford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application April 1, 1955
Serial No. 498,749
13 Claims. (Cl. 260—468)

1. A dicycloheptene derivative which comprises an adduct of a cyclopentadiene derivative selected from the group consisting of cyclopentadiene monocarboxylic acid, methylcyclopentadiene monocarboxylic acid, and the methyl esters thereof, and an unsaturated dienophilic compound having the formula



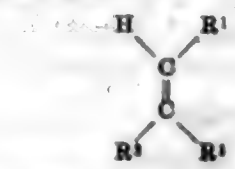
wherein R' is selected from the group consisting of hydrogen and alkyl and aryl radicals; R^2 is selected from the group consisting of hydrogen, carboxyl, carbalkoxyl, formyl, alkylformyl, cyano, chlorine and aryl radicals;

and R^3 is selected from the group consisting of hydrogen, carboxyl, carboxyalkenyl, carboxyalkadienyl, aryl, alkyl, and alkylene radicals.

6. Carbmethoxy-dicyclo(2,2,1)-heptan-2-ol.

7. A process for preparing carbmethoxy-dicyclo (2,2,1) heptan-2-ol which comprises mixing one mole of the dimethyl ester of dicyclopentadiene dicarboxylic acid with about two moles of acrolein, refluxing the mixture in an inert liquid solvent at a temperature in the range of 135° to 190° C. and a pressure between about atmospheric and 50 p.s.i.g., contacting the resulting carbmethoxy-dicyclo (2,2,1) hept-5-ene-2-al with sufficient hydrogen over a hydrogenation catalyst at a sufficient temperature and pressure to saturate the double bond and convert the aldehyde group to an alcohol group, and recovering the product carbmethoxy-dicyclo (2,2,1) heptan-2-ol.

8. A process of preparing a carboxylated dicycloheptene derivative which comprises mixing a dicarboxylated dicyclopentadiene with an unsaturated dienophilic compound having the formula



wherein R' is selected from the group consisting of hydrogen and alkyl and aryl radicals; R^3 is selected from the group consisting of hydrogen, carboxyl, carbalkoxyl, formyl, alkylformyl, cyano, chlorine and aryl radicals; and R^3 is selected from the group consisting of hydrogen, carboxyl, carboxylalkenyl, carboxyalkadienyl, aryl, alkyl, and alkylene radicals and heating the mixture at a temperature between about 75° and 250° C.

2,894,977

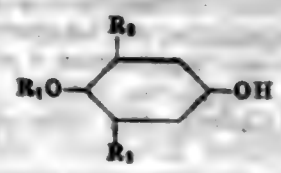
PROCESS OF PREPARING PHENOXYCINNAMIC ACID DERIVATIVES

Walter Stedel, Bad Soden (Taunus), and Helmut Nahm and Henning Pist, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Application December 18, 1956
Serial No. 628,982
Claims priority, application Germany December 24, 1955
13 Claims. (Cl. 260—471)

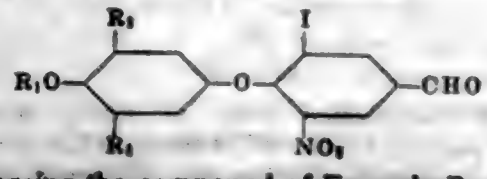
1. A process of preparing a polyiodo-thyronine which comprises (1) reacting 3-iodo-5-nitro-4-hydroxybenzaldehyde with a member selected from the group consisting of methyl sulfochloride, toluene sulfochloride and benzene sulfochloride in the presence of a tertiary amine and adding, without isolation of the ammonium compound so formed, a phenol of the general formula

(A)



wherein R_1 represents a member of the group consisting of hydrogen, alkyl groups containing up to eight carbon atoms, benzyl, acetyl and benzoyl groups, R_2 and R_3 represent radicals of the group consisting of hydrogen, iodine and nitro groups and wherein R_1 and R_2 can be linked together to form an oxazole ring system, for forming a compound of the general formula

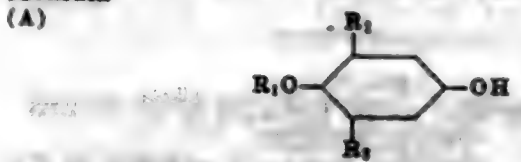
(B)



(2) condensing the compound of Formula B so obtained with a member of the group consisting of acetyl aminoacetic acid, propionyl aminoacetic acid, stearoyl aminoacetic acid, benzoyl aminoacetic acid and beta-phenyl propionyl aminoacetic acid at a temperature between 70 and 100° C. for forming an oxazolone derivative of the compound of Formula B; (3) hydrolyzing said oxazolone derivative at a temperature between 35 and 100° C. for forming a corresponding alpha-acylamino cinnamic acid derivative; (4) reducing each nitro group in said cinnamic acid derivative to an amino group; (5) replacing each said amino group with iodine for forming the corresponding polyiodo-4-phenoxy-acylamino cinnamic acid derivative; and (6) hydrogenating said cinnamic acid derivative for forming the corresponding polyiodo-thyronine.

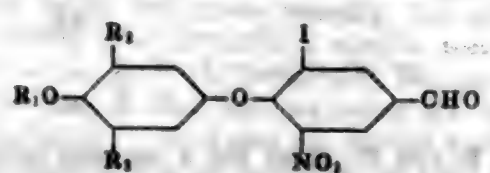
6. A process which comprises (1) reacting 3-iodo-5-nitro-4-hydroxybenzaldehyde with a member selected from the group consisting of methyl sulfochloride, toluene sulfochloride and benzene sulfochloride in the presence of a tertiary amine and adding, without isolation of the ammonium compound so formed, a phenol of the general formula

(A)



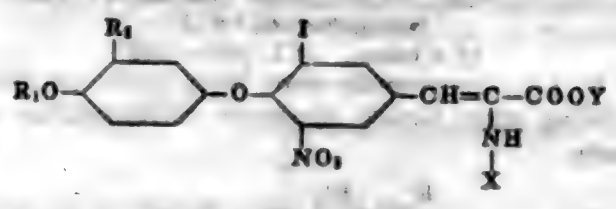
wherein R_1 represents a member of the group consisting of hydrogen, alkyl groups containing up to eight carbon atoms, benzyl, acetyl and benzoyl groups, R_2 and R_3 represent radicals of the group consisting of hydrogen, iodine and nitro groups and wherein R_1 and R_2 can be linked together to form an oxazole ring system, for forming a compound of the general formula

(B)



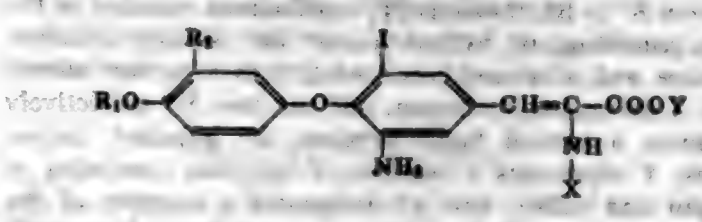
(2) condensing the compound of Formula B so obtained with a member of the group consisting of acetyl aminoacetic acid, propionyl aminoacetic acid, stearoyl aminoacetic acid, benzoyl aminoacetic acid and beta-phenyl propionyl aminoacetic acid at a temperature between 70 and 100° C. for forming an oxazolone derivative of the compound of Formula B; and (3) hydrolyzing said oxazolone derivative at a temperature between 35 and 100° C. for forming a corresponding alpha-acylamino cinnamic acid derivative.

7. A product of the general formula



wherein X represents a member of the group consisting of acetyl, propionyl, stearoyl, benzoyl, beta-phenyl-propionyl, R_1 represents a member of the group consisting of H, CH_3, butyl, octyl, benzyl, acetyl, benzoyl and R_2 represents a member of the group consisting of H, I and NH_2, and Y represents a member of the group consisting of H and CH_3.

8. Products of the general formula



wherein X represents a member of the group consisting

of acetyl, propionyl, stearoyl, benzoyl, β-phenyl-propionyl, R_1 represents a member of the group consisting of H, CH_3, butyl, octyl, benzyl, acetyl, benzoyl and R_2 represents a member of the group consisting of H, I and NH_2, and Y represents a member of the group consisting of H and CH_3.

2,894,978

PROCESS OF PRODUCING ESTERS OF PHTHALIC ACIDS BY OXIDATION OF XYLENE AND TOLUIC ACID ESTER MIXTURES

Ewald Katzschmann, Dortmund-Kruchel, Germany, assignor to Chemische Werke Witten Gesellschaft mit beschraenkter Haftung, Witten, Ruhr, Germany, a corporation of Germany

No Drawing. Application June 28, 1957
Serial No. 668,606
Claims priority, application Germany July 2, 1956
12 Claims. (Cl. 260—475)

1. In a process of producing esters of phthalic acids from mixtures of xylene and esters of toluic acids with monovalent alkanols having 1 to 4 carbon atoms, the steps which comprise oxidizing a mixture of xylenes and esters of toluic acids with alkanols having 1 to 4 carbon atoms in the proportion by weight between about 1:3 and, at the most, 1:1 in the liquid phase with an oxygen-containing gas at a temperature between about 80° C. and about 250° C. in the presence of an oxidation catalyst for a prolonged period of time until the xylenes are substantially completely oxidized and continuing oxidation of the resulting intermediate, substantially xylene-free oxidation mixture until as much toluic acid ester is oxidized as corresponds to the amounts of toluic acids formed on xylene oxidation.

2,894,979

STABILIZED POLYCARBOXYLIC ACID ESTERS

James M. Leach, Greensboro, N.C., assignor to Chas. Pfizer & Co., Inc., a corporation of Delaware

No Drawing. Application August 21, 1957
Serial No. 679,524
21 Claims. (Cl. 260—475)

1. As a new composition of matter a dialkyl ester of a dicarboxylic acid selected from the group consisting of unsubstituted, saturated aliphatic dicarboxylic acids and phthalic acid together with at least one organic stabilizing compound selected from the group consisting of ascorbic acid and fatty acid esters of ascorbic acid, said stabilizing compound being present in a small amount between .0001 and 2% by weight of said dialkyl ester and including an anti-oxidant selected from the group consisting of phenol anti-oxidants and phenothiazine.

2,894,980

PREPARATION OF ALKOXYSUCCINIC ACID ESTERS

Hymen R. Lubowitz and Harry Greenberg, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Application April 16, 1956
Serial No. 578,181
6 Claims. (Cl. 260—484)

1. A process for preparation of alkoxy succinic esters which comprises subjecting to reflux temperature a reaction mixture comprising a fumaric acid-containing material from the group consisting of fumaric acid, lower molecular weight dialkyl esters of fumaric acid, and mixtures thereof, a lower molecular weight alkanol in an amount in excess of that theoretically required to convert the fumaric acid-containing material to an alkoxy succinate, and an acidic esterification catalyst in an amount of at least about 5% by weight, based on the fumaric acid content of said fumaric acid-containing material, for a period of time sufficient to convert a substantial amount of said fumaric acid-containing material to a dialkyl ester of an alkoxysuccinic acid.

2,894,981

ALKYLATION OF MALONIC ESTERS

Bianka Tchoubar, Paris, France, assignor to Centre National de la Recherche Scientifique, Paris, France, a corporation of France

No Drawing. Application December 18, 1953
Serial No. 399,150
Claims priority, application France May 22, 1950
1 Claim. (Cl. 260—485)

An improved method for the production of diethyl (1-ethyl butyl) ethyl malonate consisting in heating under reflux diethyl (1-ethyl butyl) malonate with ethyl bromide in solution in dry tertiary butylic alcohol as a solvent and in the presence of sodium tertiary butylate as a condensing agent.

2,894,982

PREPARATION OF DIESTERS OF FUMARIC ACID

Harry Greenberg and Hymen R. Lubowitz, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Application April 24, 1956
Serial No. 580,191
7 Claims. (Cl. 260—485)

1. A process for preparation of diesters of fumaric acid from a water-wet fumaric acid-containing substance which comprises preparing a mixture comprising said water-wet substance, an aliphatic monohydric alcohol having from about 2 to 12 carbon atoms and an inert hydrocarbon liquid that forms an azeotrope with said alcohol and water, subjecting the resulting mixture substantially devoid of an acidic esterification catalyst to an elevated temperature sufficient to azeotropically remove water from said water-wet substance, and then subjecting the resulting substantially water-free fumaric acid-containing substance in mixture with said alcohol to esterification in the presence of sulfuric acid as an esterification catalyst added following said removal of water from said water-wet substance.

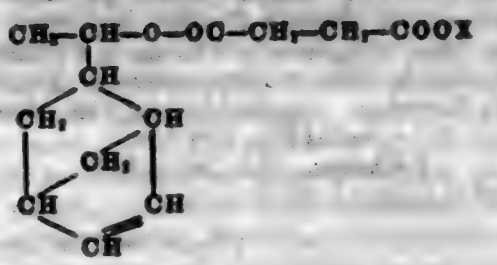
2,894,983

SUCCINIC ACID ESTERS

Herbert Arnold, Bielefeld, and Norbert Breck, Wadersloh, Germany, assignors to Asta-Werke Aktiengesellschaft Chemische Fabrik, Brackwede, Westphalia, Germany

No Drawing. Application February 18, 1958
Serial No. 715,862
Claims priority, application Germany February 23, 1957
3 Claims. (Cl. 260—485)

1. The compounds of the formula



wherein

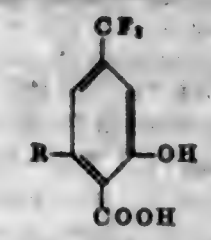
X indicates a member selected from the group consisting of hydrogen and an alkali metal.

2,894,964
4-TRIFLUOROMETHYL SALICYLIC ACIDS AND THEIR PREPARATION

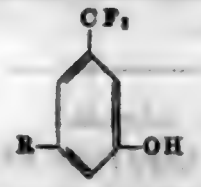
Murray Hauptschein, Glenside, Pa., assignor to Pennsalt Chemicals Corporation, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Application May 15, 1958
Serial No. 735,646
9 Claims. (Cl. 260—519)

1. The process for preparing a 4-trifluoromethylsalicylic acid represented by the formula



wherein R represents a member selected from the class consisting of H, NH_2 and OH which comprises reacting a m-trifluoromethylphenol represented by



wherein R is the same as above with potassium carbonate and carbon dioxide under pressure at a temperature in the range from about 20° C. to about 250° C. for a period of time at least sufficient for formation of said 4-trifluoromethylsalicylic acid.

2,894,985
PURIFICATION OF TOLUIC ACID

Richard L. Grantham, Downey, and Chien Liu, Anaheim, Calif., assignors to Richfield Oil Corporation, Los Angeles, Calif., a corporation of Delaware

Application November 21, 1955, Serial No. 547,945
1 Claim. (Cl. 260—525)

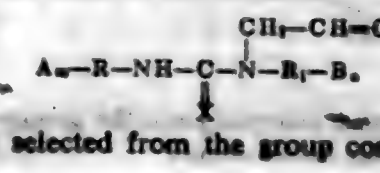
A process for the purification of crude neutrals-containing toluic acid obtained by the oxidation of xylene with an oxygen-containing gas and consisting essentially of toluic acid and neutrals obtained in the oxidation which comprises charging said crude toluic acid to an extraction zone, introducing water at a temperature of about 80 to 260° C. to said extraction zone and into and through the crude toluic acid in said zone, said water being introduced at a rate sufficient to maintain said crude toluic acid in a state of mild turbulence, maintaining a pressure in said extraction zone sufficient to keep the water in said zone in the liquid phase and to provide a stable interface between the crude toluic acid and the aqueous toluic acid phases, removing a heavy neutrals concentrate from the lower portion of said extraction zone, and removing light neutrals from the upper portion of said extraction zone, removing aqueous toluic acid-containing extract from the supernatant aqueous phase in the extraction zone, cooling said toluic acid-containing aqueous extract to precipitate toluic acid, and separating substantially pure toluic acid from the resulting lean aqueous extract.

2,894,986
DIPHENYL UREA DERIVATIVES

David J. Beaver, Richmond Heights, and Paul J. Steffel, St. Louis, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application July 23, 1956
Serial No. 599,334
9 Claims. (Cl. 260—553)

1. Diphenyl ureas of the structure



where X is selected from the group consisting of sulfur and oxygen, wherein R and R_1, respectively, are phenyl, wherein A and B, respectively, are halogen, wherein *m* and *n*, respectively, are integers from 1 to 3, inclusive, wherein the sum of *m* and *n* is an integer from 3 to 6, inclusive, wherein the phenyl radicals R and R_1 are free of substituents ortho to the nitrogen atom, and wherein the halogen substituents A and B are selected from the group consisting of chlorine and bromine.

2,894,987
N-ALLYL-2-AMINOISOCAMPHANE

Gustav A. Stein, Plainfield, and Karl Pfister III, Westfield, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Application April 4, 1957
Serial No. 650,563
3 Claims. (Cl. 260—563)

1. A compound selected from the group consisting of N-allyl-2-aminoisocamphane and pharmacologically acceptable acid salts thereof.

2,894,988
AMMONOLYSIS OF META NITRO PARA CRESOL

John Cryer, New Lenox, Ill., assignor to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Application May 21, 1956
Serial No. 585,978
6 Claims. (Cl. 260—581)

1. A method of manufacture of meta nitro para toluidine which comprises subjecting one molar proportion of meta nitro para cresol, at least in excess of one half mol of ammonium chloride, in excess of six mols of ammonia in a metal ion free aqueous environment wherein the molar ratio of ammonia to water is at least greater in numerical value than 1:2 in an autoclave to the autogenous pressure developed therein at a temperature above 125° C. but less than 150° C. for a time sufficient to complete substantially the ammonolysis of said cresol.

2,894,989
2-FLUOROTROPONES AND THEIR PREPARATION

Burt C. Pratt and Owen Wright Webster, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application July 9, 1957
Serial No. 670,661
5 Claims. (Cl. 260—586)

4. A compound of the group consisting of 2-fluorotropone and derivatives thereof having substituted in up to three positions on the ring a member of the group consisting of halogen, lower alkoxyl and hydrocarbon radicals of up to seven carbon atoms.

2,894,998
OXO PROCESS

Arnold N. Wennerberg, Chicago, Ill., Robert M. Alm, Crown Point, Ind., and Hugo H. Peter, Park Forest, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Application June 11, 1956, Serial No. 590,519
4 Claims. (Cl. 260—604)

1. In an oxo process wherein an olefin having 7 to 15 carbon atoms per molecule is reacted with a carbon monoxide-hydrogen gas in the presence of an oil-soluble cobalt catalyst in a continuous up-flow oxolation zone under oxolation conditions to form oxo aldehydes and high boiling materials and wherein said high boiling materials are separated from oxo aldehydes leaving the oxolation reaction zone by flash-steam distillation at low subatmospheric pressure, the material leaving the flash-steam distillation as bottoms comprising about 20 percent of the total stream charged to said flash-steam distillation the

improved method of operation which comprises recycling about three-fourths of said high boiling materials to the oxidation zone with added water in an amount in the range of about 1 to 5 percent by weight based on recycled high boiling materials wherein the amount of produced alcohol and aldehyde is increased, the amount of bottoms production is decreased and the amount of hydrolyzable material in the bottoms is increased over the amounts respectively which are obtained by aldehyde recycle with the absence of added water.

2,894,991

FLUOROALKYL SULFUR COMPOUNDS

John T. Barr, Needham, Mass., and Francis E. Lawlor, Wyndmoor, Pa., assignors to Pennsalt Chemicals Corporation, a corporation of Pennsylvania

No Drawing. Application December 10, 1956
Serial No. 627,152

19 Claims. (Cl. 260—608)

1. A compound having the formula $R_fCH_2S_xY$ in which Y is selected from the group consisting of hydrogen and $R_f'CH_2$; R_f and R_f' are each a perfluoroalkyl group with from 1 to 6 carbon atoms; x is 1 when Y is hydrogen; and x is a small integer when Y is $R_f'CH_2$.

11. The method for the preparation of a compound having the formula $R_fCH_2S_xY$ as defined in claim 1 which comprises reacting a 1,1-dihydroperfluoroalkyl tosylate having the formula $C_6H_4CH_3SO_3CH_2R_f$ in which R_f is a perfluoroalkyl group with 1 to 6 carbon atoms with an inorganic sulfur compound selected from the group consisting of alkali metal sulfides and alkali metal thiosulfates.

2,894,992

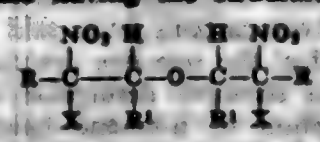
ARYL NITRO ETHERS

Edward B. Hodge, Terre Haute, Ind., assignor to Commercial Solvents Corporation, Terre Haute, Ind., a corporation of Maryland

No Drawing. Application August 19, 1957
Serial No. 679,111

9 Claims. (Cl. 260—611)

1. A compound having the structural formula:



where R is lower alkyl, R^1 is a radical selected from the group consisting of phenyl, lower alkyl substituted phenyl, and halogen substituted phenyl, and X is a radical selected from the group consisting of hydrogen and halogen.

2,894,993

INSECTICIDES AND PREPARATION THEREOF

Louis Schmerling, Riverside, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application April 26, 1957
Serial No. 655,195

5 Claims. (Cl. 260—610)

1. A compound selected from the group consisting of 1,2,3,4,7,7 - hexachloro - 5 - (2 - hydroxybenzyl) - bicyclo(2.2.1) - 2 - heptene, 1,2,3,4,7,7 - hexachloro - 5 - (2-hydroxyphenyl) - bicyclo(2.2.1) - 2 - heptene, 1,2,3,4,7,7 - hexachloro - 5 - (3 - methyl - 4 - hydroxybenzyl) bicyclo(2.2.1) - 2 - heptene, and 1,2,3,4,7,7 - hexachloro - 5 - (3,5 - dimethyl - 4 - hydroxybenzyl) - bicyclo-(2.2.1)-2-heptene.

2,894,994

CONDENSATION OF AROMATIC HYDROCARBONS WITH POLYCHLOROCYCLOOLEFINS

Louis Schmerling, Riverside, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application August 1, 1957
Serial No. 675,553

18 Claims. (Cl. 260—650)

1. A process which comprises forming a mixture of reactants consisting of a polychlorocycloolefin having one chlorine atom attached to each of the doubly bonded carbon atoms and whose cycloolefin component is selected from the group consisting of cyclopentene, cyclopentadiene, cyclohexene and cyclohexadiene, an aromatic hydrocarbon having attached to a nuclear carbon atom a carbon atom of a saturated hydrocarbon group to which last named carbon atom is attached at least one hydrogen atom, and a free radical generating catalyst, said hydrocarbon being selected from the group consisting of benzene and naphthalene derivatives having only saturated hydrocarbon substitution, and reacting the polychlorocycloolefin with the aromatic hydrocarbon by heating said mixture to a condensation temperature of from about 75° to about 300° C. and at least as high as the decomposition temperature of the catalyst, and at a pressure of from about atmospheric to about 100 atmospheres such that a substantial proportion of the reactants is in the liquid phase.

2,894,995

CONDENSATION OF AROMATIC HYDROCARBONS WITH POLYCHLOROOLEFINS

Louis Schmerling, Riverside, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application August 1, 1957
Serial No. 675,554

17 Claims. (Cl. 260—651)

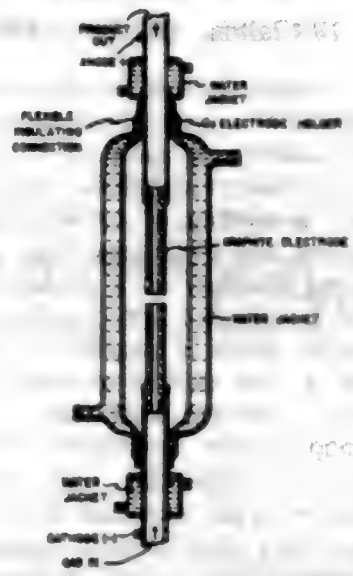
1. A process which comprises forming a mixture of reactants consisting of a polychloroolefin consisting of carbon atoms and containing from 2 to 10 carbon atoms chlorine atom attached to each of the doubly bonded carbon atoms and containing from 2 to 10 carbon atoms per molecule, an aromatic hydrocarbon having attached to a nuclear carbon atom a carbon atom of a saturated hydrocarbon group to which last named carbon atom is attached at least one hydrogen atom, and a free radical generating catalyst, said hydrocarbon being selected from the group consisting of benzene and naphthalene derivatives and having only saturated hydrocarbon substitution, and reacting the polychloroolefin with the aromatic hydrocarbon by heating said mixture to a condensation temperature of from about 75° to about 300° C. and at least as high as the decomposition temperature of the catalyst, and at a pressure of from about atmospheric to about 100 atmospheres such that a substantial proportion of the reactants is in the liquid phase.

11. A process for the preparation of (3-chloroallyl)-benzene which comprises forming a mixture of reactants consisting of trans-dichloroethylene, toluene, and di-tert-butyl peroxide, reacting the trans-dichloroethylene with the toluene by heating said mixture to a condensation temperature of from about 130° to about 300° C. and at a pressure of from about 50 to about 100 atmospheres, and recovering the resultant (3-chloroallyl)-benzene.

2,894,996
PREPARATION OF FLUORINE-CONTAINING COMPOUNDS

Mark Wendell Farlow, Wilmington, and Earl Leonard Muetterties, Hockessin, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application May 16, 1955, Serial No. 508,576
9 Claims. (Cl. 260—653.3)

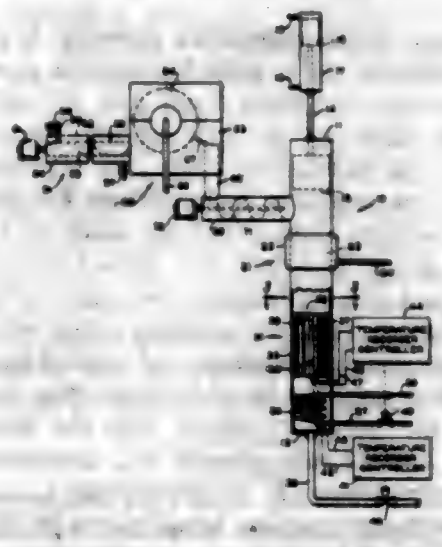


1. A process for the preparation of fluorocarbons which comprises heating a reactant composed of carbon, fluorine and at least one other element of the class consisting of oxygen, sulfur and nitrogen, said reactant containing at least three fluorine atoms per molecule, and continuing said heating at a temperature of at least 1500° C. until a fluorocarbon is produced, and separating the said fluorocarbon from the resulting mixture.

2,894,997
FRACTIONAL CRYSTALLIZATION PROCESS AND APPARATUS

Karl H. Hachmuth, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application March 7, 1955, Serial No. 492,667
15 Claims. (Cl. 260—666)

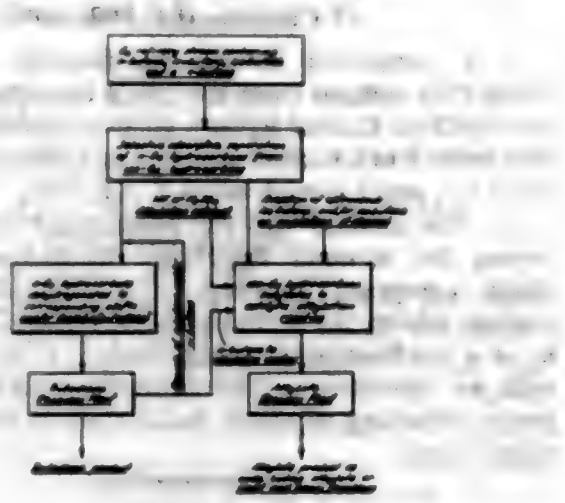


1. In a process for separating a component from a liquid multi-component mixture which comprises passing crystals, formed by said component by cooling said mixture, into a purification zone, moving said crystals through said purification zone toward a melting zone, in an intermediate portion of said purification zone passing said crystals through a plurality of adjacent passageways having walls formed of a material of high heat conductivity, moving said crystals from said passageways into said melting zone, melting crystals in said melting zone, displacing at least a portion of the resulting melt into said moving crystals, transferring heat through said material of high heat conductivity from said melting zone through said purification zone upstream crystalwise from said melting zone, and withdrawing a product from said melting zone, the improvement which comprises measuring the temperature within an intermediate portion of said purification zone; and controlling the rate of product withdrawal in response to said temperature measurement.

2,894,998
METHOD OF TREATING A C_4 HYDROCARBON STREAM

Howard V. Hess, Glenham, and Edward B. Christensen, Beacon, N.Y., assignors to The Texas Company, New York, N.Y., a corporation of Delaware

Continuation of application Serial No. 489,232, February 18, 1955. This application July 29, 1957, Serial No. 675,518
2 Claims. (Cl. 260—680)



1. A method of treating a C_4 hydrocarbon stream consisting essentially of n-butane, isobutane, isobutene and n-butene which comprises contacting said hydrocarbon stream with a selective adsorbent which selectively adsorbs straight chain hydrocarbons to the substantial exclusion of non-straight chain hydrocarbons to adsorb straight chain hydrocarbons therefrom, recovering from the aforesaid adsorption operation a first stream comprising isobutane and isobutene, desorbing the adsorbed straight chain hydrocarbons from said adsorbent under conditions to effect the selective desorption of n-butane followed by the selective desorption of n-butene, the selective desorption of n-butane being effected at a temperature not greater than the critical temperature of n-butene, subjecting the resulting selectively desorbed n-butene to catalytic dehydrogenation for the resulting production of butadiene and separating butadiene from the effluent issuing from the aforesaid dehydrogenation reaction.

2,894,999
ALKYLATION OF HYDROCARBONS, WITH EVAPORATIVE COOLING

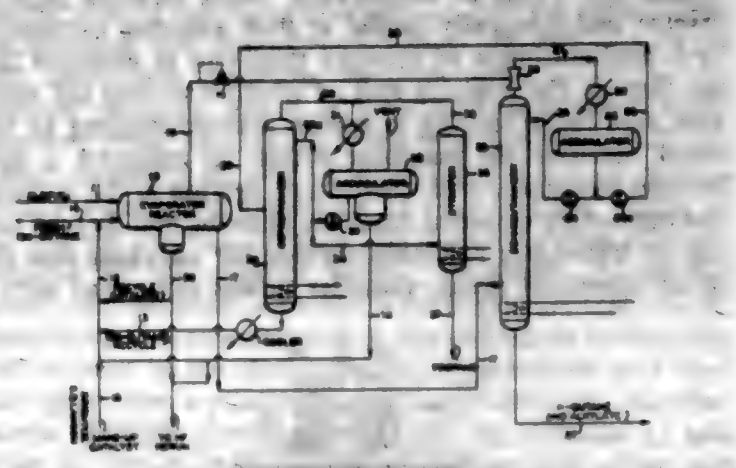
Shelby D. Lawson, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application May 23, 1957, Serial No. 661,241
9 Claims. (Cl. 260—683.48)

1. A process for the alkylation of isobutane with an olefin stream containing a butylene and some propylene which comprises contacting an excess of said isobutane and said olefin substantially in liquid phase in presence of liquid hydrofluoric acid catalyst under alkylation conditions in an alkylation zone forming an alkylation effluent, by an exothermic reaction, settling said effluent forming a hydrocarbon phase and an acid phase, returning the acid phase for reuse, deisobutanizing the hydrocarbon phase forming a stream containing n-butane and alkylate

which are removed for further treatment and a vaporous isobutane-containing stream, passing said isobutane-containing stream through a pressure-reducing zone as motive fluid therefor and connecting said pressure-reducing zone to said alkylation zone causing evaporation from said zone of a portion of the isobutane therein, thereby causing cooling of said zone.

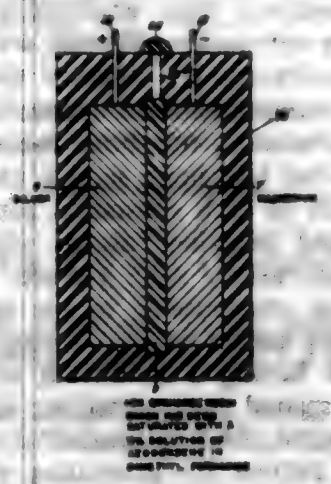
8. An apparatus suited to the alkylation of an alkylatable hydrocarbon with an alkylating hydrocarbon in presence of an acid catalyst under cooling conditions comprising in combination an evaporator reactor, means for supplying to said reactor alkylatable and alkylating hydrocarbons and acid catalyst, means for removing acid from said reactor, means for removing vapors from said reactor, means for fractionating alkylation effluent, means for passing effluent from said reactor to said means for fractionating alkylation effluent, means for taking vaporous alkylatable hydrocarbon from said means for fractionating alkylation effluent, an eductor connected to said means for taking vaporous alkylatable hydrocarbon from said means for fractionating and means connecting said



means for removing vapors from said reactor to said eductor.

ELECTRICAL

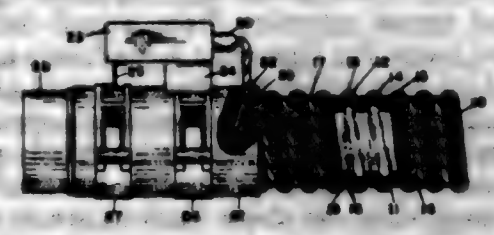
2,895,000
WETTING AGENT FOR ION-EXCHANGE RESIN BATTERY
Meyer Schwarz, Kensington, Md., and Philip J. Franklin, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Army
Application October 23, 1957, Serial No. 692,013
3 Claims. (Cl. 136—100)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An ion-exchange resin cell comprising: a magnesium plate serving as a first electrode, a silver plate serving as a second electrode, and a sheet of sulfonated polystyrene interposed between said plates, said sheet being saturated with a solution of an organic compound in dimethyl formamide, said organic compound being of the type which is easily reduced by nascent hydrogen, the amount of said organic compound being sufficient to prevent polarization of said cell.

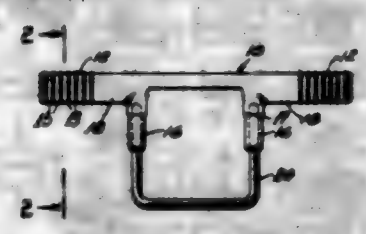
2,895,001
COMBINATION HOSE AND ELECTRICAL CONDUCTORS
Howard Noyes, Dayton, Ohio, and George West, Jr., Waynesville, N.C., assignors to The Dayton Rubber Company, a corporation of Ohio
Application July 5, 1955, Serial No. 519,954
8 Claims. (Cl. 174—47)

1. A flexible conduit comprising a helically corrugated tubular body formed with helical crests and troughs around the outer periphery thereof, a helical wire reinforcing member positioned within said tubular body and within the crests thereof, a multiple conductor insulated electrical cable removably embracing the outer surface of said body and positioned within the troughs thereof, the diameter of the cable being smaller than the depths of the troughs, whereby to protect said cable against abrasion while permitting accessibility to said cable for inspection, repair, removal or replacement, and separate



means near each end of said tubular body for anchoring said cable thereto at the points where said cable enters and leaves said troughs.

2,895,002
COPPER TO ALUMINUM STIRRUP
Henry P. Dupre, Wilton, and Irving F. Matthysse, Stamford, Conn., assignors to Burndy Corporation, a corporation of New York
Application November 17, 1954, Serial No. 469,522
2 Claims. (Cl. 174—71)

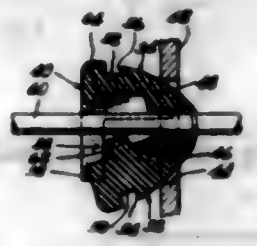


1. As an article of manufacture, a copper to aluminum connector for attachment to an endless metal cable comprising a connector body made of the same metal as the cable and having a lateral opening for insertion over the cable, said body having two sockets extending at right angles to said lateral opening, a U shaped conductor member made of a different metal than is the connector body and having each of its ends permanently secured in one of said sockets, said body being provided with malleable lips laterally disposed and outwardly extending from said sockets for crimping said body to said cable outside of the U shaped conductor member, said socket being located inwardly of the outer extremities of the body.

2,895,003
STRAIN RELIEF GROMMET
George M. Rapata, Chicago, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Application March 21, 1955, Serial No. 495,661
6 Claims. (Cl. 174—153)

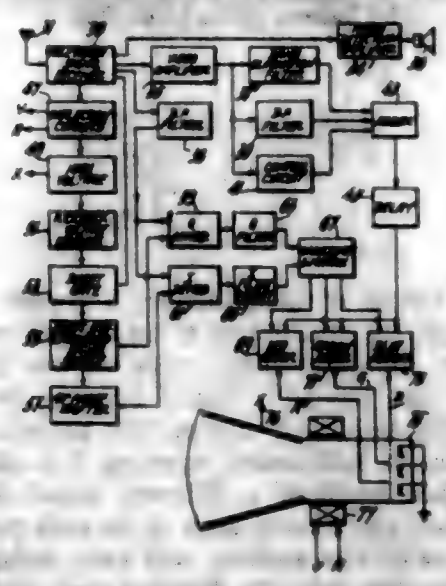
1. A one-piece strain relief grommet of molded plastic dielectric material adapted to be inserted axially and

snapped into fixed position within the complementary aperture of a panel, said grommet including an axial shank comprising a pair of cooperating shank sections tapering toward and integrally joined at their entering extremities by a resilient hinge of reduced thickness to promote flexing thereof, the bending axis of which traverses the shank axis, said hinge serving to permit juxtapositioning of said shank sections for insertion within an aperture, a head portion associated with each shank section at the extremities oppositely disposed from the entering end thereof having an outwardly radiating surface for engaging one side of an apertured panel, shoulder means associated with at



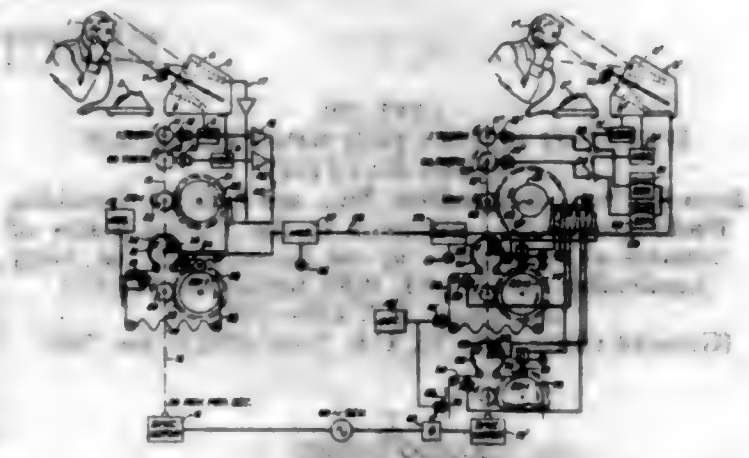
least one of said shank sections and spaced axially from the panel-engaging side of said head portions for engaging the opposite side of the panel, the juxtapositioned portions of the shank sections and said head portions having a longitudinal recess for accommodating an elongated conductor, and means extending from a wall defining said longitudinal recess for impinging a conductor to secure it in clamped position within the grommet, said hinge being of sufficiently reduced width to provide an opening at the entering end of the shank at least substantially as wide as the conductor-receiving space through the conductor impinging means when the shank sections are in conductor supporting position.

2,895,004
COLOR TELEVISION
Gordon L. Fredendall, Huntingdon Valley, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Application April 28, 1954, Serial No. 426,145
7 Claims. (Cl. 178—5.4)



1. In a luminance amplifier in a color television receiver, the combination of, a source of television signals, a first luminance channel filter coupled to said source, said first luminance channel filter including means to function as a band elimination filter in a first prescribed range of frequencies in said television signals, a second luminance channel filter coupled to said source and including means to function as a band pass filter in said first prescribed range of frequencies, an adder circuit, said adder circuit having a first input circuit, a second input circuit and a common output circuit, means for coupling said first luminance channel filter to said first input circuit, means for coupling said second luminance channel filter to said second input circuit, and adder control means, said adder control means responsive to the amplitude level of signal components in a second prescribed range of frequencies in said television signal and including means to control the amount of addition performed in said adder control according to a prescribed relationship with respect to the amplitude level of said signal components in said second prescribed range of frequencies.

2,895,006
TWO-WAY TELEVISION OVER TELEPHONE LINES
Winston E. Kock, Basking Ridge, and Ralph L. Miller, Chatham, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application September 30, 1954, Serial No. 459,300
4 Claims. (Cl. 178—6.6)



1. A two-way communication system including a first and a second substation, telephone means at each substation for two-way telephone service and picture communication means at each substation for providing subscribers using said telephone means with a visual impression of each other, said picture communication means comprising transmission means at said first station and receiving means at said second station and a transmission link having a bandwidth of approximately 4000 cycles per second interconnecting said transmission and receiving means, said transmission means comprising a miniature camera for generating vision signals at a rate of 20 frames per second, said camera including horizontal and vertical sweep generating means, means for selecting one frame of each succession of 20 generated frames and for rejecting 19 of the remaining frames of said succession, a continuous length of magnetizable tape, means for recording the selected frame of each of said successions at a rate of 20 frames per second on said tape, said recording means comprising an arcuate guide which is contacted by a relatively short section of said tape, a recording head rotatably mounted within the arc of said guide and operatively associated with said tape, means for rotating said recording head, means for advancing said tape along said guide at a uniform rate, a pickup head fixedly mounted in operative association with said tape at a point external to the arc of said guide, the relative movement between said recording head and tape being 20 times greater than the relative movement between said tape and said fixed pickup head, means for erasing signals recorded on said tape subsequent to the passage of said tape past said pickup head, common closely coupled means for synchronously operating said sweep generating means, said frame selecting means, said tape advancing means and said recording head rotating means to insure close adherence to a preassigned phase relationship between the speed and instants of operation of said synchronously

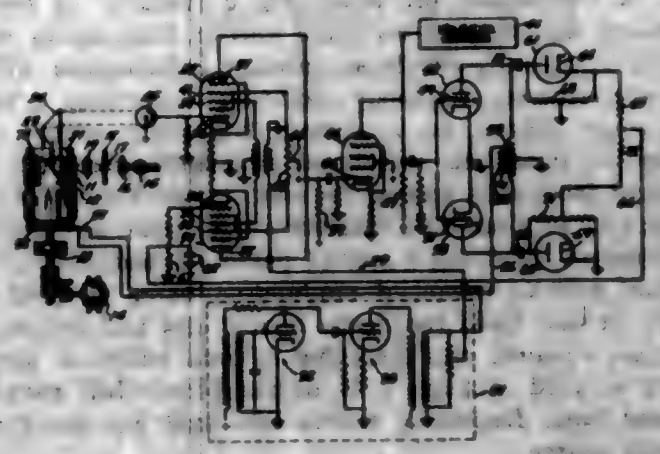
operated means, means including said transmission link for transmitting signals picked up by said pickup head to said receiving means, said said receiving means comprising means for recording signals received from said transmission means, said last-named recording means comprising two continuous lengths of magnetizable tape each mounted to traverse an associated arcuate guide, a pair of fixedly mounted recording heads each operatively associated with one of said tapes at a point removed from its associated guide, means for alternately advancing said tapes past their respective recording heads at an advancing speed of one frame per second, successive advances of each tape being separated by a dwell of said each tape in place, each advance and each dwell time occupying 20 successive frame periods, pickup means comprising a pair of magnetic pickup heads each rotatably mounted within the arc of one of said guides and operatively associated with the tape traversing its associated guide, means for rotating said heads at a rate relative to the advance of its associated tape of 20 frames per second, means for erasing recorded signals subsequent to pick up, an image reproducer, switching means for connecting the pickup head associated with an advancing tape to said reproducer device and for disconnecting the pickup head associated with a dwelling-in-place tape from said reproducer device whereby frames recorded on said tapes are each applied 20 times in succession to said image reproducer, and common closely coupled means for synchronously operating said tape advancing means, said pickup head rotating means, and said switching means thereby to insure close adherence to a preassigned phase relationship between the speed and instants of operation of said synchronously operated means, and phase adjusting means for establishing a desired relationship between the operation of the synchronously operated transmission means and the synchronously operated receiving means.

2,895,006

APPARATUS FOR BALANCING SCANNING SYSTEMS

Vincent C. Hall, Stamford, Conn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Application August 28, 1952, Serial No. 306,966
3 Claims. (Cl. 178—7.1)



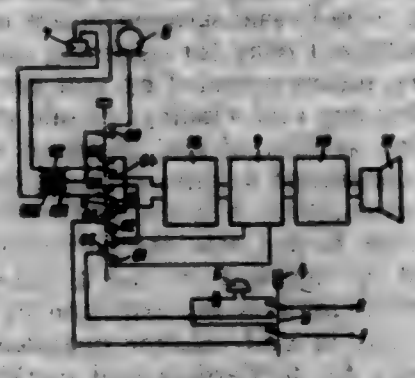
1. In a scanning system, a rotatable cylindrical drum adapted to carry a visual subject in the form of a flexible sheet wrapped part way around the drum circumference to leave between the unlapped edges of the sheet a gap of short circumferential extent relative to that of the sheet; means to direct towards said drum when rotating a light beam which passes over the circumference thereof to cyclically traverse said subject and gap in alternation, means including photoelectric means whereby said subject and gap to develop from said beam a light signal comprised in alternation of relatively long trains of intensity variations representative of tonal gradations of said subject and of relatively short pulses of constant intensity light of reference intensity, an electric signal channel including said photoelectric means adapted to translate said alternately occurring variable intensity trains and constant intensity pulses of said light signal into corresponding trains and pulses in the amplitude of an electric signal developed in said channel, control means to electrically adjust the amplitude of said electric signal in accordance with the strength and sense of a control signal received by said control means, amplitude comparator means adapted when actuated to develop from said electric signal a signal corresponding to the difference in direction and amount of the instantaneous amplitude of said electric signal from a predetermined amplitude value therefor, means operable synchronously with the rotation of said drum to actuate said comparator means only when said beam is traversing said gap to thereby render said difference signal in the form of intermittent pulses of variable strength and sense, a resistance-capacitance network characterized by a time constant which is comparable in value to the time required for at least one rotation of said drum, means whereby said resistance-capacitance network is adapted to translate the intermittent pulses of said difference signal into a predominantly D.C. signal of a strength and sense corresponding to that of said last-named pulses, and to apply said D.C. signal as said control signal to said control means, and means whereby said D.C. signal is applied thereto with appropriate polarity to stabilize the characteristic expressing for said scanning system the quantitative relation between instantaneous light intensity and instantaneous amplitude as manifested, respectively, in said trains of said light signal and said trains of said electric signal.

2,895,007

TELEPHONE INSTALLATION

Carl Gustaf Söderberg, Stockholm, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden

Application October 24, 1956, Serial No. 618,156
Claims priority, application Sweden November 3, 1955
4 Claims. (Cl. 179—1)



1. In a telephone installation for selectively transmitting sound through the handset of a telephone instrument and a loudspeaker respectively, in combination, a telephone instrument comprising a removable handset including a microphone, a receiver and a multiple switching means controlled by the position of the handset relative to the instrument, said handset moving said switching means from one position into another upon lifting the handset from and placement upon the instrument, a loudspeaker, a transmission line connected to the instrument, first circuit means connecting the transmission line through said switching means to said receiver and said loudspeaker when the handset is placed upon the instrument, said receiver then acting as microphone, and second circuit means connecting the transmission line through said switching means to the microphone and the receiver of the handset when the latter

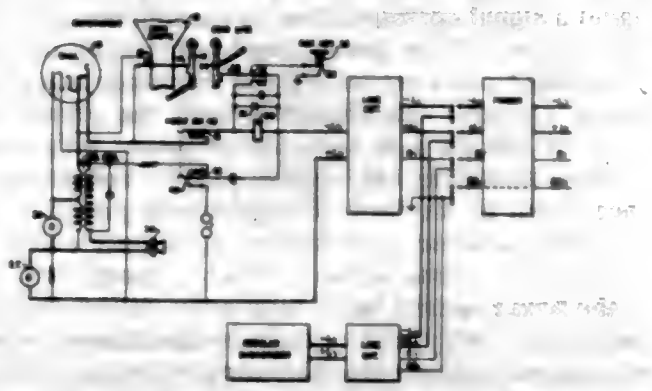
is lifted from the instrument, the microphone and the receiver then acting as microphone and receiver respectively.

2,895,006

TELEPHONE SYSTEM SERVING BOTH REGULAR AND PAYSTATION TELEPHONES

Clarence E. Lomax, Chicago, Ill., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware

Application June 10, 1955, Serial No. 514,647
9 Claims. (Cl. 179—6.3)



1. In a telephone system, subscriber lines having stations of a certain character thereon, other subscriber lines having stations of a different character thereon, a finder-selector link having access to lines of all of said stations for extending desired connections, means for connecting said link with calling ones of said lines, a differential relay in said selector and having its windings connected in series with the line conductors of a connection, means at each station on said other lines and operated in case of an attempted fraud by a calling one of said different stations, before a desired connection is completed, for causing the operation of said differential relay, means operated by said differential relay when operated for initiating the release of said desired connection, thereby preventing said fraud, a polarized relay in said selector and having one of its windings connected in series with one of the line conductors of a connection, means operated in case said fraud is not attempted and responsive to the answering of said last-mentioned connection, when completed, for operating said polarized relay, a first discriminating relay in said selector, means operated by said operated polarized relay for operating said first discriminating relay, means operated by said first discriminating relay for shunting said windings of said differential relay and said one winding of said polarized relay from said completed connection to increase the current flow in said completed connection, a marking potential common to only said lines having said certain stations thereon and encountered by said link in case a calling one of said certain stations initiates the extension of a desired connection, means in said selector operated responsive to said extension for forwarding said marking potential to said selector, a second discriminating relay in said selector operated responsive to said forwarded potential, and means operated by said operated second discriminating relay for shunting said windings of said differential relay and said one winding of said polarized relay from said extended connection to increase the current flow in said connection.

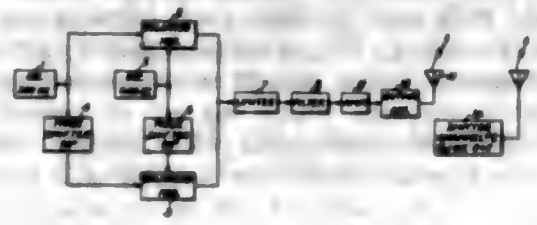
2,895,009

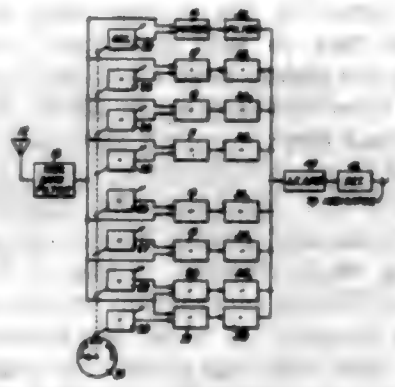
CHANNELING SYSTEM FOR FREQUENCY SPECTRUM TRANSMISSION

Henri G. Busignies, Montclair, N.J., assignor to International Telephone and Telegraph Corporation, a corporation of Maryland

Application June 29, 1953, Serial No. 364,571
13 Claims. (Cl. 179—15)

3. A channeling system for frequency spectrum transmission comprising a plurality of transmitters, one associated with each of said channels, each transmitter including a separate output means and means coupled in common to said output means to produce a plurality of predetermined discrete narrow band carrier frequencies within a predetermined frequency spectrum, each of said narrow band carrier frequencies containing the total message information of its respective channel and each of the discrete narrow frequency bands of each of said channels being selected to interlace with the narrow frequency bands of all other channels and a single receiving means for detecting said interlaced transmission, means to locally produce a plurality of beat frequencies, one for





each of said discrete frequencies within any channel, means to mix said detected signals and said locally produced frequencies to produce a plurality of different intermediate frequencies, one for each discrete frequency within said channel, and means to detect the information of said signal from said intermediate frequencies, said means to produce a plurality of local frequencies including a plurality of variable oscillators and means to couple the tuning mechanism of each of said oscillators whereby the frequency produced by any one oscillator is relative to the frequencies produced by all other oscillators.

7. A transmitter for producing a plurality of predetermined discrete narrow band carrier frequencies each carrier containing the total message information within a predetermined frequency spectrum comprising a basic frequency source, an increment frequency source and means to modulate said basic frequency with said increment frequency and harmonics of said increment frequency to produce said discrete frequencies, said modulator means including a pair of balanced modulators, one of said pair of balanced modulators being coupled directly to said basic frequency source and said increment frequency source and the other of said balanced modulators coupled through a 90 degree phase shift network to said basic frequency source and said increment frequency source.

2,895,010

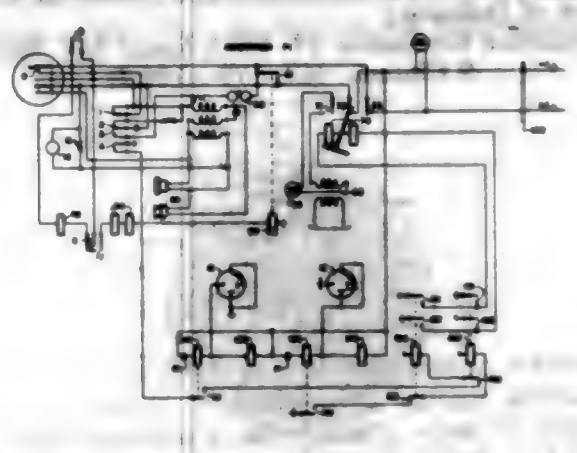
PARTY LINE PAYSTATION

Clarence E. Lomax, Chicago, Ill., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware

Application May 6, 1955, Serial No. 506,453
9 Claims. (Cl. 179—17)

1. In a telephone system, a line having a plurality of substations connected thereto, a polar relay at each substation, means controlled by each relay when operated in one direction for disconnecting its substation from said

line, and for connecting its substation to the line when operated in the other direction, means for applying direct current potentials of different polarities, with an alternat-



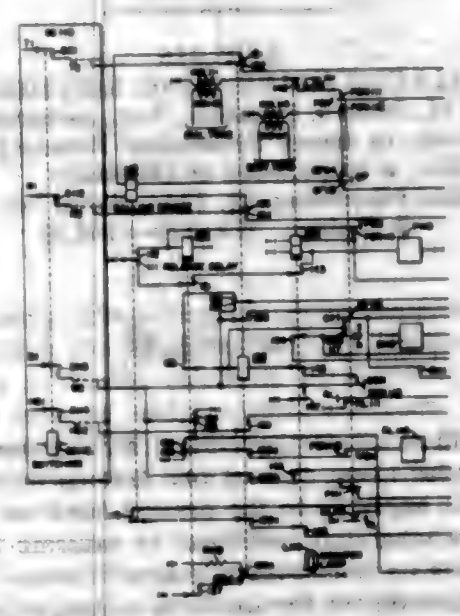
ing current superimposed on each potential, to said line to operate said polar relays in said directions dependent upon the polarity of the direct current component of the applied potential.

2,895,011

DROPBACK SELECTOR FOR TELEPHONE SYSTEMS

William W. Pharis and Ernest H. Gatzert, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Application February 25, 1957, Serial No. 642,016
4 Claims. (Cl. 179—18)



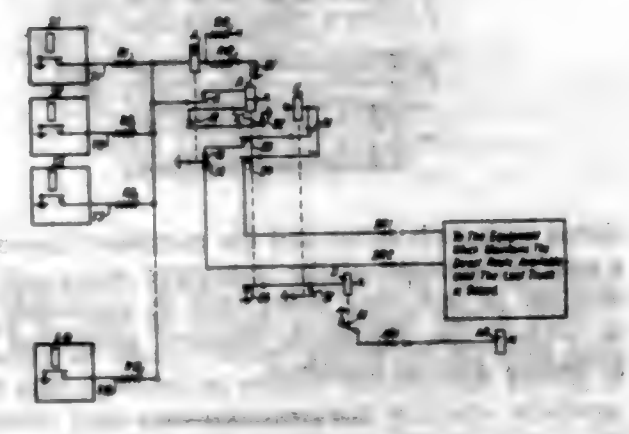
1. In a dropback selector having a plurality of levels including particular first and second levels, a switch directively operable in a primary direction from a normal position to any one of said levels in a selecting operation, means automatically operable for moving said switch in a secondary direction within the selected one of said levels in order to cause said switch to hunt for an idle line terminated within the selected one of said levels, and means for returning said switch to normal position; the combination comprising: means including a two-step relay for causing multi-dropback operation of said selector, said dropback means being controlled by the directive primary movement of said switch to either said first or said second level for selectively operating said relay to its first or second step, respectively, and for thereafter operating said returning means, said relay including means operative upon the first step operation of said relay effective upon the next succeeding primary movement of said switch to said first level for initiating the operation of said automatic secondary direction moving means, said relay including means operative upon the second step operation of said relay effective upon the next succeeding primary movement of said switch to any one of said levels for initiating the operation of said secondary direction moving means, whereby said selector may be unlocked with respect to said first level only or unlocked with respect to any of said levels.

2,895,012

ALL TRUNK BUSY DETECTION CIRCUIT

John W. Liston, Mount Prospect, and Duncan B. McGregor, River Forest, Ill., assignors to General Telephone Laboratories, Incorporated, Chicago, Ill., a corporation of Delaware

Application May 28, 1957, Serial No. 662,289
3 Claims. (Cl. 179—18)



1. In a telephone system a plurality of trunks, a test conductor and a resistance individual to each trunk, means for normally grounding each of said test conductors through its individual resistance when the corresponding trunk is idle, a busy test circuit connected in multiple to all of said test conductors, a first relay in said test circuit normally energized over said multiple connections when one or more of said trunks are idle, a second relay in said test circuit, contact means for connecting said second relay to said multiple connections in response to the operation of said first relay, means for operating said second relay over said multiple connections only in case a predetermined number of said trunks are idle, control means controlled by the operation of said second relay for establishing an unbalanced Wheatstone bridge circuit arrangement including said first and second relays and said multiple connections, means effective when a certain number of said trunks become busy, for removing certain of said ground connections from said multiple connection to balance said bridge, said first relay restoring in response to said balancing, said contact means restoring said second relay responsive to the restoration of said first relay, said control means effective responsive to the restoration of said second relay for unbalancing said bridge, and said first relay reoperating in response to the last said unbalancing of said bridge.

2,895,013

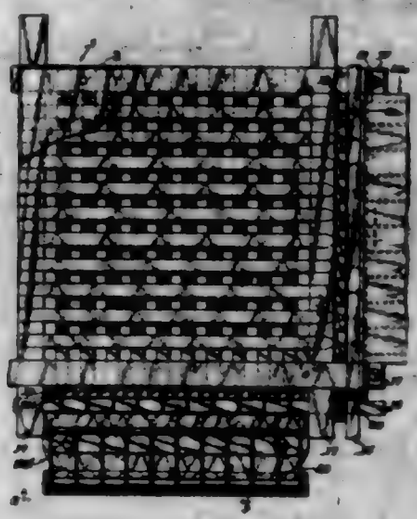
AUTOMATIC TELEPHONE SYSTEM AND ELECTROMAGNETIC ACTUATING MECHANISM THEREFOR

Walter V. Kuchan, Eureka, Mont.

Application April 3, 1956, Serial No. 575,788
14 Claims. (Cl. 179—27.54)

1. In a multiple actuating mechanism, the combination of a plurality of movable actuating elements of permeable material, arranged in a series of spaced rows with corresponding elements of such rows being laterally aligned with each other in a series of transversely extending rows, a permeable member for each of said rows, said members extending in the same direction as the rows with which they are associated and cooperable with the elements of their respective rows, the members of said transverse series being spaced from the members

of the other series, common magnetically polarizing means for each series operative to oppositely polarize the respective series, and selecting means for each series operatively connecting the common polarizing means asso-



ciated with such series and the members thereof whereby a selected member of the transverse series and a selected member of the other series may be oppositely polarized to actuate the permeable element associated with that particular pair of members.

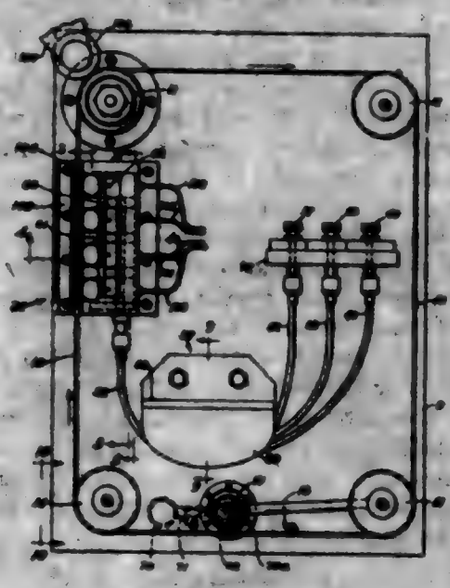
2,895,014

MAGNETIC RECORDING HEAD-MOVING MECHANISM

Lenard H. Johnson, Pasadena, Calif., assignor, by mesne assignments, to United Geophysical Corporation, Pasadena, Calif., a corporation of California

Application July 6, 1953, Serial No. 366,214

16 Claims. (Cl. 179—100.2)



1. Mechanism for recording and playback of records on magnetic tape, comprising: a housing, means for guiding the magnetic tape in a path of travel past the housing, a plurality of separate head holders in the housing located in succession one after the other along the path of travel of the tape, at least some of the head holders being movable back and forth relative to each other in the direction of travel of the tape, each head

2,895,015

MAGNETIC RECORD TRANSDU

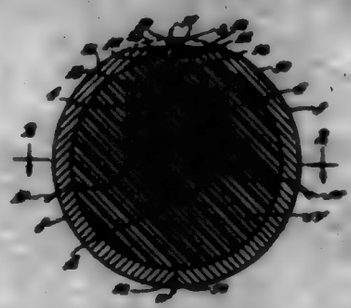
Joseph A. Zenel and Adolph B. Morgan, Pri

assignors to Radio Corporation of Ameri

ration of Delaware

Application September 17, 1953, Serial No

9 Claims. (Cl. 179—100.2)



1. A magnetic record transducer compri

member of thin, high magnetic permeability

field coil means inductively coupled to said c

said core member having polar ends, means

ing said core member with the extremities o

ends abutting in substantially a line contact

signal gap, said supporting means comprisi

netic housing member defining a cavity an

said core member and said coil means, and

having a transverse split therein, said polar

disposed within said split clamped together b

ing with said extremities thereof abutting so t

at the junction therebetween is substantially

2,895,016

MAGNETIC ERASING METHO

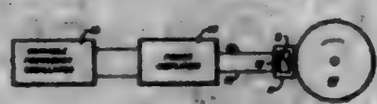
Armistead M. Moore, Houston, Tex., assigno

assignments, to Jersey Production Research

Tulsa, Okla., a corporation of Delaware

Application November 22, 1954, Serial No

2 Claims. (Cl. 179—100.2)



1. A method of demagnetizing a high-sp

magnetic drum using at least one erasing hea

the steps of: applying to the erasing head an

current of a magnitude sufficient to saturate

magnetization on said rotating magnetic drum

the magnetization on the drum as a magneti

of said drum passes under the erasing head

tinually decreasing the magnitude of said alte

rent while increasing the frequency of said

current as said magnetized portion of said d

under the erasing head until the magnetizat

pletely erased.

2,895,017

D.C. LEVEL SETTER FOR A.C. AMPL

Stanley Klipper, Brooklyn, N.Y., assignor

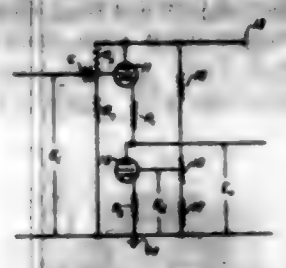
Electronics Corporation, Brooklyn, N.Y., a

of New York

Application November 9, 1953, Serial No.

4 Claims. (Cl. 179—171)

said grid, an adjustable unvarying positive bias coupled to the grid of said other tube, and a pair of output terminals coupled respectively to the anode of said other tube and to ground, the amplification factor of said other tube being greater than the ratio of the resistances of said



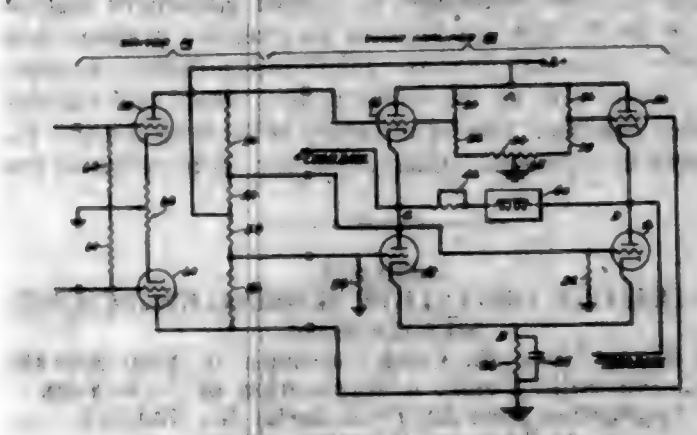
second resistor to that of said first resistor, whereby the varying component of said output voltage appearing at said output terminals is substantially equal to that of the input voltage applied to said input circuit and is independent of the direct current level of said output voltage.

2,895,018

HIGH FIDELITY PUSH-PULL AMPLIFIERS

Kerim Ondor, New York, N.Y., assignor of fifteen one-hundredths to Arthur L. Thrice, Glen Ridge, N.J.

Application January 6, 1954, Serial No. 402,443
6 Claims. (Cl. 179—171)



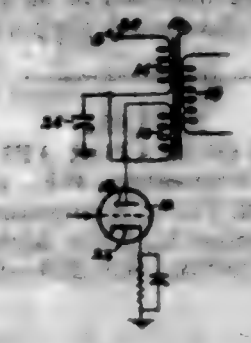
1. Apparatus comprising: a power-amplifier bridge circuit including four matched electron discharge devices each having a similar electrode arrangement including an anode, a cathode, and a control electrode, the anodes of a first pair (14, 20) of said devices and the cathodes of the second pair (18, 16) being respectively connected together to form the top and bottom corners of the bridge circuit, the cathodes of said first pair of devices being connected respectively to the anodes of said second pair to form the opposite side-corners of said bridge circuit, a source of direct energizing potential having its positive and negative terminals respectively connected to said top and bottom corners, means for fixing the operating direct potential of the control electrode of each of the devices of said second pair at a predetermined level with respect to that of said negative terminal of said source, such as at a ground reference direct potential of zero volts, where said negative terminal is grounded, a load element, and a load circuit connecting said load element between said side corners; and driving means external to said bridge and resistance coupled thereto for feeding said four devices with the same signal in suitable phases and magnitudes with respect to each other for all of them to deliver equal amounts of signal power to said load circuit, said means including an amplifier circuit having a split-phase output which is free of any circuit element having lumped inductive reactance and includes two voltage dividers for respectively deriving from each split-phase one driving voltage of relatively large magnitude and one of relatively small magnitude, and means for individually applying said relatively large magnitude voltages from the respective voltage dividers to the control electrodes of said first pair of devices and said relatively small magnitude voltages therefrom to the control electrodes of said second pair.

2,895,019

SINGLE-TUBE AMPLIFIER WITH TRANSFORMER OUTPUT

Monroe Farber, Jericho, N.Y., assignor to Fairchild Camera and Instrument Corporation, a corporation of Delaware

Application February 26, 1954, Serial No. 412,807
7 Claims. (Cl. 179—171)



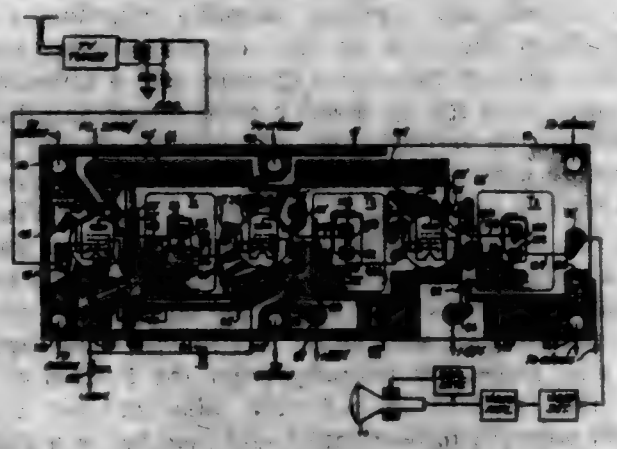
1. A single-ended amplifier comprising an amplifier tube having at least an anode, a cathode and a control grid, a source of space current connected between said anode and said cathode, an output transformer having a ferro-magnetic core and two matched primary windings both connected in the space current path through said tube and respectively poled so that the fluxes induced therein because of direct current flow in said transformer are in opposing directions whereby saturation of said core is prevented, and means for preventing alternating current components in said path from entering one only of said windings.

2,895,020

PRINTED CIRCUIT FOR MULTI-STAGE WAVE AMPLIFIER

Frank T. Kolnok, Pennsauken, N.J., assignor to Radio Corporation of America, a corporation of Delaware

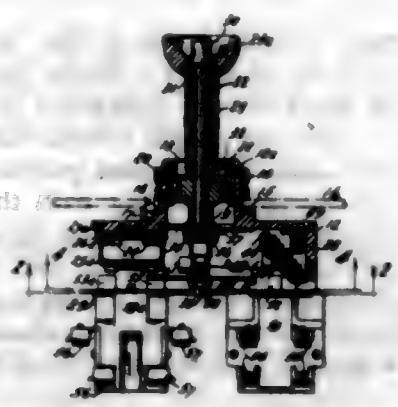
Application February 19, 1954, Serial No. 411,443
5 Claims. (Cl. 179—171)



1. A printed circuit multi-stage signal amplifier of the type having electrically conductive areas arranged on a planar insulating support adapted to be mounted on a conductive chassis, which amplifier comprises: a plurality of amplifier stage locations, on said support each including an aperture for receiving an electron tube support of the type having a plurality of radially disposed pin sockets; a plurality of conductive tabs on said support surrounding each such aperture and extending radially outwardly therefrom, said tabs being angularly separated in such manner that each tab is adapted to be in radial alignment with one of such pin sockets; an output terminal printed on said support adjacent one edge thereof; a plurality of coupling transformers printed on said sup-

port in such manner as to provide transformer coupling between successive ones of such amplifiers and between said output terminal and the final one of said amplifiers; means providing a first discrete conductive area disposed about the margin of said support and substantially surrounding the circuitry thereon to a point adjacent said final amplifier location; and means providing a second discrete conductive area on said support spaced from said last-named area and partially surrounding said transformer coupling said output terminal to the final one of said amplifiers, said first conductive area, said second conductive area and said plurality of printed coupling transformers all being disposed in substantially coplanar relationship on said insulating support.

2,895,021
SELECTIVE OPERATOR APPARATUS
Earl F. Mekelburg, Wauwatosa, Wis., assignor to Square D Company, Detroit, Mich., a corporation of Michigan
Application December 31, 1956, Serial No. 631,654
10 Claims. (Cl. 200—5)



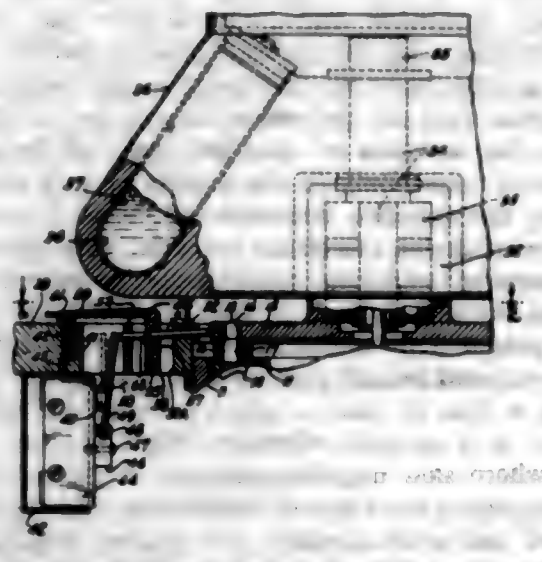
1. A selective operator for actuating switches having rectilinearly movable actuators comprising; a control member, an operator assembly and means including a base for mounting said member vertically to said base for lateral movement along predetermined paths and for pivotally mounting said operator assembly on said base laterally adjacent said control member whereby selective lateral movement of said member engages said assembly for actuation, said operator assembly including a lever spaced from the path of the operator having vertical sides and bottom forming a channel and a guide rod, a horizontal pivot for the lever, a cross pin arranged across the ends of the vertical sides of said lever seating in corresponding notches in the vertical sides of said lever and a slot formed in the end of said guide rod, said lever and guide rod being pivotally mounted at the other ends to form a toggle, a compressible coil spring arranged around said guide rod and compressed between the cross pin and pivot mounting of said guide rod to bias said toggle, a lever arm projecting laterally from the bottom of said lever into an area immediately adjacent said control member whereby movement of said member in a path actuates said assembly upon engaging said lever arm to pivot the lever and guide bar toward dead center of the toggle and compressing said spring.

2,895,022
LOW TIRE PRESSURE WARNING DEVICE
James A. West, Sr., Chicago, Ill.
Application July 25, 1958, Serial No. 750,903
4 Claims. (Cl. 200—61.26)

1. In an electrical tire pressure signal system, a vehicle having a wheel provided with a pneumatic tire, a flexible sack member mounted on the wheel and extending into the tire, whereby said sack member is exposed to the pressure in the tire, a sleeve member mounted on the wheel and extending into said sack member, a plunger member slidably and rotatably mounted in said sleeve member and having a first portion disposed in said sack member, spring means urging said portion inwardly relative to the tire against the pressure in the tire, said plunger member having a second portion extending outwardly relative to the tire, cooperating cam means on the sleeve

member and said second portion acting to rotate the plunger member responsive to inward movement thereof relative to the tire, an arm on said second portion, and a contact element on said vehicle intermittently engageable by said arm as the wheel rotates when said plunger member has been moved inwardly relative to the tire responsive to a predetermined reduction in pressure in the tire.

2,895,023
CENTRIFUGE DEVIATION SENSING SWITCHING MECHANISM
Josef Blum, Norwalk, Conn., assignor to Ivan Sorvall, Inc., Norwalk, Conn., a corporation of New York
Application June 20, 1958, Serial No. 743,303
14 Claims. (Cl. 200—61.45)



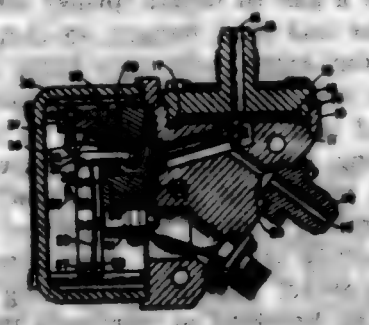
5. An actuating mechanism comprising a frame, an actuating element movable reciprocably relative to said frame, first means normally urging said element in one direction relative to said frame, second means pivotally mounted on said frame and arranged to engage said actuating element, third means operative upon said second means to cause the latter to grip said actuating element in various succeeding positions to which said element is moved in the opposite direction against the action of said first means, said second means when pivoted against the action of said third means being opera-

tive to release said actuating element and permit the latter to be moved freely in the first direction by said first means.

2,895,024
PRESSURE SWITCH
Ben E. Brown, Kansas City, Kans., and Roy R. Dunlap, Kansas City, Mo.
Application September 12, 1957, Serial No. 683,594
1 Claim. (Cl. 200—82)

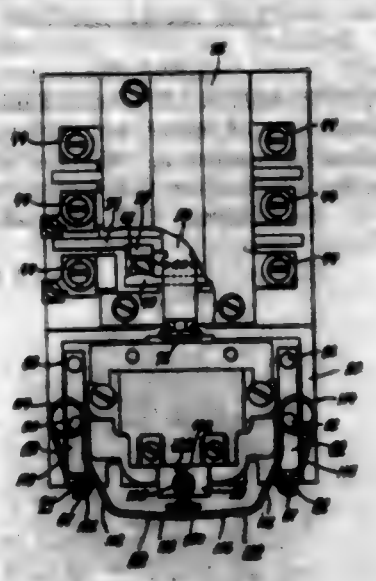
Pressure responsive, electrical switching apparatus adapted for use with fluids under extremely high pressures comprising: a base assembly having a passage therethrough including a pair of interconnected stretches of which one is of larger transverse cross section than the other presenting a continuous shoulder in the passage facing one extremity of the latter at the zone of juncture of the stretches, the other extremity of the passage being adapted for coupling with a source of fluid to whose pressure the apparatus is to respond; a resilient ring in said one stretch and disposed against the shoulder; a resilient diaphragm in said one stretch and having its margin disposed against the ring oppositely to the shoulder; a sleeve having a bore therethrough and an extremity with which the bore communicates disposed against the margin of the diaphragm oppositely to the ring; means holding the sleeve in said one stretch in disposition compressing the ring to form a fluid-tight seal between the diaphragm and the ring and between the ring and the shoulder; a plunger extending through the sleeve and reciprocably mounted in the bore of the latter, one extremity of the plunger being in engagement with the diaphragm intermediate the margin of the latter; an electrical switch on said base assembly having a reciprocable actuating element adapted for reciprocation along a path parallel to and laterally offset from the path of reciprocation of said plunger; an elongated lever arm pivotally mounted intermediate its ends on said base assembly for swinging movement about an axis between extensions in the same direction of the respective paths of reciprocation of the switch actuating element and the plunger and closer to the latter than the former, said arm including parts on one side of said pivotal axis of the arm engageable with the extremity of the plunger remote from said diaphragm; first adjustable means on the arm on the opposite side of said pivotal axis of the arm engageable with said switch actuating element for reciprocating the latter as the arm is swung by reciprocation of the plunger; a helical compression spring having one extremity thereof bearing against said base assembly; second adjustable means on the arm on said opposite side of said pivotal axis of the arm and further removed from the latter than said first adjustable means bearing against the other extremity of said spring for yieldably biasing the arm in a direction urging the plunger toward the diaphragm; and third adjustable means on the arm on said one side of said pivotal axis of the arm and further removed from the latter than said parts of the arm adapted to engage said base assembly for limiting the extent of swinging movement of the arm under the influence of the spring.

2,895,025
DIFFERENTIAL FLUID PRESSURE SWITCH DEVICE
Raymond S. Miller, Duarte, Calif., assignor to Aerojet-General Corporation, Azusa, Calif., a corporation of Ohio
Application January 2, 1957, Serial No. 632,156
4 Claims. (Cl. 200—83)



1. A differential fluid pressure switch device comprising a first chamber and a second chamber, a first diaphragm separating and forming a wall of each of said chambers and maintaining said chambers out of fluid communication with each other, a second diaphragm in a wall of said second chamber, a lever in operating relation to the side of the first diaphragm within said second chamber, said lever passing through said second chamber and through said second diaphragm to a position outside said second chamber, and being fulcrumed in said second diaphragm, spring means connected with the lever outside said second chamber urging the lever into contact with the first diaphragm, a substantially flat resilient buckling strip located outside said second chamber and having two opposite sides and having two opposite edges at respective opposite ends thereof, means supporting one of said edges in fixed position relative to the lever, means supporting the other of said edges at said lever, a switch having an actuator, said actuator being placed adjacent a side of the strip, and means for producing an initial buckling of the strip toward said actuator, whereby movement of the lever in response to difference of pressure in the two chambers alters the buckling of the strip, whereby the actuator is actuated at a predetermined difference of pressure of the chambers.

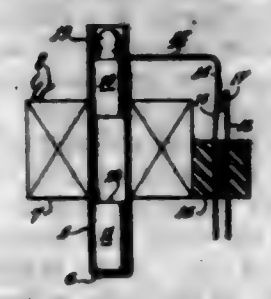
2,895,026
SWITCH OPERATING MEANS
Joseph M. Rodgers and Robert W. Leland, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 26, 1957, Serial No. 655,386
9 Claims. (Cl. 200—87)



1. In combination with an electric starting controller including a base having a plurality of stationary contacts, an electromagnet means carried by said base, a plurality

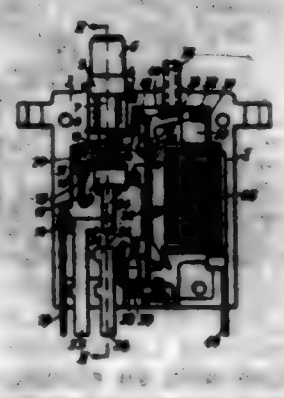
of movable contacts on bars complementary with said stationary contacts, an armature having a movable contact carrier portion therewith shiftable linearly by said electromagnet means, and a toggle spring assembly attached between said base and said armature, said assembly comprising a hanger attached to said armature, bearing means supported by said base on either side of said armature, and a pair of toggle springs fitted between said bearing means and said hanger so that a dead center spring condition exists with zero force exerted by said springs when said movable and stationary contacts are in fully closed seal position relative to each other, said springs exerting increasing force progressively on said armature for movement toward contact open position from zero force at contact seal position and decreasing force continuously from fully open contact position to fully closed contact position permitting complete contact making and breaking at minimum operating voltage values of said electromagnet means thereby eliminating a time interval operational lingering at contact touching position where contact-damaging chatter and current arcing can occur during making and breaking of contacts.

2,895,027
BISTABLE RELAYS
Henry Ball, Burbank, Calif., assignor to Radio Corporation of America, a corporation of Delaware
Application October 31, 1957, Serial No. 693,733
5 Claims. (Cl. 200—87)



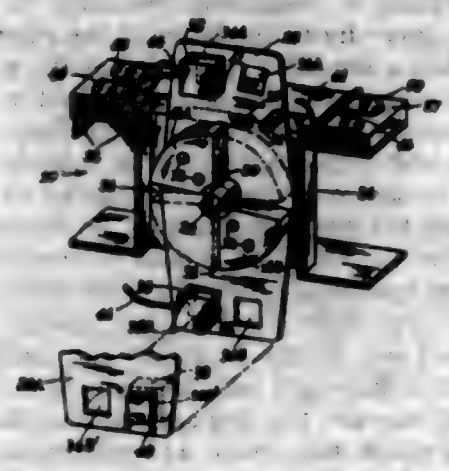
1. An electro-mechanical bistable relay comprising a coil, a tube within said coil and extending beyond both sides thereof, a pair of core sections within said tube, one position of said sections being in one end portion of said tube, and means extending into said tube at the other end thereof, energization of said coil being adapted to move said core sections into said coil until one end of one of said core sections contacts said means, said means holding said one core section in contact therewith and the other core section being adapted to return to the first-mentioned end of said tube upon de-energization of said coil.

2,895,028
PUSHBUTTON-OPERATED OVERLOAD SWITCH
Jakob Ellenberger, Altdorf, near Nurnberg, Germany
Application December 2, 1957, Serial No. 699,952
Claims priority, application Germany December 14, 1956
16 Claims. (Cl. 200—88)



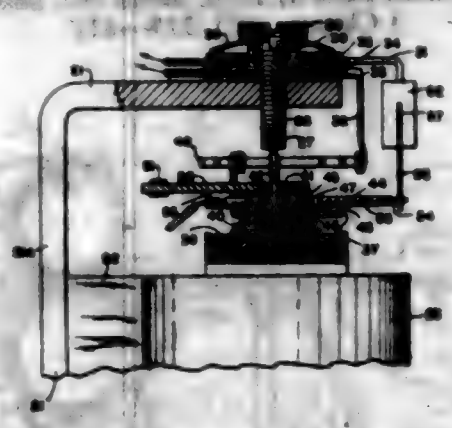
1. An overload switch having a trip-free release comprising a housing, switch elements provided within said housing and comprising a contact bridge having an angular arm thereon, a control rod, a pushbutton connected to one end of said control rod for moving said switch to the on position, a bridge member rigidly secured to the other end of said control rod, said bridge member having a projection thereon, said contact bridge being freely pivotable on said projection and being slidable along said control rod in the axial direction thereof, a carrier member mounted on said bridge member, a latching member, a projection on said angular arm of said contact bridge, said carrier member being adapted to engage said last projection when said bridge member is moved together with said control rod and pushbutton to move said contact bridge into engagement with said latching member, at least one automatic-overload actuated releasing means connected to said latching member for varying the position thereof so as to disengage said latching member from said contact bridge and thereby to move said switch to the off position, and a second pushbutton adapted to act upon said latching member for disengaging said latching member from said contact bridge and for manually moving said switch to the off position.

2,895,029
ELECTROMAGNETIC DEVICE AND RELAY
Rudolf Steiner, Van Nuys, Calif.
Application April 10, 1957, Serial No. 652,020
7 Claims. (Cl. 200—104)



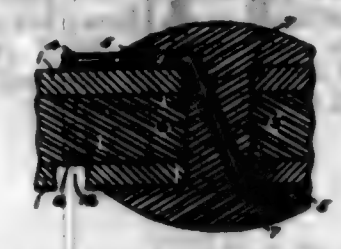
1. An electromagnetic device, such as an electromagnetic relay comprising an energizing coil, a plurality of rotatably mounted contact assembly members arranged, in pairs, within the interior of said energizing coil, each such member being equipped with electrical contacts and pairs of cores of magnetic material fastened to each of the respective members, each such pair of members being held in one mutually extreme position by action of a mechanical spring, installed appropriately among each said pair of members, when said coil is not electrically energized, and capable of being actuated to the other mutually extreme position if magnetized by means of a magnetic field created within the interior of the electrically energized coil in such a manner that, upon energizing of said coil and subsequent magnetization of said cores a concerted and effective composition of magnetic repulsion and attraction forces results producing two torques having directions opposite with respect to each other thus causing specific magnetized cores and members to which said cores are fastened to rotate in one direction and corresponding other, likewise magnetized cores and members to which these cores are fastened to rotate in a direction opposite with respect to the former members, thus overcoming the biasing force of the mechanical springs, and the opening of formerly closed, or the closing of formerly open contacts or the transfer of contact arrangements, said contacts provided in physically rigid, electrically insulated combinations with said rotatable members.

2,895,030
MOVING COIL RELAY
William Hotine, Beaumont, Calif.
Application April 9, 1956, Serial No. 577,121
2 Claims. (Cl. 200—110)



1. A moving coil relay comprising, a permanent magnet core having a cylindrical shape, a coil surrounding said core and pivotally mounted to move through magnetic lines in a magnetic field produced by said core, a paramagnetic shell surrounding said coil which provides a return path for said magnetic lines, a non-magnetic frame which includes pivot means for supporting said coil, a first relay contact structure mounted on the frame, and a second relay contact structure mounted on the coil and adapted to touch the first contact structure when the coil is rotated, said second contact structure including a torsional spring member on said coil, secured at its inner end and laterally supported for resiliently flexing when the first and second contact structures touch, a supporting bracket member having an L shaped cross section secured at one end to the coil and extending laterally along substantially the entire length of the spring member.

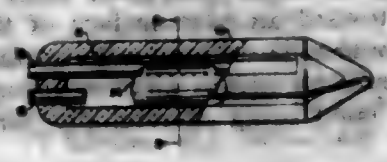
2,895,031
FUSIBLE PROTECTIVE DEVICES
Frederick J. Koncka, South Hampton, N.H., assignor to The Chase-Shawmut Company, Newburyport, Mass., a corporation of Massachusetts
Application July 24, 1958, Serial No. 750,618
10 Claims. (Cl. 200—120)



1. A fusible excess-current protective device comprising a tubular casing of insulating material, a pair of terminal elements closing the ends of said casing, means conductively interconnecting said pair of terminal elements, said interconnecting means comprising a strip of metal-clad insulating material having a transverse tunnel passage, said interconnecting means further comprising a length of wire threaded through said passage, and said passage being filled by a body of a normally solid organic insulating material liquefying and vaporizing under the heat of an arc formed upon fusion of said wire.

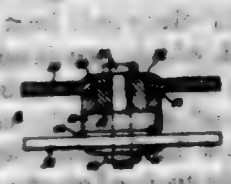
2,895,032
SWITCH APPARATUS
Ralph J. Schneider, Freeport, Ill., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application May 27, 1957, Serial No. 661,652
10 Claims. (Cl. 200—152)

1. A mercury switch comprising: an elongated glass envelope encompassing a substantially cylindrical compartment, said envelope being deformed in a longitudinal direction to provide a longitudinal inwardly extending ridge in said compartment; a globule of mercury disposed within said compartment, said globule of mercury being of such a mass as would normally occupy the entire lateral cross section of a portion of a similar compart-



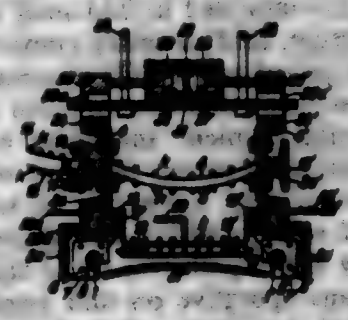
ment without said ridge; the ridge and the compartment of said envelope and said globule of mercury and the meniscus effect resulting therefrom cooperating to provide a gas passage across said globule and a pair of wire electrodes, a portion of each being disposed within said compartment and arranged to coact with said globule of mercury.

2,895,033
CURRENT-CARRYING HINGE CONSTRUCTION
John A. Favre, Brecknell, Pa., assignor to General Electric Company, a corporation of New York
Application June 17, 1955, Serial No. 516,187
13 Claims. (Cl. 200—170)



1. In a current-carrying hinge construction for electric apparatus, a pair of relatively-movable, juxtaposed contact members, transversely-extending pivot structure pivotally connecting said contact members, and a laterally-movable floating washer disposed between said contact members and mounted about said pivot structure with sufficient clearance to permit appreciable lateral and rotative movement of the washer with respect to said pivot structure in response to relative movement of said contact members, said washer having transversely-spaced faces of a highly conductive material intimately contacting said contact members in current-carrying relationship, relative pivotal movement of said contact members causing appreciable lateral and rotative movement of said washer with respect to said pivot structure.

2,895,034
INDUCTION HEATING APPARATUS
Anton Rodolphe Dalfrey, Liege, Belgium, and Heinrich Hofmeier, Breitscheid, Wilhelm Schmidt, Dinslaken, and Erich Hörmann, Duesseldorf-Eller, Germany, assignors to Phoenix-Rheinrohr Aktiengesellschaft Vereinigte Hütten- und Röhrenwerke, Duesseldorf, Germany, and A.C.E.C. Ateliers de Constructions Electriques de Charleroi, Charleroi, Belgium
Application April 4, 1957, Serial No. 650,638
Claims priority, application Germany April 5, 1956
13 Claims. (Cl. 219—8.5)



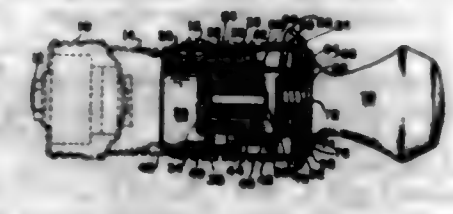
10. In an induction heater, in combination, a pair of opposed, elongated, parallel induction units adapted to

be located closely adjacent to the edges of a band whose edge portions are to be heated, each of said units including elongated conductor means for heating an edge portion of the band having a width of only a few millimeters through several hundred degrees, each of said elongated conductor means having a pair of elongated surfaces making an angle with each other and respectively directed toward an edge surface of the band and a face of the band adjacent said edge surface, said surface of said conductor means directed toward said edge surface of said band being substantially parallel to said edge surface.

2,895,035
HEAT SEALING ELECTRODE DIE
Everett A. Peterson, Roslyn Heights, and Harold W. Peterson, Roslyn, N.Y.
Application April 4, 1957, Serial No. 650,730
1 Claim. (Cl. 219—10.53)

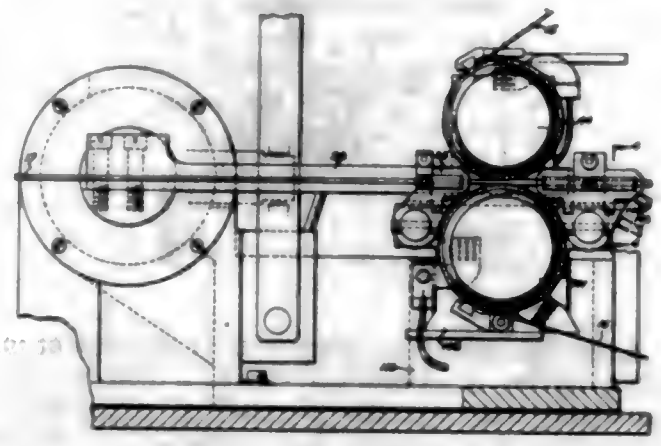
An electrode die for electronic heat sealing of thermoplastic laminations of which one lamination is materially thicker and softer than the remainder, comprising a base, a die element of electrically conductive material carried by said base, a knife edge depending from said die element sufficiently to confine the resultant heat seal seam joining the laminations to a sharp line at the knife edge, said knife edge being shaped to define the complete heat seal seam and thus the bounding edge of the article being made, and a marginal face on said die element inside and above said knife edge and gradually sloping inwardly away from said knife edge, the slope and location of said face being such as to shape the margin of the thicker lamination so that it decreases in thickness toward said knife edge and the resultant sharp heat seal seam but remains free from any other lamination inside the seam.

2,895,036
CIGAR LIGHTER
Philip E. Ashton and Arthur W. Schnick, Meriden, Conn., assignors to The Cuno Engineering Corporation, Meriden, Conn., a corporation of Connecticut
Application August 31, 1955, Serial No. 531,718
6 Claims. (Cl. 219—32)



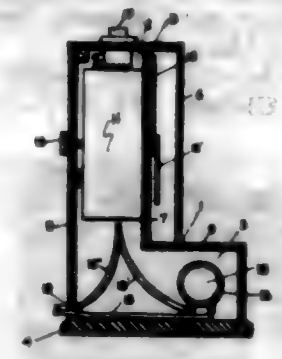
1. An electric cigar lighter plug including a shell and a plunger assembly mounted in said shell for axial movement relative thereto, said assembly comprising a heating element, a metal guard cup fixedly mounted with respect to said heating element, the skirt of said guard cup enclosing said heating element and being extended therebeyond a substantial distance, one end of said heating element being electrically connected to said guard cup, the outer edge of said guard cup being annularly beaded at a point axially offset with respect to said heating element, spring means operative on said assembly and said shell to urge said assembly relatively outwardly, and means extending radially inwardly from said shell limiting the relative outward movement of said assembly.

2,895,037
TAPE WELDERS
Charles C. Veale, West Chicago, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application June 1, 1956, Serial No. 588,859
8 Claims. (Cl. 219—81)



1. An apparatus for welding metal tapes to opposite sides of a metal bar, which comprises a pair of grooved rolls for guiding said metal tapes into contact with a metal bar advanced therebetween, a resilient cantilever arm mounting one of the rolls, means for bending the cantilever in a direction such as to urge the roll carried thereby toward the other roll, and conductive brushes mounted independently of said cantilever for applying an electrical potential across the rolls.

2,895,038
ILLUMINATED CLOCK
Edmund B. Whiston, Chicago, Ill.
Application April 2, 1956, Serial No. 575,534
3 Claims. (Cl. 240—2.1)

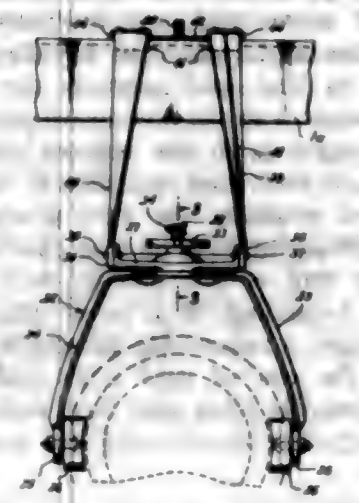


1. In an illuminated clock, a clock housing, a forwardly extending portion at the lower end of the housing, a vertically disposed transparent panel in the front of the clock housing above the forwardly extending portion, a clock mounting panel spaced rearwardly from the transparent panel and parallel thereto, the top of the forwardly extending portion of the housing being translucent and extending rearwardly past the transparent panel and joining the clock mounting panel at the lower end thereof, and a light source positioned forwardly of the transparent panel and in the forwardly extending portion of the housing directing light rearwardly and upwardly through the top of the forwardly extending portion of the housing against the clock mounting panel and into the area between the clock mounting panel and the transparent panel in the front of the housing.

ERRATUM

For Class 240—41 see:
Patent No. 2,894,693

2,895,039
DERRICK GIRTH LIGHT
Frank E. Hutchison, Houston, Tex.
Application September 9, 1955, Serial No. 533,332
1 Claim. (Cl. 240—90)

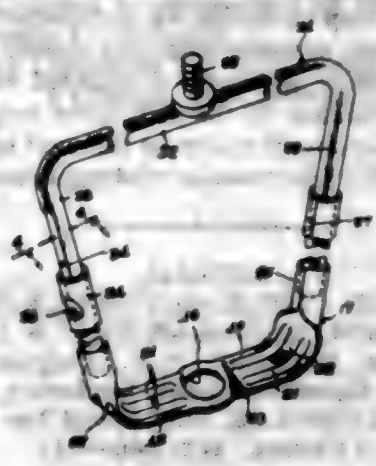


The combination with a light carrying body formed of metal, a yoke having spaced vertically-disposed depending arms at opposite sides of the body, means connecting the arms to the body for vertical angular adjustment of the body in the yoke, a horizontally disposed crossbar and means connecting the crossbar to the yoke mediate the ends of the crossbar for horizontal angular adjustment of the yoke on the crossbar, of spaced apart, flat, vertically elongated flexible members of electrically nonconductive material attached at their upper ends to an elongated horizontal metallic support at longitudinally spaced locations on the support and at their lower ends to the ends of the crossbar, the upper end portions of said members lying in planes parallel to the longitudinal axis of said support and the lower end portions of said members lying in planes at right angles to said axis and means forming an electrical connection between the body and said support.

2,895,040
LAMPSHADE
William D. Vogel, Los Angeles, and Charles Rausch, La Crescenta, Calif., assignors to Lighting Specialties, Inc., Los Angeles, Calif., a corporation of California
Application June 14, 1957, Serial No. 665,825
5 Claims. (Cl. 240—138)

1. An electric lampshade adapted to be supported on a lamp bulb, said shade comprising: a shell having an opening, there being elongated pockets formed in diametrically opposed areas in said shell just within said opening; and a spring wire element formed to include a single, complete loop and end sections which are relatively straight and each of which is provided with an anchor finger bent from its free end, said element being so dimensioned as to require it to be compressed to bring said anchor fingers within said cup in registry with said pockets, said fingers extending into said pockets when said element is then allowed to expand, thereby assembling said element with said shell, said element and shell being so assembled, in the formation of said shade, that said loop of said element is disposed within said shell, said loop being properly dimensioned to yieldably receive and grip said bulb between opposite halves of said loop.

2,895,041
LAMP HARP
Harry Shoglow, Chicago, Ill., assignor of one-half to Carl Wildey, Chicago, Ill.
Application December 3, 1956, Serial No. 625,730
1 Claim. (Cl. 240—148)



An adjustable lamp shade harp comprising a base member securable beneath a lamp socket carried on the upper end of a lamp pedestal and a bail member which is frictionally and adjustably supported by said base member, said base member including a horizontal center mounting part and a pair of integral upwardly and outwardly diverging tubate columns of a length to extend above the socket, said bail member including a single length of wire stock bent to provide an intermediate lintel section with downwardly and outwardly divergent shaft sections, said shaft sections and said tubate columns being springable convergently to align the shaft sections with and be received within the tubate columns under substantially constant frictional engagement for varying positions of insertion, a projection on the interior of each tubate column closely adjacent to its free end, and an indentation on a surface of each shaft section substantially coextensive with its length and in registration with the projection but stopping short of its free end to provide a shoulder to coact with the projection for restraining separation of the bail member from the base member.

2,895,042
RAILWAY SIGNALING SYSTEM FOR THE PROTECTION OF TRAINS INCAPABLE OF RELIABLY SHUNTING TRACK CIRCUITS
William D. Hailes, Rochester, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.
Application April 27, 1956, Serial No. 581,146
17 Claims. (Cl. 246—33)

1. In a railway signaling system, a stretch of track divided into a plurality of track sections, a signal located

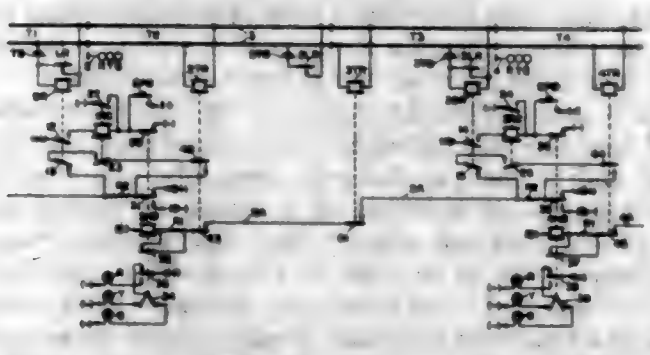
at the entrance to each track section, train-carried apparatus mounted at the front and rear of a train, said front train-carried apparatus being capable of supplying output energy of a particular character, and said rear train-carried apparatus being capable of supplying output energy of a different character, wayside detection circuit means at the entrance to each track section distinctively responsive to the characteristically different output energies of said front and rear train-carried apparatus when said train-carried apparatus and said wayside detection means are in proximity upon the passage of a train, and signaling circuit means for each track section controlled to a stop condition by the distinctive response of said associated wayside detection circuit means when a front train-carried apparatus is detected and controlled to a proceed condition by the distinctive response of said wayside detection circuit means at the next signal location in advance when a rear train-carried apparatus is detected.

2,895,043

CHECK-IN AND CHECK-OUT BLOCK SIGNALING SYSTEM USING REGULAR TRACK CIRCUITS

Neil D. Preston, Rochester, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.

Application March 28, 1957, Serial No. 647,248
3 Claims. (Cl. 246—41)



1. A signaling system for railroads having a stretch of track divided into a plurality of blocks, a line circuit for each block extending throughout the length of that block, a source of energy at the leaving end of each block, means for connecting each said source of energy into its line circuit for the corresponding block for normally energizing such line circuit, a line relay at the entering end of each block, stick circuit means including a stick circuit controlled by said line relay for connecting each said line relay into its said line circuit for the corresponding block, detection means for each block for deenergizing said line circuit when that block is occupied by a train, and restoring circuit means for restoring said line circuit for any block to a normally energized condition when a train in such block has fully entered the next block in advance.

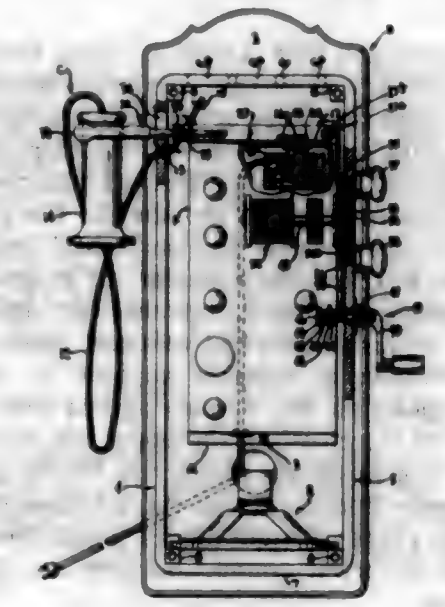
2,895,044

RADIO CONSTRUCTION

Robert Edward Bowers, El Cerrito, Calif., assignor to R-E-B, Inc., El Cerrito, Calif., a corporation of California

Application November 1, 1954, Serial No. 465,797
1 Claim. (Cl. 250—14)

A radio receiver comprising a substantially rectangular chassis having electrical components mounted thereon electrically connected and arranged to provide a radio receiver; a cabinet for said chassis having a vertical back wall face and a rectangular hollow box mounted on said vertical back wall face; said chassis mounted on said vertical back wall face interiorly of said box; radio receiver control means connected to said chassis and projecting horizontally exteriorly thereof; said control means having rotatable shafts extending exteriorly of said box; an electrical circuit breaker adapted to render said radio receiver alternatively in the operative and inoperative condition; said circuit breaker having a body mounted interiorly of said chassis and rigidly connected thereto and an upwardly projecting electrical contact carrying tubular plunger; said plunger slidably mounted in said body to reciprocate in a vertical path; said plunger extending through the top wall of said chassis and projecting upwardly above said top wall; electrical contacts mounted within said body and operably engaged with said plunger so that said contacts are rendered open when said plunger is in the downward position and closed when said plunger is in the upward position; a spring mounted in said body and operable to bias said plunger in the upward position; an arm pivotally secured at one end to a plate mounted on said chassis and extending above the top wall of said chassis; said arm having an opposite end extending to a point adjacent the inside wall of said box; a removable extension arm removably mounted on the end of said arm; said extension arm projecting outwardly from said box; said arm and extension arm disposed to rotate about said arm pivotal mount



in a vertical path; said box being apertured to allow free vertical movement of said arm extension; said plunger being disposed directly under said arm between the arm pivotal mount and the extension arm; said plunger engaging with the underside of said arm to normally support said arm against downward rotation about the arm pivotal mount; and a weighted member removably mounted on the end of said arm extension exteriorly of said box to overcome said spring bias and force said arm to rotate said arm downwardly and position said plunger to the downward position wherein the electrical contacts are positioned in the open condition; said radio receiver including a loudspeaker mounted on the bottom of said box and facing downwardly; said box having apertures on the bottom face thereof in alignment with said loudspeaker to permit audio vibrations emanating from said loudspeaker to pass exteriorly from said box; the top face of said box being formed with apertures to provide air ventilation ports to aid in cooling said receiver during operation.

2,895,045

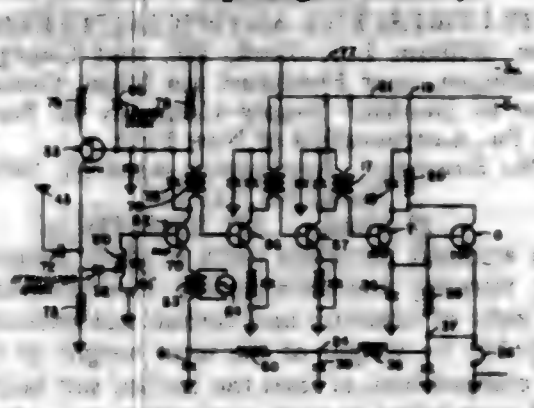
RADIO RECEIVER WITH TRANSISTORIZED AUDIO-DETECTOR AND AUTOMATIC GAIN CONTROL CIRCUITRY

Shelly Kagan, Boston, Mass., assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware

Application September 26, 1957, Serial No. 686,379
10 Claims. (Cl. 250—20)

2. A transistorized radio receiver comprising, in cascade, a diode signal attenuator having anode and cathode electrodes, a base-fed PNP type mixer having a base

and a collector and an emitter, an intermediate frequency amplifying system, a detector, a low frequency amplifier, means for developing an automatic gain control potential and applying it to the emitter of the mixer for controlling the gain thereof, and transistor amplifying means controlled by said mixer for varying the bias on said signal attenuator from a substantial forward value to zero with increase in input signal intensity.



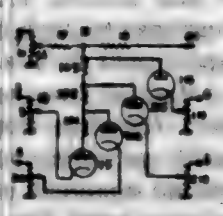
10. In a radio receiver, a low-drain detector-amplifier comprising, in combination: an NPN type detector transistor having an emitter and a base and a collector; a PNP type audio amplifier transistor having an emitter and a base and a collector; a direct connection between the emitter of the detector transistor and the collector of the amplifier transistor; a source of bias currents having a negative terminal in circuit with said connection, a more negative terminal in circuit with the base of the detector transistor, and a positive terminal in circuit with a point of reference potential; a direct connection between the collector of the detector transistor and the base of the amplifier transistor; a temperature-stabilizing resistor connected between base and emitter of the amplifier transistor; and an emitter load connected in a direct current series circuit with said resistor between the emitter of the amplifier transistor and said point of reference potential.

2,895,646

ELECTRIC SIMULATORS OF ARBITRARY FUNCTIONS

Jacques Edouard Martin, Paris, France, assignor to Societe d'Electronique et d'Automatisme, Courbevoie, France

Application February 15, 1954, Serial No. 410,119
Claims priority, application France March 19, 1953
2 Claims. (Cl. 250—27)



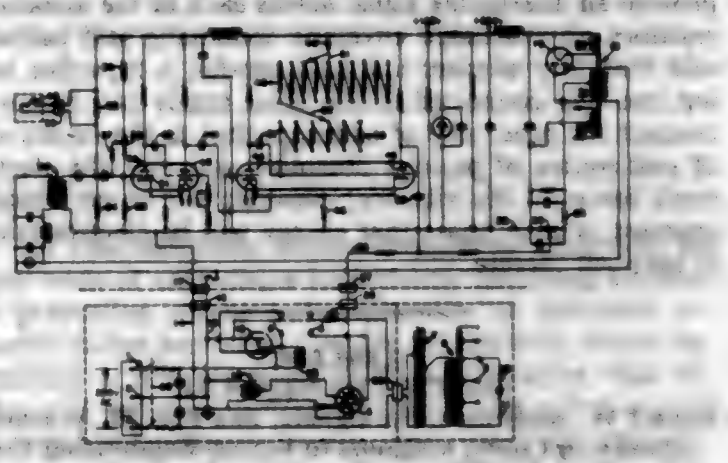
1. In a transfer arrangement for an electric simulator of an arbitrary function of at least one variable, composed of elementary functions each of which represents a portion of a straight line of predetermined slope, at least one transfer network including a series attenuator comprising two series connected resistances, at least another transfer network including unidirectionally conducting means, variable direct current voltage supply means and reference direct current voltage supply means coupled, respectively, to said transfer networks, at least one voltage limiting branch extending from the junction point of said resistances through said unidirectionally conducting means to said reference voltage supply means, a further resistance connecting said unidirectional means to said junction point, further voltage limiting branches derived from said junction point and including further unidirectional means connected respectively at one side to different points along said further resistance, a further voltage supply means connected respectively to the other side of said unidirectionally conducting means and means including a summing amplifier for linearly adding the voltage outputs derived from said series attenuator and said voltage limiting branch, respectively.

2,895,047

TIMING CIRCUIT

Josef W. Heyd, Dayton, Ohio, assignor to the United States of America as represented by the United States Atomic Energy Commission

Application December 21, 1954, Serial No. 476,863
2 Claims. (Cl. 250—27)



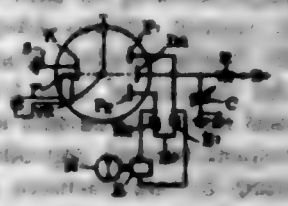
1. Means for controlling the A.C. power delivered to a utilization device comprising a source of alternating current; a grid-controlled gas discharge device connected in series circuit between said source and said device; means for supplying a negative bias voltage to said discharge tube to prevent conduction therethrough; a mono-stable switching circuit having an input coupled to receive actuating pulses, an output coupled to said grid to deliver a positive control signal thereto, and provided with a timing network adjustable to control the time required by said circuit to reassume its stable state after actuation; a trigger circuit having an output coupled to the input of said mono-stable circuit and an input connected to receive a control pulse; a source of bias voltage in said input of said trigger circuit; a control switch; means coupling said switch in circuit with said trigger input such that actuation of said switch provides substantially but not all of the triggering voltage required at said trigger input; and means coupling a portion of the alternating current from said course of alternating current to said trigger input, said portion being sufficient in magnitude to actuate said trigger circuit upon actuation of said switch only at the peak amplitude of the voltage alternation cycle.

2,895,048

VIBRATORY REED IN ELECTRONIC HEADING SENSING DEVICE

Irvin S. Jacobsen, Drexel Hill, Pa., assignor to Clifton Precision Products Co., Inc., a corporation of Pennsylvania

Application February 19, 1954, Serial No. 411,471
7 Claims. (Cl. 250—27)



7. Sensing equipment of the character described comprising an electron emitting cathode, an electron collect-

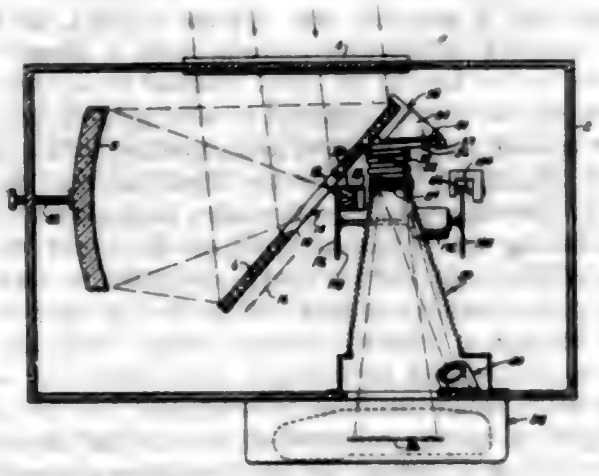
ing drive anode opposed to said electron emitting cathode, a resistor in series with said drive anode, a vibratory element positioned between said opposed cathode and said drive anode and having a normal plane of vibration along a line between said electron emitting cathode and said drive anode, a pair of electron collecting signal anodes arranged between said vibratory element and said drive anode and substantially symmetrically positioned on each side of the normal plane of vibration of the vibratory element, a resistor in series with each of said signal anodes, means to negatively polarize said vibratory element with respect to said cathode and said anodes, means to connect a source of positive potential through each of said resistors to said anodes, whereby upon vibration of said vibratory element the beam of electrons from said cathode to said anodes will be modulated to provide an alternating signal across each of the associated resistors, an evacuated envelope containing said cathode, said vibratory element and said anodes, a capacitor having one side connected to the drive anode and means to connect the other side of said capacitor to the return side of said source of positive potential, whereby, the electrostatic force on the vibratory element will be periodically changed in such phase that energy will be electrostatically supplied thereto.

2,895,049

IMAGE TRANSDUCER

Robert W. Astheimer, Springdale, and Eric M. Wormser, Stamford, Conn., assignors to Barnes Engineering Company, Stamford, Conn.

Application June 26, 1957, Serial No. 668,107
11 Claims. (Cl. 250—65)



8. An infra-red camera comprising, in combination, an infra-red sensitive transducer, a plane scanning mirror for reflecting infra-red radiation incident thereon to said transducer, means for converging on said transducer radiation reflected by said scanning mirror and parallel to the optical axis of said converging means, means adapted to cause said scanning mirror to scan a field of view by reciprocating about a first axis and indexing about a second axis perpendicular to said first axis, said scanning means adapted to cause rotation of said first axis about said second axis, a reproducing mirror affixed to said scanning mirror at an angle of approximately 40° thereto, said angle lying in a plane parallel to said second axis and perpendicular to said first axis, a variable intensity light source, means adapted to vary the intensity of a light beam emitted from said source in accordance with the output of said transducer, a light sensitive surface, said light source and said surface being so disposed with respect to said reproducing mirror that a light beam emitted by said source will be reflected by said reproducing mirror on to said surface, whereby the movement of said reproducing mirror is synchronized with that of said scanning mirror and a heat picture of the field of view is generated on said medium, said light source, said surface, and said reproducing mirror being so arranged with respect to each other as to make the heat picture thereby generated on said surface substantially correspond to said field of view and the objects therein.

2,895,050

FLUORESCENT ARTIFICIAL TEETH

Pyungtoo William Lee, York, Pa., and Georg Müller, Sprendlingen, near Frankfurt am Main, Germany, assignors to Dentists' Supply Company of New York, York, Pa., a corporation of New York

No Drawing. Application April 30, 1956
Serial No. 581,274
10 Claims. (Cl. 250—71)

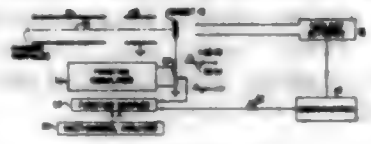
1. An artificial porcelain tooth product comprising essentially vitreous porcelain having incorporated therein mineral salts of uranium and cerium not exceeding substantially 2% by weight of the total weight of the tooth product composition, at least the cerium salt being fritted and said salts being in such proportion to each other as to modify each other suitably to produce white fluorescence in said tooth products comparable with that of natural teeth when viewed in ultra-violet light.

2,895,051

APPARATUS FOR MEASURING NEUTRON CROSS SECTIONS

Lawrence Cranberg, Los Alamos, N. Mex., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application February 4, 1957, Serial No. 638,186
3 Claims. (Cl. 250—83.3)



1. Apparatus for measuring the nuclear cross sections of materials comprising a nuclear reaction target, means for impinging a particle beam against said target, a nuclear reaction detector spacedly supported in the path of the reaction products from said target, a multi-channel analyzer, means for cyclicly varying the magnitude of a continuous target potential over a neutron producing range, a function sampler having first and second inputs respectively coupled to said means for modulating said target potential and to said nuclear reaction detector for generating a pulse in response to each detected event having an amplitude proportional to the amplitude of the instantaneous target potential, means electrically coupling the output of said function sampler to the input of said multichannel analyzer, whereby nuclear reactions are recorded in appropriate channels of said pulse height analyzer in correspondence with the magnitude of the responsible target potential.

2,895,052

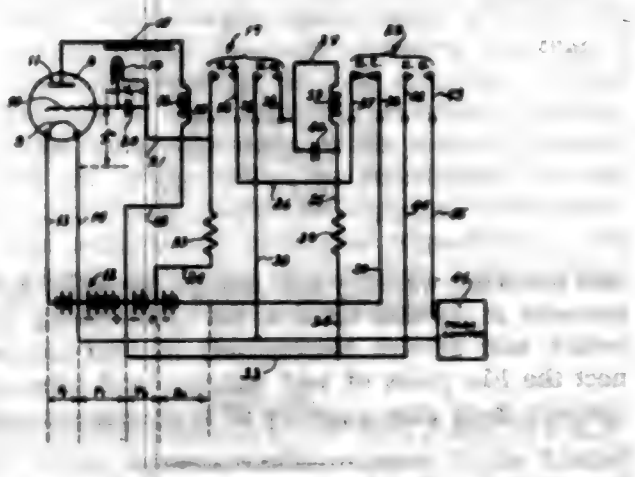
DEVICE AND CIRCUIT FOR THE MEASUREMENT OF HIGH RESISTANCES

Louis L. Weinglass and Carl P. Weinglass, New York, N.Y.

Application July 13, 1955, Serial No. 521,726
3 Claims. (Cl. 250—83.6)

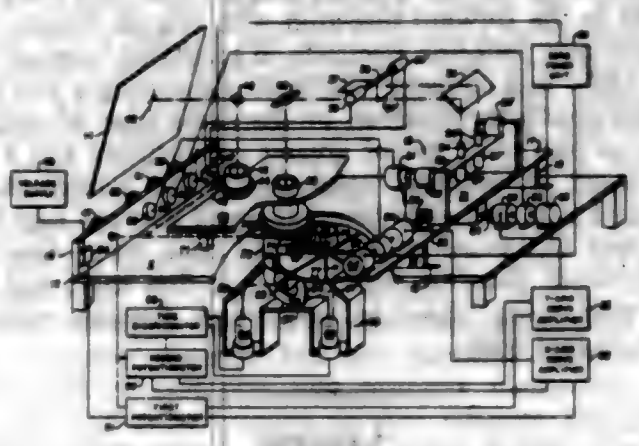
1. In a measuring system, switching means and pulse counting means controlled by said switching means, constant multi-potential supply means, a thermionic discharge tube having a cathode, a highly insulated grid and an anode coupled to said switching means, a condenser connected at one side to said grid and at the other side to a reference potential positive with respect to said

cathode, means forming a high resistance leakage path in shunt with said condenser to be measured by the rate of discharge of said condenser, thereby causing said tube at the end of the condenser discharging cycle to operate to control said switching means temporarily to switch



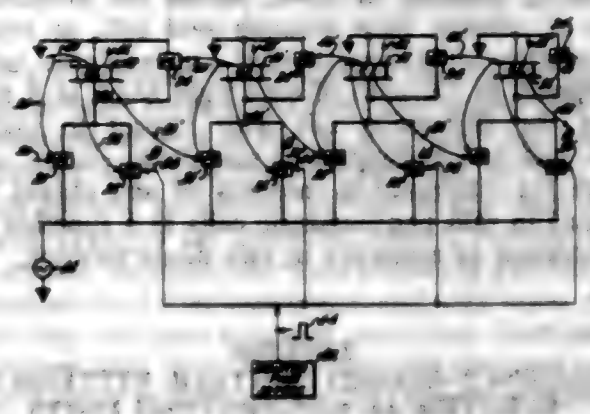
the other side of said condenser to a charging potential positive with respect to said cathode and substantially higher than said reference potential thereby recharging said condenser, and causing said tube to operate as a rectifier.

2,895,053
MEASURING PROJECTOR
Jack V. Franck and Paul S. Broadhead, Lafayette, and Edson W. Skiff, Pleasant Hill, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission
Application May 27, 1958, Serial No. 738,244
14 Claims. (Cl. 250—202)



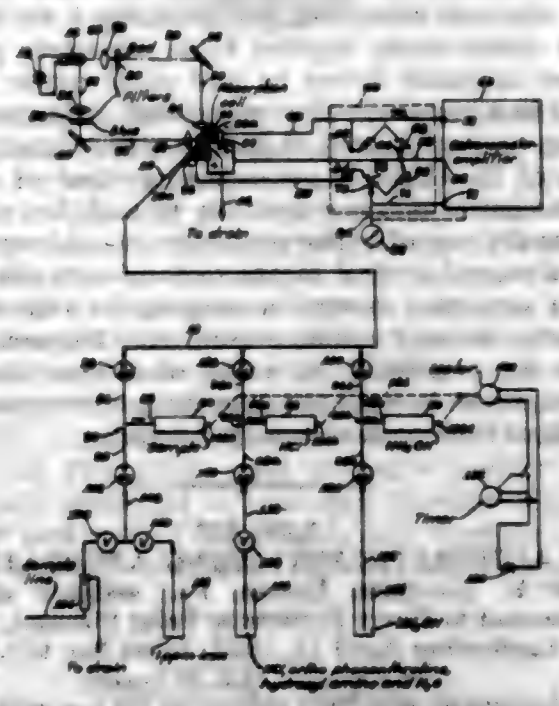
1. In apparatus for determining the coordinates of a curve, the combination comprising means forming an image which image contains said curve, a scanning element systematically sweeping across at least a portion of said image, said scanning element being generally opaque and having at least one relatively small light transmitting area, means for producing measured relative motion between said image and said scanning element whereby a fixed reference point in the region swept by said scanning element may be caused to trace along said curve, a photosensitive element positioned to receive only light from said image transmitted through said light transmitting area of said scanning element thereby producing a signal indicative of the passage of said area across the region of said image occupied by said curve, means producing a second signal as said light transmitting area of said scanning element sweeps across said fixed reference point, a discriminator circuit detecting the time interval between said first and second signals as a measure of the deviation of said curve from said fixed reference point and producing an output signal indicative of said deviation, and servo means operating in response to said output signal of said discriminator, said servo means acting to produce relative motion between said image forming means and said scanning element to restore said curve to said fixed reference point.

2,895,054
SIGNAL RESPONSIVE CIRCUIT
Egon E. Loebner, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application December 31, 1956, Serial No. 631,530
7 Claims. (Cl. 250—213)



1. An opto-electronic device comprising a plurality of stages, each of said stages individually including a radiation generating means and a plurality of radiation responsive means providing variable impedances, means for energizing a first electrical series combination that includes said radiation generating means and a first one of said variable impedance means, and means for connecting a second one of said variable impedance means electrically in parallel with said radiation generating means, said device further comprising means for coupling said radiation generating means of one of said stages to one of said parallel variable impedance means of another one of said stages.

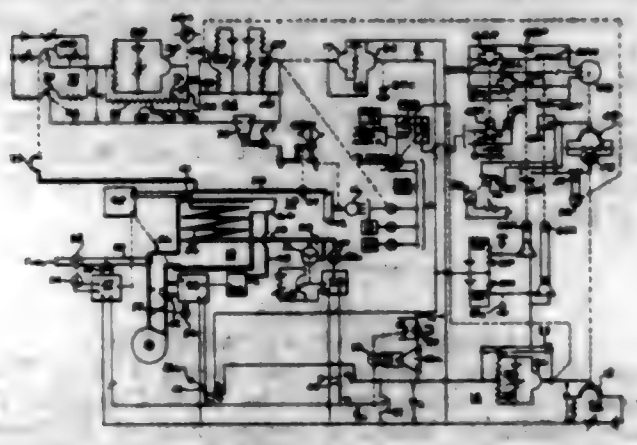
2,895,055
ANALYTICAL APPARATUS
Robert A. Crane, Concord, and David J. Pye, Walnut Creek, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Application September 30, 1957, Serial No. 687,062
3 Claims. (Cl. 250—218)



2. Apparatus for determining the concentration of materials in dilute solutions, comprising a plurality of liquid dispensing means, each of said dispensing means being connected to a common output conduit, one of said dispensing means being also coupled to a source of material in dilute solution, others of said dispensing devices being

coupled to sources of agents for developing a particular coloration to said materials in dilute solution, means for cyclically actuating said dispensing means to discharge metered quantities of said materials in dilute solution and agents for developing a particular coloration to said materials in dilution solution into said common output conduit, a light absorption cell, said output conduit being coupled to said cell, a source of white light, light filter means for separating said white light into at least two beams of colored light, each of said beams of colored light being different in color, means for directing said beams of colored light through said cell, at least two photo-electric cells, one of said photo-electric cells being disposed in the path of each light beam at a position beyond the absorption cell with respect to said light source, and means coupled to said photo-electric cells to indicate the difference in intensity of any output signals generated in said photo-electric cells as a function of the concentration of materials in said dilute solution.

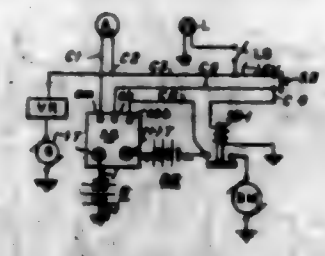
2,895,056
FREQUENCY-BIASED CONTROL SYSTEMS FOR ELECTRICAL GENERATING UNITS
Edward S. Bristol, Philadelphia, Pa., assignor to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Application July 8, 1957, Serial No. 670,548
21 Claims. (Cl. 290—2)



1. A system for controlling the electrical generation of an electrical generating unit including a vapor generator, a prime mover supplied from said vapor generator, and an alternator driven by said prime mover and connected to a power distribution network, said system comprising means adjustable to produce a first signal representative of the electrical generation required of said unit, a first control means responsive to said first signal for varying the rate of vapor generation by said vapor generator, a second control means responsive to the pressure of the generated vapor for varying the rate of supply of vapor to said prime mover, and frequency-biasing means for modifying the action of at least one of said control means in sense and magnitude corresponding with deviations from normal network frequency.

2,895,057
AUTOMATIC SWITCHING APPARATUS
Joseph E. Coughlin, Easton, Pa., assignor of twenty percent to Henry J. Nichols, Point Pleasant, N.J.
Application April 11, 1957, Serial No. 652,294
11 Claims. (Cl. 307—10)

1. Automatic switching apparatus for use with an automotive electrical power supply system including a pair of equal voltage batteries, having, in combination: a normally-open series-switch having a pair of main contacts adapted to carry full battery current when closed and to break said current when opened, said main contacts being connected between two unlike poles of said batteries; a normally-closed automatic over-current circuit-breaker-and-recloser device having a pair of contacts adapted to carry normal battery current connected to two like poles of said batteries; and a duplicate device having a pair of similar contacts connected to the other two like poles of

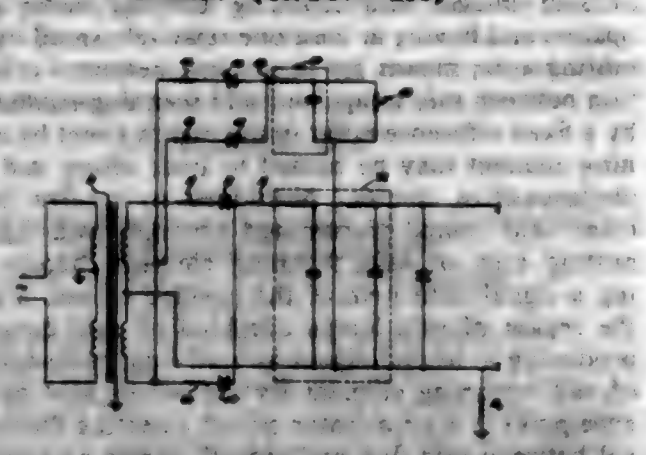


said batteries; whereby said devices normally connect said batteries in parallel relation but upon closing said series-switch said devices responsively to over-current disconnect the like poles of said batteries and subsequently reconnect them after opening of said series-switch.

2,895,058
SEMICONDUCTOR DEVICES AND SYSTEMS
Jacques I. Pankove, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application September 23, 1954, Serial No. 457,976
7 Claims. (Cl. 307—88.5)

1. Semiconductor apparatus comprising a body of semiconductor material of one type of conductivity, an emitter electrode in rectifying contact with said body and biased in the forward direction with respect thereto, and a hook-type collector electrode in rectifying contact with said body, said collector electrode comprising a first zone of semiconductor material of the same type of conductivity as said body but of greater conductivity and a second zone of different conductivity-type semiconductor material, said first zone being disposed between said body and said second zone, said second zone being biased in the forward direction with respect to first zone, and said first zone being biased in the reverse direction with respect to said body.

2,895,059
FLOATING POWER SUPPLY CIRCUIT
Norton W. Bell, Monrovia, Calif., assignor to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Application June 21, 1957, Serial No. 667,228
3 Claims. (Cl. 307—105)



1. A power supply for supplying a low ripple D.C. voltage output that is floating with respect to ground, said power supply comprising a transformer having a center-tapped secondary winding, the center-tap being main-

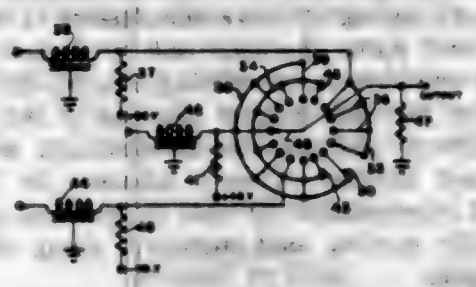
tained at a high impedance with respect to ground, a first pair of diodes respectively connecting opposite ends of the secondary winding to a first common terminal, the diodes being connected to both pass current toward the common terminal, a second pair of diodes respectively connecting opposite ends of the secondary winding to a second common terminal, the diodes being connected to both pass current away from the common terminal, a first filter connected between the first common terminal and the center-tap of the transformer secondary winding, a second filter connected between the second common terminal and the center-tap of the transformer secondary winding, and a pair of substantially equal loads simultaneously and continuously connected respectively to the outputs of the two filters, one of the loads being a useful load and the other load being a dummy load.

2,895,060

FAST RISE PULSE GENERATOR WITH HIGH P.R.F.

Clifford G. Dorn, Corona, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Application May 15, 1957, Serial No. 659,449
5 Claims. (Cl. 307—106)
(Granted under Title 35, U.S. Code (1952), sec. 266)



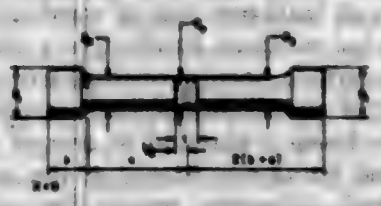
5. A pulse generator comprising in combination a pulse forming network including means for forming pulses with a fast rise and fall time and a rotary mercury jet commutating switch including a bowl provided at its bottom with a central mercury supply well, a ring of peripherally spaced contact pins mounted on and within said bowl substantially above the level of said well, a rotor mounted within said bowl coaxially therewith and provided with a nozzle having an orifice directed toward said ring of contact pins, a centrifugal pump provided on said rotor for pumping a stream of mercury from said well through said nozzle and onto said contact pins and a circular segment bus bar mounted adjacent the outer ends of said pins and operably connecting said pins and said pulse forming network whereby the output of said rotary switch comprises pulses having fast rise and fall times at a high repetitive rate.

2,895,061

PIEZOELECTRIC SANDWICH TRANSDUCER

James H. Probus, Falls Church, Va., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application January 28, 1958, Serial No. 718,168
9 Claims. (Cl. 310—9.7)



1. In a piezoelectric transducer the combination comprising: a first end portion and a second end portion; a constricted portion extending between and integrally joining said end portions and having a displacement node located therein; and a piezoelectric element forming an integral part of said constricted portion and having the same cross sectional size as said constricted portion.

2,895,062

BROAD BAND ELECTROACOUSTIC TRANSDUCER

Frank R. Abbott, San Diego, Calif.

Application December 22, 1955, Serial No. 554,901
4 Claims. (Cl. 310—9.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

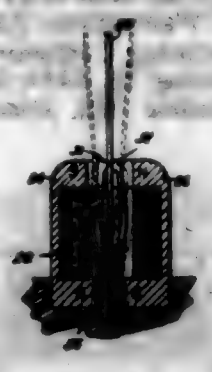
1. In a transducer, a piezoelectric ring having an inner surface, an outer surface and two sides, a first thin metallic membrane secured to one of said sides and having a lip extending over a portion of said outer surface, a second thin metallic membrane secured to the other of said sides and having a lip extending over a portion of said outer surface, an inner electrode providing electrical contact between said first membrane and said inner surface of said ring, an outer electrode providing electrical contact between said outer surface of said ring and said lip on said second membrane, electrical leads connected to both of said membranes, said ring adapted to expand radially upon electrical energization of said electrodes thereby increasing the radial tension on said membranes.

2,895,063

AIR DRIVEN REED ELECTRIC GENERATOR

George V. Morris, Chicago, Ill., assignor to the United States of America as represented by the Secretary of the Army

Application January 19, 1951, Serial No. 206,755
1 Claim. (Cl. 310—15)



In combination an electric fuse for a projectile, said fuse having an axially directed air duct, and an electric generator for said fuse in said air duct, said generator comprising a stationary polarized permanent magnet field core member having opposed pole pieces, an armature winding disposed in the field of said core, a vibratile reed disposed in said air duct between said pole pieces, means actuated by vibratory motion of a portion of said reed between said pole pieces for changing the flux linkages in said winding to induce a voltage therein, and a non-flexible armature member mounted for oscillation between said pole pieces, said armature member being mechanically connected to said reed whereby vibratory motion of said reed is imparted to said armature member to cause same to oscillate between said pole pieces.

2,895,064

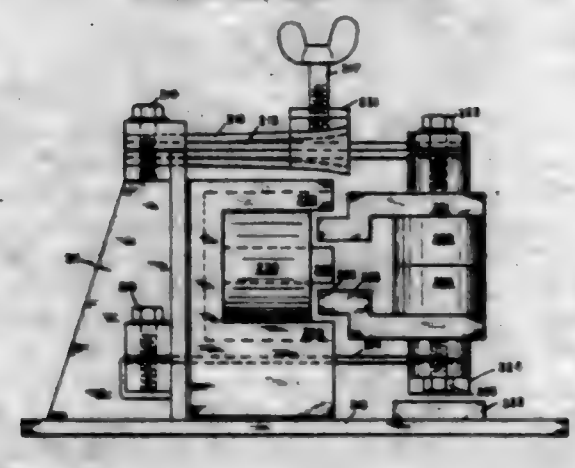
VIBRATORY MOTOR

Ronald C. Hoff and Lester R. Moskowitz, Erie, Pa., assignors to Erie Manufacturing Company, Erie, Pa., a corporation of Pennsylvania

Application December 5, 1955, Serial No. 551,936
3 Claims. (Cl. 310—39)

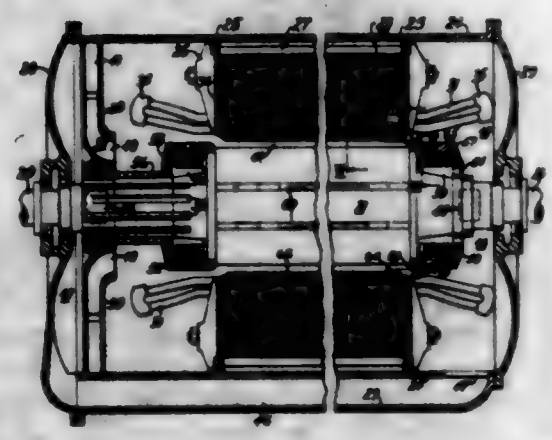
1. A vibratory motor comprising a base, a bracket attached to said base, two spaced leaf springs attached

to said bracket, a core attached to said bracket between said leaf springs, said core having three parallel spaced legs, one said leg being disposed between said other two legs, a coil on said intermediate leg, a permanent magnet attached to the distal ends of said leaf springs, said magnet having two spaced pole pieces attached to said permanent magnet one at each pole thereof, said pole



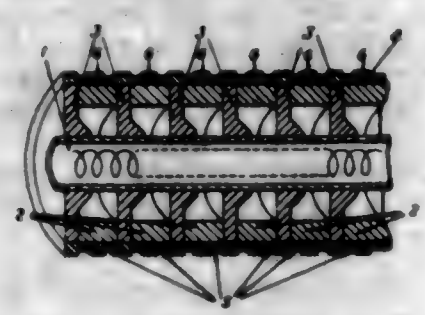
pieces being disposed between said legs of said core in spaced relation thereto, a tuning spring attached to said bracket on one side of one said leaf spring and curving outwardly therefrom, and means to urge a greater length of said tuning spring into engagement with said one leaf spring whereby the natural frequency of vibration of said one leaf spring is changed.

2,895,065
SEGMENTAL AIR GAP BAFFLE
Leon T. Rosenberg, Wauwatosa, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application November 15, 1957, Serial No. 696,829
4 Claims. (Cl. 310—64)



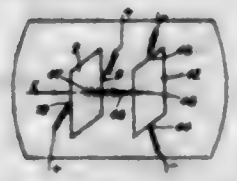
1. In a dynamoelectric machine, a housing containing a cooling gas, a stator core having slots, a winding in said stator slots having cooling ducts extending axially from one end to the other of said winding and in substantially direct contact with the conductors thereof, a rotor cooperating with said stator core to form an air gap therebetween, means producing a high differential gas pressure for forcing cooling gas through said axially extending ducts from a first end of said machine to a second end thereof, means restricting gas flow into said air gap from said first end comprising segments positioned in the radially inner portion of each of said stator slots, each of said segments having a lip portion cooperating with the lip portions of said other segments to form an annular baffle extending into said air gap.

2,895,066
TRAVELING WAVE TUBE
Susumu Yasuda, Tokyo, Japan, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Application August 5, 1955, Serial No. 526,651
Claims priority, application Japan October 4, 1954
4 Claims. (Cl. 313—84)



1. A structure for focussing an electron beam over a relatively long path comprising an assembly of a plurality of permanent magnets positioned end-to-end along said path and with the poles aligned in alternately opposite directions and magnetic permeable elements between the ends of adjacent magnets and surrounding said path whereby a magnetic field is produced longitudinally of said beam path having effective undulations of concentration along said path, characterized by means for controlling said undulations comprising, magnetically permeable members for each magnet external of the assembly of said magnets and permeable elements, means for mounting said members closely adjacent to respective magnets and intermediate the ends thereof and means for simultaneously moving said members along the length of each magnet.

2,895,067
DEVICE FOR LOCALIZING THE IMPACT POINT OF RAYS
Léon Eloi Deloffre, Lens, and Emile Alfred Pierre, Paris, France
Application June 16, 1953, Serial No. 362,120
10 Claims. (Cl. 313—95)

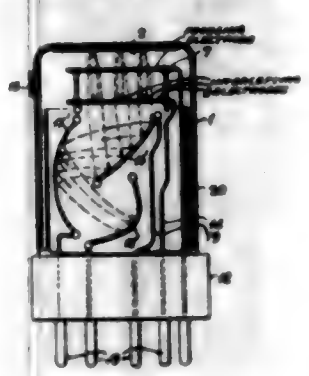


1. In an apparatus for determining the relative position of a luminous beam impinging on a photo-electric device, in combination, at least one photo-emissive cathode member having a conductive surface portion adapted to receive a light beam impinging thereon; an anode member having at least one conductive electron collecting surface portion spaced from said surface portion of said cathode member; at least one of said members being light permeable; at least one of said members having at least one pair of conductive, diametrically opposite edge portions conductively connected with said conductive surface portion of the particular member; at least one pair of circuit means, each means of said pair of circuit means being connected to one of said opposite edge portions and being maintained at the same potential as the other; and indicating means for indicating any difference between the amounts of current flowing respectively through said means constituting said pair of circuit means when a beam of light is caused to impinge on said photo-emissive surface portion, such current difference being a measure of the location of the impinging point of said beam on at least one of said surface portions between said edge portions.

2,895,068
PHOTO-ELECTRIC CELLS

Sidney Rodda, New Barnet, England, assignor, by mesne assignments, to Siemens Edison Swan Limited, Westminster, London, England, a British company

Application December 12, 1955, Serial No. 552,581
Claims priority, application Great Britain December 14, 1954
4 Claims. (Cl. 313—102)

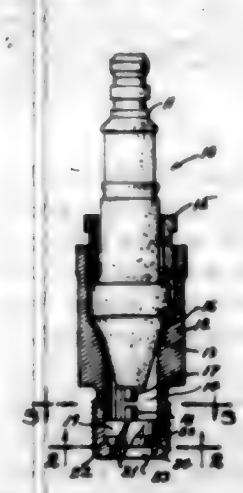


1. A photo-electric cell comprising a photo sensitive cathode and a collector electrode, a multiapertured focusing electrode extending across the electron path, means for applying a potential to said focusing electrode, and a plurality of electron absorbent intercepting electrodes with a total surface area which is small compared with the cross-sectional area of the beam and aligned with the beams passing through the apertures in said focusing electrode so as to intercept and absorb the slow moving electrons.

2,895,069
SPARK PLUGS

Putnam Davis, Larchmont, N.Y., assignor to Jet Ignition Co., Inc., Larchmont, N.Y., a corporation of New York

Application October 8, 1954, Serial No. 461,861
8 Claims. (Cl. 313—143)

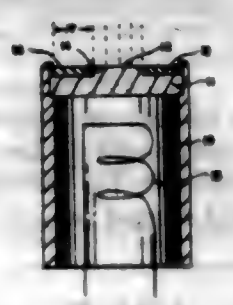


1. A spark plug comprising a hollow body having a cylindrical internal space defining an ignition chamber and a smaller diameter passage opening at the adjacent end of the body, with an annular inclined shoulder between said cylindrical internal space and smaller diameter passage, two axially aligned and spaced apart electrodes in said ignition chamber, and a substantially cylindrical insert in said cylindrical internal space at the end of the latter adjacent said passage, said insert having its lower external wall inclined inwardly so as to seat on said annular inclined shoulder, said insert having helical grooves in the side wall surface opening radially and at the opposite end faces of the insert so that helical passages are defined between said grooves and the internal wall surface of said body to communicate said ignition chamber with said small diameter passage while said inclined shoulder defines a constriction adjacent the ends of said helical passages opening towards said small diameter passage.

2,895,070
THERMIONIC CATHODE

George A. Espersen, Dobbs Ferry, N.Y., assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Application August 23, 1955, Serial No. 530,051
7 Claims. (Cl. 313—346)

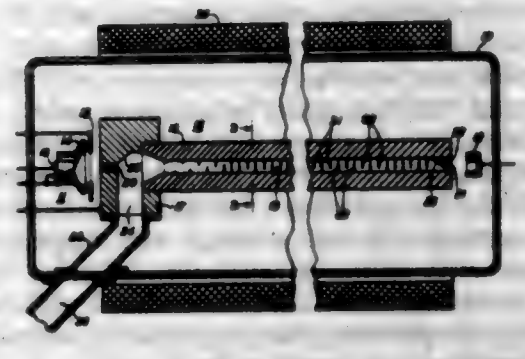


1. A thermionic dispenser cathode comprising an exposed, tungsten-containing, porous portion, a zirconium metal surface portion abutting said portion containing tungsten, a barium-containing material in reactive relationship with said portion containing tungsten, and means for heating said cathode to a temperature in the range between 800° C. and 1350° C. and at which barium and its oxide is generated and migrates to and covers the tungsten portion and tends to cover the adjacent portions of the zirconium portion, the thermionic electron emission at said temperature from the portion containing tungsten being substantially high, and the thermionic electron emission from the zirconium portion at substantially the same temperature being extremely low.

2,895,071
TRAVELING WAVE TUBE

Rudolf Kompfner, Far Hills, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application December 23, 1952, Serial No. 327,566
10 Claims. (Cl. 315—3.6)



1. In electronic apparatus, a hollow wave guiding member, a linear array comprising two sets of U-shaped wire loops, the closed ends of said wire loops of each set extending inwardly from and the open ends thereof being attached to a different one of two opposite surfaces of said member, the closed ends of said two sets overlapping at the axis of the hollow wave guiding member and being interleaved in an interdigital pattern, and means for forming and projecting an electron stream through the region of overlapping of adjacent wire loops.

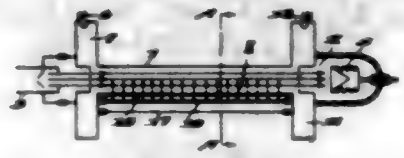
2,895,072
ELECTRONIC DEVICES

Olof Erik Hans Rydbeck, Gotoborg, Sweden

Application March 13, 1956, Serial No. 571,277
Claims priority, application Sweden March 18, 1955
8 Claims. (Cl. 315—5.15)

4. An electronic device comprising a hollow wave guide, a first source of charged particles positioned to direct a stream of said particles axially along said wave guide, a second source of charged particles positioned to

direct a second stream of charged particles substantially at right angles to said first stream of particles along a substantial portion of said wave guide, and means for

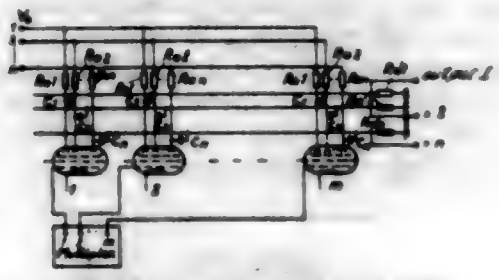


varying the current density of said second stream of charged particles to modulate said first stream of charged particles, comprising means for periodically varying the emission ability of said second source.

2,895,073
CIRCUIT SYSTEM FOR ELECTRONIC MEMORY TUBES

Walter Emil Wilhelm Jacob, Hagersten, Sweden, assignor to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden

Application February 25, 1954, Serial No. 412,599
Claims priority, application Sweden February 27, 1953
1 Claims. (Cl. 315—12)



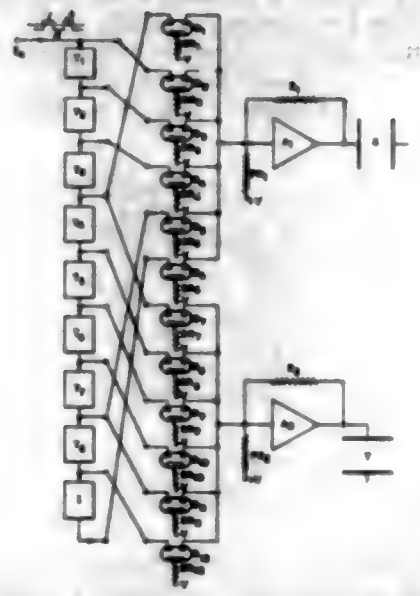
A circuit system for storing information by marking an electronic storage tube having at least one electron emitting cathode, means for control of the electrons emitted from the cathode, several secondary emission electrodes constituting storage elements, said electrodes being interconnected with outer impedances and arranged to obtain two different stable potentials within a certain potential range due to their negative current voltage characteristic and a collector electrode for collecting the primary and the secondary electron currents, all said storage elements being separately and directly electrically accessible from the outside of the tubes, said system comprising means for applying a marking potential to the respective storage element through the respective outer impedance, said marking potential differing from the normal operating potential of the cathode, and means for discharging the primary electrons into the direction of all the storage elements simultaneously.

2,895,074
BEAM DEFLECTION SYSTEMS FOR CATHODE RAY TUBES

Philip Taylor and Gerald H. Perry, Malvern, England, assignors to National Research Development Corporation, London, England

Application January 30, 1953, Serial No. 334,188
Claims priority, application Great Britain February 7, 1952
11 Claims. (Cl. 315—26)

1. Apparatus for generating deflection voltages for a cathode ray tube information storage system in which a plurality of digit signal elements is stored in the form of individual charged digit areas distributed on a cathode ray tube screen, comprising means for generating first deflection voltages corresponding to a raster scan comprising *n* lines each of *m* digit areas, means for generating sets of additional deflection voltages, each set corresponding to a different one of a number of contiguous non-overlapping locations forming a composite non-rectangular pattern for raster scans on the cathode ray tube screen, and means for cyclically applying the sets of additional deflection voltages during successive raster scans,

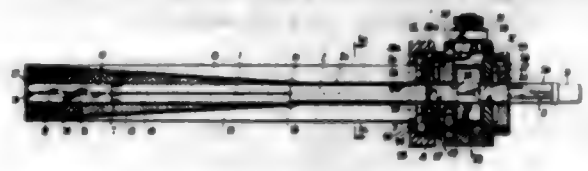


whereby the rasters of a cycle are laid down on the screen in non-overlapping relation to form a composite non-rectangular pattern.

2,895,075
ELECTRONIC DEVICES

Ronald Millership, London, England, assignor to Elliott Brothers (London) Limited, London, England, a British company

Application December 12, 1956, Serial No. 627,796
Claims priority, application Great Britain December 12, 1955
22 Claims. (Cl. 315—39)



1. An electronic device of the kind adapted to be inserted into a waveguide to extract energy therefrom and to provide an indication of the magnitude of the energy propagated through the waveguide, comprising an evacuated envelope, a cylindrical anode disposed within the envelope, a cathode arranged co-axially within the anode to provide a co-axial transmission line, the cathode extending beyond at least one end of the anode, a transformer associated with such extension of the cathode and disposed wholly within the envelope and adapted to transform the mode of energy propagated through the waveguide to a mode for propagation along the co-axial transmission line and a body of lossy dielectric material surrounding the cathode at a location spaced from the transformer in the direction in which the energy is to be propagated along the co-axial transmission line.

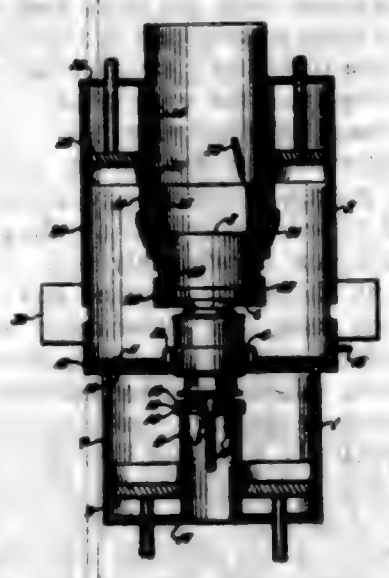
2,895,076
HIGH FREQUENCY ELECTRON DISCHARGE DEVICE

Arthur C. Stocker, Collingswood, N.J., assignor to the United States of America as represented by the Secretary of the Air Force

Application June 28, 1957, Serial No. 667,960
12 Claims. (Cl. 315—44)

1. In combination with an electron discharge tube, a coaxial cylindrical transmission line operatively associated with said tube, said transmission line including an assembly of elements concentrically surrounding said electron discharge tube, and a tube carrying assembly integrated

with said electron discharge tube and extending axially of said transmission line assembly to a point beyond the outer limits of said transmission line assembly



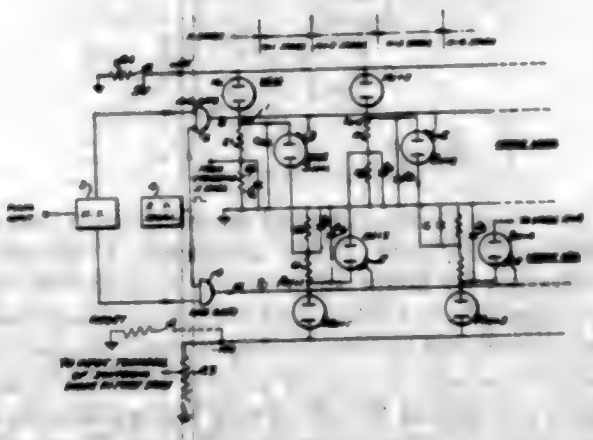
to effect insertion and withdrawal of said electron discharge tube with said tube carrying assembly from said transmission line assembly independently of any disturbance of said transmission line assembly.

2,895,077

GAS DIODE LINEAR REGISTER

Arthur W. Holt and David C. Friedman, Washington, D.C., assignors to the United States of America as represented by the Secretary of Commerce

Application May 4, 1956, Serial No. 584,405
2 Claims. (Cl. 315—84.5)



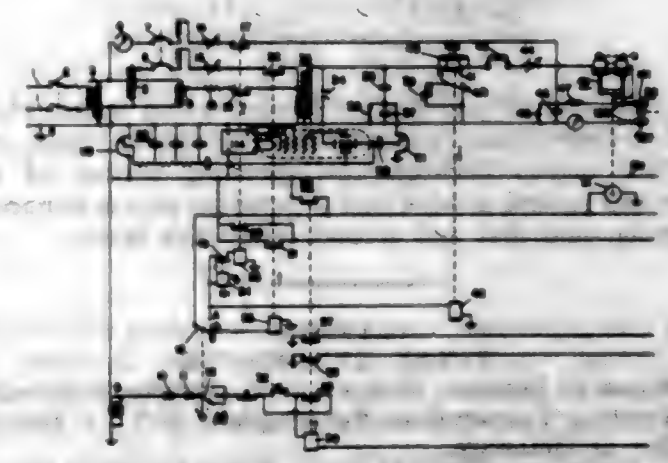
1. A step-by-step pulse counting circuit comprising a plurality of like stages connected in cascade, each stage having an energizable indicator-storage means and voltage switching means, said indicator means comprising a gaseous diode, said switching means comprising a gaseous diode and auxiliary means for applying an R.-F. field thereto, grounded biasing potential sources of opposite polarity, one electrode of the indicator diode in adjacent stages being connected respectively to said grounded biasing potential sources, each of said biasing potentials having an amplitude less than the striking potential and greater than the maintaining potential of said indicator-storage diodes, the other of said indicator-diode electrodes being directly connected to a first electrode of the switching diode in the adjacent subsequent stage, a first current limiting resistor connecting the second electrode of said switching diode in each stage to said other electrode of the indicator-diode in the same stage, a second resistor connecting said second electrode of said switching diode to ground potential, separate energizable R.-F. means connected respectively to the auxiliary R.-F. applying means of a switching diode in adjacent stages for applying an R.-F. energy potential thereto, an input for applying pulses to be counted and means connected to said input and responsive to the pulses to be counted for alternately energizing each of said energizable R.-F. means in sequence consonant with the sequence of application of said pulses.

2,895,078

LIGHT SOURCES FOR SPECTROGRAPH SYSTEMS

Norman E. Polster, Southampton, Pa., assignor to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania

Original application August 10, 1951, Serial No. 241,172, now Patent No. 2,735,330, dated February 21, 1956. Divided and this application September 27, 1955, Serial No. 536,885
8 Claims. (Cl. 315—111)



1. A spectrographic light source suited for arc and spark analysis comprising a transformer having a primary winding and a high-voltage secondary winding, capacitance means, a charging circuit for said capacitance means including said high-voltage secondary winding, a discharge circuit for said capacitance means including a control gap of constant preset length and an analysis gap subjected in series to the charging voltage existent across said capacitance means, the setting of said control gap determining the magnitude of said charging voltage for which said capacitance means discharges through said gaps in series during half-cycles of the charging voltage, two energizing circuits for said primary winding, one of said energizing circuits including a high resistance providing with said capacitance means a time constant such that said charging voltage exceeds the break-down voltage of said control gap only once during a half-cycle of said charging voltage and the other of said energizing circuits having resistance providing with said capacitance means a substantially shorter time constant for which said charging voltage during a half cycle thereof exceeds the break-down voltage of said control gap a number of times dependent upon the control gap setting, a low-voltage circuit, and switching means selectively operable to one position to connect said primary winding to said one of its said energizing circuits and also to connect said low-voltage circuit to said analysis gap so to effect spark-initiated arc operation of the light source and selectively operable to a second position to connect said primary winding to said other of its energizing circuits and to disconnect said low-voltage source from said analysis gap so to effect spark-operation of the light source at a repetition rate per half cycle determined by the control gap setting.

2,895,079

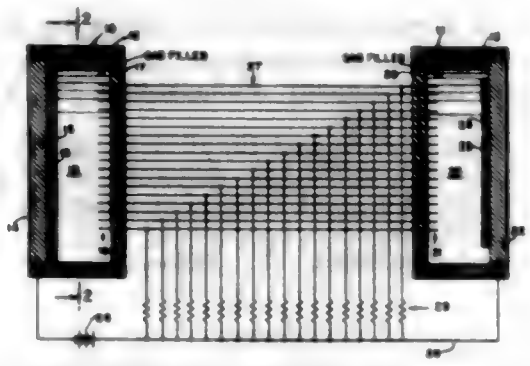
IMAGE TRANSMISSION SYSTEM

Dennis D. Willard, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application August 15, 1955, Serial No. 528,231
8 Claims. (Cl. 315—153)

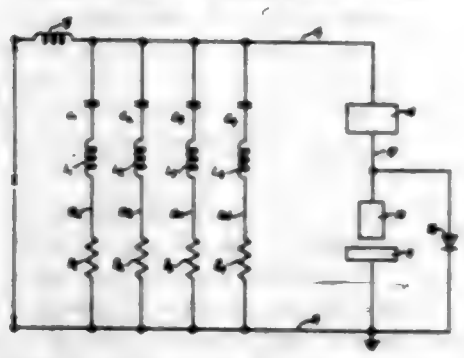
1. Image transmission apparatus comprising: first and second ionization chambers, means including a first trans-

parent conductive layer, a photo-emissive layer, and a first group of plural probes for utilizing ionization in said first chamber to convert an optical image into a plurality of electrical potentials, means including a second group of plural probes and a second transparent con-



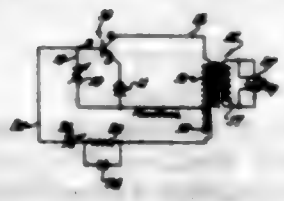
ductive layer for utilizing ionization in said second chamber to convert said potentials into an optical image, conductive means between corresponding probes of said first and second groups, and a potential source connected between said first and second conductive layers.

2,895,080
PULSE GENERATOR
Hoffman E. Branker, Merrick, N.Y., assignor to Republic Aviation Corporation, Farmingdale, N.Y., a corporation of Delaware
Application May 21, 1958, Serial No. 736,832
13 Claims. (Cl. 315—205)



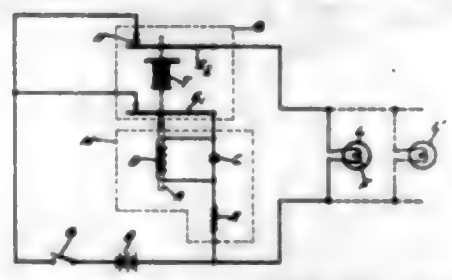
1. In electro-shaping apparatus means for producing pulse discharges comprising a plurality of series resonant circuits each including capacitance and inductance, one of said circuits having the values of capacitance and inductance proportioned to produce a discharge pulse of predetermined amplitude and a relatively large amplitude-duration ratio, the remaining circuits having the values of the capacitance and inductance proportioned to produce successively larger amplitudes and smaller amplitude-duration ratios and means for simultaneously discharging said circuits to produce a single composite pulse.

2,895,081
INTERRUPTED FLASH GENERATOR
Joseph W. Crownover, Sherman Oaks, and Nathan R. Smith, Pasadena, Calif.
Application March 12, 1956, Serial No. 571,068
6 Claims. (Cl. 315—206)



1. For combination with a relatively high voltage responsive light emitter tube containing an ionizable gas, a single transistor having base, collector and emitter electrodes, a direct current source of relatively low voltage having two terminals of opposite polarity one of which is connected in energizing relation with the transistor emitter electrode, and electrical circuit means interconnecting the transistor with the tube, said means including a voltage step-up transformer for increasing the voltage output of the transistor for transmission to the tube, feedback coupling from the transformer to the transistor for causing transistor oscillation and capacitance and resistance connected into the circuit means so as to cause periodic storage and discharge of electrical charge flowing in said circuit means in controlling relation with periodic transmission of relatively high voltage oscillations sufficient to alternately establish and cut off current flow through the tube, said transformer having an iron core and secondary inductance winding across which said tube is connected, said transformer including primary inductance winding having two end terminals electrically connected respectively with said base and collector electrodes and a fixed intermediate tap connected with the other terminal of said low voltage source, said resistance being connected in series between said transformer primary winding intermediate tap and said transistor base electrode, and all of said capacitance being connected in series between said base electrode and said transformer primary winding end terminal.

2,895,082
CYCLIC CIRCUIT INTERRUPTER MEANS FOR LOW VOLTAGE FLASHER LAMP DEVICES
Shigemitsu Sayetani, San Fernando, Calif.
Application May 10, 1955, Serial No. 507,237
1 Claim. (Cl. 315—226)

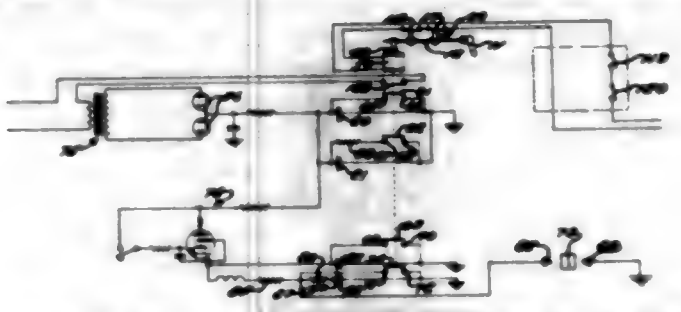


In a low voltage incandescent filament lamp flasher device, the improvement which comprises a double pole ture therefrom to adapt same to wide utility in the art switch, spring means biasing said switch to closed position, a solenoid actuated armature and means connecting the armature to the said switch to actuate the switch to open position in opposition to said spring biasing means, a low voltage battery, a low voltage incandescent filament lamp, means electrically connecting the solenoid of said solenoid actuated armature and said lamp in parallel with said battery through one pole of said switch to provide a solenoid energizing circuit, means electrically connecting the said lamp and said battery in series through the other pole of said switch to provide a lamp energizing circuit and an adjustable contact means on said other pole to provide for the energizing of said lamp energizing circuit a time interval ahead of the energizing of said solenoid energizing circuit on the spring biased return of the said switch to closed position, the time interval being selected to provide for the filament of said lamp to heat up to incandescence before the closing of said solenoid energizing circuit with consequent return of said switch to open position.

2,895,083
SAFETY DEVICES FOR ELECTRICAL APPARATUS
Amos L. Quinlan, La Grange, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application February 24, 1955, Serial No. 490,398
6 Claims. (Cl. 317—9)

1. In a safety device for a cabinet housing an electrical component and having a closure, means movable

into operative position for connecting the component in the cabinet to ground, resilient means on the cabinet normally urging the connecting means into operative position, holding means on the cabinet normally resisting the resilient means to retain the connecting means out of operative position, means on the cabinet for locking the



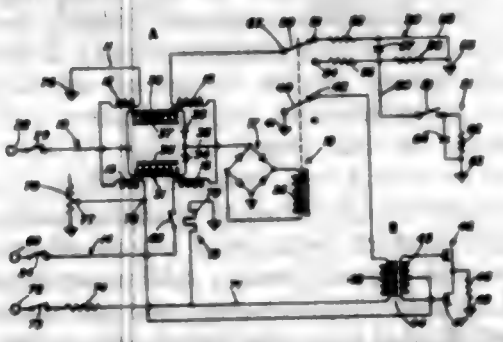
closure to the cabinet, means controlled by the locking means for disabling the holding means for permitting the resilient means to move the connecting means into operative position to ground the component, and additional means on the cabinet and actuated by the locking means for moving the connecting means to ground the component.

2,895,084

MAGNETIC AMPLIFIER CIRCUIT BREAKER

Melvin P. Siedband, Baltimore, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application October 5, 1955, Serial No. 538,817
5 Claims. (Cl. 317—22)



1. A circuit breaker device for circuits susceptible to overloads comprising a load circuit, a first source of alternating current, a manual switch in said load circuit, a normally closed load switch connected in series to said load circuit and current source, a relay for moving said switch to open position, a second source of alternating current, a direct current saturable reactor connected between said second alternating current source and said relay to supply actuating energy thereto, a source of direct current, bias means connected to said direct current source for applying said direct current to said reactor to unsaturate the same whereby the relay is deenergized, control means connected to said load and reactor for neutralizing intermittently said bias means when the load current exceeds a predetermined value, means for terminating the intermittent neutralization of said bias means after a limited number of neutralizations, during continuance of excess load in said load circuit, and time delay means for preventing flow of load current through said normally closed load switch for a time period after closure of said manual switch but before closure of said constant direct current bias circuit.

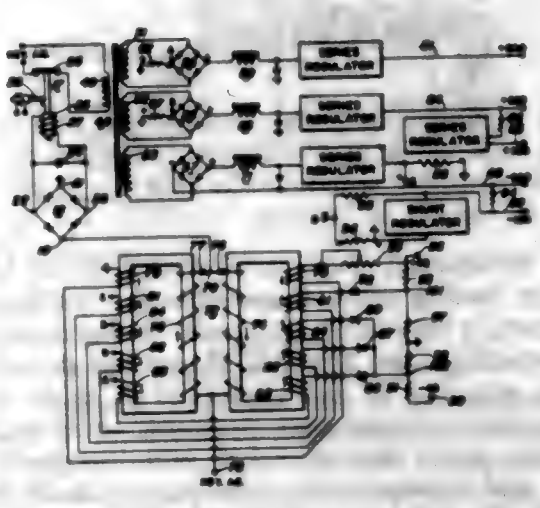
2,895,085

MAGNETIC AMPLIFIER CIRCUIT PROTECTING DEVICES

Melvin P. Siedband, Baltimore, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application December 20, 1956, Serial No. 629,764
2 Claims. (Cl. 317—31)

1. In a protective system of the character described, relay means; a self-saturating magnetic amplifier comprising load windings and a plurality of control windings, said load windings having input circuit means and output circuit means; one of said control windings being responsive to an overcurrent condition, a second of said control windings being responsive to an overvoltage condition in said circuit to be protected, a third of said control windings being responsive to an undervoltage of said



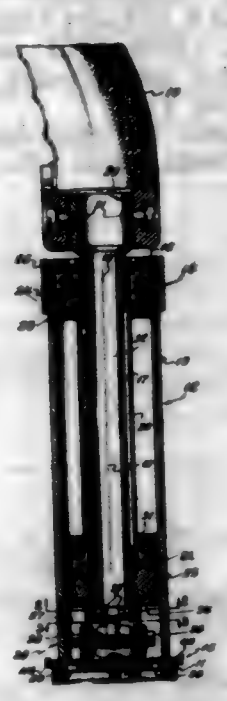
circuit to be protected; circuit means connecting said output means to said relay means; and circuit means for connecting said input means to a voltage source; said magnetic amplifier being responsive to said plurality of control windings to control the operation of said relay in response to overcurrent, overvoltage and/or undervoltage.

2,895,086

CONTROL STICK TRANSDUCER

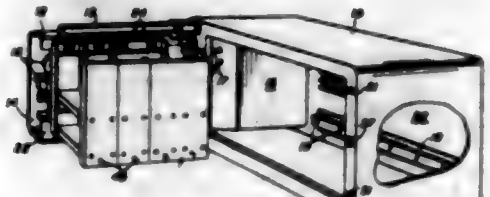
Robert H. Pettit, Huntington, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Application March 11, 1957, Serial No. 645,114
14 Claims. (Cl. 317—99)



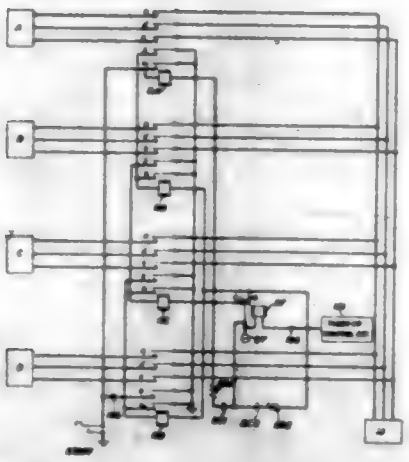
1. In combination with a control stick for an automatic pilot system for a dirigible craft, a control stick transducer comprising a housing fastened to one extremity of said control stick, a pivot member universally mounted within said housing, a grip member fastened to a first extremity of said pivot member, a resilient member yieldingly coupling said housing and said pivot member, and a pick-off means responsive to the force applied to said grip member for supplying a signal in accordance with the direction and magnitude of said applied force whereby the motion required to produce said signal is imperceptible to the human pilot.

2,895,067
ACCESSIBLE MODULAR CONSTRUCTION
Bernard L. Lieb, San Diego, Harold E. Bryan, La Mesa, and Allen T. Steinkamp, San Diego, Calif.
Application August 29, 1957, Serial No. 681,146
3 Claims. (Cl. 317—101)
(Granted under Title 35, U.S. Code (1952), sec. 266)



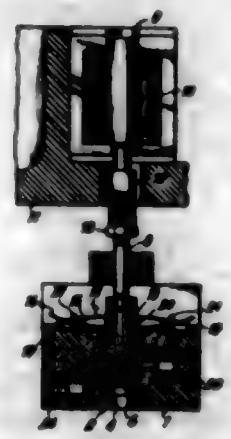
1. A box-shaped door panel hinged to an enclosure, said door having space therewithin for containing electronic parts, a removable face panel having coax and multiple connectors and identical means for detachably securing a plurality of sub-assemblies in single or multiple unit sizes equipped with electronic equipment to said door panel, guide pins carried by said door panel and the rear of said sub-assemblies and supported in the guide holes on the face of said enclosure and the rear wall thereof, respectively, said door panel having means for pivotally securing the same to an enclosore having supply cables and space therewithin for housing said sub-assemblies, said means for pivotally securing the door panel to the enclosure comprising a compound hinge for engaging or disengaging said supporting guide pins in said guide holes by a relative movement in a generally axial direction and coupling means for connecting said cables to said door panel, said sub-assemblies having mating coax connectors for plugging into said door panel whereby the electronic equipment can be serviced in operation when the door is in an open position.

2,895,068
RELAY CHAIN CIRCUIT
Walter Koenig, Jr., Clifton, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application August 19, 1955, Serial No. 529,380
6 Claims. (Cl. 317—139)



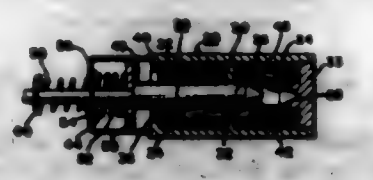
2. A relay chain circuit comprising a plurality of relays, one of said relays for each stage in the chain, each of said relays having a total of one winding thereon and a total of two pairs of contacts thereon for successively operating and holding each relay in the chain, a total of one magnetic relay common to all of said plurality of relays, timing means for actuating said common relay to alternate positions, means responsive to said operation to alternate positions for controlling the connection and disconnection of a direct current circuit through each of said plurality of relays in sequence, to operate said plurality of relays in sequence.

2,895,069
ELECTROMAGNETIC CONTROL DEVICE
Felix Leber, Koln-Riehl, Germany
Application December 13, 1955, Serial No. 552,921
Claims priority, application Germany December 13, 1954
7 Claims. (Cl. 317—165)



1. A spring assembly, comprising, in combination, a support means; an operating stem member movable relative to said support means in longitudinal direction thereof, said stem member having one end thereof located in the region of said support means and being connected at the other end thereof to the core of an electromagnetic means so as to be moved toward said support means from a first position to a second position when the electromagnetic means is energized; a first leaf spring extending transverse to said stem member and having a center portion concave toward said support means and a pair of end portions convex to said support means, said center portion having an opening through which said stem member passes; means securing said stem member to said center portion of said first leaf spring; and a second leaf spring extending transverse to said stem member and having a center portion convex toward said support means and a pair of end portions concave to said support means, said center portion being supported on said support means and having an opening through which said stem member freely passes, said end portions of said leaf springs abutting each other in said first position of said stem member whereby during movement of said stem member from said first position to said second position said center portions of said leaf springs are flattened so that the points of engagement between said leaf springs travel inwardly whereby said center portions are shortened and said end portions are lengthened and the associated ends of said first and second leaf springs move away from each other so that the resilient resistance of said leaf springs increases at a low initial rate and then increases at a substantially higher rate corresponding to the electromagnetic force acting on the core.

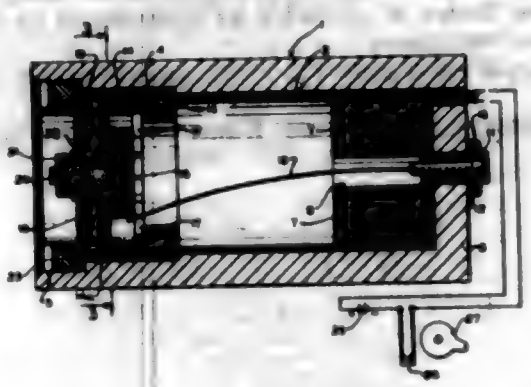
2,895,090
CONTROL DEVICE
Brooks H. Short, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 15, 1956, Serial No. 591,709
8 Claims. (Cl. 317—188)



1. In a device of the character described, the combination comprising; a pair of individually energizable coil windings axially aligned and arranged to provide a central bore having an open and closed end, a plunger

slidable in said bore and movable therein by magnetic attraction when either of said coils is energized, an armature slidably mounted on said plunger and arranged to move said plunger a predetermined distance in a first direction to a predetermined position when only one of said coils is energized, first spring means between said armature and plunger arranged to oppose the movement of said plunger in said first direction from said first predetermined position to a second predetermined position where the plunger engages the closed end of said bore and the other coil is energized, and second spring means between said plunger and an enclosure for said coils arranged to move said plunger and armature in an opposite direction from said first direction to a third positive position when neither of the coils is energized.

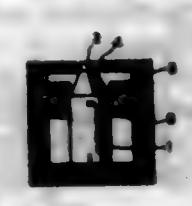
2,895,091
ELECTROMAGNETIC STEPPING DEVICE
Jacob H. Drillick, Orange, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Application February 18, 1957, Serial No. 640,773
9 Claims. (Cl. 317—192)



1. An electromagnetic stepping device comprising: an armature mounted for circumferential movement, for radial movement and for a composite of both movements with respect to the axis of a circumferential series of location points, and resiliently biased against movement from any one of said points; means for locating said armature at any one of said points; a first guide means having an annular series of internal guide surfaces concentrically located with respect to said location points; a second guide means having a peripheral series of external guide surfaces concentrically located and radially spaced with respect to said internal guide surfaces, and complementally operable respectively therewith; a magnetic circuit for moving said armature from any one of said location points; means for linking said circuit in response to an electrical pulse to move said armature from one of said location points into engagement with one of said guide surfaces for guiding in an initial step of movement toward a next successive location point and upon termination of said pulse for movement by its spring bias into engagement with the complementally operable guide surface for guiding in a terminal step of movement to said next successive location point.

2,895,092
MAGNETIC CIRCUIT
Johannes Meijer Clawen, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application April 16, 1957, Serial No. 653,119
Claims priority, application Germany April 18, 1956
8 Claims. (Cl. 317—201)

1. A magnetic circuit comprising main and auxiliary permanent magnets arranged so that their magnetization directions are substantially at right angles to one another and a soft magnetic member for carrying the flux of the magnets to an active point, said main and auxiliary magnets being composed of materials having magnetization characterics such that their field strengths at which their energy products are a maximum are different, said auxiliary magnet being located at a position in the circuit



where the sum of its own demagnetizing field strength and the stray field strength produced at that position by the main magnet substantially matches the field strength of the auxiliary magnet at which its energy product is a maximum.

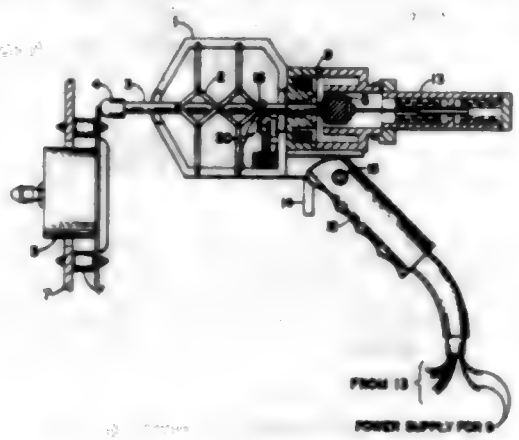
2,895,093
ELECTRICAL CAPACITOR
George T. Kodama, deceased, late of Dunstable, Mass., by Lloyd T. Kodama, administrator, Mountain View, Calif., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Application July 22, 1954, Serial No. 444,944
2 Claims. (Cl. 317—242)

2. A quick change capacitor capable of rapid insertion in and removal from a circuit, said capacitor comprising an electrically conducting open-ended non-circular flat bottom cup having an integral depending threaded shank portion, drive elements on said cup, a ceramic disc silvered on opposed flat faces, one of said faces mounted in electrically conducting relationship within said cup, an electrically conducting tab attached to the other of said faces, said cup filled with a thermoset dielectric resin, said resin encapsulating said disc and securing said disc and said tab in fixed relationship within said cup and electrically insulating said other face from said cup and rigidifying said cup whereby said drive elements provide means for rotational driving of said capacitor while said parts are maintained in fixed relation.

2,895,094
DEVICE FOR INDUCING NATURAL FREQUENCY VIBRATION
Ernst E. Seller, El Paso, Tex., assignor to the United States of America as represented by the Secretary of the Army
Application July 30, 1957, Serial No. 675,235
6 Claims. (Cl. 318—119)
(Granted under Title 35, U.S. Code (1952), sec. 266)

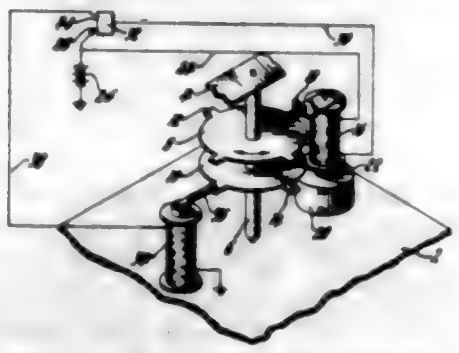
1. Vibration inducing and measuring apparatus comprising, in combination, a rigid support member fixedly secured to a frame, guide means moveably secured to said support member, vibration inducing means mounted on said guide means consisting of a stem member communicating with and responsive to movement of a plunger member, said plunger member being moveably responsive to first electromagnetic means, means for energizing said first electromagnetic means, second electromagnetic means mounted on said support member to control energization of said first electromagnetic means, means

mounted on said moveable guide means to contact said control means to open and close said control means, said contact means being operatively dependent for



contact with said control means upon the relative position of said moveable guide means, and means communicating with said plunger element for measuring induced vibration.

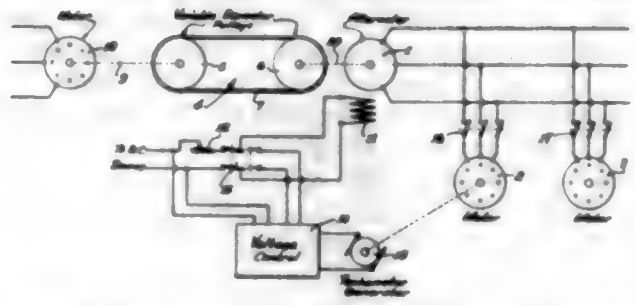
2,895,095
ELECTRONIC D.C. MOTOR
James H. Guyton, Kokomo, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 1, 1954, Serial No. 466,004
12 Claims. (Cl. 318—127)



1. In electrical apparatus, a movably mounted irregularly shaped magnetizable part, a permanent magnet mounted adjacent said part and having a core extending to a point in proximity to the path of movement of the part, a coil mounted on said core in which current is generated by the irregular shape of the part as it moves with respect to said core, a driving coil located adjacent the part at a different location along its path of movement, a core for said driving coil extending in proximity to said part at a predetermined phased location, a source of controllable electrical power having an input and an output circuit and conductive means interconnecting said two coils and the input and output circuits of the source of power to apply a driving pulse to said driving coil when current is induced in the first-named coil by movement of the part.

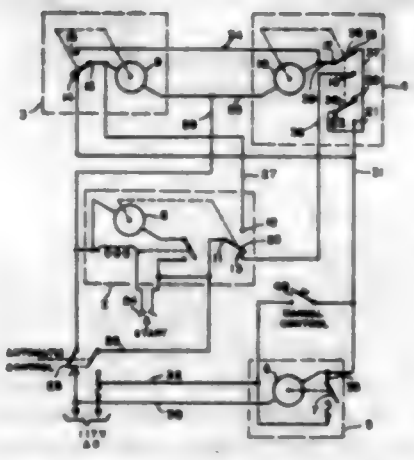
2,895,096
SYSTEM FOR CONTROLLING INDUCTION MOTOR SPEEDS
John H. Wallace, Milford, Conn., assignor to U.S. Electrical Motors, Inc., Los Angeles, Calif., a corporation of California
Application May 21, 1956, Serial No. 586,212
2 Claims. (Cl. 318—146)

1. In a system including an alternator having an exciter and a field winding energized by the exciter, an induction motor electrically fed from the alternator, the method of operating said motor over a speed range, which includes: driving the alternator at a minimum speed; reducing the excitation of the alternator for reducing its output electromotive force; connecting the motor to the alternator; increasing through a continuous range to a maximum value, the excitation of the alter-



nator while the alternator is driven at its minimum speed; and then increasing through a continuous range the speed of the alternator while the excitation of the alternator is at its maximum value.

2,895,097
AUTOMATIC PHOTOGRAPHIC PRESSING TIMER
Herbert L. Armstrong, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Army
Application July 12, 1956, Serial No. 597,560
2 Claims. (Cl. 318—443)
(Granted under Title 35, U.S. Code (1952), sec. 266)

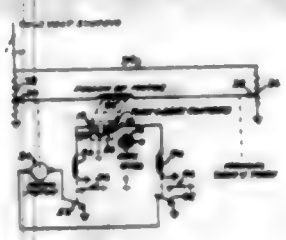


1. Apparatus for automatically controlling the operation of a vane agitator in a photographic processing machine comprising: an agitator motor, first timing means controlling the total time of operation of said agitator motor, second timing means in parallel circuit with said first timing means, said first and second timing means controlling the time of continuous energization of said motor, and third timing means in parallel circuit with said second timing means, said third timing means being energized by said first and second timing means, said third timing means being connected to intermittently energize said agitator motor.

2,895,098
AUTO PILOT SERVOSYSTEM
Edward G. Johnson, Shiloh, Ohio, assignor to Globe Industries, Inc., Dayton, Ohio, a corporation of Ohio
Application December 12, 1956, Serial No. 627,758
6 Claims. (Cl. 318—489)

1. In a single axis autopilot for a craft including a servo-motor, a follow-up motor, a rate gyro and an electrical circuit including said motors, and a normally balanced bridge portion having a variable potentiometer; pairs of juxtaposed contact means, the first pair of contacts being mounted so as to be positioned by said rate gyro and the second pair of contacts being mounted so as to be positioned by said follow-up motor, means for biasing said second pair of contacts into neutral position out of contact with the first pair of contacts, whereby

when said craft turns from a predetermined course the first pair of contacts are positioned so that one of its contacts engages the juxtaposed contact of the second pair of contacts energizing the servo-motor to move a control surface of the craft into position to return the



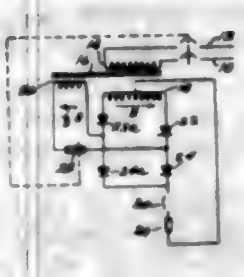
craft to the predetermined course and to adjust the variable potentiometer so as to unbalance the bridge portion, thereby energizing the follow-up motor to re-position the second pair of contacts into neutral position and de-energizing the servo-motor so as to retain the control surface in its new position.

2,895,099

VOLTAGE BALANCING FOR SERIES CONNECTED RECTIFIERS

Isadore K. Dortort, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania

Application December 10, 1956, Serial No. 627,469
13 Claims. (Cl. 321—11)



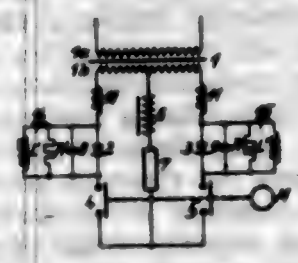
1. An electrical circuit for allowing predetermined distribution of inverse voltage between a first and second series connected diode; first and second series connected diodes being connected in series with a first A.-C. source; said electrical circuit comprising an auxiliary voltage source connected to pass inverse current through said second diode and having one terminal connected at the junction between said first and second diode and its other terminal connected at a point with respect to said second diode to complete a circuit therethrough for conduction of said inverse current.

2,895,100

SEMICONDUCTOR JUNCTION-TYPE RECTIFIER SYSTEMS

Ludwig Filberich, Berlin-Siemensstadt, Dietrich v. Haebler, Berlin-Charlottenburg, and Hans Nagorsen, Berlin-Siemensstadt, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt and Erlangen, Germany, a corporation of Germany

Application December 11, 1956, Serial No. 627,651
Claims priority, application Germany December 17, 1955
26 Claims. (Cl. 321—11)



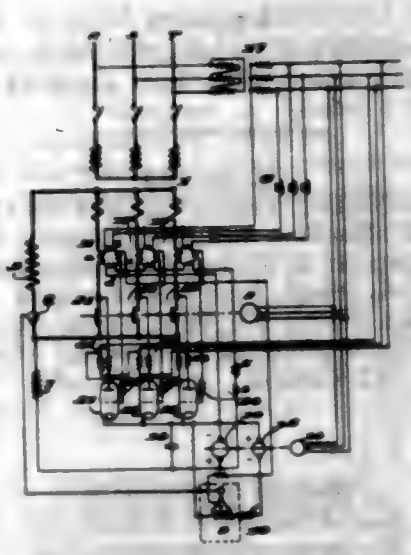
8. A semiconductor rectifier system, comprising alternating-current supply means, a load circuit, a half-wave semiconductor rectifier having a p-n junction connected between said supply means and said load circuit to supply rectified current to said load circuit, and impedance means connected with said rectifier for modifying the commencing inverse-voltage wave to minimize increased initial reverse leakage current in said rectifier, said impedance means comprising a capacitor in parallel to said rectifier, and an oscillation damping circuit composed of respective reactive and ohmic impedance members and connected in parallel with said capacitor and in series with the load.

2,895,101

VOLTAGE REGULATION ARRANGEMENT FOR CONTACT CONVERTERS

Hans Blatter, Wettingen, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie., Baden, Switzerland, a joint stock company

Application May 10, 1957, Serial No. 658,322
Claims priority, application Switzerland May 24, 1956
4 Claims. (Cl. 321—48)



1. In a contact converter system, the invention which comprises a switch throttle coil connected in series with the converter contacts, means for applying an alternating-current premagnetization control component upon said throttle coil, a control circuit connected in parallel with the converter contacts and including a grid-controlled electron tube, means for simultaneously applying a direct-current premagnetization control component upon said throttle coil and a direct-current voltage component into the cathode-to-anode circuit of said grid-controlled electron tube so that an increase in direct-current premagnetization will be accompanied by an increase in the anode direct-current voltage, and means for applying a control signal from said throttle coil upon the grid of said electron tube to control the flow of current in the parallel circuit whereby during switching the current flowing through the contacts will assume a small value.

2,895,102

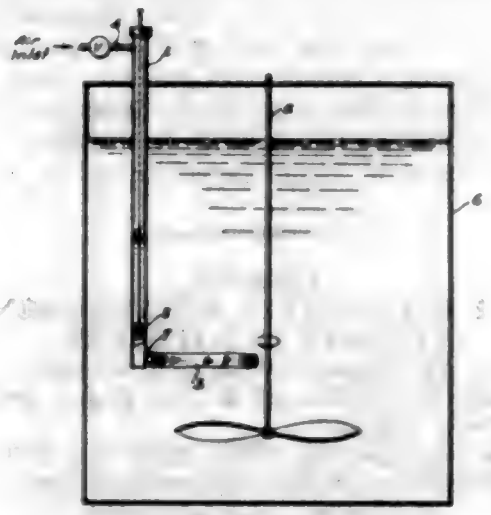
DETERMINATION OF CONDUCTIVITY OF LIQUIDS

Porter Hart, Lake Jackson, and Hugh C. Behrens, Angleton, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Application April 5, 1957, Serial No. 650,883
3 Claims. (Cl. 324—30)

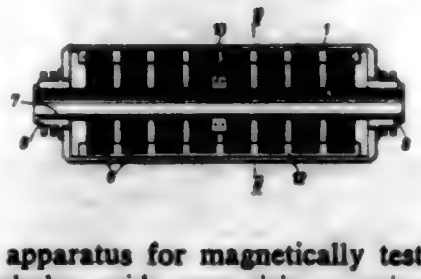
1. In an apparatus for continuously determining the electrical conductivity of the mother liquor in an agitated aqueous slurry comprising a chamber submerged in said slurry, said chamber having an inlet through which fluid is drawn in said chamber and expelled therefrom, and a conductivtiy cell placed in said chamber in contact with the fluid drawn therein, the improvement which comprises a flexible tubular sleeve open at both ends one of said ends being attached to said inlet

and the other being free to move with the movement of the agitated slurry, said sleeve being made of synthetic hydrophobic polymer type fiber having a construction



providing an interstitial area of from ½ to twice of a 60 mesh 15 denier knit nylon material in relaxed condition and having a length at least equal to its diameter.

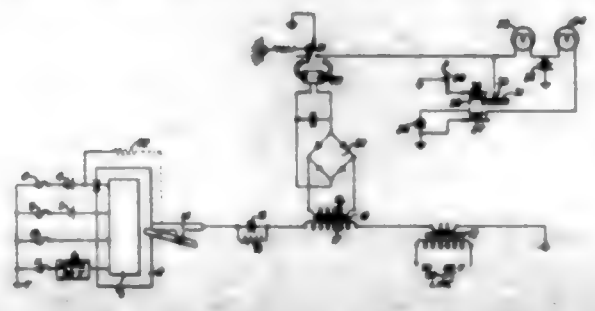
2,895,103
MAGNETIC TESTING APPARATUS
Ernst Vogt, Wallisellen, and Fritz Diemer, Meilen, Switzerland, assignors to Societe Technique pour l'Industrie Nouvelle S.A. (Stin), Vevey, Switzerland
Application March 12, 1956, Serial No. 570,735
Claims priority, application Switzerland March 12, 1955
12 Claims. (Cl. 324—34)



2. In an apparatus for magnetically testing elongated articles, a tubular guide comprising a pair of semi-cylindric half-guides dismountably assembled with their longitudinal edges in abutting relationship, a tubular casing comprising a pair of semi-cylindric half-casings made from ferro-magnetic material dismountably assembled with their longitudinal edges in abutting relationship, said tubular casing coaxially encompassing said tubular guide, an excitation coil coaxially encircling said tubular guide within said tubular casing and comprising a first set of substantially semi-circular half-winding conductors each supported in but insulated from one of said half-casings, a second set of substantially semi-circular half-winding conductors each supported in but insulated from the other of said half-casings, each of the said conductors of one set being held for endwise abutment at its one end with one, and at its opposite end with another, of the said conductors of the other set, and a measuring coil coaxially mounted on said tubular guide within said excitation coil and comprising two half-coils each mounted on one said half-guides.

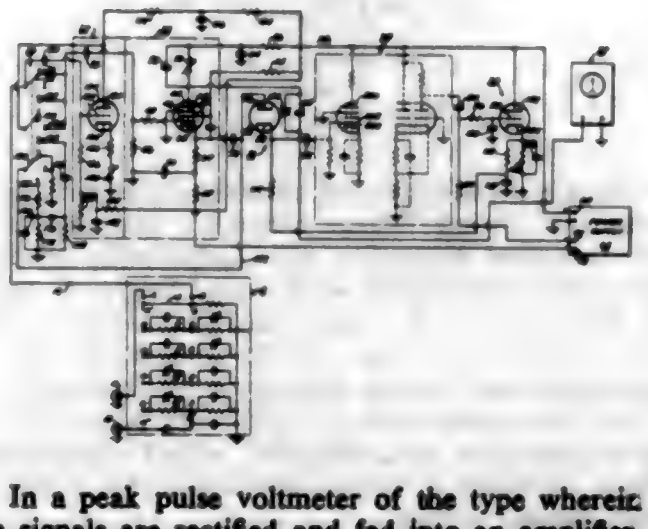
2,895,104
TEST SET
Lloyd D. Hansen, Scotch Plains, N.J., and Theodore L. Hordosi, Long Island City, N.Y., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application January 25, 1955, Serial No. 484,048
5 Claims. (Cl. 324—51)

3. A system for detecting conductive paths from electrical apparatus to a frame on which it is mounted while normal operating potentials are applied to the apparatus, said system comprising a normally open-circuited, grounded test circuit having a source of alternating potential connected in series with a winding of a transformer and the frame, a condenser serially connected in the test circuit for blocking D.C. and low frequency alternating potentials from the test circuit, an indicator circuit com-



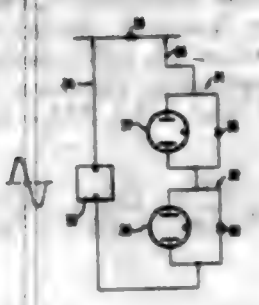
prising a secondary winding for the transformer, a control relay energized by current in the transformer and fault indicating means operated when the relay is actuated for indicating electrical current flow in the test circuit when the circuit is closed through a conductive path supplying a potential to the frame.

2,895,105
PEAK READING VOLTMETER
Carl G. Southeimer, Riverside, Conn., assignor to C.G.S. Laboratories, Inc., Stamford, Conn., a corporation of Connecticut
Application February 25, 1952, Serial No. 273,203
11 Claims. (Cl. 324—103)



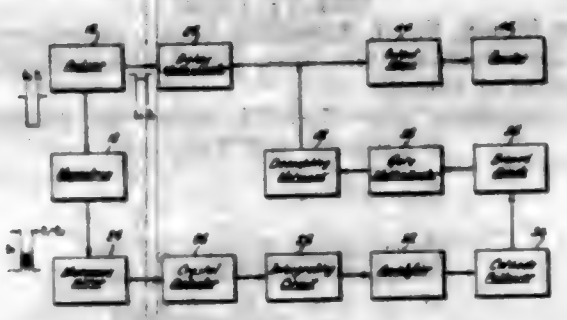
1. In a peak pulse voltmeter of the type wherein the pulse signals are rectified and fed into an amplifier system that produces a D.-C. voltage that is fed back as a bias voltage to the rectifier in opposition to the incoming pulses, apparatus comprising a common ground circuit, a diode tube having an anode connectible to a source of pulse signals and a cathode, a wide-band amplifier having input and output stages, said input stage including a vacuum tube having a control grid and a cathode, said output stage being controlled by said input stage and including a detector and a filter circuit connected thereto, a high impedance load circuit connected between said diode cathode and the common ground circuit, a first capacitor connected between said diode cathode and said control grid of said vacuum tube in said input stage, a second variable condenser having a capacity range of approximately 12 to 62 micromicrofarads connected between said rectifier anode and said cathode of said vacuum tube in said input stage, a third variable capacitor connected between said cathode of said vacuum tube in said input stage and the common ground circuit and having a capacity range of approximately 150 to 200 micromicrofarads, a cathode resistor in circuit between said cathode of said vacuum tube in said input stage and said common ground circuit, and circuit means coupling said filter circuit to the cathode of said diode.

2,895,106
TESTER
James E. Traut, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application April 29, 1958, Serial No. 731,794
8 Claims. (Cl. 324—158)



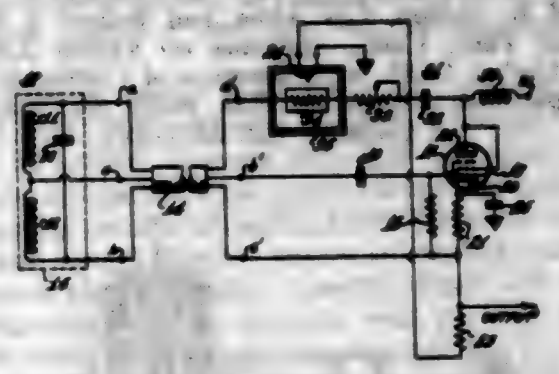
1. In a tester for electrical components which may exhibit rectifier characteristics; an A.C. power source; test circuit means including means for connecting a component to said power source whereby the voltage between elements of said test circuit means is affected by the conductivity between elements of said component for the instantaneous direction of voltage of said power source; and means forming paired indicating circuit groups connected to said test circuit means, each group comprising a rectifier and a voltage indicator, said paired groups being adapted by electrical orientation of said rectifiers to operate on alternate directions of voltage of said power source.

2,895,107
PULSED MAGNETRON INSTABILITY DETECTOR
Gerald I. Klein, New York, N.Y., assignor to the United States of America as represented by the Secretary of the Navy
Application May 28, 1954, Serial No. 433,309
7 Claims. (Cl. 331—67)
(Granted under Title 35, U.S. Code (1952), sec. 266)



3. A circuit adapted for detecting instability in a magnetron and which is suitable for use in the vicinity of high power pulse equipment comprising: means for generating magnetron driving pulses adapted to be coupled to the magnetron; a first single-pulse generating means coupled to said means for sampling a predetermined fraction of each of the magnetron driving pulses and for generating a pulse of predetermined pulse width for each magnetron driving pulse; differentiating means coupled to the output end of said first single-pulse generating means to provide a narrow reference pulse coincident with the trailing edge of each pulse generated by said first single-pulse generating means, whereby the reference pulse is spaced by a predetermined interval from the corresponding driving pulse and whereby there is minimum likelihood of coincidence between the narrow reference pulse and interference energy from said high power pulse equipment in the vicinity and consequently minimum likelihood of modification of significant number of the reference pulses by interference energy; a microwave filter adapted to be coupled to the output end of the magnetron for sampling a predetermined fraction of the microwave energy in a predetermined frequency band in each pulse generated by the magnetron; detector means coupled to said filter; integrating means coupled to said detector means for separately integrating the energy from said mircowave filter for each magnetron pulse respectively; threshold means coupled to the output end of said integrating means; a second single-pulse generating means coupled to the output end of said threshold means and triggered each time said threshold means becomes conductive to generate a gating pulse of predetermined amplitude and many times greater width than said reference pulse; said first single pulse generating means delaying each reference pulse by an interval such that each reference pulse occurs between the leading and trailing edges of a corresponding gating pulse; anticoincidence means coupled to the output ends of said differentiating means and said second single-pulse generating means for providing an output pulse for each reference pulse not attended by a gating pulse; means coupled to the output end of said anticoincidence means to provide an indication of the degree of instability in the magnetron.

2,895,108
ELECTRONIC CIRCUIT
Raymond A. Haddad, Haddonfield, and Roger R. Schell, Woodbury, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Application December 22, 1955, Serial No. 554,850
10 Claims. (Cl. 331—176)

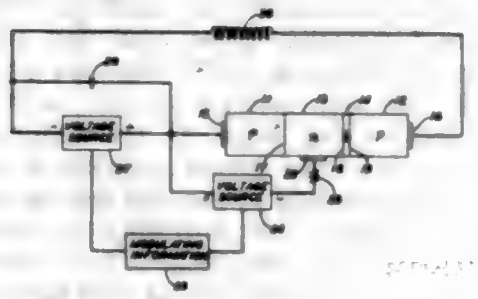


1. In an electronic circuit including an electronic amplifier device having a plurality of circuit components connected thereto, an improvement for compensating said electronic circuit for changes in weather and operating conditions comprising means connected to said amplifier device responsive to the magnitude of the total current flowing therethrough, said means including means for generating heat in accordance with the magnitude of the total current flowing through said amplifier device, a thermally sensitive electrical device provided with a characteristic such that the impedance thereof varies with temperature in a manner inverse to the impedance of said components connected to said electronic amplifier device, said electrical device being connected in said circuits connected to said electronic amplifier device, and means for coupling said electrical device and said heat generating means in heat exchange relationship with each other.

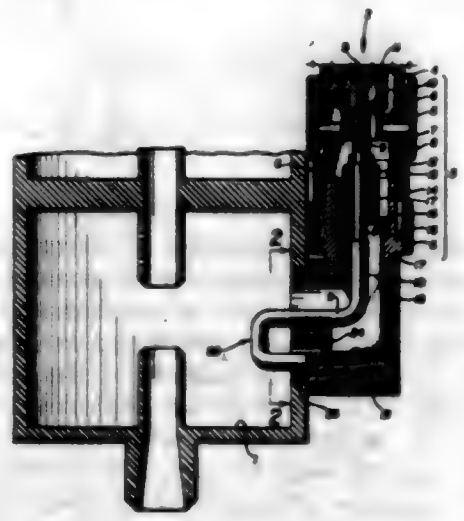
2,895,109
NEGATIVE RESISTANCE SEMICONDUCTIVE ELEMENT
Gabriel Weinreich, New Brunswick, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application June 20, 1956, Serial No. 516,691
4 Claims. (Cl. 332—52)

1. In an oscillator, a semiconductive body having a pair of terminal zones of like conductivity type and intermediate therebetween a zone of opposite conductivity type and an intrinsic zone, a pair of electrode connections to the terminal zones, circuit means connected between the pair of electrode connections including a voltage source for applying a direct current voltage across the

electrode connections to the terminal zones for establishing a flow of minority carriers through the intermediate zone of opposite conductivity type and an inductive element for providing a reactance which is resonant with the reactive component of the semiconductive element, the thickness of the intermediate zone of opposite conductivity type being such that the transit time of the minority carriers therethrough is approximately one-half the period of the resonant frequency, and means for providing a flow of majority carriers into said intermediate zone for reducing the impedance of the junction between said intermediate zone and its contiguous terminal zone.



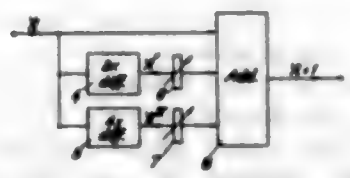
2,895,110
HIGH FREQUENCY APPARATUS
Richard B. Nelson, Los Altos, and Robert S. Symons, Menlo Park, Calif., assignors to Varian Associates, San Carlos, Calif., a corporation of California
Application August 16, 1956, Serial No. 604,535
7 Claims. (Cl. 333—24)



3. A gas tight wave permeable window assembly for coaxial transmission lines comprising, coaxially disposed inner and outer conductors, a cylindrical wave permeable window member coaxially disposed with respect to said inner and outer conductors and disposed therebetween in spaced apart relation for substantially the entire length of said window, and metallic end sealing members vacuum sealing the ends of said window member to said inner and outer conductors respectively whereby the power handling capacity of the wave permeable window assembly is greatly enhanced.

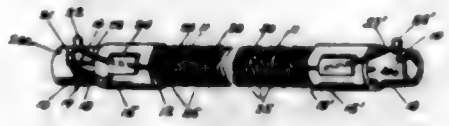
7. A high frequency electromagnetic wave energy coupling apparatus for translating wave energy from a tunable cavity resonator to a coaxial transmission line over a broad band of frequencies including, means forming an inductive coupling loop coupled to the magnetic fields of the cavity resonator, means forming a broad band impedance match for matching the impedance of the cavity resonator to the impedance of the coaxial line, and said impedance matching means consisting essentially of a slug forming a capacitive discontinuity physically closely spaced to said inductive coupling means whereby the inductive reactance of said inductive coupling means is independently balanced out over a broad band of frequencies.

2,895,111
FREQUENCY RESPONSE CURVE EQUALIZATION
Paul G. Rothe, Ulm (Danube), Germany, assignor to Telefunken G.m.b.H., Berlin, Germany
Application October 17, 1957, Serial No. 690,741
Claims priority, application Germany October 25, 1956
1 Claim. (Cl. 333—28)



A circuit arrangement for equalizing the frequency response curve of a four-terminal network passing a signal covering a wide frequency band, comprising a plurality of successive stages each receiving an input signal and delivering an output signal and said stages being connected in cascade with said network; differentiating means in each stage for forming at least one of the second and the fourth derivatives of the input signal; summing means in each stage for adding together a component of the input signal and said derivatives to form an output signal; and amplitude adjusting means for determining the amplitudes of the derivatives being added.

2,895,112
DELAY LINE
Jacques Bialek, South Pasadena, Calif., assignor to Standard Coil Products Co., Inc., Los Angeles, Calif., a corporation of Illinois
Application May 17, 1955, Serial No. 508,993
5 Claims. (Cl. 333—31)



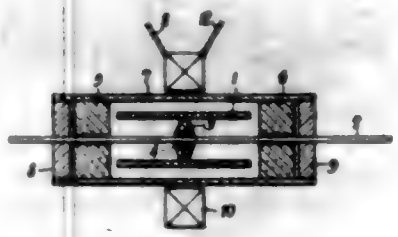
1. An electrical delay line for uniformly delaying a signal band extending to the order of several megacycles comprising a dielectric tube of length substantially greater than its diameter, insulated conductive wire wound helically about the surface of said tube to provide a predetermined distributed inductance winding for the line, a series of spaced wires arranged along said tube between said wound wire and the surface of said tube to provide a distributed capacitance coupled to said wound wire uniformly along its inductance, and a plurality of compensating capacity wire loop elements insulated from one another wound longitudinally spaced upon said wound wire and wound with a coarser pitch than said wound wire, the interrelationship of said wound wire and said series of wires providing a delay line effectively having an infinite number of inductances connected in series from one end to the other of said wires with corresponding capacities each effectively connected to each of such inductances whereby a uniform delay is effective throughout the signal band, said loop elements each being arranged to encompass a plurality of turns of the wound wire successively along the winding and provide uniform compensating capacitance therefor to improve the line action.

2,895,113

MAGNETO-STRICTIVE RESONATORS

William Oliver Agar, Danbury, England, assignor to Marconi's Wireless Telegraph Company Limited, London, England, a British company

Application June 21, 1955, Serial No. 516,813
Claims priority, application Great Britain June 23, 1954
8 Claims. (Cl. 333—71)



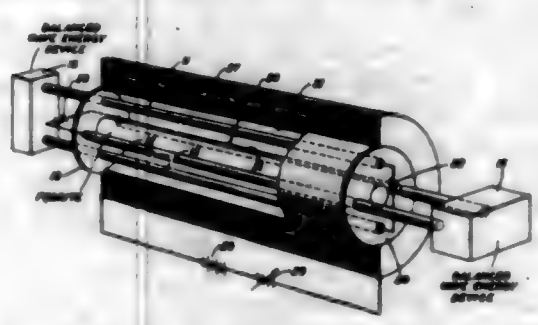
1. A frequency selective resonant electrical filter comprising a hollow cylindrical mechanical resonator made of a magneto-strictive ferromagnetic ceramic material which is permanently magnetized and having lines of force running round the annulus which constitutes the cross section of the resonator, a support wire for said resonator, the wire running axially through the resonator, means for supporting said wire adjacent its ends, means comprising an insulating member whose mechanical hardness is of the same order as that of the material of said resonator, said means being attached to the support wire and to the resonator so as to support the latter centrally of the length thereof, a first coil wound axially round the resonator and positioned midway along the length of the resonator whereby when the coil is energized by alternating current it produces an axial alternating magnetic field and the resonator is excited to vibrate in torsion and a second coil arranged near to said resonator whereby said second coil is energized by the vibrating resonator.

2,895,114

NONRECIPROCAL CIRCUIT ELEMENT

John H. Rowen, Morris Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application November 3, 1955, Serial No. 544,783
14 Claims. (Cl. 333—98)



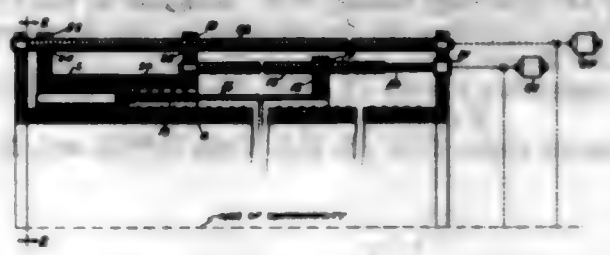
1. In combination, a pair of electromagnetic wave devices, a pair of parallel transmission lines each comprising two elongated spaced and parallel conductive elements, each of said transmission lines being located in a plane perpendicular to the plane of the other of said transmission lines intersecting in a line extending parallel to said elements, each of said pairs of transmission lines having one of said devices connected to an end thereof for launching on said transmission line a propagating wave traveling toward the other end thereof, and means for coupling said lines with a nonreciprocal coupling comprising a magnetically polarized element of material exhibiting the gyromagnetic effect at the frequency of wave energy supportable by said transmission lines extending in a space occupied in common by the magnetic field patterns of waves conducted by said lines.

2,895,115

SLIDING CONTACT DEVICE FOR TUNING COILS

Charles P. Majkrzak, Newark, N.J., assignor to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland

Application October 18, 1955, Serial No. 539,629
12 Claims. (Cl. 336—116)



1. A sliding contact device for inductive tuning coils comprising a first tubular member, a second tubular member of smaller diameter than said first member disposed concentrically therein, a curved end portion interconnecting one end of said first member to the adjacent end of said second member, means connecting together the other ends of said members at a point intermediate said members and axially opposite said curved portions, the side wall of one of said members being of conductive material and having spaced slots disposed generally axially thereof to provide a plurality of contact areas spaced circumferentially thereof to engage turns of a coil, said slots being extended into said curved interconnecting portion.

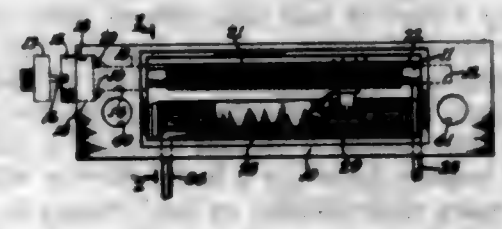
12. A tuning device comprising two concentrically-disposed coils, a first tubular member, a second tubular member of smaller diameter than said first member disposed concentrically therein, and a curved end portion interconnecting one end of said first member to the adjacent end of said second member, means connecting said members together at a distance removed from said curved interconnecting portion, the side wall of both of said members being a conductive member and having spaced slots disposed generally axially thereof to provide a plurality of inner and outer contact areas spaced circumferentially thereof to engage turns of said concentrically disposed coils, the slots of each of said members being extended into said curved interconnecting portion, and further including means to move said contact device axially of both said coils, and means to move one of said coils and said contact device as a unit axially with respect to the other said tuning coil.

2,895,116

TRIMMING POTENTIOMETER

Lawrence L. Morrison, Glendale, Calif., assignor to Component Designers, Inc., Alhambra, Calif., a corporation of California

Application June 22, 1956, Serial No. 593,184
4 Claims. (Cl. 338—180)



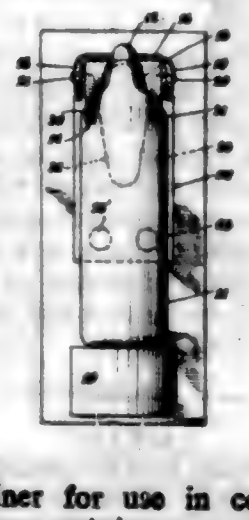
1. In a potentiometer of the type including a coil, a contact bar and a slider mounted for sliding contact with said coil and contact bar, all mounted in a closed casing, the improvement comprising: A shaft having a thread chased thereon for a portion only of its length and unthreaded adjacent each end thereof; said slider having a pair of spaced extensions each adapted to substantially surround said shaft; each of said extensions be-

ing bifurcated into two branches, with each branch engaged in a flight of said thread next adjacent a flight engaged by its associated branch.

2,895,117
RUGGEDIZED ATTENUATOR INSERT
Joseph M. Schramp, Rome, N.Y., assignor to the United States of America as represented by the Secretary of the Air Force
Application March 15, 1957, Serial No. 646,509
9 Claims. (Cl. 338—309)
(Granted under Title 35, U.S. Code (1952), sec. 266)

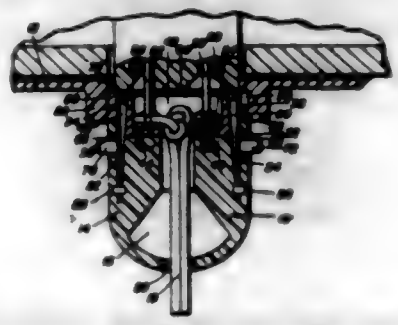
1. A ruggedized attenuator insert comprising a solid polystyrene rod with a bismuth coat permanently and firmly adhered to the rod surface throughout its length and the bismuth coat axially divided into three sections of predetermined resistive fixed values, a first compensating section, a second compensating section, a main section intermediate the first and the second compensating sections, and a pair of electrical contacts shunting the main section.

2,895,118
TUBE RETAINER
Clarence Huetten and Eldon D. Aldred, Indianapolis, Ind., assignors to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware
Application July 7, 1955, Serial No. 520,451
4 Claims. (Cl. 339—75)



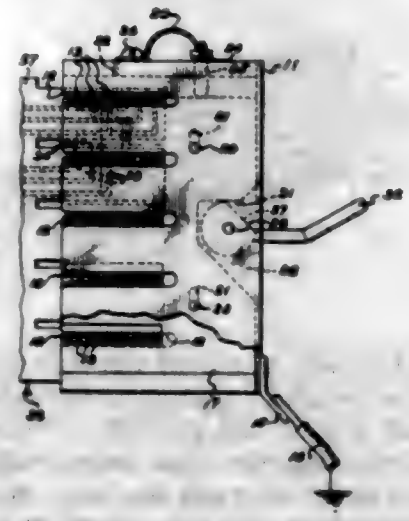
1. A tube retainer for use in combination with a subminiature electron emitting vacuum tube having contact pins held in a tube socket mounted at right angles to a chassis, said tube lying in a plane parallel thereto, said retainer comprising a resilient, flat spring, a front end of said spring having a center tapered, cut-out portion holding a part of said tube, fingers thus formed in said spring by said center, cut-out portion, each of said fingers having an extension, a back end of said spring being retained against said chassis by means of rivets eyeleted to said chassis, a bracket coupled to said extensions, said bracket including a lower portion adapted to angularly move with relation to said chassis in a plane perpendicular thereto on said extensions of said fingers of said spring, said lower portion of said bracket bearing against said chassis with a portion of said spring thus being spaced in a bowed fashion up from said chassis thereby, and a center cut-out on said bracket adapted to support an end of said tube therein whereby said tube is substantially rigidly mounted in its tube socket against substantial vibration with minimum force exerted on its pins.

2,895,119
PLUG AND FACE PLATE
Malcolm B. Montgomery, Jr., Yazoo City, Miss., assignor of one-half to Edmund Warren Montgomery II, Jackson, Miss.
Application July 5, 1955, Serial No. 520,840
6 Claims. (Cl. 339—91)



4. A face plate in combination with an electrical connector, said face plate comprising a plate member having at least one aperture therethrough, a raised wall integrally formed with said plate member and extending about and surrounding said aperture forming a plug receiving chamber having an inner peripheral wall extending substantially normal to said plate member, and a pair of opposed recesses in said wall opening into said chamber, said electrical connector comprising a casing, opposed insulated retainer hooks secured to said casing and extending outwardly beyond said casing and seating in said recesses in said wall, an inner insulative body positioned in said casing and extending outwardly of said casing, said inner casing seating in said chamber, said inner body having grooves therein receiving said hooks, and prongs carried by said inner body extending through said aperture, said hooks being separated and insulated from said prongs.

2,895,120
GROUNDING DEVICES FOR ELECTRICAL COMPONENTS
Walter Lach, Chicago, and Richard S. Zapf, La Grange, Ill., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application August 23, 1955, Serial No. 530,182
4 Claims. (Cl. 333—249)



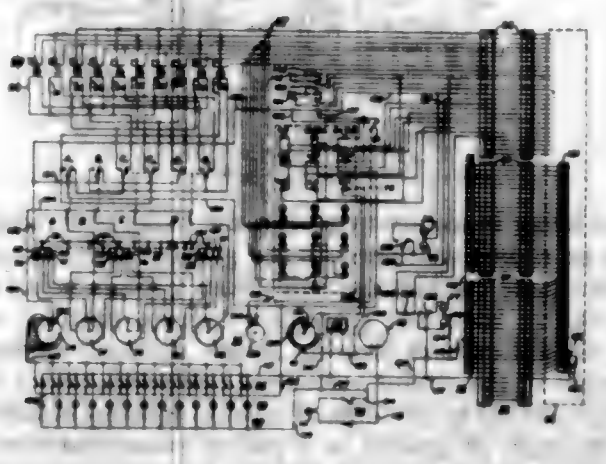
4. A device for making electrical connections with a plurality of elongated electrically conductive elements the ends of which are inaccessible, comprising a first jaw having a plurality of transverse slots extending from one side thereof in one direction for receiving intermediate portions of a plurality of elongated electrically conductive elements, a second jaw slidably mounted on the first jaw and having a plurality of transverse slots extending from one side thereof in the direction of the slots in the first jaw and normally in alignment with the slots in the

first jaw, a cam mounted on the first jaw for moving the second jaw from its normal position whereby the slots therein are out of alignment with the slots in the first jaw, and means mounted on the first jaw and engaging the second jaw for urging it toward normal position with its slots in alignment with the slots in the first jaw.

2,895,121
READ-OUT APPARATUS FOR MOVABLE INDICATING MECHANISMS

William R. Bliss, Denver, Colo., assignor, by mesne assignments, to Van Norman Industries, Inc., New York, N.Y.

Application October 7, 1954, Serial No. 460,948
8 Claims. (Cl. 340—147)



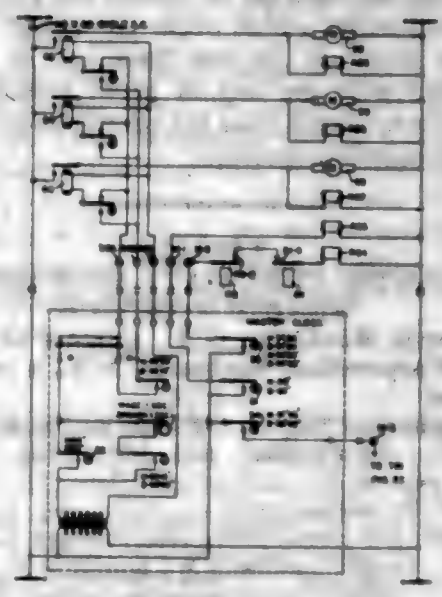
1. In a mechanism of the class described, a movable indicating element, a read-out means for producing a signal corresponding to the position of said element comprising a plurality of switches each movable between an open and a closed position, means dependent upon the position of said indicating element for establishing each of said switches in one of its positions to provide a combination of the positions of said switches corresponding to the position of said element, a plurality of electric actuating devices one for each of said switches, circuit means for connecting each switch with the corresponding one of said devices, means for energizing said circuit means to effect energization of said actuating devices in accordance with the positions of said switches, and means dependent upon energization of said circuit means for producing a different predetermined electric signal for each different combination of positions of said switches, said predetermined electric signal producing means comprising a master selector bridge-like circuit including four terminals connected in alternation, means for connecting a power supply across any arm of said master bridge-like circuit, a plurality of the arms of said bridge-like circuit including coils connected to form secondary bridge-like circuits each including four terminals connected in alternation and each constituting an arm of said master bridge, means for connecting any arm of said secondary bridge-like circuits directly to constitute the complete respective arms of said master bridge-like circuit whereby any one of said coils may be selected for operation.

2,895,122
SUPERVISORY AND CLOCK CONTROL APPARATUS

John J. De Matteis, Fresh Meadows, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application December 30, 1954, Serial No. 478,742
3 Claims. (Cl. 340—147)

1. In combination with an electric clock system including a master clock having a plurality of contacts therein each adapted to be closed at predetermined sidereal times, a program device periodically advanced by the closure of a first of said plurality of contacts in said master clock and having a plurality of circuit closing members adapted to be selectively closed at predetermined sidereal times, an impulse control device adapted when operative to control the production of a plurality of impulses, means jointly responsive to the closure of a second of said plurality of contacts in said master clock and the closure of any of predetermined ones of said circuit closing members for rendering said impulse control device operative to produce selected ones of said impulses, a signal generator capable of producing signals



at any of a plurality of carrier frequencies and having a plurality of selectively operable control devices each effective when operated to cause a signal of a selected carrier frequency to be produced by said generator, and selection means directly controlled by said second of said plurality of master clock contacts and operable jointly in response to the selective closure of said circuit closing members and to the impulses produced by said impulse control device for operating the control devices of said signal generator selectively to produce a signal of any selected frequency in response to any selected impulse.

2,895,123
TIMING PULSE SYSTEM

Jerry F. Foster, Pasadena, Martin H. Shaler, Los Angeles, and James H. Paquin, Arcadia, Calif., assignors to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Continuation of application Serial No. 431,793, May 24, 1954. This application September 24, 1956, Serial No. 611,733
11 Claims. (Cl. 340—174)

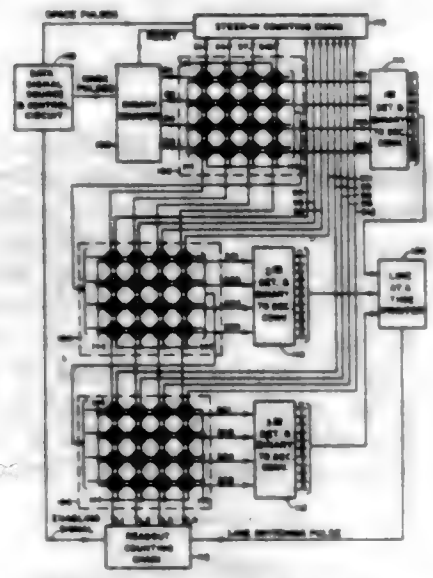
7. Apparatus for producing precisely synchronized sets of pulses, comprising a movable recording medium having three sets of signals recorded thereon with one of the sets having more signals than the other sets and with the second set having more signals than the third set, a frequency doubler having a resonant circuit responsive to

said one set of signals for producing a series of sine-wave signals having double the frequency of the signals of said one set, pulse generating means coupled to the output of the frequency doubler for producing a master series of pulses, means responsive to the second set of signals for gating all of the pulses of the master series except the pulses which occur coincident with the signals of the second set, means also responsive to the second set of signals for gating the pulses of the master series which occur coincident with the signals of the second set, and means responsive to the third set of signals for gating the pulses of the master series which occur coincident with the signals of the third set, so that three sets of gated pulses are produced with the sets of gated pulses being more precisely synchronized than the corresponding sets of signals on the recording medium.

2,895,124
MAGNETIC CORE DATA STORAGE AND READOUT DEVICE

Ben A. Harris, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Application May 8, 1957, Serial No. 657,896
11 Claims. (Cl. 340—174)



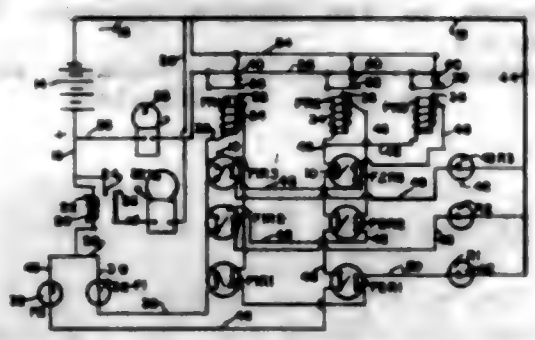
1. A data storage and readout device for sequentially storing individual characters of data a character at a time and thereafter reading out the stored data a line at a time, said device comprising a plurality of two-dimensional matrices of magnetic cores, the cores of each of said matrices being arranged in rows and columns, a first set of conductors each of which is in cooperative relationship with the cores of separate but corresponding rows of each of said matrices, a second set of conductors each of which is in cooperative relationship with the cores of separate columns of separate ones of said matrices, a third set of conductors each of which is in cooperative relationship with the cores of separate but corresponding columns of each of said matrices, and a fourth set of conductors each of which is in cooperative relationship with the cores of separate rows of separate ones of said matrices.

2,895,125
ELECTRICAL ALARM SYSTEM

Clarence R. Watts, Pedro Miguel, Canal Zone, assignor, by mesne assignments, to Patrick F. Henry

Application December 9, 1954, Serial No. 474,118
8 Claims. (Cl. 340—227)

1. In an alarm system for a building in which there are a plurality of floors and a plurality of rooms on each floor, a source of electrical current, a switch in each of the rooms closable upon the occurrence of a condition therein, floor signal means for each floor, a plurality of closed indicator circuits each beginning at one side of the source and passing through a floor signal means to one side of all switches for that floor and through a current limiting means, said current limiting means connected through the other side of one of the switches on that floor for a room of particular designation through a room signal means to the other side of the line, the other indicator circuits extending in like manner through other floor signalling means and other rooms like and different designation until all rooms are related across an open switch to their floor, the minimum required individual current limiting

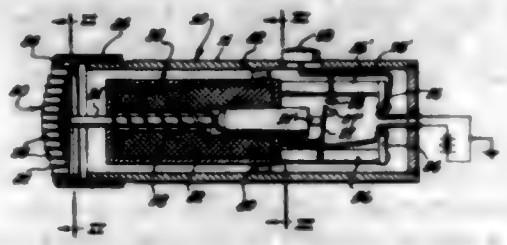


means being in number equal to the maximum number of floors or rooms whichever is the greater, each of said respective floor circuits and said room circuits being in circuit with at least one respective current limiting means, each of said current limiting means normally completing a portion of the circuit associated therewith, and a loss of normal current in any of said current limiting means being an indication of trouble in a circuit associated therewith, whereby an indication of trouble in any circuit may be determined from said current limiting means associated therewith.

2,895,126
NOISELESS DEVICE FOR GENERATING AUDIBLE VOICE FREQUENCIES INCLUDING HARMONICS

Gilbert M. Wright, Malibu, Calif., assignor to Kett Engineering Corporation, Santa Monica, Calif., a corporation of California

Application November 12, 1957, Serial No. 695,849
17 Claims. (Cl. 340—392)



1. A substantially silent device for generating voice frequencies including harmonics when in contact with a solid material, comprising: an elongated, hollow casing adapted to be hand held; a reticulated, virtually rigid element adjustably mounted on one end of said casing, said element having a frontal solid area which is smaller than the area of reticulations therethrough; electromagnetic striker means positioned within said casing and including a striker having a face of reduced area adapted to strike the element at a frequency of between about 100 and 2000 vibrations per second; and sound-absorbing means within said casing adapted to absorb the sound of blows delivered by the striker upon the element without absorbing vibrations setup in the element.

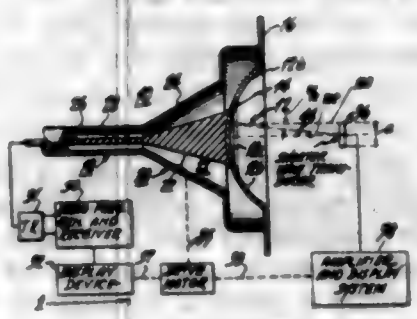
2,895,127
DIRECTIVE DIPLEX ANTENNA

Edward D. Padgett, Collingswood, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Application July 20, 1954, Serial No. 444,525
12 Claims. (Cl. 343—7)

10. A directive wave-energy radiator-receiver comprising a member formed with a paraboloidal reflecting sur-

face having a center conducting portion, an outer conducting portion surrounding said center conducting portion and an annular dielectric member located between and joining said center and outer portions; a coaxial line for conducting electromagnetic energy; and an impedance matching section joining said coaxial line to said member comprising a cone-shaped conducting member joined at the smaller end thereof to the center conductor of said coaxial line and at the larger end thereof to said center conducting portion about the periphery of said center conducting portion, and an outer member concentric with said cone-shaped member joined at the smaller end thereof to the outer conductor of said coaxial line and at the larger end thereof to the outer peripheral edge of



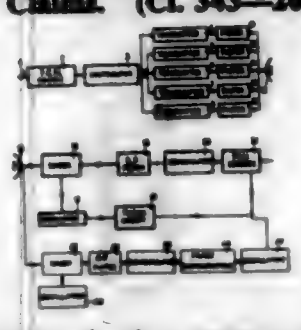
said outer conducting portion; light ray detector means; a mirror located at the focus of said element having a paraboloidal reflecting surface for reflecting light rays received by said surface onto said light ray detector means; drive motor means mechanically connected to said mirror for nutating said mirror about the center axis of said element having a paraboloidal surface while maintaining said mirror focused at said light ray detector means, whereby a target directing light at said paraboloidal surface which is not on said center axis causes said mirror to focus on said light ray detector element a signal of varying amplitude; and a means coupled between said light ray detector element and said antenna and responsive to a parameter of said signal for moving said antenna so that its center axis intersects said target.

2,895,128

SCATTER RADIATION COMMUNICATION SYSTEM USING BURSTS OF RADIO FREQUENCY ENERGY

Joseph Easto Bryden, Harrow, England, assignor to The General Electric Company Limited, London, England

Application January 13, 1954, Serial No. 403,780
Claims priority, application Great Britain January 16, 1953
4 Claims. (Cl. 343—203)



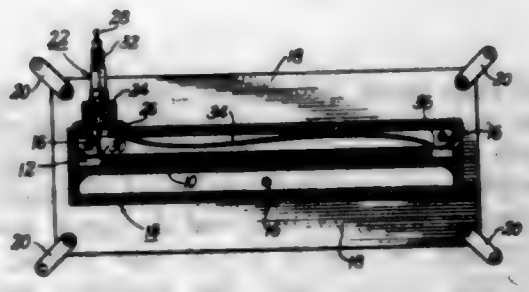
1. A radio communication system which utilises scatter radiation comprising a transmitting station and a receiving station that is located beyond the optical range of the transmitting station, the transmitting station comprising means to generate an electric pulse signal in which a pulse may selectively be present or absent at each of a succession of time intervals that are regularly recurrent at a predetermined frequency, radio transmitting means, means to cause the said radio transmitting means to transmit a burst of radio frequency energy when a pulse occurs in the said signal, and means periodically and at the said predetermined frequency to vary the operating frequency of the radio transmitting means in a range of frequencies above thirty megacycles per second so that if pulses occur at any two adjacent pulse intervals of the said pulse signal there is caused to be transmitted two bursts of radio frequency energy that are of different frequencies, the time intervals in which these bursts are transmitted being sequential so that they do not overlap, the receiving station comprising radio receiving means and means periodically and at the said predetermined frequency to vary the tuning of the radio receiving means in step with the variation in the operating frequency of the radio transmitting means at the transmitting station so that when the radio receiving means is tuned to receive radio frequency energy transmitted in any one of said pulse intervals, it is not capable of receiving energy transmitted in an adjacent interval due to the difference in frequency, the radio receiving means thereby demodulating the received radio frequency energy to reproduce the said pulse signal.

2,895,129

MOBILE RADIO ANTENNA

Ira Kamen, New York, and Salvatore P. Angelastro, Brooklyn, N.Y., assignors to General Bronze Corporation, Garden City, N.Y., a corporation of New York

Application January 30, 1956, Serial No. 562,077
6 Claims. (Cl. 343—717)



1. A mobile radio antenna comprising a metallic sheet member, means for supporting said sheet member in electrically insulated relation to a vehicle, an elongated core of high-permeability, high-Q magnetic material, means for supporting said core in a generally horizontal plane and in spaced relation to said vehicle, a coil wound on said core, and means for electrically connecting said coil and said sheet to the input circuit of a radio receiver in said vehicle.

2,895,130

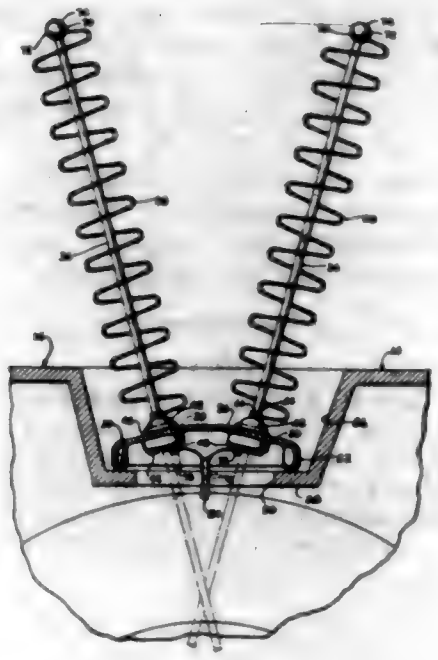
HELICAL ANTENNA COMPONENT AND ADJUSTABLE MOUNTING MEANS THEREFOR

Frank J. Klancnik, Jr., Chicago, Ill., assignor to Hi-ho TV Antenna Corp., Chicago, Ill., a corporation of Illinois

Application December 26, 1956, Serial No. 630,636
7 Claims. (Cl. 343—747)

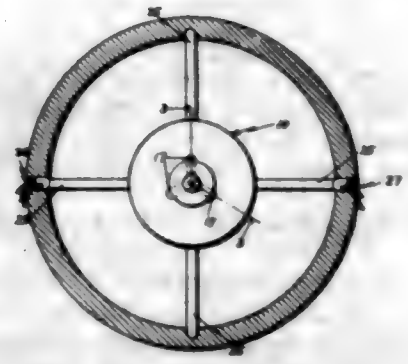
1. Antenna structure comprising in combination a base formed of electrically insulating material, a pair of rods forming a principal dipole antenna component, a ball and socket connection between the inner end of each rod and the base whereby the rods may be individually swung through respective solid angles between positions of wide divergence and positions of parallelism, said connection comprising a metal socket member fixedly secured to the base and having a socket formed therein, a ball loosely mounted for universal turning movement in said socket, said ball being formed with a radial bore extending completely therethrough and opening into the

socket, the inner end of said rod projecting completely through the bore and being slidable therein, a normally collapsed helical wire coil encompassing each rod axially and coextensively and through which the rod extends centrally, means for securing the outer end of said coil to the outer end of said rod while maintaining the same electrically insulated from the rod, means for securing the inner end of the coil to said ball whereby the coil is constrained to follow the swinging movements of the



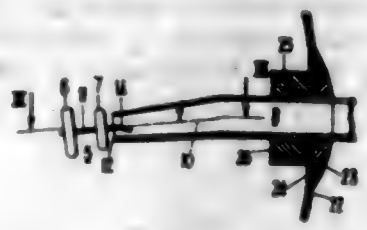
rod, said coils being inductively coupled to their respective rods and constituting an auxiliary antenna component, each coil by its attachment to the outer end of its respective rod and ball associated therewith existing under tension whereby said rod is urged inwardly of the socket and its end is forced into sliding frictional and electrical contact with the confining wall of the socket, and means for electrically connecting each socket member to one terminal of a transmission line.

2,895,131
MICROWAVE SCANNING ANTENNAS
Jesse L. Butler, Nashua, N.H., assignor to Raytheon Company, a corporation of Delaware
Application September 17, 1954, Serial No. 457,072
12 Claims. (Cl. 343—754)



1. A microwave antenna comprising a radiator having three radiating elements symmetrically disposed radially, substantially in a plane perpendicular to an axis of rotation, means for rotating said radiator about said axis thereby producing three different directional patterns for each mechanical revolution, and means for directing microwave energy to said radiator.

2,895,132
AERIAL SYSTEMS
Eugene Dillon Farmer and Denis Joseph McConalogue, London, England, assignors to The General Electric Company Limited, London, England
Application August 15, 1957, Serial No. 678,361
Claims priority, application Great Britain August 17, 1956
4 Claims. (Cl. 343—761)



1. A radar aerial system comprising a paraboloidal reflector, a feeder waveguide which is mounted for rotation about its longitudinal axis, a further length of waveguide which constitutes an extension of the feeder waveguide but which is offset at an angle to the feeder waveguide, a member projecting into the said further length of waveguide, a primary aerial which comprises at least a dipole and which is mounted on said member beyond the open end of the said further length of waveguide so as to lie partially on either side of the member, and means to provide unequal coupling between the feeder waveguide and the parts of the primary aerial on either side of the said member, the arrangement being such that rotation of the feeder waveguide causes the primary aerial to nutate about said axis in the region of the focus of the reflector while the unequal coupling between the feeder waveguide and parts of the primary aerial on either side of the said member compensates, at least in part, for the mechanical asymmetry of the aerial system that would otherwise tend to produce unequal side lobes.

2,895,133
WIDE-BAND ANTENNA
Jean Choquer, St. Leu-la-Foret, and Albert Weinfloch, Le Plessis-Robinson, France, assignors to Societe Technique d'Application et de Recherche Electronique S.T.A.R.E.C., Nogent-sur-Marne (Seine), France, a French body corporate
Application May 20, 1957, Serial No. 660,377
Claims priority, application France May 22, 1956
8 Claims. (Cl. 343—767)

1. In a half-wave antenna comprising a hollow conductive cylinder, no more than two slots formed in the wall of said cylinder, the length of the contour of each of said slots being such that each of said slots is individually at resonance at a frequency within the range of the operating frequencies; the length L of said cylinder being equal to $\lambda/2$, λ being a wavelength within the range of the operating wavelengths, and the di-

ameter of said cylinder being no more than 0.3 L; and means for feeding said antenna to produce polarization parallel with the axis of said cylinder.

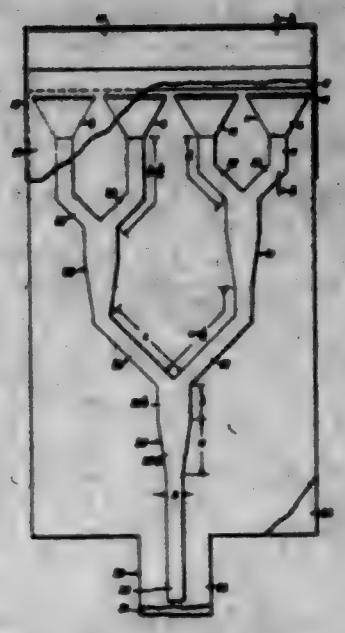
2,895,134

DIRECTIONAL ANTENNA SYSTEMS

William Sichak, Lyndhurst, N.J., assignor to International Telephone and Telegraph Corporation, a corporation of Maryland

Application January 21, 1953, Serial No. 332,424
18 Claims. (Cl. 343—786)

1. An antenna array comprising a planar conductor, a main line conductor, a plurality of branch line conductors, dielectric means spacing said main line and branch lines in a plane disposed in parallel relation with respect to said planar conductor, said main and branch lines each being of a width smaller than the width of said planar conductor and lying within the confines of said planar conductor thereby providing in conjunction with said planar conductor waveguides for propagation of radio frequency wave energy in a mode simulating substantially the TEM mode, radiators coupled to said branch lines at the ends thereof, and a junction coupling said main line to said branch lines including an impedance transformer section, said radiators each comprising an extension of said branch line conductor, said extension being



flared outwardly and disposed at an acute angle to the plane of said planar conductor.

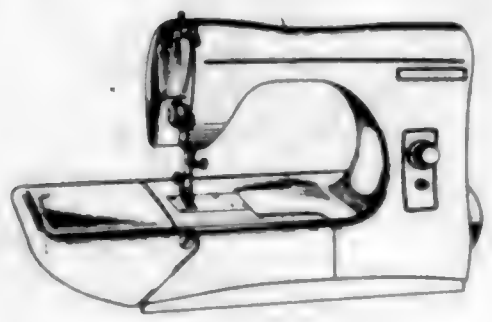
DESIGNS

JULY 14, 1959

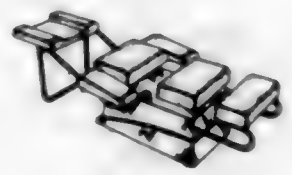
185,655
RECORD LIFTING TOOL
Virgil J. Barczak, Bay City, Mich.
Application March 3, 1958, Serial No. 49,859
Term of patent 14 years
(Cl. D54—13)

185,656
MARINE FLAGSTAFF
Donald J. Behnk, Pittsburgh, Pa., assignor to Attwood Brass Works, Inc., Grand Rapids, Mich., a corporation of Michigan
Application May 14, 1958, Serial No. 50,877
Term of patent 14 years
(Cl. D71—1)

185,657
SEWING MACHINE
Luigi Bono, Pavia, Italy, assignor to Necchi Societa per Azioni, Pavia, Italy
Original application August 12, 1957, Serial No. 47,336, now Design Patent No. 184,556, dated March 10, 1959. Divided and this application July 28, 1958, Serial No. 51,975
Claims priority, application Italy February 16, 1957
Term of patent 14 years
(Cl. D70—1)

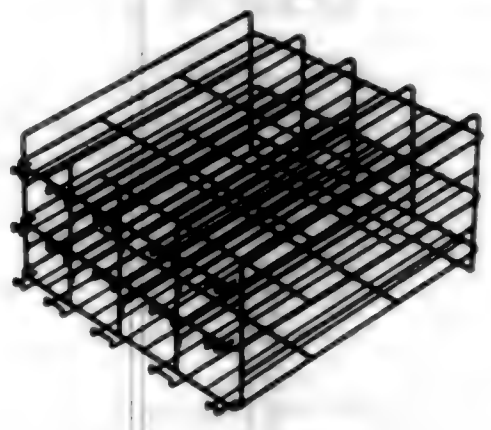


185,658
EXERCISER
Alfred P. Brandimarte and Jack E. Herweg, Fort Worth, Tex., assignors to A.R.A. Manufacturing Company, Grand Prairie, Tex.
Application December 19, 1958, Serial No. 53,827
Term of patent 14 years
(Cl. D83—1)



185,659
IRRIGATION PIPE COUPLING
James K. Campbell, Santa Clara, Calif., assignor to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware
Application April 27, 1956, Serial No. 41,228
Term of patent 14 years
(Cl. D91—3)

185,660
CAN DISPENSING RACK
Charles W. Crookes, Hawthorne, Calif.
Application June 16, 1958, Serial No. 51,379
Term of patent 14 years
(Cl. D80—10)



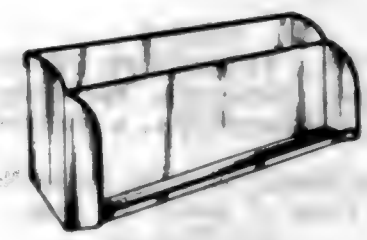
185,661
PLASTIC SHEET MATERIAL
John R. Ellefson, Newburgh, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application April 9, 1958, Serial No. 50,402
Term of patent 14 years
(Cl. D87—3)

185,662
PREFABRICATED BATHROOM UNIT
Julian G. Everett, New York, N.Y., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Application November 25, 1957, Serial No. 48,659
Term of patent 14 years
(Cl. D4—4)

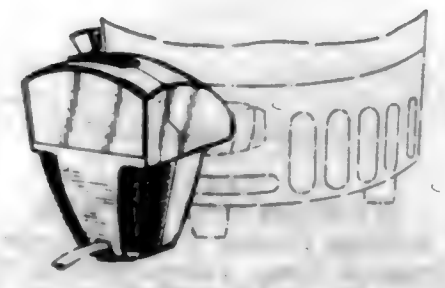
185,663
EYEGLASS FRAME FRONT
Henry E. Gaboriault, Central Falls, R.I., assignor to The Bishop Company, North Attleboro, Mass., a corporation of Massachusetts
Application May 5, 1958, Serial No. 50,742
Term of patent 14 years
(Cl. D57—1)

185,664
EYEGLASS FRAME
Henry E. Gaboriault, Central Falls, R.I., assignor to The Bishop Company, North Attleboro, Mass., a corporation of Massachusetts
Application May 5, 1958, Serial No. 50,766
Term of patent 14 years
(Cl. D57—1)

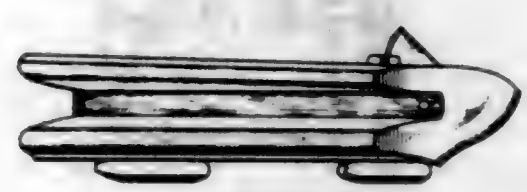
185,665
DISPLAY RACK
Francis J. Galessi, Boston, Mass.
Application January 13, 1958, Serial No. 49,205
Term of patent 14 years
(Cl. D80—9)



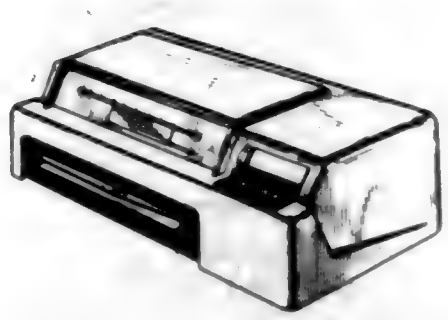
185,666
THERMOSTATIC CONTROL UNIT OR SIMILAR ARTICLE
Clifford E. Grebe, Chicago, Ill., assignor to A-M Company, Chicago, Ill., a partnership
Application June 2, 1958, Serial No. 51,151
Term of patent 14 years
(Cl. D26—13)



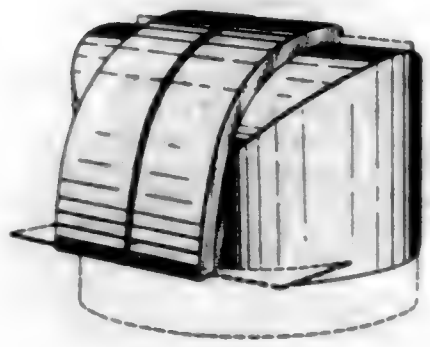
185,667
SLED
Stephen A. Holcomb, Maywood, Calif.
Application December 1, 1958, Serial No. 53,584
Term of patent 14 years
(Cl. D34—15)



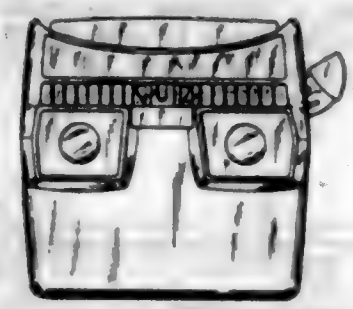
185,668
PHOTOGRAPHIC COPY MACHINE
Charles E. Jones and William G. Crowle, Chicago, Ill., assignors to American Photocopy Equipment Company, Chicago, Ill., a corporation of Illinois
Application March 12, 1958, Serial No. 50,009
Term of patent 14 years
(Cl. D61—1)



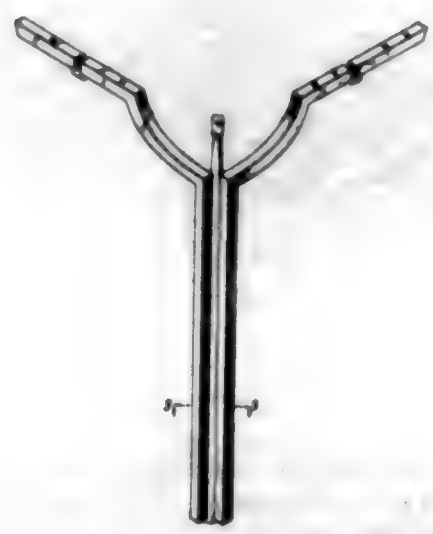
185,669
DOME FOR A TELESCOPE OR THE LIKE
Paul T. Kaestner, Pittsburgh, Pa., assignor to J. W. Fecker, Inc., Pittsburgh, Pa., a corporation of Pennsylvania
Application March 24, 1958, Serial No. 50,159
Term of patent 14 years
(Cl. D13—1)



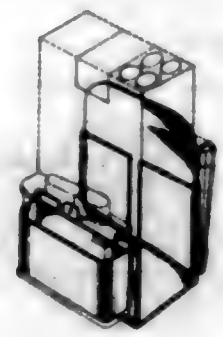
185,670
STEREOSCOPIC VIEWER
Thomas W. Kellogg, Duarte, Calif., assignor to Sawyer's Inc., Progress, Oreg., a corporation of Oregon
Application March 24, 1958, Serial No. 50,155
Term of patent 14 years
(Cl. D61—1)



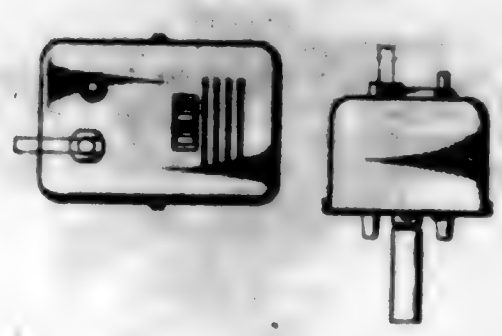
185,671
TABLE LEG
Robert E. Kjer Jakobsen, Manhattan Beach, Calif., assignor to Virtue Bros. Mfg. Co., Los Angeles, Calif., a corporation of California
Application January 19, 1959, Serial No. 54,238
Term of patent 14 years
(Cl. D33—14)



185,672
COMBINED CIGARETTE, MATCH, AND LIGHTER HOLDER
John J. Labe, Temple, Pa.
Application October 24, 1958, Serial No. 53,130
Term of patent 7 years
(Cl. D85—2)



185,673
ELECTRIC MOTOR
Charles Lind, Los Angeles, Calif.
Application December 3, 1958, Serial No. 53,641
Term of patent 14 years
(Cl. D26—5)

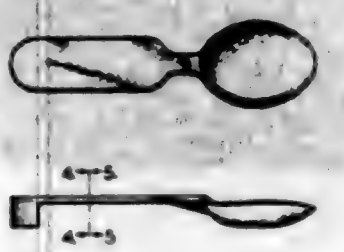


185,674
SAND URN
Maurice C. Lumley, Cincinnati, Ohio, assignor to The F. H. Lawson Company, Cincinnati, Ohio, a corporation of Ohio
Application December 31, 1958, Serial No. 53,991
Term of patent 14 years
(Cl. D58—17)

185,675
HAMMER HANDLE
Strother C. MacMinn, Los Angeles, Calif., assignor to New Plastic Corporation, Los Angeles, Calif., a corporation of Delaware
Application April 15, 1958, Serial No. 50,480
Term of patent 14 years
(Cl. D93—4)

185,676
COMBINED SOFA BED, DESK, AND DRESSER
John Maguire, Los Angeles, Calif., assignor to Duo-Bed Corporation, Los Angeles, Calif., a corporation of Nevada
Application January 26, 1959, Serial No. 54,323
Term of patent 14 years
(Cl. D15—11)

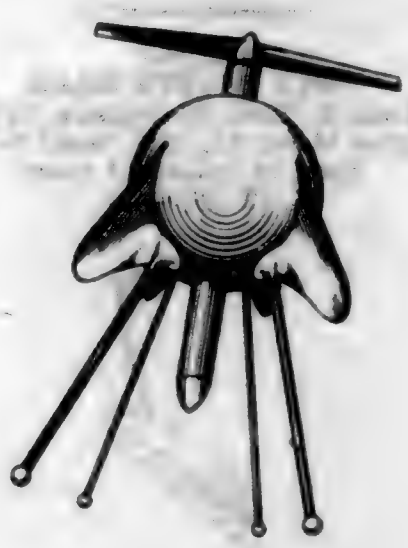
185,677
SAFETY SPOON
George C. Matteson, Kansas City, Mo., assignor to Geo. C. Matteson Co., Kansas City, Mo., a partnership
Application December 29, 1958, Serial No. 53,948
Term of patent 7 years
(Cl. D44—29)



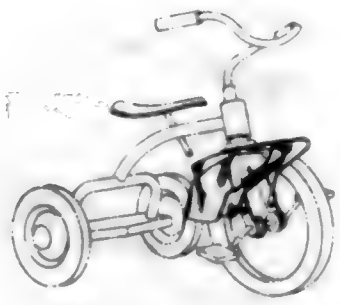
185,678
RESILIENT SEALING STRIP FOR WEATHERSTRIP ASSEMBLIES
Alfred P. McEvoy and Tym F. Seay, Dallas, Tex.
Application August 5, 1957, Serial No. 47,215
Term of patent 14 years
(Cl. D13—6)

185,679
SPOON OR THE LIKE
Joseph Rector, New York, N.Y., assignor to Amerex Trading Corporation, New York, N.Y., a corporation of New York
Application May 15, 1958, Serial No. 50,891
Term of patent 7 years
(Cl. D54—12)

185,680
TOY SATELLITE
George F. Riley, Omaha, Nebr.
Application August 5, 1958, Serial No. 52,061
Term of patent 14 years
(Cl. D34—15)

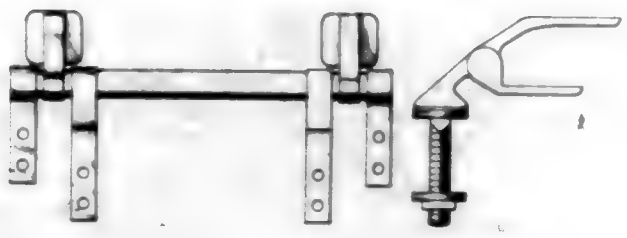


185,681
VELOCIPEDE FRONT FENDER AND TRUSS ROD ENSEMBLE
Viktor Schreckengost, Cleveland Heights, Ohio, assignor to The Murray Ohio Manufacturing Company, Nashville, Tenn., a corporation of Ohio
Application March 5, 1959, Serial No. 54,855
Term of patent 14 years
(Cl. D34—15)



185,682
SUET FEEDER FOR BIRDS
Michael R. Sheffler, Chalfont, Pa.
Application March 4, 1959, Serial No. 54,832
Term of patent 14 years
(Cl. D31—2)

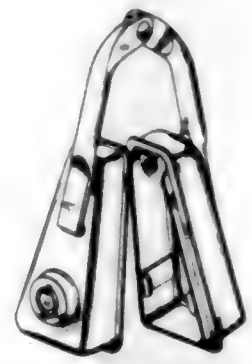
185,683
TOILET SEAT HINGE
Thomas E. Smoyer, Allentown, Pa.
Application March 21, 1958, Serial No. 50,122
Term of patent 14 years
(Cl. D4—5)



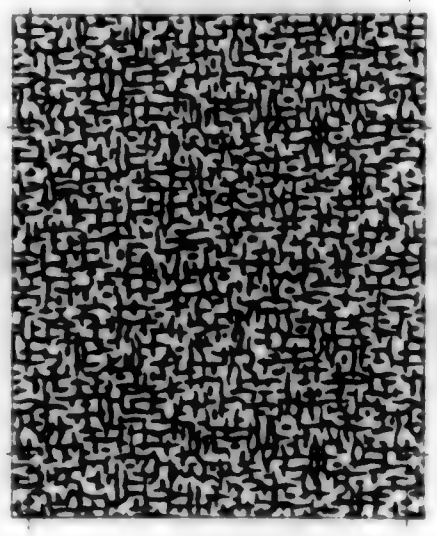
185,684
GOLF PUTTER HEAD
Lorin R. Todd, Burlingame, Calif.
Application March 13, 1959, Serial No. 54,989
Term of patent 14 years
(Cl. D34—5)

185,685
SPOON OR SIMILAR ARTICLE OF FLATWARE
Siro R. Toffolon, Meriden, Conn., assignor to The International Silver Company, Meriden, Conn., a corporation of Connecticut
Application November 25, 1957, Serial No. 48,655
Term of patent 14 years
(Cl. D54—12)

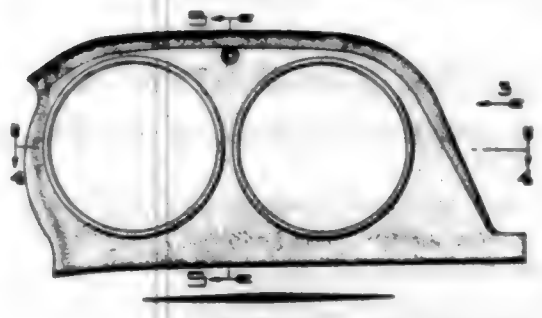
185,686
KEY SAFE
Theodore A. Tronson, San Jose, Calif.
Application July 21, 1958, Serial No. 51,859
Term of patent 14 years
(Cl. D69—1)



185,687
PLASTIC COATED FABRIC OR SIMILAR ARTICLE
Jakob H. Vogel, West Orange, N.J., assignor to Interchemical Corporation, New York, N.Y., a corporation of Ohio
Application February 14, 1958, Serial No. 49,647
Term of patent 7 years
(Cl. D87—3)



185,688
HEADLAMP DOOR
George W. Walker, Bloomfield Hills, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application August 20, 1958, Serial No. 52,304
Term of patent 7 years
(Cl. D48—32)



185,689
CLOTHES WASHING PLUNGER
Wilbert A. Werner, Hinsdale, Ill.
Application May 12, 1958, Serial No. 50,850
Term of patent 14 years
(Cl. D49—1)

185,690
LACE FABRIC OR SIMILAR ARTICLE
William H. Woodhouse, Bronxville, N.Y., assignor to Lace Art, Inc., New York, N.Y., a corporation of New Jersey
Application January 8, 1959, Serial No. 54,086
Term of patent 3½ years
(Cl. D47—6)

185,691
LACE FABRIC OR SIMILAR ARTICLE
William H. Woodhouse, Bronxville, N.Y., assignor to Lace Art, Inc., New York, N.Y., a corporation of New Jersey
Application January 27, 1959, Serial No. 54,343
Term of patent 3½ years
(Cl. D47—6)

LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 14TH DAY OF JULY, 1959

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Fielding, Francis W., to Lengsfeld Brothers, Inc. Article carrier. Re. 24,667, 7-14-59, Cl. 206—65.

Lengsfeld Brothers, Inc.: *See*—
Fielding, Francis W. Re. 24,667.

LIST OF PLANT PATENTEES

Boerner, Eugene S., to Jackson & Perkins Co. Rose plant. 1,850, 7-14-59, Cl. 47—61.

Jackson & Perkins Co.: *See*—
Boerner, Eugene S. 1,850.
Zombory, William and S. 1,851.

Schwoerer, John L. Camellia plant. 1,852, 7-14-59, Cl. 47—60.

Zombory, Sophia: *See*—
Zombory, William and S. 1,851.

Zombory, William and S., to Jackson & Perkins Co. Dianthus caryophyllus plant. 1,851, 7-14-59, Cl. 47—60.

LIST OF DESIGN PATENTEES

A-M Co.: *See*—
Grube, Clifford E. 185,666.

A. R. A. Mfg. Co.: *See*—
Brandimarte, Alfred P., and Herweg. 185,658.

Amerex Trading Corp.: *See*—
Rector, Joseph. 185,679.

American Photocopy Equipment Co.: *See*—
Jones, Charles E., and Crowle. 185,668.

Attwood Brass Works, Inc.: *See*—
Behnk, Donald J. 185,656.

Barcsak, Virgil J. Record lifting tool. 185,655, 7-14-59, Cl. D54—13.

Behnk, Donald J., to Attwood Brass Works, Inc. Marine flagstaff. 185,656, 7-14-59, Cl. D71—1.

Bishop Co., The: *See*—
Gaboriault, Henry E. 185,663.
Gaboriault, Henry E. 185,664.

Bono, Luigi, to Necchi Societa per Azioni. Sewing machine. 185,657, 7-14-59, Cl. D70—1.

Brandimarte, Alfred P., and J. E. Herweg, to A. R. A. Mfg. Co. Exerciser. 185,658, 7-14-59, Cl. D83—1.

Campbell, James K., to Food Machinery and Chemical Corp. Irrigation pipe coupling. 185,659, 7-14-59, Cl. D91—3.

Crane Co.: *See*—
Everett, Julian G. 185,662.

Crookes, Charles W. Can dispensing rack. 185,660, 7-14-59, Cl. D80—10.

Crowle, William G.: *See*—
Jones, Charles E., and Crowle. 185,668.

Duo-Bed Corp.: *See*—
Maguire, John. 185,676.

Du Pont de Nemours, E. I., and Co.: *See*—
Ellefson, John R. 185,661.

Ellefson, John R., to E. I. du Pont de Nemours and Co. Plastic sheet material. 185,661, 7-14-59, Cl. D87—3.

Everett, Julian G., to Crane Co. Prefabricated bathroom unit. 185,662, 7-14-59, Cl. D4—4.

Fecker, J. W., Inc.: *See*—
Kaestner, Paul T. 185,669.

Food Machinery and Chemical Corp.: *See*—
Campbell, James K. 185,659.

Ford Motor Co.: *See*—
Walker, George W. 185,688.

Gaboriault, Henry E., to The Bishop Co. Eyeglass frame front. 185,663, 7-14-59, Cl. D57—1.

Gaboriault, Henry E., to The Bishop Co. Eyeglass frame. 185,664, 7-14-59, Cl. D57—1.

Galassi, Francis J. Display rack. 185,665, 7-14-59, Cl. D80—9.

Grube, Clifford E., to A-M Co. Thermostatic control unit or similar article. 185,666, 7-14-59, Cl. D26—13.

Herweg, Jack E.: *See*—
Brandimarte, Alfred P., and Herweg. 185,658.

Holcomb, Stephen A. Sled. 185,667, 7-14-59, Cl. D34—15.

Interchemical Corp.: *See*—
Vogel, Jakob H. 185,687.

International Silver Co., The: *See*—
Toffolon, Siro R. 185,685.

Jones, Charles E., and W. G. Crowle, to American Photocopy Equipment Co. Photographic copy machine. 185,668, 7-14-59, Cl. D61—1.

Kaestner, Paul T., to J. W. Fecker, Inc. Dome for a telescope or the like. 185,669, 7-14-59, Cl. D12—1.

Kellogg, Thomas W., to Sawyer's Inc. Stereoscopic viewer. 185,670, 7-14-59, Cl. D61—1.

Kjer Jakobsen, Robert E., to Virtue Bros. Mfg. Co. Table leg. 185,671, 7-14-59, Cl. D33—14.

Labe, John J. Combined cigarette, match and lighter holder. 185,672, 7-14-59, Cl. D85—2.

Lace Art, Inc.: *See*—
Woodhouse, William H. 185,690.
Woodhouse, William H. 185,691.

Lawson, F. H., Co., The: *See*—
Lumley, Maurice C. 185,674.

Lind, Charles. Electric motor. 185,673, 7-14-59, Cl. D26—5.

Lumley, Maurice C., to The F. H. Lawson Co. Sand urn. 185,674, 7-14-59, Cl. D58—17.

MacMinn, Strother C., to New Plastic Corp. Hammer handle. 185,675, 7-14-59, Cl. D93—4.

Maguire, John, to Duo-Bed Corp. Combined sofa bed, desk and dresser. 185,676, 7-14-59, Cl. D15—11.

Matteson, Geo. C., Co.: *See*—
Matteson, George C. 185,677.

Matteson, George C., to Geo. C. Matteson Co. Safety spoon. 185,677, 7-14-59, Cl. D44—29.

McEvoy, Alfred P., and T. F. Seay. Resilient sealing strip for weatherstrip assemblies. 185,678, 7-14-59, Cl. D12—6.

Murray Ohio Mfg. Co., The: *See*—
Schreckengost, Viktor. 185,681.

Necchi Societa per Azioni: *See*—
Bono, Luigi. 185,657.

New Plastic Corp.: *See*—
MacMinn, Strother C. 185,675.

Rector, Joseph, to Amerex Trading Corp. Spoon or the like. 185,679, 7-14-59, Cl. D54—12.

Riley, George F. Toy satellite. 185,680, 7-14-59, Cl. D34—15.

Sawyer's Inc.: *See*—
Kellogg, Thomas W. 185,670.

Schreckengost, Viktor, to The Murray Ohio Mfg. Co. Velocipede front fender and truss rod ensemble. 185,681, 7-14-59, Cl. D34—15.

Seay, Tym F.: *See*—
McEvoy, Alfred P., and Seay. 185,678.

Sheffler, Michael R. Suet feeder for birds. 185,682, 7-14-59, Cl. D31—2.

Smoyer, Thomas E. Toilet seat hinge. 185,683, 7-14-59, Cl. D4—5.

Todd, Loris R. Golf putter head. 185,684, 7-14-59, Cl. D34—5.

Toffolon, Siro R., to The International Silver Co. Spoon or similar article of flatware. 185,685, 7-14-59, Cl. D54—12.

Tronsen, Theodore A. Key safe. 185,686, 7-14-59, Cl. D69—1.

Virtue Bros. Mfg. Co.: *See*—
Kjer Jakobsen, Robert E. 185,671.

Vogel, Jakob H., to Interchemical Corp. Plastic coated fabric or similar article. 185,687, 7-14-59, Cl. D87—3.

Walker, George W., to Ford Motor Co. Headlamp door. 185,688, 7-14-59, Cl. D48—32.

Werner, Wilbert A. Clothes washing plunger. 185,689, 7-14-59, Cl. D49—1.

Woodhouse, William H., to Lace Art, Inc. Lace fabric or similar article. 185,690, 7-14-59, Cl. D47—6.

Woodhouse, William H., to Lace Art, Inc. Lace fabric or similar article. 185,691, 7-14-59, Cl. D47—6.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 14TH DAY OF JULY, 1959

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

A.C.E.C. Ateliers de Constructions Electriques de Charleroi: *See*—
Baffrey, Anton R., Hofmeier, Schmidt, and Hormann. 2,895,034.

Abbott, Frank R. Broad band electroacoustic transducer. 2,895,062, 7–14–59, Cl. 310—9.6.

Abiah, Frank J.: *See*—
McMillan, James O. 2,894,604.

Adams, Harvey R.: *See*—
Forth, Murray W., and Adams. 2,894,651.

Adams, Joseph B.: *See*—
McCullough, Robert F., and Adams. 2,894,909.

Aerojet-General Corp.: *See*—
Berner, Leo. 2,894,488.
Miller, Raymond S. 2,895,023.

Agar, William O., to Marconi's Wireless Telegraph Co. Ltd. Magneto-strictive resonators. 2,895,113, 7–14–59, Cl. 333—71.

Agule, George J., to Machlett Laboratories, Inc. Cooling devices for electron tubes. 2,894,730, 7–14–59, Cl. 257—250.

Ajax Flexible Coupling Co., Inc.: *See*—
Brumagin, Thomas H. 2,894,397.

Aktiengesellschaft Brown, Boveri & Cie: *See*—
Blatter, Hans. 2,895,101.

Aldred, Eldon D.: *See*—
Huetten, Clarence, and Aldred. 2,895,118.

Alinari, Carlo. Panoramic mount for cinematographic cameras. 2,894,709, 7–14–59, Cl. 248—186.

Allen, Charles F.: *See*—
Booth, Robert B., Walker, and Allen. 2,894,851.

Allen, Emma G.: *See*—
Booth, Robert B., Walker, and Allen. 2,894,851.

Allied Chemical Corp.: *See*—
Lloyd, Billy E., and Kelly. 2,894,950.

Allis-Chalmers Mfg. Co.: *See*—
McDonough, Edgar R. 2,894,756.
Rosenberg, Leon T. 2,895,065.

Allison, Blaine M., and W. Schmid, to Owens-Illinois Glass Co. Injection molding machines. 2,894,284, 7–14–59, Cl. 18—30.

Alm, Rasmus S., to LKB-Produkter Fabriksaktiebolag. Apparatus for collecting liquid samples. 2,894,542, 7–14–59, Cl. 141—130.

Alm, Robert M.: *See*—
Wennerberg, Arnold N., Alm, and Peter. 2,894,990.

Alsynite Co. of America: *See*—
Ambrose, Francis X. 2,894,621.

Alvarez Sabater, Fernando. Photographic apparatus for taking and projecting pictures with color separation. 2,894,427, 7–14–59, Cl. 88—16.4.

Alvord, Charles C., to Norton Co. Grinding machine-wheel wear compensating mechanism. 2,894,360, 7–14–59, Cl. 51—165.

Ambrose, Francis X., to Alsynite Co. of America. Process of making reinforced plastic panels and article produced thereby. 2,894,621, 7–14–59, Cl. 206—60.

American Chicle Co.: *See*—
Scanlan, James J., and Harrisson. 2,894,876.

American Cyanamid Co.: *See*—
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Bullock, Milon W. 2,894,965.

American-Hawaiian Steamship Co.: *See*—
Black, James J., Brian, Frechie, Hummel, McIlhenny, Rahe, and Suman. 2,894,650.

American Home Products Corp.: *See*—
Hohnstine, Jack T., Versocki, and Steckhahn. 2,894,928.

American-Marietta Co.: *See*—
Rikard, Mack A., Bartlett, and Coleman. 2,894,820.

American Oil Co., The: *See*—
Wolston, Clinton M., Jr., and Jack. 2,894,881.

American Viscose Corp.: *See*—
Braunlich, Richard H. 2,894,802.

Amstuts, Edward D., and G. L. Krueger, to The Wm. S. Merrell Co. Indenones substituted by quinolyl, pyridyl and benzimidazolyl radicals. 2,894,952, 7–14–59, Cl. 260—289.

Amthor, William M., and V. Kosuga. Digging machine. 2,894,341, 7–14–59, Cl. 37—97.

Ander, Eric B., to Minneapolis-Honeywell Regulator Co. Resiliently mounted electromagnetic actuator for valves and the like. 2,894,714, 7–14–59, Cl. 251—30.

Anderson, John R., and W. C. Von Dohlen, to Union Carbide Corp. Refining of cyclic organic carbonates. 2,894,957, 7–14–59, Cl. 260—340.2.

Anderson, Kermit F., and L. O. Studer. Self-leveling ladder attachment. 2,894,670, 7–14–59, Cl. 228—63.

Andersson, Nils. Method and apparatus for extrusion coating and product. 2,894,853, 7–14–59, Cl. 117—11.

Andrew, Thomas A. Hydraulic vibratory jar. 2,894,724, 7–14–59, Cl. 255—27.

Angelastro, Salvatore P.: *See*—
Kamen, Ira, and Angelastro. 2,895,129.

Appel, Gerhard H. Apaparatus for straightening and for relieving stresses in workpieces. 2,894,421, 7–14–59, Cl. 78—14.

Armco Steel Corp.: *See*—
Linnert, George E., and Larrimore. 2,894,833.
Young, James C. 2,894,423.

Armstrong, Blair D., and J. W. Wallace, to Armstrong Store Fixture Co. Merchandise shelf adapter and method of making same. 2,894,303, 7–14–59, Cl. 24—81.

Armstrong, Herbert L., to United States of America, Army. Automatic photographic pressing timer. 2,895,097, 7–14–59, Cl. 318—443.

Armstrong Store Fixture Co.: *See*—
Armstrong, Blair D., and Wallace. 2,894,303.

Arnold, Herbert, and N. Brock, to Asta-Werke Aktiengesellschaft Chemische Fabrik. Succinic acid esters. 2,894,983, 7–14–59, Cl. 260—485.

Arnot, Alfred E. R., to E. Kaye and J. R. Sharp. Hoses. 2,894,536, 7–14–59, Cl. 138—56.

Arrow Tools, Inc.: *See*—
Veres, Edward W. 2,894,600.

Arteraft Venetian Blind Mfg. Co.: *See*—
Nelson, Harry. 2,894,572.

Arva S.A.: *See*—
Arvai, Tibor. 2,894,682.

Arvai, Tibor, to Arva S.A. Actuator mechanism for a ten-key machine. 2,894,682, 7–14–59, Cl. 235—60.

Asahi Kasei Kogyo Kabushiki Kaisha: *See*—
Tsunoda, Yoshio, Seko, Watanabe, Ehara, and Misumi. 2,894,917.

Ashlock, Loma E.: *See*—
Puckett, Ralph Q., and Ashlock. 2,894,782.

Ashton, Philip E., and A. W. Schnick, to The Cuno Engineering Corp. Cigar lighter. 2,895,036, 7–14–59, Cl. 219—32.

Aspergren, Brooke D., and R. B. Moffett, to The Upjohn Co. Organic compounds. 2,894,955, 7–14–59, Cl. 260—313.

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Astheimer, Robert W., and E. M. Wormser, to Barnes Engineering Co. Image transducer. 2,895,049, 7–14–59, Cl. 250—65.

Atkinson, Guy F., Co.: *See*—
Spencer, Donald B. 2,894,739.

Auer, Willem U., H. Groothuis, W. P. Hendal, and J. Vink, to Shell Development Co. Preventing condensation inside a vortex tube. 2,894,371, 7–14–59, Cl. 62—5.

Avco Mfg. Corp.: *See*—
Kagan, Sholly. 2,895,045.

Ayers, John O., ½ to D. W. Van Story. Drive mechanism. 2,894,398, 7–14–59, Cl. 74—76.

Ayres, Waldemar A. Even printing manual typewriter. 2,894,613, 7–14–59, Cl. 197—17.

B. B. Chemical Co.: *See*—
Morris, Thomas C., and Johnson. 2,894,925.

Babcock & Wilcox Co., The: *See*—
Brooks, Ernest A., Shellenberger, and Sprague. 2,894,494.

Bachman, Gustave B., and T. Hokama, to Purdue Research Foundation. Process for diazotizing primary aromatic amines. 2,894,941, 7–14–59, Cl. 260—141.

Bader, Erich, and H. Koert, to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler. Adhesive composition comprising an acrylate monomer, an unsaturated polyester and polyvinyl methyl ether. 2,894,932, 7–14–59, Cl. 260—45.4.

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Oettinger, Willi, Von Fuener, and Goehre. 2,894,898.

Baffrey, Anton R., H. Hofmeier, W. Schmidt, and E. Hormann, to Phoenix-Rheinrohr Aktiengesellschaft Vereinigte Hutten-und Rohrenwerke, and A.C.E.C. Ateliers de Constructions Electriques de Charleroi. Induction heating apparatus. 2,895,034, 7–14–59, Cl. 219—8.5.

Baker Oil Tools, Inc.: *See*—
Baker, Reuben C. 2,894,725.

Baker, Reuben C., to Baker Oil Tools, Inc. Junk basket for well bores. 2,894,725, 7–14–59, Cl. 255—28.

Ball, Henry, to Radio Corp. of America. Bistable relays. 2,895,027, 7–14–59, Cl. 200—87.

Bamburg, Robert A., to Olin Mathieson Chemical Corp. Shipping container. 2,894,672, 7–14–59, Cl. 229—27.

Banes, Fred W., J. F. Nelson, and R. F. Leary, to Esso Research and Engineering Co. Process for preparing petroleum resins II. 2,894,937, 7–14–59, Cl. 260—82.

Banes, Fred W., and H. K. Wiese, to Esso Research and Engineering Co. Bicycloheptene carboxylates and their production. 2,894,976, 7–14–59, Cl. 260—468.

Baniel, Abraham, and R. Blumberg, to Makhtaavei Israel. Preparation of water-soluble inorganic metal salts and HCl acid by double decomposition. 2,894,813, 7–14–59, Cl. 23—50.

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Libby, Edward W. 2,894,410.
Ordorica, Miguel A. 2,894,592.

Banker, Oscar H., to New Products Corp. Closed center valve and system. 2,894,533, 7–14–59, Cl. 137—622.

Bar Products Co.: *See*—
Povse, Vincent A., and Zerby. 2,894,281.

Barnes Engineering Co.: *See*—
Astheimer, Robert W., and Wormser. 2,895,049.
Barr, John T., and F. E. Lawlor, to Pennsalt Chemicals Corp. Fluoroalkyl sulfur compounds. 2,894,991, 7–14–59, Cl. 260—608.
Barr Rubber Products Co., The: *See*—
Chupa, John C. 2,894,746.
Bartlett, Eugene A.: *See*—
Rikard, Mack A., Bartlett, and Coleman. 2,894,820.
Batchelder, James W. Apparatus for automatic drilling and tapping of headed work pieces. 2,894,420, 7–14–59, Cl. 77—5.
Beaton, Roy H., to United States of America, Atomic Energy Commission. Columbic oxide adsorption process for separating uranium and plutonium ions. 2,894,810, 7–14–59, Cl. 23—14.5.
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Beavon, David K., to Texaco Inc. Apparatus for dispersing solids in gases in the catalytic treatment of hydrocarbon oils. 2,894,825, 7–14–59, Cl. 23—288.
Becker, Lyman. Flush valve control for plumbing fixtures. 2,894,580, 7–14–59, Cl. 161—7.
Becton, Dickinson and Co.: *See*—
Bednarz, Edward W. 2,894,500.
Bednarz, Edward W., to Becton, Dickinson and Co. Hypodermic syringe. 2,894,509, 7–14–59, Cl. 128—218.
Bedderman, Morris, S. Vogler, and H. H. Hyman, to United States of America, Atomic Energy Commission. Separation of ruthenium from aqueous solutions. 2,894,818, 7–14–59, Cl. 23—140.
Behrens, Hugh C.: *See*—
Hart, Porter, and Behrens. 2,895,102.
Bell & Gossett Co.: *See*—
Sykes, Robert E. 2,894,528.
Bell, Norton W., to Consolidated Electrodynamics Corp. Floating power supply circuit. 2,895,059, 7–14–59, Cl. 307—105.
Bell Telephone Laboratories, Inc.: *See*—
Kock, Winston E., and Miller. 2,895,005.
Koenig, Walter, Jr. 2,895,088.
Kompfner, Rudolf. 2,895,071.
Potter, Ralph K. 2,894,798.
Rowen, John H. 2,895,114.
Weinreich, Gabriel. 2,895,109.
Bellamy, David, Jr., to Fenwal Laboratories, Inc. Sealing closures for fluid containers. 2,894,510, 7–14–59, Cl. 128—272.
Belton, Maurice L., and H. E. Rowand, to Crown Zellerbach Corp. Prefolding device. 2,894,434, 7–14–59, Cl. 93—49.
Bendix Aviation Corp.: *See*—
Colt, Rutger B., and Uchuck. 2,894,391.
Bennett, Raymond W. Pinch bar. 2,894,720, 7–14–59, Cl. 254—25.
Benson, Richard E., to E. I. du Pont de Nemours and Co. Reaction products of 1,2,4-trimethylenecyclohexane with alpha, beta-ethylenically unsaturated compounds, their preparation and homopolymers thereof. 2,894,936, 7–14–59, Cl. 260—78.4.
Bergan, Christian K., to G. Miller. Ash container tray top attachment. 2,894,655, 7–14–59, Cl. 220—1.
Bergman, Donald J., to Universal Oil Products Co. Exhaust burning muffler. 2,894,598, 7–14–59, Cl. 181—43.
Bergy, Malcolm E.: *See*—
Nelson, Harrison A., Large, Bergy, and Hoeksema. 2,894,943.
Bernard, George G., to The Pure Oil Co. Inhibiting precipitation of iron oxide from iron-containing waters. 2,894,905, 7–14–59, Cl. 210—58.
Berner, Leo., to Aerojet-General Corp. Compressed air reciprocatory vibrator. 2,894,488, 7–14–59, Cl. 121—30.
Beyerstedt, John M., and H. E. Erickson, to Nordberg Mfg. Co. Adzing bits. 2,894,419, 7–14–59, Cl. 76—103.
Bialek, Jacques, to Standard Coil Products Co., Inc. Delay line. 2,895,112, 7–14–59, Cl. 333—31.
Bigelow, Bryant. Desk trays and the like. 2,894,640, 7–14–59, Cl. 211—126.
Billeter, Henry R., and G. B. Richards, to Liquid Controls Corp. Tank unloading apparatus. 2,894,659, 7–14–59, Cl. 222—72.
Billings, Thomas A. Tree and brush cutting attachment for bulldozers. 2,894,544, 7–14–59, Cl. 144—34.
Birchall, William R., and L. M. Watson, to National Distillers and Chemical Corp. Handling of sodium dispersions. 2,894,788, 7–14–59, Cl. 302—66.
Bird, Walter, to W. S. Correll. Automobile house and camping trailer, and method of manufacturing the same. 2,894,783, 7–14–59, Cl. 296—23.
Birdwell, Bertie F., G. G. Priest, and B. R. Morgan, to Jersey Production Research Co. Well completion. 2,894,584, 7–14–59, Cl. 166—42.
Bishofberger, Carl J., to Minneapolis-Honeywell Regulator Co. Burner control apparatus. 2,894,567, 7–14–59, Cl. 158—28.
Black, James J., W. B. Brian, M. J. Frechie, W. R. Hummel, A. McIlhenny, F. H. Rahe, and R. W. Suman, to American-Hawaiian Steamship Co. Cargo and freight transporting systems. 2,894,650, 7–14–59, Cl. 214—38.
Blatter, Hans, to Aktiengesellschaft Brown, Boveri & Cie. Voltage regulation arrangement for contact converters. 2,895,101, 7–14–59, Cl. 321—48.
Bless, Harold, to United States of America, Navy. Friction brake for catapults. 2,894,606, 7–14–59, Cl. 188—82.
Bletcher, Ralph E., and I. A. Ward, small percentages to various assignees. Spout fitting. 2,894,696, 7–14–59, Cl. 239—443.
Bliss, William R., to Van Norman Industries, Inc. Read-out apparatus for movable indicating mechanisms. 2,895,121, 7–14–59, Cl. 340—147.
Bloom, Barry M., and R. E. Carnahan, to Chas. Pfizer & Co., Inc. Isonicotinylhydrazino alkanoic amides. 2,894,972, 7–14–59, Cl. 260—295.
Bloomberg, David J., to General Electric Co. Turbomachine bucket-wheel fabricated by casting. 2,894,318, 7–14–59, Cl. 29—156.8.
Bloomer Bros. Co.: *See*—
Hatcher, Glenn B. 2,894,432.
Blower Application Co.: *See*—
Panning, Martin H., and Curry. 2,894,697.
Blum, Josef, to Ivan Sorvall, Inc. Centrifuge deviation sensing switching mechanism. 2,895,023, 7–14–59, Cl. 200—81.45.
Blumberg, Ruth: *See*—
Baniel, Abraham, and Blumberg. 2,894,813.
Bogater, John P., and L. B. Ragedale, to General Motors Corp. Deck lid hinge with adjustable counterbalance. 2,894,277, 7–14–59, Cl. 16—180.
Böger, Marius F. W. Device to develop photographic layer-carriers by the diffusion process. 2,894,440, 7–14–59, Cl. 95—89.
Boling, Virgil E. Variable speed transmission. 2,894,417, 7–14–59, Cl. 74—751.
Bolles, Charles J., Jr., to General Motors Corp. Manifold with variable length ram pipes. 2,894,497, 7–14–59, Cl. 123—52.
Bone, Herbert L., to Westinghouse Air Brake Co. Snow blower control systems. 2,894,704, 7–14–59, Cl. 246—428.
Bonn, Mathias, to F. Soennecken. Loose leaf binders. 2,894,400, 7–14–59, Cl. 74—96.
Booth, Harry T., and T. J. Lord, to United Aircraft Products, Inc. Pressure regulating valve. 2,894,526, 7–14–59, Cl. 137—116.5.
Booth, Harry T., and T. J. Lord, to United Aircraft Products, Inc. Repeated action injector device. 2,894,712, 7–14–59, Cl. 251—13.
Booth, Robert B., G. B. Walker, and C. F. Allen, deceased; E. G. Allen, executrix of the estate of said C. F. Allen; to American Cyanamid Co. Method of forming a protective coating on cyanidation tailings and the resulting product. 2,894,851, 7–14–59, Cl. 117—66.
Borden Co., The: *See*—
Stahl, Oscar C. 2,894,483.
Borutzke, Irvin W.: *See*—
Runde, Byron A., and Borutzke. 2,894,615.
Bostock, James H., to Otis Engineering Corp. Valve. 2,894,715, 7–14–59, Cl. 251—58.
Bott, Hugh R.: *See*—
Kressman, Theodore R. E., Tye, and Bott. 2,894,894.
Bourdon, Pierre M., to Compagnie Generale des Etablissements Michelin (Robert Puiseux & Cie). Pneumatic tire casings. 2,894,555, 7–14–59, Cl. 152—361.
Bourrillon, Roland: *See*—
Maier-Huser, Hans, and Bourrillon. 2,894,875.
Bowers, Robert E., to R-B-B, Inc. Radio construction. 2,895,044, 7–14–59, Cl. 250—14.
Bowes, Charles A.: *See*—
Lindeke, Charles B. 2,894,676.
Boyden, Robert E., M. V. Scosafava, and A. F. Stansell, to Clary Corp. Sales transaction machine. 2,894,449, 7–14–59, Cl. 101—96.
Boylan, Henry W., to General Motors Corp. Universal air deflector outlet devices. 2,894,441, 7–14–59, Cl. 98—2.
Boylan, Henry W., and J. B. Mall, to General Motors Corp. Air outlet devices. 2,894,444, 7–14–59, Cl. 98—2.
Bradshaw, John A. Cultivator tool unit and plant shield assembly. 2,894,591, 7–14–59, Cl. 172—512.
Bradshaw, Stanley E., and A. I. Mlavsky, to The General Electric Co. Ltd. Production of semi-conductor bodies. 2,894,863, 7–14–59, Cl. 148—1.5.
Brauker, Hoffman E., to Republic Aviation Corp. Pulse generator. 2,895,060, 7–14–59, Cl. 315—205.
Braunlich, Richard H., to American Viscose Corp. Method of forming crimped artificial filaments. 2,894,802, 7–14–59, Cl. 18—54.
Brepson, Roland, to Societe Chimiotex. Apparatus for the continuous treatment of artificial filaments. 2,894,886, 7–14–59, Cl. 68—205.
Brian, Wallace B.: *See*—
Black, James J., Brian, Frechie, Hummel, McIlhenny, Rahe, and Suman. 2,894,650.
Bright, Gordon S.: *See*—
McKinley, John K., Nelson, and Bright. 2,894,870.
Brill, William E., to General Motors Corp. Power transmitting mechanism. 2,894,407, 7–14–59, Cl. 74—361.
Brilli, Franz, to Schwarzkopf Development Corp. Porous lubricant-impregnated bearings. 2,894,792, 7–14–59, Cl. 308—240.
Brindle, Marvin H. Foot molding. 2,894,288, 7–14–59, Cl. 18—55.05.
Bristol, Edward S., to Leeds and Northrup Co. Frequency-biased control systems for electrical generating units. 2,895,086, 7–14–59, Cl. 290—2.
British Petroleum Co. Ltd., The: *See*—
Houssam, Ernest C., and Lester. 2,894,893.
Broadhead, Paul S.: *See*—
Franck, Jack V., Broadhead, and Skiff. 2,895,053.
Brock, Norbert: *See*—
Arnold, Herbert, and Brock. 2,894,963.
Brooks, Ernest A., R. Shellenberger, and T. S. Sprague, to The Babcock & Wilcox Co. Pressure shell enclosed synthesis gas generator with tubular heat exchanger. 2,894,494, 7–14–59, Cl. 122—510.
Brown, Alexander M., to Talon, Inc. Quick release end stop. 2,894,305, 7–14–59, Cl. 24—205.11.
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Brown, Eula E.: *See*—
Brown, Claude L. and E. E. 2,894,382.
Brown, Gerald H., to J. Leukart Machine Co., Inc. Impacting machine. 2,894,435, 7–14–59, Cl. 94—48.
Brown, John H., Jr.: *See*—
Harper, Billy G., Brown, and Moore. 2,894,289.
Brown Lenox and Co. Ltd.: *See*—
Hutchison, William M., and Hopkins. 2,894,475.
Brown, Richard K., to United States of America, Navy. Measurement of the velocity of sound in fluids. 2,894,595, 7–14–59, Cl. 181—.5.
Brownhill, Frank D., and R. D. Van Millingen. Torquemeter. 2,894,389, 7–14–59, Cl. 73—136.
Brucken, Byron L., to General Motors Corp. Vertical support shaft for motor rotor armature and comminutor impeller disc. 2,894,698, 7–14–59, Cl. 241—257.
Brumagin, Thomas H., to Ajax Flexible Coupling Co., Inc. Supports for mechanical vibrators. 2,894,397, 7–14–59, Cl. 74—61.
Bruning, Charles, Co., Inc.: *See*—
Schulze, John J. 2,894,744.
Bryan, Harold E.: *See*—
Lieb, Bernard L., Bryan, and Steinkamp. 2,895,087.
Bryden, Joseph E., to The General Electric Co. Ltd. Scatter radiation communication system using bursts of radio frequency energy. 2,895,128, 7–14–59, Cl. 343—203.
Brzowski, Harry S. Container clamp for liquid mixing apparatus. 2,894,809, 7–14–59, Cl. 24—268.
Buensod-Stacey, Inc.: *See*—
Waterfill, Robert W. 2,894,375.
Buhrer, Erwin. Foundry mold with sectional match plates of different sizes. 2,894,299, 7–14–59, Cl. 22—157.
Bullock, Milon W., to American Cyanamid Co. Octanoic acid esters and method of preparing the same. 2,894,965, 7–14–59, Cl. 260—408.
Bulman, Norman: *See*—
Francis, Charles E., and Bulman. 2,894,910.
Buono, Mario. Felling machine. 2,894,470, 7–14–59, Cl. 112—178.
Buoys, Inc.: *See*—
Dodge, Robert J. 2,894,269.
Burdorf, Donald L.: *See*—
Heath, Roy T., and Burdorf. 2,894,702.
Burger, Erich: *See*—
Burger, Michael and E. 2,894,489.
Burger, Michael and E. Tractive indicator for automatic aperture controllers. 2,894,489, 7–14–59, Cl. 95—64.
Burkhard, Charles A., to General Electric Co. Synthetic resin and insulated electrical conductor. 2,894,934, 7–14–59, Cl. 260—75.
Burleson, James C., to Monsanto Chemical Co. Polymers of hydrocyanic acid. 2,894,916, 7–14–59, Cl. 260—2.
Burndy Corp.: *See*—
Dupre, Henry P., and Matthysse. 2,895,002.
Burroughs Corp.: *See*—
Foster, Jerry F., Shuler, and Paquin. 2,895,128.
Runde, Byron A., and Borutzke. 2,894,615.
Bushnell, William L. Decorative star. 2,894,345, 7–14–59, Cl. 41—10.
Busignies, Henri G., to International Telephone and Telegraph Corp. Channeling system for frequency spectrum transmission. 2,895,009, 7–14–59, Cl. 179—15.
Butler, Henry J., to Dunlop Rubber Co. Ltd. Disc brakes. 2,894,607, 7–14–59, Cl. 188—73.
Butler, Jesse L., to Raytheon Co. Microwave scanning antennas. 2,895,131, 7–14–59, Cl. 343—754.
Buttolph, Ralph Q. Method and apparatus for providing a well bore with a deflected extension. 2,894,722, 7–14–59, Cl. 255—1.6.
C.G.S. Laboratories, Inc.: *See*—
Sontheimer, Carl G. 2,895,105.
Caesar, Orville S., and J. G. Stieber. Roller shade. 2,894,578, 7–14–59, Cl. 160—308.
California Packing Corp.: *See*—
Richardson, Alan C. 2,894,446.
Callery Chemical Co.: *See*—
Cunningham, George L., and Pretka. 2,894,975.
Calvin, Melvin: *See*—
Werner, Louis B., Periman, and Calvin. 2,894,805.
Camp, Dempsie C., and C. T. Robinson, to The Cumberland Case Co. Double action automatic watering valve. 2,894,717, 7–14–59, Cl. 251—263.
Campbell, Claude N., Jr. Bulk dispensing container. 2,894,666, 7–14–59, Cl. 222—528.
Campbell, Ernest C., Jr., to Hallmark Cards, Inc. Ribbon spool. 2,894,620, 7–14–59, Cl. 206—62.
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Capito & Klein Akt.: *See*—
Engelhardt, Erwin A. 2,894,860.
Caporicci, Antonio G. Toilet utility bracket. 2,894,639, 7–14–59, Cl. 211—60.
Cappie, Peter. Hose support. 2,894,708, 7–14–59, Cl. 248—87.
Carbonara, Victor E., to Kollsman Instrument Corp. Astrocompass. 2,894,350, 7–14–59, Cl. 33—61.
Care, Richard L., to Grant Development Co. Dispensing machine. 2,[illegible]612, 7–14–59, Cl. 194—4.
Carey, Earthel H. Plastic rug cover. 2,894,553, 7–14–59, Cl. 150—52.
Cargill, Sylvester H., and W. L. Harkess; said Harkess assor. to said Cargill. Wrapping machine. 2,894,362, 7–14–59, Cl. 53—182.
Carle, Amos E. Variable speed transmission. 2,894,405, 7–14–59, Cl. 74—230.17.
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Ek, Stig Y., and Eldh. 2,894,864.
Carlisle, Charles H.: *See*—
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Palmatier, Everett P. 2,894,380.
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Chapin, Ralph W., to Union Oil Co. of California. Method for burning oils. 2,894,823, 7–14–59, Cl. 23—230.
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Newcombe, Jack, and Fallgatter. 2,894,908.
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Strodtz, Norman H. 2,894,882.
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Cook, Robert W., and L. McBride, to Anthony Wayne Improvement Co. Pipe sealing apparatus and method. 2,894,539, 7–14–59, Cl. 138—97.
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Crane, Robert A., and D. J. Pye, to The Dow Chemical Co. Analytical apparatus. 2,895,055, 7–14–59, Cl. 250—218.
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Davis, James R., to The Trane Co. Multi-zone air conditioning unit. 2,894,728, 7–14–59, Cl. 257—9.
Davis, John V., to The Udylite Corp. Work-handling apparatus. 2,894,617, 7–14–59, Cl. 134—77.
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De Leonardis, Michael J. Device for heating a heat transfer medium. 2,894,493, 7–14–59, Cl. 122—135.
Deloffre, Leon E., and E. A. Pierre. Device for localising the impact point of rays. 2,895,067, 7–14–59, Cl. 313—95.
De Matteis, John J., to International Business Machines Corp. Supervisory and clock control apparatus. 2,895,122, 7–14–59, Cl. 340—147.
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Lee, Pyungtoo W., and Müller. 2,895,050.
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Devaud, Charles, to Societe anonyme de l'ancienne maison Devaud, Kunstle & Co. Swathing means for infants. 2,894,511, 7–14–59, Cl. 128—290.
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Dick, Emanuel. Frame or holder for a coffee bag. 2,894,636, 7–14–59, Cl. 210—471.
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Dobrosavljevitch, Slobodan M. Combustion chamber in a monovalve diesel engine with air cooling. 2,894,495, 7–14–59, Cl. 123—32.
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Harris, Clare S., and Huffman. 2,894,625.
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Eber, Hans, and P. Ruf, to Lytax-Werke G.m.b.H. Camera for photographing the inner surface of a hollow body. 2,894,436, 7–14–59, Cl. 95—11.

Eccher, Oreste B., to Potdevin Machine Co. Laminating machine. 2,894,559, 7–14–59, Cl. 154—1.6.

Eckstein, Morris. Carton flap clamp. 2,894,308, 7–14–59, Cl. 24—259.

Edwards, Landon B., Jr. Storage rack. 2,894,641, 7–14–59, Cl. 211—134.

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Ehrich, Fredric F., to Westinghouse Electric Corp. Jet propelled helicopter motor. 2,894,589, 7–14–59, Cl. 170—135.4.

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Ellison, Lynn E.: *See*—
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Elson, Robert E., to United States of America, Atomic Energy Commission. Recovery of protactinium from aqueous solutions. 2,894,806, 7–14–59, Cl. 23—14.5.

Embree, Harold K., to Ovalstrapping Inc. Apparatus for feeding a preselected length of wire. 2,894,617, 7–14–59, Cl. 203—240.

Emerson, John R., G. W. Fuller, and A. G. Richards. Dashpot. 2,894,740, 7–14–59, Cl. 267—1.

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Banes, Fred W., and Wiese. 2,894,976.
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Evans, Robert M., and H. E. Pattee, to The Trane Co. High-temperature nickel base brazing alloys. 2,894,835, 7–14–59, Cl. 75—170.

Ewing, Alfred M. Flower rack for casket. 2,894,705, 7–14–59, Cl. 248—27.8.

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Newcombe, Jack, and Fallgatter. 2,894,908.

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Farlow, Mark W., and E. L. Muetterties, to E. I. du Pont de Nemours and Co. Preparation of fluorine-containing compounds. 2,894,996, 7–14–59, Cl. 260—653.3.

Farmer, Eugene D., and D. J. McConalogue, to The General Electric Co. Ltd. Aerial systems. 2,895,132, 7–14–59, Cl. 343—761.

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Fauser, Giacomo, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Separation of acetylene from methane cracking gases by means of a selective solvent. 2,894,602, 7–14–59, Cl. 183—120.

Favre, John A., to General Electric Co. Current-carrying hinge construction. 2,895,033, 7–14–59, Cl. 200—170.

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Ferre, Fred L. Fastening device for installing lead liners to walls and the like. 2,894,463, 7–14–59, Cl. 109—82.

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Filberich, Ludwig, D. v. Haebler, and H. Nagorsen, to Siemens-Schuckertwerke Akt. Semiconductor junction-type rectifier systems. 2,895,100, 7–14–59, Cl. 321—11.

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Flatow, Tobias, and C. H. Carlisle, to Jersey Production Research Co. Method of determining seismic reflecting subsurfaces. 2,894,596, 7–14–59, Cl. 181—.5.

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Hardman, Harley F., and Foreman. 2,894,904.

Forse, Harry D.: *See*—
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Foster, Jerry F., M. H. Shuler, and J. H. Paquin, to Burroughs Corp. Timing pulse system. 2,895,123, 7–14–59, Cl. 340—174.

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Fuchs, Francis J., Jr., to Western Electric Co., Inc. Interlocking ring-type mandrel. 2,894,558, 7-14-59, Cl. 153—63.

Fuchs, Samuel J. Screw threads and gear teeth. 2,894,409, 7-14-59, Cl. 74—457.

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Garrett, Jack N. Cotton bale extractor. 2,894,653, 7-14-59, Cl. 214—620.

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Gingrich, Wilmer J., to Hamilton Watch Co. Epoxy resin cast balance wheel. 2,894,367, 7-14-59, Cl. 58—28.

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Hotine, William. Moving coil relay. 2,895,030, 7-14-59, Cl. 200—110.
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Ingres, Jeannot G. 2,894,490.
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Libby, Edward W., to Bank of America National Trust and Savings Assn. Vehicle transmission control. 2,894,410, 7–14–59, Cl. 74—473.
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Lindgren, Erik A. Vehicle capable of transferring itself from a liquid to a solid supporting medium. 2,894,476, 7–14–59, Cl. 115—1.
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Liston, John W., and D. B. McGregor, to General Telephone Laboratories, Inc. All trunk busy detection circuit. 2,895,012, 7–14–59, Cl. 179—18.
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Long Co., The: *See*—
Clay, Jeff C. 2,894,489.
Loomans, Robert E., to Deere & Co. Fertilizer distributor attachment for grain drills. 2,894,663, 7–14–59, Cl. 222—282.
Loop, James P., to Continental Steel Corp. Collapsible core spool mechanism. 2,894,701, 7–14–59, Cl. 242—72.1.
Lopp, Charles R.: *See*—
Levit, Edward C., and Lopp. 2,894,631.
Lord, Thomas J.: *See*—
Booth, Harry T., and Lord. 2,894,526.
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Lorens, Anton. Reclining chair. 2,894,564, 7–14–59, Cl. 155—117.
Loung, Pai Y., to Wah Chang Corp. Purification of tungstates. 2,894,814, 7–14–59, Cl. 23—51.
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Lundholm, Josef E. Magnetic door latch. 2,894,778, 7–14–59, Cl. 292—251.5.
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Severance, Ralph H. 2,894,457.
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Vuillemenot, Robert P. 2,894,673.
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Baniel, Abraham, and Blumberg. 2,894,813.
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Boylan, Henry W., and Mall. 2,894,444.
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Hogan, Eric E., and Malloch. 2,894,307.
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Huetten, Clarence, and Aldred. 2,895,118.
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Mansperger, Richard C. Soap dispenser. 2,894,662, 7–14–59, Cl. 222—242.
Manthos, Atlee G. Water saddle. 2,894,270, 7–14–59, Cl. 9—17.
Marban, Julian G. Filling device for fountain pens. 2,894,541, 7–14–59, Cl. 141—30.
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Agar, William O. 2,895,113.
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Moghadam, Leon M. 2,894,304.
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Martin, Roger M. L. Solid fuel flow controller. 2,894,466, 7–14–59, Cl. 110—101.
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Massierer, Walter. Special purpose chuck. 2,894,758, 7–14–59, Cl. 279—50.
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Dupre, Henry P., and Matthysse. 2,895,002.
Mau, Clayton C. Animal trap. 2,894,353, 7-14-59, Cl. 43—88.
Maxwell, Elvin F. Farm implement hitch. 2,894,765, 7-14-59, Cl. 280—472.
Mays, James R. Hospital utility cabinet. 2,894,794, 7-14-59, Cl. 312—313.
Maytag Co., The: *See*—
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Cook, Robert W., and McBride. 2,894,539.
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McMorris, Herschel G., and McCall. 2,894,852.
McCall, Floyd and L. Hoisting mechanism. 2,894,645, 7-14-59, Cl. 212—8.
McCall, Lloyd: *See*—
McCall, Floyd and L. 2,894,645.
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Tilford, Charles H., McCarty, and Van Campen. 2,894,949.
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McDuffie, Archie D., to General Motors Corp. Fuel pump. 2,894,459, 7-14-59, Cl. 103—150.
McGrath, Henry G., and J. A. Kraus, to The M. W. Kellogg Co. Fluidized desulfurization of hydrocarbon oils with sulfur containing catalyst. 2,894,903, 7-14-59, Cl. 208—216.
McGregor, Duncan B.: *See*—
Liston, John W., and McGregor. 2,895,012.
McIlhenny, Alan: *See*—
Black, James J., Brian, Frechie, Hummel, McIlhenny, Rahe, and Suman. 2,894,650.
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McLaughlin, Robert, to Kollsman Instrument Corp. One-way temperature compensation for pressure measuring instruments. 2,894,392, 7-14-59, Cl. 73—393.
McLean, Stuart D.: *See*—
Shipley, Calvin W., and McLean. 2,894,342.
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Mechanical Handling Systems, Inc.: *See*—
Klamp, Paul. 2,894,460.
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Hofreiter, Bernard T., Wolff, and Mehltretter. 2,894,945.
Meindl, Frank: *See*—
Wimmer, Ernest L., and Meindl. 2,894,859.
Mekelburg, Earl F., to Square D Co. Selective operator apparatus. 2,895,021, 7-14-59, Cl. 200—5.
Merck & Co., Inc.: *See*—
Stein, Gustav A., and Pfister. 2,894,967.
Meri, Carl J. Remote control steering mechanism for boats. 2,894,473, 7-14-59, Cl. 114—144.
Merla Tool Corp.: *See*—
Robinson, Art I. 2,894,793.
Merrell, Wm. S., Co., The: *See*—
Amatuzi, Edward D., and Krueger. 2,894,952.
Tilford, Charles H., McCarty, and Van Campen. 2,894,949.
Messmer, Karl: *See*—
Kolbl, Franz, and Messmer. 2,894,836.
Metal Box Co. Ltd., The: *See*—
Stuchbery, Arthur L. 2,894,481.
Meyer-Busche, Gert. Mountings of spindles in spinning or thread twisting machines. 2,894,365, 7-14-59, Cl. 57—132.
Micciche, Frank, and J. L. David. Device for modifying the operation of Venetian blinds. 2,894,574, 7-14-59, Cl. 160—115.
Middleton, John R. L.: *See*—
Harrison, John W., and Middleton. 2,894,829.
Miles, John R., to White-Rodgers Co. Optical objective. 2,894,431, 7-14-59, Cl. 88—57.
Miles, Robert L., and W. Dawson. Respirator. 2,894,508, 7-14-59, Cl. 128—146.
Miller, Earle C., to Riley Stoker Corp. Coal pulverizing apparatus. 2,894,696, 7-14-59, Cl. 241—43.
Miller, Gustave: *See*—
Bergan, Christian K. 2,894,655.
Miller, James A., to Clark Equipment Co. Five speed planetary transmission. 2,894,415, 7-14-59, Cl. 74—688.
Miller, John G., to Owens-Illinois Glass Co. Gob feeding of organic plastic materials. 2,894,285, 7-14-59, Cl. 18—30.
Miller, Ralph L.: *See*—
Kock, Winston E., and Miller. 2,895,005.
Miller, Raymond S., to Aerojet-General Corp. Differential fluid pressure switch device. 2,895,025, 7-14-59, Cl. 200—83.
Miller, Walter C.: *See*—
Howard, Eugene L. 2,894,784.
Millership, Ronald, to Elliott Brothers (London) Ltd. Electronic devices. 2,895,075, 7-14-59, Cl. 315—39.
Millikan, Allen F., and G. W. Crosby, to The Pure Oil Co. Heterocyclic polyamine salts of phosphorodithidic acid esters and compositions containing the same. 2,894,951, 7-14-59, Cl. 260—248.5.
Minerals & Chemicals Corp. of America: *See*—
Duke, James B. 2,894,628.
Goodwin, Manfred E., Sawyer, and Smith. 2,894,848.
Minneapolis-Honeywell Regulator Co.: *See*—
Ander, Eric B. 2,894,714.
Biahofberger, Carl J. 2,894,567.
Schneider, Ralph J. 2,895,032.
Soland, Hubert E. 2,894,395.
Talbot, Warren. 2,894,390.
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Sato, Yoshinobu, and Mishima. 2,894,958.
Misumi, Teruyuki: *See*—
Tsunoda, Yoshio, Seko, Watanabe, Ehara, and Misumi. 2,894,917.
Mitchell, Frank E., Sr.: *See*—
Stevens, Harold A., and Mitchell. 2,894,530.
Mitchell, Jack H., Jr., and J. J. Enright. Thermostable active dry yeast compositions. 2,894,842, 7-14-59, Cl. 99—96.
Mlavsky, Abraham I.: *See*—
Bradshaw, Stanley E., and Mlavsky. 2,894,863.
Moffett, Robert B.: *See*—
Aspergren, Brooke D., and Moffett. 2,894,955.
Moghadam, Leon M., now by change of name to L. Markoff-Moghadam. Fastening device. 2,894,304, 7-14-59, Cl. 24—113.
Monroe Calculating Machine Co.: *See*—
Drillich, Jacob H. 2,895,091.
Monsanto Chemical Co.: *See*—
Beaver, David J., and Stoffel. 2,894,986.
Burleson, James C. 2,894,916.
Chapin, Earl C., and Smith. 2,894,938.
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Rollingson, William R. 2,894,815.
Montecatini Societa Generale per l'Industria Mineraria e Chimica: *See*—
Fauser, Giacomo. 2,894,602.
Montgomery, Edmund W., II: *See*—
Montgomery, Malcolm B., Jr. 2,895,119.
Montgomery, John R.: *See*—
Roberts, Frederick W., and Montgomery. 2,894,700.
Montgomery, Malcolm B., Jr., ½ to E. W. Montgomery II. Plug and face plate. 2,895,119, 7-14-59, Cl. 339—91.
Moore, Armistead M., to Jersey Production Research Co. Magnetic erasing method. 2,895,016, 7-14-59, Cl. 179—100.2.
Moore, John C.: *See*—
Harper, Billy G., Brown, and Moore. 2,894,289.
Moore, Rhea. Transmission supporting device. 2,894,707, 7-14-59, Cl. 248—823.
Moore, Thomas J. Smoker's set. 2,894,514, 7-14-59, Cl. 131—174.
Moreton, Douglas H., to Douglas Aircraft Co., Inc. Fire-resistant hydraulic fluid. 2,894,911, 7-14-59, Cl. 252—78.
Morgan, Adolph R.: *See*—
Zenel, Joseph A., and Morgan. 2,895,015.
Morgan, Bryan E.: *See*—
Birdwell, Bertie F., Priest, and Morgan. 2,894,564.
Morris, George V., to United States of America, Army. Air driven reed electric generator. 2,895,063, 7-14-59, Cl. 310—15.
Morris, Thomas C., and E. C. Johnson, to B.B. Chemical Co. Polyethylene containing adhesive. 2,894,925, 7-14-59, Cl. 260—27.
Morrison, Lawrence L., to Component Designers, Inc. Trimming potentiometer. 2,895,116, 7-14-59, Cl. 338—180.
Morrison, Willard L., to The Union Stock Yard and Transit Co. of Chicago. Method for storing and shipping foodstuffs and the like. 2,894,373, 7-14-59, Cl. 62—64.
Morton Chemical Co.: *See*—
Seven, Raymond P. 2,894,873.
Moskowitz, Lester R.: *See*—
Hoff, Ronald C., and Moskowitz. 2,895,064.
Mott, George R.: *See*—
Dessauer, John H., Gundlach, and Mott. 2,894,840.
Mroz, Edmund A. J. Fluid dispensing apparatus. 2,894,664, 7-14-59, Cl. 222—318.
Mueller, Charles W., to Radio Corp. of America. Method of fabricating P-N type junction devices. 2,894,862, 7-14-59, Cl. 148—1.5.
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Farlow, Mark W., and Muetterties. 2,894,996.
Muffly, Glenn. Defrosting control in refrigeration system. 2,894,374, 7-14-59, Cl. 62—153.
Mulders, Cornelis E., and B. Visser, to Staatsbedrijf der Posterijen, Telegraphie en Telefonie. Packet position detecting system. 2,894,626, 7-14-59, Cl. 209—111.
Mulinos, Michael G., to Commercial Solvents Corp. Cycloserine-pyridoxine composition. 2,894,874, 7-14-59, Cl. 167—65.
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Murray, Maxton F., to The Upjohn Co. Alkyl hydrazones of cycloheximide. 2,894,871, 7-14-59, Cl. 167—33.

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Nagler, Stanley E. Car load. 2,894,461, 7-14-59, Cl. 105—367.

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Nash, Richard L., to Chicago Pneumatic Tool Co. Rotary compressor control. 2,894,677, 7-14-59, Cl. 230—3.

Nagorsen, Hans: *See*—
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Nahm, Helmut: *See*—
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National Lead Co.: *See*—
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Taylor, Philip, and Perry. 2,895,074.

Natural Lighting Corp.: *See*—
Howarth, David V. 2,894,693.

Nelson, Harrison A., C. M. Large, M. E. Bergy, and H. Hoeksema, to The Upjohn Co. Erythromycin recovery process. 2,894,943, 7-14-59, Cl. 260—210.

Nelson, Harry, to Artcraft Venetian Blind Mfg. Co. Roll-up awning. 2,894,572, 7-14-59, Cl. 160—62.

Nelson, Joseph F.: *See*—
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Nelson, Melvin C., and P. S. Hess, to Congoleum-Nairn Inc. Surface covering product and process therefor. 2,894,560, 7-14-59, Cl. 154—25.

Nelson, Richard B., and R. S. Symons, to Varian Associates. High frequency apparatus. 2,895,110, 7-14-59, Cl. 333—24.

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Krause, William F., and Neuhaus. 2,894,557.

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New Products Corp.: *See*—
Banker, Oscar H. 2,894,533.

Newsome, Joel A., Jr. Method of and means for removing condensable vapors contained in mixtures. 2,894,372, 7-14-59, Cl. 62—17.

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Nichols, Herbert C., to Consolidated Water Power & Paper Co. Palletized container. 2,894,671, 7-14-59, Cl. 229—14.

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Nichols, William T.: *See*—
Lunde, Einar, and Nichols. 2,894,681.

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Noe, Harold C., to Kidde Textile Machinery Corp. Clamp. 2,894,773, 7-14-59, Cl. 287—54.

Nohl, Walter. Copying device for sewing-machine. 2,894,468, 7-14-59, Cl. 112—103.

Noland, Robert A.: *See*—
Walker, David E., and Noland. 2,894,883.

Nomine, Gerard: *See*—
Warnant, Julien, Nomine, and Rousseau. 2,894,960.

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Beyerstedt, John M., and Erickson. 2,894,419.

North American Aviation, Inc.: *See*—
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North American Philips Co., Inc.: *See*—
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Van Heecheren, Willem J. 2,894,368.
Van Veenen, Jan C. 2,894,314.
Verbeek, Leo H. 2,894,383.
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Northover, Stanley E. Lamp shade display. 2,894,638, 7-14-59, Cl. 211—13.

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Jaxwinski, Stanislaw T. 2,894,834.

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Ullman, Fred E., Klopfenstein, and Novotny. 2,894,361.

Novotny, Raymond J.: *See*—
Ledbetter, James D., Kircher, and Novotny. 2,894,092.

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Oettinger, Willi, W. Von Fuener, and O. Gechre, to Badische Anilin- & Soda Fabrik Akt. Method of treating hydrocarbons with an alumina containing catalyst composite. 2,894,898, 7-14-59, Cl. 208—112.

Old, Bruce S., and R. W. Hyde. Process of fluidized bed reduction of iron ore followed by electric furnace melting. 2,894,831, 7-14-59, Cl. 75—13.

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Janson, Stefan K. 2,894,350.
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Onisko, John, Jr. Toroidal coil winding machine. 2,894,699, 7-14-59, Cl. 242—4.

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Johnstad, Dagfin. 2,894,583.

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Orr, Charles P., to Spray Products Corp. Engine priming line attachment for dashboards. 2,894,716, 7-14-59, Cl. 251—148.

Otis Engineering Corp.: *See*—
Bostock, James H. 2,894,715.
Schramm, Harry B., and Fredd. 2,894,586.

Otto, Fritz, to A. Stephan u. Sohne. Meat cutter. 2,894,551, 7-14-59, Cl. 146—48.

Ovalstrapping Inc.: *See*—
Embree, Harold K. 2,894,617.

Owen Bucket Co., The: *See*—
Takacs, Robert J. 2,894,781.

Owens, Delmar D. Furniture for a physically handicapped person. 2,894,267, 7-14-59, Cl. 5—68.

Owens-Illinois Glass Co.: *See*—
Allison, Blaine M., and Schmid. 2,894,284.
Miller, John G. 2,894,285.
Pawlicki, Clarence D. 2,894,359.

Pabst Brewing Co.: *See*—
Shakman, James G. 2,894,844.

Padgett, Edward D., to Radio Corp. of America. Directive diplex antenna. 2,895,127, 7-14-59, Cl. 343—7.

Page, Paul F.: *See*—
Lambert, Harry L., Page, and Snyder. 2,894,814.

Paine, Samuel H., Jr., to United States of America, Atomic Energy Commission. Jacketed uranium slugs and method. 2,894,889, 7-14-59, Cl. 204—193.2.

Pajor, Joseph P., to Union Special Machine Co. Sewing machine adjustable eccentric mechanism. 2,894,471, 7-14-59, Cl. 112—209.

Palmatier, Everett P., to Carrier Corp. Evaporator control for absorption refrigeration systems. 2,894,381, 7-14-59, Cl. 62—515.

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Pankove, Jacques I., to Radio Corp. of America. Semiconductor devices and systems. 2,895,058, 7-14-59, Cl. 307—88.5.

Panning, Martin H., and B. R. Curry, to Blower Application Co. Shredder. 2,894,697, 7-14-59, Cl. 241—154.

Paquin, James H.: *See*—
Foster, Jerry F., Shuler, and Paquin. 2,895,123.

Parker, Clarence D.: *See*—
Elder, Max E., Gunderman, MacPherson, and Parker. 2,894,927.

Parker, Dana C.: *See*—
Scatuley, Byron L., and Parker. 2,894,327.

Paschall, Eugene F., to Corn Products Co. Nitrogen containing starch derivatives. 2,894,944, 7-14-59, Cl. 260—233.3.

Pattee, Harry E.: *See*—
Evans, Robert M., and Pattee. 2,894,835.

Paul, Julien, to United Merchants and Manufacturers, Inc. Textile printing emulsions. 2,894,801, 7-14-59, Cl. 8—70.

Pawlicki, Clarence D., to Owens-Illinois Glass Co. Method of applying sealing compositions to glass parts. 2,894,359, 7–14–59, Cl. 49—82.

Payne, Frank E., to Crane Packing Co. Rotary mechanical seal. 2,894,770, 7–14–59, Cl. 286—11.14.

Pearl, Carl E.: *See*—
Cohen, Murray S., and Pearl. 2,894,803.

Peck, Rudolph, and M. N. Rich. Clamp with interchangeable pressure pad. 2,894,548, 7–14–59, Cl. 144—303.

Peller, Henry A., to General Motors Corp. Vehicle seats. 2,894,562, 7–14–59, Cl. 155—51.

Pennsalt Chemicals Corp.: *See*—
Barr, John T., and Lawlor. 2,894,991.
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Slover, Archy F., and Harbour. 2,894,861.

Pennsylvania Railroad Co., The: *See*—
Newcomer, Garfield H., and Showers. 2,894,462.

Perlman, Isadore: *See*—
Werner, Louis B., Perlman, and Calvin. 2,894,805.

Perry, Gerald H.: *See*—
Taylor, Philip, and Perry. 2,895,074.

Persinger, Laverne O.: *See*—
Persinger, Merle L. and L. O. 2,894,447.

Persinger, Merle L. and L. O. Portable barbecue. 2,894,447, 7–14–59, Cl. 99—398.

Peter, Albin: *See*—
Guenthard, Jacques, and Peter. 2,894,800.

Peter, Hugo H.: *See*—
Wennerberg, Arnold N., Alm, and Peter. 2,894,990.

Peters, Chester, and F. B. Seybold. Partition assembly machine. 2,894,433, 7–14–59, Cl. 93—38.

Peterson, Adolphe C. Automotive air spring means. 2,894,742, 7–14–59, Cl. 267—65.

Peterson, Everett A. and H. W. Heat sealing electrode die. 2,895,035, 7–14–59, Cl. 219—10.55.

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Peterson, Everett A. and H. W. 2,895,035.

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Saunders, Orson V., and Petkwitz. 2,894,378.

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Pettit, Robert H., to Sperry Rand Corp. Control stick transducer. 2,895,086, 7–14–59, Cl. 317—99.

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Stein, Gustav A., and Pfister. 2,894,987.

Pfizer, Chas., & Co., Inc.: *See*—
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Pharis, William W., and E. H. Gatzert, to General Dynamics Corp. Dropback selector for telephone systems. 2,895,011, 7–14–59, Cl. 179—18.

Philadelphia Quartz Co. of Calif.: *See*—
Wright, Roy E. 2,894,847.

Philco Corp.: *See*—
Stineman, Jacob W., Jr., and Robinson. 2,894,313.

Phillips, Benjamin, and P. S. Starcher, to Union Carbide Corp. 4,5-epoxycyclohexane-1,2-dicarbonitriles and process of preparing the same. 2,894,959, 7–14–59, Cl. 260—348.

Phillips, Carrington B. Travelling grate combustion of coking and caking bituminous coals. 2,894,465, 7–14–59, Cl. 110—69.

Phillips Petroleum Co.: *See*—
Hachmuth, Karl H. 2,894,997.
Jordan, Earl W., and Pierce. 2,894,821.
Lanning, William C. 2,894,824.
Lawson, Shelby D. 2,894,999.
Uraneck, Carl A., and Sonnenfeld. 2,894,857.

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Baffrey, Anton R., Hofmeier, Schmidt, and Hormann. 2,895,034.

Picklesimer, Marion L., to United States of America, Atomic Energy Commission. Method for annealing and rolling zirconium-base alloys. 2,894,866, 7–14–59, Cl. 148—11.5.

Pierce, Ogden R., to Dow Corning Corp. Fluorinated alkyl organosilicon compounds. 2,894,969, 7–14–59, Cl. 260—448.2.

Pierce, Weller R.: *See*—
Jordan, Earl W., and Pierce. 2,894,821.

Pierre, Emile A.: *See*—
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Pierson, Charles A.: *See*—
Pierson, Ennis B. and C. A. 2,894,503.

Pierson, Ennis B. and C. A. Archery bow. 2,894,503. 7–14–59, Cl. 124—23.

Pini, Henning: *See*—
Siedel, Walter, Nahm, and Pini. 2,894,977.

Pitts, Kennard: *See*—
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Pittsburgh Plate Glass Co.: *See*—
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Olson, Melvin M., and Christenson. 2,894,922.
Prescott, Frank R. 2,894,294.

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Tousignant, William F., and Pledger. 2,894,935.

Polarad Electronics Corp.: *See*—
Klipper, Stanley. 2,895,017.

Polster, Norman E., to Leeds and Northrup Co. Light sources for spectrograph systems. 2,895,078, 7–14–59, Cl. 315—111.

Porter, H. K., Co. Inc.: *See*—
Kennedy, Frank J. 2,894,534.

Post, Howard E., to Universal Oil Products Co. Hydrocarbon conversion process in the presence of added hydrogen. 2,894,897, 7–14–59, Cl. 208—111.

Potdevin Machine Co.: *See*—
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Potter, Ralph K., to Bell Telephone Laboratories, Inc. Magnetic printer. 2,894,798, 7–14–59, Cl. 346—74.

Poupitch, Ougljesa J., to Illinois Tool Works. Can carrier clip. 2,894,622, 7–14–59, Cl. 206—65.

Povse, Vincent A., and G. A. Zerby, to Bar Products Co. Molding press. 2,894,281, 7–14–59, Cl. 18—16.

Pratt, Burt C., and O. W. Webster, to E. I. du Pont de Nemours and Co. 2-fluorotropones and their preparation. 2,894,989, 7–14–59, Cl. 260—586.

Prescott, Frank R., to Pittsburgh Plate Glass Co. Pore closure structure for multiple glazed unit. 2,894,294, 7–14–59, Cl. 20—56.5.

Presray Corp., The: *See*—
Hollander, Louis P., and Schroth. 2,894,780.

Preston, Neil D., to General Railway Signal Co. Check-in and check-out block signaling system using regular track circuits. 2,895,043, 7–14–59, Cl. 246—41.

Pretka, Frank: *See*—
Cunningham, George L., and Pretka. 2,894,975.

Priest, Gerald G.: *See*—
Birdwell, Bertie F., Priest, and Morgan. 2,894,584.

Probus, James H., to United States of America, Navy. Piezoelectric sandwich transducer. 2,895,061, 7–14–59, Cl. 310—9.7.

Proctor & Schwartz, Inc.: *See*—
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Projectile and Engineering Co. Ltd., The: *See*—
Gaspar, Emeric, Munns, and Harrison. 2,894,286.

Pryor, Michael J., to Kaiser Aluminum & Chemical Corp. Method of improving chemical coating on aluminum. 2,894,865, 7–14–59, Cl. 148—6.16.

Puckett, Ralph Q., and L. E. Ashlock. Log handling tongs. 2,894,782, 7–14–59, Cl. 294—110.

Purdue Research Foundation: *See*—
Bachman, Gustave B., and Hokama. 2,894,941.

Pure Oil Co., The: *See*—
Bernard, George G. 2,894,905.
Cook, George R., and Ellison. 2,894,388.
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Crane, Robert A., and Pye. 2,895,055.

Quick Manufacturing, Inc.: *See*—
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Quinlan, Amos L., to Western Electric Co., Inc. Safety devices for electrical apparatus. 2,895,083, 7–14–59, Cl. 317—9.

Quist, Harold A., to Sun Oil Co. Sampler for foam blanket covered liquids. 2,894,394, 7–14–59, Cl. 73—425.4.

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Ball, Henry. 2,895,027.
Fredendall, Gordon L. 2,895,004.
Haddad, Raymond A., and Schell. 2,895,108.
Kslazek, Frank T. 2,895,020.
Loebner, Egon E. 2,895,054.
Mueller, Charles W. 2,894,862.
Nettleton, David L. 2,894,684.
Padgett, Edward D. 2,895,127.
Pankove, Jacques I. 2,895,058.
Zenel, Joseph A., and Morgan. 2,895,015.

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Simons, Allison K., Radke, and Hickman. 2,894,563.

Ragsdale, La Verne B.: *See*—
Bogater, John P., and Ragsdale. 2,894,277.

Rahe, Fred H.: *See*—
Black, James J., Brian, Frechie, Hummel, McIlhenny, Rahe, and Suman. 2,894,650.

Ramos, Thomas. Resinous composition comprising epoxy resin, curing agent and mixture of dextrines, maltose and dextrose and process for preparing. 2,894,920, 7–14–59, Cl. 260—9.

Rampe, John F. Shock absorbing drive for tumbling drums and the like. 2,894,406, 7–14–59, Cl. 74—230.17.

Randel, Raymond D. Removable axle protecting unit for cycles. 2,894,762, 7–14–59, Cl. 280—281.

Rapata, George M., to Illinois Tool Works. Elastic retaining ring with tab to facilitate removal. 2,894,425, 7–14–59, Cl. 85—8.8.

Rapata, George M., to Illinois Tool Works. Stud fastener with frictional gripping means. 2,894,426, 7–14–59, Cl. 85—36.

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Rasmussen, Carlton A., to General Motors Corp. Multiple passage supply duct. 2,894,443, 7–14–59, Cl. 98—2.

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Rawlings, Wallace G. 2,894,337.

Rawlings, Charlie C., Sr.: *See*—
Rawlings, Wallace G. 2,894,337.

Rawlings, Kenneth L.: *See*—
Rawlings, Wallace G. 2,894,337.

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Raymond, Francois H., and R. B. Dussine, to Societe d'Electronique et d'Automatisme. Electric adding and subtracting devices. 2,894,687, 7–14–59, Cl. 235—176.

Raytheon Co.: *See*—
Butler, Jesse L. 2,895,131.

Reardon, Paul H. Water heating devices. 2,894,265, 7–14–59, Cl. 4—147.
Reddy, Virgin C.: *See*—
Chaplin, Albin, and Reddy. 2,894,498.
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Reed, William W. and J. J. 2,894,478.
Reed, William W. and J. J. Fluid signaling means. 2,894,478, 7–14–59, Cl. 116—114.
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Reimann, Hans: *See*—
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Republic Aviation Corp.: *See*—
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Hazen, David C., and Ringleb. 2,894,703.
Reynolds, Donald K., to General Electric Co. Magnetic recording system. 2,894,796, 7–14–59, Cl. 346—74.
Rice Barton Corp.: *See*—
Goumenlouk, Gleb I. 2,894,581.
Rich, Malcolm N.: *See*—
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Richards, Audley G.: *See*—
Emerson, John R., Fuller, and Richards. 2,894,740.
Richards, George B.: *See*—
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Grantham, Richard L., and Liu. 2,894,985.
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Ridlinghafer, Charles B.: *See*—
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Rikard, Mack A., E. A. Bartlett, and R. B. Coleman, Jr., to American-Marietta Co. Method of producing agglomerated lime hydrate. 2,894,820, 7–14–59, Cl. 23—188.
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Riley, Walter E. Twin-arch pipe line span. 2,894,527, 7–14–59, Cl. 137—236.
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Roberts, Frederick W., and J. R. Montgomery, to Dictaphone Corp. Portable dictation apparatus. 2,894,700, 7–14–59, Cl. 242—55.13.
Robinson, Art I., to Merla Tool Corp. Well flow valve devices. 2,894,793, 7–14–59, Cl. 309—23.
Robinson, Charles T.: *See*—
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Robinson, Herman P., to United States of America, Atomic Energy Commission. Electronic analog computer for determining radioactive disintegration. 2,894,688, 7–14–59, Cl. 235—184.
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Stineman, Jacob W., Jr., and Robinson. 2,894,313.
Rocket Jet Engineering Corp.: *See*—
Gaylord, John A. 2,894,532.
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Rodgers, Joseph M., and R. W. Leland, to General Motors Corp. Switch operating means. 2,895,026, 7–14–59, Cl. 200—87.
Rolingson, William R., to Monsanto Chemical Co. Production of ammonium thiocyanate. 2,894,815, 7–14–59, Cl. 23—75.
Ronk, George T., to Transport Trailers, Inc. Trailer-tractor assembly wtih removable gooseneck. 2,894,764, 7–14–59, Cl. 280—425.
Rook, Louis W. Enclosed golf course. 2,894,749, 7–14–59, Cl. 273—176.
Roschke, Karl, to VEB Carl Zeiss Jena. Projection domes. 2,894,320, 7–14–59, Cl. 135—4.
Roscoe, Merrill W., and O. P. Lance, to Deere & Co. Control mechanism for farm implement. 2,894,411, 7–14–59, Cl. 74—491.
Rose, Dudley B. Underwater breathing apparatus. 2,894,506, 7–14–59, Cl. 128—142.
Rosen, Raphael, to United States of America, Atomic Energy Commission. Process for making uranium hexafluoride. 2,894,811, 7–14–59, Cl. 23—14.5.
Rosenberg, Leon T., to Allis-Chalmers Mfg. Co. Segmental air gap baffle. 2,895,065, 7–14–59, Cl. 310—64.
Rosenfeld, Joseph. Accordion-type doors and the like. 2,894,573, 7–14–59, Cl. 160—84.
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Runde, Byron A., and I. W. Borutzke, to Burroughs Corp. Carriage movement controls for accounting machines. 2,894,615, 7–14–59, Cl. 197—177.
Russell, Charles A., to National Lead Co. Process for the preparation of stabilized organotitanium compounds. 2,894,966, 7–14–59, Cl. 260—429.5.
Rust, David J., and J. H. Jensen, to Rylock Co., Ltd. Screen door with metallic frame. 2,894,579, 7–14–59, Cl. 160—378.
Ryan, Rhys E., and F. L. Tocher, to M. H. Treadwell Co., Inc. Apparatus for handling and cooling cast metal cakes. 2,894,518, 7–14–59, Cl. 134—131.
Rydbeck, Olof E. H. Electronic devices. 2,895,072, 7–14–59, Cl. 315—5.15.
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Schwendemann, Edward T., Sadowsky, and Murway. 2,894,856.
Salisbury, Clifton A., to H. B. Egan Mfg. Co. Clamping apparatus. 2,894,283, 7–14–59, Cl. 18—18.
Salter, Henry A., and J. R. Keeler, to United States of America, Atomic Energy Commission. Jacketing uranium. 2,894,890, 7–14–59, Cl. 204—193.2.
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Sato, Yoshinobu, and Mishima. 2,894,953.
Sassaman, John R.: *See*—
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Sato, Yoshinobu, and H. Mishima, to Sankyo Co., Ltd. Process for the production of pyridine derivative. 2,894,953, 7–14–59, Cl. 260—295.5.
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Guenthard, Jacques, and Peter. 2,894,800.
Saunders, Charles E., to United States of America, Navy. Synthetic lubricant. 2,894,909, 7–14–59, Cl. 252—34.7.
Saunders, Orson V., to General Motors Corp. Refrigerating apparatus. 2,894,379, 7–14–59, Cl. 62—377.
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Savage, Kenneth W. and L. H., to The Lithibar Co. Impulse valve. 2,894,713, 7–14–59, Cl. 251—21.
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Savage, Kenneth W. and L. H. 2,894,713.
Sawyer, Carl W., and R. W. Handley, deceased (M. P. Handley, administratrix), to United States of America, Atomic Energy Commission. Process of extracting uranium and radium from ores. 2,894,804, 7–14–59, Cl. 23—14.5.
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Scatsley, Byron L., and D. C. Parker, to United States of America, Air Force. Oblique aerial photographic plotting template. 2,894,327, 7–14–59, Cl. 33—1.
Scelzo, Frank, Jr. Golf practice device. 2,894,755, 7–14–59, Cl. 273—192.
Schafroth, Werner. Table stapling machine. 2,894,262, 7–14–59, Cl. 1—13.
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Schmerling, Louis, to Universal Oil Products Co. Condensation of aromatic hydrocarbons with polychlorocycloolefins. 2,894,994, 7–14–59, Cl. 260—650.
Schmerling, Louis, to Universal Oil Products Co. Condensation of aromatic hydrocarbons with polychlorocycloolefins. 2,894,995, 7–14–59, Cl. 260—651.
Schmid, Leopold F. Steering wheel. 2,894,413, 7–14–59, Cl. 74—552.
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Schorken, Frederick L.: *See*—
Irthum, Harold J., and Schorken. 2,894,635.
Schrader, Gerhard, to Farbenfabriken Bayer Akt. Thiophosphoric acid esters and their production. 2,894,978, 7–14–59, Cl. 260—461.
Schramm, Harry B., and J. V. Fredd, to Otis Engineering Corp. Well tools. 2,894,586, 7–14–59, Cl. 166—125.

Schramp, Joseph M., to United States of America, Air Force. Ruggedised attenuator insert. 2,895,117, 7-14-59, Cl. 338—309.

Schreiber, Charles A., to Dorr-Oliver Inc. Feedwells for sedimentation tanks. 2,894,637, 7-14-59, Cl. 210—519.

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Schulze, Harvey F. Wind-responsive louver construction. 2,894,445, 7-14-59, Cl. 98—95.

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Schweitzer, William K., Jr., to The Dow Chemical Co. Vinyl aromatic polymers stabilised with ureides. 2,894,933, 7-14-59, Cl. 260—45.9.

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Scott, Robert H., to General Motors Corp. Fluid lock differential. 2,894,416, 7-14-59, Cl. 74—710.5.

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Sears, Daniel S.: *See*—
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Grummitt, Oliver J., and Stearns. 2,894,849.

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OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

July 14, 1959 Volume 744 Number 2

TRADEMARKS

NOTICES

Service by Publication

A petition to cancel each of the registrations identified below having been filed, and the notice of such proceedings sent by registered mail to each registrant at the last known address having been returned by the Post Office as undeliverable, notice is hereby given that unless the registrants listed herein, their assigns or legal representatives, shall enter an appearance within thirty days from the date of this publication, the cancelation will be proceeded with as in the case of default.

Michael Pisani, Pittsburgh, Pa., Reg. No. 666,230, Canc. No. 7274.

Ivan Le Roy Rollefson, assignee of Stanley R. Bocchino, San Francisco, Calif., Reg. No. 425,235, Canc. No. 7278.

Clyde L. Bridges, assignee of Keen Kola Manufacturing Company, Dallas, Tex., Reg. No. 196,011, Canc. No. 7297.

Amalgamated Paint Company, New York, N.Y., Reg. No. 209,583, Canc. No. 7309.

Campus Jewelry Products, Inc., Providence, R.I., Reg. No. 442,076, Canc. No. 7311.

Krans Candy Co., Chicago, Ill., Reg. No. 212,177, Canc. No. 7314.

DAPHNE LEEDS,
Assistant Commissioner of Patents.

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1959

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	10,387
Date of oldest new application	Nov. 3, 1958
Date of oldest amended application	Jan. 8, 1959

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 16, 19, 21, 23, 24, 25, 26, 30, 31, 32, 33, 34, 35, 36, 44, 50	1-12-59	2-10-59
(II) R. F. SHRYOCK, Classes 6, 15, 27, 28, 45, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks Class 200	12-24-58	2-1-59
(III) K. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 20, 22, 29, 37, 38, 39, 40, 41, 42, 43, 46, 47, 48, 49, 52; and Certification Marks	11-3-58	1-6-59
Renewals (All Classes)	4-20-59	5-25-59
Sec. 12 (c) Publications (All Classes)	5-4-59	5-4-59

Applications filed during the month of May 1959—2,129

Registrations Issued	373—No. 681,637 to No. 682,009
Renewals Issued	73

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 55,867. North American Rayon Corporation, New York, N.Y. Filed July 23, 1958.

NARCON

For Rayon Staple Fiber and Tow.
First use on or about May 6, 1958.

SN 63,041. Gulf States Paper Corporation, Tuscaloosa, Ala. Filed Nov. 24, 1958.

LO-THERMO

For Paper Pulp.
First use Oct. 30, 1958.

SN 65,703. Proctor Ellison Company, Boston, Mass. Filed Jan. 12, 1959.

MIRATAN

For Leather.
First use Nov. 1, 1958.

SN 65,704. Proctor Ellison Company, Boston, Mass. Filed Jan. 12, 1959.

ELKFLEX

For Leather.
First use Nov. 1, 1954.

SN 65,925. California Turfgrass Nurseries, Camarillo, Calif. Filed Jan. 16, 1959.

Cal. Turf

For Stolons.
First use Mar. 13, 1958.

Class 2—Receptacles

SN 30,310. Diamond Gardner Corporation, New York, N.Y., by change of name from The Diamond Match Company, New York, N.Y. Filed May 20, 1957.

TRA-RAP

For Unit Comprised of a Cellophane Covering and a Molded Pulp Food Tray, Which Unit Is Sold Empty.
First use May 7, 1957.

SN 47,348. Dansk Designs, Inc., Great Neck, N.Y. Filed S.R. Mar. 10, 1958; Am. P.R. May 20, 1959.

DANSK

Owner of Reg. Nos. 625,802 and 661,778.
For Trays and Ice Buckets Made of Wood.
First use July 28, 1954.

TM 50

SN 50,220. The Colorado Fuel and Iron Corporation, Denver, Colo. Filed Apr. 23, 1958.

KARGO PAL

For Pallet-Type Folding Containers.
First use Mar. 11, 1958.

SN 52,197. Continental Plastics Corporation, Oklahoma City, Okla. Filed May 23, 1958.

MED ℞ VIAL

Since the letters "R" and "X" represent the well-known prescription symbol, they are disclaimed apart from the mark as shown.
For Plastic Pharmaceutical Containers of the Vial Type.
First use in 1952.

SN 52,280. Creative Plastic Containers, Culver City, Calif. Filed May 26, 1958.

SATEL-LITE

For Plastic Jars, Boxes, Bottles, Vials, and Collapsible Tubes for Packaging Cosmetics, Pharmaceuticals, and Household Products.
First use Apr. 4, 1958.

SN 52,819. Mallo-Ware Corp., Chicago, Ill. Filed June 3, 1958.

SERV-ALL

For Compartment Food Trays.
First use Aug. 10, 1957.

SN 61,211. St. Clair Plastics, Inc., Kissimmee, Fla. Filed Oct. 23, 1958.

ST CLAIR PLASTICAN

For Plastic Nursery Containers for Horticultural Use.
First use Sept. 23, 1958.

SN 63,928. Chippewa Plastics, Inc., Chippewa Falls, Wis. Filed Dec. 9, 1958.

Bags by CHIPPEWA

The word "Bags" is disclaimed apart from the mark as shown.
For Shipping Bags of Plastic Material.
First use Apr. 2, 1958.

SN 64,008. The F. E. Lawson Company, Cincinnati, Ohio. Filed Dec. 10, 1958.

LAWSON

Owner of Reg. No. 153,481.
For Trash Cans, Waste Baskets, Buckets and Pails, Canisters, Sprinkling Cans, Refuse Containers, Step-On Cans, Vegetable Bins, Paper Dispensers, and Sandurns.
First use Nov. 28, 1958.

SN 64,213. St. Regis Paper Company, New York, N.Y. Filed Dec. 12, 1958.

BIG BOY

For Paperboard Cartons.
First use on or about Jan. 1, 1957.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 60,381. Clifton Wood, d.b.a. Western Supply Company, Ardmore, Okla. Filed Oct. 9, 1958.

JO-KAY

For Leather Hand Tooled Handbags and Billfolds.
First use Feb. 28, 1958.

Class 4—Abrasives and Polishing Materials

SN 67,398. Harold J. Simpson, d.b.a. H. J. Simpson Co., Charlotte, N.C. Filed Feb. 9, 1959.

SIGOR

For Polishes and Cleaners for Shoes of Leather and Fabric and Combinations Thereof.
First use on or about Mar. 1, 1957.

Class 6—Chemicals and Chemical Compositions

SN 36,092. Metro-Atlantic, Inc., Fairlawn, N.J. Filed Aug. 23, 1957.

ATCO CATALYST NCR

The word "Catalyst" is disclaimed apart from the combination shown.
For Catalyst for Resin Finishes for Textile Fabrics.
First use Apr. 5, 1957.

SN 55,594. Michigan Chemical Corporation, St. Louis, Mich. Filed July 18, 1958.

PYROMASTER

For Halogenated Flame-Proofing Compounds.
First use June 19, 1958.

SN 65,870. Union Carbide Corporation, New York, N.Y. Filed Jan. 14, 1959.

UNION CARBIDE

Owner of Reg. Nos. 642,460, 665,250, and 669,159.
For Hydraulic Brake Fluid.
First use on or about Jan. 28, 1958.

SN 66,454. Laundry Products Corp., Brooklyn, N.Y. Filed Jan. 26, 1959.

BLEACHEEZ

For Laundry Bleach.
First use Sept. 26, 1958.

SN 67,536. Engelhard Industries, Inc., Newark, N.J. Filed Feb. 11, 1959.

RD-150C

For Catalysts.
First use Sept. 16, 1954.

Class 7—Cordage

SN 62,939. Macwhyte Company, Kenosha, Wis. Filed Nov. 21, 1958.

CABLE-LAID SAFE-GUARD

The term "Cable-Laid" is disclaimed apart from the mark as shown.
For Wire Rope Slings.
First use Feb. 24, 1958.

SN 62,940. Macwhyte Company, Kenosha, Wis. Filed Nov. 21, 1958.

ROPE-LAID SAFE-GUARD

The term "Rope-Laid" is disclaimed apart from the mark as shown.
For Wire Rope Slings.
First use Mar. 4, 1958.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 37,734. Gebruader Koelliech, Nuernberg, Bavaria, Germany. Filed Sept. 24, 1957.

CONSUL

Owner of German Reg. No. 699,833, dated Feb. 7, 1957.
For Cigarette Lighters, Pipe Cleaners, Cigarette Boxes, Filter Inserts for Cigarettes, and Ash Trays.

Class 10—Fertilizers

SN 59,223. Schneider Bros. Inc., Chicago, Ill. Filed Sept. 19, 1958.

HUMPTY DUMPTY

For Soil Conditioner and Fertilizer.
First use Aug. 25, 1958.

Class 12—Construction Materials

SN 65,467. Alsco, Inc., Akron, Ohio. Filed Jan. 8, 1959.

BAK-R-FOAM

For Aluminum Siding.
First use in November 1957.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 52,234. Samuel Moore & Company, Mantua, Ohio. Filed May 23, 1958.

NYLATHENE

For Plastic Tubing for the Conductance of Liquids and Gases.
First use in January 1958.

SN 59,765. Pulsation Controls Corporation, Santa Paula, Calif. Filed Sept. 29, 1958.

PULSCO

For Vessels Connected in Fluid Lines To Dampen Pressure Pulsations.
First use Apr. 1, 1958.

SN 65,729. United-Carr Fastener Corporation, Boston, Mass. Filed Jan. 12, 1959.

POLY GLIDE

For Furniture Glides.
First use Dec. 5, 1958.

SN 68,697. Ideal Fastener Corp., Long Beach, N.Y. Filed Mar. 2, 1959.

MYTIE MITE

For Slide Fasteners.
First use Nov. 5, 1958.

SN 68,812. Franklin Metal & Rubber Co., Hatboro, Pa. Filed Mar. 3, 1959.

SEALMASTER

Owner of Reg. No. 356,241.
For Tank Balls for the Flush Valves of Toilets.
First use on or about Oct. 14, 1937.

SN 68,953. Turex Dispensing Company, Inc., Cleveland, Ohio. Filed Mar. 4, 1959.

TUREX

For Valves, Dispensing Valves, Mixing Faucets, Fluid Dispensing Systems, and Parts Thereof.
First use on or about Aug. 28, 1957.

SN 68,957. Wilson Jones Company, Chicago, Ill. Filed Mar. 4, 1959.

BUDDY JR.

For Staples.
First use May 16, 1956.

SN 68,958. Wilson Jones Company, Chicago, Ill. Filed Mar. 4, 1959.

RASCAL

For Staples.
First use Feb. 11, 1959.

SN 68,995. Hunt Valve Company, Salem, Ohio. Filed Mar. 5, 1959.

Slim Line

For Pressure Fluid Control Valves.
First use on or about Feb. 16, 1959.

SN 69,070. Indiana Steel & Wire Company, Inc., Muncie, Ind. Filed Mar. 6, 1959.

HEXLINE

Owner of Reg. No. 317,363.
For Wire Fencing.
First use Feb. 2, 1959.

Class 14—Metals and Metal Castings and Forgings

SN 45,131. Daimler-Benz Aktiengesellschaft, Stuttgart-Untertuerkheim, Germany. Filed Feb. 3, 1958.

MERCEDES-BENZ

Owner of German Reg. No. 375,067, dated Oct. 7, 1927; and U.S. Reg. No. 389,338.

For (based on use in commerce): Steel Balls; Wire; and Metal Castings and Forgings.

For (based on German registration): Raw and Partly Prepared Non-Precious Metals—Namely, Iron, Steel, Copper, Brass, Bronze, Zinc, Tin, Lead, Nickel, Nickel Silver and Aluminum in Bars, Blocks, Slabs, Tubes, Rods, Sheets, Hoops and Corrugated Sheets; Zinc Dust; Lead Shot; Tin Foil; Babbitt Metal, Mercury, Yellow-Metal, Antimony, Magnesium, Palladium, Bismuth, Tungsten, Brass, Red Brass, Tombac in Bars, Pigs, Plates, Blocks, Sheets; Fish Plates; Grate Bars; Anvils; Solder; Font of Type; and Welding Rods and Electrodes.

First use in 1926; in commerce in 1927; 1900 as to "Mercedes" and 1896 as to "Benz."

SN 48,727. Ekco Products Company, Chicago, Ill. Filed Mar. 31, 1958.

ARMORIZED

For Finish Applied to Base Metal Articles To Provide a Smooth, Dent Resistant Surface.
First use Jan. 1, 1958.

SN 50,689. Ekco Products Company, Chicago, Ill. Filed Apr. 30, 1958.

For Finish Applied to Base Metal Articles To Provide a Smooth, Dent Resistant Surface.
First use Jan. 1, 1958.

SN 62,192. Mary Bruecke Krembs, d.b.a. Krembs & Company, Chicago, Ill. Filed Nov. 10, 1958.

BRAZ-WELD

Owner of Reg. No. 375,968.
For Welding Rods and Self-Fluxing Rods Used in Welding.
First use June 20, 1931.

SN 62,193. Mary Bruecke Krembs, d.b.a. Krembs & Company, Chicago, Ill. Filed Nov. 10, 1958.

KOP-R-ARC

Owner of Reg. No. 375,816.
For Coated and Uncoated Alloy Electrodes Containing Copper and Used for Arc and Electric Welding.
First use Oct. 15, 1938.

SN 66,124. Unitcast Corporation, Toledo, Ohio. Filed Jan. 19, 1959.

UNITCAST

Owner of Reg. No. 671,406.
For Miscellaneous Steel Castings.
First use on or about Mar. 12, 1928.

SN 67,986. Revere Copper and Brass Incorporated, New York, N.Y. Filed Feb. 18, 1959.

Revalum

Applicant disclaims the words "Aluminum" and "Products" apart from the mark as shown. Owner of Reg. Nos. 266,371, 669,510, and others.
For Extruded Aluminum Shapes, Aluminum Sheets, and Aluminum Foil.
First use Jan. 5, 1959.

Class 15—Oils and Greases

SN 49,383. Quaker State Oil Refining Corporation, Oil City, Pa. Filed Apr. 9, 1958.

QUAKER STATE

SDA

Owner of Reg. Nos. 145,778, 626,082, and others.
For Motor Oil Detergent.
First use Mar. 17, 1958.

SN 49,824. Cities Service Oil Company, New York, N.Y. Filed Apr. 17, 1958.

MILEMASTER

Owner of Reg. No. 592,753.
For Gasoline.
First use on or about Sept. 19, 1956.

SN 55,542. Union Oil Company of California, Los Angeles, Calif. Filed July 17, 1958.

LDF 760

For Diesel Engine Fuel.
First use Mar. 5, 1954.

SN 62,814. The Odell Company, Inc., Newark, N.J. Filed Nov. 12, 1958.

ODELL CLIPPER CARE

Owner of Reg. No. 225,509.
For Oil for Lubricating and Sanitizing Blades in Electric Shavers and the Like.
First use Feb. 1, 1958.

SN 66,075. Nutmeg Chemical Company, New Haven, Conn. Filed Jan. 19, 1959.

POWER-PAL

For Diesel Fuel Additive.
First use February 1958.

SN 66,483. Oronite Chemical Company, San Francisco, Calif. Filed Jan. 26, 1959.

OLOA

For Chemical Preparations Used in the Manufacture of Lubricating Oil Additives and Chemical Preparations for Use as Additives in Burner Fuel, Gasoline, Oils, Greases, and Lubricants.
First use Apr. 9, 1957.

SN 66,803. National Aluminate Corporation, Chicago, Ill. Filed Jan. 30, 1959.

HYDROCAST

For Water Soluble Drawing Compounds Which Produce a Dry Lubricating Film on the Metal Surfaces Treated.
First use in May 1952.

Class 16—Protective and Decorative Coatings

SN 24,560. M. A. Bruder & Sons, Incorporated, Philadelphia, Pa. Filed Feb. 18, 1957.

M·A·B

PLASTIC BOND

No claim is made to the words "Plastic Bond" apart from the mark as shown. Owner of Reg. No. 379,725.
For Exterior Masonry Finish for Use on All Masonry Surfaces Above Grade Such as Brick, Stone, Concrete, Asbestos, Shingles, and Stucco.
First use Dec. 3, 1956.

SN 35,856. Cray-Pas Hompo Kabushiki Kaisha Sakura Shokai, Higashinari-ku, Osaka, Japan. Filed Aug. 20, 1957.

For Drawing Paints and Water Colors.
First use in April 1924; in commerce in April 1956.

SN 37,310. Tilo Roofing Company, Inc., Stratford, Conn. Filed Sept. 16, 1957.

TK-33 WITH UVS

For Pigmented Coatings of the Resin-Solvent Type for Exterior Application to Asbestos-Cement Siding Used in Building Construction and Repair.
First use July 23, 1957; Jan. 11, 1952, as to "TK-33."

SN 54,847. Fairchild Engine and Airplane Corporation, Long Island, N.Y. Filed July 7, 1958.

cir-coat

For Moisture Repellant Coating for Electrical Circuitry.
First use Apr. 14, 1958.

SN 56,805. Spraylat Corporation, New York, N.Y. Filed Aug. 7, 1958.

SIGN-STRIP

For Water Dispersion Film Forming Material Used as a Mask Against Lacquers and Enamels in the Manufacture of Signs.
First use May 1, 1958.

SN 58,614. The Atlas Mineral Products Company of Pennsylvania, Mertztown, Pa. Filed Sept. 9, 1958.

REZKLAD

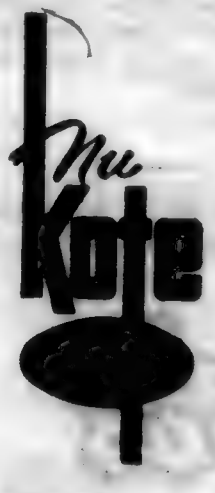
For Packaged Materials Comprising an Epoxy Resin, a Filler, and a Catalyst for Corrosion-Resistant Overlays for Concrete and Masonry Floors and Walls.
First use Apr. 27, 1958.

SN 58,845. T. C. Esser Company, Milwaukee, Wis. Filed Sept. 12, 1958.

ESCOLUX

For Alkyd Resin Enamel for Interior Walls and Woodwork of Buildings.
First use in September 1945.

SN 59,635. Pressure Pak, Inc., West Palm Beach, Fla., assignee of National Chemical Laboratories, Inc., West Palm Beach, Fla. Filed Sept. 26, 1958.



The drawing is lined for red.
For Spray Coating for Fabrics or Rubber.
First use Dec. 1, 1957.

SN 59,642. Rockcote Paint Co., Rockford, Ill. Filed Sept. 26, 1958.

"ROCK-FLEX"

For Multicolor Coating Material in the Nature of a Paint.
First use Mar. 11, 1958.

SN 61,252. Otto Bauknecht, d.b.a. O.B. Distributor, Rochester, N.Y. Filed Oct. 24, 1958.

KROME TACK

For Protector and Cleaner for Chromium Plated Trim, Particularly on Automobiles.
First use July 20, 1959

SN 70,388. Phelan-Faust Paint Mfg. Co., St. Louis, Mo. Filed Mar. 27, 1959.

The drawing is lined for red, but the use of the mark is not restricted to this color. Owner of Reg. No. 510,048.
For Roof Paints, and Particularly an Alkyd Type Fibered Colored Aluminum Paint.
First use Jan. 10, 1959; August 1919 as to "Phelan's."

SN 70,389. Phelan-Faust Paint Mfg. Co., St. Louis, Mo. Filed Mar. 27, 1959.

The drawing is lined for red, but the use of the mark is not restricted to this color. Owner of Reg. Nos. 510,048 and 502,910.
For Porch and Floor Paint.
First use Jan. 30, 1959; August 1919 as to "Phelan's."

SN 70,401. Standard Dayton Corporation, Dayton, Ohio. Filed Mar. 27, 1959.

FLEKOTE

For Protective and Decorative Coatings Used on Metallic Surfaces and Fibrous Composition Surfaces.
First use July 1958.

SN 70,828. West Paint & Varnish Company, Everett, Mass. Filed Apr. 3, 1959.

Indestructo

For Varnish.
First use Feb. 1, 1922.

Class 17—Tobacco Products

SN 48,011. Fabriques de Tabac Réunies S.A., Neuchatel-Serrieres, Switzerland. Filed Apr. 2, 1958.

DIANA

Owner of Swiss Reg. No. 152,660, dated Aug. 30, 1954. For Cigarettes, Cigars, and Tobacco.

SN 66,608. H. Fendrich, Inc., Evansville, Ind. Filed Jan. 28, 1959.

Cadets

For Cigars.
First use Nov. 25, 1958.

SN 67,296. Brown & Williamson Tobacco Corporation, Louisville, Ky. Filed Feb. 9, 1959.

BELAIR

For Cigarettes.
First use Feb. 2, 1959.

Class 18—Medicines and Pharmaceutical Preparations

SN 43,039. Live Food Products Co., Burbank, Calif. Filed Dec. 26, 1957.

LIVE FOOD VITAL CONCENTRATE

Applicant disclaims the right to the exclusive use of the words "Food Vital Concentrate" except in the relation and association shown.
For Multiple Vitamin and Mineral Preparation.
First use Jan. 4, 1957.

SN 62,664. Arthrins, Inc., Mount Vernon, N.Y. Filed Nov. 18, 1958.

BEAU-DERM

For Medicated Soap Especially Adapted for Treating Eczematous Conditions, and Dermatological Creams.
First use Aug. 26, 1958.

SN 63,398. Amfre-Grant, Inc., Brooklyn, N.Y. Filed Dec. 1, 1958.

NITROVAS

For Pharmaceutical Preparation for the Treatment of Angina Pectoris.
First use Oct. 28, 1958.

SN 63,967. Schrem Corporation, Duluth, Minn. Filed Dec. 9, 1958.

KAY-DEE

For Solium Fluoride Preparation for Oral Fluoridation.
First use June 6, 1958.

SN 64,106. Sorge Enterprises, Inc., Washington, D.C. Filed Dec. 11, 1958.

VITA-SCALP

For Medicated Scalp Preparation for the Relief of Dandruff.
First use May 1, 1958.

SN 64,759. G. D. Searle & Co., Skokie, Ill. Filed Dec. 22, 1958.

MORNIDINE

For Pharmaceutical Preparation Useful as an Anti-Emetic and Anti-Nauseant.
First use Dec. 12, 1958.

SN 64,837. Obrig Laboratories, Inc., New York, N.Y. Filed Dec. 23, 1958.

O-U

For Eye Drops.
First use October 1958.

SN 64,894. Mead Johnson & Company, Evansville, Ind. Filed Dec. 29, 1958.

PAXATE

For Tranquilizer.
First use Sept. 4, 1958.

SN 66,481. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Jan. 26, 1959.

VESPAZINE

For Central-Nervous-System Depressant.
First use Sept. 30, 1958.

SN 66,796. The S. B. Massengill Company, Bristol, Tenn. Filed Jan. 30, 1959.

AMINODROX

For Oral Pharmaceutical Preparation Indicated in Treating Coronary and Asthmatic Conditions.
First use Feb. 13, 1952.

Class 19—Vehicles

SN 43,836. Exchange Parts Company of Fort Worth, Fort Worth, Tex. Filed Jan. 13, 1958.

TRU-ARC

For Automobile Brake Shoes.
First use Nov. 15, 1954.

SN 48,353. Seamobile Corporation, Cleveland, Ohio. Filed Mar. 24, 1958.

SEAMOBILE

For Automobile Powered Water Craft.
First use on or about Dec. 1, 1957.

SN 63,490. Bert Scheuer, Inc., New York, N.Y. Filed Dec. 1, 1958.

THE LONDONER

For Bicycles.
First use Sept. 2, 1958.

SN 64,191. North American Aviation, Inc., Los Angeles, Calif. Filed Dec. 12, 1958.

NA VIGILANTE

Owner of Reg. No. 589,015.
For Attack-Type Aircraft.
First use Nov. 13, 1958.

SN 65,636. Chrysler Corporation, Highland Park, Mich. Filed Jan. 12, 1959.

DP CD

For Brake Shoes.
First use on or about Sept. 20, 1958.

SN 67,003. General Fabrication Industries, Inc., Hillside, N.J. Filed Feb. 3, 1959.

SNARK

For Boats and More Specifically, Sailboats.
First use Jan. 15, 1959.

SN 67,056. Goodyear Aircraft Corporation, Akron, Ohio. Filed Feb. 4, 1959.

THERMOSHIELD

For Transparent Plastic Airplane Canopies.
First use Dec. 29, 1958.

SN 67,063. The Huffman Manufacturing Company, Dayton, Ohio. Filed Feb. 4, 1959.

GOLD-COASTER

For Bicycles and Structural Parts Thereof.
First use Jan. 28, 1959.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 38,550. P. R. Mallory & Co. Inc., Indianapolis, Ind. Filed Oct. 8, 1957.

Gold Label

For Electrical Vibrators Used in Converting Electrical Current From One Type to Another, Such as a Converter for Automobile Radios and the Like.
First use Sept. 2, 1957.

SN 42,081. M. Ten Bosch, Inc., Pleasantville, N.Y. Filed Dec. 9, 1957.

CHAMP

For Electronic Components—Namely, Amplifiers Used in Electrical Circuitry.
First use Sept. 1, 1957

SN 45,349. Mark Simpson Manufacturing Co. Inc., Long Island City, N.Y. Filed Feb. 5, 1958.

"AUDIOSPHERE 6"

For Amplifiers.
First use Oct. 30, 1957.

SN 49,278. Kem Manufacturing Company, Inc., Fair Lawn, N.J. Filed Apr. 8, 1958.

VENT-O-LATED

For Ignition Contact Points.
First use Mar. 24, 1958.

SN 50,103. Harold Reissner, d.b.a. Reissner Chemical Co., Corona, N.Y. Filed Apr. 21, 1958.

FLOORSAVER

For Floor Waxing Machines and Vacuum Cleaners.
First use in April 1950.

SN 52,450. Universal Transistor Products Corp., Westbury, N. Y. Filed May 27, 1958.

UNIVISTOR

For Electrical Power Supplies and Components Thereof.
First use May 19, 1958.

SN 53,755. Air Reduction Company, Incorporated, New York, N.Y. Filed June 18, 1958.

AIRCOMATIC

Owner of Reg. Nos. 523,155, 596,671, and others.
For Arc Cutting Machines.
First use on or about Apr. 1, 1956.

SN 54,393. The Electra Spark Co., Jenkintown, Pa. Filed June 27, 1958.

SPIT-FIRE

For Spark Plugs.
First use June 5, 1958.

SN 55,699. Panhandle Electric Sales, Inc., Amarillo, Tex. Filed July 21, 1958.

PANHANDLE

For Electronic Telephone Carrier Equipment for Increasing the Number of Talking or Signaling Paths on a Pair of Wires.
First use Feb. 3, 1958.

SN 57,469. All-Brite Fluorescent Fixtures, Inc., South San Francisco, Calif., assignee of Fluorescent Fixtures of California, South San Francisco, Calif. Filed Aug. 19, 1958.

ALL-BRITE

For Fluorescent Electrical Lighting Fixtures.
First use Oct. 1, 1944.

SN 57,798. Graham Manufacturing Corporation, Needham Heights, Mass. Filed Aug. 25, 1958.

GRAHAM

Owner of Reg. No. 594,173.
For Electrical Welding Apparatus and Equipment, Parts, and Components.
First use during August 1953; October 1947 as to "Graham."

SN 58,237. Plasmadyne Corporation, Santa Ana, Calif. Filed Sept. 2, 1958.

PLASMADYNE

For Electrical Plasma-Flame or Plasma-Jet Apparatus, Specifically Including Plasma-Flame or Plasma-Jet Torches and Power Supplies Therefor, Said Torches Incorporating an Arcing Electrode and Means To Pass Gas Through the Arc Whereby the Gas Is Heated to a High Temperature.
First use on or about Aug. 13, 1958.

SN 58,447. Rayclad Tubes, Inc., Redwood City, Calif. Filed Sept. 5, 1958.

RAYCLAD

For Irradiated Polyethylene Tubing and Sleeving Used for Insulation of Electrical Cable and Wire.
First use June 23, 1958.

SN 61,795. Erdco Engineering Corporation, Addison, Ill. Filed Nov. 3, 1958.

ERDCO

For Radio Frequency Electrical Generators and Radio Frequency Electrical Drying Equipment.
First use Aug. 21, 1953.

SN 61,821. Leach Corporation, Compton, Calif. Filed Nov. 3, 1958.

INETROL

For Electrical Control and Regulation Equipment—Namely, Equipment To Control and Regulate the Speed of Electric Motors.
First use Sept. 25, 1958.

SN 62,068. Johnson & Johnson, New Brunswick, N.J. Filed Nov. 24, 1958.

Owner of Reg. Nos. 388,286, 597,852, and others.
For Electric Insulation.
First use Feb. 24, 1958.

SN 67,252. Sentinel Signal Corporation, Cincinnati, Ohio. Filed Feb. 6, 1959.

CYCL-O-MATIC

For Electronic Control Device for Tire Retreader.
First use Sept. 30, 1958.

SN 67,874. I-T-E Circuit Breaker Company, Philadelphia, Pa. Filed Feb. 17, 1959.

EQ

Owner of Reg. Nos. 533,091, 611,750, and others.
For Molded Case Circuit Breakers.
First use in 1948.

SN 68,133. G. & W. H. Corson, Inc., Plymouth Meeting, Pa. Filed Feb. 20, 1959.

For Electric Batteries.
First use Dec. 1, 1958.

SN 68,200. Acro Welder Mfg. Co., Milwaukee, Wis. Filed Feb. 24, 1959.

ACRO-ARC

Owner of Reg. Nos. 549,447, 642,528, and 651,137.
For Welding Machinery Employing Electric Arc and Gas Welding Processes.
First use Feb. 2, 1959.

SN 68,273. Kaiser Aluminum & Chemical Corporation, Oakland, Calif. Filed Feb. 24, 1959.

KALZONE

For Insulated Conductors.
First use Sept. 12, 1958.

SN 68,488. The Frink Corporation, Long Island City, N.Y. Filed Feb. 26, 1959.

LINOLITE

Owner of Reg. No. 369,421.
For Lighting Fixtures.
First use on or about Aug. 26, 1902.

SN 68,504. Motorola, Inc., Chicago, Ill. Filed Feb. 26, 1959.

GOLDEN VOICE

Owner of Reg. Nos. 513,987, 513,988, and 535,205.
For Loudspeakers.
First use in March 1955.

SN 68,505. Motorola, Inc., Chicago, Ill. Filed Feb. 26, 1959.

GOLDEN M

Owner of Reg. Nos. 513,987, 513,988, and 535,205.
For Vacuum Tubes and Television Receiver Chassis.
First use July 10, 1957.

SN 68,506. Motorola, Inc., Chicago, Ill. Filed Feb. 26, 1959.

GOLDEN SATELLITE

Owner of Reg. Nos. 513,987, 513,988, and 535,305.
For Remote Control Devices for Television Receivers.
First use July 18, 1957.

SN 68,914. Farris C. Lind, Boise, Idaho. Filed Mar. 4, 1959.

STINKER

Owner of Reg. No. 582,983.
For Storage Batteries.
First use in 1953.

SN 69,096. Vitalic Battery Company, Inc., Dallas, Tex. Filed Mar. 6, 1959.

PLASTICASE

Owner of Reg. No. 505,122.
For Storage Batteries.
First use Aug. 14, 1947.

SN 69,097. Vitalic Battery Company, Inc., Dallas, Tex. Filed Mar. 6, 1959.

PLASTI-CLAD

For Storage Battery Plates and Hold-Down Frames.
First use on or about Sept. 1, 1958, on hold down frames.

SN 69,166. Moxness Products, Inc., Racine, Wis. Filed Mar. 9, 1959.

MOX-TAPE

For Electrical Insulating Tape.
First use Aug. 4, 1958.

SN 69,213. Sprague Electric Company, North Adams, Mass. Filed Mar. 9, 1959.

YELLOW JACKET

Owner of Reg. No. 549,688.
For Electrical Capacitors.
First use May 19, 1958.

SN 69,215. Stauffer Chemical Company, San Francisco, Calif. Filed Mar. 9, 1959.

TILTITE

For Electric Storage Battery Vent Caps.
First use Feb. 27, 1959.

SN 69,242. Burnell & Co., Inc., Pelham Manor, N.Y. Filed Mar. 10, 1959.

MICROID

For Electronic Filters and Inductors.
First use Jan. 30, 1958.

SN 69,299. Sunbeam Lightingwares, Inc., Jamaica, N.Y. Filed Mar. 10, 1959.

HANS CHRISTIAN ANDERSEN

For Lighting Fixtures.
First use July 18, 1958.

SN 69,447. The Ruberoid Co., New York, N.Y. Filed Mar. 12, 1959.

RUBEROID

Owner of Reg. Nos. 50,919, 607,814, and others.
For Electrical Insulating Materials, Including Insulating Boards, Insulating Coatings, and Insulating Tapes.
First use in or about July 1930 on insulating tapes.

SN 69,821. Katherine L. Lee, Chicago, Ill. Filed Mar. 18, 1959.

LEE-A-LARM

For Electrically Operated Anti-Shoplifting Alarm.
First use Sept. 22, 1958.

SN 70,037. Calbest Engineering & Electronics Co., Los Angeles, Calif. Filed Mar. 23, 1959.

MUSIPLEX

For Transmitters and Radio Receivers.
First use Mar. 9, 1959.

SN 70,120. Union Insulating Co., Parkersburg, W. Va. Filed Mar. 23, 1959.

Weatherbest

For Non-Metallic Lighting Fixtures.
First use Feb. 26, 1959.

SN 70,289. The Fibre-Metal Products Company, Chester, Pa. Filed Mar. 26, 1959.

EUREKA

For Electrode Holders.
First use Nov. 1, 1931.

SN 70,292. The Edwin F. Guth Company, St. Louis, Mo. Filed Mar. 26, 1959.

EXCELUX

For Electric Lighting Fixtures for Household and Commercial Installations.
First use Mar. 30, 1938.

SN 70,315. Philadelphia Insulated Wire Company, Philadelphia, Pa. Filed Mar. 26, 1959.

PIW

For Insulated Wire and Insulation for Wire, Including Tubing, Cords, Cables, Plastics, and Plastic Parts Used in Connection Therewith.
First use early part of 1922.

SN 70,437. Columbia Broadcasting System, Inc., New York, N.Y. Filed Mar. 30, 1959.

IDOPHONIC

For Stereophonic Speaker Systems.
First use Mar. 20, 1959.

SN 70,539. Servel, Inc., Evansville, Ind. Filed Mar. 30, 1959.

VANGUARD

For Flashlights.
First use Jan. 29, 1959.

Class 22—Games, Toys, and Sporting Goods

SN 46,335. Mattel, Incorporated, Los Angeles, Calif. Filed Feb. 21, 1958.

MONKEY-OLA

For Toy Organ Grinder.
First use Jan. 24, 1958.

SN 52,520. Harry Rubin & Sons, Inc., d.b.a. Arandell Products Co., Philadelphia, Pa. Filed May 28, 1958.

BLACK GAUCHO

For Toy Kit Comprising a Whip, a Mask, a Dagger, and a Lariat.
First use Mar. 20, 1958.

SN 61,685. Barker-Chadsey Co., Johnston, R.I. Filed S.R. Oct. 31, 1958; Am. P.R. May 22, 1959.

NEWPORT

For Fishing Tackle—Namely, Rods, Reels, Lines, Hooks, Artificial Lures, and Flies.
First use in July 1953.

SN 63,668. Parker Brothers, Inc., Salem, Mass. Filed Dec. 4, 1958.

RISK

For Equipment Used in Connection With a Board Game.
First use Nov. 18, 1958.

SN 64,184. L. & I. Glenn Proprietary Limited, Hawthorn East, Victoria, Australia. Filed Dec. 12, 1958.

Owner of Australian Reg. No. 115,094, dated Aug. 13, 1958.
For Toy Construction Sets for Building Structural Models.

SN 64,844. Royal Tot Co., Inc., Brooklyn, N.Y. Filed Dec. 23, 1958.

Stick 'n' Color

For Toy Activity Set Comprising a Package of Plastic Activity Pieces Adapted To Be Used as Stencils Around Which a Background Is Colored by Crayons.
First use Oct. 6, 1958.

SN 64,987. L. W. Keenan & Co., Los Angeles, Calif. Filed Dec. 29, 1958.

KEESON

For Tricycles, Scooters, and Wagons.
First use Nov. 1, 1957.

SN 65,037. Wilkening Manufacturing Company, Philadelphia, Pa. Filed Dec. 29, 1958.

GOOFY GEARS

For Toy Comprising Figure-Carrying Gears.
First use Nov. 19, 1958.

SN 65,373. Philip S. Olt Company, Pekin, Ill. Filed Jan. 6, 1959.

No claim to exclusive right is made to "Game Calls" as used on game calls. Owner of Reg. No. 669,554.
For Duck Calls, Crow Calls, Hawk Calls, Goose Calls, Quail and Turkey Calls.
First use Mar. 1, 1958.

SN 65,829. Donald F. Duncan, Incorporated, Chicago, Ill. Filed Jan. 14, 1959.

BUTTERFLY

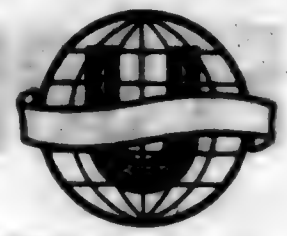
For Tops of the Bandalore Return Type.
First use July 31, 1958.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 34,590. Friden, Inc., San Leandro, Calif., by change of name from Friden Calculating Machine Co., Inc., San Leandro, Calif. Filed July 30, 1957.

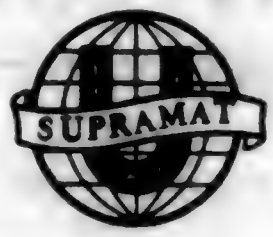
For Electrically, Electronically, and Manually Operated Office Machines, and Combinations of the Same, and Parts Thereof.
First use Jan. 15, 1957.

SN 47,532. Universal Maschinenfabrik G.m.b.H., Westhausen, Kreis Aalen, Wurttemberg, Germany. Filed Mar. 11, 1958.



For Knitting Machines.
First use Mar. 25, 1955; in commerce Mar. 25, 1955.

SN 47,533. Universal Maschinenfabrik G.m.b.H., Westhausen, Kreis Aalen, Wurttemberg, Germany. Filed Mar. 11, 1958.



For Knitting Machines.
First use Mar. 25, 1955; in commerce Mar. 25, 1955.

SN 47,613. Universal Maschinenfabrik, G.m.b.H., Westhausen, Kreis Aalen, Wurttemberg, Germany. Filed Mar. 12, 1958.

For Knitting Machines.
First use Mar. 25, 1955; in commerce Mar. 25, 1955.

SN 48,809. The Vendoriator Manufacturing Company, Fresno, Calif. Filed Mar. 31, 1958.

VENDORLATOR

Owner of Reg. No. 442,201.
For Coin Controlled Vending Machines and Parts Thereof.
First use Feb. 11, 1958.

SN 50,465. Etablissements Emile Degremont, Rueil-Malmaison, France. Filed Apr. 28, 1958.

PULSATOR

Owner of French Reg. No. 6,478, dated Dec. 18, 1956 (Versailles); Natl. Inst. No. 83,647.
For Apparatus for the Treatment of Liquids, in Particular, Apparatus for the Purification of Water.

SN 51,476. Machinery and Electrical Products Co., Inc., d.b.a. Malco, Inc., Enid, Okla. Filed May 12, 1958.

AUTO-AUGER

For Digging Machine.
First use July 1, 1957.

SN 52,287. Dover Corporation, d.b.a. C. Lee Cook Company, Louisville, Ky. Filed May 26, 1958.

AIRTOMIC

For Piston Rings and Seals.
First use May 19, 1958.

SN 55,404. Maschinenfabrik Stahlkontor Weser G.m.b.H., Hamein (Weser), Germany. Filed July 16, 1958.

SIMPLABELT

Owner of German Reg. No. 618,973, dated Apr. 15, 1952.
For Belt Transmissions.

SN 55,840. C & S Products Company, Inc., Detroit, Mich. Filed July 23, 1958.

SHELL-TRUDER

For Machine for Moulding Shapes From Flowable Solid Material.
First use May 12, 1958.

SN 56,214. Mr. Adolf Veicht, Darien, Conn. Filed July 28, 1958.

"WILGAR"

For Agricultural Implements and Gardening Tools, Such as Cultivators, Spades and the Like; and Garden Supplies Such as Seeds, Seedlings, Plants, and the Like.
First use Aug. 24, 1957.

SN 56,389. C. J. Daubenberger, Pacific Palisades, Calif. Filed July 31, 1958.

AUDIO SONIC

For Automobile Mufflers.
First use on or before June 1, 1958.

SN 57,343. Clauss Cutlery Company, Fremont, Ohio. Filed Aug. 18, 1958.

CUTAWAY

For Shears, Scissors, Nail Files, Tweezers, Tinners' Snips.
First use June 23, 1958.

SN 57,680. Dornbusch & Co., Krefeld, Germany. Filed Aug. 22, 1958.

Dornair

Priority claimed under Sec. 44(d) on German application filed June 9, 1958; Reg. No. 721,733, dated Feb. 2, 1959.
For Machines, Including Calenders and Presses for Pressing, Printing, Smoothing and Coating of Materials Including Plate-Shaped Goods, Foil-Welding Machines, Pressing-, Printing-, Smoothing-, and Coating Devices in Form of Rolls and Plates.

SN 57,691. The Hope Chest Company, Inc., Minneapolis, Minn. Filed Aug. 22, 1958.

For Stainless Steel Flatware.
First use Feb. 15, 1954.

SN 57,780. Flo-Tork Corporation, Orrville, Ohio. Filed Aug. 25, 1958.

FLO-TORK

For Fluid Pressure Activated Torque Converters.
First use on or about Jan. 23, 1957.

SN 59,040. Hupp Corporation, Cleveland, Ohio. Filed Sept. 17, 1958.

HYDROID

The word "Pumps" is disclaimed apart from the mark as shown.
For Pumps.
First use Mar. 14, 1958.

SN 59,890. Frankfurter Maschinenbau A.G. vorm. Pokorny & Wittekind, Frankfurt am Main, Germany. Filed Oct. 1, 1958.

robot

Owner of German Reg. No. 715,270, dated June 26, 1958.
For Compressors.

SN 60,351. Gebruder Heller, Bremen-Mahndorf, Germany. Filed Oct. 9, 1958.

Owner of German Reg. No. 669,716, dated Jan. 14, 1955.
For Boring Tools and Machines for Solid Boring, Trepanning Counter Boring and Finish Boring.

SN 60,388. The American Pulley Company, Philadelphia, Pa. Filed Oct. 10, 1958.

LOAD-JOCKEY

For Hydraulic Propulsion Unit for Attachment to Battery-Powered Lift Trucks.
First use Sept. 19, 1958.

SN 62,628. Standard Service Parts, Inc., Dallas, Tex. Filed Nov. 17, 1958.

HI-BALL RE-MF'D ENGINES

The representation of the goods and the expression "Re-Mf'd Engines" are hereby disclaimed apart from the mark.
For Remanufactured Internal Combustion Engines.
First use May 12, 1958.

SN 64,110. Tamper Limited, Lachine, Quebec, Canada. Filed Dec. 11, 1958.

HYDRENEWER

Owner of Canadian Reg. No. 113,050, dated Jan. 23, 1959.
For Railway Tie Handling Machinery.

SN 64,111. Tamper Limited, Lachine, Quebec, Canada. Filed Dec. 11, 1958.

HYDRILLBOLTER

Owner of Canadian Reg. No. 113,052, dated Jan. 23, 1959.
For Devices for Applying Fish Plates and the Like to Railroad Tracks.

SN 64,112. Tamper Limited, Lachine, Quebec, Canada. Filed Dec. 11, 1958.

COMBOLINER

Owner of Canadian Reg. No. 113,048, dated Jan. 23, 1959.
For Devices for Jacking and Aligning Railroad Track.

SN 64,113. Tamper Limited, Lachine, Quebec, Canada. Filed Dec. 11, 1958.

HYDREJECTOR

Owner of Canadian Reg. No. 113,049, dated Jan. 23, 1959.
For Devices for Removing Spikes From Railroad Ties and Rails.

SN 65,103. Launderenter Corperation, Woodside, N.Y. Filed Dec. 30, 1958.

Launder Bar

For Coin-Operated Soap Vending Machine.
First use Oct. 27, 1958.

SN 66,616. Gardex, Inc., Michigan City, Ind. Filed Jan. 28, 1959.

SUBURBAN

For Garden Tools, Such as Garden Hoes, Rakes, Cultivators, and Turf Edgers.
First use Nov. 7, 1958.

SN 67,764. De Vlieg Machine Company, Royal Oak, Mich. Filed Feb. 16, 1959.

MICROFACE

For Blade-Type Cutting Tools and Holders Therefor.
First use Jan. 27, 1959.

SN 67,828. Robeson Cutlery Company, Inc., Perry, N.Y. Filed Feb. 16, 1959

FLAME EDGE

For Knives.
First use Jan. 12, 1959.

SN 67,844. The Aetna-Standard Engineering Company, Pittsburgh, Pa. Filed Feb. 17, 1959.

AETNAMATIC

Owner of Reg. Nos. 555,189 and 656,788.
For Mills for Rubber and Plastics.
First use on or about June 25, 1958.

SN 67,845. American Industries Company, Bristol, Pa. Filed Feb. 17, 1959.

AICO

For Hydraulic Pumps, Valves, Motors and Cylinders and Parts and Accessories Therefor.
First use at least Aug. 30, 1951.

SN 68,040. Cummins-Chicago Corp., Chicago, Ill. Filed Feb. 19, 1959.

Cansamatic

Owner of Reg. Nos. 573,724, 663,111, and 663,112.
For Business Machines—Namely, Canceling Machines and Perforating Machines.
First use Mar. 15, 1958.

SN 68,120. Diatronics, Inc., Torrance, Calif. Filed Feb. 20, 1959.

DIATRONIC

For Diamond Edge Cutting Wheels.
First use on or about Apr. 29, 1958.

SN 68,232. Columbia Exporters, Inc., Portland, Oreg. Filed Feb. 24, 1959.

SAWMASTER

For Collapsible Saws and Parts Thereof.
First use Dec. 1, 1958.

SN 68,238. Dana Corporation, Toledo, Ohio. Filed Feb. 24, 1959.

PRESTO-MATIC

For Power Transmission Mechanisms—Namely, Clutches, Clutch Control Mechanisms and Parts Thereof.
First use on or about Oct. 10, 1958.

SN 68,433. Rockwell-Standard Corporation, Coraopolis, Pa. Filed Feb. 25, 1959.

HYDRA-DRIVES

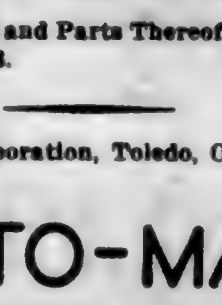
For Torque Converters for Vehicles.
First use in October 1958.

SN 68,404. Bloomer Bros. Company, Newark, N.Y. Filed Feb. 26, 1959.

BANTAM

For Machines for Erecting Egg Cartons.
First use Aug. 22, 1958.

SN 68,519. Posey Iron Works, Inc., Lancaster, Pa. Filed Feb. 26, 1959.



For Countercurrent Rapid Batch Mixers for Use Throughout the Full Range of the Ceramics Classifications as Respectively Identified as Abrasives, Whitewares and Pottery, Refractories, Enamels, and Cements, and Also Powdered Metals, Explosives, Pyrotechnics, Chemical Compounds, and the Like.
First use Dec. 3, 1958.

SN 68,597. Pacific Mufflers, Inc., Gardena, Calif. Filed Feb. 27, 1959.

ADVANCE

For Mufflers, Tailpipes, and Exhaust Pipes for Automotive Vehicles.
First use July 1, 1939.

SN 68,598. Pacific Mufflers, Inc., Gardena, Calif. Filed Feb. 27, 1959.

PACIFIC

For Mufflers, Tailpipes, and Exhaust Pipes for Automotive Vehicles.
First use May 1, 1958.

SN 70,381. Wilson Jones Company, Chicago, Ill. Filed Mar. 26, 1959.

TATUM-AIR

Owner of Reg. Nos. 587,770, 610,645, and 675,199.
For Stapling Machines.
First use Mar. 20, 1957.

SN 70,395. John W. Roby, d.b.a. John W. Roby & Company, Seattle, Wash. Filed Mar. 27, 1959.

STUDIO GIRL

For Home Type Hand Knitting Machines, Parts, and Accessories.
First use Feb. 15, 1959.

SN 70,403. Edward F. Taylor Company, Incorporated, Denver, Colo. Filed Mar. 27, 1959.

For Snow Plows.
First use Jan. 15, 1958.

SN 70,457. Erdco Engineering Corporation, Addison, Ill. Filed Mar. 30, 1959.

CLEAR-PAK

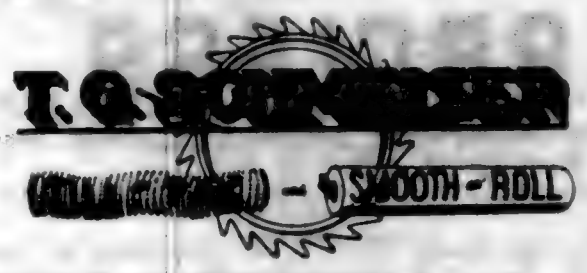
For Packaging Machinery.
First use Dec. 7, 1956.

SN 70,522. Pierce Specialized Equipment Co., San Mateo, Calif. Filed Mar. 30, 1959.

SETMASTER

For Collating, Carbon Interleaving, and Glue Tipping Apparatus.
First use Apr. 14, 1958.

SN 70,535. Ethel R. Schmeiser, d.b.a. T. G. Schmeiser Co., Fresno, Calif. Filed Mar. 30, 1959.



Owner of Reg. Nos. 654,094 and 582,996.
For Earth Working Implements and Specifically Roller Type Soil Cultivators and Packers.
First use Mar. 10, 1949.

SN 70,625. Union Carbide Corporation, New York, N.Y. Filed Mar. 31, 1959.

EVEREADY

Owner of Reg. No. 135,757.
For Propellant-Powered Gun-Type Sprayer and Duster for Applying Home and Garden Chemicals.
First use Feb. 16, 1959.

SN 70,649. The Fordath Engineering Company Limited, West Bromwich, Stafford, England. Filed Apr. 1, 1959.

FORDATH

Owner of British Reg. No. 647,306, dated May 1, 1946.
For Machines for Preparing Foundry Cores and for Preparing the Materials for Use in Such Cores.

SN 70,750. Spray-Mow Company, Belleville, N.Y. Filed Apr. 2, 1959.

For Spray Attachment for Rotary Lawn Mowers.
First use Jan. 19, 1959.

SN 70,803. International Ball & Roller Bearing Corporation, Seattle, Wash. Filed Apr. 3, 1959.

INTERNATIONAL

For Ball and Roller Bearings.
First use Jan. 1, 1959.

SN 70,949. Dorothy Schneider, d.b.a. Continental Sales & Sewing Machine Co., Brooklyn, N.Y. Filed Apr. 6, 1959.

Windsor

For Sewing Machines.
First use in 1951.

SN 71,010. Great Neck Saw Manufacturers, Inc., Mineola, N.Y. Filed Apr. 7, 1959.

PLYMOUTH

Owner of Reg. No. 431,845.
For Saws and Parts Therefor.
First use on or about Apr. 18, 1946.

SN 71,076. Alford Package Machines, Inc., Ridgefield Park, N.J. Filed Apr. 8, 1959.

MINISEALER

For Carton Sealing Machines.
First use Oct. 20, 1958.

SN 71,166. Victor Vending Corporation, Chicago, Ill. Filed Apr. 8, 1959.

SELECTORAMA

Owner of Reg. No. 627,342.
For Merchandise Vending Machine.
First use Mar. 24, 1959.

SN 71,210. Hanna Engineering Works, Chicago, Ill. Filed Apr. 9, 1959.

POWRDRAULIC

For Hydraulic Cylinders.
First use July 18, 1958.

SN 71,261. Brown-Rogers-Dixson Co., Winston-Salem, N.C. Filed Apr. 10, 1959.

For Sprayers, Pitchforks, Garden Forks, Rakes, Hoes, Shovels, and Lawnmowers.
First use Jan. 2, 1959.

Class 24 — Laundry Appliances and Machines

SN 51,467. L.I.C. Corp., Dallas, Tex. Filed May 12, 1958.

For Laundry Equipment—Namely, Washers and Dryers.
First use Mar. 1, 1958.

SN 64,331. Philco Corporation, Philadelphia, Pa. Filed Dec. 15, 1958.

BENDIX HOME LAUNDRY

Owner of Reg. No. 386,289.
For Washing Machines.
First use Sept. 27, 1937.

Class 26—Measuring and Scientific Appliances

SN 27,052. Safe Flight Instrument Corporation, White Plains, N.Y. Filed Mar. 27, 1957.

SPEED CONTROL

For Apparatus To Give Precise Lift Information During Low Speed Flying and Maneuvers.
First use July 27, 1954.

SN 28,287. Hans Rutishauser, d.b.a. Omega Instrument Company, Pasadena, Calif. Filed Apr. 16, 1957.

The mark consists of the Greek letter "Omega" and English letter "I."

For Scientific Instruments—Namely, Pressure Sensors, Accelerometers, Micro-Pressure-Transducer, Displacement Gauges, Force Gauges, Analog Computers, Temperature Gauges and Indicators, High Frequency Recorders, and Rate Gyroscopes.

First use Jan. 5, 1957.

SN 51,358. Alexander MacLean, Albuquerque, N. Mex. Filed May 9, 1958.

MILE-A-METER

For Cardboard Gas Mileage Computer.
First use Mar. 30, 1957.

SN 51,989. Glideline Corp., Waynesboro, Pa. Filed May 20, 1958.

For Mechanical Drafting Machines.
First use June 11, 1957.

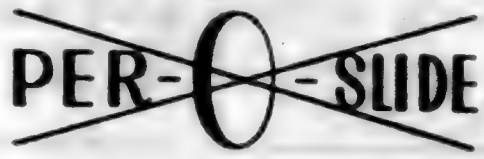
SN 52,426. New England Contact Lens Specialists Corp., Boston, Mass. Filed May 27, 1958.

AIR-FLOAT SELF-VENTILATING

The notation "Self-Ventilating" is disclaimed apart from the combination shown.

For Contact Lenses.
First use Apr. 15, 1958.

SN 52,900. Arnold Perrot, Nidau-Bienne, Berne, Switzerland. Filed June 4, 1958.



Priority claimed under Sec. 44(d) on Swiss application filed Mar. 7, 1958; Reg. No. 169,406, dated Mar. 7, 1958.

For Transparency Slides.

SN 53,721. Felix A. Nash, d.b.a. Western Color-Graphics, Portland, Oreg. Filed June 17, 1958.

HEM-RITE

For Gauge To Facilitate the Doubling Back of the Cloth in the Process of Hemming.
First use on or before Aug. 21, 1957.

SN 53,814. Arnold Perrot, Nidau-Bienne, Berne, Switzerland. Filed June 18, 1958.

ARCLESS

Priority claimed under Sec. 44(d) on Swiss Reg. No. 169,928, dated Apr. 12, 1958.

For Cover Glass for Use in Making Projection Slides.

SN 54,041. John R. E. Hoover, Glenside, Pa. Filed June 23, 1958.

For Apparatus for Determining Melting Points by the Capillary Tube Method Used in Chemical and Physical Laboratories for Establishing Identity and Characteristics of Composition of Matter.
First use Feb. 11, 1958.

SN 54,324. National Beryllia Corporation, North Bergen, N.J. Filed June 26, 1958.

BERLOX

For Ceramic Beryllium Oxide Tubes, Crucibles, Discs, Rods, Blocks, and Ramming Mixes, Used in the Missile, Aircraft, Electronics, and Nuclear Fields.
First use Jan. 2, 1958.

SN 54,500. Eastman Kodak Company, Rochester, N.Y. Filed June 30, 1958.

VISCOUNT

For Photographic Copying Apparatus.
First use May 1, 1958.

SN 59,386. Herbert Brook, d.b.a. Educational Materials and Equipment Company, Bronxville, N.Y. Filed Sept. 23, 1958.

E·M·E

For Microscopes and Items Related to Microscopes.
First use Sept. 10, 1957.

SN 60,312. William J. Puetz, d.b.a. Illinois Sansutron, Chicago, Ill. Filed Oct. 8, 1958.

For Densitometers.
First use Aug. 17, 1958.

SN 61,115. Glasfirn Curt Firn, Glasinstrumentenfabrik, Essen, Germany. Filed Oct. 22, 1958.

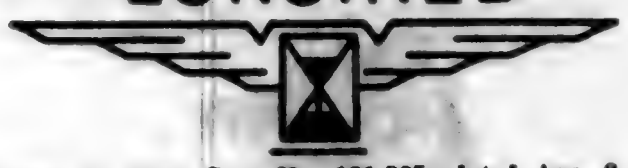
colordur

Owner of German Reg. No. 693,178, dated July 26, 1956.

For High Precision Measuring Glass Instruments With Colored Acid and Alkali Resistant Scales for Laboratories, Industry, and Hospitals, Calibrated Pipettes, Calibrated Measuring Glasses, Calibrated Measuring Cylinders, Measuring Flasks; Enclosures for Thermometers and Manometers.

SN 62,277. Compagnie des Montres Longines Francillon S.A. (Longines Watch Co. Francillon Ltd.), St. Imier, Switzerland. Filed Nov. 13, 1958.

LONGINES



Owner of Swiss Reg. No. 101,865, dated Apr. 2, 1942; and U.S. Reg. Nos. 65,109 and 668,956.

For Electronic Precision Timing Instruments—Namely, Electric Photocells in Conjunction With Timing Devices for the Timing of Sport Events and Other Events; Time-Keeping and Time-Recording Instruments; Timing Devices Operating in Conjunction With Photo-Finish Frame Cameras; Chronometers Giving Acoustic Signals at Variable Time Intervals; and Enlarged Clocks Operated by Timing Instruments and Adapted To Show the Time of Races, Scores, Etc. to Spectators.

First use about 1950; in commerce about 1950.

SN 63,276. Batori Computer Company, Inc., New York, N.Y. Filed Nov. 28, 1958.

For Instruments for Use in Solving Navigational Problems—Namely, Plotters and Computers.

First use Dec. 10, 1953, on plotters.

SN 63,304. Graflex, Inc., Rochester, N.Y. Filed Nov. 28, 1958.

IDENTIFAX

For Cameras for Making Identification Cards.

First use Aug. 29, 1958.

SN 63,642. W. C. Dillon & Co., Inc., Van Nuys, Calif. Filed Dec. 4, 1958.

Owner of Reg. No. 663,439.

For Weighing Scales, Thermometers, Force Actuated Switches, Gauges for Measuring Tensional and Compressional Forces, Testing Machines for Measuring Tension, Compression, and Shear Strength of Various Materials.

First use on or before Jan. 1, 1945.

SN 63,872. Northrop Corporation, Beverly Hills, Calif., by change of name from Northrop Aircraft, Inc., Beverly Hills, Calif. Filed Dec. 8, 1958.

For Electronic Products Comprising: Testing, Evaluating and Check Out Systems for Electronic and Electrical Systems of the Analog Computer Type, Parts and Components Thereof and Therefor.

First use Nov. 1, 1958.

SN 64,212. Sprague Products Company, North Adams, Mass. Filed Dec. 12, 1958.

TEL-OHMIKE

For Portable Instruments for Testing the Performance of Electrical Capacitors, Resistors, and Small Transformers.

First use November 1939.

SN 65,130. Texsteam Corporation, Houston, Tex. Filed Dec. 30, 1958.

TXT TEXSTEAM

For Chemical Injector Pumps.

First use Nov. 28, 1958.

SN 65,445. Powers Chemco, Inc., Glen Cove, N.Y. Filed Jan. 7, 1959.

MARATHON

For Photomechanical Cameras.

First use Dec. 29, 1958.

SN 65,582. Sidney Pfeffer, New York, N.Y. Filed Jan. 9, 1959.

CENTYARDS

For Decimal Yard Measures.

First use Dec. 22, 1958.

SN 65,586. Radio Corporation of America, New York, N.Y. Filed Jan. 9, 1959.

Swing-O-Meter

For Electric and Electronic Navigating Devices Comprised of (1) Gyro-Power Supply Unit or Units, (2) Main Indicator-Control Unit or Units, (3) Auxiliary Indicator Unit or Units, and (4) External Resistor Unit or Units, All Suitably and Effectively Interrelated, Other Components, Repair Parts as Well as Accessories for Such Goods.

First use June 12, 1958.

SN 67,047. Electronic Instruments Service, Los Angeles, Calif. Filed Feb. 4, 1959.

Hi-Fi-EYE

For Meter for Recording Elapsed Playing Time of a Record Changer To Indicate Needle Change Time.

First use on about Feb. 1, 1958.

SN 67,174. George V. Woodling, d.b.a. Moisture-Lite Company, Cleveland, Ohio. Filed Feb. 5, 1959.

MOISTURE-LITE

For Moisture Indicator.

First use Jan. 29, 1959.

SN 67,433. Automatic Controls, Inc., Seaford, N.Y. Filed Feb. 10, 1959.

MIX-A-MATIC

For Electronic Moisture Control Device for Concrete Mixers.

First use November 1957.

SN 67,601. General Aniline & Film Corporation, d.b.a. Ozalid, New York, N.Y. Filed Feb. 12, 1959.

POLYTRACE

For Matte Surfaced and Translucent Sheet Material for Tracing.
First use Oct. 20, 1958.

SN 67,625. Optische Werke G. Rodenstock, Munich, Germany. Filed Feb. 12, 1959.

YSAREX

Owner of German Reg. No. 655,017, dated Mar. 16, 1954.
For Camera and Cine Camera Lenses, Field Glasses; Spectacles, Folders, Spectacle Lenses, Reproduction and Projector Lenses, Condensers, Optical Lenses, Magnifiers, Reading Glasses.

SN 67,742. Bausch & Lomb Optical Company, Rochester, N.Y. Filed Feb. 16, 1959.

Cloud Nine

For Spectacle Frames.
First use June 11, 1958.

SN 68,012. Welsh Manufacturing Company, Providence, R.I. Filed Feb. 18, 1959.

UNIBRIDGE

For Industrial Safety Goggles.
First use in July 1958.

SN 68,013. Welsh Manufacturing Company, Providence, R.I. Filed Feb. 18, 1959.

CYCLOPS

For Industrial Safety Goggles.
First use in October 1957.

SN 68,036. City Investing Company, New York, N.Y. Filed Feb. 19, 1959.

ON STAGE

For Binoculars.
First use Mar. 28, 1958.

SN 68,050. General Aniline & Film Corporation, d.b.a. Ansco, New York, N.Y. Filed Feb. 19, 1959.

ANSCOMATIC

Owner of Reg. Nos. 378,951 and 249,170.
For Projectors.
First use Jan. 23, 1959.

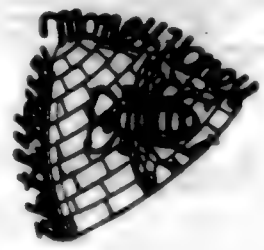
SN 68,146. J & S Sales & Service, Hutchison, Kans. Filed Feb. 20, 1959.

BLONDE SECRETARY

For Desk Top and Shelves for Attachment to Weighing Scales.
First use Mar. 21, 1954.

Class 28—Jewelry and Precious-Metal Ware

SN 66,237. Arthur G. Rush, New York, N.Y. Filed Jan. 21, 1959.



For Clamp Holders Made of Non Precious Metal for Holding Check Books, Business Cards, and Currency Bills.
First use Jan. 2, 1959.

SN 66,329. Coro, Inc., New York, N.Y. Filed Jan. 28, 1959.

JINGLE JANGLE

For Necklaces, Bracelets, Earrings, Jewelry Clips, Brooches, Lockets, Finger Rings, Charm Bracelets, and Charms.
First use Dec. 15, 1958.

SN 66,330. Coro, Inc., New York, N.Y. Filed Jan. 28, 1959.

JANGLE BANGLE

For Necklaces, Bracelets, Earrings, Jewelry Clips, Brooches, Lockets, Finger Rings, Charm Bracelets, and Charms.
First use Dec. 15, 1958.

SN 67,943. Lady Fair Pearls, Brooklyn, N.Y. Filed Feb. 18, 1959.

LADY FAIR

For Simulated Pearls and Simulated Pearls Used in Connection With Ladies' Necklaces, Earrings, Bracelets, and Pins.
First use Feb. 27, 1948.

SN 67,966. Oneida Ltd., Oneida, N.Y. Filed Feb. 18, 1959.

JENNIFER

For Silverplated Flat Tableware.
First use Jan. 20, 1959.

Class 29—Brooms, Brushes, and Dusters

SN 65,752. California Cotton Mills Company, Oakland, Calif. Filed Jan. 13, 1959.

GLASCOT

For Mops.
First use Aug. 31, 1956.

Class 31—Filters and Refrigerators

SN 36,070. Filtrox-Werk AG., St. Gallen, Switzerland. Filed Aug. 23, 1957.

FILTROX

Owner of Swiss Reg. No. 118,945, dated Nov. 20, 1946.
For Filter Materials and Devices.

SN 36,330. The Warren Company, Incorporated, Atlanta, Ga. Filed Aug. 27, 1957.

PERMA-VUE

For Sealed Glass Units for Commercial Refrigerators Such as Closed Meat Cases, Reach-In Refrigerator Doors, Self-Service Meat, Dairy, and Frozen Foods Cases.
First use Aug. 16, 1957.

SN 43,220. Victory Metal Manufacturing Company, d.b.a. Victory Metal Manufacturing Corp., Plymouth Meeting, Pa. Filed Dec. 30, 1957.

V-LINE

For Refrigerators, Refrigerated Cases, Refrigerated Units, Frozen Food Cabinets, Freezing Cabinets, Warming Cabinets, and Accessories and Parts Therefor.
First use on or about May 17, 1957.

SN 52,072. Societe Commerciale et Industrielle de Sterilisation a Froid, Paris, France. Filed May 21, 1958.

SAF

Owner of French Reg. No. 470,988, dated Mar. 13, 1958 (Paris); Natl. Inst. No. 104,518.
For Ion Exchange Resins.

SN 61,923. Marnet Products Co., Inc., New York, N.Y. Filed Nov. 4, 1958.

AIR-FLEX

For Filters for Air Conditioners, Air Circulators, and Furnaces.
First use Oct. 24, 1958.

SN 66,699. Carma Manufacturing Co., Torrance, Calif. Filed Jan. 29, 1959.

MIN-EX

For Water Purifying Devices.
First use Dec. 1, 1958.

SN 70,396. Rudy Manufacturing Company, Dowagiac, Mich. Filed Mar. 27, 1959.

CONDUCTO PLATE

For Refrigeration Evaporators.
First use Mar. 6, 1958.

SN 70,662. Hans Jorgensen, d.b.a. F.A.S. Fabrik Automatischer Schaltapparate Hans Jorgensen, Hamburg-Stellingen, Germany. Filed Apr. 1, 1959.

TERMEX

Owner of German Reg. No. 712,382, dated Mar. 26, 1956.
For Expansion Valves for Refrigerating Plants.

SN 70,813. Peterson Filters and Engineering Company, Salt Lake City, Utah. Filed Apr. 3, 1959.

ROTO-DISC

For Filters.
First use first part of June 1950.

SN 70,911. McQuay, Inc., Minneapolis, Minn. Filed Apr. 6, 1959.

THERMEX

For Refrigerant Re-Evaporator for Automatic Hot-Gas-Defrost Refrigerating Systems.
First use Feb. 27, 1959.

Class 32—Furniture and Upholstery

SN 57,415. George T. Purves, Jr., Indianapolis, Ind. Filed Aug. 18, 1958.

Kwik-Bed

For Convertible Sofa Beds.
First use Aug. 4, 1958.

SN 65,583. Plas-Ties Company, Santa Ana, Calif. Filed Jan. 9, 1959.

"SHOPPER STOPPER"

For Combined Display Counter and Rack for the Display of Plant-Ties, and Accessories Therefor.
First use Sept. 5, 1958.

SN 69,101. Acme Quilting Company, Inc., Brooklyn, N.Y. Filed Mar. 9, 1959.

SURF AND TURF

For Quilted Plastic Pads for Use on Chaise Lounge, Lawn, Beach, or the Like.
First use Feb. 28, 1959.

SN 69,579. United Furniture Corporation, Lexington, N.C. Filed Mar. 13, 1959.

HOMESTEAD

For Bedroom Furniture, Dining Room Furniture, Living Room Furniture, Such as Tables, Chests, Chairs, Buffets, Bookcases, Breakfronts, Cabinets, Carts, Headboards, Love Seats, Settees, Sofas, Stools, Dressers, Wardrobes.
First use Dec. 17, 1957.

SN 70,787. Eclipse Sleep Products, Inc., Brooklyn, N.Y. Filed Apr. 3, 1959.

springwall MATTRESS

No claim is made to the word "Mattress" nor to the representation of the goods, apart from the mark as shown. Owner of Reg. Nos. 534,160, 656,436, and others.

For Mattresses, Studios, Convertible Chairs and Couches, and Box Springs.

First use January 1956.

SN 70,788. Eclipse Sleep Products, Inc., Brooklyn, N.Y. Filed Apr. 3, 1959.

SPRINGWALL MATTRESS

No claim is made to the word "Mattress" apart from the mark as shown. Owner of Reg. Nos. 534,160, 656,436, and others.

For Mattresses, Studios, Convertible Chairs and Couches, and Box Springs.

First use Apr. 7, 1953.

SN 72,754. Shelby Williams Manufacturing Inc., Chicago, Ill. Filed May 1, 1959.

EVERWOOD

For Table Top Edging and Chair Legs.

First use Apr. 28, 1958.

Class 33—Glassware

SN 42,606. The Pyramid Rubber Company, Ravenna, Ohio. Filed Dec. 17, 1957.

EVENFLO

For Glass Pitchers.

First use on or about Jan. 13, 1954.

SN 68,811. Ford Motor Company, Dearborn, Mich. Filed Mar. 3, 1959.

CAR LITE

For Flat and Bent Sheet Glass.

First use Jan. 30, 1959.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 67,359. International Metal Products Company, Phoenix, Ariz. Filed Feb. 9, 1959.

IMPERIAL

For Evaporative Coolers.

First use Mar. 4, 1950.

SN 67,388. Peerless Corporation, Indianapolis, Ind. Filed Feb. 9, 1959.

PERFECTEMP

For Furnaces, Air Conditioning Units, and Appurtenant Parts Therefor.

First use Jan. 9, 1959.

SN 67,573. Union Steel Products Company, Albion, Mich. Filed Feb. 11, 1959.

YARD CHEF

For Outdoor Cooking Grills.

First use on or about Jan. 1, 1950.

SN 68,360. Automatic Welding Co., Inc., Waukesha, Wis. Filed Feb. 25, 1959.

A/W AUTOMATIC WELDING CO.

For Welding Manipulators and Hard Surfacing Fixtures.

First use Nov. 2, 1957.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 51,307. American Brake Shoe Company, New York, N.Y. Filed May 9, 1958.

CUSHION FIT

For Dust Guards and Seals for Use With Railroad Journal Boxes.

First use in the early part of 1938.

SN 52,581. Minnesota Rubber Company, Minneapolis, Minn. Filed May 29, 1958.

QUADEE

Owner of Reg. Nos. 581,372, 645,116, and others.

For Molded Rubber Products—Namely, Rubber Grommets, Rubber Watchcase Gaskets, Rubber Sealing Rings, Rubber Gaskets, Rubber Suction Cups, Rubber Poppets, Rubber U-Cups, Rubber Bushings, Rubber Switch Cover Gaskets, Rubber Diaphragms, Rubber Bellows, Rubber Drive Belts, Rubber Impellers, Rubber Lip Seals, Rubber Valve Buds, Rubber Aerosol Valve Seals, and Rubber Brake Cups.

First use on or about Apr. 1, 1958.

SN 53,180. Minnesota Rubber Co., Minneapolis, Minn. Filed June 9, 1958.

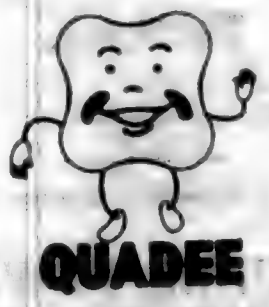
QUAD-KUP

Owner of Reg. Nos. 581,372, 645,116, and others.

For Sealing Rings.

First use May 1, 1958.

SN 53,181. Minnesota Rubber Company, Minneapolis, Minn. Filed June 9, 1958.



Owner of Reg. Nos. 581,372, 645,116, and others.

For Molded Rubber Products—Namely, Rubber Grommets, Rubber Watchcase Gaskets, Rubber Sealing Rings, Rubber Gaskets, Rubber Suction Cups, Rubber Poppets, Rubber U-cups, Rubber Bushings, Rubber Switch Cover Gaskets, Rubber Diaphragms, Rubber Bellows, Rubber Drive Belts, Rubber Impellers, Rubber Lip Seals, Rubber Valve Buds, Rubber Aerosol Valve Seals, and Rubber Brake Cups.

First use on or about Apr. 1, 1958.

SN 66,041. Seiberling Rubber Company, Barberton, Ohio. Filed Feb. 2, 1959.

CARBOJET

For Rubber Tires and Tire Treading Stock.
First use Dec. 31, 1958.

SN 66,966. United States Rubber Company, New York, N.Y. Filed Feb. 2, 1959.

SPEEDSTER

For Tread Rubber for Retreading Tires.
First use Jan. 5, 1959.

SN 67,482. Sealol Corp., Providence, R.I. Filed Feb. 10, 1959.

SEALOL

For Mechanical Shaft Seals and Flexible Metallic Hose.
First use in August 1936.

Class 36—Musical Instruments and Supplies

SN 58,079. Decca Records, Inc., New York, N.Y. Filed Aug. 29, 1958.

STEREO MATCHMAKER

No exclusive right in the word "Stereo" is claimed as applied to the goods.

For Accessory Speaker or Amplifier Speaker for a Phonograph That Utilizes Mechanically Grooved Records.

First use Aug. 26, 1958.

SN 63,357. The Soundscriber Corporation, North Haven, Conn. Filed Nov. 28, 1958.

SOUND SCRIBER

The drawing is lined for green. Owner of Reg. Nos. 557,861, 631,664, and 653,704.

For Electric Sound Recording and Reproducing Machines, Records, and Parts Thereof for Dictation Purposes.

First use on or about Jan. 1, 1936.

SN 65,386. Synthetic Plastics Co., Newark, N.J. Filed Jan. 6, 1959.

PIROUETTE

For Mechanically Grooved Phonograph Records.
First use Dec. 22, 1958.

SN 65,543. Dr. Thomastik und Mitarbeiter Offene Handelsgesellschaft, Vienna, Austria. Filed Jan. 8, 1959.

SPIROCORE

For Strings for Musical Instruments.
First use Apr. 24, 1958; in commerce Sept. 20, 1958.

SN 65,691. Mary O'Neil, d.b.a. Deb Records, Providence, R.I. Filed Jan. 12, 1959.

DEB

For Phonograph Records.
First use Jan. 9, 1959.

SN 66,353. Georgian Recording Corporation, Park Ridge, Ill. Filed Jan. 23, 1959.

For Phonograph Records, Record Albums.
First use Sept. 7, 1958.

SN 66,926. Philco Corporation, Philadelphia, Pa. Filed Feb. 2, 1959.

STEREO-DORS

For High-Fidelity Recording Sets.
First use Dec. 23, 1958.

SN 66,989. American Stereophonic Society Inc., New York, N.Y. Filed Feb. 3, 1959.

PREXY

For Phonograph Records.
First use Dec. 22, 1958.

SN 66,990. American Stereophonic Society Inc., New York, N.Y. Filed Feb. 3, 1959.

HARVEST

For Phonograph Records.
First use Dec. 22, 1958.

SN 67,028. N. Stetson Company, Philadelphia, Pa. Filed Feb. 3, 1959.

N. STETSON CO.

For Pianos.
First use Oct. 23, 1957.

SN 67,197. Calico Records, Incorporated, Pittsburgh, Pa. Filed Feb. 6, 1959.

CALICO

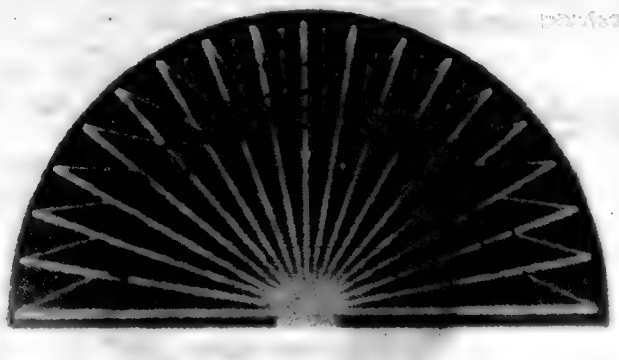
For Phonograph Records.
First use Oct. 20, 1958.

SN 67,323. Dial-A-Chord Corporation, Phoenix, Ariz. Filed Feb. 9, 1959.

DIAL-A-CHORD

For Chord Playing Attachment for Musical Instruments.
First use Jan. 10, 1959.

SN 67,620. The Listening Library, Inc., New York, N.Y. Filed Feb. 12, 1959.



For Phonograph Records.
First use Dec. 1, 1958.

Class 37—Paper and Stationery

SN 639. Vereinigte Papierwerke Schickedanz & Co., Nurnberg, Germany. Filed Dec. 2, 1958.

Owner of German Reg. No. 604,440, dated Jan. 25, 1951.
For Cellulose Wiping Sheets and Tissues, Cellulose Handkerchiefs, Cellulose Napkins, and Cellulose Mats.

SN 26,363. Koster, Dana & Barrell, Inc., New York, N.Y. Filed Mar. 18, 1957.

BANCALL KIT

Applicant disclaims the term "Kit" apart from the mark as shown.
For Envelope Type Folder With Specially Prepared Pockets for Sorting Out Banking Transactions.
First use Mar. 7, 1957.

SN 37,455. J. S. Staedtler, Nurnberg, Germany. Filed Sept. 18, 1957.

LUMOCHROM

Owner of U.S. Reg. No. 623,062.
For Pencils, Pens, Erasers, Penholders, Chalk, Crayons, and Non-Mechanical Pencil Sharpeners.
First use in 1953; in commerce in 1955.

SN 37,456. J. S. Staedtler, Nurnberg, Germany. Filed Sept. 18, 1957.

MARS-TECHNICO

Owner of U.S. Reg. No. 623,062.
For Pencils, Pens, Erasers, Penholders, Chalk, and Crayons.
First use in 1951; in commerce in 1952.

SN 45,224. Studley Paper Company, Inc., Far Rockaway, N.Y. Filed Feb. 3, 1958.

TRILOK

For Paper Bags.
First use in or about January 1957.

SN 53,848. Weber Costello Co., Chicago Heights, Ill. Filed June 18, 1958.

DOUBLE SEWED

Owner of Reg. No. 371,608.
For Blackboard Erasers.
First use on or about Jan. 1, 1915.

SN 54,645. Swanee Paper Corporation, New York, N.Y. Filed July 1, 1958.

BETTY LOU

For Facial Tissues.
First use June 16, 1958.

SN 54,647. Swanee Paper Corporation, New York, N.Y. Filed July 1, 1958.

BAMBI

For Facial Tissues.
First use June 16, 1958.

SN 54,649. Swanee Paper Corporation, New York, N.Y. Filed July 1, 1958.

DIANA

For Facial Tissues.
First use June 16, 1958.

SN 54,787. The Firm of John Dickinson Schneider, Inc., d.b.a. Franklin C. Hollister Co., Chicago, Ill. Filed July 3, 1958.

IDENT-A

Owner of Reg. No. 560,855.
For Cards for Use in Connection With Blood Specimens.
First use June 3, 1958.

SN 55,216. Birmingham Paper Company, Birmingham, Ala. Filed July 14, 1958.

BIRMINGHAM SCHOOL

Owner of Reg. No. 228,077.
For Writing Paper, Tablets, and Composition Books.
First use in 1900.

SN 56,545. Divenco, Fullerton, Calif. Filed Aug. 4, 1958.

TALKING PAPER

Applicant claims no exclusive rights in "Paper" as the name of the goods identified herein.
For Cross-Section Paper Used To Convey Dimensional Sketches, for Parts, Charts, Graphs, and Other Objects.
First use July 12, 1958.

SN 56,739. Shedd-Brown, Inc., Minneapolis, Minn. Filed Aug. 6, 1958.

FRIENDLY POINT

For Mechanical Pencils and Pens.
First use on or about January 1956.

SN 57,650. Standard Duplicating Machines Corporation, Everett, Mass. Filed Aug. 21, 1958.

THE GROWING ACHIEVEMENT IN FLUID DUPLICATING
Standard

Owner of Reg. Nos. 362,700, 622,161, and others.
For Master Paper and Copy Paper.
First use July 1, 1948; Aug. 16, 1937, as to "Standard."

SN 58,794. David Kahn, Inc., North Bergen, N.J. Filed Sept. 11, 1958.

Year-Round

Owner of Reg. No. 330,773.
For Ink Cartridges for Writing Instruments.
First use Jan. 15, 1947.

SN 60,108. The Champion Paper and Fibre Company, Hamilton, Ohio. Filed Oct. 6, 1958.

PANASET

Owner of Reg. No. 576,068.
For Printing Papers.
First use Mar. 21, 1958.

Class 38—Prints and Publications

SN 44,389. General Petroleum Corporation, Los Angeles, Calif. Filed Jan. 21, 1958.

WHEELING AND DEALING

ToBiAs
the Profit Prophet

The drawing is lined for red.
For Bulletins to Dealers in and Distributors of Automotive Supplies and Equipment.
First use on about July 1, 1957.

SN 55,561. Allegheny Ludlum Steel Corporation, Pittsburgh, Pa. Filed July 18, 1958.

TOOLING TALK

For House Organ Published From Time to Time.
First use in January 1958.

SN 63,936. Garden of Eve Publishing Corp., New York, N.Y. Filed Dec. 9, 1958.

MERMAID

For Magazine.
First use Sept. 26, 1958.

SN 63,937. Garden of Eve Publishing Corp., New York, N.Y. Filed Dec. 9, 1958.

VENUS

For Magazine.
First use Aug. 27, 1958.

SN 64,424. The Merrill Anderson Company, Inc., New York, N.Y. Filed Dec. 16, 1958.

LOOKING AHEAD

For Monthly Bulletin Concerned With Estates, Trusts, and Taxes.
First use in March 1954.

SN 65,654. William C. Felter, d.b.a. Skyline Publishers, Portland, Oreg. Filed Jan. 12, 1959.

PHARMINDEX

For Bi-Monthly Publication for the Distribution of Professional Product Information for Pharmacists.
First use Sept. 26, 1958.

SN 65,726. Tama, Inc., Chicago, Ill. Filed Jan. 12, 1959.

SPHERSCOPES

For Photographic Slides.
First use Dec. 17, 1958.

Class 39—Clothing

SN 24,756. Coleby Tailoring Company, Philadelphia, Pa. Filed Feb. 20, 1957.

Coleby

For Men's Suits, Slacks, Sport Jackets, Top Coats, Overcoats, and Rain Coats.
First use June 15, 1937.

SN 41,719. Sears, Roebuck and Co., Chicago, Ill. Filed Dec. 3, 1957.

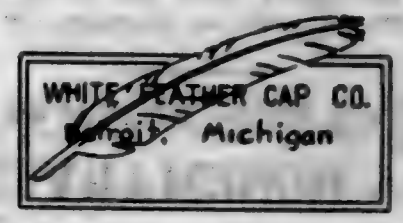
PERMA-SMOOTH

For Fabrics Sold in Finished Apparel—Namely, Men's, Women's, and Children's Shirts, Blouses, Slips, Pajamas, Dresses, and Skirts.
First use on or about Sept. 19, 1956.

SN 50,868. Bata Shoe Company, Inc., Belcamp, Md. Filed May 2, 1958.

For Slippers, Shoes, Socks, and Hosiery.
First use Mar. 13, 1958.

SN 55,766. White Feather Cap Company, Detroit, Mich. Filed July 21, 1958.



For Disposable Nurses' Caps.
First use July 18, 1956.

SN 56,263. Miller Bros. Hat Co. Inc., New York, N.Y. Filed July 29, 1958.

Bianchi

For Men's Hats.
First use Jan. 19, 1958.

SN 56,409. Phoenix Inc., New York, N.Y. Filed July 31, 1958.

'Slitewate

For Men's Suits, Slacks, and Jackets.
First use Apr. 14, 1957.

SN 56,410. Phoenix Inc., New York, N.Y. Filed July 31, 1958.

RARE'N LITE

For Men's Suits, Slacks, and Jackets.
First use May 1, 1957.

SN 57,730. Acme Hosiery Mills, Inc., Asheboro, N.C. Filed Aug. 25, 1958.

TEEN TALK

For Misses' Hosiery.
First use Aug. 4, 1958.

SN 59,231. Woventex, Inc., New York, N.Y. Filed Sept. 19, 1958.

Wovlon

For Ladies' Sweaters.
First use Aug. 26, 1958.

SN 60,397. Chadbourn Gotham, Inc., Charlotte, N.C. Filed Oct. 10, 1958.

tensionAir

For Hosiery, and in Particular Hosiery Having a Cushion Pad in the Foot Portion Thereof.
First use Aug. 28, 1958.

SN 60,477. Burberrys Limited, London, England. Filed Oct. 13, 1958.

BURBERRY BLUEBLOODS

Owner of U.S. Reg. Nos. 508,213, 510,077, and others.
For Men's and Ladies' Wool and Cotton Rainwear.
First use Oct. 10, 1958; in commerce Oct. 10, 1958.

SN 61,883. Wayne Knitting Mills, Fort Wayne, Ind. Filed Nov. 3, 1958.

ROSEMARY

For Women's Hosiery.
First use about Feb. 9, 1954.

SN 62,190. Kaydette Manufacturing Corporation, New York, N.Y. Filed Nov. 10, 1958.

KAYDETTE

Owner of Reg. Nos. 579,718 and 529,686.
For Ladies' and Children's Slips and Petticoats, Household Aprons, Garment Pockets, and Children's Swim Suits.
First use in March 1940.

SN 63,142. Wohl Shoe Company, St. Louis, Mo. Filed Nov. 24, 1958.

COLLEGESET

For Women's and Girls' Shoes.
First use on or before Aug. 1, 1947.

SN 63,404. Ballston Knitting Co., Inc., Ballston Spa, N.Y. Filed Dec. 1, 1958.

Applicant disclaims the word "Knit" apart from the mark as shown. The lining on the drawing is not intended to indicate color but is solely for the purpose of shading.
For Hosiery—Namely, Socks of Cotton, Wool and Mixtures Thereof in Combination With Synthetic Fibers, Wool and Wool-Mixed Work Socks, Hunting Socks, Athletic Socks and Loafers or Slipper Socks.
First use Mar. 1, 1924.

SN 64,245. Bear Brand Hosiery Co., Chicago, Ill. Filed Dec. 15, 1958.

CHESSMAN

For Men's Hosiery.
First use Sept. 24, 1958.

SN 64,582. Virginia Maid Hosiery Mills, Inc., Pulaski, Va. Filed Dec. 18, 1958.

COMMAND PERFORMANCE

For Ladies' Nylon Stockings.
First use Nov. 20, 1958.

SN 67,544. The Kendall Company, Walpole, Mass. Filed Feb. 11, 1959.

SORBANT

Owner of Reg. No. 297,453.
For Diapers.
First use Oct. 29, 1958.

Class 40—Fancy Goods, Furnishings, and Notions

SN 54,384. Continental Models, Inc., Brooklyn, N.Y. Filed June 27, 1958.

CONTI + Handicrafts

Applicant disclaims "Handicraft" apart from the mark as used.
For Kit Comprising Pieces of Felt, Embroidery Thread, Stuffing Material, Etc. for Making Toy Animal Figures.
First use Jan. 21, 1958.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 46,616. J. P. Stevens & Co. Inc., New York, N.Y., assignee of D. B. Fuller & Co. Inc., New York, N.Y. Filed Feb. 26, 1958.

QUAD

For Textile Fabrics in the Piece of Cotton.
First use Feb. 10, 1958.

SN 59,000. Mead & Montague, Inc., New York, N.Y. Filed Sept. 16, 1958.

MM

Owner of Reg. No. 804,252.
For Bedspreads and Drapery, Upholstery and Slipcover Fabrics.
First use July 13, 1943.

SN 63,763. Edward S. Shapiro, d.b.a. Abraham Shapiro & Son, New York, N.Y. Filed Dec. 5, 1958.

CHAPEREAUX

For Fabrics for Making Men's and Women's Skirts, Dresses, Suits, and Coats.
First use Oct. 6, 1958.

SN 63,834. Hockmeyer Bros. Inc., New York, N.Y. Filed Dec. 8, 1958.

KIDDY KORD

The word "Kord" is disclaimed apart from the mark as shown.
For Textile Fabrics in the Piece Composed of Corduroy.
First use Dec. 2, 1935.

SN 65,592. J. P. Stevens & Co., Inc., New York, N.Y. Filed Jan. 9, 1958.

MAGIC

Owner of Reg. No. 632,852.
For Cotton Sheets.
First use Dec. 1, 1958.

SN 67,476. John Ritzenthaler, New York, N.Y. Filed Feb. 10, 1959.

For Towels.
First use Dec. 15, 1958.

Class 43—Thread and Yarn

SN 58,155. Beaunit Mills, Inc., New York, N.Y. Filed Sept. 2, 1958.

For Thread or Yarn Having Randomly Disposed Colored Spots of Coating Material.
First use on or about Dec. 13, 1957.

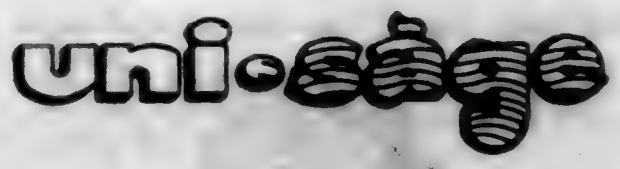
Class 44—Dental, Medical, and Surgical Appliances

SN 50,772. Leona W. Chalmers, New York, N.Y. Filed May 1, 1958.

TASSETTE

For Menstrual Cups.
First use in March 1935.

SN 68,092. Wahl Clipper Corporation, Sterling, Ill. Filed Feb. 19, 1959.



For Electric Vibrators.
First use Aug. 21, 1958.

Class 45—Soft Drinks and Carbonated Waters

SN 52,596. Seminole Flavor Company, Chattanooga, Tenn. Filed May 29, 1958.

DOUBLE-CHERRY

Owner of Reg. Nos. 359,889, 623,744, and others.
For Cherry-Flavored Syrups and Concentrates Used in the Manufacture of Carbonated Soft Drink Beverages.
First use Dec. 1, 1927.

Class 46—Foods and Ingredients of Foods

SN 690,703. The Great Western Sugar Company, Denver, Colo. Filed July 5, 1955.

No claim of exclusive right is made to "MSG" as used on monosodium glutamate. Owner of Reg. Nos. 561,343, 660,612, and others.
For Monosodium Glutamate, Used To Intensify the Natural Flavor of Foods.
First use Apr. 21, 1955.

SN 21,700. H. Kohnstamm & Co., Inc., New York, N.Y. Filed Dec. 27, 1956.

KOHNSTAMM

Owner of Reg. No. 545,255.
For Food Colors and Flavoring Extracts for Food Purposes.
First use as early as 1882.

SN 22,618. Interoceanic Commodities Corporation, Lakeville, Minn. Filed Jan. 15, 1957.

EXCELIN

For Linseed Oil Meal Concentrate Used as a Constituent of Stock Feed.
First use on or about Dec. 20, 1956.

SN 25,110. Naamloze Vennootschap Koninklijke Pellertij Mercurious Voorheen Gebroeders Laan, d.b.a. Royal Mills of Laan Bros. Ltd., Wormerveer, Netherlands. Filed Feb. 26, 1957.

For Breakfast Cereals, Including Popped Cereals; Semolina; Pudding Powder; Dessert Cereals and Cereal Flakes, Including Corn Flakes; Infant and Dietetic Foods Made From Cereal and/or Milk Powder With or Without Vitamins, and/or Minerals Added; Milk Powder; Evaporated Milk and Condensed Milk; Vitamized Yeast; Cereal Grains for Human Use, Including Rice and Pearl Barley; and Ice Cream Mixpowder.
First use Jan. 23, 1954; in commerce Aug. 9, 1954.

SN 26,467. King Candy Company, d.b.a. Southern Candy Company, Fort Worth, Tex. Filed Mar. 19, 1957.

TEXAS BRAGS

For Candies.
First use Sept. 27, 1954.

SN 30,658. H. J. Heinz Company, Pittsburgh, Pa. Filed May 24, 1957.

KRINK-L-CHIPS

For Pickle Slices.
First use Jan. 7, 1957.

SN 36,230. River Brand Rice Mills, Inc., New York, N.Y. Filed Aug. 26, 1957.

Tasty RICE

No claim of exclusive right is made to the word "Rice," such word being the name of the goods.
For Rice.
First use Nov. 6, 1926.

SN 43,979. Southern Canning Sales, Inc., Highlands, Tex. Filed Jan. 14, 1958.

WORLD OVER

For Canned Vegetables and Canned Fruits, Tomato Sauce, Canned Pork and Beans.
First use January 1923.

SN 56,796. The Rapp-Ramsey Company, Shenandoah, Iowa. Filed Aug. 7, 1958.

BITA VITA

Owner of Reg. No. 576,507.
For Vitamin Enriched Cookies.
First use July 10, 1958.

SN 57,190. Buitoni Foods Corporation, South Hackensack, N.J. Filed Aug. 14, 1958.

N°5

For Sauce To Be Used Upon All Types of Pasta Including Macaroni and Spaghetti.
First use July 17, 1957.

SN 57,399. Mutual Citrus Products Company, Anaheim, Calif. Filed Aug. 18, 1958.

No claim of exclusive right is made to the word "Lemonade" as used on frozen concentrated lemonade.
For Frozen Concentrated Lemonade.
First use Mar. 4, 1958.

SN 58,268. Sunshine Packing Corporation of Pennsylvania, North East, Pa. Filed Sept. 2, 1958.

SUNSHINE

For Frozen Fruits and Frozen Fruit Juices.
First use 1908.

SN 58,784. Falls City Creamery Company, Falls City, Nebr. Filed Sept. 11, 1958.

NEMAHA

Owner of Reg. No. 366,156.
For Dressed Frozen Poultry and Fresh and Frozen Eggs.
First use Oct. 25, 1925.

SN 59,578. R. B. Van Blaricom, d.b.a. The California Redi-date Company, Coachella, Calif. Filed Sept. 25, 1958.

REDI-DATES

For Dates, Date Pieces, Date Bits, and Macerated Dates.
First use Sept. 9, 1957.

SN 59,586. The Garin Company, Salinas, Calif. Filed Sept. 22, 1958.

For Fresh Vegetables.
First use Aug. 26, 1958.

SN 59,630. La Pesquera del Norte de Espana, S.A., Corunna, Spain. Filed Sept. 26, 1958.

FESTIVAL

Owner of Spanish Reg. No. 325,956, dated Oct. 29, 1957.
For Canned Olives Stuffed With Anchovies.

SN 59,956. "Uncle Ben's, Inc.," Houston, Tex., by change of name from Converted Rice, Inc., Houston, Tex. Filed Oct. 2, 1958.

AMERICAN MUZZA

For Rice.
First use Aug. 1, 1958.

SN 62,860. Imperial Chemical Industries Limited, London, England. Filed Nov. 20, 1958.

EDIFAS

For Vegetable Derivatives for Use in Food Manufacturing Processes and as Ingredients in Food, as Binding, Stabilizing, and Emulsifying Agents.
First use Nov. 26, 1948; in commerce Sept. 18, 1953.

SN 63,520. The Borden Company, New York, N.Y. Filed Dec. 2, 1958.

COLONIAL

For Mince Meat.
First use September 1934.

SN 63,577. Eastern States Farmers' Exchange, Incorporated, West Springfield, Mass. Filed Dec. 3, 1958.

ALFAPELS

For Livestock Feed.
First use Oct. 11, 1958.

SN 64,561. Priebe & Sons, Inc., Chicago, Ill. Filed Dec. 18, 1958.

THE COUNTRY SQUIRE'S

For Fresh Eggs and Frozen Poultry.
First use 1948.

SN 64,855. Roper Growers Cooperative, Winter Garden, Fla. Filed Dec. 22, 1958.

Applicant disclaims the word "Brand."
For Fresh Citrus Fruits and Vegetables.
First use Dec. 14, 1927.

SN 65,332. Ready White, Inc., Washington, D.C. Filed Jan. 5, 1958.

READY WHITE

Applicant disclaims the word "White" apart from the mark as shown.
For Packaged Fresh Fruits and Packaged Fresh Vegetables—Namely, Apples and Potatoes, in Peeled Form.
First use Apr. 22, 1954.

SN 66,263. H. S. Onellion, d.b.a. Onellion Coffee Co., San Francisco, Calif. Filed Jan. 21, 1959.

V.I.P.

For Coffee.
First use Sept. 10, 1958.

SN 66,373. Charles P. Rudd, d.b.a. Charles P. Rudd Company, Salt Lake City, Utah. Filed Jan. 23, 1959.

UTE

For Dressed Poultry.
First use Nov. 26, 1956.

SN 66,413. Chula Vista Farms, National City, Calif. Filed Jan. 26, 1959.

TAB

For Fresh Vegetables.
First use Dec. 27, 1958.

Class 47—Wines

SN 65,305. E. & J. Gallo Winery, Modesto, Calif. Filed Jan. 5, 1958.

TRIPLE JACK

For Wines.
First use Dec. 12, 1958.

Class 49—Distilled Alcoholic Liquors

SN 60,338. Barton Distilling Company, d.b.a. Kentucky Gentleman Distillery, Chicago, Ill. Filed Oct. 9, 1958.

KENTUCKY GENTLEMAN

Applicant asserts exclusive right in the word "Kentucky" only in combination with the word "Gentleman."
For Whiskey.
First use in November 1949.

SN 65,658. Foreign Vintages, Inc., New York, N.Y. Filed Jan. 12, 1959.

ROYAL SCOTT

For Scotch Whisky.
First use Feb. 17, 1958.

SN 66,101. Schenley Distillers, Inc., New York, N.Y. Filed Jan. 19, 1959.

ROYAL SERVICE

For Straight Bourbon Whiskey.
First use Dec. 17, 1958.

Class 50—Merchandise Not Otherwise Classified

SN 45,634. The Ullman Company, Inc., Brooklyn, N.Y. Filed Feb. 10, 1958.

Princess PLASTI-FOAMATS

For Plastic Place Mats.
First use Jan. 21, 1958.

SN 66,754. Shade Pulls, Inc., Chicago, Ill. Filed Jan. 29, 1959.

JUBILEE TOASTETTES

For Novelty Combined Plastic Drinking Goblet and Candlestick Holder for Use in Decorating Cakes and the Like.
First use Dec. 15, 1958.

Class 51—Cosmetics and Toilet Preparations

SN 54,560. Revlon, Inc., New York, N.Y. Filed June 30, 1958.

AQUAMARINE

Owner of Reg. No. 539,769.
For Toilet Water, Face and Body Powders, Personal Body Deodorants, and Cosmetic Skin Lotions.
First use Apr. 1, 1946.

SN 56,490. Harper Method, Inc., Rochester, N.Y. Filed Aug. 1, 1958.

HARPERCOLD

Owner of Reg. Nos. 622,818 and 550,950.
For Permanent Liquid Waving Solution.
First use November 1943.

SN 60,297. Marie-Francoise Masciet, d.b.a. Francesca Masciet, d.b.a. Francesca Masciet, Paris, France. Filed Oct. 8, 1958.

SUPER FACE MODELAGE FRANCESCA MASCLET

The word "Modelage" is a French word translated as "Modeling." Owner of French Reg. No. 396,258, dated Aug. 19, 1949 (Seine); Natl. Inst. No. 456,464.
For Perfume and Cosmetics—Namely, Face Powder, Face Rouge, Lipstick, Cold Creams, Mascara, Nail Polish, Hand Cream, Face Lotion, Hair Lotion, Tooth paste, and Tooth Powder.

SN 60,329. Yardley of London, Inc., d.b.a. Yardley, Union City, N.J. Filed Oct. 8, 1958.

JETSTREAM

For Pre-Shave Lotion for Electric Shaving.
First use Sept. 11, 1958.

SN 63,045. Haviland Laboratories, Inc., d.b.a. Ann Haviland, New York, N.Y. Filed Nov. 24, 1958.

FLEURS DE NOEL

The mark "Fleurs de Noel" is of French origin and means "Noel flowers" or "Christmas flowers."
For Perfumes and Toilet Water.
First use Nov. 15, 1958.

SN 63,331. Anton J. Martinek, d.b.a. Pasquire, New York, N.Y. Filed Nov. 28, 1958.

PERMA GLO

For Hair Pomade.
First use January 1954.

SN 65,110. Lovable Cosmetics Inc., Atlanta, Ga. Filed Dec. 30, 1958.

Lovable

For Perfume.
First use Dec. 11, 1958.

Class 52—Detergents and Soaps

SN 46,276. John H. Breck, Inc., Springfield, Mass. Filed Feb. 21, 1958.

Festoon

For Hair Shampoos.
First use Jan. 6, 1958.

SN 50,793. Hagan Chemicals & Controls Inc., Pittsburgh, Pa. Filed May 1, 1958.

SPINDRIFT

For Detergent for Washing Pots and Pans and for General Cleaning Purposes.
First use Mar. 26, 1958.

SN 58,206. Roy F. Kaple, d.b.a. Kap-A-Ble Products Company, San Diego, Calif. Filed Sept. 2, 1958.

KAP-A-BLE

For Glass Cleaner in Crystal Form.
First use Aug. 16, 1958.

SN 65,175. Zep Manufacturing Corporation, Atlanta, Ga. Filed Dec. 31, 1958.

ZEP

For Sweeping, Scouring, Cleansing, Degreasing, and Washing Compounds, Wax Removing Preparations for Floors, and Dishwashing Detergent Preparation.
First use Jan. 1, 1937.

SN 65,190. Zep Manufacturing Corporation, Atlanta, Ga. Filed Dec. 31, 1958.

ZEP-O-WHITE

For Cleaning Composition for White Sidewall Tires.
First use March 1951.

SN 65,196. Zep Manufacturing Corporation, Atlanta, Ga. Filed Dec. 31, 1958.

ZEP-D-LUXE

For Liquid Hand Soap.
First use March 1954.

SN 65,197. Zep Manufacturing Corporation, Atlanta, Ga. Filed Dec. 31, 1958.

ZEPOLAN

For Lanolated Hand Cleansing Preparation.
First use in March 1958.

SN 65,199. Zep Manufacturing Corporation, Atlanta, Ga. Filed Dec. 31, 1958.

ZEP-I-DINE 30

For Cleaning Preparations Having Incidental Sanitizing Properties.
First use March 1958.

SN 65,200. Zep Manufacturing Corporation, Atlanta, Ga. Filed Dec. 31, 1958.

ZEP-O-BRITE

For Scouring Cleansers.
First use March 1955.

SN 65,202. Zep Manufacturing Corporation, Atlanta, Ga. Filed Dec. 31, 1958.

ZEP-O-KREME

For Liquifying Hand Cleansing Preparation.
First use March 1952.

SN 65,206. Zep Manufacturing Corporation, Atlanta, Ga. Filed Dec. 31, 1958.

ZEP-O-SAN

For Toilet Bowl and Urinal Cleaning Preparation Having Incidental Deodorising and Disinfecting Properties.
First use March 1954.

SN 66,853. Columbia Wax Company, Glendale, Calif. Filed Feb. 2, 1959.

PREPARE

For Mild Cleanser With Detergent Properties for Floors.
First use Feb. 15, 1956.

SN 67,515. John H. Breck, Inc., Springfield, Mass. Filed Feb. 11, 1959.

MAIDEN FAIR

For Cream Shampoos.
First use Jan. 27, 1959.

SN 67,517. John H. Breck, Inc., Springfield, Mass. Filed Feb. 11, 1959.

YOUNG & GAY

For Cream Shampoos.
First use Jan. 24, 1959.

SN 67,518. John H. Breck, Inc., Springfield, Mass. Filed Feb. 11, 1959.

BEAUTY MATE

For Cream Shampoos.
First use Jan. 27, 1959.

SERVICE MARKS

Class 100—Miscellaneous

SN 31,931. Al Kane Productions, Inc., d.b.a. Al Kane Productions Incorporated, Philadelphia, Pa. Filed June 18, 1957.

VIDEO-LECTRONIC

For Motion Picture Producing Service for Others.
First use May 18, 1957.

SN 39,529. Intercontinental Hotels Corporation, New York, N.Y. Filed Oct. 25, 1957.

INTERCONTINENTAL HOTELS

Owner of Reg. No. 560,641.
For Hotel Development Services—Namely, Consultation Advice in the Planning, Equipping, and Decorating of New Hotels in Countries Foreign to the United States, and Operating and Managing Such Hotels.
First use Apr. 15, 1957.

Class 101—Advertising and Business

SN 41,627. F. W. Dodge Corporation, New York, N.Y. Filed Dec. 2, 1957.

SWEET'S

Owner of Reg. No. 246,960.

For Services Rendered to Manufacturers—Namely, the Design and Production of Manufacturers' Product Catalogs, the Pre-Filing of Such Catalogs in Bound Volume Collections, the Distribution of Such Collections to Specifiers and Buyers, and the Maintenance of Such Collections on a Current Basis.

First use 1906.

SN 41,628. F. W. Dodge Corporation, New York, N.Y. Filed Dec. 2, 1957.

Owner of Reg. No. 515,448.

For Services Rendered to Manufacturers—Namely, the Design and Production of Manufacturers' Product Catalogs, the Pre-Filing of Such Catalogs in Bound Volume Collections, the Distribution of Such Collections to Specifiers and Buyers, and the Maintenance of Such Collections on a Current Basis.

First use Feb. 3, 1943.

Class 105—Transportation and Storage

SN 37,931. National Truck Leasing Association, Chicago, Ill., assignee of National Truck Leasing System, Inc., Chicago, Ill. Filed Sept. 19, 1957. COLLECTIVE MARK. Assignee owner of Reg. No. 547,317.

NATIONAL

For Leasing of Trucks.

First use Apr. 1, 1945.

SN 44,766. Abraham Stein, d.b.a. Glass Dome Tours, New York, N.Y. Filed Jan. 27, 1958.

FRIENDLY

For Operating Package Tours and Sightseeing Tours.

First use Jan. 8, 1958.

SN 66,161. Northeast Airlines, Inc., Boston, Mass. Filed Jan. 20, 1959.

NE

For Transportation by Air of Persons, Property, and Mail.

First use on or before Mar. 25, 1958.

Class 106—Material Treatment

SN 58,631. Indian Head Mills, Inc., Boston, Mass. Filed Sept. 9, 1958.

Owner of Reg. Nos. 44,597, 646,550, and others.

For Services Consisting of Imparting a Special Finish to the Fabrics of Others.

First use July 31, 1958.

SN 64,060. Fas-Dri Corp., New York, N.Y. Filed Dec. 11, 1958.

CHLOR-BAN

For Strengthening and Stabilizing Textile Fabrics of Others, and Applying a Water, Stain, Crease Resistant and Non-Chlorine Retentive Finish Thereto.

First use June 17, 1958.

Class 107—Education and Entertainment

SN 39,439. Lucio Cristiani, Sarasota, Fla. Filed Oct. 17, 1957.

CRISTIANI BROS.

For Entertainment in the Form of a Circus.

First use 1934.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 13,926. National Guard Association of the United States, Washington, D.C. Filed Aug. 14, 1956.

For Indicating Membership in Applicant Association.

First use Oct. 15, 1944.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

681,637. BURPEE SEEDS GROW. W. Atlee Burpee Company. SN 45,370. Pub. 4–28–59. Filed 2–6–58.

681,638. BAVONISERAD. The Battelle Development Corporation. SN 52,673. Pub. 4–28–59. Filed 6–2–58.

Class 4—Abrasives and Polishing Materials

681,639. PG. Minnesota Mining and Manufacturing Company. SN 61,579. Pub. 4–28–59. Filed 10–29–58.

681,640. C-EM-SHINE. St. Lawrence Chemical Company, Inc. SN 62,333. Pub. 4–28–59. Filed 11–12–58.

681,641. HY CHROME. Hysan Products Company. SN 62,464. Pub. 4–28–59. Filed 11–14–58.

681,642. SANDWET. Sandpaper Incorporated. SN 62,620. Pub. 4–28–59. Filed 11–17–58.

Class 5—Adhesives

681,643. GROTESQUE FIGURE OF MAN. Elgen Manufacturing Corporation. SN 62,072. Pub. 4–28–59. Filed 11–7–58.

Class 6—Chemicals and Chemical Compositions

681,644. "STABILOID." Stabiloid, Inc. SN 37,915. Pub. 4–28–59. Filed 9–26–57.

681,645. CYPREX. American Cyanamid Company. SN 40,735. Pub. 4–28–59. Filed 11–15–57.

681,646. POWERLITH AND DESIGN. Chemco Photoproducts Company, Inc. SN 46,601. Pub. 4–28–59. Filed 2–26–58.

681,647. BITE ME NOT. David M. Lenger, d.b.a. Arienge Laboratories. SN 47,506. Pub. 4–28–59. Filed 3–11–58.

681,648. OHIO AND DESIGN. Air Reduction Company, Incorporated. SN 47,990. Pub. 4–28–59. Filed 3–19–58.

681,649. TROPIGAS AND DESIGN. Tropical Gas Company, Inc. SN 48,514. Pub. 4–28–59. Filed 3–26–58.

681,650. SWAT KILL. Hayes-Sammons Chemical Co. SN 49,692. Pub. 4–28–59. Filed 4–15–58.

681,651. MTDA. W. R. Grace & Co. SN 49,927. Pub. 4–28–59. Filed 4–18–58.

681,652. BUSAN. Buckman Laboratories, Inc. SN 53,696. Pub. 4–28–59. Filed 6–17–58.

681,653. ADAKANE. Archer-Daniels-Midland Company. SN 55,633. Pub. 4–28–59. Filed 7–21–58.

681,654. CHEMIFAT. Archer-Daniels-Midland Company. SN 55,634. Pub. 4–28–59. Filed 7–21–58.

681,655. UNION CARBIDE NUCLEAR AND DESIGN. Union Carbide Corporation. SN 55,955. Pub. 4–28–59. Filed 7–24–58.

681,656. DY-Q-PLEX. Henry Bower Chemical Manufacturing Co. SN 56,756. Pub. 4–28–59. Filed 8–7–58.

681,657. BORANIUM AND DESIGN. Fred E. Smith, d.b.a. Boranium Products. SN 57,575. Pub. 4–28–59. Filed 8–20–58.

681,658. AIRKEM A AND REPRESENTATION OF RETORT. Airkem, Inc. SN 57,993. Pub. 4–28–59. Filed 8–28–58.

681,659. CYANOGUM. American Cyanamid Company. SN 58,770. Pub. 3–24–59. Filed 9–11–58.

681,660. CON-O-KELL. Elastisell Corporation of America. SN 58,843. Pub. 4–28–59. Filed 9–12–58.

681,661. ELCIDE 75. Eli Lilly and Company. SN 59,156. Pub. 4–28–59. Filed 9–18–58.

681,662. 7–11. Cenol Company, Inc. SN 60,107. Pub. 4–28–59. Filed 10–6–58.

681,663. MIRALLOID. A. E. Staley Manufacturing Company. SN 60,374. Pub. 4–28–59. Filed 10–9–58.

681,664. ARIZOLE. Arizona Chemical Company. SN 61,471. Pub. 4–28–59. Filed 10–28–58.

Class 9—Explosives, Firearms, Equipments, and Projectiles

681,665. STORM KING. Harvey B. Anderson, d.b.a. The Anderson Gun Shop. SN 50,668. Pub. 4–28–59. Filed 4–30–58.

Class 12—Construction Materials

681,666. PERL-CRETE. Zonolite Company. SN 46,182. Pub. 4–28–59. Filed 2–19–58.

681,667. PERL-AG. Zonolite Company. SN 46,183. Pub. 4–28–59. Filed 2–19–58.

681,668. B-W INGERSOLL PRODUCTS ETC. AND DESIGN. Borg-Warner Corporation. SN 48,697. Pub. 4–28–59. Filed 3–31–58.

681,669. HIGHLANDER AND DESIGN. Miami Window Corporation. SN 51,361. Pub. 4–28–59. Filed 5–9–58.

681,670. LITE-LINE. Pacific Specialties. SN 51,449. Pub. 4–28–59. Filed 5–12–58.

681,671. ING-RICH. Ingram-Richardson Manufacturing Company. SN 52,575. Pub. 4–28–59. Filed 5–29–58.

681,672. TM. Textron Industries, Inc., d.b.a. Textron Metals Company. SN 52,987. Pub. 4–28–59. Filed 6–5–58.

681,673. TEXTRON TM METALS. Textron Industries, Inc., d.b.a. Textron Metals Company. SN 54,271. Pub. 4–28–59. Filed 6–25–58.

681,674. DUR-A-COTE. The Marietta Concrete Corporation. SN 55,861. Pub. 3–31–59. Filed 7–23–58.

681,675. DURIBBON. Pittsburgh Plate Glass Company. SN 56,411. Pub. 4–28–59. Filed 7–31–58.

681,676. SUPERBILT. Bird & Son, Inc. SN 58,288. Pub. 4–28–59. Filed 9–3–58.

681,677. MELTZONA. Denoho Foundry Co. SN 59,700. Pub. 4–28–59. Filed 9–29–58.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

681,678. DESIGN OF RED RING ON PIPE FITTING. Bell & Gossett Company. SN 40,310. Pub. 4–28–59. Filed 11–8–57.

681,679. GEOMETRICAL DESIGN. Standard Screw Company. SN 45,286. Pub. 4–28–59. Filed 2–4–58.

681,680. SUPREME. Berkeley Industries, d.b.a. New Jersey Wire Goods Company. SN 55,110. Pub. 4–28–59. Filed 7–11–58.

681,681. PERMANENT AND DESIGN. U.S. Industries, Inc. SN 56,816. Pub. 4–28–59. Filed 8–7–58.

681,682. LITE-LOK. The South Chester Corporation. SN 57,649. Pub. 4–28–59. Filed 8–21–58.

681,683. VARI-PORT. Eclipse Fuel Engineering Co. SN 59,177. Pub. 4–28–59. Filed 9–19–58.

681,684. CONDOR PERFECT. S.A. Eteco (European Overseas Trading Company). SN 59,841. Pub. 4–28–59. Filed 9–22–58.

681,685. SWIVEL-T. Scovill Manufacturing Company. SN 59,646. Pub. 4–28–59. Filed 9–26–58.

681,686. PAN AMERICAN SCREW AND DESIGN. Pan American Screw Corporation. SN 60,361. Pub. 4–28–59. Filed 10–9–58.

681,687. VERSA-TILE. Universal-Rundle Corporation. SN 61,601. Pub. 4–28–59. Filed 10–29–58.

681,688. SWIRL. Parker Products Company. SN 62,034. Pub. 4–28–59. Filed 11–6–58.

681,689. HORN OF PLENTY. Ajax Hardware Manufacturing Corporation. SN 62,054. Pub. 4–28–59. Filed 11–7–58.

681,690. MIST-ER. Bete Fog Nozzle, Inc. SN 62,367. Pub. 4–28–59. Filed 11–13–58.

681,691. SSS. Star Expansion Company. SN 63,187. Pub. 4–28–59. Filed 11–25–58.

681,692. EVERGOLD. Consolidated Trimming Corporation. SN 63,295. Pub. 4–28–59. Filed 11–28–58.

Class 14 — Metals and Metal Castings and Forgings

681,693. VITAMET. Frankel Co., Inc. SN 7,786. Pub. 9–25–56. Filed 5–7–56.

681,694. DYNAFLEX. Latrobe Steel Company. SN 44,626. Pub. 4–28–59. Filed 1–24–58.

681,695. UNIMESH. J. Bishop & Company Platinum Works. SN 57,670. Pub. 4–28–59. Filed 8–22–58.

Class 15 — Oils and Greases

681,696. HARAL CARE AND DESIGN. Haral Corporation, assignee of Harold H. Wigen, d.b.a. Haral Company. SN 18,384. Pub. 4–28–59. Filed 10–29–56.

681,697. SIL-GLYDE. American Grease Stick Company. SN 36,497. Pub. 4–28–58. Filed 8–30–57.

681,698. POWER PUNCH. Clinton H. Morey, d.b.a. Power Punch Products. SN 61,650. Pub. 4–28–59. Filed 10–30–58.

681,699. WIKIT. Callaway Mills Company. SN 61,900. Pub. 4–28–59. Filed 11–4–58.

681,700. CHA-Z-LUBE. The Pennsoil Company. SN 61,964. Pub. 4–28–59. Filed 11–5–58.

Class 18 — Medicines and Pharmaceutical Preparations

681,701. DPS ETC. AND DESIGN. Norman Dartell, d.b.a. Dartell Laboratories. SN 38,336. Pub. 4–28–59. Filed 7–8–57.

681,702. KAMINOMOTO. Kaminomoto Co. Ltd. SN 39,641. Pub. 4–28–59. Filed 10–28–57.

681,703. ADAMS'. Kittie Petersen, d.b.a. Charles L. Adams Medicine Co. SN 39,987. Pub. 4–28–59. Filed 11–1–57.

681,704. IT'S THE FINISH THAT COUNTS. Dr. Macdonald's Vitamized Feed Company, Inc. SN 40,354. Pub. 4–28–59. Filed 11–8–57.

681,705. HELIODINE. S. B. Penick and Company. SN 40,603. Pub. 4–28–59. Filed 11–13–57.

681,706. FOOT MAGIC. Meyer Magid, d.b.a. The Magidis Co. SN 42,892. Pub. 4–28–59. Filed 12–23–57.

681,707. ALKERAN. Burroughs Wellcome & Co. (U.S.A.) Inc. SN 44,689. Pub. 7–8–58. Filed 1–27–58.

681,708. VITA-VEEPS. Lakeshore Pharmaceutical Co. SN 46,532. Pub. 4–28–59. Filed 2–25–58.

681,709. FUNGACIDIN-PF. The G. F. Harvey Company, Inc., assignee of The Purdue Frederick Company. SN 47,428. Pub. 4–28–59. Filed 3–10–58.

681,710. INFA-DIGIN. Merit Pharmaceutical Co., Inc. SN 48,086. Pub. 4–28–59. Filed 3–19–58.

681,711. ACHROSORB. American Cyanamid Company. SN 49,403. Pub. 4–28–59. Filed 4–10–58.

681,712. MY-T-CAPS. Imperial Drug Exchange Inc., d.b.a. New York Drug Concern. SN 49,936. Pub. 4–28–59. Filed 4–18–58.

681,713. HYPACOME. Sandoz, Inc. SN 50,927. Pub. 4–28–59. Filed 5–2–58.

681,714. KUDROX. Kremers-Urban Company. SN 51,029. Pub. 4–28–59. Filed 5–5–58.

681,715. HYDAN. E. I. du Pont de Nemours and Company. SN 54,988. Pub. 4–28–59. Filed 7–9–58.

681,716. BLENDON. Derma Products, Inc. SN 55,558. Pub. 4–28–59. Filed 7–7–58.

681,717. SCANDOCAIN. Aktiebolaget Bofors. SN 56,072. Pub. 1–27–59. Filed 7–28–58.

681,718. PHORAC. Sterling Drug Inc. SN 56,277. Pub. 2–3–59. Filed 7–29–58.

681,719. DEBRICIN. Johnson & Johnson. SN 58,862. Pub. 4–28–59. Filed 9–12–58.

681,720. ALLERCUR. Schering Aktiengesellschaft. SN 58,958. Pub. 4–28–59. Filed 9–15–58.

681,721. PYELOKON-R. Mallinckrodt Chemical Works. SN 59,311. Pub. 4–28–59. Filed 9–22–58.

681,722. CLARIMACIN. The Merritt Corporation. SN 59,587. Pub. 4–28–59. Filed 9–18–58.

681,723. TIGUVON. Farbenfabriken Bayer Aktiengesellschaft. SN 59,817. Pub. 4–28–59. Filed 9–30–58.

681,724. BENTYL. The Wm. S. Merrell Company. SN 59,832. Pub. 4–28–59. Filed 9–30–58.

681,725. BEEF-GLO. F. I. Reiners, d.b.a. Dairy Service Associates. SN 59,987. Pub. 4–28–59. Filed 10–2–58.

681,726. SEPTI-PAK. Stansbury Chemical Company. SN 60,001. Pub. 4–28–59. Filed 10–2–58.

681,727. TANCAP. The Upjohn Company (Delaware corporation), assignee of The Upjohn Company (Michigan corporation). SN 60,063. Pub. 4–28–59. Filed 10–3–58.

681,728. MYCIFRADIN N. The Upjohn Company (Delaware corporation), assignee of The Upjohn Company (Michigan corporation). SN 60,065. Pub. 4–28–59. Filed 10–3–58.

681,729. ABUNDALEAN. Abundavita Corporation of America. SN 60,075. Pub. 4–28–59. Filed 10–6–58.

681,730. TRAVAMUL. Baxter Laboratories, Inc. SN 60,088. Pub. 4–28–59. Filed 10–6–58.

681,731. CHYLOCAL. Baxter Laboratories, Inc. SN 60,089. Pub. 4–28–59. Filed 10–6–58.

681,732. EDITH REHNBORG. Nutrilite Products, Inc. SN 60,302. Pub. 4–28–59. Filed 10–8–58.

681,733. PLESMET. Nordson Pharmaceutical Laboratories, Inc. SN 60,622. Pub. 4–28–59. Filed 10–14–58.

681,734. SOROPON. The Purdue Frederick Company. SN 60,628. Pub. 4–28–59. Filed 10–14–58.

681,735. CHAP-ET. Stanback Company, Ltd. SN 60,639. Pub. 4–28–59. Filed 10–14–58.

Class 19 — Vehicles

681,736. FREDS HANDI-KART AND DESIGN. Fred N. Setterdahl. SN 56,594. Pub. 4–28–59. Filed 8–4–58.

681,737. Z-BOAT. Jay V. Zimmerman, d.b.a. Jay V. Zimmerman Co. SN 60,070. Pub. 4–28–59. Filed 10–3–58.

Class 21—Electrical Apparatus, Machines, and Supplies

681,738. NAVIGUIDE AND DESIGN. The United States Naviguide Corporation. SN 26,410. Pub. 4–28–59. Filed 3–18–57.

681,739. LT AND DESIGN. Lek Trol, Inc. SN 30,095. Pub. 4–28–59. Filed 5–15–57.

681,740. FEDERAL PACIFIC. Federal Pacific Electric Company. SN 34,230. Pub. 4–28–59. Filed 8–28–57.

681,741. ELEMELT. Elemelt Limited. SN 37,871. Pub. 4–28–59. Filed 9–26–57.

681,742. (88). Sperry Rand Corporation. SN 42,736. Pub. 2–10–59. Filed 12–19–57.

681,743. REVOX. Willi Studer. SN 44,934. Pub. 4–28–59. Filed 1–29–58.

681,744. MERCEDES-BENZ. Daimler-Benz Aktiengesellschaft. SN 45,142. Pub. 4–28–59. Filed 2–3–58.

681,745. WIRELESS ELECTRONIC NURSE. Mark Simpson Manufacturing Co. Inc. SN 45,351. Pub. 4–28–59. Filed 2–5–58.

681,746. AUTOGAP. Warner Electric Brake & Clutch Company. SN 46,678. Pub. 4–28–59. Filed 2–26–58.

681,747. POLYOPTIC AND DESIGN. The Polyoptic Corporation, assignee of John Allan Studios. SN 46,868. Pub. 4–28–59. Filed 3–3–58.

681,748. FAN MASTER AND DESIGN. Liberty Distributors Group. SN 47,166. COLLECTIVE MARK. Pub. 4–28–59. Filed 2–13–58.

681,749. DB DAVID BRADLEY. Sears, Roebuck and Co. SN 50,407. Pub. 4–28–59. Filed 4–25–58.

681,750. SPARTON. Sparton Corporation. SN 50,413. Pub. 4–28–59. Filed 4–25–58.

681,751. ALTIMATIC AND DESIGN. Air-Marine Motors, Inc. SN 51,604. Pub. 4–28–59. Filed 5–14–58.

681,752. LOK-MATIC. The Ward Products Corporation. SN 52,180. Pub. 4–28–59. Filed 5–22–58.

681,753. MONITRON. Sperry Products, Inc. SN 52,775. Pub. 4–28–59. Filed 6–2–58.

681,754. K KIDDE AND DESIGN. Kidde Ultrasonic & Detection Alarms, Inc., assignee of Walter Kidde & Company, Inc. SN 54,409. Pub. 4–28–59. Filed 8–27–58.

681,755. MAG-EYE AND DESIGN. Square D Company. SN 54,643. Pub. 4–28–59. Filed 7–1–58.

681,756. MINI/VERSAL. Abe Secofsky, d.b.a. Mayfair Manufacturing Company. SN 54,896. Pub. 4–28–59. Filed 7–7–58.

681,757. TUNG-SOL. Tung-Sol Electric Inc. SN 55,036. Pub. 4–28–59. Filed 7–9–58.

681,758. RACAL. Racal Engineering Limited. SN 55,720. Pub. 4–28–59. Filed 7–21–58.

681,759. PIPS. Utah Radio Products Corporation. SN 55,817. Pub. 4–28–59. Filed 7–22–58.

681,760. CLIMATIC. Vitalic Battery Company, Inc. SN 56,603. Pub. 4–28–59. Filed 9–8–58.

681,761. SWIRLY. Bowers Battery and Spark Plug Co., assignee of Samuel Campanell, d.b.a. Swirly Safety Lite Company. SN 56,830. Pub. 5–24–59. Filed 9–12–58.

681,762. MUSIC STAFF WITH C SHARP AND DESIGN. Klemark, Inc. SN 59,469. Pub. 4–28–59. Filed 9–24–58.

681,763. PLYMOUTH. Plymouth Rubber Company, Inc. SN 60,365. Pub. 4–28–59. Filed 10–9–58.

681,764. POW-R-VUE AND DESIGN. D & H Distributing Company, Inc. SN 61,789. Pub. 4–28–59. Filed 11–3–58.

681,765. AMBASSADOR. Allied Stores Corporation. SN 62,144. Pub. 4–28–59. Filed 11–10–58.

681,766. SNOWBRITE. Supro Lux Manufacturing Co., Inc. SN 62,235. Pub. 4–28–59. Filed 11–10–58.

681,767. HYPERCON. Sprague Electric Company. SN 62,710. Pub. 4–28–59. Filed 11–18–58.

681,768. DUPLEX. The Warner & Swasey Company. SN 63,139. Pub. 4–28–59. Filed 11–24–58.

681,769. NUSONIC. Tech-Master Corporation. SN 63,162. Pub. 4–28–59. Filed 11–25–58.

681,770. DOUGLAS. Kingston Products Corporation. SN 63,235. Pub. 4–28–59. Filed 11–26–58.

681,771. HI-LINER. HI Products, Inc. SN 63,309. Pub. 4–28–59. Filed 11–28–58.

Class 22—Games, Toys, and Sporting Goods

681,772. JARTS. Laurence Barnett, d.b.a. Jarts. SN 48,002. Pub. 4–28–59. Filed 4–25–58.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

681,773. ULTRAMATIC. Fratelli Borletti S.p.A. SN 677,849. Pub. 4–17–56. Filed 11–1–54.

681,774. NATIONAL. The National Supply Company (Ohio corporation), assignee of The National Supply Company (Pennsylvania corporation). SN 41,831. Pub. 4–28–59. Filed 12–5–57.

681,775. BD AND DESIGN. Berkeley-Davis, Incorporated. SN 44,797. Pub. 2–24–59. Filed 1–28–58.

681,776. RED SEAL. Roovers-Lotsch Corporation. SN 48,838. Pub. 4–28–59. Filed 3–24–58.

681,777. MOBILE DRILL AND DESIGN. Mobile Drilling Company, Inc. SN 51,368. Pub. 4–28–59. Filed 5–9–58.

681,778. PERMA PAK. Greenlee Tool Co. SN 53,406. Pub. 1–20–59. Filed 6–12–58.

681,779. SPIN SA CREEL. Parks-Cramer Company. SN 53,813. Pub. 4–28–59. Filed 6–18–58.

681,780. HI-THRIFT. General Motors Corporation. SN 57,264. Pub. 4–28–59. Filed 8–15–58.

681,781. HOPE CHEST. The Hope Chest Company, Inc. SN 57,550. Pub. 4–28–59. Filed 8–30–58.

681,782. INTERNATIONAL IPBMCO AND DESIGN. The International Paper Box Machine Company. SN 58,208. Pub. 4–28–59. Filed 9–2–58.

681,783. HOME-BURGER. Frank J. Wirken, d.b.a. Home-Burger Sales. SN 59,369. Pub. 4–28–59. Filed 9–22–58.

681,784. TACK-N-TAKER. David J. Griswold, d.b.a. Color-Fix Import Co. SN 59,393. Pub. 4–28–59. Filed 9–23–58.

681,785. MULTI-GRADER. Tumaco Equipment. SN 61,222. Pub. 4–28–59. Filed 10–23–58.

681,786. TURBO-MATIC. Dana Corporation. SN 61,267. Pub. 4–28–59. Filed 10–24–58.

681,787. PIECE-MAKER. The Minster Machine Company. SN 61,419. Pub. 4–28–59. Filed 10–27–58.

681,788. CHEMINEER. Chemineer, Inc. SN 61,480. Pub. 4–28–59. Filed 10–28–58.

681,789. TURBOTUBE. Chemineer, Inc. SN 61,481. Pub. 4–28–59. Filed 10–28–58.

681,790. FIBR-SAVR. Curlator Corporation. SN 61,622. Pub. 4–28–59. Filed 10–30–58.

681,791. PENN-PEELER. Penn-Union Electric Corporation. SN 61,851. Pub. 4–28–59. Filed 11–3–58.

681,792. TROLL-CUT. T & L Sales, Inc. SN 61,870. Pub. 4–28–59. Filed 11–3–58.

681,793. PERMA-PAK. Continental Drill Corporation, Inc. SN 61,902. Pub. 4–7–59. Filed 11–4–58.

681,794. PERMA-CASE. Continental Drill Corporation, Inc. SN 61,903. Pub. 4–7–59. Filed 11–4–58.

681,795. DL AND DESIGN. Draper Corporation. SN 62,068. Pub. 4–28–59. Filed 11–7–58.

681,796. F. H. MALONEY AND DESIGN. F. H. Maloney Company. SN 62,202. Pub. 4–28–59. Filed 11–10–58.

681,797. SUSAN HOLDSTER. Ekco Products Company. SN 63,031. Pub. 4–28–59. Filed 1–19–59.

681,798. CLEAN-O-MATIC ETC. AND DESIGN. Stockmeister and Prins. SN 66,190. Pub. 4-28-59. Filed 1-8-59.

681,799. ND NEW DEPARTURE AND DESIGN. General Motors Corporation. SN 66,348. Pub. 4-28-59. Filed 1-23-59.

681,800. F.N.F. F.N.F. Machinery Manufacturing Company Limited. SN 66,607. Pub. 4-28-59. Filed 1-28-59.

681,801. STAR HAMRDRIVER. Star Expansion Company. SN 66,653. Pub. 4-28-59. Filed 1-28-59.

681,802. SSS HANDRIVER. Star Expansion Company. SN 66,655. Pub. 4-28-59. Filed 1-28-59.

681,803. FNF AND DESIGN. F.N.F. Machinery Manufacturing Company Limited. SN 66,680. Pub. 4-28-59. Filed 1-28-59.

Class 25—Locks and Safes

681,804. SILENTOMAT. Gebruder Vieler Gesellschaft mit beschrankter Haftung Leicht- und Schwermetall-Verarbeitungswerk. SN 44,534. Pub. 4-28-59. Filed 1-23-58.

Class 26—Measuring and Scientific Appliances

681,805. SELECTA. George E. Koch. SN 21,819. Pub. 4-28-59. Filed 12-28-56.

681,806. PRECISION COUNTER. Dittmore-Freimuth Corporation. SN 41,443. Pub. 4-28-59. Filed 11-27-57.

681,807. OPTIKO. Trans-Lux Corporation. SN 47,981. Pub. 4-28-59. Filed 3-18-58.

681,808. EM-FLASH. Photographic Importing & Distributing Corporation. SN 50,526. Pub. 4-28-59. Filed 4-28-58.

681,809. MAGNI-SEG BIFOCALS. Bell & Lewis Optical Co. SN 50,962. Pub. 11-11-58. Filed 5-5-58.

681,810. MANOTAC. The Meriam Instrument Company. SN 52,185. Pub. 4-28-59. Filed 6-23-58.

681,811. XL PAN. The Gevaert Company of America, Inc. SN 53,404. Pub. 3-10-59. Filed 6-12-58.

681,812. CADET. General Aniline & Film Corporation, d.b.a. Ansco. SN 53,497. Pub. 4-28-59. Filed 6-13-58.

681,813. SPINCO. Beckman Instruments, Inc. SN 56,829. Pub. 4-28-59. Filed 8-8-58.

681,814. HUNT-CLIP. Domar Products, Inc. SN 58,343. Pub. 4-28-59. Filed 9-4-58.

681,815. OP-TRONIC. Brice B. Hayes, d.b.a. The Brice Hayes Co. SN 59,038. Pub. 4-28-59. Filed 9-17-58.

681,816. BASOTROL. Baso Inc. SN 59,083. Pub. 4-28-59. Filed 9-18-58.

681,817. BASOTRON. Baso Inc. SN 59,165. Pub. 4-28-59. Filed 9-19-58.

681,818. BINODAPTER. D. P. Bushnell & Company, Inc. SN 59,263. Pub. 4-28-59. Filed 9-22-58.

681,819. CAMEMATIC. Coutant & Mathot. SN 59,516. Pub. 4-28-59. Filed 9-25-58.

681,820. UNION CARBIDE AND DESIGN. Union Carbide Corporation. SN 59,577. Pub. 4-28-59. Filed 9-25-58.

681,821. PAPI. Chicago Aerial Industries, Inc. SN 61,360. Pub. 4-28-59. Filed 10-27-58.

681,822. TRANSICON. Epsco, Incorporated. SN 61,374. Pub. 4-28-59. Filed 10-27-58.

681,823. FLITE-PATH. Kaiser Industries Corporation. SN 61,404. Pub. 4-28-59. Filed 10-27-58.

681,824. DYNACHROME. Dynacolor Corporation. SN 61,702. Pub. 4-28-59. Filed 10-31-58.

681,825. PERF-O-READER. Cummins-Chicago Corp. SN 61,787. Pub. 4-28-59. Filed 11-3-58.

681,826. STATHAM. Statham Instruments, Inc. SN 61,865. Pub. 4-28-59. Filed 11-3-58.

Class 27—Horological Instruments

681,827. BAYONET. The United States Time Corporation. SN 42,673. Pub. 4-28-59. Filed 12-18-57.

681,828. TISSOT VISODATE. Fabriques d'Horlogerie Chs. Tissot & Fils, S.A. SN 54,936. Pub. 4-28-59. Filed 7-8-58.

681,829. MICROFIT. Microfit Company of America. SN 57,389. Pub. 4-28-59. Filed 8-18-58.

681,830. ROTOTRON. Hallmark, Inc. SN 62,683. Pub. 4-28-59. Filed 11-18-58.

Class 28—Jewelry and Precious-Metal Ware

681,831. EMMOLITE. Emmons Jewelers, Inc. SN 682,412. Pub. 4-28-59. Filed 2-28-55.

681,832. CORONATION. Coronation, Inc. SN 40,560. Pub. 4-28-59. Filed 11-13-57.

681,833. MATISSE. Matisse Limited. SN 46,632. Pub. 4-28-59. Filed 2-26-58.

681,834. STAG. Robert Reis & Co. SN 52,516. Pub. 4-28-59. Filed 5-28-58.

681,835. COLOSSA. Marvella Pearls, Inc. SN 55,492. Pub. 4-28-59. Filed 7-17-58.

681,836. HI-STYLE. The International Silver Company, d.b.a. Wm. Rogers Mfg. Co. SN 56,012. Pub. 4-28-59. Filed 7-25-58.

Class 31—Filters and Refrigerators

681,837. BRASSERT. Brasco. SN 60,261. Pub. 4-28-59. Filed 10-3-58.

681,838. KEMI-KOLD. Kemi-Kold Corporation. SN 62,305. Pub. 4-28-59. Filed 11-12-58.

Class 32—Furniture and Upholstery

681,839. SELF-SERVER BY PATRIARCA. Domenico Patriarca. SN 8,018. Pub. 4-28-59. Filed 5-9-56.

681,840. COLUMBIA. The Columbia Mills, Inc. SN 37,419. Pub. 4-28-59. Filed 9-18-57.

681,841. SEW-WELL MADE AND DESIGN. Williams Wood Products, Inc. SN 59,666. Pub. 4-28-59. Filed 9-26-58.

681,842. DUO. Duo-Steel Shelf Corporation of Connecticut. SN 60,489. Pub. 4-28-59. Filed 10-13-58.

681,843. EMPRESS NOBLECRAFT AND DESIGN. Charles L. Noble, d.b.a. Noblecraft Wood Products. SN 62,596. Pub. 4-28-59. Filed 11-17-58.

681,844. REPRESENTATION OF OLD LADY AND MATTRESS. O'Dea and Company Limited. SN 63,960. Pub. 4-28-59. Filed 12-9-58.

681,845. FORMULA. Williams Furniture Corporation. SN 64,375. Pub. 4-28-59. Filed 12-15-58.

681,846. PRESS-TOR MATIC ETC. AND DESIGN. Super Sagless Spring Corporation. SN 67,489. Pub. 4-28-59. Filed 2-10-59.

Class 33—Glassware

681,847. SPLINTEX. S.A. Splintex Belge. SN 63,489. Pub. 4-28-59. Filed 12-1-58.

Class 34—Heating, Lighting, and Ventilating Apparatus

681,848. MASTER FAN CORP. AND DESIGN. Master Fan Corp. SN 61,305. Pub. 4-28-59. Filed 10-24-58.

681,849. GROTESQUE FIGURE OF MAN. Signs Manufacturing Corporation. SN 62,071. Pub. 4-28-59. Filed 11-7-58.

681,850. AMBASSADOR. Allied Stores Corporation. SN 62,145. Pub. 4-28-59. Filed 11-10-58.

681,851. SNORKEL. Borg-Warner Corporation. SN 62,150. Pub. 4-28-59. Filed 11-10-58.

681,852. HAPPY CHEF. Merl G. Whitehead, d.b.a. Whitehead Equipment Co. SN 63,141. Pub. 4-28-59. Filed 11-24-58.

681,853. PATIO BOY. Seidelhuber Steel Rolling Mills Corporation, d.b.a. Coast Sheet Metal Works. SN 63,355. Pub. 4-28-59. Filed 11-28-58.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

681,854. THERM-O-SEAL. Parker-Hannifin Corporation, by change of name from The Parker Appliance Company. SN 37,900. Pub. 4-28-59. Filed 9-26-57.

Class 36—Musical Instruments and Supplies

681,855. TUTOR AND DESIGN. Tutor Records, Inc. SN 42,086. Pub. 4-28-59. Filed 12-9-57.

681,856. RUDOLPH. Winter & Company, Inc. SN 61,756. Pub. 4-28-59. Filed 10-31-58.

681,857. BRAVO. Pickwick Sales Corp. SN 62,110. Pub. 4-28-59. Filed 11-7-58.

681,858. WEBCOR AND REPRESENTATION OF FAIRY. Webcor, Inc. SN 62,814. Pub. 4-28-59. Filed 11-19-58.

Class 37—Paper and Stationery

681,859. MY-V-I. Daubert Chemical Company. SN 40,213. Pub. 4-28-59. Filed 11-7-57.

681,860. VANGUARD. David Kahn, Inc. SN 41,025. Pub. 4-28-59. Filed 11-20-57.

681,861. LITTLE KING AND DESIGN. King Kullen Grocery Co., Inc. SN 44,187. Pub. 3-24-59. Filed 1-17-58.

681,862. TAB-O-LOK. American Loose Leaf Corporation. SN 47,171. Pub. 4-28-59. Filed 3-6-58.

681,863. ARMOR-GLO. Brown Company. SN 47,228. Pub. 4-28-59. Filed 3-7-58.

681,864. NORSEMAN'S HEAD. Bergstrom Paper Company. SN 54,481. Pub. 4-28-59. Filed 6-30-58.

681,865. HYGA BURRO AND DESIGN. The Joseph Dixon Crucible Company, d.b.a. The American Crayon Company. SN 54,499. Pub. 4-28-59. Filed 6-30-58.

681,866. PARCHTEX. The Sorg Paper Company. SN 57,170. Pub. 2-24-59. Filed 8-13-58.

681,867. NUMATIC. Crown Zellerbach Corporation. SN 61,483. Pub. 4-28-59. Filed 10-28-58.

681,868. See Certification Mark, Class A, for this trademark.

Class 38—Prints and Publications

681,869. WILTON'S WONDERLAND. Wilton Enterprises, Inc. SN 53,220. Pub. 4-28-59. Filed 6-9-58.

681,870. REYNOLDS REVIEW. Reynolds Metals Company. SN 60,632. Pub. 4-28-59. Filed 10-14-58.

Class 39—Clothing

681,871. FOOT JOY THE SHOE THAT'S DIFFERENT AND DESIGN. Field and Flint Co. SN 10,421. Pub. 4-28-59. Filed 6-18-56.

681,872. CORRECT STEP MATERNITY SHOES. Shoe Corporation of America. SN 15,089. Pub. 4-28-59. Filed 9-4-56.

681,873. CALIFORNIANS. Shoes of California. SN 27,741. Pub. 4-28-59. Filed 4-8-57.

681,874. ADMIRALTY CLOTH. Cluett, Peabody & Co., Inc. SN 46,896. Pub. 4-28-59. Filed 3-3-58.

681,875. RAPOLLO. Vogue Shoe, Inc. SN 47,030. Pub. 4-28-59. Filed 3-3-58.

681,876. SAYFORD. Frank M. Sayford Company. SN 50,250. Pub. 4-28-59. Filed 4-28-58.

681,877. STALWART TWIST. Morris B. Sachs, Inc. SN 54,708. Pub. 4-21-59. Filed 7-2-58.

681,878. TRU-GLIDE. American Biltrite Rubber Co., Inc. SN 60,331. Pub. 4-28-59. Filed 10-9-58.

681,879. LAUTRECS. Capezio, Inc. SN 60,394. Pub. 4-28-59. Filed 10-10-58.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

681,880. RHODHISS. Pacific Mills. SN 58,661. Pub. 3-24-59. Filed 9-9-58.

Class 44—Dental, Medical, and Surgical Appliances

681,881. SILHOUETTE HOME PLAN AND DESIGN. Ray A. Wilson. SN 53,003. Pub. 3-24-59. Filed 6-6-58.

681,882. VIBEUSH. Antoine Francois Regis Peyron. SN 56,067. Pub. 4-28-59. Filed 7-15-58.

681,883. VIMCO. VimCo, Inc., d.b.a. Vimco Incorporated. SN 56,900. Pub. 4-28-59. Filed 8-6-58.

681,884. I-L-T. Thomas J. Mahon, Inc. SN 57,555. Pub. 4-28-59. Filed 8-20-58.

681,885. ALL-SERVICE. Mine Safety Appliances Company. SN 63,241. Pub. 4-28-59. Filed 11-26-58.

681,886. NEOSURGIC. American Cyanamid Company. SN 63,394. Pub. 4-28-59. Filed 12-1-58.

681,887. STERLING. Baby World Company, Inc. SN 63,566. Pub. 4-28-59. Filed 12-3-58.

681,888. RECEIV-RAE. Dictograph Products Company, Inc. SN 64,055. Pub. 4-28-59. Filed 12-11-58.

Class 46—Foods and Ingredients of Foods

681,889. VEGETEX. Food Products Corporation. SN 696,793. Pub. 8-14-56. Filed 10-20-56.

681,890. TIP-N WHIP. Delcoy Products, d.b.a. Tip Products and Tip Food Products. SN 15,592. Pub. 4-28-59. Filed 9-13-56.

681,891. 32% STEER MIXER. Central Soya Company, Inc. SN 28,109. Pub. 4-28-59. Filed 4-15-57.

681,892. SEALADY. Sealady Seafood Corp. SN 30,265. Pub. 4-28-59. Filed 5-20-57.

681,893. SIERRA MIBAR. Clotilde Castañeda, Vda. de Barrientos. SN 34,665. Pub. 4-28-59. Filed 7-31-57.

681,894. "THE POTATO KID" AND DESIGN. Ivan W. Smith, d.b.a. Ivan Smith & Sons. SN 41,216. Pub. 4-28-59. Filed 11-25-57.

681,895. OSCAR FISCHINGER ORIGINAL AND DESIGN. Oscar Fischinger eHG. SN 42,046. Pub. 4-28-59. Filed 12-26-57.

681,896. BARBOUR'S MARDI GRAS AND DESIGN. Lee J. Barbour, d.b.a. B & W Coffee Company. SN 44,663. Pub. 4-28-59. Filed 1-27-58.

681,897. MRS. LELAND'S OLD VIENNA. Mrs. Leland's Master Kitchens, Inc. SN 45,060. Pub. 4-28-59. Filed 1-21-58.

681,898. KING OF HAWAII. Kauai Pineapple Co. Limited. SN 47,954. Pub. 4-28-59. Filed 3-18-58.

681,899. CHESTERTON. James Weiss. SN 48,068. Pub. 4-28-59. Filed 3-19-58.

681,900. TAS-T-NUTS AND DESIGN. The Tas-T-Nut Company. SN 48,880. Pub. 4-28-59. Filed 4-1-58.

681,901. TAS-T-NUT ETC. AND DESIGN. The Tas-T-Nut Company. SN 48,881. Pub. 4-28-59. Filed 4-1-58.

681,902. YORKTOWN AND Y DESIGN. Arden Candies, Inc. SN 49,897. Pub. 4-28-59. Filed 4-18-58.

681,903. BUTTERBONE. Big Shelby Candy Company. SN 51,318. Pub. 4-28-59. Filed 5-9-58.

681,904. LORETTO. Loretto Foods, Inc. SN 52,506. Pub. 4-28-59. Filed 5-28-58.

681,905. SERV-A-RACK. Louis Milani Foods, Inc. SN 52,892. Pub. 4-28-59. Filed 6-4-58.

681,906. SUTTON MANOR. Mortimer J. Kahan, d.b.a. M. J. Kahan Co. SN 53,267. Pub. 4-28-59. Filed 6-10-58.

681,907. DEL BUENO. P. Astarbi & Co., Inc. SN 53,918. Pub. 4-28-59. Filed 6-20-58.

681,908. THE PANCAKE HOUSE ETC. AND DESIGN. The Pancake House. SN 54,087. Pub. 4-28-59. Filed 6-23-58.

681,909. JAKE'S. Lamar S.R.L. SN 55,488. Pub. 4-28-59. Filed 7-17-58.

681,910. BISKS. Andomia Products Limited. SN 57,455. Pub. 4-28-59. Filed 8-19-58.

681,911. HEART OF THE DIET AND REPRESENTATION OF HEART. Fair View Packing Company, Inc. SN 58,180. Pub. 3-24-59. Filed 9-2-58.

681,912. VEGO. Fullerton & Co., Inc. SN 58,300. Pub. 4-28-59. Filed 9-3-58.

681,913. SELLO AZUL AND DESIGN. Rice Growers Association of California. SN 59,769. Pub. 4-28-59. Filed 9-29-58.

681,914. SAFETY FIRST AND DESIGN. Louis J. Jacobson, d.b.a. Safety First Foods Co. SN 60,741. Pub. 4-28-59. Filed 10-16-58.

681,915. MIS-MAPL. Meat Industry Suppliers, Inc. SN 60,756. Pub. 4-28-59. Filed 10-16-58.

681,916. NESTLE'S. The Nestlé Company, Inc. SN 61,070. Pub. 4-28-59. Filed 10-21-58.

681,917. TOWLE'S. General Foods Corporation. SN 61,282. Pub. 4-28-59. Filed 10-24-58.

681,918. ABBOTT AND DESIGN. Abbott Laboratories. SN 61,347. Pub. 4-28-59. Filed 10-27-58.

681,919. ROYAL R. Green Giant Company. SN 61,386. Pub. 4-28-59. Filed 10-27-58.

681,920. SUN-RIPE. Lindsay Ripe Olive Company. SN 61,921. Pub. 4-28-59. Filed 11-4-58.

681,921. ROYALCREST. Hillcrest Poultry, Inc. SN 62,080. Pub. 4-28-59. Filed 11-7-58.

681,922. MY-CREST. Hillcrest Poultry, Inc. SN 62,081. Pub. 4-28-59. Filed 11-7-58.

681,923. SEA BOY AND DESIGN. Franco-Italian Packing Company. SN 62,173. Pub. 4-28-59. Filed 11-10-58.

Class 47—Wines

681,924. EMPRESS. Kraus Bros. & Co., d.b.a. Richard Brooks & Co. SN 61,100. Pub. 4-28-59. Filed 9-29-58.

Class 48—Malt Beverages and Liquors

681,925. FORT PITT. The Seeburg Corporation, by change of name from Fort Pitt Industries, Incorporated. SN 47,752. Pub. 4-28-59. Filed 3-14-58.

681,926. FORT PITT AND DESIGN. The Seeburg Corporation, by change of name from Fort Pitt Industries, Incorporated. SN 47,753. Pub. 4-28-59. Filed 3-14-58.

Class 49—Distilled Alcoholic Liquors

681,927. GLASGOW'S HLI AND DESIGN. William Grant & Sons, Limited, d.b.a. Gordon Rose & Co. SN 58,150. Pub. 4-28-59. Filed 6-9-58.

681,928. FOUR ROSES. Four Roses Distilling Co. Inc. SN 60,808. Pub. 4-28-59. Filed 10-17-58.

681,929. ANTIQUE. Four Roses Distilling Co., Inc. SN 60,810. Pub. 4-28-59. Filed 10-17-58.

681,930. FOUR ROSES ANTIQUE. Four Roses Distilling Co. Inc. SN 60,811. Pub. 4-28-59. Filed 10-17-58.

Class 50—Merchandise Not Otherwise Classified

681,931. BUR-TEX. Burlington Mills Incorporated. SN 38,669. Pub. 4-28-59. Filed 10-10-57.

681,932. DURALAY. Durie & Miller Limited. SN 59,702. Pub. 4-28-59. Filed 9-29-58.

681,933. BELT VALET. Mission Industries. SN 61,498. Pub. 4-28-59. Filed 10-28-58.

681,934. STIK 'EM-UPS! Brates Printing Office, Inc. SN 61,540. Pub. 4-28-59. Filed 10-29-58.

681,935. HYLO-PLY. Weber-Costello Co. SN 62,242. Pub. 4-28-59. Filed 11-10-58.

Class 51—Cosmetics and Toilet Preparations

681,936. JEAN D'ALBRET. Jean D'Albret, S.A.R.L. SN 23,679. Pub. 4-28-59. Filed 2-4-57.

681,937. REGIS AND DESIGN. Curtis Squire, Inc. SN 24,937. Pub. 4-28-59. Filed 2-25-57.

681,938. PRETTY FEET. Pretty Feet, Inc. SN 27,519. Pub. 4-28-59. Filed 4-4-57.

681,939. LENORE DEE. Mark Allen Co., d.b.a. Dee Cosmetic Laboratories. SN 29,774. Pub. 4-28-59. Filed 5-10-57.

681,940. BEAUTY ICE. Shulton, Inc. SN 35,535. Pub. 4-28-59. Filed 8-14-57.

681,941. DESIGN OF A HORSE. Elizabeth Arden Sales Corporation. SN 46,191. Pub. 4-28-59. Filed 2-20-58.

681,942. 4711 CARAT. Ferdinand Mülhens, d.b.a. Eau de Cologne- & Parfumerie-Fabrik, Glockengasse No. 4711, gegenüber der Pferdepost von Ferd. Mülhens. SN 47,961. Pub. 4-28-59. Filed 3-18-58.

681,943. D-P ETC. AND DESIGN. D-P Lotion Co. SN 48,148. Pub. 4-28-59. Filed 3-21-58.

681,944. FRONT LINE. The House for Men, Inc. SN 49,066. Pub. 4-28-59. Filed 4-4-58.

681,945. HUMIDERM. The House of Stuart, Inc. SN 50,702. Pub. 1-27-59. Filed 4-30-58.

681,946. FLOW-ON. Avon Products, Inc. SN 50,763. Pub. 4-28-59. Filed 5-1-58.

681,947. ULTRA SHEEN. Johnson Products Co., Inc. SN 51,021. Pub. 4-28-59. Filed 5-5-58.

681,948. CREMEFIX. Clark-Cleveland, Incorporated. SN 53,122. Pub. 4-28-59. Filed 6-9-58.

681,949. FIXOCREME. Clark-Cleveland, Incorporated. SN 53,123. Pub. 4-28-59. Filed 6-9-58.

681,950. FASTCREME. Clark-Cleveland, Incorporated. SN 53,124. Pub. 4-28-59. Filed 6-9-58.

681,951. VANGUARD. Miahatl, Inc., d.b.a. Miahatl. SN 53,278. Pub. 4-28-59. Filed 6-10-58.

681,952. FONTENAC. John Lahoud. SN 53,718. Pub. 4-21-59. Filed 6-17-58.

681,953. SUPER-MOIST. Germaine Monteil Cosmetiques Corporation. SN 55,255. Pub. 4-28-59. Filed 7-14-58.

681,954. "NIFTY." The Realistic Company. SN 58,242. Pub. 4-28-59. Filed 9-2-58.

681,955. BELZITH. Action Laboratories Corporation, assignee, by mesne assignment, of Action Laboratories. SN 58,887. Pub. 4-28-59. Filed 9-5-58.

681,956. EDITH REHNBORG EMERALD FROST. Nutrilite Products, Inc. SN 62,601. Pub. 4-28-59. Filed 11-17-58.

681,957. EDITH REHNBORG DROPS OF PEARLS. Nutrilite Products, Inc. SN 62,602. Pub. 4-28-59. Filed 11-17-58.

Class 52—Detergents and Soaps

681,958. SMITH AND DESIGN. H. V. Smith Company. SN 11,805. Pub. 4-28-59. Filed 7-9-56.

681,959. BANISH. John H. Breck, Inc. SN 40,204. Pub. 4-28-59. Filed 11-7-57.

681,960. DIQPHOR. Klensade Products, Incorporated. SN 61,714. Pub. 4-28-59. Filed 10-31-58.

681,961. KONDUCT. Klensade Products, Incorporated. SN 61,717. Pub. 4-28-59. Filed 10-31-58.

681,962. NOS-O-SAN. Klensade Products, Incorporated. SN 61,718. Pub. 4-28-59. Filed 10-31-58.

681,963. MED-I-SOLV. Klensade Products, Incorporated. SN 61,719. Pub. 4-28-59. Filed 10-31-58.

681,964. SCROAP. Klensade Products, Incorporated. SN 61,720. Pub. 4-28-59. Filed 10-31-58.

681,965. STAPH-I-CIDE. Klensade Products, Incorporated. SN 61,721. Pub. 4-28-59. Filed 10-31-58.

681,966. HYDENE. Hysan Products Company. SN 61,812. Pub. 4-28-59. Filed 11-3-58.

681,967. EDITH REHNBORG. Nutrilite Products, Inc. SN 61,845. Pub. 4-28-59. Filed 11-3-58.

Service Marks

Class 100—Miscellaneous

681,968. H. Hamilton Watch Company. SN 28,515. Pub. 4-28-59. Filed 4-19-57.

681,969. CPS. Cargill, Incorporated. SN 57,767. Pub. 4-28-59. Filed 8-25-58.

Class 101—Advertising and Business

681,970. REPRESENTATION OF GLOBE MARKED WITH LETTERS DD. Deadline Data, Inc. SN 49,255. Pub. 4-28-59. Filed 4-3-58.

681,971. GROTESQUE REPRESENTATION OF "TAPE" MAN. Tape Production Corporation. SN 53,746. Pub. 4-28-59. Filed 6-17-58.

681,972. COMPUMATIX, INC.—CI AND DESIGN. Compumatix, Incorporated. SN 59,696. Pub. 4-28-59. Filed 9-29-58.

Class 103—Construction and Repair

681,973. COMFORT CRAFTSMAN. Lennox Industries Inc. SN 32,504. Pub. 4-28-59. Filed 6-24-57.

681,974. MIDAS MUFFLER SHOPS AND DESIGN. Midas, Inc. SN 51,927. Pub. 4-28-59. Filed 5-19-58.

Class 104—Communication

681,975. WSAZ-TV CHANNEL 3 AND DESIGN. WSAZ, Incorporated. SN 63,503. Pub. 4-28-59. Filed 12-1-58.

Class 105—Transportation and Storage

681,976. MEYERS BROS. PARKING SYSTEM AND DESIGN. Meyers Bros. SN 696,897. Pub. 10-30-56. Filed 10-21-55.

681,977. AIR CHARTER TRAFFIC EXCHANGE AND DESIGN. Aircoach Transport Association, Inc. (Air Charter Traffic Exchange Division). SN 16,576. Pub. 4-28-59. Filed 9-28-56.

681,978. RED CARPET. United Air Lines, Inc. SN 18,034. Pub. 4-30-57. Filed 10-23-56.

681, 979. UNI-PACK. United Van Lines, Inc. SN 44,224. Pub. 4-28-59. Filed 1-17-58.

681,980. JETFREIGHT VIA AMERICAN JETFREIGHT AA AND DESIGN. American Airlines, Inc. SN 55,324. Pub. 4-28-59. Filed 7-22-58.

681,981. STATES LINE AND REPRESENTATION OF SEA HORSE. States Steamship Company. SN 61,339. Pub. 4-28-59. Filed 10-24-58.

Class 106—Material Treatment

681,982. CRANFREE. Cranston Print Works Company. SN 55,649. Pub. 4-28-59. Filed 7-21-58.

Class 107—Education and Entertainment

681,983. WORLD WIDE PICTURES AND DESIGN. Billy Graham Evangelistic Film Ministry, Inc., d.b.a. World Wide Pictures. SN 22,181. Pub. 7-15-58. Filed 1-7-57.

681,984. WORLD WIDE. Billy Graham Evangelistic Film Ministry, Inc., d.b.a. World Wide Pictures. SN 22,182. Pub. 7-15-58. Filed 1-7-57.

681,985. THEATER GUILD. The Theatre Guild. SN 25,649. Pub. 4-28-59. Filed 2-6-57.

681,986. THE GOOMBAY KINGS. Joseph Del Russo, d.b.a. Del Russo Enterprises. SN 36,137. Pub. 4-28-59. Filed 8-19-57.

681,987. POLICE BEAT. Storer Broadcasting Company. SN 59,353. Pub. 4-28-59. Filed 9-22-58.

681,988. "LUCKY BASKET." Albert F. Goetze, Incorporated. SN 59,538. Pub. 4-28-59. Filed 9-25-58.

Collective Membership Mark

Class 200

681,989. NATIONAL RURAL LETTER CARRIERS ASSOCIATION AND DESIGN. National Rural Letter Carriers' Association. SN 61,653. Pub. 4-28-59. Filed 10-30-58.

Certification Marks

Class A—Goods

681,990. VM VALUE MEASURED AND DESIGN. International Harvester Company. SN 48,745. Pub. 4-28-59. Filed 3-31-58.

Class B—Services

681,991. MYCEL. R. R. Street & Co., Inc. SN 2,253. Pub. 4-28-59. Filed 2-7-56.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2—Receptacles

681,991. Poloron Products, Inc., New Rochelle, N.Y. SN 15,820. Filed 9–17–56.

COLA COOLER

For Portable Insulated Chests.
First use Aug. 9, 1954.

681,992. Keyes Fibre Company, Waterville, Maine. SN 53,269. Filed P.R. 6–10–58; Am. S.R. 5–21–59.

POULTRY-PAK

For Molded Pulp Packing Trays.
First use May 3, 1938.

Class 4—Abrasives and Polishing Materials

681,993. Edward T. Mish, Agawam, Mass. SN 50,238. Filed P.R. 4–23–58; Am. S.R. 3–18–59.

MISH'S

For Metal Polish.
First use Feb. 15, 1955.

Class 12—Construction Materials

681,994. Safety Window Hardware Corporation, Brooklyn, N.Y. SN 31,151. Filed 5–31–57.

SAFETY TILT WINDOW

For Tilting Window Frames and Sash Constructions.
First use Dec. 22, 1954.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

681,995. Fabricated Products Company, Inc., West Newton, Pa. SN 47,360. Filed 3–10–58.

TOPSEAL SYSTEM OF STRUCTURAL FASTENING

For Threaded Fasteners for Securing Covering Materials to Structures, Tools for Applying Same, and Hardware Associated Therewith Sold as a Unit With Instructions Therefor.
First use May 17, 1955.

681,996. Farmland Irrigation Company, Inc., San Jose, Calif. SN 54,506. Filed P.R. 6–30–58; Am. S.R. 5–22–59.

TRACTOR MOVE

For Irrigation Pipe Couplers.
First use Apr. 1, 1949.

TM 86

Class 14—Metals and Metal Castings and Forgings

681,997. Brice E. Hayes, d.b.a. The Brice Hayes Co., Chicago, Ill. SN 62,180. Filed 11–10–58.

SHOCK-FREE

For Railroad Car Bumping Posts.
First use July 28, 1955.

Class 18—Medicines and Pharmaceutical Preparations

681,998. Dr. L. D. Le Gear Medicine Company, St. Louis, Mo. SN 43,763. Filed P.R. 1–10–58; Am. S.R. 4–29–59.

CALF TABS

For Tablets for Treatment of Calf Scours, and Calf Pneumonia.
First use Sept. 25, 1957.

Class 21—Electrical Apparatus, Machines, and Supplies

681,999. New York Merchandise Co., Inc., New York, N.Y. SN 50,513. Filed P.R. 4–28–58; Am. S.R. 4–30–59.

PATIO-LITES

For Electric Light Bulb Strings for Decorating Christmas Trees and Other Festive Occasions.
First use Mar. 21, 1957.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

682,000. Original Tractor Cab Company, Inc., Arlington, Ind. SN 24,370. Filed P.R. 2–13–57; Am. S.R. 3–19–59.

LAY-DOWN

For Tractor Cover Windshields.
First use 1948.

682,001. Original Tractor Cab Company, Inc., Arlington, Ind. SN 24,371. Filed P.R. 2–13–57; Am. S.R. 3–19–59.

SNAP-OPENING

For Tractor Cover Windshields.
First use February 1956.

682,002. Brewer Sewing Supplies Company, Chicago, Ill. SN 46,595. Filed P.R. 2–26–58; Am. S.R. 5–14–59.

RIP-EASY

For Seam Rippers.
First use Oct. 28, 1957.

Class 25—Locks and Safes

682,003. Supplee-Biddle-Steltz Company, Philadelphia, Pa. SN 67,881. Filed 2-16-59.

TRUSTWORTHY

For Lock Sets, Night Latches, and Key Blanks.
First use Jan. 1, 1938.

Class 32—Furniture and Upholstery

682,004. Duo-Bed Corporation, Los Angeles, Calif. SN 49,687. Filed P.R. 4-15-58; Am. S.R. 3-30-59.

DRESSERACK

For Combined Chest of Drawers and Luggage Rack.
First use Mar. 4, 1958.

Class 38—Prints and Publications

682,005. American Aviation Publications, Inc. (District of Columbia corporation), Washington, D.C., by merger from American Aviation Publications, Inc. (Pennsylvania corporation), Washington, D.C. SN 41,214. Filed P.R. 11-25-57; Am. S.R. 4-3-59.

missile electronics

For Section of a Periodical Publication Concerning Missiles, Being a Section of Applicant's Magazine "Missiles and Rockets."
First use Oct. 7, 1957.

Class 46—Foods and Ingredients of Feeds

682,006. Limpert Brothers, Incorporated, New York, N.Y. SN 28,719. Filed P.R. 9-4-57; Am. S.R. 6-3-58.

CHERRY BLOSSOM

For Ice Cream in Paper Cartons.
First use Oct. 4, 1956.

682,007. Elmer S. Fitzgerald, d.b.a. Fitzgerald Fruit Farm, Leominster, Mass. SN 50,882. Filed P.R. 5-8-58; Am. S.R. 5-11-59.

MAGIC-MAGS

GROWN AT FITZGERALD FRUIT FARM

The drawing is lined for red.
For Fresh Apples.
First use Apr. 15, 1958.

Class 51—Cosmetics and Toilet Preparations

682,008. Richard Hudnut, Morris Plains, N.J. SN 48,561. Filed P.R. 3-27-58; Am. S.R. 4-17-59.

SMOOTH SET

For Hair Rinse.
First use Dec. 18, 1957.

Service Mark

Class 107—Education and Entertainment

682,009. National Academy of Ballet, Inc., New York, N.Y. SN 48,426. Filed 3-25-58.

NATIONAL ACADEMY OF BALLET

For Ballet Educational Program Designed To Improve the Standards of the Profession of Ballet Teaching.
First use Mar. 12, 1957.

TRADEMARK REGISTRATIONS RENEWED

125,254. NO-TO-BAC. Cl. 18. 4-22-19.
125,877. SUN SHINE AND DESIGN. Cl. 4. 5-13-19.
126,507. ALLAN RED METAL AND DESIGN. Cl. 14. 9-16-19.
126,536. XL AND DESIGN. Cl. 35. 9-16-19.
126,549. HT AND DESIGN. Cl. 23. 9-16-19.
126,597. GOODYEARITE. Cl. 35. 9-23-19.
126,603. LUXOR AND DESIGN. Cl. 1. 9-23-19.
126,711. LOUMAIN. Cl. 42. 9-30-19.
126,834. CROMPTON AND DESIGN. Cl. 42. 10-7-19.
126,848. DUVELLA. Cl. 42. 10-7-19.
126,916. ALLAN. Cl. 14. 10-14-19.
127,123. BRIGHTBOY AND DESIGN. Cl. 4. 10-21-19.
363,206. PLUS & LITE. Cl. 37. 12-13-38.
363,678. PLUS LITE AND DESIGN. Cl. 50. 1-3-39.
364,686. RCA ALL THE WAY. Cl. 36. 2-14-39.
364,722. SPECIAL BREAKFAST. Cl. 46. 2-14-39.
365,245. TOASTMASTER. Cl. 33. 2-28-39.
365,246. TOASTMASTER. Cl. 30. 2-28-39.
365,248. HOSPITALITY. Cl. 33. 2-28-39.
365,249. HOSPITALITY. Cl. 30. 2-28-39.
365,438. TOASTMASTER. Cl. 2. 3-7-39.
365,439. HOSPITALITY. Cl. 2. 3-7-39.
365,561. HUDORA. Cl. 22. 3-14-39.
365,645. ESICO. Cl. 21. 3-14-39.
366,210. PYROCIDE. Cl. 6. 4-4-39.
366,462. DEEPDOWN. Cl. 42. 4-11-39.
366,532. DURFERRIT. Cl. 34. 4-18-39.
366,678. CELLO. Cl. 50. 4-25-39.
366,804. DURFERRIT. Cl. 6. 5-2-39.
367,044. SOMBRERO. Cl. 49. 5-9-39.
367,116. PRE-FIX AND DESIGN. Cl. 39. 5-9-39.
367,166. NYMOC. Cl. 52. 5-9-39.
367,262. TOWN-CLAD. Cl. 39. 5-9-39.
367,322. UTILOY. Cl. 44. 5-9-39.
367,329. FIRESTONE CHAMPION. Cl. 35. 5-9-39.
367,734. LANE'S. Cl. 46. 5-30-39.
368,113. THRIFTY. Cl. 42. 6-6-39.
368,418. ELECTROFILE. Cl. 23. 6-20-39.
368,419. BERCKTOWNE. Cl. 39. 6-20-39.
368,446. AERO-THREAD. Cl. 18. 6-20-39.
368,826. ALPHA. Cl. 6. 7-4-39.
368,961. KENSINGTON AND DESIGN. Cl. 8. 7-11-39.
369,327. BETAPLEXIN. Cl. 18. 7-18-39.

369,442. MICRONIZED. Cl. 1. 7-25-39.
369,556. KENSINGTON AND DESIGN. Cl. 13. 8-1-39.
369,592. MELLOW MILK HOMOGENIZED. Cl. 46. 8-1-39.
369,775. KOOLNITE. Cl. 42. 8-1-39.
369,826. CROWN AND TULIP DESIGN. Cl. 32. 8-1-39.
370,029. MAGDRAULIC. Cl. 23. 8-15-39.
370,217. SWEET LIFE. Cl. 46. 8-22-39.
370,544. AFAXIN. Cl. 18. 8-29-39.
370,608. NODTIME. Cl. 42. 8-29-39.
370,610. HI-MILER. Cl. 35. 8-29-39.
370,732. M/S. Cl. 2. 9-5-39.
370,757. HI-GEAR. Cl. 2. 9-5-39.
370,760. HILLSIDE. Cl. 1. 9-5-39.
370,981. PLOWAX. Cl. 16. 9-12-39.
371,105. HISTORIC AMERICA. Cl. 30. 9-19-39.
371,153. HOWBL'S. Cl. 45. 9-19-39.
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70,411. HALL'S SAFE AND LOCK CO. Cl. 25. 8-25-08.
302,733. THE GLENFYNE HIGHLAND WHISKY AND DESIGN. Cl. 49. 4-25-33.
441,172. PLASTITOOL. Cl. 1. 10-26-48.
571,103. LUSTRAKOOL. Cl. 33. 2-24-53.

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574,897. WALSH. Cl. 23.
574,899. "PE KA." Cl. 26.
574,900. DEODOPHYLL. Cl. 18.
574,905. MACASOL. Cl. 18.
574,907. VEJ-A-CAPS. Cl. 18.
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574,913. ORTHO AND DESIGN. Cl. 18.
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416,268. PRONTO. Cl. 6. 9-4-45.
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439,817. SWEETHEART. Cl. 46. 7-27-48.
564,830. GINGER MINT. Cl. 45. 10-7-52.
634,592. CHARC-O-MATIC. Cl. 34. 9-18-56.
666,044. GOLDEN HOUSE. Cl. 39. 8-19-58.

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365,630. VELVA CREPE. Cl. 39. 3–14–39. S. D. Arrowood & Co., Inc., New York, N.Y. Corrected: In the certificate, lines 2 and 16, heading, signature, and in the statement, column 1, line 1, "Company" should be deleted and *Co., Inc.* should be inserted.

369,177. WHYTE & MACKAY'S AND DESIGN. Cl. 49. 7–18–39. Whyte & Mackay, Limited, Glasgow, Scotland. Amended to appear:

578,260. TRILOK. Cl. 42. 8–4–53. United States Rubber Company, New York, N.Y. Amended to appear:

TRILOK

584,809. SPORTS STARS. Cl. 39. 1–19–54. Shoe Corporation of America, Columbus, Ohio. Amended: In the statement, column 2, line 12, "Sport" is deleted and *Sports* is inserted, and the drawing is amended to appear:

SPORTS STARS

676,889. PREDNIDERM. Cl. 18. 4–14–59. U.S. Vitamin Corporation. U.S. Vitamin & Pharmaceutical Corporation, New York, N.Y. Amended: In the statement, column 1, line 1, after "Corporation" , *now by change of name U.S. Vitamin & Pharmaceutical Corporation* is inserted.

676,890. PREDNIMIDE. Cl. 18. 4–14–59. U.S. Vitamin Corporation. U.S. Vitamin & Pharmaceutical Corporation, New York, N.Y. Amended: In the statement, column 1, line 1, after "Corporation" , *now by change of name U.S. Vitamin & Pharmaceutical Corporation* is inserted.

677,891. PERMAPLY. Cl. 12. 5–5–59. United States Plywood Corporation, New York, N.Y. Corrected: In the statement, column 2, line 4, "53,079" should be deleted and *331,076* should be inserted.

677,930. FLAVOMONE. Cl. 18. 5–5–59. U.S. Vitamin Corporation. U.S. Vitamin & Pharmaceutical Corporation, New York, N.Y. Amended: In the statement, column 1, line 1, after "Corporation" , *now by change of name U.S. Vitamin & Pharmaceutical Corporation* is inserted.

678,390. SANI-FAX. Cl. 23. 5–12–59. Ruud Manufacturing Company, Kalamazoo, Mich. Corrected: In the statement, column 1, line 1, "Pennsylvania" should be deleted and *Delaware* should be inserted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

218,685. PHILADELPHIA DAILY NEWS AND DESIGN. Cl. 38. The Philadelphia Tabloid Publishing Company. 9–28–26. New Cert. Sec. 7(c) to S.R.B. TV Publishing Co., Inc., Rochester, N.Y. 7–14–59.

223,224. PEDEZEMA. Cl. 6. George S. Cammack, doing business as Pedesema Laboratory. 1–18–27. New Cert. Sec. 7(c) to Mary E. Wilson, Houston, Tex. 7–14–59.

538,543. BIB AND DESIGN. Cl. 46. The Bib Corporation. 2–27–51. New Cert. Sec. 7(c) to Mead Johnson & Company, Evansville, Ind. 7–14–59.

655,589. FOR THE CARRIAGE TRADE AND DESIGN. Cl. 46. The Bib Corporation. 12–10–57. New Cert. Sec. 7(c) to Mead Johnson & Company, Evansville, Ind. 7–14–59.

659,607. BIB. Cl. 46. The Bib Corporation. 3–18–58. New Cert. Sec. 7(c) to Mead Johnson & Company, Evansville, Ind. 7–14–59.

672,242. POLLYANNA. Cl. 39. H. O. Toor Footwear, Inc. 1–6–59. New Cert. Sec. 7(c) to Melville Shoe Corporation, New York, N.Y. 7–14–59.

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Adams, Charles L., Medicine Co.: *See*—
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Du Pont de Nemours, E. I., and Co., Wilmington, Del. 681,715, pub. 4–28–59. Cl. 18.
Durie & Miller Ltd., Haslingden, England. 681,932, pub. 4–28–59. Cl. 50.
Dynacolor Corp., Brockport, N.Y. 681,824, pub. 4–28–59. Cl. 26.
Eau de Cologne- & Parfumerie-Fabrik, Glockengasse No. 4711, gegenuber der Pferdepost von Ferd. Mulhens: *See*— Mulhens, Ferdinand.
Eclipse Fuel Engineering Co., Rockford, Ill. 681,683, pub. 4–28–59. Cl. 13.
Ekco Products Co., Chicago, Ill. 681,797, pub. 4–28–59. Cl. 28.
Elastisell Corp., of America, Alpena, Mich. 681,660, pub. 4–28–59. Cl. 6.
Electric Soldering Iron Co., Inc., Deep River, Conn. 365,645, ren. 7–14–59. Cl. 21.
Electrofile, Inc., Troy, N.Y., to Selectograph Co., San Francisco, Calif. 368,418, ren. 7–14–59. Cl. 23.
Electrona Corp., The, Irvington, N.J. 574,970, canc. Cl. 14.
Elemelt Ltd., Bilston, England. 681,741, pub. 4–28–59. Cl. 21.
Elgen Mfg. Corp., Long Island City, N.Y. 681,643, pub. 4–28–59. Cl. 5.
Elgen Mfg. Corp., Long Island City, N.Y. 681,849, pub. 4–28–59. Cl. 34.
Elmer Candy Co., New Orleans, La. 574,985, canc. Cl. 46.
Emmons Jewelers, Inc., Newark, N.Y. 681,881, pub. 4–28–59. Cl. 28.
Empire Electric Brake Co.: *See*— Empire Electric Brake Corp.
Empire Electric Brake Corp., Dover, Del., to Empire Electric Brake Co., Jersey City, N.J. 370,029, ren. 7–14–59. Cl. 23.
Engler Instrument Co.: *See*— Knopf Instrument Co.
Epsco, Inc., Boston, Mass. 681,822, pub. 4–28–59. Cl. 26.
Esmond, Gundlach and Co.: *See*— Gundlach, George P.
Excelsior Leather Washer Mfg. Co., Rockford, Ill. 126,536, ren. 7–14–59. Cl. 35.
F.N.F. Machinery Mfg. Co. Ltd., Stafford, England. 681,800, pub. 4–28–59. Cl. 23.
F.N.F. Machinery Mfg. Co. Ltd., Burton-On-Trent, Stafford, England. 681,803, pub. 4–28–59. Cl. 23.
Fabricated Products Co., Inc., West Newton, Pa. 681,995. Cl. 13.
Fabrique d'Horlogerie Chs. Tissot & Fils, S.A., Le Locle, Switzerland. 681,828, pub. 4–28–59. Cl. 27.
Fair View Packing Co., Inc., Hollister, Calif. 681,911, pub. 4–24–59. Cl. 46.
Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. 681,723, pub. 4–28–59. Cl. 18.
Farmland Irrigation Co., Inc., San Jose, Calif. 681,996. Cl. 13.
Federal Pacific Electric Co., Newark, N.J. 681,740, pub. 4–28–59. Cl. 21.
Federal Wine and Liquor Co.: *See*— Canadian American Spirits Corp.
Feldman, Louis J., d.b.a. Allied Pharmetics Co., Plainfield, N.J., to Parfums Corday, Inc., New York, N.Y. 574,811, canc. Cl. 52.
Ferguson Publishing Co., Inc., to McGraw-Hill Publishing Co., Inc., New York, N.Y. 371,742, ren. 7–14–59. Cl. 38.
Fibreboard Paper Products Corp.: *See*— Fibreboard Products Inc.
Fibreboard Products Inc., to Fibreboard Paper Products Corp., San Francisco, Calif. 370,757, ren. 7–14–59. Cl. 2.
Field and Flint Co., Brockton, Mass. 681,871, pub. 4–28–59. Cl. 39.
Filotecnica Salmoiraghi S.A., Milano, Italy. 574,853, canc. Cl. 26.
Finch, Joseph S., and Co., New York, N.Y., and Schenley, Pa. 367,044, ren. 7–14–59. Cl. 49.
Firestone Tire & Rubber Co., The, Akron, Ohio. 367,329, ren. 7–14–59. Cl. 35.
Fitzgerald, Elmer S., d.b.a. Fitzgerald Fruit Farm, Leominster, Mass. 682,007. Cl. 46.
Fitzgerald Fruit Farm: *See*— Fitzgerald, Elmer S.
Florin, Philip, Inc., New York, N.Y. 574,948, canc. Cl. 3.
Florin, Philip, Inc., New York, N.Y. 574,953, canc. Cl. 3.
Food Products Corp., Kansas City, Mo. 681,889, pub. 8–14–56. Cl. 46.
Forstmann & Huffmann Co., Passaic, N.J., to J. P. Stevens & Co., Inc., New York, N.Y. 126,848, ren. 7–14–59. Cl. 42.

Fort Pitt Industries, Inc.: *See*—
Seeburg Corp., The.
Four Roses Distilling Co. Inc., Louisville, Ky. 681,828–30, pub. 4–28–59. Cl. 49.
Franco-Italian Packing Co., Terminal Island, Calif. 681,923, pub. 4–28–59. Cl. 46.
Frankel Co., Inc., Detroit, Mich. 681,893, pub. 4–28–59. Cl. 14.
Fratelli Borletti S.p.A., Milan, Italy. 681,773, pub. 4–17–59. Cl. 23.
Fullerton & Co., Inc., Paterson, N.J. 681,912, pub. 4–28–59. Cl. 46.
Gebruder Vieler Gesellschaft mit Beschrankter Haftung Leicht- und Schwermetall-Verarbeitungswerk, Letmathe, Westphalia, Germany. 681,804, pub. 4–28–59. Cl. 25.
General Aniline & Film Corp., d.b.a. Anaco, New York, N.Y. 681,812, pub. 4–28–59. Cl. 26.
General Foods Corp., White Plains, N.Y. 681,917, pub. 4–28–59. Cl. 46.
General Motors Corp., Detroit, Mich. 681,780, pub. 4–28–59. Cl. 23.
General Motors Corp., Detroit, Mich. 681,799, pub. 4–28–59. Cl. 23.
Germaine Monteil Cosmetiques Corp., New York, N.Y. 681,953, pub. 4–28–59. Cl. 51.
Gevaert Co. of America, Inc., The, New York, N.Y. 681,811, pub. 3–10–59. Cl. 26.
Ginger Mint Julep Co., Baltimore, Md. 564,830, canc. Cl. 45.
Glenfyne Distillery Co. Ltd., The, Ardrishaig, Scotland. 302,733, canc. Cl. 49.
Glidden Co., The, Cleveland, Ohio. 368,826, ren. 7–14–59. Cl. 6.
Goetze, Albert F., Inc., Baltimore, Md. 681,988, pub. 4–28–59. Cl. 107.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 126,597, ren. 7–14–59. Cl. 35.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 370,610, ren. 7–14–59. Cl. 35.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 370,961, ren. 7–14–59. Cl. 16.
Grace, W. R., & Co., Cambridge, Mass. 681,651, pub. 4–28–59. Cl. 6.
Graham, Billy, Evangelistic Film Ministry, Inc., d.b.a. World Wide Pictures, Sherman Oaks, Calif. 681,983–4, pub. 7–15–58. Cl. 107.
Granitize Laboratories, Burlingame, to Granitize Products, Inc., Lynwood, Calif. 371,164, ren. 7–14–59. Cl. 4.
Granitize Products, Inc.: *See*—
Granitize Laboratories.
Grant, William, & Sons, Ltd., d.b.a. Gordon Rost & Co., Glasgow, Scotland. 681,927, pub. 4–28–59. Cl. 49.
Gray & Co., Portland, Oreg. 372,070, ren. 7–14–59. Cl. 45.
Green Giant Co., Le Sueur, Minn. 681,919, pub. 4–28–59. Cl. 46.
Greenlee Tool Co., Rockford, Ill. 681,778, pub. 1–20–59. Cl. 23.
Greer, Arthur H., d.b.a. Ohio Steak & Barbecue Co., Los Angeles, Calif., and Columbus, Ohio. 575,040, canc. Cl. 46.
Griswold, David J., d.b.a. Colorfix Import Co., Minneapolis, Minn. 681,784, pub. 4–28–59. Cl. 23.
Gundlach, George P., d.b.a. Esmond, Gundlach and Co., to G. P. Gundlach & Co., Inc., Cincinnati, Ohio. 369,592, ren. 7–14–59. Cl. 46.
Hallmark, Inc., Chicago, Ill. 681,830, pub. 4–28–59. Cl. 27.
Hamilton Metal Products Co., The, Hamilton, Ohio. 574,869, canc. Cl. 25.
Hamilton Watch Co., Lancaster, Pa. 681,968, pub. 4–28–59. Cl. 100.
Haral Co.: *See*—
Haral Corp.
Haral Corp., from H. H. Wigen, d.b.a. Haral Co., Chicago, Ill. 681,696, pub. 4–28–59. Cl. 15.
Harman Brothers Ltd., Birmingham, England. 574,861, canc. Cl. 8.
Harrison Paint & Varnish Co., The, Canton, Ohio. 371,933, ren. 7–14–59. Cl. 16.
Harter, Ed., Inc., Toledo, Ohio. 439,817, canc. Cl. 46.
Harvey, G. F., Co., Inc., The, Saratoga Springs, from The Purdue Frederick Co., New York, N.Y. 681,709, pub. 4–28–59. Cl. 18.
Hayes, Brice, Co., The: *See*—
Hayes, Brice E.
Hayes, Brice E., d.b.a. The Brice Hayes Co., Chicago, Ill. 681,815, pub. 4–28–59. Cl. 26.
Hayes, Brice E., d.b.a. The Brice Hayes Co., Chicago, Ill. 681,997. Cl. 14.
Hayes-Sammons Chemical Co., Mission, Tex. 681,650, pub. 4–28–59. Cl. 6.
Helenhart Novelty Corp., New York, N.Y. 574,848, canc. Cl. 13.
Heli-Coil Corp.: *See*—
Aircraft Screw Products Co., Inc.
Herring-Hall-Marvin Safe Co., Hamilton, Ohio, and New York, N.Y. 70,369, canc. Cl. 25.
Herring-Hall-Marvin Safe Co., Hamilton, Ohio, and New York, N.Y. 70,411, canc. Cl. 25.
Higginson, George J., New York, N.Y. 371,105, ren. 7–14–59. Cl. 50.
Hillcrest Poultry, Inc., Lewiston, Maine. 681,921–2, pub. 4–28–59. Cl. 46.
Hi Products, Inc., Minneapolis, Minn. 681,771, pub. 4–28–59. Cl. 21.
Hollingshead, R. M., Corp., Camden, N.J. 371,679, ren. 7–14–59. Cl. 16.
Home-Burger Sales: *See*—
Wirken, Frank J.
Hope Chest Co., Inc., The, Minneapolis, Minn. 681,781, pub. 4–28–59. Cl. 23.
House for Men, Inc., The, Chicago, Ill. 681,944, pub. 4–28–59. Cl. 51.
House of Stuart, Inc., The, Newark, N.Y. 681,945, pub. 1–27–59. Cl. 51.
Hudnut, Richard, Morris Plains, N.J. 682,008, pub. 7–14–59. Cl. 51.
Hudora-Werk Hugo Dorneslf: *See*—
Dorneslf, Hugo.
Hughes Tool Co., to Hughes Tool Co., Houston, Tex. 126,540, ren. 7–14–59. Cl. 23.
Hyman Products Co., Chicago, Ill. 681,841, pub. 4–28–59. Cl. 4.
Hyman Products Co., Chicago, Ill. 681,966, pub. 4–28–59. Cl. 52.
Imperial Drug Exchange Inc., d.b.a. New York Drug Concern, New York, N.Y. 681,712, pub. 4–28–59. Cl. 18.
Ingram-Richardson Mfg. Co., Beaver Falls, Pa. 681,671, pub. 4–28–59. Cl. 12.
International Harvester Co., Chicago, Ill. 681,968, pub. 4–28–59. Cl. A.
International Paper Box Machine Co., The, Nashua, N.H. 681,782, pub. 4–28–59. Cl. 23.
International Pulverizing Co., to Pemco Corp., Moorestown, N.J. 369,442, ren. 7–14–59. Cl. 1.
International Silver Co., The, d.b.a. Wm. Rogers Mfg. Co., Meriden, Conn. 681,836, pub. 4–28–59. Cl. 28.
Jacobson, Louis J., d.b.a. Safety First Foods, Chicago, Ill. 681,914, pub. 4–28–59. Cl. 46.
Jarts: *See*—
Barnett, Laurence.
Johnson & Johnson, New Brunswick, N.J. 681,719, pub. 4–28–59. Cl. 18.
Johnson Products Co., Inc., Chicago, Ill. 681,947, pub. 4–28–59. Cl. 51.
Jordan, Thomas, Inc., New Orleans, La. 574,880, canc. Cl. 18.
Julep Co., The, Sycamore, Ill. 371,158, ren. 7–14–59. Cl. 45.
Kahn Bros. Co.: *See*—
Kahn Bros. Hay & Grain Co.
Kahan, J., Co.: *See*—
Kahan, Mortimer J.
Kahan, Mortimer J., d.b.a. J. Kahan Co., New York, N.Y. 681,906, pub. 4–28–59. Cl. 46.
Kahn Bros. Hay & Grain Co., to Kahn Bros. Co., Chicago, Ill. 370,760, ren. 7–14–59. Cl. 1.
Kahn, David, Inc., North Bergen, N.J. 681,860, pub. 4–28–59. Cl. 37.
Kaiser Industries Corp., Oakland, Calif. 681,823, pub. 4–28–59. Cl. 26.
Kaminomoto Co. Ltd., Fukiai-ku, Kobe, Japan. 681,702, pub. 4–28–59. Cl. 18.
Kauai Pineapple Co. Ltd., Lawai, Territory of Hawaii. 681,896, pub. 4–28–59. Cl. 46.
Kemi-Kold Corp., Orlando, Fla. 681,838, pub. 4–28–59. Cl. 31.
Kensington, Inc., to Wear-Ever Aluminum, Inc., New Kensington, Pa. 368,961, ren. 7–14–59. Cl. 8.
Kensington, Inc., to Wear-Ever Aluminum, Inc., New Kensington, Pa. 369,556, ren. 7–14–59. Cl. 13.
Kessler Luggage Mfg. Corp., New York, N.Y. 574,887, canc. Cl. 3.
Keyes Fibre Co., Waterville, Maine. 681,992. Cl. 2.
Kidde Ultrasonic & Detection Alarms Inc., from Walter Kidde & Co., Inc., Belleville, N.J. 681,754, pub. 4–28–59. Cl. 21.
Kidde, Walter, & Co., Inc.: *See*—
Kidde Ultrasonic & Detection Alarms Inc.
King Kullen Grocery Co., Inc., Jamaica, N.Y. 681,861, pub. 3–24–59. Cl. 37.
Kingston Products Corp., Kokomo, Ind. 681,770, pub. 4–28–59. Cl. 21.
Klein, Olda V., Washington, D.C. 574,918, canc. Cl. 39.
Klemark, Inc., Salinas, Calif. 681,762, pub. 4–28–59. Cl. 21.
Klenzade Products, Inc., Beloit, Wis. 681,960–5, pub. 4–28–59. Cl. 52.
Knoll, H. G., & Co., Inc.: *See*—
Sterling Remedy Co., The.
Knopf Instrument Co., now by change of name Engler Instrument Co., Jersey City, N.J. 574,890, canc. Cl. 26.
Koch, George E., New York, N.Y. 681,805, pub. 4–28–59. Cl. 26.
Kraus Bros. & Co., d.b.a. Richard Brooks & Co., New York, N.Y. 681,924, pub. 4–28–59. Cl. 47.
Kremers-Urban Co., Milwaukee, Wis. 681,714, pub. 4–28–59. Cl. 18.
Lahoud, John, Paris, France. 681,952, pub. 4–21–59. Cl. 51.
Lakeshore Pharmaceutical Co., Paducah, Ky. 681,708, pub. 4–28–59. Cl. 18.
Lamar, S. R. L., Buenos Aires, Argentina. 681,909, pub. 4–28–59. Cl. 46.
Lane, E. F., & Son, to E. F. Lane & Son, San Francisco, Calif. 367,734, ren. 7–14–59. Cl. 46.
Latrobe Steel Co., Latrobe, Pa. 681,694, pub. 4–28–59. Cl. 14.
Leader Mfg. Co., St. Louis, Mo. 574,931, canc. Cl. 8.
LeGear, Dr. L. D., Medicine Co., St. Louis, Mo. 681,998. Cl. 18.
Lehn & Fink Products Corp.: *See*—
Salena, Dorothy G.
Lek Trol, Inc., Arlington, Tex. 681,739, pub. 4–28–59. Cl. 21.
Lenger, David M., d.b.a. Arlenge Laboratories, New York, N.Y. 681,647, pub. 4–28–59. Cl. 6.
Lennox Industries Inc., Marshalltown, Iowa. 681,975, pub. 4–28–59. Cl. 103.
Lewiston Bleachery and Dye Works, Lewiston, Maine, to Pepperell Mfg. Co., Boston, Mass. 126,711, ren. 7–14–59. Cl. 42.
Libby, McNeill & Libby, Chicago, Ill. 364,722, ren. 7–14–59. Cl. 46.

Liberty Distributors Group, Philadelphia, Pa. 681,748, pub. 4–28–59. Cl. 21.
Lilly, Eli, and Co., Indianapolis, Ind. 681,661, pub. 4–28–59. Cl. 6.
Limpert Brothers, Inc., New York, N.Y. 682,006. Cl. 46.
Lindsay Ripe Olive Co., Lindsay, Calif. 681,929, pub. 4–28–59. Cl. 46.
Lippert, George A., New York, N.Y. 575,027, canc. Cl. 6.
Loretto Foods, Inc., Olean, N.Y. 681,904, pub. 4–28–59. Cl. 46.
Louis Milani Foods, Inc., Los Angeles, Calif. 681,905, pub. 4–28–59. Cl. 46.
Macon, Roger, Vanves, France. 574,823, canc. Cl. 51.
Magid, Meyer, d.b.a. The Magidiz Co., Oakland, Calif. 681,706, pub. 4–28–59. Cl. 18.
Magidiz Co., The: *See*—
Magid, Meyer.
Mahon, Thomas J., Inc., Englewood Cliffs, N.J. 681,884, pub. 4–28–59. Cl. 44.
Mallinckrodt Chemical Works, St. Louis, Mo. 681,721, pub. 4–28–59. Cl. 18.
Maloney, F. H., Co., Houston, Tex. 681,796, pub. 4–28–59. Cl. 23.
Mangels, Arthur C., Industries, Philadelphia, Pa. 574,852, canc. Cl. 16.
Marietta Concrete Corp., The, Marietta, Ohio. 681,674, pub. 3–31–59. Cl. 12.
Marvella Pearls, Inc., New York, N.Y. 681,835, pub. 4–28–59. Cl. 28.
Master Fan Corp., Los Angeles, Calif. 681,848, pub. 4–28–59. Cl. 34.
Matisse Ltd., Los Angeles, Calif. 681,838, pub. 4–28–59. Cl. 28.
Mayfair Mfg. Co.: *See*—
Secofsky, Abe.
McCall Corp., New York, N.Y. 575,007, canc. Cl. 38.
McGraw-Edison Co.: *See*—
McGraw Electric Co.
McGraw Electric Co., Chicago, to McGraw-Edison Co., Elgin, Ill. 365,245, ren. 7–14–59. Cl. 33.
McGraw Electric Co., Chicago, to McGraw-Edison Co., Elgin, Ill. 365,246, ren. 7–14–59. Cl. 30.
McGraw Electric Co., Chicago, to McGraw-Edison Co., Elgin, Ill. 365,248, ren. 7–14–59. Cl. 33.
McGraw Electric Co., Chicago, to McGraw-Edison Co., Elgin, Ill. 365,249, ren. 7–14–59. Cl. 30.
McGraw Electric Co., Chicago, to McGraw-Edison Co., Elgin, Ill. 365,438, ren. 7–14–59. Cl. 2.
McGraw Electric Co., Chicago, to McGraw-Edison Co., Elgin, Ill. 365,439, ren. 7–14–59. Cl. 2.
McGraw-Hill Publishing Co., Inc.: *See*—
Fergusson Publishing Co., Inc.
McLaughlin Gormley King Co., Minneapolis, Minn. 366,210, ren. 7–14–59. Cl. 6.
McLean County Canning Co., Le Roy, Ill. 414,281, canc. Cl. 46.
McQuillan, Patricia, d.b.a. Evelyn West, Los Angeles, Calif. 575,038, canc. Cl. 107.
Mead Johnson & Co.: *See*—
Bib Corp., The.
Mead-Suydam Co., Orange, N.J. 370,732, ren. 7–14–59. Cl. 2.
Meat Industry Suppliers, Inc., Northfield, Ill. 681,915, pub. 4–28–59. Cl. 46.
Meier & Pohlmann Furniture Co., St. Louis, Mo. 574,885, canc. Cl. 32.
Melville Shoe Corp.: *See*—
Toor, H. O., Footwear, Inc.
Meriam Instrument Co., The, Cleveland, Ohio. 681,810, pub. 4–28–59. Cl. 26.
Merit Pharmaceutical Co., Inc., Houston, Tex. 681,710, pub. 4–28–59. Cl. 18.
Merrell, Wm. S., Co., The, Cincinnati, Ohio. 681,724, pub. 4–28–59. Cl. 18.
Merritt Corp., The, Jersey City, N.J. 681,722, pub. 4–28–59. Cl. 18.
Meyers Bros., New York, N.Y. 681,976, pub. 10–30–56. Cl. 105.
Miahati: *See*—
Miahati, Inc.
Miahati, Inc., d.b.a. Miahati, New York, N.Y. 681,951, pub. 4–28–59. Cl. 51.
Miami Window Corp., Hialeah, Fla. 681,669, pub. 4–28–59. Cl. 12.
Microdot Co. of America, San Diego, Calif. 681,829, pub. 4–28–59. Cl. 27.
Midas, Inc., Chicago, Ill. 681,974, pub. 4–28–59. Cl. 108.
Mid-States Shoe Co., Milwaukee, Wis. 367,116, ren. 7–14–59. Cl. 39.
Mine Safety Appliances Co., Pittsburgh, Pa. 681,885, pub. 4–28–59. Cl. 44.
Minnesota Mining and Mfg. Co., St. Paul, Minn. 681,639, pub. 4–28–59. Cl. 4.
Minster Machine Co., The, Minster, Ohio. 681,787, pub. 4–28–59. Cl. 23.
Mish, Edward T., Agawam, Mass. 681,993. Cl. 4.
Mission Industries, Escondido, Calif. 681,933, pub. 4–28–59. Cl. 50.
Mobile Drilling Co., Inc., Indianapolis, Ind. 681,777, pub. 4–28–59. Cl. 22.
Morey, Clinton H., d.b.a. Power Punch Products, Beaverton, Oreg. 681,698, pub. 4–28–59. Cl. 15.
Mrs. Leland's Master Kitchens, Inc., Chicago, Ill. 681,897, pub. 4–28–59. Cl. 46.
Mulhens, Ferdinand, d.b.a. Eau de Cologne- & Parfumerie-Fabrik, Glockengasse No. 4711, gegenuber der Pferdepost von Ferd. Mulhens, Cologne (Rhine), Germany. 681,942, pub. 4–28–59. Cl. 51.
National Academy of Ballet, Inc., New York, N.Y. 682,009, Cl. 107.
National Aniline & Chemical Co., Inc., to Allied Chemical Corp., New York, N.Y. 372,191, ren. 7–14–59. Cl. 6.
National Rural Letter Carriers' Association, Washington, D.C 681,980, pub. 4–28–59. Cl. 200.
National Supply Co., The, from The National Supply Co., Pittsburgh, Pa. 681,774, pub. 4–28–59. Cl. 23.
Nepera Chemical Co. Inc., Nepera Park, N.Y. 574,905, canc. Cl. 18.
Nestle Co., Inc., The, White Plains, N.Y. 681,916, pub. 4–28–59. Cl. 46.
New Jersey Wire Goods Co.: *See*—
Berkeley Industries.
New York Drug Concern: *See*—
Imperial Drug Exchange Inc.
New York Merchandise Co., Inc., New York, N.Y. 681,999. Cl. 21.
Noble, Charles L., d.b.a. Noblecraft Wood Products, Beaverton, Oreg. 681,843, pub. 4–28–59. Cl. 32.
Noblecraft Wood Products: *See*—
Noble, Charles L.
Nordson Pharmaceutical Laboratories, Inc., Irvington, N.J. 681,733, pub. 4–28–59. Cl. 18.
Nutrilite Products, Inc., Buena Park, Calif. 681,732, pub. 4–28–59. Cl. 18.
Nutrilite Products, Inc., Buena Park, Calif. 681,956–7, pub. 4–28–59. Cl. 51.
Nutrilite Products, Inc., Buena Park, Calif. 681,967, pub. 4–28–59. Cl. 52.
Nutrition Research Laboratories, Inc., Chicago, Ill. 575,000, canc. Cl. 18.
Nymoc Products Co.: *See*—
Brohman, John J.
O'Dea and Co. Ltd., Dublin, Ireland. 681,844, pub. 4–28–59. Cl. 32.
Ohio Leather Co., The, Girard, Ohio. 126,603, ren. 7–14–59. Cl. 1.
Ohio Steak & Barbecue Co.: *See*—
Greer, Arthur H.
Organon Inc.: *See*—
Roche-Organon, Inc.
Original Tractor Cab Co., Inc., Arlington, Ind. 682,000–1. Cl. 23.
Ortho Pharmaceutical Corp., Raritan, N.J. 574,913, canc. Cl. 18.
Pacific Mills, New York, N.Y. 681,880, pub. 3–24–59. Cl. 42.
Pacific Specialties, Alhambra, Calif. 681,670, pub. 4–28–59. Cl. 12.
Pan American Screw Corp., San Juan, Puerto Rico. 681,686, pub. 4–28–59. Cl. 13.
Pancake House, The, Portland, Oreg. 681,908, pub. 4–28–59. Cl. 46.
Parke, Davis & Co., Detroit, Mich. 575,019, canc. Cl. 18.
Parker Appliance Co., The: *See*—
Parker-Hannifin Corp.
Parker-Hannifin Corp., by change of name from The Parker Appliance Co., Cleveland, Ohio. 681,854, pub. 4–28–59. Cl. 35.
Parker Products Co., Delaware, Ohio. 681,688, pub. 4–28–59. Cl. 13.
Parks-Cramer Co., Fitchburg, Mass. 681,779, pub. 4–28–59. Cl. 23.
Patriarca, Domenico, Cranston, R.I. 681,839, pub. 4–28–59 Cl. 32.
Pedesema Laboratory: *See*—
Cammack, George S.
Pemco Corp.: *See*—
International Pulverising Co.
Penick, S. B., and Co., New York, N.Y. 681,705, pub. 4–28–59. Cl. 18.
Penney, J. C., Co., New York, N.Y. 367,262, ren. 7–14–59. Cl. 39.
Penn-Union Electric Corp., Erie, Pa. 681,791, pub. 4–28–59. Cl. 23.
Pennsoil Co., The, Los Angeles, Calif. 681,700, pub. 4–28–59. Cl. 15.
Pepperell Mfg. Co.: *See*—
Lewiston Bleachery and Dye Works.
Pepperell Mfg. Co., Boston, Mass. 366,462, ren. 7–14–59. Cl. 42.
Pepperell Mfg. Co., Boston, Mass. 368,113, ren. 7–14–59. Cl. 42.
Pepperell Mfg. Co., Boston, Mass. 369,775, ren. 7–14–59. Cl. 42.
Pepperell Mfg. Co., Boston, Mass. 370,608, ren. 7–14–59. Cl. 42.
Petersen, Kittie, d.b.a. Charles L. Adams Medicine Co., Syracuse, N.Y. 681,703, pub. 4–28–59. Cl. 18.
Pferr, Arthur: *See*—
Allan, A., & Son.
Pharmacie Principale de la Porte d'Orleans, Paris, France. 574,818, canc. Cl. 18.
Philadelphia Tabloid Publishing Co., The, to S. R. B. TV Publishing Co., Inc., Rochester, N.Y. 218,685, new cert. Cl. 38.
Photographic Importing & Distributing Corp., Valley Stream, N.Y. 681,806, pub. 4–28–59. Cl. 24.
Pickwick Sales Corp., Brooklyn, N.Y. 681,857, pub. 4–28–59. Cl. 36.
Piechinger, Oscar, oHG., Munich, Germany. 681,895, pub. 4–28–59. Cl. 46.
Pittsburgh Plate Glass Co., Pittsburgh, Pa. 681,675, pub. 4–28–59. Cl. 12.
Plymouth Rubber Co., Inc., Canton, Mass. 681,762, pub. 4–28–59. Cl. 21.
Poloron Products, Inc., New Rochelle, N.Y. 681,991. Cl. 2.
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Pulici, Louis.
Purdue Frederick Co., The: See—
Harvey, G. F., Co., Inc., The.
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Racal Engineering Ltd., Bracknell, Berkshire, England. 681,756, pub. 4-26-60. Cl. 21.
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RCA Mfg. Co., Inc.
Radiovision Corp., Los Angeles, Calif. 575,020, canc. Cl. 26.
Realistic Co., The, Cincinnati, Ohio. 680,854, pub. 4-26-60. Cl. 51.
Realist, Inc., Jersey City, N.J. 574,945, canc. Cl. 24.
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Rund Mfg. Co., Kalamazoo, Mich. 678,300, cor. Cl. 23.
S. A. Bisco (European Overseas Trading), Zwevegem, Belgium. 681,894, pub. 4-26-60. Cl. 12.
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Philadelphia Tabloid Publishing Co., The.
Sachs, Morris B., Inc., Chicago, Ill. 681,877, pub. 4-21-60. Cl. 26.
Safety First Foods: See—
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Schaeffer Products Co., Inc.: See—
Schaeffer, Louis M.
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Schoenbach, Richard F., d.b.a. Schoenbach Industries, Dallas, Tex. 574,911, canc. Cl. 32.
Schoenman, J., Inc., Baltimore, Md. 666,044, canc. Cl. 20.
Scovill Mfg. Co., Waterbury, Conn. 681,696, pub. 4-26-60. Cl. 13.
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Sears, Roebuck and Co., Chicago, Ill. 681,749, pub. 4-26-60. Cl. 21.
Secofsky, Abe, d.b.a. Mayfair Mfg. Co., Brooklyn, N.Y. 681,756, pub. 4-26-60. Cl. 21.
Seeburg Corp., The, by change of name from Fort Pitt Industries, Inc., Pittsburgh, Pa. 681,925-6, pub. 4-26-60. Cl. 49.
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Smith, Ivan W.
Smith, Ivan W., d.b.a. Ivan Smith & Sons, Mars Hill, Maine. 681,894, pub. 4-26-60. Cl. 46.
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Star Expansion Co., Mountainville, N.Y. 681,661, pub. 4-26-60. Cl. 13.
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Stevens, J. P., & Co., Inc.: See—
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Stockmeister and Prins, Wellston, Ohio. 681,796, pub. 4-26-60. Cl. 23.
Storer Broadcasting Co., Miami Beach, Fla. 681,967, pub. 4-26-60. Cl. 107.
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Sun Oil Co., Philadelphia, Pa. 574,991, canc. Cl. 6.
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Swirly Safety Lite Co.: See—
Bowers Battery and Spark Plug Co.
T & L Sales, Inc., Minneapolis, Minn. 681,792, pub. 4-26-60. Cl. 22.
Tape Production Corp., St. Petersburg, Fla. 681,971, pub. 4-26-60. Cl. 101.
Tas-T-Nut Co., The, Baltimore, Md. 681,900-1, pub. 4-26-60. Cl. 46.
Tech-Master Corp., Brooklyn, N.Y. 681,768, pub. 4-26-60. Cl. 21.
Textron Industries, Inc., d.b.a. Textron Metals Co., Girard, Ohio. 681,672-3, pub. 4-26-60. Cl. 12.
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Theatre Guild, The, New York, N.Y. 681,966, pub. 4-26-60. Cl. 107.
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Trans-Lux Corp., New York, N.Y. 681,807, pub. 4-26-60. Cl. 26.
Tri-State Engineering Co., Los Angeles, Calif. 634,582, canc. Cl. 34.
Tropical Gas Co., Inc., Panama, Panama. 681,843, pub. 4-26-60. Cl. 6.
Tumaco Equipment, Marion, Kans. 681,785, pub. 4-26-60. Cl. 22.
Tung-Sol Electric Inc., Newark, N.J. 681,757, pub. 4-26-60. Cl. 21.

Tutor Records, Inc., Miami, Fla. 681,855, pub. 4–28–59. Cl. 36.
Union Carbide Corp., New York, N.Y. 681,655, pub. 4–28–59. Cl. 6.
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United Air Lines, Inc., Chicago, Ill. 681,978, pub. 4–30–57. Cl. 105.
United Van Lines, Inc., St. Louis, Mo. 681,979, pub. 4–28–59. Cl. 105.
U.S. Industries, Inc., New York, N.Y. 681,681, pub. 4–28–59. Cl. 13.
United States Naviguide Corp., The, Akron, Ohio. 681,738, pub. 4–28–59. Cl. 21.
United States Plywood Corp., New York, N.Y. 677,891, cor. Cl. 12.
United States Rubber Co., New York, N.Y. 578,260. Am. 7(d). Cl. 42.
United States Time Corp., The, Waterbury, Conn. 681,827, pub. 4–28–59. Cl. 27.
U.S. Vitamin & Pharmaceutical Corp.: *See*—
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U.S. Vitamin Corp. U.S. Vitamin & Pharmaceutical Corp., New York, N.Y. 676,890. Am. 7(d). Cl. 18.
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Universal-Rundle Corp., New Castle, Pa. 681,687, pub. 4–28–59. Cl. 13.
Upjohn Co., The, Dover, Del., from The Upjohn Co., Kalamazoo, Mich. 681,727, pub. 4–28–59. Cl. 18.
Upjohn Co., The, from The Upjohn Co., Kalamazoo, Mich. 681,728, pub. 4–28–59. Cl. 18.
Utah Radio Products Corp., Huntington, Ind. 681,759, pub. 4–28–59. Cl. 21.
Vimco Inc.: *See*—
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Vitalic Battery Co., Inc, Dallas, Tex. 681,760, pub. 4–28–59. Cl. 21.
Vogue Shoe, Inc., Los Angeles, Calif. 681,875, pub. 4–28–59. Cl. 39.
WSAZ, Inc., Huntington, W. Va. 681,975, pub. 4–28–59. Cl. 104.
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Warner Electric Brake & Clutch Co., South Beloit, Ill. 681,746, pub. 4–28–59. Cl. 21.
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Whitehead Equipment Co.: *See*—
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Whitehead, Meri G., d.b.a. Whitehead Equipment Co., Goshen, Ind. 681,852, pub. 4–28–59. Cl. 34.
Whyte & Mackay, Ltd., Glasgow, Scotland. 369,177. Am. 7(d). Cl. 49.
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Williams Furniture Corp., Sumter, S.C. 681,845, pub. 4–28–59. Cl. 32.
Williams Gold Refining Co., Inc., Buffalo, N.Y. 367,322, ren. 7–14–59. Cl. 44.
Williams Wood Products, Inc., Sutton, W. Va. 681,841, pub. 4–28–59. Cl. 32.
Wilson Flour Mills, The: *See*—
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Wilson, Mary E.: *See*—
Cammack, George S.
Wilson, Ray A., Houston, Tex. 681,881, pub. 3–24–59. Cl. 44.
Wilton Enterprises, Inc., Chicago, Ill. 681,869, pub. 4–28–59. Cl. 38.
Winter & Co., Inc., New York, N.Y. 681,856, pub. 4–28–59. Cl. 36.
Winthrop Chemical Co., Inc., to Sterling Drug Inc., New York, N.Y. 369,327, ren. 7–14–59. Cl. 18.
Winthrop Chemical Co., Inc., to Sterling Drug Inc., New York, N.Y. 370,544, ren. 7–14–59. Cl. 18.
Wirken, Frank J., d.b.a. Home-Burger Sales, Kansas City, Mo. 681,783, pub. 4–28–59. Cl. 28.
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Zonolite Co., Chicago, Ill. 681,666–7, pub. 4–28–59. Cl. 12.

U. S. GOVERNMENT PRINTING OFFICE: 0—1959

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PATENTS

NOTICES

Disclaimer

2,756,875.—*Albert Yochim*, Villa Park, Ill. COMPARTMENTED BAG AND PACKAGE. Patent dated July 31, 1956. Disclaimer filed Apr. 20, 1959, by the assignee, *Minnesota Mining and Manufacturing Company*.

Hereby enters this disclaimer to claim 4 of said patent.

Patents Available for Licensing or Sale

2,435,617. Tracked Vehicle or Craft Construction (Means To Prevent Pinching of Tread on Bogie Wheels). Mrs. T. A. Werkenthin, 3601 2nd St., South, Arlington 4, Va.

2,884,009. Fluid Flow Control Valve With Modulating Orifice. S. W. Hetherington, 5540 Madison Road, Cincinnati 27, Ohio.

2,887,079. Jig for Standard Pipe Flanges. Leonard B. Wilson, 307 West Myrrh St., Compton 3, Calif.

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2,850,593. High Sensitivity Electrical Relay.

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2,808,290. Electric Switchgear.

2,841,311. Bus Bar Duct Support.

2,841,841. Electric Power Distribution System.

2,430,587. Bus Bar Duct System.

2,600,804. Substitute Unit for Circuit Testing and Grounding.

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2,869,700. Clutch Arrangement.

2,873,068. Lightweight Rotor Construction.

Classification Order No. 282

Classification Order No. 282, dated June 29, 1959, incorporates changes in the following classes:

40
250
331 (New Class—Definitions will appear in Bulletin No. 431)
(OSCILLATORS)

The above changes will be incorporated in the Manual of Classification replacement pages dated July 1959.

M. C. ROSA,
June 25, 1959. *Director, Patent Examining Operation.*

Board of Appeals Decisions Rendered in the Month of June 1959

Examiner affirmed	209
Examiner affirmed in part	16
Examiner reversed	24
Total	249

New Applications Received During May 1959

Patents	6,777
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Plant Patents	15
Reissues	25
Total	7,232

Issue

Patents	1,073	No. 2,895,135 to No.	2,896,207, incl.
Designs	37	No. 185,692 to No.	185,728, incl.
Plant Patents	3	No. 1,853 to No.	1,855, incl.
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Total	1,117		

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION — Oldest Application

CONDITION OF PATENT APPLICATIONS AS OF MAY 30, 1959

Total number of pending applications (excluding Designs)	198, 799
Total number of pending Design applications	6, 927
Total number of applications awaiting action (excluding Designs)	83, 843
Total number of Design applications awaiting action	1, 790
Date of oldest new application	May 27, 1958
Date of oldest amended application	Apr. 9, 1958

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 63, 64.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 69.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Excavating; Planting; Plant Husbandry; Scattering Unloaders; Harrows and Diggers; Plows	9-30-58	9-8-58
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	9-16-58	10-2-58
3. (VII) MARMELSTEIN, N. (WINDHAM, R. K., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Resistances and Rheostats	12-1-58	12-3-58
4. (VI) FALLER, E. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	11-3-58	11-5-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	7-24-58	8-28-58
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	11-3-58	11-3-58
7. (IV) GONSALVES, J. E. (ANDERSON, E. G., acting), Optics	10-13-58	10-1-58
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	9-22-58	8-5-58
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	10-27-58	10-27-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	11-3-58	11-3-58
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	11-3-58	10-7-58
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	10-20-58	10-17-58
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	10-24-58	10-13-58
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	7-2-58	6-3-58
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	11-4-58	11-3-58
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	9-15-58	9-18-58
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Association or Folding	12-1-58	12-2-58
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	11-14-58	11-5-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation	11-3-58	10-29-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	10-31-58	10-29-58
21. (III) MADER, R. C., Textiles	11-10-58	11-5-58
22. (VI) PAUL, E. (acting), Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	10-30-58	10-29-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators, Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	8-27-58	4-9-58
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	11-12-58	11-13-58
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	11-4-58	10-31-58
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	11-3-58	10-15-58
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	10-23-58	10-27-58
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyers; Pressure Modulating Relays; Wheel Substitutes	9-2-58	9-15-58
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	11-7-58	11-19-58

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
30. (VII) O'LEARY, R. A., Illuminating Burners; Comminutors; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling; Refrigeration; Fluid Sprinkling, Spraying and Diffusing	8-1-58	8-11-58
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Polypropylenes, Polyisobutylenes); Mineral Oils	1-23-59	1-16-59
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Agitation; Fire Extinguishers	11-17-58	11-10-58
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs; Building Structures	10-29-58	10-1-58
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Separating and Assorting Solids (part)	5-23-58	5-19-58
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Sheet Feeding; Severing by Tearing or Breaking	1-6-59	1-5-59
36. (V) EVANS, R. L., Measuring and Testing (part)	7-1-58	7-1-58
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	11-3-58	10-13-58
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	11-17-58	11-5-58
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	12-1-58	11-13-58
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	12-1-58	12-1-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	11-19-58	11-13-58
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	9-15-58	9-15-58
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	11-10-58	11-5-58
44. (II) EVANS, N. H., Directive Radio Systems; Mass Spectrometers; Nuclear Batteries; Nuclear Resonant Devices; Neutron Detecting and Measuring; Radar; Sonar; Torpedoes	8-5-58	8-1-58
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	12-2-58	10-15-58
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e. g., fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	11-4-58	11-4-58
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	11-5-58	11-4-58
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	10-20-58	10-17-58
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass	10-16-58	10-1-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	9-23-58	9-10-58
51. (II) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas; Oscillators	10-7-58	10-6-58
52. (V) LE ROY, C. A., Supports and Racks	12-5-58	12-1-58
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators	1-12-59	1-12-59
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications	12-9-58	12-15-58
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	8-18-58	8-6-58
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	10-27-58	10-29-58
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting and Punching	9-2-58	9-4-58
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Punching	10-20-58	10-27-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	10-1-58	9-22-58
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	10-15-58	10-6-58
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	10-16-58	10-16-58
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Illumination; Photographic Apparatus	10-21-58	10-3-58
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e. g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	11-3-58	11-3-58
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	2-9-59	9-5-58
65. (II) SAX, E. J., Wave Guides; Electric Motors; Conductors; Insulators; Amplifiers	12-1-58	12-9-58
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	6-24-58	6-25-58
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators; Separating and Assorting Solids (part)	11-3-58	11-3-58
81. (III) MONCURE, J. A., Industrial Arts	2-6-59	2-12-59
82. (III) GRAY, M. A., Household, Personal and Fine Arts	2-11-59	2-13-59
91. BAILEY, J. S., Laminated Fabrics	11-4-58	11-3-58
92. GAUSS, H., Detectors, Miscellaneous Electron Tube Circuits	10-24-58	10-6-58
93. WAHL, R. A., Metal Bending; Web Feeding	10-1-58	10-3-58
94. BERLOWITZ, W., Earth Boring; Gas Separation	11-21-58	10-15-58
95. ANGEL, C. D., Masonry and Concrete Structures; Time-Controlling Apparatus; Packed Rod Joints; Joint Packings	11-3-58	10-21-58
M. E. DIV. A (I) LANHAM, B. E., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part), i. e., Polyethylenes	10-16-58	10-13-58

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1959, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1958*.

Patents ..... Numbers 2,866,569 to 2,891,508, inclusive
Plant Patents ..... Numbers 531 to 536, inclusive

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE COMPAGNIE NATIONALE AIR FRANCE

No. 6424. Decided April 22, 1959

[— CCPA — ; — F.2d — ; — USPQ—]

TRADEMARKS — SERVICE MARKS — REGISTRABILITY — "SKY-ROOM."

Registration to appellant of "SKY-ROOM" as a service mark for air transportation of passengers *Held* properly refused, where an advertisement, the sole evidence of appellant's use of the term, "taken as a whole, indicates that 'SKY-ROOM' is used to connote a particular type of accommodation, regardless of who provides it, rather than to distinguish any service provided by appellant from similar services provided by others."

APPEAL from the Patent Office. Serial No. 687,678.

AFFIRMED.

Douglas H. Kenyon (*Kenyon & Kenyon* of counsel) for Compagnie Nationale Air France.

Clarence W. Moore for the Commissioner of Patents.

Before WORLEY, *Acting Chief Judge*, and RICH, MARTIN and JOHNSON (retired), *Associate Judges*

MARTIN, *J.*, delivered the opinion of the court.

This is an appeal from a decision of the Commissioner of Patents, acting through the Assistant Commissioner, affirming the refusal of the Examiner of Trademarks to register "SKY-ROOM" as a service mark for air transportation of passengers.

The sole evidence of appellant's use of the above term, the specimens submitted with the application, are copies of an advertisement from the July, 1954 issue of "Boston Business," appearing as follows:

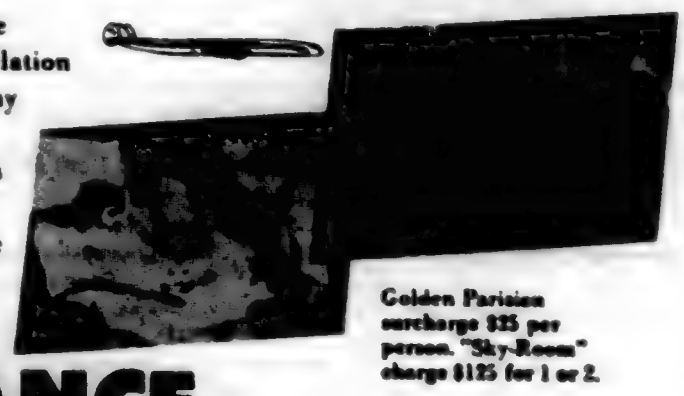
THE WORLD'S MOST LUXURIOUS FLIGHT

The Golden Parisian

YOUR PRIVATE "SKY-ROOM" *To Paris*

With immediate connections to all Europe

Your private salon by day, double bedroom at night...Super Constellation non-stop overnight to Paris, Friday evening from New York. "Sky-Lounge" chairs and spacious cocktail lounge too. A new magnificence in famed Air France service and cuisine.



Golden Parisian surcharge $25 per person. "Sky-Room" charge $125 for 1 or 2.

Send for Free Descriptive Folder

AIR FRANCE

THE WORLD'S LARGEST AIRLINE

SEE YOUR TRAVEL AGENT OR AIR FRANCE, 493 Boylston St., Boston—Copley 7-5350

Section 45 of the Trademark Act of 1946 (15 U.S.C. 1127) reads, in part, as follows:

Service mark. The term "service mark" means a mark used in the sale or advertising of services *to identify the services of one person and distinguish them from the services of others* and includes without limitation the marks, names, symbols, titles, designations, slogans, character names, and distinctive features of radio or other advertising used in commerce. [Italic ours.]

The Assistant Commissioner held that "'SKY-ROOM' is merely the identifying name of a special room on applicant's luxury flight from New York to Paris," and that "the record fails to show that 'SKY-ROOM' is used by applicant to identify and distinguish its air transportation service," as required by Section 45 of the Trademark Act of 1946, and accordingly refused registration under Section 3 of that act (15 U.S.C. 1053).

Appellant agrees that a registrable service mark must identify and distinguish the service of the applicant, and its contention is that, even though "SKY-ROOM" may designate a room on the airplane, it also identifies and distinguishes a service of the airline. The evidence introduced by appellant fails to substantiate this proposition.

Except for the words "YOUR PRIVATE 'SKY-ROOM'," "Your private salon by day, double bedroom by night" the words of the advertisement describe the features of this specific flight which are available to all the passengers who travel on the "Golden Parisian," whether or not they have reserved a "SKY-ROOM." The accompanying pictures which portray the "SKY-ROOMS" show a man, woman and child in the daytime surroundings of the room and two adults and a child in the room as, we presume, it appears when converted into a bedroom at night. Nothing in the advertisement pertaining to the "SKY-ROOM" identifies the air trans-

portation service of appellant and there is no other evidence which reveals that the public considers "SKY-ROOM" as an identifying mark of this airline. In our opinion, the advertisement, taken as a whole, indicates that "SKY-ROOM" is used to connote a particular type of accommodation, regardless of who provides it, rather than to distinguish any service provided by appellant from similar services provided by others.

For the above reasons we *affirm* the decision of the Assistant Commissioner.

AFFIRMED.

RICH, *J.* (concurring):

I agree that the decision below should be affirmed because I believe that no servicemark use (to coin a phrase having the same meaning as "trademark use") has been made of the words "Sky-Room." They aptly describe a private room on an airplane—a room in the sky—whether or not it is convertible to a sleeping compartment. They have been used in running text in a descriptive manner. In the absence of any evidence that the term "has become distinctive of the applicant's goods in commerce" (section 2(f)), the specimen we have before us fails to indicate, at least to me, that the public would be likely to take the words "Sky-Room" as indicating a service originating with Compagnie Nationale Air France as distinguished from any other airline using the same type of aircraft. While the use of quotation marks has a slight tendency toward the establishment of appellant's claim, this emphasis is not sufficient by itself to turn that into a service mark which otherwise lacks the necessary characteristics, either inherently or by virtue of manner of use.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,123,878. (See 2,856,626.)

2,264,785, J. Geralds, Basket structure, Appeal, filed C.C.A., 6th Circuit, Doc. 13703, *Mid-West Wire Products Co., Inc.* v. *Wall Tube and Metal Products Co., Inc.* Judgment of District Court affirmed May 7, 1959.

2,296,059, F. T. Roberts, Flexible tube; 2,436,961, Roberts and Roberts, Method of making flexible tubes, filed May 4, 1959, D.C., M.D. Pa. (Scranton), Doc. 6621, *Great Lakes Rubber Corp.* v. *Herbert Cooper Co., Inc.*

2,397,114, R. Anzalone, Rocket construction; 2,519,123, Dwyer and Anzalone, Hand operated rocket type device for signaling and other purposes, filed May 7, 1959, Ct. Cls., Doc. 205/59, *Martin Dwyer* v. *The United States.*

2,300,606, Schuh and Boyles, Centrifugal casting, filed May 5, 1959, D.C., S.D. Ohio (Columbus), Doc. 2344, *U.S. Pipe and Foundry Co.* v. *The Ohio Steel Foundry Co.*

2,436,961. (See 2,396,059.)

2,454,244, C. H. Wintermute, Moisture proof housing for a piezo-electric element, filed July 30, 1956, D.C.N.J. (Newark), Doc. C-606/56, *Carlton H. Wintermute* v. *Hermetic Seal Corp.* Complaint dismissed (notice May 4, 1959).

2,466,593, A. E. Nelson, Support; 2,462,416, same, Can opener; 2,469,961, same, Pivotal bracket; 2,471,242, same, Bracket; 2,542,606, same; 2,558,058, same; 2,657,897, same, Can opener; 2,648,127, same, Magnetic lid holder, Appeal, filed July 15, 1958, C.C.A. 8th Circuit, Doc. 16044, *Helen S. Nelson, Executrix of Arthur E. Nelson* v. *Swing Away Manufacturing Co. et al.* Decree reversed, cause remanded May 5, 1959.

2,462,416. (See 2,460,593.)

2,469,961. (See 2,460,593.)

2,471,242. (See 2,460,593.)

2,473,052, S. J. Klapman, Intercommunication systems, filed Jan. 12, 1956, D.C., S.D.N.Y., Doc. 106/166, *Sol J. Klapman* v. *David Bogen Co., Inc.* Stipulation and order of dismissal with prejudice Apr. 9, 1959.

2,486,560, R. B. Gray, Transducer and method of making same, filed May 1, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c711, *Erie Resistor Corp. et al.* v. *Hudson-Ross, Inc.*

2,488,682, A. M. Rapoport, Perfume atomizer, filed Apr. 3, 1951, D.C., S.D.N.Y., Doc. 65/207, *Irving M. Blau* v. *Screws and Instruments, Inc. et al.* Order of discontinuance Apr. 29, 1959.

2,510,428, K. M. Tuohy, Contact lens, filed Feb. 14, 1956, D.C., S.D. Calif. (Los Angeles), Doc. 19497-TC, *Soles Laboratories, Inc.* v. *Robert Graham.* Patent held valid and infringed, injunction granted (notice May 13, 1959).

2,514,130, H. T. Jones, Locking wrench and plier, filed Mar. 31, 1958, D.C. Colo. (Denver), Doc. 6019, *H. R. Basford Co., Inc. et al.* v. *Harold T. Jones.* Complaint and counterclaim dismissed with prejudice May 12, 1959.

2,518,123. (See 2,397,114.)

2,534,137, R. C. Lewis, Vibration isolator pad, filed May 13, 1959, D.C., E.D. Pa. (Philadelphia), Doc. 26355, *Textron, Inc.* v. *Walter T. Scott et al.*

2,535,154, S. Oestreicher, Variable output transformer, filed July 13, 1954, D.C., E.D. Wis. (Milwaukee), Doc. 6353, *Harnischfeger Corp.* v. *Miller Electric Manufacturing Co.* "Action dismissed for want of equity May 18, 1959, with finding for defendant."

2,542,606. (See 2,460,593.)

2,558,058. (See 2,460,593.)

2,561,538, Lemmens and Dorgelo, Vacuumtight seal for electrical apparatus and method of forming such seals, filed May 7, 1959, D.C.N.J. (Newark), Doc. 391/59, *N. A. Philips Co., Inc.* v. *Hermetic Seal Corp.*

2,579,304, J. B. Crawford, Self-adjusting recirculating overflow; 2,701,235, O. M. King, Operating system for swimming pool, filed Dec. 31, 1957, D.C., S.D. Calif. (Los Angeles), Doc. 1436/57-BH, *Paddock of California, Inc. et al.* v. *O. M. King Construction Co. et al.* Judgment by consent; plaintiff's Patent 2,579,304 held valid and infringed; defendant's Patent 2,701,235 held valid and infringed (notice May 4, 1959).

2,627,491, Scabo and Bruce, Penicillin salts of substituted alkylene diamines, filed May 21, 1959, D.C., S.D.N.Y., Doc. 146/229, *American Home Products Corp.* v. *American Roland Corp.*

2,657,897. (See 2,460,593.)

2,648,763, Easley and Swayze, Etching; 2,828,194, Hopkins and Easley, same, filed May 20, 1959, D.C., E.D.N.Y. (Brooklyn), Doc. 19776, *The Dow Chemical Co.* v. *Thomas J. Rohan, etc.* Same, filed May 8, 1959, D.C.N.J. (Newark), Doc. 399/59, *Dow Chemical Co.* v. *Hamilton Photo Engraving Co.* Same, filed May 21, 1959, D.C., W.D.N.C. (Asheville), Doc. 1431, *The Dow Chemical Co.* v. *Pictorial Engraving Co., Inc.*

2,648,127. (See 2,460,593.)

2,649,947, Sternbergh and Knabb, Tool holder, filed Sept. 11, 1953, D.C., E.D. Mich. (Detroit), Doc. 12870, *West Shore Manufacturing Co.* v. *Wesson Co.* Dismissal May 11, 1959.

2,651,573, J. M. Leash, Process for manufacturing confections, filed May 7, 1959, D.C., E.D.N.Y. (Brooklyn), Doc. 19751, *Thermal Equipment Co. and ano.* v. *John M. Leach and ano.*

2,652,874, A. E. Armstrong, Covering for toilet flush tanks, filed July 23, 1954, D.C., E.D. Wis. (Milwaukee), Doc. 6373, *Rhee Manufacturing Co.* v. *Bell Textile Co.* Consent decree, injunction granted May 11, 1959.

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2,699,129. (See 2,683,046.)

2,701,235. (See 2,579,304.)

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2,704,730, Herbert Glatt, Semi-porous coated cloth and articles made therefrom, Appeal, filed Apr. 18, 1959, C.C.A., 4th Circuit, Doc. 7880, *Magic Products* v. *O. C. Murphy Co.*

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2,746,652. (See 2,856,626.)

2,748,075, N. G. Hovlid, Aquarium device; 2,868,535, Aquarium aerating device, filed Mar. 9, 1959, D.C., S.D. Tex. (Houston), Doc. 12/546, *Norman G. Hovlid* v. *Foley Brothers Dry Goods Corp. et al.* Consent judgment; patents held valid and infringed, injunction granted May 15, 1959.

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2,757,437. (See 2,757,436.)

2,794,505. (See 2,683,046.)

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2,826,642, Lyon and Thompson, Eraser for magnetically recorded bulk tape in roll form; 2,845,495, W. H. Lyon, Long playing tape recording apparatus; 2,856,462, same, Head drum assembly for magnetic tape; 2,856,463, same, Rotary magnetic transducer means having yieldable heads, filed Jan. 19, 1959, D.C., E.D.N.Y. (Brooklyn), Doc. C-19389, *The Soundscriber Corp.* v. *Olympic Radio & Television, Inc.* Consent order of dismissal May 4, 1959.

2,823,194. (See 2,640,763.)

2,823,790. (See 2,797,461.)

2,845,495. (See 2,826,642.)

2,856,462. (See 2,826,642.)

2,856,463. (See 2,826,642.)

2,856,626, H. L. Marte, Windshield clearing system; 2,128,878, E. C. Horton, Windshield cleaner control mechanism; 2,748,662, J. R. Oishei, Windshield washer, Amended answer, filed Jan. 4, 1956, D.C., S.D. Iowa (Des Moines), Doc. 3/648, *Trico Products Corp.* v. *The Delman Co. et al.*

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2,868,535. (See 2,748,075.)

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2,877,868, Gunning and Dorman, Hydraulic lift for industrial trucks and tractors, Suit for Declaratory Judgment, filed May 8, 1959, D.C., W.D. Mich. (Grand Rapids), Doc. 3637, *Harlo Products Corp.* v. *Multi-Lift Co.*

2,880,980, C. A. Gallagher, Hot box detector, filed May 7, 1959, D.C., S.D.N.Y., Doc. 146/39, *Barnes Engineering Co.* v. *Servo Corp. of America.*

2,886,124, G. A. Scharmer, Kitchen conditioner, filed May 14, 1959, D.C., E.D.N.Y. (Brooklyn), Doc. 19765, *The Ductless Hood Co., Inc.* v. *A and B Home Appliances, Inc.*

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REISSUES

JULY 21, 1959

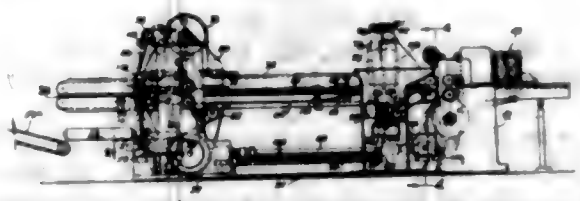
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,668
APPARATUS FOR CUTTING FLATTENED CONTAINERS

James B. Rodman, Burlington, N.J., assignor, by mesne assignments, to Weyerhaeuser Timber Company, Tacoma, Wash., a corporation of Washington

Original No. 2,807,197, dated September 24, 1957, Serial No. 626,539, December 5, 1956, which is a continuation of Serial No. 488,926, February 17, 1955. Application for reissue February 19, 1959, Serial No. 794,485

38 Claims. (Cl. 93—58.4)



1. In an apparatus for cutting the large flaps of a flattened rectangular container having a central body portion and large and small flaps on at least one end thereof; means extending lengthwise of the apparatus and engageable with said flattened container to move the latter through the apparatus; means for deflecting the small flaps out of the plane of the flattened container as it is moved by said conveyor; and means for cutting the large flaps while the small flaps are in deflected positions.

24,669
COLOR STABILIZERS FOR TALLOW

Robert J. Hlavacek, Clarendon Hills, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois

No Drawing. Original No. 2,680,121, dated June 1, 1954, Serial No. 239,840, August 1, 1951. Application for reissue May 22, 1956, Serial No. 586,638

6 Claims. (Cl. 260—398.5)

6. A method for retarding the color reversion of fatty materials which comprises: subjecting said fatty materials to a decolorization treatment with a liquefied, normally gaseous hydrocarbon; and thereafter incorporating in said decolorized fatty materials a small amount of a compound containing as the only sulfur group a sulfhydryl group activated by a hydroxyl group.

10. A method for retarding the color reversion of fatty materials which comprises: subjecting said fatty materials to a decolorization treatment with a liquefied normally gaseous hydrocarbon; and thereafter incorporating in said decolorized fatty material a small amount of thioglycollic acid.

24,670
DEVICE FOR EXTRACTING THE EXCITATION FUNCTION FROM SPEECH SIGNALS

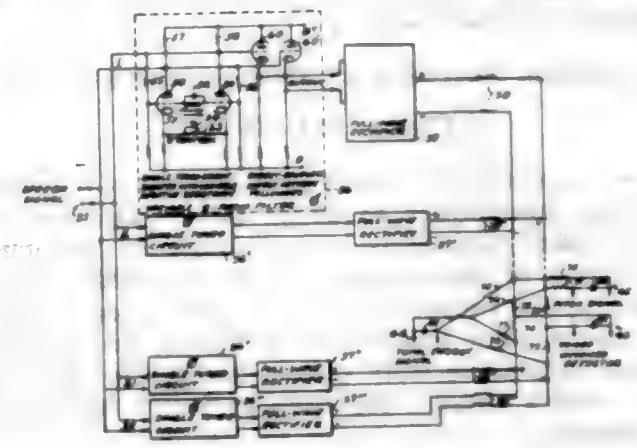
Caldwell P. Smith, Bedford, Mass., assignor to the United States of America as represented by the Secretary of the Air Force

Original No. 2,691,137, dated October 5, 1954, Serial No. 296,101, June 27, 1952. Application for reissue April 23, 1956, Serial No. 580,152

11 Claims. (Cl. 179—1)

(Granted under Title 35, U.S. Code (1952), sec. 266)

9. In speech analysis, an input for speech waves, a multiplicity of contiguous frequency band channels for subdividing said speech waves into higher and lower groups of frequency subbands, a rectifying circuit rectifying the output from each frequency subband, a means for summing said rectified signals from a first lower frequency group of subbands as vowel sound energy, a second means



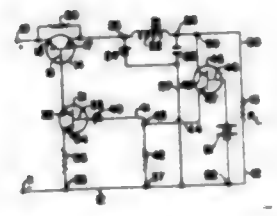
for summing said rectified signals from a second higher frequency group of subbands as consonant sound energy, and a third means for summing rectified signals from all of the subbands and thereby deriving a direct current signal proportional to total speech signal energy.

24,671
VOLTAGE AND CURRENT REGULATION

James Lee Jensen, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Original No. 2,776,382, dated January 1, 1957, Serial No. 524,039, July 25, 1955. Application for reissue November 21, 1958, Serial No. 775,658

16 Claims. (Cl. 323—22)



1. Regulating means for supplying current from an unregulated source to a load device comprising: first and second transistors each having a plurality of electrodes including a base, a collector, and an emitter, said collector and emitter electrodes of said first transistor comprising the output electrodes of said first transistor; circuit means including said output electrodes interconnecting the output terminals of said source and the input terminals of said load device; means connecting the emitter of said second transistor to one of said load terminals; voltage reference means; means connecting said voltage reference means from the base of said second transistor to the other of said load terminals; potential producing means energizable to produce a potential; means connecting the collector of said second transistor through said potential producing means to said other load terminal so that upon conduction of said second transistor said potential producing means is ener-

gized; impedance means; means connecting said impedance means to the base of said first transistor in current controlling relation thereto, and to said potential producing means, so that upon energization of said potential producing means said impedance means cuts off the conduction of said first transistor.

PLANT PATENTS

GRANTED JULY 21, 1959

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

1,853

ROSE PLANT

Herbert Robinson, Burbeage, Hinckley, England, assignor to Jackson & Perkins Company, Newark, N.Y., a corporation of New York

Application November 25, 1958, Serial No. 776,249

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of strong stems of upright habit, irregular and corrugated foliage, good flower production, a Scarlet Red general color tonality of the flowers which persists and does not appreciably change during the life of the bloom, and a strong "Old Rose perfume" fragrance of the flowers.

1,854

FUCHSIA PLANT

Horace M. Tiret, San Francisco, Calif.

Application November 28, 1958, Serial No. 777,163

1 Claim. (Cl. 47—60)

The new and distinct variety of fuchsia plant herein described and illustrated characterized by the size of the bloom in conjunction with an unusual attractive pink coloring of the flower.

1,855

FUCHSIA PLANT

Horace M. Tiret, San Francisco, Calif.

Application November 28, 1958, Serial No. 777,164

1 Claim. (Cl. 47—60)

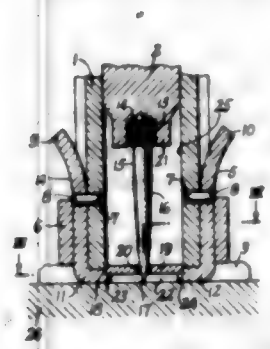
The new and distinct variety of fuchsia plant herein described and illustrated, characterized by the form and attractive color of the red double corolla, contrasting with the sepals, as combined in a plant having an excellent trailing habit of growth.

PATENTS

GRANTED JULY 21, 1959

GENERAL AND MECHANICAL

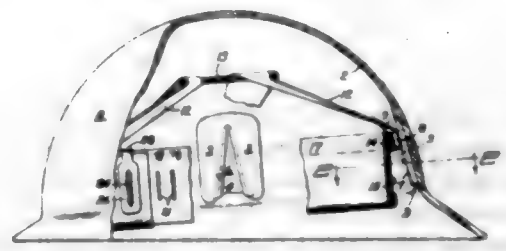
2,895,135
SETTING DEVICES FOR USE IN THE DRIVING OF NAILS OR OTHER PINS
Martin Hilti, Vaduz, Liechtenstein, assignor to Anstalt für Montage-Technik, Vaduz, Liechtenstein
Application January 31, 1956, Serial No. 562,466
Claims priority, application Austria January 31, 1955
5 Claims. (Cl. 1—47)



1. In a hand-held tool adapted to drive a stud of the type including an elongated shaft having a pointed tip at one end and a driving head at the other end, with said shaft carrying a tightly-fitted deformable guide disc near the tip end thereof, the combination of means including a tubular member forming a guide chamber, a ram slidable within and guided in a straight line by said tubular member, said ram having an impact-receiving end and a stud striking end, an opening in the bottom of said guide chamber communicating with the striking end of said ram, stop member means adapted to protrude inwardly into the interior of said guide chamber adjacent said bottom opening for engaging said disc and preventing longitudinal movement of said disc during the initial stages of a driving operation, and manually-operated means for adjusting the lateral positioning of said stop member means into first and second end positions, said stop member means in said first position being clear of the interior of said guide chamber so as to permit said disc to pass freely thereby, said stop member means in said second position protruding slightly into said guide chamber opening and defining an aperture therein larger than the stud-striking end of said ram, whereby said ram is enabled to drive the stud completely into said material with said stop member means in said second position, the interior surface of said guide chamber above said stop member means serving to engage the peripheral edges of said guide disc to maintain said disc and the shaft of said stud laterally fixed in position relative to said tubular member during a driving operation.

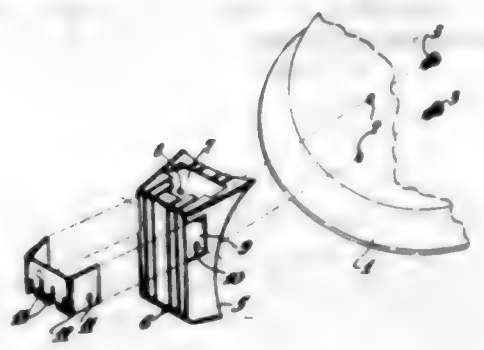
2,895,136
SAFETY HAT
Alfred J. Ruggiero, San Francisco, Calif., assignor to E. D. Bullard Company, San Francisco, Calif., a corporation of California
Application June 23, 1955, Serial No. 517,539
5 Claims. (Cl. 2—3)

1. A safety hat comprising a stiff crown, a plurality of sockets formed by pairs of lugs integrally molded with the crown around the lower part thereof, the lugs of each pair along their adjacent edges being interiorly beveled to provide an undercut and the undercut beveled edges diverging downwardly, a dovetail wedge block having lateral edges complementary to the edges of the lugs and detachably seated in each socket, said wedge block



having an integral cross bar providing oppositely extending free end portions, a head strap in the crown having at each end a bifurcated loop detachably engaging said free end portions of an associated wedge block, and a sweat band to which each head strap is directly connected.

2,895,137
MINER'S LAMP BRACKET
Jack N. Simpson and Charles J. Boyer, Reading, Pa., assignors, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Application August 6, 1956, Serial No. 602,228
2 Claims. (Cl. 2—3)

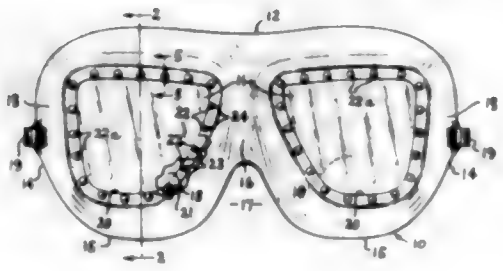


1. In combination with a safety hat including a plurality of holes in the front crown portion thereof, a lamp bracket including a block of insulating material having a rear surface in the form of a spherical segment and corresponding to the shape of the front crown surface of said hat, a recess of substantially rectangular shape formed on each side surface of said block, said block having a central cavity extending from said rear surface and having sidewalls substantially parallel to said recess, a spring clip of substantially U-shaped cross section and having side portions of substantially rectangular shape closely fitting the perimeters of said recesses so as to prevent relative turning movement between said side portions and the sides of said block, said side portions each having only a central hole, a screw and spring washer for each hole, each spring washer having leaves engaging the threads and flexed by rotation of the threads of the screw and being resiliently held against one of said cavity sidewalls.

2,895,138
MEANS AND METHOD FOR FORMING GOGGLES OR THE LIKE

Joseph V. Miller, Auburn, Mass., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

Application February 3, 1956, Serial No. 563,215
3 Claims. (Cl. 2—14)

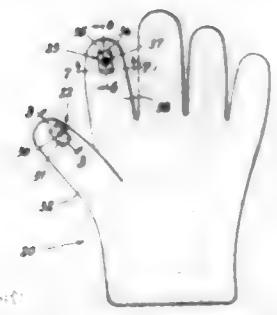


1. The method of securing a plastic lens in intimate relation with a goggle frame, said method comprising the steps of forming a goggle frame having a sight opening in the front wall portion thereof, forming a lens of a predetermined size larger than the sight opening and with a peripheral shape similar to the shape of the sight opening, forming a ring-like element with a shape similar to the lens and with a plurality of integral projections extending outwardly of a side thereof to provide a unitary plastic connecting member, forming spaced openings in said lens adjacent the periphery thereof, forming spaced openings in the goggle frame adjacent the sight opening, positioning said lens in said goggle frame so as to overlie said sight opening with the spaced openings aligned, simultaneously inserting said projections in said aligned openings so as to extend therethrough, and controllably heating and pressing the exposed ends of said projections so as to form head portions thereon and to retain said lens in intimate attached relation with said goggle frame.

2,895,139
FISH CLEANING GLOVE SET

Harold G. Compton, Jennings, Mo.

Application September 7, 1954, Serial No. 454,508
5 Claims. (Cl. 2—161)

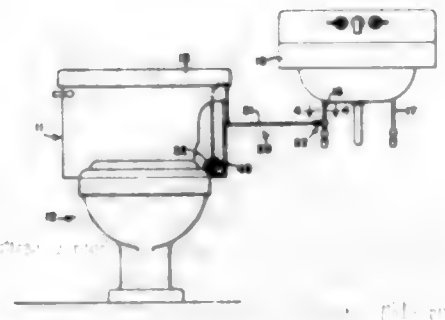


2. A fish cleaning glove set composed of a grasping glove and a cleaning glove for use together, both of said gloves having a plurality of appendages, said grasping glove having piercing means on at least one of the appendages adapted to pierce a fish and hold it in firm engagement, anchoring means for securing the piercing means to said grasping glove, said piercing means comprising a pin-like member, centering means secured to one of the other appendages for receiving the point of said pin-like members, said cleaning glove have a plurality of scaling means on its appendages, said scaling means including a plurality of scaling elements spaced from one another along the length of the individual appendage, said scaling elements decreasing in vertical height in a direction away from the tip of the individual appendage, and a gutting knife extending beyond the tip of one of said appendages.

2,895,140
FLUSH TANK HEATING MEANS

John H. Starr, Hustisford, Wis.

Application September 2, 1955, Serial No. 532,313
23 Claims. (Cl. 4—18)

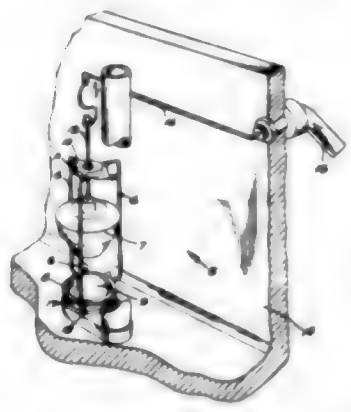


1. The combination with the flush tank of a toilet, of a conduit leading into said tank, a thermally responsive valve disposed within the tank and disposed so as to be responsive to the temperature of the water in the tank, means connecting said valve with the inner end of the tube to control the flow of hot water therefrom, and means to connect the other end of the tube to a source of hot water.

2,895,141
WATER CLOSET BALL VALVE GUIDE

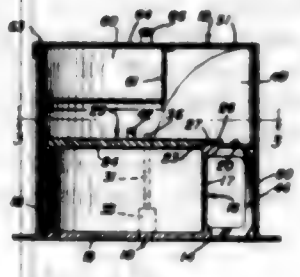
John J. Curran, Shamokin, Pa., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., Los Angeles, Calif., a corporation of California

Application October 15, 1957, Serial No. 690,238
1 Claim. (Cl. 4—57)



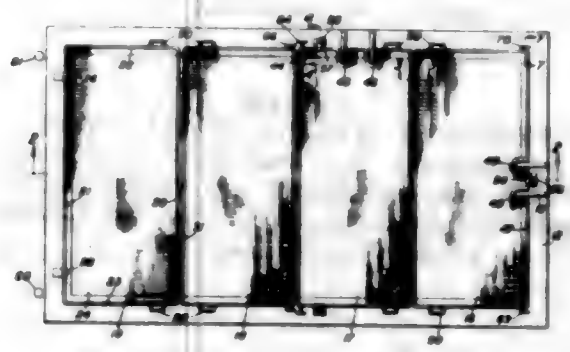
A water closet ball valve guide, comprising: three symmetrically spaced, upright ball valve guide bars cooperable for encompassing a ball valve and having substantially horizontal inwardly bent resilient upper and lower ends; a top guide and support member including a downwardly directed central hollow tubular portion, in which a ball valve guide arm is vertically reciprocable, and three symmetrically spaced radially outwardly directed substantially horizontal support sleeves whereto the inwardly bent substantially horizontal upper ends of said upright ball valve guide bars are attached; a partly annular resilient bottom mounting clip, whereon the inwardly bent substantially horizontal lower ends of said upright ball valve guide bars are substantially equiangularly attached, cooperable for resilient attachment to the inlet end of a flush pipe; said bottom mounting clip being partly open with two of said inwardly bent substantially horizontal lower ends of said upright ball valve guide bars attached to said clip on each side of the open portion thereof, and with the third of said inwardly bent substantially horizontal lower ends of said upright ball valve guide bars attached to said clip at a location substanally opposite the open portion thereof; said top guide and support member being fixedly vertically spaced above said bottom mounting clip a predetermined distance.

2,895,142
PORTABLE TOILET DEVICE
Ernest Nagel and Stellane Nagel, Downey, Calif.
Application November 3, 1955, Serial No. 544,728
3 Claims. (Cl. 4—135)



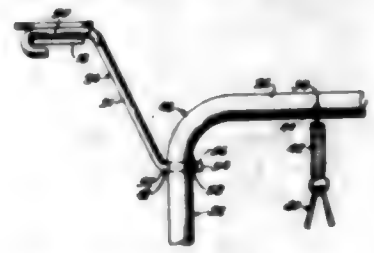
3. A device of the character described, comprising: a base having a wall upstanding therefrom to define, with a portion of said base, a pot chamber offset forwardly on said base, said chamber wall curving forwardly and inwardly; a flange extending horizontally outwardly from the upper edge of the chamber wall and having openings at generally opposite sides of said chamber and spaced outwardly of said chamber; a removable lid for said chamber, having a marginal portion extending outwardly; a marginal gasket on the lower side of said lid; vertical rods slidable in said openings and having hook portions at the upper ends; guides for the lower ends of said rods; yielding means urging said rods downwardly, said rods being rotatable to move said hooks between a position overlying edge portions of said lid and a position clear of said edge portions; and a back member extending upwardly from the flange at the rear of the chamber.

2,895,143
SWIMMING POOL COVER
Katherine B. Seitz, Eggertsville, N.Y.
Application October 23, 1956, Serial No. 617,790
4 Claims. (Cl. 4—172)



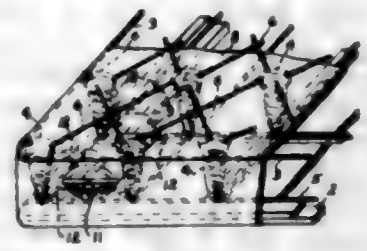
1. An extensible and retractible cover for swimming pools comprising more than two generally rectangular panels disposed in side-by-side relation, hinges connecting the adjacent edges of adjacent panels whereby the panels may be folded upon themselves in a retracted position to uncover the pool and may be disposed in planar alignment to cover the pool, each panel including a wire-like frame and a sheet of screening secured thereto, means anchoring an end panel at its outer end adjacent to one end of the pool, pairs of supporting wheels mounted on the outside edges of intermediately disposed panels rolling upon the upper edge of the pool to facilitate extension and retraction of said cover, some of said panels having recessed portions in the edges of their frames to receive ladders disposed in said swimming pool, a lock means on the frames of an intermediate panel for securing the cover in extended position of a pool, handles on the opposite sides of each panel.

2,895,144
CRIB SPRING CONSTRUCTION
Abraham G. Feldmann, Chicago, Ill., assignor to Stark-line Furniture Corp., Chicago, Ill., a corporation of Illinois
Application August 5, 1957, Serial No. 676,161
2 Claims. (Cl. 5—207)



1. A crib spring construction comprising, in combination, a generally rectangular tubular frame, four independently movable supporting-hook members connected to the frame adjacent the corners thereof, each hook member including a mounting leg at one end thereof of greater length than the diameter of the tubular frame members, the tubular frame members being diametrically bored adjacent the corners of the frame to define journal means whose axes lie in the plane of the frame, and the mounting leg of each hook member being pivotally mounted in said journal means for rotation about an axis located in the plane of the frame with the terminus of the mounting leg positioned inwardly of the frame, and selectively removable means on the terminus of said mounting leg located inwardly of the frame for engaging the inner periphery of the frame to maintain the hook member on the frame.

2,895,145
BOX SPRING WITH SAFE RECEPTACLE
Oscar Solfer, Dayton, Ohio
Application February 27, 1958, Serial No. 717,909
6 Claims. (Cl. 5—317)

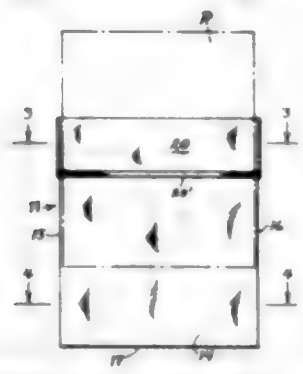


1. In combination, in a resilient structure including an upper frame unit, a lower frame unit, springs interposed between and connecting said frame units at longitudinally and transversely spaced positions, a receptacle having means providing an opening to one end disposed intermediate said frame units and spaced relative said springs, means covering and enclosing said frame units and receptacle, means providing a blind opening in said covering means, the means providing the opening to said receptacle abutting the inner surface of said covering means and maintained in communication with the blind opening in said cover means.

2,895,146
FOLD-CLOSED REVERSIBLE COVER FOR PILLOWS, MATTRESSES OR THE LIKE
Ruth Lester, Nashville, Tenn.
Application August 14, 1956, Serial No. 604,020
6 Claims. (Cl. 5—339)

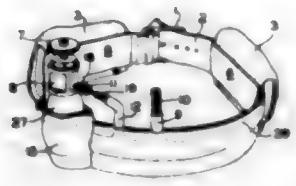
1. A cover for pillows, pads, mattresses or the like, comprising: a pair of flexible panels joined for a major portion of their extent but open along at least a major portion of one edge thereof to provide an opening for insertion and removal of the object being covered thereby,

the edges of said opening being defined by outwardly and reversely turned cuff-like extensions of said panels fastened at their lateral edges to the adjacent joined edges of said panels, said panel extensions being selectively turnable to either side of said cover to close said opening



and to provide overlap-free covering for the other side of said object, or to opposite sides thereof to uncover said opening for insertion or removal of said covered object, whereby said cover is reversible to approximately double its period of use between launderings and to similarly greatly increase its durability.

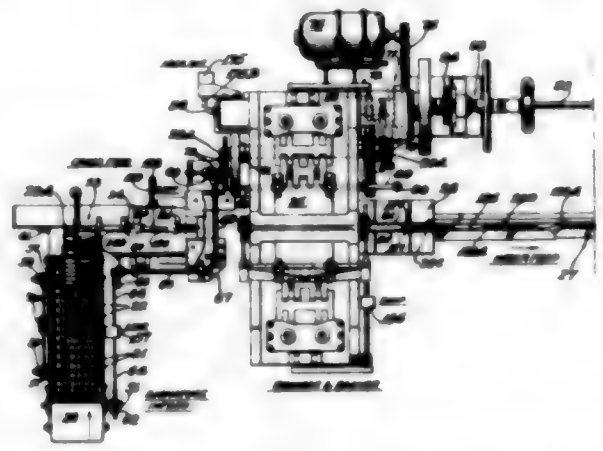
2,895,147
LIFE PRESERVER
Arthur Desjarlais, Springfield, and Frederick E. Desjarlais, Agawam, Mass.
Application August 14, 1956, Serial No. 603,905
1 Claim. (Cl. 9—19)



A life preserver having a pair of folded type water wings, a hollow air tube, a first T-connection, an L-shaped air tube having one end connected to one end of the T-connection, a tank valve assembly, a source of air in said tank valve assembly, an outlet from said source of air, said outlet connected to the other end of the L-shaped tube, one segment of said hollow tube connected to a second end of said T-connection and to a water wing, a second segment of said hollow tube connected to said third end of said T-connection, a second T-connection, a mouth valve connected to one end of said second T-connection, said second segment of said hollow tube connected to the second end of said second T-connection, a third segment of said hollow tube connected to the third end of said second T-connection and to the other water wing, said water wings being mounted on a belt, said hollow tube segments being within the belt, a mounting block attached to the outside of said belt, a clamping means for securing said tank valve assembly to the block, the contacting surface of said block complementing the contour of the contacting surface of said tank valve assembly, and a flap means for covering the said tank assembly.

2,895,148
CONTINUOUS-FLOW ROUNDING, JOINTING, AND CASING-IN MACHINERY
William B. Hildmann, Chicago, Ill., assignor to Brock & Rankin, Inc., Chicago, Ill., a corporation of Illinois
Application April 30, 1952, Serial No. 285,255
9 Claims. (Cl. 11—1)

1. Bookbinding machinery for effecting sequential, continuous-flow rounding and casing-in operations and comprising, in combination, a rounding-and-backing machine having a main drive shaft and an internal signature-feed synchronized with said shaft and internal rounding-and-backing mechanism; a casing-in machine having a main drive shaft and an internal signature-feed synchronized with internal casing-in mechanism; a power unit driving said main shaft of the rounding-and-backing machine; a synchronizing interdrive connecting driving power from said main shaft of the rounding and backing mechanism to the main shaft of said casing-in mechanism; a signature-interfeed communicating from the discharge side of said signature-feed of the rounding-and-backing machine to the injection side of the signature-feed of the casing-in machine; signature-feed means in the



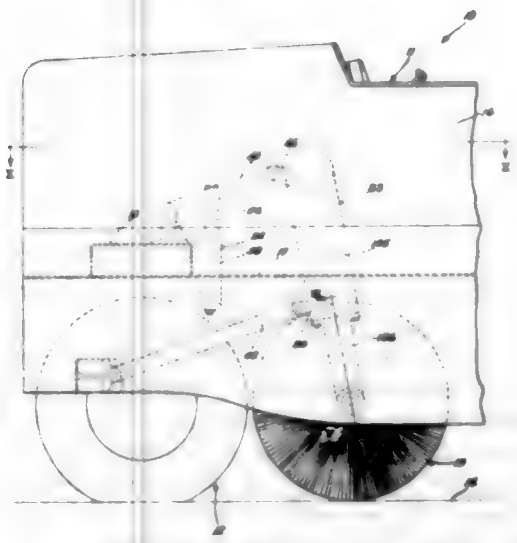
interfeed drivingly connected through a break-away coupling with the signature-feed of the rounding-and-backing machine; a signature-infeed mechanism connected with the infeeding side of the signature-feed of said rounding-and-backing machine and driven by power connected through a break-away coupling from said rounding-and-backing mechanism for driving the infeed in a predetermined synchronism respectively with the internal signature-feed of the rounding-and-backing machine, the interfeed, and the internal signature-feed of the casing-in machine, whereby to effect a continuous flow of book signatures into, through, and out of said rounding-and-backing machine, said interfeed, and said casing-in machine at a uniform predetermined rate.

2,895,149
METHOD OF MAKING PLASTIC BOOT
Ira A. Abernethy, Jr., Meadville, Pa., assignor to Talon, Inc., a corporation of Pennsylvania
Application August 1, 1955, Serial No. 525,685
1 Claim. (Cl. 12—142)

The method of making a boot having a one-piece molded sole and upper wall structure which comprises providing a boot body upper member having a circumferentially continuous inner wall portion including a bridging portion arranged in one area thereof, said body upper member having an outer layer having spaced-

apart edges providing a vent opening arranged in said outer layer directly opposite said bridging portion, said vent opening extending from the upper edge of the boot downwardly to a point intermediate said body member, said outer wall layer having a marginal flap portion arranged at each edge thereof as an integral extension of said outer wall layer, each flap being spaced outwardly from said bridging portion, removing the central part of said bridging portion along lines directly opposite the confronting edges of said flaps so as to provide spaced inner marginal portions on said inner wall portion, providing a slide fastener comprising a pair of stringer tapes having co-operating interlocking means arranged along their opposed edges, and finally positioning the stringer tapes of the fastener in the spaces between the marginal flap portions and the inner marginal wall portions of the boot, and adhesively securing together the marginal flap portions, the stringer tapes and the inner marginal wall portions of the boot.

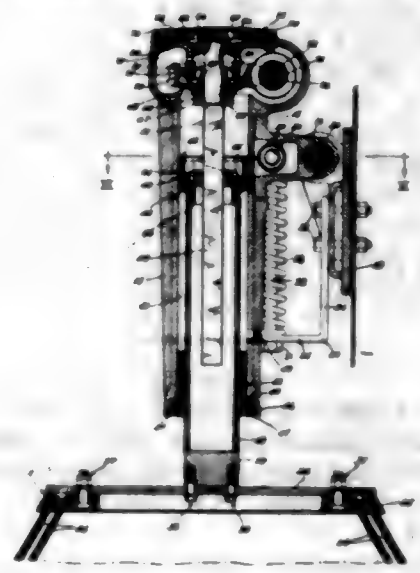
2,895,150
STREET SWEEPER MAIN BROOM DRIVE AND SUPPORT
Charles T. Link, Jr., Skokie, and John S. Gooden, Chicago, Ill., assignors to Elgin Sweeper Company, Elgin, Ill., a corporation of Illinois
Application March 8, 1955, Serial No. 492,859
4 Claims. (Cl. 15—83)



1. In a street sweeper including a wheeled body having a horizontal plate therewithin, a pair of transversely spaced upright support means extending through said plate, a broom journaled between lower end portions of said support means, and means connecting said support means to said body including a first pair of links connected between said body and said support means below said plate, and a second pair of links connected between said body and said support means above said plate, said links being so arranged that the axis of said broom is displaceable in a substantially vertical direction.

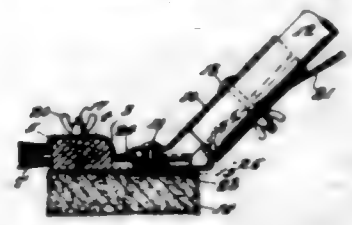
2,895,151
STREET SWEEPER SIDE BROOM DRIVE AND SUPPORT
Charles T. Link, Jr., Skokie, Ill., assignor to Elgin Sweeper Company, a corporation of Illinois
Application March 8, 1955, Serial No. 492,860
6 Claims. (Cl. 15—87)

1. In a street sweeper or the like, a housing having a generally vertical bore, a sleeve in said bore having an external diameter less than the internal diameter of said bore, piston means at the upper end of said sleeve in sealing engagement with the internal surface of said bore, bushing means at the lower end of said bore in sealing engagement with said sleeve, means for introducing fluid into the space between said piston and bushing means to elevate said sleeve, side broom support means coupled



to said sleeve, and means for rotating said side broom support means.

2,895,152
MOPS WITH REPLACEABLE MOP HEADS AND EXTRACTOR MECHANISM
Peter S. Voshkian and Thomas S. Voshkian, Melrose, Pa.
Application August 4, 1955, Serial No. 526,398
3 Claims. (Cl. 15—116)



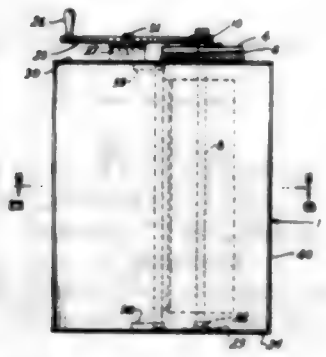
3. In a mop, a top cover plate, a mop handle secured thereto, a block of absorbent cleaning material positioned beneath said top plate, a flexible backing secured to the top face of said block, means to fasten only the front portion of said block to said top plate to provide a non-foldable front section and a rear foldable section, a rigid plate secured to the top of said foldable section beneath the flexible backing and having a pair of spaced sockets extending above the flexible backing, and an extractor handle having spring side arms forward portions of which extend between the top plate and the flexible backing the forward ends of said portions being outwardly bent and interlocking with said sockets, said side arms, when the block sections are in mopping position in horizontal alignment, being locked with the mop handle and maintaining the foldable block section in horizontal alignment with the non-foldable block section.

2,895,153
TOOL FOR SUPPORTING AND USING WINDOW CLEANING IMPLEMENTS
Irma B. Lowe, New York, N.Y.
Application October 11, 1956, Serial No. 615,266
2 Claims. (Cl. 15—118)

1. A tool for supporting and using window cleaning implements comprising, in combination, an extensible

telescopic tubular handle, an implement-supporting head including a rigid elongated plate secured to one end of said handle, said plate having a pair of opposed longitudinally extending and inwardly directed flanges and a pair of opposed laterally extending and inwardly directed flanges, said opposed laterally extending flanges each having a centrally disposed opening and inwardly directed pointed gripping elements, all said flanges cooperating to removably support a cleaning implement, a flexible strap extending through said openings securing a wiping pad to the opposite side of said plate, and means for selectively adjusting the length of said handle.

2,895,154
PAINT ROLLER CLEANER
David Daniel Belcher, Detroit, Mich.
Application February 9, 1955, Serial No. 487,154
2 Claims. (Cl. 15—121.3)



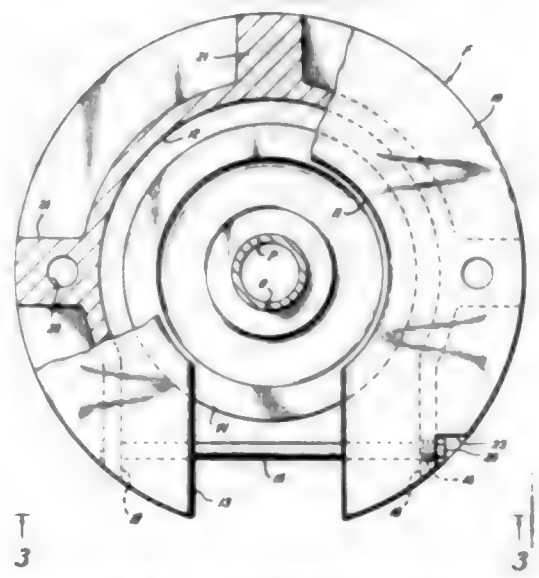
1. A paint roller cleaner comprising a container having a bottom wall, top wall and side walls therebetween; an opening in one of the side walls; a cover removably closing said opening; a manually rotatable shaft extending through said cover parallel to the container bottom wall; a paint roller-supporting core member carried on said shaft within the container and extending parallel to the container bottom wall; the axis of said shaft and core member being so located with respect to the top and bottom walls of the container that the container volume below said axis is less than the container volume above said axis; two horizontally aligned bearing members secured to said one side wall and the side wall opposite thereto, respectively, said bearing members being aligned with one another on a horizontal line above and parallel to the axis of the shaft; a scraper bar located between said bearing members; and shaft sections fixedly extending from the opposite ends of said scraper bar into rotary engagement in the bearing members so as to gravitationally suspend the scraper bar for pivotal movement around a horizontal axis; whereby when the container is filled with cleaning fluid to a level above the lower surface of the roller, the shaft can be rotated to impregnate the roller with cleaning fluid and cause the scraper bar to ride along the roller periphery so as to squeegee off loose and partially dissolved paint particles from the nap fiber roots, after which the container can be inverted so as to allow the scraper bar to fall away from the roller, and the shaft can again be rotated to cause roller-adhered cleaning fluid to be centrifugally thrown from the roller.

2,895,155
WIRE STEM BRUSH
Ruben O. Petersen, University Heights, Ohio, assignor to The Osborn Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Application December 15, 1955, Serial No. 553,317
17 Claims. (Cl. 15—192)

12. A brush comprising two parallel closely spaced unitary wire stem members having hollows in their opposed faces, adhesive material in such hollows, and brush material clamped between said opposed faces and extending laterally beyond said wire stem members, said brush

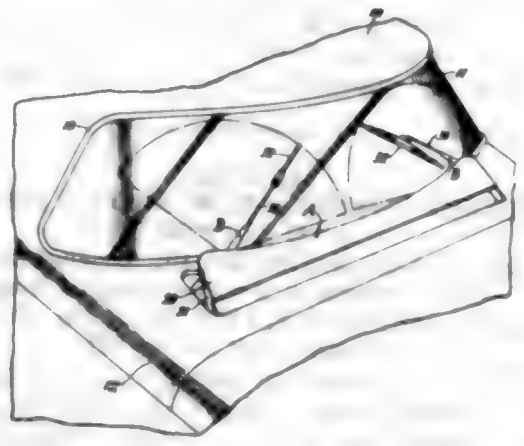
material being bonded to said wire stem members by said adhesive interlocked in said hollows.

2,895,156
PIPE WIPER AND HOUSING THEREFOR
A. V. Lemons, Pasadena, Tex., assignor to Petroleum Mechanical Development Company, Houston, Tex., a corporation of Texas
Application August 4, 1958, Serial No. 752,841
8 Claims. (Cl. 15—310)



7. In combination, a substantially flat, circular pipe wiper, and a support for said wiper, said support comprising, a rigid substantially flat one-piece annular body having an axial bore smaller in diameter than said wiper, a circumferential recess in the wall of said bore adapted to supportingly receive the peripheral portion of said wiper, a radial slot through the wall of the body through which the pipe wiper may be inserted into and removed from said recess, and removable keeper means closing said slot.

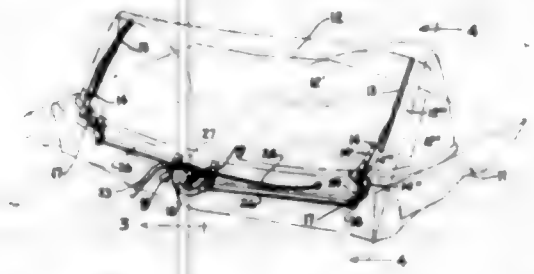
2,895,157
WIPER MECHANISM
Robert J. Kocourek, Chicago, Ill.
Application July 13, 1955, Serial No. 521,771
6 Claims. (Cl. 15—253)



1. In combination with a vehicle having a windshield and a body portion extending outwardly therefrom, said body portion being provided with a compartment

adjacent said windshield, a support member selectively movable between a substantially horizontal retracted position and an upwardly inclined extended position, said support member providing a cover for said compartment when in said retracted position, a wiper assembly mounted beneath said support member and comprising a wiper arm, a wiper blade mounted thereon, and a wiper motor for moving said blade in an arcuate path across said windshield when said support member is in said extended position, said wiper assembly being carried within said compartment when said member is in a retracted position, means for moving said member between said extended and said retracted position, and means provided by said body portion and operably connected with said support member for guiding movement of said member between retracted and extended positions so that said wiper blade contacts said windshield only when said support member is fully extended.

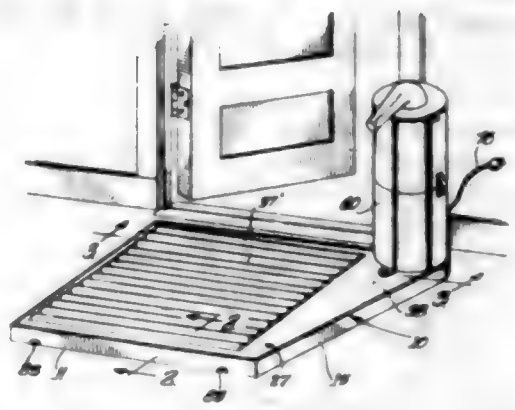
2,895,158
WINDSHIELD WIPER MOTOR TRANSMISSION SYSTEM
William C. Riester, Buffalo, N.Y., assignor to Trico Products Corporation, Buffalo, N.Y.
Application August 13, 1956, Serial No. 603,692
5 Claims. (Cl. 15—253)



2. A cleaner for a curved wrap-around type of windshield having a frontal area flanked by a lateral area and joined thereto by a more sharply curved crest area, comprising a wiper, a rockshaft journaled adjacent the lower edge of the windshield, a wiper motor for operating the rockshaft, and transmission means connecting the motor to the rockshaft and including a driven arm member fixed to said rockshaft and a longer driving arm member pivoted off-center from the rockshaft and having a connector in movable engagement with the driven arm member to provide a variable leverage through which to oscillate the wiper, the arrangement being such that in the midpositions of the driving arm member and the driven arm member their longitudinal axes are coplanar along with their axes of oscillation, there being a driving connecting rod extending substantially normal to such common plane when said members are in their midpositions, for affording a greater leverage to produce an augmented torque at points adjacent the wiper reversal on the lateral area for aiding in moving the wiper up and off the lateral area on its return stroke to the frontal area.

2,895,159
ELECTRIC DOOR MAT
Henry J. Ostrow, Palatine, Ill.
Application June 12, 1957, Serial No. 665,251
3 Claims. (Cl. 15—311)

1. A mechanical door mat comprising an open-topped, cup-shaped support frame having a flat bottom wall, transversely spaced and parallel vertical side walls, and longitudinally spaced, vertical end walls; an inverted cup-shaped grid frame telescoped within said support frame having a substantially flat top wall closing the open top of said support frame having a plurality of elongated slots formed therethrough arranged in parallel spaced relation with respect to each other, and longitudinally spaced, vertical end walls of unequal vertical depth, the bottom edge of said end wall having the greatest vertical depth resting upon said flat bottom wall adjacent one of said end walls of said support frame; spring means depending from the opposite end of said top wall and engaging said bottom wall to maintain said top and bottom walls substantially parallel, said spring means being effective to permit pivoting of said top wall whereby said top wall is inclined with respect to said bottom wall; bearing means detachably connected to the underside of said top wall; a plurality of brush shafts arranged in horizontal parallel spaced relation with respect to each other supported by said bearing means for axial and rotational movements separately and severally with respect to said grid frame, each of said shafts being disposed below a respective slot in said top wall; a brush having radially extending bristles carried by each shaft, a section of each brush projecting through a respective slot and disposed above said top wall; a motor supported by said grid frame; a drive shaft rotatably supported by said grid frame and drivingly connected to said motor,

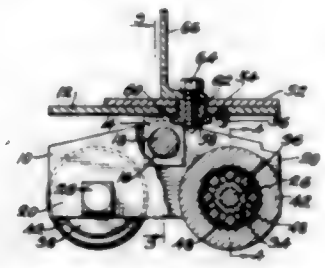


said drive shaft having a plurality of axially spaced, radially offset cranked portions; quick detachable, flexible coupling means connecting each cranked portion to a respective brush shaft and imparting reciprocating movement to the brush shaft when said motor is energized, said coupling means permitting said brush shafts to be manually rotated; an electric circuit for energizing said motor; switch means carried by said top wall adjacent said spring means, said switch means being in said electric circuit and being open when said top and bottom walls are substantially parallel, said switch means being actuated to close when said top wall is inclined with respect to said bottom wall to complete said electric circuit and energize said motor; air conducting means having one end in air communication with the space between said top and bottom walls and its opposite end opening to the atmosphere; and exhaust blower means drivingly connected to said motor and supported by said grid frame for causing air to be drawn through said slots to said space between said top and bottom walls and flow through said air conducting means and be discharged to the atmosphere.

2,895,160
DOLLY CASTERS
Chester C. Clifton, Denver, Colo., assignor to Acorn Company, Denver, Colo., a corporation of Colorado
Application March 23, 1956, Serial No. 573,431
5 Claims. (Cl. 16—47)

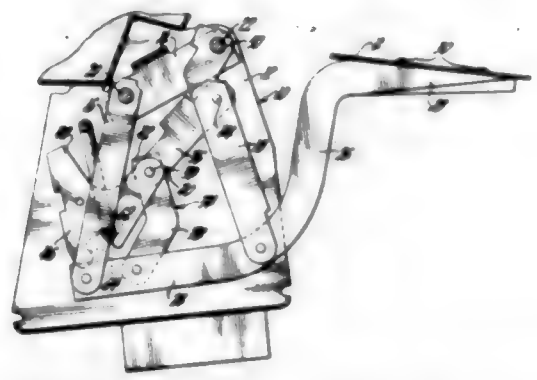
3. In a dolly caster of the type having supporting wheel means mounted in tandem with their axes of rotation in spaced parallel relation on opposite sides of the pivot axis of the caster, the improved means for turning the caster about its pivot axis which comprises: a turning bar attached to the caster between the axes of rotation of the wheel means at spaced points on opposite sides

of the pivot axis of the caster with its axis substantially parallel to said axes of rotation of the wheel means, said turning bar projecting outwardly from the caster to form



a lever arm by which the wheel means may be skidded arcuately over a supporting surface about the pivot axis to change the direction of movement of the caster when in loaded condition.

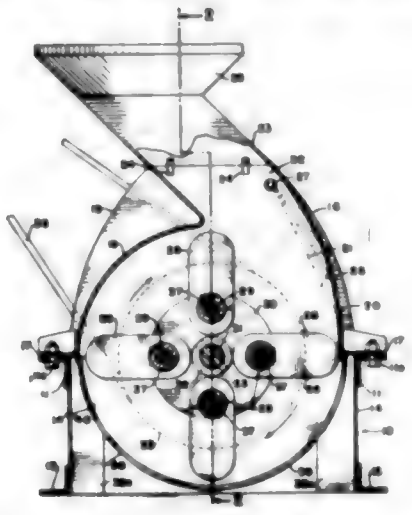
2,895,161
COUNTERBALANCING HINGE ASSEMBLY
Edmund S. Badura, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 26, 1956, Serial No. 612,297
2 Claims. (Cl. 16—163)



1. A rear deck lid hinge assembly for a convertible automobile body comprising a hinge box adapted to be secured to the body inside the rear deck, a rearwardly extending hinge butt adapted to be secured to the rear deck lid, a pair of spaced hangers including a rearward hanger and a forward hanger having their upper ends pivotally connected to said box in diagonally downward spaced relation in the forward direction and their opposite ends pivotally connected in substantially horizontal spaced relation to said hinge butt when said butt is in the rear deck lid closed position, a pair of links forming a toggle by having ends pivotally connected together, the opposite end of one of said links being pivotally connected to said rearward hanger intermediate the ends thereof, the opposite end of the other of said links being connected to said butt intermediate the pivotal connections of said hangers to said butt such that said links converge downwardly and forwardly when said butt is in the rear deck lid full open position, and rear deck lid counterbalancing means connected to the pivotally connected ends of said links biasing said links and consequently said butt upwardly and rearwardly when said butt is in the rear deck lid full open position.

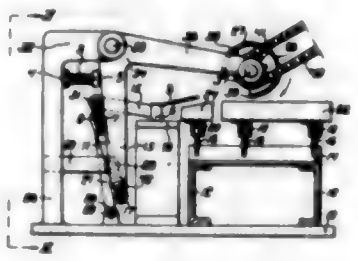
2,895,162
MACHINE FOR RECOVERING MEAT FROM ANIMAL CARCASSES
Sterling G. Harris, Beaufort, S.C., assignor to The Blue Channel Corp., Port Royal, S.C., a corporation of Maryland
Application November 8, 1957, Serial No. 695,359
7 Claims. (Cl. 17—1)

1. An apparatus for use in recovering the meat from animal carcasses or pieces thereof, which comprises a casing having a bottom discharge opening, a horizontal shaft within the casing, a plurality of impellers supported by the shaft for swinging movement on axes parallel to the shaft, a feed chute for introducing the material to be treated into the upper quadrant of the casing in front of the impellers, in the direction of their movement, at



top dead center, the casing having a smooth inner impact surface in said quadrant, and a screen plate mounted in the casing between the shaft and the discharge opening and having slots extending in a direction parallel to the paths of the impellers, said slots having an uninterrupted angular length in said direction of at least 90°.

2,895,163
DEVICES FOR POSITIONING FISH
Paul Danielsson, Stockholm, Sweden, assignor to Arenco Aktiebolag, Stockholm, Sweden, a Swedish joint-stock company
Application November 30, 1956, Serial No. 625,437
2 Claims. (Cl. 17—2)



1. In apparatus for positioning fish, means for conveying the fish transversely of its longitudinal direction of extent, a rigid rotatable roller mounted above said conveying means and having a segmental helical peripheral surface portion, means yieldingly supporting said roller in engagement with the body of the transversely conveyed fish and thus yieldingly adjusting its position with respect to said conveying means in dependence on the thickness of said fish engaged, an abutment mounted laterally adjacent said conveyor means in position to be engaged by said fish and being adjustable in the longitudinal direction of extent of said fish, means operably connecting said roller with said abutment to adjust said abutment longitudinally of the fish in accordance with the thickness of the fish, means operably interconnecting said roller and said conveying means to rotate said roller and cause its helical surface portion to displace the transversely advancing fish longitudinally of the fish toward and against said abutment, said roller having an interrupted peripheral segment whereby the peripheral extent of said helical surface portion of said roller is substantially less than 360 degrees, and the operably interconnected drives of said conveyor and roller being coordinated so that the interrupted portion of the roller's periphery is downward as the fish are brought under said roller.

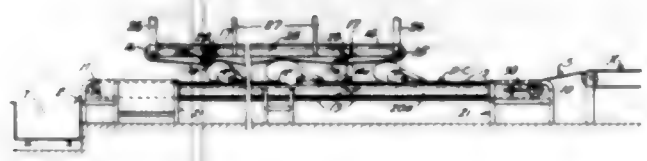
means for flowing said extracted melted plastic from said the exterior of said ring; said shoe mold being rigid and

2,895,164
APPARATUS AND PROCESS FOR FACILITATING SLAUGHTER AND FOR BLEEDING SLAUGHTER ANIMALS

Laurence W. Murphy, Austin, Minn., assignor to Geo. A. Hormel & Co., Austin, Minn., a corporation of Delaware

Original application November 14, 1955, Serial No. 546,622, now Patent No. 2,841,817, dated July 8, 1958. Divided and this application January 27, 1958, Serial No. 711,532

5 Claims. (Cl. 17—45)



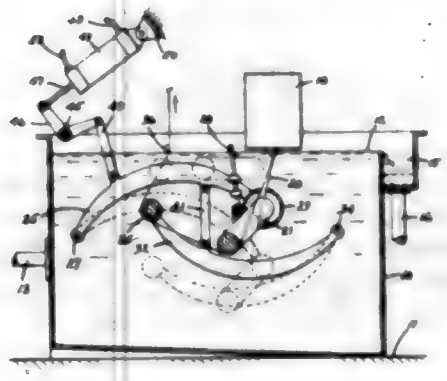
1. The process of slaughtering and bleeding slaughter animals after the voluntary processes of said animals have been immobilized, which consists in supporting and substantially horizontally moving at slow speed a plurality of said animals disposed in horizontal, transverse relation to their line of travel, successively sticking said animals during their initial movement and continuing the movement of said animals for a predetermined time travel adequate for full bleeding of the stuck animals and collecting the blood from said animals as they travel through said path.

2,895,165
RADIUS BAR LINKAGE

Horace P. Fry, Jr., West Chester, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

Application November 5, 1956, Serial No. 620,544

2 Claims. (Cl. 18—15)



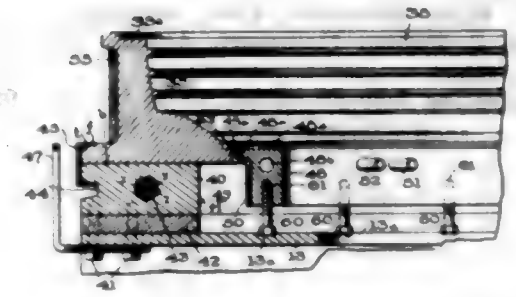
1. In an apparatus for the manufacture of film by the extrusion of film-forming solution into a coagulating bath, the combination comprising a container for the coagulating bath, a nozzle adjacent to said container for extruding film-forming solution into the bath, a curved guide member and a straight bar immersed in the bath in spaced-apart relationship, the freshly extruded film being drawn under said guide member and bar before it is removed from the bath, an elevating means for raising said guide member and straight bar as a unit to the surface of the bath to permit initial lacing of the film thereover, said elevating means including a first pair of arms holding the ends of the curved guide member, a second pair of arms holding the ends of the straight bar, each pair of arms being rotatably mounted on the walls of said container, a direct mechanical linkage connecting the two sets of arms, and a lever positioned above the bath and connected to one of said pair of arms, whereby movement of said lever determines the elevation of the guide member and bar in the bath.

2,895,166
MOLDS FOR RETREADING OR RECAPPING VEHICLE TIRES

Donald M. MacMillan, Macon, Ga.

Application April 30, 1954, Serial No. 426,658

5 Claims. (Cl. 18—18)



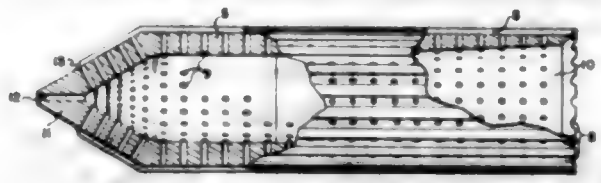
1. In a vehicle tire recapping apparatus, an annular pressure plate, a heater ring secured to said plate, insulating material interposed between said ring and plate, an annular retreading molding matrix section of heat conducting material removably mounted on said heater ring, said matrix section having a radial flange projecting outwardly therefrom in heat conducting contact with said heater ring, said heater ring having its outer diameter substantially equal to the diameter of said outwardly projecting flange, said heater ring having a circumferential groove in the outer surface thereof, means for securing said matrix section and heater ring together and comprising a channel form split band having one leg of the channel engaging said groove and the other leg embracing the outwardly projecting radial flange of the matrix section, and adjustable fastener means at the split ends of the band whereby it may be fastened into and unfastened from its securing position.

2,895,167
FILTERING LINER FOR BARRELS OF EXTRUSION MACHINES

Louis Paggi, Belleville, N.J., assignor, by mesne assignments, to Mario Maccaferri, Rye, N.Y.

Application June 9, 1954, Serial No. 435,397

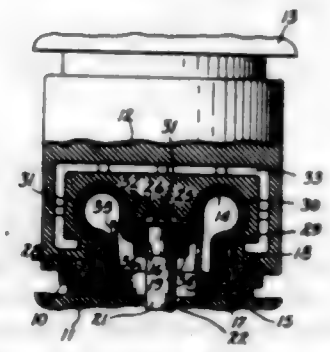
8 Claims. (Cl. 18—30)



8. In apparatus for plasticizing plastics, in combination, holding means providing therewithin an interiorly unobstructed plasticizing chamber for holding a solid mass of unplasticized plastic material under pressure in closely compacted, granular form against movements bodily therein as a mass; said holding means providing an intake into one end of said plasticizing chamber and a discharge therefrom at the opposite end thereof; heating means for applying plasticizing heat directly to and around and along the peripheral surfaces of a mass of unplasticized plastic held in said plasticizing chamber; feeding means at said intake end of said plasticizing chamber for forcing unplasticized plastic through said intake and applying pressure to one end of the solid mass of unplasticized plastic formed and held in said plasticizing chamber; extracting means for the extraction and removal radially outwardly from locations relatively closely spaced apart around and spaced apart along a mass of unplasticized plastic under pressures exerted by said feeding means, of the layers of melted plastic formed along and around said mass by the heat directly applied thereto by said heating means; and

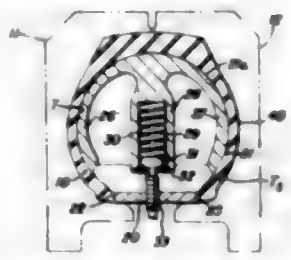
means for flowing said extracted melted plastic from said plasticizing chamber to said discharge from the latter under the pressures exerted thereon by said feeding means.

2,895,168
AIR SPRING VULCANIZING MOLD
Stephen C. Sabo, Barberton, Ohio, assignor to The General Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Application July 30, 1958, Serial No. 752,008
6 Claims. (Cl. 18—35)



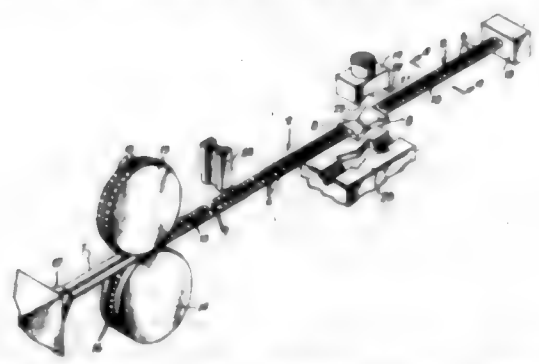
1. A mold for shaping and vulcanizing an air spring bellows comprising a base member, a tubular upwardly tapering elastic rubber diaphragm for engagement with the interior of a bell shaped bellows blank and having its larger end clamped to said base member, means forming a closure for the upper end of said diaphragm, an upper mold member having a cavity of less height than said diaphragm that is provided with a central opening of a size to permit entry of said diaphragm with a bellows blank thereon and with a portion of enlarged diameter above said opening, said upper mold member having an annular portion engageable with said base member around the exterior of said diaphragm, a portion engageable with the lower end of a bellows blank to clamp it to said base member and a portion enagageable with the upper end of said bellows member to clamp it to the upper end of said diaphragm, and bracing means carried by said base member and extending upwardly therefrom within said diaphragm at circumferentially spaced points and adjacent its interior face to resist inward collapse of the diaphragm at said points during closing of the mold.

2,895,169
SECTIONAL VULCANIZING APPARATUS
Adolf H. Fröhlich and Edward J. Harris, Akron, Ohio, assignors to The Cleveland Trust Company, Cleveland, Ohio, as trustee
Application July 30, 1956, Serial No. 600,936
4 Claims. (Cl. 18—45)



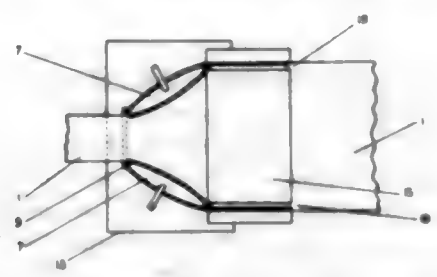
1. A sectional vulcanizing apparatus of the character described for use interiorly of a pneumatic tire having an internal wall surface and opposed bead portions, comprising; an endless ring having opposed axial edges receivable against the internal wall of a tire in the bead regions thereof; an arcuate shoe mold of concavo-convex cross-sectional configuration and adapted to have its external surfaces engaged flush with said internal wall of said tire; and means for shiftably mounting said shoe mold in radially projecting relationship with respect to the exterior of said ring; said shoe mold being rigid and being normally urged radially away from said ring; said endless ring coacting with said tire upon contact therewith to define a sealed internal annular chamber interiorly of said tire; said chamber remaining sealed upon contact of said shoe mold with said tire.

2,895,170
METHOD OF MAKING ADJUSTABLE FASTENER TRACK
Alfred E. Carille, Meadville, Pa., assignor to Talon, Inc., a corporation of Pennsylvania
Application May 1, 1956, Serial No. 581,860
6 Claims. (Cl. 18—47.5)



1. The method of making flexible tracks for adjustable fasteners of the class described which comprises forming by extrusion a continuous strip of track substantially T-shape in cross section, cutting a piece from said strip of sufficient length for two fasteners, passing the cut strip into and through a heated combination punch and cut-off knife so as to simultaneously cut said strip centrally thereof and applying heat and pressure to either side of the central cutting point thereby deforming the two opposed ends of the resulting cut lengths whereby two fastener tracks are provided with each having an enlarged portion at one end thereof which acts as a stop when the fasteners are in use.

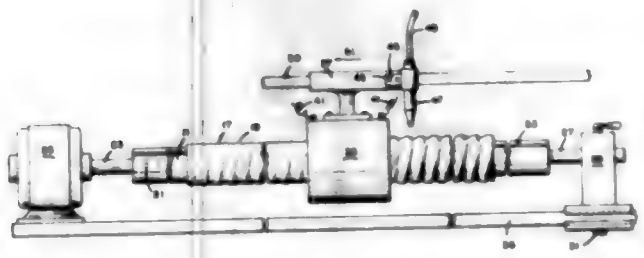
2,895,171
PRODUCTION OF FILMS FROM POLYMERIC MATERIALS
William Anthony Holmes-Walker, Boxmoor, and Denis James Henry Sandiford, Welwyn, England, assignors to Imperial Chemical Industries Limited, Millbank, London, England, a corporation of Great Britain
Application June 11, 1957, Serial No. 664,962
Claims priority, application Great Britain March 22, 1957
1 Claim. (Cl. 18—48)



A process for the production of an oriented film from a polymer of 3:3-bis-chloromethyloxacyclobutane which comprises melting a polymer of 3:3-bis-chloromethyloxacyclobutane having a molecular weight of at least 10,000; extruding said molten polymer as a film and quenching the same in water at a temperature between −5° and +5° C., to obtain a substantially amorphous, extruded film; first drawing said substantially amorphous, extruded film in one direction to between 2.75 and 3.5 times its original dimension in the direction of drawing; thereafter drawing said film a second time in another direction at right angles to the direction in which said film was first

drawn, to between 2.75 and 3.5 times its dimension in the direction of said second drawing; further drawing said film in the direction in which said film was first drawn, each of said drawing steps being carried out at a temperature between 12 and 22° C.; and heat setting said film, after drawing, at a temperature between 50 and 150° C., while preventing retraction of said film.

2,895,172
METHOD OF CENTRIFUGALLY FORMING ARCH WALL TUBING
William E. Meissner, Devon, Pa.
Application October 10, 1955, Serial No. 539,355
3 Claims. (Cl. 18—56)

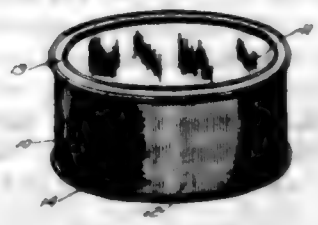


1. A method of providing reinforced plastic tubing with an arched wall between reinforced areas including the steps of rotating the plastic tubing about its axis to exert a centrifugal force on the tubing wall, softening the tubing progressively along its length during the rotation thereof to cause the same to plastically flow and effect an outward arching of said softened wall between reinforced areas, and progressively stabilizing the softened wall while said tubing is rotated to set the same in its arched position.

2,895,173
POROUS RESIN COMPOSITION AND METHOD OF USING AND PREPARING SAME
John K. Atticks, East Hartford, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
No Drawing. Application July 7, 1955
Serial No. 520,633
4 Claims. (Cl. 18—59)

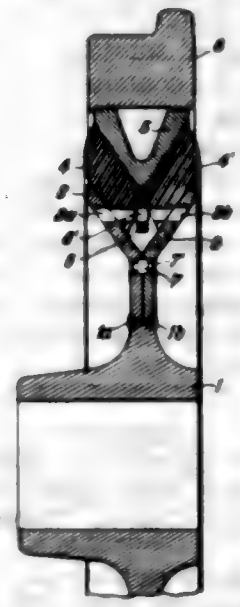
1. A process for the manufacture of overall light density, high strength filling material comprising blending together an expandable material comprising 5 to 25% by weight of pellets of a resinous material selected from the group consisting of phenol-aldehyde resins, natural rubber, butadiene-acrylonitrile copolymers and chloroprene polymers containing a normally solid agent decomposable at elevated temperatures to release nitrogen gas, 95 to 75% of a matrix comprising 20 to 95% of short fibers of an organic polymer selected from the group consisting of polyhexamethylene adipamide, cellulose acetate, polyacrylonitrile, a polyester which is the reaction product of terephthalic acid and ethylene glycol, and mixtures of the foregoing and from 80 to 5% of a dry particulate resinous cementing agent selected from the group consisting of an epoxy resin which is the reaction product of bis-phenol and epihalohydrin, phenol-aldehyde resins, polyhexamethylene adipamide and mixtures of the foregoing, said cementing agent having a lower melting point than the short organic polymer fibers and not higher than the temperature at which the expanding agent is activated, heating said blended mixture of pellets and matrix to a temperature whereby the cementing agent melts and the decomposable agent in the expandable material gasifies causing expansion of said expandable material which in turn causes the matrix to be compacted to form a disperse phase of low density, low modulus expanded resinous material within a high modulus, high strength compacted matrix of said fibers and cementing agent.

2,895,174
MANUFACTURE OF PLEATED FILTERS
Carl G. Heckett, Uxbridge, Mass., assignor to Fram Corporation, Providence, R.I., a corporation of Rhode Island
Application January 18, 1957, Serial No. 633,408
6 Claims. (Cl. 18—59)



1. In the manufacture of approximately annular pleated filters having the zigzag ends of the pleated material embedded in plastic end caps; the method of assembling such a filter which comprises placing an inner screen having the form of an open ring about a jig having a laterally extending base and an approximately cylindrical body so that the ends of the screen slidably overlap, placing a pleated filter material with its end pleats secured together on the jig about said screen, placing an outer screen having the form of an open ring on said jig about the pleated material so that its ends slidably overlap, forcing the two screens and pleated material against the base, then tightening a band about the screens and pleated material to cause them to hug the body of the jig, and while they are so held about the jig, immersing an edge of each screen and the zigzag ends of the pleats in a plastic that is confined in a mold.

2,895,175
METHOD OF CASTING RESILIENT CUSHIONING MEMBERS FOR WHEELS
Gottfried Reuter, Lemforde, Hannover, and Heinrich Kordes, Osnabruck, Germany, assignors to Firma Klöckner-Georgsmarienwerke Aktiengesellschaft, Osnabruck, Germany
Application April 2, 1957, Serial No. 650,245
Claims priority, application Germany April 5, 1956
3 Claims. (Cl. 18—59)



1. A method of forming resilient cushioning members for wheels comprising placing a rim and one annular sheet metal disc of smaller diameter than the rim upon a base plate having a surface which conforms in shape with the external surface of an uncompressed resilient insertion to be moulded, centrally locating the rim and disc on the base plate by means of a dowel pin and then filling the space between the base plate and the rim and the annular disc and around the dowel pin with a heat

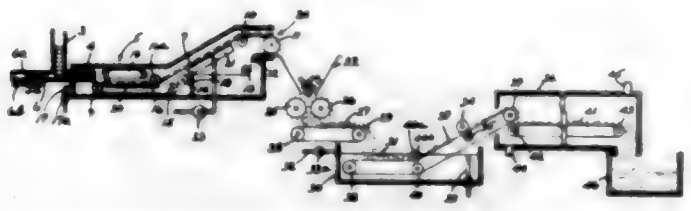
settable plastic material until the desired level of liquid plastic for forming the resilient insertion is reached, submitting the plastic material to heat treatment until the plastic material has set and adheres to the rim and disc, removing the rim and the sheet metal disc from the base plate and removing the dowel pin out of the plastic material, positioning another annular disc on the base plate, inverting the rim and the said first-mentioned disc so that the plastic material insertion lies uppermost and engaging the said first-mentioned disc with a spacing ring supported on the other annular disc, securing the discs and the spacing ring together, pouring a heat-settable plastic material into the space between the base plate and the rim and said second-mentioned disc through the hole formed in the set plastic insertion left by the dowel pin as a second insertion until the level of the plastic material reaches the desired level, subjecting the wheel again to heat treatment until the plastic material has set to adhere to the second-mentioned disc and the rim, and finally removing the base plate.

2,895,176
APPARATUS FOR RECOVERING WASTE COATED FIBERS

Worth Wade, Rosemont, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

Original application June 2, 1952, Serial No. 291,165, now Patent No. 2,795,823, dated June 18, 1957. Divided and this application October 24, 1956, Serial No. 618,110

6 Claims. (Cl. 19—66)



1. In apparatus for preparing potentially adhesive fibers from waste filter batts which after their use in filtering a potentially adhesive material carry a non-uniform deposit of said material thereon; means for distributing the potentially adhesive material throughout each of the batts comprising an elongated substantially enclosed container; means for supplying the container with controlled amounts of a solvent for the potentially adhesive material; an opening in an upper portion of one end of the container; a conveyor which extends through the solvent and upwardly through the opening; means at the opposite end of the container for depositing the batts on the conveyor beneath the surface of the solvent; and means for maintaining the batts submerged in the solvent during a substantial portion of their travel through the solvent.

2,895,177
TEXTILE COMBING MACHINES

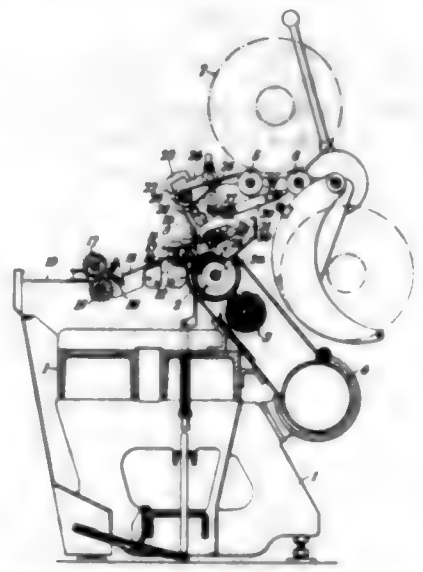
John Raymond Foster, Accrington, England, assignor to T.M.M. (Research) Limited, Helmshore, Rossendale, England

Original application October 12, 1953, Serial No. 385,633, now Patent No. 2,781,556, dated February 19, 1957. Divided and this application March 3, 1955, Serial No. 491,821

Claims priority, application Great Britain October 14, 1952

2 Claims. (Cl. 19—120)

1. In a textile combing machine including a comb cylinder and a top comb, in combination, a nipper assembly, a detaching mechanism, the nipper assembly being arranged to supply a web of material to said detaching mechanism, said detaching mechanism comprising front and back spaced roller pairs, each consisting of an upper roller and a lower roller, all four of the rollers being reversably rotatable about fixed axes, said comb cylinder and said top comb cooperating to comb respectively the leading edge of said supply web and the trailing edge of the web held by the detaching mechanism, said nipper and said detaching mechanism being cooperative to cause the combed leading edge of the supply web to be pieced

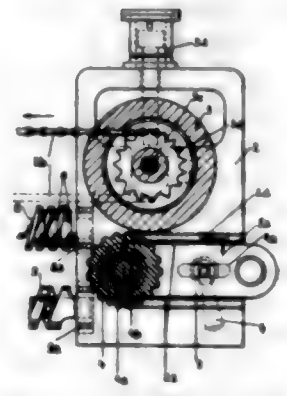


onto the trailing edge of the combed web held by the detaching mechanism before reaching the nip of the back roller pair, the axis of said back rollers being situated at higher points than the axes of the corresponding front rollers, to cause the pieced web when fed toward the nipper to travel substantially tangential to the surface of the bottom back roller when at a point displaced from the nip of the back roller toward the front rollers.

2,895,178
DRAFTING ARRANGEMENT FOR TEXTILE FIBRES

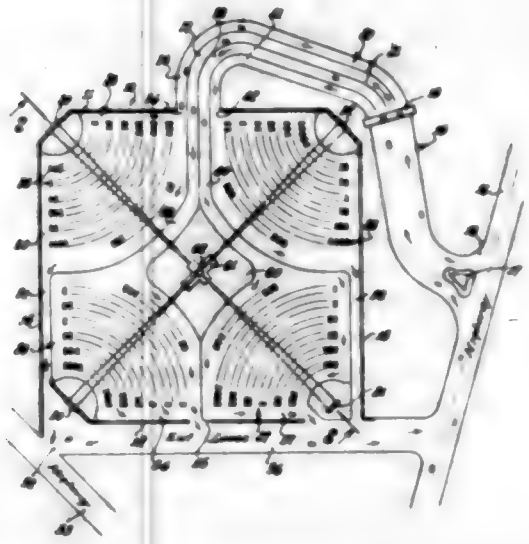
Joseph Marie Julien Sauvage, Herstal, Belgium

Application November 15, 1954, Serial No. 468,926
Claims priority, application Belgium November 21, 1953
1 Claim. (Cl. 19—134)



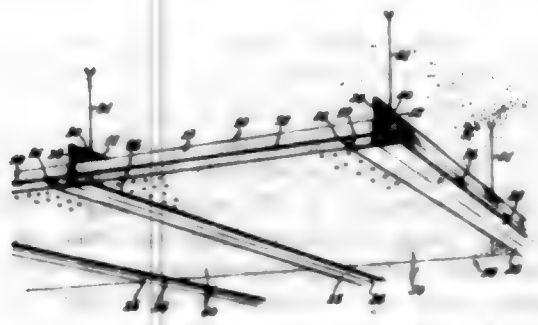
Apparatus for the treatment of textile fibres comprising a first roller including a resilient peripheral portion, a second roller of lesser diameter than the first roller and including a corrugated peripheral portion, a frame having first and second perpendicular slots, the first slot displaceably accommodating the first roller for supporting the latter, a support member displaceably accommodated in the second slot and supporting the second roller in adjustable operative association with the first roller, the second roller being supported for free wheeling operation, means coupled to the first roller for driving the same, means coupled to the first roller for urging the same generally in the direction of the second roller, and locking means coupled to the support member for fixing the same in position on the frame whereby to adjust the engagement of the fibres between the rollers.

2,895,179
MULTIPLE SCREEN DRIVE-IN THEATER
Lewis Eugene Wilson, Los Angeles, Calif.
Application February 24, 1953, Serial No. 338,211
2 Claims. (Cl. 20—1.12)



1. A multiple drive-in theater group comprising a parking field divided into a plurality of inwardly facing individual theaters each having a plurality of rows of car parking plots, a common service area, rear projection picture-producing media within said service area at an elevated location and a screen for each individual theater cooperable therewith, an entrance hold-out lane common to all individual theaters in communication with a highway and located between adjoining individual theaters, individual entrance lanes in communication with the hold-out lane through the service area to the respective individual theaters, an exit lane for each individual theater at a side thereof removed from the entrance lane, common exits for adjoining individual theaters adapted to communicate with the highway, screens separating each theater from the respectively adjacent theaters, and a light baffle between each theater and the service area.

2,895,180
SUSPENDED CEILING
George J. Byssing, Los Angeles, Calif.
Application October 25, 1956, Serial No. 618,261
3 Claims. (Cl. 20—4)



1. A ceiling suspended from a supporting structure and comprising: a pair of elongate runners arranged in spaced apart relationship in a common plane, each runner comprising a flat web having side edges, stem means projecting substantially normal to the web along the longitudinally extending medial line of the web, and marginal portions integral with and projecting substantially normal to the web along the side edges of the web respectively; a plurality of rectangular panels each having an underface, two side edges and two end edges, the panels spanning the space between adjacent runners and resting on the webs, the panels having recesses formed therein adjacent said panel side edges respectively and receiving said marginal portions, each panel end edge having a longitudinally extending kerf formed therein, and strip members resting on the webs and extending transversely of the runners and being received in said kerfs and means secured to the stem means for suspending said runners from the supporting structure.

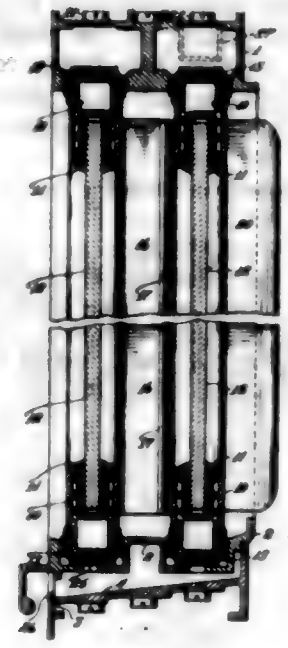
2,895,181
SHAKE OR SHINGLE PANELS
Robert Arthur Hope and John Robert Walker, Vancouver, British Columbia, Canada
Application October 24, 1955, Serial No. 542,334
2 Claims. (Cl. 20—5)

1. A shingle panel produced with a plurality of shingles to form an undercourse and a plurality of shingles to form a finish course, the opposing faces of the undercourse shingles and the finish course shingles being grooved transversely a short distance from their butts, the grooves of the undercourse shingles being disposed at a slight angle to the grooves of the finish course shingles when the undercourse and finish course are brought into contact with each other, a flat ribbon spline closely fitting the grooves of the undercourse shingles and the finish course shingles, a fillet extending horizontally of the inner face of the undercourse, said fillet forming a member to initially support one finished panel on the upper edge of a panel previously hung upon a wall surface, the upper edges of the undercourse shingles of the panel and the finish course shingles of the panel being trimmed off horizontally to a straight line and a row of stitching uniting the trimmed edges of the shingles in side edge to side edge contact.

2,895,182
WINDOW STRUCTURE
Lyon D. Evans, Louisville, Ky., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Application April 22, 1954, Serial No. 424,898
2 Claims. (Cl. 20—11)

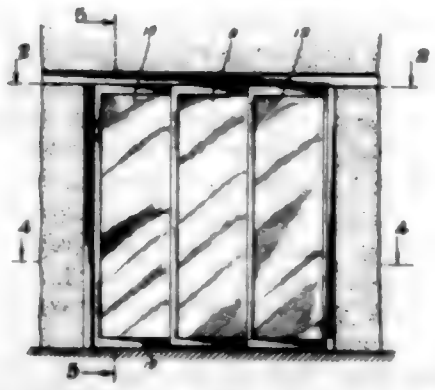
1. A sill, jamb, and head structure, for sliding sash, comprising a unitary head member formed with front and rear walls and an intermediate downwardly extending wall, said walls defining spaced channels and wall guides for two sash, a first sill member having front and back walls, and a connecting wall therefor, said connecting wall being formed with an upwardly directed centrally located U-shaped projection serving as a spacer between channels, each for receiving a sash, a second and lower sill member consisting of front and back walls having an intermediate connecting wall adapted as a bottom sill closure, said intermediate wall being spaced from the bottom area of the first sill member, and a pair of vertically disposed jamb

pieces each formed with integrally apertured screw-receiving areas adapted to receive screws passed downward-



ly from the head and upwardly from the second sill member.

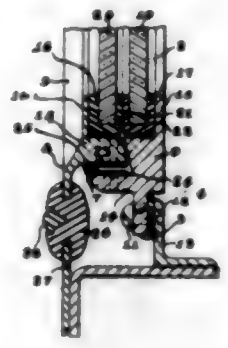
2,895,183
DOOR CONSTRUCTION
Carl P. Dumbolton, San Marino, Calif.
Application October 21, 1954, Serial No. 463,677
4 Claims. (Cl. 20—19)



1. A door construction comprising a fixed panel and a plurality of sliding panels in offset parallel vertical planes, each sliding panel being suspended from an overhead track and slidable thereon and having a longitudinal guide groove extending the length of its bottom edge, and separate guide means mounted on the fixed panel adjacent its bottom and mounted on each but the outermost of the sliding panels adjacent their respective bottoms, each guide means having an upturned flange slidably engaged in the guide groove of the next outermost panel whereby each sliding panel is maintained in stable vertical alignment with adjacent panels during sliding movement, one panel of each adjoining pair of panels having a first stop means, the other panel of each adjoining pair of panels having a second stop means, said first and second stop means positioned to be in engaging relationship when the adjoining pair of panels are substantially aligned and acting to produce combined movement as the outermost panel of the pair of panels is moved toward the fixed panel.

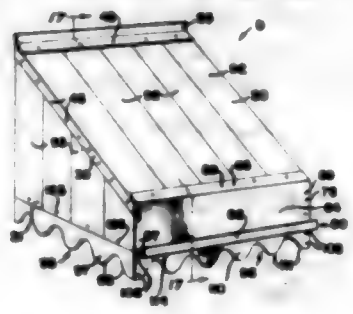
2,895,184
RAILWAY CAR WINDOW
Harold Russell O'Connor, Montreal, Quebec, Canada
Application October 30, 1957, Serial No. 693,385
11 Claims. (Cl. 20—56.5)

1. A sash assembly for use with double glazed type windows comprising a fixed interior frame and a movable exterior frame each having body portions from which extend inwardly light holder engaging flanges adapted to clamp rigidly between them two separable light holders in substantially air tight abutment when the frames are in engaged position, the interior frame being adapted to be permanently connected to the edges of the window aperture and having a transversely extending flange adapted to receive and surround at least part of the body portion of the exterior frame, the exterior frame also



having an outwardly extending flange adapted, when the frames are in engaged position, to be in registry with the exterior surface of the wall and define therewith a slot extending completely around the assembly, said slot being adapted to accommodate a removable seal member to effect a substantially weathertight seal between the exterior frame and the edge of the window aperture, and removable means for releasably holding the frames in engaged position.

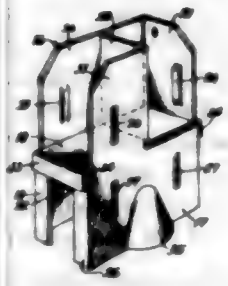
2,895,185
AWNING CONSTRUCTION
Charles M. Proctor, Tulsa, Okla., assignor to Life-Long Aluminum Awning Company, Inc., Tulsa, Okla., a corporation of Oklahoma
Application April 24, 1958, Serial No. 730,725
3 Claims. (Cl. 20—57.5)



1. In an awning construction the combination of a top panel section comprising a plurality of downwardly angled longitudinal channel members, each of said channel members having a flattened uppermost portion, a pair of legs depending downwardly from said uppermost portion at substantially a 90 degree angle therefrom, and a pair of flange portions extending inwardly toward each other from said legs and disposed at substantially a 90 degree angle with respect to said legs, said channel members being positioned with the uppermost portions thereof forming a continuous roof portion, with the legs of adjoining channel members in abutment and the flange portions of adjoining channel members disposed in the same plane; a plurality of retainer strips adapted to secure said channel members together, each of said retainer strips having a flattened lowermost portion adapted to abut the lowermost surface of the flange portions of adjoining channel members, and upwardly and inwardly folded side edges adapted to overlie the adjacent flange portions of adjoining channel members; interlocking means securing said retainer strips to said adjacent flange portions uniting said channel members as a rigid unit, said interlocking means comprising a plu-

rality of crimps disposed along the lengths of said retainer stripe, each of said crimps deforming and mutilating each adjacent flange portion and their overlying retainer strip in an interlocking relationship, deforming the upwardly and inwardly folded side edges of said retainer strip into a position flush with the uppermost surface of said adjacent flange portions and mutilating the outermost portion of said adjacent flange portions and the outermost side of said retainer strip by inwardly cutting and notching a small segment of said adjacent flange portions and said retainer strip and bending said inwardly cut small segment of said adjacent flange portions and said retainer strip out of the plane of the remainder of said adjacent flange portions and said retainer strip; and a spar mounted upon the front edge of said top panel section, said spar comprising a front plate having an upper angled flange portion, a lower angled flange portion disposed at substantially 90 degrees to said front plate, the outermost edge of said lower angled flange portion being provided with an upturned lip disposed substantially parallel to said front plate, said upper angled flange portion being secured adjacent the uppermost surface of said top panel section and said lower angled flange portion depending therebelow forming a drip strip for said awning construction.

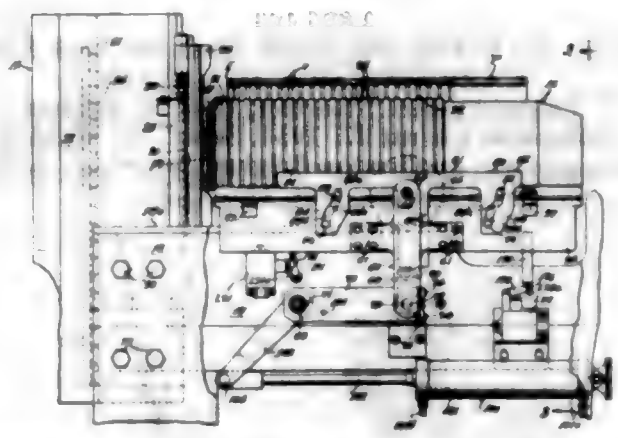
2,895,186
FRAMING CONNECTOR
Norvin H. Franks, Chicago, Ill., assignor, by mesne assignments, to Union Asbestos & Rubber Company, Chicago, Ill., a corporation of Illinois
Application June 18, 1957, Serial No. 664,657
3 Claims. (Cl. 20—95)



1. A framing connector for posts comprising a generally rectangular socket defined by angularly related wall sections to fit over the end of a post, wall sections secured to the socket and projecting beyond the end of the post and including two wall portions joined at a right angle and aligned with and coextensive with two adjacent wall sections of the socket respectively and two wall portions joined at a right angle, one of the last-named wall portions being aligned with a third wall section of the socket and being substantially half of the width thereof and the other lying at a right angle to one of the first-named wall portions and extending centrally across the top of the socket, said wall portions defining between them a pair of open-sided sockets lying within a projection of the periphery of the first-named socket to receive the ends of rails lying at a right angle to each other.

2,895,187
APPARATUS FOR CASTING STEREOTYPE PRINTING PLATES
Corson Walter Chase, Oak Park, and Glenn Nicholas Krueger, North Riverside, Ill., assignors to Miehle-Goss-Dexter, Incorporated, Wilmington, Del., a corporation of Delaware
Application March 26, 1956, Serial No. 573,904
12 Claims. (Cl. 22—2)

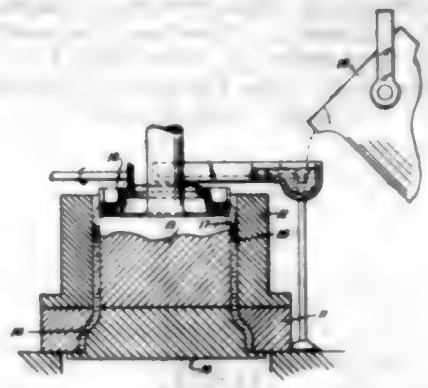
2. In apparatus for casting curved stereotype printing plates, the combination comprising a stationary vertical mold box, a plunger movable between a vertical position adjacent the mold box to define a mold space and a forwardly tilted position, means for supporting said plunger such that it moves substantially horizontally and transverse to the longitudinal, vertical axis of said mold box as the former enters and leaves the latter, a head ring rigidly fixed to the lower end of said plunger and having a recess in the upper surface thereof, a plate lifter disposed along the side of said plunger, means for shifting said plate lifter at an acute angle relative to the longitudinal axis of the plunger as an incident to movement of the latter to its tilted position, and means defining



a plurality of circumferential grooves in the surface of said plunger, each of said grooves having one side angled in the general direction of movement of said plate lifter relative to said plunger.

5. In apparatus for casting curved stereotype printing plates, the combination comprising an upright mold box having a concave surface, a plunger having a convex surface and movable between open and closed positions relative to said mold box, and means for stripping a plate away from said convex surface in a direction inclined to the axis of the latter as an incident to movement of said plunger to its open position.

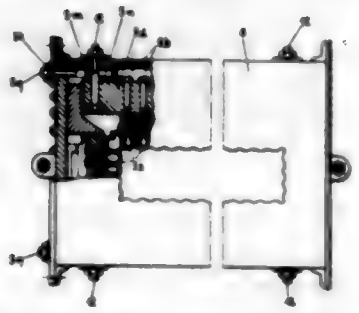
2,895,188
CONTINUOUS CASTING APPARATUS
Adalbert Wittmoser, Gelsenkirchen, Germany, assignor to Firma Eisenwerke Gelsenkirchen Aktiengesellschaft, Gelsenkirchen, Germany
Application June 4, 1956, Serial No. 590,283
Claims priority, application Germany June 2, 1955
3 Claims. (Cl. 22—57.2)



1. In a metal casting apparatus for casting tubes or the like, in combination, mold means including concentric cylindrical inner and outer wall means forming between themselves an upwardly extending annular space adapted to receive molten metal; and a molten metal supply vessel arranged above said mold means, said vessel having an annular portion located exteriorly of an upward annular extension of said annular space and at least one transverse portion projecting into said upward angular extension, said transverse portion being so constructed and arranged as to have at least two side walls facing an

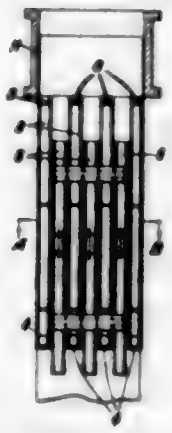
upwardly extending cylindrical projection of said inner wall means and an upwardly extending cylindrical projection of said outer wall means, respectively, each of said side walls being formed with at least one substantially vertical slot through which molten metal received by said vessel may flow into said annular space so that the rate of discharge of molten metal through said slots is dependent upon the height of the liquid level within said vessel, whereby the rate of discharge of molten metal from said vessel through said slots may be varied in accordance with the rate of delivery of molten metal into said vessel.

2,895,189
STEEL CASTING PROCESS AND MEANS FOR CARRYING OUT THE SAME
Leopold Julien Maertens, Ougree, Belgium
Application August 22, 1956, Serial No. 605,611
Claims priority, application Belgium September 6, 1955
6 Claims. (Cl. 22—57.2)



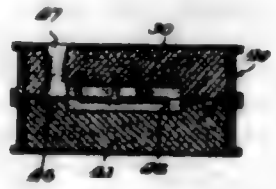
1. An ingot mold for the continuous casting of a metal comprising four exterior walls fixed in operative association to confine a chamber, a plurality of hollow members in the chamber and in operative association to provide four inner walls defining a passage open at both ends for movement of the ingot, the hollow members accommodating a cooling medium, wedge means between the exterior walls and the hollow members to adjust the relative positions thereof thereby to control the dimensions of the passage, and control means coupled to the wedge means and extending externally of the exterior walls to provide an external control of the dimensions of the passage.

2,895,190
CONTINUOUS CASTING PLANTS
Adolf Bungeroth and Karl Georg Speith, Duisburg-Hochfeld, and Hans Schrewe, Duisburg-Ungelsheim, Germany, assignors to Mannesmann Aktiengesellschaft, Duesseldorf, Germany, a German corporation
Application September 11, 1956, Serial No. 609,279
Claims priority, application Germany September 12, 1955
7 Claims. (Cl. 22—57.2)



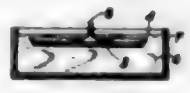
1. In a continuous casting plant, a device for guiding a casting moving vertically downward comprising longitudinally extending members arranged around the casting, certain of said members being substantially movable as a group from an upward position to a downward position and being movable with respect to others of said members whereby said certain of said members may be moved downwardly as a group relative to said other members along with the casting and in gripping engagement therewith during downward movement of said certain of said members.

2,895,191
METHOD OF AND APPARATUS FOR PRECISION CORING IN THE CASTING OF METALLIC ARTICLES
George R. Sendenburgh, Evanston, and Marshall D. King, Wood Dale, Ill.; said Sendenburgh assignor to Hills-McCanna Company, Chicago, Ill., a corporation of Illinois
Application July 11, 1955, Serial No. 521,236
3 Claims. (Cl. 22—131)



1. In a device for producing aluminum or magnesium alloy castings of the type having passageways formed therein, the combination with a pattern of the article to be cast the dimensions of which exceed those of the article by the normal shrinkage allowances, of a conventional mold having a mold cavity therein formed by said pattern, a core within the mold cavity for forming the passageways within the cast article, said core comprising an assembly of tubular elements of borosilicate glass and said core having a position within the mold cavity for the proper location of the passageways, the dimensions for the size, shape and configuration of the core and the dimensions for the proper positioning of the core within the mold comprising the actual dimensions for the particular article to be cast expanded by the same shrinkage allowances as employed for the pattern.

2,895,192
PROCESS FOR CLADDING OR PLATING METALS OR OTHER BASE SHEETS AND THE LIKE
William E. Meissner, New York, N.Y., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Application December 10, 1952, Serial No. 325,193
7 Claims. (Cl. 22—204)



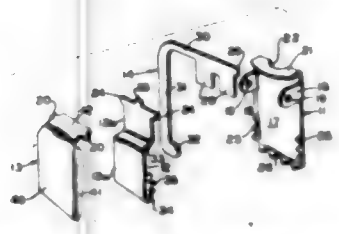
1. The method of applying a layer of metallic fusible material to a surface of a metallic base layer comprising providing a bath of a molten substance having a melting point below the melting point of the fusible material and a specific gravity at and between such melting points less than the specific gravity of the fusible material, heating the bath to a temperature above the melting point of the fusible material, immersing the entire base layer into the bath, introducing the fusible material into the molten bath above the immersed base layer while the latter is positioned substantially horizontally to receive the fusible material on its uppermost surface whereby the fusible material flows and covers the surface of the base layer to the desired thickness, cooling the bath while the covered base layer is held in said immersed position until the covering layer of fusible material is solidi-

fied, and finally removing the base layer with its solidified coating of fusible material thereon from the bath for further cooling.

2,895,193
CABLE SUPPORT
Frederick G. Ridgers, Hamilton, Ontario, Canada, assignor to N. Slater Company Limited, Hamilton, Ontario, Canada
Application October 11, 1955, Serial No. 539,716
1 Claim. (Cl. 24—20)

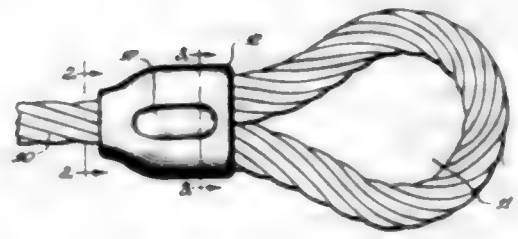
A clamping band of the class described comprising a strip of metallic ribbon-like material of uniform width throughout its entire length adapted to be looped convolutely around a plurality of articles, said band having one end plain, and there being a slot formed lengthwise of the material and extending inwardly from the opposite end along the centerline of the band and terminating at a crotch located a predetermined distance inwardly from the said opposite end of the material to thereby provide a pair of similarly shaped portions at said opposite end of the band, the longitudinal side edges of said similarly shaped end portions aligning with the longitudinal side edges of the material whereby said similarly shaped end portions are arranged to be folded at said crotch to provide a pair of jaws which extend laterally in opposite directions from the side edges of the material in position to be bent over the looped portion of the band after the band has been convolutely looped around the articles so as to lock the plain end portion in position on the looped band.

2,895,194
PLEAT FORMING CURTAIN HANGER
Oliver M. Hanson, Hemet, Calif.
Application February 9, 1956, Serial No. 564,464
2 Claims. (Cl. 24—84)



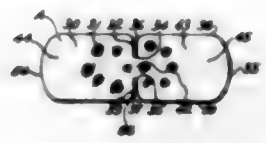
1. For combination with a clamp having a first jaw member with a substantially flat body portion having a bent over upper end portion, a pair of ears being provided on opposite sides of the body portion of said first jaw member and spaced downwardly from said bent-over upper end portion, with a second jaw member pivotally mounted on said ears and spaced slightly from the first jaw member, and having means for releasably clamping the jaw members together to grip a pleat of curtain material therebetween; a rod engaging hook member comprising a flat, sheet-like base portion adapted to be closely interfitted beween the ears, and overlying the upper body portion, and closely adjacent the bent-over upper end portion of the first jaw member, of such clamp, with said hook base portion interposed in the space between the two jaw members, and a rod engaging hook portion formed integrally with said base portion at the upper end thereof and adapted to extend laterally through the space between one of the ears and the bent-over upper end portion of such first jaw member, the outer end of said hook member extending downwardly to lie in laterally spaced relation to such clamp when the hook member is assembled therewith, and to be spaced therefrom by a sufficient distance to receive a curtain rod of predetermined width therebetween for hooked support of such clamp member and of a curtain having a pleat thereof gripped between the jaws of said clamp member, whereby the flat base portion firmly holds the hook portion against lateral and swivel displacement.

2,895,195
SLEEVE FERRULE
Leslie G. Ehmann, Portland, Oreg., assignor to Electric Steel Foundry Company, Portland, Oreg., a corporation of Oregon
Application February 9, 1956, Serial No. 564,447
4 Claims. (Cl. 24—123)



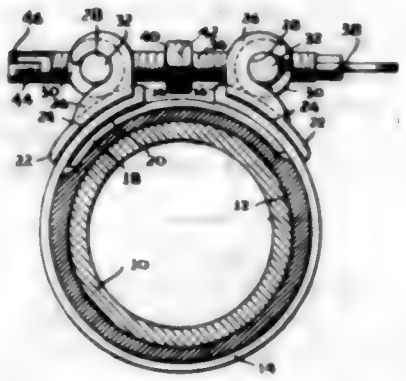
1. A sleeve ferrule adapted for use in securing wire rope eye splices, comprising an elongated sleeve having an opening extending therethrough for receiving a wire rope, said opening at one end thereof being reduced in cross section for snugly receiving a single thickness of a wire rope and being enlarged at its other end for receiving a double thickness of such rope, said sleeve having a channel extending longitudinally along each side thereof at the ends of the smaller transverse dimension of the enlarged end of said opening, said channels terminating a spaced distance from the end of said sleeve providing the enlarged end portion of said opening.

2,895,196
DISPOSABLE SEPARABLE LOCK FOR SAFETY PINS
Walter I. Kennedy, Dorchester, Mass.
Application December 6, 1954, Serial No. 473,301
2 Claims. (Cl. 24—156)



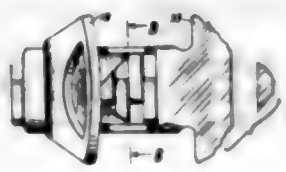
1. A safety pin locking device comprising an elongated sheet of tearable, disposable paper having a layer of adhesive on one face thereof, said sheet being divided into two identical halves by a pair of opposite, narrow, slots aligned along the lateral median line of said sheet, each said half being longer than it is wide, each said narrow slot having parallel side edges extending from a closed end outwardly substantially to the adjacent longitudinal edge of said sheet and the closed ends of said slots defining a short, integral web between said halves for resisting compression of the bars of a safety pin toward each other when said halves are folded and adhered around the head of a safety pin; and at least one slot cut-out flap, folded back and adhered to said web for increasing the compression resistance thereof in a lateral direction.

2,895,197
HOSE CLAMP
Robert W. Agne and Clayton M. Frank, Mobile, Ala.
Application September 27, 1955, Serial No. 536,823
1 Claim. (Cl. 24—279)



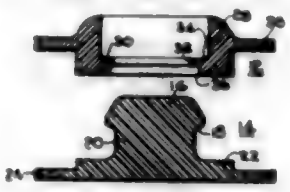
A hose clamp comprising: a clamping band having spaced ends, said bend curving in a generally circular path so as to be contractable about a hose; spaced lips formed upon the respective ends and projecting outwardly from said path; brackets secured to the band in abutting relation to the respective lips exteriorly of the space therebetween; nuts engaged with the respective brackets against rotation relative thereto; a bolt having end portions respectively formed with threads of opposite hand, said end portions being threadedly engaged with said nuts, said bolt including a wrench-receiving enlargement located midway between the lips for rotating the bolt, said enlargement extending into the space between the lips in position to constitute a limit stop the opposite sides of which are engageable simultaneously by the lips following contraction of the band about a hose to a predetermined extend, in response to movement of the nuts toward each other a predetermined distance on rotation of the bolt in one direction.

2,895,198
ADJUSTABLE FASTENING DEVICE
Ira Stern, Lawrence, N.Y.
Application September 17, 1954, Serial No. 456,802
1 Claim. (Cl. 24—206)



In adjustable fastening device comprising: a base element, a rack element, a slider element and a locking element; said base element including a pair of slide fastener tape stringers; said rack element including engaged slide fastener teeth held in projected position with respect to said base element by the interconnection of said tape elements comprising said base element along a line disposed beneath said engaged slide fastener teeth; said sliding element engaging said slide fastener teeth; said locking element including a pair of locking lugs disposed in a plane perpendicular to the axis of said stringers, the distance between the free ends of said locking lugs being substantially greater than the width of a slide fastener tooth; said engaged slide fastener teeth having alternately staggered interstices therebetween, said lugs having means for simultaneously being lowered upon said teeth in such manner that one of said lugs enter one of said interstices, while the other of said lugs will simultaneously contact an oppositely disposed tooth to push the same against a portion of a stringer disposed directly therebeneath.

2,895,199
ALL PLASTIC SEPARABLE FASTENER OF THE PRESS BUTTON TYPE
Walter I. Jones, Belmont, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Application April 12, 1955, Serial No. 500,866
5 Claims. (Cl. 24—213)

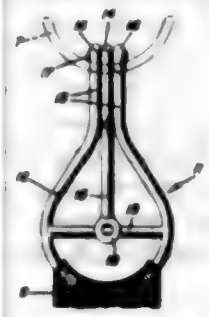


1. A separable fastener comprising a male and a female element each being unitary and self-sufficient molded body of firm but yielding tenacious and resiliently extensible polymeric material; the male element comprising a post having a substantially solid enlarged head with a rounded end and overhanging shoulder and, at the base of the post, an integral peripheral flange providing for anchorage of the element to a supporting part; the female member comprising a circumferentially continuous tube having an exterior peripherally extending flange providing for anchorage to a flexibile sheet and having at one end an inwardly extending circumferentially continuous overhanging flange the rearward surface of which is disposed substantially perpendicular to the axis of the tube to provide an abrupt shoulder, the opening within the latter flange corresponding substantially to the cross sectional area of the post beneath the head, whereby on axial approximation of the parts and their resultant elastic deformation when pressed together the head may pass the flange and the abrupt shoulder of the flange move beneath the overhanging shoulder of the head effectively to resist axial withdrawal of the head, the tube being elastically distortable in shape under radially applied strain to withdraw a portion of the flange radially beyond the head and permit separation of the element by a tipping movement following the distortion.

2,895,200
SNAP FASTENER FOR STRAPS AND THE LIKE
John A. Gaylord, San Rafael, Calif., assignor to H. Koch & Sons, Corte Madera, Calif., a partnership
Application August 12, 1957, Serial No. 677,422
7 Claims. (Cl. 24—230)

1. A snap fastener for straps comprising a first loop adapted to be secured to a strap, a second loop adapted to be secured to another strap, a frame extended from said second loop, a slidable element on the frame, a link pivoted to said slidable element, a second link pivoted to said frame and to said first link, said links having concave portions forming complemental jaws adapted to receive and substantially surround a side of said first loop, and releasable means to fasten said slidable element to said frame in the closed position of said links.

2,895,201
CINCH CONNECTOR
Noah Henry, Oakdale, Calif.
Application February 26, 1957, Serial No. 642,548
1 Claim. (Cl. 24—232)



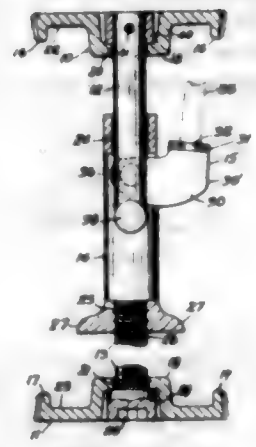
Means for releasably connecting one end of a cinch to a quarter strap ring of a saddle, said means comprising: a split, substantially ovate metallic loop mounted on said one end of the cinch, a pair of upwardly, outwardly and then downwardly extending, spaced hooks on the ends of the loop having laterally spaced apart bills engageable in a quarter ring, and a locking lever including a hooked end having a bill pivotally connected to and between the bills of the hooks and operatively engageable with a quarter ring for engaging said hooks therein and having a free end opposite and in front of the loop, and a crossbar in said loop for preventing said free end from swinging into the loop.

2,895,202
YOKE-TYPE CLAMPS
Jack G. Imperato, Brooklyn, N.Y.
Application September 17, 1958, Serial No. 761,514
7 Claims. (Cl. 24—263)

1. A clamp of the character described, comprising a pair of flanged clamp plates, including central socket portions, the socket portions being apertured to receive rod members, a yoke arranged upon adjacent end portions of said rod members, means, at the other ends of the rod members, for retaining the plates against displacement therefrom, and an actuating cam arranged within the yoke and operatively engaging the yoke and one of said rod members in controlling spacing of the clamp plates one with respect to the other, and said cam being pivotally supported on and arranged within the yoke and operatively engaging part of said rod disposed within the yoke.

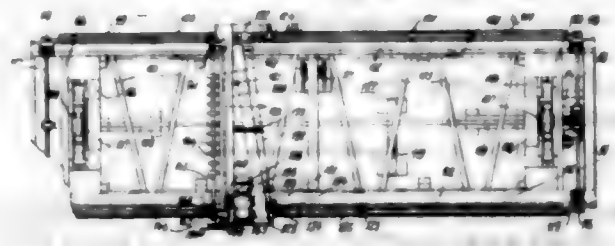
2,895,203
YOKE-TYPE CLAMPS
Jack G. Imperato, Brooklyn, N.Y.
Application September 17, 1958, Serial No. 761,515
8 Claims. (Cl. 24—263)

1. A clamp of the character described, comprising a pair of flanged clamp plates, including central socket portions, the socket portions being apertured to receive rod members, a yoke arranged upon adjacent end portions of said rod members, means, at the other ends of the rod members, for retaining the plates against displacement therefrom, an actuating cam arranged within the yoke and operatively engaging the yoke and one of said rod members in controlling spacing of the clamp



plates one with respect to the other, and said cam being pivotally supported on and arranged within the yoke and operatively engaging part of said rod disposed within the yoke.

2,895,204
APPARATUS FOR TREATING CASTINGS OF LIGHTWEIGHT CONCRETE IN OPEN CASTING MOLDS
Karl Gustav Olsson, Solna, Sweden, assignor, by mesne assignments, to Casius Corporation Limited, Montreal, Quebec, Canada
Application April 30, 1956, Serial No. 581,558
6 Claims. (Cl. 25—1)

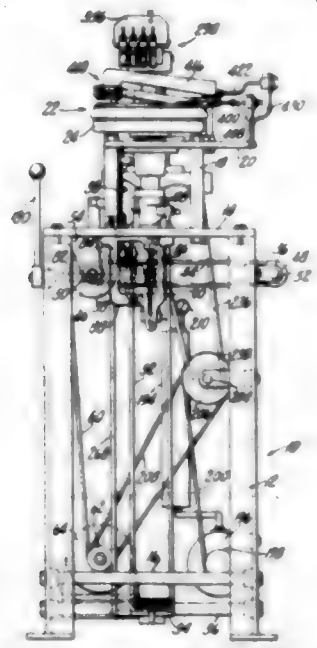


5. In an apparatus for treating porous lightweight concrete bodies in open casting molds in the manufacture of building elements, the combination of a laterally tiltable rectangular frame structure, means pivotally supporting said frame structure, a carriage, a vertically adjustable knife blade mounted on said carriage and traversing said frame structure for removing the upper expansion layer of the contents of said open casting mold when positioned in said frame structure, said knife blade forming a chute for transporting the removed expansion layer to and over the lower side of said frame structure when tilted, and means for producing grooves in the top surface of the contents of said mold exposed by the action of said knife blade, said means including a series of rotatable, spaced rollers having a common axis of rotation substantially perpendicular to the direction of advance of said carriage and means for pressing said rollers partly into the contents of said casting mold to break down locally the cellular structure of the concrete body.

2,895,205
MACHINES FOR OPERATING ON BLANKS OF CERAMIC WARE
Alfred Maurice Bentley, Leslie Garratt, and Charlie Ambrose Smith, Leicester, England, assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Application March 26, 1954, Serial No. 418,969
Claims priority, application Great Britain April 15, 1953
3 Claims. (Cl. 25—24)

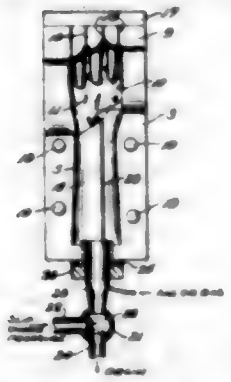
1. A machine for operating on circular blanks of ceramic ware comprising a work support for supporting

a blank for rotation about a substantially vertical axis, a tool for towing the upper surface of the blank, an arm supporting said tool for movements relatively to said work support, means mounting said arm for pivotal movements about a horizontal axis to move the tool toward and away from said work support, means mounting said arm for movements about an axis substantially parallel to the axis of rotation of said work support to move the



tool over the surface of a work piece on the support, cam means for first moving said arm about the first-mentioned axis to move the tool into engagement with a blank on the support, cam means for then moving said arm about the second-named axis to move the tool over the surface of the blank, the first-named cam means then operating to move the arm about the first-named axis to elevate the tool.

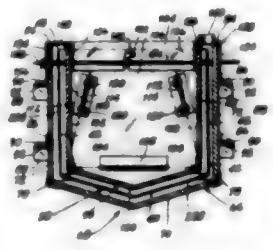
2,895,206
APPARATUS FOR PRODUCING ROUGHENED SURFACE GLOVE FORMS OR THE LIKE
Rayburn W. Hemphill, Jr., Akron, Ohio
Application December 29, 1955, Serial No. 556,188
9 Claims. (Cl. 25—129)



3. A mold for making a glove form having a design integrally formed therewith on a palm and finger surface thereof which mold comprises a pair of mold sections cooperating to provide a cavity defining the outlines of a glove form except for the adjacent surfaces of the thumb, palm and fingers of the form, a pair of mold members for completing the thumb and the finger portions of the mold cavity, and wedge means to secure the mold members in position and to complete the mold cavity.

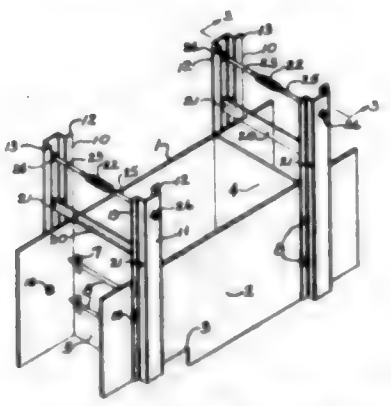
2,895,207
APPARATUS FOR MOLDING BURIAL VAULT DOMES
Robert N. Johnson, Bonne Terre, Mo.
Application April 30, 1954, Serial No. 426,675
1 Claim. (Cl. 25—130)

Apparatus for use in fabricating a burial vault dome member consisting of a precast shell of steel in which all surfaces thereof are to be covered by a layer of an asphalt compound of the character described, said apparatus comprising: a mold assembly including outer and inner mold sections contoured correspondingly to said shell, said outer section being dimensionwise larger and said inner section being dimension-wise smaller than the shell; means to support the inner section within the outer section to provide a mold cavity in said assembly between said sections, and to simultaneously suspend the shell in inverted position within the cavity in such manner that the lower peripheral edges of the shell are disposed in a plane below that of the upper peripheral edges of said mold sections, said supporting means comprising removable pins passing through registered openings in said inner and outer sec-



tions and said shell to hold them in supported spaced relation with one another; means for closing the upper open end of the mold cavity comprising closure strips having a U-shaped cross-section engageable in nested relation with the top portions of said inner and outer sections and fitting thereover, said closure strips having a pair of legs provided with openings and attached to a web defining said U-shaped cross-section and fitting over the top portions of the inner and outer sections in inverted relation with said legs acting as spacing stops for said sections, said closure strips being supported upon said inner and outer sections by said removable pins passing through the openings in the legs of said strips; and means for introducing the asphalt compound into said cavity.

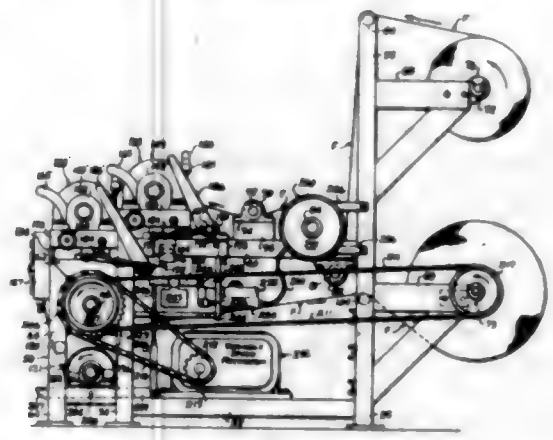
2,895,208
CONCRETE WALL FORM
Charles M. Paxton, Houston, Pa.
Application September 24, 1953, Serial No. 382,046
1 Claim. (Cl. 25—131)



A mold for casting continuous block sections in building a cement wall comprising parallel side plates having their mold surfaces facing each other and having aligned openings therethrough spaced materially from the ends of said side plates, two pairs of vertical posts, each post constructed to provide a vertical channel member defined by a web with parallel flanges having their outer portions bent outwardly in opposite directions and lying in a common plane to form widely spaced inner and outer face flanges that embrace in full vertical contact the outer face of said side plates, the outer face flange of each post that is positioned on the side toward the end of said mold having fastening means to detachably secure the post to its respective parallel side plate, the other or inner face flange of

each post having openings to align with said openings in said parallel side plates, at least one transverse end plate means positioned between said side plates and having on one side an outer surface with sockets and on the other side an inner molding surface, bolt means passing through the aligned openings in the inner face flanges of said posts and side plates and received in said sockets on said end plates to detachably support the same in position directly between said inner face flanges of a pair of said posts, a fulcrum member for each pair of posts having its ends pivotably secured to said parallel flanges immediately above said side plates to hold them in proper assembled relation, turnbuckle means for each pair of posts with stem sections secured to their respective channel members adjacent the tops of said posts to spread the upper ends of said posts and press said inner and outer face flanges of the lower portions of said posts against the outer surface of said side plates to exert pressure on the contents of the mold and on said transverse end plate means.

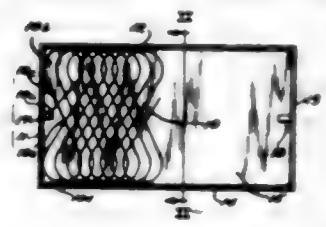
2,895,209
PILE CUTTING MACHINE
Grady H. Sanders, Graniteville, S.C., assignor to Graniteville Company, Graniteville, S.C., a corporation of South Carolina
Application March 16, 1954, Serial No. 416,614
23 Claims. (Cl. 26—10)



1. In a machine for cutting the threads of fabrics to form a pile thereon, the combination of first and second series of disk cutters, the cutters in the second series being staggered with relation to the cutters in the first series, a guide for each cutter adapted to enter the fabric between the body portion thereof and the pile forming threads and means for feeding fabric past said cutters in sequence, a movable straight edge positioned adjacent the lower portions of each series of cutters and over which the fabric passes as the threads are severed, manually operable means for moving each of said straight edges toward and away from its series of cutters, and means responsive to movement of a straight edge away from its cutters for stopping the machine.

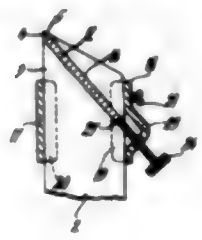
2,895,210
METHOD OF PACKAGING WIRE
Eber J. Hubbard, Fort Wayne, Ind., assignor, by mesne assignments, to The American Pulley Company, Philadelphia, Pa., a corporation of Pennsylvania
Application October 19, 1955, Serial No. 541,353
5 Claims. (Cl. 28—72)

3. The method of packaging wire in a generally rectangular box comprising the steps of placing one end of said wire on the bottom of the box adjacent the mid point of one of the box side walls, looping said wire into a loop extending against a second side wall of said box perpendicular to the first wall, reversely looping the wire backwardly against a third wall extending substantially parallel to the second wall to form a complete figure 8 loop, reversely looping the wire backwardly again to cross over the previously laid wire to form a second loop against said second wall and continuing to form such loops moving progressively toward a fourth wall until the bottom



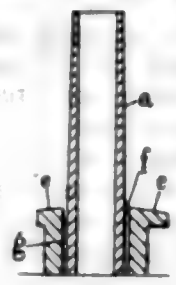
of the box is covered and the fourth side wall is reached and then proceeding with an overlying layer of figure 8's extending from said fourth side wall back to said first side wall and having the long axis of each successive figure 8 loop extending substantially parallel to the long axis of the figure 8 loops in the first layer.

2,895,211
METAL CUTTING
Albert W. Scribner, West Hartford, Conn.
Application December 27, 1956, Serial No. 630,941
1 Claim. (Cl. 29—106)



In combination with a metal cutting tool having a shank portion and a cutting portion; the mutually adjacent faces of said cutting portion cooperatively defining the tool cutting edge: the improvement comprising a layer of solid but fusible lubricant material disposed in a channel that is formed in said cutting portion; said channel extending from said cutting edge to a region of said tool remote from said cutting edge, and said layer of lubricant material being movable along the length of said channel; bracket means connected to said tool; and lubricant material feeding means mounted on said bracket means and engaging said lubricant material for progressively advancing said lubricant material along the length of said channel towards said cutting edge.

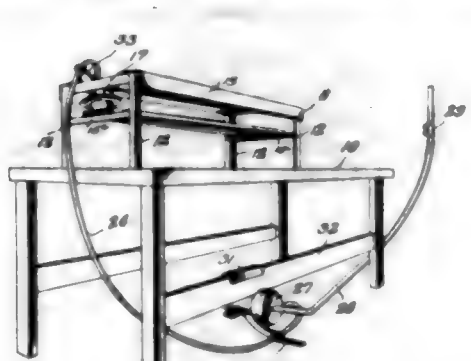
2,895,212
COMBUSTION TURBINES
Edward Peterson Hawthorne, Newcastle-upon-Tyne, England, assignor to C. A. Parsons & Company Limited, Newcastle-upon-Tyne, England
Application February 24, 1953, Serial No. 338,479
Claims priority, application Great Britain February 22, 1952
2 Claims. (Cl. 29—156.8)



1. In the manufacture of turbine blades for combustion turbines of the type comprising a hollow blade skirt

of aerofoil cross section and a root part attached to the said skirt for the purpose of fixing same to the turbine rotor, the method of forming and attaching the root part, which comprises affixing to the lower end of the blade skirt a removable layer of uniform thickness, the said removable layer having a thickness in a range from substantially .0005 to .005 inch, casting the blade root around the said removable layer, separating the blade from the root, removing the said layer from the blade skirt, then bringing the skirt and root together, with the skirt located within the root in the same position as during casting, and then brazing or soldering the two parts together, whereby a uniform thickness of brazing material between skirt and root is ensured.

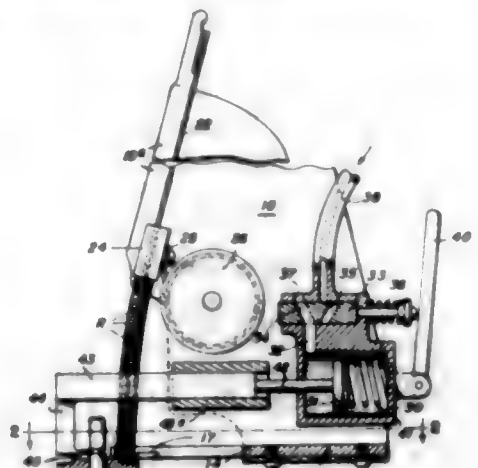
2,895,213
DEVICE FOR COMPRESSING SPRING VALVES
George H. Killeen, Jr., Hyde Park, Mass.
Application December 1, 1955, Serial No. 550,314
2 Claims. (Cl. 29—213)



1. An apparatus of the class described comprising a support, a frame mounted upon said support, longitudinal track rails carried by said frame, an air brake chamber mounted for longitudinal sliding movement upon said track rails, a spring engaging attachment actuated from said air brake chamber, an air control valve carried by said support below said frame, a spring guide carried at one end of said frame and projecting beyond the end of said frame and being inclined slightly upwardly, said spring guide having an air hose receiving eye, and an air hose extending from said air control valve below said frame and extending through said air hose receiving eye and connected to said air brake chamber carried by said frame, said spring guide holding said hose above said air brake chamber and out of entanglement with said air brake chamber and track rails to avoid pinching of said hose between the bottom of said air brake chamber and said track rails as said air chamber is moved longitudinally of said track rails.

2,895,214
MEANS FOR ASSEMBLING OPEN RETAINING RINGS ON SHAFTS, PINS, OR THE LIKE
Hans Erdmann, Maplewood, N.J., assignor to Waldes Kohinoor, Inc., Long Island City, N.Y., a corporation of New York
Application December 12, 1956, Serial No. 627,865
10 Claims. (Cl. 29—229)

1. Means for assembling open retaining rings in the grooves of shafts, pins and the like comprising, in combination, a frame member, a blade-like applicator operatively mounted on said frame member and having a receiving recess to accommodate a retaining ring opening through its front end-edge, a ring magazine operatively affixed to said frame member and extending therefrom in position to mount a supply of the retaining rings to be assembled in alignment with the recess and with the endmost ring of the supply accommodated in said recess in assembly-readiness position, means for aligning said endmost ring with the groove of a shaft in which ring assembly is to be effected preliminary to the assembly operation and being also effective to positively drive the shaft into the applicator recess during said assembly operation comprising a finger operatively associated with the applicator and being disposed forwardly and in the plane of, and pointing towards, the applicator recess, said finger having a thickness substantially equaling the thickness of a retaining ring, means positioned on said frame member mounting said finger for reciprocatory movement towards and



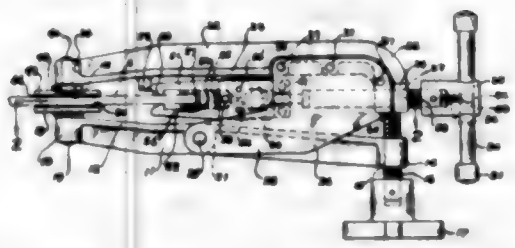
away from said applicator recess, and means for actuating said finger throughout its reciprocatory travel as aforesaid, the construction and arrangement being such that preliminary to the assembly of said endmost ring in its groove said finger may be inserted in such groove of a shaft interposed between the finger and applicator and from the side of the groove opposite the applicator recess thereby to align the groove with said endmost ring, and thereupon said finger may be reciprocated towards the applicator thereby to effect forcible assembly of said endmost ring in the groove while the finger is maintained inserted therein.

2,895,215
MACHINE FOR ASSEMBLING RESILIENT BUSHINGS AND THE LIKE
Eldon Paul Neher, Logansport, and William Gordon Myers, Kewanna, Ind., assignors to The General Tire and Rubber Company, Akron, Ohio, a corporation of Ohio
Application October 17, 1955, Serial No. 540,742
6 Claims. (Cl. 29—235)

4. Apparatus for assembling an elastic tubular rubber insert under radial compression between an outer rigid tube and an inner rigid core comprising means for supporting an insert, an outer tube, and a core in spaced relation and in axial alinement with the outer tube between the insert and the core, an insert contracting funnel-shaped guide between the insert and outer tube supporting means, means for clamping the outer tube to the small end of said guide and for holding said tube in registry and in axial alinement with said guide, a plunger engageable with the end of the insert opposite that toward said guide, means for moving said funnel guide and the

outer tube clamped thereto toward said plunger, means for applying fluid pressure to said plunger during movement of said guide toward said plunger sufficient to overcome the frictional resistance to the passage of the insert through said guide and into said outer tube, means for pushing a core into an insert placed within the outer tube while said plunger is held in engagement with the insert, and means controlled by said guide moving means for reducing the pressure acting on said plunger and for maintaining a reduced pressure thereon to provide a yielding resistance to axial movement of the insert in the outer tube during the entry of the core into the insert.

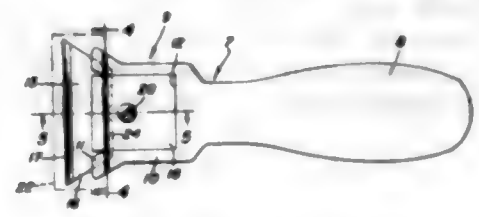
2,895,216
DISENGAGING DEVICE FOR GLASS-HOLDING STRIPS
Leopold Hirsch, Oak Park, Mich.
Application January 31, 1955, Serial No. 485,032
1 Claim. (Cl. 29—256)



In a tool adapted for use in the replacement of a pane of glass which has the edges thereof retained in a channel frame, an elongated clamp arm, a transversely arranged pressure pad secured upon one end thereof, a transversely arranged clamp screw threaded through the opposite end thereof, an elongated frame arranged in opposed relation to said arm and pivotally connected intermediate its ends to an intermediate portion of said arm, a transversely arranged pressure pad secured upon one end of said frame in alignment with said first pressure pad and in opposed relation for gripping a pane therebetween, the opposite end of said frame being operatively engaged by said clamp screw for establishing a gripping relation between said pads, an elongated jaw screw threaded through said latter end of said frame interposed between the frame and arm longitudinally thereof, and a pair of opposed pivotal channel frame engaging jaws swivelly secured upon the end of said jaw screw, the mounting of said jaws comprising a horizontally extending U-shaped housing with an apertured base, said jaw screw having a portion of reduced diameter slidably extending loosely through said base defining a pair of spaced annular shoulders alternately engageable with said base for pulling and pushing said housing, said jaws being pivotally mounted within and upon said housing and projecting outwardly thereof, the inner ends of said jaws within said housing having inwardly directed opposing portions to cooperatively receive the shoulder on the end of said jaw screw for pivoting the free ends of said jaws toward each other and for securing said jaws in gripping relation to the edge of said channel frame.

2,895,217
SCRAPER
Arthur F. Fisher, McMinnville, Oreg.
Application February 28, 1957, Serial No. 643,080
2 Claims. (Cl. 30—169)

1. A scraper of the character described comprising: an elongated handle, a flat plate integral with the distal end of said handle, the forward end portion of said plate being increased in width and flared outwardly, said plate having in its top a recess embodying a flared, open forward end portion defining divergent side walls, said side walls having channels therein, the inwardly situated ends of said channels defining blade supporting shoulders, a rigid blade substantially trapezoidal in shape removably seated in the flared end portion of the recess and having its ends seated in the channels and resting against said



shoulders, a clamping plate removably mounted in the recess and resting atop the blade, and a bolt threadedly mounted in the first named plate and engaged with the clamping plate for binding the same against the blade.

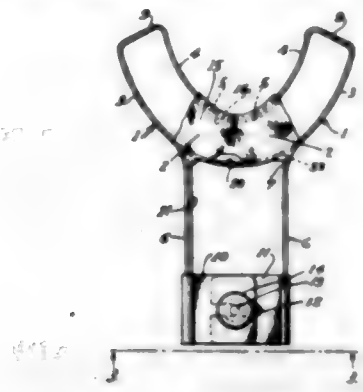
2,895,218
KNIFE FOR DOMESTIC OR TRADE USE
Werner Petzoldt, Solingen-Grafrath, Germany
Application November 21, 1957, Serial No. 697,994
Claims priority, application Germany November 26, 1956
1 Claim. (Cl. 30—355)

A cutlery blade comprising an elongated flat blade including a serrated cutting edge, said cutting edge including a plurality of longitudinally spaced groups of teeth, said groups of teeth extending alternately from opposite sides of said blade and terminating in the plane of the opposite side of said blade, the teeth of each group defining a linear cutting edge coplanar with the side of the blade opposite from that side from which the respective group of teeth extends, individual teeth of the separate groups extending from the same side of the blade.

2,895,219
BITE TRAY
Russell J. Jones, Bratenahl, Ohio
Application May 12, 1958, Serial No. 734,517
5 Claims. (Cl. 32—19)

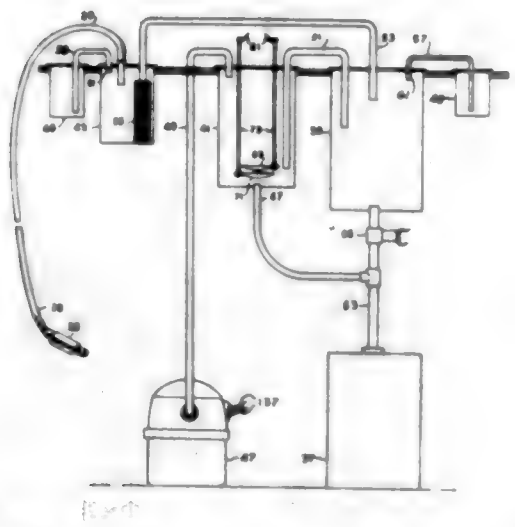
1. In a bite tray comprising a pair of open end frames, handles on the frames, respectively, each handle being connected at one of its ends to its associated frame and extending endwise from the open end of its associated frame in a direction away from the other end of its associated frame, said handles being connected and supporting the frames in laterally spaced relation to each other edgewise of the frames, each of said frames consisting of a single length of wire, one end portion of

which provides an inner side frame member having a free forward end, an intermediate portion of which extends laterally of the handles from the other end of the inner side frame member and provides a rear end frame member, and a third portion of which extends forwardly from the rear end frame member and provides an outer side frame member, the handle of each frame member extending forwardly from the forward end of its



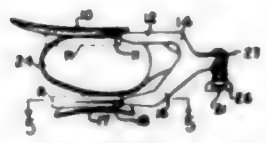
associated outer side frame member and in a direction generally endwise of the frame, a front frame member is connected to at least one of the handles and extends laterally of the handles in the general plane of the frames in spaced relation forwardly from the open ends of the frames for a sufficient distance for accommodating the front teeth between said open ends and said front frame member when the side teeth are within the frames in spaced relation to the inner and outer frame members.

2,895,220
DENTAL VACUUM APPARATUS
Reece W. Johnston, Fort Worth, and Hagan H. Chandler, Dallas, Tex.
Application July 9, 1957, Serial No. 670,800
6 Claims. (Cl. 32—33)



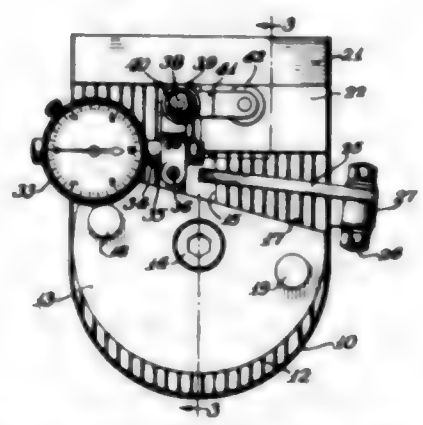
1. Dental vacuum apparatus comprising a gold trap container, a collector container, a liquid level cut-off container, and a storage container, each said container being sealed substantially vacuum tight, a high volume air flow low vacuum type pump, an air conduit connecting said pump to said liquid level cut-off container, an air conduit connecting said liquid level cut-off container with said collector container in such manner that the fluid will be drawn into said liquid level cut-off container after it reaches a predetermined level in said collector container, an air conduit connecting said gold trap container with said collector container in such manner that the gold trap container will be maintained at a low fluid level, a flexible pick-up air conduit connected to said gold trap container, means for selectively draining said collector container into said storage container, and means for draining said liquid level cut-off container into said storage container.

2,895,221
ABSORBENT ROLL HOLDER WITH RETAINING STRUCTURE AND CHEEK GUARD
Romila C. Dichoso, Birmingham, Ala.
Application April 1, 1957, Serial No. 649,692
5 Claims. (Cl. 32—35)



1. In a dental appliance for holding absorbent rolls in a patient's mouth, an elliptical shaped tongue engaging portion with its minor transverse dimension disposed vertically when in use and having a roll prong on its side opposite the tongue engaging side thereof, an elliptical shaped cheek engaging portion laterally spaced from the tongue engaging portion to provide a work area therebetween when in use, the minor transverse dimension of said cheek engaging portion being disposed vertically when in use and having a roll prong on its side opposite the cheek engaging side thereof, an upwardly bowed bridge portion connected to and extending forwardly of the tongue engaging portion, a lip engaging portion connected to and extending laterally and rearwardly from the bridge portion to connect with the cheek engaging portion, a chin portion extending downwardly from the lip portion when in use, an attaching member, a link connecting the attaching member to the chin portion, and spring pressed pivots at each end of the link.

2,895,222
TAPER GAGE
Theodore O. Rueb, Chicago, Ill.
Application September 21, 1955, Serial No. 535,717
2 Claims. (Cl. 33—75)

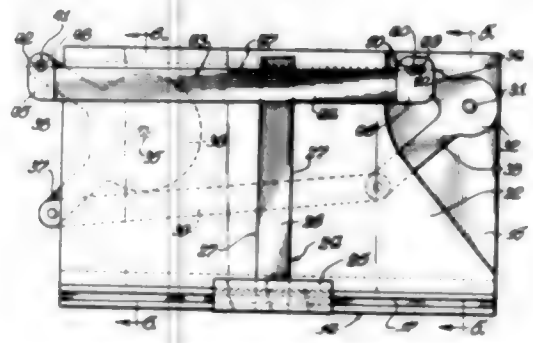


1. In a taper gage, the combination with a base, of a gage block mounted on the base for engagement with one side of the work piece, a sine-bar pivotally mounted on the base adjacent to the gage block for engagement with the opposite side of the work piece, an anvil engaging the bottom of the work piece to support the same, a bolt to which the anvil is pivoted, a bearing for said bolt, a shaft carrying said bearing, a bearing for said shaft, a bracket carrying the last named bearing which is pivoted to the base and a set screw for supporting the bracket, and means for adjusting the anvil to correspond with the taper of the work piece to be tested.

2,895,223
PERSPECTIVE DRAFTING MACHINE
Chris J. Fields, Allen County, Ind.
Application April 29, 1955, Serial No. 504,987
5 Claims. (Cl. 33—77)

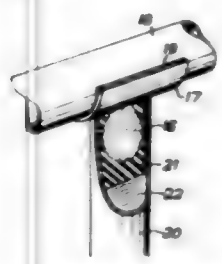
1. A perspective drafting machine comprising a plate having a pair of parallel marginal edges, said plate pro-

viding a plane working surface, an area of said surface being adapted to receive a perspective view of the object to be illustrated; a first straight edge mounted on said plate and extending substantially between said parallel marginal edges of said plate and slidable across said surface area adapted to receive the perspective view in a direction parallel to said parallel marginal edges; a centro-lineal including an elongated member having a second straight edge intersecting said first straight edge; and means for mounting said second straight edge on said plate for sliding movement across said surface area adapted to receive the perspective view wherein a line containing said second straight edge continually intersects through a particular point, said means for mounting



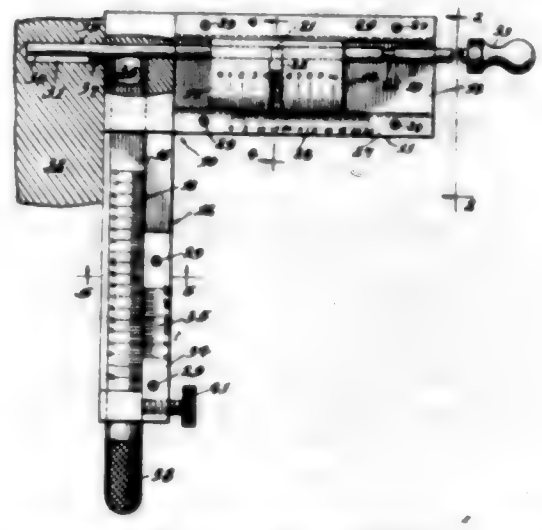
said second straight edge on said plate including a supporting member spaced below said plane working surface, a pair of spaced arms pivotally connected to said supporting member, said arms being of unequal length and parallel, said arms further being disposed below said plate and above said supporting member, means interconnecting said arms whereby they are constrained to pivot in unison, means pivotally connecting one of said arms and said second straight edge, and means operatively connecting the other of said arms and said second straight edge including pivot connecting means for connecting said other of said arms and said second straight edge for relative pivotal movement about an axis, said pivotal axis being movable along a straight line relative to said second straight edge.

2,895,224
PLASTIC DIES, JIGS AND THE LIKE
Stanley O. Jones, Headington, Oxford, England, assignor to Pressed Steel Company Limited, Cowley, Oxford, England, a British company
Application March 29, 1957, Serial No. 649,496
3 Claims. (Cl. 33—174)



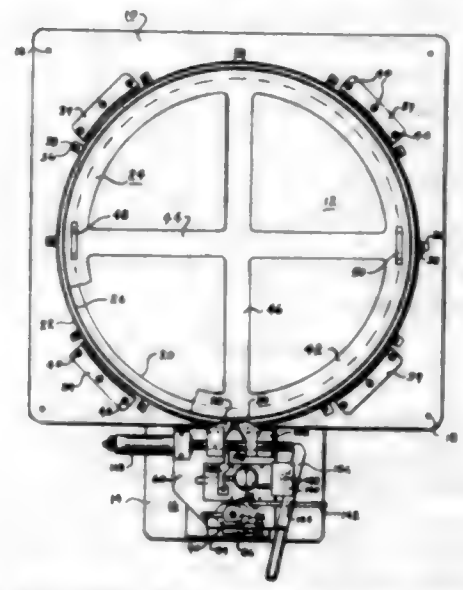
1. A framework for supporting the operative surface of a plastic die, jig, fixture, gauge, spotting frame or the like, said framework being bonded with a cement to form a rigid structure and comprising tubular members and ball joint members forming joints between at least some of said tubular members, said ball joint members each being rigidly bonded to the outside of one tubular member and having a ball portion projecting into and being rigidly bonded to the interior of the end of an adjoining tubular member, said ball joint members allowing the relative positions of said tubular members to be adjusted before the framework is bonded into a rigid structure.

2,895,225
DEPTH AND DIAMETER GAGE
Chester W. Eisele, Homewood, Ill.
Application October 9, 1957, Serial No. 689,107
5 Claims. (Cl. 33—174)



1. In combination, a depth and diameter gage assembly comprising a pair of channelled sections arranged to form a right angle square, a slide in the channel of one of said sections and a plunger rod projecting through and movable with said slide longitudinally in the channel of said one section with an end of said plunger rod projecting beyond the outer margin of the other section for penetrating an opening to be checked, said plunger rod having spaced designations and means in said slide for tensionally but detachably retaining said plunger rod at a predetermined and designated spacing to facilitate determining the depth of the opening, and an adjustable plunger longitudinally movable in the channel of the other of said sections and at a right angle to said plunger rod and having a projection extending beyond said outer margin and adjustable relative to the projecting end of said plunger rod whereby the positioning of the projecting end of the plunger rod against one side of the opening and the projection on the plunger against the opposite side of said opening determines the diameter thereof.

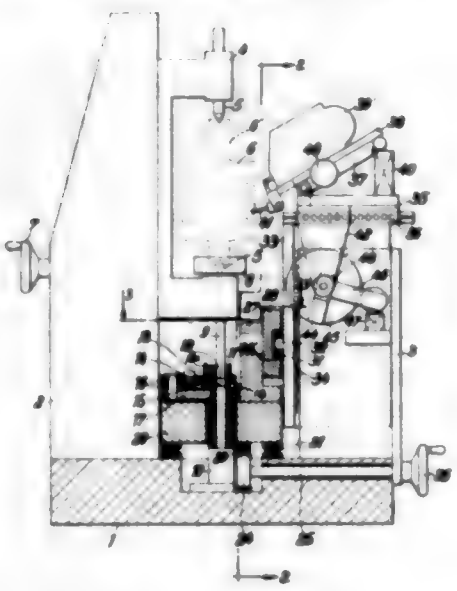
2,895,226
MEASURING INSTRUMENT
Homer E. Coy, South Bend, Ind., assignor to Ace Tool Engineering Co., Inc., South Bend, Ind., a corporation of Indiana
Application November 1, 1957, Serial No. 693,838
8 Claims. (Cl. 33—179)



7. In an apparatus for measuring peripheral surfaces of objects: a base having an annular portion for receiv-

ing objects to be measured, a platform movable toward and away from said annular portion, an anvil mounted on said platform and extending to said annular portion, a movable anvil mounted on said platform and extending to said annular portion, an indicator mounted on said platform and operatively connected to said movable anvil, an indicator connected to said movable anvil, and a measuring band of flexible material on said annular portion connected at its ends to said anvils forming a loop with an opening between said anvils.

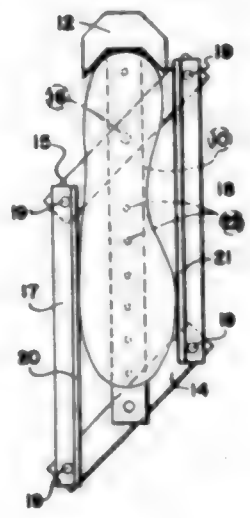
2,895,227
MACHINE FOR THE TESTING OF HOBS
Erich Wagner and Friedrich Albert Walder, Huckeswagen (Rhineland), Germany, assignors to W. Ferd Klingelnberg Söhne, Remscheid-Berghausen, Germany, a corporation of Germany
Application December 9, 1955, Serial No. 552,189
Claims priority, application Germany December 11, 1954
4 Claims. (Cl. 33—179.5)



1. An apparatus for testing hobs comprising means for supporting a hob for rotation about a fixed axis, a rolling friction driven means coupled with and mounted for rotation about a common axis with said hob, a rolling friction drive means engaging said rolling friction driven means to produce rotation of said hob, a stationary support column, a support element mounted upon said column for movement relative to said column along a path parallel to the axis of said hob, a stylus carrying element mounted upon said support element for movement relative to said support element in a direction radially of said hob, first guide means coupling said support element to said rolling friction drive means for moving said support element upon said column axially of said hob at a predetermined rate relative to the rotation imparted to said hob by said rolling friction drive means, and second guide means coupling said stylus carrying element to said support column to move said stylus carrying element relative to said support element in a direction radially of said hob at a predetermined rate upon movement of said support element relative to said column along said path.

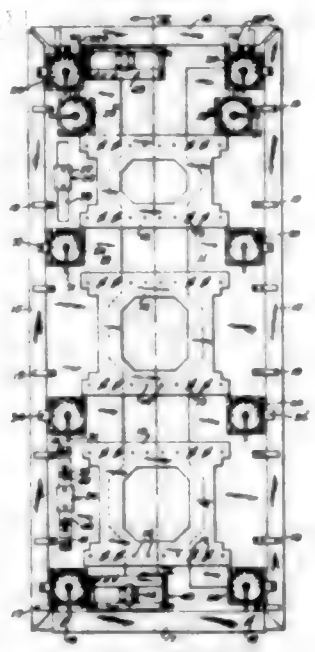
2,895,228
SOLE MARKING DEVICE
Charles W. Snyder, Dayton, Ohio
Application October 17, 1956, Serial No. 616,478
1 Claim. (Cl. 33—189)

A device for establishing the weight balance line on the sole of a skating shoe comprising a sole supporting plate having a plurality of longitudinally spaced centrally positioned openings therein, a heel-engaging member affixed to one end of said sole supporting plate and having a heel-receiving opening facing the body of said sole supporting plate, the longitudinal axis of said supporting plate bisecting said heel-receiving opening to divide the same into a pair of opposed symmetrical portions, a crossbar centrally pivoted to said sole supporting plate at an end portion thereof, an identical crossbar centrally pivoted to said sole supporting plate intermediately of said heel-engaging member and said first mentioned crossbar, a pair of side members each having its end portions pivoted



to end portions of said crossbars whereby said side members are always in spaced parallel relation to each other and to the longitudinal axis of said sole supporting plate, and a vertical wall formed integrally with one edge of each of said side members, said crossbars and said side members being movable with respect to said sole supporting plate whereby when said vertical walls are brought into engagement with the respective sides of the sole of a skating shoe, the weight balance line on said sole line on said sole is located by said supporting plate openings.

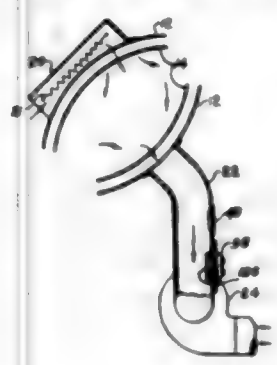
2,895,229
ADJUSTABLE DOOR TEMPLATE
Gordon E. Strickland, Palo Alto, Calif.
Application October 3, 1955, Serial No. 538,207
6 Claims. (Cl. 33—194)



1. A template for use in fitting doors in door openings which comprises a panel-like member, a plurality of adjustable edge portions, means mounting said edge portions on said member for movement outwardly relative to said member to engage the edges of an opening, clampable means movably mounted on said member for movement relative to said member and movable inde-

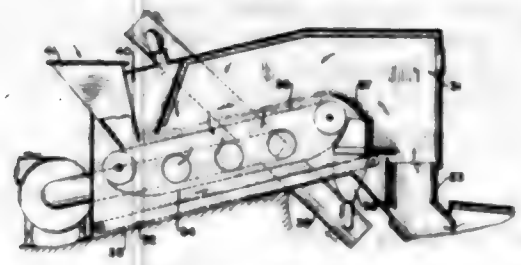
pendently of said edge portions, and guide means on said member engaging said clampable means for guiding movement of said member relative to said clampable means when said clampable means is clamped to a door for the purpose of facilitating the use of said edge portions as guide means for trimming the door.

2,895,230
LAUNDRY DRYER CONTROL
George L. Reiley, Syracuse, N.Y., assignor to The Murray Corporation of America, Syracuse, N.Y., a corporation of Delaware
Application April 30, 1956, Serial No. 581,771
9 Claims. (Cl. 34—45)



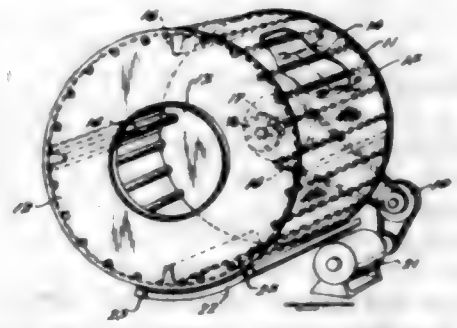
1. A laundry dryer comprising, a drying chamber, means for continuously supplying air to said chamber, means for heating the air supplied to said chamber, an exhaust duct leading from said chamber, thermostatic control means in said exhaust duct associated with said heating means and adapted to act in response to a temperature increase impressed thereon to deactivate said heating means, a normally dry moisture absorbing and heat insulating felt shield interposed between and blanketing said thermostat from the air in said exhaust duct, said shield being adapted to absorb and evaporate moisture from and into the air passing through said exhaust duct each drying cycle to delay response of said thermostatic control means.

2,895,231
APPARATUS FOR HEATING FINELY DIVIDED MATERIALS
Karl Jens Sylvest, Copenhagen-Valby, Denmark, assignor to F. L. Smidth & Co., New York, N.Y., a corporation of New Jersey
Application November 27, 1956, Serial No. 624,679
Claims priority, application Denmark November 29, 1955
3 Claims. (Cl. 34—86)



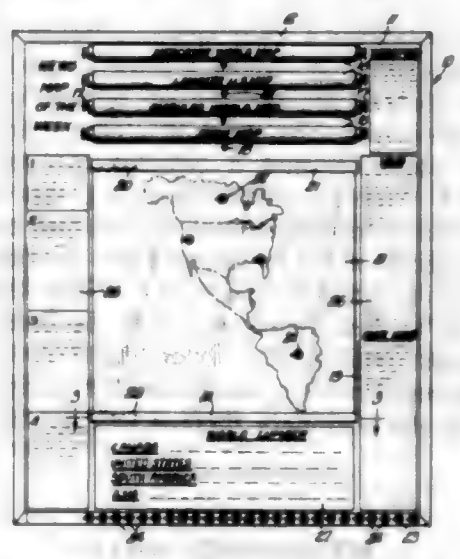
1. An apparatus for preheating raw material to be burned in a rotary kiln, which comprises a chamber, means for supporting and advancing a bed of material, including a gas-permeable support dividing the chamber into upper and lower sub-chambers, means receiving the cold raw material and converting it into nodules, means for depositing the cold raw material nodules upon the support adjacent one end to form a layer, means adjacent the depositing means for distributing partially preheated material upon the layer to form a bed, an inlet into the upper sub-chamber for introduction of hot gases, an outlet from the lower sub-chamber for the gases, means adjacent the other end of the support for dividing the bed into at least two portions with the first portion including at least a part of the upper layer and the second portion including at least a part of the lower layer, means for conducting the first portion of the divided bed out of the chamber, and means for transferring the second portion of the divided bed to the distributing means.

2,895,232
WASHING AND DRYING MACHINES
David Tann, Detroit, Mich.
Original application August 25, 1952, Serial No. 306,118. Divided and this application October 19, 1954, Serial No. 463,172
14 Claims. (Cl. 34—95)



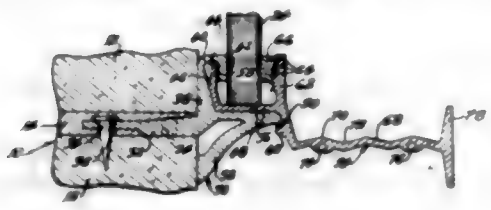
1. A laundering machine having a support, a cylinder mounted for rotation on said support, said cylinder having a pair of spaced end walls, a peripheral wall between the end walls made of liquid carrying material, means adjacent to said peripheral wall extending inwardly therefrom for raising wet clothes on one side of the cylinder as it is rotated and ejecting them near the top of the cylinder to drop on a bottom portion thereof, means for extracting liquid from the peripheral wall, and means for drying said wall near the point of drop of said clothes.

2,895,233
COORDINATED NEWS AND MAP DISPLAY DEVICE
Medard W. Welch, Chicago, Ill.
Application December 13, 1955, Serial No. 552,773
8 Claims. (Cl. 35—40)



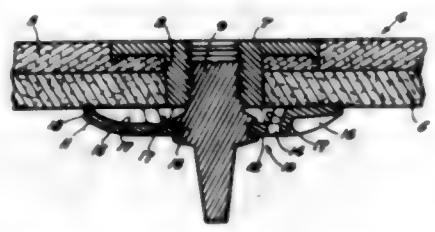
6. A map display device for use in coordinating items of interest with their location of source, said device including a map mounting unit, at least one map mounted on said unit near the top thereof and being downwardly movable across said unit, vertical geographical locating coordinates associated with said unit and cooperating with said map, and clamping means in slidable engagement with said unit to clamp the map in flush relation therewith, said clamping means extending across said unit and being provided with horizontal geographical locating coordinates for use with said vertical coordinates.

2,895,234
SUPPORTING FRAME CONSTRUCTION FOR DISPLAY BOARD OR CHALKBOARD
Henry F. Robrman, Berwyn, and Robert A. Butters, Elmhurst, Ill.
Application June 20, 1956, Serial No. 592,564
4 Claims. (Cl. 35—65)



1. A lower support for a display board comprising an anchor with an outwardly extending plate adapted to be secured in a mortar joint in a wall, said anchor having a shelf extending therefrom on the side opposite the plate and a rim extending therefrom between the shelf and the plate, said rim having a groove therein confronting the shelf, and a trough forming member having a plate portion abutting the shelf of the anchor and a ridge extending from the plate into the groove of the rim, said member having a wall extending from the plate portion generally parallel to the ridge and spaced therefrom to form a trough adapted to receive a display board, said member extending over the end of the shelf of the anchor and having a ridge abutting the side of the shelf opposite to the plate portion of the member.

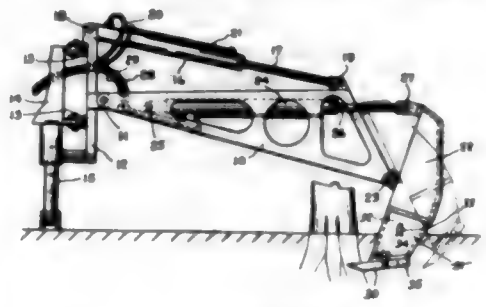
2,895,235
SHOE SPIKE
James V. Melchiona, Cincinnati, Ohio
Application June 9, 1958, Serial No. 740,782
3 Claims. (Cl. 36—59)



1. In combination: a shoe spike, a flange element secured to the spike and having a central aperture for engaging an intermediate portion of said spike, a raised, outwardly projecting boss portion stamped in the flange around the aperture, and a circular row of angularly spaced apart external, ground gripping ribs stamped in the flange and extending radially from the boss portion into the periphery of the flange, said ribs forming opposite, internal grooves on the inside face of the flange which communicate at their inner ends with the inner depressed side of the boss, said grooves extending into the periphery of the flange and forming indentations in the inside face of the flange at the periphery thereof to grip the shoe sole.

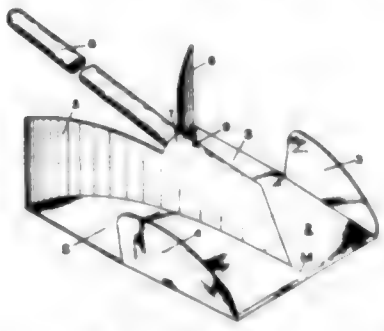
2,895,236
HYDRAULIC ADZE
John S. Pilch, Ware, Mass.
Application September 25, 1956, Serial No. 612,008
1 Claim. (Cl. 37—2)

In a machine of the type described having a boom, equipped with an implement operating hydraulic ram, a horizontal pivot means at the end of said boom, a chopping device for mounting on said boom, said chopping device comprising an elongated rigid box-like support element, a pivot connection approximately mid length of said rigid support element, said pivot connection being complementary to the pivot means of said boom for cooperation therewith when said rigid support element is mounted on said boom with one end of said rigid support element extending generally upwardly, and the other end extending generally downwardly from said boom, a pivot connection on said rigid support element at its end extending upwardly from said boom adapted to be secured to said implement operating hydraulic ram, the lower end of said elongated support element being provided with a reduced end portion of angular section,



and a shoe having an angular recess that fits over said reduced end portion, aligned openings in said shoe and in said reduced portion, a chopping blade mounted on said shoe, said shoe being provided with a backing block on its lower surface and said chopping blade being removably secured to said lower surface against said backing block, and said shoe being secured to said reduced portion by means of a bar inserted through said aligned openings in said shoe and through said reduced portion.

2,895,237
SNOW PLOW
Gustav B. Abrahams, Amity, Oreg.
Application September 13, 1954, Serial No. 455,397
1 Claim. (Cl. 37—53)

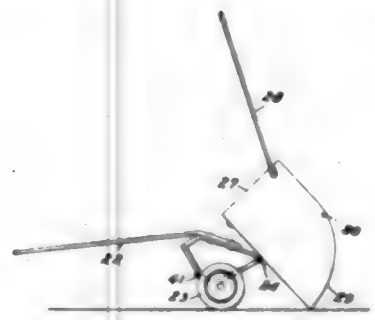


An article of manufacture in the manually operable snow plow class, comprising a flat center board having longitudinally extending lateral edges and a pair of arcuate outwardly and rearwardly diverging rear edges, a pair of vertically disposed wings integral with the forward portions of said lateral edges, an upstanding plow share integrally formed with the central portion of said center board intermediate said lateral edges with said plow share including a pair of rearwardly and outwardly diverging members secured to said arcuate rear edges, and an integral shank extending between and connecting the forward portions of said plow shaft members to form a handle receiving socket.

2,895,238
DUMP SCOOP
John R. Long, Detroit, Mich.
Application June 6, 1957, Serial No. 663,932
3 Claims. (Cl. 37—130)

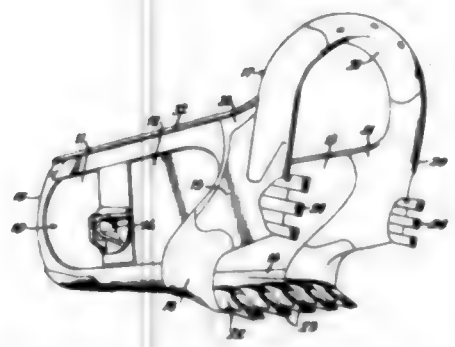
1. A carrying device comprising a container scoop, a stand for supporting said scoop, said stand having a pair of laterally spaced, axially aligned wheels mounted thereon, pivot means carried by said stand forwardly of said wheels, means for pivotally supporting said scoop on said pivot means, handle means secured to said stand and extending rearwardly and upwardly therefrom whereby said stand may be propelled and the elevation of said

pivot means may be controlled relative to the elevation of the axis of said wheels, and second handle means



secured to said scoop and extending rearwardly and upwardly therefrom whereby said scoop may be independently rocked about said pivot means.

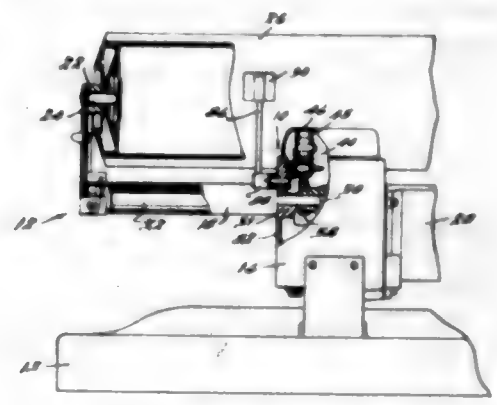
2,895,239
DRAGLINE BUCKET ASSEMBLY
Paul V. Larsen, Portland, Oreg., assignor to Electric Steel Foundry Company, Portland, Oreg., a corporation of Oregon
Application December 15, 1955, Serial No. 553,338
4 Claims. (Cl. 37—135)



1. A front end structure for a dragline bucket, comprising a lip, an arch, and a pair of cheeks connecting ends of said arch to ends of said lip to form a unitary ring adapted to be secured to the forward end of a dragline bucket, each of said cheeks being elongated upwardly to form a hollow portion connected with said arch and elongated rearwardly of said elongated portion to provide an integral arch support along the base of said elongated portion, the lower edge of each cheek being constructed and arranged to mate with an end of said lip along an irregular elongated line.

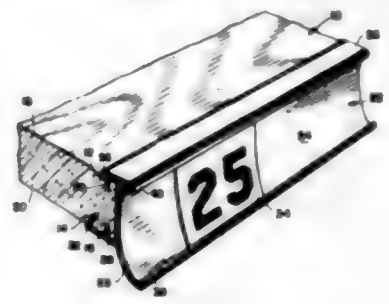
2,895,240
EMERGENCY RELEASE MECHANISM
Loren E. Schrader, Mount Clemens, Mich., assignor to Ironrite, Inc., Mount Clemens, Mich., a corporation of Michigan
Application February 17, 1958, Serial No. 715,737
4 Claims. (Cl. 38—59)

1. In an ironing machine which includes a frame, an ironing shoe on the frame, a shaft rotatably mounted on the frame, a roll carried on the shaft, an arm attached to and extending transversely of the shaft, a plate member pivotally connected to said arm, a pin on said plate member, a cam follower rotatably supported on said pin, and a cam member rotatably supported on said frame and arranged in rolling engagement with the follower so that on rotation of the cam member the follower and the arm are moved so as to rotate said shaft and swing the roll back and forth toward and away from the shoe; an emergency release mechanism for moving the roll away from the shoe when the cam member is in a stationary position corresponding to a position of the roll against the shoe, said mechanism comprising an irregularly shaped lever member pivotally mounted on the frame adjacent said follower supporting plate member for rotation about an axis substantially perpendicular thereto, and leg means on said lever member engageable with



said follower supporting pin for moving the plate member in a direction to move said follower along said cam member and thereby move said arm in a direction to move the roll away from the shoe.

2,895,241
SHELF MOLDING AND SIGN
Irwin J. Ferdinand, Glencoe, and Milton E. Handler, Evanston, Ill., assignors to S. A. Hirsh Manufacturing Co., Skokie, Ill., a corporation of Illinois
Application January 15, 1957, Serial No. 634,362
2 Claims. (Cl. 40—16)

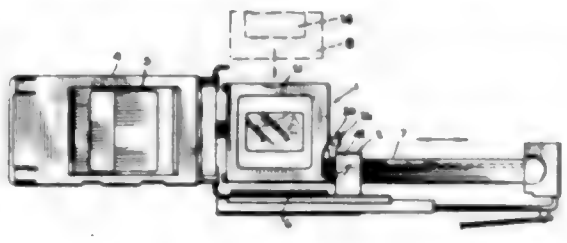


1. In a structure of the character described a shelf having an upper and a lower surface, grooves formed on upper and lower surfaces thereof parallel and spaced from the marginal edge thereof, a shelf molding strip having a body receivable against the marginal edge and adapted to support indicia thereupon, a first extension forming a rigid right angle with the body, integral therewith and provided with a depending integral flange adapted to engage the groove on the upper surface of the shelf, and a second extension spaced from the first, forming a rigid right angle with the body, integral therewith and provided with a depending flange adapted to engage a groove in the lower surface of the shelf wherewith mounting and demounting of the moulding strip to the shelf may be accomplished only by longitudinally sliding the molding along the shelf from an end thereof with the flanges engaged in grooves.

2,895,242
ADAPTER FRAME
Carl H. Wiklund, New Rochelle, N.Y., assignor to Airequipt Manufacturing Co., Inc., New Rochelle, N.Y., a corporation of New York
Application May 29, 1957, Serial No. 662,366
5 Claims. (Cl. 40—63)

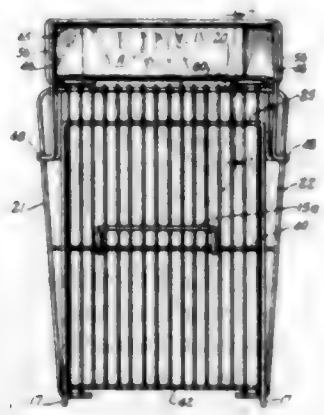
1. A slide adapter frame for use with a slide changer having a reciprocably mounted slide transfer member with a projection thereon adapted to engage a recess in slide holders to move them into and out of a slide viewing position comprising the combination of a frame, slide holder engaging means on said frame adapted to

removably mount a slide holder on said frame, a recess at one edge of said frame positioned to engage the projection on said slide transfer member, and a locking means adapted to removably lock the slide adapter frame in place on the slide transfer member comprising a latch member pivotally mounted on said frame in spaced relationship to said recess and having a locking surface there-



on positioned to occupy a first position slightly spaced from a portion of the slide transfer member opposite the projection when the projection is inserted into said recess whereby the latch member removably locks the projection in the recess and positioned to occupy a second position remote from the slide transfer member to permit removal of the slide adapter frame therefrom.

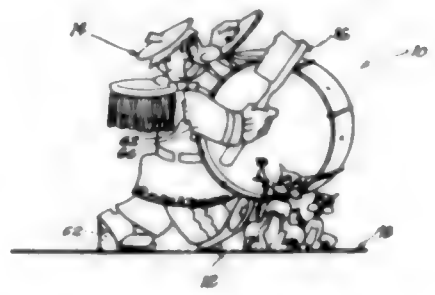
2,895,243
SIGN HOLDER AND BABY SEAT FOR TELESCOPING CARTS
Ralph G. Hummer, Fred W. Young, and Kurt H. Schweitzer, Oklahoma City, Okla.
Application March 15, 1956, Serial No. 571,763
1 Claim. (Cl. 40—125)



A sign holder comprising a pair of frames arranged in abutting parallel relation with their bottom portions secured together to provide a sign holding area therebetween, the first frame including a top and end structures, the second frame including a top, ends and a bottom structure, the top of one of the frames being laterally offset to provide space for the insertion of a sign between said frames, a first side support for the sign extending parallel to the top of the frames and secured to the bottom of the second frame and positioned thereabove, and a second side support secured to the end walls of the second frame, the ends of one of the frames depending downwardly to define the first legs of a pair of spaced legs, the bottoms of the depending legs being bent outwardly to define hooks and then extending upwardly at points inwardly of the first legs and connected to the second side member.

2,895,244
ANIMATED CARD DEVICE
Milton D. Youngren, Glencoe, Ill.
Application July 29, 1958, Serial No. 751,739
7 Claims. (Cl. 40—126)

1. An animated card, comprising a one-piece member made of sheet material, said member having a bottom panel, a top panel, with a first fold connecting said top panel to said bottom panel at the rear edges of said panels, and an upright panel extending upwardly substantially at right angles to said bottom panel with a second fold connecting the lower edge of said upright panel to the front edge of said bottom panel, said bottom panel having first and second substantially parallel slots therein extending in a direction substantially at right angles to said first and second folds, said folds being substantially parallel to each other, said slots being spaced apart in a direction substantially parallel to said folds, a slider made of sheet material and having a central portion slidable between said top and bottom panels, said slider having end portions extending downwardly through said first and second slots, said top panel having a tap thereon disengageably receivable in one of said slots for retaining said top panel in substantially parallel relation to said bottom panel, said slider having an upright member extending generally at right angles from said central portion with a fold connecting the lower edge of said upright member to the front edge of said slider, said

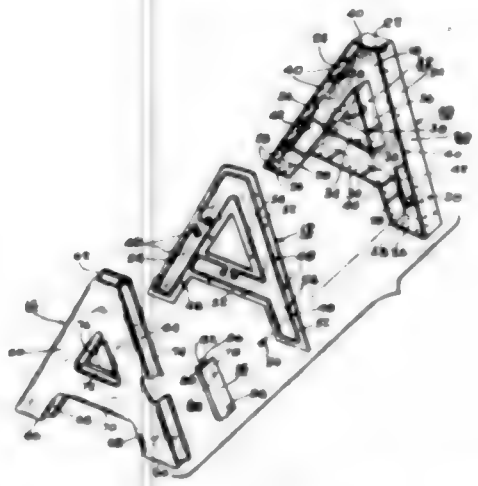


upright member extending between the front edge of said top panel and said upright panel, said upright member being movable behind said front panel in closely spaced relation thereto, said front panel having a brace portion folded rearwardly therefrom, with a second tab on the lower edge of said brace portion, said top panel having a slot therein for disengageably receiving said second tab to hold said upright panel in an upright position, an animating member having a front portion in front of said upright panel and a rear portion behind said upright panel, said upright panel having a slot therein for disengageably receiving said rear portion, tab means on said rear portion for retaining said rear portion in said last-mentioned slot for swinging movement, said upright panel and said animating member having relatively movable complementary portions of a figure thereon, and a slot in said upright member of said slider for disengageably receiving said rear portion of said animating member for swinging said animating member in response to movement of said slider through said first and second slots.

2,895,245
DISPLAY SIGN INDICIA
Bernard Spangler, Philadelphia, Pa.
Application April 25, 1955, Serial No. 503,381
2 Claims. (Cl. 40—130)

1. A display-sign letter or the like comprising an integral back member of opaque lightweight metal or the like having a back wall and a relatively wide continuous forwardly directed peripheral flange; a separate metallic reflector member corresponding in shape to the back member and fitting snugly therewithin, means detachably securing the reflector member to the back member; a source of illumination mounted on the reflector member; a one-piece front member of light-transmitting synthetic resin or the like and corresponding in shape to the back member, said front member having a generally flat face and integrally formed rearwardly directed peripheral walls of lesser width than the back member flange and having

an integral outwardly directed peripheral flange formed on the rearwardly directed walls with its free edges terminating adjacent the free edges of the peripheral flange of the back member; and separate means detachably connecting the peripheral walls of the front member to the free edges of the peripheral flange of the back member so as to form a water-tight seal therebetween comprising lengths of integral molding strip of relatively small F-



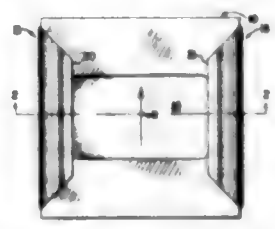
shaped cross-sectional configuration, the parallel arms of the F receiving the outwardly directed peripheral flange of the front member while the base of the F overlies the peripheral flange of the back member for a short distance and is removably secured thereto; the inner free edge of the flange of the back member and the peripheral edge of the face of the reflector abut the inner of the parallel arms of the F with a sealing gasket disposed therebetween.

2,895,246
SIGN AND FIXTURE THEREFOR
Howard C. Menges, Bristol, Ind.
Application March 16, 1956, Serial No. 571,994
5 Claims. (Cl. 40—145)

1. A sign, comprising a sign panel, a rigid support for said panel, a fixture for resiliently mounting said panel on said support including a vertically arranged bar-like member attached to the sign panel and having laterally extending ends, a vertically arranged bar-like member of a length different from that of the first member attached to said support and having laterally extending ends, the lateral ends of the shorter of said means being disposed between the lateral ends of the longer of said members, springs mounted between the respective ends of said members and supporting said first mentioned member in spaced relation to said second mentioned member, and a means attached to one of said members for limiting the rotational movement of said panel on the mountings provided by said springs.

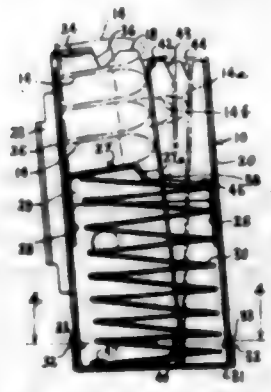
2,895,247
PHOTOGRAPHIC SLIDE CLIP
William J. Beck and Donald F. Fazendin, Minneapolis, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application September 16, 1957, Serial No. 684,257
1 Claim. (Cl. 40—152)

The combination comprising; a rectangular mounted transparency having a rectangular transparency held between layers of cardboard sealed together, the layers of cardboard having aligned openings through which the transparency may be viewed, and a pair of protective clip members mounted on opposite edges of said mounted transparency in a relationship to said transparency to indicate the proper position of said mounted transparency in a projector, each of said clip members being formed of a folded member of relatively thin resilient material having an inner dimension at the fold thereof greater than the composite thickness of said layers of cardboard and having a pair of parallel edges biased toward each other by the resiliency of the material of the clip and



gripping the opposite faces of said layers of cardboard, each of said clips having an overall length slightly less than the length of the outside edge of said transparency and a width between the fold and the edges thereof no greater than the width of the cardboard layers between the edge thereof and the adjacent edge of the aligned openings therein, said protective clips functioning to provide edge surfaces at the folds thereof thicker than the layers of cardboard to insure proper operation of the mounted transparency in a photographic projector, to prevent wear of said cardboard with use in a projector, and to stiffen said mounted transparency to reduce buckling due to the heat of a projection lamp.

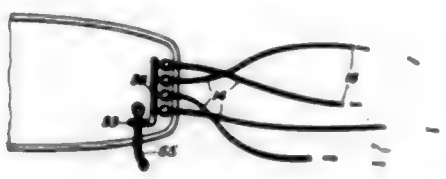
2,895,248
BOX-TYPE CARTRIDGE MAGAZINE
Raymond R. Sawin, Hamden, Conn., assignor to O. F. Mossberg & Sons, Inc., New Haven, Conn., a corporation of Connecticut
Application July 24, 1957, Serial No. 673,826
8 Claims. (Cl. 42—50)



1. A magazine for firearms, which is convertible for receiving and delivering cartridges of various lengths but of the same caliber, comprising in combination as a single composite unit, a box-like structure capable of receiving a plurality of cartridges in superimposed relation, one end of said magazine being open for delivery of the cartridge one after the other to the firing chamber of a gun, a cartridge follower guided within said

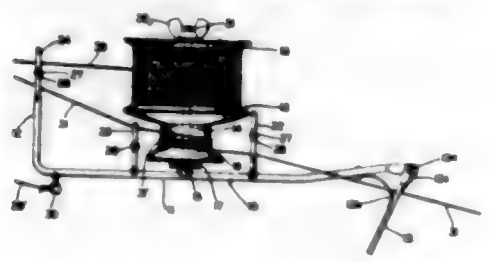
structure having a follower spring urging said cartridge follower toward said open end, a stationary element adjacent one side of said structure for guiding one end of each of said cartridges, and a movable guide-element extending generally parallel to and adjustably spaced from said stationary element for guiding the opposite ends of said cartridges; said guide-element and box-like structure having engageable locking portions for locating said guide-element at various distances from said stationary element, said guide-element being connected to said follower spring and retained thereby in said magazine with said follower spring normally resiliently urging said guide-element into locking engagement with the locking portion of said box-like structure at any selected position with respect to said stationary element.

2,895,249
ARTIFICIAL BAIT AND METHOD OF ACTIVATING BAIT
Eben H. Carruthers, Hammond, Oreg.
Application November 4, 1954, Serial No. 466,779
8 Claims. (Cl. 43—4)



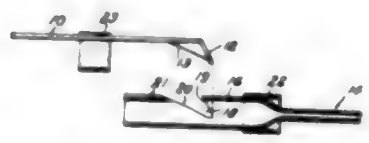
3. Apparatus for launching artificial bait over the side of a boat comprising, in combination, a rotatable drum having pockets formed therein, a casing at least partly enclosing said drum, said pockets having ridges between them, a connection to said casing from a source of fluid pressure, a conduit connected to said casing, said ridges making a close fit with the inner wall of the casing whereby as the pockets are successively brought into registry with said connection and said conduit the lures are discharged from said pockets into said conduit by fluid pressure.

2,895,250
FISH LURE RETRIEVER
Oscar Burden, Alliance, Ohio
Application October 8, 1957, Serial No. 688,920
4 Claims. (Cl. 43—17.2)



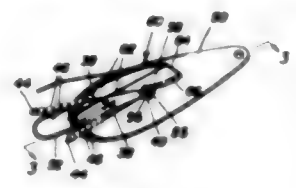
1. A retriever for a lure attached to one end of a fish line, said retriever comprising a substantially L-shape frame having a substantially horizontal portion with an upright post at its rear end, an upright shaft on said frame spaced forwardly from said upright post, a spool journalled upon said shaft, said spool comprising integral upper and lower drums, the upper drum being of relatively large diameter and the lower drum being of relatively small diameter, eyes upon the frame forwardly and rearwardly of the lower drum, an eye upon said upright post, means for snubbing the fish line around the lower drum and threading it through said eyes, the free end of the fish line being relatively fixed, and a second line wrapped around the upper drum, the free end of said second line extending rearwardly and being threaded through the eye on said upright post, whereby a steady pull upon said free end of said second line will cause said second line to be continuously unwound from the upper drum continuously rotating the lower drum causing the retriever to continuously travel forwardly along the fish line toward the lure.

2,895,251
ATTACHMENT FOR FISHING RODS
Bert A. Karry, Livonia, Mich.
Application November 21, 1956, Serial No. 623,627
9 Claims. (Cl. 43—24)



1. In a device adapted to be mounted on the end of a fishing rod to prevent entanglement of the fishing line, said fishing rod having a loop on the end thereof with the plane of the loop forming an angle with the axis of the fishing rod, the combination comprising a first section having an opening therethrough, the length of said opening being many times greater than the diameter thereof, a second section having an opening therethrough and fixed to said first section, the opening in said second section being aligned with the opening in said first section, said second section having portions thereof spaced from each other to provide a side opening for receiving the loop of said fishing rod to bring the opening in said loop into alignment with the openings in said sections, and means for supporting said first and second sections on the end of said fishing rod.

2,895,252
FISHING LURE
Raymond O. Tibbetts, Menomonie, Wis.
Application April 11, 1958, Serial No. 727,972
3 Claims. (Cl. 43—42.5)



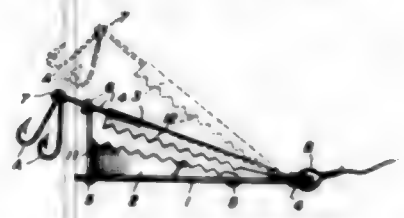
2. A fishing device comprising, in combination, an elongated concavo-convex spoon having a rear end provided with a first hole centrally positioned, having a median portion provided with a second hole centrally positioned in alignment with said first hole and a forward portion having a third hole for line attachment means aligned with said first and second holes, a fishhook having a barbed end located beyond the rear end of said spoon, said fishhook having a shank passing forwardly through said first hole and terminating in an eye in alignment with said second hole, a vibratory lure V-shaped in plan and embodying a pair of companion rearwardly diverging flexibly resilient fine-gage limbs which may vibrate freely in response to wobbling movements of the spoon during the act of fishing, the median bight portion of said lure being provided with an eye in alignment with said second hole, the rear vibratory free end portions of said limbs extending in a plane above and clear of the concave side of said spoon and projecting beyond said rear end and terminating in stop shoulders, said rear ends being disposed on opposite sides of the barbed hook and being disposed in a plane between the spoon and the barbed end of said fishhook, and a plurality of freely rotatable and slidable beads mounted on the respective limbs and held against endwise displacement by way of stop shoulders which are provided on the rear ends of said limbs,

and a headed fastener having a shank portion passing through the aligned eyes and through said second hole and secured in place by way of said second hole.

2,895,253
FISHING TACKLE
Ray H. Hess, Albuquerque, N. Mex.
Application July 3, 1958, Serial No. 746,404
10 Claims. (Cl. 43—42.15)

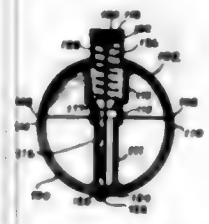
1. A spinner element for a fishing lure comprising: a piece of thin sheet material having four attachment points located near the edges and arranged to form the corners of an equilateral figure; and four vanes, each extending from a surface of said piece parallel to the line of adjacent attachment points, alternate vanes extending from opposite surfaces of said piece.

2,895,254
COMBINED FISH LURE AND BAIT HOLDER
Fred W. Kraus, Pittsburgh, Pa.
Application December 2, 1957, Serial No. 700,135
5 Claims. (Cl. 43—44.6)



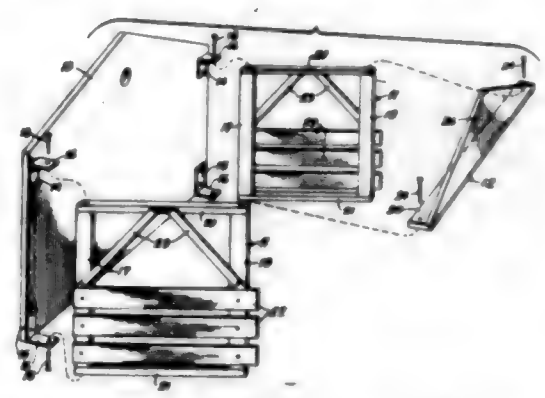
1. A fish lure and bait holder comprising a substantially flat metallic base plate, a generally triangular metallic member rigidly mounted at one edge on the base plate, and a pivoted metallic member mounted at one end on said base plate and swingable to a position over a second edge of said triangular member for holding bait between said members, hook means at the third edge of the triangular member, and latch means on the pivoted member for engaging said hook means to hold the said members in bait holding relation.

2,895,255
FISHING FLOAT
Harry Basil Irwin, Dayton, Ohio, assignor to Dayton Bait Co., a corporation of Ohio
Application August 18, 1958, Serial No. 755,739
7 Claims. (Cl. 43—44.88)



1. A fishing float adapted for use in conjunction with a rod having a fishing line, said fishing float including a main float body of buoyant material and a pair of clamping members mounted on said body for compressively clamping the fishing line, said clamping members consisting of a pair of substantially cylindrical members mounted in end-to-end relation for relative movement and spring means biasing said clamping members into compressive engagement, said clamping members being of substantially equal diameter and having opposing flat surfaces cooperating upon the insertion of a fishing line therebetween to frictionally clamp the same, means serving as a cam on one of said clamping members to spread said members apart upon engagement of the rod tip with said means, whereby said clamping members upon coming into contact with the rod tip and upon the line being pulled outwardly from between their opposing surfaces in a plane substantially parallel to such surfaces to completely release the line.

2,895,256
ERECTION BUILDING TOY
John H. Miller, La Grange, Mo.
Application November 19, 1956, Serial No. 622,962
3 Claims. (Cl. 46—19)

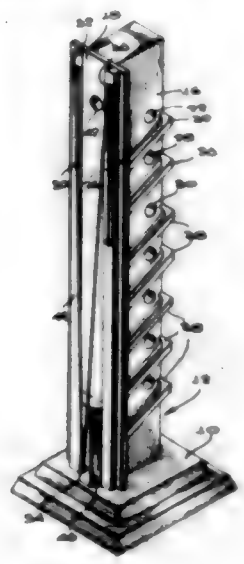


1. In an erection building toy, a rear wall board, spaced angle members secured to the edge portions of the board at the top and bottom of each edge and providing forwardly-extending horizontal hinge flanges, a pair of stiff side walls having inner posts extending between a pair of said flanges and being pivotally secured to said flanges for swinging movement in the same direction between closed positions wherein said side walls are substantially parallel with said rear wall and extended positions wherein said side walls extend forwardly away from said rear wall at substantially right angles thereto, and a roof support member pivotally connecting the forward portions of said side walls and being substantially parallel with said rear wall when said side walls are closed and extended, said roof support member, when said side walls are swung in the same lateral direction into closed positions, frictionally engaging the upper edge portion of one of said side walls to maintain the same in closed position.

2,895,257
AMUSEMENT DEVICE
Robert C. Morse, Braddyville, Iowa
Application June 7, 1957, Serial No. 664,435
2 Claims. (Cl. 46—43)

1. In an amusement device, a base, a standard rising from said base, said standard having a pair of faces arranged in parallel spaced relation, and a connecting face extending between one of the adjacent ends of said pair of faces, each of said pair of faces having two side edges and a vertically disposed row of spaced holes inwardly of and adjacent each side edge, the holes of the row adjacent one of the side edges of said pair of faces being at a higher level than the holes of the row adjacent the other of the side edges of said pair of faces, said standard having an upwardly sloping first runway

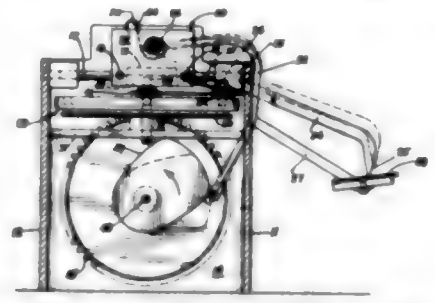
adjacent to and spaced from the top thereof and having one end opening out of the uppermost hole of the row of holes adjacent one of the side edges of one of said pair of faces and having the other end terminating at a point spaced from and inwardly of the uppermost hole of the row of holes adjacent the complemental one of the side edges of the other of said pair of faces, a downwardly sloping continuous second runway positioned below and spaced from said first runway and having one end opening out of the uppermost hole of the row of holes adjacent the other of the side edges of said one of said pair of faces and having the other end opening out of the uppermost hole of the row of holes adjacent the complemental other of the side edges of said other of said pair of faces, and a downwardly sloping continuous third runway positioned below and spaced from said second runway and having one end opening out of the next uppermost hole of the row of holes adjacent said one side edge of said one of said pair of faces and having the other end opening out of the next uppermost hole of the row of holes adjacent the complemental one of the side edges of said other of said pair of faces, a downwardly sloping first trackway fixedly carried by said one of said faces and



having one end in communication with said other end of said first runway and having the other end in communication with said one end of said second runway, a downwardly sloping second trackway fixedly carried by said other of said faces and having one end in communication with said other end of said second runway and having the other end in communication with said one end of said third runway, a downwardly sloping third trackway fixedly carried by said one of said faces and having one end in communication with said other end of said third runway, there being a charging runway having one end extending inwardly from said connecting face adjacent to and above said first runway and having the other end in communication with the terminating point of said first runway, a carriage normally positioned in registry with a delivery runway provided in said standard intersecting said third runway and opening out of said connecting face and mounted on said connecting face for upward movement to a position in registry with said one end of said charging runway, and a manually actuable means operatively connected to said carriage for effecting the movement of the latter.

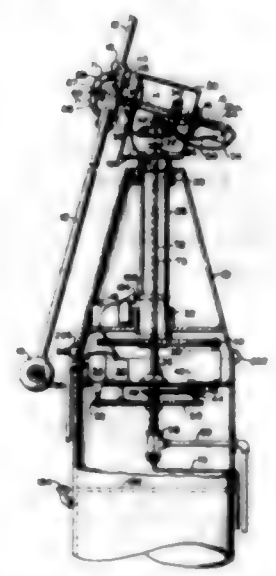
2,895,258
WRITING DOLL
Manuel von Rabenau, St. Paul, Minn.
Application April 15, 1957, Serial No. 652,787
11 Claims. (Cl. 46—119)

1. A mechanical writing doll, said doll including at least a body portion, a pair of arms, and a pair of hands, a device for converting rotary motion to transverse and longitudinal motion in a plane mounted in the upper body portion of said doll, said device comprising a supporting frame, a transverse motion carrier mounted for reciprocatory motion in said frame between the front and back of said doll body portion, a longitudinal motion carrier mounted on said transverse carrier for transverse movement with said carrier and longitudinal motion relative thereto, said longitudinal motion being in the direction from side to side of said doll body, a double track disk cam, a cam follower disposed in each of said cam tracks, a slotted guide member for each of said cam followers, the slots in said guide members being disposed at right angles with respect to each other, means connecting one of said cam followers to said transverse motion carrier to impart transverse motion to said carrier, means connecting the other of said cam followers to said longitudinal motion carrier to impart longitudinal motion



thereto, a rigid carrier arm mounted on said longitudinal motion carrier for movement therewith, said arm extending outwardly from said motion conversion device and extending through one arm of said doll and terminating in one hand of said doll, a stylus at the outer extremity of said rigid carrier arm held in the hand of said doll, a rigid stationary arm mounted on said supporting frame opposite to said movable carrier arm, said stationary arm extending outwardly from said motion conversion device and extending through said other arm of said doll and terminating at the other hand of said doll, a flat pad at the outer extremity of said stationary arm held in the hand of said doll in the plane of movement of said stylus, and means for rotating said cam whereby transverse and longitudinal motion is imparted to said carriers and transmitted to said carrier arm supporting said stylus to trace an inscription on said pad.

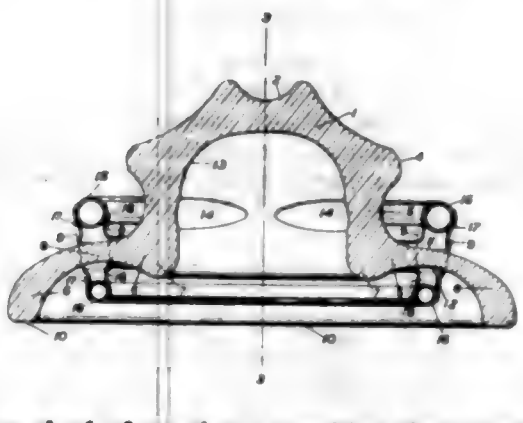
2,895,259
ORCHARD FAN DRIVEN BY RAM-JET ENGINES
Joseph E. Beckett, Palo Alto, Calif., assignor, by direct and mesne assignments, to Ram Jet Wind Inc., a corporation of California
Application July 2, 1956, Serial No. 595,225
13 Claims. (Cl. 47—2)



1. A ram-jet driven orchard fan comprising: Support means adapted to position said fan at a predetermined

height and orientation relative to the ground; a plurality of fan blades attached to a common hub adapted to rotate about a common axle; a plurality of ram-jet engines attached to the end of said blades, respectively; conduit means for carrying fuel to said ram-jet engines; means for carrying ignition voltage to said engines; and mechanical means mechanically linked to be driven by said axle, and adapted to change the orientation of said axle about an azimuth axis.

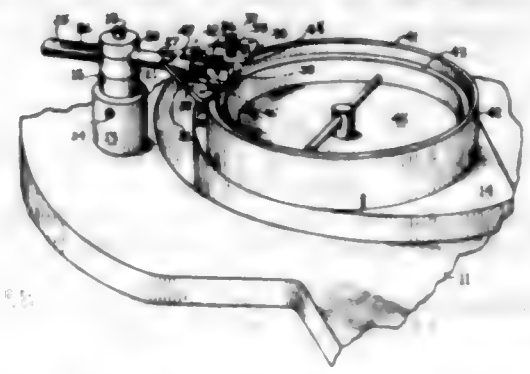
2,895,260
METHOD OF TREATING A GLASS INSULATOR
Philip E. Jellyman, Eccleston, St. Helens, and George A. Dickinson, Eccleston Hill, St. Helens, England, and Hamish F. Macintosh, Glenaveron, Brora, Sutherland, Scotland, assignors to Pilkington Brothers Limited, Liverpool, England, a company of Great Britain
Application February 8, 1955, Serial No. 486,962
Claims priority, application Great Britain February 11, 1954
2 Claims. (Cl. 49—89)



1. A method of treating a moulded glass insulator having a hollow head and an integral skirt emanating radially from the base thereof, which method comprises thermally treating the insulator in a temperature equalizing furnace to equalize the temperature of the insulator at a point just above its softening point and promptly thereafter cooling with annularly disposed jets directed onto both sides of an annular zone in the skirt and near the head, said cooling being limited substantially to said zone to produce in the zone a temperature which is substantially less than the temperature of the surrounding glass, and then subjecting the insulator as a whole to a rapid chilling operation to toughen the insulator, the cooling of said zone being at a restricted rate due to the temperature differential so that the subsequent rapid chilling of the insulator as a whole causes said zone to be toughened to a lesser degree than the rest of the insulator to form a barrier against the propagation of a fracture in the skirt through the zone to the head or vice versa.

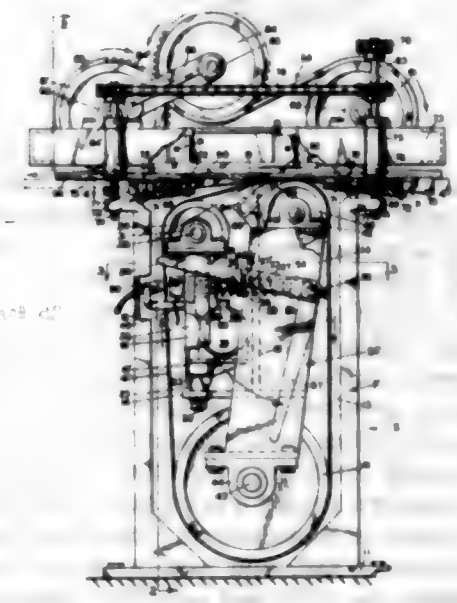
2,895,261
CONDITIONING RING HOLDING APPARATUS FOR LAPPING MACHINES
Lawrence Day and Joseph Dobrick, Chicago, and Arthur Kay, Evanston, Ill., assignors to Spitfire Tool and Machine Co., Inc., Chicago, Ill., a corporation of Illinois
Application February 25, 1957, Serial No. 641,897
8 Claims. (Cl. 51—131)

1. A device for holding and retaining a work-holding surface-conditioning ring upon a rotating lap surface of a lapping machine including a surface conditioning ring provided with an interior circumferential shoulder, said device comprising a ring-holding means, and said means including three triangularly disposed depending roller bearings engageable with one edge portion of said ring, means for positioning said roller bearings relative to said ring and in spaced confronting relation to the lap surface of the machine, means for supporting said positioning means and said roller bearings relative to said ring, means for vertically adjusting said supporting means relative to the lap surface of the machine, means carried by said positioning means and operatively connected to said supporting means for laterally adjusting said posi-



tioning means relative to said ring, means for pivoting one of said roller bearings out of engagement with said interior circumferential shoulder to permit removal of said ring from the lap surface, and means for latching said roller bearings in ring-holding and retaining position.

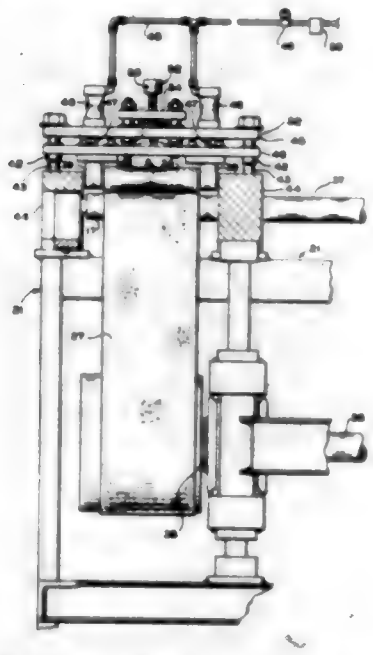
2,895,262
COMBINATION DRUM AND BELT SANDING SURFACING MACHINES
John A. Nylund, Portland, and Frank J. Miehe, Lake Grove, Oreg.
Application June 3, 1957, Serial No. 663,152
4 Claims. (Cl. 51—137)



1. A sanding machine comprising a base frame having a pair of upstanding spaced parallel webs, a single upstanding web secured to said base and extending between adjacent ends of said parallel webs, a sub-frame secured to said single upstanding web between said parallel webs, means on said base frame for feeding work horizontally through said machine, a roller journalled on said sub-frame with its axis perpendicular to the direction of travel of work through said machine, said roller having its peripheral surface positioned closely adjacent the work feeding through said machine, a second roller spaced from said first roller and journalled on said sub-frame with its peripheral surface spaced below the work feeding through said machine, a third roller journalled on said sub-frame intermediate said first and second rollers and spaced substantially therebelow, said rollers having their axes substantially parallel, a work contacting sanding belt trained over said rollers, said first named roller supporting said sanding belt in initial work contacting position, means controlled by the position of said belt on said rollers for tilting said second roller to move said

belt to a central position with respect to said roller, a resilient pressure bar positioned adjacent said first named roller between said first and said second named rollers supporting said sanding belt in a secondary work contacting position and manually operated means connected to said pressure bar for vertically adjusting said pressure bar with respect to the work feeding through said machine.

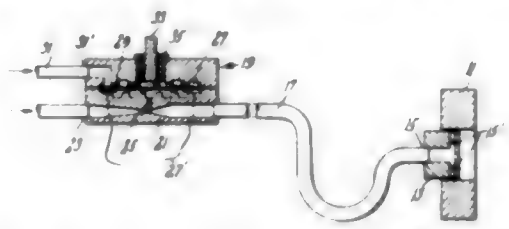
2,895,263
METHOD AND APPARATUS FOR BUFFING SHOE SOLES
Coy Reynolds, Carey, Ohio, assignor to Selberling Rubber Company, Akron, Ohio, a corporation of Delaware
Application October 26, 1955, Serial No. 542,826
11 Claims. (Cl. 51—139)



11. A machine as for buffing shoe soles or like articles, having thickening surface irregularities on one side thereof comprising a pair of rollers between which the article is to be fed, means for conveying the article flatwise between said pair of rotatable rollers, means for relatively urging said rollers toward each other to engage the article conveyed between them, means for rotating one of said rollers, continuous abrasive means backed by said one rotated roller and adapted to be continuously movable therewith for buffing the other side of the article, the other said roller having a continuous peripheral area and being of resilient materials to substantial depth yieldingly to conform to said one side of the article fed between the rollers, the other said roller also having an inner supporting core of rigid material and which is of reduced diameter centrally thereof thereby to present correspondingly centrally thickened portions of said resilient material to said thickening surface irregularities on the article.

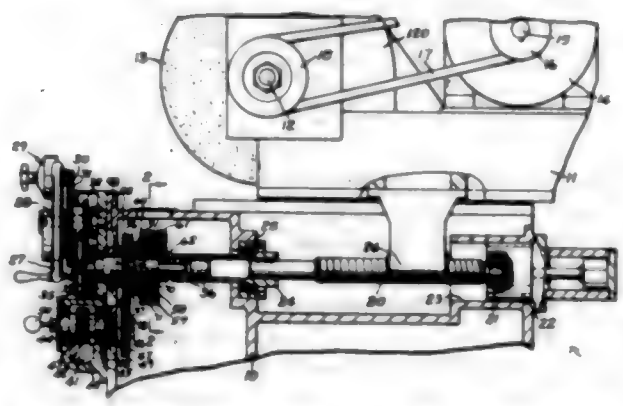
2,895,264
GAGE SYSTEM
Gordon E. Lillie, Bellows Falls, Vt., assignor to Bryant Chucking Grinder Company, Springfield, Vt., a corporation of Vermont
Application September 16, 1955, Serial No. 534,818
5 Claims. (Cl. 51—165)

1. In an internal grinding machine having a grinding wheel and means to repetitively insert the wheel in the hole of a workpiece to enlarge it and to withdraw the wheel to permit measurement of the hole size during regularly recurring intervals, in combination therewith control apparatus for automatically regulating the size of the hole, said apparatus including a fluid plug gage adapted to be alternately inserted into the hole of the workpiece and withdrawn therefrom during said intervals, means to provide to said gage a continuous supply of pressure fluid for discharge from said gage at a predetermined rate when the gage is inserted in a hole of desired size, said fluid being discharged at a higher rate while said gage is withdrawn from the workpiece and at a lower rate while the gage is inserted in a hole of in-



sufficient size, and means responsive to an irregularity in said fluctuations between said higher and lower rates of fluid discharge, as when a said fluctuation fails to occur during one of said intervals, said last-named means being adapted to cause operation of said machine on a given workpiece to terminate.

2,895,265
GRINDING MACHINE
Olva E. Hill, Worcester, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Application December 5, 1956, Serial No. 626,484
8 Claims. (Cl. 51—165)

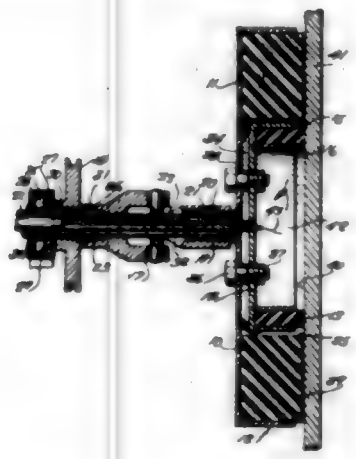


1. In a grinding machine having a transversely movable wheel slide, a rotatable grinding wheel thereon, a feeding mechanism to impart a feeding movement to said slide in either direction, a grinding wheel truing apparatus including a longitudinally traversable truing tool, means to reciprocate said truing tool either through one complete reciprocation for an intermittent truing cycle or to reciprocate said truing tool continuously for a continuous truing cycle, a truing tool feed mechanism to feed said truing tool transversely, means actuated by and in timed relation with the longitudinal movement of the truing tool to actuate said truing tool feeding mechanism at each end of the truing tool traverse either at a fine feed for a continuous truing cycle or at a coarser feed for an intermittent truing cycle, and a wheel feed compensator mechanism actuated by and in timed relation with the longitudinal traversing movement of the truing tool automatically to impart a compensating adjustment to the wheel feeding mechanism each time the truing tool reciprocates, said feed compensation being arranged so as to impart either a fine adjustment during a continuous truing cycle or a coarser adjustment during an intermittent truing cycle.

2,895,266
GRINDING HEAD
Lowell Statler, Bellevue, Ohio
Application May 10, 1957, Serial No. 658,333
4 Claims. (Cl. 51—180)

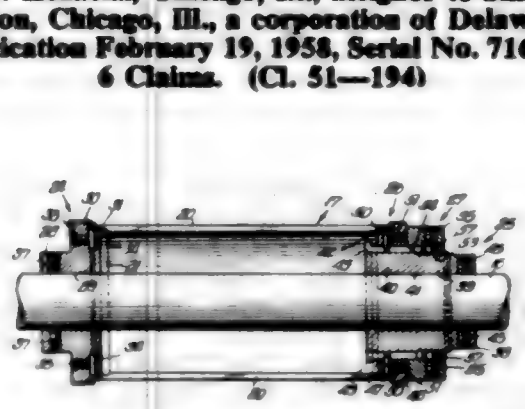
1. In a grinding head, the combination which comprises a disc having a nipple extended from one side and posi-

tioned in the center thereof and having a peripheral flange extended from the outer edge and positioned on the side of the disc opposite to that from which the nipple extends, a band of resilient material providing a backing mounted on the disc and positioned against the inner surface of the flange, a layer of material having an abrading surface secured to the face of the resilient backing band, an inner disc having a flange extended from the peripheral edge positioned in the center of the band and spaced from the inner surface thereof, an annular partition mounted on the inner disc, concentric with and spaced from the flange extended from the peripheral edge



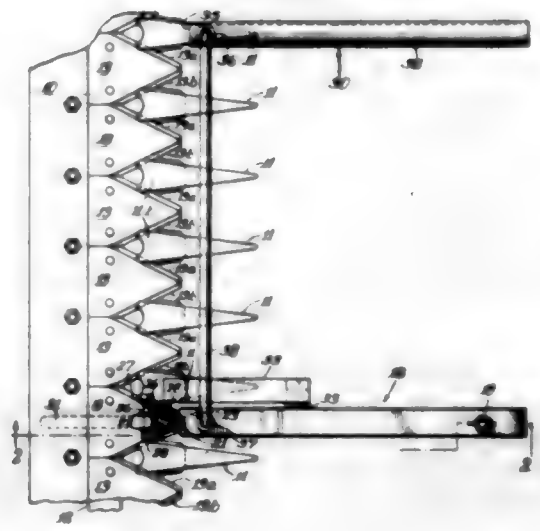
thereof, a sealing ring of resilient material positioned between the partition and flange of the inner disc providing separating means between the high vacuum area in the center of the head and a vacuum passage between the flange of the inner disc and inner surface of the resilient backing, a tubular handle extended from the nipple of the disc on which the resilient backing is positioned, an inner tube extended from the inner disc through the tubular handle extended from the nipple of the disc upon which the resilient backing is positioned, a universal joint through which the tube extended from the nipple passes, and means for rotating the head.

2,895,267
ABRASIVE UNIT
Joseph S. Kozacka, Chicago, Ill., assignor to Skil Corporation, Chicago, Ill., a corporation of Delaware
Application February 19, 1958, Serial No. 716,118
6 Claims. (Cl. 51—194)



1. An abrasive unit for mounting on a rotatable shaft, said unit including a plurality of arcuate abrasive sleeve sections combined to define an annular sleeve which is held and drive connected at opposite ends thereof by end members arranged for concentric mounting about a shaft for rotation therewith, one of said end members including an axially movable sleeve section clamping ring drive connected with said one end member and holding said sections in operative position spaced relative to the shaft, and position fixing means for releasably holding said clamping ring in axially advanced position on said one end member to hold said sections while allowing axial retraction of said clamping ring for dismounting of said sections from said end members.

2,895,268
SHARPENER FOR MOWER SICKLE SECTION
Werner Martinmaas, Jr., Miller, S. Dak.
Application November 6, 1956, Serial No. 620,762
12 Claims. (Cl. 51—250)



1. A sharpener for the sickle sections of a mower which has a fixed cutter bar provided with a plurality of forwardly projecting, generally conical guard members and a plurality of sickle sections reciprocable on said cutter bar between said guard members, said sharpener comprising: a frame including a base member and a grinder member above and spring urged toward said base member; a fixed grinder element mounted on said grinder member and having a downwardly facing grinder surface at its lower end; means on said members establishing a minimum spacing there-between; an anchor member adapted to rotatably and frictionally embrace a guard member which is spaced laterally a substantial distance from a selected sickle section; a link pivotally connected to the frame and to said anchor member on parallel pivots which are in planes substantially perpendicular to the grinding surface, said link being adapted to locate the frame between two guard members when the anchor member is engaged with a third guard member; and positioning means engageable with fixed portions of the cutter bar to locate the grinding surface of said grinder element in the plane of reciprocation of said selected sickle section.

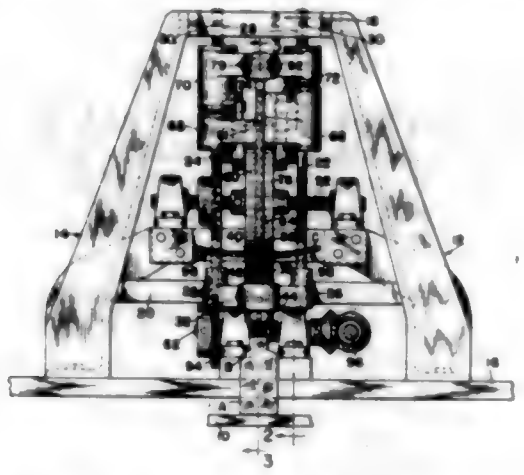
ERRATUM

For Class 53—3 see:
Patent No. 2,896,207

2,895,269
COTTONING MACHINE
Eino E. Lakso, Fitchburg, and Charles H. Jones, Jr., Lunenburg, Mass., assignors, by direct and mesne assignments, to The Lakso Company Incorporated, Fitchburg, Mass., a corporation of Massachusetts
Application June 22, 1955, Serial No. 517,175
15 Claims. (Cl. 53—21)

1. The method of packing necked containers for loose materials to prevent relative movement of the materials therein which comprises folding a length of loose fibrous packing material into a tube without compressing the

packing material, engaging the now folded packing material at an end thereof, in the tube, and expressing the



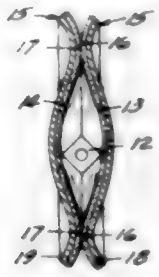
folded packing material from the tube, folded end first, into the container above the contents thereof.

2,895,270

PACKAGING MATERIAL

A. Albert Blaess, Western Springs, Ill., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Application November 14, 1955, Serial No. 546,344
7 Claims. (Cl. 53—21)



1. A packaging sheet material adapted for use in providing sealed enclosures with protective atmospheres for small, grease-free, metal articles so as to protect said metal articles from the corrosive action of water vapor and oxygen, said sheet material comprising a flexible, relatively-stiff, smooth surfaced, sheet support member and a macroscopically homogeneous film-like coating adhered thereover, said coating comprising a heat-activatible, thermoplastic, flexible, normally non-tacky, vinyl resin adhesive and a volatile inhibitor of the corrosion of metals dispersed throughout said adhesive, the weight ratio of said adhesive to said corrosion inhibitor being between 1:1.5 and 8.5:1.5 with the total dry solids coating weight of said adhesive and corrosion inhibitor being between 10 and 40 lbs. per ream of sheet support member equivalent to 500 sheets measuring 24" x 36", said corrosion inhibitor being characterized by having a vapor pressure at least greater than 0.00002 mm. Hg at 21° C. and by being non-reactive with said adhesive.

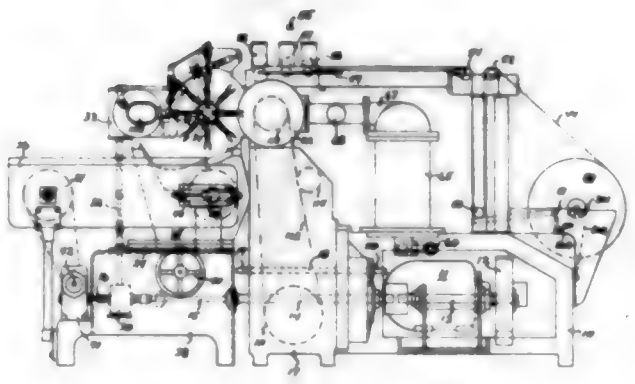
6. A process for packaging small, grease-free, metal articles in heat-sealed, barrier-type enclosures so as to protect said metal articles against the corrosive action of water vapor and oxygen, said process comprising (1) wrapping said articles with a packaging material comprising a flexible, relatively-stiff, smooth-surfaced, sheet support member and a macroscopically homogeneous coating adhered thereover, said coating comprising a heat-activatable, thermoplastic, normally non-tacky adhesive and a volatile inhibitor of the corrosion of metals dispersed throughout said adhesive, said corrosion inhibitor being characterized by a vapor pressure at least greater than 0.00002 mm. Hg at 21° C. and by being non-reactive with said adhesive, said packaging material being disposed about said metal articles with its coated side facing inwardly and with areas thereof meeting to form an enclosure about said metal articles, and (2) applying heat and pressure to meeting areas of said packaging material so as to activate the adhesive in the coating thereof and form a seal between said meeting areas while simultaneously accelerating the volatilization of the corrosion inhibitor from areas of the coating immediately adjacent to those areas treated with heat, thereby to form a heat sealed enclosure with a protective atmosphere therein.

2,895,271

METHOD OF AND APPARATUS FOR PRODUCING PACKAGES OF PLASTIC MATERIAL AT HIGH CYCLIC RATES

Henry W. Bevarly, Walter F. Whitson, and Carl C. Yann, Louisville, Ky., assignors to Chemetron Corporation, a corporation of Delaware

Application May 18, 1956, Serial No. 585,737
22 Claims. (Cl. 53—21)



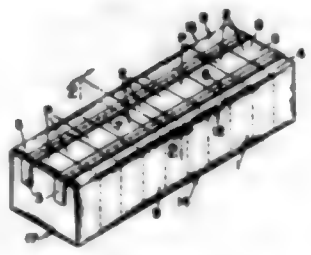
1. The method of producing packages of plastic material which comprises supplying material continuously at a constant rate under pressure to a pressure vessel, directing material from said vessel in a plurality of separate flow paths to a plurality of separate expansible molding compartments, intermittently flowing said material into each of said compartments and utilizing the pressure of the incoming material to extrude previously molded material from companion molding compartments during the flow into said first-mentioned compartments, dispensing said previously molded material in the form of separate units into separate enwrapments while continuing to utilize the pressure of the incoming material to deposit said separate units in partially enwrapped form into separate wrapping receptacles, interposing an enwrapment at the dispensing side of each of said companion compartments in timed sequence with the interrupted flow of said material into said first mentioned compartments, and completing the enwrapment of said deposited units.

2,895,272

METHOD OF ASSEMBLING AND WRAPPING ARTICLES

Alexander C. Krukonis, Auburn, Mass., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts

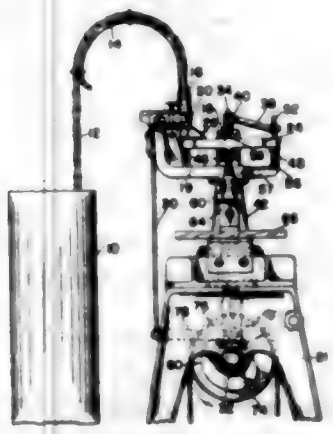
Original application June 25, 1956, Serial No. 593,582. Divided and this application July 18, 1957, Serial No. 672,648
3 Claims. (Cl. 53—21)



1. The method of assembling and wrapping packages of cigarettes and having the packages in a group on one

side of which each package will have an unobstructed surface, the method consisting in the following steps: partly enclosing said group in a wrapper having a length less than the girth of the group with the ends of the wrapper spaced from each other along said side of the group in a manner such that no other part of the wrapper will extend over any part of said ends and to expose a part of said surface of each package for application thereto of a mark or stamp, and applying fastener means along said ends and part of said surfaces to secure the packages and wrapper and said ends in fixed position with respect to each other in a manner to hold said ends flat on said part of said surfaces such that the fastener means does not substantially obstruct said part of said surface.

2,895,273
METHOD AND APPARATUS FOR WADDING CONTAINERS
Elmo E. Lakso, Fitchburg, Mass.
Application April 29, 1955, Serial No. 504,737
4 Claims. (Cl. 53—24)

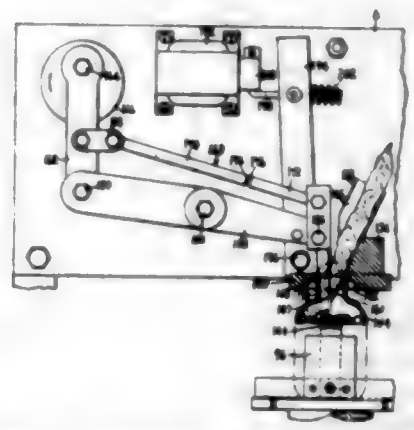


1. The method of packing wadding in a necked shouldered container and substantially immobilizing the contents thereof comprising the steps of providing a predetermined amount of loose compressible wadding, compressing the same in a tube in an axial direction therein, and then aligning the tube with the open mouth of a container, projecting the compressed wadding out of the tube into the neck and upon the contents of the container and partially below the neck, and allowing the wadding to expand under the shoulders of the container formed by the neck and substantially fill the space between the contents and the shoulders.

2,895,274
MACHINE FOR HANDLING EGGS
Harold J. Mumma, Riverside, Calif., assignor to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware
Application December 28, 1953, Serial No. 400,466
92 Claims. (Cl. 53—59)

1. A machine for sorting articles, such as eggs, comprising means for conveying the articles along a predetermined path, means for weighing the articles as they are passed along said predetermined path, means operable to discharge the articles from said conveying means at selected points of said path according to their weight as determined by said weighing means, and means at said selected points operable to place containers into article receiving position adjacent said conveying means.

2,895,275
MACHINES FOR INSERTING PACKING MATERIAL INTO BOTTLES
Albert C. Hollis, Watford, England, assignor to B. U. Supplies & Machinery Company Limited, Leicester, England
Application July 11, 1956, Serial No. 597,261
Claims priority, application Great Britain July 28, 1955
12 Claims. (Cl. 53—59)

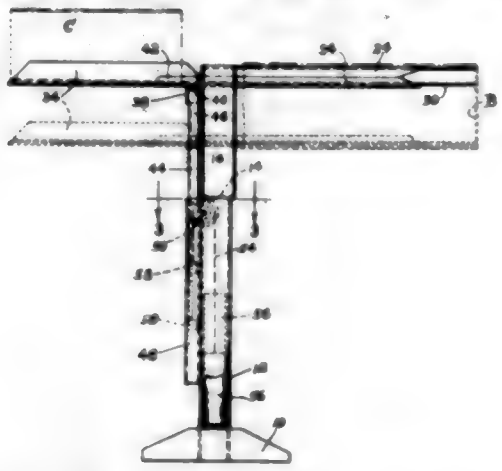


12. A machine adapted for use in inserting packing material, such as cotton wool, crinkled paper strip or the like, into a container of the type that comprises a neck portion and a shouldered body portion to act as a packing on top of previously inserted tablets or the like, said machine comprising a guide member presenting a guide surface extending obliquely downwards, mechanism arranged to cause packing material to be fed along said guide surface, a holder arranged in the operation of the machine to present such a container to the guide member neck portion uppermost and in such a manner that part at least of the guide surface is accommodated in the container obliquely of the neck portion, a sensing device arranged to operate to cause the feeding mechanism to be operative to feed packing material along said surface into the container when in such presented position and to operate to cause the mechanism not to be operative when the container is not so presented, and means arranged to detach packing material which has been inserted into the container from the remainder of the packing material in the machine, the machine being so arranged that in its operation (*a*) the container is positioned in the holder (*b*) the holder presents the container to the guide member and the feeding mechanism operates to feed packing material obliquely downwards into the container and material is packed at one locality under the shouldering of the body portion, (*c*) the angular relation of the container and the guide means is altered, so that the feeding mechanism packs material into the container at another locality under the shouldering of the body portion (*d*) the holder removes the container from presented position and the feeding mechanism ceases to operate to feed packing material and (*e*) the detaching means severs the packing material which has been inserted into the container from the remainder of the packing material in the machine.

2,895,276
DEVICE TO OPEN AND HOLD CONTAINERS DURING PACKAGING OPERATION
Alfred J. Brooks, Needham, and John S. Strickland, Boston, Mass.; said Strickland assignor to said Brooks
Application March 8, 1955, Serial No. 492,911
5 Claims. (Cl. 53—261)

1. A device to open containers comprising supporting means, a supporting frame supported by said means embodying two upstanding sides, two engaging blades attached to said sides, movable container opening means embodying a work supporting plate, two engaging blades carried by said work supporting plate and extending upwardly therefrom and being below said first-mentioned

blades, during the opening movement of said opening means, and operating means attached to and normally maintaining said opening means in predetermined posi-



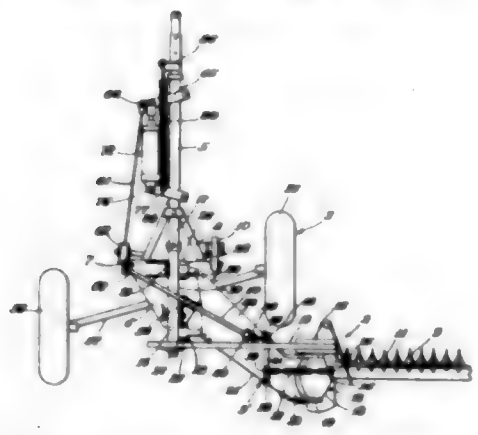
tion embodying a push rod below and attached to said opening means and instrumentalities responsive to pressure of said push rod whereby said work supporting plate is normally maintained in predetermined position.

2,895,277

MOWER OPERATING MECHANISM

Thomas J. Scarnato, Park Ridge, and Max I. Zielinski and Samuel E. Hillblom, Chicago, Ill., assignors to International Harvester Company, a corporation of New Jersey

Application January 17, 1957, Serial No. 634,641
13 Claims. (Cl. 56—25)



1. In a mower having a frame, a cutting mechanism carried thereby for vertical movement from a lowered operating position in which it tends to remain because of its own weight and a raised transport position to which it must be forcibly moved, the improvement comprising: a pair of laterally spaced levers pivotally supported at corresponding ends on said frame, a ram extending between and pivotally connected to said spaced levers, a linkage operatively interconnecting one of said levers with said cutting mechanism in tension, spring means connected between the other lever and the frame and acting through said other lever and ram in a direction applying a tension load to said linkage through said one lever, and stop means on the frame abuttable with said other lever to limit spreading movement thereof with respect to said one lever upon expansion of the ram to provide a fixed anchor therefor.

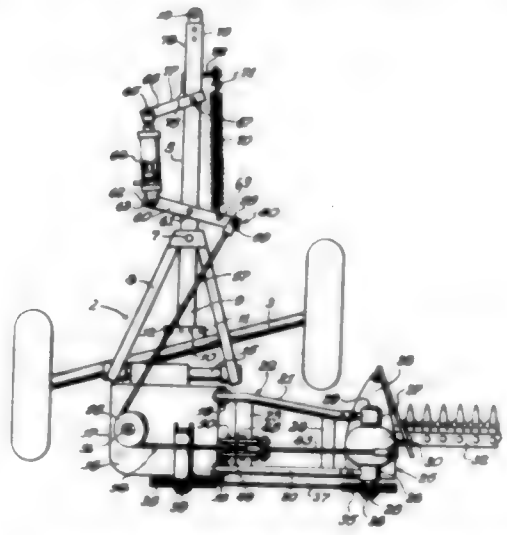
2,895,278

MOWER CONTROL MECHANISM

Edwin F. Huddle, Elmwood Park, and John D. Clark, Westmont, Ill., assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey

Application August 22, 1957, Serial No. 679,655
6 Claims. (Cl. 56—25)

1. In a mower having a frame, a cutting mechanism carried thereby for vertical movement from a lowered operating position in which it tends to remain because of its own weight and a raised transport position to which it must be forcibly moved, the improvement comprising: a pair of laterally spaced levers pivotally supported on the frame, a ram extending between and pivotally connected thereto, a linkage operatively interconnecting one of said levers with said cutting mechanism in tension,



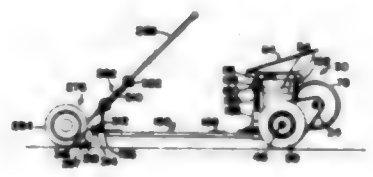
spring means connected between said one lever and the frame and acting through said one lever in a direction applying a tension load to said linkage, and stop means on the frame abuttable with said other lever to limit spreading movement thereof with respect to said one lever upon expansion of the ram to provide a fixed anchor therefor.

2,895,279

SECTIONAL VEHICLE

Frederick S. Schrage, Rock Island, Ill., assignor to G. D. Shawver, Davenport, Iowa

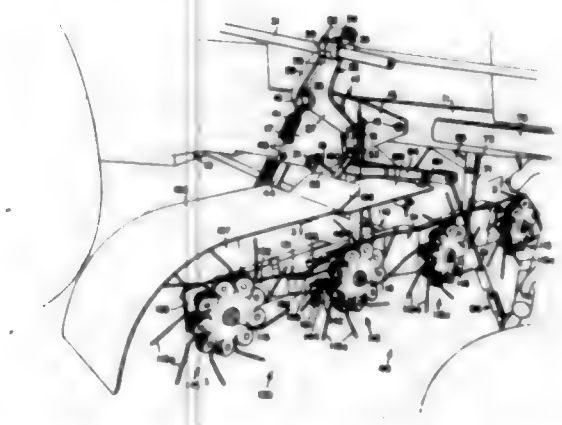
Application November 10, 1955, Serial No. 546,045
8 Claims. (Cl. 56—26)



1. A vehicle comprising: front and rear selectively interconnectible and separable fore-and-aft spaced apart units, each having its own ground-engaging means; said rear unit including a forwardly extending frame part having a front end portion rigid thereon and proximate to the front unit; said front unit including a rearwardly extending frame part having a rigid support portion rearwardly beyond and overlying said front end portion of said rear frame part, said front frame part being vertically swingable bodily upwardly and forwardly about its own ground-engaging means and relative to the rear unit between an up position spaced above the rear frame part and a down position proximate to said rear frame part; a front connection element rigid on the front frame part ahead of said support portion and a rear connection element rigid on the front end portion of the rear frame part receivable by said front connection element when the front frame part is in its up position, said elements being constructed to afford a hook and eye device interengaging to provide an articulate joint enabling swinging of the front frame part to its down position and said front connection element having a portion beneath and cooperating to sustain the front end portion of the rear frame part on the front frame part, and sustaining means on the support portion of the front frame part and engaging the rear unit from above and immediately rearwardly

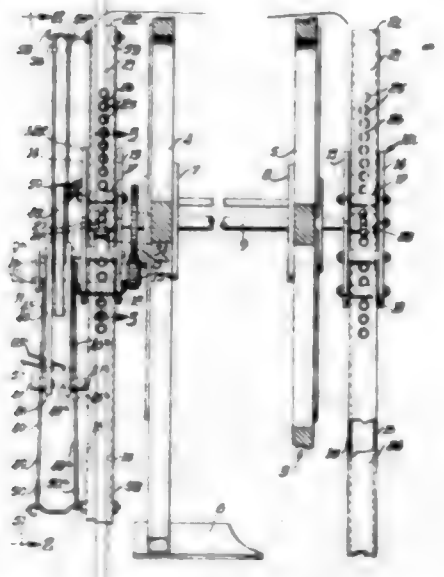
of the articulate joint to prevent downward buckling of the frame parts about said articulate joint, and said hook and eye device of the articulate joint constituting a pivot on an upright axis to enable steering of the front unit to control the direction of travel of the vehicle.

2,895,280
BEET HARVESTER
Knud B. Sorensen and Harold R. Lindstrom, Rock Island, Ill., assignors, by mesne assignments, to Deere & Company, a corporation of Delaware
Application March 12, 1956, Serial No. 570,937
9 Claims. (Cl. 56—121.44)



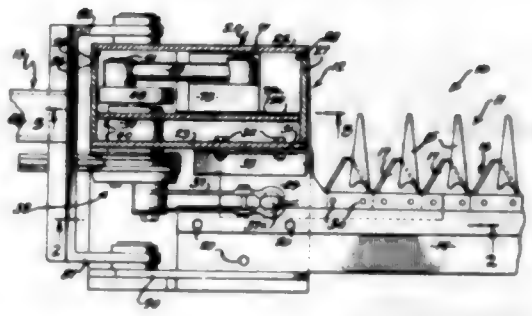
1. In a beet harvester, a top disposal unit comprising main supporting means disposable generally transversely of the harvester, said supporting means comprising a plate having a horizontally slotted opening adjacent each end and a vertically slotted opening in the generally central part, a bearing unit disposable in each opening, the bearing units in said end openings being adjustable horizontally along said plate and the bearing unit in said intermediate opening being adjustable vertically, means attaching said bearing units in selected positions of adjustment, and a plurality of rake wheels mounted on said bearing units.

2,895,281
REEL LIFTING AND LOWERING DEVICE
Stephen M. Young, Hamilton, Ontario, and Reginald A. Christie, Ancaster, Ontario, Canada, assignors to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Application May 23, 1957, Serial No. 661,250
6 Claims. (Cl. 56—221)



1. For a device having an upright standard on which is carried for vertical adjustment a support and which mounts a reel structure including a powered shaft journaled on the support, the improvement comprising: means including a drum having a surface on the shaft for rotation therewith, a cable having an intermediate portion loosely wrapped about the drum and having upper and lower anchored ends and means operably associated with the cable for tensioning said cable to take up the slack therein whereby drivingly engaging said intermediate portion of the cable with the drum said means comprising a first lever pivoted intermediate its ends on the support on a generally horizontal axis and having upper and lower ends, spring means reactively stressed between the upper end of the first lever and said support for biasing the first lever in a direction swinging the lower end thereof away from the cable, an abutment on the lower end of the first lever, a second lever pendently hung from said support on said axis and disposed outwardly of the abutment and in engagement intermediate its ends therewith and having a lower end, a cable-engaging roller on the lower end of said second lever, and an actuator connected to said second lever adjacent to its lower end.

2,895,282
MECHANISM FOR DYNAMICALLY BALANCING THE WORK FORCE OF A WORK LOAD
Edward Charles Myers, Santa Barbara, Calif.
Application May 22, 1956, Serial No. 586,492
5 Claims. (Cl. 56—306)



1. A drive mechanism for a reciprocating type mower comprising a cutter bar, a sickle mounted for reciprocation on said cutter bar, a combined drive support and shoe on the inner end of said cutter bar, a power-driven crank shaft mounted in said support normal to the longitudinal axis of said cutter bar, said crank shaft having oppositely disposed crank engaging portions, a pitman interconnecting a first of said portions and said sickle, a counterweight slideably mounted on said support in substantially the same plane as that of said sickle, a pitman interconnecting a second of said portions and said counterweight, and a lubricant containing housing enclosing said counterweight and said second crank engaging portion of said crank shaft.

ERRATUM

For Class 56—377 see:
Patent No. 2,895,855

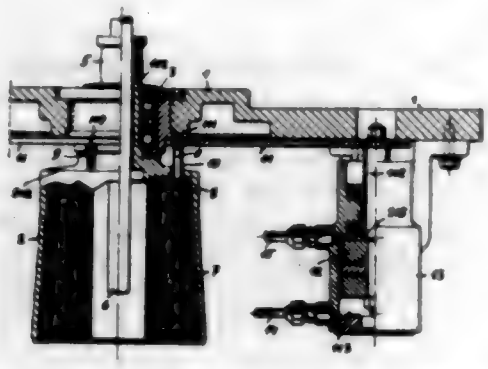
2,895,283
THREAD CHEESE-EJECTING DEVICE FOR SUSPENDED CENTRIFUGAL SPINNING CANS
Costantino Gardella, Genoa, Italy
Application January 24, 1956, Serial No. 561,106
Claims priority, application Italy January 28, 1955
2 Claims. (Cl. 57—34)

2. A thread cheese-ejecting device for centrifugal spinning cans comprising a frame, a row of bell-like spinning cans suspended from said frame, each can having a closed top with a central opening and a crown of spaced holes, an annular disc-like ejector within the top of each

in the presence of an acidic catalyst, followed by thermal yokes placed side by side and spaced from each other a

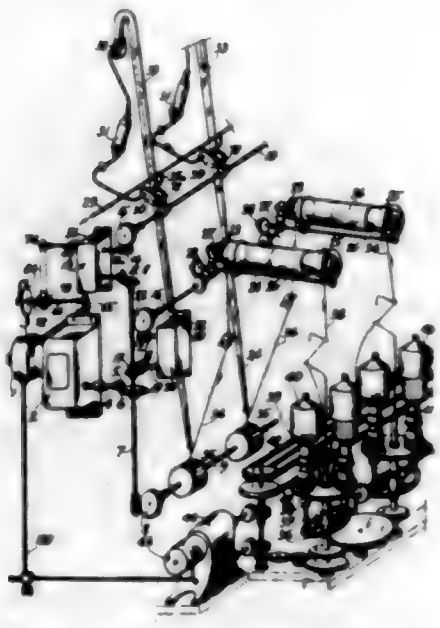
carried thereby for vertical movement from a lowered ing the rear unit from above and immediately rearwardly

spinning can, a plurality of stems fixed with each ejector and projecting upwardly through said holes respectively, a head on the upper end of each of said stems, a spring coiled around each stem and interposed between said stem head and the top of the spinning can to bias the ejector upwardly against the can top, a push bar overlying all of the stems of all of the spinning cans of a



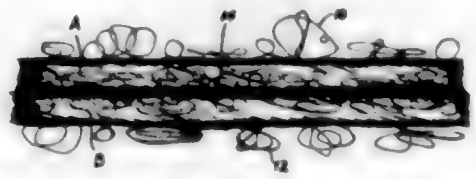
row and slightly spaced therefrom when said stems are not in depressed position and pneumatic means for reciprocating such push bar towards or away from said stems for depressing said stems to press the ejectors of all the cans of the row against the respective threads cheeses to effect the removal thereof from the respective cans.

2,895,284
SYNTHETIC FIBER SPINNING MACHINE DRIVE
Otto V. Drtina, Cleveland, Ohio
Application May 29, 1957, Serial No. 662,543
5 Claims. (Cl. 57—77)



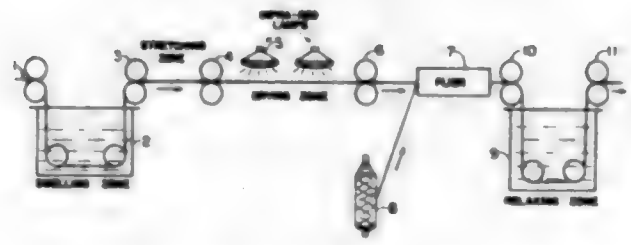
1. Mechanical drive arrangement for spinning machinery comprising first, second and third processing groups, said arrangement comprising a motorized speed ratio adjustable V belt variable drive, a first power transmitting means arranged to drive the first processing group by the output of the V belt variable drive, a speed ratio adjustable chain belt type positive variable drive, power transmitting means arranged to drive the second processing group by the output of the V belt variable drive through said chain belt type positive variable drive, a second speed ratio adjustable chain belt type positive variable drive, and power transmitting means arranged to drive the third processing group by the output of the V belt variable drive through said second chain belt type positive variable drive, whereby to provide a minimal cost arrangement but with all processing groups interlocked with respect to one another without slippage while speed of the whole arrangement may be regulated from one place and speed of each processing group may be regulated independently when necessary.

2,895,285
METHOD OF MANUFACTURING YARN AND THE PRODUCT THEREOF
Richard G. Hilbert, Smithfield, R.I., assignor to Universal Winding Company, Cranston, R.I., a corporation of Massachusetts
Application January 13, 1954, Serial No. 403,848
3 Claims. (Cl. 57—140)



1. A plied yarn comprising a plurality of multi-filamentary strands, wherein the filaments in each strand are twisted together, assembled in substantially parallel, juxtaposed contacting relationship throughout the entire length thereof to form a unitary structure free of twist as a whole, the filaments in said strands having loops at random intervals therein, loops in the filaments in each strand being entangled with loops and filaments in another strand to bind the strands together, said strands essentially retaining their individual identity.

2,895,286
PREPARATION OF BULKY TEXTILES
Richard A. O'Connell, El Cerrito, Calif., assignor to the United States of America as represented by the Secretary of Agriculture
Application June 12, 1958, Serial No. 741,708
3 Claims. (Cl. 57—156)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. The method which comprises subjecting wool yarn to the action of a swelling agent, stretching the swelled yarn, setting it in the stretched state, plying the set-stretched yarn and other yarn to form a multiple-ply yarn, and relaxing the composite yarn while untensioned to form a yarn of substantially greater bulk than the original composite yarn.

2,895,287
PRODUCTION OF BULKY RESIN SPUN RAYON YARN
Hyungduk Yoo, Swarthmore, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Application September 21, 1956, Serial No. 611,216
14 Claims. (Cl. 57—164)

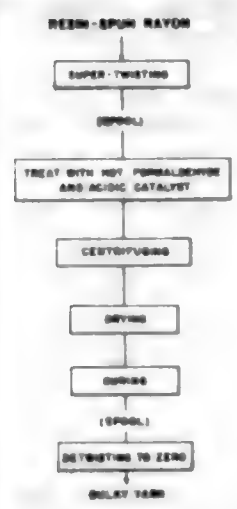
1. A process for producing a bulky yarn from a resin spun cellulosic yarn comprising supertwisting the yarn, setting the twist therein by impregnating the twisted yarn with formaldehyde at an elevated temperature and

identifying means comprising concave depressions formed

2,895,293

mounts a reel structure including a powered shaft jour- holes, an annular disc-like ejector within the top of each

in the presence of an acidic catalyst, followed by thermal curing of the impregnated yarn, and then detwisting the

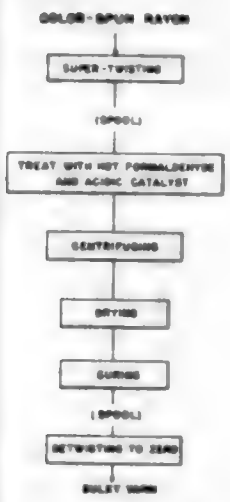


cellulosic yarn to produce a wooly effect which is substantially fast to washing.

2,895,288
PRODUCTION OF BULKY COLORSPUN RAYON YARN

Hyungduk Yoo, Swarthmore, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

Application September 21, 1956, Serial No. 611,217
6 Claims. (Cl. 57—164)



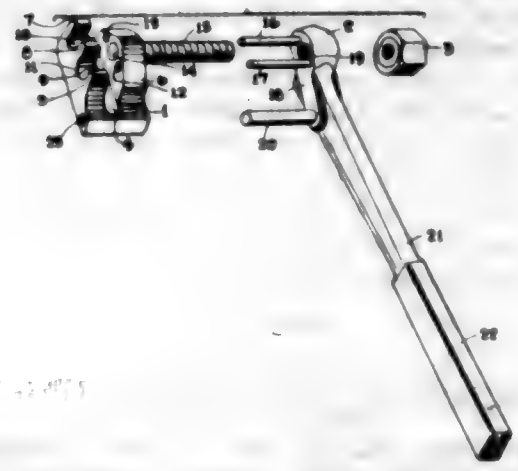
1. A process for producing a bulky yarn from a pigmental cellulosic yarn comprising supertwisting the pigmented yarn, setting the twist therein by impregnating the twisted yarn with formaldehyde at an elevated temperature and in the presence of an acidic catalyst, thermally curing the impregnated yarn, and then detwisting the cellulosic yarn to produce a wool effect which is substantially fast to washing.

2,895,289
CHAIN LINK REMOVING TOOL

James N. Wognum, Chicago, Ill., and Martin J. Teibel and Willis S. Wognum, Crown Point, Ind., assignors to Twin Martin Corporation, Chicago, Ill., a corporation of Illinois

Application December 3, 1956, Serial No. 625,742
1 Claim. (Cl. 59—7)

A tool for disconnecting a link from a roller chain of a type having roller links retained in longitudinally spaced relationship by means of connecting links having two parallel spaced side plates assembled onto two parallel spaced pivot pins whose ends are deformed into rivet-like connections with the side plates, comprising a chain support member provided with two spaced apart side walls, the front wall being provided with at least two yokes placed side by side and spaced from each other a distance approximately equal to the distance between two adjacent rollers of adjacent roller links and of a thickness less than the length of the rollers in order to accommodate positioning thereon of the two rollers, the rear wall being provided with two apertures extending therethrough and each aligned with the radial center of one of the yokes to thereby be in alignment with two adjacent pivot pins of a connecting link joining together two adjacent roller links positioned in the yokes, a block positioned behind said rear wall of said chain support member and provided with two drive pins extending forwardly of the block and slidably guided for movement of translation through the two apertures in the rear wall and for a distance equal to the thickness of said rear wall plus the length of said pivot pins of the roller chain, said pins having a diameter smaller than that of the chain apertures which receive said pivot pins said rear wall being provided with a rearwardly extending threaded shaft which is guided through an aperture in said block with its free end projecting rearwardly beyond said block,



said free end being provided with a threaded nut which can be rotated onto it for causing the threaded shaft to be drawn rearwardly through the aperture in said block as the nut reacts against the rear surface of said block for causing relative movement of the chain support member toward the block in order to cause the two drive pins to simultaneously contact the two adjacent pivot pins of said two rollers positioned in said yokes and upset the rivet-like connections between the two pivot pins and one of said two side plates of a connecting link to thereby bodily extract from the roller chain the two adjacent pivot pins and the other of said two side plates to which they are still integrally joined by rivet-like connections, said block being provided with a third forwardly extending pin fastened at a position out of alignment with the positions where the two drive pins are connected to the block, said third pin being guided through another aperture provided in the chain support member to insure proper alignment of the drive pins with the pivot pins and minimize the possibility of binding as the tool is actuated.

2,895,290
CHAIN LINK HAVING IDENTIFICATION AND A REPLACEMENT GAUGING MEANS

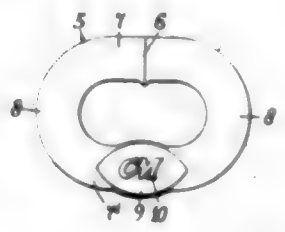
William H. Devonshire, Williamsville, and Edward R. Behnke, Lockport, N.Y., assignors to Columbus McKinnon Chain Corporation, Tonawanda, N.Y.

Application February 13, 1957, Serial No. 639,965
1 Claim. (Cl. 59—90)

In a chain link having generally straight side portions joined at the opposite ends thereof by curved end portions one of said side portions containing a weld, the other of said side portions including identifying means, said

positive variable drive, whereby to provide a minimal cost

identifying means comprising concave depressions formed on opposite sides of said other side portion between said curved end portions, said depressions having a generally ovoid plan view configuration with their major axes lying within the body of said other side portions in substantial alignment with each other and with the longitudinal axis of said other side portion, the minor axes of said depressions extending laterally beyond the lateral sides of said other side portion, identifying symbols embossed in said depressions, said symbols being of a height substantially equal to the depth of the associated depression whereby



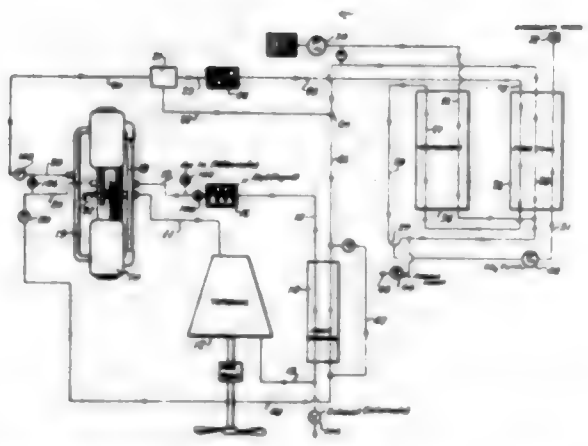
the outermost surfaces of the symbols are substantially flush with an adjacent one of said opposite sides, the center depths of said depressions being such that the stock thickness between the central portions of the depressions comprises a built-in measurement corresponding to the minimum allowable stock thickness of each of said curved end portions to indicate by visual comparison with or measurement of the relative thickness of said curved end portions and said stock thickness the attainment of maximum allowable wear and the end of the useful life of said link for its intended purpose.

2,895,291

RECYCLING METHOD OF OPERATING FOR POWER PLANTS

Frank M. Lewis, Weston, and Joseph H. Keenan, Belmont, Mass., and Kurt Goldmann, Hamilton, Ohio, assignors, by mesne assignments, to Baldwin-Lima-Hamilton Corporation, a corporation of Pennsylvania

Application December 2, 1948, Serial No. 63,162
3 Claims. (Cl. 60—13)



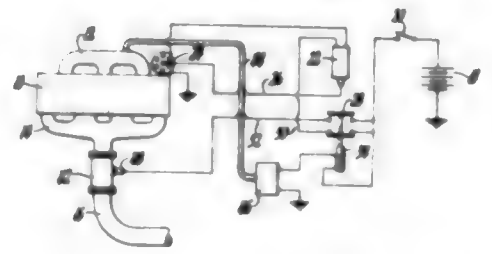
1. In a method of operating a power plant comprising an internal combustion engine and a turbine driven by the products of combustion of the engine, the steps which include passing the products of combustion through the turbine and expanding them therein, compressing the products of combustion after energy has been extracted therefrom in the turbine, dividing the compressed gas into two streams, reducing the temperature of one stream sufficiently to liquify carbon dioxide, removing liquified carbon dioxide from the system, adjusting the argon content of the stream to a predetermined maximum, adding a mixture of oxygen and argon to the cooled stream, reuniting the oxygen enriched stream with the other stream, and supplying the combined streams of gas as combustion supporting gas to the internal combustion engine.

2,895,292

FUEL AND EXHAUST GAS COMBUSTION CONTROL OF AN INTERNAL COMBUSTION ENGINE

Joseph T. Wentworth, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application October 10, 1956, Serial No. 615,067
5 Claims. (Cl. 60—29)



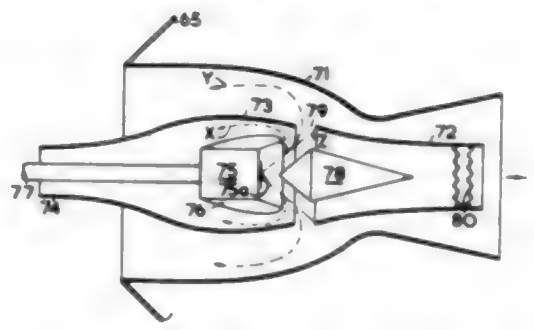
1. In an internal combustion engine having a spark ignition system and an intake manifold for introducing the fuel-air mixture into said engine and an exhaust system for removing exhaust gases from said engine, means for deenergizing said engine ignition system whereby said fuel-air mixture is permitted to pass through said engine in an unburned state, and means in said engine exhaust system controlled by said deenergizing means for igniting said exhausted unburned fuel-air mixture.

2,895,293

COMBUSTION APPARATUS FOR AND METHOD OF BURNING ASH-FORMING LIQUID FUEL

Ronald Inglis Hodge, Church Crookham, near Aldershot, England, assignor to Power Jets (Research and Development) Limited, London, England, a British company

Application May 14, 1956, Serial No. 584,629
Claims priority, application Great Britain May 10, 1956
13 Claims. (Cl. 60—39.06)



1. A combustion method for burning ash-forming liquid fuel that comprises the steps of establishing a combustion zone; discharging said fuel as a spray of droplets of various sizes into a region outside said combustion zone; separating from the spray substantially all those droplets of sizes less than a pre-determined size, which separated droplets would, under the conditions of combustion prevailing in said zone, be substantially completely burned; introducing the remainder of the droplets into the combustion zone; igniting said remainder of the droplets in said zone; partially burning said ignited droplets in said zone so that a proportion of unburnt carbon associated with fuel ash is formed; and discharging said carbon with the combustion gases from said zone.

2,895,294

CONTROL SYSTEM FOR GAS TURBINE INSTALLATIONS

Basil Joseph Terrell, Monkseaton, England, assignor to The Parsons and Marine Engineering Turbine Research and Development Association, Wallsend, England

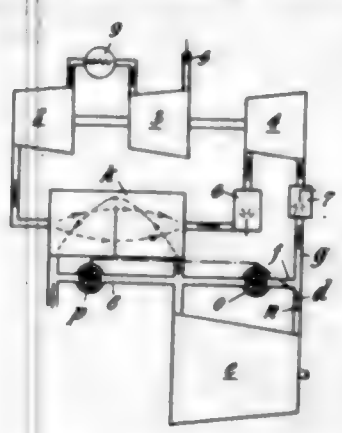
Application February 4, 1955, Serial No. 486,232
Claims priority, application Great Britain July 22, 1954
2 Claims. (Cl. 60—39.16)

1. A gas turbine installation of the kind referred to wherein exhaust gases from a compressor-driving turbine are passed to the inlet of the output turbine by way of a

and an air entry thereto; means to supply compressed air

latter whereby the regulating characteristics of said pres-

connection containing a valve, a by-pass connection for said output turbine being provided also containing a valve linked to said former valve, the output turbine being followed by a heat exchanger, a by-pass connection being provided across said heat exchanger characterized by the



provision of a valve in said heat exchanger by-pass connections operable for all output turbine loads from zero to full power in order to maintain the rate of heat transfer in the heat exchanger substantially constant for all positions of said valves.

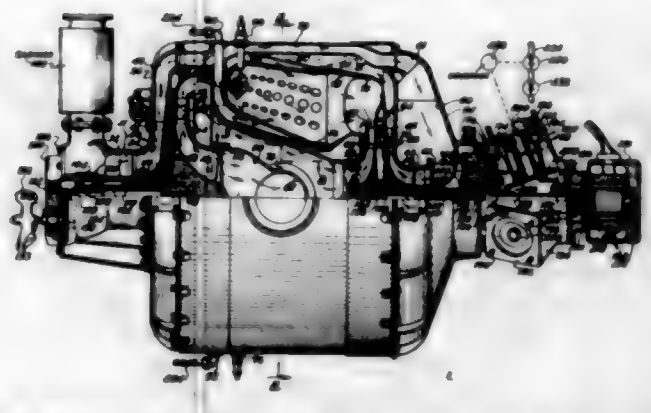
2,895,295

VARIABLE SPEED GAS TURBINE

Paul G. Carlson, San Diego, Calif., assignor to Solar Aircraft Company, San Diego, Calif., a corporation of California

Original application April 4, 1952, Serial No. 280,523. Divided and this application July 26, 1956, Serial No. 602,949

20 Claims. (Cl. 60—39.16)



1. A compact, light weight gas turbine power plant adapted to provide independently controllable main and auxiliary power outputs while maintaining efficient combustion and energy extraction, said power plant comprising a power plant casing, first and second coaxially aligned mechanically independent compressors disposed within said casing; first and second mechanically independent turbines disposed within said casing intermediate said compressors and coaxially aligned therewith; means mechanically coupling said first and second turbines to said first and second compressors respectively to form respectively mechanically independent low and high pressure compressor-turbine units; main and auxiliary power output drives connected respectively to said low and high pressure units; fluid guide structure connecting the outlet of said first compressor with the inlet of said second compressor, the outlet of said second compressor with the inlet of said second turbine and the outlet of said second turbine with the inlet of said first turbine; combustion chamber means interposed in the path of fluid flow between the outlet of said second compressor and the inlet of said second turbine, and means at the inlet of said first turbine for controlling the speed and direction of rotation thereof independently of the speed of said second turbine.

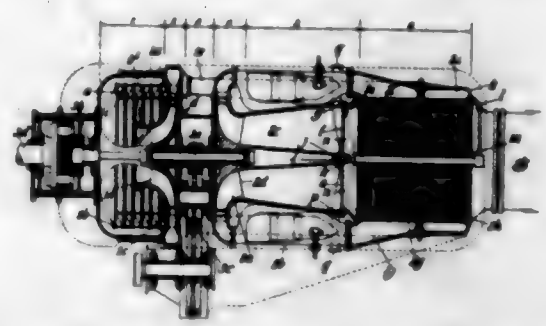
2,895,296

GAS TURBINE POWER PLANT WITH REGENERATOR

Waldemar Hryniszak, Cullercoats, Whitley Bay, England, assignor to C. A. Parsons & Company Limited, Newcastle-upon-Tyne, England

Application January 25, 1952, Serial No. 268,229

6 Claims. (Cl. 60—39.51)



1. A combustion turbine plant consisting of the following operative connected sections arranged in the order stated and beginning with an air inlet end, the whole arrangement being approximately cylindrical and the ratio of length to diameter being greater than 1, namely: an air filtering arrangement consisting of a louvre followed by a filtering device inside the louvre and consisting of a plurality of thin discs of filtering material and means supporting them in axially spaced relation; an air compressor of the centrifugal type in which air enters vanes in an axial direction and leaves in a radial direction taking air and through an eye receiving air from the air filtering arrangement; a diffuser system consisting of distributing scrolls situated at the exit from the compressor impeller, a number of straight diffusers connected to the distributing scrolls, having their axes disposed in a plane perpendicular to the axis of the plant and equally spaced apart circumferentially, final diffusers running in an axial direction, and bends connecting the outlets of the straight diffusers to the inlets of the final diffusers; a centripetal turbine arranged mechanically to drive he aforesaid air compressor and in addition to produce energy available for external work; a combustion arrangement comprising combustion chambers disposed in an axial direction and equally distributed over the circumference of the turbine outlet diffuser in the interleaving spaces between the final diffusers of the compressor and arranged so that the outside diameter of the said combustion arrangement is not greater than the outside diameter of the compressor and its radially disposed diffuser arrangement combined; and an air preheater of the recuperative type having a nest of heat exchange tubes and in which the exhaust gases of the turbine travel inside the tubes in an axial direction and compressed air from the compressor is led from the exit of the aforesaid final diffuser of the compressor to an inlet annulus of the air preheater and then flows over the tubes, in a direction perpendicular to the flow of gases from the turbine exhaust inside the tubes, to the center of the nest of tubes and is then directed to an outward radial direction to enter an air exhaust annulus connected with the inlets of the combustion chambers.

2,895,297

COMBUSTION APPARATUS FOR BURNING ASH-FORMING LIQUID FUEL

John Alan Gardiner, Crookham, near Aldershot, England, assignor to Power Jets (Research and Development) Limited, London, England, a British company

Application May 14, 1956, Serial No. 584,577

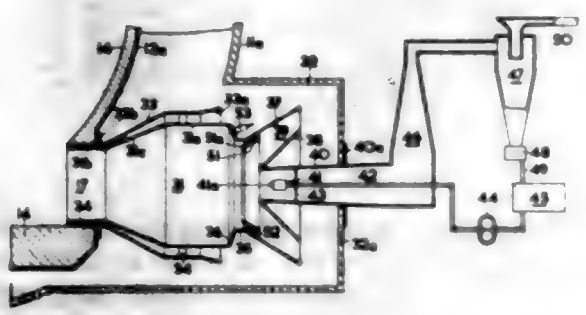
Claims priority, application Great Britain May 10, 1956

8 Claims. (Cl. 60—39.74)

1. Combustion apparatus for burning ash-forming liquid fuel comprising means defining a combustion zone

comprising, pivotally connecting a resiliently buoyant

and an air entry thereto; means to supply compressed air to said entry; a duct opening at one end into said air entry; a fuel injector mounted within and spaced from the air entry end of said duct, said injector being of the type discharging a spray of fuel droplets of various sizes and being arranged to discharge towards said end; means to establish a pressure differential in a sense to cause part of said compressed air to flow down said duct away from said air entry end, the differential being so related to the size of the duct that the air will flow therethrough with a velocity which is such in relation to the mass,



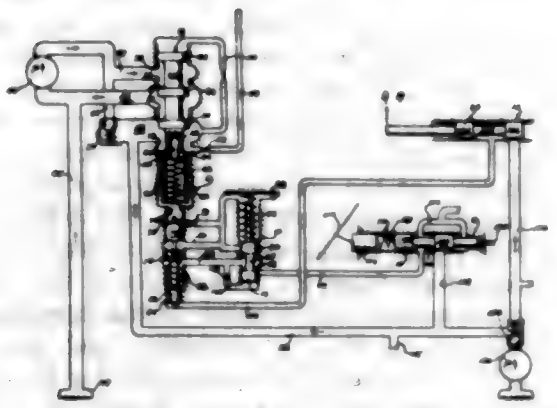
dimensions, and velocity of fuel droplets discharged by the injector and its spacing from the air entry end of the duct that substantially all those droplets of less than a predetermined size are reversed and carried away by the air flow before they can reach said air entry end of the duct; an igniter for igniting the remainder of said droplets in the combustion zone; said zone being shaped and dimensioned so that said ignited droplets are only partially burnt therein so that a proportion of unburnt carbon associated with the fuel ash is formed, and having an outlet for combustion gases.

2,895,298

PRESSURE REGULATOR VALVE ASSEMBLY

Zbigniew J. Jania, Detroit, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Application April 6, 1956, Serial No. 576,658
17 Claims. (Cl. 60—97)



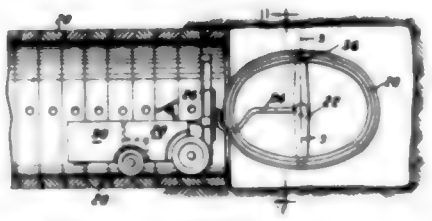
1. In a control mechanism having a fluid pressure source, a plurality of pressure responsive control elements and conduit structure providing communication between said pressure source and said control element; pressure regulator valve means for maintaining the effective pressure in said conduit structure at a regulated value, an auxiliary passage extending from a high pressure region of said conduit structure to a lower pressure region, a flow restricting orifice situated in and partly defining said auxiliary passage, said orifice establishing a pressure differential thereacross, passage means for subjecting opposed portions of said regulator valve means to said pressure differential to actuate the same, and pilot valve means including a pilot valve element situated in said auxiliary passage for controlling the rate of fluid flow through the latter whereby the regulating characteristics of said pressure regulator valve means is controlled by said pilot valve means.

2,895,299

METHOD OF CONSTRUCTING TUNNELS

Edward P. Washabaugh, Saginaw, Mich., assignor to American-Marietta Company, Chicago, Ill., a corporation of Illinois

Application June 24, 1955, Serial No. 517,701
8 Claims. (Cl. 61—45)



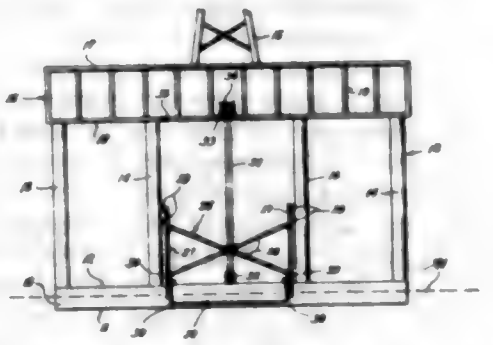
1. That method of constructing a tunnel from a plurality of similarly dimensioned tubular tunnel sections each having a major axis and a minor axis and each having an outside dimension along its minor axis less than the inside dimension along its major axis and having a tubular axial dimension such that one tunnel section may be passed through another tunnel section when the corresponding axes of the two sections are disposed substantially perpendicularly with respect to each other comprising: installing a succession of said sections in tubular alignment forming a length of tunnel, removing the earth from ahead of the length of tunnel forming a heading sufficient to receive a succeeding tunnel section, supporting a succeeding tunnel section so positioned with respect to the installed sections that the corresponding axes of the succeeding section and the installed sections are disposed substantially perpendicularly with respect to each other and the major axis of the succeeding section is disposed substantially parallel to the tubular axis of the installed sections, advancing the succeeding section while so supported through the installed sections and into the heading, supporting the succeeding section at its center of mass within the heading but with the weight of its support taken from a point within the installed sections rearwardly of such heading for rotatable and radial displacement sufficient to bring the succeeding section into tubular alignment with the installed sections, displacing said section within the heading while so supported from within the installed sections bringing its several axes into alignment with the corresponding axes of the installed sections, and withdrawing the succeeding section when so aligned toward the installed sections forming a tubular continuation thereof.

2,895,300

METHOD AND APPARATUS FOR STABILIZING SUBMERSIBLE VESSELS

John T. Hayward, Tulsa, Okla.

Application July 22, 1953, Serial No. 369,633
11 Claims. (Cl. 61—46.5)



1. A method for stabilizing a submersible vessel during the submersion and raising thereof in a water body,

tent, comprising the steps of cooling said mixture in heat-

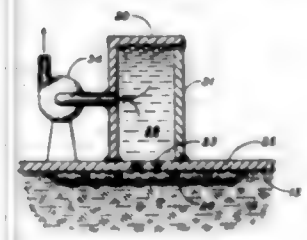
perature of said fresh food evaporator for starting said

comprising, pivotally connecting a negatively buoyant stabilizing body in laterally spaced relation to the vessel, and maintaining said stabilizing body while negatively buoyant partially submerged in the water body as the vessel descends and emerges through the surface of said water body.

2,895,301
STABILIZATION OF SUBMARINE RAFT FOUNDATIONS

Arthur Casagrande, Belmont, Mass., and Celestine Paul Besse and John H. Bigham, New Orleans, La., assignors, by mesne assignments, to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Application February 8, 1955, Serial No. 486,774
2 Claims. (Cl. 61—46.5)



1. Apparatus for increasing the stability of a submergible foundation raft against lateral or overturning forces acting on said raft when seated on the underwater bottom comrising a submergible foundation raft, a plurality of ports formed in the bottom surface of the hull of said raft, filter means permeable to water and substantially impermeable to clayey underwater bottom sediments covering each of said ports, conduit means for interconnecting said filter means and said ports, means for decreasing the pressure within said conduit means to cause water to enter said ports through said filter means while said filter means excludes the particulated solid matter of said clayey bottom sediments thereby to consolidate the said particulated solid matter of the underwater bottom adjacent said bottom surface of said hull, and a downwardly depending skirt means formed around the periphery of said foundation raft to restrict the flow of water from the overlying body of water into said filter means and said ports.

2,895,302
PILE COPING

Douglas McKnight, Lincoln, Nebr.

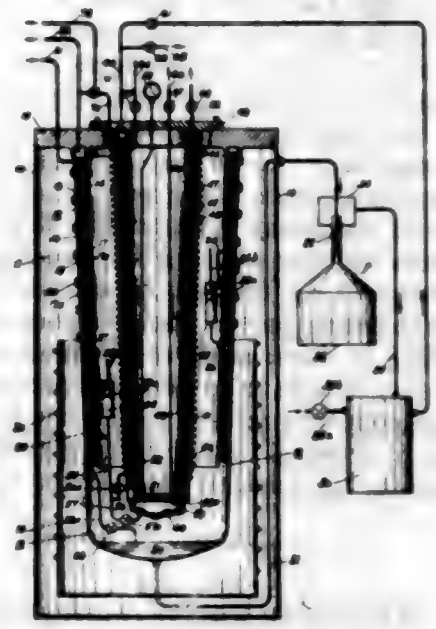
Application July 12, 1954, Serial No. 442,781
4 Claims. (Cl. 61—49)

1. In a prefabricated coping for a plurality of piles, a pair of stepped coping sections, each of said coping sections including a top face, a bottom face, a step face and a side face, said step faces being disposed in abutting relation, said top faces being flush with respect to each other, said coping sections having a plurality of coinciding pile receiving recesses formed in said bottom faces thereof and clamping means for securing said sections in clamping relation about said piles, said last mentioned means including aligned holes extending through said coping sections, bolts extended through said holes and nuts on said bolts.

2,895,303
PURIFICATION OF LOW-BOILING GASES

Milton H. Stroeter, South Sudbury, Mass., assignor to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts

Application May 17, 1956, Serial No. 585,493
7 Claims. (Cl. 62—12)

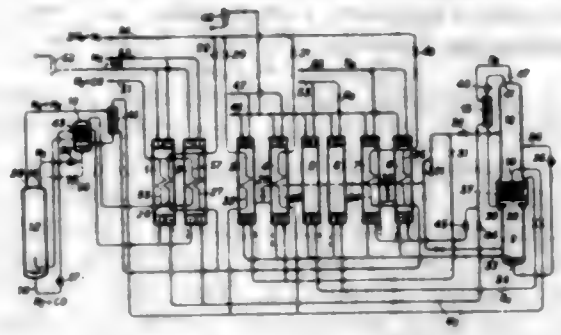


1. In a gas purifying heat exchanger designed to freeze out low-boiling gaseous contaminants, hermetically sealed concentric circular channel means having finned tubing helically wound therein, bridging conduit means connecting said channel means to said finned tubing at the cold end of said channel, means for conducting contaminated gas into said channel at the warm end thereof and containing valve means for controlling the flow of gas into said channel means, means for conducting the resulting purified gas from said finned tubing, means located within said channel means and in heat-exchange relationship with said finned tubing and with said bridging means for periodically warming said finned tubing and said bridging means whereby low-boiling gaseous contaminants deposited as solids on said finned tubing are volatilized and removed from said channel means, and means for maintaining the temperature of the atmosphere surrounding at least the area of said cold end of said heat exchanger at a temperature below the freezing points of said contaminants and above the freezing point of said purified gas.

2,895,304
PROCESS AND APPARATUS FOR GAS PURIFICATION

Johannes Wucherer, Munich, Hermann Linde, Munich-Solln, and Fritz Jakob, Munich, Germany, assignors to Gesellschaft für Linde's Eismaschinen Aktiengesellschaft, Hollriegelskreuth, near Munich, Germany, a German company

Application May 31, 1956, Serial No. 588,372
Claims priority, application Germany June 2, 1955
16 Claims. (Cl. 62—13)



1. Process for the purification and nitrogen-enrichment of a compressed gas mixture having a high hydrogen con-

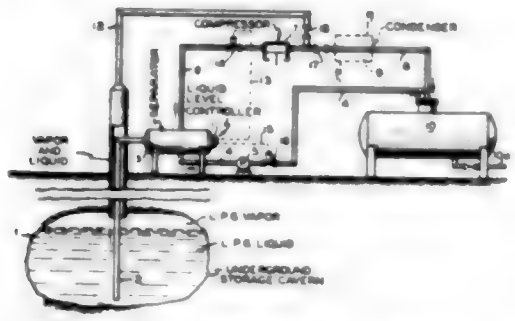
said evaporator and through said casing and discharges high pressure refrigerant to said condenser, said motor

flexible blanket of insulating material reaching the full

passage for controlling the rate of fluid flow through the ing the submersion and raising thereof in a water body.

tent, comprising the steps of cooling said mixture in heat-exchange with cold, low-pressure nitrogen obtained by a two-stage air separation and with one part of a hydrogen- and nitrogen-containing mixture obtained by said purification and nitrogen-enrichment, scrubbing the cooled gas mixture with a washing liquid consisting of substantially pure nitrogen at a pressure only slightly lower than that obtaining in the high-pressure stage of said air separation, thereby to form said hydrogen- and nitrogen-containing mixture, reheating the other part of the latter mixture in heat-exchange with air to be separated, condensing substantially pure nitrogen gases from said high pressure stage in heat-exchange with vapourising charged washing liquid consisting substantially of a nitrogen-carbon monoxide mixture to form said washing liquid, using cold expanded air to cool the compressed air to be separated, expanding part of the incoming air after only partial cooling to form said cold expanded air, feeding the fully cooled remainder to said high-pressure stage, and using low-pressure nitrogen from said air-separation as a flushing gas to remove accumulated impurities deposited by the incoming compressed gas mixture on the cooling thereof.

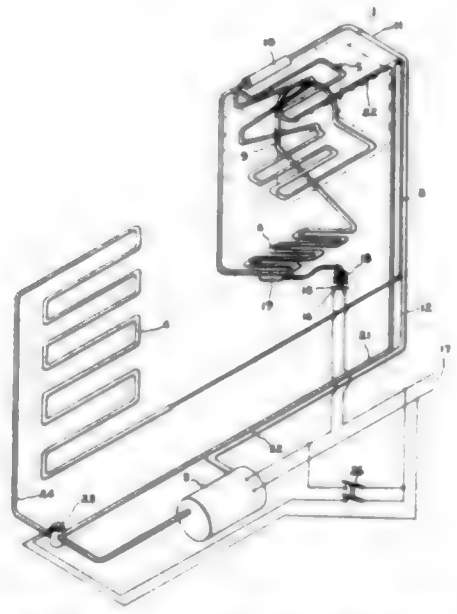
2,895,305
L.P.G. REMOVAL FROM UNDERGROUND STORAGE
Edwin E. Reed, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application December 20, 1954, Serial No. 476,468
11 Claims. (Cl. 62—54)



1. In a system comprising an underground cavern for the storage of volatile liquid, a riser extending from the lower portion of the cavern to the surface for lifting the stored volatile liquid, means connected to the upper end of said riser for separating the volatile liquid from its vapors, and a compressor communicating with the separator means and adapted to compress the separated volatile liquid vapors, in combination, means for recycling a portion of the gas discharged from said compressor to the cavern in heat exchange relationship with the riser, and means for condensing a portion of said gas discharge for above ground use.

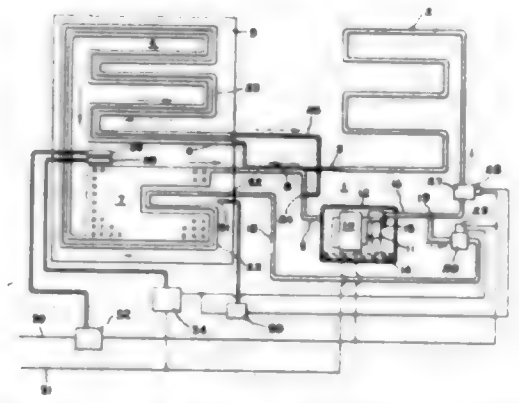
2,895,306
HOT GAS DEFROST SYSTEM INCLUDING BYPASS-SUCTION LINE HEAT EXCHANGE
Bruce B. Latter, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Application February 27, 1957, Serial No. 642,823
2 Claims. (Cl. 62—152)

1. A refrigerating system comprising a compressor, a condenser, a capillary tube flow restricting element, a freezer evaporator for cooling a frozen food compartment, a fresh food evaporator for maintaining a fresh food compartment at above-freezing temperatures and a suction line, said compressor, condenser, capillary tube element, freezer evaporator, fresh food evaporator and suction line being connected in series in a closed refrigerating circuit, a portion of said suction line being in heat exchange relationship with said capillary tube flow restricting element, control means responsive to the temperature of said fresh food evaporator for starting said compressor only when said fresh food evaporator has attained a temperature above freezing to assure defrosting of said fresh food evaporator prior to energization of said compressor and means for periodically defrosting said freezer evaporator including a conduit bypassing said condenser and flow restricting element and connecting said compressor directly to the inlet to said freezer evaporator for the introduction of hot gas into said freezer evaporator, a valve in said conduit controlling the flow of refrigerant therethrough, control means for controlling



the operation of said valve and energizing said compressor when said valve is open, said bypass conduit being in heat exchange contact with a part of said suction line adjacent said compressor and between said portion of said suction line in heat exchange relationship with said capillary tube flow restricting element and said compressor thereby to remove from the hot compressed gas entering said freezer evaporator during defrosting operation of the system substantially all of the superheat whereby defrosting of the freezer evaporator is effected substantially by the latent heat of the compressed gas.

2,895,307
REFRIGERATING SYSTEM INCLUDING A HOT GAS DEFROSTING CIRCUIT
Clyde J. Nonomaque, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Application December 20, 1957, Serial No. 704,129
2 Claims. (Cl. 62—156)

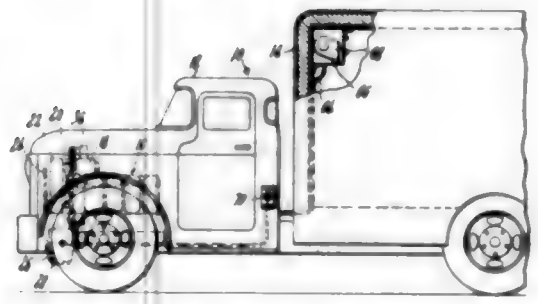


1. A refrigerating system comprising a hermetic compressor unit including a casing and a compressor and a motor for driving said compressor sealed within said casing, a condenser, a fixed flow restrictor, and an evaporator, conduit means connecting said compressor, condenser, fixed flow restrictor, evaporator and casing to form a closed series-flow refrigerating circuit in which said compressor withdraws low pressure refrigerant from

of a compressed gas mixture having a high hydrogen con-

said evaporator and through said casing and discharges high pressure refrigerant to said condenser, said motor being cooled by the low pressure refrigerant in said casing, means for periodically warming said evaporator to defrosting temperatures comprising an auxiliary circuit having an inlet end connected to said normal refrigerating circuit between said compressor and said condenser and its outlet end connected to said normal refrigerating circuit between said evaporator and said compressor, said auxiliary circuit including a defrost portion in heat exchange relation with said evaporator and a flow restricting means, conduit means connecting said compressor, said defrost portion, said flow restricting means and said casing to form a series-flow defrosting circuit, a first, normally closed valve in said auxiliary circuit for normally preventing flow of refrigerant through said auxiliary circuit, a second, normally open valve in said normal refrigerating circuit between said compressor and said condenser, and an electrical control circuit for controlling the defrost operation of said system comprising means for opening said first valve to initiate flow of refrigerant from said compressor through said defrost circuit and means responsive to a change in a system condition effected by flow of refrigerant through said defrost circuit for closing said second valve.

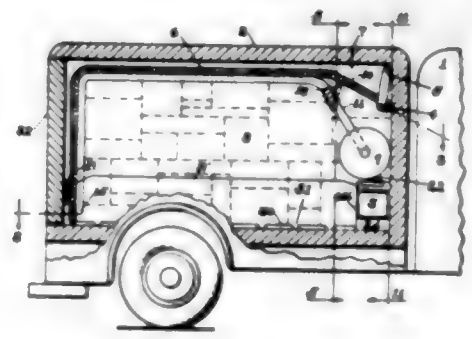
2,895,308
MOTOR VEHICLE REFRIGERATION SYSTEM
Francis Alward, Cambridge, Mass.; Robert F. McNeil, administrator of said Francis Alward, deceased
Application March 30, 1956, Serial No. 575,244
5 Claims. (Cl. 62—161)



1. In a motor vehicle having an internal combustion engine and a cargo storage space adapted to be refrigerated, said engine having a crank shaft, in combination with said engine and shaft an over-running clutch having its inner member keyed to said shaft, a fan for the engine, a generator for supplying current to the regular vehicle electrical system, a refrigerating compressor, the three last named elements being belt-driven from the outer member of said clutch, an electric motor mounted independently of said engine adapted to be actuated by an outside source of current, the shaft of said motor being connected by a belt to the outer member of said over-running clutch whereby said clutch and the remaining elements belt-driven thereby may be driven alternatively by said electric motor independently of said crank shaft, an evaporator and blower in operative relation to said storage space for cooling the same, said blower being driven by the regular vehicle electrical system and the evaporator being supplied with refrigerant from said compressor, and a condenser in communication with said compressor and evaporator, the same being mounted in the air stream of said engine fan.

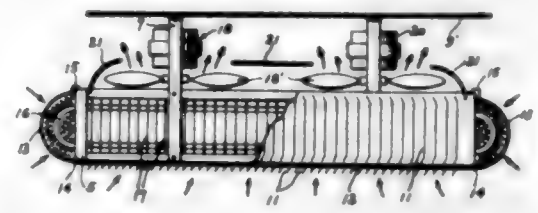
2,895,309
REFRIGERATION EQUIPMENT FOR INSULATED TRUCKS AND VEHICLES
Robert H. Kuhlmeier, Rockford, Ill.
Application May 6, 1957, Serial No. 657,237
27 Claims. (Cl. 62—186)

5. A refrigerating chamber having a floor and surrounding walls and a service door at one end, a single flexible blanket of insulating material reaching the full width of said chamber extensible substantially horizontally from the other end of said chamber toward the door end so as to be held by gravity in more or less close relationship to the top of the material to be refrigerated, said blanket also extending down behind said material to



the floor, whereby closely to enclose whatever material is present to be refrigerated and thereby enclose only a fraction of the total volume of the chamber which diminishes as material is removed and the blanket is shifted accordingly, and means in the end of said chamber remote from the service door for refrigerating the blanket enclosed portion of said chamber.

2,895,310
MOTOR-VEHICLE AIR-CONDITIONING SYSTEM
Mortimer Benisch, Tucson, Ariz.
Application December 31, 1954, Serial No. 479,847
2 Claims. (Cl. 62—239)

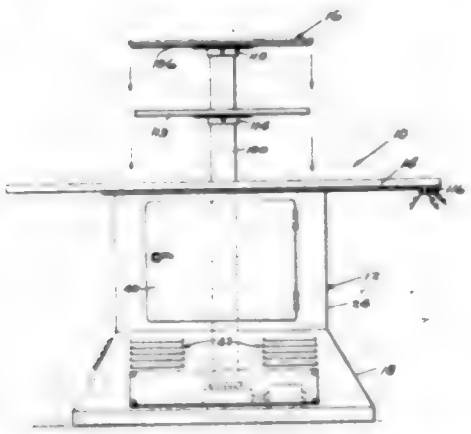


1. In a motor-vehicle air-conditioning system of the compressor-condenser-evaporator type, a rectangular-shaped condenser, a framework constituting a housing for the condenser, means for suspending the framework underneath the vehicle from the floorboard or chassis thereof, closure members for the sides and bottom of the framework provided with louvres which face in the same direction towards the front end of the vehicle, fan means carried by the framework above the condenser for drawing air from the area external to the condenser through the louvres of the closure members and through the condenser for cooling the same, and a shroud or hood disposed over the condenser for protecting the fan means and increasing the air exhaust, the framework suspending means being provided with positive adjusting means to thereby adjustably position the condenser with respect to the floorboard or chassis of the vehicle.

2,895,311
REFRIGERATION TABLE ASSEMBLY
Janis V. Spalvins, Jamaica Plain, Mass.
Application September 7, 1956, Serial No. 608,496
5 Claims. (Cl. 62—258)

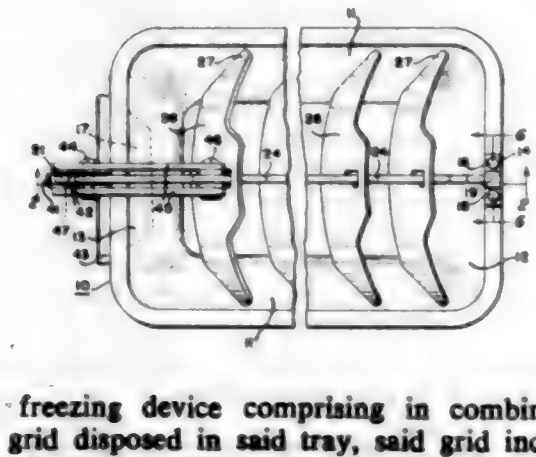
1. In a combined refrigerator and table assembly, a refrigerator cabinet having a sidewall and a bottom wall defining a refrigerating compartment, a hollow base beneath and supporting said cabinet, said base having a bottom wall, a hollow housing secured upon said base bottom wall, a lower journal boss mounted within said housing, a vertical guide tube having upper and lower ends, the lower end of the guide tube being secured upon said housing concentrically around said lower journal

boss, a vertical screw having a lower end journalled in said lower boss and an upper end, a traveler nut threaded on said screw and slidably engaging the interior of said guide tube, said guide tube having a sidewall provided with opposed vertically elongated guide slots, said nut having arms projecting therefrom and extending through said slots, a tubular slide having an upper end, and a lower end portion slidably telescoped upon the upper end of the guide tube, said lower end portion of the slide resting upon said nut arms, a table top on the



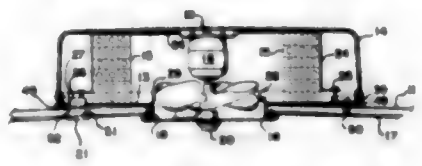
upper end of said cabinet and closing the refrigerating compartment, said table top being provided with a relatively large access opening through which said slide rises, an upper shelf mounted on the upper end of the slide, a lower shelf mounted around said slide and spaced below said upper shelf, said shelves being dimensioned to close said access opening in the table top, a boss on the upper end of the guide tube in which the upper end of the crew is journalled, and driving means in said base and operatively connected to the lower end of the screw.

2,895,312
ICE CUBE TRAY
Arthur J. Frei and Raymond C. Davis, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 24, 1957, Serial No. 667,338
4 Claims. (Cl. 62—365)



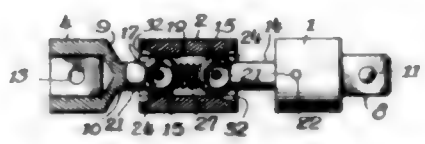
1. A freezing device comprising in combination, a tray, a grid disposed in said tray, said grid including a rigid longitudinal partition and a plurality of spaced apart one-piece walls extending continuously across said tray and being interlocked with said partition for tilting movement with respect thereto, said grid dividing the interior of said tray into compartments in which water is frozen into separated ice blocks, said one-piece grid walls being straight from their top to their bottom and bowed about an upright axis intermediate ends thereof into an arcuate shape, means engageable with the central portion of said bowed walls for applying force thereto in a direction opposite the direction of the bow thereof to tilt them relative to said partition for loosening ice blocks from said tray, and said grid walls being responsive to a force applied thereto by said means to substantially peel the walls simultaneously with the tilting thereof away from the ice blocks in two directions transverse to said partition from said central portion of the walls toward their ends.

2,895,313
AIR CONDITIONER EVAPORATOR UNIT
Ralph J. Flick, Inkster Village, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application August 14, 1957, Serial No. 678,087
4 Claims. (Cl. 62—426)



1. An air conditioner evaporator unit for mounting on the turret of a motor vehicle passenger compartment comprising a base having a periphery defined by an upwardly turned lip, said base provided with a central opening defined by an upwardly turned lip and a plurality of smaller openings radially spaced from said central opening, each of said smaller openings defined by an upwardly turned lip, an evaporator coil disposed on said base between said central opening and said smaller openings, a blower disposed within said coil and arranged to discharge through said central opening, said openings being in communication with the interior of said compartment, drain means in said base positioned below the lowest level of said lips for removing condensate from said coil, and means preventing air from being drawn into said fan other than laterally through said evaporator coil.

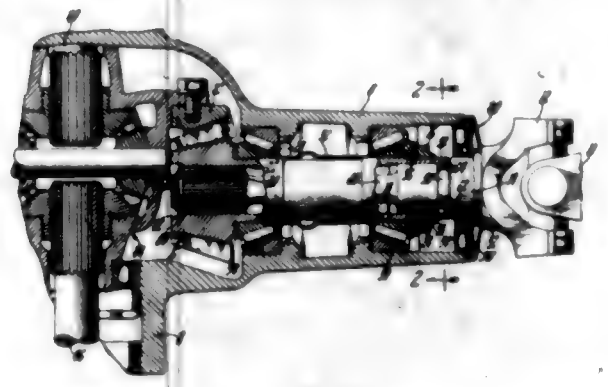
2,895,314
UNIVERSAL JOINT
Tony W. Helm, Chicago, Ill.
Application July 25, 1958, Serial No. 751,021
1 Claim. (Cl. 64—7)



A universal joint for transmitting rotational power from a driving member to a driven member through angularly poistioned units, comprising, a female member having a longitudinal central opening formed with flat side walls meeting in longitudinally extending angle corners, a male member having a stem with a ball fixed at one end thereof with the ball positioned in said longitudinal central opening, said ball having radially extending portions arranged in a series angularly positioned therearound, each of said radially extended portions having a driving face extending across the adjacent side wall of said longitudinal central opening and close thereto, each of said driving faces having at each end a tapered point seated in the adjacent longitudinally extending corner of said longitudinal opening, said ball having a diametrical hole therethrough, a pin extending through said hole in the ball and across said longitudinal central opening and fixed at its ends to the female member, said hole in the ball being at its longitudinal middle approximately the diameter of the pin and progressively increasing in diameter on both sides of said middle, said female member being formed at one end adjacent the ball with an outwardly flared countersink to increase the swing of the stem in all angular directions, and a compression spring in the longitudinal central opening of the female member, said spring bearing against the ball on the side opposite from that of the stem.

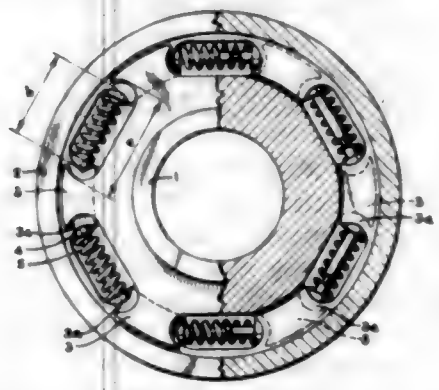
said rigid members to selectively pre-set the members for from said outlet means back to the tub for recirculating

2,895,315
VIBRATION DAMPING MEANS
Vernon F. Fleischer, Ludlow Village, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 17, 1956, Serial No. 628,915
3 Claims. (Cl. 64—27)



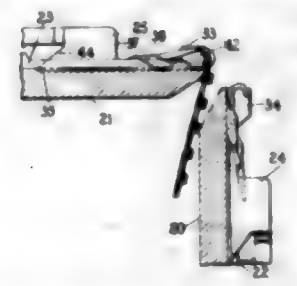
1. In a differential drive mechanism, a casing having differential gears and a differential gear drive pinion and a drive shaft mounted therein, said pinion having a quill shaft extending toward said drive shaft and rotatably mounted in a plurality of thrust bearings, spacing means disposed radially outward of said quill shaft for maintaining a desired spacing between said pinion and said bearings, first means interconnecting said pinion and said drive shaft and disposed concentrically within said quill shaft and said spacing means, and second means adapted to interconnect said quill shaft and said drive shaft upon a predetermined angular displacement of said first means.

2,895,316
ELASTIC COUPLING
Jan Klosd, Holyne, near Slivenec, Czechoslovakia, assignor to Vyzkumny a zkusebni letecky ustav, Letnany, near Prague, Czechoslovakia
Application November 14, 1957, Serial No. 696,557
2 Claims. (Cl. 64—27)



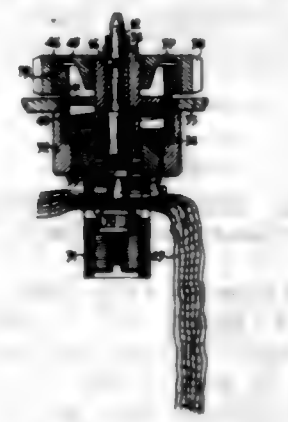
1. An elastic coupling comprising relatively angularly displaceable inner and outer coupling members, outwardly directed tooth-like extensions on said inner coupling member and corresponding inwardly directed tooth-like extensions on said outer coupling member, the successive tooth-like extensions on each of said coupling members defining circumferential clearances therebetween, with the extensions of said inner coupling member being in juxtaposed relation to the corresponding extensions of said outer coupling member, and springs carried by spring holders interposed in each clearance between adjacent extensions of both coupling members for transmitting a torque between the latter, the circumferential distances between corresponding adjacent extensions of said inner and outer coupling members, respectively, being different for at least a number of said extensions so that said springs interposed in said clearances are successively effective to transmit torque between said coupling members at different relative angular displacements of the latter.

2,895,317
MEANS FOR TRANSFERRING LOOPS IN KNITTING MACHINES
Charles F. Miller and Thomas C. Lyster, Philadelphia, Pa., assignors to Wildmann Jacquard Co., Norristown, Pa., a corporation of Pennsylvania
Application March 24, 1955, Serial No. 496,557
8 Claims. (Cl. 66—24)



1. In a knitting machine having angularly disposed beds, needles in each bed and transfer instruments associated with needles of at least one bed, said needles and instruments being retained for sliding movement in superimposed relationship within slots and each instrument having adjacent its loop engaging end a needle enclosing and guiding portion terminating in a shouldered, bifurcated, channel sectioned, loop spreading and retaining means within which a portion of its companion needle is guided and through which a needle from the opposed bed may be projected and a split opening at the side of said instrument and behind its point to permit its retraction and disengagement from the needle to which loop transfer is made.

2,895,318
LIGHTERS COMPRISING A DEVICE FOR ADJUSTING THE DELIVERY OF FUEL FEEDING THE FLAME
Conrad Zellweger, Chene-Bougeries, Switzerland, assignor to La Nationale S.A., Geneva, Switzerland, a corporation of Switzerland
Application January 22, 1957, Serial No. 635,521
Claims priority, application Switzerland February 8, 1956
6 Claims. (Cl. 67—87)



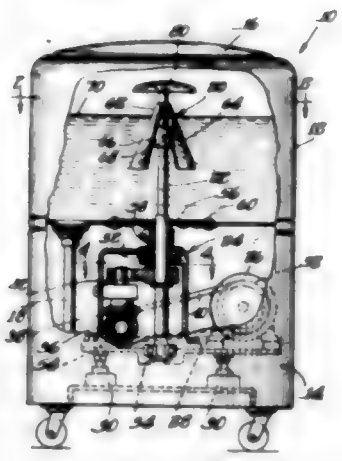
2. A lighter including a casing having a burner and a fuel reservoir, two relatively adjustable rigid members one of which has an opening, a tubular member establishing communication between said opening and the burner, a porous compressible fuel absorbing element between said rigid members and communicating with said reservoir, and a plurality of means operable from the outside of the casing for adjusting said rigid members to provide a coarse and fine adjustment respectively of the flame at the burner, said means for effecting coarse adjustment including one of said rigid members turnable on an axis coinciding with the axis of said opening in the other of

circumferential basket wall upon rapid rotation of said basket, and means for admitting liquid organic solvent along said shanks in the direction to increase the effective

thereto by said means to substantially peel the walls simul-

said rigid members to selectively pre-set the members for coarse adjustment, and fine adjustment means engageable with said tubular member for producing said fine flame.

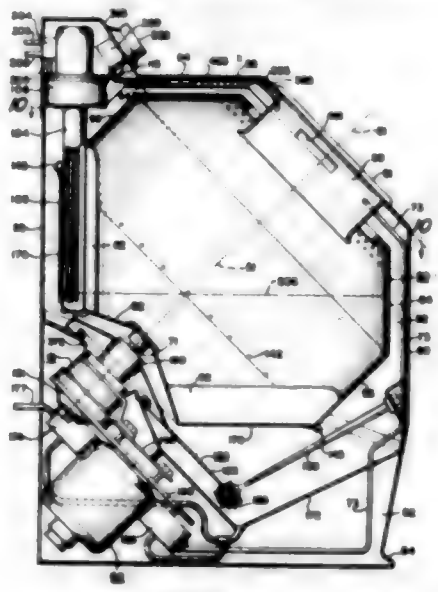
2,895,319
WASHING MACHINE
Leo T. Rochefort, Baroda Township, Berrien County, Mich.
Application March 29, 1956, Serial No. 574,747
4 Claims. (Cl. 68—3)



1. A washing machine comprising a tub having a predetermined normal liquid level, vibrator means mounted in said tub for oscillation about a substantially vertical axis, means connected with said vibrator means for oscillating the vibrator means about said axis at a frequency in excess of about 3600 cycles per minute and an amplitude of less than about 5°, said vibrator means comprising a generally upright vane including a concave front surface having a first resistance to movement through a body of liquid and a convex back surface having a resistance to movement through a body of liquid substantially less than said first mentioned resistance, said vane surfaces projecting upwardly at least to said predetermined level, said vane surfaces being inclined with respect to said axis from their lower ends rearwardly of said front surface so that said front surface faces partially upwardly and said back surface faces partially downwardly, said vane upon being oscillated at a high frequency and a low amplitude creating high frequency vibrations in a body of liquid in the tub, drawing air into the liquid and breaking up said air into tiny bubbles, and spirally circulating the body of liquid.

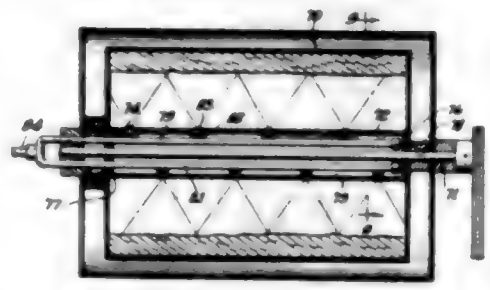
2,895,320
WASHER
George B. Long, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 15, 1955, Serial No. 515,698
4 Claims. (Cl. 68—58)

2. A washing machine including a cabinet, a rotatable tub at an angle in said cabinet and provided with an inclined axis of rotation, said tub having an inwardly turned rim for holding liquid and clothes therein, a transverse bulkhead forming a catch basin beneath said tub, said tub having concentric wall portions of different diameters and a series of small apertures extending around its greatest diameter substantially to its lowest point for complete gravity drainage and having an access opening and being otherwise substantially imperforate, pump means having inlet means connected to said bulkhead and also having outlet means, said pump means having a pumping capacity much greater than the flow of liquid at any time through said apertures to keep the liquid level in the bulkhead below the tub, said tub having a normal liquid level, a recirculating connection extending from said outlet means back to the tub for recirculating any liquid flowing through said aperture at a rate sufficient to substantially maintain the normal liquid level, said tub having a circumferential trough on and encir-



cling its outer peripheral surface alongside and beneath said series of small apertures for directing the gravity induced flow from the apertures to the lowest point of the trough.

2,895,321
COMBINATION WASHER-EXTRACTOR AND SPRAY MEANS
Joe L. Mayberry, La Grange, Ill., and Linwood P. Giddings, Columbus, Ohio, assignors to R. R. Street & Co., Inc., Chicago, Ill., a corporation of Illinois
Application January 15, 1953, Serial No. 331,400
3 Claims. (Cl. 68—148)

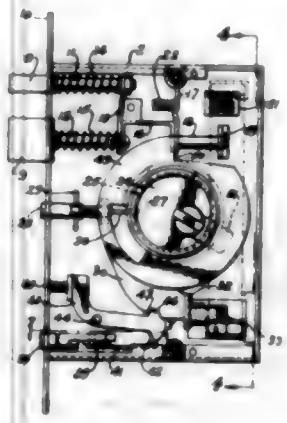


1. A combination washer-extractor for use in connection with the dry cleaning of fabrics, comprising a basket having a perforated circumferential wall and end walls, means for rotating said basket about a horizontal axis at a high rate of speed, spray rinse means for directing diverging rinse sprays within said basket including a plurality of spray nozzles spaced from each other longitudinally of said axis between said end walls and within the interior area of the confines of said basket and terminating substantially closer to the basket axis than to said perforated circumferential wall, a housing substantially concentric with and spaced from said horizontal axis, said housing having apertures in the circumferential wall of said housing and in alinement with the spray openings of the respective spray nozzles through which housing apertures liquid projected through said spray nozzles is directed toward said perforated circumferential wall, the outer tips of said spray nozzles extending at least immediately adjacent to their said correspondingly alined housing apertures but not beyond the outer circumferential surface of said housing, the axis of each of said spray nozzles being directed toward a point on the circumferential wall so that the sprays issuing from said nozzles together encompass essentially the entire length of the basket and directly impinge upon the face of the exposed wall of fabrics forced by centrifugal forces against said

springs interposed in said clearances are successively coinciding with the axis of said opening in the other of

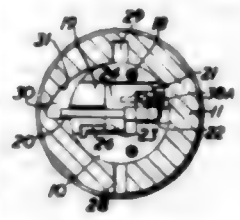
circumferential basket wall upon rapid rotation of said basket, and means for admitting liquid organic solvent under pressure to said spray nozzles.

2,895,322
DOOR LOCK
Gordon J. Pollock, Parma, Ohio, assignor to The E. F. Hauserman Company, Cleveland, Ohio, a corporation of Ohio
Application June 10, 1955, Serial No. 514,445
14 Claims. (Cl. 70—153)



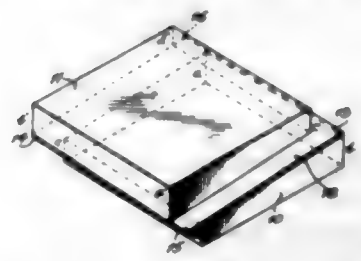
9. In a door latch including a latch member adapted to protrude from an adjacent door edge, resilient means urging said latch member to extended position, and a handle reciprocable at right angles to such door and the direction of reciprocation of said latch member; a key operated lock assembly accessible only from the other side of such door from said handle and mounted in a spindle and having an operating member rotatable by turning of such key, latch-retracting means engageable by said operating member to retract said latch member, a latch-engaging member pivotally mounted on said spindle for rotation about an axis closely adjacent and parallel to that of said operating member and operative when rotated to retract said latch member, and means operable by said handle to engage said latch-engaging member to rotate the same.

2,895,323
CHANGE KEY LOCK
Ernest Norbert Kennedy, London, England
Application March 31, 1955, Serial No. 498,373
Claims priority, application Great Britain April 5, 1954
10 Claims. (Cl. 70—383)



10. A change key lock comprising a fixed part, a relatively movable part, a keyway formed in one of said parts, a plurality of slidable tumblers of adjustable effective length carried by said one part and adapted to be lifted, by a key of a profile corresponding to the actual effective lengths of said tumblers inserted into said keyway, from a position in which they prevent movement of said movable part to a position in which they permit such movement, each of said tumblers comprising a shank and a lifting member which is adapted to be engaged by a key inserted into said keyway and which is in frictional engagement with said shank so as to be slidable thereon to alter the effective length of the tumbler but only by the application thereto of a force substantially in excess of that normally required to move said tumbler, means adapted to force said lifting members along said shanks in the direction to increase the effective length of said tumblers carried by said one part while said shanks are held against movement in the same direction by engagement of said shanks with said other part, and means operative by relative movement of said two parts adapted to produce relative movement between said lifting members and said shanks in the opposite direction to decrease the effective length of said tumblers to an extent determined by the profile of the inserted key engaging said lifting members.

2,895,324
BUILDING CONSTRUCTIONS
Mack Rosensweig, New York, N.Y., assignor to Ameray Corporation, a corporation of New Jersey
Application January 23, 1952, Serial No. 267,801
3 Claims. (Cl. 72—38)



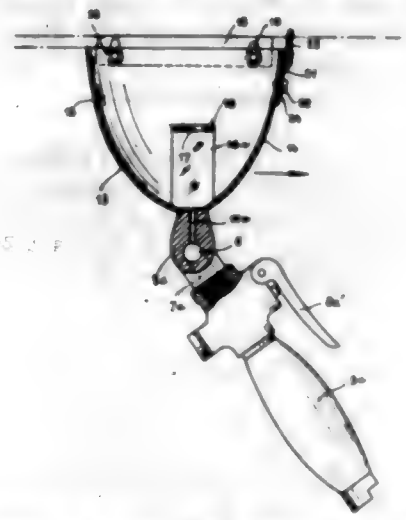
1. A building block, comprising in combination two identical monolithic cementitious units joined with one another along one of their faces by way of a planar interlayer disposed between their adjacent faces, each of the units constituting a square, right-angle truncated prism, each of the four corners of which being of a different height, whereby the joined adjacent faces of the units as well as the said interlayer are caused to assume a position along an inclined plane oriented in three different directions, the outer faces of the units being planar and being disposed in uniformly spaced parallel planes, the units being offset relative to each other along a diagonal plane normal to their outer faces so that two diagonally opposite aligned corners of one unit located in said diagonal plane become spaced from two corresponding diagonally opposite aligned corners of the other unit, and which latter corners are also located in said diagonal plane; that offsetting of the units along said diagonal plane causing the corner pair intermediate between the aligned corners of one unit to shift in respect to the corresponding intermediate corner pair of the other unit whereby the intermediate corner pairs of the two respective units assume positions in spaced parallel planes normal to the said first mentioned diagonal plane, and whereby corner gaps are formed between these intermediate corner pairs of the two units; that offsetting of the units further causing the formation, at portions of the inclined adjacent faces of both units, of converging marginal edge areas extending between correspondingly converging spaced peripheral body edges of the two units, each of said converging marginal edge areas being inclined in different directions; and wherein said interlayer not only covers said marginal edge areas of both units, but extends with two of its corner areas beyond the aforesaid marginal edge areas and seals the corner gaps formed between the intermediate corner pairs of the units.

2,895,325
SPRAYING APPARATUS
Paolo Dassetto, Brandizzo (Turin), Italy, assignor to Intonacatrice Tigre s.r.l., Turin, Italy
Application March 1, 1954, Serial No. 413,396
Claims priority, application Italy March 2, 1953
6 Claims. (Cl. 72—130)

1. An apparatus for spray coating ceilings and like surfaces with mortar, cementitious material and the like, comprising, in combination, a receptacle having an upper

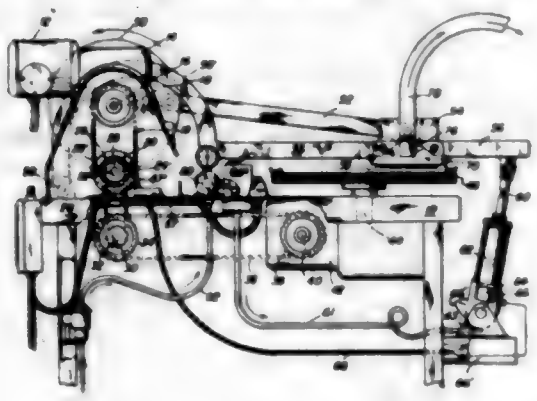
surface area than it had when it was in said trough so through the other of the pair of gages so that the strain at

open end for receiving a charge of the material to be sprayed, said receptacle having a bottom and side walls, a plurality of pressure air delivery nozzles provided at the bottom of said receptacle, said nozzles being disposed in a row and equidistantly spaced from each other, a partition extending across said receptacle between opposite walls and facing the open end of said receptacle and



thereby adapted to face the surface to be sprayed when the apparatus is in its operative position, said partition extending along said row of nozzles but spaced therefrom and being provided with a plurality of bores each of which is coaxial with one of said nozzles, means for delivering air under pressure to said nozzles, and means for supporting said receptacle in its operative position.

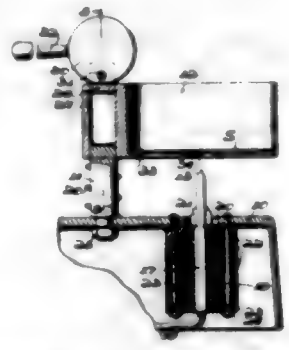
2,895,326
RUG WEAR TESTING MACHINE
James L. Fesperman and Robert F. Hackney, Dalton, Ga., assignors to Cabin Crafts, Inc., Dalton, Ga., a corporation of Georgia
Application April 19, 1955, Serial No. 502,386
15 Claims. (Cl. 73—7)



1. A wear testing machine comprising a rotatable table upon which a test specimen is attachable, a movable shoe above the table, means to move the shoe to and fro over the specimen, means to press the shoe upon the specimen while the shoe moves in one direction, and to raise the shoe off the specimen and to move it in the other direction, and means to drive the shoe moving means and to rotate continuously the table in coordination therewith.

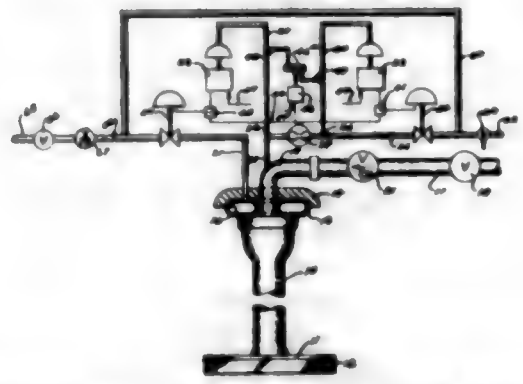
2,895,327
APPARATUS FOR MEASURING RESISTANCE OF FABRICS TO THERMAL DECOMPOSITION
Constantin J. Monego, Sherborn, William J. Manning, Natick, and Howard D. Ponty, Worcester, Mass., assignors to the United States of America as represented by the Secretary of the Army
Application February 20, 1957, Serial No. 641,430
5 Claims. (Cl. 73—15)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. Apparatus for testing materials for their resistance to elevated temperatures comprising, in combination, a support; a vertical post fixed to the support; a coil spring supported by said support on the lower end of the vertical post; a specimen holder movable up and down on the post and compressing said spring as it moves toward the support; a cam movably mounted upon said vertical post



and having a handle for moving it; a cam follower secured to the specimen holder; the cam when swung by its handle causing the specimen holder to move toward the support; and a heated tip fixed to the support in such position that it will be contacted by a specimen on said holder.

2,895,328
PROCESS AND APPARATUS FOR PRESSURE TESTING VESSELS
Andrew H. Payne, Jr., and Herman J. Gauggel, Jr., Birmingham, Ala.
Application December 16, 1954, Serial No. 475,782
5 Claims. (Cl. 73—49.1)

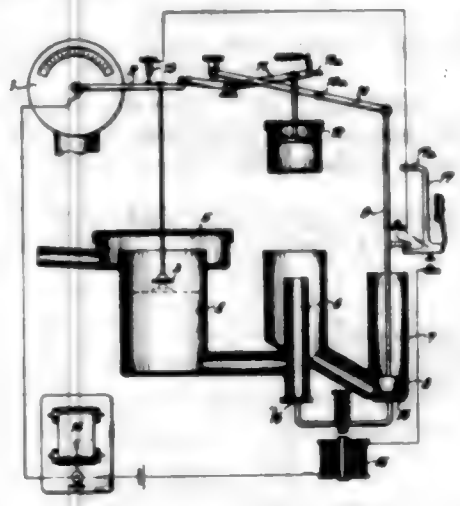


2. In apparatus for pressure testing vessels having at least one open end, a pressure actuated closure for sealing the open end of the vessel, means to fill the vessel with fluid, means to put the fluid in the vessel under test pressure, means continuously to exert on the closure during the test a pressure of a predetermined ratio to the pressure in the vessel for urging the closure into sealing relation with the vessel, and controls effective upon escape of a predetermined amount of fluid from the vessel or around the closure to limit the pressure of said closure on the open end of the vessel and to shut off said test pressure.

2,895,329
PROCESS AND AN APPARATUS FOR MEASURING IMPURITIES OF WATER
Otto Hettche, Hamburg, and Karl Schultze, Hamburg-Blankenese, Germany, assignors to Brau & Labbe, Hamburg, Germany, a corporation of Germany
Application June 15, 1954, Serial No. 436,936
Claims priority, application Germany June 15, 1953
14 Claims. (Cl. 73—53)

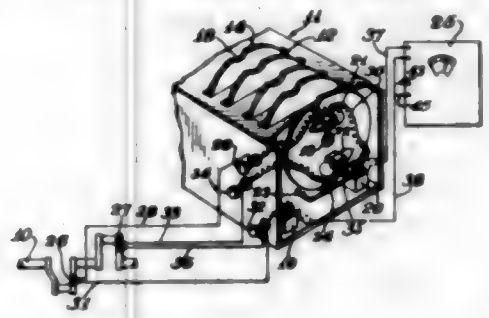
1. In an apparatus for automatically measuring and recording the concentration of surface-active substances in liquids, in combination, a measuring vessel with a trough or channel at its upper rim, this latter being arranged round the measuring vessel in the form of a cascade and having such a configuration that the liquid upon entering said measuring vessel will have a smaller

surface area than it had when it was in said trough so that the concentration of surface-active substances will be greater in said measuring vessel than it was in said trough, an overflow pipe in communication with said measuring vessel for automatically adjusting and maintaining a certain water level therein; an adhesion element;



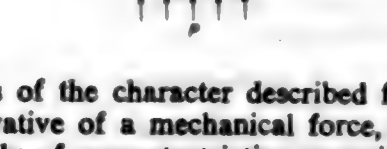
a balance; means for suspending said adhesion element from said balance so as to place said adhesion element in contact with said liquid surface in said measuring vessel; and means operatively connected with said balance for measuring the force necessary to lift said adhesion element from the surface of said liquid thereby indicating the concentration of said surface active substances therein.

2,895,330
SWITCHING MEANS FOR STRAIN MEASURING APPARATUS
Ralph J. Erisman, Oak Park, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Application February 7, 1957, Serial No. 638,712
4 Claims. (Cl. 73—88.5)



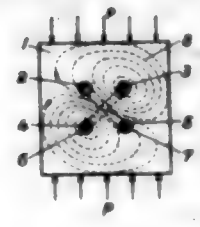
1. Means for measuring strain on a member subjected to loads at a plurality of locations on the member and a plurality of wire containing gages secured to the member at spaced locations and a strain indicating instrument, the means comprising a box, a plurality of discs supported by the box for rotative movement, a pair of bus bars disposed in the box and arranged in spaced relation, a pair of switches mounted on each disc, one pair of the wire containing gages being provided for each of the discs, electrical connections between each of the gages and one of the switches on the respective disc and the bus bars, and electrical connections leading from the bus bars to the strain indicating instrument, rotation of the respective disc in one direction causing engagement of one of the switches on the disc completing the circuit through one of the pair of gages so that the strain at the particular location on the member is indicated on the strain indicating instrument and rotation of the disc to a neutral position causing both switches on the disc to be disengaged breaking the circuit and rotation of the disc in the opposite direction causing engagement of the other of the switches on the disc completing the circuit through the other of the pair of gages so that the strain at the particular location on the member is indicated on the strain indicating instrument.

2,895,331
MAGNETIC TORQUE MEASURING DEVICE
Orvar Dahle, Vasteras, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden
Application September 20, 1955, Serial No. 535,320
Claims priority, application Sweden September 27, 1954
3 Claims. (Cl. 73—136)



1. Means for measuring torsional stresses in a cylindrical shaft of magnetostrictive material, which comprises a stationary coil surrounding the shaft, means for feeding alternating current into said coil whereby an axial magnetic field is generated in the shaft, a magnetic shield surrounding a part of said coil and restricting the axial extension of said magnetic field in the shaft, two contact members in contact with the shaft on opposite sides of said shielded coil, indicating means responsive to alternating voltage, and means connecting said indicating means with the said contact members.

2,895,332
MEANS FOR MEASURING MECHANICAL FORCES AND THEIR TIME DERIVATIVES
Orvar Dahle and Birgit Dahle nee Andersson, Vasteras, Sweden, assignors to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden
Application December 14, 1954, Serial No. 475,142
Claims priority, application Sweden December 28, 1953
9 Claims. (Cl. 73—141)

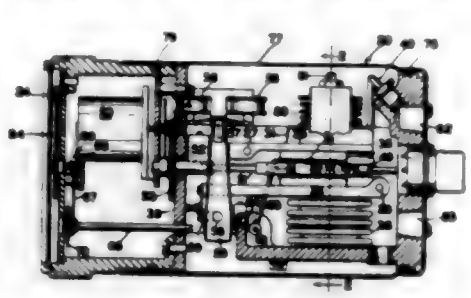


1. A means of the character described for measuring the time derivative of a mechanical force, comprising a measuring body of magnetostrictive material, means for applying said force to said measuring body, two coils embracing at least a part of said body, the winding planes of said coils being disposed at right angles to each other and at substantially 45° to the direction of said force and so arranged that the mutual inductance of said coils is substantially zero when the measuring body is mechanically unloaded, a direct current source connected to one of said coils which serves as an exciting coil, and a voltage sensing means connected to the other coil which serves as a measuring coil.

2,895,333
PRESSURE RESPONSIVE FORCE-RATIO BALANCE APPARATUS
Edward J. Hazen, Westwood, N.J., assignor to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Application September 7, 1954, Serial No. 454,277
5 Claims. (Cl. 73—182)

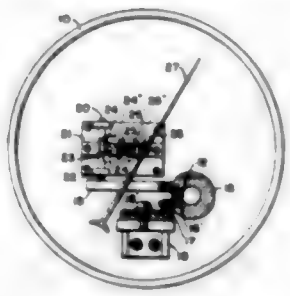
1. In a Mach meter, the combination comprising a pair of bellows responsive to, respectively, impact and static

pressures, a force ratio balance mechanism including a pair of levers pivoted on spaced parallel axes and responsive to changes in said bellows pressures, with one of said bellows having an end fixedly mounted and another end bearing upon one of said levers, means for supplying a fluid medium under said impact pressure to an interior surface of said one bellows so as to apply a force to said one lever varying with said impact pressure, another of said bellows being at least partially evacuated and disposed between and having opposite ends connected to both of said levers, each of said levers having portions extending between said axes providing spaced and generally parallel track surfaces with one track surface of each lever being disposed at one side of said other bellows and the other track surface of each lever being disposed at the opposite side of said other bellows, means for supplying a fluid medium under static pressure to an exterior surface of said other bellows and so as to apply a force to the other of said levers varying with said static



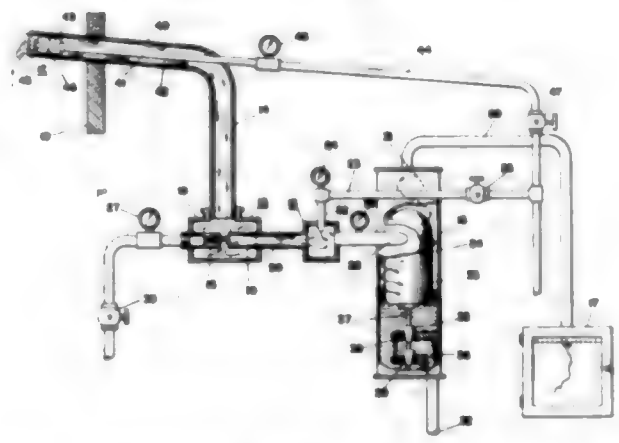
pressure and in a sense opposite to the force applied to said one lever by the impact pressure, longitudinally slidable force transmitting means including caged roller members having surfaces simultaneously bearing on the track surfaces of both levers and movable perpendicular relative to said slidable means upon an unbalance in the forces applied through said levers, electrical pick-off means for generating a continuous signal and having a control element normally in a null position and movable therefrom upon the unbalance in said forces, linkage means for operatively connecting at least one of the pressure responsive levers to the control element of the pick-off means, motor means coupled to said slidable means and responsive to the phase and amplitude of the generated signal to actuate the slidable means in a sense to vary the leverage of said levers in opposite senses so as to rebalance the forces applied through said levers to restore the control element of the pick-off means to the null position, and indicating means drivingly connected to said slidable means for indicating Mach number.

2,895,334
PRESSURE GAGE
Otto W. Heise, Newtown, Conn.
Application March 19, 1956, Serial No. 572,381
9 Claims. (Cl. 73—388)



1. In a pressure gage, a tube having a substantial portion of its length of non-cylindrical cross-section and including top and bottom walls joined by substantially semi-cylindrical side walls; means for closing one end of said tube; means for connecting a source of pressure fluid to the other end of said tube; means separate from said tube for restraining the deflection of the entire top and bottom walls of said tube within said substantial portion of its length; and multiplying means responsive to the deflection of said restraining means for operating an indicator.

2,895,335
SYSTEMS FOR OBTAINING GAS SAMPLES FOR ANALYSIS
Harry A. Kraftson, Bala-Cynwyd, Pa., and Edward M. Yard, Trenton, N.J., assignors to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania
Application January 12, 1956, Serial No. 558,731
6 Claims. (Cl. 73—421.5)



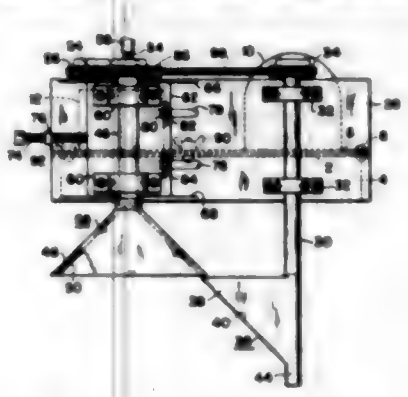
1. A gas sampling apparatus for producing a solid-free stream of gas from a dust and corrosive material ladened atmosphere comprising a gas sampling line having an inlet disposed within the atmosphere, said line including a steam ejector, means for supplying said ejector with steam for developing at the inlet of said sampling line a low pressure for flow into the line of a gaseous stream from the atmosphere, means for thoroughly mixing the gaseous stream with steam from said steam ejector to surround the solid particles within the gaseous stream with the steam, means located downstream of said ejector for directing a stream of condensing water into the mixture of steam and the dust-ladened sample in amount for condensation of the steam, the dust particles in the mixture forming nuclei for condensation of steam to form water droplets to increase the apparent mass of the dust particles, means for controlling the ratio of the rate of gas sample flow to the rate of condensing water flow to minimize release from the water of the same gaseous component as that to be measured, said water providing for condensation of the steam being in amount adequate to dilute corrosive liquids formed by absorption of corrosive materials by the condensed steam, a separator, means for producing rotary flow of the mixture within said separator at a speed developing centrifugal force for movement of the water particles and the dust particles contained therein outwardly with concurrent movement of the gaseous sample inwardly, and outlet means for flow from said separator of a solid-free gas sample for application to an analyzer.

2,895,336
DEVICE FOR SAMPLING FLOWABLE MATERIAL
Roland G. Vesper, Durango, Colo., assignor to Vanadium Corporation of America, New York, N.Y., a corporation of Delaware
Application November 20, 1957, Serial No. 697,667
3 Claims. (Cl. 73—424)

1. A device for sampling flowable material, which comprises a cone unit having an outer and an inner cone spaced from each other, means for rotating said cones as a unit, means for supplying the material to be sampled to the space between said cones, a cutter located below said cone unit and rotatable in an arc which

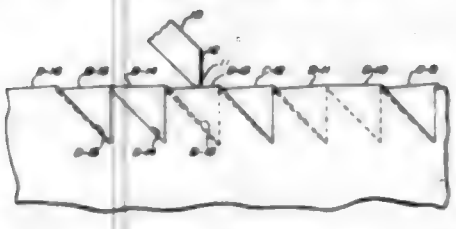
direction along said supporting shaft, said tapered ribs

intersects the arc of said cone unit, said cutter having a pocket for receiving flowable material discharged from said cone unit and an outlet for discharging said material from said cutter, and means for adjusting the relative



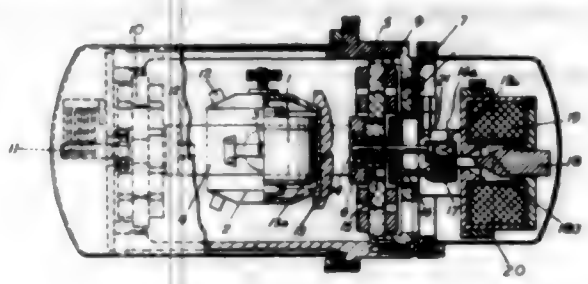
positions of said cone unit and said cutter to vary the amount of intersection between the arc of said cutter and the arc of said cone unit to thereby vary the amount of the sample.

2,895,337
PERMUTATION MEMBER TOOTH DESIGN
Walter G. Moring, Jr., and Geoffrey T. Gray, Toledo, Ohio, assignors, by mesne assignments, to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Application October 18, 1956, Serial No. 616,851
1 Claim. (Cl. 74—1)



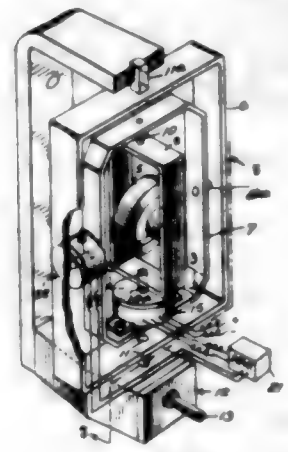
In a permutation selecting device, a plurality of parallelly aligned notched permutation members, a search member adapted for movement in a given direction over said permutation members in search of aligned notches, each permutation member having a notch with an entering face gradually descending into said member in said given direction to intersect an ascending abutment face substantially perpendicular to said given direction, said notches on said permutation members being arranged in a pattern, and a land on each member adjacent each notch in said given direction not immediately followed by another notch, said land ascending from the crest of said abutment face in said given direction.

2,895,338
GYROSCOPE CAGING DEVICES
William R. Simons, Cheltenham, England, assignor to Smiths America Corp., Washington, D.C.
Application March 5, 1956, Serial No. 569,336
Claims priority, application Great Britain March 3, 1955
13 Claims. (Cl. 74—5.1)



1. A caging device for a gyroscope having an inner gimbal ring pivotally mounted in an outer gimbal ring for rotation about an inner gimbal axis, which said outer gimbal ring is itself mounted for rotation about an outer gimbal axis comprising a first cam member on the inner gimbal ring, said first cam member having an operative portion lying in the plane passing through the outer gimbal axis normal to the inner gimbal axis, and being formed with an inwardly-directed depression, a first plunger whose line of action coincides with the outer gimbal axis, said first plunger being normally spaced away from the operative portion of the first cam member but being adapted to be forced into contact with the operative portion, the operative portion then moving past the plunger solely by reason of the force exerted by the plunger in the direction of the outer gimbal axis, the inner gimbal ring being located in the desired caged position relative to the outer gimbal ring when the plunger is at the vertex of the depression, a second cam member on the outer gimbal ring having an operative contour surrounding the outer gimbal axis, a second plunger whose line of action is parallel to but displaced from the outer gimbal axis, said second plunger being adapted to be forced into contact with the contour of the second cam, the contour having a depression in the direction of the line of action of the second plunger, the outer gimbal ring being located in its desired predetermined position when the second plunger is at the vertex of the depression.

2,895,339
CORRECTION SYSTEM FOR MASS SHIFT IN GYROS
George F. Schroeder, Pines Lake, N.J., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Wilmington, Del., a corporation of Delaware
Application November 12, 1958, Serial No. 773,223
10 Claims. (Cl. 74—5.47)

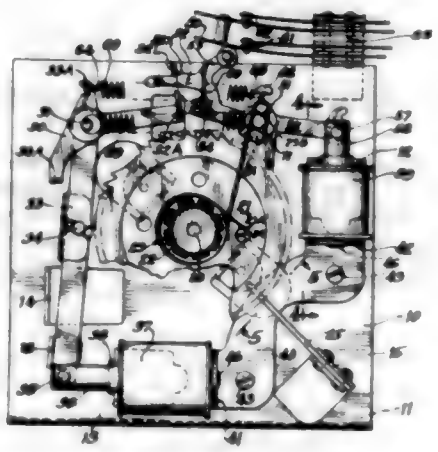


1. A gyro mechanism of the character described comprising a frame, means by which said frame is supported for vertically reciprocal but non-rotary movement, an outer gimbal, horizontally disposed shaft means carried by said frame by which said outer gimbal is mounted in said frame for rotation about a horizontal axis, an inner gimbal, vertically disposed shaft means carried by said outer gimbal by which said inner gimbal is mounted within said outer gimbal for rotation about a vertical axis, a gyro wheel, a supporting shaft carried by said inner gimbal by which said gyro wheel is mounted within said inner gimbal for rotation about a horizontal axis, the axes of said horizontally disposed shaft means, said vertically disposed shaft means and said supporting shaft all intersecting each other at a common point and said gyro wheel being mounted on said supporting shaft in balanced position with the center of mass thereof disposed at said common point, means by which said frame and the mechanism carried thereby are vertically reciprocated at a predetermined frequency, said reciprocation being operative to impart an oscillatory vibrational precession to said inner gimbal in the event said gyro wheel shifts out of balanced position in either

internal helical groove, said grooves mating with each abutting against an end of said steering column tubular

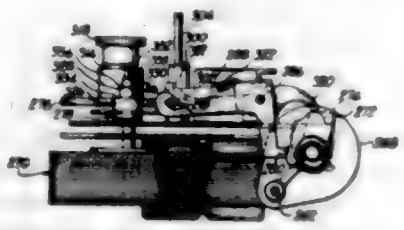
direction along said supporting shaft, said torsional vibration being proportioned to the distance said gyro wheel has shifted out of balanced position and to the frequency of said reciprocation, an amplifier having a phase detector tuned to the frequency of said reciprocating means, pickup means carried by said mechanism, said pickup means being operative to detect any torsional vibration of said inner gimbal due to an unbalanced position of said gyro wheel and to impart a corresponding signal to said amplifier, and correcting means mounted on said mechanism and operative to cause a precession of said inner gimbal opposite to that caused by the unbalanced position of said gyro wheel, said correcting means being actuated by said amplifier in accordance with signals imparted thereto by said pickup means.

2,895,340
STEPPER WITH BUILT-IN LATCH
Frank G. Nicolaus, Chicago, Ill., assignor to Raymond T. Moloney, Chicago, Ill.; American National Bank and Trust Company of Chicago, executor of said Raymond T. Moloney, deceased
Application April 30, 1956, Serial No. 581,522
7 Claims. (Cl. 74—142)



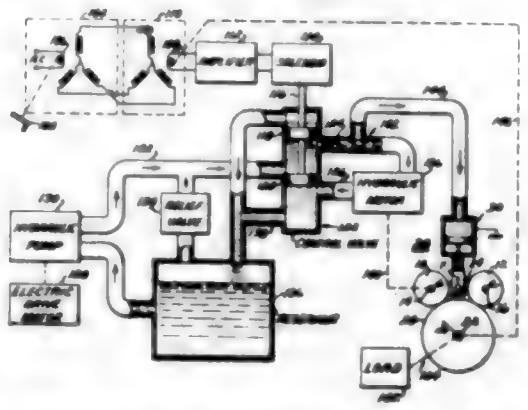
1. In a step-up ratchet mechanism, a ratchet wheel including spring means urging the same to a normal starting position; a step-up pawl oscillable to advance said wheel step-by-step; a holding dog yieldingly urged to engagement with said wheel to hold the gain thereof; interengaging parts on both dogs acting in the released condition of the holding dog to move the stepping dog out of engagement with said wheel when the holding dog is releasably moved beyond a predetermined amount from holding position; and a latch formation on one of said dogs automatically engaging a part on the other dog in the disengaged condition of both dogs and integral therewith to lock-up the same in mutually holding relation in said disengaged condition, said mutually holding relation being broken and released responsive to a stepping motion of the stepping dog.

2,895,341
MOTOR SPEED CHANGER
Daniel J. Vondran, Chicago, Ill., assignor to Webcor, Inc., Chicago, Ill., a corporation of Illinois
Application June 5, 1957, Serial No. 663,689
6 Claims. (Cl. 74—199)



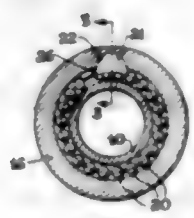
1. In a record changer, a motor carrying a driven spindle having a plurality of coaxial steps of successively reduced diameter, a tire biased into contact with said spindle and having drive means coaxially mounted therewith for driving the turntable of the record changer, a cam plate pivotally mounted on said motor and having a pair of integrally formed cams thereon, a lever biased into engagement with each of said cams, one of said levers having fixedly secured thereto an extension defining a lost motion slot, pin means slidably and pivotally mounted on said motor for movement in said lost motion slot, a camming extension on the other of said levers adapted to cam said pin means, a stop bar fixedly secured to said pin means, and means pivotally supported on said pin means and movable by said stop bar for supporting said tire, said first named lever and cam engaged therewith being adapted to effect vertically slidable movement of said tire and said second lever and cam engaged therewith being adapted to effect lateral movement of said tire, said cams being complementary to provide synchronized movement relative to said steps.

2,895,342
GEARING
Thomas S. Hayhurst, Moorestown, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Application July 29, 1955, Serial No. 525,234
9 Claims. (Cl. 74—409)



1. In a gear train, in combination, a pair of first gears spaced apart and mounted to turn on parallel axes of fixed spacing; a third gear mounted to turn about an axis parallel to said parallel axes and fixed with respect thereto, said third gear being engaged with both of said first gears; a fourth gear mounted to turn about an axis parallel to said parallel axes and engageable with both of said first gears; drive means coupled to one of said gears for driving said gear; sensing means coupled to said drive means for sensing the driving force thereof; and means coupled to said sensing means for urging said fourth gear in the direction of said third gear and into engagement with both of said first gears with a force proportional to and greater than the tangential force exerted by said one gear, during at least one direction of rotation of said one gear.

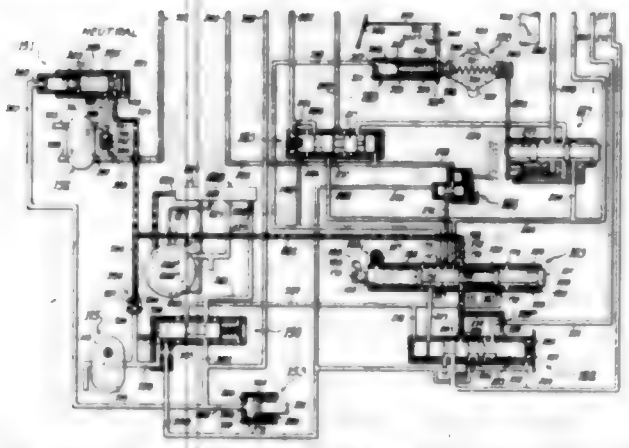
2,895,343
BALL-BEARING SCREW AND NUT MECHANISM
Harry Orner, Altadena, Calif.
Application October 1, 1954, Serial No. 459,605
15 Claims. (Cl. 74—459)



1. A ball-bearing screw and nut mechanism, comprising a screw having an external helical groove, a nut having an

internal helical groove, said grooves mating with each other to form a working ball race loop of substantially a single convolution, a single convoluted passage means in said nut forming a return ball race loop, said passage means having substantially the same pitch as the pitch of said working loop but reversely arranged thereto with the ends of said return loop merging with the ends of said working loop to form a continuous ball race having a figure eight configuration with the return loop lying in the same general plane transversely of the screw as the working ball loop and being free of abrupt change in the direction of ball travel therealong, and a plurality of balls mounted in said continuous ball race and serving to lock said nut and screw in assembled relation.

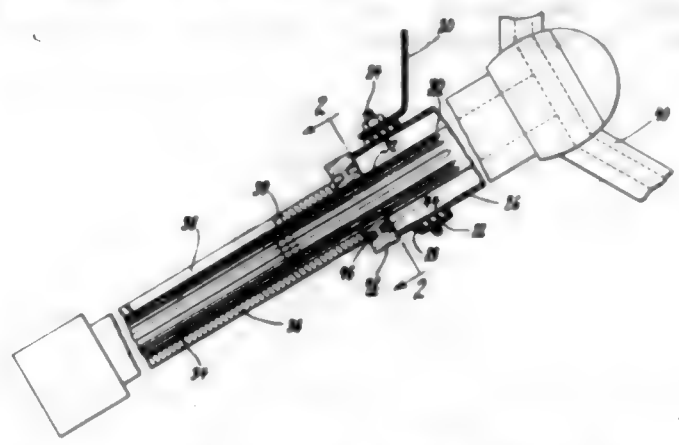
2,895,344
TRANSMISSION
John W. Holdeman, Vincent E. Masko, John B. Polomski, and Gordon E. Whelpley, Detroit, Mich., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application November 13, 1953, Serial No. 391,878
9 Claims. (Cl. 74—472)



1. In a transmission, the combination of a drive shaft, a driven shaft, means for providing low, second, third, and high speeds forward drives between said shafts, a selector member having first, second, third and drive positions, means for rendering said first, second and third drives completed under the control of said selector member when the selector member is respectively positioned in its low, second and third positions, and speed responsive means rendered operative by said selector member when it is positioned in its drive position for automatically shifting the transmission from its second to its third and finally to its high speed drives as the speed of said driven shaft increases.

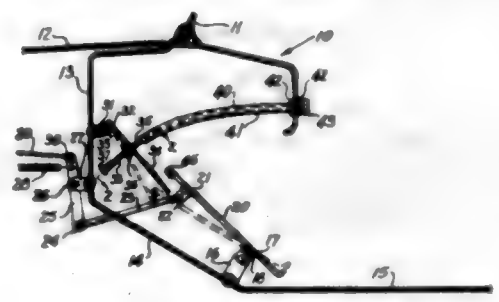
2,895,345
SAFETY STEERING WHEEL
Robert McClure, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 13, 1956, Serial No. 621,768
2 Claims. (Cl. 74—493)

1. A safety steering wheel assembly adapted to move toward a dashboard of a vehicle under predetermined load, comprising, in combination, a telescopic steering column including a tubular portion having internal splines, a member attached to a steering wheel and having external splines complementary to said internal splines of said tubular portion, an annular steering mast jacket being supported resiliently relative to the dashboard as well as being carried by the steering wheel and spaced radially outwardly from said externally splined member at a diameter exceeding an outer diameter of said tubular portion, and an annular bracket collar means interposed between said mast jacket and said steering column tubular portion, said collar means being formed of a metallic alloy including a radially inner portion abutting against an end of said steering column tubular portion as well as a radially outer portion abutting against an end of said mast jacket and an intermediate portion joining said radially inner and outer portions at a location between grooves on opposite sides of said collar means and aligned to have a mean diameter substantially equal to the other diameter of said steering column tubular portion whereby said collar means prevents longitudinal



movement of said externally splined member relative to said steering column tubular portion unless said mast jacket transmits a predetermined impact load to said radially outer portion of said collar means and thereby effects shearing of said collar means adjacent to said intermediate portion thereof substantially in alignment with said grooves and the outer diameter of said steering column tubular means.

2,895,346
CONTACT GOVERNOR
John Arch, Jr., Bryte, Calif.
Application November 8, 1957, Serial No. 695,425
1 Claim. (Cl. 74—526)

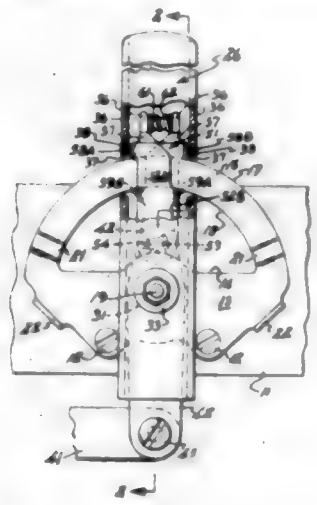


In a contact governor for regulating the speed of vehicles controlled by foot depressible accelerator pedals, a leaf spring connected at one end to the front body wall of the vehicle, the other end being free and extending beneath the free end of said accelerator pedal, and means for varying the position of the free end of said leaf spring relative to said accelerator pedal, said last mentioned means being controlled by a knob on the dashboard of said vehicle, said leaf spring having an aperture therethrough, a threaded nut aligned with said aperture, a threaded bolt extending through said nut, a flexible cable rotatably connecting said bolt to said knob, said bolt extending beyond said nut and terminating in a head, and a compression spring between said head and said nut.

2,895,347
AUTOMATIC LOCKING CONTROL
James H. Reid, deceased, late of Los Angeles County, Calif., by Marguerite L. Reid, administratrix, Los Angeles County, Calif.
Application May 13, 1957, Serial No. 658,882
8 Claims. (Cl. 74—531)

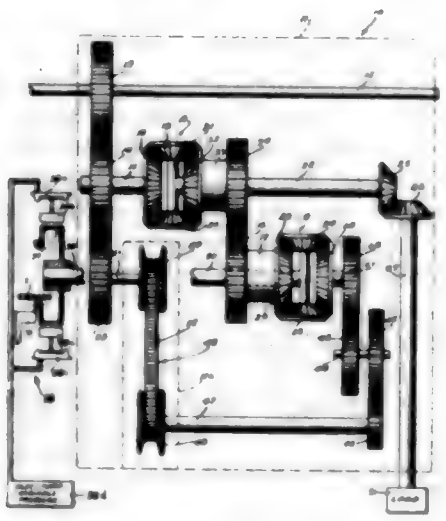
1. In a locking control apparatus first means forming a first bar, a control handle, a secondary bar, second means

independently pivotally mounting said control handle and secondary bar on said first means about a common center, and a locking structure pivotally mounted on said secondary bar about a center between said second means and said first bar, said locking structure comprising a pair of shoe-bearing members each formed from a flat piece of material, one said shoe-bearing member being positioned on one side of said secondary bar and on one side of said first bar and the other said shoe-bearing member being positioned on the opposite side of said



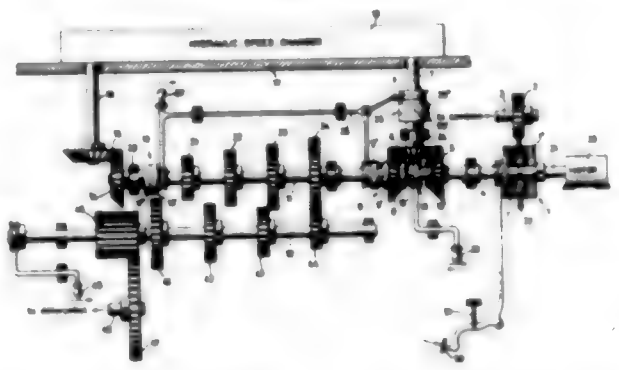
secondary bar and said first bar, each said shoe-bearing member being formed to provide two shoes, each said shoe being an integral extension of its respective shoe-bearing member bent transversely of said first bar, one said shoe of each said shoe-bearing member engaging the top edge of said first bar and the other said shoe engaging the underside of said first bar, the upper shoe of one said shoe-bearing member being opposite the lower shoe of the other shoe-bearing member and vice versa, and means biasing said shoes toward engagement with said first bar.

2,895,348
MACHINE DRIVE
Edward D. Beachler, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Application January 21, 1958, Serial No. 710,257
13 Claims. (Cl. 74—689)



1. In a paper machine having a driven rigid lineshaft member, a drive mechanism having a driving member for being drivingly connected to a section of the machine to drive said section, said mechanism comprising in combination: a housing; a pair of differential gearing assemblies within said housing and each having three rotary elements; the first of said elements of the first of said differential gearing assemblies being drivingly connected to the lineshaft member; the third of said elements of the first of said assemblies being drivingly connected to the first of said elements of the second of said differential gearing assemblies; the third of said elements of said second assembly being a control element; a variable speed-ratio drive powered by the lineshaft member and drivingly connected to said control element; the second of said elements of one of said differential gearing assemblies comprising planetary gearing supported on means drivingly and rigidly connected to the driving member; and a brake rigidly connected to the second of said elements of the other of said differential gearing assemblies.

2,895,349
TRANSMISSION SYSTEM FOR AUTOMOTIVE AGRICULTURAL VEHICLES AND THE LIKE
Karl Wehsely, Leipzig, Germany, assignor to Leitburo für Erfindungswesen, Leipzig, Germany, a corporation of Germany
Application January 14, 1958, Serial No. 708,872
Claims priority, application Germany April 15, 1957
4 Claims. (Cl. 74—745)

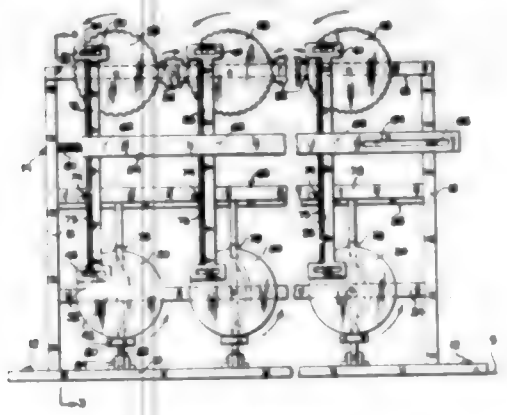


1. A transmission system comprising a drive shaft, a driven shaft, a speed changer having an input shaft and an output shaft, a train of meshing gears, coupling means operatively connecting one of said meshing gears with said drive shaft, first clutch means having a first and a second position for selectively coupling said train with said input shaft and with said driven shaft, respectively, said first clutch means in said first position coupling a second one of said meshing gears with said input shaft while decoupling said train from said driven shaft, said first clutch means in said second position positively coupling one of said meshing gears other than said second one with said driven shaft while decoupling said second one of said meshing gears from said input shaft, and second clutch means operatively linked with said first clutch means for positively coupling said output shaft with said driven shaft in said first position of said first clutch means and for decoupling said driven shaft from said output shaft in said second position.

2,895,350
CUTTING DEVICE FOR TEETH OF SAWS, FILES AND THE LIKE
Israel Weinglas, New York, N.Y.
Application May 20, 1957, Serial No. 660,367
10 Claims. (Cl. 76—31)

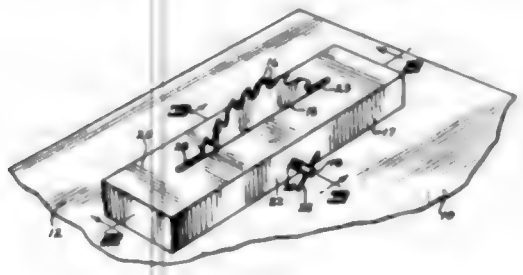
1. A reciprocating multiple-type apparatus for forming a series of notches in a plurality of saw blades, comprising a frame, means movably mounted therein for supporting a plurality of saw blades to be notched, reciprocating cutters on the frame arranged each adjacent a blade to be notched, so as to form notches in the blades responsive to reciprocation of the cutters, means on the frame supporting the cutters for movement against the blades on shifting of the cutters in one direction and for movement of the cutters away from the blades when the cutters are shifted in an opposite direction, and means on the frame for effecting step-by-step advancement of

the blades past the cutters, the saw blade support means being slidably supported on the frame, for movement in a plane normal to the path of reciprocating movement



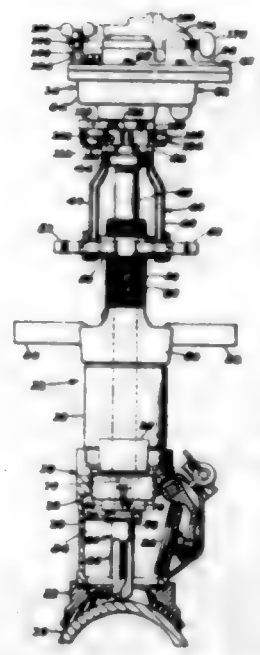
of the cutters, said saw blade support means comprising a flat bar having recesses in which the saw blades may be removably engaged.

2,895,351
SAW VISE
Stanley Bergstrom, Minneapolis, Minn.
Application March 22, 1957, Serial No. 647,840
2 Claims. (Cl. 76—78)



1. A saw vise for retaining a circular saw in stationary position, said circular saw being rotatably mounted in a saw bench beneath a longitudinally slotted shelf thereof including a horizontal flat upper surface and a peripheral portion of the circular saw extending vertically upwardly through the slot in said shelf to a position above its flat upper surface, comprising a block of material including an upper surface and a lower flat surface to be rested upon and slidable over the flat upper surface of said shelf, the block having a vertical, longitudinally extending slot therethrough situated between and in spaced relation to each of opposite side walls thereof for reception of said peripheral portion of the circular saw to project upwardly above the upper surface of said block, a vertical, longitudinally extending gripping surface bounding a side of said slot in the block, a portion of the block at the side of the circular saw opposite said gripping surface having an internally threaded opening therethrough contiguous at an inner end thereof with the slot in said block and at an outer end thereof with a side surface of the block, a clamping screw in said internally threaded opening to be engageable with a side surface of said circular saw opposite the gripping surface, and manually operable means rigid with said clamping screw for accomplishing rotation thereof thus to cause an inner end of the clamping screw to be forcibly engaged against the surface of said circular saw adjacent to said clamping screw and the gripping surface to be forcibly engaged against the surface of the circular saw opposite the clamping screw, the clamping screw and gripping surface being operable to rigidly secure said circular saw to said block, and said circular saw, clamping screw and gripping surface being cooperatively operable to rigidly secure the block down against the upper surface of said shelf.

2,895,352
POWER DRIVE ATTACHMENT FOR DRILLING MACHINE
Frank H. Mueller and John J. Smith, Decatur, Ill., assignors to Mueller Co., Decatur, Ill., a corporation of Illinois
Application June 20, 1958, Serial No. 743,318
7 Claims. (Cl. 77—34.4)

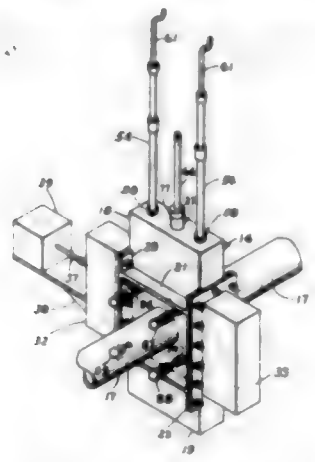


1. A power drive and automatic feed attachment for use with a drilling machine having a boring bar provided with a driving end, a feed collar concentric with the bar and threadedly engaged with a fixed part of the machine, and a feed yoke pivotally connected to the collar and swingable into and out of engagement with a shoulder on the bar to feed the latter, when engaged with the shoulder, by rotation of the collar, the combination comprising: a housing; a bar-driving member journalled in said housing and having non-circular means exposed exteriorly of said housing for driving engagement with complementary means on the driving end of the bar; a tubular yoke-driving member journalled in said housing concentrically about said bar-driving member and having a portion projecting outwardly of said housing for driving engagement with the yoke; movable means on said portion for disengaging the last-mentioned driving engagement while maintaining the first-mentioned driving engagement; a shaft means having an end accessible from the exterior of the housing for driven engagement by exterior driving means and connected to said bar-driving member for driving the latter; and gear means journalled in said housing and connecting said shaft means with said yoke-driving member to drive the latter by the former.

2,895,353
MECHANISM FOR CONTROLLING THE FLOW OF FLUIDS UNDER PRESSURE
Claude H. Webber, Tucson, Ariz., assignor to Mueller Co., Decatur, Ill., a corporation of Illinois
Application June 11, 1957, Serial No. 665,082
9 Claims. (Cl. 77—41)

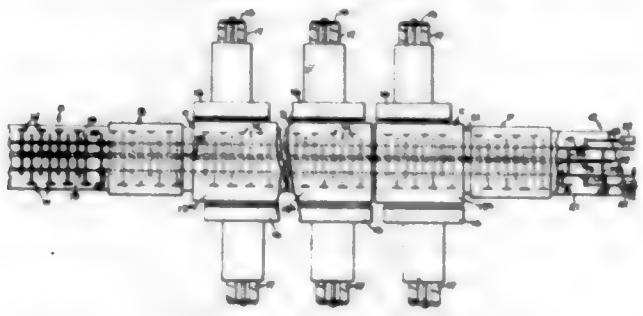
1. Pressure controlling mechanism of the character described comprising a housing adapted to be welded around a pipe line to seal off a portion thereof, said housing including a cap portion above the said pipe line and a sump portion below the pipe line, opposite sides of the housing spaced at right angles to the axis of the pipe line being open and provided with flanges for releasable attachment of housing covers forming a continuation of the housing in which cutting saws may operate, a pair of hack saw blades within the housing and extendible into said housing covers, said hack saw blades being supported in spaced relation to each other.

guide means having slots to receive top edges of said hack saw blades, adjustable means extending through said housing cap for resiliently pressing said guide means downwardly to force the blades downwardly against



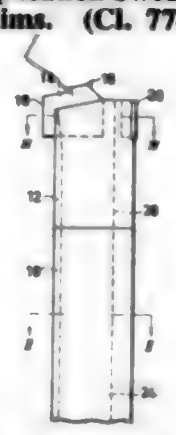
the pipe line and hold them in position, and means extending through one of said housing covers for reciprocating the saw blades to cut a coupon from the said pipe line.

2,895,354
MULTIPLE STATION MACHINE TOOL
Donald E. Hawkinson, Kenneth O. Kolnes, and Joel A. Jannenga, Rockford, Ill., assignors to Greenlee Bros. & Co., Rockford, Ill., a corporation of Illinois
Application May 11, 1956, Serial No. 584,301
11 Claims. (Cl. 77—64)



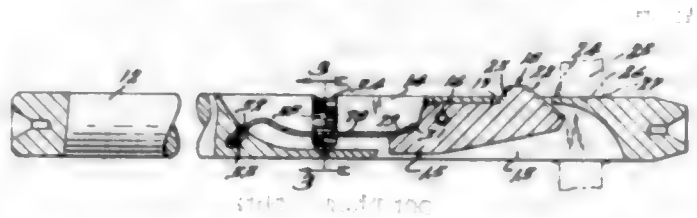
1. In a machine tool for operating on elongated workpieces of circular cross section, the combination of, a pair of laterally spaced bars supported for reciprocation horizontally back and forth in unison with each other and engageable with a series of said workpieces to support the latter in spaced parallel relation, power actuated mechanism operable to move said bars back and forth and carry the workpieces sidewise to successive dwell positions along a path, an endless link conveyor extending along said path between said bars and having spaced locating members thereon each adapted to receive and be clamped to one of the workpieces, means at each of said dwell positions providing fixed locating surfaces facing toward said path for engagement with said locating members and the workpieces to position each of the latter angularly about the longitudinal axis thereof and in two directions transverse to the axis, clamping elements at each of said dwell positions movable toward and away from said surfaces and engageable with the workpieces and said locating members to clamp the same rigidly against the surfaces, a conveyor shifting element connected to said bars for movement therewith longitudinally of said path and for movement relative to the bars transversely of the path and into and out of a shifting position of engagement with said conveyor, and means connected to said element for moving the same transversely of said path and said bars and into and out of said shifting position to couple the conveyor to the bars for movement therewith in one direction and to uncouple the conveyor for movement of the bars relative thereto in the opposite direction.

2,895,355
DRILL SHANK FOR DRILLS
Werner Kurt Max Kleine, Bremen-Mahndorf, Germany, assignor to Maskinfirma R. L. Carlstedt, Hagersten, Sweden, a corporation of Sweden
Application March 4, 1954, Serial No. 414,117
Claims priority, application Sweden March 4, 1953
10 Claims. (Cl. 77—68)



1. Drill mechanism for deep hole boring comprising a hollow drill head and shank, said drill head having mounted therein a cutting tool having cutting edges for cutting a bore and extending from at least the central axis of the drill to a radius at least as great as the radius of said shank, the outer periphery of said head and said shank being non-circular and including a plurality of peripherally spaced projections extending along the length of the tool, for centering the same in the bore created by the drill, the spaces between said projections providing a plurality of flow passages for introduction of liquid under high pressure externally of the drill to the cutting end thereof, the central opening of said hollow drill head communicating laterally of said cutting tool to provide egress for the pressure fluid and the chips resulting from the boring action of the tool.

2,895,356
DEBURRING TOOL
Stuart A. Cogsdill, Orchard Lake, Mich., assignor to Cogsdill Tool Products, Inc., Oak Park, Mich., a corporation of Michigan
Application March 20, 1956, Serial No. 572,746
4 Claims. (Cl. 77—73.5)



1. A deburring tool including, in combination, a body having a slot of substantial length on the axis thereof, an aperture extending through the bottom of the slot adjacent to one end thereof, a deburring blade pivoted in the slot having a projecting cutting end extending from the bottom through the aperture to the outside of the body, and a longitudinally extending spring strip having one end fixedly supported within the slot with the opposite end engaging the end of the blade opposite to that having the projecting end, the end of said spring engaging said blade exerting a force thereon substantially perpendicular to the axis of said tool.

2,895,357
CORK EXTRACTOR
Jose Brito Perez, Havana, Cuba
Application March 12, 1958, Serial No. 720,994
1 Claim. (Cl. 81—3.34)

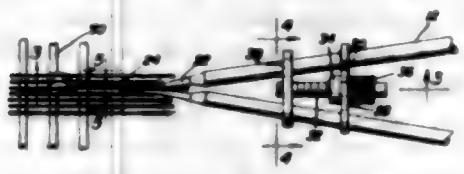
A cork extractor comprising a handle, a pair of elongated resilient arms formed of strap members joined at one end, said joined end being secured to the handle.

opening through which said expander rod passes, flexible ing the opposite end concave on an arc extending to the

one of said arms being longer than the other, said arms being curved away from each other centrally of their length and toward each other at their outer ends opposite the joined ends, said longer arm having its outer end angled toward the shorter arm, and the end of the shorter arm being turned first toward the longer arm and then inwardly toward the handle, the inner faces of said resilient arms being provided with sharp projections nor-

mal to the axis of the arms and offset from each other for clamping a cork between said arms, the end edge of the shorter arm being serrated to provide teeth projecting toward said handle, and said longer arm being sufficiently longer than said shorter arm so that the turned end of the shorter arm may nest within the end of and engage the length of the longer arm upon insertion of the extractor into a bottle to reduce the space required for entry thereinto.

2,895,358
RADIATOR FIN REPAIR TOOL
Christ L. Johnson, Everett, Wash.
Application October 23, 1957, Serial No. 691,860
5 Claims. (Cl. 81—15)



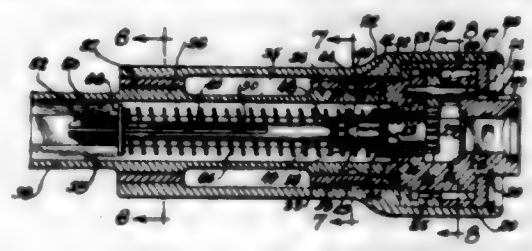
1. A repair tool for a radiator that has tubes and spaced fins which require straightening, said tool comprising a fixed position handle having a pair of shanks, slender elongate angulated ends on said shanks which form tines, flat confronting surfaces on said tines between which a fin is adapted to be located and straightened by moving said ends lengthwise of the fin, said tines being resilient and converging toward said angulated ends, a slide having openings through which said shanks extend, and means connected with said slide to move said slide on said shanks thereby adjusting the spacing of said angulated ends.

2,895,359
PREDETERMINED-TORQUE-APPLYING WRENCH WITH THRUST OPERATED TORSION BAR
Gorman R. Nelson, Sioux Falls, S. Dak.
Application September 20, 1957, Serial No. 685,134
14 Claims. (Cl. 81—52.3)

1. A thrust type torque wrench, comprising an elongated torsion bar having front and rear ends rotatable with respect to each other within the elastic limit of the bar, coupling apparatus affixed to the front end of the bar and adapted for non-rotatable and removable attachment with a workpiece to be turned, a pair of cooperating cam parts, one of said parts being a helical cam, the other of said parts being a cam follower, said cam parts being relatively rotatable and being movable

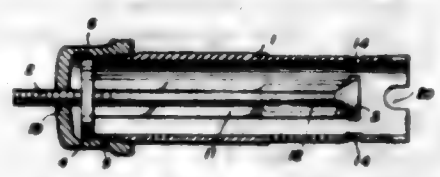
relative to each other along the rotation axis, means connecting one of said cam parts with the rear end of the bar, and means maintaining said cam parts in cooperative camming relation, whereby linear movement of one of the cam parts with respect to the other of the cam parts produces rotation of the rear end of the bar and causes application of torque to the workpiece.

2,895,360
POWER OPERATED MAGAZINE-TYPE SOCKET WRENCH ATTACHMENT
Jens Axel W. Madsen, Sioux City, Iowa, assignor to Albertson & Company, Inc., Sioux City, Iowa, a corporation of Iowa
Application August 7, 1957, Serial No. 676,839
16 Claims. (Cl. 81—57)



16. In a magazine-type socket wrench device, the combination comprising an elongated wrench socket having a portion of polygonal internal section extending along a major portion of the length of the socket from an open end thereof, a nut retaining and centering pin of fixed length extending longitudinally of the interior of the socket to a position spaced inwardly of the open end of the socket, means for driving the socket and supporting said pin for rotation relative to the socket, and means providing a predetermined correlation of the rates of rotation of the wrench socket and pin.

2,895,361
SPUD WRENCH
Endsley Henry Collett, Pittsburgh, Pa.
Application May 6, 1958, Serial No. 733,288
3 Claims. (Cl. 81—72)



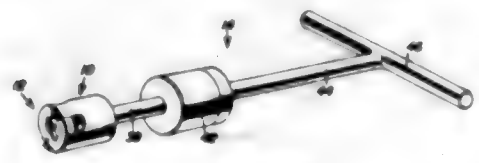
1. A spud wrench comprising an open ended tubular body member provided with slots through its wall near one end thereof, a cap provided with a threaded central opening and engaging the other end of the body member, a threaded expander rod extending from near said slots centrally of the body and through the opening in said cap, a disk member under said cap and provided with an

2,895,365
JAW FACE CONSTRUCTION FOR PIPE WRENCHES

filters of said banks to eliminate key clicks and to control attack and decay, amplifier means, means connecting

opening through which said expander rod passes, flexible bar members mounted on said disk member and having free ends bent outwardly to provide lug members in registration with the slots in said tubular body member, an expander member on said rod at the end near said slots and adapted to engage the free ends of said flexible bar members to project said lug members through said slots, and means on the end of said expander rod outside said cap to rotate said rod for moving said expander member axially in said body member.

2,895,362
WRENCH
George H. Jamgotchian, Fresno, Calif.
Application September 11, 1957, Serial No. 683,374
5 Claims. (Cl. 81—90)



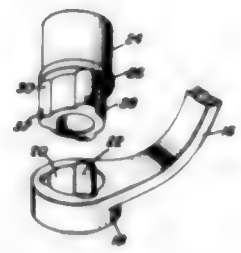
1. A wrench for use particularly with thread cutting nuts of the type formed of a circular plate having a central opening formed therein with diametrically opposed inwardly and upwardly extending points projecting into the opening for cutting threads on rods disposed through the opening and having diametrically opposed upwardly extending flanges attached to the plate, said wrench comprising a cylindrical body having a nut engaging portion and a handle engaging portion and an axial bore formed therethrough, a wrench handle having a polygonal end, that portion of said bore disposed in the nut engaging portion of said body being circular in configuration and of sufficient diameter to permit the passage thereinto of a rod onto which the nut is to be fastened, that portion of said bore disposed in the handle engaging portion of said body being polygonal in configuration and of sufficient dimensions to accommodate said handle end without permitting relative rotation therebetween, said nut engaging portion having diametrically opposed grooves in the outer end thereof the inner surfaces of which are spaced apart a distance substantially equal to the distance between the flanges on the thread cutting nut for frictional engagement with said flanges, said circular bore portion being countersunk at the outer end thereof to provide clearance for the nut points upon engagement of said nut on said wrench.

2,895,363
TOOL FOR REMOVING AND HOLDING A RADIATOR CAP
George B. Cox, Knoxville, Tenn., assignor of one-half to Lyman J. Weaver, Knoxville, Tenn.; Eunice Cox, administratrix of the estate of said George B. Cox, deceased
Substituted for abandoned application Serial No. 453,907, September 2, 1954. This application August 28, 1958, Serial No. 757,853
1 Claim. (Cl. 81—125)

A tool for removing radiator caps comprising a head having a wide closed back with a surrounding rim and having a relatively shallow recess within the rim to receive a radiator cap therein, said recess being substantially circular in outline on a radius appreciably greater than the depth of the recess, said rim having a plurality of semicircular notches in the inner side thereof to receive ears on the radiator cap when the head is telescoped over the latter, said rim having undercut recesses at the inner periphery thereof in open communication at one end with the notches, each of the undercut recesses having the opposite end concave on an arc extending to the inner face of the rim, and a handle secured to the closed

back of the head substantially at the axis thereof and extending axially and radially outwardly from said head.

2,895,364
OFFSET WRENCH HANDLE WITH TRI-POINT BOX END AND DETACHABLE SOCKET
Howard H. Heinz, Casper, Wyo.
Application April 9, 1957, Serial No. 651,788
2 Claims. (Cl. 81—177)



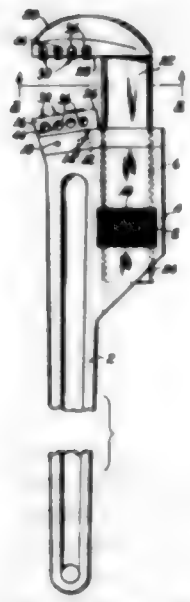
1. A wrench comprising an elongated handle, a closed box end on said handle defining a through socket-receiving opening, a socket, means on said handle and said socket for locking them together and preventing rotation therebetween, said handle being downwardly offset adjacent the box end with the plane of the box end and the elongated handle diverging away from the box end, said socket including a body, a polygonal opening in one end thereof for accommodating nuts, a peripheral flange extending from a medial portion of said body, a base on said body being generally cylindrical in shape and having a plurality of semicylindrical projections on the outer surface thereof, the interior surface of the socket-receiving opening of said box end generally defining a cylinder having a plurality of semicylindrical recesses in the wall thereof, said locking and rotation-preventing means being defined by the semicylindrical projections which are telescopically engaged with said semicylindrical recesses, said flange being seated on the upper surface of said box end so that movement of the socket through the socket-receiving opening in one direction is prevented, a split spring ring, each of said semicylindrical projections having a groove receiving said spring ring, said gooves and said spring ring being disposed immediately below the lower surface of the box end so that the spring ring is engaged therewith, thus preventing movement through the opening therein in the other direction.

of the shank, said bearing surface being provided with an annular undercut on a radius tangent to said clearance

2,895,370
SHEET METAL SLIDE FASTENER FOR

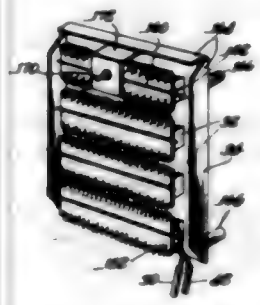
gated torsion bar having front and rear ends rotatable cap, a disk member under said cap and provided with an

2,895,365
JAW FACE CONSTRUCTION FOR PIPE WRENCHES
John C. Myers and Monty M. Hagar, Salem, Ill.
Application October 22, 1957, Serial No. 691,594
6 Claims. (Cl. 81—186)



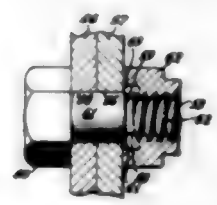
1. In a wrench, a pair of jaws having opposed faces, work engaging and gripping means on said faces, at least one of said faces having openings adjacent said work engaging and gripping means, each of said openings extending inwardly into said jaw and intersecting at its inner end an interior passageway in said jaw, said interior passageway in turn providing communication with the exterior of said jaw at a position remote from said work engaging means, whereby foreign matter dislodged by said work engaging means is discharged through said openings to the exterior of said jaw.

2,895,366
ORGAN STRUCTURE AND FILTER PANEL
Richard F. Schneeberger, Buffalo, and Harold O. Schwartz, North Tonawanda, N.Y., assignors to The Rudolph Wurlitzer Company, North Tonawanda, N.Y., a corporation of Ohio
Application June 18, 1953, Serial No. 362,593
4 Claims. (Cl. 84—1)



1. In an electronic organ, the combination comprising a plurality of vibratile reeds and cooperable pickups, means positioned adjacent said reeds and acting thereon for continuously vibrating said reeds, a source of electrical potential, a plurality of key switches individually connecting said reeds and pickups to said source of electrical potential, a plurality of keys for operating said switches, a filter panel, a plurality of banks of filters mounted on said panel, each filter comprising a unit, and a bank of filters comprising a common base on which a plurality of such units are mounted, a plurality of said bases being mounted on said panel, each such base being elongated and having the filters mounted transversely thereof and parallel to one another, said bases being flat and mounted parallel to said panel and spaced therefrom substantially in a common plane, said plurality of bases being substantially parallel and coterminous, means individually connecting said reeds and pickups to the filters of said banks to eliminate key clicks and to control attack and decay, amplifier means, means connecting said reeds and cooperable pickups to said amplifier means for amplifying electrical oscillations generated by said reeds, and a loud speaker for converting the amplified electrical oscillations into audible organ tones.

2,895,367
SELF-BROACHING FASTENERS
Michael J. Nagy, Inglewood, Calif., assignor, by mesne assignments, to Pastushin Aviation Corporation, Los Angeles, Calif., a corporation of California
Application July 19, 1954, Serial No. 444,177
3 Claims. (Cl. 85—1)



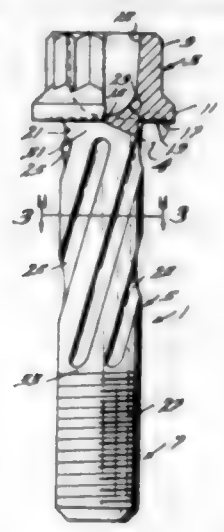
1. A fastener made of relatively hard high strength metal for use in attaching together a plurality of members having aligned preformed openings, said fastener having: a head for abutment against the outer side of one of said members; a shank comprising a first shank portion integral with and adjacent to said head for ultimate positioning in said openings and a second shank portion integral with and axially adjacent said first shank portion, said second shank portion being formed with a plurality of axially spaced circumferential elements to enlarge said preformed openings when the fastener is forced into the preformed openings, said first shank portion being at least as large in cross-section as the rearmost opening-enlarging element for tight fit in the enlarged openings, said second shank portion being circumferentially grooved between the successive opening-enlarging elements to receive particles removed from said members by the enlarging action of said elements; and a retainer member secured to the second shank portion and engageable by direct pressure contact with the outer side of the members opposite to the member engaged by said head for holding said fastener against withdrawal from said openings, said retainer member having internal wall means defining a chamber circumscribing said second shank portion for receiving and holding a sealing compound, said opening-enlarging elements being shaped for rotary cutting action on the walls of said preformed openings, and the head of said fastener having a shape for engagement by the walls of a complementary recess of a rotary driving tool for installation of the fastener.

2,895,368
BOLT HAVING ROLLED GROOVES AND RECESSED HEAD TO ENHANCE UNIFORM ELONGATION
Charles E. S. Place, Detroit, Mich.; Isobel Place, Paul R. Trigg, Jr., and National Bank of Detroit, coexecutors of said Charles E. S. Place, deceased
Application January 21, 1955, Serial No. 483,366
2 Claims. (Cl. 85—1)

1. A high tension bolt or the like of the type described comprising a solid shank having a plurality of substantially parallel, shallow rolled grooves in the surface thereof spaced circumferentially around the outside thereof and running for substantially the full length thereof, a threaded portion on one end of the shank, a head on the other end of the shank having a bearing surface extending perpendicularly to the axis of the shank, a head clearance portion of the shank immediately adjacent said surface being of blank diameter but of the same cross sectional area as the grooved portion

end with the notches, each of the undercut recesses having a pre-sliding movement through the opening therein in the other direction.

of the shank, said bearing surface being provided with an annular undercut on a radius tangent to said clearance portion, said head having a recess thereon opening out of the top and having a substantially semi-spherical bottom, said recess extending downwardly to such a depth and said undercut radius being of a length such that the area of the minimum head section between the bottom of the recess and said undercut is approximately the same

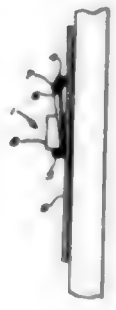


as the critical area of the threaded portion, the area of said shank being substantially constant over the full length thereof and approximately the same as the critical area of the threaded portion, said radius of said undercut being of a length such that the area of said bearing surface is substantially equal to the critical area of the threaded portion and the radial width of said undercut is approximately equal to the radial width of said bearing surface.

2,895,369
PLANK PROTECTOR WITH COLD WORKED DEFLECTING TEETH
James B. Andersen, Muncie, Ind.
Application November 30, 1955, Serial No. 550,009
2 Claims. (Cl. 85—11)

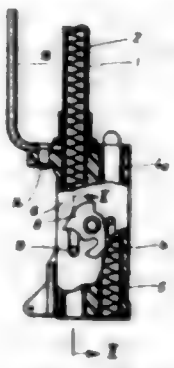
1. A plank protector, comprising an elongated metal strap having a main body adapted to lie transversely of a plank against a face thereof, end portions projecting from the ends of said body and adapted to be bent over the edges of the plank to lie against the sides thereof, said end portions having means for securing the same to the plank sides, a series of spaced teeth along each edge of the strap body portion to penetrate the plank face and secure the strap thereto over substantially the whole width of the plank, said teeth being generally triangular in plan and each bent downward from the body of the strap about a generally longitudinal bend line and normally positioned substantially perpendicular to the plane of the strap, the downwardly presented points of the teeth being offset outward from the plane of the teeth and angled outward to cause the teeth and the points thereon to spread outwardly at different angles when driven into a plank face, a cold worked central area on each tooth forming a recess extending from the base of the tooth toward the point thereof and terminating short of such point to form a ridge at the outer face of the tooth adjacent the point, and a notch extending transversely across the inner face of the tooth adjacent the point, said ridge and notch offsetting the point out of the plane of the tooth.

2,895,370
SHEET METAL SLIDE FASTENER FOR THREADLESS STUDS
Harry L. Hamann, Toledo, Ohio, assignor to Production Metal Stamping Company, Toledo, Ohio, a corporation of Ohio
Application January 23, 1957, Serial No. 635,670
4 Claims. (Cl. 85—36)



1. A combination of a stud of relatively soft material, said stud having parallel flat walls separated by a given distance, a member through which said stud projects, and a piece of hard resilient sheet metal having an elongated slot therein through which said stud projects, both ends of said slot being closed, a first portion of said slot having an open region exceeding the cross section of the stud to freely pass the stud therethrough, an edge at one end of said slot defining a stop against which an end of said stud intermediate said parallel walls is adapted to bear when said piece is moved laterally across said parallel walls, and converging side edges of said slot sloped upwardly with respect to the major surface of said piece from said first portion of said slot and extending from said first portion toward said stop which are separated by less than said given distance over a length from said stop which is substantially less than and preferably about one-half the length of said stud from said end to the remote end of said parallel walls whereby lateral movement of said piece from one end of said stud will cause said side edges adjacent said stop to bite into the parallel stud walls at said one end without affecting the material of the parallel walls at the opposite end and upon removal of said piece from said one end it can be advanced laterally across said parallel walls from the opposite end so that said side edges will bite into unmarred portions of said parallel walls.

2,895,371
BOBBIN CARRIER FOR BRAIDING MACHINES
August Guenther Herzog, Oldenburg-Ofenerdiek, Germany
Application November 25, 1957, Serial No. 698,751
Claims priority, application Germany December 6, 1956
6 Claims. (Cl. 87—56)

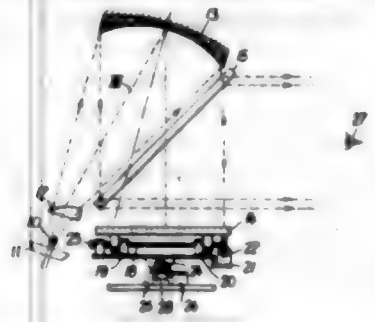


1. A bobbin for braiding machines comprising a base of synthetic material and at least two tube sections of metal arranged side by side and adapted to house operating elements of said bobbin carrier, said tube sections being molded into the synthetic material forming said base.

2,895,372
COLLIMATOR SIGHT

Sven Magnus Tacklind, Johannesbov, and Georg Vogl, Bromma, Sweden, assignors to Svenska Ackumulator Aktiebolaget Jungner, Stockholm, Sweden, a corporation of Sweden

Application January 19, 1956, Serial No. 560,287
Claims priority, application Sweden January 22, 1955
2 Claims. (Cl. 88—2.4)

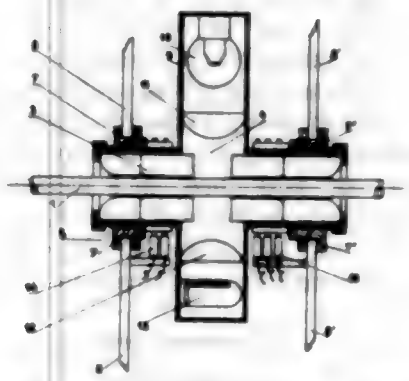


1. A collimator sight comprising a sight mark, a concave mirror mounted obliquely relative to the principal ray extending between the center of the sight mark and the optical center of said mirror, an optical correcting element positioned intermediate said sight mark and said mirror adjacent said sight mark, said correcting element comprising a portion of a plano-convex body arranged asymmetrically with respect to said principal ray, the axis of revolution of said body being in the proximity of the axis of rotation of said mirror and the optical axis of said body intersecting the optical axis of said mirror, said concave mirror parallelizing the rays of light passing from the sight mark through said optical correcting element, an angularly adjustable mirror having a plane surface substantially normal to and in the path of the parallel light rays reflected from said concave mirror, and a transparent plate obliquely arranged intermediate said concave mirror and said adjustable mirror.

2,895,373
DEVICE FOR RECORDING VARIATIONS IN THE DIAMETER OF SUBSTANTIALLY CYLINDRICAL OBJECTS

Yvan Eyraud, Lyon, France, assignor to Compagnie Generale d'Electricite, Paris, France, a corporation of France

Application April 20, 1956, Serial No. 579,511
Claims priority, application France April 28, 1955
2 Claims. (Cl. 88—14)

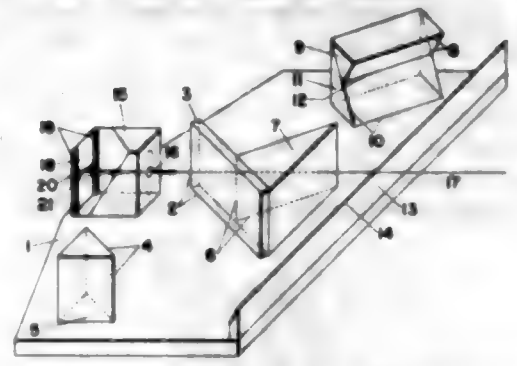


1. A device including a measuring head for recording, during passage through said measuring head, the variations in the tranverse dimensions of objects having relatively great length, such as electric conductors, comprising means providing relative rotary movement between said measuring head and the object to be tested, a light source, means including a bridge circuit with a first photo-electric cell and a second photo-electric cell in operative relationship to said source for simultaneously detecting variations, along said object, of the mean dimensions in different radial directions, on the one hand, and variations of the dimensions of said object in different radial directions in the same perpendicular plane, on the other, and recording means connected to the output of said bridge circuit for individually recording said two types of variations.

2,895,374
STEREO-OPTICAL SYSTEM

Edgar E. Price, Norfolk, Va., assignor of one-tenth to James R. Forman, Fairfax County, Va., and one-tenth to Don C. Glassie, Montgomery County, Md.

Application September 14, 1954, Serial No. 455,860
13 Claims. (Cl. 88—16.6)



1. An optical system for forming on a film or projecting into a stereoscopic coincidence from a film stereoscopically dissimilar image pairs inverted with respect to each other about an imaginary line located in the film and in a plane perpendicular to the film which plane contains the line along which may be measured the distance between elements in the system which determines the amount of stereoscopic dissimilarity in the image pairs; comprising a film gate; optical image forming means positioned with respect to the film to form or project said image pairs; a plurality of reflecting surfaces located on that side of the said optical image forming means away from said film gate arranged to receive light rays corresponding to each point in the image pairs, to cause the light rays corresponding to each point in one of the image pairs to be displaced by an amount and in a direction to provide part of the stereoscopic dissimilarity between the image pairs, and to cause light rays corresponding to each point in the other of the image pairs to be displaced by an amount and in a direction to provide the remaining part of the stereoscopic dissimilarity between the image pairs, and additionally to cause light rays corresponding to each point in the other of the image pairs to be symmetrically transposed or inverted from one side to the other of said plane perpendicular to the film, said plurality of reflecting surfaces comprising a combination of two plane reflecting surfaces immediately adjacent to said optical image forming means, a laterally displaced plane objective reflecting surface, and a laterally displaced objective roof reflector, the directions of lateral displacement being along suitably located lines in the plane perpendicular to the film and containing said imaginary line located in the film; an opaque mask located on that side of the plurality of reflecting surfaces away from the image forming means and adapted to absorb or deflect light rays corresponding to those points in each image which would otherwise be superimposed upon each other; and means comprising suitably placed polarizing elements by which predetermined polarization characteristics may be imparted to the light rays corresponding to each of said image pairs.

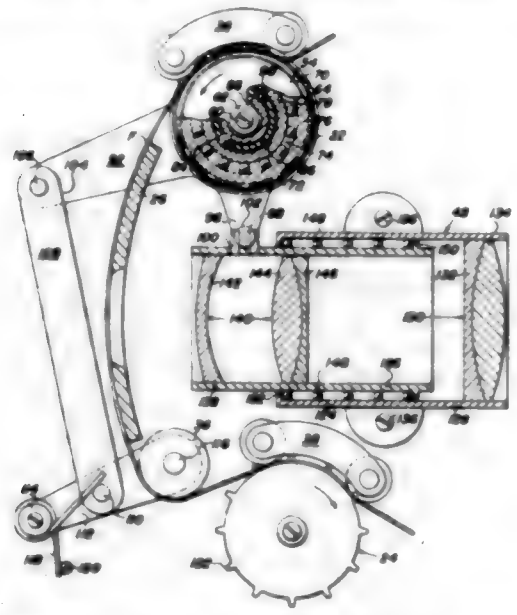
2,895,375
FILM PITCH COMPENSATING MECHANISM FOR PHOTOGRAPHIC APPARATUS

Otto Wittel, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Application August 4, 1954, Serial No. 447,862
7 Claims. (Cl. 88—17)

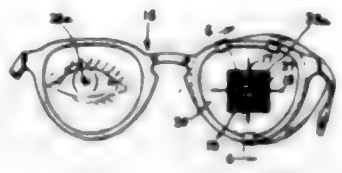
1. In photographic apparatus the combination with a film gate and synchronously driven rotatable driving

members each mounted on a driving shaft and positioned opposite the entrance and exit sides of said gate for engaging a film strip and for advancing said film strip through said gate, of a variable film pitch compensating device associated with one of said driving members and comprising fixed bearing means nonrotatably mounted in said apparatus and supporting said one driving member and its shaft for rotation about a fixed rotational axis, a cylindrical drum peripherally disposed about said one driving member and rotatably driven thereby, second bearing means concentric with said drum for rotatably mounting said drum on said fixed bearing means, said second bearing means being pivotally mounted on said fixed bearing means for movement independently of the rotation of said drum, between a first position concentric with said fixed bearing means and a second position eccentric with said fixed bearing means, said drum



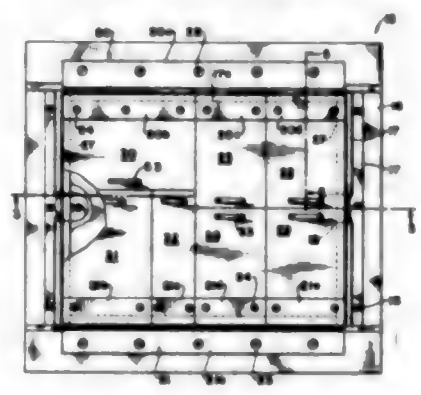
in said first position of said second bearing means supporting a film strip having a normal film pitch on said one driving member at a normal driving radius and in said second position of said second bearing means supporting a film strip having a film pitch which is different from said normal film pitch on said one driving member at a driving radius different from said normal driving radius, and means for sensing variations in pitch of said film strip being advanced through said gate, said sensing means comprising contact means in engagement with said film strip beneath said driving members and movable by said strip in response to variations in pitch of the film strip between said driving members, and means for imparting the movements of said contact means to said second bearing means to position said second bearing means in one of said positions in accordance with the pitch of said film strip.

2,895,376
OCCLUDERS FOR SPECTACLE ATTACHMENT
Edward Linder, Jr., Oreland, Pa.
Application April 19, 1955, Serial No. 502,409
4 Claims. (Cl. 88—20)



1. An optical occluder for attachment to the rim of a lens supporting frame for occluding an eye of the user, said occluder comprising a front flat opaque disk of distortable plastic material having a contour shape and size to fit rearwardly adjacent the plane of the rim, a metallic washerlike member of a diameter less than the diameter of the disk embedded in said disk with its side surfaces substantially parallel with the side surfaces of the disk and having a plurality of integral adjustable fingers extending radially outwardly thereof and outwardly of the outer contour edge of the disk on opposed sides thereof, an opaque cup portion of yieldable material having a front portion secured to the rear surface of said disk and spaced inwardly of its contour edge and extending rearwardly thereof and having a rear edge portion shaped to have a relatively intimate yielding fit with the face about the eye of the user and said disk having an opening therein inwardly of said washerlike member, said fingers being of a length to permit them to be adjusted to a shape to have a gripping fit with the rim on the opposed sides thereof to hold said occluder in proper position on said rim.

2,895,377
ENLARGING EASEL ESPECIALLY ADAPTED FOR USE IN A SYSTEM FOR IDENTIFYING HORSES
James J. Manning, Floral Park, N.Y.
Application April 6, 1956, Serial No. 576,692
5 Claims. (Cl. 88—24)

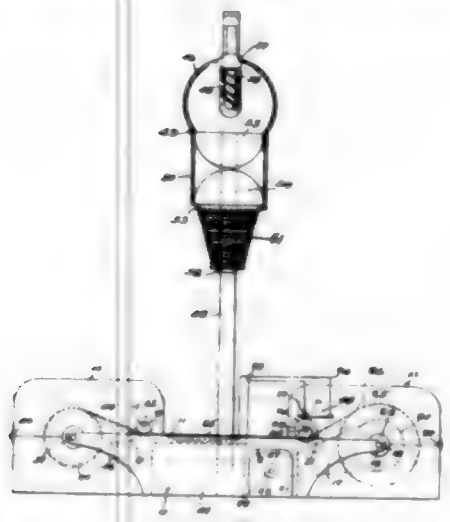


1. An enlarging easel especially adapted for the preparation of a composite of enlargements of photographs for the identification of horses, comprising a base, a support on said base for engaging and supporting a rectangular sheet of photographic paper, a plurality of separate masking elements hinged to said base and individually movable with respect thereto, said masking elements acting in combination to cover the whole of the surface of a photographic sheet on said support, said masking elements being of rectangular shape and being at least seven in number, four of said masking elements being grouped at one end of said base and being adapted to cover four substantially equal quadrant portions of a rectangular area of said photographic sheet, said rectangular area being substantially less than the whole of the effective area of said sheet and means forming light-colored upper surfaces for said masking elements to facilitate the projection of an image thereupon for aligning said easel preparatory to exposing a portion of said photographic paper.

2,895,378
PHOTOGRAPHIC ENLARGER
William J. Budde, New Orleans, La.
Application February 20, 1957, Serial No. 641,387
1 Claim. (Cl. 88—24)

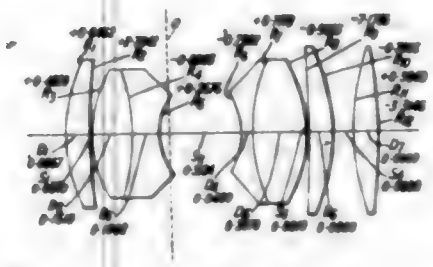
A photographic enlarger comprising a base, oppositely extending roll supporting bracket arms carried by said base, a supply roll rotatably disposed on one pair of arms, a winding roll rotatably carried by the other pair of arms, an electric motor, a belt and pulley connection between said motor and said winding roll for rotating the latter, a centrally disposed platform on said base, sensitized paper in said supply roll extending across said platform to said winding roll, a housing for each roll having a slotted opening therein adjacent the top of said plat-

form, said sensitized paper extending through said opening, a pair of upper and lower idler rollers in each housing adjacent its slotted opening, said upper roller of each pair of rollers being disposed above the upper side of said sensitized paper in contact with and rotating said upper rollers by contact with the sensitized paper, a shaft mounting each idler roller, a vertically disposed standard centrally disposed on said base, a housing carried by said standard, a negative holder in said housing above said



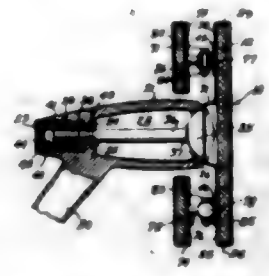
platform, an electronic flasher tube in said housing above said negative holder, a power source providing current for said flasher tube, a normally open flasher switch including a switch blade in said housing for said winding roll, and a cam on said upper roller of one pair of rollers operable intermittently moving said switch blade to close said flasher switch, said cam being mounted on the shaft of the adjacent idler roller whereby rotation is imparted thereto upon rotation of its associated idler roller by the passage of said sensitized paper thereunder.

2,895,379
OPTICAL OBJECTIVES
Gordon Henry Cook and Peter Arnold Merigold, Leicester, England, assignors to Taylor, Taylor & Hobson Limited, Leicester, England, a British company
Application December 17, 1956, Serial No. 628,582
Claims priority, application Great Britain December 30, 1955
18 Claims. (Cl. 88—57)



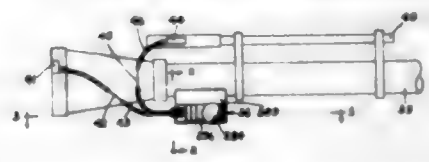
1. An optical objective corrected for spherical and chromatic aberrations, coma, astigmatism, field curvature and distortion, and having a stop position which lies within 0.2 F of the front focal point of the objective and with respect to which such aberrations are corrected, where F is the equivalent focal length of the objective, the objective having an overall axial length which lies between 0.85 F and 1.5 F and comprising two axially spaced members, of which the front member consists of a compound meniscus dispersive component having its air-exposed surfaces convex to the front and a simple collective component located in front of such compound component, whilst the rear member has an equivalent focal length *f* lying between 0.4 and 0.7 times the overall axial length of the complete objective and consists of two simple collective components and a compound meniscus dispersive component located in front of such simple components, the rear surface of such compound component being concave to the front and having radius of curvature lying between 0.7 *f* and 1.1 *f*, the front focal point lying within 0.25 *f* of the vertex of the rear surface of the front dispersive meniscus component.

2,895,380
REAR VIEW MIRROR
Paul C. Kurlytis, Springfield, Ill.
Application May 21, 1957, Serial No. 660,515
1 Claim. (Cl. 88—86)



In a multiple position rear view vehicular mirror, a support for attachment to a vehicle fender, a rectangular frame pivotally connected to said support, a rectangular mirror carried by said rectangular frame, a bifurcated shaped frame, a square mirror carried by the body portion of said bifurcated shaped frame, means supported by the leg portions of said bifurcated frame, a ball pin carried by the forward side of each of said means in said leg portions, a pair of channel members mounted horizontally on the rear of said rectangular frame, longitudinal slots provided in the upper and lower extending portions of said channel members, a vertical bore provided in each of the balls carried upon the free ends of the ball pins, said balls assembled within said channel members and locking bolts extending through said slots and said bores to secure said square mirror in position relative to said rectangular mirror.

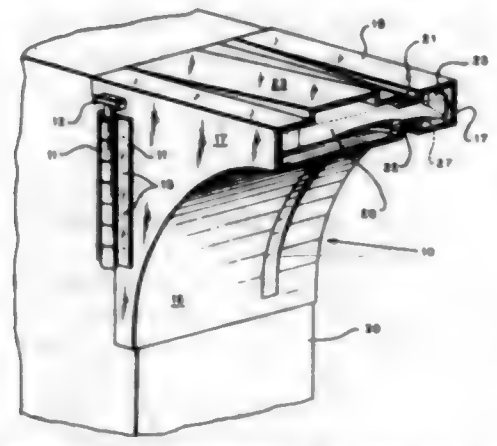
2,895,381
TRIGGER RELEASE MECHANISM FOR A PLURALITY OF GUNS
C Walton Musser, Beverly, Mass., assignor to the United States of America as represented by the Secretary of the Army
Original application February 24, 1953, Serial No. 338,627, now Patent No. 2,805,603, dated September 10, 1957. Divided and this application July 18, 1957. Serial No. 672,845
2 Claims. (Cl. 89—27)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a combination with a large caliber rifle, of a smaller caliber spotting rifle by means of which the larger caliber rifle may be brought to bear on a target by the preliminary firing of said spotting rifle, the combination with said large caliber rifle and said spotting rifle of the improvement for simplifying and expediting the firing of said spotting rifle and larger caliber rifle by means of a single trigger release mechanism, said improvement including a flexible cable for said spotting rifle, a second flexible cable for said larger caliber rifle, a guide for each flexible cable, a firing means for each of said rifles on pulling its flexible cable, a walking beam having a pivotal support adjacent each end portion for selectively supporting said walking beam and pulling either flexible

cable, one of said flexible cables being attached to said walking beam adjacent each pivotal support and an actuating arm projection on said walking beam intermediate its end portions, whereby said actuating arm projection may be moved in a first direction pivoting a first rounded end portion of the walking beam about its adjacent pivotal support and pulling the flexible cable attached to an opposite end portion of the walking beam, and whereby said actuating arm projection may be moved in a direction opposite the first direction, pivoting a second end portion of the walking beam about its adjacent pivotal support and pulling the flexible cable attached to an end portion of the walking beam opposite said first mentioned pivotal support.

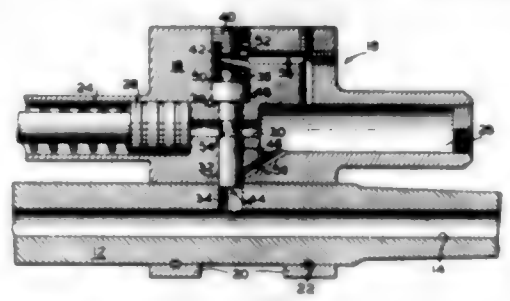
2,895,382
JAM-PROOF FEED MOUTH ASSEMBLY FOR AMMUNITION CONTAINERS
Raymond A. Starry, Levittown, Pa.
Application September 29, 1955, Serial No. 537,592
5 Claims. (Cl. 89—34)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An ammunition container for tapered round ammunition to be supported therein by a cartridge belt folded in successive horizontal layers within the container, said container comprising a rectangular box with a substantial rectangular opening therethrough adjacent the upper edge of one vertical end thereof, an inwardly flared outlet assembly fixedly secured to said container, said outlet assembly, including upper and lower walls and a pair of side walls interconnecting said upper and lower walls, being generally rectangular in vertical cross-section and terminating at the outer end in a horizontally elongated outlet opening, the lower wall thereof being curved away from the outlet opening and faired smoothly into vertical alignment with the end of the container adjacent the lower edge of the rectangular opening therethrough, a first elongated ammunition guide means smoothly tapered lengthwise thereof thickest at the outlet opening, extending along the inner surface of the upper wall adjacent to but spaced from one side wall, and faired into the inner surface of the upper wall adjacent to said container, and a second elongated ammunition guide means smoothly tapered lengthwise thereof thickest at the outlet opening, extending along the inner surface of the lower wall adjacent to but spaced from the same side wall, and faired into the inner surface of the lower wall adjacent to said container.

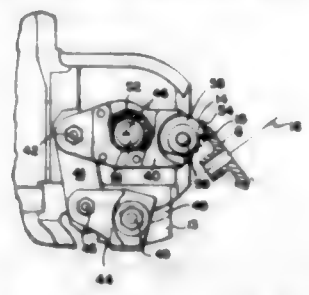
2,895,383
GAS SYSTEM FOR FIREARMS
Frederick P. Reed, Ludlow, Mass., assignor to the United States of America as represented by the Secretary of the Army
Application May 8, 1957, Serial No. 657,990
2 Claims. (Cl. 89—191)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In a firearm having a barrel with a bore and a gas port leading therefrom, a gas-operated actuating system including a cylinder, a chamber, a piston slidingly mounted in said cylinder, a passageway between said cylinder and said chamber, an aperture for directing gases from the bore to said chamber, a valve actuatable by the difference in the pressure of the gases in said chamber and the bore, and stem means on said valve disposed for cooperation with said passageway and said aperture for



unblocking said aperture to permit passage of gases into said chamber when the pressure of the gases in the bore is greater than that of the gases in said chamber and for simultaneously blocking said aperture and passing the gases in said chamber through said passageway to said cylinder for energizing said piston when the pressure of the gases in said chamber is greater than that of the gases in the bore.

2,895,384
MACHINE FOR CUTTING GEARS AND THE LIKE
Meriwether L. Baxter, Jr., Brighton, and Leonard O. Carlsen, Rochester, N.Y., assignors to The Gleason Works, Rochester, N.Y., a corporation of New York
Application June 15, 1954, Serial No. 436,824
20 Claims. (Cl. 90—6)

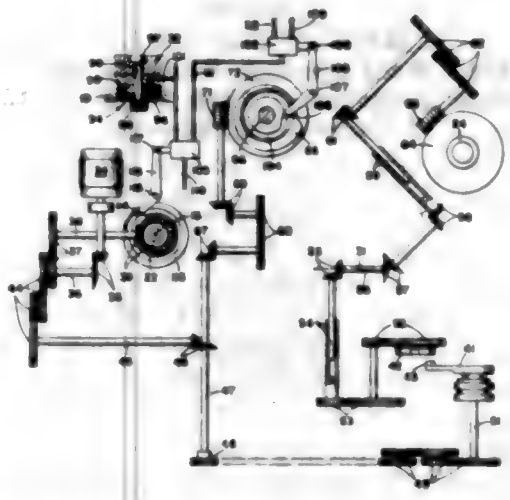


1. A machine for cutting the tooth sides of straight bevel gears and the like with a tool which while cutting moves substantially in the direction of the root of the tooth side being cut, from end to end of such tooth side, comprising a work support and a tool support, and means on the tool support for carrying a cutting tool in a substantially elliptical orbit, with the tooth-side-cutting edge of the tool disposed approximately in the plane of said orbit, said means being so positioned on the tool support that the tool moves in the direction of the major diameter of said orbit when it is at least approximately at the mid-points of its cutting and return strokes, said orbit providing a path of tool motion that is of relatively large radius while the tool is cutting and of relatively small radius during the advance and withdrawal of the tool which respectively precedes and follows cutting.

2,895,385
FEED MECHANISM FOR A MACHINE FOR CUTTING GEARS AND THE LIKE
Leonard O. Carlsen, Rochester, N.Y., assignor to The Gleason Works, Rochester, N.Y., a corporation of New York
Application March 10, 1958, Serial No. 720,221
15 Claims. (Cl. 90—6)

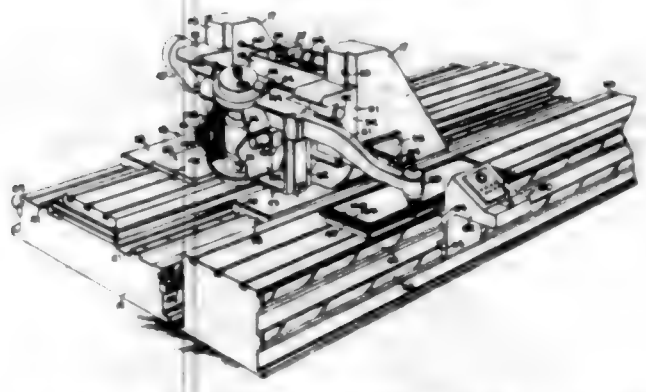
15. A machine for cutting gears or the like having a tool arranged to cut intermittently and a slide movable on its support for effecting a feed motion between the tool and the workpiece, feed means for urging such feed

motion of said slide, a movable stop for limiting the feed motion and means for moving the stop as the cutting operation proceeds, a clamp for securing the slide to the support, and a control for the clamp operating in



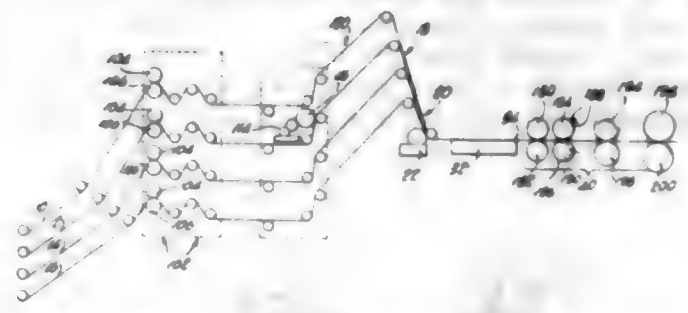
time with the tool for maintaining the clamp applied while the tool is cutting and for releasing it when the tool is idle to thereby allow feed motion to the extent permitted by the stop.

2,895,386
PROFILING MACHINE
Theodore C. Mann, Beloit, Wis., assignor to Ekstrom-Carlson & Co., Rockford, Ill., a corporation of Illinois
Application January 27, 1955, Serial No. 484,381
9 Claims. (Cl. 90—13)



1. In a machine tool, the combination of, a work support, a member mounted for movement along a predetermined path relative to said support, a tool support mounted on said member for bodily movement therewith and for movement relative to the member along a second and perpendicular path, a first power actuator for moving said member along said first path, a second power actuator for moving said tool support along said second path, a selector manually movable in a plurality of directions, control mechanism responsive to said selector and operable to energize said actuators in a proportion correlated with the direction of selector movement thereby to move said tool support in a corresponding direction, an element for supporting a template, a template follower carried by said tool support and engageable with the template whereby the tool support is moved by manipulating said selector to move the follower along the template, said follower being mounted for movement relative to said tool support in a direction toward and away from the template and movable in such a direction when the direction of selector movement deviates from the direction of the template, and mechanism responsive to movement of said follower relative to said tool support to change the proportion of energization of said actuator and thereby correct the direction of movement of the tool support and the follower.

2,895,387
MULTIPLY BAG WITH SUPPLEMENTAL SLEEVE
Paul C. Robinson, Canajoharie, N.Y., and Arch L. Staffileno, Brooke, W. Va., assignors to Arkell and Smiths, a corporation of New York
Application December 7, 1956, Serial No. 627,004
5 Claims. (Cl. 93—8)

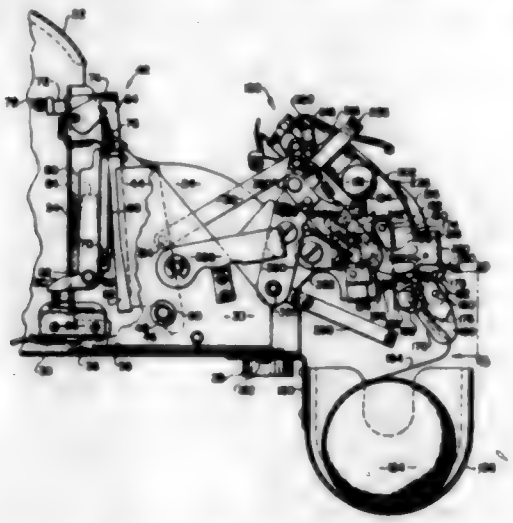


5. In automatic bag tube forming apparatus of the type in which a plurality of plies of bag-forming material are continuously fed into the apparatus as separate flat plies of material which are subsequently superimposed one on top of the other to form a bag wall the sides of which are overlapped and pasted together in the form of a bag tube which is in turn divided into bag lengths which are valved by folding a portion of the bag side wall inwardly into the tube at the open mouth thereof, the improvement which comprises apparatus for inserting a supplemental sleeve in the valve of the bag tube which includes means for weakening the plies of bag-forming material at least along the line of the lip of the valve while the plies are flat before being folded into tube form, means for feeding a web of sleeve stock at a speed below that of the plies of bag-forming material, means for weakening the web of sleeve stock in a line across the web in order to delineate lengths of sleeve patch therein, means for continuing the feeding at a speed below that of the speed of the plies of bag-forming material which means for continuing the feeding are adapted to bring one end of the sleeve patch at the free end of the web into contact with one of the plies of bag-forming material in the area of the valve therein, means for thereafter accelerating the speed of such sleeve patch up to that of the ply of bag-forming material with which it is in contact whereby the said sleeve patch is separated from the web and positioned on the ply to provide a supplemental sleeve for the valve of the finished bag tube, said means for accelerating a length of sleeve patch to separate it from the web including an idler roll positioned under the ply adjacent the place where the free end of the web of sleeve stock is fed into contact with such ply and a cooperating roll positioned above such ply and out of contact therewith, pivotal means for rotatively mounting said cooperating roll, cam means adapted to pivot the cooperating roll down into contact against the free end portion of the web of sleeve stock after it is fed into contact with the ply of bag-forming material and means for driving the cooperating roll at a speed approximately equal to that of the ply of bag-forming material whereby a length of sleeve patch may be separated from the web and applied in position on the ply of bag-forming material.

2,895,388
MACHINE FOR AFFIXING IDENTIFICATION TAGS
Jamieson A. Flisinger and Philip N. Braun, Syracuse, N.Y., assignors to Textile Marking Machine Co., Inc., Syracuse, N.Y., a corporation of New York
Application June 9, 1958, Serial No. 740,830
8 Claims. (Cl. 93—88)

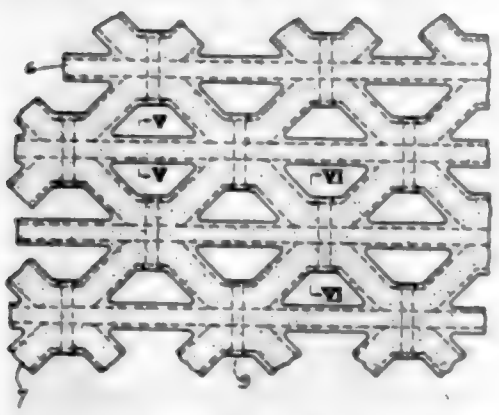
1. A machine for stapling identifying tags to garments and the like including a frame, a stapling assembly having a stapling head mounted on the frame, an anvil assembly including an anvil having a clinching surface

mounted on the frame, one of said assemblies moving into and out of stapling engagement with the other assembly to effect a stapling operation, a supply of tape carried by said machine, means for feeding an end portion of said tape to an extended position past said anvil on said anvil assembly, clamp means movable into and out of clamping and unclamped positions and actuated by said feeding means to clamp said tape on said anvil in said extended position relative to said anvil, a tag holder carried by said anvil assembly in proximity to said anvil with said extended portion of tape juxtaposed



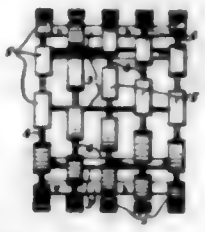
therewith, a tag folder carried by said anvil assembly and operable when actuated to fold said clamped extended tape portion into a V-shaped tag with the apex of said tag supported in said tag holder with the legs of said tag overlying the clinching surface of said anvil, whereby upon insertion of an edge of said garment in said apex and movement of one of said assemblies to effect said stapling operation, said tag is stapled to said garment, tag severing means operable during said stapling operation to sever said tag from said tape and means operable upon return movement of said movable assembly to return the clamp means to the unclamped position.

2,895,389
COATINGS FOR THE TRAFFIC BEARING SURFACES OF GRATING
Harold Nagin, Pittsburgh, Pa., assignor to Reliance Steel Products Company, McKeesport, Pa., a corporation of Pennsylvania
Application September 16, 1954, Serial No. 456,380
2 Claims. (Cl. 94—5)



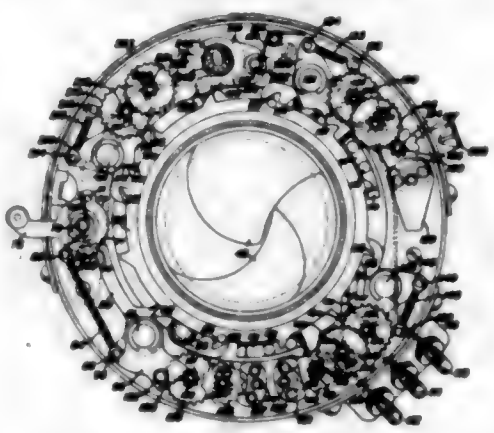
1. An open mesh metal grating having anti-slipping traffic bearing surfaces, comprising interconnected metal members having their upper surfaces in substantially the same plane to provide traffic bearing surfaces and side surfaces extending downwardly from the traffic bearing surface, a mixture of one part by volume of liquid epoxy resin plus about 10% by weight of a catalyst and not less than one part by volume of sand-like abrasive particles applied as a continuous coating of substantial thickness over the exposed traffic bearing surfaces, the joints therebetween and a substantial portion of the adjacent exposed side surfaces of the said interconnected metal members.

2,895,390
SEGMENTED ROLL
Adryl Wade Gardner, Redlands, Calif.
Application December 17, 1956, Serial No. 628,880
7 Claims. (Cl. 94—50)



1. A roll for compacting loose material comprising a composite cylindrical broken surface supported on a hub, said surface comprising spaced annular rows of substantially identical compaction pads, the pads in each row being separated circumferentially by uniform gaps therebetween, said roll including a system of no less than three rows of pads progressively staggered in the same circumferential direction, wherein each gap defines a circumferential spacing from the trailing edge of one pad to the leading edge of the next pad in the same row, and this gap lies opposite a transverse edge of a pad in each immediately adjacent row, and said spacing being in each case greater than the circumferential distance from the said trailing edge to each transverse edge located adjacent said gap.

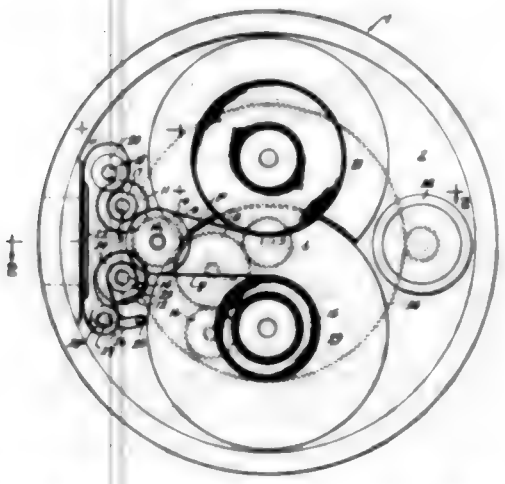
2,895,391
SHUTTER FOR PHOTOGRAPHIC CAMERAS
Archie H. Gorey, Irondequoit, N.Y., assignor to Graflex, Inc., Rochester, N.Y., a corporation of Delaware
Application September 8, 1955, Serial No. 533,191
3 Claims. (Cl. 95—11.5)



1. A between-the-lens shutter for photographic cameras comprising a casing, a shutter leaf movably movable from a cocked to a released position and connected to said shutter leaf to open and close the same upon movement of said member in one direction, a rotary toothed wheel mounted coaxially with the lenses and having a plurality of teeth equispaced about its axis and connected to said rotary member to rotate upon rotation of said rotary member and electrically grounded in said casing, a manually releasable member positioned to engage a tooth of said wheel when said wheel has rotated through one pitch to stop rotation of said wheel and of said rotary member, a pair of conductors positioned in angularly spaced relation about the axis of said wheel, said conductors being spaced apart an angular distance which is greater than but not an exact multiple of the pitch of the teeth of said wheel, whereby said conductors are engaged, respectively, by

different teeth of said wheel after, respectively, different amounts of rotation of said wheel, and three terminals, one of which is electrically connected to one of said conductors, another of which is electrically connected to the other of said conductors, and the third of which is grounded in said casing, whereby a flashlamp may be connected with said third terminal and with either of the other two terminals to be flashed upon contact of a tooth of said wheel with the conductor that is connected electrically with the other terminal to which the flashlamp is connected.

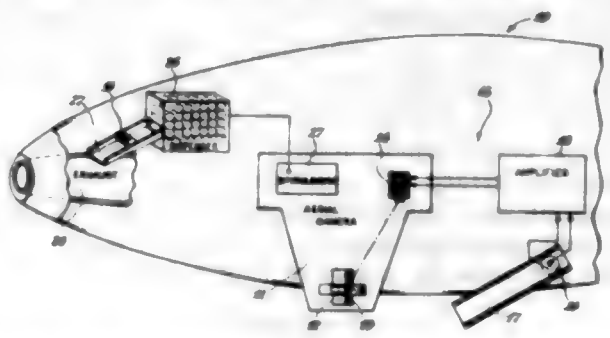
2,895,392
IMAGE MOTION COMPENSATING FILM CONTROL APPARATUS
Harry R. Habig, Dayton, Ohio
Application May 26, 1954, Serial No. 432,347
9 Claims. (Cl. 95—12.5)



1. Film transport control apparatus for a camera including a film feed sprocket, a film take-up sprocket and a film gate interposed therebetween comprising, a smooth contoured cam means integrally connected to the take-up sprocket coaxially therewith, a free swinging arm pivoted adjacent the take-up sprocket, a film spacing roller rotatively mounted on the free swinging arm engaging the film intermediate the film gate and the take-up sprocket as it flows therebetween, means for driving said sprockets at a continuously uniform speed, the film freely biasing said film spacing roller against said cam as the take up sprocket rotates to be tensioned by said cam in varying degrees during cyclic operation of the take-up sprocket to induce a wide range of acceleration and deceleration of the film through the film gate only, the conformation of said cam being such as to induce harmonic motion of the film, through the film gate only, and a shutter operatively connected to said cam means for synchronous rotation therewith, said shutter having means defining an exposure aperture, said shutter and said cam means being relatively adjustable in a rotative sense to shift the cyclic position of said exposure aperture relative said cam means, thus providing image motion compensation to a variable degree along with precise registration within a single camera unit.

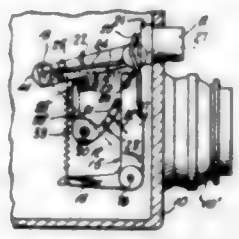
2,895,393
AUTOMATIC AERIAL PHOTOGRAPHY SYSTEM
George W. Goddard, Chevy Chase, Md., assignor to Bulova Research and Development Laboratories, Inc., Woodside, N.Y., a corporation of New York
Application February 9, 1956, Serial No. 564,535
4 Claims. (Cl. 95—12.5)

1. In a jet or rocket propelled missile provided with rear exhaust tubes through which propulsive gases are emitted, an aerial photographic system comprising a camera having an exposure shutter, means to drop a flash-powder cartridge into said exhaust to cause rearward propulsion thereof, said cartridge having fuse means ignited by said gases to effect an explosion of the flash



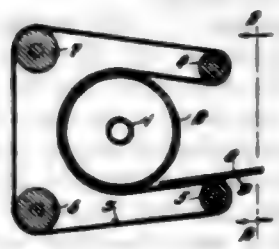
powder at a point sufficiently rearward of the missile to produce long shadows, and means responsive to the illumination of said flash powder to actuate said shutter.

2,895,394
SINGLE LENS REFLEX CAMERA
Alex C. Muller, New York, N.Y., assignor of fifty percent to Albert W. Moser, New York, N.Y.
Application February 29, 1956, Serial No. 568,472
6 Claims. (Cl. 95—42)



1. In a single lens reflex camera comprising a reflecting mirror movable, respectively between a viewing position intercepting the lens axis and a picture-taking position clear of said axis and shutter actuating means actuatable along a fixed operating path between an initial position and a shuter actuating position; operating mechanism for said mirror comprising first constant biasing means independent of said shutter actuating means to urge said mirror to said picture-taking position, detent means to normally hold said mirror in the viewing position against the action of said biasing means, means to release said detent means by said shutter release means at the end of said operating path and prior to the actuation of the shutter, and further biasing means for said mirror controlled by said shutter actuating means, to provide an additional biasing force intermittently raising said constant bias prior to the release of said mirror by said detent means, thereby to cause a quick-action deflection of said mirror from its viewing position to its picture-taking position.

2,895,395
CONVEYOR DEVICE FOR PHOTO-PRINTING MATERIAL IN PHOTO-PRINTING MACHINES
Ernst D. Gern, Zurich, Switzerland, assignor to Engelhard Industries, Inc., Newark, N.J., a corporation of New Jersey
Application December 20, 1955, Serial No. 554,304
Claims priority, application Switzerland April 16, 1955
3 Claims. (Cl. 95—77.5)



1. Photo-printing apparatus comprising a light source, a conveyor means, a transparent member having a cylin-

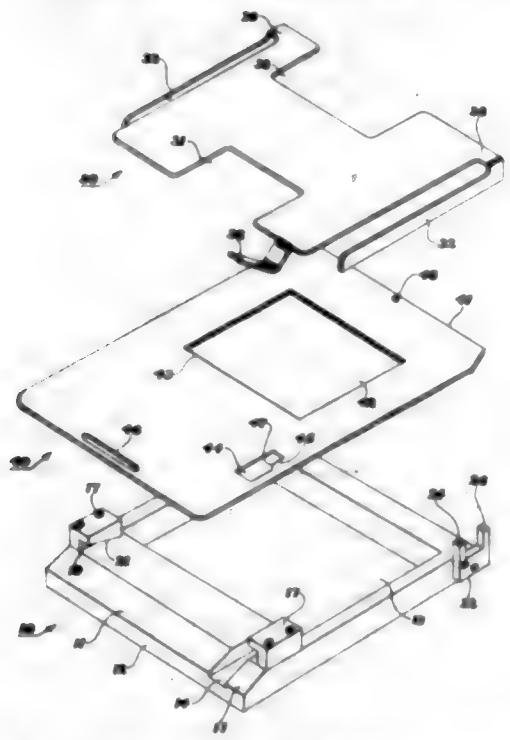
drical surface, the transparent member being positioned between the light source and the conveyor means, the conveyor means being an endless belt, a plurality of spaced contact surfaces on one side of the belt and distributed across the entire width thereof, heat insulation means between said contact surfaces, said heat insulation means being longitudinal grooves and said contact surfaces being longitudinal ribs, said grooves and ribs being the surface of a pile fabric, said contact surfaces contacting said cylindrical surface whereby the heat transfer from said light source to said belt is uniformly distributed across the width of said belt.

2,895,396

INTERCHANGEABLE MASK ARRANGEMENT FOR PHOTOGRAPHIC PRINTERS

John S. Pollock and Willard R. Amann, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Application June 13, 1957, Serial No. 665,534
12 Claims. (Cl. 95—79)



1. In a photographic printer adapted to hold a length of printing paper and having a platen normally positioned for maintaining said paper in a printing position, the combination of: a printing mask adapted to be moved from a position away from said paper to a position adjacent said paper, said mask having a portion thereof adapted to cooperate with a portion of said platen for moving said platen during at least a part of the movement of said mask; and a connection between said platen and said paper for moving the paper away from said printing position in response to said movement of the platen.

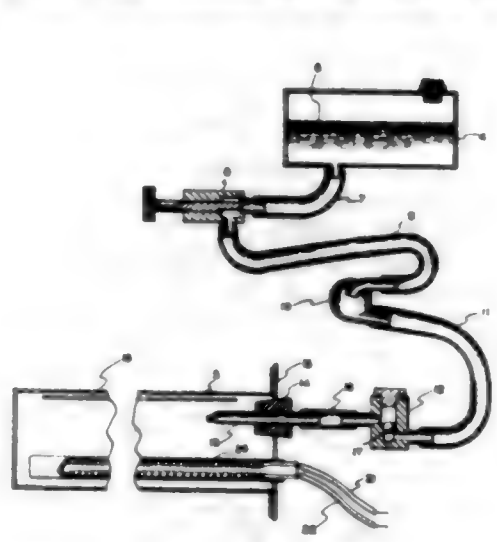
2,895,397

DEVELOPING LIQUID FEED AND VAPORIZING SYSTEM FOR DIAZOTYPE MACHINES

Gordon K. Hurlbut, Chenango Bridge, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

Application February 7, 1957, Serial No. 638,793
3 Claims. (Cl. 95—89)

1. In a developing apparatus for diazo sensitized material having a developing tank, the combination comprising a heated vaporizing chamber, said chamber having a plurality of openings therein for the passage of vapors therefrom into the tank, a liquid storage re ervoir positioned at a higher elevation than said chamber, conduit means connecting said reservoir to said chamber, whereby liquid may flow from said reservoir to said chamber by gravity, said conduit means including a vertically extending portion, a nozzle extending into said chamber and tubular means for connecting said nozzle to said vertically extending portion, a fluid pressure operated check valve in said tubular means, said check valve being arranged to open by the pressure of the head of liquid in said vertically extending portion and to close by the back pressure of the fluid in said nozzle



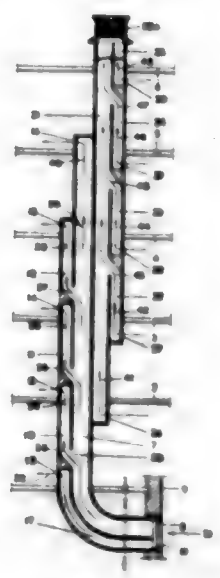
whereby when the pressure in the nozzle exceeds the pressure of the head of liquid in said vertically extending portion, the flow of liquid from said vertically extending portion to said nozzle is cut off and when the pressure in the nozzles falls to below the pressure of the head of liquid the flow is reestablished and means in said conduit means, positioned adjacent the reservoir, to control the flow of liquid from the reservoir to the vertically extending portion.

2,895,398

VENTILATING SYSTEM FOR A BUILDING, E.G. A BUILDING DIVIDED INTO FLATS

Johannes Petrus Hekelaar, The Hague, Netherlands, assignor, by mesne assignments, to N.V. Outwerp- & Exploitatiebureau "Shunt," The Hague, Netherlands, a limited-liability company

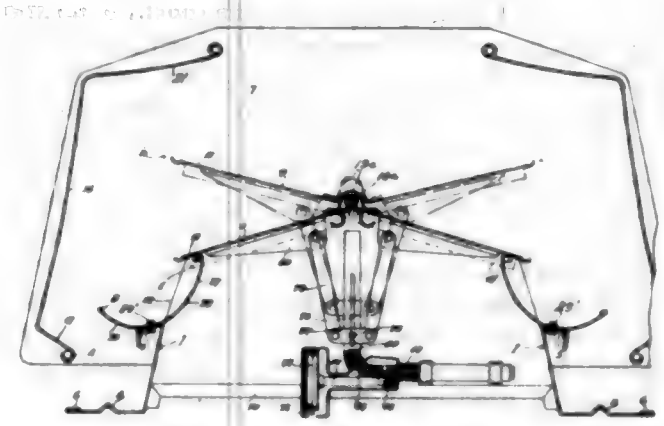
Application October 24, 1956, Serial No. 618,106
Claims priority, application Netherlands July 4, 1956
1 Claim. (Cl. 98—32)



A ventilating system for ventilating a plurality of stories in a multi-story building, said system comprising a vertical main channel having at its lower end an inlet opening communicating with the atmosphere and at its upper end an opening communicating with the uppermost story of the building adjacent the floor thereof, a second vertical main channel having an exhaust outlet

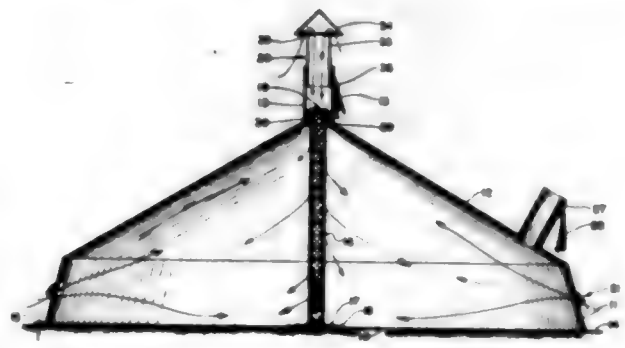
at its upper end, and a lower end communicating with the first story of the building adjacent the ceiling thereof, said two channels being located adjacent to and separated from each other, a plurality of superposed vertical auxiliary channels branching off the first-mentioned main channel, each of said vertical auxiliary channels having a lower end communicating with the first-mentioned main channel and an upper end communicating with a separate story adjacent the floor thereof, a plurality of superposed vertical auxiliary channels branching off said second main channel and being located opposite to the first-mentioned auxiliary channels, each of the second-mentioned vertical auxiliary channels having a lower end communicating with a separate story adjacent the ceiling thereof and an upper end communicating with said second main channel, a further vertical auxiliary channel located parallel to the lower portion of the first-mentioned main channel and having at its lower end an air inlet opening and at its upper end an opening communicating with the first story of the building, and a still further vertical auxiliary channel located parallel to the upper portion of said second main channel and having a lower end communicating with the uppermost story of the building and an upper end communicating with the atmosphere.

2,895,399
VENTILATORS
Ignatius John O'Hea, Surbiton, England, assignor to Colt Ventilation Limited, Surbiton, England, a British company
Application July 3, 1956, Serial No. 595,689
Claims priority, application Great Britain July 6, 1955
2 Claims. (Cl. 98—42)



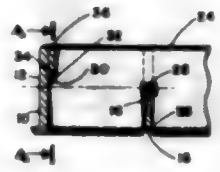
1. A roof ventilator including channel shaped lateral members mounted on opposite sides of a roof opening with their web portions extending substantially vertically and with their flanges extending away from the opening, end walls secured to the longitudinal ends of the channels, the two channels and the two end walls forming a throat above and around the roof opening, ventilator end plates secured to and spaced outwardly from the said end walls, arcuate splash guards, means mounting the arcuate portion of the guard on the upper flanges of the channels so that a portion of each guard extends over the throat and extends above the level of the opposite side portion of each guard, a pair of substantially vertical baffles, on said ventilator end plates spaced outwardly from said splash guards, each said baffle having a substantially horizontal inwardly projecting flange at the top, cover means mounted above said throat and beneath said inwardly projecting flanges and extending substantially over the throat between the end walls and mounted on said end walls, said cover being wider than the space between the edges of the inwardly extending portions of said splash guards and wider than the distance between the edges of the horizontal inwardly projecting flanges of said baffles.

2,895,400
GRAIN STORAGE BAG
Sam B. Topf, Cambria Heights, N.Y., assignor to Concord Supplies and Equipment Corporation, New York, N.Y., a corporation of New York
Application May 9, 1955, Serial No. 507,086
10 Claims. (Cl. 98—55)



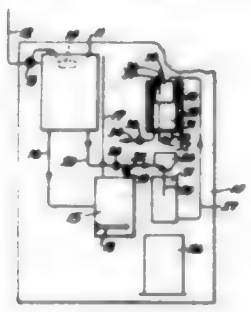
10. A grain storage structure comprising a floor portion having a circular configuration, an upwardly-tapered cylindrical gusset portion secured continuously at its lower edge to the periphery of said floor portion to prevent entry of animals in said structure, said gusset portion being provided with a plurality of screened vent openings circumferentially arranged at spaced positions, an upright truncated-pyramidal roof portion secured at its base to the upper edge of said gusset portion, said roof portion having a mouth at the peak thereof and having a slope of approximately 35 degrees, a zippered opening in said roof portion extending the length thereof, a chimney portion secured to the mouth of said roof portion and projecting thereabove, said portions being fabricated of woven nylon fabric vinyl-coated on either side, said coatings including a rodent repellent, said outer coating being light reflective, said inner coating being heat absorbing, a supporting post extending vertically from the center of said floor portion, a socket resiliently supported in said mouth of the roof portion and engaging the upper end of said post, said post having a hollow portion extending longitudinally therein, and a ventilating cap removably received within said chimney.

2,895,401
AIR DIRECTING LOUVER DEVICE
Albert B. Goettl, Phoenix, Ariz., assignor to International Metal Products Company, Phoenix, Ariz.
Application August 20, 1957, Serial No. 679,223
5 Claims. (Cl. 98—110)



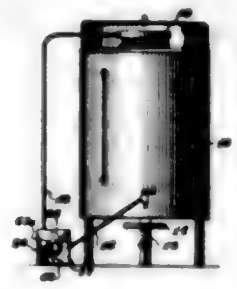
1. In a louver slat and frame construction the combination of: a frame having a side member provided with an inwardly offset portion forming a ledge; said inwardly offset portion having notches extending therethrough and disposed to receive the ends of slats when inserted in said frame; slats pivotally disposed in said frame and having arcuate bearing portions at their ends and disposed adjacent said ledge; and a holding member engaging said ledge and bridging said notches, said holding member disposed between said ledge and the bearing portions of said slats to prevent displacement of said bearing portions through said notches and means retaining said slats adjacent to said holding member.

2,895,402
COFFEE BREWING APPARATUS
John A. Totten, Hammond, Ind., assignor to Industrial Vendors, Inc., Hammond, Ind., a corporation of Indiana
Application August 26, 1957, Serial No. 680,184
5 Claims. (Cl. 99—289)



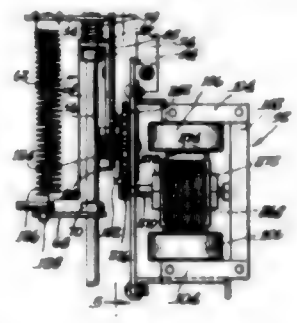
1. In coffee brewing apparatus, a housing supporting a water storage tank adjacent the top thereof, water supply means for said tank, a brewing chamber mounted in said housing below said tank, a conduit connecting said tank and chamber whereby water from said tank flows by gravity into said chamber, means in said conduit for heating water flowing therethrough, a valve in said conduit, said chamber comprising a generally tubular element equipped with openable end closures at the top and bottom thereof, a coffee hopper supported in said housing above said chamber and vertically aligned therewith, means in said housing for opening the top end closure and for introducing coffee into said chamber from said hopper, a screen in said element spaced inwardly of the side wall thereof and defining a closed-ended annular space communicating with the interior of said element only through said screen, said conduit extending into the said interior of said element, an outlet conduit for said chamber connected with said space and brewed coffee reservoir means, and means in said housing for opening and closing the bottom end closure of said chamber, the last-mentioned means being operative to open said valve temporarily just prior to the closing of said bottom end closure to additionally flush and preheat said chamber.

2,895,403
CIRCULATING BEVERAGE PUMPS
Pete Matty, Washington, D.C.
Application August 14, 1957, Serial No. 678,056
8 Claims. (Cl. 99—309)



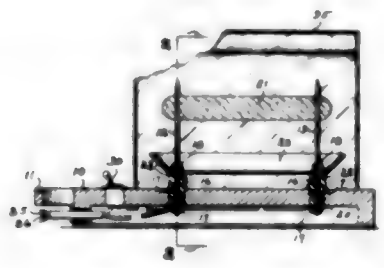
1. In a circulating pump for coffee urns or the like having a housing with inlet and outlet pipe openings and a large opening in one wall providing free access to the interior of said housing for cleaning same, an impeller housing adjacent said large opening having inlet and outlet pipe openings, an inlet pipe extending from said urn through said inlet openings in said housing and in said impeller housing, an outlet pipe extending through said outlet openings in said impeller housing and in said pump housing and back into said urn, an impeller rotatably journalled in said impeller housing, drive means for rotating said impeller, a detachable plug having opposed ends, one end of said plug extending into said large opening in said wall of said housing and extending substantially into said impeller housing, the other end of said plug having an enlarged flange portion overlying said large opening, a gasket secured to said flange portion, said first mentioned end having a recess receiving said inlet pipe, a cross bar positioned over the second mentioned end of said plug and extending beyond said end of said plug on both sides, said cross bar having slots at both ends thereof, a bolt extending through said slots of said cross bar at both ends thereof and embedded in said wall, one of said slots being a bayonet slot whereby the cross bar can be removed from one slot, screw means extending through said cross bar and engaging said plug whereby said plug is secured in sealed relationship to said opening.

2,895,404
POWER DRIVE FOR AUTOMATIC TOASTER
Murray Ireland, Elgin, Ill., assignor to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware
Application September 11, 1956, Serial No. 609,120
5 Claims. (Cl. 99—329)



5. A toaster comprising a housing, toasting means within said housing, bread carrying means in said housing for carrying the bread between a non-toasting position and a toasting position adjacent to said toastng means, an electric motor, drive means including an over-running clutch having cooperated members, one of said members being connected to said motor and the other member being connected directly to said bread carrying means, said drive means being operative upon operation of said motor in one direction to move said bread carrying means from one of said positions to the other, and bumper and latch means for stopping and holding said bread carrying means in said other position, said over-running clutch preventing the rebound momentum of said motor from being applied to said holding means.

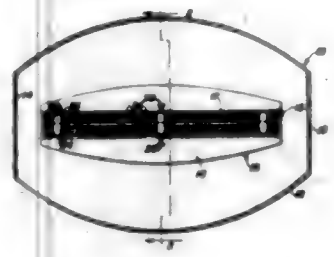
2,895,405
FOOD COOKING DEVICE
Ralph E. Hopkins, Colfax, Iowa
Application October 1, 1956, Serial No. 613,179
2 Claims. (Cl. 99—341)



1. In a food cooker, a base having two spaced apart holes, an insulation spool having a reduced lower end portion extending through each of said holes and having a shoulder engaging the top surface of said base, a pointed vertical spike having electrical conducting characteristics extending through each of said insulation spools, a stop means on each of said spikes engaging the top of the insulation spool through which it extends a nut threaded on the lower end portion of each of said

spikes, an electric lead wire connected to the lower end portion of each of said spikes, and a tray having two openings embracing the upper end portion of said insulation spools.

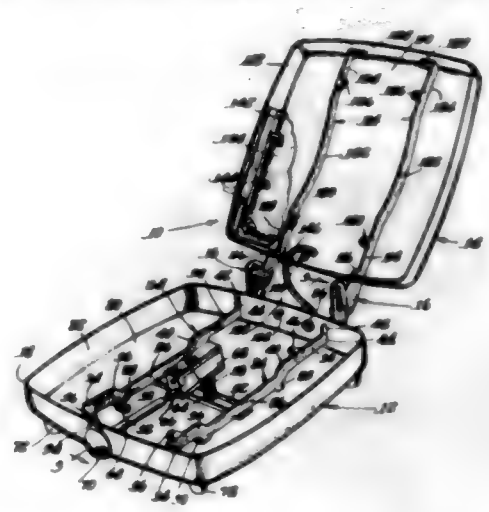
2,895,406
COOKING UTENSIL FOR STRIP FOOD PRODUCTS
William B. Randolph, Falls Church, Va.
Continuation of application Serial No. 553,070, December 14, 1955. This application March 18, 1957, Serial No. 646,677
17 Claims. (Cl. 99—341)



1. A cooking utensil for strip food products, said utensil comprising a relatively shallow pan having bottom and side walls, an elongated upstanding portion substantially centrally disposed in said bottom wall and terminating at opposite ends in spaced relation to said side wall and providing a top wall spaced above said bottom wall, a channel in said top wall extending longitudinally of said upstanding portion, said channel being open at opposite ends to permit drainage into said pan, a holder for strip food products removably disposed in said channel with strips of food carried thereby disposed in spaced substantially parallel, upright edgewise position, said holder comprising a plurality of elongated, substantially rectangular, flat plates, said plates being of a length and width at least equal to the length and width of said food strips, said plates being hingedly connected together at alternate top and bottom side edges whereby said plates may be folded into spaced substantially parallel relationship with a food strip disposed between each adjacent pair of plates and unfolded to facilitate the placing or removal of said food strips, laterally extending lugs on certain of said plates adjacent the lower side edges for engaging the lower edges of said food strips and supporting the same between adjacent pairs of plates and manipulating handles on the outermost plates of said holder whereby with food strips disposed between adjacent pairs of plates and with said holder disposed in said channel upon the application of heat to said upstanding portion said food strips will be uniformally cooked by heat conducted through said plates and fluid from said food strips will flow through said channel into said pan.

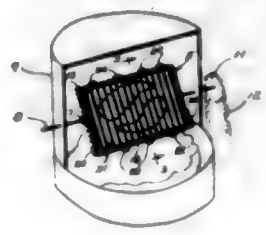
2,895,407
WAFFLE BAKER CONSTRUCTION
John R. Gomersall, Elgin, Ill., assignor to McGraw-Edison Company, a corporation of Delaware
Application May 5, 1954, Serial No. 427,721
3 Claims. (Cl. 99—379)

1. A waffle baker comprising generally complementary upper and lower body shells respectively having substantially horizontal top and bottom walls, a pair of hinges hingedly interconnecting said upper and lower body shells, a pair of upper and a pair of lower substantially rigid hinge bars forming integral continuations of said hinges and substantially inflexible vertically, said lower pair of hinge bars being attached to the substantially horizontal bottom wall of said lower body shell at spaced apart positions to brace the same, said upper pair of hinge bars being attached to said upper body shell at the front thereof and bearing against an intermediate portion of said top wall to brace the same, cooking plates carried in said upper and lower body shells, and electric heating means for said cooking plates supported by the upper and lower



pairs of hinge bars adjacent the cooking plates for heating the same.

2,895,408
SPIT BASKET
Clarence S. Glenny, Rockford, Ill., assignor to The Washburn Company, Worcester, Mass., a corporation of Massachusetts
Application February 27, 1957, Serial No. 642,712
10 Claims. (Cl. 99—427)

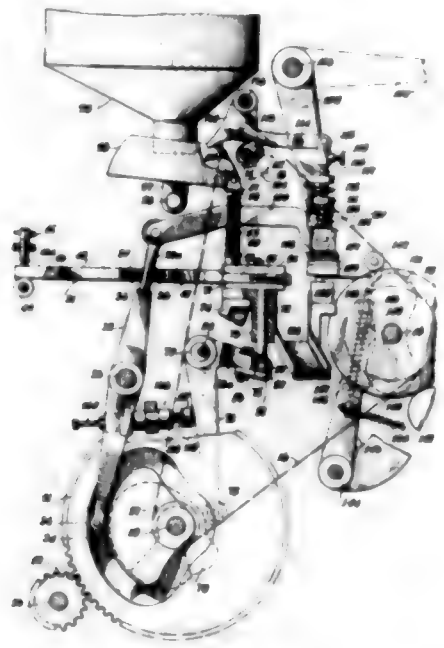


1. A spit basket comprising a generally rectangular wire tray having a bottom wall and upwardly projecting back and end walls, a front wall for said tray hinged to the bottom wall to swing upwardly to closed position, the back and front walls having parallel wires that are parallel to the bottom wall and in different vertically spaced relation with respect thereto, a generally rectangular wire panel serving as a closure for the top of said tray having means on opposite sides for detachable connection of the panel with selected wires in the front and back walls, whereby to mount said panel in any one of a plurality of positions in spaced relation to the bottom wall, and means for releasably locking said front wall in closed position.

2,895,409
MACHINE FOR STAMPING SMALL OBJECTS
Eize Egbert van Kekem, Amsterdam West, Netherlands, assignor to Combinatie N.V. En Amsterdamsche Bandoengsche & Nederlandsche Kininefabriek, Amsterdam, Netherlands, a corporation of the Netherlands
Application September 13, 1954, Serial No. 455,626
16 Claims. (Cl. 101—44)

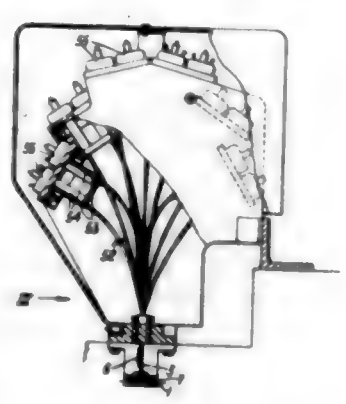
1. In a machine for stamping small objects with ink indicia, a unit consisting of firstly a conveyor slide having a plurality of openings therein arranged to receive one of the objects in each of the openings and convey them to a stamping station, secondly an indicia applying member, and thirdly means connecting said slide and said member for making a simultaneous motion to a forward and retracted position, said member reaching said stamping station when said unit arrives at a retracted position, said unit being arranged to make a reciprocable movement interrupted by periods of rest, feeding means for

feeding the small objects to the openings during one period of rest, and stamping means for bringing the small



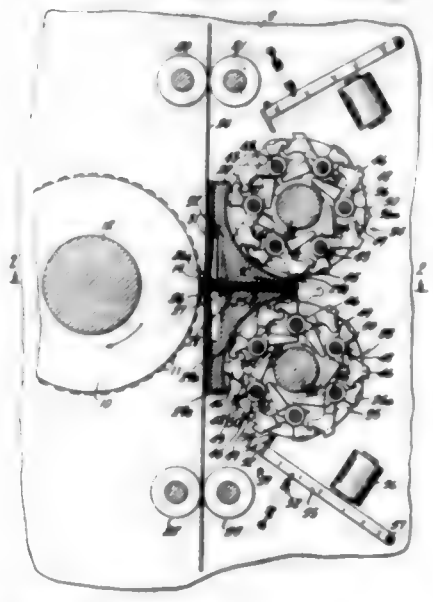
objects into contact with the indicia applying member, the stamping occurring in said period of rest.

2,895,410
PRINTING MACHINES
Donald Rudolf Lambert, Carshalton, England, assignor to Powers-Samas Accounting Machines Limited, London, England, a British company
Application December 13, 1956, Serial No. 628,140
Claims priority, application Great Britain January 9, 1956
8 Claims. (Cl. 101—93)



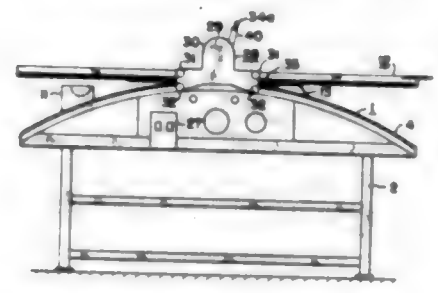
1. Printing apparatus comprising marking elements movable towards and away from impression-receiving material to define characters by impressing dots thereon, feeding means operable to feed impression-receiving material at a constant linear speed past said marking elements during character definition, a rotatable drive shaft connected with the feeding means to effect operation thereof, a transmission shaft rotatable continuously at one revolution per line of characters to effect material feeding at a first constant linear speed to determine one height for characters defined by the marking elements, an epicyclic differential gear coupled to said drive and transmission shafts and having a normally stationary cage, a counter-shaft connected to said cage to effect operation thereof, and a normally inactive selectively operable clutch to couple the counter-shaft to the transmission shaft for rotation thereby in order through said differential gear temporarily to vary the rate of revolution of the drive shaft and so effect material feeding at a second and different constant linear speed to determine a second and different height for characters defined by the marking elements.

2,895,411
HIGH SPEED PRINTER
Frederick M. Demer, Johnson City, and Richard H. Harrington, Vestal, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application December 27, 1956, Serial No. 630,817
6 Claims. (Cl. 101—93)



1. In a high speed printer, means carrying a plurality of characters past a printing position, a firing pin adjacent to the printing position adapted to urge data receiving means against the characters, a rotating element synchronized with the character carrying means, a plurality of hammers pivoted on the rotating element, the effective mass of each hammer approximating the mass of the firing pin, and means selectively enabling one of said hammers to strike the firing pin and print a selected character on the data receiving means.

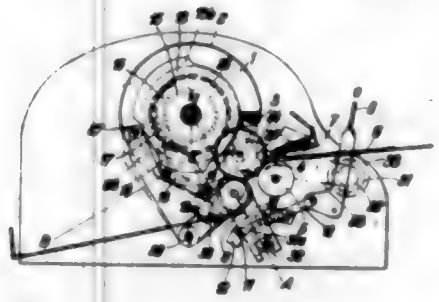
2,895,412
PRINTING APPARATUS
James H. Reed III, Pittsburgh, Pa., assignor to Dry Screen Process, Inc., Pittsburgh, Pa., a corporation of Pennsylvania
Application April 1, 1958, Serial No. 725,757
10 Claims. (Cl. 101—123)



1. Screen printing apparatus comprising two members, one being a bed adapted for supporting stock to be printed and the other being a frame, a screen housed in said frame, said frame being mounted upon said bed and being so located thereupon that said screen is positioned for delivering a printing composition onto the stock, one of the two members being longitudinally curved and the other being substantially flat, the frame and the bed having guideways extending longitudinally thereof, the guideways of the curved member being longitudinally curved and having a curvature different from the curvature of said member and the guideways of the other member being substantially flat, a carrier mounted upon the guide ways of said frame and said bed, said carrier being adapted to move back and forth along said guideways of said bed and said frame so that one member rocks upon

the other member, and means mounted upon said carrier for forcing the printing composition through said screen onto said stock as said carrier travels along said guideways.

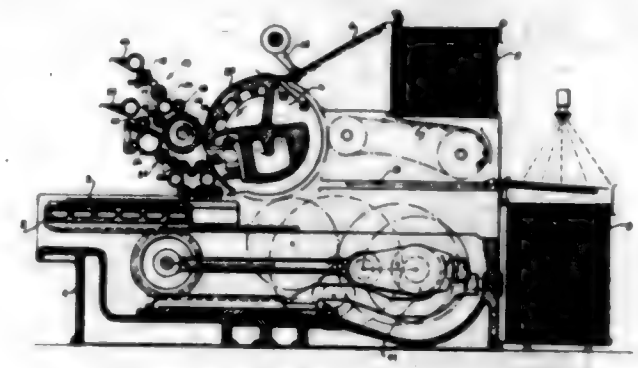
2,895,413
PRESSURE ROLLER SUPPORT AND MOVING MEANS FOR A ROTARY DUPLICATING MACHINE
Wilhelm Ritzerfeld, Berlin-Dahlem, and Gerhard Ritzerfeld, Berlin-Grunewald, Germany
Application March 27, 1956, Serial No. 574,246
Claims priority, application Germany March 31, 1955
11 Claims. (Cl. 101—132.5)



1. In a rotary duplicator, in combination, a duplicating drum for supporting a master sheet; section printing means including control cam means having a cam track and being driven from said duplicating drum; a pressure roller for pressing a copy sheet against the master sheet; an articulated lever system including lever means supporting said pressure roller and a cam follower means cooperating with said cam track so that said lever system is moved by said cam means from a first position in which said pressure roller is spaced from said duplicating drum and in which said cam follower means is located within a recessed portion of said cam track to a second position in which said pressure roller is advanced and tends to engage said duplicating drum along a printing line and in which said cam follower means is engaged only by the projecting portions of said cam track; means urging said lever system into said first position so that said pressure roller is normally moved in a cyclic movement toward and away from said drum during each revolution of said drum; holding means movable between an operative position engaging said lever system and holding said lever system in said second position so that said cam track is rendered ineffective and said pressure roller presses the copy sheet continuously against the master sheet, and an inoperative position releasing said lever system for movement between said first and second positions under control of said cam means so that said lever system tends to assume said first position and is moved by said control cam at selected intervals from said first position to said second position for duplicating selected sections of the master sheet; and an operating means for actuating said holding means to move between said positions.

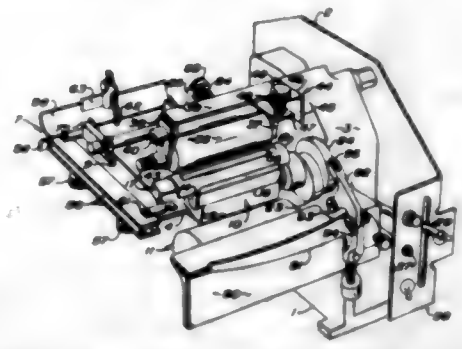
2,895,414
SINGLE-REVOLUTION HIGH-SPEED CYLINDER PRESS
Artur Büttner, Heidelberg, Germany, assignor to Schnellpressenfabrik Aktiengesellschaft Heidelberg, Heidelberg, Germany
Application March 16, 1954, Serial No. 416,616
Claims priority, application Germany March 19, 1953
4 Claims. (Cl. 101—173)

1. In a single-revolution high-speed printing press; an impression cylinder having a printing segment, a reciprocating flat forme cooperating with said segment, a cylindrical forme cooperating with said segment in advance of said flat forme upon each revolution of said impression cylinder, an inking mechanism for each of said formes, respectively, provided with inking rollers, and means for feeding sheet material to said impression cylinder at a location advanced relative to said cylindrical forme by an amount approximately equal to the length of said printing segment, whereby said printing segment is readily accessible to an operator when said press is assembled but not in operation, and con-



necting roller means pivotally connected with and bearing on one of said inking mechanisms, pivoting of said connecting roller means causing the latter to also bear on the other of said linking mechanisms, whereby both inking mechanisms are interconnected by said connecting roller means to facilitate simultaneous cleaning of both said inking mechanisms.

2,895,415
INKING MEANS FOR ROTARY PRINTING APPARATUS
Clayton H. Maurice, Jr., Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Application January 5, 1955, Serial No. 480,026
5 Claims. (Cl. 101—228)

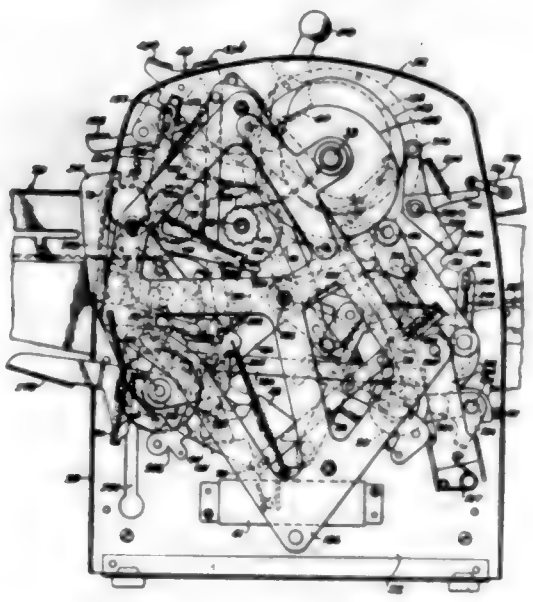


1. In rotary printing apparatus for labels, in combination, a frame, a pin fixed to the frame, an ink roll suspension member rockingly mounted on the pin, a bracket that also is rockingly mounted on the pin and that is adjustably fixed to the frame for rocking the suspension member about the axis of the pin, and connecting means joining the bracket and the suspension member and functioning to additionally rock the suspension member about the axis of the pin.

2,895,416
FEED MECHANISM AND INTERRUPTER FOR DUPLICATING MACHINES
Anthony J. Mazzio, Chicago, George P. Niesen, Niles, and George E. Engelstad and Edgar H. Du Bois, Chicago, Ill., assignors to A. B. Dick Company, a corporation of Illinois
Application May 10, 1954, Serial No. 428,422
6 Claims. (Cl. 101—245)

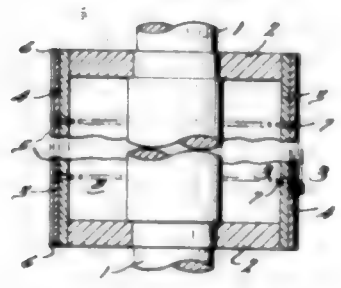
1. In a duplicating machine, the combination comprising a rotatable duplicating cylinder, means for rotating said cylinder, an impression roller engageable therewith, a pair of interengageable forwarding rollers for advancing copy sheets between said cylinder and said impression roller, stack engaging feed means for separating copy

sheets from a supply stack and feeding the copy sheets to the forwarding rollers, a movable hand control member, a selectively rockable feed control cam for lowering and raising said feed means into and out of engagement with the stack, means for engaging and disengaging said forwarding rollers in response to lowering and raising of said feed means, pawl means connected to said feed cam, a drive cam rotatable with said cylinder, a follower member oscillable by said drive cam, means operable by said



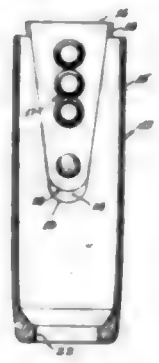
control member for selectively shifting said pawl means into the path of said follower member to operate said feed cam, an impression roller control cam for moving said impression roller into and out of engagement with said cylinder, second pawl means connected to said impression roller cam, and means operable by said hand control member for selectively shifting said second pawl means into the path of said follower member to operate said impression roller cam.

2,895,417
INKING OR DISTRIBUTING ROLLER FOR THINLY LIQUID INKS
Ernst Pfäffle, Neuffen, Wurttemberg, Germany, assignor to Hans Sickinger, Providence, R.I., an individual
Application September 25, 1956, Serial No. 611,895
Claims priority, application Germany November 5, 1955
2 Claims. (Cl. 101—375)



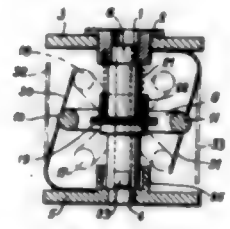
1. A roller for printing ruled lines comprising a cylindrical shell having an inner chamber, a plurality of circumferentially spaced ruling bars raised from the surface of said shell, each pair of adjacent ruling bars forming therebetween a non-inked channel-shaped depression, said ruling bars having surfaces of predetermined width for the reception of ink, and a plurality of passageways connecting said depressions with the inner chamber of said shell, whereby air may flow at all times between the inner chamber of said shell and all the spaces between said bars.

2,895,418
BOMB HEAD CONSTRUCTION
George Albert Lyon, Detroit, Mich.
Application March 28, 1955, Serial No. 497,269
3 Claims. (Cl. 102—2)



1. In a bomb or the like, a cylindrical casing-like body comprising at least two longitudinal tubular sections, namely, a nose section and a lower section, one of said sections having a portion of its wall recessed longitudinally from an end edge thereof, a hanger stud segment in said recess and means comprising a welded joint between said sections for holding them in longitudinal alignment and with said other section bearing endwise against an end of said segment at the joint, said segment having metallurgical characteristics different from that of said sections for reinforcing the hanger stud area of the bomb and said segment being incorporated in said recess prior to the welding of said sections together, said stud segment having a series of studs projecting internally of the tubular sections and having threaded recesses opening exteriorly of the tubular sections for receipt of hanger elements.

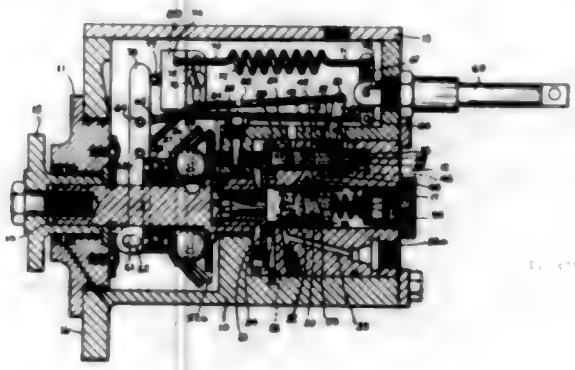
2,895,419
SAFETY ARMING MECHANISM FOR FUSES
Jean Rosselet, Geneva, Switzerland
Application June 7, 1955, Serial No. 513,836
Claims priority, application Switzerland June 8, 1954
11 Claims. (Cl. 102—71)



1. In a fuse for a rotating missile, including a fuse body and a striker slidable axially thereof, the provision of a safety arming mechanism, comprising a central spindle revolubly carried axially of the fuse and provided with a central bore to slidingly house the striker and with a radially directed channel opening into said bore, a driving spring urging said central spindle into rotation, a weight adapted to rock with reference to the fuse body around an axis crossing perpendicularly the axis of the central spindle to either side of a position of non-stable equilibrium, a regulating spring operatively connected with the rocking weight to urge it towards its position of non-stable equilibrium, an escape mechanism operatively connecting the rocking weight with the central spindle to provide for constancy of the speed of rotation of the latter, a bolt slidably mounted in the radially directed channel and engaging transversely in its original position the bore in the central spindle to prevent the operative movement of the striker through said bore, said bolts being subjected to centrifugal force, means carried by the fuse body preventing radial movement of the bolt as long as the spindle is in its original starting position and during its rotary travel

between said starting position and a predetermined angular setting, the bolt being urged outwardly centrifugally to release the striker as soon as the spindle has entered said predetermined angular setting, means locking in its original starting position the system including the rocking weight, escape mechanism and central spindle against rotation and means releasing the last-mentioned locking means upon firing of the missile.

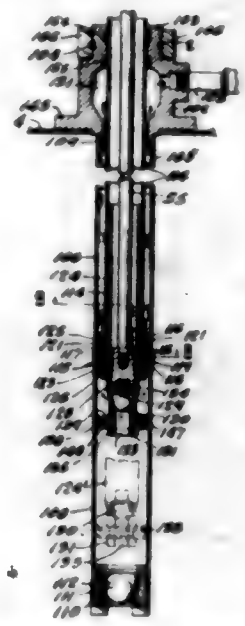
2,895,420
FUEL INJECTION PUMP
Thomas D. Hess, Agawam, Mass., assignor to American Bosch Arma Corporation, a corporation of New York
Original application June 19, 1952, Serial No. 294,516, now Patent No. 2,773,683, dated December 11, 1956. Divided and this application October 4, 1956, Serial No. 613,994
4 Claims. (Cl. 103—2)



1. In a device of the character described, a housing having spaced parallel bores, a drive shaft journalled in said housing, a face cam operatively connected to said drive shaft and driven thereby, a rotary fuel distributor in one of said bores and a fuel injection pump in the other of said bores, said distributor being operatively connected to and driven by said drive shaft, said pump being reciprocated by said face cam upon rotation of said drive shaft, a fuel inlet and a plurality of fuel outlets communicating with said bore containing said fuel distributor, and a fuel passage in said housing between said bore containing said distributor and said bore containing said fuel injection pump, said passage having a common portion communicating with said bore containing said pump and separated portions communicating with said bore for said distributor with one of said separated portions being adapted to supply fuel from said fuel inlet to said pump and the other of said separated portions being adapted to supply fuel from said pump to said distributor.

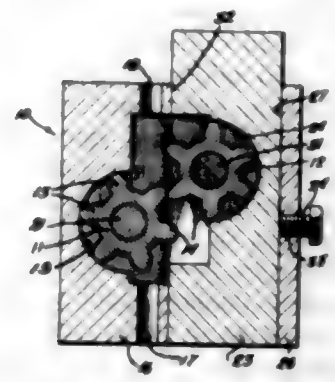
2,895,421
COATING MATERIAL PUMP
Donald J. Peeps, Rossford, Ohio, assignor to The De Vilbiss Company, Toledo, Ohio, a corporation of Ohio
Application April 20, 1956, Serial No. 579,648
5 Claims. (Cl. 103—50)

1. In a pump of the type described, a unitary casing, a plunger reciprocably disposed in the lower portion of the casing, a stationary cylinder concentrically disposed within the casing above the area of reciprocation of the plunger, the stationary cylinder being sufficiently smaller in diameter than the casing to provide an annular space therebetween, a piston of smaller diameter than the plunger and connected thereto, said piston reciprocably disposed within the stationary cylinder, a sleeve fastened to the lower end of the stationary cylinder, the inner bore of said sleeve being in sealing and guiding contact with the piston and the outer periphery thereof being generally spaced from the inner wall of the casing, valve elements at the lower ends of the casing and of the plunger admitting material being pumped into the base of the casing and upwardly past the plunger and into the annular space between the casing and the stationary cylinder, and members projecting radially inwardly through ports in the



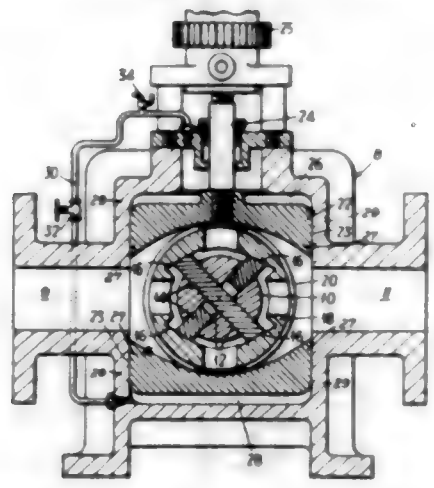
casing and having centering and supporting engagement with the sleeve and therethrough supporting the stationary cylinder.

2,895,422
VARIABLE DISPLACEMENT FLUID PUMP OR MOTOR
Harold Gold and David M. Straight, Shaker Heights, Ohio
Application June 2, 1955, Serial No. 512,608
3 Claims. (Cl. 103—120)



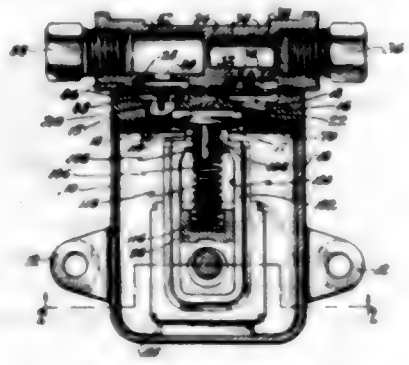
1. A pump comprising first and second housing parts and having guideways slidably connecting said housing parts to one another for relative movement, said housing parts having confronting wall portions particularly characterized by the formation therein of a pumping chamber in each said housing part disposed on axes in spaced parallel relation and each pumping chamber opening into the corresponding portions of said confronting wall surfaces, thereby to form together with one another a generally figure 8-shaped pumping cavity for a pair of meshing gears, one of said housing parts having an inlet and an outlet formed therein to conduct fluid to and away from said pumping cavity, a rotary gear journaled in each said housing part for rotation on a corresponding one of said axes, said gears being in mesh with one another at said confronting surfaces of said housing parts, said rotary gears having a maximum meshing overlap with one another when said parts are aligned with a line connecting said axes in substantially a right angular relationship with said confronting surfaces, and manually operated locking means operatively connected between said parts and accessible from the outside of the pump to lock said housing parts at different positions of adjustment with said line connecting said axes disposed at different angles relative to said confronting surfaces, thereby to adjust the meshing overlap of the gears and vary the displacement of the pump.

2,895,423
VARIABLE CAPACITY PUMP
Guy T. Shoosmith, St. Mary Bourne, England, assignor to Plenty and Son Limited, Newbury, England
Application August 28, 1956, Serial No. 606,771
Claims priority, application Great Britain August 31, 1955
3 Claims. (Cl. 103—120)



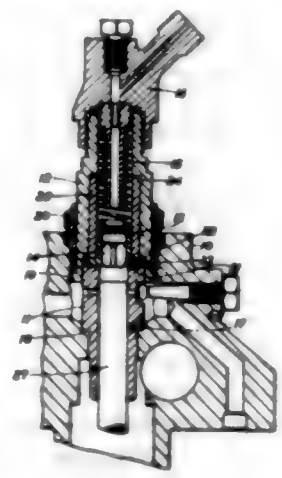
1. A variable capacity pump comprising a hollow pump body, a suction passage and a delivery passage in said pump body, a sliding block slidably mounted within said pump body, a rotor shaft rotatable within said pump body, means mechanically connected to said sliding block and arranged externally of said pump body on an upper portion thereof for slidably moving said sliding block whereby to alter the relative positions of said sliding block and said rotor shaft, sealed chambers on either side of said sliding block within said pump body, each of said sealed chambers being bounded on one side by said sliding block, portions of said pump body and said sliding block sealingly preventing at all times communication between said sealed chambers and said suction passage and said delivery passage, a passage inter-connecting said sealed chambers, a throttle valve in said inter-connecting passage, valve adjusting means independent of said means mechanically connected to said sliding block for adjustably moving said throttle valve into a plurality of throttling positions and into one position wherein said valve closes said interconnecting passage, said valve adjusting means being adapted to maintain said throttle valve fixed in any position to which said valve is moved irrespective of variations in the fluid pressures in said pump body, said sealed chambers and said inter-connecting passage being filled with liquid whereby cyclic pulsations of said sliding block are damped out.

2,895,424
CONSTANT PRESSURE LIQUID PUMP
Vernon N. Tramontini and John F. Wein, Indianapolis, Ind., assignors to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Application September 13, 1955, Serial No. 533,994
1 Claim. (Cl. 103—150)



In a pump, a rotatable shaft having an eccentric in the central portion thereof which is larger than the ends of said shaft, a block having an opening therethrough fitted to said eccentric, a yoke including a central opening reciprocably receiving and guiding said block, the faces of said eccentric, said block and said yoke which are normal to the axis of said shaft at each end of said eccentric being substantially coplanar, a pair of thrust washers carried by said shaft in engagement with said faces, means restraining the thrust washers against axial movement away from the faces so that said single pair of washers act as thrust elements for said eccentric shaft and said block and said yoke, resilient means interposed between said block and one end of said yoke and tending to urge said one end of said yoke away from said block, said block impinging against the other end of said yoke to move said yoke in the opposite direction, a pump diaphragm connected to said one end of said yoke, means forming a pump chamber having inlet and outlet valves, said chamber being closed on one side by the face of said diaphragm which is away from said yoke.

2,895,425
FUEL INJECTION PUMPS FOR INTERNAL COMBUSTION ENGINES
Ernest E. Chatterton, Acton Vale, London, England, assignor to D. Napier & Son Limited, London, England, a company of Great Britain
Application January 18, 1957, Serial No. 634,882
Claims priority, application Great Britain February 29, 1956
3 Claims. (Cl. 103—154)

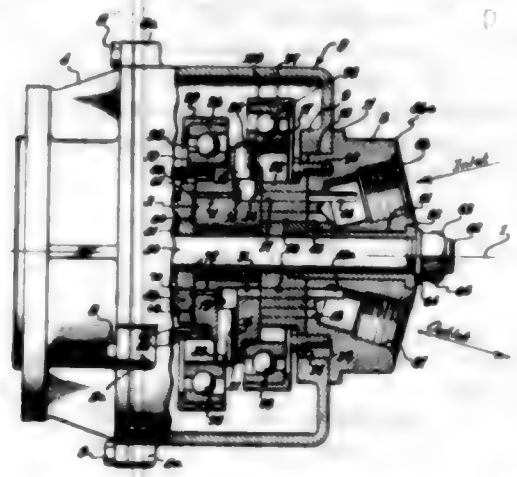


1. A fuel injection pump for an internal combustion engine comprising a body, a barrel seated in said body and having an upper end surface, a plunger slidable in said barrel, a delivery valve, a delivery valve housing enclosing said delivery valve, an internal sleeve in said delivery valve housing having an upper end and a lower end, a shoulder in said delivery valve housing engaging the upper end of said sleeve, abutment means supporting said lower end of said sleeve upon said barrel, and clamping means securing said delivery valve housing to said body and urging said shoulder towards said upper end surface of said barrel to maintain substantially the whole of said sleeve under longitudinal compression substantially greater than the extension of said clamping means produced by the reaction of the pumping pressure transmitted therethrough.

2,895,426
HYDRAULIC APPARATUS UTILIZING ROTARY CYLINDER BLOCKS
Elias Orshansky, Jr., Pasadena, Calif., assignor, by mesne assignments, to The New York Air Brake Company, New York, N.Y., a corporation of New Jersey
Application December 27, 1952, Serial No. 328,214
5 Claims. (Cl. 103—161)

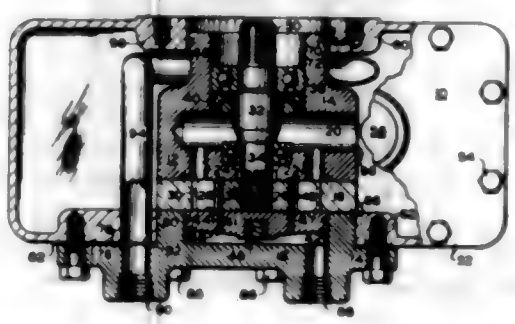
2. In hydraulic apparatus of the character described: a cylinder block rotatable about an axis; said block

having two sets of cylinder chambers, said sets being axially spaced along the block axis; said chambers being radial to said axis; piston structures in said chambers; a pair of reaction rings respectively for the sets of piston structures, said rings having substantially equal and opposite eccentricities with respect to the block axis; each piston structure of one set being diametrically opposite a corresponding piston structure of the other set; the reaction rings having annular sloping surfaces of contact for the piston structures such that the directions of the forces between the piston structures and the ring of one set align respectively with the forces corresponding to diametrically opposite piston structures of the other set; said cylinder block having individual ports respectively to the cylinder chambers, and annularly arranged; the ports for one set of chambers being located on a circle of different diameter than the ports of the other set of



chambers; and all of the ports opening on one side of the cylinder block; a non-rotary valve plate facing said one side, having two pairs of kidney ports respectively for the sets of cylinder ports, the pair of kidney ports for the inner annular series of cylinder ports corresponding in radial position with the inner series of cylinder ports, and the pair of kidney ports for the outer annular series of cylinder ports corresponding in radial position with the outer series of cylinder ports; and a non-rotary balance plate facing the other side of the cylinder block and having kidney shaped annular recesses corresponding in size and position with the kidney ports; the cylinder chambers of one set that have ports arranged on the outer annular circle, having supplemental ports leading to the outer annular recesses; and the cylinder chambers of the other set having supplemental ports leading to the inner annular recesses.

2,895,427
POWER TRANSMISSION
George A. Hudson, Berkley, Mich., assignor to Vickers Incorporated, Detroit, Mich., a corporation of Michigan
Application March 1, 1954, Serial No. 413,359
7 Claims. (Cl. 103—218)

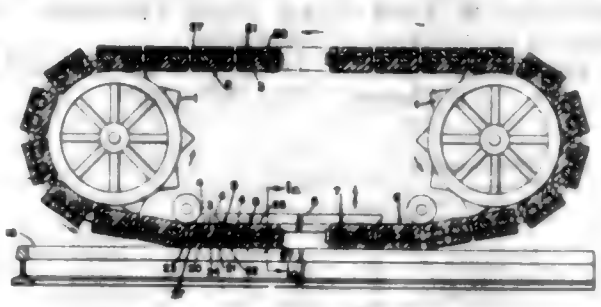


1. A combined pump and reservoir adapted for containment of fluid ot supply said pump and comprising a reservoir including two opposed walls each having an opening therein and forming mounting portions, a pump having a housing supported in the mounting portions and extending through the reservoir openings to present two exposed outer surfaces, one at each of said walls of the reservoir, a pump delivery passage formed in the housing and opening to one of the exposed outer surfaces at one of said side walls, a drive shaft projecting from the other outer surface and through the opening provided in the other side wall, and means forming fluid tight seals between the pump housing and the opposed walls of the reservoir.

2,895,428
LOWERING PULLING TOOL AND SHATTERABLE GUIDE NOSE COMBINATION
John Regan, Rolling Hills, and Louis M. Regan, Redondo, Beach, Calif., assignors to Regan Forge and Engineering Company, San Pedro, Calif., a corporation of California
Application May 21, 1956, Serial No. 586,179
10 Claims. (Cl. 103—233)

3. In combination: a fishing tool capable of being lowered into a well and having jaw means thereon having laterally extending teeth to engage a device to be withdrawn; and a displaceable head carried by the lower end of said tool adjacent said jaw means and having a laterally recessed upper portion engaged by said teeth and normally rounded on its bottom to be deflected by a structure to be by-passed and displaceable to free said teeth of said jaw means by striking said device to be withdrawn whereby said teeth of said jaw means may engage said device to be withdrawn.

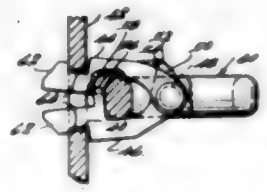
2,895,429
FRICTION INCREASING ARRANGEMENT
Max Baermann, Bensberg-Wulfshof, Bezirk Koln, Germany
Application August 16, 1954, Serial No. 449,857
Claims priority, application Germany August 17, 1953
9 Claims. (Cl. 105—77)



1. Apparatus for increasing the adhesion of a vehicle to magnetically permeable rails for the purpose of increasing the tractive force comprising in combination; a plurality of links arranged in an endless chain, each link including a pair of spaced magnetically permeable pole

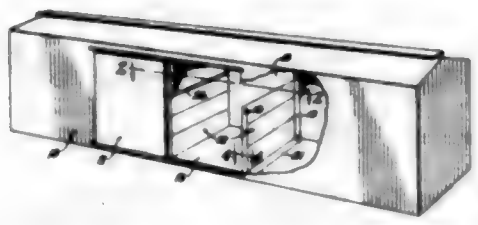
shoes each adapted to engage said rail as said vehicle moves therealong and means for magnetizing said pole shoes with an opposite magnetic polarity whereby said shoes will be magnetically attracted to said rail, said means including a permanent magnet arranged to have the flux from the opposite poles thereof flow through said pole shoes and means for varying the amount of flux from such permanent magnet in such pole shoes.

2,895,430
FREIGHT SECURING MEANS
Henry L. Dunlap, Dearborn, Mich., assignor to Evans Products Company, Plymouth, Mich., a corporation of Delaware
Application December 20, 1954, Serial No. 476,336
2 Claims. (Cl. 105—369)



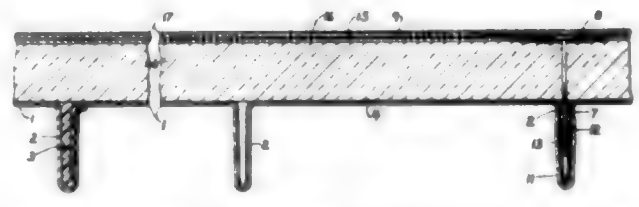
1. A fitting adapted to be inserted in hole means in a plate-like element comprising a pair of jaw elements, means pivotally connecting corresponding ends of said jaw elements, jaws on the opposite ends of said jaw elements adapted to be inserted through said hole means from one side of said plate-like element when said jaws are moved toward each other by pivotal movement of said jaw elements in one direction and adapted to engage the remote side of said plate-like element after being so inserted through said hole means when said jaws are moved away from each other by pivotal movement of said jaw elements in the opposite direction, said jaw elements having opposed surfaces disposed at said one side of said plate-like element when said jaws engage said remote side of said element and defining an opening therebetween, and a loop extending through said opening and pivotally movable between a first position in which it is disposed substantially parallel to said plate-like element and a second position in which it is disposed at right angles to said element, said loop including a portion having an oblong cross section adapted to fit within said opening when said loop is in said first position and said jaw elements have been pivoted in said one direction so that said jaws may be moved through said hole means and said oblong cross section of said portion being effective upon only pivotal movement of said loop from said first position to said second position to pivot said jaw elements in said opposite direction to move said jaws apart for engaging the remote side of said plate-like element.

2,895,431
FREIGHT CAR BULKHEAD
Barton H. Ford, Omaha, Nebr., assignor, by mesne assignments, to Ford Grain Door Company, Omaha, Nebr., a corporation of Nebraska
Application April 22, 1957, Serial No. 654,164
2 Claims. (Cl. 105—369)



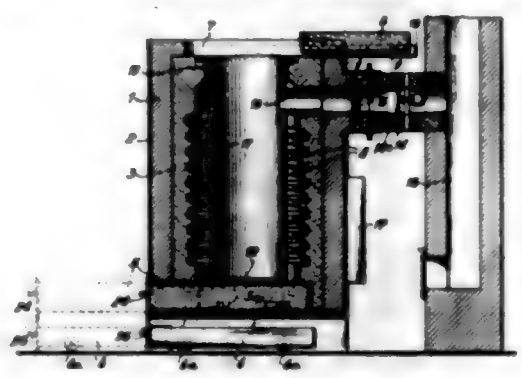
1. In combination with a freight car carrying granular material, a bulkhead extending transversely across the car and cooperating with the side walls and end of the car to confine the granular material, said bulkhead comprising an elongated paper board panel having a length greater than the width of the car with the panel length disposed transversely of the car, said panel being transversely creased to provide a central portion of a length substantially equal to the width of the car with the portions outward of said central portion being oriented toward said end and providing thereby side flaps abutting the side walls of the car, a plurality of longitudinally-extending, spaced-apart, flat metal straps secured to and extending beyond the said central portion of the panel on the side thereof remote from the said end, only said straps being secured to said side walls at their ends, the connection of said straps to said side walls constituting the sole connection of said bulkhead to said side walls with said flaps abutting said side walls but unsecured thereto and providing a seal against grain leakage by virtue of said side flaps abutting said side walls and being held thereagainst in continuous sealing relation solely by the pressure of the granular material, with said bulkhead thereby being free to shift under the impact stresses applied to said central portion tending to bow the same and thereby move said side flaps.

2,895,432
ROOFING MATERIAL
Joseph H. Bowman, Pittsburgh, Pa., assignor to American Steel Band Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application September 10, 1954, Serial No. 455,260
3 Claims. (Cl. 108—13)



1. The combination with a sheet metal roof deck provided with laterally spaced parallel narrow folds projecting downward, and thermal insulation covering the deck, of a plurality of thin U-shape sheet metal clips disposed at longitudinally spaced intervals in some of said folds in frictional engagement with their sides, each clip extending along a fold far enough to hold itself upright, and nails extending down through the insulation and into said clips and forcing the sides of the clips apart against the resistance of the adjoining sides of the folds, whereby the nails are anchored in the folds to hold the insulation in place.

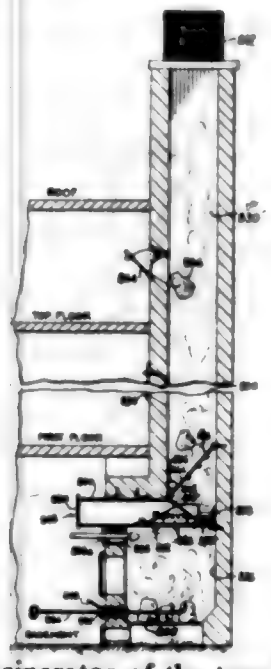
2,895,433
FURNACE FOR BURNING OF WASTE MATERIAL
Otto Michaelis, Duesseldorf-Reisholz, Germany
Application July 10, 1957, Serial No. 671,075
8 Claims. (Cl. 110—8)



1. A furnace for burning of waste material originating from surgery and hospital operations, refuse and the like comprising a substantially vertical duct member of

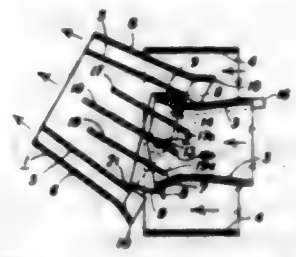
highly heat resistant material, said duct member having an upper neck portion and an open top end and an open bottom end, a duct-like ceramic housing surrounding said duct member and said open bottom end receiving combustion air, heating means recessed in the inner wall of said duct member, a hollow insert having a flanged upper end and defining a combustion chamber therewithin and a space between said duct member and said insert, said upper neck portion engaging said flanged upper end of said hollow insert to close the upper portion of said space between said duct member and said insert, a flue gas connecting branch removably inserted into said duct member and communicating with said combustion chamber slightly below said flanged upper end of said hollow insert, a chimney, and means forming a channel communicating said connecting branch with said chimney.

2,895,434
INCINERATOR CONSTRUCTION
Albert Werner, Oyster Bay Cove, N.Y.
Application April 24, 1956, Serial No. 580,237
2 Claims. (Cl. 110—18)



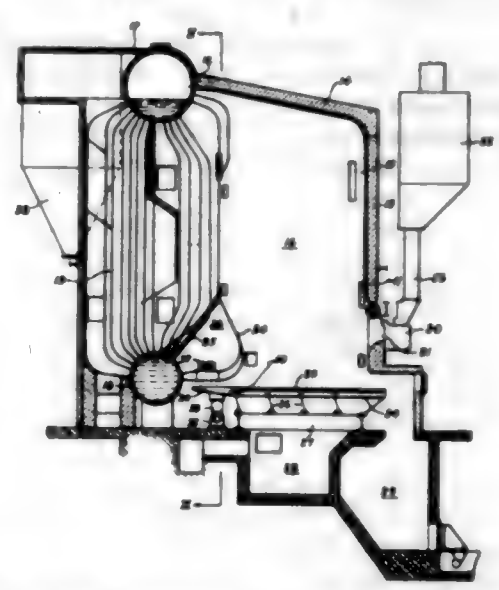
1. In a refuse incinerator of the type having a firebox, a grate, and an upright flue in communication with the firebox for delivery to said firebox of a gravity-directed downward flow of refuse to be burned; the combination of a transverse air duct communicating with the lower end of the flue where it joins the firebox for admitting atmospheric air, a horizontally slidable plate having an opening therethrough, a pair of runners extending transversely across the flue on opposite sides thereof from said transverse air duct, said slidable plate being movable on said runners between an inactive position out of the flue and an active position within the flue on a line separating the transverse air duct from the firebox, a canopy carried by said slide and extending upwardly and over said opening, a wire mesh screen constituting a wall of said canopy adjacent said opening to intercept and retard the passage from the firebox to the flue of air-entrained partially combusted materials to subject said materials to more complete combustion, a diverter plate pivoted at the junction of the upper wall of transverse air duct and the flue wall to swing in the path of the said slide, said diverter plate being swung on its pivot forwardly and upwardly by forward movement of the slide into the flue whereby when the slide is in active position across the flue, the diverter plate will catch and hold refuse until the slide is again moved to inactive position, at least one auxiliary air inlet near the top of the firebox in the path of the air-entrained partially combusted material toward the screen to supply additional air for more complete combustion.

2,895,435
TILTING NOZZLE FOR FUEL BURNER
Alexander Bogot, Hastings on Hudson, and Virginius Z. Caracristi, Bronxville, N.Y., assignors to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Application March 15, 1954, Serial No. 416,313
4 Claims. (Cl. 110—28)



1. In a conduit for conveying a fluid and having a tiltable nozzle at the discharge end thereof for receiving said fluid in a stream substantially uniform across the conduit's flow area and for discharging said stream uniformly across the nozzle's discharge area, an outlet portion of said conduit operatively connected to said tiltable nozzle, said outlet portion forming a single and undivided flow channel, means for pivoting and tilting said nozzle in a plane about an axis perpendicular to the longitudinal axis of said conduit, a division wall normal to said plane arranged within said nozzle in the direction of flow forming two parallel flow channels, a portion of said division wall extending a substantial distance beyond said pivoting axis in an upstream direction, and at all tilting positions being rigidly aligned with said division wall, said extended portion having a length sufficient, upon tilting said nozzle with respect to said conduit, to cause the effective flow area between said portion and said conduit's wall to be restricted on one side and to be enlarged on the opposite side thereof to such an extent that, because of the turbulence being created by virtue of said portion being extended into said fuel stream, the solid fuel concentration of said fluid leaving each of said channels remains substantially equal regardless of the tilted position of said nozzle.

2,895,436
FUEL BURNING APPARATUS
Earle C. Miller, Worcester, Mass., assignor to Riley Stoker Corporation, Worcester, Mass., a corporation of Massachusetts
Application January 23, 1956, Serial No. 560,562
8 Claims. (Cl. 110—165)



1. Fuel burning apparatus comprising a self-cleaning longitudinally-extending grate, a horizontal tray located over the grate, means for collecting flyash, means for introducing the collected flyash onto the tray, means subjecting the tray to oscillatory movement transversely of

the grate, the tray having a substantially flat bottom terminating in an open edge extending generally transversely over one end of the grate, the oscillatory movement of the tray causing the flyash to pass over the said edge of the tray onto the grate.

2,895,437

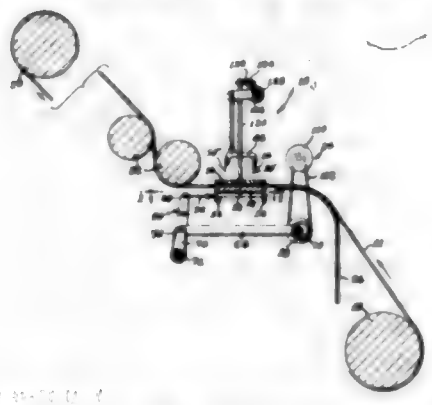
WITHDRAWN

2,895,438

MULTIPLE NEEDLE AUTOMATIC QUILTING MACHINE

Nathan Shotsky, Brooklyn, N.Y., assignor of one-fourth to Hersch Zauderer, one-fourth to Benjamin Zauderer, and one-fourth to David H. Turkel, all of Brooklyn, N.Y.

Application March 31, 1955, Serial No. 498,366
7 Claims. (Cl. 112—164)



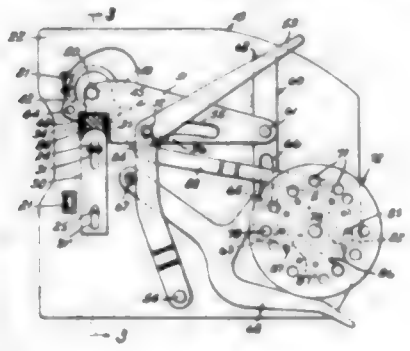
1. In a multiple needle automatic quilting machine, in combination, a pair of laterally spaced substantially parallel rows of vertically reciprocable needles each operable in a fixed path and adapted to penetrate and stitch a fabric operatively disposed relative thereto; the needles of one of said rows being disposed in staggered relation with respect to the needles of the other of said rows; the needles which extend along parallel oblique planes with respect to the line of feed of the machine constituting companion pairs of needles; and pairs of shuttles operatively associated with said companion pairs of needles and reciprocable along angular paths corresponding to the disposition of said companion pairs of needles.

2,895,439

CLOTH FEEDING MECHANISM FOR SEWING MACHINES

Donald E. Lipfert, Meriden, Conn., assignor to Raymond Engineering Laboratory, Inc., Middletown, Conn., a corporation of Connecticut

Application July 29, 1955, Serial No. 525,291
30 Claims. (Cl. 112—204)



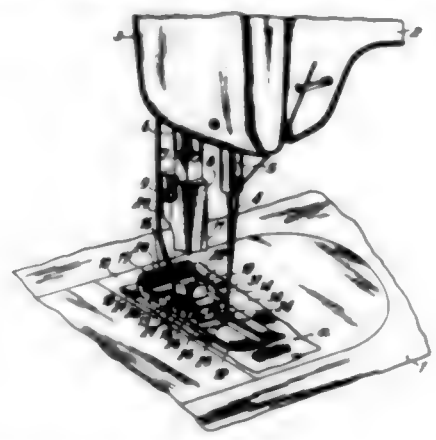
1. A cloth feeding mechanism for sewing machines comprising a lever mounted for vertical and horizontal pivoting movement, an upwardly facing cloth feed dog carried by one end of the lever, a follower on said one end of the lever, means operated by the driving means of the sewing machine for raising and lowering the feed dog and engageable with said follower to move the said end of the lever while in raised position to a predetermined locus in a horizontal plane, and means for moving the feed dog while in lowered position to a variable selected locus spaced horizontally from said predetermined locus comprising a conical follower operatively connected to the other end of the lever and facing approximately at right angles to the plane of the lever, a control element having a positioning hole arranged to be brought into partial registry with the conical follower, and means for seating the conical follower in the positioning hole to impart a selected horizontal movement to the dog.

2,895,440

THREAD-CONTROLLED CONTACT DEVICE FOR POWER DRIVEN SEWING MACHINES

Karl Winz, Kaiserslautern-Pfalz, Germany, assignor to G. M. Pfaff A.G., Kaiserslautern-Pfalz, Germany, a corporation of Germany

Application March 13, 1957, Serial No. 645,691
Claims priority, application Germany March 27, 1956
2 Claims. (Cl. 112—219)



1. A thread-controlled electrical contact device for lock-stitch sewing machines having a needle and a presser foot comprised of a vertical shaft and a horizontal base connected thereto and engaging a work piece in the lowered position, said device comprising a lever having a rear portion pivotally mounted upon the rear portion of said base behind said shaft, as viewed in the sewing direction, and about an axis transverse thereto, said lever extending in a direction opposite to the sewing direction above and substantially parallel to said base and having a front portion at right angle to the sewing direction, said front portion forming a first contact element movable substantially vertically within a corresponding recess in the front portion of said base close to the path of said needle, spring biasing means for said lever, to urge said contact element into continuous resilient engagement with said work piece in the lowered position of said presser foot, and a second cooperating contact element mounted upon said base adjacent to said first contact element.

2,895,441

SEWING MACHINE

Wolfgang Engel and Fritz Höner, Bielefeld, Germany, assignors to Phoenix-Nähmaschinen A.G. Baer & Rempel, Bielefeld, Germany

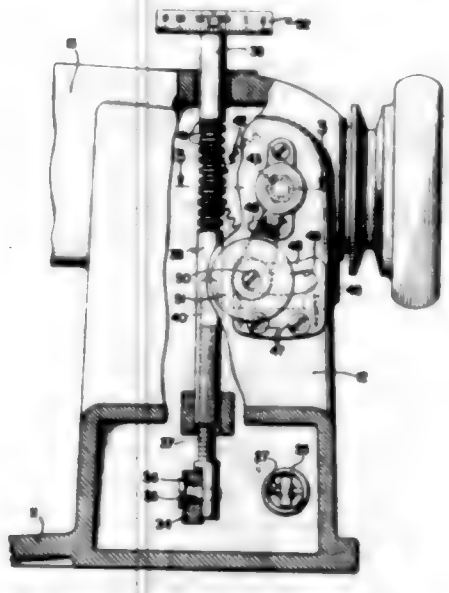
Application August 6, 1956, Serial No. 602,333
Claims priority, application Germany August 10, 1955
3 Claims. (Cl. 112—248)

1. In a sewing machine having an arm shaft, a rotary thread feed control device comprising a pair of spaced thread control disks mounted in axial alignment at the head of the machine in direct driving engagement with said arm shaft and having a plurality of conformations adapted to guide and support varying lengths of thread including a pair of members presenting thread guiding

edge portions extending in substantially parallel alignment radially outwardly of said disks, a pair of nose portions extending one each substantially at right angles to and endwise of said guiding edge portions, a pair of thread catching arms having portions extending generally circumferentially of said device in the normal direction of rotation, one in each disk, a pair of members presenting thread deflecting edge portions extending from

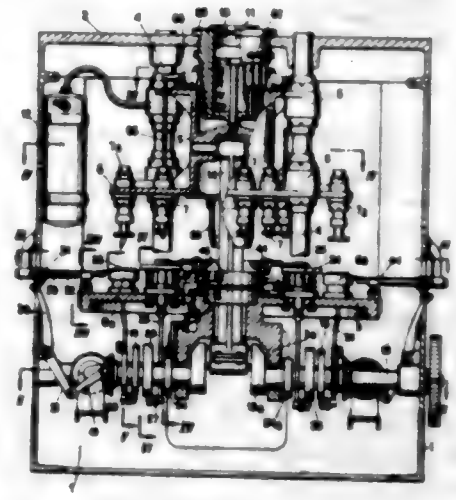
and inwardly of said arms and defining thread catching throats at the juncture with said arms, and a thread catching claw defined endwise of one said thread deflecting edge portions on one said disk and extending outwardly of one said edge portion and in generally opposite direction to said arms, and a spacing means between the disks for fixing the distance between said disks, said spacing means including a dismountable spacing member disposed between and generally centrally of said disks.

2,895,442
WORK TABLE HEIGHT ADJUSTING MECHANISM FOR BLINDSTITCH SEWING MACHINES
Frank Parry, Trumbull, Conn., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Application November 14, 1955, Serial No. 546,556
3 Claims. (Cl. 112—260)



1. A work table height adjusting mechanism for a blindstitch sewing machine having a frame, comprising a work table stop member shiftably supported on said frame, a threaded stud operatively associated with said stop member, a control rod rotatably journaled in said frame, said control rod being threaded axially to accommodate said threaded stud, operator influenced means for turning said control rod, a series of axially spaced annular gear tooth-shaped serrations formed on said control rod providing an annular rack thereon, a gear carried for turning movement in said frame and disposed in mesh with said annular rack, operator influenced gear turning mechanism carried by said frame, and means for clamping said gear turning mechanism rigidly to said frame in any selected position of adjustment thereof.

2,895,443
CIRCULAR MACHINE FOR THE PRESSING OF METALLIC SHEET ELEMENTS
Manlio Gavazzi, Florence, Italy
Application December 15, 1954, Serial No. 475,495
Claims priority, application Italy September 11, 1954
4 Claims. (Cl. 113—1)

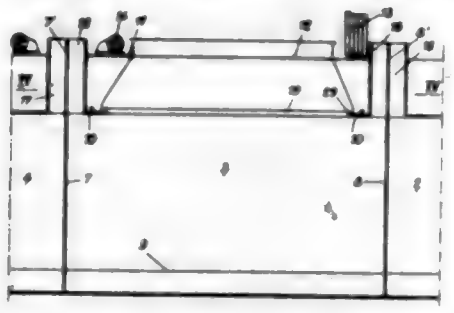


1. A machine for shearing strip material into elements and working upon said elements, comprising a bed, a plurality of different stationary working dies arranged on said bed in a circle, a movable plate concentric with said circle and arranged for substantially vertical displacement relative to said working dies, a plurality of dollies on said movable plate for movement toward and away from said working dies respectively, a stationary shearing and embossing die located adjacent and outwardly of said working dies to provide a free marginal working area about said preliminary die greater in radial extent than the corresponding free marginal working area about each of said plurality of dies, a shearing and embossing dolly on said movable plate and positioned opposite said shearing and embossing die, means for feeding strip material to said shearing and embossing die to be worked thereon by said shearing and embossing dolly to form an element, means for arcuately displacing elements on said bed along said circle to successively different positions to be received by said working dies in sequence, means for radially and inwardly displacing an element formed on said shearing and embossing die to a position on said circle, means for intermittently actuating said arcuately and said radially displacing means substantially simultaneously to thereby effect substantially simultaneous arcuate displacement of elements along said circle from one die to the successive die and radial displacement of an element on said shearing and embossing die to a position on said circle, and means for intermittently carrying said movable plate with all of said dollies toward the respective dies simultaneously, said actuating means and said carrying means operating alternately, whereby an element is sheared from said strip material and embossed by said shearing and embossing die simultaneously with working of other elements by said working dies, all of said elements then advancing to the next successive operation.

2,895,444
METHOD OF ARRANGING SHIP'S HOLDS OR THE LIKE, AND HOLDS THUS ARRANGED
Paul André Mege, Saint-Germain-en-Laye, France
Application March 6, 1956, Serial No. 574,054
Claims priority, application France March 18, 1955
6 Claims. (Cl. 114—73)

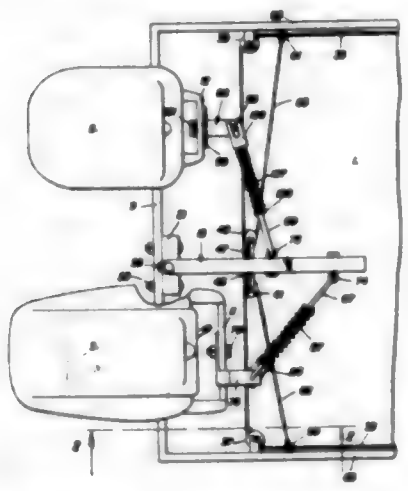
1. In a ship intended for use as a bulk carrier and at will for carrying parcel goods without the need of any

transformation, a 'tween-deck, at least one hold provided therein, a hatch opening in the tween-deck having an area substantially corresponding to the horizontal area of the hold, affording the direct introduction of parcel goods of any kind, and channel-like compartments extending transversely of said ship having an open top and extending vertically over said tween-deck, provided at each end of the hold considered longitudinally to the ship and



communicating with the hold at their bottom portions, the said compartments being located outside the open area of the said hatch and forming a free volume permanently connected with the hold and adapted to be filled with bulk cargo when the ship is used as a bulk carrier and to compensate any free spaces in the hold which may occur when the bulk cargo is shifted during the transport due to the deplacements of the ship on sea.

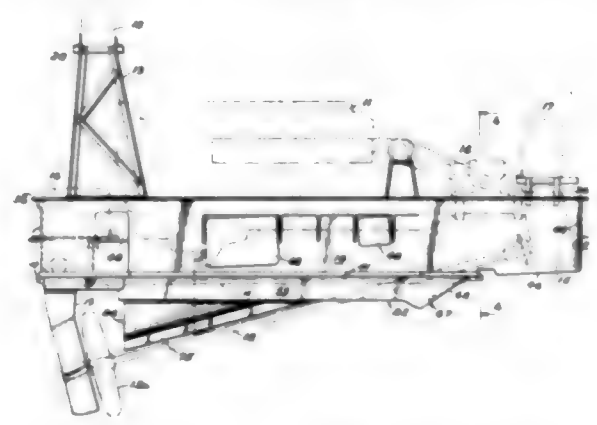
2,895,445
STEERING MEANS FOR OUTBOARD MOTORS
David K. Foraker, Marshalltown, Iowa
Application August 4, 1958, Serial No. 753,005
3 Claims. (Cl. 115—18)



1. In a boat having a transom, and twin outboard motors mounted on said transom at opposite sides of the boat and swingable to steer the boat, means for swinging said motors in unison comprising a tiller lever extending forwardly from said transom, means terminally mounting said lever on said transom for swinging in opposite directions, cable and pulley means attached to opposite sides of said lever and to opposite sides of the boat for swinging said lever, and operating connections extending from opposite sides of said lever to said motors, respectively, for swinging of said motors in response to swinging of said lever in opposite directions.

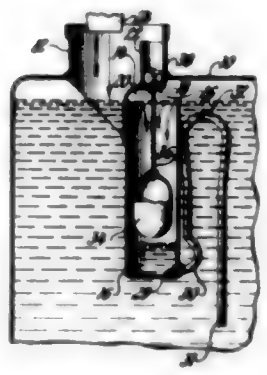
2,895,446
MARINE PROPULSION UNIT
Ralph M. Upton, Detroit, and Charles Douglas Van Patten, Flint, Mich.
Application May 24, 1954, Serial No. 431,666
3 Claims. (Cl. 115—34)

1. A construction for mounting marine propulsion components including an engine, gear box, propeller shaft and propeller as a removable unit in the hull of a vessel, comprising a frame supporting said components, said frame having side and end walls adapted to surround the lower portions of said engine and gear box below the load water line level of said hull, said frame having a bottom portion connected to said side and end walls and adapted to mount said propeller shaft and propeller, said propeller shaft extending downwardly and rearwardly through said bottom portion, and said propeller being located beneath and within the area of said bottom portion, said hull being formed with an opening in the bottom thereof dimensioned to receive said bottom portion of said frame, sealing means located between said bottom portion and the periphery of said hull opening, a water-tight well having side and end



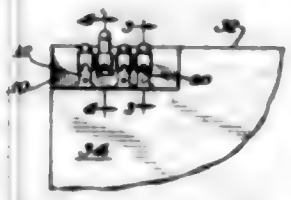
walls surrounding said opening and extending to a level above the water line of said hull, means for detachably securing said frame to the structure of said wall, the said bottom portion of said frame being constructed to form a chamber separated from the upper portion thereof, a sea water exit opening formed toward the aft end of said chamber, said sealing means including outer and inner sealing members adapted to contact the surface of the bottom portion of said frame at spaced points forming a peripheral space therebetween, and means venting said peripheral space to said chamber, whereby any water flowing past the outer of said sealing members can pass through said vent means into said chamber and thence back to the sea through the exit opening therein.

2,895,447
LIQUID LEVEL INDICATORS
Frank C. Burrell, Orchard Lake, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application February 10, 1958, Serial No. 714,230
5 Claims. (Cl. 116—118)



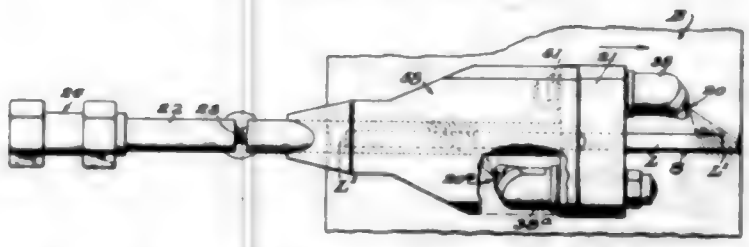
1. A liquid level indicator associated with a tank, said indicator comprising means defining a compartment with a port at the upper end of said compartment communicating at a predetermined level with the interior of said tank, a float in said compartment, an indicator arranged to be moved by said float, a siphon tube connecting the bottom of said compartment with a lower zone of said tank, and said tube being entirely located below said port.

2,895,448
FILE RECORD SIGNALLING DEVICE
Theron L. Haines, Chicago, Ill.
Application January 24, 1955, Serial No. 483,489
1 Claim. (Cl. 116—135)



A file record signalling device comprising a plastic sheet having two lines of slots therein parallel to one longitudinal edge of said sheet and spaced substantially from each other, the slots in one of said rows being transversely opposite the slots in the other of said rows, the sheet portion between opposite slots constituting open-ended pockets, the slots in the row remote from said longitudinal edge being formed to provide a relatively deep notch in the end of said pocket remote from said edge and extending toward said edge and a tongue shaped similarly to said notch on the sheet portion outside said pocket underlying said notch, individually distinctive elongated tabs having the central portions thereof movably contained in said pockets, said tabs having means at each of the ends thereof to retain said tabs movably in said pockets, said tabs being movable in said pockets to a position where one end thereof projects substantially beyond said longitudinal edge and a position where said end is substantially even with said edge, said tabs having an aperture therein adjacent the other end thereof adapted to receive a pencil point and underlying said notch and overlying said tongue when said tab is in its extended position.

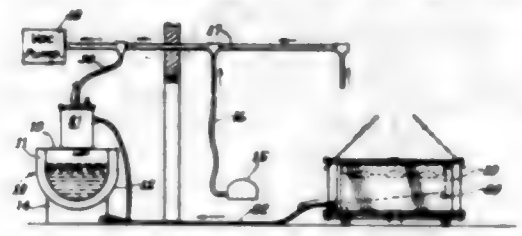
2,895,449
INSIDE SIDE SEAM COATING MEANS
Clarence E. Oldfield, Jr., Berkeley, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Application April 30, 1957, Serial No. 656,033
9 Claims. (Cl. 118—306)



1. In a can body maker in which solder-seamed can bodies are progressively advanced with their soldered side seams in longitudinal alignment, two lacquer spray nozzles stationarily mounted in position to spray the inner sides of the soldered side seams and the contiguous portions of the can bodies, one of said lacquer spray nozzles being slanted toward the path along which the can bodies approach the nozzles, the other of said lacquer spray nozzles being slanted toward the path along which the can bodies depart from the nozzles.

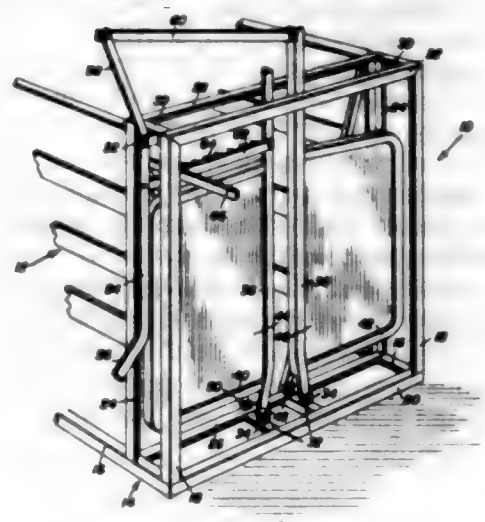
2,895,450
SYSTEM FOR MOVING LIQUIDS
Alfred Paul Hope, South Haven, Mich.
Application March 1, 1956, Serial No. 568,721
11 Claims. (Cl. 119—14.95)

7. A system for moving liquids such as milk comprising a source of air at substantially constant subatmospheric pressure, a portable tank for receiving liquid to be moved, a relatively fixed tank for receiving the moved liquid, said portable tank having inlet and outlet ends, the inlet end of said portable tank being at substantially atmospheric pressure, container means for the moved liquid, said fixed tank being in a liquid-receiving relationship to the container means, flexible liquid-conducting means connected to the outlet of the portable tank and to the container means to conduct the liquid from the portable tank to



the container means, and liquid-responsive control means associated with said container and connecting the interior of the container alternately to the said source of air at substantially constant sub-atmospheric pressure, and to air at substantially atmospheric pressure for conditioning the container to pass liquid from the container to the fixed tank.

2,895,451
COMBINATION HEAD LATCH AND CHUTE GATE
Ralph T. Smith, Gainesville, Fla.
Application October 11, 1957, Serial No. 689,512
4 Claims. (Cl. 119—99)



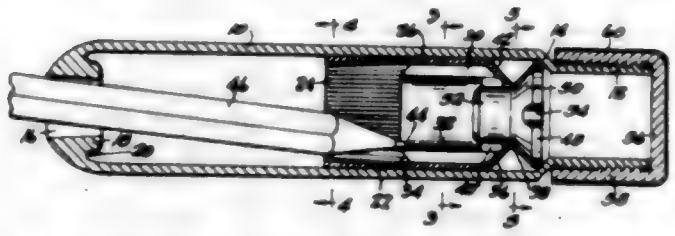
1. For use at one end of a chute, a readily openable and closable gate structure comprising a framework embodying an outwardly disposed open rectangular frame, an inwardly disposed corresponding open rectangular frame in alignment with the first named frame, connecting members joining the respective corner portions of the respective inner and outer frames in spaced parallelism, a pair of vertically disposed door members having lower end portions hingedly anchored on support members provided therefor between the lower frame members of said inner and outer frames, one of said door members extending through and upwardly beyond the space existing between the horizontal frame members of said inner and outer frames and having an elongated push-pull link pivotally connected at one end thereto and the other end extending, when the door members are closed, to a position outwardly beyond the vertical frame members of said inner and outer frames, an operating lever having a median portion hingedly connected to an upper corner portion of said frame structure with one end pivotally connected to an adjacent end of said push-pull link, and the other end formed into a conveniently accessible and usable handle, the other door member having its upper end extending through and beyond the space between the horizontal frame members but terminating below the upper end of the first named door member, and complemental doors mounted on and operable by the respective door members and cooperating with each other in nor-

mally spanning and closing the space to the left and right of the median portion of the frame structure, and an operating connection between a median portion of said lever and a median portion of the adjacent door member.

2,895,452
PENCIL-POINT SHARPENER
Frank Jordan Angeloff, New York, N.Y.
Application October 2, 1957, Serial No. 687,764
1 Claim. (Cl. 120—91)

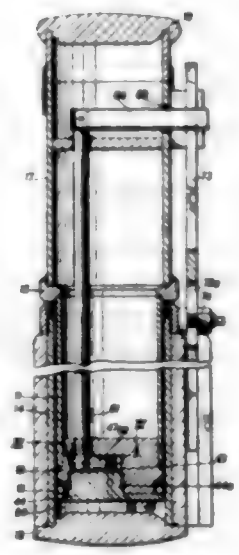
A pencil pointer comprising a base, a first hollow cup shaped frusto-conical member, a circular end wall integrally formed on the end of smaller diameter of said first member, means extending centrally through said end wall detachably securing said first member to said base, a second hollow frusto-conical member of substantially the same taper as said first hollow frusto-conical member having its smaller end of a diameter greater than the smaller end but less than the larger end of said first member, said second member surrounding said first member, a strip of abrasive material around said first member having a portion thereof frictionally held between said first and second members, and an abrasive portion of said strip extending beyond said first member into and supported by said second member.

2,895,453
DEVICE FOR POINTING PENCIL LEADS
Ira David Jones, Jr., South Bend, Ind.
Application February 10, 1958, Serial No. 714,321
13 Claims. (Cl. 120—92)



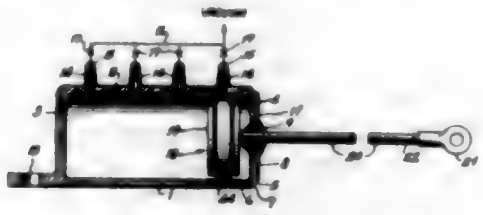
5. A device for pointing pencil leads, comprising an elongated hollow housing having a central opening in one end and an annular internal abrasive surface intermediate its ends, a closure detachably mounted on the opposite end of said housing, an annular guide in said housing between said abrasive and said closure, a plug shiftable in said housing between said guide and said closure and accommodating passage of graphite powder therepast toward said closure, said plug having a surface adapted to engage and span said guide when said housing is positioned with said closure uppermost to define a valve confining graphite powder in said closure, a ring of smaller cross-sectional size than said housing, said abrasive surface being formed in said ring, means mounting said ring in said housing to define passages around and extending from end to end of said ring, and an annular ribbed wiping surface in said housing between said abrasive surface and said opening.

2,895,454
PROPS, ESPECIALLY FOR USE IN COAL MINES
Bernard Tebb, Swanland, and Clarence Herbert Perry, Hull, England, assignors to Mastabor Mining Equipment Company Limited, Hull, England, a British company
Application June 8, 1956, Serial No. 590,185
Claims priority, application Great Britain June 10, 1955
14 Claims. (Cl. 121—40)



1. In a hydraulically extensible pit prop having a rising characteristic, hydraulic load sustaining means, pressure relief means adapted on opening to relieve hydraulic pressure within said load sustaining means, and relief pressure adjusting means bearing on said pressure relief means and defining a range of relief pressures at which said pressure relief means is permitted to open, said adjusting means being operable responsive to a function of load displacement to render said relief pressure continuously variable within said range during extension and contraction of said prop.

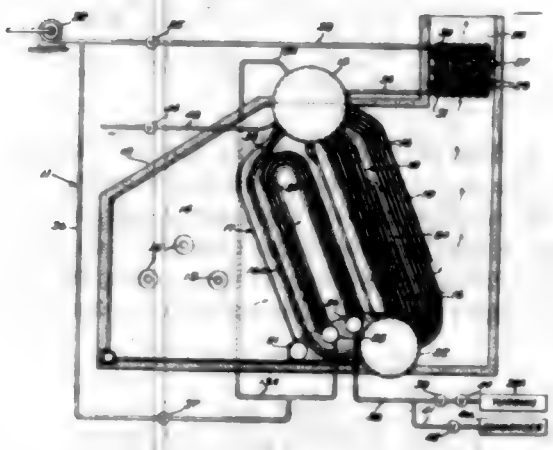
2,895,455
VACUUM CONTROL AND MOTOR
Garth Anthony Clowes, Kalamazoo, Mich., assignor to Shakespeare Products Company, Kalamazoo, Mich., a corporation of Michigan
Application April 10, 1958, Serial No. 727,629
13 Claims. (Cl. 121—41)



1. In a control device the combination of a vacuum cylinder having side and end walls, a plurality of longitudinally spaced lateral outlets each opening through said side wall and each having a vacuum line connected thereto, means for selectively applying a vacuum to said lines, a piston head fitted in said cylinder for slidable longitudinal movement and adapted to be positioned selectively opposite each of said outlets for sealing the same, a hollow piston rod fixed to said piston head and communicating with the interior thereof and having an aperture positioned outwardly from said cylinder and communicating

with the interior of said rod for admission of air from the atmosphere, opposed ports in opposite sides of said piston each having an inwardly facing conical valve seat, a ball valve loosely confined between said valve seats adapted to seat selectively on either one and a passage for air leading interiorly of said piston from said hollow piston rod to said valve seat.

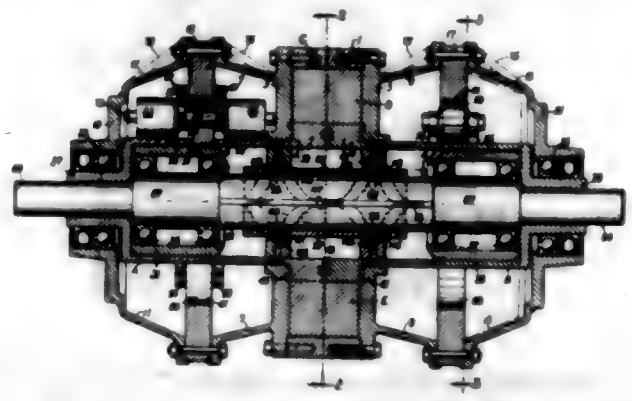
2,895,456
METHOD FOR GENERATING VAPOR
George E. Tate, Summit, N.J., assignor to Foster Wheeler Corporation, New York, N.Y., a corporation of New York
Application December 22, 1954, Serial No. 476,943
3 Claims. (Cl. 122—406)



1. A method for rapid start-up of a vapor generator to raise liquid therein to a temperature and pressure for the production of vapor, said vapor generator including a circuit containing a vapor and liquid vessel and vapor generating tubes in communication with each other, said circuit having an inlet and an outlet both in communication with a source of liquid under pressure, the circuit inlet receiving liquid from said source and the circuit outlet being subjected to the pressure of said source and adapted to discharge vapors from said circuit, the steps comprising, conducting liquid from the liquid source to the circuit inlet to fill the vapor and liquid vessel and vapor generating tubes completely with liquid, closing off communication between the source of liquid and the circuit inlet but maintaining communication between the liquid source and the circuit outlet to prevent flow of liquid from said circuit and to cause the pressure of said liquid source to be impressed upon the liquid in the circuit to thereby cause subsaturation of the liquid during start-up firing of the vapor generator, firing the vapor generator during start-up at a rapid rate until the liquid in the vapor generating tubes is raised to the desired temperature and pressure to produce vapor, withdrawing a portion of the liquid from the vapor and liquid vessel to reduce the liquid in said vessel to a normal operating level, cutting off communication between the source of liquid and the circuit outlet to permit discharge of vapors from the circuit, and reopening communication between the source of liquid and the circuit inlet to permit flow of liquid to the latter.

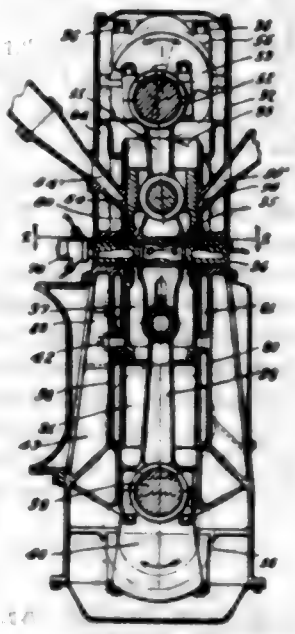
2,895,457
ROTARY ENGINE
George E. Mallinckrodt, St. Louis, Mo., assignor to Elliot Enterprises, Incorporated, St. Louis County, Mo., a corporation of Missouri
Application July 30, 1958, Serial No. 752,063
22 Claims. (Cl. 123—11)

1. A rotary engine comprising a frame, a toroidal cylinder carried in said frame, relatively movable rotors having interdigitated pistons in the cylinder, reverse-locking mechanisms operative between said rotors and the frame adapted successively to reverse-lock the rotors at a certain angular position in the frame, said pistons executing gas-buffered collision events wherein they and the rotors move substantially at the same angular speed throughout a range of movements across said reverse-locking position, each set of pistons and their corresponding rotor otherwise successively moving relatively



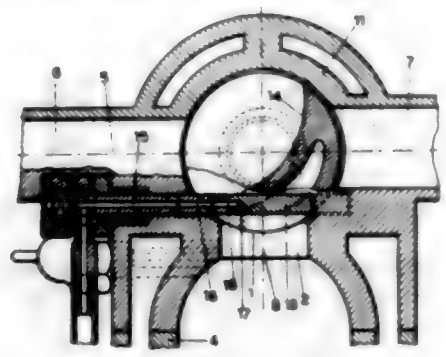
to the reverse-locked pistons and their corresponding rotor, a shaft, shuttles slidable relative to said shaft and adapted to drive it in rotation, and cam means connecting each shuttle with both rotors adapted to slide the shuttles relative to the shaft while rotating them and the shaft during relative rotor movements and to lock the shuttles relative to the shaft while rotating them and the shaft during equal rotor movements.

2,895,458
COOLANT JACKET ARRANGEMENT FOR INTERNAL COMBUSTION ENGINES
Harold M. Jacklin, Indianapolis, Ind.
Original application October 6, 1950, Serial No. 188,810, now Patent No. 2,805,654, dated September 10, 1957. Divided and this application September 9, 1957, Serial No. 687,847
4 Claims. (Cl. 123—41.72)



1. In an internal combustion engine, a cylinder block and a head having interengaging end faces, a cylinder in said block, a combustion chamber in said head, coolant jackets in said head and block respectively, said jackets having ports which open in said end faces, the head-jacket ports being displaced circumferentially from the block-jacket ports and at least one of said end faces being provided with a circumferentially extending groove interconnecting each head-jacket port with an adjacent block-jacket port.

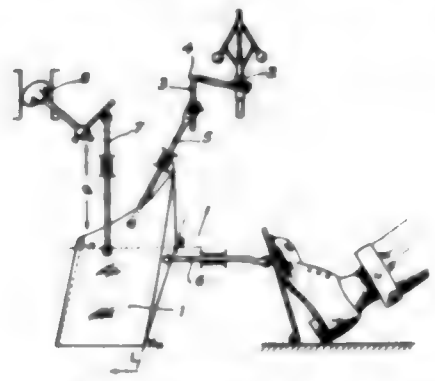
2,895,459
THERMAL ENGINES, PARTICULARLY I.C. ENGINES
Antonio Sbeiz, Milan, Italy
Application July 11, 1955, Serial No. 521,282
Claims priority, application Brazil July 23, 1954
1 Claim. (Cl. 123—80)



In an internal combustion engine, including a cylinder provided with an internal combustion chamber and a head at the upper end thereof, said head and said cylinder having a valve chamber therein opening into said combustion chamber, said head and said cylinder having aligned inlet and exhaust passages disposed transversely of the cylinder and intersecting said valve chamber for the intake of air and the exhausting of gases, a rotary valve rotatably mounted in the valve chamber, a shaft rotatably mounted in the cylinder transverse thereto and positioned at right angles to the passages and on which said valve is fixed, said valve having a surface cavity formed therein to permit communication selectively between said inlet passage and said combustion chamber and between said combustion chamber and said exhaust passage, said valve having also a surface portion closing off said combustion chamber from said valve chamber, the improvement which comprises a recessed shoulder in said cylinder adjacent the upper end of said combustion chamber and opening into said valve chamber, and a sealing ring seated on said recessed shoulder for contacting the surface portion of said rotary valve when said valve is in position to close off said combustion chamber from said valve chamber, said cylinder being provided with a first fuel passage extending laterally therethrough and terminating adjacent said sealing ring, said sealing ring being provided with a second fuel passage extending laterally therethrough and communicating with said first fuel passage, the surface portion of said rotary valve shutting off communication between said combustion chamber and said valve chamber being provided with a third passageway which, when said rotary valve is in position for preventing communication between said combustion chamber and said valve chamber, communicates with said second fuel passage and said combustion chamber, whereby fuel may be injected into said combustion chamber through said three fuel passages when said combustion chamber is closed by said rotary valve.

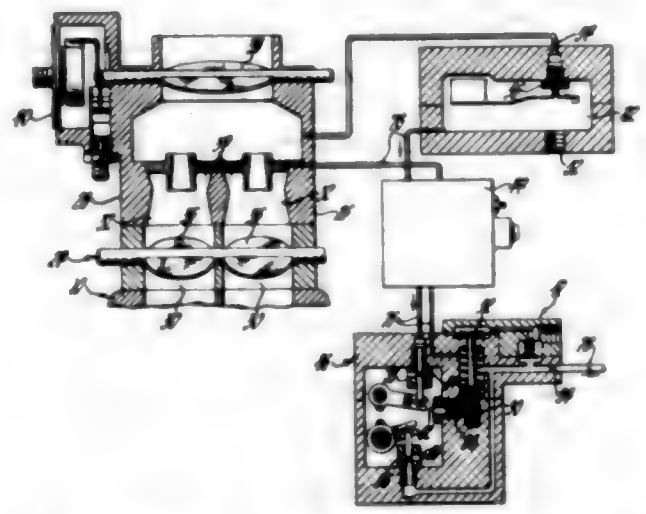
2,895,460
CONTROL DEVICE FOR INTERNAL COMBUSTION ENGINES
Antoine Braeder, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France, a French corporation
Application November 1, 1955, Serial No. 544,310
Claims priority, application France November 9, 1954
2 Claims. (Cl. 123—98)

1. A control mechanism for varying the power output of an engine for a motor vehicle and maintaining constant the power output for a determined position of the control mechanism in response to an accelerator foot pedal comprising a throttle for controlling air fuel mixture, a cam defining a three-dimensional active cam surface, first linkage means coupling said cam to said foot pedal for controlling a first unidirectional movement of said cam, indicating means for indicating the speed of said engine, second linkage means coupling said indicating means to said cam for controlling a second unidirectional movement of said cam to compensate for speed variations of said engine, and a feeler supported on said surface and coupled



to said throttle for the exclusive control thereof in response to the position of said cam and thereby in response both to the position of said foot pedal and said indicating means, the active surface of the cam representing a family of curves each corresponding to the opening of the throttle valve dependent on the engine speed for a constant power output.

2,895,461
FUEL INJECTION SYSTEM
Ronald C. Groves, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application February 4, 1957, Serial No. 638,103
11 Claims. (Cl. 123—119)

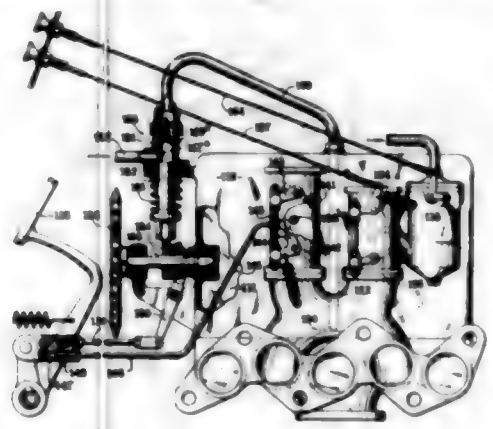


1. In an internal combustion engine having a combustion chamber with an intake valve for controlling the admission of induction air into said chamber, a fuel pump located adjacent said intake valve and actuated by reciprocating movement thereof, a fuel system having means for metering fuel and delivering said metered fuel to said pump.

2,895,462
FEED DEVICE FOR AN INTERNAL COMBUSTION ENGINE
Marcel Champ, Vire, France
Application December 11, 1957, Serial No. 702,130
Claims priority, application France December 17, 1956
16 Claims. (Cl. 123—133)

13. In a four-stroke engine having n cylinders comprising a crankshaft, each cylinder consuming, in each cycle at normal running speed of the engine, substantially a mass u of fuel, the engine consuming therefore for each rotation of the crankshaft a mass $nu/2$ of fuel, said explosion engine comprising an induction mani-

fold, an exhaust manifold, and a first feed device for starting the engine and for operation of the latter at idling speed; said first feed device comprising a carburetor and a first air induction tube connected to said induction manifold, a first jet in said carburetor, said jet communicating with said first tube, and first control means for controlling said first feed device; a second feed device for operation of the engine at normal running speeds, said second feed device comprising a housing defining a vaporization chamber for prior vaporization of the fuel by means of the heat of the exhaust gases of the engine, at least a portion of the wall of



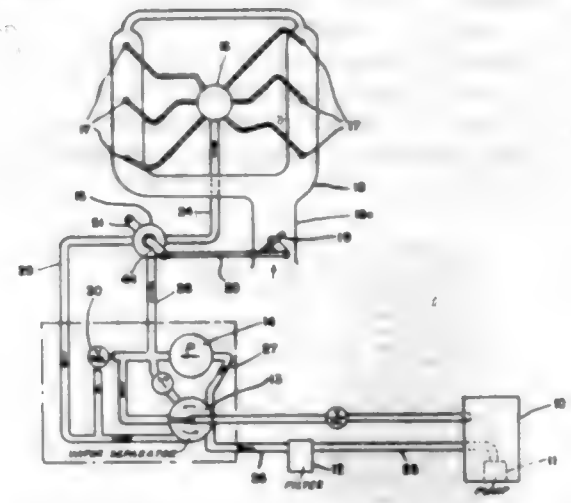
said housing being disposed in such manner as to be heated by the exhaust gases of the engine, at least one second jet disposed inside said vaporization chamber in the vicinity of said portion of said wall, a pump of the type comprising a cylinder and piston, the output end of said pump communicating with said jet for feeding said second jet with liquid fuel, a second induction tube connected to said induction manifold, a nozzle putting said second tube in communication with said vaporization chamber; said pump having a single cylinder and having such capacity as to be capable of injecting into said vaporization chamber a mass

$$\frac{nu}{2} \times N$$

of fuel, where N is a number greater than 1, and speed-reducing transmission means operatively connecting the crankshaft of the engine to said pump for driving the latter at reduced speed; the speed reduction ratio being equal to N.

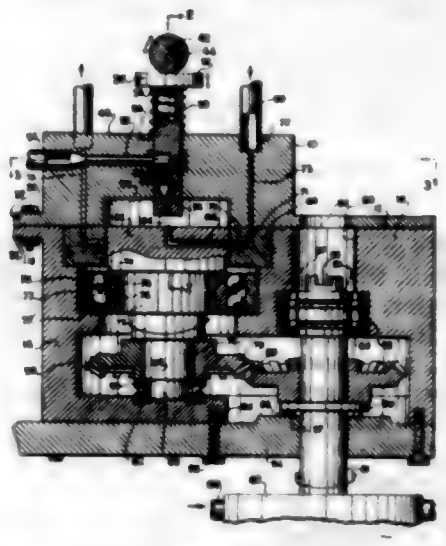
2,895,463
FUEL METERING VALVE
Robert J. Powell and James E. Champion, Muskegon, Mich., assignors to Continental Motors Corporation, Detroit, Mich., a corporation of Virginia
Application January 16, 1957, Serial No. 634,538
4 Claims. (Cl. 123—139)

1. A continuous flow fuel injection system for an internal combustion engine having an air induction manifold and an adjustable air intake throttle valve for same, said injection system operable in response to throttle valve adjustment to deliver metered fuel to said engine and including a source of fuel supply, a fuel pressure pump assembly having a fuel intake connected with said fuel source and a fuel outlet, and a fuel metering valve structure comprising a valve housing having a fuel inlet connected with said pump outlet, a fuel delivery outlet connected with said engine, and a fuel spill outlet connected with said pump intake, an adjustable metering valve member in said housing operable to vary the opening of said delivery outlet, means connecting and simultaneously actuating said metering valve and said throttle valve for delivering fuel variably relative to throttle valve position, an adjustable mixture control valve member disposed in said housing intermediate said metering valve and said fuel inlet, said mixture control valve being operable to open and close said fuel delivery outlet and to simultaneously respectively close and open said fuel spill



outlet, and means selectively actuating said mixture control valve independently of said throttle valve and of said metering valve.

2,895,464
FLUID METERING AND TIMING DEVICE
John E. Tennant and Richard H. Hair, Rock Hill, S.C.
Application September 29, 1958, Serial No. 763,969
6 Claims. (Cl. 123—139)

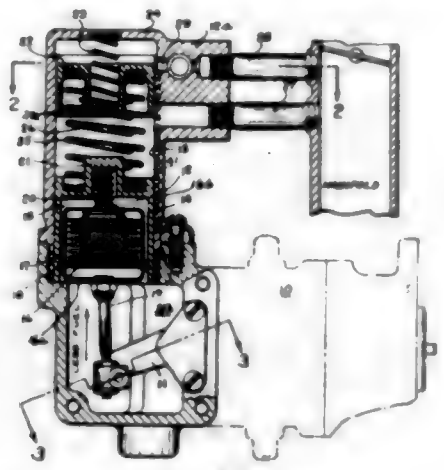


1. A fluid metering and timing device, comprising a head block, a base block secured to the head block, an inlet connected to the head block for receiving fluid under pressure, a plunger mounted slidably in the head block and spring biased outwardly from the head block, means for adjustably positioning the plunger in the head block against said spring bias, a tapered orifice provided in the plunger communicating with the inlet through a passage in the head block, a generally cylindrical rotor rotatably mounted in the base block, said rotor having a radially extending passage communicating with said orifice to receive fluid therefrom, and a plurality of outlets disposed radially around said rotor to receive fluid in turn from said radially extending passage as the rotor rotates.

2,895,465
FUEL INJECTION APPARATUS
John N. Humber, North Wilbraham, and Carl H. Nystrom, West Springfield, Mass., assignors to American Bosch Arma Corporation, a corporation of New York
Application April 9, 1957, Serial No. 651,688
6 Claims. (Cl. 123—140)

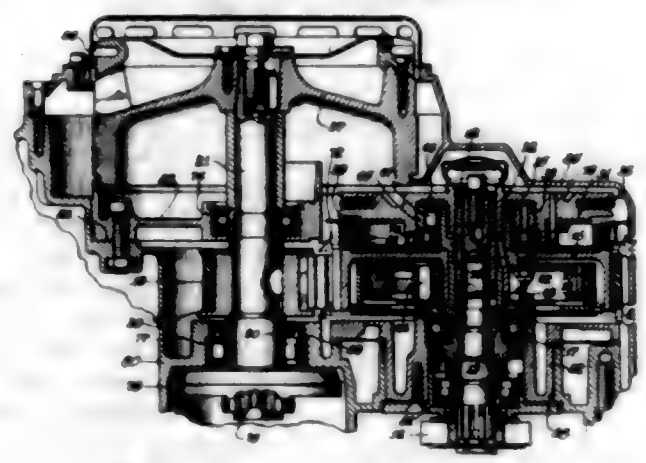
1. In a device of the character described, a fuel injection pump having a control member, said control member having a pressure chamber, a first pressure

actuated means in said pressure chamber and operatively connected to said control member, a second pressure actuated means in said pressure chamber, said first and second pressure actuated means being operatively connected to manifold pressure or vacuum and actuated thereby, resilient means between said first and second pressure actuated means, the connection of said pressure actuated means to manifold pressure or vacuum comprising a line connecting said pressure chamber between



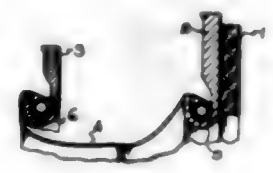
said first and second pressure actuated means to a source of pressure for actuating said first pressure actuated means, and a second line connecting said pressure chamber on the side of said second pressure actuated means remote from said first pressure actuated means to a source of pressure for actuating said second pressure actuated means and pressure operated valve means for controlling the connection of said second line to said pressure chamber.

2,895,466
CHAIN SAW STARTER MECHANISM
Arthur W. Mall, Floossmoor, and Charles A. Mattson and Walter Ziegler, Crete, Ill., assignors, by mesne assignments, to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware
Application February 14, 1955, Serial No. 487,942
6 Claims. (Cl. 123—179)



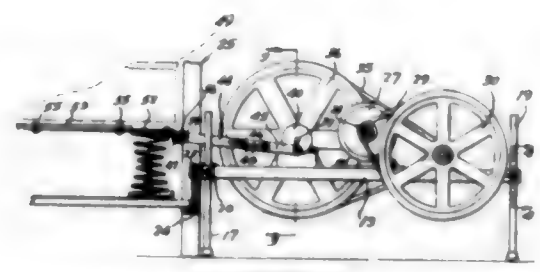
1. The combination in a gasoline engine chain saw, of a sprocket shaft, a driven pulley to actuate the sprocket shaft journalled on the sprocket shaft, a sleeve carried behind the pulley, drive means from the engine crankshaft to said pulley, a starter assembly located adjacent the driven pulley having a hub journalled on the sprocket shaft comprising a starter pulley provided with a circular flange forming a recess into which the sleeve on the driven pulley extends, rollways formed in the outer circumferential surface of the recess having shallow and deep portions, rollers in the rollways and arranged between the said outer surface of the recess and the sleeve, a roller cage having an inner ring portion with openings to receive the rollers, said inner ring portion being in contact with the sleeve so that the rollers shift between the shallow and deep portions of the rollways upon relative movement of the hub and the ring portion, said rollers being arranged to establish a unidirectional drive relation between the starter pulley and the driven pulley when the rollers are shifted to the shallow portions and a disengaged relation when the rollers are shifted to the deep portions of the rollways; and a centrifugal clutch assembly comprising centrifugally actuated clutch shoes carried on the face of the pulley and a clutch drum keyed on the sprocket shaft, for engaging the driven pulley and the sprocket shaft.

2,895,467
NECK SEAL
Francis T. Wallin, Brookline, Mass.
Application March 17, 1953, Serial No. 342,857
9 Claims. (Cl. 128—30)



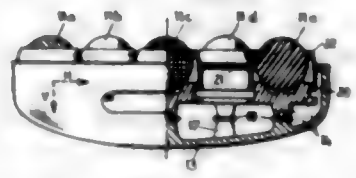
1. A plastic flexible yieldable tube having ends of different peripheral size, said ends being formed as closed loops and a plastic flexible yielding elastic ring, freely positioned in said loops and coextensive therewith about each end of said tube.

2,895,468
SLEEP INDUCING DEVICE
Doris M. Short, Stamps, Ark.
Application January 25, 1957, Serial No. 636,330
4 Claims. (Cl. 128—33)



1. In combination with a bed having a spring assembly, a frame, a plurality of vertical supporting legs adjustably secured to said frame, a motor mounted on said frame, a crank disc, means drivingly coupling said motor to said crank disc, and a link arm connecting said crank disc to said spring assembly and being formed and arranged to oscillate said spring assembly responsive to rotation of said crank disc.

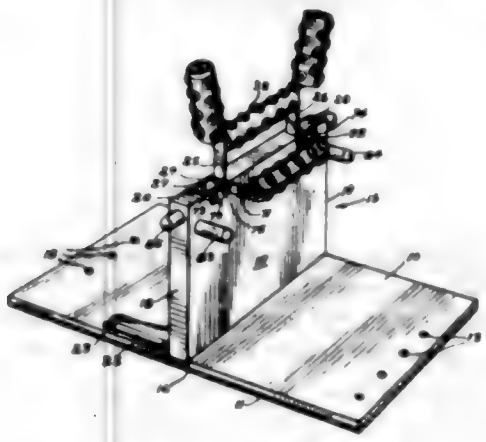
2,895,469
MASSAGING APPARATUS OF THE BALL TYPE
Henri-Louis Regley, Lille, France
Application November 15, 1957, Serial No. 696,838
Claims priority, application France November 17, 1956
5 Claims. (Cl. 128—57)



5. A massaging apparatus including a carrier provided with a plurality of openings, a plurality of ball supports

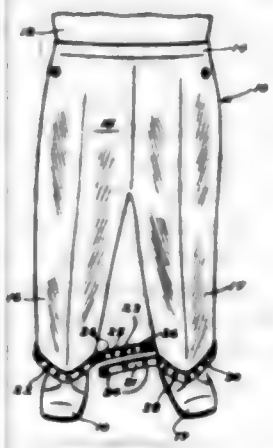
rigid with said carrier and a plurality of balls each revolubly carried by a corresponding ball-support and projecting outwardly through the corresponding opening of the carrier, the edge of each opening engaging the corresponding ball along a circular line and projecting beyond same as an outer section flaring outwardly towards a free terminal annular line located at a distance of at least 5 tenths of a millimeter from the cooperating ball.

2,895,470
FOOT MASSAGE DEVICE
Lambert Reiter, Spring Park, Minn.
Application July 24, 1958, Serial No. 750,701
10 Claims. (Cl. 128—57)



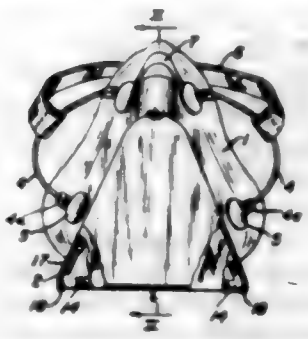
4. A foot massaging device having in combination, a base plate, a plate member upstanding from said base plate, a bracket upstanding from said plate member, an elongated roller journaled in said bracket, said bracket having portions extending outwardly at either side thereof, a pair of rollers respectively journaled on and upstanding from said outwardly extending portions, a second bracket mounted on said upstanding member in a substantially horizontal position and adjacent the top of said member, an elongated roller journaled in said bracket, said first and second rollers being in parallel relation and in alignment whereby both of said rollers are readily simultaneously engaged by a foot.

2,895,471
SAFETY GARMENT STRUCTURE
Ada E. Rollie, St. Paul, Minn.
Application August 7, 1958, Serial No. 753,674
5 Claims. (Cl. 128—133)



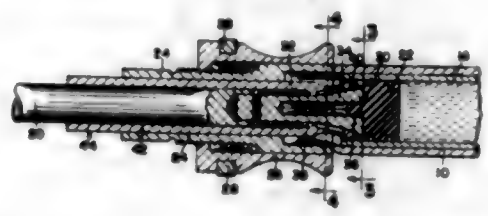
2. A safety garment for an infant embodying leg movement limiting means comprising an outer garment adapted to be worn by an infant, said outer garment having a pair of leg portions, a band of material about each of said leg portions adjacent the bottoms thereof, said bands respectively having portions detachable from said leg portions to form free end portions, said free end portions being adjacent one another and adapted to be removably secured together to link together the leg portions of said garment to limit the leg movement of said infant.

2,895,472
RESPIRATOR
James N. Matheson, West Reading, Pa., assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Application January 5, 1956, Serial No. 557,466
22 Claims. (Cl. 128—146)



1. A respirator including a unitary face piece and filter holding box of flexible material integrally molded in one piece, the filter holding box being positioned forwardly and extending downwardly of said face piece in substantially the form of a triangular box with downwardly and outwardly sloping sidewalls and integral front and rear walls and an open base portion, a filter supporting frame having corresponding downwardly and outwardly sloping sidewalls and a filter pad of substantially butterfly shape folded over and supported thereon mounted in said box so that the edges of said pad will directly contact the inner surface of the sidewalls of said box and form a dust-tight fit therewith aided by the yieldability of the box and aligning functions of the flexible sidewalls thereof.

2,895,473
ASPIRATING CARTRIDGE SYRINGE
Solomon Reznek, Wheeling, W. Va., assignor to Cook-Waite Laboratories, Inc., New York, N.Y., a corporation of Delaware
Application July 12, 1954, Serial No. 442,494
2 Claims. (Cl. 128—218)



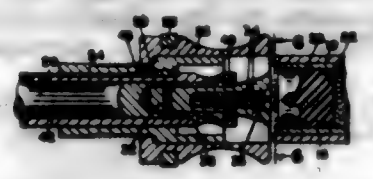
1. A syringe for use with a disposable ampoule cartridge having a plunger and said plunger having an exposed resilient tip extending therefrom, said syringe comprising a barrel for receiving the cartridge, a needle on the barrel, a hinged head on the barrel, a locking sleeve on the head, and a plunger rod slidably mounted in the head, and means on said plunger rod for selectively gripping the cartridge plunger tip for movement of the cartridge plunger with the plunger rod in either direction for both aspiration and injection, the plunger tip gripping means comprising a series of radially movable fingers on the plunger rod at the inner end thereof and including means for moving said fingers radially inwardly to grip the tip, said finger moving means includes a rotatable sleeve surrounding the fingers, and means for moving the sleeve axially relative to said fingers, said fingers being resilient and extending into the path of the sleeve.

plier jaws and an auxiliary member pivoted on one plier

2,895,481

to receive the rollers, said inner ring portion being in with a plurality of openings, a plurality of ball supports

2,895,474
ASPIRATING CARTRIDGE SYRINGE
Solomon Reznek, Albany, N.Y., assignor to Cook-Waite Laboratories, Inc., New York, N.Y., a corporation of Delaware
Application January 4, 1955, Serial No. 479,818
2 Claims. (Cl. 128—218)

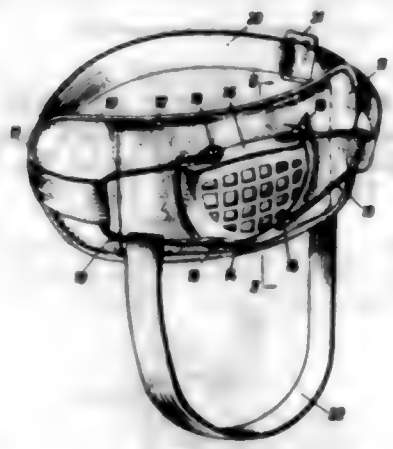


1. A syringe for use with a disposable ampoule cartridge having a plunger and said plunger having an exposed tip extending therefrom, said syringe comprising a barrel for receiving the cartridge, a needle and a piston rod associated with the barrel, and means on said piston rod for gripping the cartridge plunger tip for movement of the cartridge plunger with the piston rod in either direction for both aspiration and injection, the plunger tip gripping means comprising radially movable gripping fingers on the piston rod at the inner end thereof and including means for moving said fingers radially inwardly to grip the tip, said fingers being resilient and normally retracted, the means for actuating the gripping fingers comprising a locking sleeve, a second sleeve rotatable on the piston rod and non-rotatably associated with the locking sleeve for rotation by the locking sleeve, and inter-engaging means between said second sleeve and the gripping fingers moving said fingers radially inwardly upon relative axial motion thereof.

2,895,475
CONTAINER FOR COLLECTING, STORING AND DISPENSING BIOLOGICAL FLUIDS
Everett L. Cole, Savannah, Ga.
Application December 3, 1956, Serial No. 625,975
5 Claims. (Cl. 128—272)

1. Means for collecting and storing fluid samples and the like comprising an elongated flexible tube having sealed ends and having a catheter integrally joined to one end of the tube in communication with the interior of said tube for filling or emptying the tube, a tubular shell having an end opening receiving said container, the container having an enlarged plug at the base of the catheter and the end opening of the shell having a seat for said plug, said shell having a collapsible air bulb joined thereto whereby to apply super-atmospheric or sub-atmospheric pressure to the exterior of a container sealed in said shell by the plug and seat.

2,895,476
COLOSTOMY BELTS AND THE LIKE
Frank Leslie Hallard, Manchester, England
Application December 13, 1957, Serial No. 702,586
Claims priority, application Great Britain
January 22, 1957
3 Claims. (Cl. 128—283)



1. A surgical belt comprising an elongated pad of light foamed plastic material having an additional piece of foamed plastic material bonded thereto so as to provide a thickened portion at the center of said pad, said pad having an aperture, said additional piece having a second larger aperture, said apertures together providing an under cut recess in said pad, a removable perforate element, absorbent pads received in said perforate element, the latter being disposed in said under cut recess, and harness means connected with said perforate element and permitting said belt to be worn with said perforate element in register with a body cavity.

2,895,477
DIAPER-HOLDING GARMENT
Edith E. Bernard, South Pasadena, Calif.
Application January 22, 1954, Serial No. 485,577
1 Claim. (Cl. 128—284)

A diaper holding garment comprising a fabric bottom sheet which is relatively narrow intermediate its ends, a lining for said bottom sheet, a pair of top strips spaced apart transversely of said bottom sheet and a pair of side strips secured to said lining and secured respectively to said respective top strips whereby to define a diaper receiving pocket accessible between said top strips, the end edge portions of each of said top strips being precut to be biased toward its outer edge, and transverse stitching securing said end edge portions of said top strips to said bottom sheet in transverse alignment whereby to maintain the inner edge portions of said top strips relatively more taut longitudinally than the outer edge portions thereof.

2,895,478
SUTURE-TYING INSTRUMENT
Charles Russell Post, Andover, N.J.
Application March 18, 1954, Serial No. 417,050
3 Claims. (Cl. 128—334)

1. A combined needle holder and knotter comprising, in combination, a pair of plier levers, one thereof having in the end thereof a recess parallel to the length of the

thereby in opening and closing operations; said fingers of the tubular post, whereby to withdraw the clutch balls

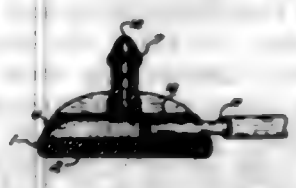
portions to form free end portions, said free end portions

sleeve.

plier jaws and an auxiliary member pivoted on one plier jaw, one end thereof having a pin passing into said

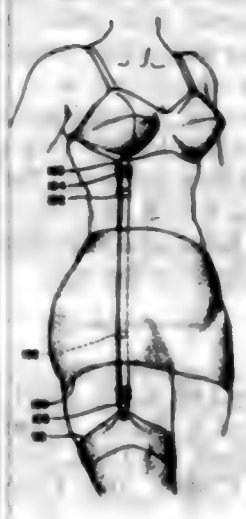
notch, the other end being adapted to manual manipulation.

2,895,479
ELECTROCARDIOGRAPH ELECTRODE
Roger A. Lloyd, Middleton, Wis.
Application September 13, 1957, Serial No. 683,912
5 Claims. (Cl. 128—417)



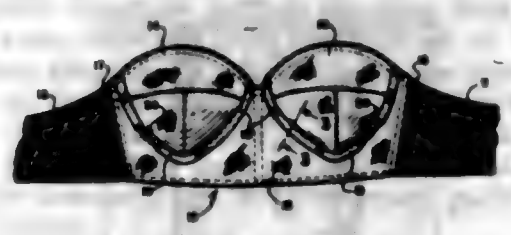
1. A device of the type described comprising a disc of sintered conductive material, said disc being impregnated with a liquid electrolyte, a metal housing in conductive relation to said disc, said housing providing a reservoir above said disc for said electrolyte, and electrical conductor means attached to said housing.

2,895,480
BRASSIERE ATTACHMENT
Anne Finel, Brooklyn, N.Y.
Application June 24, 1957, Serial No. 667,599
3 Claims. (Cl. 128—453)



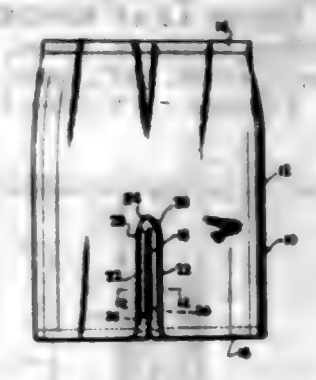
1. The combination of a brassiere and attachment therefor, which comprises a short-line brassiere having cup portions and a lower marginal edge portion, a brassiere stabilizing and stocking supporting elastic strip of sufficient length to extend between said brassiere and the top of a stocking being secured at one end thereof to said lower edge portion of the brassiere, the other end of said strip being adapted for securing to said stocking top.

2,895,481
BRASSIERE FRAME
Anne Spitzer, Bayside, N.Y., assignor to Lily of France, Inc., New York, N.Y., a corporation of New York
Application November 13, 1958, Serial No. 773,793
2 Claims. (Cl. 128—476)



1. A supporting frame of substantially V shape, having a pair of arms extending outwardly and upwardly from an elliptical apex to a midpoint between said apex and a terminal; said arms further extending parallel to each other from said midpoint to said terminal.

2,895,482
GIRDLE
Nicholas A. Marino, Montreal, Quebec, Canada
Application September 5, 1958, Serial No. 759,257
2 Claims. (Cl. 128—563)



1. A girdle comprising an open-ended body portion of flexible material adapted to fit snugly about the lower part of the trunk of a wearer's body, said body portion having a vertical slit at its front medially between its opposite sides, and a pair of rigid rods carried by the body portion at opposite sides of the slit, said rods being pivotally connected at one end for relative swinging movement in a fore-and-aft direction only, the girdle further including tubular hems at opposite sides of the slit receiving the respective rods, and the connection there between the pivotal connection between the rods comprising a screw extending through the upper ends of the rods, and a nut threaded on the screw, the shank of the screw being peened over upon the nut to hold the nut and screw permanently against disassembly, said pivotal connection further including a spacer washer between the rods, the screw extending through the spacer washer.

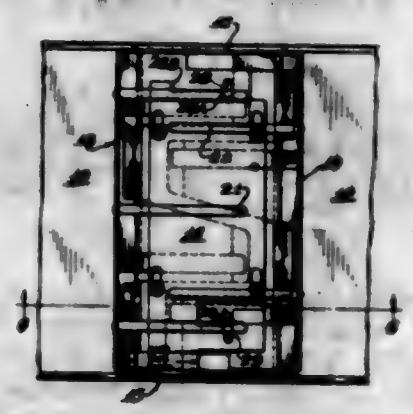
2,895,483
LOOSE-LEAF BINDER
Edward C. Rankin, Oak Park, Ill., assignor to Brock & Rankin, Inc., Chicago, Ill., a corporation of Illinois
Application April 12, 1956, Serial No. 577,863
8 Claims. (Cl. 129—8)

1. In a post binder having laterally dividing post carrying means, improvements comprising, namely: a housing having open side portions and attached to the backbone portion of a binder having a set of covers joined to a backbone; a post-carrying wing structure at each of said sides of the housing respectively adjoining one of said covers; and each having elongated finger means respectively slidably projecting into one of said open side portions for approximately linear movement substantially wholly into and out of said housing to diverge and converge said wing structures and the post means carried

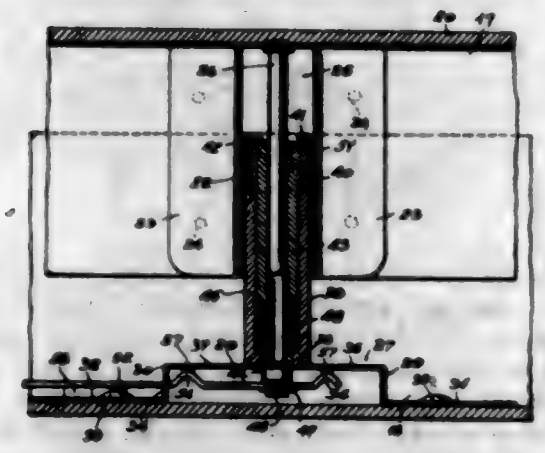
sealed in said shell by the plug and seat.

in the end thereof a recess parallel to the length of the

thereby in opening and closing operations; said finger means and housing including cooperative hinge and lug means acting to limit the divergent movement of the wings to a predetermined open position wherein the fingers are substantially withdrawn from the housing and hingedly pivotable to dispose the appertaining binder posts at a substantial angle to the line of sliding movement of said fingers in said housing.

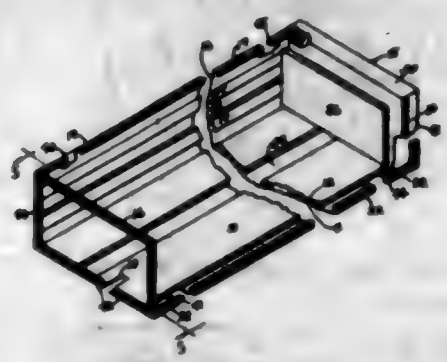


2,895,484
LOOSE LEAF BINDER
William Grassney, Bronx, N.Y.
Application April 30, 1957, Serial No. 656,144
3 Claims. (Cl. 129—13)



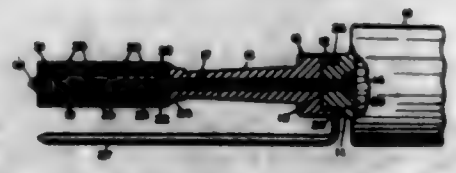
1. In a loose leaf binder, slidable L-shaped plates constituting the back of the binder, prongs carried by one of said plates for loosely and detachably holding loose leaves, and expansible means connecting the L-shaped plates and associated parts, said means including a sleeve carried by one of the said L-shaped plates, a solid post carried by said one L-shaped plate and positioned centrally of the sleeve, a plate carried by the other of said L-shaped plates, said latter plate being bent to form a housing with a central opening and with an end opening, a tubular post having one end secured in said central opening, a tubular cap secured to the free end of said tubular post and forming an extension thereof, said cap having a conical inner surface, a carrier sleeve telescoped in said tubular post, said carrier sleeve having a reduced end portion extending outwardly of the tubular post and protruding into said housing, clutch balls carried by said carrier sleeve at its other end adapted to be wedged between the conical wall and the solid post, to secure the sleeve and tubular post against movement apart, a compression spring interposed between the tubular post and carrier sleeve for urging said carrier sleeve inwardly of the tubular post and for maintaining the balls in operative gripping position, a releasing bar longitudinally slidable in said hollow housing and operatively connected with said carrier sleeve, and coacting camming means on the housing and releasing bar, so that longitudinal shifting of the releasing bar draws the carrier sleeve outwardly of the tubular post, whereby to withdraw the clutch balls from the conical wall and to release the sleeve and tubular post for separation.

2,895,485
CARD FILE TRAY
Raymond L. Myers, Vestal, N.Y., assignor to Ray Myers Corporation, Endicott, N.Y., a corporation of New York
Application October 19, 1956, Serial No. 617,174
3 Claims. (Cl. 129—16)



1. A file card tray comprising a receptacle having only three integrally united sheet metal walls forming a bottom, a side and a front end which are arranged substantially at right angles to each other at an inner corner and each has flat inner faces lying in a plane for supporting a set of cards normally on either the bottom or the side wall, said tray being substantially open opposite to the side wall for an unobstructed positioning and removal of the cards from either supporting wall, a hollow sheet metal structure in front of and projecting forwardly from said front end wall which defines an outwardly opening recess, said structure comprising two walls at right angles to each other having inturned flanges adjacent the top and side of the wall and spaced from the end wall and located respectively remote from and opposite to the bottom and side walls which form vertical and horizontal handles for carrying the tray, and an open frame having arms at right angles secured to the bottom and side walls at the rear end of the tray opposite to said front end wall which provides horizontal and vertical handles respectively remote from and opposite to the bottom and side walls, said four handles being arranged in substantially parallel pairs providing for a two handed carrying of the tray with the cards lying edgewise on either the bottom or the side wall, and each handle being arranged off center relative to the center of gravity of the tray for suspending the tray therefrom in a tilted position which urges the cards towards the adjacent side wall or bottom, both said frame and said hollow structure having its outermost portions lying in a plane so that each forms an unobstructed base on which the tray may be stood, and the frame and the front end wall forming inner supports lying in planes for cards in the tray.

2,895,486
COMBINATION HAIR DYE APPLICATING DEVICE
Harold F. Sayer, Miami, Fla.
Application April 11, 1956, Serial No. 577,611
1 Claim. (Cl. 132—9)



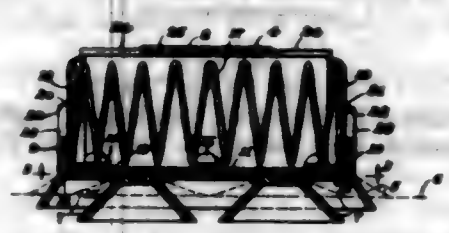
A combination hair dye applicating device comprising a container, a threaded neck portion mounted on said container, said neck portion having a discharge duct, an

elongated member threadedly mounted at one end on said neck portion, said elongated member having a duct extending along said member and communicating with said first named discharge duct, a wall portion mounted across said duct at said other end of said elongated member to prevent the flow of fluid therethrough, said elongated member having a plurality of radially disposed discharge orifices along said other end, a stop member mounted on said elongated member between said ends, a plurality of prongs mounted on said stop member extending longitudinally in spaced relation to said elongated member and extending in the direction of said other end of said elongated member, a cylindrical pad mounted on said other end of said elongated member in contact relation with said prongs and said stop member and an elongated rod mounted on said neck portion and extending in parallel and spaced relation with said elongated member.

2,895,487
HAIR AND SCALP CLEANER
Lillian Hazzard, New York, N.Y.
Application May 27, 1958, Serial No. 738,229
7 Claims. (Cl. 132—110)

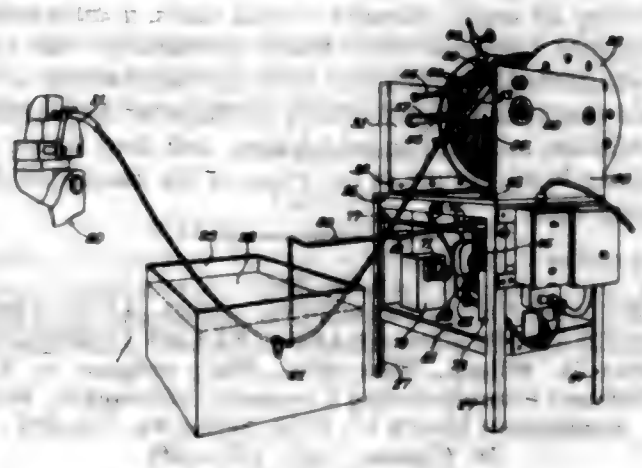
1. A hair and scalp cleaner comprising a comb having a base and teeth extending from said base, a hood secured to said base in a position in which said hood and base include a space narrower than the length of said teeth, said hood having apertures of a width allowing passage of said teeth in positions spaced from the circumference of said apertures, and a pad made in originally substantially flat shape of absorbent, rubber-like stretchable material, having a thicker part in said space and having thinner parts stretched resiliently out of said thicker part through said apertures about said teeth.

2,895,488
COIN DISPENSER
Stanley L. F. Soderquist and Oscar F. Johnson, Rockford, Ill.; said Johnson assignor to said Soderquist
Application January 11, 1954, Serial No. 403,250
2 Claims. (Cl. 133—6)



1. In a coin dispenser, an elongated hollow casing of uniform outside dimensions from end to end and internally of uniform depth from end to end, said casing having a semi-circular front wall and being open on the back thereof and having parallel side walls and parallel end walls and two coin receiving slots provided in the front wall of said casing, one adjacent each end wall, one of said slots being of greater diameter than the other to receive a larger size coin, the bore of said casing being of the same width as the larger diameter slot the major portion of the length of said casing and one end portion of the bore being tapered abruptly toward the smaller diameter slot, whereby said casing may be filled substantially to capacity with both sizes of coins or with either of the two sizes of coins, an elongated coiled compression spring insertable through the open back of said casing and working freely in said bore and normally reaching from end to end of the casing, said spring being of uniform diameter from end to end, coin follower disks seated on the opposite ends of said spring and insertable therewith through the open back of said casing to press whatever coins are disposed in front of them against the end walls, portions of the latter being cut away to provide finger openings for access to the outermost coins in said casing, and a back plate closing the open back of said casing and carrying means for securing the coin dispenser in substantially parallel relation to a support.

2,895,489
CLEANING AND REELING MECHANISM FOR STRIP STOCK
Eugene A. Foust, Hagerstown, Ind., assignor to Perfect Circle Corporation, Hagerstown, Ind., a corporation of Indiana
Application April 18, 1955, Serial No. 501,860
4 Claims. (Cl. 134—57)

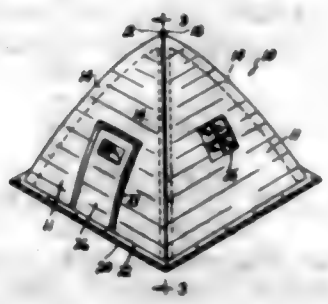


1. A cleaning and reeling mechanism for stretchable strip stock fed continuously from a forming machine comprising an open top tank for cleaning solution adjacent the discharge of said machine, a rotatable reel mounted adjacent said tank on the opposite side from said machine, said tank being located so that its open top is below the levels of the discharge of said machine and the reel to permit the stock to sag into the cleaning solution, drive means for the reel for winding the stock thereon as it emerges from the cleaning solution, and control means for said drive means including a control member having a loop submerged in the cleaning solution and through which the stock passes, said control member also having a shield, and photo-electric means for controlling said drive means, said control member being counter-balanced and freely movable by the stock when the sag thereof decreases to avoid tension on the stock to move said shield into deenergizing relation with said photo-electric means to stop said drive means and increase the sag in the stock and thereby hold the stock in the cleaning solution.

2,895,490
INFLATABLE TENTS
Merill R. Dimond, Punta Gorda, Fla.
Application May 2, 1957, Serial No. 656,544
1 Claim. (Cl. 135—1)

In an inflatable tent, the combination of a plurality of substantially triangular flexible wall forming sheets each having a base edge and a pair of convergent side edges and being curved in a plane transverse to the base edge thereof, said sheets being disposed in mutually adjacent relation wherein side edges of the adjacent sheets are contiguous and secured together and wherein the base

edges of the sheets are in angular relation whereby the upper corners of the sheets unite in an apex at the top of the tent, an out-turned anchoring strip provided at the base edges of said sheets and formed with apertures to receive fastening elements for anchoring the tent to the ground, a plurality of strip-like members provided inside the tent in overlapping relation with the contiguous side edges of the adjacent sheets, side edges of said strip-like members being secured to the side edge portions of the adjacent sheets and coacting therewith to form air ducts



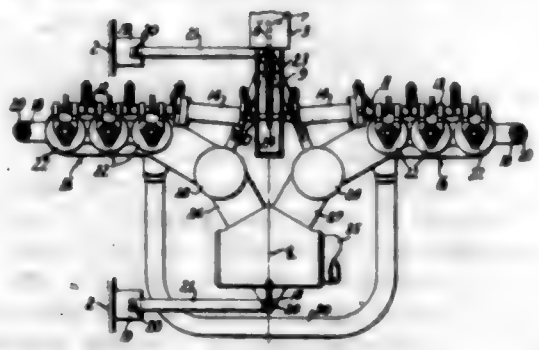
extending from the base of the tent to the apex thereof, said air ducts having closed lower ends and communicating with one another at the apex of the tent, valve means for delivering air under pressure to said ducts, a substantially rectangular inflatable door frame provided at the edges of a substantially rectangular door opening formed in one of said sheets, and a substantially rectangular door adapted for inflation mounted in said frame, said door frame and said door being curved in the plane of the associated door forming sheet.

2,895,491

INLET VALVE SUPPORTING AND ACTUATING MECHANISM FOR ELASTIC FLUID TURBINES

Charles D. Wilson, West Allis, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Application March 17, 1958, Serial No. 721,899
10 Claims. (Cl. 137—35)



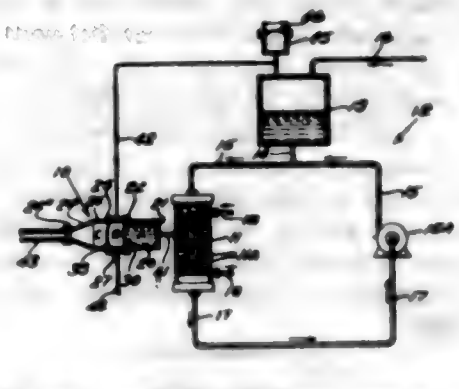
1. In an elastic fluid turbine apparatus having a turbine and foundation structure supporting said turbine; motive fluid supply means connected to said turbine; valve means in said motive supply means; support structure supporting said valve means for movement limited to translatory movement relative to said turbine and said foundation structure, said support structure comprising a set of support arms pivotally connecting horizontally spaced points on said valve means to foundation structure vertically spaced from said valve means, and a set of guide bars connecting horizontally spaced points on said valve means to foundation structure horizontally spaced from said valve means; a shaft assembly for operating said valve means, a first portion of said shaft assembly rotatably supported by said foundation structure, a second portion of said shaft assembly rotatably supported by and engaging said valve means, flexible torque transmitting means connecting said first portion to said second portion of said shaft, and force generating means supported by said foundation and connected to said first portion of said shaft assembly for rotating said shaft assembly to operate said valve means.

2,895,492

PRESSURE SAFETY DEVICE

Alan Bell, Sutton Courtney, England, assignor to Foster Wheeler Corporation, New York, N.Y., a corporation of New York

Application December 19, 1955, Serial No. 554,065
2 Claims. (Cl. 137—68)



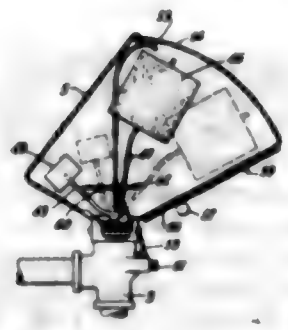
1. A fluid heat exchange system having a heat exchanger communicating with a surge tank to receive a first fluid maintained under a relatively low pressure by a gaseous fluid introduced into a vapor space of said surge tank, the heat exchanger including means to receive a second fluid under relatively high pressure and pass the second fluid in indirect heat exchange relationship with said low pressure fluid, in combination with a pressure safety device comprising a housing communicating at one end with the atmosphere, a first diaphragm disposed in said housing, a second diaphragm disposed in said housing and in spaced relationship with said first diaphragm to divide the housing into a first and second fluid-tight compartment and a third compartment communicating with the atmosphere, means communicating the first compartment with said heat exchanger to receive therein low pressure fluid from the heat exchanger, a high impedance line communicating at one end with said second compartment formed between said first and second diaphragms and at the other end with the vapor space of said surge tank to conduct gaseous fluid into said second compartment whereby the pressure in said second compartment is substantially equal to the pressure of said low pressure fluid, said first and second diaphragms being rupturable when the pressure of said low pressure fluid in said fluid heat exchanger and in said first compartment attains a value exceeding the maximum safe operating pressure of the heat exchange system for causing flow of low pressure fluid from said first compartment through said second and third compartments to atmosphere thereby relieving pressure upon said heat exchange system.

2,895,493

VALVE STRUCTURE

Samuel H. Edwards, San Pablo, Calif.

Application June 16, 1955, Serial No. 515,813
1 Claim. (Cl. 137—78)



A device for controlling the flow of water comprising: a valve body having an outlet and a vertical inlet; a partition in said valve body having a valve seat thereon directly over said inlet, said valve seat dividing the inlet

2,895,496

being truncated and in operative engagement with the

and outlet; a chamber above and concentric with said inlet; a pilot valve on the upper end of said chamber to seal off the interior of said chamber to the atmosphere; resilient means operatively associated with said pilot valve to bias said pilot valve to a closed position; a piston mounted for reciprocating movement in said chamber, the lower-most surface of said piston being adapted to register with said valve seat whereby to seal off the inlet when said piston is in a lowered position; a fluid passage through the center of said piston providing communication between the inlet and said chamber whereby to provide means for equalizing the pressure on either side of said piston when said pilot valve is closed; control means extending upwardly from the top of said pilot valve for controlling the operation of said pilot valve, said means operating to open said pilot valve when said control means is depressed; a first arm pivoted at the base thereof above said chamber, said first arm having a cam thereon positioned for contact with said control means of said pilot valve, said first arm being biased to one side of the vertical so that said cam normally contacts said control means of said pilot valve; a weight on the free end of said first arm; a second arm secured at the base thereof to the base of said first arm, said second arm being biased from the vertical in a direction opposite to that of said first arm; a sponge mounted on the free end of said second arm, said sponge being of sufficient size and absorbency that when said sponge is saturated with water the moment of said second arm bearing said sponge is in excess of the moment of said first arm bearing said weight whereby said cam is caused to pivot away from said control means for said pilot valve, said moment of said second arm and sponge being less than the moment of said first arm and weight when said sponge is dry; an auxiliary fluid passage on the outlet side of said valve having adjustment means therein for controlling the flow of water therethrough, said passage terminating at the far end thereof adjacent said sponge whereby fluid passing through said passage will contact said sponge on emerging from said passage; and a hood surrounding said first arm and weight and said second arm and sponge, said hood having an open portion positioned over said sponge whereby precipitation may enter said hood and contact said sponge.

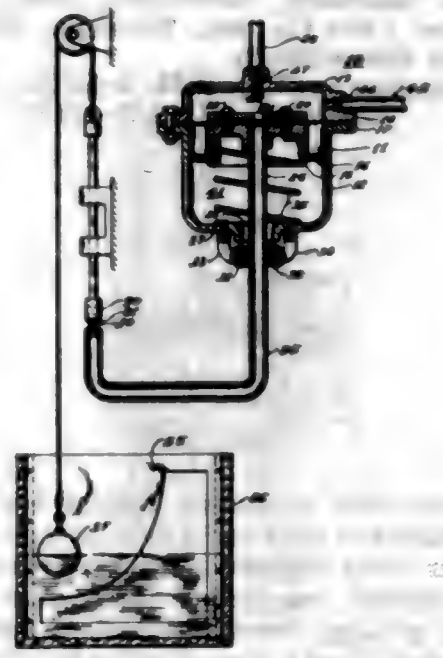
2,895,494

DEVICE FOR PRODUCING PRESSURES VARYING PROPORTIONALLY TO VARIATIONS IN A CONDITION

Samuel L. Adelson, Tucson, Ariz., assignor to Inflico Incorporated, Tucson, Ariz., a corporation of Delaware

Application August 9, 1954, Serial No. 448,730
4 Claims. (Cl. 137—85)

1. In combination with a metering element moving from a zero position through distances which are proportional to variations in a condition, means for obtaining a gas pressure varying proportionally to variations of said condition, comprising a nozzle axially aligned with said element, a gas pressure chamber in fluid connection with said nozzle, an inlet for gas under substantially constant pressure to said gas pressure chamber, there being normally between said element and said nozzle a gap of such size that gas escapes through said nozzle at the rate at which it enters said chamber, a pressure port in said gas pressure chamber adapted to be connected to a point of application of the pressure therein, and means operative when said element moves relative to said nozzle due to a change in the value of said condition to instantaneously cause said nozzle to follow the movement of said element over the entire range of said movements and restore a gap of substantially normal size for any position of said element, said means consisting of a piston having a hollow piston rod, a roller-type flexible diaphragm sealing said piston to a wall of said gas pressure chamber and permitting said piston to move substantially without friction, said hol-



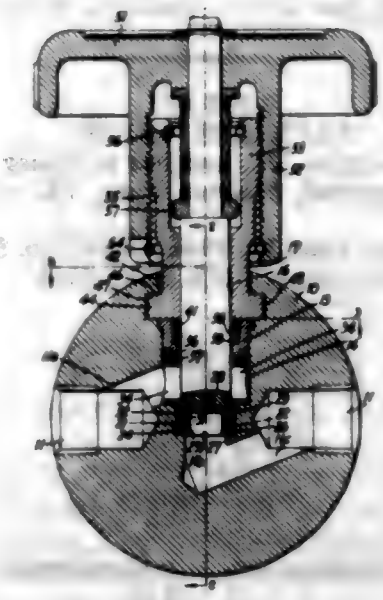
low piston rod connecting said chamber and said nozzle, and a compression spring opposing movement of said piston due to gas pressure in said chamber.

2,895,495

VALVE CONSTRUCTION

Austin U. Bryant, Walnut Creek, Calif., assignor, by mesne assignments, to Walworth Company, New York, N.Y., a corporation of Massachusetts

Application December 20, 1954, Serial No. 476,101
4 Claims. (Cl. 137—315)



1. In a valve construction, a body having flow passages adapted to be connected to associated piping, a flow control means within the body, a sleeve fitted within the body and ported for flow of fluid through the same, an operating stem fitted within the sleeve and operatively connected with said flow control means, means forming a seal between the sleeve and the body, means carried by the sleeve forming a seal between the same and the operating stem, a bonnet member surrounding the stem, the body having a slot open at the end faces of the body, said slot being adjacent the exterior end of the sleeve and serving to accommodate the adjacent end portion of the bonnet, and means forming an interlock between the bonnet and the body, said means including abutment surfaces engaged by insertion of the bonnet into the slot from one end face of the body.

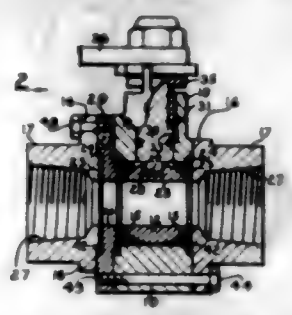
2,895,499

sive biasing means in said tubular member exposed to

2,895,496
BALL VALVE AND UNION HAVING A DETACHABLE END FITTING

Robert E. Sanctuary, Shrewsbury, Mass., assignor to Worcester Valve Co., Inc., Worcester, Mass., a corporation of Massachusetts

Application April 23, 1958, Serial No. 730,412
2 Claims. (Cl. 137—315)

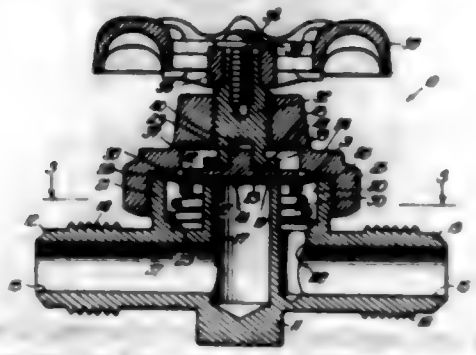


1. A ball valve comprising a valve body having opposite annular end faces and a fluid passage therethrough, an annular valve ball having a part spherical surface which is movably mounted in the passage to open and close said passage, annular seat rings interfitting with the ball annulus and surrounding the fluid passage on the opposite sides of the ball, removable end fittings at the opposite sides of and carried by the body, a removable annular end plate between the body and an end fitting which has an inner surface contacting and retaining an adjacent seat ring in an operative association with the ball, the plate and the associated fitting having substantially parallel, slidably separable, interfitting faces, a set of fasteners for removably securing the plate to the body and a separate set of independently removable fasteners for securing the adjacent end fitting to the plate, said slidably separable fitting and its fasteners providing for lateral removal of the fitting from the adjacent plate without interference with the function of the valve to control the fluid flow at the remaining fitting.

2,895,497
PACKLESS VALVE

Evan Jones, Evanston, Ill., assignor to Henry Valve Company, Incorporated, Melrose Park, Ill., a corporation of Illinois

Application April 18, 1956, Serial No. 579,098
2 Claims. (Cl. 137—316)

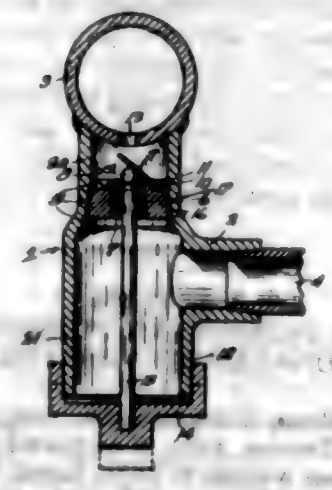


1. A packless valve including a body portion having vertically extending inner and outer spaced annular walls, the top radial edge of said inner wall defining a valve seat which is positioned slightly below the top radial edge of said outer wall, said walls being of substantial axial length and defining therebetween a valve chamber of substantial size having a bottom annular wall connecting said inner and outer walls, a readily flexible diaphragm peripherally clamped between the top radial edge of said outer wall and an inner radial surface of a cap removably secured to said body portion, the outer peripheral portion of said bottom wall having a raised annular shoulder on which rests the base of an upwardly directed cone-shaped coil spring, the top of said spring being truncated and in operative engagement with the inner surface of said diaphragm and acting to urge the same out of contact with said valve seat, a movable stem received through said cap and having a bearing plate in engagement with the outer surface of said diaphragm to cooperatively move said diaphragm with said spring into and out of flow restricting relation with said seat, said bearing plate being engaged by said stem for rotation therewith while being readily axially disengaged therefrom, separate passageways in said body portion communicating said chamber with the exterior of said body portion through said valve seat and the bottom wall of said chamber, the latter passageway extending through said bottom wall between said inner wall and said shoulder and providing unrestricted flow into said chamber toward and away from said valve seat, said spring being positioned within said chamber out of flow restricting relation with respect to said latter passageway, said cap being provided with an annular end wall received about the outer wall of said body portion, an annular radial shoulder inwardly of the outermost edge of said end wall defining the diaphragm clamping inner radial surface, said diaphragm being snugly received by said end wall and retained thereby when said cap is removed from said body portion, said diaphragm retaining said bearing plate in mounted association with said stem upon removal of said cap from said body portion.

2,895,498
VALVED T-FITTING

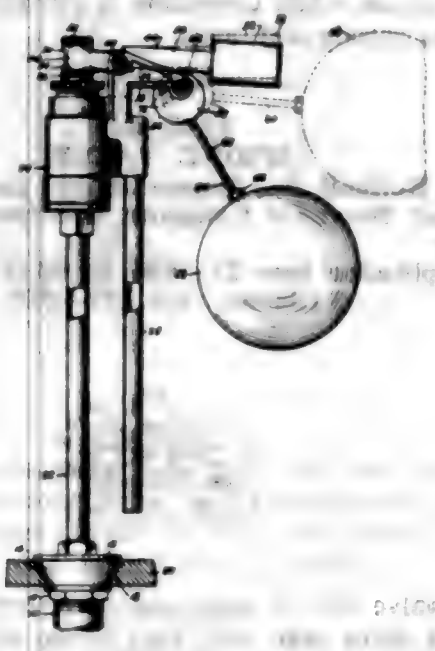
Harry T. Waite, Jr., and Patterson D. Merrill, South Bend, Ind., assignors to M. B. Skinner Company, South Bend, Ind., a corporation of Indiana

Application January 3, 1956, Serial No. 557,001
6 Claims. (Cl. 137—329)



1. A valved T-fitting adapted for connection by welding to a pipe to be tapped, comprising a tube threaded at one end and having its other end serving as an inlet end, a branch tube projecting from and communicating with said first tube intermediate the ends of said first tube, a valve assembly mounted in said first tube between said branch tube and said inlet end, said assembly including an annular member anchored in sealing engagement in said tube and defining a valve seat and a pressure responsive valve plate freely pivoted to said annular member at the side of said annular member nearest said inlet end to swing between sealing position and open position, a closure removably mounted on said threaded tube end, and a rod carried by and extending substantially axially of said closure and of a cross-sectional size to extend through said annular member with clearance, said rod being of a length to extend through said annular member and hold said valve plate unseated when said closure is fully advanced on the threaded end of said tube but to terminate spaced from said valve plate when said closure is at least partially retracted on the threaded end of said tube.

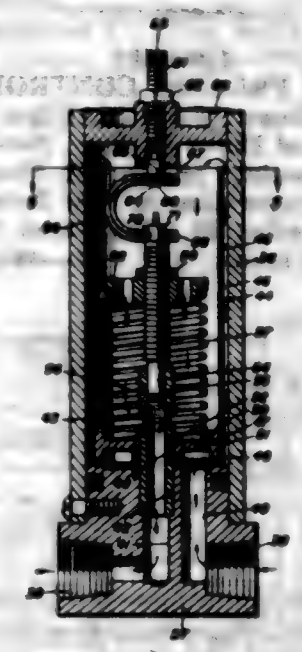
2,895,499
ECCENTRICALLY MOUNTED FLOAT BALL INLET VALVE OPERATING MECHANISM FOR FLUSH TOILETS
Pernell N. Nelson, Galesburg, Ill., assignor to Lynn H. Ewing, Rock Island, Ill.
Application November 14, 1957, Serial No. 696,488
1 Claim. (Cl. 137—425)



The combination with a valve housing mounted at the upper end of an inlet conduit in a water closet reservoir and a vertically reciprocal plug valve mounted in said valve housing, said valve housing having a pair of spaced parallel arms extending upwardly and outwardly on one side of said housing to define an upper end and an outer end, a pair of pivot pins connected between said arms, one at the upper end and one at the outer end of said arms, of a valve operating lever mounted between said arms on the upper of said pivot pins, said lever having its ends extending in both directions from said pivot pin, said plug valve having a slot through the top end of the same, one end of said lever extending into said slot to raise or lower said plug valve, the other end extending away from said valve housing, a weight attached to the last named end of said lever, a float ball, a float ball stem, a disc eccentrically mounted on the pivot pin at the outer end of said arms, said float ball stem connected to the peripheral edge of said disc, said float ball adapted to raise or lower according to the level of water in said reservoir and capable, when being raised, of raising said valve arm to close said plug valve, said disc having a stop pin connected thereto for engagement with the lower side of said valve housing arms to limit lowering movement of said float ball.

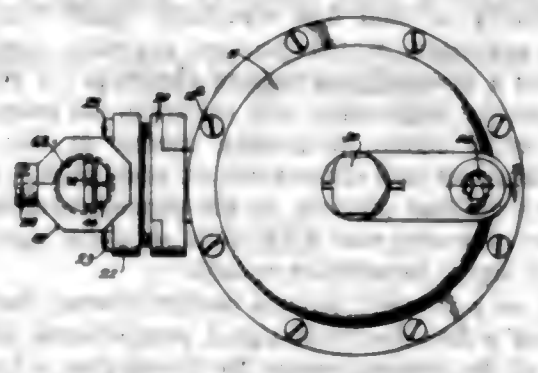
2,895,500
METERING VALVE
Harry Burnett, Atlanta, Ga.
Application August 30, 1955, Serial No. 531,483
3 Claims. (Cl. 137—468)

1. A metering valve comprising an upright hollow cylinder having a fitting in its lower end provided with a liquid inlet to said cylinder and with an outlet from said cylinder, an upright tubular member in said cylinder spaced therefrom to provide a restricted by-pass passage surrounding the tubular member to create a flow in the cylinder around and downwardly into the tubular member, a tube rising from said outlet into the tubular member and having side inlet ports therein for passage of liquid from the cylinder to said outlet, a valve member fixed in the lower end of the tubular member and vertically slidable on said tube to vary the area of said ports in response to variations in the volume of flow, and thermally responsive biasing means in said tubular member exposed to liquid therein and connected to said valve member for variably opposing upward closing movement of said valve



member to compensate for variations in the volume of flow resulting from variations in viscosity of the liquid incident to changes in temperature of the liquid.

2,895,501
PRESSURE REGULATOR CONSTRUCTION
Donald W. Irwin, Marshalltown, Iowa, assignor to Fisher Governor Company, Marshalltown, Iowa, a corporation of Iowa
Application July 18, 1955, Serial No. 522,585
4 Claims. (Cl. 137—484.4)



1. In valve means for controlling the flow of fluid, a diaphragm body member having a shallow cavity therein, a bonnet constituting a cover for said cavity, a flexible diaphragm clamped between said bonnet and said body member, a spring in said bonnet bearing upon said diaphragm, the position of said diaphragm being responsive to the pressure of fluid in said cavity, a valve housing having an inlet and an outlet chamber separated by a web, an opening through the web having a marginal seat opening into the outlet chamber, a conduit for fluid connecting said diaphragm cavity with said outlet chamber, said conduit being concentric with respect to said seat and having one end extending through said valve housing and terminating above said seat, a valve member slidably disposed within said conduit and having a disc adapted to move toward and away from said seat to regulate fluid flow through said web opening, in response to movement of said diaphragm, said disc being of smaller diameter than said conduit to permit movement into said conduit with its bottom below said one end thereof in fully open position away from said seat, means responsive to the movement of said diaphragm for actuating said valve member, and a circumferential lip projecting axially from the disc surface and adapted

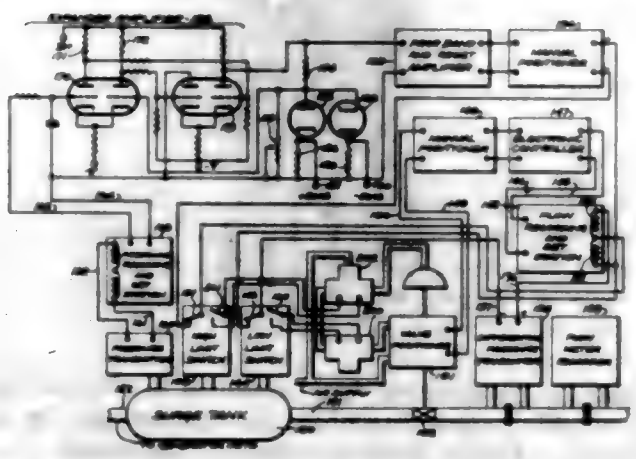
to divert fluid flowing between said disc and said seat past said one end of the conduit to effect a reduction of pressure within said cavity.

2,895,502

AUTOMATIC PROCESS CONTROL SYSTEM

Charles Garland Roper, Fairfield, Edgar Sheppard Gilchrist, Easton, and Harry Lockery, New Haven, Conn., assignors to Manning, Maxwell & Moore, Inc., Stratford, Conn., a corporation of New Jersey

Application October 20, 1955, Serial No. 541,726
19 Claims. (Cl. 137—486)



1. In an automatic process control system, means for developing a first electrical signal proportional to the process pressure, means for developing an electrical error signal proportional to the deviation of said signal from a predetermined set point, means responsive to said error signal for controlling the process to reduce said error signal to zero, means for developing a differential set point signal, means for impressing said differential set point signal on said error signal developing means in the same polarity as said first electrical signal, thereby to cause a reduction in the process pressure, means for developing a gradually increasing electrical set point signal, means for impressing said electrical set point signal on said error signal developing means in the correct polarity to offset said differential set point signal, thereby to cause a gradual increase in the process pressure, and means for removing said differential set point signal from said error signal developing means.

13. In an automatic process control system, means for developing a first electrical signal proportional to a first variable of the process, means for developing a first error signal proportional to the deviation of said first electrical signal from a first predetermined set point, means responsive to said first error signal for controlling the process to reduce said first error signal to zero, means for developing a second electrical signal proportional to a second variable of the process, means for developing a second error signal proportional to the deviation of said second electrical signal from a second predetermined set point, means for modifying said second error signal when said second process variable deviates more than a predetermined amount from said second set point, and means for impressing said modified second error signal on said first error signal developing means to modify said first set point in accordance with variations in said modified second error signal.

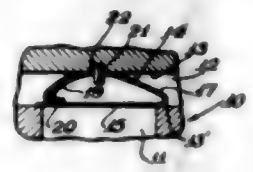
16. In an automatic process control system, means for developing a first electrical signal proportional to process flow, means for developing a first error signal proportional to the deviation of said first signal from a first predetermined set point, means responsive to said first error signal for controlling the flow to reduce said first signal to zero, means for developing a second electrical signal proportional to process pressure, means for developing a second error signal proportional to the deviation of said second electrical signal from a second predetermined set point, means for impressing said second error signal on said first error signal developing means to modify said first set point, said second error signal having a relatively small value when the process pressure remains within a predetermined range of said second set point, and means for increasing the value of said second error signal when the process pressure exceeds said predetermined range so that small pressure variations do not affect said flow controlling means while correction is provided for pressure variations outside said range.

2,895,503

SPRING VALVE

C. Paul Kolthoff, Jr., Naperville, Ill., assignor to International Harvester Company, a corporation of New Jersey

Application June 25, 1956, Serial No. 593,715
3 Claims. (Cl. 137—535)



3. A valve for an open end bore terminating at one end in a valve seat, said bore being adapted to communicate with a passage having portions extending generally transversely with respect to said bore and having a support positioned opposite said valve seat comprising; a valve member seated upon said valve seat, means normally urging said valve member against said seat to close said open end bore including an arm, a spring-like connector element integral with said arm and said valve member connecting said arm to a peripheral portion of said valve member, said arm extending radially inwardly toward the center of said valve member, a portion of said arm being laterally spaced from said valve member, a pair of spring fingers connected to said arm, said fingers and said arm having a generally arcuate configuration, the fingers diverging radially outwardly from said arm, curved engaging portions connected to the free ends of said fingers and extending radially inwardly, and means connecting said arm to the support opposite said valve seat whereby said engaging portions engage said valve member and said fingers resiliently urge said valve member against said seat during a predetermined pressure in said bore, said valve member being displaceable from said seat during a predetermined pressure rise in said bore.

2,895,504

COMBINED RELIEF VALVE AND LOW PRESSURE INDICATOR

Robert C. Lederer, Berkeley, Calif., assignor to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware

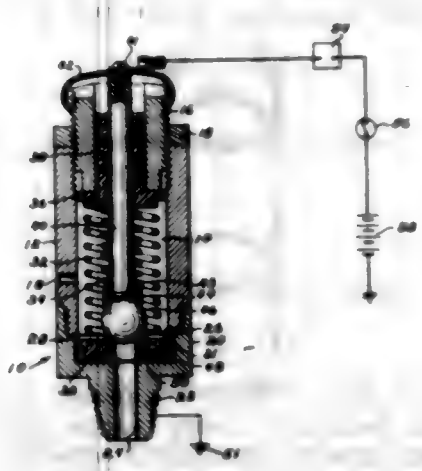
Application July 8, 1957, Serial No. 670,556
5 Claims. (Cl. 137—539)

2. A combined low pressure indicator and relief valve for a fluid pressure system comprising a casing having an inlet passage and a pressure responsive element having one side exposed to fluid pressure in the inlet passage and being movable between a first position and a second position, spring means normally resisting movement of said element from said first position until a greater than predetermined low pressure exists in said inlet passage, electric conducting means extending from one side to the other of said element, an electric contact engaged by one end of said conducting means when said element is in its first position, an electrical circuit including indicator means connected to the other end of said conducting means, a relief passage extending through said

2,895,508

projecting means spaced in longitudinal direction of said

element, a spring-loaded relief valve normally closing said relief passage and openable to release pressure in said inlet passage only when said pressure exceeds a



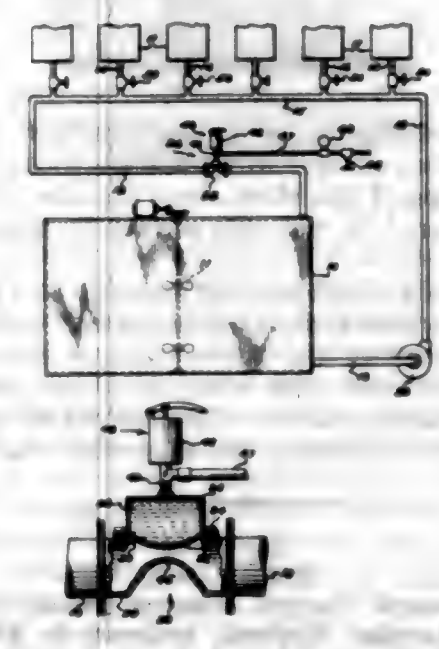
predetermined high value and only after said pressure has moved said element from its first position out of engagement with said contact so that said circuit is de-energized before said relief valve can open.

2,895,505

PRESSURE VALVE AND CONTROL SYSTEM FOR PAPER PULP MACHINES

Benson F. Bochna, Westchester, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Application August 31, 1954, Serial No. 453,241
6 Claims. (Cl. 137—563)



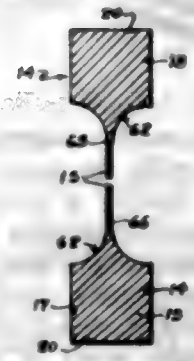
1. A device for controlling the pressure of fluid material flowing in a line comprising a hollow member connectible to said line and forming a passageway for said fluid material and having a lateral opening in a portion thereof, a resilient membrane covering the opening in said hollow member and forming a portion of said passageway and operable to vary the cross-sectional area thereof, means on said hollow member forming a chamber on one side of said membrane, a substance in said chamber in engagement with said membrane and capable of movement with said membrane for damping the vibrations thereof, and a gas under a predetermined pressure in said chamber for yieldably exerting said predetermined pressure to said substance and said membrane.

2,895,506

METAL FOIL DIAPHRAGM

William P. Langefeld, Huntington Park, Calif., assignor to Turco Products, Inc., Los Angeles, Calif., a corporation of California

Application October 11, 1954, Serial No. 461,385
1 Claim. (Cl. 137—793)



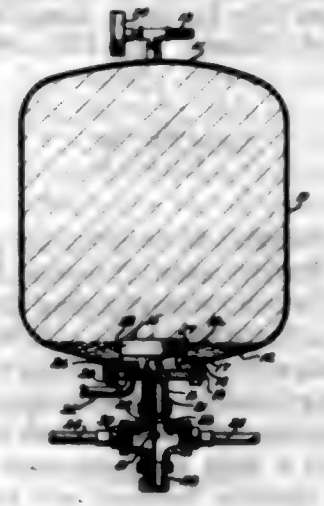
An article comprising an aluminum metal foil diaphragm circumscribed by an integral metal rim, said foil diaphragm having a substantially uniform thickness of less than 0.005 inch, said rim having a thickness of at least 0.1 inch, and a continuous curved fillet along the line of juncture between said diaphragm and rim, said fillet providing a continuously curved contour between the surface of said rim and the surface of said foil diaphragm, said diaphragm, rim, and fillet having been formed from a single piece of aluminum metal.

2,895,507

PRESSURE ACCUMULATOR

Lawrence D. Orser, Cedar Falls, Iowa, assignor to Chamberlain Corporation, Waterloo, Iowa, a corporation of Iowa

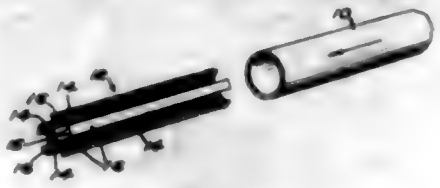
Application August 24, 1955, Serial No. 530,287
3 Claims. (Cl. 138—30)



2. A pressure accumulator including a single chamber pressure tank for holding compressed air and liquid, said tank having an inlet for admitting compressed air thereto, a liquid inlet-outlet in the tank bottom, a valve seat provided on said inlet-outlet, and a valve assembly having a valve member defining a valve face coacting with the valve seat, a float member connected to said valve member and being within the confines of said tank, a guide rod extending downwardly from said valve member and outwardly of said tank, and means outside said tank slidably receiving said guide rod in axial alignment with said inlet-outlet for guiding said valve member along a linear path.

ducting means, a relief passage extending through said

2,895,508
HEAT EXCHANGE CONDUIT
Charles E. Drake, Stroudsburg, Pa., assignor to The Patterson-Kelley Company, Inc., East Stroudsburg, Pa.
Application November 23, 1955, Serial No. 548,647
1 Claim. (Cl. 138—38)



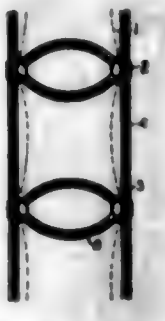
A heat exchange conduit comprising an outer metallic shell, an internal metallic fin device comprising a longitudinal hub portion having a plurality of integral legs extending radially therefrom, each leg being of tapering sectional form of increasing width toward the outer end thereof, each leg terminating in an enlarged foot portion having an initially flattened shape at its outer surface, each foot portion being of a width greater than the width of the leg portion to which it is immediately joined whereby the opposite sides of each foot portion extend laterally beyond their corresponding leg, the longitudinally extending centers of said outer surfaces of the foot portions lying at points on a circle whose diameter is substantially the same as the inside diameter of said shell while the outer edges of said opposite sides of the foot portions lie at points on a circle whose diameter is greater than the inside diameter of said shell, said fin device being of harder metal than said outer shell and being disposed within said shell with the opposite sides of said foot portions and the portions of said shell which they contact being mutually deformed so that the outer surfaces of the opposite sides of said foot portions define arcs having radii greater than the radius of the inner surface of said shell.

2,895,509
FLEXIBLE HOSE
William C. Ticknor, Whittier, Calif., assignor, by mesne assignments, to Federal-Mogul-Bower Bearings, Inc., Detroit, Mich., a corporation of Michigan
Application July 11, 1955, Serial No. 521,143
4 Claims. (Cl. 138—49)

1. Axially collapsible flexible ducting comprising a strip of impervious flexible material wound helically with the leading edge of one turn overlapping the trailing edge of the adjacent turn to form a seam, a helically wound reinforcing member positioned within said seam, at least two rows of stitching locking said overlapped edges together with said reinforcing helix held captive between said rows of stitching, and a strip of impervious flexible material wider than the distance between said rows sealed to the outer wall of said ducting over said rows of stitching so as to reinforce said ducting at said overlapped edge and to seal said ducting against leakage through the openings made by said stitching.

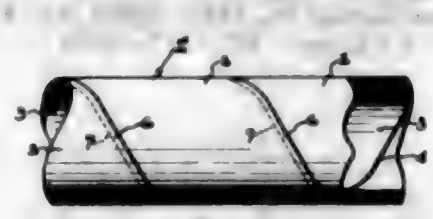
2,895,510
TUBULAR CONDUITS
Paul Robet, Tarare, France
Application June 27, 1955, Serial No. 518,301
Claims priority, application France June 25, 1954
3 Claims. (Cl. 138—54)

1. A tubular conduit means, comprising, in combination, a flexible tubular member having an inner tubular surface and an outer tubular surface; a first set of tubular projecting means spaced in longitudinal direction of said tubular member and projecting from one of said surfaces thereof; a second set of tubular projecting means spaced in longitudinal direction of said tubular member and projecting from the other of said surfaces thereof, each of said tubular projecting means of one of said sets being located in planes transverse to the axis of said tubular



member and the tubular projecting means of the other of said sets being located in radial planes passing through the axis of said tubular member; a plurality of annular reinforcing members, respectively located in said projecting means of said one set; and a plurality of elongated reinforcing members respectively located in said projecting means of said other set, whereby said flexible tube is supported longitudinally and circumferentially.

2,895,511
GROUND SURFACED LAMINATED PAPER TUBES
Paul R. Seltman, Covington, Ky., assignor to Crescent Paper Tube Company, Inc., Covington, Ky., a corporation of Kentucky
Application October 14, 1955, Serial No. 540,519
3 Claims. (Cl. 138—76)



1. The combination of a fiber core having a ground exterior surface charged with static electricity, and a convolute winding of film sheet about the core with its starting end adhered to said core surface by means of static electricity.

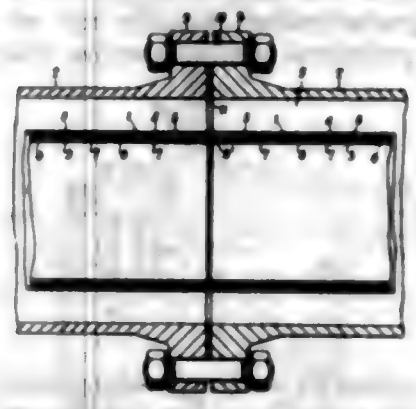
3. A method of winding film sheets about a fibrous core comprising grinding the exterior surface of the core to loosen the ends of the fibers on the core surface and charge said surface with static electricity, statically adhering the starting end of a film sheet to the ground core surface, and then winding the sheet about the core.

2,895,512
PIPE LINES
George Howard Forsyth, George Wood, and James Stevens, London, England, assignors to Vickers-Armstrongs (Engineers) Limited, London, England, a British company
Application October 17, 1955, Serial No. 540,856
Claims priority, application Great Britain
October 29, 1954
6 Claims. (Cl. 138—87)

1. A pipeline for transmitting high temperature high pressure gaseous fluid, the pipeline comprising an outside pipe, a core pipe within and spaced from the outside pipe, the core pipe including an outer pipe and an inner pipe within and spaced from the outer pipe, the inner pipe serving for conveying the high temperature high pressure gaseous fluid and the space between the outer pipe and the outside pipe serving to receive a high pressure fluid of relatively low temperature compared to that of the high temperature gaseous fluid for

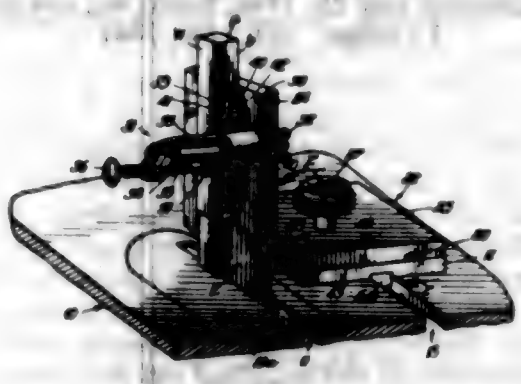
mount-oscillating device mounted on said casing and head for guiding the work piece along said table for

pressurizing the core pipe containing the high temperature high pressure gaseous fluid, and partitions in the annular space between the inner and outer pipes of the core pipe spaced along the core pipe for dividing said



annular space into smaller spaces, said core pipe being provided with a vent opening for each of said smaller spaces so that said smaller spaces contain stagnant fluid only.

2,895,513
WORKHOLDER
William E. Cowley, Louisville, Ky., assignor to American Saw and Tool Company, Louisville, Ky., a corporation of Kentucky
Application April 2, 1956, Serial No. 578,481
6 Claims. (Cl. 143—52)



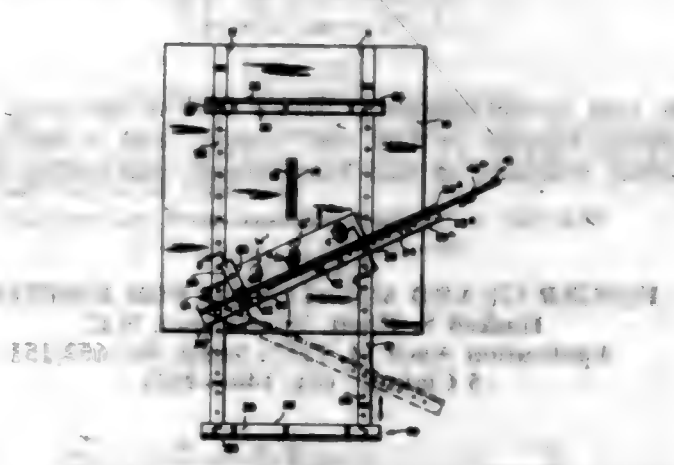
1. A workholder for a machine tool having a cutter and a table provided with a guideway, said workholder comprising a base member to slide on said table and including a guide portion on its under side to extend within said guideway to control the direction of said slide, said base member having guide means on its top surface extending in a direction at an angle to the direction of its said guide-portion, a second member adapted to slide on said base member and having a pair of normally disposed guideways on its underside to selectively embrace said guide means in slidable relation thereto, said second member having an upright providing a surface against which one side of the work may rest, and an abutment member removably mounted on said upright in normal relation thereto to provide means against which a second side of the work may rest.

2,895,514
PORTABLE RECIPROCATING POWER SAW
John W. Wright, Stratford, Conn.
Application August 19, 1954, Serial No. 450,883
7 Claims. (Cl. 143—6S)

1. In a power saw driven by an internal combustion engine, the combination of a crankshaft including a pair of angularly related cranks mounted in a crankcase, driving piston means coupled to one of the cranks, coupling piston means coupled to the other of the cranks and moving oppositely to the driving piston means, a saw blade secured to the coupling piston means, the weight of the driving piston means being greater than the weight of the coupling piston means including the saw blade

to at least partially offset the reactive force due to the cutting action of the blade.

2,895,515
MITER JIG ATTACHMENT FOR TABLE SAWS
Don Ende, Brooklyn, N.Y.
Application November 7, 1957, Serial No. 694,989
2 Claims. (Cl. 143—169)



2. A mitering structure, comprising a flat rectangular table having a pair of parallel grooves therein, and a rectangular frame having a pair of parallel rails slidably disposed in said grooves, a pair of angle bars disposed transversely across the rails at the ends thereof, each of the rails having a plurality of spaced threaded apertures therein, another angle bar disposable at a predetermined angle across the rails, said other angle bar having a plurality of spaced holes in a base flange thereof, a flat rail slidably disposed along the base flange, said flat rail having a projecting head arranged coplanar with an upstanding wall of said other angle bar, a pair of bolts passing through the holes in the other angle bar and threaded in said pair of rails to fix said other angle bar in a predetermined angular position with respect to the rails, a movable stop member removably secured to an upstanding wall of said other angle bar, said stop member including an inverted U-shaped wall portion with an outwardly extending stop element thereon, means for fixing the position of the stop member on said wall portion, and means on the upstanding wall and base flange receiving a rotating saw blade.

2,895,516
OSCILLATING ADJUSTABLE STROKE MORTISING MACHINE
Max Mayer, Neu-Ulm, Germany
Application January 5, 1956, Serial No. 557,609
8 Claims. (Cl. 144—86)

2. A mortising machine comprising a base, a turntable mounted on said base, an upstanding supporting structure mounted on said turntable with a vertical guideway thereon, a cutting head carriage slidably mounted on said guideway for vertical travel therealong, a cutting head mounted on said carriage and including a hollow casing disposed substantially above the center of rotation of said turntable, said cutting head having a vertically-disposed mortising tool mount oscillatably mounted on the forward portion of said casing, a motor-driven

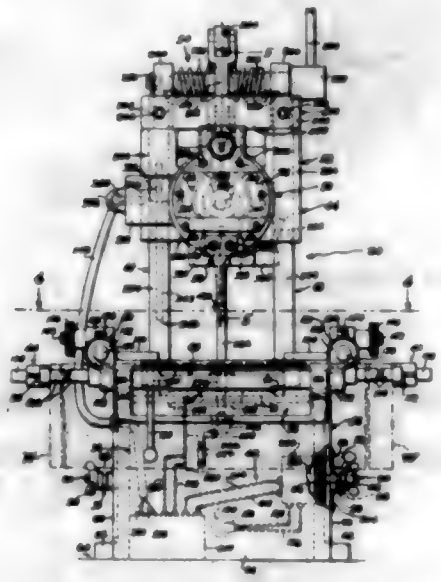
2,895,520

edges thereof for holding a plurality of ties thereon, and

surface and an outer tubular surface; a first set of tubular

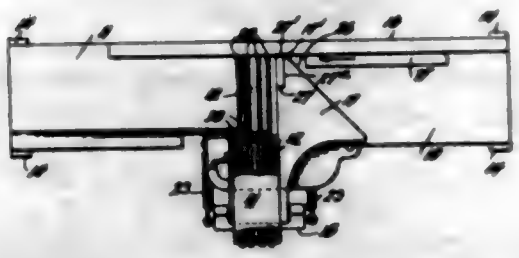
pared to that of the high temperature gaseous fluid for

mount-oscillating device mounted on said casing and oscillatingly connected to said tool mount, an electric motor disposed in said casing and drivingly connected



to said mount-operating device and a mortising tool carrier secured to said tool mount; and a workpiece holder mounted on said base beneath said cutting head.

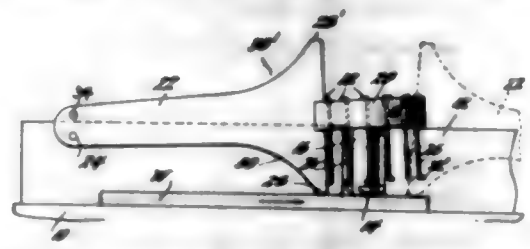
2,895,517
FINGER GUARD MECHANISM FOR JOINTERS
Haskell S. Rhett, Wilmington, N.C.
Application April 11, 1957, Serial No. 652,151
5 Claims. (Cl. 144—251)



1. In a machine of the class wherein a workpiece is traversed over an infeed table and on to an outfeed table alongside a fence common to both tables for operative engagement with a cutterhead rotatably supported between the tables on one side of said fence, the combination comprising a main guard guided for generally horizontal movement over the infeed table transversely to the fence, said main guard being positioned in advance of the cutter head for engagement by the workpiece before the latter is fed into engagement with the cutter head, resilient means urging said guard toward the fence, a plurality of generally parallel horizontal guard fingers carried by the guard for movement thereon transversely to the fence, said fingers normally overlying said cutterhead and being spaced apart in a direction parallel to the fence, spring means resiliently individually projecting said fingers transversely toward said fence, said spring means collectively being weaker than said resilient means.

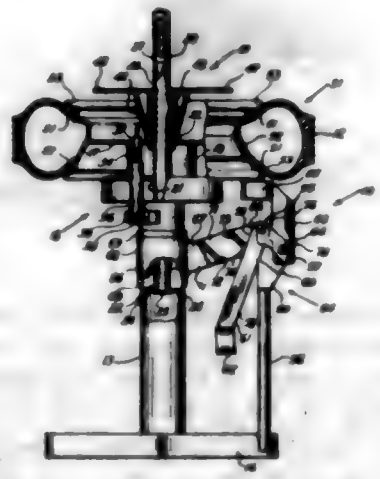
2,895,518
SHAPER GUARD WITH AUXILIARY FINGER PROTECTORS
Haskell S. Rhett, Wilmington, N.C.
Application April 11, 1957, Serial No. 652,152
8 Claims. (Cl. 144—251)

6. In a machine of the class wherein a workpiece is traversed over a horizontal feed table in operative engagement with a rotary cutter head on said table, said feed table including a rectilinear fence extending in opposite horizontal directions from said cutter head and to one side of the operative peripheral cutting portion of said head for guiding the work piece along said table for feeding movement in a predetermined direction in operative engagement with the cutter head, said cutter head rotating about a vertical axis, the combination comprising a main guard, means supporting said guard for vertical movement above the feed table abreast of said cutter head in said predetermined direction and on the opposite side of said peripheral cutting portion from the fence,



cam means carried by said supporting means on the infeed side of the cutter head for engagement by a workpiece to raise the guard, a plurality of guard fingers guided for free vertical movement on said guard, and disposed in a series extending generally along the path of feed of the workpiece and spaced apart relative to each other in said predetermined direction, and movement limiting means associated with the respective fingers for preventing their movement below said cam means.

2,895,519
WHEEL SUPPORTING AND CLAMPING APPARATUS
Gilbert E. Coats, Fort Dodge, Iowa
Application July 25, 1956, Serial No. 600,045
2 Claims. (Cl. 144—288)



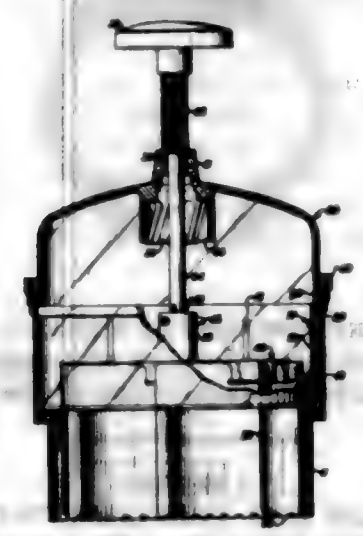
1. In a device for moving the bead of a pneumatic tire away from a complementary portion of a rim of a wheel on which the tire is mounted, said device comprising a center post having a table, means operatively associated with said post and table for holding said wheel and tire in a supported position on one side of said table in a centered relation with said post, said means including threads built up on a portion of said post above said wheel and tire and extended partially about the periphery thereof, a cone member having a tubular internally threaded hub portion extended axially thereof of a size to be received on said center post, said hub having a pair of outwardly extended handle portions formed thereon, said hub having an internal slot therein extended longitudinally thereof of a width corresponding to the peripheral length of said threads so that said cone member is axially movable along said center post to an engaged position of said cone member with said wheel for subsequent rotation of said cone member to advance said hub portion on said built up threads to clamp said wheel to said table.

a fastening nut with threads of one hand threaded upon said shank against said surface and having flat outer

with the mid-circumferential plane of the tire and each lateral package of said groups being constituted of cores

blade secured to the coupling piston means, the weight the forward portion of said casing, a motor-driven

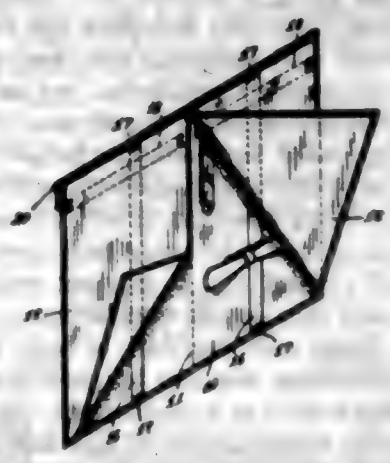
2,895,520
FOOD CHOPPER
Nathan K. Morris, Avon by the Sea, N.J.
Application August 27, 1957, Serial No. 680,449
6 Claims. (Cl. 146—160)



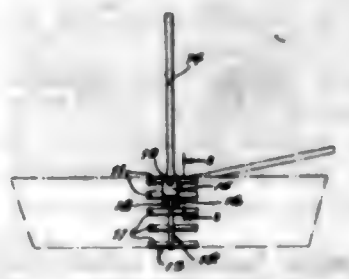
6. A food chopper comprising a cylindrical body shell open at the top and bottom ends, an internal upwardly facing annular shoulder in said shell, a stripper element comprising a bottom wall, a cylindrical sidewall, said element being rotatably supported in said shell on said shoulder and a sinuous slot in said bottom wall providing tapered tongues between adjacent portions of said slot, a removable cover for said shell and stripper element, said cover having a centrally located vertical aperture, a downwardly extending hollow boss on said cover concentric with said aperture and a plurality of spiral grooves in the inner surface of said boss, a pushrod slidably received in said aperture, a hand engaging knob in the upper end of said rod, a compression spring on said rod between said knob and the upper surface of said cover, a rod rotating mechanism comprising a sleeve rotatably received on said rod adjacent the lower end, means for preventing axial movement of said sleeve on said rod, a one-way clutch in said sleeve engaging said rod, whereby upon rotation of said sleeve in one direction said rod will be rotated through said clutch and upon rotation of said sleeve in the opposite direction said rod will remain fixed and radially projecting studs on said sleeve engaging said spiral grooves to rotate said sleeve upon reciprocation of said rod and a cutter blade assembly fixed to the lower end of said rod said assembly comprising a downwardly facing channel member secured intermediate the length thereof to the lower end of said rod, outwardly extending flanges on the lower edges of said channel member, opposed pairs of notches in said flanges, a sinuous knife blade, aligned slots in the upper edges of said blade and inwardly extending opposed locking ears on the side edges of said last named slots, said channel member being disposed in said aligned slots with said blade engaging said notches and said locking ears extending inwardly over said flanges to lock said blade on said channel member, said blade being slidably received in the slot in said stripper element and said stripper element being rotatable with said blade.

2,895,521
TIE HOLDER
Robert J. Weber, Indianapolis, Ind.
Application May 23, 1957, Serial No. 661,190
3 Claims. (Cl. 150—1)

1. A tie holder, comprising a portfolio of a generally foldable material having a back wall and a pair of front flaps secured to margins of said back wall to form a closure for said portfolio and define a pair of tie holding sections, strap members underlying said flaps and secured to said back wall adjacent the upper and lower-edges thereof for holding a plurality of ties thereon, and means secured to the back face of the back wall adjacent the top margin thereof adapted to receive a supporting member for supporting the tie holder in an extended display position.

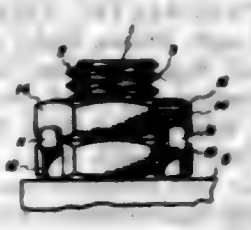


2,895,522
MOLDED PLASTIC BASKET
Jack Bloch, Leominster, Mass., assignor, by mesne assignments, to Foster Grant Co., Inc., Leominster, Mass., a corporation of Delaware
Application June 4, 1957, Serial No. 663,434
2 Claims. (Cl. 150—48)



1. A basket comprising side walls formed of vertical and horizontal strips of molded thermoplastic material of sufficient thinness to have inherent resilience and flexibility, and a handle having its ends pivotally connected to a vertical strip at the middle of each side of the basket, the lower portion of each end of the handle being forked, each branch of the fork having an outwardly extending shoulder that is adapted to be springingly engaged with and to hook on to one of the resilient horizontal strips at each side of the basket to hold the handle releasably in erect position when it is swung into that position.

2,895,523
OPPOSITELY THREADED NUTS HAVING BENDABLE LOCKING TABS
Alfredo Avendaño Lopez, Madrid, Spain
Application June 29, 1956, Serial No. 594,825
Claims priority, application Spain July 5, 1955
1 Claim. (Cl. 151—18)



In a nut-locking arrangement, a uniform-diameter bolt having a shank with threads of opposite hand superimposed upon each other with said threads being coextensive, the shank of said bolt projecting outwardly of a surface on which the nut-locking arrangement is being used,

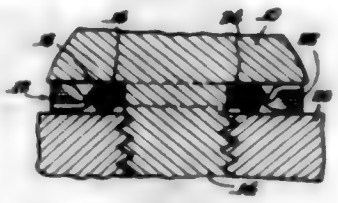
thereon and including parallel reforming elements for

2,895,529

side of the operative peripheral cutting portion of said wheel to said table.

a fastening nut with threads of one hand threaded upon said shank against said surface and having flat outer wrench engaging sides, a control nut having threads of the opposite hand from said fastening nut threaded upon said shank against said fastening nut, and a plurality of bendable tabs of uniform thickness cut in the flats of said fastening nut intermediate the edges of the flats so as to leave the edges solid and having a height less than the height of the flats, the upper ends of said tabs adjacent said control nut being attached to said fastening nut and the bottom ends of said tabs being bent upwardly against the flats of said control nut to prevent relative rotation therebetween, said tabs in the normal inoperative unbent position being flush with the flats of said fastening nut whereby said fastening nut can be received in a socket wrench and can be used as a control nut, the said control and fastening nuts being similar in size and shape so that the tabs of said fastening nut are bent upwardly to engage corresponding faces of said control nut to assure locking of said nuts.

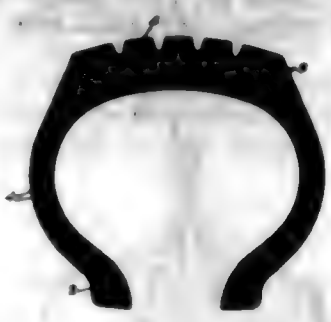
2,895,524
TWISTED TOOTH LOCK WASHER HAVING ANTI-SKID BODY SECTION
Thomas R. Boyd, Park Ridge, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Application September 26, 1956, Serial No. 612,133
7 Claims. (Cl. 151—37)



1. A lock washer having a substantially semi-toroidal body section opening axially in one direction, twisted locking teeth extending radially from said body section and extending axially in both directions beyond said semi-toroidal body section for engagement with a clamping surface of a rotary threaded fastener and with the surface of a workpiece, and a ring of resilient, anti-skid rubber-like material radially substantially coextensive with and received in said substantially semi-toroidal body section and having a body section in part semitoroidal and complementary to said washer-body section, said ring extending axially beyond said twisted locking teeth in the direction which said body section opens whereby to engage a workpiece and prevent rotation of said washer relative to said workpiece during installation, and thereby preventing marking of said workpiece by said locking teeth due to relative rotation, said insert resiliently yielding to allow the locking teeth to engage the workpiece, and said semi-toroidal body section preventing complete collapse of said locking teeth.

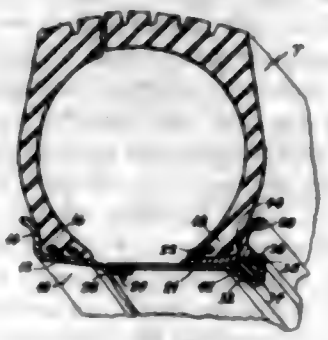
2,895,525
PNEUMATIC TIRE
Giuseppe Lugli, Milan, Italy, assignor to Pirelli S.p.A., Milan, Italy
Application December 26, 1956, Serial No. 630,547
Claims priority, application Italy March 21, 1951
29 Claims. (Cl. 152—354)

1. In a pneumatic tire construction including an interior carcass portion, an external tread portion and a cincture belt structure contained therebetween, the improvement comprising the cincture belt being formed of a group of three separate packages axially arranged in juxtaposition, the central package of said group being constituted of at least one layer composed of a plurality of cords extending in a direction substantially parallel with the mid-circumferential plane of the tire and each lateral package of said group being constituted of super-



posed layers each composed of a plurality of cords extending in a direction to form an acute angle of 5 to 45° with the mid-circumferential plane of the tire.

2,895,526
RIM FOR TUBELESS TIRE
Homer L. Mueller, Rocky River, Ohio, assignor to American Machine & Foundry Company, a corporation of New Jersey
Application May 23, 1955, Serial No. 510,137
7 Claims. (Cl. 152—410)



1. A rim assembly for tubeless tires comprising a rim base having a flange and bead seat formed on one side of said rim base conforming to the configuration of the bead of a tubeless tire for effecting an air seal between the bead and the flange and seat, a side ring having a flange and a bead seat conforming to the configuration of the opposite bead of the tubeless tire to effect an air seal between the bead and the seat and flange of said side ring, a gutter formed on the opposite side of said rim base and extending around the base over which said side ring is slid on to said base, an endless sealing ring mounted in said gutter, a split locking ring mounted so that one beveled edge pivots on the outer edge of said gutter, said split locking ring having a downwardly extending flange extending into said sealing ring, a tapered surface formed on said side ring and engaging one side of said split locking ring to exert a twisting action thereon to force the downwardly extending flange of said locking ring into said rubber sealing ring to form an air seal between the side ring, the gutter and the locking ring.

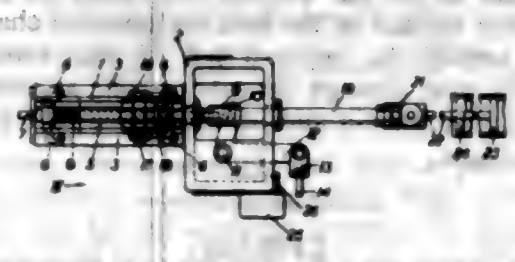
2,895,527
RESHAPING OF CAN BODIES
Don Powell and Wilfred James Allsopp, Worcester, England, assignors to The Metal Box Company Limited, London, England, a British company
Application May 31, 1955, Serial No. 512,173
2 Claims. (Cl. 153—2)

1. Apparatus for reforming can bodies of circular cross-section to a rectangular cross-section having inwardly directed panels in opposite wider sides, comprising an expansible mandrel normally contracted for receiving a circumposed circular cross-sectioned can body

secured to said back wall adjacent the upper and lower-

face on which the nut-locking arrangement is being used,

thereon and including parallel reforming elements for conforming to the narrower opposite sides of a reformed can body, means operatively connected to said reforming elements for simultaneously moving the same away from each other a predetermined distance, said means comprising a longitudinally slidable rod, links pivotally connected to said rod and to said reforming elements of the mandrel, a spring urging said rod to an inactive position, and manually operating lever means for moving said rod against the action of the spring so that the links will cause the reforming elements to move away from each other a predetermined distance, a fixed anvil extending axially of said mandrel and including opposite-



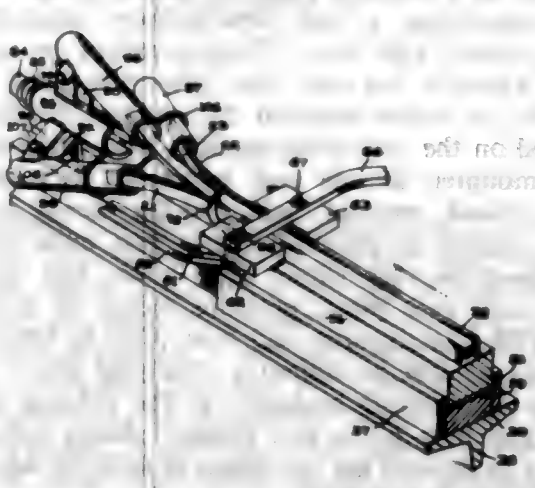
shaped and inwardly-directed side portions extending axially thereof and cooperating with contiguous portions of said reforming elements for forming the inwardly directed panels on the opposite wider sides of the can body being reformed, and shaping means including portions conforming to and movable parallel along said opposite-shaped and inwardly directed side portions of said anvil and the contiguous portions of said reforming elements after the mandrel has been expanded for forming said inwardly directed panels on a can body and actuating means connected to said shaping means for moving said shaping means in timed relation with the means for operating the reforming elements of the mandrel.

2,895,528

METAL FENCE POST LEG BENDING AND FORMING MACHINE

Martin A. Steinhauer, High Bridge, N.J.

Application October 8, 1957, Serial No. 688,861
9 Claims. (Cl. 153—15)



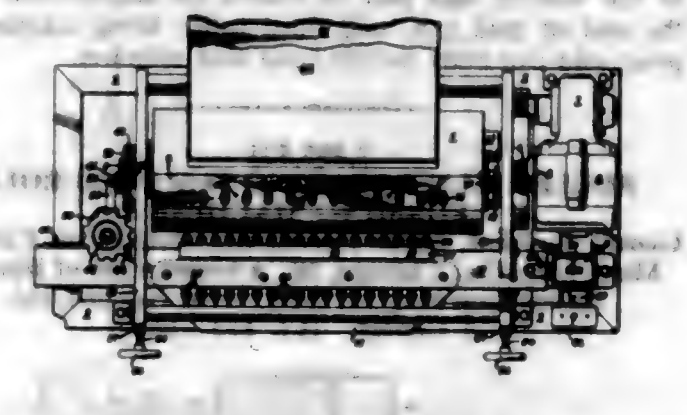
9. In apparatus for bending and forming longitudinally extending portions of a body member, a carriage, power means for reciprocating said carriage, means for removably securing said member on said carriage parallel to the line of movement thereof, a die for each of said portions receiving its respective portion upon movement of said carriage in one direction, and means on said apparatus for supporting each of said dies and said means permitting rotation of said dies outwardly into spaced parallel relationship with the line of movement of said member upon further movement of said carriage in said one direction while maintaining said dies at a predetermined angle with each other.

2,895,529

MACHINE FOR DE-EMBOSSING LITHOGRAPHIC PRINTING PLATES BY PRESSING EACH PLATE AGAINST A ROTATING CYLINDER BY AXIALLY SPACED PRESSING ROLLS

Herman J. Schultz, Glenview, Ill., assignor, by mesne assignments, to Direct Image Offset Corporation, Evanston, Ill., a corporation of Illinois

Application April 17, 1953, Serial No. 349,597
6 Claims. (Cl. 153—32)



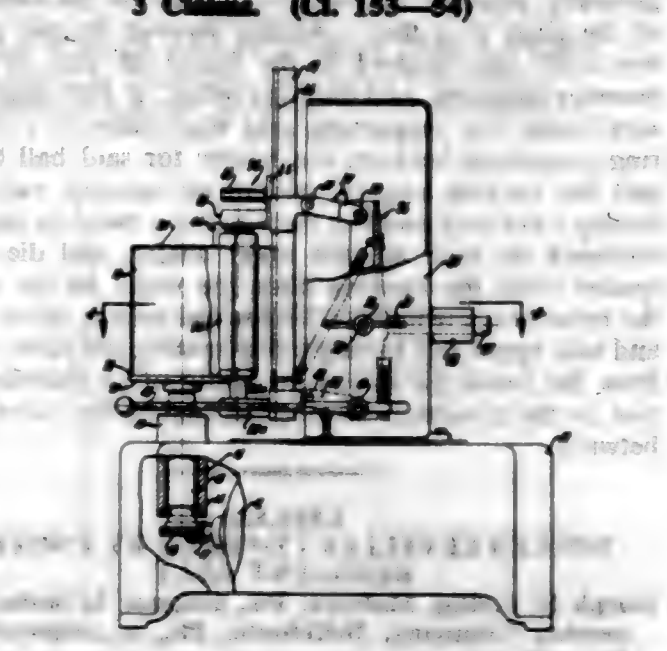
1. A machine for de-embossing printing plates comprising a rotatable cylinder provided with means for holding a printing plate thereon for movement therewith, driving means for said cylinder, a plurality of spaced coaxially mounted rollers of substantially equal widths adjacent the cylinder and independently movable towards and from said cylinder to engage and press the plate against the cylinder during rotation thereof, a spring biasing each of said rollers equally towards said cylinder, and traversing mechanism connected with said driving means intermittently advancing said rollers axially relative to said cylinder a distance less than the width of one of said rollers.

2,895,530

CAN BODY STRAIGHTENING MACHINE

Alois G. Luthi, Gardena, Calif., assignor to Luthi Machinery & Engineering Co., Inc., Gardena, Calif., a corporation of California

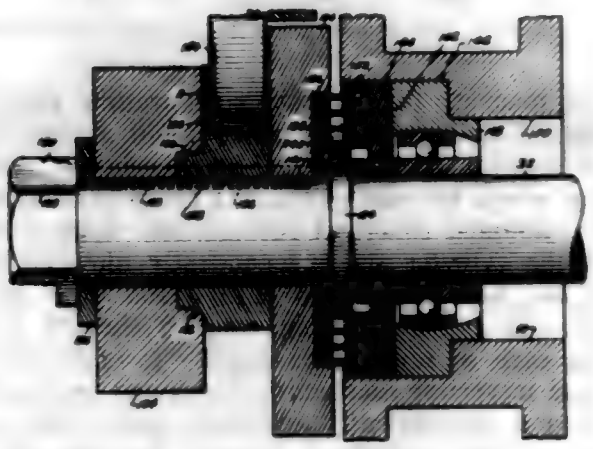
Application October 28, 1955, Serial No. 543,353
3 Claims. (Cl. 153—54)



1. A can body straightening machine comprising a power driven shaft adapted to receive any of a plurality of different diameter mandrels shaped to receive a can body, a mandrel mounted on said shaft and shaped to fit closely within a can body placed thereon and having a rim portion conforming to an expanded edge of the can body, a bracket mounted adjacent the mandrel and shaft, a roller carriage adjustably mounted upon the bracket,

a pair of can body straightening rollers and having end portions complementary in shape to the rim portion of said mandrel, means mounting said rollers upon the carriage parallel to the mandrel and shaft for movement axially and radially of said mandrel, an actuating lever mounted upon the carriage for moving the pair of rollers into and out of engagement with and axially of the side wall of a can body upon the mandrel, and a third roller rotatably mounted on said mounting means between said pair of rollers for rotation about an axis perpendicular to the axes of said pair of rollers for engagement with the end of said can, said third roller being adapted to press said can body axially onto said mandrel.

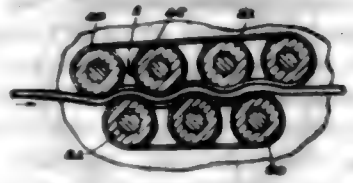
2,895,531
ROLLER SHAFT BEARING FOR COLD ROLL FORMING MACHINE
George F. Hauf, River Forest, Ill., assignor to Chicago Metal Mfg. Co., Chicago, Ill., a corporation of Illinois
Application May 10, 1956, Serial No. 584,066
3 Claims. (Cl. 153—65)



1. The combination with a cold roll structural iron member forming machine that has a vertically adjustable upper die roller and a right and left lower die roller disposed below said first mentioned roller on both sides of the same, a horizontal shaft for each of said die rollers, of a backing plate mounted on each shaft, each backing plate having a circular groove in the back face thereof generally adjacent the peripheral edge of the same, one of the rings of a thrust bearing secured in said groove, the other ring secured in the frame of said structural member adjacent said backing plate, a ball bearing in said frame for supporting said shaft therein, a circular ring positioned between the holder for said ball bearing and the backing ring of said thrust bearing, each shaft having a key-way and key therein and a build-up die roller mounted on each of said lower shafts, said die rollers spaced from the backing plate the width of the web of the structural member to be formed into a spiral shape, and said upper roll having a conforming die roller spaced from the lower die rollers the width of an extended portion of the structural member to confine the same therebetween.

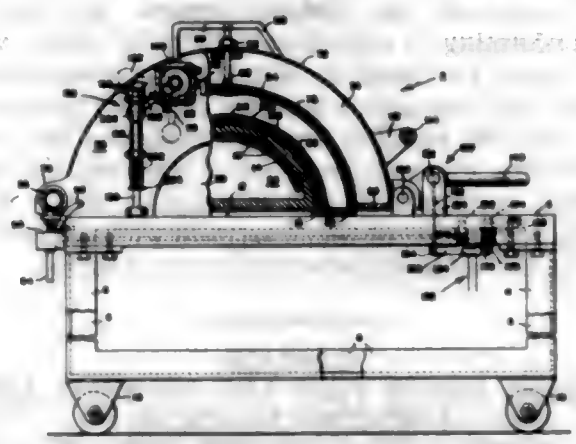
2,895,532
ROLLER LEVELLER COVERED BY ENDLESS RESILIENT BELT
Joseph H. Gettig, Malvern, Pa., assignor to Sutton Engineering Company, Bellefonte, Pa., a corporation of Pennsylvania
Application July 13, 1955, Serial No. 521,865
4 Claims. (Cl. 153—104)

1. Apparatus for straightening concrete reinforcing bars having spaced surface protuberances, comprising a group of staggered and opposed bending rolls having all of their axes parallel and including a first set of spaced rolls and a second set of spaced rolls disposed opposite to those of the first set and in staggered relation thereto, and a separate endless belt of resilient material surrounding each set of rolls, each of said belts having its outer surface channeled lengthwise to receive a portion of the bar to be straightened, said belts having the requisite thickness and resiliency to permit bending stresses to be applied



therethrough to the bar without deforming the protuberances on the surface of the bar, the opposed channels of the belts around the opposed sets of rolls substantially defining the pass through the sets of rolls at right angles to the roll axes therein and being adapted to restrain the bar to that pass.

2,895,533
PRINTING PLATE ASSEMBLY FORMER
Steward Heller, Robert H. Isenhower, and Richard B. Singer, Ocala, Fla., assignors to Perry Printing Process Company, Ocala, Fla., a corporation of Florida
Application August 14, 1956, Serial No. 603,966
6 Claims. (Cl. 154—1)

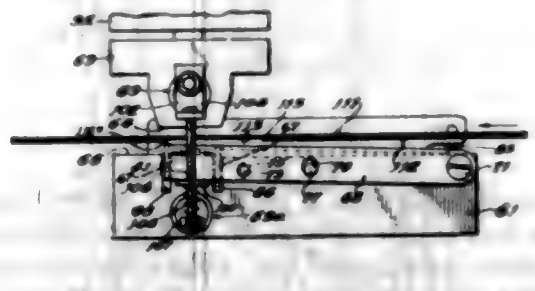


1. A printing plate assembly former adapted to form an assembly of a printing plate, an adhesive and a backing plate comprising: a base plate support adapted to support a curved base plate, heating means to apply heat to an adhesive between the base plate and a printing plate, a cover adapted to enclose the base plate mounted on the base plate support, said cover being pivotally mounted at one end, means to lock said cover in the closed position, said locking means comprising a pin adapted to slidably engage and hold said cover, an expandible bag within said cover and adapted to overlie said base plate, pressure means to expand said expandible bag towards said base plate to force a printing plate against an adhesive overlying said base plate to form an intimate assembly of the printing plate, adhesive and base plate, and plunger means responsive t pressure to prevent the retraction of said pin when the e: pandible bag is expanded.

2,895,534
MECHANISM FOR ADHERING GUMMED TAPE TO THE TOP FLAPS OF AN ENVELOPE ASSEMBLY IN CONTINUOUS FORM
Donald J. Steidinger, Deep River, Conn., assignor to Usco Incorporated, a corporation of Illinois
Application May 24, 1956, Serial No. 587,157
11 Claims. (Cl. 154—1.6)

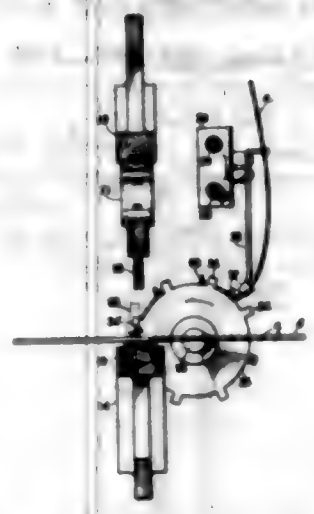
7. A device for feeding and adhering gummed tape adapted for heat sealing in proper position on a strip of paper material for use in a series-connected envelope assembly, comprising: feed means engaging and advancing

the tape transversely across the path of the strip of paper material in timed relation to the advance of said strip; a pair of spaced guides extending across the path of said strip for receiving and maintaining the gummed tape in proper position and against displacement longitudinally of the strip of paper material as the strip and gummed



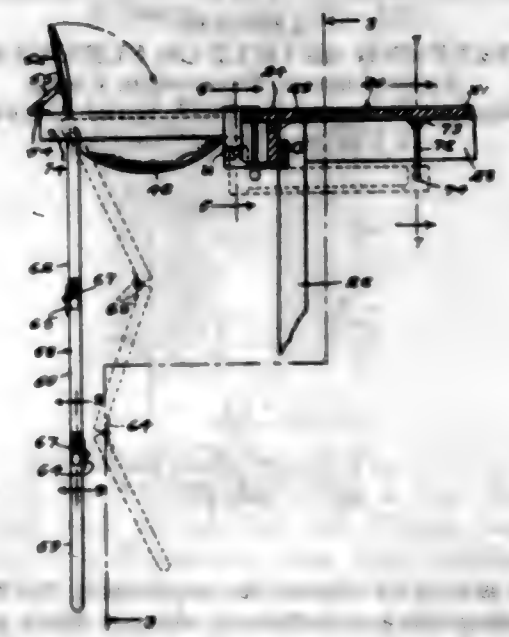
tape are being simultaneously fed; and a pair of co-operating members relatively movable with respect to each other and having surfaces adapted to clamp the strip and gummed tape together, at least one of the co-operating members being heated to apply heat to the strip and gummed tape for heat sealing the same together.

2,895,535
PROCESSES AND APPARATUSES FOR PRODUCING PLASTIC NETS AND THE LIKE
Iwao Ono, Fuse City, Japan
Application February 1, 1957, Serial No. 637,792
6 Claims. (Cl. 154—1.7)



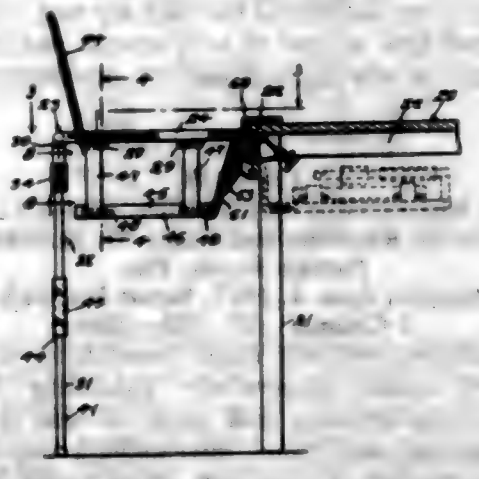
4. A machine for continuously producing a thermoplastic article including a warp of thermoplastic material together with which is bonded a plurality of thermoplastic woof lines arranged transversely of said warp, which comprises, in combination, a welding means having a pair of cooperating upper and lower pressure electrodes, one of the said electrodes being movable upwardly and downwardly with respect to the other, said electrodes normally being spaced from each other, means for intermittently feeding the warp in the direction of the length thereof through the space between the electrodes, means for intermittently feeding a woof line across said warp and for laying the woof line on the warp while the latter is interposed between said electrodes, means for periodically moving the movable electrode while the warp and the woof line thereon are stationary in said space to press-hold both the warp and the woof line between said electrodes for a predetermined period of time and thereafter to move said movable electrode oppositely to release the line, means for periodically energizing the electrodes for said predetermined period of time to produce a high frequency field in the electrode zone thereby to heat-weld the said lines together along the length of the woof.

2,895,536
INFANT CHAIR ATTACHMENT FOR A TABLE
Haskell B. Davidson, Oklahoma City, Okla.
Application January 3, 1956, Serial No. 556,844
1 Claim. (Cl. 155—78)



In an infant chair attachment for tables a leg comprising, a pair of spaced apart downwardly converging upper tubular members, a pair of spaced apart downwardly converging middle tubular members having their upper ends respectively hingedly secured to the lower ends of said upper members, a V-shaped lower tubular member having upwardly diverging sides terminating in spaced upper ends hingedly secured to the lower ends of said middle members, a rigid pin slidably mounted in the lower end of each of said upper members for telescopic engagement into the upper ends of said middle members to releasably lock said upper and said middle members rigidly in axially aligned relation, and a rigid pin slidably mounted in the lower end of each of said middle members for telescopic engagement into the upper ends of the diverging sides of said lower member to releasably lock said middle member and said lower member in rigid axially aligned relation.

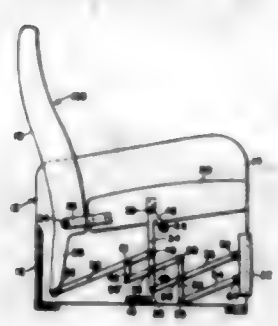
2,895,537
INFANT CHAIR ATTACHMENT FOR A TABLE
Haskell B. Davidson, Oklahoma City, Okla.
Application January 23, 1956, Serial No. 560,711
1 Claim. (Cl. 155—78)



In an infant chair attachment for tables a clamp for securing the chair to a table comprising, a portion for engaging over the table, a second portion for engaging under the table, a nut pivotally mounted on a horizontal axis on said second portion beneath the table, a set screw threaded through said nut, an inverted V-shaped head detachably secured to one end of said set screw for engaging beneath the table, and handle means on

the other end of said set screw for operating said set screw, said set screw and said nut being pivotally adjustable to cooperate with said portion engaging over the table.

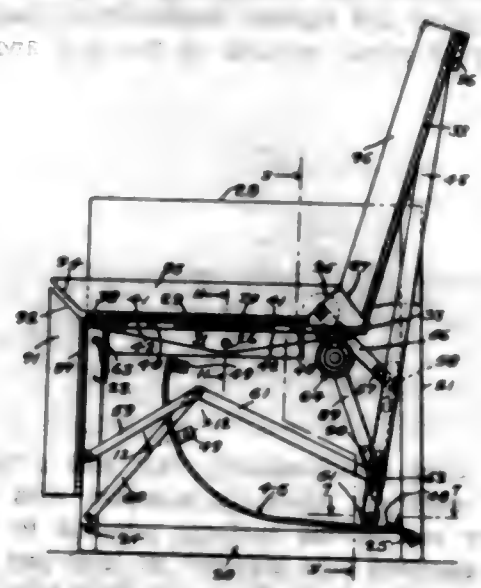
2,895,538
RECLINING ARTICLE OF FURNITURE
Anton Lorenz, Greenwich, Conn.
Application February 28, 1957, Serial No. 643,064
11 Claims. (Cl. 155—106)



1. An article of repose for supporting the body of a person comprising a stationary support, body supporting members operatively connected to said support, said body supporting members including a back rest member and a seat member, a leg rest member, and a system of linkage for connecting said members and causing coordinated movement thereof when it is desired to change the positions of the body supporting members in accordance with the wishes of the occupant, said system of linkage including a first pair of links pivoted to each other, the first link of said pair being operatively connected with a body supporting member so as to be actuated when said body supporting member is moved, a second pair of links pivoted to each other, the first link of said second pair being pivoted at one end to the stationary support and being pivoted between its ends to the free end of the second link of the first pair, a third pair of links pivoted to each other, the first link of said third pair of links being pivoted to the second link of the first pair of links at an intermediate point of the length of the latter, the second link of the third pair of links and the first link of the second pair of links crossing each other at intermediate points of the lengths of such links and being pivoted together at such crossing point, and a fourth pair of links pivoted to each other, the first link of said fourth pair of links being pivoted at spaced points to a link of the second pair of links and to a link of the third pair of links, the leg rest being pivoted at spaced points from front to rear of the said leg rest, respectively to the second link of one of said second and third pairs of links and to the second link of the fourth pair of links.

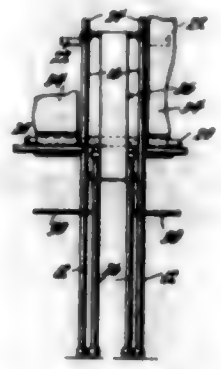
2,895,539
RECLINING EXERCISE CHAIR
Alton H. Ragsdale and Claire M. Ragsdale,
Delray Beach, Fla.
Application June 4, 1957, Serial No. 663,416
6 Claims. (Cl. 155—106)

1. A reclining exercise chair comprising a frame, a seat support panel, transversely extending horizontal means pivotally securing said panel to said frame, said means engaging said panel intermediate the front and rear edges thereof, a foot rest front panel having its upper edge hingedly secured to the front edge of said seat panel, a back rest panel having its lower edge hingedly secured to the rear edge of said seat support panel, a guide track secured to said frame and having a plurality of bores arranged in spaced relation therein, a back rest panel support bar having one end rigidly secured to said back rest panel and having a roller journalled on the other end supporting said bar in guided relation on said track, and hand controlled means for



locking the roller carrying end of said bar in adjusted position on said track.

2,895,540
COMBINED CHAIR ARM AND CONNECTOR
Charles Mackintosh, Los Angeles, Calif.
Original application April 4, 1955, Serial No. 498,855. Divided and this application July 1, 1958, Serial No. 746,811
9 Claims. (Cl. 155—130)



4. A multiple seating structure including a pair of chairs in adjoining side by side relation, both facing in the same direction, said chairs respectively including relatively adjoining rear legs, seats and back rests about said seats, in combination with a dual functioning chair arm and connecting element of unitary construction disposed between said chairs, said element including a generally horizontal arm rest extending forwardly and rearwardly between said chairs, a diagonal brace extending from the forward end of said arm rest downwardly and rearwardly between said adjoining rear legs, front and rear clamping members fixedly carried by the said brace on the front and rear sides of the said legs, said clamping members having portions disposed on relatively remote sides of said adjoining legs to prevent spreading thereof, whereby upward tilting of the brace about its lower end will urge said clamping members into firm clamping engagement with said adjoining rear legs, and a coupling means carried by the rear end of said arm rest for connection to the adjoining back rests of the said chairs to secure the brace in its upwardly tilted position and to fixedly support the rear end of said arm rest.

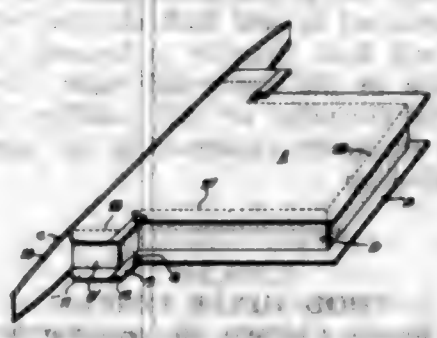
2,895,545

2,895,546

2,895,541
BENCH MADE OF CORRUGATED BOARD
Stanley Spivack, Bayside, N.Y.
Application April 18, 1958, Serial No. 729,322
1 Claim. (Cl. 155—169)

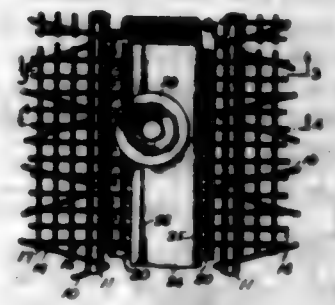
Apparatus for supporting a seated person comprising, outer and inner hollow tubes, each having four side panels and opposed open ends, said tubes being made of corrugated board, the inner tube being slidably nested within the outer tube to form an upright structure having top and bottom ends in spaced horizontal planes, the outer one of said tubes having its four panels disposed in vertical planes and having the flutes of the panels extending vertically and lengthwise between the open ends thereof, a cover adapted to fit over the top end of the nested upright structure upon which a person may be seated, said cover being made of corrugated board, said inner tube being disposed with two of its panels extending in vertical planes and two of its other panels extending in horizontal planes, the vertical height of said inner tube being less than the vertical height of said outer tube, and a tray resting on the upper one of said horizontal panels of said inner tube, said tray extending vertically to the top end of the upright structure.

2,895,542
COVER FOR CUSHION IN UPHOLSTERED FURNITURE
Ethel M. Schutte, Baltimore, Md., assignor to The Comfy Manufacturing Company, Baltimore, Md., a corporation of Maryland
Application July 27, 1956, Serial No. 600,520
9 Claims. (Cl. 155—182)



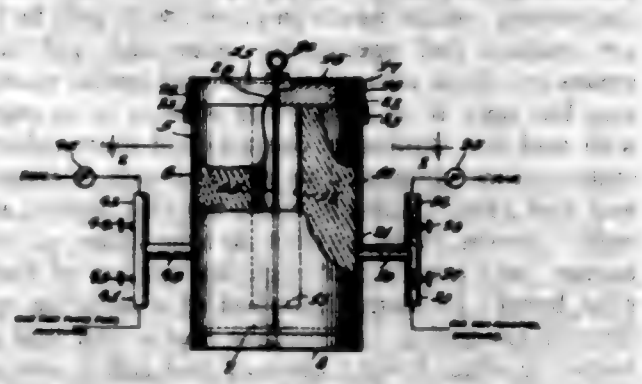
1. A universal cover for cushions comprising top and bottom panels each substantially in the form of a blank to enable it to be readily placed in covering relation with a plane surface of a cushion, means joining the forward edges of said top and bottom panels to each other, the remaining edges of said panels being free, said top and bottom panels each having extensions projecting outwardly from each side edge of the forward portions thereof to enable the cover to cover cushions of T-shaped configuration, said extensions having covering areas greater than the areas of associated plane surfaces of portions of T projections of a T-shaped cushion and including edge portions around the periphery of the bodies of said extensions for covering the side surfaces of such T projection portion and forming with such extension bodies variable covering inclosures receptive of different sizes of such T projection portions, and elongated covering elements extending laterally from the joined portions of said top and bottom panels to overlie and conceal the edges of such covering inclosures.

2,895,543
CASING FOR VENTILATED CUSHIONS
Samuel P. Crane, Great Neck, and Stephen D. Kent, Newburgh, N.Y.
Application December 5, 1956, Serial No. 626,450
4 Claims. (Cl. 155—182)



1. In a ventilating cushion, an inner coiled wire unit and a casing for the unit comprising a front foraminous sheet having warp threads and weft threads crossing the warp threads, a foraminous rear sheet similar to the front sheet, a flexible non-metallic reinforcing strip between the sheets at each side portion of the casing, stitching securing the strip and sheets together, an edge binding around the marginal portions of the sheets, the strip extending inwardly past the binding, a rearwardly directed snap fastener element at one side edge of the casing passing through the binding, the strip and the sheets, a forwardly directed cooperating snap fastener element at the opposite side edge of the casing passing through the binding, the sheets and the strip, and adhesive securing the strip and the marginal portions of the warp threads together and maintaining said portions in secured contact with the strip and within the binding under such abnormal tension on said portions as would pull said portions out of the binding in the absence of said strip, the strip resisting creasing of said portions at the edge of the binding.

2,895,544
RADIANT WALL FURNACE
Joseph R. Parsons, Park Forest, Ill., assignor to Chicago Fire Brick Company, Chicago, Ill., a corporation of Illinois
Application July 19, 1954, Serial No. 444,317
3 Claims. (Cl. 158—4.5)



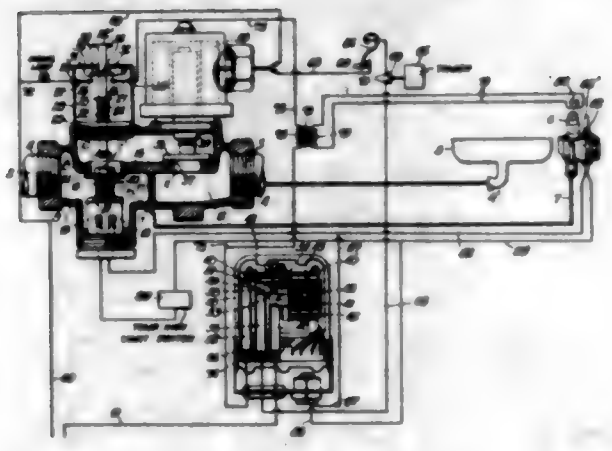
1. A radiant wall furnace comprising a fuel impervious housing, refractory material of substantial porosity and thickness lining said housing and defining a heating zone, said refractory material being made up of bonded refractory aggregate wherein substantially all grain sizes fall in the range of 1/20 inch to 1/2 inch, said porous refractory material being partitioned by fuel impervious means into at least two separate portions, means cooperating with said two separate portions whereby first one portion and then the other is supplied interiorly with a mixture of air and fluid fuel and whereby each portion, when not being so supplied, has a low pressure applied to the interior thereof, and means providing access to said heating zone.

by said shaft and manually rotatable in either direction, with the walls of the finger holes of the rotatable dial of

2,895,545
CONTROL APPARATUS FOR FLUID FUEL BURNING APPARATUS AND THE LIKE

Neal Seegert, Elm Grove, Wis., assignor to Baso Inc., Milwaukee, Wis., a corporation of Wisconsin

Application January 29, 1954, Serial No. 407,906
3 Claims. (Cl. 158—128)

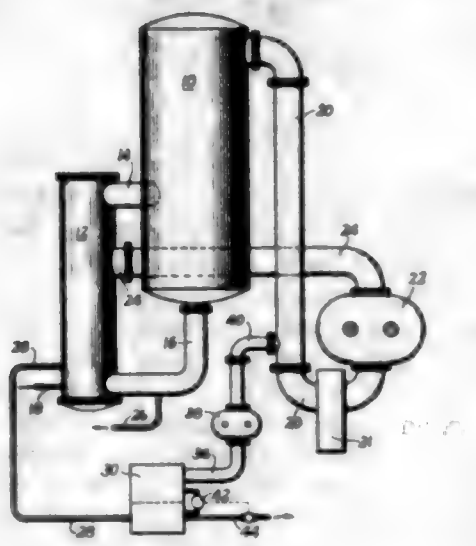


1. In fuel burning apparatus including main and pilot burners, safety shut-off fuel control and ignition apparatus comprising in combination, main burner fuel flow control means having flow-preventing and flow-permitting positions, a safety shut-off valve biased toward closed position and resettable to open position, said valve comprising electromagnetic holding means operable when energized to hold said valve open when reset to said position but incapable of moving said valve to open position, means for manually resetting said safety shut-off valve to open position, ignition means for said pilot burner energizable to afford ignition of fuel at said pilot burner, electroresponsive interlock means comprising first and second substantially stationary contacts and a movable contact biased into engagement with said first stationary contact to permit energization of said ignition means and prevent disposition of said main burner fuel control means in its flow-permitting position, energization of said interlock means moving said movable contact against its bias into engagement with said second stationary contact to prevent energization of said ignition means and permit disposition of said main burner fuel control means in its flow-permitting position, energizing means for said igniter comprising switch means in circuit with said first stationary contact and operatively associated with said reset means to afford energization of said igniter during resetting but only if said movable contact is in engagement with said first stationary contact, and thermoelectric generator means connected to energize said interlock means and said safety shut-off valve holding means, said generator means being subject to the flame at said pilot burner, said generator means, on ignition of fuel at said pilot burner following initiation of a resetting operation, directly energizing said holding means and said interlock means to effect holdng open of said safety shut-off valve and movement of said movable contact against its bias into engagement with said second stationary contact to terminate energization of said ignition means irrespective of the position of said switch means and to permit disposition of said main burner fuel control means in flow-permitting position, said generator means, on subsequent pilot burner outage, terminating its energization of said holding means and said interlock means to permit closure of said safety shut-off valve as well as return of said movable contact into engagement with said first stationary contact under its bias to terminate disposition of said main burner fuel control means in its flow-permitting position and to set up the energizing circuit of said igniter for subsequent energization of the latter upon resetting.

2,895,546
METHOD AND APPARATUS FOR RECOMPRESSION EVAPORATION

Philip B. Saddler, South Norwalk, Conn., assignor to Chicago Bridge & Iron Company, New York, N.Y., a corporation of Illinois

Application August 30, 1955, Serial No. 531,564
9 Claims. (Cl. 159—24)

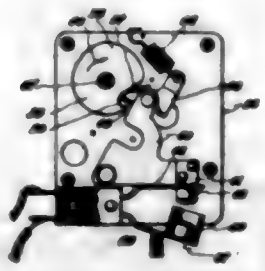


1. In a recompression evaporator of the type that includes an evaporator body adapted to contain a quantity of liquor to be evaporated, a heating element operatively associated with said evaporator body, said heating element having a liquor side through which the liquor to be evaporated flows to said evaporator body and a vapor side wherein vapor is condensed to supply heat to said liquor, and a vapor compressor for compressing vapors evaporated from said liquor in said heating element and evaporator body and supplying them to the vapor side of said heating element, the combination with said heating element, evaporator body and vapor compressor of a condensate flash chamber connected to the vapor side of said heating element to receive condensed vapor therefrom and auxiliary compressor means having an intake connected to said flash chamber whereby the pressure in said flash chamber is lowered to cause at least a portion of the condensed vapor therein to be vaporized, the discharge of said auxiliary compressor means being effectively connected to the vapor side of said heating element.

2,895,547
FOOD MIXER TIMER

Raymond J. Brashi, Chicago, Ill., assignor to Dormeyer Corporation, Chicago, Ill., a corporation of Illinois

Original application October 11, 1950, Serial No. 189,651, now Patent No. 2,671,191, dated March 2, 1954. Divided and this application July 29, 1953, Serial No. 371,998
5 Claims. (Cl. 161—1)



1. A timer comprising an escapement mechanism, a clock spring, an overload clutch, a drive shaft connected through said clutch to said mechanism, a cam driven

2,895,551
APPARATUS FOR MAKING CONTAINER

with said slot as the aperture approaches the leading

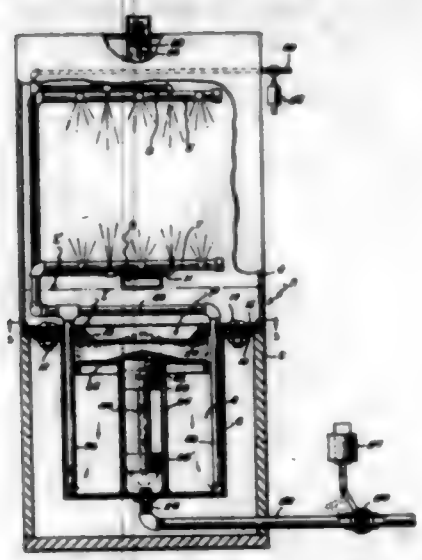
by said shaft and manually rotatable in either direction from an "off" position, a switch actuator member, a cam follower cooperating with said cam and pivotally supported on the switch actuator member, stop means for limiting rotation of said follower with respect to said member, said cam having a relieved portion defining a step thereon and said follower rotating in one direction to ride up the step when the cam is turned in one direction, resilient means for urging said follower to rotate in the opposite direction after it has ridden up said step so that said cam slips suddenly off of said step when said cam is turned in the opposite direction and a switch closable by said switch actuator member when said cam follower is on either side of said relieved portion, said spring being adapted to impart torque to said shaft when said follower is on the side adjacent said step and to maintain said mechanism in inoperative condition when said follower is on the other side thereof.

2,895,548

APPARATUS FOR HANDLING FLUID MATERIALS

Stephen F. Stafford, Roosevelt, N.Y.

Application June 6, 1956, Serial No. 589,675
2 Claims. (Cl. 161—7)



1. In a fluid circulating apparatus an enclosure body said enclosure body including a fluid reservoir compartment having discharge conduits connected thereto, said enclosure body further including a fluid receptacle for receiving fluid ejected from the said discharge conduits, said fluid receptacle having a passageway communicating with said fluid reservoir compartment, a valve member, reciprocating means for supporting said valve in the fluid reservoir compartment in close proximity to the passageway, said reciprocating means consisting of a cylinder mounted in said fluid reservoir compartment, a compressed gas actuated piston assembly slidably received in the cylinder and having the said valve secured at the upper end thereof, said piston structure being formed with gas outlet means communicating with the fluid reservoir compartment when the piston is extended into a position to force the valve against the passageway. and means for intermittently exerting gas pressure on the said piston structure.

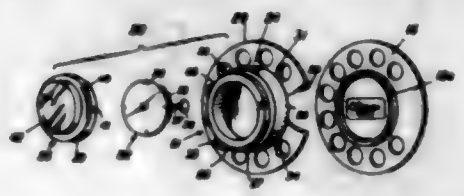
2,895,549

TELEPHONE CLOCK

David Gruber, Rego Park, and Warren D. Winkler, Jamaica Estates, N.Y.; said Winkler assignor to said Gruber

Application June 3, 1957, Serial No. 663,182
1 Claim. (Cl. 161—19)

In a clock-supporting generally circular unitary attachment having portions for insertion into and engagement with the walls of the finger holes of the rotatable dial of a telephone, that improvement comprising a flat outer ring portion provided with downwardly projecting sleeves adapted to extend through and engage the walls of the finger holes in a telephone dial, an intermediate cylindrical housing portion concentric with and projecting upwardly from said outer ring portion, a top cylindrical housing portion concentric with and projecting above the intermediate cylindrical housing portion and forming a common inner wall therewith for housing a clock and having a smaller outer diameter forming a lip portion about said top cylindrical housing portion to engage an



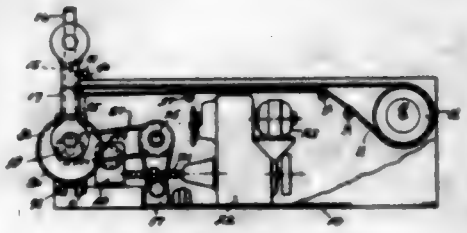
edge flange of a frictionally fitting cylindrical cover, a substantially circular bottom portion sealing the bottom of the intermediate cylindrical housing portion, said top cylindrical housing portion being formed with a substantially rectangular radial slot extending therethrough which is adapted to receive the winding and setting stem of a clock with the clock inside the housing and supported by said bottom portion and a substantially circular transparent cover provided with a downwardly projecting edge flange in frictionally gripping relation about said top cylindrical housing portion to seal the clock receiving housing.

2,895,550

RECIPROCATING CUTTING WITH AUTOMATICALLY INTERRUPTED FEED

Edward C. Kastner, Akron, Ohio, assignor to Akron Standard Mold Company, Akron, Ohio, a corporation of Ohio

Application June 7, 1954, Serial No. 434,940
5 Claims. (Cl. 164—48)



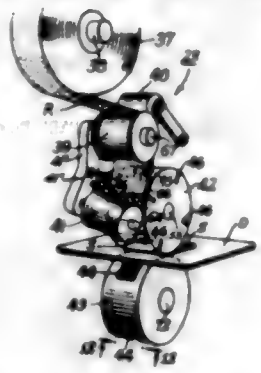
1. A sheet cutting apparatus comprising in combination, a frame, said frame having a conveyor including a material supporting belt and a rotatable drum for moving the belt, a source of motive power having a driven shaft, a drum shaft carried by the frame and supporting the drum for free rotation thereon, coupling means for translating continuous rotation of the driven shaft into reciprocable rotation of the drum shaft forward and rearward relative to the sheet material advancing direction, clutch means operably disposed for coaction between the drum and drum shaft, brake means operably disposed for coaction between the drum and the frame, a cutter adapted to be positioned towards and away from cutting engagement with sheet material on the belt, means for moving the cutter away from the material in synchronism with forward rotation of the drum shaft and towards the material while the drum shaft is rotated rearwardly, and electrical means coacting with said cutter movement to selectively activate said clutch and brake means respectively as the cutter moves away from and toward engagement with the material.

through said clutch to said mechanism, a cam driven

2,895,551
APPARATUS FOR MAKING CONTAINER CLOSURES

Emil Anderson, Briarcliff Manor, and John J. Kowalewski, Bronx, N.Y., assignors to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware

Application December 20, 1952, Serial No. 327,132
1 Claim. (Cl. 164—68)



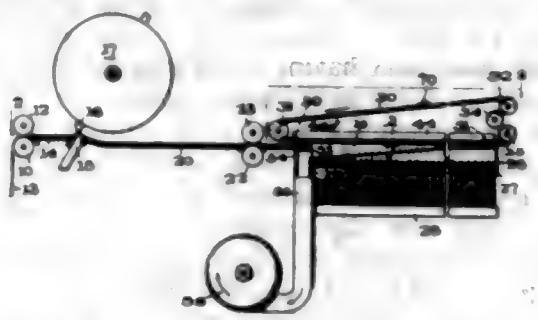
Apparatus for progressively cutting off material in a transverse cut with respect to the line of feed of the material, said apparatus comprising a frame, a cylindrical roller rotatably mounted on said frame, a cutting blade mounted on the periphery of said cylindrical roller in substantially parallel relation to the axis of the cylindrical roller with the cutting edge extending beyond the periphery of said cylindrical roller, a hollowground platen roller rotatably mounted on said frame in adjacent askew relation to the cylindrical roller for relative movement toward and away from the cylindrical roller along a path transverse to the axes of said rollers to cause said platen roller to maintain material in cutting relation to said cutting blade progressively from one end of the blade to the other and to produce a progressive severance of the material, said platen roller and cylindrical roller at the point of the progressive severance coacting to guide the material passing therebetween, means urging the platen roller toward the cylindrical roller, movement of said platen roller permitting a change in distance between said rollers when the cutting edge coacts with said platen roller during the arcuate cutting movement of the blade making a progressive cut from one end of the blade to the other end with the platen roller serving to maintain the portion of material being cut against the cutting blade with sufficient pressure to assure a complete cut, spacing means limiting the movement of the said platen roller along its path toward the cylindrical roller, the resulting spacing between the rollers providing a passageway for feeding unsevered strip material between the rollers after each cut.

2,895,552
TRANSVERSE WEB CUTTING APPARATUS HAVING SHEET DELIVERY MECHANISM USING TIMED VACUUM BELTS

Anthony W. Pomper, Piscataway Township, Middlesex County, and Charles J. Waechter, New Market, N.J., assignors to John Waldron Corporation, New Brunswick, N.J., a corporation of New Jersey

Application August 10, 1955, Serial No. 527,462
12 Claims. (Cl. 164—68)

1. Apparatus for cutting a high speed travelling web into sheets, delivering and stacking the same comprising, in combination, means for continuously feeding said web at a uniform speed, a shear driven to cut said web into uniform length sheets, a drop board for receiving said sheets, a belt having a reach extending at least from a position above the leading edge of the web at shearing to the forward edge of the drop board, a vacuum box contacting the upper face of said reach and having a longitudinal slot in the belt contacting face, means driving said belt in timed relation to but faster than said web, and an aperture through said belt adapted to register with said slot as the aperture approaches the leading edge of the sheet just prior to shearing to apply a tension to the web during shearing and to remove the cut sheet,

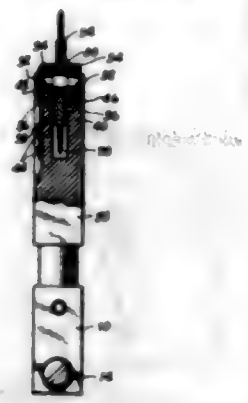


said slot terminating at a position to cut-off vacuum from said aperture as the leading edge of the sheet is at the forward edge of the drop board.

2,895,553
CARRIER FOR ROTARY KNIFE FOR WEB-SLITTING MACHINE

Gerrit De Gelleke, Parsippany, N.J., assignor to Cameron Machine Company, Brooklyn, N.Y., a corporation of New York

Original application June 28, 1955, Serial No. 518,630, now Patent No. 2,796,933, dated June 25, 1957. Divided and this application March 5, 1956, Serial No. 569,462
1 Claim. (Cl. 164—70)



A cutter assembly for web-slitting machines comprising a continuously rotatable circular knife having bearing means at opposite sides thereof, a knife-holding block having two spaced walls defining therebetween a knife recess adapted to freely accommodate a portion of said knife therein, leaving a portion of the knife protruding from said block and resilient retention means for releasably holding said knife rotatably in said block; said spaced walls being formed with aligned, bearing-receiving recesses in which said bearing means are slidably disposed with an accurate fit, to position the knife in said knife recess, one of said spaced walls having an abutment flange at the other side of its said bearing-receiving recess, and said retention means comprising a cap resiliently fixed to the other of said spaced walls, said cap being adapted to yieldably engage the end of one of the bearing means at one side of the knife and urge the latter bearing means and the knife sidewisely to centrally position the knife in said knife recess with the bearing means at the other side of the knife in abutment with said abutment flange; said bearing means each having an inner annulus constrained to rotate with the knife and an outer annulus constrained against rotation within said bearing-receiving recesses, said abutment flange being in engagement with the outer annulus and clear of engagement with the inner annulus of the adjacent one of said bearing means, and said cap having a circularly dished portion approximately coaxial with and clear of the inner annulus of the one of said bearing means which is adjacent to said cap; and an annular portion of said cap which

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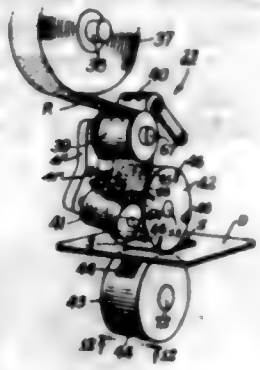
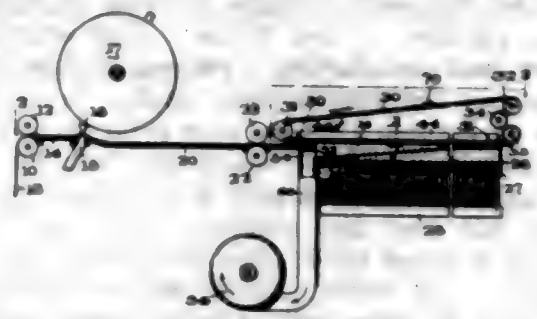
2,895,551
APPARATUS FOR MAKING CONTAINER CLOSURES
Emil Anderson, Briarcliff Manor, and John J. Kowalewski, Bronx, N.Y., assignors to Electrolux Corporation, Old Greenwich, Conn., a corporation of Delaware
Application December 28, 1953, Serial No. 327,132
1 Claim. (Cl. 164—68)



Apparatus for progressively cutting off material in a transverse cut with respect to the line of feed of the material, said apparatus comprising a frame, a cylindrical roller rotatably mounted on said frame, a cutting blade mounted on the periphery of said cylindrical roller in substantially parallel relation to the axis of the cylindrical roller with the cutting edge extending beyond the periphery of said cylindrical roller, a hollowground platen roller rotatably mounted on said frame in adjacent askew relation to the cylindrical roller for relative movement toward and away from the cylindrical roller along a path transverse to the axes of said rollers to cause said platen roller to maintain material in cutting relation to said cutting blade progressively from one end of the blade to the other and to produce a progressive severance of the material, said platen roller and cylindrical roller at the point of the progressive severance coacting to guide the material passing therebetween, means urging the platen roller toward the cylindrical roller, movement of said platen roller permitting a change in dirtance between said rollers when the cutting edge coacts with said platen roller during the arcuate cutting movement of the blade making a progressive cut from one end of the blade to the other end with the platen roller serving to maintain the portion of material being cut against the cutting blade with sufficient pressure to assure a complete cut, spacing means limiting the movement of the said platen roller along its path toward the cylindrical roller, the resulting spacing between the rollers providing a passageway for feeding unsevered strip material between the rollers after each cut.

2,895,552
TRANSVERSE WEB CUTTING APPARATUS HAVING SHEET DELIVERY MECHANISM USING TIMED VACUUM BELTS
Anthony W. Pomper, Piscataway Township, Middlesex County, and Charles J. Waechter, New Market, N.J., assignors to John Waldron Corporation, New Brunswick, N.J., a corporation of New Jersey
Application August 10, 1955, Serial No. 527,462
12 Claims. (Cl. 164—68)

1. Apparatus for cutting a high speed travelling web into sheets, delivering and stacking the same comprising, in combination, means for continuously feeding said web at a uniform speed, a shear driven to cut said web into uniform length sheets, a drop board for receiving said sheets, a belt having a reach extending at least from a position above the leading edge of the web at shearing to the forward edge of the drop board, a vacuum box contacting the upper face of said reach and having a longitudinal slot in the belt contacting face, means driving said belt in timed relation to but faster than said web, and an aperture through said belt adapted to register with said slot as the aperture approaches the leading edge of the sheet just prior to shearing to apply a tension to the web during shearing and to remove the cut sheet,



said slot terminating at a position to cut-off vacuum from said aperture as the leading edge of the sheet is at the forward edge of the drop board.

2,895,553
CARRIER FOR ROTARY KNIFE FOR WEB-SLITTING MACHINE
Gerrit De Gelleke, Parsippany, N.J., assignor to Cameron Machine Company, Brooklyn, N.Y., a corporation of New York
Original application June 28, 1955, Serial No. 518,636, now Patent No. 2,796,933, dated June 25, 1957. Divided and this application March 5, 1956, Serial No. 569,462
1 Claim. (Cl. 164—78)

A cutter assembly for web-slitting machines comprising a continuously rotatable circular knife having bearing means at opposite sides thereof, a knife-holding block having two spaced walls defining therebetween a knife recess adapted to freely accommodate a portion of said knife therein, leaving a portion of the knife protruding from said block and resilient retention means for releasably holding said knife rotatably in said block; said spaced walls being formed with aligned, bearing-receiving recesses in which said bearing means are slidably disposed with an accurate fit, to position the knife in said knife recess, one of said spaced walls having an abutment flange at the other side of its said bearing-receiving recess, and said retention means comprising a cap resiliently fixed to the other of said spaced walls, said cap being adapted to yieldably engage the end of one of the bearing means at one side of the knife and urge the latter bearing means and the knife sidewisely to centrally position the knife in said knife recess with the bearing means at the other side of the knife in abutment with said abutment flange; said bearing means each having an inner annulus constrained to rotate with the knife and an outer annulus constrained against rotation within said bearing-receiving recesses, said abutment flange being in engagement with the outer annulus and clear of engagement with the inner annulus of the adjacent one of said bearing means, and said cap having a circularly dished portion approximately coaxial with and clear of the inner annulus of the one of said bearing means which is adjacent to said cap; and an annular portion of said cap which

of said assembly about a horizontal axis, and means

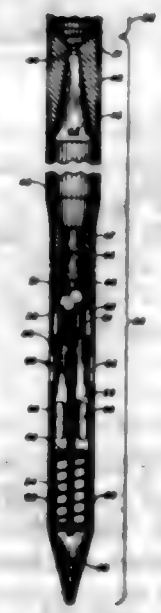
2,895,559

extends about said dished portion being in engagement with the outer annulus of the last-mentioned bearing means.

2,895,554
METHOD AND APPARATUS FOR PERFORATING WELL CASINGS
Roland F. Krueger, Fullerton, and Lee C. Vogel, Long Beach, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Application November 5, 1954, Serial No. 467,033
4 Claims. (Cl. 166—35)

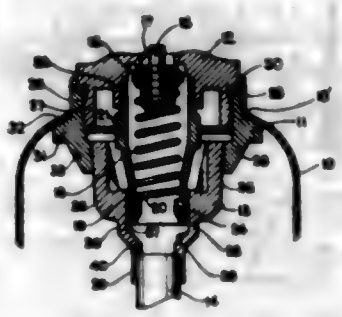
1. In a well completion process wherein well perforating means are positioned within a well bore and are therein actuated to perforate the walls of the bore said means being activated by detonation of explosive and being submerged in a body of solids-containing fluid at the time of detonation, the method of preventing the solids in said fluid from plugging the perforations which comprises positioning within the well bore above said perforating means a flow control means, permitting substantially unrestricted flow of said fluid upwardly through the well bore and substantially restricting the flow of fluids downwardly above said flow control means through the well bore.

2,895,555
GAS-AIR BURNER WITH CHECK VALVE
Coral L. De Priester, Fullerton, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Application October 2, 1956, Serial No. 613,465
2 Claims. (Cl. 166—59)



1. Apparatus for stimulating the production of petroleum from a subterranean formation penetrated by a well bore comprising tubing means extending into said well bore from the surface of the earth for carrying a gaseous combustible mixture, a combustion chamber secured to the lower end of said tubing for burning said gaseous combustible mixture, ignition means for initiating combustion of said gaseous mixture within said combustion chamber, an exhaust member connected to the lower end of said combustion chamber and having openings therein communicating with said well bore, a passageway in said exhaust member establishing fluid communication between said combustion chamber and said openings in said exhaust member, and check valve means in said passageway, said check valve means including a ring member in said passageway forming a valve seat, a ball adapted to seat on said valve seat, a rod member for actuating said ball, and a spring member disposed in the lower end of said exhaust member away from said openings and connected to said rod member for urging said ball toward said valve seat, the pressure of the products of said combustion being sufficient to overcome the force of said spring to open said passageway to permit said combustion products to flow from said combustion chamber to said exhaust member during combustion, said passageway being closed in response to a decrease in said pressure to prevent fluid flow from said exhaust member into said combustion chamber.

2,895,556
FIRE EXTINGUISHER
Charles K. Hutheing, Sr., Culver City, and Ira J. Billings, Los Angeles, Calif., assignors to General Fire Extinguisher Corporation, a corporation of California
Application December 9, 1957, Serial No. 701,627
6 Claims. (Cl. 169—31)



1. In a dry chemical fire extinguisher provided with a head assembly; the combination comprising: a tank having an opening at one end; a collar mounted in said opening and adapted for threading to said head assembly; a siphon tube adapted to be received in said tank through said collar and opening; yoke means coupled to one end of said siphon tube; yoke carrying means integrally formed with and depending downwardly into said tank from said collar and adapted to supportingly receive said yoke means; and, an internally connected fluid conveying means extending downwardly into said tank from said head assembly and dimensioned to be received in sliding fluid tight relationship with said yoke means and siphon tube.

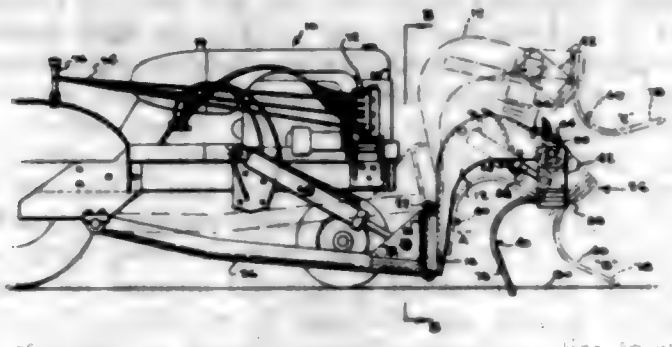
2,895,557
BEACH CLEANING ATTACHMENT
Herbert W. Davis, Hackettstown, N.J.
Application March 15, 1957, Serial No. 646,365
4 Claims. (Cl. 171—63)

1. A beach cleaning attachment comprising a pair of uprights arranged in transverse spaced relation, a beam positioned rearwardly of and extending transversely of said uprights and secured to the latter, an arm extending forwardly of and carried by each of said uprights, said arms being in registry with each other, a rake assembly including a support having a plurality of concavely curved teeth arranged in spaced relation therealong positioned so that the support extends parallel to said beam with the teeth facing away from said beam and having the support connected to said arms for rocking movement

2,895,561
TORQUE RESPONSIVE FUEL CUT-OFF MEANS

tension transformer and rectifier means between the secondary of said transformer and said electrodes, ballasting

of said assembly about a horizontal axis, and means operatively connected to said arms and said assembly



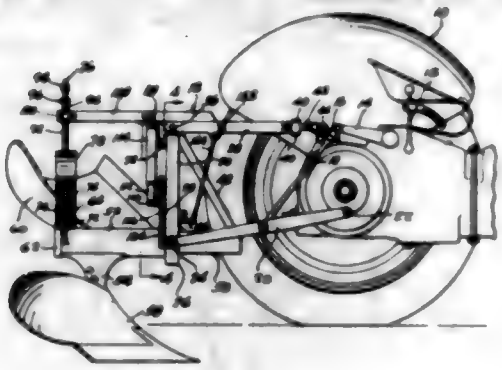
support for effecting the rocking movement of said assembly support.

2,895,558

AUTOMATIC REVERSING MECHANISM FOR TRACTOR-ATTACHED AGRICULTURAL IMPLEMENTS

John A. Perry and Floyd B. Perry, Wendell, and Darrell D. Perry, Pocatello, Idaho

Application June 18, 1957, Serial No. 666,425
7 Claims. (Cl. 172—210)



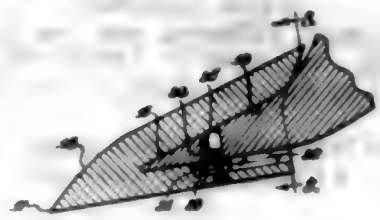
1. In a tractor attachment the combination, with an implement lifting means of a tractor, of a generally vertical frame connected to said means to be lifted thereby; tool support means rotatably mounted on and projecting rearwardly from the frame; a pair of angularly spaced ground working tools carried by the support means; mechanism connected between the frame and tool support means operative responsive to elevation of the frame to impart rotary motion to the tool support means through an angular distance about the axis of rotation thereof past a dead center but less than the angular distance that the tools are spaced apart, said mechanism including an arm projecting rearwardly from the frame and connected thereto for elevation therewith, rod means extending downwardly from the arm and elevatable therewith, a selection control plate lying transversely of the tool support means and connected to the tool support means for rotation therewith, said plate having an elongated, straight slot extending transversely of said axis, and a connection between the rod means and plate slidably engaged in the slot and connected to the rod means for elevation therewith, for rocking of the plate responsive to elevation of said connection with the rod means; and resilient, yielding means connected between the frame and tool support means, said resilient, yielding means being compressed and carried through said dead center on rotation of the tool support means through the first named angular distance, said last named means on movement thereof through said dead center exerting a force against the tool support means sufficient to rotate the same through the remainder of the second named angular distance.

2,895,559

REPLACEABLE CULTIVATOR POINT

Wayne G. Toland, Stockton, Calif., assignor to International Harvester Company, a corporation of New Jersey

Application February 16, 1956, Serial No. 566,846
3 Claims. (Cl. 172—762)



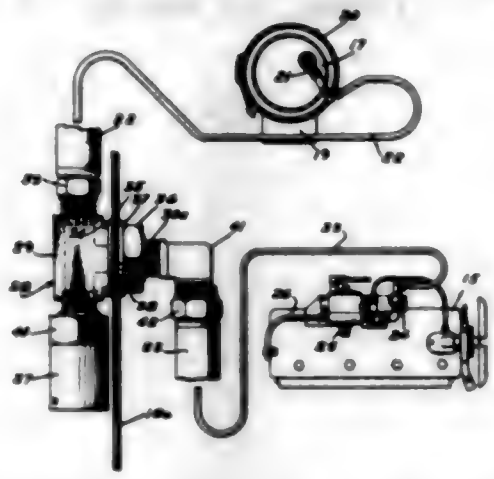
1. The combination with a tool shank having a tool-receiving portion, of a replaceable tool having an earth-penetrating forward end and a socket therein opening to the rear and conforming generally to the shape and size of said tool-receiving portion to slidably receive the latter, said socket having a restricted portion forming a generally channel-shaped groove lengthwise thereof between the bottom of said tool-receiving portion and the bottom of the socket and opening at the rear of the tool, said tool-receiving portion having a smooth bore cylindrical recess therein, a threaded member carried by the tool and slidably receivable in said recess to prevent displacement of the tool from said tool-receiving portion, and a locking member slidable in said groove to a position in registry with said threaded member, said locking member comforming generally to the sape of said groove to prevent rotation of the locking member therein and having means cooperable with said threaded member for securing the latter to the tool.

2,895,560

FUEL SUPPLY SYSTEM FOR INTERNAL COMBUSTION ENGINES

Harold E. Lynn, Anaheim, Calif., assignor to Beam Products Mfg. Co., Los Angeles, Calif., a corporation of California

Application December 16, 1957, Serial No. 703,153
4 Claims. (Cl. 180—54)



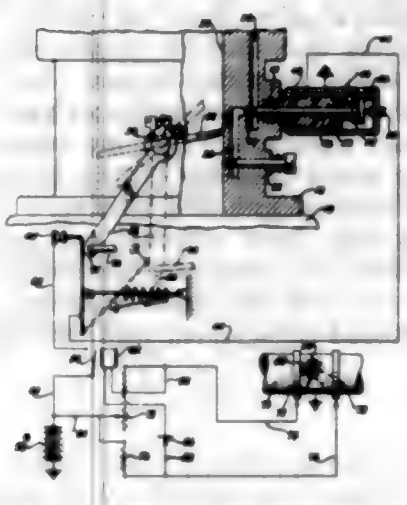
1. In combination: a truck having an engine and a hood therefor, an apparatus for supplying fuel to the engine including a fuel tank supported on the hood, a fluid-pressure regulator within the hood, a conduit communicating at one end with said regulator, a fuel line communicating at one end with said tank and disposed exteriorly of the hood, a tubular coupling having one part secured within and extending through one wall of the hood and connected to the other end of the conduit, and a second part disposed exteriorly of the hood and connected to the other end of the fuel line, and a hydrostatic-relief valve mounted on the second part and communicating with the fuel line through the latter.

and having its marginal portions extending into the channels of said frame, an inner frame member comprising a

wardly of the lower ends of said channel members, an

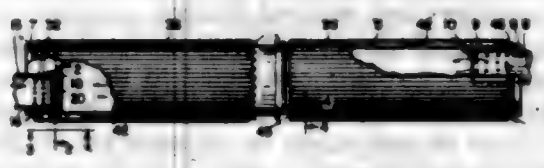
combustible mixture, ignition means for initiating com- support connected to said arms for rocking movement

2,895,561
TORQUE RESPONSIVE FUEL CUT-OFF MEANS
William E. McCollough, Detroit, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Application January 17, 1957, Serial No. 634,781
14 Claims. (Cl. 180—82)



1. In a vehicle having an engine, a driven axle and a drive train between said engine and said axle, a carburetor adapted to supply a motive fluid to said engine, said carburetor having a manually operated throttle for controlling the speed of said engine and an idle fuel system for supplying idle fuel to said engine when said throttle is closed, said idle fuel system including a valve adapted when closed to shut off the supply of said idle fuel, and means in addition to the inherent control of said vehicle by said manual throttle for closing said valve when said axle is driving said engine, said means including means having the sole function of sensing directly the torque in said drive train.

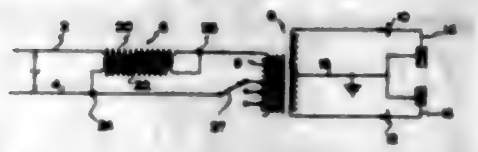
2,895,562
EXHAUST MUFFLER FOR INTERNAL COMBUSTION ENGINE
Frank R. Perry, Los Angeles, Calif., assignor to Turco Products, Inc., a corporation of California
Application August 12, 1955, Serial No. 527,937
1 Claim. (Cl. 181—61)



In a muffler for an internal combustion engine, a hollow, cylindrical shell having an exhaust inlet at its inner end and an exhaust outlet at its outer end, means for cooling said shell comprising a pair of longitudinally spaced sleeves of corrugated cross section secured to and each extending about the periphery of said shell and defining therewith a plurality of open-ended air passageways extending longitudinally of said shell, the inlet ends of the passageways defined by the rear one of said sleeves and said shell being spaced longitudinally of said shell from the outlet ends of the passageways defined by the front one of said sleeves and said shell, and an annular air deflector carried by said shell between said sleeves.

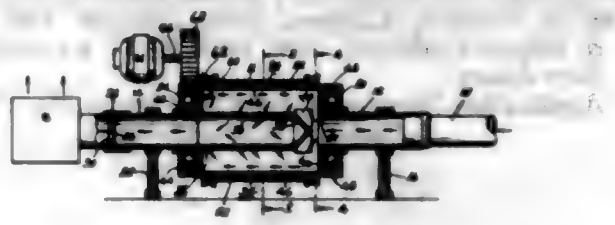
2,895,563
ELECTRICAL PRECIPITATOR
Harry A. Winternute, Plainfield, N.J., assignor to Research Corporation, New York, N.Y., a corporation of New York
Application February 28, 1955, Serial No. 490,889
16 Claims. (Cl. 183—7)

1. In combination with an electrical precipitator or the like having spaced precipitating electrodes, a high tension transformer and rectifier means between the secondary of said transformer and said electrodes; ballasting means in series with the transformer primary, said ballasting means comprising second transformer means having a current winding in series with the primary winding of the high tension transformer, and a voltage winding



between said current winding and said primary winding in voltage boosting relationship with said current winding such that a change in current flow in the high tension transformer primary winding causes an inverse change in the voltage drop across the voltage winding, to tend to oppose said current change.

2,895,564
DIRT COMPACTOR UNIT FOR VACUUM CLEANING SYSTEMS
Henry P. Borie, Jr., Cleveland Heights, Ohio, assignor to General Electric Company, a corporation of New York
Application October 25, 1956, Serial No. 618,288
8 Claims. (Cl. 183—37)



1. A compactor unit for separating solids out of an air stream and compacting them, comprising a pair of substantially coaxial, concentric, coextensive cylinders, said pair of cylinders comprising an outer one which is imperforate and an inner one which is perforate, a radial wall extending between and secured to both of said cylinders at one of their axial ends, said inner cylinder being open at its end adjacent said radial wall and communicating with an air outlet, the other axial ends of said cylinders being spaced, the annular space between said cylinders communicating with an air inlet through the space between the spaced ends of said cylinders, the other axial end of said inner cylinder being closed and having radial vanes formed exteriorly thereon, whereby when said compactor unit is rotated and an air stream is forced through it, air flows into said inlet, axially into said dirt compactor unit through the space between said spaced cylinder ends, whereby air contacts said vanes and is directed radially outwardly against the inner surface of said outer cylinder, where dirt is separated from the air stream, deposited and compacted by the action of centrifugal force, and the air is then directed axially and radially inwardly through said angular space and through said perforate cylinder, and axially out the open end of said perforate cylinder to said outlet.

2,895,565
FILTER
George K. Le Brun and Aubrey H. Terrell, Bethesda, Md.
Application December 6, 1956, Serial No. 626,729
1 Claim. (Cl. 183—51)

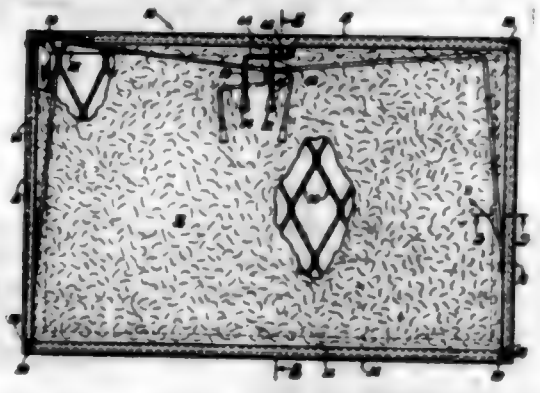
In a renewable sheet filter medium supporting structure comprising an inwardly channeled open sided box frame providing spaced marginal top and bottom flanges, a foraminous plate extending across an open side of said frame within the channels and supported on the flanges thereof, a sheet of filter medium supported on said plate

units carrying leveling members engageable with the passage, a support mounted on the head, an abutment

named angular distance.

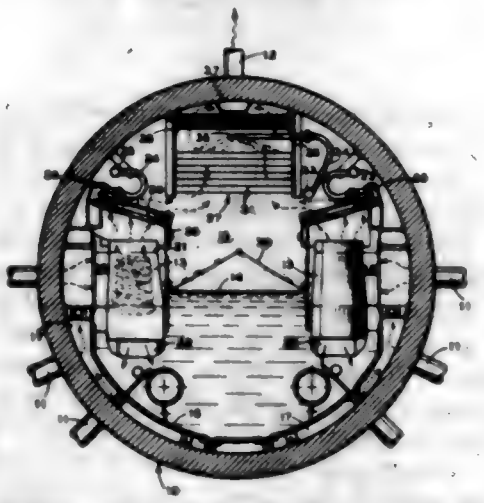
fuel line through the latter.

and having its marginal portions extending into the channels of said frame, an inner frame member comprising a single length of resilient wire of materially greater length than the channel in said frame engaging the marginal portions of said filter sheet within said channels and having its free end portions extending in overlapping relation



against said filter sheet on its supporting plate, and one free end portion of said wire frame being notched inwardly of said channels to resiliently interlock with the other free end portion thereof to retain said filter sheet and plate in fixed relationship within said channelled frame.

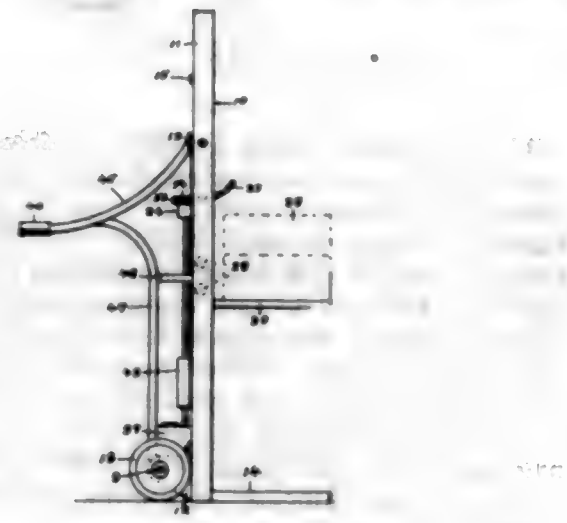
2,895,566
METHOD OF WASHING HIGH PRESSURE STEAM
Earl E. Coulter, Alliance, Ohio, assignor The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Application November 14, 1955, Serial No. 546,335
2 Claims. (Cl. 183—121)



1. The method of purifying high pressure steam which comprises, subjecting said steam to a preliminary purifying step of contact with films of wash water, passing a countercurrent flow of said partially purified steam through a plurality of relatively closely spaced steam and wash water contact stages wherein the wash water is dispersed into said steam, limiting the maximum quantity of steam flow through said washer whereby wash water droplets dispersed in said steam do not carry over from one stage to an upwardly adjacent stage, and regulating said wash water flow to said washer to a substantially uniform rate of less than 10% by weight of said steam at the maximum steam flow through an upper range of steam flow rates, and reducing said water flow rate proportionally to said steam flow rate throughout a lower range of steam flow rates.

2,895,567
HOIST
Lester W. Hall, Livingston, Mont.
Application June 6, 1957, Serial No. 664,828
1 Claim. (Cl. 187—9)

In a hoist, a frame including a pair of spaced parallel channel members, plates secured to and extending rearwardly of the lower ends of said channel members, an axle mounted at their inner ends in each of said plates and extending outwardly thereof at right angles thereto, wheels journaled on the outer ends of said axles, a bar extending outwardly from the lower end of each of said channel members and secured thereto, a safety switch extending between said pair of channel members and secured thereto, a cross piece extending between said channel members and secured thereto, a safety switch and a master switch supported by said cross piece, an end piece arranged contiguous to said cross piece and secured to said channel members, a bushing supported by said cross piece, a screw member having its upper end arranged in engagement with said bushing, a strap arranged rearwardly of said screw member and parallel to said channel members, an automatic trip switch mounted on said strap, a movable lift plate including a bearing arranged in threaded engagement with said screw member,



rollers connected to said lift plate and positioned in said channel members, lift arms extending outwardly from said lift plate and secured thereto, a bottom piece secured to the bottom ends of said channel members, a bushing on said bottom piece for journalling the lower end of said screw member, a sprocket connected to the lower end of said screw member above said bushing, a support member extending between the lower portions of said channel members and secured thereto, a motor having a vertically disposed drive shaft is connected to said support member, a sprocket connected to the lower end of said drive shaft, chain means connecting the sprocket on the drive shaft of said motor to the sprocket on the lower end of said screw member, a stop switch carried by said support member, support bars extending between said channel members and secured thereto, a junction box connected to said support bars, and handles extending from said frame and secured thereto.

2,895,568
ELEVATOR PLATFORM LEVELING SYSTEM
Robert W. Smith and Robert A. Vaughan, Columbus, Ohio, assignors, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Application January 28, 1958, Serial No. 711,591
4 Claims. (Cl. 187—76)

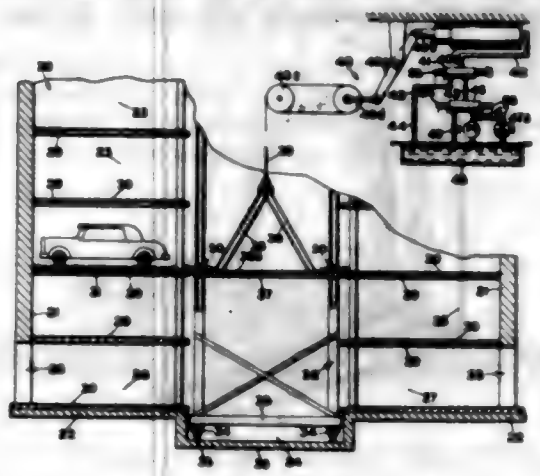
1. In a mechanical parking garage or the like having a plurality of vertically superposed decks disposed alongside of a horizontally elongated vertically extending elevator shaft, an elevator tower mounted for movement horizontally along said shaft and extending vertically thereof, an elevator mounted for vertical movement on said tower to different levels adjacent said decks, a plurality of leveling units carried on the elevator and movable from a retracted position within the confines of the elevator to an extended position vertically overlying a selected deck with which the elevator is to be leveled, said leveling

scopic guide members mounted to slide along said par- ton of the body and fitting tightly against the bottom of

the like having spaced precipitating electrodes, a high

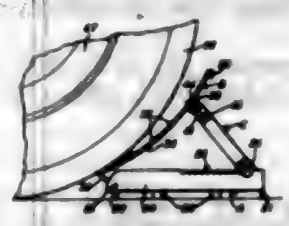
thereof, a sheet of filter medium supported on said plate

units carrying leveling members engageable with the selected deck for movement therealong to permit horizontal movement of the elevator therealong upon hori-



zontal movement of said tower along said elevator shaft, and control means for moving said units between said retracted and extended positions.

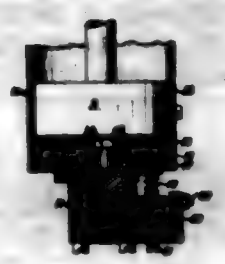
2,895,569
SAFETY CAR BLOCK
Arthur W. Nystrom, Naples, Idaho
Application January 8, 1957, Serial No. 633,080
6 Claims. (Cl. 188—32)



1. A safety car block comprising a base member, a pressure member pivoted to said base member for movement between a collapsed position within the confines of the base member and an operative extended position in engagement with the tire of a vehicle wheel, resilient means on said base member and pressure member for releasably holding the pressure member in its collapsed position, and means for effecting the movement of the pressure member with respect to the base member comprising at least one rack bar on the base member and pinion means connected to said pressure member at a distance from the pivot between the base and pressure members, said pinion means comprising a pair of spaced-apart pinion bars adapted to enter the spaces between the teeth of the rack bar and to serve alternately as a pivot for the step-by-step travel of the pinion means along the rack bar.

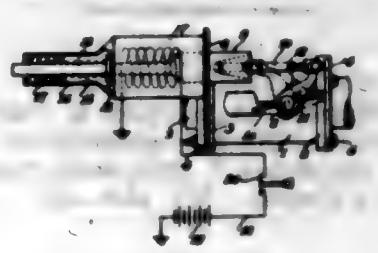
2,895,570
PNEUMATIC BRAKE WITH PRESSURE CLOSED VALVE
Josef Kury, Prilly, near Lausanne, Switzerland, assignor to J. Bobst and Son S.A., Prilly, near Lausanne, Switzerland, a corporation of Switzerland
Application June 4, 1956, Serial No. 589,069
Claims priority, application Switzerland June 22, 1955
2 Claims. (Cl. 188—94)

1. A pneumatic device comprising a piston, a cylinder defining a bore accommodating said piston, said cylinder including a head defining a first passage communicating with the bore and a second passage radially intersecting said first passage, a hollow sleeve having a central opening and a radial opening communicating therewith, said sleeve being displaceably positioned in the first passage with the central opening communicating with said bore and the radial opening being registerable with said second passage, a support mounted on the head, an abutment threadably adjustable on the support and having an end adjacent said sleeve to limit the displacement thereof, means threadably engaging said abutment for adjustment



thereon, a spring intermediate said means and sleeve for controlling rate of displacement of the latter, and means on said support for locking the first said means in position whereby the magnitude and rate of displacement of the sleeve are individually adjustable.

2,895,571
EXHAUST BRAKING APPARATUS FOR MOTOR VEHICLES
Emil Friedrich Gottlieb Hanebeck, Gerrards Cross, England, assignor to Clayton Dewandre Company Limited, Lincoln, England
Application February 25, 1955, Serial No. 490,626
12 Claims. (Cl. 188—99)

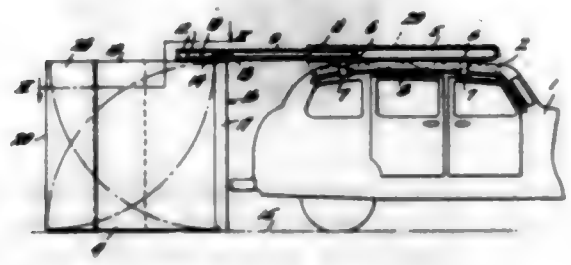


1. An exhaust braking apparatus for a motor vehicle, comprising an exhaust gas duct, a rotatable closure member therein, an operating shaft for said closure member rotatably supported in the wall of the duct and extending exteriorly thereof, variable rate spring means mounted externally of the duct and normally acting through said shaft to urge the closure member toward the fully open position, and an electromagnetic device mounted externally of the duct and operable, when energized, to overcome the opposing force of said spring means and, through the intermediary of said shaft, move the closure member toward a closed position, said spring means being so constructed that the rate thereof sufficiently increases during movement of the closure member towards the closed position that the impact of closure of said member by said electromagnetic device is effectively reduced and the compressed spring exerts optimum closure member opening force when said electromagnetic device is denergized, said spring means comprising two springs one of which is active throughout the whole range of movement of the closure member and the other of which comes into action in the latter part of the closing movement of said closure member.

2,895,572
FOLDING CAMPING SHELTER
Erik Johan Mårten Brinck, Skomstavik, Enskede, Sweden
Application July 25, 1955, Serial No. 524,175
1 Claim. (Cl. 189—2)

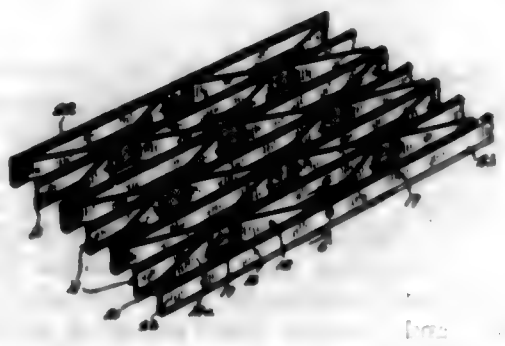
In combination, a folding camping shelter intended for transport on the top of a vehicle and means for carrying said shelter on said vehicle when folded, comprising a pair of parallel guide members mountable on the vehicle top; a rigid slide frame comprised of tele-

scopic guide members mounted to slide along said parallel guide members, respectively, and a transversely extending rod rigidly interconnecting said telescopic guide members; said shelter being comprised of relatively light weight plates some of which are hingedly connected together in series relationship; a rectangular box frame, some of said plates of said series being hinged to said box frame so that said plates are foldable within said



box frame for transport on the vehicle top and are foldable out of said box frame to constitute the walls, roof, and floor of the shelter when erected on the ground, said box frame being hingedly hooked at one of its ends to said slide frame so as to be swingable downward into vertically extending position and said box frame having a width enabling it to be swung upwardly into horizontal position between said telescopic guides and to be slid with said slide frame onto the vehicle top.

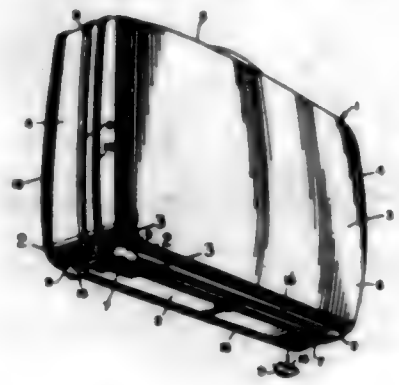
2,895,573
GRATING MATERIAL
John W. Hill, Chicago, Ill., assignor to The Globe Company, Chicago, Ill., a corporation of Illinois
Application December 7, 1954, Serial No. 473,557
6 Claims. (Cl. 189—82)



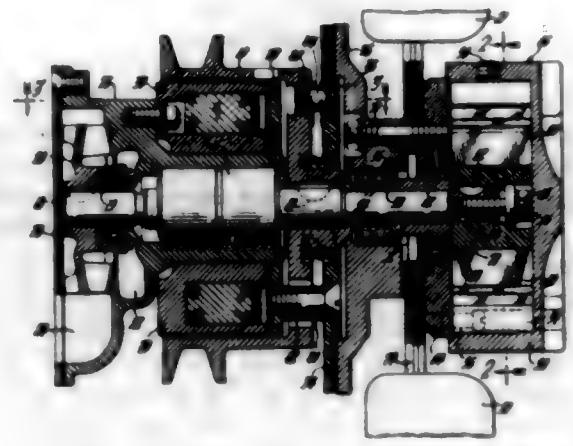
1. A grating material comprising a plurality of spaced load-supporting bars having flanges along the lower edges thereof and spaced openings extending transversely therethrough above said flanges, and a plurality of sinuous tie bars positioned between said load bars and connecting adjacent ones, said tie bars having substantially flat contacting portions engaging said load bars on opposite sides thereof with bosses thereon extending into said openings from opposite sides, said bosses being fused together in and substantially filling said openings, and said tie bars having the lower edges of said contacting portions abutting the upper portions of said lower flanges.

2,895,574
FEET FOR LUGGAGE
Sol Keller, Providence, R.I.
Application September 17, 1957, Serial No. 684,686
7 Claims. (Cl. 190—37)

2. A foot for application to a piece of luggage having lid hinges on its bottom and a bead extending about the luggage, said foot comprising a one piece molded body having a longitudinal groove formed in its upper surface to receive said bead, a peripheral rim extending about the top of the body and fitting tightly against the bottom of the luggage, said foot having a relatively flat bottom and inclined outwardly and upwardly toward the top on at least one side and the ends of the body, one side of the foot being inclined upwardly and outwardly and terminating into a straight portion to form a relatively thin edge located toward a hinge, the upper surface of the foot being dished to form said rim, and a single fastening member passing through the foot substantially centrally thereof and fastened to the bottom of the luggage.



2,895,575
VARIABLE SPEED MECHANISM
Adam S. Lamont, Pontiac, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 29, 1957, Serial No. 699,738
8 Claims. (Cl. 192—3.2)



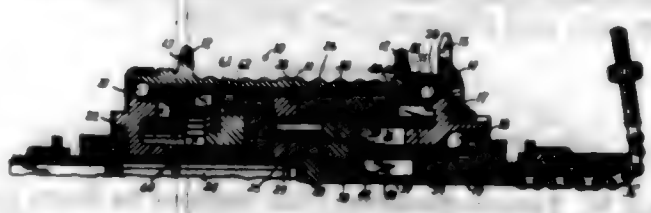
1. In a vehicle equipped with a pair of accessory mechanisms one of which is desirably operated at first and second speeds reflecting conditions of relatively high and relatively low demand thereon, the combination of a drive for said accessory mechanisms comprising: a drive member directly connected to the other of said accessory mechanisms, a fluid coupling including an output member and an element directly connected to said drive member, said coupling being filled with a predetermined quantity of fluid, means interconnecting said output member and said one accessory mechanism, clutch means including a first component connected to said output member and a second component connected to said drive member, means normally urging said clutch components into engagement and means for effecting disengagement of such components, said drive being characterized in operation in that on disengagement of said clutch components movement of said output member is caused to continue by fluid impelled thereagainst by said input member and in that the rate of such movement is determined by said predetermined quantity of fluid, said rate being less than the rate of movement of said output member with the said clutch components engaged.

force so that at low rotational speeds the magnetic force having second openings disposed adjacent said drive lugs,

2,895,576
AUTOMATICALLY ENGAGING AND DISENGAGING RATCHET PAWL MECHANISM FOR CHANGEABLE SPEED DRIVE COASTER BRAKES FOR BICYCLES

Hans Joachim Schwerdhöfer, Schweinfurt (Main), Germany, assignor to Fichtel & Sachs A.G., Schweinfurt (Main), Germany, a corporation of Germany

Application November 19, 1957, Serial No. 704,235
Claims priority, application Germany November 22, 1956
9 Claims. (Cl. 192—6)

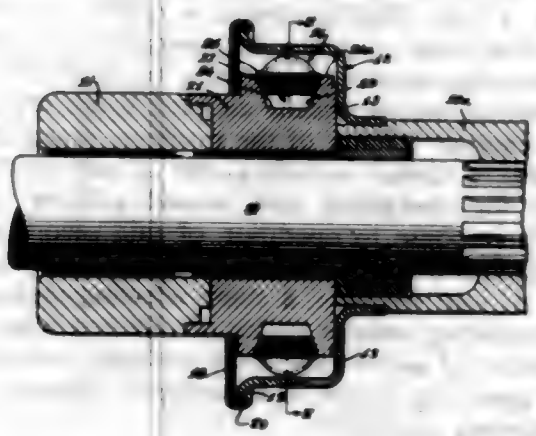


1. In a changeable speed coaster brake device of the type which comprises a sprocket wheel adapted for engagement with the drive chain of a bicycle, a wheel hub adapted for support by the wheel spokes of said bicycle, an axle on which said sprocket and hub are both freely rotatable, a driving member rotatable on said axle, changeable ratio gearing connecting said sprocket wheel to said driving member, means for changing the gear ratio of said gearing, and back pedaling brake means connected to said driving member for braking said hub in response to backward rotation of said driving member, the improvement which comprises the provision of mutually axially displaceable pawl and ratchet means for connecting said driving member to said hub for forward driving of said hub by said sprocket through said gearing, limited torque friction means continuously interconnecting said hub and said pawl and ratchet means, and means defining a guide surface inclined with respect to the axis of said axle, said guide surface causing pawl disengaging axial displacement of said pawl and ratchet means to disengage the same when said hub rotates forwardly faster than said driving member.

2,895,577
CLUTCH

John M. Dodwell, Piedmont, Quebec, Canada

Application May 16, 1955, Serial No. 508,654
15 Claims. (Cl. 192—41)



1. A clutch comprising a first member having an externally facing peripheral V groove therein, a second clutch member having at least one internally facing pocket positioned adjacent and over said groove, a torque transmitting band associated with each pocket and having a body precurved to wrappingly engage the side walls of said V groove, and means securing one end of each said band in a respective pocket, said means comprising an outwardly projecting portion fixed to said one end and positioned in the respective pocket, said projecting portion and its respective pocket having complementary contacting torque applying surfaces lying in substantially parallel planes both of which are inclined at an angle to a radial plane defined by the axis of rotation of said members and a radius line drawn through said surfaces, said torque applying surfaces being slideable relative to each other and the planes of said surfaces being divergent outwardly away from said radial plane on the side thereof opposite from the body of said band.

2,895,578
SPRING CLUTCH

Frank J. Winchell, Franklin Village, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application September 10, 1956, Serial No. 608,953
5 Claims. (Cl. 192—41)

1. A spring clutch to transmit rotary drive between a first shaft and a second substantially coaxial shaft having a hollow bore, said clutch comprising a first spring section including a plurality of continuous coils wound in one direction about said first shaft, a second spring section including a plurality of continuous coils wound in the opposite direction within the hollow bore of said second shaft, and connecting means on adjacent end coils of said first and second spring sections to contract and expand the latter respectively into frictional driving engagement with said first and second shafts upon driving rotation of one of the latter.

2,895,579
CENTRIFUGAL POWDER CLUTCHES

Arthur Terry III, Newtown, Conn.

Application February 1, 1956, Serial No. 562,888
2 Claims. (Cl. 192—58)

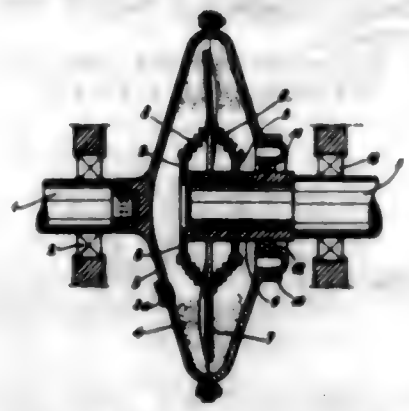
1. A centrifugal powder clutch of the sort employing a subdivided magnetizable solid material as a fluid coupling medium comprising a hollow rotatable casing adapted to be mounted on a drive shaft, the casing defining a cavity serving to contain a quantity of medium and to enclose a rotor, a rotor within said casing and coaxial therewith, said rotor and casing being relatively turnable, a finely divided medium in the cavity in an amount insufficient to completely fill the cavity and adapted, by centrifugal action, to be disposed by rotation of the casing packingly in the peripheral portions of the cavity when the casing is rotated at high speed about its axis to thereby lockingly engage the casing and the rotor, the rotor having in its peripheral portions a plurality of radial corrugations circumferentially disposed as protrusions increasing in depth toward the periphery of the rotor, and a plurality of removable and externally adjustable magnetic screws mounted in the casing and extending inwardly to its inner wall, said screws being mounted in a portion of the casing radially outward of the axis of rotation of the casing and radially inwardly of the portions of the rotor having the radial corrugations, for attracting the magnetizable particles of the medium and for balancing the magnetic force against the centrifugal

articles of various character; value recording means pre- said tilt member relative to said base member, a rotatable

to receive said bead, a peripheral rim extending about the ber with the said clutch components engaged.

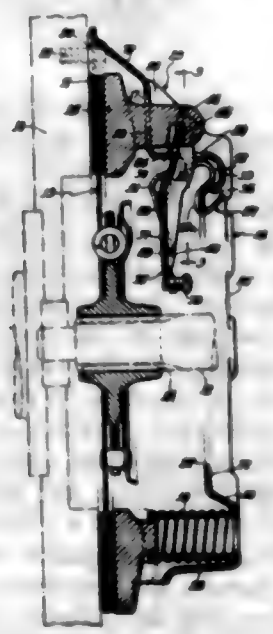
force so that at low rotational speeds the magnetic force exerts on the medium a force slightly in excess of the centrifugal force on the medium at those low speeds.

2,895,580
POWDER COUPLING
Ferdinand Badin, Paris, France, assignor to Societe Mediterraneene Metallurgique Miniere et Commerciale, Paris, France, a corporation of France
Application September 3, 1957, Serial No. 681,691
Claims priority, application France September 3, 1956
3 Claims. (Cl. 192—58)



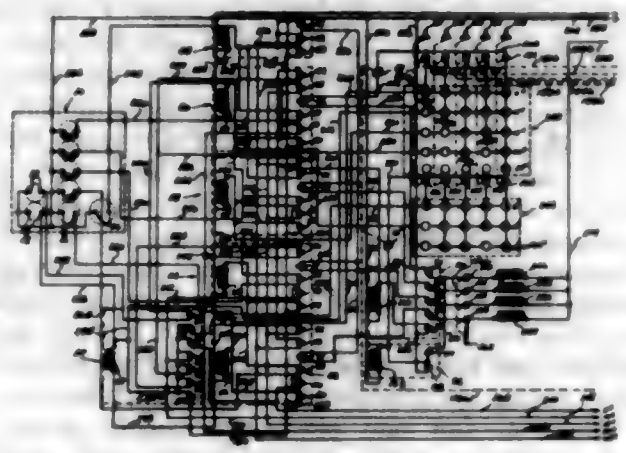
1. A powder coupling device comprising a housing in which the width of the axial cross-section diminishes toward the periphery, which housing is supported by at least one bearing positioned outside the housing, metal shot contained in the said housing, a substantially flat disc which is slightly undulated at the periphery, the depth of these undulations being less than fifteen percent (15%) of their length so that the disc has a very slight continuous slip during operation, the said hub being also supported by at least one bearing positioned outside the housing and a flexible seal which closes the space between the hub and the opening in the housing through which the hub fits.

2,895,581
FRICTION CLUTCHES
Daniel W. Lysett, Utica, Mich., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application May 8, 1956, Serial No. 583,526
4 Claims. (Cl. 192—99)



1. In a clutch assembly, a pressure plate having drive lugs extending laterally thereof and provided with slots therein; a cover plate having first and second angularly disposed portions, said first portion being provided with openings receiving said lugs and the said second portion being disposed radially inwardly of said first portion and having second openings disposed adjacent said drive lugs, and tongues projecting into said second openings; a plurality of levers extending through said second openings and into said slots for engagement with sides thereof and having bifurcated ends receiving said lugs and openings intermediate the ends thereof receiving said tongues for fulcruming said levers on edges of said second openings in said cover plate on opposite sides of said tongues; and means disposed between said pressure plate and said cover plate for holding said levers in engagement with said tongues on said cover plate and in operative relation with said pressure plate drive lugs.

2,895,582
CONTROL CIRCUIT FOR ELECTRICAL MERCHANDISING MACHINES
Jack W. Turner, Boonton, N.J., assignor to Rowe Manufacturing Co., Inc., Whippany, N.J., a corporation of New York
Application April 25, 1951, Serial No. 222,857
11 Claims. (Cl. 194—7)



9. In a control circuit for an electrical multicolumn merchandising machine a first relay including a plurality of normally open switches and a winding adapted to be energized to close said switches, means responsive to the deposit in the machine of a coin of predetermined value for energizing said first relay winding, a second relay including a plurality of normally open switches and a winding adapted to be energized to close said normally open switches, means responsive to the deposit in the machine of a coin of a different value from said first coin for energizing said second relay winding, means adapted to be energized to operate one column of the machine, a first selecting means, a circuit including one of said first relay switches for energizing said one column operating means in response to operation of said first selecting means, means adapted to be energized to operate another column of the machine, a second selecting means, a circuit including one of said second relay switches for energizing said second column operating means in response to operation of said second selecting means, means adapted to be energized to operate a third column of said machine, a third selecting means, and a circuit including another switch of said first relay and another switch of said second relay for energizing said third column operating means in response to operation of said third selecting means.

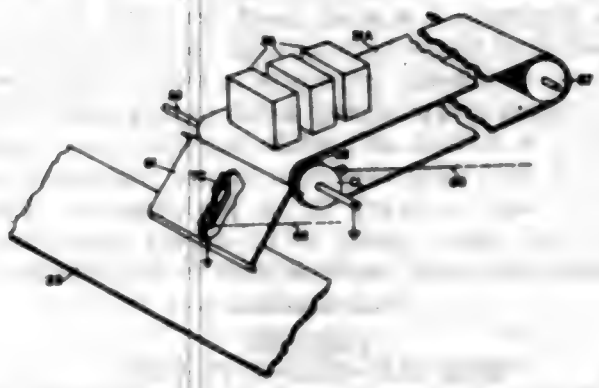
2,895,583
COIN-OPERATED VENDING MACHINES
Alan D. Lackey, McMahon's Point, New South Wales, Australia, assignor to T. S. Skillman and Company Pty. Limited, Cammeray, near Sydney, Australia, a corporation of New South Wales
Application January 21, 1954, Serial No. 405,431
Claims priority, application Australia January 23, 1953
11 Claims. (Cl. 194—10)

1. Apparatus for vending articles having dispensing devices to store and dispense one or a plurality of selected

2,895,587
EGG CRACKING MECHANISM

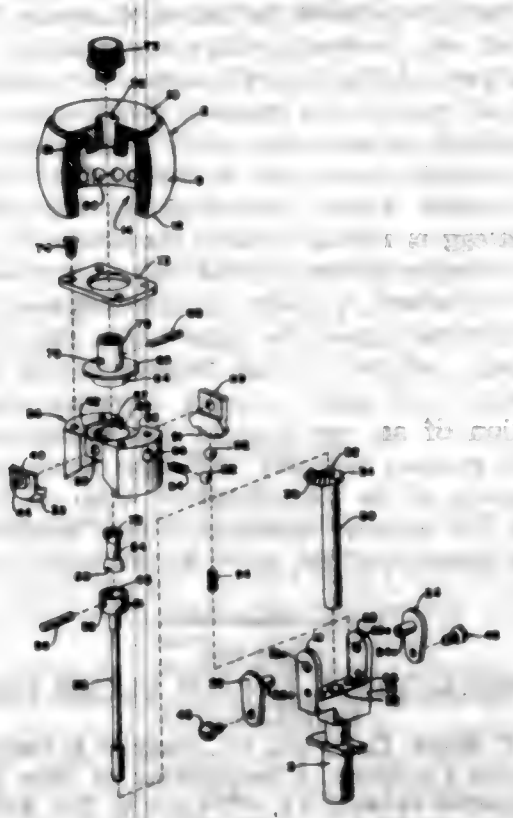
scanning said mail pieces being transported linearly by

articles of various character; value recording means presettable in accordance with the value of each article to be dispensed; a coin-operated device adapted to accept a plurality of coins of the same or various denominations and including credit-registering means operable by said coins; article selecting means to select articles for dispensing; first checking means to check the pre-set values of selected articles against the registered credit and releasing means operable by said first checking means to initiate the release of selected articles only when the registered credit is



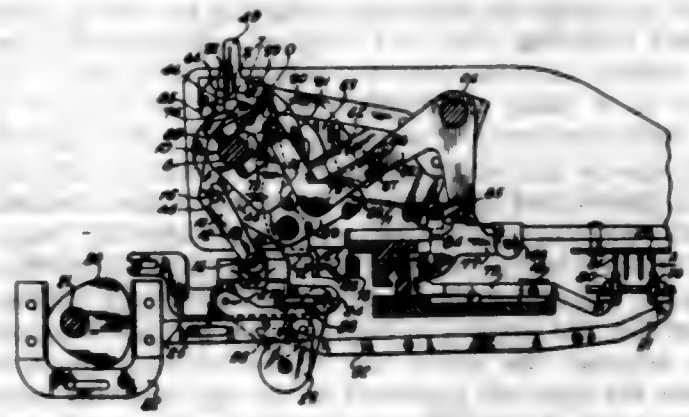
greater than the pre-set value of a selected article; subtracting means operable at the release of said selected article to reduce the credit registered at said credit-registering means by the pre-set value of said selected article; second checking means to check the pre-set values of selected articles against the registered credit and to operate said releasing means to initiate the release of selected articles only when the registered credit is exactly equal to the pre-set value of a selected article, and cancelling means operable by said second checking means at the release of said selected article to cancel the registered credit.

2,895,584
SINGLE ELEMENT PRINTING HEAD
John E. Hickerson, Wappingers Falls, and Ralph E. Page and James A. Weidenhammer, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application November 17, 1955, Serial No. 547,481
13 Claims. (Cl. 197—52)



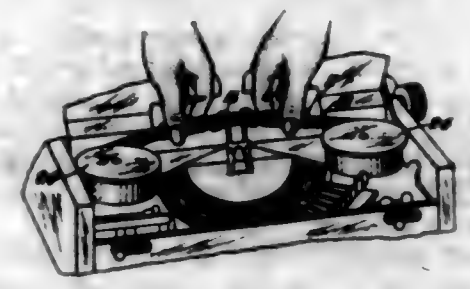
1. A single element printing head comprising a base member, a tilt member, pivot means pivotally supporting said tilt member relative to said base member, a rotatable member, means mounting the same for rotation relative to and coaxially of said tilt member, a type shell having a plurality of type characters arranged on the periphery thereof, means mounting the same on said rotatable member, indexing means, and means interconnecting said indexing means with said tilt member and with said rotatable member respectively to provide for the operation of said connected members and the consequential movement of said type shell whereby one shell character at a time may be positioned at a reference position in response to the manipulation of said indexing means.

2,895,585
LINE SPACING DEVICES FOR BUSINESS MACHINES
Harry Güldner and Gerhard Tippmann, Karl-Marx-Stadt, Germany, assignors to VEB Buchungsmaschinenwerk Karl-Marx-Stadt, Karl-Marx-Stadt, Germany
Application April 18, 1958, Serial No. 729,405
Claims priority, application Germany May 24, 1957
7 Claims. (Cl. 197—114)



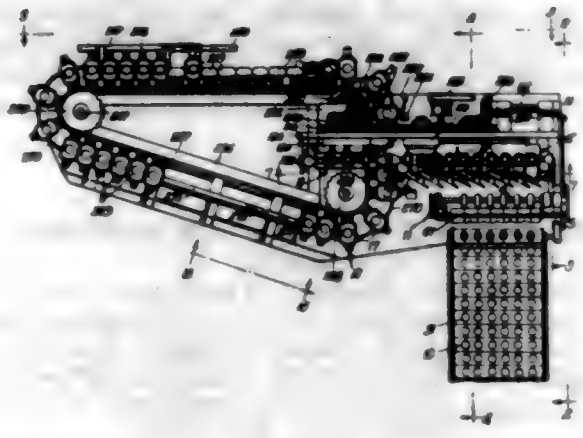
1. In a business machine having a cylinder adapted to support a recording medium for printing thereon in a printing operation, said cylinder being rotatable for indexing said medium; a line spacing device comprising ratchet means operatively connected to said cylinder, and first and second pawl means for selectively indexing said ratchet means in a forward and backward direction respectively, and means for synchronizing the indexing action of said pawl means on said ratchet means with said printing operation, whereby said cylinder is adapted to be indexed backward prior to said printing operation, and to be indexed forward after said printing operation.

2,895,586
RIBBON INSERTER
Eugene Di Luca, North Brunswick, N.J.
Application May 24, 1957, Serial No. 661,487
8 Claims. (Cl. 197—172)



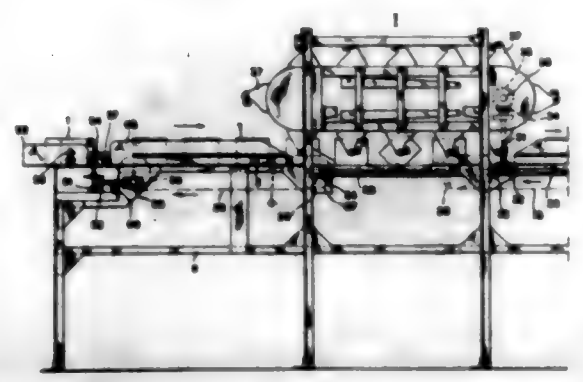
1. A ribbon inserter comprising a strip having a central portion dimensioned to fit into a ribbon carrier, two pairs of opposed top and bottom tabs on the strip, the one pair being spaced apart from the other pair a distance substantially the width of a ribbon carrier, the tabs overlying the strip in general parallelism.

2,895,587
EGG CRACKING MECHANISM
Charles H. Willsey, Topeka, Kans.
Original application October 18, 1952, Serial No. 315,447, now Patent No. 2,760,536, dated August 28, 1956. Divided and this application January 5, 1956, Serial No. 557,592
16 Claims. (Cl. 198—27)



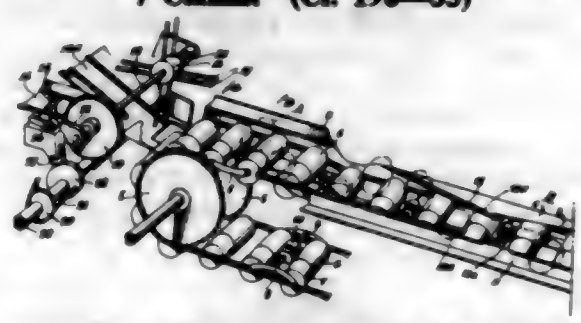
8. Mechanism for transferring eggs from a feed conveyor on which the eggs are arranged in successive transversely extending rows to an elongate continuously moving endless carrying conveyor which is arranged to operate in a plane extending transversely of the end of the feed conveyor and which is provided with longitudinally spaced egg receiving cups, said mechanism comprising a plurality of egg gripping finger assemblies mounted in row forming relation on a swingable carrying frame, said frame being mounted to swing from a position adjacent the end of the feed conveyor where the gripping assemblies are adapted to receive a row of eggs to a position adjacent the upper run of the carrying conveyor where the eggs are deposited in the egg receiving cups, means cooperating with said transfer mechanism for operating the gripping fingers to grip the eggs on the feed conveyor and to release the same for deposit in the cups on the carrying conveyor, and means for moving said gripper assemblies in the direction of advancing movement of said carrying conveyor for a distance sufficient to permit release of the eggs from the gripper assemblies and withdrawal of the same by swinging movement of the carrying frame out of the path of advancing movement of the eggs.

2,895,588
MAIL FACING MACHINE
Frederick Van Marle, The Hague, Netherlands, assignor to N.V. Technische Maatschappij Marchand-Andriessen, The Hague, Netherlands, a Dutch limited-liability company
Application June 4, 1956, Serial No. 589,102
11 Claims. (Cl. 198—33)



4. In a mail piece facing machine, a mail piece separator, a first conveyor receiving successive mail pieces individually from said separator, a stamp detection means scanning said mail pieces being transported linearly by said first conveyor, a second conveyor comprising a series of connected carriages each having timed clamping means positively gripping one of said mail pieces as it reaches the end of its travel in said first conveyor, means responsive to said detection means causing said timed means to rotate said mail piece or not about a horizontal axis while continuing its transport linearly, timed means opening said timed clamping means after a predetermined travel, a third conveyor also comprising a series of connected carriages each having timed clamping means positively gripping one of said mail pieces after it leaves the second conveyor, a second stamp detection means scanning said mail pieces between said second and said third conveyors, and means responsive to said second detection means causing said clamping means to rotate said piece or not about a vertical axis while continuing its transport linearly in said third conveyor, means responsive to the travel of said carriages for a predetermined distance with its mail piece causing said clamping means to open, and means delivering the mail piece to a destination.

2,895,589
EGG HANDLING PLANTS
Frank Rostron, Westbury, England, assignor to Newman, Hender and Company, Limited, Trowbridge, England, a British company
Application June 12, 1958, Serial No. 741,576
Claims priority, application Great Britain June 24, 1957
7 Claims. (Cl. 198—33)



1. Apparatus for orienting eggs comprising an endless conveyor, a continuous series of pairs of egg receiving rollers forming part of said conveyor and rotatably mounted on axes transverse to the line of travel of said conveyor means for rotating said egg receiving rollers each in the same direction at the commencement of travel of the upper run of the conveyor, means for maintaining said egg receiving rollers non rotative during a following part of their travel, means for rotating said rollers of all pairs in the opposite direction towards the delivery end of the conveyor, whereby each egg is caused to move laterally to one end or the other of the pair of rollers in which it rests determined by the position in which the egg is initially placed therebetween, complementary retaining means formed at and by one end of the pairs of rollers, a guide member disposed adjacent the conveyor to engage the eggs during the period the egg receiving rollers are non rotative during travel of the conveyor, said guide member reversing the end to end position of an egg brought into engagement with said guide member whereby such eggs move to the retaining means of the pair of rollers when the latter are rotated in the opposite direction to that appertaining at the commencement of the travel of the upper run of the conveyor.

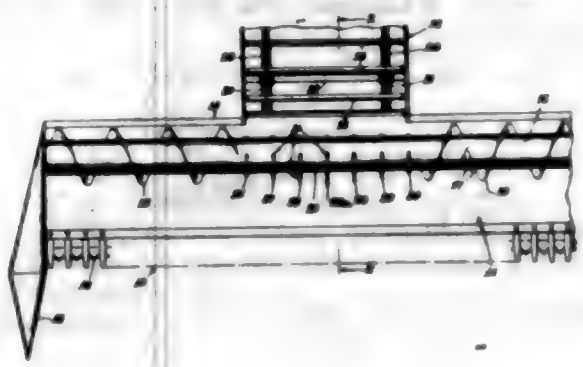
2,895,590
RETRACTABLE FINGER AUGER FOR HARVESTERS
Kenneth T. Snow, Oak Park, Ill., assignor to International Harvester Company, a corporation of New Jersey
Application January 21, 1954, Serial No. 405,294
2 Claims. (Cl. 198—104)

1. In a retractable finger auger for harvester platforms comprising an auger drum across the width of the plat-

2,895,594
FLEXIBLE TROUGHING ROLLER ASSEMBLY

2,895,596
APPARATUS FOR CONTINUOUSLY FEEDING A

form, opposed spiral flight on said drum feeding to a discharge portion of the platform, retractable fingers located in an intermediate section of the drum adjacent the discharge portion of the platform, said retractable fingers increasing in length from minimum length outside fingers adjacent the discharge endings of the opposed spiral flight to maximum length fingers at the center of said intermediate section, said retractable fingers increasing in width as they increase in length.

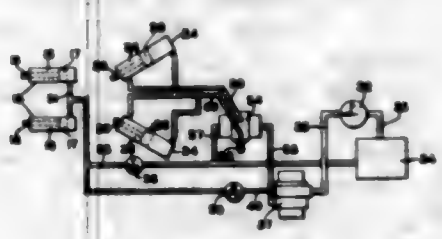


2,895,591

HYDRAULIC CONVEYOR SWING AND TAKE-UP

Carlton B. Frellsen, Franklin, Pa., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

Application May 27, 1958, Serial No. 738,125
6 Claims. (Cl. 198—109)



1. In a conveyor mechanism having a laterally swingable end portion and an endless conveyor guided thereon, fluid operated means for swinging said end portion laterally, fluid operated take-up means connected to said conveyor for automatically taking up any slack introduced therein as said conveyor is swung laterally, and means for supplying fluid under pressure to said swinging means and said take-up means comprising a fluid pump having a discharge and a flow divider having a relatively large capacity discharge and a relatively small capacity discharge for dividing the flow from said pump discharge respectively to said swinging means and said take-up means whereby a relatively larger quantity of pressure fluid is supplied to said swinging means than to said take-up means.

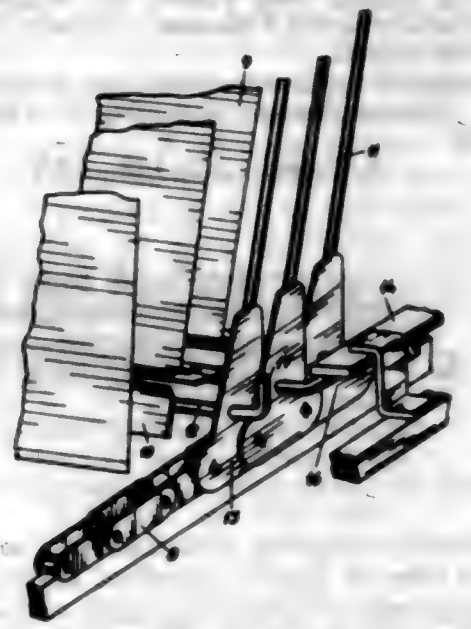
2,895,592

DOWNWARD DISCHARGE CONVEYOR

Göste L. Jonsson and Karl G. Andersson, Lyseki, Sweden

Application July 6, 1954, Serial No. 441,574
Claims priority, application Sweden July 11, 1953
13 Claims. (Cl. 198—134)

1. A conveyor device comprising endless rotatable members having support means for plates, each support means comprising a lower element for co-operation with the lower edge of a plate and another means extending upwardly from the members and adapted to cooperate with the back side of a plate, the support means being so arranged that the plates during the transport are held in a substantially upright position, and means rendering the lower elements of said support means inoperative for removing the plates edgewise downwardly by gravity between the rotatable members before the plates reach the end of the upper run.

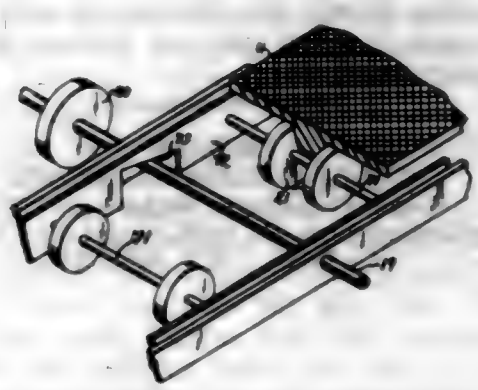


2,895,593

CONVEYORS

Robert Joseph McKnight, Little Falls, and Edwin Whitney Sweney, Hackensack, N.J., assignors to The Rapids-Standard Company, Inc., Grand Rapids, Mich., a corporation of Michigan

Application June 9, 1955, Serial No. 514,228
8 Claims. (Cl. 198—160)



1. A conveyor for conveying articles in a substantially straight path and including a conveyor frame, tail and head pulleys mounted on said frame at opposite ends of said frame and having substantially horizontal axes laterally of said frame, a flexible endless belt interengaging said tail and head pulleys thus providing top and bottom passes extending along the length of said frame, said belt having a frictional gripping face at the outer periphery thereof and said frictional gripping face in the top pass having its width dimension laterally of said frame, a plurality of conveying rollers on said frame on opposite sides of the top pass of said belt and spaced repeatedly along substantially the full length of said top pass, said rollers having their uppermost surfaces situated in a conveying plane, and support means on said frame and including a plurality of rollers spaced with respect to each other, giving bottom support to said top pass of said flexible belt in a plane substantially parallel to but lower than said conveying plane and holding the outer frictional gripping face of said flexible belt along substantially the full length of said top pass laterally and longitudinally up into the conveying plane, while said face engages frictionally the bottoms of articles and advances the articles substantially in a straight path on the conveying rollers situated on opposite sides of the top pass.

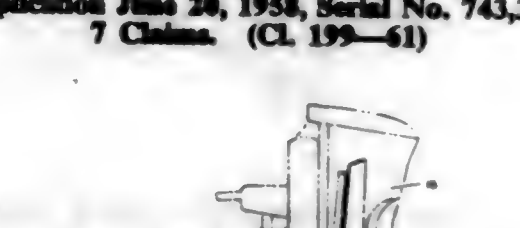
individually from said separator, a stamp detection means

comprising an auger drum across the width of the plat-

2,895,594
FLEXIBLE TROUGHING ROLLER ASSEMBLY FOR BELT CONVEYOR

Herman E. Smith, Park Forest, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Continuation of application Serial No. 655,594, April 29, 1957. This application September 17, 1958, Serial No. 762,196
2 Claims. (Cl. 198—192)

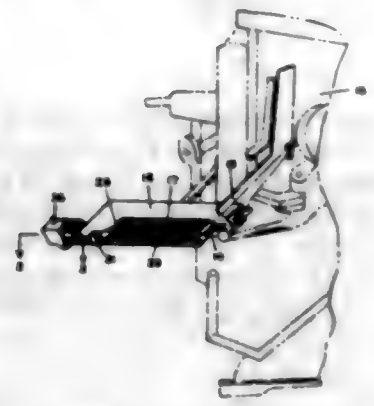


1. A flexible troughing roller assembly comprising: an elongated tube of flexible rubberlike material, said tube having a plurality of circumferentially extending grooves spaced along the length of said tube for improved flexibility transverse to the length thereof, said tube having a layer of relatively high strength reinforcing material adjacent the inner wall of said tube and effective to strengthen said tube against tension loads, a shaft extending into said tube in engagement with said inner wall thereof, a connection between each shaft and its corresponding end portion of the tube including a clamp wholly recessed within one of said grooves and exerting radially inward pressure through said tube and said reinforcing material to create a gripping engagement between said shaft and the tube portion adjacent said reinforcing material, said gripping engagement effectively resisting tension loads tending to pull said shaft out of said tube, and a bearing supporting said shaft for rotation about an axis within said tube.

2,895,595
GALLEY SLIDE RECEIVER

Ralph Fassnough, Richwood, Ohio

Application June 20, 1958, Serial No. 743,322
7 Claims. (Cl. 199—61)

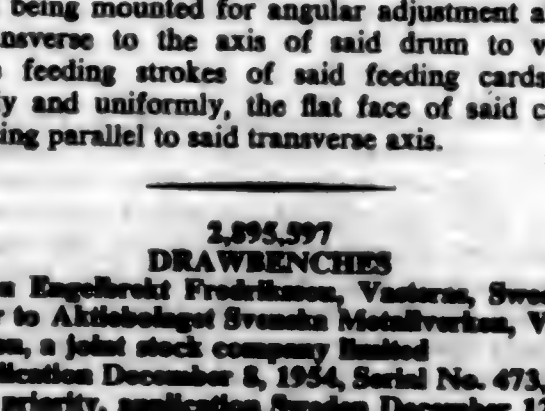


1. In combination with the galley of a line casting composing machine having a galley slide engaged by and movable along the galley toward one end thereof by the slugs which accumulate thereon, a slide receiver mounted adjacent said end of the galley, said receiver comprising a socket member pivotally mounted on the galley having a socket with an open mouth formed therein, latching means for positioning the socket member with its mouth opening inwardly towards the galley, and means for releasing said latching means upon movement of the galley slide into said socket so that the socket member will swing downwardly and position the slide upright.

2,895,596
APPARATUS FOR CONTINUOUSLY FEEDING A BAND OF TEXTILE OR SIMILAR MATERIAL

Joannes Andreas Kuypers, Weert, Netherlands

Application June 24, 1955, Serial No. 517,888
Claims priority, application Netherlands June 28, 1954
2 Claims. (Cl. 203—150)

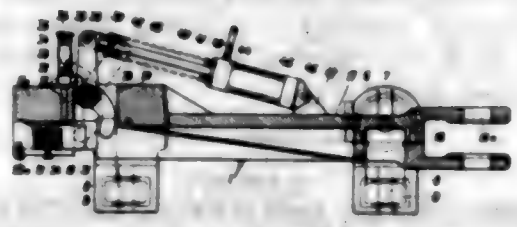


1. A feeding means for a band cutting mechanism for continuously cutting a spiral band of material from a fabric tube, comprising a mandrel mounted for rotation about a fixed axis, a drum mounted coaxially on said mandrel for rotation therewith, an annular series of relatively spaced retainer cards fixedly supported on said drum, a further annular series of relatively spaced feeding cards mounted on said drum for reciprocal movement axially of drum and mandrel between adjoining retainer cards, said feeding cards and said retainer cards both having outwardly presented similarly axially inclining carding teeth for operative engagement with the interior of a tube of fabric received on said mandrel, an axially inclined flat cam element and means supporting same in axial alignment with said drum, and cam follower members extending axially from said respective feeding cards into operative engagement with said cam element, whereby rotation of the said drum will cause reciprocatory feeding movements of said feeding cards, said cam element being mounted for angular adjustment about an axis transverse to the axis of said drum to vary the effective feeding strokes of said feeding cards simultaneously and uniformly, the flat face of said cam element being parallel to said transverse axis.

2,895,597
DRAWBENCHES

Per Sven Engelbrekt Fredriksson, Vasteras, Sweden, assignor to Aktiebolaget Svenska Metallverken, Vasteras, Sweden, a joint stock company limited

Application December 8, 1954, Serial No. 473,948
Claims priority, application Sweden December 12, 1953
3 Claims. (Cl. 205—3)



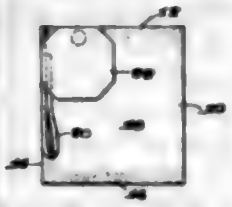
1. Apparatus for drawing a plurality of elongated members through drawing dies, said apparatus comprising a drawing carriage, a plurality of drawing dies, said carriage having an open ended recess disposed in axial alignment with each die to provide an unobstructed path of movement for said members after leaving said dies, a pair of member gripping wedge jaws slidably disposed in each recess, means for limiting sliding movement of said jaws in one direction, individual means for moving each pair of jaws into gripping engagement with the as-

manner to form an opening between the edges of the

the container so that upon opening a top portion of the

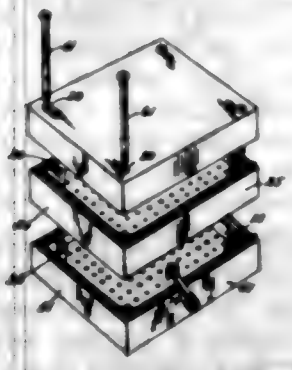
sociated member, separate pneumatic means for actuating each individual means, means for supplying pneumatic pressure to said pneumatic means from a common source whereby the force urging each pair of jaws into gripping engagement with said members will be equal irrespective of differences in cross sectional size or shape of said members and means for retracting said individual means out of the path of movement of said jaws in said one direction.

2,895,598
INFUSION BAG
James P. Whelan, Quincy, Mass., assignor to Pneumatic Scale Corporation, Limited, Quincy, Mass., a corporation of Massachusetts
Application September 14, 1956, Serial No. 609,982
1 Claim. (Cl. 206—5)



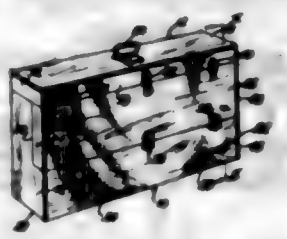
An article of manufacture comprising an infusion bag containing an infusion material said bag being formed of a thin porous bag material folded upon itself and adhesively secured together along its open edges, and a handle for the bag comprising a thin fibrous strip and a tag, said strip being secured to and extended from one marginal edge of the bag, said tag comprising a pair of leaves having an adhesive layer therebetween and folded upon and adhesively secured to the extended end of the strip along a marginal edge of the tag aligned with said one marginal edge of the bag, one of said leaves having a relatively small opening therein adjacent a marginal edge arranged at right angles to said first marginal edge and exposing a small bonding area of adhesive on its opposing leaf, the extended length of the strip being folded upon itself along said one marginal edge of the bag, said tag being disposed at the corner of the bag defined by said one edge and the edge at right angles thereto and adhesively secured to a two-ply sealed edge portion of the right angle edge of the bag by adherence thereof to the bonding area exposed by said opening, an edge of the tag overlying and confining a portion of the folded strip to prevent entanglement of the handle with the handles of similar bags packed in a container, said bonded area provided a temporary frangible anchorage which may be readily broken to detach the tag and extend the strip for use.

2,895,599
DEVICE FOR CRATING PAINTINGS AND THE LIKE
Harold W. Moyer, Lemoyne Station, and Leon A. Marsh, Walnutport, Pa.
Application March 28, 1958, Serial No. 724,719
4 Claims. (Cl. 206—1)



4. A device for crating paintings and the like comprising: a plurality of frames, each including a plurality of walls in interconnected relation to define a substantially rectangular space, a planar board member having a plurality of uniformly spaced openings therein engaged with said frame and between said walls, and at least one pair of interconnectable strap means having detachable clip means thereon for selectively engaging said openings in said board member, whereby a painting may be supported in strapped relation within said space and upon said board; nut and bolt means passing through similar portions of each of said frame elements for interconnecting the same in stacked relation, and means for covering the rectangular space formed by the frame elements disposed at the ends of a stack of frames.

2,895,600
CARPENTER'S TOOL CHEST
Glenn D. Nevins, Tulsa, Okla.
Application February 11, 1957, Serial No. 639,575
1 Claim. (Cl. 206—16)



A carpenter's tool chest comprising a hollow open top, polygonal box, having a bottom wall, a rear wall, a pair of identical ends and a front wall, said front wall having an uppermost section and a lowermost section, both of said sections spanning the distance between said end walls, the lowermost section being rigidly attached to the bottom wall and to the end walls, the uppermost section being hingedly connected to the lowermost section for forward and downward swinging movement with respect thereto, the end walls having an L-shaped portion presenting a rectangular notch at the forwardmost and uppermost corners thereof; a plurality of rectangular blocks secured to the inner face of said uppermost section of the front wall, there being a block fitting complementally in each of said notches respectively thereby forming a part of the ends of the box, and a pair of article-mounting blocks; a cover overlying the open top of the box in closing relationship thereto, said cover having a top, a pair of ends flush with the ends of the box, a front flush with the front wall of the box and a back flush with the rear wall of the box; hinge means connecting said back of the cover and the rear wall of the box for upward and rearward swinging movement of the cover to a position uncovering said open top of the box; releasable fasteners joining said uppermost section of the front wall and said front of the cover when the cover is closed; and a removable, article-receiving tray adjacent the rear wall of the box and spanning the distance between the ends of the box, the uppermost edges of the tray being flush with the uppermost edges of the ends and the rear wall of the box, the front of the tray being spaced rearwardly from the inner face of said uppermost section of the front wall a distance greater than the width of said rectangular blocks.

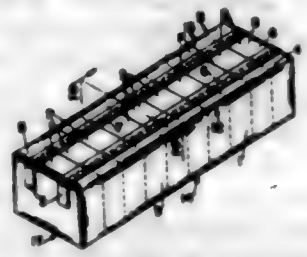
2,895,601
PACKAGE OF ARTICLES
Alexander C. Krukonis, Auburn, Mass., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts
Application June 25, 1956, Serial No. 593,582
1 Claim. (Cl. 206—45.31)

In an elongated bundle, a group of articles each of which has an accessible surface to be stamped, wrapper means partially folded around the group of articles in a

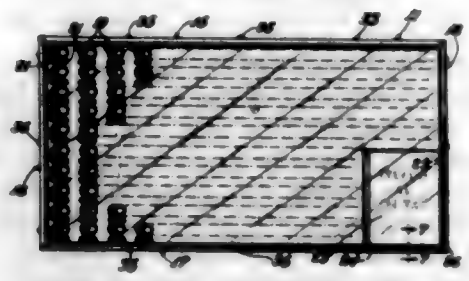
2,895,606
COMMODITY PACKETS

other cup having a lateral projection positioned in said slot, within the periphery of the carrier cup member,

manner to form an opening between the edges of the wrapper to expose said surfaces, said opening extending along at least on one side of the bundle in a direction lengthwise thereof, and fastener means holding the articles and wrapper fixed with respect to each other, said fastener means substantially overlapping said edges to hold the latter down and to maintain the greater part of said opening constant to facilitate the placing of a stamp or mark on said surfaces.

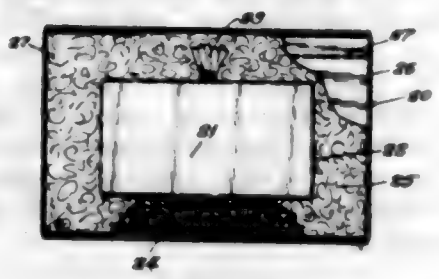


2,895,602
MEDICAMENT DISPLAY AND REFERENCE CASE OR SIMILAR ARTICLE
Hyman J. Hait, South Orange, N.J.
Application September 12, 1956, Serial No. 609,498
4 Claims. (Cl. 206—45.31)



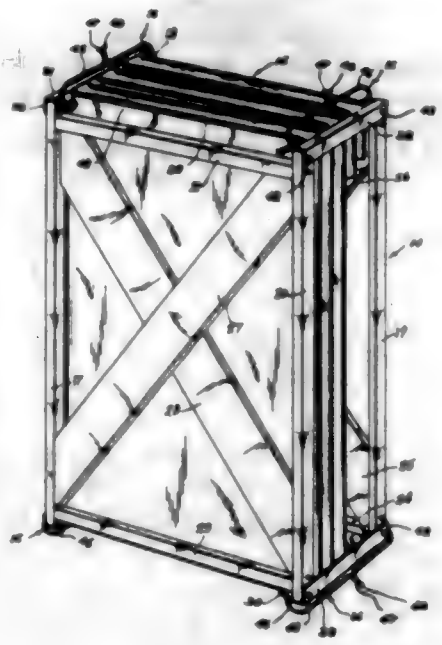
1. A medicament display and reference case comprising moldings defining a frame; top, bottom, and side walls on the moldings, upper and lower supports on the side walls of the moldings and defining upper, intermediate, and lower channels with said walls, a transparent top panel and a bottom panel, each with their edges seated respectively in said upper and lower channels, a tray disposed in the intermediate channel and having a plurality of cavities.

2,895,603
USE OF CELLULAR MATERIAL IN PACKAGING ARTICLES
Stephen E. Freeman, Milwaukee, Wis., assignor to Freeman Chemical Corporation, a corporation of Wisconsin
Application January 15, 1957, Serial No. 634,280
14 Claims. (Cl. 206—46)



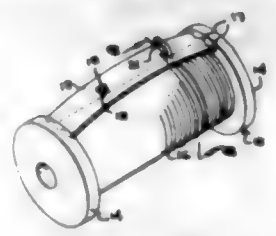
6. A rupturable package containing a fragile article, which comprises: a container; a solid readily rupturable energy-absorbing cellular polyurethane envelope-cushion enclosed therein, said envelope-cushion having a density of not more than about 20 lbs./ft.^{3} and a tensile strength of not more than about 30 p.s.i.; a protective bag embedded within said envelope-cushion and located with its filling opening positioned at the top plane of the rupturable envelope-cushion and adjacent to the top of the container so that upon opening a top portion of the container the filling opening of the bag is exposed; and an article within said bag.

2,895,604
PACKING MEANS FOR PILE FABRICS
Sol Schwartz, Flushing, N.Y.
Application June 1, 1956, Serial No. 588,672
15 Claims. (Cl. 206—51)



9. A packing, storing and shipping crate comprising a rectangular frame with corner posts, bars connecting the posts at the top and bottom at the sides of the frame, transverse fabric supporting and clamping devices connecting the posts, at the ends of the frame, each device having an L-shaped body with vertical and horizontal leg portions, a flange depending from the free end edge of the horizontal leg portion, said flange having spaced keyhole slots therein forming fingers therebetween, perforated lugs on the fingers disposed at an oblique angle to the plane of the fingers, said flanges being arranged so as to receive folds of a folded pile fabric in the slots thereof, and wire means passing through the material of the folds of the fabric and through the perforations in said lugs for securing the pile fabric to the device, one edge wall of each finger being curved at its bottom end to facilitate entry of the folds of the fabric into the slots.

2,895,605
SELF-LOCKING CABLE RETAINER
Marjorie D. Nash, Fort Wayne, Ind.
Application February 1, 1957, Serial No. 637,738
4 Claims. (Cl. 206—55)



1. In a reel having a pair of end flanges, a cable element wound on said reel, and a relatively flat flexible retaining bar having serrated ends engaged with said end flanges and having a locking aperture receiving said cable element, said aperture being formed with a downwardly struck pointed spur lockingly engaged with said cable element.

integral leg and extending parallel to, but below, said apertured panel proximate said tray bottom, said second downwardly and then upwardly from one side to the other

prising: a plurality of frames, each including a plurality means partially folded around the group of articles in a

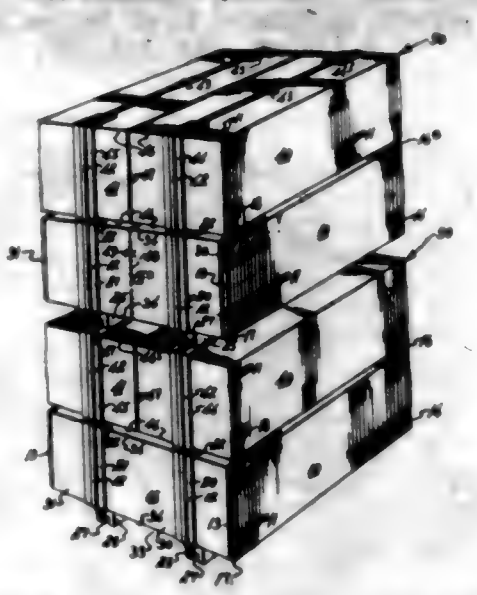
2,895,606
COMMODITY PACKETS
Roderick W. Hong, Melrose, Mass.
Application September 25, 1956, Serial No. 611,899
1 Claim. (Cl. 206—56)

A commodity packet comprising a rectangular backing layer, and a second rectangular layer superposed on said backing layer and having a pair of opposed margins thereof heat-sealed to the corresponding margins of said backing layer, and a second pair of opposed margins of the second layer being crimp-sealed to the backing layer, said second layer being provided with a plurality of cell-forming flutes opening toward said backing layer and free of connection therewith, inwardly of said heat-sealed and crimp-sealed margins, said flutes being of relatively small uniform transverse dimensions and having their outermost points in a plane parallel with said backing layer, thereby providing a pocket of generally flat form for facilitating packaging thereof in containers, and a tear line intersecting said fluates adjacent the corresponding ends thereof for the ready severance of the corresponding end portions of said layers and permitting the discharge of a relatively large volume of a commodity from within all of said flutes.

2,895,607
HOLDER WITH MEANS FOR EJECTING CONTENTS
Murray Dalberg, New York, N.Y.
Continuation of application Serial No. 315,530, October 18, 1952. This application October 30, 1956, Serial No. 619,349
2 Claims. (Cl. 206—56)

1. An article holder comprising a tubular member having an internal opening extending longitudinally therethrough, a carrier cup member having an internal opening extending longitudinally therethrough and movable longitudinally within said tubular member, means, located outside the periphery of said carrier cup member and within said tubular member, for so moving said carrier cup member, said internal openings forming a channel extending longitudinally directly through said members, an inverted cup, the top surface of said inverted cup providing a platform for an article adapted to slidably fit in said carrier cup member and said top surface being positioned entirely within said carrier cup member at a predetermined level below the top of said carrier cup member so that the upper end portion of said carrier cup member is free to frictionally hold said article against accidental separation from said carrier cup member, said carrier cup member being adapted to hold said inverted cup separated from the lower end of said internal opening of the tubular member, said inverted cup being slidably related to said carrier cup member for simple longitudinal movement upwardly relative to said carrier cup member for removal of said article from said carrier cup member, said inverted cup being accessible for elevation relative to said carrier cup member through the lower end of said internal opening of the tubular member and through the lower end of said internal opening of the carrier cup member, and one of said cups having a longitudinal slot therein and the other cup having a lateral projection positioned in said slot, within the periphery of the carrier cup member, and said lateral projection being positioned at one end of said slot and being longitudinally movable toward the other end of said slot to raise the top surface of said inverted cup at least flush with the top of said carrier cup member, said slot having a terminal edge at said other end thereof for restricting movement of said lateral projection relative to said slot to thereby limit upward movement of said inverted cup relative to said carrier cup member, whereby said article holder is safeguarded against accidental elevation of said inverted cup relative to said carrier cup member and against accidental separation of said inverted cup from said carrier cup member.

2,895,608
SELF-PALLETIZED PACKAGE
Harry W. Wilson, Millbrae, Calif.
Application April 9, 1957, Serial No. 651,615
13 Claims. (Cl. 206—56)



1. A shipping package for cartons, comprising two pre-pressurized stacks of K.D.F. corrugated paper cartons side by side compressed and vertically on end; a pair of oversize corrugated paper locking sheets overlying the opposite vertical end faces of said stacks and having flanged portions thereof folded back over marginal portions of the top and bottom of said stacks; a plurality of bumper strips of corrugated paper covering spaced-apart portions of the upper and lower corner edges of said locking sheets; a plurality of rabbeted runners on the bottom of said package supporting said package, with the rabbets on the lower surfaces thereof, said runners being spaced apart parallel to each other, each extending between and beneath the bumper strips; and a corresponding plurality of metal bands around said package, each said band lying in the rabbet of one said runner and passing around said locking sheets and bumper strips, each bumper strip lying inside said band, whereby the package is self-palletized.

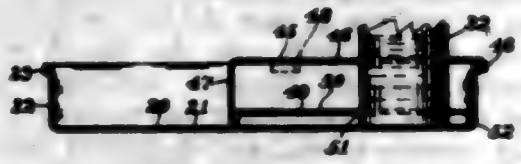
2,895,609
UNITARY BOTTLE SUPPORT FOR SERVING TRAYS
George E. Rajotte, Manchester, N.H.
Application July 16, 1957, Serial No. 672,326
4 Claims. (Cl. 206—72)

1. In combination with a serving tray having a flat bottom and an upstanding, beaded, side wall, a unitary bottle support of sheet material, said support comprising a flat panel peripherally supported on said rim and having a plurality of spaced, circular, bottle-receiving apertures therein and a downturned integral leg extending across the central section of said tray and supported on the flat bottom thereof; a second panel bent from said

reciprocate said turntable within said sector whereby in remain at rest for predetermined intervals, a box having

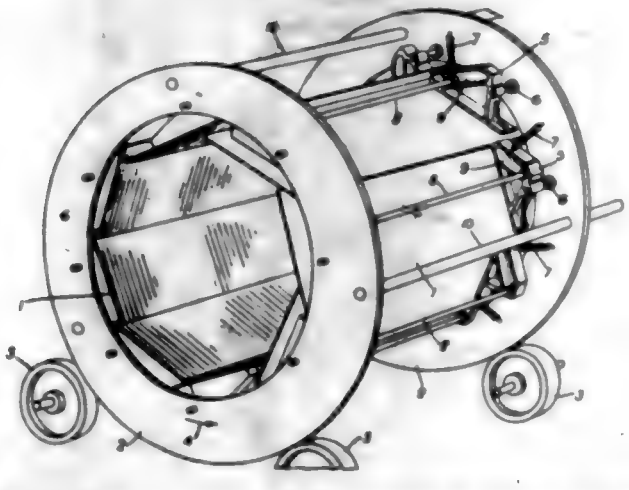
rupturable envelope-cushion and adjacent to the top of said cable element.

integral leg and extending parallel to, but below, said apertured panel proximate said tray bottom, said second panel having apertures in registration with the bottle re-



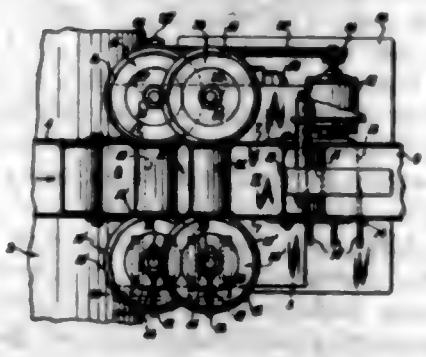
ceiving apertures of said flat panel and integral clip means, peripherally spaced on said flat panel for releasably engaging said beaded side wall.

2,895,610
SEGREGATING APPARATUS
Geoffrey Percy Copping, Chesham, Thomas Roland Myers, Wembley Park, and Gilbert Harold Smith, Purley, England, assignors to Her Majesty's Postmaster General, London, England
Application June 3, 1957, Serial No. 663,625
Claims priority, application Great Britain June 4, 1956
4 Claims. (Cl. 209—98)



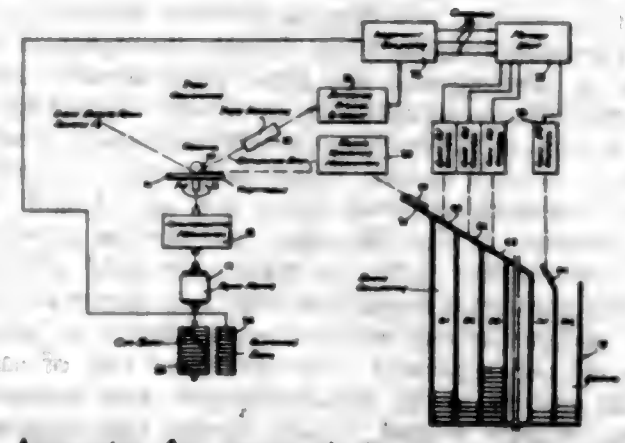
1. Segregating apparatus for segregating from a quantity of items of postal mail, letters and other like postal packets of less than a predetermined thickness, the said apparatus comprising an elongated drum formed by ring members, spacer members extending between and securing said ring members in co-axial relation and axially spaced, and a plurality of elongated flaps extending between the said ring members in edgewise overlapping relation and forming the peripheral wall of the drum; rollers engaging the edge surface of said ring members to support the drum with the axis thereof inclined downwardly from one ring member to the other and drive means for rotating said rollers thereby to rotate the drum in a given direction, the said drum further comprising means pivotally mounting each flap at its ends in the said ring members and stop means limiting the pivoting of the flaps in one direction to a position in which the overlapping marginal edge of one flap is spaced from the adjacent marginal edge of the immediately preceding flap in the direction of rotation of the drum a distance equal to the said predetermined thickness thereby to provide metering slots extending lengthwise of the drum and through which letters and like postal packets introduced through the said one ring member and having a thickness less than said predetermined thickness are discharged upon rotation of the drum, the said pivotal mounting means including brackets secured to the flaps and spindles pivotally supporting the brackets on the ring members so that the pivotal axis of each bracket is spaced rearwardly with respect to the direction of rotation of the drum from the longitudinal axis of the flap to which it is secured, whereby the flaps are weight-biased by the weight of the brackets forwardly of the said spindles to urge the flaps into engagement with the said stop means as the flaps move downwardly and then upwardly from one side to the other of the horizontal diameter of the drum, and to urge the flaps away from the said stop means as the flaps move upwardly from said horizontal diameter, whereby as the flaps approach their uppermost position the spacing of the overlapping marginal edges is increased to release any articles which may have become lodged in the metering slots.

2,895,611
CAN SEPARATING DEVICE
Wesley V. Barkway, Mason, Mich.
Application July 12, 1956, Serial No. 597,467
8 Claims. (Cl. 209—104)



4. A can separating device comprising: a trackway for the reception of rolling cans, said trackway having an opening therein; a first pair of opposed wheels situated on opposite sides of said trackway and overlying portions of the edges of said trackway in the vicinity of the forward edge of said opening; and a second pair of opposed wheels situated on opposite sides of said trackway and overlying portions of said trackway in the vicinity of the rear edge of said opening, said first pair of wheels being adapted to grip said cans therebetween and to convey only cans having bulged ends along the trackway to said second pair of wheels, and said second pair of wheels being adapted to grip said bulge-ended cans at the upper edges thereof and being driven to convey said bulge-ended cans along said trackway past said opening.

2,895,612
AUTOMATIC CRYSTAL MEASURING AND SORTING APPARATUS
Lester V. Wise, Plainview, Abe Mann, Uniondal, and Georg Buergel, Richmond Hill, N.Y., assignors to Bulova Research and Development Laboratories, Inc., Long Island, N.Y., a corporation of New York
Application September 18, 1956, Serial No. 610,453
11 Claims. (Cl. 209—111)



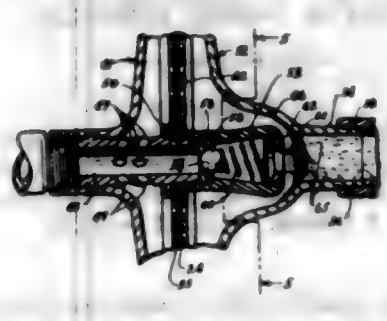
2. Apparatus for automatically measuring the axial orientation of crystal blanks and to sort the blanks according to the orientation measurements, said apparatus comprising an X-ray diffraction goniometer including a turntable adapted to orient a crystal blank within a given sector relative to an incident X-ray beam, and an X-ray detector to produce an output signal at the angular position of the turntable at which reflection occurs, means to

sure member for the other end of said receptacle, said closure member comprising an elongated side wall ex-

the circular part is pivotal, the opening in one ear being

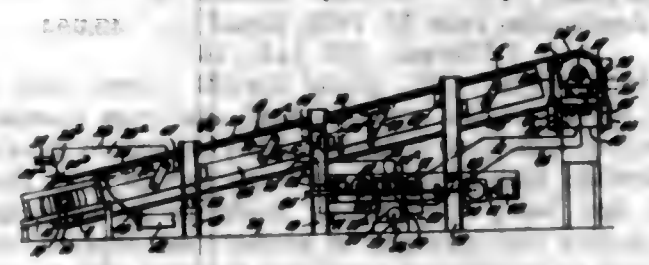
reciprocate said turntable within said sector whereby in the course of one arcuate sweep of the turntable an output signal is produced at the angular position at which reflection occurs, a crystal blank collector provided with a plurality of bins each intended to receive only blanks whose measured angles fall within a given angular increment of the sector swept by said turntable, each bin having a normally closed entrance gate, means to transfer a measured blank from said goniometer to said collector and increment selector means responsive to said signal and governed by the angular position of the turntable to open the appropriate gate in said collector so as to admit the transferred blank therein.

2,895,613
FILTER FOR SAMPLING FLUIDS
Edgar J. Griffiths, Pittsburgh, Pa.
Application March 17, 1955, Serial No. 494,989
10 Claims. (Cl. 210—130)



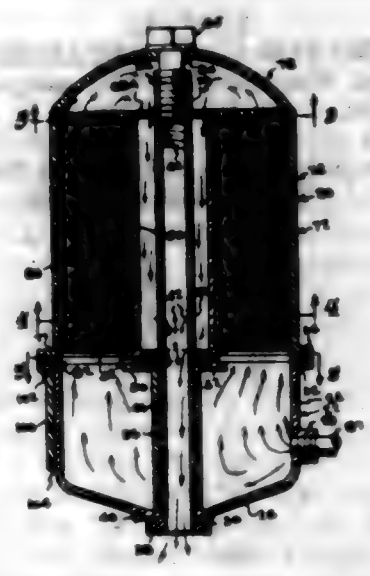
1. A sampling filter for a fluid including a casing enclosing a chamber, a filter element within the chamber and having passages therethrough, a support for the filter element, passages opening into the casing at opposite sides of the filter element for the entrance and discharge of fluid, and a conduit leading from the chamber on the upstream side of the filter and by-passing the filter element, the by-pass conduit and the passages through the filter element being open simultaneously for the flow of liquid, the discharge passage being in simultaneous communication with the by-pass conduit and the chamber on the downstream side of the filter element during the flow of liquid through the by-pass conduit whereby the flow of filtered liquid and by-passed liquid merge in the discharge passage, said conduit having its downstream end directed into the discharge passage, and means for determining the proportions of the liquid flow that pass through the filter and the by-pass.

2,895,614
FILTERING UNIT
Thomas R. Komline, Gladstone, N.J., assignor to Komline-Sanderson Engineering Corporation, Peapack, N.J., a corporation of New Jersey
Application December 12, 1955, Serial No. 552,325
12 Claims. (Cl. 210—401)



1. A filtering unit comprising an endless filter belt having an operative generally horizontal run disposed to present upper and lower surfaces, whereby material to be filtered may be deposited on said upper surface, means supporting and guiding said belt for movement through an endless circuit, intermittent drive mechanism operatively associated with said belt for alternately moving said belt along its said circuit and permitting it to remain at rest for predetermined intervals, a box having an open side presented toward the lower surface of the belt, and means mounting said box wholly beneath said belt for vertical movement to and from a position of sealing engagement with said belt wherein said lower surface of the belt covers and seals the open side of the box, mechanism coordinated with said intermittent drive mechanism for moving said box to and from sealing relation with said belt as the belt comes to rest and upon its resumption of movement respectively, and pneumatic means connected to said box for modifying the air pressure within said box in coordination with the movements of said belt by reducing said air pressure below atmospheric pressure each time the belt comes to rest and by raising said pressure to atmospheric pressure just prior to resumption of each belt movement.

2,895,615
FILTER
Richard W. Outhout, San Clemente, Calif.
Application August 16, 1957, Serial No. 678,497
4 Claims. (Cl. 210—439)



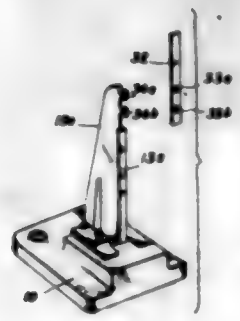
3. A fluid filter comprising a reservoir having a side wall, said side wall having an end wall extending across one end thereof, a fluid inlet port extending transversely through said side wall, said end wall having an opening extending transversely therethrough, an elongated tubular fluid discharge conduit extending through said opening and having an end thereof projecting beyond the other end of said reservoir and having a plurality of apertures extending transversely therethrough intermediate its ends, means rigidly securing the other end of said conduit to said end wall, an elongated substantially hollow support member having a side wall telescoped over said conduit and having an end thereof fixedly secured to said end wall, the other end of said side wall terminating at a point proximate to but spaced from said apertures and being secured to a radial flange, a fluid discharge chamber comprising a side wall having an annular flange at one end thereof, said flange having portions thereof extending on opposite sides of said last named side wall, said discharge conduit extending through the opening formed in one portion of said annular flange with said annular flange positioned in confronting relation relative to said radial flange and with said last named side wall disposed in spaced concentric relation with respect to adjacent portions of said conduit and the space therebetween comprising a fluid discharge chamber, a fluid tight sealing ring interposed between said radial and annular flanges, a plate having a plurality of perforations extending transversely therethrough and a centrally positioned aperture, said fluid discharge conduit extending through said aperture, and said plate being supported on the other end of said side wall of said chamber, a clo-

tive front and rear posts of adjacent upright frames; and a connector bracket provided on each end of each stringer pairs of registering openings at the same height in both sides, and a shelf interposed between and abutting said

tion of the turntable at which reflection occurs, means to

sure member for the other end of said receptacle, said closure member comprising an elongated side wall surrounding said side wall of said fluid discharge chamber in laterally spaced relation relative thereto, one end of said wall for said closure member being juxtaposed with respect to the other end of said side wall of said reservoir, a fluid tight sealing ring interposed between one end of said closure member and said other end of said receptacle, the other end of said wall of said closure member having an end wall extending thereacross and connected with said end wall projecting laterally away from the adjacent side of said plate and the adjacent end of said fluid discharge conduit, and means extending through said last named end wall and engaging within the adjacent end of said fluid discharge conduit in order to serve to secure said closure member on said receptacle, said side wall of said fluid discharge chamber being adapted to telescopically receive thereover a hollow core of a roll of porous tissue paper, said core having an end thereof seated against the other portion of said annular flange, and said plate extending across the other end of said core and the adjacent side of said roll of porous tissue paper.

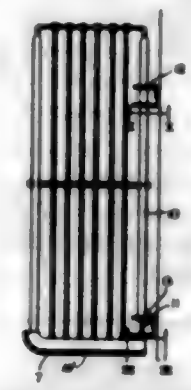
2,895,616
DISPENSERS FOR OPEN RETAINING RINGS
Hans Erdmann, Maplewood, N.J., assignor to Waldes Kohinoor, Inc., Long Island City, N.Y., a corporation of New York
Application August 26, 1954, Serial No. 452,373
3 Claims. (Cl. 211—59)



1. In a retaining ring dispenser adapted to mount a plurality of the retaining rings to be dispensed in stack formation on a removable stack rod and to present the lowermost ring of the stack to the action of a ring gripping and withdrawing tool, the combination with said stack rod of a fixed stack rod support, a rail member affixed to a front edge of said support and adapted upon assembly of the stack rod to form a fixed lower continuation thereof, said rail member terminating at its upper end below the upper end of the support, the lower end portion of the stack rod upon assembly thereof seating against the edge portion of said support which extends above said rail member, and a detachable connection between said support and said stack rod comprising a plurality of protrusions on said edge portion of the support and a plurality of registering and cooperating holes in said lower end portion of the stack rod.

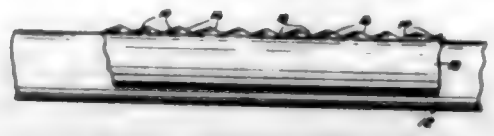
2,895,617
SHELF AND SUPPORTING BRACKET THEREFOR
Lawrence D. Orser, Cedar Falls, Iowa, assignor to Chamberlain Corporation, Waterloo, Iowa, a corporation of Iowa
Application July 11, 1955, Serial No. 521,180
6 Claims. (Cl. 211—93)

2. In combination, a shelf having a side member generally circular in cross-section but having a flattened portion of substantially rectangular cross-section and of greater width, a supporting U-shaped bracket having ear portions each having an opening therein in axial alignment and in which said member is entirely slidable and the circular part is pivotal, the opening in one ear being circular, the opening in the other ear being defined in part by projections extending inwardly therein with edges



disposed to provide opposed abutment for said flattened portion of rectangular cross-section to restrain the same against further pivotal movement when said shelf is in either a horizontal or vertical position.

2,895,618
APPAREL HANGER SPACER
Joseph D. Nathan, Worcester, Mass.
Application December 30, 1955, Serial No. 556,731
1 Claim. (Cl. 211—123)



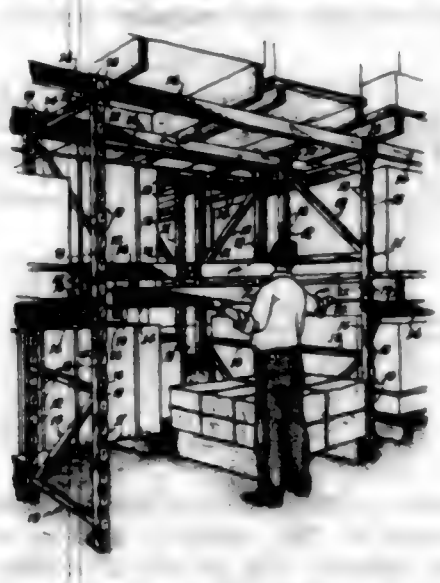
A spacer for clothes-hangers comprising a thin shell adapted to be applied to a clothes rod, said shell being separate from the rod and snapped onto the same at the top thereof, and a series of hanger separating protuberances on the shell, said protuberances being struck up from the material of the shell, said series extending longitudinally of the shell generally centrally thereof, each protuberance having inclined generally straight side edges arranged longitudinally of the shell, forming a series of depressions for receiving and restraining clothes-hangers between adjacent protuberances, the clothes-hanger hooks being forced to slide up the said inclined side edges in order to move from one depression to another, restraining the clothes-hangers between adjacent protuberances against accidental longitudinal movement on the shell but providing for easy manual longitudinal movement of hangers and clothes hung thereon at the will of the user.

2,895,619
STORAGE RACK
Donald Frazier, Glen Ridge, N.J., assignor to Midland Machine Corporation, Irvington, N.J., a corporation of New Jersey
Application June 27, 1958, Serial No. 745,054
9 Claims. (Cl. 211—147)

1. In a storage rack: plural upright frames each of which includes front and rear posts and truss members connecting said posts together rigidly in spaced parallel relationship, each of said posts being formed from sheet metal and being substantially C-shaped in horizontal cross-section and arranged to present two opposite side walls and an intervening front wall merging with the latter at right and left front corners, portions of both front corners being cut away at vertical intervals to provide uniformly longitudinally spaced pairs of side-by-side vertically elongated and horizontally shallow rectangular entrance slots each of which opens both forwardly through the front wall and laterally through the corresponding side wall; plural pairs of elongated front and rear stringers extending horizontally between the respec-

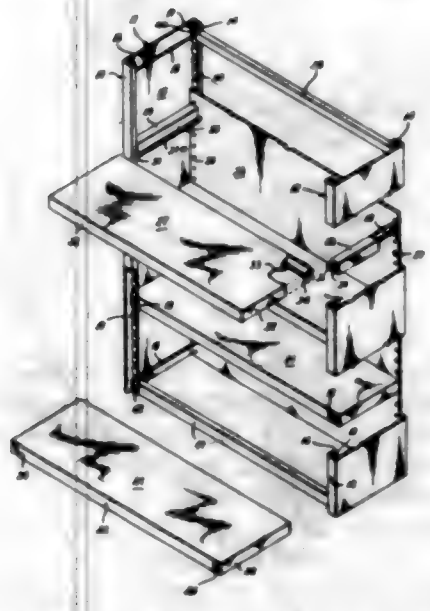
posite the end hinged at said joint, said bracket arm nism comprising a plurality of elevators connected in

tive front and rear posts of adjacent upright frames; and a connector bracket provided on each end of each stringer rigid therewith to connect the same demountably to a selected post of one of the upright frames, said connector bracket being of flat plate form and having plural vertically co-planar tongues projecting longitudinally outward from the corresponding stringer end, the vertical spacing of the tongues of each connector bracket being substantially equal to the vertical spacing of adjacent post entrance slots; each connector tongue being slightly less in length than the horizontal width of the front wall



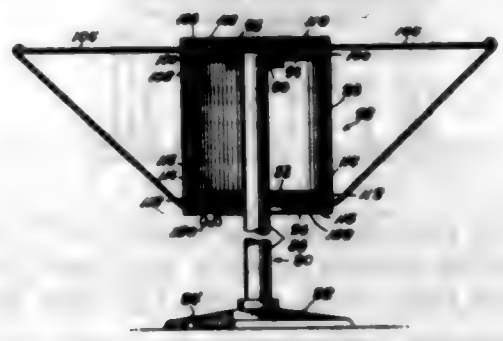
portion of each entrance slot, slightly less in vertical width than the height of said slot, and slightly less in horizontal thickness than the horizontal depth of the side wall portion of said slot, whereby the respective tongues of each connector bracket may be introduced directly by horizontal movement from front to rear into the respective engaged entrance slots through the front wall portions thereof until they overlie the lower edges of the respective side wall portions of said slots; each connector tongue being provided with a vertical anchor slot in its lower edge to embrace the lower edge of the side wall portion of the engaged entrance slot.

2,895,620
SHELVING UNIT
Harold D. Thompson, Houston, Tex.
Application February 3, 1955, Serial No. 485,884
6 Claims. (Cl. 211—148)



5. A metal shelving unit comprising a pair of vertical sides each having a pair of posts and means fixedly spacing said posts from each other, registering openings spaced along the confronting walls of the posts of each side, hanger bars removably positioned in registering pairs of registering openings at the same height in both sides, and a shelf interposed between and abutting said sides and having adjacent each post downwardly extending flanges with downwardly opening slots therein engaging over said bars, the edge of each slot which is closest the means spacing the posts from each other, being inclined downwardly and toward said means to wedgingly engage between the bars and said means and lock the sides and the shelf together.

2,895,621
GARMENT DISPLAY RACK
Maurice Cohen, Miami, Fla.
Application January 13, 1953, Serial No. 331,033
5 Claims. (Cl. 211—165)



3. In a garment display rack, a hanger assembly rotatably mounted on a shaft having bearing units secured thereto, said hanger assembly including a hollow cylindrical member, an upper plate secured to the upper end of said cylindrical member, a lower plate secured to the lower end of said cylindrical member and cooperating with said upper plate and cylindrical member to define an enclosed drum, said upper and lower plates having central openings formed therein for receiving said bearing units and having a plurality of openings formed therein adjacent the periphery thereof, a plurality of radially extending hangers secured to said upper and lower plates and defining means for supporting and displaying garments thereon, each of said hangers being formed with an upper horizontal arm and a lower inclined arm joined to said horizontal arm at the outer end thereof, said upper arms being formed with downwardly extending end portions that project through the openings in said upper plate and into the interior of said drum, said lower inclined arms having upwardly extending end portions that project through the openings in said lower plate and into the interior of said drum, a lower locking disc secured to said lower plate and engaging the lower portion of said inclined arms for locking the upwardly extending hanger ends in said lower plate, and an upper locking disc secured to said upper plate and engaging a portion of said horizontal arms for locking the downwardly extending hanger ends in said upper plate, said upper locking disc defining the top of said rack.

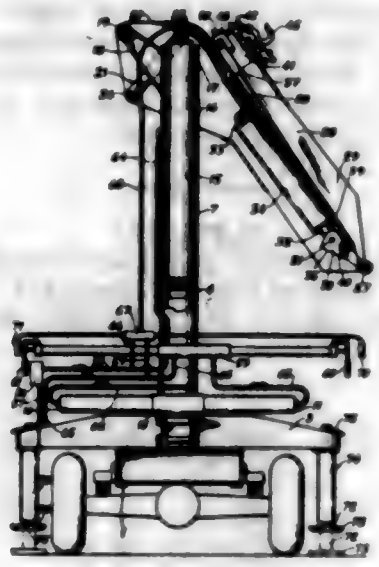
2,895,622
HYDRAULIC JACK
Anders Eric Sundin, Hudiksvall, Sweden, assignor to Hydrauliska Industri Aktiebolaget, Hudiksvall, Sweden, a corporation of Sweden
Application December 8, 1955, Serial No. 551,916
Claims priority, application Sweden December 9, 1954
3 Claims. (Cl. 212—35)

1. An hydraulic jack especially adapted to be arranged on a lorry, a lever beam swingable in a vertical and horizontal direction relative to the body of said jack, said lever beam comprising an outer and an inner lever arm, a bracket arm swingable in a vertical plane and hinged at the joint between said outer and inner lever arm, a cylinder having a pressure piston pivotally connected to said bracket arm at its end and arranged op-

ment and in which said member is entirely slidable and

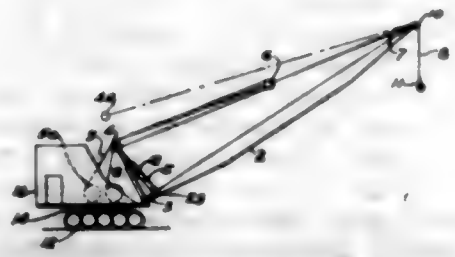
rear stringers extending horizontally between the respec-

posite the end hinged at said joint, said bracket arm being arranged to abut against said outer lever arm near



its joint with said inner lever arm when said lever beam is in a loading position, whereby said outer lever arm is capable of being swung up onto said inner lever arm.

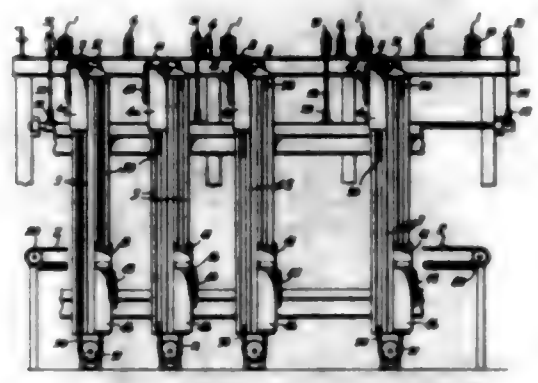
2,895,623
CRANE CONSTRUCTION
Edward A. Urbanowicz, Cleveland, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio
Application December 2, 1953, Serial No. 395,735
3 Claims. (Cl. 212—59)



1. In crane construction, the combination of a frame, a boom pivotally secured at one end to said frame, an extensible guide assembly pivotally mounted by the frame at a point closely adjacent the thus secured end of the boom and extending upwardly therefrom, boom-suspension means extending between the upper end of said guide assembly and an outer end portion of said boom, an expansion strut pivotally supported at one end on the boom and connected at its other end to an upper end portion of the guide assembly, and drive means for regulating the length of said expansion strut to vary the spacing of the guide assembly engagement with the boom-suspension means from the pivotally secured end of the boom.

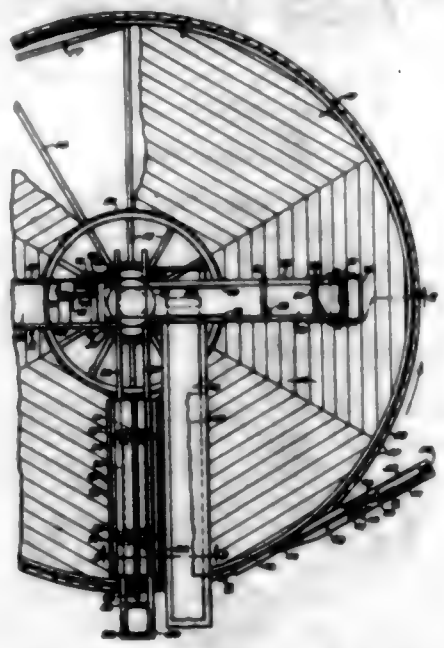
2,895,624
ELEVATOR FOR USE IN A LUMBER STACKER
Harvey J. C. Outer, Jr., Seattle, Wash., assignor to C. M. Lovsted & Co., Inc., Seattle, Wash., a corporation of Washington
Application September 24, 1956, Serial No. 611,514
20 Claims. (Cl. 214—6)

1. An elevator mechanism, for use in conjunction with a lumber stacker wherein feed mechanism operates substantially uninterruptedly to advance successive boards in a direction transverse to their length to a stacking station, and wherein offbearing mechanism at a level below the feed path of the boards moves successive stacks from the stacking station in a direction transverse to the direction of feed of the boards, said elevator mechanism comprising a plurality of elevators connected in pairs and distributed along the opposite sides of the offbearing mechanism, means guiding the elevators of each pair for up and down movement of each in a single path, means interconnecting the paired elevators for alternate and simultaneous raising and lowering of each elevator in its path between the level of the feed mechanism and a level below the level of the offbearing mechanism, the paths of the paired elevators defining planes parallel to the offbearing mechanism, means interconnecting the like elevators at opposite sides of the offbearing mechanism for conjoint vertical movement,



means carried by each elevator and cooperating with like means carried by the similarly moving elevator of a pair at the opposite side of the offbearing mechanism, for supporting a stack of lumber, means operatively associated with the feed mechanism for depositing a course of boards upon said stack-supporting means or upon boards previously stacked thereon, and means energized automatically in conjunction with the deposit of each course to lower the stack-supporting elevators by the effective thickness of such course, and correspondingly to raise the inactive elevators.

2,895,625
STORAGE AND FEED APPARATUS
James D'A. Clark, Longview, Wash., assignor to Chargewood Corporation, Chicago, Ill., a corporation of Illinois
Application October 29, 1954, Serial No. 465,697
13 Claims. (Cl. 214—17)



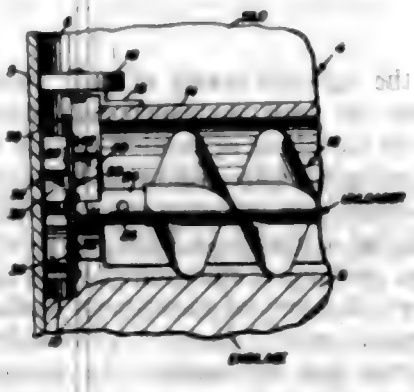
1. In storage and feeder apparatus of the character described, a relatively deep annular bin supported for rotational movement and providing a large storage chamber therein, spreader means for depositing material relatively uniformly around said chamber, a discharge elevator supported within said chamber for swinging move-

2,895,630

to said desk top; said base and traveling links each hav-

ment about a generally horizontal axis extending radially across said bin, said elevator being equipped with a plurality of elements adapted to raise material from said chamber and to discharge the material at an elevation above the bin, said elevator being normally in a generally vertical position within said chamber and being swingable laterally from that position by the force of the material within the bin pushing thereagainst, and power means for rotating said bin in a step by step pattern in response to the swinging of said elevator into a predetermined position within said chamber.

2,895,626
SCRAPER ATTACHMENT FOR SILO UNLOADER
Merlin L. Bier, Alexander, Iowa
Application November 19, 1957, Serial No. 697,447
2 Claims. (Cl. 214—17)

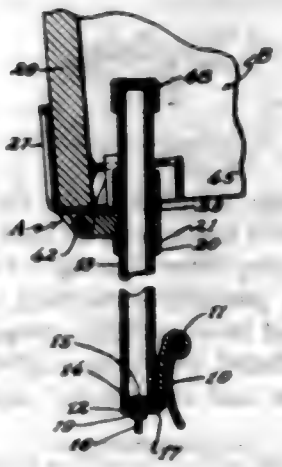


1. An attachment for the outer end portion of a shielded auger-type conveyor used in conjunction with a silage unloader comprising a cutter head having an axial shaft adapted to be operatively joined to the outer end of the shaft portion of said conveyor, scraper blades mounted on the outer surface of said head, cutter blades mounted on the peripheral portion of the head, and anti-clogging, silage agitating and cleaning fins mounted on the inner surface of the head.

2,895,627
BOAT-LOADING, TRANSPORTING, AND LAUNCHING TRAILER
Rigo R. Facchini, Kingston, Mass., assignor of one-half to Frederick L. Carlson, Kingston, Mass.
Application July 28, 1955, Serial No. 524,859
7 Claims. (Cl. 214—84)

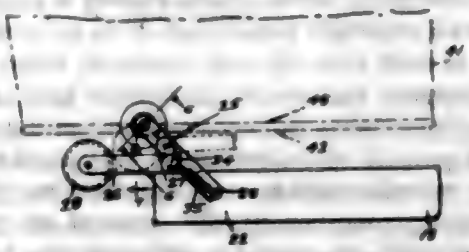
1. A boat trailer of the kind described comprising a boat-carrying frame, supporting wheels therefor, a plurality of anti-friction elements for boat-loading and unloading, a plurality of pairs of side-supporting rollers, a pair of cam plates to which said side rollers are pivotally secured in spaced relation for self-seating on the boat being loaded, yielding means to move said cam plates for successive contact of adjacent pairs of rollers on the boat, thereby to move the boat and frame-carrying portion from inclined loading to horizontal carrying positions, in combination with a winch at the forward end of the trailer to draw a boat onto said frame during the loading action.

2,895,628
BOAT LOADER FOR AUTOMOBILES
Leonard J. Gebhart, St. Paul, Minn.
Application July 31, 1953, Serial No. 371,616
9 Claims. (Cl. 214—450)



2. A boat loading device for loading one end of a boat upon the top of a car, the device including in combination a vertical standard extending upwardly from an end of the car, a rotatable support mounted on the vertical axis of said standard, a bracket pivotally supported on said support and movable therewith about a substantially vertical axis relative to said standard, adjustable mounting means for positioning said rotatable support relative to said standard, means on said bracket for accommodating an end of the boat, said boat being rotatable about said vertical axis over the top of the car.

2,895,629
BOAT LOADING DEVICE FOR BOAT TRAILERS
Ephraim J. Trunzll, Sr., Lincoln Park, Mich.
Application January 17, 1958, Serial No. 709,501
2 Claims. (Cl. 214—506)



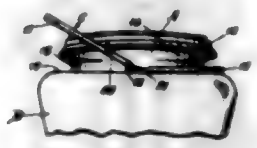
1. A boat loading attachment for boat trailers of the type having an elongated central boat supporting tow bar comprising a transversely extending U-shaped bracket adapted for attachment to the rear end of said tow bar to extend upwardly therefrom, a pair of spaced parallel arms rigidly secured to said bracket adjacent their forward ends, a transversely extending keel supporting roller journalled between said arms adjacent the rear ends thereof with said roller positioned above the plane of said tow bar, a pair of spaced parallel bars, a second U-shaped bracket extending between and rigidly connecting said pair of bars, transversely extending pivot means connecting said pair of bars intermediate their opposite ends to said first named U-shaped bracket above said arms, a pair of spaced apart axially aligned rollers positioned between the rear end portions of said pair of bars, means journalling said pair of rollers on said pair of bars, and spring means extending between said pair of bars and said pair of arms normally biasing said pair of bars in a direction to move said pair of rollers upwardly away from said roller journalled in said arms, said pair of rollers being adapted to closely engage on opposite sides of the keel of a boat being loaded on said trailer to guide said boat by maintaining said keel in central position with respect to said trailer.

developed in the container will fracture the said thin portion of the wall to thereby relieve said pressures without

having an outer stepped surface and the shell section being thickened and stepped on the inside around the

the direction of feed of the boards, said elevator mecha- vator supported within said chamber for swinging move-

2,895,630
JAR LID LIFTER
Rudolf C. Kraemer, Lancaster, N.Y.
Application May 20, 1957, Serial No. 660,303
5 Claims. (Cl. 215—46)



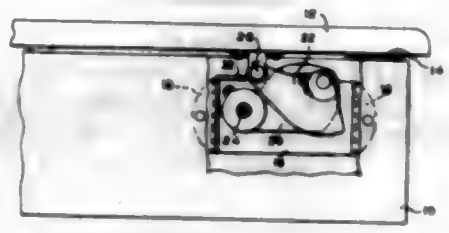
1. A jar lid lifter adapted to lift the lid from the top flange of a jar which has a neck located below said flange, comprising: a prying lever arranged tangentially to said neck; and means partially encircling said neck and arranged to hold said lever radially inward in operative position, with a reduced thickness portion being arranged between said lever and said partial encircling means.

2,895,631
DISPENSING CLOSURE FOR CONTAINERS
Robert B. Perry, Macon, Ga.
Application October 10, 1957, Serial No. 689,350
5 Claims. (Cl. 215—75)

1. A closure assembly for containers of the type having a neck portion made of non-magnetic material and provided with an orifice through which the contents of the container is dispensed, comprising a hollow cap member adapted to be mounted on the neck of the container for axial movement thereon and having a circular orifice in its top wall centrally positioned so as to be aligned with the orifice in said neck of said container when said cap is mounted thereon, and means carried by said cap member for sealing the orifices in said neck and said cap member including a pair of metal members, one a spherical metal ball freely movable within said cap member, the other a metal retaining member fixedly secured to the internal side wall of said cap member adjacent the top thereof, with at east one of said metal members being magnetized, the construction and arrangement being such that when said closure assembly is mounted on said container and said cap member is axially moved in a direction to close said container, said ball will be seated on and between said orifices in said neck and said cap member and tightly seal both orifices, and when said cap member is axially moved on said neck portion in the direction to open said container, said ball will be released and when said container is tilted will be pulled to and held against said metal retaining member by magnetic attraction, thereby permitting the contents of said container to be dispensed through said orifices.

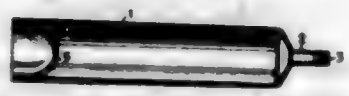
2,895,632
SAFETY HINGE LIMITING APPARATUS
Severin B. Hendrickson, Templeton, and Helmer W. Wickman, Gardner, Mass., assignors to Heywood-Wakefield Company, Gardner, Mass., a corporation of Massachusetts
Application November 14, 1955, Serial No. 546,726
3 Claims. (Cl. 217—60)

1. Safety hinge limiting apparatus for a desk top hinged to an open desk comprising: a base link pivotally connected to said desk; a traveling link pivotally connected to said desk top; said base and traveling links each having a free end and means for pivotally interconnecting said free ends; friction means for retarding the pivotal motion of said links comprising a friction washer located at the pivotal connection between said desk and base link and frictionally engaging said base link; a shallow housing mounted on said desk surrounding the pivotal connection between said base link and said desk; an upper opening in said housing through which both said links move when pivoted; a limit stop at one end of said open-



ing limiting the upward travel of said base link; and a side extension on said traveling link forming a web substantially in the plane of motion of said traveling link and having a marginal edge following a curve spaced from the pivotal connection between said traveling link and said base link by a dimension slightly less than the distance between said latter mentioned pivot and said limit stop throughout the pivotal movement of the link whereby said marginal edge follows a path substantially adjacent said limit stop throughout the pivotal motion of said links when said desk top is raised and lowered.

2,895,633
RECEPTACLES OF LIGHT METAL FOR LIQUEFIED GAS, PARTICULARLY ADAPTED FOR RECHARGING LIQUEFIED GAS LIGHTERS
Conrad Zellweger, Chene-Bougeries, Geneva, Switzerland, assignor to La Nationale S.A., Geneva, Switzerland, a Swiss company
Application September 30, 1955, Serial No. 537,828
Claims priority, application Switzerland October 2, 1954
2 Claims. (Cl. 220—3)

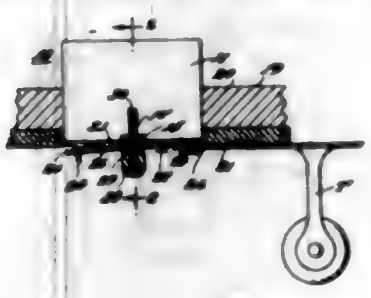


1. As an article of manufacture, a capsule for containing liquefied gas or the like which generates substantial pressures in passing from the liquid to the gaseous phase, comprising a cylindrical body of cold impact extruded metal, said body having a substantially uniform bore and having walls tapering from one end to the other, thereby providing a relatively thin wall at one end, said thin wall portion of said body being formed with a reduced neck portion, said neck being sealed closed by a manually puncturable disc, the other relatively thicker wall end of said body being closed by an annular plug having an arcuate bottom and an integrally formed annular upstanding flange, said plug being smaller than the bore of the said body and being mounted in the bore with the peripheral rim of the said flange flush with the peripheral rim of the relatively thicker end of the said body wall and the convex side of the bottom facing the neck portion of the capsule in the provision of an annular recess, and a polymerized synthetic plastic sealing composition between the outer annular surface of the said flange and the said annular recess at the base of the said arcuate bottom wall and the contiguous portion of the interior wall of the bore of the body, said sealing compound when aged serving to provide a seal of greater strength and resistance to fracture than the thin wall at the opposite end of the body, whereby excessive pressures

resilient sealing gasket mounted on said cover flange with said abutment element and to cause the toothpick

developed in the container will fracture the said thin portion of the wall to thereby relieve said pressures without disturbing said plug in its sealed mounting.

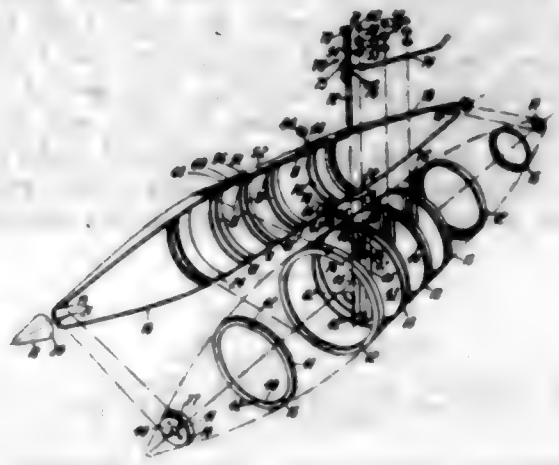
2,895,634
PLASTER PROTECTION PLATE FOR ELECTRIC CONNECTION BOXES
Herman Cesaree, Philadelphia, Pa.
Application April 26, 1954, Serial No. 425,513
3 Claims. (Cl. 220—3.4)



1. A plaster protective cover for an electrical connection box which is provided with a front opening comprising a plate having inner and outer faces and having marginal edges spaced to provide an area of said plate substantially covering the front opening of the box, and mounting devices for said plate for removably mounting said plate in front of said front opening for limited rocking movement with respect to said front opening in mounted position, said mounting devices including a pair of spaced mounting pin members for removable engagement with said box at opposite sides of said front opening, said pin members having shank portions, said pin members in plate mounting position being normal to the plane of said front opening and extending outwardly therefrom, said plate contiguous to one pair of opposite marginal edges having openings therethrough through which said shank portions extend, said last openings being of sufficiently larger size than said shank portions to permit relative rocking movement of said plate and said mounting pin members, spacing members extending along said shank portions on the inner side of said plate and in operative position contacting said inner side for positioning said plate forwardly with respect to said front opening and providing fulcrums for rocking movement of said plate at said front opening on a pivotal rocking axis substantially parallel to said plate and forwardly of said front opening, said pin members having enlarged elongated heads in spaced relation to said spacing members, said heads extending entirely outwardly from said plate and providing abutments exteriorly of the outer fact of said plate for inhibiting plastering over said plate, and marginal portions of said plate on opposite sides of said pivotal axis providing abutments for engaging the box and limiting the rocking movement of said plate about said pivotal axis.

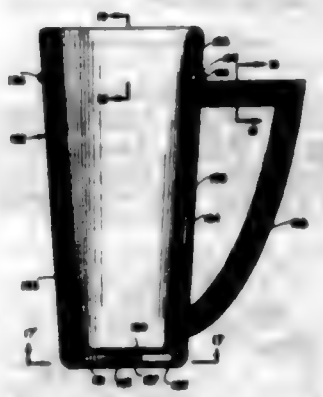
2,895,635
CONTAINERS FOR ATTACHMENT TO THE EXTERIOR OF AIRCRAFT
Harold John Pollard and William Andrew Baker, Bristol, England, assignors, by mesne assignments, to Bristol Aircraft Limited, Bristol, England, a British company
Application September 12, 1955, Serial No. 533,589
Claims priority, application Great Britain September 23, 1954
6 Claims. (Cl. 220—5)

1. A container section comprising a shell composed mainly of resin bonded fibrous material, and a diaphragm secured in said shell section by an adhesive, said diaphragm including a web part and a peripheral flange having an outer stepped surface and the shell section being thickened and stepped on the inside around the



flange the contiguous surfaces of the shell and the flange being of corresponding shape.

2,895,636
HEAT AND COLD RETAINING GLASSES, MUGS, BOWLS AND THE LIKE
James M. Martin, Greenwich, Conn.
Application July 24, 1957, Serial No. 673,967
3 Claims. (Cl. 220—15)

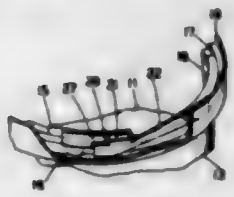


1. A heat and cold retaining vessel construction for glasses, mugs, bowls and the like comprising a closed bottom outer shell, a closed bottom inner shell that is dimensioned so the closed end thereof can telescope within the closed bottom of said outer shell, said shells serving as a double-wall vacuum and coverable type of vessel, the upper end of said inner shell extending above the outer shell and being enlarged, the outer surface of the enlarged portion being flush with the outer surface of the outer shell, said enlarged portion being formed with a central groove opening downwardly, the outer wall of said groove seating on the top edge of the outer shell, an annular bead on the free end of the outer wall of said groove, and an annular bead on the outer surface of the top end of said outer shell, said latter bead extending above the top end edge of the outer shell and being snapped over the annular bead on said enlarged portion of the inner shell in interlocking relation therewith.

2,895,637
METER HOUSING
Hans A. Bakke, Swampscott, and Henry D. Treitel, Nahant, Mass., assignors to General Electric Company, a corporation of New York
Application May 9, 1956, Serial No. 583,679
5 Claims. (Cl. 220—40)

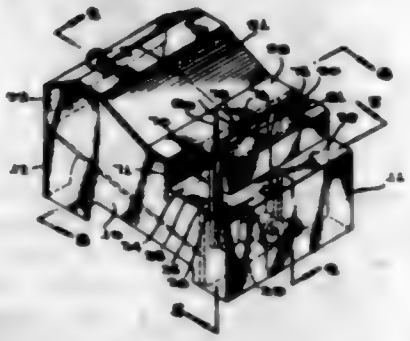
1. A watthour meter housing comprising: a base member having an annular flange, said flange having a plurality of notches spaced around its peripheral edge; a detachable cover having an outwardly flanged annular open end adapted to fit on said base flange; an annular

resilient sealing gasket mounted on said cover flange adapted to overlie said base flange; an annular flanged metallic ring mounted on said cover flange adapted to have its ring portion surround the outer edge portions of said base flange and said cover flange; and a plurality of elastically deformable metallic arms spaced around said metallic ring nd surrounded thereby, said arms being curved to conform to the curvature of said ring and situated contiguous thereto with their edges overlying said cover flange, each of said arms having one end se-



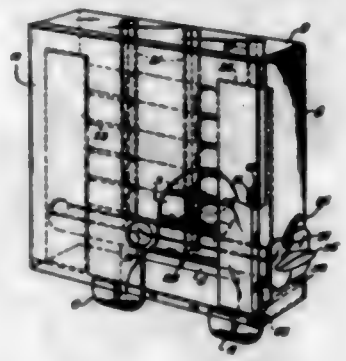
curely fixed to said ring and having an inwardly projecting radial tab formed on its other end, there being a tab for each of said notches, said other ends being free to move a limited amount relative to said fixed ends, said tabs cooperating with said notches and portions of said base flange to form a bayonet lock for clamping said cover on said base, said arms being elastically deformed when said bayonet lock is formed to maintain continuous clamping pressure on said gasket, said deformation being sufficient to compensate for changes in resiliency of said gaket caused by aging effects.

2,895,638
TOOTHPICK DISPENSER
Edgar E. White, Annapolis, Md.
Application December 7, 1956, Serial No. 626,951
3 Claims. (Cl. 221—224)



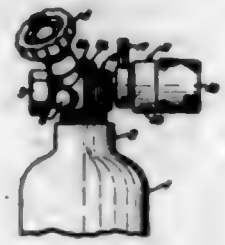
1. A toothpick dispenser comprising a receptacle having a sloping bottom wall and adapted to support therein a plurality of toothpicks arranged so that their axes are parallel to each other and transverse of the sloping bottom wall, a vertical carriage member mounted in said receptacle adjacent and parallel to the lower edge of said bottom wall and movable upwardly and downwardly, said carriage member having an upwardly facing portion normally aligned with said bottom wall for receiving a toothpick therefrom and elevating it on upward movement of said carriage member, a pusher member movably connected to said carriage member and spaced above the top edge of said carriage member, means moving said pusher member in turn responsive to the initial portion of execution of upward movement of said carriage member toward said bottom wall substantially into vertical alignment with said carriage member to elevate a single toothpick with the carriage member and prevent elevation of the remaining toothpicks and then away from said bottom wall and out of vertical alignment with said carriage member, and an abutment element within said receptacle spaced above said bottom wall adjacent one side margin thereof and arranged transversely of said carriage member, said carriage member being spaced inwardly of said abutment element to engage one end portion of the toothpick carried by the carriage member with said abutment element and to cause the toothpick to be tilted to an upright position responsive to the remaining portion of execution of the upward movement of said carriage member.

2,895,639
APPARATUS FOR DISPENSING NEWSPAPERS
John W. Little, Belleville, Ill.
Application October 1, 1956, Serial No. 613,257
2 Claims. (Cl. 221—266)



1. A newspaper dispenser comprising a vertical rack, a plurality of rolled newspapers stacked within said rack, each of said rolled newspapers being centrally secured in its rolled condition by a rigid endless ring formed of stiff wire, a dispensing trough of generally semi-circular cross section rotatably disposed across the bottom of said rack for dispensing a rolled newspaper received from said rack, means for rotating said trough to dispense a newspaper from the trough, each of said rings being of a diameter approximately equal to that of the semi-circular trough.

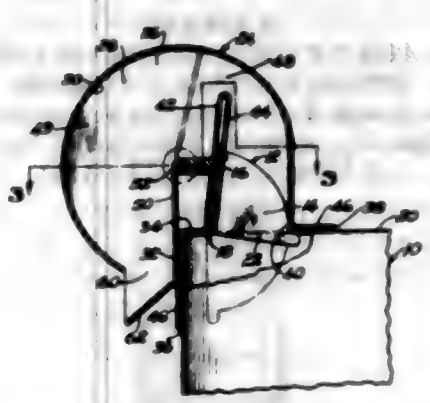
2,895,640
GAS DISPENSING APPARATUS
Earl M. Becker, Pittsburgh, and John J. Bridge, Turtle Creek, Pa., assignors to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application February 17, 1955, Serial No. 488,818
15 Claims. (Cl. 222—3)



1. Apparatus for dispensing gas at low pressure from a container of high pressure gas, comprising a high pressure chamber for receiving high pressure gas from the container, a low pressure chamber provided with an outlet, a gas passage connecting the two chambers, valve means controlling the flow of gas through the passage, the cross-sectional areas of the passage and the outlet being so proportioned that when the valve means are fully opened gas will flow through the passage into the low pressure chamber at least as fast as it flows out of that chamber through the outlet, flow regulating means responsive to changes of pressure in the low pressure chamber and operative to open the valve when that pressure falls below and to close the valve when that pressure rises above a predetermined pressure, and pressure indicating means including a dispensing head secured to the top of the container, a feeler rod slidably received within the head and extending therethrough with its inner end subjected to the pressure of gas within the container and its outer end adapted to project outside the head when that pressure is above a predetermined minimum, spring

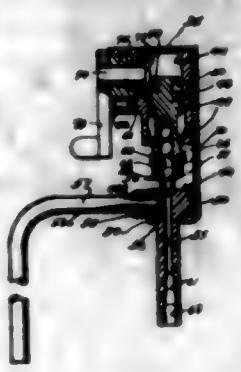
means urging the feeler rod against the pressure of gas in the container, sealing means to prevent the escape of gas from the container around the rod.

2,895,641
MEASURING DISPENSER ATTACHMENT
Rose Dublitsky, Frackville, Pa.
Application October 4, 1957, Serial No. 688,191
3 Claims. (Cl. 222—48)



1. A dispenser comprising a hollow, generally disc-like housing having flat, parallel side walls and an edge wall, a fixed partition in said housing in a transverse plane of said side walls and integrally joined along opposite sides to said side walls and along one end to said edge wall, said partition separating the interior of said housing into first and second chambers, said edge wall having a discharge opening and an inlet opening located at opposite sides of and immediately adjacent to said one end of said partition communicating with said first and second chambers, respectively, there being a space between the other end of said partition and said edge wall communicating said chambers, a movable partition in and slidably engaging the walls of said first chamber, means pivoting one end of said movable partition on said fixed partition for turning on an axis perpendicular to said side walls, the portion of said edge wall bounding said first chamber being cylindrically curved about said axis, said movable partition being adjustable to vary the volume of said first chamber between said space and movable partition, said movable partition normally blocking said discharge opening and being swingable toward said one end of the fixed partition to uncover the latter opening, means for pivoting said movable partition exteriorly of said housing, and means for indicating said volume.

2,895,642
THROW-AWAY TYPE OF CONCENTRATE PROPORTIONER
Carl C. Bauerlein, Mukwonago, Wis., assignor to The Dole Valve Company, Chicago, Ill., a corporation of Illinois
Application May 6, 1955, Serial No. 506,577
8 Claims. (Cl. 222—39)

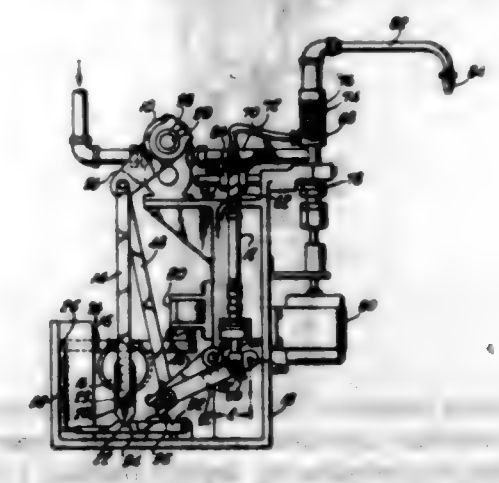


1. In a concentrate dispenser, a dispenser body, a passageway member for water guided for movement therealong, a proportioner, means removably supporting said proportioner in axial alignment with said passageway member and retaining said proportioner from axial movement with respect to said support means, means for moving said passageway member along said body into and out of sealing engagement with said proportioner, said means being movable in one direction only and moving said passageway member beyond a position of sealing engagement with said proportioner thereby crushing said proportioner prior to moving said passageway member out of engagement therewith.

2,895,643
OIL CAN SPOUTS
Albert L. Fladung, Akron, Colo., assignor to Clark-Feather Manufacturing Company, Fort Morgan, Colo., a corporation of Colorado
Application July 25, 1958, Serial No. 751,083
1 Claim. (Cl. 222—90)

An attachable spout for a closed container comprising: an elongated tubular nipple; corrugated expansion strips extending longitudinally of said nipple, said strips being separated by longitudinally extending slots formed in said nipple adjacent the lower extremity of said nipple; an internally threaded tapered plug fixedly mounted in the lower extremity of said nipple; a winged fitting having a base pad mounted adjacent the upper extremity of said nipple; a sealing washer surrounding said nipple adjacent said fitting; a pointed penetrating screw extending longitudinally through said sleeve and projecting downwardly beyond said plug; and a head on said screw resting against the upper extremity of said nipple so that pressure on said head will force said screw and said nipple through the top of said container, and so that when said holding member is maintained stationary and said screw is rotated, it will cause said plug to travel toward the inner surface of the top of said container compressing the expansion strips thereagainst to maintain said sealing washer against the top of said container so that when said screw is removed, said nipple will form a pouring spout for said container, and a tapered flexible dispensing tube mounted on said nipple.

2,895,644
PROPORTIONING APPARATUS
Henry Pande, East Orange, N.J., assignor to H. V. Hardman Co., Incorporated, a corporation of New Jersey
Application October 18, 1956, Serial No. 616,637
21 Claims. (Cl. 222—134)

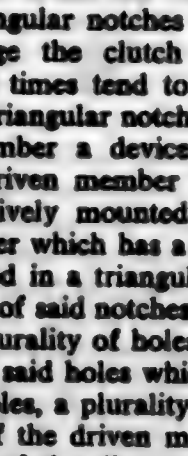


1. A proportioning apparatus comprising two pumps, one of said pumps being a rotary pump, a reciprocating

drive for the pumps, means for connecting the reciprocating drive to the drive mechanism of each of the two pumps which includes means adapted to drive the shaft of the rotary pump to deliver liquid when the reciprocating drive moves in one direction and to run free of the shaft when the reciprocating drive moves in the opposite direction and which also includes means for transmitting only a portion of the movement of the reciprocating drive for driving the other pump to deliver liquid when the said rotary pump shaft is being driven and to stop such delivery of liquid when the driving means for the rotary pump runs free of the rotary pump shaft whereby simultaneous pumping of proportionate quantities of liquid from each pump may be achieved in intermittent flow.

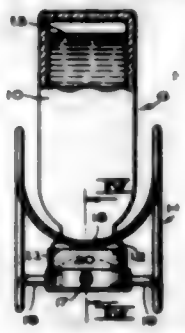
19. In an overrunning clutch of the type which includes a housing rotatively mounted on a driven member which has triangular notches with steel rollers positioned therein which are adapted to connect the driven member to the housing when the rollers are in the apex of the triangular notches to engage the clutch and which when moved into the base of the triangular notches lose contact with the housing to disengage the clutch and which includes springs which at all times tend to urge the said rollers into the apex of the triangular notches to engage the housing and driven member a device for disengaging the housing from the driven member which comprises disengaging plate rotatively mounted in the housing next to said driven member which has a plurality of pins each of which is positioned in a triangular notch between the steel roller and apex of said notches, said clutch disengaging plate having a plurality of holes positioned therein, a steel ball in each of said holes which is small enough to move through the holes, a plurality of cam grooves positioned in the face of the driven member adapted to receive the steel balls of the disengaging plate, means for applying pressure against the balls of the disengaging plate to force said balls down into the wedge-shaped cam grooves of the driven member whereby when the balls are forced into the camming grooves the disengaging plate will be forced to rotate in a direction opposite to the direction of rotation of the said clutch plate and whereby the pins of the clutch disengaging plate will force the balls of the clutch plate into the base of the wedge-shaped notches and disengage the clutch from the housing.

2,895,645
MIXING AND DISCHARGING APPARATUS
Andrew Peink, Garfield, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Application June 11, 1956, Serial No. 590,556
7 Claims. (Cl. 222—162)



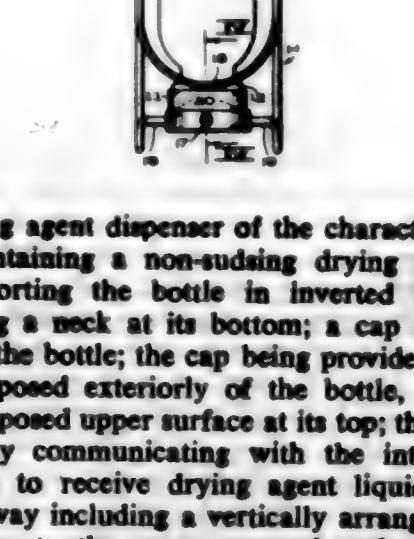
1. A mixing machine for pourable liquids comprising a closed container, openable means at the upper part of the container for introducing liquids therein, a shaft extending through said container having paddles thereon for stirring and mixing the liquids upon rotation of said shaft, a selectively operable drain valve at the bottom of said container, and means to apply fluid pressure within said container to discharge liquids therein through said drain valve upon opening of the latter, said drain valve comprising a hollow lower end on said shaft having a port in the shaft surface communicating with the shaft hollow, and means to move said shaft and container axially to expose said port to the inside of said container, and to locate said port below the bottom of said container.

2,895,646
DRYING AGENT DISPENSER FOR USE WITH A DISHWASHING MACHINE
George Joseph Federighi, San Francisco, Calif.
Application December 3, 1956, Serial No. 625,843
1 Claim. (Cl. 222—181)



In a drying agent dispenser of the character described; a bottle containing a non-sudsing drying agent liquid; means supporting the bottle in inverted position; the bottle having a neck at its bottom; a cap secured over the neck of the bottle; the cap being provided with a rim which is disposed exteriorly of the bottle, and the rim having an exposed upper surface at its top; the cap having a passageway communicating with the interior of the bottle so as to receive drying agent liquid therefrom; this passageway including a vertically arranged restricted orifice leading to the upper exposed surface of the rim of the cap and providing an outlet through which the drying agent liquid may be discharged in an upward direction, when the contents of the bottle are heated to build up pressure in the bottle; and adjustable regulating means operable to control the outflow of the drying agent liquid through the orifice.

2,895,647
HIGHWAY MARKING APPARATUS AND METHOD
John R. Wald, Jr., and Rufus W. Wilson, Huntingdon, Pa., assignors to Wald Industries, Inc., Huntingdon, Pa., a corporation of Pennsylvania
Application November 15, 1956, Serial No. 622,309
14 Claims. (Cl. 222—189)

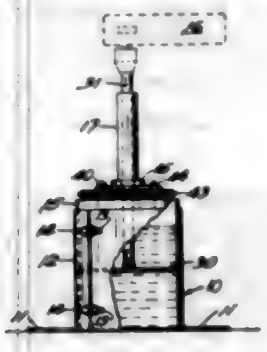


1. In a dispenser for small glass spheres, a source of glass spheres subjected to a gas under a relatively low pressure yet greater than atmospheric, a source of gas

the periphery of the side wall and located longitudinally

pressure under a relatively high pressure, a valve chamber, a valve arranged in said chamber, a diaphragm chamber, a diaphragm arranged within said diaphragm chamber separating said diaphragm chamber into two portions, said diaphragm being connected to said valve and adapted to control the position of said valve by movement of said diaphragm, a first means connecting said valve chamber and said source of spheres, whereby said valve chamber is maintained full of glass spheres subjected to said gas under a relatively low pressure when said valve is closed, a second means permitting the passage of the low pressure gas from said valve chamber to one portion of the diaphragm chamber, a third means connecting the other portion of said diaphragm chamber with said source of higher gas pressure, and a second valve arranged in said third means, whereby the control of the operation of said second valve results in the operation of said first mentioned valve through said diaphragm to dispense controlled amounts of said glass spheres from said valve chamber.

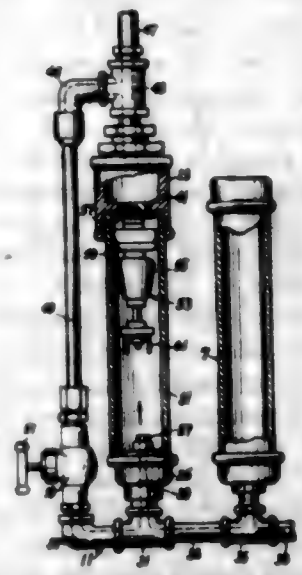
2,895,648
MIXING AND DISPENSING SYSTEM
John M. Woughter, Detroit, Mich., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Application October 15, 1956, Serial No. 615,967
6 Claims. (Cl. 222—235)



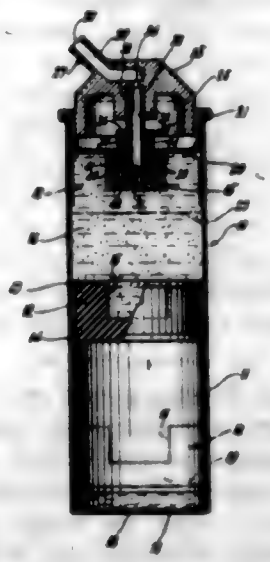
1. A mixing and dispensing system for handling multi-component self-curing plastic sealer compositions and the like including: a mixer assembly suitable for rapidly and effectively mechanically mixing together the multiple components of said composition in a thin-walled open-head constant-diameter shipping container and comprising a temporary protective and supporting jacket for said container, a temporary cover and pressure-plate member slidably fitting within said container and having a central orifice and a tubular adapter fitting therein, agitator means fitting within said container, and spindle means removably attached to said agitator means and passing through said orifice and said adapter for attachment to suitable torque-producing power means; and pressure-dispensing components including means for conveying said composition from the adapter tube of the covered container under pressure into a dispensing unit, and pressure-supplying means for forcing said cover into said container to cause said composition to be forced from said container through said adapter and conveyor means and into said dispensing unit.

2,895,649
LIQUID DISPENSING APPARATUS
Joseph Carl Dawson, Ferguson, Mo.
Application June 9, 1958, Serial No. 740,777
6 Claims. (Cl. 222—318)

1. Apparatus for dispensing measured dosages of a liquid, such as a liquid fumigant, comprising a vertical cylinder having an inlet at its lower end and an outlet at its upper end, a hose line for supplying liquid under pressure to the cylinder having a connection to the cylinder inlet, said cylinder having a valve seat at its upper end, a vertically movable valve member in the cylinder, said valve member being adapted to sink to the lower end of the cylinder, and being adapted to rise in the cylinder in response to a pressure drop in the cylinder above the valve member and force out liquid through the cylinder outlet, said valve member, upon rising to the upper end of the cylinder, being engageable with said valve seat to cut off flow from the upper end of the cylinder, a delivery hose having a connection to the cylinder outlet, a manually operable delivery valve at the outer end of the delivery hose, a by-pass around the cylinder providing for communication from the supply hose to the cylinder outlet above the valve seat, and a valve in the by-pass adapted to provide a restriction in the by-pass such as to effect a pressure drop in the cylinder above said valve member upon operation of said manually operable valve and adapted to provide for equalization of pressure above and below said valve member after the latter has risen into engagement with said valve seat and said manually operable valve is closed, whereupon the valve member sinks to the lower end of the cylinder.



2,895,650
DISPENSER FOR MATERIALS IN LIQUID AND SEMISOLID STATES
Thomas J. Mahon, Englewood, N.J., and Albert Leon Edelstein, New York, N.Y., assignors, by mesne assignments, to Association for Physiologic Research, Inc., New York, N.Y., a corporation of New York
Application June 14, 1956, Serial No. 591,345
1 Claim. (Cl. 222—387)



A dispenser comprising a generally cylindrical housing side wall, housing end walls at opposite ends of said housing side walls, one of said end walls being crimped about

means yieldingly urging said lever into a normal position to press the lowermost one of said tube-engaging pro-

2,895,655
SANITARY PROTECTIVE COVER FOR INFOLDED

a selectively operable drain valve at the bottom of said pressure yet greater than atmospheric, a source of gas

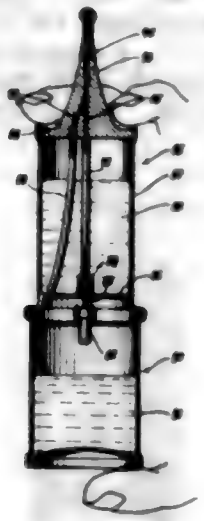
the periphery of the side wall and located longitudinally inward from the adjacent end of said housing side wall to define a trough and longitudinal extension into said housing, a reciprocable piston in said housing side wall forming a seal therewith combining with said housing side wall to define a dispensing material chamber and an expansion chamber, an elongate open-ended collar arranged longitudinally within said housing and fixedly carried within said longitudinal extension having one of its ends extending inward into said dispensing material chamber and the other end extending beyond said housing, an annular sealing gasket fixed within said collar adjacent to the inward end thereof and extending into said dispensing material chamber, a tubular valve member extending longitudinally through said collar into said dispensing material chamber and received in said sealing gasket for longitudinal movement, dispensing apertures in said valve member normally closed by said sealing gasket and radially covered thereby when said valve member is in its outward position to close the interior of said dispensing material chamber to the atmosphere and movable relative thereto to be selectively and progressively uncovered a predetermined amount by said sealing gasket when said valve member is moved progressively inward into said dispensing material chamber to vent said chamber a predetermined amount to the atmosphere, a coil compression spring located interiorly of said collar circumposed about said tubular valve member and resiliently urging the latter toward its outward closed position of movement, and a selectively operable dispenser cap carried on the outer end of said tubular valve member for manually effecting the predetermined longitudinal movement of said valve member, said cap conforming in shape for receipt in the adjacent end portion of said housing side wall and engageable therewith to limit lateral movement of said valve member.

2,895,651

DISPENSING DEVICE

Thomas J. Mahon, Englewood, N.J., and Albert L. Edelstein, Bronx, N.Y., assignors, by mesne assignments, to Association for Physiologic Research, Inc., a corporation of New York

Application February 23, 1956, Serial No. 567,281
2 Claims. (Cl. 222—399)



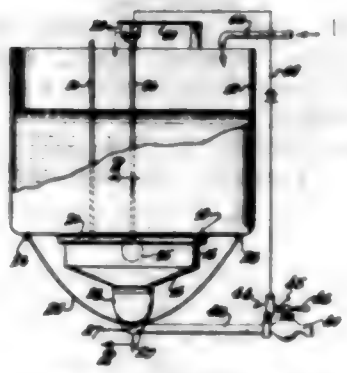
1. In a dispensing device, a pair of vessels arranged in end-to-end spaced relation, an outlet-valve tube mounted in the adjacent end wall of one vessel projecting outward therefrom toward the other vessel and slidable longitudinally inward of said one vessel to an open position and longitudinally outwardly of said one vessel to a closed position, spring means operatively connected to said valve tube and first vessel and resiliently urging said valve tube longitudinally outward to its closed position, the projecting end of said tube being fixed to the adjacent end of said other vessel to connect said vessels for movement toward and away from each other to open and close said valve tube against the force of said spring means urging said vessels away from each other, a conduit disposed longitudinally within said other vessel having one end in fluid communication with the projecting end of said valve tube and having its other end extending through and beyond the distal end of said other vessel, and a standpipe in said other vessel having one end opening into the interior region of the latter vessel adjacent to said one vessel and having its other end connected in fluid communication with said conduit intermediate the ends of the latter.

2,895,652

MEASURING AND DISPENSING APPARATUS

Clyde R. Rockriver, Burbank, Calif., assignor to Automatic Enterprises, Inc., Los Angeles, Calif., a corporation of California

Application December 17, 1956, Serial No. 628,594
9 Claims. (Cl. 222—442)



1. A liquid measuring and dispensing apparatus comprising: a supply tank; a measuring cup positioned below the tank; a partition between the tank and the cup provided with a circular opening establishing communication between the tank and the cup; a circular outlet opening in the cup aligned with that in the partition; a ball valve member disposed in the cup for movement from one of said circular openings to the other in seating relationship and for trapping a measured amount of liquid in the cup between the circular openings; means for withdrawing liquid from the cup; and automatic means for moving the ball valve from the circular outlet opening in the cup and into seating relationship with the opening in the partition when liquid withdrawal from the cup is initiated and for moving the valve from the opening in the partition and into seating relationship with the outlet opening in the cup when said withdrawal is terminated.

2,895,653

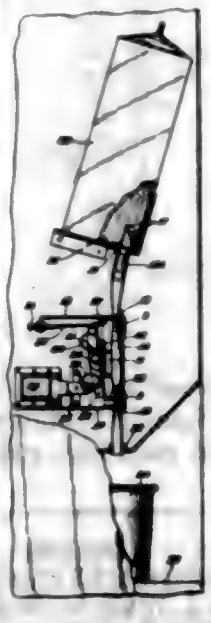
MEASURING AND DISPENSING VALVE

Hubert M. Glepen, Des Plaines, Ill., assignor to Raymond T. Moloney; American National Bank and Trust Company of Chicago, executor of said Raymond T. Moloney, deceased

Application June 27, 1957, Serial No. 668,362
2 Claims. (Cl. 222—452)

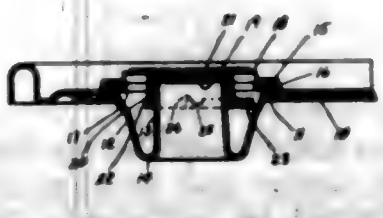
2. A liquid measuring valve comprising a compressible feed tube and frame means for mounting said tube in a substantially upright position, means carried by said frame means providing a backstop at spaced points constituting upper and lower levels along said tube, a long lever mounted between its ends at one side of the tube to rock about an axis normal to the length of the tube so that the opposite ends of the lever can be rocked toward and away from engagement with the tube; a tube-engaging projection at each end of the lever respectively opposite one of said backstop means to pinch the corresponding portion of the tube at the corresponding level against the appertaining backstop means when the lever is rocked in the appropriate direction; a first spring

means yieldingly urging said lever into a normal position to press the lowermost one of said tube-engaging projections against the tube to close the latter at the lower level, a second spring means connecting with said lever on one side of the rocking axis thereof, and a third spring



means connecting with the lever on the opposite side of said axis from the second spring means to cause the opposite rocking movements thereof to occur with a snap action, and means connecting with said lever and operable to rock the same in opposite directions.

2,895,654
BAIL HANDLED CLOSURE CAP
Glenn T. Rieke, Auburn, Ind., assignor to Rieke Metal Products Corporation, Auburn, Ind., a corporation
Application November 23, 1956, Serial No. 623,854
7 Claims. (Cl. 222—529)

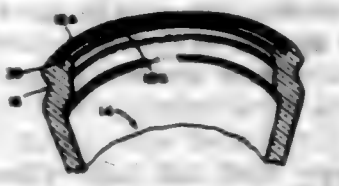


1. In a normally nesting extensible plastic closure for containers having a body portion peripherally secured to the container for flexing between a nesting position within the container and an extended position exteriorly therefor, a spout portion of less diameter integrally joined therewith through a flexible reversible offset shoulder and adapted to nest within said body portion in spaced relation therewith when in its nesting position and be extended from said body portion through the reverse flexing of said shoulder portion, a bail handled closure cap of flexible plastic material in screw threaded engagement with the pouring end of said spout to provide a removable closure therefor, said cap including a skirt portion, and a bail having its terminal ends fixedly secured to diametrically opposite sides of said skirt portions for normally supporting said bail in the transverse plane thereof and in substantially spaced relation therewith to normally nest in the space between said spout and body portion when in their nesting position, the portions of said bail adjacent the terminal ends thereof being flexible for permitting said bail to be forcibly moved from its nested position to an exposed position over the top portion of said cap for finger gripping thereof in pulling said body and spout portions from nested to extended position.

2,895,655
SANITARY PROTECTIVE COVER FOR INFOLDED DISPENSING TUBE OF MILK DISPENSER CAN
George Perusk, Jr., Verona, N.J., assignor to The Ollink Manufacturing Co., Inc., Montclair, N.J., a corporation of New Jersey
Application August 1, 1958, Serial No. 752,505
1 Claim. (Cl. 222—529)

The combination with a milk dispensing can having a tubular outlet and a flexible dispensing tube infolded into said outlet and having a base portion engaged over the end of said outlet, a binding ring surrounding said base portion and an external compressible ring surrounding said binding ring, a sanitary sealing cap having an internal annular bead in engagement with said binding ring and a second internal bead in compressive engagement with said compressible sealing ring portion of said dispensing tube.

2,895,656
CONTAINER CLOSURE
Arthur F. Stagmeier, New York, N.Y., assignor to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
Application January 10, 1956, Serial No. 558,368
3 Claims. (Cl. 222—542)

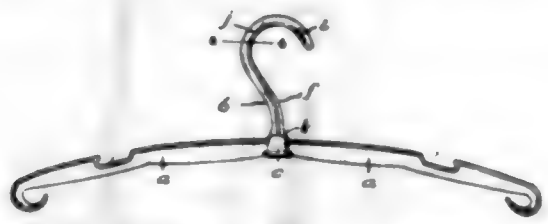


1. A container closure-pourspout which comprises an annular container mouth having a pebbled free end, said free end having an annular indentation between its outer and inner peripheral edges, a gasket seated on the free end of the container mouth, a cap mounted on said container mouth bearing on said gasket and maintaining it in frictional contact with the free end of the container mouth, and an integral depending skirt on said cap adapted to snap fit onto said container mouth and be rotatably mounted thereon, the cap having a spout opening eccentric to its axis of rotation on the container mouth, the gasket having an opening eccentric to the axis of rotation of the cap and adapted to register with the spout opening when the cap is rotated.

2,895,657
HANGERS OR AIRERS FOR CLOTHES AND LIGHT ARTICLES
Malcolm Laughton, Selly Oak, Birmingham, England
Application October 28, 1957, Serial No. 692,682
Claims priority, application Great Britain November 6, 1956
1 Claim. (Cl. 223—92)

A moulded plastic garment hanger having a detachable plastic hook comprising in combination a one-piece

yoke bar, a bearing housing therein open above and below the yoke bar and having an internal wall surface terminating in a lipped upper end on the yoke bar and in a shoulder near the underside of the yoke bar and a hook having a flat end plate on its stem, said hook having in addition a cruciform section stem above the end plate and a curved hook part above the cruciform stem



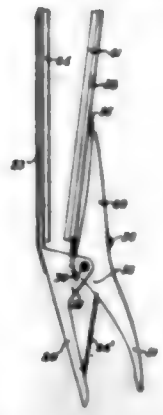
having a broad underface and a stiffening upstanding perpendicular rib, the underface being formed as a continuation of two opposed arms of the cruciform stem, the plastic hook further having small projections on opposed ribs of its cruciform stem which projections are placed so that they will snap out of the lipped upper end of the internal wall surface of the housing when the hook is threaded up into place in the housing.

2,895,658
WRIST GUARD OR PROTECTOR
William Druz, West Islip, N.Y.
Application February 25, 1954, Serial No. 412,563
1 Claim. (Cl. 224—4)

A wrist band assembly comprising an expansible, metal band for securing a wrist watch around the wrist of a wearer and which can expand and contract between expanded and fully-contracted positions and a flexible strip at least substantially as wide as the band and cooperable to be applied to the inner surface of the band and having lost motion connecting means adjacent both ends of the strip for connecting the strip to the band so that the band can expand with respect to the strip, said strip being longer than said band when the band is in fully contracted position and being non-contractible and said connecting means having portions engaging with the band adjacent the two ends thereof and serving to maintain the band in partially expanded condition.

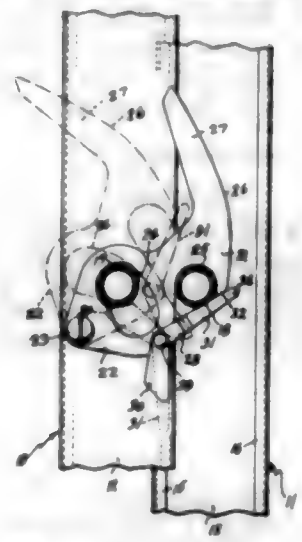
2,895,659
GARMENT-VENT CLAMP
Frank H. Richterkessing, Louisville, Ky., assignor to W. M. Cissell Manufacturing Company, Louisville, Ky., a corporation of Kentucky
Application May 6, 1957, Serial No. 657,088
4 Claims. (Cl. 24—252)

1. A garment-vent clamp comprising a first frame member having a handle at one end thereof, a second frame member having a handle at one end thereof and pivotally attached to said first frame member, an elongated first jaw member rigidly secured to said first frame member, an elongated self-adjusting second jaw member pivotally secured to said second frame member intermediate the ends of said second jaw member and having a guide extension engaging with and slidable along the handle portion of at least one of said frame members for guided movement with respect thereto and for causing the outer end of said second jaw member to pivot in an arc as it moves toward fully separated position with respect to said first jaw member, resilient pads attached to each of said jaw members in confronting relation to each other, said pads having a length and a width commensurate with closing at least a substantial portion of the vent of a gar-



ment clamped therebetween, and a spring means interposed between the handle portions of said frame members for forcing said pads into guided contact with each other.

2,895,660
STOP HOOK FOR EXTENSION LADDERS
Thomas J. O'Keefe, Bethel, Conn.
Application May 9, 1956, Serial No. 583,752
1 Claim. (Cl. 228—18)

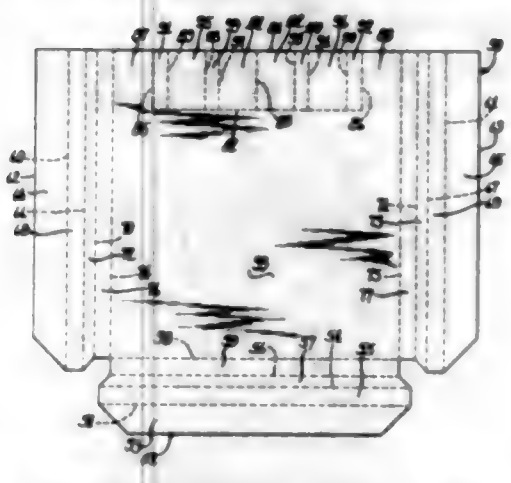


An extension ladder comprising top and bottom relatively slidable sections each including laterally spaced side rails connected by longitudinally spaced rungs, a hook member pivotally mounted on the inner side of each top rail on a pivot adjacent to but spaced from a lower rung of the top section and each provided with an arcuate elongated opening struck about said pivot as a center and embracing said rung, each hook also provided with an open sided recess in its under side adapted to hook over a rung of the lower section in substantially the same horizontal plane as a rung of the top section to hold the top section, each hook having a curved cam edge outwardly of the recess to engage rungs of the lower section to swing the hook backwardly and allow it to pass said rungs, the movements of the hook in both directions being limited by cooperation of the opposite ends of the opening with the enclosed rung, and a control toggle pivoted to each hook including an arm adapted to lie in an inclined position across the open side of the recess to close it and have a camming action on the rungs of the lower section to swing the hook backwardly to a retracted position to permit it to pass the rungs as the top section moves downwardly on the lower section to shorten the ladder, said toggle having a free end projecting beyond the curved cam edge to engage a rung to shift the arm from the recess closing position, and the toggle including an opposite weighted end tending to hold the first arm in the recess closing position.

2,895,661
MEANS FOR SUPPORTING APPARATUS FOR SHIPMENT

Larry J. Budd, Chicago, Ill., assignor to Pallet Devices, Inc., Des Plaines, Ill., a corporation of Illinois

Application May 17, 1954, Serial No. 430,381
3 Claims. (Cl. 229—14)

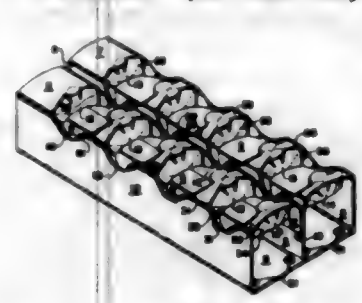


1. In a shipping structure, article support means formed of sheet material and comprising a rectangular first support section for engaging one end of the article, a second support section in the same plane as and projecting outwardly from each end of one edge of said first section, said second support sections having spaced opposed edges transverse to said one edge; each of said second support sections having integral therewith between said opposed edges and along said one edge a third support section projecting transversely from said edge of said second section, a fourth support section projecting transversely from said third section in spaced parallel opposed relation to said second section and a fifth support section projecting transversely from said fourth section to said second section; said third, fourth and fifth support sections having edges in a plane through said one edge of said first section and transverse to said base section for engaging the side of the article.

2,895,662
CARTON

Oscar L. Vines, New York, N.Y., assignor to Continental Paper Company, Ridgefield Park, N.J., a corporation of New Jersey

Application October 25, 1954, Serial No. 464,385
4 Claims. (Cl. 229—28)

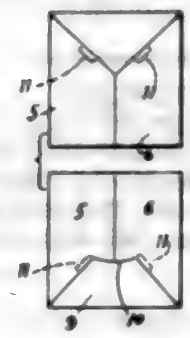


1. A partitioned carton comprising a bottom panel, a pair of side panels extending upwardly from the side extremities of the bottom panel, a main interior partition panel parallel to the side panels and extending upwardly from the central portion of the bottom panel, and a pair of top panels overlying the bottom panel and extending inwardly from the upper extremities of the side panels, one of the top panels being connected to the upper extremity of the main partition panel and the other top panel being connected to a reinforcing partition panel which is joined only along its distal longitudinal edge to a portion of the main partition panel below the line along which the proximate top panel is connected, each of the top panels being provided with a plurality of longitudinally spaced pairs of fold sections each pair of which is defined (*a*) by a transverse cut line extending across the top panel and into the upper portion of the adjoining respective side wall and partition panels and (*b*) by a pair of oppositely bowed transverse fold lines similarly extending across the top panel and communicating at their ends with the lateral extremities of the transverse cut line.

2,895,663
GIFT BOXES

Richard E. Paige, New York, N.Y.

Application June 11, 1956, Serial No. 590,781
1 Claim. (Cl. 229—35)

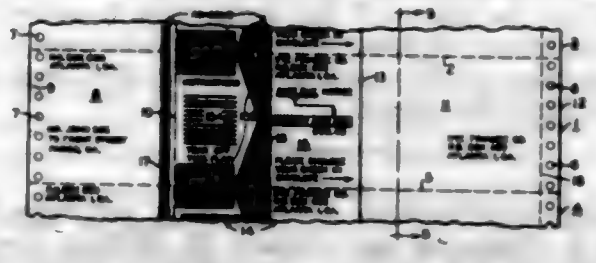


A box formed of a blank having longitudinal parallel lines of fold adjacent opposite edges thereof and transverse lines joining said longitudinal lines and dividing the blank into a bottom and side portions, the side portions each having oppositely disposed flaps along the opposite edges hinge-connected to said side portions along the said longitudinal lines, the bottom portion having oppositely disposed flaps hinge-connected to its ends, each of said last-named flaps lying between adjacent side flaps along the same longitudinal line, and having converging edges and a transverse outer concave edge, the side flaps having tabs at the outer corners adjacent to the ends of the blank, so that when the sides are turned upright the side flaps can be joined together by said tabs, the end flaps connected to the bottom having tabs on the converging edges at the extremities of the outer concave edge, the said side flaps having near the bottom slits in which the last-named tabs are received, and a cover for said box made up of a blank having the same construction with respect to the sides, bottom and end flaps, with the end flaps having converging side edges of substantially equal length, so as to be triangular in outline and terminating in points, centrally located on the last-named flaps, and having tabs at the sides spaced from said points, the height of the box and cover being substantially equal and the height of the end flaps of both body and cover each being less than half the height of the box and cover.

2,895,664
MAILING AND RETURN DEVICE

James E. Cone, Atlanta, Ga.

Application August 15, 1956, Serial No. 604,189
2 Claims. (Cl. 229—73)

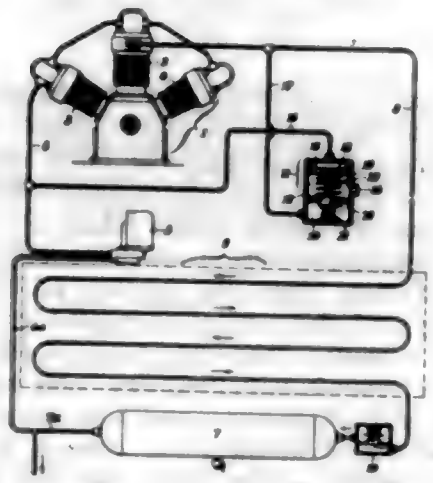


1. A combination mailing and return device comprising a primary address panel having a plurality of marginal holes formed along an edge thereof, a message panel adjoined with said primary address panel by a weakened junction line forming an edge of said primary

said inlet duct to pump a large range of volume of fluid passing a liquid diluent into said mixing tube so that

address panel opposite from said holes, a secondary address panel foldably adjoined with said message panel along a side thereof opposite from said weakened junction line, said secondary address panel having a plurality of marginal holes formed along an edge thereof remote from the fold line between said message panel and said secondary address panel, a tear line formed in said secondary address panel adjacent said marginal holes, said secondary address panel being foldable over said message panel along the fold line therebetween, said tear line registering with said junction line when said secondary address panel is folded over said message panel, and means for securing the edge of said secondary address panel adjacent said holes to the edge of said primary address panel adjacent said junction line.

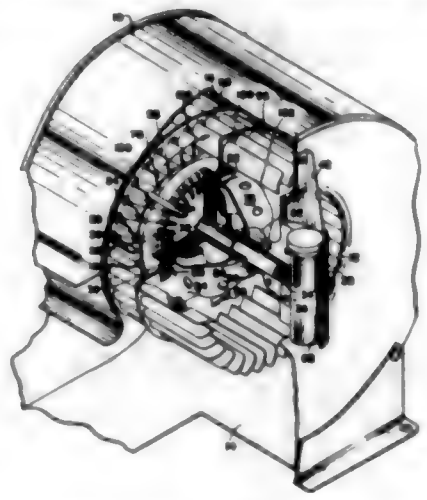
2,895,665
AIR COMPRESSOR DISCHARGE LINE CLEANING AND UNLOADING SYSTEMS
Thomas J. McSweeney, Sr., Wilmington, Del.
Application October 17, 1957, Serial No. 690,737
1 Claim. (Cl. 230—24)



In a compressed air generating apparatus for a railway train brake system or the like, a storage reservoir; a compressor having a cylinder with an unloading valve; a governor interposed in a conduit extending between the outlet of the reservoir and the compressor cylinder; an after cooler interposed in a discharge pipe leading from the compressor to the storage reservoir; a check valve interposed in the discharge pipe at the inlet of the storage reservoir; a dump valve having a ported partition between two chambers, an actuating piston in one of said chambers, a lateral exhaust port in the valve body beyond said piston, and a closure element in the other chamber operable by the piston but normally spring-biased into engagement with a seat around the port in said partition; a branch conduit extending from the conduit aforesaid at a point between the compressor and the governor; and a branch pipe leading from the discharge pipe at a point immediately adjacent the compressor and connecting into the aforesaid other chamber of the dump valve whereby, upon operation of the governor to unload the compressor, after a predetermined pressure of air in the reservoir is reached, the piston of the dump valve is actuated to move the closure element of the dump valve from its seat for expulsion of the contaminants from the compressor and from the after cooler.

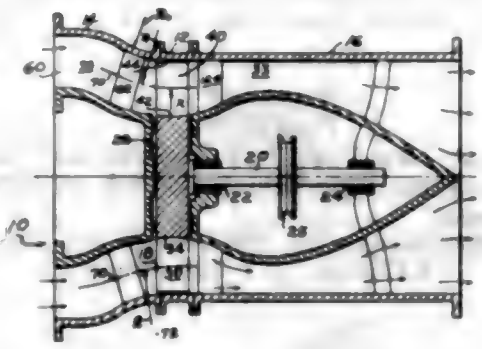
2,895,666
EXTERNAL ROTOR MOTOR FAN ASSEMBLY
Arthur J. Girdwood and Elwaine W. Shillett, Guelph, Ontario, Canada, assignors to Leland Electric Canada Limited, a corporation of Canada
Application July 17, 1956, Serial No. 598,352
9 Claims. (Cl. 230—117)

1. A blower assembly comprising a stationary support, a stator axially mounted on said support, a housing surrounding said support, brackets attached to each end of said housing and having means for cooperatively engaging said support, said brackets each having a resilient insert adapted to receive said support shaft to prevent the transmission of vibrations from said shaft to said housing, a rotor surrounding said stator and axially aligned there-



with, end shields rotatably mounted on said support and abutting each end of said rotor to rotatably support said rotor in spaced relationship to said stator, said end shields having integral, radially extending flanges with spaced slots therein near the outer periphery thereof, and blower vanes extending through opposite pairs of slots in each of said end shields and immovably supported thereby.

2,895,667
ELASTIC FLUID MACHINE FOR INCREASING THE PRESSURE OF A FLUID
Edward A. Stalker, Bay City, Mich.
Application April 9, 1954, Serial No. 422,153
7 Claims. (Cl. 230—120)



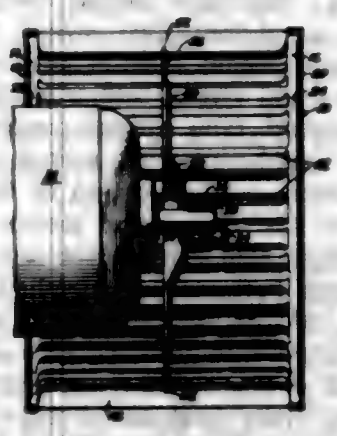
1. In combination in an axial flow compressor for raising the pressure of an elastic fluid, a case means comprising an inlet duct, a rotor case and an exit duct, a rotor having a hub mounted in said rotor case for rotation about an axis and defining a flow channel with said rotor case, said channel registering with said inlet and exit ducts to conduct a flow of fluid, and a plurality of peripherally spaced axial flow blades carried on said hub with rotor flow passages between said blades for conducting said fluid, a plurality of axial flow guide vanes positioned in said inlet duct upstream adjacent to said rotor with guide vane flow passages between said vanes, said vanes being curved backward relative to the direction of rotation of said rotor to direct fluid counter to the direction of rotation of said rotor blades to increase the range of volume flow per revolution of said rotor, said inlet duct having its center line curved in an axial plane to be convex to said axis of rotation for producing a centrifugal pressure in said fluid toward said axis in said guide vane passages, said vanes each being positioned in a curved portion of said inlet duct, said rotor blades and said guide vanes cooperating with

mass respectively, means for mechanizing said quantities signal coincidence test circuit having one input connected

plurality of longitudinally spaced pairs of fold sections

said inlet duct to pump a large range of volume of fluid through said compressor with a limited range of angles of attack for said rotor blades.

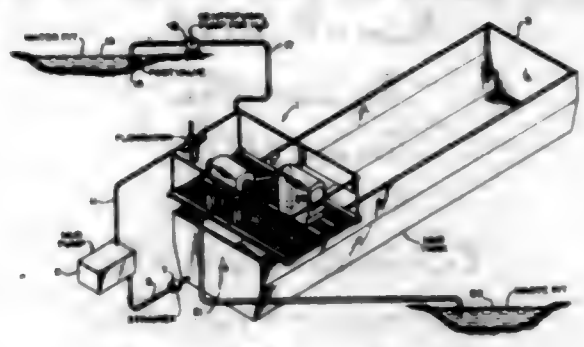
2,895,668
BLOWER CONSTRUCTION AND METHOD OF ASSEMBLY
William W. Zink, Jr., Marshalltown, Iowa, assignor to Lennox Industries, Inc.
Application February 18, 1957, Serial No. 640,878
2 Claims. (Cl. 230—134)



1. A drive blower wheel assembly, comprising a generally cylindrical cage unit of unitary one-piece construction having a plurality of axially-elongated peripherally-spaced blades extending integrally between parallel end rings, said end rings defining co-axial air inlet openings of larger diameter than the inner diameter of said cage unit defined by the inner axial edges of said blades, a single unitary support plate positioned within said cage between the ends of said blades, said plate having a plurality of peripheral notches defining cam teeth, each of said teeth having leading and trailing edges relative to the direction of wheel rotation and a generally tangential outermost edge therebetween, said leading edge forming a steep angle relative to said outermost edge to provide abutment means and said trailing edge forming a shallow angle relative to said outermost edge to provide cam means, each of said teeth outermost edges having a detent groove, the outer diameter of said plate defined by the outermost edges of said teeth being smaller than the diameters of said air inlet openings but greater than said inner diameter of the cage unit, and the diameter across said plate between said notches being smaller than said cage unit inner diameter defined by said blades, whereby said blades may be initially loosely axially received within said notches to resiliently deform and slide radially outwardly along said teeth cam means upon rotation of said support plate rearwardly relative to said cage unit, each blade axial edge being disposed in a corresponding tooth detent groove to effect a positive mechanical locking of said blades in predetermined supported positions.

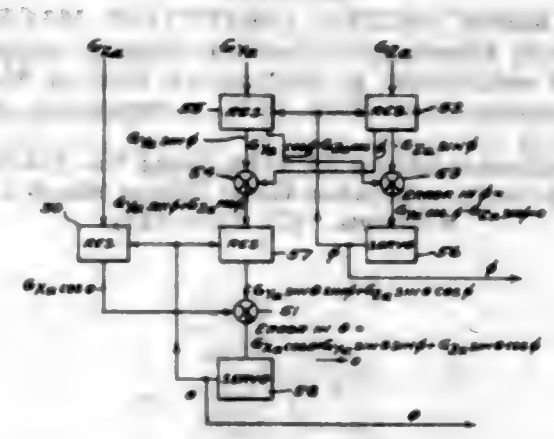
2,895,669
MECHANICAL TREATMENT OF DRILLING MUDS
Ray A. Bobe, Houston, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Application September 13, 1954, Serial No. 455,425
9 Claims. (Cl. 233—21)

1. An apparatus for resolving a drilling mud into heavier materials and lighter materials which comprises, in combination, a centrifugal classifier having an inlet, a source of power operatively connected to said classifier, a mixing tube connected to said classifier inlet, said mixing tube being of a length equal to at least about 45 diameters of said tube, a means for passing said drilling mud into said mixing tube and a conduit means for passing a liquid diluent into said mixing tube so that said drilling mud and liquid diluent pass through said mixing tube under conditions of turbulent flow, a means for measuring the rate of flow of said diluent installed in said conduit means and a rectangular metal frame



having a floor and having mounted thereon said classifier, source of power, mixing tube and conduit means, said frame having a rectangular handrail, and said mixing tube and said conduit means being arranged to act as part of said handrail.

2,895,670
FLIGHT ANALYZER
William H. Newell, Mount Vernon, N.Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N.Y., a corporation of Delaware
Application July 27, 1956, Serial No. 600,575
6 Claims. (Cl. 235—61)



1. A system of determining the flight characteristics of an aircraft in motion, comprising means for measuring the three components $W_{IA(Xa)}$, $W_{IA(Ya)}$ and $W_{IA(Za)}$ of the angular velocity of the aircraft coordinate system in relation to inertial space along the three axes Xa, Ya and Za of the coordinate system respectively to obtain three corresponding quantities in physical form, Xa representing the axis along the aircraft, Ya representing the axis cross-wise of the aircraft and Za representing the normal axis, means for measuring the three components

$$\bar{G}_{Xa}+\bar{a}_{IA(Xa)},\ \bar{G}_{Ya}+\bar{a}_{IA(Ya)}$$

and

$$\bar{G}_{Za}+\bar{a}_{IA(Za)}$$

along the three axes Xa, Ya and Za of said system respectively of the vector representing the combined effects of the acceleration $\bar{G}$ due to the gravitational attraction of the earth and of the linear acceleration $\bar{a}$ of the aircraft with respect to inertial space, to obtain the three corresponding quantities in physical form, means for feeding in physical form as inputs into the system the quantities $\bar{V}'_{Xa}$ and $\bar{V}'_{Za}$ corresponding to the values of the indicated airspeed of the aircraft and the value of the normal velocity of the aircraft in relation to the air

MP digit comprising a plurality of gates capable when conditioned for operation of passing all code pulses from

of magnetized, detection means including a coil positioned adjacent the path of said medium and operable

a stator axially mounted on said support, a housing sur- | said rotor blades and said guide vanes cooperating with

mass respectively, means for mechanizing said quantities in accordance with the following relations

$$\dot{G}_{Xa}=-\overline{W}_{IA(Xa)}\times\overline{G}_{Xa}$$

$$\dot{G}_{Ya}=-\overline{W}_{IA(Ya)}\times\overline{G}_{Ya}$$

$$\dot{G}_{Za}=-\overline{W}_{IA(Za)}\times\overline{G}_{Za}$$

$$\overline{G}_{Xa\ control}=K'\dot{\overline{G}}_{Xa}$$

$$\overline{G}_{Ya\ control}=K''\dot{\overline{G}}_{Ya}$$

$$\overline{G}_{Za\ control}=K'''\dot{\overline{G}}_{Za}$$

$$\dot{\overline{V}}_{Xa}=\bar{a}_{IA(Xa)}+\overline{W}_{IA(Xa)}\times\overline{V}_{Xa}$$

$$\dot{\overline{V}}_{Ya}=\bar{a}_{IA(Ya)}+\overline{W}_{IA(Ya)}\times\overline{V}_{Ya}$$

$$\dot{\overline{W}}_{Za}=\bar{a}_{IA(Za)}+\overline{W}_{IA(Za)}\times\overline{V}_{Za}$$

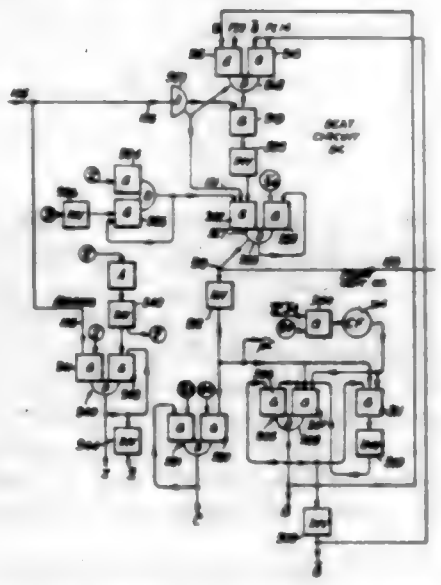
wherein $\dot{V}_{Xa}$, $\dot{V}_{Ya}$, and $\dot{V}_{Za}$ are the components of the vector representing the acceleration of the aircraft in relation to the air mass along the three axes X*a*, Y*a* and Z*a* respectively, $\dot{V}_{Xa}$, $\dot{V}_{Ya}$ and $\dot{V}_{Za}$ are the corresponding velocities, K′, K″ and K‴ represent constants and $\bar{G}_{Xa\ control}$, $\bar{G}_{Ya\ control}$ and $\bar{G}_{Za\ control}$ represent the difference between $\dot{V}'_{Xa}$ and $\dot{V}_{Xa}$, $\dot{V}_{Ya}$ and the difference between $\dot{V}'_{Za}$ and $\dot{V}_{Za}$ respectively, to obtain the quantities $\bar{G}_{Xa}$, $\bar{G}_{Ya}$ and $\bar{G}_{Za}$ respectively in physical form, and equation mechanizing means responsive to the quantities $\bar{G}_{Xa}$, $\bar{G}_{Ya}$ and $\bar{G}_{Za}$ as inputs for producing a quantity in physical form representing the pitch angle of the aircraft.

2,895,671

ELECTRONIC DIGITAL COMPUTING MACHINES

Andrew St. Johnston, Buntingford, England, assignor, by mesne assignments, to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application March 23, 1954, Serial No. 418,104
Claims priority, application Great Britain March 24, 1953
6 Claims. (Cl. 235—157)



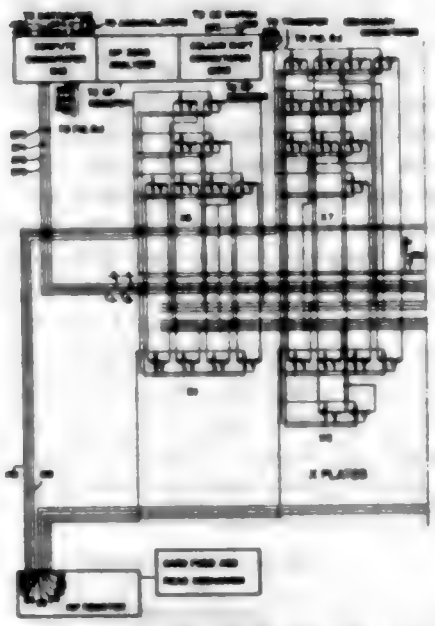
1. An electronic digital computing machine arranged for operation with serial mode word signals and comprising a data store of the circulating type in which each word storage address is made available sequentially during time intervals which are identified by a separate address signal presented immediately prior to the access time of each storage location, a control system including a control register arranged for operation with instructions containing separate first and second storage address signal portions, means for presenting each of said separate first and second address signal portions simultaneously on separate output channels in time synchronism with said address signals of said data store, a signal coincidence test circuit having one input connected to receive said address signal from said store and a second input connected by way of signal-controlled switch means to each of said output channels of said instruction address signal presenting means, said signal controlled switch means being arranged to route either said first or said second address signal portions to said second input, said coincidence testing circuit providing an output signal indicative of coincidence between said input signals, a two-stable-state trigger circuit device connected to supply output control signals to said signal-controlled switch means, said trigger circuit when in one state providing a first type output control signal which operates said signal-controlled switch means to route said first address signal portion of the instruction to said coincidence test circuit and when in its other state providing a second type output control signal which operates said signal-controlled switch means to route said second address signal portion of the instruction to said coincidence test circuit and means for causing the output signal from said coincidence test circuit resulting from coincidence between said applied address signals and said first address signal portion to operate said trigger circuit to provide a second type output signal and for causing said output signal from said coincidence test circuit resulting from coincidence between said second address signal portion and said address signals to operate said trigger circuit to provide a first type output signal whereby said coincidence test circuit operates alternately to establish coincidence between said address signals of said data store and said first and second address signal portions of said instruction.

2,895,672

ELECTRONIC MULTIPLYING SYSTEM

Arthur H. Dickinson, Greenwich, Conn., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application January 15, 1954, Serial No. 404,157
18 Claims. (Cl. 235—160)



2. A machine adapted to compute the product (PR) resulting from the multiplication of a multiplicand (MC) by a multiplier (MP), wherein the digit (RH) designates the lower order digit in said product and the digit (LH) designates the higher order digit therein, said machine comprising MP and MC registers each comprising for each order a group of counter tubes selected ones of which register the respective MP and MC digits in response to corresponding digital impulses at the input of the group, a compute commutator comprising a source of a repetitive series of code pulses each representing one of a code of components which can be added to form all digits, a code channelling network for each possible

2,895,676

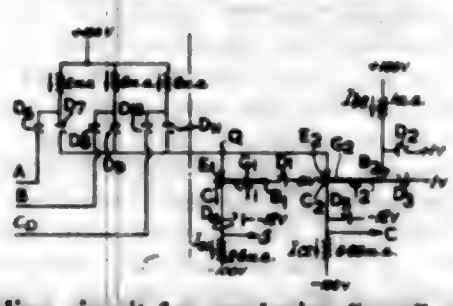
WATER TEMPERING VALVE

valve, and temperature responsive valve means opening

ing mud into said mixing tube and a conduit means for the normal velocity of the aircraft in relation to the air

MP digit comprising a plurality of gates capable when conditioned for operation of passing all code pulses from the compute commutator required to form the product of that possible MP digit by all possible MC digits, means whereby a registering tube in each order of the MP counter may successively condition for operation the network corresponding to the digit registered by that tube and means whereby one registering tube in each order of the MC counter concurrently may select from the network so conditioned for operation for each MP order successively only those code pulses required to form the product of the registered MP digits by the registered MC quantity, both of said MP and MC registers comprising a counter tube for each decimal digit for each order, the compute commutator repeating its series of code pulses once for each MP order, and means responsive to the occurrence of a zero in any MP order for causing the machine to skip that order.

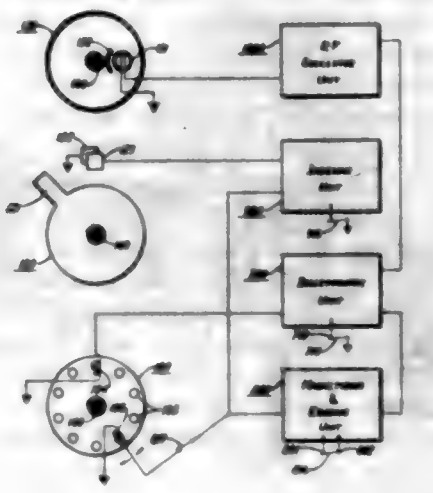
2,895,673
TRANSISTOR BINARY ADDER
Frederic Calland Williams, Romiley, England, assignor to National Research Development Corporation, London, England, a corporation of Great Britain
Application July 24, 1953, Serial No. 375,265
Claims priority, application Great Britain July 28, 1952
4 Claims. (Cl. 235—164)



1. An adding circuit for producing "sum" and "carry" binary digit output signals in response to analogue input signals comprising a first transistor having an emitter, a base and a collector, a diode connecting said base to a fixed potential, a high impedance connecting said collector to a low voltage supply, a diode connecting said collector to a small negative bias voltage, a second transistor having an emitter, a base and a collector, a high impedance connecting the latter base to a high voltage supply, diodes connecting said latter base to small positive and small negative bias voltages to restrict the voltage excursions of said latter base between said bias voltages, said small negative bias being lower than said fixed potential, a high impedance connecting the latter collector to a low voltage supply, the latter higher impedance being of smaller value than the high impedance connected to the first transistor collector whereby said second transistor will carry more current than said first transistor, a "sum" output lead connected directly to the first transistor collector, a "carry" output lead connected directly to the second transistor collector, and an input terminal connected directly to the emitters of both said transistors for the application of input current signals of the analogue type representing the sum of three binary digit signals A, B and C_D.

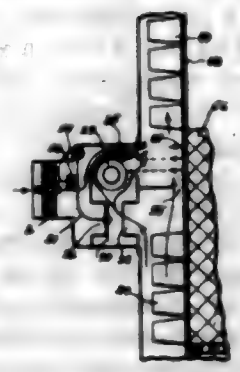
2,895,674
CALCULATING MACHINES
Meryl C. Burns, Factoryville, Pa., and George J. Giel, Jr., Los Angeles, and Robert J. Stahl, Redwood City, Calif., assignors to Smith-Corona Marchant Inc., a corporation of New York
Original application February 12, 1951, Serial No. 210,592. Divided and this application June 18, 1956, Serial No. 591,932
10 Claims. (Cl. 235—167)

1. In a device of the class described, the combination of, a moving magnetic medium having one portion thereof magnetized, detection means including a coil positioned adjacent the path of said medium and operable in response to movement of said magnetized portion tangent to said coil to energize the detection device, magnetizing means including, a magnetizing circuit connected to the detection means and operable in response



to said energization of the detection means for generating a magnetizing pulse, a magnetizing coil adjacent said medium and selectively settable along the path thereof to a plurality of positions, a coupling between the magnetizing circuit and the magnetizing coil for conducting said magnetizing pulse to said magnetizing coil to magnetize a second portion of the medium.

2,895,675
TEMPERATURE REGULATOR FOR ROOM HEATERS
Gerhard Goebel, Hamburg-Wellingsbuettel, Germany
Application January 17, 1955, Serial No. 482,365
6 Claims. (Cl. 236—9)



1. A temperature regulator for room heaters, including an auxiliary regulating device, with a heating element heated by fluid medium, said temperature regulator comprising as an assembly unit a casing with an inlet and an outlet opening, a pilot thermostat arranged in said casing, said inlet opening being capable of drawing-in room air under the influence of suction established at said outlet opening by a stack in said heating system, said draft of air from the inlet opening affecting the pilot thermostat, a second thermostat mounted in a separate enclosure within said casing, adjacent to said pilot thermostat but separated by a wall of said enclosure therefrom, said enclosure having an inlet and an outlet opening, a valve controlled by said pilot thermostat so as to alternately admit a cold or hot medium to said second thermostat, and means for connecting said second thermostat to a second valve arranged outside said unit in said stack, whereby temperature fluctuations of the second thermostat actuate said second valve.

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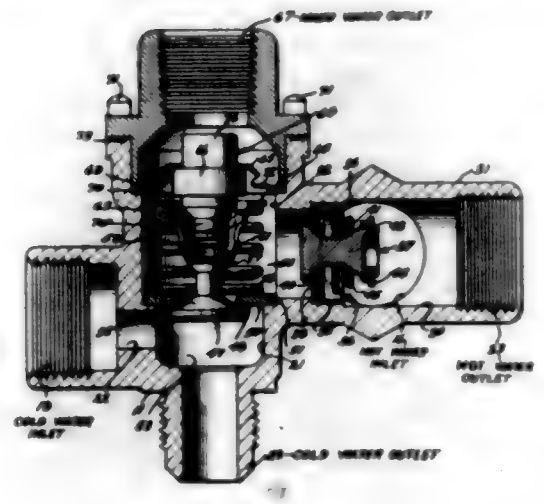
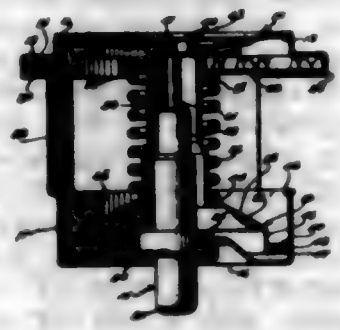
2,895,676
WATER TEMPERING VALVE
El Roy J. Kraft, Des Plaines, Ill., assignor to The Dole Valve Company, Chicago, Ill., a corporation of Illinois
Application February 15, 1956, Serial No. 565,564
2 Claims. (Cl. 236—12)



1. In a fluid mixing valve, a valve body having a central chamber therein opening to opposite ends thereof, a hot water inlet leading into said valve body to one side of said central chamber and intermediate the ends of said valve body, a communicating passageway between said hot water inlet and said chamber, a cold water inlet leading into said chamber adjacent one end thereof, a mixed water outlet opening from the opposite end of said chamber from said cold water inlet, a valve seating member in said chamber downstream of said cold water inlet and upstream of said communicating passageway and having a central orifice leading therethrough, a valve engageable with said orifice on the upstream side of said valve seating member, a carrier in said chamber downstream of said communicating passageway and adjacent said mixed water outlet, a thermal element seated on said carrier and having a power member engaging said valve, a retainer mounted on said valve, a spring seated on said seating member and engageable with said retainer and biasing said valve into engagement with said power member and retaining said thermal element in said carrier, a hot water outlet leading directly from said hot water inlet, and a check valve in said communicating passageway loaded to close off the free flow of hot water to said chamber upon the flow of hot water through said hot water outlet, to accommodate the passage of hot water to said mixing chamber to open said first mentioned valve and accommodate the passage of cold water from said cold water inlet into said chamber by the heat of the hot water flowing along said thermal element upon a predetermined back pressure in said hot water outlet.

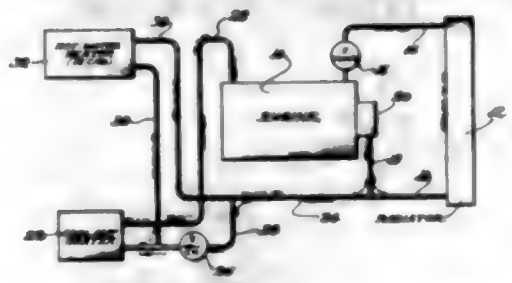
2,895,677
PRESSURE COMPENSATED WATERLINE THERMOSTAT
Harold B. Drapeau, Oak Park, Ill., assignor to The Dole Valve Company, Chicago, Ill., a corporation of Illinois
Application December 14, 1956, Serial No. 628,289
7 Claims. (Cl. 236—34)

5. In a thermostatic valve particularly adapted for controlling the engine temperature of internal combustion engines and the like, a valve housing having a port leading therethrough, a poppet valve cooperable with said port for controlling the flow of coolant through said port, a thermal element seated in said housing for operating said valve to admit coolant through said port, valve balancing means tending to balance pump pressure on the valve, and temperature responsive valve means opening upon over-temperature conditions and counteracting said



valve balancing means and effecting the opening of said poppet valve by the pressure of fluid thereon.

2,895,678
COOLANT AND PERSONNEL HEATING APPARATUS
Gordon J. Fairbanks, Donald A. Potter, and Jesse B. Mellett, Indianapolis, Ind., assignors to Stewart-Warner Corporation, Chicago, Ill., a corporation of Virginia
Application January 23, 1956, Serial No. 560,751
2 Claims. (Cl. 237—12.3)

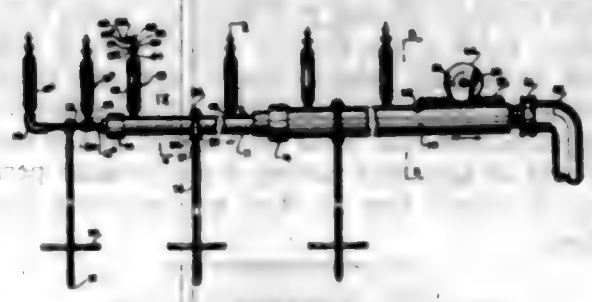


1. In an automotive vehicle having an internal combustion engine provided with a jacket for the circulation of a liquid coolant therethrough, a radiator, a liquid pump driven by the engine, a coolant heater of the combustion type, a hot liquid heater including a heat exchanger positioned within the passenger compartment of the vehicle for heating the compartment, means operative automatically prior to the operation of the engine to connect in a hydraulic circuit the coolant heater, the jacket and pump with coolant flow being in a direction opposite to the pumping direction of said pump and operative automatically upon operation of the engine to connect said pump, coolant heater, hot liquid heater and jacket in a hydraulic circuit with the direction of the coolant flow being in the pumping direction, and valve and conduit means connecting the pump and radiator in a hydraulic circuit that is completed in response to elevation of the coolant temperature to a satisfactory engine operating value.

2,895,679
METHODS OF DISPERSING FOGS
George Alfred Hugh Elton, London, England, assignor of one-half to Lodu Chemicals Limited, London, England, a British company
No Drawing. Application April 30, 1954
Serial No. 426,924
Claims priority, application Great Britain May 4, 1953
13 Claims. (Cl. 239—2)

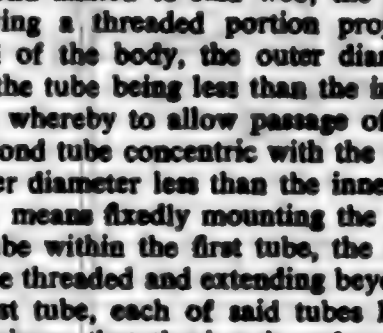
1. A method of dispersing a fog of moisture droplets comprising forming surface charges on fog dispersing droplets, distributing the latter throughout said fog, and coalescing the moisture droplets into the interiors of the fog dispersing droplets while maintaining the surface charges on the latter which are thereby effective to coalesce a large number of said moisture droplets, the fog dispersing droplets being treated with a surface active agent to form said surface charges.

2,895,688
RECIPROCATING IRRIGATION SPRINKLER SYSTEM
Vincent Tavone, East Paterson, N.J.
Application August 4, 1958, Serial No. 752,706
2 Claims. (Cl. 239—76)



1. In a farm sprinkling device, a plurality of vertically disposed hollow bodies, each body having a wall defining an upwardly directed nozzle at the upper end thereof, a circular web affixed across the interior of each body intermediate the ends thereof, said web having a plurality of spaced openings therethrough, a first hollow tube having its lower end affixed to said web, the upper end of said tube having a threaded portion projecting above the upper end of the body, the outer diameter of said upper end of the tube being less than the inner diameter of said nozzle whereby to allow passage of water therebetween, a second tube concentric with the first tube and having an outer diameter less than the inner diameter of said first tube, means fixedly mounting the lower end of said second tube within the first tube, the upper end of the second tube threaded and extending beyond the upper end of the first tube, each of said tubes having lateral apertures therein so that the interior of each tube communicates with a portion of the body beneath said web, deflector nuts threaded on the first and second tubes exteriorly of the body for adjustably constricting the spaces surrounding said tubes, a cap having an opening therein threaded on the end of said second tube, a first pipe affixed in the lower end of the body, a plurality of horizontally disposed pipes of progressively smaller diameter secured to each other in axial alignment, the first pipe of each tube secured to one of the horizontally disposed pipes, a plurality of posts carrying rollers with said horizontally disposed pipes supported on said rollers, a rack gear secured to one of the horizontally disposed pipes, gear means engaged with said rack gear, and a motor operatively connected to said gear means, said motor provided with means for reversing the direction of rotation thereof periodically at the end of each pass of the rack gear in back and forth directions.

2,895,681
IMPULSE SPRINKLER WITH SHIFTABLE TOGGLE
Henry J. Kachergis, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Application August 2, 1957, Serial No. 675,921
3 Claims. (Cl. 239—230)



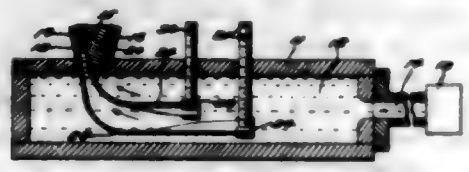
1. In a sprinkler of the intermittent reversible type consisting of a support, a sprinkler head having a discharge nozzle, an impulse arm pivoted upon said head, said impulse arm having opposed hammer projections, a reversing mechanism comprising a yoke pivoted on said sprinkler head and having stop lugs at its opposite ends, a pivot pin projecting from said head below said yoke pivot, a reversing lever pivotally mounted on said pin, spring means connected between said yoke and said reversing lever and serving to alternately move said yoke to selectively position the stop lugs in line with the hammer projections of the swinging arm to cause intermittent rotation of the head in one direction or the other, area-control members adjustable on said support and having radially extending arms, said lever having an extension normally moving with the head in a path to be intercepted by said arms and upon contact therewith swing the lever to reverse the position of said yoke; the improvement which consists of a lateral slidable connection between said reversing lever and said pivot pin permitting said lever to be shifted from one pivoting position on said pin where the lever extension will contact the radial arms to another or inactive support position on said pin where the lever extension will clear the arms and allow the sprinkler head to continuously rotate in one direction.

2,895,682
ADJUSTABLE SPRINKLER FOR LAWNS
Vincent Tavone, East Paterson, N.J.
Application February 3, 1958, Serial No. 712,837
2 Claims. (Cl. 239—281)

1. In a lawn sprinkling device, a vertically disposed hollow body, the wall of said body at the upper end thereof forming an upwardly directed nozzle, a circular web affixed across the interior of said body intermediate the ends thereof, said web having a plurality of spaced openings therethrough, a first hollow tube having its lower end affixed to said web, the upper end of said tube having a threaded portion projecting above the upper end of said body, the outer diameter of said upper end of the tube being less than the inner diameter of said nozzle whereby to allow passage of water therebetween, a second tube concentric with the first tube and having an outer diameter less than the inner diameter of said first tube, means fixedly mounting the lower end of said second tube within the first tube, the upper end of the second tube being threaded and extending beyond the upper end of the first tube, each of said tubes having lateral apertures therein so that the interior of each tube communicates with a portion of the body beneath said web, deflector nuts threaded on the first and second tubes exteriorly of the body for adjustably constricting the spaces surrounding said tubes, a cap having an opening therein threaded on the end of said second tube, each of said tubes having H-shaped cuts therein forming outwardly extending spring lips for retaining said deflector

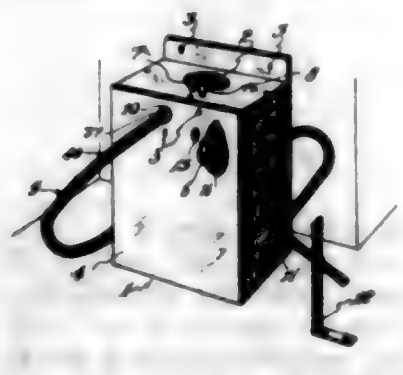
nuts in selected positions on the tubes, a first pipe affixed in the lower end of the body, a second pipe, said first pipe being adjustably and telescopically supported in the second pipe, a cylindrical member supporting the first and second pipes in a vertical elevated position, and a plurality of legs affixed to said cylindrical member.

2,895,683
DEVICE FOR SPRAYING FLUIDS
Howard A. Dvorak, Brookfield, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application September 30, 1957, Serial No. 687,036
7 Claims. (Cl. 239—332)



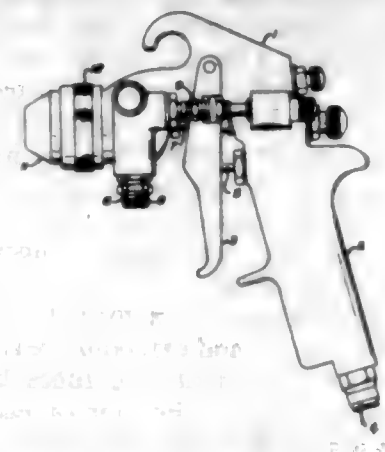
7. A device for forming a sheetlike fountain of molten solder of variable height, comprising a closed container of rectangular cross section for receiving a stream of fluid, said container having an elongated opening extending across one side thereof normal to the stream of fluid, a flexible vane having a trailing edge secured to the container at the downstream side of the elongated opening and having a leading edge extending into the stream of fluid, and a plurality of set screws threaded through said one side of the container and attached to the leading edge of the vane for varying the configuration of said leading edge to regulate the flow of solder through the elongated opening.

2,895,684
MIST COOLANT DISPENSER
Jesse Harr, Union, N.J.
Application May 20, 1958, Serial No. 738,879
2 Claims. (Cl. 239—341)



1. In a mist coolant dispenser having a container for holding coolant to be misted, a valve block having an oil control valve to which oil is fed and having an outlet through which the coolant is centrally discharged and an air inlet leading to an air control valve and having a channel connecting the discharge side of said air valve with said outlet, and a discharge hose connectable in sealing relation to said outlet, said hose having a small diameter flexible tube disposed annularly therein, both hose and tube terminating in a nozzle mist discharge end, the improvement comprising a valve block outlet having an annularly disposed seating surface and means forming a side opening as a terminus for said channel, a discharge hose mounting circumscribing the other terminus of said tube and comprising a cylindrical hose holding means disposed around said other tube terminus and having one end adapted to hold one end of said hose, gasketing means disposed around said other tube terminus ahead of and seating against the other end of said hose holding means and constructed to seat in air sealing relation on said block outlet seating surface inward of said channel opening when the discharge hose is connected to the block, means forming an air opening in said hose holding means disposed outwardly of said gasketing means and pneumatically connectable with said channel opening providing air access from said air control valve to the annular space between said hose and tube, connecting means disposed over said hose holding means for connecting said hose holding means in air sealing relation to said block outlet, said nozzle mist discharge end of said tube having a non-circular periphery adapted to permit free air flow between said tube and said hose.

2,895,685
SPRAY NOZZLE
Donald J. Peeps, Romford, Ohio, assignor to The De Vilbiss Company, Toledo, Ohio, a corporation of Ohio
Application February 29, 1956, Serial No. 568,565
3 Claims. (Cl. 239—400)

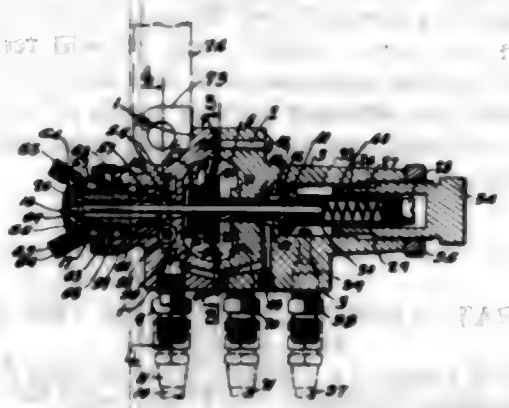


1. A spray nozzle for atomizing a material with compressed air and intimately mixing with the material an additive agent carried by the compressed air, said spray nozzle having a discharge tip for the discharge of material having a conical outer end, and means for discharging atomizing air carrying an additive agent in surrounding relation to the tip, said means including an inner insert member fitting around the conical outer end of the tip, there being a series of circumferentially spaced air passages through the inner insert member, and said means also including an outer air cap member in retaining contact with the inner insert member, the outer air cap member being shaped to define an annular chamber forwardly of the inner insert member, said annular chamber being of flat form with its axial dimension less than the radial distance between its inner and outer diameters, and a restricted annular air outlet around the outer end of the tip in direct communication with said annular chamber, there also being a series of air outlet ports in the outer air cap member disposed in surrounding relation to the annular air outlet and also in direct communication with said annular chamber.

2,895,686
SPRAY GUN
Donald J. Peeps, Romford, Ohio, assignor to The De Vilbiss Company, Toledo, Ohio, a corporation of Ohio
Application March 16, 1956, Serial No. 572,000
6 Claims. (Cl. 239—412)

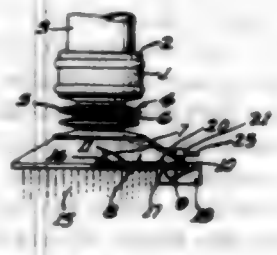
1. In a spray gun of the type described a main body member, a nozzle at the forward end of the body member for discharging air atomized coating material, means providing a coating material supply inlet adjacent the forward end of the body member and a passage for conveying coating material under pressure from the supply inlet to the nozzle, other means providing a receiving inlet for atomizing air in the body member adjacent the rear end

thereof and also providing a passage for carrying atomizing air from the receiving inlet to the nozzle, a coating material valve, a seat for the coating material valve in the nozzle against which the valve is normally seated and from which it may be withdrawn by rearward movement, a second valve and a valve seat therefor against which the second valve normally is forwardly seated, said second valve and valve seat being within the passage for carrying atomizing air near the rear end of the body member, a reciprocable, pressure responsive, diaphragm mounted in the mid portion of the body member, con-



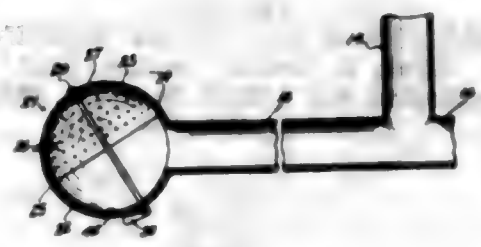
nections between the diaphragm and the valves for the coating material and the atomzing air, means for applying pressure against the forward face of the diaphragm to move the diaphragm rearwardly and through said connections to move the valves from their seats and thus allow coating material and atomizing air to reach and be discharged from the nozzle with the air atomizing the coating material, and additional means for applying air pressure against the rear face of the diaphragm to return the diaphragm forwardly in opposition to the pressure applied to the forward face of the diaphragm.

2,895,687
SPRAY NOZZLE
Francis D. Ammen, Los Angeles, Calif.
Application August 17, 1956, Serial No. 604,693
1 Claim. (Cl. 239—443)



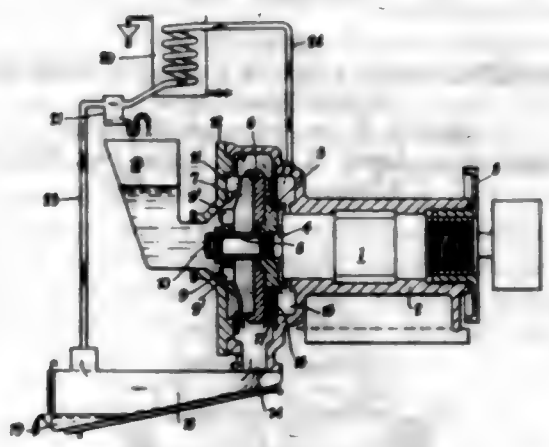
A spray device for selectively delivering either a single relatively large stream of liquid or a plurality of relatively fine spray streams, comprising: a hollow flared body and having relatively small diameter flexible inlet neck, a plate mounted in closing relationship to the base end of said body, said plate having a relatively large central discharge aperture and a plurality of relatively small spray apertures surrounding said central aperture, a disk-like valve member pivotally mounted on said plate for swinging movement over a surface thereof into and out of closing relationship to said central aperture, a pair of projections carried by said body, said projections extending radially beyond the periphery of said body and being spaced apart circumferentially of said body, and a lever for actuating said valve member, said lever being operatively connected to said valve member and projecting radially outwardly beyond the periphery of said body between said projections for swinging movement therebetween to cause said valve member to move between positions opening and closing said central aperture whereby a user may engage a finger with one of said projections while using another finger of the same hand to swing said lever towards said projection and thereby to balance the forces exerted by said fingers to maintain said body substantially stationary.

2,895,688
SPRAY NOZZLE FOR LIQUID STORAGE TANKS
Dale A. Selberling, Columbus, and Frank W. Wish, Bellefontaine, Ohio
Application December 28, 1956, Serial No. 631,206
4 Claims. (Cl. 239—559)



1. A spray nozzle comprising a hollow spray head and an adjoining substantially straight length of conduit for supplying fluid to said head, said head including a first, shell-like section fixed to an end of the conduit and terminating in an open mouth disposed in axial alignment with said conduit, the open mouth of said first section defining a considerably larger area than the cross-sectional area of said conduit and lying in a plane acutely angular to the axis of said conduit and overlying the cross-sectional area of said conduit, whereby to permit unobstructed visual inspection of the interior surfaces of said first section and axial access to said length of conduit; a second shell-like section of substantially identical shape and size as said first section disposed in edge-abutting closing relation to the open mouth of said first section; and manually operable, quick-releasable means detachably connecting said sections and operable to maintain the same in edge-abutting relation.

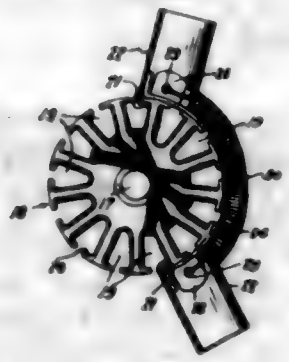
2,895,689
GRINDING MILLS
George Wilfred Edwards and Roger Joseph Sevin, Paris, France
Application April 19, 1956, Serial No. 579,225
Claims priority, application France April 20, 1955
4 Claims. (Cl. 241—23)



1. In the wet grinding of materials in a high speed grinding mill the method of cooling the material being ground between the grinding elements of the mill comprising the steps of adding a volatile liquid to the material to be ground in the mill the boiling point of which is at least as low as the maximum permissible temperature to which the material being ground may be heated

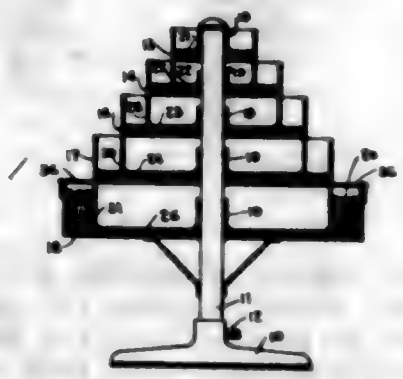
in the grinding operation, feeding the material containing the added volatile liquid to the mill and into contact with the grinding elements of the mill, absorbing the heat produced in the grinding operation by the added volatile liquid to supply heat of vaporization thereof and vaporize the added volatile liquid during the grinding of the material by the grinding elements, thereby preventing the heating of the material being ground to a temperature above said permissible maximum temperature, projecting the ground material together with the vapors of the volatile liquid into a collection zone, and separately recovering the ground material and the vapors of the vaporized volatile liquid.

2,895,690
GUIDE FOR ARMATURE WINDING
Edwin E. Savard, Ventura, Calif.
Application July 3, 1956, Serial No. 595,631
1 Claim. (Cl. 242—13)



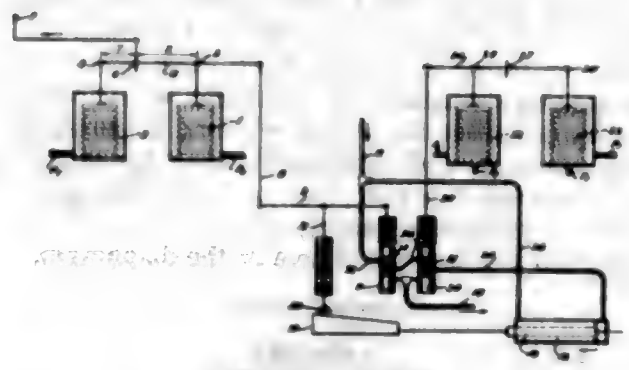
In a guide attachment for guiding the wire of an armature winding into the slots of an armature core, mounted on an armature winding head, the core having flanges extending laterally from the longitudinal edges of said slots, comprising guide blades having rearwardly curved ends disposed longitudinally of said core adjacent to the slots of said core, a flange extending laterally from one longitudinal edge of each blade adapted to be positioned within a slot of the armature core in contact with a flange extending from said core, securing plates fixed to said guide blades, brackets having extending ears fixed to said securing plates, spaced parallel coiled springs secured between the ears of said brackets and stretched between said blades normally biasing said blades towards each other holding said flanges of the blades within the slots of said armature core guiding the armature wire into said slots while being wound on the core, and clips secured between said spaced parallel springs for tensioning said springs.

2,895,691
DISPENSING AND DISPLAY RACK FOR COILED MERCHANDISE
Otis R. Toler, Moundville, Ala.
Application April 12, 1957, Serial No. 652,616
1 Claim. (Cl. 242—85)



A rack for displaying and dispensing coiled flexible merchandise, comprising a vertical standard, a plurality of horizontally disposed circular trays fixedly mounted on the standard in superposed spaced relation, with the standard forming a center for each of the trays, each of said trays having an outer vertical wall for restraining radial expansion of a coil of merchandise and each outer wall having a slot adapted to receive a protruding end of the merchandise, said trays being progressively larger in diameter from the uppermost downwardly, whereby larger coils to be placed in lower trays may pass over upper and intermediate trays, a reel rotatably mounted in each tray on the standard and having an inner vertical wall extending in concentric spaced relation to said outer wall and forming therewith a compartment for supporting a coil of merchandise, the inner vertical wall of said reel being in generally vertical alignment with the outer wall of the next superjacent tray whereby vertical access to each compartment is provided, and means on each outer wall to secure a protruding end of a coil.

2,895,692
APPARATUS FOR CONTROLLING THE SPEED OF JET AIRCRAFT
René Leduc, Le Vesinet, Seine-et-Oise, France
Application December 31, 1953, Serial No. 401,490
Claims priority, application France December 12, 1947
6 Claims. (Cl. 244—76)

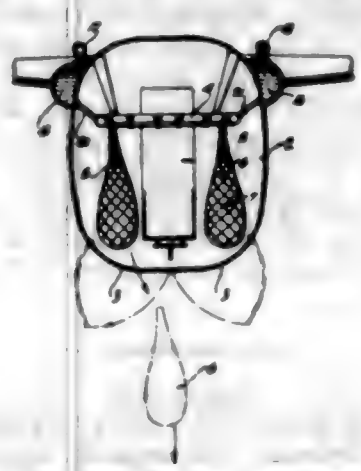


1. For use in an aircraft having a thrust-producing power plant for propelling the aircraft, in combination, first pressure-sensitive means for registering changes in total pressure of the atmosphere; second pressure-sensitive means for registering changes in the static pressure of the atmosphere; lever means operatively connected to said first and second pressure-sensitive means for applying the force of said first pressure-sensitive means through a first moment arm against said second pressure-sensitive means through a second moment arm, so that an equilibrium position is reached when the product of said first moment arm times the force of said first pressure-sensitive means equals the product of said second moment arm times the force of said second pressure-sensitive means; regulating means adapted to be connected to a fuel supply valve for regulating the latter to control the rate at which fuel is supplied to the power plant of the aircraft; and transmission means connected to said lever means and regulating means for transmitting movements of said lever means to said regulating means for operating the latter to maintain said equilibrium position of said lever means and first and second pressure-sensitive means.

2,895,693
FIRE FIGHTING AIRPLANE
Socrates G. Pertiss, Los Angeles, Calif.
Application September 22, 1956, Serial No. 535,818
10 Claims. (Cl. 244—136)

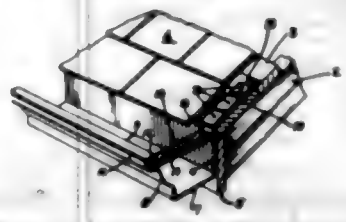
1. A fire fighting airplane having an open bay area, a manifold positioned within the bay area, conduit means extending to said manifold, said conduit means including

a hose connection thereon, a plurality of nozzles on said manifold, a breakable water filled bag mounted on each



of the nozzles, and supporting means on each nozzle for a bag positioned thereon.

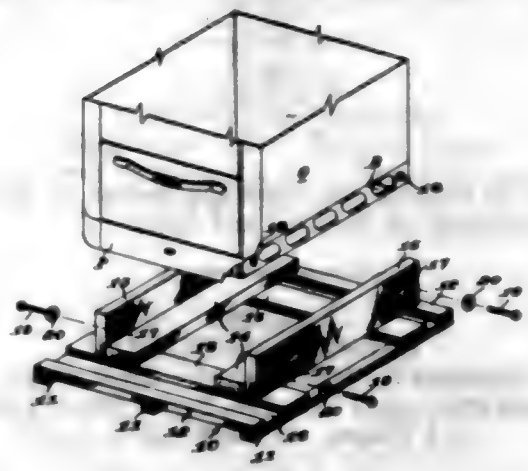
2,895,694
MOUNTING BRACKETS FOR GUTTERS
Robert S. Graving and Lyle W. Lund, Minneapolis, Minn.
Application January 23, 1956, Serial No. 560,498
1 Claim. (Cl. 248—48.1)



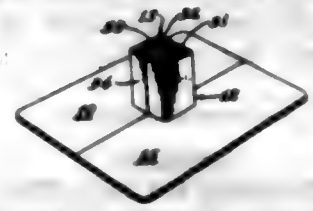
In combination, a roof gutter having a rear vertical wall angled inwardly and upwardly from an intermediate point thereon to provide roof board engaging and connecting shoulder portions, a horizontal bottom wall and an upwardly and outwardly inclined front wall, said front wall having a preformed U-shaped bead along its upper edge with spaced top and bottom horizontal walls providing therebetween a channel, and said top wall of said bead being downwardly and inwardly turned providing a horizontal narrow channel way at the inner edge of said first mentioned channel, and a single piece mounting bar bracket for said gutter comprising a main body portion extending horizontally across said gutter between the front and rear walls thereof; the improvement comprising the intermediate portion of said bracket being offset upwardly and outwardly providing a hand manipulating roof anchoring extension and an intermediate saddle and vertical shoulder portion overlying and tightly engaging the shoulder and vertical rear wall of said gutter, and the opposite end portion of said bracket having an upwardly and inwardly facing hooked end with the upper horizontal tongue thereof underlying the top wall of said bead and positively interlocked within the narrow channel way thereof and the lower portion seated against the bottom horizontal wall of said bead, whereby uniformly spacing and bracing the front wall structure of said gutter from the rear wall portions thereof and securing same under tension.

2,895,695
CRATE BOTTOM FOR RECESSED GAS AND ELECTRIC OVENS
Ralph Elroy Solomon, Chattanooga, Tenn., assignor to Samuel Stamping & Enameling Company, Chattanooga, Tenn., a corporation of Tennessee
Application January 26, 1956, Serial No. 561,628
3 Claims. (Cl. 248—119)

1. A crate bottom for the base of a generally rectangular appliance having a pair of check nuts in each side thereof and whose axes are horizontally disposed; comprising a plurality of spaced slat members in parallelism with said appliance base sides, a plurality of spaced parallel slat members disposed upon said first slat members in right angular relation thereto, a pair of horizontally disposed spaced parallel slat members disposed upon certain of said last plurality of slat members for vertically supporting said base, and a pair of vertically disposed slat members having their lower edge portions engaged with the opposite edges of said pair of horizontally disposed slat members, said last slat members each being provided with a pair of horizontal apertures, and a bolt extendible through each aperture and removably engaged with a respective check nut in said appliance base.



2,895,696
DISPLAY POST SUPPORTS
Edward C. Morgenthaler, Minneapolis, Minn., assignor to Waldorf Paper Products Company, St. Paul, Minn., a corporation of Minnesota
Application April 1, 1955, Serial No. 498,619
6 Claims. (Cl. 248—158)

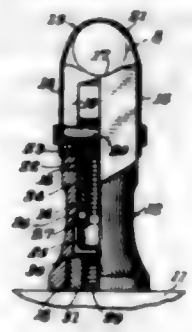


1. A post support including a series of four sections hingedly connected along parallel fold lines, said sections including a pair of end sections comprising the end sections of the series and a pair of intermediate sections between said end sections, the end sections being arranged in a substantially common plane in edge abutting relation, the intermediate sections including first panels extending at substantially right angles to said end sections, said first panels being in surface contact, a series of three additional panels foldably connected to each said first panel and folded to provide a hollow rectangular member overlying one of said end sections, said panels thus providing two side by side hollow rectangular tubes overlying said end sections and connected thereto through said first panels.

2,895,697
MOUNTING POST
Robert J. Paglinco, Glendale, Calif.
Application October 17, 1955, Serial No. 540,694
8 Claims. (Cl. 248—187)

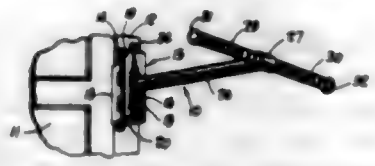
1. A mounting post comprising a housing having a longitudinal bore therein, said housing being provided with opposite flat sides, clamping means comprising a relatively movable seat and clamp band, said band having ends engaged flatwise with said housing sides with the mentioned seat extending in a direction between the

flat sides, means for connecting and disconnecting a band end with the housing, and means disposed within



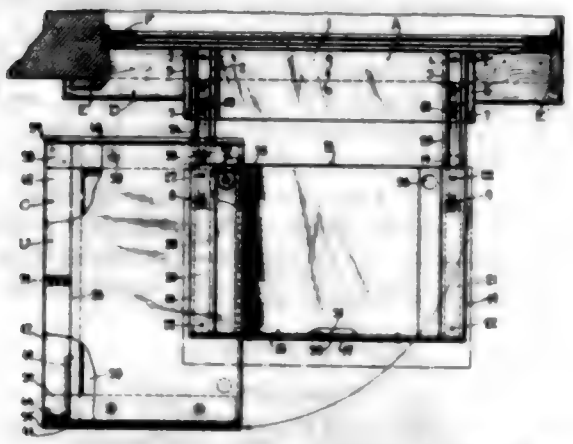
said bore to operate the clamping means to adjust the relative positions of the seat and band.

2,895,698
CLOTHES HANGER
Marianne C. Palmer, Rocky River, Ohio
Application April 11, 1956, Serial No. 577,564
1 Claim. (Cl. 248—285)



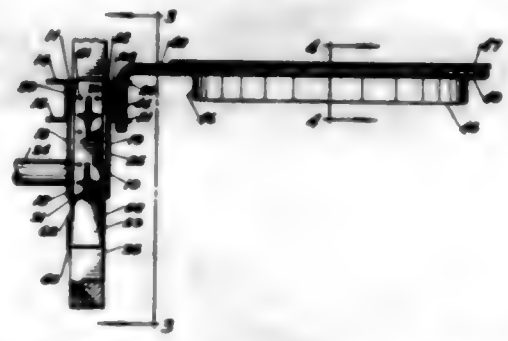
A clothes hanger adapted to be mounted on a door hinge of the type having intermeshing sleeves and a removable pintle, comprising in combination, a unitary yoke, comprising, sheet material bent upon itself to form a base, parallel top and bottom walls perpendicular thereto and two side walls perpendicular to both the top and bottom walls, nested therebetween and connected to said top and bottom walls to form reinforcing supports therefor, the so shaped yoke being open to the front, and a hanger bar mounted on the yoke base and extending laterally thereof in a horizontal plane, the termini of the top and bottom walls being mountable on the door hinge and having aligned bores to receive the hinge pintle therethrough.

2,895,699
AIR CONDITIONER UNIT MOUNTING
Louis Lidsky, Jamaica Estates, N.Y., assignor to The L and P Electric Company, Inc., Maspeth, N.Y., a corporation of New York
Application July 31, 1957, Serial No. 675,434
8 Claims. (Cl. 248—288)



8. An air conditioner unit adjustable mounting comprising a foundation assembly having a base plate adapted to be secured on a window sill and provided with laterally spaced substantially parallel guideway components rigidly secured to said plate and extending forwardly thereof, a sliding tray providing a substantially horizontal upper surface and provided on its lower side with guideway components in cooperative sliding engagement with the guideway components on said foundation assembly and serving to support said sliding tray, a pivotal tray providing a substantially horizontal lower surface in supporting engagement on said sliding tray for movement therewith and pivotally secured thereto adjacent a rear corner for angular movement relative thereto, said pivotal tray having means spaced upwardly from its lower side for supporting an air conditioner unit and a folding leg hinged at its upper end to the front corner of said pivotal tray adjacent the side thereof opposite said pivotally secured rear corner and foldable beneath the front edge of said pivotal tray.

2,895,700
LADDER SUPPORTED CONTAINER HOLDER
Ross Herman Johnson, Indianapolis, Ind.; Le Carda E. Johnson, executrix of said Ross Herman Johnson, deceased, assignor to Le Carda E. Johnson, individually
Application April 5, 1956, Serial No. 576,331
2 Claims. (Cl. 248—310)



1. A holder carried selectively by either one of two rails of a ladder having a plurality of steps therealong, comprising a bracket having a pair of side plates extending along opposite sides of a rail with an integral foot turned respectively therefrom, one foot overlapping and resting along the forward edge of the rail with the other foot shiftably overlapping said one foot; said bracket supported longitudinally along said rail by having a lower end portion of one side plate resting on a ladder step; a plurality of pins carried by and extending from the forward side of said one foot; said other foot having a series of transversely aligned holes selectively receiving said pins therethrough; a bar overlapping said other foot and having a series of spaced apart transversely and longitudinally aligned holes selectively receiving said pins therethrough; an arm turned rearwardly from a lower end portion of said bar; and means engaging said pins on the forward side of said bar clamping together said one foot, other foot, and bar loosely positioning said plates in close proximity to said rail sides with said bar arm extending under said step upon which said side plate lower end portion rests from the top side.

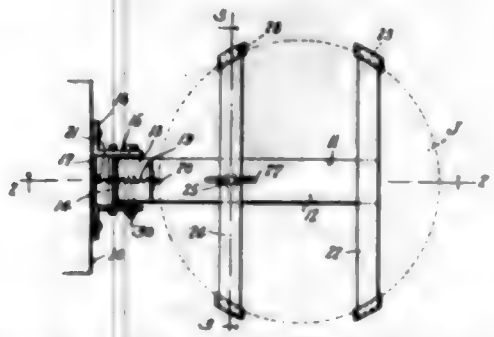
2,895,701
WINDOW BRACKETS FOR CURTAINS, DRAPERIES AND THE LIKE
James Mazzarisi, Jersey City, N.J.
Application July 6, 1954, Serial No. 441,328
1 Claim. (Cl. 248—263)

A support for curtains and the like on a window frame having a horizontal undersurface at the top thereof, comprising four generally straight bracket bars mounted in spaced positions on the undersurface of the window frame and having inner ends secured to said undersurface, each of said bars extending outwardly from said undersurface, the two innermost of said bracket bars having outer ends cooperating to engage opposite ends of a pair of flat telescopic channel-shaped rods for supporting the rods in vertical planes, the two outermost of said bracket bars having outer ends cooperating to engage opposite

angle therewith, a second pair of reinforcing flanges grooves on the front face thereof, a continuously foram-

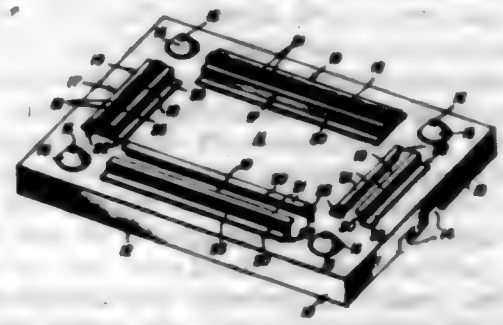
ends of another pair of flat telescopic channel-shaped rods for supporting these rods in vertical planes, and a fifth bracket bar mounted on said undersurface between the innermost bracket bars and extending perpendicularly outward from said undersurface, said fifth bracket having an outer portion with an upwardly bent lip engaging inside a center portion of said other pair of telescopic channel-shaped rods, a center portion of the first-named pair of telescopic channel-shaped rods being supported on said outer portion of the fifth bracket adjacent to and spaced from said lip, said fifth bracket having an upwardly bent portion at the outer edge of said undersurface and a doubly twisted section extending from the upwardly bent portion toward said lip to increase the rigidity of the outer portion of the fifth bracket, the outer end of each of the four bracket bars being connected to the inner end thereof by a 90° twisted portion so that the outer ends extend in vertical planes while the inner ends are horizontal on the undersurface of the window frame.

2,895,702
THERMOS JUG HOLDER
Eldridge M. Pierce, North Highlands, Calif.
Application September 18, 1956, Serial No. 610,484
1 Claim. (Cl. 248—293)



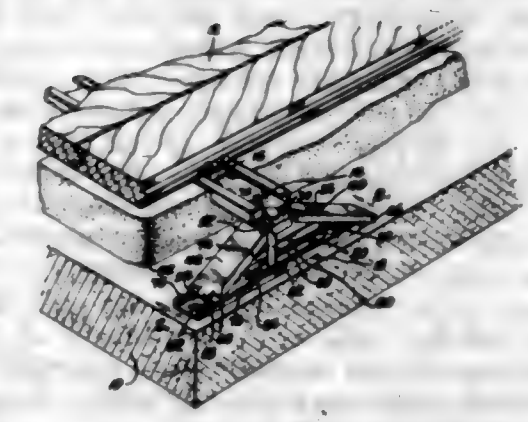
A jug holder comprising a base plate, a pair of angle members fixed to said plate in spaced parallel relation, one side of each angle member projecting right-angularly from said plate, an elongated bar having an obtuse angled end therein adjacent the edges of said angle members, means engaging through the projecting sides of said angle members and fixed to the inner end of said bar pivotally securing said elongated bar at an intermediate point between said angle members said projecting sides of said angle members having elongated parallel slots therein adjacent and below said means for pivotally securing said one end of said elongated bar, a stop bolt extended through said slots engageable with the under side of said obtusely angled end of said elongated bar, a nut for adjustably securing said bolt to adjustably limit the downward movement of said elongated bar, a transverse bar fixed to said first named bar adjacent the forward end of the latter, an upstanding lug at each end of said transverse bar engageable on the outer side of the jug, said lugs having arcuate inner sides to conform to the curvature of said jug, a longitudinal slot in said elongated bar, a second transverse bar, a pin engaging through said slot for adjustably securing said second transverse bar to said elongated bar longitudinally of said elongated bar, a pair of upstanding lugs having arcuate surfaces oppositely disposed relative to said first mentioned arcuate surfaces carried by the ends of said second transverse bar cooperating with said first named lugs in clamping the jug bottom, a rubber cap on each lug to yieldably hold the jug onto said transverse bars, and spring means connecting said base plate to said elongated bar at the obtuse angle thereof for biasing said elongated bar and the parallelism of said base plate in the absence of weight on said elongated bar.

2,895,703
TELEPHONE SUPPORT
José Brito Perez, Havana, Cuba
Application October 24, 1957, Serial No. 692,126
3 Claims. (Cl. 248—346)



1. A support for a portable telephone comprising a tray-like member for receiving and supporting the base of a telephone, said member conforming substantially to the shape of the telephone base and having a bottom wall, a plurality of universally movable supporting elements depending from said bottom wall for engagement with a table top and supporting said member for movement in any direction on the table top, and nonscratching friction pad means depending from said bottom wall and extending between said supporting elements in both directions with the lower surface of said pad means disposed above the table top engaging plane of said supporting elements and engageable with the table top to arrest movement of said member only when at least one of said supporting elements overruns the edge of the table top and said member becomes tilted.

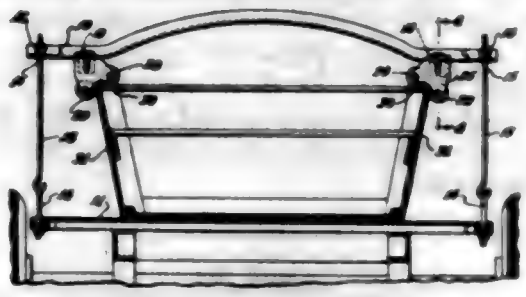
2,895,704
CONSTRUCTION SHIM
Leon F. Urbain and Matthew P. Glowacki, Chicago, Ill.; said Glowacki assignor to said Urbain
Application November 26, 1954, Serial No. 471,386
9 Claims. (Cl. 248—354)



9. An integral one-piece adjustable sheet metal shim for adjusting the position of a load receiving member supported thereby within the range of about ¼ inch to about 2 inches comprising a base, a first pair of reinforcing flanges formed on the longitudinally extending sides of said base and disposed at substantially right angles thereto, a first side member having one end thereof integrally connected to one end of said base by a bendable connection and in use disposed at an acute

angle therewith, a second pair of reinforcing flanges formed on the longitudinally extending sides of said first side member, a load bearing support member having one end thereof integrally attached to the other end of said first side member by a bendable connection and disposed in use at an obtuse angle therewith, a third pair of reinforcing flanges formed on said support member, a second side member having one end thereof integrally attached to the other end of said support member by a bendable connection and disposed in use at an obtuse angle therewith, a fourth set of reinforcing flanges formed on the longitudinal edges of said second side member, a set of teeth formed in each of said first pair of reinforcing flanges on said base adjacent the free end of said base, a laterally and upwardly extending projection formed on each edge of second side member, one of said projections cooperating with one set of teeth and the other projection cooperating with the other set of teeth, and a tool engaging tongue formed on the free end of said second side member between said projections and extending upwardly therefrom, said support member having an aperture formed therein and said base having an elongated slot formed therein, said aperture being in alignment with some portion of said slot at all adjusted positions of said shim, the end of said base opposite the connection to said first side member having an aperture formed therein, the width of said base being less than the width of said support member and said side members whereby said first pair of reinforcing flanges fit within the other pairs of reinforcing flanges.

2,895,705
HOLD-DOWN DEVICE
Carl E. Mahnn, Williamsburg, Ohio
Application July 7, 1955, Serial No. 520,432
4 Claims. (Cl. 248—361)



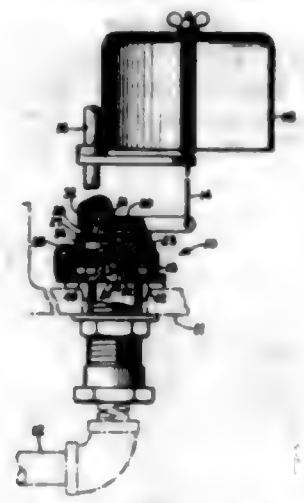
1. A hold-down device for maintaining an object on a base, said hold-down device comprising a bar to be placed across said object; fastening members connected to said bar and connectable to a said base whereby to draw said bar towards said base; a pair of hold-down members connected to said bar; each said hold-down member including a block connected to said bar, a first pin extending rotatably through a bore in said block, said pin having ends of reduced diameter forming shoulders, a pair of plates clamped on said ends against said shoulders, the distance between said shoulders being greater than the length of said bore whereby said plates may rotate with said pin and free of said block, and a pair of rubber bumpers carried between said plates and arranged to be engaged with the top and side of said object; said bar being slotted and said block being connected to said bar by means of a bolt passing through said slot whereby said block may be shifted along said bar throughout the length of said slot.

2,895,706
VACUUM FILM SUPPORT
Delbert T. Bintherwick, Chicago, Ill., assignor to Robertson Photo-Mechanix, Inc., a corporation of Illinois
Application February 14, 1955, Serial No. 488,001
7 Claims. (Cl. 248—363)

1. A vacuum support for a photosensitive sheet or film, comprising a backing plate provided with concentric grooves on the front face thereof, a continuously foraminated, thin, plastic sheet attached to said face adapted to receive a sheet or film to lie flat thereagainst, there being a series of perforations passing through said grooves to the rear of said backing plate, and a valve disposed on the rear of said backing plate, said valve being connected to a source of vacuum and adapted to be connected to a selected number of said perforations,

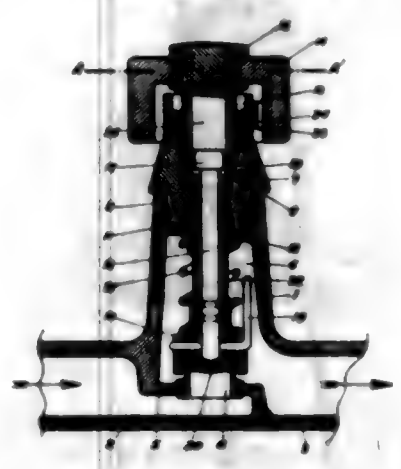
guide flanges formed on the rear of said plate, said guide flanges extending along straight lines and encompassing said perforations, said valve slidably mounted between said guide flanges, a cover plate over said guide flanges and valve to retain said valve in its guideway, a slot formed in said cover plate over said guideway, and a finger piece projecting from the valve through said slot, whereby said valve may be adjusted to connect a selected number of said grooves to said source of vacuum.

2,895,707
VALVE CONSTRUCTION
James R. Bailey, Chicago, Ill., assignor of thirty percent to Robert J. Bailey, Chicago, Ill.
Application September 14, 1953, Serial No. 379,887
2 Claims. (Cl. 251—46)



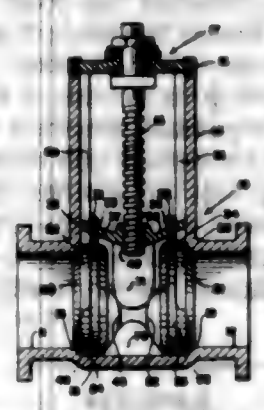
1. In a fluid control valve, the combination comprising a valve body, a source of pressure fluid, a main valve seat, a one-piece flexible diaphragm mounted in said valve body and having normal sealing engagement with said valve seat for shutting off the flow of pressure fluid, said valve body providing a pressure chamber on the opposite side of said diaphragm from said valve seat, said one-piece diaphragm comprising a central boss and an opening of small diameter extending through said diaphragm and boss so that pressure fluid from said source may enter said chamber for exerting a seating pressure on said diaphragm, said boss extending from said diaphragm in a direction away from said seat and said boss cooperating with a wall of said chamber to limit the total excursion of said diaphragm when moving from its seat, said boss comprising a ball and an integrally formed recessed guide forming a continuation of said opening for centering the ball for captive movement relative to said opening thereby to prevent reverse flow of fluid through the diaphragm, said valve body having a passage for venting said pressure chamber, a seat on said passage exterior of said chamber, a valve member for normally sealing off said passage at said seat on said passage and for venting said chamber for causing unseating of the diaphragm and discharge of pressure fluid from said valve.

2,895,708
FAUCET
Ludovico Palumbo, Rome, Italy
Application October 9, 1956, Serial No. 614,829
Claims priority, application Italy October 14, 1955
1 Claim. (Cl. 251—77)



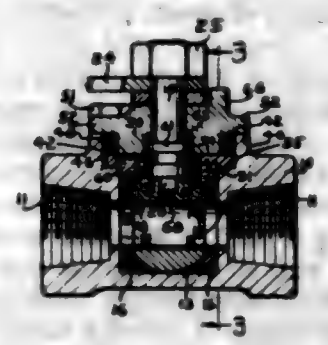
A faucet comprising a body provided with an inlet, an outlet, a working chamber therebetween, a valve, a valve seat cooperating with said valve to control flow from said inlet to said outlet, a cylindrical hollow skirt fixed on the upper part of said body and depending into said working chamber, an annular indentation on the outer circumferential surface of said skirt, a valve stem passing through the bore of said skirt and carrying at its lower end said valve, a control device comprising a hollow cylinder mounted on said body with a lost-motion connection to said valve stem adapted for moving said valve stem together with said valve away from said valve seat, an annular indentation on said valve stem, a tubular elastic sleeve surrounding said skirt and the lower end of said valve stem and anchored on said indentations, a valve spring surrounding said sleeve and abutting at one end against said skirt and at the other end against said valve so as to urge said valve against said valve seat, a lubricant in said hollow cylinder in the clearance between the bore of the skirt and the valve stem and between the flexible sleeve and the valve stem, and stop means on said body and on said control device to limit the operating movement of said control device.

2,895,709
GATE VALVE
Edwin D. Rattigan, Chalfont, Pa.; A. Frieda Rattigan, administratrix of the estate of Edwin D. Rattigan, deceased
Application March 22, 1955, Serial No. 495,990
5 Claims. (Cl. 251—167)



5. In a valve assembly having a flow path, a valve seat across said flow path, a valve disc for mating therewith and an operating shaft extending angularly of said flow path, means for providing selected constrained motion to the valve disc relative to its seat by rotation of the operating shaft including a unit assembled to the operating shaft so as to move parallel to the shaft axis upon rotation of the shaft and having a horn extending outwardly from the shaft and angularly away from the flow path, said valve disc being slidably assembled to said horn, a contoured guide projection affixed internally of the valve assembly and a projection assembled to the valve disc for mating therewith, said projections being respectively contoured to provide a pair of interacting surfaces forcing positive constrained motion of the valve disc longitudinally of the flow path toward the valve seat as rotation of the shaft in closing direction moves the disc transversely of the flow path into the flow path, a guide rail having a recess affixed internally of the valve assembly and a second projection assembled to the valve disc for mating therewith, said recess and said projection being respectively contoured to provide a second pair of interacting surfaces forcing positive constrained motion of the valve disc longitudinally of the flow path away from the valve seat as rotation of the shaft in opening direction moves the disc transversely of the flow path out of the flow path.

2,895,710
BALL VALVE
Robert E. Sanctuary, Shrewsbury, Mass., assignor to Worcester Valve Co., Inc., Worcester, Mass., a corporation of Massachusetts
Application May 29, 1956, Serial No. 588,064
3 Claims. (Cl. 251—312)



1. A ball valve comprising a body having two longitudinally aligned fluid passages and a lateral opening communicating with a central space, the walls defining said space and lateral opening including parallel annular end walls around the fluid passages and a U-shaped bottom wall, a rotatable ball having an opening therethrough communicable with the fluid passages, annular seat rings fitting against and clampingly securing the ball therebetween and which are supported by said bottom surface and seat laterally against the annular end walls and provide for the passage of fluid therethrough, said parallel walls having a horizontal spacing nearly equal to the thickness of an assembled unit of two seat rings under compression and a ball therebetween and said lateral opening being greater than said spacing and providing a free passage for the simultaneous insertion of said unit elements into operative positions, a removable bonnet unit having a retainer removably insertable through the lateral opening, said retainer having an under partial cylindrical surface cooperating with the U-wall bottom surface to provide a substantially complete cylindrical bearing for the peripheries of the seat rings, said bonnet unit having a vertical bore, a rotatable valve stem projecting through the bore which is connected to rotate the ball between positions of permitting and opposing the passage of fluid therethrough, removable fasteners for securing the bonnet unit on the body and forcing the assembled ball and seat rings downwardly into position within the internal cylinder formed by the U-shaped bottom and the retainer, and seals between the stem and the bonnet unit and between said unit and the wall of the lateral opening of the valve body for preventing the escape of fluid past the stem and the bonnet unit.

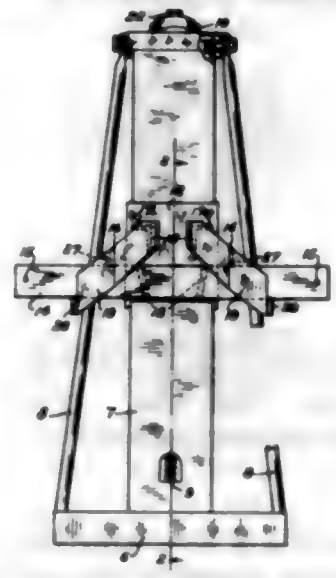
through, a shaft projecting through the drum in clearance relation to the bore thereof, means to releasably hold rails for holding said supports in selected, adjusted position with respect to said rails, and fence elements ei-

2,895,711
DEVICE FOR INSPECTING PNEUMATIC TIRES
Charles E. Branick, Fargo, N. Dak.
Application May 2, 1957, Serial No. 656,674
13 Claims. (Cl. 254—50.3)

1. In a device for inspecting pneumatic tire casings, a frame structure; means on said frame structure for supporting a tire casing for rotation on a horizontal axis; a pair of opposed tire bead-engaging and spreading elements mounted for movements in directions radially and axially with respect to a casing mounted in said device; means including a reciprocatory member and linkage operatively connected to said reciprocatory member and said bead-engaging elements for moving said elements toward each other to dispose said elements radially inwardly of the beads of the tire casing and for moving said elements radially outwardly into engagement with the beads of the tire and in opposite directions axially of the tire to spread the beads apart responsive to movement of said reciprocatory member in one direction; said linkage comprising a pair of spreader arms, means connecting the lower ends of said arms to said reciprocatory member for common reciprocatory movements therewith and for pivotal movements relative thereto, and a pair of control links pivotally secured together at their inner ends and each pivotally connected outwardly of its inner end to the intermediate portion of a different one of said spreader arms; said bead-engaging elements comprising rollers journalled to the upper ends of said spreader arms; stop means engageable with said control links upon movement of said reciprocatory member in one direction to impart spreading movements to said spreader arms and bead-engaging rollers; means for imparting rotation to the tire casing on its own axis relative to said bead-engaging elements; said elements engaging and spreading a relatively small portion of the circumferential dimension of said beads, whereby said beads are spread apart only at the portions thereof engaged by said elements, said spread portions contracting axially during movement thereof away from said elements upon rotation of the tire casing.

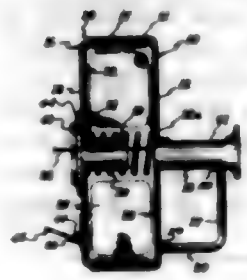
2,895,712
ADJUSTABLE LOAD SUPPORT
Ingram V. Stovern and Wendell L. Vallee, Sheboygan, Wis., assignors to Blackhawk Mfg. Co., West Allis, Wis., a corporation of Wisconsin
Application May 21, 1956, Serial No. 586,225
2 Claims. (Cl. 254—134)

2. In a load carrier for a vehicle jack, an elongated rigid horizontal beam having its mid-portion formed for attachment to the lifting member of the jack, and a pair of load supports slidably and swingably adjustable relatively to each other on said beam, each of said supports having spaced side walls united at their upper ends to form a saddle by an integral transverse element provided with load engaging surfaces disposed at an angle relative to each other while the lower side wall ends are united by integral upper and lower transverse off-set beam engaging elements to provide a loop snugly but slidably embracing the beam, said supports being swingable toward or away from each other relative to said beam about said lower elements to alternately present



said saddle surfaces to the load at various positions along the beam, and the supports also being bodily slidable along said beam when swung either toward or away from each other to likewise present said saddle surfaces at various positions along the beam.

2,895,713
CABLE LASHER
John Thornton Richardson, Phoenix, Ariz., assignor to Antennavision Manufacturing & Engineering Company, Phoenix, Ariz., a corporation of Arizona
Application October 8, 1956, Serial No. 614,675
5 Claims. (Cl. 254—134.3)



1. A cable lasher including a pair of interengaging cup members to hold a coil of lashing wire, a guide tube projecting outwardly from one of said cups adapted to traverse along a messenger cable and electrical conductor to be lashed together, a radially extending plate having diametrically disposed lugs fixed on the outer end of said guide tube, means including a pair of segmental members supported in spaced relation from each other and from the other cup to provide a radially extending slot between said segmental members and cavities between said segmental members and said other cup to receive corresponding lugs of another lasher when relatively rotated therewith for multiple interconnection of said lasher on a transmission line to be lashed, and means to lock adjacent interconnected lashers against relative rotation.

2,895,714
CABLE WINCH
John C. Clark, Perkins, Calif., assignor, by mesne assignments, to Western Piping & Engineering Co., Inc., San Francisco, Calif.
Application February 27, 1956, Serial No. 567,817
4 Claims. (Cl. 254—165)

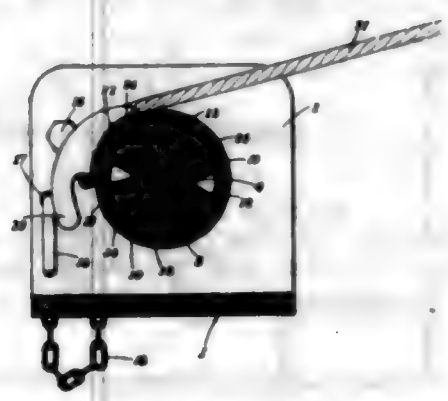
1. In a winch, a tubular drum to receive a cable in wrap-around relation, the drum having a bore there-

spaced from but covered by the other face to provide a

2,895,720

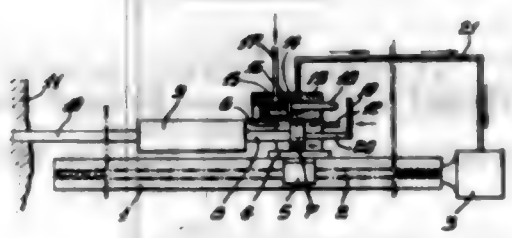
the operating shaft including a unit assembled to the operating shaft so as to move parallel to the shaft axis upon of the valve body for preventing the escape of fluid past the stem and the bonnet unit.

through, a shaft projecting through the drum in clearance relation to the bore thereof, means to releasably hold the shaft against rotation, opposed splines projecting from the shaft toward the drum bore, opposed splines in the drum projecting from said bore toward the shaft in circumferentially spaced relation to the shaft splines, and



shock absorbing members disposed in the spaces between and engaging predetermined ones of the splines and arranged so that upon rotation of the shaft in a direction to rotate the drum in the same direction to wind the cable onto the drum the rotative force will be taken through said members; said members comprising compressible rubber shoes extending substantially the full length of the drum.

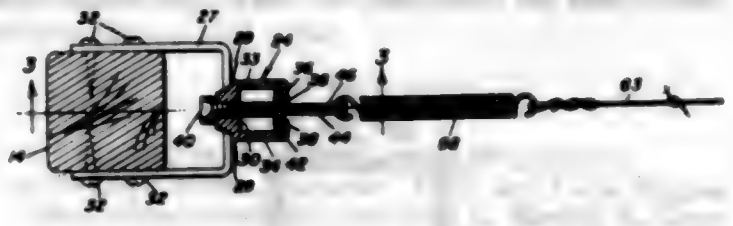
2,895,715
DRILLING AND SIMILAR MACHINES
Andre Pierre Camille Stesmick, Fontaine l'Eveque, Belgium
Application October 30, 1956, Serial No. 619,303
Claims priority, application Great Britain October 31, 1955
2 Claims. (Cl. 255—45)



1. A device for feeding a power operated drilling tool into its work, said device comprising a supporting member which is elongated in the direction of drilling; a tool support for said drilling tool longitudinally slidably mounted on said elongated supporting member; air cylinder means longitudinally slidably mounted on said supporting member and connected to advance said tool support; motor driven advancing means acting on said air cylinder means to advance said air cylinder means and said tool support together; control means for said motor of said advancing means; an actuating member movable with said tool support and cooperating with said control means for energizing said motor to advance said air cylinder means in response to advancing movement of said tool support; and air supply means continuously furnishing a supply of compressed air to said air cylinder means, whereby a constant drilling pressure is resiliently applied to said drilling tool independently of the operation of said motor.

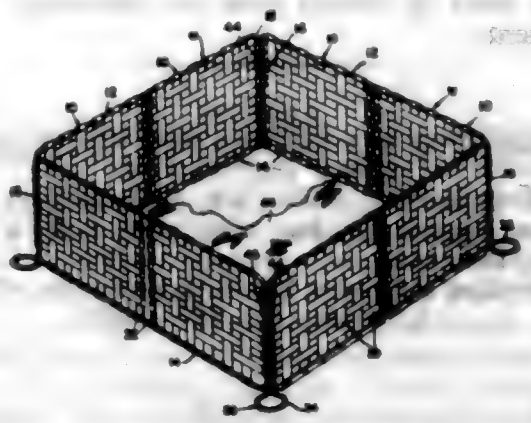
2,895,716
ADJUSTABLE FENCE SECTION
Paul A. Voltri, Crested Butte, Colo.
Application January 2, 1957, Serial No. 632,872
10 Claims. (Cl. 256—23)

1. In a fence, a fence section comprising a pair of spaced rails, supports slidable in said rails, means on said rails for holding said supports in selected, adjusted position with respect to said rails, and fence elements ex-



tending between said supports in order to be elevated and lowered with the supports with which they are connected.

2,895,717
FOLDABLE PLAY PEN
Anthony De Falco, New Haven, Conn., assignor of one-third to Martin M. Morrison and one-third to Lawrence J. Garofalo, New Haven, Conn.
Application April 25, 1955, Serial No. 503,595
17 Claims. (Cl. 256—25)



1. A play pen having a plurality of side walls, each of said side walls comprising a horizontal top rail and upright end rails, said walls being arranged with the end rails of each wall in juxtaposed relation with an end rail of an adjoining wall forming a corner of the pen, a foot member adjacent to each of said corners embodying a floor engaging part having its major portion extending and lying outwardly from said corner with its innermost part directly below the corner and at least two elongate elements carried in upright position by said innermost part, means disposed between the elongate elements and connecting the same to each other and to the lower ends of two juxtaposed end rails, said upright elements being spaced apart in a line extending transversely across the floor engaging portion whereby said major portion will at all times lie outside of the pen enclosed area.

2,895,718
WATER POWER HEATER OR COOLER FOR NURSING BOTTLES
John B. Prather, Yonkers, N.Y.
Continuation of abandoned application Serial No. 541,410, October 19, 1955. This application January 2, 1958, Serial No. 706,817
12 Claims. (Cl. 257—74)

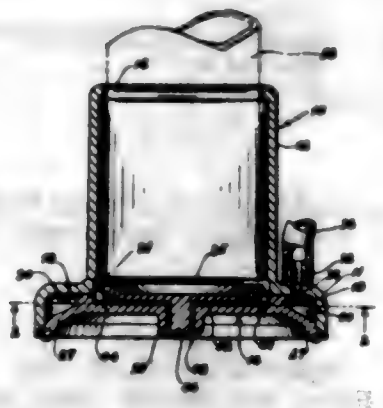
1. Bottle-warming or cooling apparatus comprising a vessel for holding a bottle or the like, a base at the lower end of the vessel, a rotor in the lower part of the vessel, the rotor having blades and having a top surface on which the bottle is supported, a bottom element which closes the lower end of the vessel and extends under said base, the base and bottom element having confronting faces in contact with one another over a portion of their areas, at least one of the confronting faces having a portion

chamber for moving material in said chamber towards air lift piston in said cylinder having a passage to deliver

relative to each other while the lower side wall ends are

wrap-around relation, the drum having a bore there-

spaced from but covered by the other face to provide a water chamber, a channel formed in at least one of the confronting faces and covered by the other face to provide a passage, the passage being in position to discharge water from the water chamber into the lower part of the

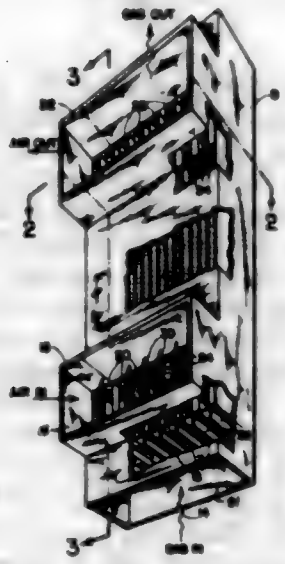


vessel in a generally tangential direction with respect to the rotor and into impingement with the blades of the rotor to rotate the rotor and the bottle supported thereby, and means securing the base to the vessel with said confronting faces in contact over the substantial areas of their extent.

2,895,719
METHOD AND APPARATUS FOR RECUPERATIVE HEAT EXCHANGE

Henry J. Binskowski, New York, N.Y., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware

Application December 24, 1954, Serial No. 477,482
4 Claims. (Cl. 257—245)

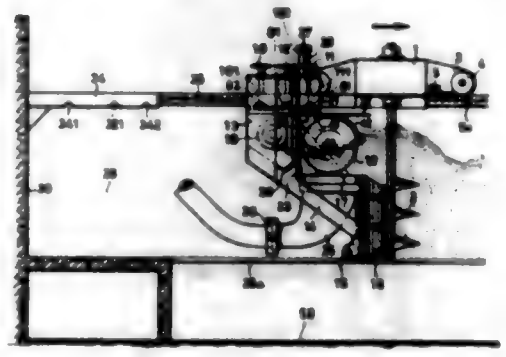


2. The method of indirectly transferring heat from a heating gas to relatively cold gas to be heated through a metallic wall comprising continuously passing said heating gas over one surface of said wall in uniflow direction, continuously passing said gas to be heated over the opposite surface of said wall in uniflow direction, retaining a material in particle form in engagement with each of said surfaces, and fluidizing said material by passing said gases therethrough and imparting heat from said heating gas to said cold gas through said wall and progressively lowering the temperature of the heating gas and raising the temperature of the cold gas as each pass through the heat exchanger whereby the gas that is heated has a substantially higher temperature upon leaving the heat exchanger than it did as it entered the same and the heating gas has a substantially lower temperature as it leaves the heat exchanger than it did upon entering the same.

2,895,720
APPARATUS FOR TREATING GRANULAR MATERIAL

Hans Robert Werner Albin Koch and Hans Joachim Koch, Stuttgart-Bad Cannstatt, Germany

Application December 24, 1957, Serial No. 705,005
Claims priority, application Germany December 24, 1956
6 Claims. (Cl. 259—5)

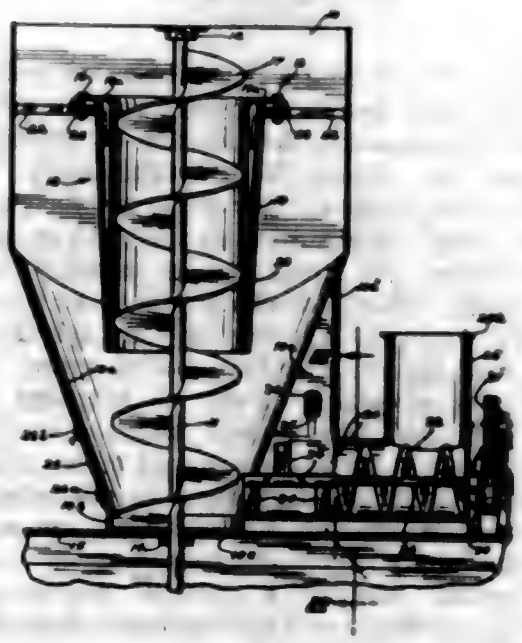


1. Apparatus for treating granular material, comprising, in combination, an elongated container for the granular material; carriage means longitudinally movable along the container; a plurality of vertically extending screw means carried by said carriage means for movement therewith longitudinally along the container; a horizontal screw means extending transversely across the container; means for optionally connecting said horizontal screw means with said carriage for movement therewith or with a wall of the container, said horizontal screw means including an elongated channel extending across the container, having a horizontal screw located therein, and being open along at least one side; and supply means communicating with the interior of said channel for supplying granular material thereto to be distributed by said horizontal screw means in the container.

2,895,721
AUXILIARY MIXING DEVICE

Howard C. Jacobsen and Robert P. Olson, Minneapolis, Minn.

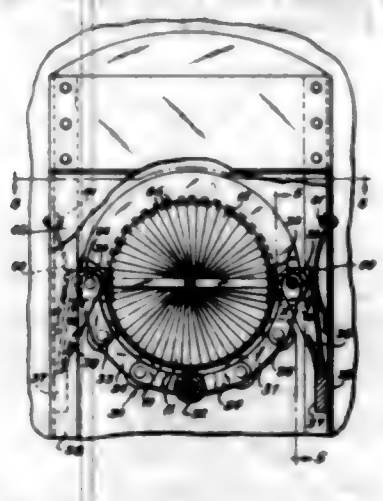
Application May 6, 1957, Serial No. 657,103
3 Claims. (Cl. 259—23)



1. A mixing device for feed material having in combination, a tank having a lower frusto conical portion, a vertically disposed wall portion at one side of said frusto conical portion, said wall portion having parallel sides extending to said frusto conical portion thus forming a chamber, a conveyor disposed in said tank adapted to move material upwardly, a casing removably suspended in said tank closely about a substantial portion of said conveyor, an auxiliary mixing means disposed in said

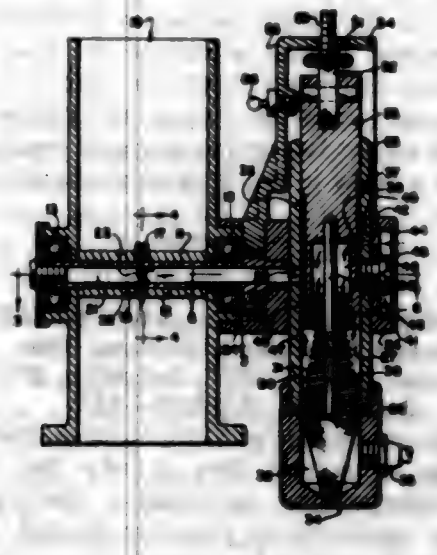
chamber for moving material in said chamber towards said conveyor, said material being dropped directly into said chamber by said conveyor over the top of said casing, said tank having a lower cylindrical portion depending therefrom, said conveyor extending into said lower cylindrical portion, inlet means communicating with said cylindrical portion for receiving material, and rotatable means in said inlet means for moving said material therethrough to said conveyor in said cylindrical portion.

2,895,722
CONCRETE MIXER
Everett D. Hunkins, University City, Mo.
Application August 20, 1956, Serial No. 605,026
7 Claims. (Cl. 259—164)



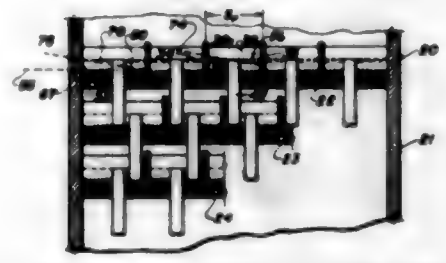
1. A material mixer comprising a rotatable mixing drum, said drum having a hub at one end thereof, means for rotatably supporting the opposite end of said drum, and means for rotatably supporting said hub, said latter means comprising a chain fixedly secured to and positioned between stationary supporting means on said mixer, said hub supported in a rotatable position by said chain.

2,895,723
CARBURETORS FOR INTERNAL COMBUSTION ENGINES
Alfred Wolland, Clearwater, Fla.
Application March 4, 1958, Serial No. 719,153
19 Claims. (Cl. 261—44)



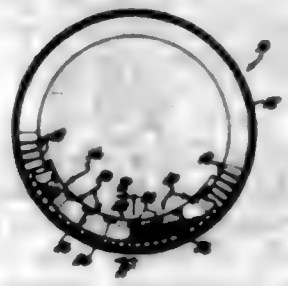
1. A carburetor comprising an air intake barrel, a throttle valve in said barrel, a cylinder offset from said barrel having a fuel outlet to said barrel and a supplemental air inlet, a fuel well in said cylinder, a reciprocable air lift piston in said cylinder having a passage to deliver supplemental air from said inlet through said well to said outlet, and common mechanical means for operating said throttle and said piston to proportion the fuel and air mixture leaving said outlet.

2,895,724
GAS-LIQUID CONTACT APPARATUS
Charles Leo Newton, Columbus, Ohio, and Leslie Eugene White, Glendora, Calif., assignors to Herrick L. Johnston, Inc., Columbus, Ohio, a corporation of Ohio
Application March 21, 1956, Serial No. 572,920
2 Claims. (Cl. 261—114)



1. In a gas separation-apparatus, the combination of tray means forming a horizontal surface, a plurality of spaced bubble caps on said surface, each of said bubble caps including a gas intake opening through said tray means and a gas outlet opening adjacent the upper surface of said tray means; a plurality of spaced baffles on said surface and extended transversely to said bubble caps to form a plurality of wells for retaining pools of liquid separated one from another, the walls of each of said wells being formed by said baffles and bubble caps, a plurality of wells being provided between each pair of baffles; a liquid drain member centrally disposed in each of said wells intermediate said walls of the well formed by said baffles and bubble caps and extended through said tray means and having an upper opening above said horizontal surface and below the tops of the side walls of said wells; divider means in each of said bubble caps between said gas intake opening and said gas outlet opening each divider being higher than the associated gas outlet opening; and the vertical distance of said drain opening above said surface being less than the height of the baffles and bubble caps and greater than the height of the associated gas outlet opening.

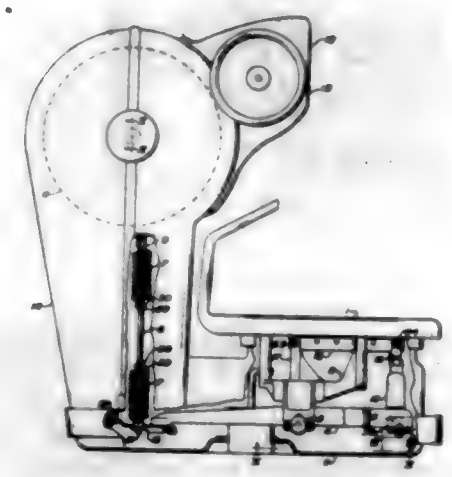
2,895,725
ROTARY KILN CONSTRUCTION
Frank J. Anderson, Laramie, Wyo., assignor to Monolith Portland Midwest Company, Los Angeles, Calif., a corporation of Nevada
Application December 26, 1956, Serial No. 630,618
16 Claims. (Cl. 263—33)



3. A rotary kiln comprising: a cylindrical metal shell and a lining within said shell, at least a portion of said

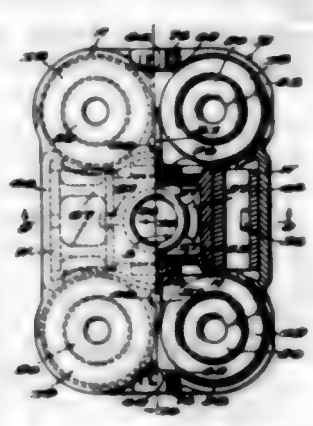
lining including basic bricks each of which is of substantially uniform physical and chemical composition throughout and each of which has a complete face in full contact with said metal shell, and a metal shim positioned between at least one surface of each of said bricks and a surface of another of said bricks with each of said shims being spaced away from said shell so as to restrict the transfer of heat to said shell through said shims.

2,895,726
BALL BEARING SCALE PIVOTS
Lawrence S. Williams, Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Application June 7, 1954, Serial No. 434,759
5 Claims. (Cl. 265—27)



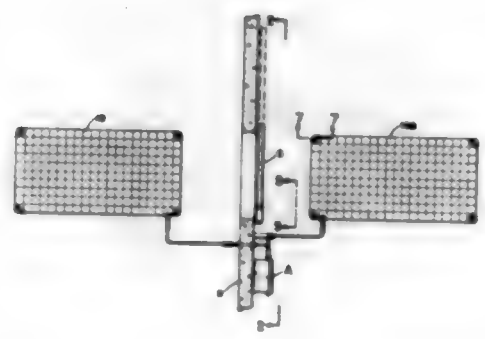
1. In a device of the class described in combination, a lever having a first V-groove extending along its fulcrum pivot axis and a second V-groove parallel to said first V-groove and extending along its load pivot axis, a stud clamped in each V-groove and extending laterally from the lever, a base having a V-groove that extends along the fulcrum axis of the lever when mounted on the base, a ball bearing assembly mounted in the V-groove of the base and engaging the stud projecting along the fulcrum axis, a load receiving spider, and a ball bearing assembly mounted in the spider and engaging the stud projecting along the load pivot line.

2,895,727
COMBINED SPRING GROUP AND FRICTION DAMPER
Carl D. McClurg, Columbus, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio
Application May 17, 1954, Serial No. 430,193
22 Claims. (Cl. 267—9)



1. In a combined spring group and damping mechanism, a first member, a second member, vertically disposed load supporting springs between the first and second members, walls on an intermediate portion of the first member having generally vertical inner faces, a spring seat on an intermediate portion of the second member, a bridge member having inclined surfaces at the ends thereof facing said vertical surfaces, an actuating spring engaging said spring seat and said bridge member, a wedge disposed between each inclined surface of the bridge member and a vertical face on the first member, and lugs carried by the second member each engaging an apex portion of the associated wedge whereby said actuating spring and the bridge member urge outer faces of the wedges into engagement with said vertical faces.

2,895,728
DOOR OPERATING MECHANISM
Abraham Edelman, New York, N.Y.
Application January 30, 1953, Serial No. 334,324
5 Claims. (Cl. 268—47)

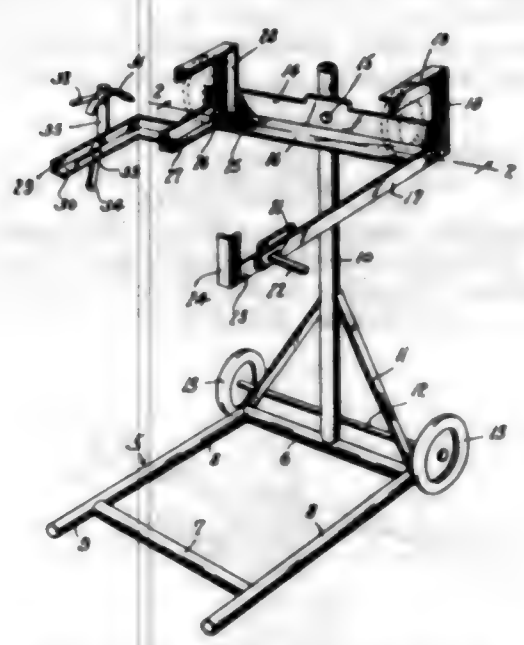


2. In a door control system for a door equipped with power means for producing an opening movement thereof and an electric current receiving element for directing operating energy thereto, the combination, with said door and current receiving element, of an antenna assembly suspended above the area of approach to said door, means to impress upon said antenna assembly an alternating electric potential of sufficiently high frequency to create an electric field adapted to encompass some part, at least, of a body approaching said door, means responsive to the disturbance produced in said field, by said approaching body, to actuate said current receiving element and thereby to cause said power means to open the door, said actuating means including electronic timing means for causing said power means to reclose the door at a predetermined time measured from the commencement of operation of said actuating means, and means included in said timing means for prolonging said measured time, in response to a delay in the departure of said body from said door.

2,895,729
SERVICE STAND FOR LAWN MOWERS
Pressie W. Sanders, Urbana, Ohio
Application July 18, 1957, Serial No. 672,757
2 Claims. (Cl. 269—156)

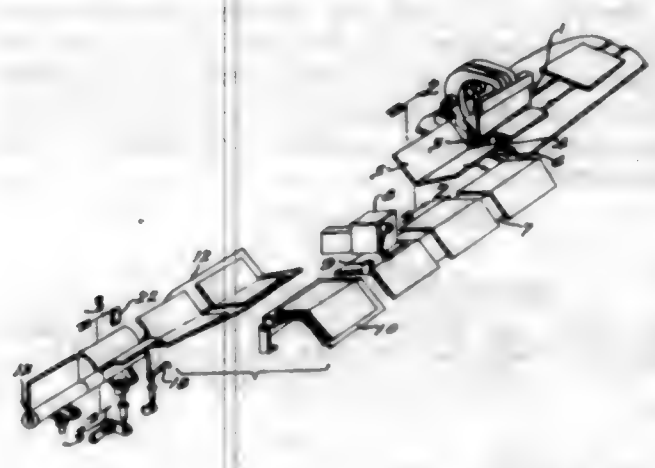
1. A mower service stand comprising a base, a vertical post rising from said base at one end thereof, a mower supporting frame including a main supporting bar bolted on said vertical post for pivotal movement about the axis of said bolt, spaced flanged rearwardly extending horizontal supporting bars having substantially U-shaped ends connected to and extended from the ends of said main supporting bar, the open sides of said horizontal bars having U-shaped ends extending rearwardly,

providing support for mower being serviced, and an extension section mounted on one end of one of said hori-



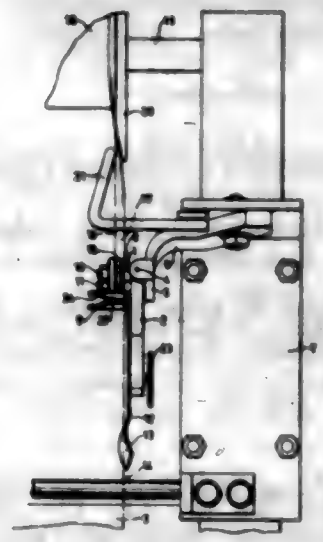
zontal bars for adjustment longitudinally of said bar of which it forms a part, and wheels on which said base is mounted.

2,895,730
APPARATUS FOR MAKING ARTICLES STITCHED ALONG A FOLD
Hans Biel, Ernst Pfiffle, and Fritz Bertsch, Neuffen, Germany, assignors to Hans Sickinger, Providence, R.I.
Application April 29, 1955, Serial No. 505,006
Claims priority, application Germany April 30, 1954
7 Claims. (Cl. 270—37)



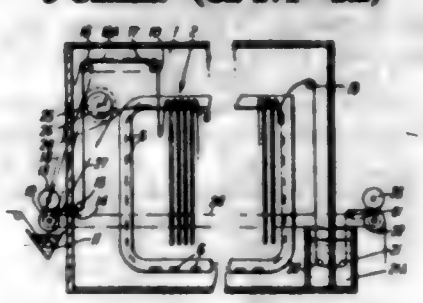
1. In a device for manufacturing exercise books or the like, means for holding a pile of sheets, a die movable downwardly to fold said sheets, a carriage for receiving said pile with said fold pointing downwardly, said carriage being swingable to a position reversing said pile so that said fold points upwardly, a saddle for receiving said reversed pile, a stop engageable by said pile when advanced along said saddle, whereby the sheets of said pile will be brought into register in the direction of said fold while in an angular position with said fold pointing upwardly, means for stitching said fold while supported by said saddle, a second reversing carriage at the end of said saddle for receiving stitched piles advanced therealong, an upwardly facing angular trough alongside said second reversing carriage, said second reversing carriage being swingable to deposit the stitched pile on said trough, and a repressing mechanism engageable with said fold as said pile is advanced from said trough with said fold pointing downwardly.

2,895,731
APPARATUS FOR FOLDING A RUNNING WEB OF FLEXIBLE MATERIAL
Sten Elmar Nilsson, Lund, Sweden
Application April 8, 1957, Serial No. 651,327
Claims priority, application Sweden April 17, 1956
4 Claims. (Cl. 270—86)



1. An apparatus for folding a longitudinal margin zone of a running flexible web, comprising means for continuously scoring the web along a line defining said margin zone, means for continuously applying a moment to said margin zone initially to fold the same gradually about said score line towards and somewhat beyond a plane therethrough perpendicular to the remaining width of said web, and means subsequently for continuously and gradually folding said margin zone about said score line towards the adjacent web face and into a final folding position desired, said final folding means comprising a pulley roller engagingly enveloped by one web face along an arc of circle corresponding to the final degree of folding desired, said moment-applying means comprising the inner face of an end wall flange of said pulley roller, said end wall flange being of a diameter greater than that of the pulley roller proper, and said scoring means maintaining said score line substantially in a plane perpendicular to the axis of said pulley roller and passing through the intersection of the cylindrical surface thereof and said inner face of said end wall flange.

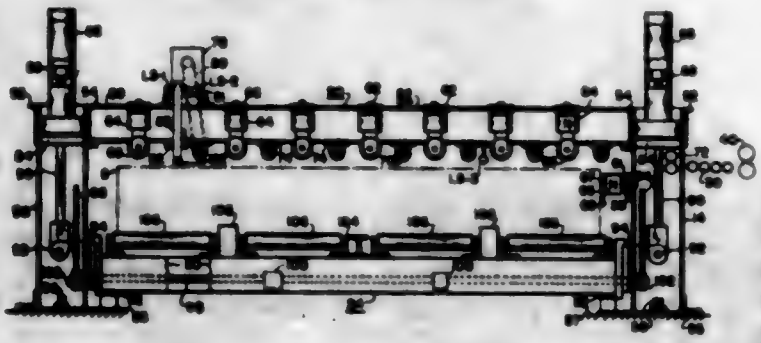
2,895,732
APPARATUS FOR USE IN TREATING LENGTHS OF TEXTILE FABRICS
Robert Coburn, Belfast, Northern Ireland, assignor to Flaxall Products Limited, Belfast, Northern Ireland
Application January 24, 1956, Serial No. 561,091
Claims priority, application Great Britain July 5, 1955
3 Claims. (Cl. 271—2.2)



1. Apparatus for use in treating lengths of textile fabric, the apparatus comprising opposed endless tracks having horizontal upper runs, endless conveyor means that travel round said tracks and include an upper horizontal run and a series of parallel interspaced conveying elements, each element engaging and folding thereover in turn fabric entering the apparatus, and carrying the fabric from one end of said upper run to the other suspended

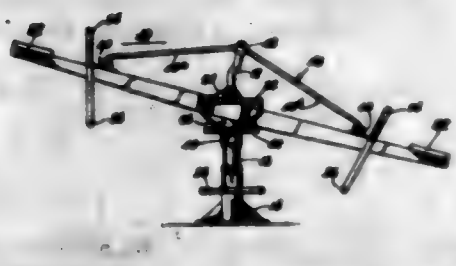
in a series of loops extending downwardly between each pair of elements, the conveying elements consisting of thin flat bars interconnected by bands consisting of an endless series of hinge members which hinge alternatively in opposed directions, and means for pushing the endless conveyor means round said tracks and simultaneously engaging said elements and standing them on edge in said upper run and urging them substantially to abut one another.

2,895,733
ELECTROMAGNET CONTROLS FOR SHEET HANDLERS
Robert B. Powers, Columbiana, Ohio, assignor to L. W. Nash Company, East Palestine, Ohio, a corporation of Ohio
Application April 10, 1956, Serial No. 577,309
9 Claims. (Cl. 271—18)



1. In a machine for destacking magnetizable sheets, an upwardly moving support for the stack of sheets, a frame of depending lift members in tandem above the support, a riffler member disposed slightly below one end of the frame to provide space for a top edge of the stack to intervene between it and the lift member at that end, said lift and riffler member having coil means to energize them electromagnetically for joint field action in manipulative separation of the sheets, a normally closed first switch in circuit with the riffler coil means to keep it energized, second switches closeable to energize the lift coil means at full strength when the top of the stack approaches said frame, first switching mechanism to open the normally closed first switch for temporarily deenergizing the riffler coil means when the top sheet completes being magnetically transferred from the stack to the lift members as they draw it to the frame, and second switching mechanism acting substantially simultaneously with the first mechanism to operate at least one of said second switches to reduce the lift coil means to part strength.

2,895,734
COMBINATION SEE-SAW AND MERRY-GO-ROUND
Louis Pittaluga, Willow Grove, Pa.
Application July 10, 1958, Serial No. 747,730
3 Claims. (Cl. 272—30)

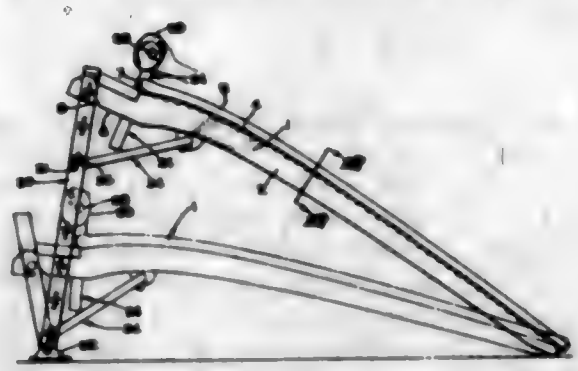


1. A see-saw device comprising a bearing member extending vertically from a supporting surface, a teeter board pivotally mounted on said bearing member for oscillatory and rotary movement with respect to a vertical axis defined by said bearing member, a shaft member formed as an extension of said bearing member and angularly offset with respect to the vertical axis defined by said bearing member, a collar rotatably mounted on said offset shaft and a single rigid tie rod having portions secured to and extending outwardly from the collar in opposite directions and pivotally secured at their outer extremities to the teeter board at locations longitudinally spaced from its mounting on the bearing member.

2,895,735
AMUSEMENT RIDE
Norman Bartlett, North Miami Beach, Fla., assignor of one-half to Marjorie Bartlett, North Miami Beach, Fla.
Application November 4, 1957, Serial No. 694,337
11 Claims. (Cl. 272—51)

1. In an amusement ride of the roundabout type, a generally upright central support and means rotatable relative thereto, a plurality of arms radiating from said rotatable means and pivoted thereto for up and down movement of the arms relative to the rotatable means, passenger carrying means at the outer ends of said arms, power means for rotating said rotatable means whereby the passenger carrying means traverse a circular path, a ramp in said path having an inclined rise portion whereby the passenger carrying means ascend the ramp and are projected therefrom, hydraulic means having relatively movable parts connected to said arms and said rotatable means and adapted for relative movement in opposite directions in response to up and down movements of said arms, said hydraulic means being single-acting whereby said parts are movable unrestrictedly during upward movements of said arms but are restrained by restricted hydraulic flow upon downward movements of said arms and downward movement of said passenger carrying means occurs at a speed controlled by said hydraulic means.

2,895,736
EXERCISE APPARATUS
Claes G. Adler and Eddie S. Jung, Los Angeles, Calif.
Application December 29, 1955, Serial No. 556,234
4 Claims. (Cl. 272—58)



1. An exercise apparatus, comprising: an exercise platform having a padded surface and arched principally at one end portion, said end portion having an offset extension whereby said padded surface forms a padded shoulder for engagement with the heels of the user; said offset portion having a slot therein; a post extending through said slot; means under said platform for adjustably supporting said post; a cross bar carried by said post above said padded surface, said cross bar having

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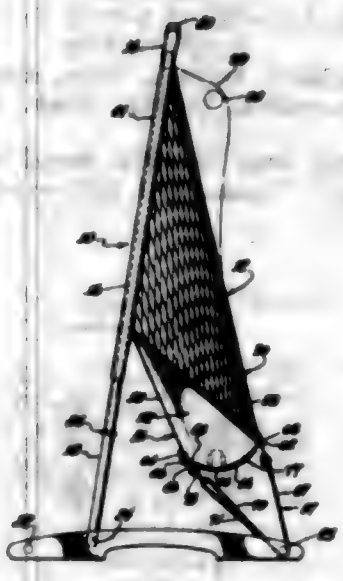
and yieldingly pressed against the work, a bushing in said body member at the other end thereof to absorb radial

said wheel chair axle-receiving passages, each of said

hand grips at its extremities; and pads mounted on said cross bar adjacent said post and arranged to cooperate with said padded shoulder, to engage the upper portions of the feet when the heels thereof overlie said padded shoulder for yieldably restraining the feet of the user.

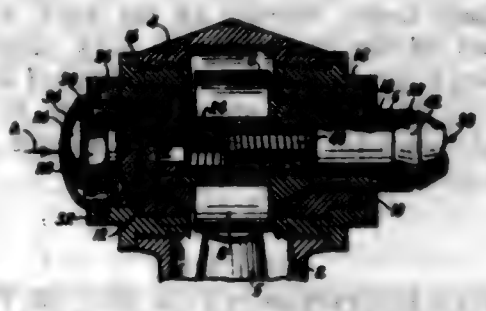
2,895,737
BALL CATCHER
William A. Bloss, Los Angeles, Calif., assignor to Sacket Sporting Goods Company, Beverly Hills, Calif., a corporation of California
Application April 24, 1957, Serial No. 654,915
4 Claims. (Cl. 273—26)



1. A ball catcher comprising a substantially rectangular frame having top and sides and including a base supporting said frame in upright position, a loose bodied net having top and sides secured respectively at the top and sides of said frame, said net having a mesh of fullness at the upper corners greater than at the mid-portion for killing motion of the ball, a bottom for said net extending rearwardly and downwardly to a level below the sides of the net, means adapted to hold said bottom in distended condition comprising attaching elements at the rear and fore sides of said bottom and a flexible tie string having ends engaging said elements at the rear, a mid-portion of said string slidably engaging the element at the front and intermediate portions of said string slidably engaging said base at a location below and rearwardly of said rear side of the bottom, and a valve in said bottom between said rear and fore sides within the area of said elements, said valve comprising means forming a triangular opening with the apex pointing rearwardly and a canvas panel of rectangular shape secured at the fore edge thereof to the bottom at the base of said triangular opening and at the side edges to the bottom and leaving an access slot along the rear edge.

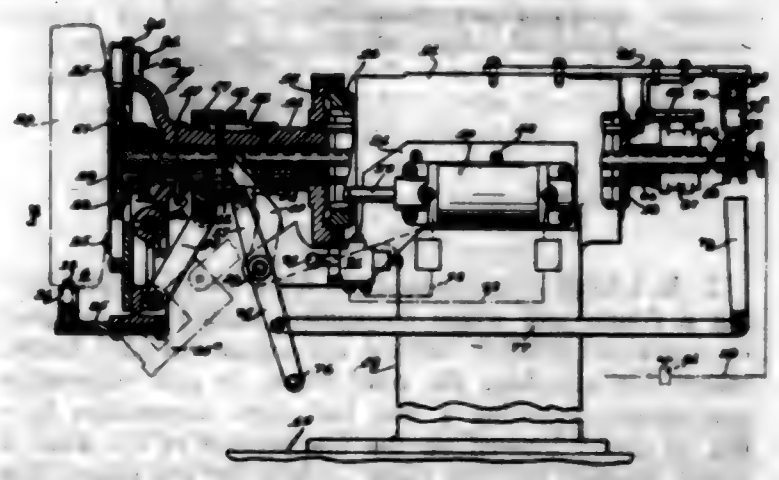
2,895,738
DENTAL DRILL CHUCK
Robert N. Baker, Kings Mountain, N.C., assignor to Bowen & Company, Inc., Rockville, Md., a corporation of Delaware
Application September 22, 1958, Serial No. 762,536
8 Claims. (Cl. 279—1)

1. In a rotary tool having a housing and a fluid driven turbine rotor therein; said turbine rotor having a shaft journalled in said housing and extending through opposite sides thereof, a bore extending axially through said shaft, one end of said bore being flared outwardly, holding means slidable in said bore for holding an end of a tool, and means resiliently urging said holding means away from said flared end and toward the other end of said bore whereby to frictionally hold a com-



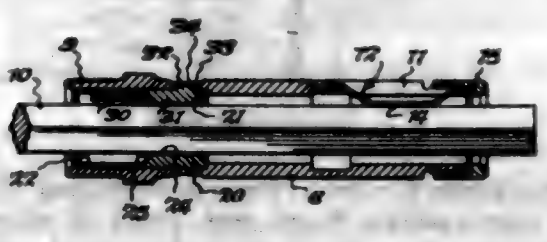
plementary portion of the tool against said flared portion of said bore.

2,895,739
VACUUM CHUCKS
Ralph H. Smith, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application February 13, 1956, Serial No. 565,116
10 Claims. (Cl. 279—3)



2. The combination of a chuck mounted for rotation about an axis, a holder mounted for rotation with the chuck about said axis, a plurality of point contact elements carried by said holder and distributed around said axis with their contact points substantially in a plane perpendicular to said axis and in position to make point contacts with a workpiece and position the workpiece on the chuck, gripping means for gripping the workpiece, means for applying a pulling force to the said gripping means in a direction parallel with said axis and with the reacting force applied to the said contact elements, whereby the workpiece is held against the contact elements during the rotation of the chuck, said gripping means comprising a vacuum head mounted for movement lengthwise of said axis and for rotation with the chuck, said means for applying force comprising spring means for applying force to the vacuum head in a direction to hold the workpiece against said contact elements.

2,895,740
FEED CHUCKS
Hubert J. Parsons, Horseheads, and Anders Adolf Peterson, Elmira, N.Y., assignors to Hardinge Brothers, Inc., Elmira, N.Y.
Application March 13, 1958, Serial No. 721,118
8 Claims. (Cl. 279—41)



1. A feed chuck including a tubular body member having work gripping parts adjacent to one end thereof

2,895,744
AIR OIL SUSPENSION UNIT WITH RIDE HEIGHT

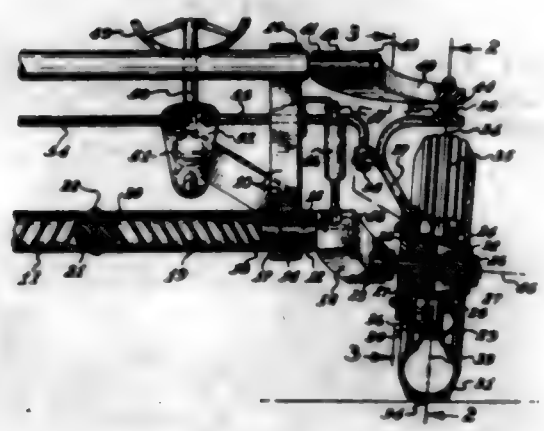
are mounted on swinging semi-axles, comprising for each

angularly offset with respect to the vertical axis defined

post above said padded surface, said cross bar having

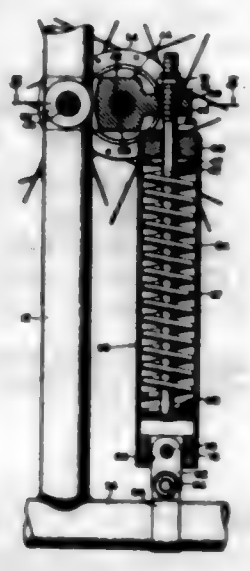
and yieldingly pressed against the work, a bushing in said body member at the other end thereof to absorb radial and torsional forces exerted by the work and oppose transmission of the same to said work gripping parts, said bushing having a bore of cross-sectional shape forming a sliding fit with the stock to be fed by said feed chuck, and means for removably locking said bushing in said body member.

2,895,741
FRONT END SUSPENSION FOR MOTOR VEHICLES
Fred Minock, Phoenix, Ariz.
Application February 24, 1958, Serial No. 717,168
2 Claims. (Cl. 280—96.3)



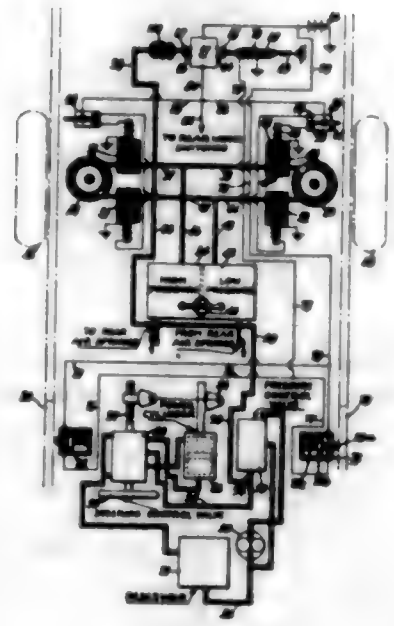
2. In a front wheel suspension for a motor vehicle having a frame and wheel suspension mechanism adapted to restrained relative vertical movement on said frame, means for attaching the road wheel to said suspension mechanism including a first ball joint connection having its center located on the intersection of the axis of wheel rotation and the plane defined by the center line of the tread of the tire on said wheel, and a second ball joint having its center lying in said plane defined by the center line of the tread of the tire and located outside of the peripheral tread surface of said tire.

2,895,742
WHEEL CHAIR SHOCK ABSORBER
Franklyn H. Johnson, deceased, late of Los Angeles, Calif., by Robbie F. Johnson, executrix, Fresno, Calif.
Application June 14, 1954, Serial No. 436,452
3 Claims. (Cl. 280—124)



1. Apparatus for converting a conventional wheel chair of the type having a frame with a pair of spaced frame members that have substantially horizontal wheel axle-receiving passages therethrough into a spring supported wheel chair; including a pivot pin engageable in each of said wheel chair axle-receiving passages, each of said pins extending from both sides of its respective said axle-receiving passage, a bifurcated rocker arm having a body portion and a pair of spaced legs pivotally mounted on each of said pins, the spaced legs of each of said rocker arms being pivotally mounted on the respective said pin on opposite sides of the respective said wheel chair axle-receiving passage, a substantially horizontal axle-receiving passage in said body portion of each of said rocker arms for carrying the respective wheel axles, and spring means operatively engageable between each of said rocker arms and said wheel chair frame.

2,895,743
CONTROL APPARATUS FOR FLUID SPRING SUSPENSION
George W. Jackson, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 18, 1956, Serial No. 592,150
7 Claims. (Cl. 280—124)

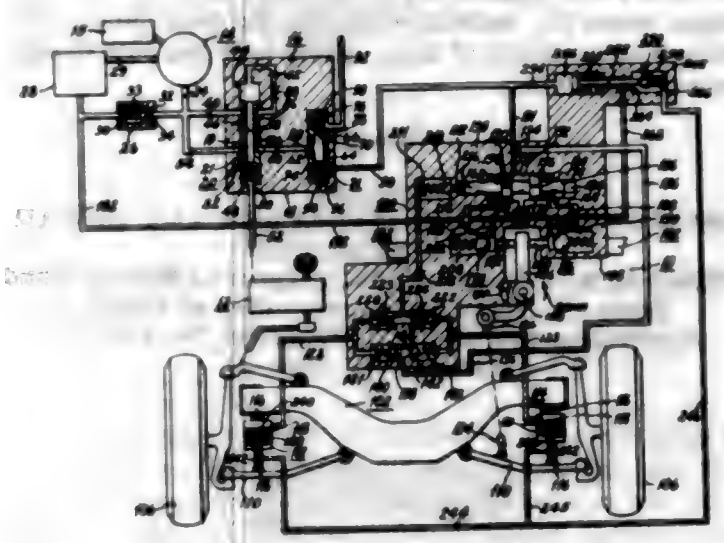


1. Apparatus for maintaining a predetermined vertical distance between a sprung and an unsprung part of a motor vehicle irrespective of the load carried by said motor vehicle comprising, a fluid spring connected between said sprung and unsprung parts, a source of fluid pressure, valve means connected between said source and said spring and between said spring and a low pressure exhaust line, said valve means normally blocking communication between said source and said spring and normally blocking communication between said spring and said exhaust line, said valve means being operable to connect said source with said spring and operable to connect said spring with said exhaust line, actuating means for operating said valve means, said actuating means being responsive to relative movement between said sprung and unsprung parts when said movement changes the vertical distance between said parts to a value different from said predetermined distance, and control means for at times rendering said actuating means ineffective to operate said valve means, a power steering system for said motor vehicle including a source of fluid pressure, a control valve and a power actuator connected with the motor vehicle steering mechanism, said control means being associated with said power actuator and being operative in response to the attainment of a predetermined value of fluid pressure within said actuator to render said actuating means effective and operative to render said actuating means ineffective when the pressure in said actuator is below said predetermined value.

2,895,744
AIR-OIL SUSPENSION UNIT WITH RIDE HEIGHT CONTROL

George W. Jackson, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application June 25, 1956, Serial No. 593,610
10 Claims. (Cl. 280—124)

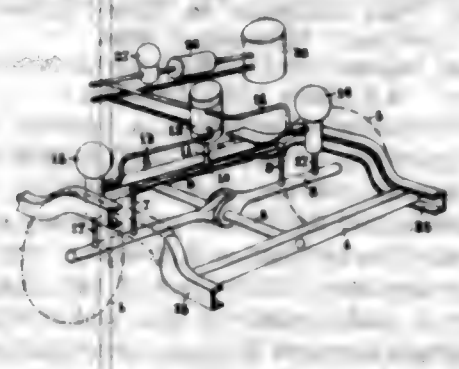


1. A control valve for a hydraulically operable vehicle suspension system including a source of fluid supply, comprising, a valve body connected by conduits to the source with a supply line connectable with a chamber formed within said body, a valve spool having a pair of lands forming the chamber therebetween with said body connectable to the supply line, said spool forming a pair of chambers at opposite ends thereof and having a land separating the chambers relative to each other, a first pressure relief valve connected by a passage with the chamber at one end of said spool capable of being opened in response to change of clearance height between a sprung mass and an unsrpung mass of the vehicle to supply fluid to the system, a second pressure relief valve in said body connected by a passage with the chamber at the opposite end of said spool capable of being opened in response to change of clearance height to exhaust fluid from the system, stem portions on said spool located in the chambers on opposite ends of said spool, one of said stem portions cooperating with a damping chamber at one side of said spool, and a secondary relief means in the valve body engageable by said stem portion on the opposite end of said spool to intermittently open exhaust flow from the suspension system through said second relief valve when clearance height between the sprung and unsprung masses exceeds the value to be maintained.

2,895,745
SUSPENSION SYSTEM FOR MAINTAINING THE LEVEL OF A VEHICLE FRAME

Antoine Bruedet, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France

Application June 3, 1957, Serial No. 663,059
Claims priority, application France January 21, 1955
3 Claims. (Cl. 280—124)

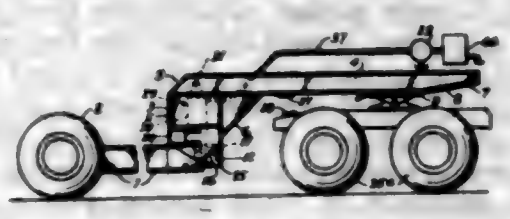


1. Suspension system adapted to maintain the level of the frame of a vehicle of which the wheels of each pair are mounted on swinging semi-axles, comprising for each pair of wheels two hydropneumatic shock absorbers secured on the frame and bearing on two points respectively of said semi-axles, a compressed fluid distributor mounted on said frame, members for controlling said distributor and adapted to either cause said compressed fluid to be forced into said pair of shock absorbers or release the fluid from said pair of shock absorbers, a pair of links pivoted on said semi-axles, a rod pivoted on said pair of links, and a member connecting the middle point of said rod to the distributor control member to actuate the distributor to force the compressed fluid into said shock absorbers when said middle point of said rod rises above a predetermined mean position with respect to the frame, and to release the fluid from said shock absorbers when said middle point of the rod moves beneath said predetermined mean position.

2,895,746
DETACHABLE GOOSENECK FOR TRAILERS AND METHOD OF MANIPULATING THE SAME

Charles E. Swaney, Albion, Pa., assignor to Rogers Brothers Corporation, Albion, Pa., a corporation of Pennsylvania

Application August 7, 1957, Serial No. 676,827
5 Claims. (Cl. 280—423)



1. In a tractor-trailer combination, a tractor including a rear wheel assembly, a trailer body member including a rear wheel assembly, a gooseneck hitch member, a fifth wheel connecting the hitch member and tractor for swinging about the fifth wheel axis and for rocking movement about a horizontal axis extending transversely of the tractor, coupling means coupling the rear portion of the hitch member and the front of the body member for relative rocking movement about an axis extending transversely of the body member and operable for supporting the forward end of the body member at a plurality of different elevations above the ground by the tractor through the medium of the hitch member, and power operated ground engaging hoist means on at least one of the members for lifting and lowering the rear portion of the hitch member, auxiliary means operable for connecting the tractor and gooseneck member, while the gooseneck member is in a lowered position, for lifting the tractor when the rear portion of the gooseneck member is lifted, and rendered operative by predetermined operation of the hoist means to hoist the rear portion of the gooseneck sufficiently to cause the rear wheel assembly of the tractor to be lifted from the ground.

2,895,747
WELDED ALUMINUM COATED TUBULAR MEMBER AND METHOD OF MAKING SAME

Julius Bland, Munster, Ind., and Edward D. McKeague, Crete, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

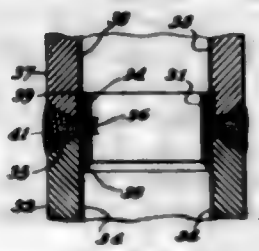
Application May 31, 1955, Serial No. 512,149
7 Claims. (Cl. 285—21)

1. The method of joining steel pipe whereby a substantially continuous protective aluminum coating, not thicker than about 0.06 inch, is provided on the inner surface thereof, which method comprises welding a backup ring on the inner surface of a first steel pipe whereby about one-half the width of said ring extends beyond the end of said pipe and which ring is at least about 5/16

flange whereby said fluid flows between said surfaces and provides a predetermined film thickness therebetween,

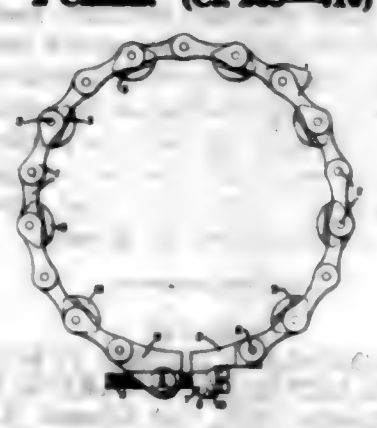
2,895,752
ADJUSTABLE FITTING

inch in thickness and is at least about ¾ inch in width, coating said back-up ring and the inner surface of said first steel pipe with aluminum, positioning a second aluminum coated steel pipe on said ring in welding relationship with said first steel pipe, and welding said first steel pipe to said second steel pipe whereby said back-up ring is welded to the edges of both steel pipes by the root pass of said welding step.



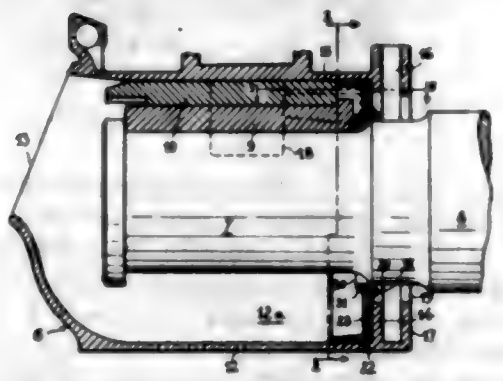
5. An article of manufacture which comprises a first steel pipe having an inner surface, an outer surface and an end, a second steel pipe having an inner surface, outer surface and an end which is spaced from but adjacent to the end of the first pipe, a steel back-up ring at least 5/16 inch in thickness and at least ¾ inch in width overlapping the first and second pipes at their adjacent ends and having its outer surface adjacent the inner surface of each of said pipes, a weld between the first pipe and the back-up ring, a weld between the first and second pipes extending to said back-up ring and a continuous coating of aluminum not thicker than about .06 inch, said continuous coating of aluminum comprising a first coating of aluminum in fused contact with a second coating of aluminum, said first coating of aluminum being positioned to cover the inner surface of the first pipe up to the first named weld, said first named weld, and that portion of the surface of the back-up ring which extends from the first named weld across the inner surface of the back-up ring and to the second named weld, and said second coating of aluminum being positioned to cover the inner surface of the second pipe and in fused relationship with said first coating of aluminum at said back-up ring.

2,895,748
BAND TYPE CLAMP FOR FLANGED PIPES
Charles Albert Edward Oldham, Clapham, London, England
Application September 12, 1957, Serial No. 683,480
2 Claims. (Cl. 285—410)



1. A constricting member for urging two opposed substantially circular pipe flanges towards each other in a fluid tight joint, comprising a pair of spaced flexible bands for encircling said flanges, flange clamping means pivotally mounted between said bands on axes extending transversely of the constricting member, said means constituting elements spaced along said member and resembling segments of spools each having a pivot portion carrying laterally spaced inwardly directed projections with opposed faces for straddling the pipe flanges, said faces having inwardly flaring substantially conical segmental surfaces for substantial line contact with the pipe flanges, and means between said elements and said bands maintaining said projections all on the inner side only of said constricting member and limiting pivotal movement of said elements on their axes, whereby said elements press against the outer axial sides of the pipe flanges when the member encircles the pipe flanges and produce components of force which urge the pipe flanges towards each other.

2,895,749
DEVICES FOR RETAINING LUBRICANT IN CAR AXLE BEARINGS
William H. Sole, Saunderton, Va., assignor to Klasing Hand Brake Co., Joliet, Ill., a corporation of Illinois
Application February 6, 1957, Serial No. 638,522
1 Claim. (Cl. 286—5)



A device for retaining oil in a housing which encloses the front end of a railway-car axle and a bearing for the axle and comprises walls surrounding the axle and bearing, a front provided with an opening for access to the inside of the housing, a back wall provided with an opening through which the axle extends, and an oil well under the axle and between said front and said rear wall, said device comprising a panel of elastic material for retaining oil in the well and preventing its flow through the back wall, disposed against and lapping the front face of said back wall, provided with an opening therein having a sealing engagement with the axle, and also provided with forwardly extending marginal flanges conforming to and having sealing engagement with the inside face of the walls of the housing surrounding the axle, and means for releasably retaining the panel in its operative position in the housing, said device being flexible for insertion into and removal from the housing, through the opening in the front of the housing when the bearing is removed from the housing.

2,895,750
AUTOMATIC THRUST DEVICE FOR HYDROGEN SEAL
Willis W. Gardner, West Allis, and Joseph T. McKeon, Waukesha, Wis., assignors to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application September 27, 1957, Serial No. 686,728
4 Claims. (Cl. 286—9)

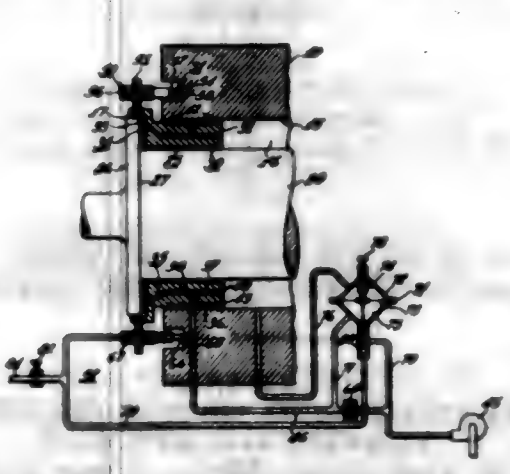
1. In a dynamoelectric machine, a housing containing a gas under pressure, a rotatable shaft including a flange having an annular surface, means providing a seal for said gas between said flange and said housing comprising an axially movable annular seal member having an annular surface opposing said surface of said flange, an annular groove in said surface of said seal member, force means including a constant biasing means tending to move said seal member toward said flange, means supplying a fluid under pressure between said surfaces to cause a force tending to move said seal member away from said

and open at both ends and having longitudinally extend- larly from an edge of the narrowed portion, said dove

1. Suspension system adapted to maintain the level of the frame of a vehicle of which the wheels of each pair

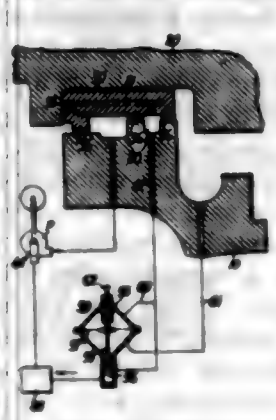
about one-half the width of said ring extends beyond the end of said pipe and which ring is at least about 5/16

flange whereby said fluid flows between said surfaces and provides a predetermined film thickness therebetween, means responsive to changes in said film thickness adjusting said fluid pressure in said groove to provide a hydrostatic equilibrium of said forces on said seal member,



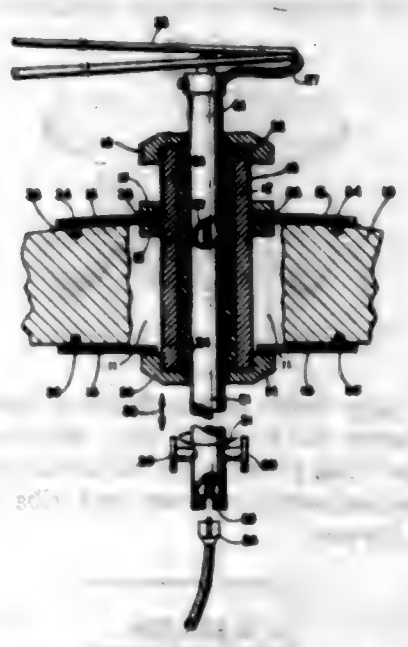
variable biasing means responsive to pressure differentials below a predetermined differential between said fluid pressure in said groove and said gas pressure in said housing providing an additional force tending to move said seal ring toward said flange.

2,895,751
HYDROGEN SEAL FOR DYNAMOELECTRIC MACHINES
Earl L. Standish, West Allis, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application July 5, 1957, Serial No. 670,163
5 Claims. (Cl. 286—19)



1. In a dynamoelectric machine, a housing containing a cooling gas at a pressure above atmospheric, a rotatable shaft, a flange on said shaft having an annular radially extending surface, means providing a seal for said gas between said flange and said housing comprising an annular seal member presented by said housing, said seal member being disposed on the cooling gas side of said flange and having a radially extending surface opposing said surface of said flange, means including said gas pressure causing the surface of said seal member to bear against said surface of said flange, a first annular groove in said surface of said seal members, a second annular groove in said surface of said seal member disposed radially inward and in the same radial plane of said first groove, means supplying oil to said first groove at a pressure above said gas pressure, drain means provided for said second groove to discharge oil flowing radially inward across said surface from said first groove to said second groove, means for controlling the pressure of said oil in said second groove to a predetermined relation to said gas pressure to maintain sufficient oil in said second groove to provide a fluid film at the interface of said seal member and said flange preventing said cooling gas from entering said seal.

2,895,752
ADJUSTABLE FITTING
William E. De Berrie, Los Angeles, Calif.
Application January 16, 1956, Serial No. 559,246
1 Claim. (Cl. 287—20)



An antenna support fitting for use in an automobile house trailer for supporting an antenna on the roof of the trailer and enabling positioning of the antenna from the interior of the trailer through an opening in the roof of said trailer, said fitting comprising: a sleeve member dimensioned to pass through said opening in said roof; an apertured retaining plate surrounding said sleeve to cover the peripheral portions of the upper end of said opening; two lock nuts threaded on said sleeve on either side of said retaining plate axially positioning said sleeve so that a given length of sleeve extends into the interior of said trailer; means for securing said retaining plate in weather tight engagement with the roof of said trailer; an apertured finishing plate surrounding the end of said sleeve within said trailer; means for securing said finishing plate to the inside of said roof; a tubular member passing axially through said sleeve and having an outside diameter less than the inside diameter of said sleeve to leave an annular space in said sleeve; packing material within said annular space; end nuts on the ends of said sleeve having openings of diameter greater than the outside diameter of said tubular member and less than the inside diameter of said sleeve to provide annular shoulders to confine said packing material within said annular space, said given length of sleeve extending into the interior of said trailer being less than the sum of the thicknesses of said finishing plate and the one of said end nuts secured to the lower end of said sleeve, whereby said lower end is concealed by said one of said end nuts, and laterally directed indicating means secured to the lower portion of said tubular member for indicating relative rotative positions thereof with respect to said sleeve; said tubular member providing a passage for a transmission line from the interior of said trailer to said antenna on the roof of said trailer; said packing material having limited frictional engagement with the exterior of said tubular member whereby said tubular member may be axially and rotatively manually set to desired positions and retained in such position by said limited frictional engagement with said packing material.

2,895,753
JOINT
Arthur E. Fentiman, Ottawa, Ontario, Canada, assignor to F. Fentiman & Sons, Ltd., Ottawa, Ontario, Canada
Application January 18, 1956, Serial No. 560,827
10 Claims. (Cl. 287—20.3)

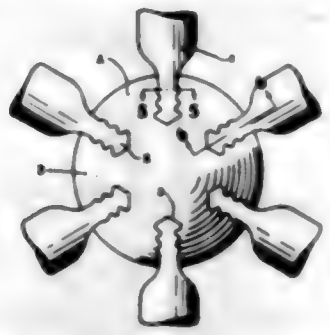
1. A joint comprising a hub formed with a radially disposed tapered keyway extending the length of the hub

tion on one of said pieces to permit the pivot joint to, said shoulder and threaded portions being adapted for

with opposed faces for straddling the pipe flanges, said

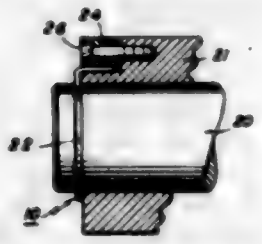
force tending to move said seal member away from said

and open at both ends and having longitudinally extending recesses in the lateral walls of the keyway, ribs between the recesses, a tube with a flattened end having a space between the walls of the flattened end, transverse



ribs on the outer walls of the flattened end of the tube, recesses between the last said ribs, the ribs and recesses of the flattened end of the tube frictionally and resiliently engaging complemental recesses and ribs on the lateral walls of the keyway.

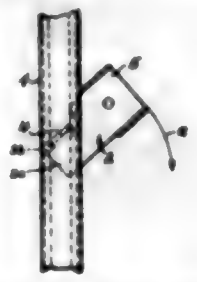
2,895,754
CONNECTORS
Hugo Wurzel, Bronx, N.Y., assignor to Waldes Kohinoor, Inc., Long Island City, N.Y., a corporation of New York
Application December 14, 1954, Serial No. 475,647
8 Claims. (Cl. 287—53)



4. A connected assembly comprising generally cylindrical members and a connector extending between said members and being operative to prevent relative turning movement therebetween, one of said members having an outwardly opening, circumferential groove, the other member having a recess defined in part by bottom and side walls, the connector comprising an open-ended ring body of spring material seating with spring pressure against the bottom of said groove and being provided at its ends with angularly disposed, laterally spaced inwardly biased locking prongs which extend into and are spaced from the side walls of said recess and engage against the bottom wall thereof with sufficient tightness as to substantially prevent relative movement of said parts, said prongs being also positioned in said recess as to be abutted by the recess side walls responsively to any substantial relative turning of said parts, said recess being wider than the combined width of said prongs, plus the spacing between them when said prongs are so arranged, whereby to permit intentional limited relative lateral expansive movement of the prongs therein.

2,895,755
APPARATUS FOR SLIDABLE CLOSURES
Hans T. Golde, Frankfurt am Main, Germany
Application May 29, 1957, Serial No. 662,394
Claims priority, application Germany August 24, 1956
1 Claim. (Cl. 287—56)

A structure for a foldable, flexible closure of a vehicle comprising a cross brace of substantially C-shaped cross-section, a folding arm coupled at a right angle to said cross brace in a substantially horizontal plane, a flat coupling element mounted on said folding arm and including a narrowed portion, a dove tail extending perpendicularly from an edge of the narrowed portion, said dove tail including a narrow throat rigidly jammed between

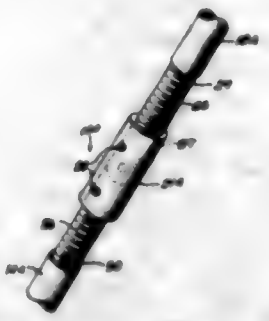


the edges of the C-section with said folding arm in its right angle position with regard to said cross beam.

2,895,756
SELF-POSITIONING TIE ROD CLAMP AND TURNBUCKLE ASSEMBLY
Albert W. Gair, Fraser, Mich., assignor to Thompson Products, Inc., Cleveland, Ohio, a corporation of Ohio
Application October 6, 1955, Serial No. 538,821
3 Claims. (Cl. 287—62)

1. An adjusting sleeve and clamp adapted for connecting a tie rod with a tie rod joint comprising a split tube having adjacent edges of the main portion thereof slightly spaced apart and having a longitudinally slotted internally threaded end portion, the longitudinal adjacent edges of the end portion being spaced apart a greater distance than the adjacent edges of said main portion, a clamping ring surrounding said slotted end portion and having an annular bight portion with an embossment opening toward the outer surface of said split tube together with a pair of outturned legs adapted to receive a draw bolt to contract the bight portion, a clamping ring retainer protuberance on said end portion of the tube projecting into the embossment of the annular bight portion to hold the ring against axial movement on the tube and said legs when drawn together contracting said bight portion and said tube to bring the adjacent edges of the main tube portion and the end portion closer together.

2,895,757
HANDLE
William F. Kasper, Keyport, N.J., assignor of one-half to John Charles Scorsa, Union Beach, N.J.
Application July 14, 1955, Serial No. 522,809
1 Claim. (Cl. 287—98)



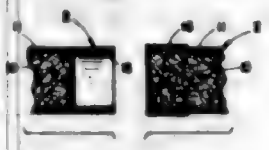
A two piece handle in which the two pieces are joined by a pivot joint and in which the abutting ends of said pieces are provided with a similar thread and a sleeve threadably secured on said threaded ends, means to rotate said sleeve in either direction to a retracted posi-

tion on one of said pieces to permit the pivot joint to break and means to rotate said sleeve in an opposite direction to move said sleeve back over said pivot joint and retain said handle pieces in alignment with each other.

2,895,758
MECHANICAL COMPENSATOR
Oswald A. Wright, Los Angeles, Calif.
Application June 9, 1954, Serial No. 435,482
7 Claims. (Cl. 288—7)

1. In combination with a packing gland for a shaft, wherein means defines a cavity surrounding the shaft and adapted to receive compressible packing material, and a packing collar is axially movable into said cavity to compress said packing, of a compensator, comprising: a pair of continuous unbroken radially rigid annular rings having relatively inclined confronting faces to define an annular V-groove; an annular spring disposed in said V-groove and tending to spread said rings axially; said compensator having external walls disposed substantially at right angles to the axis of said shaft and being interposed between said packing material to maintain said packing material under axial compression between adjustments of said packing collar; said annular rings defining an annular lubricant-receiving channel for the supply of lubricant to the packing material on either axial side thereof.

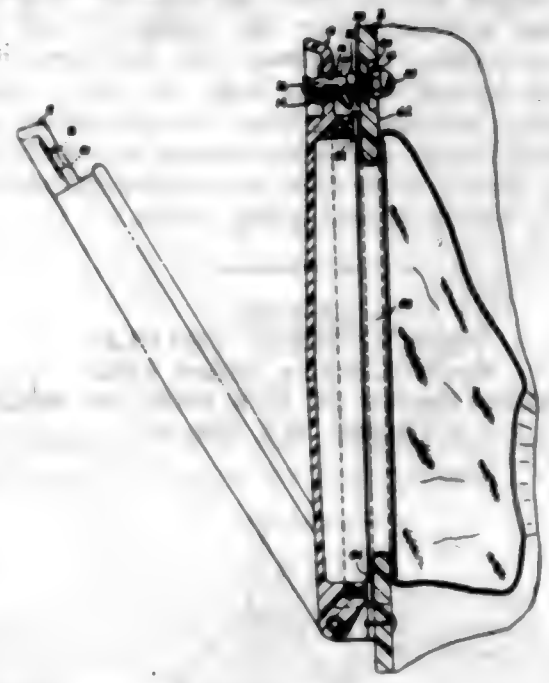
2,895,759
SEAL
Harold L. Conrad, Manhattan Beach, and John E. Vanderbur, Jr., Los Angeles, Calif., assignors to North American Aviation, Inc.
Application February 17, 1955, Serial No. 488,852
4 Claims. (Cl. 288—17)



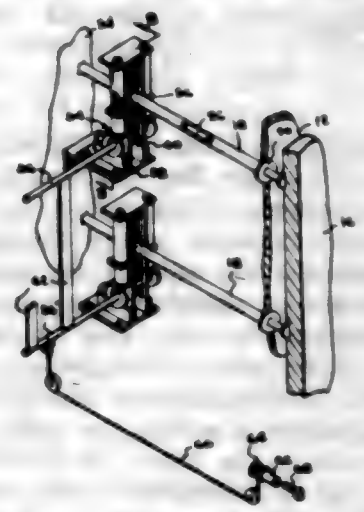
1. A segmented seal comprising an elongated core of flexible glass fibers impregnated with a resilient resinous material, and a cover of glass fabric impregnated with polytetrafluoroethylene over the exterior of said core, adjoining segments of said seal being constructed and arranged with the cover at the end of one of said segments projecting beyond the core thereof providing a receptacle receiving the end of the adjacent segment to form a joint therewith, the end of the core of each of said segments being provided with a closure of resilient glass construction impregnated with polytetrafluoroethylene and fused to the cover therefor, thereby to preclude entry of fluid into said core.

2,895,760
CLOSURE LATCH
John W. Dornik, Lyndhurst, and Thomas F. Van Deusberg, Chagrin Falls, Ohio, assignors to The Gordon Armstrong Company, Inc., Cleveland, Ohio, a corporation of Ohio
Application November 26, 1957, Serial No. 698,976
7 Claims. (Cl. 292—87)

1. A latch for holding a closure pivotally mounted on a supporting part in shut position, said latch comprising on one end thereon a threaded portion, on the other end thereof a shank portion, and a shoulder portion disposed intermediate said shank and threaded portions, said shoulder and threaded portions being adapted for securing said latch to said supporting part, said shank portion being adapted to extend into an opening into said closure and having a generally lengthwise extending slot therein, a yieldable member mounted on said shoulder portion and extending outwardly therefrom, said yieldable member including a portion extending into said slot and a catch portion normally disposed exteriorly of said slot for holding engagement with a confronting portion of said closure.



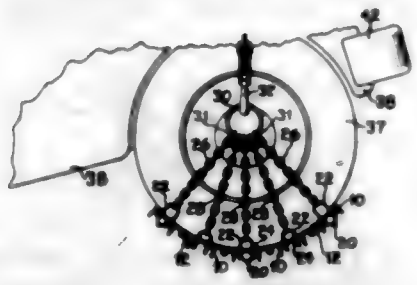
2,895,761
VAULT LOCK
Ferdinand P. Kroll, Pemberton, Minn.
Application September 13, 1957, Serial No. 683,898
2 Claims. (Cl. 292—302)



1. The combination with a vault having a front provided with an access opening, a horizontally disposed hollow member positioned within said vault and having one end in the portion of said front adjacent said opening and having the other end remote from the front of said vault, said member having a notch on the underface adjacent said other end, a door conformably shaped to bridge and close said access opening positioned exteriorly of and adjacent said opening, and a supporting element having one end carried by said door and retractable into and projectable out of said hollow member for mounting said door for opening and closing movement with respect to said opening, said element having a recess on the underface adjacent the other end thereof, of a releasable lock means positioned within said vault adjacent said hollow member other end, said means comprising a horizontally disposed latch element positioned below and in vertical spaced aligned relation with respect to said hollow mem-

ber notch and connected to said vault for vertical up and down movement with respect to said notch, spring means operatively connected to said latch element for urging the latter toward said hollow member notch, a locking element carried by said latch element, said locking element being movable under the action of said spring means into locking engagement with the recess in said supporting element when the latter has been moved to the retracted position, and hand actuable means operatively connected to said latch element for restoring the latter to a position away from said hollow member notch against the tension of said spring means.

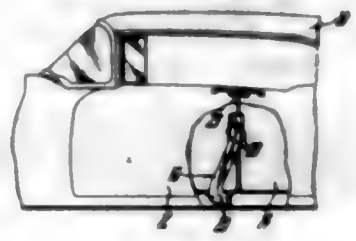
2,895,762
VEHICLE HOIST CRADLE
Edwin F. Sevinc, Sidney, Ohio
Application October 20, 1954, Serial No. 463,370
6 Claims. (Cl. 294—67)



1. A support device for a vehicle wheel comprising a series of rigid elongate channel members, each of the channel members being provided with a web member having a pair of flanges extending therefrom, rigid hinge members attached to the web members maintaining the channel members in parallel closely spaced relation, a right angle bar extending substantially the length of one of the channel members and attached thereto, the right angle bar being attached to the channel member intermediate the flanges thereof so that the vertex of the angle bar is disposed in the same plane with the longitudinal edges of the flanges, and flexible members attached to each of the channel members for support thereof, the flexible members which are attached to the two channel members which are disposed at the ends of the series of channel members being shorter in length than the flexible members attached to the channel members which are intermediate the ends of the series, the arrangement of the flexible members being such that they are successively longer from the ends of the series toward the center of the series, there being a lower portion of each of the flexible members attached to a channel member, and means attaching the upper end of the flexible members one to the other, the flexible members being attached to the web members of the channel members so that web members are uppermost and are engaged by the vehicle wheel.

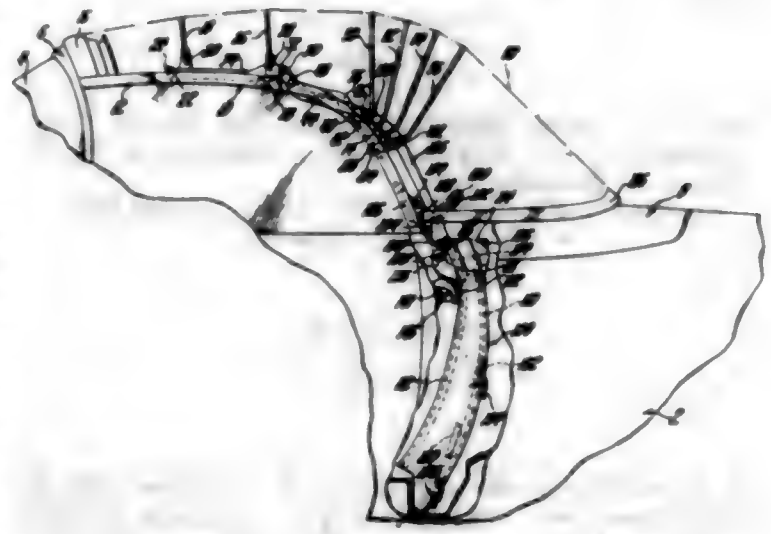
2,895,763
VEHICLE BODY STRUCTURE
James H. Wernig, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 24, 1956, Serial No. 618,018
6 Claims. (Cl. 296—28)

1. In combination with a vehicle body having an opening therein and having a belt line, a pair of closure members for the opening swingably mounted on the body for movement between open and closed positions and having jamb faces in spaced adjacent relation in the closed positions thereof, each of said jamb faces along a relatively small part of the total jamb face area below the belt line being offset laterally of the closure member and inboard of the outer marginal edge thereof to provide a pocket inboard of the body, a support member mounted on the body inboard of the closure members and laterally displaced from the adjacent jamb faces of the closure members when in the closed positions so as to extend from a floor portion to below the body belt line, said support member having a flange portion



thereof projecting within said pocket and being concealed from exterior view in the closed positions of said closure members and means on said support member flange portion cooperable with means on said closure members to detachably secure said closure members to said support member in the closed positions thereof.

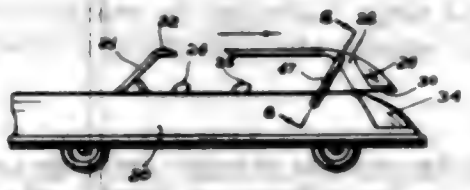
2,895,764
VEHICLE FOLDING TOP
John Hinka, Detroit, and Frederick C. Walther, Grosse Pointe, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application March 9, 1955, Serial No. 493,261
8 Claims. (Cl. 296—117)



6. In a convertible vehicle, the combination comprising a top frame including a pair of spaced foldable side rails joined by a number of transverse bows, each of said side rails including a front rail section and a rear rail section, parallelogram linkage means interconnecting said side rail sections to permit folding movement thereof, a storage compartment within said vehicle receiving said top frame in the folded position thereof, track means within said compartment, top frame support members movable along said track means, power driven means for folding and unfolding said top frame, said power driven means including first and second power arms, linkage means interconnecting one of said power arms with said parallelogram linkage means and one of said rail sections, the other of said power arms being fixedly supported on said one of said rail sections, power drive means for moving said top frame support members along said track means to move said top frame into and out of said compartment, and means for transferring power from said power drive means to said power driven means to fold and unfold said top frame, said means including stationary cam means mounted within said storage compartment and cam follower means supported by one of

said top frame support members and engageable with said cam means as said one top frame support member moves along said track means, and means interconnecting said first and second power arms with said cam follower means whereby engagement and disengagement of said cam follower means with said cam means folds and unfolds said top frame.

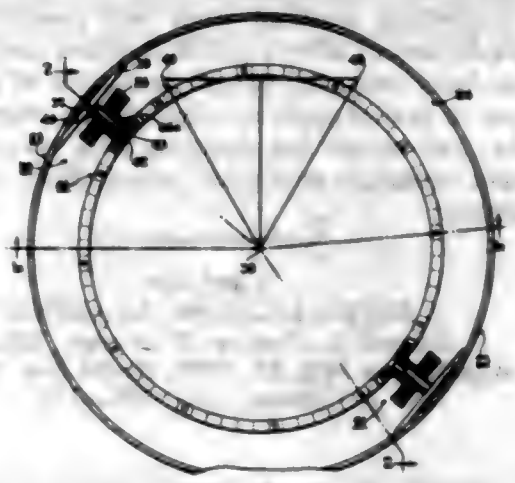
2,895,765
RETRACTIBLE RIGID AUTOMOBILE TOP
Dimitrij Olobolj, East Orange, N.J.
Application November 8, 1956, Serial No. 621,165
3 Claims. (Cl. 296—117)



3. A sport type convertible automobile, comprising a body, a rigid retractible roof top having forward and rear portions, said body having a windshield with a fixed rearwardly extending portion abutting the free end of said forward portion when the top is closed over the body, a pair of flat arms having inwardly extending short supporting shafts axially aligned on one end, another shaft attached to the other end of each arm, a pair of cylindrical bearings attached to opposite sides of the rear portion of said top, said short shafts being journaled in said bearings and extending axially through the center of gravity of said roof top, another pair of bearings attached to opposite sides of said body adjacent the rear thereof, said other shaft being journaled in said other bearings, a pair of cog wheels formed respectively on one of the cylindrical bearings and on one of said other bearings, an endless toothed member passing over said cog wheels to retract the roof top while retaining said top in a horizontal balanced position during retraction thereof, drive means operatively connected to said other shaft for limited angular rotation thereof, a trunk door disposed at the rear of said body over a compartment therein, a pair of curved arms pivotally attached adjacent their ends to said door and said other shaft respectively, and spring means attached between the ends of said curved arms and a rear end portion of said body for holding the door selectively in open and closed positions, the rear portion of said top having a curved hollow shell-like depending section, said door being a curved hollow shell-like member having an outer curvature conforming to the inner curvature of said depending section so that the rear portion of the retractible top seats snugly on the door when the top is retracted.

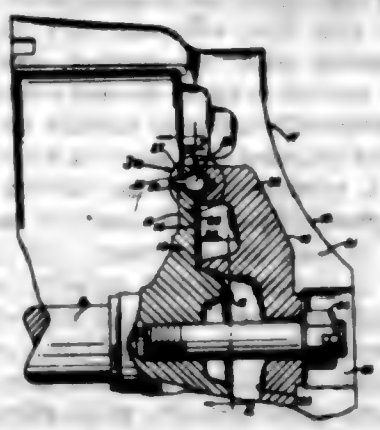
2,895,766
BALANCING DEVICE
Wilbur R. Leopold, Jr., Ridgewood, N.J., assignor to Mechanical Controls Inc., New Rochelle, N.Y., a corporation of New York
Application March 6, 1956, Serial No. 569,747
13 Claims. (Cl. 301—5)

2. A balancing device for a rotatable body comprising an annular race, a plurality of balance weight elements each of which includes a pair of masses mounted for movement together about such race and relative to one another, one of said masses being so movable relative to the other in response to centrifugal force, and resilient means for urging such last-mentioned mass radially of the axis of rotation of such body and toward engagement with a portion of such race, the weight of such last-mentioned mass and the strength of said resilient means both being selected for maintaining the aforementioned engagement of such mass and race below the critical speed



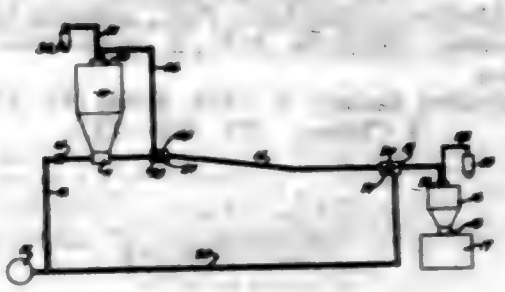
of such balancing device and rotatable body but permitting disengagement thereof above such speed.

2,895,767
ALUMINUM WHEEL MOUNTING
Thomas H. Risk, Birmingham, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application February 3, 1958, Serial No. 712,734
5 Claims. (Cl. 301—9)



1. A wheel and axle assembly comprising a demountable wheel member, a hub member and a fastener removably securing the wheel member to said hub member at the center thereof, said wheel and hub members having opposed face portions in spaced relation to each other, and driving means radially spaced from said center and engaged with said opposed face portions for transmitting driving torque from the one member to the other, said driving means comprising spherical means seated in complementary recesses in said opposed faces.

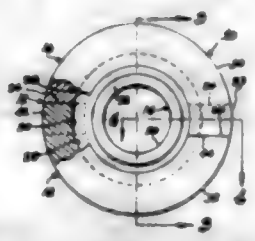
2,895,768
PNEUMATIC CONVEYING SYSTEM
Vernon H. Bray, Jr., Fullerton, Calif., assignor to National Food Equipment Co. Inc., Anaheim, Calif.
Application September 9, 1957, Serial No. 682,667
12 Claims. (Cl. 302—17)



1. In a system for handling bulk products, the combination of a storage container, a receptacle at a remote

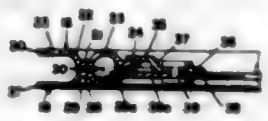
destination for receiving the conveyed material, a main conveying conduit extending from said container to said receptacle and discharging therein, means for pneumatically conveying material from said container into said receptacle, means after a pre-determined amount of material has been conveyed to said receptacle of reversing the air flow in said conduit for clearing the trapped material therein, and means for directing said reversed air flow into said container at a point remote from the discharge end thereof.

2,895,769
SELF-ALIGNING BEARING
Russell A. Dwyer, Wolverine, Mich.
Application July 20, 1956, Serial No. 599,221
2 Claims. (Cl. 308—72)



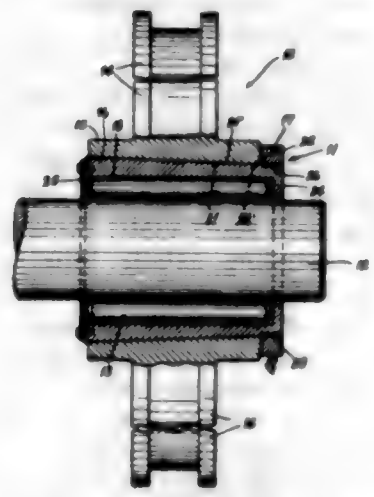
1. A self-aligning spherical bearing comprising an annular outer bearing unit having a central plane and opposite sides disposed substantially parallel thereto, said outer bearing unit being composed of a pair of arcuate outer bearing unit components disposed in a substantially annular path with their adjacent ends disposed in interfitting relationship with one another, said outer bearing unit having a central opening therein containing a spherically-curved internally-concave annular surface forming a ball socket, and an inner ball member seated in said socket and having a spherically-curved convex outer surface fitting the spherically-curved concave surface of said socket, each of said arcuate outer bearing unit components having a circumferential extent exceeding a semicircle, said ball member having a central plane passing through its center of curvature and cutaway opposite sides whereby rotation of said ball member into a position with its central plane approximately perpendicular to the central plane of said outer bearing unit releases the components thereof for disassembly but retains the same in assembly when said central planes are rotated substantially into coincidence with one another, one of said outer bearing unit components having circumferentially-elongated tongues disposed at its opposite ends extending circumferentially beyond the opposite ends of the diameter of the component and the other outer bearing unit component having circumferentially-elongated notches receiving said tongues, the portions of said other outer bearing unit component at the sides of said notches forming circumferentially-elongated fingers also extending circumferentially beyond the opposite ends of the diameter of said other component, said fingers being displaced laterally away from the central plane of said outer bearing unit.

2,895,770
SWIVEL BEARING
John T. Matthews, Charlotte, N.C., assignor to Wil-Mat Corporation, Charlotte, N.C., a corporation of North Carolina
Application January 9, 1956, Serial No. 558,062
5 Claims. (Cl. 308—227)



1. A swivel comprising two substantially flat mounting plates arranged in superposed relation, each plate having a substantially centrally located opening therein, a plurality of rotatable antifriction elements disposed in a circular arrangement between the plates whereby relative rotation of the plates is permitted, means forming a part of one plate lying within the area defined by said arrangement of elements providing a flat circular relatively narrow track which is in a plane with the said elements and intersects the same, the other plate having inwardly extending integral parts and with integral portions of said parts extending inwardly and beyond said track and in the plane of the said elements, plate holding clips, each clip comprising a body portion secured to said inwardly extending portion of the said other plate and having an upwardly offset tongue overlying and coacting with the track to retain the plates against separating movement but permit rotation of one plate relative to the other, and means facilitating the attachment of the plates to bodies between which the swivel is located.

2,895,771
EXPANSION WHEEL HUB BEARING
Bruce Ridgeway, Mexico, Mo.
Application December 16, 1957, Serial No. 703,009
3 Claims. (Cl. 308—236)

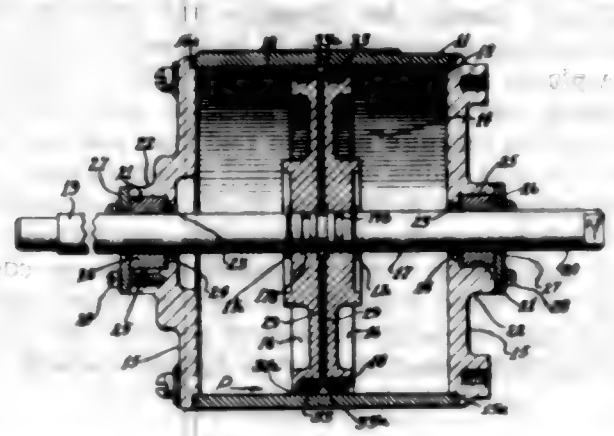


1. An expansion bearing for a wheel subjected to high temperature variations, said bearing comprising a sleeve having an interior bearing surface and a tapered exterior surface, said tapered exterior surface being mated with an interior tapering surface provided on a hub of said wheel, and draw means cooperating with the hub and the sleeve urging the sleeve in an expanded direction upon increases in temperature of the wheel and urging the sleeve in a contracted direction upon reductions in temperature of the wheel, said draw means comprising a draw ring secured to the reduced end of the sleeve, said draw ring having a tapered surface cooperating with a tapered surface at the end of the wheel hub.

2,895,772
PACKING RING
Walter R. Chapman, Bedford, and Alfred Tains, Cleveland, Ohio, assignors to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Application March 31, 1955, Serial No. 498,132
13 Claims. (Cl. 309—23)

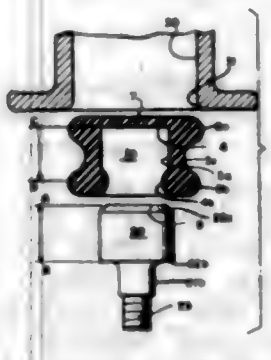
1. In a fluid seal assembly for preventing fluid leakby between the wall of a cylindrical bore and a cylindrical member having an annular groove formed on the periphery thereof adapted for movement within said bore, at least one generally annular relatively pliable sealing member carried by and movable with said cylindrical member, said sealing member including a radially extending body portion and an integral normally angularly projecting annular flange portion, said annular flange portion being adapted to overlie at least a portion of said groove and to be biased radially outwardly against said

wall in tight sliding fluid-seal engagement therewith responsive to fluid pressure, and at least one resilient annulus disposed within said groove adapted to underlie



said annular flange portion and to cooperate with said sealing member to prevent fluid leak-by around the outer periphery of said cylindrical member.

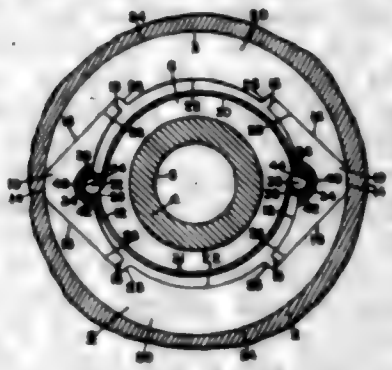
2,895,773
VARIABLE DIAMETER TENSED RING PISTON
Robert K. McConnaughey, Chevy Chase, Md.
Application October 22, 1956, Serial No. 617,467
11 Claims. (Cl. 309—23)



1. In a piston construction adapted to move within a cylinder, a generally cylindrical piston head having a diameter less than the inner diameter of the cylinder and an elastic cap on said piston head stretched both longitudinally and radially over the surface of said piston head and arranged to engage the inner surface of said cylinder, said cap having at least two spaced external rings extending therearound and connected by a tubular elastic web stretched therebetween, said piston head having an annular shoulder contiguous to each of the rings, said shoulders forming fulcrums supporting the respective rings for rotation therearound when the piston is moved in said cylinder, the outer diameter of said rings being greater than the inner diameter of said cylinder and each said rings as a whole being thus constrained by said cylinder to rotate around said shoulders and assume positions offset along the length of said piston head from the positions assumed in the absence of constraint by said cylinder, there being space for inward movement of said rings at said offset positions, whereby said rings may rotate inwardly and outwardly around said shoulders in conformity with variations in the diameter of said cylinder.

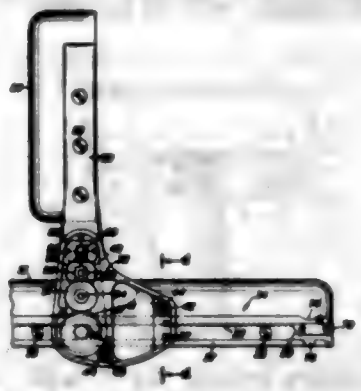
2,895,774
PISTON ASSEMBLY
Eugene J. Doperalski, Michigan City, Ind., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application April 15, 1957, Serial No. 652,726
16 Claims. (Cl. 309—38)

1. A piston ring assembly comprising, a hollow body, expanding means extending between and engaging opposed portions on the inner surface of said body, said expanding means comprising a pair of elongated resilient arcuate members reversely disposed in relation to each other to form a hollow member, each of said arcuate



members having a first means at one end thereof and a second means at the other end thereof insertable within said first means on said one end of the other of said arcuate members.

2,895,775
ADJUSTABLE KNEE REST
Robert L. McDonald and Karl H. Burzlaff, Rochester, N.Y., assignors to Bitter Co., Inc., Rochester, N.Y., a corporation of Delaware
Application April 15, 1957, Serial No. 652,939
10 Claims. (Cl. 311—5)



1. In a medical examination and operating table, the combination of a leg rest section and a knee rest section, a track on said leg rest section, at least two rollers carried by said leg rest section and engaging said track on opposite sides thereof for supporting said knee rest section in approximately right angle relation to each other, said leg rest section when the table is oriented for some uses extending in a downward direction, said track being open at its upper end so that the rollers may roll off the track without interference whereby the knee rest section can be freely separated from the leg rest section and stop means at the lower end of said track.

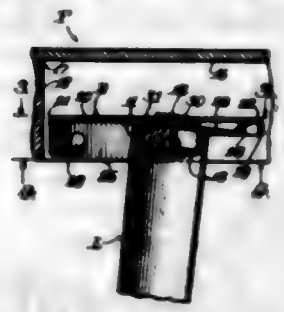
2,895,776
ADJUSTABLE EXTENSION ARM
William G. Meyer, Clifton, N.J., and Morris Manson, Great Neck, N.Y., assignors to Steel Slides, Inc., Yonkers, N.Y., a corporation of New York
Application February 14, 1958, Serial No. 715,462
6 Claims. (Cl. 311—71)

1. An extension arm comprising in combination; a pair of duplicate side-by-side slide elements, each of said elements having a pair of longitudinally extending slots therein; a pair of fastener elements for holding to-

fixedly secured to said other wall, a second leg in con- a laundry classifying and load measuring hamper com-

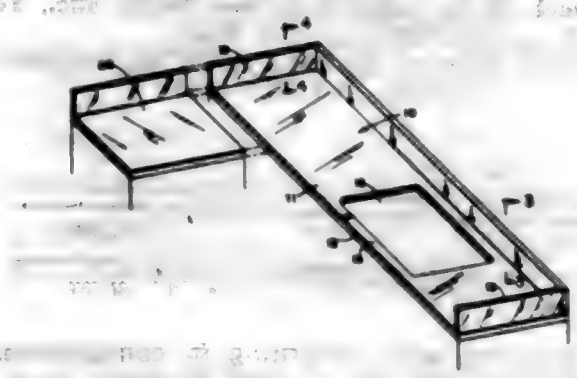
gether said two slide elements with said slots in side-by-side relation, each fastener element passing through its respective pair of side-by-side slots, one such slot in each of the slide elements; each of said slide elements being formed with a pair of longitudinally extending grooves parallel to each of the slots of such slide elements, one of each pair of grooves extending along one side of one of the slots of the slide element and the other groove extending along the other side of such slot, corresponding grooves of the respective slide elements forming face-to-face pairs adjacent either side respectively of each of said pairs of side-by-side slots; a first pair of anti-fraction elements interposed between said slide elements adjacent a first pair of said side-by-side slots, one of said pair of anti-friction elements being interposed between one pair of face-to-face grooves adjacent said first pair of side-by-side slots and the other of said pair of anti-friction elements being interposed between the other pair of face-to-face grooves adjacent said first pair of side-by-side slots; and a second pair of anti-friction elements similarly positioned with respect to the other pair of side-by-side slots.

2,895,777
TABLE LEG SUPPORT BRACKET
Wilbur J. Urban, River Forest, Ill., assignor to Hub Stamping and Manufacturing Company, Chicago, Ill.
Application December 30, 1957, Serial No. 706,121
1 Claim. (Cl. 311—104)



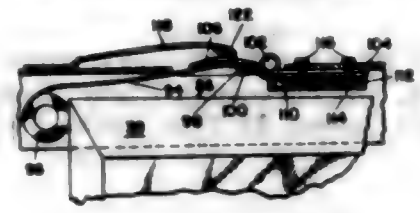
A table leg support bracket for a table having a thin, light-weight top mounted on edge rails, said bracket comprising a generally triangular plate portion having a downwardly dished inclined portion for rigidly securing a leg thereto with the leg slightly slanted, said plate portion having a depending flange extending along two edges thereof for securing the bracket to said rails and thereby hold said rails in fixed relative position, the other edge having a downwardly extending lip formed thereon and extending from end to end of said other edge and adjacent said inclined portion to stiffen said plate portion and resist bending moments applied thereto through said leg.

2,895,778
COUNTERTOP CONSTRUCTION
Phillip Ben Lieber, Shreveport, La.
Application May 6, 1957, Serial No. 657,172
2 Claims. (Cl. 311—106)



1. A countertop comprising a main base and backsplash, said base and backsplash being simultaneously faced with a plastic material so as to leave a small radius at the juncture between the two, end splashes for said countertop, each of said endsplashes being formed separately and adapted for assembly with said countertop when the same is installed, said endsplashes being faced with a plastic material and provided with a concave radius along one bottom edge identical with the radius formed at the juncture between said base and said backsplash, a convex radius also formed at one corner of each of said endsplashes to conform to the concave radius between said base and said backsplash, the bottom faces of said endsplashes being machined to a sharp edge to overlap and blend with the countertop facing material when set onto the same, the area of all radial bends being supported throughout the entire lengths thereof.

2,895,779
CABINET WITH SELF-CLOSING DOORS
Paul P. Bender, Philadelphia, Pa.
Application June 18, 1958, Serial No. 742,955
10 Claims. (Cl. 312—138)



9. A self-closing door arrangement comprising a housing, a rectangular opening in said housing, track means on at least a portion of the periphery of said opening, said track means comprising an upper channel member defined by an upper strip having two vertical walls integral therewith, a guide element generally parallel to but spaced from said upper channel member, a rectangular door panel removably positioned in said opening and having one edge removably engaged in said channel member, and the opposite edge having guide means releasably engaged with said guide element, a spring strip in said channel member, said spring strip being resiliently biased into a coil, said coil being resiliently biased into a normal position within said channel member adjacent the lower edges of said vertical walls, said door panel being of such width that when it is positioned in said opening one edge thereof extends into said track means beyond the corresponding peripheral plane of said coil when said coil is in its normal position so that when said one edge is inserted in said track means adjacent said coil, said one edge engages said coil and pushes it radially back from its normal position, and said door panel having a length smaller than the distance between said coil and one end of said opening whereby, upon linear movement of said door panel toward said one end of said opening, said door panel is disengaged from said coil which thereupon moves back into its normal position.

2,895,780
STRIKE MOUNT FOR REFRIGERATOR CABINET
Julius B. Hervay, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Application August 27, 1958, Serial No. 757,617
2 Claims. (Cl. 312—214)

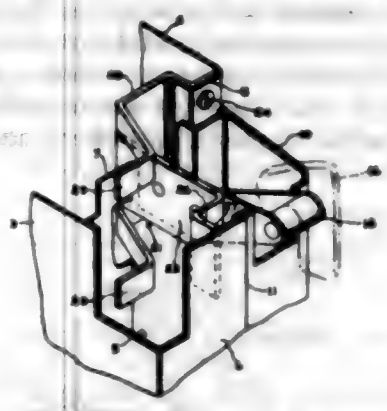
2. A metal strike mount for mounting a strike on a cabinet having an access opening at the front thereof and comprising spaced inner and outer walls, one of said walls including a channel section having front and rear flanges extending towards the other of said walls adjacent said access opening, said strike mount including a body portion disposed between said walls for supporting a strike, a first leg on one side of said body portion and

ing a cycle of said punched card data recorder from a pulse emitted by said master pulse generator, a serial

which the relation between a predetermined characteristic of the pulses in the first pulse group is a function of the

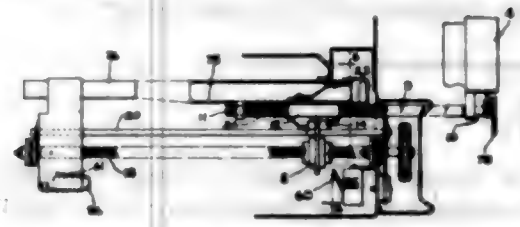
expanding means extending between and engaging opposed portions on the inner surface of said body, said

fixedly secured to said other wall, a second leg in contact with but not secured to the rear surface of said



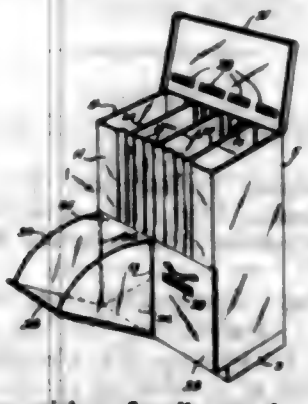
front flange and additional legs in contact with but not secured to the front surface of said rear flange.

2,895,781
SAFETY THROWOUT MECHANISM FOR POWER OPERATED DRAWERS
Bruce B. Latter and William C. Bodeng, Louisville, Ky., assignors to General Electric Company, a corporation of New York
Application October 24, 1958, Serial No. 769,377
9 Claims. (Cl. 312—223)



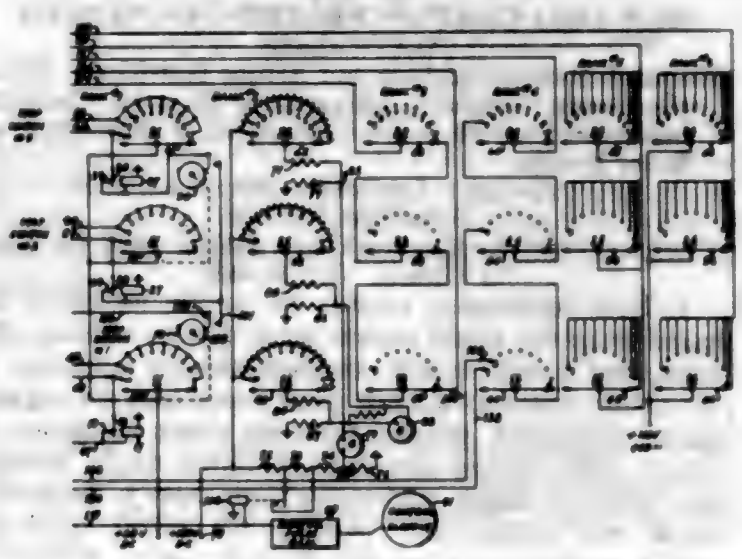
1. In a drive mechanism for opening and closing a drawer, a drive member, driving means for moving said drive member in a path parallel to the line of travel of said drawer, driven means comprising a rod having one end connected to said drawer, a connecting element slidably mounted on said rod adjacent the other end thereof for engaging said drive member and adapted in first position on said rod to positively engage said drive member and in second position to disengage said drive member, and spring means for biasing said connecting member to said first position against the driving force of said drive member under normal drawer operating conditions and for permitting said connecting member to move to said second position when the driving force of said drive member exceeds a predetermined value.

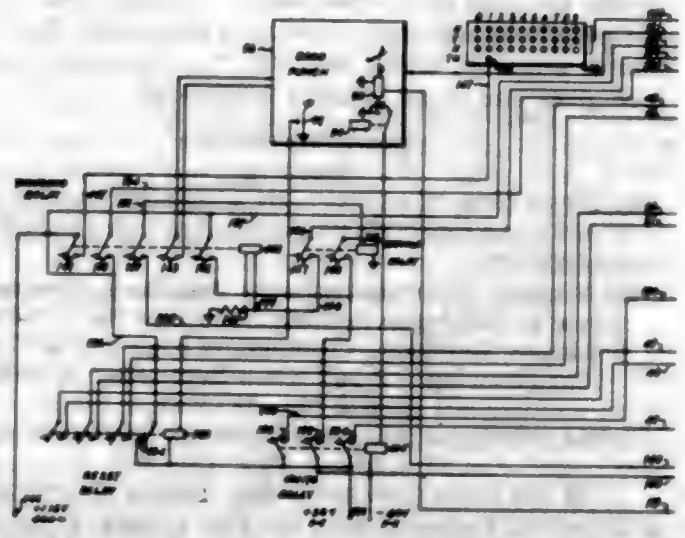
2,895,782
CLOTHES HAMPER
Eleanor M. Fragola, St. Louis, Mo.
Continuation of application Serial No. 433,586, June 1, 1954. This application June 13, 1956, Serial No. 591,133
1 Claim. (Cl. 312—290)



In conjunction with a family wash machine having a fixed, known, optimum capacity for various kinds of wash, a laundry classifying and load measuring hamper comprising a rectangular cabinet having fixed front, back and side walls, said cabinet having a plurality of open-topped upper compartments having front, back, side and bottom walls, the front and back walls of said compartments being common with the fixed front and back walls of the cabinet and at least one of the sides of each of said upper compartments being defined by a removably mounted vertical partition extending between said front and back walls; and a plurality of lower compartments immediately beneath the said upper compartments, the bottom wall of the upper compartments constituting a top closure for the lower compartments, each of said lower compartments having a forwardly extendable front wall, hinged at its bottom to tilt forwardly, said lower compartments being substantially larger than the individual upper compartments and being designated for the reception of whites, each of said compartments being designated for the reception of a particular kind of laundry and being of a capacity to hold a single wash machine load of the particularly designated kind of laundry, whereby, when one of said compartments is full of the particular kind of laundry, it is immediately apparent that a proper optimum load for the family wash machine is available.

2,895,783
DATA CORRELATOR
Samuel G. Cohen, Ossining, N.Y., assignor to General Precision Laboratory Incorporated, a corporation of New York
Application March 18, 1957, Serial No. 646,778
3 Claims. (Cl. 346—23)





1. A data correlator for correlating by serial numbering two data recorders emitting graphic and punched card records respectively of identical data comprising, a master pulse generator emitting pulses, means start-

of the cellulose, of a modifying agent selected from the group consisting of choline, choline chloride, choline

caused to fall back as a compact stream at an angle to the vertical and collecting said compact stream of a

1. A countertop comprising a main base and backsplash, said base and backsplash being simultaneously

body portion disposed between said walls for supporting a strike, a first leg on one side of said body portion and

ing a cycle of said punched card data recorder from a pulse emitted by said master pulse generator, a serial number generator for generating signals representing a serial number, means starting said serial number generator under control of said punched card data recorder to generate a selected serial number, means applying a signal generated by said serial number generator to said punched card data recorder whereby it digitally punches said selected serial number in a card, and means substantially simultaneously applying a signal generated by said serial number generator to said graphic data recorder whereby it draws graphic indicia which together are an analog of said selected serial number.

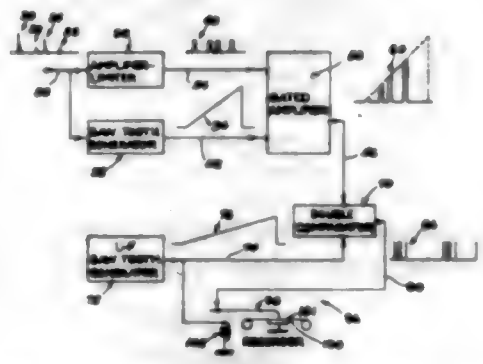
2,895,784

TIME BASE CONVERTER

Henrique A. F. Rocha, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Application June 24, 1957, Serial No. 667,577
16 Claims. (Cl. 346—33)

1. A time base converter comprising apparatus to feed a series of repeating pulse patterns in which each pulse pattern has a finite time duration and each pulse within the pattern occurs at a time having a definite time relation to the finite time duration, a first device connected to said feed apparatus and responsive to the series of repeating pulse patterns to produce a first pulse group in which the relation between a predetermined characteristic of the pulses in the first pulse group is a function of the definite time relation of the pulses in the pulse patterns, a second device connected to said first device and responsive to the first pulse group to produce a second pulse group having a time duration substantially greater than the time duration of the pulse pattern and in which the



individual pulses in the second pulse group have a definite time relation to the predetermined characteristic of the pulses in the first pulse group and to the time duration of the pulse group, the last mentioned definite time relation being proportional to the definite time relation between the individual pulses in the pulse pattern and the finite time duration of the pulse pattern.

CHEMICAL

2,895,785

NEW COLOURATION PROCESS FOR TEXTILE MATERIALS

Frederick Richard Ainberg and Arthur Hutchinson Wyld, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application March 31, 1958
Serial No. 724,850
Claims priority, application Great Britain April 10, 1957
3 Claims. (Cl. 8—65)

1. New colouration process for textile materials, selected from the group consisting of cotton, viscose, silk, wool, and nylon, which comprises locally applying to the textile materials a resist paste comprising an organic amino compound, selected from the group consisting of amino acids, amino alcohols, saturated cyclic amines, and aliphatic mono- and polyamines, and a thickening agent, and subsequently padding the textile materials with a solution of a reactive dyestuff having a reactive group capable of reacting with the fiber, and, when the textile material is of cellulose, a member selected from the group consisting of an alkaline compound and a compound which on being subjected to an elevated temperature gives rise to an alkaline compound.

2,895,786

PROCESS FOR MAKING FILAMENTS FROM POLYVINYL ALCOHOL POLYAMIDE MIXTURE AND PRODUCT

Paul Schlack, Leitershofen, near Augsburg, Germany, assignor to Bobingen Aktiengesellschaft für Textil-Faser, Bobingen, Bobingen, Germany, a company of Germany

No Drawing. Application September 1, 1953
Serial No. 377,964
Claims priority, application Germany September 4, 1952
11 Claims. (Cl. 18—54)

1. In the process of preparing threads by extrusion of solutions of high polymers through narrow openings, the steps which comprise extruding into an aqueous precipitation bath an aqueous solution of polyvinyl alcohol and a synthetic linear high polymer containing amido nitrogen and active hydrogen attached to said amido nitrogen, orienting resultant threads and hardening the oriented threads by means of an active carbonyl compound at an elevated temperature in the presence of a compound of acid reaction.

2,895,787

PROCESS OF PRODUCING ALL SKIN RAYON

Harry H. Hall, Drexel Hill, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application December 30, 1954
Serial No. 478,913
6 Claims. (Cl. 18—54)

1. In a method of producing shaped bodies of regenerated cellulose consisting substantially entirely of skin, the step which comprises extruding viscose containing from about 0.25% to about 4%, based on the weight of the cellulose, of a modifier selected from the group consisting of alkali-soluble esters of phosphoric acid and alkali-soluble esters of alkali-metal acid salts of phosphoric acid with polyoxyalkylene glycol mono-ethers of higher aliphatic alcohols into an aqueous spinning bath containing from about 10% to 25% sodium sulfate, from about 3% to 15% zinc sulfate and sulfuric acid, the sulfuric acid content of the spinning bath exceeding the slubbing point but not exceeding about 8.5%, the polyoxyalkylene glycol mono-ether of the higher aliphatic alcohol containing at least about 2 alkylene oxide units per molecule of higher aliphatic alcohol.

2,895,788

METHOD OF FORMING ALL SKIN VISCOSE RAYON

John A. Howenson, Wilmington, Del., and Byron A. Thomas, Prospect Park, Pa., assignors to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application December 30, 1954
Serial No. 478,914
8 Claims. (Cl. 18—54)

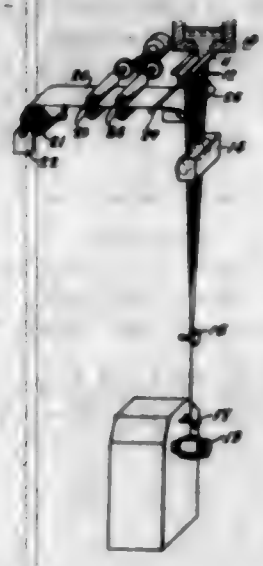
1. In a method of producing shaped bodies of regenerated cellulose consisting substantially entirely of skin, the step which comprises extruding viscose containing from about 0.3% to about 4.5%, based on the weight

to their fluocomplexes, the pH being maintained at a

until said conversion is substantially complete, and sep-

of the cellulose, of a modifying agent selected from the group consisting of choline, choline chloride, choline bromide, choline sulfate, choline bisulfate, choline acetate and choline propionate and mixtures thereof into an aqueous spinning bath containing from about 10% to 25% sodium sulfate, from about 3% to 15% zinc sulfate and sulfuric acid, the sulfuric acid content of the spinning bath exceeding the slubbing point but not exceeding about 8.5%.

2,895,789
METHOD FOR PRODUCING COATED GLASS FIBERS
Robert G. Russell, Granville, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Application December 28, 1956, Serial No. 631,097
7 Claims. (Cl. 18—54)



1. The method of producing coated filaments of heat softenable mineral material comprising flowing streams of such mineral material from a molten source thereof, attenuating said streams into filaments, progressively feeding a sheet of heat softenable coating material toward said filaments, passing said sheet over a heat supplying coating unit, heating and melting said sheet at said coating unit, flowing the molten material of said sheet to said filaments, and so passing the filaments for envelopment by the molten coating material to provide the desired coatings for the filaments.

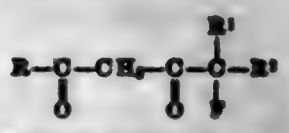
2,895,790
PRODUCTION AND TREATMENT OF ARTIFICIAL FILAMENTARY MATERIALS
Russell Jacques Brown and John Downing, Spondon, near Derby, England, assignors to British Celanese Limited, a corporation of Great Britain
Application April 4, 1955, Serial No. 499,166
Claims priority, application Great Britain April 12, 1954
6 Claims. (Cl. 18—54)

1. A process in which filamentary material is drawn up and out of a substantially vertical narrow zone up which liquid is also flowing and in which a drawing force is applied to said filamentary material after said filamentary material has left said liquid which comprises subjecting the material between the point at which it leaves the vertical narrow zone and that at which the drawing force is applied to a change of direction of 10–70° over an arc of a circle caused by contact with a smooth cylindrical solid surface of diameter 2–8 inches moving at a speed between 60 and 98% of that of the material whereby liquid is moved from the material and caused to fall back as a compact stream at an angle to the vertical and collecting said compact stream at a collection zone which is below the first point of contact

of said filamentary material and said surface said collection zone being displaced from said filamentary material and being on the side of said filamentary material engaged by said surface.

2,895,791
SEPARATION PROCESS FOR PROTACTINIUM AND COMPOUNDS THEREOF
Quentin Van Winkle, Columbus, Ohio, assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application January 19, 1950
Serial No. 139,531
20 Claims. (Cl. 23—14.5)

1. A process for the separation of protactinium from an acidic aqueous solution containing a salt of protactinium in the pentavalent state and containing a strong inorganic acid, which comprises contacting said aqueous solution with a fluorinated β-diketone having the general formula:



wherein R is a member of the group consisting of alkyl, aryl, aralkyl, alkaryl and heterocyclic radicals and R^1 and R^2 are members of the group consisting of hydrogen and fluorine.

2,895,792
PROCESS FOR SEPARATING VALUES OF TANTALUM AND COLUMBIUM FROM VALUES OF AN ELEMENT OF GROUP IV–B
John R. Ruhoff and George L. Martin, Webster Groves, and Charles O. Gerlen, Brentwood, Mo., assignors to Mallinckrodt Chemical Works, St. Louis, Mo., a corporation of Missouri
No Drawing. Original application February 15, 1955, Serial No. 488,462, now Patent No. 2,859,098, dated November 4, 1958. Divided and this application May 16, 1957, Serial No. 659,466
2 Claims. (Cl. 23—23)

1. The method of recovering columbium and tantalum values from a concentrate containing the hydrous oxides of said elements and the hydrous oxide of an element of group IV–B of the periodic table, comprising adding a source of fluoride ions to an aqueous suspension of said hydrous oxides in an amount sufficient to selectively dissolve the hydrous oxide of the group IV–B element as its fluocomplex but less than that required to completely convert the hydrous oxides of columbium and tantalum

gel and active hydrogen attached to said amido nitrogen, orienting resultant threads and hardening the oriented

the step which comprises extruding viscose containing from about 0.3% to about 4.5%, based on the weight

to their fluocomplexes, the pH being maintained at a value between approximately 2–7, and separating the resulting solution containing the fluocomplex of the group IV–B element from the undissolved hydrous oxides of columbium and tantalum.

2,895,793

PROCESS FOR SEPARATING TANTALUM AND COLUMBIUM VALUES

John R. Ruhoff and George L. Martin, Webster Groves, and Charles O. Gerfen, Brentwood, Mo., assignors to Mallinckrodt Chemical Works, St. Louis, Mo., a corporation of Missouri

No Drawing. Original application February 15, 1955, Serial No. 488,403, now Patent No. 2,859,099, dated November 4, 1958. Divided and this application May 16, 1957, Serial No. 659,467

1 Claim. (Cl. 23—23)

The method of recovering tantalum values from a concentrate containing the hydrous oxides of tantalum and columbium, comprising adding a source of fluoride ions to an aqueous suspension of said hydrous oxides in an amount sufficient to selectively dissolve the hydrous oxide of columbium as its fluocomplex but less than that required to dissolve the hydrous oxide of tantalum as its fluocomplex, the pH being maintained at a value between approximately 2–6, and separating the resulting solution containing the fluocomplex of columbium from the undissolved hydrous oxide of tantalum.

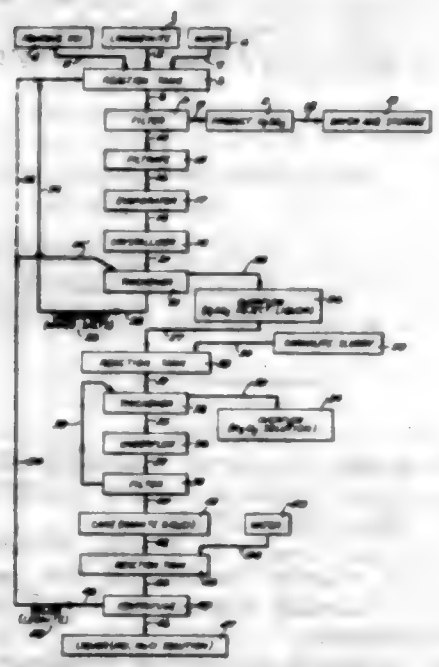
2,895,794

PROCESS FOR RECOVERING POTASSIUM VALUES FROM KAINITE

William B. Dancy and William N. Stanley, Jr., Carlsbad, N. Mex., assignors to International Minerals & Chemical Corporation, a corporation of New York

Application May 3, 1955, Serial No. 505,622

3 Claims. (Cl. 23—38)



1. In a process for recovering potassium values from kainite containing between about 5 and about 20% by weight of sodium chloride, based on total solids, the steps which comprise admixing said kainite with water in an amount sufficient to dissolve all of the sodium chloride and to produce a slurry in which the liquid phase is substantially saturated with sodium chloride while the solid phase contains substantially no sodium chloride, agitating the resulting slurry at a temperature between about 20 and about 60° C., whereby the sodium chloride is dissolved and the kainite is converted into leonite, continuing said agitation for at least about 0.5 hour and until said conversion is substantially complete, and separating said leonite as the solid phase from the reaction product mixture.

2,895,795

METHOD FOR PRODUCING SODIUM CHLORIDE BRINE LOW IN CALCIUM SULFATE CONTENT

Horace W. Diamond, Chicago, Ill., assignor to Morton Salt Company, Chicago, Ill., a corporation of Illinois

No Drawing. Application September 10, 1954 Serial No. 455,347

2 Claims. (Cl. 23—42)

1. The method for reducing the calcium content of a sodium chloride brine containing in solution sodium carbonate, phosphates and calcium sulfate, which compriaes adding calcium carbonate to said brine to effect a decrease in the dissolved calcium and carbonate content of the brine without a substantial decrease in the sulfate content of said brine, said decrease in the dissolved calcium and carbonate content of the brine resulting from precipitation of said calcium and carbonate content of said brine without corresponding calcium sulfate precipitation following addition of calcium carbonate to said brine, and then removing from the thus treated brine precipitated calcium carbonate together with the added calcium carbonate.

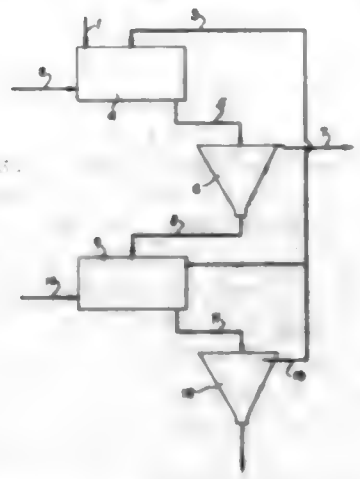
2,895,796

PRODUCTION OF IRON CHLORIDE AND SULFUR

Cyril Thomas Hill, New York, N.Y., assignor to Texas Gulf Sulphur Company, New York, N.Y., a corporation of Texas

Application March 19, 1954, Serial No. 417,413

9 Claims. (Cl. 23—87)



1. A process of obtaining sulfur and iron chloride comprising treating iron sulfide with chlorine at a temperature between 100 and 440° C. in the presence of a liquid solvent of chlorine.

2,895,797

RECOVERY OF GERMANIUM TETRACHLORIDE

Cyril T. Hill, New York, N.Y., assignor to Texas Gulf Sulphur Company, New York, N.Y., a corporation of Texas

No Drawing. Application February 14, 1955 Serial No. 488,159

5 Claims. (Cl. 23—87)

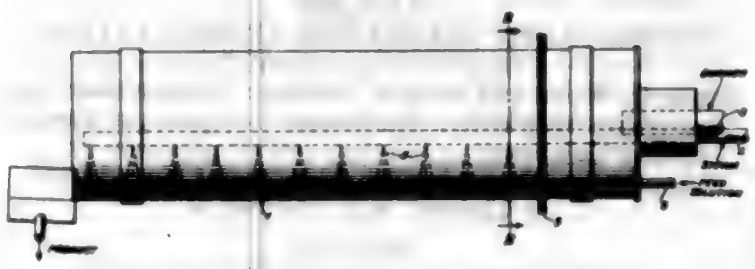
3. A process of decomposing metal sulfides comprising suspending a finely ground metal sulfide mixture containing germanium sulfide in from about 2 to about 10 times its volume of sulfur, maintaining said sulfur in the liquid phase at a temperature between 100 and 440° C., passing a chlorinating agent into the suspension thereby converting the germanium sulfide into sulfur and germanium tetrachloride, and separating said germanium tetrachloride from the reaction mixture by distillation of said chloride with the aid of an inert gas.

at two different temperatures, said isotope with another chamber, and is burned as it enters the chamber

2,895,798
BARIUM RECOVERY PROCESS
Raymond E. Blanco, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application October 26, 1954
Serial No. 464,918
6 Claims. (Cl. 23—102)

1. A method for the separation of barium values from an aqueous nitric acid solution of neutron-irradiated uranium contaminated with fission products, including strontium values, which comprises providing a sufficient quantity of sulfate ions and lead ions in said solution to precipitate barium from said solution as the sulfate together with lead, separating the resulting barium-lead-strontium-containing sulfate precipitate from the resulting supernatant solution, dissolving the separated precipitate in an aqueous solution of ethylene diamine tetra acetic acid, adjusting the resulting solution to pH 6.0–6.5, contacting the resulting solution with a comminuted organic cation exchange resin bed characterized by a plurality of methylene sulfonic acid groups and initially in the sodium form, whereby strontium and barium values are adsorbed on said bed, selectively eluting the resulting adsorbed strontium values from said bed with 0.05 to 0.2 molar aqueous ethylene diamine tetra acetic acid at pH 6.0–6.5, eluting sodium values with 0.5 to 2.0 molar aqueous hydrochloric acid and finally eluting the barium product with 6 to 12 molar aqueous nitric acid.

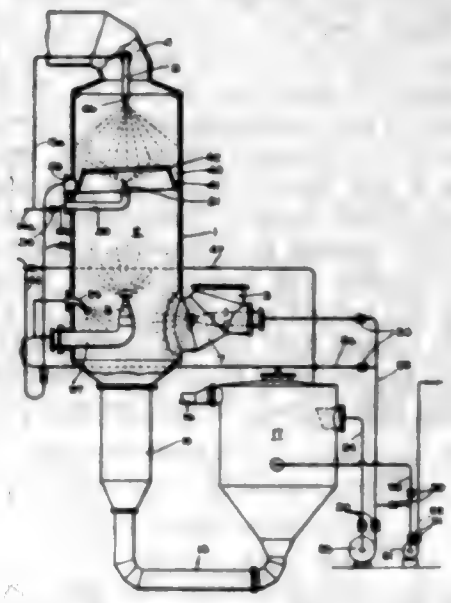
2,895,799
PROCESS FOR TREATING FLUORINE-CONTAINING PHOSPHATIC MATERIALS
Ira M. Le Baron and Elliott Northcott, Lakeland, Fla., assignors to International Minerals & Chemical Corporation, a corporation of New York
Application September 19, 1955, Serial No. 534,967
11 Claims. (Cl. 23—109)



1. A defluorination process which comprises forming a film of an aqueous solution of a fluorine-containing acidic phosphatic material selected from the group consisting of orthophosphoric acid, monocalcium phosphate and mixtures thereof, heating said film to a temperature of at least about 300° F., but below the melting point of the phosphatic material when it is in the solid phase and directing extraneously produced steam against the surface of said film while said heating is being effected, to produce a product containing phosphatic material of reduced fluorine content.

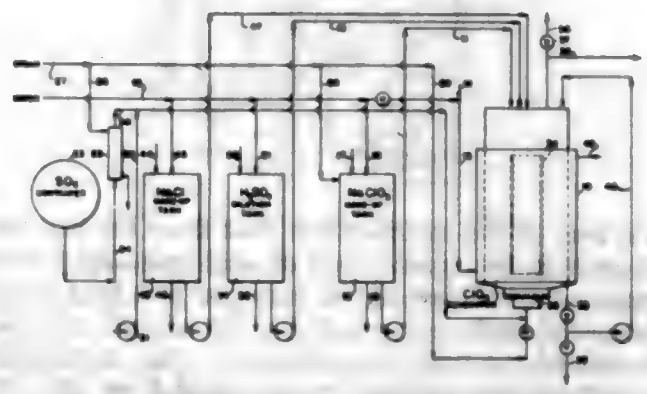
2,895,800
METHOD OF AND APPARATUS FOR PRODUCING AMMONIUM SULPHATE CRYSTALS
Carl Otto, Manhasset, N.Y.
Application August 27, 1954, Serial No. 452,574
5 Claims. (Cl. 23—119)

1. In producing ammonium sulfate by the liquor and crystal dispersion method in which gas having a small ammonia content is passed through a scrubbing space from a lower gas inlet to an upper gas outlet, the improvement which comprises the steps of spraying a relatively small portion of acidulated ammonium sulfate liquor having a relatively high sulfuric acid content into the upper portion of said space, spraying a relatively large portion of acidulated ammonium sulfate liquor having a relatively low sulfuric acid content upward into the lower portion of said space, and collecting liquor sprayed into said upper portion of said scrubbing space in an



annular space adjacent the lower end of said upper portion, and withdrawing said collected liquor from said annular space.

2,895,801
PROCESS FOR PRODUCING CHLORINE DIOXIDE
Walter W. Northgraves, Baltimore, Md., and Bernard H. Nicolaisen, Kenmore, N.Y., assignors to Olin Mathieson Chemical Corporation, a corporation of Virginia
Application April 6, 1956, Serial No. 576,579
15 Claims. (Cl. 23—152)



1. In the manufacture of chlorine dioxide by reacting an alkali metal chlorate and a reducing agent selected from the group consisting of sulfur dioxide and methanol in an aqueous reaction mixture containing sulfuric acid, the step of introducing into the reaction mixture from an external source a material selected from the group consisting of chlorine and inorganic chlorides, adjusting the rates of introduction of alkali metal chlorate, reducing agent and said material into the reaction mixture so as to maintain the reaction mixture 0.01 to 0.5 molar with respect to alkali metal chlorate and 0.05 to 0.25 molar with respect to chloride and maintaining the reaction mixture from 1 to 5.5 molar with respect to sulfuric acid.

2,895,802

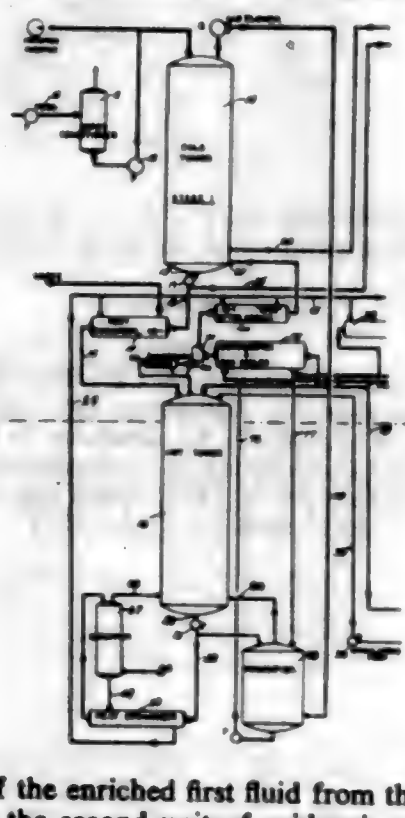
WITHDRAWN

2,895,803
ISOTOPE CONCENTRATION SYSTEM
Jerome S. Spevack, New Rochelle, N.Y.
Application September 29, 1950, Serial No. 188,925
14 Claims. (Cl. 23—284)

1. A method of producing a substance containing concentrated therein an isotope of an element by exchanging,

determined value, recycling the resulting cooled gas, prises a clear, non-absorptive gas impermeable type, a

at two different temperatures, said isotope with another isotope of the same element between chemically different fluid substances which are physically separable from each other and which are capable of containing each of said isotopes, which method comprises (*a*) establishing a countercurrent flow of the two substances in a series of at least two pairs of exchange units; (*b*) mixing said two fluids in each of said exchange units to cause an exchange of isotopes of the element between the two fluids; (*c*) maintaining a first unit of each pair at a temperature to cause the first fluid flowing therethrough to become enriched and the second fluid flowing therethrough to become impoverished with respect to said isotope; and (*d*) maintaining the second unit of each pair at a temperature to cause the second fluid flowing therethrough to become enriched and the first fluid flowing therethrough to become impoverished with respect to said isotope; (*e*) transferring



a first part of the enriched first fluid from the first unit of each pair to the second unit of said pair and (*f*) transferring a second part of the enriched first fluid from the first unit of each pair except the last of said pairs to the first unit of the next succeeding pair; (*g*) transferring a first part of the enriched second fluid from the second unit of each pair to the first unit of said pair and (*h*) transferring a second part of said enriched second fluid from the second unit of each pair except the last to the second unit of the next succeeding pair of units; (*i*) transferring impoverished first fluid from the second unit of each pair of units except the first pair to the second unit of the next preceding pair of units; and (*j*) transferring impoverished second fluid from the first unit of each pair of units except the first pair to the first unit of the next preceding pair of units; and (*k*) removing as product enriched fluid from the last pair of exchange units of said series.

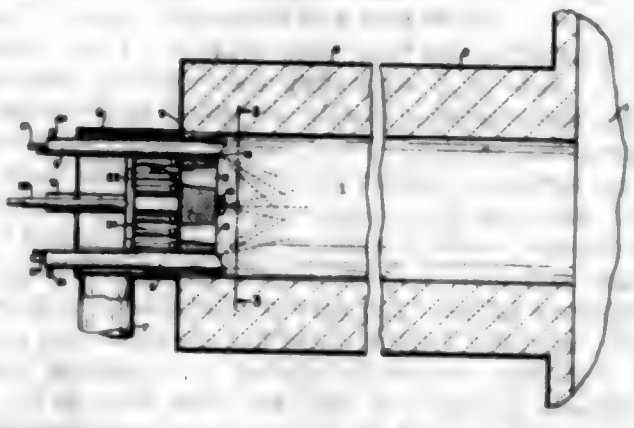
2,895,804

MANUFACTURE OF CARBON BLACK

George L. Heller, Monroe, La., assignor to Columbian Carbon Company, New York, N.Y., a corporation of Delaware

Application July 16, 1957, Serial No. 672,282
8 Claims. (Cl. 23—209.4)

1. In the process for producing carbon black by the decomposition of hydrocarbons whereby a combustible mixture of a fluid fuel and an oxygen-containing gas is blasted longitudinally into one end of an elongated, heat-insulated reaction chamber, through the upstream end wall of the chamber, as a multiplicity of streams symmetrically positioned over the transverse area of the chamber, and is burned as it enters the chamber to form a substantially uniform stream of hot gases passing substantially longitudinally through the chamber at high velocity and turbulence, and the hydrocarbon to be decomposed is separately introduced into the chamber through said upstream end wall of the chamber as a plurality of symmetrically positioned streams, and is mixed with said hot gases and decomposed by heat absorbed therefrom to form carbon black in gaseous suspension and the carbon black is separated from the



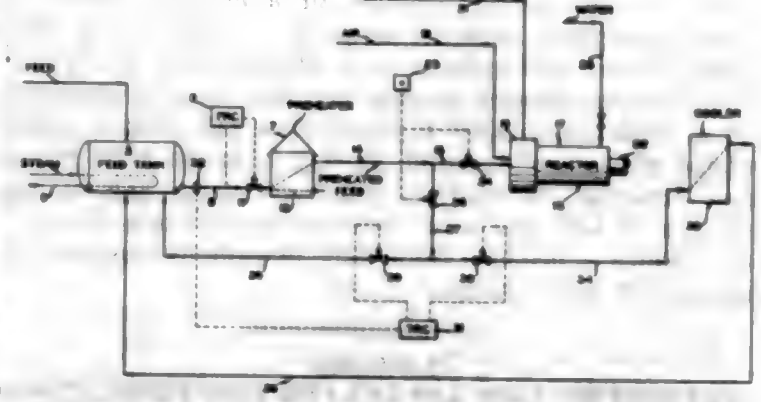
furnace effluent gases, the step of injecting the hydrocarbon streams into the hot gas stream as expanding gas-atomized liquid sprays initiated from positions located near the periphery of said end wall and so directed that the axis of symmetry of the respective sprays converge at a point lying downstream on the longitudinal axis of the chamber at an angle within the range of 15°–45° and at an initial velocity sufficiently greater than that of the blast flame gases that they are not materially deflected from their directed course before the oil has been substantially vaporized.

2,895,805

CONTROLLING FEEDSTOCK TEMPERATURE IN COMBUSTION PROCESS

James Q. Wood and Alvin J. Andrews, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

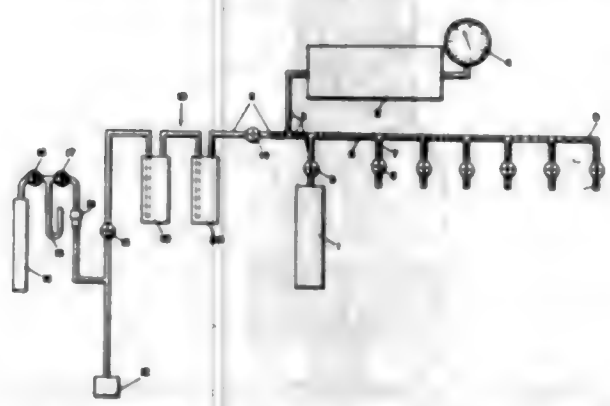
Application December 28, 1956, Serial No. 631,367
3 Claims. (Cl. 23—209.6)



2. In a carbon black process comprising conducting a stream of hydrocarbon charging stock from a source thereof to a preheating zone, continuously introducing the resulting preheated charging stock into a reaction zone along with combustion gases for the incomplete combustion thereof, and conducting the resulting reaction effluent to carbon black recovery equipment, the improvement comprising the steps of conducting said preheated charging stock so as to bypass said reaction zone and recycling the same to said charging stock source, conducting said preheated charging stock to a cooling zone rather than recycling the same directly to said source when the temperature of said stream of charging stock reaches a pre-

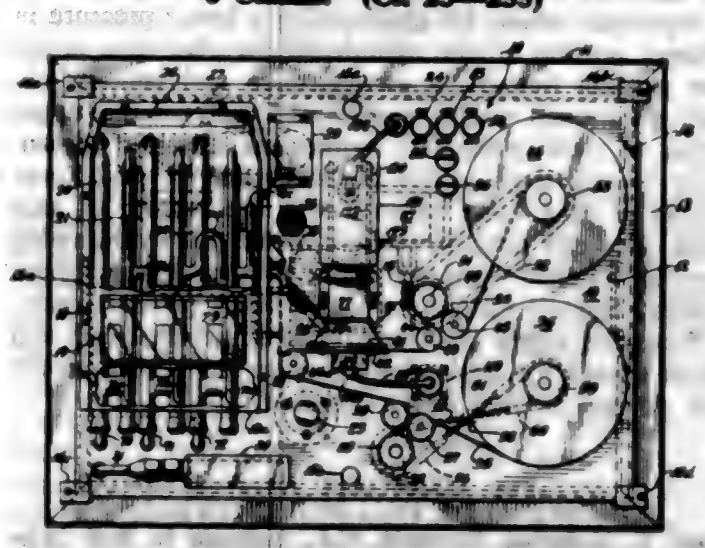
determined value, recycling the resulting cooled preheated charging stock to said source, and recycling again said preheated charging stock to said source rather than conducting the same to said cooling zone when the temperature of said stream of charging stock falls below said predetermined value.

2,895,806
METHOD FOR DETERMINING THE STABILITY OF FLUOROCARBON OILS
Zachary D. Sheldon, Rochester, N.Y., and Helmut M. Haendler, Durham, N.H., assignors to the United States of America as represented by the United States Atomic Energy Commission
Application February 11, 1946, Serial No. 646,948
1 Claim. (Cl. 23—230)



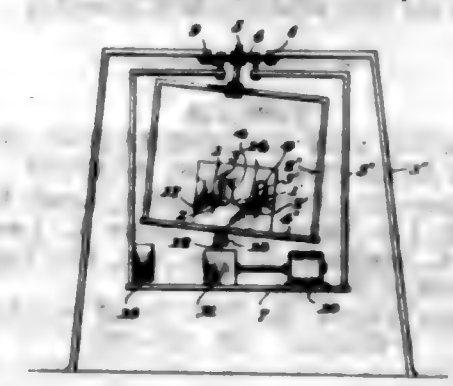
The method of determining the stability of a fluorocarbon oil to uranium hexafluoride which comprises treating a sample of the oil by weighing a sample of the oil, evacuating a reaction zone containing said oil sample, evacuating a container space of predetermined volume, causing the vapor of uranium hexafluoride to flow into said container space until a predetermined pressure is attained, causing the vapor so collected to flow into the reaction zone and to condense in said zone, causing the uranium hexafluoride to react with said oil sample, and titrating the amount of uranium tetrafluoride produced by means including a standard dichromate solution.

2,895,807
MULTIPLE STREAM GAS ANALYZER
Leonard V. Sorg, Kansas City, and John C. Lamkin, Independence, Mo., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application July 22, 1957, Serial No. 673,319
6 Claims. (Cl. 23—255)



1. An apparatus for detecting the concentration of a chemically reactive component in a gasiform stream wherein a moving tape is exposed to such stream and the extent of change in the light transmittancy of the tape is a measure of the concentration of the reactive component in such a stream, the improvement which comprises a clear, non-absorptive gas-impermeable tape, a water absorptive coating thereon, a plurality of traces on said coating specifically reactive to a component to be measured, an exposure chamber through which said tape is caused to travel, a plurality of jet inlet means directing streams of gasiform fluids within the exposure chamber, cabinet means enclosing said exposure chamber and unexposed tape, a heat radiating panel in said cabinet means supporting said exposure chamber, means for controlling the humidity within the said cabinet whereby said traces are sensitized with water vapor prior to passage through said exposure chamber, said means for controlling the humidity comprising trough means in heat conducting relation to said panel, and a replenished pool of saturated salt solution in said trough, photoelectric means providing a light beam on one side of said tape and a light-sensitive means on the other side, and means responsive to changes in the light transmittancy of said tape immediately after exposure to said reactive component.

2,895,808
APPARATUS FOR THE SEPARATION OF SOLUTES BY PARTITION
Gilbert S. Hartley, Fulbourn, England, assignor to Fisons Pest Control Limited, Bourn, England, a British company
Application October 13, 1955, Serial No. 540,242
Claims priority, application Great Britain October 19, 1954
9 Claims. (Cl. 23—267)



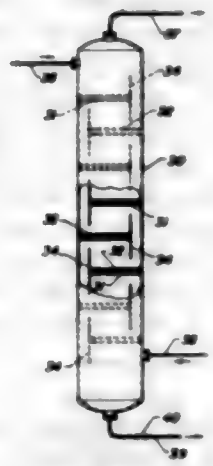
1. An apparatus comprising a closed conduit having a single opening at one extreme and a single opening at the opposite extreme; said conduit containing between said extremes a plurality of sections which are serially connected, each of said sections consisting essentially of an inlet tube, a mixing vessel, a loose body and an outlet tube, said mixing vessel being substantially horizontally disposed, having a cross-sectional area greater than that of the inlet tube to which it is connected and enveloping the loose body, said loose body being a free mass having a cross sectional area less than that of the mixing vessel and being restricted by said mixing vessel, said outlet tube having a greater cross-sectional area than the inlet tube, being substantially vertically disposed and being attached to the mixing vessel; each of said outlet tubes extending from its respective mixing vessel in substantially the same direction; one inlet tube connecting one of said single openings to a mixing vessel, a further tube connecting the other of said single openings to an outlet tube, and each of the remaining inlet tubes connecting the mixing vessel in one section to the outlet tube of the preceding section.

2,895,809
LIQUID-FLUID CONTACTOR
Jack R. Pohlenz, Riverside, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
Application March 12, 1956, Serial No. 571,012
3 Claims. (Cl. 23—270.5)

1. A multi-stage liquid-fluid contacting column comprising a vertical shell having upper fluid inlet and outlet

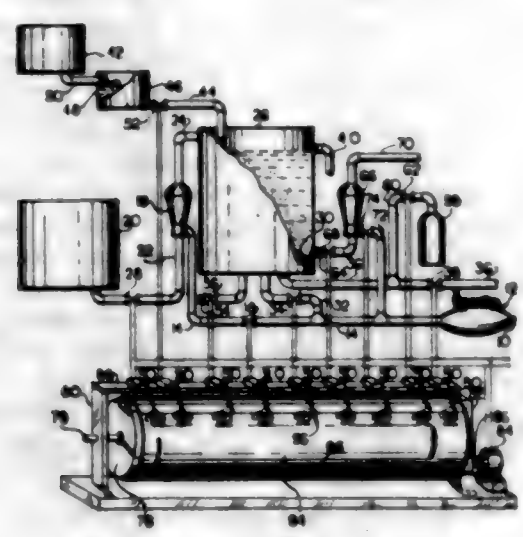
which closes off a portion only of the horizontal cross- taining from 14 to about 18% Al_2O_3 are formed, and

means and lower fluid inlet and outlet means, a plurality of vertically spaced sieve deck assemblies in the shell, each of said deck assemblies comprising a pair of vertically spaced, horizontal plates, each of said plates having a plurality of horizontally spaced perforations and one of said plates having a greater perforated area than the other,



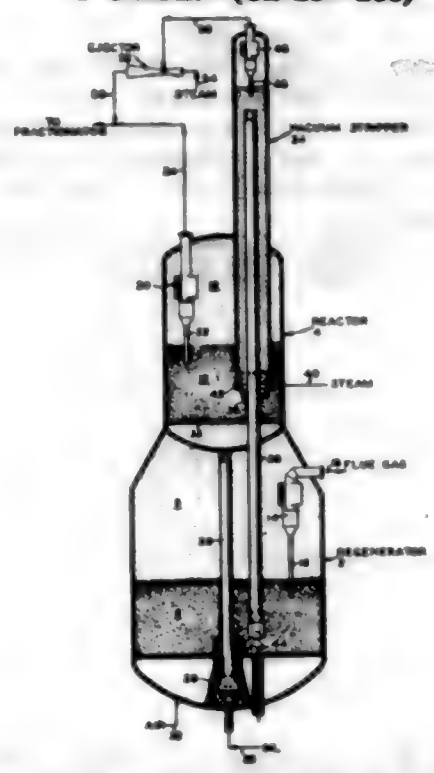
and conduit means extending vertically and in one direction only from the plate having the greater perforated area through and beyond the plate having the smaller perforated area, the conduit means of each deck assembly terminating within the space between the last-named deck assembly and the next adjacent deck assembly.

2,895,810
APPARATUS FOR REGENERATING SPENT WATER SOFTENING AGENTS
Walter P. Casey, Jr., Paradise Valley, Lewis E. Cascadden, North Las Vegas, and Luther L. Lawson, Las Vegas, Nev., assignors to Pier Inc., Las Vegas, Nev., a corporation of Nevada
Application August 30, 1957, Serial No. 681,380
4 Claims. (Cl. 23—285)



1. In apparatus for regenerating spent ion exchange material in which said material is treated with brine and wash water in a treatment tank, the combination which comprises; water injector pumping means for transferring spent material into said tank and regenerated material out of said tank, means for introducing wash water into said tank, means for introducing brine into said tank, electrically actuated valves controlling said pumping means and said wash water and brine introduction means, a timing device to actuate said valves at times and for intervals during a regeneration cycle, and a constant pressure valve controlling the water supply to said pumps and wash water introduction means.

2,895,811
UNITARY VESSEL CATALYTIC REACTOR, REGENERATOR AND VACUUM STRIPPER
Robert P. Schaaf, Livingston, N.J., assignor to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware
Application November 7, 1955, Serial No. 545,323
2 Claims. (Cl. 23—288)



1. A unitary apparatus comprising in combination, an upper chamber and a lower chamber, each of said chambers adapted to contain a dense fluidized bed of finely divided contact material, a first open end conduit extending from the lower portion of said lower chamber into the bottom of said upper chamber for transfer of finely divided contact material upwardly therethrough, a hollow stem plug valve aligned with the bottom of said first open end conduit, an elongated cylindrical chamber open at the bottom extending from the lower portion of said upper chamber upwardly therethrough, conduit means attached to the lower portion of said elongated cylindrical chamber for the introduction of a gaseous material thereto, said elongated cylindrical chamber adapted for the flow of contact material upwardly therethrough to the upper portion thereof, separator means in the upper portion of said elongated cylindrical chamber for the separation of finely divided contact material from gaseous material, an ejector means connected to said separator means for maintaining a lower pressure in the upper portion of said cylindrical chamber than in the lower portion thereof, a second open end conduit coaxially positioned within and extending from the upper portion of said elongated cylindrical chamber downwardly therethrough to the lower portion of said lower chamber, a plug valve aligned with the bottom of said second open end conduit, conduit means for withdrawing vaporous material from the upper portion of said upper chamber, conduit means for withdrawing gaseous material from the upper portion of said lower chamber and conduit means for introducing a gaseous material to the lower portion of said lower chamber.

2,895,812
GROWING OF QUARTZ CRYSTALS
Girard T. Kohman, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application July 28, 1954, Serial No. 446,315
9 Claims. (Cl. 23—301)

1. The method of growing quartz crystals in a sealed cylindrical autoclave mounted with its axis substantially vertical and containing a baffle at a point between its ends

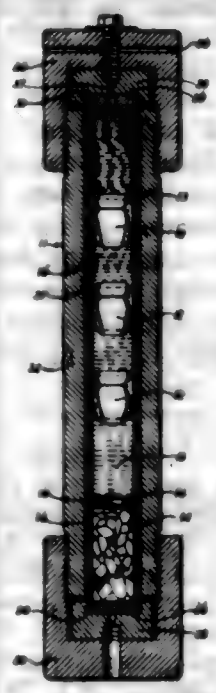
of 35 to 64 Rockwell C in which the steel is a martensitic

2,895,819

ponent in such a stream, the improvement which com-

prising a vertical shell having upper fluid inlet and outlet

which closes off a portion only of the horizontal cross-sectional area of said autoclave, said portion being at least 50 percent of the cross sectional area, which method comprises charging said autoclave with a crystalline quartz nutrient below said baffle, at least one quartz seed above said baffle and an amount of an aqueous medium

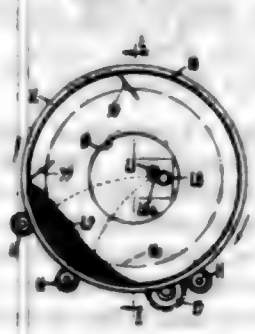


containing sodium ions sufficient to fill at least 60 percent of the remaining space in said autoclave, sealing said autoclave, heating it to quartz-growing temperatures and maintaining the region occupied by the nutrient at a higher temperature than the region occupied by said at least one seed.

2,895,813
PROCESS OF PRODUCING SOLID ALUMINUM SULPHATE

Harry Percival Brockelbank, Merdialloc, Victoria, and Michael James Martin, Canterbury, Victoria, Australia, assignors to Sulphates Limited, Melbourne, Victoria, Australia, a corporation of Victoria, Australia

Application September 29, 1955, Serial No. 537,494
Claims priority, application Australia October 5, 1954
3 Claims. (Cl. 23—301)

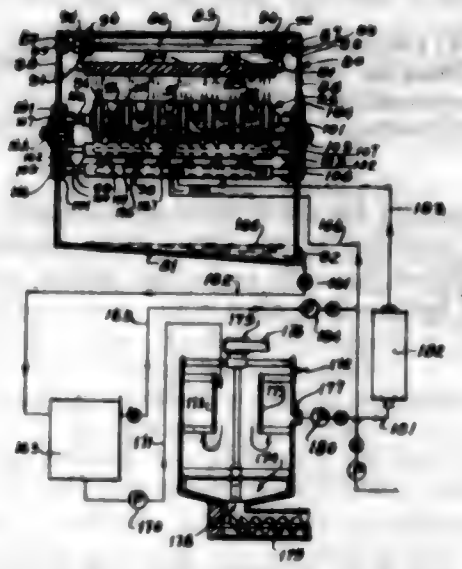


1. Process of producing nodules of solid hydrated aluminum sulphate from a liquid hydrated aluminum sulphate having a specific gravity of approximately 1.6, which consists essentially in the steps of maintaining a charge of solid nodules of solid hydrated aluminum sulphate containing from 14 to about 18% Al_2O_3 in a state of continuous agitation, establishing and maintaining a supply of said liquid hydrated aluminum sulphate at a temperature substantially about 85–87° C., continuously directing said liquid hydrated aluminum sulphate in subdivided condition onto the agitated nodules from a discharge position spaced therefrom while cooling the discharged liquid hydrated aluminum sulphate whereby the latter solidifies in contact with the agitated nodules and the latter enlarge by accretion to nodules of solid hydrated aluminum sulphate containing from 14 to about 18% Al_2O_3 while at the same time fresh nodules of solid hydrated aluminum sulphate containing from 14 to about 18% Al_2O_3 are formed, and continuously removing nodules from said agitated charge at substantially the same rate said liquid hydrated aluminum sulphate is supplied.

2,895,814
APPARATUS AND METHOD FOR REMOVING METAL FROM THE SURFACE OF A METAL OBJECT

Francis E. Clark, San Gabriel, Calif., assignor to Turbo Products, Inc., Los Angeles, Calif., a corporation of California

Application February 4, 1955, Serial No. 486,195
9 Claims. (Cl. 41—43)



1. A process for the removal of metal from a metal work piece which comprises directing a stream of liquid etchant against said work piece, directing a stream of confining fluid against said work piece adjacent said stream of liquid etchant, said fluid producing an etchant stream of predetermined geometric cross-sectional configuration and confining the area of impingement of said etchant liquid on said work piece, forming said predetermined geometric etch configuration in said work piece, and withdrawing spent etchant liquid and confining fluid from said work piece.

2,895,815
STABILIZED FUEL OIL COMPOSITIONS

George A. Wolgerber, Iselin, and John O. Smith, Jr., North Plainfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application November 19, 1956
Serial No. 622,796
2 Claims. (Cl. 44—68)

1. A petroleum distillate fuel oil including at least 10 percent of cracked hydrocarbons to which has been added from about 0.001 to about 0.2 percent by weight of a mixture of from 1 to 3 parts of dinitrophenyl octadecyl sulfide and from 1 to 3 parts of a zinc salt of a petroleum naphthenic acid having a molecular weight of from about 150 to about 300.

2,895,816
STEEL GRIT AND METHOD FOR MANUFACTURING SAME

Chalmer R. Cline, South Bend, Ind.

No Drawing. Application June 16, 1955
Serial No. 515,969
7 Claims. (Cl. 51—309)

1. For use with centrifugal blasting wheels in the treatment of metal surfaces, crushed steel shot consisting of steel grit of small dimension and irregular shape having relatively abrupt edges and a hardness within the range

bining titanium hydride and titanium carbide into a

ber of diazotype dry printing and developing machines,

water introduction means.

cylindrical autoclave mounted with its axis substantially vertical and containing a baffle at a point between its ends

of 35 to 64 Rockwell C in which the steel is a martensitic steel converted by heat treatment from an austenitic steel shot having from 1.00–1.50 percent by weight carbon, 0.40–0.90 percent by weight silicon, and a hardening element selected from the group consisting of 1.00–1.50 percent by weight manganese, 0.50–5.0 percent by weight chromium, 0.30–5.0 percent by weight molybdenum, 0.05–0.40 percent by weight vanadium, 0.50–2.5 percent by weight nickel, 0.20–1.00 percent by weight copper and mixtures thereof, the remainder being iron plus small amounts of impurities.

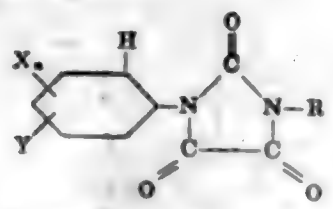
2,895,817

HERBICIDAL METHOD AND COMPOSITION EMPLOYING SUBSTITUTED PHENYL PARABANIC ACIDS

Raymond W. Luckenbaugh, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application April 12, 1956
Serial No. 577,656
2 Claims. (Cl. 71—2.5)

1. The method for the control of undesired vegetation comprising applying to the locus to be protected, in an amount sufficient to exert herbicidal action, a compound represented by the formula:



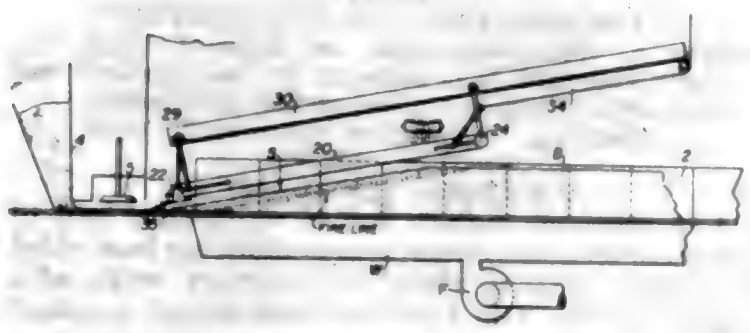
wherein X and Y are selected from the group consisting of hydrogen, halogen, and alkyl groups containing less than 5 carbon atoms; *n* is a positive integer less than 4, and R is an alkyl group containing less than 5 carbon atoms.

2,895,818

METHOD AND APPARATUS FOR DEEP-BED CHARGING OF TRAVELING GRATES

Robert C. McDowell, Lakewood, Ohio, assignor to McDowell Company, Inc., Cleveland, Ohio, a corporation of Ohio

Application April 9, 1956, Serial No. 577,137
6 Claims. (Cl. 75—5)



1. A method of charging a sintering machine with a deep bed comprising finely divided material mixed and formed into components of varying sizes of pellets and loose particles, the method consisting of mixing the material and maintaining uniform composite distributed relation of the components while conveying the material to moving pallets and spreading it from side to side and upwardly and downwardly in multiplicity of repeated applications of the material and along a gradual slope corresponding to the angle of travel of a thin firing zone created by igniting the material at the bottom of the bed and causing the firing zone to move progressively upwardly.

2,895,819

METHOD FOR PREPARING A CATALYTIC METAL FOAM AND USE THEREOF

William Stuart Fiedler, Madison, Wis., assignor to Bjorksten Research Laboratories, Inc., Fitchburg, Wis., a corporation of Illinois

No Drawing. Application September 3, 1957
Serial No. 681,435
5 Claims. (Cl. 75—20)

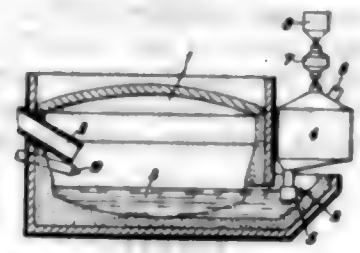
1. A method for preparing a catalytic metal foam comprising providing a molten pool of metal alloy consisting of a catalytic metal and at least one metal adapted to be easily removed from said metal alloy after foaming; introducing into the interior of the pool, a material adapted to effect foaming of the alloy to form a body of molten metal alloy containing discrete cellular bubbles distributed therethrough cooling said body, treating said body to remove said metal adapted to be easily removed from the metal alloy foam to provide catalytic metal foam.

2,895,820

METHODS OF REDUCING IRON ORES AND CARBURIZING UNDER VACUUM

Fritz Harders, Post Ergste über Schwerte (Ruhr), Germany, assignor to Dortmund-Hörder Hüttenunion Aktiengesellschaft, Dortmund, Germany

Application October 29, 1957, Serial No. 693,184
Claims priority, application Germany November 8, 1956
6 Claims. (Cl. 75—48)



1. The process of reducing iron ore, which comprises delivering the ore and additional materials to an iron melt, sucking the iron melt in portions into an evacuated vessel, carburizing the melt in the vessel and returning the carburized portions to the iron melt.

2,895,821

PROCESS FOR REFINING BLISTER COPPER

Eugene R. Redmond, Oracle, Ariz., assignor to Brian Jackson Associates Inc., Tucson, Ariz., a corporation of Arizona

No Drawing. Application May 18, 1954
Serial No. 430,725
3 Claims. (Cl. 75—75)

1. In the process of refining blister copper in the converter in which it is formed which includes blowing air into a molten mass of blister copper, and continuing the air blow to the worm stage, the improvement comprising refining said blister copper through the worm stage including the steps of adding a silica flux to the mass as the worm is just about to disappear, continuing the blow until the silica flux has formed a solid coating over said mass and pouring said mass out from under said coating.

2,895,822

HEAT-RESISTANT ALLOYS

Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France

No Drawing. Application March 9, 1954
Serial No. 415,164
Claims priority, application France March 16, 1953
4 Claims. (Cl. 75—204)

1. A method of preparing hard, tough alloys having a density of less than 5.0 gm./cm.^{3} and having the property of retaining their hardness and toughness up to a temperature of 1200° C., which comprises intimately com-

2,895,827

carbohydrates are derived from rolled oats, the fats are

fresh nodules of solid hydrated aluminum sulphate con-

or steel grit of small dimension and irregular shape having relatively abrupt edges and a hardness within the range

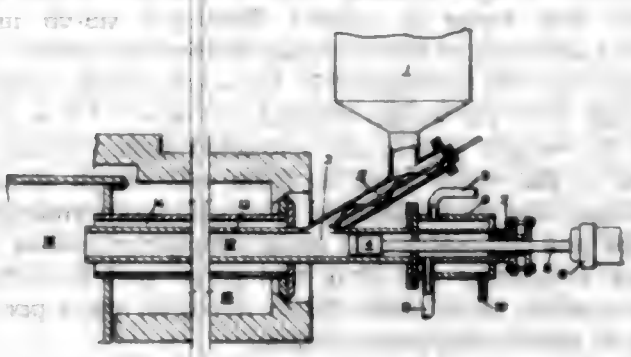
bining titanium hydride and titanium carbide into a pulverulent mixture, the carbon and the titanium being in substantially equiatomic proportions, and the percentage of titanium hydride in the mixture lying between 10% and 35%, compressing the pulverulent mixture into briquettes of sufficient cohesion to be handled, heating the briquettes to a temperature sufficient to eliminate hydrogen completely from the hydride, disintegrating the thus-heated briquettes, compressing the particles of the disintegrated briquettes in a mold, and heating the material in a mold in an inert atmosphere to a temperature between 1900 and 2300° C., whereby to form a polycrystalline substance consisting of homogeneous fine grains free from any intergranular binding agent.

2,895,823

METHOD OF FURTHER REDUCING THE REACTION PRODUCTS OF A TITANIUM TETRACHLORIDE REDUCTION REACTION

Peter John Lynskey, Woolton, Liverpool, England, assignor to Peter Spence & Sons Limited, Widnes, England

Application March 19, 1957, Serial No. 646,990
Claims priority, application Great Britain March 28, 1956
2 Claims. (Cl. 75—211)



1. A continuous method of heat treating the reaction products of a continuous reactor for titanium metal production wherein the reactants consist essentially of sodium and titanium tetrachloride and the reactor products consist essentially of titanium metal particles, sodium metal, molten sodium chloride and lower chlorides of titanium comprising introducing said reaction products into one end of an elongated zone of controlled heat containing an atmosphere inert to said reaction products, maintaining said zone at a temperature of from 850° to 950° C., continuously moving said reaction products through said elongated zone for a period of time sufficient to complete the reaction initiated in the continuous reactor, venting volatile vapors from said reaction zone, agglomerating the particles of titanium metal within said zone to form a sintered mass having a surface area of less than that of said titanium metal particles, continuously removing said sintered mass and said molten sodium chloride from said other end of said zone, said molten sodium chloride lubricating and thus facilitating the passage of said sintered mass of titanium metal through and from said zone.

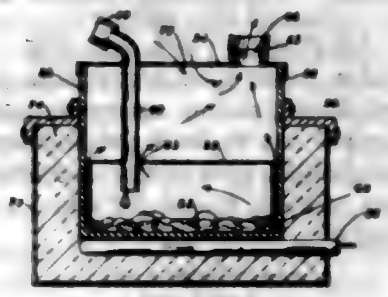
2,895,824

PROCESS FOR AUTOMATIC DISPOSAL OF WASTE AMMONIA DEVELOPER IN DRY PRINTING AND DEVELOPING MACHINES

Frederick H. Frantz, Binghamton, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

Original application April 24, 1952, Serial No. 284,100, now Patent No. 2,735,346, dated February 21, 1956. Divided and this application July 9, 1954, Serial No. 442,417
2 Claims. (Cl. 96—48)

1. A method of disposing of the aqueous ammonia condensate which normally forms in the developing chamber of diazotype dry printing and developing machines, such machines having a forced air cooling system and an exhaust for the cooling air which comprises diverting



said condensate into a container separate from said chamber, vaporizing said condensate in said container and passing said vapors through the cooling air exhaust of said machines.

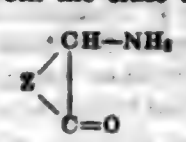
2,895,825

PRODUCTION OF PHOTOGRAPHIC COLOUR IMAGES WITH HETEROCYCLIC DEVELOPERS

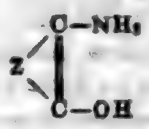
Willibald Pelz, Koln-Stammheim, Lothar Burgardt, Leverkusen-Bayerwerk, and Ottmar Wahl, Opladen, Germany, assignors to AGFA Aktiengesellschaft

No Drawing. Application March 8, 1955
Serial No. 493,844
Claims priority, application Germany March 18, 1954
5 Claims. (Cl. 96—55)

1. In the process of producing photographic color images by developing an exposed silver halide emulsion with a color forming developer in an alkali-containing bath and in the presence of a color coupler containing a coupling radical selected from the class consisting of reactive methylene and hydroxy aryl groups, which coupler reacts with the oxidation products of the developer to produce stable dyes that form in the portions of the emulsion where development takes place and remain in those portions to give a dye image corresponding to the exposure, the improvement by which the developer is selected from the class consisting of



and



where Z represents a group that completes a heterocyclic ring selected from the class consisting of pyrazolone-5 and isoxazolone rings, thereby increasing the stability of the dyes that are formed.

2,895,826

PHOTOGRAPHIC COLOR COUPLERS CONTAINING FLUOROALKYLCARBONAMIDO GROUPS

Ilmari F. Salminen, Charles R. Barr, and Anthony Loria, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application October 8, 1956
Serial No. 614,361
19 Claims. (Cl. 96—55)

1. A photographic silver halide emulsion containing a coupler compound of the class consisting of phenolic hydroxyl, 5-pyrazolone and open chain reactive methylene compounds capable of forming a dye with the oxidation product of a primary aromatic amino silver halide developing agent, said coupler having a perfluoroalkylcarbonamido group attached to its molecule in a non-coupling position.

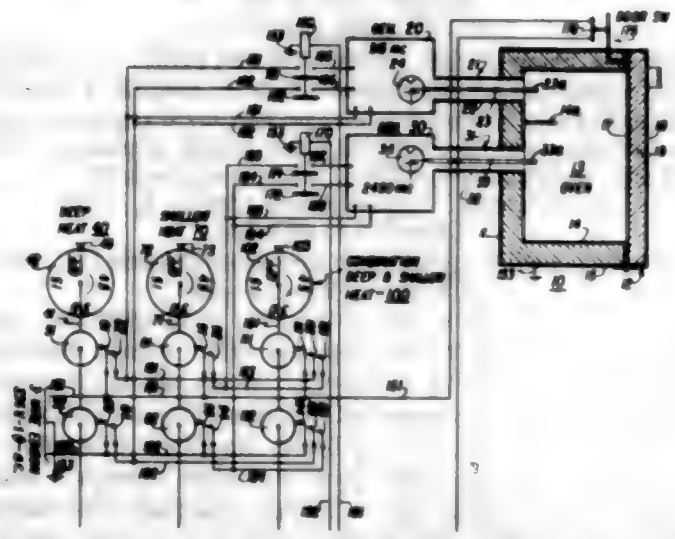
that which will react with and promote chemical reactions

stroke of said piston so as to dislodge any crystalline material from said filter means; and removing purified

2,895,827
PHOTOGRAPHIC PAPER BASE
Thomas E. Calleer and Albert S. O'Brien, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Application October 24, 1956
Serial No. 617,917
10 Claims. (Cl. 96—85)

1. Photographic paper base comprising paper containing a wet-strength imparting amine-formaldehyde resin therein which paper has thereon a sizing layer containing a substantial proportion of a compound selected from the group consisting of urea, melamine and 5,5-dimethyl-1,3-cyclohexane dione.

2,895,828
ELECTRONIC HEATING METHODS AND APPARATUS
Harris P. Kamida, Chicago, Ill., assignor to General Electric Company, a corporation of New York
Application February 6, 1958, Serial No. 713,742
19 Claims. (Cl. 99—1)



1. The method of cooking a food product comprising arranging the food product in a chamber defined by a wall formed of an electrical conductor, and permeating said chamber with first electromagnetic wave energy of an ultra-high frequency f_1 characterized by a preferential deep cooking effect upon the food product and with second electromagnetic wave energy of an ultra-high frequency f_2 characterized by a preferential shallow cooking effect upon the food product, wherein the spread between f_1 and f_2 is at least 1000 mc. so that said deep cooking effect and said shallow cooking effect are separate and distinct with respect to each other.

2,895,829
BEE FOOD COMPOSITION
Edmond G. Foo, Van Nuys, Edward D. Feldman, Hollywood, and Harry M. Goetz, Los Angeles, Calif., assignors to Atlas Laboratories, Inc., Hollywood, Calif., a corporation of California
No Drawing. Application February 28, 1957
Serial No. 642,958
6 Claims. (Cl. 99—2)

1. A bee food composition which consists essentially of grape pomace and a substantially dry mixture of a partially digested protein comprising partially hydrolyzed soya flour, sucrose, and a fat.

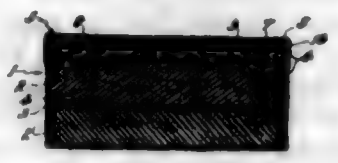
2,895,830
SOW MILK SUBSTITUTE
Walter Hans George Roe, Gentofte, Denmark, assignor to Aktieselskabet Kemovit, Copenhagen, Denmark, a firm
No Drawing. Application October 18, 1954
Serial No. 463,039
Claims priority, application Great Britain June 17, 1954
7 Claims. (Cl. 99—7)

1. A sow milk substitute composition consisting essentially of fats, carbohydrates and proteins in which the carbohydrates are derived from rolled oats, the fats are absorbed on the carbohydrates, and porcine blood plasma forms the main part of the proteins, the components being present in proportions to form a sow milk substitute.

2,895,831
WHEAT FOOD
Tewfic Zacharia, Beirut, Lebanon, assignor to Proto, International Hygienic Food Co., Beirut, Lebanon, a collective company of Lebanon
No Drawing. Application April 24, 1958
Serial No. 730,527
1 Claim. (Cl. 99—80)

A process for the manufacture of a wheat product of high nutritive value, stability, versatility and relatively low calorie content from two wheat fractions of milled wheat, one fraction being wheat endosperm which is that material of milled wheat which passes through a sieve of No. 120 mesh size and the other fraction being a flour containing fine bran and germ which is that material of milled wheat which passes through sieve No. 50 mesh size but which is retained by sieves having a mesh size from above No. 50 to No. 120, said process, comprising mixing said wheat endosperm with water to form an endosperm dough, washing said endosperm dough sufficiently with water to extract therefrom starch in an amount sufficient to leave a moist endosperm residue containing about 50 to about 65% by weight water, about 22 to about 30% by weight protein and about 15 to about 20% by weight starch, the extracted starch being dissolved in the water wash to form said starch solution, separating said starch solution from said moist endosperm residue, and combining said moist endosperm residue with a flour containing fine bran and germ, said flour being in an amount from about 20 to about 25 parts per 100 parts of moist endosperm residue.

2,895,832
NOVELTY CAKE AND METHOD OF PRODUCING THE SAME
Edward R. Bersey, Iselin, N.J.
Application May 2, 1958, Serial No. 732,519
4 Claims. (Cl. 99—92)



1. A novelty cake comprising a baked cake having a recess in its upper surface, an edible sheet bearing an edible design applied on the surface of said sheet disposed in said recess, and a layer of transparent gelatin disposed over said sheet and filling most of the recess in said cake.

2,895,833
PROCESS FOR MAKING MAPLE PRODUCT OF INTENSIFIED MAPLE FLAVOR
Charles O. Willits, Glenside, Joseph Clyde Underwood, Plymouth Meeting, and Harry G. Lento, Philadelphia, Pa., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Application April 16, 1958
Serial No. 729,037
2 Claims. (Cl. 99—142)
(Granted under Title 35, U.S. Code (1952), sec. 266)

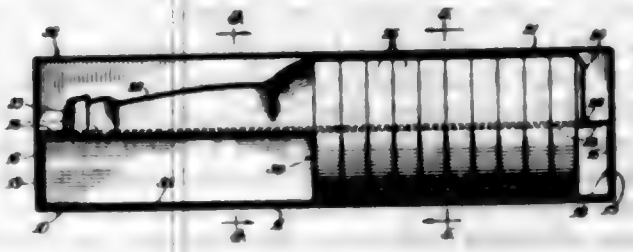
1. A process for preparing a maple product of intensified maple flavor comprising heating a maple sirup at a temperature of about 250° F. for about 3 to 5 hours and, if necessary, adding water to adjust the density of the heat-treated sirup to about 65 to 75° Brix, adding to the heat-treated sirup a volume of ethanol in excess of

mixture consisting of substantially pure silicon dioxide

2,895,843

that which will react with and promote chemical reactions of constituents of the heat-treated sirup, heating the alcohol-sirup mixture until most of the materials in the sirup which impart acrid, bitter and caramel-like flavors have been rendered inoperative, and adjusting the water and alcohol content of the alcohol digestion product to provide a maple product of intensified maple flavor of the desired density and alcohol content.

2,895,834
NOVELTY PACKAGE
Milton Brav, Chicago, Ill., assignor to Sue Ann Food Products Corporation, Chicago, Ill., a corporation of Illinois
Application August 2, 1955, Serial No. 526,837
8 Claims. (Cl. 99—171)



1. A package structure comprising a box, a shelf mounted within said box having means for holding the shelf in spaced relation above the bottom of the box and having an opening in the outline of a well-known form of container, and a member simulating the appearance of a container and extending upwardly through said opening and having a peripheral flange engaging the underside of said shelf about said opening, the width of said member across said flange being greater than the width of said opening, said member together with said shelf providing an enclosed space, and one or more articles of a size to fit between said member and the bottom of the box mounted in said enclosed space, said one or more articles resting on the bottom of the box and engaging said member to hold said member with its flange in engagement with said shelf.

2,895,835
SEPARATION BY CRYSTALLIZATION
Robert A. Findlay, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application June 28, 1954, Serial No. 439,734
4 Claims. (Cl. 99—199)

1. A process for purifying an impure crystalline material, which comprises intermittently moving an elongated compact mass of impure crystals through an elongated confined displacement zone toward a melting zone at one end thereof by the reciprocating movement of a piston spaced upstream from said melting zone; melting crystals in said melting zone; displacing a portion of resulting melt countercurrently through at least a portion of said compact mass of impure crystals so as to displace liquid therefrom; removing displaced liquid from an upstream portion of said displacement zone through filter means; maintaining a back pressure on said displaced liquid so removed so as to cause a back flow of said displaced liquid through said filter means upon the back stroke of said piston so as to dislodge any crystalline material from said filter means; and removing purified product from said melt zone.

2,895,836
METHOD FOR PREPARING UNSULPHURED DEHYDRATED FRUITS
Melvin E. Lazar, Oakland, and Myron J. Powers, Lafayette, Calif., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Application January 10, 1957
Serial No. 633,566
2 Claims. (Cl. 99—204)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process of preparing dehydrated fruit without addition of any sulphiting agent which comprises dipping raw fruit of natural moisture content, the fruit being in the form of pieces with cut surfaces, into an aqueous solution containing only water, sodium chloride, and citric acid, subjecting the fruit to rapid dehydration in a current of hot air at a piece temperature below 110–135° F. until its moisture content is about from 30 to 70%, blanching the partially dehydrated fruit to inactivate the enzymes therein, and dehydrating the blanched fruit until its moisture content is less than about 10%.

2,895,837
NEW COMPLEX SOLUTIONS AND DISPERSIONS AND PROCESS FOR THEIR PREPARATION
Xavier Bilger, Soisy-sous-Montmorency, and Paul Muller, Chantilly, France, assignors to Compagnie Française des Matieres Colorantes, Paris, France, a French body corporate
No Drawing. Application December 26, 1956
Serial No. 630,452
3 Claims. (Cl. 106—18)

3. The water-soluble solutions of copper 8-hydroxyquinolate in alcoholic solutions of chromium stearatochloride which comprise up to three molecules of quinolate for each stearic group, the alcohol of the said alcoholic solutions having one to four carbon atoms.

2,895,838
METAL CASTING MOLD MATERIAL
Frank P. Honda, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
No Drawing. Application September 5, 1956
Serial No. 608,000
11 Claims. (Cl. 106—38.3)

1. The method of forming a metal casting mold which comprises placing in contact with a casting-defining surface an intimate mixture of a major proportion of a finely-divided refractory material, a minor amount of a phosphate compound selected from the group consisting of alkali metal phosphates, alkaline earth metal phosphates, ammonium phosphates and triaryl phosphates, the amount of said phosphate compound being at least sufficient to provide mold collapsibility after casting and not greater than about 5% by weight of said refractory, about 3 to 15% by weight of said refractory of an alkali metal silicate binder, and impregnating this mixture with a reactant capable of curing the mixture.

2,895,839
METHOD OF INCORPORATING TITANIUM INTO SELECTIVELY TRANSPARENT SILICA GLASS
Henri J. C. George, Paris, France, assignor to Quartz & Silice S.A., Paris, France, a corporation of France
No Drawing. Application May 14, 1956
Serial No. 584,444
Claims priority, application France May 26, 1955
2 Claims. (Cl. 106—52)

1. In the preparation of selectively transparent silica glass by heating to about 1750° C. and then cooling a

mixture consisting of substantially pure silicon dioxide and titanium dioxide in an amount effective to render the glass substantially opaque to light radiation of 1850 A.U. while being transparent to radiation of 2537 A.U., the method of incorporating the titanium into the silicon dioxide prior to heating comprising mixing an aqueous solution of a water-soluble titanium salt with a mass of silica particles in an amount to substantially fill the voids between said particles, adding a base to said mixture effective to precipitate titanium hydroxide, removing the by-products from said precipitation, and drying the mixture.

2,895,840
KILN REFRACTORY
Curtis D. Ortmans, Swartz Creek, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
No Drawing. Application November 8, 1957
Serial No. 695,201
9 Claims. (Cl. 106—68)

1. A refractory article made by casting and subsequently drying and then firing at sintering temperature a raw batch consisting essentially of about from 66% to 78% corundum, from 4% to 12% clay and from 10% to 28% mullite, said corundum being characterized by sharply angular grains which are a composite of intergrown crystals and fragments of crystals of various sizes, at least about 25% of said corundum having a relatively large grain size of about ⅛ to ¼ inch, at least about 15% of said corundum having an intermediate grain size of from about 14 to 325 mesh and at least about 20% of said corundum having a relatively small gain size of less than about 325 mesh.

2,895,841
PHOTOGRAPHIC RETOUCHING OPAQUE
William J. Rogers, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Application November 7, 1957
Serial No. 694,924
2 Claims. (Cl. 106—162)

1. A red opaque containing water, corn syrup, the sodium salt of sulfonated naphthalene formaldehyde condensates, gum arabic, phenol, a red pigment and 15–25% by weight of triethylene glycol.

2,895,842
ESTERS OF 4-(4'-TOLYLSULFONYL)-BENZOIC ACID AND RESINOUS COMPOSITIONS PLASTICIZED THEREWITH
John R. Caldwell and James C. Martin, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Application February 13, 1956
Serial No. 564,890
8 Claims. (Cl. 106—179)

1. A plasticized plastic composition selected from the group consisting of a lower alkanoic acid ester of cellulose and a polymerization product of a resin forming mono-ethylenically unsaturated compound, which plasticized plastic composition contains as a plasticizer a substantial proportion of a compound having the following general formula:

wherein R is a member selected from the group consisting of an alkoxyalkyl radical and an alkoxyalkoxyalkyl radical having from 1 to 8 carbon atoms in each alkyl or alkylene group.

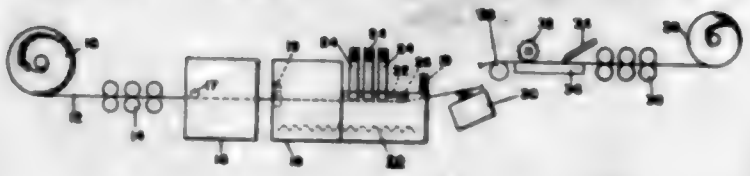
2,895,843
PROCESS FOR INCORPORATING TITANIUM DIOXIDE INTO CELLULOSE ESTER SOLUTIONS DISSOLVED IN ALIPHATIC ACIDS
Maurice Lopin, Le Pouge de Roussillon, France, assignor to Societe Rhodiaceta, Paris, France, a body corporate of France
No Drawing. Application July 8, 1957
Serial No. 670,374
Claims priority, application France February 5, 1957
5 Claims. (Cl. 106—180)

1. A process of producing cellulose ester solutions which are suitable for the production of shaped articles, which process comprises incorporating titanium dioxide into a solution of a cellulose ester dissolved in at least one aliphatic carboxylic acid having at most four carbon atoms, said cellulose ester being a simple ester of cellulose with an acid selected from the group consisting of formic, acetic, propionic and butyric acid, said titanium dioxide being introduced into said solution in the form of a relatively concentrated suspension obtained by suspending the titanium dioxide in a medium of a solution of cellulose ester dissolved in a mixture of at least one aliphatic carboxylic acid having at most four carbon atoms and an ester selected from the group consisting of ethylidene diacetate, ethylene diacetate and methylene diacetate.

2,895,844
ACETOACETIC ACID ESTERS OF CASTOR OIL AND THE USE THEREOF IN PLASTICIZATION
Alfred R. Bader, Milwaukee, Wis., and Henry A. Vogel, Gibsonia, Pa., assignors to Pittsburgh Plate Glass Company
No Drawing. Application November 12, 1954
Serial No. 468,556
3 Claims. (Cl. 106—195)

1. Nitrocellulose plasticized with the acetoacetic acid ester of castor oil.

2,895,845
METHOD FOR APPLYING METALLIC COATINGS
James Byron Jones and William C. Pettinell, West Chester, Pa., assignors to Aeroprojects, Inc., West Chester, Pa., a corporation of Pennsylvania
Application December 7, 1955, Serial No. 551,544
23 Claims. (Cl. 117—8)



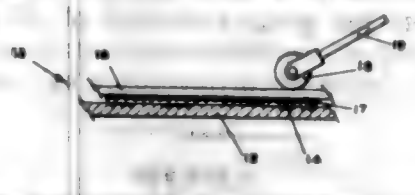
1. A method for continuously bonding a metal having a relatively low melting point to the surface of a moving strip of metal having a relatively high melting point which comprises coating the surface of the moving strip of higher melting metal with a molten mass of the lower melting metal at a temperature above the melting point of the lower melting metal and below the melting point of the higher melting metal, immersing the tip of a vibratory device in said molten mass of metal with the lowermost end of said tip being spaced from the surface of the metal having a relatively high melting point a distance of between 0.001 to 0.085 inch, exposing the molten mass of the lower melting metal to a sufficient amount of mechanical vibratory wave energy having a frequency of between 59 and 300,000 cycles per second to effect cavitation in said molten mass and bonding of the molten mass to the underlying metal surface, and then cooling said molten mass of metal to a temperature at which it solidifies.

drous aromatic compound having the general formula

2,895,846
PROTECTIVE COATING FOR DECORATED GLASSWARE AND METHOD OF APPLICATION
Earl F. Schaefer, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application May 25, 1955, Serial No. 511,857
2 Claims. (Cl. 117—12)

1. The method of producing a decorated glass container which bears an additional protective coating capable of improving the water and abrasion resistance of the decoration, said method comprising the continuous, uninterrupted sequence of steps of (1) applying a temperature-hardenable printing ink decoration to selected areas of the glass container, (2) heating said glass container to a temperature above 450° F. to bond the printing ink decoration thereto, (3) lowering the temperature of the decorated glass container to a temperature of between 300° F. and 400° F., (4) subjecting said decorated glass container to a fine spray of an aqueous emulsion of a silicone resin constituting from 0.5% to 2.0% by weight of the total weight of emulsion until the entire external surface of the decorated glass container is provided with a uniform coating while within said range of temperature, (5) maintaining said silicone coated decorated glass container within said temperature range until said coating is cured, and (6) cooling said decorated coated container to room temperature.

2,895,847
ELECTRIC IMAGE DEVELOPMENT
Clyde R. Mayo, Rochester, N.Y., assignor, by mesne assignments, to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware
Application December 21, 1953, Serial No. 399,293
4 Claims. (Cl. 117—17.5)



1. The method of developing an electrostatic image on an electrostatic image-bearing member comprising forming a substantially uniform layer of finely-divided electrostatically charged powder marking particles on a smooth support surface extending across the image-bearing portion of said image-bearing member, said particles loosely adhering to said surface by electrostatic attraction, contacting said image-bearing member with said layer of marking particles, sliding said surface bearing said layer of marking particles relative to said image-bearing member and removing said surface from said image-bearing member whereby said marking particles are selectively transferred from said layer to said image-bearing member in the pattern of the electrostatic image.

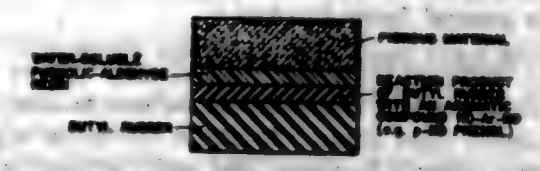
2,895,848
METHOD OF PRESERVING THE WOODEN STRUCTURE OF COOLING TOWERS BY IMPREGNATING
Donald R. Baker, Blue Springs, Mo., assignor to The Marley Company, Kansas City, Mo., a corporation of Delaware
No Drawing. Application June 28, 1955
Serial No. 516,769
1 Claim. (Cl. 117—57)

In a method of preserving the wooden structure of cooling towers by impregnation with a wood preservative subsequent to fabrication thereof, the improved steps of flooding the outermost surfaces of the wooden structure while in a fabricated condition with water for a time sufficient to completely saturate the entire structure; applying in successive order, sufficient quantities only of each of a pair of slurries to subject all of the outermost surfaces of the structure substantially simultaneously to a respective slurry, one of the slurries containing an excess of a metallic sulfate preservative chosen from the group consisting of zinc sulfate and copper sulfate and the other slurry containing an excess of a metallic salt preservative chosen from the group consisting of chromate, arsenate, fluoride, phosphate, borate and pentachlorophenate, each of said slurries being maintained in contacting relationship to the structure for a time sufficient to substantially impregnate the structure with each preservative, the excess of preservative in each slurry maintaining the solution pressure of each of the slurries at the maximum point throughout diffusion of each of the preservatives into said structure; applying water successively to the outermost surfaces of the structure subsequent to application of each of the slurries and in sufficient quantities only to maintain the structure completely saturated and the outer surfaces thereof moist without excessive runoff of water containing a respective preservative; and collecting the liquid runoff containing said preservatives and reapplying the same to the structure during the period that a slurry containing the corresponding preservative is maintained in contacting relationship with the structure.

2,895,849
METHOD OF PREPARING COATED REFRACTORY WARE
Morris L. Perlman, Blue Point, N.Y., and David Lipkin and Sam I. Weissman, St. Louis, Mo., assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application April 12, 1950
Serial No. 155,566
1 Claim. (Cl. 117—62)

The process of preparing refractory ware which comprises applying to at least the inner surface of a heat stable container form of a refractory metal of the class consisting of niobium, molybdenum, tantalum and tungsten, within a period of one-half to ten minutes to prevent substantial alloying, a molten coating of thorium so as to form a non-alloyed coating on the refractory metal and then exposing the thorium coating to a reactive atmosphere of nitrogen at a temperature of about 1750° C. for a time of from about one-half hour to about one hour to form a refractory thorium nitride coating on the heat stable refractory metal form.

2,895,850
COATING FIBERS WITH MODIFIED BUTYL RUBBER
Samuel B. Robison, Roselle, and Francis P. Baldwin, Colonia, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Application September 22, 1954, Serial No. 457,794
16 Claims. (Cl. 117—76)



1. The process comprising treating a fibrous material with an aqueous solution of a phenolic-aldehyde resin, drying it and then treating it with about 0.1 to 5 wt. percent of a Butyl rubber reaction product of a nitroso hy-

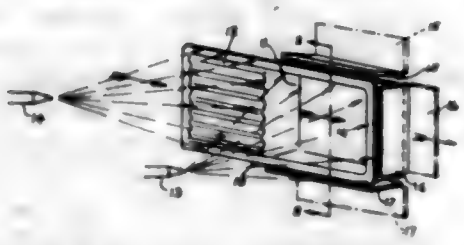
of metal to a temperature at which it solidifies.

droxy aromatic compound having the general formula HO—Ar—NO in which Ar is an aroclatic hydrocarbon nucleus.

2,895,851
MAGNETIC APPLICATION OF PARAMAGNETIC SPRAY PAINT

William L. Johnson, Omaha, Nebr., assignor to Abrasive Company of America, Omaha, Nebr., a corporation of Nebraska

Application August 18, 1955, Serial No. 529,176
5 Claims. (Cl. 117—93)

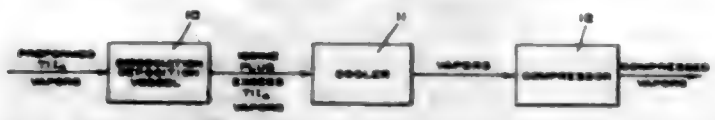


3. In a method for the application of spray paint to ferrous and nonferrous materials, the steps of maintaining about the material to be painted a magnetic field, mixing with the paint a pigment which is paramagnetic, agitating the mixture to maintain said paramagnetic pigment uniformly distributed throughout the paint, and thereafter spraying the resulting mixture upon the article, whereby the paramagnetic pigments are effective in guiding the paint particles toward the article.

2,895,852
TITANIUM METALLURGY

Alfred C. Loonam, New York, N.Y., assignor to Chilean Nitrate Sales Corporation, New York, N.Y., a corporation of New York

Application November 16, 1954, Serial No. 469,289
6 Claims. (Cl. 117—107)



1. The method of producing high-purity metallic titanium suitable for use in forming shaped articles consisting largely of metallic titanium which comprises contacting with a heated surface maintained at a temperature in the range 1100° C. to 1700° C. a flowing body of gas comprising titanium tetraiodide.

2,895,853
SILOXANE WATER REPELLENT TREATMENT FOR FIBROUS MATERIALS

Donald L. Bailey, Snyder, and Edward R. York, Endwell, N.Y., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application May 3, 1955
Serial No. 505,841
15 Claims. (Cl. 117—155)

1. The method of rendering a fibrous material water repellent which method comprises treating such a material with a dilute system of a linear copolymeric polysiloxane having the general formula—

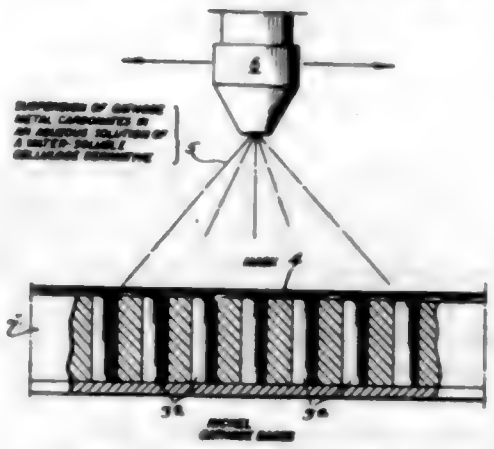
$$(R_3SiO)_x[Me_2SiO)_y(H_2SiO)_z](SiR_3)_x$$

wherein R is a monovalent hydrocarbon radical, x is a positive integer from about 5 to about 1000, y is a positive integer from about 2 to about 500 and z is zero or 1, and x bears a ratio to y of from about 1 to 1 to about 50 to 1, said dilute system comprising from about 0.5% by weight to about 10% by weight of said copolymeric polysiloxane in a suitable liquid carrier, and curing the treated fibrous material.

2,895,854
METHOD OF MAKING CATHODE ASSEMBLIES AND PRODUCTS

Armand P. La Rocque, Montgomery Township, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Application September 28, 1956, Serial No. 612,670
34 Claims. (Cl. 117—223)

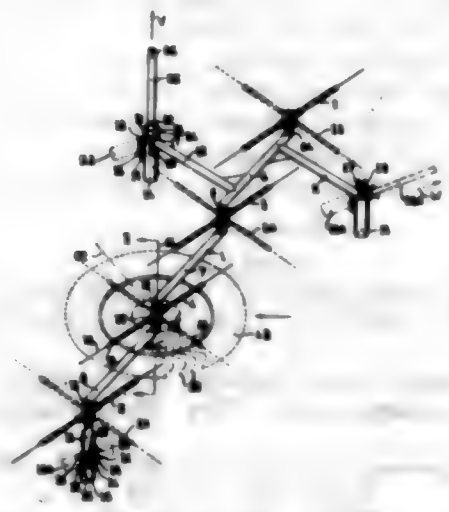


1. In the preparation of cathode assemblies involving application of a suspension of cathode metal carbonates to a cathode base and drying the coating, application of a suspension of refractory oxide powder to a cathode heater base and drying the coating, assembling the coated cathode heater and cathode in cathode assembly relationship and passing current through the cathode heater to generate heat to heat the assembly, decomposing the coating binders and the carbonates to oxide form, the improvement which comprises applying said carbonates to said cathode base as a suspension in an aqueous solution of a water-soluble cellulose derivative selected from the group consisting of salts of carboxymethyl cellulose, carboxymethylhydroxyethyl cellulose and salts of carboxymethylhydroxyethyl cellulose, said solution being free of metal ions detrimental to emission, and applying said refractory oxide powder as a suspension in an aqueous solution of a water-soluble cellulose derivative selected from the group consisting of salts of carboxymethyl cellulose, carboxymethylhydroxyethyl cellulose and salts of carboxymethylhydroxyethyl cellulose.

2,895,855
RAKING IMPLEMENT

Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V.

Application December 31, 1956, Serial No. 631,601
Claims priority, application Netherlands December 31, 1955
13 Claims. (Cl. 56—377)



1. A device for laterally displacing a crop lying on the ground comprising a frame member, a bearing defin-

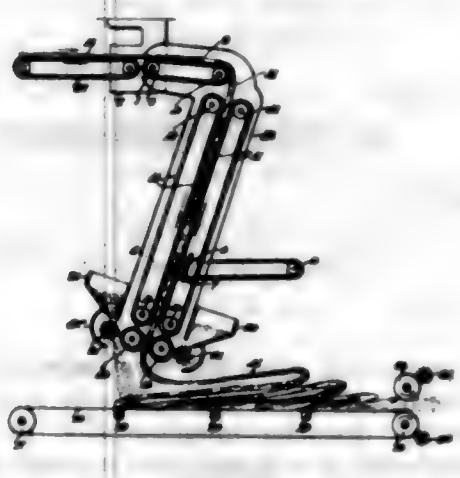
which comprises die casting in a chill mold an iron suit-

ing an axis of rotation and selectively rotatable on said frame member and a rake wheel rotatably mounted on said bearing at an acute angle to the axis of rotation of said bearing whereby selective rotation of the bearing controls the positioning of the rake wheel.

2,895,856
METHOD OF PICKLING CHROMIUM-CONTAINING STEEL TUBES
Tonny Hong, North Sewickley Township, Beaver County, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
No Drawing. Application December 15, 1955
Serial No. 553,212
2 Claims. (Cl. 134—3)

1. A method of removing scale from open-annealed chromium-containing steel comprising heating said steel to between 1100 and 1400° F. for at least one hour while in a reducing atmosphere containing at least about 5% carbon monoxide and at least about 10% carbon dioxide in a ratio of at least 2:1 and the balance substantially nitrogen and thereafter pickling said steel in an aqueous acid solution containing between 15 and 25% by weight of acid of the group consisting of sulphuric and hydrochloric acid maintained at a temperature between 150 and 200° F.

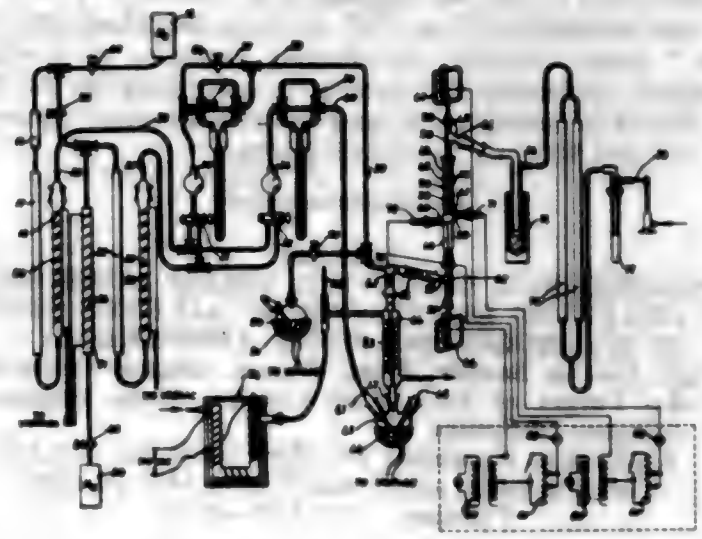
2,895,857
PROCESS FOR CLEANING WOOL IN DRY STATE
Arpad Boer, Buenos Aires, Argentina, assignor, by mesne assignments, to Bancroft-Brillotex International S.A., Montevideo, Uruguay, a corporation of Uruguay
Application October 19, 1954, Serial No. 463,217
6 Claims. (Cl. 134—7)



1. A process for cleaning carded wool in the dry state which comprises forming a length of such wool into a succession of overlapping zig-zag folds, discharging a grease-avid detergent powder on to the folds as they are formed, subjecting the folded wool and powder to frictional contact until the detergent powder has absorbed the grease from the wool, and then removing the detergent powder with its absorbed grease from the wool to leave the wool in cleaned condition.

2,895,858
METHOD OF PRODUCING SEMICONDUCTOR CRYSTAL BODIES
Raymond C. Sangster, Dallas, Tex., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Application June 21, 1955, Serial No. 516,897
7 Claims. (Cl. 148—1.5)

3. The method of forming a silicon crystal body having at least one P-N junction therein comprising: suspending a crystallographically oriented silicon filament of a first conductivity type in a reaction chamber, suspending a metallic filament in said reaction chamber, passing a vapor mixture of silicon tetrabromide, hydrogen, and an active impurity halide through said reaction chamber; and heating said silicon filament and said metallic filament to a temperature in the range of the order of 1100° C. to 1350° C., whereby said silicon tetrabromide and said active impurity halide are decomposed at said filament



to deposit silicon and said active impurity on the surface of said silicon crystal filament in a crystallographically oriented growth to form a silicon region of a second conductivity type, said deposited region being of a conductivity type opposite that of said silicon filament.

2,895,859
PROCESS FOR THE MANUFACTURE OF PISTON RINGS
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
No Drawing. Application June 30, 1955
Serial No. 519,220
Claims priority, application France August 4, 1954
3 Claims. (Cl. 148—3)

1. The process of making alloyed cast piston rings which are substantially free of primary cementite and brittleness, and have a low coefficient of friction, comprising stack molding in a green sand mold the piston rings of a cast iron having the composition 3.00–4.00% carbon, 1.50–3.10% silicon, 0.6–1.5% manganese, 0.8–2.0% copper, 0.05–0.70% phosphorus, 0.02–0.15% sulphur, and the balance substantially all iron, whereby the cast piston rings have a white structure, heating to a temperature slightly above that of the eutectoid transformation point so that austenitization takes place and for a time sufficient for all the carbon to be dissolved, quenching while maintaining a substantially martensitic structure, again heating at a constant temperature between 420° C. and 550° C. for a period of the order of three hours to bring forth graphite nucleation, increasing the temperature after said nucleation heating to a temperature higher than the eutectoid transformation point for a period of time sufficient to graphitize the carbon in the primary cementite, cooling at a controlled rate, said cooling rate being a function of the final hardness to be obtained, and tempering at a predetermined temperature to insure a predetermined hardness.

2,895,860
PRESSURE CHILL-CASTINGS OF IRON
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France, French works
No Drawing. Application July 25, 1956
Serial No. 599,906
Claims priority, application France August 5, 1955
5 Claims. (Cl. 148—3)

1. A method of obtaining malleable iron of pearlitic structure containing diffused fine particles of graphite

2,895,865
FILAMENT REINFORCED GUMMED TEAR TAPE
elongated sheet of said air extending longitudinally of

material.

1. A device for laterally displacing a crop lying on the ground comprising a frame member, a bearing defi-

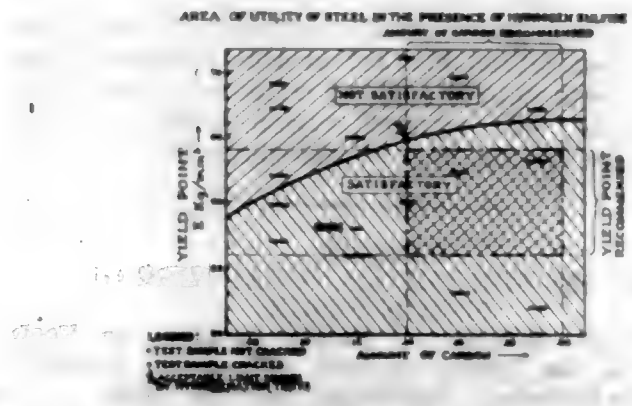
which comprises die casting in a chill mold an iron suitable for the formation of pearlitic malleable iron, stripping the casting from the mold while hot, and above 810° C., quenching the casting in a salt bath at a temperature of about 180° C. for about 1 minute, cooling the casting in still air, subjecting the casting to a temperature between 400° to 500° C. for a period of time up to 5 hours, sufficient for effecting formation of graphite nuclei, subjecting the casting to graphitization of the primary cementite with heat at a temperature between 850° and 900° C. for 2 to 6 hours.

2,895,861

PROCESS FOR IMPROVING STRESS CORROSION CRACKING RESISTANCE OF ALLOYED STEEL IN HYDROGEN SULPHIDE ATMOSPHERE

Paul Gaston Bastien, Paris, France, assignor to Société des Forges et Ateliers du Creusot, Paris, France, a company of France

Application November 13, 1957, Serial No. 696,261
Claims priority, application France May 28, 1957
7 Claims. (Cl. 148—21.5)



1. A process for manufacturing an alloyed steel element having fine spheroidized carbide particles uniformly distributed in the ferritic matrix capable of stress corrosion cracking resistance in a moist atmosphere charged with hydrogen sulfide including the steps of austenitizing an alloyed steel element having a composition comprising from 0.10 to 0.25% carbon, from 0.10 to 0.50% silicon, from 0.30 to 1.0% manganese, from 1 to 14% chromium, from 0.40 to 1.5% molybdenum, from 0.10 to 0.60% vanadium, from 0 to 1% nickel, and minor quantities of other elements such as sulfur up to 0.030%, phosphorus up to 0.025%, copper up to 0.20%, the remainder being substantially all iron, at a temperature between 975° and 1100° C., cooling the steel at a speed at least equal to 30° C. per minute between 850° and 600° C., and then tempering the steel at a temperature between 725° and 800° C. for a period of time sufficient to produce a yield point between 55 and 65 kg./mm.^{2}, according to the amount of carbon.

2,895,862

SOLDER FLUXES

Harry B. Landenslager, Jr., Jamestown, N.Y., assignor to Blackstone Corporation, Jamestown, N.Y., a corporation of New York

No Drawing. Application September 18, 1956
Serial No. 610,673
7 Claims. (Cl. 148—23)

1. A soldering flux consisting essentially of about 3% to 12% of a water soluble, organic acid having less than 8 to 10 carbon atoms in the chain, about 1% to 6% of a material selected from the group consisting of ammonium halides, ammonium nitrate and urea, about 0.5% to 1% stannous chloride and about 0.1% to 0.5% of a wetting agent selected from the group consisting of anionic and non-ionic wetting agents and the balance water.

2,895,863

ARC WELDING FLUX COMPOSITION

Leonidas K. Stringham, Shaker Heights, and Paul E. Jerabek, Euclid, Ohio, assignors to The Lincoln Electric Company

No Drawing. Application September 30, 1955
Serial No. 537,898
7 Claims. (Cl. 148—26)

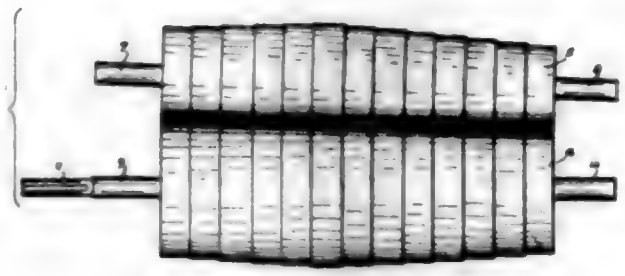
1. A welding flux composition consisting of the following named ingredients, bound together in a finely ground, uniformly distributed condition into free flowing, granular particles, namely basic ingredients selected from the class of oxides of magnesium, manganese, aluminum, titanium in amounts of from 22 to 66%, fluorides selected from the class of calcium fluoride and sodium fluoride in amounts of from 2% to 22%; a killing agent selected from the class of ferro manganese, ferro silicon, aluminum, chromium, vanadium, manganese and silicon in amounts of from 1 to 8%, and acid ingredients selected from the class consisting of silicon dioxide and zircon, said acid ingredients being in approximately combining ratio with said basic ingredients but said silicon dioxide being present in amounts less than 5% of the total weight of the ingredients.

2,895,864

GLASS PRESSING NIPPER ROLLS

Ronald E. Richardson, Oshawa, Ontario, Canada, assignor, by mesne assignments, to Pittsburgh Plate Glass Company, Pittsburgh, Pa.

Application March 23, 1956, Serial No. 573,519
Claims priority, application Canada April 12, 1955
2 Claims. (Cl. 154—2.7)



1. In a nipper roll press for the preliminary pressing of curved laminated glass sheets, a first resilient nipper roll of varying diameter longitudinally, said variation being compounded of a progressive increase of diameter in one longitudinal direction to provide said roll with a conical aspect and a symmetrical increase of diameter from each end longitudinally towards the centre of the roll to provide said roll with a hump aspect, a second resilient nipper roll of varying diameter longitudinally, said variation being compounded of a progressive increase of diameter in one longitudinal direction to provide said roll with a conical aspect and a symmetrical increase of diameter from each end longitudinally towards the centre of the roll to provide said roll with a hump aspect, the mean diameter of said second cone being greater than the mean diameter of the first cone and the ratio of the diameter of one end of the first cone to the diameter of the other end of the first cone being substantially equal to the corresponding ratio of the second cone, journal means at each end of each of said rolls, and bearing means rotatably mounting said journal means, said bearing means being structurally positioned to maintain the axes of said rolls inclined to each other while lying in a common plane with both rolls tapering in the same direction and to maintain the opposing surfaces of the rolls pressed tightly together along their entire lengths, the angle of mutual inclination of said axes being generally equal to the sum of the conical aspects of the two rolls.

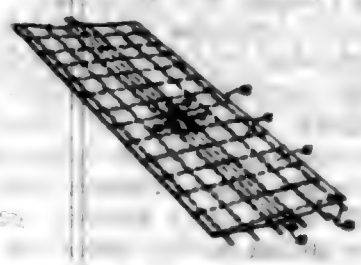
mixture of silicon tetrabromide, hydrogen, and an active structure containing diffused fine particles of graphite

2,895,865

FILAMENT REINFORCED GUMMED TEAR-TAPE

Ferdinand W. Humphner, River Forest, Ill., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Application August 26, 1955, Serial No. 530,788
7 Claims. (Cl. 154—53.5)



3. Reinforced tear-tape, comprising laminated paper sheets having extending therebetween longitudinal threads and transverse threads, bonding means uniting the paper sheets and anchoring the threads therein, adhesive on the lower side of said tape, and a tear-cord united to the bottom of said tape and extending longitudinally thereof between a pair of said longitudinally-extending threads, said transverse threads having a breaking strength less than that of said tear-cord.

2,895,866

LAMINATED STRUCTURES, COMPOSITIONS FOR PRODUCING SAME AND PROCESSES OF EMPLOYING SUCH COMPOSITIONS

William F. Amon, Jr., Kirkwood, Mo., and Finn Claudi-Magnussen, Kenmore, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application May 22, 1956
Serial No. 586,387
16 Claims. (Cl. 154—139)

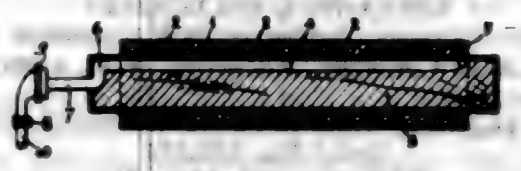
1. A process of laminating comprising applying a solution of a coplymer of a vinyl lower alkyl ether and maleic anhydride in N,N-dimethyl formamide to a polymethyl α-chloracrylate base, drying the coating, exposing the treated base to ammonia vapors, applying to the coated side of said coated base a pre-formed sheet and laminating the resulting assembly under heat and pressure.

2,895,867

METHOD OF AND APPARATUS FOR REMOVING FROM A MANDREL, BY MEANS OF COMPRESSED AIR, FIBROCEMENT TUBES PRODUCED WITH TUBE-MAKING MACHINES AND THE LIKE

Robert Fourmanoit, Genoa, Italy, assignor to Eternit Soc. p. Az., Genoa, Italy

Application May 16, 1956, Serial No. 585,338
Claims priority, application Italy June 17, 1955
1 Claim. (Cl. 162—118)



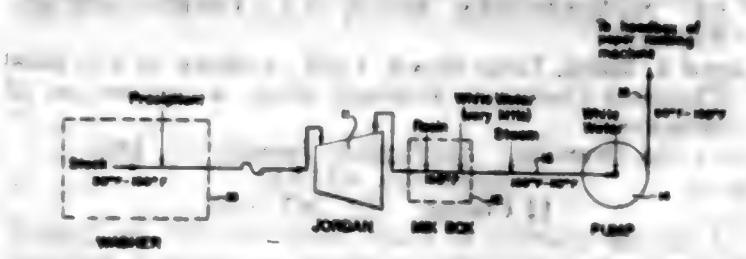
A process for removing a fibro-cement tube from a mandrel upon which it has been formed which comprises the steps of introducing from the interior of the mandrel a plurality of streams of air under superatmospheric pressure between the outer surface of the mandrel and the interior surface of the fibro-cement tube to form an elongated sheet of said air extending longitudinally of said fibro-cement tube, rotating said mandrel, and applying rolling pressure to the exterior surface of said fibro-cement tube as the mandrel rotates.

2,895,868

METHOD OF MAKING RESIN IMPREGNATED PAPER

Donald G. Magill, Jr., Milford, N.J., assignor, by mesne assignments, to Riegel Paper Corporation, New York, N.Y., a corporation of Delaware

Application January 26, 1955, Serial No. 484,230
7 Claims. (Cl. 92—21)



1. A method of making a resin impregnated paper which comprises preparing an aqueous slurry of pulp, adding a quantity of a beater addition resin and a precipitating agent to the aqueous slurry prior to supplying the aqueous slurry to the head box of a paper making machine, initially maintaining the resin-pulp-precipitating agent slurry at a temperature not above the sticking point temperature of the resin whereby to effect a partial precipitation of the resin onto the fibers of the aqueous slurry, raising the temperature of the aqueous resin-pulp-precipitating agent slurry prior to its reaching the head box to a temperature above the sticking point temperature of the resin whereby to effect a further precipitation of the resin onto the fibers, cooling said aqueous slurry to reduce the temperature thereof to a point below said sticking point temperature of the resin, and then making paper from said cooled slurry.

2,895,869

METHOD FOR CONTROLLING NEMATODES

Henry Binestone, Cleveland Heights, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Application October 6, 1954
Serial No. 460,755
6 Claims. (Cl. 167—22)

1. The method of controlling nematodes which comprises contacting nematode-infested soil with a nematocidal amount of a composition including as an active toxic ingredient a compound having the formula

$$H_nCX_{3-n}-CH=C(R)-NO_2$$

wherein n is a number from 0 to 3, inclusive, X is halogen and R is selected from the group consisting of hydrogen, lower alkyl, phenyl, naphthyl, tolyl, xylyl, benzyl and phenethyl radicals.

2,895,870

GRAIN FUMIGANT COMPOSITION AND METHOD FOR MAKING AND USING SAME

Joseph R. Baldridge, Mentor, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Application February 17, 1958
Serial No. 715,485
9 Claims. (Cl. 167—22)

1. A fumigant composition comprising 82–83% by volume carbon tetrachloride, 16.5–17.5% by volume carbon disulfide and 0.5–1% by volume petroleum ether.

2,895,871
POLYCHLOROBENZHYDROLS
Charles E. Entemann, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
No Drawing. Application January 9, 1957
Serial No. 633,192
6 Claims. (Cl. 167—30)

3. A biologically active composition of matter which comprises a carrier and a polychlorobenzhydrol.

2,895,872
AGRONOMICAL PRACTICE FOR THE CONTROL OF NEMATODES WITH 1,2,3-TRIBROMOPROPANE
Lloyd J. Meuli, Long Beach, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Application January 11, 1957
Serial No. 633,527
12 Claims. (Cl. 167—39)

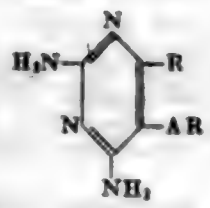
3. In the practice of plant husbandry for the control of nematodes, the method which comprises impregnating soil with 1,2,3-tribromopropane as the sole active nematocidal ingredient in the amount of at least 1.0 part by weight per million parts by weight of soil.

2,895,873
INORGANIC ANIMAL LITTER AND METHOD FOR MAKING THE SAME
Edgar W. Sawyer, Jr., Metuchen, and Wright W. Gary, Princeton, N.J., assignors to Minerals & Chemicals Corporation of America, Menlo Park, N.J., a corporation of Maryland
No Drawing. Application September 20, 1957
Serial No. 685,093
16 Claims. (Cl. 167—42)

1. An animal litter comprising a granular sorptive essentially non-colloidal clay mineral having an aluminum content, calculated as Al_2O_3, of at least about 5 percent based on the volatile free weight of said mineral, in which at least a portion of the aluminum therein exists as the sulfate salt formed in situ by the reaction of said mineral with sulfuric acid, said litter being characterized by being essentially devoid of free acid.

2,895,874
DIAMINO-PYRIMIDINE COMPOSITIONS FOR CHEMOTHERAPY OF COCCIDIOSIS
Russell E. Lutz, Myerstown, and Ammon M. Brubaker, Sheridan, Pa., assignors to Whitmoyer Laboratories, Inc., Myerstown, Pa., a corporation of Delaware
No Drawing. Application March 27, 1953
Serial No. 345,252
12 Claims. (Cl. 167—53.1)

1. A ration for ad libitum feeding to a flock of poultry to combat the disease of coccidiosis in the poultry flock without intolerable toxic effect upon the poultry which comprises a poultry feeding mash in which is incorporated not less than .002 percent and not more than .05 percent by weight of a diamino-pyrimidine having the formula:



where R is selected from the class consisting of H and an alkyl group containing one to five carbons inclusive and Ar is selected from the class consisting of p-chlorophenyl and 3,4-dichlorophenyl.

2,895,875
SUBCUTANEOUS HORMONE PELLETS
Hermann Klette, Frankfurt am Main, Germany, assignor to Erich M. H. Radde, New York, N.Y.
No Drawing. Original application October 28, 1950, Serial No. 193,842, now Patent No. 2,824,546, dated February 25, 1958. Divided and this application February 25, 1958, Serial No. 717,303
Claims priority, application Germany November 2, 1949
6 Claims. (Cl. 167—58)

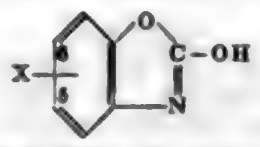
1. A solid shaped hormone preparation suitable for implantation comprising crystals of hormones having the activity of steroid hormones, the particle size of said crystals substantially exceeding 0.01 mm. and small crystals of hormones having the activity of steroid hormones, the particle size of said crystals being substantially lower than 0.01 mm. and a binding agent, said hormone preparation disintegrating under the influence of the body fluids into said hormone particles of different partiole size.

2,895,876
CATENULIN AND ITS PRODUCTION
Jacob W. Davisson, Floral Park, and Alexander C. Finlay, Flushing, N.Y., assignors to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware
No Drawing. Application March 11, 1954
Serial No. 415,688
9 Claims. (Cl. 167—65)

1. A process for producing catenulin, which comprises cultivating *Streptomyces catenulae* under submerged aerobic conditions in an aqueous nutritive medium containing a growth-promoting substance, carbohydrate and organic nitrogen, until substantial antibacterial activity is imparted to said medium.

2,895,877
COMPOSITION AND METHOD FOR RELIEVING SPASTICITY
David F. Marsh, Lafayette Hill, Pa., assignor to McNeil Laboratories, Incorporated, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Application July 30, 1956
Serial No. 600,703
11 Claims. (Cl. 167—65)

1. A pharmaceutical composition comprising at least about 1%, by weight, of a 2-hydroxybenzoxazole compound selected from the group consisting of 2-hydroxybenzoxazoles having the structural formula:



where X is selected from the group consisting of 5-chloro, 5-bromo, 6-chloro and 6-bromo, and salts thereof, and a pharmaceutical carrier therefor suitable for internal administration.

2,895,878
COMPOSITIONS CONTAINING STABILIZED VITAMIN A MATERIALS
Robert W. Lehman, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Application September 28, 1955
Serial No. 537,274
7 Claims. (Cl. 167—81)

1. A vitamin A composition having incorporated therein a stabilizer combination comprising tocopherol in amounts from 5 mg. to 150 mg. per 1,000,000 U.S.P. units of vitamin A in said composition and 2,6-di-tertiary butyl-4-methyl phenol in amounts from 1.0 mg. to 50 mg. per 1,000,000 U.S.P. units of vitamin A in said composition, the relative proportions of tocopherol and

wardly successively through a foraminate disengaging sion thereof to the end adjacent said hopper, the transfer

interior surface of the fibro-cement tube to form an

bon disulfide and 0.5–1% by volume petroleum ether.

2,6-di-tertiary butyl-4-methyl phenol in said stabilizer combination being 1 to 5 parts of tocopherol to each part of 2,6-di-tertiary butyl-4-methyl phenol, said tocopherol being present in addition to any tocopherol naturally present in other constituents of said composition.

2,895,879
GELLED GLYCEROL FATTY ACID PARTIAL ESTER PHARMACEUTICAL CARRIER
George Y. Brokaw and William C. Lynam, Jr., Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Application April 19, 1957
Serial No. 653,728
7 Claims. (Cl. 167—81)

1. A firm, substantially clear gel comprising a glycerol fatty acid partial ester composition containing at least 75% by weight of monoglycerides having fatty acid radicals with at least 16 carbon atoms and having incorporated therein water in an amount of from 10% to 90% by weight based on said glycerol fatty acid partial ester composition and a medicament in amounts up to about 15% by weight based on said glycerol fatty acid partial ester composition, said glycerol fatty acid partial ester composition containing less than 10% by weight of glycerides having saturated fatty acid radicals with more than 11 carbon atoms.

2,895,880
SUSTAINED RELEASE PHARMACEUTICAL PRODUCT
Fritz Rosenthal, Park Forest, Ill., assignor, by mesne assignments, to Smith, Kline & French Laboratories, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Application May 13, 1955
Serial No. 508,293
6 Claims. (Cl. 167—82)

1. A solid pharmaceutical product providing a gradual release of medicament over a long period of time, comprising a medicament dispersed in a material selected from the group consisting of zein, gliadin, hordein and kafirin, said material being from about 20% to about 45% by weight of said product and having a salt point in the range from about 0.2 to about 0.5.

2,895,881
QUINIDINE GLUCONATE SUSTAINED MEDICATION TABLET
Tsugio Hamada, Philadelphia, Pa., assignor to Wynn Pharmacal Corporation, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Application April 4, 1957
Serial No. 650,560
2 Claims. (Cl. 167—82)

1. A process of making a therapeutic tablet containing quinidine gluconate suitable for oral administration to control heart action which process consists of mixing and heating three and one-half parts by weight of hydrogenated castor oil and one part by weight of ethyl cellulose until both are thoroughly melted and a homogeneous mixture is formed, separately mixing four and one-half parts of quinidine gluconate by weight with one part of starch by weight and only a sufficient amount of isopropyl alcohol to render the mixture damp, adding the damp mixture to the molten mixture while heating the molten mixture, stirring the two mixtures and continuing the stirring and heating until the hydrogenated castor oil, ethyl cellulose, quinidine gluconate and starch become intermixed and form a homogeneous mixture, pouring the mixture upon trays and permitting it to cool and solidify, granulating the solidified material by forcing it through a 12 mesh screen, adding a trace of magnesium stearate to the granules and thoroughly intermixing the magnesium stearate with the granules and thereafter compressing the thus obtained mixture into tablets of the desired size.

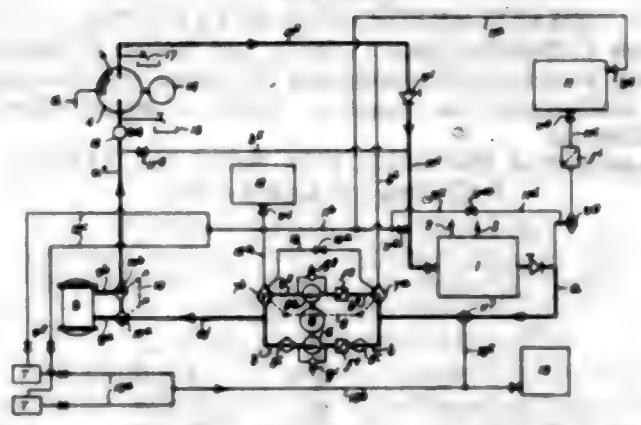
2,895,882
PRODUCTION OF GLUTAMYL POLYPEPTIDE BY *BACILLUS SUBTILIS*
Curtis B. Thorne, Riley D. Housewright, and Carmen G. Leonard, Frederick, Md.
No Drawing. Application October 16, 1957
Serial No. 690,591
3 Claims. (Cl. 195—96)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method of producing glutamyl polypeptide by culturing *Bacillus subtilis* ATCC 9945*a* on a medium comprising

	Gr.
Glutamic acid	12–20
Citric acid	4–16
Glycerol	20–80
NH_4^+ as NH_4Cl	5–10
K_2HPO_4	.5–3.0
$MgSO_4.7H_2O$	.5–3.0
$FeCl_3.6H_2O$	.04–.12
$CaCl_2.2H_2O$	.15–.5
$ZnSO_4.7H_2O$	.001–.005
$MnSO_4.H_2O$	.001–0.1

Distilled water to 1 liter.

2,895,883
OIL PURIFICATION OR SEPARATION PLANT
Eric D. Hobson, Shandon, Scotland, assignor to Yarrow and Company Limited, Scotstroun, Glasgow, Scotland
Application March 31, 1955, Serial No. 498,416
Claims priority, application Great Britain April 5, 1954
8 Claims. (Cl. 196—46)



1. An oil purification and separation plant for lubricating systems of machinery installations, including a centrifugal separator having an inlet flow line communicating therewith a pump connected in the inlet flow line to the separator and having a rated output to enable it to pump oil to the separator at a rate to permit the latter to operate at its rated throughput capacity, a second pump having a rated output at least equal to the first pump, conduit means connecting said second pump in the said inlet flow line for operation in parallel to the first pump, additional conduit means connecting said second pump with the discharge flow line from the separator, and control means for optionally connecting the said second pump to one or other of said conduit means.

2,895,884
SHALE RETORTING APPARATUS AND PROCESS
Robert L. Switzer, Long Beach, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California
Application March 22, 1956, Serial No. 573,286
20 Claims. (Cl. 202—6)

1. In a method for contacting fluids with fines-containing solids, which comprises passing said solids up-

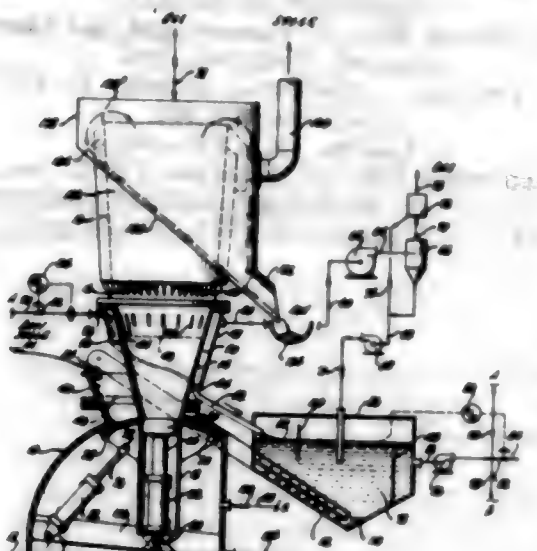
improvement in combination therewith of a differential planetary drive assembly located above said kiln top com-

2,895,890
LOW STRESS ELECTRODEPOSITED RHODIUM

and 3,4-dichlorophenyl.

composition, the relative proportions of tocopherol and

wardly successively through a foraminate disengaging zone and a contacting zone and passing a fluid comprising a liquid and gaseous phase downwardly in countercurrent contact with said solids successively through said contacting zone and said disengaging zone, the improvement which comprises establishing a sloping manifold



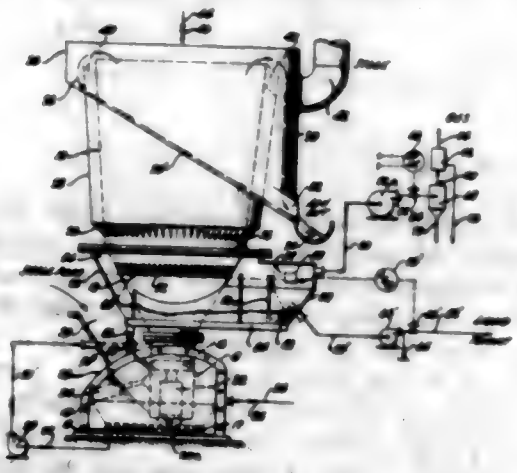
zone surrounding said disengaging zone and a settling zone communicating with the lowest point of said manifold zone, and flowing the liquid phase from said disengaging zone only into the highest point of said manifold zone, whereby fines passing from said disengaging zone are hydraulically sluiced from the entire manifold zone into said settling zone.

2,895,885

SHALE RETORTING APPARATUS

William L. Bewley, John L. Hotz, and Robert L. Switzer, Long Beach, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California

Application March 22, 1956, Serial No. 573,287
4 Claims. (Cl. 202—91)



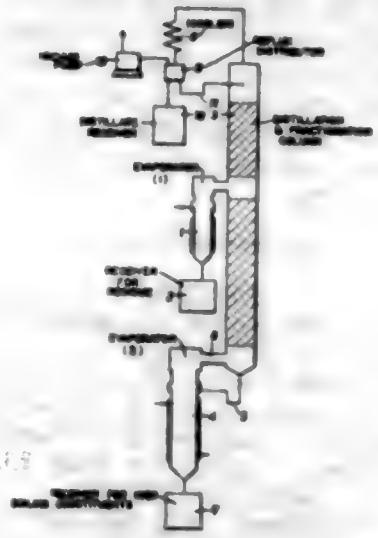
1. In an apparatus wherein fines-containing solids are passed downwardly through a hopper and upwardly successively through a feeder, a perforated disengaging section and a contacting section; and fluids comprising liquids and gases are passed downwardly in countercurrent contact with said solids through said contacting section and said disengaging section, the improvement which comprises a manifold-settling section surrounding the perforations in said disengaging section and extending laterally in a direction away from said hopper, said manifold-settling section having a substantially horizontal W-shaped bottom consisting of a pair of adjacent V-shaped troughs extending along substantially the entire length of said manifold-settling section from the lateral extension thereof to the end adjacent said hopper, the troughs having sides describing an angle of at least 45° with the horizontal so as to permit fines escaping from said perforations to settle directly to the bottom of said troughs, fines conveyor means at the bottom of each trough for transferring settled fines to a fines outlet, and a plurality of vertical baffles in the lateral extension of said manifold-settling section, said baffles being displaced with respect to each other so as to form a serpentine path for liquid flow from the disengaging section toward a liquid outlet near the extended end of said manifold-settling section.

2,895,886

DISTILLATION APPARATUS

Rudolf Schneider, Krefeld-Uerdingen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Application April 8, 1953, Serial No. 347,481
Claims priority, application Germany April 24, 1952
2 Claims. (Cl. 202—158)



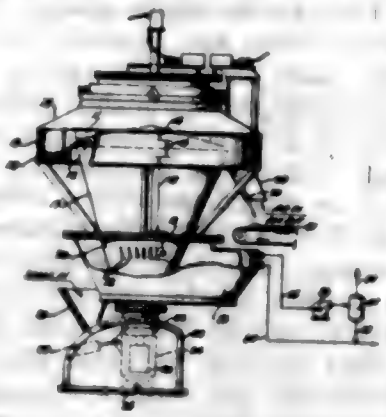
1. A distillation apparatus comprising a distillation column and a film evaporator connected to said distillation column for receiving reflux from the lower end portion of said distillation column into its upper end portion and for passing vapor from its upper end portion upwardly to the lower end portion of said distillation column, said film evaporator having a vertically extending evaporator surface.

2,895,887

DIFFERENTIAL ASH SCRAPER DRIVE FOR A RETORT

Roland F. Deering, Brea, and Herbert F. Wilkinson, Fullerton, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California

Application April 24, 1958, Serial No. 730,682
12 Claims. (Cl. 202—222)



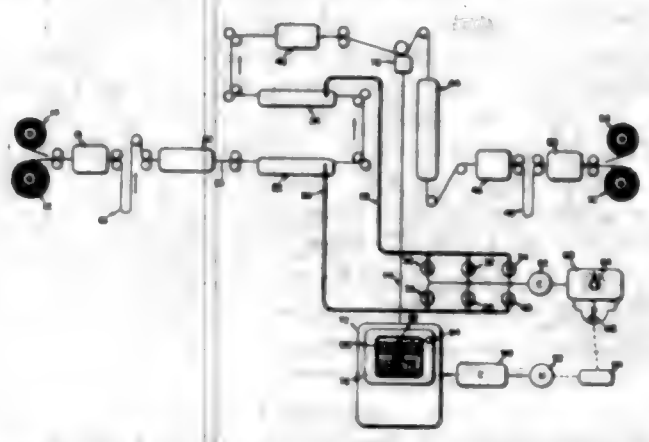
1. In an apparatus for feeding solids upwardly through a kiln and removing ash from above the kiln top, the

ing it through a 12 mesh screen, adding a trace of magnesium stearate to the granules and thoroughly inter-

1. In a method for contacting fluids with finer-containing solids, which comprises passing said solids up-

improvement in combination therewith of a differential planetary drive assembly located above said kiln top comprising: a first rotatable mantle section; a second rotatable mantle section, respective working apparatus for said first and second sections, each of which sections is adapted to support respectively, one of said working apparatus rotatable therewith; a first motive means for driving said first rotatable mantle section at a selected speed of rotation; and a second motive means mounted on said second rotatable mantle section, which second motive means is mechanically engaged with said driven first rotatable mantle section, whereby said second rotatable mantle section and its supported working apparatus are driven with a rotation which is relative to rotation of said first rotatable mantle section and its supported working apparatus.

2,895,888
ELECTROLYTIC PLATING APPARATUS AND PROCESS
Donald E. Varner, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Application October 7, 1957, Serial No. 688,728
14 Claims. (Cl. 204—28)



1. The method of electrodepositing a controlled thickness of plating on a continuous length of base material, which comprises conveying said base material lengthwise at a controllable rate through a plating bath, supplying said bath with a plating current of controllable magnitude for depositing a thickness of said plating material on said base material to form a plated material, initially maintaining a predetermined ratio of said current magnitude to said conveyor rate, removing electrolyte wetting a surface of said plated material traveling away from said bath, directing a beam of beta radiation into said traveling surface, quantitatively detecting reflected beta radiation returned backwardly from said surface to provide an indication of the thickness of plating on said surface, and correctively altering said ratio whenever said thickness indication deviates from a desired value.

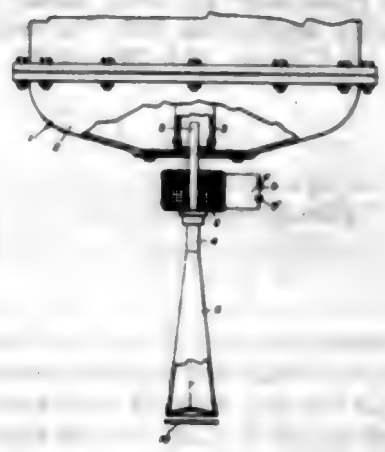
2,895,889
LOW STRESS ELECTRODEPOSITED RHODIUM
Karl Schumpelt, Union, N.J., assignor to Sel-Rex Precious Metals, Inc., Belleville, N.J., a corporation of New Jersey
No Drawing. Application January 10, 1957
Serial No. 633,381
5 Claims. (Cl. 204—47)

1. A process of electroplating rhodium metal under low internal stress comprising electrodepositing rhodium upon a basis metal from an aqueous bath consisting essentially of 20–100 cc. per liter of free sulfuric acid, 2 to about 5 grams per liter of rhodium added as rhodium sulfate and 10–100 grams per liter of magnesium sulfate, the remainder being water, electrodepositing rhodium from said bath at a current density of from 4 to 20 amperes per square foot and at a temperature of about 20° C. to about 50° C.

2,895,890
LOW STRESS ELECTRODEPOSITED RHODIUM
Karl Schumpelt, Union, N.J., assignor to Sel-Rex Corporation, Belleville, N.J., a corporation of New Jersey
No Drawing. Application June 5, 1957
Serial No. 663,595
7 Claims. (Cl. 204—47)

1. The process which comprises electrodepositing rhodium upon a basis metal from an aqueous bath containing rhodium sulfate and 10–100 g. per liter of magnesium sulfamate dissolved therein.

2,895,891
CELLULOSIC MATERIALS
Alexander A. Miller, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Application May 15, 1957, Serial No. 659,329
13 Claims. (Cl. 204—154)



1. A process of cross-linking cellulosic materials which comprises irradiating a non-salt containing, aqueous sol of a water dispersible cellulosic material with ionizing radiation having an energy equivalent to at least 50,000 electron volts to a radiation dose in the range of 1×10^6–1×10^8 REP, said sol containing at least 50% by weight of water.

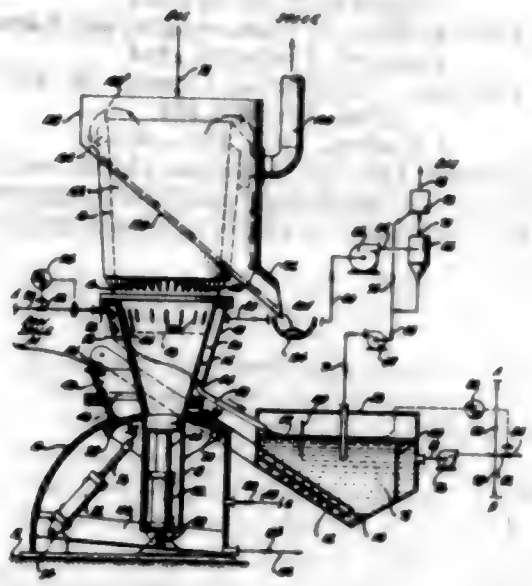
2,895,892
PHOTOCHEMICAL PROCESS
Lyman Chalkley, Prince Georges County, Md.
No Drawing. Application August 10, 1954
Serial No. 448,990
9 Claims. (Cl. 204—157)

1. The photochemical process comprising the steps of providing an intimate mixture of a heteropolytungstic acid with a carbonaceous reducing agent chosen from the group consisting of polyhydric alcohol, polyether, polyamid, aldehyde, leucobase of triphenylmethane dye, leucobase of xanthene dye and irradiating said mixture with light to produce a chemical reaction between the heteropolytungstic acid and the carbonaceous reducing agent and thereby forming a colored product.

2,895,893
GALVANIC ANODE
Harold A. Robinson, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Original application May 19, 1954, Serial No. 430,921. Divided and this application October 18, 1956, Serial No. 616,888
3 Claims. (Cl. 204—197)

1. A block like unitary galvanic anode having at least one flat surface, a straight straplike metal core extending through said anode parallel with said flat surface, at least one aperture extending from said flat surface through said core, said aperture being smaller than the width of said core, and at least a second aperture of larger diameter than said first mentioned aperture, said second aper-

wardly successively through a foraminate disengaging zone and a contacting zone and passing a fluid comprising a liquid and gaseous phase downwardly in countercurrent contact with said solids successively through said contacting zone and said disengaging zone, the improvement which comprises establishing a sloping manifold



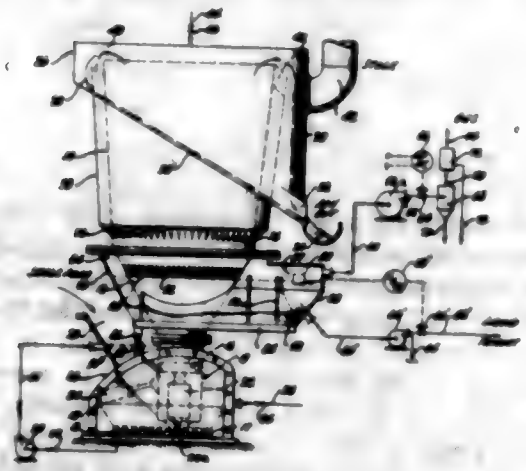
zone surrounding said disengaging zone and a settling zone communicating with the lowest point of said manifold zone, and flowing the liquid phase from said disengaging zone only into the highest point of said manifold zone, whereby fines passing from said disengaging zone are hydraulically sluiced from the entire manifold zone into said settling zone.

2,895,885

SHALE RETORTING APPARATUS

William L. Bewley, John L. Hotz, and Robert L. Switzer, Long Beach, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California

Application March 22, 1956, Serial No. 573,287
4 Claims. (Cl. 202—91)



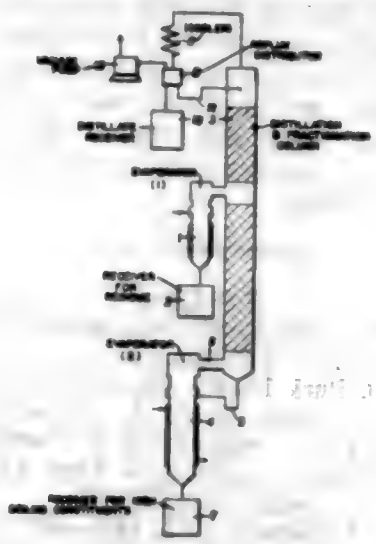
1. In an apparatus wherein fines-containing solids are passed downwardly through a hopper and upwardly successively through a feeder, a perforated disengaging section and a contacting section; and fluids comprising liquids and gases are passed downwardly in countercurrent contact with said solids through said contacting section and said disengaging section, the improvement which comprises a manifold-settling section surrounding the perforations in said disengaging section and extending laterally in a direction away from said hopper, said manifold-settling section having a substantially horizontal W-shaped bottom consisting of a pair of adjacent V-shaped troughs extending along substantially the entire length of said manifold-settling section from the lateral extension thereof to the end adjacent said hopper, the troughs having sides describing an angle of at least 45° with the horizontal so as to permit fines escaping from said perforations to settle directly to the bottom of said troughs, fines conveyor means at the bottom of each trough for transferring settled fines to a fines outlet, and a plurality of vertical baffles in the lateral extension of said manifold-settling section, said baffles being displaced with respect to each other so as to form a serpentine path tor liquid flow from the disengaging section toward a liquid outlet near the extended end of said manifold-settling section.

2,895,886

DISTILLATION APPARATUS

Rudolf Schneider, Krefeld-Uerdingen, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

Application April 8, 1953, Serial No. 347,481
Claims priority, application Germany April 24, 1952
2 Claims. (Cl. 202—158)



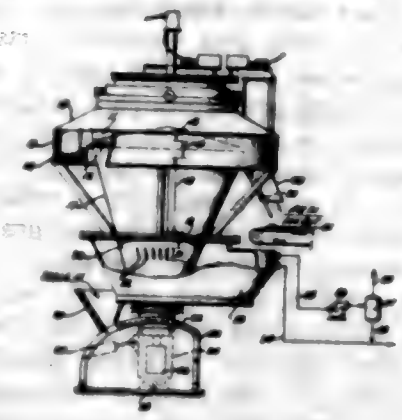
1. A distillation apparatus comprising a distillation column and a film evaporator connected to said distillation column for receiving reflux from the lower end portion of said distillation column into its upper end portion and for passing vapor from its upper end portion upwardly to the lower end portion of said distillation column, said film evaporator having a vertically extending evaporator surface.

2,895,887

DIFFERENTIAL ASH SCRAPER DRIVE FOR A RETORT

Roland F. Deering, Brea, and Herbert F. Wilkinson, Fullerton, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California

Application April 24, 1958, Serial No. 730,682
12 Claims. (Cl. 202—222)

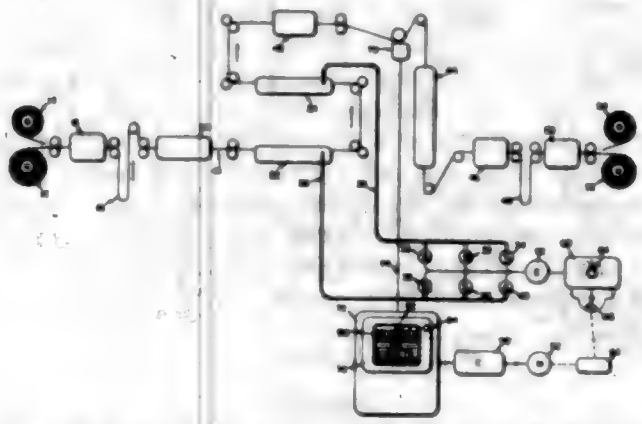


1. In an apparatus for feeding solids upwardly through a kiln and removing ash from above the kiln top, the

ture being concentric with said first aperture and extend- the weight ratio of the two components of the mixture

improvement in combination therewith of a differential planetary drive assembly located above said kiln top comprising: a first rotatable mantle section; a second rotatable mantle section, respective working apparatus for said first and second sections, each of which sections is adapted to support respectively, one of said working apparatus rotatable therewith; a first motive means for driving said first rotatable mantle section at a selected speed of rotation; and a second motive means mounted on said second rotatable mantle section, which second motive means is mechanically engaged with said driven first rotatable mantle section, whereby said second rotatable mantle section and its supported working apparatus are driven with a rotation which is relative to rotation of said first rotatable mantle section and its supported working apparatus.

2,895,888
ELECTROLYTIC PLATING APPARATUS AND PROCESS
Donald E. Varner, Columbus, Ohio, assignor to Industrial Nucleonics Corporation, a corporation of Ohio
Application October 7, 1957, Serial No. 688,720
14 Claims. (Cl. 204—28)



1. The method of electrodepositing a controlled thickness of plating on a continuous length of base material, which comprises conveying said base material lengthwise at a controllable rate through a plating bath, supplying said bath with a plating current of controllable magnitude for depositing a thickness of said plating material on said base material to form a plated material, initially maintaining a predetermined ratio of said current magnitude to said conveyor rate, removing electrolyte wetting a surface of said plated material traveling away from said bath, directing a beam of beta radiation into said traveling surface, quantitatively detecting reflected beta radiation returned backwardly from said surface to provide an indication of the thickness of plating on said surface, and correctively altering said ratio whenever said thickness indication deviates from a desired value.

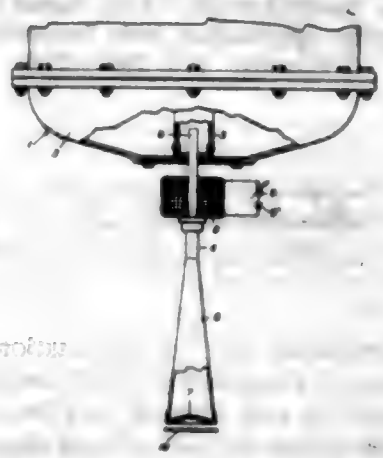
2,895,889
LOW STRESS ELECTRODEPOSITED RHODIUM
Karl Schumpelt, Union, N.J., assignor to Sel-Rex Precious Metals, Inc., Belleville, N.J., a corporation of New Jersey
No Drawing. Application January 10, 1957
Serial No. 633,381
5 Claims. (Cl. 204—47)

1. A process of electroplating rhodium metal under low internal stress comprising electrodepositing rhodium upon a basis metal from an aqueous bath consisting essentially of 20–100 cc. per liter of free sulfuric acid, 2 to about 5 grams per liter of rhodium added as rhodium sulfate and 10–100 grams per liter of magnesium sulfate, the remainder being water, electrodepositing rhodium from said bath at a current density of from 4 to 20 amperes per square foot and at a temperature of about 20° C. to about 50° C.

2,895,890
LOW STRESS ELECTRODEPOSITED RHODIUM
Karl Schumpelt, Union, N.J., assignor to Sel-Rex Corporation, Belleville, N.J., a corporation of New Jersey
No Drawing. Application June 5, 1957
Serial No. 663,595
7 Claims. (Cl. 204—47)

1. The process which comprises electrodepositing rhodium upon a basis metal from an aqueous bath containing rhodium sulfate and 10–100 g. per liter of magnesium sulfamate dissolved therein.

2,895,891
CELLULOSIC MATERIALS
Alexander A. Miller, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Application May 15, 1957, Serial No. 659,329
13 Claims. (Cl. 204—154)



1. A process of cross-linking cellulosic materials which comprises irradiating a non-salt containing, aqueous sol of a water dispersible cellulosic material with ionizing radiation having an energy equivalent to at least 50,000 electron volts to a radiation dose in the range of 1×10^6–1×10^8 REP, said sol containing at least 50% by weight of water.

2,895,892
PHOTOCHEMICAL PROCESS
Lyman Chalkley, Prince Georges County, Md.
No Drawing. Application August 10, 1954
Serial No. 448,990
9 Claims. (Cl. 204—157)

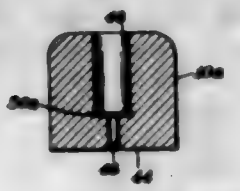
1. The photochemical process comprising the steps of providing an intimate mixture of a heteropolytungstic acid with a carbonaceous reducing agent chosen from the group consisting of polyhydric alcohol, polyether, polyamid, aldehyde, leucobase of triphenylmethane dye, leucobase of xanthene dye and irradiating said mixture with light to produce a chemical reaction between the heteropolytungstic acid and the carbonaceous reducing agent and thereby forming a colored product.

2,895,893
GALVANIC ANODE
Harold A. Robinson, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Original application May 19, 1954, Serial No. 430,921. Divided and this application October 18, 1956, Serial No. 616,888
3 Claims. (Cl. 204—197)

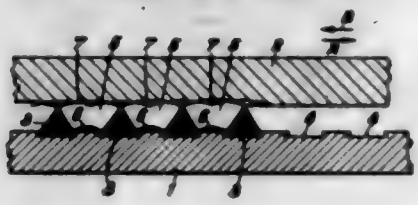
1. A block like unitary galvanic anode having at least one flat surface, a straight straplike metal core extending through said anode parallel with said flat surface, at least one aperture extending from said flat surface through said core, said aperture being smaller than the width of said core, and at least a second aperture of larger diameter than said first mentioned aperture, said second aper-

the two said distillates with gas consisting essentially of vapors; whereby heat fronts during initial contact of said

ture being concentric with said first aperture and extending from a surface of said anode other than said flat surface to said core member, said first and second apertures providing a passageway which extends between oppositely disposed surfaces of the anode.

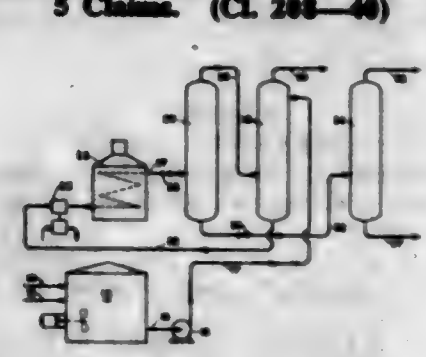


2,895,894
ELECTROLYTIC CELL ARRANGEMENT
Gaetano Comforto, Genoa, Italy, assignor to Pintsch Bamag Aktiengesellschaft, Berlin, Germany
Application November 26, 1956, Serial No. 624,439
Claims priority, application Italy November 25, 1955
2 Claims. (Cl. 204—219)



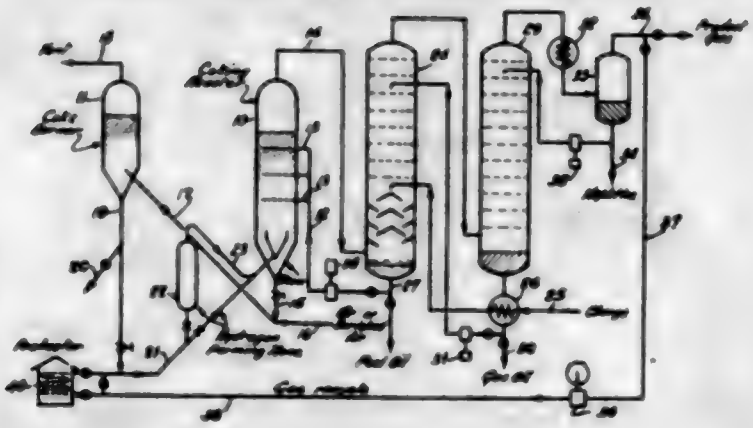
1. In an electrolytic cell, in combination, a base member; a plurality of elongated parallel electrical insulating ridges arranged on one face of said base member and covering a substantial portion of said face, each of said insulating ridges having a wide base portion covering a portion of said one face of said base member and a narrow elongate top edge, said insulating ridges being transversely spaced from each other and defining with uncovered portions of said face of said base member a plurality of elongate parallel channels; an anode extending over said top edges of said electrical insulating ridges spaced from said face of said base member and substantially enclosing each of said elongated parallel channels formed between adjacent insulating ridges; and a mercury cathode formed by a plurality of flowing mercury streams, each of said mercury streams flowing through one of said elongated parallel channels and substantially covering said respective portion of said face of said base member forming part of said respective channel.

2,895,895
PRODUCTION OF CARBON BLACK OIL
Gysbert F. De Ridder and William P. Bryan, Houston, Tex., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware
Application January 2, 1958, Serial No. 706,654
5 Claims. (Cl. 208—48)



1. A process for the production of a highly aromatic base oil suitable for carbon black manufacture comprising preparing a feed mixture containing substantial proportions of a catalytically cracked gas oil and a straight run aromatic extract, each of said components having at least 30% by weight of aromatic hydrocarbons and with the weight ratio of the two components of the mixture being between 70–30 and 30–70 and with neither of said components having been subjected before preparation of the feed mixture to either a separate hydrogenation or a separate non-catalytic, thermal cracking, subjecting the mixture to a severe thermal cracking operation for a period of time less than 30 minutes, and separating the lighter material in a substantially atmospheric pressure separation from the thermally cracked mixture to obtain a highly aromatic residue suitable for carbon black manufacture and having overall carbon black base oil characteristics superior to that obtainable by the thermal cracking of either of the components separately.

2,895,896
FLUID CONTACT COKING IN THE PRESENCE OF HYDROGEN PRODUCED BY DEHYDROGENATION OF PRODUCT GASES
Alfred R. Vander Ploeg, Port Arthur, Tex., assignor to Texaco Inc., a corporation of Delaware
Application December 1, 1954, Serial No. 472,460
2 Claims. (Cl. 208—53)



1. The process of producing a superior gas oil adapted for catalytic cracking that comprises contacting a residual petroleum stock with coke under fluidized conditions at cracking and coking temperature in a reaction zone, passing coke from the reaction zone to a burning zone in which the coke is subjected to combustion at a temperature of at least 1500° F., withdrawing coke at a temperature of at least 1500° F. from the burning zone, withdrawing vapors comprising hydrocarbon gas from said reaction zone, dispersing said coke withdrawn from said burning zone in said hydrocarbon gas and passing the dispersion through a dehydrogenation zone at a temperature of about 1200 to 2000° F. for a time of about 0.1 to 20.0 seconds effecting dehydrogenation and formation of hydrogen, delivering effluent from the dehydrogenation zone comprising coke and hydrogen to the aforesaid reaction zone to supply heat thereto and maintain fluidization therein in an atmosphere of hydrogen and fractionating evolved vapors from said reaction zone to separate said gas oil.

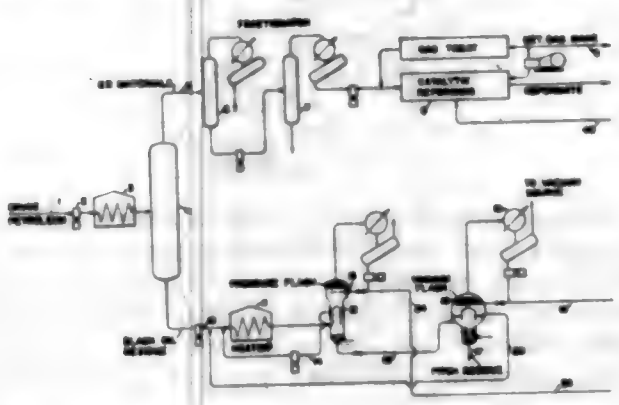
2,895,897
PRODUCTION OF GASOLINE FROM PETROLEUM RESIDUES
Warren L. Snider, Walnut Creek, Dante H. Serne, Berkeley, and George E. Lindholm, El Cerrito, Calif., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware
Application August 28, 1956, Serial No. 606,618
4 Claims. (Cl. 208—57)

1. In the production of gasoline from petroleum residues the improvement which comprises recovering from petroleum residue two separate distillate fractions of the nature of gas oil both of which boil essentially above gasoline and one of which is lower boiling and of lower molecular weight than the other, passing the heavier of

vaporous hydrocarbon gas oil mixture at a temperature

2,895,902

the two said distillates with gas consisting essentially of hydrogen under hydrogenation conditions of temperature and pressure through a bed of hydrogenation catalyst in a hydrogenation zone at a reciprocal space velocity sufficient to incorporate in said fraction at least about 300 cubic feet of hydrogen per barrel of said distillate, injecting said lighter distillate into said bed of catalyst at one or more downstream points along the length thereof adjusted such that the average space velocity with respect to said lighter distillate is such that the sole hydrogen



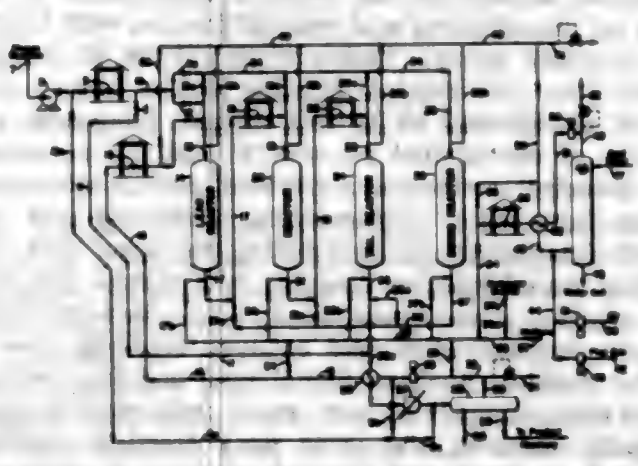
consumption with respect to said lighter distillate is essentially in the desulfurization thereof with residual hydrogen from the hydrogenation of said heavier distillate and is less than about 150 cubic feet per barrel of said lighter distillate, recovering liquid product comprising strongly hydrogenated heavy distillate and lightly hydrogenated lighter distillate from said hydrogenation zone, catalytically cracking the mixed distillates so withdrawn and separately recovering from the products of said catalytic cracking a catalytically cracked gasoline and a light gas oil.

2,895,898

TEMPERATURE CONTROL IN PLATINUM CATALYST REFORMING

John A. Brooks and Marvin J. Den Herder, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Application May 28, 1956, Serial No. 587,778
12 Claims. (Cl. 208—65)



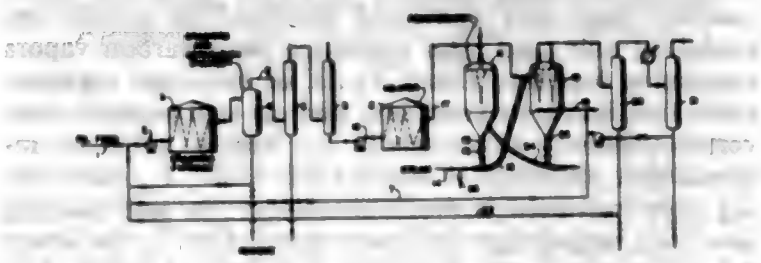
1. In a platinum catalyst naphtha reforming system including lead, intermediate, and tail reaction zones containing said platinum catalyst, heating zones, and a gas separation zone, in which a hydrogen-rich gas is separated for recycling, the method of bringing said platinum catalyst on-stream at reforming temperatures which comprises purging said catalyst with flue gas to remove oxygen therefrom; purging said catalyst for about 0.1 to 2 hours with a non-reactive gas containing 0.05 to 5 mol. percent sulfur, said gas being substantially free of uncombined hydrogen, to effect removal of flue gas from said catalyst and to contact said catalyst with sulfur; thereafter purging said catalyst with the hydrogen-rich separated gas; and contacting said catalyst with naphtha vapors; whereby heat fronts during initial contact of said catalyst with hydrogen-rich separated gas and with naphtha vapors are inhibited.

2,895,899

PROCESS FOR THE PRODUCTION OF GASOLINE THROUGH THERMAL AND CATALYTIC CRACKING

Frederick Kaureuther and William K. Meerbott, Houston, Tex., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

Application November 5, 1954, Serial No. 467,864
6 Claims. (Cl. 208—78)



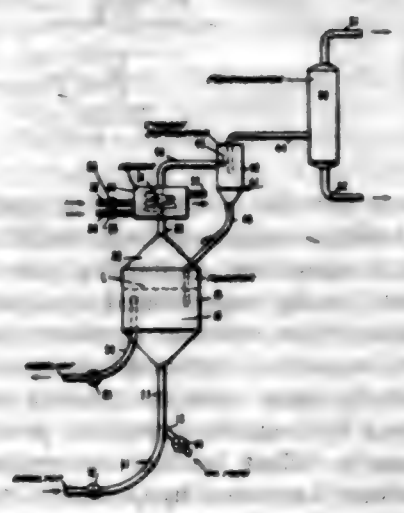
1. Process for the production of high octane olefinic gasoline which comprises thermally cracking a hydrocarbon oil, separating from the cracked product an olefinic thermal gasoline, vaporizing and superheating said olefinic thermal gasoline, producing a dispersion of finely divided freshly regenerated cracking catalyst in superheated steam and passing said dispersion as a rapidly moving free suspension through a narrow confined vertical path to a separating zone, injecting said vaporized and superheated olefinic gasoline vapors into said confined path near the top thereof at a point sufficiently close to said separating zone that the residence time of the said gasoline vapors in said path is between 0.2 and 0.6 second, maintaining the temperature of the said vapors in said path between 950° F. and 1100° F. and regulating the quantity of said catalyst dispersed in said steam such that the weight ratio of catalyst to olefinic gasoline is between about 2 and 8.

2,895,900

HYDROCARBON CONVERSION PROCESS

Leroy V. Robbins, Jr., and Edwin J. Newcharch, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application April 8, 1954, Serial No. 421,852
2 Claims. (Cl. 208—72)



1. A method for converting a hydrocarbon gas oil having a boiling range between about 400–1000° F. to lower boiling components including gasoline which comprises combining said hydrocarbon gas oil with a hot finely divided catalyst, introducing the resultant catalyst and

(1) subjecting the reduced crude to catalytic cracking in which comprises passing the vaporized hydrocarbon feed

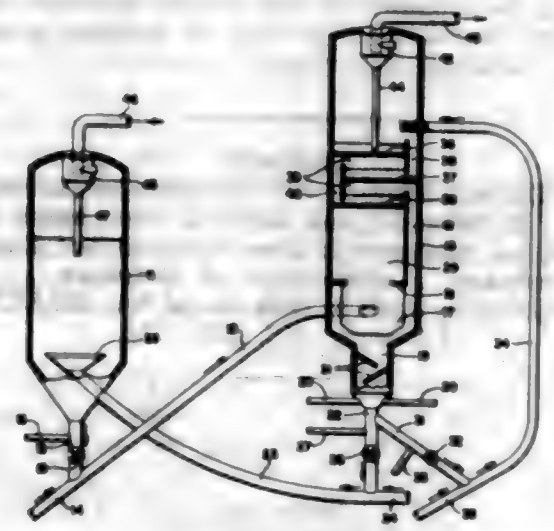
vaporous hydrocarbon gas oil mixture at a temperature of about 850–1000° F. into the bottom of a reaction zone wherein said catalyst is maintained in the lower portion thereof as a dense fluidized bed by passing said vaporous hydrocarbon gas oil upwardly therethrough at a superficial velocity of about 1 to 3 feet/second and wherein about 30–50% of said vaporous hydrocarbon gas oil is converted to coke and gasoline boiling below 430° F., but not more than about 5% by weight of said vaporous hydrocarbon gas oil is converted to coke and wherein the resultant converted hydrocarbon vapors are passed from said dense bed upwardly through a disperse phase in said reaction zone located above said dense bed to thereby disengage substantially all of said finely divided catalyst from said converted hydrocarbon vapors, introducing only said total converted hydrocarbon vapors containing less than about 0.1 lb. of entrained catalyst/cubic foot into a soaking zone wherein said partially converted vaporous hydrocarbons are heated solely by indirect heat exchange to about 1050–1150° F., maintaining said converted hydrocarbon vapors in said soaking zone at a temperature of about 1050–1150° F. for about 0.5–10 seconds until an additional 5–20% of said hydrocarbon vapors is converted to gasoline boiling below 430° F. and a small amount of coke, and passing the resultant further converted hydrocarbon vapors from said soaking zone into a recovery zone wherein said further converted hydrocarbon vapors are fractionated into at least two product fractions.

2,895,901

HYDROCARBON CONVERSION PROCESS

Forrest H. Blanding, Cranford, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application October 5, 1953, Serial No. 384,147
8 Claims. (Cl. 208—73)



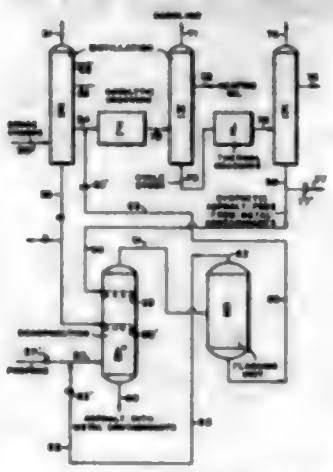
3. A process for the conversion of hydrocarbons to stable lower boiling components and middle distillate oil fractions which comprises contacting gas oil hydrocarbons with hot freshly regenerated catalyst to produce vaporous hydrocarbon reaction products, separating the total resultant vaporous hydrocarbon reaction products from the partially spent catalyst, passing said total separated vaporous hydrocarbon reaction products through a soaking zone to effect further conversion, contacting the total resultant vaporous hydrocarbon reaction products from said soaking zone with a portion of said separated partially spent catalyst to produce said stable lower boiling components and middle distillate oil fractions, separating said stable lower boiling components and middle distillate oil fractions from said partially spent catalyst, and regenerating said partially spent catalyst to produce said freshly regenerated catalyst.

2,895,903

REMOVAL OF METAL CONTAMINANTS FROM RESIDUAL OILS

Nick F. Peet, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Continuation of application Serial No. 420,373, April 1, 1954. This application November 27, 1956, Serial No. 624,650
12 Claims. (Cl. 208—73)



1. A method of treating a petroleum fraction feed stock containing a major portion of components boiling above 900° F. and contaminated by a substantial amount of metal contaminants which comprises deasphalting said feed stock with a liquefied normally gaseous hydrocarbon solvent to separate asphalt from said feed stock and to form a solution of deasphalted oil in said solvent, contacting said solution of deasphalted oil with a wash oil containing as its principal component a synthetic asphalt substantially free from metal contaminants and recovering said thus treated deasphalted oil, said recovered deasphalted oil being substantially completely free from metal contaminants, said synthetic asphalt having been produced by thermal cracking of cycle stock obtained in the catalytic cracking of gas oil.

12. An improved method for treating a metals contaminated crude petroleum oil including the steps of distilling said crude petroleum oil to obtain a distillate gas oil fraction and a residual fraction contaminated with a substantial amount of said metallic components of said crude oil, deasphalting said residual fraction with a liquefied normally gaseous hydrocarbon solvent to separate asphalt from said residual fraction and to form a solution of deasphalted oil in said solvent, contacting said solution of deasphalted oil with a wash oil containing as its principal component a synthetic asphalt substantially free from metal contaminants, recovering said thus treated deasphalted oil and mixing the same with said distillate gas oil fraction, charging said mixture to a catalytic cracking zone to catalytically crack the same, distilling the products from said catalytic cracking zone to recover distillate products lighter than said feed mixture to said catalytic cracking zone and a cycle stock fraction, thermally cracking said cycle stock fraction, distilling the products from said thermal cracking to recover a bottoms product comprising a synthetic asphalt substantially free from metal contaminants, said thus obtained synthetic asphalt being the synthetic asphalt utilized for the contacting of said solution of deasphalted oil.

2,895,983

PRODUCTION OF LUBRICATING OIL COMPONENTS OF HIGH VISCOSITY INDEX

Robert W. B. Johnston, Houston, Tex., assignor to Shell Development Company, New York, N.Y., a corporation of Delaware

Application August 16, 1955, Serial No. 528,800
8 Claims. (Cl. 208—96)

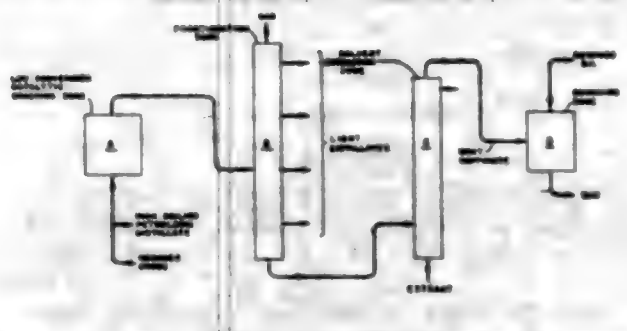
8. A process for the production of a mineral lubricating oil from an asphaltic reduced crude which comprises:

ping vapors are withdrawn from the system substantially

2,895,989

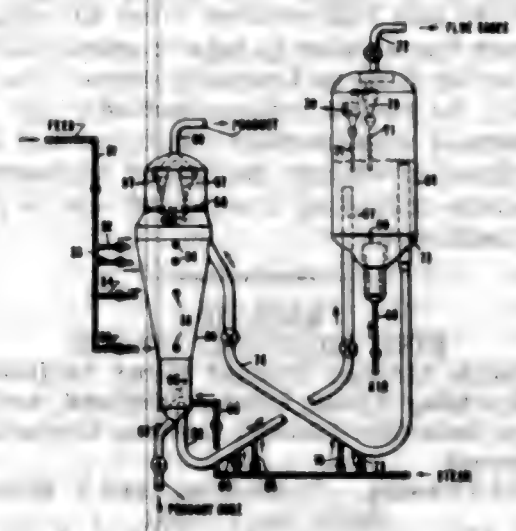
separated gas; and contacting said catalyst with naphtha divided catalyst, introducing the resultant catalyst and

(1) subjecting the reduced crude to catalytic cracking in a disperse phase cracking zone with a silica-alumina gel cracking catalyst containing 10–15% alumina and having a surface area of about 76 square meters per gram at about 950° F. and about 37% conversion level to obtain a cracked product containing a substantial proportion of



naphthenic hydrocarbons, (2) separating catalyst and formed carbonaceous deposits thereon from a high boiling 765° F.+ distillate fraction, and (3) extracting said distillate fraction with a selective solvent for aromatic hydrocarbons and producing a highly saturated raffinate fraction of high viscosity index and lubricating oil viscosity.

2,895,904
FLUID COKING PROCESS
William H. Jones, Baton Rouge, La., and Homer Z. Martin, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Application March 15, 1954, Serial No. 416,210
3 Claims. (Cl. 208—127)

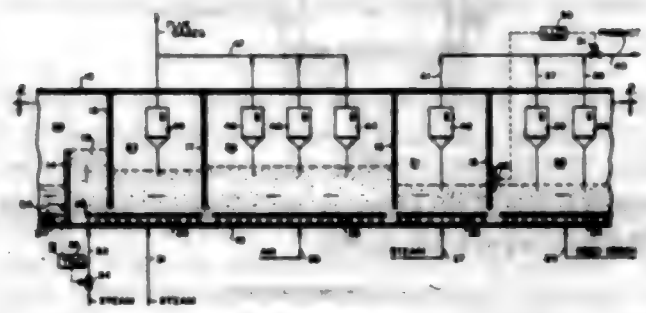


2. A hydrocarbon oil fluid coking process for converting heavy residual oils which comprises maintaining hot particulate solids in the form of a conical dense fluidized mass, injecting a heavy residual oil into said dense mass at a plurality of vertically spaced levels, the total feed rate of said heavy residual oil being 0.1 to 3 weights/hr./weight of particulate solids, and the volumes of said conical dense fluidized mass between said vertically spaced levels being maintained within the limits of 0.007 to 0.5 cu. ft./lb. of residual oil injected per hour at any one vertical level, whereby bogging of the fluidized mass is prevented and maximum feed rates are achieved.

2,895,905
HYDROFORMING PROCESS AND CATALYSTS
Charles Newton Kimberlin, Jr., Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Application June 13, 1957
Serial No. 665,589
15 Claims. (Cl. 196—50)

11. The method of hydroforming hydrocarbon fractions boiling within the naphtha or motor gasoline boiling range which comprises passing the vaporized hydrocarbon feed stock in admixutre with hydrogen-rich gas through a hydroforming reaction zone, maintaining the naphtha vapors and hydrogen-containing gas in contact with a catalyst comprising a group VI metal oxide supported on a high purity alcoholate alumina base at active hydroforming conditions of temperature and pressure for a period sufficient to substantially increase the octane number of said hydrocarbon fraction.

2,895,906
FLUIDIZED SOLIDS PROCESS AND APPARATUS
Kenneth A. Harper, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application May 10, 1957, Serial No. 658,398
14 Claims. (Cl. 208—147)



9. A process for contacting fluidized solid particles with fluids in a unitary contact chamber having an energizing zone, a reaction zone, a first stripping zone, a regeneration zone, and a second stripping zone, said process comprising maintaining a bed of fluidized solids in each of said zones; introducing steam into the bottom of said energizing zone to develop a pressure gradient through each of said zones in order to effect circulation of said bed of fluidized solids through each of said zones in a cyclic manner; introducing fluids into the bottom of said reaction zone, first stripping zone, regeneration zone, and second stripping zone; contacting said fluidized solids with said introduced fluids in said reaction zone, first stripping zone, regeneration zone, and second stripping zone; and withdrawing vapors from the top of said regeneration zone, first stripping zone, reaction zone, regeneration zone, and second stripping zone.

2,895,907
CATALYTIC CRACKING OF HYDROCARBONS WITH RECYCLING OF THE STRIPPING VAPORS
Ralph H. Crosby, Jackson Heights, N.Y., assignor to Shell Development Company, Emeryville, Calif., a corporation of Delaware
Application June 15, 1953, Serial No. 361,632
3 Claims. (Cl. 208—150)

1. In the catalytic cracking of hydrocarbon oil in a fluidized bed of cracking catalyst in a cracking zone above which is a disengaging space to allow suspended catalyst to settle from the ascending vaporous hydrocarbon products, and in which the vaporous hydrocarbon products leave said disengaging space through a plurality of centrifugal separation zones within said disengaging space, and wherein partially spent catalyst is continuously withdrawn from said reaction zone and separately stripped with steam prior to regenerating it, the improvement which comprises retaining the vapors comprising a mixture of gas, oil vapors, and steam from said stripping step including suspended catalyst separate from the vaporous hydrocarbon reaction product while conveying the former to a point above the level of said centrifugal separation zones and then discharging them at said point into said disengaging space in such a manner that they flow unobstructed downward to and then through said same centrifugal separation zones whereby the said strip-

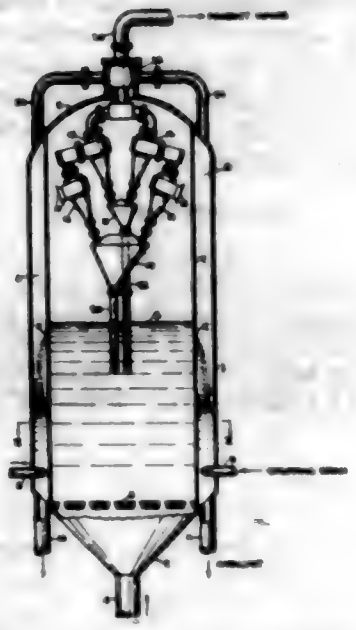
gel-forming material of colloidal-particle size and a suspended quantity of a weighting material selected from

temperature of 90–150° C.; and adding at said temperature to the thus formed mixture at least one sub-

duce said freshly regenerated catalyst.

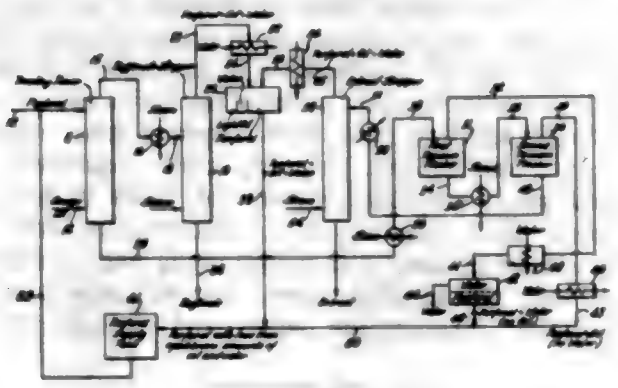
ing oil from an asphaltic reduced crude which comprises:

ping vapors are withdrawn from the system substantially free of suspended catalyst particles along with the hy-



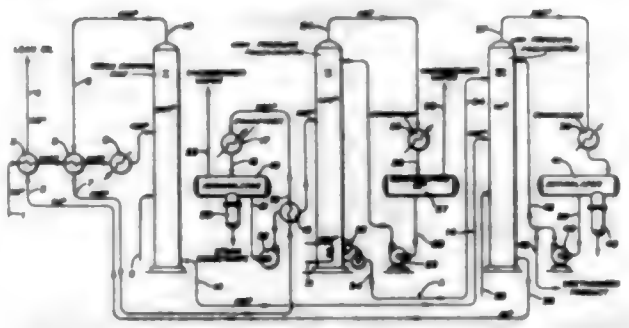
drocarbon product vapors as the vaporous effluent of said centrifugal separation zones.

2,895,908
FURFURAL SOLVENT REFINING AND RECOVERY PROCESS
David K. Beavon, Darien, Conn., assignor to Texaco, Inc., a corporation of Delaware
Application March 29, 1957, Serial No. 649,476
9 Claims. (Cl. 208—327)



1. In an operation wherein furfural is employed as the selective solvent for the solvent refining of a hydrocarbon oil to yield a furfural rich phase containing furfural and more aromatic hydrocarbons dissolved therein the improvement which comprises flashing said furfural rich phase at a subatmospheric pressure to yield overhead a first vapor stream substantially free of oil and comprising furfural and water and a first liquid bottoms phase, subjecting said first liquid bottoms phase to flashing at a subatmospheric pressure to yield overhead a second vapor stream substantially free of water and comprising furfural and oil and a second liquid bottoms phase comprising substantially only furfural and oil, condensing said first vapor stream to separate liquid furfural therefrom, condensing said second vapor stream, subjecting said second bottoms phase to distillation in the presence of steam to separate overhead therefrom a vaporous admixture of oil, steam and substantially all of the furfural in said second bottoms phase, condensing the resulting overhead vaporous admixture to separate furfural therefrom, combining the furfural separated from said condensed first vapor stream, the condensed second vapor stream and the furfural separated from said condensed vaporous admixture and employing the resulting combined furfural as selective solvent in the aforesaid solvent refining of said hydrocarbon oil.

2,895,909
RECOVERY OF NATURAL GASOLINE BY FRACTIONATION
Thomas G. Strickland, Denver, Colo., assignor to The Stearns-Roger Manufacturing Company, Denver, Colo., a corporation of Colorado
Application November 23, 1955, Serial No. 548,747
2 Claims. (Cl. 208—364)



1. In a process for the separation of a mixture of hydrocarbons absorbed in an absorber oil, the steps of initially high-pressure steam stripping such a mixture in the absorber oil at a sufficiently high temperature to produce a first overhead fraction containing substantially all light, undesirable components with a major portion of the desirable components and a bottom fraction containing the remainder of the desirable components, partially condensing said initial overhead fraction to liquefy substantially all the desirable components therein and to separate fixed gases therefrom, passing said last mentioned liquified fraction to high-pressure fractionation to substantially completely separate the light undesirable fraction from the desired components, passing the bottom product from said high-pressure steam stripping step to low-pressure fractionation to remove substantially all the desired fraction from said partially stripped absorber oil, and passing the bottom product from said high pressure fractionation as supplementary reflux into said low-pressure fractionation whereby the heat of the lower boiling components is utilized as a source of heat in said low-pressure fractionation.

2,895,910
FIRE FIGHTING FOAMS
Robert Ralph Merton, Richard Henry McDowell, and John Goldring Aylett, London, England, assignors to Alginate Industries Limited, London, England, a British company
No Drawing. Application April 2, 1956
Serial No. 575,331
Claims priority, application Great Britain April 7, 1955
22 Claims. (Cl. 252—3)

1. A fire-fighting foam composition comprising as its essential ingredients an aqueous solvent, a foaming agent, a mixed salt of alginic acid corresponding in composition to a mixture of at least one simple water soluble salt of alginic acid comprising between 50 and 80% of the total alginate, and at least one substantially water insoluble salt of alginic acid and a metal, said metal being selected from the group consisting of iron, manganese, and cobalt and comprising between 50 and 20% of the total alginate, so that the mixed salt is soluble in the composition prior to foaming, and a water soluble fluoride which functions to selectively remove Ca++ ions from solution in the presence of iron, manganese, and cobalt irons.

2,895,911
DRILLING FLUID
Orien W. Van Dyke, Houston, Tex., assignor to Magnet Cove Barium Corporation, Houston, Tex.
No Drawing. Application March 17, 1958
Serial No. 721,679
12 Claims. (Cl. 252—8.5)

8. A water-base mud for use in well operations comprising an aqueous fluid mixture containing dispersed

hydration while intermittently agitating it and reducing

ter soluble compound of a metal selected from the group

boiling within the naphtha or motor gasoline boiling range same centrifugal separation zones whereby the said strip-

gel-forming material of colloidal-particle size and a suspended quantity of a weighting material selected from the group consisting of galena concentrate having a specific gravity of at least 6.5 and Speiss, said weighting material having a particle size range and distribution substantially as produced by grinding in a commercial Raymond mill until the percentage of the grind which will pass a 325 mesh screen is in the range of 55% to 85%, the balance being retained on a 325 mesh screen.

2,895,912

EXTREME PRESSURE LUBRICANT

Carl M. Peck, Havertown, Pa., assignor to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Application April 18, 1957
Serial No. 651,831
9 Claims. (Cl. 252—18)

1. A lubricating grease comprising a major proportion of a mineral lubricating oil thickened to a grease consistency and having incorporated therein from about 2 to 10 percent total weight of a combination of sublimed blue lead and sulfurized sperm oil in a weight ratio to each other of from about 1:3 to 1:5.

2,895,913

MAGNESIUM CONTAINING ORGANIC COMPOSITIONS AND METHOD OF PREPARING THE SAME

Robert L. Carlyle, Lake Jackson, Tex., and Earl F. Morris, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Application May 28, 1957
Serial No. 662,002
10 Claims. (Cl. 252—18)

1. The process of preparing a stable dispersion of a basic magnesium containing compound in lubricating oil compositions which comprises: (*a*) reacting magnesium with an excess of an alkanol containing less than 6 carbon atoms forming an alkanol insoluble magnesium alkoxide; (*b*) forming an alkanol soluble magnesium alkoxide-carbon dioxide complex by passing carbon dioxide through the magnesium alkoxide-alkanol mixture until the same is acid to alpha-naphthol benzein indicator; (*c*) adding said complex to a lubricating oil containing an oil soluble dispersing agent in an amount that is sufficient to give a magnesium content of the resulting mixture that is 50 to 500 percent greater than that produced by the presence of chemically combined magnesium in the oil soluble dispersing agent alone a quantity of water that varies from 15 to 45 parts per 100 parts of said complex whereby a homogeneous system is formed, and (*d*) condensing from said homogeneous system an oil insoluble magnesium compound in particles the diameter of which are less than .25 micron by heating said system whereby said alkanol is removed and said complex is decomposed.

2,895,914

PROCESS OF FORMING NAPHTHENIC ACID SOLUTIONS

Rudolf Kern, Neustadt, Hans Scheurer, Heidelberg, Hermann Zorn, Mannheim, and Eugen Kruppke, Heidelberg, Germany, assignors to Firma Rhein-Chemie G.m.b.H., Heidelberg, Germany

No Drawing. Application April 3, 1953
Serial No. 346,784
Claims priority, application Germany April 12, 1952
27 Claims. (Cl. 252—37)

1. A process of forming liquid hydrocarbon solutions of naphthenic acid salts, comprising the steps of mixing a naphthenic acid salt with a liquid hydrocarbon at a temperature of 90–150° C.; and adding at said temperature to the thus formed mixture at least one substance having the general formula:

$$XO—(R—O)_n—R—OY$$

wherein R is an alkylene radical having a minimum of 2 and a maximum of 3 carbon atoms, *n* is a whole number between 1 and 20, and wherein one of the groups X and Y is selected from the class consisting of hydrogen, alkyl, aryl, aralkyl, alkaryl, alicyclic and acyl radicals and the other of said groups X and Y is selected from the class consisting of alkyl, aryl, aralkyl, alkaryl, alicyclic and acyl radicals having at least 6 carbon atoms in an amount sufficient to form a solution of said naphthenic acid salt, said liquid hydrocarbon and said substance.

11. A liquid hydrocarbon solution consisting essentially of a liquid hydrocarbon; a naphthenic acid salt; and at least one substance having the general formula:

$$XO—(R—O)_n—R—OY$$

wherein R is an alkylene radical having a minimum of 2 and a maximum of 3 carbon atoms, *n* is a whole number between 1 and 20, and wherein one of the groups X and Y is selected from the class consisting of hydrogen, alkyl, aryl, aralkyl, alkaryl, alicyclic and acyl radicals and the other of said groups X and Y is selected from the class consisting of alkyl, aryl, aralkyl, alkaryl, alicyclic and acyl radicals having at least 6 carbon atoms in an amount sufficient to form a solution of said naphthenic acid salt, said liquid hydrocarbon and said substance.

2,895,915

POLYMERIC POUR POINT DEPRESSANT COMPOSITIONS

William A. Hewett, Oakland, Robert C. Jones, Berkeley, and Lyman E. Lorensen, Orinda, Calif., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

No Drawing. Application August 28, 1956
Serial No. 606,536
6 Claims. (Cl. 252—59)

6. A lubricating composition consisting essentially of mineral oil and 0.1–2.5% by weight, sufficient to reduce the pour point thereof, of a substantially linear alpha-olefin polymer having an average molecular weight between about 100,000 and about 1,000,000 and having alkyl radicals dependent from substantially each alternate carbon atom in the linear polymer chain. said alkyl radicals having an average of 12 carbon atoms each.

2,895,916

METHOD FOR PREPARING DETERGENT COMPOSITIONS

Joseph A. Milenkevich and James E. Henjum, Cincinnati, Ohio, assignors to The Procter & Gamble Company, Cincinnati, Ohio, a corporation of Ohio

Application May 15, 1956, Serial No. 585,017
8 Claims. (Cl. 252—99)

1. A process for preparing detergent compositions comprising a water-soluble alkaline condensed phosphate, a water-soluble alkali metal silicate, and chlorinated trisodium phosphate which comprises adding to a substantially anhydrous alkaline condensed phosphate an alkali-metal silicate having a SiO_2/alkali metal oxide ratio in the range from about 2.0 to about 3.4, and water in an amount at least adequate to wet the said condensed phosphate sufficiently to induce agglomeration and insufficient to destroy the discrete particle characteristic of the condensed phosphate-silicate mixture, agitating the mixture while keeping the temperature from using above about 130° F., then adding chlorinated trisodium phosphate to the said mixture, agitating the resultant mixture, aging the said resultant mixture to substantially complete

catalyst at least one polyalkylene glycol in which the alkylene radical has from 2 to 4 carbon atoms in a polyvinyl aromatic hydrocarbons, said cross-linking agent being present in an amount equal to 0.5 to 50 molar

refining of said hydrocarbon oil.

prising an aqueous fluid mixture containing dispersed

hydration while intermittently agitating it and reducing the agglomerates formed to the desired size, the total amount of water added, exclusive of water introduced with the chlorinated trisodium phosphate, being from about 12% to about 25% by weight of the final detergent composition, whereby a composition characterized by resistance to caking on storage and formation of difficultly soluble gels during use is produced.

2,895,917

FLUORESCENT COMPOSITION

Thomas Norman Gaunt, Birkenshaw, near Bradford, England, assignor, by mesne assignments, to Switzer Brothers, Inc., Cleveland, Ohio, a corporation of Ohio

No Drawing. Application August 6, 1952
Serial No. 302,989
Claims priority, application Great Britain August 13, 1951
7 Claims. (Cl. 252—301.2)

1. A fluorescent pigment consisting essentially of a precipitate of a metallic salt of an alkyd resin, uniformly colored with a fluorescent dye, said metal component being selected from the group consisting of aluminum, zinc, magnesium and the alkaline earth metals.

2,895,918

REACTIVATION OF POISONED SILVER CATALYSTS FOR THE OXIDATION OF ETHYLENE

Kenneth E. MacCormack, Ottawa, Ontario, Canada, assignor to National Research Council, Ottawa, Ontario, Canada, a body corporate

No Drawing. Application January 5, 1954
Serial No. 402,395
6 Claims. (Cl. 252—412)

1. A process of reactivating a poisoned silver catalyst to be used in the oxidation of ethylene hydrocarbons, which comprises treating a catalyst poisoned by contact with gases containing an agent selected from the group consisting of sulphur, halogens, halides and sulphur-containing compounds with an aqueous alkaline solution of a reactivating agent selected from the group consisting of the hydrates and salts of hydrazine, hydroxylamines and their water-soluble homologues.

2,895,919

CATALYST COMPOSITIONS

Howard L. Gerhart, Milwaukee, Wis., assignor to Pittsburgh Plate Glass Company, a corporation of Pennsylvania

No Drawing. Application July 13, 1954
Serial No. 443,138
15 Claims. (Cl. 252—430)

1. A polymerization catalyst consisting essentially of a liquid peroxygen compound and a siliceous material containing at least about 50 percent by weight of SiO_2, and possessing a surface area of from about 10 to 800 square meters per gram, said polymerization catalyst containing from about 50 percent to about 80 percent by weight of said liquid peroxygen compound.

2,895,920

PROCESS FOR CATALYST PREPARATION

Edward J. Janoski, Philadelphia, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Application November 29, 1955
Serial No. 549,838
8 Claims. (Cl. 252—452)

1. Process for the preparation of a catalyst which comprises preparing a solution of a water soluble compound of a metal selected from the group consisting of aluminum, magnesium, zirconium, and silicon and a water soluble compound of a metal selected from the group consisting of cobalt, iron, nickel, molybdenum, manganese, chromium, vanadium, tin, tungsten, and mixtures thereof, in quantities so that the final catalyst has the hereinafter recited composition, admixing said solution with a quantity of hydrogen peroxide sufficient to maintain the metals in their highest valence state, introducing ammonium hydroxide into said mixture to produce a hydrogel, aging said hydrogel for from 10 minutes to 6 hours, admixing the aged hydrogel with a low molecular weight oxygen-containing organic solvent which is miscible with water, separating said organic solvent, admixing the separated aged gel with water, separating said water from the gel, drying the separated gel for from 5 to 20 hours at a temperature of from about 180° F. to 250° F. and calcining the dried composition for from about 2 to 10 hours at a temperature of from about 900° F. to 1400° F. to produce a catalyst consisting essentially of an oxide of said metal selected from the group consisting of aluminum, magnesium, zirconium and silicon and from 0.1% to 35% by weight of the oxide of the metal of said selected water soluble compound.

2,895,921

PREPARATION OF OXETANE POLYMERS

Charles C. Price, Lansdowne, Pa., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application August 27, 1956
Serial No. 606,217
10 Claims. (Cl. 260—2)

1. In the method of polymerizing 3,3-disubstituted oxetane, of the group consisting of 3,3-bis(halomethyl)-oxetane, 3-chloromethyl-3-methyl oxetane, 3,3-dimethyl oxetane, and 3,3-bis(phenoxymethyl)oxetane the improvement which comprises polymerizing said oxetane in the presence of an aluminum alkoxide catalyst said catalyst being present in an amount sufficient to catalyze polymerization of said oxetane to a polymer having a molecular weight of at least 10,000.

2,895,922

PREPARATION OF OXETANE POLYMERS

Robert F. Geddu, Kennett Square, Pa., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application August 27, 1956
Serial No. 606,229
9 Claims. (Cl. 260—2)

1. In the method of polymerizing 3,3-disubstituted oxetane of the group consisting of 3,3-bis(halomethyl)oxetane, 3-chloromethyl-3-methyl oxetane, 3,3-dimethyl oxetane, and 3,3-bis(phenoxymethyl) oxetane, the improvement which comprises polymerizing said oxetane in the presence of an aluminum alkyl catalyst said catalyst being present in an amount sufficient to catalyze polymerization of said oxetane to a polymer having a molecular weight of at least 10,000.

2,895,923

AMINOTRIAZINE MODIFIED POLYACETALS

Bernard H. Kress, Lafayette Hill, Pa., assignor to Quaker Chemical Products Corporation, Conshohocken, Pa., a corporation of Pennsylvania

No Drawing. Application November 30, 1956
Serial No. 625,241
7 Claims. (Cl. 260—2)

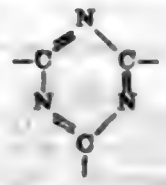
1. A water-soluble aminotriazine modified polyacetal condensation product comprising the reaction product of a previously prepared acetal selected from the group consisting of acetals and hemiacetals prepared by reacting at elevated temperatures in the presence of an acidic

2,895,928

each molecule of said polyether epoxide oil-modified

a naphthenic acid salt with a liquid hydrocarbon at a the said resultant mixture to substantially complete

catalyst at least one polyalkylene glycol in which the alkylene radical has from 2 to 4 carbon atoms in a straight chain and at least one aldehyde selected from the group consisting of aliphatic, carbocyclic and heterocyclic aldehydes containing from 1 to 8 carbon atoms in monomeric form, and at least one aminotriazine characterized by the nucleus



wherein at least one of the free valences is substituted by an NH_2 group, said acetal and aminotriazine being reacted under elevated temperatures, wherein the molar ratio of aminotriazine to polyalkylene glycol is within the range of 1 to 4.5 and 1 to 15, said condensation product containing per molecule at least two polyoxyalkylene radicals derived from said polyalkylene glycol and at least two alkylidene radicals derived from said aldehyde.

2,895,924

PREPARATION OF OXETANE POLYMERS

James A. Hudy, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application July 5, 1957
Serial No. 669,950
5 Claims. (Cl. 260—2)

1. In the process of bulk polymerizing 3,3-bis(chloromethyl) oxetane in the presence of aluminum alkyl catalyst, the improvement to obtain a significant increase in the molecular weight of the polymer upon polymerization comprising conditioning of the 3,3-bis(chloromethyl)oxetane prior to polymerization with from about 100 to about 1,000 p.p.m. by weight of the aluminum alkyl catalyst at a temperature of from about 25 to about 200° C. under conditions of temperature, time and catalyst level to substantially maintain said 3,3-bis(chloromethyl)oxetane in its monomeric form during said conditioning said time being about 2–3 minutes when said temperature is about 200° C., about 3–20 minutes when said temperature is about 100° C., about 5–30 minutes when said temperature is about 75° C. and about 12–24 hours when said temperature is about 25° C. and thereafter changing the relation between the variables, namely the catalyst level and temperature, by increasing at least one of said variables within the range of about 150° to about 250° C. for the temperature and about 100 to about 1,000 p.p.m. for the catalyst to polymerize said oxetane.

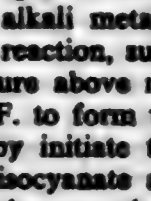
2,895,925

ANION-EXCHANGE RESIN CONTAINING SULFONIUM GROUPS

Jesse C. H. Hwa, Levittown, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application February 2, 1956
Serial No. 562,945
7 Claims. (Cl. 260—2.1)

1. A strongly basic anion-exchange resin which comprises an insoluble cross-linked copolymer of a mixture of an aromatic monovinyl hydrocarbon and a copolymerizable cross-linking agent selected from the class consisting of acrylic and methacrylic esters of polyhydric alcohols, diallyl esters of dicarboxylic acids, and polyvinyl aromatic hydrocarbons, said cross-linking agent being present in an amount equal to 0.5 to 50 molar percent, based on the total moles of said monovinyl hydrocarbon and said cross-linking agent, said copolymer having attached to the aromatic nuclei thereof groups of the structure.



in which n is an integer of value one to four, R' and R'' are members of the class consisting of monohydroxy substituted alkyl groups which contain one to four carbon atoms, and Y is an anion.

2,895,926

PREPARATION OF POLYURETHANE FOAM AND REACTION MIXTURES THEREFOR

George Rappaport, Joseph A. Sanraga, and James R. Wall, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Application July 14, 1958
Serial No. 748,140
4 Claims. (Cl. 260—2.5)

1. In a method for producing foamed products through substantially concurrent polymerization and foaming reactions between an organic polyisocyanate and a polyester, comprising the steps of; mixing from 16 to 25 parts by weight of an organic diisocyanate with 100 parts by weight of a polyester which is a reaction product of a polyhydric alcohol and a dicarboxylic acid having an acid number between 1.5 and 5 and an hydroxyl number of from 60 to 80 together with calculated quantities of beta,beta' dichlorodiethylether and aniline sufficient to subsequently form between 3 and 7 parts by weight of N-phenyl morpholine together with from 4 to 8 parts by weight of a hydrated alkali metal carbonate to supply water for the foaming reaction, subsequently heating the mixture to a temperature above room temperature and not in excess of 250° F. to form the N-phenyl morpholine in situ and thereby initiate the polymerization reaction between the diisocyanate and the polyester and substantially concurrently cause the hydrated alkali metal carbonate to release its water of hydration for causing the foaming reaction to take place.

2,895,927

SYNTHESIS OF THYRONINE COMPOUNDS

Patsy Frank Bevilacqua, Paterson, John Thomas Pisti, Rutherford, and Wilhelm Wenner, Upper Montclair, N.J., assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Application July 5, 1957
Serial No. 669,959
8 Claims. (Cl. 260—4.71)

1. A process for the production of O-methyl-N-acetyl-3,5-diiodo-L-thyronine alkyl ester which comprises condensing di-((p-anisyl)-iodonium halide with N-acetyl-3,5-diiodo-L-tyrosine alkyl ester in alkaline medium in the presence of a member of the group consisting of copper and salts thereof.

8. A process which comprises condensing di-(p-anisyl)-iodonium halide with N-acetyl-3,5-diiodo-L-tyrosine alkyl ester in alkaline medium in the presence of a member of the group consisting of copper and salts thereof and hydrolyzing the condensation product with mineral acid to produce 3,5-diiodo-L-thyronine.

aluminum, magnesium, zirconium, and silicon and a wa- at elevated temperatures in the presence of an acidic

2,895,928
RESIN-BLOOD GLUE AND PROCESS OF MAKING THE SAME

Charles N. Cone, Portland, Oreg., assignor, by mesne assignments, to American-Marietta Company, Chicago, Ill., a corporation of Illinois

No Drawing. Application October 13, 1954
Serial No. 461,947
23 Claims. (Cl. 260—7)

1. The process of making a glue which comprises providing an aqueous blood material selected from the group consisting of fresh blood, an aqueous solution of soluble dried blood and mixtures thereof, heat coagulating the blood in dispersed form by increasing its temperature to between about 120° F. and the boiling point of the aqueous blood material, while agitating it for maintaining the coagulated blood particles in finely divided condition and dispersed throughout the aqueous medium, cooling the resulting aqueous dispersion of coagulated blood to a temperature of below about 120° F., and improving the adhesive qualities of the cooled aqueous coagulated blood dispersion and rendering it alkaline by admixing therewith an adhesive conditioner comprising an alkali metal caustic and a thermosetting phenol-aldehyde resin.

2,895,929
POLYMERIZABLE EPOXIDE GROUP-CONTAINING MODIFIED ALKYD RESINS

Milton Yusem, Chicago, Ill., assignor to Bradley & Vroeman Company, a corporation of Illinois

No Drawing. Application May 9, 1955
Serial No. 507,135
18 Claims. (Cl. 260—21)

1. A polymerizable composition adapted to be cured in the presence of an epoxy curing catalyst containing (1) a polymerizable polyether polyepoxide oil modified alkyd resin prepared by the dehydrohalogenation of an epihalohydrin addition product of a short to medium oil modified alkyd resin having from 8 to 20 carbon atoms in the fatty acid molecule, an acid number below 60, and sufficient free hydroxyl groups to provide about ½ to 2½ epoxy groups in each molecule of said epihalohydrin ether, said ether epoxide oil modified alkyd having an ether oxygen atom attached to adjacent carbon atoms forming the cyclic structure and at least two of said epoxide groups being linked in an ether linkage to a hydroxyl group in said alkyd resin molecule and (2) a polymerizable monomeric compound which forms a mixed polymer with (1), which compound contains at least one $CH_2{=}C{=}$ grouping, but having no conjugated C to C double bonds.

2,895,930
WATER EMULSION OF POLYMERIZABLE EPOXIDE GROUP CONTAINING OIL MODIFIED ALKYD AND FORMALDEHYDE CONDENSATION RESINS

Milton Yusem, Chicago, Ill., assignor to Bradley & Vrooman Company, a corporation of Illinois

No Drawing. Application June 28, 1955
Serial No. 518,665
15 Claims. (Cl. 260—21)

1. An emulsion coating composition containing water as the dispersing phase and a heat reactive polymer in the oil phase, said heat reactive polymer comprising a member selected from the group consisting of a mixed polymer of an epoxide oil-modified alkyd resin prepared by the dehydrohalogenation of an epihalohydrin ether addition product of a short to medium oil-modified alkyd resin containing from 8 to 20 carbon atoms in the fatty acid molecule, an acid number below 60 and sufficient free hydroxyl groups to provide by reaction with said epihalohydrin to provide about ½ to 2½ epoxy groups in each molecule of said polyether epoxide oil-modified alkyd resin and a vinylidene monomer containing at least one $CH_2{=}C{=}$ grouping but having no conjugated carbon to carbon grouping and a mixture of said mixed polymer with said polyether epoxide oil-modified alkyd resin, said heat reactive polymer member being in combination with a member selected from the group consisting of an etherified melamine-formaldehyde resin and an etherified urea-formaldehyde resin.

2,895,931
METHOD FOR PREPARATION OF 3,3-DISUBSTITUTED OXETANE POLYMERS

Eugene D. Klug, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application March 31, 1958
Serial No. 724,807
5 Claims. (Cl. 260—2)

1. In the method of polymerizing 3,3-disubstituted oxetane of the group consisting of 3,3-bis(halomethyl) oxetane, 3-chloromethyl-3-methyl oxetane, 3,3-dimethyl oxetane, and 3,3-bis(phenoxymethyl)oxetane, the improvement which comprises polymerizing said oxetane in the presence of at least one catalyst of the group consisting of aluminum hydride and aluminum amalgam at a temperature from about 100° C. to about 275° C., said catalyst being present in an amount sufficient to catalyze polymerization of said monomer to a polymer having a molecular weight of at least 10,000.

2,895,932
CERTAIN ISOPHTHALIC AND ORTHOPHTHALIC ACID ALKYD RESINS

Maurice J. Schlatter, Berkeley, and Funston G. Lum, Richmond, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Application October 5, 1954
Serial No. 460,520
4 Claims. (Cl. 260—22)

1. In the process of preparing oil-modified alkyd resins having an oil length of 35 to 85% and an acid number of about 5 to 20, by condensing as essentially the sole ingredients a phthalic acid and a fatty acid partial ester of polyhydric alcohol, the improvement of increasing the hardness and alkali resistance of said resins which comprises employing a partial ester of polyhydric alcohol and a fatty acid derived from natural glyceride oils, said partial ester having an average of about 1.5 to 2.5 free hydroxyl groups; and as the phthalic acid, an acid selected from the group consisting of 5-t-butyl isophthalic acid and 4-t-butyl orthophthalic acid, said phthalic acid being employed in amounts of about 0.8 to 0.9 equivalents per free hydroxyl group of said ester.

2,895,933
MASTICATING AND SOFTENING AGENT FOR RUBBER AND A PROCESS OF MAKING THE SAME

Konrad Höpfner and Ernst Götte, Duesseldorf, Germany, assignors to Dehydag, Deutsche Hydrierwerke G.m.b.H., Duesseldorf, Germany, a company of Germany

No Drawing. Application June 8, 1954
Serial No. 435,358
10 Claims. (Cl. 260—23.7)

1. A composition of matter comprising a rubber material selected from the group consisting of natural rubber, butadiene-styrene synthetic rubber and reclaimed rubber, and as a softening and masticating agent, at least 0.5% by weight, based on the weight of rubber of a water-insoluble organic salt precipitate obtained by adding together an aqueous solution of an organic cationic

styrene, alpha-chloro-substituted styrene and nuclear

surface-active onium compound selected from the group consisting of quaternary ammonium compounds, quaternary phosphonium compounds and tertiary sulfonium compounds and having at least one aliphatic hydrocarbon radical containing 6 to 22 carbon atoms and an aqueous solution of an organic anionic surface-active compound having at least one aliphatic hydrocarbon radical containing 6 to 22 carbon atoms and at least one acid radical capable of being neutralized by an organic base to form a salt therewith selected from the group consisting of sulfuric acid radicals, sulfonic acid radicals, phosphoric acid radicals and carboxylic acid radicals, said cationic and said anionic compounds being in substantially equimolar proportions in said precipitate.

2,895,934

RESINOUS COMPOSITIONS FROM COAL ACIDS AND ALCAMINES AND METHOD FOR MAKING COMPOSITE PRODUCTS THEREOF

Wesley L. Archer and Robert S. Montgomery, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Application December 20, 1956, Serial No. 629,569
20 Claims. (Cl. 260—37)

1. Thermosetting, cross-linkable composition comprised of an adduct of coal acids and an alcamine compound, said alcamine compound containing at least one reactive amine group and at least one reactive hydroxyl group in its molecule, said coal acids being the water-soluble, mixed aromatic polycarboxylic acids of the class that are the products of the oxidation of coal, which acids have an average molecular weight of about 250, an average equivalent weight of from about 75 to about 90 and contain an average of from about 2.5 to 5 carboxylic groups per aromatic nucleus in their molecule.

2,895,935

RESINOUS COMPOSITIONS FROM COAL ACIDS AND POLYHYDROXY COMPOUNDS AND METHOD FOR MAKING COMPOSITE PRODUCTS THEREOF

Wesley L. Archer, Keith B. Bozer, and Herbert B. Rickert, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Application December 20, 1956, Serial No. 629,668
18 Claims. (Cl. 260—37)

1. Thermosetting, cross linkable composition selected from the group consisting of physical admixtures and adducts of coal acids and a polyfunctional non-aromatic polyhydroxy compound, said polyfunctional polyhydroxy compound being selected from the group consisting of organic aliphatic polyhydric alcohols, organic alicyclic polyhydric alcohols, and mixtures thereof, said coal acids being the water-soluble, mixed aromatic polycarboxylic acids of the class that are the product of the oxidation of coal, which acids have an average molecular weight of about 250, an average equivalent weight of from about 75 to about 90 and contain an average of from about 2.5 to 5 carboxylic groups per aromatic nucleus in their molecule.

2,895,936

RESINOUS COMPOSITIONS FROM COAL ACIDS AND POLYFUNCTIONAL AMINES AND METHOD FOR MAKING COMPOSITE PRODUCTS THEREOF

Wesley L. Archer, Robert S. Montgomery, and John L. Lang, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Application December 20, 1956, Serial No. 629,669
20 Claims. (Cl. 260—37)

1. Thermosetting, cross linkable composition comprised of an adduct of coal acids and a polyfunctional amine compound, said polyfunctional amine compound being selected from the group consisting of those of the formulae $H_2N—R—NH_2$ and

$$H_2N—(R—NH—R)_n—NH_2$$

wherein R is a radical of the class consisting of 2 to 10 carbon atom hydrocarbon aliphatic radicals and 6 to 14 carbon atom aromatic radicals and n is a whole integer, said coal acids being the water-soluble, mixed aromatic polycarboxylic acids of the class that are the product of the oxidation of coal, which acids have an average molecular weight of about 250, an average equivalent weight of from about 75 to about 90 and contain an average of from about 2.5 to 5 carboxylic groups per aromatic nucleus in their molecule.

2,895,937

PROCESS FOR HEAT TREATING BUTYL RUBBER WITH AN AROMATIC NITROSO COMPOUND AND PRODUCT OBTAINED

Francis P. Baldwin, Colonia, and Samuel B. Robison, Roselle, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application June 17, 1955
Serial No. 516,313
14 Claims. (Cl. 260—41.5)

1. A process which comprises reacting in the substantial absence of curatives at a temperature level between about 250° and 350° F. for between about one to twenty minutes with a vulcanizable rubber selected from the group consisting of rubbery isoolefin-multiolefin copolymers, butadiene-styrene copolymers, and natural rubber; about 0.1 to 5.0 percent by weight of an aromatic nitroso compound containing at least one other reactive substituent less reactive than nitroso, said compound having the empirical formula $ONArM_mY$, in which Ar is selected from the group consisting of mono- and polynuclear aromatic hydrocarbon nuclei, M being an aliphatic divalent hydrocarbon group having a formula selected from the group consisting of C_nH_{2n} and C_nH_{2n-2}, n being an integer of between about one to ten, m being between about 0 and 10; Y being selected from the group consisting of OR, C=OR, COOR, X, CN, NO_2 and NR_2 in which R is selected from the group consisting of hydrogen, alkyl, aryl, aralkyl, alkaryl and cycloalkyl, X being halogen; mixing and milling at said temperature level in the substantial absence of curatives at least one filler with the reaction product formed, and subsequently vulcanizing the resulting composition in the presence of added curatives whereby a vulcanizate having an improved modulus and resistivity is produced.

2,895,938

COPOLYMERIZATION OF A STYRENE AND ACRYLONITRILE IN THE PRESENCE OF AN ORGANIC SOLVENT HAVING AT LEAST ONE HYDROXYL GROUP

Helmut Ohlinger, Ludwigshafen (Rhine), Oppau, and Rolf Fricker, Ludwigshafen (Rhine), Germany, assignors to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Application November 15, 1955
Serial No. 547,015
Claims priority, application Germany November 24, 1954
8 Claims. (Cl. 260—45.5)

1. A method of manufacturing a homogeneous, transparent copolymer of a styrene compound and acrylonitrile which comprises preparing a homogeneous solution of 5–50% by weight of polymerizable constituents composed of 50–90% by weight of a styrene compound selected from the group consisting of styrene, alpha-methyl

2,895,944

styrene, alpha-chloro-substituted styrene and nuclear methylated styrene and 50–10% by weight of acrylonitrile, the percentages of the styrene compound and acrylonitrile being based on the total weight of these two polymerizable compounds, in a saturated alcohol having 1–4 carbons, which alcohol is miscible with water and in which alcohol the formed copolymers of said styrene compound and acrylonitrile are insoluble, said alcohol containing 0.05%–2% by weight, based on the total weight of said styrene compound and acrylonitrile, of an organic protective colloid which is a film-forming, high molecular weight polymer selected from the group consisting of homopolymers and copolymers of monoethylenically unsaturated monomers, said polymer being soluble in said alcohol and having a K-value between 30 and 100, and copolymerizing the styrene compound and the acrylonitrile while agitating the reaction mixture.

2,895,939

METHOD FOR COATING RUBBER IN GRANULAR FORM WITH IMPALPABLE RESINOUS VINYL AROMATIC POLYMER DUSTS

Kenneth E. Stober, Gales Ferry, Clifford H. Engwis, Norwich, and Theodore W. Dwight, Jr., Mystic, Conn., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Application March 18, 1957, Serial No. 646,822
13 Claims. (Cl. 260—45.5)

1. Method for preparing solid bales of a rubber for subsequent blending with a vinyl aromatic compound which comprises mechanically comminuting said bales in the presence of an interblended impalpable resinous vinyl aromatic polymer dust selected from the group consisting of (*a*) polystyrene, (*b*) polyvinyltoluene, (*c*) polychlorostyrene, (*d*) copolymers of at least 50 weight percent of styrene and not more than 50 weight percent of at least one other monomer of the group consisting of methyl styrene, alpha-methyl styrene, chlorostyrene and acrylonitrile, (*e*) copolymers of at least 50 weight percent of vinyl toluene and not more than 50 weight percent of at least one other monomer of the group consisting of styrene, methyl styrene, alpha-methyl styrene, chlorostyrene and acrylonitrile, (*f*) copolymers of at least 50 weight percent of chlorostyrene and not more than 50 weight percent of at least one other monomer of the group consisting of styrene, methyl toluene, alpha-methyl styrene and acrylonitrile, and (*g*) mixtures thereof, to provide a substantially uniform surface coating of said dust on the comminuted rubber particles.

2,895,940

OZONE INHIBITORS

Harold Tucker, Parma, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Application August 22, 1957
Serial No. 679,774
8 Claims. (Cl. 260—45.9)

1. A sulfur-vulcanized elastomer product possessing superior resistance to ozone deterioration comprising a sulfur-vulcanizable rubbery diolefin polymer sulfur-vulcanized in the presence of a substantially non-staining non-discoloring highly effective ozone inhibitor comprising a 1,4-diamino-2,3,5-trimethyl-6-alkyl-benzene wherein the alkyl group is a branched chain hydrocarbon radical selected from the class consisting of 3-cyclohexylpropyl, 4-ethyl-5,5-dimethylhexyl and 4-methylpentyl, and each of the amino groups is a $-NH_2$ group, the ozone inhibitor being intimately dispersed in the sulfur-vulcanized elastomer product in proportions ranging from about 0.5 to about 10 weight percent on the rubbery diolefin polymer.

2,895,941

STABILIZED VINYL RESINS CONTAINING CHLORINE

Charles W. Montgomery and Robert C. Bryan, Jr., Baton Rouge, La., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application October 10, 1956
Serial No. 615,806
5 Claims. (Cl. 260—45.75)

1. A composition resistant to the discoloring effects of heat comprising a vinyl resin selected from the group consisting of polyvinyl chloride, polyvinylidene chloride and copolymers of vinyl chloride and vinylidene chloride with copolymerizable monomers containing a $CH_2{=}C<$ group, and, as a stabilizer therefor, from about 0.001 to 10 percent, based upon the weight of said vinyl resin, of a tin compound selected from a group consisting of (1) tin mercaptides having the general formula $(RS)_4Sn$ wherein R is a hydrocarbon radical selected from the group consisting of alkyl, aryl, alkaryl, alkenyl and cycloalkyl, and having from one to 20 carbon atoms, and (2) organotin salts of organic acids having the general formula

$$R_xSn(COOR')_{4-x}$$

wherein R is a hydrocarbon radical selected from the group consisting of alkyl, aryl and alkaryl, R' is a hydrocarbon radical selected from the group consisting of alkyl, aryl and cycloalkyl, R and R' having from one to 30 carbon atoms, and x is an integer of from 1–3, inclusive, and as a second stabilizer, an azo-aromatic compound having the general formula $ArN{=}NAr'$ wherein Ar and Ar' are hydrocarbon aromatic radicals, said azo-aromatic compound being employed in a concentration of one part per 5 to 200 parts of said tin compound.

2,895,942

POLYMERIC METHYL ISOPROPENYL KETONE

Leonard J. Rosen, East Orange, N.J., assignor to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Application May 26, 1955
Serial No. 511,390
10 Claims. (Cl. 260—45.85)

1. Process for the production of homopolymers of methyl isopropenyl ketone which comprises polymerizing methyl isopropenyl ketone in stable aqueous emulsion in an inert atmosphere in admixture with an emulsifying agent and in the presence of a catalyst system consisting essentially of a water-soluble persulfate in admixture with a buffering agent selected from the group consisting of sodium bicarbonate and sodium acetate at an initial pH of 6.0 to 7.5.

2,895,943

HYDROGENATING POLYMERIC METHYL ISOPROPENYL KETONE

Donald E. Hudgin and Frank Brown, Summit, N.J., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Application November 9, 1955
Serial No. 546,008
3 Claims. (Cl. 260—63)

1. Process for the production of resinous products which comprises hydrogenating polymeric methyl isopropenyl ketone in solution in a cyclic ether which is a solvent for the polymer and a non-solvent for the resulting hydrogenation product, said ether having ether oxygen in a ring of 5 to 6 members and consisting of carbon, hydrogen and oxygen atoms, with a metal hydride soluble in said ether, at a temperature of 20 to 100° C., said hydrogenation product precipitating from said solution during the hydrogenation reaction.

2,895,944

NOVEL CONDENSATION PRODUCTS

Hermann Francis Mark, Brooklyn, N.Y., assignor to Robert S. Aries, Stamford, Conn.

No Drawing. Application December 2, 1955
Serial No. 550,762

17 Claims. (Cl. 260—65)

1. A condensation product of a di-oxo-alkane and a tetra-amine comprising two pairs of amino groups wherein both amino nitrogen atoms of each pair are separated from both amino nitrogen atoms of the other pair by an aliphatic chain containing from 2 to 3 carbon atoms.

2,895,945

ALDEHYDE POLYERYTHRITOL POLYMERS

Rudolph F. Fischer, Oakland, and Thomas F. Mika, Orinda, Calif., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

No Drawing. Application July 30, 1956
Serial No. 600,719

4 Claims. (Cl. 260—67)

1. A product of reaction of about one mol of tripentaerythritol with 5 mols of an alpha,beta-ethylenically unsaturated alkenal containing no more than 10 carbon atoms with the aid of an acid catalyst.

2,895,946

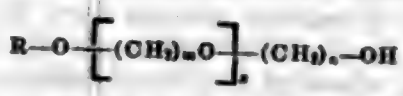
POLYESTERS MODIFIED WITH CHAIN TERMINATING AND CHAIN BRANCHING AGENTS AND PROCESS FOR PRODUCING SAME

William A. H. Huffman, Decatur, Ala., assignor to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware

No Drawing. Application December 16, 1955
Serial No. 553,424

17 Claims. (Cl. 260—75)

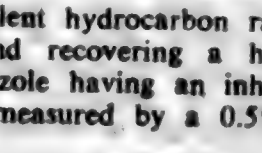
1. A process for producing fiber-forming modified polyesters which comprises mixing together at least one compound selected from the group consisting of terephthalic acid, isophthalic acid and dimethyl esters of said acids, and at least one polymethylene glycol containing from 2 to 10 carbon atoms, with from 0.05 to 4.0 mole percent, based on the weight of the first-named compound, of a chain-terminating compound selected from the group consisting of monohydric polyalkylene oxides having the formula:



wherein R is selected from the group consisting of alkyl groups containing from 1 to 4 carbon atoms and aryl groups containing from 6 to 10 carbon atoms, m and n are integers from 1 to 4, and x is an integer in the range of 1 to 100, and polyalkylvinyl ethers having a terminal hydroxyl group and wherein the alkyl group contains from 1 to 4 carbon atoms, said ethers being the homopolymerization products of alkylvinyl ethers, and with from 0.05 to 2.4 mole percent, based on the weight of the first-named compound, of a chain-branching agent selected from the group consisting of compounds having the formula:

wherein R is a saturated aliphatic hydrocarbon radical containing from 3 to 6 carbon atoms and n is an integer from 3 to 6; compounds having the formula:

wherein R is a saturated aliphatic hydrocarbon radical containing from 2 to 6 carbon atoms; compounds having the formula:



wherein n is an integer from 1 to 6; and compounds having the formula:

wherein n is an integer from 3 to 5, reacting said mixture by heating the same to a temperature in the range of 90° to 300° C., and continuing the heating and reaction of said mixture until a fiber-forming modified polyester is produced.

2,895,947

POLYMERIZATION OF DI-(2,3-EPOXYPROPYL PHTHALATE)

Edward C. Shokal, Walnut Creek, and Albert C. Mueller, Berkeley, Calif., assignors to Shell Development Company, Emeryville, Calif., a corporation of Delaware

No Drawing. Application February 11, 1954
Serial No. 409,782

2 Claims. (Cl. 260—78.4)

1. A method of polymerizing which comprises heating a mixture consisting of di(2,3-epoxypropyl) phthalate and about 0.1% to 15% of a tertiary amine at about 40° C. to about 100° C.

2,895,948

POLYBENZIMIDAZOLES

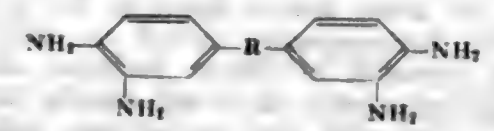
Keith Clark Brinker and Ivan Maxwell Robinson, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application October 28, 1955
Serial No. 543,599

10 Claims. (Cl. 260—78.4)

1. A process for the preparation of polybenzimidazoles which comprises heating at a temperature of 100° to 300° C. in the absence of oxygen, substantially equivalent quantities of bis-orthodiaminophenyl compounds having formulae of the class consisting of

and



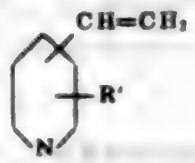
wherein R is a divalent hydrocarbon radical, and an alkane-dioic acid, and recovering a high molecular weight polybenzimidazole having an inherent viscosity of at least 0.4, as measured by a 0.5% solution in m-cresol.

2,895,949
COPOLYMERS OF ACRYLONITRILE

Walter M. Thomas, Springdale, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application August 20, 1953
Serial No. 375,576
13 Claims. (Cl. 260—80.5)

1. A dyeable, fiber-formable, dimethylformamide soluble polyacrylonitrile composition wherein the sole acrylonitrile polymer is a ternary polymer of a mixture of comonomers consisting of by weight, from 2 to 8% of a member of the class consisting of acrylamide and methacrylamide, from 2.5 to 5.0% of at least one alkyl vinylpyridine represented by the formula



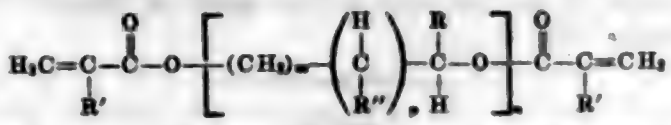
where R' represents a member of the class consisting of methyl and ethyl radicals, and the remainder acrylonitrile.

2,895,950
COMPOSITIONS CONTAINING HYDROPEROXIDE POLYMERIZATION CATALYST AND ACRYLATE ACID DIESTER

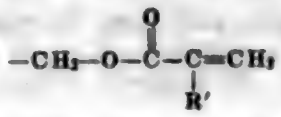
Vernon K. Krieble, Hartford, Conn., assignor to The American Sealants Company, Hartford, Conn., a corporation of Connecticut

No Drawing. Application November 27, 1957
Serial No. 699,269
27 Claims. (Cl. 260—89.5)

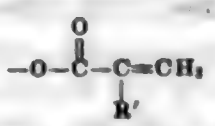
1. A sealant composition having an extended shelf life when exposed to oxygen but capable of setting up in a relatively brief time when excluded from contact with oxygen comprising a mixture of an unoxygenated monomer corresponding to the general formula:



where R is a member selected from the class consisting of hydrogen, $-CH_3$, $-C_2H_5$, $-CH_2OH$,



R' is a member selected from the class consisting of hydrogen, chlorine, $-CH_3$, and $-C_2H_5$, R'' is a member selected from the class consisting of hydrogen, —OH, and



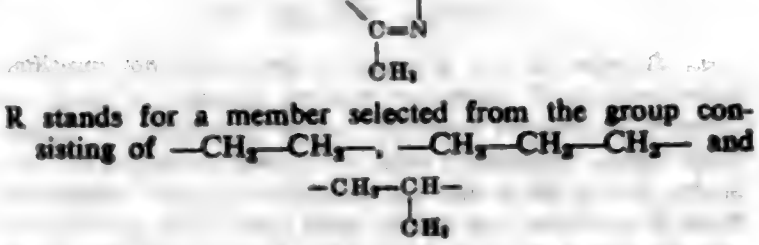
m is an integer equal to at least 1, *n* is an integer equal to at least 2, and *p* in one of the following: 0, 1 and a minor amount, less than 20%, sufficient to polymerize said monomer within a maximum period of about five hours upon the exclusion of oxygen, of a latent initiator of polymerization consisting essentially of a non-polymerizing organic hydroperoxide having a formula in which the atoms directly linked to the carbon atom bearing the hydroperoxide radical are selected from the group consisting of carbon, hydrogen and oxygen, and in such cases where all of said directly linked atoms are carbon, not more than two of said carbon atoms comprise the carbon atom of a methyl group, said hydroperoxide being characterized by its ability to remain ineffective to polymerize said monomer in the presence of oxygen and to initiate polymerization of said monomer in the absence of oxygen at room temperature.

2,895,951
DISAZO DYESTUFFS AND THEIR METAL COMPLEX COMPOUNDS

Willy Steinemann, Basel, Switzerland, assignor to Sandoz Ltd. (also known as Sandoz A.G.), Basel, Switzerland, a Swiss firm

No Drawing. Application April 14, 1958
Serial No. 728,115
Claims priority, application Switzerland April 17, 1957
7 Claims. (Cl. 260—160)

1. A member selected from the group consisting of a disazo dyestuff which corresponds to the formula

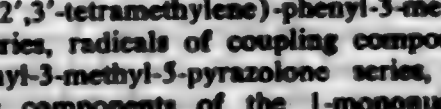


and the copper and nickel complex compounds thereof, wherein:

v stands for a member selected from the group consisting of a simple carbon linkage,

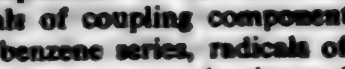
—HN—CO—NH—
—HN—OC—CH=CH—CO—NH—
—HN—OC—CCl=CH—CO—NH—
—HN—OC—C(CH_3)=CH—CO—NH—
—HN—OC—CH=CH—CH=CH—CO—NH—
—HN—OC—CCl=CH—CH=CCl—CO—NH—

and

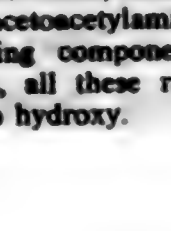


x stands for a member selected from the group consisting of a simple carbon linkage and an oxygen atom,

Z stands for a member selected from the group consisting of the radicals



and



R stands for a member selected from the group consisting of $-CH_2-CH_2-$, $-CH_2-CH_2-CH_2-$ and

when *x* represents an oxygen atom and for a polymethylene chain with 3 to 4 carbon atoms, when *x* represents a simple carbon linkage,

A stands for a member selected from the group consisting of 2-sulfo-1,4-phenylene, 2-sulfo-4,4'-diphenylene and 2,2'-disulfo-4,4'-stilbenyl radicals and B stands for a member selected from the group consisting of radicals designated by B', radicals of coupling components of the 1-mononuclear aryl-3-methyl-5-pyrazolone series, radicals of coupling components of the 1-(2',3'-tetramethylene)-phenyl-3-methyl-5-pyrazolone series, radicals of coupling components of the 1-naphthyl-3-methyl-5-pyrazolone series, radicals of coupling components of the 1-mononuclear aryl-5-pyrazolone-3-carboxylic acid amide series, radicals of coupling components of the acetoacetylamino-alkane series, radicals of coupling components of the acetoacetylamino-benzene series, radicals of coupling components of the acetoacetylaminonaphthalene series, radicals of coupling components of the hydroxynaphthalene series, all these radicals being coupled in ortho-position to hydroxy.

2,895,952
PURIFICATION OF NOVOBIOCIN

Edward A. Kaczka, Union, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Application April 21, 1955
Serial No. 503,030
1 Claim. (Cl. 260—210)

A process for the isolation and purification of novobiocin from fermentation broth which comprises acidifying an aqueous alkaline solution of filtered fermentation broth containing diatomaceous earth to a pH of about 2 by the addition of hydrochloric acid, separating the mixture of precipitated novobiocin and diatomaceous earth, extracting said precipitate with methanol to obtain a methanolic solution of novobiocin, evaporating the resulting methanolic solution to a volume of about 1/10 of the original volume, adjusting the pH of the resulting solution to about 9.0 with sodium hydroxide, extracting said alkaline solution with butanol, evaporating the resulting butanol extract, dissolving the concentrate in an aqueous solution of sodium hydroxide to produce a solution having a pH of 9.0, adding a diatomaceous earth to the alkaline solution acidifying the alkaline solution by the addition of hydrochloric acid to a pH of 2.0, separating and drying the precipitated mixture of diatomaceous earth and novobiocin, triturating this precipitate with petroleum ether, removing the petroleum ether containing the dissolved impurities, extracting the residue by mixing with ethanol, intimately contacting the resulting ethanolic solution of novobiocin with acid-washed alumina in an amount equivalent to at least 50 parts by weight of alumina to the solids contained in the ethanolic solution, separating the alumina containing the adsorbed impurities, evaporating the resulting ethanol solution to a concentration of about 5% solids, adding water to said concentrate, in an amount just sufficient to produce turbidity and separating the crystallized novobiocin from the resulting solution.

2,895,953
PROCESS FOR PURIFICATION OF PARTIALLY HYDROLYZED STEROIDAL SAPONINS

Monroe E. Wall, Oreland, and Harold E. Kenney, Hatboro, Pa., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application December 18, 1957
Serial No. 703,712
1 Claim. (Cl. 260—210.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A process for purification of a partially hydrolyzed water insoluble steroidal saponin obtained from a plant in a genus selected from the group consisting of Agave, Yucca and Dioscorea by extracting the freshly ground plant with water and acidifying the extract to a pH of about 1 to 2 to precipitate a crude mixture containing the partially hydrolyzed saponins, comprising extracting the mixture with hot aqueous 50 to 95% monohydric aliphatic alcohol containing 1 to 3 carbon atoms, to obtain an alcoholic extract containing said saponin, clarifying said extract, concentrating said extract until the partially hydrolyzed saponin begins to precipitate, cooling the concentrated extract, and recovering the purified partially hydrolyzed saponin.

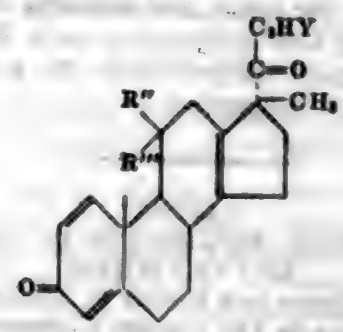
2,895,954
SYNTHESIS OF STEROIDS

Josef Fried and Josef E. Herz, New Brunswick, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Application October 11, 1956
Serial No. 615,237
5 Claims. (Cl. 260—239.55)

1. A compound selected from the group consisting of $\Delta^{1,4}$-17β-methyl-18-nor-17α-pregnadiene-13α,21-oxido-11β-ol-3,20-dione and $\Delta^{1,4}$-17β-methyl-18-nor-17α-pregnadiene-13α,21-oxido-3,11,20-trione.

2. A compound of the general formula



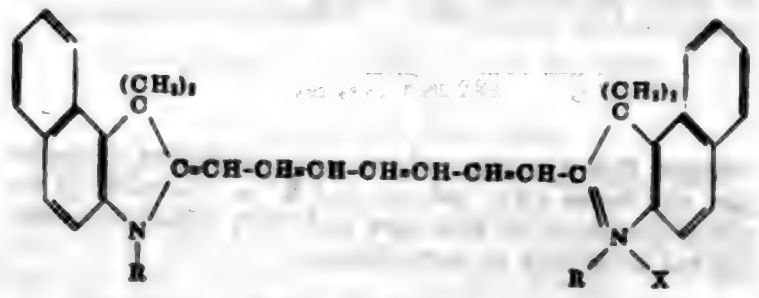
wherein R″ is hydrogen, R‴ is selected from the group consisting of β-hydroxy and β-acyloxy, and together R″ and R‴ is keto, and Y is selected from the group consisting of hydroxy and acyloxy, the acyloxy radical in both instances being the acyloxy radical of a hydrocarbon carboxylic acid having less than ten carbon atoms.

2,895,955
TRICARBOCYANINE INFRARED ABSORBING DYES

Donald W. Heseltine and Leslie G. S. Brooker, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application June 5, 1957
Serial No. 663,578
4 Claims. (Cl. 260—240.5)

1. A water-soluble tricarbocyanine dye selected from those represented by the following general formula:



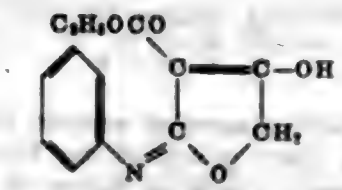
wherein R represents an alkyl group containing from 1 to 4 carbon atoms and X represents a non-toxic acid anion.

2,895,956
SYNTHESES OF FUROQUINOLINE DERIVATIVES

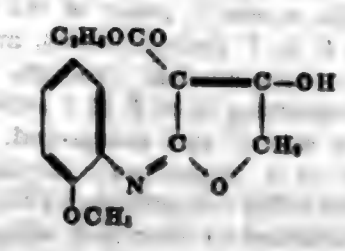
Hans Tuppy, Vienna, Austria

No Drawing. Application September 9, 1957
Serial No. 682,642
7 Claims. (Cl. 260—289)

1. A method of producing a compound selected from the group consisting of dictamines and γ-fagarines, comprising the steps of heating a compound selected from the group consisting of



and



for a time and at a temperature sufficiently high to cause ring closure and splitting-off of ethanol; treating the

(4)

mixture to produce pure 7',6-dihydroxycoumarino-(3',4'-

thus-formed closed ring compound with diazomethane so as to methylate the same; treating the thus-methylated compound with phosphorous oxychloride and water so as to chlorinate the same; and reducing the thus-chlorinated compound with hydrogen so as to form the corresponding compound selected from the group consisting of dictamines and γ-fagarines.

2,895,957
α(2,6-DIMETHYL PIPERIDINE-1)α,α-DIPHENYL BUTYRAMIDES

Brooke D. Aspergren and Robert B. Moffett, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application November 19, 1956
Serial No. 622,823
5 Claims. (Cl. 260—294)

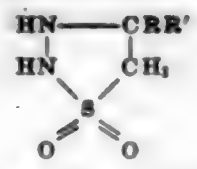
1. 2,6-dimethyl-α,α-diphenyl - 1 - piperidinebutyramide free base.

2,895,958
DIOXO-THIADIAZOLIDINES AND PROCESS THEREFOR

William S. Friedlander, Hudson, Wis., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Application December 16, 1957
Serial No. 702,821
6 Claims. (Cl. 260—301)

1. A 1,1-dioxo-1,2,3-thiadiazolidine represented by the formula:



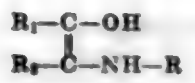
wherein R is a member of the group consisting of hydrogen and lower alkyl radicals and R′ is a member of the group consisting of hydrogen and alkyl radicals containing not more than 16 carbon atoms.

2,895,959
PROCESS FOR MANUFACTURE OF OXAZOLE QUATERNARY SALTS

Roy A. Jeffreys and Edward B. Knott, Harrow, England, assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application December 19, 1955
Serial No. 554,100
10 Claims. (Cl. 260—307)

1. A method of making oxazole quaternary salts comprising intermixing a member selected from the group consisting of a compound selected from those represented by the following general formula:



wherein R represents a member selected from the group consisting of an alkyl group of the formula C_nH_{2n+1} wherein n represents a positive integer of from 1 to 12 and a mononuclear aromatic group of the benzene series containing from 6 to 7 carbon atoms, and R_1 and R_2 each represents a mononuclear aromatic group of the benzene series containing from 6 to 7 carbon atoms and and acid-addition salt of said compound, together with an acetyl halide at a temperature varying from room temperature to the reflux temperature of the reaction mixture for a time sufficient to form said oxazole quaternary salts, and separating said oxazole quaternary salts from the reaction mixture.

2,895,960
METHOD OF PRODUCTION OF 5-o-METHOXYPHENOXYMETHYL-2-OXAZOLIDONE

Carl D. Lunsford, Richmond, Va., assignor to A. H. Robins Company, Inc., Richmond, Va., a corporation of Virginia

No Drawing. Application June 26, 1958
Serial No. 744,660
7 Claims. (Cl. 260—307)

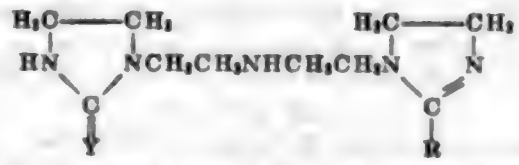
1. The method of preparing 5-o-methoxyphenoxymethyl-2-oxazolidone which comprises reacting approximately equimolar quantities of urea and 3 - o - methoxyphenoxy-2-hydroxy-1-propyl carbamate by heating at a temperature of at least 180° C. for a period of at least three hours and separating and recovering said oxazolidone.

2,895,961
COMPOUNDS CONTAINING THE IMIDAZOLINE AND IMIDAZOLIDONE OR IMIDAZOLIDINE-THIONE GROUPS

William B. Hughes, Webster Groves, Mo., assignor to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey

No Drawing. Application March 14, 1956
Serial No. 571,375
11 Claims. (Cl. 260—309.6)

1. As a new composition of matter a compound having the formula



wherein Y is selected from the group consisting of oxygen and sulfur and R is selected from the group of hydrocarbon radicals consisting of alkyl and alkenyl radicals having not more than 20 carbon atoms and the phenyl radical.

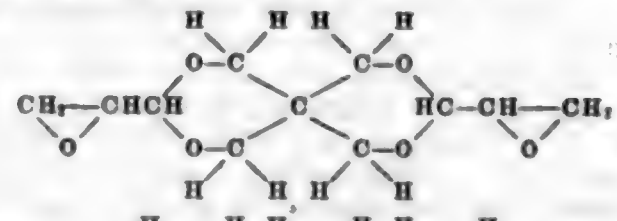
2,895,962
EPOXIDIZED ACETALS AND POLYMERS THEREOF

Rudolph F. Fischer, Oakland, Calif., assignor to Shell Development Company, New York, N.Y., a corporation of Delaware

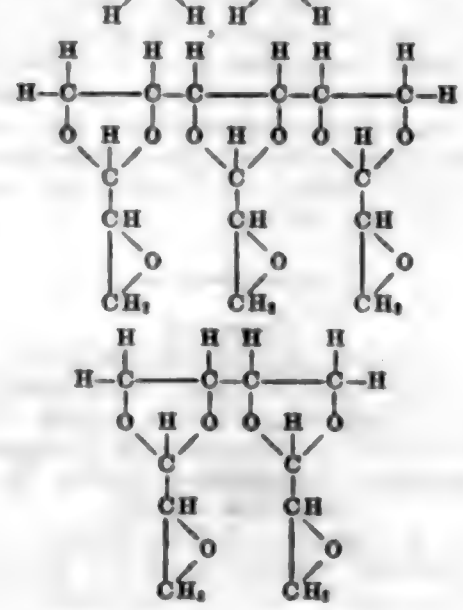
No Drawing. Application July 30, 1956
Serial No. 600,696
5 Claims. (Cl. 260—340.7)

5. A polycyclic acetal polyepoxide selected from the group consisting of

(1)



(2)

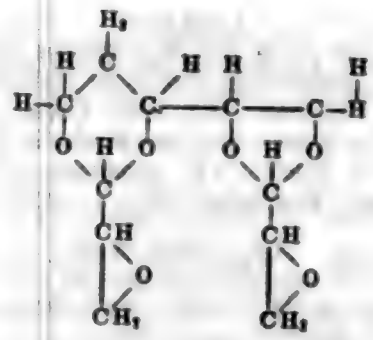


(3)

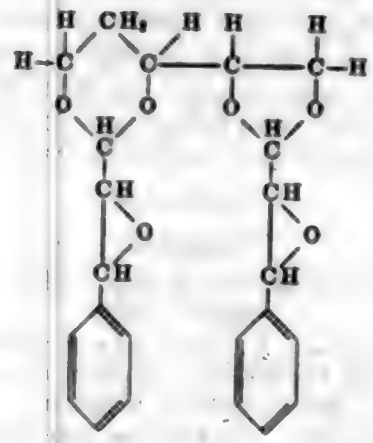
2,895,968
Δ1,2 BISNORCHOLADIENIC ACIDS AND ESTERS

2,895,971
REMOVAL OF

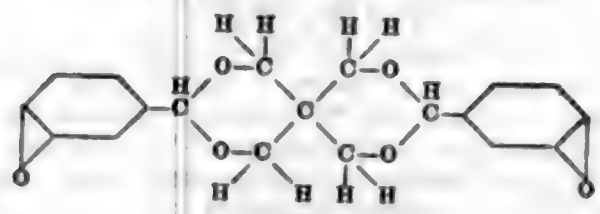
(4)



(5)



(6)



2,895,963

4-METHYL-6:7-BIS-β-DIETHYLAMINO-ETHOXY COUMARIN

Guido Cavallini and Elena Massarani, Milan, Italy, assignors to Maggioni & C. Societa per Azioni, Milan, Italy, a company of the Italian Republic

No Drawing. Application May 31, 1957
Serial No. 662,586

Claims priority, application Italy June 5, 1956

2 Claims. (Cl. 260—343.2)

1. 4-methyl-6:7-bis-(beta-diethylamino - ethoxy)-coumarin.

2,895,964

PURIFICATION OF COUMESTROL

Oliver H. Emerson, Orinda, and Emanuel M. Bickoff, Berkeley, Calif., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application April 4, 1958
Serial No. 726,586

5 Claims. (Cl. 260—343.2)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. The method of recovering pure 7',6-dihydroxycoumarino-(3',4'-3,2) coumarone from an impure mixture containing the same which comprises reacting the mixture with an acylating agent of the group consisting of the anhydride, the chloride, the bromide, and the iodide of a carboxylic acid selected from the group consisting of alkanoic acids, oleic acid, palmitoleic acid, benzoic acid, dinitrobenzoic acid, o-toluic acid, m-toluic acid, and p-toluic acid, to produce the corresponding ester of said 7',6-dihydroxycoumarino-(3',4'-3,2) coumarone, separating said ester from the esterification reaction mixture, subjecting it to alkaline hydrolysis to convert the ester groups to hydroxy groups, acidifying the alkaline reaction mixture to produce pure 7',6-dihydroxycoumarino-(3',4'-3,2) coumarone, and isolating the pure 7',6-dihydroxycoumarino-(3',4'-3,2) coumarone from the resulting acidified mixture.

2,895,965

PROCESS FOR THE PRODUCTION OF AMMONIUM COMPOUNDS

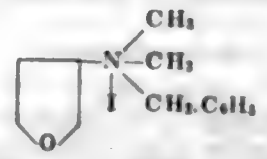
Conrad Hans Eugster, Wallisellen, Rolf Denss and Franz Häfliger, Basel, Bruno Hofer, Munchenstein, Rudolf Pfister, Basel, and Markus Zimmermann, Riehen, near Basel, Switzerland, assignors to Geigy Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application March 25, 1957
Serial No. 647,996

Claims priority, application Switzerland June 14, 1956

5 Claims. (Cl. 260—347.7)

1. A compound corresponding to the formula:



2,895,966

MONOGLYCERIDE DIACETATES

Waldo C. Ault, Glenside, Pa., and Reuben O. Feuge, New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application April 12, 1954
Serial No. 422,708

4 Claims. (Cl. 260—348)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. Epoxidized monoglyceride diacetates of oils selected from the group consisting of cottonseed oil, soybean oil, olive oil, corn oil, tall oil, and fish oil.

2. Epoxidized cottonseed oil monoglyceride diacetate.

2,895,967

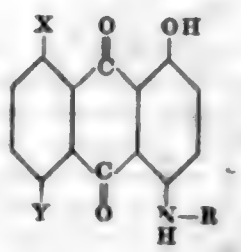
METALLIZED ANTHRAQUINONE DYES

James M. Straley and David G. Hedberg, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application March 7, 1958
Serial No. 719,756

20 Claims. (Cl. 260—366)

1. A complex metal compound which contains a metal selected from the group consisting of chromium, cobalt, copper, iron, manganese, nickel and vanadium in complex combination with an anthraquinone compound having the formula:



wherein R represents a monocyclic aryl nucleus of the benzene series and X and Y each represent a different member selected from the group consisting of a hydroxy group and a nitro group.

ratio of oleic acid to formaldehyde to sulfuric acid of

2,895,977

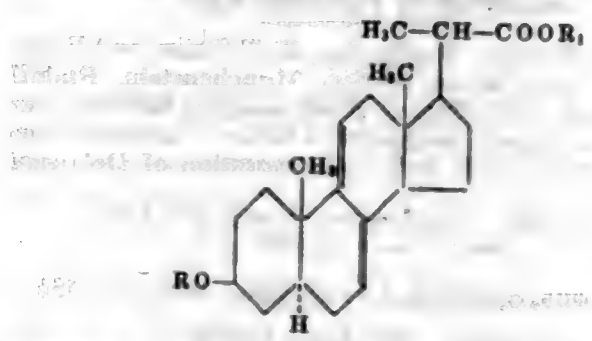
PROCESS FOR ALKYLTRIFLUOROSILANES

2,895,968
$\Delta^{7,9}$ BISNORCHOLADIENIC ACIDS AND ESTERS THEREOF

William V. Rayle, Westfield, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Application April 30, 1954
Serial No. 426,915
1 Claim. (Cl. 260—397.1)

A $\Delta^{7,9(11)}$ compound of the formula



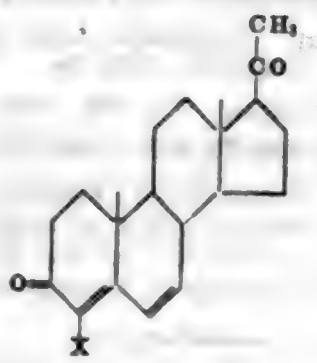
wherein R is a member from the group consisting of hydrogen and lower fatty acid radicals and R_1 is a member from the group consisting of hydrogen and lower alkyl groups.

2,895,969
CYCLOPENTANOPHENANTHRENE DERIVATIVES

Howard J. Ringold, Fred Allan Kincl, and Enrique Batres, Mexico City, Mexico, assignors to Syntex S.A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Application September 22, 1958
Serial No. 762,269
Claims priority, application Mexico September 23, 1957
9 Claims. (Cl. 260—397.3)

1. A compound of the following formula:



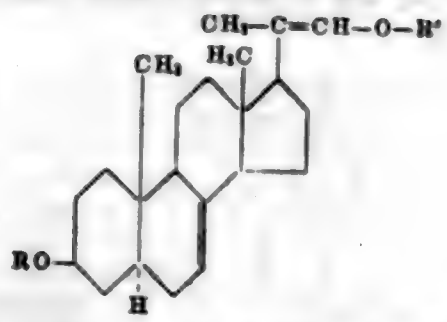
wherein X is selected from the group consisting of chlorine or bromine.

2,895,970
BISNORALLO-7-CHOLENALDEHYDES

Gerald D. Laubach, Jackson Heights, N.Y., assignor to Chas. Pfizer & Co., Inc., Brooklyn, N.Y., a corporation of Delaware

No Drawing. Application September 24, 1954
Serial No. 458,268
1 Claim. (Cl. 260—397.5)

A steroid compound having the structure



wherein R is chosen from the group consisting of hydrogen and hydrocarbon acyl containing up to 7 carbon atoms and R' is hydrocarbon acyl containing up to 7 carbon atoms.

2,895,971
REMOVAL OF IMPURITIES FROM IRRADIATED 7-DEHYDROCHOLESTEROL

Israel Spiegel, Verona, N.J., and Oscar Schneider, deceased, late of Ferdo, N.J., by Rachelle Schneider, legal representative, Ferdo, N.J., assignors to Nopco Chemical Company, Harrison, N.J., a corporation of New Jersey

No Drawing. Application November 29, 1957
Serial No. 699,450
10 Claims. (Cl. 260—397.25)

1. A process for removing impurities from irradiated 7-dehydrocholesterol which comprises contacting an alcoholic solution of irradiated 7-dehydrocholesterol with a cation exchange resin and with an anion exchange resin, the cation exchange resin being in the hydrogen form and the anion exchange resin being in the basic form.

2,895,972
METHOD OF MAKING 21-F$\Delta^{1,4}$ PREGNADIENE COMPOUNDS

Josef Fried and Josef E. Herz, New Brunswick, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Application July 18, 1956
Serial No. 598,539
4 Claims. (Cl. 260—397.45)

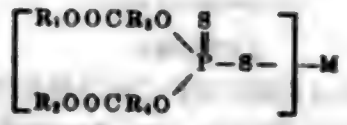
1. A process for preparing a steroid selected from the group consisting of 21-fluoro-$\Delta^{1,4}$-pregnadiene-11β, 17α-diol-3,20-dione and 21-fluoro-$\Delta^{1,4}$-pregnadiene-17α-ol-3,11,20-trione, which comprises interacting a steroid selected from the group consisting of the 21-(lower alkane) sulfonic acid esters of $\Delta^{1,4}$-pregnadiene-11β,17α, 21-triol-3-20-dione and $\Delta^{1,4}$-pegnadiene-17α,21-diol-3,11,20-trione with potassium fluoride under substantially anhydrous conditions and recovering the resulting 21-fluoro steroid.

2,895,973
METAL SALTS OF DITHIOPHOSPHORIC ACIDS

Harold R. Reedy, Roselle Park, James M. Boyle, Bayonne, and Charles S. Lynch, Plainfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application February 9, 1955
Serial No. 487,212
6 Claims. (Cl. 260—403)

1. A compound of the formula



where R_1 and R_2 are alkyl radicals containing 1 to 20 carbon atoms, —OCR_3O— and —OCR_4O— are residues of aliphatic monohydroxy monocarboxylic acids selected from the group consisting of ricinoleic acid and condensation polymers thereof having in the range of 2 to 6 ricinoleic groups per molecule, and M is a metal selected from the group consisting of alkaline earth metals and zinc.

2,895,974
COMPOSITION OF MATTER

Everett N. Case, Homewood, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Application February 9, 1955
Serial No. 487,207
4 Claims. (Cl. 260—413)

1. A method for the production of organic hydroxy acids which comprises reacting oleic acid and formaldehyde in the presence of a sulfur acid catalyst in a molar

cycling the oil from one end of the column to the other

2,895,983
BETA HYDROXY PHOSPHINOTHIOIC ESTERS AND

ratio of oleic acid to formaldehyde to sulfuric acid of about 1:2:0.5–2 and in the substantial absence of water while controlling the temperature at about 30 to 60° C.

2,895,975
REMOVAL OF ODOR AND COLOR BODIES IN FAT SPLITTING

Andrew M. Ives, Marblehead, Mass., and Richard F. Thompson, Crete, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois

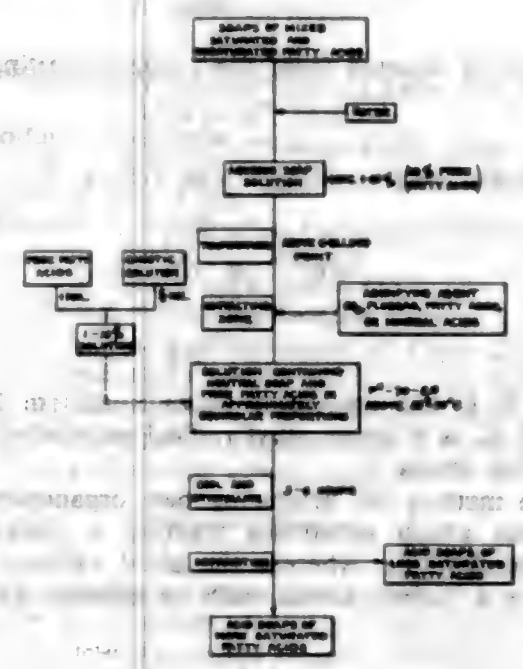
Application April 16, 1956, Serial No. 578,430
4 Claims. (Cl. 260—415)

1. The process for hydrolyzing fat into fatty acids and glycerine which comprises continuously passing the fat and water in countercurrent flow in a hydrolyzing zone maintained under temperature and pressure conditions sufficiently high to cause the fat to hydrolyze and to maintain the products in the liquid phase, immediately conducting the reaction products under substantially reduced pressure and temperature into a distillation zone maintained under a high vacuum wherein the pressure on said reaction products is quickly reduced and the lower boiling constituents thereof, including steam, and color and odor causing bodies, are flashed off as vapors by the self-contained heat of said reaction products, and recovering from said distillation zone a liquid fraction of fatty acids of improved color, odor, and stability.

2,895,976
PROCESS FOR FRACTIONATION OF FATTY ACID MIXTURES

Stepan Kairys, Toronto, Ontario, Edwin M. Meade, Richmond Hill, Ontario, and William Oakley Mawes, and Dilys A. Walder, Toronto, Ontario, Canada, assignors to Canada Packers Limited, Toronto, Ontario, Canada

Application July 9, 1956, Serial No. 596,523
18 Claims. (Cl. 260—419)



1. A process for the separation of a mixture of saturated and unsaturated fatty acids into relatively saturated and relatively unsaturated fractions, comprising: forming from said mixture an aqueous solution containing acid soaps of said saturated and unsaturated fatty acids, said solution having a concentration of less than about 10%; aging said solution at a temperature below about 30° C. to crystallize the acid soaps of the more saturated fatty acids and separating the solid fraction containing the acid soaps of the more saturated fatty acids from the liquid fraction containing the acid soaps of the less saturated fatty acids.

2,895,977
PROCESS FOR ALKYLTRIFLUOROSILANES

Frederick T. Fitch, Baltimore, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Application March 18, 1958
Serial No. 722,144
6 Claims. (Cl. 260—448.2)

1. A process for preparing loweralkyltrihalosilanes which comprises passing alkyl aluminum halide vapors through excess alkali metal fluosilicate at 200 to 300° C.

2,895,978
PROCESS FOR OXIDIZING PETROLEUM OIL AND PRODUCTS THEREOF

John W. Brooks, Wenonah, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

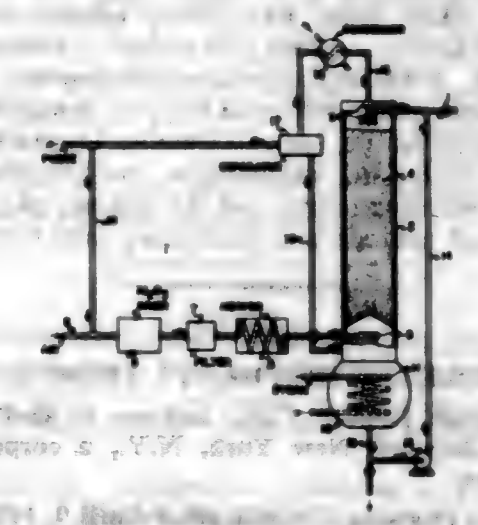
No Drawing. Application July 6, 1954
Serial No. 441,626
4 Claims. (Cl. 260—451)

1. A process for preparing a metal-containing oxidized oil product which comprises (1) forming a mixture comprising (*a*) a petroleum oil having a molecular weight of from about 300 to about 1000 and (*b*) from about 2% to about 25%, based on the weight of said oil, of a hydroxide of a metal of group II of the periodic table of the elements, (2) contacting said mixture with an oxidizing gas at a temperature of from about 250° F. to about 600° F., to effect oxidation of said oil and reaction of said metal hydroxide with the oxidized oil, (3) continuing said oxidation for a time sufficient to effect the reaction of at least about 5%, but not more than about 55%, of said metal hydroxide and (4) subjecting the resulting reaction mixture to filtration to separate the metal-containing oxidized oil product.

2,895,979
OXIDATION OF HYDROCARBON DRYING OILS

William Benjamin Segraves, Baton Rouge, La., and George Oliver Hilliard, Jr., Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application June 13, 1957, Serial No. 665,571
6 Claims. (Cl. 260—451)



1. In a process for improving the properties of a polymeric hydrocarbon drying oil of an acyclic conjugated diolefin having 4 to 6 carbon atoms per molecule, said polymer being prepared by mass polymerization with a catalyst selected from the group consisting of a hydrocarbon soluble peroxide and metallic sodium in which the oil is contacted with oxygen in the presence of a hydrocarbon solvent having Kauri-Butanol value of at least 40, the improvement which comprises incorporating above 8% oxygen in said drying oil within 9 hours by contacting the oil with the oxygen in the form of thin films in a packed column and continuously re-

2,895,985
PROCESS FOR THE PREPARATION OF

hydrogen and alkyl radicals having from one to about

cycling the oil from one end of the column to the other while maintaining a pressure of at least 70 lbs. per square inch gage on the column.

2,895,980
ALLYL ESTERS OF MONO-SUBSTITUTED DITHIOCARBAMIC ACIDS

Marion W. Harman, Nitro, and Harry W. Kilbourne, South Charleston, W. Va., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application November 10, 1955
Serial No. 546,275
6 Claims. (Cl. 260—455)

1. A compound of the structure

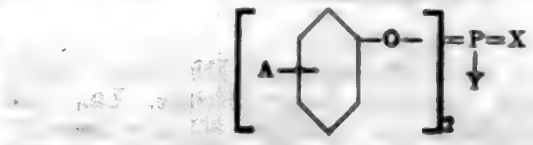
where R represents an organic radical selected from the group consisting of alkyl, alkenyl, aralkyl and alicyclic radicals.

2,895,981
ARYL ESTERS OF ACID PHOSPHORUS COMPOUNDS

Howard M. Fitch, New York, N.Y., assignor to Campbell Pharmaceuticals, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Original application July 3, 1952, Serial No. 297,169, now Patent No. 2,759,961, dated August 21, 1956. Divided and this application September 8, 1955, Serial No. 533,243
11 Claims. (Cl. 260—461)

1. A compound of the group consisting of diaryl esters of acid phosphorus compounds of the general formula



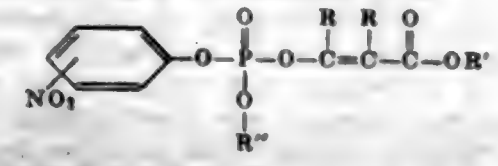
wherein A is selected from the group consisting of lower dialkylamino and lower dialkylamino-loweralkyl, X is selected from the group consisting of sulfur and oxygen and Y is selected from the group consisting of halogen, hydroxyl, alkali metal oxy, lower alkoxy, loweralkylaminoloweralkoxy, monocyclicaryloxy, amino, loweralkylamino, loweralkylaminoloweralkylamino, monocyclicarylamino, monocyclicaralkylamino, loweralkylaminomonocyclicarylamino, cycloalkylamino, loweralkyl, monocyclicaryl, cycloalkyl, morpholino, pyridylamino, hydrazino and phenylhydrazino, and the pharmacologically acceptable acid addition and quaternary salts thereof.

2,895,982
COMPLEX NITROPHENYL PHOSPHATES

Alan R. Stiles, Denver, Colo., assignor to Shell Development Company, New York, N.Y., a corporation of Delaware

No Drawing. Application April 9, 1956
Serial No. 576,786
3 Claims. (Cl. 260—461)

1. A compound of the formula



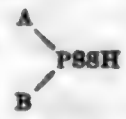
wherein R is chosen from the group consisting of hydrogen and lower alkyl radicals, and R′ and R″ individually represent lower alkyl radicals.

2,895,983
BETA HYDROXY PHOSPHINOTHIOIC ESTERS AND METHOD OF PREPARING SAME

Peter A. Ameff, Cleveland, Ohio, assignor to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio

No Drawing. Application April 30, 1956
Serial No. 581,280
4 Claims. (Cl. 260—461)

2. The process of preparing neutral phosphorus- and sulfur-containing compounds which comprises the reaction of (*a*) a phosphinodithioic acid having the structural formula



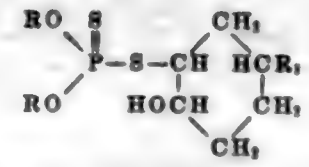
where A and B are selected from the class consisting of phenyl, chlorophenyl and alkylphenyl radicals with (*b*) a compound selected from the class consisting of lower aliphatic epoxides, epoxidized aliphatic esters and styrene oxide.

2,895,984
ORGANOPHOSPHORUS COMPOUNDS DERIVED FROM PHOSPHOROTHIOLOTHIONATES AND EPOXIDES

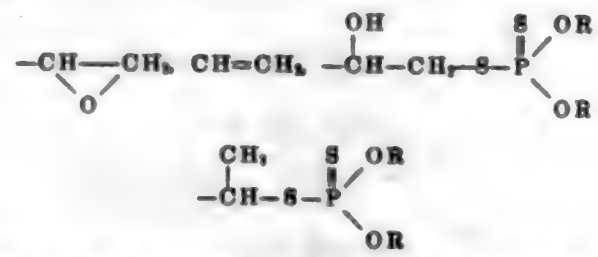
Marvin A. McCall and Richard L. McConnell, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application August 12, 1957
Serial No. 677,759
12 Claims. (Cl. 260—461)

1. As a composition of matter, organophosphorus compounds having the formula:

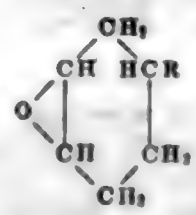


wherein R_1 is selected from the group consisting of hydrogen,

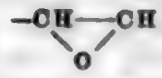


wherein R in the structural formula and in the definition of R_1 is a lower alkyl radical containing from 1 to 4 carbon atoms.

7. The method for producing new organophosphorus compounds which comprises reacting a dialkyl phosphorothiolothionate, wherein the alkyl radicals contain from 1 to 4 carbon atoms, with an epoxide having the formula:



wherein R is selected from the group consisting of hydrogen,



and —CH=CH$_2$ at a temperature within the range of 0 to 150° C.

Y_1, Y_2, Y_3 and Y_4 are selected from the group con-

2,895,995
QUATERNARY AMMONIUM SALTS OF DIALKYL

2,895,985
PROCESS FOR THE PREPARATION OF TRIALKOXYBOROHYDRIDES

Richard A. Carpenter, Prairie Village, Kans., assignor to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Application July 2, 1954
Serial No. 441,164
5 Claims. (Cl. 260—462)

1. A method of preparing alkali metal triloweralkoxyborohydride which comprises reacting an alkali metal hydride and a lower alkyl borate ester in the presence of about 1 to 10 mol percent, based on said hydride reactant, of a compound selected from the group consisting of pyridine, piperidine, aniline, morpholine, ethylene diamine, N-methyl morpholine, N-methyl piperidine, N,N-dimethylaniline and ethyleneglycol dimethyl ethers of the formula $CH_3O(C_2H_4O)_nCH_3$, where n is an integer from 1 to 4, and recovering the resultant alkali metal triloweralkoxyborohydride.

2,895,986
PREPARATION OF META-SULFOISOPHTHALIC ACID

Harold W. Burns, Wenonah, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application October 21, 1957
Serial No. 691,167
2 Claims. (Cl. 260—507)

1. A liquid phase process for the preparation of m-sulfoisophthalic acid which comprises forming a liquid reaction mass by mixing solid isophthalic acid with liquid SO_3 in the absence of a separate fluidizing agent at atmospheric pressure and at a temperature in excess of 160° C., and retaining said liquid reaction mass at atmospheric pressure and at the elevated temperature until the isophthalic acid has reacted with the liquid SO_3 to form the m-sulfoisophthalic acid product.

2,895,987
METHOD OF PREPARING ALPHA-SULFO ACRYLIC ACID

Charles Malcolm Hendry, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Application December 20, 1956
Serial No. 629,469
1 Claim. (Cl. 260—513)

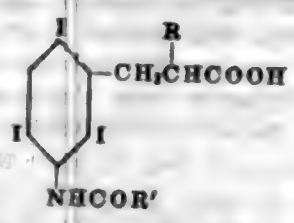
A method which comprises reacting acrylic acid with chlorosulfonic acid at a temperature of from about 50° C. and not substantially above 158° C. and thereafter treating the reaction product thus formed with barium carbonate in an aqueous medium and recovering the barium salt of alpha-sulfo acrylic acid.

2,895,988
ACYLATED TRIIODOAMINOPHENYLALKANOIC ACIDS AND PREPARATION THEREOF

Sydney Archer and James O. Hoppe, Bethlehem, N.Y., assignors to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Application September 5, 1957
Serial No. 682,075
20 Claims. (Cl. 260—518)

1. A member of the group consisting of: 2,4,6-triiodo-3-acylaminophenylalkanoic acids having the formula



wherein R and R' are members of the group consisting of hydrogen and alkyl radicals having from one to about four carbon atoms; and pharmacologically acceptable salts thereof.

2,895,989
METHOD FOR THE PREPARATION OF IMINODIACETIC ACID

Arthur R. Sexton, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application June 22, 1956
Serial No. 593,052
12 Claims. (Cl. 260—534)

1. Method for transforming the alkaline earth and alkali metal salts of iminodiacetic acid, including the ammonium salts thereof, into free iminodiacetic acid in a substantially pure form which comprises passing each equivalent weight of the salt of iminodiacetic acid in solution through contact with a fixed bed of an acidified form of a sulfonated vinyl aromatic ion exchange resin containing an amount of the resin that is commensurate in its ion exchanging capacity to the number of cation equivalent weights in the salt of the iminodiacetic acid that is being transformed, thereby to fix the cation of said salt in the bed of said ion exchange resin and to convert the salt to the free iminodiacetic acid; and recovering the resulting solution of the free iminodiacetic acid, in a substantially pure form, from the fixed bed of the ion exchange resin.

2,895,990
PROCESS OF PRODUCING SODIUM OR POTASSIUM ACETATE, PROPIONATE OR BUTYRATE

Millard S. Larrison, Hackettstown, and John F. Henry, Rutherford, N.J.

No Drawing. Application December 9, 1957
Serial No. 701,318
14 Claims. (Cl. 260—540)

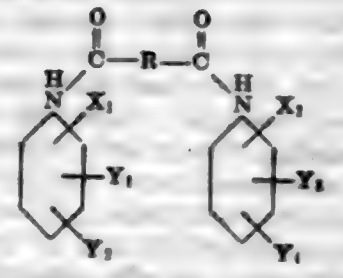
1. A process of producing an alkali metal salt of an organic acid from the group consisting of acetic, propionic and butyric acids, which alkali metal is from the group consisting of sodium and potassium, which process comprises mixing a dry finely divided carbonate from the group consisting of carbonates and bicarbonates of said alkali metal with said organic acid substantially free of water and in about the stoichiometric proportions of said acid and said carbonate and in the absence of extraneous water and thereafter heating the reaction mixture to a temperature above 100° C. but below the temperature at which the reaction product decomposes until the reaction has gone to completion, and the reaction mixture is free of unreacted acid and carbonate.

2,895,991
NEW CHLOROMETHYLATED ANILIDES

David I. Randall, New Vernon, N.J., and Edgar E. Renfrew, Jr., Easton, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application November 6, 1956
Serial No. 620,583
8 Claims. (Cl. 260—558)

1. Nuclear chloromethylated derivatives of compounds having the formula:



wherein R is an alkylene radical, X_1 and X_2 are selected from the group consisting of hydrogen, nitro, halo, and

mine, in the presence of an alkylation catalyst selected at a temperature within the range of about 300 to 500°

Y_1, Y_2, Y_3 and Y_4 are selected from the group consisting of hydrogen, alkyl of less than about six carbon atoms and alkoxy.

8. Nuclear chloromethylated terephthalanilide.

2,895,992

PROCESS FOR THE PRODUCTION OF BENZOIC ACID DERIVATIVES

Gerhard Ohnacker and August Kottler, Biberach (Riss), Germany, assignors to Dr. Karl Thomae G.m.b.H., Biberach (Riss), Germany, a corporation of Germany

No Drawing. Application June 28, 1955
Serial No. 518,684

Claims priority, application Germany June 29, 1954

6 Claims. (Cl. 260—559)

5. Ortho-lower alkoxyethoxy-benzamide.

2,895,993

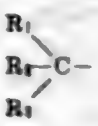
ALKYL SUBSTITUTED ANHYDROTETRACYCLINE COMPOUNDS AND PROCESS OF PREPARING THE SAME

Charles R. Stephens, Jr., Niantic, Conn., assignor to Chas. Pfizer & Co., Brooklyn, N.Y., a corporation of Delaware

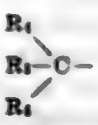
No Drawing. Application May 16, 1957
Serial No. 659,482

2 Claims. (Cl. 260—559)

2. A compound selected from the group consisting of the D-ring nuclearly substituted compounds selected from the group consisting of 5a,6-anhydrotetracycline, 5a,6-anhydrochlortetracycline, and 5a,6-anhydrobromtetracycline, wherein said D-ring nuclear substituent is a hydrocarbon containing up to 9 carbon atoms and selected from the group consisting of



and



wherein R_1 is aryl, R_2 and R_3 are selected from the group consisting of hydrogen and alkyl and R_4, R_5, and R_6 are alkyl.

2,895,994

METHOD OF PRODUCING GUANIDINE NITRATE

Joseph Newton Robinson and Frederick John Leslie Miller, Trail, British Columbia, and Basil McDonnell, Rossland, British Columbia, Canada, assignors to The Consolidated Mining and Smelting Company of Canada Limited, Montreal, Quebec, Canada, a company of Canada

Application May 17, 1956, Serial No. 585,502

3 Claims. (Cl. 260—564)

1. In a process for the production of guanidine nitrate in which ammonia, sulphur dioxide, urea and ammonium sulphamate are reacted to produce a reaction product which contains guanidine sulphamate, guanidine sulphamate is separated from the reaction product and is reacted with nitric acid to form a reaction product which contains guanidine nitrate and sulphamic acid, the improvement which comprises separating and separately recovering guanidine nitrate and sulphamic acid from the guanidine nitrate-sulphamic acid reaction product, neutralizing recovered sulphamic acid with ammonia to form ammonium sulphamate, and re-cycling so-formed ammonium sulphamate to the guanidine sulphamate forming step of the process.

2,895,995

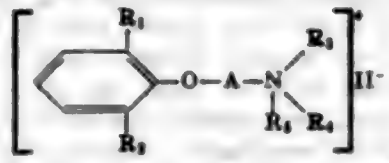
QUATERNARY AMMONIUM SALTS OF DIALKYL-AMINOALKYL PHENYL ETHERS

George Lawrence Willey, Salisbury, England, and Peter Hey, Baghdad, Iraq

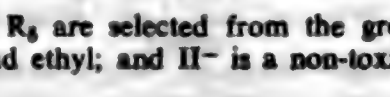
No Drawing. Continuation of application Serial No. 455,764, September 13, 1954. This application April 10, 1957, Serial No. 651,824

3 Claims. (Cl. 260—567.6)

1. A quaternary ammonium salt of an amino phenyl ether of the formula:



wherein R_1 and R_2 are each selected from the group consisting of chlorine and methyl; A represents a divalent group selected from the group consisting of —CH_2—CH_2—,



R_3, R_4, and R_5 are selected from the group consisting of methyl and ethyl; and II^- is a non-toxic anion.

2,895,996

PURIFICATION OF NEOPENTYLGLYCOL BY STEAM SUBLIMATION

Howard Nolan Wright, Jr., and Hugh J. Hagemeyer, Jr., Longview, Tex., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application July 16, 1956
Serial No. 597,878

5 Claims. (Cl. 260—637)

1. In the process for producing neopentylglycol of high purity wherein isobutyraldehyde is reacted with formaldehyde and resulting hydroxypivaldehyde is reduced to neopentylglycol, the improvement which comprises saponifying neopentylglycol-hydroxypivalate esters in the neopentylglycol-containing reaction mixture with caustic and passing steam through the saponified reaction mixture at a sub-atmospheric pressure and a temperature of 60–150° C. to produce an aqueous solution of neopentylglycol.

2,895,997

SELF-CONDENSATION OF HALOALKYL-AROMATIC COMPOUNDS

Louis Schmerling, Riverside, and John P. Luvisi, Des Plaines, Ill., assignors, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application February 28, 1957
Serial No. 642,952

12 Claims. (Cl. 260—649)

1. A process for the self-condensation of a p-haloalkylbenzene having the general formula:

in which R and R′ are independently selected from the group consisting of hydrogen, alkyl, alkylene, cycloalkylalkyl and cycloalkyl radicals and X is a halogen radical which comprises treating said haloalkylbenzene with an alkylating agent selected from the group consisting of tert-alkyl halides, tert-cycloalkyl halides and polyhaloalkanes containing at least two halogen atoms on the same carbon atom, the halogen of said alkylating agent being selected from the group consisting of chlorine and bro-

wherein R and R' are members of the group consisting of from the group consisting of hydrogen, nitro, halo, and

mine, in the presence of an alkylation catalyst selected from the group consisting of aluminum chloride, aluminum bromide, zirconium chloride and boron fluoride at a temperature in the range of from about 0° to about 100° C., and recovering the resultant self-condensation products.

2,895,998

PYROLYSES OF BENZENE HEXACHLORIDE

John A. Crowder and Everett E. Gilbert, Morris Township, Morris County, N.J., assignors to Allied Chemical Corporation, a corporation of New York

No Drawing. Application October 1, 1954
Serial No. 459,860

6 Claims. (Cl. 260—650)

1. A process for the pyrolysis of benzene hexachloride which comprises contacting benzene hexachloride with a catalyst comprising activated carbon containing about 5 to 10% by weight of a metal chloride selected from the group consisting of cupric chloride, ferric chloride, zinc chloride and aluminum chloride at a temperature of about 400° to 500° C.

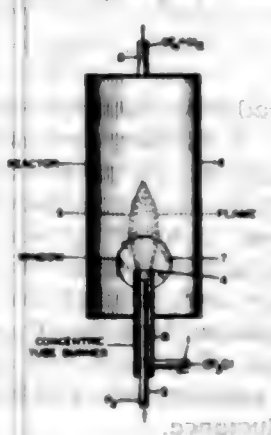
2,895,999

PRODUCTION OF CARBON TETRAFLUORIDE

Edward A. Tyczkowski, Rockaway, N.J., assignor to Allied Chemical Corporation, a corporation of New York

Application December 1, 1955, Serial No. 550,374

3 Claims. (Cl. 260—653.8)



1. A process for the production of carbon tetrafluoride which comprises igniting reactants comprising (1) a member of the group consisting of trifluorochloromethane and difluorodichloromethane, in stoichiometric excess, and (2) elementary fluorine, said reactants constituting the sole reaction medium to form a self-sustaining flame, maintaining said flame by continuous addition of the reactants and recovering carbon tetrafluoride from the resulting reaction products.

2,896,000

PROCESS FOR THE MANUFACTURE OF VINYL CHLORIDE

Franklyn D. Miller and Donald P. Jenks, Cincinnati, Ohio, assignors to National Distillers and Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Application May 9, 1955
Serial No. 507,134

3 Claims. (Cl. 260—656)

1. A process for chlorination of ethylene to vinyl chloride which comprises reacting ethylene with chlorine at a temperature within the range of about 300 to 500° C., the ethylene being in molar excess in relation to the chlorine, in the presence of ethylene dichloride in molar proportion of substantially more than 0.3 to about one mol of ethylene dichloride to one mol of chlorine.

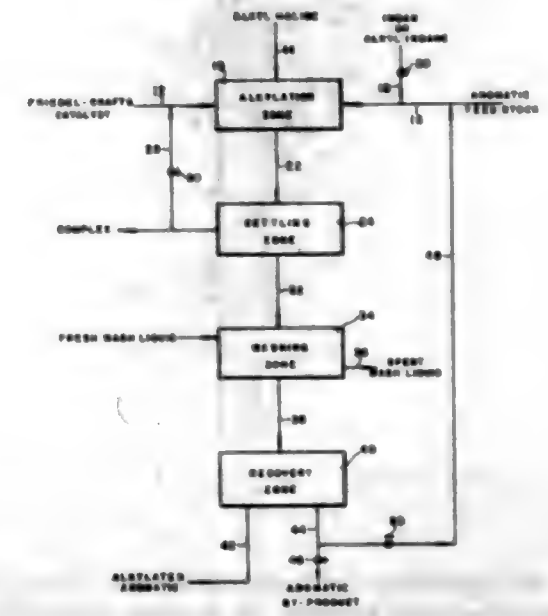
2,896,001

PROCESS FOR ALKYLATING AROMATIC HYDROCARBONS

Harry G. Beyston and William R. Edwards, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Application September 27, 1957, Serial No. 686,746

7 Claims. (Cl. 260—671)



1. In a process for alkylating a benzenoid feed stock with an alkyl halide in the presence of a catalytic amount of a metal halide Friedel-Crafts catalyst under Friedel-Crafts alkylation conditions, the improvement for enhancing the activity of said Friedel-Crafts catalyst which comprises conducting said alkylation reaction in the presence of an amount of an added indan insufficient to inhibit the formation of stable phenonium ions.

2,896,002

PROCESS FOR THE SEPARATION OF A MIXTURE OF CYCLOHEXANE AND BENZENE

Georges Jules Pierre Soulliard, Brussels, Belgium, assignor to Institut Francais du Petrole des Carburants et Lubrifiants, Paris, France

No Drawing. Original application July 19, 1951, Serial No. 237,674, now Patent No. 2,707,197, dated April 26, 1955. Divided and this application April 4, 1955, Serial No. 499,219

Claims priority, application France July 22, 1950

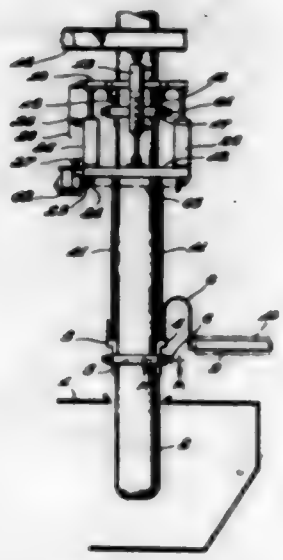
2 Claims. (Cl. 260—666)

1. A method of separating a mixture consisting essentially of cyclohexane and benzene wherein the benzene is present in minor proportion, comprising analyzing the mixture to determine quantitatively the quantity of benzene present in the mixture and then quantitatively selectively chlorinating the benzene by passing chlorine into the mixture in the presence of a catalyst comprising ferric chloride in the dark, at ambient temperature, and in ratio of at least about 1.5 mols of chlorine per mol of benzene, and then physically separating the chlorinated benzene from the cyclohexane.

surrounding said rods, and improved covers surrounding said active material to retain the active material on said diate its ends and extending through said opening, and a resilient ring within said groove compressed against

ELECTRICAL

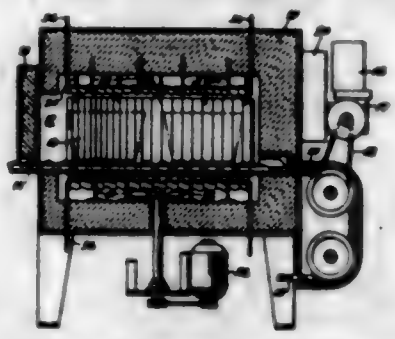
2,896,003
APPARATUS FOR CONTROLLING SLIPPING OF CONTINUOUS ELECTRODES
Milton Eaton, Shawinigan Falls, Quebec, Canada, assignor to Shawinigan Chemicals Limited, Montreal, Quebec, Canada, a corporation of Canada
Application June 7, 1957, Serial No. 664,281
11 Claims. (Cl. 13—14)



1. An apparatus for controlling the slipping of a continuous electrode through its holders comprising (1) an electrode supporting yoke suspended from fixed supports by hoisting gear, (2) contact shoes suspended from the said electrode supporting yoke, (3) means for adjusting the pressure of the contact shoes on the electrode to maintain said contact shoes capable of supporting a maximum proportion of the electrode weight which is less than the whole weight, (4) secondary supporting means for partially supporting the weight of the electrode from the said electrode supporting yoke, said secondary means being adapted also to support a maximum proportion of the electrode weight which is less than the whole weight, said secondary means and said contact shoes together being adapted to support at least the whole weight of the electrode, and (5) power actuated motive means for lowering the said secondary supporting means in relation to the supporting yoke, said secondary supporting means comprising (*a*) a secondary yoke mounted on the electrode supporting yoke through the power actuated motive means, (*b*) auxiliary electrode supporting clamps suspended from said secondary yoke, and (*c*) means for adjusting the pressure of said auxiliary supporting clamps on the electrode.

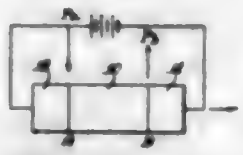
2,896,004
ELECTRIC HEATING FURNACE AND METHOD OF HEATING
John R. Duffy, Northbrook, and George W. Holz and August Wilford Lillenberg, Chicago, Ill., assignors to Lindberg Engineering Company, Chicago, Ill., a corporation of Illinois
Application March 5, 1956, Serial No. 569,549
26 Claims. (Cl. 13—22)

1. An electric heating furnace comprising a hollow body defining a chamber to receive material to be heated, a thin strip of conductive material formed with a series of parallel corrugations therein transverse to the length of the strip mounted in the chamber adjacent to and spaced from the wall thereof, and terminals connected to the



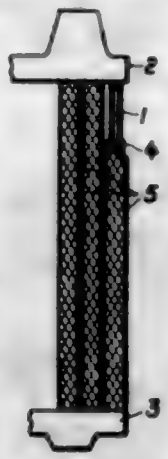
ends of the strip and extending out through the wall of the chamber for connection to a source of power.

2,896,005
THERMOELECTRIC HEAT PUMP
Robert W. Fritts, Elm Grove, Wis., and Sebastian Karrer, Port Republic, Md., assignors, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
Application June 1, 1955, Serial No. 512,436
13 Claims. (Cl. 136—5)



4. A cold producing thermoelement comprising two circuit members of different respective materials, a heat absorbing element having good heat conductivity and slight thermoelectric power conductively joined intermediate said members to form together therewith a thermoelectric junction, at least one of said two members consisting of a binary compound of two metals of a slightly imperfect composition departing from perfect stoichiometry by an amount of at most 2 percent by weight of the total material of said member, and having semiconductor-like electric conductance.

2,896,006
COVER FOR ELECTRODES IN GALVANIC CELLS
Erik Gustav Sundberg, Nol, Sweden, assignor to Aktiebolaget Tudor, Stockholm, Sweden, a Swedish joint-stock company
Application May 14, 1956, Serial No. 584,780
5 Claims. (Cl. 136—43)



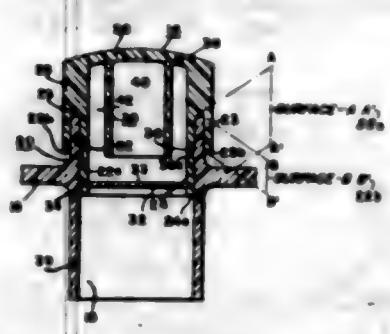
1. In an accumulator electrode comprising a plurality of parallel rods of conductive material, active material

opening, the clamping device also including an operating angular position relative to said first angular position, so

chloride which comprises reacting ethylene with chlorine from the cyclohexane.

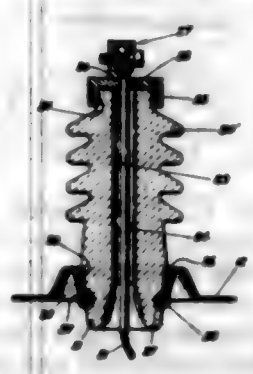
surrounding said rods, and improved covers surrounding said active material to retain the active material on said rods, said improved covers consisting of a fabric of threads, part of said threads being of a fusible plastic and part of said threads being of a fibrous material, said plastic parts crossing each other and being fusible at a temperature lower than any temperature at which the threads of said fibrous material may be fusible to be bound to each other at said crossing points.

2,896,007
VENT CAP
John E. Baskirk, Muncie, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 12, 1957, Serial No. 695,663
4 Claims. (Cl. 136—177)



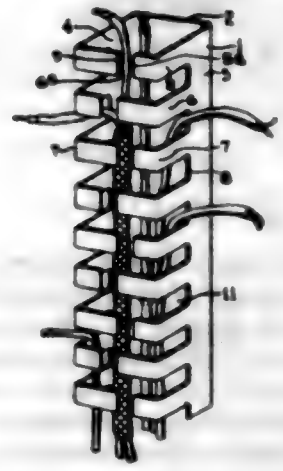
1. A vent cap for use in combination with a storage battery cell cover which includes a filler opening surrounded by an upwardly extending cylindrical portion, comprising, a cover and downwardly extending body for the vent cap made of semi-rigid plastic material having a coefficient of expansion different than that of material of the cell cover and cylindrical portion, a pair of concentrically spaced skirts extending downwardly from said body and encasing both sides of the cylindrical portion with semi-rigid plastic material, the outer of said concentric skirts sealing against a top outer surface of said cylindrical portion during expansion at higher temperatures and the inner of said concentric skirts being of greater length than the outer skirt and sealing against a top inner surface of said cylindrical portion during contraction at lower temperatures, snap-in abutment means engaged between said inner concentric skirt and said cylindrical portion, and an annular rigid member fitted inside said inner skirt for maintaining engagement of said snap-in means.

2,896,008
SEAL OF BUSHING TO CASING OF ELECTRICAL APPARATUS
Frank A. Putz, Wauwatosa, Wis., assignor to McGraw-Edison Company, a corporation of Delaware
Application December 29, 1953, Serial No. 401,025
11 Claims. (Cl. 174—50.56)



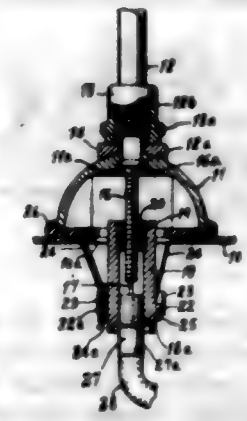
5. In electrical apparatus, in combination, a casing enclosing an electrical device and having an opening therein defined by a wall conically flared outwardly of said casing and having an inner marginal edge, an electrical bushing having a circumferential groove intermediate its ends and extending through said opening, and a resilient ring within said groove compressed against said wall and providing the sole support for said bushing on said casing, said ring having a portion extending beyond and beneath said edge serving as locking means to prevent withdrawal of said bushing from said casing, whereby said ring provides a dam which prevents leakage into the interior of said casing, the portion of said bushing above said groove and said ring being opposite and in radially spaced relation to said conically flared wall.

2,896,009
WIRING DUCT
Jack E. Caveney, Chicago, Ill.
Application May 17, 1955, Serial No. 508,843
5 Claims. (Cl. 174—72)



5. A wiring duct comprising a channel having a bottom wall connected between side walls, each side wall having a row of inwardly extending bent fingers of two different lengths placed alternately, the longer length fingers in one row and laterally spaced from each other at their ends to row being opposite the shorter length fingers in the other provide an irregular passage for the accommodation of wires.

2,896,010
AUTOMOBILE ANTENNA
David Newman, Brooklyn, N.Y., assignor of one-half to Milton Herman, Brooklyn, N.Y.
Application July 5, 1956, Serial No. 596,088
17 Claims. (Cl. 174—153)



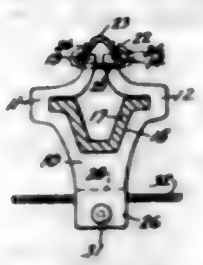
1. A mount for securing an antenna to an electrically conductive body over an opening in the body, the mount comprising a housing having a generally arcuate undercut groove in its outer wall, the housing being open at the bottom, an antenna member having an expanded end portion receivable in the groove and movable therein to adjust said member to different angular positions relative to the housing, a locking element for securing the antenna member in a predetermined angular position relative to the housing, a clamping device including expansible means secured to the housing and extending below the bottom thereof, said means being insertable through said body

signal-translating characteristic for said subcarrier wave ing such beam to scan said screen in a succession of fields

parallel corrugations therein transverse to the length of of parallel rods of conductive material, active material

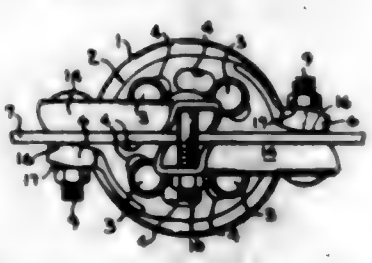
opening, the clamping device also including an operating member accessible from outside the housing and connected to said expansible means for drawing the same against the inner surface of the body around said body opening, a live terminal in the housing electrically connected to the antenna member but electrically insulated from the expansible means and from said body, and a ground terminal electrically connected to the expansible means.

2,896,011
ELECTRIC FENCE INSULATOR
Elvin Hunsby, Morris, Minn.
Application November 9, 1954, Serial No. 467,685
2 Claims. (Cl. 174—163)



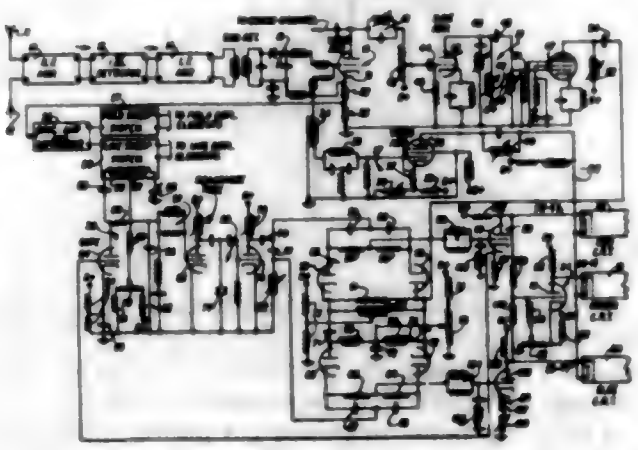
1. An insulating electric fence mount, comprising an elongate and completely dielectric and unitary body portion to be normally applied in a horizontal position on an upright fence post, said body portion having at one end a pair of yieldable and outwardly extending legs and also having an enlarged recess between the legs defining substantially the cross-sectional configuration of a fence post, said legs terminating outwardly in resilient and relatively narrow spaced ends, an open-ended clincher-type ring extending inwardly at the outside surfaces of each of said legs at their end portions for pressing and holding the legs firmly against the sides of a fence post received in said recess, said body portion having at the opposite end thereof a wire-retaining means spaced from the recess for securely holding the wire in insulated condition and spaced relation from the post.

2,896,012
BUS SUPPORT
Thorsten A. Fjellstedt, Ingleside, Ill., assignor to McGraw-Edison Company, a corporation of Delaware
Application September 22, 1955, Serial No. 535,844
5 Claims. (Cl. 174—171)



1. A bus bar support adjustable to embrace one or a plurality of bus bars by rotation on its axis, said support comprising a base member rotatable between first and second angular positions, means for releasably securing said base in any angular position between said first and second angular positions, said base member having a pair of upstanding legs extending integrally from the base generally in the direction of said rotational axis and disposed at substantially opposite sides of the margins of said base, each of said legs being a first predetermined distance from the opposite sides of a fixed plane containing said rotational axis when said base is in said first angular position, the sum of said distances constituting the width of a bus bar passageway between said legs, each of said legs being a different predetermined distance from said plane when said base is in a predetermined different angular position relative to said first angular position, so that the width of said bus bar passageway may be varied by rotating said base to change the angular position of said legs, each of said legs having bearing surfaces disposed toward said passageway for engaging the bus bars in compressive relation thereagainst, said surfaces being bowed outwardly toward said passageway, and means including a plurality of clamping members, one being disposed on the opposite side of said passageway from each of said legs, for urging the bus bars into compressive relation with said legs.

2,896,013
COLOR TELEVISION RECEIVER
Norman W. Parker, Park Forest, Ill., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Application August 5, 1953, Serial No. 372,547
10 Claims. (Cl. 178—5.4)



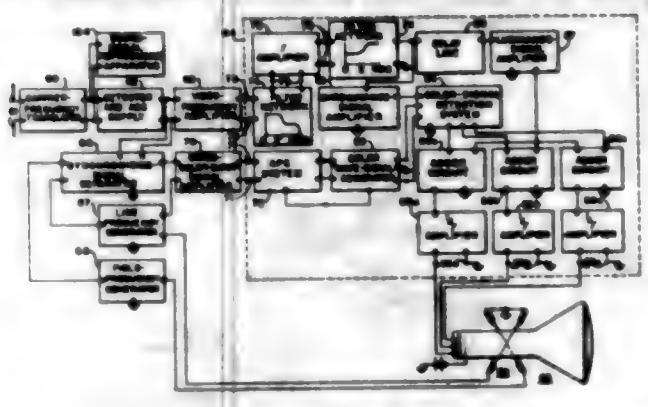
10. A television receiver for utilizing a television signal which has synchronizing components and picture components, said receiver including in combination, a detector for demodulating the television signal, an amplifier including an electron discharge device having an anode, a cathode and a control electrode, first direct current impedance means connecting said cathode to a point of reference potential, first circuit means coupling said detector between said control electrode and said first impedance means at a point thereon remote from said point of reference potential, so that said detector is floating with respect to said point of reference potential for direct current, second circuit means connected to said anode of said discharge device and including second impedance means, a first channel coupled to said first impedance means for utilizing the synchronizing components of the demodulated television signal appearing across said first impedance means, and a second channel connected to said second impedance means for utilizing the picture components of the demodulated television signal appearing across said second impedance means.

2,896,014
GAMMA-CORRECTION APPARATUS
Bernard D. Loughlin, Lynbrook, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Application July 22, 1954, Serial No. 445,106
17 Claims. (Cl. 178—5.4)

4. Gamma-correction apparatus for a color-television system comprising: circuit means for supplying a composite television signal including a first signal primarily representative of the luminance and a modulated subcarrier wave signal representative of the chrominance of a televised image; means including a gamma-correcting device coupled to said supply circuit and having a non-linear signal-translating characteristic for said first signal to correct the gamma of said first signal and a linear

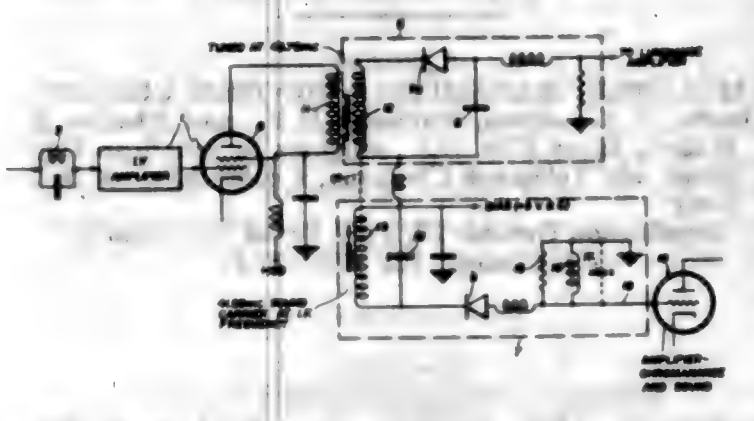
being spaced apart, in the direction of line scanning, a recording and reading devices operative on the same

signal-translating characteristic for said subcarrier wave signal which varies as a function of the intensity of said first signal so as effectively to modulate said subcarrier wave signal by said first signal; and signal-modifying means responsive to said translated composite signal for



effecting one degree of modification of a characteristic of said subcarrier wave signal and another degree of modification of the same characteristic of said first signal to develop a gamma-corrected composite television signal.

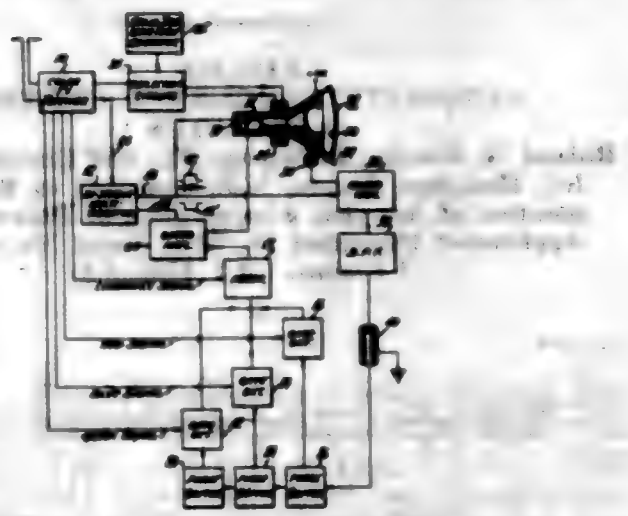
2,896,015
COLOR TELEVISION SIGNAL-SEPARATING SYSTEM
Frank Patterson Smith, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation
Application December 16, 1955, Serial No. 553,532
5 Claims. (Cl. 178—5.4)



1. A system of the character described comprising first means for amplifying a composite color television signal consisting of luminance, chrominance and sound signal components, second means for attenuating the sound signal component of the composite signal which is amplified by said first means, a first luminance signal circuit, a second chrominance-sound signal circuit, third means intercoupling said first means with said first and second signal circuits, said third means comprising signal-separating means which limits the luminance portion of the composite signal to said luminance circuit only and the chrominance and sound signal components of said composite signal to said chrominance-sound circuit only, and sound signal-peaking means included in said signal-separating means for increasing the ratio of the sound signal to the luminance signal in said second chrominance-sound circuit.

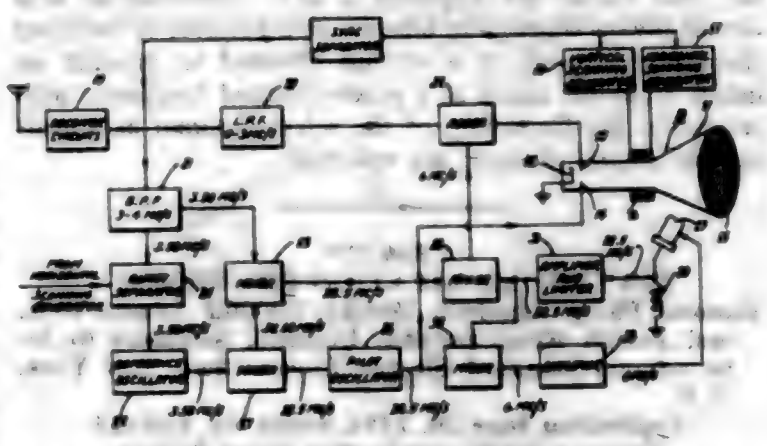
2,896,016
COLOR IMAGE REPRODUCING APPARATUS
Roger D. Thompson, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application March 27, 1956, Serial No. 574,115
20 Claims. (Cl. 178—5.4)

1. Color television image reproducing apparatus which comprises: a cathode ray tube having a target screen made up of a plurality of repeating groups of color light-emitting strip-like areas and means for directing an electron beam toward said screen; deflection means for causing such beam to scan said screen in a succession of fields each including a plurality of vertically spaced lines, said deflection means comprising line and field deflection wave generators; a source of color representative signals corresponding to said color light-emitting areas; means associated with said tube for deriving index signals from the scansion of said screen by such beam in a line scanning direction; modulating means coupled operatively between said color signal source and said index signal-deriving means and controlled by such index signals for applying color-representative signals to said tube sequentially in such manner as to modulate the intensity of such beam;



delay means for delaying the application of index signals to said modulating means for substantially the period of one scanning line interval; means operating in synchronism with said line deflection generator for causing selected lines of a field to be devoted, at least in part, solely to the production of index signals, said means comprising a gate for periodically interrupting the application of said color representative signals to said tube, such that said selected lines constitute screen search lines while the remaining lines of said field constitute display lines active in the production of color image light; and means for so controlling such vertical deflection as to cause the display lines of successive fields to be vertically interlaced.

2,896,017
DUAL-BEAM CATHODE RAY TUBE SYSTEM
Melvin E. Partin, Philadelphia, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application November 28, 1956, Serial No. 624,780
14 Claims. (Cl. 178—5.4)



1. In a cathode ray tube system, a dual-beam cathode ray tube having a screen with spaced indexing elements thereon which emit radiant energy in response to electron impingement thereon, means for effecting line scanning of said screen by the two electron beams within said tube, one beam being the image-producing beam and the other being the indexing beam, the two beams

2,896,021
INTER-COMMUNICATION SYSTEM

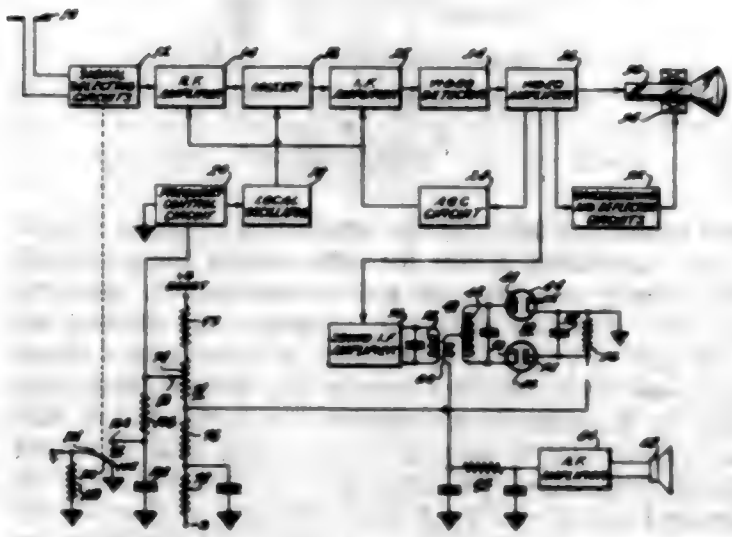
2,896,023
REVERTIVE CALL TELEPHONE SYSTEM

being spaced apart, in the direction of line scanning, a predetermined distance different from the spacing of said indexing elements, whereby time-spaced pulses of energy are emitted by said indexing elements, and the energy pulses caused by the image-producing beam occur during the time intervals between the energy pulses caused by the indexing beam, means for producing current pulses in response to energy pulses emitted by said indexing elements, and means for effecting gate operation of said last means so as to produce an indexing signal from the pulses caused by said indexing beam substantially to the exclusion of the pulses caused by said image-producing beam.

2,896,018
AUTOMATIC FREQUENCY CONTROL APPARATUS

Roland N. Rhodes, Levittown, Pa., and Charles B. Oakley, Hamilton Square, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Application December 19, 1956, Serial No. 629,383
7 Claims. (Cl. 178—5.8)



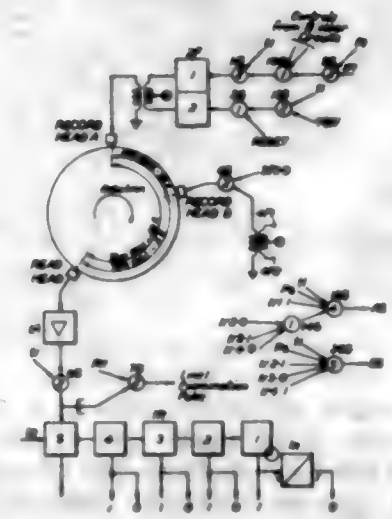
7. In an intercarrier sound television receiver having a signal selection circuit for tuning said receiver to any one of a plurality of television channels, a local heterodyne oscillator, and a sound channel including a frequency modulation detector having a stabilizing capacitor, the combination of frequency controlling means connected to said oscillator, circuit means connecting said stabilizing capacitor to said frequency controlling means to vary the frequency of said oscillator in accordance with the potential developed across said stabilizing capacitor, and means for applying a D.-C. potential to said circuit means during the interval said receiver is switched from one channel to a second channel to provide an initial oscillator signal at a predetermined frequency with respect to the frequency of the selected signal as signals in said second channel are received.

2,896,019
TELECOMMUNICATION EQUIPMENT

Esmond Phillip Goodwin Wright, Donald Adams Weir, and Joseph Rice, London, England, assignors to International Standard Electric Corporation, New York, N.Y.

Application June 30, 1954, Serial No. 440,424
Claims priority, application Great Britain July 7, 1953
11 Claims. (Cl. 178—17.5)

1. Apparatus for measuring a succession of time intervals comprising a storage device having tracks, a recording device and a reading device mounted adjacent said storage device in operative relation to a common track, a re-recording device mounted intermediate said recording and reading devices operative on the same track, means for moving the storage device past said devices in turn at a substantially uniform speed, means for causing the recording device initially to insert a mark in said storage device after which at a predetermined time interval, said reading device detects said mark,

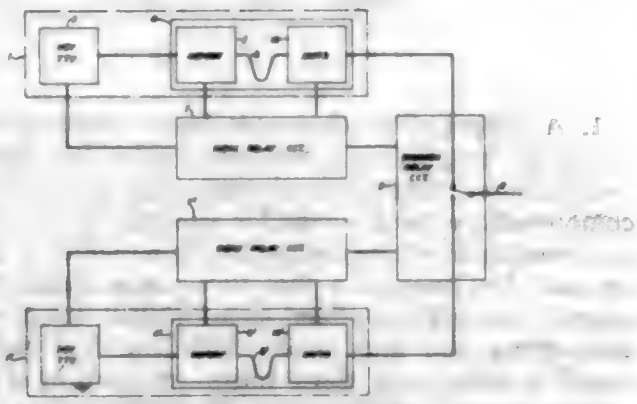


means operated by said reading device both for producing a time signal and for causing the re-recording device to record a further mark, and means responsive to the detection of a mark by said reading device and the recording of a mark by said re-recording device a desired number of times for disabling said re-recording device at the time a further mark is to be recorded.

2,896,020
MULTIPLE TRANSMITTER CONTROL CIRCUIT

Charles J. Goodman, Valhalla, N.Y., and Charles R. Walker, Jersey City, N.J., assignors to American Telephone and Telegraph Company, a corporation of New York

Application October 29, 1954, Serial No. 465,672
8 Claims. (Cl. 178—17.5)

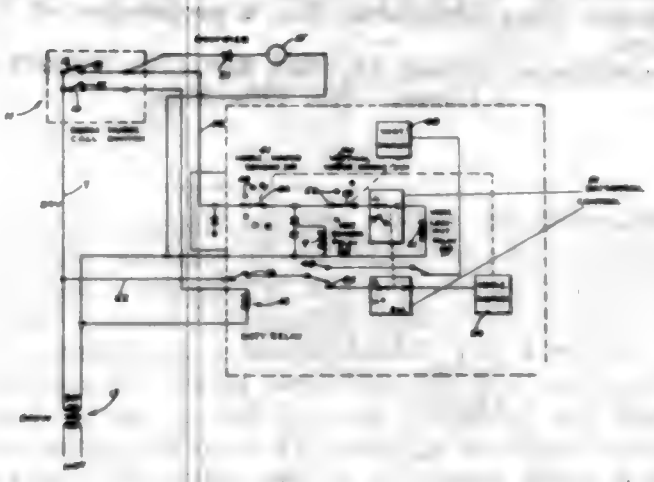


1. In a telegraph system, a keyboard transmitter, a reperforator adapted to store in the form of perforated tape messages generated by said keyboard, a tape transmitter associated with said reperforator for transmitting the messages stored in said perforated tape, an outgoing transmission channel connected to said tape transmitter, means for registering reception of a break signal incoming over said channel, means controlled by said break signal registering means for arresting said tape transmitter if in operation, means also controlled by said break signal registering means for conditioning said keyboard transmitter to be disabled, means responsive to the next end-of-message signal generated by said keyboard transmitter for completing the disablement thereof, and manually operable means for canceling the registration of said break signal and for requalifying said tape transmitter and said keyboard transmitter for operation.

2,896,021
INTER-COMMUNICATION SYSTEM

Louis E. Phillippe, Cleveland Heights, Ohio, assignor, by mesne assignments, to The Standard Electric Time Company, Springfield, Mass., a corporation of Connecticut

Application February 9, 1954, Serial No. 409,104
4 Claims. (Cl. 179—1)

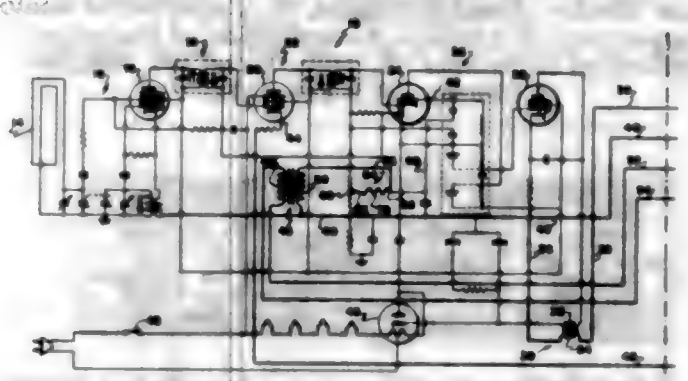


1. An intercommunication system comprising a central station and a plurality of remote stations having lines leading to the central station, switch means at each remote station connected to the respective line and operable when actuated to initiate a call to the central station, selector switch means connected to the central station and having connections to all of said lines and having means for selecting the line in which a call has been initiated and connecting the selected line to the central station, audible communication means at the central station having provision for communication selectively with each of the remote stations, and means operable while said audible communication means is in use to reset said switch means at the remote station which initiated the call and to render said selector switch means inoperative to select other lines in which later calls have been initiated.

2,896,022
INTERCOMMUNICATION SYSTEM

Spencer D. Wooten, Jr., Memphis, Tenn., assignor to Home Music Systems, Inc., Memphis, Tenn., a corporation of Tennessee

Application March 9, 1955, Serial No. 493,137
14 Claims. (Cl. 179—1)

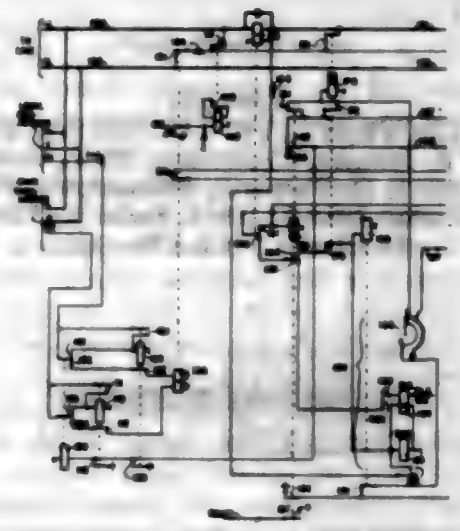


1. An intercommunication system comprising an amplifier, a plurality of speaker stations, means associated with each speaker station for selectively connecting its respective speaker to the output or to the input of said amplifier and for disconnecting its respective speaker from said amplifier, and means effective upon the connection of any speaker to the input of said amplifier for connecting to the output of said amplifier any speaker disconnected from said amplifier.

2,896,023
REVERTING CALL TELEPHONE SYSTEM

Pier Bakker, Chicago, Ill., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware

Application August 13, 1953, Serial No. 374,037
10 Claims. (Cl. 179—17)



10. In a telephone system, a plurality of party lines each having a number of substations thereon, a line circuit individually connected to each line over which connections may be extended to and from the substations on the lines, an adapter circuit individual to each line, each said adapter circuit connected to its line between the substations and the line circuit, means for extending calls by way of said adapter circuits over said lines and line circuits, a switch in each adapter circuit having a reverting call position, means in the adapter circuit of a calling line operated responsive to one substation on said calling line making a reverting call to another substation on said calling line for operating its individual switch to connect with said reverting call position, signalling means in said adapter circuit operated responsive to the connection of said switch to said reverting call position for signalling said other substation on said calling line, and means in said adapter circuit for disconnecting said calling line from said line circuit in response to the connection of said switch to said reverting call position.

2,896,024
HEARING-AID HAVING DIRECTIONAL RECEPTION CHARACTERISTICS

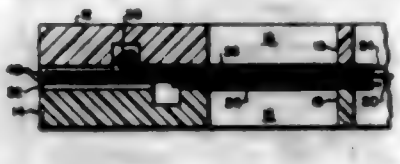
Eugene James Toomey, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

Application October 28, 1954, Serial No. 465,311
4 Claims. (Cl. 179—107)

1. A hearing aid having directional characteristics of reception comprising a support adapted to be worn in substantially fixed position on the head of the user and having the general configuration of a spectacle frame, means for converting sound impulses mounted in each earpiece of said spectacle frame adjacent the ears of the user, a sound reproducer carried by each end of the

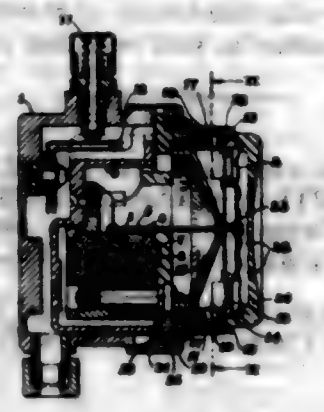
earpieces of said spectacle frame, and independent connections between said means and said sound reproducer mounted in one earpiece and between said means and said sound reproducer mounted in the other earpiece whereby electrical impulses produced by said means in turn independently produce audible sounds in the sound reproducers.

2,896,825
ELECTROSTATIC LOUDSPEAKER
Arthur A. Jaumann, Cambridge, Mass., assignor to Francis D. Wetherill, Philadelphia, Pa.
Application June 21, 1955, Serial No. 516,898
14 Claims. (Cl. 179—111)



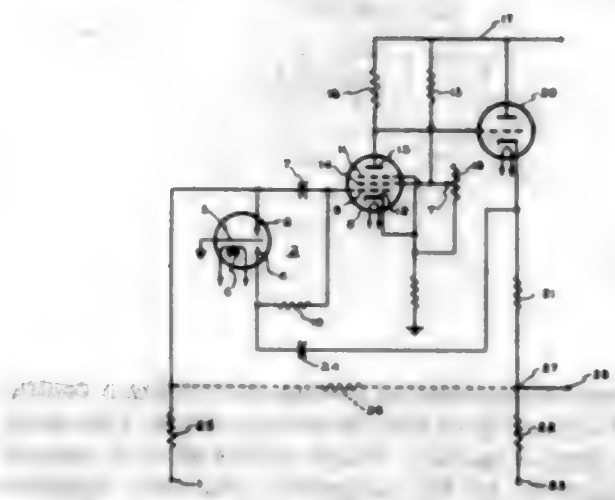
1. An electrostatic transducer comprising a flexible diaphragm of high resistivity, a frame on which the diaphragm is supported, a plurality of conductive electrodes, electrical connections to the diaphragm and to the electrodes, and dielectric insulating sheaths for the electrodes, the sheaths being supported by the frame in closely spaced relation to the diaphragm with the electrodes slidable within the sheaths to accommodate relative dimensional changes between electrodes and frame.

2,896,826
SOUND POWERED PHONE
Alfred H. Kettler, Collingswood, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application November 2, 1953, Serial No. 389,905
3 Claims. (Cl. 179—115)



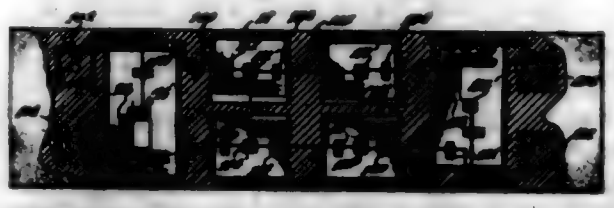
2. A microphone comprising a cup-like casing, a diaphragm mounted transversely across and closing the open end of said cup-like casing, a partition wall spaced inwardly of said diaphragm and extending transversely across the casing for forming with said diaphragm and the casing wall a closed chamber, a generator mounted in the casing interiorly of said partition wall, said chamber being provided with a plurality of openings formed in a peripherally-spaced radially-directed arrangement about the casing wall, a rotatable shutter for adjustably closing said openings, and an elongate drive-rod interconnecting the generator and the diaphragm and having its outer end extending through and sealably supported in the central portion of said partition wall, said central drive-rod supporting portion of said partition wall being disposed in such close proximity to the diaphragm that only a relatively small extent of the rod projects through said closed chamber, whereby the remaining elongate extent of said rod is protectively disposed in said casing interiorly of said partition wall.

2,896,827
REFLEX AMPLIFIERS
Blanchard D. Smith, Jr., Alexandria, Va., assignor to Melpar, Inc., Alexandria, Va., a corporation of New York
Application October 19, 1953, Serial No. 386,693
5 Claims. (Cl. 179—171)



1. A D.-C. amplifier, comprising an input terminal for a D.-C. signal, means for interrupting said D.-C. signal periodically to produce periodic pulses having amplitudes proportional only to the amplitude of said D.-C. signal, an amplifying device having an input circuit and an output circuit, means comprising a condenser for applying said pulses to said input circuit, said condenser being connected in series between said input circuit and said input terminal, said amplifying device producing amplified replicas of said pulses in said output circuit, means comprising said means for interrupting for generating a D.-C. steady votlage representative in amplitude only of said replicas of said pulses, means for applying said D.-C. steady voltage to said input circuit, and said amplifying device generating an amplified replica only of said D.-C. steady voltage in said output circuit.

2,896,828
PRINTED CIRCUIT FOR HIGH FREQUENCY AMPLIFIER APPARATUS
Donald Mackey, Haddon Heights, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application September 30, 1954, Serial No. 459,366
4 Claims. (Cl. 179—171)

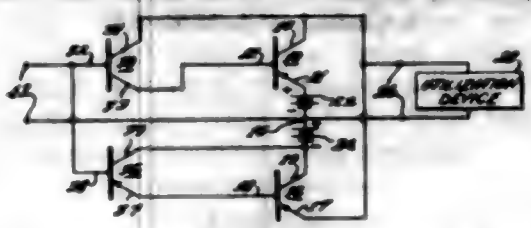


1. A high frequency printed circuit transformer system comprising in combination, a flat insulating supporting panel, a plurality of printed circuit transformers affixed to and spaced along one side of the panel, means providing planar conductive areas on said one side of the panel and along respective opposite edges of said panel and means providing further planar conductive areas positioned on said one side of the panel between adjacent printed circuit transformers and interconnecting said first named areas such that each of said printed circuit transformers is surrounded by a continuous conductive loop coplanar therewith.

surface part having forward and after extremities, an

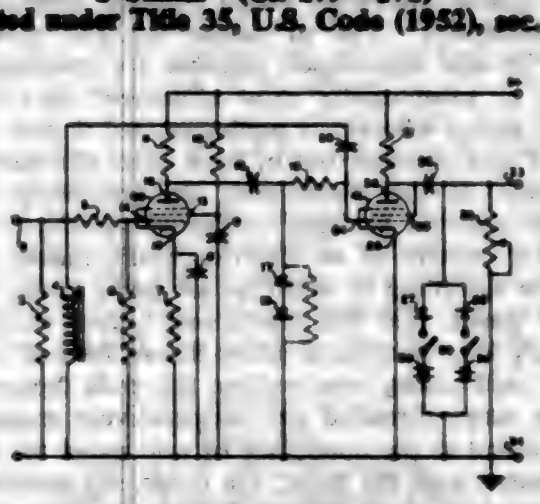
2,896,834

2,896,829
SEMICONDUCTOR AMPLIFIER CIRCUITS
Hung Chang Lin, Levittown, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Application May 3, 1955, Serial No. 505,769
6 Claims. (Cl. 179—171)



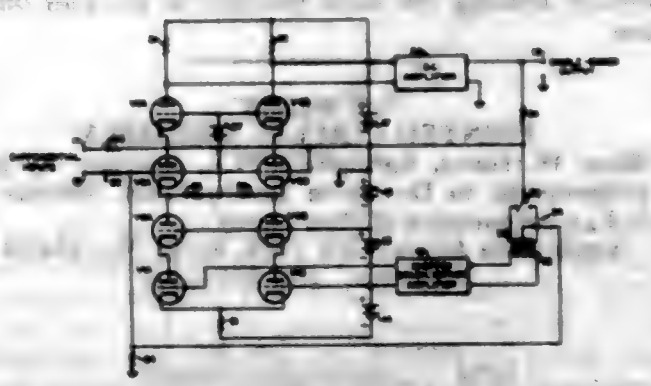
1. In a push-pull amplifier circuit the combination with a first transistor of one conductivity type including a first base, a first emitter, and a first collector electrode; a second transistor of said one conductivity type including a second base, a second emitter, and a second collector electrode; means connecting said first emitter electrode with said second collector electrode; and output circuit means connected with said first collector and second emitter electrodes and to a common point in said circuit to derive a push-pull output signal; of a third transistor of an opposite conductivity type including a third base, a third emitter, and a third collector electrode; a fourth transistor of said one conductivity type including a fourth base, a fourth emitter, and a fourth collector electrode; input circuit means connected with said third and fourth base electrodes and to a common point in said circuit for applying an input signal thereto; signal conveying and direct-current conductive means connecting said third collector electrode with said first base electrode; means connecting said third emitter electrode with said first collector electrode; signal conveying and direct-current conductive means connecting said fourth emitter electrode with said second base electrode; and means connecting said fourth collector electrode with said second collector electrode; said third and fourth transistors being alternately conductive in response to input signals of opposite polarity to provide out-of-phase signals for driving said first and second transistors in push-pull relation.

2,896,830
METHOD OF AUTOMATIC AMPLITUDE CONTROL FOR SPEECH FREQUENCIES
Lyle R. Battersby, Little Silver, N.J., assignor to the United States of America as represented by the Secretary of the Army
Application May 3, 1956, Serial No. 582,609
1 Claim. (Cl. 179—171)
(Granted under Title 35, U.S. Code (1952), sec. 266)



In an amplitude control system, first and second vacuum tubes, each having anode, cathode and control electrodes, a source of positive potential with respect to ground, a first load impedance connected between said source of potential and the anode of said first vacuum tube, a second load impedance connected between said source of potential and the anode of said second vacuum tube, the cathodes of said first and second vacuum tubes being connected to ground, first input terminal, a second grounded input terminal, a first resistance connected across said first and second input terminals, a first inductance across said first and second input terminals, a second resistance connecting said first input terminal to the control electrode of said first vacuum tube, a third resistance connecting the control electrode of said first vacuum tube to ground, a first condenser connected in series with a fourth resistance between the anode of said first vacuum tube and the control electrode of said second vacuum tube, a second condenser connected between the control electrode of said second vacuum tube and said first input terminal, a first output terminal and a grounded second output terminal, a third condenser connected between the anode of said second vacuum tube and said first output terminal, a first diode having one polarity, a first battery having the opposite polarity and a first switch connected in series across said first and second output terminals, a second diode having the opposite polarity, a second battery having the one polarity and a second switch connected in series across said first and second output terminals, and a third diode having the one polarity connected between the intersection of said first condenser and said fourth resistance and ground.

2,896,831
DIFFERENTIAL AMPLIFIER
Frink Mansfield Young, Boston, Mass., assignor to Epsco, Incorporated, Boston, Mass., a corporation of Massachusetts
Application October 15, 1957, Serial No. 690,358
7 Claims. (Cl. 179—171)



1. Apparatus for providing an output signal indicative of the difference in amplitude between first and second input signals comprising, a differential amplifier having first and second controllable parameters, means for deriving a difference signal characteristic of the difference between said first and second parameters and amplifying same to derive said output signal, means for combining one of said input signals with said output signal to provide a first combined signal which differs from the other of said input signals by less than the difference between said first and second signals, and means responsive to the difference between said first combined signal and the other of said input signals for altering the difference between said first and second controllable parameters until the difference between said first combined signal and said other of said input signals is less than a predetermined value.

2,896,832
TROLLEY SHOE
Fred George Christmann, Edmonton, Alberta, Canada, assignor to The Ohio Brass Company, Mansfield, Ohio, a corporation of New Jersey
Application February 16, 1953, Serial No. 337,138
5 Claims. (Cl. 191—99.1)

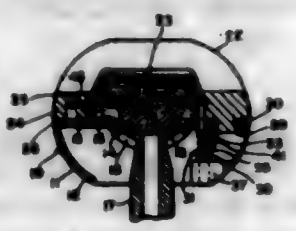
1. A current collector head comprising support means for attachment to a trolley pole including an elevated

panel and the upper surface of a peripheral flange formed axially movable therein, a tubular adapter in said barrel

that only a relatively small extent of the rod projects

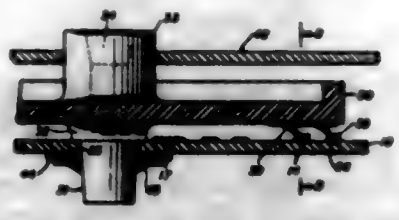
circuit transformers is surrounded by a continuous conductive loop coplanar therewith.

surface part having forward and after extremities, an under-cut part at the forward extremity of the said elevated part, a trolley shoe carried on the top surface of the said elevated part with a downwardly and rearwardly directed hook-like member at the forward extremity of the shoe engaged with the under-cut part, a downwardly and rearwardly projecting hook-like member at the after extremity of the collector shoe and a transverse counterpart member on the support means engaged by the after hook-like member of restraining, with the forward hook-like member and the said under-cut part, vertical movement of the shoe, the said counterpart member being spaced from the said elevated part sufficiently to permit



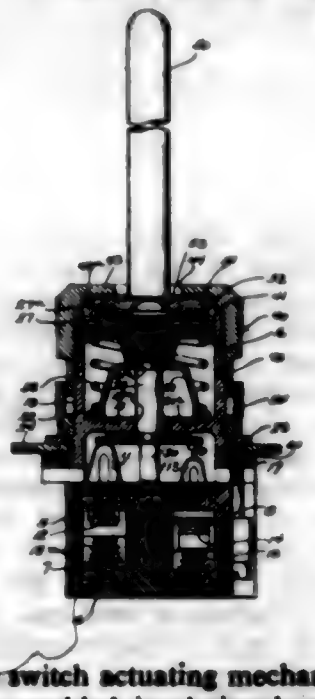
movement of the shoe in the forward direction to disengage the said hook-like members from the said under-cut part and from the said counterpart member respectively, latch means comprising a transversely directed and vertically movable latch member carried by the support means forwardly of and below the said counterpart member and engaged with the forward side of the after hook-like member in an upward one of two positions to prevent forward movement of the shoe relative to the support means and disposed below the after hook-like member in a second of the said two positions and spring means between the support means and latch member for normally holding the latch member in the said one position.

2,896,033
PRINTED CIRCUIT ASSEMBLY
William W. Harts, Springfield, N.J., assignor, by mesne assignments, to Daystrom Incorporated, Murray Hill, N.J., a corporation of New Jersey
Application January 27, 1955, Serial No. 484,541
3 Claims. (Cl. 200—11)



1. Electrical apparatus of the class described comprising a flat plate of insulating material having a hole extending therethrough, a plurality of current-conducting members carried on the upper surface of the plate and forming parts of the electrical circuit of the apparatus, said conducting members terminating in ends spaced apart along a plurality of circles concentric to the hole in the plate, a rotary disc including a lower shaft passing through the said hole in the plate and an upper shaft, a fixed panel spaced from the plate and having a hole accommodating the upper shaft of the disc, spring means biasing the said disc toward the plate, metallic inserts disposed in the circumferential spaces between adjacent ends of the conducting members of said circles, said inserts being electrically isolated from the current-conducting members and the circuitry, and flexible contact fingers made of spring material and secured to the lower surface of the disc, each of said fingers being adapted for sliding contact with the conducting member ends and inserts oriented along a given circle and each finger having a length exceeding the spacing between adjacent inserts and conducting member ends.

2,896,034
MOUNTING AND OPERATING MEANS FOR ELECTRIC SWITCH MECHANISMS
William F. Nolden and Clyde F. Robbins, Milwaukee, Wis., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Application August 17, 1956, Serial No. 604,712
1 Claim. (Cl. 200—16)



In an electric switch actuating mechanism, in combination, a two-part molded insulating housing providing a recess, a pair of combined stationary contact and terminal members, the stationary portions of said members being positioned within said recess and the terminal portions of said members being located exteriorly of said recess, an insulating actuating member slidably mounted within said recess and having a reduced portion at one end thereof, a coiled compression spring interposed between the other end of said recess and said actuating member to normally bias the latter toward a given outer extreme position, a bridging contactor associated with and movable by said actuating member, means including a second coiled compression spring interposed between a part of said actuating member and said contactor to normally bias the latter toward a given extreme position with respect thereto, a die-cast metal casing to which said housing is attached for support of the latter, a push-button slidably mounted within said casing, said push-button when depressed effecting movement of said bridging contactor out of engagement with said stationary contacts, a die-cast, inverted cup-shaped metal member attached to said die-cast metal casing and having a centrally located outwardly flared opening formed therein, a "wobble-stick" type of switch actuator movably retained by said cup-shaped member for extension of the former in substantially axial alinement with the push-button, means whereby a predetermined degree of movement of said actuator out of such axial alinement causes movement of the pushbutton, the insulating actuating member and the bridging contactor associated with the latter for control of an electric circuit, means affording one hole mounting of said die-cast metal casing to a perforated panel, said last mentioned means comprising a relatively long peripheral screw-thread formed on a portion of said casing intermediate the ends thereof, an internally screw-threaded nut cooperatively engaging said screw-thread at the outer face of said panel for clamping engagement with the latter, the outer end portion of said nut being formed to provide therein an internal annular recess, said inverted, cup-shaped metal member having a lower end portion of reduced external diameter to telescope into said annular recess in said nut, thus avoiding exposure of said peripheral screw-thread when said parts are in assembled relationship to each other, a sealing gasket interposed between the lower surface of said

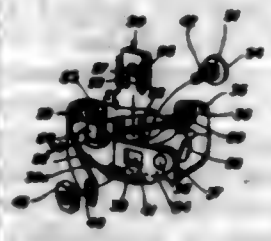
panel and the upper surface of a peripheral flange formed integrally with said die-cast metal member, a dome-shaped elastic sealing gasket, the reduced outer end portion of which is adapted to seat against the inner end of said pushbutton and the larger end portion of which is adapted to seat against the inner wall of an outwardly opening recess in said cast metal member, and a relatively large coiled compression spring interposed between the inner surface of said pushbutton and a peripheral flange formed integrally with the inner end portion of said dome-shaped elastic sealing member.

2,896,835

BREAKER POINT ASSEMBLY

Robert D. Harrington, Gurnee, and Glenn E. Heveran and Peter D. Kolar, Waukegan, Ill., assignors to Shurhit Products, Inc., Waukegan, Ill., a corporation of Illinois

Application May 28, 1956, Serial No. 587,853
2 Claims. (Cl. 200—30)



1. A breaker point assembly, comprising a bracket plate with an ear turned upwardly therefrom, a fixed contact mounted on the ear, an upright hollow pivoting post secured to the plate at a distance from the ear, an insulating sleeve mounted upon the post, a movable breaker arm mounted on the sleeve and insulated thereby from the post, a contact at the end of the arm to engage the said fixed contact, an insulating member secured to the arm intermediate its end for engagement by a breaker cam, a leaf spring having one end interposed between the insulating member and the arm and the intermediate portion extending around the said insulating sleeve to the opposite side of the arm, an ear extending upwardly from the plate at said opposite side of the arm, an insulating bracket attached to the last named ear, the bracket plate having a recess and the insulating bracket having a projection to engage in the recess for additionally holding this bracket in fixed relation, means releasably securing the other end of said spring to the insulating bracket comprising an opening in the bracket and a recess in the end of the spring, a fastening unit and a headed bolt therefor inserted through the opening and the recess, a retaining clip with a front recess and a closed back inserted over the threaded shank of the bolt and with its back extending over the head of the bolt and straddling the bracket and the end of the spring for also engaging the outer end of the head and retaining the bolt in position through the bracket and the spring even though the nut is removed from the bolt, the back imperforate side of the clip having inwardly projecting flanges extending from the edges forwardly toward the edges of the recessed front of the clip to engage the insulated bracket at the sides of the head of the fastening bolt providing a space for seating the head in the clip at the inside thereof.

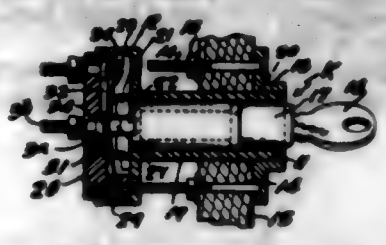
2,896,836

SWITCH MECHANISM

John B. Parsons, Maumee, Ohio

Original application November 17, 1955, Serial No. 547,487. Divided and this application February 3, 1958, Serial No. 712,976
3 Claims. (Cl. 200—44)

1. Switch mechanism of the character described comprising a housing having a tubular barrel, a key lock cylinder in the outer end of said barrel rotatable and axially movable therein, a tubular adapter in said barrel having an enlarged end portion at the inner end of the barrel, an operative driving connection between said lock cylinder and said adapter, a spring contact arm at the inner end of the adapter, means for securing the spring arm to the adapter for movement therewith, a cup-shaped end portion on said barrel enclosing said spring arm, a base fitting said cup-shaped end and having



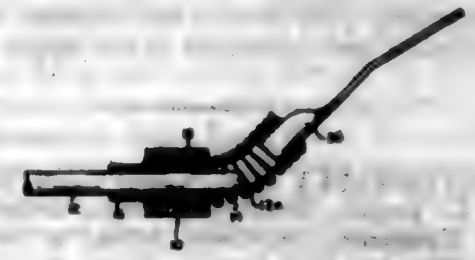
contact terminals engageable by the spring contact arm upon rotation of the adapter, a countersunk channel extending crosswise of the inside of said base, a central contact terminal in said base disposed in the bottom of said channel, and a contact spring extending lengthwise of said channel with the ends thereof on the base, said spring being in engagement with said spring arm, said spring arm and contact spring when in register being axially movable to engage said central contact terminal.

2,896,837

ELECTRIC SWITCH

Edward Vossen, Malverne, N.Y., assignor to Step Motion Devices Corp., Brooklyn, N.Y.

Application December 23, 1957, Serial No. 704,309
2 Claims. (Cl. 200—51)



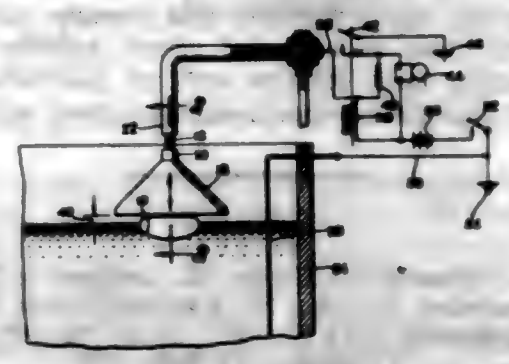
1. An electric switch of the character described, comprising a straight wire, an insulating sleeve on said straight wire, a spaced distance from one end of said wire, leaving said end bare, and a coil spring surrounding said insulating sleeve and said wire, one end of said coil spring being secured to said insulating sleeve and the opposite end being adapted to flex relative to its longitudinal axis into and out of engagement with the bare end of said wire, the straight wire being provided with external screw threads and the insulating sleeve with internal screw threads meshing therewith, whereby the wire is longitudinally adjustable relative to the insulating sleeve and the coil spring.

2,896,838

SWIMMING POOL ALARM

Harry Gerber, Glendale, Calif.

Application January 18, 1957, Serial No. 635,049
4 Claims. (Cl. 200—61.2)



1. A swimming pool warning system comprising: an electrical conductor immersed in said pool, a second con-

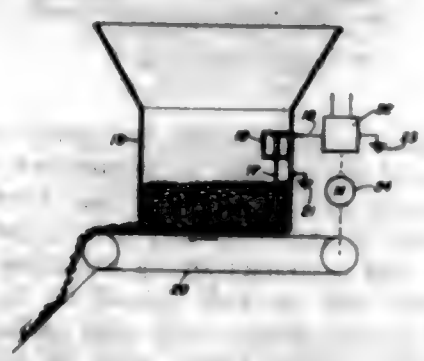
moving the movable magnet laterally along the stationary comprising at least one elongated contact member car-

inserts and conducting member ends.

ing gasket interposed between the lower surface of said

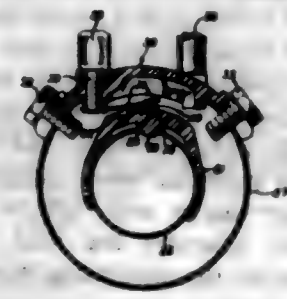
ductor positioned immediately above the surface of said pool and a signalling device connected to said conductors, a float supporting said second conductor above the surface of the pool.

2,896,039
BIN-LEVEL SENSING DEVICE
Clarence B. Sizemore and James R. Thompson, Birmingham, Ala., assignors to United States Steel Corporation, a corporation of New Jersey
Application July 17, 1957, Serial No. 672,468
4 Claims. (Cl. 200—61.21)



1. A sensing device comprising a housing having an opening in its underside, a downwardly extending tubular flexible element of insulating material fixed at its upper end within said housing and terminating with its lower end above the underside of the housing, an elongated electrically conductive probe fixed at its upper end to the lower end of said flexible element and extending downwardly through said opening, and an electric conductor extending from outside said housing, through said flexible element and connected to the upper end of said probe.

2,896,040
INTERNALLY MOUNTED CONTACTS
William G. Jonson, Dearborn, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application November 7, 1955, Serial No. 545,260
6 Claims. (Cl. 200—61.54)



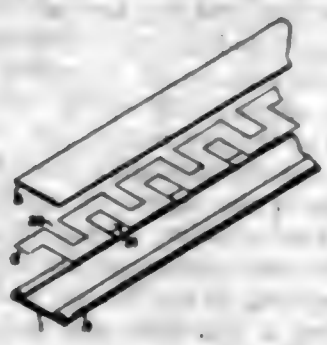
1. In a motor vehicle gear selector assembly having a rotatably and axially movable gear selector tube enclosed within a fixed housing, that improvement comprising a collar carried by the gear selector tube, a current conducting member carried by said collar, a terminal portion carried by the housing, said portion including a staggered spring urged contacts, said member arranged to selectively close an electrical circuit between pairs of said contacts upon rotation only of said tube, and to maintain said circuit upon axial movement only of said tube.

2,896,041
SWITCH
Fred C. Schwanske, Chicago, Ill., assignor to Dormeyer Corporation, Chicago, Ill., a corporation of Illinois
Application May 17, 1957, Serial No. 659,816
7 Claims. (Cl. 200—73)

6. A switch for providing arc-free electrical contact action comprising a pair of resilient blades, a dielectric support member interposed between said blades, said dielectric member defining an aperture, a contact on each of said blades having a diameter approaching the diameter of said aperture, said blades being positioned for effecting circuit-making contact of said contacts within said aperture, cup means on one of said blades biased thereby into abutting engagement with the said dielectric support member, said cup means being disposed coaxially around the contact carried by said blades and being movable out of engagement with said dielectric support member for a slight interval following contact between said

contacts whereby movement of the contact on the other of said blades into said aperture is effective to force out air therein, said dielectric support member cooperating with said cup and contact means to prevent arcing in said switch and to preserve the calibration and life of said contacts, and spring means connecting said blades, said spring means including a bowed, resilient connecting strip and a limit element at one end of said strip configured to be disposed at an angle relative to a blade connected by said spring means in one position of said switch and to be disposed in abutting, substantially parallel relationship with said blade at another position of said switch.

2,896,042
TAPE SWITCH
Robert H. Koenig, Cambria Heights, N.Y., assignor to Tapeswitch Corporation of America, Cambria Heights, N.Y.
Application March 3, 1958, Serial No. 718,784
1 Claim. (Cl. 200—86)



An electrical tape switch comprising a pair of thin continuous conductive stripe, first insulating means between said strips, said insulating means being partially wrapped around one of said strips to provide an air gap between said conductive strips, at least one of said conductive strips being expandable and compressible to permit coiling said tape switch without buckling or short circuiting, at least one of said strips having a transverse curvature and second insulating means placed on the outside of said other strip of said pair and connected to said first insulating means along the edges thereof.

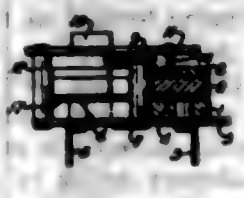
2,896,043
ELECTRIC SWITCH FORMED FROM MAGNETS
Lewis D. Andrews, St. Marys, Pa., assignor to Stackpole Carbon Company, St. Marys, Pa., a corporation of Pennsylvania
Application February 11, 1957, Serial No. 639,512
10 Claims. (Cl. 200—87)

1. An electric switch comprising a stationary magnet and a movable magnet normally attracted to each other, the movable magnet being separable from the stationary magnet and also movable laterally along it, means for

2,896,047

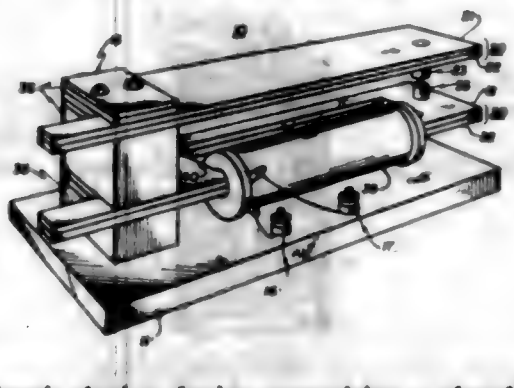
contact springs mounted to said other end of said heel-

moving the movable magnet laterally along the stationary magnet from one predetermined position to another, a pair of electric contacts projecting from the inner surface of one magnet, and a layer of conducting material on part of the inner surface of the other magnet bridging said contacts only when the movable magnet is in one of said two positions, said magnets being nonconductors of



electricity and each provided with a plurality of north and south poles, unlike poles of the two magnets being opposite each other in each of said two positions to attract the magnets toward each other, and like poles of the magnets being opposite each other while the movable magnet is moving laterally from either of said positions to the other, whereby the movable magnet will be repelled from the stationary magnet during said movement.

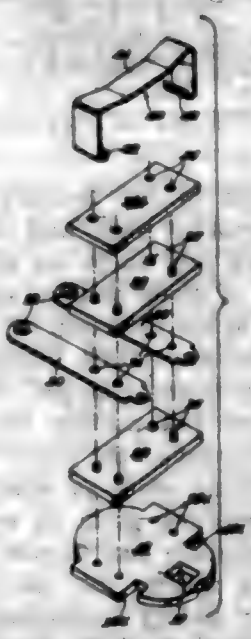
2,896,044
MAGNETOSTRICTIVE RELAY
Harold J. McCreary, Lombard, Ill., assignor to General Telephone Laboratories, Incorporated, Northlake, Ill., a corporation of Delaware
Application October 1, 1957, Serial No. 687,392
2 Claims. (Cl. 200—87)



1. A circuit closing device comprising a plurality of bimetallic cantilever contacting springs and means for producing a magnetic flux in one of said springs, each of said springs comprising a pair of dissimilar metals bonded together, said dissimilar metals including a first metal having a positive coefficient of magnetostriction and a second metal having a negative coefficient of magnetostriction, each of said springs having the metals aligned in the same relative positions, all said springs responsive to ambient temperature changes to assume relatively parallel positions when acted on only by temperature, one of said springs having a cutout therein, said flux producing means comprising an electromagnetic coil mounted to said cutout, said one spring including a complete magnetic path for magnetic flux around said cutout, said one spring capable of assuming an arcuate shape to contact another of said springs when said one spring is saturated by a magnetic flux.

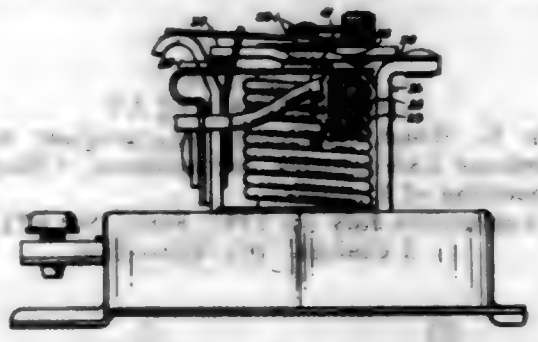
2,896,045
RELAY WITH CLAMP-CONTACT ASSEMBLY
Daniel Brunicardi, Wood Dale, Ill., assignor to Raymond T. Moloney, Chicago, Ill.; American National Bank and Trust Company of Chicago, executor of said Raymond T. Moloney, deceased
Application November 8, 1957, Serial No. 695,326
1 Claim. (Cl. 200—87)

In a relay of the type having a flat armature plate mounted on a fulcrum near one end thereof to rock in a sense normal to the magnetic axis through a pole of an electromagnet disposed at one side of said plate; a removable contact assembly borne by said armature and comprising at least one elongated contact member carried at one end between at least two insulating plates which are seated on said armature plate at that particular side of said fulcrum which is toward said magnetic axis so that the weight of said contact assembly acts in a direction to rock said armature toward said electromagnet pole; spring means acting on said armature plate at an opposite side of said fulcrum from said particular side to rock the armature to a normal position oppositely from the effort of the weight of said contact assembly; and means for removably securing said contact assembly on the armature and comprising a U-shaped flat spring



strap straddling said insulating plates with the respective ends of the opposite side arms of said strap turned back to form wide hooks and passing around the side margins of said armature plate and locking respectively by spring action in elongated slots formed on the underside of said armature plate respectively adjacent said margins thereof, said slots having a length and width substantially the same as the width and thickness of the ends of said hooks to interfit closely with the latter and prevent shifting movement of the strap relative to the armature, together with cooperating boss and protuberance means on the armature and insulating plates to further prevent shifting of the latter.

2,896,046
VOLTAGE REGULATOR
Gerald Diepenhorst, Roseville, and Marvin S. Denenfeld, Ann Arbor, Mich., assignors to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application January 7, 1957, Serial No. 632,779
8 Claims. (Cl. 200—102)



1. In a voltage regulator that improvement comprising a core having two windings and two switches, a first switch being hinged at one end of said core and a second switch being hinged to said first switch, said first switch defining a flux path opening, a portion of said second switch extending through said opening so that after said winding and core have established a predetermined field said second switch will be opened.

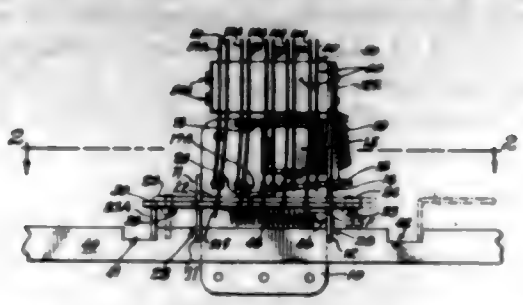
tacts, a current-carrying movable element to bridge said members, said movable element including a main fusible

2,896,052
CONTROL MECHANISM

action comprising a pair of resilient blades, a dielectric

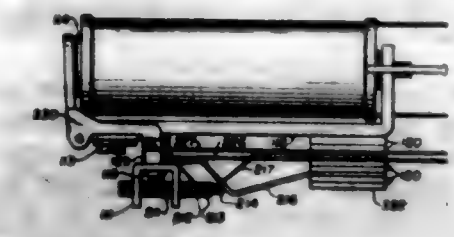
the movable magnet being separate from the stationary magnet and also movable laterally along it, means for

2,896,847
GANG SWITCH
Charles T. Breitenstein, Chicago, Ill., assignor to Raymond T. Moloney, Chicago, Ill.; American National Bank and Trust Company of Chicago, executor of said Raymond T. Moloney, deceased
Application March 4, 1955, Serial No. 492,283
2 Claims. (Cl. 200—104)



1. A gang switch of the latching type comprising a base, a switch-operating plate and means mounting the same to slide back and forth on said base, said plate having a plurality of blade notches spaced along an edge thereof extending in the direction of its movement aforesaid; a gang of flexible switch blades arranged side by side in supporting means engaged with said base, each blade having a free end portion extending into one of said slots for movement of the blade responsive to movement of the operating plate as aforesaid; spring means acting on said operating plate to move the same to a normal starting position and dispose said switch blades correspondingly; a setting bar having at least partial guided support for sliding movement on said base in a direction paralleling that of the movement of said operating plate; and means having connection with said operating plate and projecting into a wide notch in said setting bar for engagement and movement by the latter in a direction opposite to that of the effort of said spring to move the operating plate to an advanced switch-operating position, the width of said notch substantially equalling the required travel of said operating plate for actuating the switch blades as aforesaid; an electromagnet carried on said base and having an armature spring-urged into a normal latching position from which it is withdrawn by attractive action of the electromagnet when energized; and latch means movable with said operating plate and positioned by the latter when in switch-operating position to be latchingly engaged by said armature to latch the operating plate in such position; said electromagnet being energizable to withdraw said armature from normal latching position relative to the operating plate as aforesaid to release the latter for spring return to said normal positon; and means for reciprocating said setting bar through a complete setting stroke the length of which is substantially the same as the width of said notch.

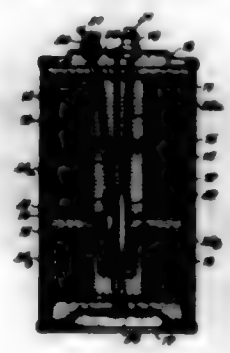
2,896,848
SENSITIVE RELAY
Fredric E. Wood, McHenry, Ill., assignor to General Telephone Laboratories, Incorporated, Chicago, Ill., a corporation of Delaware
Application July 10, 1957, Serial No. 671,010
2 Claims. (Cl. 200—104)



1. In a relay having a heelpiece, an armature pivotally mounted to one end of said heelpiece, a plurality of

contact springs mounted to said other end of said heelpiece, two of said springs combinedly forming a make combination including a stationary spring and a movable spring, said movable spring actuated by pivoting of said armature to impinge against said stationary spring, a first adjusting spring acting on said movable spring for increasing or decreasing the tension in said movable spring, said first adjusting spring formed of a light gauge spring material, a second adjusting spring acting on said stationary spring for changing the contact separation distance between said springs, said second adjusting spring formed of a rigid spring material to arrest the momentum imparted to said stationary spring by impingement thereagainst by said movable spring to thereby damp out vibrations of said stationary spring, a U-shaped bracket affixed transversely to said heelpiece, individual control means advanceably and retractably mounted through the legs of said U shaped bracket, each of said control means aligned in parallel relationship and controllably contacting individually said first and second adjusting springs.

2,896,849
ELECTRICAL APPARATUS
Alfred Maier, Stuttgart, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany
Application February 8, 1955, Serial No. 486,954
Claims priority, application Germany February 20, 1954
6 Claims. (Cl. 200—113)



1. In combination, electrical apparatus including a housing member; at least two current-carrying members mounted within said housing; an electrically conductive connector strip mounted between said current-carrying members, said connector strip being formed with a portion having a reduced cross section; a first pulling strip secured to said electrically conductive connector and also secured to a first point of said housing member; a second pulling strip secured to said electrically conductive connector strip spaced from that place at which said first pulling strip is secured, said second pulling strip also being secured to a point of said housing member spaced from and arranged substantially opposite said first point of said housing member to which said first pulling strip is secured; and a difficultly vaporizable fluid substantially filling the remainder of said housing, whereby upon expansion of said fluid and resulting movement of said two points of said housing in a direction away from each other, said pulling stripe will exert a pulling force upon said electrically conductive connector strip, breaking the same and interrupting electrical connection between said two current-carrying members.

2,896,850
REMOTE-OPERATED FUSE
Henry R. Tomlinson, Framingham, Mass.
Application April 12, 1957, Serial No. 652,495
6 Claims. (Cl. 200—113)

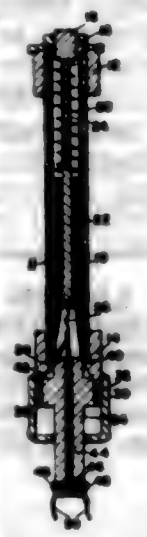
1. A remote operated fuse comprising a fuse body, a pair of spaced members thereon forming electric con-

of blades will produce actuation of the other blade of

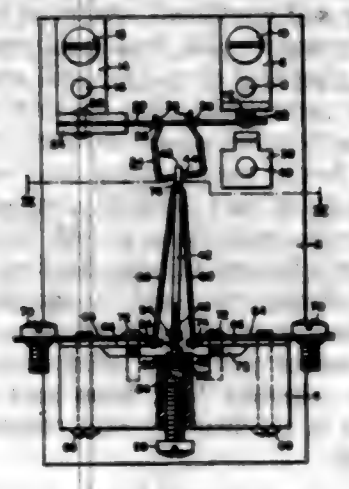
normally having a value such that only a very small

movable contact assembly borne by said armature and said second switch will be opened.

tacts, a current-carrying movable element to bridge said members, said movable element including a main fusible element, a spring tending to move the element to electrically disconnect said members, means including an auxiliary fusible element to hold the movable element in current-conducting position, a normally open electric circuit connected to the auxiliary fusible element, and means to close the circuit at will to fuse the fusible element and release the movable element.

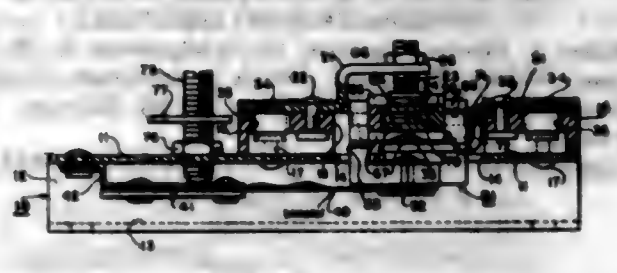


2,896,051
RELAY
Owen L. Taylor, Easton, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a corporation of Connecticut
Application March 30, 1956, Serial No. 575,835
15 Claims. (Cl. 200—122)



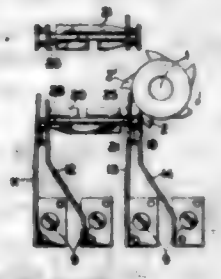
1. A relay comprising, a base of insulating material, separable contacts mounted on said base, an elongated contact operating member having one end supported on said base for longitudinal and pivotal movement, means engaging the other end of said operating member for operating said contacts in response to lateral movement of said other end of the operating member, thermally expansible wires connecting said other end of the operating member to said base at opposite sides of said operating member, respectively, and spring means reacting between said base and said operating member to bias said member longitudinally toward its aforesaid other end to place said wires under tension when cool so that when one wire is heated said other end of the operating member is moved toward the opposite side by the tension in the other wire to operate said contacts to one position and said operating member is moved in the opposite direction when the other wire is heated to move said contacts to another position.

2,896,052
CONTROL MECHANISM
Clayton L. Haller, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application December 11, 1957, Serial No. 702,845
5 Claims. (Cl. 200—138)



1. A thermostat comprising an assembly base; a snap-acting heat-responsive member including a first portion secured to said base and a second portion free to snap to a first position when its temperature reaches a predetermined first value and to snap to a second position when its temperature reaches a predetermined second value; a contact base of non-electrically-conductive material mounted on said assembly base; a first pair of contact arms carried by said contact base; a second pair of contact arms carried by said contact base; a contact carried by each of said contact arms; and a contact assembly including a non-electrically-conductive bracket secured to the second portion of the heat responsive member, a first contact plate aligned with the contacts of said first pair of contact arms, a second contact plate disposed in parallel spaced relation with respect to said first contact plate and aligned with the contacts of said second pair of contact arms, and non-electrically-conductive carrier structure supporting said contact plates in said bracket, whereby movement of said heat-responsive member second portion to said first position moves said first contact plate into bridging engagement with the contacts of said first pair of contact arms and said second contact plate out of bridging engagement with said second pair of contact arms, and movement of said heat-responsive member second portion to said second position moves said first contact plate out of bridging engagement with the contacts of said first pair of contact arms and said second contact plate into bridging engagement with the contacts of said second pair of contact arms.

2,896,053
ELECTRICAL SWITCH BLADE ASSEMBLY
Harold B. Feete, Lynn, and Ralph M. Manning, Winchester, Mass., assignors to General Electric Company, a corporation of New York
Application August 15, 1958, Serial No. 755,201
10 Claims. (Cl. 200—166)

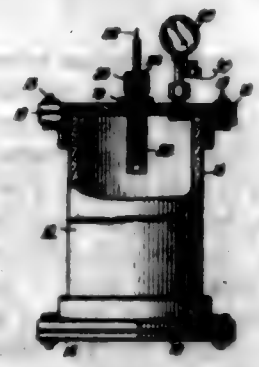


1. A switch assembly comprising at least two pairs of resilient spaced apart blade members, said blades being secured at corresponding ends, and a pair of movably interlocked, mutually supporting blade links interconnected such that actuation of one of the blades of one pair will produce actuation of one of the other blades of another pair through actuation of one of said blade links therebetween and actuation of the other blade of said one pair

to an A.C. source and to said heater resistance through a with respective grooves in which said end portions of

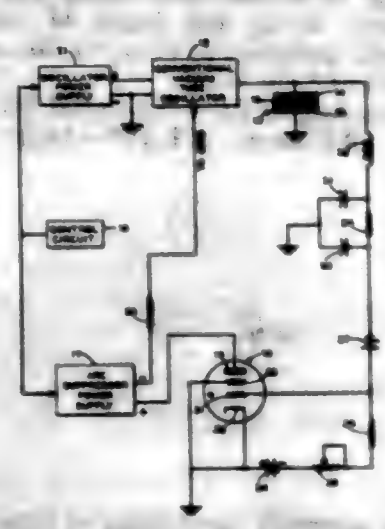
of blades will produce actuation of the other blade of said other pair of blades through actuation of the other of said blade links therebetween.

2,896,854
METHOD OF AND APPARATUS FOR THERMATRONIC HEATING
Ladislav J. Pircon, Berwyn, Ill., assignor to A. W. Brickman, Victor Conquest, Frank J. Madden, Wrisley B. Oleson, and Emery T. Filbey, all of Chicago, Ill., as trustees
Application September 14, 1954, Serial No. 455,945
3 Claims. (Cl. 219—10.41)



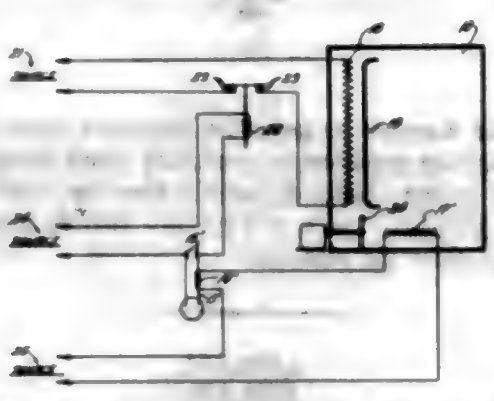
1. The method of raising the thermal energy level in an optimum manner in current-conducting organic materials uniformly throughout its mass which comprises the steps of placing between a pair of electrodes, and in direct contact therewith, an amount of current-conducting organic material which is sufficient to cause the electrodes to be spaced at a distance which is greater than the minor diameter of the electrodes, and applying a current to said electrodes of a frequency sufficiently high to insure passage of said current through said material without depending entirely upon the conductivity of said material, thereby achieve ionic and molecular motion in the material.

2,896,855
ARC SUPPRESSOR FOR DIELECTRIC HEATING EQUIPMENT
Fred Kohler, New York, N.Y.
Continuation of application Serial No. 359,114, April 21, 1953, now Patent No. 2,763,758, dated September 18, 1956. This application June 13, 1956, Serial No. 591,123
4 Claims. (Cl. 219—10.77)



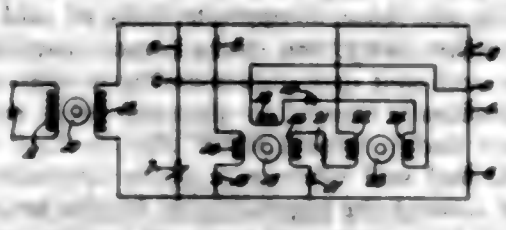
1. Dielectric heating apparatus comprising, in combination, a high frequency oscillator; a pair of electrodes connected to the output terminals of said oscillator for transfer of high frequency electric energy between said electrodes; a control circuit operable to impress a D.C. potential across said electrodes; a resistance in series in said control circuit, the inter-electrode conductivity normally having a value such that only a very small D.C. current flows through said resistance; a bias circuit including a source of D.C. bias potential having its negative terminal connected to the control grid of said oscillator; a normally non-conductive electronic valve in said bias circuit; a control element for said valve connected in said control circuit and operable, responsive to an increase in the potential drop across said resistance resulting from increased current flow in said control circuit due to an increase in the inter-electrode conductivity, to render said valve conductive to apply, to the oscillator control grid, a negative bias sufficient to cut-off the oscillator.

2,896,856
ELECTRIC THERMO CONTROL CIRCUIT
Ronald J. Berrup, Glastonbury, and Harold C. Davis, Jr., Cheshire, Conn.
Application September 20, 1955, Serial No. 535,354
1 Claim. (Cl. 219—39)



In heating system controls to maintain relatively constant temperature of air in an enclosed space, the combination comprising an electric circuit including an electric heating element to supply heat to said enclosed air in excess of requirements and a thermo-responsive switch means having a self-contained electrical heater means to connect or disconnect said first-mentioned heating element, a second electrical circuit for said second-mentioned electrical heater means including resistance means having electrical conductivity varying with temperature, said second-mentioned heater means being responsive to changes in the conductivity of said variable conductivity means to actuate the thermo-responsive switch means to connect or disconnect said first-mentioned heating element within predetermined limits of said conductivity, and air-circulating means in said space to blow air heated by said heating element from the latter directly to said resistance means, whereby heat from said first-mentioned heating element is received by said resistance means by convection of air.

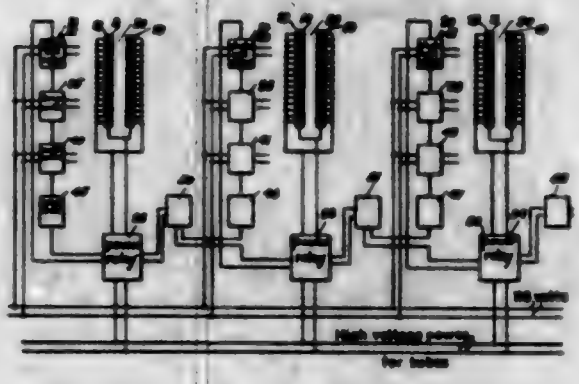
2,896,857
TEMPERATURE CONTROL DEVICE
Earl W. Grant, Los Angeles, Calif., assignor to Statham Instruments, Inc., Los Angeles, Calif., a corporation of California
Application October 29, 1956, Serial No. 618,962
7 Claims. (Cl. 219—39)



7. In combination, an electrical resistance heater element, a control circuit for said heater element, said control circuit comprising a reset magnetic amplifier including a reset control coil and a load coil connected

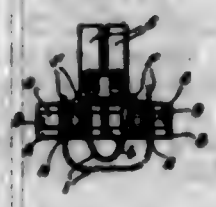
to an A.C. source and to said heater resistance through a half-wave rectifier in series with said heater resistance and said load coil, an electrical bridge comprising a temperature sensitive resistance and a balancing resistance, an A.C. power source connected to the input of said bridge, the output of said bridge connected to the said reset control coil of said magnetic amplifier.

2,896,058
APPARATUS AND METHOD OF DRYING PAPER
George H. Perrymun, Teaneck, N.J.
Application June 6, 1957, Serial No. 664,112
4 Claims. (Cl. 219—30)



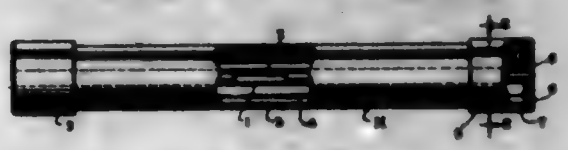
1. In an apparatus for drying paper, means for moving a paper web, a plurality of successive banks of infrared heating devices to which the web is successively moved and which operate directly upon the web to dry the same, and a plurality of control means operative by direct ascertainment of the condition of the web and by which the operation of the several banks of heating devices are controlled, said control means being operative to extinguish selected banks of the heating devices when no web is present in the moving means; when the moisture content in the moving web is below a predetermined level; when the temperature of the web is above a certain level and when the speed of movement of the web is reduced.

2,896,059
MOUNTING HEAD ASSEMBLY FOR AN ELECTRICALLY HEATED CUTTING TOOL
Herbert Ruff, Grafing, near Munich, Germany
Application January 31, 1958, Serial No. 712,396
Claims priority, application Germany April 26, 1957
5 Claims. (Cl. 219—31)



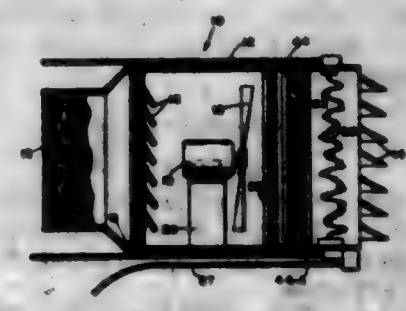
1. A mounting head assembly for an electrically heated cutting tool, comprising a pair of contact members each terminating in an enlarged forward face, an insulating member disposed between said contact members, each of said contact members being provided with a recess adjacent said forward face, fastening block means slidably disposed within the respective recesses of said contact members, and supporting means for said cutting tool detachably secured to said fastening block means and contiguous with the forward face of said contact members, so that respective end portions of said cutting tool abut against said contact members to form a closed circuit for a supply of electrical energy utilized to heat said cutting tool, said supporting means being provided with respective grooves in which said end portions of said tool are received in mounted condition of said head assembly.

2,896,060
APPARATUS FOR HEAT SETTING YARN
Earl J. Serfass and Walter D. Radler, Bethlehem, Pa., assignors to Hoberlein Patent Corporation, New York, N.Y., a corporation of New York
Application June 11, 1956, Serial No. 590,713
6 Claims. (Cl. 219—36)



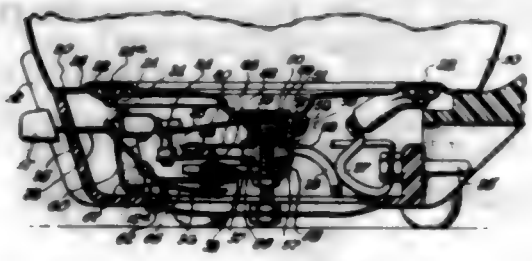
1. Yarn setting apparatus comprising an electrical resistance heating tube having an axially extending bore and a wall of substantially uniform cross-sectional area throughout its length, an insulator tube of substantially greater internal diameter than the external diameter of said heating tube surrounding said heating tube, and means holding said tubes in substantial concentric spaced relationship and bridging the space between said tubes adjacent their ends to thereby provide a closed annular air chamber surrounding said heating tube, said holding means providing for relative movement between said tubes to allow for the differences in coefficients of expansion of said tubes.

2,896,061
AIR RINSE
Hugh D. McMillan, Granite City, Ill.; Alice A. McMillan, executrix of said Hugh D. McMillan, deceased
Application March 27, 1958, Serial No. 724,312
3 Claims. (Cl. 219—39)



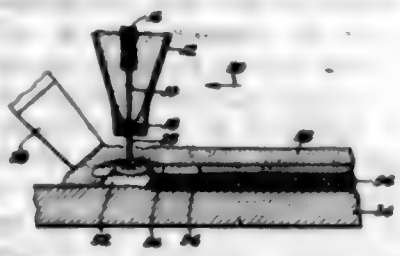
1. A ventilation system comprising, in combination, a duct having means at one end for connection to an air vent, means at the opposite end of said duct for connection to a sewer vent, a common passageway intermediate said one end of said opposite end of said duct, air flow control apparatus in communication with said common passageway, and valve means within said duct selectively blocking communication between said air flow control apparatus and each of said one and opposite ends of said duct, said duct comprising a T-shaped tubular section, said air flow control apparatus comprising an enclosure, a coupling at one end of said enclosure connected to said common passageway of said duct, louvers at the opposite end of said enclosure directing a stream of air inwardly and outwardly of said enclosure, blower means intermediate said coupling and said louvers, heating means intermediate said blower means and said louvers, and filter means intermediate said blower means and said heating means, said blower means comprising a reversible motor having a drive shaft, a set of fan blades secured to said shaft, said heating means comprising a plurality of electrical resistance elements disposed in the path of air flow between said coupling and said louvers, and a source of electrical energy for energizing said resistance elements.

2,896,862
COFFEE MAKER AND THERMOSTAT CONSTRUCTION THEREFOR
John Joseph Knoerr, St. Louis, Mo., assignor to Knapp-Monarch Company, St. Louis, Mo., a corporation of Delaware
Application March 12, 1956, Serial No. 570,929
5 Claims. (Cl. 219—44)



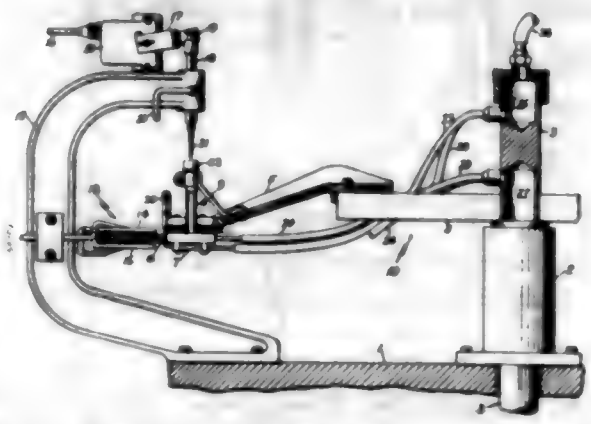
1. An electrically operated coffee maker comprising the combination of a water receiving vessel having a circular bottom of low thermal mass formed with a water-receiving depression at the geometric center thereof, an annular heating element disposed concentrically about the geometric center of the bottom wall of said vessel and in operative relation therewith, and means including temperature sensitive control elements secured to the bottom wall of said vessel and at the geometric center thereof for providing maximum thermal isolation, through said vessel bottom of low thermal mass, between said heating element and said temperature sensitive control elements, said temperature sensitive control elements including a bimetal member, means for connecting said bimetal member to said bottom wall at the geometric center thereof and in good heat transfer relation thereto for maximizing heat sensing by said bimetal of the true heat of the water in said vessel, said last named means including a layer of heat resistant silicone grease between the vessel and the bimetal member for preventing oxidation thereat, and thermal insulation means connected to said bimetal member on the side thereof away from said vessel for minimizing heat loss therefrom.

2,896,863
ELECTRIC ARC WELDING METHOD
Robert E. Jones, La Canada, Calif., assignor to Western Carbide Corporation, North Hollywood, Calif., a corporation of California
Application April 25, 1956, Serial No. 580,558
3 Claims. (Cl. 219—73)



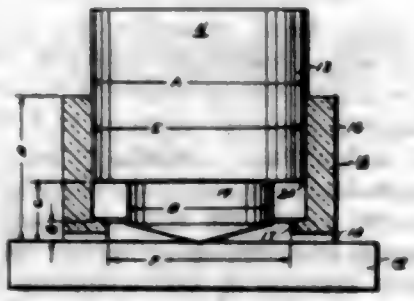
1. A method of applying to a metal workpiece a metal layer of a composition having a magnetic content and a nonmagnetic alloy metal content, characterized by the steps of: placing at least a part of the length of a welding rod in an electric circuit for deposition of the metal of the rod on the workpiece by an electric arc, said welding rod comprising a portion of the content of said composition, less than all of the magnetic content, and less than all of the nonmagnetic alloy content; finely dividing the remaining nonmagnetic alloy content to form particles; finely dividing the remaining magnetic content to form particles; bonding the nonmagnetic alloy particles and the magnetic particles together to form magnetically responsive clusters of particles; placing on said workpiece a layer of granulated, fusible flux material substantially free of substances capable of evolving large amounts of gas at welding temperatures; creating an arc between the welding rod and the workpiece inside said layer; placing a quantity of said magnetically responsive clusters adjacent said current-carrying part of the welding rod to cause the clusters to adhere magnetically to the welding rod; and feeding said welding rod with the adhering clusters thereon to the arc inside said flux layer.

2,896,864
TUBULATION APPARATUS
Henry B. Maloney, Wakefield, Mass., and Walter L. Russo, Wilton, Maine, assignors to Raytheon Company, a corporation of Delaware
Application March 25, 1957, Serial No. 648,228
4 Claims. (Cl. 219—85)



1. In combination, an intermittently movable member having a plurality of spaced heads attached thereto, each of said heads including an arm attached at one end to said movable member and having a holding fixture attached to its free end for holding an article to be soldered, said heads further including an elongated hollow chamber positioned above each of said holding fixtures adapted to receive therein said article to be soldered, a conducting loop positioned adjacent each of said holding fixtures and adapted to be moved into operative cooperation with a succession of stationary conducting loops at each intermittent movement of said movable member for heating said article by the transformer action of said movable and stationary loops while said loops are cooperatively related, means for electrically energizing said stationary loops, and means responsive to each intermittent movement of said member for injecting gaseous matter into each of said chambers while said article is being heated.

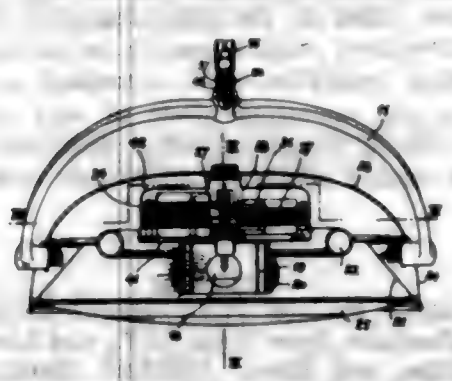
2,896,865
WELDING STUD AND FERRULE
Robert W. Murdock, Vermilion, and Robert C. Singleton, Oberlin, Ohio, assignors to Gregory Industries, Inc., Detroit, Mich., a corporation of Michigan
Application January 23, 1957, Serial No. 635,819
2 Claims. (Cl. 219—99)



1. In combination a welding stud and ferrule for end arc welding the stud to a work plate, said stud comprising a main body and a welding end with the welding end having a cross dimension less than the cross dimension of

the main body and having a predetermined axial length, said ferrule having a body slideable on said main body and having an axial length greater than the said predetermined length, said ferrule having an inwardly extending flange on one end thereof with an internal cross dimension greater than the said cross dimension of the welding end of the stud and less than the said cross dimension of the main body of the stud, said flange encircling said welding end and having an axial length less than the predetermined axial length of the welding end.

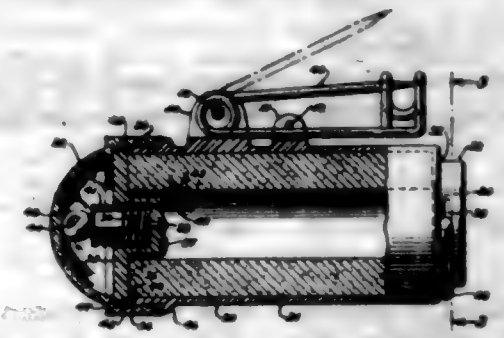
2,896,066
LIGHTING APPARATUS FOR DENTAL SURGERIES
Emmanuel Quetin, Paris, France
Application June 10, 1957, Serial No. 664,787
Claims priority, application France June 21, 1956
3 Claims. (Cl. 240—1.4)



1. A dual lighting apparatus for dental surgery comprising a pivotally mounted articulated arm, a stirrup rotatably carried by said arm, a casing pivotally supported by the stirrup, an operating handle attached to the forward edge of the casing for moving the casing in all directions, an intra-buccal scialytic electric lamp centrally located within the casing, a support within the casing supporting said lamp, a reflector fixedly mounted within the forward portion of the casing, means within the casing for focusing the lamp in relation to the reflector for producing a focused concentrated beam of light for intra-buccal illumination, a luminescent tubular lamp for general lighting surrounding said first-mentioned lamp and caried by the support, a transformer, starter, inductance, and fuse for the luminescent tubular lamp mounted on said support all arranged around the electric lamp and interiorly of the tubular lamp, a handle for operating the focusing means within the casing located outside the casing near the casing operating handle, switches for independently operating the lamps mounted on the casing in the vicinity of the casing operating handle, and electric supply wires passing through the arm, stirrup, and casing and having connections with said lamps within the casing and being hidden from view.

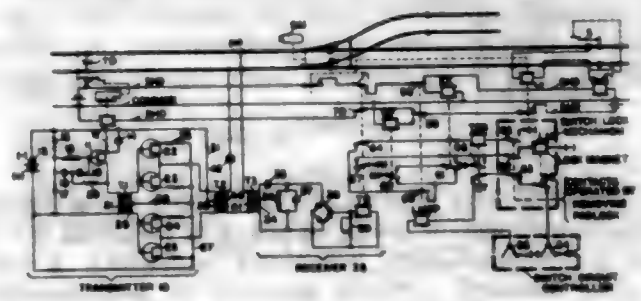
2,896,067
FLASHLIGHT
Lee J. Lockwood, Wonewoc, Wis., assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Application April 3, 1953, Serial No. 346,577
5 Claims. (Cl. 240—10.6)

3. A hermetically-sealed flashlight comprising a molded substantially rigid plastic tube having one closed end, the dry components only of a hollow bore cylindrical reserve cell disposed within said tube, a flashlight lamp, a molded plastic light tray positioned in the open end of said tube and hermetically sealed to the side walls thereof, said light tray having a perpendicularly off-set, annular, center well extending within the hollow bore of said reserve cell, a coiled spring in said well adapted to receive said lamp and electrically connected to one terminal of said cell, a flat spring contact positioned inside the coils of said coil spring and connected to the other terminal of said cell, and a transparent dome removably attached to said



tube and enclosing said lamp, said tube having means therein adapted to admit a liquid into the tube from the exterior thereof for the activation of said dry cell.

2,896,068
ELECTRONIC TRACK CIRCUIT FOR RAILROADS
John H. Auer, Jr., and Clinton S. Wilcox, Rochester, and Marcian E. Hoff, Jr., Spencerport, N.Y., assignors to General Railway Signal Company, Rochester, N.Y.
Application October 5, 1955, Serial No. 538,552
4 Claims. (Cl. 246—34)

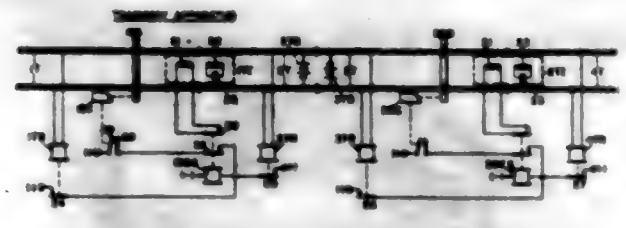


1. An overlay track circuit comprising, a pair of track rails, an electronic transmitter including an oscillator for generating an alternating current of a selected relatively high audio frequency, an electronic receiver tuned to said frequency and including an electromagnetic relay, said electromagnetic relay being connected to the output of said electronic receiver to be energized when an effective signal is received, an output transformer having primary and secondary windings, said primary winding being connected with the output of said transmitter, an input transformer having primary and secondary windings, said secondary winding being connected with the input of said receiver, a capacitor, and coupling circuit means connecting said secondary winding of said output transformer and said primary winding of said input transformer in series with said capacitor across said pair of track rails at a single selected feedpoint for producing an effective signal in the secondary winding of said input transformer for said receiver to actuate said electromagnetic relay only when said rails are shunted by a train in the vicinity of said single selected feedpoint.

2,896,069
DRAGGING EQUIPMENT DETECTING SYSTEM FOR RAILROADS
Leland W. Wight, Rochester, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.
Application August 31, 1954, Serial No. 453,180
5 Claims. (Cl. 246—169)

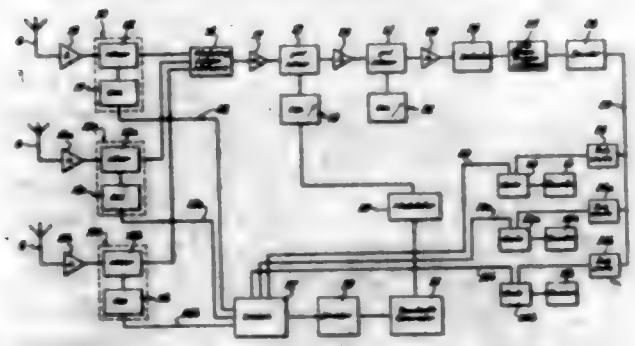
1. A dragging equipment detector control system for trains passing over a stretch of railway track comprising in combination, detector means disposed at intervals along the trackway and subject to actuation by equipment

dragging beneath a railway car, an inductor located along the trackway for each detector means, circuit means for shunting each of the inductors except when said de-



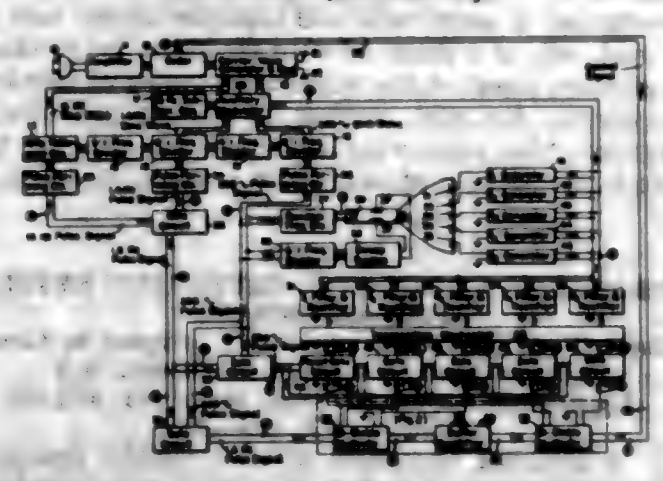
tector means is actuated, train carried receiving means subject to actuation when a train passes over said inductor only if said inductor is unshunted, and means for automatically resetting said detector means subsequent to its actuation after passage of a train.

2,896,070
RADIO AND TELEVISION SURVEY SYSTEM
Herbert Fromont, Los Angeles, and Harold N. Parker, Van Nuys, Calif., assignors to Calbest Engineering & Electronics Co., Los Angeles, Calif., a corporation of
Application July 2, 1956, Serial No. 595,251
13 Claims. (Cl. 250—2)



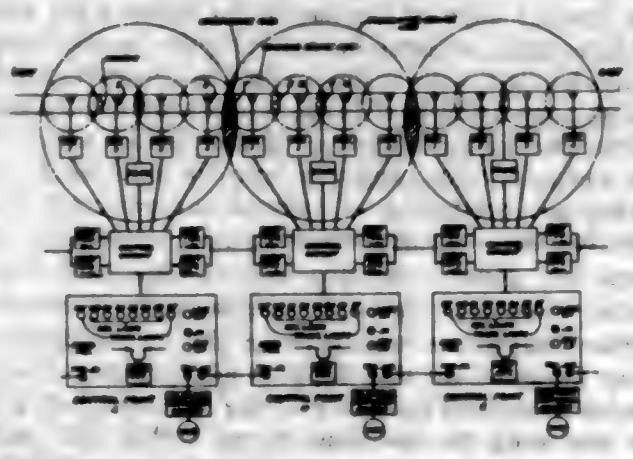
1. In a polling system responsive to the radiations from local oscillators utilized by radio receiving sets: successively operable means responsive to various pre-set frequencies to produce out-of-phase impulses; means repeating the impulses through a number of cycles at each position of the successively operable means; means dividing the cumulative impulses by said number; and successively operable means synchronously operated with the impulse producing means for integrating the impulses from the dividing means.

2,896,071
SECRECY COMMUNICATION SYSTEM
Walter S. Druz, Bonnerville, and Erwin M. Roschke, Des Plaines, Ill., assignors to Zenith Radio Corporation, a corporation of Delaware
Application March 1, 1954, Serial No. 413,272
9 Claims. (Cl. 250—6)



1. A secrecy communication system comprising: means for developing an intelligence signal consisting of frequency components falling within a relatively narrow frequency band; an encoding device coupled to said intelligence signal developing means and responsive to an applied control signal for varying the operating mode of said system; a signal source for developing a signal having a sinusoidal wave shape and having a predetermined frequency also falling within said narrow frequency band; a pulse forming circuit coupled to said signal source for developing a series of signal pulses periodically recurring at a frequency related to said predetermined frequency and individually exhibiting a relatively high order of precision timing; a gate circuit coupled to said pulse forming circuit; means including another pulse forming circuit coupled to said gate circuit for effecting actuation thereof to select only certain ones of said signal pulses; a control mechanism coupled to said gate circuit for developing a control signal having characteristic variations occurring in time coincidence with at least some of the pulses selected by said gate circuit; and means coupling said control mechanism to said encoding device to effect actuation of said device for varying the operating mode of said system in response to, and in time coincidence with, each such characteristic variation effectively to encode said intelligence signal.

2,896,072
MOBILE RADIO TELEPHONE SYSTEM
Albert E. Bachelet, New York, N.Y., and Louis A. Dorff, Glen Ridge, and Doron Mitchell, Martinsville, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application April 26, 1954, Serial No. 425,386
19 Claims. (Cl. 250—6)



2. In a mobile radio telephone system having a plurality of operator stations, a radio transmitter and a plurality of radio receivers connected to each of said stations, said stations being located at spaced intervals along a route of travel of mobile units equipped with radio sets, receiver indicator means at each of said stations for indicating which of the receivers connected thereto and which of the receivers connected to the stations adjacently located thereto are receiving radio transmission from said mobile units, transmitter indicator means at each of said stations for indicating which of the transmitters connected to said stations adjacently located thereto are transmitting to said mobile units, a control lead extending from each of said stations to each of said stations adjacently located thereto, transmitter control means at each of said stations for controlling the operation of the transmitter connected thereto, means at each of said stations responsive to the reception of radio transmission over the receivers connected thereto for operating the associated receiver indicator means thereat, means at each of said stations responsive to the reception of radio transmission over the receivers connected thereto for operating over the control lead extending to each of said stations adjacently located thereto the associated re-

age pick-off wiper, a first amplifier containing a cathode, sponsive to a D.C. potential differential connected be-

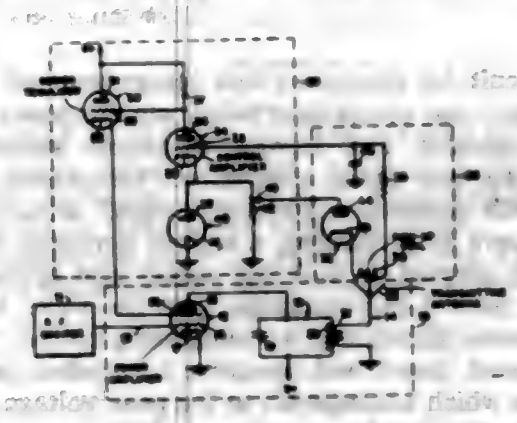
ceiver indicator means thereat, means at each of said stations controlled by said transmitter control means thereat when the transmitter thereat is operated for operating over said control lead extending to each of said stations adjacently located thereto the associated transmitter indicator means thereat, busy indicator means at each of said stations, means at each of said stations controlled by the transmitter control means thereat for operating the busy indicator means thereat when the transmitter connected thereto is operated, and busy control means at each of said stations responsive to the concurrent operation of certain of the receiver indicator means thereat and certain of the transmitter indicator means thereat for operating said busy indicator means thereat.

2,896,873

APPARATUS TO AUTOMATICALLY CONTROL TRANSMITTER POWER

James A. Westphal, Owasso, Okla., assignor to Sinclair Oil & Gas Company, Tulsa, Okla., a corporation of Maine

Application September 13, 1957, Serial No. 683,879
1 Claim. (Cl. 250—17)



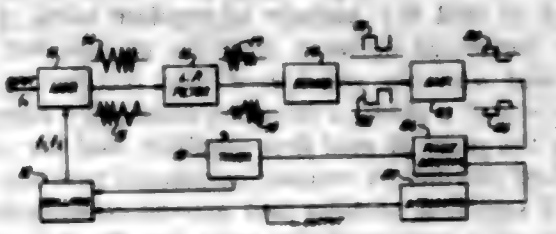
In combination with a radio transmitting apparatus including an amplifier for a high frequency electrical signal having an output circuit and a control circuit, the amplitude of a signal of said high frequency in said output circuit being a function of an input control signal applied to said control circuit, and an antenna coupled to said output circuit for generating an electromagnetic wave of said high frequency; the improvement which includes electromagnetic field sensitive means for positioning in the field of said electromagnetic wave, said field sensitive means having an output circuit for generating an output control signal in said output circuit of said field sensitive means which is a function of the intensity of an electromagnetic field of said high frequency at the position of said field sensitive means, in which said amplifier includes a first electron amplifier tube coupled to said output circuit of said amplifier and having a space current control electrode, in which said control circuit includes a second and a third electron amplifier tube, each having a cathode, a space current control electrode and an anode, said control electrode of said first tube being connected in series with said anode and cathode of said second tube to a source of bias potential, said anode of said third tube being connected to said control electrode of said second tube, means having a fixed impedance connecting said cathode of said third tube to a source of bias potential, means having a fixed potential connected to said cathode of said third tube, and means coupling said output circuit of said field sensitive means across said control electrode and cathode of said third tube of said control circuit as an input control signal for said amplifier, whereby the amplitude of said high frequency signal coupled to said antenna is a function of the field intensity of said wave at the location of said field sensitive means.

2,896,874

FREQUENCY TRACKER WITH FIXEDLY-SPACED LOCAL OSCILLATIONS EQUALLY OFFSET FROM UNKNOWN FREQUENCY

Earl G. Newsom, Thenewood, and Wilbur J. Huntington, White Plains, N.Y., assignors to General Precision Laboratory Incorporated, a corporation of New York

Application July 31, 1953, Serial No. 371,698
20 Claims. (Cl. 250—20)



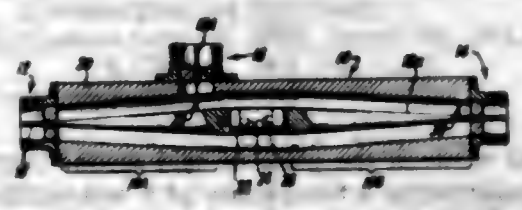
20. Apparatus for producing a direct voltage the magnitude and polarity of which are indicative of the extent and sign of the difference in frequency between that of a first alternating voltage and that of the mean of the frequencies of second and third alternating voltages comprising, a modulator, means for impressing said first voltage on said modulator, means for alternately impressing said second and third voltages on said modulator, a low-pass filter connected to the output of said modulator, demodulating means for rectifying the output of said filter, and a phase detector connected to the output of said demodulating means, said phase detector being operated in synchronism with the alternate impression of said second and third voltages on said modulator.

2,896,875

BRANCHED COAXIAL WAVEGUIDE STRUCTURE UTILIZING FINE RESISTIVE WIRE COUPLING

Lloyd A. Addleman, Los Altos, Calif., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Application May 12, 1955, Serial No. 507,765
3 Claims. (Cl. 250—20)



6. Broadband high frequency mixer apparatus including a main section of coaxial line having inner and outer conductors, a crystal rectifier serially connected in the inner conductor of said main coaxial line, a branch coaxial line having inner and outer conductors connected to said main coaxial line in the vicinity of said crystal rectifier, and a connection for coupling low frequency signals between said crystal rectifier and said branch coaxial line consisting solely of a fine gauge high resistance wire connected to the inner conductor of said branch coaxial line and extending radially across the space between the inner and outer conductors of said main coaxial line and connected to the inner conductor of said main coaxial line.

2,896,876

DRIVER AMPLIFIER FOR RECORDER

Claude E. Lisle, San Diego, Calif.

Application April 21, 1953, Serial No. 350,275
1 Claim. (Cl. 250—27)
(Granted under Title 35, U.S. Code (1952), sec. 266)

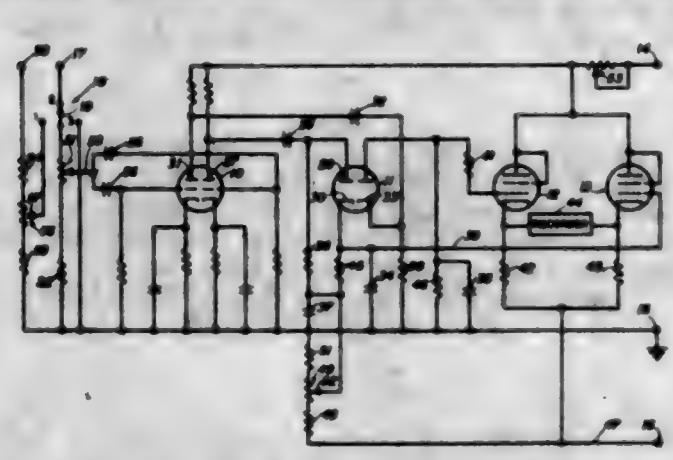
In a driver power amplifier for operating a recorder on D.C. voltages in response to A.C. signals received from a high impedance source, an input signal terminal, a ground, a gain control potentiometer connected between said terminal and said ground including a variable volt-

constant during each of a plurality of periodically recurrent first intervals, but which is subject to changes from

2,896,000

BLOCKING OSCILLATOR

age pick-off wiper, a first amplifier containing a cathode, a control grid, and a plate, a coupling condenser connected between said first amplifier control grid and said wiper, a resistor connected between the interconnection of said first amplifier grid and said wiper and ground, a resistor and a condenser connected in parallel therewith connected between said first amplifier cathode and said ground, a B+ voltage supply, a variable resistor connected to said B+ voltage to regulate same, a plate resistor connected between the plate of said first amplifier and said variable resistor, a first rectifier including a cathode and a plate, a coupling condenser connected between the plate of said first amplifier and the cathode of said first rectifier, a resistor connected between the cathode of said first rectifier and ground constituting a completion of a non-rectifying path for the A.C. signal appearing at the plate of the first amplifier, a second amplifier including a cathode, a control grid, and a plate, a resistor and a condenser connected in parallel therewith connected between said second amplifier cathode and ground, a plate resistor connected between said second amplifier plate and the aforesaid variable resistor, a coupling condenser connected between said second amplifier grid and the wiper of said gain control potentiometer, a resistor connected between said second amplifier control grid and ground, a second rectifier including a cathode and a plate, a coupling condenser connected between said second rectifier plate and the plate of the aforesaid second amplifier, a resistor and a condenser connected in series



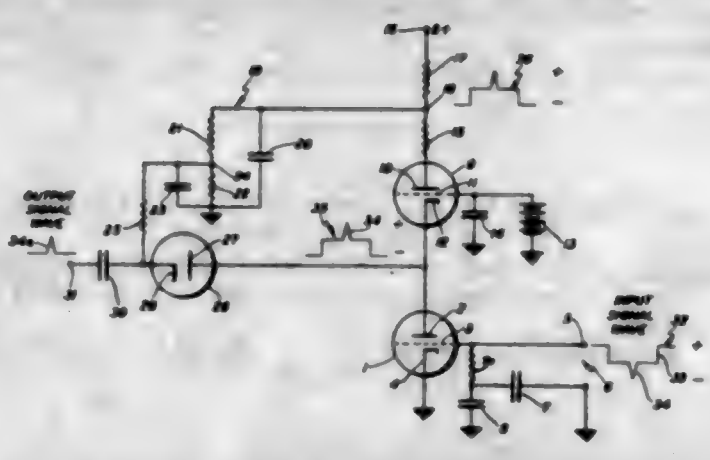
connected between the plate of said second rectifier and ground constituting a completion of a non-rectifying path for the A.C. signal appearing at the plate of said second amplifier, a high voltage supply, a voltage divider including a potentiometer containing a wiper connected between said high voltage supply and ground, said wiper being connected to the interconnection of the aforesaid series connected resistor and condenser, a resistor connected between said wiper and the cathode of said second rectifier, a condenser connected between the cathode of said second rectifier and ground, a resistor and condenser connected in parallel therewith connected between the plate of said first rectifier and ground, a first power amplifier including a cathode, a control grid, a supressor grid, and a plate, a resistor connected between the plate of said first rectifier and the control grid of said first power amplifier, a second power amplifier including a cathode, a control grid, a supressor grid, and a plate, the plates of said first and second power amplifiers being connected to B+ voltage thru the aforesaid variable resistor, the plates of said first and second power amplifiers being connected to their respective supressor grids, a resistor connected between the cathode of said first power amplifier and the interconnection between the aforesaid voltage divider and the high voltage supply, a resistor connected between the cathode of said second power amplifier and said high voltage supply, the control grid of said second power amplifier being electrically connected to the cathode of said second rectifier, and recording means responsive to a D.C. potential differential connected between the cathodes of said first and second power amplifiers.

2,896,077

CLIPPER CIRCUIT

Raymond W. Brandt, Janesville, Wis., assignor to International Telephone and Telegraph Corporation, a corporation of Maryland

Application April 24, 1953, Serial No. 350,956
8 Claims. (Cl. 250—27)



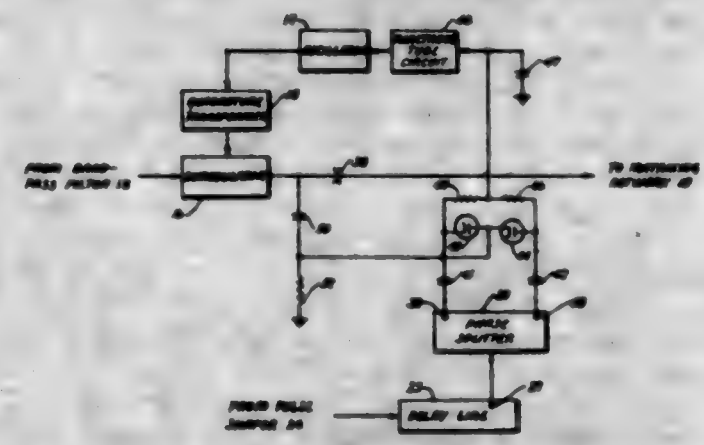
1. A circuit for separating two components of a composite signal, one component being superimposed on the other component and having a period substantially smaller than said other component; comprising a first circuit which conducts a composite signal in accordance with the wave form thereof, a second normally conductive circuit coupled to said first circuit and operative to conduct a current in accordance with the wave form of said composite signal, and an integrating circuit coupled to said second circuit and operative to produce an average voltage which corresponds to the peak voltage of said other composite signal component, a third circuit coupled to said first circuit and to said integrating circuit and including a unidirectionally conducting device having at least two terminals, said average voltage having a polarity whereby when applied to one of said terminals the conduction characteristics of said device is determined, the signal voltage produced by said first circuit corresponding to said composite signal, this first circuit signal being applied to the other of said terminals whereby said device conducts in accordance with that portion of said first circuit signal which exceeds the magnitude of said average voltage.

2,896,078

AMPLITUDE MEASURING CIRCUIT

Robert C. Moore, Erdenheim, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Application April 29, 1953, Serial No. 351,770
3 Claims. (Cl. 250—27)



1. In combination: a signal source means for producing a signal having an amplitude which is substantially

2,896,082

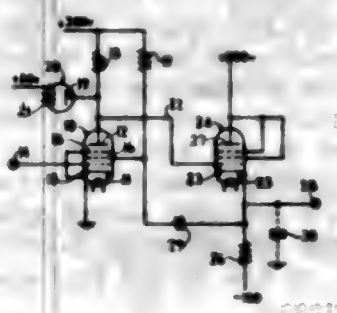
to said electrodes for providing adjacent electrodes in said

said field sensitive means.

said terminal and said ground including a variable volt-

constant during each of a plurality of periodically recurrent first intervals, but which is subject to change from one of said intervals to the next, each of said first intervals being followed by a second interval during which the amplitude of said signal is substantially constant but subject to departure from its amplitude during the preceding one of said first intervals, and means for developing a potential whose magnitude represents the magitude of said departure and whose polarity represents the sense of said departure, said means comprising a series resistance-capacitance network consisting of a capacitive element and a substantially reactance free resistive element, said capacitive element being connected between said signal source and the junction of said elements and said resistive element being connected between a first point of fixed potential and said junction, said network having a time-constant, at least during each of said first intervals, such as to establish said junction at said fixed potential within the duration of any one of said first intervals, a capacitor having one plate connected to a second point of fixed potential, and normally non-conductive means operative during each of said second intervals to conduct unidirectional current in either direction between the other plate of said capacitor and said junction of said resistance-capacitance network.

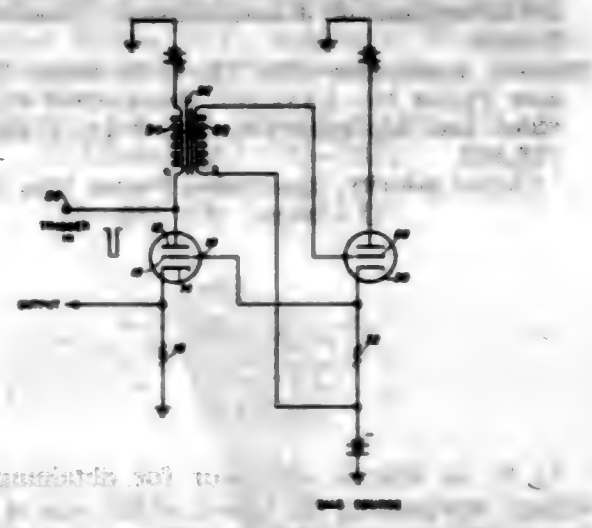
2,896,079
ELECTRIC PULSE TRANSLATION STAGES
Allan Henry Ellson, Salford, England, assignor to National Research Development Corporation, London, England, a corporation of Great Britain
Application April 12, 1954, Serial No. 422,618
Claims priority, application Great Britain
April 14, 1953
13 Claims. (Cl. 250—27)



1. An electric pulse translation stage comprising a first pentode discharge tube having a cathode, a control grid, a screen grid, a suppressor grid and an anode, a second discharge tube having at least three electrodes consisting of a cathode, a control grid and an anode, an input terminal, circuit means connecting said input terminal to said control grid of said first tube, circuit means connecting said suppressor grid and said cathode of said first tube to ground, an anode load resistor, circuit means connecting said anode of said first tube to a source of positive potential through said anode load resistor, a screen load resistor, circuit means connecting said screen grid of said first tube to a source of positive potential through said screen load resistor, a direct current connection between said anode of said first tube and said control grid of said second tube, a cathode load resistor, circuit means connecting said cathode of said second tube to a source of negative potential through said cathode load resistor, an output terminal, circuit means connecting said cathode of said second tube to said output terminal and a coupling capacitor connected between said screen grid of said first tube and said cathode of said second tube.

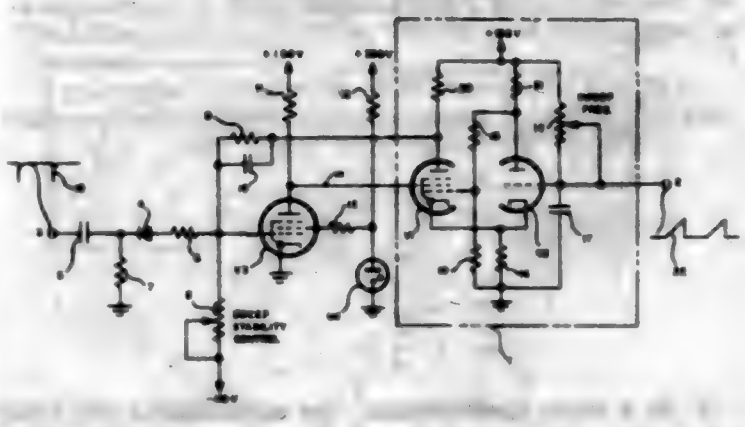
744 O.G.—33

2,896,080
BLOCKING OSCILLATOR
Robert J. Price, Lakeside, Calif.
Application June 23, 1955, Serial No. 517,669
5 Claims. (Cl. 250—27)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a blocking oscillator which draws grid current when triggered, an electron tube having a cathode, plate and control grid, a substantially constant source of negative bias for said grid, and means for regeneratively coupling said plate to said grid, said coupling means including a low impedance resistive path for said grid current independent of said bias source, said path comprising an electronic valve having at least a plate, cathode and control grid, said tube grid being directly connected with said valve cathode, and said valve grid being inductively coupled to said tube plate whereby the bias voltage of said source is not appreciably changed by the flow of grid current.

2,896,081
TIME BASE GENERATOR
Jerome Machlis, Granada Hills, Calif., assignor, by mesne assignments, to Hycon Corporation, Los Angeles, Calif., a corporation of California
Application June 18, 1956, Serial No. 592,129
6 Claims. (Cl. 250—27)



1. A time base generator, comprising: a pair of electron discharge devices connected as an astable operating multivibrator; an input for accepting trigger signals; a third, normally conducting electron discharge device connecting said input to said multivibrator, said third electron discharge device placing said multivibrator in a first conducting state for monostable operation, each said input trigger signals operating to cut off said third electron discharge device and place said multivibrator in a second conducting state for a predetermined length of time, from said first conducting state; and a feedback network connecting said multivibrator and said third electron discharge device for maintaining non-conduction of said third electron discharge device when said multivibrator is in said second conducting state, said feedback network including a resistor and a capacitor connected in parallel.

substantially on the axis of said hood and adapted to direct ultra-violet light onto said base, said access and

whereby the illumination output of said electroluminescent element is a function of the intensity of the incident

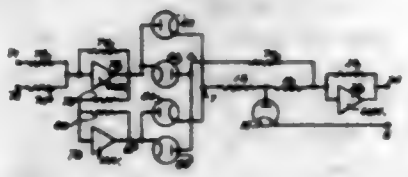
cathode of said second rectifier, and recording means re-

ing a signal having an amplitude which is substantially

2,896,062
ELECTRIC SIMULATORS OF ARBITRARY FUNCTIONS

François Henri Raymond, Saint-Germain-en-Laye, Pierre François Louis Chapouille, Montfermeil, and Jacques Edouard Martin, Paris, France, assignors to Societe d'Electronique et d'Automatisme, Courbevoie, Seine, France

Original application May 22, 1952, Serial No. 290,588, now Patent No. 2,831,107, dated April 15, 1958. Divided and this application April 14, 1958, Serial No. 728,483
Claims priority, application France May 28, 1951
12 Claims. (Cl. 250—27)

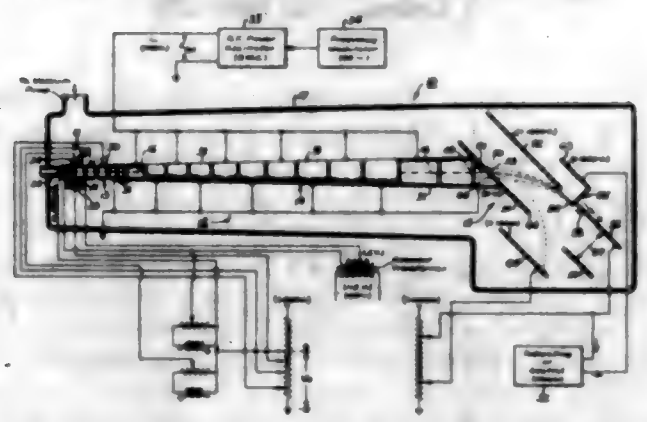


12. In an electric simulator for obtaining an output voltage representing the square of the sum of two quantities, a pair of summation amplifiers, means in series with a pair of resistors for applying voltages corresponding to said quantities to the input of one of said summation amplifiers; two pair of uniconducting means, and means including a resistance path and a pair of series connected resistors for connecting the output of the first summing amplifier in opposite polarities over the elements of each uniconducting pair, respectively, to the input of the second summation amplifier, other voltage supplying means and other unidirectional means connecting the junction point of said series connected resistors to said other voltage supplying means.

2,896,083
RADIO FREQUENCY MASS SPECTROMETER

George H. Hare and David R. Margetts, Pasadena, Calif., assignors to Beckman Instruments, Inc., South Pasadena, Calif., a corporation of California

Application July 27, 1953, Serial No. 370,582
33 Claims. (Cl. 250—41.9)

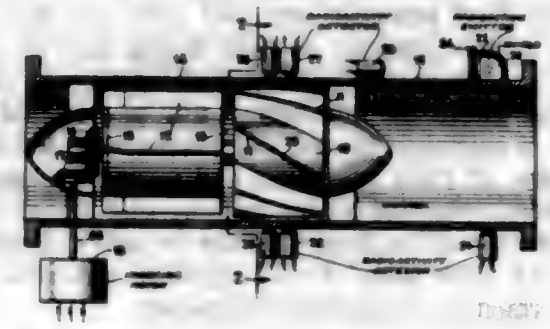


3. In a mass spectrometer, the combination of; ionizing means at the upstream end of an ion path for ionizing a sample substance to produce ions thereof; analyzer means on said path downstream from said ionizing means for selectively varying the velocities of said ions in progressive degree along said path according to the respective masses thereof so as to provide those ions of a selected mass with an optimum kinetic energy along said path, said analyzer means including an upstream analyzer section having means for accelerating said ions along said path toward the downstream end thereof, and said analyzer means including a downstream analyzer section having a linear array of successively adjoining electrodes spaced along said path to define between successive pairs of said electrodes corresponding interelectrode stages progressively varying in length according to the progressively varying velocity of said ions of selected mass, and having an alternating potential source connected to said electrodes for providing adjacent electrodes in said array with alternatingly opposite polarities; and ion collecting means at the downstream end of said path for separating said ions of selected mass from other charged particles and for collecting said ions of selected mass.

2,896,084
FLOW METERS

Dennison H. MacDonald, East Haven, Conn., assignor to Revere Corporation of America, Wallingford, Conn., a corporation of New Jersey

Application January 22, 1957, Serial No. 635,334
13 Claims. (Cl. 250—43.5)

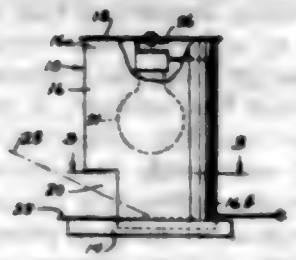


3. Fluid flow rate indicating apparatus comprising a rotor adapted to be driven by said fluid, adjustable directing vanes mounted adjacent said rotor for controlling the flow of said fluid toward said rotor, a housing enclosing said rotor and said vanes and having a chamber therein for receiving said fluid, electrically operable vane adjusting means connected to said vanes, a radioactive, ray source mounted adjacent said chamber, first electrical means for detecting rays from said source mounted adjacent said source, adjustable ray intercepting means mounted between said source and said first means, second electrical means for detecting rays from said source mounted with a portion of said chamber between said second means and said source, and electrical amplifying means connected to said first and said second means and responsive to the difference in electrical outputs of said first and said second means, said amplifying means also being connected to said vane adjusting means for controlling said adjusting means in accordance with the outputs of said first and said second means, whereby the speed of rotation of said rotor is increased for a predetermined rate of flow of said fluid when the density of said fluid is increased.

2,896,085
LIGHT RESPONSIVE AMUSEMENT DEVICE

Jacob J. Hagopian, Santa Clara County, Calif.

Application January 17, 1956, Serial No. 559,724
2 Claims. (Cl. 250—78)



1. In an amusement device of the type in which a card is inserted in a viewing box, a viewing box comprising a base, a hood formed symmetrically about an axis and mounted on the upper surface of said base and having a lower wall portion cooperating with the base to define an access and viewing opening, a top wall extending across the upper end of said hood, and a lamp mounted in depending relation from said top wall and disposed

2,896,090

a divider consisting of a first stage having a count equal

tube and said cathode of said second tube.

744 O.G.—33

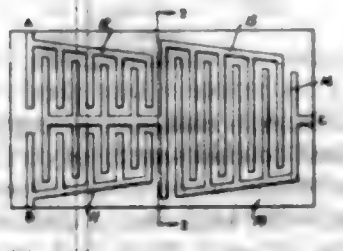
substantially on the axis of said hood and adapted to direct ultra-violet light onto said base, said access and viewing opening having a width sufficient to receive a card presented thereto in a horizontal position and having a height sufficient to permit a card disposed on said base directly under said lamp to be seen from outside of said hood through said opening.

2,896,086

ATTENUATOR NETWORK

Irwin Wunderman, Mountain View, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California

Application July 1, 1957, Serial No. 669,149
5 Claims. (Cl. 250—211)



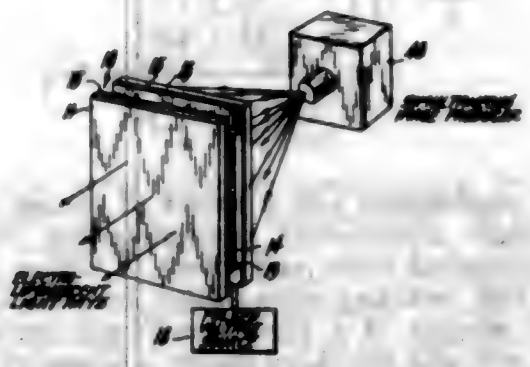
1. A network comprising an interlaced grid network of conductive material, photoconductive material serving to interconnect the grids of said network, said grid network comprising four separate grids so disposed as to form together with said photoconductive material the resistive elements of a T-network, a light source, and means for controlling the light incident upon said photoconductive material whereby the attenuation and impedance level may be controlled as desired.

2,896,087

HALF-TONE IMAGE PRODUCTION

Benjamin Kazan, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Application May 3, 1954, Serial No. 426,964
8 Claims. (Cl. 250—213)



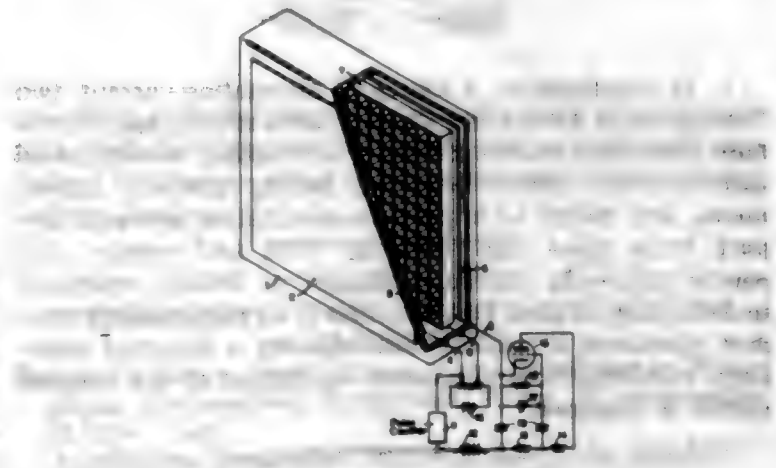
1. A system for reproducing incident light radiation having a plurality of intensity gradations, comprising a regenerative electroluminescent photoconductive device having a photoconductive element and an electroluminescent element, electrically coupled in series relation, said photoconductive element having a variable impedance characteristic which is a function of the illumination thereon, means coupled to said device for applying an excitation voltage across said series-coupled elements whereby the voltages across said elements are in a ratio which is a function of the impedance ratio of said elements, means connected to control said excitation voltage in an on-and-off manner according to a predetermined time pattern, said pattern including an on-time having a duration less than the time required for said device to reach regeneration-induced illumination saturation, and having an off-time corresponding substantially to the conductivity decay time of said photoconductive element, whereby the illumination output of said electroluminescent element is a function of the intensity of the incident light radiation on said device.

2,896,088

REGENERATING SCINTILLATION COUNTER

Joseph Lemport, Elmira, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application November 26, 1954, Serial No. 471,330
10 Claims. (Cl. 250—213)



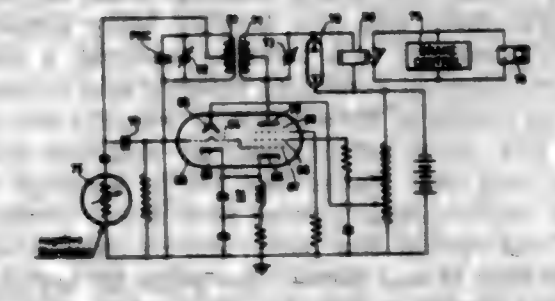
1. A radiation responsive device comprising a vacuum-tight enclosure, a first screen therein responsive to emit electrons upon incidence of a photon of input radiation thereon, a second screen therein responsive to incidence of electrons to emit an output radiation to which said first screen is photoelectrically responsive, a honeycomb structure of ducts positioned between and normal to said first and second screens, and a circuit connecting said first screen to said second screen and responsive to the amount of current flow and containing means to interrupt current flow after passage of a predetermined amount of current.

2,896,089

VEHICULAR WARNING SYSTEM

Ludwig Weech, Heidelberg, Germany, assignor, by mesne assignments, to Eltro G.m.b.H. & Co., Gesellschaft für Strahlungstechnik, Bremen, Germany, a corporation of Germany

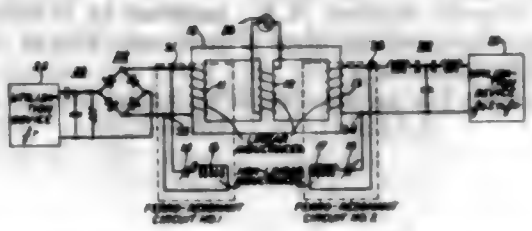
Application January 29, 1957, Serial No. 636,914
Claims priority, application Germany February 2, 1956
5 Claims. (Cl. 250—215)



1. In a vehicular warning system, in combination, a source of electrical oscillations comprising an amplifier element having a tuned input circuit and a tuned output circuit inductively coupled together, circuit means for controlling said oscillations, said circuit means including a capacitive element connected in one of said tuned circuits and provided with a photosensitive dielectric, said amplifier element being provided with frequency-determining means adapted to stabilize said amplifier element in a normal operating condition in which a change in the relative tuning of said coupled circuits produces a substantial output-current variation in said amplifier element, and alarm means controlled by the output of said source.

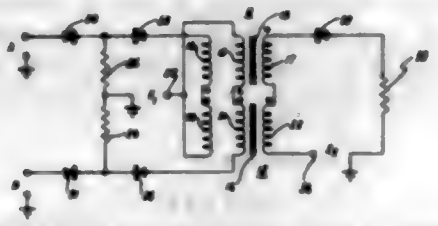
effective collector electrode; a first clamping means a core and at least one secondary winding; shield means

2,896,090
MAGNETIC FREQUENCY GENERATOR
Herbert S. Feder, Fanwood, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application February 10, 1954, Serial No. 409,362
3 Claims. (Cl. 307—88)



1. In combination, a source of alternating current, two ferroresonant circuit branches of substantially equal resonant frequency each containing a coupling winding, said ferroresonant circuit branches having unequal impedances, and means to impress magnetization of equal ampere turns upon said windings from said source, said source supplying current sufficient to induce resonance in both said circuits but insufficient to continuously support resonance in said circuits whereby a distorted waveform resulting from relaxation oscillation of the over-all circuit is obtained.

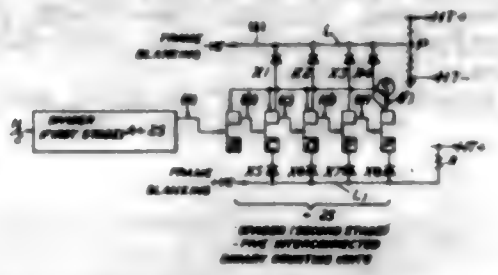
2,896,091
MAGNETIC AMPLIFIER DIGITAL COMPARISON CIRCUIT
Hubert V. Nuttall, Culver City, and John E. Richardson, Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Application May 3, 1956, Serial No. 583,577
6 Claims. (Cl. 307—88)



3. A comparator circuit comprising: first and second magnetic cores having substantially rectangular hysteresis loops; first and second input windings and an output winding on said first core; third and fourth input windings and an output winding on said second core, said first and third windings being connected in series opposition and said second and fourth windings being connected in series opposition, said first winding being connected to said fourth winding at a common terminal; a source of energizing potential connected between said common terminal and a point of fixed potential, whereby two parallel current flow paths are provided by said first and third windings and said second and fourth windings respectively; a unidirectional current flow device connected in each of said current flow paths; and coupling means connected to each of said current flow paths for applying control signals thereto, whereby output signals are produced only during the time said control signals are alike or during the time no control signals are applied.

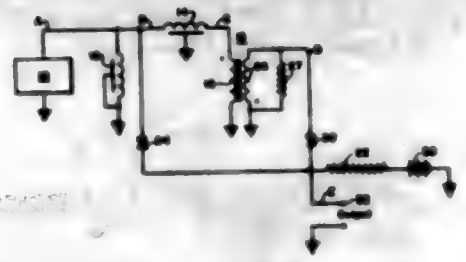
2,896,092
WAVEFORM GENERATORS
Donald John Davey Pugsley, Cambridge, England, assignor to Pye Limited, Cambridge, England, a British company
Application April 25, 1955, Serial No. 503,621
Claims priority, application Great Britain May 3, 1954
6 Claims. (Cl. 307—88.5)

1. A waveform generator for generating the frame blanking pulses in a television waveform comprising line frequency pulses and frame frequency pulses, comprising a divider consisting of a first stage having a count equal to the number of lines in a frame blanking pulse to be produced, and a second stage connected in series with the first stage and itself comprising a plurality of series connected electronic counting units having a count which when multiplied by the first count produces output pulses at a repetition rate equal to a low integral multiple, including the multiple unity of the frame frequency, means for feeding input pulses to the first stage of the divider at at least the repetition frequency of the line pulses in



the television waveform, a source of direct current potential, a line connected to said source of direct current potential, at least one diode, a connection between one electrode of each diode and said line, a connection between the other electrode of each diode and respectively one of said counting units of said second stage, means for deriving an output pulse from the line, and the number of diodes being such that said output pulse caused by a change of potential on the line is produced on said line at a repetition rate equal to the pulse output repetition rate of the divider and of a duration required for the frame blanking pulses.

2,896,093
PULSE LENGTH DISCRIMINATOR
Peter A. Castruccio and Martin G. Woolfson, Baltimore, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application February 27, 1956, Serial No. 567,886
6 Claims. (Cl. 307—88.5)



5. In combination with a source of voltage pulses, a pulse length discriminator comprising first delay line means connected across said source of voltage pulses, a current path including second delay line means and the primary winding of a pulse transformer connected in parallel with said first delay means, a secondary winding for said pulse transformer, and means operatively connected to said first delay line means and to said second delay line means for comparing in phase voltage pulses appearing across said first delay line means with pulses appearing across said secondary winding.

2,896,094
MONOSTABLE TWO-STATE APPARATUS
Norman F. Moody, Ottawa, Ontario, and Charles D. Florida, Merivale Gardens, Ontario, Canada, assignors to Her Majesty The Queen in right of Canada as represented by the Minister of National Defence
Application April 29, 1957, Serial No. 655,606
13 Claims. (Cl. 307—88.5)

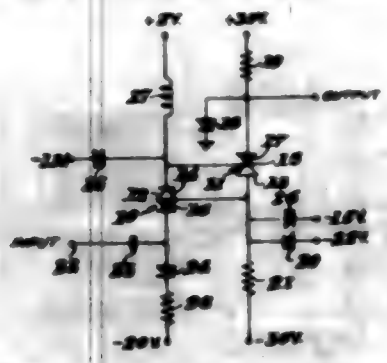
1. A monostable two-state apparatus responsive to an input signal to switch from a stable cut-off state to a state of conduction, comprising a semiconductor unit having an effective emitter electrode, an effective first base electrode, an effective second base electrode, and an

elongated, substantially identical solid ultrasonic acoustic

2,896,101

ductivity decay time of said photoconductive element, output of said source.

effective collector electrode; a first clamping means adapted to clamp the base electrodes at predetermined potentials when the semiconductor unit is in the state of conduction; a second clamping means adapted to clamp the collector electrode and one of the base electrodes at predetermined potentials when the semiconductor unit



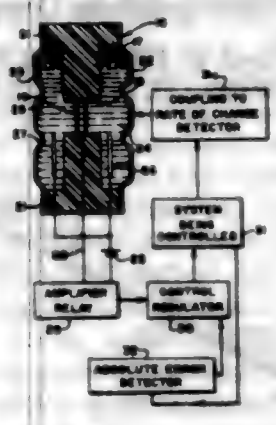
is in the cut-off state; an inductor connected between the other base electrode and a source of predetermined potential; an output connection taken from one of the electrodes; and an input connection taken from one of the electrodes to switch the semiconductor unit from the cut-off state to the state of conduction in response to the input signal.

2,896,095

ELECTROCHEMICAL ELEMENT FOR AUTOMATIC CONTROL

Herbert B. Reed, Jr., and Nelson N. Estes, Silver Spring, Md., assignors to the United States of America as represented by the Secretary of the Navy

Application June 27, 1957, Serial No. 668,575
24 Claims. (Cl. 307—149)
(Granted under Title 35, U.S. Code (1952), sec. 266)



24. A dual mode follow-up control system for restoring a variable system for a predetermined condition of operation susceptible to deviation therefrom comprising, in combination, means responsive to the instantaneous variations in the condition of operation of said variable system for deriving a corrective factor representative of the deviation of the condition of operation of said variable system from said predetermined condition, electrochemical means including a redox solution for deriving a damping factor in response to the rate of change of the operating condition of said variable system and operatively associated with said first named means to develop a composite factor from their respective derived factors, and coupling means for applying said composite factor to said variable system whereby said variable system is restored to said predetermined condition of operation unattended by overshoot.

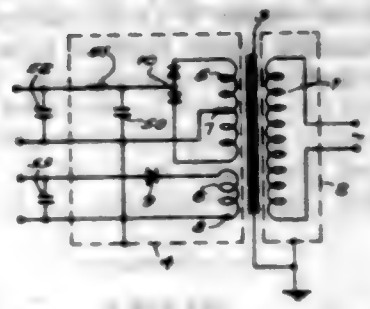
2,896,096

POWER SUPPLY

Fritz Schwarzer, Munich-Pasing, Germany

Application March 16, 1954, Serial No. 416,641
Claims priority, application Germany March 17, 1953
7 Claims. (Cl. 307—150)

1. In a differential amplifier arrangement, in combination, a power transformer including a primary winding, a core and at least one secondary winding; shield means enclosing said primary winding; conductive means connecting said core and said shield means to a point of reference potential; shield means enclosing said secondary winding and isolated from said point of reference potential; and a conductive connection between said secondary winding and said shield means enclosing said secondary winding.

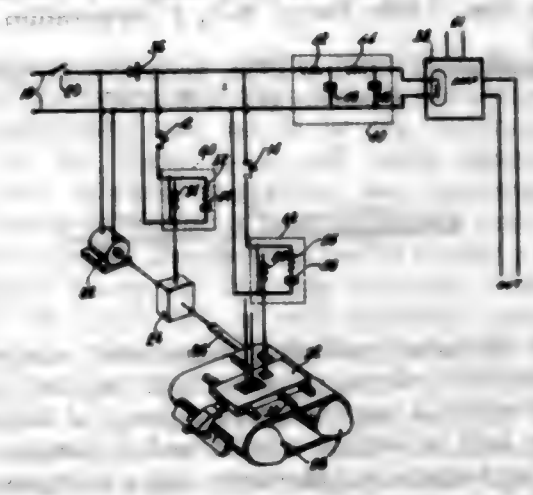


2,896,097

POWER SUPPLY FOR DICTATING MACHINE AND THE LIKE

Roger C. Curtis, New Haven, Conn., assignor to Dictaphone Corporation, Bridgeport, Conn., a corporation of New York

Application September 18, 1957, Serial No. 684,737
5 Claims. (Cl. 307—150)



5. An improved direct-current power supply and load circuit arrangement comprising a first load to which it is desirable to apply a substantially constant voltage, first capacitance filter means connected to said load, rectifier means to supply said load and filter means with a steady direct voltage, said direct voltage having a given value dependent upon the parameters of said filter means and load, a second relatively high current load adapted to be connected to said rectifier means, a switch for alternatively connecting and disconnecting said second load to and from said rectifier means, and second capacitance filter means associated with said second load and adapted to be connected and disconnected along with it to said rectifier means, said second capacitance filter means being proportioned with respect to said loads and said first capacitance filter means so that the direct voltage applied to said first load remains substantially the same both when said second load is connected to said rectifier means and when said second load is disconnected from said rectifier means.

2,896,098

ULTRASONIC PROBES

John R. Bencer and Hans Bincer, London, England, assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Application July 1, 1955, Serial No. 519,476
8 Claims. (Cl. 310—8.1)

1. An ultrasonic thickness probe comprising, in combination, means forming a casing; a pair of relatively

2,896,103

fixed positions by the wall of the envelope, the envelope

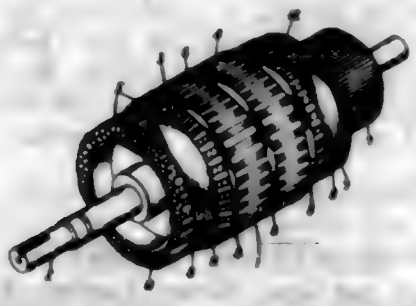
elongated, substantially identical solid ultrasonic acoustic energy transmitting members secured within said casing to project therefrom in substantially parallel relation to each other; each member having a contact face on its outer end arranged to engage the surface of an object the thickness of which is to be determined, and said members, including their contact faces, being slightly spaced from each other to provide an air gap therebe-

tween for insulation against the transfer of ultrasonic acoustic energy therebetween; a pair of electro-acoustic transducers each associated with the inner end of one member; electric terminal means extending from each transducer; and a metal screen within said casing separating each transducer and its terminal means from the other transducer and its terminal means to inhibit electrical energy transfer therebetween.

2,896,099
TRANSDUCERS USED IN ULTRASONIC EQUIPMENT
Benson Carlin, Fair Lawn, N.J., assignor to Alcar Instruments, Inc., Little Ferry, N.J., a corporation of New Jersey
Application April 4, 1955, Serial No. 499,824
2 Claims. (Cl. 310—26)

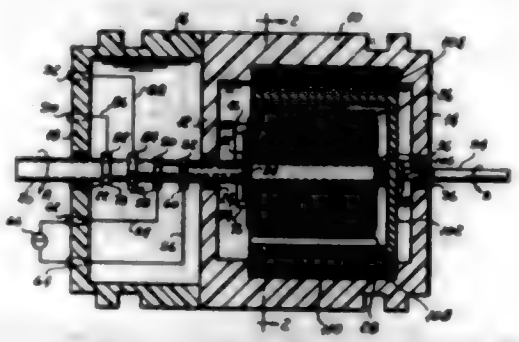
1. An ultrasonic soldering transducer comprising a magnetostrictive vibratory metal rod, one-half sectional length of which is constituted by a group of laminations, the other half of which is solid and is bonded to said one-half to form a resonant unit, and a coil surrounding said rod, said coil being wound of wire in which the voltage drop when current flows therein produces sufficient heat to raise the temperature of said rod to a point sufficiently high to prevent solidification of solder vibrated by said rod.

2,896,100
ELECTRODYNAMIC MACHINE
John S. Azelson, Erie, Pa., assignor to General Electric Company, a corporation of New York
Application December 9, 1957, Serial No. 701,532
4 Claims. (Cl. 310—51)



1. A rotating member for an electrodynamic machine having at least one resin-impregnated band therearound, at least one of said bands having adherent thereto a resin material filled with a relatively high density filler.

2,896,101
DIFFERENTIAL TACHOMETER
Carl Laskin, Kew Gardens Hills, N.Y., assignor, by mesne assignments, to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Application May 3, 1957, Serial No. 656,877
9 Claims. (Cl. 310—171)



1. A differential tachometer including in combination a support, a first member, means mounting said first member for movement on said support, a second member, means mounting said second member for movement on said support, means carried by said first member for inducing eddy currents in said second member when said members move relative to each other and means carried by said first member for producing an electrical signal proportional to the magnitude of said eddy currents.

2,896,102
ELECTRICAL CONDUCTOR AND PROCESS FOR MAKING SAME
Lewis V. Bucklew, Columbus, Ohio, assignor, by mesne assignments, to McGraw-Edison Company, a corporation of Delaware
Application March 4, 1957, Serial No. 643,730
12 Claims. (Cl. 310—213)

1. An improved electrical conductor for dynamo electric machinery and the like, said conductor comprising a plurality of metallic strips each with two angled off-sets at portions of reduced thickness, one off-set toward one edge of the strip and the other off-set away from said edge; the strips forming one-half of the conductor being assembled in such a manner that a group is formed wherein said portions of reduced thickness are disposed in co-planar relationship along a side of said conductor to form a longitudinally extending conductor portion of reduced thickness and wherein the strip which is at the bottom or side at one end passes by way of the top or other side at one off-set to the bottom or original side at the next off-set; the strips forming the other half of the conductor being similarly assembled; one-half being turned through 140 degrees and the two halves being assembled in interlocking relationship, said portions of reduced thickness including a left side that decreases in thickness in one longitudinal direction and a right side that decreases in thickness in the other longitudinal direction, said right and left sides forming two oppositely inclined inner surfaces overlying two oppositely inclined outer surfaces on two of said metallic strips.

2,896,107
GASEOUS ELECTRIC DISCHARGE LAMP

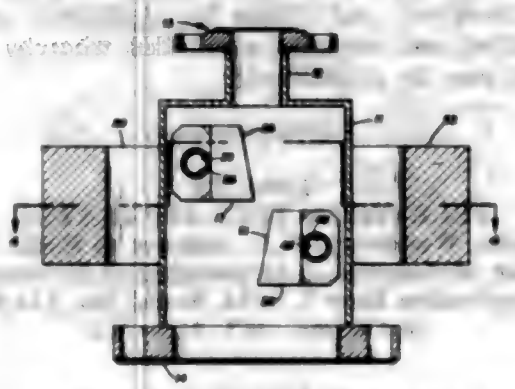
mounting means slidably carrying said holder means

tion, a power transformer including a primary winding, bination, means forming a casing; a pair of relatively

2,896,103
CHARGED PARTICLE BEAM DIFFUSER

Sherman R. Farrell, El Sobrante, Calif., assignor to Applied Radiation Corporation, Walnut Creek, Calif., a corporation of California

Application November 17, 1958, Serial No. 774,415
6 Claims. (Cl. 313—7)

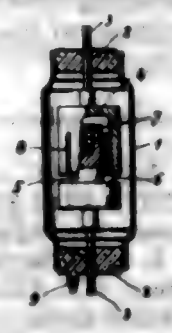


1. A charged particle beam diffuser comprising means for establishing an evacuated region for traversal by a beam of energetic charged particles, means for generating within said region a primary heterogeneous magnetic field transverse to the axis of beam traversal therethrough, said field progressively increasing in strength laterally outward from the beam axis, said field spatially distributed along the beam axis to be effective over an axial distance progressively increasing with respect to outward lateral displacement from the axis, and means for generating a secondary heterogeneous magnetic field within said evacuated region transverse to the beam axis, said secondary field increasing in strength laterally outward from the beam axis, said secondary field spatially distributed along the beam axis to be effective over an axial distance progressively increasing with respect to outward lateral displacement from the axis, said secondary field generated in spatial and polar opposition to said primary field to partially cancel said primary and secondary fields and produce a resultant steep field strength gradient laterally across the beam axis whereby said primary and secondary fields progressively increase sharply in strength and the axial distance over which the fields act upon beam particles progressively increases with respect to lateral displacement of the particles from the beam axis to deflect said beam particles laterally outward by amounts with progressively increase with respect to increasing lateral particle displacement from the beam axis.

2,896,104
LIGHTNING ARRESTER

Franz Sedlacek, Vienna, Austria

Application April 14, 1955, Serial No. 501,280
Claims priority, application Austria June 11, 1954
10 Claims. (Cl. 313—42)

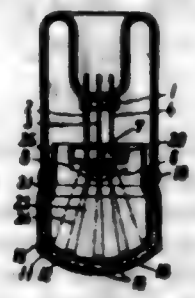


1. A lightning arrester comprising a transparent envelope, a hollow cylindrical electrode in the envelope, a rigid inlet wire supporting said electrode, a second cylindrical electrode located within and coaxial with the first one, a second rigid inlet wire supporting the second cylindrical electrode, both of said wires being held in fixed positions by the wall of the envelope, the envelope being composed of material which may be placed in a moulten state and when in that state will allow the two rigid wires to be moved with respect to each other whereby the cylindrical electrodes may be adjusted to be coaxial, and a circular element mounted on the second rigid wire in a position spaced from the first cylindrical electrode and having the same diameter as the first cylindrical electrode so that the two cylindrical electrodes may be adjusted until they are concentric by moving at least one of the rigid wires until the circular element appears to be coaxial with the first cylindrical electrode.

2,896,105
HIGH CAPACITY X-RAY TUBE

Rolf Hosemann, Berlin-Grunewald, Germany

Application January 2, 1957, Serial No. 632,322
8 Claims. (Cl. 313—56)

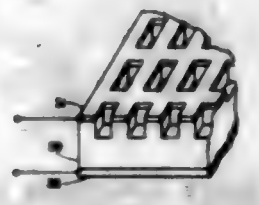


1. A high-capacity X-ray tube comprising, in combination, drum anode means incorporating a membrane which is ray-transmissive and serves as the ray-transmissive window of the X-ray tube, and which membrane is formed with reinforcing portions, and ray-transmissive means located outwardly of said membrane and forming therewith a cooling chamber adapted to receive a coolant; and cathode means for directing electrons toward substantially the entire area of said membrane except said reinforcing portions thereof, said membrane exclusive of said reinforcing portions, having an area of at least 50 mm.^{2} so that at a total load of at least two kilowatts the specific electric load across the entire area of said membrane, except at said reinforcing portions thereof, assumes a constant value of not more than forty watts per square millimeter.

2,896,106
STORAGE TUBE

Joseph Burns, Clifton, and Albert Eberhard Bockes, Cedar Grove, N.J., assignors to Allen B. Du Mont Laboratories, Inc., Clifton, N.J., a corporation of Delaware

Application December 11, 1956, Serial No. 627,708
9 Claims. (Cl. 313—68)



1. A sheet of insulative material having pits on one surface thereof; a perforated conductive film positioned on said surface, said perforations being aligned with said pits, said solid portions of said film being contiguous and in intimate contact with the unpitted portions of said surface, whereby said perforated conductive film is formed into a control grid structure which is immovably attached to a rigid sheet of insulated material, and therefore is unable to flex.

tion of said external conductive circuit to continuously maintain the instantaneous potential difference between beam over said target, a source of current supply for energizing said deflecting means and means connected

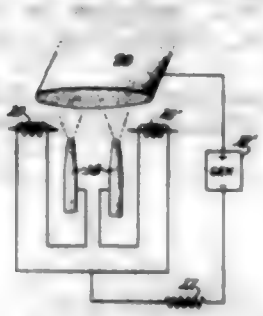
material filled with a relatively high density filler.

outer surfaces on two of said metallic strips.

2,896,107
GASEOUS ELECTRIC DISCHARGE LAMP
William T. Anderson, Jr., Maplewood, N.J., assignor to Engelhard Industries, Inc., a corporation of New Jersey
Application February 6, 1957, Serial No. 638,588
5 Claims. (Cl. 313—184)

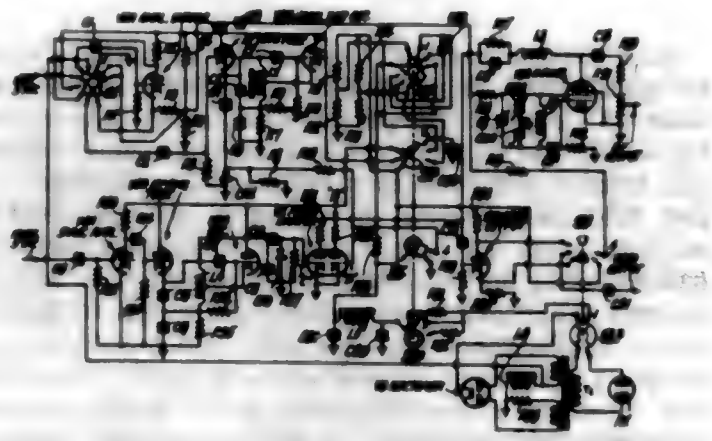
1. A high pressure gaseous electric discharge lamp comprising a light transmissive envelope containing a plurality of electrodes spaced apart one centimeter and less and an ionizable atmosphere at a pressure of more than two atmospheres at a temperature of about 25° C., said envelope defining a discharge cavity which converges from one end of the envelope toward the other end, said spaced electrodes defining a vertical discharge path located below the narrow end of the cavity at a greater distance from the narrower end of the cavity than from the wider end of said cavity.

2,896,108
APPARATUS EMPLOYING HORIZONTALLY ELONGATED CARBON ARC SOURCES
Stanley M. Segal, Springfield, Va.
Application January 31, 1957, Serial No. 637,583
8 Claims. (Cl. 314—47)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A carbon arc device comprising in combination a positive electrode having an elongated cross-section, means for supporting said positive electrode with the length thereof normal to an exposed cross-sectional area, a plurality of negative electrodes, holder means for each said negative electrode for independently supporting each of said plurality of negative electrodes to project towards the exposed cross-sectional area of said positive electrode with the longitudinal axis of each said negative electrode angularly disposed relative to the longitudinal axis of said positive electrode, semicircular segmented mounting means slidably carrying said holder means thereon, arcuate support members extending normal to said semicircular segmented mounting means and connected thereto for slidably adjusting said semicircular segmented mounting means along the length of said arcuate support members for relative vertical angular adjustment therewith, a base for supporting said arcuate support members, and means for electrically energizing said positive and negative electrodes whereby an electrical arc may be established.

2,896,109
TELEVISION TEST APPARATUS
Saul Koren, Woodbury, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application June 7, 1954, Serial No. 434,941
10 Claims. (Cl. 315—8.5)



1. In test apparatus of the type in which pulse trains of different pulse recurrence rates are generated for selective application individually and simultaneously to the apparatus to be tested, means for producing test signals of other characteristics from said pulse trains, said means comprising a mixing circuit for producing a composite pulse train, said mixing circuit including a pair of electron discharge tubes having grid electrodes to which the generated pulse trains are individually applied, cathode electrodes connected in common and anode electrodes connected in common, and circuit components including a circuit selecting device arranged to form a plurality of selective clipping circuits each having different amplitude selection characteristics, said clipping circuits being individually connected at said common connected anode electrodes of said mixing circuit by said circuit selecting device for selecting only the desired one of a plurality of predetermined amplitude portions of said composite pulse train, thereby to produce said testing signals of other characteristics from said pulse trains, said clipping circuits comprising a unilateral conducting device and said circuit selecting device being operative, in different modes of operation, to bias said unilateral conduction device differently.

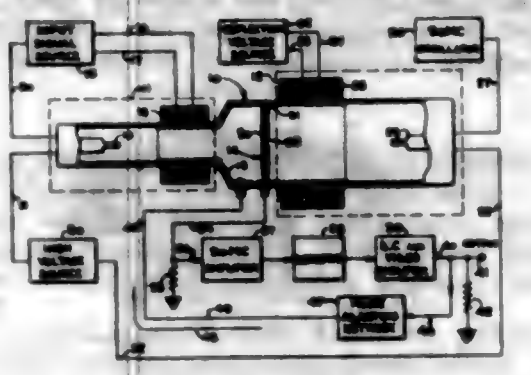
2,896,110
FEEDBACK CIRCUITS FOR STORAGE TUBES
Siegfried Hansen, Los Angeles, Calif.
Application July 2, 1956, Serial No. 595,354
15 Claims. (Cl. 315—12)

1. A circuit for providing linear operation of a storage tube having collector and target electrodes, said circuit comprising: an external conductive circuit between said electrodes including the series combination of an impedance element for producing an output signal from the storage tube and a conduction path; and feedback means connected to respond to the current flow in one of said electrodes for producing a voltage across at least a por-

ing a primary winding connected with said transistor units in stacked and aligned relation, said unit having a

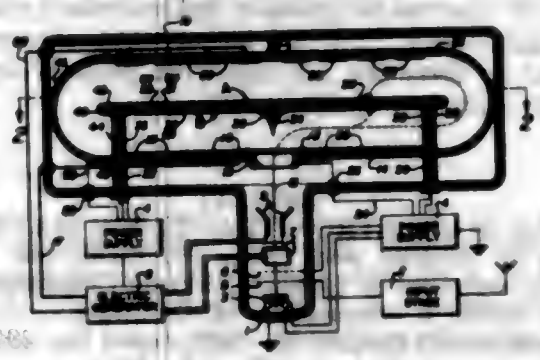
cylindrical electrode, both of said wires being held in unable to flex.

tion of said external conductive circuit to continuously maintain the instantaneous potential difference between



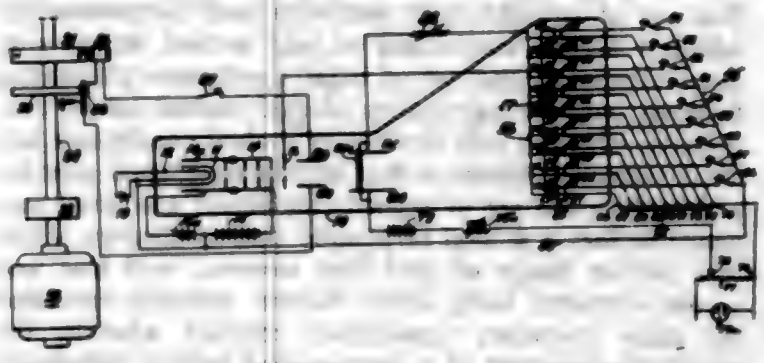
the electrodes substantially constant to provide for linear operation of said tube.

2,896,111
ELECTRONIC DEVICE
William Ross Aiken, Los Altos, Calif., assignor, by mesne assignments, to Kaiser Industries Corporation, a corporation of Nevada
Application May 1, 1956, Serial No. 582,032
6 Claims. (Cl. 315—21)



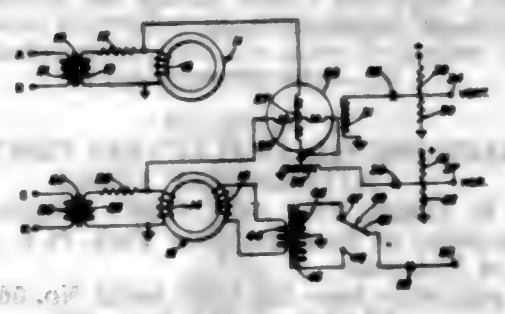
1. A polar coordinate cathode ray tube for exhibiting multi-color displays comprising a target, said target having at least one surface coated with a plurality of sets of annuli of fluorescent material arranged in a predetermined pattern, certain of said annuli of each set having different color emitting properties than other of said annuli in the set, the annuli of each set of said plurality being arranged in the same pattern, electron beam source means arranged to deliver a beam along a path generally parallel to said surface of said target, and deflection means for selectively deflecting said beam from said path into registration with different ones of said annuli.

2,896,112
CATHODE RAY TUBE APPARATUS
Phillip H. Allen and Benjamin J. Chromy, Saratoga, Calif.
Original application August 28, 1945, Serial No. 611,608. Divided and this application September 30, 1957, Serial No. 687,182
26 Claims. (Cl. 315—21)



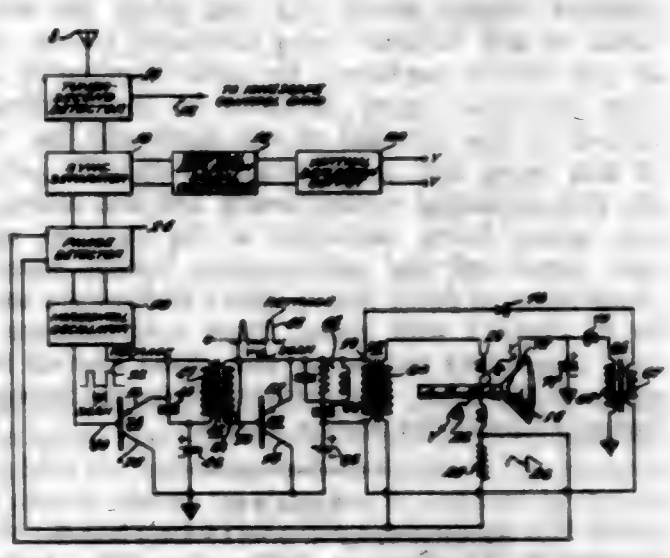
1. Cathode ray tube apparatus comprising a cathode ray tube having means for producing a cathode ray beam, a target for said beam, deflecting means for moving said beam over said target, a source of current supply for energizing said deflecting means and means connected to said deflecting means and controlled by said beam as said beam is deflected over said target for causing said beam to move automatically over said target.

2,896,113
INVERTED TEE SYMBOL GENERATOR
William F. List, Linthicum Heights, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application November 15, 1956, Serial No. 622,512
12 Claims. (Cl. 315—24)



2. A symbol generator comprising: a first saturable core reactor having a first winding thereon, a second saturable core reactor having a second winding thereon, circuit means for respectively applying to said reactor windings a pair of ninety degree phase displaced voltages, a sine-cosine resolver having input means and output means, circuit means connecting said reactor windings to said sine-cosine resolver input means, output terminal means, circuit means for connecting said output terminal means to said sine-cosine resolver output means, a third winding on said second saturable core reactor in voltage inducing relationship to said second winding, and circuit means including switch means and substantially unidirectional conducting means connecting said third winding to said output terminal means.

2,896,114
TELEVISION DEFLECTION AND POWER SUPPLY CIRCUITS
Ioury G. Maloff, Pennsauken, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application April 18, 1957, Serial No. 653,584
10 Claims. (Cl. 315—27)



1. In a television receiver, a horizontal deflection and a high voltage power supply circuit for an electron beam image reproducing device having a horizontal deflection winding, comprising, in combination, a transistor, means for biasing said transistor in the forward direction, means for applying signal energy to said transistor during the retrace portion of the horizontal deflection cycle to reduce current flow thereof, an output transformer includ-

ments at different direct current potentials to provide an electric field perpendicular to said plane of symmetry

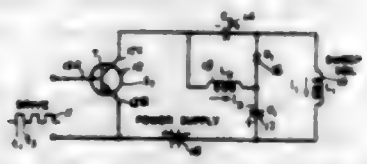
directional current flow device connecting said cathode to ground and a second electrical path including a sec-

ing a primary winding connected with said transistor and a secondary winding connected with said deflection winding for supplying a deflection current thereto during the trace portion of the horizontal deflection cycle, a high voltage transformer including a primary winding and a secondary winding, means including a rectifier connecting the secondary winding of said high voltage transformer with said image reproducing device for applying high voltage thereto, and means including a unilateral conducting device connected in series between the primary winding of said output transformer and the primary winding of said high voltage transformer and poled to isolate said high voltage power supply circuit from said deflection circuit during the trace portion of the horizontal deflection cycle.

2,896,115
RETRACE DRIVEN DEFLECTION CIRCUIT FOR CATHODE RAY TUBES

Walter B. Geggi, Palo Alto, Calif., assignor to Radio Corporation of America, New York, N.Y., a corporation of Delaware

Application June 13, 1957, Serial No. 665,488
13 Claims. (Cl. 315—27)



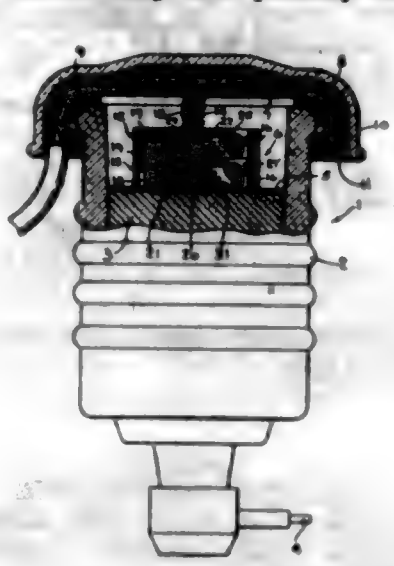
1. In a deflection system of the character described wherein there is a retrace interval and a sweep interval, a sweep coil, through which a substantially linear flow of current with respect to time flows during said sweep interval, a retrace condenser which is charged during a terminating portion of said sweep interval and discharged through said sweep coil during said retrace interval, a voltage source, an electronic switch serially connected with said voltage source, said retrace condenser and said sweep coil, said electronic switch being normally open and functioning to close in response to pulses applied thereto, a constant voltage source, a diode, said constant voltage source and said diode being serially connected in a series circuit which is in parallel with said sweep coil, a storage inductor having one of its terminals connected in said series circuit and at the junction of said constant voltage source and said diode, the other terminal of said inductor being connected to one terminal of said retrace condenser, the other terminal of said retrace condenser being connected to the junction point defined by one terminal of said diode and one terminal of said sweep coil, the terminals of opposite polarity of the first mentioned voltage source and said constant voltage source being connected at the junction point of said sweep coil and said constant voltage source, said diode being so poled that it allows said retrace condenser to be charged with energy from said inductor during said terminating portion of said sweep interval but prevents discharge of said retrace condenser through said inductor during the retrace interval.

2,896,116
SPARK GAP CONSTRUCTIONS

Francis V. Cunningham, Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Application April 28, 1958, Serial No. 731,274
8 Claims. (Cl. 315—36)

1. A spark gap construction comprising at least one unit having a pair of insulating members arranged to be stacked, each member having a groove aligning with the groove of the other member, a U-shaped magnetizable member seated partially in each groove and holding the units in stacked and aligned relation, said unit having a primary spark gap, and having a plurality of secondary spark gaps, said primary and secondary spark gaps being arranged in an approximate line, said magnetizable member partially surrounding said primary and secondary

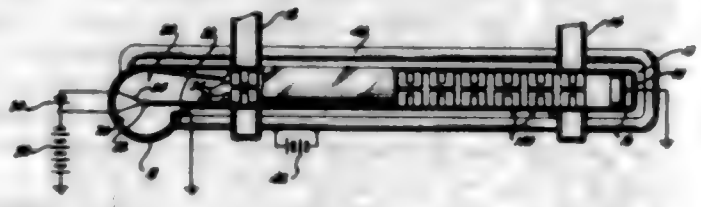


spark gaps and having an axis approximately aligning with said line and being adapted to be magnetized by current flow across the primary and secondary spark gaps, the magnetic flux from said magnetizable member being arranged to force the arc from the primary spark gap into the secondary spark gaps.

2,896,117
LINEAR MAGNETRON TRAVELING WAVE TUBE

Charles K. Birdsall and Lester M. Field, Los Angeles, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Application February 28, 1955, Serial No. 490,953
3 Claims. (Cl. 315—39.3)



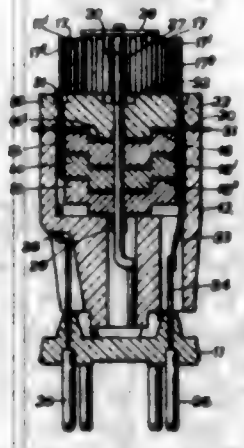
3. A linear magnetron traveling-wave tube comprising a slow-wave structure having a first set of arched conductors disposed in the same position sequentially along a predetermined axis; a second set of arched conductors disposed sequentially along said axis and having their extremities disposed in an opposed adjacent position to the extremities of said first set of arched conductors; a first set of straight axial segments interconnecting adjacent arched conductors of said first set of conductors, said first set of axial segments alternating between opposite extremities of said first set of conductors; a second set of straight axial segments disposed adjacent to said first set of straight axial segments and interconnecting adjacent arched conductors of said second set of conductors, said second set of axial conductors alternating between opposite extremities of said second set of conductors, whereby said first set of arched conductors and axial segments defines a first serpentine shaped element and said second set of arched conductors and axial segments defines a second serpentine shaped element which is a mirror image of said first element, said first and second elements being direct current mutually insulated but radio frequency capacitively coupled, whereby the electrical equivalent of a contrawound helix is simulated, being made up of two continuous serpentine elements lying adjacent to each other and having axial plane of symmetry; means for maintaining said serpentine ele-

signal having a predetermined value; and means interprising said secondary winding means and said spark gap

744 O.G.—56

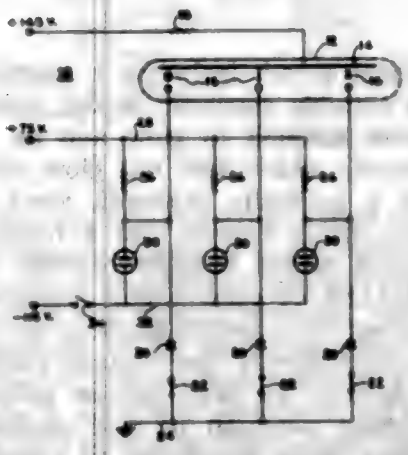
ments at different direct current potentials to provide an electric field perpendicular to said plane of symmetry and means for providing a magnetic field along said plane of symmetry in the region of said slow-wave structure transversely to the axis of said structure.

2,896,118
DISCHARGE DEVICES FOR ELECTRONIC COUNTING AND LIKE PURPOSES
David John Williams, Wollaton, Nottingham, and Kenneth Harold Westley, Dunkirk, Nottingham, England, assignors to Ericsson Telephones Limited, London, England
Application January 5, 1956, Serial No. 557,571
Claims priority, application Great Britain September 7, 1955
15 Claims. (Cl. 315—84.6)



1. A gaseous electric discharge device comprising a sealed envelope and within said envelope a plurality of elongated electrodes disposed with their longitudinal axes parallel to one another in at least part of a ring, a common electrode in electric discharge relationship with said elongated electrodes, said elongated electrodes being constituted by arms of a plurality of spiders each having a hub portion, each said hub portion having bearing surfaces in planes perpendicular to said axis, and insulating spacer means located between and in engagement with said bearing surfaces of adjacent spiders and supporting the latter relative each other, the arms of one spider being interleaved with the arms of another spider.

2,896,119
GLOW TUBE STORAGE CIRCUITS
Wojslaw J. Milan-Kamski, North Bergen, N.J., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Application March 10, 1958, Serial No. 720,346
6 Claims. (Cl. 315—84.6)

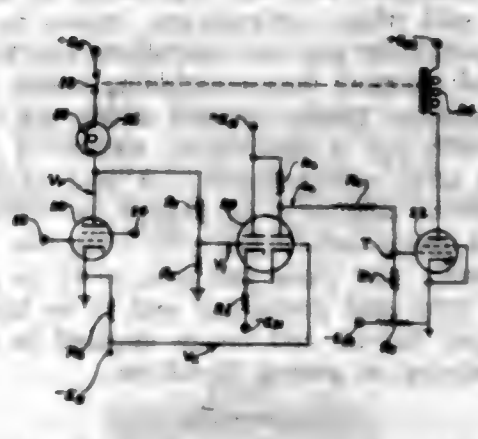


1. A storage circuit for an indicator device including a first gaseous glow discharge tube containing an anode and a glow cathode, a first electrical path including a unidirectional current flow device connecting said cathode to ground and a second electrical path including a second gaseous glow tube connecting said cathode to a fixed negative potential, and means for applying a positive bias voltage to said anode, the combination of said positive voltage and the potential across said second gaseous glow tube when ignited being sufficient in magnitude to cause said first glow tube to glow.

2,896,120
IGNITION NOISE SUPPRESSOR
Heinrich Spittler, Hohenacker, Kreis Waiblingen, Germany, assignor to Robert Bosch G.m.b.H., Stuttgart, Germany
Application December 19, 1956, Serial No. 629,373
Claims priority, application Germany December 23, 1955
10 Claims. (Cl. 315—85)

1. Apparatus for suppressing ignition noise in wireless equipment, comprising, in combination, an electrical source of interference; electrical conductors respectively leading to and from said source; and a ferrite tube of predetermined composition through which one of said conductors passes, said composition of said tube providing a real resistance at high frequencies through the cooperation of said tube with said conductor.

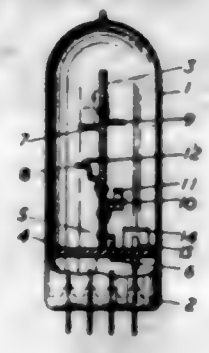
2,896,121
LAMP BURNOUT DETECTOR
Adrian E. Gleadon, Cedar Rapids, Iowa, assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Application December 11, 1957, Serial No. 702,055
4 Claims. (Cl. 315—119)



1. In combination with a circuit comprising a circuit load in series with (*a*) a source of direct current, (*b*) an amplifier for operating said load, and (*c*) a normally closed switch, means for detecting a decrease in the impedance of said load for opening said switch, said detecting means comprising: means connected to said circuit for developing a first signal which is an analog of the current flowing through said load and said amplifier; means connected to said circuit for developing a second signal which is an analog of the voltage across said amplifier; means connected to both of said developing means for summing said first and second signals; means connected to said summing means for comparing the sum of the values of said first and second signals to a

signal having a predetermined value; and means interconnecting said comparing means and said switch for opening the latter in response to a predetermined result of said comparison.

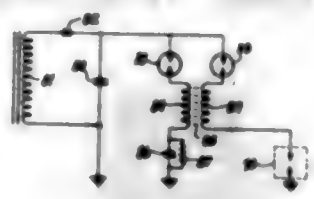
2,896,122
ELECTRIC DISCHARGE TUBES
Thomas Melrion Jackson and Eric Andreas Frederic Sell, London, England, assignors to International Standard Electric Corporation, New York, N.Y.
Application November 18, 1955, Serial No. 547,653
3 Claims. (Cl. 315—169)



1. An arrangement comprising in combination a gas-filled electric discharge tube and a circuit for operating said tube, said tube comprising an envelope containing a plurality of electrodes, a pair of said electrodes comprising a first anode and a first cathode defining a diode gap therebetween, other of said electrodes comprising a second anode and a second cathode defining an anode-cathode gap therebetween, a trigger electrode positioned with respect to said second cathode so as to define a trigger-cathode gap therewith, said trigger gap included in said anode-cathode gap, means for shielding said diode gap from said other gaps, a probe for coupling said diode gap with said anode-cathode gap, said probe extending from said first cathode electrode through said shielding means into said main gap and defining a probe gap with said second anode, said operating circuit comprising a first source of anode potential, a second source of triggering potential, a third source of biasing potential, means for applying said second source to said trigger-cathode gap, means for applying said third source to said anode-cathode gap coincident with the application of said second source to said trigger-cathode gap, means for coupling said anode-cathode gap and said diode gap to said first source, said coupling means including means for reducing the potential applied to said diode gap while said anode-cathode gap is discharging, means for firing said probe gap after extinguishment of said anode-cathode gap, said probe adapted to be primed by residual ionization in said anode-cathode gap after extinction of the discharge therein, said diode gap adapted to be primed by ionization from said probe gap and to be fired by said first potential source, and means coupled to said diode gap for deriving an output therefrom.

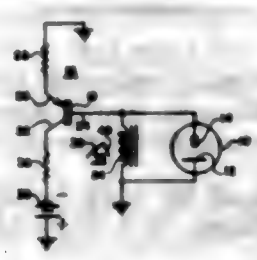
2,896,123
SPARK PRODUCING APPARATUS INCLUDING SATURABLE CORE TRANSFORMER
John V. McNulty, Norwich, N.Y., assignor to General Laboratory Associates, Inc., Norwich, N.Y., a corporation of New York
Application November 23, 1953, Serial No. 393,831
1 Claim. (Cl. 315—177)

Spark producing apparatus, comprising a transformer having primary winding means, secondary winding means, and a saturable magnetic core; a spark gap having a fixed breakdown potential, a trigger condenser, primary and secondary circuit branches, said primary circuit branch comprising said primary winding means and said trigger condenser in series, said secondary circuit branch comprising said secondary winding means and said spark gap in series, an energy supply condenser, means for charging said energy supply condenser, means operable to connect said energy supply condenser across said primary circuit branch, said last-named means including a first sealed gap connected in series with the primary winding means and the trigger condenser and having a predetermined breakdown potential, said energy supply condenser being effective upon breakdown of said first sealed gap to provide a current flow through said primary winding, said energy supply condenser and said transformer then cooperating to induce in said secondary winding a potential effective to break down said spark gap, means operable to connect said energy supply condenser across said secondary circuit branch, said last-named means including



a second sealed gap having a breakdown voltage greater than that of the first sealed gap and less than that of the spark gap, said energy supply condenser being effective when the spark gap is broken down to produce a current flow through said secondary winding sufficiently large to saturate the core and thereby to reduce the impedance of the secondary winding and to increase cumulatively the current through the spark gap until the energy supply condenser potential falls to a value too low to maintain a spark discharge at the gap, said first sealed gap having an arc sustaining potential greater than the potential existing across the energy supply condenser when the core is saturated, said first sealed gap being thereby effective to open the primary circuit branch before the core becomes saturated.

2,896,124
GASEOUS GLOW TUBE CIRCUITS
Laurence R. Brown, Berwyn, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Application November 25, 1957, Serial No. 698,668
8 Claims. (Cl. 315—200)



1. An electrical circuit including a gaseous indicator tube having a cathode electrode in the form of an indicator character adapted to glow and be viewed and an anode electrode which does not glow, circuit means for generating a generally sawtooth wave of current having a slowly rising portion and a rapidly decaying portion, inductive means coupled between said circuit means and said tube for generating a comparatively high voltage pulse from the rapidly decaying portion of said wave and a comparatively low voltage pulse from the slowly rising portion, the high voltage pulse exceeding the glow threshold potential of said cathode and the low voltage pulse being insufficient to exceed the glow threshold of said anode, and means for applying said pulses to said tube so that the cathode is pulsed negative with respect to the anode by said high voltage pulse and the cathode is thereby caused to glow.

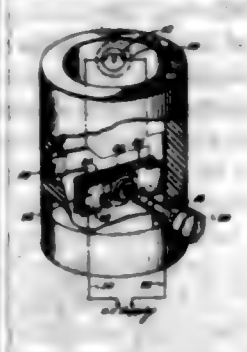
2,896,129

sistor is normally cut off, a second junction transistor

2,896,125
ELECTRIC LAMP SWITCHING MECHANISM

Robert C. Morton, Los Angeles, Calif., assignor to California Computer Products, Inc., Downey, Calif., a corporation of California

Application May 27, 1957, Serial No. 661,903
5 Claims. (Cl. 315—272)

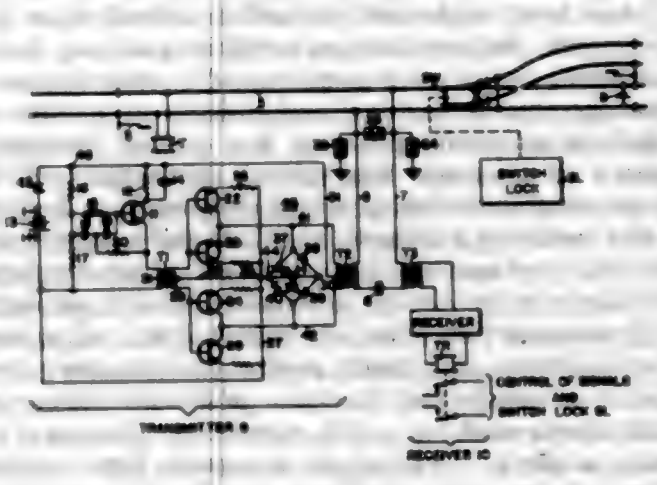


5. In an electric unit system for providing at least two distinct energization levels for an electric unit controlled thereby, the combination of: circuit means for supplying alternating current from an alternating current source to the electric unit, rectifier means to be selectively connected into said circuit means between the source and the unit to provide rectification of the alternating current supplied from the source to the electric unit, and switching means for selectively connecting said rectifier means into said circuit means between the source and the unit to provide a first energization level for the unit for one operating condition of the switching means and to provide a second energization level for the unit for a second operating condition of the switching means, the electric power supplied to the unit at one energization level being less than that supplied to the unit at the other energization level.

2,896,126
LIGHTNING PROTECTION FOR AN ELECTRONIC TRACK CIRCUIT

Marcian E. Hoff, Jr., Spencerport, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.

Application September 4, 1956, Serial No. 607,842
7 Claims. (Cl. 317—9)

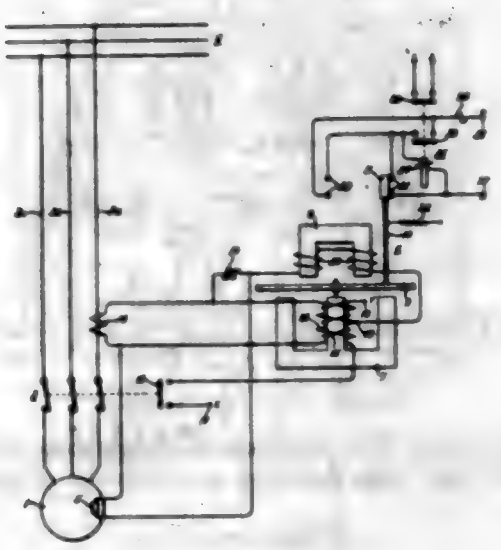


1. In an electronic circuit organization effective to generate an alternating current of a selected frequency at its output terminals, a transformer having a primary winding connected across said output terminals, circuit means including a rectifying bridge having its input terminals connected parallel to said primary winding across said output terminals, a capacitor connected across the output terminals of said rectifying bridge, said rectifying bridge including diodes having low forward resistance characteristics for conducting the energy of a transient voltage surge to said capacitor, said capacitor having internal leakage characteristics for dissipating said transient energy voltage surge.

2,896,127
TEMPERATURE RESPONSIVE PROTECTIVE RELAY

Harold T. Seeley, Havertown, Pa., assignor to General Electric Company, a corporation of New York

Application June 26, 1956, Serial No. 593,945
5 Claims. (Cl. 317—40)

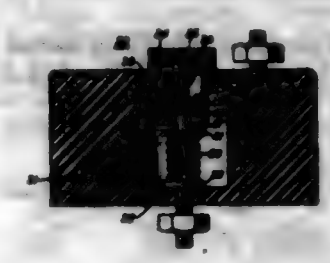


1. A circuit controlling relay responsive to resistance variations of a temperature detector comprising, an electromagnetic unit including a circuit controlling induction element and a magnetizable structure, a tapped winding disposed on said structure, a polarizing winding magnetically coupled to said tapped winding and connected for energization to a source of substantially constant alternating voltage, a reference resistor of predetermined substantially constant resistance, circuit means interconnecting said resistor, detector and tapped winding to form a Wheatstone bridge, and an operating winding disposed on said structure and connected across said bridge between points of normally equal potential, whereby variations in the resistance of the temperature detector unbalance said bridge and cause current flow in said operating winding thereby tending to actuate said induction element.

2,896,128
LIGHTNING SURGE PROTECTING APPARATUS

Calvin S. Fuller, Chatham, and Gerald L. Pearson, Bernards Township, Somerset County, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application March 5, 1954, Serial No. 414,332
1 Claim. (Cl. 317—61)

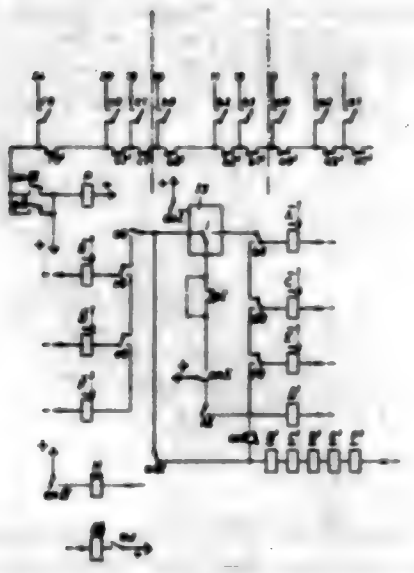


Means for preventing voltage surges on a telephone transmission line from reaching a subscriber's subetation set comprising a pair of PNP silicon diodes each connected between a conductor of said transmission line and ground, a pair of fuse elements each serially connected with a different one of said diodes, and means under control of each fuse element for short circuiting its related diode, whereby voltage surges of either polarity in said transmission line are conducted to ground.

discharge device, and a capacitor of small value con- the fixed pole piece, a work holder, means for moving

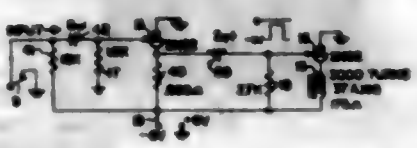
condenser in series, said secondary circuit branch com- and the cathode is thereby caused to glow.

2,896,129
RELAY CHAINS COMPRISING MAGNETIC COUNTING OR STORING RELAYS
Johannes Matthias, Stuttgart-Stammheim, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Application October 6, 1954, Serial No. 460,721
5 Claims. (Cl. 317—140)



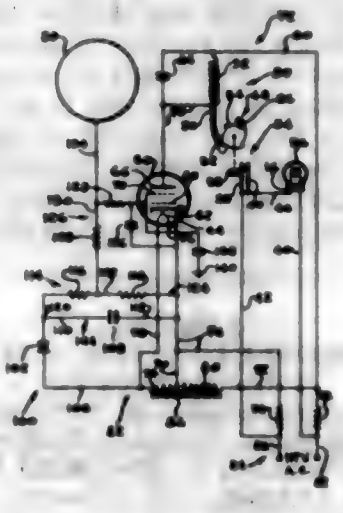
1. An electrical impulse counting circuit comprising a plurality of electromagnetic impulse counters, each being of the type having a common energizing winding, a common restoring winding, a series of multiple armatures associated with said windings and separate electrical contacts associated with each of said armatures, said armatures successively operated in response to successive pulses, respectively, said counters arranged in a chain of odd and even groups, a source of operating impulses, an energizing circuit for the energizing winding of the first counter in the odd group extending to said source over a back contact of the first counter in said even group, an energizing circuit for the energizing winding of the first counter in said even group extending to said source over a front contact of the first counter in said odd group and a back contact of the second counter in said odd group, each succeeding counter in each group having an energizing circuit which includes the closed ultimate contacts of all previously operated counters in the opposite group of the chain, and a restoring circuit for connecting the restoring winding of the first counter in one of said groups to said source, said restoring circuit including the ultimate contact of the ultimate counter in said chain.

2,896,130
TRANSISTOR ACTUATED DEVICE
Howard E. Tompkins, Ridley Park, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Application September 16, 1955, Serial No. 534,809
2 Claims. (Cl. 317—148.5)



1. A pulse operated transistor circuit for operating a solenoid comprising in combination; a first junction transistor having an emitter, a base, and a collector, a resistor connected at one end to the collector of the first transistor and connectible at its other end to a source of collector potential, a first base resistor connected between the base of the first transistor and a point at reference potential, the emitter of the first transistor being directly connected to a point at reference potential, whereby said first transistor is normally cut off, a second junction transistor substantially of the same type as said first transistor and having a base, an emitter, and a collector, a solenoid, said solenoid being connected at one end to the collector of the second transistor and connectible at its other end to the source of collector potential, a second base resistor connected at one end to the base of the second transistor and connectible at its other end to the source of collector potential, the emitter of the second transistor being directly connected to a point at reference potential, whereby said second transistor is normally saturated, a coupling capacitor connecting the collector of the first transistor to the base of the second transistor, circuit means for applying pulses to the base of the first transistor, said first transistor becoming saturated when pulses of the proper amplitude and width are applied to its base, said circuit being so constructed and arranged that the second transistor cuts off and de-energizes said solenoid when the first transistor becomes saturated.

2,896,131
TOUCH RESPONSIVE LAMP OR THE LIKE
Fred Schumann, Nashville, Tenn., assignor to Aladdin Industries, Incorporated, Nashville, Tenn., a corporation of Illinois
Application May 7, 1956, Serial No. 583,366
4 Claims. (Cl. 317—149)



1. In a touch responsive device for controlling an electrical circuit, the combination comprising a relay having an actuating coil, a set of contacts, and a ratcheting mechanism operable by said coil and effective to operate said contacts to successive positions in a cyclical manner responsive to successive intervals of energization of said coil, an electron discharge device containing an ionizable gas and including a cathode, an anode and a control electrode, first and second supply lines for direct connection to a source of household alternating current, an output circuit connected between said supply lines and connecting said cathode, said anode, and said coil in series therebetween, a transformer having a primary winding connected across said lines, said transformer having a secondary winding, a bias supply energized from said secondary winding and including a rectifier for supplying a direct voltage and a filter for smoothing said direct voltage into a biasing voltage, a touch receiving electrode adapted to be contacted by a portion of a human body, a first resistor of high value connected between said touch receiving electrode and said control electrode of said electron discharge device, said bias supply having positive and negative output terminal elements for delivering said biasing voltage, said positive terminal element being connected to said cathode, means including a second resistor of high value for applying said biasing voltage from said negative terminal element to said touch receiving electrode, said biasing voltage thereby being applied between said control electrode and said cathode of said electron

plate constituting said other terminal, a water jacket

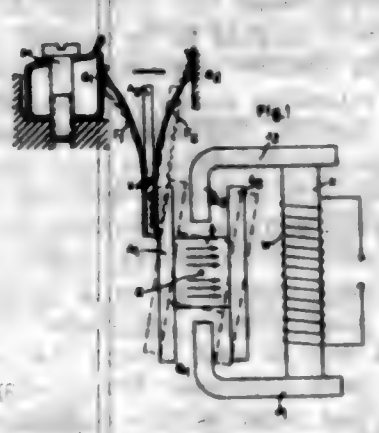
2,896,138
PRESSURE INDICATOR

voltage surge.

said transmission line are conducted to ground.

discharge device, and a capacitor of small value connected between said control electrode and said cathode for bypassing high frequency interference, said capacitor having a substantial impedance with respect to the value of said first capacitor at the frequency of the alternating current source, said first resistor and said capacitor thereby affording small attenuation at the frequency of said source while affording progressively increasing attenuation with increasing frequency so that high frequency interference will be highly attenuated, said electron discharge device being normally maintained non-conductive by said biasing voltage but being rendered conductive by application of a portion of a human body to said touch receiving electrode.

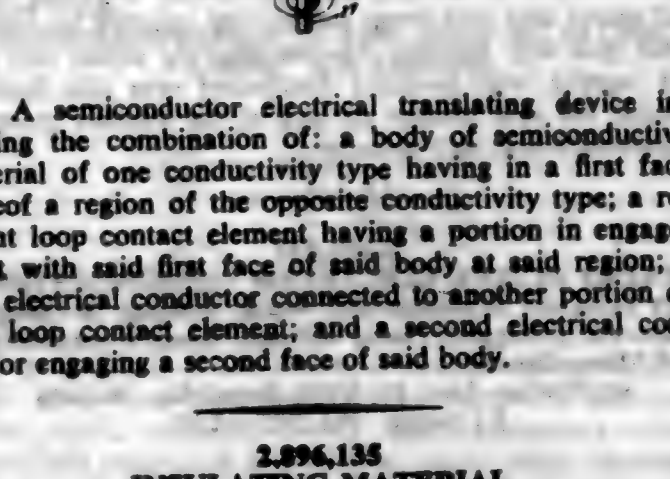
2,896,132
ELECTROMAGNETIC RELAY WITH SPRING LOADED ARMATURE
Hans Sauer, Chicago, Ill., assignor to Comar Electric Company, Chicago, Ill., a corporation of Illinois
Application March 7, 1955, Serial No. 492,451
8 Claims. (Cl. 317—199)



1. A relay comprising a pivoted armature; an elongated spring-backing member movable with said armature; a pair of spring fingers disposed on opposite sides of said backing member and respectively fixed at corresponding ends adjacent said armature with their respective free ends projecting into space beyond the armature, at least; said fingers being curved in opposite directions away from each other and said backing member from said fixed end thereby biased to predetermined normal positions with substantial portions thereof out of contact with said backing member; and counterbearing means positioned opposite to, and each respectively engaged by, one of said free ends of the spring fingers, the latter acting to dispose said armature in a predetermined normal position with substantially minimum spring force acting thereon, pivotal displacement of said armature from said normal position causing one of said spring fingers to be flexed toward and against said backing member and the other thereof to flex away from the backing member, whereby to change the effective length and thereby the spring characteristic of the said fingers and the spring action thereof in predetermined desired relation to the amount of displacement of the armature; together with electromagnet means for displacing the armature.

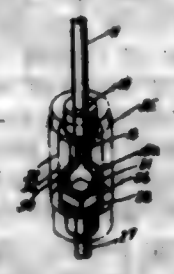
2,896,133
MAGNETIZING APPARATUS
Harry W. Heidegott, Indianapolis, Ind., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application April 13, 1956, Serial No. 577,998
8 Claims. (Cl. 317—203)

6. A magnetizing apparatus, comprising a fixed pole piece, a movable pole piece, lever means mounting the movable pole piece for movement from a retracted position to an operative position in juxtaposition relative to the fixed pole piece, a work holder, means for moving said work holder to a position over the fixed pole piece, and means operable by the work holder for swinging



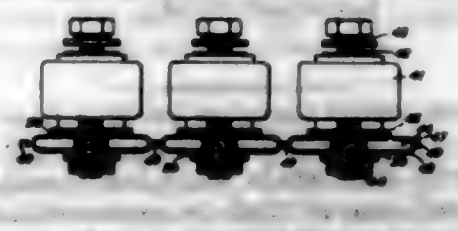
the movable pole piece to the operative position as the work holder is moved to a position over the fixed pole piece.

2,896,134
LOOP CONTACT FOR SEMICONDUCTOR
Jon H. Myer, Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Application September 15, 1955, Serial No. 534,588
8 Claims. (Cl. 317—234)



1. A semiconductor electrical translating device including the combination of: a body of semiconductive material of one conductivity type having in a first face thereof a region of the opposite conductivity type; a resilient loop contact element having a portion in engagement with said first face of said body at said region; a first electrical conductor connected to another portion of said loop contact element; and a second electrical conductor engaging a second face of said body.

2,896,135
INSULATING MATERIAL
John Cockbain Briggs, Harrogate, England, assignor of one-half to Sydney Hirst, East Grinstead, Sussex, England
Application July 16, 1957, Serial No. 672,307
Claims priority, application Great Britain July 16, 1956
21 Claims. (Cl. 317—234)



19. A germanium rectifier comprising a germanium rectifier cell, a stud on which said rectifier cell is mounted and one end of which carries a terminal, a metal plate through which passes the other end of said stud, said metal

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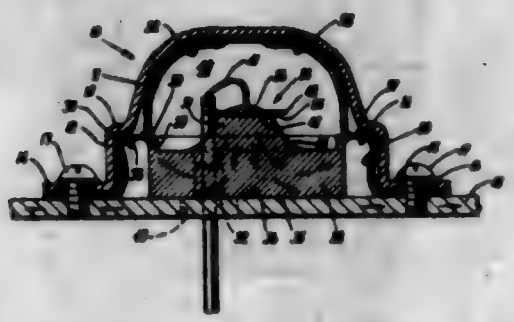
circuit, a load member including a shaft and condenser

coil, each transformer having its primary in circuit with

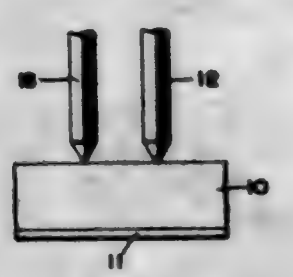
to a point at reference potential, whereby said first transplate constituting said other terminal, a water jacket surrounding the stud adjacent the plate, and a layer of insulating material between and in contact with said water jacket and said stud and plate, the layer of insulating material comprising metal powder embedded in a matrix of rubber, the particles of the metal powder each being coated with an electrically insulating resin.

2,896,136
SEMICONDUCTOR UNITS
Kenneth R. Hales, Colmar, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application April 23, 1958, Serial No. 730,436
5 Claims. (Cl. 317—234)



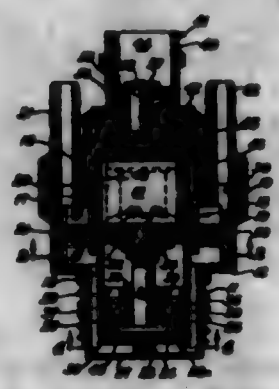
1. In a semiconductor unit, a support member of copper or the like, said support member having an annular flange around a top surface thereof and having a flat bottom surface spaced from and parallel to said flange; semiconductor means on the top surface of said support member; an integral hat of copper or the like, having a flange cold welded to the flange of said support member, a wall extending upwardly from said flanges and above the semiconductor means, and strap means extending outwardly from the flange of the hat; a rigid shield into which the hat is nested; and bolt means engaging both said shield and said strap means and adapted to engage a flat heat sink member for pressing the shield and hat and thereby, with pressure distributed over said bottom surface, the said bottom surface of the support member against such heat sink member.

2,896,137
RADIO ACTIVE ELECTRODE CONSTRUCTION
Kurt Lehovec, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Application June 25, 1953, Serial No. 364,006
3 Claims. (Cl. 317—235)



1. In a point-contact transistor having a body of n-type conductivity, a base electrode in ohmic contact with said body, an emitter electrode in rectifying contact with said body, and a collector electrode in contact with said body in close proximity to said emitter electrode; the improvement comprising providing said collector electrode with a source of alpha-particle radiation so as to produce a region of p-type conductivity in said body surrounding said collector contact.

2,896,138
PRESSURE INDICATOR
Carl E. Grinstead, Altadena, Calif., assignor to Photocon Research Products, Pasadena, Calif., a corporation of California
Application August 30, 1955, Serial No. 531,485
10 Claims. (Cl. 317—246)



1. A pressure indicator comprising: an outer body adapted to be mounted to a chamber in which pressure is to be measured, said outer body including an internal wall which defines an inner bore adjacent the end of the outer body which is adapted to be exposed to chamber pressure; an outer flexible diaphragm attached to said outer body and extending across and closing said inner bore, the outer flexible diaphragm isolating the inner bore from said chamber pressure; an inner body mounted to said outer body and projecting into said inner bore, that part of the inner body which projects into said inner bore having smaller corresponding lateral dimensions than the wall of said inner bore so as to leave a continuous spacing therebetween; an inner flexible diaphragm mounted only to and closing the end of said part of the inner body, said inner flexible diaphragm being spaced from said outer flexible diaphragm so as to leave a space therebetween; a post interconnecting the flexible diaphragms, the post being the only direct interconnection between the diaphragms; a variable circuit element comprising the inner flexible diaphragm and a plate which is stationarily mounted in and insulated from the inner body, said plate facing and being spaced from the inner flexible diaphragm; whereby flexure of the outer flexible diaphragm exerts a force through the post on the inner diaphragm, thereby deflecting the inner diaphragm and varying the spacing between the inner diaphragm and the plate to vary the response of the variable circuit element, an annular groove in one of the bodies, the groove substantially circumscribing said inner body, a pair of substantially diametrically opposed blocks in said groove, which blocks divide the groove into two segments, a first port in one of said bodies in communication with one segment of said groove, and a second port through one of said bodies in communication with the other segment of said groove, said segments each communicating with the spacing between the wall of the inner bore and the inner body and communicating with each other only through the said spacing, whereby coolant fluid can be introduced through said first port and thence into one segment of the groove from which it flows into the said spacing and thence through the other segment of the groove and out the second port.

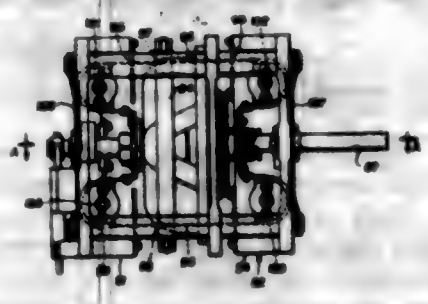
2,896,139
ELECTROMECHANICAL TRANSDUCER FOR CONTROLLING A TUNING CONDENSER IN AN OSCILLATOR CIRCUIT
Albert Axelrod, Bronx, N.Y., assignor, by mesne assignments, to Van Norman Industries, Inc., New York, N.Y.
Application August 10, 1956, Serial No. 603,291
15 Claims. (Cl. 317—250)

1. In a transportable electro-mechanical transducer for producing a sweep frequency in an electric oscillator

for obtaining the production of a magnetomotive force means including means responsive to the attitude of said

tion to an operative position in juxtaposition relative to through which passes the other end of said stud, said metal

circuit, a load member including a shaft and condenser electrode means attached to said shaft, driving means under control of electromagnetic alternating current energy to cause said load member to vibrate in the longitudinal direction of said shaft, there being arranged stationary with respect to said shaft other condenser electrode means cooperating with said first condenser electrode means, counterbalancing means arranged sub-



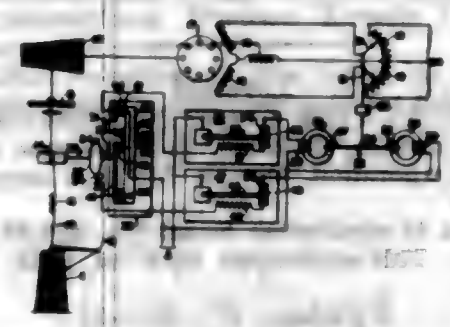
stantially symmetrically with respect to said load member and coupled at least to two diametrical points of said load member so as to move under control of said driving means in a direction which at any moment is substantially opposite to that of the momentary direction of said load member, thereby counteracting the external forces due to the transport movement exerted upon said load member.

2,896,140

MOTOR CONTROLS FOR WINDING MACHINES

Harry B. Fuge, Somerville, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Application April 26, 1955, Serial No. 503,907
7 Claims. (Cl. 318—6)



1. In a control system for maintaining constant the angular speed of a shaft, an electric motor for driving said shaft and connected thereto through a continuously changing speed-ratio transmission, a two-circuit centrifugal contact-making governor driven by said shaft, thermal relays having heater elements energized responsively to operation of said governor, an eddy-current disc, stator elements energized by said relays for producing opposite torques in said disc, a variable transformer driven mechanically by said disc and connected electrically to said electric motor for supplying a variable voltage thereto, whereby the changing speed ratio may be compensated to hold the angular shaft speed constant.

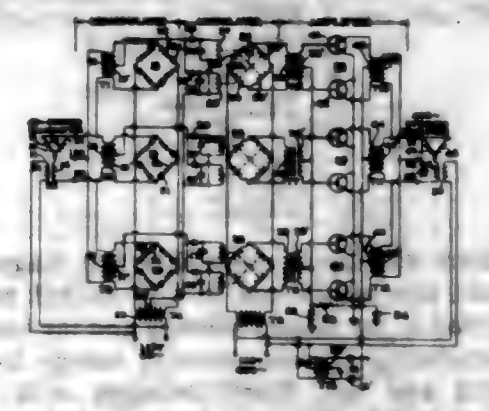
2,896,141

SELF-SYNCHRONOUS TRANSMISSION SYSTEM

Jay H. Steudemann, Baltimore, Md., assignor to Bendix Aviation Corporation, Baltimore, Md., a corporation of Delaware

Application September 30, 1953, Serial No. 764,435
9 Claims. (Cl. 318—24)

1. In a self-synchronous transmission system, a transmitter and a receiver each having an exciting coil and a coacting set of transmission and receiving coils inductively related to the exciting coil, and an electrical signal frequency-converting and signal-amplifying network interconnecting said transmission and receiving coils comprising: a demodulator section provided with a signal-input transformer for each transmission and receiving coil, each transformer having its primary in circuit with one of said latter coils, and a demodulator circuit operatively related to each transformer, each of said demodulator circuits being in the form of a ring-type rectifier bridge having signal-input junctions in circuit with the secondary of each of said transformers, means for supplying a common reference voltage at a given frequency to the exciting coil of said transmitter and each of said bridges; a modulator section comprising a plurality of magnetic amplifiers each having output or load windings



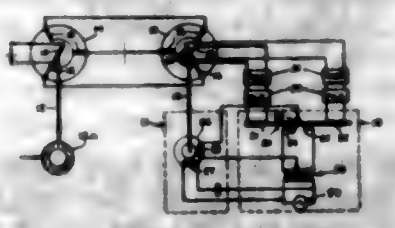
and coacting control windings for regulating the outputs of said load windings, circuits arranged to conduct the rectified signal current outputs of said demodulator bridges to and through said control windings, phase discriminating means in said latter circuits, means for supplying a common reference voltage at a frequency different from said first-named frequency to said amplifier output windings and the exciting coil of said receiver; and an electric signal-amplifying network connecting the output coils of said magnetic amplifiers with the transmission and receiving coils of the receiver.

2,896,142

SERVO CONTROLLER

Mark A. Steinbacher, Rockville Centre, N.Y., assignor to American Bosch Arma Corporation, a corporation of New York

Application December 12, 1956, Serial No. 627,900
7 Claims. (Cl. 318—30)



2. In a device of the character described, a controlled shaft, motive means operatively connected to said controlled shaft, an order shaft, signal generating means operatively connected to said order shaft, signal receiving means electrically connected to said signal generating means and operatively connected to said controlled shaft, said signal receiving means producing a pair of electrical signals varying with the displacement of said controlled shaft, control means comprising a directional relay for said motive means, said motive means comprising an electric motor, electrical connections between said receiving means and said control means and rectifying means interposed in said last named connections.

2,896,143

ELECTRIC DRIVE ASSEMBLY

Andrew Bekey, Los Angeles, Calif., assignor to Geneco, Inc., Los Angeles, Calif., a corporation

Application March 11, 1957, Serial No. 645,972
25 Claims. (Cl. 318—197)

1. A variable speed drive assembly including, first means including first and second windings rotatable with respect to one another, the first means having properties

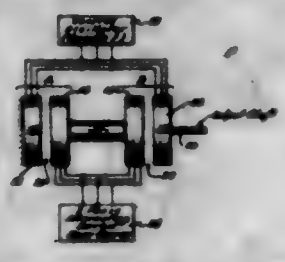
2,896,147

coupling said control winding to said load circuit so as

said collector contact.

producing a sweep frequency in an electric oscillator

for obtaining the production of a magnetomotive force in the first means upon the introduction of electrical energy to at least one of the windings, second means including third and fourth windings rotatable with respect to one another, the second means having properties for obtaining the production of a magnetomotive force in the second means upon the introduction of electrical energy to at least one of the third and fourth windings, means coupled to the first winding and the third winding for introducing first electrical energy to said first winding



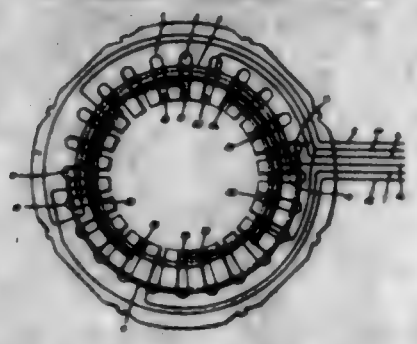
and said third winding to establish a first magnetomotive force in said first means and in said second means, and means coupled to the second winding and the fourth winding for introducing second electrical energy to said second winding and said fourth winding with particular polarities relative to the introduction of energy to the first and third windings to establish a second magnetomotive force in said first means in aiding relation with said first magnetomotive force and to establish said second magnetomotive forces in said second means in opposing relation with said first magnetomotive force.

2,896,144

TWO SPEED INDUCTION TYPE MOTOR

Leroy Mollenberg, Fort Wayne, Ind., assignor to General Electric Company, a corporation of New York

Application March 24, 1958, Serial No. 723,281
6 Claims. (Cl. 318—224)



1. In a single phase induction type motor adapted to operate at two speeds, a magnetic core member having a plurality of slots, a winding disposed in said slots to form a predetermined number of primary poles, each of said poles comprising a number of coils, connections for reversing the polarity of every other pole, each primary pole having a polarity opposite the adjacent pole in one connection, and having a like polarity in a second connection thereby to create consequent poles between said primary poles, some of the outermost coil sides of each of said poles being positioned in the same slots as the outermost coil sides of the pole adjacent thereto for producing additive M.M.F.'s for one of said connections and cancelling M.M.F.'s for the other of said connections, thereby to provide a desirable wave form for both connections.

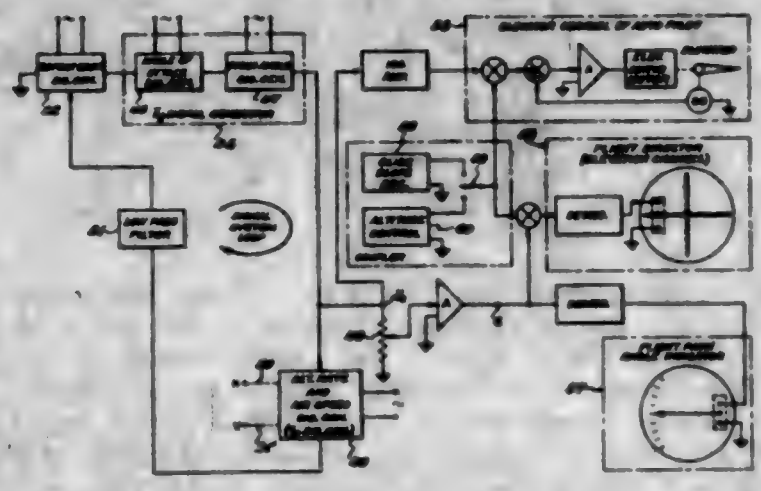
2,896,145

FLIGHT PATH ANGLE CONTROL SYSTEMS

Reuben P. Snodgrass, Lake Ronkonkoma, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware

Application March 13, 1956, Serial No. 571,170
14 Claims. (Cl. 318—489)

3. Apparatus for controlling the angle of the flight path of an aircraft with respect to the horizontal comprising means including means responsive to the attitude of said craft in flight for supplying a first measure of the flight path angle of said aircraft, said first measure being responsive predominately to high frequency changes in said flight path angle but also including erroneous low-frequency components, air pressure responsive means responsive to vertical and horizontal movements of said craft in its sustaining air mass for supplying a second measure of the flight path angle of said aircraft, said



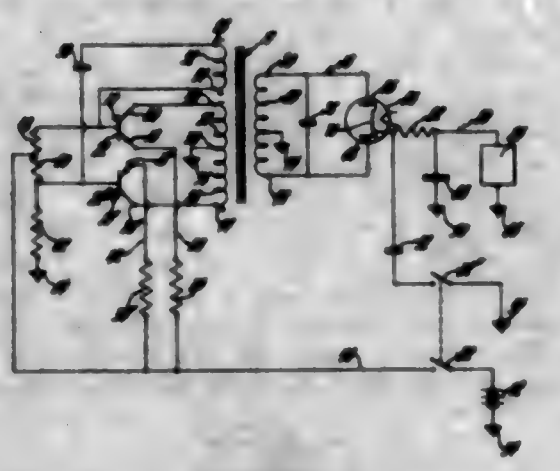
second measure being responsive predominately only to the low frequency changes in said flight path angle, frequency-responsive means responsive to both said first and second measures for supplying a third measure of said flight path angle including only the predominate frequency components of both said first and second measures, and means for controlling the attitude of said aircraft in accordance with said third flight path angle measure.

2,896,146

OSCILLATOR STARTING CIRCUIT

Richard L. Jenkins, Kokomo, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Continuation of application Serial No. 559,951, January 18, 1956. This application April 14, 1958, Serial No. 728,181
4 Claims. (Cl. 321—3)

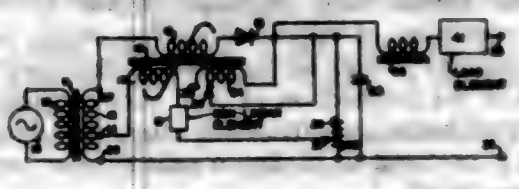


1. In combination, an oscillator including a voltage source and switching means for energization thereof, a rectifier circuit coupled with the oscillator for energization thereby and including a rectifying device which is conductive in the forward direction at low voltage, a condenser connected across the electrodes of said rectifying device to accumulate a voltage therefrom, said switching means including circuit interrupting means in series with said condenser whereby the rectifying device is biased in the reverse direction by the accumulated voltage on said condenser after deenergization of the oscillator to delay conduction of the rectifying device upon subsequent energization of the oscillator.

output voltage across the armature winding of said main, said emitter electrode being connected to the other ter-

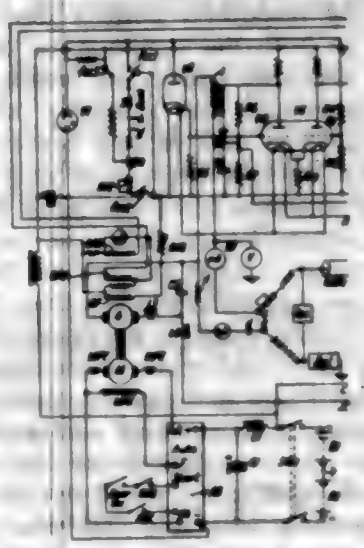
input transformer for each transmission and receiving respect to one another, the first means having properties

2,896,147
REFERENCE VOLTAGE DEVICE
Henry M. Hoge, Bay Village, Ohio, assignor to Lorain Products Corporation, a corporation of Ohio
Application March 12, 1956, Serial No. 571,099
16 Claims. (Cl. 321—25)



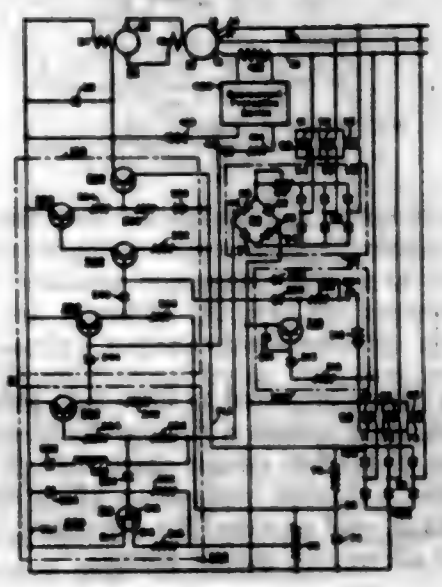
5. In combination, saturable magnetic core means, rectifying means and non-linear means characterized by substantial increases in current for slight increases in voltage above a predetermined critical voltage, first alternating current circuit means for magnetizing said saturable magnetic core means during the portion of the alternating current cycle when said rectifying means is conductive, second alternating current circuit means for demagnetizing said saturable magnetic core means with current passed through said non-linear means during the portion of the alternating current cycle when said rectifying means is non-conductive, means for applying a portion of said output voltage as a bias to said non-linear means, and means for reducing said bias with increasing output current in the direct current circuit means.

2,896,148
GENERATOR REGULATED POWER SUPPLY EQUIPMENT
Victor John Terry, Richard Kelly, Patrick Stanley Kelly, and William Donald Cragg, London, England, assignors to International Standard Electric Corporation, New York, N.Y.
Application November 1, 1954, Serial No. 466,172
Claims priority, application Great Britain November 3, 1953
3 Claims. (Cl. 322—24)



1. A regulated electric equipment for supplying power to a load circuit comprising a generator having a main magnetic field winding for supplying an excitation flux for said generator, two auxiliary magnetic field windings, one for supplying a booster excitation flux and the other for supply a bucking excitation flux for said generator, a circuit comprising a magnetically controlled thermionic diode having a magnetic biasing means and a magnetic control winding, said biasing means and said control winding normally producing opposed magnetic fluxes, a push-pull amplifier having input circuits and two independent output circuits, one of said independent circuits comprising said booster flux winding, the other independent circuit comprising said bucking flux winding, circuit connections between said diode circuit and the input circuits of the push-pull amplifier and means coupling said control winding to said load circuit so as to be responsive to electrical variations therein, whereby said electrical variations control the power supplied to said load.

2,896,149
ELECTRICAL GENERATOR CONTROL APPARATUS
Lewis R. Lowry, Jr., and Glenn W. Ernsberger, Lima, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application March 20, 1958, Serial No. 722,665
8 Claims. (Cl. 322—28)



1. In combination, a dynamoelectric machine having output terminals and an excitation field winding, first means for providing substantially a sawtooth output voltage, second means for providing a direct current control voltage, a first transistor having a base, an emitter and a collector, third means connected in circuit relationship with said first and second means for applying the sum of said sawtooth voltage and said control voltage between said base and said emitter of said first transistor to thereby cause periodic pulses of current to flow between said collector and said emitter of said first transistor which produce periodic output pulses, the width of said output pulses varying with said control voltage, a plurality of additional transistors connected in circuit relationship with said first transistor for amplifying said output pulses, and fourth means connected in circuit relationship between said transistors and said field winding for applying the amplified output pulses to said field winding as excitation current, the average value of said excitation current being controlled by said control voltage.

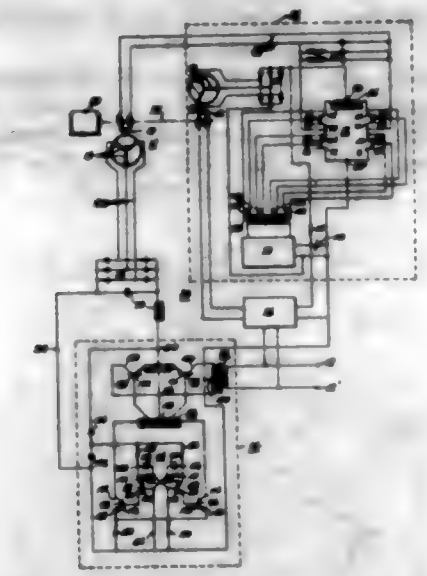
2,896,150
FREQUENCY CONTROL DEVICE FOR GENERATORS
Bruce M. Benton, Bellevue, and Raymond P. Judkins, Seattle, Wash., assignors to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Application September 25, 1958, Serial No. 763,238
5 Claims. (Cl. 322—61)

5. The combination comprising, a main alternating-current generator having a field winding and an armature winding, means for supplying a substantially constant frequency alternating current to said field winding, said means including an alternating-current exciter having a field winding and an armature winding, an oscillator controlled inverter having an input and an output, circuit means for rectifying the alternating voltage appearing across the armature winding of the exciter and applying the resulting direct-current voltage to the input of said inverter, and other circuit means for interconnecting the output of said inverter with the field winding of said main generator to effect a modulated alternating carrier wave

contact member of said second control device after said first means has effected the operation of said cooling means

tion to impress the first alternating voltage across a circuit including the cathode, plate and load resistor and to

output voltage across the armature winding of said main generator, a rectifier having an input and an output, the input of said rectifier being connected to the armature winding of said main generator so as to effect a pulsating direct-current voltage at the output of said rectifier,



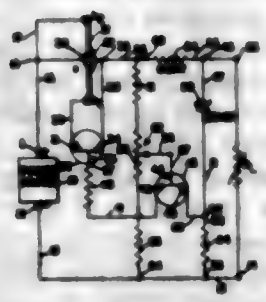
a low pass filter connected to filter said pulsating direct-current voltage to obtain a filtered direct-current pulsating voltage, a flip-flop circuit responsive to said filtered direct-current pulsating voltage to effect an alternating output voltage, and an amplifier connected to be responsive to said alternating output voltage.

2,896,151

SEMICONDUCTOR APPARATUS

Richard J. Zeilnin, Lino Lakes, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application March 21, 1958, Serial No. 722,877
8 Claims. (Cl. 323—22)



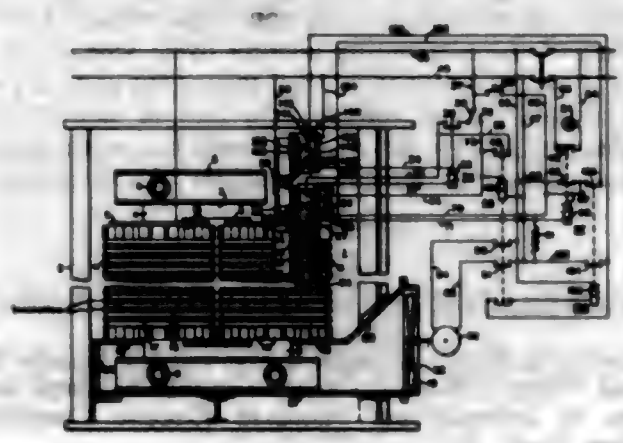
1. Semiconductor voltage regulator apparatus having fail-safe operation in the event of overload comprising: tetrode semiconductor means having a plurality of electrodes including a collector electrode, an emitter electrode, and first and second base electrodes; first and second regulator output terminals; first and second regulator power input terminals, said first and second power input terminals being connected to a source of potential; means connecting said first power input terminal to said emitter electrode; means directly connecting said second base electrode to said emitter electrode; connection means connecting said collector electrode to said first output terminal; compensating resistance means forming a portion of said connection means; potential divider resistance means connected from said collector electrode to said second input terminal, said potential divider means having an adjustable intermediate tap; means comprising a Zener diode and a resistance in series, connected between said first output terminal and said second input terminal, one terminal of said Zener diode being connected to said first output terminal; further semiconductor amplifier means, said means having a plurality of electrodes including a collector, an emitter and a base electrode, said emitter electrode being connected to the other terminal of said Zener diode, said base electrode being connected to said adjustable intermediate tap of said potential divider means; and conductive means connecting the collector electrode of said further semiconductor means to the first base electrode of said tetrode semiconductor means; said regulator means having a first normal condition of operation during which an increase in load current causes an increase in the bias to and an increase in the conduction of said further semiconductor means, and having an overload condition during which the bias is reversed to maintain said further semiconductor means cutoff.

2,896,152

TRANSFORMER COOLING SYSTEM CONTROL

Richard L. Schwab, Hickory Township, Mercer County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application March 7, 1958, Serial No. 719,808
8 Claims. (Cl. 323—44)



1. In an air-cooled transformer provided with a coil assembly, in combination, cooling means disposed for operation to effect the cooling of the transformer, first and second thermally responsive control devices disposed to be responsive to both the temperature of the air rising from said coil assembly and to the heating caused by the current flowing in said coil assembly, said first control device including first and second contact members arranged to close at different degrees of loading of said transformer, a relay disposed to be energized in response to a predetermined value of current flow in said coil assembly and to be deenergized when the current flow decreases to a value below said predetermined value, first means disposed to be energized to effect the operation of said cooling means only after said relay is energized and the first contact member of said first control device is closed, said relay when energized cooperating with said first means to thereafter effect the energization of said cooling means independently of said first control device and when deenergized cooperating with said first means to deenergize said cooling means, a signalling means disposed for operation for indicating a predetermined load condition of said transformer, second means disposed for operation in response to the closing of said second contact member of said first control device to effect operation of said signalling means, said second control device including first and second contact members arranged to open and close respectively at different degrees of loading of said transformer at temperatures less than the temperatures required for the operation of said first control device and a contactor disposed to be energized only when the first contact member of said second control device has closed after said first means has effected the operation of said cooling means, said contactor when energized cooperating with the second contact member of said second control device to effect operation of said second means and said signalling means in response to the closing of said second

power supply including a transformer having a primary material; passing electrical current regulated to have a

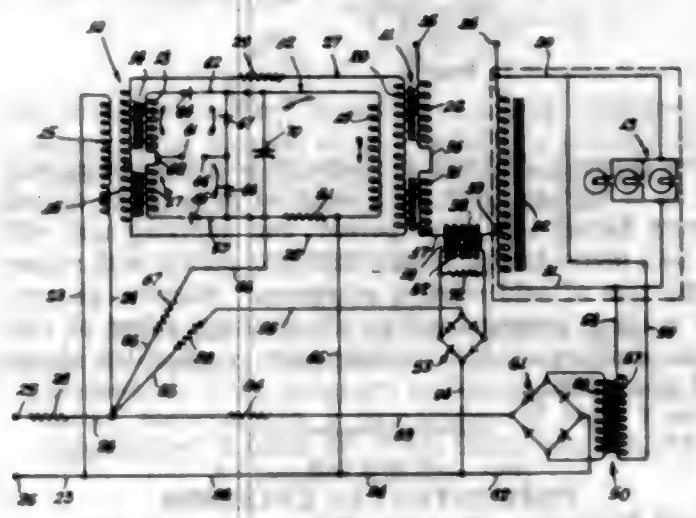
the input circuits of the push-pull amplifier and means generator to effect a modulated alternating carrier wave

contact member of said second control device after said first means has effected the operation of said cooling means and said first contact member of said second control device has closed.

2,896,153
MULTI-STAGE MAGNETIC AMPLIFIER TYPE OF CONTROL

Joseph C. May, Northford, Conn., assignor to The Superior Electric Co., Bristol, Conn., a corporation of Connecticut

Application April 5, 1955, Serial No. 499,379
6 Claims. (Cl. 323—89)

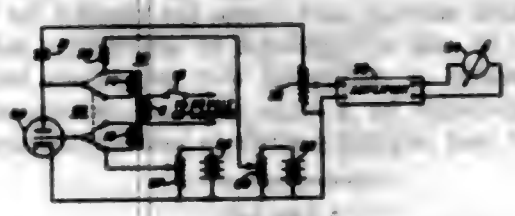


6. A multi-stage magnetic amplifier comprising a pair of saturable reactor devices and a coupling circuit therefor, said devices having magnetic core structures and load and control windings on said core structures, the load winding of one of said devices and the control winding of the other device being connected in said coupling circuit; a supply circuit connected to said load winding; rectifier means in said circuits, providing for unidirectional energization of the control winding when the supply circuit is energized with A.C., said unidirectional energization being under the control of said load winding; means connected to said coupling circuit, providing captive reactance across the leads supplying current to the said control winding, to minimize loss of gain; and a damping circuit and damping windings on the reactor devices, connected in said circuit, and in which the capacitive reactance tends to reduce harmonics in said damping circuit.

2,896,154
METHOD AND APPARATUS FOR MEASURING THE TRANSCONDUCTANCE OF AN ELECTRON TUBE

John Nagy, Jr., Newark, N.J., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of New Jersey

Application October 18, 1954, Serial No. 462,719
7 Claims. (Cl. 324—37)

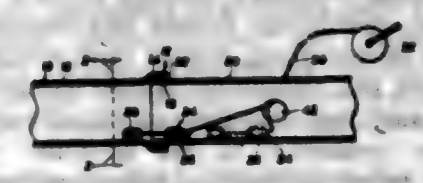


1. Apparatus for the direct measurement of the transconductance of an electron tube, said apparatus comprising means energizing the electrodes of the tube at rated D.-C. voltages; a load resistor connected to the plate of the tube, an indicating instrument connected directly across the tube plate and cathode said instrument having a pointer movable over a scale calibrated in transconductance values; a source of two alternating voltages of known relative magnitudes; means operable to one position to impress the first alternating voltage across a circuit including the cathode, plate and load resistor and to another position to impress the second alternating voltage across the cathode and grid; and electrical means adjustable to align the instrument pointer with a fixed reference mark on the scale.

2,896,155
PIPE JOINT-LOCATING DEVICE

Robert W. Cook, Fort Wayne, Ind., assignor, by mesne assignments, to Charles W. Fuelling, Fort Wayne, Ind.

Application November 24, 1953, Serial No. 394,083
4 Claims. (Cl. 324—34)

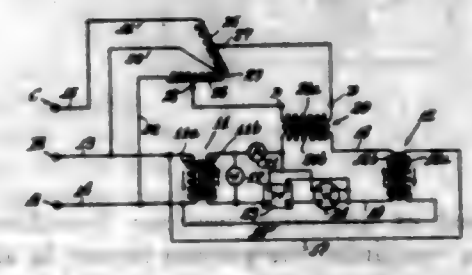


1. A pipe line joint-locating device comprising primary and secondary inductors supported in mutually inductive relation, each inductor comprising a core of ferrous material and a coil mounted thereon, the opposite ends of the core projecting beyond the respective ends of the coil and rigid non-ferrous frame members secured between the core ends of the two inductors for securing the latter together, each frame member passing through one end of each core to be secured to the latter and to secure both cores in substantially parallel relation, both inductors being separated a predetermined distance to provide a high reluctance path therebetween.

2,896,156
TRANSFORMER TEST CIRCUIT

Allen R. Perrine, Bristol, Conn., assignor to The Superior Electric Co., Bristol, Conn., a corporation of Connecticut

Application May 4, 1956, Serial No. 582,856
10 Claims. (Cl. 324—55)



1. A test circuit for testing a transformer by synthesizing a load thereon comprising two transformers; a first circuit connecting the primary windings of the transformers in parallel and to a source of A.C.; a second circuit interconnecting the secondary windings of the transformers in series; adjustable means connected to a source of alternating current for supplying a voltage adjustable in phase and magnitude; and means for introducing said adjustable voltage into the circuits to cause unbalance thereof to cause current to flow in both circuits, said voltage having a phase difference with respect to the voltage across the primary windings in order to control the phase angle of the voltages and currents in the circuits.

2,896,157
SYSTEM FOR TESTING AN AMPLIFIER

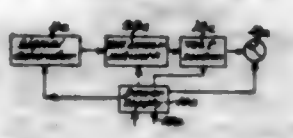
Jerome Tannenbaum, Chicago, Ill., assignor to B & K Manufacturing Co., Chicago, Ill., a corporation of Illinois

Application May 18, 1956, Serial No. 585,752
4 Claims. (Cl. 324—57)

1. A tester for an electronic amplifier having a number of electrodes including a control electrode and an output electrode, said tester comprising an unregulated

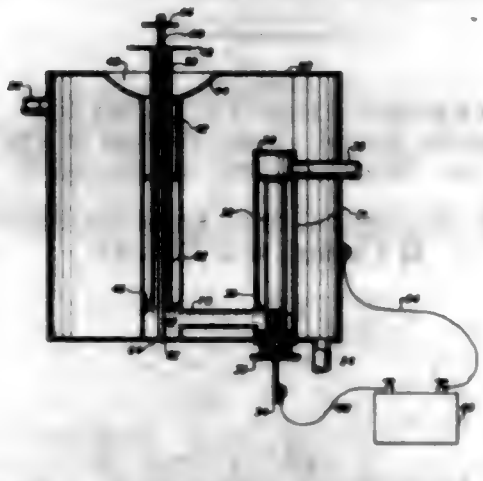
first circuit a periodic potential the frequency of which the deflecting means to tend to deflect the strand trans-

power supply including a transformer having a primary winding to be energized by an alternating current power line and having a plurality of secondary windings, a signal circuit energized by one secondary winding for supplying said control electrode, a current supply circuit energized by another secondary winding for supplying current at a suitable potential to said output electrode of said amplifier, a resistance bridge having four arms



with a non-linear resistance element in each of two non-adjacent arms, said bridge having two diagonal terminals connected to be energized from a third winding, connections disposing the remaining bridge terminals in series with one of said two amplifier supply circuits, and indicating means connected to the amplifier output, said bridge being poled so that the non-linear bridge output compensates for the lack of regulation in said power supply or variation in line voltage.

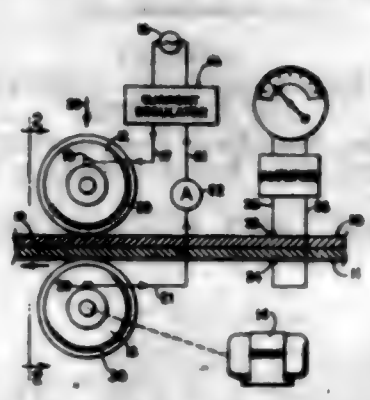
2,896,158
METHOD OF ANALYZING BENZENE HEXACHLORIDE AND APPARATUS THEREFOR
Clarence I. Glasbrook, Hayward, and Thomas D. Parks, San Lorenzo, Calif., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware
Application December 6, 1954, Serial No. 473,234
1 Claim. (Cl. 324—61)



The method of analyzing benzene hexachloride isomer mixtures containing the gamma isomer in at least 80 weight percent concentration and containing impurities having an identical chemical composition but being stereoisomers thereof, including the alpha and delta benzene hexachloride isomers, to determine the gamma isomer content of said mixture, comprising measuring the total dielectric constant of said mixture while said mixture is in a molten state and determining the quantity of said gamma isomer in said mixture by comparing the total dielectric constant measurement of said mixture with a known standard.

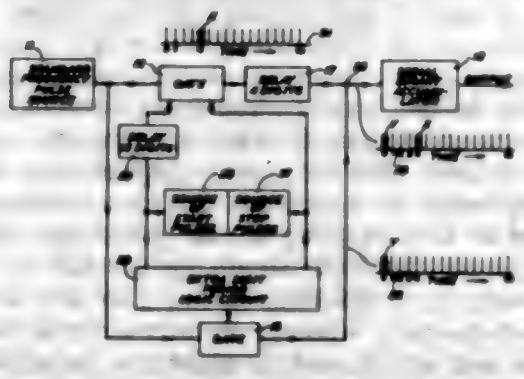
2,896,159
METHOD AND APPARATUS FOR MEASURING ELECTRICAL RESISTANCE
Robert A. Webster, Santa Monica, Calif., assignor to Webster Instrument, Inc., a corporation of California
Application July 14, 1955, Serial No. 521,967
4 Claims. (Cl. 324—64)

4. A method of measuring the average electrical resistance of the inter-face in a composite material made up of two flat pieces of metal placed in face to face engagement, comprising the steps of: engaging opposite sides of said material in rolling contact with an electrical conducting source; adjusting the normal pressure of engagement in accordance with the characteristics of said material; passing electrical current regulated to have a constant value from said source to said material; effecting relative, constant movement between said material and said source for a given period of time so that current



passes through different portions of said inter-face; picking up a voltage from said material as a result of said current during said given period; and applying said voltage to a meter having a long damping period with respect to the rate of said relative movement, whereby an average reading proportional to the average value of electrical resistance of said inter-face is provided during said given period.

2,896,160
TIME INTERVAL ENCODER
Gerald Kronacher, Newark, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application September 20, 1954, Serial No. 457,126
12 Claims. (Cl. 324—68)



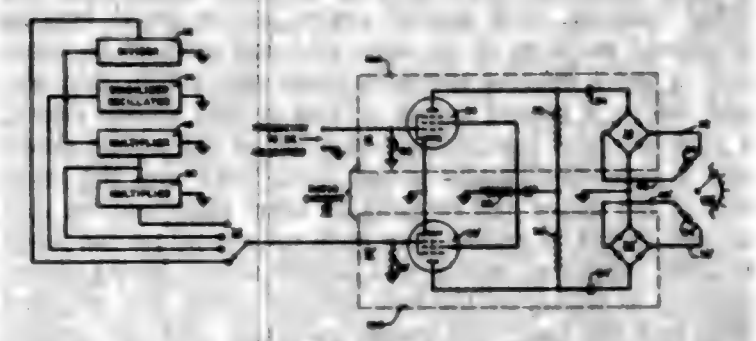
1. A time interval encoder comprising a standard frequency pulse source having a given period, means for dividing said period into subdivisions, a serial accumulator, means for indicating the beginning and end of a time interval to be measured, means for gating pulses from said standard source to said accumulator indicating the number of integral periods included in said interval, means for gating pulses derived from said standard source and having the same frequency as said standard source to said accumulator indicating the number of extra subdivisions in addition to said integral periods which are included in said interval, and means for spacing the time of application to said accumulator of said pulses indicating integral periods as compared with the pulses indicating extra subdivisions by a time interval corresponding to the ratio of said integral periods to said subdivisions.

2,896,161
MEASURING SYSTEM
Benjamin Fox, New York, N.Y.; Bessie E. Fox executrix of said Benjamin Fox, deceased
Original application June 30, 1942, Serial No. 449,121. Divided and this application October 6, 1951, Serial No. 250,175
20 Claims. (Cl. 324—79)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A frequency measuring system comprising first and second input circuits, means for impressing upon said

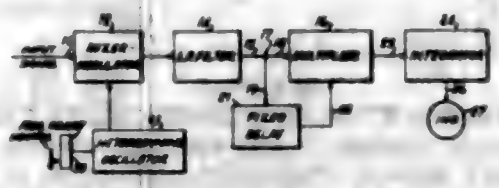
2,896,166

first circuit a periodic potential the frequency of which is to be measured, a source of frequency stabilized periodic potential, and means for impressing the output of



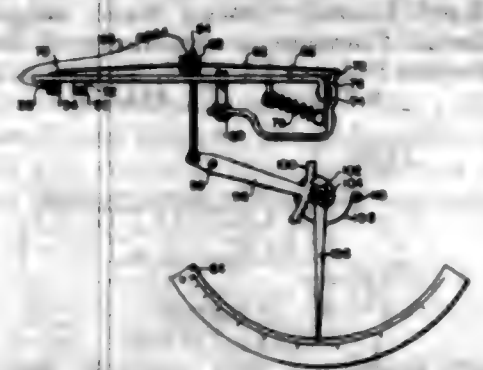
said source upon said second circuit, and calibrated indicating means coupled to said circuits to provide an indication which is substantially proportional to the ratio of the frequencies of said periodic potentials.

2,896,162
HETERODYNE AUTOCORRELATOR
France B. Berger, Pleasantville, and Earl G. Newsom, Thornwood, N.Y., assignors to General Precision Laboratory Incorporated, a corporation of New York
Application October 30, 1953, Serial No. 389,292
8 Claims. (Cl. 324—79)



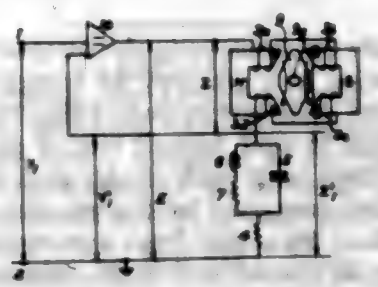
1. An autocorrelator for measuring frequency comprising, a multiplier, fixed-time delay means having electrical input and output terminals, an electrical mixer, an adjustable heterodyning generator having its output connected to said mixer, means for applying a varying electrical signal to said mixer, means for applying the product of said mixer to said multiplier both directly and through said fixed-time delay means, means for integrating the output of said multiplier and means for indicating the adjustment of said heterodyning generator.

2,896,163
HOT WIRE DEVICE
William E. Baker, Wellesley, Mass., assignor to Standard-Thomson Corporation, Waltham, Mass., a corporation of Delaware
Application December 9, 1955, Serial No. 552,019
8 Claims. (Cl. 324—106)



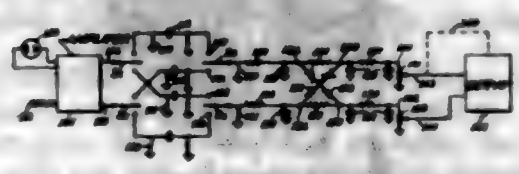
1. An electro-mechanical transducer having the combination of a metal support, a continuous metallic strand secured at both ends to the support, deflecting means bearing upon the strand intermediate its ends, the strand being suspended between said ends without support except by said deflecting means, resilient means to cause the deflecting means to tend to deflect the strand transversely from the line between its secured ends, whereby the position of the deflecting means is a function of said deflection, control means associated with the deflecting means and operative as a function of its position, a flexible conductor connected with the strand intermediate its ends, and connections for passing current through said conductor and through two portions of the strand in parallel to the support member.

2,896,164
DAMPING DEVICE FOR OSCILLATING MEMBERS OF ELECTRO-MECHANICAL APPARATUS
Paul Bizouard, Saint-Maurice, and Yvans Hardouin, Montrouge, France, assignors to Compagnie pour la Fabrication des Compteurs et Materiel d'Usines a Gaz, Montrouge, Seine, France, a French joint-stock company
Application April 16, 1956, Serial No. 578,334
Claims priority, application France May 14, 1957
1 Claim. (Cl. 324—125)



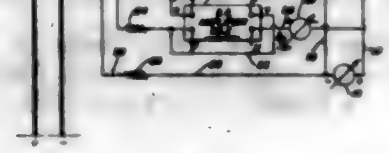
In an electro-mechanical instrument comprising an oscillating member, an exciting winding for the said oscillating member and an amplifier of the negative feed-back type with two input potentials, a damping device for the said oscillating member, constituted by a corrector circuit comprising: a resistance; and a rejector circuit parallel tuned to the natural frequency of the oscillating member, the said resistance, the said rejector circuit and the said exciting winding of the oscillating member, connected in series, being connected to the output terminals of the said amplifier, the two said input potentials of the said amplifier being the voltage of the input signal applied to the instrument and the voltage across the terminals of the said corrector circuit.

2,896,165
RATIO MEASUREMENT APPARATUS
Donald F. Hornig, Providence, R.I., and George E. Hyde, Metuchen, N.J.
Application July 26, 1951, Serial No. 238,745
12 Claims. (Cl. 324—140)



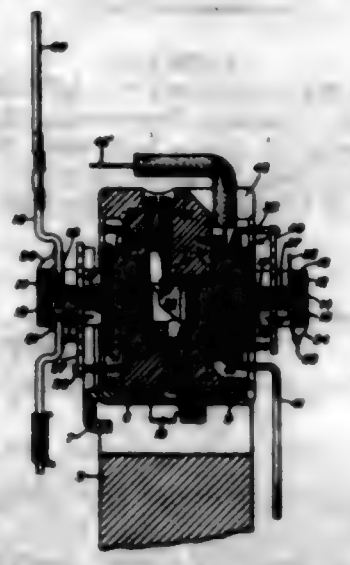
1. A ratio measuring device comprising a substantially linear circuit element through which may be passed two series of pulse-shaped signals representative of the quantities to be compared, two signal channels composed of linear circuit elements, means to sort the output of said first-named element to said signal channels successively, in cyclical fashion, two resistors connected between said channels with a resistance element in each of said channels between the points of connection thereto of said resistors, and means to compare the voltages in said channels at the ends thereof opposite said sorting means.

2,896,166
CURRENT MEASURING SYSTEM
Roswell W. Gilbert, Montclair, and John H. Miller, Short Hills, N.J., assignors, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of New Jersey
Application November 7, 1955, Serial No. 545,437
3 Claims. (Cl. 324—140)



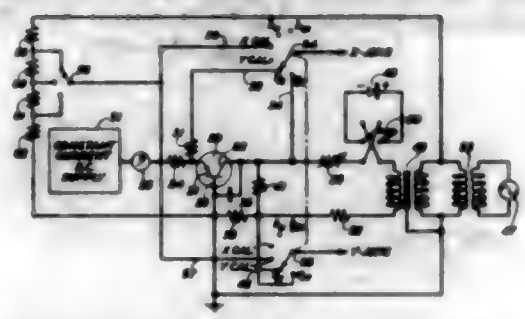
1. A system for measuring the summation of the direct currents flowing in a plurality of branch lines connected to a main line, said system comprising individual current shunts inserted in each branch line, a direct current amplifier associated with each shunt, each amplifier having its input circuit energized by the potential drop across the associated shunt by a lead from each end thereof, a feedback resistor in one of said leads, a lead connecting said resistor to one of the amplifier output terminals, individual isolating resistors each having one end connected to a common junction and the other end connected to a potential terminal of the associated shunt, and a direct current indicating instrument having one side connected to the common junction of the isolating resistors and the other side connected to the other output terminal of each amplifier.

2,896,167
INSTRUMENT BEARING ARRANGEMENT
Paul P. Huber, Hillside, N.J., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of New Jersey
Application October 19, 1956, Serial No. 617,034
1 Claim. (Cl. 324—155)



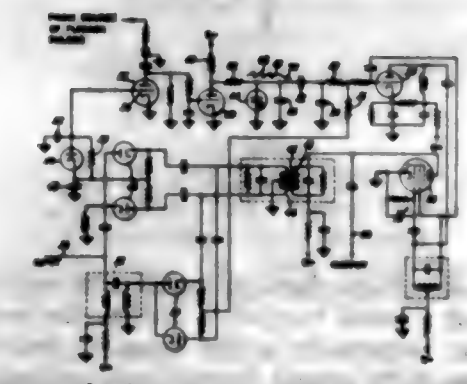
A core and bearing assembly for an electrical instrument, said assembly comprising a substantially cylindrical core having an axial passage therethrough; a pair of bushings individually mounted in the opposite ends of the said passage; a first sleeve fixedly carried by one of the said bushings, said sleeve having jewel bearing abutment portions at its outer end and open at its inner end; a jewel bearing movably supported within said first sleeve; a spring carried in said sleeve and acting between said bushing and the adjacent end of said bearing to urge said bearing toward said abutment portions; a second sleeve slidably mounted in a bore extending axially through the other bushing, said second sleeve having jewel bearing abutment portions at its outer end and open at its inner end; a jewel bearing movably supported within said second sleeve; a second spring carried in said second sleeve; a plug having a conical head external of the second sleeve and a reduced-diameter shank force-fitted into the inner end of the sleeve and forming an inner abutment for said second spring to enable it to push outwardly on the jewel bearing supported within said second sleeve; spring means tending to withdraw the said second sleeve and attached plug into the core; and means co-acting with the conical head of the plug and adjustable to force the said second sleeve and attached plug outwardly.

2,896,168
TRANSISTOR CHARACTERISTIC CURVE TRACERS
Donald E. Thomas, Madison, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application March 18, 1954, Serial No. 416,973
14 Claims. (Cl. 324—158)



1. In combination, a transistor having a semiconductive body, an emitter electrode, a collector electrode, and a base electrode, means including a source of direct potential connected between said emitter and base electrodes to bias said emitter electrode in the forward direction, the externally connected impedance between said emitter and base electrodes being many times larger than the internal D.-C. emitter and base resistances of said transistor, and means including a source of direct potential connected between said collector and base electrodes to bias said collector electrode in the reverse direction, the externally connected impedance between said collector and base electrodes being many times smaller than the internal D.-C. collector resistance of said transistor.

2,896,169
AUTOMATIC FREQUENCY CONTROL SYSTEM WITH A TWO-SPEED FREQUENCY SWEEP
Edward Keith Howell, Nahant, Mass., assignor to General Electric Company, a corporation of New York
Application October 24, 1955, Serial No. 542,155
9 Claims. (Cl. 331—4)

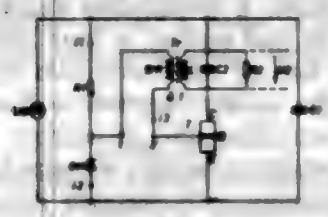


1. An automatic frequency control system comprising a first phase detector, a local oscillator to be synchro-

connected to two larger cylinders extending axially over

sized with a synchronizing signal, local oscillator control means for controlling the phase and frequency of said local oscillator, a circuit connecting the output of said first phase detector to said local oscillator control means, a second phase detector, means coupling a signal representative of the output of said local oscillator and a synchronizing signal to said first and second phase detectors, phase-shifting means coupled between said first and second phase detectors whereby the phase relationship between the two signals at one of said phase detectors will differ 90° from the phase relationship between the same two signals at the other phase detector, a sweep oscillator, a circuit coupling the output of said sweep oscillator to said local oscillator control means whereby the frequency of said local oscillator will vary over a band of frequencies including that of said synchronizing signal when said sweep oscillator is operating, sweep oscillator control means for controlling the operation of said sweep oscillator and effective to cause it to develop a varying voltage signal upon the receipt of a control signal from said second phase detector indicating that the local oscillator is not in synchronism with said synchronizing signal, anticipator means coupling the output of said second phase detector to said sweep oscillator control means to decrease the time rate of change of the varying voltage signal developed by said sweep oscillator to slow down the rate of change of frequency of said local oscillator as synchronism is initially approached.

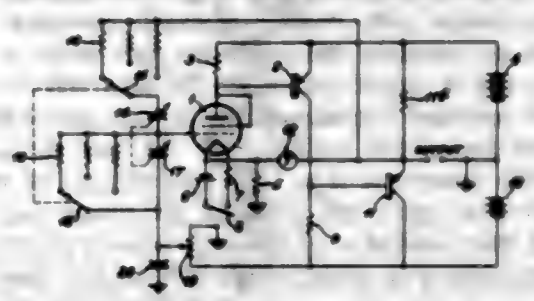
2,896,170
OSCILLATOR CIRCUIT FOR TRANSISTORS
Theodor Grewe, Stuttgart-Bad Cannstadt, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Application January 11, 1956, Serial No. 558,587
Claims priority, application Germany January 20, 1955
11 Claims. (Cl. 331—117)



1. An oscillator comprising a transistor having input, base and output electrodes, a resonant circuit coupled to the output electrode, means coupled to said resonant circuit for developing an alternating voltage and including, a feedback circuit comprising two branches carrying pulsating direct current, a first branch including a unidirectional current limiting device coupled to one side of said alternating voltage means, a second branch including a rectifying path through the base-input electrodes coupled to the other side of said alternating voltage means, a direct-current source, means coupling said direct-current source to said first and second branches, the magnitude of the alternating feedback voltage being sufficient to block alternately said first and second branches, whereby the output of said transistor is controlled by a pulsating direct-current passing through the rectifying path of said transistor.

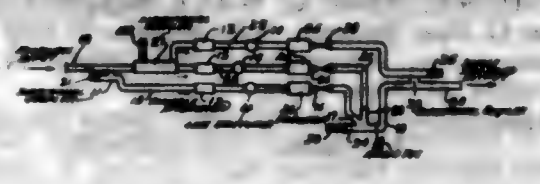
2,896,171
OSCILLATOR
Louis W. Erath, Houston, Tex., assignor to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Application September 30, 1955, Serial No. 764,307
14 Claims. (Cl. 331—135)

1. An oscillator comprising a vacuum tube having an anode, a cathode and a control grid, a source of plate voltage, a plate resistor connected between said anode and the positive side of said source, means connecting the negative side of the source to said cathode, said tube and the parameters of its circuits being so chosen that the grid current in said tube is of the order of 10^{-12} amperes, a PNP junction transistor having its base connected to the anode of said tube and its emitter connected to the positive side of said source, an output



circuit connected to the emitter-collector circuit of said transistor, and a frequency-selective feedback circuit connected between said output circuit and the grid-cathode circuit of said tube and operable to furnish regenerative feedback to cause oscillations at the frequency selected by said feedback circuit.

2,896,172
MICROWAVE MODULATOR
John C. Cacheris, Bethesda, Md., and Herbert A. Dropkin, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Army
Application March 6, 1957, Serial No. 644,425
2 Claims. (Cl. 332—45)
(Granted under Title 35, U.S. Code (1952), sec. 266)



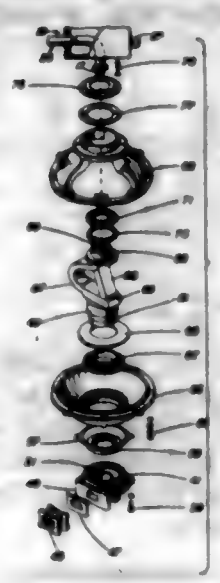
1. A microwave reflection system having an input end, means at said input end to receive a single stream of microwave energy at a given carrier frequency and to divide said stream into a plurality of energy streams, means to adjust said streams for differences of phase relative to each other, means to amplitude modulate each of said phased streams at a frequency other than said given frequency by ferrite modulators, means to suppress the carriers, means to add selected sidebands of said modulated streams and to reflect outwardly through said input end a single sideband having a frequency different from said given frequency.

2,896,173
ROTARY JOINT
George R. Cooney, Lawrence, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application October 5, 1953, Serial No. 384,363
3 Claims. (Cl. 333—7)

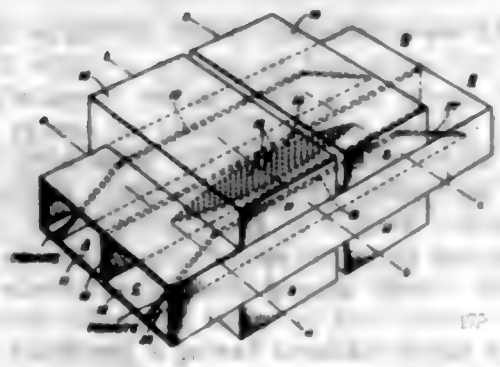
1. In combination, a selector valve including a rectangular waveguide portion rotatable to any one of a plurality of angularly spaced operative positions for communication with any one of a corresponding plurality of antennas; a rotary joint including support means, a waveguide member secured to said support means, said member being formed with a rectangular waveguide termination at one end, a circular waveguide termination at its opposite end and a transition portion therebetween, a generally U-shaped rectangular waveguide member, a brace secured between the ends of said U-shaped member, means secured to the outside end of one of the legs of said U-shaped member to provide a circular waveguide termination to said U-shaped member; the other leg of said U-shaped member being arcuately bent substantially ninety degrees to terminate coaxial with the circular wave-

of said one outer conductor adjacent said slot and in elec- a brush actuating mechanism for moving the brush in

guide termination on the one leg of said U-shaped member, said U-shaped member and said last-mentioned means secured thereto being mounted for rotation on said support means with the circular waveguide terminations of said last-mentioned means and said first-mentioned waveguide member in registration; and a length of straight rectangular waveguide connected between the rectangular waveguide portion of said selector valve and the termination of the ninety degree bend of said U-shaped member.



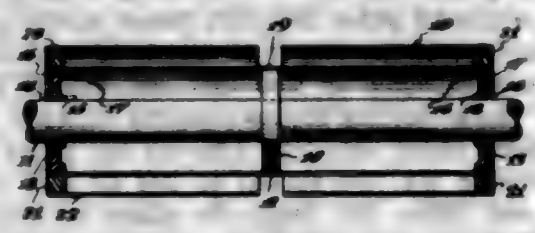
2,896,174
NONRECIPROCAL WAVE TRANSMISSION
Arthur G. Fox, Rumson, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application January 27, 1955, Serial No. 484,498
15 Claims. (Cl. 333—10)



1. A coupling device comprising a pair of electromagnetic wave guides, means for distributively coupling said guides along an interval of their lengths, said coupling versus distance along said interval defining a continuous function, gyromagnetic material extending in at least one of said guides longitudinally along at least a portion of said interval and asymmetrically located in the transverse cross section of said guide to modify the phase constant of said guide in said portion, and means for applying a transverse magnetic field to said gyromagnetic material, the product of the strength of said field and the mass of said gyromagnetic material being tapered along said portion so that said guides have phase constants that are substantially equal at at least one point along said portion and substantially different along the major part of said portion.

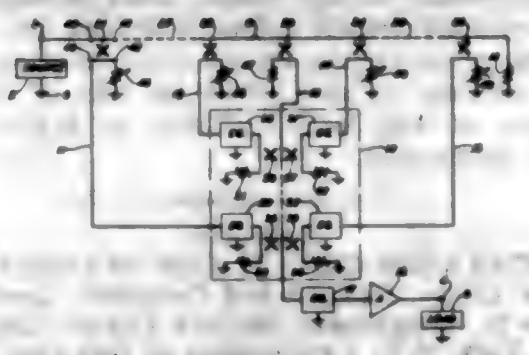
2,896,175
RADIATION CHOKE
Marvel W. Scheidorf, Palos Heights, Ill., assignor to Andrew Corporation, a corporation of Illinois
Application October 13, 1955, Serial No. 540,239
6 Claims. (Cl. 333—12)

1. A radiation choke comprising a cylinder surrounding an antenna conductor, said cylinder at each end being connected to two larger cylinders extending axially over a substantial portion of said first cylinder toward the center of said first cylinder, said latter cylinders and end connections having an electrical length of one-quarter



wavelength, said first cylinder having an electrical length of one-half wavelength of the frequency to be choked on said conductor, and a conductive connection between the center of the first cylinder and said conductor.

2,896,176
DISTORTION CORRECTOR
Brian C. Bellows, Jr., Brookside, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application April 16, 1957, Serial No. 653,175
4 Claims. (Cl. 333—28)



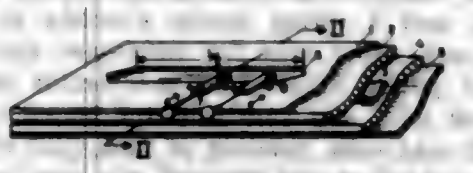
1. A device providing adjustable gain and delay equalization for correcting distortion on broadband wave transmission systems comprising in combination with a source of electrical signals, a terminated delay path connected at the free end to said source, a four-terminal directional coupler having two of said terminals connected to said delay path at the center thereof, a fixed matching impedance for controlling the directivity of said coupler connected to a third terminal, a main transmission path coupled to said delay path through the free terminal of said directional coupler and extending to an output circuit and a plurality of echo branches each coupled at one end to one of said paths by a four-terminal directional coupler having two of said terminals connected to said path and the remaining terminal connected to a variable impedance for providing said coupler with control of the magnitude and polarity of the signals passing through said coupler and coupled at the other end to the other of said paths, whereby electrical signals being applied to said delay path are coupled into said main path and said echo branches controlled as to magnitude and polarity by said directional couplers and recoupled to said main path, thereby equalizing the input signal as to gain and delay distortion.

2,896,177
HIGH FREQUENCY TRANSMISSION LINE TUNING DEVICE
William J. Wilson, Nashua, N.H., assignor, by mesne assignments, to Sanders Associates, Incorporated, Nashua, N.H., a corporation of Delaware
Application December 13, 1954, Serial No. 474,925
10 Claims. (Cl. 333—33)

1. A composite high frequency electric transmission line tuning device comprising a pair of elongated outer conductors; an elongated inner conductor; insulating means holding said inner conductor in spaced relation to said outer conductors; a slot in one of said outer conductors; a movable conductor disposed on the outside

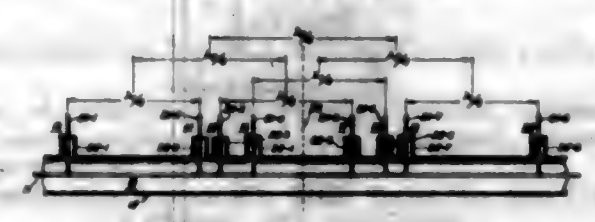
and the positive side of said source, means connecting ninety degrees to terminate coaxial with the circular wave-

of said one outer conductor adjacent said slot and in electrical and mechanical contact with said one outer conductor for capactively coupling said one outer coonductor and said inner conductor through said slot; and means for



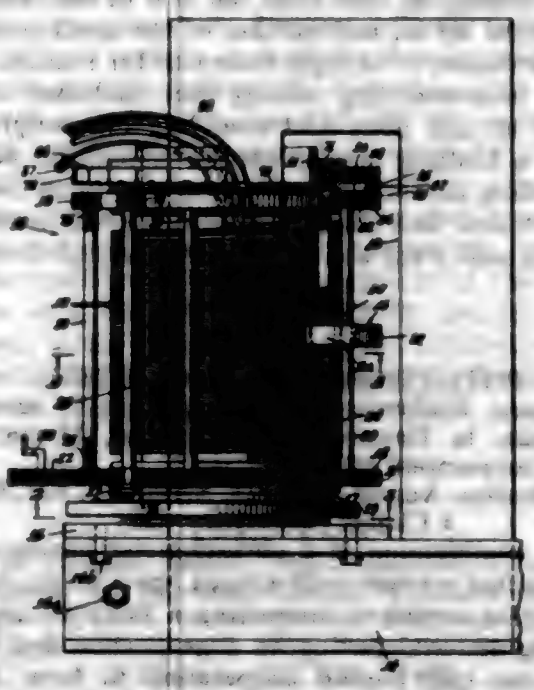
adjusting at least the degree said capacitive means extends over said slot to adjust the impedance of said line, whereby a load impedance may be matched to the characteristic impedance of said line by adjustment of the position of said capacitive means.

2,896,178
WAVE TRANSMISSION SYSTEM
Gordon Raisbeck, Bernards Township, Somerset County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application May 9, 1958, Serial No. 734,228
8 Claims. (Cl. 333—73)



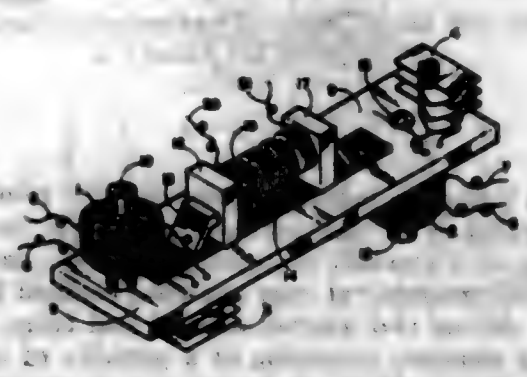
5. An ultra-high-frequency transmission line having 2_n discrete, substantially like, reflection-producing discontinuities, where n is any integer greater than one, said discontinuities being arranged in pairs of successively higher orders corresponding to successive powers of 2, the members of the several pairs of each of said orders being spaced apart by an electrical quarter wavelength of a discrete frequency within a band of frequencies, said discrete frequencies differing from order to order.

2,896,179
VARIABLE TRANSFORMER
William H. Lamrie, Plainville, Conn., assignor to The Superior Electric Co., Bristol, Conn., a corporation of Connecticut
Application November 23, 1956, Serial No. 623,968
6 Claims. (Cl. 336—141)



1. In combination with a variable transformer having a helical winding and a brush operable on the winding, a brush actuating mechanism for moving the brush in a helical path to engage only one turn of the winding at a time comprising a pair of spaced-apart ring members mounted for rotation, a screw rod extending between the members and having a pitch substantially equal to the pitch of the winding, a brush carrier formed with a threaded aperture through which the screw rod is threaded, a third ring mounted for rotation on an axis eccentric to the axis of the other rings, a pin carried by the third ring and a link connected between the pin and the screw rod for maintaining the screw rod stationary on its longitudinal axis as it is rotated about the winding, and means for rotating the rings, whereby the brush carrier is caused to move in a helical path in contact with only one turn of the winding at a time throughout its limits of movement.

2,896,180
SATURABLE TRANSFORMER
William C. Brown, Ottawa, Ontario, Canada
Application May 25, 1955, Serial No. 510,976
6 Claims. (Cl. 336—155)



1. A radio frequency transformer comprising a nonmagnetic base, a primary coil mounted on said base, a secondary coil also mounted on said base and physically separated from said primary coil so that in the absence of a magnetically permeable path between said coils the coupling therebetween would be negligible, a strip of easily-saturated magnetic material rigidly fixed with respect to said base, each end of said strip being spaced from one of said coils to define a discontinuous magnetic path between said coils, a core of magnetic material difficult to saturate, the said core having two ends in contact with said strip and a saturating coil around said core, whereby passing of a predetermined current through said saturating coil will cause said strip to be saturated to a desired degree thus controlling the degree of coupling between said primary and said secondary coils without altering the selectivity of said transformer.

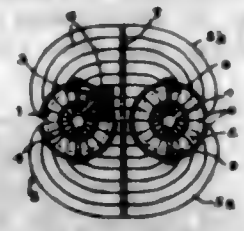
2,896,181
MAGNETIC CORE
Martin I. Zwelling, Zanesville, Ohio, assignor to McGraw-Edison Company, a corporation of Delaware
Application November 18, 1952, Serial No. 321,229
6 Claims. (Cl. 336—217)

1. In an electrical apparatus, a magnetic core structure comprising leg members and yoke members substantially at right angles to each other forming a closed magnetic circuit about a rectangular window, the leg and yoke members being built up of layers of laminations having preferred grain orientation parallel to the length thereof, odd-numbered layers consisting of two leg laminations and two yoke laminations, even-numbered layers consist-

like element presenting a conducting face for engaging a shell; a disk of insulating material secured to said

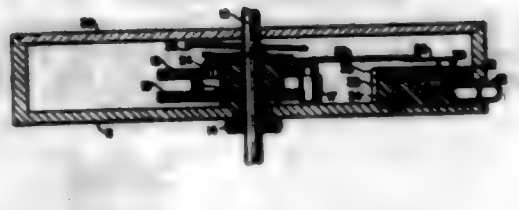
ing of two leg laminations, said yoke laminations being at least twice as wide as said leg laminations, the yoke and leg laminations of said odd-numbered layers having adjoining edges forming substantially mitered butt joints adjacent the corners of the core structure, the leg laminations of said even-numbered layers extending between and overlapping the yoke laminations of said odd-numbered layers, said butt joints having a length at least twice as great as the width of said leg laminations, said joints being contiguous uncut portions of leg laminations of said even-numbered layers.

2,896,182
MAGNETIC CIRCUITS FOR STATIONARY ELECTRICAL INDUCTION APPARATUS
Pierre Marie Prunoom, Asnieres, France
Application August 21, 1956, Serial No. 605,321
Claims priority, application France September 17, 1955
8 Claims. (Cl. 336—234)



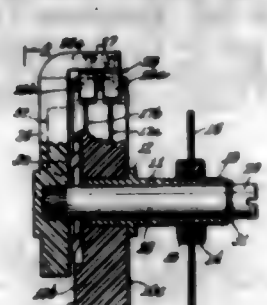
1. In a stationary induction apparatus, the combination of a plurality of at least partially cylindrical cores each consisting of a plurality of radially disposed laminations of magnetic material; at least one yoke element for magnetically uniting two selected ones of said cores, each of said yoke elements consisting of a plurality of magnetic sheets, each of said sheets having a least one end zone shaped substantially as an involute of a circle circumscribing the adjacent one of said cores and in edge-to-edge contact with one of said radial laminations of said core; and means for maintaining said cores and said yoke elements as a rigid unit.

2,896,183
POTENTIOMETER
Paul W. Nebel, Braham, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application July 5, 1956, Serial No. 595,976
9 Claims. (Cl. 338—91)



1. In a device of the type described, a casing, a rotatable shaft centrally positioned in said casing, a resistance member in said casing arcuately disposed about said shaft, a wiper arm rotatably mounted on said shaft, a contact member on said wiper arm in cooperation with said resistance member, a pinion attached to said wiper arm and rotatably mounted on said shaft, a gear sector pivoted in said casing on an axis parallel to and removed from the pivotal axis of said shaft, the teeth on said gear sector in cooperation with the teeth on said pinion, a cam member integrally attached to said shaft and rotatable by said shaft, a cam follower on said gear sector in cooperation with and positioned by said cam member, and a spring means attached to said casing biasing said wiper arm for rotational movement such that said pinion biases said gear sector for rotational movement with said cam follower biased into cooperation with said cam, rotation of said shaft effecting rotation of said wiper arm through said cam, cam follower, gear sector and pinion.

2,896,184
RHEOSTAT
Matthew J. McCabe, Bristol, Conn., assignor to The Superior Electric Co., Bristol, Conn., a corporation of Connecticut
Application November 20, 1957, Serial No. 697,643
3 Claims. (Cl. 338—97)

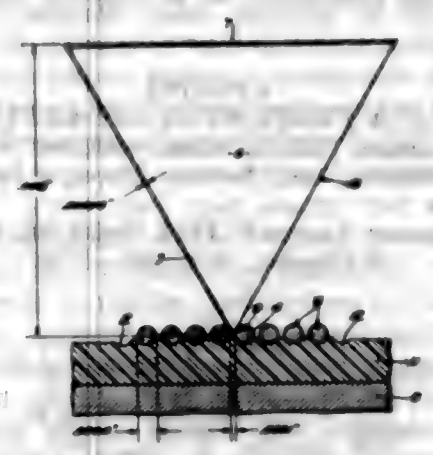


1. A rheostat adapted to be mounted upon a chassis comprising an elongate mounting sleeve, an insulating body molded on one end portion of said sleeve to be rigid therewith and having a narrow cylindrical peripheral surface, said sleeve being longer than the thickness of the insulating body and projecting outwardly therefrom, a pair of juxtaposed terminals carried by the body at the periphery thereof, an anchoring screw threaded radially into the periphery of the body spaced from said terminals, a resistance wire having its ends connected to respective terminals and the wire looped around said anchoring screw to constitute a pair of parallel wire sections lying on and held stretched along the periphery of the body by the screw when tightened, an operating shaft extending through said mounting sleeve to project from both sides of the sleeve and retained therein against substantial axial displacement, said sleeve constituting an elongate bearing for said shaft, an arm of insulating material molded on an end portion of the shaft projecting beyond the sleeve to be rigid therewith for rotation therewith, said arm extending radially from said shaft in close proximity to said body and overlying the periphery of the body, a bridging contact carried directly by said arm and extending across both said parallel wire sections and normally biased into sliding contact therewith incident to rotation of said shaft and of said arm carried thereby.

2,896,185
POTENTIOMETER CONTACTOR
Elias Blanco, Hollywood, Calif., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of New Jersey
Application August 30, 1955, Serial No. 531,523
4 Claims. (Cl. 338—202)

4. The combination in a potentiometer having a wire wound resistor element with spaced apart turns, an electrical contact structure comprising a body of electrical conducting material having an edge portion and insulation on one side thereof cooperating to form a relatively sharp wedge-like element adapted to extend between adjacent turns of said resistor element, said wedge-

like element presenting a conducting face for engaging one of said adjacent turns and an insulating face for engaging the other of said adjacent turns, and means for

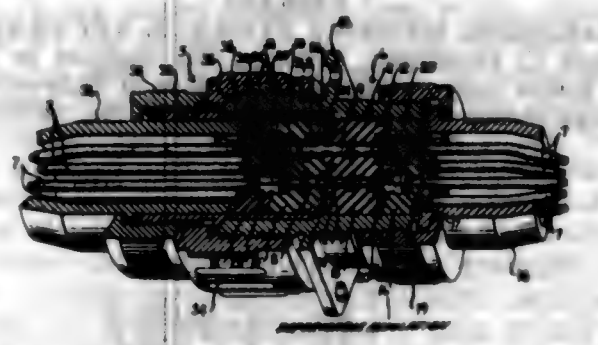


biasing said wedge-like element in a wedging direction between said adjacent turns, whereby said wedge-like element is forcibly retained in a contact position against displacement under forces due to shock and vibration.

2,896,186
HERMETICALLY SEALED ELECTRIC CABLE CONNECTOR

Ragnar M. Hirdmark, Linkoping, Sweden, assignor to Svenska Aeroplan Aktiebolaget, Linkoping, Sweden, a corporation of Sweden

Application August 23, 1956, Serial No. 605,738
5 Claims. (Cl. 339—100)



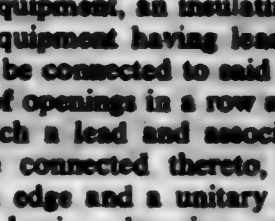
4. In an electric cable connector of the character described: a body of insulating material having a well opening to one end thereof, the portion of the body defining the outer end portion of the well being resiliently deformable; a metal terminal member secured in said body of insulating material and having a pointed pin extending axially into the well from the bottom thereof with the point of said pin disposed adjacent to the mouth of the well; a radially deformable ferrule seated in the well encircling the pointed pin to embrace the end portion of an electric cable inserted into the mouth of the well and axially impaled upon the pointed pin; a plurality of shell members cooperating to embrace said body of insulating material; and means on the shell members for holding the shell members in compressive engagement with the resiliently deformable portion of the body so that the shell members apply radially inward compressive force to the ferrule through said resiliently deformable portion of the body to thus cause the ferrule to grip a cable so inserted into the well.

2,896,187
LAMP BASE

Ralph B. Thomas, Salem, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Application June 5, 1956, Serial No. 589,488
2 Claims. (Cl. 339—145)

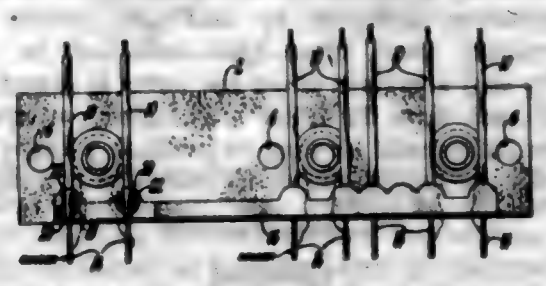
1. A base for an electric lamp having lead-wires extending from an end of the lamp envelope comprising: a shell; a disk of insulating material secured to said shell; base pins mounted on said disk for receiving the lead-wires extending from the lamp envelope; and a boss of insulating material on said disk, said boss having a central opening therein defining a pocket within which said base pins are disposed, and said boss having a slit transverse to the boss near the bottom of the boss and formed in at least one side thereof and extending into said pocket.



2,896,188
TERMINAL BOARD

William R. Kearney, Kokomo, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application September 27, 1956, Serial No. 612,435
3 Claims. (Cl. 339—198)

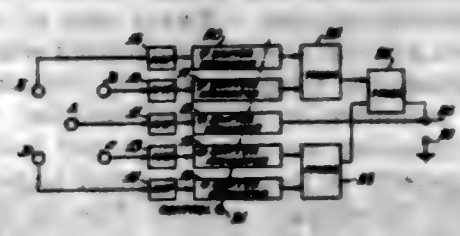


1. In electrical equipment, an insulating panel for supporting electrical equipment having leads, a plurality of conductive lines to be connected to said leads, said panel having a plurality of openings in a row adjacent one edge across each of which a lead and associated line, which are adapted to be connected thereto, are placed and extend beyond said edge and a unitary clamping bar of insulating material having clamping projections located in the same configuration as the openings in the panel, each said clamping projection including spaced legs and adapted when assembled to project through each opening and hold the lead and line between them so that the leads and lines can be soldered together simultaneously by a single solder dip.

2,896,189
HIGHER ORDER PRESSURE GRADIENT MICROPHONE SYSTEM HAVING ADJUSTABLE POLAR RESPONSE PATTERN

Alpha M. Wiggins, Buchanan, Mich., assignor to Electro-Voice, Incorporated, Buchanan, Mich.

Application February 8, 1952, Serial No. 270,564
8 Claims. (Cl. 340—6)



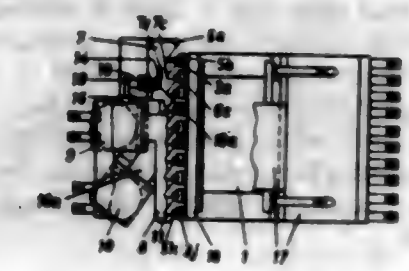
1. A higher order pressure gradient microphone system comprising a plurality of spaced pressure microphones symmetrically arranged along a plurality of intersecting axes, means for variably shifting the phase and differentially combining the outputs of said microphones to produce a highly directional polar response pattern in any desired direction.

mediately succeeding individual read-out pulses, coupled windings linked through another aperture of each of said

2,896,190
AUDIBLE FLASHING SAFETY TURN SIGNALS FOR VEHICLES
Donald M. Gallora, Webster County, and Cloyde B. Eslinger, Fort Dodge, Iowa, assignors, by mesne assignments, to Hoda Corporation, Great Neck, N.Y., a corporation of New York
Application September 17, 1956, Serial No. 610,329
6 Claims. (Cl. 340—75)

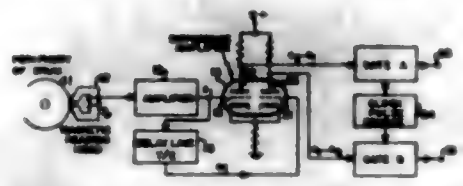
1. In an automotive vehicle turn signalling system of the type including a flasher having a hot terminal connected to the vehicle electric power supply and a signal lamp terminal connected to a turn signal selector switch operable to selectively connect the flasher lamp terminal to selected signal lamps for selective intermittent energization of the signal lamps, the improvement comprising an electromagnet coil having opposite ends connected to said hot and lamp terminals for intermittent energization of said coil, when said selector switch is operated to signal a turn, in accordance with the intermittent lamp circuit controlling operation of said flasher; an electromagnetic armature operable by said coil; means biasing said armature away from said coil; and an element struck by said armature when the latter is drawn toward said coil each time the latter is energized; whereby said armature strikes said element to produce a single audible sound once during each cycle of operation of said flasher.

2,896,191
ELECTROMAGNETIC IMPULSE COUNTER
Udo Hübner, Stuttgart-Zuffenhausen, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Application June 23, 1954, Serial No. 438,713
Claims priority, application Germany July 1, 1953
10 Claims. (Cl. 340—168)



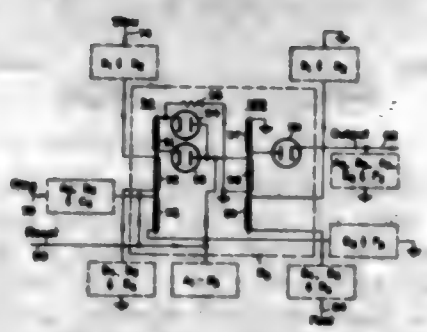
1. An electromagnetic impulse counting device comprising a first auxiliary electromagnet and cooperating armature, a second electromagnet, a plurality of counting armatures adapted to selectively cooperate with said second electromagnet upon the receipt of impulses applied to said electromagnets, a plurality of interponent members, there being one more than the number of said counting armatures, different ones of said interponent members disposed between different ones of said counting armatures and the armature associated with said auxiliary electromagnet, fixed means for retaining all said interponent members in an initial position, means including the armature associated with said auxiliary electromagnet operable in response to a first impulse for dislodging a first interponent member from its initial position with respect to said retaining means and for positioning said dislodged member in motion-transmitting relation to its adjacent interponent member, both said members adapted to be urged by the armature associated with said auxiliary electromagnet into contiguity and against the counting armature associated with said adjacent interponent member, means for successively dislodging adjacent interponent members for positioning same in motion-transmitting relation to adjacent successive interponent members, and resetting means for restoring said dislodged interponent members to original position upon conclusion of an impulse count.

2,896,192
DATA PROCESSING APPARATUS
Paul A. Haumann, Natick, Mass., assignor to Laboratory For Electronics, Inc., Boston, Mass., a corporation of Delaware
Application August 9, 1954, Serial No. 448,590
9 Claims. (Cl. 340—174)



1. In apparatus for reading stored digital data having means for providing a signal output characteristic of said stored data, means for interpreting said signal output comprising, a source of substantially periodic timing signals, means for deriving first and second signals from said signal output spaced in time by substantially one-half the period of said timing signals, means for linearly combining said time spaced signals to provide a data signal, and means for providing said data signal as an output during time intervals related to said timing signals.

2,896,193
MAGNETIC MEMORY STORAGE APPARATUS
Richard C. Herrmann, Chicago, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Application October 21, 1954, Serial No. 463,700
3 Claims. (Cl. 340—174)

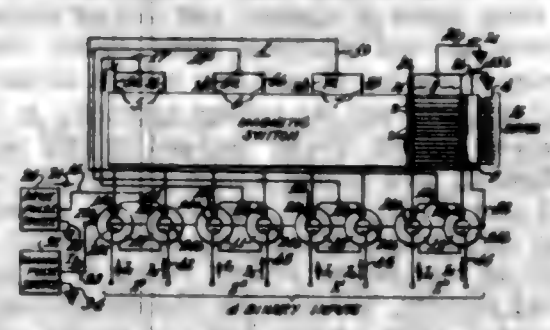


3. A storage apparatus comprising: a first transformer including a first ferromagnetic core and a plurality of windings encompassing said first core, said first core exhibiting a first predetermined and substantially rectangularly shaped hysteresis loop with substantially flat flux density saturation levels at the top and bottom portions of said first loop; first presetting means including a source of reset pulses for magnetizing said first core to saturation at the bottom portion of said first hysteresis loop at spaced time intervals; a source of periodically recurring timing signal pulses, individually occurring subsequently to one of said spaced time intervals, coupled to a first winding of said first transformer for applying pulses thereto with a polarity tending to alter the flux density condition of said first core from the saturation level at the bottom portion of said first hysteresis loop to the saturation level at the top portion of said first hysteresis loop; a source of periodically recurring read-out signal pulses individually occurring subsequently to respective ones of said timing pulses; a source of randomly occurring storing signal pulses, some of which individually occur in time coincidence with individual ones of said timing pulses while others individually occur between individual ones of said timing pulses and the im-

multivibrator circuit including a normally conducting first direct-current voltage being of a magnitude to

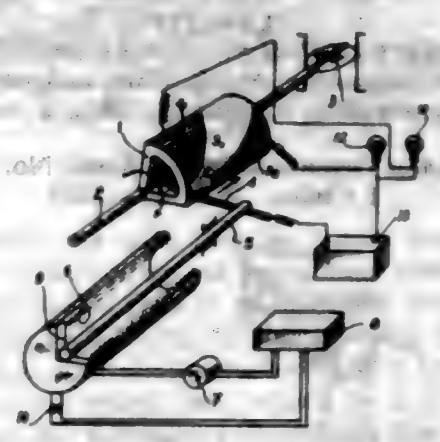
mediately succeeding individual read-out pulses, coupled to a second winding of said first transformer for applying pulses thereto with a polarity tending to restrain the flux density condition from changing to the saturation level at the top portion of said first hysteresis loop, each of said storing pulses having a magnitude sufficient to render ineffective a timing pulse occurring in time coincidence therewith; a second transformer including a second ferromagnetic core and a plurality of windings encompassing said second core, said second core exhibiting a second predetermined and substantially rectangularly shaped hysteresis loop with substantially flat flux density saturation levels at the top and bottom portions of said second loop; second presetting means including said source of reset pulses for magnetizing said second core to saturation at the bottom portion of said second hysteresis loop at said spaced time intervals; means including a third winding of said first transformer and further including unidirectional coupling means for supplying signal pulses of only one polarity to a first winding of said second transformer with such one polarity tending to alter the flux density condition of said second core from the saturation level at the bottom portion of said second hysteresis loop to the saturation level at the top portion of said second hysteresis loop in response to the application to said first transformer of the timing pulses that do not occur in time coincidence with any of said storing pulses; means coupling said read-out signal source to a second winding of said second transformer for applying said read-out pulses thereto with a polarity tending to alter the flux density condition of said second core from the saturation level at the bottom portion of said second hysteresis loop to the saturation level at the top portion of said second hysteresis loop and effective only subsequent to each of the timing pulses that occurs in time coincidence with a storing pulse; and means including a third winding of said second transformer actuated only in response to the application to said second transformer of the read-out pulses that are effective to saturate said second core to the saturation level at the top portion of said second hysteresis loop thereby to sense the particular flux density condition of said first core as of the termination of each of said timing pulses.

2,896,194
MAGNETIC SWITCHING SYSTEMS
Hewitt D. Crane, Menlo Park, Calif., assignor to Radio Corporation of America, a corporation of Delaware
Application May 7, 1956, Serial No. 582,986
20 Claims. (Cl. 340—174)



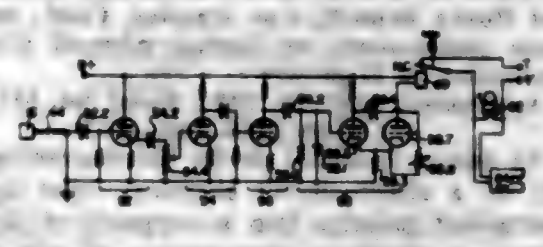
1. A magnetic system comprising first and second magnetic cores each of substantially rectangular hysteresis loop magnetic material and each having a plurality of apertures in said material, said cores each having first and second response conditions respectively corresponding to relatively high and low impedance levels, a parallel circuit including first and second branch circuits connected in parallel with each other, each of said branch circuits linking a different one of said cores through one of its apertures, means for setting one of said cores to said first response condition and the other of said cores to said second response condition, said means including windings linked through another aperture of each of said cores, whereby a signal applied to said parallel circuit is directed through said second branch circuit while said first core is in said first response condition, and means for resetting said cores to one of said response conditions.

2,896,195
INDICATOR OF ENGINE CONDITIONS IN MOTOR VEHICLES
Antoine Breeder, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France, a corporation of France
Application November 1, 1955, Serial No. 544,335
Claims priority, application France November 6, 1954
2 Claims. (Cl. 340—213)



1. A device for indicating the performance of a vehicle comprising first means for controlling at least one parameter affecting the operation of the vehicle, second means for indicating at least one type of response of the vehicle to the control of its operation, a device including detectable representations of optimum and undesirable ratios between the parameter and response, said device being coupled to one of said means and being positioned thereby, and a detector coupled to the other of said means and being in movable engagement with said device, said detector being moved by the latter said means in accordance with the response of said vehicle whereby the relative movements of the device and detector continuously detect the ratio between the parameter and response wherein the first means is a throttle controlling fuel feed in the vehicle.

2,896,196
APPARATUS FOR DETECTING DEFECTS IN SHEET MATERIALS
Willis G. Hartford, Andover, Joseph W. Holt, Lawrence, and Ernest Jellinek, Marblehead, Mass., assignors to Champion International Company, Lawrence, Mass., a corporation of Massachusetts
Application May 18, 1955, Serial No. 509,134
1 Claim. (Cl. 340—259)



A monitoring device for detecting localized areas of increased thickness in a travelling web comprising means engaging the surface of a travelling web yieldable in response to thickness variations in said web; an acceleration sensitive transducer including a piezoelectric member providing an electric pulse in response to movement of said surface engaging means; a variable gain amplifier adapted to amplify said pulse; a one cycle multivibrator circuit adapted to receive amplified pulses from said amplifier and to actuate a relay in response thereto, said

formed with an aperture therein; a cathode-ray picture tube including a rectangular frontal display screen posi-

2,896,201
TELEVISION RECEIVER CHASSIS CONSTRUCTION

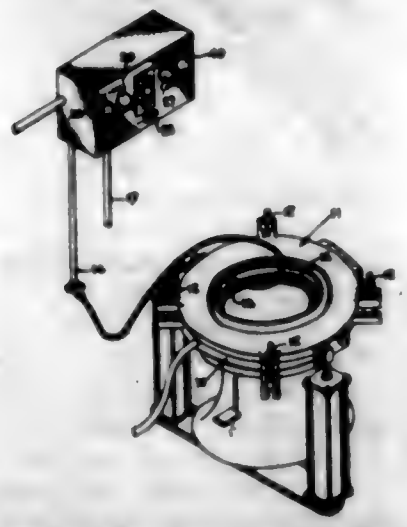
multivibrator circuit including a normally conducting vacuum tube having a plate, a grid and a cathode and a normally non-conducting vacuum tube having a plate, a grid and a cathode, said cathodes being connected together and grounded through a common cathode resistance, said normally non-conducting tube having its grid connected to receive positive pulses from said amplifier and its plate connected through a condenser to the grid of said normally conducting tube, said normally conducting tube having a relay in its plate circuit and having a circuit from grid to cathode which includes a variable resistor, whereby the charging time for said condenser may be varied; and signalling means operated by said relay.

2,896,197

TIRE CURING SENTINEL SYSTEM

Adam A. Weissenberger, Mack, Ohio, assignor to Sentinel Signal Corporation, Cincinnati, Ohio, a corporation of Ohio

Application October 24, 1956, Serial No. 618,076
1 Claim. (Cl. 340—267)



In a mold unit of the character described, the combination of a chamber for receiving a tire casing, air bag within said tire casing, an air hose secured to said tire casing at one end and secured to an air pressure source unit at its other end, predetermined timing means secured within said air hose between said air bag and said air pressure source unit, comprising, a solenoid operated valve actuated in response to presettable timing mechanism, signal means connected to said timing mechanism, and operable in accordance with the setting of said timing mechanism, said timing mechanism operable to close the flow of air through said air hose at the end of a predetermined period of time to actuate the signal means.

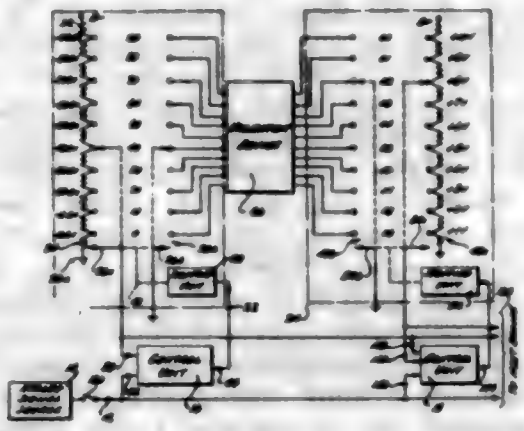
2,896,198

ELECTRICAL ANALOG-TO-DIGITAL CONVERTER

Robert Royce Bennett, Los Angeles, Calif., assignor by mesne assignments, to Hughes Aircraft Company, a corporation of Delaware

Application April 28, 1953, Serial No. 351,659
2 Claims. (Cl. 340—347)

1. An analog-to-digital device for converting the amplitude of a direct-current electrical input signal of a predetermined polarity into a sequence of digits which constitutes a number representative of said amplitude, said device comprising a first voltage divider corresponding to a major decimal decade of said number, said first voltage divider having one extremity thereof connected to ground and having first, second, third, fourth, fifth, sixth, seventh, eighth, ninth and tenth uniformly spaced taps commencing from said one extremity and corresponding, respectively, to the integers 0, 1, 2, 3, 4, 5, 6, 7, 8, and 9; means for applying a first direct-current voltage of a polarity opposite to said predetermined polarity to the remaining extremity of said first voltage divider, said first direct-current voltage being of a magnitude to produce potentials greater than $(p+0.9)10^n$ volts and less than $(p+1.0)10^n$ volts at each of said first, second, third, fourth, fifth, sixth, seventh, eighth, ninth and tenth taps thereof where p is an integer which successively corresponds to each of said taps and n is an integer that defines said major decimal decade; a second voltage divider corresponding to a decimal decade that is adjacent to and lesser than said major decimal decade of said number, said second voltage divider having one extremity thereof connected to ground and first, second, third, fourth, fifth, sixth, seventh, eighth, ninth and tenth uniformly spaced taps commencing from said one extremity and corresponding, respectively, to integers 9, 8, 7, 6, 5, 4, 3, 2, 1 and 0; means for applying a second direct-current voltage of a polarity the same as said predetermined polarity to the remaining extremity of said second voltage divider, said second direct-current voltage being of a magnitude to produce a potential substantially equal to $(10-q)10^{n-1}$ at each of said first, second, third, fourth, fifth, sixth, seventh, eighth, ninth and tenth taps thereof, where q is an integer which successively corresponds to each of said



taps of said second voltage divider; first and second switches having first and second movable contact arms, respectively, for engaging and disengaging said voltage taps of said first and second voltage dividers, said first and second movable contact arms being normally disengaged from the first of said voltage taps thereof; a first control means responsive to said input signal and the voltage available at said first movable contact arm for actuating said first switch thereby to move said first arm into engagement with the tap of said first voltage divider to which the lowest voltage of greater absolute magnitude than the amplitude of said direct-current electrical input signal is applied; and second control means responsive to said electrical input signal, the voltage appearing at the tap of said first voltage divider engaged by said first arm and the voltage appearing at the tap of said second voltage divider engaged by said second arm for actuating said second switch thereby to move said second arm to the lowest numbered tap of said second voltage divider at which the algebraic sum of the input voltages to said second control means is of said predetermined polarity, whereby the integers corresponding to the respective taps of said first and second voltages dividers that are engaged by said first and second arms, respectively, constitute successive digits of said number.

2,896,199

TELEVISION RECEIVER CONSTRUCTION

William H. Myers, Cincinnati, Ohio, assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware

Application May 19, 1954, Serial No. 430,875
5 Claims. (Cl. 340—367)

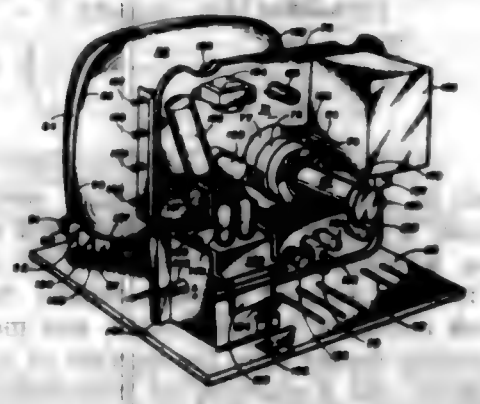
1. In an electronic television receiver of the direct-view type, the combination of: a single upright chassis

ing the above-mentioned elements, insulation separating

2,896,204

to said second response condition, said means including amplifier and to actuate a relay in response thereto, said

formed with an aperture therein; a cathode-ray picture tube including a rectangular frontal display screen positioned parallel to and in front of said chassis and having major and minor axes, said tube having a neck extended horizontally rearwardly through said aperture; circuit components on the rear of said chassis and other circuit components mounted on the front of said chassis, said chassis and at least a majority of said components being



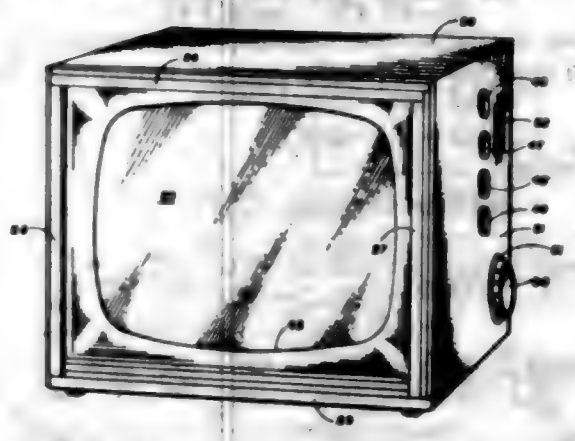
positioned substantially entirely within the confines of a rearward projection of the screen and rearwardly of said screen; a cabinet structure; and means for supporting said chassis and picture tube within said cabinet structure, said cabinet structure having a rectangular front framing and registering with the entire rectangular display screen and substantially fully occupied by said rectangular display screen, said major and minor axes determining the useable frontal area of said cabinet.

2,896,200

TELEVISION RECEIVER CABINET CONSTRUCTION

Eugene Aeschlimann, Cincinnati, Ohio, assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware

Application May 19, 1954, Serial No. 430,876
4 Claims. (Cl. 340—367)



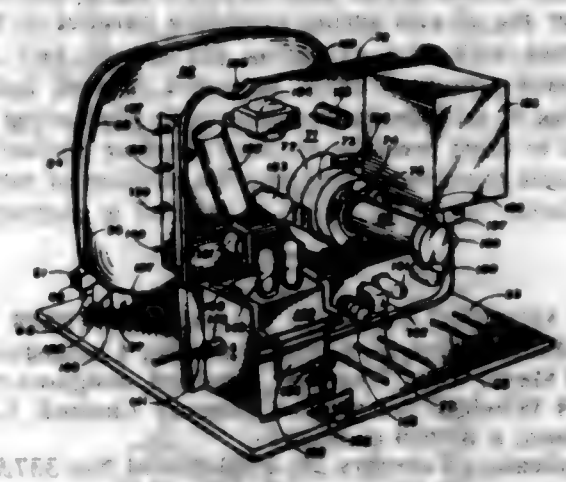
1. A television receiver comprising, in combination: a horizontal supporting base, and a self-supporting wall structure vertically extending from said supporting base and removably secured thereto, said base and said wall structure forming a rigid enclosure; an upright component-supporting chassis secured to said base, said chassis having an aperture therethrough; a cathode-ray tube having a rear portion terminating in a neck and a bulb-shaped portion terminating in a screen, said cathode-ray tube being positioned with its neck extended through said aperture; means secured to said supporting base and embracing said bulb-shaped portion for vertically clamping down said cathode-ray tube in fixed relation to said supporting base; means spaced from the last-named means for supporting the rear portion of the cathode ray tube in fixed relation to said supporting base; whereby said supporting base, chassis, cathode ray tube and tube-supporting means form a unitary ensemble substantially confined within said rigid enclosure.

2,896,201

TELEVISION RECEIVER CHASSIS CONSTRUCTION

Carl L. Ackerman, Mount Healthy, Ohio, assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware

Application May 19, 1954, Serial No. 430,877
7 Claims. (Cl. 340—367)



1. A cathode ray tube display system comprising a cathode ray tube having an evacuated envelope constructed substantially entirely of glass and having a substantially rectangular display surface, a dome-shaped portion attached to said display surface and a neck portion attached to said dome-shaped portion by a glass-to-glass seal, a support for said tube comprising a first means engaging said dome-shaped portion around a major portion of the periphery of said display surface, a second means engaging said dome-shaped portion at a point spaced from said first means and urged toward said first means to provide a grid clamping support engaging said cathode ray tube solely at said dome-shaped portion whereby said cathode ray tube is supported entirely from said dome-shaped portion with no support from said neck portion, and a third means substantially rigidly mounted radially of the axis of said tube and adjustably mounted axially of said tube for positioning a magnetic deflection yoke in a fixed position adjacent said dome portion and loosely around said neck portion whereby pressure of said deflection yoke against said neck portion with resultant strain on said seal is eliminated.

2,896,202

TOY RAILROAD SYSTEMS

Joseph L. Bonanno, South Orange, N.J., assignor to The Lionel Corporation, New York, N.Y., a corporation of New York

Continuation of application Serial No. 157,545, April 22, 1950. This application August 29, 1957, Serial No. 680,956
3 Claims. (Cl. 340—388)

1. In a toy railroad car, a sound producing device including a coil having an iron core therein, an armature juxtaposed to said coil for attraction thereby, adjustable resilient mounting means for said armature, and circuit breaking means connected in series with said coil and operated by said armature, said circuit breaking means including a diaphragm, a first contact mounted on said diaphragm and a second contact mounted on said armature, said second contact being juxtaposed to said first contact, said resilient mounting means including a deformable framework affixed to said coil, a casing enclos-

are indicative of the Doppler frequency difference, and means for summing said output signals to obtain the aver-

ing K.D.F. cartons horizontally in two stacks, side by side, inserting a bottom oversize locking sheet beneath

the remaining extremity of said first voltage divider, said

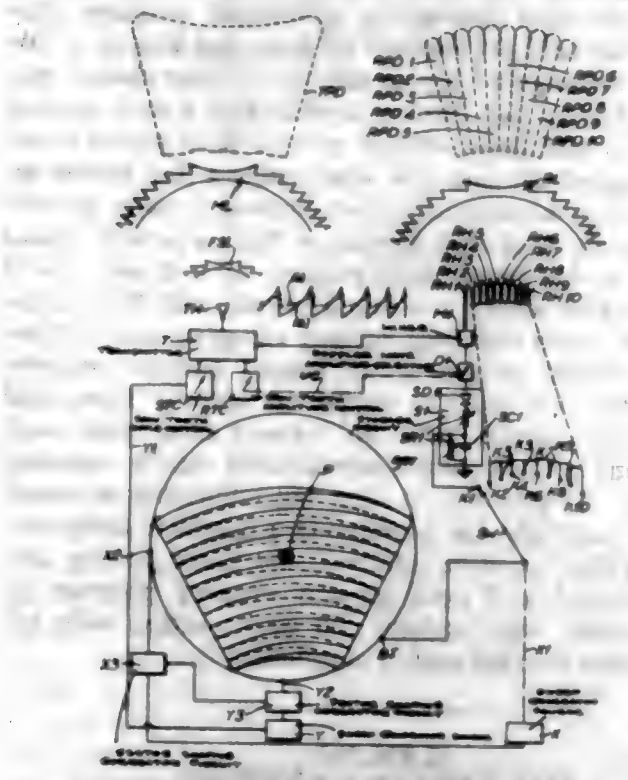
ing the above-mentioned elements, insulation separating the framework from the casing, a portion of said framework extending laterally in a direction away from said coil parallel to but not in contact with said armature, a downwardly depending lug on the outer extremity of said extending portion, an L-shaped resilient spring one leg of which is mounted to said downwardly projecting lug, the other leg of said spring extending parallel to but not in contact with, the extending portion of said framework, said armature being mounted to said last mentioned leg of said spring and adjustable positioning means adapted to exert pressure on the extending portion of the deformable framework whereby the position of the armature relative to the iron core of the coil is controlled.

2,896,203

MOVING TARGET RADAR SYSTEMS

Peter Maurice Wright, Great Waltham, Chelmsford, and Noel Meyer Rust, Worthing, England, assignors to Marconi's Wireless Telegraph Company Limited, London, England, a British company

Application February 20, 1953, Serial No. 337,985
4 Claims. (Cl. 343—7.7)



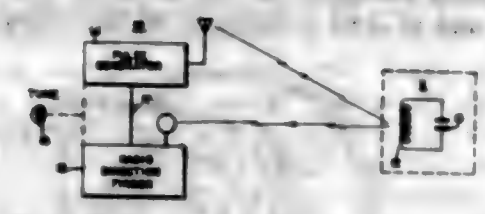
1. A C.W. radar system for picking up moving targets and ascertaining and displaying the range and azimuth thereof, said system comprising a frequency modulated transmitter adapted to irradiate a predetermined volume of space with continuous waves; means for cyclically modulating the frequency of said transmitter in accordance with a predetermined cyclic law of frequency variation; a plurality of directional receivers adapted between them to cover said volume, said receivers having adjacent directional diagrams; a received signal channel fed each from a different receiver, each channel including a mixer for mixing received signals with energy direct from the transmitter, a Doppler note amplifier-selector adapted to provide an output consisting of an uninterrupted Doppler note when a target echo is present from a target whose echo time is exactly the same as the modulation cycle of the transmitter, a storage circuit fed from said amplifier selector, and an output terminal fed from said storage circuit; means for scanning said output terminals to collect signals sequentially therefrom; a display cathode ray tube; means for deflecting the ray in said tube in one direction in synchronism with said scanning means; means for deflecting said ray in the co-ordinate direction in synchronism with the cyclic modulating means; and means for applying signals picked up by scanning said terminals to brighten said ray.

2,896,204

NAVIGATION SYSTEM

Willis H. Gille, St. Paul, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application September 27, 1954, Serial No. 458,428
1 Claim. (Cl. 343—16)



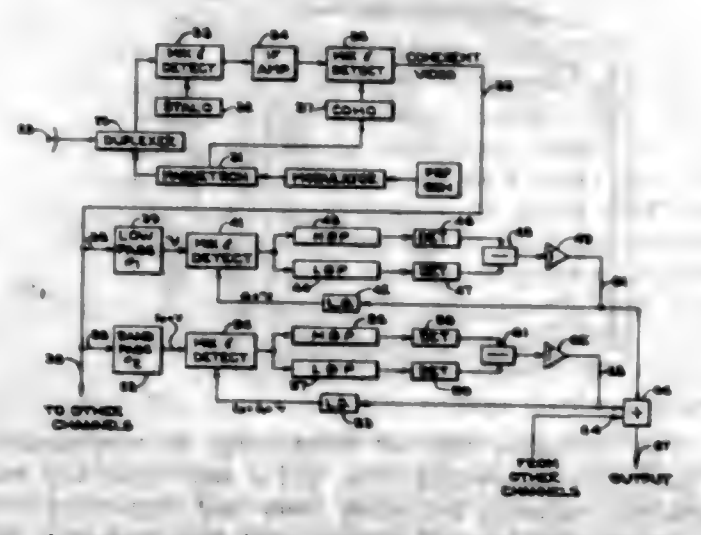
A point to point navigation system comprising, in combination: a search station carried by a vehicle and comprising a tunable pulse transmitter, a tunable directional receiver adapted to make evident the direction from which reception is taking place, and means blocking the receiver during only the interval of transmission of each pulse; and a plurality of unattended, parasitic, continuously operative, omnidirectional sought stations each comprised of a weatherproof housing, a tuned inductance-capacitance circuit having a high Q and a natural frequency to which said transmitter and receiver are tunable within each said housing, said sought stations being located at points along a path to be traversed by the vehicle, and the sought stations within the effective radius of said search station having different natural frequencies, so that by following the signals of said directional receiver the vehicle may be navigated along the course determined by said sought stations.

2,896,205

MULTIPLE SIDEBAND DOPPLER RECEIVER

France B. Berger, Pleasantville, N.Y., assignor to General Precision Laboratory Incorporated, a corporation of New York

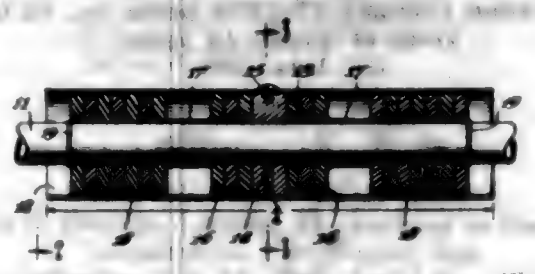
Application January 13, 1954, Serial No. 403,680
13 Claims. (Cl. 343—17.1)



1. A pulsed radar instrument for determining the Doppler frequency difference between transmitted pulse signals and the reflected echo signals thereof comprising, means for obtaining a series of coherent video pulse signals each of which contains Doppler frequency information from said echo signals, a plurality of signal channels each having said series of coherent video pulse signals impressed thereon, a band-pass filter in each of said channels, said band-pass filters passing frequency bands which differ from each other by progressive multiples of the repetition frequency of the transmitted pulse signals, oscillator means generating signals of selected frequencies, mixing means in each of said channels having a signal produced by said oscillator means and the output of a respective band-pass filter impressed thereon, means for deriving output signals from each of said mixers which

are indicative of the Doppler frequency difference, and means for summing said output signals to obtain the average thereof.

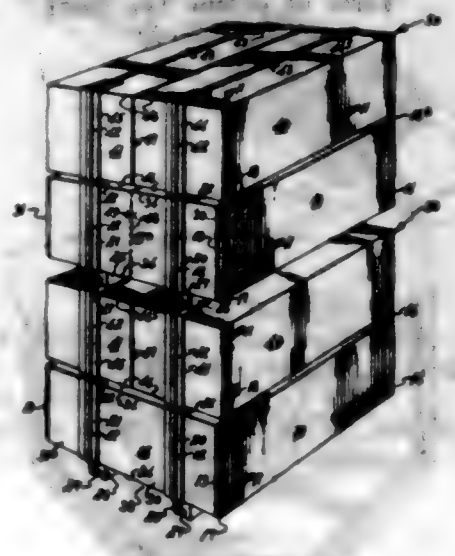
2,896,206
RADIATION CHOKE
Marvel W. Scholdorf, Palos Heights, Ill., assignor to Andrew Corporation, a corporation of Illinois
Application November 8, 1955, Serial No. 545,663
7 Claims. (Cl. 343—841)



1. A radiation choke arranged to be mounted on a central radiating conductor to isolate longitudinal portions of the conductor for signals of a given frequency comprising a cylindrical section coaxial to the central conductor and of a length less than one-half the free-space wavelength of such signals, a conductive annular member interconnecting the cylindrical section at its center with the coaxial radiating conductor, said annular member being otherwise unconnected, and dielectric members positioned within said cylindrical section in an amount sufficient to provide a reduced velocity of propagation of radiant high frequency energy such that the choke has an internal electrical length of one-half wavelength.

2,896,207
METHOD OF PACKAGING K.D.F. CARTONS
Harry W. Wilson, Millbrae, Calif.
Original application April 9, 1957, Serial No. 651,615. Divided and this application October 21, 1957, Serial No. 696,304
10 Claims. (Cl. 53—3)

1. A method for making a self-palletized package of K.D.F. corrugated cartons, comprising the steps of: stacking K.D.F. cartons horizontally in two stacks, side by side, inserting a bottom oversize locking sheet beneath the resultant stacks and an upper oversize locking sheet over said stacks; exerting pressure on said stacks sufficient to make the cartons equiplanar and squeeze out the air between them without damage to the individual cartons; folding the portions of said locking sheets that extend beyond said stacks against those faces which are common to both of said stacks; placing overlength bumper strips to extend from end to end at spaced intervals over the top of the upper locking sheet and beneath the bottom of the bottom locking sheet; folding the overlength



end portions of said bumper strips against said faces of said stacks and the folded portions of said locking sheets; positioning rabbeted runners, rabbet outward, against one of said faces of the stacks with the lower surface of their end portions resting on the folded end portions of said bumper strips; passing metal bands around said stacks while they are still under pressure, each said band lying in the rabbet of a said runner and overlying a said bumper strip at the top, bottom, and folded end portions; securing the ends of said bands together tightly to form a baled stack; and then turning said resultant baled stack 90° to rest it on said runners, which are then used as pallet rails.

185,696
CONTINER HANDLE AND TEAR STRIP FOR

185,702

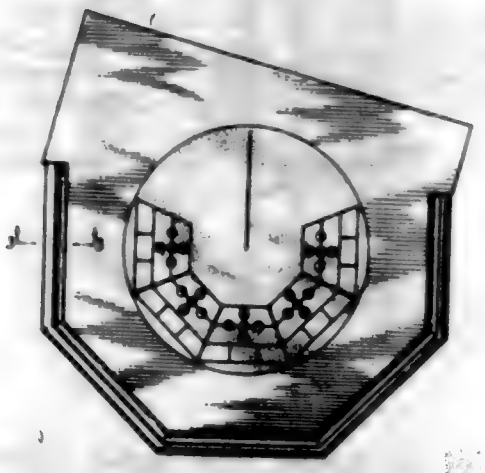
ming said terminals to brighten said ray.

deriving output signals from each of said mixers which

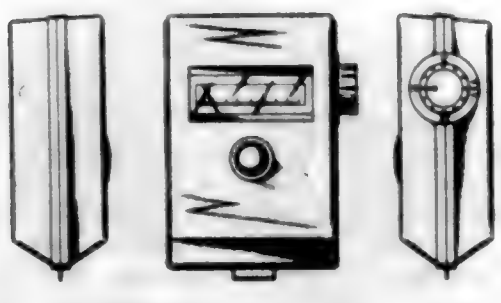
DESIGNS

JULY 21, 1959

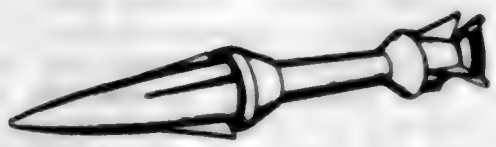
185,692
GAMEBOARD
Jenell R. Anderson, Sunland, and Lee J. Dionne, San Fernando, Calif.
Application August 11, 1958, Serial No. 52,160
Term of patent 3½ years
(Cl. D34—5)



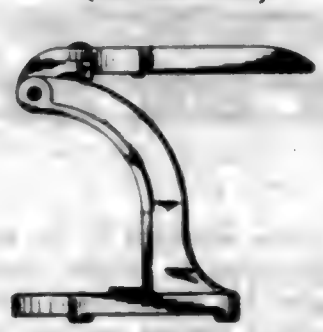
185,693
PHOTOGRAPHIC EXPOSURE METER
Yukihiro Asano, Tokyo, Japan, assignor to U.S. Photo Supply Co., Inc., Washington, D.C., a corporation of Delaware
Application July 15, 1958, Serial No. 51,792
Term of patent 14 years
(Cl. D61—1)



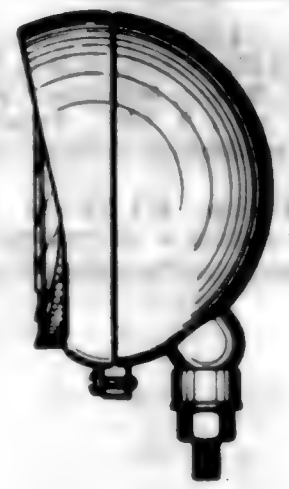
185,694
COMBINED TOY ROCKET AND LAUNCHER
Carl Ayala, Chicago, Ill., assignor to Marvin I. Glass, Chicago, Ill.
Application January 19, 1959, Serial No. 54,207
Term of patent 14 years
(Cl. D34—15)



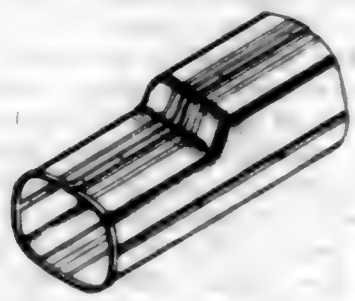
185,695
CAN PUNCH
Norman Blumberg, Cleveland Heights, Ohio
Application February 27, 1959, Serial No. 54,764
Term of patent 14 years
(Cl. D44—29)



185,696
ANTIFOG HEADLIGHT FOR VEHICLES
Francesco Caminelli, Venegono Superiore, Italy, assignor to Messrs. Fratelli Pagani, Milan, Italy, an Italian firm
Application June 1, 1956, Serial No. 41,729
Term of patent 3½ years
(Cl. D48—32)

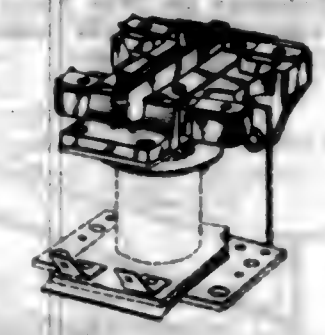


185,697
SHELL FOR A SUCTION CLEANER
Raymond Descarries, Montreal, Quebec, Canada, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Application April 1, 1958, Serial No. 50,282
Term of patent 14 years
(Cl. D9—3)

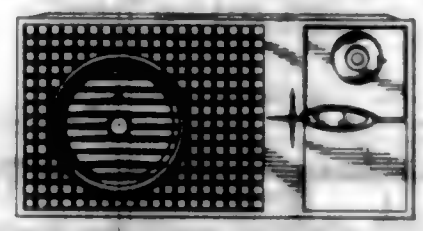


185,698
COMBINED HANDLE AND TRIM STRIP FOR SUCTION CLEANER
Raymond Descarries, Montreal, Quebec, Canada, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Application April 1, 1958, Serial No. 50,285
Term of patent 14 years
(Cl. D9—2)

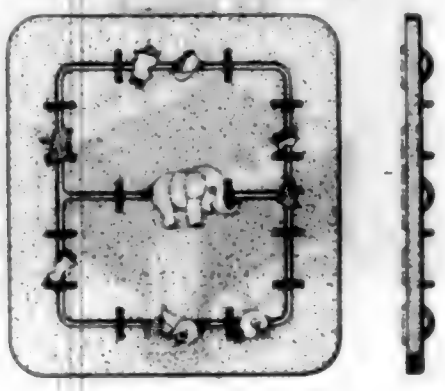
185,699
ELECTROMAGNETIC RELAY
Walter F. Dowdle, Lincoln, Ill., assignor to Essex Wire Corporation, Fort Wayne, Ind.
Application July 22, 1957, Serial No. 47,046
Term of patent 14 years
(Cl. D26—13)



185,700
FRONT PANEL FOR A ROOM AIR CONDITIONER
Philip S. Egan, Glenview, Ill., assignor to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Application September 6, 1957, Serial No. 47,627
Term of patent 3½ years
(Cl. D62—4)

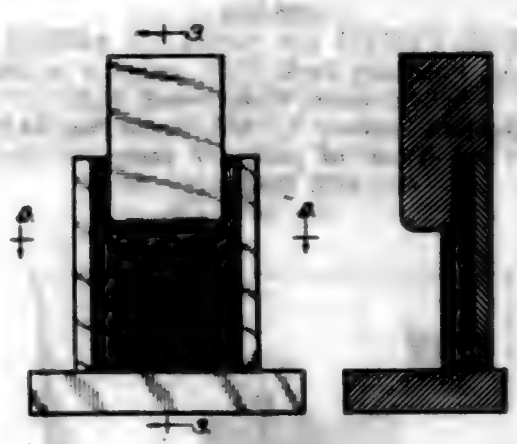


185,701
GAMEBOARD
Julius Ellmann, Brooklyn, N.Y.
Application January 5, 1959, Serial No. 54,036
Term of patent 14 years
(Cl. D34—5)



185,702
PENCIL BOX
Jack Fairchild Fleming, Summit, N.J., assignor to Sterling Plastics Co., Union, N.J., a corporation of New Jersey
Application October 2, 1958, Serial No. 52,853
Term of patent 14 years
(Cl. D74—21)

185,703
TROPHY BASE
Donald R. Foster and Ray Hansen, Omaha, Nebr., assignors to F. H. Noble & Company, Chicago, Ill., a corporation of Illinois
Application April 21, 1958, Serial No. 50,553
Term of patent 14 years
(Cl. D29—23)



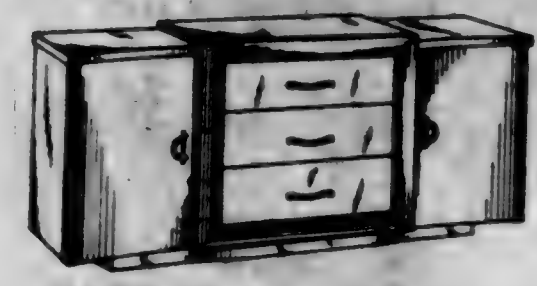
185,704
ALTAR CLOTH OR SIMILAR ARTICLE
Otto Frei, Palisades Park, N.J., assignor to Otto A. Schoenmann, Ridgewood, N.J.
Application January 7, 1959, Serial No. 54,060
Term of patent 7 years
(Cl. D92—1)

185,705
ALTAR CLOTH OR SIMILAR ARTICLE
Otto Frei, Palisades Park, N.J., assignor to Otto A. Schoormann, Ridgewood, N.J.
Application January 7, 1959, Serial No. 54,861
Term of patent 7 years
(Cl. D92—1)

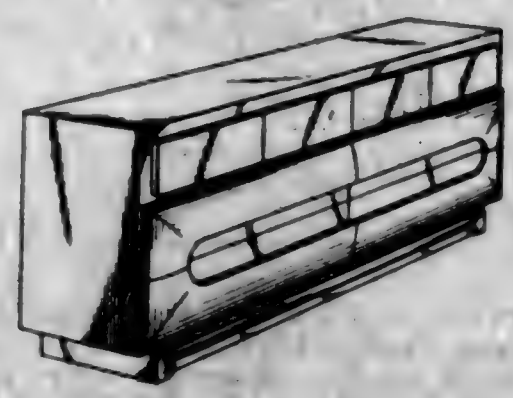
185,706
ALTAR CLOTH OR SIMILAR ARTICLE
Otto Frei, Palisades Park, N.J., assignor to Otto A. Schoormann, Ridgewood, N.J.
Application January 7, 1959, Serial No. 54,862
Term of patent 7 years
(Cl. D92—1)

185,707
BABY FOOD SERVER
Ruth M. Gallagher, Oceanside, Calif.
Application February 3, 1958, Serial No. 49,475
Term of patent 3½ years
(Cl. D54—12)

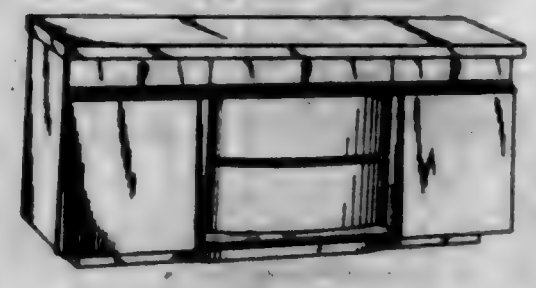
185,708
DRESSER OR THE LIKE
Ernest Herrmann, South Norwalk, Conn.
Application February 28, 1958, Serial No. 49,856
Term of patent 3½ years
(Cl. D33—6)



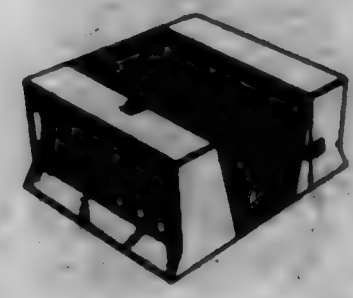
185,709
DRESSER OR THE LIKE
Ernest Herrmann, South Norwalk, Conn.
Application February 28, 1958, Serial No. 49,857
Term of patent 3½ years
(Cl. D33—6)



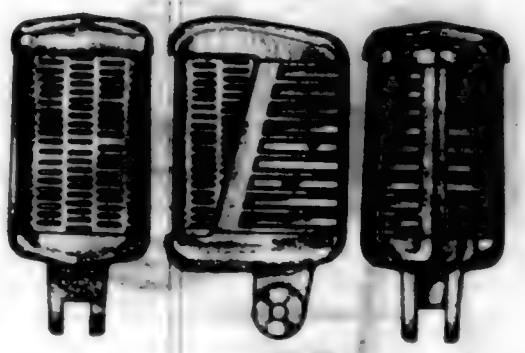
185,710
DRESSER OR THE LIKE
Ernest Herrmann, South Norwalk, Conn.
Application February 28, 1958, Serial No. 49,858
Term of patent 3½ years
(Cl. D33—6)



185,711
PORTABLE STEREOPHONIC PHONOGRAPH
Frank A. Hinson, Rockville Centre, N.Y.
Application October 1, 1958, Serial No. 52,827
Term of patent 14 years
(Cl. D56—4)

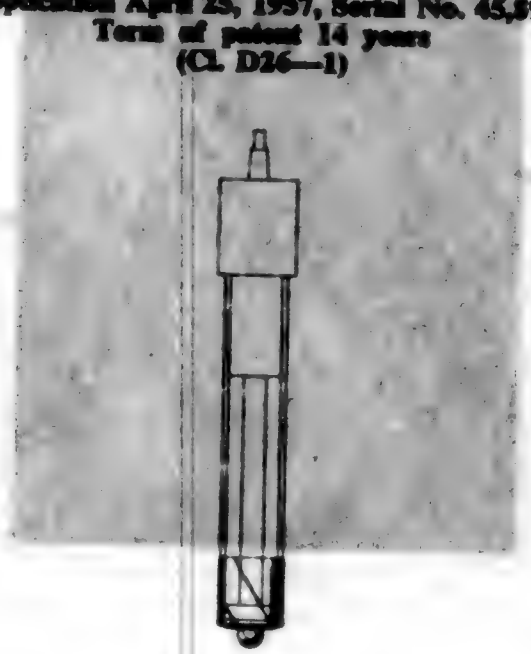


185,712
MICROPHONE
George Bruce Kamp, Springfield, Pa., assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Application October 10, 1957, Serial No. 48,057
Term of patent 7 years
(Cl. D26—14)

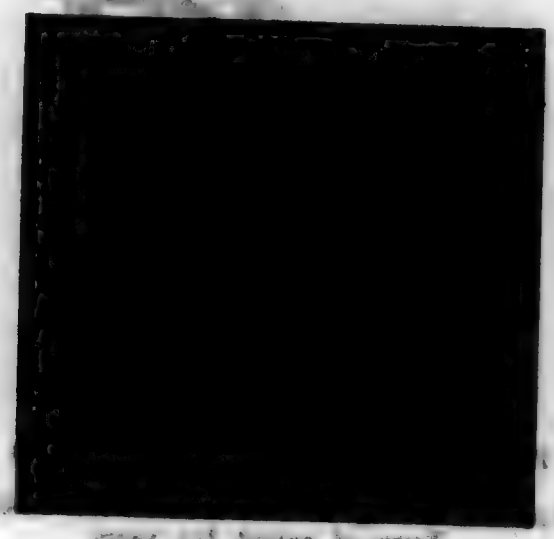


185,713
RECORDING OSCILLOGRAPH
Richard S. Kampf, Denver, Colo., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application September 5, 1958, Serial No. 52,516
Term of patent 14 years
(Cl. D26—14)

185,714
COMBINATION GLASS AND REFERENCE ELECTRODE
John E. Leonard and Hideo Watanabe, Fullerton, Calif., assignors to Beckman Instruments, Inc., Fullerton, Calif., a corporation of California
Application April 25, 1957, Serial No. 45,893
Term of patent 14 years
(Cl. D26—1)



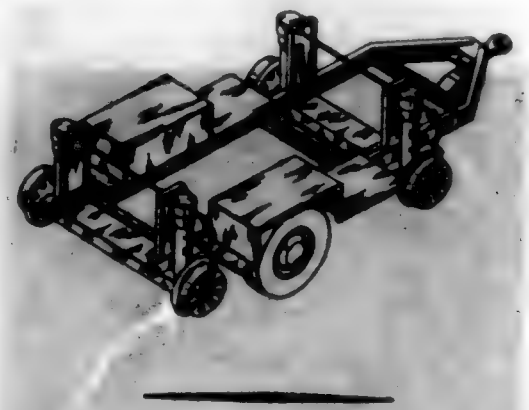
185,715
PLASTIC COATED FABRIC
John M. Little, Toledo, Ohio, assignor to The Landers Corporation, Toledo, Ohio, a corporation of Ohio
Application December 11, 1957, Serial No. 48,066
Term of patent 14 years
(Cl. D67—3)



185,716
HANGER FOR ARTICLES OF CLOTHING
George S. Nalle, Jr., Austin, Tex.
Application July 14, 1958, Serial No. 51,762
Term of patent 14 years
(Cl. D60—8)

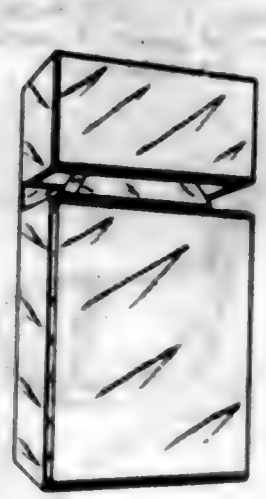
185,717
GOLF CLUB HEAD
Haydon L. Newton, Portland, Oreg.
Application January 24, 1958, Serial No. 49,397
Term of patent 7 years
(Cl. D34—5)

185,718
PORTABLE CARRIAGE FOR COMPRESSORS OR THE LIKE
Roy C. Patton, Charlotte, N.C.
Application March 24, 1958, Serial No. 50,141
Term of patent 14 years
(Cl. D14—3)

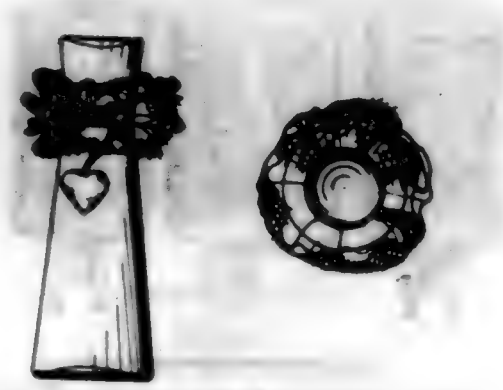


185,719
WATER HEATER
Pierre Pehau, Milan, Italy, assignor to Societa Italiana Misuratori S.I.M.S.p.A., Milan, Italy
Application August 6, 1958, Serial No. 52,063
Term of patent 3½ years
(Cl. D81—2)

185,720
WATER HEATER
Pierre Pehau, Milan, Italy, assignor to Societa Italiana Misuratori S.I.M.S.p.A., Milan, Italy
Application August 6, 1958, Serial No. 52,066
Term of patent 3½ years
(Cl. D81—2)

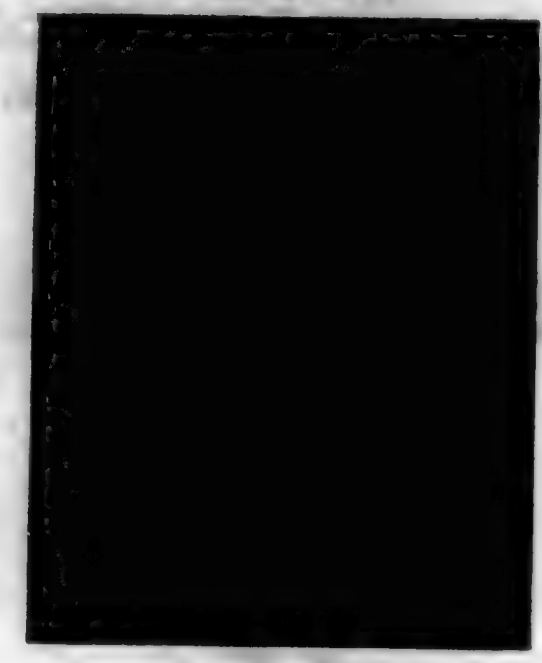


185,721
PERFUME BOTTLE OR THE LIKE
Saul Poison, New York, N.Y.
Application November 27, 1957, Serial No. 48,692
Term of patent 14 years
(Cl. D58—8)

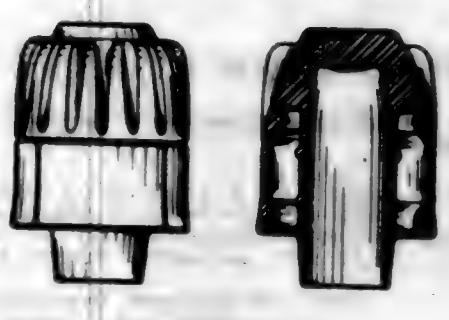


185,722
MOULDED BOBBY PIN
Nathan L. Solomon, Englewood, N.J.
Application December 4, 1956, Serial No. 44,065
Term of patent 14 years
(Cl. D86—10)

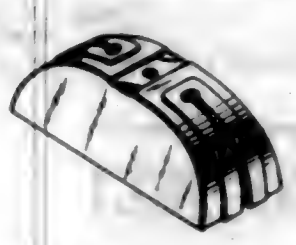
185,723
PLASTIC SHEET MATERIAL
Arthur D. Sylvester and Arno H. Scheibling, Rowayton, Conn., assignors to L. E. Carpenter & Co., Inc., Wharton, N.J., a corporation of New Jersey
Application November 20, 1956, Serial No. 43,852
Term of patent 14 years
(Cl. D87—3)



185,724
COMBINATION CHAMPAGNE BOTTLE CORK AND SKIRT LOCK THEREFOR
Floyd A. Terwilliger, Rochester, N.Y.
Application October 24, 1958, Serial No. 53,132
Term of patent 14 years
(Cl. D58—10)

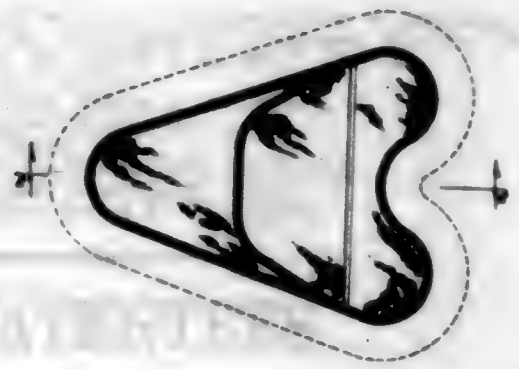


185,725
SHIELD FOR ELECTRIC WALL SOCKETS
Daryle W. Wieland, Kawkawlin, Mich.
Application February 6, 1959, Serial No. 54,490
Term of patent 14 years
(Cl. D26—13)

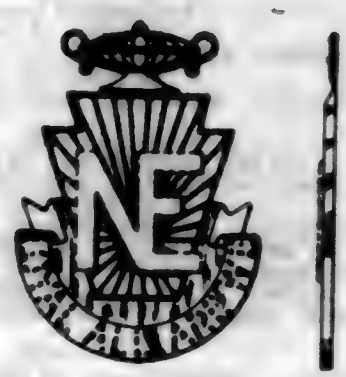


185,726
PLASTIC SHEET MATERIAL
Russel Wright, New York, N.Y.
Application February 17, 1959, Serial No. 54,640
Term of patent 14 years
(Cl. D67—3)

185,727
MOP HEAD
Irving A. Yamen, Hayward, Calif., and William W. Smith, Denver, Colo., assignors to Dust-Tex Corporation, Denver, Colo., a corporation of Colorado
Application August 14, 1957, Serial No. 47,358
Term of patent 14 years
(Cl. D9—2)



185,728
SCHOOL EMBLEM
Charles A. Young, Philadelphia, Pa.
Application October 22, 1958, Serial No. 53,091
Term of patent 14 years
(Cl. D29—2)



LIST OF REISSUE PATENTEES

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PATENTS WERE ISSUED ON THE 21ST DAY OF JULY, 1959

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Hlavacek, Robert J., to Swift & Co. Color stabilizers for tallow. Re. 24,669, 7-21-59, Cl. 260—398.5.
Jensen, James L., to Minneapolis-Honeywell Regulator Co. Voltage and current regulation. Re. 24,671, 7-21-59, Cl. 323—22.
Minneapolis-Honeywell Regulator Co.: *See*—
Jensen, James L. Re. 24,671.
Rodman, James B., to Weyerhaeuser Timber Co. Apparatus for cutting flattened containers. Re. 24,668, 7-21-59, Cl. 93—58.4.
Smith, Caldwell P., to United States of America, Air Force. Device for extracting the excitation function from speech signals. Re. 24,670, 7-21-59, Cl. 179—1.
Swift & Co.: *See*—
Hlavacek, Robert J. Re. 24,669.
United States of America
Air Force: *See*—
Smith, Caldwell P. Re. 24,670.
Weyerhaeuser Timber Co.: *See*—
Rodman, James B. Re. 24,668.

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Robinson, Herbert, to Jackson & Perkins Co. Rose plant. 1,853, 7-21-59, Cl. 47—61.
Tiret, Horace M. Fuchsia plant. 1,854, 7-21-59, Cl. 47—60.
Tiret, Horace M. Fuchsia plant. 1,855, 7-21-59, Cl. 47—60.

LIST OF DESIGN PATENTEES

Aktiebolaget Electrolux: *See*—
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Descarries, Raymond. 185,698.
Anderson, Jenell R., and L. J. Dionne. Gameboard. 185,692, 7-21-59, Cl. D34—5.
Asano, Yukihiro, to U.S. Photo Supply Co. Inc. Photographic exposure meter. 185,693, 7-21-59, Cl. D61—1.
Astatic Corp., The: *See*—
Kamp, George B. 185,712.
Ayala, Carl, to M. I. Glass. Combined toy rocket and launcher. 185,694, 7-21-59, Cl. D34—15.
Beckman Instruments, Inc.: *See*—
Leonard, John E., and Watanabe. 185,714.
Blumberg, Norman. Can punch. 185,695, 7-21-59, Cl. D44—29.
Carpenter, L. E., & Co., Inc.: *See*—
Sylvester, Arthur D., and Scheiding. 185,723.
Cassinelli, Francesco, to Messrs Fratelli Pagani. Antifog headlight for vehicles. 185,696, 7-21-59, Cl. D48—32.
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Descarries, Raymond, to Aktiebolaget Electrolux. Combined handle and trim strip for suction cleaner. 185,698, 7-21-59, Cl. D9—2.
Dionne, Lee J.: *See*—
Anderson, Jenell R., and Dionne. 185,692.
Dowdle, Walter F., to Essex Wire Corp. Electromagnetic relay. 185,699, 7-21-59, Cl. D26—13.
Dust-Tex Corp.: *See*—
Yamen, Irving A., and Smith. 185,727.
Egan, Philip S., to Sears, Roebuck and Co. Front panel for a room air conditioner. 185,700, 7-21-59, Cl. D32—4.
Ellman, Julius. Gameboard. 185,701, 7-21-59, Cl. D34—5.
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Dowdle, Walter F. 185,699.
Fleming, Jack F., to Sterling Plastics Co. Pencil box. 185,702, 7-21-59, Cl. D74—21.
Fosler, Donald R., and R. Hansen, to F. H. Noble & Co. Trophy base. 185,703, 7-21-59, Cl. D29—23.
Frei, Otto, to O. A. Scheurmann. Altar cloth or similar article. 185,704, 7-21-59, Cl. D92—1.
Frei, Otto, to O. A. Scheurmann. Altar cloth or similar article. 185,705, 7-21-59, Cl. D92—1.
Frei, Otto, to O. A. Scheurmann. Altar cloth or similar article. 185,706, 7-21-59, Cl. D92—1.
Gallagher, Ruth M. Baby food server. 185,707, 7-21-59, Cl. D54—12.
Glass, Marvin I.: *See*—
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Hansen, Ray: *See*—
Fosler, Donald R., and Hansen. 185,703.
Herrmann, Ernest. Dresser or the like. 185,708, 7-21-59, Cl. D33—6.
Herrmann, Ernest, Dresser or the like. 185,709, 7-21-59, Cl. 33—6.
Herrmann, Ernest, Dresser or the like. 185,710, 7-21-59, Cl. D33—6.
Hiaeres, Frank A. Portable stereophonic phonograph. 185,711, 7-21-59, Cl. D56—4.
Kamp, George B., to The Astatic Corp. Microphone. 185,712, 7-21-59, Cl. D26—14.
Kampf, Richard S., to Minneapolis-Honeywell Regulator Co. Recording oscillograph. 185,713, 7-21-59, Cl. D26—14.
Landers Corp., The: *See*—
Little, John M. 185,715.
Leonard, John E., and H. Watanabe, to Beckman Instruments, Inc. Combination glass and reference electrode. 185,714, 7-21-59, Cl. D26—1.
Little, John M., to The Landers Corp. Plastic coated fabric. 185,715, 7-21-59, Cl. D87—3.
Messrs Fratelli Pagani: *See*—
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Minneapolis-Honeywell Regulator Co.: *See*—
Kampf, Richard S. 185,713.
Nalle, George S., Jr. Hanger for articles of clothing. 185,716, 7-21-59, Cl. D60—3.
Newton, Haydon L. Golf club head. 185,717, 7-21-59, Cl. D34—5.
Noble, F. H., & Co.: *See*—
Fosler, Donald R., and Hansen. 185,703.
Patton, Roy C. Portable carriage for compressors or the like. 185,718, 7-21-59, Cl. D14—3.
Pehau, Pierre, to Societa Italiana Misuratori S.I.M.S.p.A. Water heater. 185,719, 7-21-59, Cl. D31—2.
Pehau, Pierre, to Societa Italiana Misuratori S.I.M.S.p.A. Water heater. 185,720, 7-21-59, Cl. D31—2.
Poison, Saul. Perfume bottle or the like. 185,721, 7-21-59, Cl. D58—3.
Scheiding, Arno H.: *See*—
Sylvester, Arthur D., and Scheiding. 185,723.
Scheurmann, Otto A.: *See*—
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Frei, Otto. 185,705.
Frei, Otto. 185,706.
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Smith, William W.: *See*—
Yamen, Irving A., and Smith. 185,727.
Societa Italian Misuratori S.I.M.S.p.A.: *See*—
Pehau, Pierre. 185,719.
Pehau, Pierre. 185,720.
Solomon, Nathan L. Moulded bobby pin. 185,722, 7-21-59, Cl. D36—10.
Sterling Plastics Co.: *See*—
Fleming, Jack F. 185,702.
Sylvester, Arthur D., and A. H. Scheiding, to L. E. Carpenter & Co., Inc. Plastic sheet material. 185,723, 7-21-59, Cl. D87—3.
Terwilliger, Floyd A. Combination champagne bottle cork and skirt lock therefor. 185,724, 7-21-59, Cl. D58—10.
U.S. Photo Supply Co. Inc.: *See*—
Asano, Yukihiro. 185,693.
Watanabe, Hideo: *See*—
Leonard, John E., and Watanabe. 185,714.
Wieland, Daryle W. Shield for electric wall sockets. 185,725, 7-21-59, Cl. D26—13.
Wright, Russel. Plastic sheet material. 185,726, 7-21-59, Cl. D87—3.
Yamen, Irving A., and W. W. Smith, to Dust-Tex Corp. Mop head. 185,727, 7-21-59, Cl. D9—2.
Young, Charles A. School emblem. 185,728, 7-21-59, Cl. D29—2.

Automatic Enterprises, Inc.: *See*—

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 21ST DAY OF JULY, 1959

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

AGFA Akt.: *See*—
Peiz, Willibald, Burgardt, and Wahl. 2,895,825.
Abernethy, Ira A., Jr., to Talon, Inc. Method of making plastic boot. 2,895,149, 7–21–59, Cl. 12—142.
Abrahams, Gustav B. Snow plow. 2,895,237, 7–21–59, Cl. 37—53.
Abrasive Co. of America: *See*—
Johnson, William L. 2,895,851.
Ace Tool Engineering Co., Inc.: *See*—
Coy, Homer E. 2,895,226.
Ackerman, Carl L., to Avco Mfg. Corp. Television receiver chassis construction. 2,896,201, 7–21–59, Cl. 340—367.
Acorn Co.: *See*—
Clifton, Chester C. 2,895,160.
Addleman, Lloyd A., to Sylvania Electric Products Inc. Branched coaxial waveguide structure utilizing fine resistive wire coupling. 2,896,075, 7–21–59, Cl. 250—20.
Adelson, Samuel L., to Infilco Inc. Device for producing pressures varying proportionally to variations in a condition. 2,895,494, 7–21–59, Cl. 137—85.
Adler, Claes G., and E. S. Jung. Exercise apparatus. 2,895,736, 7–21–59, Cl. 272—58.
Aeroprojects, Inc.: *See*—
Jones, James B., and Potthoff. 2,895,845.
Aeschliman, Eugene, to Avco Mfg. Corp. Television receiver cabinet construction. 2,896,200, 7–21–59, Cl. 340—367.
Agne, Robert W., and C. M. Frank. Hose clamp. 2,895,197, 7–21–59, Cl. 24—279.
Aiken, William R., to Kaiser Industries Corp. Electronic device. 2,896,111, 7–21–59, Cl. 315—21.
Airequipt Mfg. Co., Inc.: *See*—
Wiklund, Carl H. 2,895,242.
Akron Standard Mold Co.: *See*—
Kastner, Edward C. 2,895,550.
Aktiebolaget Svenska Metallverken: *See*—
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Madsen, Jens A. W. 2,895,360.
Alcar Instruments, Inc.: *See*—
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Merton, Robert R., McDowell, and Aylett. 2,895,910.
Allen, Philip H., and B. J. Chromy. Cathode ray tube apparatus. 2,896,112, 7–21–59, Cl. 315—21.
Allied Chemical Corp.: *See*—
Crowder, John A., and Gilbert. 2,895,998.
Tyczkowski, Edward A. 2,895,999.
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Gardner, Willis W., and McKean. 2,895,750.
Standish, Earl L. 2,895,751.
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Allmänna Svenska Elektriska Aktiebolaget: *See*—
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Dahle, Orvar and B. 2,895,332.
Allsopp, Wilfred J.: *See*—
Powell, Dan, and Allsopp. 2,895,527.
Alsberg, Frederick R., and A. H. Wyld, to Imperial Chemical Industries Ltd. New colouration process for textile materials. 2,895,785, 7–21–59, Cl. 8—65.
Alward, Francis, deceased; R. F. McNeil, administrator. Motor vehicle refrigeration system. 2,895,308, 7–21–59, Cl. 62—161.
Amann, Willard R.: *See*—
Pollock, John S., and Amann. 2,895,396.
Ameray Corp.: *See*—
Rosensweig, Mack. 2,895,324.
American Bosch Arma Corp.: *See*—
Hess, Thomas D. 2,895,420.
Humber, John N., and Nystrom. 2,895,465.
Steinhacker, Mark A. 2,896,142.
American Cyanamid Co.: *See*—
Thomas, Walter M. 2,895,949.
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Mueller, Homer L. 2,895,526.
American-Marietta Co.: *See*—
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Washabaugh, Edward P. 2,895,299.
American National Bank and Trust Co. of Chicago: *See*—
Breitenstein, Charles T. 2,896,047.
Brunicardi, Daniel. 2,896,045.
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American Optical Co.: *See*—
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American Saw and Tool Co.: *See*—
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American Sealants Co., The: *See*—
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American Steel Band Co.: *See*—
Bowman, Joseph H. 2,895,432.
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Yoo, Hyungduk. 2,895,288.
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Amon, William F., Jr., and F. Claudi-Magnussen, to General Aniline & Film Corp. Laminated structures, compositions for producing same and processes of employing such compositions. 2,895,866, 7–21–59, Cl. 154—139.
Andersen, James B. Plank protector with cold worked deflecting teeth. 2,895,369, 7–21–59, Cl. 85—11.
Anderson, Emil, and J. J. Kowalewski, to Electrolux Corp. Apparatus for making container closures. 2,895,551, 7–21–59, Cl. 164—68.
Anderson, Frank J., to Monolith Portland Midwest Co. Rotary kiln construction. 2,895,725, 7–21–59, Cl. 263—33.
Anderson, William T., Jr., to Engelhard Industries, Inc. Gaseous electric discharge lamp. 2,896,107, 7–21–59, Cl. 313—184.
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Andrew Corp.: *See*—
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Wood, James Q., and Andrews. 2,895,805.
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Archer, Sydney, and J. O. Hoppe, to Sterling Drug Inc. Acylated triiodoaminophenylalkanoic acids and preparation thereof. 2,895,988, 7–21–59, Cl. 260—518.
Archer, Wesley L., and R. S. Montgomery, to The Dow Chemical Co. Resinous compositions from coal acids and alcamines and method for making composite products thereof. 2,895,934, 7–21–59, Cl. 260—37.
Archer, Wesley L., K. B. Boser, and H. B. Rickert, to The Dow Chemical Co. Resinous compositions from coal acids and polyhydroxy compounds and method for making composite products thereof. 2,895,935, 7–21–59, Cl. 260—37.
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Association For Physiologic Research, Inc.: *See*—
Mahon, Thomas J., and Edelstein. 2,895,651.
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Attlcks, John K., to United Aircraft Corp. Porous resin composition and method of using and preparing same. 2,895,172, 7–21–59, Cl. 18—59.
Auer, John H., Jr., C. S. Wilcox, and M. E. Hoff, Jr., to General Railway Signal Co. Electronic track circuit for railroads. 2,896,068, 7–21–59, Cl. 246—34.
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Avendano Lopez, Alfredo. Oppositely threaded nuts having bendable locking tabs. 2,895,523, 7-21-59, Cl. 151—18.

Axelrod, Albert, to Van Norman Industries, Inc. Electromechanical transducer for controlling a tuning condenser in an oscillator circuit. 2,896,139, 7-21-59, Cl. 317—250.

Axelson, John S., to General Electric Co. Electrodynamic machine. 2,896,100, 7-21-59, Cl. 310—51.

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Bachelet, Albert E., L. A. Dorff, and D. Mitchell, to Bell Telephone Laboratories, Inc. Mobile radio telephone system. 2,896,072, 7-21-59, Cl. 250—6.

Bachus, Benson F., to Western Electric Co., Inc. Pressure valve and control system for paper pulp machines. 2,895,505, 7-21-59, Cl. 137—562.

Bader, Alfred R., and H. A. Vogel, to Pittsburgh Plate Glass Co. Acetoacetic acid esters of castor oil and the use thereof in plasticization. 2,895,844, 7-21-59, Cl. 106—195.

Badin, Ferdinand, to Societe Mediterraneene Metallurgique Miniere et Commerciale. Power coupling. 2,895,590, 7-21-59, Cl. 192—58.

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Ohlinger, Helmut, and Fricker. 2,895,938.

Badura, Edmund S., to General Motors Corp. Counterbalancing hinge assembly. 3,895,161, 7-21-59, Cl. 16—168.

Baermann, Max. Friction increasing arrangement. 2,895,429, 7-21-59, Cl. 105—77.

Bailey, Donald L., and E. R. York, to Union Carbide Corp. Siloxane water repellent treatment for fibrous materials. 2,895,853, 7-21-59, Cl. 117—155.

Bailey, James R., 30% to R. J. Bailey. Valve construction. 2,896,707, 7-21-59, Cl. 251—46.

Bailey, Robert J.: *See*—
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Baker, Donald R., to The Marley Co. Method of preserving the wooden structure of cooling towers by impregnating. 2,895,848, 7-21-59, Cl. 117—57.

Baker, Robert N., to Bowen & Co., Inc. Dental drill chuck. 2,895,738, 7-21-59, Cl. 279—1.

Baker, William A.: *See*—
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Baker, William E., to Standard-Thomson Corp. Hot wire device. 2,896,163, 7-21-59, Cl. 324—106.

Bakke, Hans A., and H. D. Treitel, to General Electric Co. Meter housing. 2,895,637, 7-21-59, Cl. 220—40.

Bakker, Pier, to General Telephone Laboratories, Inc. Reverting call telephone system. 2,896,028, 7-21-59, Cl. 179—17.

Baldridge, Joseph R., to Diamond Alkali Co. Chemical composition and method. 2,895,870, 7-21-59, Cl. 167—22.

Baldwin, Francis P.: *See*—
Robison, Samuel B., and Baldwin. 2,895,850.

Baldwin, Francis P., and S. B. Robison, to Esso Research and Engineering Co. Process for heat treating butyl rubber with an aromatic nitroso compound and product obtained. 2,895,937, 7-21-59, Cl. 260—41.5.

Baldwin-Lima-Hamilton Corp.: *See*—
Lewis, Frank M., Keenan, and Goldmann. 2,895,291.

Bancroft-Brillotex International S.A.: *See*—
Boer, Arpad. 2,895,857.

Barkway, Wesley V. Can separating device. 2,895,611, 7-21-59, Cl. 209—104.

Barnett, Harry. Metering valve. 2,895,500, 7-21-59, Cl. 137—468.

Barr, Charles R.: *See*—
Salminen, Ilmari F., Barr, and Loria. 2,895,826.

Bartlett, Marjorie: *See*—
Bartlett, Norman. 2,895,735.

Bartlett, Norman, ½ to M. Bartlett. Amusement ride. 2,895,735, 7-21-59, Cl. 272—51.

Base Inc.: *See*—
Seegert, Neal. 2,895,545.

Bastien, Paul G., to Societe des Forges et Ateliers du Creusot. Process for improving stress corrosion cracking resistance of alloyed steel in hydrogen sulphide atmosphere. 2,895,861, 7-21-59, Cl. 148—21.5.

Batres, Enrique: *See*—
Ringold, Howard J., Kinel, and Batres. 2,895,969.

Battelle Development Corp.: *See*—
Mayo, Clyde R. 2,895,847.

Battersby, Lyle R., to United States of America, Army. Method of automatic amplitude control for speech frequencies. 2,896,030, 7-21-59, Cl. 179—171.

Bauerlein, Carl C., to The Dole Valve Co. Throw-away type of concentrate proportioner. 2,895,642, 7-21-59, Cl. 222—80.

Baxter, Meriwether L., Jr., and L. O. Carlson, to The Gleason Works. Machine for cutting gears and the like. 2,895,384, 7-21-59, Cl. 90—6.

Beachler, Edward D., to Beloit Iron Works. Machine drive. 2,895,348, 7-21-59, Cl. 74—689.

Beam Products Mfg. Co.: *See*—
Lynn, Harold E. 2,895,560.

Beavon, David K., to Texaco Inc. Furfural solvent refining and recovery process. 2,895,908, 7-21-59, Cl. 208—327.

Beck, William J., and D. F. Fasendin, to Minneapolis-Honeywell Regulator Co. Photographic slide clip. 2,896,247, 7-21-59, Cl. 40—152.

Becker, Earl M., and J. J. Bridge, to Mine Safety Appliances Co. Gas dispensing apparatus. 2,895,640, 7-21-59, Cl. 222—3.

Bechara, Albert E.: *See*—
Burns, Joseph, and Bechara. 2,896,106.

Beckett, Joseph E., to Ram Jet Wind Inc. Orchard fan driven by ram-jet engines. 2,895,259, 7-21-59, Cl. 47—2.

Beckman Instruments, Inc.: *See*—
Hare, George H., and Margetts. 2,896,063.

Behnke, Edward E.: *See*—
Devonshire, William H., and Behnke. 2,895,290.

Bekey, Andrew, to Geniseo, Inc. Electric drive assembly. 2,896,142, 7-21-59, Cl. 318—197.

Belcher, David D. Paint roller cleaner. 2,895,154, 7-21-59, Cl. 15—121.2.

Bell, Alan, to Foster Wheeler Corp. Pressure safety device. 2,895,492, 7-21-59, Cl. 137—68.

Bell Telephone Laboratories, Inc.: *See*—
Bachelet, Albert E., Dorff, and Mitchell. 2,896,072.
Bellows, Brian C., Jr. 2,896,176.
Feder, Herbert S. 2,896,090.
Fox, Arthur G. 2,896,174.
Fuller, Calvin S., and Pearson. 2,896,122.
Kohman, Girard T. 2,895,812.
Kromacher, Gerald. 2,896,160.
Raisbeck, Gordon. 2,896,178.
Thomas, Donald E. 2,896,168.

Bellows, Brian C., Jr., to Bell Telephone Laboratories, Inc. Distortion corrector. 2,896,176, 7-21-59, Cl. 333—28.

Beloit Iron Works: *See*—
Beachler, Edward D. 2,895,348.

Bender, Paul P. Cabinet with self-closing doors. 2,895,779, 7-21-59, Cl. 312—138.

Bendix Aviation Corp.: *See*—
Hasen, Edward J. 2,895,333.
Stoudenmire, Jay H. 2,896,141.

Bendix-Westinghouse Automotive Air Brake Co.: *See*—
Lederer, Robert C. 2,895,504.

Benisch, Mortimer. Motor-vehicle air-conditioning system. 2,895,310, 7-21-59, Cl. 62—239.

Bennett, Robert R., to Hughes Aircraft Co. Electrical analog-to-digital converter. 2,896,198, 7-21-59, Cl. 340—347.

Bentley, Alfred M., L. Garratt, and C. A. Smith, to United Shoe Machinery Corp. Machines for operating on blanks of ceramic ware. 2,895,205, 7-21-59, Cl. 25—24.

Benton, Bruce M., and R. P. Judkins, to Boeing Airplane Co. Frequency control device for generators. 2,896,150, 7-21-59, Cl. 322—61.

Berger, France B., and E. G. Newsom, to General Precision Laboratory Inc. Heterodyne autocorrelator. 2,896,162, 7-21-59, Cl. 324—79.

Berger, France B., to General Precision Laboratory Inc. Multiple sideband doppler receiver. 2,896,205, 7-21-59, Cl. 343—17.1.

Bergstrom, Stanley. Saw vise. 2,895,351, 7-21-59, Cl. 76—78.

Bernard, Edith E. Diaper-holding garment. 2,895,477, 7-21-59, Cl. 128—284.

Bersey, Edward R. Novelty cake and method of producing the same. 2,895,832, 7-21-59, Cl. 99—92.

Besse, Celestine P.: *See*—
Casagrande, Arthur, Besse, and Bigham. 2,895,301.

Bevarly, Henry W., W. F. Whitson, and C. C. Yann, to Chemetron Corp. Method of and apparatus for producing packages of plastic material at high cyclic rates. 2,895,271, 7-21-59, Cl. 53—21.

Bevilacqua, Patsy F., J. T. Piatt, and W. Wenner, to Hoffmann-La Roche Inc. Synthesis of thyronine compounds. 2,895,927, 7-21-59, Cl. 260—4.71.

Bewley, William L., J. L. Hotz, and R. L. Switzer, to Union Oil Co. of California. Shale retorting apparatus. 2,895,895, 7-21-59, Cl. 202—91.

Bickoff, Emanuel M.: *See*—
Emerson, Oliver H., and Bickoff. 2,895,964.

Biel, Hans, E. Pfiffe, and F. Bertsch, to H. Sickinger. Apparatus for making articles stitched along a fold. 2,896,730, 7-21-59, Cl. 270—37.

Bier, Merlin L. Scraper attachment for silo unloader. 2,895,626, 7-21-59, Cl. 214—17.

Bigham, John H.: *See*—
Casagrande, Arthur, Besse, and Bigham. 2,895,301.

Bilger, Xavier, and P. Muller, to Compagnie Francaise des Matieres Colorantes. New complex solutions and dispersions and process for their preparation. 2,895,837, 7-21-59, Cl. 106—18.

Billings, Ira J.: *See*—
Huthsing, Charles K., Sr., and Billings. 2,896,556.

Bincer, Hans: *See*—
Boxcer, John R., and Bincer. 2,896,098.

Birdsall, Charles K., and L. M. Field, to Hughes Aircraft Co. Linear magnetron traveling wave tube. 2,896,117, 7-21-59, Cl. 315—39.3.

Bitter Co., Inc.: *See*—
McDonald, Robert L., and Barslaff. 2,895,775.

Bisouard, Paul, and Y. Hardouin, to Compagnie pour la Fabrication des Compteurs et Materiel. Damping device for oscillating members of electro-mechanical apparatus. 2,896,164, 7-21-59, Cl. 324—125.

Bjorksten Research Laboratories, Inc.: *See*—
Fiedler, William S. 2,895,819.

Blackhawk Mfg. Co.: *See*—
Stovern, Ingram V., and Vallee. 2,895,712.

Blackstone Corp.: *See*—
Landenslager, Harry B., Jr. 2,895,862.

Blaess, A. Albert, to Minnesota Mining and Mfg. Co. Packaging material. 2,895,270, 7-21-59, Cl. 53—21.

Blanco, Elias, to Daystrom, Inc. Potentiometer contactor. 2,896,185, 7–21–59, Cl. 338—202.

Blanco, Raymond E., to United States of America, Atomic Energy Commission. Barium recovery process. 2,895,798, 7–21–59, Cl. 23—102.

Bland, Julius, and E. D. McKeague, to Standard Oil Co. Welded aluminum coated tubular member and method of making same. 2,895,747, 7–21–59, Cl. 285—21.

Blanding, Forrest H., to Esso Research and Engineering Co. Hydrocarbon conversion process. 2,895,901, 7–21–59, Cl. 208—73.

Blaskowski, Henry J., to Combustion Engineering, Inc. Method and apparatus for recuperative heat exchange. 2,895,719, 7–21–59, Cl. 257—245.

Blatherwick, Delbert T., to Robertson Photo-Mechanix, Inc. Vacuum film support. 2,895,706, 7–21–59, Cl. 248—363.

Bless, William A., to Sacket Sporting Goods Co. Ball catcher. 2,895,737, 7–21–59, Cl. 273—26.

Blech, Jack, to Foster Grant Co., Inc. Molded plastic basket. 2,895,522, 7–21–59, Cl. 150—48.

Blue Channel Corp., The: *See*—
Harris, Sterling G. 2,895,162.

Bluestone, Henry, to Diamond Alkali Co. Method for controlling nematodes. 2,895,969, 7–21–59, Cl. 167—22.

Bobingen Aktiengesellschaft fur Textil-Faser: *See*—
Schlack, Paul. 2,895,786.

Bobo, Roy A., to Phillips Petroleum Co. Mechanical treatment of drilling muds. 2,895,669, 7–21–59, Cl. 233—21.

Bobst, J., and Sea S.A.: *See*—
Kury, Josef. 2,895,570.

Bodong, William C.: *See*—
Latter, Bruce B., and Bodong. 2,895,781.

Boeing Airplane Co.: *See*—
Benton, Bruce M., and Judkins. 2,896,150.

Boer, Arpad, to Bancroft-Brillotex International S.A. Process for cleaning wool in dry state. 2,895,857, 7–21–59, Cl. 134—7.

Bogot, Alexander, and V. Z. Caracciati, to Combustion Engineering, Inc. Tilting nozzle for fuel burner. 2,895,435, 7–21–59, Cl. 110—28.

Bonanno, Joseph L., to The Lionel Corp. Toy railroad systems. 2,896,202, 7–21–59, Cl. 340—388.

Borg-Warner Corp.: *See*—
Holdeman, John W., Masko, Polomski, and Whelpley. 2,895,344.
Lysett, Daniel W. 2,895,581.

Borie, Henry P., Jr., to General Electric Co. Dirt compactor unit for vacuum cleaning systems. 2,895,564, 7–21–59, Cl. 183—37.

Borrup, Ronald J., and H. C. Davis, Jr. Electric thermo control circuit. 2,896,056, 7–21–59, Cl. 219—20.

Bosch, Robert, G.m.b.H.: *See*—
Maier, Alfred. 2,896,049.
Spittler, Heinrich. 2,896,120.

Bowen & Co., Inc.: *See*—
Baker, Robert N. 2,895,738.

Bowman, Joseph H., to American Steel Band Co. Roofing material. 2,895,432, 7–21–59, Cl. 108—13.

Boxcer, John R., and H. Bincer, to The Babcock & Wilcox Co. Ultrasonic probes. 2,896,098, 7–21–59, Cl. 310—8.1.

Boyd, Thomas R., to Illinois Tool Works. Twisted tooth lock washer having anti-skid body section. 2,895,524, 7–21–59, Cl. 151—37.

Boyer, Charles J.: *See*—
Simpson, Jack N., and Boyer. 2,895,137.

Boyle, James M.: *See*—
Ready, Harold R., Boyle, and Lynch. 2,895,973.

Boynton, Harry G., and W. R. Edwards, to Esso Research and Engineering Co. Process for alkylating aromatic hydrocarbons. 2,896,001, 7–21–59, Cl. 260—671.

Boser, Keith B.: *See*—
Archer, Wesley L., Boser, and Richert. 2,895,935.

Bradley & Vrooman Co.: *See*—
Yusem, Milton. 2,895,929.
Yusem, Milton. 2,895,930.

Bran & Lubbe: *See*—
Hettche, Otto, and Schultze. 2,895,329.

Brandt, Raymond W., to International Telephone and Telegraph Corp. Clipper circuit. 2,896,077, 7–21–59, Cl. 250—27.

Branick, Charles E. Device for inspecting pneumatic tires. 2,895,711, 7–21–59, Cl. 254—50.3.

Braski, Raymond J., to Dormeyer Corp. Food mixer timer. 2,895,547, 7–21–59, Cl. 161—1.

Braun, Philip N.: *See*—
Filsinger, Jamieson A., and Braun. 2,895,386.

Brav, Milton, to Sue Ann Food Products Corp. Novelty package. 2,895,834, 7–21–59, Cl. 99—171.

Bray, Vernon H., Jr., to National Food Equipment Co. Inc. Pneumatic conveying system. 2,895,768, 7–21–59, Cl. 302—17.

Breitenstein, Charles T., to R. T. Moloney, American National Bank and Trust Co. of Chicago, executor of said Moloney, deceased. Gang switch. 2,896,047, 7–21–59, Cl. 200—104.

Brickman, A. W.: *See*—
Pircon, Ladislav J. 2,896,054.

Bridge, John J.: *See*—
Becker, Earl M., and Bridge. 2,895,840.

Briggs, John C., ⅓ to S. Hirst. Insulating material. 2,896,135, 7–21–59, Cl. 317—234.

Brinck, Erik J. M. Folding camping shelter. 2,895,572, 7–21–59, Cl. 189—2.

Brinker, Keith C., and I. M. Robinson, to E. I. du Pont de Nemours and Co. Polybenzimidazoles. 2,895,948, 7–21–59, Cl. 260—78.4.

Bristol Aircraft Ltd.: *See*—
Pollard, Harold J., and Baker. 2,895,635.

British Celanese Ltd.: *See*—
Brown, Russell J., and Downing. 2,895,790.

Brito Pers, José. Telephone support. 2,895,703, 7–21–59, Cl. 248—346.

Brock & Rankin, Inc.: *See*—
Hildmann, William B. 2,895,148.
Rankin, Edward C. 2,895,483.

Brokaw, George Y., and W. C. Lyman, Jr., to Eastman Kodak Co. Gelled glycerol fatty acid partial ester pharmaceutical carrier. 2,895,879, 7–21–59, Cl. 167—81.

Brooker, Leslie G. S.: *See*—
Heseltine, Donald W., and Brooker. 2,895,955.

Brooks, Alfred J., and J. S. Strickland, said Strickland to said Brooks. Device to open and hold containers during packaging operation. 2,895,276, 7–21–59, Cl. 53—261.

Brooks, John A., and M. J. Den Herder, to Standard Oil Co. Temperature control in platinum catalyst reforming. 2,895,898, 7–21–59, Cl. 208—65.

Brooks, John W., to Socony Mobil Oil Co., Inc. Process for oxidizing petroleum oil and products theref. 2,895,978, 7–21–59, Cl. 260—451.

Broksbank, Harry P., and M. J. Martin, to Sulphates Ltd. Process of producing solid aluminum sulphate. 2,895,813, 7–21–59, Cl. 23—301.

Brown, Frank: *See*—
Hudgin, Donald E., and Brown. 2,895,943.

Brubaker, Ammon M.: *See*—
Lux, Russell E., and Brubaker. 2,895,874.

Brown, Laurence R., to Burroughs Corp. Gaseous glow tube circuits. 2,896,124, 7–21–59, Cl. 315—200.

Brown, Russell J., and J. Downing, to British Celanese Ltd. Production and treatment of artificial filamentary materials. 2,895,790, 7–21–59, Cl. 18—54.

Brown, William C. Saturable transformer. 2,896,180, 7–21–59, Cl. 336—155.

Brueder, Antoine, to Societe Anonyme Andre Citroen. Control device for internal combustion engines. 2,895,460, 7–21–59, Cl. 123—98.

Brueder, Antoine, to Societe Anonyme Andre Citroen. Suspension system for maintaining the level of a vehicle frame. 2,895,745, 7–21–59, Cl. 280—124.

Brueder, Antoine, to Societe Anonyme Andre Citroen. Indicator of engine conditions in motor vehicles. 2,896,195, 7–21–59, Cl. 340—213.

Brunicardi, Daniel, to R. T. Moloney, deceased; American National Bank and Trust Co. of Chicago, executor of said R. T. Moloney. Relay with clamp-contact assembly. 2,896,045, 7–21–59, Cl. 200—87.

Bryan, Robert C., Jr.: *See*—
Montgomery, Charles W., and Bryan. 2,895,941.

Bryan, William P.: *See*—
De Ridder, Gysbert F., and Bryan. 2,895,895.

Bryant, Austin U., to Walworth Co. Valve construction. 2,895,495, 7–21–59, Cl. 137—315.

Bryant Chucking Grinder Co.: *See*—
Lillie, Gordon E. 2,895,264.

Bryant Electric Co., The: *See*—
Taylor, Owen L. 2,896,051.

Buckeye Steel Castings Co., The: *See*—
McClurg, Carl D. 2,895,727.

Bucklew, Lewis V., to McGraw-Edison Co. Electrical conductor and process for making same. 2,896,102, 7–21–59, Cl. 310—213.

Budd, Larry J., to Pallet Devices, Inc. Means for supporting apparatus for shipment. 2,895,661, 7–21–59, Cl. 229—14.

Budde, William J. Photographic enlarger. 2,895,378, 7–21–59, Cl. 88—24.

Buergel, Georg: *See*—
Wise, Lester V., Mann, and Buergel. 2,896,612.

Bullard, E. D., Co.: *See*—
Ruggiero, Alfred J. 2,895,136.

Bulova Research and Development Laboratories, Inc.: *See*—
Goddard, George W. 2,895,293.
Wise, Lester V., Mann, and Buergel. 2,895,612.

Bungeroth, Adolf, K. G. Speith, and H. Schrewe, to Mannesmann Akt. Continuous casting plants. 2,895,190, 7–21–59, Cl. 22—57.2.

Burden, Oscar. Fish lure retriever. 2,895,250, 7–21–59, Cl. 43—17.2.

Burgardt, Lothar: *See*—
Pelz, Willibald, Burgardt, and Wahl. 2,895,825.

Burns, Harold W., to E. I. du Pont de Nemours and Co. Preparation of meta-sulfoisophthalic acid. 2,895,986, 7–21–59, Cl. 260—507.

Burns, Joseph C., and A. E. Beckers, to Allen B. Du Mont Laboratories, Inc. Storage tube. 2,896,106, 7–21–59, Cl. 313—68.

Burns, Meryl C., G. J. Giel, Jr., and R. J. Stahl, to Smith-Corona Marchant Inc. Calculating machines. 2,895,674, 7–21–59, Cl. 235—167.

Burrell, Frank C., to General Motors Corp. Liquid level indicators. 2,895,447, 7–21–59, Cl. 116—116.

Burroughs Corp.: *See*—
Brown, Laurence R. 2,896,124.
Milan-Kamski, Wojslaw J. 2,896,119.
Tompkins, Howard E. 2,896,130.

Burslaff, Karl H.: *See*—
McDonald, Robert L., and Burslaff. 2,895,775.

Buskirk, John E., to General Motors Corp. Vent cap. 2,896,007, 7–21–59, Cl. 136—177.

Butters, Robert A.: *See*—
Rehrman, Henry F., and Butters. 2,895,234.

Buttner, Arthur, to Schnellpressenfabrik Akt. Single-revolution high-speed cylinder press. 2,895,414, 7–21–59, Cl. 101—173.

Byssing, George J. Suspended ceiling. 2,895,180, 7–21–59, Cl. 20—4.

Cabin Crafts, Inc.: *See*—
Fesperman, James L., and Hackney. 2,895,326.

Cook-Waite Laboratories, Inc.: *See*—

Den Herder, Marvin J.: *See*—

Cacheris, John C., and H. A. Dropkin, to United States of America, Army. Microwave modulator. 2,896,172, 7-21-59, Cl. 332—45.

Calbest Engineering & Electronics Co.: *See*—
Fremont, Herbert, and Parker. 2,896,070.

Caldwell, John R., and J. C. Martin, to Eastman Kodak Co. Esters of 4-(4'-tolylsulfonyl)-benzoic acid and resinous compositions plasticized therewith. 2,895,842, 7-21-59, Cl. 106—179.

California Computer Products, Inc.: *See*—
Morton, Robert C. 2,896,125.

California Research Corp.: *See*—
Casagrande, Arthur, Besse, and Bigham. 2,895,301.
De Priester, Coral L. 2,896,553.
Schlatter, Maurice J., and Lum. 2,895,932.

Callear, Thomas E., and A. B. O'Brien, to Eastman Kodak Co. Photographic paper base. 2,895,827, 7-21-59, Cl. 96—85.

Callery Chemical Co.: *See*—
Carpenter, Richard A. 2,895,985.

Cameron Machine Co.: *See*—
De Gelleke, Gerrit. 2,895,553.

Campbell Pharmaceuticals, Inc.: *See*—
Fitch, Howard M. 2,895,961.

Canada, Her Majesty the Queen in The right of, as represented by the Minister of National Defense: *See*—
Moody, Norman F., and Florida. 2,896,094.

Canada Packers Ltd.: *See*—
Kairys, Stepas, Meade, Munns, and Walder. 2,895,976.

Caracristi, Virginius Z.: *See*—
Bogot, Alexander, and Caracristi. 2,895,435.

Carlile, Alfred E., to Talon, Inc. Method of making adjustable fastener track. 2,895,170, 7-21-59, Cl. 18—47.5.

Carlin, Benson, to Alcar Instruments, Inc. Transducers used in ultrasonic equipment. 2,896,099, 7-21-59, Cl. 310—26.

Carlsen, Leonard O.: *See*—
Baxter, Meriwether L., Jr., and Carlsen. 2,895,384.

Carlsen, Leonard O., to The Gleason Works. Feed mechanism for a machine for cutting gears and the like. 2,895,385, 7-21-59, Cl. 90—6.

Carlson, Frederick L.: *See*—
Facchini, Rigo R. 2,895,627.

Carlson, Paul G., to Solar Aircraft Co. Variable speed gas turbine. 2,895,295, 7-21-59, Cl. 60—39.16.

Carlyle, Robert L., and E. F. Morris, to Continental Oil Co. Magnesium containing organic compositions and method of preparing the same. 2,895,913, 7-21-59, Cl. 252—18.

Carpenter, Richard A., to Callery Chemical Co. Process for the preparation of trialkoxyborohydrides. 2,895,985, 7-21-59, Cl. 260—462.

Carruthers, Eben H. Artificial bait and method of activating bait. 2,895,249, 7-21-59, Cl. 43—4.

Casagrande, Arthur, C. P. Besse, and J. H. Bigham, to California Research Corp. Stabilization of submarine raft foundations. 2,895,301, 7-21-59, Cl. 61—46.5.

Cascadden, Lewis E.: *See*—
Casey, Walter P., Jr., Cascadden, and Lawson. 2,895,810.

Case, Everett N., to Sinclair Refining Co. Composition of matter. 2,895,974, 7-21-59, Cl. 260—413.

Casey, Walter P., Jr., L. E. Cascadden, and L. L. Lawson, to Pier Inc. Apparatus for regenerating spent water softening agents. 2,895,810, 7-21-59, Cl. 23—285.

Casius Corp. Ltd.: *See*—
Olsson, Karl G. 2,895,204.

Castruccio, Peter A., and M. G. Woolfson, to Westinghouse Electric Corp. Pulse length discriminator. 2,896,093, 7-21-59, Cl. 307—88.5.

Cavallini, Guido, and E. Massarani, to Maggioni & C. Societa per Azioni. 4-methyl-6:7-bis-β-diethylamine-ethoxy coumarin. 2,895,963, 7-21-59, Cl. 260—343.2.

Caveney, Jack E. Wiring duct. 2,896,000, 7-21-59, Cl. 174—72.

Celanese Corp. of America: *See*—
Hudgin, Donald E., and Brown. 2,895,943.
Rosen, Leonard J. 2,895,942.

Chalkley, Lyman. Photochemical process. 2,895,892, 7-21-59, Cl. 204—157.

Chamberlain Corp.: *See*—
Orner, Lawrence D. 2,895,507.
Orner, Lawrence D. 2,895,617.

Champ, Marcel. Feed device for an internal combustion engine. 2,895,462, 7-21-59, Cl. 123—133.

Champion International Co.: *See*—
Hartford, Willis G., Holt, and Jellinek. 2,896,196.

Champion, James E.: *See*—
Powell, Robert J., and Champion. 2,895,463.

Chandler, Hagan H.: *See*—
Johnston, Reece W., and Chandler. 2,895,220.

Changewood Corp.: *See*—
Clark, James D'A. 2,895,625.

Chapman, Walter R., and A. Talas, to Ramo Wooldridge Inc. Packing ring. 2,895,772, 7-21-59, Cl. 309—28.

Chapouille, Pierre F. L.: *See*—
Raymond, Francois H., Chapouille, and Martin. 2,896,082.

Chase, Carson W., and G. N. Krueger, to Miehle-Goss-Dexter, Inc. Apparatus for casting stereotype printing plates. 2,895,187, 7-21-59, Cl. 22—2.

Chatterton, Ernest E., to D. Napier & Son Ltd. Fuel injection pumps for internal combustion engines. 2,895,425, 7-21-59, Cl. 103—154.

Chemetron Corp.: *See*—
Bevariy, Henry W., Whitsen, and Yann. 2,895,271

Chemstrand Corp., The: *See*—
Huffman, William A. H. 2,895,946.

Chicago Bridge & Iron Co.: *See*—
Sadtler, Philip B. 2,895,546.

Chicago Fire Brick Co.: *See*—
Parsons, Joseph R. 2,895,544.

Chicago Metal Mfg. Co.: *See*—
Hauf, George F. 2,895,531.

Chilean Nitrate Sales Corp.: *See*—
Leonam, Alfred C. 2,895,852.

Christie, Reginald A.: *See*—
Young, Stephen M., and Christie. 2,895,281.

Christman, Fred G., to The Ohio Brass Co. Trolley shoe. 2,896,032, 7-21-59, Cl. 191—59.1.

Clesell, W. M., Mfg. Co.: *See*—
Richterkessing, Frank H. 2,895,659.

Cities Service Research and Development Co.: *See*—
Hughes, William B. 2,895,961.

Clark-Feather Mfg. Co.: *See*—
Fladung, Albert L. 2,895,643.

Clark, Francis E., to Turko Products, Inc. Apparatus and method for removing metal from the surface of a metal object. 2,895,814, 7-21-59, Cl. 41—43.

Clark, James D'A., to Changewood Corp. Storage and feed apparatus. 2,895,625, 7-21-59, Cl. 214—17.

Clark, John C., to Western Piping & Engineering Co., Inc. Cable winch. 2,895,714, 7-21-59, Cl. 254—165.

Clark, John D.: *See*—
Huddle, Edwin F., and Clark. 2,895,278.

Claudi-Magnussen, Finn: *See*—
Amon, William F., Jr., and Claudi-Magnussen. 2,895,866.

Clayton Dewandre Co. Ltd.: *See*—
Hanebeck, Emil F. 2,895,571.

Cleveland Trust Co., The: *See*—
Frohlich, Adolf H., and Harris. 2,895,169.

Clifton, Chester C., to Acorn Co. Dolly casters. 2,895,160, 7-21-59, Cl. 16—47.

Cline, Chalmer R. Steel grit and method for manufacturing same. 2,895,816, 7-21-59, Cl. 51—309.

Clowes, Garth A., to Shakespeare Products Co. Vacuum control and motor. 2,895,455, 7-21-59, Cl. 121—41.

Coats, Gilbert E. Wheel supporting and clamping apparatus. 2,895,519, 7-21-59, Cl. 144—288.

Coburn, Robert, to Flaxall Products Ltd. Apparatus for use in treating lengths of textile fabrics. 2,895,732, 7-21-59, Cl. 271—2.2.

Cogsdill, Stuart A., to Cogsdill Tool Products, Inc. Deburring tool. 2,895,356, 7-21-59, Cl. 77—73.5.

Cogsdill Tool Products, Inc.: *See*—
Cogsdill, Stuart A. 2,895,356.

Cohen, Maurice, Garment display rack. 2,895,621, 7-21-59, Cl. 211—165.

Cohen, Samuel G., to General Precision Laboratory Inc. Data correlator. 2,895,783, 7-21-59, Cl. 346—23.

Cole, Everett L. Container for collecting, storing and dispensing biological fluids. 2,895,475, 7-21-59, Cl. 128—272.

Collett, Endsley H. Spud wrench. 2,895,361, 7-21-59, Cl. 81—72.

Colt Ventilation Ltd.: *See*—
O'Hea, Ignatius J. 2,895,399.

Columbian Carbon Co.: *See*—
Heller, George L. 2,895,804.

Columbus McKinnon Chain Corp.: *See*—
Devonshire, William H., and Behnke. 2,895,290.

Comar Electric Co.: *See*—
Sauer, Hans. 2,896,132.

Combinatie N.V. En Amsterdamsche Bandoengsche & Nederlandsche Kininefabriek: *See*—
Van Kekem, Eize E. 2,895,409.

Combustion Engineering, Inc.: *See*—
Blaskowski, Henry J. 2,895,719.
Bogot, Alexander, and Caracristi. 2,895,435.

Comfy Mfg. Co.: *See*—
Schutte, Ethel M. 2,895,542.

Compagnie Francaise des Matieres Colorantes: *See*—
Bilger, Xavier, and Muller. 2,895,837.

Compagnie Generale d'Electricite: *See*—
Eyraud, Yvan. 2,895,373.

Compagnie pour la Fabrication des Compteurs et Materiel: *See*—
Bizouard, Paul, and Hardouin. 2,896,164.

Compton, Harold G. Fish cleaning glove set. 2,895,139, 7-21-59, Cl. 2—161.

Comroe, Herman. Plaster protection plate for electric connection boxes. 2,895,634, 7-21-59, Cl. 220—3.4.

Concord Supplies and Equipment Corp.: *See*—
Topf, Sam B. 2,895,400.

Cone, Charles N., to American-Marietta Co. Resin-blood glue and process of making the same. 2,895,928, 7-21-59, Cl. 260—7.

Cone, James E. Mailing and return device. 2,895,664, 7-21-59, Cl. 229—73.

Comforto, Gaetano, to Pintsch Bamag Akt. Electrolytic cell arrangement. 2,895,894, 7-21-59, Cl. 204—219.

Conquest, Victor: *See*—
Pircon, Ladislav J. 2,896,054.

Conrad, Harold L., and J. E. Vanderbur, Jr., to North American Aviation, Inc. Seal. 2,895,759, 7-21-59, Cl. 288—17.

Consolidated Mining and Smelting Co. of Canada Ltd., The: *See*—
Robinson, Joseph N., Miller, and McDonnell. 2,895,994.

Continental Can Co., Inc.: *See*—
Oldfield, Clarence E., Jr. 2,895,449.

Continental Motors Corp.: *See*—
Powell, Robert J., and Champion. 2,895,463.

Continental Oil Co.: *See*—
Carlyle, Robert L., and Morris. 2,895,913.

Continental Paper Co.: *See*—
Vines, Oscar L. 2,895,862.

Cook, Gordon H., and P. A. Merigold, to Taylor, Taylor & Hobson Ltd. Optical objectives. 2,895,379, 7-21-59, Cl. 88—57.

Cook, Robert W., to C. W. Fuelling. Pipe joint-locating device. 2,896,155, 7-21-59, Cl. 324—34.

Dunenfeld, Marvin S.: *See*—
Diepenhorst, Gerald, and Dunenfeld. 2,896,040.

Krueberger, Glenn W.: *See*—

Bristol Aircraft Ltd.: *See*—
Pollard, Harold J., and Baker. 2,895,635.

Cabin Crafts, Inc.: *See*—
Fesperman, James L., and Hackney. 2,895,826.

Cook-Waite Laboratories, Inc.: *See*—
Reznek, Solomon. 2,895,473.
Reznek, Solomon. 2,895,474.

Cooney, George R., to United States of America, Navy. Rotary joint. 2,896,173, 7-21-59, Cl. 333—7.

Copping, Geoffrey P., T. R. Myers, and G. H. Smith, to Her Majesty's Postmaster General. Segregating apparatus. 2,895,610, 7-21-59, Cl. 209—98.

Coulter, Earl E., to The Babcock & Wilcox Co. Method of washing high pressure steam. 2,895,506, 7-21-59, Cl. 183—121.

Cowley, William E., to American Saw and Tool Co. Workholder. 2,895,513, 7-21-59, Cl. 143—62.

Cox, Eunice: *See*—
Cox, George B. 2,895,363.

Cox, George B., deceased; E. Cox, administratrix of the estate of said G. B. Cox; ½ to L. J. Weaver. Tool for removing and holding a radiator cap. 2,895,363, 7-21-59, Cl. 81—125.

Coy, Homer E., to Ace Tool Engineering Co., Inc. Measuring instrument. 2,895,226, 7-21-59, Cl. 33—179.

Cragg, William D.: *See*—
Terry, Victor J., R. and P. S. Kelly, and Cragg. 2,896,148.

Crane, Hewitt D., to Radio Corp. of America. Magnetic switching systems. 2,896,194, 7-21-59, Cl. 340—174.

Crane, Samuel P., and S. D. Kent. Casing for ventilated cushions. 2,895,543, 7-21-59, Cl. 155—182.

Crescent Paper Tube Co., Inc.: *See*—
Seltman, Paul R. 2,895,511.

Crompton & Knowles Corp.: *See*—
Krukonis, Alexander C. 2,895,272.
Krukonis, Alexander C. 2,895,601.

Crosby, Ralph H., to Shell Development Co. Catalytic cracking of hydrocarbons with recycling of the stripping vapors. 2,895,907, 7-21-59, Cl. 208—150.

Crowder, John A., and E. E. Gilbert, to Allied Chemical Corp. Pyrolysis of benzene hexachloride. 2,896,998, 7-21-59, Cl. 260—650.

Cunningham, Francis V., to McGraw-Edison Co. Spark gap constructions. 2,896,116, 7-21-59, Cl. 315—36.

Curran, John J., ⅓ to Gadget-Of-The-Month Club, Inc. Water closet ball valve guide. 2,895,141, 7-21-59, Cl. 4—57.

Curtis, Roger C., to Dictaphone Corp. Power supply for dictating machine and the like. 2,896,097, 7-21-59, Cl. 307—150.

Curtiss-Wright Corp.: *See*—
Polak, Andrew. 2,895,645.

Curtler-Hammer, Inc.: *See*—
Nolden, William F., and Robbins. 2,896,034.

Dahle, Birgit: *See*—
Dahle, Orvar and B. 2,896,332.

Dahle, Orvar, to Allmänna Svenska Elektriska Aktiebolaget. Magnetic torque measuring device. 2,895,331, 7-21-59, Cl. 73—136.

Dahle, Orvar, and B. Dahle (nee Andersson), to Allmänna Svenska Elektriska Aktiebolaget. Means for measuring mechanical forces and their time derivatives. 2,895,332, 7-21-59, Cl. 73—141.

Dancy, William B., and W. N. Stanley, Jr., to International Minerals & Chemical Corp. Process for recovering potassium values from kainite. 2,895,794, 7-21-59, Cl. 23—38.

Danielsson, Paul, to Arenco Aktiebolag. Devices for positioning fish. 2,895,163, 7-21-59, Cl. 17—2.

Dassetto, Paolo, to Intonacatrice Tigre s.r.l. Spraying apparatus. 2,895,325, 7-21-59, Cl. 72—130.

Davidson, Haskell B. Infant chair attachment for a table. 2,895,536, 7-21-59, Cl. 155—78.

Davidson, Haskell B. Infant chair attachment for a table. 2,895,537, 7-21-59, Cl. 155—78.

Davis, Harold C., Jr.: *See*—
Borrup, Ronald J., and Davis. 2,896,056.

Davis, Herbert W. Beach cleaning attachment. 2,895,557, 7-21-59, Cl. 171—63.

Davis, Raymond C.: *See*—
Frei, Arthur J., and Davis. 2,895,312.

Davisson, Jacob W., and A. C. Finlay, to Chas. Pfizer & Co., Inc. Catenulin and its production. 2,895,876, 7-21-59, Cl. 167—65.

Dawson, Joseph C. Liquid dispensing apparatus. 2,895,649, 7-21-59, Cl. 222—318.

Day, Lawrence, J. Dobrick, and A. Kay, to Spitfire Tool and Machine Co., Inc. Conditioning ring holding apparatus for lapping machines. 2,895,261, 7-21-59, Cl. 51—131.

Daystrom, Inc.: *See*—
Blanco, Elias. 2,896,165.
Gilbert, Roswell W., and Miller. 2,896,166.
Harts, William W. 2,896,033.
Huber, Paul P. 2,896,167.
Nagy, John, Jr. 2,896,154.

Dayton Bait Co.: *See*—
Irwin, Harry B. 2,895,256.

De Barrie, William E. Adjustable fitting. 2,895,752, 7-21-59, Cl. 287—20.

Deere & Co.: *See*—
Sorensen, Knud B., and Lindstrom. 2,895,280.

Deering, Roland F., and H. F. Wilkinson, to Union Oil Co. of California. Differential ash scraper drive for a retort. 2,895,887, 7-21-59, Cl. 202—222.

De Falco, Anthony, ⅛ to M. M. Merriam, and ⅛ to L. J. Garofalo. Foldable play pen. 2,895,717, 7-21-59, Cl. 256—25.

De Gelleke, Gerrit, to Cameron Machine Co. Carrier for rotary knife for web-slitting machine. 2,895,553, 7-21-59, Cl. 164—70.

Dehydag, Deutsche Hydrierwerke G.m.b.H.: *See*—
Höpfner, Konrad, and Götte. 2,895,933.

Demer, Frederick M., and R. H. Harrington, to International Business Machines Corp. High speed printer. 2,895,411, 7-21-59, Cl. 101—93.

Den Herder, Marvin J.: *See*—
Brooks, John A., and Den Herder. 2,895,898.

Denss, Rolf: *See*—
Eugster, Conrad H., Denss, Hafliger, Hofer, Pfister, and Zimmermann. 2,895,965.

De Priester, Coral L., to California Research Corp. Gas-air burner with check valve. 2,895,555, 7-21-59, Cl. 166—59.

De Ridder, Gysbert F., and W. P. Bryan, to Shell Development Co. Production of carbon black oil. 2,895,893, 7-21-59, Cl. 206—40.

Desjarlais, Arthur and F. E. Life preserver. 2,895,147, 7-21-59, Cl. 9—19.

Desjarlais, Frederick E.: *See*—
Desjarlais, Arthur and F. E. 2,895,147.

De Vilbiss Co., The: *See*—
Peeps, Donald J. 2,895,421.
Peeps, Donald J. 2,895,685.
Peeps, Donald J. 2,895,686.

Devonshire, William H., and E. R. Behnke, to Columbus McKinnon Chain Corp. Chain link having identification and a replacement gauging means. 2,895,290, 7-21-59, Cl. 59—90.

Diamond Alkali Co.: *See*—
Baldridge, Joseph R. 2,895,870.
Bluestone, Henry. 2,895,869.
Entemann, Charles E. 2,895,871.
Ilenda, Frank P. 2,895,838.

Diamond, Horace W., to Morton Salt Co. Method for producing sodium chloride brine low in calcium sulfate content. 2,895,795, 7-21-59, Cl. 23—42.

Dichosa, Rosalia C. Absorbent roll holder with retaining structure and check guard. 2,895,221, 7-21-59, Cl. 32—35.

Dick, A. B., Co.: *See*—
Massie, Anthony J., Niesen, Engelstad, and Du Bois. 2,895,416.

Dickinson, Arthur H., to International Business Machines Corp. Electronic multiplying system. 2,895,672, 7-21-59, Cl. 235—160.

Dickinson, George A.: *See*—
Jellyman, Philip E., Dickinson, and Macintosh. 2,895,260.

Dictaphone Corp.: *See*—
Curtis, Roger C. 2,896,097.

Diepenhorst, Gerald, and M. S. Dunenfeld, to Ford Motor Co. Voltage regulator. 2,896,046, 7-21-59, Cl. 200—102.

Di Luco, Eugene. Ribbon inserter. 2,895,586, 7-21-59, Cl. 197—172.

Dimond, Merill R. Inflatable tents. 2,895,490 7-21-59, Cl. 135—1.

Direct Image Offset Corp.: *See*—
Schultz, Herman J. 2,895,529.

Dobrick, Joseph: *See*—
Day, Lawrence, Dobrick, and Kay. 2,895,261.

Dodwell, John M. Clutch. 2,895,577, 7-21-59, Cl. 192—41.

Dole Valve Co., The: *See*—
Bauerlein, Carl C. 2,895,642.
Drapeau, Harold B. 2,895,677.
Kraft, El Roy J. 2,895,676.

Doperalski, Eugene J., to Joy Mfg. Co. Piston assembly 2,895,774, 7-21-59, Cl. 309—38.

Dorff, Louis A.: *See*—
Bachelet, Albert E., Dorff, and Mitchell. 2,896,072.

Dormeyer Corp.: *See*—
Brashi, Raymond J. 2,895,547.
Schwaneke, Fred C. 2,896,041.

Dorsak, John W., and T. F. Van Denberg, to The Gordon Armstrong Co., Inc. Closure latch. 2,895,760, 7-21-59, Cl. 292—87.

Dortmund-Hörder Hüttenunion Akt.: *See*—
Hardera, Fritz. 2,895,820.

Dow Chemical Co., The: *See*—
Archer, Wesley L., Boser, and Rickert. 2,895,935.
Archer, Wesley L., and Montgomery. 2,895,934.
Archer, Wesley L., Montgomery, and Lang. 2,895,936.
Meuli, Lloyd J. 2,895,872.
Robinson, Harold A. 2,895,883.
Sexton, Arthur R. 2,895,989.
Stober, Kenneth E., Engwis, and Dwight. 2,895,939.

Downing, John: *See*—
Brown, Russell J., and Downing. 2,895,790.

Drake, Charles E., to The Patterson-Kelley Co., Inc. Heat exchange conduit. 2,895,508, 7-21-59, Cl. 138—38.

Drapeau, Harold B., to The Dole Valve Co. Pressure compensated waterline thermostat. 2,895,677, 7-21-59, Cl. 236—34.

Dresser Industries, Inc.: *See*—
Erath, Louis W. 2,896,171.
Smith, Robert W., and Vaughan. 2,895,569.

Dropkin, Herbert A.: *See*—
Cacheris, John C., and Dropkin. 2,896,172.

Drtina, Otto V. Synthetic fiber spinning machine drive. 2,895,284, 7-21-59, Cl. 57—77.

Drus, Walter S., and B. M. Roschke, to Zenith Radio Corp. Secrecy communication system. 2,896,071, 7-21-59, Cl. 250—6.

Dry Screen Process, Inc.: *See*—
Reed, James H., III. 2,895,412.

Dubitsky, Rose. Measuring dispenser attachment. 2,895,641, 7-21-59, Cl. 222—48.

Du Bois, Edgar H.: *See*—
Massie, Anthony J., Niesen, Engelstad, and Du Bois. 2,895,416.

Duffy, John R., G. W. Holz, and A. W. Lillienberg, to Lindberg Engineering Co. Electric heating furnace and method of heating. 2,896,004, 7-21-59, Cl. 13—22.

Dulberg, Murray. Holder with means for ejecting contents. 2,895,607, 7-21-59, Cl. 206—56.

Dumbolton, Carl P. Door construction. 2,895,183, 7-21-59, Cl. 20—19.

Du Mont, Allen B., Laboratories, Inc.: *See*—
Burns, Joseph, and Beckers. 2,896,106.

Fisons Pest Control Ltd.: *See*—
Hartley, Gilbert S. 2,895,809.

Fry, Horace P., Jr., to American Viscose Corp. Radius

Dunenfeld, Marvin S.: *See*—
Diepenhorst, Gerald, and Dunenfeld. 2,896,046.
Dunlap, Henry L., to Evans Products Co. Freight securing means. 2,895,430, 7-21-59, Cl. 105—369.
Du Pont de Nemours, E. I., and Co.: *See*—
Brinker, Keith C., and Robinson. 2,895,948.
Burns, Harold W. 2,895,986.
Luckenbaugh, Raymond W. 2,895,817.
Dvorak, Howard A., to Western Electric Co., Inc. Device for spraying fluids. 2,895,682, 7-21-59, Cl. 239—332.
Dwight, Theodore W., Jr.: *See*—
Stober, Kenneth E., Engwis, and Dwight. 2,895,939.
Dwyer, Russell A. Self-aligning bearing. 2,895,769, 7-21-59, Cl. 308—72.
Dzus, William. Wrist guard or protector. 2,895,658, 7-21-59, Cl. 224—4.
Eastman Kodak Co.: *See*—
Brokaw, George Y., and Lyman. 2,895,879.
Caldwell, John R., and Martin. 2,895,842.
Callear, Thomas E., and O'Brien. 2,895,827.
Glandon, Adrian E. 2,896,121.
Heseltine, Donald W., and Brooker. 2,895,955.
Jeffreys, Roy A., and Knott. 2,895,950.
Lehman, Robert W. 2,895,878.
McCall, Marvin A., and McConnell. 2,895,984.
Pollock, John S., and Amann. 2,895,396.
Rogers, William J. 2,895,841.
Salminen, Ilmari F., Barr, and Loria. 2,895,826.
Straley, James M., and Hedberg. 2,895,967.
Wittel, Otto. 2,895,375.
Wright, Howard N., Jr., and Hagemeyer. 2,895,996.
Eatinger, Cloyde B.: *See*—
Gallaro, Donald M., and Eatinger. 2,896,190.
Eaton, Milton, to Shawingan Chemicals Ltd. Apparatus for controlling slipping of continuous electrodes. 2,896,003, 7-21-59, Cl. 13—14.
Edelman, Abraham. Door operating mechanism. 2,895,728, 7-21-59, Cl. 268—47.
Edelstein, Albert L.: *See*—
Mahon, Thomas J., and Edelstein. 2,895,650.
Mahon, Thomas J., and Edelstein. 2,895,651.
Edwards, George W., and R. J. Sevin. Grinding mills. 2,895,680, 7-21-59, Cl. 241—23.
Edwards, Samuel H. Valve structure. 2,895,493, 7-21-59, Cl. 137—78.
Edwards, William R.: *See*—
Boynton, Harry G., and Edwards. 2,896,001.
Ehmann, Leslie G., to Electric Steel Foundry Co. Sleeve ferrule. 2,895,195, 7-21-59, Cl. 24—123.
Eisele, Chester W. Depth and diameter gage. 2,895,225, 7-21-59, Cl. 33—174.
Ekstrom-Carlson & Co.: *See*—
Mann, Theodore C. 2,895,386.
Electric Steel Foundry Co.: *See*—
Ehmann, Leslie G. 2,895,195.
Larsen, Paul V. 2,895,239.
Electric Storage Battery Co., The: *See*—
Lockwood, Lee J. 2,896,067.
Matheson, James N. 2,895,473.
Simpson, Jack N., and Boyer. 2,895,137.
Electrolux Corp.: *See*—
Anderson, Emil, and Kowalewski. 2,895,551.
Electro-Voice, Inc.: *See*—
Wiggins, Alpha M. 2,896,189.
Elgin Sweeper Co.: *See*—
Link, Charles T., Jr. 2,895,151.
Link, Charles T., Jr., and Gooden. 2,895,150.
Elliot Enterprises, Inc.: *See*—
Mallinckrodt, George E. 2,895,457.
Ellson, Allan H., to National Research Development Corp. Electric pulse translation stages. 2,896,079, 7-21-59, Cl. 250—27.
Elten, George A. H., ½ to Leda Chemicals Ltd. Methods of dispersing fogs. 2,895,679, 7-21-59, Cl. 239—2.
Eltro G.m.b.H. & Co.: *See*—
Wesch, Ludwig. 2,896,089.
Emerson, Oliver H., and E. M. Bickoff, to United States of America, Agriculture. Purification of coumestrol. 2,895,964, 7-21-59, Cl. 260—343.2.
Ende, Don. Miter jig attachment for table saws. 2,895,515, 7-21-59, Cl. 143—169.
Engel, Wolfgang, and F. Höner, to Phoenix-Nähmaschinen A.G. Baer & Rempel. Sewing machine. 2,895,441, 7-21-59, Cl. 112—248.
Engelhard Industries, Inc.: *See*—
Anderson, William T., Jr. 2,896,107.
Gern, Ernst D. 2,896,396.
Engelstad, George E.: *See*—
Massie, Anthony J., Niesen, Engelstad, and Du Bois. 2,895,416.
Engwis, Clifford H.: *See*—
Stober, Kenneth E., Engwis, and Dwight. 2,895,939.
Entemann, Charles E., to Diamond Alkali Co. Polychlorobenzhydrols. 2,895,871, 7-21-59, Cl. 167—30.
Epco, Inc.: *See*—
Young, Frink M. 2,896,031.
Erath, Louis W., to Dresser Industries, Inc. Oscillator. 2,896,171, 7-21-59, Cl. 331—135.
Erdmann, Hans, to Waldes Kohinoor, Inc. Means for assembling open retaining rings on shafts, pins, or the like. 2,895,214, 7-21-59, Cl. 29—229.
Erdmann, Hans, to Waldes Kohinoor, Inc. Dispensers for open retaining rings. 2,895,616, 7-21-59, Cl. 211—59.
Ericsson Telephones Ltd.: *See*—
Williams, David J., and Westley. 2,896,118.
Erisman, Ralph J., to International Harvester Co. Switching means for strain measuring apparatus. 2,895,330, 7-21-59, Cl. 73—88.5.
Ernsberger, Glenn W.: *See*—
Lowry, Lewis R., Jr., and Ernsberger. 2,896,140.
Esso Research and Engineering Co.: *See*—
Baldwin, Francis P., and Robison. 2,895,837.
Blanding, Forrest H. 2,895,901.
Boynton, Harry G., and Edwards. 2,896,001.
Jones, William H., and Martin. 2,895,904.
Kimberlin, Charles N., Jr. 2,895,905.
Peet, Nick P. 2,895,902.
Ready, Harold R., Boyle, and Lynch. 2,895,973.
Robbins, Leroy V., Jr., and Newchurch. 2,895,900.
Robison, Samuel B., and Baldwin. 2,895,850.
Segraves, William B., and Hilliard. 2,895,979.
Weingerber, George A., and Smith. 2,895,815.
Estes, Nelson N.: *See*—
Reed, Herbert B., Jr., and Estes. 2,896,095.
Eternit Soc. p. Az.: *See*—
Fourmanoit, Robert. 2,895,867.
Ethyl Corp.: *See*—
Glassbrook, Clarence I., and Parks. 2,896,158.
Montgomery, Charles W., and Bryan. 2,895,941.
Eugster, Conrad H., R. Denss, F. Hafliger, B. Hofer, R. Pfister, and M. Zimmermann, to Geigy Chemical Corp. Process for the production of ammonium compounds. 2,895,965, 7-21-59, Cl. 260—347.7.
Evans, Lyon D., to Reynolds Metals Co. Window structure. 2,895,182, 7-21-59, Cl. 20—11.
Evans Products Co.: *See*—
Dunlap, Henry L. 2,895,430.
Ewing, Lynn H.: *See*—
Nelson, Permil N. 2,895,499.
Eyraud, Yvan, to Compagnie Generale d'Electricite. Device for recording variations in the diameter of substantially cylindrical objects. 2,895,373, 7-21-59, Cl. 33—14.
Facchini, Rigo R., ⅓ to F. L. Carlson. Boat-loading, transporting, and launching trailer. 2,895,627, 7-21-59, Cl. 214—84.
Fairbanks, Gordon J., D. A. Potter, and J. B. Mellett, to Stewart-Warner Corp. Coolant and personnel heating apparatus. 2,895,678, 7-21-59, Cl. 237—12.3.
Farbenfabriken Bayer Akt.: *See*—
Schneider, Rudolf. 2,895,886.
Farrell, Sherman R., to Applied Radiation Corp. Charged particle beam diffuser. 2,896,103, 7-21-59, Cl. 313—7.
Faunnaugh, Ralph. Galley slide receiver. 2,895,595, 7-21-59, Cl. 196—61.
Fazendin, Donald F.: *See*—
Beck, William J., and Fazendin. 2,895,247.
Feder, Herbert S., to Bell Telephone Laboratories, Inc. Magnetic frequency generator. 2,896,090, 7-21-59, Cl. 307—88.
Federal-Mogul-Bower Bearings, Inc.: *See*—
Tickmor, William C. 2,895,509.
Federighi, George J. Drying agent dispenser for use with a dishwashing machine. 2,895,646, 7-21-59, Cl. 222—181.
Feldman, Abraham G., to Storkline Furniture Corp. Crib spring construction. 2,895,144, 7-21-59, Cl. 5—207.
Feldman, Edward D.: *See*—
Feo, Edmond G., Feldman, and Goetz. 2,895,829.
Fentiman, Arthur E., to F. Fentiman & Sons, Ltd. Joint. 2,895,753, 7-21-59, Cl. 287—20.3.
Fentiman, F., & Sons, Ltd.: *See*—
Fentiman, Arthur E. 2,895,753.
Feo, Edmond G., E. D. Feldman, and H. M. Goetz, to Atlas Laboratories, Inc. Bee food composition. 2,895,829, 7-21-59, Cl. 99—2.
Ferdinand, Irwin J., and M. E. Handler, to S. A. Hirsh Mfg. Co. Shelf molding and sign. 2,895,241, 7-21-59, Cl. 40—16.
Fesperman, James L., and R. F. Hackney, to Cabin Crafts, Inc. Rug wear testing machine. 2,895,326, 7-21-59, Cl. 73—7.
Feuge, Reuben O.: *See*—
Ault, Waldo C., and Feuge. 2,895,966.
Fichtel & Sachs A.G.: *See*—
Schwerdhofer, Hans J. 2,895,576.
Fiedler, William S., to Bjorksten Research Laboratories, Inc. Method for preparing a catalytic metal foam and use thereof. 2,895,819, 7-21-59, Cl. 75—20.
Field, Lester M.: *See*—
Birdsall, Charles K., and Field. 2,896,117.
Fields, Chris J. Perspective drafting machine. 2,895,223, 7-21-59, Cl. 33—77.
Filbey, Emery T.: *See*—
Pircon, Ladislav J. 2,896,054.
Filsinger, Jamieson A., and P. N. Braun, to Textile Marking Machine Co., Inc. Machine for affixing identification tags. 2,895,388, 7-21-59, Cl. 93—88.
Findlay, Robert A., to Phillips Petroleum Co. Separation by crystallization. 2,895,835, 7-21-59, Cl. 99—190.
Finlay, Alexander C.: *See*—
Davisson, Jacob W., and Finlay. 2,895,876.
Firma Eisenwerke Gelsenkirchen Akt.: *See*—
Wittmoser, Adalbert. 2,895,188.
Firma Klockner-Georgsmarienwerke Akt.: *See*—
Reuter, Gottfried, and Kordes. 2,895,175.
Firma Rhein-Chemie G.m.b.H.: *See*—
Kern, Rudolf, Scheurer, Zorn, and Kruppke. 2,895,914.
Fischer, Rudolph F., to Shell Development Co. Epoxidized acetals and polymers thereof. 2,895,962, 7-21-59, Cl. 260—340.7.
Fischer, Rudolph F., and T. F. Mika, to Shell Development Co. Aldehyde polyerythritol polymers. 2,895,945, 7-21-59, Cl. 260—67.
Fisher, Arthur F. Scraper. 2,895,217, 7-21-59, Cl. 30—109.
Fisher Governor Co.: *See*—
Irwin, Donald W. 2,895,501.
Fishtahler, Vernon F., to General Motors Corp. Vibration damping means. 2,895,315, 7-21-59, Cl. 64—27.

Genisco, Inc.: *See*—
Grewe, Theodor, to International Standard Electric Corp.

Fisons Pest Control Ltd. : *See*—
Hartley, Gilbert S. 2,895,808.
Fitch, Frederick T., to W. R. Grace & Co. Process for alkyltrifluorosilanes. 2,895,977, 7–21–59, Cl. 260—448.2.
Fitch, Howard M., to Campbell Pharmaceuticals, Inc. Aryl esters of acid phosphorus compounds. 2,895,981, 7–21–59, Cl. 260—461.
Fixel, Anna. Brassiere attachment. 2,895,490, 7–21–59, Cl. 128—453.
Fjellstedt, Thorsten A., to McGraw-Edison Co. Bus support. 2,896,012, 7–21–59, Cl. 174—171.
Fladung, Albert L., to Clark-Feather Mfg. Co. Oil can spouts. 2,895,643, 7–21–59, Cl. 222—90.
Flaxall Products Ltd. : *See*—
Coburn, Robert. 2,895,732.
Flick, Ralph J., to Ford Motor Co. Air conditioner evaporator unit. 2,895,313, 7–21–59, Cl. 62—426.
Florida, Charles D. : *See*—
Moody, Norman F., and Florida. 2,896,094.
Food Machinery and Chemical Corp. : *See*—
Mumma, Harold J. 2,895,274.
Foote, Harold B., and R. M. Manning, to General Electric Co. Electrical switch blade assembly. 2,896,053, 7–21–59, Cl. 200—166.
Foraker, David K. Steering means for outboard motors. 2,895,445, 7–21–59, Cl. 115—18.
Ford, Barton H., to Ford Grain Door Co. Freight car bulkhead. 2,895,431, 7–21–59, Cl. 105—369.
Ford Grain Door Co. : *See*—
Ford, Barton H. 2,895,431.
Ford Motor Co. : *See*—
Diepenhorst, Gerald, and Dunenfeld. 2,896,046.
Flick, Ralph J. 2,895,313.
Janis, Zbigniew J. 2,895,298.
Jensen, William G. 2,896,040.
Risk, Thomas H. 2,895,767.
Forman, James R. : *See*—
Price, Edgar E. 2,895,374.
Forsyth, George H., G. Wood, and J. Stevens, to Vickers-Armstrongs (Engineers) Ltd. Pipe lines. 2,895,512, 7–21–59, Cl. 138—87.
Foster Grant Co., Inc. : *See*—
Bloch, Jack. 2,895,522.
Foster, John R., to T.M.M. (Research) Ltd. Textile combing machines. 2,895,177, 7–21–59, Cl. 19—120.
Foster Wheeler Corp. : *See*—
Bell, Alan. 2,895,492.
Tate, George E. 2,895,456.
Fourmanoit, Robert, to Eternit Soc. p. Ax. Method of and apparatus for removing from a mandrel, by means of compressed air, fibrocement tubes produced with tube-making machines and the like. 2,896,867, 7–21–59, Cl. 162—118.
Foust, Eugene A., to Perfect Circle Corp. Cleaning and reeling mechanism for strip stock. 2,895,489, 7–21–59, Cl. 134—57.
Fox, Arthur G., to Bell Telephone Laboratories, Inc. Non-reciprocal wave transmission. 2,896,174, 7–21–59, Cl. 333—10.
Fox, Benjamin, deceased; E. E. Fox, executrix. Measuring system. 2,896,161, 7–21–59, Cl. 324—79.
Fox, Bessie E. : *See*—
Fox, Benjamin. 2,896,161.
Fragale, Eleanor M. Clothes hamper. 2,895,782, 7–21–59, Cl. 312—290.
Fram Corp. : *See*—
Hockett, Carl G. 2,895,174.
Frank, Clayton M. : *See*—
Agne, Robert W., and Frank. 2,895,197.
Franks, Norvin H., to Union Asbestos & Rubber Co. Framing connector. 2,895,186, 7–21–59, Cl. 20—95.
Frantz, Frederick H., to General Aniline & Film Corp. Process for automatic disposal of waste ammonia developer in dry printing and developing machines. 2,895,824, 7–21–59, Cl. 96—48.
Frazier, Donald, to Midland Machine Corp. Storage rack. 2,895,619, 7–21–59, Cl. 211—147.
Fredriksson, Per S. E., to Aktiebolaget Svenska Metallverken. Drawbenches. 2,895,597, 7–21–59, Cl. 205—3.
Freeman Chemical Corp. : *See*—
Freeman, Stephen E. 2,895,603.
Freeman, Stephen E., to Freeman Chemical Corp. Use of cellular material in packaging articles. 2,895,603, 7–21–59, Cl. 206—46.
Frei, Arthur J., and R. C. Davis, to General Motors Corp. Ice cube tray. 2,896,312, 7–21–59, Cl. 62—365.
Frellsen, Carlton E., to Joy Mfg. Co. Hydraulic conveyor swing and take-up. 2,895,591, 7–21–59, Cl. 198—109.
Fremont, Herbert, and H. N. Parker, to Calbest Engineering & Electronics Co. Radio and television survey system. 2,896,070, 7–21–59, Cl. 250—2.
Fricker, Rolf : *See*—
Oblinger, Helmut, and Fricker. 2,895,938.
Fried, Josef, and J. E. Herz, to Olin Mathieson Chemical Corp. Synthesis of steroids. 2,895,954, 7–21–59, Cl. 260—239.55.
Fried, Josef, and J. E. Herz, to Olin Mathieson Chemical Corp. Method of making 21-Fδ1,4 pregnadiene compounds. 2,895,972, 7–21–59, Cl. 260—397.45.
Friedlander, William E., to Minnesota Mining and Mfg. Co. Dioxo-thiadiazolidines and process therefor. 2,895,958, 7–21–59, Cl. 260—301.
Fritts, Robert W., and S. Karrer, to Minnesota Mining and Mfg. Co. Thermoelectric heat pump. 2,896,005, 7–21–59, Cl. 136—5.
Frohlich, Adolf H., and E. J. Harris, to The Cleveland Trust Co., trustee. Sectional vulcanizing apparatus. 2,895,169, 7–21–59, Cl. 18—45.
Fry, Horace P., Jr., to American Viscose Corp. Radius bar linkage. 2,895,165, 7–21–59, Cl. 18—15.
Fuge, Harry B., to The Singer Mfg. Co. Motor controls for winding machines. 2,896,140, 7–21–59, Cl. 318—6.
Fuelling, Charles W. : *See*—
Cook, Robert W. 2,896,155.
Fuller, Calvin S., and G. L. Pearson, to Bell Telephone Laboratories, Inc. Lightning surge protecting apparatus. 2,896,128, 7–21–59, Cl. 317—61.
Gadget-Of-The-Month Club, Inc. : *See*—
Curran, John J. 2,895,141.
Gair, Albert W., to Thompson Products, Inc. Self-positioning tie rod clamp and turnbuckle assembly. 2,895,750, 7–21–59, Cl. 287—62.
Gallaro, Donald M., and C. B. Batinger, to Hoda Corp. Audible flashing safety turn signals for vehicles. 2,896,190, 7–21–59, Cl. 340—75.
Gardella, Costantino. Thread cheese-ejecting device for suspended centrifugal spinning cans. 2,895,282, 7–21–59, Cl. 57—34.
Gardiner, John A., to Power Jets (Research and Development) Ltd. Combustion apparatus for burning ash-forming liquid fuel. 2,895,297, 7–21–59, Cl. 60—39.74.
Gardner, Adryl W. Segmented roll. 2,896,390, 7–21–59, Cl. 94—50.
Gardner, Willis W., and J. T. McKean, to Allis Chalmers Mfg. Co. Automatic trust device for hydrogen seal. 2,895,750, 7–21–59, Cl. 286—9.
Garofalo, Lawrence J. : *See*—
De Falco, Anthony. 2,895,717.
Garratt, Leslie : *See*—
Bentley, Alfred M., Garratt, and Smith. 2,895,205.
Gary, Wright W. : *See*—
Sawyer, Edgar W., Jr., and Gary. 2,895,873.
Gauggel, Herman J., Jr. : *See*—
Payne, Andrew H., Jr., and Gauggel. 2,895,328.
Gaunt, Thomas N., to Switzer Brothers, Inc. Fluorescent composition. 2,895,917, 7–21–59, Cl. 252—301.2.
Gavazzi, Manlio. Circular machine for the pressing of metallic sheet elements. 2,895,443, 7–21–59, Cl. 113—1.
Gaylord, John A., to H. Koch & Sons. Snap fastener for straps and the like. 2,895,200, 7–21–59, Cl. 24—230.
Gebhart, Leonard J. Boat loader for automobiles. 2,895,628, 7–21–59, Cl. 214—450.
Geigy Chemical Corp. : *See*—
Eugster, Conrad H., Denss, Hafliger, Hofer, Pfister, and Zimmermann. 2,895,965.
General Aniline & Film Corp. : *See*—
Amon, William F., Jr., and Claudi-Magnussen. 2,895,866.
Frantz, Frederick H. 2,895,824.
Hurlbut, Gordon K. 2,895,897.
Randall, David I., and Renfrew. 2,895,991.
General Electric Co. : *See*—
Axelson, John S. 2,896,100.
Bakke, Hans A., and Treitel. 2,895,687.
Borie, Henry P., Jr. 2,895,564.
Foote, Harold B., and Manning. 2,896,053.
Horvay, Julius B. 2,895,780.
Howell, Edward K. 2,896,169.
Kamide, Harris P. 2,895,828.
Latter, Bruce B. 2,895,806.
Latter, Bruce B., and Bodong. 2,895,781.
Miller, Alexander A. 2,895,891.
Mollenberg, Leroy. 2,896,144.
Nonomaque, Clyde J. 2,895,807.
Rocha, Henrique A. F. 2,895,784.
Seeley, Harold T. 2,896,127.
General Fire Extinguisher Corp. : *See*—
Huthsing, Charles K., and Billings. 2,895,556.
General Foods Corp. : *See*—
Stagmeier, Arthur F. 2,895,656.
General Laboratory Associates, Inc. : *See*—
McNulty, John V. 2,896,123.
General Motors Corp. : *See*—
Badura, Edmund S. 2,895,161.
Burrell, Frank C. 2,895,447.
Buskirk, John E. 2,896,007.
Fishtahler, Vernon F. 2,895,315.
Frei, Arthur J., and Davis. 2,895,312.
Groves, Ronald C. 2,895,461.
Himka, John, and Walther. 2,895,764.
Jackson, George W. 2,895,743.
Jackson, George W. 2,896,744.
Jenkins, Richard L. 2,896,146.
Kearney, William R. 2,896,188.
Lamont, Adam S. 2,895,575.
Long, George B. 2,895,320.
McClure, Robert. 2,895,345.
Ortman, Curtis D. 2,895,840.
Rappaport, George, Szaruga, and Wall. 2,895,926.
Wentworth, Joseph T. 2,895,292.
Wernig, James H. 2,895,763.
Winchell, Frank J. 2,895,578.
General Precision Laboratory Inc. : *See*—
Berger, France B. 2,895,205.
Berger, France B., and Newsom. 2,896,162.
Cohen, Samuel G. 2,895,783.
Newsom, Earl G., and Huntington. 2,896,074.
General Railway Signal Co. : *See*—
Auer, John H., Jr., Wilcox, and Hoff. 2,896,068.
Hoff, Marcian E., Jr. 2,896,126.
Wight, Leland W. 2,896,069.
General Telephone Laboratories, Inc. : *See*—
Bakker, Pier. 2,896,023.
McCreary, Harold J. 2,896,044.
Wood, Fredric E. 2,896,048.
General Tire and Rubber Co., The : *See*—
Neher, Eldom P., and Myers. 2,895,215.
Sabo, Stephen C. 2,895,168.
Du Mont, Allen B., Laboratories, Inc. : *See*—
Burns, Joseph, and Beckers. 2,896,106.

Hausserman, E. F., Co., The : *See*—
Hillard, George O., Jr. : *See*—

ing means for strain measuring apparatus. 2,895,330, 7-21-59, Cl. 73—88.5.

Irwin, Donald W. 2,895,901.

Lichtahler, Vernon F., to General Motors Corp. Vibration damping means. 2,895,315, 7-21-59, Cl. 64—27.

Genisco, Inc.: *See*—
Bekey, Andrew. 2,896,143.

George, Henri J. C., to Quartz & Silice S.A. Method of incorporating titanium into selectively transparent silica glass. 2,895,839, 7-21-59, Cl. 106—52.

Gerber, Harry. Swimming pool alarm. 2,896,038, 7-21-59, Cl. 200—61.2.

Gerfen, Charles O.: *See*—
Ruhoff, John R., Martin, and Gerfen. 2,895,792.
Ruhoff, John R., Martin, and Gerfen. 2,895,793.

Gerhart, Howard L., to Pittsburgh Plate Glass Co. Catalyst compositions. 2,895,919, 7-21-59, Cl. 252—430.

Gern, Ernst D., to Engelhard Industries, Inc. Conveyor device for photo-printing material in photo-printing machines. Ernst D. Gern. 2,895,395, 7-21-59, Cl. 95—77.5.

Gesellschaft fur Linde's Eismaschinen Akt.: *See*—
Wucherer, Johannes, Linde, and Jakob. 2,895,304.

Gettig, Joseph H., to Sutton Engineering Co. Roller leveller covered by endless resilient belt. 2,895,532, 7-21-59, Cl. 153—104.

Giddings, Linwood P.: *See*—
Mayberry, Joe L., and Giddings. 2,895,321.

Giel, George J., Jr.: *See*—
Burns, Meryl C., Giel, and Stahl. 2,895,674.

Giepen, Hubert M., to R. T. Moloney, deceased, American National Bank and Trust Co. of Chicago, executor. Measuring and dispensing valve. 2,895,653, 7-21-59, Cl. 222—452.

Gilbert, Everett E.: *See*—
Crowder, John A. and Gilbert. 2,895,898.

Gilbert, Roswell W., and J. H. Miller, to Daystrom, Inc. Current measuring system. 2,896,166, 7-21-59, Cl. 324—140.

Gilchrist, Edgar S.: *See*—
Robert, Charles G., Gilchrist, and Lockery. 2,895,502.

Gille, Willis H., to Minneapolis-Honeywell Regulator Co. Navigation system. 2,896,204, 7-21-59, Cl. 343—16.

Girdwood, Arthur J., and E. W. Shiffett, to Leland Electric Canada Ltd. External rotor motor fan assembly. 2,895,666, 7-21-59, Cl. 230—117.

Glandon, Adrian E., to Eastman Kodak Co. Lamp burnout detector. 2,896,121, 7-21-59, Cl. 315—119.

Glassbrook, Clarence L., and T. D. Parks, to Ethyl Corp. Method of analyzing benzene hexachloride and apparatus therefor. 2,896,158, 7-21-59, Cl. 324—61.

Glassie, Don C.: *See*—
Price, Edgar E. 2,895,374.

Gleason Works, The: *See*—
Baxter, Meriwether L., Jr., and Carlsen. 2,895,384.
Carlsen, Leonard O. 2,895,385.

Glenny, Clarence S., to The Washburn Co. Spit basket. 2,895,408, 7-21-59, Cl. 99—427.

Globe Co., The: *See*—
Hill, John W. 2,895,573.

Glowacki, Matthew P.: *See*—
Urbain, Leon F., and Glowacki. 2,895,704.

Goddard, George W., to Bulova Research and Development Laboratories, Inc. Automatic aerial photography system. 2,895,393, 7-21-59, Cl. 95—12.5.

Goddu, Robert F., to Hercules Powder Co. Preparation of oxetane polymers. 2,895,922, 7-21-59, Cl. 260—2.

Goebel, Gerhard. Temperature regulator for room heaters. 2,895,675, 7-21-59, Cl. 236—9.

Goettl, Albert B., to International Metal Products Co. Air directing louver device. 2,895,401, 7-21-59, Cl. 98—110.

Goetz, Harry M.: *See*—
Fee, Edmond G., Feldman, and Goetz. 2,895,829.

Gold, Harold, and B. M. Straight. Variable displacement fluid pump or motor. 2,895,422, 7-21-59, Cl. 103—120.

Golde, Hans T. Apparatus for slidable closures. 2,895,755, 7-21-59, Cl. 287—56.

Goldmann, Kurt: *See*—
Lewis, Frank M., Keenan, and Goldmann. 2,895,291.

Gomersall, John E., to McGraw-Edison Co. Waffle baker construction. 2,895,407, 7-21-59, Cl. 99—379.

Gooden, John S.: *See*—
Link, Charles T., Jr., and Gooden. 2,895,150.

Goodman, Charles J., and C. R. Walker, to American Telephone and Telegraph Co. Multiple transmitter control circuit. 2,896,020, 7-21-59, Cl. 178—17.5.

Goodman Mfg. Co.: *See*—
Smith, Herman E. 2,895,594.

Goodrich, B. F., Company, The: *See*—
Hendry, Charles M. 2,895,887.
Tucker, Harold. 2,895,940.

Gorey, Archie H., to Graflex, Inc. Shutter for photographic cameras. 2,895,391, 7-21-59, Cl. 95—11.5.

Götte, Ernst: *See*—
Höpfner, Konrad, and Götte. 2,895,933.

Grace, W. R., & Co.: *See*—
Fitch, Frederick T. 2,895,977.

Graflex, Inc.: *See*—
Gorey, Archie H. 2,895,391.

Gramacy, William. Loose leaf binder. 2,895,484, 7-21-59, Cl. 129—13.

Graniteville Co.: *See*—
Sanders, Grady H. 2,895,209.

Grant, Earl W., to Statham Instruments, Inc. Temperature control device. 2,896,057, 7-21-59, Cl. 219—20.

Graving, Robert S., and L. W. Lund. Mounting brackets for gutters. 2,895,694, 7-21-59, Cl. 248—48.1.

Gray, Geoffrey T.: *See*—
Moring, Walter G., Jr., and Gray. 2,895,337.

Greenlee Bros. & Co.: *See*—
Hawkinson, Donald E., Kolnes, and Jannenga. 2,895,354.

Gregory Industries, Inc.: *See*—
Murdock, Robert W., and Singleton. 2,896,065.

Grewe, Theodor, to International Standard Electric Corp. Oscillator circuit for transistors. 2,896,170, 7-21-59, Cl. 331—117.

Griffiths, Edgar J. Filter for sampling fluids. 2,895,613, 7-21-59, Cl. 210—130.

Grinstead, Carl E., to Photocon Research Products. Pressure indicator. 2,896,138, 7-21-59, Cl. 317—246.

Groves, Ronald C., to General Motors Corp. Fuel injection system. 2,895,461, 7-21-59, Cl. 123—119.

Gruber, David, and W. D. Winkler, said Winkler assignor to said Gruber. Telephone clock. 2,896,549, 7-21-59, Cl. 161—19.

Guggi, Walter B., to Radio Corp. of America. Retrace driven deflection circuit for cathode ray tubes. 2,896,115, 7-21-59, Cl. 315—27.

Guldner, Harry, and G. Tippmann, to VEB Buchungsmaschinenwerk Karl-Marx-Stadt. Line spacing devices for business machines. 2,895,585, 7-21-59, Cl. 197—114.

Gulf Oil Corp.: *See*—
Peck, Carl M. 2,895,912.

Habig, Harry R. Image motion compensating film control apparatus. 2,895,392, 7-21-59, Cl. 95—12.5.

Hackney, Robert F.: *See*—
Fesperman, James L., and Hackney. 2,895,326.

Haendler, Helmut M.: *See*—
Sheldon, Zachary D., and Haendler. 2,895,806.

Hafliger, Franz: *See*—
Eugster, Conrad H., Denes, Hafliger, Hofer, Pfister, and Zimmermann. 2,895,965.

Hagar, Monty M.: *See*—
Myers, John C., and Hagar. 2,895,365.

Hagemeyer, Hugh J., Jr.: *See*—
Wright, Howard N., Jr., and Hagemeyer. 2,895,996.

Hagopian, Jacob J. Light responsive amusement device. 2,896,083, 7-21-59, Cl. 250—78.

Haines, Theron L. File record signalling device. 2,895,448, 7-21-59, Cl. 116—135.

Hair, Richard H.: *See*—
Tennant, John E., and Hair. 2,895,464.

Hait, Hyman J. Medicament display and reference case or similar article. 2,895,602, 7-21-59, Cl. 206—45.31.

Hales, Kenneth R., to Philco Corp. Semiconductor units. 2,896,136, 7-21-59, Cl. 317—234.

Hall, Harry H., to American Viscose Corp. Process of producing all skin rayon. 2,895,787, 7-21-59, Cl. 18—54.

Hall, Lester W. Hoist. 2,895,587, 7-21-59, Cl. 187—9.

Hallard, Frank L. Colostomy belts and the like. 2,895,476, 7-21-59, Cl. 128—283.

Haller, Clayton L., to Westinghouse Electric Corp. Control mechanism. 2,896,032, 7-21-59, Cl. 200—138.

Hamada, Twagie, to Wynn Pharmacal Corp. Quinidine gluconate sustained medication tablet. 2,895,881, 7-21-59, Cl. 167—82.

Hamann, Harry L., to Production Metal Stamping Co. Sheet metal slide fastener for threadless studs. 2,895,370, 7-21-59, Cl. 85—36.

Handler, Milton E.: *See*—
Ferdinand, Irwin J., and Handler. 2,895,241.

Hanebeck, Emil F. G., to Clayton Dewandre Co. Ltd. Exhaust braking apparatus for motor vehicles. 2,895,571, 7-21-59, Cl. 188—99.

Hansen, Siegfried. Feedback circuits for storage tubes. 2,896,110, 7-21-59, Cl. 315—12.

Hanson, Oliver M. Pleat forming curtain hanger. 2,895,194, 7-21-59, Cl. 24—84.

Harders, Fritz, to Dortmund-Hörder Hüttenunion Akt. Methods of reducing iron ores and carburizing under vacuum. 2,895,820, 7-21-59, Cl. 75—48.

Hardinge Brothers, Inc.: *See*—
Parsons, Hubert J., and Peterson. 2,895,740.

Hardman, H. V., Co., Inc.: *See*—
Pande, Henry. 2,895,644.

Härdmark, Ragnar M., to Svenska Aeroplan Aktiebolaget. Hermetically sealed electric cable connector. 2,896,186, 7-21-59, Cl. 339—100.

Hardouin, Yvane: *See*—
Bizouard, Paul, and Hardouin. 2,896,164.

Hare, George H., and D. R. Margetts, to Beckman Instruments, Inc. Radio frequency mass spectrometer. 2,896,083, 7-21-59, Cl. 250—41.9.

Harman, Marion W., and H. W. Kilbourne, to Monsanto Chemical Co. Allyl esters of mono-substituted dithiocarbamic acids. 2,895,980, 7-21-59, Cl. 260—455.

Harper, Kenneth A., to Phillips Petroleum Co. Fluidized solids process and apparatus. 2,895,906, 7-21-59, Cl. 208—147.

Harr, Jesse. Mist coolant dispenser. 2,895,684, 7-21-59, Cl. 239—341.

Harrington, Richard H.: *See*—
Demer, Frederick M., and Harrington. 2,895,411.

Harrington, Robert D., G. E. Heveran, and P. D. Kolar, to Shurhit Products, Inc. Breaker point assembly. 2,896,035, 7-21-59, Cl. 200—80.

Harris, Edward J.: *See*—
Frohlich, Adolf H., and Harris. 2,895,169.

Harris, Sterling G., to The Blue Channel Corp. Machine for recovering meat from animal carcasses. 2,895,162, 7-21-59, Cl. 17—1.

Hartford, Willis G., J. W. Holt, and E. Jellinek, to Champion International Co. Apparatus for detecting defects in sheet materials. 2,896,196, 7-21-59, Cl. 340—259.

Hartley, Gilbert S., to Fisons Pest Control Ltd. Apparatus for the separation of solutes by partition. 2,895,806, 7-21-59, Cl. 23—267.

Hartz, William W., to Daystrom Inc. Printed circuit assembly. 2,896,022, 7-21-59, Cl. 200—11.

Hauf, George F., to Chicago Metal Mfg. Co. Roller shaft bearing for cold roll forming machine. 2,895,331, 7-21-59, Cl. 153—65.

Huffman, William A. H., to The Chemstrand Corp. Polyesters modified with chain terminating and chain branching

Ives, Andrew M., and R. F. Thompson, to Swift & Co. Re-

Hauserman, E. F., Co., The: *See*—
Pollock, Gordon J. 2,895,322.
Hawkinson, Donald E., K. O. Kolnes, and J. A. Janssenga, to Greenlee Bros. & Co. Multiple station machine tool. 2,895,354, 7-21-59, Cl. 77—44.
Hawthorne, Edward P., to C. A. Parsons & Co. Ltd. Combustion turbines. 2,895,212, 7-21-59, Cl. 29—156.8.
Hayhurst, Thomas S., to United States of America, Army. Gearing. 2,895,342, 7-21-59, Cl. 74—409.
Hayward, John T. Method and apparatus for stabilising submersible vessels. 2,895,300, 7-21-59, Cl. 61—46.5.
Haseltine Research, Inc.: *See*—
Loughlin, Bernard D. 2,896,014.
Hasen, Edward J., to Bendix Aviation Corp. Pressure responsive force-ratio balance apparatus. 2,895,333, 7-21-59, Cl. 73—182.
Hassard, Lillian. Hair and scalp cleaner. 2,895,487, 7-21-59, Cl. 132—110.
Heberlein Patent Corp.: *See*—
Serfass, Earl J., and Radler. 2,896,060.
Hedberg, David G., Jr.: *See*—
Straley, James M., and Hedberg. 2,895,967.
Hefler, Steward, R. H. Isenhower, and R. B. Singer, to Perry Printing Process Co. Printing plate assembly former. 2,895,553, 7-21-59, Cl. 154—1.
Heidergott, Harry W., to Western Electric Co., Inc. Magnetising apparatus. 2,896,133, 7-21-59, Cl. 317—203.
Heins, Howard H. Offset wrench handle with tri-point box end and detachable socket. 2,895,364, 7-21-59, Cl. 81—177.
Heise, Otto W. Pressure gage. 2,895,334, 7-21-59, Cl. 73—388.
Hekelaar, Johannes P., to N.V. Ontwerp- & Exploitatiebureau "Shunt". Ventilating system for a building, e.g. a building divided into flats. 2,895,398, 7-21-59, Cl. 98—32.
Heller, George L., to Columbian Carbon Co. Manufacture of carbon black. 2,895,804, 7-21-59, Cl. 23—209.4.
Helm, Tony W. Universal joint. 2,895,314, 7-21-59, Cl. 64—7.
Hemphill, Rayburn W., Jr. Apparatus for producing roughened surface glove forms or the like. 2,895,206, 7-21-59, Cl. 25—129.
Hendrickson, Severin B., and H. W. Wickman, to Heywood-Wakefield Co. Safety hinge limiting apparatus. 2,895,632, 7-21-59, Cl. 217—60.
Hendry, Charles M., to The B. F. Goodrich Co. Method of preparing alpha-sulfo acrylic acid. 2,895,987, 7-21-59, Cl. 260—513.
Henjum, James E.: *See*—
Milenkevich, Joseph A., and Henjum. 2,895,916.
Henry, John F.: *See*—
Larrison, Millard S., and Henry. 2,895,990.
Henry, Noah. Cinch connector. 2,895,201, 7-21-59, Cl. 24—232.
Henry Valve Co., Inc.: *See*—
Jones, Evan. 2,895,497.
Hercules Powder Co.: *See*—
Goddu, Robert F. 2,895,922.
Hudy, James A. 2,895,924.
Klug, Eugene D. 2,895,931.
Price, Charles C. 2,895,921.
Herman, Milton: *See*—
Newman, David. 2,896,010.
Herrmann, Richard C., to Zenith Radio Corp. Magnetic memory storage apparatus. 2,896,193, 7-21-59, Cl. 340—174.
Herz, Josef E.: *See*—
Fried, Josef, and Herz. 2,895,934.
Fried, Josef, and Herz. 2,895,972.
Hersog, August G. Bobbin carrier for braiding machines. 2,895,371, 7-21-59, Cl. 87—56.
Heseltine, Donald W., and L. G. S. Brooker, to Eastman Kodak Co. Tricarbocyanine infrared absorbing dyes. 2,895,955, 7-21-59, Cl. 260—240.5.
Hess, Ray H. Fishing tackle. 2,895,253, 7-21-59, Cl. 43—42.15.
Hess, Thomas D., to American Bosch Arma Corp. Fuel injection pump. 2,895,420, 7-21-59, Cl. 103—2.
Hettche, Otto, and K. Schultze, to Bran & Lubbe. Process and an apparatus for measuring impurities of water. 2,895,329, 7-21-59, Cl. 73—53.
Heveran, Glean E.: *See*—
Harrington, Robert D., Heveran, and Kolar. 2,896,035.
Hewett, William A., R. C. Jones, and L. E. Lorensen, to Shell Development Co. Polymeric pour point depressant compositions. 2,895,915, 7-21-59, Cl. 252—59.
Hewlett-Packard Co.: *See*—
Wunderman, Irwin. 2,896,086.
Hey, Peter: *See*—
Willey, George L., and Hey. 2,895,995.
Heywood-Wakefield Co.: *See*—
Hendrickson, Severin B., and Wickman. 2,895,632.
Hickerson, John E., R. E. Page, and J. A. Weidenhammer, to International Business Machines Corp. Single element printing head. 2,895,584, 7-21-59, Cl. 197—52.
Hilbert, Richard G., to Universal Winding Co. Method of manufacturing yarn and the product thereof. 2,895,285, 7-21-59, Cl. 57—140.
Hiblom, Samuel E.: *See*—
Scarnato, Thomas J., Zielinski, and Hiblom. 2,895,277.
Hildmann, William B., to Brock & Rankin, Inc. Continuous-flow rounding, jointing, and casing-in machinery. 2,895,148, 7-21-59, Cl. 11—1.
Hill, Cyril T., to Texas Gulf Sulphur Co. Recovery of germanium tetrachloride. 2,895,797, 7-21-59, Cl. 23—87.
Hill, Cyril T., to Texas Gulf Sulphur Co. Production of iron chloride and sulfur. 2,895,796, 7-21-59, Cl. 23—87.
Hill, John W., to The Globe Co. Grating material. 2,895,573, 7-21-59, Cl. 189—82.
Hill, Oiva E., to Norton Co. Grinding machine. 2,895,265, 7-21-59, Cl. 51—165.
Hillard, George O., Jr.: *See*—
Segraves, William B., and Hillard. 2,895,979.
Hills-McCanna Co.: *See*—
Sandenburgh, George R. 2,895,191.
Hilti, Martin, to Anstalt fur Montage-Technik. Setting devices for use in the driving of nails or other pins. 2,895,135, 7-21-59, Cl. 1—47.
Himka, John, and F. C. Walther, to General Motors Corp. Vehicle folding top. 2,895,764, 7-21-59, Cl. 296—117.
Hirsch, Leopold. Disengaging device for glass-holding strips. 2,895,216, 7-21-59, Cl. 29—256.
Hirsh, S. A., Mfg. Co.: *See*—
Ferdinand, Irwin J., and Handler. 2,895,241.
Hirst, Sydney: *See*—
Briggs, John C. 2,896,135.
Hoag, Roderick W. Commodity packets. 2,895,606, 7-21-59, Cl. 206—56.
Hobson, Eric D., to Yarrow and Co. Ltd. Oil purification or separation plant. 2,895,883, 7-21-59, Cl. 196—46.
Hockett, Carl G., to Fram Corp. Manufacture of pleated filters. 2,895,174, 7-21-59, Cl. 18—59.
Hoda Corp.: *See*—
Gallaro, Donald M., and Ratinger. 2,896,190.
Hodge, Ronald I., to Power Jets (Research and Development) Ltd. Combustion apparatus for and method of burning ash-forming liquid fuel. 2,895,293, 7-21-59, Cl. 60—39.06.
Hofer, Bruno: *See*—
Fuester, Conrad H., Deuss, Hafliger, Hofer, Püster, and Zimmermann. 2,895,965.
Hoff, Marcian E., Jr.: *See*—
Auer, John H., Jr., Wilcox, and Hoff. 2,896,068.
Hoff, Marcian E., Jr., to General Railway Signal Co. Lightning protection for an electronic track circuit. 2,896,126, 7-21-59, Cl. 317—9.
Hoffmann-La Roche Inc.: *See*—
Bevilacqua, Patsy F., Platt, and Wenner. 2,895,927.
Holdeman, John W., V. E. Masko, J. B. Polomski, and G. E. Whelpley, to Borg-Warner Corp. Transmission. 2,895,344, 7-21-59, Cl. 74—472.
Holley Carburetor Co.: *See*—
McCollough, William E. 2,895,561.
Hollis, Albert C., to B. U. Supplies & Machinery Co. Ltd. Machines for inserting packing material into bottles. 2,895,275, 7-21-59, Cl. 53—59.
Holmes-Walker, William A., and D. J. H. Sandiford, to Imperial Chemical Industries Ltd. Production of films from polymeric materials. 2,895,171, 7-21-59, Cl. 18—48.
Holt, Joseph W.: *See*—
Hartford, Willis G., Holt, and Jellinek. 2,896,196.
Hols, George W.: *See*—
Duffy, John R., Hols, and Lillienberg. 2,896,004.
Home Music Systems, Inc.: *See*—
Wooten, Spencer D., Jr. 2,896,022.
Höner, Fritz: *See*—
Engel, Wolfgang, and Höner. 2,895,441.
Hong, Tonny, to United States Steel Corp. Method of pickling chromium-containing steel tubes. 2,895,856, 7-21-59, Cl. 134—3.
Hope, Alfred P. System for moving liquids. 2,895,450, 7-21-59, Cl. 119—14.05.
Hope, Robert A., and J. R. Walker. Shake or shingle panels. 2,895,181, 7-21-59, Cl. 20—5.
Höpfner, Konrad, and E. Götte, to Dehydag, Deutsche Hydrierwerke G.m.b.H. Masticating and softening agent for rubber and a process of making the same. 2,895,933, 7-21-59, Cl. 260—23.7.
Hopkins, Ralph E. Food cooking device. 2,895,405, 7-21-59, Cl. 99—341.
Hoppe, James O.: *See*—
Archer, Sydney, and Hoppe. 2,895,988.
Hormel, Geo. A., & Co.: *See*—
Murphy, Laurence W. 2,895,164.
Hornig, Donald F., and G. E. Hyde. Ratio measurement apparatus. 2,896,165, 7-21-59, Cl. 324—140.
Horvay, Julius B., to General Electric Co. Strike mount for refrigerator cabinet. 2,895,780, 7-21-59, Cl. 312—214.
Hosemann, Rolf. High capacity X-ray tube. 2,896,105, 7-21-59, Cl. 313—56.
Hotz, John L.: *See*—
Bewley, William L., Hotz, and Switzer. 2,895,885.
Housewright, Riley D.: *See*—
Thorne, Curtis B., Housewright, and Leonard. 2,895,882.
Howell, Edward K., to General Electric Co. Automatic frequency control system with a two-speed frequency sweep. 2,896,169, 7-21-59, Cl. 331—4.
Howamon, John A., and B. A. Thumm, to American Viscose Corp. Method of forming all skin viscose rayon. 2,895,788, 7-21-59, Cl. 18—54.
Hrynisak, Waldemar, to C. A. Parsons & Co. Ltd. Gas turbine power plant with regenerator. 2,895,296, 7-21-59, Cl. 60—39.51.
Hub Stamping and Mfg. Co.: *See*—
Urban, Wilbur J. 2,895,777.
Hubbard, Eber J., to The American Pulley Co. Method of packaging wire. 2,895,210, 7-21-59, Cl. 29—72.
Huber, Paul P., to Daystrom, Inc. Instrument bearing arrangement. 2,896,167, 7-21-59, Cl. 324—155.
Hubner, Udo, to International Standard Electric Corp. Electromagnetic impulse counter. 2,896,191, 7-21-59, Cl. 340—168.
Huddle, Edwin F., and J. D. Clark, to International Harvester Co. Mower control mechanism. 2,895,278, 7-21-59, Cl. 56—25.
Hudgin, Donald E., and F. Brown, to Celanese Corp. of America. Hydrogenating polymeric methyl isopropenyl ketone. 2,895,943, 7-21-59, Cl. 260—63.
Hudson, George A., to Vickers Inc. Power transmission. 2,895,427, 7-21-59, Cl. 103—218.
Hudy, James A., to Hercules Powder Co. Preparation of oxetane polymers. 2,895,824, 7-21-59, Cl. 260—2.

Kaiser Industries Corp.: *See*—
Aiken, William R. 2,896,111.
Kraftson, Harry A., and E. M. Yard, to Leeds and Northrup Co. Systems for obtaining gas samples for analysis.

Gregory Industries, Inc.: *See*—
Murdock, Robert W., and Singleton. 2,896,065.

Huffman, William A. H., to The Chemstrand Corp. Polyesters modified with chain terminating and chain branching agents and process for producing same. 2,895,948, 7-21-59, Cl. 260—75.

Hugo, Henry M., to Lenain Products Corp. Reference voltage device. 2,896,147, 7-21-59, Cl. 321—25.

Hughes Aircraft Co.: *See*—
Bennett, Robert R. 2,896,196.
Birdsall, Charles K., and Field. 2,896,117.
Myer, Jon H. 2,896,134.
Nuttall, Hubert V., and Richardson. 2,896,091.
Sangster, Raymond C. 2,895,358.

Hughes, William B., to Cities Service Research and Development Co. Compounds containing the imidazoline and imidazolidone or imidazolidinethione groups. 2,896,961, 7-21-59, Cl. 260—309.6.

Humber, John N., and C. H. Nystrom, to American Beech Arms Corp. Fuel injection apparatus. 2,895,445, 7-21-59, Cl. 123—140.

Hummer, Ralph G., F. W. Young, and K. H. Schweitzer. Sign holder and baby seat for telescoping carts. 2,895,243, 7-21-59, Cl. 40—125.

Humphner, Ferdinand W., to Minnesota Mining and Mfg. Co. Filament reinforced gummed tear-tape. 2,895,865, 7-21-59, Cl. 154—53.5.

Hunkins, Everett D. Concrete mixer. 2,895,722, 7-21-59, Cl. 259—164.

Huntington, Wilbur J.: *See*—
Newsom, Earl G., and Huntington. 2,896,074.

Huribut, Gordon K., to General Aniline & Film Corp. Developing liquid feed and vaporizing system for diazotype machines. 2,895,397, 7-21-59, Cl. 95—89.

Huseby, Elvin. Electric fence insulator. 2,896,011, 7-21-59, Cl. 174—163.

Husman, Paul A., to Laboratory For Electronics, Inc. Data processing apparatus. 2,896,192, 7-21-59, Cl. 340—174.

Huthsing, Charles K., Sr., and I. J. Billings, to General Fire Extinguisher Corp. Fire extinguisher. 2,895,556, 7-21-59, Cl. 169—31.

Hwa, Jesse C. H., to Rohm & Haas Co. Anion-exchange resin containing sulfonium groups. 2,895,925, 7-21-59, Cl. 260—2.1.

Hyde, George E.: *See*—
Hornig, Donald F., and Hyde. 2,896,165.

Hydrauliska Industri Aktiebolaget: *See*—
Sundin, Anders E. 2,895,622.

Hymac Corp.: *See*—
Machlis, Jerome. 2,896,061.

Ilenda, Frank P., to Diamond Alkali Co. Metal casting mold material. 2,895,835, 7-21-59, Cl. 106—38.3.

Illinois Tool Works: *See*—
Boyd, Thomas R. 2,895,524.

Imparato, Jack G. Yoke-type clamps. 2,895,202, 7-21-59, Cl. 24—263.

Imparato, Jack G. Yoke-type clamps. 2,895,203, 7-21-59, Cl. 24—263.

Imperial Chemical Industries Ltd.: *See*—
Alsberg, Frederick R., and Wyld. 2,895,785.
Holmes-Walker, William A., and Sandiford. 2,895,171.

Industrial Nucleonics Corp.: *See*—
Varner, Donald R. 2,895,888.

Industrial Vendors, Inc.: *See*—
Totten, John A. 2,895,402.

Infilco Inc.: *See*—
Adelson, Samuel L. 2,895,494.

Institut Francais du Petrole des Carburants et Lubrifiants: *See*—
Souillard, Georges J. P. 2,896,002.

International Business Machines Corp.: *See*—
Demer, Frederick M., and Harrington. 2,895,411.
Dickinson, Arthur H. 2,895,672.
Hickerson, John E., Page, and Weidenhammer. 2,895,584.
St. Johnston, Andrew. 2,895,671.

International Harvester Co.: *See*—
Erisman, Ralph J. 2,895,280.
Huddle, Edwin F., and Clark. 2,895,278.
Kolthoff, C. Paul, Jr. 2,895,503.
Scarnato, Thomas J., Zielinski, and Hillblom. 2,895,277.
Snow, Kenneth T. 2,895,590.
Toland, Wayne G. 2,895,559.
Young, Stephen M., and Christie. 2,895,281.

International Metal Products Co.: *See*—
Goetti, Albert E. 2,896,401.

International Minerals & Chemical Corp.: *See*—
Dancy, William R., and Stanley. 2,895,794.
Le Baron, Ira M., and Northcott. 2,895,799.

International Standard Electric Corp.: *See*—
Grewe, Theodor. 2,896,170.
Hubner, Udo. 2,896,191.
Jackson, Thomas M., and Sell. 2,896,122.
Matthieu, Johannes. 2,896,128.
Terry, Victor J., R. and P. S. Kelly, and Craggs. 2,896,148.
Wright, Esmond P. G., Weir, and Rice. 2,896,019.

International Telephone and Telegraph Corp.: *See*—
Brandt, Raymond W. 2,896,077.
Smith, Frank P. 2,896,015.

Intensacatrice Tigre s.r.l.: *See*—
Dassetto, Paolo. 2,895,325.

Ireland, Murray, to McGraw-Edison Co. Power drive for automatic toaster. 2,895,404, 7-21-59, Cl. 99—329.

Irearite, Inc.: *See*—
Schrader, Loren E. 2,895,240.

Irwin, Donald W., to Fisher Governor Co. Pressure regulator construction. 2,895,501, 7-21-59, Cl. 137—484.4.

Irwin, Harry E., to Dayton Bait Co. Fishing float. 2,895,255, 7-21-59, Cl. 43—44.88.

Isenhower, Robert H.: *See*—
Hefler, Steward, Isenhower, and Singer. 2,895,533.

Ives, Andrew M., and R. F. Thompson, to Swift & Co. Removal of odor and color bodies in fat splitting. 2,896,975, 7-21-59, Cl. 260—415.

Jacklin, Harold M. Coolant jacket arrangement for internal combustion engines. 2,895,458, 7-21-59, Cl. 123—41.72.

Jackson, Brian, Associates, Inc.: *See*—
Redmond, Eugene R. 2,896,521.

Jackson, George W., to General Motors Corp. Control apparatus for fluid spring suspension. 2,895,743, 7-21-59, Cl. 280—124.

Jackson, George W., to General Motors Corp. Air-oil suspension unit with ride height control. 2,896,744, 7-21-59, Cl. 280—124.

Jackson, Thomas M., and E. A. F. Sell, to International Standard Electric Corp. Electric discharge tubes. 2,896,122, 7-21-59, Cl. 313—169.

Jacobson, Howard C., and R. P. Olson. Auxiliary mixing device. 2,895,721, 7-21-59, Cl. 259—23.

Jakob, Fritz: *See*—
Wucherer, Johannes, Linde, and Jakob. 2,895,304.

Jamgotchian, George H. Wrench. 2,895,362, 7-21-59, Cl. 81—90.

Janis, Zbigniew J., to Ford Motor Co. Pressure regulator valve assembly. 2,895,296, 7-21-59, Cl. 60—97.

Jannenga, Joel A.: *See*—
Hawkinson, Donald E., Koines, and Jannenga. 2,895,354.

Janoski, Edward J., to Sun Oil Co. Process for catalyst preparation. 2,895,920, 7-21-59, Cl. 252—452.

Janssen, Arthur A., to F. D. Wetherill. Electrostatic loudspeaker. 2,896,025, 7-21-59, Cl. 179—111.

Jeffreys, Roy A., and E. B. Knott, to Eastman Kodak Co. Process for manufacture of oxazole quaternary salts. 2,895,959, 7-21-59, Cl. 260—307.

Jellinek, Ernest: *See*—
Hartford, Willis G., Holt, and Jellinek. 2,896,196.

Jellyman, Philip E., G. A. Dickinson, and H. F. Macintosh, to Pilkington Brothers Ltd. Method of treating a glass insulator. 2,895,260, 7-21-59, Cl. 49—80.

Jenkins, Richard L., to General Motors Corp. Oscillator starting circuit. 2,896,146, 7-21-59, Cl. 321—2.

Jenks, Donald P.: *See*—
Miller, Franklyn D., and Jenks. 2,896,900.

Jensen, William G., to Ford Motor Co. Internally mounted contacts. 2,896,040, 7-21-59, Cl. 200—61.54.

Jerabek, Paul E.: *See*—
Stringham, Leonidas K., and Jerabek. 2,895,863.

Johnson, Christ L. Radiator fin repair tool. 2,895,358, 7-21-59, Cl. 81—15.

Johnson, Franklyn H., deceased: R. F. Johnson, executrix. Wheel chair shock absorber. 2,895,742, 7-21-59, Cl. 280—124.

Johnson, Le Carda E.: *See*—
Johnson, Ross H. 2,895,700.

Johnson, Oscar F.: *See*—
Soderquist, Stanley L. F., and Johnson. 2,895,488.

Johnson, Robbie F.: *See*—
Johnson, Franklyn H. 2,895,742.

Johnson, Robert N. Apparatus for molding burial vault domes. 2,895,207, 7-21-59, Cl. 25—130.

Johnson, Ross H., deceased: L. E. Johnson, executrix of said R. H. Johnson; to L. E. Johnson. Ladder supported container holder. 2,895,700, 7-21-59, Cl. 248—210.

Johnson, William L., to Abrasive Co. of America. Magnetic application of paramagnetic spray paint. 2,895,851, 7-21-59, Cl. 117—93.

Johnston, Herrick L., Inc.: *See*—
Newton, Charles L., and White. 2,895,724.

Johnston, Reece W., and H. H. Chandler. Dental vacuum apparatus. 2,895,220, 7-21-59, Cl. 32—33.

Johnston, Robert W. B., to Shell Development Co. Production of lubricating oil components of high viscosity index. 2,895,902, 7-21-59, Cl. 208—96.

Jones, Charles H., Jr.: *See*—
Lakso, Eino E., and Jones. 2,895,269.

Jones, Evan, to Henry Valve Co., Inc. Packless valve. 2,895,497, 7-21-59, Cl. 137—316.

Jones, Ira David, Jr. Device for pointing pencil leads. 2,895,453, 7-21-59, Cl. 120—92.

Jones, James B., and W. C. Potthoff, to Aeroprojects, Inc. Method for applying metallic coatings. 2,895,845, 7-21-59, Cl. 117—8.

Jones, Robert C.: *See*—
Hewett, William A., Jones, and Lorenzen. 2,895,915.

Jones, Robert E., to Western Carbide Corp. Electric arc welding method. 2,896,063, 7-21-59, Cl. 219—73.

Jones, Russell J. Bite tray. 2,895,210, 7-21-59, Cl. 32—19.

Jones, Stanley O., to Pressed Steel Co. Ltd. Plastic dies, jigs and the like. 2,895,224, 7-21-59, Cl. 33—174.

Jones, Walter L., to United-Carr Fastener Corp. All plastic separable fastener of the press button type. 2,895,199, 7-21-59, Cl. 24—218.

Jones, William H., and H. E. Martin, to Esso Research and Engineering Co. Fluid coking process. 2,896,904, 7-21-59, Cl. 208—127.

Jonsson, Gosta L., and K. G. Andersson. Downward discharge conveyor. 2,895,592, 7-21-59, Cl. 198—134.

Joy Mfg. Co.: *See*—
Donerlaki, Eugene J. 2,895,774.
Frellsen, Carlton B. 2,895,591.

Judkins, Raymond P.: *See*—
Benton, Bruce M., and Judkins. 2,896,150.

Jung, Eddie S.: *See*—
Adler, Clace G., and Jung. 2,895,736.

Kachergis, Henry J., to Scovill Mfg. Co. Impulse sprinkler with shiftable toggle. 2,895,681, 7-21-59, Cl. 239—290.

Karuka, Edward A., to Merck & Co., Inc. Purification of Novobiocin. 2,895,952, 7-21-59, Cl. 260—210.

Kairys, Stepas E M. Meade, W. O. Munns, and D. A. Walder, to Canada Packers Ltd. Process for fractionation of fatty acid mixtures. 2,895,978, 7-21-59, Cl. 260—419.

Lehman, Robert W., to Eastman Kodak Co. Compositions containing stabilized vitamin A materials. 2,895,878.

Luckenbaugh, Raymond W., to E. I. du Pont de Nemours and Co. Herbicidal method and composition employing

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oxetane polymers. 2,895,924, 7-21-59, Cl. 260—2.

Kaiser Industries Corp.: *See*—
Aiken, William E. 2,896,111.

Kamide, Harris P., to General Electric Co. Electronic heating methods and apparatus. 2,895,828, 7-21-59, Cl. 99—1.

Karrar, Sebastian: *See*—
Fritts, Robert W., and Karrar. 2,896,005.

Karry, Bert A. Attachment for fishing rods. 2,895,251, 7-21-59, Cl. 43—24.

Kaspar, William F., Jr., to J. C. Scoras. Handle. 2,895,757, 7-21-59, Cl. 287—96.

Kastner, Edward C., to Akron Standard Mold Co. Reciprocating cutting with automatically interrupted feed. 2,895,550, 7-21-59, Cl. 164—48.

Kay, Arthur: *See*—
Day, Lawrence, Dobrick, and Kay. 2,895,261.

Kazan, Benjamin, to Radio Corp. of America. Half-tone image production. 2,896,087, 7-21-59, Cl. 250—213.

Kearney, William R., to General Motors Corp. Terminal board. 2,896,188, 7-21-59, Cl. 339—198.

Keenan, Joseph H.: *See*—
Lewis, Frank M., Keenan, and Goldmann. 2,895,291.

Kellogg, M. W., Co., The: *See*—
Schaaf, Robert P. 2,895,811.

Kelly, Patrick S.: *See*—
Terry, Victor J., R. and P. S. Kelly, and Cragg. 2,896,148.

Kelly, Richard: *See*—
Terry, Victor J., R. and P. S. Kelly, and Cragg. 2,896,148.

Kennedy, Ernest N. Change key lock. 2,895,322, 7-21-59, Cl. 70—383.

Kennedy, Walter I. Disposable separable lock for safety pins. 2,895,196, 7-21-59, Cl. 24—156.

Kenney, Harold E.: *See*—
Wall, Monroe E., and Kenney. 2,895,953.

Kent, Stephen D.: *See*—
Crane, Samuel P., and Kent. 2,895,543.

Kern, Rudolf, H. Scheurer, H. Zorn, and E. Kruppke, to Firma Rhein-Chemie G.m.b.H. Process of forming naphthenic acid solutions. 2,895,914, 7-21-59, Cl. 252—37.

Kettler, Alfred H., to United States of America, Navy. Sound powered phone. 2,896,026, 7-21-59, Cl. 179—115.

Kilbourne, Harry W.: *See*—
Harman, Marion W., and Kilbourne. 2,895,980.

Killeen, George H., Jr. Device for compressing spring valves. 2,895,213, 7-21-59, Cl. 29—213.

Kimberlin, Charles N., Jr., to Esso Research and Engineering Co. Hydroforming process and catalysts. 2,895,905, 7-21-59, Cl. 196—50.

Kincl, Fred A.: *See*—
Ringold, Howard J., Kincl, and Batres. 2,895,909.

Klasing Hand Brake Co.: *See*—
Sale, William H. 2,895,749.

Kleine, Werner K. M., to Maskinfirma R. L. Carlstedt. Drill shank for drills. 2,895,355, 7-21-59, Cl. 77—68.

Kletta, Hermann, to E. M. H. Radde. Subcutaneous hormone pellets. 2,895,875, 7-21-59, Cl. 167—58.

Klingelnberg, W. Ferd. Sohne: *See*—
Wagner, Erich, and Walder. 2,895,227.

Kloud, Jan, to Vyzkumny a zkusebni letecky ustav. Elastic coupling. 2,895,316, 7-21-59, Cl. 64—27.

Klug, Eugene D., to Hercules Powder Co. Method for preparation of 3,3-disubstituted oxetane polymers. 2,895,931, 7-21-59, Cl. 260—2.

Knapp-Monarch Co.: *See*—
Kueser, John J. 2,896,062.

Knott, Edward B.: *See*—
Jeffreys, Roy A., and Knott. 2,895,959.

Koch, H., & Sons: *See*—
Gaylord, John A. 2,895,200.

Koch, Hans J.: *See*—
Koch, Hans R. W. A. and H. J. 2,895,720.

Koch, Hans R. W. A. and H. J. Apparatus for treating granular material. 2,895,720, 7-21-59, Cl. 259—5.

Kocourek, Robert J. Wiper mechanism. 2,895,157, 7-21-59, Cl. 15—253.

Koenig, Robert H., to Tapeswitch Corp. of America. Tape switch. 2,896,042, 7-21-59, Cl. 200—86.

Kofler, Sol. Feet for luggage. 2,895,574, 7-21-59, Cl. 190—37.

Kohler, Fred. Arc suppresser for dielectric heating equipment. 2,896,055, 7-21-59, Cl. 219—10.77.

Kohman, Girard T., to Bell Telephone Laboratories, Inc. Growing of quartz crystals. 2,895,812, 7-21-59, Cl. 23—301.

Kolar, Peter D.: *See*—
Harrington, Robert D., Heveran, and Kolar. 2,896,035.

Koines, Kenneth O.: *See*—
Hawkinson, Donald E., Koines, and Jannenga. 2,895,354.

Kolthoff, C. Paul, Jr., to International Harvester Co. Spring valve. 2,895,503, 7-21-59, Cl. 137—535.

Komline-Sanderson Engineering Corp.: *See*—
Komline, Thomas R. 2,895,614.

Komline, Thomas R., to Komline-Sanderson Engineering Corp. Filtering unit. 2,895,614, 7-21-59, Cl. 210—401.

Kordes, Heinrich: *See*—
Reuter, Gottfried, and Kordes. 2,895,175.

Koren, Saul, to Radio Corp. of America. Television test apparatus. 2,896,109, 7-21-59, Cl. 315—8.5.

Kottler, August: *See*—
Ohmacker, Gerhard, and Kottler. 2,895,802.

Kowalewski, John J.: *See*—
Andersen, Emil, and Kowalewski. 2,895,551.

Kozacka, Joseph S., to Skil Corp. Abrasive unit. 2,895,267, 7-21-59, Cl. 51—194.

Kraemer, Rudolf C. Jar lid lifter. 2,895,620, 7-21-59, Cl. 215—46.

Kraft, El Roy J., to The Dole Valve Co. Water tempering valve. 2,895,676, 7-21-59, Cl. 236—12.

Kraftson, Harry A., and E. M. Yard, to Leeds and Northrup Co. Systems for obtaining gas samples for analysis. 2,895,335, 7-21-59, Cl. 73—421.5.

Krauss, Fred W. Combined fish lure and bait holder. 2,895,254, 7-21-59, Cl. 43—44.6.

Kress, Bernard H., to Quaker Chemical Products Corp. Aminotriazine modified polyacetals. 2,895,923, 7-21-59, Cl. 260—2.

Krieble, Vernon K., to The American Sealants Co. Compositions containing hydroperoxide polymerization catalyst and acrylate acid diester. 2,895,950, 7-21-59, Cl. 260—89.5.

Kroll, Ferdinand P. Vault lock. 2,895,761, 7-21-59, Cl. 292—302.

Kromacher, Gerald, to Bell Telephone Laboratories, Inc. Time interval encoder. 2,896,160, 7-21-59, Cl. 324—68.

Krueger, Glenn N.: *See*—
Chase, Corson W., and Krueger. 2,895,187.

Krueger, Roland F., and L. C. Vogel, to Union Oil Co. of California. Method and apparatus for perforating well casings. 2,895,554, 7-21-59, Cl. 166—35.

Krukonis, Alexander C., to Crompton & Knowles Corp. Method of assembling and wrapping articles. 2,895,272, 7-21-59, Cl. 53—21.

Krukonis, Alexander C., to Crompton & Knowles Corp. Package of articles. 2,895,601, 7-21-59, Cl. 206—45.31.

Kruppke, Eugen: *See*—
Kern, Rudolf, Scheurer, Zorn, and Kruppke. 2,895,914.

Kueser, John J., to Knapp-Monarch Co. Coffee maker and thermostat construction therefor. 2,896,062, 7-21-59, Cl. 219—44.

Kuhlmeier, Robert H. Refrigeration equipment for insulated trucks and vehicles. 2,895,309, 7-21-59, Cl. 62—186.

Kunreuther, Frederick, and W. K. Meerbott, to Shell Development Co. Process for the production of gasoline through thermal and catalytic cracking. 2,895,899, 7-21-59, Cl. 208—70.

Kurlytis, Paul C. Rear view mirror. 2,895,380, 7-21-59, Cl. 98—86.

Kury, Josef, to J. Bobst and Son S.A. Pneumatic brake with pressure closed valve. 2,895,570, 7-21-59, Cl. 188—94.

Kuypers, Joannes A. Apparatus for continuously feeding a band of textile or similar material. 2,895,598, 7-21-59, Cl. 203—150.

L and P Electric Co., Inc., The: *See*—
Lidsky, Louis. 2,895,699.

Laboratory For Electronics, Inc.: *See*—
Husman, Paul A. 2,896,192.

Lackey, Alan D., to T. S. Skillman and Co. Pty. Ltd. Coin-operated vending machines. 2,895,583, 7-21-59, Cl. 194—10.

Lakso Co. Inc., The: *See*—
Lakso, Eino E., and Jones. 2,895,269.

Lakso, Eino E., and C. H. Jones, Jr., to The Lakso Co. Inc. Cottoning machine. 2,895,269, 7-21-59, Cl. 53—21.

Lakso, Eino E. Method and apparatus for wadding containers. 2,895,273, 7-21-59, Cl. 53—24.

Lambert, Donald R., to Powers-Samas Accounting Machines Ltd. Printing machines. 2,895,410, 7-21-59, Cl. 101—93.

Lamkin, John C.: *See*—
Sorg, Leonard V., and Lamkin. 2,895,807.

Lamont, Adam S., to General Motors Corp. Variable speed mechanism. 2,895,575, 7-21-59, Cl. 192—3.2.

La Nationale S.A.: *See*—
Zellweger, Conrad. 2,895,318.
Zellweger, Conrad. 2,895,622.

Lang, John L.: *See*—
Archer, Wesley L., Montgomery, and Lang. 2,895,936.

Langsfeld, William P., to Turco Products, Inc. Metal foil diaphragm. 2,883,506, 7-21-59, Cl. 137—796.

La Rocque, Armand P., to Philco Corp. Method of making cathode assemblies and products. 2,895,854, 7-21-59, Cl. 117—223.

Larrison, Millard S., and J. F. Henry. Process of producing sodium or potassium acetate, propionate or butyrate. 2,895,990, 7-21-59, Cl. 260—540.

Larsen, Paul V., to Electric Steel Foundry Co. Dragline bucket assembly. 2,895,239, 7-21-59, Cl. 37—135.

Laskin, Carl, to United Aircraft Corp. Differential tachometer. 2,896,101, 7-21-59, Cl. 310—171.

Latter, Bruce E., and W. C. Bodong, to General Electric Co. Safety throwout mechanism for power operated drawers. 2,895,781, 7-21-59, Cl. 312—228.

Laubach, Gerald D., to Chas. Pfizer & Co., Inc. Bisnoralle-7-cholenaldehydes. 2,895,970, 7-21-59, Cl. 260—397.5.

Laudenslager, Harry B., Jr., to Blackstone Corp. Solder fluxes. 2,896,862, 7-21-59, Cl. 148—23.

Laughton, Malcolm. Hangers or airers for clothes and light articles. 2,895,657, 7-21-59, Cl. 223—92.

Laurie, William H., to The Superior Electric Co. Variable transformer. 2,896,179, 7-21-59, Cl. 336—141.

Lazar, Melvin E., and M. J. Powers, to United States of America, Agriculture. Method for preparing unsulphured dehydrated fruits. 2,895,836, 7-21-59, Cl. 99—204.

Le Baron, Ira M., and E. Northcott, to International Minerals & Chemical Corp. Process for treating fluorine-containing phosphatic materials. 2,895,799, 7-21-59, Cl. 23—109.

Le Brun, George K., and A. H. Terrell. Filter. 2,896,565, 7-21-59, Cl. 183—51.

Leda Chemicals Ltd.: *See*—
Hiten, George A. H. 2,895,679.

Lederer, Robert C., to Bendix-Westinghouse Automotive Air Brake Co. Combined relief valve and low pressure indicator. 2,895,504, 7-21-59, Cl. 137—559.

Leduc, Rene. Apparatus for controlling the speed of jet aircraft. 2,895,692, 7-21-59, Cl. 244—76.

Leeds and Northrup Co.: *See*—
Kraftson, Harry A., and Yard. 2,895,335.

Manning, William J.: *See*—
Monego, Constantin, Manning, and Ponty. 2,895,327.

McKeague, Edward D.: *See*—
Bland, Julius, and McKeague. 2,895,747.

Hefler, Steward, Isenhower, and Singer. 2,895,533.

to Canada Packers Ltd. Process for fractionation of fatty acid mixtures. 2,895,976, 7-21-59, Cl. 260—419.

Lehman, Robert W., to Eastman Kodak Co. Compositions containing stabilised vitamin A materials. 2,895,878, 7-21-59, Cl. 167—81.

Lehovec, Kurt, to Sprague Electric Co. Radio active electrode construction. 2,896,137, 7-21-59, Cl. 317—235.

Leitburo fur Erfindungswesen : *See*—
Wehsely, Karl. 2,895,349.

Leland Electric Canada Ltd. : *See*—
Girdwood, Arthur J., and Shiffett. 2,895,666.

Lemons, A. V., to Petroleum Mechanical Development Co. Pipe wiper and housing therefor. 2,895,156, 7-21-59, Cl. 15—210.

Lempert, Joseph, to Westinghouse Electric Corp. Regenerating scintillation counter. 2,896,088, 7-21-59, Cl. 250—213.

Lennox Industries, Inc. : *See*—
Zink, William W., Jr. 2,895,668.

Lento, Harry G. : *See*—
Willits, Charles O., Underwood, and Lento. 2,895,833.

Leonard, Carmen G. : *See*—
Thorne, Curtis B., Housewright, and Leonard. 2,895,882.

Leopold, Wilbur R., Jr., to Mechanical Controls Inc. Balancing device. 2,895,766, 7-21-59, Cl. 301—5.

Lepin, Maurice, to Societe Rhodiaceta. Process for incorporating titanium dioxide into cellulose ester solutions dissolved in aliphatic acids. 2,895,842, 7-21-59, Cl. 106—180.

Lester, Ruth. Fold-closed reversible cover for pillows, mattresses or the like. 2,895,146, 7-21-59, Cl. 5—339.

Lewis, Frank M., J. H. Keenan, and K. Goldmann, to Baldwin-Lima-Hamilton Corp. Recycling method of operating for power plants. 2,895,291, 7-21-59, Cl. 60—13.

Lidsky, Louis, to The L and P Electric Co., Inc. Air conditioner unit mounting. 2,895,699, 7-21-59, Cl. 248—208.

Lieber, Philip B. Countertop construction. 2,895,778, 7-21-59, Cl. 311—106.

Liedholm, George E. : *See*—
Snider, Warren L., Sarno, and Liedholm. 2,895,897.

Life-Long Aluminum Awning Co., Inc. : *See*—
Preaus, Charles M. 2,895,185.

Lillie, Gordon E., to Bryant Chucking Grinder Co. Gage system. 2,895,264, 7-21-59, Cl. 51—165.

Lillienberg, August W. : *See*—
Duffy, John R., Holz, and Lillienberg. 2,896,004.

Lily of France, Inc. : *See*—
Spitzer, Anne. 2,895,481.

Lin, Hung C., to Radio Corp. of America. Semiconductor amplifier circuits. 2,896,029, 7-21-59, Cl. 179—171.

Lincoln Electric Co., The : *See*—
Stringham, Leonidas K., and Jerabek. 2,895,863.

Lindberg Engineering Co. : *See*—
Duffy, John R., Holz, and Lillienberg. 2,896,004.

Linde, Hermann : *See*—
Wucherer, Johannes, Linde, and Jakob. 2,895,304.

Linder, Edward, Jr. Occluders for spectacle attachment. 2,895,376, 7-21-59, Cl. 88—20.

Lindstrom, Harold R. : *See*—
Sorensen, Knud B., and Lindstrom. 2,895,280.

Link, Charles T., Jr., and J. S. Gooden, to Elgin Sweeper Co. Street sweeper main broom drive and support. 2,895,150, 7-21-59, Cl. 15—83.

Link, Charles T., Jr., to Elgin Sweeper Co. Street sweeper side broom drive and support. 2,895,151, 7-21-59, Cl. 15—87.

Lionel Corp., The : *See*—
Bonanno, Joseph L. 2,896,202.

Lipfert, Donald E., to Raymond Engineering Laboratory, Inc. Cloth feeding mechanism for sewing machines. 2,895,439, 7-21-59, Cl. 112—204.

Lipkin, David : *See*—
Perlman, Morris L., Lipkin, and Weissman. 2,895,849.

Lisle, Claude K. Driver amplifier for recorder. 2,896,076, 7-21-59, Cl. 250—27.

List, William F., to United States of America, Navy. Inverted T-symbol generator. 2,896,118, 7-21-59, Cl. 315—24.

Little, Arthur D., Inc. : *See*—
Streeter, Milton H. 2,895,303.

Little, John W. Apparatus for dispensing newspapers. 2,895,689, 7-21-59, Cl. 221—266.

Lloyd, Roger A. Electrocardiograph electrode. 2,895,479, 7-21-59, Cl. 128—417.

Lockery, Harry : *See*—
Roper, Charles G., Gilchrist, and Lockery. 2,895,502.

Lockwood, Lee J., to The Electric Storage Battery Co. Flashlight. 2,896,067, 7-21-59, Cl. 240—10.6.

Long, George B., to General Motors Corp. Washer. 2,895,320, 7-21-59, Cl. 68—58.

Long, John R. Dump scoop. 2,895,256, 7-21-59, Cl. 37—130.

Loonam, Alfred C., to Chilean Nitrate Sales Corp. Titanium metallurgy. 2,895,852, 7-21-59, Cl. 117—107.

Lorain Products Corp. : *See*—
Huge, Henry M. 2,896,147.

Lorensen, Lyman E. : *See*—
Hewett, William A., Jones, and Lorensen. 2,895,915.

Lorenz, Anton. Reclining article of furniture. 2,895,538, 7-21-59, Cl. 155—106.

Loria, Anthony : *See*—
Salminen, Ilmari F., Barr, and Loria. 2,895,826.

Loughlin, Bernard D., to Hazeltine Research, Inc. Gamma-correction apparatus. 2,896,014, 7-21-59, Cl. 178—5.4.

Lovsted, C. M., & Co., Inc. : *See*—
Oster, Harvey J. C., Jr. 2,895,624.

Lowe, Irma B. Tool for supporting and using window cleaning implements. 2,895,153, 7-21-59, Cl. 15—118.

Lowry, Lewis R., Jr., and G. W. Brusberger, to Westinghouse Electric Corp. Electrical generator control apparatus. 2,896,149, 7-21-59, Cl. 322—28.

Lubrizol Corp., The : *See*—
Asseff, Peter A. 2,895,962.

Luckenbaugh, Raymond W., to E. I. du Pont de Nemours and Co. Herbicidal method and composition employing substituted phenyl carabanic acids. 2,895,817, 7-21-59, Cl. 71—2.5.

Lugli, Giuseppe, to Pirelli S.p.A. Pneumatic tire. 2,895,525, 7-21-59, Cl. 152—354.

Lum, Funston G. : *See*—
Schlatter, Maurice J., and Lum. 2,895,932.

Lund, Lyle W. : *See*—
Graving, Robert S., and Lund. 2,895,694.

Lunsford, Carl D., to A. H. Robins Co., Inc. Method of production of 5-o-methoxyphenoxymethyl-2-oxazolidone. 2,895,960, 7-21-59, Cl. 260—307.

Luthi, Alois G., to Luthi Machinery & Engineering Co., Inc. Can body straightening machine. 2,895,530, 7-21-59, Cl. 153—54.

Luthi Machinery & Engineering Co., Inc. : *See*—
Luthi, Alois G. 2,895,530.

Luvisi, John P. : *See*—
Schmerling, Louis, and Luvisi. 2,895,997.

Lux, Russell E., and A. M. Brubaker, to Whitmoyer Laboratories, Inc. Diamino-pyridine compositions for chemotherapy of coccidiosis. 2,895,874, 7-21-59, Cl. 167—52.1.

Lyman, William C., Jr. : *See*—
Brokaw, George Y., and Lyman. 2,895,870.

Lynch, Charles S. : *See*—
Ready, Harold R., Boyle, and Lynch. 2,895,973.

Lynn, Harold E., to Beam Products Mfg. Co. Fuel supply system for internal combustion engines. 2,895,560, 7-21-59, Cl. 180—54.

Lynskey, Peter J., to Peter Spence & Sons Ltd. Method of further reducing the reaction products of a titanium tetrachloride reduction reaction. 2,895,823, 7-21-59, Cl. 75—211.

Lyon, George A. Bomb head construction. 2,895,418, 7-21-59, Cl. 102—2.

Lysett, Daniel W., to Borg-Warner Corp. Friction clutches. 2,895,581, 7-21-59, Cl. 192—99.

Lyster, Thomas C. : *See*—
Miller, Charles F., and Lyster. 2,895,317.

Maccaferri, Mario : *See*—
Paggi, Louis. 2,895,167.

MacCormack, Kenneth E., to National Research Council. Reactivation of poisoned silver catalysts for the oxidation of ethylene. 2,895,918, 7-21-59, Cl. 252—412.

MacDonald, Dennison H., to Revere Corp. of America. Flow meters. 2,896,064, 7-21-59, Cl. 250—43.5.

Machlis, Jerome, to Hymac Corp. Time base generator. 2,896,081, 7-21-59, Cl. 250—27.

Macintosh, Hamish F. : *See*—
Jellyman, Philip E., Dickinson, and Macintosh. 2,895,260.

Mackey, Donald, to Radio Corp. of America. Printed circuit for high frequency amplifier apparatus. 2,896,028, 7-21-59, Cl. 179—171.

Mackintosh, Charles. Combined chair arm and connector. 2,895,540, 7-21-59, Cl. 155—130.

MacMillan, Donald M. Molds for retreading or recapping vehicle tires. 2,895,166, 7-21-59, Cl. 18—18.

Madden, Frank J. : *See*—
Pircon, Ladislav J. 2,896,054.

Madsen, Jens A. W., to Albertson & Co., Inc. Power operated magazine-type socket wrench attachment. 2,895,360, 7-21-59, Cl. 81—57.

Maertens, Leopold J. Steel casting process and means for carrying out the same. 2,895,189, 7-21-59, Cl. 22—57.2.

Maggioni & C. Societa per Azioni : *See*—
Cavallini, Guido, and Massarani. 2,895,963.

Magill, Donald G., Jr., to Riegel Paper Corp. Method of making resin impregnated paper. 2,895,868, 7-21-59, Cl. 92—21.

Magnet Cove Barium Corp. : *See*—
Van Dyke, Orien W. 2,895,911.

Maham, Carl E. Hold-down device. 2,895,705, 7-21-59, Cl. 248—361.

Mahon, Thomas J., and A. L. Edelstein, to Association for Physiologic Research, Inc. Dispenser for materials in liquid and semisolid states. 2,895,650, 7-21-59, Cl. 222—387.

Mahon, Thomas J., and A. L. Edelstein, to Association for Physiologic Research, Inc. Dispensing device. 2,895,651, 7-21-59, Cl. 222—390.

Maier, Alfred, to Robert Bosch, G.m.b.H. Electrical apparatus. 2,896,049, 7-21-59, Cl. 200—113.

Mall, Arthur W., C. A. Mattson, and W. Ziegler, to Remington Arms Co., Inc. Chain saw starter mechanism. 2,895,466, 7-21-59, Cl. 123—179.

Mallinckrodt Chemical Works : *See*—
Ruhoff, John R., Martin, and Gerfen. 2,895,792.
Ruhoff, John R., Martin, and Gerfen. 2,895,793.

Mallinckrodt, George E., to Elliot Enterprises, Inc. Rotary engine. 2,895,457, 7-21-59, Cl. 123—11.

Maloff, Ioury G., to Radio Corp. of America. Television deflection and power supply circuits. 2,896,114, 7-21-59, Cl. 315—27.

Maloney, Henry B., and W. L. Russo, to Raytheon Co. Tubulation apparatus. 2,896,084, 7-21-59, Cl. 219—85.

Mann, Abe : *See*—
Wise, Lester V., Mann, and Buergel. 2,895,612.

Mann, Theodore C., to Ekstrom-Carlson & Co. Profiling machine. 2,895,386, 7-21-59, Cl. 90—13.

Mannesmann Akt. : *See*—
Bungeroth, Adolf, Speith, and Schrewe. 2,895,190.

Manning, James J. Enlarging easel especially adapted for use in a system for identifying horses. 2,895,377, 7-21-59, Cl. 88—24.

Manning, Maxwell & Moore, Inc. : *See*—
Roper, Charles G., Gilchrist, and Lockery. 2,895,502.

Manning, Ralph M. : *See*—
Foote, Harold B., and Manning. 2,896,033.

Minnesota Mining and Mfg. Co. : *See*—
Blaess, A. Albert. 2,895,270.

N. V. Technische Maatschappij Marchand-Andriessen : *See*—

Manning, William J.: *See*—
Monego, Constantin, Manning, and Ponty. 2,895,327.
Manson, Morris: *See*—
Meyer, William G., and Manson. 2,895,776.
Marconi's Wireless Telegraph Co. Ltd.: *See*—
Wright, Peter M., and Rust. 2,896,203.
Margetts, David R.: *See*—
Hare, George H., and Margetts. 2,896,083.
Marino, Nicholas A. Girdle. 2,895,482, 7-21-59, Cl. 128—563.
Mark, Herman F., to R. S. Aries. Novel condensation products. 2,895,944, 7-21-59, Cl. 260—65.
Marley Co., The: *See*—
Baker, Donald R. 2,895,848.
Marsh, David F., to McNeil Laboratories, Inc. Composition and method for relieving spasticity. 2,895,877, 7-21-59, Cl. 167—65.
Marsh, Leon A.: *See*—
Moyer, Harold W., and Marsh. 2,895,599.
Martin, George L.: *See*—
Ruhoff, John R., Martin, and Gerfen. 2,895,792.
Ruhoff, John R., Martin, and Gerfen. 2,895,793.
Martin, Homer Z.: *See*—
Jones, William H., and Martin. 2,895,904.
Martin, Jacques E.: *See*—
Raymond, Francois H., Chapouille, and Martin. 2,896,082.
Martin, James C.: *See*—
Caldwell, John R., and Martin. 2,895,842.
Martin, James M. Heat and cold retaining glasses, mugs, bowls and the like. 2,895,636, 7-21-59, Cl. 220—15.
Martin, Michael J.: *See*—
Brooksbank, Harry P., and Martin. 2,895,813.
Martinmaas, Werner, Jr. Sharpener for mower sickle section. 2,895,268, 7-21-59, Cl. 51—250.
Maskinfirma R. L. Carlstedt: *See*—
Kleine, Werner K. M. 2,895,355.
Masko, Vincent E.: *See*—
Holdeman, John W., Masko, Polomski, and Whelpley. 2,895,344.
Massarani, Elena: *See*—
Cavallini, Guido, and Massarani. 2,895,963.
Mastabar Mining Equipment Co. Ltd.: *See*—
Tebb, Bernard, and Perry. 2,895,454.
Matheson, James N., to The Electric Storage Battery Co. Respirator. 2,895,472, 7-21-59, Cl. 128—146.
Matthews, John T., to Wil-Mat Corp. Swivel bearing. 2,895,770, 7-21-59, Cl. 308—227.
Matthieu, Johannes, to International Standard Electric Corp. Relay chains comprising magnetic counting or storing relays. 2,896,129, 7-21-59, Cl. 317—140.
Mattson, Charles A.: *See*—
Mall, Arthur W., Mattson, and Ziegler. 2,895,466.
Matty, Pete. Circulating beverage pumps. 2,895,403, 7-21-59, Cl. 99—309.
Maurice, Clayton H., Jr., to Toledo Scale Corp. Inking means for rotary printing apparatus. 2,895,415, 7-21-59, Cl. 101—228.
May, Joseph C., to The Superior Electric Co. Multi-stage magnetic amplifier type of control. 2,896,153, 7-21-59, Cl. 323—89.
Mayberry, Joe L., and L. P. Giddings, to R. R. Street & Co., Inc. Combination washer-extractor and spray means. 2,895,321, 7-21-59, Cl. 68—148.
Mayer, Max. Oscillating adjustable stroke mortising machine. 2,895,516, 7-21-59, Cl. 144—80.
Mayo, Clyde R., to Battelle Development Corp. Electric image development. 2,895,847, 7-21-59, Cl. 117—17.5.
Mazzarisi, James. Window brackets for curtains, draperies and the like. 2,895,701, 7-21-59, Cl. 248—263.
Mazzio, Anthony J., G. P. Nielsen, G. E. Engelstad, and E. H. Du Bois, to A. B. Dick Co. Feed mechanism and interrupter for duplicating machines. 2,895,416, 7-21-59, Cl. 101—243.
McCabe, Matthew J., to The Superior Electric Co. Rheostat. 2,896,184, 7-21-59, Cl. 338—97.
McCall, Marvin A., and R. L. McConell, to Eastman Kodak Co. Organophosphorus compounds derived from phosphorothiolothionates and epoxides. 2,895,984, 7-21-59, Cl. 260—461.
McClure, Robert, to General Motors Corp. Safety steering wheel. 2,895,345, 7-21-59, Cl. 74—493.
McClurg, Carl D., to The Buckeye Steel Castings Co. Combined spring group and friction damper. 2,895,727, 7-21-59, Cl. 267—9.
McConell, Richard L.: *See*—
McCall, Marvin A., and McConell. 2,895,984.
McConnaughey, Robert K. Variable diameter tensed ring piston. 2,895,773, 7-21-59, Cl. 309—23.
McCreary, Harold J., to General Telephone Laboratories, Inc. Magnetostrictive relay. 2,896,044, 7-21-59, Cl. 200—87.
McDonald, Robert L., and K. H. Burzlaff, to Bitter Co., Inc. Adjustable knee rest. 2,895,775, 7-21-59, Cl. 311—5.
McDonnell, Basil: *See*—
Robinson, Joseph N., Miller, and McDonnell. 2,895,904.
McDowell Co., Inc.: *See*—
McDowell, Robert C. 2,895,818.
McDowell, Richard H.: *See*—
Merton, Robert R., McDowell, and Aylett. 2,895,910.
McDowell, Robert C., to McDowell Co., Inc. Method and apparatus for deep-bed charging of traveling grates. 2,895,818, 7-21-59, Cl. 75—5.
McGraw-Edison Co.: *See*—
Bucklew, Lewis V. 2,896,102.
Cunningham, Francis V. 2,896,116.
Fjellstedt, Thorsten A. 2,896,012.
Gomersall, John R. 2,895,407.
Ireland, Murray. 2,895,404.
Putz, Frank A. 2,896,008.
Zwelling, Martin I. 2,896,181.
McKeague, Edward D.: *See*—
Bland, Julius, and McKeague. 2,895,747.
McKean, Joseph T.: *See*—
Gardner, Willis W., and McKean. 2,895,760.
McKnight, Douglas. Pile coping. 2,895,302, 7-21-59, Cl. 61—49.
McKnight, Robert J., and E. W. Swezey, to The Rapids-Standard Co., Inc. Conveyors. 2,895,593, 7-21-59, Cl. 198—160.
McMillan, Hugh D., deceased; A. A. McMillan, executrix of said H. D. McMillan. Air rinse. 2,896,061, 7-21-59, Cl. 219—39.
McMillan, Alice A.: *See*—
McMillan, Hugh D. 2,896,061.
McNeil Laboratories, Inc.: *See*—
Marsh, David F. 2,895,877.
McNeil, Robert F.: *See*—
Alward, Francis. 2,895,308.
McNulty, John V., to General Laboratory Associates, Inc. Spark producing apparatus including saturable core transformer. 2,896,123, 7-21-59, Cl. 315—177.
McSweeney, Thomas J., Sr. Air compressor discharge line cleaning and unloading systems. 2,895,665, 7-21-59, Cl. 230—24.
Meade, Edwin M.: *See*—
Kairys, Stepas, Meade, Munns, and Walder. 2,895,976.
Mechanical Controls Inc.: *See*—
Leopold, Wilbur R., Jr. 2,895,766.
Meerbott, William K.: *See*—
Kunreuther, Frederick, and Meerbott. 2,895,899.
Mego, Paul A. Method of arranging ship's holds or the like, and holds thus arranged. 2,895,444, 7-21-59, Cl. 114—73.
Meissner, William E. Method of centrifugally forming arch wall tubing. 2,895,172, 7-21-59, Cl. 18—56.
Meissner, William E., to American Viscose Corp. Process for cladding or plating metals or other base sheets and the like. 2,895,192, 7-21-59, Cl. 22—204.
Melchiona, James V. Shoe spike. 2,895,235, 7-21-59, Cl. 36—59.
Mellett, Jesse B.: *See*—
Fairbanks, Gordon J., Potter, and Mellett. 2,895,678.
Melpar, Inc.: *See*—
Smith, Blanchard D., Jr. 2,896,027.
Menges, Howard C. Sign and fixture therefor. 2,895,246, 7-21-59, Cl. 40—145.
Merck & Co., Inc.: *See*—
Kacska, Edward A. 2,895,952.
Ruyle, William V. 2,895,968.
Mergenthaler, Edward C., to Waldorf Paper Products Co. Display post supports. 2,895,696, 7-21-59, Cl. 248—158.
Merigold, Peter A.: *See*—
Cook, Gordon H., and Merigold. 2,895,379.
Merriam, Martin M.: *See*—
De Falco, Anthony. 2,895,717.
Merrill, Patterson D.: *See*—
Waite, Harry T., Jr., and Merrill. 2,895,498.
Merton, Robert R., R. H. McDowell, and J. G. Aylett, to Alginate Industries Ltd. Fire fighting foams. 2,895,910, 7-21-59, Cl. 252—3.
Metal Box Co. Ltd., The: *See*—
Powell, Dan, and Allsopp. 2,895,527.
Meuli, Lloyd J., to The Dow Chemical Co. Agronomical practice for the control of nematodes with 1,2,3-tribromopropane. 2,895,872, 7-21-59, Cl. 167—39.
Meyer, William G., and M. Manson, to Steel Slides, Inc. Adjustable extension arm. 2,895,776, 7-21-59, Cl. 311—71.
Michaelis, Otto. Furnace for burning of waste material. 2,895,433, 7-21-59, Cl. 110—8.
Midland Machine Corp.: *See*—
Frazier, Donald. 2,895,619.
Miehe, Frank J.: *See*—
Nylund, John A., and Miehe. 2,895,262.
Miehle-Goss-Dexter, Inc.: *See*—
Chase, Corson W., and Krueger. 2,895,187.
Mika, Thomas F.: *See*—
Fischer, Rudolph F., and Mika. 2,895,945.
Milan-Kamski, Wojslaw J., to Burroughs Corp. Glow tube storage circuits. 2,896,119, 7-21-59, Cl. 315—84.6.
Milenkevich, Joseph A., and J. E. Henjum, to The Procter & Gamble Co. Method for preparing detergent compositions. 2,895,916, 7-21-59, Cl. 252—99.
Miller, Alexander A., to General Electric Co. Cellulosic materials. 2,895,891, 7-21-59, Cl. 204—154.
Miller, Charles F., and T. C. Lyster, to Wildman Jacquard Co. Means for transferring loops in knitting machines. 2,895,317, 7-21-59, Cl. 66—24.
Miller, Earle C., to Riley Stoker Corp. Fuel burning apparatus. 2,895,436, 7-21-59, Cl. 110—165.
Miller, Franklyn D., and D. P. Jenks, to National Distillers and Chemical Corp. Process for the manufacture of vinyl chloride. 2,896,000, 7-21-59, Cl. 260—656.
Miller, Frederick J. L.: *See*—
Robinson, Joseph N., Miller, and McDonnell. 2,895,904.
Miller, John H.: *See*—
Gilbert, Roswell W., and Miller. 2,896,166.
Miller, Joseph V., to American Optical Co. Means and method for forming goggles or the like. 2,895,138, 7-21-59, Cl. 2—14.
Mine Safety Appliances Co.: *See*—
Becker, Earl M., and Bridge. 2,895,640.
Mineck, Fred. Front end suspension for motor vehicles. 2,895,741, 7-21-59, Cl. 280—96.3.
Minerals & Chemicals Corp. of America: *See*—
Sawyer, Edgar W., Jr., and Gary. 2,895,873.
Minneapolis-Honeywell Regulator Co.: *See*—
Beck, William J., and Fasendin. 2,895,247.
Gille, Willis H. 2,896,204.
Nebel, Paul W. 2,896,183.
Zelinka, Richard J. 2,896,181.

O'Brien, Albert S.: *See*—
Patterson-Kelley Co., Inc., The: *See*—

Minnesota Mining and Mfg. Co.: *See*—
Blaess, A. Albert. 2,895,270.
Friedlander, William S. 2,895,958.
Fritts, Robert W., and Karrer. 2,896,005.
Humphner, Ferdinand W. 2,895,865.
Woughter, John M. 2,895,849.

Mitchell, Doren: *See*—
Bachelet, Albert R., Dorff, and Mitchell. 2,896,072.

Moffett, Robert B.: *See*—
Aspergren, Brooke D., and Moffett. 2,895,957.

Mollenberg, Leroy, to General Electric Co. Two speed induction type motor. 2,896,144, 7–21–59, Cl. 318—224.

Moloney, Raymond T.: *See*—
Breitenstein, Charles T. 2,896,047.
Brunicardi, Daniel. 2,896,045.
Giegen, Hubert M. 2,895,653.
Nicolaus, Frank G. 2,895,340.

Monego, Constantin J., W. J. Manning, and H. D. Ponty, to United States of America, Army. Apparatus for measuring resistance of fabrics to thermal decomposition. 2,895,327, 7–21–59, Cl. 73—15.

Monolith Portland Midwest Co.: *See*—
Anderson, Frank J. 2,895,725.

Monsanto Chemical Co.: *See*—
Harman, Marion W., and Kilbourne. 2,895,980.

Montgomery, Charles W., and R. C. Bryan, Jr., to Ethyl Corp. Stabilized vinyl resins containing chlorine. 2,895,941, 7–21–59, Cl. 260—45.75.

Montgomery, Robert S.: *See*—
Archer, Wesley L., and Montgomery. 2,895,934.
Archer, Wesley L., Montgomery, and Lang. 2,895,936.

Moody, Norman F., and C. D. Florida, to Her Majesty the Queen in The Right of Canada, as represented by the Minister of National Defence. Monostable two-state apparatus. 2,896,094, 7–21–59, Cl. 307—88.5.

Moore, Robert C., to Philco Corp. Amplitude measuring circuit. 2,896,078, 7–21–59, Cl. 250—27.

Moring, Walter G., Jr., and G. T. Gray, to Toledo Scale Corp. Permutation member tooth design. 2,895,337, 7–21–59, Cl. 74—1.

Morris, Earl F.: *See*—
Carlyle, Robert L., and Morris. 2,895,913.

Morris, Nathan K. Food chopper. 2,895,520, 7–21–59, Cl. 146—160.

Morse, Robert C. Amusement device. 2,895,257, 7–21–59, Cl. 46—43.

Morton, Robert C., to California Computer Products, Inc. Electric lamp switching mechanism. 2,896,125, 7–21–59, Cl. 315—272.

Morton Salt Co.: *See*—
Diamond, Horace W. 2,895,795.

Moser, Albert W.: *See*—
Muller, Alex C. 2,895,394.

Mossberg, O. F., & Sons, Inc.: *See*—
Sawin, Raymond R. 2,895,248.

Motorola, Inc.: *See*—
Parker, Norman W. 2,896,013.

Moyer, Harold W., and L. A. Marsh. Device for crating paintings and the like. 2,895,599, 7–21–59, Cl. 206—1.

Mueller, Albert C.: *See*—
Shokal, Edward C., and Mueller. 2,895,947.

Mueller Co.: *See*—
Mueller, Frank H., and Smith. 2,895,352.
Webber, Claude H. 2,895,353.

Mueller, Frank H., and J. J. Smith, to Mueller Co. Power drive attachment for drilling machine. 2,895,352, 7–21–59, Cl. 77—34.4.

Mueller, Homer L., to American Machine & Foundry Co. Rim for tubeless tire. 2,895,526, 7–21–59, Cl. 152—410.

Muller, Alex C., 50% to A. W. Moser. Single lens reflex camera. 2,895,394, 7–21–59, Cl. 95—42.

Muller, Paul: *See*—
Bilger, Xavier, and Muller. 2,895,837.

Mumma, Harold J., to Food Machinery and Chemical Corp. Machine for handling eggs. 2,895,274, 7–21–59, Cl. 53—59.

Munns, William O.: *See*—
Kairys, Stepas, Meade, Munns, and Walder. 2,895,976.

Murdock, Robert W., and R. C. Singleton, to Gregory Industries, Inc. Welding stud and ferrule. 2,896,065, 7–21–59, Cl. 219—99.

Murphy, Laurence W., to Geo. A. Hormel & Co. Apparatus and process for facilitating slaughter and for bleeding slaughter animals. 2,895,164, 7–21–59, Cl. 17—46.

Murray Corp. of America, The: *See*—
Reiley, George L. 2,895,230.

Musser, C Walton, to United States of America, Army. Trigger release mechanism for a plurality of guns. 2,895,381, 7–21–59, Cl. 89—27.

Myer, Jon H., to Hughes Aircraft Co. Loop contact for semiconductor. 2,896,134, 7–21–59, Cl. 317—234.

Myers, Edward C. Mechanism for dynamically balancing the work force of a work load. 2,895,282, 7–21–59, Cl. 56—306.

Myers, John C., and M. M. Hagar. Jaw face construction for pipe wrenches. 2,895,365, 7–21–59, Cl. 81—186.

Myers, Ray, Corp.: *See*—
Myers, Raymond L. 2,895,485.

Myers, Raymond L., to Ray Myers Corp. Card file tray. 2,895,485, 7–21–59, Cl. 129—16.

Myers, Thomas R.: *See*—
Copping, Geoffrey P., Myers, and Smith. 2,895,610.

Myers, William G.: *See*—
Neher, Eldon P., and Myers. 2,895,215.

Myers, William H., to Avco Mfg. Corp. Television receiver construction. 2,896,199, 7–21–59, Cl. 340—367.

N. V. Ontwerp- & Exploitatiebureau "Shunt": *See*—
Hekelaar, Johannes P. 2,895,398.

N. V. Technische Maatschappij Marchand-Andriessen: *See*—
Van Marle, Frederick. 2,895,588.

Nagel, Ernest and S. Portable toilet device. 2,895,142, 7–21–59, Cl. 4—135.

Nagel, Stellane: *See*—
Nagel, Ernest and S. 2,895,142.

Nagin, Harold, to Reliance Steel Products Co. Coatings for the traffic bearing surfaces of grating. 2,895,389, 7–21–59, Cl. 94—5.

Nagy, John, Jr., to Daystrom, Inc. Method and apparatus for measuring the transconductance of an electron tube. 2,896,154, 7–21–59, Cl. 324—27.

Nagy, Michael J., to Pastushin Aviation Corp. Self-broaching fasteners. 2,895,367, 7–21–59, Cl. 85—1.

Napier, D., & Son Ltd.: *See*—
Chatterton, Ernest E. 2,895,425.

Nash, L. W., Co.: *See*—
Powers, Robert B. 2,895,733.

Nash, Majorie D. Self-locking cable retainer. 2,896,605, 7–21–59, Cl. 206—55.

Nathan, Joseph D. Apparel hanger spacer. 2,895,616, 7–21–59, Cl. 211—123.

National Bank of Detroit: *See*—
Place, Charles R. S. 2,895,366.

National Distillers and Chemical Corp.: *See*—
Miller, Franklyn D., and Jenks. 2,896,000.

National Food Equipment Co. Inc.: *See*—
Bray, Vernon H., Jr. 2,895,768.

National Research Council: *See*—
MacCormack, Kenneth E. 2,895,918.

National Research Development Corp.: *See*—
Ellison, Allan H. 2,896,079.
Williams, Frederic C. 2,895,673.

Nebel, Paul W., to Minneapolis-Honeywell Regulator Co. Potentiometer. 2,896,183, 7–21–59, Cl. 338—91.

Neher, Eldon P., and W. G. Myers, to The General Tire and Rubber Co. Machine for assembling resilient bushings and the like. 2,895,215, 7–21–59, Cl. 29—235.

Nelson, Gorman R. Predetermined-torque-applying wrench with thrust operated torsion bar. 2,895,359, 7–21–59, Cl. 81—52.3.

Nelson, Permil N., to L. H. Ewing. Eccentrically mounted float ball inlet valve operating mechanism for flush toilets. 2,895,499, 7–21–59, Cl. 137—425.

Nevins, Glenn D. Carpenter's tool chest. 2,895,600, 7–21–59, Cl. 206—16.

Newchurch, Edwin J.: *See*—
Robbins, Leroy V., Jr., and Newchurch. 2,895,900.

Newell, William H., to Sperry Rand Corp., Ford Instrument Co. Division. Flight analyzer. 2,895,670, 7–21–59, Cl. 235—61.

Newman, David, ½ to M. Herman. Automobile antenna. 2,896,010, 7–21–59, Cl. 174—153.

Newman, Hendler and Co., Ltd.: *See*—
Rostron, Frank. 2,895,589.

Newsom, Earl G.: *See*—
Berger, France B., and Newsom. 2,896,162.

Newsom, Earl G., and W. J. Huntington, to General Precision Laboratory Inc. Frequency tracker with fixedly-spaced local oscillations equally offset from unknown frequency. 2,896,074, 7–21–59, Cl. 250—20.

Newton, Charles L., and L. E. White, to Herrick L. Johnston, Inc. Gas-liquid contact apparatus. 2,895,724, 7–21–59, Cl. 261—114.

New York Air Brake Co., The: *See*—
Orshansky, Elias, Jr. 2,895,426.

Nicolaisen, Bernard H.: *See*—
Northgraves, Walter W., and Nicolaisen. 2,895,801.

Nicolaus, Frank G., to R. T. Moloney, deceased; American National Bank and Trust Co. of Chicago, executor of said Moloney. Stepper with built-in latch. 2,895,340, 7–21–59, Cl. 74—142.

Niesen, George P.: *See*—
Mazzio, Anthony J., Niesen, Engelstad, and Du Bois. 2,895,416.

Nilsson, Sten E. Apparatus for folding a running web of flexible material. 2,895,731, 7–21–59, Cl. 270—86.

Nolden, William F., and C. F. Robbins, to Cutler-Hammer, Inc. Mounting and operating means for electric switch mechanisms. 2,896,034, 7–21–59, Cl. 200—16.

Nonomaque, Clyde J., to General Electric Co. Refrigerating system including a hot gas defrosting circuit. 2,895,307, 7–21–59, Cl. 62—156.

Nopco Chemical Co.: *See*—
Spiegel, Israel, and Schneider. 2,895,971.

North American Aviation, Inc.: *See*—
Conrad, Harold L., and Vanderbur. 2,895,759.

Northcott, Elliott: *See*—
Le Baron, Ira M., and Northcott. 2,895,799.

Northgraves, Walter W., and B. H. Nicolaisen, to Olin Mathieson Chemical Corp. Process for producing chlorine dioxide. 2,895,801, 7–21–59, Cl. 23—152.

Norton Co.: *See*—
Hill, Oiva E. 2,895,285.

Nuttall, Hubert V., and J. E. Richardson, to Hughes Aircraft Co. Magnetic amplifier digital comparison circuit. 2,896,091, 7–21–59, Cl. 307—88.

Nylund, John A., and F. J. Miebe. Combination drum and belt sanding surfacing machines. 2,895,262, 7–21–59, Cl. 51—137.

Nystrom, Arthur W. Safety car block. 2,895,569, 7–21–59, Cl. 188—32.

Nystrom, Carl H.: *See*—
Humber, John N., and Nystrom. 2,895,465.

Oakley, Charles B.: *See*—
Rhodes, Roland N., and Oakley. 2,896,018.

Oathout, Richard W. Filter. 2,895,615, 7–21–59, Cl. 210—439.

Pilch, John S. Hydraulic edge

O'Brien, Albert S.: *See*—
Callear, Thomas E., and O'Brien. 2,895,827.
O'Connell, Richard A., to United States of America, Agriculture. Preparation of bulky textiles. 2,895,286, 7–21–59, Cl. 57—156.
O'Connor, Harold R. Railway car window. 2,895,184, 7–21–59, Cl. 20—56.5.
O'Hea, Ignatius J., to Colt Ventilation Ltd. Ventilators. 2,895,399, 7–21–59, Cl. 98—42.
Ohio Brass Co., The: *See*—
Christman, Fred G. 2,896,032.
Ohlinger, Helmut, and R. Fricker, to Badische Anilin- & Soda-Fabrik Akt. Copolymerisation of a styrene and acrylonitrile in the presence of an organic solvent having at least one hydroxyl group. 2,895,938, 7–21–59, Cl. 260—45.5.
Ohnacker, Gerhard, and A. Kottler, to Dr. Karl Thomae, G.m.b.H. Process for the production of benzoic acid derivatives. 2,895,992, 7–21–59, Cl. 260—559.
Olijak Mfg. Co., Inc., The: *See*—
Persak, George Jr. 2,895,655.
O'Keefe, Thomas J. Stop hook for extension ladders. 2,895,660, 7–21–59, Cl. 228—18.
Oldfield, Clarence E., Jr., to Continental Can Co., Inc. Inside side seam coating means. 2,895,449, 7–21–59, Cl. 118—306.
Oldham, Charles A. E. Band type clamp for flanged pipes. 2,895,748, 7–21–59, Cl. 285—410.
Oleksij, Dimitrij. Retractible rigid automobile top. 2,895,765, 7–21–59, Cl. 296—117.
Oleson, Wrisley B.: *See*—
Pircon, Ladislav J. 2,896,054.
Olin Mathieson Chemical Corp.: *See*—
Fried, Josef, and Herz. 2,895,954.
Fried, Josef, and Herz. 2,895,972.
Northgraves, Walter W., and Nicolaisen. 2,895,801.
Olson, Robert P.: *See*—
Jacobson, Howard C., and Olson. 2,895,721.
Olsson, Karl G., to Casius Corp. Ltd. Apparatus for treating castings of lightweight concrete in open casting molds. 2,895,204, 7–21–59, Cl. 25—1.
Ono, Iwao. Processes and apparatuses for producing plastic nets and the like. 2,895,535, 7–21–59, Cl. 154—1.7.
Orner, Harry. Ball-bearing screw and nut mechanism. 2,895,343, 7–21–59, Cl. 74—459.
Orser, Lawrence D., to Chamberlain Corp. Pressure accumulator. 2,895,507, 7–21–59, Cl. 138—30.
Orser, Lawrence D., to Chamberlain Corp. Shelf and supporting bracket therefor. 2,895,617, 7–21–59, Cl. 211—93.
Orshansky, Elias, Jr., to The New York Air Brake Co. Hydraulic apparatus utilizing rotary cylinder blocks. 2,895,426, 7–21–59, Cl. 103—161.
Ortman, Curtis D., to General Motors Corp. Kiln refractory. 2,895,840, 7–21–59, Cl. 106—68.
Osborn Mfg. Co., The: *See*—
Peterson, Ruben O. 2,895,155.
Oster, Harvey J. C., Jr., to C. M. Lovated & Co., Inc. Elevator for use in a lumber stacker. 2,895,624, 7–21–59, Cl. 214—6.
Ostrow, Henry J. Electric door mat. 2,895,159, 7–21–59, Cl. 15—311.
Otto, Carl. Method of and apparatus for producing ammonium sulphate crystals. 2,895,800, 7–21–59, Cl. 23—119.
Owens-Corning Fiberglas Corp.: *See*—
Russell, Robert G. 2,895,789.
Owens-Illinois Glass Co.: *See*—
Schaefer, Earl F. 2,895,846.
Smith, Ralph H. 2,895,739.
Page, Ralph E.: *See*—
Hickerson, John E., Page, and Weidenhammer. 2,895,584.
Paggi, Louis, to M. Maccaferri. Filtering liner for barrels of extrusion machines. 2,895,167, 7–21–59, Cl. 18—30.
Pagliuso, Robert J. Mounting post. 2,895,697, 7–21–59, Cl. 248—187.
Paige, Richard E. Gift boxes. 2,895,663, 7–21–59, Cl. 229—35.
Pallet Devices, Inc.: *See*—
Budd, Larry J. 2,895,061.
Palmer, Marianne C. Clothes hanger. 2,895,698, 7–21–59, Cl. 248—205.
Palumbo, Ludovico. Faucet. 2,895,708, 7–21–59, Cl. 251—77.
Pande, Henry, to H. V. Hardman Co., Inc. Proportioning apparatus. 2,895,644, 7–21–59, Cl. 222—134.
Parker, Harold N.: *See*—
Fremont, Herbert, and Parker. 2,896,070.
Parker, Norman W., to Motorola, Inc. Color television receiver. 2,896,013, 7–21–59, Cl. 178—5.4.
Parks, Thomas D.: *See*—
Glassbrook, Clarence L., and Parks. 2,896,158.
Parry, Frank, to The Singer Mfg. Co. Work table height adjusting mechanism for blindstitch sewing machines. 2,895,442, 7–21–59, Cl. 112—260.
Parsons, C. A., & Co. Ltd.: *See*—
Hawthorne, Edward P. 2,895,212.
Hryniewsk, Waldemar. 2,895,296.
Parsons, Hubert J., and A. A. Peterson, to Harding Brothers, Inc. Feed chucks. 2,895,740, 7–21–59, Cl. 279—41.
Parsons, John B. Switch mechanism. 2,896,036, 7–21–59, Cl. 200—44.
Parsons, Joseph R., to Chicago Fire Brick Co. Radiant wall furnace. 2,895,544, 7–21–59, Cl. 158—4.5.
Parsons and Marine Engineering Turbine Research and Development Association: *See*—
Terrell, Basil J. 2,895,294.
Partin, Melvin E., to Philco Corp. Dual-beam cathode ray tube system. 2,896,017, 7–21–59, Cl. 178—5.4.
Pastushin Aviation Corp.: *See*—
Nagy, Michael J. 2,895,367.
Patterson-Kelley Co., Inc., The: *See*—
Drake, Charles E. 2,895,508.
Paxton, Charles M. Concrete wall form. 2,895,206, 7–21–59, Cl. 25—131.
Payne, Andrew H., Jr., and H. J. Gauggel, Jr. Process and apparatus for pressure testing vessels. 2,895,328, 7–21–59, Cl. 73—49.1.
Pearson, Gerald L.: *See*—
Fuller, Calvin S., and Pearson. 2,896,128.
Peck, Carl M., to Gulf Oil Corp. Extreme pressure lubricant. 2,895,912, 7–21–59, Cl. 258—18.
Peeps, Donald J., to The De Vilbiss Co. Coating material pump. 2,895,421, 7–21–59, Cl. 103—50.
Peeps, Donald J., to The De Vilbiss Co. Spray nozzle. 2,895,685, 7–21–59, Cl. 239—400.
Peeps, Donald J., to The De Vilbiss Co. Spray gun. 2,895,686, 7–21–59, Cl. 239—412.
Peet, Nick P., to Esso Research and Engineering Co. Removal of metal contaminants from residual oils. 2,895,902, 7–21–59, Cl. 208—73.
Pelak, Andrew, to Curtiss-Wright Corp. Mixing and discharging apparatus. 2,895,645, 7–21–59, Cl. 222—162.
Peiz, Willibald, L. Burgardt, and O. Wahl, to AGFA Akt. Production of photographic colour images with heterocyclic developers. 2,895,823, 7–21–59, Cl. 96—55.
Peras, Lucien, to Regie Nationale des Usines Renault. Heat-resistant alloys. 2,895,822, 7–21–59, Cl. 75—204.
Peras, Lucien, to Regie Nationale des Usines Renault. Process for the manufacture of piston rings. 2,895,859, 7–21–59, Cl. 148—3.
Peras, Lucien, to Regie Nationale des Usines Renault. Pressure chill-castings of iron. 2,895,860, 7–21–59, Cl. 148—3.
Perez, Jose B. Cork extractor. 2,895,357, 7–21–59, Cl. 81—3.34.
Perfect Circle Corp.: *See*—
Foust, Eugene A. 2,895,480.
Perlman, Morris L., D. Lipkin, and S. I. Weissman, to United States of America, Atomic Energy Commission. Method of preparing coated refractory ware. 2,895,849, 7–21–59, Cl. 117—62.
Perrins, Allen B., to The Superior Electric Co. Transformer test circuit. 2,896,156, 7–21–59, Cl. 324—53.
Perry, Clarence H.: *See*—
Tebb, Bernard, and Perry. 2,895,454.
Perry, Darrell D.: *See*—
Perry, John A., F. B., and D. D. 2,895,558.
Perry, Floyd B.: *See*—
Perry, John A., F. B. and D. D. 2,895,558.
Perry, Frank R., to Turco Products, Inc. Exhaust muffler for internal combustion engine. 2,895,562, 7–21–59, Cl. 181—61.
Perry, John A., F. B. and D. D. Automatic reversing mechanism for tractor-attached agricultural implements. 2,895,558, 7–21–59, Cl. 172—210.
Perry Printing Process Co.: *See*—
Hefler, Steward, Isenhower, and Singer. 2,895,533.
Perry, Robert B. Dispensing closure for containers. 2,895,631, 7–21–59, Cl. 215—75.
Perryman, George H. Apparatus and method of drying paper. 2,896,058, 7–21–59, Cl. 219—20.
Persak, George Jr., to The Olijak Mfg. Co., Inc. Sanitary protective cover for infolded dispensing tube of milk dispenser can. 2,895,655, 7–21–59, Cl. 222—520.
Peterson, Anders A.: *See*—
Parsons, Hubert J., and Peterson. 2,895,740.
Peterson, Ruben O., to The Osborn Mfg. Co. Wire stem brush. 2,895,155, 7–21–59, Cl. 15—192.
Petroleum Mechanical Development Co.: *See*—
Lemons, A. V. 2,895,156.
Petzoldt, Werner. Knife for domestic or trade use. 2,895,218, 7–21–59, Cl. 30—355.
Pfaff, G. M., A.G.: *See*—
Wins, Karl. 2,895,440.
Pfäffle, Ernst: *See*—
Biel, Hans, Pfäffle, and Bertsch. 2,895,730.
Pfäffle, Ernst, to H. Sickinger. Inking or distributing roller for thinly liquid inks. 2,895,417, 7–21–59, Cl. 101—375.
Pfister, Rudolf: *See*—
Eugster, Conrad H., Denss, Hafliger, Hofer, Pfister, and Zimmermann. 2,895,965.
Pfizer, Chas., & Co., Inc.: *See*—
Davisson, Jacob W., and Finlay. 2,895,876.
Laubach, Gerald D. 2,895,970.
Stephens, Charles R., Jr. 2,895,993.
Philco Corp.: *See*—
Hales, Kenneth R. 2,896,136.
La Rocque, Armand P. 2,895,854.
Moore, Robert C. 2,896,078.
Partin, Melvin E. 2,896,017.
Philippe, Louis E., to The Standard Electric Time Co. Inter-communication system. 2,896,021, 7–21–59, Cl. 179—1.
Phillips Petroleum Co.: *See*—
Bobe, Roy A. 2,895,669.
Findlay, Robert A. 2,895,835.
Harper, Kenneth A. 2,895,906.
Reed, Edwin E. 2,895,305.
Wood, James Q., and Andrews. 2,895,805.
Phoenix-Nähmaschinen A.G. Baer & Rempel: *See*—
Engel, Wolfgang, and Höner. 2,895,441.
Photocon Research Products: *See*—
Grinstead, Carl R. 2,896,138.
Pier Inc.: *See*—
Casey, Walter P., Jr., Cascadden, and Lawson. 2,895,810.
Pierce, Eldridge M. Thermos jug holder. 2,895,702, 7–21–59, Cl. 248—293.

Pilch, John S. Hydraulic adse. 2,895,236, 7-21-59, Cl. 37—3.
Pilkington Brothers Ltd.: See—
Jellyman, Philip E., Dickinson, and Macintosh. 2,895,260.
Pintsch Bamag Akt.: See—
Conforto, Gaetano. 2,895,304.
Pircon, Ladislav J., to A. W. Brickman, V. Conquest, F. J. Madden, W. B. Gleson, and E. T. Filbey, trustees. Method of and apparatus for thermatronic heating. 2,896,054, 7-21-59, Cl. 219—10.41.
Pirelli S.p.A.: See—
Lagil, Giuseppe. 2,895,525.
Pittalugn, Louis. Combination see-saw and merry-go-round. 2,895,734, 7-21-59, Cl. 272—30.
Pittsburgh Plate Glass Co.: See—
Bader, Alfred R., and Vogel. 2,895,844.
Gerhart, Howard L. 2,895,919.
Richardson, Ronald E. 2,895,964.
Place, Charles E. S., deceased; I. Place, P. R. Trigg, Jr., and National Bank of Detroit, co-executors. Belt having rolled grooves and recessed head to enhance uniform elongation. 2,895,368, 7-21-59, Cl. 85—1.
Place, Isobel: See—
Place, Charles E. S. 2,895,368.
Platt, John T.: See—
Bevilacqua, Patsy F., Platt, and Wenner. 2,895,927.
Plenty and Son Ltd.: See—
Shoesmith, Guy T. 2,895,423.
Pneumatic Scale Corp. Ltd.: See—
Whelan, James P. 2,895,598.
Pohlenz, Jack B., to Universal Oil Products Co. Liquid-fluid contactor. 2,895,802, 7-21-59, Cl. 23—270.5.
Pollard, Harold J., and W. A. Baker, to Bristol Aircraft Ltd. Containers for attachment to the exterior of aircraft. 2,895,635, 7-21-59, Cl. 220—5.
Pollock, Gordon J., to The H. F. Hauserman Co. Door lock. 2,895,322, 7-21-59, Cl. 70—153.
Pollock, John S., and W. R. Amann, to Eastman Kodak Co. Interchangeable mask arrangement for photographic printers. 2,895,396, 7-21-59, Cl. 95—79.
Polomski, John B.: See—
Holdeman, John W., Masko, Polomski, and Whelpley. 2,895,244.
Pomper, Anthony W., and C. J. Waechter, to John Waldron Corp. Transverse web cutting apparatus having sheet delivery mechanism using timed vacuum belts. 2,895,552, 7-21-59, Cl. 164—66.
Ponty, Howard D.: See—
Monego, Constantin J., Manning, and Ponty. 2,895,227.
Portlas, Socrates G. Fire fighting airplane. 2,895,692, 7-21-59, Cl. 244—136.
Post, Charles R. Suture-tying instrument. 2,895,478, 7-21-59, Cl. 128—334.
Postmaster General, Her Majesty's: See—
Copping, Geoffrey P., Myers, and Smith. 2,895,610.
Potter, Donald A.: See—
Fairbanks, Gordon J., Potter, and Mellett. 2,895,678.
Potthoff, William C.: See—
Jones, James B., and Potthoff. 2,895,845.
Powell, Dan, and W. J. Allsopp, to The Metal Box Co. Ltd. Reshaping of can bodies. 2,895,527, 7-21-59, Cl. 153—2.
Powell, Robert J., and J. E. Champion, to Continental Motors Corp. Fuel metering valve. 2,895,463, 7-21-59, Cl. 123—139.
Power Jets (Research and Development) Ltd.: See—
Gardiner, John A. 2,895,297.
Hodge, Ronald I. 2,895,293.
Powers, Myron J.: See—
Lamar, Melvin E., and Powers. 2,895,836.
Powers, Robert B., to L. W. Nash Co. Electromagnet controls for sheet handlers. 2,895,733, 7-21-59, Cl. 271—18.
Powers-Samas Accounting Machines Ltd.: See—
Lambert, Donald R. 2,895,410.
Prather, John B. Water power heater or cooler for nursing bottles. 2,895,718, 7-21-59, Cl. 257—74.
Preuss, Charles M., to Life-Long Aluminum Awning Co., Inc. Awning construction. 2,895,185, 7-21-59, Cl. 20—57.5.
Pressed Steel Co. Ltd.: See—
Jones, Stanley O. 2,895,224.
Price, Charles C., to Hercules Powder Co. Preparation of enotane polymers. 2,895,921, 7-21-59, Cl. 260—2.
Price, Edgar E., ½o to J. R. Forman and ½o to D. C. Glassie. Stereo-optical system. 2,895,374, 7-21-59, Cl. 88—16.6.
Price, Robert J. Blocking oscillator. 2,896,080, 7-21-59, Cl. 250—27.
Procter & Gamble Co., The: See—
Milenkovich, Joseph A., and Henjum. 2,895,916.
Production Metal Stamping Co.: See—
Hamann, Harry L. 2,895,370.
Preto, International Hygienic Food Co.: See—
Zacharia, Tewfic. 2,895,831.
Prunean, Pierre M. Magnetic circuits for stationary electrical induction apparatus. 2,896,182, 7-21-59, Cl. 336—234.
Pugsley, Donald J. D., to Pye Ltd. Waveform generators. 2,896,092, 7-21-59, Cl. 307—88.5.
Puts, Frank A., to McGraw-Edison Co. Seal of bushing to casing of electrical apparatus. 2,896,006, 7-21-59, Cl. 174—50.56.
Pye Ltd.: See—
Pugsley, Donald J. D. 2,896,092.
Quaker Chemical Products Corp.: See—
Kress, Bernard H. 2,895,923.
Quartz & Silice S.A.: See—
George, Henri J. C. 2,895,899.
Questin, Emmanuel. Lighting apparatus for dental surgeries. 2,896,066, 7-21-59, Cl. 240—1.4.
Radde, Erich M. H.: See—
Klette, Hermann. 2,895,875.
Radio Corp. of America: See—
Crane, Hewitt D. 2,896,194.
Guggi, Walter B. 2,896,115.
Kaman, Benjamin. 2,896,087.
Koren, Saul. 2,896,109.
Lin, Hung C. 2,896,029.
Mackey, Donald. 2,896,028.
Maloff, Leury G. 2,896,114.
Rhodes, Roland N., and Oakley. 2,896,018.
Thompson, Roger D. 2,896,016.
Radler, Walter D.: See—
Serfass, Earl J., and Radler. 2,896,060.
Ragsdale, Alton H. and C. M. Reclining exercise chair. 2,895,539, 7-21-59, Cl. 155—106.
Ragsdale, Claire M.: See—
Ragsdale, Alton H. and C. M. 2,895,539.
Ratsbeck, Gordon, to Bell Telephone Laboratories, Inc. Wave transmission system. 2,896,178, 7-21-59, Cl. 333—73.
Rajotte, George E. Unitary bottle support for serving trays. 2,895,602, 7-21-59, Cl. 206—72.
Ram Jet Wind Inc.: See—
Beckett, Joseph E. 2,895,259.
Ramo Wooldridge Inc.: See—
Chapman, Walter R., and Talas. 2,895,772.
Randall, David I., and E. E. Renfrew, Jr., to General Aniline & Film Corp. New chloromethylated anilides. 2,895,991, 7-21-59, Cl. 260—558.
Randolph, William B. Cooking utensil for strip food products. 2,895,406, 7-21-59, Cl. 99—341.
Rankin, Edward C., to Brock & Rankin, Inc. Loose-leaf binder. 2,895,483, 7-21-59, Cl. 129—8.
Rapids-Standard Co., Inc., The: See—
McKnight, Robert J., and Sweney. 2,895,593.
Rappaport, George, J. A. Szaruga, and J. R. Wall, to General Motors Corp. Preparation of polyurethane foam and reaction mixtures therefor. 2,895,926, 7-21-59, Cl. 260—2.5.
Rattigan, A. Frieda: See—
Rattigan, Edwin D. 2,895,709.
Rattigan, Edwin D., deceased; A. F. Rattigan, administratrix. Gate valve. 2,895,709, 7-21-59, Cl. 251—167.
Raymond Engineering Laboratory, Inc.: See—
Lipfert, Donald E. 2,895,439.
Raymond, Francois H., P. F. L. Chapouille, and J. R. Martin, to Societe d'Electronique et d'Automatisme. Electric simulators of arbitrary functions. 2,896,082, 7-21-59, Cl. 250—27.
Raytheon Co.: See—
Maloney, Henry E., and Russo. 2,896,064.
Ready, Harold R., J. M. Boyle, and C. S. Lynch, to Esso Research and Engineering Co. Metal salts of dithiophosphoric acids. 2,895,973, 7-21-59, Cl. 260—403.
Robut, Paul. Tubular conduits. 2,895,510, 7-21-59, Cl. 138—54.
Redmond, Eugene R., to Brian Jackson Associates, Inc. Process for refining blister copper. 2,895,821, 7-21-59, Cl. 75—75.
Reed, Edwin E., to Phillips Petroleum Co. LPG removal from underground storage. 2,895,305, 7-21-59, Cl. 62—54.
Reed, Frederick P., to United States of America, Army. Gas system for firearms. 2,895,382, 7-21-59, Cl. 89—191.
Reed, Herbert B., Jr., and N. N. Estes, to United States of America, Navy. Electrochemical element for automatic control. 2,896,095, 7-21-59, Cl. 307—149.
Reed, James H., III, to Dry Screen Process, Inc. Printing apparatus. 2,895,412, 7-21-59, Cl. 101—128.
Regan Forge and Engineering Co.: See—
Regan, John and L. M. 2,895,428.
Regan, John and L. M., to Regan Forge and Engineering Co. Lowering pulling tool and shatterable guide nose combination. 2,896,428, 7-21-59, Cl. 103—233.
Regan, Louis M.: See—
Regan, John and L. M. 2,895,428.
Regie Nationale des Usines Renault: See—
Peras, Lucien. 2,895,822.
Peras, Lucien. 2,895,859.
Peras, Lucien. 2,895,860.
Regley, Henri-Louis. Massaging apparatus of the ball type. 2,895,469, 7-21-59, Cl. 128—57.
Reid, James H., deceased, by M. L. Reid, administratrix. Automatic locking control. 2,895,347, 7-21-59, Cl. 74—531.
Reid, Marguerite L.: See—
Reid, James H. 2,895,347.
Reiley, George L., to The Murray Corp. of America. Laundry dryer control. 2,895,230, 7-21-59, Cl. 34—45.
Reiter, Lambert. Foot massage device. 2,895,470, 7-21-59, Cl. 128—57.
Reliance Steel Products Co.: See—
Nagin, Harold. 2,895,389.
Remington Arms Co., Inc.: See—
Mall, Arthur W., Mattson, and Ziegler. 2,895,466.
Renfrew, Edgar E., Jr.: See—
Randall, David I., and Renfrew. 2,895,991.
Research Corp.: See—
Wintermute, Harry A. 2,895,563.
Reuter, Gottfried, and H. Kordes, to Firma Klockner-Georgsmarienwerke Akt. Method of casting resilient cushioning members for wheels. 2,895,175, 7-21-59, Cl. 18—59.
Revere Corp. of America: See—
MacDonald, Dennison H. 2,896,064.
Reynolds, Coy. Method and apparatus for buffing shoe soles. 2,895,262, 7-21-59, Cl. 51—139.
Reynolds Metals Co.: See—
Evans, Lyon D. 2,895,182.
Reznek, Solomon, to Cook-Waite Laboratories, Inc. Aspirating cartridge syringe. 2,895,473, 7-21-59, Cl. 128—218.
Reznek, Solomon, to Cook-Waite Laboratories, Inc. Aspirating cartridge syringe. 2,895,474, 7-21-59, Cl. 128—218.

Rhett, Haskell S. Finger guard mechanism for jointers. 2,895,517, 7–21–59, Cl. 144—251.
Rhett, Haskell S. Shaper guard with auxiliary finger protectors. 2,895,518, 7–21–59, Cl. 144—251.
Rhodes, Roland N., and C. B. Oakley, to Radio Corp. of America. Automatic frequency control apparatus. 2,896,018, 7–21–59, Cl. 178—5.8.
Rice, Joseph: *See*—
Wright, Esmond P. G., Weir, and Rice. 2,896,019.
Richardson, John E.: *See*—
Nuttall, Hubert V., and Richardson. 2,896,091.
Richardson, John T., to Antennavision Mfg. & Engineering Co. Cable lasher. 2,895,713, 7–21–59, Cl. 254—134.3.
Richardson, Ronald E., to Pittsburgh Plate Glass Co. Glass pressing nipper rolls. 2,895,864, 7–21–59, Cl. 154—2.7.
Richterbessing, Frank H., to W. M. Cissell Mfg. Co. Garment-vent clamp. 2,895,859, 7–21–59, Cl. 224—252.
Rickert, Herbert B.: *See*—
Archer, Wesley L., Besser, and Rickert. 2,895,935.
Ridgers, Frederick G., to N. Slater Co. Ltd. Cable support. 2,895,193, 7–21–59, Cl. 24—20.
Ridgeway, Bruce. Expansion-wheel hub bearing. 2,895,771, 7–21–59, Cl. 308—236.
Riegel Paper Corp.: *See*—
Magill, Donald G., Jr. 2,895,868.
Rieke, Glenn T., to Rieke Metal Products Corp. Bail handled closure cap. 2,895,654, 7–21–59, Cl. 222—529.
Rieke Metal Products Corp.: *See*—
Rieke, Glenn T. 2,895,654.
Riester, William C., to Trico Products Corp. Windshield wiper motor transmission system. 2,895,158, 7–21–59, Cl. 15—252.
Riley Stoker Corp.: *See*—
Miller, Earle C. 2,895,436.
Ringold, Howard J., F. A. Kincl, and E. Batres, to Syntex S.A. Cyclopentanophenanthrene derivatives. 2,895,969, 7–21–59, Cl. 260—397.3.
Risk, Thomas H., to Ford Motor Co. Aluminum wheel mounting. 2,895,767, 7–21–59, Cl. 301—9.
Ritzerfeld, Gerhard: *See*—
Ritzerfeld, Wilhelm and G. 2,895,413.
Ritzerfeld, Wilhelm and G. Pressure roller support and moving means for a rotary duplicating machine. 2,895,413, 7–21–59, Cl. 101—132.5.
Robbins, Clyde F.: *See*—
Nolden, William F., and Robbins. 2,896,034.
Robbins, Leroy V., Jr., and E. J. Newchureh, to Esso Research and Engineering Co. Hydrocarbon conversion process. 2,895,900, 7–21–59, Cl. 208—72.
Robertson Photo-Mechanix, Inc.: *See*—
Blatherwick, Delbert T. 2,895,706.
Robins, A. H., Co., Inc.: *See*—
Lunsford, Carl D. 2,895,960.
Robinson, Harold A., to The Dow Chemical Co. Galvanic anode. 2,895,893, 7–21–59, Cl. 204—197.
Robinson, Ivan M.: *See*—
Brinker, Keith C., and Robinson. 2,895,948.
Robinson, Joseph N., F. J. L. Miller, and B. McDonnell, to The Consolidated Mining and Smelting Co. of Canada Ltd. Method of producing guanidine nitrate. 2,895,804, 7–21–59, Cl. 260—564.
Robinson, Paul C., and A. L. Staffieno, to Arkell and Smiths. Multiply bag with supplemental sleeve. 2,895,387, 7–21–59, Cl. 93—8.
Robison, Samuel B.: *See*—
Baldwin, Francis P., and Robison. 2,895,937.
Robison, Samuel B., and F. P. Baldwin, to Esso Research and Engineering Co. Coating fibers with modified butyl rubber. 2,895,850, 7–21–59, Cl. 117—76.
Rocha, Henrique A. F., to General Electric Co. Time base convertor. 2,895,784, 7–21–59, Cl. 346—33.
Rochefort, Leo T. Washing machine. 2,895,318, 7–21–59, Cl. 68—3.
Rochriver, Clyde R., to Automatic Enterprises, Inc. Measuring and dispensing apparatus. 2,895,652, 7–21–59, Cl. 222—442.
Roe, Walter H. G., to Aktieselskabet Kemovet. Bow milk substitute. 2,895,830, 7–21–59, Cl. 99—7.
Rogers Brothers Corp.: *See*—
Swaney, Charles E. 2,895,746.
Rogers, William J., to Eastman Kodak Co. Photographic retouching opaque. 2,895,841, 7–21–59, Cl. 106—162.
Rohm & Haas Co.: *See*—
Hwa, Jesse C. H. 2,895,925.
Rohrman, Henry F., and R. A. Butters. Supporting frame construction for display board or chalkboard. 2,895,234, 7–21–59, Cl. 35—65.
Rollie, Ada E. Safety garment structure. 2,895,471, 7–21–59, Cl. 128—133.
Roper, Charles G., E. S. Gilchrist, and H. Leckery, to Manning, Maxwell & Moore, Inc. Automatic process control system. 2,895,502, 7–21–59, Cl. 137—486.
Roschke, Erwin M.: *See*—
Drux, Walter S., and Roschke. 2,896,071.
Rosen, Leonard J., to Celanese Corp. of America. Polymeric methyl isopropenyl ketone. 2,895,942, 7–21–59, Cl. 260—45.85.
Rosenaweig, Mack, to Ameray Corp. Building constructions. 2,895,324, 7–21–59, Cl. 72—38.
Rosenthal, Fritz, to Smith, Kline & French Laboratories. Sustained release pharmaceutical product. 2,895,890, 7–21–59, Cl. 167—82.
Rosselet, Jean. Safety arming mechanism for fuses. 2,895,419, 7–21–59, Cl. 102—71.
Rostron, Frank, to Newman, Hender and Co., Ltd. Egg handling plants. 2,895,589, 7–21–59, Cl. 198—33.
Rowe Mfg. Co., Inc.: *See*—
Turner, Jack W. 2,895,582.
Rueb, Theodore O. Taper gage. 2,895,222, 7–21–59, Cl. 33—75.
Ruff, Herbert. Mounting head assembly for an electrically heated cutting tool. 2,896,059, 7–21–59, Cl. 219—21.
Ruggiero, Alfred J., to E. D. Bullard Co. Safety hat. 2,895,136, 7–21–59, Cl. 2—3.
Ruhoff, John R., G. L. Martin, and C. O. Gerfen, to Mallinckrodt Chemical Works. Process for separating values of tantalum and columbium from values of an element of group IV B. 2,895,792, 7–21–59, Cl. 23—23.
Ruhoff, John R., G. L. Martin, and C. O. Gerfen, to Mallinckrodt Chemical Works. Process for separating tantalum and columbium values. 2,895,793, 7–21–59, Cl. 23—23.
Russell, Robert G., to Owens-Corning Fiberglas Corp. Method for producing coated glass fibers. 2,895,789, 7–21–59, Cl. 18—54.
Russo, Walter L.: *See*—
Maloney, Henry B., and Russo. 2,896,064.
Rust, Noel M.: *See*—
Wright, Peter M., and Rust. 2,896,203.
Ruyle, William V., to Merck & Co., Inc. $\Delta^{7,9}$ bisnorcholadienic acids and esters thereof. 2,895,962, 7–21–59, Cl. 260—397.1.
Sabo, Stephen C., to The General Tire & Rubber Co. Air spring vulcanizing mold. 2,895,168, 7–21–59, Cl. 18—35.
Sacket Sporting Goods Co.: *See*—
Bloss, William A. 2,895,737.
Sadtler, Philip B., to Chicago Bridge & Iron Co. Method and apparatus for recompression evaporation. 2,895,546, 7–21–59, Cl. 159—24.
St. Johnston, Andrew, to International Business Machines Corp. Electronic digital computing machines. 2,895,671, 7–21–59, Cl. 235—157.
Sale, William H., to Kissing Hand Brake Co. Devices for retaining lubricant in car axle bearings. 2,895,749, 7–21–59, Cl. 286—5.
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Solomon, Ralph E. 2,895,695.
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Wilson, William J. 2,896,177.
Sanders, Grady H., to Graniteville Co. Pile cutting machine. 2,895,209, 7–21–59, Cl. 26—10.
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Holmes-Walker, William A., and Sandiford. 2,895,171.
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Steinemann, Willy. 2,895,951.
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Steinemann, Willy. 2,895,951.
Sangster, Raymond C., to Hughes Aircraft Co. Method of producing semiconductor crystal bodies. 2,895,858, 7–21–59, Cl. 148—1.5.
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Snider, Warren L., Sarno, and Liedholm. 2,895,807.
Sauer, Hans, to Comar Electric Co. Electromagnetic relay with spring loaded armature. 2,896,132, 7–21–59, Cl. 317—199.
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Sawin, Raymond R., to O. F. Mossberg & Sons, Inc. Box-type cartridge magazine. 2,895,248, 7–21–59, Cl. 42—50.
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Brooks, John W. 2,895,978.
Soifer, Oscar. Box spring with safe receptacle. 2,895,145, 7–21–59, Cl. 5—313.
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Hall, Ralph E. 2,895,435.
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Spaeth, Carl P., to Esso Research and Engineering Co. Hydrocarbon conversion process. 2,896,061, 7–21–59, Cl. 208—72.
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Schneider, Oscar: *See*—
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Schneider, Rachelle: *See*—
Spiegel, Israel and Schneider. 2,895,971.
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Schrader, Loren E., to Ironrite, Inc. Emergency release mechanism. 2,895,240, 7–21–59, Cl. 38—59.
Schrage, Frederick S., to G. D. Shawver. Sectional vehicle. 2,895,279, 7–21–59, Cl. 56—26.
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Schroeder, George F., to Sperry Rand Corp., Ford Instrument Co. Division. Correction system for mass shift in gyros. 2,895,339, 7–21–59, Cl. 74—5.47.
Schultz, Herman J., to Direct Image Offset Corp. Machine for de-embossing lithographic printing plates by pressing each plate against a rotating cylinder by axially spaced pressing rolls. 2,895,529, 7–21–59, Cl. 153—32.
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Schumpelt, Karl, to Sel-Rex Corp. Low stress electrodeposited rhodium. 2,895,890, 7–21–59, Cl. 204—47.
Schutte, Ethel M., to The Comfy Mfg. Co. Cover for cushion in upholstered furniture. 2,895,542, 7–21–59, Cl. 155—182.
Schwab, Richard L., to Westinghouse Electric Corp. Transformer cooling system control. 2,896,152, 7–21–59, Cl. 323—44.
Schwaneke, Fred C., to Dormeyer Corp. Switch. 2,896,041, 7–21–59, Cl. 200—73.
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Segal, Stanley M. Apapratus employing horizontally elongated carbon arc sources. 2,896,106, 7–21–59, Cl. 314—47.
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Seitz, Katherine B. Swimming pool cover. 2,895,143, 7–21–59, Cl. 4—172.
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Schumpelt, Karl. 2,895,890.
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De Ridder, Gysbert F., and Bryan. 2,895,895.
Fischer, Rudolph F. 2,895,962.
Fischer, Rudolph F., and Mika. 2,895,945.
Hewett, William A., Jones, and Lorensen. 2,895,915.
Johnston, Robert W. B. 2,895,903.
Kunreuther, Frederick, and Meerbott. 2,895,899.
Shokal, Edward C., and Mueller. 2,895,947.
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Stiles, Alan B. 2,895,982.
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Shotsky, Nathan, ¼ to H. Zauderer, ¼ to B. Zauderer and ¼ to D. H. Turbel. Multiple needle automatic quilting machine. 2,895,438, 7–21–59, Cl. 112—164.
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Pfäffle, Ernst. 2,895,417.
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Hefler, Steward, Isenhower, and Singer. 2,895,523.
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Copping, Geoffrey P., Myers, and Smith. 2,895,610.
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Smith, Herman E., to Goodman Mfg. Co. Flexible troughing roller assembly for belt conveyor. 2,895,594, 7–21–59, Cl. 198—192.
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Smith, Ralph H., to Owens-Illinois Glass Co. Vacuum chucks. 2,895,739, 7–21–59, Cl. 279—3.
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Brueder, Antoine. 2,895,745.
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Societe Mediterraneene Metallurgique Miniere et Commerciale: *See*—
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Societe Rhodiaceta: *See*—
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Tebb, Bernard, and C. H. Perry, to Mastabar Mining Equipment Co. Ltd. Props, especially for use in coal mines. 2,895,454, 7–21–59, Cl. 121—40.
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Bloch, Henry S. 2,895,912.
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Bloch, Henry S. 2,895,920.
Bloch, Henry S.

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Solomon, Ralph E., to Samuel Stamping & Enameling Co. Crate bottom for recessed gas and electric ovens. 2,895,695, 7-21-59, Cl. 248—119.
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Sorg, Leonard V., and J. C. Lamkin, to Standard Oil Co. Multiple stream gas analyser. 2,895,807, 7-21-59, Cl. 23—255.
Souillard, Georges J. P., to Institut Francais du Petrole des Carburants et Lubrifiants. Process for the separation of a mixture of cyclohexane and benzene. 2,896,002, 7-21-59, Cl. 260—666.
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Spevack, Jerome S. Isotope concentration system. 2,895,803 7-21-59, Cl. 23—204.
Spiegel, Israel, O. Schneider, deceased; by R. Schneider, legal representative, to Nopco Chemical Co. Removal of impurities from irradiated 7-dehydrocholesterol. 2,895,971, 7-21-59, Cl. 260—397.25.
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Steinemann, Willy, to Sandoz Ltd. (also known as Sandoz A.G.). Disazo dyestuffs and their metal complex compounds. 2,895,951, 7-21-59, Cl. 260—160.
Steinhacker, Mark A., to American Bosch Arma Corp. Servo controller. 2,896,142, 7-21-59, Cl. 318—30.
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Tann, David. Washing and drying machines. 2,896,232, 7-21-59, Cl. 34—95.
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Tavorne, Vincent. Reciprocating irrigation sprinkler system. 2,895,680, 7-21-59, Cl. 239—76.
Tavorne, Vincent. Adjustable sprinkler for lawns. 2,896,682, 7-21-59, Cl. 239—281.
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Hoffman, Robert L. 2,895,826.
Tecnifax Corp. of Holyoke, Mass.: *See*—
Hoffman, Robert L. 2,895,826.
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Hoffman, Robert L. 2,895,826.
Tecnifax Corp. of Massachusetts, Holyoke, Mass.: *See*—
Hoffman, Robert L. 2,895,826.
Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corp. of Massachusetts: *See*—
Hoffman, Robert L. 2,895,826.
Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corporation of Massachusetts: *See*—
Hoffman, Robert L. 2,895,826.
Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corporation of Massachusetts, Assignor to Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corporation of Massachusetts: *See*—
Hoffman, Robert L. 2,895,826.
Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corporation of Massachusetts, Assignor to Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corporation of Massachusetts, Assignor to Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corporation of Massachusetts: *See*—
Hoffman, Robert L. 2,895,826.
Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corporation of Massachusetts, Assignor to Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corporation of Massachusetts, Assignor to Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corporation of Massachusetts, Assignor to Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corporation of Massachusetts: *See*—
Hoffman, Robert L. 2,895,826.
Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corporation of Massachusetts, Assignor to Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corporation of Massachusetts, Assignor to Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corporation of Massachusetts, Assignor to Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corporation of Massachusetts, Assignor to Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corporation of Massachusetts: *See*—
Hoffman, Robert L. 2,895,826.
Tecnifax Corp. of Massachusetts, Holyoke, Mass., a Corporation of Massachusetts, Assignor to

Tebb, Bernard, and C. H. Perry, to Mastabar Mining Equipment Co. Ltd. Props, especially for use in coal mines. 2,895,454, 7-21-59, Cl. 121—40.
Teibel, Martin J.: *See*—
Wegnum, James N., Teibel, and W. S. Wegnum. 2,895,289.
Tennant, John E., and R. H. Hair. Fluid metering and timing device. 2,895,464, 7-21-59, Cl. 123—139.
Terrell, Aubrey H.: *See*—
Le Brun, George K., and Terrell. 2,895,565.
Terrell, Basil J., to Parsons and Marine Engineering Turbine Research and Development Assn. Control system for gas turbine installations. 2,895,294, 7-21-59, Cl. 60—39.16.
Terry, Arthur, III. Centrifugal powder clutches. 2,895,579, 7-21-59, Cl. 192—58.
Terry, Victor J., R. and P. S. Kelly, and W. D. Cragg, to International Standard Electric Corp. Generator regulated power supply equipment. 2,896,148, 7-21-59, Cl. 322—24.
Texaco Inc.: *See*—
Beavon, David K. 2,895,908.
Vander Ploeg, Alfred R. 2,895,898.
Texas Gulf Sulphur Co.: *See*—
Hill, Cyril T. 2,895,796.
Hill, Cyril T. 2,895,797.
Texas Instruments Inc.: *See*—
Toomey, Eugene J. 2,896,024.
Textile Marking Machine Co., Inc.: *See*—
Filsinger, Jamieson A., and Braun. 2,895,388.
Thomae, Dr. Karl, G.m.b.H.: *See*—
Ohnacker, Gerhard, and Kottler. 2,895,902.
Thomas, Donald E., to Bell Telephone Laboratories, Inc. Transistor characteristic curve tracers. 2,896,168, 7-21-59, Cl. 324—158.
Thomas, Ralph B., to Sylvania Electric Products Inc. Lamp base. 2,896,127, 7-21-59, Cl. 339—145.
Thomas, Walter M., to American Cyanamid Co. Copolymers of acrylonitrile. 2,895,949, 7-21-59, Cl. 260—80.5.
Thompson, Harold D. Shelving unit. 2,895,620, 7-21-59, Cl. 211—148.
Thompson, James R.: *See*—
Sizemore, Clarence B., and Thompson. 2,896,039.
Thompson Products, Inc.: *See*—
Gair, Albert W. 2,895,756.
Thompson, Richard F.: *See*—
Ives, Andrew M., and Thompson. 2,895,975.
Thompson, Roger D., to Radio Corp. of America. Color image reproducing apparatus. 2,896,016, 7-21-59, Cl. 178—5.4.
Thorne, Curtis B., R. D. Housewright, and C. G. Leonard. Production of glutamyl polypeptide by bacillus subtilis. 2,895,882, 7-21-59, Cl. 195—96.
Thumm, Byron A.: *See*—
Howsmon, John A., and Thumm. 2,895,788.
Tibbetts, Raymond O. Fishing lure. 2,895,252, 7-21-59, Cl. 43—42.5.
Ticknor, William C., to Federal-Mogul-Bower Bearings, Inc. Flexible hose. 2,895,509, 7-21-59, Cl. 138—49.
Tippmann, Gerhard: *See*—
Guldner, Harry, and Tippmann. 2,895,585.
Toland, Wayne G., to International Harvester Co. Replaceable cultivator point. 2,895,559, 7-21-59, Cl. 172—762.
Toledo Scale Corp.: *See*—
Maurice, Clayton H., Jr. 2,895,415.
Moring, Walter G., Jr., and Gray. 2,895,337.
Williams, Lawrence S. 2,895,726.
Toler, Otis R. Dispensing and display rack for coiled merchandise. 2,895,691, 7-21-59, Cl. 242—85.
Tomlinson, Henry R. Remote-operated fuse. 2,896,050, 7-21-59, Cl. 200—113.
Tompkins, Howard E., to Burroughs Corp. Transistor actuated device. 2,896,130, 7-21-59, Cl. 317—148.5.
Toomey, Eugene J., to Texas Instruments Inc. Hearing-aid having directional reception characteristics. 2,896,024, 7-21-59, Cl. 179—107.
Topf, Sam B., to Concord Supplies and Equipment Corp. Grain storage bag. 2,895,400, 7-21-59, Cl. 28—55.
Totten, John A., to Industrial Vendors, Inc. Coffee brewing apparatus. 2,895,402, 7-21-59, Cl. 99—289.
Tramontini, Vernon N., and J. F. Wein, to Stewart-Warner Corp. Constant pressure liquid pump. 2,895,424, 7-21-59, Cl. 103—150.
Treitel, Henry D.: *See*—
Bakke, Hans A., and Treitel. 2,895,637.
Trico Products Corp.: *See*—
Riester, William C. 2,895,158.
Trigg, Paul R., Jr.: *See*—
Place, Charles E. S. 2,895,368.
Truxall, Ephraim J., Sr. Boat loading device for boat trailers. 2,895,629, 7-21-59, Cl. 214—506.
Tucker, Harold, to The B. F. Goodrich Co. Ozone inhibitors. 2,895,940, 7-21-59, Cl. 260—45.9.
Tuppy, Hans. Synthesis of furoquinoline derivatives. 2,895,956, 7-21-59, Cl. 260—289.
Turco Products, Inc.: *See*—
Langsfeld, William P. 2,895,506.
Perry, Frank R. 2,895,562.
Turkel, David H.: *See*—
Shotsky, Nathan. 2,895,438.
Turko Products, Inc.: *See*—
Clark, Francis E. 2,895,814.
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Twin Martin Corp.: *See*—
Wegnum, James N., Teibel, and W. S. Wegnum. 2,895,289.
Tyczkowski, Edward A., to Allied Chemical Corp. Production of carbon tetrafluoride. 2,895,998, 7-21-59, Cl. 260—653.8.
Uarco Inc.: *See*—
Steidinger, Donald J. 2,896,534.
Underwood, Joseph C.: *See*—
Willits, Charles O., Underwood, and Lento. 2,895,833.
Union Asbestos & Rubber Co.: *See*—
Franks, Norvin H. 2,896,186.
Union Carbide Corp.: *See*—
Bailey, Donald L., and York. 2,895,853.
Union Oil Co. of California: *See*—
Bewley, William L., Hotz, and Switzer. 2,895,865.
Deering, Roland F., and Wilkinson. 2,896,887.
Krueger, Roland F., and Vogel. 2,895,554.
Switzer, Robert L. 2,895,884.
United Aircraft Corp.: *See*—
Atticks, John K. 2,895,173.
Laskin, Carl. 2,896,101.
United-Carr Fastener Corp.: *See*—
Jones, Walter I. 2,895,190.
United Shoe Machinery Corp.: *See*—
Bentley, Alfred M., Garratt, and Smith. 2,895,205.
United States of America
Agriculture: *See*—
Ault, Waldo C., and Feuge. 2,895,966.
Emerson, Oliver H., and Bickoff. 2,895,964.
Lazar, Melvin E., and Powers. 2,895,836.
O'Connell, Richard A. 2,895,286.
Wall, Monroe E., and Kenney. 2,895,958.
Willits, Charles O., Underwood, and Lento. 2,895,833.
Army: *See*—
Battersby, Lyle R. 2,896,030.
Cacheris, John C., and Dropkin. 2,896,172.
Hayhurst, Thomas S. 2,895,342.
Monego, Constantin J., Manning, and Ponty. 2,895,327.
Musser, C Walton. 2,895,281.
Reed, Frederick P. 2,895,283.
Atomic Energy Commission: *See*—
Blanco, Raymond E. 2,895,798.
Perlman, Morris L., Lipkin, and Weissman. 2,895,849.
Sheldon, Zachary D., and Haendler. 2,895,806.
Van Winkle, Quentin. 2,895,791.
Navy: *See*—
Cooney, George R. 2,896,173.
Kettler, Alfred H. 2,896,026.
List, William F. 2,896,113.
Reed, Herbert B., Jr., and Estes. 2,896,095.
United States Steel Corp.: *See*—
Hong, Toany. 2,895,856.
Sizemore, Clarence B., and Thompson. 2,896,039.
Universal Oil Products Co.: *See*—
Pohlenz, Jack B. 2,895,809.
Schmerling, Louis, and Luvisi. 2,895,997.
Universal Winding Co.: *See*—
Hilbert, Richard G. 2,895,285.
Upjohn Co., The: *See*—
Aspergren, Brooke D., and Moffett. 2,895,957.
Upton, Ralph M., and C. D. Van Patten. Marine propulsion unit. 2,895,446, 7-21-59, Cl. 115—34.
Urbain, Leon F., and M. P. Glowacki; said Glowacki assor. to said Urbain. Construction shim. 2,895,704, 7-21-59, Cl. 248—354.
Urban, Wilbur J., to Hub Stamping and Mfg. Co. Table leg support bracket. 2,895,777, 7-21-59, Cl. 311—104.
Urbanowicz, Edward A., to The Standard Oil Co. Crane construction. 2,895,623, 7-21-59, Cl. 212—59.
VEB Buchungsmaschinenwerk Karl-Marx-Stadt: *See*—
Guldner, Harry, and Tippmann. 2,895,585.
Vallee, Wendell L.: *See*—
Stovern, Ingram V., and Vallee. 2,895,712.
Vanadium Corp. of America: *See*—
Vesper, Roland G. 2,896,836.
Vanderbur, John E., Jr.: *See*—
Conrad, Harold L., and Vanderbur. 2,895,759.
Van Denberg, Thomas F.: *See*—
Dorsak, John W., and Van Denberg. 2,895,760.
Van der Lely, C., N.V.: *See*—
Van der Lely, Cornelis and A. 2,895,855.
Van der Lely, C., N.V.: *See*—
Van der Lely, Cornelis and A. 2,895,855.
Van der Lely, Cornelis and A., to C. Van der Lely, N.V. Raking implement. 2,895,856, 7-21-59, Cl. 56—377.
Vander Ploeg, Alfred R., to Texaco Inc. Fluid contact coking in the presence of hydrogen produced by dehydrogenation of product gases. 2,895,896, 7-21-59, Cl. 208—53.
Van Dyke, Orien W., to Magnet Cove Barium Corp. Drilling fluid. 2,895,911, 7-21-59, Cl. 252—8.5.
Van Kekem, Else E., to Combinatie N.V. En Amsterdamsche Bandoengsche & Nederlandsche Kinafabriek. Machine for stamping small objects. 2,895,409, 7-21-59, Cl. 101—44.
Van Marle, Frederick, to N.V. Technische Maatschappij Marchand-Andriessen. Mail facing machine. 2,895,588, 7-21-59, Cl. 198—33.
Van Norman Industries, Inc.: *See*—
Axelrod, Albert. 2,896,189.
Van Patten, Charles D.: *See*—
Upton, Ralph M., and Van Patten. 2,895,446.
Van Winkle, Quentin, to United States of America, Atomic Energy Commission. Separation process for protactinium and compounds thereof. 2,895,791, 7-21-59, Cl. 23—14.5.
Varner, Donald E., to Industrial Nucleonics Corp. Electrolytic plating apparatus and process. 2,895,898, 7-21-59, Cl. 204—28.
Vaughan, Robert A.: *See*—
Smith, Robert W., and Vaughan. 2,895,568.
Veltri, Paul A. Adjustable fence section. 2,895,716, 7-21-59, Cl. 256—23.
Vesper, Roland G., to Vanadium Corp. of America. Device for sampling flowable material. 2,895,336, 7-21-59, Cl. 73—424.
Vickers-Armstrongs (Engineers) Ltd.: *See*—
Forsyth, George H., Wood, and Stevens. 2,895,512.

Vickers Inc.: *See*—
Hudson, George A. 2,895,427.
Vines, Oscar L., to Continental Paper Co. Carton. 2,895,662, 7-21-59, Cl. 229—28.
Vogel, Henry A.: *See*—
Bader, Alfred E., and Vogel. 2,895,844.
Vogel, Lee C.: *See*—
Krueger, Roland F., and Vogel. 2,895,554.
Vogl, Georg: *See*—
Tacklind, Sven M., and Vogl. 2,895,372.
Vondran, Daniel J., to Webcor, Inc. Motor speed changer. 2,895,341, 7-21-59, Cl. 74—199.
Von Rabenau, Manuel. Writing doll. 2,895,258, 7-21-59, Cl. 46—119.
Vosbikian, Peter S. and T. S. Mops with replaceable mop heads and extractor mechanism. 2,895,152, 7-21-59, Cl. 15—116.
Vosbikian, Thomas S.: *See*—
Vosbikian, Peter S. and T. S. 2,895,152.
Vossen, Edward, to Stop Motion Devices Corp. Electric switch. 2,896,037, 7-21-59, Cl. 200—51.
Vyskumny a skusobni letecky ustav: *See*—
Kloud, Jan. 2,895,316.
Wade, Worth, to American Viscose Corp. Apparatus for recovering waste coated fibers. 2,895,176, 7-21-59, Cl. 19—66.
Waechter, Charles J.: *See*—
Pomper, Anthony W., and Waechter. 2,895,552.
Wagner, Erich, and F. A. Walder, to W. Ferd Klingelnberg Sohne. Machine for the testing of hobs. 2,895,227, 7-21-59. Cl. 33—179.5.
Wahl, Ottmar: *See*—
Pels, Willibald, Burgardt, and Wahl. 2,895,825.
Waite, Harry T., Jr., and P. D. Merrill, to M. B. Skinner Co. Valved T-fitting. 2,895,498, 7-21-59, Cl. 137—220.
Wald Industries, Inc.: *See*—
Wald, John R., Jr., and Wilson. 2,895,647.
Wald, John R., Jr., and R. W. Wilson, to Wald Industries, Inc. Highway marking apparatus and method. 2,895,647, 7-21-59, Cl. 222—189.
Walder, Dilys A.: *See*—
Kairys, Stepas, Meade, Munns, and Walder. 2,895,976.
Walder, Friedrich A.: *See*—
Wagner, Erich, and Walder. 2,895,227.
Waldes Kohinoor, Inc.: *See*—
Erdmann, Hans. 2,895,214.
Erdmann, Hans. 2,895,616.
Wursel, Hugo. 2,895,754.
Waldorf Paper Products Co.: *See*—
Morgenthaler, Edward C. 2,895,696.
Waldron, John, Corp.: *See*—
Pomper, Anthony W., and Waechter. 2,895,552.
Walker, Charles R.: *See*—
Goodman, Charles J., and Walker. 2,896,020.
Walker, John R.: *See*—
Hope, Robert A., and Walker. 2,895,181.
Wall, James R.: *See*—
Rappaport, George, Suaruga, and Wall. 2,896,926.
Wall, Monroe E., and H. E. Kenney, to United States of America, Agriculture. Process for purification of partially hydrolysed steroidal saponins. 2,895,952, 7-21-59, Cl. 260—210.5.
Wallin, Francis T. Neck seal. 2,895,467, 7-21-59, Cl. 128—30.
Walther, Frederick C.: *See*—
Himka, John, and Walther. 2,895,764.
Walworth Co.: *See*—
Bryant, Austin U. 2,895,495.
Washabaugh, Edward P., to American-Marietta Co. Method of constructing tunnels. 2,895,299, 7-21-59, Cl. 61—45.
Washburn Co., The: *See*—
Glenny, Clarence S. 2,895,408.
Weaver, Lyman J.: *See*—
Cox, George B. 2,895,363.
Webber, Claude H., to Mueller Co. Mechanism for controlling the flow of fluids under pressure. 2,895,353, 7-21-59, Cl. 77—41.
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Weber, Robert J. Tie holder. 2,895,521, 7-21-59, Cl. 150—1.
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Webster, Robert A. 2,896,159.
Webster, Robert A., to Webster Instrument, Inc. Method and apparatus for measuring electrical resistance. 2,896,159, 7-21-59, Cl. 324—64.
Wehrely, Karl, to Leitbare fur Erfindungswesen. Transmission system for automotive agricultural vehicles and the like. 2,895,349, 7-21-59, Cl. 74—745.
Weidenhammer, James: *See*—
Hieberson, John E., Page, and Weidenhammer. 2,895,594.
Weiland, Alfred. Carburetors for internal combustion engines. 2,895,723, 7-21-59, Cl. 261—44.
Wein, John F.: *See*—
Tramontini, Vernon N., and Wein. 2,895,424.
Weingins, Israel. Cutting device for teeth of saws, files and the like. 2,895,350, 7-21-59, Cl. 76—31.
Weir, Donald A.: *See*—
Wright, Esmond P. G., Weir, and Rice. 2,896,019.
Weisenberger, Adam A., to Sentinel Signal Corp. Tire curing sentinel system. 2,896,197, 7-21-59, Cl. 340—267.
Weisgerber, George A., and J. O. Smith, Jr., to Esso Research and Engineering Co. Stabilized fuel oil compositions. 2,895,815, 7-21-59, Cl. 44—68.
Weissman, Sam I.: *See*—
Perlman, Morris L., Lipkin, and Weissman. 2,895,849.
Welch, Medard W. Coordinated news and map display device. 2,895,233, 7-21-59, Cl. 35—40.
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Wentworth, Joseph T., to General Motors Corp. Fuel and exhaust gas combustion control of an internal combustion engine. 2,895,292, 7-21-59, Cl. 60—39.
Werner, Albert. Incinerator construction. 2,895,434, 7-21-59, Cl. 110—18.
Wernig, James H., to General Motors Corp. Vehicle body structure. 2,895,763, 7-21-59, Cl. 296—28.
Weseh, Ludwig, to Eltro G.m.b.H. & Co. Vehicular warning system. 2,896,089, 7-21-59, Cl. 250—215.
Western Carbide Corp.: *See*—
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Western Electric Co., Inc.: *See*—
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Dvorak, Howard A. 2,895,682.
Heidergott, Harry W. 2,896,183.
Western Piping & Engineering Co., Inc.: *See*—
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Westinghouse Electric Corp.: *See*—
Castruccio, Peter A., and Woolfson. 2,896,093.
Haller, Clayton L. 2,896,052.
Lempert, Joseph. 2,896,068.
Lowry, Lewis R., Jr., and Ernsberger. 2,896,149.
Schwab, Richard L. 2,896,152.
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Janssen, Arthur A. 2,896,025.
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Whelpley, Gordon E.: *See*—
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White, Edgar E. Toothpick dispenser. 2,895,639, 7-21-59, Cl. 221—224.
White, Leslie E.: *See*—
Newton, Charles L., and White. 2,895,734.
Whitmoyer Laboratories, Inc.: *See*—
Lux, Russell E., and Brubaker. 2,895,874.
Whitson, Walter F.: *See*—
Beverly, Henry W., Whitson, and Yana. 2,895,271.
Wickman, Helmer W.: *See*—
Hendrickson, Severin B., and Wickman. 2,895,632.
Wiggins, Alpha M., to Electro-Voice, Inc. Higher order pressure gradient microphone system having adjustable polar response pattern. 2,896,189, 7-21-59, Cl. 340—6.
Wight, Leland W., to General Railway Signal Co. Dragging equipment detecting system for railroads. 2,896,069, 7-21-59, Cl. 246—169.
Wiklund, Carl H., to Airequipt Mfg. Co., Inc. Adapter frame. 2,895,242, 7-21-59, Cl. 40—68.
Wilcox, Clinton S.: *See*—
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Miller, Charles F., and Lyster. 2,895,317.
Wilkinson, Herbert F.: *See*—
Deering, Roland F., and Wilkinson. 2,895,887.
Willey, George L., and P. Hey. Quaternary ammonium salts of dialkylaminoalkyl phenyl ethers. 2,895,995, 7-21-59, Cl. 260—567.6.
Williams, David J., and K. H. Westley, to Ericsson Telephones Ltd. Discharge devices for electronic counting and like purposes. 2,896,118, 7-21-59, Cl. 315—84.6.
Williams, Frederic C., to National Research Development Corp. Transistor binary adder. 2,895,673, 7-21-59, Cl. 235—164.
Williams, Lawrence S., to Toledo Scale Corp. Ball bearing scale pivots. 2,895,726, 7-21-59, Cl. 265—27.
Willits, Charles O., J. C. Underwood, and H. G. Lento, to United States of America, Agriculture. Process for making maple product of intensified maple flavor. 2,895,835, 7-21-59, Cl. 99—142.
Willsey, Charles H. Egg cracking mechanism. 2,895,587, 7-21-59, Cl. 198—27.
Wil-Mat Corp.: *See*—
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Wilson, Charles D., to Allis-Chalmers Mfg. Co. Inlet valve supporting and actuating mechanism for elastic fluid turbines. 2,895,491, 7-21-59, Cl. 137—85.
Wilson, Harry W. Self-palletised package. 2,895,606, 7-21-59, Cl. 206—56.
Wilson, Harry W. Method of packaging K.D.F. cartons. 2,896,207, 7-21-59, Cl. 53—3.
Wilson, Lewis E. Multiple screen drive-in theater. 2,896,178, 7-21-59, Cl. 20—1.12.
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Wintermute, Harry A., to Research Corp. Electrical precipitator. 2,895,563, 7-21-59, Cl. 183—7.
Winz, Karl, to G. M. Pfaff A.G. Thread-controlled contact device for power driven sewing machines. 2,895,440, 7-21-59, Cl. 112—219.
Wise, Lester V., A. Mann, and G. Buergel, to Bulova Research and Development Laboratories, Inc. Automatic crystal measuring and sorting apparatus. 2,895,612, 7-21-59, Cl. 209—111.
Wish, Frank W.: *See*—
Seiberling, Dale A., and Wish. 2,895,668.

Wittel, Otto, to Eastman Kodak Co. Film pitch compensating mechanism for photographic apparatus. 2,895,375, 7–21–59, Cl. 88—17.
Wittmoser, Adalbert, to Firma Eisenwerke Gelsenkirchen Akt. Continuous casting apparatus. 2,895,188, 7–21–59, Cl. 22—57.2.
Wognum, James N., M. J. Teibel, and W. S. Wognum, to Twin Martin Corp. Chain link removing tool. 2,895,289, 7–21–59, Cl. 59—7.
Wognum, Willis S.: *See*—
Wognum, James N., Teibel, and Wognum. 2,895,289.
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Wood, George: *See*—
Forsyth, George H., Wood, and Stevens. 2,895,512.
Wood, James Q., and A. J. Andrews, to Phillips Petroleum Co. Controlling feedstock temperature in combustion process. 2,895,805, 7–21–59, Cl. 23—209.6.
Woolfson, Martin G.: *See*—
Castruccio, Peter A., and Woolfson. 2,896,093.
Wooten, Spencer D., Jr., to Home Music Systems, Inc. Intercommunication system. 2,896,022, 7–21–59, Cl. 179—1.
Worcester Valve Co., Inc.: *See*—
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Reg. No. 462,720 (COLONAID), T. D. Allen, Laxatives, filed May 19, 1959, D. C., W.D.S.C. (Greenville), Doc. 402/720 1959, D.C., N.D. Ga. (Atlanta), Doc. 6848, *Mead Johnson &*

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

July 21, 1959 Volume 744 Number 3

TRADEMARKS

NOTICES

Service by Publication

A petition to cancel each of the registrations identified below having been filed, and the notice of such proceedings sent by registered mail to each registrant at the last known address having been returned by the Post Office as undeliverable, notice is hereby given that unless the registrants listed herein, their assigns or legal representatives, shall enter an appearance within thirty days from the date of this publication, the cancelation will be proceeded with as in the case of default.

Howard Clarence Gibson (assignee of Viking Boat Corporation), Tallahassee, Fla., Reg. No. 622,065, Canc. No. 7242.

Jack J. Gottlieb, Philadelphia, Pa., Reg. No. 443,331, Canc. No. 7279.

Duplex Automatic Appliance Corp., Evanston, Ill., Reg. No. 633,589, Canc. No. 7281.

DAPHNE LEEDS,
Assistant Commissioner of Patents.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 75,265 (ALLIGATOR BRAND), Ferguson Waterproof Co. (The Alligator Co.), Oiled clothing; **Reg. No. 251,991** (ALLIGATOR), The Alligator Co., Coats, jackets, pants, hats, and caps for men, women and children, etc., filed Feb. 10, 1959, D.C., S.D.N.Y., Doc. 143/5, *Alligator Co. and David Crystal, Inc.* v. *Kandahar Sportswear Co., Inc.* Consent judgment, defendants enjoined May 20, 1959. Same, filed Mar. 11, 1959, same, Doc. 143/395, *The Alligator Co. and David Crystal* v. *Cortley Shirt Co., Inc.* Decree as above.

Reg. No. 112,291 (LIBBY'S), Libby, McNeil and Libby, Canned meats, sausage, soups and boneless chicken; **Reg. No. 122,012**, same, Canned meats, poultry, fish, soup, fruits, berries, vegetables, mayonnaise, etc.; **Reg. No. 176,868**, same; **Reg. No. 186,882**, same; **Reg. No. 232,742** (LIBBY'S AND RECTANGULAR OUTLINE DESIGN), same, Canned fruits and berries, filed Dec. 29, 1955, D.C., S.D.N.Y., Doc. 106/41, *Libby, McNeil and Libby* v. *Alfred Heller, doing business as Products Import and Export Co.* Judgment by consent, defendants enjoined May 20, 1959.

Reg. No. 122,012. (See Reg. No. 112,291.)

Reg. No. 182,677 (GALVANUM), Vita Var Corp., Paint for galvanized iron, filed May 12, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c775, *Vita Var Corp.* v. *Rust-Oleum Corp.*

Reg. No. 178,709 (MICKEY), John C. Michael Co., Inc., Women's, misses' and children's wash dresses and aprons, filed Jan. 6, 1956, D.C., S.D.N.Y., Doc. 106/113, *Roberts Manufacturing Co., Inc.* v. *All Metal Products Co., Inc.* Stipulation and order of dismissal May 19, 1959.

Reg. No. 176,868. (See Reg. No. 112,291.)

Reg. No. 199,218 (GULISTAN), A. & M. Karagheusian, Inc., Carpets and textile rugs, filed May 19, 1959, D.C., S.D.N.Y., Doc. 146/196, *A. & M. Karagheusian, Inc.* v. *Couristan, Inc., doing business as Couri-Murad & Co.*

Reg. No. 186,882. (See Reg. No. 112,291.)

Reg. No. 232,742. (See Reg. No. 112,291.)

Reg. No. 251,991. (See Reg. No. 75,265.)

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1959

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	10,387
Date of oldest new application	Nov. 8, 1958
Date of oldest amended application	Jan. 8, 1959

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION

	Oldest Application	
	New	Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 16, 19, 21, 23, 24, 25, 26, 30, 31, 32, 33, 34, 35, 36, 44, 50	1-13-59	2-16-59
(II) R. F. SHRYOCK, Classes 6, 18, 27, 28, 48, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks Class 200	12-24-58	2-1-59
(III) K. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 20, 22, 29, 37, 38, 39, 40, 41, 42, 43, 45, 47, 48, 49, 52; and Certification Marks	11-3-58	1-6-59
Renewals (All Classes)	4-30-59	5-25-59
Sec. 12 (c) Publications (All Classes)	5-4-59	5-4-59

Applications filed during the month of May 1959—2,129

Registrations Issued	335—No. 682,010 to No. 682,344
Renewals Issued	83

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

Reg. No. 402,720 (COLONAID), T. D. Allen, Laxatives, filed May 19, 1959, D. C., W.D.S.C. (Greenville), Doc. 402/720, *Carter Products, Inc.* v. *Joseph E. Shaw, Jr., doing business as Lamont Laboratories.*

Reg. No. 411,898 (DOFAN WITH DESIGN), Parisian Handbag Co., Inc., Ladies' handbags; **Reg. No. 435,727**, same, Leathers, filed Jan. 21, 1957, D.C., S.D.N.Y., Doc. 116/311, *Dofan Handbag Co., Inc.* v. *Francis Milch, doing business as Dolphin Bag Co.* Defendants enjoined May 4, 1959.

Reg. No. 435,727. (See Reg. No. 411,898.)

Reg. No. 531,806 (TRI-VI-SOL), Mead Johnson and Co., Liquid vitamin preparation containing vitamins A, D and C; **Reg. No. 532,894**, same, Liquid dietary preparation containing vitamins A, D and C, in water dispersible form, for addition to milk formulas and other foods; **Reg. No. 536,612** (POLY-VI-SOL), same, Liquid vitamin preparation containing vitamins A, D, C, thiamine, riboflavin, and niacinamide; **Reg. No. 543,616**, same; **Reg. No. 595,698** (CE-VI-SOL), same, Liquid vitamin preparation containing ascorbic acid; **Reg. No. 595,948**, same, Liquid dietary preparation containing ascorbic acid in water dispersible form, for addition to milk formulas and other water-containing vehicles; **Reg. No. 622,989** (DECA-VI-SOL), same, Liquid vitamin preparation, filed May 13, 1959, D.C., N.D. Ga. (Atlanta), Doc. 6848, *Mead Johnson & Co.* v. *Reid Laboratories, Inc.*

Reg. No. 532,894. (See Reg. No. 531,806.)

Reg. No. 536,612. (See Reg. No. 531,806.)

Reg. No. 543,616. (See Reg. No. 531,806.)

Reg. No. 576,669 (GAR WOOD), Gar Wood Industries, Inc., Truck and trailer bodies and tank bodies for carrying liquids, filed May 6, 1959, D.C., N.D. Ind. (Hammond), Doc. 2575, *Gar Wood Industries, Inc.* v. *Garwood Homes, Inc.*

Reg. No. 595,698. (See Reg. No. 531,806.)

Reg. No. 595,948. (See Reg. No. 531,806.)

Reg. No. 621,989 (ALSAR), Alsar Distributors, Inc., Baked enamel aluminum lap siding, filed Apr. 1, 1959, D.C., S.D. Calif. (Los Angeles), Doc. 302/59, *Alsar Manufacturers, Inc.* v. *Edward A. Ross, et al.* Consent judgment, trademark valid and infringed, injunction granted (notice May 4, 1959).

Reg. No. 622,989. (See Reg. No. 531,806.)

Reg. No. 649,282 (TEX GAS), Tex Gas, Inc., Liquified petroleum gases, particularly to liquify petroleum gases in sealed containers, filed May 18, 1959, D.C., N.D. Okla. (Tulsa), Doc. 4636, *Tex-Gas, Inc.* v. *Texas Natural Gasoline Corporation.*

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 46,326. Macco Corporation, Reno, Nev. Filed Feb. 21, 1958.

The drawing is lined for orange and green.
For Liquid Drilling Mud and Additives, Including Clays, Weighting Materials, Fluid-Loss Reducing Agents, Viscosity Treating Agents, Lost Circulation Materials and Special Materials for Formulation and Treatment of Drilling Muds Used in Drilling Oil Wells.
First use Jan. 1, 1949.

SN 50,040. Eagle Ottawa Leather Company, Grand Haven, Mich. Filed Apr. 21, 1958.

MICHIPAC

For Leather.
First use Apr. 1, 1958.

SN 51,893. The General Tire & Rubber Company, Akron, Ohio. Filed May 19, 1958.

Bolta **thane**

Owner of Reg. Nos. 348,184, 585,004, and others.
For Plastic Sold Only in Molded and Extruded Articles.
First use Jan. 10, 1958.

SN 64,194. Plains Seed Company, Inc., Lubbock, Tex. Filed Dec. 12, 1958.

STRETCH-R

For Delinted Cottonseed.
First use on Mar. 5, 1950.

SN 65,339. Howard F. Travers, d.b.a. Travelon Products Company, Rochester, N.Y. Filed Jan. 5, 1958.

ETI-KAT

For Sanitary, Absorbent Material for Use in Cat Boxes, Dog Pens, Bird Cages, Etc., for Receiving Animal Excretions.
First use Mar. 6, 1956.

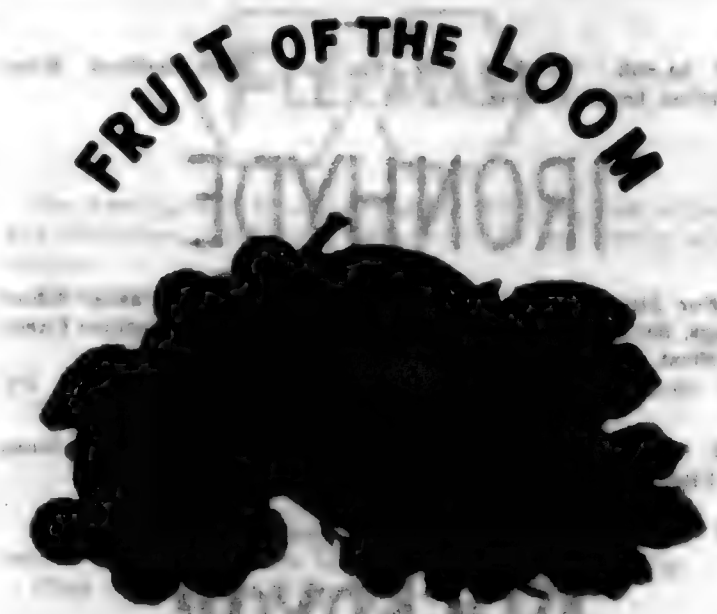
Class 2—Receptacles

SN 41,087. Clarence M. Mersbach, Grand Haven, Mich. Filed Nov. 20, 1957.

JIFFY TR-ASH TRAY

The words "Tr-ash Tray" are disclaimed apart from the mark.
For Collapsible, Moisture-Proof, Paperboard Base Receptacle.
First use Apr. 27, 1957.

SN 55,776. Fruit of the Loom, Inc., Providence, R.I. Filed July 23, 1958.



Owner of Reg. Nos. 124,730 and 592,254.
For Plastic Garment Bags, Blanket Bags, Shoe Bags, Shirt Bags, Sweater Bags, Bread Bags, Lettuce Bags, Food Bags.
First use Aug. 13, 1947.

SN 60,220. David B. Greenberg, d.b.a. Seal-All Co., Philadelphia, Pa. Filed Oct. 7, 1958.

"SEAL-ALL"

For Transparent Sheets Which Are Adhered Together To Form a Sealed Envelope for Protecting Documents.
First use on or about Sept. 2, 1958.

SN 61,688. Bemis Bro. Bag Company, St. Louis, Mo. Filed Oct. 31, 1958.

The mark consists of a line of fanciful design, having two smaller lines on each side also of fanciful design, the

Class 7—Cordage

Class 10—Fertilizers

whole forming a band vertically of the bag. The drawing is lined for red and blue, but the mark is not limited to a specific color scheme.
For Bags.
First use in 1908.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 57,335. Bond Street Ltd., New York, N.Y. Filed Aug. 18, 1958.

TWO-FOLD

For Combined Handbag, Purse and Cosmetic Bag.
First use Mar. 4, 1957.

SN 63,883. Protection Equipment Co., Sunbury, Pa. Filed Dec. 8, 1958.

ANIGUARD

For Treatment and Protective Pads for Animals.
First use Nov. 4, 1958.

SN 64,858. Winfield Mfg. Co. Inc., New Bedford, Mass. Filed Dec. 23, 1958.

IRONHYDE

For Zipper Ring Binders, Brief Bags, Brief Cases, School Bags, Ring Binders, Club Bags, Utility Kits, Underarm Cases.
First use Aug. 26, 1953.

SN 64,854. Winfield Mfg. Co. Inc., New Bedford, Mass. Filed Dec. 23, 1958.

Rockhyde

For Zipper Ring Binders, Brief Bags, Brief Cases, School Bags, Ring Binders, Club Bags, Utility Kits, Underarm Cases.
First use Aug. 26, 1953.

Class 4—Abrasives and Polishing Materials

SN 63,836. Hysan Products Company, Chicago, Ill. Filed Dec. 8, 1958.

ACRILAX

For Acrylic Base Wax for Floors and Like Surfaces.
First use July 31, 1958.

Class 6—Chemicals and Chemical Compositions

SN 36,978. Pentex Incorporated, Kankakee, Ill. Filed Sept. 10, 1957.

TEM-JEN

For Chemical Constituents of Animal Blood Sold for Industrial Purposes.
First use July 18, 1957.

SN 50,247. Reeves Soundcraft Corp., New York, N.Y. Filed Apr. 23, 1958.

GRIMACO

For Dispersion of Magnetic Particles in a Resinous Binder Used as a Magnetic Coating for Drums, Disks and the Like for Magnetic Recording.
First use Mar. 11, 1957.

SN 55,289. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed July 14, 1958.

M. F. ACID

The word "Acid" is disclaimed apart from the mark as shown.
For Composition Consisting Essentially of Fluoride Salts.
First use Jan. 26, 1955.

SN 55,607. Rayonier Incorporated, New York, N.Y. Filed July 18, 1958.

QUE FLO

For Chemical Additives for Oil Well Drilling Mud.
First use Jan. 6, 1958.

SN 56,293. Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen on Rhine, Germany. Filed July 30, 1958.

PALANIL

For Dyestuffs.
First use Sept. 29, 1950; in commerce July 9, 1958.

SN 56,459. Corn Products Company, New York, N.Y., by merger from Corn Products Refining Company, New York, N.Y. Filed Aug. 1, 1958.

NU MIX

For Starch for Laundry and Industrial Purposes.
First use at least as early as June 4, 1958.

SN 57,055. Collier Carbon and Chemical Corporation, Los Angeles, Calif. Filed Aug. 12, 1958.

COLLIER

Owner of Reg. No. 646,953.
For Ammonium Nitrate.
First use Nov. 7, 1957.

SN 61,715. Klenzade Products, Incorporated, Beloit, Wis. Filed Oct. 31, 1958.

KLENZ-SOFT

For Fabric Softener.
First use Sept. 19, 1958.

SN 64,193. Original Bradford Soap Works, Incorporated, West Warwick, R.I. Filed Dec. 12, 1958.

BRADSYN

For Chemical Products for Use in Processing Textiles—Namely, Textile Finishing Compounds, Plasticisers, Softeners, and Solvents.
First use Nov. 6, 1956.

SN 31,279. Stylewood, Inc., Baltimore, Md., assignee of Howard F. Thompson, Baltimore, Md. Filed June 2, 1957.

SN 55,519. Quarts-Mosaic, Inc., Yorklyn, Del. Filed July

SN 61,931. Samson Cordage Corp., Bellingham, Wash. Filed Nov. 4, 1958.

For Braided Cordage Products Such as Lines, Ropes, and the Like.
First use Apr. 15, 1955.

SN 65,257. Milton L. Mintzer, Inc., New York, N.Y. Filed Jan. 2, 1959.

VALLEY

For Baler and Binder Twine.
First use Dec. 28, 1953.

SN 66,083. Plymouth Cordage Company, Plymouth, Mass. Filed Jan. 19, 1959.

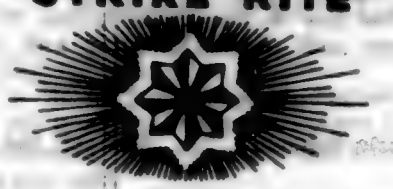
CITADEL

For Baler Twine.
First use Dec. 5, 1958.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 51,208. Dr.-Ing. Friedrich Meyer-Helbeck, d.b.a. "Sirius-Grunbach" Aktiengesellschaft fur Industrie und Steinkohlenbergbau, Nachfolger Dr.-Ing. Freidrich Meyer-Helbeck, Vienna, Austria. Filed May 7, 1958.

STRIKE RITE



Owner of Austrian Reg. No. 38,173, dated Jan. 29, 1958.
For Safety Matches.
Subj. to Intf. with SN 52,653.

SN 52,653. J. B. Griffin, d.b.a. J. B. Griffin Company and Southern Match Company, Norfolk, Va. Filed May 20, 1958.

STRIKE RITE

For Safety Matches.
First use Jan. 15, 1958.
Subj. to Intf. with SN 51,208.

SN 54,320. Louis D. Levalle, d.b.a. Bugwall Humus, Cheektowaga, N.Y. Filed June 26, 1958.

BUGWALL

For Soil Conditioner Comprising Humus Treated With Insecticide and Plant Food Materials.
First use Sept. 19, 1957.

Class 11—Inks and Inking Materials

SN 33,358. Lawter Chemicals, Inc., Chicago, Ill. Filed July 8, 1957.

SUPER-GEL

For Ink and Paint Vehicle Comprising a Carrier for Pigments.
First use July 1, 1957.

SN 51,888. Flexabar Corporation, Rockleigh, N.J. Filed May 19, 1958.

FLEXABAR

For Printing and Marking Inks, Ink Thinners, Ink Solvents, Ink Extenders, Ink Drying Retarders, and Ink Drying Accelerators.
First use Apr. 7, 1958.

SN 55,860. Magic-Glo Chemical Corporation, Chicago, Ill. Filed July 23, 1958.

BLANCLITE

For Invisible Transparent Inks Containing Luminous Materials Which Fluoresce Under Black Light or X-Ray.
First use June 11, 1958.

SN 67,749. Business Forms Corporation, Newtonville, Mass. Filed Feb. 16, 1959.

TAB-RITE

For Ribbons for Typewriters, Tabulators, and Other Mechanical or Electrical Typing Equipment, Carbon Paper, Duplicator Fluid.
First use Oct. 22, 1958.

Class 12—Construction Materials

SN 22,173. General Plywood Corporation, Louisville, Ky. Filed Jan. 7, 1957.

SS

For Wooden Doors Having a Relatively Smooth Glazed or Semi-Glazed Surface Finish.
First use Dec. 29, 1955.

SN 22,174. General Plywood Corporation, Louisville, Ky. Filed Jan. 7, 1957.

SSS

For Wooden Doors Having a Relatively Smooth Glazed or Semi-Glazed Surface Finish.
First use Sept. 28, 1956.

SN 31,279. Stylewood, Inc., Baltimore, Md., assignee of Howard K. Thompson, Baltimore, Md. Filed June 3, 1957.

STYLEWOOD

For Millwork—Namely, Custom Made Permanent Built-In Type Kitchen and Home Cabinets.
First use Nov. 5, 1954.

SN 45,207. Rollmaster Screen Corporation, Montreal, Quebec, Canada. Filed Feb. 3, 1958.

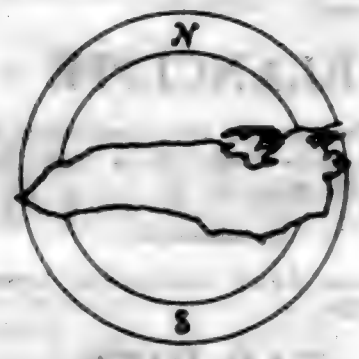
UNIMASTER

Priority claimed under Sec. 44(d) on Canadian application filed Dec. 16, 1957; Reg. No. 113,664, dated Mar. 26, 1959.
For Window Screens.

SN 47,537. The E. L. Wagner Company, Incorporated, Darien, Conn. Filed Mar. 11, 1958.

The drawing is lined for blue.
For Swimming Pools and Accessories Therefor Including Ladders, Diving Boards, Etc.
First use during November 1954.

SN 50,431. Lake Ontario Portland Cement Company, Limited, Picton, Ontario, Canada. Filed Apr. 7, 1958.



Owner of Canadian Reg. No. 112,980, dated Jan. 16, 1959.
For Portland Cement, Bulk and Packaged.

SN 51,076. Sun Valley Industries, Inc., Sun Valley, Calif. Filed May 5, 1958.

IMPERIAL WEATHERWALL

For Sliding Doors.
First use Apr. 11, 1958.

SN 54,618. Jack & Jill Shelters, Inc., Columbia, Pa. Filed July 1, 1958.

JACK & JILL

For Prefabricated Bus-Stop Shelters.
First use Aug. 27, 1957.

SN 55,519. Quarts-Mosaic, Inc., Yorklyn, Del. Filed July 17, 1958.

MOZEL

For Ceramic Tiles and Ceramic Coatings.
First use July 1, 1958.

SN 58,974. Zonolite Company, Chicago, Ill. Filed Sept. 15 1958.

ZONOLITE

Owner of Reg. Nos. 546,096, 569,162, and others.
For Glass Fibre Insulation.
First use June 14, 1957.

SN 59,812. Manta Vin-Cor Steel Corporation, Chicago, Ill. Filed Sept. 22, 1958.

VIN-COR

For Plastic-Coated Corrugated Sheet Metal for Roofing and Siding Building Panels.
First use Aug. 18, 1958.

SN 60,011. American Rock Wool Corp., Chicago, Ill. Filed Oct. 3, 1958.

thermafiber

The drawing is lined for gray, but color is not claimed as a feature of the mark. The words "Glass Fiber Products" are disclaimed apart from the mark as shown. Owner of Reg. No. 569,720.
For Thermal and Acoustical Insulation.
First use Sept. 7, 1958.

SN 60,019. Ciba Limited, Basel, Switzerland. Filed Oct. 3, 1958.

AEROWEB

Owner of Swiss Reg. No. 168,963, dated Jan. 29, 1958.
For Laminated Material in Sheet or Mesh Form Made of Common Metal Alloys With Wood, Paper, Plastics, Including Honeycomb for Use in the Construction of Aeroplanes, Railway Carriages, and in Boatbuilding and the Machine Industry.

SN 61,328. Prairie Schooner, Inc., Elkhart, Ind. Filed Oct. 24, 1958.

THE MOTETTE

For Prefabricated Housing Units.
First use Aug. 26, 1958.

SN 62,067. Dormetco, Inc., Los Angeles, Calif. Filed Nov. 7, 1958.

DORMETCO

For Metal Sliding Wardrobe Doors and Metal Sliding Shelves.
First use in August 1955.

SN 67,092. South Chester Corporation, Lester, Pa. Filed

Class 18—Medicines and Pharmaceutical

SN 62,506. Allied Chemical Corporation, New York, N.Y. Filed Nov. 17, 1958.

STORM KING

For Composition Shingles.
First use Aug. 2, 1957.

SN 62,510. American-Marietta Company, Chicago, Ill. Filed Nov. 17, 1958.

KOPETITE

Owner of Reg. No. 618,854.
For Synthetic Caulking Material Packaged in Extruded Form.
First use Jan. 21, 1955.

SN 62,511. American-Marietta Company, Chicago, Ill. Filed Nov. 17, 1958.

KOPEROPE

Owner of Reg. No. 618,854.
For Synthetic Caulking Material Packaged in Extruded Form.
First use June 9, 1954.

SN 62,512. American-Marietta Company, Chicago, Ill. Filed Nov. 17, 1958.

KOPEBEAD

Owner of Reg. No. 618,854.
For Synthetic Caulking Material Packaged in Extruded Form.
First use May 11, 1954.

SN 62,582. Miraplas Tile Company, Columbus, Ohio. Filed Nov. 17, 1958.

FORUM

For Ceramic Wall and Floor Tile.
First use Nov. 10, 1958.

SN 62,858. Hercules Chemical Co., Inc., New York, N.Y. Filed Nov. 20, 1958.

HERCULES

Owner of Reg. No. 668,137.
For Plastic Seal, Pipe Joint Compound, Putty, Liquid Composition for Repairing Leaks in Boilers and Tubing Joints in Heating Systems, Iron Cement, and Furnace Cement.
First use June 1933.

SN 63,262. Ralph Travers, d.b.a. Travaco Laboratories, East Boston, Mass. Filed Nov. 26, 1958.

Surf-Tex

For Epoxy Resin and Catalyst Primer.
First use Jan. 16, 1958.

SN 63,338. Montana Lightweight Aggregate Co., Billings, Mont. Filed Nov. 28, 1958.

TANALITE

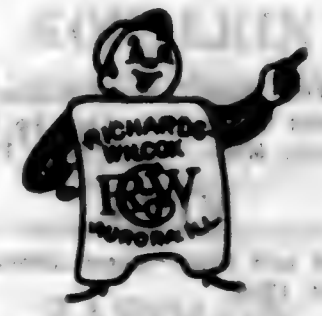
For Expanded Shale Aggregate for Use in Building Blocks, Structural Concrete, Precast Concrete, and the Like.
First use June 2, 1958.

SN 65,133. B. Vitalini, Milford, Mass. Filed Dec. 30, 1958.

VITA CRETE

For Dry Aggregates With or Without Cement Mix.
First use Nov. 1, 1958.

SN 67,635. Richards-Wilcox Manufacturing Company, Aurora, Ill. Filed Feb. 12, 1959.



Owner of Reg. Nos. 500,134, 547,435, and others.
For Sliding (Either Horizontally or Vertically) and Folding Doors and Partitions.
First use during January 1954.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 62,874. Exeter Manufacturing Company, Exeter, N.H. Filed June 4, 1958.

The mark consists of two yellow strands of plastic fiber woven into the selvage edge of the goods followed by two orange strands of plastic fiber woven adjacent thereto.
For Plastic Coated Glass Fiber Screening.
First use May 12, 1958.

SN 66,255. United-Carr Fastener Corporation, Boston, Mass. Filed Jan. 21, 1959.

T.C.F.

The representation of the fastener is disclaimed apart from the mark as shown.
For Thread Cutting Fasteners.
First use Mar. 12, 1957.

SN 67,088. Paul Gerhard Rohland, d.b.a. Gerhard Rohland, Goteborg, Sweden. Filed Feb. 4, 1959.

TALURIT

Owner of Swedish Reg. No. 74,003, dated May 8, 1958; and U.S. Reg. No. 601,021.
For Rope Clamps as Well as Presses and Press Tools, Also Other Machines and Tools Required for the Manufacture and Fixing of the Rope Clamps.

SN 53,188. Novo Terapeutisk Laboratorium A/S, Copenhagen, Denmark. Filed June 2, 1950.

SN 62,432. Curran Pharmaceuticals, Inc., Needham, Mass. Filed Nov. 10, 1958.

SN 67,092. South Chester Corporation, Lester, Pa. Filed Feb. 4, 1959.

MODULATCH

For Fastening Device for Use in Obtaining Access to Equipment Closures.
First use Jan. 21, 1959.

SN 66,903. General Fittings Company, East Greenwich, R.I. Filed Mar. 4, 1959.

HYDROMATIC

For Automatic Valve for Zone Control in Hot Water Heating Systems.
First use Feb. 24, 1959.

Class 14—Metals and Metal Castings and Forgings

SN 15,797. Le Vita Metal Alloy Company, Detroit, Mich., assignee of Frank O. Le Vita, d.b.a. Le Vita Metal Alloy Company, Detroit, Mich. Filed Sept. 17, 1956.

VITA

For High Speed and Other Metal Alloys.
First use Jan. 31, 1956.

SN 44,828. Earle M. Jorgensen Company, Los Angeles, Calif. Filed Jan. 28, 1958.

J-20

For Steel Plates and Bars.
First use Nov. 22, 1957.

SN 51,614. Norman Bohn Limited, Maidenhead, England. Filed May 14, 1958.

HERMES

For Wire and Wire Rods.
First use in 1930; in commerce in 1930.

Class 16—Protective and Decorative Coatings

SN 66,969. Vianova-Kunsthars Aktiengesellschaft, Vienna, Austria. Filed Feb. 2, 1959.

RESYDRIN

Owner of Austrian Reg. No. 17,160, dated Dec. 7, 1949.
For Varnishes, Lacquers, Aqueous Varnishes, Enamels, Primer Fillers, Synthetic Resins, Binders, and Adhesives.

SN 66,970. Vianova-Kunsthars Aktiengesellschaft, Vienna, Austria. Filed Feb. 2, 1959.

RESYDROL

Owner of Austrian Reg. No. 17,162, dated Dec. 7, 1949.
For Varnishes, Lacquers, Aqueous Varnishes, Enamels, Primer Fillers, Synthetic Resins, Binders, and Adhesives.

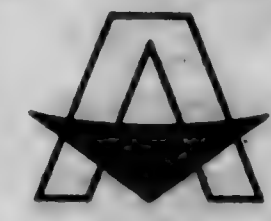
SN 67,734. American Lacquer Solvents Company, Phoenixville, Pa. Filed Feb. 18, 1959.

ACRY-LAC

For Acrylic Lacquer.
First use Feb. 1, 1958.

Class 18—Medicines and Pharmaceutical Preparations

SN 14,385. Armour and Company, Chicago, Ill. Filed Aug. 22, 1956.



The lining is intended to designate the color blue.
For Medicament and Growth Promotant for Livestock and Poultry.
First use July 8, 1936.

SN 39,703. Bariatric Corporation, Portland, Oreg. Filed Oct. 29, 1957.

BARINE

For Iodinated Organic Compounds Having Thyroid-Like Activity.
First use Jan. 3, 1953.

SN 42,875. A. E. Halperin Co., Inc., Boston, Mass. Filed Dec. 23, 1957.

BURN-QUEL

For Sprayable Liquid Preparation for the Relief of Burns.
First use Mar. 7, 1957.

SN 45,428. United Laboratories, Ltd., Pasadena, Calif. Filed Feb. 6, 1958.

SOY ADOPHILUS

For Condensed Pure Culture of *Bacillus Acidophilus* in Soy Bean Milk.
First use Jan. 17, 1934.

SN 47,337. CJ Research, Inc., Tyler, Tex. Filed Mar. 10, 1958.

The lining (not conventional) is representative of the color red.
For Nutritional Supplement Compositions.
First use Feb. 6, 1958.

SN 51,066. Joseph E. Seagram & Sons, Inc., New York, N.Y. Filed May 5, 1958.

Owner of Reg. Nos. 635,816, 656,452, and 630,771.
For Vitamin Tonic With Iron.
First use Mar. 26, 1958; Nov. 22, 1955, on cough and cold medicines.

SN 53,188. Novo Terapeutisk Laboratorium A/S, Copenhagen, Denmark. Filed June 9, 1958.

ULTRALENTE

Owner of Danish Reg. No. 1535/1952, dated Nov. 1, 1952.
For Preparation for the Treatment of Diabetes.

SN 54,465. James A. Marshall, d.b.a. Rainbow Drug, Salem, Oreg. Filed June 27, 1958.

ARB

For Preparation for Relief of Arthritis and Rheumatism.
First use Feb. 15, 1958.

SN 57,302. The Upjohn Company (Delaware corporation), Dover, Del., assignee of The Upjohn Company (Michigan corporation), Kalamazoo, Mich. Filed Aug. 15, 1958.

MEDAPRIN

Owner of Reg. Nos. 657,023 and 650,013.
For Analgesic Cortacoid Preparation.
First use Dec. 13, 1957.

SN 60,205. Clinical Products Limited, Richmond, Surrey, England. Filed Dec. 29, 1958.

IONEXTEN

Owner of British Reg. No. 768,582, dated Aug. 22, 1957.
For Pharmaceutical Preparations for Internal Use by Oral Administration.

SN 61,472. Benger Laboratories Limited, Cheshire, England. Filed Oct. 28, 1958.

LOMUDASE

Owner of British Reg. No. 777,693, dated May 15, 1958.
For Pharmaceutical Preparations for Human and Veterinary Use.

SN 61,982. Acerex Products Inc., Yonkers, N.Y., by change of name from The Acerex Corporation, Yonkers, N.Y. Filed Nov. 6, 1958.

ACEREX

For Dietary Food Supplement Consisting of Natural Vitamin C With Natural Bioflavonoids.
First use Apr. 23, 1958.

SN 62,429. Stur-Dee Health Products, Inc., Brooklyn, N.Y. Filed Nov. 13, 1958.

STUR-DEE

Owner of Reg. No. 639,259.
For Vitamin and/or Mineral Preparations.
First use 1934.

SN 62,878. Savage Laboratories, Inc., Houston, Tex. Filed Nov. 20, 1958.

CALMIVITE

For Vitamin and Mineral Pharmaceutical Preparation.
First use Mar. 1, 1958.

SN 63,432. Curran Pharmaceuticals, Inc., Mendham, N.J. Filed Dec. 1, 1958.

LES-CAV

For Sodium Fluoride Drops, To Be Taken by Children, as a Medication To Prevent Cavities in Their Teeth.
First use Sept. 1, 1958.

SN 63,506. Vita+Plus Corporation, Madison, Wis. Filed Dec. 1, 1958.

TUR-MOL-IZED

For Mineral Additive for Animal Feeds.
First use Oct. 27, 1958.

SN 63,878. Louis A. Paparelli, d.b.a. San Antonio Pharmacy, Albuquerque, N. Mex. Filed Dec. 8, 1958.

KOPALKIN

For Medicinal Compound Usable as a Tonic and Stimulant for the Appetite.
First use Nov. 14, 1958.

SN 65,006. Pharmaceuticals, Incorporated, New York, N.Y. Filed Dec. 29, 1958.

ZAROLON

For Preparation for the Relief of Muscular Aches and Pains.
First use Dec. 19, 1958.

SN 65,033. Walker Laboratories, Inc., Mount Vernon, N.Y. Filed Dec. 29, 1958.

PEPTOLIN

For Mood-Elevating Dietary Supplement Containing, Among Other Ingredients, Vitamins and Minerals.
First use Nov. 20, 1958.

SN 65,055. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed Dec. 30, 1958.

BEROCILLIN

Owner of German Reg. No. 716,905, dated Aug. 21, 1958.
For Antibiotic.

SN 65,056. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed Dec. 30, 1958.

BESONITRON

Owner of German Reg. No. 716,233, dated July 29, 1958.
For Cardiovascular Analeptic.

SN 65,057. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed Dec. 30, 1958.

MYCINGUN

Owner of German Reg. No. 713,490, dated Apr. 30, 1958.
For Antibiotic.

SN 65,058. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed Dec. 30, 1958.

NAUTIBERON

Owner of German Reg. No. 711,127, dated Feb. 17, 1958.
For Pharmaceutical Preparation for Use in the Treatment of Travel Sickness, Vomiting, and Nausea.

SN 65,161. Mason Ball Corp., Mason, Ohio. Filed Dec. 31, Class 21—Electrical Apparatus

SN 66,396. American Home Products Corporation, d.b.a. Wyeth Laboratories, New York, N.Y. Filed Jan. 7, 1959.

OSTENSOL

For Antihypertensive Preparation.
First use Dec. 17, 1958.

SN 66,440. Horton & Converse, Los Angeles, Calif. Filed Jan. 26, 1959.

RESTRAN

For Preparation in Capsule Form Used as an Aid to Inducing Sleep.
First use on or about Apr. 15, 1957.
Subj. to Intf. with SN 71,351.

SN 67,478. Schering Corporation, Bloomfield, N.J. Filed Feb. 10, 1959.

BETOXYLIN

For Antiasthmatic Preparation.
First use Oct. 6, 1958.

SN 67,582. American Home Products Corporation, d.b.a. Whitehall Laboratories, New York, N.Y. Filed Feb. 12, 1959.

DIGENE

For Preparation for Treatment and Alleviation of Diaper Rash.
First use Dec. 15, 1958.

SN 67,819. Phillips Yeast Products Limited, London, England. Filed Feb. 16, 1959.

Vetzyme

Owner of British Reg. No. 719,709, dated July 8, 1953.
For Preparations of Yeast for Veterinary Use.

SN 67,820. Phillips Yeast Products Limited, London, England. Filed Feb. 16, 1959.

Kit-zyme

Owner of British Reg. No. 740,083, dated Mar. 7, 1955.
For Preparations of Yeast for Veterinary Use.

SN 67,932. Haack Laboratories, Incorporated, Portland, Oreg. Filed Feb. 18, 1959.

HYPAN

For Tablets Containing Acid Acetylsalicylic, Calcium Carbonate Prec. USP, Aluminum Hydroxide Gel Dried, and Acid Citric Anhydrous.
First use July 9, 1958.

SN 68,063. Merck & Co., Inc., Rahway, N.J. Filed Feb. 19, 1959.

DICLOTRIDE

Owner of Reg. Nos. 669,790 and 669,791.
For Medicinal Compound for Use as a Diuretic and as an Agent in the Treatment of Hypertension.
First use Feb. 9, 1959.

SN 68,085. Societe des Usines Chimiques Rhone-Poulenc, Paris, France. Filed Feb. 19, 1959.

STIRAL

Owner of French Reg. No. 477,129, dated Jan. 2, 1959 (Paris); Natl. Inst. No. 116,408.
For Pharmaceutical Composition for the Treatment of Neurological Conditions.

SN 68,093. White Laboratories, Inc., Kenilworth, N.J. Filed Feb. 19, 1959.

DISOMER

For Antihistamine Product.
First use Jan. 13, 1959.

SN 68,355. American Cyanamid Company, New York, N.Y. Filed Feb. 25, 1959.

DECLOMICINA

Owner of Reg. No. 609,844.
For Antibiotic.
First use Feb. 10, 1959.

SN 71,351. Cole Chemical Company, St. Louis, Mo. Filed Apr. 13, 1959.

RESTRAN

For Tranquilizers.
First use June 29, 1955.
Subj. to Intf. with SN 66,440.

SN 71,638. A. H. Robins Company, Inc., Richmond, Va. Filed Apr. 17, 1959.

NELADINE

For Antirheumatic Medicinal Preparation.
First use Mar. 24, 1959.

SN 71,639. A. H. Robins Company, Inc., Richmond, Va. Filed Apr. 17, 1959.

NILADINE

For Antirheumatic Medicinal Preparation.
First use Mar. 24, 1959.

Class 19—Vehicles

SN 61,397. Jamco, Inc., Oklahoma City, Okla. Filed Oct. 27, 1958.

JAMCO

For Automobile Front End Repair Parts—Namely, Idler Arm Kits, Ball Joint Kits, Spring Spacers, Camber Shims, and the Like.
First use Nov. 1, 1954.

SN 54,525. Hoffman Engineering Corporation, Anoka, Minn.

SN 68,649. H. F. Booker, d.b.a. Aquadynamics Company,

SN 66,161. Mason Ball Corp., Mason, Ohio. Filed Dec. 31, 1958.

TRASH CADDY

For Utility Cart Particularly Adapted To Transport Garbage Cans.
First use Oct. 1, 1958.

SN 67,667. Clark Equipment Company, Buchanan, Mich. Filed Feb. 13, 1959.

Cushionair

For Vehicle Suspension Mechanisms.
First use in February 1957.

SN 68,105. Brace & Corbett, Inc., Prairie Village, Kans. Filed Feb. 20, 1959.

Ped-A-Tiller

For Remote Steering Attachments for Outboard Motor Boats.
First use Feb. 11, 1959.

SN 68,136. Grish Bros., St. John, Ind. Filed Feb. 20, 1959.

Tornado

For Propellers for Outboard Motors.
First use Dec. 18, 1958.

SN 68,291. Tyler McVey, d.b.a. The Fyre-Kart Company, North Hollywood, Calif. Filed Feb. 24, 1959.

FYRE-KART

For Fireplace Wood Carts.
First use Oct. 31, 1958.

SN 68,312. Parrett Manufacturing Company, Inc., Benton Harbor, Mich. Filed Feb. 24, 1959.

NASSAU

For Engine Propelled Golf Car.
First use July 10, 1958.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 40,409. The Magnavox Company, Fort Wayne, Ind. Filed Nov. 12, 1957.

HIGH FIDELITY THEATRE

The words "High Fidelity" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 631,662 and 631,665.
For Combination Television Receivers and Phonographs.
First use Oct. 23, 1957.

SN 40,547. Berg Manufacturing Corporation, New Cumberland, Pa. Filed Nov. 12, 1957.

For Terminals for Electric Conductors.
First use in June 1957.

SN 44,794. Amphenol Electronics Corporation, Chicago, Ill. Filed Jan. 28, 1958.

IPC

For Electronic Components—Namely, Radio Frequency Connectors.
First use in June 1946.

SN 52,188. The Miller Company, Meriden, Conn. Filed May 22, 1958.

RICHMOND

For Electric Lighting Fixtures and Parts Thereof.
First use Jan. 1, 1958.

SN 53,780. Dit-Mco, Incorporated, Kansas City, Mo. Filed June 18, 1958.

"ATOMIC"

For Electric Motor Driven Blowers for Port Holes of Projection Booths in Theaters.
First use July 26, 1954.

SN 53,781. Dit-Mco, Incorporated, Kansas City, Mo. Filed June 18, 1958.

"ATOMIC JET"

For Electric Motor Driven Blowers for Motion Picture Projection Machine Lamp Houses.
First use July 26, 1954.

SN 53,782. Dit-Mco, Incorporated, Kansas City, Mo. Filed June 18, 1958.

"UNIVERSAL"

For Speakers for Use in Cars in Drive-In Theaters.
First use Jan. 18, 1956.

SN 59,241. Charles F. Alexander, d.b.a. Fox Products Co., Los Angeles, Calif. Filed Sept. 15, 1958.

First use July 8, 1958.

First use Nov. 1, 1954.

SN 54,525. Hoffman Engineering Corporation, Anoka, Minn. Filed June 30, 1956.

HOFFMAN

For Electrical Enclosure Boxes and Cabinets and Panels Therefor, Sheet Metal Boxes and Cabinets, Wireway and Wire Troughs, Washers for Electrical Box Connections, Remote Control Switching Devices, Light Bulb Holders, and Portable Lighting Fixtures.
First use Aug. 10, 1948.

SN 56,770. Electro Lighting Corporation, Chicago, Ill. Filed Aug. 7, 1958.

MODERNAIRE

For Electric Fluorescent Lighting Fixtures.
First use June 1, 1958.

SN 57,606. Electronics Water Purifier Co. Inc., Lombard, Ill. Filed Aug. 21, 1958.

FILTER-ALL

For Electro-Chemical Apparatus for Installation in a Plumbing System Using Water for Treating the Water To Remove Undesirable Salts, Metals and the Like and Sold as a Complete Unit for Such Installation.
First use Oct. 1, 1957.

SN 65,106. Liberty Long Life Lamp Corporation, Freeport, N.Y. Filed Dec. 30, 1958.

The representation of an electric light bulb is disclaimed apart from the mark as shown. The drawing is lined for shading purposes only.
For Electric Light Bulbs.
First use June 20, 1958.

SN 65,278. Dr. Wenger and Associates, Ltd., Chicago, Ill. Filed Jan. 2, 1959.

HEALTH SENTINEL

For Electric Heating Pad for Warming the Human Body.
First use Aug. 15, 1958.

SN 65,754. Crouse-Hinds Company, Syracuse, N.Y. Filed Jan. 12, 1959.

CONDULETTO

Owner of Reg. No. 50,463.
For Incandescent Lamp Receptacles, Electric-Plug Receptacles, Electric Rosettes, and Parts Thereof, To Be Used in Connection With Electric Conduit Fittings.
First use June 10, 1909.

SN 67,368. Magnetic Metals Company, Camden, N.J. Filed Feb. 9, 1959.

SUPERMU

For High Permeability Magnetic Core Laminations.
First use Jan. 27, 1959.

SN 68,649. H. F. Booker, d.b.a. Aquadynamics Company, North Hollywood, Calif. Filed Mar. 2, 1959.

DYNAPLATE

For Radiotelephone Grounding Plates for Boat Installation.
First use May 14, 1958.

SN 68,686. Globe-Union Inc., Milwaukee, Wis. Filed Mar. 2, 1959.

PEC

For Electrical Units Having a Circuit Directly Bonded to the Surface of a Ceramic Body.
First use in March 1958.

SN 68,761. U-C-Lite Manufacturing Company, Chicago, Ill. Filed Mar. 2, 1959.

Owner of Reg. Nos. 405,663 and 545,716.
For Combination Incandescent Lights and Battery Units.
First use on or about Apr. 16, 1958.

SN 68,822. Ideal Industries, Inc., Sycamore, Ill. Filed Mar. 3, 1959.

WRAP-CAP

Owner of Reg. No. 624,856.
For Covers, Caps or Insulators for Electrical Connections or Joints.
First use Apr. 5, 1954.

Class 22 — Games, Toys, and Sporting Goods

SN 45,914. Poole Manufacturing Co. Ltd., North Vancouver, British Columbia, Canada. Filed Feb. 14, 1958.

JOLLY JUMPER

Applicant disclaims any exclusive use of the word "Jumper" apart from the mark shown.
For Baby Supporters and Exercisers.
First use in March 1950.

SN 51,134. Juncker Rijwielfabriek N.V., Apeldoorn, Netherlands. Filed May 6, 1958.

No claim is made to the exclusive right to the notation "Apeldoorn, Holland."
For Bicycles and Tricycles for Children and Structural Parts Therefor.
First use Nov. 8, 1934.

pany, Bay Shore, N.Y. Filed Sept. 22, 1958.

HULI

"Huli" is a word in the Hawaiian language which is substantially the equivalent of "turn over."

For Equipment Sold as a Unit for Playing a Card Game.
First use Aug. 21, 1958.

SN 61,899. Brumberger Sales Corp., Brooklyn, N.Y. Filed Nov. 4, 1958.

CODEMASTER

For Radio-Telegraph Signal Set and Other Communication Devices Used as Toys, Employing a Housing, Batteries, Telegraph Key, Light Bulb, Buzzer, and Clicker, Sold as a Unit for Playing a Game or Games of Communication.
First use on or about Mar. 5, 1958.

SN 62,425. Slammer Gun Company, Inc., Louisville, Ky. Filed Nov. 13, 1958.

SLAMMER 6-38

For Toy Guns.
First use Apr. 28, 1958.

SN 63,848. Magna-Ball Corporation, New York, N.Y. Filed Dec. 8, 1958.

BATTING KING

For Equipment Sold as a Unit for Playing an Indoor Ball Game.
First use Feb. 28, 1958.

SN 64,048. Bruck Tackle & Manufacturing Company, Portland, Oreg. Filed Dec. 11, 1958.

SURON

For Fishing Line.
First use Oct. 24, 1958.

SN 64,411. Gutert Quality Products Corporation, Milwaukee, Wis. Filed Dec. 16, 1958.

WHOPPER-LANDER

For Fish Nets and Gaff Hooks.
First use Jan. 11, 1958.

SN 65,584. Plymouth Golf Ball Sales Company, Plymouth Meeting, Pa. Filed Jan. 9, 1959.

STROKE-MASTER

For Golf Balls.
First use Oct. 3, 1958.

SN 65,795. Traylor-Rich, Inc., Boonville, Ind. Filed Jan. 13, 1959.

HUM-DINGA

For Toys, i. e, Spinning Tops.
First use Dec. 20, 1958.

SN 66,135. Grish Bros., St. John, Ind. Filed Feb. 20, 1959.

Tornado

For Toy Airplane Propellers.
First use in June 1957.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 50,104. John W. Roby, d.b.a. John W. Roby and Company, Seattle, Wash. Filed Apr. 21, 1958.

KNITTEN KITTEN

For Knitting Machine.
First use Nov. 8, 1957.

SN 55,169. The Skefko Ball Bearing Company Limited, Luton, England. Filed July 11, 1958.

SKEFKO

Owner of British Reg. Nos. 320,748 and 359,367, dated Feb. 11, 1910 and Mar. 6, 1914, respectively.

For Ball Bearings, Roller Bearings, Axle Boxes, Plummer Block Housings, Parts of All the Aforementioned Goods, Castings Being Parts of or Articles for Use With Machinery, Steel Balls and Steel Rollers.

SN 55,843. Dustex Corp., Buffalo, N.Y. Filed July 23, 1958.

ROTO-JET

For Dust Collectors of the Type Having a Filter Cloth Movable Past a Stationary Blow Tube.
First use July 6, 1958.

SN 57,233. AMP Incorporated, Harrisburg, Pa. Filed Aug. 15, 1958.

BANTAM ROTA-CRIMP

For Tools for Crimping Electrical Connectors.
First use in July 1958.

SN 61,079. The Raymond Corporation, Greene, N.Y. Filed Oct. 21, 1958.

4-D

For Material Handling Fork Lift Trucks.
First use Jan. 20, 1958.

SN 63,447. Hobbs Transmission Limited, Leamington Spa, Warwickshire, England. Filed Dec. 1, 1958.

MECHA-MATIC

Priority claimed under Sec. 44(d) on British Reg. No. 779,402, dated July 3, 1958.

For Power Transmission Mechanisms (Sold Complete) for Land Vehicles and Parts of Such Mechanisms.

SN 64,867. Bird Machine Company, South Walpole, Mass. Filed Dec. 24, 1958.

CENTRISCREEN

For Centrifugal Screens.
First use May 23, 1958.

SN 52,670. Anciens Etablissements Duverdrey & Bloquel, Seine-Maritime, France. Filed June 2, 1958.

Class 28 — Jewelry and Precious-Metal Ware

SN 65,639. Curtis & Marble Machine Co., Worcester, Mass. Filed Jan. 12, 1959.

CURTIS & MARBLE

Owner of Reg. No. 126,407.
For Textile Machinery.
First use in 1863.

SN 67,057. Great Lakes Warehouse Corporation, Detroit, Mich. Filed Feb. 4, 1959.

BRODIE'S THREE STAR

For Automotive Mufflers.
First use Aug. 1, 1958.

SN 67,058. Great Lakes Warehouse Corporation, Detroit, Mich. Filed Feb. 4, 1959.

BRODIE'S FIVE STAR

For Automotive Mufflers.
First use Aug. 1, 1958.

SN 67,059. Great Lakes Warehouse Corporation, Detroit, Mich. Filed Feb. 4, 1959.

BRODIE'S FOUR STAR

For Automotive Mufflers.
First use Aug. 1, 1958.

SN 68,159. Marinette Engineering Corporation, Marinette, Wis. Filed Feb. 20, 1959.

POLYCON

For Molds.
First use Feb. 2, 1959.

SN 68,222. Burndy Corporation, Norwalk, Conn. Filed Feb. 24, 1959.

HYLUGGER

Owner of Reg. No. 409,907.
For Tools for Installing Electrical Connectors.
First use July 7, 1953.

SN 68,713. Logan Engineering Co., Chicago, Ill. Filed Mar. 2, 1959.

LILLY

For Mine Hoist Controllers and Safety Devices Employed Therewith.
First use 1919.

SN 68,819. H & C Container Machinery Corp., Sunnyvale, Calif. Filed Mar. 3, 1959.

AUTOSTAK

For Boxboard Material Stacking Machines.
First use Dec. 30, 1958.

SN 68,850. Star Iron and Steel Co., Tacoma, Wash. Filed Mar. 3, 1959.

BRUTE

For Material Handling Equipment—Namely, Lumber Grapples, Cranes, Hoists, Etc.
First use in the year 1923.

SN 68,856. Towlsaver, Inc., Los Angeles, Calif. Filed Mar. 3, 1959.

NEVER-OUT

For Roll Paper Dispensers.
First use Dec. 6, 1958.

SN 68,872. Bucyrus Blades, Inc., Bucyrus, Ohio. Filed Mar. 4, 1959.

FORGE TEMP

For Cutting Edge Members for Road and Construction Machinery.
First use on or about July 22, 1958.

Class 24—Laundry Appliances and Machines

SN 38,137. Eugene Tractor & Implement Co., d.b.a. F. R. Anderson Company, Springfield, Oreg. Filed Oct. 1, 1957.

DIAPER DUNKER

The term "Diaper" is disclaimed apart from the mark as shown.
For Container and Tongs for Rinsing Diapers.
First use Aug. 2, 1957.

SN 60,347. Morris Fefferman, d.b.a. General Textile Company, Newark, N.J. Filed Oct. 9, 1958.

A GENERAL TEXTILE PRODUCT

The word "Product" is disclaimed apart from the mark as shown.
For Ironing Table Set Consisting of Ironing Table Covers, Pads, Shoulder Press Mits and Bags.
First use May 1, 1956.

SN 66,059. Magla, Inc., Newark, N.J. Filed Jan. 19, 1959.

DURALON

For Ironing Board Pads Sold in Combination With Ironing Board Covers.
First use Jan. 12, 1959.

Class 27—Horological Instruments

SN 36,834. Arabesque, Incorporated, Chicago, Ill. Filed Sept. 9, 1957.

ARABESQUE

Owner of Reg. No. 565,728.
For Decorative Wall Clocks.
First use September 1955.

SN 63,070. Johnson & Johnson, New Brunswick, N.J. Filed Nov. 24, 1958.

SN 65,088. Oxford, Ltd., Chicago, Ill. Filed July 10, 1958.

CASSILA

SN 52,670. Anciens Etablissements Duverdrey & Bloquel, Seine-Maritime, France. Filed June 2, 1958.

Owner of French Reg. No. 381, dated Aug. 7, 1957 (Eu & Treport); Natl. Inst. No. 94,799.

For Horological Instruments—Namely, Clocks, Clock Works, Watches and Parts Thereof.

SN 64,549. Kabushiki-Kaisha Hattori Tokei-Ten, Chuo-ku, Tokyo-to, Japan. Filed Dec. 18, 1958.

SEIKO

Owner of Japanese Reg. No. 175,840, dated Dec. 2, 1925.

For Watches and Clocks and Parts Thereof.

First use April 1949; in commerce on or about Apr. 15, 1949.

SN 70,285. Eltic, Inc., Topeka, Kans., assignee of Electronic Lapsed Time Indicator Company, Topeka, Kans. Filed Mar. 26, 1959.

ELTIC

For Electrically Controlled Stop Watches.

First use Oct. 6, 1958.

SN 70,644. Croton Watch Co., Inc., New York, N.Y. Filed Apr. 1, 1959.

SWORDFISH

For Watches.

First use in or about January 1959.

SN 71,228. Jean Richard S.A., Geneva, Switzerland. Filed Apr. 9, 1959.

AQUASTAR

For Watches.

First use Oct. 10, 1958; in commerce Oct. 10, 1958.

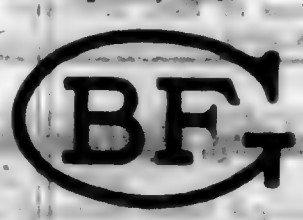
SN 71,550. Bulova Watch Company, Inc., Flushing, N.Y. Filed Apr. 15, 1959.

AMERICANA

For Watches.

First use Mar. 19, 1959.

SN 72,574. Baumgartner Freres S.A., Grenchen, Soleure, Switzerland. Filed Apr. 30, 1959.



For Watches, Watch Movements, and Spare Parts for Watches.

First use Jan. 1, 1930; in commerce Jan. 1, 1930.

SN 72,995. Bulova Watch Company, Inc., Flushing, N.Y. Filed May 6, 1959.

GREAT LADY

For Watches.

First use Apr. 22, 1959.

Class 28—Jewelry and Precious-Metal Ware

SN 36,833. Arabesque, Incorporated, Chicago, Ill. Filed Sept. 9, 1957.

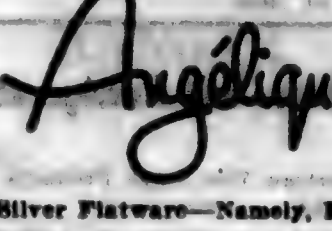
ARABESQUE

Owner of Reg. No. 665,728.

For Plaques, Sconces, and Decorative Wall Mirrors, Which Are Silver or Gold Surfaced.

First use September 1955.

SN 59,495. Superior Chain Co., Inc., New York, N.Y. Filed Sept. 24, 1958.



For Men's and Women's Gold and Platinum Jewelry Consisting of Bracelets, Necklaces, Key Chains, Key Loops, Charm Bracelets, Charms, Circle Pins, Earrings, Waldemars, Pearls, Watch Bracelets and Kindred Items.

First use Aug. 19, 1958.

SN 67,967. Oneida Ltd., Oneida, N.Y. Filed Feb. 18, 1959.

VALERIE

For Silverplated Flat Tableware.

First use Jan. 20, 1959.

SN 68,243. Feather Ring Co., Inc., New York, N.Y. Filed Feb. 24, 1959.

PER-FIT

For Finger Rings and Finger Ring Mountings Made of Precious Metal.

First use on or about Feb. 16, 1959.

SN 68,630. The International Silver Company, Meriden, Conn. Filed Mar. 3, 1959.

For Sterling Silver Flatware—Namely, Knives, Forks, and Spoons.

First use Dec. 2, 1958.

Class 29—Brooms, Brushes, and Dusters

SN 62,892. Milton Arnold Zelinkoff, d.b.a. The House of Zelinkoff and The Zelinkoff Company, Wichita, Kans. Filed Nov. 20, 1958.

For Mops.

First use Sept. 10, 1958.

SN 53,892. Maron Premix Burner Company, Muncie, Ind. Filed June 19, 1958.

SN 66,191. Caritas Record Corporation, New York, N.Y. Filed Jan. 14, 1959.

SN 63,070. Johnson & Johnson, New Brunswick, N.J. Filed Nov. 24, 1958.

DENTA-STATIC

For Finish Applied to Toothbrush Bristles as Bacteria Inhibitor.
First use June 16, 1958.

SN 66,051. S. H. Kress and Company, New York, N.Y. Filed Jan. 19, 1959.

The drawing is lined for blue and red. Owner of Reg. No. 562,353.
For Powder Puffs.
First use Dec. 31, 1958.

SN 66,060. Magla, Inc., Newark, N.J. Filed Jan. 19, 1959.

MAGLA

For Sponge Cloth and Sponges.
First use Jan. 12, 1959.

Class 30—Crockery, Earthenware, and Porcelain

SN 47,349. Dansk Designs Inc., Great Neck, N.Y. Filed S.R. Mar. 10, 1958; Am. P.R. May 20, 1959.

DANSK

Owner of Reg. Nos. 625,802 and 661,778.
For Pitchers, Casserole, Coffee Servers, Sauce Pans, Bowls, and Trivet Sets, All Made of Stoneware.
First use July 28, 1954.

SN 66,143. Del-Craft Company, Inc., Waukesha, Wis. Filed Jan. 20, 1959.

DEL-CREST

For China Dinner Ware.
First use Sept. 10, 1958.

Class 31—Filters and Refrigerators

SN 67,183. American Vita-Sauge Products, Inc., Media, Pa. Filed Feb. 6, 1959.

HEALTH-GARD

For Water Purifier.
First use Aug. 15, 1958.

Class 32—Furniture and Upholstery

SN 47,623. Ahlex Plastics, Inc., New York, N.Y. Filed Mar. 13, 1958.

ULTRA-VIOLET "A-T-X" FADE CONTROL

The words "Ultra-Violet" and "Fade Control" are disclaimed apart from the mark.
For Transparent Plastic Window Shades.
First use Feb. 13, 1957.

SN 55,088. Oxford, Ltd., Chicago, Ill. Filed July 10, 1958.

CASSIA

For Furniture Having Exposed Wood Surface and Finish—Namely, Living-Room Furniture, Dining Room Furniture, and Bedroom Furniture.
First use June 16, 1958.

SN 57,727. United Fixture Hardware Co., Pittsburgh, Pa. Filed Aug. 22, 1958.

flextures

For Store Fixtures and Equipment—Namely, Shelf, Rack, Display, and Display Case Articles and Parts.
First use on or about Apr. 18, 1958.

SN 64,652. Emil J. Paidar Company, Chicago, Ill. Filed Dec. 19, 1958.

MARK I

For Barber Chairs.
First use Aug. 8, 1958.

SN 67,392. Professional Bedding Stores, Inc., Chicago, Ill. Filed Feb. 9, 1959.

PROFESSIONAL

For Bedding—Namely, Mattresses.
First use Dec. 15, 1958.

SN 73,152. Standard Furniture Company, Herkimer, N.Y. Filed May 7, 1959.

Standard

Owner of Reg. No. 24,368.
For Office Furniture.
First use April 1955.

Class 33—Glassware

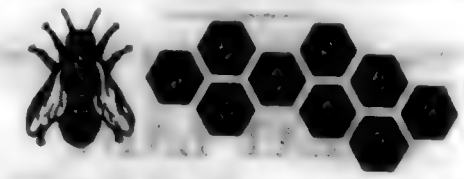
SN 56,094. Corning Glass Works, Corning, N.Y. Filed July 28, 1958.

PYROCERAM

Owner of Reg. Nos. 153,430, 665,879, and others.
For Vessels and Utensils Formed of Crystalline Material Produced From Glass by Heat Treatment Thereof.
First use Mar. 18, 1958.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 34,531. Hexcel Products Inc., Berkeley, Calif. Filed July 29, 1957.



For Honeycomb Panels for Light Diffusing Purposes.
First use Aug. 2, 1955.

SN 29,525. Robert Glenn Chapman, d.b.a. National Fishing

SN 65,951. The Great Atlantic and Pacific Tea Company,

SN 53,892. Maron Premix Burner Company, Muncie, Ind. Filed June 19, 1958.

AIRFLO

For Line Burners, Air Gas Mixing Devices for Gas Burners, and Air Heating Systems.
First use May 1, 1957.

SN 55,050. Cordley & Hayes, New York, N.Y. Filed July 10, 1958.

HOT-TAP

For Water Heaters.
First use Apr. 11, 1958.

SN 68,128. The Dutch Cupboard, Downingtown, Pa. Filed Feb. 20, 1959.

HEISBITTEN

For Trays for Heating and Serving Foods Such as Hors d'Oeuvres and the Like.
First use Jan. 29, 1959.

Class 36—Musical Instruments and Supplies

SN 42,955. Webcor, Inc., Chicago, Ill. Filed Dec. 23, 1957.

REGENT

For High Fidelity Tape Recorder and Parts Thereof.
First use June 15, 1957.

SN 51,917. Livingston Electronic Corporation, Livingston, N.J. Filed May 19, 1958.

LIVINGSTON

For High Fidelity Equipment and Components—Namely, Tone Arms, Phonograph Records, Amplifiers, and Recorded Magnetic Tape.
First use in September 1946.

SN 52,643. Pfanstiehl Chemical Corporation, Waukegan, Ill. Filed May 23, 1958.

PFANSTIEHL

For Metal, Sapphire, and Diamond Phonograph Needles and Metal, Sapphire, and Diamond Phonograph Styli, Both for Home Phonograph and for Coin Phonograph Machines.
First use Jan. 22, 1940.

SN 54,151. Dictaphone Corporation, New York, N.Y. Filed June 24, 1958.

DICTACHRON

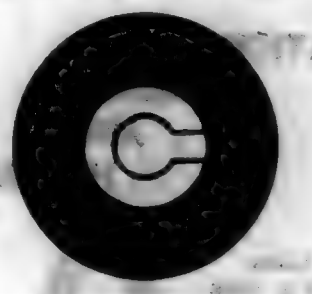
Owner of Reg. No. 576,982.
For Electrically-Operated Sound Reproducing Machines—Namely, Machines for Magnetic Tape Recording and Playback of Time Announcement Signals, and Parts and Accessories Therefor.
First use Apr. 2, 1958.

SN 62,141. Advertising Service Associates, San Diego, Calif. Filed Nov. 10, 1958.

RAVE

For Phonograph Records.
First use Sept. 23, 1958.

SN 66,181. Caritas Record Corporation, New York, N.Y. Filed Jan. 14, 1959.



For Grooved Phonograph Records.
First use Oct. 15, 1958.

SN 66,466. Mercury Record Corporation, Chicago, Ill. Filed Jan. 26, 1959.

LIVING PRESENCE

For Pre-Recorded Tape.
First use on or about Aug. 1, 1957.

SN 66,786. M. Hohner, Inc., New York, N.Y. Filed Jan. 30, 1959.

HOHNER MELODICA

For Harmonicas and Keyboard Harmonicas.
First use Jan. 12, 1959.

SN 67,701. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Feb. 13, 1959.

DEPUTY

For Magnetic Recording Machines.
First use Jan. 2, 1959.

SN 68,048. Fidelitone, Incorporated, Chicago, Ill. Filed Feb. 19, 1959.

PYRAMID

For Phonograph Needles.
First use Feb. 6, 1959.

Class 37—Paper and Stationery

SN 55,601. Ozark Pencil Co., Lewisburg, Tenn. Filed July 18, 1958.

RANGER

Owner of Reg. No. 399,732.
For Pencils.
First use in 1911.

SN 65,940. Dennison Manufacturing Company, Framingham, Mass. Filed Jan. 16, 1959.

FABRI-KLEAN

For Gummed Labels.
First use Dec. 2, 1958.

Class 38—Prints and Publications

SN 27,909. Tribune Company, Chicago, Ill. Filed Apr. 10, 1957.

THE WEEKLY ILLUSTRATED FOOD GUIDE

For Newspaper Section.
First use Feb. 22, 1957.

SN 67,036. Ken Cook Co., Milwaukee, Wis. Filed Feb. 4, 1959.

SN 57,770. Bernstein & Sons Shirt Corporation, New York, N.Y. Filed Sept. 25, 1957.

SN 29,525. Robert Glenn Chapman, d.b.a. National Fishing and Hunting Club, Pryor, Okla. Filed May 7, 1957.

NATIONAL FISHING AND HUNTING CLUB

For Mailing Lists.
First use July 2, 1956.

SN 62,573. Harold V. McGee, Joshua Tree, Calif. Filed Nov. 17, 1958.

RADIANTLIFE

For Christian Publications, Teachers' Manuals, Pupils' Study Books, Teaching Aids, i.e., Pictures, Research Cards, Dictionary Cards, and Newsletter.
First use Mar. 15, 1958.

SN 64,569. Southern States Cooperative, Incorporated, Richmond, Va. Filed Dec. 18, 1958.

PIG-A-RENA

For Blueprints and Instructions for Building Enclosures for Feeding and Watering Swine.
First use Aug. 1, 1958.

SN 65,460. World Wide, Inc., Minneapolis, Minn. Filed Jan. 7, 1959.

WORLD WIDE

For Catalog of General Merchandise.
First use Sept. 1, 1957.

SN 65,790. Stonnell Enterprises, Inc., New York, N.Y. Filed Jan. 13, 1959.

POCKETSCOPE

For Monthly Astrological Guide.
First use Dec. 16, 1958.

SN 65,885. Calendar Craft Manufacturing Co., St. Louis, Mo. Filed Jan. 15, 1959.

ART-CRAFT

For Calendars.
First use in November 1957.

SN 65,918. Wine Institute, d.b.a. The California Society of Wine Tasters, San Francisco, Calif. Filed Jan. 15, 1959.

THE WINE TASTER

For Periodic Publication.
First use Nov. 1, 1958.

SN 65,915. Boston Publishing Company, Inc., Boston, Mass. Filed Jan. 14, 1959.

MODERN ASSEMBLY PRACTICE

For Periodical Published Quarterly.
First use Dec. 15, 1958.

SN 65,951. The Great Atlantic and Pacific Tea Company, New York, N.Y. Filed Jan. 16, 1959.

The AP Circle

For Magazine.
First use Jan. 2, 1959.

SN 66,000. Allied Decals, Inc., Cleveland, Ohio. Filed Jan. 19, 1959.

"CHROME-CAL"

For Decalcomanias.
First use Mar. 4, 1957.

SN 66,002. Allied Decals, Inc., Cleveland, Ohio. Filed Jan. 19, 1959.

"MARVEL-CAL"

For Decalcomanias.
First use Aug. 13, 1958.

SN 66,003. Allied Decals, Inc., Cleveland, Ohio. Filed Jan. 19, 1959.

"CLEAR-CAL"

For Decalcomanias.
First use Oct. 4, 1954.

SN 66,007. American Home Products Corporation, d.b.a. Wyeth Laboratories, New York, N.Y. Filed Jan. 19, 1959.

THERAPEUTIC BACKGROUNDS

For Periodical Publication.
First use Sept. 9, 1958.

SN 66,545. Gesher America, Inc., New York, N.Y. Filed Jan. 27, 1959.

The meaning of "Ayin B'Ayin" and the Hebrew words is "eye to eye."
For Illustrated Weekly Literary and Current Events Magazine in Hebrew.
First use Dec. 25, 1957.

SN 66,690. Billy and Ruth Promotion, Inc., Philadelphia, Pa. Filed Jan. 29, 1959.

HAPPY HOURS WITH BILLY AND RUTH

Owner of Reg. No. 344,511.
For Children's Magazines.
First use Jan. 2, 1958.

SN 49,456. National Hosiery Mills, Inc., Indianapolis, Ind. Filed Dec. 29, 1955.

SN 53,305. Judy Wayne, Inc., New York, N.Y. Filed June 19, 1956.

SN 67,038. Ken Cook Co., Milwaukee, Wis. Filed Feb. 4, 1959.

American AIRMAN

For Magazine.
First use September 1957.

Class 39—Clothing

SN 19,470. Laskin Bros. of Phila., Inc., Philadelphia, Pa. Filed Nov. 19, 1956.

Owner of Reg. Nos. 246,711, 339,299, and 340,878.
For Women's, Misses', and Children's Undergarments—Namely, Panties.
First use on or about Sept. 27, 1956.

SN 19,784. Laskin Bros. of Phila., Inc., Philadelphia, Pa. Filed Nov. 23, 1956.

Miss-Eve

Owner of Reg. Nos. 246,711, 339,299, and 340,878.
For Women's, Misses', and Children's Undergarments—Namely, Panties.
First use on or about Sept. 27, 1956.

SN 25,527. Dunhill Tailored Clothes, Inc., New York, N.Y. Filed Mar. 5, 1957.

DUNHILL TAILORS

For Men's Suits and Overcoats.
First use Sept. 3, 1926.

SN 34,041. Cluett, Peabody & Co., Inc., New York, N.Y. Filed July 19, 1957.

ARROW first in fashion

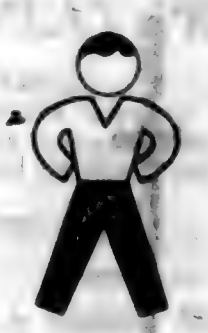
Owner of Reg. Nos. 34,645, 609,776, and others.
For Shirts, Sweaters, Jackets, and Underwear.
First use Aug. 5, 1955.

SN 35,259. Gay Togs, Inc., Freeport, N.Y. Filed Aug. 9, 1957.

MAINLAND

For Ladies' and Misses' Shorts, Jamaicas, Skirts, Vests, Pedal Pushers, Slacks.
First use June 10, 1957.

SN 37,770. Bernstein & Sons Shirt Corporation, New York, N.Y. Filed Sept. 25, 1957.



For Boys' Sport Shirts.
First use Aug. 21, 1957.

SN 38,571. E. H. Tallaferro Manufacturing Company, d.b.a. Elon of California, San Diego, Calif. Filed Oct. 8, 1957.

ELON

Owner of Reg. No. 649,341.
For Men's, Women's, and Children's Cotton and Elasticized Swim Suits and Sun Wear.
First use in 1947.

SN 41,019. Ruth Hinckley and Harry D. Hinckley, d.b.a. H. & R. Hinckley Shoe Company, Fleetwood, Pa. Filed Nov. 26, 1958.

TIO'S

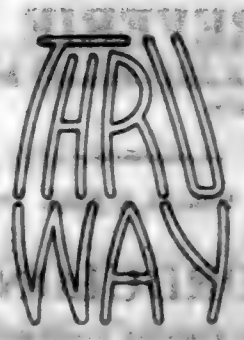
For Shoes, Slippers, and Boots.
First use Oct. 19, 1957.
Subj. to Intf. with SN 57,212.

SN 44,903. The Kaynee Company (South Carolina corporation), Greenville, S.C., assignee of The Kaynee Company (Ohio corporation), Cleveland, Ohio. Filed Jan. 29, 1958.

Varsity by Kaynee

Owner of Reg. No. 90,312.
For Boys' Shirts.
First use Oct. 25, 1957.

SN 46,617. Gro-Cord Rubber Company, Lima, Ohio. Filed Feb. 26, 1958.



For Soles for Footwear.
First use Jan. 29, 1958.

SN 56,585. Piedmont Shirt Company, Greenville, S.C. Filed Aug. 4, 1958.

SN 59,992. Simon & Mogilner, Birmingham, Ala. Filed Oct. 2, 1958.

SN 49,456. National Hosiery Mills, Inc., Indianapolis, Ind. Filed Apr. 10, 1958.

For Ladies' Hosiery.
First use Nov. 1, 1957.

SN 50,831. Pendleton Woolen Mills, Portland, Oreg. Filed May 1, 1958.

THE 49'ER

Owner of Reg. No. 550,641.
For Women's Wool Jackets.
First use Apr. 4, 1958; Aug. 5, 1949, as to "49'er."

SN 50,871. Charleston Rubber Company, Charleston, S.C. Filed May 2, 1958.

CHARCO
RAD BAR

For Gloves Worn To Provide Protection Against Harmful Radiation.
First use Mar. 17, 1958.

SN 52,110. Federated Department Stores, Inc. (Bloomingdale Bros. Division), New York, N.Y. Filed May 22, 1958.

YOUNG EASTSIDER

For Clothing—Namely, Dresses, Coats, Suits, Slacks, Shorts, Blouses, Jumpers, Skirts, Bathing Suits, Sweaters, and Jackets.
First use Apr. 16, 1958.

SN 52,262. Archdale Manufacturing Company, Inc., High Point, N.C. Filed May 26, 1958.

TWO-SEATER

Owner of Reg. No. 585,350.
For Ladies' and Girls' Panties.
First use Mar. 17, 1952.

SN 52,747. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed June 2, 1958.

REVERIE

For Foundation Garments—Namely, Brassieres.
First use May 14, 1958.

SN 52,789. John W. Henson & Sons, Inc., Greenville, Tex. Filed May 29, 1958.

CORDULON

For Fabric Sold in Finished Garments—Namely, Underwear, Negligees, Panties, Slips, Petticoats, Bedjackets, Gowns, Pajamas, and Robes.
First use Aug. 5, 1955.

SN 53,305. Judy Wayne, Inc., New York, N.Y. Filed June 10, 1958.

judy Wayne

For Women's and Misses' Dresses.
First use Aug. 2, 1957.

SN 53,727. Portis Style Industries Co., Chicago, Ill. Filed June 17, 1958.

SNOW PILE

For Mittens, Gloves, Hats, and Caps.
First use on or about Mar. 1, 1958.

SN 53,840. Sweetheart Baby Needs, Inc., New York, N.Y. Filed June 18, 1958.

SWEETHEART

Owner of Reg. No. 620,912.
For Baby Pants and Bibs.
First use Nov. 3, 1954.

SN 54,261. Schiller Bros., Inc., New York, N.Y. Filed June 25, 1958.

Petti-Loon

For Undergarments Specifically Pantaloons and Panties.
First use June 16, 1958.

SN 54,262. Schiller Bros., Inc., New York, N.Y. Filed June 25, 1958.

Lady Opera

Owner of Reg. No. 293,741.
For Undergarments Specifically Petticoats, Pantaloons, Panties, and Slips.
First use June 16, 1958.

SN 54,718. The Welfit Corporation, New Haven, Conn. Filed July 2, 1958.

WELFIT

Owner of Reg. No. 401,661.
For Ladies' Foundations, Brassieres, Corsets, and Girdles.
First use on or about Apr. 12, 1921.

SN 55,449. Breier of Amsterdam, Incorporated, Amsterdam, N.Y. Filed July 17, 1958.

For Men's, Women's, and Children's Coats and Jackets.
First use Nov. 25, 1957.

SN 61,602. Varsity Pajamas, Incorporated, d.b.a. Varsity Pajamas, Inc., New York, N.Y. Filed Oct. 29, 1958.

SN 64,826. Irving E. Greenman, d.b.a. I.E.G. Associates, New Haven, Conn. Filed

SN 56,585. Piedmont Shirt Company, Greenville, S.C. Filed Aug. 4, 1958.

Wings
GOLDEN AWARD

Owner of Reg. Nos. 253,701, 665,286, and others.
For Men's and Boys' Shirts, Pajamas, Undershorts, and Jackets.
First use July 21, 1958.

SN 56,663. Slack-ees Corp., Manhattan, N.Y. Filed Aug. 5, 1958.

SLACK-EES

For Panty Girdles, Corselettes, and Girdles.
First use in June 1949.

SN 57,212. International Shoe Company, St. Louis, Mo. Filed Aug. 14, 1958.

Trios

For Children's Shoes.
First use Aug. 6, 1958.
Subj. to Intf. with SN 41,019.

SN 58,027. Fashion Park, Inc., Rochester, N.Y. Filed Aug. 28, 1958.

SUNNYDEW

For Men's and Boys' Coats, Vests, Trousers, Sport Coats, and Slacks.
First use Oct. 1, 1929.

SN 58,727. Hickey-Freeman Company, Rochester, N.Y. Filed Sept. 10, 1958.

LITEMATE

For Men's Suits.
First use on or about Aug. 27, 1958.

SN 58,728. Hickey-Freeman Company, Rochester, N.Y. Filed Sept. 10, 1958.

THINLYTE

For Men's Suits.
First use on or about Aug. 27, 1958.

SN 59,141. Société à Responsabilité Limitée: Ditexa, Paris, France. Filed Sept. 18, 1958.

Médine
PARIS

No claim is made to the word "Paris" apart from the mark as shown. Owner of French Reg. No. 442,629, dated June 15, 1954 (Seine); Natl. Inst. No. 37,824.
For Jumpers, Robes, Skirts, Ensembles, Dresses, and Hosiery.

SN 59,092. Simon & Mogilner, Birmingham, Ala. Filed Oct. 2, 1958.

PLAY-PET

Owner of Reg. No. 537,154.
For Sunsuits, Coveralls, Creepalls, Overalls, Slacks, Pedal Pushers, Skirts, Capri Pants, Jamaica Shorts, Boxer Shorts, Jackets, Novelty Sets, Halters, Pram Suits, Snowsuits, Ski Pants.
First use Dec. 1, 1957.

SN 59,093. Simon & Mogilner, Birmingham, Ala. Filed Oct. 2, 1958.

MISS PLAY-PET

Owner of Reg. No. 537,154.
For Children's Slacks, Pedal Pushers, Skirts, Shirts, Capri Pants, Jamaica Shorts, Boxer Shorts, Jackets, Novelty Sets, Halters, and Ski Pants.
First use Dec. 1, 1957.

SN 59,994. Simon & Mogilner, Birmingham, Ala. Filed Oct. 2, 1958.

MISTER PLAY-PET

Owner of Reg. No. 537,154.
For Children's Playclothes, Sportswear, and Outerwear—Namely, Shirts, Pants, and Jackets.
First use Dec. 1, 1957.

SN 60,056. Azuma, Inc., New York, N. Y. Filed Oct. 6, 1958.

AZUMA

The word "Azuma" in the Japanese language means "my wife," when translated into English.
For Ties, Slippers, Tabis, Kimonos, Chinese Dresses, and Happi Coats for Beach and House Wear.
First use Dec. 10, 1954.

SN 60,856. The Simone Co., Inc., New York, N.Y. Filed Oct. 17, 1958.

SIMONE

For Girdles, Corsets, Garter Belts, Brassieres.
First use 1928.

SN 60,908. Edmont Manufacturing Company, Coshocton, Ohio. Filed Oct. 20, 1958.

VYLACA

For Utility Gloves Made of Plastic-Coated Fabric.
First use on or about Aug. 1, 1958.

SN 61,251. Baar & Beards, Inc., New York, N.Y. Filed Oct. 24, 1958.

ENDURO-HYDE

For Jackets.
First use Sept. 26, 1958.

SN 61,306. Jerome H. Mayer, d.b.a. Jem Enterprises, Ladue, Mo. Filed Oct. 24, 1958.

THE BEAT GENERATION

For Shirts, Jackets, Pajamas, and Sweatshirts.
First use Oct. 21, 1958.

SN 66,202. Buster Brown Textiles, Inc., Wilmington, Del. SN 67,290. Saks & Company, New York, N.Y. Filed Feb.

First use Aug. 5, 1955.

First use Nov. 25, 1957.

SN 61,602. Varsity Pajamas, Incorporated, d.b.a. Varsity Pajamas, Inc., New York, N.Y. Filed Oct. 29, 1958.

PA-JAMA MA-JAMA
dream-mates

Applicant disclaims the word "Pa-Jama" alone and apart from the mark as shown.

For Pajamas for Men and Women.

First use June 16, 1958.

SN 62,082. Home Manufacturing Company, Decatur, Ill. Filed Nov. 7, 1958.

Choos Coats

Applicant disclaims exclusive right to the word "Coats" apart from the mark as shown.

For Ladies' Ready-to-Wear Clothing—Namely, House Coats, Brunch Coats, Dusters, Sportswear, Maternity Wear, and Lounge Wear.

First use Oct. 20, 1958.

SN 62,552. Wm. P. Goldman & Bros., Inc., New York, N.Y. Filed Nov. 17, 1958.

Donatello

For Men's Suits, Topcoats, Overcoats, Slacks, Sport Coats, and Jackets.

First use Mar. 1, 1958.

SN 62,849. Farah Manufacturing Company, Inc., El Paso, Tex. Filed Nov. 20, 1958.

TRAIL BLAZERS

For Shorts for Outer Wear.

First use Oct. 18, 1958.

SN 63,538. National Glove, Inc., Coshocton, Ohio. Filed Dec. 2, 1958.

BUFFER

For Work Gloves.

First use Nov. 18, 1958.

SN 64,276. Federated Department Stores, Inc., Brooklyn, N.Y. Filed Dec. 15, 1958.

BOBBY LEEDS

Owner of Reg. No. 373,436.

For Clothing for Men, Boys, and Children—Namely, Suits, Coats, Overcoats, Outer and Under Shirts, Blouses, Underwear, Hats, Shoes Made of Leather, Fabric, or Combinations Thereof, Neckties, Robes, Pajamas, Mufflers, Hosiery, Gloves Made of Leather, Fabric, or Combinations Thereof, Sweaters, Mackinaws, and Jackets.

First use Oct. 12, 1938.

SN 64,828. Irving E. Grossmann, d.b.a. I.E.G. Associates, Los Angeles, Calif. Filed Dec. 23, 1958.

LARGOS

For Women's Shoes.

First use Oct. 20, 1958.

SN 64,967. Fawn Hosiery Company, Inc., Nashville, Tenn. Filed Dec. 29, 1958.

Campana

For Women's Hosiery.

First use Jan. 24, 1958.

SN 65,093. Holt Hosiery Corporation, New York, N.Y. Filed Dec. 30, 1958.

Mr. Adam & Lady Eve

For Hosiery.

First use on or about Dec. 5, 1958.

SN 65,432. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Jan. 7, 1959.

FRON-CERTO

Owner of Reg. No. 335,000.

For Brassieres.

First use Dec. 5, 1958.

SN 65,441. Plee-Zing, Inc., Evanston, Ill. Filed Jan. 7, 1959.

PLEE-ZING

Owner of Reg. Nos. 569,221 and 526,277.

For Men's Socks, Ladies' Nylon Stockings, Men's Athletic Shirts, Men's and Boys' T-Shirts, Men's and Boys' Briefs and Men's Boxer Shorts, and Bobby Sox.

First use Feb. 11, 1952.

SN 65,574. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Jan. 9, 1959.

STAR FLOWER

For Brassieres.

First use Dec. 31, 1958.

SN 65,575. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Jan. 9, 1959.

STARSTRUCK

For Brassieres.

First use Dec. 31, 1958.

SN 65,632. The William Carter Company, Needham Heights, Mass. Filed Jan. 12, 1959.

NEVA-VEX

Owner of Reg. Nos. 302,161, 500,112, and 572,182.

For Front Structures of Finished Underpants for Men.

First use Aug. 31, 1951.

SN 61,234. Continental Mills, Inc., Philadelphia, Pa. Filed Oct. 10, 1958.

SN 64,367. Dr. Lorraine A. Van Ostrom, Laguna Beach, Calif. Filed Dec. 15, 1958.

SN 66,202. Buster Brown Textiles, Inc., Wilmington, Del. Filed Jan. 21, 1959.

SLUMBER BUNNIES

For Children's Sleepwear.
First use Jan. 7, 1959.

SN 66,251. Stratton Coats, Incorporated, New York, N.Y. Filed Jan. 21, 1959.

STRATTON

Owner of Reg. No. 606,210.
For Coats for Women, Misses', and Junior Misses.
First use Nov. 1, 1952.

SN 66,296. The Moyer Manufacturing Company, Youngstown, Ohio. Filed Jan. 22, 1959.

Seven Seas

For Slacks.
First use Oct. 15, 1937.

SN 67,276. Alba Hosiery Mills, Inc., Valdese, N.C. Filed Feb. 9, 1959.

TOPMOST

For Ladies' Hosiery.
First use July 31, 1936.

SN 67,375. Metric Hosiery Co., Inc., New York, N.Y. Filed Feb. 9, 1959.

LEOTOTS

For Children's Leotards.
First use Feb. 6, 1959.

SN 67,387. Parkland Sportswear Co., Inc., Dallas, Tex. Filed Feb. 9, 1959.

TEXAS TRAVELER

For Women's Dresses.
First use Jan. 24, 1959.

SN 67,609. Interwoven Stocking Company, New Brunswick, N.J. Filed Feb. 12, 1959.

Interwoven

Owner of Reg. Nos. 48,230, 351,869, and 360,141.
For Hosiery.
First use May 1, 1956.

SN 67,686. Stanwood R. Portney, d.b.a. Stanwood Manufacturing Co., St. Louis, Mo. Filed Feb. 17, 1959.

STANWOOD

For Ladies' Sportswear—Namely, Jackets, Blouses, Dresses, Skirts, Slacks, and Shorts.
First use June 26, 1958.

SN 67,890. Saks & Company, New York, N.Y. Filed Feb. 18, 1959.

Saksbrooke

Owner of Reg. Nos. 304,947, 612,218, and others.
For Women's, Misses', and Girls' Suits and Dresses.
First use Feb. 11, 1958.

Class 40—Fancy Goods, Furnishings, and Notions

SN 61,841. Charles M. Neal, Biddeford, Maine. Filed Nov. 3, 1958.

NEALSLIDE

For Neckerchief Slides.
First use Feb. 9, 1957.

Class 41—Canes, Parasols, and Umbrellas

SN 67,581. Joseph Allman, Atlantic City, N.J. Filed Feb. 12, 1959.

Bag-or Stick

No claim is made to the word "Stick" apart from the mark as shown.
For Swagger Sticks.
First use Feb. 2, 1959.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 38,279. Greenwood Mills, Inc., New York, N.Y. Filed Oct. 8, 1957.

BONDYNE

For Blends of Dynel With Natural and Man-Made Fibers Constituting a Fabric for Trouserings, Skirts, and Shirtings.
First use Oct. 2, 1957.

SN 53,626. C. H. Masland & Sons, Carlisle, Pa. Filed June 16, 1958.

HEX-A-MOTH

For Moth Proofing Finish With Which Applicant Has Treated Its Carpets.
First use Apr. 9, 1958.

SN 55,207. Wm. Briggs & Co. Limited, Manchester, England. Filed July 15, 1958.

BINCA

For Textile Piece Goods for Use in Embroidery Work or Needlework.
First use in 1910; in commerce in 1955.

SN 59,181. The Georgia Company, Inc., New York, N.Y. Filed Sept. 19, 1958.

FABRA-WALL

For Textile Fabrics—Namely, Drapery Fabrics, Wall Covering Fabrics, Slipcover Fabrics, Upholstery Fabrics, and Curtaining Fabrics.
First use June 16, 1958.

SN 44,847. Sta-Wite, Incorporated, Medford, Mass. Filed Jan. 28, 1958.

SN 46,834. Holiday Coffee Corporation, Walpole, Mass. Filed Apr. 1, 1958.

SN 61,234. Continental Mills, Inc., Philadelphia, Pa. Filed Oct. 10, 1958.

ORBIT

For Knitted and Woven Fabrics Made of Wool, Silk, Cotton, Synthetic Fibers or Any Combination Thereof Sold in the Piece.
First use on or about Sept. 22, 1958.

SN 61,235. Continental Mills, Inc., Philadelphia, Pa. Filed Oct. 10, 1958.

BICENTENNIAL

For Knitted and Woven Fabrics Made of Wool, Silk, Cotton, Synthetic Fibers or Any Combination Thereof Sold in the Piece.
First use on or about Sept. 23, 1958.

Class 43—Thread and Yarn

SN 59,983. North American Rayon Corporation, New York, N.Y. Filed Oct. 2, 1958.

NARCREST

For Bulked Yarn.
First use on or about Aug. 26, 1958.

SN 67,074. Masurel Mills, Inc., Woonsocket, R.I. Filed Feb. 4, 1959.

NOVLAN

For Yarns Produced From a Combination of Continuous Filaments and Staple Fibers.
First use Jan. 16, 1959.

SN 67,842. Union des Fabricants "Longfibre" (U.F.A.L.) Syndicat Professionnel, Paris, France. Filed Jan. 5, 1959.

UFAL

Owner of French Reg. No. 456,060, dated Feb. 24, 1956 (Seine); Natl. Inst. No. 69,477.
For Threads.

Class 44—Dental, Medical, and Surgical Appliances

SN 50,853. Stauffer Reducing, Inc. of California, d.b.a. Posture Rest Company, Los Angeles, Calif. Filed May 27, 1957.

POSTURE REST

For Electric Motor Driven Vibrators Used for Posture Correction, Stimulating Circulation, and Exercising Muscles as an Aid to Weight Reduction and Figure Control.
First use Jan. 1, 1953.

SN 65,143. Daleco Products Corporation, San Francisco, Calif. Filed Feb. 3, 1958.

BLUPOINTS

For Devices for Use in Finishing and Polishing Dental Restorations—Namely, Abrasive, Bonded Rubber Rods Adapted To Be Held in Rotary Chucks of Power Driven Holders.
First use Nov. 7, 1957.

SN 64,367. Dr. Lorraine A. Van Ostrom, Laguna Beach, Calif. Filed Dec. 15, 1958.

LE VAN

For Corrective Foot Supports.
First use Nov. 17, 1958.

SN 69,255. Guardian Products Company, Inc., Los Angeles, Calif. Filed Mar. 10, 1959.

GUARDIAN

For Crutches, Tips, Cushions, and Hand Grips for Crutches, Canes, Invalid Cushions, Wheel Chair Cushions, Bed Pan Cushions, Neck Cushions, Knee Bolster Cushions, Horseshoe-Shaped Cushions, Back Rests, Bed Tables, Invalid Bed Receptors, Blanket Supports, and Surgical Tubing.
First use in 1940.

Class 46—Foods and Ingredients of Foods

SN 12,264. E. F. Drew & Co., Inc., New York, N.Y. Filed July 17, 1956.

CHIX-MIX

For Vegetable Fat in Liquid Form Used as a Binder and Fortifier in Poultry Feeds.
First use Apr. 30, 1956.

SN 23,285. E. J. Brach & Sons, Chicago, Ill. Filed Jan. 28, 1957.

ROYAL ANNE

Owner of Reg. No. 539,551.
For Candy.
First use Aug. 4, 1935.

SN 27,076. Anheuser-Busch, Incorporated, St. Louis, Mo. Filed Mar. 28, 1957.

GUARD

For Mold Inhibitor for Bread, Cakes, and Other Baked Products.
First use Feb. 21, 1957.

SN 27,936. American Chicle Company, Long Island City, N.Y. Filed Apr. 10, 1957.

Dentyne

The color lining is for red and black. Owner of Reg. Nos. 566,778 and 198,490.
For Chewing Gum.
First use Jan. 3, 1956.

SN 39,214. Four Star Candy Co. Inc., Newark, N.J. Filed Oct. 21, 1957.

POPS

No claim of exclusive right is made to the word "Pops," said word being the name of the goods.
For Hard Candy on a Stick.
First use Jan. 2, 1952.
Subj. to Intf. with SN 66,635.

SN 53,991. Artie's Food Products, Inc., Indianapolis, Ind. Filed June 23, 1958.

SN 61,753. Washington Fish & Oyster Co. of Calif., d.b.a. Washington Fish and Oyster Co., Inc., San Francisco, Calif.

SN 44,847. Sta-Wite, Incorporated, Medford, Mass. Filed Jan. 26, 1958.

STA-WITE

Owner of Reg. No. 432,158.
For Peeled Raw Potatoes.
First use May 1, 1944.

SN 45,115. D. L. Burke, d.b.a. Duncan Mills Food Co., Columbus, Ohio. Filed Feb. 3, 1958.

For Salad Dressing.
First use August 1956.

SN 45,777. Lyman D. Dunn, d.b.a. The Dewitt Co., Chicago, Ill. Filed Feb. 5, 1958.

Q-BURGER

For Flavoring Composition for Addition to Meat.
First use Oct. 15, 1957.

SN 47,193. Hayden Flour Mills, Tempe, Ariz. Filed Mar. 6, 1958.

The word "Arizona" is disclaimed apart from the mark.
Owner of Reg. Nos. 555,626 and 619,186.
For Self-Rising Flour.
First use Dec. 27, 1957.

SN 47,833. Bookey Packing Company, Des Moines, Iowa. Filed Mar. 10, 1958.

For Edible Beef Offal, Comprising Beef Cheekmeat, Beef Lungs, Beef Lips, Beef Hearts, Beef Tongues, Beef Melts, Scalded Beef Trips, Ox Tails, Beef Livers, and Honeycomb Tripe.
First use Jan. 4, 1954.

SN 48,836. Holiday Coffee Corporation, Walpole, Mass. Filed Apr. 1, 1958.

HOLIDAY

Owner of Reg. No. 525,383.
For Instant Coffee and Tea Bag Tea.
First use June 9, 1947, on coffee.

SN 49,748. E. F. Drew & Co., Inc., New York, N.Y. Filed Apr. 16, 1958.

DRI-MULSE

Owner of Reg. No. 539,496.
For Emulsifier and Whipping Agent for Use in Frozen Desserts.
First use Feb. 5, 1958.

SN 49,752. Farley Manufacturing Company, Skokie, Ill. Filed Apr. 16, 1958.

J. J. TOYS

For Candy.
First use on or about Mar. 31, 1958.

SN 50,570. Wilbur-Ellis Company, d.b.a. Wilbur-Ellis Co., Inc., San Francisco, Calif. Filed Apr. 28, 1958.

SOUTHERN ISLE

For Canned Tuna Fish and Frozen Shell Fish.
First use Jan. 22, 1958.

SN 51,148. Stella D'Oro Biscuit Co. Inc., New York, N.Y. Filed May 6, 1958.

EGG JUMBO

For Cookies or Biscuits.
First use Feb. 20, 1951.

SN 51,775. E. Cherry Sons & Co., Inc., Philadelphia, Pa. Filed May 16, 1958.

NUTARAMA GLACE'

The word "Glacé" is disclaimed.
For Candy Confection Composed Principally of Nuts, Cane Sugar, Glucose, Molasses, Butter, and Salt.
First use Jan. 5, 1956.

SN 52,615. Eto Nahrungsmittelfabriken Richard Graebener, Karlsruhe, Baden, Germany. Filed May 23, 1958.

ETO

Owner of German Reg. No. 490,479, dated Jan. 25, 1938.
For Ready-to-Cook Soups; Bouillons, and Sauces in Dried, Paste-Like and Liquid Form, and Albumin Seasonings in Dried, Paste-Like and Liquid Form.

SN 53,912. Welch & Sons Limited, North Shields, Northumberland, England. Filed June 19, 1958.

WELCASTLE

Owner of British Reg. No. 772,950, dated Dec. 31, 1957.
For Candies.

SN 52,827. Ice Cream Equipment Rental, Inc., La Grange, Ill. Filed Dec. 8, 1958.

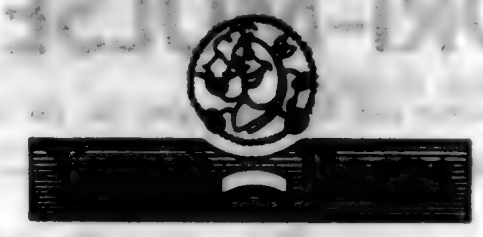
SN 70,666. General Mills, Inc., Minneapolis, Minn. Filed Mar. 23, 1959.

SN 52,961. Artic's Food Products, Inc., Indianapolis, Ind. Filed June 23, 1958.

RIC-RACS

For Potato Chips.
First use May 29, 1958.

SN 57,450. William T. Young, d.b.a. Young Bean Company and W. T. Young Bean Company, Lexington, Ky. Filed Aug. 18, 1958.



The drawing is lined to indicate blue color. No claim of exclusive use to the word "Beans" is made, such word being the name of the goods.
For Dried Beans.
First use Oct. 21, 1957.

SN 57,599. Central Retailer-Owned Grocers, Inc., Chicago, Ill. Filed Aug. 21, 1958.

SHURFRESH

Owner of Reg. No. 663,880.
For Milk, Cream, Cheese, Ice Cream, Oleomargarine, Cheese Spread, Dry Milk Powder, Refrigerated Ready to Bake Biscuits and Salad Oil.
First use Oct. 9, 1950.

SN 59,779. J. R. Simplot Company, Boise, Idaho. Filed Sept. 29, 1958.

POTATO GEMS

The applicant claims no exclusive rights to the word "Potato" as the name of the goods identified herein. Owner of Reg. No. 627,838.
For Frozen Potatoes.
First use Sept. 14, 1958.

SN 60,406. Donna Citrus, Inc., Donna, Tex. Filed Oct. 10, 1958.

TEXAS MOON

No claim of exclusive right is made to "Texas," as used on the goods claimed. Owner of Reg. No. 387,501.
For Fresh Citrus Fruits and Fresh Vegetables.
First use Dec. 15, 1939.

SN 61,029. California Packing Corporation, San Francisco, Calif. Filed Oct. 21, 1958.

TIP TOP

For Canned Fruits and Canned Vegetables.
First use 1904.

SN 61,753. Washington Fish & Oyster Co. of Calif., d.b.a. Washington Fish and Oyster Co., Inc., San Francisco, Calif. Filed Oct. 31, 1958.

Drake's Bay

For Canned Fish.
First use July 31, 1957.

SN 62,143. Allied Mills, Inc., Chicago, Ill. Filed Nov. 10, 1958.

SUCRENE

Owner of Reg. Nos. 528,026 and 44,742.
For Livestock Feed.
First use September 1899.

SN 62,200. The Low Calorie Candy Company, Inc., Yonkers, N.Y. Filed Nov. 10, 1958.

Magic Mints

No claim of exclusive right is made to the word "Mints," such word being the name of the goods.
For Chocolate Peppermints Having a Low Calorie Content.
First use Apr. 1, 1958.

SN 62,462. E. E. Hawes, d.b.a. Hawes Packing Company, Queen Creek, Ariz. Filed Nov. 14, 1958.

MISTER SOLID SPUD

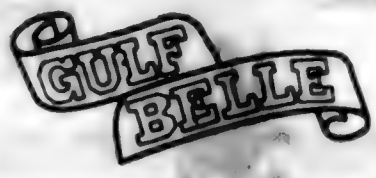
No claim of exclusive right is made to "Spud," as used on the goods claimed.
For Fresh Potatoes in Their Natural State.
First use June 4, 1952.

SN 62,982. Standard Brands Incorporated, New York, N.Y. Filed Nov. 20, 1958.

TRIXY

Owner of Reg. No. 156,750.
For Gelatin Desserts, Pudding, and Pie Filling.
First use July 3, 1958.

SN 63,184. Southland Canning & Packing Company, New Orleans, La. Filed Nov. 25, 1958.



For Canned Seafoods—Namely, Canned Shrimp and Canned Oysters.
First use Jan. 26, 1948.

SN 63,197. Winton Bros., Inc., Stratford, Conn. Filed Nov. 25, 1958.

ORONOQUE ORCHARDS

For Pies, Cakes, Cookies, Doughnuts, Bread, Unfermented Cider, Candy, Table Syrup, Jams, Jellies, Honey, Popped and Unpopped Popcorn, Ice Cream, and Fresh Fruit.
First use January 1950 on pies and cider.

SN 58,250. Safe-T-Pacific Baking Co., San Francisco, Calif. Filed Sept. 2, 1958.

SN 52,045. Richard Hudnut, Morris Plains, N.J. Filed May 21, 1958.

SN 63,857. Ice Cream Equipment Rental, Inc., La Grange, Ill. Filed Dec. 8, 1958.

ICER

For Wafers for Ice Cream Sandwiches.
First use Sept. 15, 1958.

SN 64,240. Anderson, Clayton & Co., Dallas, Tex. Filed Dec. 15, 1958.

GIST

For Vegetable Shortening, Salad Oil, and Oleomargarine.
First use Nov. 25, 1958.

SN 64,241. Anderson, Clayton & Co., Dallas, Tex. Filed Dec. 15, 1958.

DEFT

For Vegetable Shortening, Salad Oil, and Oleomargarine.
First use Nov. 25, 1958.

SN 66,635. Pangburn Company, Inc., Fort Worth, Tex. Filed Jan. 28, 1959.

TV

For Candy.
First use Nov. 4, 1949.
Subj. to Intf. with SN 39,214.

SN 69,177. The Quaker Oats Company, Chicago, Ill. Filed Mar. 9, 1959.

KEN·L TREATS

Owner of Reg. Nos. 188,236, 425,833, 661,112, and others.
For Dog Food.
First use June 30, 1955.

SN 69,815. Kaydee Ice Cream Co., Atlantic City, N.J. Filed Mar. 18, 1959.

SUGAR-LO

For Ice Cream.
First use Mar. 1, 1959.

SN 69,945. Bridgford Packing Company, Anaheim, Calif. Filed Mar. 20, 1959.

BOLO

For Luncheon Meats.
First use Mar. 9, 1959.

SN 70,046. The Dickinson Company, d.b.a. The Dickinson Family, Portland, Oreg. Filed Mar. 23, 1959.

Dickinson's

Owner of Reg. No. 508,673.
For Fruit Preserves, Fruit Syrups, and Jellies.
First use about Aug. 1, 1950.

SN 70,066. General Mills, Inc., Minneapolis, Minn. Filed Mar. 23, 1959.

ROYAL BREAKFAST

For Fresh Eggs.
First use Feb. 1, 1957.

SN 70,702. Dr. Macdonald's Vitamized Feed Co., Inc., Fort Dodge, Iowa. Filed Apr. 2, 1959.

VY-TAB-O-LATOR

For Mineral Feeds for Poultry and Livestock.
First use 1924.

SN 70,753. Stewarts Private Blend Coffee Co., Chicago, Ill. Filed Apr. 2, 1959.

CONGO

For Barbecue Sauce.
First use Jan. 5, 1959.

SN 70,997. The Crosse & Blackwell Company, Baltimore, Md. Filed Apr. 7, 1959.

EMPIRE

For Candy Assortment.
First use Mar. 12, 1959.

SN 71,005. Escalon Packers, Inc., Escalon, Calif. Filed Apr. 7, 1959.

CRISTOFORO COLOMBO

The trademark is the baptismal name of the president of the applicant corporation, consent of record.
For Peeled Tomatoes.
First use Nov. 21, 1958.

Class 50—Merchandise Not Otherwise Classified

SN 57,585. Zeta-Northern Co., Erie, Pa. Filed Aug. 20, 1958.

TRADE MARKER

For Signs Having Magnetic Means Thereon for Attaching Them to Vehicles Such as Trucks, Commercial Automobiles, and Buses.
First use July 1, 1958.

SN 57,915. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Aug. 26, 1958.

REFLECTO-LITE

Owner of Reg. Nos. 548,504 and 662,673.
For Light Reflective Material in Sheet Form.
First use July 1957.

SN 61,844. Nutrilite Products, Inc., Buena Park, Calif.

SN 64,812. Botany Mills, Inc., d.b.a. Holley Co., South San

SN 58,250. Safe-T-Pacific Baking Co., San Francisco, Calif. Filed Sept. 2, 1958.

For Paper Drinking Straws.
First use Feb. 4, 1957.

SN 58,181. Unena Manufacturing Company, Providence, R.I. Filed Feb. 20, 1959.

RING-O-RAMA

For Display Case for Rings.
First use Dec. 1, 1958.

Class 51 — Cosmetics and Toilet Preparations

SN 46,653. Shiseido Company, Limited, Chuo-ku, Tokyo, Japan. Filed Feb. 26, 1958.

SHISEIDO

The English meaning of the Japanese term "Shiseido" is "all things are created by Heaven." Owner of Japanese Reg. Nos. 393,943, dated Nov. 16, 1950, and 393,976, dated Nov. 17, 1950.

For Dentifrices, Perfumes, Cosmetic Skin Creams and Lotions, Toilet Waters, Powders for the Face and Body, Rouge, Lipstick, Eye Shadow, Eyebrow Pencil, Preparations for the Hair—Namely, Hair Grooming Creams, Hair Conditioning Creams, Pomade, Hair Grooming Oils, Hair and Scalp Conditioning Oils, Permanent Wave Solutions, Hair Dyes, Depilatories, Breath Deodorants, and Mascara.

SN 46,986. Park & Tilford, d.b.a. Tilford Toiletries, New York, N.Y. Filed Mar. 3, 1958.

TILFORD STAY PUT

Owner of Reg. Nos. 423,356 and 672,938.
For Hair Sprays and Lipsticks.
First use June 3, 1958; 1915 as to "Tilford" as part of the mark "Park & Tilford."

SN 49,501. Lehn & Fink Products Corporation, d.b.a. Tussy Cosmetics, Bloomfield, N.J. Filed Apr. 11, 1958.

LIQUID PEARL

For Skin Cleansing Lotion.
First use Mar. 15, 1958.

SN 51,794. Richard Hudnut, Morris Plains, N.J. Filed May 16, 1958.

MOISTURE PETALS

For Cosmetic Facial Lotion.
First use May 6, 1958.

SN 52,045. Richard Hudnut, Morris Plains, N.J. Filed May 21, 1958.

FLATTER FLUFF

For Cream Foundation Makeup.
First use May 6, 1958.

SN 52,603. Cosmetically Yours, Inc., Yonkers, N.Y., by change of name from Tiara Cosmetics Inc., Yonkers, N.Y. Filed May 29, 1958.

Cosmetically Yours

For Cosmetic Skin Lotions and Creams.
First use Feb. 2, 1958.

SN 59,648. Shulton, Inc., Clifton, N.J. Filed Sept. 26, 1958.

ICE-O-DERM

For Medicated Cosmetic Skin Astringent.
First use Aug. 19, 1958.

SN 59,750. Mytinger & Casselberry, Inc., Long Beach, Calif. Filed Sept. 29, 1958.

FEMINE 20

For Cosmetic Skin Cream.
First use July 24, 1958.

SN 59,751. Mytinger & Casselberry, Inc., Long Beach, Calif. Filed Sept. 29, 1958.

COOL BLUSH

For Cosmetic Face Pack and Facial Cream Preparation.
First use July 24, 1958.

SN 60,304. Nutrilite Products, Inc., Buena Park, Calif. Filed Oct. 8, 1958.

EDITH REHNBORG

The mark consists of the name of a director and former president of applicant, consent of record.

For Cosmetics—Namely, Liquid Foundation Lotion, Liquid Leg Make-Up, Beauty Packs, Lipstick, Face Powder, Liquid Hair Rinse, Liquid Skin Freshener, Hand and Body Lotion, Hair Conditioning and Dressing Preparation, Rouge, and Cosmetic Skin Creams and Liquids.
First use May 5, 1958.

SN 60,318. Jack Solomon, d.b.a. Le Jacque, Flushing, N.Y. Filed Oct. 8, 1958.

REVE D'AMOUR

The French notation "Reve D'Amour" means "love's dream."
For Perfume and Toilet Water.
First use Aug. 30, 1958.

SN 70,255. Schlumberger Well Surveying Corporation, Hous-

SN 59,366. West Coast Electronic Manufacturers Associa-

SN 61,844. Nutrilite Products, Inc., Buena Park, Calif. Filed Nov. 3, 1958.

Edith Rehnborg

The mark consists of the name of a director and former president of applicant, consent of record.

For Cosmetics—Namely, Hair Rinse, Hair Conditioner, Hand and Body Lotion, Skin Toning Freshener, Beauty Pack, Face Powder, Liquid Foundation Lotion, Liquid Leg Make-Up, Lipstick, and Cosmetic Skin Creams and Liquids.

First use May 5, 1958.

SN 63,167. Lingner-Werke G.m.b.H., Duesseldorf, Germany. Filed Nov. 25, 1958.

pitrell

Owner of German Reg. No. 715,737, dated July 11, 1958.

For Cosmetics and Toilet Preparations—Namely, Shaving Lotions for Electric Razors.

SN 63,478. Paula Payne Products Company, d.b.a. Paula Payne Products, Charlotte, N.C. Filed Dec. 1, 1958.

PAULA PAYNE

For Permanent Wave Supplies—Namely, Wave Lotions, Wave Neutralizer, and Shampoo Concentrate.

First use Oct. 2, 1958.

SN 63,525. Daggett & Ramsdell, Inc., New York, N.Y. Filed Dec. 2, 1958.

RUFFLES

Owner of Reg. Nos. 591,399 and 121,000.

For Toilet Water.

First use Feb. 18, 1958.

SN 64,483. Nacional Quimica, S.A., Panama, Panama. Filed Dec. 17, 1958.

MENTICOL

For Skin Refreshing and After Shave Lotion.

First use April 1958; in commerce April 1958.

SN 64,812. Botany Mills, Inc., d.b.a. Holley Co., South San Francisco, Calif. Filed Dec. 23, 1958.

TANFASTIC

For Suntan Lotion.

First use Dec. 8, 1958.

Class 52—Detergents and Soaps

SN 50,580. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Apr. 28, 1958.

444-C

For Paint Removing Compound.

First use Oct. 23, 1951.

SN 55,463. The Du Bois Co., Inc., Cincinnati, Ohio. Filed July 17, 1958.

DuJET

For Liquid Steam Cleaning Preparation.

First use Mar. 18, 1958.

SN 66,951. Southwest Grease & Oil Co., Inc., Wichita, Kans. Filed Feb. 2, 1959.

230

For Waterless Hand Cleaner.

First use Dec. 23, 1958.

SN 67,190. Paul F. Beich Company, Bloomington, Ill. Filed Feb. 6, 1959.

TLC tender loving care

For Liquid Detergent.

First use Jan. 21, 1959.

SERVICE MARKS

Class 100—Miscellaneous

SN 47,863. Kerr-McGee Oil Industries, Inc., Oklahoma City, Okla. Filed Mar. 17, 1958.

SHOP 'N GAS

For Services Rendered to Automotive Vehicles—Namely, Wheel Changing, Testing and Replenishing of Battery Liquid, Antifreeze Testing and Replenishment, Window Glass Cleaning, and Minor Repairs.

First use August 1954.

SN 56,919. Burgess-Norton Mfg. Co., Geneva, Ill. Filed Aug. 11, 1958.

PARTNEERING

For Engineering Consultation, Design and Manufacture of Machine Parts to the Special Order of Customers.

First use February 1957.

SN 57,417. Ramada Inns, Inc., Chicago, Ill. Filed Aug. 18, 1958.

The lining does not symbolize color. Applicant claims no exclusive rights in the words "Roadside Hotels."

For Hotel and Inn Services.

First use July 12, 1958.

SN 64,747. Physicians and Hospitals Supply Company, Minneapolis, Minn. Filed Dec. 22, 1958.

P&H

For Consultant Services to Hospitals in the Field of Equipment and Furnishings.

First use 1925.

SN 71,147. The Poulsen Insurance Company of America, Chicago, Ill. Filed Apr. 8, 1959.

Class 104—Communication

SN 70,255. Schlumberger Well Surveying Corporation, Houston, Tex. Filed Mar. 25, 1959.

SPEED-O-LOG

For Geophysical Exploration Services in Which Logs of Measured Earth Characteristics Are Electronically Transmitted To Be Reproduced at a Receiving Location.
First use Jan. 30, 1959.

SN 70,514. Outdoor Development Company, Incorporated, Augusta, Ga. Filed Mar. 30, 1959.

OUTDOOR DEVELOPMENT Company

For Professional Consultation and Services Relating to the Design of Building Structures and for Writing Specifications in Connection With Building Structures.
First use January 1958.

Class 101—Advertising and Business

SN 5,262. United States Wholesale Grocers Association, Inc., Washington, D.C. Filed Mar. 26, 1956.

ECONOMAT

For Retail Grocery Services.
First use Feb. 15, 1956.

SN 42,139. Independent Grocers' Alliance Distributing Company, Chicago, Ill. Filed Dec. 10, 1957.

IGA

For Association Services—Namely, Preparing Publicity and Advertising for Member Stores.
First use Jan. 15, 1937.

SN 49,181. Photographers' Telegraph Ass'n., Inc., Los Angeles, Calif. Filed Apr. 7, 1958.

PHOTOGRAPHERS TELEGRAPH ASSN., INC. P.T.A.

The words "Photographers Telegraph Assn., Inc." "Service" and "Integrity" are disclaimed apart from the mark.
For Coordinating Activities of Photographers in Securing Photographic Business, as by Promoting the Sale of Gift Orders for Portraits.
First use July 5, 1957.

SN 49,263. The General Fireproofing Company, Youngstown, Ohio. Filed Apr. 9, 1958.

GF STUDIOS

No claim is made to the word "Studios" apart from the mark as shown.
For Interior Decorating Service Comprising the Planning, Designing, and Decorating of Office Interiors.
First use Mar. 3, 1958.

SN 59,366. West Coast Electronic Manufacturers Association, Los Angeles, Calif. Filed Sept. 22, 1958.

WESCON

For Staging an Annual Industrial Show for the Electronics Industry.
First use on or about June 1, 1957.

Class 102—Insurance and Financial

SN 46,514. WRSM Financial Service Corporation, New York, N.Y. Filed Feb. 24, 1958.

TREND & VALUE

The words "Critical Investment Studies" are disclaimed apart from the mark.
For Rendering an Analysis Service of the Stock Market for Subscribers by Means of Investment Reports.
First use Nov. 4, 1957.

SN 47,206. Northwestern National Life Insurance Company, Minneapolis, Minn. Filed Mar. 6, 1958.

BUDG-O-MATIC

For Services in Connection With the Payment of Insurance Premiums Becoming Due on Insurance Contracts Between Applicant, the Insurer, and Others, the Insured, Such Services Involving the Authorized Withdrawal, by Applicant, of Funds Covering Such Premium Payments From Checking Accounts of the Insured.
First use Nov. 5, 1957.

SN 48,292. William M. Ledwith, Pittsburgh, Pa. Filed Mar. 24, 1958.

A-T-B

For Consulting Services in the Field of Machine Accounting.
First use Feb. 26, 1958.

SN 51,413. Bankers Life Insurance Company of Nebraska, d.b.a. Bankers Life of Nebraska, Lincoln, Nebr. Filed May 12, 1958.

For Underwriting Life Insurance.
First use Jan. 30, 1958.

SN 64,775. Surety Mutual Life & Casualty Insurance Company, Fargo, N. Dak. Filed Dec. 22, 1958.

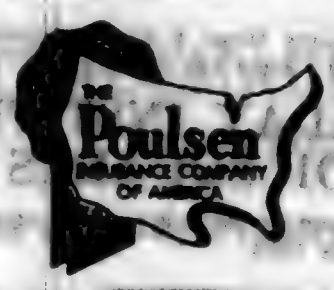
DOLLABAC

For Underwriting of Accident and Health Insurance.
First use Dec. 15, 1958.

SN 49,891. Allied Textile Printers, Inc., Paterson, N.J.

Class 107—Education and Entertainment

SN 71,147. The Poulsen Insurance Company of America, Chicago, Ill. Filed Apr. 8, 1959.



Owner of Reg. No. 599,507.
For Health and Accident Insurance Underwriting.
First use Sept. 22, 1953.

Class 103—Construction and Repair

SN 47,372. George Getz Corporation, Chicago, Ill. Filed Mar. 10, 1958.

SERVISOFT

Owner of Reg. No. 595,720.
For Service of Water Softening and the Installation, Maintenance and Repair of Equipment for Softening Water.
First use Oct. 20, 1936.

SN 49,905. Coastal-Marine Drilling and Construction Corporation, Houston, Tex. Filed Apr. 18, 1958.

For Offshore Well Drilling, Construction, and Installation of Offshore Drilling Platforms.
First use Aug. 17, 1957.

SN 53,335. Fred E. Jacobie, d.b.a. Superior Rug & Upholstery Cleaners, Harvey, Ill. Filed June 11, 1958.

For Cleaning of Rugs, Carpeting, Upholstery.
First use Apr. 1, 1957.

SN 55,693. O.K. Ko-Op Rubber Welding System, Littleton, Colo. Filed July 21, 1958.

The lining is part of the mark and does not indicate color.
Owner of Reg. No. 602,235.
For Tire Retreading, Tire Recapping, Tire Siping, and Tire Balancing Services.
First use on or about Mar. 19, 1934.

Class 104—Communication

SN 62,816. WIBC, Inc., Indianapolis, Ind. Filed Nov. 17, 1958.

THE FRIENDLY VOICE OF INDIANA

The service mark is read by radio announcers.
For Radio Broadcasting Services.
First use November 1948.

SN 64,682. Blue Skies Broadcasting Corporation, Bradenton, Fla. Filed Dec. 22, 1958.

Applicant's call letters "WTRL" are used subject to the control and regulations of the Federal Communications Commission and to the extent that applicant's rights to use said call letters are limited or abridged by said Federal Communications Commission said call letters are disclaimed by applicant apart from the mark as shown.
For Radio Program Broadcasting Services.
First use July 1, 1957.

Class 105—Transportation and Storage

SN 64,246. Belgian Line Incorporated, New York, N.Y. Filed Dec. 15, 1958.

BELGIAN LINE

The word "Line" is disclaimed separate and apart from the mark as shown.
For Transportation by Ship of Package Freight and Other Cargo.
First use Jan. 1, 1929.

Class 106—Material Treatment

SN 20,002. Aktiengesellschaft Cilander, Herisau, Appenzell, Switzerland. Filed Nov. 28, 1956.

ANTISAL

For Finishing the Textile Fabrics of Others—Namely, Bleaching, Dyeing, Printing, and Rendering Shrink-Proof and Spot, Stain, and Water-Repellent.
First use Dec. 17, 1955; in commerce May 1, 1956.

SN 46,564. Oxford Textile Finishing Co., Inc., Oxford, N.J. Filed Feb. 25, 1958.

WASH EVER

For Processing Fabrics of Others, Such as by Dyeing and Applying Crease Resistant and Shrink Controlling Finishes.
First use Dec. 20, 1957.

SN 49,891. Allied Textile Printers, Inc., Paterson, N.J. Filed Apr. 18, 1958.

Embroché

For Flock Printing and Burning Out of Textile Fabrics of Others.
First use Feb. 17, 1958.

SN 64,061. The Kenyon Piece Dyeworks, Inc., Kenyon, R.I. Filed Dec. 11, 1958.

Sun-Resist®

Owner of Reg. No. 565,159.
For Treatment of Textile Fabrics To Resist Deterioration by Light.
First use Oct. 14, 1958.

Class 107 — Education and Entertainment

SN 48,831. De Luxe Music & Square Dance Record Shops, Inc., Chicago, Ill. Filed Apr. 1, 1958.

HOLIDAY INSTITUTE OF SQUARES

For Teaching and Promoting the Art of Square Dancing.
First use May 28, 1958.

SN 51,725. School Pen Company, Chatham, N.J. Filed May 15, 1958.

For Teacher and Student Workshops Pertaining to Writing Instruments.
First use Sept. 15, 1952.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 50,967. Cabana Nutria Breeders Association, Arcadia, Calif. Filed May 5, 1958.

CNBA

For Indicating Membership in an Organization of Nutria Breeders and Raisers.
First use July 1954.

SN 64,093. National Education Association of the United States, d.b.a. Future Teachers of America and National Education Association, Washington, D.C. Filed Dec. 11, 1958.

FUTURE TEACHERS OF AMERICA

For Indicating Membership in Applicant's Organization.
First use June 28, 1937.

Class 10 — Fertilizers

682,077. LID-BASE. Coach and Car Equipment Corpora-

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

682,010. REDCO AND DESIGN. Reading Anthracite Company, assignee of Philadelphia and Reading Corporation. SN 55,877. Pub. 5–5–59. Filed 9–30–57.

682,011. DREYCO BASE. L. A. Dreyfus Company. SN 45,150. Pub. 5–5–59. Filed 2–3–58.

682,012. CONSOL ORIGINAL POCAHONTAS AND DESIGN. Consolidation Coal Company, assignee of Pocahontas Fuel Company, Incorporated. SN 48,202. Pub. 5–5–59. Filed 3–21–58.

682,013. FOSTA. Foster Grant Co., Inc. SN 48,265. Pub. 5–5–59. Filed 3–24–58.

682,014. FOSTA TUF-FLEX. Foster Grant Co., Inc. SN 48,267. Pub. 5–5–59. Filed 3–24–58.

682,015. SHADY SPOT. Wm. G. Scarlett & Co. SN 48,788. Pub. 5–5–59. Filed 3–31–58.

682,016. FIN 'N FEATHER. Fin 'n Feather Farm, Inc., d.b.a. Fin 'n Feather Club. SN 50,358. Pub. 5–5–59. Filed 4–25–58.

682,017. DEL/TA. The Glidden Company. SN 51,563. Pub. 5–5–59. Filed 5–13–58.

682,018. EVANETTE. John R. Evans & Co. SN 52,807. Pub. 5–5–59. Filed 6–3–58.

682,019. SPEY ROYAL SCOTCH. Eagle Ottawa Leather Company. SN 55,410. Pub. 5–5–59. Filed 9–5–58.

682,020. MO-DRI. Caulfield Oil Company. SN 56,093. Pub. 5–5–59. Filed 9–16–58.

682,021. BEL-AIR. Germain's, Inc. SN 56,162. Pub. 5–5–59. Filed 9–19–58.

682,022. STAR-FLEX. International Minerals & Chemical Corporation. SN 56,620. Pub. 5–5–59. Filed 9–26–58.

682,023. GLOPAQUE. U.S. Plastic Products Corporation. SN 60,777. Pub. 5–5–59. Filed 10–16–58.

682,024. CORDATAN. The Griess-Pfleger Tanning Co. SN 61,051. Pub. 5–5–59. Filed 10–21–58.

682,025. MR. HICKORY AND DESIGN. Frank Miller & Sons, Incorporated. SN 61,578. Pub. 5–5–59. Filed 10–29–58.

Class 2—Receptacles

682,026. GEORGETOWN. Chicago Molded Products Corporation. SN 63,805. Pub. 5–5–59. Filed 12–8–58.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

682,027. JET STAR AND DESIGN. Armored Luggage Mfg. Co., Inc. SN 49,404. Pub. 5–5–59. Filed 4–10–58.

682,028. CONTOURET. Country Town Products, Inc. SN 56,839. Pub. 5–5–59. Filed 9–8–58.

682,029. JR. AIRLINE AND DESIGN. Rosco, Inc., d.b.a. Airline Textile Mfg. Co. SN 57,290. Pub. 5–5–59. Filed 8–15–58.

682,030. COFFEE CLUTCH. Roxanne Leather Goods Inc. SN 60,883. Pub. 5–5–59. Filed 10–15–58.

682,031. MISS UNIVERSE. Skyway Luggage Company. SN 61,515. Pub. 5–5–59. Filed 10–28–58.

Class 4—Abrasives and Polishing Materials

682,032. DURA-GRIT. Tar-Gon Products, Inc., d.b.a. Handyman Tool Co. SN 62,395. Pub. 5–5–59. Filed 11–12–58.

Class 5—Adhesives

682,033. UNIWELD. Permaglo Corporation of America. SN 62,481. Pub. 5–5–59. Filed 11–14–58.

682,034. DURO-LOK. National Starch Products Inc. SN 62,589. Pub. 5–5–59. Filed 11–17–58.

Class 6—Chemicals and Chemical Compositions

682,035. WRDA. W. R. Grace & Co. SN 45,797. Pub. 5–5–59. Filed 2–13–58.

682,036. URALOY. Interchemical Corporation. SN 47,508. Pub. 5–5–59. Filed 3–11–58.

682,037. DEDO. Antoine François Régis Peyron. SN 55,705. Pub. 5–5–59. Filed 7–21–58.

682,038. DEDORAL. Antoine François Régis Peyron. SN 55,706. Pub. 5–5–59. Filed 7–21–58.

682,039. UNION CARBIDE. Union Carbide Corporation. SN 55,889. Pub. 5–5–59. Filed 7–22–58.

682,040. THO-NOL ETC. AND DESIGN. Tho-Nol, Inc. SN 56,506. Pub. 5–5–59. Filed 8–1–58.

682,041. NUTRI-FRESH. Nutrena Mills, Inc. SN 57,918. Pub. 5–5–59. Filed 8–26–58.

682,042. PANGIT. Automatic Vulcanizers Corporation. SN 59,233. Pub. 5–5–59. Filed 9–19–58.

682,043. AD-CON. Old-North Manufacturing Company, Inc. SN 59,451. Pub. 5–5–59. Filed 9–24–58.

682,044. INCCO. Inland Chemical Corp. SN 60,040. Pub. 5–5–59. Filed 10–2–58.

682,045. FALAINE. Catomance Limited. SN 62,155. Pub. 5–5–59. Filed 11–10–58.

682,046. CHEM/TEX AND DESIGN. Standard Products Co., Inc. SN 62,252. Pub. 5–5–59. Filed 11–6–58.

682,047. HYZERN. Beta Laboratories, Inc. SN 62,520. Pub. 5–5–59. Filed 11–17–58.

Class 7—Cordage

682,048. SNIP 'N TIE. M. Hausman & Sons, Inc. SN 45,732. Pub. 5–5–59. Filed 2–12–58.

682,049. TWINKLE-SHEEN. American Greetings Corporation. SN 51,764. Pub. 5–5–59. Filed 5–16–58.

Class 9—Explosives, Firearms, Equipments, and Projectiles

682,050. H. & R. REISING. Harrington & Richardson, Inc. SN 42,625. Pub. 5–5–59. Filed 2–28–58.

682,060. 'ALCOPARA'. Burroughs Wellcome & Co. (U.S.A.)

682,128. MINIPLEXER. Applied Science Corporation of

Class 10 — Fertilizers

682,051. INTERNATIONAL ETC. AND DESIGN. International Minerals & Chemical Corporation. SN 54,952. Pub. 5-5-59. Filed 8-8-58.

Class 11 — Inks and Inking Materials

682,052. GESTELITH. Gestetner Limited. SN 42,469. Pub. 5-5-59. Filed 12-16-57.

Class 12 — Construction Materials

682,053. INBETWEENER. M. & W. Specialties, Inc. SN 32,097. Pub. 5-5-59. Filed 6-17-57.

682,054. KOROK. The Enamel Products Company. SN 32,806. Pub. 5-5-59. Filed 6-28-57.

682,055. PLUM VALLEY. The Babcock Company. SN 36,245. Pub. 5-5-59. Filed 8-28-57.

682,056. ACITAB. Mexico Refractories Company. SN 41,922. Pub. 5-5-59. Filed 12-6-57.

682,057. ALUMINAIRE. Edward W. Rafter, d.b.a. Aluminaire Company. SN 44,759. Pub. 5-5-59. Filed 1-27-58.

682,058. PERL-FLOTE. Zonolite Company. SN 46,180. Pub. 5-5-59. Filed 2-19-58.

682,059. PERL-TROWL. Zonolite Company. SN 46,181. Pub. 5-5-59. Filed 2-19-58.

682,060. WAT R BAR AND DESIGN. American-Marietta Company. SN 47,317. Pub. 5-5-59. Filed 3-10-58.

682,061. TALIA. George A. Specht, d.b.a. Talia Mosaic Tile Company. SN 47,449. Pub. 5-5-59. Filed 3-10-58.

682,062. LOXON. The Sherwin-Williams Company. SN 50,852. Pub. 5-5-59. Filed 4-29-58.

682,063. BLUE SEALED P/P AND DESIGN. Plywood Products Corp. SN 51,061. Pub. 5-5-59. Filed 5-14-58.

682,064. SMOOTHPLY. United States Plywood Corporation. SN 53,079. Pub. 5-5-59. Filed 6-6-58.

682,065. HERCULES. American Cement Corporation. SN 55,428. Pub. 5-5-59. Filed 7-17-58.

682,066. PLASTIC RIVERSIDE CEMENT-COMPANY- AND DESIGN. American Cement Corporation. SN 55,627. Pub. 5-5-59. Filed 7-21-58.

682,067. SCCO AND CROWN DESIGN. Smithcary Corporation. SN 58,461. Pub. 5-5-59. Filed 9-5-58.

682,068. BLASTPATCH. Donoho Foundry Co. SN 59,701. Pub. 5-5-59. Filed 9-29-58.

682,069. REDORA. Hoenig Plywood Corporation. SN 61,057. Pub. 5-5-59. Filed 10-21-58.

682,070. UNI-DEK. Pacific Tile and Porcelain Company. SN 61,490. Pub. 5-5-59. Filed 10-27-58.

682,071. FLEX-COVE. Sonoco Products Company. SN 61,516. Pub. 5-5-59. Filed 10-28-58.

682,072. LIFTVIEW. R.O.W. Sales Co. SN 61,560. Pub. 5-5-59. Filed 10-30-58.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

682,073. HOBART H AND DESIGN. The Hobart Manufacturing Company. SN 44,838. Pub. 5-5-59. Filed 1-28-58.

682,074. SECO. Spence Engineering Company, Inc. SN 49,529. Pub. 5-5-59. Filed 4-11-58.

682,075. POWERGRIP. Tri-Metals Company. SN 49,536. Pub. 5-5-59. Filed 4-11-58.

682,076. SAYFORD. Frank M. Sayford Company. SN 50,251. Pub. 5-5-59. Filed 4-23-58.

682,077. LID-BASE. Coach and Car Equipment Corporation. SN 60,482. Pub. 5-5-59. Filed 10-13-58.

682,078. MINUTEMEN. Colonial Stationery and Supply Company, Inc. SN 62,834. Pub. 5-5-59. Filed 11-20-58.

Class 14 — Metals and Metal Castings and Forgings

682,079. GKN. Guest, Keen & Nettlefolds Limited. SN 55,066. Pub. 5-5-59. Filed 7-10-58.

682,080. DIXI-PAK. Atlantic Steel Company. SN 57,456. Pub. 5-5-59. Filed 8-19-58.

682,081. DIXI-COIL. Atlantic Steel Company. SN 57,457. Pub. 5-5-59. Filed 8-19-58.

682,082. TRI-VAN. Uddeholm Company of America, Inc. SN 57,857. Pub. 5-5-59. Filed 8-25-58.

682,083. CHEMETAL AND DESIGN. Standard Electric Co., Inc. SN 59,857. Pub. 5-5-59. Filed 9-30-58.

682,084. TUFTON. Metallizing Company of America, Inc. SN 62,023. Pub. 5-5-59. Filed 11-6-58.

Class 15 — Oils and Greases

682,085. MOTOR POWR. Clarence M. Wynn, d.b.a. Dri-Powr Co. SN 49,471. Pub. 5-5-59. Filed 4-10-58.

682,086. BOMB-LUBE. Price-Driscoll Corporation. SN 62,226. Pub. 5-5-59. Filed 11-10-58.

682,087. LOOK MOM! A. H. Christensen. SN 63,211. Pub. 5-5-59. Filed 11-26-58.

682,088. MO-LEK. Cleo Passmore, d.b.a. Rev-Up Service Co. SN 63,879. Pub. 5-5-59. Filed 12-8-58.

Class 16 — Protective and Decorative Coatings

682,089. WILLIAMSBURG. Williamsburg Restoration, Incorporated. SN 50,571. Pub. 1-6-59. Filed 4-23-58.

682,090. PAINT FAIR AND DESIGN. Paint Fair Stores, Inc. SN 50,916. Pub. 5-5-59. Filed 5-2-58.

682,091. ARROW METAL PRODUCTS CORPORATION ETC. AND DESIGN. Arrow Metal Products Corp. SN 50,951. Pub. 5-5-59. Filed 5-5-58.

682,092. NAUTILUS. Clover Leaf Paint & Varnish Corporation. SN 60,206. Pub. 5-5-59. Filed 10-7-58.

Class 17 — Tobacco Products

682,093. JOSE L. PIEDRA. Concepcion Nodarse, trustee of Jose Lamadrid-Piedra y Nodarse, Orencio Lamadrid-Piedra y Nodarse, and Ana Maria Lamadrid-Piedra y Nodarse. SN 55,943. Pub. 5-5-59. Filed 7-24-58.

Class 18 — Medicines and Pharmaceutical Preparations

682,094. DIASEPT. National Institute of Diaper Services, Inc., assignee of Bristol Laboratories Inc. SN 7,480. Pub. 11-18-58. Filed 5-2-58.

682,095. LONGCAPS. G and G Pharmacal Co., Inc. SN 32,944. Pub. 4-29-58. Filed 7-1-57.

682,096. MY-T-LETS. Imperial Drug Exchange Inc., d.b.a. New York Drug Concern. SN 49,925. Pub. 5-5-59. Filed 4-18-58.

682,097. CKA AND DESIGN. Pannett Products, Inc. SN 51,578. Pub. 5-5-59. Filed 5-13-58.

682,098. BRO-PARIN. Brecomed Pharmaceuticals. SN 59,256. Pub. 5-5-59. Filed 9-22-58.

Class 27 — Horological Instruments

682,099. 'ALCOPARA'. Burroughs Wellcome & Co. (U.S.A.) Inc. SN 60,106. Pub. 5-5-59. Filed 10-6-58.

682,100. ATLEST. Charles A. Thomas. SN 60,449. Pub. 5-5-59. Filed 10-10-58.

682,101. SENNOVAC. The Purdue Frederick Company. SN 60,629. Pub. 5-5-59. Filed 10-14-58.

682,102. CERULAV. The G. F. Harvey Company, Inc. SN 60,819. Pub. 5-5-59. Filed 10-17-58.

682,103. CERULYSIN. The G. F. Harvey Company, Inc. SN 60,820. Pub. 5-5-59. Filed 10-17-58.

682,104. OTOLAV. The G. F. Harvey Company, Inc. SN 60,821. Pub. 5-5-59. Filed 10-17-58.

682,105. ILOSONE. Eli Lilly and Company. SN 60,827. Pub. 5-5-59. Filed 10-17-58.

682,106. IONIMIN. R. J. Strasenburgh Company. SN 60,859. Pub. 5-5-59. Filed 10-17-58.

682,107. IONAMINE. R. J. Strasenburgh Company. SN 60,860. Pub. 5-5-59. Filed 10-17-58.

682,108. IONAMIN. R. J. Strasenburgh Company. SN 63,120. Pub. 5-5-59. Filed 11-24-58.

Class 19—Vehicles

682,109. VERTAX. Pacific Car and Foundry Company. SN 51,140. Pub. 5-5-59. Filed 5-6-58.

682,110. MERCHANDISER CAB. Boyertown Auto Body Works, Incorporated. SN 54,667. Pub. 5-5-59. Filed 7-2-58.

682,111. MERCHANTVAN. Boyertown Auto Body Works, Incorporated. SN 54,670. Pub. 5-5-59. Filed 7-2-58.

682,112. CAR CADDY. Amity Leather Products Co. SN 56,291. Pub. 5-5-59. Filed 7-30-58.

682,113. ENWELL. Enlite Products Company, Inc. SN 57,360. Pub. 5-5-59. Filed 8-18-58.

682,114. JOMAR. Raymond Saidel. SN 62,491. Pub. 5-5-59. Filed 11-14-58.

682,115. DRACONE. Dracone Developments Limited. SN 62,676. Pub. 5-5-59. Filed 11-18-58.

682,116. MELODY. Charles M. Hunt, Jr. SN 62,689. Pub. 5-5-59. Filed 11-18-58.

Class 20—Linoleum and Oiled Cloth

682,117. KENTILE EASY-CLEAN VINYL TILE AND DESIGN. Kentile, Inc. SN 59,397. Pub. 5-5-59. Filed 9-23-58.

Class 21—Electrical Apparatus, Machines, and Supplies

682,118. SMITHS. S. Smith and Sons (England) Limited. SN 40,972. Pub. 5-5-59. Filed 11-19-57.

682,119. VH. Voigt & Haeffner A.G. SN 44,778. Pub. 5-5-59. Filed 1-27-58.

682,120. HOBART H AND DESIGN. The Hobart Manufacturing Company. SN 44,822. Pub. 5-5-59. Filed 1-28-58.

682,121. GLITA-LITES. New York Merchandise Co., Inc. SN 47,270. Pub. 5-5-59. Filed 6-7-58.

682,122. FLEXOTRON. Precision Welder & Flexopress Corporation. SN 51,730. Pub. 5-5-59. Filed 5-15-58.

682,123. SENSISTOR AND DESIGN. Texas Instruments Incorporated. SN 52,602. Pub. 5-5-59. Filed 5-29-58.

682,124. KIDDE. Kidde Ultrasonic & Detection Alarms, Inc., assignee of Walter Kidde & Company, Inc. SN 54,410. Pub. 5-5-59. Filed 6-27-58.

682,125. DURAPOINT. Applied Science Corporation of Princeton. SN 56,075. Pub. 5-5-59. Filed 7-28-58.

682,126. MINIPLEXER. Applied Science Corporation of Princeton. SN 56,076. Pub. 5-5-59. Filed 7-28-58.

682,127. GENTHERM. General Cable Corporation. SN 57,144. Pub. 5-5-59. Filed 8-13-58.

682,128. HOT DOG ROASTER AND DESIGN. Dolly Enterprises. SN 57,248. Pub. 5-5-59. Filed 8-18-58.

682,129. TIPLET. Ungar Electric Tools, Inc. SN 57,869. Pub. 5-5-59. Filed 9-4-58.

682,130. MICROJUNCTION. Hewlett-Packard Company. SN 59,294. Pub. 5-5-59. Filed 9-22-58.

682,131. COMPCO. Compco Corporation. SN 60,402. Pub. 5-5-59. Filed 10-10-58.

682,132. TRAVEL-WELD AND DESIGN. Braham Industries, Inc. SN 61,027. Pub. 5-5-59. Filed 10-21-58.

682,133. TRANSI-MAG. Magnetic Amplifiers, Inc. SN 62,093. Pub. 5-5-59. Filed 11-7-58.

682,134. HAVE PHILCO WILL TRAVEL. Philco Corporation. SN 62,134. Pub. 5-5-59. Filed 11-5-58.

682,135. HANDI-LITE. Kas-Kel Electric Co. Inc. SN 63,073. Pub. 5-5-59. Filed 11-24-58.

682,136. GLOBAL. Masuyama Trading Company, Ltd. SN 63,232. Pub. 5-5-59. Filed 11-26-58.

682,137. GRIND-O-MATIC. Rival Manufacturing Company. SN 63,486. Pub. 5-5-59. Filed 12-1-58.

682,138. RAZWAY AND DESIGN. Z & W Manufacturing Corporation. SN 63,507. Pub. 5-5-59. Filed 12-1-58.

682,139. PSI. Pacific Semiconductors, Inc. SN 65,261. Pub. 5-5-59. Filed 1-2-59.

Class 22—Games, Toys, and Sporting Goods

682,140. TROQUE AND DESIGN. Production and Marketing Company. SN 10,619. Pub. 5-5-59. Filed 6-20-56.

682,141. RED ROBIN ETC. AND DESIGN. Red Robin, Inc. SN 29,947. Pub. 5-5-59. Filed 5-13-57.

682,142. 300 GRIP. Bowl-Rite Company. SN 37,132. Pub. 5-5-59. Filed 9-13-57.

682,143. STAGECOACH. Schaper Manufacturing Co., Inc. SN 48,995. Pub. 5-5-59. Filed 4-2-58.

682,144. MIYAKODORI AND DESIGN. Fukutaro Aminaka. SN 49,268. Pub. 5-5-59. Filed 4-8-58.

682,145. COMBO POKER. Fred Cors. SN 50,097. Pub. 5-5-59. Filed 4-21-58.

682,146. "CARD-O-MATIC." Dayo Products Company. SN 56,700. Pub. 5-5-59. Filed 8-6-58.

682,147. EAGLE. H. Wensel Tent & Duck Co. SN 57,040. Pub. 5-5-59. Filed 8-11-58.

682,148. HAWAIIAN. Fred Arbogast Company, Inc. SN 57,659. Pub. 5-5-59. Filed 8-23-58.

682,149. ABSORBLO. MacGregor Sport Products, Inc. SN 58,552. Pub. 5-5-59. Filed 9-9-58.

682,150. FANCIFUL DESIGN OF FISH TAKING BAIT. Lea J. Thompson, d.b.a. Lea Thompson Bait Co. SN 58,880. Pub. 5-5-59. Filed 9-9-58.

682,151. ROD-MASTER. Percy Jepson, d.b.a. The Rod-Master Company. SN 60,235. Pub. 5-5-59. Filed 10-7-58.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

682,152. B-B AND DESIGN. The Bastian-Blessing Company. SN 33,600. Pub. 5-5-59. Filed 7-12-57.

682,153. LIGHTNIN. Mixing Equipment Co., Inc. SN 47,958. Pub. 5-5-59. Filed 8-18-58.

682,154. NAUTA. N.V. Nautamix. SN 48,496. Pub. 5-5-59. Filed 3-26-58.

682,155. SANIQUIK. The Hobart Manufacturing Company. SN 48,743. Pub. 5-5-59. Filed 3-31-58.

Class 35—Belting, Hose, Machinery Packings, and Miscellaneous Rubber Products

Class 39—Clothing

682,156. LOGAN. Logan Engineering Co. SN 48,856. Pub. 5-5-59. Filed 4-1-58.

682,157. REPRESENTATION OF A PUMP. Manten Gaulin Manufacturing Company, Inc. SN 48,857. Pub. 5-5-59. Filed 4-1-58.

682,158. AUTO-PAK. National Tool Company, assignee, by mesne assignment, of Auto-Vac Company. SN 50,006. Pub. 5-5-59. Filed 4-21-58.

682,159. LAB-VAC. National Tool Company, assignee, by mesne assignment, of Auto-Vac Company. SN 50,007. Pub. 5-5-59. Filed 4-21-58.

682,160. "THIN-LINE." Robert G. Evans Co. SN 50,466. Pub. 5-5-59. Filed 4-28-58.

682,161. HELIXFORM. The Gleason Works. SN 52,710. Pub. 5-5-59. Filed 6-2-58.

682,162. BUHR-ECONOMATIC AND DESIGN. Buhr Machine Tool Company. SN 53,575. Pub. 5-5-59. Filed 6-16-58.

682,163. MODU-MATIC. Textron Inc. SN 53,665. Pub. 5-5-59. Filed 6-16-58.

682,164. MODU-FORM. Textron Inc. SN 53,666. Pub. 5-5-59. Filed 6-16-58.

682,165. TRIUMPH. Western Commerce Corporation. SN 56,218. Pub. 5-5-59. Filed 7-28-58.

682,166. MERIDIAN. Biddle Purchasing Company, d.b.a. Meridian Distributors. SN 57,529. Pub. 5-5-59. Filed 8-20-58.

682,167. AGDOR. Hults Bruks Aktiebolag. SN 59,728. Pub. 5-5-59. Filed 9-29-58.

682,168. JET. Detroit Centerless Grinding Co. SN 59,813. Pub. 5-5-59. Filed 9-30-58.

682,169. ROLL-A-MATIC. Sperry Rand Corporation. SN 59,996. Pub. 5-5-59. Filed 10-2-58.

682,170. HANDI COOK AND DESIGN. The Deisam Co. SN 60,404. Pub. 5-5-59. Filed 10-10-58.

682,171. "BOKUMATIC." Bokum Tool Company, Inc. SN 61,939. Pub. 5-5-59. Filed 11-6-58.

682,172. SHIP-MASTER. Outboard Marine Corporation. SN 62,031. Pub. 5-5-59. Filed 11-6-58.

682,173. DYNA-LINK. Draper Corporation. SN 62,069. Pub. 5-5-59. Filed 11-7-58.

682,174. TACK-MATE. Markwell Manufacturing Company, Inc. SN 62,094. Pub. 5-5-59. Filed 11-7-58.

682,175. 3C AND DESIGN. Borg-Warner Corporation. SN 62,149. Pub. 5-5-59. Filed 11-10-58.

682,176. CENTURY. Borg-Warner Corporation. SN 62,151. Pub. 5-5-59. Filed 11-10-58.

682,177. VELVET DRIVE. Borg-Warner Corporation. SN 62,152. Pub. 5-5-59. Filed 11-10-58.

682,178. GENERALAIRE. Levey Distributing Company, d.b.a. General Appliance Company. SN 66,105. Pub. 5-5-59. Filed 12-30-58.

Class 24—Laundry Appliances and Machines

682,179. WYNCREST. Proctor Electric Company. SN 62,416. Pub. 5-5-59. Filed 11-13-58.

Class 26—Measuring and Scientific Appliances

682,180. DATA BLOC. Harvey-Wells Electronics, Inc. SN 49,846. Pub. 2-24-59. Filed 4-17-58.

682,181. DATA-PAC. Harvey-Wells Electronics, Inc. SN 49,847. Pub. 2-24-59. Filed 4-17-58.

682,182. "PERMAKOUPLE." R. C. Smith Manufacturing Company, Inc. SN 61,131. Pub. 5-5-59. Filed 10-23-58.

682,183. MAGNIHOOD. Photographic Importing and Distributing Corp. SN 62,222. Pub. 5-5-59. Filed 11-10-58.

Class 27—Horological Instruments

682,184. LYTLE. Lytle Engineering & Mfg. Co. SN 39,873. Pub. 5-5-59. Filed 5-3-57.

682,185. TITOMATIC. Fabrique des Montres Seivil et Titus S.A. SN 59,527. Pub. 5-5-59. Filed 9-25-58.

682,186. TITAUTO. Fabrique des Montres Seivil et Titus S.A. SN 60,074. Pub. 5-5-59. Filed 9-25-58.

682,187. AFTER SIX. Bulova Watch Company, Inc. SN 64,396. Pub. 5-5-59. Filed 12-16-58.

Class 28—Jewelry and Precious-Metal Ware

682,188. MacJIGGER. Oneida Ltd. SN 52,524. Pub. 5-5-59. Filed 6-24-57.

682,189. SMALL FRY. Tru-Kay Manufacturing Co. SN 43,121. Pub. 5-5-59. Filed 12-27-57.

682,190. PIN O GRAM. Lorber Novelty Co., Inc., d.b.a. Division of Button Center. SN 47,669. Pub. 5-5-59. Filed 3-13-58.

682,191. RW AND DESIGN—TELESCOPA. Rodi & Wienenberger Aktiengesellschaft. SN 50,834. Pub. 5-5-59. Filed 5-1-58.

682,192. PULSOPLANA. Rodi & Wienenberger Aktiengesellschaft. SN 50,835. Pub. 5-5-59. Filed 5-1-58.

682,193. RADIANCE. The International Silver Company. SN 51,716. Pub. 5-5-59. Filed 5-15-58.

682,194. AZURLITE. A. G. Schwab & Sons, Inc. SN 56,050. Pub. 5-5-59. Filed 7-25-58.

Class 29—Brooms, Brushes, and Dusters

682,195. HOPPY DEW BOY AND DESIGN. Hopkins Manufacturing Corporation. SN 61,297. Pub. 5-5-59. Filed 10-24-58.

Class 32—Furniture and Upholstery

682,205. WALLMASTER. Reflector-Hardware Corporation. SN 67,505. Pub. 5-5-59. Filed 2-11-59.

682,206. VERSETTE-TABLE. Re-Ly-On Metal Products, Inc. SN 67,506. Pub. 5-5-59. Filed 2-11-59.

Class 34—Heating, Lighting, and Ventilating Apparatus

682,196. RANGAIRE. Cobell Industries. SN 49,045. Pub. 5-5-59. Filed 4-4-58.

682,197. AQUAMATIC. International Metal Products Company. SN 50,059. Pub. 5-5-59. Filed 4-21-58.

682,198. FLOWTROL. International Metal Products Company. SN 50,061. Pub. 5-5-59. Filed 4-21-58.

682,199. SYNCROFLOW. International Metal Products Company. SN 50,062. Pub. 5-5-59. Filed 4-21-58.

682,200. BOX-FIN. Edwards Engineering Corporation. SN 57,257. Pub. 5-5-59. Filed 8-18-58.

682,201. PERMAPLEAT. Hearth Craft, Inc. SN 60,283. Pub. 5-5-59. Filed 10-6-58.

682,202. OILAMANDER. Bell & Gossett Company. SN 62,726. Pub. 5-5-59. Filed 11-19-58.

682,203. CAPITOLAIRE. National-U.S. Radiator Corporation. SN 63,069. Pub. 5-5-59. Filed 11-24-58.

682,204. ATMOS-PAK ETC. AND DESIGN. Air Conditioning Engineers, Inc. SN 63,201. Pub. 5-5-59. Filed 11-26-58.

682,205. See Class 32 for this trademark.

682,206. See Class 32 for this trademark.

Class 45—Soft Drinks and Carbonated

682,207. ENERGOL. Robert C. Hoffman, d.b.a. Bob Hoffman-York Barbell Co. SN 59,825. Pub. 5-5-59. Filed

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

682,207. ELECTR-O-SEAL. Parker-Hannifin Corporation, by change of name from The Parker Appliance Company. SN 37,901. Pub. 5-5-59. Filed 9-26-57.

682,208. MET-O-SEAL. Parker-Hannifin Corporation, by change of name from The Parker Appliance Company. SN 37,902. Pub. 5-5-59. Filed 9-26-57.

682,209. RAYGEN. The General Tire & Rubber Company. SN 58,091. Pub. 5-5-59. Filed 8-29-58.

682,210. SOMETHING FROM THE IRISHMAN. F. H. Maloney Company. SN 62,406. Pub. 5-5-59. Filed 11-12-58.

Class 37—Paper and Stationery

682,211. INFO-DEX. Miriam Zion, d.b.a. Medical Case History Bureau. SN 27,917. Pub. 5-5-59. Filed 4-10-57.

682,212. TAYCO AND DESIGN. Tayler Printing Co. SN 48,352. Pub. 5-5-59. Filed 1-2-58.

682,213. MARKETEER. Crown Zellerbach Corporation. SN 51,778. Pub. 5-5-59. Filed 5-16-58.

682,214. KINGSMARK. Scripto, Inc. SN 53,528. Pub. 5-5-59. Filed 6-13-58.

682,215. BIG NAME. A. J. Siris Products Corp. SN 55,532. Pub. 5-5-59. Filed 7-17-58.

682,216. SOVEREIGN. Gerhard Paper Company. SN 59,122. Pub. 5-5-59. Filed 9-15-58.

682,217. TEEN-GLO. A. J. Siris Products Corp. SN 59,780. Pub. 5-5-59. Filed 9-29-58.

682,218. DULSEAL. Keuffel & Esser Company. SN 62,559. Pub. 5-5-59. Filed 11-17-58.

Class 38—Prints and Publications

682,219. TV JUNIOR AND DESIGN. TV Junior Publications Inc. SN 47,292. Pub. 5-5-59. Filed 3-7-58.

682,220. THE CONGREGATIONALIST. The National Association of Congregational Christian Churches of the United States. SN 48,526. Pub. 5-5-59. Filed 3-26-58.

682,221. LITTLE PHILOSOPHER. Constance Bannister. SN 50,144. Pub. 5-5-59. Filed 4-22-58.

682,222. THERM-O-GRAF. Richard J. Cole. SN 57,132. Pub. 5-5-59. Filed 8-13-58.

682,223. PROGRESSIVE PLASTICS. Maclean-Hunter Publishing Company Limited. SN 57,361. Pub. 5-5-59. Filed 8-18-58.

682,224. COOL NOTES. Rudy A. Fischer, d.b.a. R. A. Fischer & Associates. SN 57,468. Pub. 5-5-59. Filed 8-19-58.

682,225. PARKER SPARKER. Parker-Hannifin Corporation. SN 58,317. Pub. 5-5-59. Filed 9-3-58.

682,226. TIME OUT. United Press International Inc. SN 59,654. Pub. 5-5-59. Filed 9-26-58.

682,227. THE FARM PICTURE. Farm Business Council, Inc. SN 60,090. Pub. 5-5-59. Filed 10-3-58.

682,228. REYNOLDS ALUMINUM DIGEST. Reynolds Metals Company. SN 60,632. Pub. 5-5-59. Filed 10-14-58.

682,229. CRYSTALYTE. National Publishing Company. SN 61,069. Pub. 5-5-59. Filed 10-21-58.

682,230. PEDIGREETINGS. Ben Richter Co. Inc. SN 61,437. Pub. 5-5-59. Filed 10-27-58.

682,231. FINANCIALLY SPEAKING. William T. Schetman. SN 61,443. Pub. 5-5-59. Filed 10-27-58.

Class 39—Clothing

682,232. TRIM SPORTSWEAR OF TEXAS. Harry Eldridge Co., Inc., and T. S. Lankford & Sons, Inc., d.b.a. Trim Sportswear of Texas. SN 35,107. Pub. 5-5-59. Filed 3-23-59.

682,233. LITTLE SUSY OF PARIS. United Mills Corporation. SN 50,261. Pub. 5-5-59. Filed 4-23-58.

682,234. VALEROS. Geo. R. Keith Company. SN 54,855. Pub. 5-5-59. Filed 6-6-58.

682,235. SOFTIES. Interwoven Stocking Company. SN 57,551. Pub. 5-5-59. Filed 8-20-58.

682,236. SOFT WALK. Knipe Bros.-Ward Hill Shoes, Inc. SN 57,959. Pub. 5-5-59. Filed 9-27-58.

682,237. GUENTHER. Guenther Hosiery Company, Inc. SN 58,921. Pub. 5-5-59. Filed 9-15-58.

682,238. REGGIE'S. Buddy and Sons, Inc. SN 59,169. Pub. 5-5-59. Filed 9-19-58.

682,239. SLIPKNOT. Plymouth Rubber Company, Inc. SN 60,961. Pub. 5-5-59. Filed 10-20-58.

682,240. LYCO. Lyons & Company. SN 61,724. Pub. 5-5-59. Filed 10-31-58.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

682,241. BONAFAILLE AND DESIGN. Cameo Fabrics, Inc. SN 43,238. Pub. 5-5-59. Filed 12-31-57.

682,242. LACHLAN. Deering, Milliken & Co, Inc. SN 51,876. Pub. 5-5-59. Filed 5-19-58.

682,243. WILLIAMSBURG. Williamsburg Restoration, Incorporated. SN 56,614. Pub. 5-5-59. Filed 8-4-58.

682,244. 4 CW XX BTC. AND DESIGN. Williamsburg Restoration, Incorporated. SN 56,615. Pub. 5-5-59. Filed 8-4-58.

682,245. SATIN SUPREME. Charles Bloom, Inc. SN 57,938. Pub. 5-5-59. Filed 8-27-58.

682,246. SYNCHROLATED. Exeter Manufacturing Co. SN 58,096. Pub. 5-5-59. Filed 8-29-58.

682,247. POW-WOW. Goldfarb Bros. SN 59,292. Pub. 5-5-59. Filed 9-22-58.

682,248. EMBROIDERIQUE. Associated Mills. SN 62,057. Pub. 5-5-59. Filed 11-7-58.

Class 44—Dental, Medical, and Surgical Appliances

682,249. HOLLYWOOD GLAMORIZER. Douglas Products Corp., assignee of Douglas Products Co., Inc. SN 57,467. Pub. 5-5-59. Filed 8-19-58.

682,250. FOX'S. Johnson & Johnson. SN 58,963. Pub. 5-5-59. Filed 9-12-58.

682,251. THE JOBST STOCKING AND DESIGN. Jobst Institute, Inc. SN 58,928. Pub. 5-5-59. Filed 9-15-58.

682,252. SOFT-AIR. Remito-Dennelly Corporation. SN 59,920. Pub. 5-5-59. Filed 10-1-58.

682,253. DILUPETTE. Becton, Dickinson and Company. SN 60,015. Pub. 5-5-59. Filed 10-3-58.

682,254. HOSPAC AND DESIGN. Hospital Accessories Company. SN 60,142. Pub. 5-5-59. Filed 10-6-58.

682,255. DERMALENE. American Cyanamid Company. SN 61,102. Pub. 5-5-59. Filed 10-22-58.

682,256. SURGILANCE. American Cyanamid Company. SN 61,104. Pub. 5-5-59. Filed 10-22-58.

682,257. AMIPAK. American Hospital Supply Corporation, assignee of Mead Johnson & Company. SN 64,217. Pub. 5-5-59. Filed 12-15-58.

682,258. PERMADROPS. The Gillette Company, d.b.a. The Toni Company. SN 64,406. Pub. 5-5-59. Filed 12-16-58.

682,309. STORK CLUB AND DESIGN OF A STORK. The Stork Restaurant, Inc. SN 54,795. Pub. 5-5-59. Filed

Class 102—Insurance and Financial

tributing Corp. SN 62,222. Pub. 5–5–59. Filed 11–10–58.

682,206. See Class 32 for this trademark.

Class 45—Soft Drinks and Carbonated Waters

682,259. GEM AND DESIGN. The Gem Bottling Co. SN 52,707. Pub. 5–5–59. Filed 6–2–58.

682,260. TROIKA. Crispin A. Santos, d.b.a. U.S. Trade Services Co. SN 59,067. Pub. 5–5–59. Filed 9–17–58.

682,292. HUSKY. National NuGrape Company. SN 62,318. Pub. 5–5–59. Filed 11–12–58.

Class 46—Foods and Ingredients of Foods

682,261. CAIN'S. Cain's Coffee Co. SN 690,529. Pub. 5–5–59. Filed 6–30–55.

682,262. SLENDORA AND DESIGN. Slendora Candy Company. SN 6,841. Pub. 12–4–56. Filed 4–20–56.

682,263. ARPEAKO DAISY AND DESIGN. Tobin Packing Co., Inc. SN 24,009. Pub. 5–5–59. Filed 2–7–57.

682,264. SPICE RIGHT. Doris C. Grassman, d.b.a. Dorwal Products Company. SN 29,207. Pub. 5–5–59. Filed 5–1–57.

682,265. CAROUSEL. M. G. Shaghalian & Co., d.b.a. M. G. Shaghalian. SN 31,157. Pub. 10–28–58. Filed 5–31–57.

682,266. HERMES. Standard Importing Co., Inc. SN 33,842. Pub. 5–5–59. Filed 7–16–57.

682,267. KLEIN'S. Sunshine Biscuits, Inc., assignee, by mesne assignment, of Mrs. Klein's. SN 34,060. Pub. 5–5–59. Filed 7–19–57.

682,268. TASTY-BIRD. The Joe O. Frank Company, d.b.a. J. O. Frank Co., Frank's, and Tasty Bird Farms. SN 35,257. Pub. 5–5–59. Filed 8–9–57.

682,269. BETTA AND DESIGN. Bettman Nut Co. Inc. SN 38,586. Pub. 5–5–59. Filed 10–9–57.

682,270. HENNEG. Henningsen, Inc.' SN 38,919. Pub. 5–5–59. Filed 10–15–57.

682,271. "GOOD TASTE" IN COFFEE AND DESIGN. Hills Bros. Coffee, Inc. SN 46,059. Pub. 5–5–59. Filed 2–18–58.

682,272. GOODMAN'S. A. Goodman & Sons, Inc. SN 47,575. Pub. 5–5–59. Filed 3–12–58.

682,273. PURITAN. The Cudahy Packing Company. SN 48,249. Pub. 5–5–59. Filed 3–24–58.

682,274. RON JON AND DESIGN. Ron Jon Annaballi, d.b.a. Ron Jon Kitchens. SN 48,846. Pub. 5–5–59. Filed 4–1–58.

682,275. PERFECTION AND DESIGN. Fresno Macaroni Manufacturing Company, Inc., d.b.a. Fresno Macaroni Mfg. Co. SN 50,044. Pub. 5–5–59. Filed 4–21–58.

682,276. CCB AND DESIGN. Chicago Corned Beef Corporation. SN 51,863. Pub. 5–5–59. Filed 5–19–58.

682,277. REPRESENTATION OF CUP, SAUCER AND SPOON AND LOZENGE DESIGN. Franck und Kathreiner G.m.b.H. SN 51,889. Pub. 5–5–59. Filed 5–19–58.

682,278. JAKE'S AND FANCIFUL FIGURE OF DOG. Lamar S.R.L. SN 55,489. Pub. 5–5–59. Filed 7–17–58.

682,279. WELCH'S AND DESIGN. The Welch Grape Juice Company, Inc. SN 56,436. Pub. 5–5–59. Filed 7–31–58.

682,280. BAN ANDY. Ban Andy, Inc. SN 57,182. Pub. 5–5–59. Filed 8–14–58.

682,281. E. Megowen-Educator Food Company. SN 57,282. Pub. 5–5–59. Filed 8–15–58.

682,282. SUNKIST AND DESIGN. Sunkist Growers, Inc. SN 57,512. Pub. 5–5–59. Filed 8–19–58.

682,283. SLENDA SUE. Coffee County Creamery, Inc., d.b.a. Super Sue Ice Cream Company. SN 58,337. Pub. 5–5–59. Filed 9–4–58.

682,284. CHOC-LUCKS. Paul F. Beich Company. SN 58,616. Pub. 5–5–59. Filed 9–9–58.

682,285. MINT DIXIES. Paul F. Beich Company. SN 58,617. Pub. 5–5–59. Filed 9–9–58.

682,286. SEBASTOPOL QUEEN AND DESIGN. Pelletti Fruit Company, Inc., d.b.a. Pelletti Fruit Co. SN 59,760. Pub. 5–5–59. Filed 9–29–58.

682,287. ENERGOL. Robert C. Hoffman, d.b.a. Bob Hoffman-York Barbell Co. SN 59,825. Pub. 5–5–59. Filed 9–30–58.

682,288. CHEF'S DELIGHT. Meletio Company, d.b.a. Chef's Delight Products. SN 60,048. Pub. 5–5–59. Filed 10–3–58.

682,289. COASTER. De Erven de Wed. J. van Nelle N.V. SN 61,169. Pub. 5–5–59. Filed 10–23–58.

682,290. MEETER'S AND DESIGN. Meeter Bros. & Co. SN 62,021. Pub. 5–5–59. Filed 11–6–58.

682,291. BADERS'. Baders' Dutch Bakeries, Inc. SN 62,260. Pub. 5–5–59. Filed 11–12–58.

682,292. See this trademark in Class 45.

Class 47—Wines

682,293. ROBIN HOOD. Pioneer Liquor Company, Inc., d.b.a. Green Valley Wine Co. SN 59,332. Pub. 5–5–59. Filed 9–22–58.

Class 48—Malt Beverages and Liquors

682,294. BIG STATE. Tivoli Brewing Co. SN 50,121. Pub. 5–5–59. Filed 4–21–58.

682,295. BRADING'S "CINCI" AND DESIGN. Brading Breweries Limited. SN 55,638. Pub. 5–5–59. Filed 7–21–58.

Class 49—Distilled Alcoholic Liquors

682,296. LIQUORE GALLIANO AND DESIGN. McKesson & Robbins, Incorporated, assignee, by transformation and assignment of Distillerie Riunite di Liquori. SN 16,505. Pub. 2–17–59. Filed 7–23–58.

682,297. MORCO. John P. Dick and Marion V. Dick, d.b.a. More, Inc. SN 29,881. Pub. 5–5–59. Filed 5–13–57.

682,298. STANYA. Standard Wine & Liquor Co., Inc. SN 58,749. Pub. 5–5–59. Filed 9–10–58.

682,299. PERFECT MARRIAGE. James Robertson Company. SN 60,682. Pub. 5–5–59. Filed 10–15–58.

Class 50—Merchandise Not Otherwise Classified

682,300. W. GOEBEL. W. Goebel Porzellanfabrik. SN 39,804. Pub. 5–5–59. Filed 10–30–57.

682,301. FLARE-BRITE. F. H. Noble and Company. SN 47,672. Pub. 5–5–59. Filed 3–13–58.

682,302. HANDI-SHAPER AND DESIGN. Jack Davis. SN 48,719. Pub. 5–5–59. Filed 3–31–58.

682,303. POKEY. James A. Coon, d.b.a. Pokey Mfg. Co. SN 51,695. Pub. 5–5–59. Filed 5–15–58.

682,304. CRAFTINT AND DESIGN. The Craftint Manufacturing Company. SN 56,905. Pub. 5–5–59. Filed 7–30–58.

Class 51—Cosmetics and Toilet Preparations

682,305. METICS. The Rilling-Dermetics Company. SN 684,682. Pub. 2–14–56. Filed 3–31–55.

682,306. DEMILO. Ingeborg Wagner, d.b.a. Demilo Company. SN 46,259. Pub. 5–5–59. Filed 2–20–58.

682,307. TO A WILD ROSE. Avon Products, Inc. SN 48,894. Pub. 5–5–59. Filed 4–2–58.

682,308. LYRE DESIGN. Siegfried Leichner, d.b.a. L. Leichner. SN 51,667. Pub. 5–5–59. Filed 5–14–58.

Class 37—Paper and Stationery

682,342. R. Best Inc., Boyertown, Pa. SN 53,822. Filed P.R. 6–18–58; Am. S.R. 5–25–59.

682,309. STORK CLUB AND DESIGN OF A STORK. The Stork Restaurant, Inc. SN 54,795. Pub. 5-5-59. Filed 7-3-58.

Class 52—Detergents and Soaps

682,310. DODIE. Antoine Francois Regis Peyron. SN 48,961. Pub. 5-5-59. Filed 1-14-58.

682,311. PRISM OF LIGHT. John H. Breck, Inc. SN 46,274. Pub. 5-5-59. Filed 2-21-58.

682,312. ROMAN CANDLE. John H. Breck, Inc. SN 46,275. Pub. 5-5-59. Filed 2-21-58.

682,313. FRAGRANCE-SEAL. Dodge & Olcott, Inc. SN 46,610. Pub. 5-5-59. Filed 2-26-58.

682,314. FOOTE'S AND DESIGN. Foote's White Wall Cleaner Company, d.b.a. Foote Manufacturing Company. SN 49,150. Pub. 5-5-59. Filed 4-7-58.

682,315. KEEGO. Wyandotte Chemicals Corporation. SN 52,371. Pub. 5-5-59. Filed 5-26-58.

682,316. ENCA. Edward J. Burke, d.b.a. Burke's Prescription Center and Dira Derm Soap Company. SN 58,398. Pub. 5-5-59. Filed 9-5-58.

682,317. CN PLUS AND DESIGN. West Chemical Products, Inc. SN 58,968. Pub. 5-5-59. Filed 9-15-58.

682,318. FAIN. John D. Giagnocavo, d.b.a. Martin Manufacturing Co. SN 60,663. Pub. 5-5-59. Filed 10-15-58.

682,319. SUPER KEMITE. The Betco Corporation. SN 62,148. Pub. 5-5-59. Filed 11-10-58.

Service Marks

Class 100—Miscellaneous

682,320. SLATER AND DESIGN. Slater System, Incorporated. SN 38,093. Pub. 5-5-59. Filed 9-30-57.

682,321. ROOS AND DESIGN. Allen Roos, d.b.a. Roos Food Service. SN 40,503. Pub. 5-5-59. Filed 11-12-57.

Class 101—Advertising and Business

682,322. BID-A-BUCK. Pet Milk Company. SN 22,025. Pub. 5-5-59. Filed 1-2-57.

682,323. VULCAN. Ebsco Industries, Inc. SN 60,278. Pub. 5-5-59. Filed 10-8-58.

Class 102—Insurance and Financial

682,324. TIMEPAY. First Service Corporation. SN 685,103. CONCURRENT USE. Pub. 5-5-59. Filed 4-7-55.

682,325. LIFECO. General Life Company of America. SN 56,121. Pub. 5-5-59. Filed 7-29-58.

Class 103—Construction and Repair

682,326. DEAL AND DESIGN. Square Deal Machinery & Supply Co. SN 29,561. Pub. 5-5-59. Filed 5-7-57.

682,327. I'M PENNY AND DESIGN. Penetred Corporation. SN 35,284. Pub. 5-5-59. Filed 8-9-57.

682,328. SAINE COMPANY, INC. ETC. AND DESIGN. Saine Company, Inc. SN 54,563. Pub. 5-5-59. Filed 6-30-58.

682,329. GROTESQUE OF MALE WITH NET CHASING INSECT. Pioneer Exterminating Co. Inc. SN 59,331. Pub. 5-5-59. Filed 9-22-58.

Class 105—Transportation and Storage

682,330. CHA CHA TOURS AND DESIGN. Garber's Travel Service, Inc., d.b.a. Garber's Travel Service. SN 48,913. Pub. 5-5-59. Filed 4-2-58.

Class 106—Material Treatment

682,331. "DURA-FLEX" EDGE. The Flexene Corporation. SN 26,617. Pub. 5-5-59. Filed 3-21-57.

Class 107—Education and Entertainment

682,332. MEL BURNS SHOW. Plaza Court Broadcasting Company. SN 55,191. Pub. 5-5-59. Filed 6-25-58.

682,333. YOU ASKED FOR IT. Wayne Steffner, Inc. and Willard Cranston Chamberlin, Jr. (Co-owners). SN 57,436. Pub. 5-5-59. Filed 8-18-58.

Collective Membership Mark

Class 200

682,334. JOHNNY APPLESEED ETC. AND DESIGN. Johnny Appleseed National Memorial Foundation, Inc. SN 54,725. Pub. 5-5-59. Filed 7-3-58.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2—Receptacles

682,335. Free State Specialty Co., Baltimore, Md. SN 53,144. Filed P.R. 6-9-58; Am. S.R. 5-28-59.

MAK-A-BOX

For Scored Box Blanks.
First use May 2, 1956.

Class 14—Metals and Metal Castings and Forgings

682,336. Morrison Steel Co., New Brunswick, N.J. SN 55,017. Filed P.R. 7-9-58; Am. S.R. 5-12-59.

MORRISON ARC-CUT STAINLESS STEEL PLATE

For Stainless Steel Plates.
First use Jan. 10, 1958.

360,761. CUMID. Cl. 16. 8-1-39.
360,764. HSS AND DESIGN. Cl. 47. 8-1-39.
371,619. PLUS 4. Cl. 48. 10-3-39.
371,646. HOLTEMP. Cl. 2. 10-3-39.

Class 37—Paper and Stationery

682,337. The Interstate Folding Box Company, Middletown, Ohio. SN 43,166. Filed P.R. 12-30-57; Am. S.R. 5-15-59.

GLOSSCOAT

For Paperboard Having a Mineral-Adhesive Surface Coating on Its Printing Surface.
First use June 12, 1952.

Class 39—Clothing

682,338. Munsingwear, Inc., d.b.a. Hollywood V-Ette-Vassarette, Minneapolis, Minn., assignee of Hollywood-Maxwell Co., Los Angeles, Calif. SN 41,638. Filed P.R. 12-2-57; Am. S.R. 11-12-58.

SECOND GLANCE

For Brassieres.
First use Oct. 28, 1957.

682,339. Munsingwear, Inc., d.b.a. Hollywood V-Ette-Vassarette, Minneapolis, Minn., assignee of Hollywood-Maxwell Co., Los Angeles, Calif. SN 41,639. Filed P.R. 12-2-57; Am. S.R. 12-12-58.

"V-V"

For Brassieres.
First use Nov. 7, 1957.

682,340. Munsingwear, Inc., d.b.a. Hollywood V-Ette-Vassarette, Minneapolis, Minn., assignee of Hollywood-Maxwell Co., Los Angeles, Calif. SN 41,640. Filed P.R. 12-2-57; Am. S.R. 11-12-58.

HAPPY DAY

For Brassieres.
First use Oct. 29, 1957.

682,341. Musebeck Shoe Company, Oconomowoc, Wis. SN 44,482. Filed P.R. 1-22-58. Am. S.R. 2-9-59.

SLEEP-SLIPPERS

For Slippers Formed of Synthetic Fabrics.
First use Jan. 6, 1958.

682,342. R. Best Inc., Boyertown, Pa. SN 53,832. Filed P.R. 6-18-58; Am. S.R. 5-25-59.

The lining on the drawing is a feature of the mark and does not represent color.
For Underwear.
First use Apr. 10, 1958.

Class 48—Malt Beverages and Liquors

682,343. Carlton and United Breweries Limited, Carlton, Victoria, Australia. SN 43,143. Filed 12-30-57.

Priority claimed under Sec. 44(d) on Australian Reg. No. 133,082, dated July 13, 1957. Owner of U.S. Reg. No. 567,847.
For Beer.

Class 49—Distilled Alcoholic Liquors

682,344. The American Distilling Company, d.b.a. The American Distilling Company Inc., New York, N.Y. SN 42,336. Filed P.R. 12-13-57; Am. S.R. 1-12-59.

DUNPHY'S ORIGINAL IRISH

For Irish Whiskey.
First use Oct 21, 1957.

TRADEMARK REGISTRATIONS RENEWED

17,054. MANHATTAN. Cl. 35. 9-24-1889.
125,374. SILKOTE. Cl. 37. 5-15-19.
126,774. ATOPHAN. Cl. 18. 9-30-19.
126,844. FANNY FARMER. Cl. 46. 10-7-19.
127,143. SNOWDRIFT. Cl. 46. 10-21-19.
260,566. BUCKHORN. Cl. 1. 9-20-38.
265,103. PLEASURE BOUND. Cl. 28. 3-21-39.
266,374. MERCOLITE. Cl. 44. 4-11-39.
266,632. M. MARIN AND DESIGN. Cl. 49. 4-25-39.
266,652. UP & UP. Cl. 46. 4-25-39.
266,835. VI-MINTONE. Cl. 18. 5-2-39.
266,967. TRIUMPH. Cl. 35. 5-2-39.
267,074. MORVAL. Cl. 39. 5-9-39.
267,124. BATONNET. Cl. 51. 5-9-39.
267,151. TRAIL-MAKER. Cl. 32. 5-9-39.
267,243. FASTELL. Cl. 14. 5-9-39.
267,294. COMPLICH. Cl. 51. 5-9-39.
267,316. HYFRECATOR. Cl. 44. 5-9-39.
267,358. RENAULT. Cl. 47. 5-16-39.
267,380. PRODAMANT. Cl. 22. 5-16-39.
267,381. TRIAMANT. Cl. 22. 5-16-39.
267,382. WALLRAM. Cl. 23. 5-16-39.
267,393. PARGATE. Cl. 39. 5-16-39.
367,410. COMFORTAIRE. Cl. 24. 5-16-39.
367,416. HYDITE. Cl. 23. 5-16-39.
367,465. MON-E-SAVERS. Cl. 39. 5-16-39.
367,489. TRAVELSER. Cl. 42. 5-16-39.
367,550. FILMFAST. Cl. 6. 5-23-39.
367,735. TILO. Cl. 12. 5-30-39.
367,937. MIRACLE. Cl. 51. 6-6-39.
368,075. MACPERTH. Cl. 39. 6-6-39.
368,268. DIX-MAKE+666. Cl. 39. 6-13-39.
368,348. SALTANGS. Cl. 46. 6-13-39.
368,350. KELETHA. Cl. 50. 6-13-39.
368,564. UNION. Cl. 25. 6-27-39.
368,598. SWAMP BUGGY. Cl. 35. 6-27-39.
368,700. KLEENFLO. Cl. 34. 6-27-39.
368,774. REMINGTON. Cl. 23. 6-27-39.
368,776. CATAVAR. Cl. 16. 6-27-39.
369,079. TURTLES AND DESIGN. Cl. 46. 7-11-39.
369,121. TANKS FOR THE WORLD AND DESIGN. Cl. 2. 7-18-39.
369,191. MAGNOGENE. Cl. 18. 7-18-39.
369,203. SALEM. Cl. 6. 7-18-39.
369,272. SECRETARIAL. Cl. 37. 7-18-39.
369,566. FABRIC BONING. Cl. 42. 8-1-39.

203,947. SPARKLE AND DESIGN. Cl. 46. C. D. Robinson Company. 9-29-25. New Cert. Sec. 7(c) to Sparkle Sugar Inc. 2-1-55.

601,649. GRADE AID. Cl. 32. Colonial Engineering Co., Inc. 2-1-55. New Cert. Sec. 7(c) to Grade-Aid Corpora-

369,701. CUMID. Cl. 16. 8-1-39.
369,764. HSS AND DESIGN. Cl. 47. 8-1-39.
369,875. WAFFLE. Cl. 46. 8-8-39.
369,972. AQUA-BOY. Cl. 28. 8-8-39.
370,138. VANDA AND DESIGN. Cl. 35. 8-15-39.
370,140. LABRATENT. Cl. 44. 8-15-39.
370,180. MANOR. Cl. 27. 8-22-39.
370,223. ADORATION. Cl. 26. 8-22-39.
370,630. VERI-CHROME. Cl. 44. 8-29-39.
370,692. CURBAY. Cl. 5. 9-5-39.
370,742. SUNBEAM. Cl. 23. 9-5-39.
370,902. COOK'S FRIEND. Cl. 46. 9-12-39.
371,168. FULCO TWO-TONE. Cl. 50. 9-19-39.
371,223. DRYMET. Cl. 6. 9-19-39.
371,318. PENFLO. Cl. 31. 9-19-39.
371,326. PERMA-GUARD. Cl. 6. 9-19-39.
371,501. SHIP 'N SHORE. Cl. 39. 9-26-39.
371,507. O & C AND DESIGN. Cl. 46. 9-26-39.
371,520. PRIMATUBE. Cl. 9. 9-26-39.
371,526. VITACEE. Cl. 18. 9-26-39.
371,619. PLUS 4. Cl. 48. 10-3-39.
371,646. HOLTEMP. Cl. 2. 10-3-39.
371,750. LITTLE WHITE FARM AND DESIGN. Cl. 46. 10-3-39.
371,778. PERFEX. Cl. 37. 10-3-39.
371,810. COMET. Cl. 22. 10-10-39.
371,831. MACKINLAY'S. Cl. 49. 10-10-39.
371,997. CYCLEX. Cl. 23. 10-17-39.
372,179. ONE SHOT. Cl. 6. 10-24-39.
372,232. TANALOGNE. Cl. 51. 10-24-39.
372,247. K.C. BEVERAGES AND DESIGN. Cl. 45. 10-24-39.
372,360. HAMILTON. Cl. 28. 10-31-39.
372,360. FASHION IN THE NEWS. Cl. 38. 10-31-39.
372,372. BATH-BLOOM. Cl. 51. 10-31-39.
372,414. GEM DANDY. Cl. 23. 10-31-39.
372,491. TIGRESS. Cl. 51. 10-31-39.
372,516. CRESCENDO. Cl. 51. 10-31-39.
372,624. FISH BRAND AND DESIGN. Cl. 39. 11-7-39.
372,658. BODYRITE. Cl. 14. 11-7-39.

TRADEMARK REGISTRATIONS CANCELED

Section 8

90,401. QUIK-TRIP. Cl. 37. 2-25-13.
294,475. "OLO" ETC. AND DESIGN. Cl. 52. 5-31-32.
300,686. SETH THOMAS. Cl. 21. 1-31-33.
301,415. SOIL-PEEP. Cl. 10. 2-28-33.

The following registrations issued July 21, 1959

575,059. SPED-FRESH AND DESIGN. Cl. 1.
575,062. R.M.T. MRS A LOGAN. Cl. 18.
575,074. LYRIC. Cl. 27.
575,075. PRIMO. Cl. 46.
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203,947. SPARKLE AND DESIGN. Cl. 46. C. D. Robinson Company. 9-29-25. New Cert. Sec. 7(e) to Sparkle Sugar Corporation, St. Paul, Minn. 7-21-59.

203,958. SPARKLE. Cl. 46. C. D. Robinson Company. 9-29-25. New Cert. Sec. 7(c) to Sparkle Sugar Corporation, St. Paul, Minn. 7-21-59.

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601,649. GRADE AID. Cl. 32. Colonial Engineering Co., Inc. 2-1-55. New Cert. Sec. 7(c) to Grade-Aid Corporation, Nashua, N.H. 7-21-59.

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Fisher, Thorsen & Co., Inc., Portland, Oreg. 575,342, canc. Cl. 16.
Flexene Corp., The, New York, N.Y. 682,331, pub. 5–5–59. Cl. 106.
Foote Mfg. Co.: *See*—
Foote's White Wall Cleaner Co.
Foote's White Wall Cleaner Co., d.b.a. Foote Mfg. Co., Henderson, Tex. 682,314, pub. 5–5–59. Cl. 52.
Fougera, E., and Co., Inc., New York, N.Y. 575,243, canc. Cl. 18.
Franck und Kathreiner G.m.b.H., Ludwigsburg, Germany. 682,277, pub. 5–5–59. Cl. 46.
Frank, J. O., Co., Frank's, and Tasty Bird Farms: *See*—
Frank, Joe O., Co., The.
Frank, Joe O., Co., The, d.b.a. J. O. Frank Co., Franks's, and Tasty Bird Farms, Dayton, Ohio. 682,268, pub. 5–5–59. Cl. 46.
Free State Specialty Co., Baltimore, Md. 682,335. Cl. 2.
Fresno Macaroni Mfg. Co.: *See*—
Fresno Macaroni Mfg. Co., Inc.
Fresno Macaroni Mfg. Co., Inc., d.b.a. Fresno Macaroni Mfg. Co., Fresno, Calif. 682,275, pub. 5–5–59. Cl. 46.
Frontel Net & Twine Corp., The, East Hampton, Conn. 575,151, canc. Cl. 22.
Fukutaro Aminaka, Sumidaku, Tokyo, Japan. 682,144, pub. 5–5–59. Cl. 22.

Light Products, Inc., Beverly Hills, Calif. 575,110, canc. Cl. 21.
National Alfalfa Dehydrating & Milling Co., Lamar, Colo. 575,215, canc. Cl. 46.

Fulton Bag & Cotton Mills, Atlanta, Ga. 371,163, ren. 7-21-59. Cl. 50.
G and G Pharmacal Co., Inc., South Bend, Ind. 682,095, pub. 4-29-59. Cl. 18.
Garber's Travel Service: See—
Garber's Travel Service, Inc.
Garber's Travel Service, Inc., d.b.a. Garber's Travel Service, Brookline, Mass. 682,230, pub. 5-5-59. Cl. 105.
Gem Bottling Co., The, Wellston, Ohio. 682,259, pub. 5-5-59. Cl. 45.
General Appliance Co.: See—
Levey Distributing Co.
General Cable Corp., New York, N.Y. 682,127, pub. 5-5-59. Cl. 21.
General Chemical Co., to Allied Chemical Corp., New York, N.Y. 367,550, ren. 7-21-59. Cl. 6.
General Life Co. of America, Seattle, Wash. 682,235, pub. 5-5-59. Cl. 102.
General Time Corp.: See—
General Time Instruments Corp.
General Time Instruments Corp., New York, N.Y., and La Salle, Ill., to General Time Corp., New York, N.Y. 370,180, ren. 7-21-59. Cl. 27.
General Tire & Rubber Co., The, Akron, Ohio. 682,206, pub. 5-5-59. Cl. 35.
Germain's Inc., Los Angeles, Calif. 682,021, pub. 5-5-59. Cl. 1.
Gestetner Ltd., London, England. 682,052, pub. 5-5-59. Cl. 11.
Giagnocavo, John D., d.b.a. Martin Mfg. Co., Quakertown, Pa. 682,318, pub. 5-5-59. Cl. 52.
Gillette Co., The, d.b.a. The Toni Co., Chicago, Ill. 682,258, pub. 5-5-59. Cl. 44.
Gleason Works, The, Rochester, N.Y. 371,997, ren. 7-21-59. Cl. 23.
Gleason Works, The, Rochester, N.Y. 682,161, pub. 5-5-59. Cl. 23.
Glidden Co., The, Cleveland, Ohio. 682,017, pub. 5-5-59. Cl. 1.
Goebel, W., Porzellanfabrik, Oeslau near Coburg, Germany. 682,300, pub. 5-5-59. Cl. 50.
Goldfarb Bros., New York, N.Y. 682,247, pub. 5-5-59. Cl. 42.
Goodman, A., & Sons, Inc., Long Island City, N.Y. 682,272, pub. 5-5-59. Cl. 46.
Grace, W. R., & Co., Cambridge, Mass. 682,085, pub. 5-5-59. Cl. 6.
Grade-Aid Corp.: See—
Colonial Engineering Co., Inc.
Grand Chapter of Phi Sigma Kappa, The, Chicago, Ill. 575,291, canc. Cl. 100.
Grant, Foster, Co., Inc., Leominster, Mass. 682,013-14, pub. 5-5-59. Cl. 1.
Greenman, Doris C., d.b.a. Dorwal Products Co., West Englewood, N.J. 682,264, pub. 5-5-59. Cl. 46.
Greene, Tweed & Co., New York, N.Y., to Greene, Tweed & Co., North Wales, Pa. 17,054, ren. 7-21-59. Cl. 35.
Green Valley Wine Co.: See—
Pioneer Liquor Co., Inc.
Griess-Pfleger Tanning Co., The, Waukegan, Ill. 682,024, pub. 5-5-59. Cl. 1.
Gross, Lewis A., d.b.a. The Mulcine Co. (also known as The Mulcine Co.), Philadelphia, Pa., to Mead Johnson & Co., Evansville, Ind. 575,116, canc. Cl. 18.
Gude Brothers, Kiefer Co., to June Dairy Products Co., Inc., Jersey City, N.J. 575,077, canc. Cl. 46.
Guenther Hosiery Co., Inc., Hornell, N.Y. 682,237, pub. 5-5-59. Cl. 39.
Guest, Keen & Nettlefolds Ltd., Smethwick, England. 682,079, pub. 5-5-59. Cl. 14.
Hamilton Watch Co., Lancaster, Pa. 372,800, ren. 7-21-59. Cl. 28.
Handyman Tool Co.: See—
Tar-Gon Products, Inc.
Harmon Machine Co., Inc.: See—
Sand, J., & Sons.
Harrington & Richardson, Inc., Worcester, Mass. 682,050, pub. 5-5-59. Cl. 8.
Harvey, G. F., Co., Inc., The, Saratoga Springs, N.Y. 682,102-4, pub. 5-5-59. Cl. 18.
Harvey-Wells Electronics, Inc., Southbridge, Mass. 682,180-1, pub. 5-24-59. Cl. 26.
Hausman, M., & Sons, Inc., New York, N.Y. 682,048, pub. 5-5-59. Cl. 7.
Hawley Products, Chicago, Ill. 575,141, canc. Cl. 22.
Hearth Craft, Inc., Portland, Oreg. 682,201, pub. 5-5-59. Cl. 34.
Hearthgreen, Inc., New York, N.Y. 682,270, pub. 5-5-59. Cl. 46.
Hercules Powder Co., Wilmington, Del. 371,520, ren. 7-21-59. Cl. 6.
Hettrick Mfg. Co., The, Toledo, Ohio. 575,084, canc. Cl. 50.
Hewlett-Packard Co., Palo Alto, Calif. 682,130, pub. 5-5-59. Cl. 21.
Hills Bros. Coffee, Inc., San Francisco, Calif. 682,271, pub. 5-5-59. Cl. 46.
Hine & Co., Inc., to End-O-Rust Inc., Cleveland, Ohio. 575,201, canc. Cl. 18.
Hobart Mfg. Co., The, Troy, Ohio. 682,073, pub. 5-5-59. Cl. 13.
Hobart Mfg. Co., The, Troy, N.Y. 682,120, pub. 5-5-59. Cl. 21.
Hobart Mfg. Co., The, Troy, Ohio. 682,155, pub. 5-5-59. Cl. 22.
Hockensmith, John B., d.b.a. Johns Hollywood Salon or Johns Hollywood Beauty Salon, Knoxville, Tenn. 575,283, canc. Cl. 52.
Hoosic Plywood Corp., New York, N.Y. 682,069, pub. 5-5-59. Cl. 12.
Hoffman, Bob, -York Barbell Co.: See—
Hoffman, Robert C.
Hoffman, Robert C., d.b.a. Bob Hoffman-York Barbell Co., York, Pa. 682,267, pub. 5-5-59. Cl. 46.
Hollywood-Maxwell Co.: See—
Munsingwear, Inc.
Hollywood V-Ette-Vanarette: See—
Munsingwear, Inc.
Hopkins Mfg. Corp., Emporia, Kans. 682,105, pub. 5-5-59. Cl. 20.
Hospital Accessories Co., Woodside, N.Y. 682,254, pub. 5-5-59. Cl. 44.
Hults Bruks Aktiebolag, Aby, Sweden. 682,167, pub. 5-5-59. Cl. 22.
Hunt, Charles M., Jr., Lake Wales, Fla. 682,116, pub. 5-5-59. Cl. 19.
Hyde Mfg. Co., Southbridge, Mass. 367,416, ren. 7-21-59. Cl. 23.
Imperial Drug Exchange Inc., d.b.a. New York Drug Concern, New York, N.Y. 682,096, pub. 5-5-59. Cl. 18.
Industrial Chemicals, Inc.: See—
U.S. Industrial Alcohol Co.
Industrias Muerza S.A. Viuda e Hijos de Maximo Muerza, San Adrian, Navarra, Spain. 575,156, canc. Cl. 46.
Inland Chemical Corp., New York, N.Y. 682,044, pub. 5-5-59. Cl. 6.
Intelligence Publishing Co., Inc., New York, N.Y. 575,289, canc. Cl. 38.
Interchemical Corp., New York, N.Y. 682,036, pub. 5-5-59. Cl. 6.
International Heater Co., Utica, N.Y. 575,124, canc. Cl. 34.
International Metal Products Co., Phoenix, Ariz. 682,197-9, pub. 5-5-59. Cl. 34.
International Minerals & Chemical Corp., Skokie, Ill. 682,082, pub. 5-5-59. Cl. 1.
International Minerals & Chemical Corp., Skokie, Ill. 682,051, pub. 5-5-59. Cl. 10.
International Silver Co., to The International Silver Co., Meriden, Conn. 370,323, ren. 7-21-59. Cl. 28.
International Silver Co., The: See—
International Silver Co.
International Silver Co., The, Meriden, Conn. 682,188, pub. 5-5-59. Cl. 28.
Interstate Folding Box Co., The, Middletown, Ohio. 682,237. Cl. 37.
Interwoven Stocking Co., New Brunswick, N.J. 682,235, pub. 5-5-59. Cl. 39.
Jeyson, Percy, d.b.a. The Rod-Master Co., Oakland, Calif. 682,151, pub. 5-5-59. Cl. 22.
Jobst Institute, Inc., Toledo, Ohio. 682,251, pub. 5-5-59. Cl. 44.
Johnny Appleseed National Memorial Foundation, Fort Wayne, Ind. 682,234, pub. 5-5-59. Cl. 200.
Johns Hollywood Beauty Salon: See—
Hockensmith, John B.
Johns Hollywood Salon: See—
Hockensmith, John B.
Johnson & Johnson, New Brunswick, N.J. 682,250, pub. 5-5-59. Cl. 44.
June Dairy Products Co., Inc.: See—
Gude Brothers Kiefer Co.
Kas-Kel Electric Co. Inc., New York, N.Y. 682,125, pub. 5-5-59. Cl. 21.
Keith, Geo. E., Brockton, Mass. 682,234, pub. 5-5-59. Cl. 39.
Kentile, Inc., Brooklyn, N.Y. 682,117, pub. 5-5-59. Cl. 20.
Kenfel & Esser Co., Hoboken, N.J. 682,218, pub. 5-5-59. Cl. 37.
Kidde Ultrasonic & Detection Alarms Inc., from Walter Kidde & Co., Inc., Belleville, N.J. 682,124, pub. 5-5-59. Cl. 21.
Kidde, Walter, & Co., Inc.: See—
Kidde Ultrasonic & Detection Alarms Inc.
Klein's, Mrs.: See—
Sunshine Biscuits, Inc.
Knipe Bros.-Ward Hill Shoes, Inc., Gardiner, Maine. 682,236, pub. 5-5-59. Cl. 39.
Korman, Loraine H., d.b.a. C. & H. Steinkraus Co., Chicago, Ill. 575,062, canc. Cl. 18.
Laboratoires Ramon, S.A.R.L., Paris, France. 369,191, ren. 7-21-59. Cl. 18.
Laird, R. H., Mfg. Co., Inc., New York, N.Y. 372,232, ren. 7-21-59. Cl. 51.
Lamar S.R.L., Buenos Aires, Argentina. 682,273, pub. 5-5-59. Cl. 46.
Lankford, T. S., & Sons, Inc.: See—
Milridge, Harry, Co., Inc., and T. S. Lankford & Sons, Inc.
Lanvin Parfums, Inc., Wilmington, Del., and New York, N.Y., to Lanvin-Parfums, Inc., New York, N.Y. 372,516, ren. 7-21-59. Cl. 51.
Lanvin-Parfums, Inc.: See—
Lanvin Parfums, Inc.
La Resista Corset Co., The, Bridgeport, Conn. 369,586, ren. 7-21-59. Cl. 42.
Larsh, Everett P.: See—
Etc., Inc.
Leichner, L.: See—
Leichner, Siegfried.
Leichner, Siegfried, d.b.a. L. Leichner, Berlin-Dahlem, Germany. 682,308, pub. 5-5-59. Cl. 51.
Leatherie, Inc., New York, N.Y., to Helene Curtis Industries, Inc., Chicago, Ill. 367,937, ren. 7-21-59. Cl. 51.
Levey Distributing Co., d.b.a. General Appliance Co., Omaha, Nebr. 682,178, pub. 5-5-59. Cl. 23.
Licoreria Maria Inc., Mayaguez, P.R. 366,632, ren. 7-21-59. Cl. 46.

Peabody Coal Co., Inc.: See—
Consolidation Coal Co.
Scheinman, William T., Fort Wayne, Ind. 682,231, pub.

Light Products, Inc., Beverly Hills, Calif. 575,110, canc. Cl. 21.
Lilly, Eli, and Co., Indianapolis, Ind. 682,105, pub. 5–5–59. Cl. 18.
Logan Engineering Co., Chicago, Ill. 682,156, pub. 5–5–59. Cl. 23.
Lorber Novelty Co., Inc., d.b.a. Division of Button Center, New York, N.Y. 682,190, pub. 5–5–59. Cl. 28.
Love, K. C., d.b.a. Dr. Pepper-Love Bottling Co., to Dr. Pepper Love Bottling Co., Muskogee, Okla. 372,247, ren. 7–21–59. Cl. 45.
Lyons & Co., New York, N.Y. 682,240, pub. 5–5–59. Cl. 39.
Lytle Engineering & Mfg. Co., Chicago, Ill. 682,184, pub. 5–5–59. Cl. 27.
M. & W. Specialties, Inc., Boca Raton, Fla. 682,053, pub. 5–5–59. Cl. 12.
MacGregor Sport Products, Inc., Cincinnati, Ohio. 682,149, pub. 5–5–59. Cl. 22.
MacKinlay, Charles, & Co. Ltd.: *See*—
MacKinlay, Charles, & Co.
MacKinlay, Charles, & Co., to Charles MacKinlay & Co. Ltd., Leith, Scotland. 371,831, ren. 7–21–59. Cl. 49.
MacLean-Hunter Publishing Co. Ltd., Toronto, Ontario, Canada. 682,223, pub. 5–5–59. Cl. 38.
Magnetic Amplifiers, Inc., New York, N.Y. 682,133, pub. 5–5–59. Cl. 21.
Manton Gaulin Mfg. Co., Inc., Everett, Mass. 682,157, pub. 5–5–59. Cl. 23.
Marine Colloids, Inc.: *See*—
Algin Corp. of America.
Markwell Mfg. Co., Inc., New York, N.Y. 682,174, pub. 5–5–59. Cl. 23.
Marlboro Automotive Co.: *See*—
Ferber, Murray.
Maloney, F. H., Co., Houston, Tex. 682,210, pub. 5–5–59. Cl. 35.
Martin Mfg. Co.: *See*—
Giagnocavo, John D.
Mason Plastics Co., Inc., Kansas City, Kans. 575,079, canc. Cl. 22.
Masuyama Trading Co., Ltd., Shinagawa-ku, Tokyo, Japan. 682,136, pub. 5–5–59. Cl. 21.
McCoy's Products, Inc.: *See*—
Vi-Mintone, Inc.
McKesson & Robbins, Inc., New York, N.Y., from Distillerie Riunite di Liquori, Milan, Italy. 682,296, pub. 2–17–59. Cl. 49.
McKinley Corp., Baraboo, Wis. 575,099, canc. Cl. 22.
McMillan, W. W.: *See*—
Comfortaire Corp.
McMillan, W. W., & Co.: *See*—
Comfortaire Corp.
Mead Johnson & Co.: *See*—
Gross, Lewis A.
American Hospital Supply Corp.
Medical Case History Bureau: *See*—
Zion, Miriam.
Meeter Bros. & Co., Union Grove, Wis. 682,290, pub. 5–5–59. Cl. 46.
Megowen-Educator Food Co., Lowell, Mass. 682,281, pub. 5–5–59. Cl. 46.
Meletio Co., d.b.a. Chef's Delight Products, St. Louis, Mo. 682,286, pub. 5–5–59. Cl. 46.
Mercantile Stores Co., Inc., Wilmington, Del. 575,233, canc. Cl. 34.
Merck & Co., Inc., Rahway, N.J. 369,701, ren. 7–21–59. Cl. 18.
Meridian Distributors: *See*—
Biddle Purchasing Co.
Metallising Co. of America, Inc., Chicago, Ill. 682,084, pub. 5–5–59. Cl. 14.
Meutsch, Voigtländer & Co., vormals Gewerkschaft Wallram, Essen-Ruhr, Germany, to Wallram Hartmetallwerk, und Hartmetallwerkzeugfabrik Meutsch, Voigtlander & Co., Essen, Germany. 367,380, ren. 7–21–59. Cl. 23.
Meutsch, Voigtländer & Co., vormals Gewerkschaft Wallram, Essen-Ruhr, Germany, to Wallram Hartmetallwerk, und Hartmetallwerkzeugfabrik Meutsch, Voigtlander & Co., Essen, Germany. 367,381, ren. 7–21–59. Cl. 23.
Meutsch, Voigtländer & Co., vormals Gewerkschaft Wallram, Essen-Ruhr, Germany, to Wallram Hartmetallwerk, und Hartmetallwerkzeugfabrik Meutsch, Voigtlander & Co., Essen, Germany. 367,382, ren. 7–21–59. Cl. 23.
Mexico Refractories Co., Mexico, Mo. 682,056, pub. 5–5–59. Cl. 12.
Miller, Frank, & Sons, Inc., Chicago, Ill. 682,025, pub. 5–5–59. Cl. 1.
Miller, I., & Sons, Inc., Long Island City, N.Y. 575,320, canc. Cl. 39.
Miller Shoe Co., The, Cincinnati, Ohio. 575,318, canc. Cl. 39.
Mixing Equipment Co., Inc., Rochester, N.Y. 682,153, pub. 5–5–59. Cl. 23.
Monroe Chemical Co., Quincy, Ill. 372,372, ren. 7–21–59. Cl. 51.
More, Inc.: *See*—
Dick, John P.
Morrison Steel Co., New Brunswick, N.J. 682,236. Cl. 14.
Mulcine Co., The: *See*—
Gross, Lewis A.
Multi-Hydromatic Welding and Mfg. Co., East Detroit, Mich. 575,310, canc. Cl. 21.
Munsingwear, Inc., d.b.a. Hollywood V-Ette-Vassarette, Minneapolis, Minn., from Hollywood-Maxwell Co., Los Angeles, Calif. 682,238–40. Cl. 39.
Musebeck Shoe Co., Oconomowoc, Wis. 682,241. Cl. 39.
N.V. Nautamix, Haarlem, Netherlands. 682,154, pub. 5–5–59. Cl. 23.
National Alfalfa Dehydrating & Milling Co., Lamar, Colo. 575,215, canc. Cl. 46.
National Association of Congregational Christian Churches, The, Milwaukee, Wis. 682,220, pub. 5–5–59. Cl. 38.
National Biscuit Co., New York, N.Y. 368,348, ren. 7–21–59. Cl. 46.
National Biscuit Co., New York, N.Y. 369,875, ren. 7–21–59. Cl. 46.
National Distillers and Chemical Corp.: *See*—
U.S. Industrial Alcohol Co.
National Institute of Diaper Services, Inc., from Bristol Laboratories Inc., New York, N.Y. 682,094, pub. 11–13–58. Cl. 18.
National Modes, Inc., to Carolyn Fashions, Inc., New York, N.Y. 372,360, ren. 7–21–59. Cl. 39.
National Nugrape Co., Atlanta, Ga. 682,292, pub. 5–5–59. Cl. 45.
National Publishing Co., Philadelphia, Pa. 682,229, pub. 5–5–59. Cl. 38.
National Starch Products Inc., New York, N.Y. 682,034, pub. 5–5–59. Cl. 5.
National Tool Co., Cleveland, Ohio, from Auto-Vac Co., Bridgeport, Conn. 682,158–9, pub. 5–5–59. Cl. 23.
National-U.S. Radiator Corp., Johnstown, Pa. 682,293, pub. 5–5–59. Cl. 34.
Netzky, William, d.b.a. Susquehanna Waist Co., Philadelphia, to Ship 'n Shore, Inc., Upland, Pa. 371,501, ren. 7–21–59. Cl. 39.
Newport Ships, Not Inc.: *See*—
Ete, Inc.
New York Drug Concern: *See*—
Imperial Drug Exchange Inc.
New York Merchandise Co., Inc., New York, N.Y. 682,121, pub. 5–5–59. Cl. 21.
Noble, F. H., and Co., Chicago, Ill. 682,301, pub. 5–5–59. Cl. 50.
Nodarse, Concepcion, trustee of Jose Lamadrid-Piedra y Nodarse, Orencio Lamadrid-Piedra y Nodarse & Ana Maria Lamadrid-Piedra y Nodarse, Marianao City, Havana, Cuba. 682,093, pub. 5–5–59. Cl. 17.
North Penn Co., Inc.: *See*—
Riego, Ralph A.
Nutrena Mills, Inc., Minneapolis, Minn. 682,041, pub. 5–5–59. Cl. 6.
Old-North Mfg. Co., Inc., Lenoir, N.C. 682,043, pub. 5–5–59. Cl. 6.
Olney & Carpenter, Inc., Wolcott, N.Y. 371,507, ren. 7–21–59. Cl. 46.
Oneida Ltd., Oneida, N.Y. 682,188, pub. 5–5–59. Cl. 28.
Orchard Paper Co., St. Louis, Mo. 682,216, pub. 5–5–59. Cl. 37.
Ours, Fred, Morgantown, W. Va. 682,145, pub. 5–5–59. Cl. 22.
Outboard Marine Corp., Waukegan, Ill. 682,172, pub. 5–5–59. Cl. 23.
Ozark Charcoal Co., to Charco, Inc., Denver, Colo. 667,524, new cert. Cl. 1.
Pacific Car and Foundry Co., Renton, Wash. 682,109, pub. 5–5–59. Cl. 19.
Pacific Tile and Porcelain Co., Paramount, Calif. 682,070, pub. 5–5–59. Cl. 12.
Pacific Semiconductors, Inc., Culver City, Calif. 682,139, pub. 5–5–59. Cl. 21.
Pagoda Knitting Mills, Inc., Reading, Pa. 575,237, canc. Cl. 39.
Paint Fair Stores, Inc., Long Island City, N.Y. 682,090, pub. 5–5–59. Cl. 16.
Pannett Products, Inc., New York, N.Y. 682,097, pub. 5–5–59. Cl. 18.
Parker Appliance Co., The: *See*—
Parker-Hannifin Corp.
Parker-Hannifin Corp., by change of name from The Parker Appliance Co., Cleveland, Ohio. 682,207–8, pub. 5–5–59. Cl. 35.
Parker-Hannifin Corp., Cleveland, Ohio. 682,225, pub. 5–5–59. Cl. 38.
Parkes, Josiah, & Sons, Ltd., Willenhall, England. 368,564, ren. 7–21–59. Cl. 23.
Passmore, Cleo, d.b.a. Rev-Up Service Co., Kettering, Ohio. 682,085, pub. 5–5–59. Cl. 15.
Pelletti Fruit Co.: *See*—
Pelletti Fruit Co., Inc.
Pelletti Fruit Co., Inc., d.b.a. Pelletti Fruit Co., Graton, Calif. 682,286, pub. 5–5–59. Cl. 46.
Penetred Corp., Marshfield, Wis. 682,327, pub. 5–5–59. Cl. 103.
Permagile Corp. of America, Woodside, N.Y. 682,033, pub. 5–5–59. Cl. 5.
Pet Milk Co., St. Louis, Mo. 682,322, pub. 5–5–59. Cl. 101.
Peyron, Antoine F. R., Paris, France. 682,037–8, pub. 5–5–59. Cl. 6.
Peyron, Antoine F. R., Paris, France. 682,310, pub. 5–5–59. Cl. 52.
Philadelphia and Reading Corp.: *See*—
Reading Anthracite Co.
Philco Corp., Philadelphia, Pa. 682,184, pub. 5–5–59. Cl. 21.
Photographic Importing and Distributing Corp., Valley Stream, N.Y. 682,182, pub. 5–5–59. Cl. 26.
Pioneer Exterminating Co. Inc., New York, N.Y. 682,329, pub. 5–5–59. Cl. 103.
Pioneer Liquor Co., Inc., d.b.a. Green Valley Wine Co., St. Louis, Mo. 682,293, pub. 5–5–59. Cl. 47.
Plaza Court Broadcasting Co., Oklahoma City, Okla. 682,332, pub. 5–5–59. Cl. 107.
Plymouth Rubber Co., Inc., Canton, Mass. 682,239, pub. 5–5–59. Cl. 39.
Plywood Products Corp., Corvallis, Oreg. 682,063, pub. 5–5–59. Cl. 12.

Pocahontas Fuel Co., Inc.: See—
Consolidation Coal Co.
Poley Mfg. Co.: See—
Coon, James A.
Pond, Arthur E., d.b.a. Pond Bros., Detroit, Mich. 575,694, canc. Cl. 28.
Pond Bros.: See—
Pond, Arthur E.
Popalisky and Rachlin, Milwaukee, Wis. 575,158, canc. Cl. 18.
Precision Welder & Flexopress Corp., Cincinnati, Ohio. 682,122, pub. 5-5-59. Cl. 21.
Price-Driscoll Corp., Rockville Center, N.Y. 682,066, pub. 5-5-59. Cl. 15.
Proctor Electric Co., Philadelphia, Pa. 682,179, pub. 5-5-59. Cl. 24.
Production and Marketing Co., Newtown, Conn. 682,140, pub. 5-5-59. Cl. 22.
Prospect Mills Corp., Cambridge, Mass. 368,380, ren. 7-21-59. Cl. 50.
Purdue Frederick Co., The, New York, N.Y. 682,101, pub. 5-5-59. Cl. 18.
R.O.W. Sales Co., Ferndale, Mich. 682,072, pub. 5-5-59. Cl. 12.
Rafter, Edward W., d.b.a. Aluminaire Co., Mesa, Ariz. 682,057, pub. 5-5-59. Cl. 12.
Ranco, Inc., d.b.a. Airline Textile Mfg. Co., Des Moines, Iowa. 682,029, pub. 5-5-59. Cl. 2.
Reading Anthracite Co., from Philadelphia and Reading Corp., Pottsville, Pa. 682,010, pub. 5-5-59. Cl. 1.
Red Robin, Inc., Los Angeles, Calif. 682,141, pub. 5-5-59. Cl. 22.
Reflector-Hardware Corp., Melrose Park, Ill. 682,205, pub. 5-5-59. Cl. 32.
Re-Ly-On Metal Products, Inc., Brooklyn, N.Y. 682,206, pub. 5-5-59. Cl. 32.
Remington Rand Inc., Buffalo, to Sperry Rand Corp., New York, N.Y. 368,774, ren. 7-21-59. Cl. 23.
Remington Rand Inc., Buffalo, to Sperry Rand Corp., New York, N.Y. 369,272, ren. 7-21-59. Cl. 37.
Renault, L. N., & Sons Inc., Egg Harbor, N.J. 367,258, ren. 7-21-59. Cl. 47.
Rev-Up Service Co.: See—
Passmore, Cleo.
Reynolds Metals Co., Richmond, Va. 682,226, pub. 5-5-59. Cl. 38.
Rich's Inc., Atlanta, Ga. 367,465, ren. 7-21-59. Cl. 39.
Richter, Ben, Co. Inc., New York, N.Y. 682,230, pub. 5-5-59. Cl. 38.
Riegge, Ralph A., New York, to North Penn Co., Inc., Freeport, N.Y. 371,318, ren. 7-21-59. Cl. 31.
Rilling-Dermetics Co., The, New York, N.Y. 682,205, pub. 2-14-56. Cl. 51.
Rival Mfg. Co., Kansas City, Mo. 682,137, pub. 5-5-59. Cl. 21.
Rivoli Corset Co., Inc., New York, N.Y. 575,247, canc. Cl. 39.
Robertson, James, Co., Los Angeles, Calif. 682,200, pub. 5-5-59. Cl. 49.
Robertson, Mildred J., New York, N.Y. 575,066, canc. Cl. 22.
Robinson, C. D., Co., to Sparkle Sugar Corp., St. Paul, Minn. 203,947, new cert. Cl. 46.
Robinson, C. D., Co., to Sparkle Sugar Corp., St. Paul, Minn. 208,955, new cert. Cl. 46.
Rodi & Wiesenberger Aktiengesellschaft, Pforzheim, Germany. 682,191-2, pub. 5-5-59. Cl. 28.
Rod-Master Co., The: See—
Jepson, Percy.
Romito-Donnelly Corp., Ravenna, Ohio. 682,252, pub. 5-5-59. Cl. 44.
Ron Jon Kitchens: See—
Annaballi, Ron J.
Roop & Babb Co., Columbus, Ohio. 575,816, canc. Cl. 40.
Roos, Allen, d.b.a. Roos Food Service, Orange City, Iowa. 682,221, pub. 5-5-59. Cl. 100.
Roos Food Service: See—
Roos, Allen.
Roos, Abe D., Havertown, Pa. 575,211, canc. Cl. 12.
Roxanne Leather Goods Inc., Passaic, N.J. 682,090, pub. 5-5-59. Cl. 3.
Rubin, Samuel, to Fabergé, Inc., New York, N.Y. 372,491, ren. 7-21-59. Cl. 51.
Rulevel Inc., Glendale, Calif. 575,295, canc. Cl. 36.
Ryerson, Joseph T., & Son, Inc., Chicago, Ill. 575,268, canc. Cl. 106.
Ryerson, Joseph T., & Son, Inc., Chicago, Ill. 575,269, canc. Cl. 106.
Saco-Moc Shoe Corp., to Songo Shoe Mfg. Corp., Portland, Maine, 207,151, ren. 7-21-59. Cl. 39.
Saidel, Raymond, Manchester, N.H. 682,114, pub. 5-5-59. Cl. 19.
Saine Co., Inc., Orlando, Fla. 682,228, pub. 5-5-59. Cl. 102.
Salem Chemical & Supply Co., Salem, to American Home Products Corp., New York, N.Y. 369,262, ren. 7-21-59. Cl. 6.
Sand, J., & Sons, to Harmon Machine Co., Inc., Wichita, Kans. 110,434, new cert. Cl. 26.
Santos, Crispin A., d.b.a. U.S. Trade Services Co., New York, N.Y. 682,260, pub. 5-5-59. Cl. 45.
Sawyer-Tower, Inc.: See—
Tower, A. J., Co.
Sayford, Frank M., Co., Brooklyn, N.Y. 682,076, pub. 5-5-59. Cl. 13.
Scarlett, Wm. G., & Co. Baltimore, Md. 682,015, pub. 5-5-5. Cl. 1.
Schaper Mfg. Co., Inc., Minneapolis, Minn. 682,142, pub. 5-5-59. Cl. 22.
Scheiman, William T., Fort Wayne, Ind. 682,231, pub. 5-5-59. Cl. 38.
Schering & Glatz, Inc., New York, N.Y., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 186,774, ren. 7-21-59. Cl. 18.
Schwab, A. G., & Sons, Inc., Cincinnati, Ohio. 682,194, pub. 5-5-59. Cl. 32.
Science Laboratories, Inc., to Sperti, Inc., Cincinnati, Ohio. 366,374, ren. 7-21-59. Cl. 44.
Scripto, Inc., Atlanta, Ga. 682,214, pub. 5-5-59. Cl. 37.
Seth Thomas Clock Co., Thomaston, Conn. 200,693, canc. Cl. 21.
Sewing Machine Factors, San Francisco, Calif. 575,136, canc. Cl. 23.
Sexton, John, & Co., Chicago, Ill. 370,992, ren. 7-21-59. Cl. 46.
Shaghalian, M. G.: See—
Shaghalian, M. G., & Co.
Shaghalian, M. G., & Co., d.b.a. M. G. Shaghalian, Providence, R.I. 682,265, pub. 10-28-58. Cl. 48.
Sherwin-Williams Co., The, Cleveland, Ohio. 682,062, pub. 5-5-59. Cl. 12.
Ship 'n Shore, Inc.: See—
Netzky, William.
Sichel, H., & Sons, Ltd., to H. Sichel & Sons Ltd., London, England. 369,764, ren. 7-21-59. Cl. 47.
Siegler Corp., The: See—
Consolidated Machinery & Supply Co., Ltd.
Siris, A. J., Products Corp., New York, N.Y. 682,215, pub. 5-5-59. Cl. 37.
Siris, A. J., Products Corp., New York, N.Y. 682,217, pub. 5-5-59. Cl. 37.
Skyway Luggage Co., Seattle, Wash. 682,081, pub. 5-5-59. Cl. 3.
Slator System, Inc., Philadelphia, Pa. 682,220, pub. 5-5-59. Cl. 100.
Sleeders Candy Co., Los Angeles, Calif. 682,262, pub. 12-4-56. Cl. 46.
Smith, H. C., Mfg. Co., Inc., Conshohocken, Pa. 682,182, pub. 5-5-59. Cl. 26.
Smith, S., and Sons (England) Ltd., London, England. 682,118, pub. 5-5-59. Cl. 21.
Smithcary Corp., Magnolia, Ark. 682,067, pub. 5-5-59. Cl. 12.
Songo Shoe Mfg. Corp.: See—
Saco-Moc Shoe Corp.
Sonoco Products Co., Hartsville, S.C. 682,071, pub. 5-5-59. Cl. 12.
Southern Cotton Oil Co., The, Jersey City and Bayonne, N.J., New York, N.Y., Gretna, La., Savannah, Ga., and Chicago, Ill., to Wesson Oil & Snowdrift Co., Inc., New Orleans, La. 127,148, ren. 7-21-59. Cl. 46.
Southwest Airways Co., South San Francisco, Calif. 575,285, canc. Cl. 105.
Sowl-Rite Co., Flint, Mich. 682,142, pub. 5-5-59. Cl. 22.
Sparkle Sugar Corp.: See—
Robinson, C. D., Co.
Specht, George A., d.b.a. Talia Mosaic Tile Co., Florence, Italy. 682,061, pub. 5-5-59. Cl. 12.
Sped-Fresh Co., The, Dayton, Ohio. 575,059, canc. Cl. 1.
Spence Engineering Co., Inc., Walden, N.Y. 682,074, pub. 5-5-59. Cl. 13.
Sperti, Inc.: See—
Science Laboratories, Inc.
Sperry Rand Corp., New York, N.Y. 682,169, pub. 5-5-59. Cl. 23.
Sperry Rand Corp.: See—
Remington Rand Inc.
Spoto, Sam P., d.b.a. El Rancho Canning Co., Tampa, Fla. 575,092, canc. Cl. 46.
Square Deal Machinery & Supply Co., Orlando, Fla. 682,236, pub. 5-5-59. Cl. 103.
Squirt Co., The, Beverly Hills, Calif. 575,259, canc. Cl. 33.
Standard Electric Co., Inc., San Antonio, Tex. 682,082, pub. 5-5-59. Cl. 14.
Standard Importing Co., Inc., New York, N.Y. 682,206, pub. 5-5-59. Cl. 46.
Standard Products Co., Inc., Philadelphia, Pa. 682,046, pub. 5-5-59. Cl. 6.
Standard Wine & Liquor Co., Inc., Long Island City, N.Y. 682,236, pub. 5-5-59. Cl. 49.
Stearns' Enterprises: See—
Stearns, Robert F.
Stearns, Robert F., d.b.a. Stearns' Enterprises, Arlington, Mass. 575,329, canc. Cl. 52.
Stoffner, Wayne, Inc., and Willard C. Chamberlin, Jr., Hollywood, Calif. 682,233, pub. 5-5-59. Cl. 107.
Steinkraus, C. & H., Co.: See—
Kerman, Loraine H.
Stork Restaurant, Inc., The, New York, N.Y. 682,209, pub. 5-5-59. Cl. 51.
Strassenburgh, R. J., Co., Rochester, N.Y. 682,106-8, pub. 5-5-59. Cl. 18.
Sunbeam Corp.: See—
Chicago Flexible Shaft Co.
Sunkist Growers, Inc., Los Angeles, Calif. 682,232, pub. 5-5-59. Cl. 46.
Sunshine Biscuits, Inc., Long Island City, N.Y., from Mrs. Klein's, Chicago, Ill. 682,267, pub. 5-5-59. Cl. 46.
Super Sno Ice Cream Co.: See—
Coffee County Creamery, Inc.
Susquehanna Waist Co.: See—
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Synchro Watch & Jewelry Corp., New York, N.Y. 575,074, canc. Cl. 27.
TV Junior Publications Inc., New York, N.Y. 682,219, pub. 5-5-59. Cl. 36.

Talia Mosaic Tile Co.: *See*—
Specht, George A.
Tar-Gon Products, Inc., d.b.a. Handyman Tool Co., Chicago, Ill. 682,032, pub. 5–5–59. Cl. 4.
Taylor Printing Co., Los Angeles, Calif. 682,212, pub. 5–5–59. Cl. 37.
Tennessee Corp., New York, N.Y. 301,415, canc. Cl. 10.
Texas Instruments Inc., Dallas, Tex. 682,123, pub. 5–5–59. Cl. 21.
Textron Inc., Cleveland, Ohio. 682,163–4, pub. 5–5–59. Cl. 23.
Thomas, Charles A., Grafton, W. Va. 682,100, pub. 5–5–59. Cl. 14.
Thomas Mfg. Corp., Newark, N.J. 575,195, canc. Cl. 22.
Thompson, Len, Bait Co.: *See*—
Thompson, Len J.
Thompson, Len J., d.b.a. Len Thompson Bait Co., Abernethy, Saskatchewan, Canada. 682,150, pub. 5–5–59. Cl. 22.
The-Nel, Inc., Minot, N.D. 682,040, pub. 5–5–59. Cl. 4.
Tile Roofing Co., Inc., Stratford, Conn. 367,735, ren. 7–21–59. Cl. 12.
Tivoli Brewing Co., Denver, Colo. 682,294, pub. 5–5–59. Cl. 46.
Tobin Packing Co., Inc., Rochester, N.Y. 682,263, pub. 5–5–59. Cl. 46.
Toni Co., The: *See*
Gillette Co., The.
Tower, A. J., Co., Boston, to Sawyer-Tower, Inc., Watertown, Mass. 372,624, ren. 7–21–59. Cl. 39.
Trim Sportswear of Texas: *See*—
Eldridge, Harry, Co., Inc., and T. S. Lankford & Sons, Inc.
Tri-Metals Co., Oakland, Calif. 682,075, pub. 5–5–59. Cl. 13.
Tru-Kay Mfg. Co., Providence, R.I. 682,189, pub. 5–5–59. Cl. 28.
Uddeholm Co. of America, Inc., New York, N.Y. 682,082, pub. 5–5–59. Cl. 14.
Union Carbide Corp., New York, N.Y. 682,089, pub. 5–5–59. Cl. 6.
United Knitwear: *See*—
United Knitwear, Inc.
United Knitwear, Inc., to United Knitwear, Cincinnati, Ohio, 368,075, ren. 7–21–59. Cl. 39.
United Mills Corp., Mount Gilead, N.C. 682,232, pub. 5–5–59. Cl. 39.
United Press International Inc., New York, N.Y. 682,226, pub. 5–5–59. Cl. 38.
U.S. Industrial Alcohol Co., to U.S. Industrial Chemicals, Inc., to National Distillers and Chemical Corp., New York, N.Y. 370,692, ren. 7–21–59. Cl. 5.
U.S. Plastic Products Corp., Metuchen, N.J. 682,023, pub. 5–5–59. Cl. 1.
United States Plywood Corp., New York, N.Y. 682,064, pub. 5–5–59. Cl. 12.
United States Rubber Co., New York, N.Y. 370,138, ren. 7–21–59. Cl. 35.
United States Safety Service Co., Kansas City, Mo. 575,186, canc. Cl. 26.
United States Steel Co., now by merger, United States Steel Corp., Pittsburgh, Pa. 575,181, canc. Cl. 14.
United States Steel Corp.: *See*—
United States Steel Co.
U.S. Trade Services Co.: *See*—
Santos, Crispin A.
Universal Dental Co., Philadelphia, Pa. 370,630, ren. 7–21–59. Cl. 44.
Unger Electric Tools, Inc., Los Angeles, Calif. 682,139, pub. 5–5–59. Cl. 21.
Vi-Mintone, Inc., to McCoy's Products, Inc., New York, N.Y. 366,835, ren. 7–21–59. Cl. 18.
Vitraside Industries, Inc., Milwaukee, Wis. 575,164, canc. Cl. 12.
Voight & Haeffner A.G., Frankfurt am Main, Germany. 682,118, pub. 5–5–59. Cl. 21.
Wagner, Ingeborg, d.b.a. Damilo Co., Detroit, Mich. 682,306, pub. 5–5–59. Cl. 51.
Waldes Kohinoor, Inc., Long Island City, N.Y. 371,779, ren. 7–21–59. Cl. 37.
Wallace, R., & Sons Mfg. Co., The, Wallingford, Conn. 575,104, canc. Cl. 28.
Wallace, R., & Sons Mfg. Co., The, Wallingford, Conn. 575,105, canc. Cl. 28.
Wallram Hartmetallwerk, and Hartmetallwerkzeugfabrik Meutsch, Voigtlander & Co.: *See*—
Meutsch, Voigtlander & Co., vormals Gewerkschaft Wallram.
Warnell, Charles E., Portland, Oreg. 575,350, canc. Cl. 21.
Warner-Lambert Pharmaceutical Co.: *See*—
Schering & Glatz, Inc.
Warren, S. D., Co., Boston, Mass. 125,374, ren. 7–21–59. Cl. 37.
Welch Grape Juice Co., Inc., The, Westfield, N.Y. 682,279, pub. 5–5–59. Cl. 46.
Wennsl, H., Tent & Duck Co., St. Louis, Mo. 682,147, pub. 5–5–59. Cl. 22.
Wesson Oil & Snowdrift Co., Inc.: *See*—
Southern Cotton Oil Co., The.
West Chemical Products, Inc., Long Island City, N.Y. 682,317, pub. 5–5–59. Cl. 52.
Western Commerce Corp., Los Angeles, Calif. 682,165, pub. 5–5–59. Cl. 23.
White Creamery Co., Inc., Charlestown, Mass. 371,750, ren. 7–21–59. Cl. 46.
Williamsburg Restoration, Inc., Williamsburg, Va. 682,089, pub. 1–6–59. Cl. 16.
Williamsburg Restoration, Inc., Williamsburg, Va. 682,248–4, pub. 5–5–59. Cl. 42.
Wyandotte Chemicals Corp., Wyandotte, Mich. 682,215, pub. 5–5–59. Cl. 52.
Wynn, Clarence M., d.b.a. Dri-Powr Co., Azusa, Calif. 682,065, pub. 5–5–59. Cl. 15.
Z & W Mfg. Corp., Wickliffe, Ohio. 682,138, pub. 5–5–59. Cl. 21.
Zion, Miriam, d.b.a. Medical Case History Bureau, New York, N.Y. 682,211, pub. 5–5–59. Cl. 37.
Zonolite Co., Chicago, Ill. 682,058–9, pub. 5–5–59. Cl. 12.
Zweig, Irwin: *See*—
Chase, Samuel.
Zylite Products Co., Inc., New York, N.Y. 575,244, canc. Cl. 26.

U. S. GOVERNMENT PRINTING OFFICE: 0—1959

CONDITION OF PATENT APPLICATIONS AS OF MAY 30, 1959

Total number of pending applications (excluding Designs)	196,790
Total number of pending Design applications	6,927
[illegible]	53,343

PATENTS

NOTICES

Board of Appeals Decisions Rendered in the Month of June 1959

Examiner affirmed	209
Examiner affirmed in part	16
Examiner reversed	24
Total	249

Disclaimers

2,796,593.—*Seymour Offerman*, Great Neck, N.Y. SOCKET FOR A PRINTED CIRCUIT. Patent dated June 18, 1957. Disclaimer filed Mar. 27, 1959, by the Inventor; the assignee, *Industrial Hardware Manufacturing Co., Inc.*, consenting.

Hereby enters this disclaimer to claims 5, 6, 7, and 8 of said patent.

2,855,096.—*Howard L. Jameson*, Ferndale, Mich., and *Joseph E. Michesh*, Ashtabula, Ohio. APPARATUS FOR REMOVING CLAY FROM A FOUNDRY SAND SPECIMEN. Patent dated Oct. 7, 1958. Disclaimer filed June 12, 1959, by the assignee, *Harry W. Dietert Company*.

Hereby enters this disclaimer to claim 1 of said patent.

Disclaimer-Dedications

2,745,998.—*George McPherson, Jr.*, Columbus, Ohio. FREQUENCY CONTROL SYSTEMS. Patent dated May 15, 1956. Disclaimer and dedication filed June 25, 1959, by the assignee, *Drilling Research, Inc.*

Hereby disclaims and dedicates to the public the entire term of said patent.

2,795,397.—*Henry E. Hull* and *Paul G. Perry*, Columbus, Ohio. ELECTRICAL TRANSMISSION LINES. Patent dated June 11, 1957. Disclaimer and dedication filed June 25, 1959, by the assignee, *Drilling Research, Inc.*

Hereby disclaims and dedicates to the public the entire term of said patent.

2,858,108.—*Boyd A. Wise*, *Donald E. Cooper*, and *Robert L. Thompson*, Columbus, Ohio. WELL DRILLING SYSTEM. Patent dated Oct. 28, 1958. Disclaimer and dedication filed June 25, 1959, by the assignee, *Drilling Research, Inc.*

Hereby disclaims and dedicates to the public the entire term of said patent.

New Applications Received During May 1959

Patents	6,777
Designs	415
Plant Patents	15
Reissues	25
Total	7,232

Issues

Patents	1,292	No. 2,896,206 to No. 2,897,499, incl.
Designs	51	No. 185,729 to No. 185,779, incl.
Reissues	6	No. 24,672 to No. 24,677, incl.
Total	1,349	

CONDITION OF PATENT APPLICATIONS AS OF MAY 30, 1959

Total number of pending applications (excluding Designs)	198,790
Total number of pending Design applications	6,927
Total number of applications awaiting action (excluding Designs)	83,843
Total number of Design applications awaiting action	1,790
Date of oldest new application	May 27, 1958
Date of oldest amended application	Apr. 9, 1958

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 21, 26, 42, 46, 50, 52, 53, 60, 62, 64.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	18, 26, 37, 41, 42, 44, 46, 51, 54, 60.
(III) YUNG KWAI, R., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 24, 26, 27, 32, 61, 81, 83.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 22, 24, 36, 38, 52, 69.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 30, 32, 34, 40, 52, 56.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 6, 10, 13, 32, 33, 35, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 28, 30, 31, 49, 55, 57.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 96.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
1. (VI) GOLDBERG, A. J., Brakes; Excavating; Planting; Plant Husbandry; Scattering Unloaders; Harrows and Diggers; Plows	9-30-58	9-6-45
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	9-16-58	10-3-56
3. (VII) MARMELSTEIN, N. (WINDHAM, R. K., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Resistances and Rheostats	12-1-58	12-3-58
4. (VI) FALLER, R. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	11-3-58	11-6-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminuters; Fences; Gates; Music; Signals and Indicators; Acoustics	7-24-58	8-20-58
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	11-3-58	11-3-58
7. (IV) GONSALVES, J. R. (ANDERSON, R. G., acting), Optics	10-13-58	10-1-58
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	9-22-58	9-6-58
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	10-27-58	10-27-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	11-3-58	11-3-58
11. (IV) BENHAM, R. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Chaining; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	11-3-58	10-7-58
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Intermittent Clutch and Motor Controls	10-20-58	10-17-58
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	10-24-58	10-13-58
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	7-9-58	6-9-58
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	11-4-58	11-3-58
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	9-15-58	9-15-58
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Association or Folding	12-1-58	12-2-58
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	11-14-58	11-5-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation	11-3-58	10-20-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	10-21-58	10-20-58
21. (III) MADER, R. C., Textiles	11-10-58	11-5-58
22. (VI) PAUL, R. (acting), Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	10-20-58	10-20-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators, Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	8-27-58	4-9-58
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	11-12-58	11-13-58
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	11-4-58	10-31-58
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	11-3-58	10-15-58
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	10-23-58	10-27-58
28. (VI) BRAUNER, R. E., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Clutches or Sockets; Fluid Current Conveyors; Pressure Modulating Relays; Wheel Substitutes	9-2-58	9-15-58
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	11-7-58	11-19-58

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
30. (VII) O'LEARY, E. A., Illuminating Burners; Commutators; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling; Refrigeration; Fluid Sprinkling, Spraying and Diffusing	8-1-55	8-11-55
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Addends, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (eg., Polypropylenes, Polyisobutylenes); Mineral Oils	1-20-59	1-16-59
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Agitation; Fire Extinguishers	11-17-58	11-10-58
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs; Building Structures	10-20-58	10-1-58
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Separating and Assorting Solids (part)	8-20-58	8-19-58
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Sheet Feeding; Severing by Tearing or Breaking	1-6-59	1-6-59
36. (V) EVANS, R. L., Measuring and Testing (part)	7-1-58	7-1-58
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	11-3-58	10-13-58
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	11-17-58	11-4-58
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	12-1-58	11-13-58
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	12-1-58	12-1-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	11-10-58	11-13-58
42. (II) REYNOLDS, E. B., Electric Signaling; Telegraphy (part)	9-15-58	9-15-58
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	11-10-58	11-4-58
44. (II) EVANS, N. H., Directive Radio Systems; Mass Spectrometers; Nuclear Batteries; Nuclear Resonant Devices; Neutron Detecting and Measuring; Radar; Sonar; Torpedoes	8-6-58	8-1-58
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	12-2-58	10-15-58
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e. g., fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	11-4-58	11-4-58
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	11-5-58	11-4-58
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	10-20-58	10-17-58
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass	10-16-58	10-1-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitrile, Acrylate Polymers and Copolymers)	9-29-58	9-10-58
51. (II) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas; Oscillators	10-7-58	10-6-58
52. (V) LE ROY, C. A., Supports and Racks	12-6-58	12-1-58
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or Portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Feed Apparatus; Closure Operators	1-13-59	1-13-59
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications	12-9-58	12-15-58
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	9-15-58	9-5-58
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	10-27-58	10-29-58
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting and Punching	9-3-58	9-4-58
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufacture; Selective Punching	10-30-58	10-27-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	10-1-58	9-23-58
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	10-15-58	10-6-58
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	10-16-58	10-16-58
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Illumination; Photographic Apparatus	10-21-58	10-9-58
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e. g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	11-3-58	11-3-58
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	9-9-58	9-5-58
65. (II) SAX, E. J., Wave Guides; Electric Motors; Conductors; Insulators; Amplifiers	12-1-58	12-3-58
66. (V) LISANN, L., Geometric Instruments; Measuring and Testing (part)	8-24-58	8-25-58
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators; Separating and Assorting Solids (part)	11-3-58	11-3-58
81. (III) MONCURE, J. A., Industrial Arts	3-6-59	3-12-59
82. (III) GRAY, M. A., Household, Personal and Fine Arts	3-11-59	3-13-59
91. BAILEY, J. S., Laminated Fabrics	11-4-58	11-3-58
92. GAUSS, H., Detectors, Miscellaneous Electron Tube Circuits	10-24-58	10-6-58
93. WAHL, R. A., Metal Bending; Web Feeding	10-1-58	10-3-58
94. BERLOWITZ, W., Earth Boring; Gas Separation	11-21-58	10-15-58
95. ANGEL, C. D., Masonry and Concrete Structures; Time-Controlling Apparatus; Packed Rod Joints; Joint Packings	11-3-58	10-21-58
M. E. DIV. A (I) LANHAM, B. E., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part), i. e., Polyethylenes	12-16-58	10-13-58

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during July 1959, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1958*.

Patents ..... Numbers 2,868,989 to 2,891,595, inclusive
Plant Patents ..... Numbers 881 to 895, inclusive

This is an appeal from the decision of the Board of Patent Interferences of the United States Patent Office

and Technical Dictionary" (1947) edited by H. Bennett and published by Chemical Publishing, Inc., Brooklyn,

Receptacles; Packings and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	11-7-58	11-18-58	—

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

BLUESTONE *v.* SCHMERLING

No. 6402. Decided March 16, 1959. Petition for rehearing denied May 15, 1959

[— CCPA —; 265 F.2d 948; 121 USPQ 417]

1. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE COURT—APPLICATION CONSIDERED.

Where appellee's later application directly included in interference contained everything pertinent to the invention in issue which was found in his earlier parent application, as well as some additional matter, and appellant did not deny that, if the earlier application contained a sufficient disclosure, the later one also did, and where appellee took no testimony and relied for priority solely on his earlier application, *Held* that "the disclosure of the later application need not be further considered."

2. WORDS AND PHRASES—"DIELS-ALDER REACTION."

"* * *, the distinguishing feature of the Diels-Alder synthesis does not reside in specific condition of reaction, but in the choice of the ingredients. Accordingly, we find the following statement in the Board's decision to be correct: 'The Diels-Alder concept was in the choice of certain type reactants for addition by conventional means. If the correct type reactants are chosen—the ensuing action is inherently a Diels-Alder reaction.'"

3. APPLICATION — INHERENT DISCLOSURE — INTERFERENCES—RIGHT TO MAKE.

Held that the condensation reaction of vinyl chloride and hexachlorocyclopentadiene disclosed in appellee's earlier application would inherently be "in the Diels-Alder manner."

4. SAME—DISCLOSURE—INTERFERENCES—RIGHT TO MAKE.

"With respect to the final requirement of the count, i.e., that the product of the reaction shall be the equi-molar adduct of the ingredients, it is noted that the application states that operable yields may be obtained by the use of an approximately equimolecular ratio of reactants, but that it is preferred to use a stoichiometric excess of the chloro-olefin component (vinyl chloride) which excess may be from 1.5 to 1 to about 10 to 1, for the reason, inter alia, that the hexachlorocyclopentadiene component will thus be consumed substantially to completion, while the excess of the chloro-olefin which remains after the reaction may be readily removed by distillation. It seems evident that if an excess of the chloro-olefin as low as 1.5 to 1 results in complete reaction of the pentadiene ingredient with a substantial residue of the chloro-olefin, a substantially equi-molar adduct will result."

5. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—EVIDENCE—UNCONTROVERTED STATEMENT BY BOARD OF PATENT INTERFERENCES ACCEPTED.

Where appellant did not question the statement of the Board of Patent Interferences that "Examples of the Diels-Alder reaction shown in organic chemistry texts typically show that there results an equi-molar adduct and accordingly such is assumed unless there is indication otherwise," call for identification of the texts referred to, or challenge the statement in his reasons of appeal, *Held* that the statement would be accepted as correct.

6. APPLICATION — DISCLOSURE — INTERFERENCES—RIGHT TO MAKE.

"While Schmerling's earlier application does not give a specific example of the use of vinyl chloride in a reaction, it does give an example of the reaction of hexachlorocyclopentadiene with 1,3-dichloropropene, and states that such example is 'indicative of typical representative compounds of the present process.' We agree with both Patent Office tribunals that that is a sufficient disclosure to enable one skilled in the art to carry out a similar reaction involving vinyl chloride."

7. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—REASONS OF APPEAL—MATTER BEFORE COURT.

Where the issue of res judicata was not specifically raised by any reason of appeal, *Held* that it is questionable whether that issue was properly before the court.

8. RES JUDICATA — APPLICATION — DISCLOSURE — INTERFERENCES—RIGHT TO MAKE.

Where appellant contended that the insufficiency of the disclosure of appellee's earlier application to support the interference count was res judicata in view of the Examiner's final rejection of claims 1 and 2 thereof as being unduly broad on the ground that only a single compound of the claimed genus was described and the fact that appellee, Schmerling, did not appeal from that rejection, but cancelled the rejected claims, *Held* that "if anything became res judicata by reason of the failure to appeal from the final rejection, it was merely the holding that claims 1 and 2 were too broad," and *Held* that "By failing to appeal from a final rejection an applicant does not necessarily admit the validity of every ground of rejection."

9. SAME—SAME—SAME—SAME—SAME.

"* * *, the count, unlike rejected claims 1 and 2, is not drawn to a compound but to a method, hence would not necessarily require that the product of the method be 'actually described in the application.' Accordingly, Schmerling's failure to appeal claims 1 and 2 does not render the rejection of those claims res judicata on the issue whether the disclosure of his earlier application will support the method claim at issue."

10. APPLICATION—DISCLOSURE—UTILITY.

Appellant also questions the sufficiency of the disclosure in said application as to utility of the adduct which constitutes the product of the claimed method. We agree with the Patent Office tribunals that such disclosure is ample. The application states that the products of the process disclosed are useful as insecticides. As indicated in *Smith* v. *Bousquet*, 27 CCPA 1136, 111 F.2d 157, 45 USPQ 347, such a broad disclosure may not be sufficient in the absence of more specific information as to manner of use, but Schmerling's application furnishes such additional information. Thus, it is explained in the application that the compounds act by contact with the insect; that they may be dissolved in solvents such as a mineral or vegetable oil; that a composition containing from 1 to 5 percent of the active component is normally effective; and that such compositions may be sprayed on the area to be treated. That would appear to be clearly enough information to enable a person skilled in the art to use the compounds effectively.

11. SAME—SAME—SAME.

"Appellant by his arguments and by his reliance on *Smith* v. *Bousquet*, which decision was concerned primarily with actual, rather than constructive, reduction to practice, appears to contend that it was incumbent on Schmerling to prove that the compounds will function as stated in his application. We do not understand that to be the law. In the absence of any apparent reason why the compounds disclosed will not so function, or of any evidence showing that they actually do not, the statements in the application are generally deemed sufficient."

12. INTERFERENCES—PRIORITY—METHOD OF REACTING VINYL CHLORIDE WITH HEXACHLOROCYCLOPENTADIENE.

The decision of the Board of Patent Interferences awarding priority of invention to appellee, senior party, of a single count to a method comprising reacting vinyl chloride with hexachlorocyclopentadiene in a Diels-Alder manner to form their equi-molar adduct is affirmed.

APPEAL from the Patent Office. Interference No. 87,311.

AFFIRMED.

Lee J. Gary, James M. Parker, and *Gary, Desmond & Parker* (*Frank P. Cyr* of counsel) for Bluestone.

Charles M. Thomas and *M. M. Weisman* (*C. J. Giuliani* of counsel) for Schmerling.

Before WORLEY, *Acting Chief Judge*, and RICH and MARTIN, *Associate Judges*

WORLEY, *Acting Chief Judge*, delivered the opinion of the court.

Schmerling may react in a different manner with hexa- compounds act by contact with the insect; that they

This is an appeal from the decision of the Board of Patent Interferences of the United States Patent Office awarding priority of invention of the single count of Interference No. 87,311 to the senior party, Louis Schmerling, appellee here.

Appellant, Bluestone, filed his application December 22, 1952. Schmerling's application No. 419,627, directly included in the interference, was filed March 29, 1954, but he was given the benefit of his copending application No. 100,756, filed June 22, 1949, and was thus made the senior party. Bluestone, in his preliminary statement, alleged no date of invention as early as the filing date of the earlier application of Schmerling, and was accordingly ordered to show cause why judgment should not be entered against him. In response, Bluestone contended that neither Schmerling application contained a sufficient disclosure to support the subject matter of the count, nor a sufficient showing of utility of the compound produced by the process of the count. Each of those questions had been seasonably raised by Bluestone and decided adversely to him by the Primary Examiner.

The Board agreed with the Examiner and held that each of the Schmerling applications was sufficient to disclose both the claimed method and utility of the resulting compound. While the correctness of each of those holdings is challenged here, [1] it is clear the later application contains everything pertinent to the invention in issue which is found in the earlier one, as well as some additional matter, and it does not appear to be denied by Bluestone that, if the earlier application contains a sufficient disclosure, the later one also does. In view of that fact, and of the further fact that Schmerling took no testimony and relies for priority solely on his earlier application, the disclosure of the later application need not be further considered. If the earlier application contains a sufficient disclosure to support the count, the decision of the Board must be affirmed; otherwise it must be reversed. No question has been raised as to the sufficiency of the Bluestone application, hence the disclosure of that application need not be specifically considered.

The count reads:

> The method which comprises reacting vinyl chloride with hexachlorocyclopentadiene in a Diels-Alder manner to form their equi-molar adduct.

It will be seen that the count comprises three essential features; namely, (1) the use of the specified materials as ingredients, (2) reaction of the ingredients in a specified manner and, (3) the production of an equi-molar adduct, i.e. one in which the ingredients are present in amounts proportional to their molecular weights.

The earlier Schmerling application discloses the condensation reaction of hexachlorocyclopentadiene with any one of a wide variety of chloro-substituted olefins, and states that "The preferred chloro-olefin utilisable in the present condensation reaction on the basis of yield of product obtained therefrom and the relative ease of preparation is vinyl chloride." We interpret that language as an unmistakable disclosure of the use of the materials recited by the count as reaction ingredients.

The only limitation in the count as to the nature of the reaction is that it takes place "in a Diels-Alder manner." As to that manner, the "Concise Chemical and Technical Dictionary" (1947) edited by H. Bennett and published by Chemical Publishing, Inc., Brooklyn, N.Y., contains the following definition:

> Diels-Alder synthesis (diene synthesis). Reaction between a compound containing a conjugated double bond and a compound containing an activated double bond, e.g. butadiene and maleic anhydride.

As indicated by the definition, [2] the distinguishing feature of the Diels-Alder synthesis does not reside in specific condition of reaction, but in the choice of the ingredients. Accordingly, we find the following statement in the Board's decision to be correct:

> The Diels-Alder concept was in the choice of certain type reactants for addition by conventional means. If the correct type reactants are chosen—the ensuing action is inherently a Diels-Alder reaction.

That vinyl chloride and hexachlorocyclopentadiene are reactants of the proper type is evident from the fact that the count calls for them as taking part in a Diels-Alder reaction, and from the further fact that vinyl chloride contains an activated double bond and hexachlorocyclopentadiene a conjugated double bond. [3] It follows that the condensation reaction of those materials, which is disclosed by Schmerling's earlier application, would inherently be "in the Diels-Alder manner."

[4] With respect to the final requirement of the count, i.e., that the product of the reaction shall be the equi-molar adduct of the ingredients, it is noted that the application states that operable yields may be obtained by the use of an approximately equimolecular ratio of the reactants, but that it is preferred to use a stoichiometric excess of the chloro-olefin component (vinyl chloride) which excess may be from 1.5 to 1 to about 10 to 1, for the reason, inter alia, that the hexachlorocyclopentadiene component will thus be consumed substantially to completion, while the excess of the chloro-olefin which remains after the reaction may be readily removed by distillation. It seems evident that if an excess of the chloro-olefin as low as 1.5 to 1 results in complete reaction of the pentadiene ingredient with a substantial residue of the chloro-olefin, a substantially equi-molar adduct will result. Moreover, [5] it was stated by the Board that

> Examples of the Diels-Alder reaction shown in organic chemistry texts typically show that there results an equi-molar adduct and accordingly such is assumed unless there is indication otherwise.

We do not find where appellant questioned that statement or called for identification of the texts referred to, nor is the statement challenged in his reasons of appeal. Accordingly we accept it as correct, and agree with the Board that an equi-molar adduct is inherent in the process disclosed by the earlier Schmerling application.

[6] While Schmerling's earlier application does not give a specific example of the use of vinyl chloride in a reaction, it does give an example of the reaction of hexachlorocyclopentadiene with 1,3-dichloropropene, and states that such example is "indicative of typical representative compounds of the present process." We agree with both Patent Office tribunals that that is a sufficient disclosure to enable one skilled in the art to carry out a similar reaction involving vinyl chloride.

Appellant asserts that merely bringing the specified reactants together by condensation does not inherently or inevitably cause them to react in a Diels-Alder manner. In support of that proposition he states the record shows that some of the olefins mentioned by

Claim 7 is illustrative of the claims on appeal and

points out that the Board experienced "* * * consid-

raised by any reason of appeal, *Held* that it is questionable whether that issue was properly before the court.

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WORLEY, *Acting Chief Judge*, delivered the opinion of the court.

Schmerling may react in a different manner with hexachlorocyclopentadiene and that in some cases care must be taken to avoid polymerization. However, there is nothing to show that such difficulties are encountered in reacting the specific materials recited by the count, or that any particular precautions are necessary to avoid them. On the contrary, appellant's application, after giving an example using those materials, states that "The specific process shown in the foregoing example may be varied with respect to conditions utilised," and suggests a number of possible variations. Nothing is said as to the possibility of polymerization, or of obtaining a product other than the desired adduct.

As above indicated, we are of the opinion the disclosure of the earlier Schmerling application teaches that an equi-molar adduct is to be obtained, and we find nothing to justify a conclusion differing from that of the tribunals below, i.e., that the manner of obtaining such a product by reacting the ingredients involved here would be apparent to a person skilled in the art on the basis of the application disclosure.

[7] [8] Appellant further contends that the insufficiency of the Schmerling disclosure to support the count is res judicata in view of the Examiner's final rejection of claims 1 and 2 of the earlier application as being unduly broad on the ground that "Only a single compound of the claimed genus is actually described in the specification, namely, that characterised in the passage beginning on the last line of page 11," and that Schmerling did not appeal from that rejection, but cancelled the rejected claims. As we interpret the evidence of record, the compound the Examiner stated to be the only one actually described is not the adduct of the instant count.

It is questionable whether the issue of res judicata is properly before this court since it was not specifically raised by any reason of appeal. However, if anything became res judicata by reason of the failure to appeal from the final rejection, it was merely the holding that claims 1 and 2 were too broad. By failing to appeal from a final rejection an applicant does not necessarily admit the validity of every ground of rejection.

Moreover, [9] the count, unlike rejected claims 1 and 2, is not drawn to a compound but to a method, hence would not necessarily require that the product of the method be "actually described in the application." Accordingly, Schmerling's failure to appeal claims 1 and 2 does not render the rejection of those claims res judicata on the issue whether the disclosure of his earlier application will support the method claim at issue.

[10] Appellant also questions the sufficiency of the disclosure in said application as to utility of the adduct which constitutes the product of the claimed method. We agree with the Patent Office tribunals that such disclosure is ample. The application states that the products of the process disclosed are useful as insecticides. As indicated in *Smith* v. *Bousquet*, 27 CCPA 1136, 111 F.2d 157, 45 USPQ 347, such a broad disclosure may not be sufficient in the absence of more specific information as to manner of use, but Schmerling's application furnishes such additional information. Thus, it is explained in the application that the compounds act by contact with the insect; that they may be dissolved in solvents such as a mineral or vegetable oil; that a composition containing from 1 to 5 percent of the active component is normally effective; and that such compositions may be sprayed on the area to be treated. That would appear to be clearly enough information to enable a person skilled in the art to use the compounds effectively.

[11] Appellant by his arguments and by his reliance on *Smith* v. *Bousquet*, which decision was concerned primarily with actual, rather than constructive, reduction to practice, appears to contend that it was incumbent on Schmerling to prove that the compounds will function as stated in his application. We do not understand that to be the law. In the absence of any apparent reason why the compounds disclosed will not so function, or of any evidence showing that they actually do not, the statements in the application are generally deemed sufficient. *In re Chilowsky*, 43 CCPA 775, 229 F.2d 457, 108 USPQ 321.

[12] We have given careful consideration to the various arguments advanced by appellant but find nothing which would justify us in reaching a conclusion differing from that of the Board.

The decision is affirmed.

AFFIRMED.

U.S. Court of Customs and Patent Appeals

IN RE FLEISSNER

No. 6401. Decided February 11, 1959

[— CCPA —; 264 F.2d 897; 121 USPQ 270]

1. PATENTABILITY—INVENTION—OMISSION OF ELEMENT.
   "'It is ordinarily true that the omission of an element and its function is uninventive.' * * * However, as a corollary thereto, it may be unobvious to omit an element while retaining its function."
2. APPEAL TO THE U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE COURT—REJECTION NOT OF RECORD.
   Where there was no rejection of the claims on appeal as failing to particularly point out and distinctly claim the alleged invention, but rather only a rejection predicated on a British patent as an anticipation, *Held*, "To reject these claims as indefinite, we would be compelled to raise a ground of rejection not of record, and thus act beyond our statutory authority."
3. PATENTABILITY — PARTICULAR SUBJECT MATTER — DRUM DRYING MACHINE.
   Certain claims to a "Sieve Drum Drying Machine" *Held* patentable over the cited prior art.

APPEAL from the Patent Office. Serial No. 274,104.

REVERSED.

Richard B. Babcock, Jr., and *Watson, Cole, Grindle & Watson* for Fleissner.

Clarence W. Moore (*S. Wm. Cochran* of counsel) for the Commissioner of Patents.

Before WORLEY, *Acting Chief Judge*, and RICH, MARTIN, and JOHNSON (retired), *Associate Judges*

MARTIN, *J.*, delivered the opinion of the court.

This appeal is from the decision of the Board of Appeals of the United States Patent Office affirming the Examiner's rejection of claims 7–10 of appellant's application for patent for improvements in a "Sieve Drum Drying Machine." Counsel for appellant withdrew the appeal as to claim 10 at the oral argument and the appeal accordingly is dismissed as to that claim.

appellant's fans draws the drying air through the

U.S. Court of Customs and Patent Appeals

Claim 7 is illustrative of the claims on appeal and reads as follows:

7. A drying machine for drying fibre material, fabrics and the like, comprising a drying chamber, two groups of sieve drums arranged the one above the other and within said drying chamber to cause a layer of the material to be dried to pass from a drum of one group to a drum of the other group, an air heating device arranged within said drying chamber, means to conduct drying air through said heating device for heating the air, and from there through the material to be dried and the drums from the outside of the drums into the interior, and means to cause the drying air to pass from the heating device through the said layer of the material to be dried on the one group of drums peripherally into and out of the drums through the jackets of said drums into their interior and from there through the layer of the material to be dried on the other group of drums into their interior and finally from there axially to the heating device to be reheated.

The appealed claims are directed to an apparatus for drying fibrous material comprising an enclosed drying chamber having two groups of rotatably mounted perforated drums, one group above the other, with the respective members of said groups arranged in staggered relationship. A web of the material to be dried is interwoven between the upper and lower drums, passing alternately over the perforated peripheral surfaces of members of each of said groups of drums. Means are provided dividing the drying chamber into upper and lower sections, each section containing one set of the hollow drums. Each member of the lower group contains an axially mounted fan which causes air to pass over an external heater element, through the web of drying material on the upper drums and radially into the interior thereof, thence outwardly, axially through an appropriate duct, or radially through the perforated lower portions of said drums, to the lower section of the drying chamber. The fans then draw the air radially through the drying material and perforations on the lower drums into their interior, and axially recirculate the air to the heater element. It is noted that the drying air passes through the web material twice before being reheated and recycled.

The sole reference relied on is:

British Patent, 336,540, Oct. 16, 1930.

The British patent relates to a multiple drum drier of the same general type as that disclosed herein, comprising an enclosed drying chamber in which are contained upper and lower groups of rotatable staggered sieve drums. The material to be dried is passed in web form around alternate upper and lower drums through the chamber. Each drum contains an axially mounted fan which radially draws air into the drum interior through the material to be dried and recirculates the air axially to the next adjacent drum in each respective group. Heater elements adjacent each group of drums reheat the drying air as it passes in series flow. The patent discloses that the drying air is

* * * distributed, as uniformly as possible, in the drying chamber * * *. This is an important feature inasmuch as the drums must be uniformly charged with air and eddies and transverse currents of air in the chamber must be avoided.

The Board of Appeals affirmed the Examiner's rejection of claims 7–9 as fully met by the British patent.

Counsel for the Patent Office concedes that the device disclosed "* * * differs structurally from the reference drier in the manner asserted * * *" by appellant, but contends that the claims on appeal do not define that distinction structurally. The Solicitor points out that the Board experienced "* * * considerable difficulty in applying the terminology of these claims either to the application disclosure or the reference disclosure particularly with regard to the path of circulation of drying air between the heater and drying drums." The Board then came to the conclusion that "to the extent that such terminology understandably amplifies the structure positively recited, we consider these claims to apply to the reference disclosure in the same sense as to the application disclosure." The sole issue before us, therefore, is whether the claims on appeal define a patentable structural distinction over the British patent.

We do not agree with the Board that patentable distinction has not been drawn between the recited apparatus of claim 7 and the reference drier, especially when the functional limitations of that claim are neither directly set forth nor reasonably suggested by the prior art of record. The basic modes of operation of the devices are distinguishable in that applicant discloses a chamber wherein drying air flows in series from the upper to the lower group of drying drums, whereas the chamber of the reference patent is so constructed that the air circulates independently within the upper and lower groups of drums.

Turning now to the claims on appeal, claim 7 defines a machine comprising "a drying chamber, two groups of sieve drums * * *, an air heating device * * *, means to conduct drying air * * *," suitably arranged in a particular manner to facilitate circulation of the air through each drum. These elements find response in the British patent. However, the claim continues:

* * * means to cause the drying air to pass from the heating device through * * * the material * * * on the *one group of drums* * * * and from there through the * * * material * * * on the *other group* of drums * * *.

Those means are disclosed to include "* * * portions of the upper drums neighbouring the lower section * * * of the chamber * * * without covering sheets * * *" so located that:

One portion of the drying air may enter the lower section of the chamber U directly over the respective segments of the upper drums.

Furthermore, axial ducts are provided in the upper drums which cause air to pass therefrom to the lower drums.

In contrast thereto, it is noted that, in addition to the portion of the British patent previously quoted, claim 8 of that reference recites that:

* * * the air * * * is * * * distributed as uniformly as possible, substantially one half above the upper series of drums and the other half underneath the lower series of drums, into a chamber, after having passed heating bodies, whereby the suction surfaces of the drum are uniformly supplied with air and *eddies and transverse movements of the air in the chamber are prevented.* [Emphasis added.]

Furthermore, the patentee makes specific provisions to prevent air flow from the upper to the lower series of drums, including covering means blocking the uncovered portions of the upper drums.

[1] "It is ordinarily true that the omission of an element and its function is uninventive." *In re Perrine*, 27 CCPA 1127, 111 F.2d 177, 45 USPQ 316. However, as a corollary thereto, it may be unobvious to omit an element while retaining its function. *In re Anthony et al.*, 32 CCPA 868, 147 F.2d 695, 64 USPQ 553. In the instant case, the omission of covering means creating independent air flow in each group of drums accomplishes the omission of fans from one group of drums *without* omission of the function of those fans. Furthermore, the air pressure differential produced by

tion. Thus, it is explained in the application that the claim.

appellant's fans draws the drying air through the moist fibrous material twice before being reheated, a manner of operation altogether foreign to the teachings of the reference patent. The pertinent claim recitation in this connection is:

> * * * means to cause the drying air to pass from the heating device through *material* to be dried on *one* group of drums *peripherally into* and *out of* the *drums* through the *jackets* of *said* drums into their interior * * * and from there through the layer of *material* to be dried on the other group of *drums* into their interior and finally from there *axially* to the heating device to be reheated. [Emphasis added.]

It will be noted that the air flows into and out of the one (upper) group of drums peripherally through their jackets. The air then flows through the material on the other (lower) group of drums into their interior, such passage necessarily being through the periphery of those drums. The use of the word "*axially*" with reference to the outflow of air from the "other group of drums," taken in conjunction with the recitation pertaining to air passage "peripherally into and out of the [upper group of] drums * * *" accentuates the distinction between the means by which the air flows from the first group and the means by which it flows from the second group.

However, the Patent Office Solicitor contends that the recitation of "means to cause * * * air to pass * * * peripherally into and *out of the drums* * * * *into their interior* * * *" [Emphasis ours] would appear to find no response in appellant's drier. Counsel argues that it is an obvious impossibility for air to circulate in the underscored manner and that no means can be found to accomplish such function. [2] There was, however, no rejection of the claims on appeal as failing to particularly point out and distinctly claim the alleged invention, but rather only a rejection predicated on the British patent as an anticipation. To reject these claims as indefinite, we would be compelled to raise a ground of rejection not of record, and thus act beyond our statutory authority. *In re Heitzer*, 38 CCPA 1124, 189 F.2d 971, 90 USPQ 92. Nevertheless, it would not be amiss for appellant to clarify the claim in certain particulars.

Moreover, the words "into their interior" can only be reasonably interpreted to modify the air passage "peripherally into * * * the drums * * *" and not to relate to air flow from one group of drums to the other. That the air passes through "* * * the jackets of said drums into their interior * * *," in no way detracts from the recitation of "means * * * to cause * * * air to pass * * * peripherally into and out of the [said] drums * * *" to the other group of drums.

[3] Since the British patent contains no disclosure of the last mentioned means or its equivalents, and since we find that that means, when construed in the light of appellant's specification, produces a new mode of operation productive of results unexpected from a consideration of the teachings of the prior art, we shall reverse the rejection of claim 7. Since claims 8 and 9 depend from claim 7, we believe, for the reasons set out above, that the rejection of those claims should also be reversed.

REVERSED.

WORLEY, *J.* (dissenting):

In my opinion the record supports the decision appealed from. I would affirm.

U.S. Court of Customs and Patent Appeals

PINK LADY CORPORATION *v.* L. N. RENAULT & SONS, INC.

No. 6438. Decided April 22, 1959

[— CCPA —; 265 F.2d 951; 121 USPQ 465]

1. TRADEMARKS—OPPOSITION—BURDEN OF PROVING LIKELIHOOD OF CONFUSION.

"* * * we gather that the Assistant Commissioner's decision is predicated upon the premise that opposer had the burden of proving by evidence in addition to its registration its claim of likelihood of confusion among purchasers. While we agree that an opposer has the burden of proving likelihood of confusion, this burden does not necessarily require the submission of evidence other than the registration."

2. SAME—CONFUSING SIMILARITY—WORDS AND SYMBOLS IDENTIFIED THEREBY.

"* * * the marks are similar, even though opposer uses only the words 'PINK LADY' and applicant, besides these words, includes a lady dressed in Victorian attire. It is well settled that words and the symbols identified thereby will be given the same significance in determining the likelihood of confusion between two marks. * * * Accordingly, the marks in issue are so similar as to lead to confusion of prospective purchasers, if applied to the same goods."

3. SAME—SAME—GOODS OF SAME "DESCRIPTIVE PROPERTIES."

Held that although the trademark statute no longer requires a finding that the goods of the parties to an opposition proceeding be of the same "descriptive properties," as a prerequisite to a finding of likelihood of confusion, "such a finding is not prohibited by the statute and is pertinent to the issue if it aids the court in determining the likelihood of confusion of prospective purchasers."

4. SAME—CONFUSING SIMILARITY.

In an opposition by the registrant of the word mark "Pink Lady," for fruit juices for food purposes, for packaged grapefruit juices for beverage purposes, and for Texas citrus fruit and canned orange and grapefruit juices for food purposes, against a trademark application seeking to register the mark "Pink Lady" accompanied by the picture of a woman, for wines, *Held* that "There can be no doubt, if opposer's and applicant's products are sold in the same stores, that purchaser confusion is likely, and section 2 of the Trademark Act of 1946 states that no trademark should be registered if it is '* * * *likely, when applied to the goods of the applicant, to cause confusion or mistake or to deceive purchasers* * * *.'"

APPEAL from the Patent Office. Opposition No. 34,312.

REVERSED.

Herbert J. Jacobi for Pink Lady Corporation.

No brief filed and no oral argument on behalf of L. N. Renault & Sons, Inc.

Before WORLEY, *Acting Chief Judge*, and RICH, MARTIN, and JOHNSON (retired), *Associate Judges*

MARTIN, *J.*, delivered the opinion of the court.

This is an appeal from the decision of the Commissioner of Patents, acting through the Assistant Commissioner, affirming the decision of the Examiner of Interferences, and dismissing the opposition brought by appellant, the Pink Lady Corporation, against a trademark application of L. N. Renault & Sons, Inc., seeking to register the mark "PINK LADY" accompanied by the picture of a woman, for wines. Appellee has not made an appearance nor filed a brief. The opposer is the registrant of the word mark "Pink Lady" for "fruit juices for food purposes,"[1] for "packaged grapefruit juices for beverage purposes,"[2] and for "Texas citrus fruit * * * and canned orange and grapefruit juices for food purposes."[3]

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[1] Reg. No. 378,760 issued to a predecessor on July 23, 1940.
[2] Reg. No. 381,642 issued to a predecessor on October 1, 1940.
[3] Reg. No. 553,386 issued January 15, 1952.

2,888,688, R. B. Mack, Jacketed conical blender, filed June 2.

2,718,234, E. J. Blumberg, Hygroscopic air escape valve, filed

The record itself contains nothing but the pleadings, applicant's mark, one of its labels and several of opposer's registrations, together with its label. Under these circumstances, it is incumbent upon this court to determine the degree of protection which the law affords the registrant.

The sole issue presented is, as stated by the Assistant Commissioner, "* * * whether or not purchasers familiar with opposer's 'PINK LADY' citrus fruits and juices are likely, upon seeing 'PINK LADY' wine, to associate the latter with the former and to attribute common source to the products."

The Assistant Commissioner stated that:

> There is nothing in the record which suggests that purchasers would be likely to associate wine with citrus fruits and juices, or to assume that such products marked "PINK LADY" came from the same producer.
>
> The record fails to show any facts which would support a finding that purchasers are likely to be confused between "PINK LADY" citrus fruits and juices and "PINK LADY" wine.

[1] From this statement we gather that the Assistant Commissioner's decision is predicated upon the premise that opposer had the burden of proving by evidence in addition to its registration its claim of likelihood of confusion among purchasers. While we agree that an opposer has the burden of proving likelihood of confusion, this burden does not necessarily require the submission of evidence other than the registration.

There is no question but that the opposer is the prior user and that [2] the marks are similar, even though opposer uses only the words "PINK LADY" and applicant, besides these words, includes a lady dressed in Victorian attire. It is well settled that words and the symbols identified thereby will be given the same significance in determining the likelihood of confusion between two marks. *Weyenberg Shoe Manufacturing Co.* v. *Hood Rubber Co.*, 18 CCPA 1449, 49 F.2d 1046, 9 USPQ 449; *In re Maclin-Zimmer-McGill Tobacco Co., Inc.*, 262 Fed. 635, 49 App. D.C. 181. See also *In re Riverbank Canning Company*, 25 CCPA 1028, 1030, 95 F.2d 327, 37 USPQ 268, and cases there cited. Accordingly, the marks in issue are so similar as to lead to confusion of prospective purchasers, if applied to the same goods.

It does not seem unreasonable to assume that citrus fruit juices and wines are likely to be sold in the same stores over the same counters to the same prospective purchasers. Appellant has cited a number of cases which stand for the proposition that wines and fruit juices are goods of the "same descriptive properties" and might be sold in the same channels of trade.[1] The Assistant Commissioner held that these cases were not controlling, inter alia, because the statute no longer requires a finding that the goods of the parties to an opposition proceeding be of the same "descriptive properties," as a prerequisite to a finding of likelihood of confusion.

[3] Although the "same descriptive properties" requirement has been removed, such a finding is not prohibited by the statute and is pertinent to the issue if it aids the court in determining the likelihood of confusion of prospective purchasers. For, as this court said in *Fred W. Amend Co.* v. *American Character Doll Co.*, 42 CCPA 983, 223 F.2d 277, 106 USPQ 187:

> Under the Trademark Act of 1946 the ultimate test is the likelihood of confusion or mistake or deception of purchasers; the requirement that goods be of the same descriptive properties has been omitted; this does not mean that the similarity or dissimilarity of the descriptive properties of the goods is no longer a factor to be considered; it should be considered in every case of this type since it is logically a factor of considerable importance to be given much weight in reaching the ultimate conclusion as to whether or not there is likelihood of confusion, mistake, or deception of purchasers.

[4] There can be no doubt, if opposer's and applicant's products are sold in the same stores, that purchaser confusion is likely, and section 2 of the Trademark Act of 1946 states that no trademark should be registered if it is "* * * *likely, when applied to the goods of the applicant, to cause confusion or mistake or to deceive purchasers* * * *." [Emphasis added.] (15 U.S.C. 1052.)

In view of the foregoing, we are of the opinion that appellee's mark should not be registered. Therefore, the decision of the Assistant Commissioner is reversed.

REVERSED.

[1] *Reid, Murdock & Co.* v. *Monarch Wine Co., Inc. et al.*, 46 USPQ 278, Com'r. Dec.; *California Fruit Growers Exchange et al.* v. *Geneke et al., d.b.a. Sun-Kist Wine Company*, 55 F. Supp. 490, 61 USPQ 205; see also *Ex parte The Grapette Company, Inc.*, 91 USPQ 63, Com'r. Dec.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,332,896, Louis Napolitan, Hair dressing, filed Mar. 27, 1958, D.C., S.D.N.Y., Doc. 83/395, *M. Louis Hair Design Institute* v. *Ingerid Studio of Hair Design, Ltd. et al.* Order of dismissal for lack of prosecution May 22, 1959.

2,370,435, E. Berg, Hair net, filed Feb. 25, 1958, D.C., N.D. Ill. (Chicago), Doc. 58c306, *Regal Manufacturing Co., Inc. et al.* v. *Wilson & Co., Inc.* Dismissed with prejudice May 20, 1959.

2,806,161, A. H. Hawes, Temporary supports for use in casting concrete floors and similar purposes, filed May 7, 1959, D.C., S.D.N.Y., Doc. 146/51, *Universal Builders Supply, Inc.* v. *Hico Corp. of America.*

2,806,057, N. Straussler, Propulsion devices for amphibious vehicles, filed May 8, 1959, Ct. Cls., Doc. 209/59, *Nicholas Straussler* v. *The United States.*

2,427,961, M. Group and J. Schonholtz, Watch dial construction, filed Nov. 1, 1947, D.C., S.D.N.Y., Doc. 43/787, *Swiss Watch Dial Co., Inc.* v. *International Watch Co., Inc. et al.* Order striking counterclaim, etc., Feb. 13, 1948. Order of dismissal for lack of prosecution May 22, 1959.

2,472,968, J. M. Oldak, Cuff link construction, filed Aug. 22, 1952, D.C., S.D.N.Y., Doc. 78/147, *Nissh Refining Co., Inc.* v. *Avedon Mfg. Corp. et al.* Order of dismissal for lack of prosecution May 22, 1959.

2,810,433, K. M. Tuohy, Contact lens, filed May 18, 1959, D.C., N.D. Calif. (San Francisco), Doc. 38251, *Soleo Laboratories, Inc.* v. *Parsons Optical Laboratories, Inc.* Same, filed same, Doc. 38252, *Soleo Laboratories, Inc.* v. *Kentur Kontact Lens Co., Inc.*

2,881,789, F. M. Pence, Kitchen range, filed May 20, 1959, D.C., S.D. Calif. (Los Angeles), Doc. 473/59-TC, *Norris-Thermador Corp.* v. *General Electric Co., doing business as Hotpoint Co.*

2,882,196, W. Sher, Lamp shades and supporting members therefor, filed Mar. 5, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c367, *Hamilton Industries, Inc.* v. *Sher & Sons, Inc.* Order stating Sher & Sons, Inc. was not owner of the patent at time suit was filed. Dismissed without prejudice May 19, 1959.

[1] Reg. No. 553,386 issued January 15, 1952.

2,622,602, R. B. Mack, Jacketed conical blender, filed June 2, 1955, D.C., S.D.N.Y., Doc. 101/73, *General Machine Co. of New Jersey* v. *Patterson Foundry and Machine Co.* Order of discontinuance May 26, 1959.

2,622,605, R. L. Miller, Weight proportioning means and method, filed May 6, 1959, D.C. Ariz. (Phoenix), Doc. 2057–Phx., *Robert L. Miller* v. *Arizona Sand & Rock Co., Inc.*

2,660,702, Easley & Swayze, Etching; 2,698,194, Hopkins & Easley, same, filed June 22, 1956, D.C. Mass. (Boston), Doc. 53/644–S, *Dow Chemical Co.* v. *Eastern Engravers, Inc.* Stipulation of dismissal without prejudice May 20, 1959.

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2,691,730, E. L. Simmons, Wall and ceiling light transmitting means, filed May 6, 1958, D.C., N.D. Ill. (Chicago), Doc. 59c737, *Elwyn L. Simmons et al.* v. *Luminous Ceilings, Inc.*

2,700,891, Kaufman & Kaufman, Ash tray, filed July 7, 1955, D.C., S.D.N.Y., Doc. 102/24, *Samuel and Adolph Kaufman* v. *Able Wire & Frame Products Corp.* Order of dismissal for lack of prosecution May 26, 1959. Same, filed same, Doc. 102/25, *Samuel and Adolph Kaufman* v. *Le Blume Lamp & Novelty Co., Inc.* Decree as above.

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2,718,224, B. J. Blumberg, Hygroscopic air escape valve, filed Oct. 21, 1955, D.C., E.D.N.Y. (Brooklyn), Doc. 15968, *Benjamin J. Blumberg & ano.* v. *Mortimer Reiss, etc.* Notice of discontinuance May 27, 1959.

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2,731,125, C. Loveless, Combination ventilator and ladder for tanks or the like, filed May 19, 1959, D.C. Kansas (Topeka), Doc. KC–1262, *Smith & Loveless, Inc.* v. *Louis H. Coller et al.*

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2,642,577, W. F. Brannon, Truck side-loader, filed May 8, 1959, D.C., S.D. Calif., Doc. 425/58–Y, *Weitco Engineering Co.* v. *Aluminum Body Corp. et al.*

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2,678,514, Nichols and Carabella, Apparatus for curling plastic yarn, filed May 20, 1959, D.C., S.D.N.Y., Doc. 146/213, *David & David, Inc.* v. *Doll Machinery Manufacturing Co.*

REISSUES

JULY 28, 1959

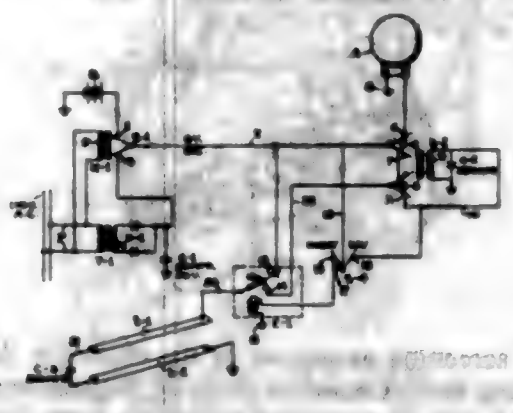
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,672
ALARM SYSTEM

Harry Gerber, Glendale, Calif., assignor to Simplex Industrial Products, Inc., Glendale, Calif., a corporation of California

Original No. 2,771,596, dated November 20, 1956, Serial No. 515,951, June 16, 1955. Application for reissue April 28, 1958, Serial No. 732,414

6 Claims. (Cl. 340—276)



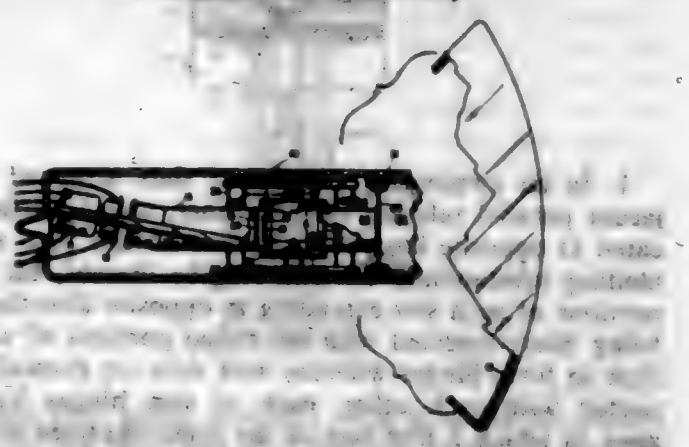
1. An electric alarm system, comprising: a low voltage D.C. line; an alarm device and circuit therefor, said circuit being energizable from said current line; an alarm switch interposed between said circuit and said current line, closing of said switch effecting energization of said alarm device; a relay operative, when energized, to maintain said alarm switch open; a first condenser shunted across the coil of said relay; a second relay switch having a contact electrically connected to said relay coil; an electric vibrator unit having a pair of spaced poles and a vibrator arm movable between the poles to alternately engage the same to establish electrical contact therewith, the first pole being connected to said current line and the second pole being connected to the actuator arm of said relay switch; an electric line connected between said current line and said vibrator unit for energizing the latter; a control switch in said electric line for opening and closing the same; a first metallic strip electrically connected to said vibrator arm; a second metallic strip connected to ground; and a second condenser connected between said strips, closing of said control switch causing current flow to said vibrator unit to energize the same, engagement of said vibrator arm with said first pole causing current flow through said tapes and charging of said second condenser, disengagement of said vibrator arm from said first pole and subsequent engagement of this arm with said second pole effecting discharge of the electric potential from said second condenser and current flow to said first condenser and said relay coil so as to energize said relay and thus maintain said alarm switch open and said relay switch closed, breaking or shorting of either of said metallic strips resulting in opening or shorting the circuit between said condensers and thus rendering said relay inactive to allow closing of said alarm switch and energization of said alarm device.

24,673
ELECTROSTATIC ELECTRON LENS

Kenneth A. Hoagland, High Crest Lake, N.J., assignor to Allen B. Du Mont Laboratories, Inc., Clifton, N.J., a corporation of Delaware

Original No. 2,719,243, dated September 27, 1955, Serial No. 235,016, July 3, 1951. Application for reissue December 7, 1956, Serial No. 627,087

14 Claims. (Cl. 315—16)



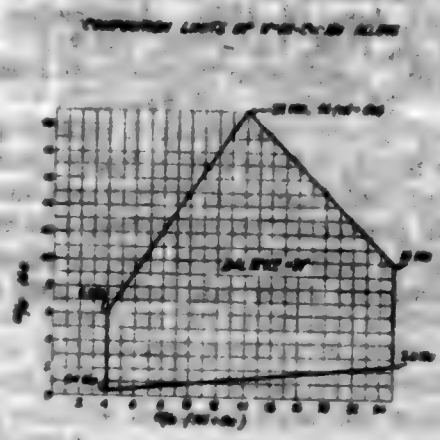
10. In a cathode ray tube having a conductive coating on the walls thereof, and a cathode, an electrostatic lens system comprising, in combination, three electrically insulated coaxial electrode members, said members including an intermediate cylinder and a pair of end cylinders, each said end cylinder having a portion received within said intermediate cylinder, a direct electrical connection between said end cylinders, means to electrically connect one of said end cylinders to the coating whereby a potential applied to said coating is present at both said end cylinders, and means to supply a lower potential to said intermediate cylinder to establish an electrostatic field between said intermediate cylinder and each said end cylinder.

24,674
HIGH-STRENGTH HIGH-DENSITY TUNGSTEN BASE ALLOYS

Chain-Yi Ang, Indianapolis, Ind., assignor to P. R. Mallory & Co., Inc., Indianapolis, Ind., a corporation of Delaware

Original No. 2,843,921, dated July 22, 1958, Serial No. 594,039, June 26, 1956. Application for reissue December 23, 1958, Serial No. 782,613

5 Claims. (Cl. 29—182)



1. A sintered high-density alloy prepared by pressing and sintering particles of the constituents having an aver-

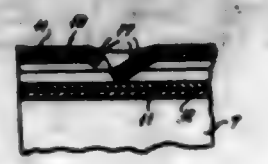
age size between 2 and 6 microns, said alloy consisting essentially of at least 65% by weight of tungsten, with nickel and copper in such amounts that their combined weight constitutes 4% to 25% of the weight of the composition and their weight ratio is between 0.5 and 2.5, and molybdenum in an amount from [0.4] *0.1* to 1.5 times the combined weight of the nickel and copper.

24,675
AWNINGS

Frank J. Zarnowski, Rutherford, N.J., assignor to Orchard Brothers Incorporated, a corporation of New Jersey

Original No. 2,812,813, dated November 12, 1957, Serial No. 426,373, April 29, 1954. Application for reissue May 26, 1958, Serial No. 737,989

9 Claims. (Cl. 160—235)



1. In an awning, a plurality of slats arranged in adjacent parallel relation to each other, coiled portions located at opposite longitudinal edges of said slats and extending substantially the full lengths thereof, the coiled portions of each slat extending in opposite directions and being interconnected with the coiled portions of adjacent slats to form hinges whereby said slats are pivotally connected with each other, each of said hinges having a zone in which a first one of the interconnected coil portions is disposed within and in face-to-face contact with the other of the interconnected coil portions, said first one of the interconnected coil portions having an opening therein in said zone and intermediate its ends, said first portion being bent inwardly toward the axis of the hinge adjacent opposite sides of said opening to form two detents extending lengthwise of the hinge in opposite directions and terminating at said opening, and the other of said interconnected coil portions having an opening and two detents conforming in position, size and shape to said opening and said two detents in said first portion, whereby the detents of said first portion and of said other portion are disposed substantially in face-to-face contact to prevent longitudinal sliding movement of said interconnected portions relative to each other.

24,676
RAKING DEVICE HAVING A RAKE WHEEL BEARING CRANK EXTENDING IN FORWARD DIRECTION

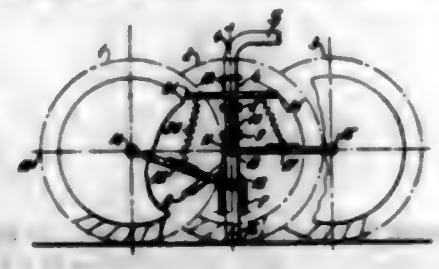
Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a Dutch company

Original No. 2,816,414, dated December 17, 1957, Serial No. 362,637, June 18, 1953. Application for reissue December 16, 1958, Serial No. 780,913

Claims priority, application Netherlands June 24, 1952

28 Claims. (Cl. 56—377)

1. A raking device comprising a mobile ground-supported frame having a front end, a freely rotatable raking wheel adjacent said front end, a first axle in said wheel, a second axle connected on said front end and substantially parallel to said first axle, and a coupling device extending forwardly from said second axle and having connection with said first axle to enable a pivotal movement of said raking wheel whereby said raking wheel is



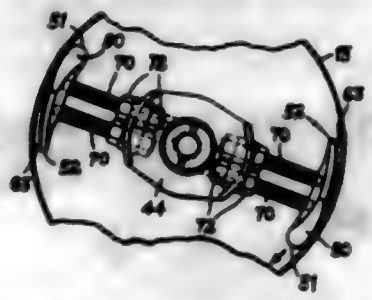
enabled to adapt itself to the ground and substance lying thereupon.

24,677
PAPER MACHINERY

James H. Martindale, Middletown, Ohio, assignor to The Black-Clawson Company, Hamilton, Ohio, a corporation of Ohio

Original No. 2,835,173, dated May 20, 1958, Serial No. 491,831, March 3, 1955. Application for reissue December 31, 1958, Serial No. 785,107

15 Claims. (Cl. 210—415)



1. In a screening apparatus of the character described for screening fibrous material in liquid suspensions including a fixed vertically extending cylindrical perforate screen defining supply and discharge chambers respectively on the inner and outer sides thereof and having a rotary hub operable in said supply chamber, the combination of a bar having an airfoil configuration in cross section providing convex leading and trailing edge portions, means for mounting said bar in upwardly extending fixed relation with said hub for rotation therewith with respect to said screen, a portion of the outer surface of said bar adjacent said leading edge portion being cylindrically curved on substantially the same radius as said screen, the remainder of the outer surface of said bar being convexly curved about a shorter radius on a first center located to cause said convex surface to diverge from the rearward projection of said cylindrically curved surface, the inner surface of said bar being concavely curved about a second center located angularly to the rear of said first named center of curvature to impart to the trailing portion of said bar a progressively decreasing thickness, means for fixing said bar on said hub with said cylindrically curved outer surface portion thereof spaced radially inwardly from said screen by a predetermined small distance providing a corresponding small radial clearance therebetween, means for rotating said hub with respect to said screen to create a positive pressure wave along said leading edge of said bar tending to force said material outwardly through said screen and followed by a negative pressure wave between said screen and said trailing edge portion of said bar tending to draw solid particles inwardly from the surface of said screen for downward movement along said trailing edge of said bar, and means forming a discharge outlet at the bottom of said supply chamber for receiving and discharging said rejected solid particles.

2,896,211
THUMB TACK TOOL

an end formed to engage the leads of a component adjacent

alarm switch and energization of said alarm device.

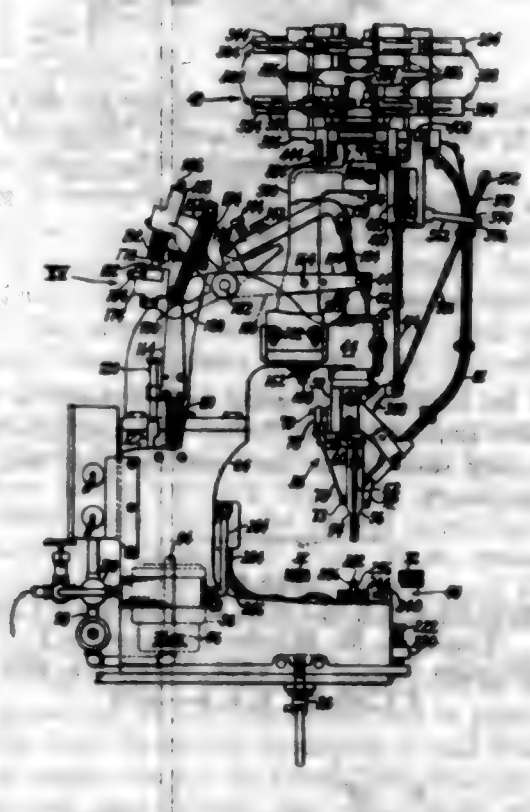
1. A sintered high-density alloy prepared by pressing and sintering particles of the constituents having an aver-

PATENTS

GRANTED JULY 28, 1959

GENERAL AND MECHANICAL

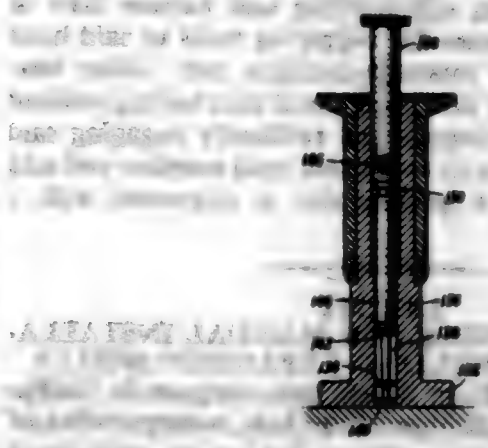
2,896,206
COMPONENT INSERTING MACHINES
Leon D. Alderman, Magnolia, Ralph E. Hobbs, Jr., Salem, and Mieth Mazer, Beverly, Mass., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Application September 5, 1956, Serial No. 608,131
3 Claims. (Cl. 1—2)



1. In a machine for mounting electrical components respectively having leads projecting from corresponding portions of their bodies, a pair of jaws movable into and away from engagement with a work piece on which a component is to be mounted, said jaws being yieldable separable from the component and formed to provide a pocket for receiving and slidably carrying the body of the component and to provide individual channels for guiding its leads, means for feeding a component into the pocket when said jaws are retracted from the work piece, a driver bar operable between said jaws to thrust the leads of a component in said pocket through their respective channels and into the work piece while said jaws are in engagement with the work piece, a surface formed on the driver and arranged thereafter to interact with at least one of said jaws to separate them laterally from that component while the jaws are thus engaging and determining the lead-receiving level of the work piece and while being retracted, and means for thus operating said jaws and driver bar.

2,896,209
STUD DRIVING DEVICE
Martin Hilti, Vaduz, Liechtenstein
Application April 4, 1957, Serial No. 650,701
Claims priority, application Austria May 8, 1953
15 Claims. (Cl. 1—47)

1. A hand-held stud-fastener driving tool for manually driving fasteners into hard material by a series of blows from a hand-held hammer, comprising, in combination, means including a tubular member, a ram slidable within and guided in a straight line path by said tubular member, said ram having an impact receiving end and a fastener striking end, a base flange attached to the lower end of said tubular member and adapted to rest against the material into which the fastener is to be driven and forming a support for said tubular member to prevent tilting movement thereof, said base flange having an opening therein communicating with a striking end of said



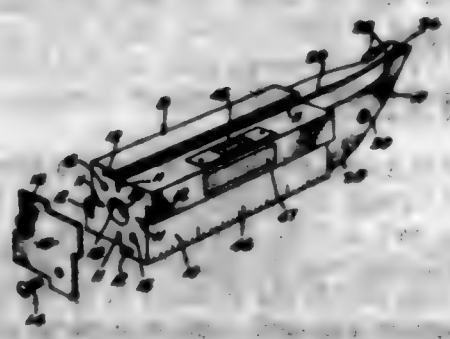
ram, said ram being provided with a recess to receive and guide the head end of a fastener extending through said base flange opening, and second guide means located within said base flange opening and arranged to contact and guide the shank of a fastener during a driving operation, said second guide means including at least one arm supported on said tubular member for lateral motion towards and away from the shank of the fastener.

2,896,210
HAMMER TYPE STAPLERS
Lewis J. Rubin, Plainview, N.Y., assignor to Arrow Fastener Co., Inc., New York, N.Y., a corporation of New York
Application February 27, 1957, Serial No. 642,817
11 Claims. (Cl. 1—49)

1. In a stapler, an elongated casing, a staple magazine in the bottom of the casing, a cover hinged at its front end to the top of the casing, said cover having means to retain a staple strip in the magazine, when said cover is in closed position, a pusher slidably mounted on the staple magazine, a pusher rod slidably engaging the pusher, a member fixed to the rear end of the pusher rod and having means to hold the cover down in closed position on the casing, and a spring latch pivoted to said member, and means on the magazine releasably engaged by said latch to hold said member in cover holding position, in combination with means to prevent the pusher from being entirely removed from the casing when the latch is unlatched.

2,896,215

2,896,211
THUMB TACK TOOL
Frank A. Robertson, Pasadena, Calif.
Application March 14, 1958, Serial No. 721,482
7 Claims. (Cl. 1—49.5)



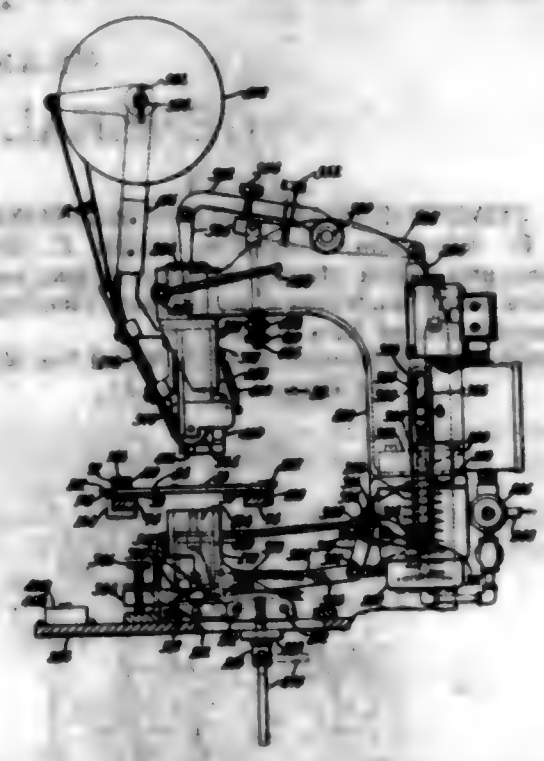
1. A thumb tack dispensing device comprising, a head member including a body portion gradually tapering to form a sharp narrow claw at one end, said body portion having a tack guiding slot splitting said narrow claw at its outer end, and means for supplying tacks to said head member including a rotatable multiple tack holder having plural tack supply slots, said plural slots having resilient retaining means frictionally and resiliently engaging said tack heads, and means to retain said head member and said holder with said tack guiding slot in alignment with a slot in said holder.

2,896,212
CHUCK AND HANDLE FOR MANUAL INSTALLATION OF SELF-DRILLING EXPANSION SHELLS
Frank A. Werstein, Long Beach, Ind., assignor to Phillips Drill Company, Michigan City, Ind., a corporation of Illinois
Application April 21, 1958, Serial No. 729,834
15 Claims. (Cl. 1—49.5)

1. A combined chuck and handle for the manual installation of self-drilling expansion shells, which comprises, a chuck member having an axial bore including a shell-receiving socket opening to the bottom end thereof, an imperforate impact head formed at the end opposite said bottom, first and second transverse passageways through said chuck member having axes intersect the axis of said bore, said second passageway being closest to the bottom end, at least said second passageway physically intersecting said bore and providing communication with said socket for the discharge of cuttings from the interior of the chuck member, an elongate handle member slidingly engaged in said first passageway for holding said chuck during the use thereof, and there being stop means on the one end of the handle to limit the extent of sliding movement thereof in said first passageway.

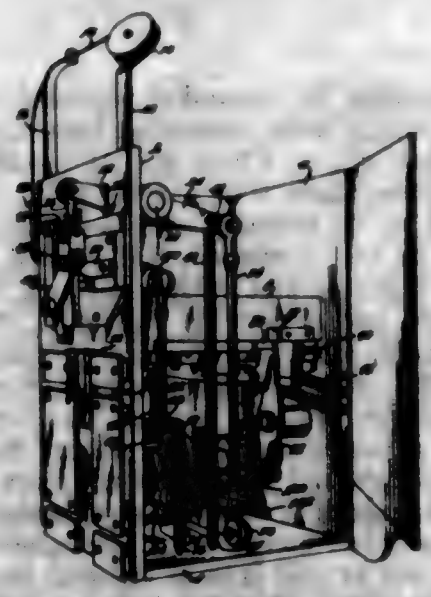
2,896,213
MACHINES FOR CUTTING, FORMING AND FASTENING COMPONENTS
Leon D. Alderman, Manchester, Charles F. Cardinal, Hamilton, Edwin S. Kent, Melrose, and Henry B. Kimball, Marblehead, Mass., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Application September 27, 1954, Serial No. 458,312
33 Claims. (Cl. 1—102)

1. In a machine for cutting, forming, and inserting the leads of lead bearing components, a driver bar having an end formed to engage the leads of a component adjacent to its body portion, outside former tools mounted for relative movement adjacent to the driver bar and respectively having operative connection therewith, lead cutting tools



mounted for relative movement with respect to the outside former tools and said driver bar, and power means for operating said driver bar, cutting tools and former tools in sequence.

2,896,214
WIRE STAPLE HANDLING APPARATUS
Theodore M. Wright, Camden, N.J.
Application August 14, 1956, Serial No. 603,967
9 Claims. (Cl. 1—203)

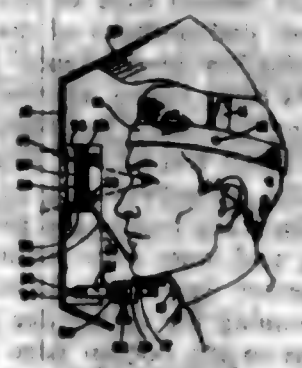


1. A wire staple fastener apparatus comprising means for forming from wire a reversely-bent staple having a loop portion and a pair of legs, means for holding said loop portion and bending the ends of said legs to a plane angularly related to said loop portion, means for confining said legs to maintain them relatively rigid and for driving said ends through a sheet member in proximity to an edge of said sheet member while said legs are so confined, means for thereafter bending said leg ends back toward said loop portion along straight paths snugly up against said sheet member and beyond said sheet member edge, and means for thereafter bending said leg ends over said sheet member edge and over said legs and for clinching said ends onto the surface of said sheet member.

means including a tubular member, a ram slidable with-

latch is unlatched.

2,896,215
PROTECTIVE HOOD
Frank C. Fernandez, Santa Monica, Calif.
Application February 2, 1956, Serial No. 562,968
9 Claims. (Cl. 2—5)



1. In a protective hood including a front frame for supporting eye shield means normally in the line of vision of a wearer, the combination comprising: a pair of brace members pivotally secured to opposite sides of said front frame below said eye shield means and extending rearwardly in substantially parallel relationship for a given distance, said brace members being spaced apart to pass adjacent the opposite interior sides of said protective hood, said brace members then turning in towards each other to form a seat; a chin rest mounted on said seat such that pivotal movement of said brace members can be effected upon movement of said chin rest by a wearer's chin; drum means rotatably supported on opposite sides of said front frame above the pivotal mountings of said brace members, respectively, said drum means being rigidly secured to said eye shield means such that rotation of said drum means rotates said eye shield means out of said line of vision; flexible line means having one end portion wrapped about said drum means and its other end portion connected to said brace members at points spaced rearwardly from the pivotal mounting of said brace members; and means adapted to insure the frictional engagement between said flexible line means and said drum means at all times whereby pivotal movement of said brace members pulls on said flexible line means to rotate said drum means.

2,896,216
PROTECTIVE COVERING FOR BATHING SUIT
Morwell Spewak, Philadelphia, Pa.
Application March 5, 1958, Serial No. 719,355
1 Claim. (Cl. 2—46)

In a protective covering for a bathing suit, an integrally formed seamless waterproof sheath comprising bulbous upper and lower portions integrally extending from a narrowed medial portion to define an hourglass configuration, the upper portion having a peripheral opening adjacent the distal end thereof, the lower portion having a pair of spaced openings adjacent the distal end thereof, and elastic bands peripherally secured about the respective openings whereby said sheath is the sole means for sealing the bathing suit on the body of the wearer.

2,896,217
SLIDE FOR A NECKTIE
Victor Emanuel Cedarstaff, Omaha, Nebr.
Application May 24, 1954, Serial No. 431,703
1 Claim. (Cl. 2—150)

In a slide and compressible necktie, the combination which comprises an elongated compressible tie, a rigid front plate, spaced side portions attached to and extending rearwardly from said front plate, rigid wings attached to and extending inwardly from said side portions and disposed generally in approximate parallelism to and spaced from said front plate, said wings having rigid protrusions extended inwardly from the inner surfaces thereof, the protrusions being spaced from the sides of the slide a distance sufficiently small that a portion of the tie which is snapped over the protrusions into spaces between the protrusions and inner surfaces of the sides is compressed, the said tie portion being disposed between the protrusions to permit free sliding of the tie in the slide until the slide is in position for use such as at the ends of a collar and snapped over the protrusions upon the arrival thereof at an upper position for use to securely and releasably hold the slide in an uppermost position against its tendency to slide down both from gravity and from the pressure of the tie thereon as the tie receives pressure from neck movements, said front plate having upper outer corner portions cut away and the upper ends of said side portions being also cut away to form notches extending below the upper edge of the front plate to receive the tie portions therethrough respectively whereby the tie portions enter the slide substantially more from the sides than from the top when the slide is at the collar whereby the outer edges of the notches receive the pressure of the tie when the slide is in an uppermost position of use and whereby a more attractive appearance is possible, the slide being shaped for free sliding along the tie when the tie is released from said protrusions.

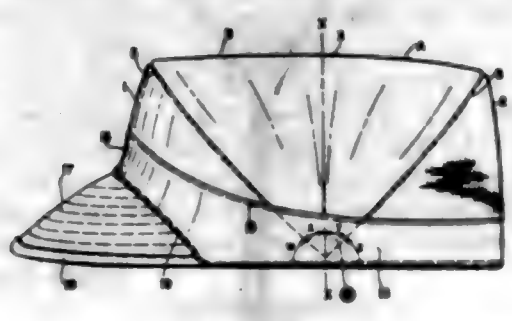
2,896,218
FOLDABLE CAP
Frank K. Lipschutz, Louisville, Ky., assignor to Louisville Cap Corporation, Louisville, Ky., a corporation of Kentucky
Application January 17, 1956, Serial No. 559,576
1 Claim. (Cl. 2—199)

In a collapsible cap of the character described, a substantially flat visor member having a free outer edge and a concave inner edge, a crown including a top panel, front and rear crown panels, and a crown band; said top

of said wall-chamber, and passage means communicating

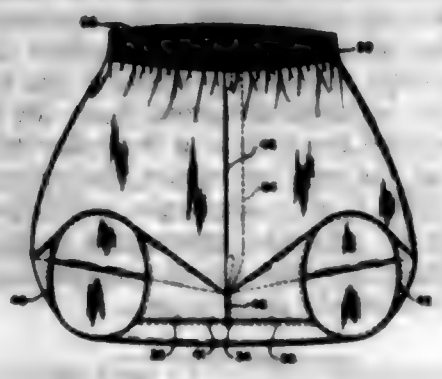
ciated with the respective side wall sections, said floor

panel being of a configuration defined by an ellipse having diametrically opposite pointed portions lying at the intersection of the marginal edges on the longitudinal axis of the ellipse, said top panel being foldable inwardly along a transverse crease line substantially coincident with said longitudinal axis thereby providing front and rear substantially semi-elliptical panel portions, said rear crown panel being of substantially semi-elliptical configuration the upper edge conforming substantially to the arc of curvature of the marginal edge of said rear semi-elliptical panel portion, said rear crown panel being secured along said upper edge to a portion of the marginal edge of said rear semi-elliptical panel portion, said front crown panel being of substantially crescent shape and having a lower concave edge and an upper convex edge



which conforms substantially to the arc of curvature of the marginal edge of said front semi-elliptical panel portion and secured thereto, said pointed portions of said top panel extending downwardly beyond the lower edges of said front and rear crown panels, said crown band extending around the lower periphery of said crown band secured to and depending from said front and rear crown panels adjacent the lower edges thereof, said crown band also secured to said top panel at points inwardly of said pointed portions, said visor member being secured along said concave inner edge to the lower edge of said crown band, said semielliptical portions of the top panel and said front and rear panels together with the subjacent portions of said crown band being foldable together upon the visor in substantially flat parallel relationship.

2,896,219
SHORTS TYPE GARMENT CONSTRUCTION
Joseph Clyne, Bronx, N.Y., assignor to Flemtex, Inc., New York, N.Y., a corporation of New York
Application March 19, 1957, Serial No. 647,875
5 Claims. (Cl. 2—224)

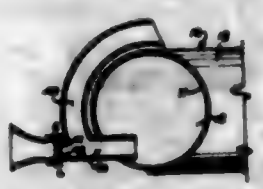


1. A shorts type garment comprising body and leg portions formed from a single generally oblong and symmetrically shaped piece of fabric material which when laid out flat in pattern form has a length approximating twice its width, the longer edges of said piece of material being parallel and constituting respectively the top and bottom of the garment, each end of said piece of fabric material being cut inwardly in a direction generally longitudinally of said piece about two-thirds the distance from the top to the bottom to provide upper and lower end portions separated by said cut, each lower end portion extending outwardly relative to the adjacent upper end portion and having an edge continuing from said cut outwardly and inclined to and meeting the bottom edge of the piece of fabric material, said lower end portions of the piece of fabric material being folded-in toward each other and their inner edge portions being joined together and their outer edge portions being joined to the bottom edge of the piece of fabric material respectively along parts of said bottom edge on the respective sides of its center with a single seam to form the legs of the garment, the seam formed by joining said inner edge portions of the lower end portions together extending forwardly from the seam formed by joining the outer edge portions to said lower end portions to the bottom edge of the piece of fabric to form a crotch seam, whereby a shorts type garment is formed from the single piece of fabric material having a minimum number of seams.

2,896,220
INVISIBLE AUXILIARY TROUSERS AND SKIRT BELT
Leslie W. Kenny, Neenah, Wis.
Application December 15, 1955, Serial No. 553,301
1 Claim. (Cl. 2—319)

An inside garment belt adapted to be worn under an outside garment and its supporting outside belt below said outside belt and in overlapping relationship therewith, comprising a flexible strip of washable material providing a top and bottom edge and inner and outer surfaces, means detachably securing the terminals of the strip together, a lining of friction material secured to the inner surface of said strip at the forward portion of said inside belt, plates secured to the outer surface of said strip at spaced points forward of said lining below the top edge thereof and having a thickness materially greater than said strip to form protuberances under the outside garment and upon which the outside garment belt is adapted to rest, snap fasteners detachably securing said plates to said strips whereby said plates are freely removable from said inside belt.

2,896,221
POOL WITH INFLATABLE WALL
Arthur J. Thomas, Chicago, Ill.
Application January 22, 1957, Serial No. 635,542
6 Claims. (Cl. 4—172)



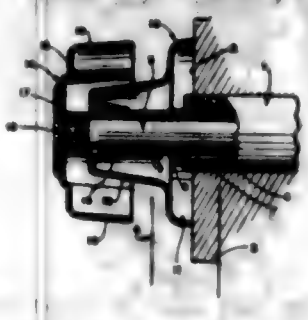
1. For use with an inflatable pool including an inflatable, peripheral wall-chamber, a pool-filling and wall-inflating device comprising a tubular inlet including a portion at one end for receiving pressurized liquid, said tubular inlet extending into said wall chamber and terminating in an outlet opening adjacent the lower portion

with the side walls of the base structure and extending plate means each integrally affixed to one of said cores

jacent the distal end thereof, the lower portion having a pair of spaced openings adjacent the distal end thereof, a concave inner edge, a crown including a top panel, front and rear crown panels, and a crown band; said top

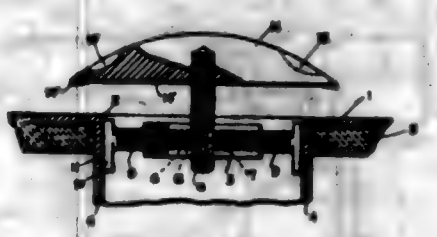
of said wall-chamber, and passage means communicating from the lower portion of said wall chamber, said passage means terminating exteriorly of said wall chamber and above said outlet opening and directed into said pool.

2,896,222
ADJUSTABLE HANDLE AND MOUNTING FLANGE CONSTRUCTION FOR SHOWER VALVES
Leonard W. Freibott, West Covina, Calif., assignor to Crown City Die Casting Co., Pasadena, Calif., a partnership
Application June 9, 1958, Serial No. 740,841
3 Claims. (Cl. 4—191)



1. An adjustable handle and mounting flange construction for valves having a valve stem and a nipple surrounding said stem and protruding therewith from a wall face, said construction comprising: a mounting flange having a relatively flat flared base, an elongated hollow boss of reduced diameter encompassing said nipple, and a re-entrant sleeve joined to the extremity of said boss and directed within said boss toward said base, said sleeve being axially adjustable on said nipple to place said base against said wall face; and a valve stem member having means for attachment to said handle and an elongated skirt axially overlapping said hollow boss said skirt and hollow boss cooperating to conceal said valve stem and nipple throughout a predetermined variation in distance of the end of said stem from said wall face.

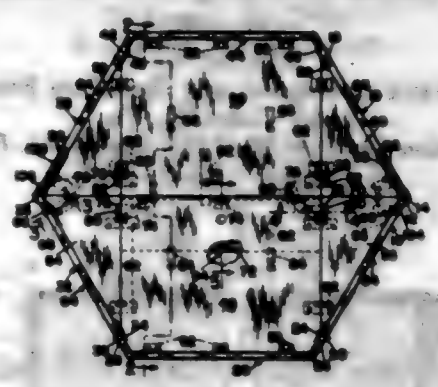
2,896,223
SINK STOPPER
Nicholas Treslo, Chicago, Ill.
Application December 16, 1955, Serial No. 553,537
2 Claims. (Cl. 4—286)



1. A stopper for sink drains comprising a support member and a stopper member carried by the support member, said support member comprising a block, drain gripping members carried by the block and movable inwardly and outwardly by selective rotation of the block, an offset elongated vertical gripping head on the end of each gripping member, and a threaded opening in the block carrying the stopper in threaded engagement therewith for movement toward and away from the support member and the sink drain by rotative movement of the stopper member.

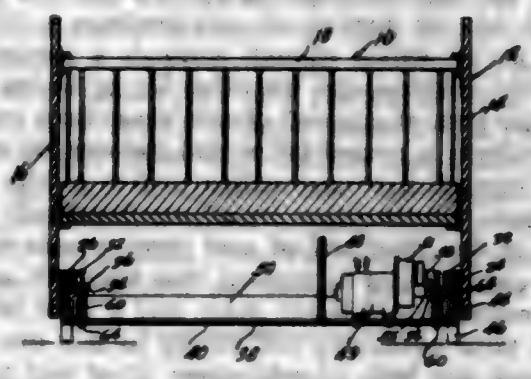
2,896,224
CONVERTIBLE FOLDING PLAY-YARD
Henry J. Landry, Ashburnham, Mass.
Application November 19, 1956, Serial No. 623,191
7 Claims. (Cl. 5—99)

1. A folding play-yard comprising a plurality of side wall sections and a plurality of floor parts pivotally associated with the respective side wall sections, said floor parts being foldable against the side wall sections and said side wall sections being foldable in order to fold the entire play-yard, certain of said side wall sections being arranged in angular relation with respect to each other in



one extended condition of the yard, releasable means to hold said certain side wall sections in aligned relation with the play-yard extended in a selected different shape, said floor parts being movably associated with each other to form a floor for the play-yard in either selected play-yard shape.

2,896,225
CRIB ROCKER
Josephine Tonkin, Winnemucca, Nev.
Application October 19, 1956, Serial No. 617,163
1 Claim. (Cl. 5—109)



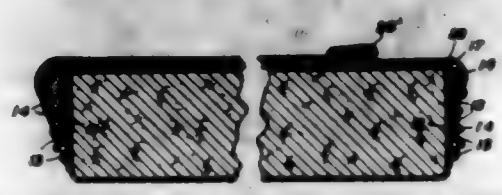
A crib rocker comprising a crib structure including a bottom support on which a mattress is adapted to be placed, upstanding end walls extending above and below the bottom support, rockers provided transversely on the end walls adjacent the lower ends thereof, said rockers having arcuate under surfaces, plate elements on the rockers and extending towards the center of the crib structure, a base structure underlying the crib structure and including a bottom wall and end walls, said end walls having ground engaging means and having flat upper ends on which the arcuate under surfaces of the rockers seat, said base structure also having upstanding side walls forming with the bottom wall and the end walls a compartment, rod elements fixedly upstanding from the bottom wall adjacent the end walls of the crib structure, said plate elements having apertures through which the rod elements slidably extend, said rod elements having stops on their upper ends, coil springs disposed around the rod elements and bearing against the bottom wall and the under side of the plate elements and means mounted on the bottom wall of the base structure and operatively connected to at least one of the rockers for rocking the crib structure on the base structure, said crib structure having side walls which depend from the bottom support and which, in the normal position of the crib structure, are disposed vertically outwardly of the side walls on the base structure and terminate in a plane slightly below the plane in which the upper ends of the side walls of the base structure terminate said side walls of the crib structure being at least coextensive in length

piece of fabric material being cut inwardly in a direction generally longitudinally of said piece about two-

tubular inlet extending into said wall chamber and terminating in an outlet opening adjacent the lower portion

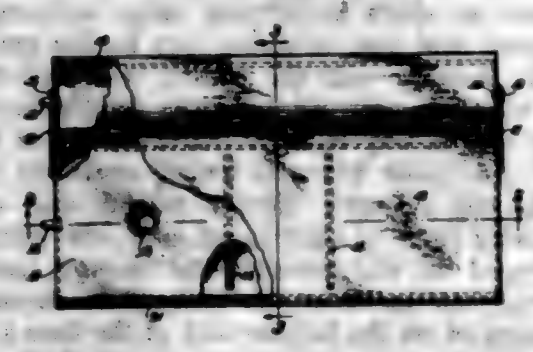
with the side walls of the base structure and extending below the upper edges of the side walls of the base structure so as to hide from view any articles positioned within the compartment of the base structure.

2,896,226
BEDDING
Lucy-Jim Davis Swicegood and Hamilton Frank Swicegood, Danville, Va.
Application October 30, 1956, Serial No. 619,190
5 Claims. (Cl. 5—326)



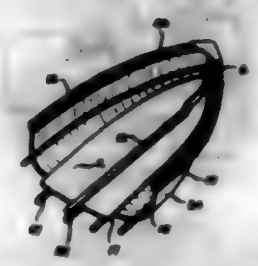
1. In a bed the combination of a mattress having a head, a foot, two sides and a top surface, at least two parallel pockets extending substantially across the head and the foot of said mattress below the upper surface thereof, a lower sheet for said mattress having a hem at each end, said sheet being of a length equal to the distance from the uppermost of said pockets at the foot of the mattress over the top surface of said mattress to the uppermost pocket at the head of the mattress, holes in the hems of said sheet at equal distances from the center of the sheet and spaced apart a distance equal to the length of said pockets on said mattress, a bifurcated rod one leg of which extends through a pocket at the head of the mattress and the other leg of which extends through the hem of one end of said sheet from one to the other said hole, a second bifurcated rod one leg of which extends through a corresponding pocket at the foot of the mattress and the other leg of which extends through the hem at the other end of said sheet, means to secure the free ends of said bifurcated rods together, an upper sheet identical to said lower sheet, and a third bifurcated rod, said third bifurcated rod having its legs one extending through one hem of said upper sheet and the other through a pocket across the foot of said mattress adjacent the said pocket engaged by said second bifurcated rod, and a clip to secure the ends of said third rod.

2,896,227
CONTOUR PILLOW
Maurice J. Reed, Cranford, N.J.
Application August 11, 1954, Serial No. 449,855
1 Claim. (Cl. 5—338)



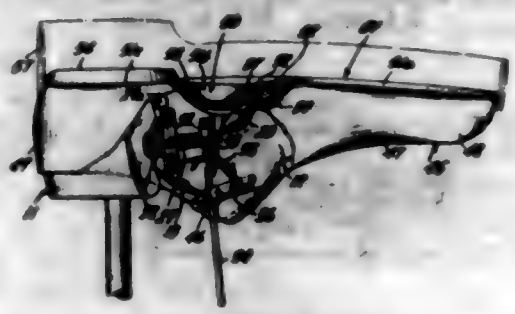
A pillow comprising a first inflatable core of substantially cylindrical design, a second inflatable core of rectangular cross-section, said first core when fully inflated extending to a height above said second core when fully inflated, valve means for each of said cores, means to maintain said cores adjacent to one another when each of said cores is separately supported by a substantially flat surface, said means comprising at least two perforated plate means each integrally affixed to one of said cores and engaging the other of said cores to accurately maintain the space relationship of said cores, one of said plate means resiliently engaging one of said valve means, whereby the degree of inflation and the height of each of said cores can be individually controlled as well as the difference in the heights thereof.

2,896,228
BOAT CONSTRUCTION
Charles Saunders, North Vancouver, British Columbia, Canada
Application November 20, 1956, Serial No. 623,372
3 Claims. (Cl. 9—6)



1. A boat hull comprising a bottom panel, side walls, a stem post and a gunwale, said bottom panel being a wide unit extending the major portion of the length of the hull and having a forward portion, said forward portion having upwardly curved side edges, said stem post being disposed between said upwardly curved side edges, the side walls being formed of narrow strips in side by side relation and secured at their lower extremities to the marginal edges of the bottom panel, keel members extending lengthwise of the lower extremities of the narrow side wall strips, the upper ends of the side wall strips being united to each other by the gunwale.

2,896,229
SHOE ARCH SUPPORT APPARATUS
William H. Doherty, Rego Park, N.Y.
Application September 28, 1956, Serial No. 612,697
7 Claims. (Cl. 12—1)



2. Apparatus for lifting the shank of a shoe comprising a form to support the shoe, said form being cut away adjacent to the inner portion of the shank of the shoe, connecting means on the form extending therefrom and secured to the inner portion of the shank, and means tensioning the connecting means to lift the inner portion of the shoe shank.

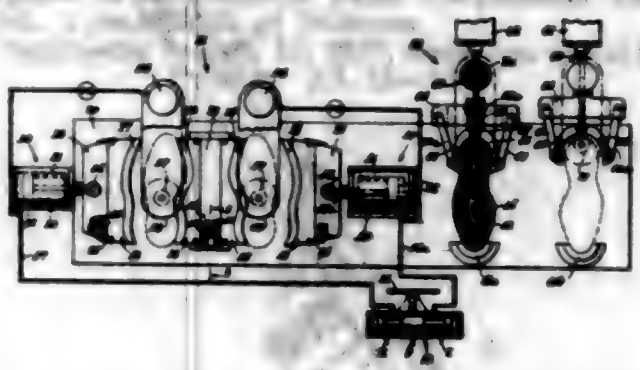
2,896,230
APPARATUS FOR APPLYING WRAPPERS TO SHOE SOLES
Frank A. Pebura, Norwalk, Conn., assignor to Style Footwear Co., Inc., South Norwalk, Conn., a corporation of Connecticut
Application November 27, 1957, Serial No. 699,391
11 Claims. (Cl. 12—1)

1. In a machine for securing an adhesive surface of a wrapper to the side edges of the soles of a pair of shoes,

to be moved into engagement with the opposite ends of

position in which said cleaning surface is lowermost

a base having means thereon for pressing the wrapper against the sides of the soles of a pair of shoes comprising a fixed center member having on each side thereof a resilient contoured pressing face extending for the full length thereof and shaped to engage the inside edges of the soles of a pair of shoes, side members disposed on each side of the center member in spaced parallel relation and having resilient contoured faces to engage the out-



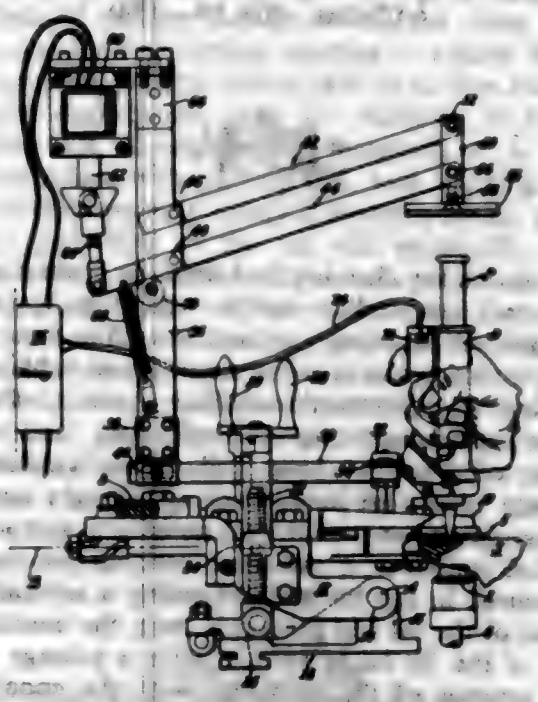
side edges of the soles of said pair of shoes, and pressure applying means connected to each of said side members and operable in a plane perpendicular to said center member to cause the resilient pressing faces to uniformly press the wrapper against the sides of the soles and to maintain said pressure thereon to cause said wrapper to be securely adhered to the side edges of the sole for the full length thereof to insure firm adherence of the wrapper.

2,896,231

FASTENER DRIVING DEVICES

Bernhardt Jorgensen, Marblehead, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey

Application May 15, 1958, Serial No. 735,428
14 Claims. (Cl. 12—12.2)



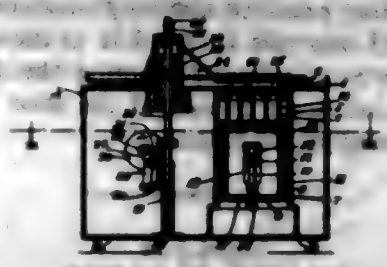
1. A shoemaking machine having, in combination, a shoemaking instrument, a portable tack driver, a striker for delivering an operating stroke to said driver, motor means for operating said striker, and means for controlling the operation of said motor means, said portable driver being movable into various tack driving locations relatively to and independently of said shoemaking instrument and said striker and its operating motor.

2,896,232

MACHINE FOR INTRODUCING RUBBER PINS INTO THROUGH-GOING HOLES IN A LEATHER SOLE FOR FOOT-WEAR

Alois Odermatt, Zurzach, Switzerland

Application June 17, 1957, Serial No. 665,887
Claims priority, application Switzerland February 27, 1957
8 Claims. (Cl. 12—17)



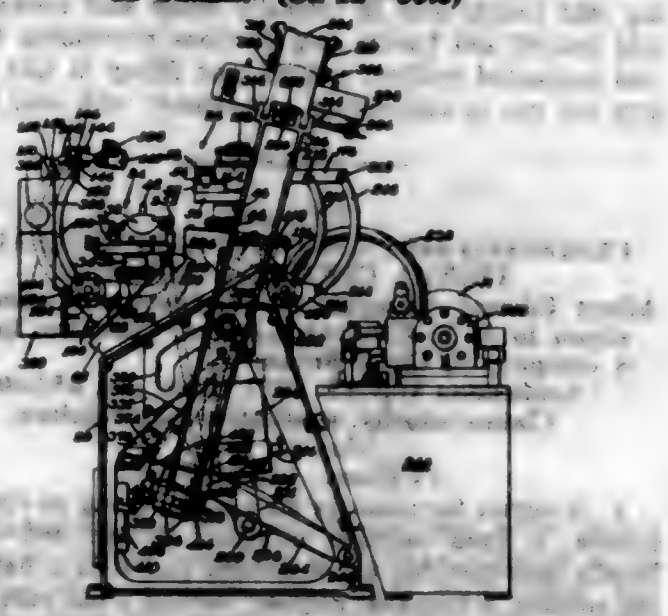
1. A machine for inserting rubber pins into holes extending through a leather shoe sole and having smaller cross-sectional areas than the normal cross-sectional areas of the rubber pins; said machine comprising a supporting plate having an arrangement of holes corresponding to the holes of a leather sole and adapted to have the latter disposed on the supporting plate, a gripping member slidably received in each of said holes of said supporting plate and having a normally flaring, resilient upper end portion which is radially contracted when said upper end portion is disposed within the related hole of said supporting plate, and means operative to move the gripping members upward so that said upper end portion of each gripping member passes upwardly through a hole of a leather sole disposed on said supporting plate to envelop a rubber pin disposed above the sole, and then to move the gripping members downwardly so that initially the rubber pin enveloped by said upper end portion of each gripping member is compressed in cross-section by the radial contraction of said upper end portion and enters into the related hole of the leather sole, whereupon, further downward movement of the gripping member withdraws said upper end portion from the hole of the leather sole and leaves the rubber pin firmly held therein.

2,896,233

TWO-STATION SOLE PRE-SPOTTING AND ATTACHING MACHINES

Charles W. Markham, Jr., Vernon H. Meyer, and William R. Wade, Beverly, Mass., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey

Application November 29, 1957, Serial No. 699,851
12 Claims. (Cl. 12—33.6)



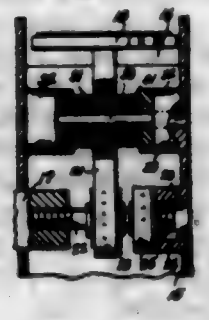
1. In a machine for attaching prefitted outsoles to shoe bottoms, heel and toe end supports for supporting a lasted shoe in inverted position, gages constructed and arranged

trainer, and a screw-threaded cap adapted to be screwed slidable valve member having a cut-away portion on

flat surface, said means comprising at least two perforated a wrapper to the side edges of the soles of a pair of shoes,

to be moved into engagement with the opposite ends of the shoe and of a prefitted and adhesive coated loose sole on the bottom of the shoe to aline the sole in register with the shoe bottom, to remain in engagement therewith throughout a sole attaching cycle of the machine and to be retracted at the end of said cycle, means for thus moving said gages, means for locking the shoe against the toe and support prior to engagement of the gages with the sole and shoe, pressure applying means movable into engagement with the sole to bond it to the shoe bottom, and means for automatically ejecting the finished shoe from the machine upon release of the shoe by the gages and the pressure applying means.

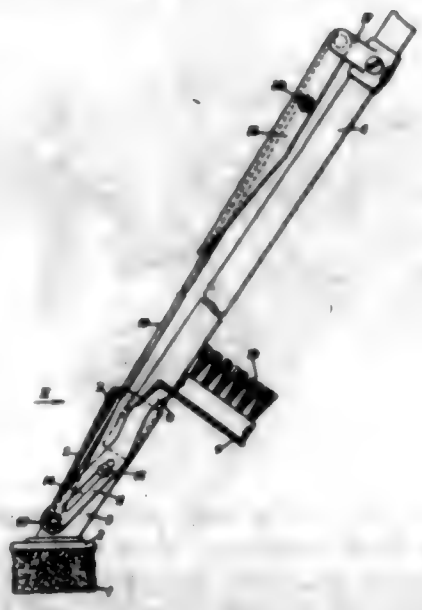
2,896,234
ERASER CLEANER
Fred L. Housefer, Kaysville, Utah
Application October 19, 1956, Serial No. 617,118
2 Claims. (Cl. 15—89)



1. An eraser cleaner of the class described comprising a casing having an eraser cleaning chamber formed therein, said casing having an eraser receiving opening in the upper end thereof, said opening communicating with said cleaning chamber, an eraser cleaning element mounted within said opening and inset within said casing, a supporting arm engaging said cleaning element and extending inwardly of said cleaning chamber, means connected to the lower end of said supporting arm to impart a beating action to said cleaning element through said supporting arm, a journal pin for said supporting arm located above said last mentioned means, laminated resilient mounts encasing said journal pin within said supporting arm and extending laterally of said supporting arm, a rocker arm pivoted to said casing within said cleaning chamber and engaging said laminated resilient mounts in lateral spaced relation to said supporting arm, and bosses carried by said casing and frictionally engaging said rocker arm to laterally brace said rocker arm, said journal pin having end portions protruding beyond said laminated resilient mounts and fitting in said rocker arm but not in connecting engagement with said bosses.

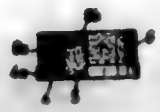
2,896,235
COMBINED MOP AND WRINGER WITH ADDITIONAL CLEANING MEMBER
Albert Edward Clements, South Harrow, England, assignor to A. E. Clements Limited, Cheshunt, England, a company of Great Britain
Application May 15, 1957, Serial No. 659,486
Claims priority, application Great Britain May 25, 1956
3 Claims. (Cl. 15—116)

3. A device for cleaning floors comprising an elongated handle, a fixed member attached to one end of said handle and carrying an absorbent pad with a flat working surface, a movable member having a flat part having a side carrying a member which has a cleaning surface and a reverse side, an operating mechanism for swinging said movable member from a position lying adjacent said handle with said cleaning surface uppermost to a position in which said cleaning surface is lowermost and said reverse side of said movable member lies against said absorbent pad and for moving the said movable member when in contact with said absorbent pad in a direction substantially normal to the plane of the working surface of said absorbent pad, said movable



member being attached to said fixed part by means of a swivel and slide mechanism, said swivel and slide mechanism comprising fixed slots in said fixed member, a pin attached to said movable member and sliding in said fixed slots, a fixed pivot attached to said fixed member and slots in said movable member which slide over said pivot.

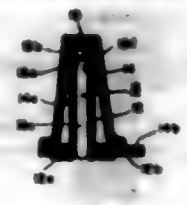
2,896,236
MEANS FOR CLEANING AND DRESSING FOOTWEAR AND THE LIKE
Paul Barthewitz, Bietigheim, Wurttemburg, Germany
Application January 3, 1955, Serial No. 479,614
Claims priority, application Germany January 4, 1954
4 Claims. (Cl. 15—134)



1. A device for cleaning and dressing boots and shoes, leather and leather-like textile materials by applying a cleaning and dressing medium in a fine state of subdivision to the surfaces to be treated and rubbing it on, comprising: a cylindrical container open at the upper end for accommodating the cleaning and dressing medium, a lid in the open end of the container, the outer edge of the lid being bent up at right angles and bearing sealingly on the internal peripheral surface of the cylindrical container, a one-piece resilient porous sponge body secured in the lid and projecting a substantial distance out of the lid and outwards from the container, the surface of the lid being formed with a passage connecting the interior of the container with the sponge body, the under surface of the sponge body being formed with a deep central recess communicating with the passage in the lid and therefore with the interior of the container, and the said recess extending so far into the sponge body that the distance between the inner end of the recess and the external surface of the sponge body is substantially less than the distance between the passage in the lid and the peripheral surface of the sponge body, an external screw thread near the upper edge of the con-

tainer, and a screw-threaded cap adapted to be screwed on to the external thread on the container, and adapted, when so screwed on, to compress the sponge body.

2,896,237
FLEXIBLE CONTAINER
Robert G. Owens and Emanuel Kroll, Dover, Del., assignors to International Latex Corporation, Dover, Del., a corporation of Delaware
Application January 11, 1957, Serial No. 633,616
1 Claim. (Cl. 15—136)



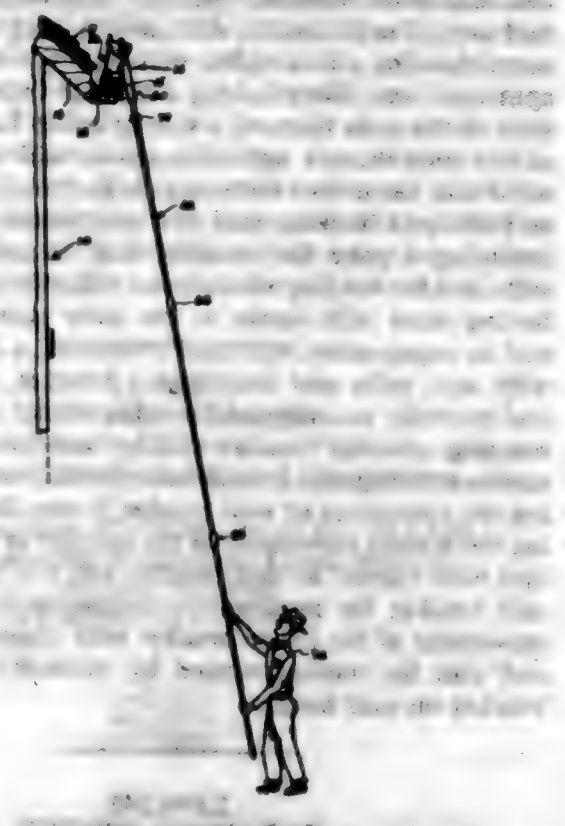
A dispensing container for liquids comprising a hollow body of flexible resilient material; an elongated tip section secured to the top of said body and extending outwardly therefrom, said tip section having a substantially rounded outer end; a liquid dispensing passageway extending longitudinally through said tip section, said passageway being restricted at the outer end thereof to a diameter and for a length thereof such that when said container is inverted liquid will not flow through said restricted passageway except when the hollow body is squeezed, said rounded outer end of said tip section defining a circular recess concentric with the axis of said passageway, said recess having an inwardly directed tapered wall, said tapered wall having substantially larger mean diameter than the diameter of said restricted passageway; a hollow cap adapted to fit over and cover said tip section; a tapered circular plug positioned in the bottom of the closed end of the cap adapted to engage the wall of said tapered recess when said cap is in place, said plug having a taper greater than that of the taper of the wall of said recess so as to have a wedging engagement therewith; an outwardly directed tapered surface positioned on the inner wall of the cap, said tapered surface adapted to engage the outer periphery of the extreme end of said tip section and having a diameter slightly less than the diameter of the outer end at the line of engagement therewith so as to have a wedging action with said tip end, said wedging engagements provide inwardly directed wedging action to clamp the outer periphery of the tip and outwardly directed wedging action to clamp the inner periphery of the tapered opening, each wedging action opposed to the other to form a double annular tip seal; and locking means positioned below said annular seal for securing said cap to said container at the base of said tip section to effect a second seal and simultaneously cause engagement of the tapered surface of said cap against the outer periphery of the end of said tip and the tapered plug against the tapered wall of said recess in a single capping operation.

2,896,238
APPLICATOR
Harold K. Riel, Hollywood, Calif.
Continuation of application Serial No. 489,981, February 23, 1955. This application November 14, 1955, Serial No. 546,698
1 Claim. (Cl. 15—137)

An applicator for a viscous material comprising in combination, an applicator head having a hollow nose with applicator means at its forward end, a reservoir housing secured to the applicator head, an annular floating valve seat slidably mounted in said reservoir housing and having a central passage therethrough along its axis, a slidable valve member having a seat engaging portion engageable with said floating valve seat to close the passage and having a spanner portion rigid with the seat engaging portion and extending from such portion and through the passage along said axis when the portion engages the seat, the spanner portion being of a length greater than the length of the passage, a spider member mounted in the housing, said member having legs engaging the interior wall of the housing and having passages between the legs to permit material to flow past the spider, the spider

being mounted at the end of said spanner portion and the legs of the spider being engageable with the valve seat, and means for reciprocating the valve member and spider member so that when moved in one direction, the valve member will engage the valve seat thereby closing the passage and moving the valve seat in a piston action, and when reciprocated in the other direction, the valve member moves away from the valve seat, opening the passage, and the spider member engages the valve seat and returns it to its original position for subsequent operation.

2,896,239
APPARATUS FOR CLEANING LEAVES FROM HIGH GUTTERS
Herbert Cepelin Bugbird, Summit, N.J.
Application October 21, 1957, Serial No. 691,516
9 Claims. (Cl. 15—144)



1. Apparatus for removing leaves and other debris from roof gutters including a carriage adapted to be supported from a front edge of a roof gutter and movable along the length of the gutter, the carriage having riders adapted to contact with the front edge of the gutter at regions spaced from one another lengthwise of the gutter to provide stability for the carriage in the direction of the length of the gutter, and abutments

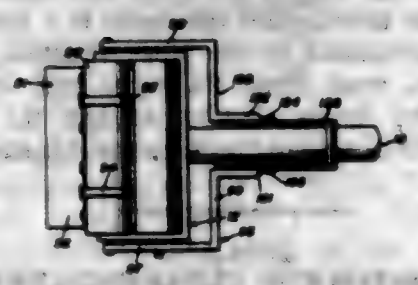
cess and undulated to retain the first element thereon, and the other of said arms at its spaced end extending

ing the strand endwise through the guide concurrently with the up and down sweeps whereby a diagonal pic-

said handle with said cleaning surface uppermost to a an external screw thread near the upper edge of the con-

on the carriage in positions to extend downwardly inside and outside of the front edge of the gutter for limiting displacement of the carriage on the gutter in directions transverse of the direction of movement of the carriage along the gutter, a bearing secured to the carirage and in position to be located in front of the gutter with the longitudinal axis of said bearing extending downwardly when the riders are in contact with the front edge of the gutter, a reach rod extending through the bearing and projecting from both ends thereof, the reach rod being rotatable in the bearing about the longitudinal axis of the reach rod, a handle portion at the lower end of the reach rod, a bracket at the upper end of the reach rod, and a leaf-removing tool connected to the bracket and adapted to extend downwardly into the gutter at an acute angle to the reach rod whereby rotation of the reach rod in the bearing swings the leaf-removing tool through an arc about the reach rod axis.

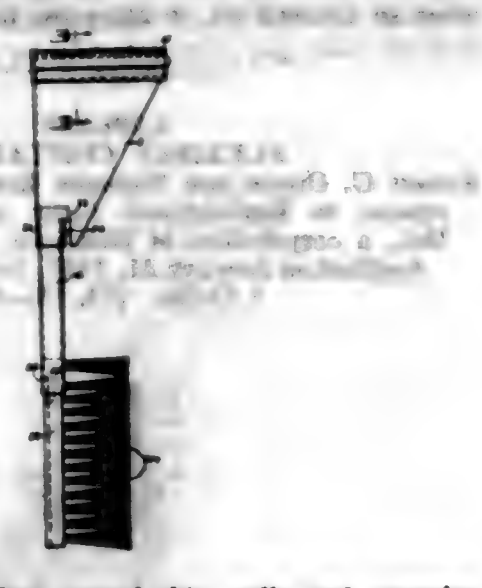
2,896,240
COMBINATION CLEANING DEVICE
Armand J. Racine, Cambridge, Mass., assignor to Louis L. Sheretta, Malden, Middlesex County, and William L. Sheretta, Lynn, Essex County, Mass.
Application November 7, 1955, Serial No. 545,179
1 Claim. (Cl. 15—148)



In a combination appliance, a handle having a bore at one end, a U-shaped frame having sides and a cross member, said cross member secured intermediate its ends to said end of said handle, said sides having a pair of apertures therein, a first roller mounted for rotation in said apertures, said sides having a pair of outwardly opening slots at the ends thereof, a second roller having trunnions at the ends thereof and disposed in said slots, an implement that has means thereon attached to said second roller and clamped between said first and second rollers, means including a yoke for securing said second roller in said slots and for holding said second roller in place, said yoke having sides with hooks at the outer extremities thereof and in engagement with said trunnions, a latch connected with said yoke and including a bracket, means slidably and pivotally securing said bracket to said handle, a spring reacting on said bracket sliding and pivotally securing means and disposed in said bore in said handle and opposing the movement of said bracket in one direction and aiding the pivotal movement of the bracket in the other direction with respect to said handle, and said yoke pivoted to said bracket for motion in response to the spring urged movement of the entire bracket with respect to the handle and also for motion caused by pivotally operating said bracket on said handle.

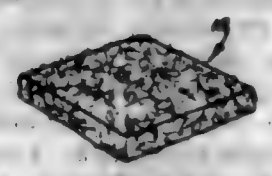
2,896,241
CLEANING DEVICE
Lawrence Cetnam, Detroit, Mich.
Application October 23, 1957, Serial No. 691,907
4 Claims. (Cl. 15—184)

3. In a cleaning device of the class described, comprising: a holding member trough-shaped in cross section and having a pair of spaced apart side walls; a trough-shaped slide member positioned between said side walls and having a pair of oppositely disposed side walls; an inwardly turned flange on the edge of each of said last named side walls; and a tongue punched inwardly



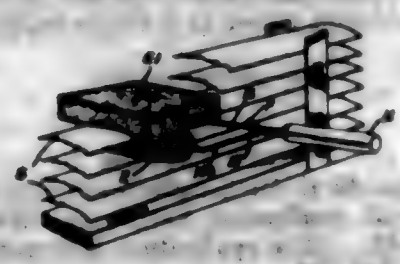
from each of said first named side walls and engaging the flanges of said second named side walls.

2,896,242
CLEANING AND SCOURING PADS
Allen R. Winch, Westfield, N.J., assignor to Personal Products Corporation, a corporation of New Jersey
Application May 11, 1956, Serial No. 584,224
12 Claims. (Cl. 15—209)



10. An article of manufacture comprising a mass of glass fibers having diameters of from about 1 to about 15 microns, said fibers being randomly matted and bonded in the form of a a cleaning and scouring pad containing a solid, inorganic acidic material capable of yielding a pH below 5 in a one percent aqueous solution in an amount of from about 0.05 to about 5 grams per cubic inch of pad, from about 0.05 to about 5 grams of a solid, inorganic water-soluble salt per cubic inch of pad, and from about 0.2 to about 2 grams of a member of the group consisting of higher fatty acids having from 12 to 22 carbon atoms and mixtures thereof per cubic inch of pad.

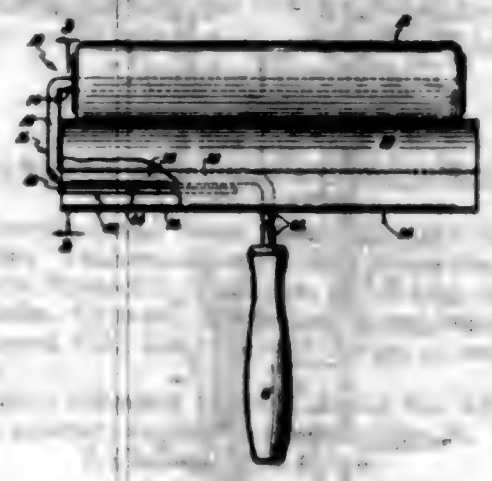
2,896,243
VENETIAN BLIND SLAT-CLEANING DEVICE
Milton H. Schoenfeld, Beverly Hills, and Donald B. Schoenfeld, Los Angeles, Calif.
Application December 31, 1956, Serial No. 631,948
6 Claims. (Cl. 15—244)



1. A device for cleaning the slats of Venetian blinds, including: a first element having a recess therein; a second element having an opening axially therethrough, said elements of a compressible liquid-absorbing material; and a pair of arms secured to each other at one end and spaced from each other at the other end, one of said arms at its spaced end extending into said re-

cess and undulated to retain the first element thereon, and the other of said arms at its spaced end extending through said opening and rotatably supporting the second element.

2,896,244
DRIP AND SPATTER GUARD ATTACHMENT FOR A PAINT ROLLER
Harry W. Creek, Pasadena, Calif.
Application January 29, 1957, Serial No. 636,912
3 Claims. (Cl. 15—248)

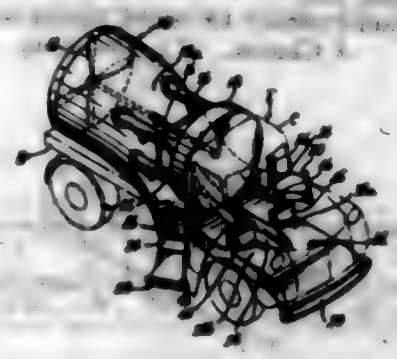


1. A drip and spatter guard attachment for use with a paint roller applicator of the type having an offset handle extending laterally from the roller mid portion and connected to one end of the roller journalling axle by means of a rod segment extending laterally from the end of the handle nearer the roller and parallel to the roller, said guard attachment comprising an elongated resilient sheet material trough member, clip means comprising a reentrant crimp in the bottom of the trough member and defining an outwardly disposed relatively deep groove, the inner end of the groove being of enlarged and rounded cross section to resiliently embrace said rod segment, and a pair of opposed transversely extending indentations in the walls of said groove to receive the handle portion adjacent the rod segment, whereby the guard may be detachably mounted adjacent the roller periphery without danger of accidental pivotal or translational dislodgment.

2,896,245
WINDSHIELD WIPER SYSTEM
Leo Hoppenen, deceased, late of Livingston County, Mich., by Mabel Hoppenen, executrix, Livingston County, Mich.
Application September 11, 1957, Serial No. 683,386
12 Claims. (Cl. 15—253)

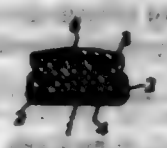
1. A windshield wiper comprising a strand of flexible material arranged horizontally of a vehicle windshield, a shiftable guide means for the strand, means for shifting the guide means through alternately reversible up and down sweeps to cause the strand to traverse the windshield vertically and means for pulling the strand endwise through the guide concurrently with the up and down sweeps whereby a diagonal wiping action is produced.

2,896,246
RUNWAY SWEEPER
Fred Wildt, Fairbanks, Territory of Alaska
Application February 24, 1958, Serial No. 717,081
8 Claims. (Cl. 15—405)



1. Runway sweeper apparatus comprising, in combination, an automotive vehicle adapted to be driven over a runway to be swept, said vehicle having a forwardly situated driver's station and having a frame extending beneath said driver's station and projecting to the rear therefrom, a relatively large plenum duct mounted on said frame extending generally fore and aft thereon and provided with an air inlet in the rear portion thereof, said plenum duct tapering forwardly in vertical width and flaring in horizontal width and having an upper wall which slopes downwardly from a location forward of said inlet substantially to a level below that of said frame, impeller means mounted in said plenum duct at a location forwardly from said inlet for drawing air through said inlet and driving it forwardly in said plenum duct, said impeller means being mounted for driven rotation by a shaft extending generally fore and aft and through said sloping upper duct wall, an impeller drive engine connected to the forward end of said drive shaft and mounted on said frame at a relative forward location, and discharge duct means extending generally forwardly and laterally from a relative forward portion on said plenum duct to conduct air therefrom, said discharge duct means terminating in at least one discharge orifice directed generally laterally and forwardly in relation to said plenum duct at a relative location on the vehicle to blow gravel and other loose materials from the runway during advance of the vehicle thereon.

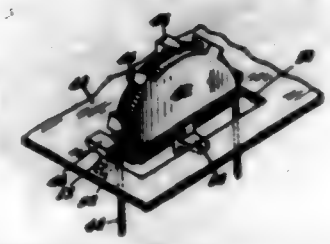
2,896,247
SUPPORT MEMBER
Frederick Robert Sowell, Bochenham, England, assignor to Percy Jones (Twinlock) Limited, Bochenham, England
Application June 22, 1956, Serial No. 593,148
Claims priority, application Great Britain August 29, 1955
4 Claims. (Cl. 16—42)



1. A support for a relatively heavy object intended to be placed upon a polished supporting surface, comprising an elongated substantially U-shaped metal channel member, inwardly bent edges on the side walls of such member, a strip of durable fibrous material fitting snugly within the U-shaped channel member, the inwardly bent edges of the side walls of said channel being embedded

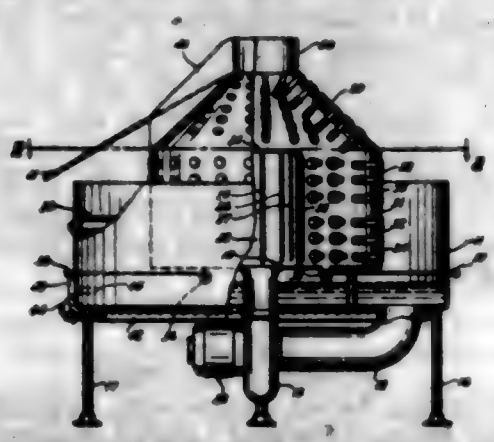
in said strip and extending towards the web portion of the channel member, and apertures in the web of the channel to receive fastening means.

2,896,248
WINDOW
Russell A. Gillespie, Indianapolis, Ind., assignor of one-third to Carl F. Spicklemire, one-third to Edith S. Greer, and one-third to Betty S. Spicklemire, all of Indianapolis, Ind.
Application January 13, 1956, Serial No. 559,035
4 Claims. (Cl. 16—196)



2. A shoe for slidable engagement by a sash-counterbalancing cable in a window structure, said shoe comprising a generally semicircular body portion adapted to be supported from its straight face with its curved face presented upwardly, said shoe having a series of cable-retaining fingers projecting across said curved face alternately from opposite sides of the shoe, and having tips spaced from the body portion of the shoe to permit said cable to be inserted beneath the fingers by movement transversely of the cable.

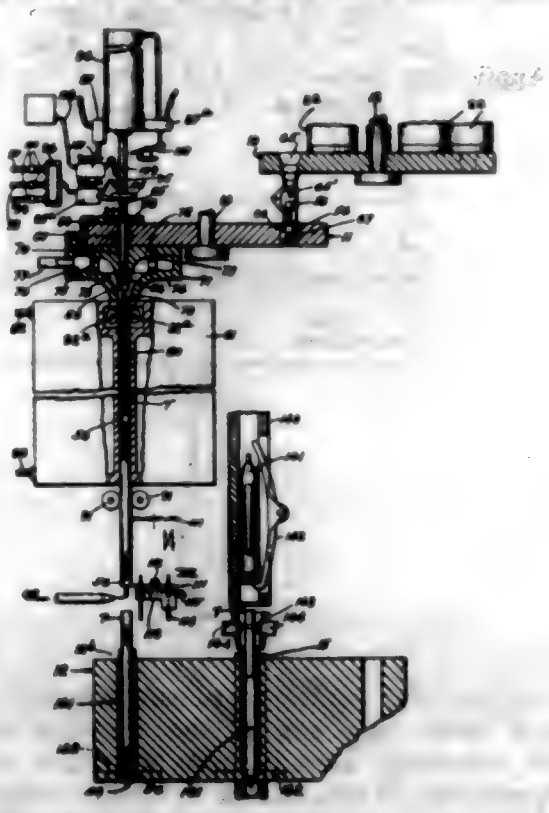
2,896,249
POULTRY PROCESSING EQUIPMENT
Robert Donald Pitts and Frederick C. Covey, Cedar Rapids, Iowa, assignors to Pickwick Company, Cedar Rapids, Iowa, a corporation of Iowa
Application May 13, 1957, Serial No. 658,563
2 Claims. (Cl. 17—45)



1. The method of defeathering poultry comprising immersing said poultry in a large volume of heated liquid, moving said liquid and said poultry directionally in a turbulent state and causing said poultry to be floated and tumbled freely in said liquid, and subjecting said poultry to a stationary scraping action removing the feathers therefrom during the movement thereof.

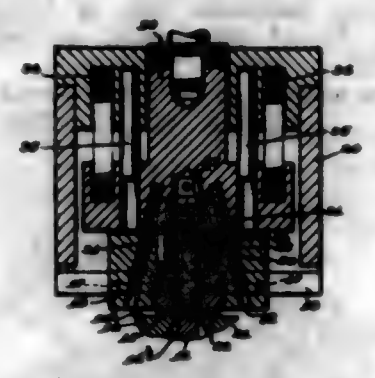
2,896,250
APPARATUS FOR MAKING BALL POINT PENS
Burnie J. Craig, Pasadena, Calif.
Application December 1, 1954, Serial No. 472,415
4 Claims. (Cl. 18—5)

1. An apparatus for making a ball point pen cartridge comprising an extruding member including a central part having a bore therethrough, said bore being adapted to receive a writing point, means about said central part to form an orifice through which material is extruded to form a tube, a plunger movable to engage a point in said bore and to move the point to a location where the point may be engaged by the inner surface of the extruded material as it passes through the orifice so that the point is engaged within the tube, feed members engaging the tube to advance the tube, said plunger having a conduit there-



in, said conduit being open at the lower end of the plunger, a source of ink, a pipe connecting said source of ink and said conduit so that the ink is supplied to the interior of the tube, a valve for said pipe, and means to repeat the operation of forming a tube, inserting a point into the tube, and inserting a supply of ink into the tube to provide an advancing system of cartridges.

2,896,251
MACHINE FOR MOLDING PLASTIC MATERIALS
Orville B. Sherman, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application April 1, 1958, Serial No. 725,755
4 Claims. (Cl. 18—5)



2. In a molding apparatus for the formation of a plastic container and including a neck mold having a cylindrical open-ended molding space, an extruder body having an aperture therein and a concentric body defining an annular extrusion orifice for communication with a body of plastic material, and means supporting said neck mold for reciprocal movement between a first position overlying and spaced from said orifice to a second position contacting said body and registering with said orifice to be filled with plastic material therefrom, movement of the neck mold to said first position from said

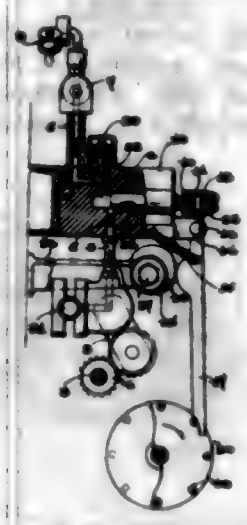
second position accommodating the extrusion of a tubular plastic sleeve integral with plastic material filling said neck mold, the improvement of means to prevent internal flash rings in said sleeve comprising a neck mold core concentric with and extending axially through said neck mold for contact with the body core only of said annular orifice, lost-motion means accommodating movement of said neck mold core relative to said neck mold, and spring means biassing said neck mold core into contact with said body core, said lost-motion means accommodating limited initial movement of said neck mold toward its first position and initial tubular sleeve extrusion while maintaining neck mold core-to-body core contact.

2,896,252

APPARATUS FOR PRODUCING SPECIAL RAYON YARN

Taketo Maruyama and Teino Sakamoto, Otsu-shi, Shiga-ken, Shiro Tamura, Kusatsu-shi, Shiga-ken, Eisaku Kawahara, Yasu-cho, Yasu-gun, Shiga-ken, and Tadahiko Okubo, Otsu-shi, Shiga-ken, Japan, assignors to Toyo Rayon Co., Ltd., Tokyo, Japan, a corporation of Japan

Application February 12, 1957, Serial No. 639,675
Claims priority, application Japan May 16, 1956
2 Claims. (Cl. 18—8)



1. Apparatus for the production of thread of variable denier from a liquid comprising supply means for supplying the liquid under pressure, an extrusion device, coupling means coupling the supply means and the extrusion device and defining a delivery channel therebetween, pressure varying means coupled to the delivery channel between the supply means and the extrusion device for alternately increasing and decreasing the pressure of the liquid therein, and a liquid supply control device coupled to the delivery channel to maintain a supply of the liquid to the extrusion device, despite the operation of the pressure varying means, to maintain the continuity of the thread, the liquid supply control device comprising a valve in said delivery channel for controlling the flow of liquid therethrough and a spring loading said valve and exerting a force thereupon to allow a flow of fluid through the delivery channel with the pressure varying means reducing the pressure therein.

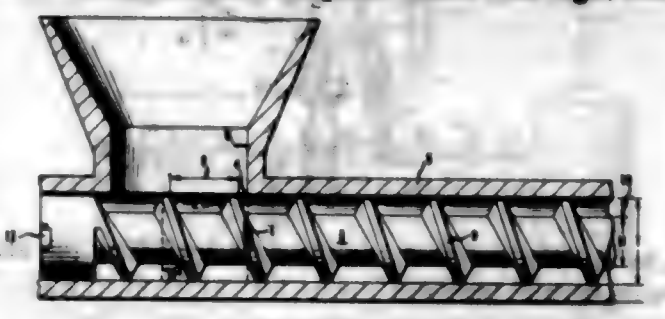
2,896,253

SCREW FOR HANDLING THERMOPLASTIC RESINS

Evert Ary Jan Mol, Fort Wayne, Ind., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application January 17, 1957, Serial No. 634,654
4 Claims. (Cl. 18—12)

1. An apparatus for receiving, transporting, melting, working, and extruding thermoplastic pellets, by means of a screw motion, comprising a screw, a barrel located concentrically around the outside of said screw, and means for rotating said screw with respect to said barrel, a feed hopper attached to a passageway from the outside of said barrel to the inside of said barrel, through which said thermoplastic pellets may be fed to said screw, said screw consisting of a section for transporting and melting said thermoplastic pellets and a section for working and compressing the plastic and forcing it through screen pack and die, the configuration of said screw being characterized in that a portion of each flight of the aforementioned transport section of the screw contains a sole notch contiguous with the point where said flight contacts



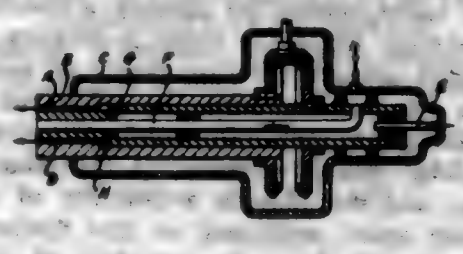
the meeting point of said barrel with the forward edge of said hopper, said notch being generally concave and extending through the entire width of said flight and having dimensions such that, in a radial direction with respect to said screw, the notch has a minimum depth equal to the largest dimension of said thremoplastic pellets and has a maximum depth equal to the depth of flight and, in a direction measured along the outer face of the flight, said notch has a minimum width at its widest point equal to the largest dimension of said thermoplastic pellets and a maximum width of 15% of the circumference of said screw.

2,896,254

APPARATUS FOR THE MANUFACTURE OF THIN ARTIFICIAL EDIBLE SAUSAGE CASINGS

Emil Braun, Weinheim an der Bergstrasse, Germany, assignor to Carl Freudenberg, Kommanditgesellschaft auf Aktien, Weinheim, Germany

Application March 24, 1955, Serial No. 496,584
Claims priority, application Germany, April 14, 1954
3 Claims. (Cl. 18—14)



1. An apparatus for converting finely disintegrated swollen animal skin into artificial edible sausage casings having a wall thickness not substantially exceeding 0.016 mm., comprising a rotatable tubular cylindrical core, a sleeve surrounding said core and rotatable in the opposite direction, said core and sleeve forming between themselves an annular passage having a width not exceeding about 0.22 mm., a tube entering the tubular cavity of said core for feeding a fibrous mass thereinto, passages in the wall of said core connecting the cavity thereof with said annular passage, and means for injecting air into said tubular cavity of said core for inflating tubing formed in said annular passage.

2,896,255

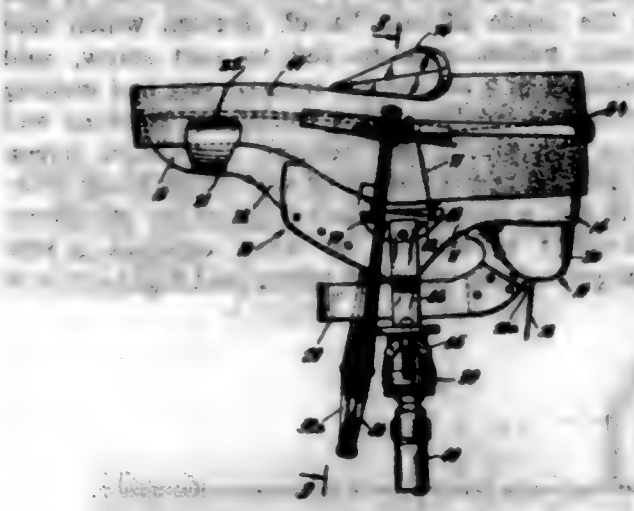
ARCH SUPPORT SHOE BOTTOMING METHODS AND APPARATUS

William H. Doherty, Rego Park, N.Y.

Application July 18, 1955, Serial No. 522,688
12 Claims. (Cl. 18—17)

2. In apparatus for providing an arch supporting bottom on a shoe, means forming a shoe bottom mold on

the shoe, and means secured to the shoe and in contact



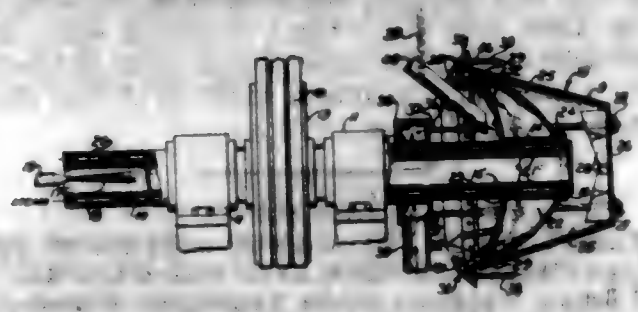
with and acting positively on the arch for lifting the arch above its normal position.

2,896,256

APPARATUS FOR MANUFACTURING MINERAL WOOL AND THE LIKE

Miles S. Firmstone, Pewaukee, Wis., assignor to Seattle Insulation Mfg. Corp., Waukesha, Wis., a corporation of Wisconsin

Application March 6, 1958, Serial No. 719,563
10 Claims. (Cl. 18—2.5)



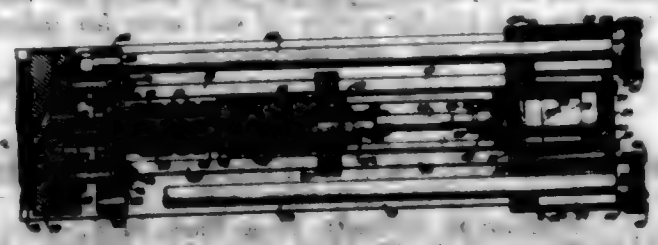
1. In an apparatus for manufacturing mineral wool having a rotor with an external end receiving face and having means for feeding molten material onto said end receiving face, said rotor having an internal receiver for a fiberizing agent, means for feeding a fiberizing agent into said receiver while the rotor is rotating, a hollow ring supported adjacent the periphery of said end receiving face for rotation with the rotor and having a central opening, and means for conducting the fiberizing agent from the internal receiver of the rotor into said hollow ring, said ring having a plurality of outlets for said fiberizing agent positioned so that molten material thrown centrifugally from the periphery of said end receiving face will be fiberized by said fiberizing agent.

2,896,257

INJECTION MOLDING MACHINE

Richard M. Norman, Russell W. Powell, and Kenneth E. Sherer, Richmond, Ind., assignors to National Automatic Tool Company, Inc., Richmond, Ind., a corporation of Indiana

Application November 21, 1955, Serial No. 548,104
10 Claims. (Cl. 18—30)



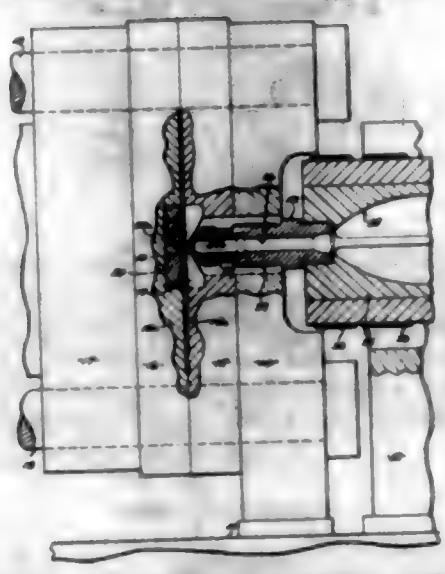
1. A molding machine comprising a frame, a mold carried thereby, first, second and third movable units on said frame, said first movable unit forming with said second movable unit cylinder and plunger injection means and hydraulically operable cylinder and piston injection operation means, said last means including a pressure relief valve to offer hydraulic resistance to relative movement of the cylinder and piston thereof, said second movable unit having a nozzle communicating with said injection means to supply molding material to the mold, said third movable unit forming with said first movable unit cylinder and plunger feed means and hydraulically operable cylinder and piston feed operation means, said third movable unit upon movement thereof relative to said first movable unit effecting such relative movement of the cylinder and piston of said feed operation means against the hydraulic resistance offered by said relief valve, said first movable unit having between said injection means and said feed means a premelting chamber for molding material fed by said feed means to said injection means.

2,896,258

APPARATUS FOR INJECTION MOLDING OF PLASTIC ARTICLES

Ernest P. Moslo, Cleveland, Ohio

Application February 23, 1956, Serial No. 567,364
3 Claims. (Cl. 18—30)



1. Apparatus for injection molding articles of synthetic resin material having a central cylindrical opening, comprising a die having walls enclosing a cavity having the form of the article to be molded, there being openings in said walls registering with the opening to be molded in said article, an injection nozzle adapted to enter said openings in said walls, the outer wall of said nozzle being a snug fit in said wall openings, said nozzle having a hollow center surrounded by a cylindrical wall not substantially over 0.060 inch thick and having a plurality of holes not substantially greater than 0.050 inch in diameter extending generally radially through said cylindrical wall and communicating with said cavity when said nozzle fits in said wall openings, means for injecting flowable synthetic resin material through said nozzle and holes into said cavity, and means for causing withdrawal movement between said nozzle and said die after an article is molded to clear said nozzle from said openings, whereby said nozzle as it is withdrawn from said openings shears said resin material around the periphery of said nozzle leaving no sprue, said hole size being sufficiently small in volume that the resin material left therein is incorporated acceptably in the next article molded in a series.

2,896,259

DENTAL FLASKS

Samuel Harris, Forest Hills, N.Y.

Application November 25, 1957, Serial No. 698,454
3 Claims. (Cl. 18—33)

1. A three member hinged dental flask adapted for forming extensive units of acrylic dentures or a complete

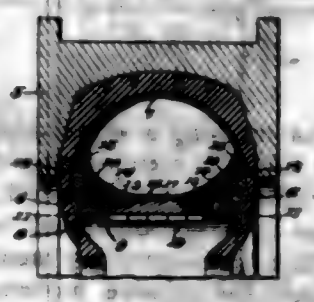
under surface of the sheet as the sheet moves along said

superficially at such surface, subjecting the liquefied sur-

arch bridge comprising a bottom flask member, an upper flask member hinged to one end thereof, a second upper flask member hinged to the other end thereof, a removable platform member fitted into said bottom flask member, and a locking member superposed on said platform, said locking member having spaced, upstanding prongs that project, when the aforesaid three flask members are

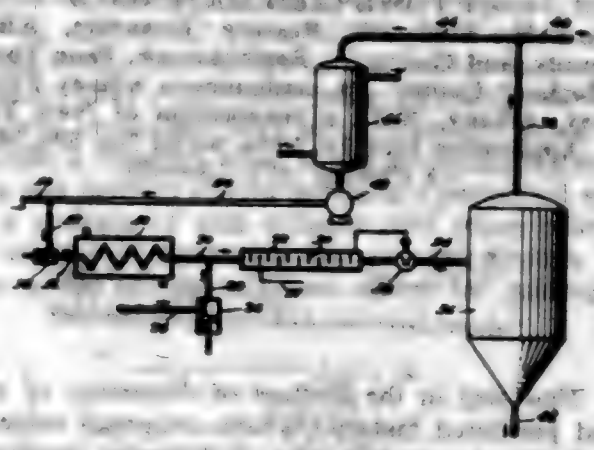
in molding relationship, into the cavities of the upper flask members which are provided to receive investment material so that when the aforesaid flask members are filled with investment material and brought into molding relationship said prongs of the locking member project from the investment material in the bottom flask member and are embedded in the investment material in the upper flask members.

2,896,260
INSIDE CURING RIM
Donald M. MacMillan, Macon, Ga.
Application September 14, 1956, Serial No. 609,926
4 Claims. (Cl. 18—45)



1. An inside curing rim for reception between the side walls of a retreaded or recapped tire casing to receive the inward thrust of the usual inflatable air bag used to hold the casing in a curing mould having inwardly directed side flanges; said rim comprising a circular generally cylindrical substantially rigid body having laterally presented circumferential edges disposed at parallel planes, and two relatively stiff but deformable and resilient rings unitarily connected with said body, said resilient rings surrounding said body at opposite sides of a plane disposed centrally between the aforesaid planes, said rings being of generally wedge shaped cross section and having inner cylindrical peripheral sides tightly surrounding and secured against said body, said rings having laterally facing wide and generally flat outer sides disposed at said edges of said body and adapted to be deformed into contact with the casing side walls upon inflation of the bag, said rings having outer outwardly and laterally curving peripheral sides which extend from the central peripheral portion of said body to said laterally facing sides and meet the latter at acute angles, said outer peripheral sides and said laterally facing sides cooperating in providing said rings with substantially feather edges to lie tightly against the casing side walls said generally wedge shaped rings being dimensioned so that the outer sides thereof will lie opposite the inner extremities of the inwardly directed side flanges of a mould when the curing rim is placed therein with the feather edges outwardly of said mould flange inner extremities and their inner peripheral sides inwardly of said mould flange inner extremities.

2,896,261
METHOD OF COOLING AND GRANULATING PETROLEUM PITCH
Jerry McAfee, Oakmont, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Application December 27, 1954, Serial No. 477,795
3 Claims. (Cl. 18—47.2)



1. A process of solidifying hot liquid petroleum pitch having a softening point above about 275° F. comprising mixing the hot liquid pitch at a temperature of about 500–700° F. with water to form a mixture having a temperature above about 450° F. and below the critical temperature of water, the mixing being performed at an elevated pressure at least high enough to maintain water in the liquid phase at the temperature of the mixture and below about 3100 p.s.i.g., the ratio of water to pitch being high enough that evaporation of the water on flashing at atmospheric pressure will extract sufficient heat to solidify the pitch, agitating the mixture of water and liquid petroleum pitch while at the elevated temperature and pressure to form a substantially uniform dispersion of water and pitch, and flashing the resulting mixture of pitch and water to substantially atmospheric pressure, whereby evaporation of the water cools the pitch to a temperature below its softening point to form solid pitch particles.

2,896,262
PROCESS FOR TRANSVERSELY STRETCHING A THERMOPLASTIC SHEET
Otto Herrmann, Wiesbaden, Germany, assignor to Kalle & Co. Aktiengesellschaft, Wiesbaden-Biebrich, Germany
Application April 5, 1955, Serial No. 499,499
Claims priority, application Germany April 9, 1954
4 Claims. (Cl. 18—48)

1. A process for transversely stretching a thermoplastic sheet which comprises continuously moving said sheet in a horizontal planar path, impinging upwardly directed streams of hot liquid continuously against the

the steps of dejuicing the succulent parts of the plant, feeding the dejuiced fibrous mass into contact with a

cessive drawing and doubling steps, and comprising a sliver drawing and doubling frame composed of a plu-

carried thereby, first, second and third movable units on said frame, said first movable unit forming with said

1. A three [illegible] forming extensive units of acrylic dentures or a complete

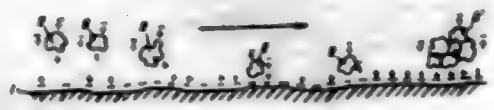
under surface of the sheet as the sheet moves along said path to soften the sheet, and simultaneously stretching said sheet in a direction transverse to the path of movement of said sheet.

2,896,263

METHOD OF CHANGING THE BULK DENSITY OF POWDERED MATERIALS

Edward R. Frederick, Reserve Township, Allegheny County, and George A. Bartholomew, Penn Township, Allegheny County, Pa., assignors to Albany Felt Company, Albany, N.Y., a corporation of New York

Application June 14, 1956, Serial No. 591,300
8 Claims. (Cl. 18—48)



5. That step in the method of dispersion of agglomerated powdered material which comprises subjecting it to agitation in contact with a dielectric medium possessing the inherent capacity to provide an electrostatic charge of a polarity the same as that of the charges that hold the particles together.

2,896,264

METHOD OF MAKING SHAPED ARTICLES OF CRYSTALLINE POLYSTYRENE

Giulio Natta, Milan, and Giovanni Crespi, Busto Arsizio, Italy, assignors to Montecatini Societa Generale per Fiudustria Minoraria e Chimica, Milan, Italy

No Drawing. Application November 5, 1957
Serial No. 694,488
11 Claims. (Cl. 18—55)

1. A method for making shaped articles of crystalline, linear high polymers of styrene from polystyrenes consisting essentially of a mixture of non-crystallizable, atactic polymers, block polymers, and crystallizable, isotactic polymers of styrene, which comprises separating at least the non-crystallizable atactic polymers from the mixture of polystyrenes by extraction with a selective solvent therefor, at a temperature below the melting point of the crystallizable polymers, shaping the residue of such extraction at a temperature above the melting point of the crystallizable, isotactic polymers to obtain a pre-form, annealing the pre-form at a temperature below the melting point to effect crystallization of the crystallizable, isotactic polystyrene, and then finally shaping the annealed pre-form at a temperature below the melting point of the crystalline polystyrene.

2,896,265

METHOD OF MAKING ORAL DENTURES

John Chambers, Sacramento, Calif.

Application September 12, 1955, Serial No. 533,806
4 Claims. (Cl. 18—55.1)

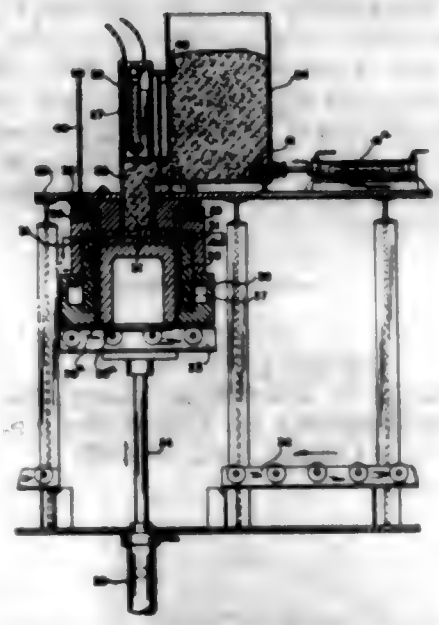
4. In the making of oral dentures, the method of making sheet material for application as veneers to dental cases for forming a denture matrix, comprising the steps of applying heat to a surface of a suitable sized sheet of meltable dental plastic material which liquefies by application of heat and congeals at normal temperatures, said heat being applied until such dental material liquefies superficially at such surface, subjecting the liquefied surface of said material to a directionally undefined flow of liquid thereagainst whereby a surface pattern is fortuitously and irregularly delineated thereon by said liquid flow, and congealing the liquefied material at said superficially liquefied surface and thereby fixing the delineated pattern therein.

2,896,266

APPARATUS FOR PRODUCING A VENEER LINING UPON INNER WALL OF HOT TOPS

Benjamin F. Anthony, Cleveland Heights, Ohio, assignor to Ogiebay Norton Company, Cleveland, Ohio, a corporation of Delaware

Application April 12, 1955, Serial No. 500,914
10 Claims. (Cl. 18—59)



4. Apparatus for molding a veneer upon the inner lining of a tubular hot top comprising a mandrel having sides parallel to the axis of the mandrel, means for supporting a hot top in axial alignment with the axis of the mandrel, the hot top supporting means and the mandrel being mounted for relative movement so that the hot top and mandrel may be relatively moved to telescope the mandrel into said hot top from one end thereof until the mandrel is telescoped within the hot top with said sides disposed in spaced relation to the inner lining of the hot top to define with the hot top a mold cavity corresponding in size and shape to the veneer to be molded, there being passageways formed in the mandrel which communicate with the space between the inner lining of the hot top and the mandrel when the same are in assembled condition, a ring-like member associated with the hot top at said one end and extending inwardly of the hot top substantially into engagement with said mandrel when the mandrel is telescoped therein to close said cavity at said one end of said hot top, said mandrel being withdrawable from said hot top through said member and outwardly of said one end while the ring-like member is maintained in place with respect to said hot top, and pressure means communicating with said passageways in the mandrel for forcing a mobile granular refractory material under pressure through the said passageways in the mandrel to fill substantially the entire space between the mandrel and the lining of the hot top.

2,896,267

FABRICATION OF PRODUCTS FROM *AGAVE LECHUGUILLA*

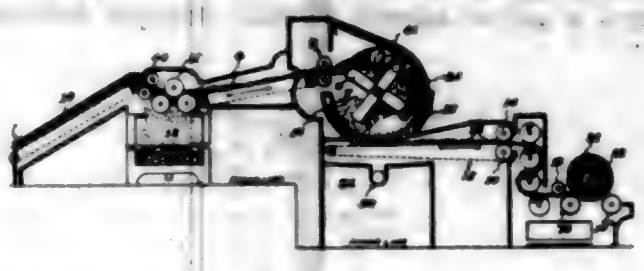
Gustav J. Nord, Asheville, N.C.

Application November 26, 1957, Serial No. 699,133
5 Claims. (Cl. 19—8)

5. A process for extracting the natural products of the *Agave lechuguilla* plant and related species comprising

[illegible] under sufficient pressure to cause said pieces to bow out-

the steps of dejuicing the succulent parts of the plant, feeding the dejuiced fibrous mass into contact with a plurality of rotating hammer mill blades having a diameter of rotation not exceeding about 27 inches at a



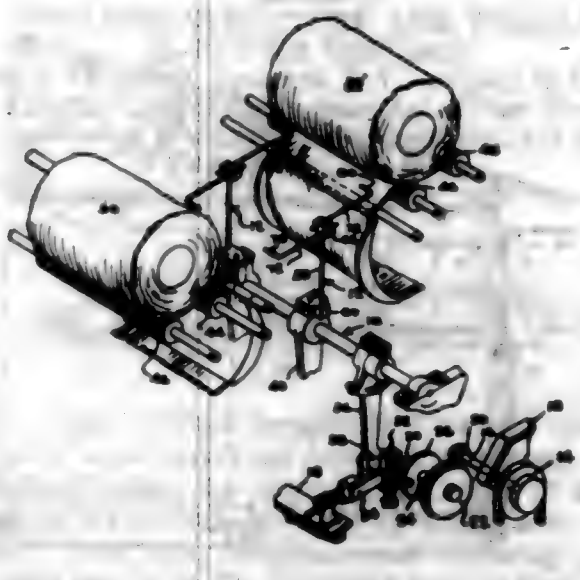
speed of between 800 to 2000 r.p.m., subjecting the fibrous mass to the beating action of the said blades, forcing the fibrous mass against a plurality of grid bars in an arcuate path and collecting the fibrous mass.

2,896,268

LAP SPLIT PREVENTING MEANS FOR ATTACHMENT TO A COMBER

Haywood S. Cardon, Durham, N.C.

Application May 29, 1958, Serial No. 738,664
4 Claims. (Cl. 19—115)



1. In a textile machine operating upon fiber supplied thereto in layers rolled in lap form, a horizontally disposed rock shaft, a pair of horizontally disposed spaced feed rollers arranged on one side of said rock shaft and spaced therefrom and adapted to support a rolled lap thereon, means for preventing the splitting of the lap end comprising an upstanding support positioned above said rock shaft exteriorly of and adjacent the end of a lap when supported on said feed rolls, the lower end of said support being connected to said rock shaft for movement therewith, a comb bar positioned above and spaced from and parallel to the one of said feed rolls adjacent said rock shaft and connected to the upper end of said support for movement with said support, said comb bar upon movement of said rock shaft in one direction moving from the spaced position to a position engaging the portion of a lap layer adjacent the lap end at the point of separation of said layer from a lap when supported on said feed rolls.

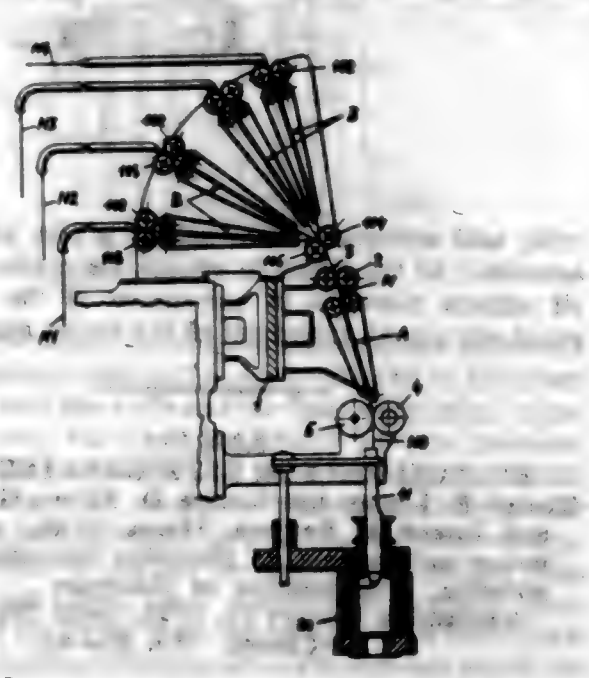
2,896,269

MULTI-DRAWING FRAME PARTICULARLY ADAPTED FOR USE ON HIGH-SPEED SPINNING FRAMES

Adriano Gardella and Costantino Gardella, Genoa, Italy

Application January 15, 1954, Serial No. 404,342
Claims priority, application Italy January 19, 1953
4 Claims. (Cl. 19—131)

1. A multi-drawing frame for textile fibre slivers in which the sliver drawing is effected in a number of successive drawing and doubling steps, and comprising a sliver drawing and doubling frame composed of a plurality of primary sliver-feed guides, a primary sliver-draw head for each of said sliver guides arranged to draw its slivers from one of the correspondingly positioned guides, each of said draw heads comprising a feed roller pair composed of two substantially contacting rollers providing a series of feed roller pairs arcuately arranged, means for driving said roller pairs with such a speed as to pull continuously said slivers at the desired feed speed, said primary feed roller pairs being arranged with their substantially contacting lines at substantially equal distances from a common point, a pair of contacting sliver-doubling and delivery rollers driven at a peripheral speed that is a multiple of said primary feed roller pairs arranged with their contacting line passing through said common point, endless belt feed means for guiding the



sliver fed by the said primary feed rollers towards the contacting point of said primary sliver-doubling and delivery rollers; said endless belt feed means being disposed at an acute angle one to the other, a pair of substantially contacting secondary sliver feed rollers spaced from said primary sliver-doubling and delivery rollers and arranged so as to receive the double sliver delivered from said primary delivery rollers, said secondary feed rollers being driven at a speed in the order of, but not less than, that of said primary delivery rollers, a pair of secondary delivery contacting rollers arranged in spaced relation and substantially parallel to said secondary feed rollers and driven at a speed that is multiple of that of the said secondary feed rollers and means for guiding the sliver delivered from said secondary feed rollers towards the contacting line of said secondary delivery rollers and means for taking up the sliver issuing from said secondary delivery rollers.

2,896,270

TOP ROLL SUPPORTING AND WEIGHTING APPARATUS FOR TEXTILE DRAFTING MACHINES

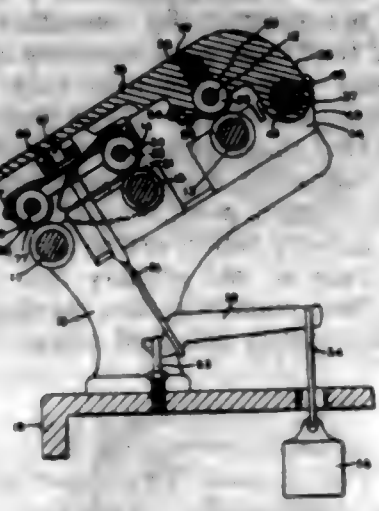
Franklin A. Young and Alfred J. Haselden, Gastonia, N.C., assignors, by mesne assignments, to Franklin A. Young, Gastonia, N.C.

Application July 23, 1956, Serial No. 599,381
10 Claims. (Cl. 19—131)

7. For use with a spinning frame having a lower intermediate roll and an intermediate cradle assembly journalled to rock about the lower intermediate roll and including aprons having adjacent runs and having front rolls having a draft nip therebetween, adjusting means adapted to be secured to the frame and adapted to be coupled to

beat being applied until such dental material liquefies *Agave lechuguilla* plant and related species comprising

the cradle assembly and accessible for adjustment during spinning operations for angularly rocking the cradle assembly about the lower intermediate roll to cause the adjacent apron runs to aline with the draft nip of the front



rolls, said adjusting means having a part adapted when assembled to the frame to engage the cradle assembly in all angular positions of adjustment of the assembly to avoid any casual movement of the cradle assembly.

2,896,271
ENCLOSURES FOR REFRIGERATED AREAS
George E. Kloote and George D. Meier, Grand Rapids, and Joseph A. Potchen, Marne, Mich., assignors, by mesne assignments, to Hoskolite Manufacturing Corporation, a corporation of Delaware
Application January 31, 1955, Serial No. 484,948
11 Claims. (Cl. 20—4)

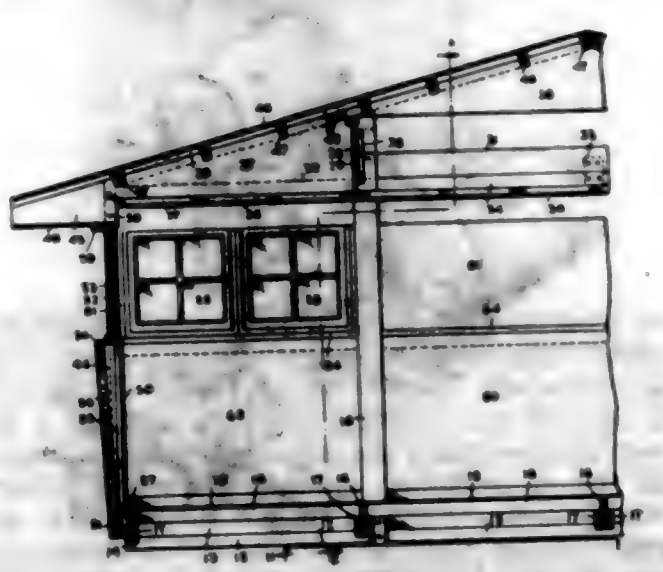
1. An enclosure for a refrigerated area comprising a plurality of laminated panels having on at least the surfaces exposed to the interior of said enclosure a moisture impervious facing of synthetic high density resin, a core having a low coefficient of thermal conductivity, said core being a rigid expanded cellular synthetic resin, the cells of said core resin being independent and hermetically sealed from each other, and a moisture impervious adhesive bonding said facing to said core, the abutting surfaces of said panels being adhered with a moisture impervious adhesive to thereby form a strong moisture impervious joint which presents a continuous smooth interior surface in said enclosure.

2,896,272
INSULATING SEALED WALL OR WINDOW PANEL
James S. Latessner, Omaha, Nebr.
Application March 1, 1956, Serial No. 568,731
15 Claims. (Cl. 20—5)

4. An insulated panel unit comprising two pieces of normally flat sheet material disposed in face-to-face relationship with each other, means for sealing the marginal edge portions of said pieces together in an airtight relationship, and a gas disposed between said pieces under sufficient pressure to cause said pieces to bow outwardly at their center portions and to hold said pieces

in spaced apart relationship at their center portions for providing an insulating space between said pieces.

2,896,273
COLLAPSIBLE PRE-FABRICATED BUILDING
John Pettaz, Arlington, Va.
Application March 11, 1954, Serial No. 415,539
9 Claims. (Cl. 20—2)



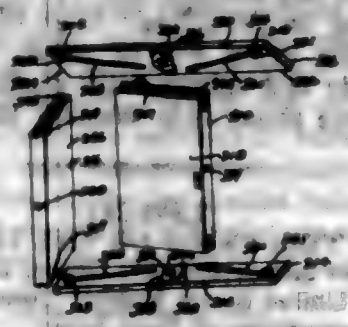
1. A pre-fabricated wooden building frame comprising two rows of longitudinally aligned posts arranged in transversely aligned pairs and a series of parallel transversely arranged roof supports bridging the space between said longitudinally aligned rows, said roof supports being supported at their ends on the tops of transversely aligned pairs of posts, said roof supports each consisting of two parallel web members arranged on edge with spacing and roof supporting strips secured between said web members and extending lengthwise thereof following the slope of the roof, and at least one series of transversely arranged roof and eaves supports aligning with said roof supports and each consisting of two parallel overhanging web members arranged on edge with a spacing and roof supporting strip secured between the upper edges of said overhanging web members in alignment with and secured to one of said roof supporting spacing strips.

2,896,274
SLIDING DOORS
Theodore S. Clark, New York, N.Y.
Application May 20, 1957, Serial No. 660,195
2 Claims. (Cl. 20—19)

1. In a door construction including a frame, a door element and means to mount the door element upon the frame for slideable movement thereon and second means to mount the door element on said frame element for pivotal movement thereon, the improvement comprising:

ly-dimensioned, casting-defining surface, the improve-

said door element including a projection thereon lying substantially on the plane of said door element and extending outwardly therefrom, said frame element having a first elongated groove in which said projection is slideably disposed, said frame element having a pivotally mounted turntable element thereon having a second



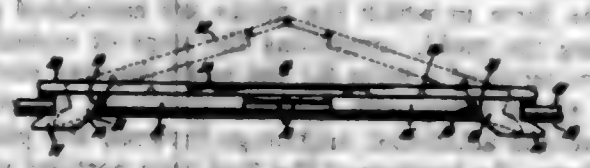
dead-end groove therein adapted in a first rotational position to form an extension of said first groove, whereby the projection may move into said second groove whereby the turntable will form the pivotal axis of the door and in a second rotational position to maintain said projection against rectilinear movement therefrom.

2,896,275

FRAMING STRUCTURE AND TOGGLE RETAINER THEREOF

Albert J. Fitzgerald, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York

Application March 19, 1956, Serial No. 572,168
9 Claims. (Cl. 20—56.4)



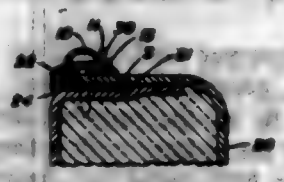
1. A toggle retainer comprising a pair of elongated lever arms each having an engaging lip formed on one end thereof, means for adjusting the angle of said engaging lip with respect to the longitudinal axis of said elongated lever arm, retaining means including a small depression formed in the remaining ends of each of said lever arms, a bendable connecting member having protuberances thereon coacting with the depressions in the retaining means formed on both of said lever arms extending between said lever arms for hinging said lever arms together toggle fashion, resilient cushioning members interposed between said lever arms and said connecting member at points adjacent said engaging lips, and snap-on fastening means formed on said lever arms for engaging a framing member.

2,896,276

LOW COMPRESSION RESISTANT SEALING GASKET

Leslie J. Read and Thomas P. Higgins, Grand Rapids, Mich., assignors to Cordaroy Rubber Company, Grand Rapids, Mich., a corporation of Delaware

Application July 9, 1956, Serial No. 596,500
4 Claims. (Cl. 20—69)



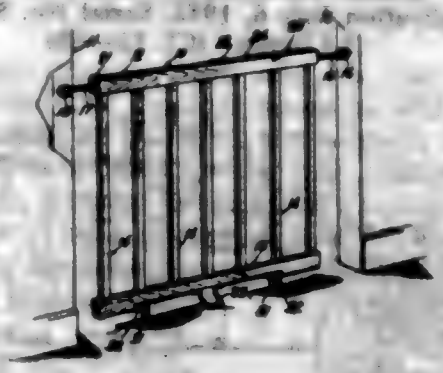
1. A gasket comprising: a flat leg adapted to underlie a supporting structure, a first arcuate leg overlying said flat leg and, said arcuate leg being arched outwardly from said flat leg and secured to said flat leg along one of its edges, its other edge being free and slidably contacting the supporting structure above said flat leg, a second arcuate leg overlying said first arcuate leg and secured along one of its edges to said first arcuate leg, said second arcuate leg being arched outwardly from said leg and having its other edge constantly contacting said first arcuate leg and slidable thereon.

2,896,277

GATE STRUCTURE

Joseph C. Halligan, Wayne, Pa.

Application July 20, 1956, Serial No. 598,834
3 Claims. (Cl. 20—71)



1. A gate structure operable to be positioned between a pair of oppositely disposed walls or the like in frictional engagement with the walls and the floor comprising; upper and lower cross bars and a plurality of bars interconnecting the upper and lower cross bars, upper latch mechanism adjustably carried by said upper cross bar for movement axially of said upper cross bar between predetermined outer and inner limit positions, resilient pads carried by said upper latch mechanism operable upon movement of the upper latch mechanism to its outer limit position to frictionally engage the walls between which the gate is positioned, lower latch mechanism carried by said lower cross bar, a pair of resilient foot members carried by said lower latch mechanism, and a treadle pivotally secured to the lower cross bar for pivotal movement between opposite limit positions and operatively interconnected with said lower latch mechanism, said treadle operable upon movement to one limit position thereof to force said foot members downwardly relative to said gate into frictional engagement with the floor, said resilient pads and resilient foot members cooperating with each other to prevent lateral displacement of the gate.

2,896,278

PROCESS OF INSULATING SIDE WALL OF BUILDING

Louis L. Wasserbeck, Waterbury, Conn.

Application June 23, 1955, Serial No. 517,470
1 Claim. (Cl. 20—101)

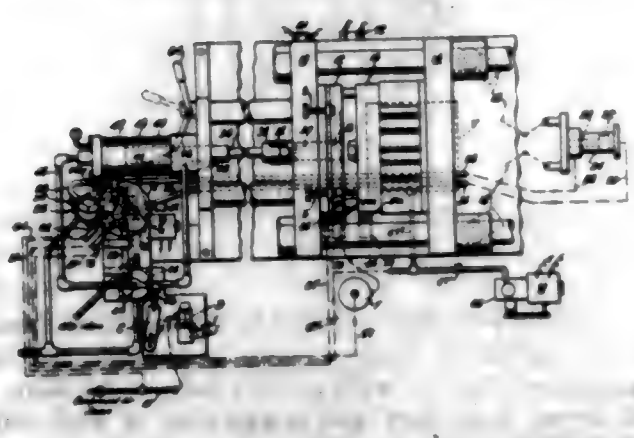
The process of insulating the wall of a building, which comprises pumping into the space between a pair of vertical studs of said wall, a quantity of sand granules which have been impregnated with aluminum paint which

of each member being formed of a substantially vertical

latching shoulders and enlarged terminal journal portions

has then been allowed to dry, said granules also having an exterior coating of sticky aluminum paint to cause said sand granules to adhere to each other while in place within said wall, and then applying a slight pressure to said mass of sticky sand granules to produce a compact porous heat-and-cold insulating, fireproof, soundproof, non-sweating block which will be self-supporting and which will not exert any substantial pressure against the sides of said wall.

2,896,279
MEANS FOR CONTROLLING THE OPERATION OF DIE CASTING APPARATUS AUTOMATICALLY AND IN TIMED RELATION
Gustav Nyselius, Stamford, Conn.
Application July 6, 1956, Serial No. 596,364
2 Claims. (Cl. 22—68)



1. In a die casting machine having a mold and a reciprocable plunger to push molten metal into the mold, means for actuating the plunger in two charging steps and a return step, including, a fluid cylinder and piston means therein connected to said plunger, a source of fluid under pressure, a conduit interconnecting said source of fluid pressure and said fluid cylinder on opposite sides of the piston therein, a four-way valve in said conduit, two operating arms connected to said valve, a first source of power, and means connecting it to one of said operating arms, a second source of power and means connecting it to the other of said operating arms, said first named connecting means including a turntable, cam means thereon, a cam follower and link means connecting said cam follower to one of said operating arms for rotating said valve mechanically upon actuation of said cam follower by said cam means, said second named connecting means including an air cylinder, link means connecting said air cylinder to said second operating arm, and an electrical circuit for controlling said air cylinder, said circuit including a switch and means carried by said turntable for opening and closing said switch in timed relation to the actuation of said cam follower by said cam means.

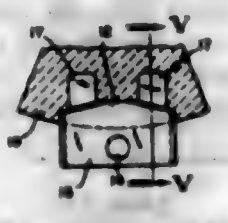
2,896,280
COMPOSITION FOR AND PROCESS OF JOINING CORE
Frank P. Ilenda, Painesville, and Joseph C. Noyes, Jr., Shaker Heights, Ohio, assignors to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware
No Drawing. Application April 12, 1957
Serial No. 652,350
14 Claims. (Cl. 22—194)

1. An adhesive composition of matter comprising the following ingredients in about the proportions stated:

	Percent by weight
Aliphatic polyhydroxy compound	1 to 15
Manganese dioxide	1 to 6
Bentonite	6 to 18
Liquid alkali metal silicate	Balance

13. In the production of castings via the use of thin-walled rigid shell molds characterized by a fine, accurately-dimensioned, casting-defining surface, the improvement which comprises adhesively joining complementary sections of said shell mold by applying as an adhesive a composition as defined in claim 1 to at least one of said sections and thereafter placing said sections in contact with each other thereby to form a quick-setting, adherent bond and resultant unitary shell mold structure. silicate having an SiO_2:Na_2O ratio of 3.22:1.0, thereafter dispersing about 4% of —300 mesh manganese dioxide therein and subsequently dispersing in the thus-formed mixture about 18% Western Bentonite.

2,896,281
TIRE MOLD OR THE LIKE
Roy W. Miller and Arthur W. Grant, Detroit, Mich., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Application September 17, 1956, Serial No. 610,890
2 Claims. (Cl. 22—203)



1. A process for manufacturing a tire mold having a plurality of thin plates partially embedded therein so as to leave free plate portions projecting from the mold face for forming a plurality of shallow slots in a molded tire, said free plate portions projecting from the mold face a distance insufficient to provide adequate anchorage in the form in which the plates are embedded prior to casting the mold, comprising the steps of embedding in the material of a form for the mold the free portions of said plates along with extensions secured thereto so as to provide additional anchorage between the plates and the form, the juncture of the free plate portions with said extensions being weakened to facilitate removal of said extensions, pouring the material of the mold around the form and about the portions of the plates located beyond said embedded free plate portions and extensions and extending from the form so that said extending plate portions are embedded in the material of the mold, removing the form from the mold after the material thereof solidifies so as to expose said free plate portions and said extensions, and breaking off said extensions from said free plate portions at said weakened juncture to leave said free plate portions projecting from the mold surface.

2,896,282
FASTENERS FOR CONVEYOR BELTS AND THE LIKE
Henry Lellan, Tangiers, Morocco
Application October 26, 1954, Serial No. 464,705
Claims priority, application France February 9, 1954
3 Claims. (Cl. 24—33)

1. A hinge fastener for conveyor belts and the like comprising two generally U-shaped sheet metal members adapted to fit on the opposed ends of the belt, substantially along the whole width thereof, each member having an upper horizontal jaw and a lower horizontal jaw connected by a bent end and being recessed at intervals in its bent end and adjacent same to provide spaces to receive the unrecessed parts of the other member in intermeshing engagement, each unrecessed part

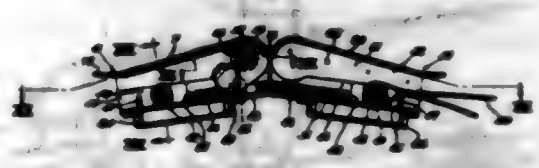
of each member being formed of a substantially vertical shoulder portion extending downwardly from said upper jaw on a smaller distance than the distance apart of said upper and lower jaws and a U-shaped portion disposed in front of said shoulder portion to connect the lower edge of same with said lower jaw, and each recessed part of each member being formed with an integral substantially rigid extension substantially situated in the plane of said upper jaw to overlap the U-shaped portion of the unrecessed part of the other member which is engaged into the last-named recessed part of the first member, said extension terminating short of the shoulder portion of the last-named unrecessed part of the other member; and a hinge pin rotatably engaged through the intermeshing beat ends of both members.

2,896,283
ROPE ADJUSTING AND SNUBBING DEVICE
John Richard Huber, Warrington, Pa., assignor to Eastern Rotorcraft Corporation, Doylestown, Pa., a corporation of Pennsylvania
Application November 1, 1954, Serial No. 465,838
3 Claims. (Cl. 24—71.1)

1. A rope tightening and snubbing device in which a main load carrying rope extends from the central region on one side and an adjustable anchored loop portion extends from the ends of the device, said device incorporating a beam member composed of two side plate parts, a large diameter drum located between said plate parts adjacent the mid region of the beam member to locate the main rope load midway of said beam member, a smaller drum located between said plate parts at one end of said beam member to transfer the reduced load carried by one side of the loop portion of the rope, both of said drums incorporating coacting inwardly directed circular dished projections in said side plate parts, fastening rivets recessed in the external depressions of said dished projections to retain the plate parts in assembled relationship and a rope attachment terminal formed at the end of said beam opposite said smaller drum.

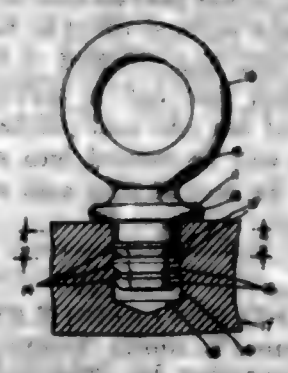
2,896,284
SAFETY BELT AND BUCKLE STRUCTURE
Morris Bishof, Skokie, Ill., assignor to Stein Bros. Mfg. Co., Chicago, Ill., a corporation of Illinois
Application November 17, 1954, Serial No. 469,390
5 Claims. (Cl. 24—75)

5. In a safety belt buckle structure, a body plate having marginal upstanding parallel side walls, a pivot pin extending between said side walls, a latch bar having angularly disposed spaced apart end flanges providing latching shoulders and enlarged terminal journal portions mounted on said pin, said bar being disposed in spaced relation to the pivot pin and being swingable thereabout, a biasing spring coiled about said pin and engaging with said latch bar for normally biasing the same and thus the latching shoulders toward said plate for engagement with a second buckle member to be coupled with said first mentioned buckle member, and a combination closure plate and latch operating lever having marginal



flanges pivotally engaged with said pin and shoulder means cooperable with shoulder means on said terminal end flange journals of the latch bar normally acting to hold the cover-lever plate in covering relation to the buckle plate and latch bar but responsive to manipulation of the cover-lever plate in opposition to the bias of said spring to swing the latch bar and the latching shoulders thereof out of latching position.

2,896,285
BUTTON SHANKS
Louis H. Morin, Bronx, N.Y.
Application June 7, 1954, Serial No. 434,735
1 Claim. (Cl. 24—90)

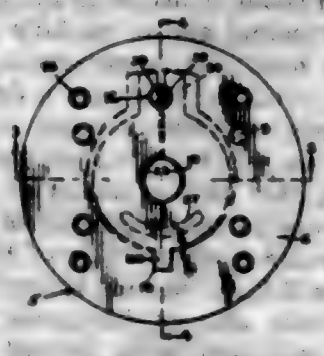


In a shank for use with a button having a preformed hole, wherein said shank is driven in the hole, said shank having a part extending above the hole and a part extending into the hole, the improvement comprising a disc-shaped base portion on that part of the shank extending above the hole, said base portion being in contact with the button, an attaching end portion connected to said base portion, that part of the shank extending into the hole comprising an upper portion of circular cross-sectional shape and a lower portion of hexagonal cross-sectional shape, said lower portion comprising a plurality of superposed lands also of hexagonal cross-sectional shape, each of said land being defined by upper and lower surfaces that taper outwardly and meet to form a substantially sharp edge, said edge extending around the periphery of said land, said peripheral edge, by virtue of the hexagonal cross-sectional shape of the land, being characterized by having alternating straight sides and corners, said upper portion having a diameter smaller than the diameter of the hole, the distance between opposed straight sides of said land being substantially equal to the diameter of the hole, opposed corners of said peripheral edge being spaced apart a distance greater than the diameter of said hole, said shank having a drive fit in the hole arising from the forcible engagement of said corners with the walls of the hole, said forcible engagement serving to prevent withdrawal of the shank, and the hexagonal cross-sectional shape of said lands serving to prevent rotation of the shank.

2,896,286
LOCKABLE SAFETY PIN
Peter Weinchhof, Riethelm, Kreis Villingen, Germany, assignor of one-half to Paul E. Tobeler, doing business under the name of Trans-Oceanic, Los Angeles, Calif.
Application April 9, 1956, Serial No. 577,156
4 Claims. (Cl. 24—158)

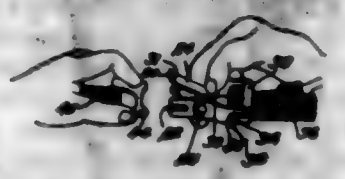
1. A safety pin comprising a cap, a pointed pin, a bar extending alongside said pin, pin-biasing spring means connecting adjacent ends of said pin and bar, said bar longitudinally and slidably engaged in a sleeve adjacent a longitudinal edge of said cap, said pointed pin adapted to close in guide latch means in said cap, said pin being longitudinally and slidably engaged in said latch means when said safety pin is closed, a tube in said cap longitudinally aligned with said latch means, said tube extending beyond said latch means in the direction away from said spring, a portion of said bar extending through and beyond said sleeve in the direction away from said spring, said portion being first deflected toward said pointed pin and being secondly deflected toward and having its end against a transverse surface of said cap between the longitudinal axes of said sleeve and said tube, and a hole in said surface of said cap in longitudinal alignment with said end of said portion against said cap; whereby when said cap is moved slidably toward said spring on said bar and said pointed pin, said end of said bar portion will be moved into said hole and said pointed pin will be moved into said tube so as to lock said safety pin.

2,896,287
SEPARABLE AND REVERSIBLE SNAP FASTENER
Samuel E. Stoltz, Miami, Fla.
Application November 20, 1956, Serial No. 623,451
3 Claims. (Cl. 24—211)



1. A reversible type fastening device of the character described for clamping engagement with a stud having a grooved head, the device embodying a housing that consists of upper and lower and an intermediate flat laminations riveted together, the upper and lower laminations being provided with concentric and centrally arranged cylindrical stud receiving openings and concentric openings formed in the upper and lower laminations that are laterally spaced from the first named openings, a rotatable release stud disposed within the last named openings and with the opposite ends of the last named stud being in flush arrangement with the outer faces of the upper and lower laminations, the intermediate lamination being cut away to form an opening that constitutes a relatively shallow flat cylindrical chamber for the reception of stud clamping mechanism, the chamber at one side being extended to provide an anchoring notch for a clamping mechanism, the said clamping mechanism being formed integrally to form a flat cylindrical body portion that is transversely slotted for its major diameter, the body portion also being provided centrally thereof with a pair of opposed arcuate notches that communicate with the slot and whereby to jointly form an eliptical opening, the said notches being upon the same radius as the first named cylindrical stud receiving openings of the upper and lower laminations, the said body portion being also provided with a concentric arcuate slot that extends an equal distance to either side of the first named slot and with the slots communicating, the first named slot providing a pair of substantially identical clamping jaws, the second named slot forming a pair of oppositely extending flat arcuate spring arms, a flat anchoring tongue that projects radially from the clamping device intermediate the said spring arms for anchoring engagement in the said notch of the chamber, the said jaws each being extended to form a pair of spaced apart and parallel release arms that engage the said rotatable stud, the stud intermediate its length having a flat key that engages between the arms and whereby the arms and the jaws are spread apart under the influence of the turning movement of the key and against the tension of the spring arms.

2,896,288
WEB END CONNECTOR
Frank L. Davis, College Point, N.Y.
Application January 11, 1957, Serial No. 633,611
1 Claim. (Cl. 24—230)



A quick attachable and detachable web connector comprising a body member in the form of a channel having spaced parallel side flanges slotted inwardly from one end to accommodate the complementary member to which the connector is to be connected, a pivot stud connecting the opposite end portions of said side flanges, a hook lever in the form of a smaller reversely faced channel having spaced parallel side flanges entered between the side flanges of said body channel and in pivotal engagement on said stud, said side flanges of said lever channel having beveled end edges faced toward the slotted end of the body channel flanges and abrupt transverse hook shoulders in back of said beveled end edges positioned for holding engagement with a pin or other complemental connector member entered in said slots, a spring coiled about said stud in the space between said side flanges of the lever channel having opposite ends engaging opposite inner surfaces of said opposed channels for yieldingly holding the lever channel seated in said body channel, means for rocking said lever channel about the pivot stud center in opposition to the force of said spring, a yoke of generally parallel side arms engaged on the ends of said pivot stud at the outer sides of said side flanges of the body channel and means at the free ends of said side arms of the yoke for securing a web thereto.

2,896,289
BRACELET END ATTACHMENT
Emil Rodriguez, New York, N.Y., assignor to Jacoby-Bender, Inc., Woodside, N.Y., a corporation of New York
Application January 21, 1955, Serial No. 483,252
14 Claims. (Cl. 24—235)

1. An end attachment for a bracelet or the like comprising a body having a pair of laterally spaced end portions with an opening therebetween, said body comprising a base and a shell secured to said base, said shell

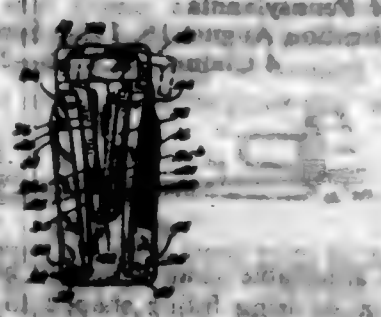
comprising a top wall extending over said base, a closure member articulately mounted on said base and having a finger projecting laterally therefrom, extending across said opening adjacent the tips of said body said portions for one position of said closure member and being laterally withdrawn from said opening for another position of said closure member, resilient means operatively connected between said body and said closure member and urging said closure member to said one position, said base comprising two overlying sections with registering vertical apertures therethrough, the aperture in the lower section being larger than that in the upper section and having a slot extending outwardly from the inner surface thereof, said closure member being pivotally mounted on said base by an element received substantially snugly in the aperture in said upper section but having a clearance from the aperture in said lower section, said resilient means comprising a coil spring at least partially received in said clearance between said element and the inner surface of the aperture in said lower section, one end of said spring being received within said outwardly extending slot so as to be operatively connected to said base, the other end of said spring being operatively connected to said closure member.

2,896,290

POCKET IMPLEMENT WITH RETAINER FOR APERTURED ARTICLES

Arthur Salm and Clifford V. Johnson, Chicago, Ill., assignors to Arthur Salm Inc., Chicago, Ill., a corporation of Illinois

Application September 27, 1957, Serial No. 686,667
4 Claims. (Cl. 24—239)



1. A retainer for apertured articles comprising body means defining a substantially flat elongate recess, transverse means disposed in said body to provide protuberances within said recess, and an article receiver comprising a substantially flat ring-like holder having an opening therein to receive such articles and a substantially flat locking loop having legs extending from said holder and terminating in a tight portion, said locking loop being resilient and said legs having locking recesses formed therein whereby said loop is maintained in said flat elongate recess between said protuberances and said locking recesses removably engage said protuberances, said article receiver being removable by the resilient relative movement of said legs whereby said opening may receive articles.

2,896,291

ADJUSTABLE CLAMPING DEVICE

Ralf G. Gildow, St. Paul, Minn., assignor to The Pillsbury Company, a corporation of Delaware

Application April 30, 1956, Serial No. 581,494
1 Claim. (Cl. 24—248)

A clamping device comprising a headed member having a screw-threaded shank; an adjustable stop member for screw-threaded engagement with the shank of said headed member; a bifurcated lever having the outer edges of its open ends curved to provide a pair of cam surfaces; a ferrule slidable on the shank of said headed member except when said clamping device is in clamping position; said ferrule being disposed between the head of said headed member and said stop member and pivotally secured at its sides to the bifurcation of said

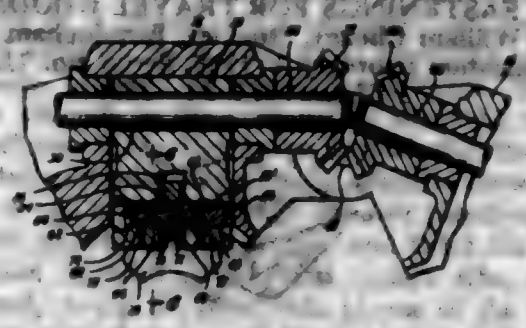
lever at positions which are adjacent to, but spaced from, said cam surfaces and aligned with the longitudinal axis of said lever; and a resilient element disposed between said ferrule and said stop member; each of said cam surfaces being so shaped as to provide a central arcuate area which is aligned with the longitudinal axis of said lever and with a high-rise camming area at either side thereof, with each of the latter areas terminating in a receding low point.

2,896,292

AUTOMATIC TUBING SPIDER ASSEMBLY

Robert B. Kinzbach, Houston, Tex.

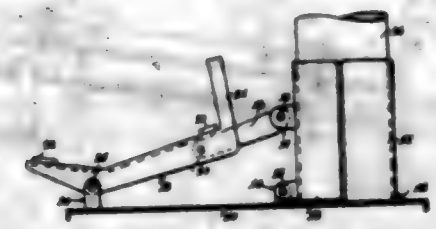
Application January 13, 1955, Serial No. 481,578
6 Claims. (Cl. 24—249)



1. In pipe suspension mechanism, a pipe gripping spider assembly comprising a body adapted to be supported above a well bore and having a vertical passageway therethrough for the reception of a pipe extending into the bore, pipe gripping members in the body and disposed for radial movement into and out of gripping engagement with the pipe, links pivotally connected at their outer ends to the body for vertical swinging movement in the passageway, said links having annular, horizontally disposed openings therethrough near their inner ends and said members having annular, horizontally disposed openings therethrough positioned for alignment with the openings of the links, said links having end faces and said members having surfaces positioned for engagement with said end faces and slidable laterally thereon to hold the members against horizontal rotational movement relative to the body, said members being formed with internal, annular grooves whose side walls diverge radially outwardly, pins extending through the openings in the links and members and having external annular grooves located to be positioned opposite said internal grooves, expansible split rings in said external grooves which are expansible into said internal grooves to releasably hold the pins against longitudinal displacement in the openings, said external grooves being of greater depth than the radial

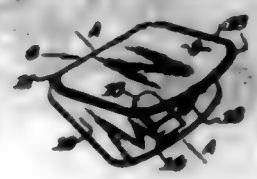
thickness of the rings and the rings being engageable with corresponding side walls of the internal grooves to contract the rings to cause the rings to move out of said internal grooves to release the pins upon the exertion of a longitudinal force on the pins sufficient to cause such contraction.

2,896,293
OVER CENTER LOCKING CLAMP
Leslie G. Love, Cranwell, Calif.
Application May 21, 1957, Serial No. 660,536
2 Claims. (Cl. 24—249)



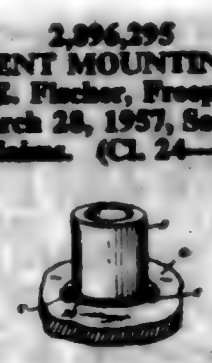
1. In an over center locking clamp, a base, a fixed jaw contiguous to said base, a movable jaw hingedly connected to said base, a link pivotally connected to said movable jaw, a lever hingedly connected to said base and pivotally connected to said link for moving the movable jaw, a handle on one end of said lever for actuating the lever by hand, said jaws having a shape to clampingly engage a member being held therebetween, a heel engaging pad on the opposite end of the lever, and a foot engaging pad on said lever arranged forwardly of said heel engaging pad for actuating the lever by foot.

2,896,294
FASTENINGS FOR TRAVEL GOODS
Charles William Cheney, Hockley, Birmingham, England
Application February 4, 1958, Serial No. 713,132
1 Claim. (Cl. 24—259)



A hasp adapted to be secured to a flexible member and consisting of two flanges of bendable metallic material, the flanges having a common web with two ends and each flange having an edge distant from said web, one flange having a side adjacent to the other flange and the other flange having a side facing away from said one flange when the flanges are pivoted about said web, said one flange having a tongue integral with its edge and defining a crank bent along the side of said one flange and extending a short distance toward the web, said one flange also having a boundary rim extending thereabout from one to the other end of said web and integral with said crank, the rim extending from the side of said one flange, the other flange having a slot adjacent its edge and so positioned as to permit passage of said tongue therethrough when the flanges are pivoted about said web and defining in its side a recess extending from the slot toward said web whereby, when the flanges are pivoted about said web with a flexible member therebetween and the tongue extends through the flexible member and through said slot, the tongue may be bent into said recess to lie flush with the side of said other flange and to retain the flexible member between said flanges, and further comprising a staple fixed to and extending from the side of said other flange.

2,896,295
COMPONENT MOUNTING CLAMP
Wilbur E. Fischer, Freeport, N.Y.
Application March 28, 1957, Serial No. 649,235
6 Claims. (Cl. 24—263)



1. A component mounting clamp for clamping a flanged component onto a mounting block comprising a rotatable clamp member provided with a clamping sector, said clamp member being rotatable over an arc for moving the clamping sector to a position for engaging and to a position for releasing the flange of the component which is to be fastened to a mounting block, a screw having a head and a threaded shank, and a plastic element between the clamp member and the screw, said plastic element being keyed to the clamp member for rotation therewith and being tightly threadedly coupled to the shank of the screw, the head of the screw being arranged to engage the clamping member, the screw shank being adapted to be received by a tapped opening in said mounting block, whereby actuation of the screw in opposite rotative directions in said tapped opening will serve to rotate the plastic element and clamp member together between said engaging and releasing positions, and whereby continued rotation of the screw with its head engaging the clamping member and with the clamping sector in its component flange engaging position is permitted to effect a forced fastening of the component flange to the mounting block.

2,896,296
STRAP CLAMP-DEVICE
John Richard Huber, Warrington, Pa., assignor to Eastern Rotorcraft Corporation, Doylestown, Pa., a corporation of Pennsylvania
Application August 16, 1954, Serial No. 449,830
4 Claims. (Cl. 24—273)

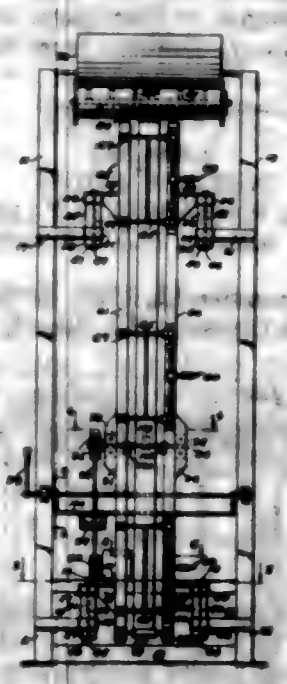
3. An adjustable strap assembly having a strap member and a securing fitting shaped to form an elongated integral handle, said fitting having a pair of slotted side frame members, two cross bars consisting of an inner and an outer bar mounted at one end of said frame members, one end of the strap being secured to the inner of said cross bars, one of the cross bars being rigidly supported, and the other bar being movably supported in said slots for motion toward and away from the fixed cross bar, the strap assembly having an open position with the bars separated and the strap freely adjustable, the strap member being adapted to be passed beneath, around and over the outer bar so that a terminal end of the strap member overlies a load carrying portion thereof, whereby when the assembly is rotated through an angle of approximately 180 degrees the movable bar moves toward the rigidly attached bar and simultaneously shortens the strap and clamps two strap thicknesses therebetween.

2,896,297
REINFORCED CONCRETE PRODUCT MACHINE
Louis A. Geesaman, Center Line, Mich.
Application October 25, 1954, Serial No. 464,543
3 Claims. (Cl. 25—41)

1. A synchronously universally vibratory machine for compactive reinforced homogeneous aggregate compris-

gated part extending transversely of said supporting part releasing said members comprising a rod operable for

ing a primary support structure including vertical support stanchions; a pair of lower arms extending horizontally inwardly from said stanchions, a pair of upper arms extending horizontally inwardly from said stanchions; said arms being vertically aligned relative to one another; a vibratory vertical frame located between both said pairs of arms, a lower pair of brackets horizontally extending from said frame adapted to cooperate with said lower pair of arms, an upper pair of brackets horizontally extending from said frame adapted to cooperate with said upper pair of arms, cylindrical resilient rubber cushions



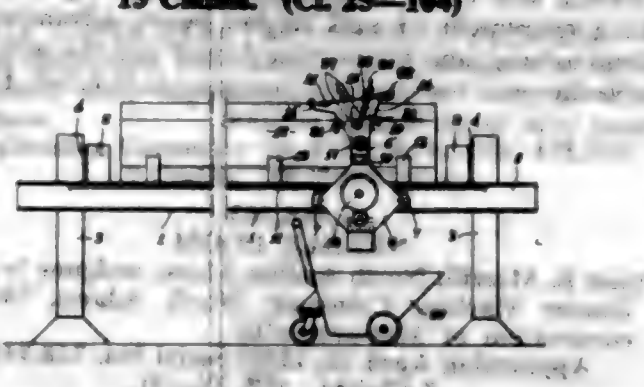
disposed on end between said cooperating arms and brackets and adapted to compressionwise and shearwise universally resiliently floatingly support said frame relative to said support structures; said frame being adapted to receive and hold an aggregate form in a vertical position; a horizontal axle on said frame, at least one eccentric weight on said axle running in air, a form vertically disposed on said frame, and means for rotating said axle with said eccentric weight to impart a universal dynamic vibratory non-hammering movement to said form via said frame so as to homogeneously pack aggregate in said form.

2,896,298

APPARATUS PARTICULARLY FOR THE REMOVAL OF THE UPPER EXPANSION LAYER FROM OPEN CASTING MOULDS IN THE MANUFACTURE OF POROUS LIGHT-WEIGHT CONCRETE

Karl Gustav Olsson, Solna, Sweden, assignor, by mesne assignments, to Casius Corporation Limited, Montreal, Quebec, Canada

Application November 17, 1953, Serial No. 392,726
Claims priority, application Sweden January 27, 1953
13 Claims. (Cl. 25—104)



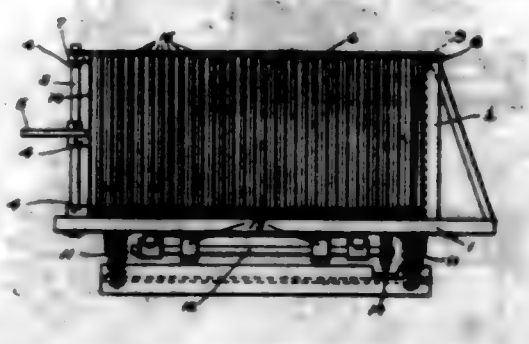
1. An apparatus for the removal of the upper expansion layer from open casting moulds in the manufacture of porous lightweight concrete, comprising a casting mould, means pivotally mounting said casting mould for tilting around its longitudinal axis, truck means mounted for tilting movement along with said casting mould, means connected to said truck means for moving said truck means independently of and in the longitudinal direction of said casting mould, and a knife mounted on said truck means and extending over and transverse to the pivotal axis of said casting mould, said knife being of a width and shape that on the tilting of said mould, said knife serves as a chute for transporting the upper expansion layer, cut off on the movement of said truck means, to the lower side of said mould when tilted.

2,896,299

APPARATUS FOR MOLDING TONGUE AND GROOVE CONCRETE SLABS

Harold B. Hemb, Glencoe, Ill.

Application August 13, 1956, Serial No. 603,624
1 Claim. (Cl. 25—121)



Apparatus for forming tongue and groove concrete slabs, comprising, a plurality of similar mold units adapted to be clamped together side by side standing edgewise to form open-top molds, each of said mold units having a plate provided with a first face on one side and a second face on the other side, each of said first and second faces having vertical and horizontal ribs arranged to form mold cavities, each of said ribs being in cross section half of a square cut diagonally, the diagonally cut side of each rib being fixed to its respective side face of the plate, and the perpendicular distance from the diagonally cut side to the apex of the rib being one-half of the thickness of the slab to be formed, the ribs on the first face being respectively directly opposite those on the second face and extending in the opposite direction therefrom, a rib square in cross section and twice the size in cross section of each of the half square ribs, secured longitudinally along the outer side of one of the vertical ribs of the second face and having a beveled bottom end, a rib similar in cross section to the last mentioned square rib, secured longitudinally along the lower side of a horizontal rib of the second face and having beveled ends, said square ribs each being of a diagonal thickness equal to the thickness of the slab to be formed, whereby to provide means for registering the mold units when placing them side by side during assembling.

2,896,300

OUTSIDE CORNER CLAMP FOR PREFABRICATED WALL FORMS

Artil Arrighini, Detroit, and George A. Van Sickle, Mount Clemens, Mich., assignors, by mesne assignments, to Rocwall Company, Detroit, Mich., a corporation of Michigan

Application June 15, 1953, Serial No. 361,557
5 Claims. (Cl. 25—131)

1. A collapsible form for composition walls comprising first and second wall panels extending in angularly related planes with an end of the first panel abutting the inner side of the second panel adjacent the end of the latter to form a corner, an outside corner clamp for removably securing said panels together in the aforesaid relationship comprising an elongated supporting part extending along the outer side of said first panel outwardly beyond the corner formed by said panels, a second elon-

inclined in one direction from a plane normal to the

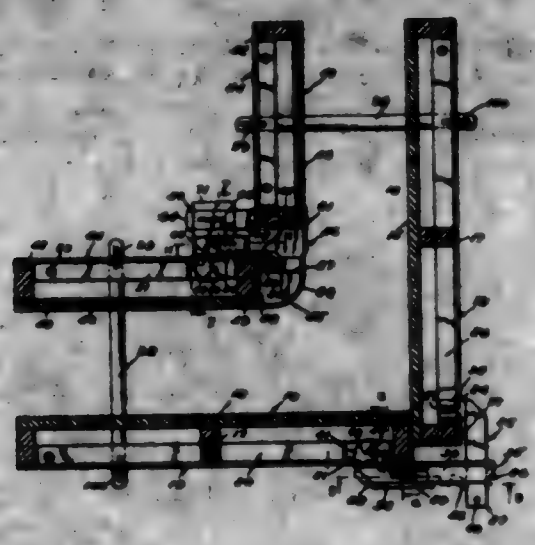
bath maintained at a slight alkalinity by an organic

tain the flexible member between said flanges, and further comprising a staple fixed to and extending from the side of said other flange.

1. A synchronously universally vibratory machine for compactive reinforced homogeneous aggregate compris-

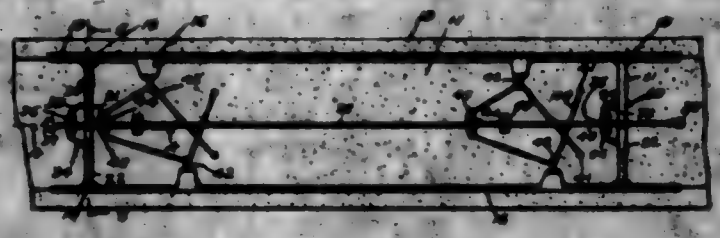
gated part extending transversely of said supporting part along the outer side of said second panel outwardly beyond the corner formed by said panels, the end portion of said second part beyond said corner being supported on the corresponding end portion of said supporting part for sliding movement of said second part in the direction of its length, a third part mounted on the opposite end portion of said supporting part for sliding movement along said first panel lengthwise of said supporting part, said third part having a portion engageable with said first panel to urge said first panel in its plane toward said sec-

releasing said members comprising a rod operable for longitudinal movement from a remote point, a ring fixed to said rod, a chain extending from said ring to each segment, a circular member slidably mounted on said rod, a cable affixed to each side of said circular member, said cables being adapted to extend to a ring on the adjacent support member and thence across to have their ends secured to the opposite support member, and a second ring fixed to said rod forming a stop for slidable movement of said circular member, whereby a pull on said rod releases said rounded ends from their associated sockets to cause said segments to disengage, and hence permit release of said support members from the hardened concrete.



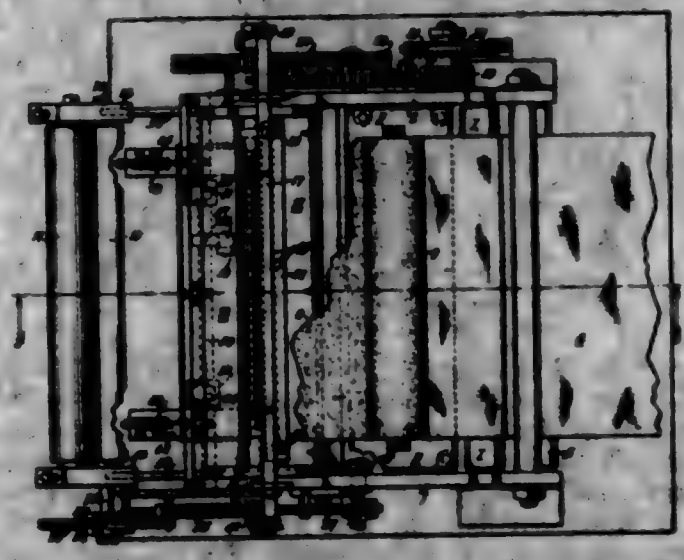
ond panel upon movement of said third part along said supporting part toward said second part, actuating means engageable with said supporting and third parts operable to move said third part along said supporting part toward said second part, said second part having means engageable with said second panel to hold the inner side thereof against the end of said first panel and also to hold said second panel against movement in its plane away from said corner, and means for holding said second part against lengthwise sliding movement relative to said supporting part in response to operation of said actuating means.

2,896,301
TOP FORM FOR CONCRETE CONDUITS
Curtis L. Barron, Sacramento, Calif.
Application December 3, 1957, Serial No. 700,486
1 Claim. (Cl. 25—131.5)



Brace and release means for use with a pair of elongated transversely arcuate support members having hinges connecting the members along contiguous sides thereof to form an arcuate support for concrete poured thereon and means on the outer edges of said members for supporting said members upon the sides of a previously formed base portion, said brace means comprising a pair of separable segments adapted to hold the outer edges of the support members in spaced apart relation, said segments each having a rounded end adapted to be received in a cup carried by oppositely aligned sockets carried by the support members, at least one of said rounded ends comprising a spring biased ball detent, the other end of each rod being substantially flat to engage in abutting relation, one of said other ends having a detent therein and the other of said other ends having a socket for the reception of said detent, said means for

2,896,302
NEEDLE LOOM
Walter P. Costello, Wynantskill, N.Y., assignor to Albany Felt Company, Albany, N.Y., a corporation of New York
Application December 12, 1955, Serial No. 552,329
8 Claims. (Cl. 28—4)

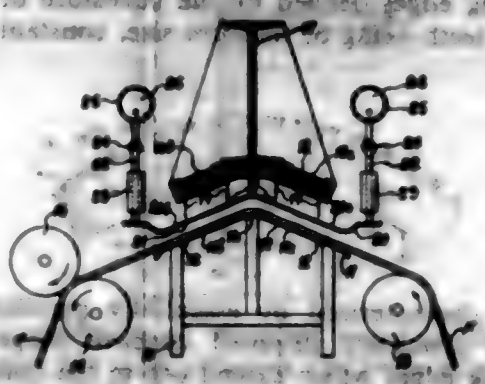


1. A needle loom comprising a first needle beam having a plurality of needles therein, and a mounting therefor in which said beam is adapted to reciprocate; a second needle beam having a plurality of needles therein and a mounting therefor in vertically spaced relation to the mounting of said first needle beam in which said second needle beam is adapted to reciprocate; means between said beams for supporting, at each side of the zone penetrable by said needles, a base fabric having a layer of stuffing thereon; means for holding said fabric down on one of said supporting means; means for reciprocating said first beam to drive said stuffing material into said fabric; means for reciprocating said second beam to drive back into said fabric any stuffing material carried therethrough by the needles in said first beam; and means for releasing said fabric holding means following a reciprocating movement of said second beam, advancing said fabric to bring another portion thereof into the zone penetrable by said needles, and restoring said fabric holding means to its fabric holding position.

2,896,303
NEEDLE LOOM
Frank B. Merrill, North Adams, Mass., assignor to James Hunter Machine Company, North Adams, Mass., a corporation of Massachusetts
Application April 16, 1956, Serial No. 578,910
8 Claims. (Cl. 28—6)

1. In a needle loom, the combination of a reciprocating beam, spaced needles secured to the beam and projecting therefrom in parallel relation to each other and to the reciprocating movements of the beam, a bed plate section opposing a series of the needles and

inclined in one direction from a plane normal to the needles, a second bed plate section opposing another series of the needles and inclined in the opposite direction from said plane, the plate sections having holes aligned with the needles for receiving the same upon reciprocation of the beam, inclined stripper plate sections disposed sub-



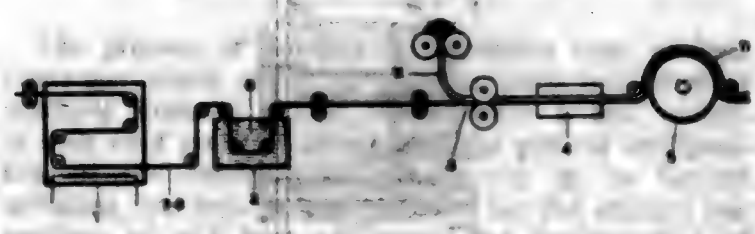
stantially parallel to the respective bed plate sections and having holes through which the needles extend toward the bed plate sections, the stripper plate sections being spaced from the bed plate sections to form a passage, and means for moving material through said passage from one to the other of the bed plate sections between reciprocations of the beam.

2,896,304

PROCESS FOR OBTAINING A VELVET-LIKE COATING OR COVERING MATERIAL

Carlo Peroni, Milan, Italy

Application December 4, 1953, Serial No. 396,276
Claims priority, application Italy December 16, 1952
2 Claims. (Cl. 28—72)



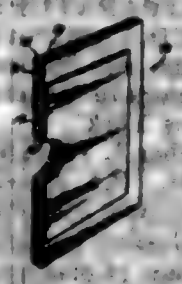
1. A process for manufacturing a velvet-like material which is essentially composed of a synthetic textile material bonded to a thermoplastic backing comprising heat-treating the synthetic textile material at a predetermined temperature, impregnating the textile material with a compound of thermo-plastic material, laminating the impregnated textile material with a thermoplastic backing, curing the composite material thus obtained at a temperature which is less than said predetermined temperature, and napping said textile material in part.

2,896,305

RECTIFIER ELECTROFORMING PROCESS

George Lemarine, Bloomington, Ind., assignor to Sarkes Tarzian, Inc., Bloomington, Ind., a corporation of Indiana

Application December 16, 1954, Serial No. 475,765
7 Claims. (Cl. 29—25.3)



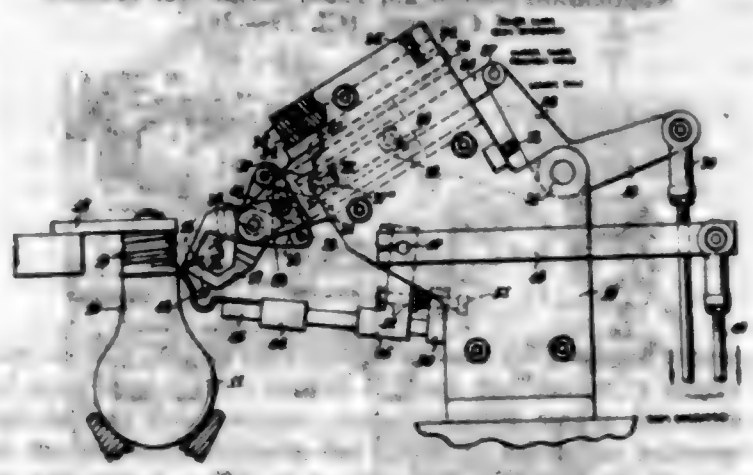
5. The method of electroforming a selenium rectifier which comprises first soaking the rectifier in a warm oil bath maintained at a slight alkalinity by an organic amine and thereafter energizing said rectifier in series with a low resistance at a voltage of constant magnitude and at an initial current density of the order of one to three amperes per square inch while said rectifier is submerged in an oil bath maintained at a temperature below 49° C., and at a pH of approximately 7 by an organic amine.

2,896,306

LAMP FABRICATION

Herman James Eberle, West Orange, and Frederick Theodore May, Verona, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application June 30, 1953, Serial No. 364,994
2 Claims. (Cl. 29—25.11)



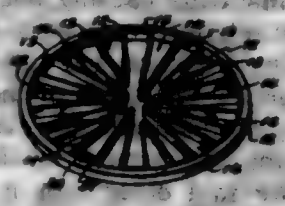
1. The method of attaching the protruding side wire to the base shell of an otherwise substantially fabricated lamp, which comprises positioning said wire at a predetermined angle away from the lamp bulb and toward said base shell, tensioning said wire while so positioned, ripping a crevice with said tensioned wire in the peripheral edge of said base shell, wedging said side wire in said crevice to retain same in permanent electrical contact with the material of said base shell, and severing the excess portion of said wire adjacent said crevice and said base shell.

2,896,307

GRID MANUFACTURING PROCESS

Charles A. Whiteley, East Meadow, N.Y., assignor to The Sperry Rand Corporation, a corporation of Delaware

Application May 14, 1954, Serial No. 429,207
4 Claims. (Cl. 29—25.14)

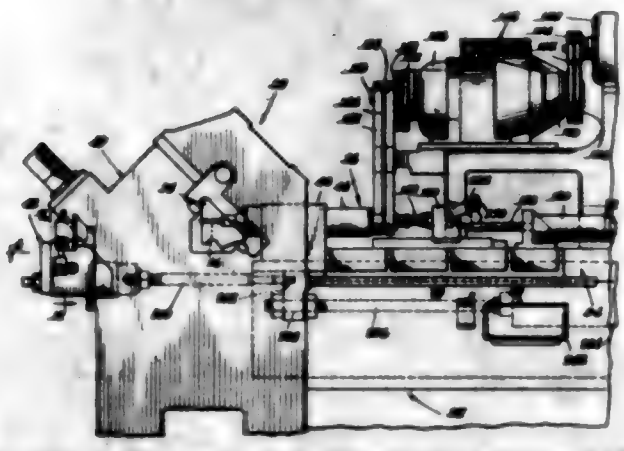


1. A process of forming a grid for an electron beam tube device, comprising anchoring one end of an elongated strip-like metallic element upon a jig having an appreciably larger temperature coefficient of expansion than said metallic element, interwinding said element in edgewise relationship with respect to a face of said jig back and forth in the same plane across parts of said jig face from one to another of a plurality of predeterminedly shaped and distributed protuberances extending from said jig face to thereby provide a substantially planar vane-type grid configuration, anchoring the other end of said element upon said jig, placing a grid supporting member around said element upon said jig in close relationship with portions of said element for

knife edge all punchings of the group having a slot assembly heads each having gripping means for each

bonding between said element and said member upon application of heat, heating the assembly comprising said jig, said element and supporting member to thereby expand said jig relative to said element and tighten said element about said protuberances so that portions of said element are heat-bent to closely conform to parts of the peripheries of said protuberances, and cooling said assembly to thereby rigidly bond said element to said member and permanently fix the shapes of the bends in said element and provide for ready removal of said element from said jig after contraction thereof.

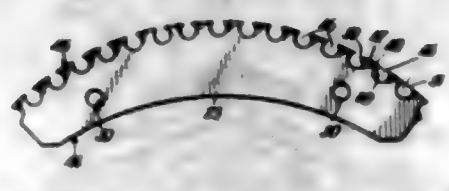
2,896,308
APPARATUS FOR BORING AND FACING WORK PIECES
Robert W. Swords, Rockford, Ill.
Application March 23, 1954, Serial No. 418,009
15 Claims. (Cl. 29—26)



1. An apparatus for machining a bore in a work piece and for machining a surface of the work piece surrounding said bore, comprising a spindle head, said spindle head including rotatable means, a tool disposed on said rotatable means for machining said surface surrounding said bore in the work piece, an elongated bore machining tool concentrically and reciprocably disposed within said rotatable means, and means on said rotatable means for radially supporting said bore machining tool adjacent a cutting edge thereof for restraining whipping action by said bore machining tool at said cutting edge when the bore machining tool is in a retracted position, means for reciprocating said bore machining tool relative to said first mentioned tool, means for advancing and withdrawing said spindle head to and from operative and inoperative positions, means for rotating said rotatable means and said bore machining tool, and means for causing successive working engagement of said tools with the work piece and for automatically causing one tool to have an axial idle movement relative to the work piece at the completion of its working operation and substantially prior to initiation of the working operation of the other tool, said last means including mechanism for preventing substantial simultaneous working engagement of the tools with the work piece whereby said other tool is in working engagement with the work piece only after said one tool has substantially completed its operation on the work piece and has begun its idle axial movement.

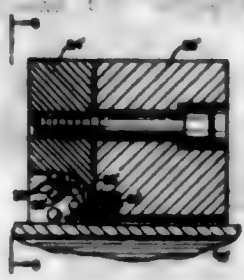
2,896,309
TIRE RASP
Emil B. Jensen, Chicago, Ill.
Application July 5, 1957, Serial No. 669,987
2 Claims. (Cl. 29—79)

1. A replaceable blade for a rasp used to buff the rubber carcass of an automobile tire, said blade comprising a sheet metal member of essentially uniform thickness having a planar main body and an interrupted outer working edge of generally convexed arcuate shape, said main body portion having means spaced from said arcuate working edge by which the blade may be removably mounted on a tire rasp, and said arcuate working edge including a plurality of equi-shaped, constant-sized, circular cutouts which directly interrupt said edge and form teeth of generally dovetail shape between each adjacent pair of cutouts, said teeth each having its leading and trailing edges defined by the curvature of said cutouts, said teeth being of uniform size, constant thickness



and each characterized by essentially parallel opposed sides and oppositely disposed concave shaped trailing and leading edges which extend out to the outer edge of the blade, said teeth being disposed in transverse relation to the plane of said main body portion, and the cutouts between each adjacent pair of said teeth defining a major arc of constant diameter having a mouth interrupting the outer edge of the blade and which mouth is of a width less than the said diameter of said major arc.

2,896,310
SCALPING DIE ASSEMBLY
Ralph Young, Toronto, Canada, assignor to The American Brass Company, Waterbury, Conn., a corporation of Connecticut
Application September 23, 1955, Serial No. 536,167
2 Claims. (Cl. 29—95.1)



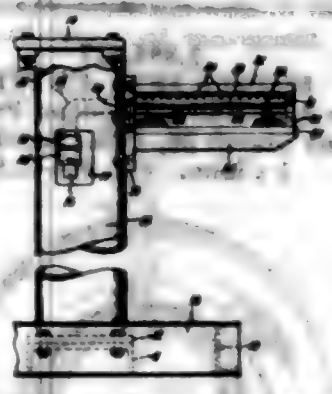
1. A scalping die assembly for cutting a surface layer of material from elongated metallic articles comprising a scalping die having an opening therethrough from front to back and having a peripheral cutting edge surrounding said opening at the front end thereof, and a separate chip breaker member attached to the forward portion of the scalping die assembly surrounding and projecting forward of the cutting edge, said chip breaker having a circular concave working surface which converges inwardly and rearwardly toward said cutting edge, the curvature of said concave working surface being of substantially less radius than that normally assumed by cuttings separated from the elongated articles by said cutting edge, said working face being positioned to intercept the cuttings substantially tangentially and to cause them to bend to such a degree that they break into small chips.

2,896,311
METHOD AND APPARATUS FOR ALIGNING SLOTTED LAMINATIONS
Linn T. Stafford, Scotia, and William F. Bernadt, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Application December 2, 1954, Serial No. 472,626
3 Claims. (Cl. 29—155.61)

1. The method of aligning dynamoelectric machine annular stator punchings having like inner periphery winding slots, comprising the steps of placing a group of punchings having slots distributed at random over a knife engageable into any one of the slots, supporting independently of the

rent machine adapted to place electrical components in cutting through said rigid connecting member whereby a

knife edge all punchings of the group having a slot straddling the knife edge, and applying a vibratory force to cause the knife edge to vibrate through an arc with a



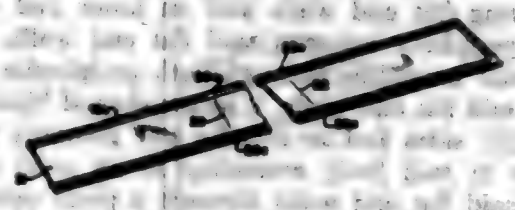
maximum amplitude of vibration equal to the smallest width of the like slots adjacent the knife edge to rotate each punching of the group until each has a slot straddling said knife edge.

2,896,312

REFRIGERATING APPARATUS

Carl M. Schell, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application February 25, 1955, Serial No. 490,560
1 Claim. (Cl. 29—157.3)



The process of forming a serpentine type of heat exchanger which comprises superimposing two strips of weldable material having therebetween a first pattern of stop weld material arranged in the general configuration of the desired main passageway to be formed including one type of configuration for the straight run portions of said heat exchanger and another type of configuration for the return bend portions and having a second locating pattern of stop weld material adjacent one edge of said strips and having a plurality of indicator portions arranged in a predetermined relationship to said return bend portions of said first pattern, roll forging said plates together to form a composite strip, dilating said plates throughout the area covered by said locating pattern so as to determine the location of said return bend portions before dilating said plates throughout said first pattern, placing marks adjacent said return bend portions on a part of one of said plates, removing the edge portions of said composite strip so as to remove said locating pattern without removing said marks, forming one or more bends in said composite strip in a predetermined relationship to said marks, placing the composite strip in a serpentine die cavity, and then dilating said main passageway while said strip is in said die cavity so as to limit the extent of dilation of said main passageway.

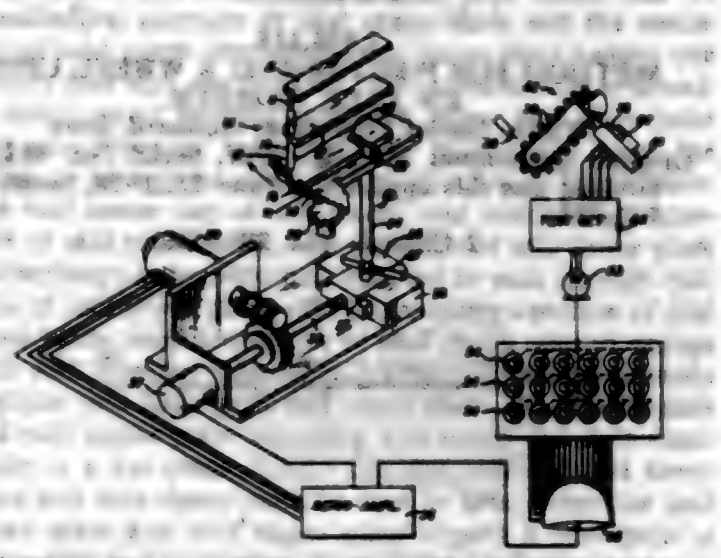
2,896,313

AUTOMATIC CONTROL FOR ASSEMBLY MACHINES

Robert F. Brewer and James A. Hosford, Bethlehem, and John W. McGrath, Allentown, Pa., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Application October 8, 1956, Serial No. 614,741
9 Claims. (Cl. 29—203)

1. In an assembly machine for fabricating articles having spaced members, the combination with a plurality of assembly heads each having gripping means for each of the spaced members, at least one of said gripping means being movable, and means for successively moving the heads through a number of stations, of means for one of the stations for automatically controlling the relative positioning of the gripping means for the heads as they are successively moved through the station to produce a prescribed spacing between said spaced members comprising a movable actuator in said one of the stations



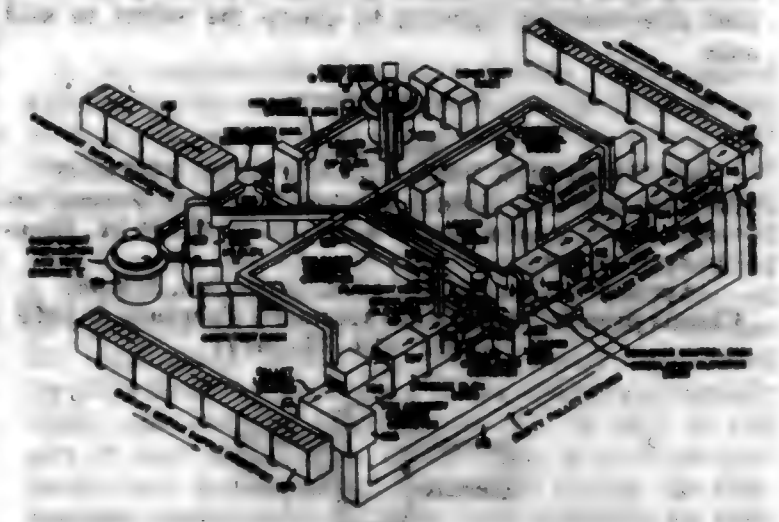
for causing relative movement between the gripping means of each head as it is moved through the station, a motor for driving the actuator, motor control means for each of the heads for causing the motor to move the actuator to prescribed positions as required for each of the individual heads, and switching means responsive to movement of the heads for connecting corresponding motor control means to the motor as the heads are successively moved into the station.

2,896,314

COMPONENT ASSEMBLY SYSTEM

Charles J. Godwin, Mark Hurowitz, Philip D. Kaplan, and Earl W. Siegel, Ithaca, and Thomas W. Zebley, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Application March 21, 1955, Serial No. 495,682
9 Claims. (Cl. 29—203)



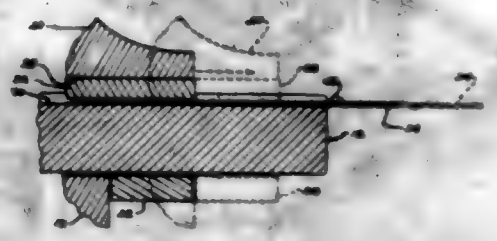
1. In a system for assembling leaded electrical components into circuit matrices, the combination comprising a plurality of component carriers, each having a transfer portion for handling said carrier and a lead gripping portion adapted to support a single electrical component by the leads thereof, means for installing components into said carriers, a plurality of magazines each adapted to accommodate a plurality of component carriers, means for installing a predetermined number of like components into each of said magazines, a component place-

when said first portion is parallel to the corresponding, fairly parallel to one another and at right angles to the

said main body portion having means spaced from said into any one of the slots, supporting independently of the

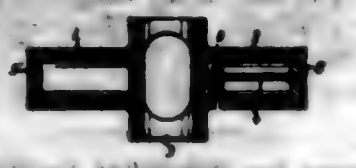
ment machine adapted to place electrical components in any of a plurality of positions upon a circuit matrix having a placement foot fitted to engage said transfer portion; means for circulating said number of circuit matrices equal to said predetermined number through said placement machine, and means for transferring a magazine to said placement machine each time said circuit matrices complete a cycle.

2,896,315
METHOD FOR POSITIONING A WHEEL UPON AN AXLE MEMBER
Walter Harley Dubbeke, Hubbard, Iowa
Original application May 31, 1957, Serial No. 662,871. Divided and this application June 11, 1958, Serial No. 741,427
2 Claims. (Cl. 29—469)



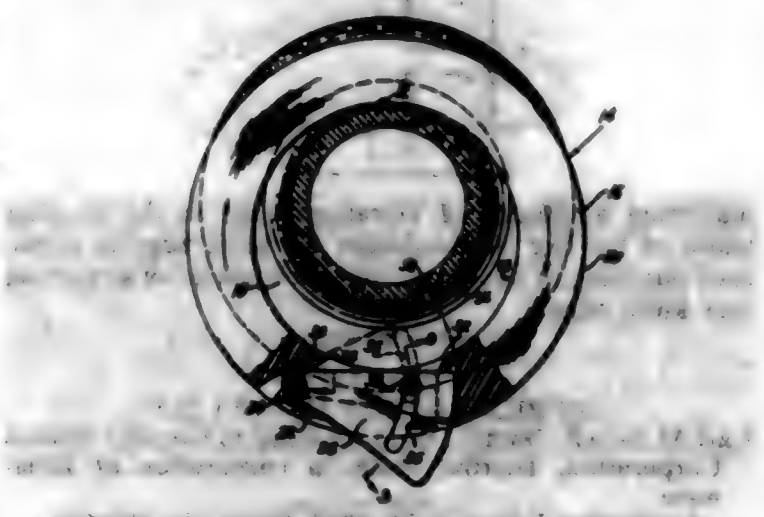
1. A method of axially positioning a wheel having a size-adjustable axle-receiving opening provided with a keyway slot therein, upon an elongated axle having a complementary keyway slot and provided with a key to lock said wheel and said axle against relative rotational movement; comprising the steps of the loosening of said wheel upon said axle by increasing the size of the axle-receiving opening in said wheel whereby said keyways are separated to provide a space in the bottom of said axle keyway; rotating said axle and wheel to a position where said keyway slots extend downwardly, placing a friction reducing tool in said keyway slot space, rotating said axle to a point where said keyway slots extend upwardly and said wheel rests on said friction reducing tool through said key in said keyway slot, longitudinally moving said wheel and said friction reducing tool along the length of said keyway slot to the desired position, rotating said wheel and axle to a position where said keyway slots extend downwardly, removing said friction reducing tool, and finally reducing said axle-receiving opening to clamp the wheel to said axle.

2,896,316
METHOD FOR PRODUCING TWIN PISTONS
Hans Schmidt and Günter Dunkel, Kassel, Germany, assignors to Licentia Patent-Verwaltungs-G.m.b.H., Hamburg, Germany
Application August 17, 1955, Serial No. 528,861
Claims priority, application Germany February 4, 1955
6 Claims. (Cl. 29—411)



1. A method of producing aligned surface portions on resiliently connected coaxial twin pistons comprising the steps of brazing a rigid connecting member to a pair of independent hollow substantially coaxial pot-shaped pistons, and simultaneously brazing a resilient rod located in the axis of said pistons to the outwardly located end plates of said pot-shaped pistons whereby said pistons are resiliently and rigidly connected; finishing surface portions of said pistons to align said surface portions of the same; and cutting through said rigid connecting member whereby a pair of coaxial resiliently connected twin pistons having aligned surface portions is obtained.

2,896,317
BOTTLE SEAL CUTTER
Victor Alex Valve, Highland Park, Mich.
Application March 28, 1958, Serial No. 724,766
1 Claim. (Cl. 30—1.5)



A bottle seal opening device comprising a flat annular body having flat end walls and an inner and an outer circular periphery between said flat end walls, a blade housing slot extending through both peripheries midway between said flat end walls, a sector shaped blade having two straight sides and an arcuate side pivotally mounted by a pin in said body extending in an axial direction between said flat end walls through a pivot opening adjacent the apex angle between said straight sides of said sector-shaped blade, a knife edge on said blade on the straight sector side extendable through said inner periphery, and a finger pressure receiving dull edge on the opposite straight sector side extendable through said outer periphery, limit means for said blade comprising a second pin in said body through said blade housing slot parallel to said pivot pin extending through an arcuate slot in said blade concentric with said pivot pin, and a torsion spring about said pivot pin having one end abutting said blade on the sharp edge side and the other end abutting a wall of said blade housing slot in said body normally resisting the pivoting of said blade inwardly through said inner periphery and urging said blade outwardly therefrom, whereby said annular body may be placed in either direction about a bottle cap seal and rotated relative to said seal in a direction toward said blade pivot pin while said blade is pressed inwardly through said inner periphery to circumferentially cut the bottle seal.

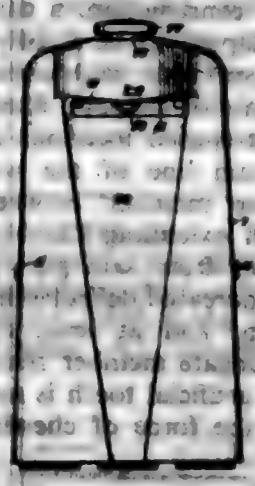
2,896,318
PACKAGE OPENER
William H. Brown, Fremont, Ohio, assignor to Clauss Cutlery Company, Fremont, Ohio, a corporation of Ohio
Application April 9, 1957, Serial No. 651,630
1 Claim. (Cl. 30—2)

An opener for domestic use for opening lightweight packages or the like having at least two walls disposed at an angle to one another, said opener comprising a first portion adapted to contact a first wall, a second portion connected to said first portion and adapted to contact a second wall adjacent, and disposed at an angle to, said first wall, a blade extending outwardly from said first portion, a handle fixedly attached to that side of said first portion opposite the wall contacting side, said handle being inclined at an angle of not more than about 30 degrees toward the direction of movement of said opener

when said first portion is parallel to the corresponding wall, said handle having a lateral cross section generally in the shape of an "I" of varying dimensions over the length of the handle with the web of the "I" extending laterally to the direction of movement of said opener,

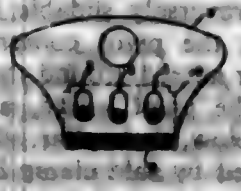
said "I" being thicker nearer the first wall contacting portion with a slot extending thereinto from said first portion to receive said blade, said handle having a tapered hole extending toward and contiguously to said slot, and a tapered pin in said tapered hole to wedge said blade securely in said slot.

2,896,319
AUTOMATIC CAN OPENER
Robert M. Pinotto, Manchester, Conn.
Application November 1, 1956, Serial No. 619,861
32 Claims. (Cl. 30—4)



1. An automatic can opener mechanism including a pressure shoe, a cutter, a driving wheel, a motor, means driven by said motor for causing engagement of said driving wheel with the cover securing flange of a can placed between said shoe and driving wheel to rotate the can, said means being adapted for moving the cutter into cutting engagement with the cover of said can upon the flange being engaged by said driving wheel, means operable by the cover of the can, upon the can being placed in opening position, for causing energization of the motor for an opening operation, the said latter means being operable upon severance of the cover from the can to cause de-energization of the motor and disengagement of the flange from the cutter, shoe and driving wheel.

2,896,320
HAIR CUTTING DEVICE
Alexander Caplan, Hollywood, Calif.
Application January 31, 1955, Serial No. 485,051
1 Claim. (Cl. 30—30)



A haircutting device comprising in combination, a flexible, toothed comb having three slots disposed substantially parallel to one another, and at right angles to the toothed edge, and so spaced one from the other as to register with the apertures of a safety razor blade; a lower plate having one concave face and one flat face and provided with two studs and a hole, said studs protruding beyond the surface of said concave and said flat faces, said studs and said hole being so spaced one from the other as to register with outermost apertures of said razor blade and outermost slots of said comb and an intermediate aperture of said razor blade and the center slot of said comb respectively; an upper plate having one convex face and one flat face and provided with a threaded hole located between two plain holes, said plain holes and said threaded hole being so spaced one from the other as to register with said studs of said lower plate, and said center slot of said comb, said intermediate aperture of said razor blade, and said hole of said lower plate respectively; a threaded bolt adapted to pass through said hole of said lower plate, said intermediate aperture of said razor blade, said center slot of said comb, and to engage with said threaded hole of said upper plate, thus drawing together said lower and said upper plate, said lower plate and said upper plate disposing said comb and said razor blade in a flat plane should said flat faces of said lower plate and said upper plate be face to face, otherwise said lower plate and said upper plate impart a curvature to said comb and said razor blade should said concave face and said convex face of said lower plate and said upper plate respectively be disposed face to face and drawn together by the action of said bolt in said threaded hole of said upper plate.

2,896,321
KNIFE HANDLE
Albert M. Baer, New York, N.Y., assignor to Imperial Knife Associated Companies, Inc., New York, N.Y., a corporation of Rhode Island
Application October 15, 1957, Serial No. 690,380
2 Claims. (Cl. 30—164)

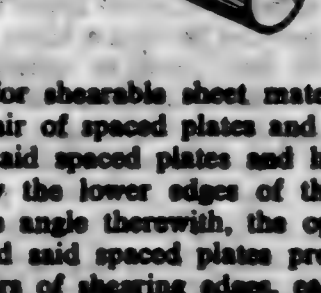
1. In combination in a knife handle, an elongated knife frame including two elongated outside lining plates, at least one narrow back spring disposed at a long edge of the frame and with said plates defining at least one elongated narrow compartment open along the other long edge of the frame, means at the ends of the frame and also adjacent the edge of the frame where the spring is located to permanently join the outer lining plates and spring to one another, at least two pins located adjacent the longitudinal central axis of the frame and spaced inwardly from the ends of the frame, means permanently rigidly and securely mounting one end of each of said pins on one of the outer lining plates to protrude perpendicularly outwardly only therefrom leaving the compartment unobstructed, a cover unit including an elongated arched outwardly convex sheet metal scale and a plastic cover sheet overlying a substantial portion of said scale and having its edges turned in to lie beneath said scale, said sheet being frictionally self-held to said scale in intimate contact therewith, the contour of said cover unit substantially matching the contour of the frame, said cover unit having matched openings in the scale and sheet through which the free ends of said pins extend, said ends of the pins being headed and pressing the cover unit, including the inturned portions of the sheet, against the one outer lining plate.

supporting means comprising a flat generally annular base, a median flange vertically attached to the base, the upper and lower surfaces and a band-like, horizontally

said pistons to align said surface portions of the same; and

degrees toward the direction of movement of said opener

2,896,322
TOOL FOR SHEARING SHEET MATERIAL
Robert W. Vess, West Springfield, Mass.
Application December 16, 1957, Serial No. 702,913
8 Claims. (Cl. 30—169)

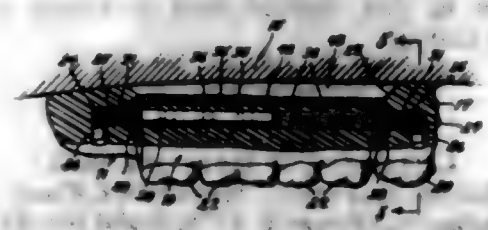


1. A cutter for shearable sheet material, said cutter comprising a pair of spaced plates and an intermediate plate between said spaced plates and having a portion extending below the lower edges of the spaced plates and at an acute angle therewith, the opposed edges of said portion and said spaced plates providing horizontally spaced pairs of shearing edges, each of said pairs of edges being vertically spaced for working on the upper and lower surfaces of a work piece, the shearing edges of said intermediate plate being concavely formed, said intermediate plate terminating in a sharp edge below said spaced plates, the end of said intermediate plate remote from said sharp edge extending beyond said spaced plates to provide a striking surface for a hammer to drive said sharp edge into a workpiece thereby puncturing same and providing for further use of the hammer to force said shearing edges against the punctured edge of the workpiece and force a strip of sheet material between said spaced plates, a handle secured between said plates and angled upwardly in a direction remote from said striking surface, said spaced plates being vertically slotted above said intermediate plate, and a spindle adapted to enter said slots, said spindle being slotted to receive the said strip, said spindle having a head adapted to be received by a ratchet wrench and rotated thereby, to wind said strip on the spindle and draw said shearing edges against said workpiece to progressively shear further strip portions therefrom, thus severing the workpiece.

2,896,323
GUIDE FOR ELECTRIC CLIPPERS
Joseph Guerra and Anthony Zemont, Crystal Lake, Ill.
Application April 22, 1958, Serial No. 730,169
3 Claims. (Cl. 30—201)

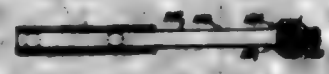
1. A guide for electric clippers having a slot therein, said guide comprising a base positioned below the clippers, said base including a front curved portion and flat side faces, there being a pair of spaced parallel grooves in the upper portion of said base, there being threaded apertures in each side of the base, a plate arranged contiguous to each side of the base, the front end of each plate being shaped arcuately, there being a plurality of spaced apart openings in each plate, a screw member extending through one of the openings and into threaded engagement with a threaded aperture, a pair of spaced apart support members each having a first portion extending through certain of the openings in said plates and seated in said grooves, each support member further including second portions arranged at right angles to said first portion, said second portions terminating in third portions, a pair of spaced parallel body members each provided with apertured ears connected to the third portions of said support members, a bar arranged contiguous to one side of the base and said bar being provided with cutouts therein for registering with the adjacent portions of the support members, a tongue extending from said bar and seated in the slot in the clippers, and a lever pivotally connected to the base, and said lever being mounted for movement into and out of locking engagement with respect to said tongue.

2,896,324
ARTIFICIAL DENTURE
Irwin J. Pletnick, Philadelphia, Pa.
Application February 28, 1957, Serial No. 643,856
9 Claims. (Cl. 32—2)



1. In a denture construction, a carrier structure having an opening adapted to be fixedly positioned in the mouth of a wearer with said opening overlying the wearer's gum, a pair of supports fixedly carried by said carrier structure at spaced locations about said opening adjacent to the gum line of the wearer, a resiliently deflectable elongate member between and having its opposite ends each extending slidably into a respective support and spaced from said gum line to afford said elongate member increased deflectability under the forces of chewing action, and at least one artificial tooth carried by said elongate member remote from said gum line, whereby said artificial tooth is mounted for resilient yieldability under the force of chewing action.

2,896,325
DRAFTING IMPLEMENTS
Richard Greubele, Ardmore, Pa.
Application July 9, 1956, Serial No. 596,635
19 Claims. (Cl. 33—27)



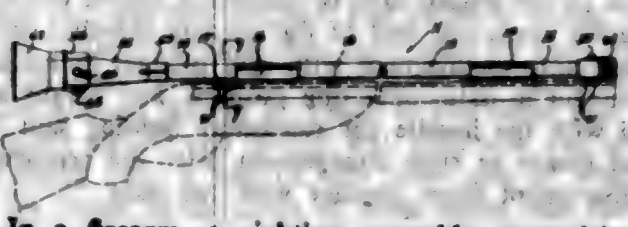
1. In combination: a beam compass, supporting means movable on drafting surfaces for spacing the compass pivot therefrom and enabling the drafting of circles of all requirable sizes, and circle center indicating means; with the beam compass comprising an initial link and extension links as required, a clamp block, a cursor block, a scriber and a pivot, scriber securing means at the cursor bottom and flanged guides on the cursor top; said links comprising elongated bars having end to end joining means, a hole extending vertically through the initial link, a hole extending through the clamp block, the clamp block fixed on top of the initial link with said holes aligned, the links traversely slidable between the cursor top flanged guides; the pivot comprising an elongated round tube, a collar affixed around the pivot and located intermediately of the pivot length, a journalling length along the pivot below the collar, the pivot extending through and clamped by said clamp block longitudinally perpendicular to the compass beam at a selected location on the pivot length, the cursor securing the scriber axially coplanarly shiftable with and parallel to the pivot; said

secondary rule means operatively connected at one end with said primary rule means and rectilinearly and pivot-

spindle, means for adjusting said sine bar on said sleeve angularly relative to the sine head, means for releasably

supporting means comprising a flat generally annular base, a median flange vertically attached to the base, the flange cut out at its lower edge adjacent to the annular base opening, the flange comprising pivot journalling means including a hole extending vertically through said flange, joining means at the flange top edge, a vertical sleeve endwise attached to a cantilever, the sleeve comprising pivot journalling means including a hole extending vertically through the sleeve, spacing means attached under the cantilever, with joining means at the lower extremity of said spacing means; the pivot journalling means comprised in the base attached median flange journalling the pivot with its axis perpendicular to the plane of the base bottom at the center of the base in a first position; the vertical sleeve endwise attached to the cantilever with sub-attached spacing means joined on the top edge of the base attached vertical median flange journalling the pivot with its axis perpendicular to the base bottom plane to one side of the base in a second position basewise; the pivot when journalled in said first position, with the initial link clamped above the pivot collar, with extension links as required joined to the initial link and to each other implementing the drafting of large circles around the base; the pivot when journalled in said second position, with the initial link clamped at the lower end of the pivot implementing the drafting of small circles to one side of the base; the initial link being of sufficient length to enable the scriber when positioned at the end of the initial link to draw circles around the base, the cantilever being of sufficient length to enable the scriber likewise positioned at the initial link end to draw entire circles to one side of the base; with the circle center indicating means comprising an elongated pin slidable within the tubular pivot, pointed co-axially therewith, and releasably securable therein.

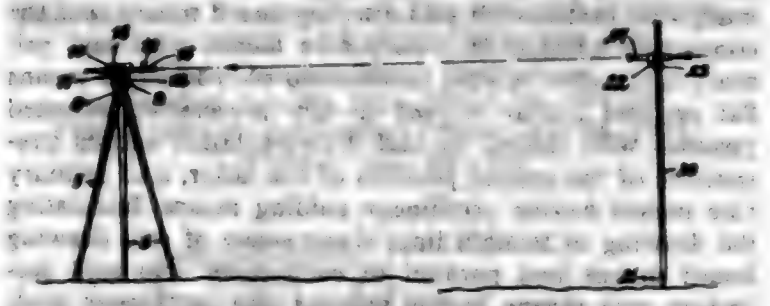
2,896,326
PRECISION GUN SIGHT
Albert J. Brünnmann, Port au Prince, Haiti
Application May 9, 1958, Serial No. 734,235
5 Claims. (Cl. 33—50)



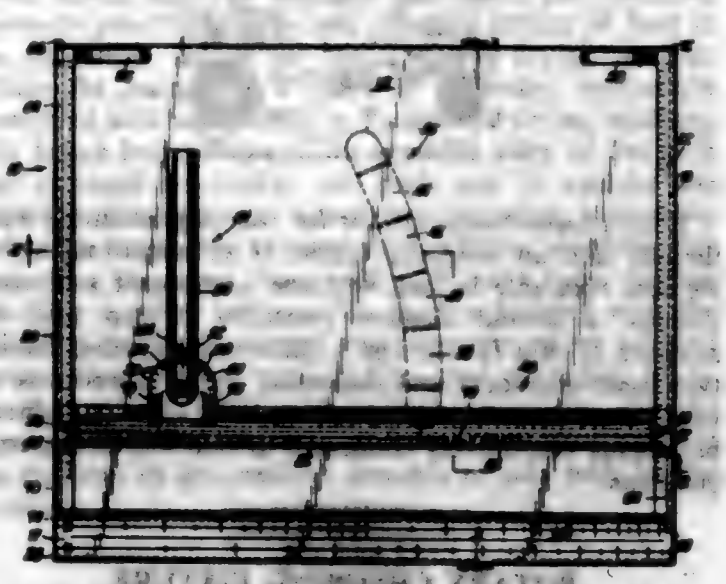
1. In a firearm, a sighting assembly comprising an elongated main tube, means supporting said main tube on the barrel of the firearm parallel thereto, an upstanding open front sight element on the top of the forward portion of said main tube, a reticle in the forward portion of said main tube and including a pair of spaced, opposing inner front sight elements, a sleeve-like auxiliary tube disposed loosely on the rear portion of said main tube, means to adjust the auxiliary tube in a plane perpendicular to the axis of said main tube, a rear sight element mounted on the top of the rear portion of said auxiliary tube, a channel-shaped member secured in said auxiliary tube and receiving the rear end of said main tube, said last-named member having a transverse end wall located rearwardly adjacent said rear end of the main tube, and a tubular rear sight member mounted in said end wall and directed substantially into said main tube towards said inner front sight elements.

2,896,327
SURVEYING APPARATUS
Bernard M. Thommen, Tonawanda, N.Y.
Application April 17, 1957, Serial No. 653,357
1 Claim. (Cl. 33—74)

Apparatus for determining elevations with reference to a datum level, comprising a table having broad, parallel upper and lower surfaces and a band-like, horizontally attenuated marginal edge of sufficient vertical thickness to be visible at a distance through a sight tube, a coat of paint on said edge contrasting with the colors of said upper and lower surfaces, means arranged to support said table at said datum level with said upper and lower surfaces level in all directions, a vertical leveling rod at the elevation to be determined, a horizontal sight tube, and means adjustably supporting said horizontal sight tube for adjustment vertically along said leveling rod whereby when said coat of paint, free from said contrasting colors, is visible through said sight tube said sight tube is at said datum level.



2,896,328
PORTABLE DRAWING BOARD
Claude Grady, Evanston, Ill.
Application August 4, 1953, Serial No. 372,362
1 Claim. (Cl. 33—80)



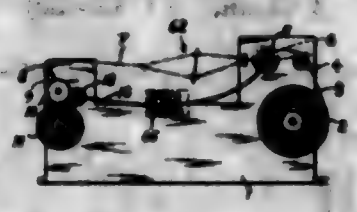
In combination, drawing board means having front and back faces, the front face presenting a planar working surface for backing a sheet of drawing paper, means permanently attached to said drawing board means and extending over a part of the front face for releasably holding a sheet of drawing paper to the planar surface of said drawing board means said means comprising spring holding means adjacent the upper edge of the board for holding the sheet in register with the board and for holding the upper part of the sheet from falling away from the board in any position thereof, finger strap means secured to the back of said drawing board means for receiving a plurality of fingers of one hand of an operator whereby said drawing board means may be held in drawing position and may also be freely carried on the said one hand of the operator both while a drawing is being made on a sheet of drawing paper with a drawing instrument held in the other hand of the operator and while the supporting hand is moved about, said drawing board means including pocket means closable and openable by one hand disposed adjacent one edge of the working surface for receiving and storing a drawing instrument, primary rule means operatively connected at its ends with said drawing board means and slidably adjustable by motion of translation over the planar working surface of the latter,

port and adapted to be maintained in engagement with tioned step and said flange measured in a direction co-

threaded aperture, a pair of spaced apart support members each having a first portion extending through certain on the pivot length, the cursor securing the scriber axially coplanarly shiftable with and parallel to the pivot; said

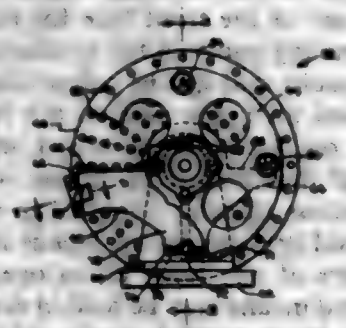
secondary rule means operatively connected at one end with said primary rule means and rectilinearly and pivotally adjustable relative to the latter over the planar working surface of said drawing board means, said primary and secondary rule means overlying said sheet and preventing the lower part of the sheet from falling away from said board in any position thereof, the connections of said primary rule means with said drawing board means and the connection of said secondary rule means with said primary rule means serving to maintain both said rule means flat on said planar surface in any preselected adjusted positons with respect to said drawing board means irrespective of the special position of the latter, said primary rule means having rectilinear guiding means facilitating the drawing of straight lines transversely of said drawing board means and parallel to each other and said secondary rule means having angular and rectilinear guiding means facilitating the drawing of straight lines at any angle to the transverse lines, and said primary and secondary rule means being adjustable by the said other hand of the operator while said drawing board means is supported on the said one hand of the operator.

2,896,329
SHRINKAGE COUNTER FOR LOOMS
Paul Szabó, Montreal, Quebec, Canada
Application March 31, 1958, Serial No. 725,865
20 Claims. (Cl. 33—129)



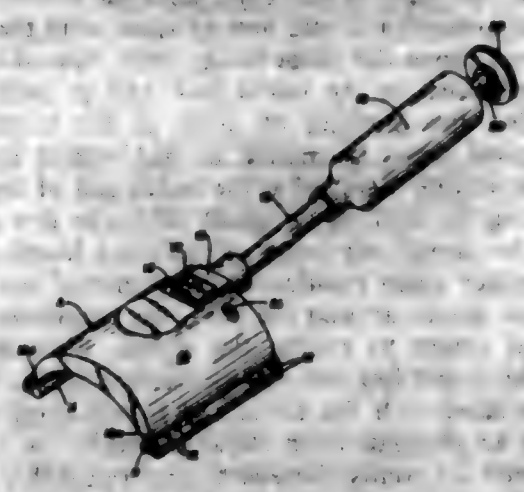
1. In a loom having means for weaving incoming warp threads into an outgoing fabric, in combination, a first element rotatable in step with the advance of said warp threads, a second element rotatable in step with the advance of said fabric, and a differential counter having two input members and indicating means responsive to relative motion of said input members, said input members being respectively connected to said first and second elements.

2,896,330
ROTARY CHECKING FIXTURE
Daniel R. Powell, Robbinsdale, Minn.
Application January 23, 1957, Serial No. 635,749
4 Claims. (Cl. 33—174)



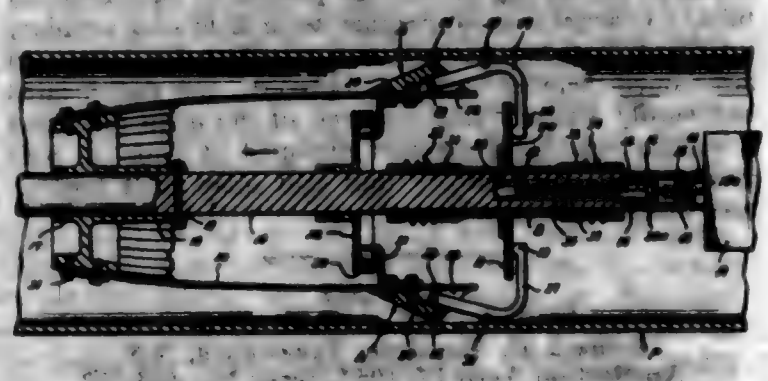
1. In a rotary checking fixture, the combination of a supporting frame including a pair of spaced supporting members and a tubular sleeve extending therebetween, a spindle rotatable in said sleeve and projecting at both ends therefrom, a disc-shaped sine head secured to one end and a work plate secured to the other end of said spindle, for rotation therewith, a sine bar rotatably positioned on said sleeve adjacent said sine head and including a pair of arm portions having locating surfaces disposed in a common plane at opposite sides of said spindle, means for adjusting said sine bar on said sleeve angularly relative to the sine head, means for releasably locking the sine head to said sine bar, and an indexing pin carried by said sine head, said common plane of said locating surfaces of the arm portions of said sine bar being parallel to but spaced away from a plane diametrically intersecting said spindle by a distance equal to one-half the thickness of said indexing pin, whereby said pin may be selectively engaged with said locating surfaces of the sine bar to selectively locate said work plate in two positions spaced 180 degrees apart.

2,896,331
DEVICE FOR MEASURING THE DIAMETER OF A RAILWAY CAR AXLE IN AN AXLE BOX
John C. Horst, Adams County, Colo.
Application May 13, 1955, Serial No. 508,238
10 Claims. (Cl. 33—178)



1. An instrument for accurately measuring the outside diameter of an object of round cross section, such as that portion of a railway car axle disposed within an axle box, comprising an arcuate member adapted to contact the axle at spaced lines, a spring-urged plunger carried by said member and engageable with said axle within the area defined by the spaced lines of contact, a handle extending outwardly from one end of the arcuate member, means movable into engagement with said plunger to maintain the plunger in axle-contacting position, and means associated with the handle for releasably holding said first-named means in such engagement after the removal of the instrument from contact with the axle.

2,896,332
APPARATUS FOR DETECTING IRREGULARITIES IN SURFACES
William A. Elston, Lorin A. McElwee, Jerry W. Moore, Jr., and William C. Tessarin, Jr., Shreveport, La., assignors to United Gas Corporation, Shreveport, La., a corporation of Delaware
Application June 27, 1955, Serial No. 518,682
22 Claims. (Cl. 33—178)

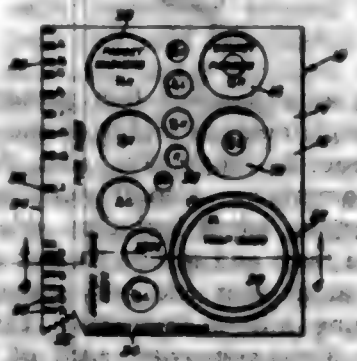


10. An apparatus for detecting irregularities in the internal surface of a tubular member including, a support, a plurality of probing units mounted on said sup-

side the drum and band and furnishing moisture evapo- secured to the upper end of said finger, a globe having

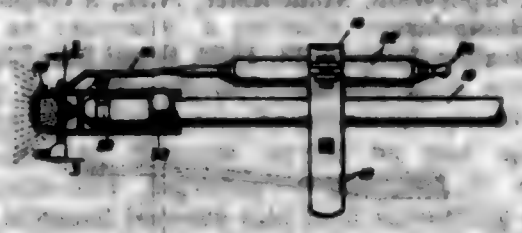
port and adapted to be maintained in engagement with the wall of said tubular member as the support is moved therethrough, each probing unit including a reference element which rides upon the internal wall of the tubular member and a detection element capable of independent movement with respect to the reference element, said detection element engaging the surface under investigation at a point spaced from the area of contact between its reference element and said surface whereby when the detection element contacts an irregularity in the wall surface said detection element undergoes movement relative to the reference element to indicate the presence of said irregularity, and means for recording the movement of the detection element and also for recording the extent of said movement with respect to the reference element to record the extent of the irregularity encountered by the detection element.

2,896,333
SIZING GAUGE FOR HARDWARE ITEMS
Stanley E. Kivela, Fond du Lac, Wis.
Application April 9, 1957, Serial No. 651,789
1 Claim. (Cl. 33—178)



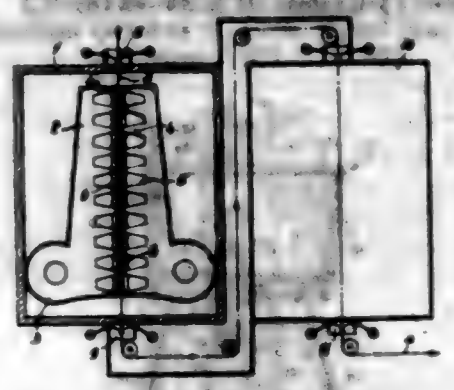
A gauge comprising the combination of a panel that has two surfaces and a plurality of edges, one surface of said panel having recesses opening therethrough and extending only partially through said panel to accept items that are to be sized along their outer edge for both dimension and shape, one edge of said panel having concentric arcuate grooves therein by which to size items that have an arcuate section and specific wall thickness, and projections rising from a part of said panel and on which to size the inside of the same or other items that have an arcuate section.

2,896,334
DOMESTIC OIL BURNER ELECTRODE GAUGE
Fred J. Dunderman, Antwerp, Ohio
Application April 2, 1958, Serial No. 725,963
6 Claims. (Cl. 33—180)



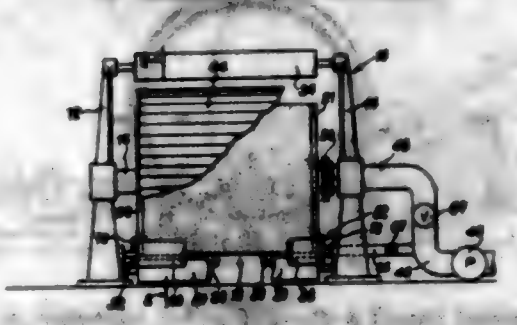
1. A gauge for adjusting a pair of electrodes with respect to the discharge nozzle of a fuel burning apparatus, said gauge comprising a tube having an open end, means constituting a stop in the bore of said tube and adapted to abut the outer end of the nozzle when the tube is fitted over the nozzle by sliding the tube so that the nozzle enters said open end of said tube, a flange on said tube and extending laterally therefrom, said flange constituting a stop against which the outer ends of the electrodes are adapted to abut, the distance between said first mentioned stop and said flange measured in a direction coaxial with the nozzle axis being the desired distance for the electrodes to be with respect to the nozzle spray pattern.

2,896,335
DRYING OF FABRICS, PAPERS, CARDBOARDS, AND OTHER LENGTHY MATERIALS
Julien Dunoyer, Basel, Switzerland
Application July 24, 1956, Serial No. 599,845
Claims priority, application France July 28, 1955
7 Claims. (Cl. 34—68)



1. Drying apparatus comprising an enclosure for accommodating material to be dried, the material having a determinable path of travel in the enclosure, radiating elements adapted for being heated and operatively disposed along opposite sides of said path, the radiating elements constituting the sole effective source of heat in the enclosure, means for circulating a drying medium within the enclosure, a plurality of boxes operatively associated with said means to receive the drying medium, said boxes being disposed on opposite sides of the path and arranged to confine the path and to enclose the radiating elements, said boxes each including a plurality of nozzles interposed between said radiating elements and supporting the same along said path, said boxes further including sections between the nozzles defining with the radiating elements enclosed discharge chambers adapted for the discharge of said medium and extending transversely of said path, said radiating elements defining openings coupling said path and discharge chambers for the removal of the medium brought to said path by the nozzles.

2,896,336
APPARATUS FOR DRYING WEB MATERIAL
Nicholas Shemanski, Bedford, N.Y., assignor to West Virginia Pulp and Paper Company, New York, N.Y., a corporation of Delaware
Application April 11, 1957, Serial No. 652,302
15 Claims. (Cl. 34—86)



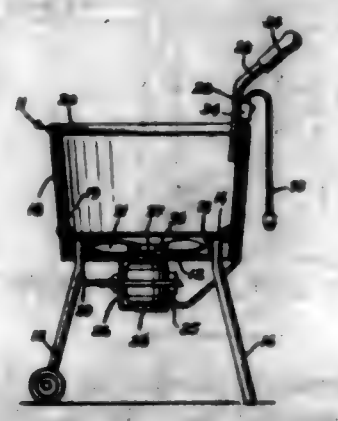
1. Apparatus for drying web material by evaporation comprising, in combination, a hollow rotary drum having a steam permeable circumferential zone, a uniformly thin, impermeable, endless heat conducting band running on the drum in unison therewith for conducting a web to be dried part-way around the drum between itself and the drum, the band being wide enough to cover the permeable zone of the drum and prevent access of air to the band covered area of the web and the passage of air into the drum, external heating means located out-

2,896,341

projecting outwardly from said shaft, said shaft extend-

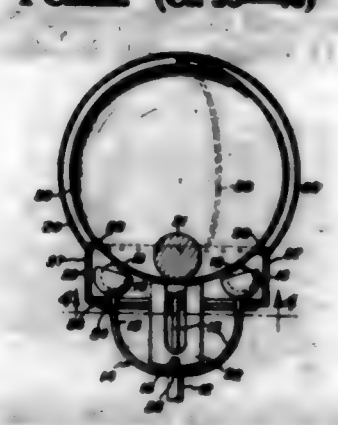
side the drum and band and furnishing moisture evaporating heat to the web through the band, means for sealing against ingress of air the arc of the drum which is not covered and sealed by the band, and means for conducting away from the drum the substantially pure steam delivered to the interior of the drum from the web.

2,896,337
EGG DRYER
Lawrence D. Blythe, White City, Kans.
Application February 21, 1958, Serial No. 716,733
1 Claim. (Cl. 34—218)



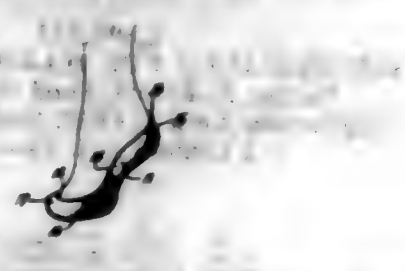
An egg dryer comprising a frame having a plurality of depending supporting legs, a receptacle mounted on said frame, said frame including a generally circular ring member having a horizontal outwardly extending annular top flange and an annular short depending vertical inner skirt portion defining an air intake duct open at its bottom, and a plurality of parallel grill bars secured on said top flange in spaced parallel relationship, defining a horizontal bottom grill assembly, an upwardly flaring annular shell member extending around said bottom grill assembly and completely housing and secured to said circular ring member in the lower portion thereof, and an air blower mounted vertically on said frame beneath said bottom grill assembly, said air blower being arranged substantially coaxially with said shell member and including a multiple-bladed horizontal propeller located immediately subjacent said bottom grill assembly and disposed completely within said vertical skirt portion.

2,896,338
SATELLITE GLOBE
Maurice E. Peterson, North Muskegon, Mich.
Application April 8, 1958, Serial No. 727,154
1 Claim. (Cl. 35—46)



In a device of the character described, a base, a post extending upwardly from said base, a finger extending upwardly from said post, a support unit including a central bushing connected to said finger, a plurality of spaced apart arms extending upwardly and outwardly from said bushing, cup shaped members on the upper ends of said arms, ball bearings arranged in said cup shaped members, ball pieces seated in said cup shaped members and engaging said ball bearings, a magnet secured to the upper end of said finger, a globe having indicia thereon movably supported on said ball pieces, a ball member arranged in said globe for coaction with said magnet, a ring surrounding said arms and secured thereto, a rotary body member including a lower flange arranged above said ring, said body member further including a cylindrical collar extending upwardly from said flange, there being a plurality of spaced apart apertures in the upper portion of said collar, and guide members arranged adjacent the outer periphery of the globe, said guide members having their lower end portions engaging said apertures.

2,896,339
FOOT PROTECTOR
Albert Rabinowitz, Philadelphia, Pa.
Application February 28, 1955, Serial No. 490,247
1 Claim. (Cl. 36—10)



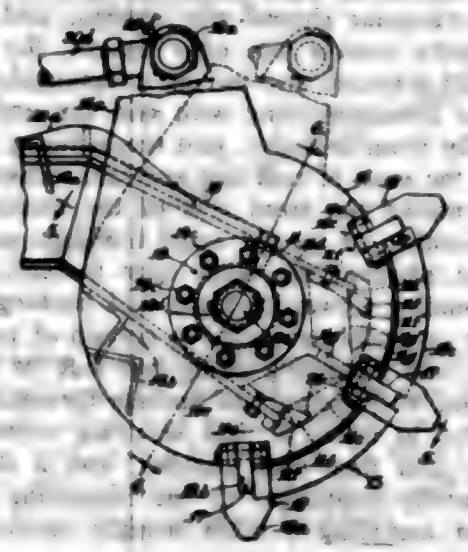
A blank for an expansible foot protector comprising an elongated single piece of highly elastic textile material symmetrical about its longitudinal axis, the perimeter of said blank comprising smoothly-continuous merging edges, said merging edges including side edge portions slightly concave from end to end thereof and each merging outwardly at its rear end into a blunt convex rear corner continuing into a transverse rear edge portion having a very slight concavity, each of said side edge portions merging outwardly at its forward end into a blunt convex forward corner continuing into a forwardly extending blunt toe portion terminating on the longitudinal axis of said blank in a slightly pointed portion, the transverse maximum width across said rear corners being less than the maximum transverse width across said forward corners and greater than the minimum transverse width across said side edge portions, whereby an elastic cord secured at and continuously around the perimeter of said blank will draw the edges thereof together to form a continuous seamless foot-enclosing portion conforming smoothly and closely to the natural contour of those portions of a user's foot normally subject to chafing when a shoe is worn and providing an expansible opening into which the user's foot may be readily inserted.

2,896,340
PLATFORM UNIT FOR SHOES
George Browning, Jr., Hooksett, N.H., assignor to B.G.S. Shoe Corporation, Manchester, N.H., a corporation of New Hampshire
Application January 28, 1958, Serial No. 711,666
2 Claims. (Cl. 36—30)

1. A platform unit for shoes comprising a laminated body of fiber and sponge rubber plies having a thick wedge heel seat portion, a body cover of sheet material registering in contour with the heel seat and shank portions of said body and enlarged in its forepart to include a lasting allowance which is wrapped about the forepart thereof, and a cover strip stitched to the body cover about the margin of its heel seat portion and wrapped about the wedge heel seat portion of the laminated platform body.

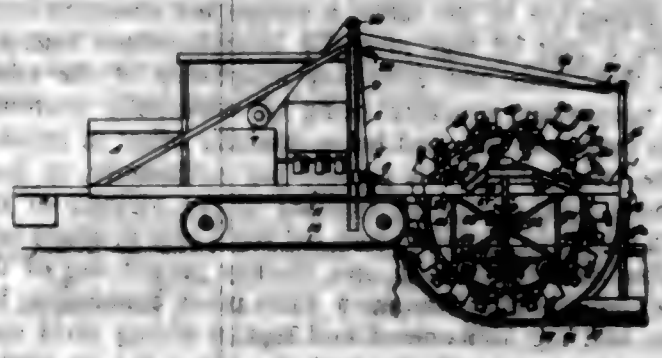
are adapted to abut, the distance between said first mem- air into the drum, external heating means located out-

2,896,341
DREDGE
Ray Chance, Lexington, Ind.
Application April 25, 1955, Serial No. 503,390
5 Claims. (Cl. 37—58)



1. In a suction dredge, a suction tube having an open end with a rectangular cross section, a pair of reinforcing lips, one each removably secured to an opposite edge of said open end, said lips having a laterally enlarged outer end and being mounted on the suction tube so that the minimum spacing between the lips occurs at the outer end, a crushing bar extending transversely across said tube and spaced between and parallel to said lips within said open end, a crushing block extending generally parallel to the crushing bar and exteriorly of said open end adjacent the crushing bar, and means for oscillating the crushing block laterally relative to the crushing bar to alternately space and juxtapose said bar and block for crushing matter lodged between said crushing bar and said lips.

2,896,342
EXCAVATING MACHINE
Francis M. Reising, Edinburg, Tex.
Application July 15, 1953, Serial No. 368,065
9 Claims. (Cl. 37—97)

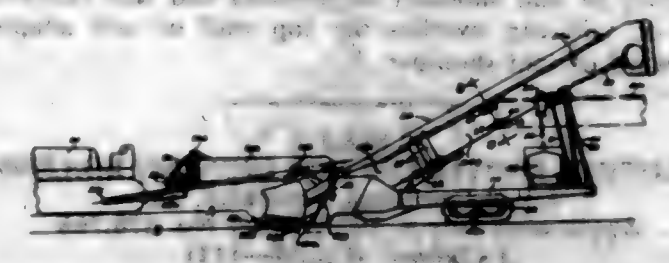


1. In an excavator, a portable power driven tractor assembly including a frame having laterally extending inwardly converging arms, spaced uprights mounted on the tractor assembly, vertically adjustable spaced swinging load supporting elements carried by said uprights, a rotary excavator including a plurality of excavator buckets mounted between said load supporting elements, a laterally extending material conveyor carried by said supporting elements for removing earth from said rotary excavator, digger members mounted on said excavator and projecting laterally of the excavator buckets and interposed therebetween for undercutting the walls of the trench formed by said rotary excavator, and diverging side slope cutters mounted on the frame, said side slope cutters being supported at their lower ends in bearings supported by said frame, and including a shaft and spirally arranged earth working elements, said elements projecting outwardly from said shaft, said shaft extending above the frame to the outer extremities of the inwardly converging arms and including a fluid motor assembly for rotating said shaft, means for applying hydraulic pressure to said fluid motor for rotating said shaft, and screeding plates supported rearwardly of said diverging side slope cutters, said screeding plates being adjustably supported from said frame.

2,896,343
ATTACHMENT FOR BULLDOZER MOLDBOARDS
Claude H. Raby, Knoxville, Tenn.
Application October 9, 1956, Serial No. 614,910
4 Claims. (Cl. 37—98)

1. An attachment for the moldboard of a bulldozer, comprising a frame having a pair of laterally spaced uprights, means on said frame defining an upwardly opening notch for the reception of the lower end of said moldboard, a unitary clamp slidably mounted on said uprights and including a pair of laterally spaced gripping members for engaging the upper end of said moldboard, a single screw fixed to said frame and extending upwardly substantially parallel to said uprights through an opening in said clamp, a wing nut threaded on said screw above said clamp for urging said clamp downwardly to clamp said moldboard between said notch and said gripping members, and a blade on the lower end of said frame.

2,896,344
LOADER-ARTICULATED FRAME
George R. Armington, South Euclid, Ohio, assignor, by mesne assignments, to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 27, 1953, Serial No. 351,448
3 Claims. (Cl. 37—110)



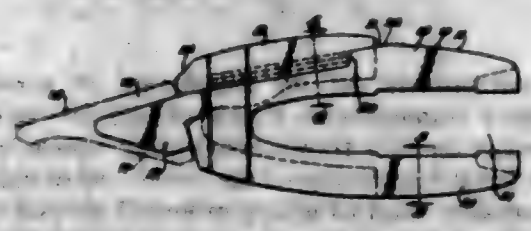
1. In a conveyor loader having a frame having a blade means with a cutting blade at its forward end for ground engagement, said cutting blade having a generally vertical cutting portion located generally on one side of the longitudinal central axis of said frame extending in the direction of travel of said conveyor loader frame for active cutting, conveyor means on said frame positioned to receive and transport earth cut by said blade means and extending upwardly from said blade means, rolling support means on the frame to the rear of said blade means for supporting said frame for movement along the

tending from one end of the housing and to another po- hold an inserted transparency slide transversely across said

members and engaging said ball bearings, a magnet nated platform body.

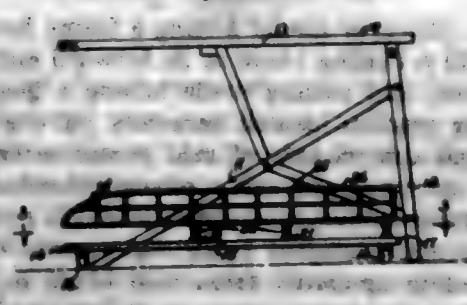
ground, and means for supporting the front of said frame, said last-mentioned means including a drawbar on said frame adapted to be secured at its leading end to a tractor for supporting the forward end of said drawbar; the combination therewith of first and second rolling support means on said frame, said first rolling support means being substantially in the path of travel of said cutting blade, said second rolling support means being laterally spaced from said path but parallel thereto, offset attachment means between said drawbar and frame located between the longitudinal central axis of said frame and said second rolling support means generally on that side of the longitudinal central axis of said frame opposite that of said vertical cutting blade portion so that the space above the lower end of said conveyor means adjacent said blade vertical cutting portion is unobstructed to permit cutting at substantial vertical depths into a hillside, to obtain a good mixture of a large number of strata and so that the operator's view of said cutting is unobstructed, and said attachment means including pivotal connecting means between said drawbar and said frame member.

2,896,345
TOOTH ASSEMBLY
William P. Pekiay, Vancouver, Wash., assignor, by mesne assignments, to Electric Steel Foundry, Portland, Oreg., a corporation of Oregon, now by change of name to Electric Steel Foundry Company
Application July 23, 1954, Serial No. 445,337
4 Claims. (Cl. 37—142)



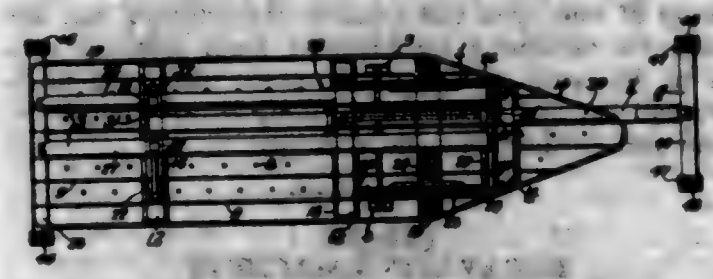
1. In a tooth assembly, an adaptor for mounting on the lip of digging apparatus, or the like, said adaptor terminating forwardly in a nose portion adapted to receive a point thereon, a point on said nose portion and removable therefrom by forwardly exerted pressures, said adaptor having a longitudinally-extending tongue integral with the top wall thereof and forwardly terminating a spaced distance from the rearward end of said point, said adaptor having a vertically-extending shoulder in the top wall thereof at the rearward end of said tongue, and a wear-resistant cap provided in its bottom wall with a longitudinally-extending slot open at one end for slidably receiving said tongue therein, the slot-defining side walls of said cap terminating a spaced distance from the rearward end thereof, whereby a step portion complementary to said shoulder is provided and said rearward end of said cap overlies the top wall of said adaptor rearward of said shoulder.

2,896,346
CLOTHES PROTECTOR FOR IRONING BOARDS
Louis Cambanis, Sewickley, Pa.
Application July 9, 1957, Serial No. 670,766
3 Claims. (Cl. 38—111)



1. In a clothes protector for use with an ironing board of the type including a top piece and front and rear legs, a horizontally disposed platform, said platform being wider than the top piece of said ironing board, said platform including a major portion of rectangular formation and an end of said platform being rounded, the rounded portion of said platform having a transversely extending rectangular shaped slot therein, said slot extending inwardly from a side edge thereof, the rounded portion of said platform also having a rectangular shaped recess therein communicating with said slot and extending rearwardly from said slot, said recess being arranged intermediate the ends of said slot and said recess and slot adapted to receive the front legs of the ironing board therein, a plurality of spaced apart bushings secured to said platform adjacent the outer edge thereof, securing elements extending upwardly from said bushings, a first wall member pivotally connected to certain of said securing elements and extending along one side of the platform, a second wall member of arcuate formation pivotally connected to other of said securing elements and spaced from said first wall member, and a third wall member pivotally connected to the remaining securing elements and including a main straight section and a front curved section.

2,896,347
IRONING TABLE
Harvey E. Hartman, Jr., Southampton, Pa., assignor to Procter Electric Company, Philadelphia, Pa., a corporation of Pennsylvania
Application April 12, 1956, Serial No. 155,436
15 Claims. (Cl. 38—121)



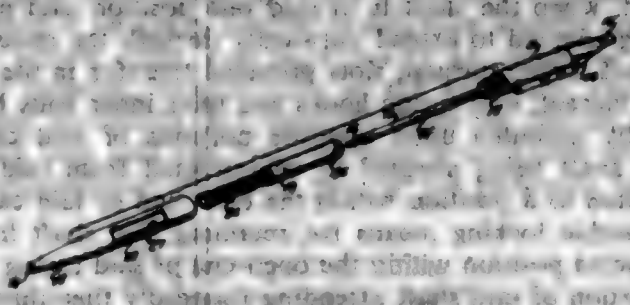
14. In an adjustable and collapsible ironing table, a relatively long and narrow table top to be positioned at various heights, including low heights for sit-down ironing, during use of the table, a supporting structure comprising a pair of legs pivotally interconnected intermediate their ends and extending lengthwise of the table, said supporting structure being of sufficiently narrower width than said top, and being laterally offset in relation to the longitudinal axis of said top sufficiently, at least in those portions to be disposed in the vicinity of the user's knees, to provide room for the knees opposite said portions beneath the top and thereby permit use of the table for sit-down ironing, a fixed pivot connection between said top and one of said legs, a sliding pivot connection between said top and the other leg to enable adjustment and collapse of the table, manually-controllable means for retaining the slidable pivot in different positions when the table is set up for use, enabling the positioning of said top at various heights including low heights for sit-down ironing, and foot portions on said legs constructed to provide stable support for the ironing table despite the aforementioned laterally offset relation.

2,896,348
WRITING IMPLEMENT
William L. Herne, White Plains, N.Y.
Application March 4, 1957, Serial No. 643,892
12 Claims. (Cl. 40—19)

1. A writing implement comprising an elongated outer housing, a writing element reciprocably mounted in said housing and movable to one position with a portion ex-

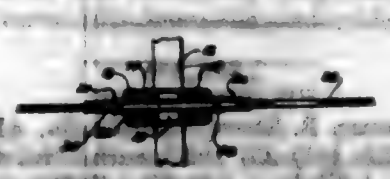
rearwardly portions of said shaft extend outwardly of

tending from one end of the housing and to another position position wholly within said housing, a cylindrical indicia carrying member slidably mounted in said housing and surrounding said element, a spring coaxially carried by said cylindrical member and extending therefrom, said spring engaging said housing, cooperating



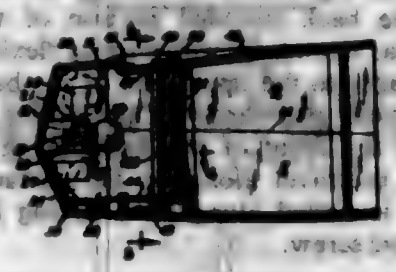
means between said element aand cylindrical member, means for moving said element in said one direction for longitudinally displacing said member and compressing said spring, said spring functioning to return said member to said other position and means in said housing for viewing said indicia carrying members.

2,896,349
ADVERTISING SPINNER
Lawrence R. Morrison, Detroit, and Erik E. Erikson, St. Clair Shores, Mich.
Application September 16, 1957, Serial No. 684,087
1 Claim. (Cl. 40—39)



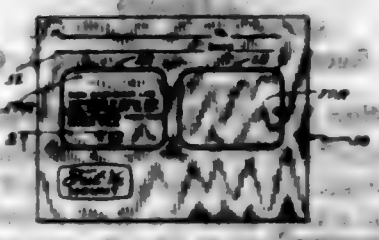
An advertising spinner adapted to rotate on a cable comprising centrally apertured hub and a plurality of spaced angularly related blades projecting radially therefrom, a pair of longitudinally spaced nylon bushings snugly projected into opposite ends of said hub, a tubular metallic bearing loosely positioned through said bushings and projected beyond their outer ends, adapted for slidable positioning upon said cable, and a pair of flanged eyelets positioned over opposite ends of said bearing with their flanges loosely engaging outer ends of said bushings, said eyelets and radially adjacent portions of said bearing being crimped inwardly securing said eyelets to said bearing and said bearing to said cable.

2,896,350
TRANSPARENCY VIEWING DEVICE
Kenneth R. Golden, Portland, Oreg., assignor to Sawyer's Inc., Progress, Oreg., a corporation of Oregon
Application October 21, 1955, Serial No. 760,711
5 Claims. (Cl. 40—63)



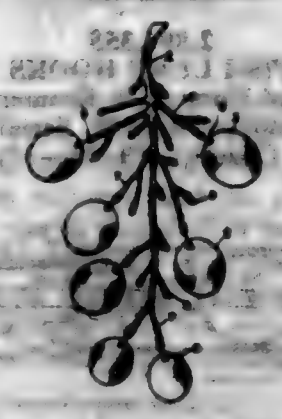
1. A transparency viewing device comprising a casing having a transverse slot in one wall through which a transparency slide may be inserted and withdrawn, illuminating means mounted in said casing and comprising a light bulb, a battery, and conductive circuit means between said bulb and said battery and including a spring contact switch, slide guiding means in said casing to hold an inserted transparency slide transversely across said casing, a light diffusing plate, plate guiding means parallel to said slide guiding means and closely adjacent thereto to hold said plate for limited movement in the direction of movement of said slide, a portion of said plate projecting through said casing wall closely adjacent said slot, an ejector spring in said casing opposite said slot in position to be engaged by the edge of an inserted slide, said ejector spring also engaging an edge of said plate to hold said plate in an elevated position, said ejector spring normally holding the upper edge of an inserted above the upper edge of said plate whereby the slide may be grasped to effect its withdrawal from the casing, and means on said plate to depress and close said spring contact switch when said plate is manually depressed against the force of said ejector spring.

2,896,351
PICTURE MOUNT
Ralph L. Johnson, Wheaton, Ill.
Application May 29, 1958, Serial No. 738,888
2 Claims. (Cl. 40—158)



1. In a mount for photographic transparencies, a transparent flexible base sheet having a transparent coating of pressure-sensitive adhesive on one face thereof, a flexible cover sheet having one face provided with means to provide a low degree of adhesion between said one face and said adhesive, said cover sheet being laminated to said base sheet with said one face of the cover sheet adhered to said adhesive, said cover sheet having at least one separable section defined by a separation line so that the separable section may be removed to expose a mounting area having said pressure-sensitive adhesive retained thereon and exposed for retaining engagement with a photographic transparency of a size corresponding to said separable section.

2,896,352
ARTIFICIAL ARTICLES IMITATING NATURAL ARTICLES
Arvid Strauss, Chicago, Ill., now by change of name, Arvid Marie
Application April 14, 1958, Serial No. 728,336
8 Claims. (Cl. 41—10)



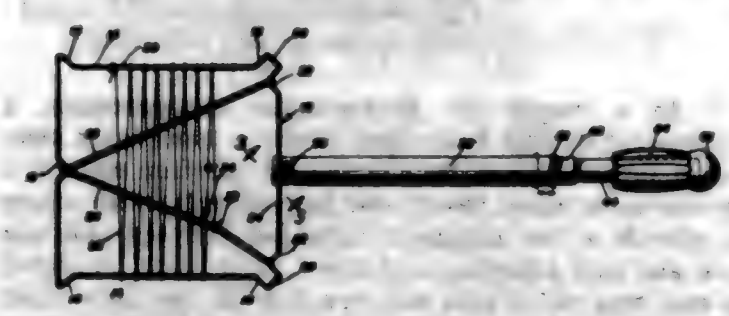
1. An imitation of a bunch of grapes comprising a plurality of closed hollow bodies of plastic simulating grapes and a plastic stem, each body having a socket at one end thereof, said stem having a plurality of branches, each branch having a button on the end thereof adapted to be detachably received in a socket of a hollow body.

of the type including a top piece and front and rear legs, housing and movable to one position with a portion ex-

2,896,353
RESILIENT RELOADING CLIP FOR REVOLVERS
John M. Hunt, San Mateo, Calif.
Application April 16, 1956, Serial No. 578,462
10 Claims. (Cl. 42—89)

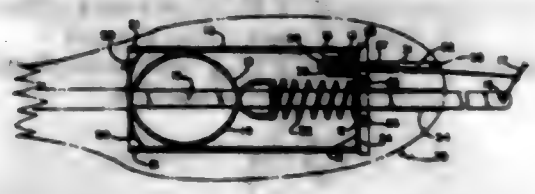
1. A reloading clip for revolvers, comprising a resilient cup having annular sides, a closed bottom and an open top, said cup having a substantially flat bottom outside surface, said surface containing a plurality of recesses each adapted to receive the butt end of a revolver cartridge, said recesses being arranged in a circle holding a plurality of cartridges in position for simultaneous insertion into the cylinder of a revolver.

2,896,354
SPORTING TACKLE
Willis E. Reed, Cicero, and Ralph J. Cummings, Berwyn, Ill.
Application May 19, 1955, Serial No. 509,542
4 Claims. (Cl. 43—21)



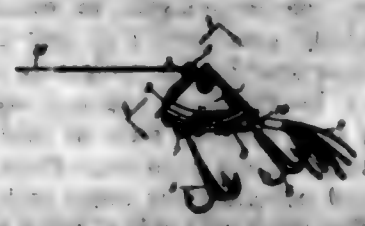
1. In a fishing tackle, an exposed flat reel, a fishing line wound on the reel, a rod engaged on end of the reel, a handle surrounding the rod, a spring to rewind the line on the reel as unwound therefrom and also surrounding the rod and attached at opposite ends to the rod and to the handle for rotating the reel relative to the handle and automatically rewinding the line on the reel as much as unwound therefrom, a release sleeve mounted on the outside of the handle and movable longitudinally thereof, ratchet teeth at the end of the handle to engage the reel, the release sleeve being manually movable longitudinally with respect to the handle by contacting the sleeve at the end opposite the ratchet for disengaging the reel from the ratchet teeth.

2,896,355
FISH LURE HOOKS
Gilbert L. Dean and Howard O. Kramer, Spokane, Wash.
Application October 30, 1956, Serial No. 619,218
2 Claims. (Cl. 43—35)



1. A hidden fish hook mechanism for fishing lures or the like comprising a hollow casing open at the rear end and being formed with a forward end closure, said end closure having a central opening therethrough, an elongated shaft slidable through said opening longitudinally of said casing, said shaft being of greater length than said casing and in one position thereof forwardly and rearwardly portions of said shaft extend outwardly of said casing, means for retaining said shaft in said one position comprising a collar secured to said shaft intermediate the ends thereof and a coil spring sleeving said shaft intermediate said collar and said closure, at least two oppositely disposed spring hooks connected to said shaft, when the shaft is in said one position said hooks being adapted to extend outwardly through the open end of said casing through slots provided therefor in the rear end thereof, said spring hooks and their inner ends being fixedly mounted upon opposite portions of said collar, said shaft being adapted to be retracted from said one position to a position within the open end of said casing, releasable locking means for retaining said shaft in the retracted position within the open end of said casing with a portion of said shaft extending forwardly therethrough, and trigger means adapted to be actuated upon the fish striking for releasing said locking means, said shaft when in the retracted position drawing said spring hooks inwardly of said casing, said locking means comprising a pair of elongated strips positioned across the outer face of said casing closure on opposite sides of said shaft, a pair of coil springs interconnecting said strips on opposite sides of said shaft whereby to urge the same thereagainst, said strips at their central portions having rectangular oppositely disposed cutouts on their inner faces, said shaft on opposite sides being formed with oppositely disposed notches adapted to receive said cutout portions therewithin whereby to retain the shaft in the retracted position against the action of said coil spring.

2,896,356
FISHING LURE
Truman B. Shaw, Montevallo, Ala.
Application July 22, 1957, Serial No. 673,262
1 Claim. (Cl. 43—42.28)

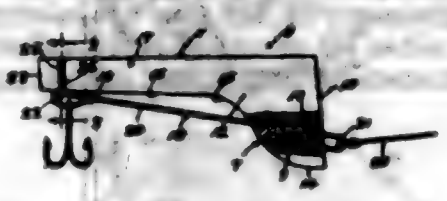


A fishing lure of the character described comprising, a main body, said body having a front and a top flat surface which meet to form a substantial right angle and an arcuate shaped back portion which joins said front and top surfaces, said body being made of semi-hard material of a consistency to receive and hold screws, a metal plate attached to the front of the body so as to extend beyond the sides thereof, the side extensions of the plate being bent at approximately 90 degrees away from the body, an eye screw attached in the upper end portion of the plate and body, said eye screw being adapted for the end of a fishing line to be removably attached thereto, a plurality of fishing hooks swingably attached on the back rounded portion of the body, a cluster of similar strands of water proof flexible material attached swingably to the upper end of the back rounded portion of the body rearwardly of the fishing hooks, said metal plate on the front of the body being adapted to cause the lure to travel along on the surface of water when the lure is pulled along by a fishing line end attached in said eye screw.

2,896,357
FISH LURE
Robert A. Kurtz, Ohiopyle, Pa.
Application September 26, 1958, Serial No. 763,534
6 Claims. (Cl. 43—42.36)

1. A fish lure comprising an elongated lure body having a forward portion constituting a head and a rear

portion constituting a tail, said head being of greater width and substantially greater thickness than the tail and having a substantially flat front side forming the face of the lure body, said lure body having a substantially flat upper side extending from end-to-end thereof and disposed at an angle, relative to said face, slightly greater than a right angle, said head having an underside convexly rounded, longitudinally of the lure body, and extending rearwardly and upwardly from the bottom edge of said face, said lure body including a concavely rounded longitudinally extending part of the underside form-



ing a continuation of the rounded underside of the head, a line engaging loop partially embedded in said head and having a forward end projecting forwardly from said face, near the bottom edge thereof, a hook attaching loop disposed beneath the rear portion of the tail, and means anchoring said hook attaching loop to the tail, said loops constituting end portions of a wire strand including a substantially straight intermediate portion extending between and connecting said loop and having a forward part embedded in and extending longitudinally through the head and outwardly from the underside thereof.

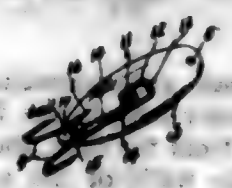
2,896,358
FISHING RIG
Arlan E. Strausser, Reading, Pa.
Application May 24, 1956, Serial No. 586,987
5 Claims. (Cl. 43—42.72)

1. A fishing rig in the form of an isosceles triangle comprising a pair of angularly disposed, spring wire portions, each having an intermediate, integral, helically coiled portion forming one of the pivotal corners of the triangle which is attachable to a hook, the base of said triangle having a central helically coiled portion which is attachable to a sinker, the apex also being helically coiled and which is attachable to a line, whereby a slight pull on the apex will raise said pivots without raising said central coiled portion.

2,896,359
FISHHOOK
Camille Lauzon, Front, N.Y.
Application January 22, 1957, Serial No. 635,448
1 Claim. (Cl. 43—43.16)

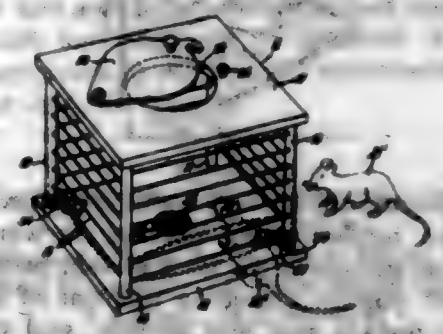
In combination with a fish hook having a shank, a bill, a point and a barb, a one-piece barb guard of substantially the same shape as the fish hook including an upper tubular portion sleeved on the hook shank, an intermediate tapered section tapering longitudinally throughout its length, said tapered section being bent longitudinally to conform to the curvature of the hook bill and bent transversely to extend partly around said hook shank and lie in contiguous relationship with the inner face of the hook bill, when the guard is in inoperative position, and a terminal portion issuing from said tapered section, said barb guard being movable as a unit to bring said terminal portion thereof into engagement with the hook barb and thereby render the barb inoperative.

2,896,360
COMBINATION FISH HOOK AND BAIT HOLDER
John G. Lucas, Saginaw, Mich.
Application January 23, 1956, Serial No. 560,694
7 Claims. (Cl. 43—44.2)



1. A combination fish hook and bait holder, comprising a hook portion and a shank, the upper end of the shank being coiled to form a spring, thence leading downwardly and being turned, with the turned portion bearing against the shank of the hook, to yieldably hold a bait therebetween, a portion of the downwardly extending section projecting upwardly beyond the coil to form a rest to facilitate swinging said turned portion away from said shank to remove or admit the bait therebetween when downward pressure is exerted on said rest.

2,896,361
RAT TRAPS
Thomas E. Allen, Syracuse, N.Y.
Application June 18, 1957, Serial No. 664,678
9 Claims. (Cl. 43—131)



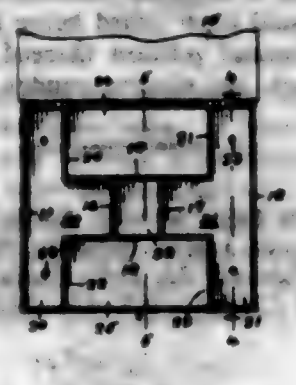
1. A rodent trap comprising a base plate having corners, four corner posts flexibly mounted on said base plate and extending upwardly therefrom, a cover having an aperture therein and mounted on said corner posts, rodent destroying means mounted in the middle of said base plate, and spaced wires connecting said flexibly mounted corner posts providing variable entrance openings for rodents therebetween but preventing large animals from reaching said rodent destroying means.

2,896,362
POISON BAIT MOUSE AND RAT EXTERMINATOR
Mary K. Wingate, Cincinnati, Ohio
Application August 13, 1958, Serial No. 754,794
1 Claim. (Cl. 43—131)

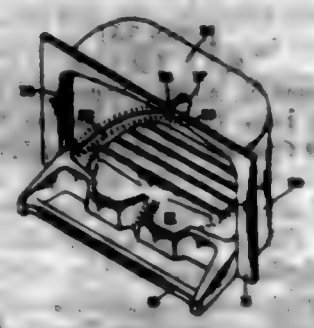
In a poison bait rodent exterminator, the combination which comprises a base, front, rear, and end walls extended upwardly from the base, the front and rear walls having openings extended therethrough providing pas-

sound parallel edges, a first pair of journal bosses secured to said toy vehicle for controlling the movement and

cages for rodents, a water tank having side and end walls positioned on the center of the base and with the walls thereof extended upwardly from the base to points spaced downwardly from upper edges of the front, rear and end walls extended upwardly from the base, the side walls of the water tank being extended beyond the end walls thereof, intermediate end walls positioned between the end walls of the water tank and end walls extended upwardly from the base and connecting the ends of the side walls of the water tank to the front and rear walls extended upwardly from the base, the upper edges of the portions of the side walls of the tank being extended beyond the end walls thereof and the intermediate end walls being spaced downwardly from the upper edges of the walls of the tank, a cover hinged to the rear wall and extended over compartments formed by the said walls, and a latch for securing the cover in the closed position.



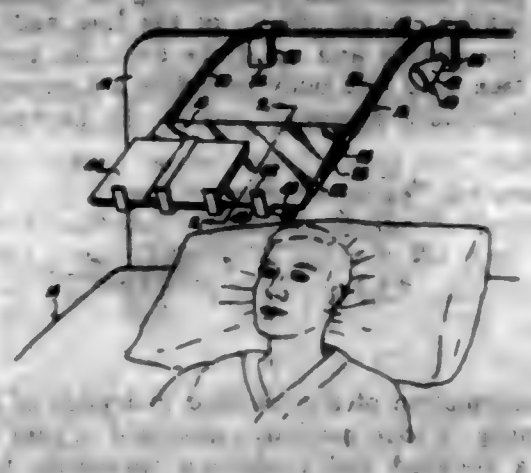
2,896,363
COMBINATION UTILITY SHELF
Edgar M. Litanw, Brea, Calif.
Application February 8, 1956, Serial No. 564,288
2 Claims. (Cl. 45—28)



1. A bathroom utility shelf comprising a relatively flat, discrete rear bottle-holding portion, forwardly sloping and extending gutters at the sides of said portion, a soap-holding shelf portion extending in front of and inclined downwardly toward said rear portion, said shelf portion sloping downwardly from the forward end of said gutters to a low central rear area of said shelf portion, and a downwardly and forwardly inclined trough extending from said low central rear area of said shelf portion to in front of and below said shelf portion to drain away water impinging on both said portions.

2,896,364
READING MATERIAL HOLDER FOR BEDS
Howard M. McCollister, Midnapore, Alberta, Canada
Application February 3, 1958, Serial No. 712,849
4 Claims. (Cl. 46—82)

1. A reading material holder for beds having an upright headboard, said holder comprising a relatively flat transparent plate adapted to support said material; a pair of brackets adapted to be removably secured to said headboard in spaced relationship and above the bed occupant's body; an elongated element interconnecting each of the brackets with the plate for maintaining the latter and its supported reading material at any selected position above and in the line of vision of an occupant in said bed, each of said elements being flexible longitudinally thereof in all directions, said elements being capable of remaining in predetermined longitudinal configuration under the weight of said plate and the reading material thereon until manually flexed by the bed occupant whereby the latter may adjust the plate to any one of an infinite number of positions above his head and while lying flat on his back; and means carried by the plate at the edge thereof in greatest spaced relationship to said brackets for maintaining the material on the upper surface of the plate when the latter is tilted at an angle.



2,896,365
COLLAPSIBLE STAND
Gilbert M. Ehmann, Chicago, Ill., assignor to Aristo-Craft Products, Chicago, Ill., a partnership
Application June 11, 1958, Serial No. 741,611
7 Claims. (Cl. 46—121)

1. A collapsible stand, comprising: an inner frame having a lower end adapted to rest on the floor, a hollow outer frame having a lower end adapted to rest on the floor and an intermediate portion pivotally connected to an intermediate portion of the inner frame, a rest including a front portion secured to the upper end of one frame substantially parallel thereto and a rear portion hinged on the lower edge of the front portion, and releasable means for detachably connecting the upper rear end of the rear portion to the upper end of the other frame to releasably retain the stand in upright position with the frames inclined from the vertical and crossing at their pivotal interconnection, and with said rear rest portion inclined upwardly and rearwardly from the front rest portion so that the latter forms a retaining ledge for the former.

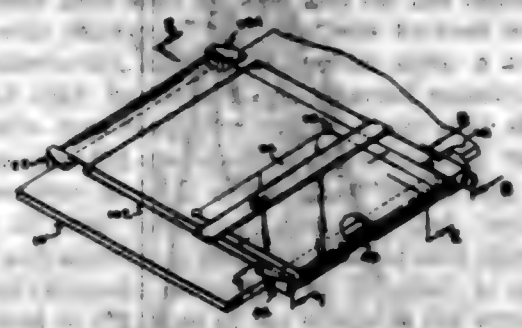
2,896,366
DRAFTING DEVICE
Siven F. Van Dorbye, Santurce, Puerto Rico
Application August 2, 1957, Serial No. 676,842
3 Claims. (Cl. 46—131)

1. In combination with a drafting board having a polygonal configuration including a pair of oppositely dis-

lowered positions, means for moving the operating arm

In combination with a fish hook having a shank, a bill, a point and a barb, a one-piece barb guard of sub-

posed parallel edges, a first pair of journal boxes secured to said board and projecting beyond one of said parallel edges, a roller bearing disposed within each of said first pair of journal boxes, an elongated shaft having a pair of opposed ends and a roller fixedly secured thereon for rotation therewith, said opposed ends of said shaft being journalled, respectively, within said bearings; that improvement which comprises a second pair of journal boxes fixedly secured to said board, said second pair of journal boxes projecting beyond the other of said parallel edges and having a pair of confronting cavities formed therein, each of said cavities having an ogive configuration including a semi-circular end wall and an oppositely disposed end wall extending perpendicular to the radius which bisects said semi-circular wall, a resilient element disposed

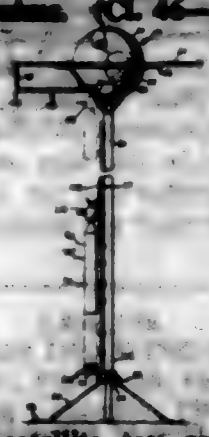


in the cavity of each of said second journal boxes, each of said resilient elements having a semi-circular recess formed therein disposed in confronting relation relative to said semi-circular wall to complement the same and to form a substantially hollow cylindrical recess in conjunction therewith, said resilient elements each having an end thereof abutting against said oppositely disposed walls, a ball bearing positioned within each of said cylindrical recesses, a shaft having a pair of opposed ends, a roller fixedly secured on said shaft for rotation therewith, an endless belt trained around said rollers and slidably engaging a side of said board, said said resilient elements being under compression to constantly bias said last named ball bearings for movement towards said semi-circular walls of said second pair of journals to maintain constant tension on said endless belt.

2,896,367
REMOTELY CONTROLLED TOY VEHICLE
Marvin I. Glass, Chicago, and Charles Pearson, Jr., Elmhurst, Ill.
Application December 28, 1956, Serial No. 631,879
6 Claims. (Cl. 46—40)

1. In a toy construction toy of the character described comprising a portable housing including a floor surface and a transparent hood which extends completely over said floor surface and entirely encloses said floor surface to form an integral closure therewith, an electrically operated toy vehicle held captive by said within said enclosure and having wheels for rotation on said floor surface and for moving said toy vehicle only within said enclosure, control means positioned exteriorly of said housing and fixedly secured to said housing and electrically connected to said toy vehicle for controlling the movement and direction of said toy vehicle in said enclosure, granular objects loosely positioned on the floor of said enclosure and held captive by said enclosure and engaged by said toy vehicle for moving said granular objects within said enclosure, said hood having an opening on one of the walls thereof, a dump bin pivotally secured to said enclosure adjacent said opening, said dump bin having an opening in communication with said wall opening to permit the granular material to be pushed therein by said toy vehicle, said dump bin adapted when pivoted to empty the granular material on the floor of said enclosure.

2,896,368
TOY ROCKET
Parrell O. Higley, Salt Lake City, Utah
Application May 16, 1958, Serial No. 735,832
9 Claims. (Cl. 46—52)



1. A rocket and satellite toy comprising a vertical standard, a hollow globe rotatably mounted on the top end of said standard, motor means formed and arranged to rotate said globe, a simulated rocket member slidably connected to said standard parallel and adjacent thereto, motor means in said rocket member formed and arranged to elevate same to a position adjacent said globe, a simulated satellite detachably mounted on the top end of said simulated rocket, a ring member secured to the upper portion of said standard surrounding said globe, a radial rod member connecting said globe and ring member and extending over said satellite, and coupling means on the top of said satellite lockingly engageable with an being slidable on said radial rod member, said coupling means being formed and arranged to interlock with said rod member responsive to the upward movement thereof into contact with said rod member.

2,896,369
TOY AIRPLANE HAVING RETRACTABLE LANDING GEAR
William A. Polansky, Council Bluffs, Iowa
Application November 13, 1956, Serial No. 621,619
1 Claim. (Cl. 46—79)

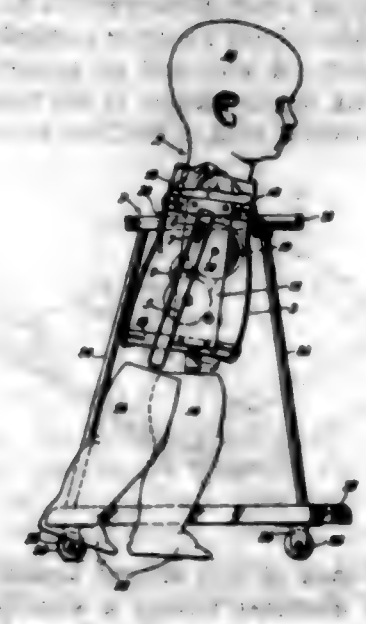
In a toy or model airplane having a fuselage and a wing assembly provided with engine nacelles, a wheel assembly comprising a rotatable nose wheel, a strut carrying said wheel, means mounting the strut in the nose portion of the fuselage for rearward swinging movement from a lowered to a raised position seated within the fuselage, an operating arm axially disposed in the fuselage and movable longitudinally therein, means connecting the strut to the operating arm so that rearward movement of the arm raises the strut and wheel, an undercarriage wheel assembly including a center crank section and outwardly extending, laterally projecting axles, wheels rotatably mounted on said axles, and adapted to be housed in the engine nacelles, means connecting the crank section to the operating arm so that rearward movement of the operating arm swings the axles and wheels forwardly and upwardly to position the wheels in the engine nacelles, spring means connected to the operating arm for normally urging it forwardly of the fuselage to maintain the nose wheel and undercarriage wheels in

lowered positions, means for moving the operating arm rearwardly in the fuselage against the urgement of the spring means and locking means carried by the arm and the fuselage for locking the operating arm in its rearward position to hold the wheels in their raised positions, said crank section including rearwardly inclined legs from the lower ends of which the axles extend downwardly and laterally outwardly and said means connecting the crank section to the operating arm including a pair of abutments depending from the arm and disposed in spaced arrangement and alignment longitudinally of the arm and between which the bight portion of the crank section is fitted.

2,896,370
AIRFOIL FOR TOY AIRCRAFT
Leslie De Witt, Jr., Wichita, Kans.
Application September 5, 1956, Serial No. 608,037
3 Claims. (Cl. 46—79)

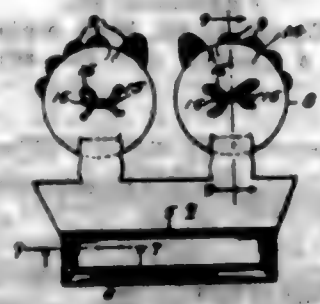
2. A wing structure for mounting in a slot in the fuselage of a toy glider, comprising, in combination, an elongated, thin and sheet-like one-piece, formed plastic member being substantially straight in longitudinal cross-section in its outer portions and curved in transverse cross-section in said outer portions to have a streamlined convex upper surface, the central portion of said wing having a plurality of spaced, longitudinal and raised strengthening and stiffening spars formed integral therewith and a relatively flat and depressed transverse portion, and constructed and adapted to fit into said slot of said fuselage to mount said wing therewith, said spars being constructed to snugly and frictionally engage said fuselage to secure said wing structure when mounted in said fuselage, said wing having longitudinal strengthening spars formed integral therewith in said outer portions, a plurality of spaced, transverse strengthening ribs formed integral therewith in said outer portions, and a forwardly projecting strengthening lip formed integral therewith along the leading edge, said outer portions of said wing forming a dihedral angle and being compoundly curved, and said wing having elongated convex raised portions on its outer ends formed integral therewith and transverse thereto to simulate wing fuel tanks and to strengthen said wing.

2,896,371
DOLL BABY AND WALKER TOY
Anthony G. Ardolino, Orange, Conn.
Application April 1, 1955, Serial No. 498,530
10 Claims. (Cl. 46—102)



1. A doll baby and walker toy comprising a doll having a body and simulated walking motion legs and a motor for causing said motion, said doll being unstable when standing unsupported, and a toy walker having wheels for rolling on a floor and a frame for receiving said body standing and structure supporting said frame on said wheels at a height causing the lower ends of said legs to touch the floor and propel said walker with the latter supporting said doll.

2,896,372
DOLL WITH DISPOSABLE HAND AND FOOT MEMBERS
Mary I. Austin, Dahlgren, Va.
Application May 7, 1957, Serial No. 657,652
1 Claim. (Cl. 46—157)



A doll comprising a body having permanent hand and foot members forming a permanent part thereof, flat disposable paper hand and foot members corresponding in size and shape to said permanent hand and foot members, positioned over said permanent hand and foot members of the doll in contact therewith, said permanent hand and foot members and disposable hand and foot members having pairs of registering openings, tie members inserted through said openings, removably securing said disposable hand and foot members to the doll, completely concealing said permanent hand and foot members and said disposable hand and foot members presenting unpainted surfaces to be painted a selected color at the will of the person playing with the doll.

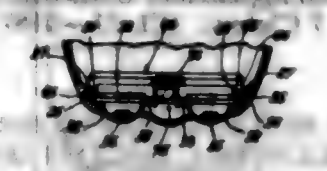
2,896,379

2,896,373

DOLLS' HEADS PROVIDED WITH SLEEPING EYES

David Cohn, New York, N.Y., assignor to Model Plastic Corp., White Plains, N.Y., a corporation of New York

Application January 16, 1956, Serial No. 559,224
6 Claims. (Cl. 46—169)



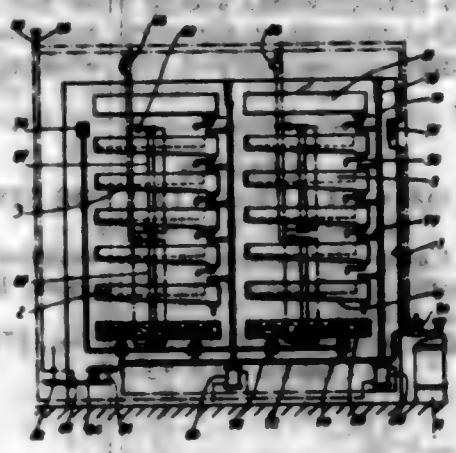
1. In combination, a doll's head having a front face wall formed with eye openings, said head being formed at the outer sides of said eye openings and at the sides of the front face wall portion and on the inner surface thereof with thickened boss portions formed with horizontal rearwardly extending parallel slots, a transverse horizontal shaft having the ends thereof received in said slots, doll's eyes rotatably mounted on said shaft and projecting into the eye openings, a transverse horizontal bridge member in back of the shaft contacting the rear surfaces of said thickened portions, and having lugs received and secured in the rear ends of said slots whereby to limit rearward movement of the shaft in said slots, an arm fixed to the front of the bridge at the center thereof, and extending downwardly therefrom, said arm having side walls formed at their front edges with rearwardly extending notches through which the shaft passes, a leaf spring having its lower end anchored at the lower end of the arm, and having a free upper end engaging the back of the shaft and pressing the shaft forwardly to retain the doll's eyes within said eye openings.

2,896,374

APPARATUS FOR HYDROCULTIVATION

Gaston Paris, Vaux-sous-Chevremont, Belgium, assignor to Leon Hippolyte Jules Van Essel, Kappellen, Belgium

Application September 27, 1957, Serial No. 686,647
Claims priority, application Belgium October 9, 1956
11 Claims. (Cl. 47—1.2)



1. Apparatus for the application of the process for hydroculture comprising means forming at least one closed space divided into superposed compartments; in each compartment at least one processing unit consisting of a cultivation tray and a drainage trough; adjacent to each drainage trough, an auxiliary trough of small capacity, containing a device for regulating the flow of liquid medium; under each stack of processing units, a device for generating a tropical atmosphere loaded with carbon dioxide, consisting of at least one trough containing water, a heating device for aforesaid trough, which heating device also constitutes a generator of carbon dioxide; on top of each stack of processing units, a storage tank containing a nutritive solution, and in combination with aforesaid storage tank, a device for automatically refilling these tanks as soon as they have been emptied, wherein the drainage troughs being of prismatic shape with a slanting bottom are fitted, at the lowest level of said slanting bottom, with the said small auxiliary trough comprising a device for controlling the outflow of the liquid medium, whereby the partition between aforesaid draining trough and aforesaid auxiliary trough is provided with at least one orifice whose opening is controlled by a shutter with indicator sight, all processing units being strictly standardized for all installations.

2,896,375

CHEMICAL METHOD OF BARK REMOVAL IN FORESTRY BY USING BOROARSENATES

John W. Ryznar, La Grange, Ill., assignor to National Aluminate Corporation, Chicago, Ill., a corporation of Delaware

No Drawing. Application December 16, 1957
Serial No. 702,792
15 Claims. (Cl. 47—57.5)

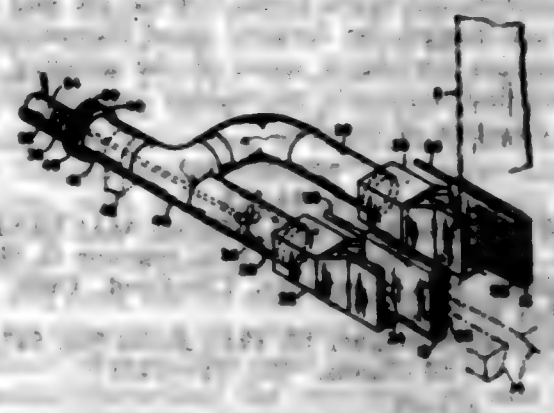
1. In forestry practice, the chemical method of debarking trees which comprises applying a lethal concentration of a water-soluble boroarsenate salt about the periphery of the trees, said salt at least in contact with the cambium layer of the tree subsequent to the Winter season but applied thereto not later than during the sappeeling season.

2,896,376

APPARATUS FOR DRAWING SHEET GLASS

Albert S. Crandon, Jr., Pittsburgh, Pa., assignor to American Window Glass Company, Pittsburgh, Pa., a corporation of Pennsylvania

Application August 8, 1957, Serial No. 676,968
9 Claims. (Cl. 49—17)



1. Apparatus for drawing sheet glass comprising means to hold molten glass, means to draw a sheet vertically therefrom, a pair of generally U-shaped air return pipes disposed one adjacent each end of the meniscus of the sheet being drawn, each of said pipes being provided with an adapter box supported on at least one of its leg portions so as to confront the adapter box on the corresponding leg portion of the other pipe, longitudinally extending cooler means supported at the opposite ends on said adapter boxes in face to face arrangement with the glass as it is being drawn, and rotary means mechanically forcing air through said pipes to pass in opposite directions on the faces of said sheet for mutually establishing a common air path closing on itself.

2,896,377

CENTERLESS-GRINDING MACHINES FOR CYLINDRICAL WORK PIECES

Helmuth Wollkind, Aachen, Nordrhine-Westphalia, Germany, assignor to Schmeing Schmeinbar Metallwerke Gesellschaft mit beschränkter Haftung, Aachen, Germany

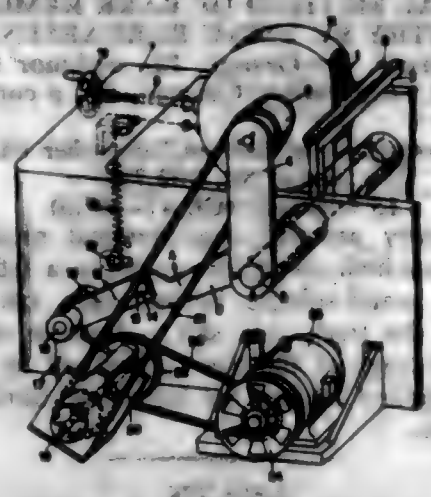
Application December 27, 1957, Serial No. 705,673
Claims priority, application Germany, January 3, 1957
4 Claims. (Cl. 51—103)

1. In a centerless grinding machine for cylindrical workpieces moved linearly in a predetermined path

the guides and the form so that the stocking is in intimate contact with the guides and sensing both the

2,896,383

through the machine, at least one grinding disc, a stationary motor, a driving connection between said motor and the grinding disc including automatic slack adjusting variable speed transmission means and an intermediate driving member adjustable with respect to the motor axis for controlling the said variable speed transmission means, bell crank levers carrying the grinding disc on one arm, manually operable means linked to the said lever for tilting and thereby adjusting the grinding disc to bring it into and hold it in contact with the workpiece, another bell crank lever carrying members of the driving connection



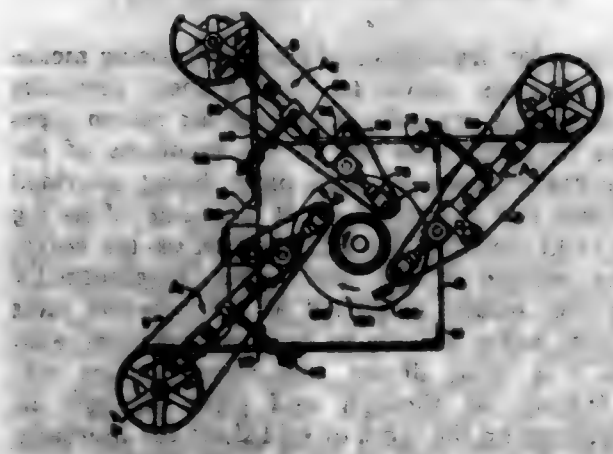
between the motor and the grinding disc including the adjustable control member of the variable speed transmission on one arm, a slot and pin connection between the free arms of the different bell crank levers, and the ratio of the lengths of these arms being such that in adjusting the tiltable grinding disc the entailed movement of the different bell crank levers through the said control member so changes the variable speed transmission that the maximum peripheral speed of the grinding disc is constantly and uniformly maintained irrespective of the varying diameter of the disc.

2,896,378

GRINDING AND POLISHING MACHINE

John H. Keating, Cleveland, Ohio, assignor to Monarch Aluminum Mfg. Company, Cleveland, Ohio, a corporation of Ohio

Application November 18, 1955, Serial No. 547,598
10 Claims. (Cl. 51—145)



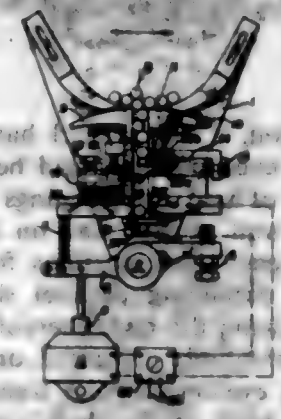
10. Belt finishing apparatus comprising: a frame; a vertical shaft rotatably supported thereon; an article holding chuck on said shaft; motor means to rotate said shaft a plurality of revolutions per workpiece finishing cycle; a plurality of supporting brackets mounted on said frame; an arm pivotally mounted on each bracket for pivotal motion about an axis; a plurality of pulleys carried by each arm; an abrading belt supported by the pulleys of each arm; means to rotatably drive said belts; and cam means to sequentially cause said arms to move toward and away from said chuck in predetermined and non-overlapping order, whereby only one abrading belt is in engagement with said chuck at any given time.

2,896,379

FEEDING ATTACHMENTS

Heinrich Herrmann, Aachen, Germany, assignor to Schwamborn Schumacher Metallwerke Gesellschaft mit beschränkter Haftung, Aachen, Germany

Application May 29, 1957, Serial No. 662,523
Claims priority, application Germany May 30, 1956
7 Claims. (Cl. 51—215)



1. An attachment for axially feeding elongated cylindrical work pieces into a tool machine having a working plane, comprising means for supporting a bundle of the work pieces in the general direction of feed and at an inclination with the ends of the work pieces nearest the machine supported in an elevated position above the working plane of the machine and their other ends substantially in the working plane, means for successively releasing the elevated ends of the work pieces one by one from the bundle to permit them to drop toward the working plane, and means below the elevated ends of the work pieces to intercept and advance the individually dropped work pieces toward the machine, said advancing means including a pair of discs having their end faces spaced a distance substantially corresponding to the diameter of the work pieces to receive an individual work piece therebetween, said discs being axially offset relative to each other but in partially overlapping relation and rotatable in the same direction to rotate a work piece therebetween, and a work rest blade between said discs to support the work piece dropped between said discs substantially in the working plane of the machine.

2,896,380

METHOD OF AND APPARATUS FOR FORMING HOSIERY PACKAGE

Howard N. Campbell, Kankakee, Ill., assignor to Paramount Textile Machinery Co., Kankakee, Ill., a corporation of Illinois

Application March 16, 1956, Serial No. 572,058
16 Claims. (Cl. 53—3)

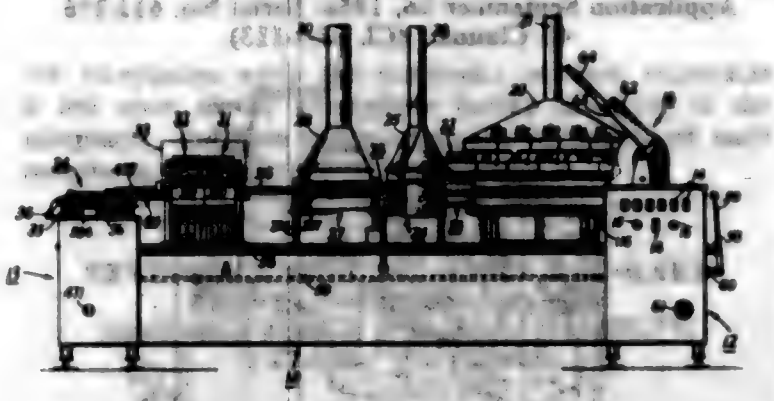
16. The method of forming a hosiery package comprising the steps of providing a pair of spaced apart guides having elongated apertures therein, supporting a flat form between said guides, drawing a stocking over

position after a full container has been removed; inter-

heat fuse together the wall surfaces of said sheet material

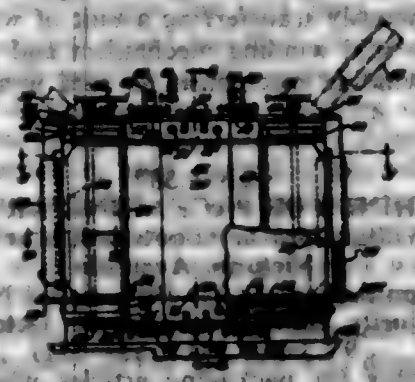
the guides and the form so that the stocking is in intimate contact with the guides and envelops both the guides and the form, and then simultaneously removing the stocking and the form from the guides by pressing the sides of the stocking through said apertures and against the opposite flat sides of the form and withdrawing the stocking and form in unison from the guides.

2,896,381
METHOD AND APPARATUS FOR TREATING AND FILLING AMPOULES
Richard Lange, Lorain, N.J., assignor to Hodes-Lange Corporation, North Bergen, N.J., a corporation of New Jersey
Application May 27, 1954, Serial No. 432,715
22 Claims. (Cl. 53—37)



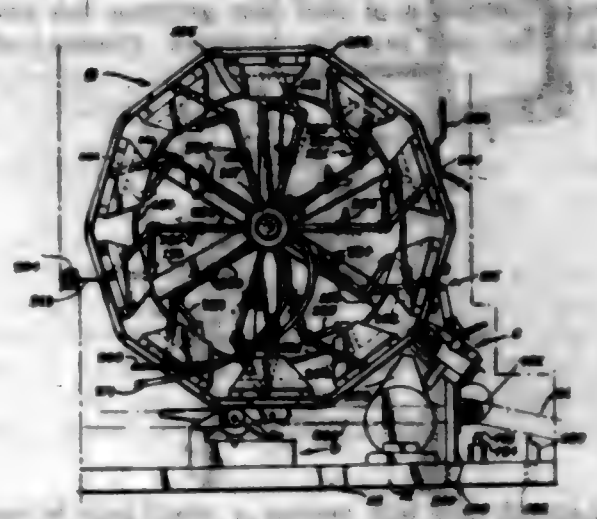
1. In a process of sealing glass ampoules, the steps which consist in advancing each ampoule past a sealing flame directed against its midportion, drawing the lower part of the ampoule downwardly away from the upper part while the glass is soft, rotating the ampoule on its axis during its subjection to said flame, and continuing the rotation of the lower part of the ampoule during its downward movement away from the upper part.

2,896,382
FOLDING DEVICE FOR PAPERBOARD CARRIERS
Leonard Beck and Walter Hann, Hamilton, Ohio, assignors to The Interstate Folding Box Company, Middletown, Ohio, a corporation of Ohio
Application February 23, 1956, Serial No. 567,123
13 Claims. (Cl. 53—48)



1. A folding device comprising a curved folding blade having a folding edge, a shaft fixed to said folding blade, pivoted arms mounting said shaft and said blade for movement in a normally arcuate path of travel, a pair of cams mounted on said shaft for movement therewith, one of said cams being fixedly secured to the shaft and the other being rotatably journaled on said shaft, abutment means in the path of travel of said cams, said cams acting upon contact with said abutment means to move said pivoted arms so as to shift the position of the shaft and hence the path of travel followed by the folding edge of said blade.

2,896,383
APPARATUS FOR COVERING WIRE GARMENT HANGERS
Ben I. Aronson, Skokie, Ill., assignor, by mesne assignments, to Aronson Hanger Covers, Incorporated, Chicago, Ill., a corporation of Illinois
Application June 26, 1956, Serial No. 593,918
45 Claims. (Cl. 53—61)



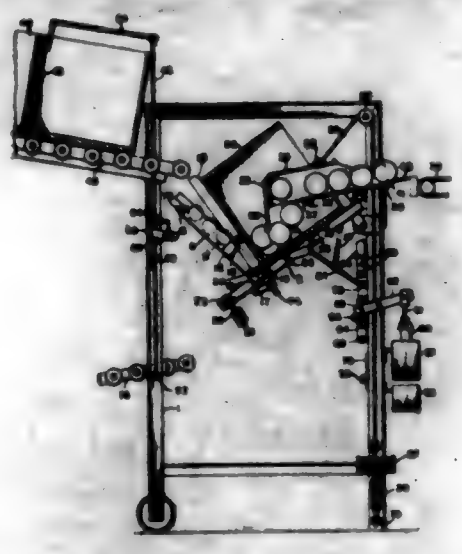
1. A machine for covering wire garment hangers, comprising: a wrapping station; power driven transfer means for periodically advancing a web of paper to said station; means including suction ports on said station for receiving the leading portion of said paper web and holding it to said station; knife edges mounted on said station, extending perpendicular to and slightly above the face thereof, and arranged to define a substantially triangularly shaped cover blank having foldable areas at edges thereof; first means for pressing the paper against said knife edges and cutting a cover blank from the paper; second means for applying an adhesive to predetermined areas of said cover blank; power driven transfer means for periodically delivering a triangularly shaped wire garment hanger having shoulder and lower bars into juxtaposition with said station; magnets on said station for securing said hanger on said cover blank whereby each hanger bar is adjacent to a foldable area; pivotal arms on said table, one for each foldable area and adapted to fold the same over the adjacent hanger bar and effectively secure the foldable area in its folded condition; third means controlling the operation of said pivotal arms; and synchronizing means for relatively timing the operation of said transfer means, and said first, second, and third means, whereby a covered hanger is produced at said station during each cycle of machine operation.

2,896,384
AUTOMATIC BOX FILLER
Earl W. Carlson, Yakima, and Alvan Beam, Wapato, Wash.
Application March 26, 1958, Serial No. 722,833
4 Claims. (Cl. 53—69)

1. A machine for filling containers which comprises a vertically rotatable support for holding a container to be filled; filling means in adjustable proximity to said rotatable support adapted to transfer material into a container held on said rotatable support; storage means also in proximity to said rotatable support adapted to hold a plurality of empty containers; means for removing a full container from said rotatable support; counterbalancing means connected to said rotatable support adapted to maintain the rotatable support in filling relationship to said filling means, said counterbalancing means being further adapted to permit the rotatable support to descend at such a rate while the container is being filled that descent is completed when the container is full and to cause the rotatable support to return to its uppermost

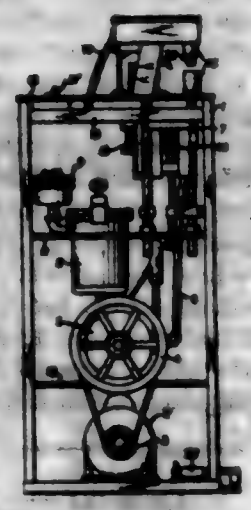
belt is in engagement with said chuck at any given time.

position after a full container has been removed; interlocking means actuated by the rotatable support for simultaneously releasing a full container from said rotatable support and for closing off said filling means; first release means on said storage means cooperative with



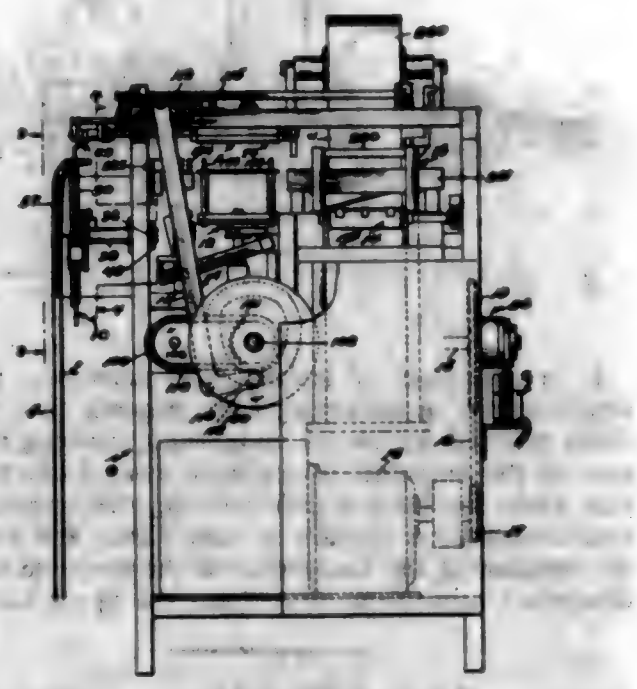
the rotatable support adapted to deposit a single empty container on said support as it returns to its uppermost position; and second release means on said rotatable support cooperative with the interlocking means adapted to reopen the filling means as soon as an empty container is deposited on the rotatable support.

2,896,385
SEALED PACKAGE EVACUATING MEANS
Otto Gebhardt, Fort Lee N.J.
Application August 24, 1956, Serial No. 606,002
3 Claims. (Cl. 53—112)



1. A machine for evacuating a sealed package formed from a flexible sheet material capable of being heat sealed and for resealing said package comprising a frame, a heat sealing device carried by said frame and having two sections facing each other and being co-operatively aligned, a vacuum producing means supported by and disposed in said frame, a vacuum tube connected with said vacuum producing means and projecting beyond the top of said frame, the upper end of said vacuum tube having a working face constituting one of said sections of said heating device, a knife means mounted in the upper end of said vacuum tube and projecting slightly above the said working face of said tube, so that upon positioning a sealed package on said working face, one layer of the sheet material is pierced by said knife means due to the suction action of said vacuum producing means to form an aperture therein and simultaneously air is exhausted from said package, and means for moving said sections of said heat sealing device toward each other in order to heat fuse together the wall surfaces of said sheet material around said aperture during exhaustion of air from said package, a second heat sealing device adapted for heat sealing the longitudinal edge of said package and mounted on top of said frame and said first mentioned heat sealing device being disposed on top of said frame at about the center of said second heat sealing device and spaced apart therefrom for a distance equal with a predetermined distance of said seal around said aperture formed by said first mentioned heat sealing device from said seal formed by said second heat sealing device.

2,896,386
BRAID PACKAGING MACHINE
Charles W. Marsh, Los Angeles, Calif., assignor, by mesne assignments, to Bured, Inc., a corporation of Rhode Island
Application September 26, 1956, Serial No. 612,276
43 Claims. (Cl. 53—113)



1. In a narrow fabric packaging machine, a magazine for holding a plurality of units of work in spaced relation, a winding mechanism for receiving and winding a unit of work into a bank, a wrapping mechanism for applying a wrapper onto said bank, said magazine, winding mechanism and wrapping mechanism being in line with each other, and a conveyor having a straight line movement for simultaneously transferring a unit of work from said magazine to said winding mechanism and a wound unit from said winding mechanism to said wrapping mechanism.

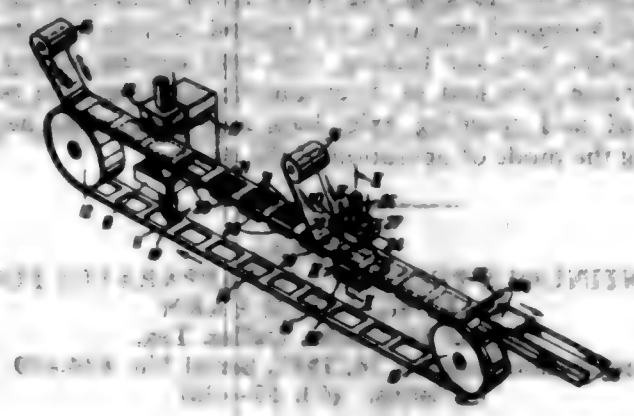
2,896,387
MACHINE FOR PACKAGING ARTICLES
Herbert William Brock, Abbotsford, near Melbourne, Victoria, Australia
Application September 27, 1957, Serial No. 686,755
Claims priority, application Australia October 2, 1956
9 Claims. (Cl. 53—141)

1. Apparatus for packaging articles which comprises a conveyor for feeding a first strip of thermo-plastic material through a deforming zone, a loading zone and a contracting zone, a moulding device at said deforming zone for softening successive portions of the strip when present therein and deforming them and cooling them to form the strip emerging from the deforming zone with a series of depressions which are shaped to constitute receptacles adapted to be loaded with the articles to be packaged as the strip passes through the loading zone, means for feeding a second strip of thermo-plastic material to cover the receptacles following passage of the latter through said loading zone and thus enclose the articles, and, in the contracting zone, a heater for heating

2,896,391

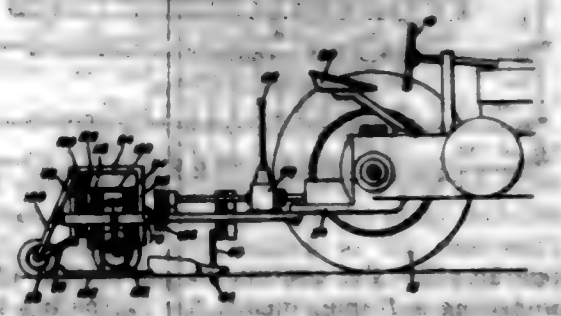
in said support tubes for rotation therein, rake wheels

the receptacles and thus causing them to shrink and grip the articles, and a heat-sealing device for initially heat sealing the second strip over a substantial part of each of



the receptacles while the remainder of each receptacle is left open to the atmosphere during shrinking of the receptacle, and then heat sealing the remainder of each receptacle.

2,896,388
REVERSIBLE SIDE DELIVERY HAY RAKE
Glenn H. Dudley, Bison, S. Dak.
Application April 4, 1957, Serial No. 650,772
2 Claims. (Cl. 56—23)



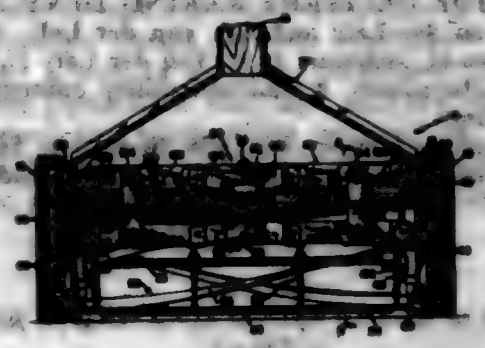
1. A side delivery hay rake for use in combination with a tractor having a laterally extending mower mounted thereon with the tractor having a power take-off, said rake comprising an elongated frame adapted to be supported rearwardly of and generally parallel to the mower, a laterally extending endless driven sprocket chain supported on said frame and disposed substantially parallel to the mower, a plurality of tines pivotally mounted on said chain, control means for said tines including an endless driven control chain mounted on said frame and movable in a path parallel to and spaced above the path of movement of the endless tine carrying chain, each of said tines including a rigid vertically depending arm pivotally connected to said control chain whereby the arm will be maintained in vertical position for maintaining the tines in vertical position throughout their path of movement, said frame being provided with an upwardly curved stripper plate mounted thereon, said plate being disposed adjacent the path of movement of the tines and having upwardly curved end portions disposed longitudinally outwardly of the frame and tine carrying sprocket chain whereby the tines will move upwardly past the edge of the stripper plate when moving from the lower run of the tine carrying sprocket chain to the upper run thereof.

2,896,389
GRASS TRIMMER
Marion R. Dupree, Sarasota, Fla., assignor, by mesne assignments, to James J. Dennard and Margaret D. Dennard, Bradenton, Fla., as tenants by the entireties
Application December 4, 1956, Serial No. 779,041
1 Claim. (Cl. 56—239)

In a device of the character described, in combination, a handle, a wheel rotatably mounted on said handle, a unitary guide blade pivotally mounted on said handle, said blade having a plurality of spaced substantially horizontally aligned apertures near its upper edge, a bolt extending through said handle selectively positionable in one of said apertures to position said blade in a selected angular relationship to said handle, a wing nut securing said bolt in a selected aperture, a knife pivotally mounted adjacent the forward lower

corner of said blade, a scraper and stop device adapted for vertical engagement with the ground adjustably mounted on said blade, said guide blade having a row of aligned spaced apertures extending angularly across the upper rear corner portion thereof, and bolt means carried by said scraper selectively engageable with said last-mentioned apertures for adjusting the position of said scraper and stop to vary the depth of penetration of said guide into the ground.

2,896,390
AUTOMATIC EQUALIZER ADJUSTMENT MECHANISM FOR REEL TYPE LAWN MOWERS
Ira Cunningham, Enid, Okla.
Application February 18, 1957, Serial No. 640,943
10 Claims. (Cl. 56—249)

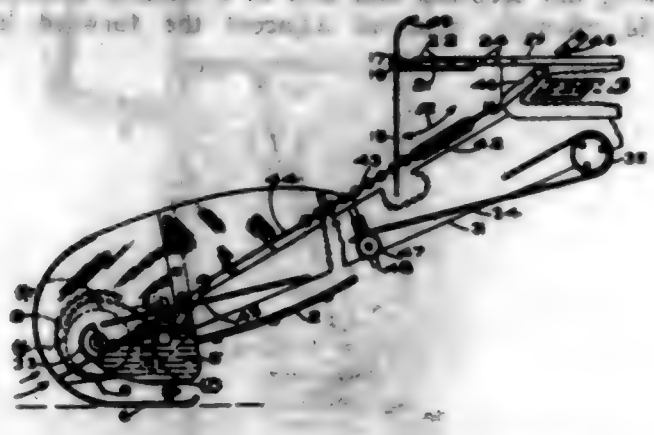


1. In a lawn mower having a frame, wheels on said frame, a reel having rotary blades on said frame and connected to said wheels for simultaneous rotation therewith, a bed knife, and mounting means for said bed knife on said frame positioned adjacent the arc of rotation of said blades on said reel for effecting a mowing action in conjunction with said blades on said reel when said rotary blades are rotated; an automatic equalizer adjustment mechanism comprising a housing positioned on said frame above said bed knife and including a pair of apertured juxtaposed flanges, a king bolt extending through the apertures in said flanges, apertured balancing yokes on opposite sides of said flanges, means pivotally mounting said balancing yokes on opposite ends of said king bolt, a compression spring between each said last mentioned means and each flange, upper and lower links pivotally connected at one of their ends to each end of each yoke, brackets each engaging one of said flanges at one end pivotally connected to an intermediate point of each of said links at its other end, there being a bracket for each link, and the upper and lower brackets on either side of said yoke being in vertical alignment, and means connecting the opposite end of each link with said mounting means for said bed knife.

the steps in the other group, each step being provided at annular driving surface located in a plane normal to said

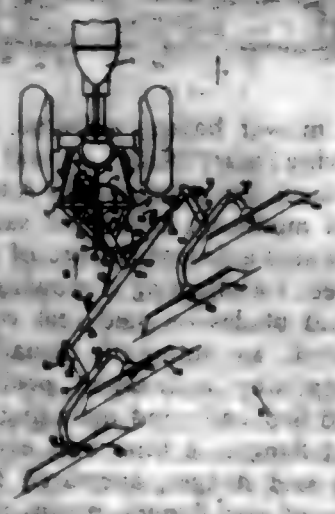
said heat sealing device toward each other in order to articles, and, in the contracting zone, a heater for heating

2,896,391
PICKUP FOR TRAVELING BALER
Robert E. Wade, Consort, Alberta, Canada, assignor of one-half to William Cecil Wade, Consort, Alberta, Canada
Application May 8, 1957, Serial No. 657,995
1 Claim. (Cl. 56—364)



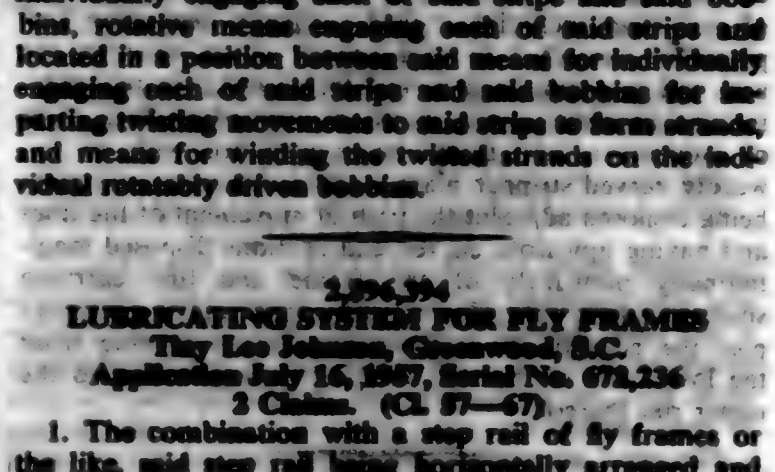
A travelling baler of a character providing a rotatable toothed drum for picking up loose material off the ground, said drum being mounted on a drum shaft, and a conveyer raddle having its forward end terminating on an approximate level with the drum shaft and on which the material is deposited to be elevated and including a series of fingers between the drum and conveyer raddle, in which said fingers are carried on a bar attached at the forward end of the conveyer raddle and said fingers incline forwardly upward from the bar spaced in relation to the drum to form an arch well above the uppermost part of the drum and descending forwardly into close relation to the drum at their forward ends.

2,896,392
SIDE DELIVERY RAKING DEVICE
Cornelis van der Lely and Ary van der Lely, Maasland, Netherlands, assignors to C. van der Lely N.V., Maasland, Netherlands, a limited-liability company of the Netherlands
Application January 25, 1956, Serial No. 561,298
Claims priority, application Netherlands February 24, 1955
17 Claims. (Cl. 56—377)



1. A device for displacing material lying on the ground and for attachment to a tractor comprising a coupling device connected to said tractor and including a horizontal tube angularly positionable with respect to the longitudinal axis of the tractor, a coupling axle in said tube and rotatable therein, a frame tube rigidly connected to said axle, bars slidable in said frame tube, support tubes rigidly fastened to said bars at an angle with respect thereto, said support tubes extending rearwardly of said frame tube, yokes including yoke axles in said support tubes for rotation therein, rake wheels supported on each of the yokes, all of said wheels being in linear alignment, first locking devices on said support tubes for locking the yoke axles against rotation in predetermined positions, and second locking devices on said frame tube for locking said bars against sliding in said frame tube and in determinable positions, the positions of said coupling axle, bars and yoke axles determining the mode of operation of the device.

2,896,393
CONTINUOUS PROCESS AND APPARATUS FOR MAKING PAPER YARN
Ronald H. Morin, Dallas, Tex.
Application January 16, 1957, Serial No. 634,490
7 Claims. (Cl. 57—32)



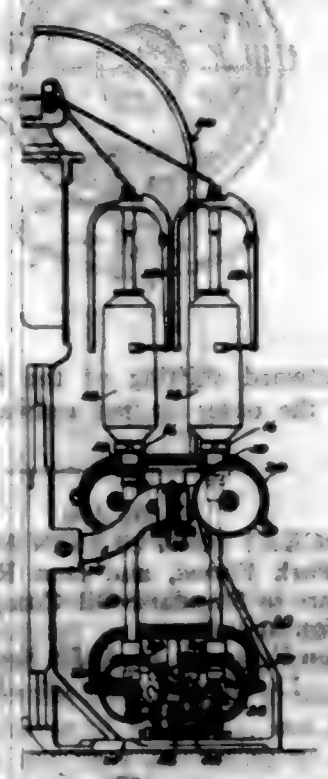
3. Apparatus for the continuous production of paper yarn comprising a frame, means for journaling a paper roll in said frame for feeding a web of paper, a group of rotatably driven bobbins, means journaled in said frame for slitting said web into a multiplicity of paper strips, separating means in said frame for spreading and spacing said paper strips, means in said frame individually engaging each of said paper strips for simultaneously pulling said paper strips in spaced linear paths while integrally connected with said web of paper for moving said web through said slitting means, a fluid applicator located between said last mentioned means and said separating means for applying moisture to each of said separated paper strips, said strips extending between said means for individually engaging each of said strips and said bobbins, rotative means engaging each of said strips and located in a position between said means for individually engaging each of said strips and said bobbins for imparting twisting movements to said strips to form strands, and means for winding the twisted strands on the individual rotatably driven bobbins.

2,896,394
LUBRICATING SYSTEM FOR FLY FRAMES
Tiny Lee Johnson, Greenwood, S.C.
Application July 16, 1957, Serial No. 672,236
2 Claims. (Cl. 57—67)

1. The combination with a step rail of fly frames or the like, said step rail being horizontally arranged and formed inverted T-shaped in transverse section and including a vertical flange and horizontal flanges arranged upon opposite sides of the vertical flange, of two longitudinal groups of vertical steps arranged upon opposite sides of said vertical flange and secured thereto and extending above said vertical flange, the steps in each group being spaced longitudinally of the step rail and the steps in one group being staggered with relation to

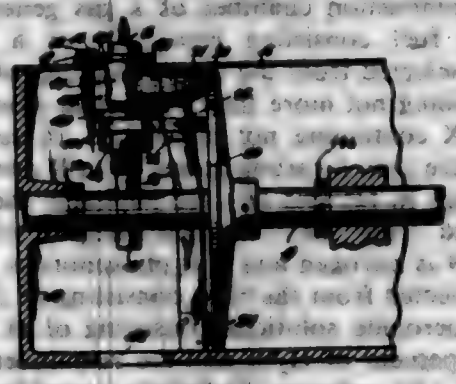
In a device of the character described, in combination, a handle, a wheel rotatably mounted on said handle, connecting the opposite end of each link with said mounting means for said bed knife.

the steps in the other group, each step being provided at its top with a vertical bearing and a reservoir having communication with the bearing, a spindle held within each bearing, horizontal manifolds arranged upon the same side of said vertical flange and mounted upon the adjacent horizontal flange, each manifold being arranged between the adjacent pair of steps upon the same side of the vertical flange with such manifold, vertical metering valves mounted upon the manifold and providing a



pair of outer metering valves and a pair of inner metering valves, tubes connected with the outer metering valves of each manifold and leading to the reservoirs of the adjacent pair of steps upon the same side of the vertical flange with said manifold, tubes connected with the inner metering valves of each manifold and leading to the reservoirs of the adjacent pair of steps upon the opposite side of the vertical flange, tubes connecting the manifolds in series, a tube connected with the end of one manifold, and a pump connected with the last-named tube.

2,896,395
SPINDLE DRIVE FOR A SPINNING AND TWISTING MACHINE
Heinrich Fink, Esslingen-Hegensberg, Germany, assignor to SKF Kugellagerfabriken G.m.b.H., Schweinfurt, Germany
Application October 19, 1955, Serial No. 541,446
Claims priority, application Germany October 23, 1954
7 Claims. (Cl. 57—162)

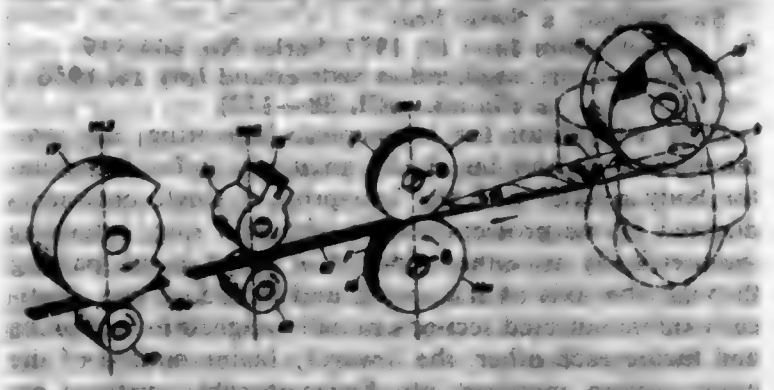


1. In a drive for a spindle of a spinning and twisting machine, in combination, support means; drive means and driven means having respectively fixed axes of rotation which extend in different directions and being supported for rotation about said fixed axes, respectively, by said support means, said drive means having an annular driving surface located in a plane normal to said axis of rotation of said drive means and said driven means having an annular driven surface coaxial with said axis of rotation of said driven means; annular transmission means having an axis of rotation substantially perpendicular to said axis of rotation of said drive means and having an outer surface engaging said annular driving surface and said annular driven surface; carrier means, carried by said support means and carrying said transmission means for free rotation about its axis of rotation, said carrier means being in form of a leaf spring extending substantially parallel to the axis of rotation of said transmission means in the space between said drive means and said driven means and supporting said transmission means for movement in a direction substantially perpendicular to a straight line extending between the point of contact between said transmission means and annular driving surface and the point of contact between said transmission means and said annular driven surface; and spindle means fixed coaxially to said driven means to be driven thereby.

2,896,396
ENDLESS DRIVING BELT FOR SPINNING MACHINES
William Arnold Kenyon, Woodley, England, assignor to William Kenyon & Sons Inc., Perth Amboy, N.J., a corporation of New Jersey
Application April 20, 1955, Serial No. 502,657
5 Claims. (Cl. 57—104)

1. In a spinning machine having a spindle and a drive therefor, a spindle driving belt comprising an endless length of woven tape consisting essentially of a spun synthetic polyamide having its ends overlapped and joined together by a strip of synthetic polyamide fused to the overlapping portions of said tape whereby variations in spindle speed are substantially reduced and high uniformity of twist in the product is obtained with capacity for higher speed and relatively low power consumption.

2,896,397
PAPER STRAP AND METHOD FOR MAKING SAME
Harford K. Stoen, Newburgh, N.Y., assignor, by mesne assignments, to Interstate Bag Company, Inc., a corporation of Virginia
Application May 25, 1955, Serial No. 510,894
9 Claims. (Cl. 57—154)

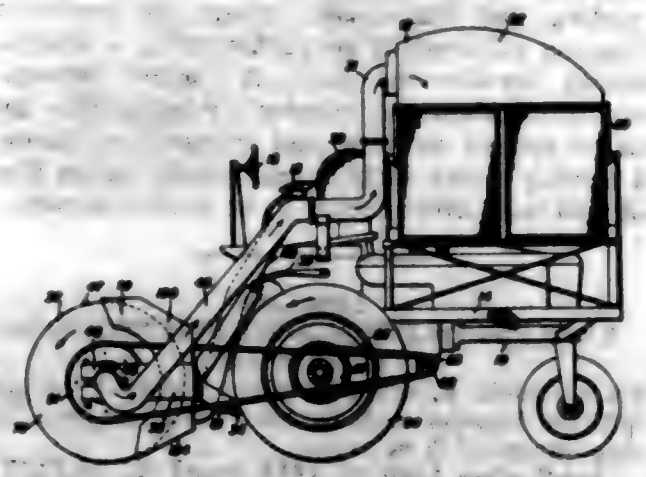


1. A paper strap consisting of a single winding of concurrently crumpled and loosely twisted paper having a plurality of twists per linear foot, and compressed along two cross sectional dimensions to a permanent form having a width of several times its thickness, but of

into the combustion chamber of a gas generator (1) a

appreciable thickness and with blunted side edges, the material of the strap being longitudinally folded in a plurality of flutings extending in the general direction of the longitudinal axis of the strap but making an angle thereto.

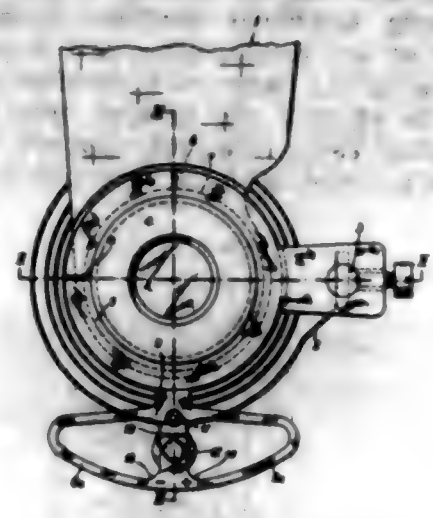
2,896,398
COTTON HARVESTER
James R. Green, Coalinga, Calif., assignor of forty-nine percent to Frankie C. Green, Coalinga, Calif.
Application November 15, 1957, Serial No. 696,781
5 Claims. (Cl. 56—48)



1. An attachment to convert a cotton harvesting machine into a harvester for gathering fallen cotton bolls and cotton bolls that remain on the stalks after original harvesting, said attachment comprising a horizontal drum, means operatively connected with said drum for rotating said drum, an axle that is hollow and about which said rotating drum is operable, said axle having at least one opening in it, a source of suction connected with said axle, said drum having a substantially cylindrical wall provided with a plurality of apertures through which the cotton is adapted to be sucked for entry into said hollow axle, a hood covering a part of the exterior surface of said drum, suction producing means connected with said hood to extract surface clinging cotton from the drum, and an air stop disposed in said drum and connected to said axle, said air stop opposed to some of the apertures of said drum and arranged at least in part in operative relationship to the portion of the drum with which said hood is operable.

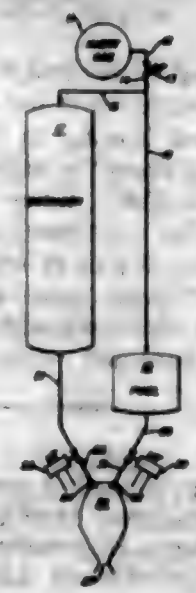
2,896,399
REGULATOR SYSTEM FOR A TIMEPIECE
Marcel Giroud, La Chaux de Fonds, Switzerland, assignor to Manufacture des Montres Doxa S.A., Le Locle, Switzerland, a Swiss firm
Application June 10, 1957, Serial No. 664,836
Claims priority, application Switzerland July 18, 1956
2 Claims. (Cl. 58—113)

1. In a regulator for a timepiece hairspring, the combination of an annular elastic angularly shiftable regulator body coaxial with the hairspring, a single outwardly directed elastic projection rigid with said ring, extending symmetrically to either side of a radial plane passing through the axis of the spring and including two elastically interconnected sections radially aligned in said plane and facing each other, the inwardly facing outline of the outer section merging into finger-operable surfaces arranged symmetrically to either side of said plane and adapted to be urged outwardly against the elasticity of the projection together with said outer section, a spring-clamping member and a pin rigid respectively with each of said sections of the projection, lying inwardly of the finger-operable surfaces and clamping normally the spring between them under the action of the elasticity of the



projection outward shifting of the finger-operable surfaces urging the outer section outwardly to release the hairspring.

2,896,400
ROCKET PROPULSION METHOD
Alex Zletz, Park Forest, and Don R. Carmody, Crete, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application February 16, 1953, Serial No. 336,983
13 Claims. (Cl. 60—35.4)



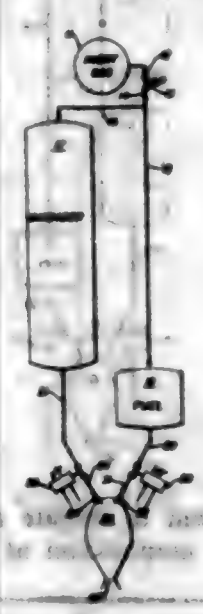
1. A method of generating gas, which method comprises injecting separately and essentially simultaneously into the combustion chamber of a gas generator (1) a hypergolic fuel consisting essentially of a haloamidophosphite selected from the class consisting of (*i*) $(R_2N)PX_2$ containing not more than 12 carbon atoms, and (*ii*) $(R_2N)_2PX$ containing not more than 16 carbon atoms and not more than 6 carbon atoms in an R group, wherein the R groups in (*i*) and (*ii*) are aliphatic, the X radicals are selected from the class consisting of chlorine and bromine, N is nitrogen and P is phosphorous and (2) an oxidizer selected from the class consisting of (*a*) aqueous hydrogen peroxide solutions consisting of at least about 80 weight percent of H_2O_2 and the remainder essentially water and (*b*) aqueous hydrogen peroxide-ammonium nitrate solutions wherein the hydrogen peroxide-water portion is the predominant component and consists of at least about 80 weight percent of H_2O_2 and the remainder essentially water, in an amount and at a rate sufficient to initiate a hypergolic reaction with and to support combustion of the fuel.

of H_2O_2 and the remainder essentially water, in an portion consists of at least about 80 weight percent of

2,896,401
ROCKET PROPULSION METHOD

Alex Zletz, Park Forest, and Don R. Carmody, Crete, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Application February 16, 1953, Serial No. 336,904
11 Claims. (Cl. 60—35.4)

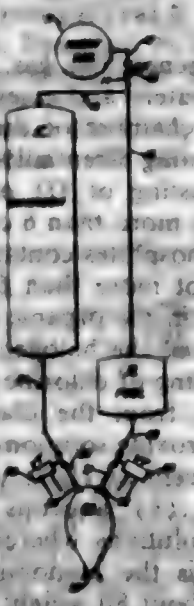


1. A method of generating gas, which method comprises injecting separately and essentially simultaneously into the combustion chamber of a gas generator (1) a hypergolic fuel consisting essentially of a member selected from the class consisting of PX_3, SX_2, and S_2X_2 wherein X is selected from the class consisting of chlorine and bromine, S is sulfur and P is phosphorus and (2) an oxidizer selected from the class consisting of (*a*) aqueous hydrogen peroxide solutions consisting of at least about 80 weight percent of H_2O_2 and the remainder essentially water and (*b*) aqueous hydrogen peroxide-ammonium nitrate solutions wherein the hydrogen peroxide-water portion consists of at least about 80 weight percent of H_2O_2 and the remainder essentially water, in an amount and at a rate sufficient to initiate a hypergolic reaction with and to support combustion of the fuel.

2,896,402
ROCKET PROPULSION METHOD

Alex Zletz, Park Forest, and Don R. Carmody, Crete, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Application February 16, 1953, Serial No. 336,905
15 Claims. (Cl. 60—35.4)



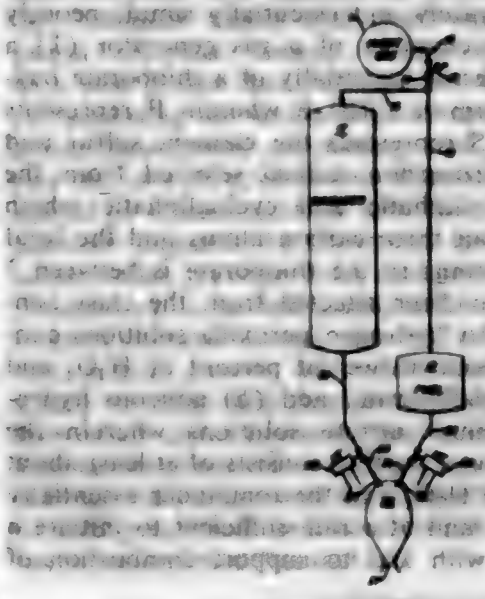
1. A method of generating gas, which method comprises injecting separately and essentially simultaneously

into the combustion chamber of a gas generator (1) a hypergolic mixed fuel consisting essentially of (*i*) between about 0.1 and 10 volume percent, based on mixed fuel, of a halide promoter selected from the class consisting of BX_3, PX_3, SX_2, S_2X_2, SiX_4 and TiX_4, wherein X is selected from the class consisting of chlorine and bromine and (*ii*) a liquid fuel selected from at least one member of the class consisting of pentene, octene, butyne, cyclopentadiene, propylene tetramer, turpentine, butyl mercaptan, benzyl mercaptan, ethylsulfide, butylsulfide, dimethyl disulfide, diethyl disulfide, dibutyl disulfide, tri-diethyltriamidophosphite, di-dimethyldiamidomethylthiophosphite, dipropylamidodiethylthioborate, tri - dimethyltriamidoborate, trimethyl trithiophosphite, triethyl trithiophosphite, tri-n-butyl trithiophosphite, and mono(n-octyl) phosphine and (2) an oxidizer selected from the class consisting of (*a*) aqueous hydrogen peroxide solutions consisting of at least about 80 weight percent of H_2O_2 and the remainder essentially water and (*b*) aqueous hydrogen peroxide-ammonium nitrate solutions wherein the hydrogen peroxide-water portion is the predominant component and consists of at least about 80 weight percent of H_2O_2 and the remainder essentially water, in an amount and at a rate sufficient to initiate a hypergolic reaction with and to support combustion of the fuel.

2,896,403
ROCKET PROPULSION METHOD

Alex Zletz, Park Forest, and Don R. Carmody, Crete, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Application February 16, 1953, Serial No. 336,906
16 Claims. (Cl. 60—35.4)

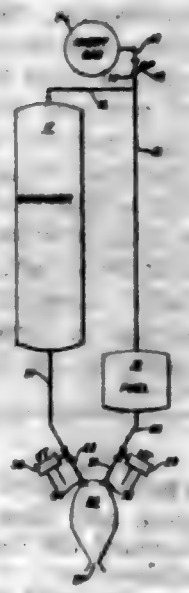


1. A method of generating gas, which method comprises injecting separately and essentially simultaneously into the combustion chamber of a gas generator (1) a hypergolic fuel consisting essentially of a member selected from the class consisting of (i) monoorganicmonohalophosphines containing not more than 16 carbon atoms, (ii) monoorganicdihalophosphines containing not more than 10 carbon atoms and (iii) diorganicmonohalophosphines containing not more than 12 carbon atoms and not more than 8 carbon atoms in an organic group, wherein the organic groups in (i), (ii) and (iii) above are alkyl and the halogen radicals are selected from the class consisting of chlorine and bromine and (2) an oxidizer selected from the class consisting of (*a*) aqueous hydrogen peroxide solutions consisting of at least about 80 weight percent of H_2O_2 and the remainder essentially water and (*b*) aqueous hydrogen peroxide-ammonium nitrate solutions wherein the hydrogen peroxide-water portion is the predominant component and consists of at least about 80 weight percent

of said sections of the projection, lying inwardly of the bustion of the fuel.

of H_2O_2 and the remainder essentially water, in an amount and at a rate sufficient to initiate a hypergolic reaction with and to support combustion of the fuel.

2,896,404
ROCKET PROPULSION METHOD
Alex Zletz, Park Forest, and Don R. Carmody, Crete, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application February 16, 1953, Serial No. 336,907
12 Claims. (Cl. 60—35.4)

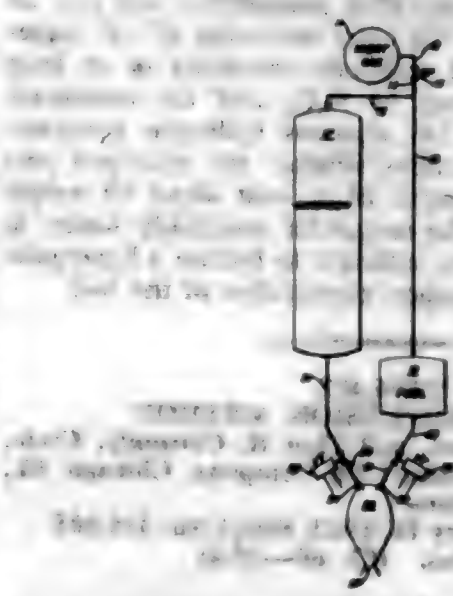


1. A method of generating gas, which method comprises injecting separately and essentially simultaneously into the combustion chamber of a gas generator (1) a hypergolic fuel consisting essentially of a thioborate having the empirical formula $(RS)_3B$ wherein B represents the element boron, S represents the element sulfur and R represents a hydrocarbon radical selected from the class consisting of aliphatic and cycloaliphatic which contain not more than three carbon atoms and the total number of carbon atoms in the thioborate is between 3 and 7 and (2) an oxidizer selected from the class consisting of (*a*) aqueous hydrogen peroxide solutions consisting of at least about 80 weight percent of H_2O_2 and the remainder essentially water and (*b*) aqueous hydrogen peroxide-ammonium nitrate solutions wherein the hydrogen peroxide-water portion consists of at least about 80 weight percent of H_2O_2 and the remainder essentially water, in an amount and at a rate sufficient to initiate a hypergolic reaction with and to support combustion of the fuel.

2,896,405
ROCKET PROPULSION METHOD
Alex Zletz, Park Forest, and Don R. Carmody, Crete, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application February 16, 1953, Serial No. 336,908
14 Claims. (Cl. 60—35.4)

1. A method of generating gas, which method comprises injecting separately and essentially simultaneously into the combustion chamber of a gas generator (1) a hypergolic fuel having the empirical formula RSX, wherein R is selected from the class consisting of aliphatic and cycloaliphatic groups containing not more than 4 carbon atoms, X is selected from the class consisting of chlorine and bromine and S is sulfur and (2) an oxidizer selected from the class consisting of (*a*) aqueous hydrogen peroxide solutions consisting of at least about 80 weight percent of H_2O_2 and the remainder essentially water and (*b*) aqueous hydrogen peroxide-ammonium nitrate solutions wherein the hydrogen peroxide-water portion consists of at least about 80 weight percent of H_2O_2 and the remainder essentially water, in an amount and at a rate sufficient to initiate a hypergolic reaction with and to support combustion of the fuel.

2,896,406
ROCKET PROPULSION METHOD
Alex Zletz, Park Forest, and Don R. Carmody, Crete, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application February 16, 1953, Serial No. 336,909
19 Claims. (Cl. 60—35.4)



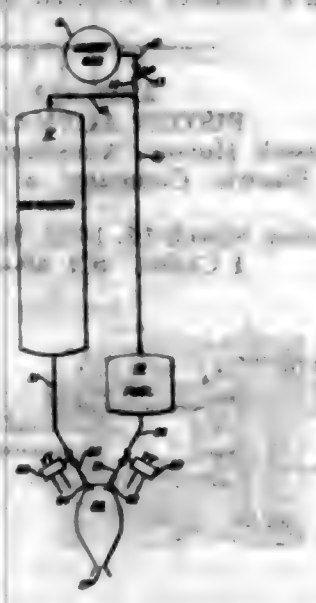
1. A method of generating gas, which method comprises injecting separately and essentially simultaneously into the combustion chamber of the gas generator (1) a hypergolic fuel consisting essentially of a member selected from the class consisting of (*i*) organicdihalothiophosphites containing not more than 6 carbon atoms and (*ii*) diorganichalodithiophosphites containing not more than 8 carbon atoms and not more than 6 carbon atoms in an organic group, wherein the organic group in (*i*) and (*ii*) above are aliphatic and the halogen radicals are selected from the class consisting of chlorine and bromine and (2) an oxidizer selected from the class consisting of (*a*) aqueous hydrogen peroxide solutions consisting of at least about 80 weight percent of H_2O_2 and the remainder essentially water and (*b*) aqueous hydrogen peroxide-ammonium nitrate solutions wherein the hydrogen peroxide-water portion is the predominant component and consists of at least about 80 weight percent of H_2O_2 and the remainder essentially water, in an amount and at a rate sufficient to initiate a hypergolic reaction with and to support combustion of the fuel.

ing and having fixed to its inner end a cylindrical cylinder two separate chambers, a piston in one chamber, centrif-

1. A method of generating gas, which method comprises injecting separately and essentially simultaneously

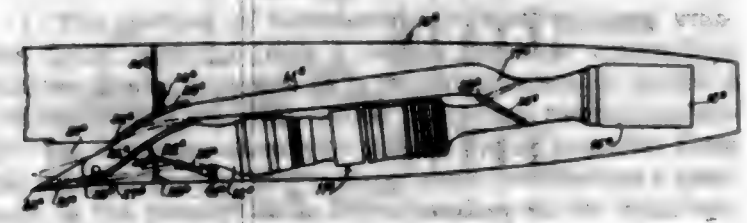
drogen peroxide-water portion is the predominant component and consists of at least about 80 weight percent

2,896,407
ROCKET PROPULSION METHOD
Alex Zletz, Park Forest, and Don R. Carmody, Crete, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application February 16, 1953, Serial No. 336,910
20 Claims. (Cl. 60—35.4)



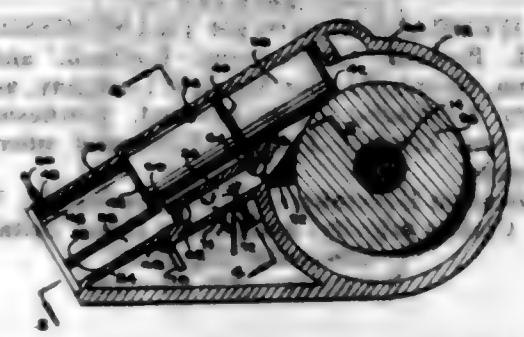
1. A method of generating gas, which method comprises injecting separately and essentially simultaneously into the combustion chamber of a gas generator (1) a hypergolic fuel consisting essentially of a member selected from the class consisting of (i) organicdihalothioborates containing not more than 8 carbon atoms and (ii) diorganichalodithioborates containing not more than 12 carbon atoms and not more than 8 carbon atoms in an organic group, wherein the organic groups in (i) and (ii) above are aliphatic and the halogen radicals are selected from the class consisting of chlorine and bromine and (2) an oxidizer selected from the class consisting of (*a*) aqueous hydrogen peroxide solutions consisting of at least about 80 weight percent of H_2O_2 and the remainder essentially water and (*b*) aqueous hydrogen peroxide-ammonium nitrate solutions wherein the hydrogen peroxide-water portion is the predominant component and consists of at least about 80 weight percent of H_2O_2 and the remainder essentially water, in an amount and at a rate sufficient to initiate a hypergolic reaction with and to support combustion of the fuel.

2,896,408
TURBOJET CONVERTIBLE TO A RAMJET
William J. O'Donnell, Freeport, N.Y., assignor to Republic Aviation Corporation, near Farmingdale, N.Y., a corporation of Delaware
Application September 23, 1953, Serial No. 381,904
5 Claims. (Cl. 60—35.6)



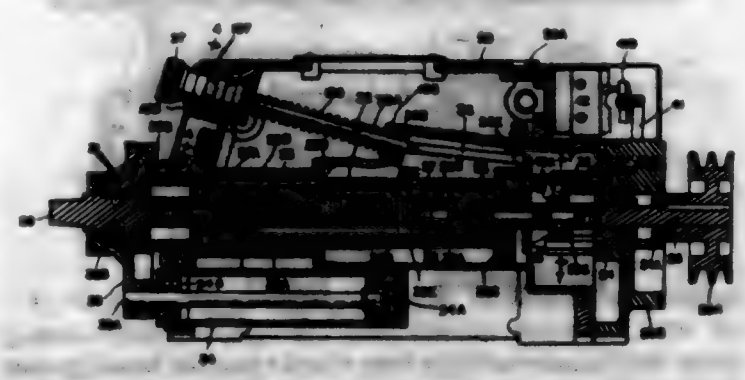
1. In a power plant for aircraft the combination with a turbo-jet engine and an associated ram-jet engine for individual and alternative operation including an independent air intake duct individual to each of said engines for the delivery of external air thereto, of a mechanism disposed adjacent said ducts comprising multiple substantially parallel plates each forming a flush continuation of a wall of one of said ducts and pivotally secured at one end, and means to swing the free ends of said plates in unison from the flush position aforesaid to a position transversely of said one duct and forming a flush continuation of another wall defining the other of said ducts, whereby all of the external air aforesaid is delivered to either one of said ducts only at a time.

2,896,409
ROTARY ENGINE
John H. Heimen, Jr., Kansas City, Mo.
Application September 9, 1958, Serial No. 760,043
9 Claims. (Cl. 60—39.61)



1. In a rotary engine, a closed chest, a shaft to be rotatably mounted in said chest, a rotor secured to said shaft for rotation therewith, said rotor being provided with a groove extending completely about the periphery thereof, a piston bridging said groove and carried by said rotor, a cylindrical piston chamber within said chest and arranged tangentially with respect to said groove and having part of one end in communication with said groove, an abutment piston working within said chamber and slidable in said chamber, a combustion chamber within said chest and contiguous to said piston chamber, means connected in communication with said piston chamber adjacent the other end thereof for admitting air under pressure to said piston chamber, a first passageway connecting said piston chamber with one end of said combustion chamber, a check valve connected in communication with the portion of said piston chamber adjacent the other end for controlling the flow of air under pressure from said piston chamber into said passageway, a second passageway connecting said combustion chamber to said one end of said piston chamber and to said groove, an outlet from said groove, a first rotary valve in said first passageway for controlling the flow of air under pressure from said first passageway into said combustion chamber, and a second rotary valve in said second passageway for controlling the flow of combustion gases from said combustion chamber to said one end of said piston chamber.

2,896,410
AUTOMATIC HYDRAULIC POWER UNIT
Samuel S. Schmidt, Hazel Park, Mich.
Application March 1, 1954, Serial No. 413,170
10 Claims. (Cl. 60—52)



1. A hydraulic drill unit comprising a casing adapted to be filled with oil, a drive shaft extending into the cas-

sponding reduction in temperature; (*b*) in an interme-

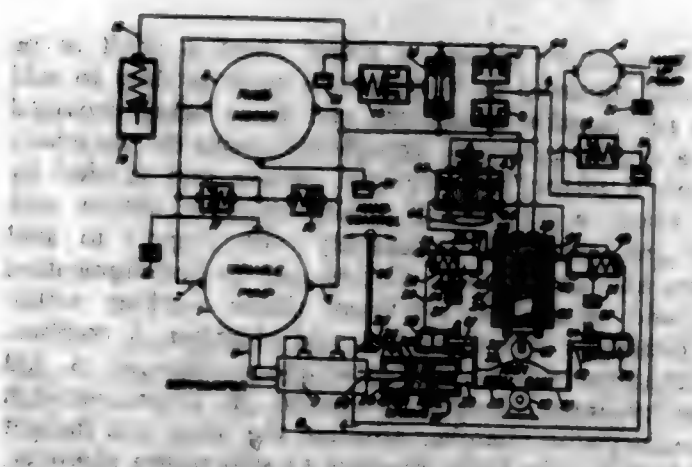
2,896,416
MEANS FOR THE TRANSPORTATION AND STOR-

water and (b) aqueous hydrogen peroxide-ammonium nitrate solutions wherein the hydrogen peroxide-water

rate sufficient to initiate a hypergolic reaction with and to support combustion of the fuel.

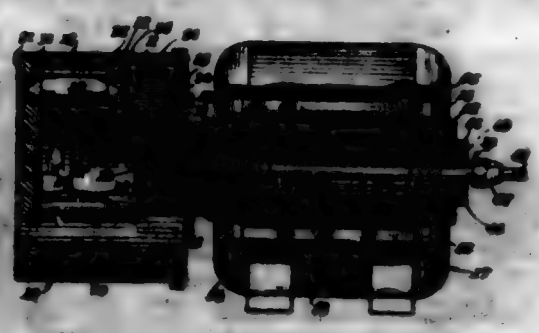
ing said having fixed to its inner end a cylindrical cylinder block having a plurality of pump cylinders and pistons therein, a longitudinally arranged drive cylinder fixed to said block and having at its free end an internally splined drive nut, a splined quill coacting with said nut and driven thereby, a piston mounted on said quill and slidably fitting said drive cylinder, and means for actuating said pump pistons whereby to deliver oil from said casing to said drive cylinder above said piston and thereby move said quill longitudinally in said nut.

2,896,411
HYDRAULIC POWER TRANSMISSION
Eric H. Bowers, Cheltenham, England, and Oswald Thoma, Grunwald uber Munich, Germany, assignors to Dowty Hydraulic Units Limited, Tewkesbury, England, and Oswald Thoma, Grunwald uber Munich, Germany
Application December 19, 1957, Serial No. 704,217
Claims priority, application Great Britain December 21, 1956
9 Claims. (Cl. 60—53)



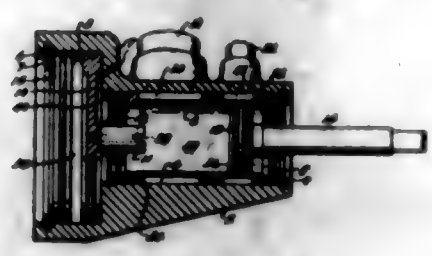
1. A hydraulic power transmission for use between a prime mover and a mechanical load comprising a variable positive displacement pump driven by the prime mover, a positive displacement motor driving the mechanical load, a flow conduit to feed pumped pressure liquid from the pump to the motor, manual means to control pump displacement, a first pressure sensitive means fed with pump output pressure to act on the pump displacement and to override the manual control to reduce pump displacement if the pump pressure exceeds a certain value, and means variable with pump displacement to increase the said certain value of pump pressure as pump displacement reduces.

2,896,412
CENTRIFUGAL FEED DEVICE
August Becker, Fullerton, and Neil G. Kane, Santa Fe Springs, Calif.
Application October 21, 1957, Serial No. 691,208
12 Claims. (Cl. 60—54.5)



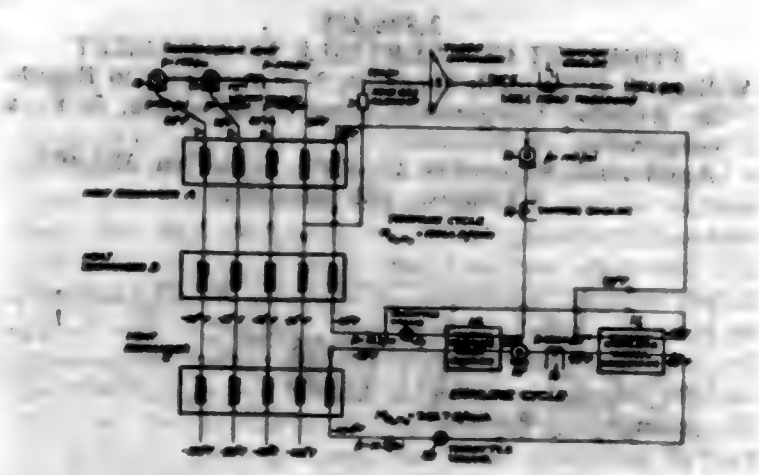
10. In a centrifugal feed device, a rotationally-mounted housing, a flexible diaphragm dividing said housing into two separate chambers, a piston in one chamber, centrifugal weight means interconnecting said piston and housing to move the former when the weight means is moved outwardly centrifugally, said piston being engaged with the diaphragm to move the same in a direction to reduce the size of the second chamber, hydraulic fluid in said second chamber and displaced therefrom by the diaphragm, and a member projected by said displaced fluid.

2,896,413
PISTON ACTUATOR
Norman Russell Hussey, Amesbury, Mass., assignor to General Electric Company, a corporation of New York
Application March 16, 1955, Serial No. 494,689
1 Claim. (Cl. 60—97)



A fluid actuator comprising a casing, a first bore and a second bore longer than said first bore within said casing, said bores being separated by an annular closure member, a first piston slidably disposed within said first bore and a second piston slidably disposed within said second bore, an extension on one of said pistons projecting slidably through an opening in said annular closure member and adapted to abut the adjacent surface of the other of said pistons, a first fluid port near the end of said second bore adjacent said first bore, a second fluid port near the end of said second bore remote from said first bore, and a fluid passage between the end of said first bore remote from said second bore and the end of said second bore adjacent said first bore.

2,896,414
METHANE LIQUEFACTION CYCLE
Shao E. Tung, Ponca City, Okla., assignor to Comstock Liquid Methane Corporation, New York, N.Y., a corporation of Delaware
Application September 12, 1955, Serial No. 533,713
18 Claims. (Cl. 62—12)



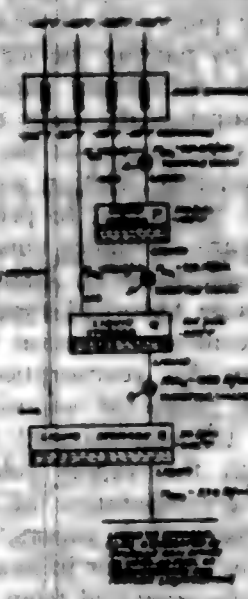
1. The method of continuously liquefying a stream of natural gas formed mostly of methane and which is available at a pressure substantially in excess of the critical pressure thereof, which comprises a multi-stage temperature reduction of such stream including the following: (a) in an initial stage, expanding the process stream with work to an intermediate pressure with corre-

compressing said vapors, condensing the compressed vaporized with resultant drop in temperature to extract

tially parallel plates each forming a flush continuation of a wall of one of said ducts and pivotally secured at one

1. A hydraulic drill unit comprising a casing adapted to be filled with oil, a drive shaft extending into the cas-

sponding reduction in temperature; (*b*) in an intermediate stage within which the process stream is substantially liquefied, refrigerating the cooled and expanded process stream from the initial stage to liquefy substantially all of the gas in the process stream without substantial reduction in pressure; and (*c*) in a final stage within



which the process stream is substantially entirely in liquid form at super-atmospheric pressure, comprising reducing the pressure of the liquefied gas to substantially atmospheric pressure with consequent reduction of the temperature of the liquid to its boiling point at such pressure and with vaporization of a portion thereof as flash.

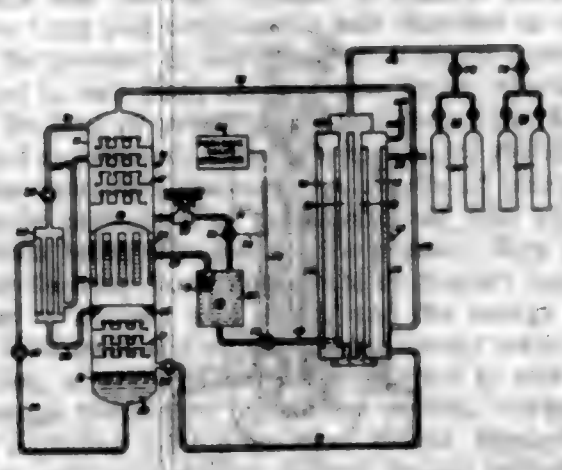
2,896,415

LIQUEFIED GAS PRESSURIZING SYSTEMS

James J. Stanley, Bethesda, Md., assignor to Air Products Incorporated, a corporation of Michigan

Application November 21, 1956, Serial No. 623,675

11 Claims. (Cl. 62—21)



1. The method of transferring in liquid phase a volatile liquid material from a supply reservoir where it is held at a low pressure to a receiving chamber under a relatively high pressure, which comprises conducting under the influence of gravity volatile liquid material from the supply reservoir to a transfer zone, establishing a pressure in the transfer zone corresponding to the relatively high pressure, conducting volatile liquid material under the influence of gravity in the transfer zone to the receiving chamber, bleeding high pressure vapor from the transfer zone to the supply reservoir after volatile liquid has been conducted from the transfer zone to thereby reduce the pressure in the transfer zone to the low pressure and thereafter placing the transfer zone in communication with the supply reservoir.

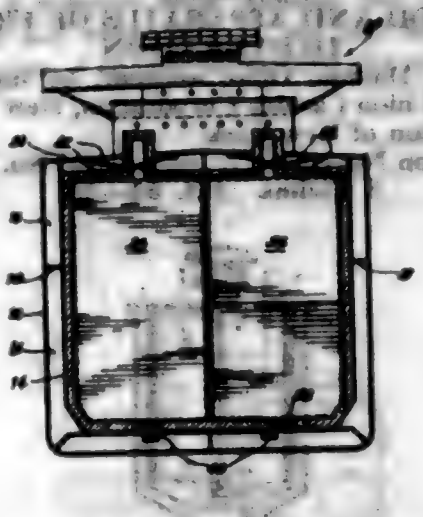
2,896,416

MEANS FOR THE TRANSPORTATION AND STORAGE OF COLD BOILING LIQUEFIED HYDROCARBON GAS

James I. Henry, New York, N.Y., assignor to Constock International Methane Limited, Nassau, Bahamas, a corporation of Bahamas

Application August 5, 1957, Serial No. 676,158

12 Claims. (Cl. 62—45)



1. Means for the storage, at about atmospheric pressure, of a liquefied gas having a boiling point below −40° F. at atmospheric pressure, comprising:

(*a*) a housing of a fluid and vapor impervious material,

(*b*) a thick layer of insulating material lining the inner face of the housing wall,

(*c*) a tank within the insulated housing for housing the liquefied gas therein,

(*d*) means mounting the tank within the insulated housing in a manner to maintain the tank in a predetermined relative position while permitting relative expansion and contraction movements,

(*e*) water applying means for wetting the outer face of the insulated wall of the housing for temperature control, and

(*f*) heating means for increasing the temperature adjacent portions of the outer face of the insulated wall of the housing to heat the wall and to prevent the accumulation of ice thereon.

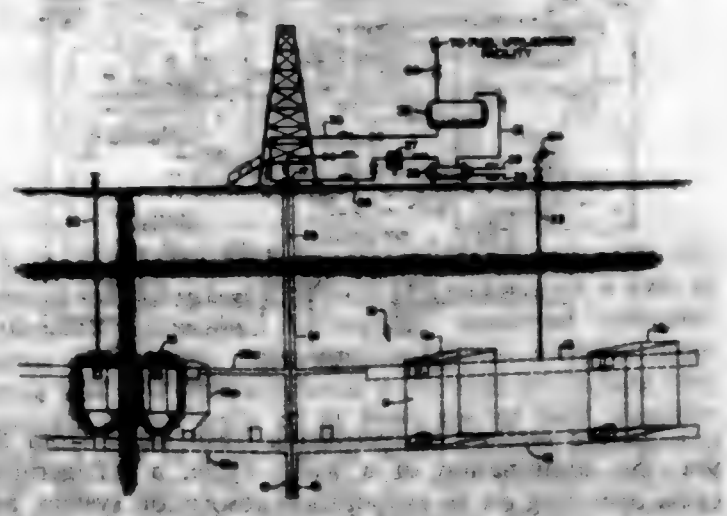
2,896,417

UNDERGROUND STORAGE

Leonard P. Meade, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application November 21, 1955, Serial No. 547,964

4 Claims. (Cl. 62—54)

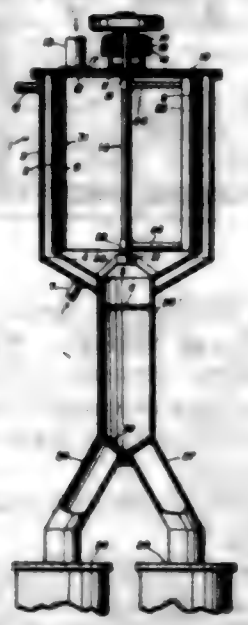


1. A method of operating an underground storage system which comprises introducing material into an underground storage cavern and withdrawing stored material therefrom, withdrawing vapors from said cavern,

contacts, a pressure sensor in the means connecting the drums and said evaporator for storing liquid refrigerant

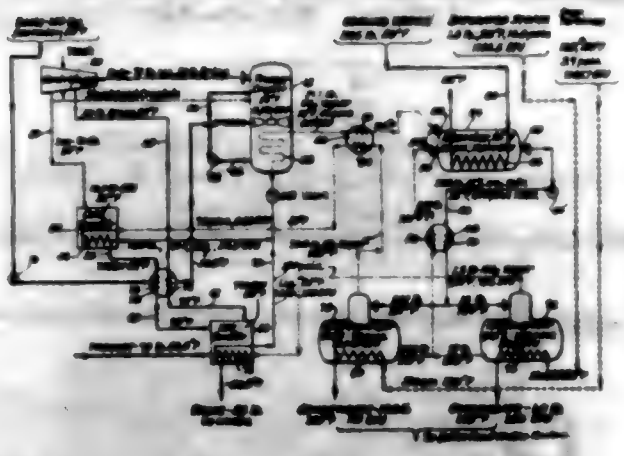
compressing said vapors, condensing the compressed vapors, returning the condensate to the storage cavern, and controlling the rate of withdrawal of vapors to the compressor in such fashion as to decrease the cavern pressure and thereby maintaining cavern pressure substantially equal to the formation pressure.

2,896,418
METHOD AND APPARATUS OF FREEZE DEHYDRATION
Carl Berger, Dayton, Ohio, assignor, by mesne assignments, to Union Carbide Corporation, New York, N.Y., a corporation of New York
Application November 7, 1955, Serial No. 546,086
5 Claims. (Cl. 62—58)



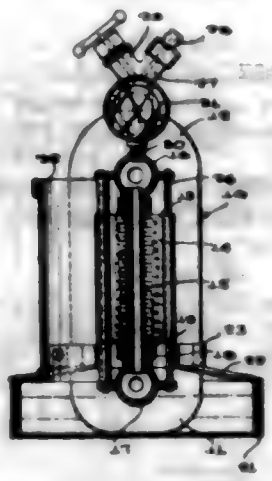
1. In a freezing apparatus for low temperature dehydration of a heat sensitive material, a jacketed tank having inner and outer walls, said tank being cooled by the circulation of a refrigerant within said jacket, a non-metallic surface mounted on the inner wall of said tank, and means for wiping said non-metallic surface.

2,896,419
FRESH WATER RECOVERY PROCESS AND APPARATUS FOR USE IN SAME
Herbert L. Thompson, Birmingham, Ala.
Application December 20, 1955, Serial No. 554,174
8 Claims. (Cl. 62—58)



1. In the method of recovering fresh water from the sea, the combination of a water cycle, a refrigeration cycle operating on an evaporation-absorption system, and a steam cycle, wherein the water cycle comprises the steps of withdrawing water from the sea, extracting heat from the water in a freezer-crystallizer by passing the sea water in heat exchange relation with an evaporator in the refrigeration cycle in which a liquid refrigerant is vaporized with resultant drop in temperature to extract heat from the sea water and cool the water to a temperature below freezing, agitating the refrigerated sea water while in a supersaturated state within the freezer-crystallizer to cause formation of ice crystals substantially free of inclusions of brine to produce a pulp formed of a mixture of ice crystals and brine removing the pulp from the freezer-crystallizer, separating the ice crystals from the brine in the pulp removed and remelting the separated ice crystals by passing the ice crystals in heat exchange relation with refrigerant vapors; wherein the refrigeration cycle comprises the steps of absorbing the vapors released upon vaporization of the refrigerant during passage in heat exchange relation with the sea water into a solution of the refrigerant to produce a solution containing the refrigerant in higher concentration, heating the concentrated solution with latent heat available from steam to regenerate absorbed vapors, recirculating the resulting less concentrated solution from the regenerator to the absorber for reabsorption of additional vapors made available from the vaporizer, passing the vapors released from the concentrated solution in heat exchange relation with the vapors released from the evaporator to raise the temperature of the latter while cooling down the regenerated vapors, passing vapors made available from the generator in heat exchange relation with the ice crystals separated from the brine in the sea water cycle to reduce the ice crystals to water and to condense the refrigerant vapors to form a liquid refrigerant, and advancing the liquid refrigerant to the evaporator for extraction of heat from the sea water, and wherein the steam cycle comprises the steps of passing the steam in heat exchange relation with the concentrated solution of absorbed vapors to regenerate the vapors.

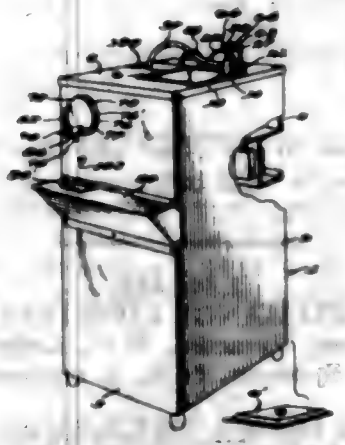
2,896,420
APPARATUS FOR CHARGING A REFRIGERATING SYSTEM WITH A PREDETERMINED AMOUNT OF REFRIGERANT
Charles L. Smouse, Bridgeport, W. Va.
Application April 2, 1957, Serial No. 650,177
1 Claim. (Cl. 62—125)



An apparatus for charging a refrigerating system with a predetermined amount by weight of refrigerant comprising a closed receptacle having a bottom and a top and adapted to contain a body of gaseous refrigerant in liquefied state, a vertically disposed liquid scale marked in volume graduations corresponding to specific weights of the liquefied gaseous refrigerant at a predetermined temperature and pressure positioned exteriorly of said receptacle and extending from the bottom of said receptacle to a point adjacent to and spaced below the top of said receptacle, a transparent pressure resistant tube positioned exteriorly of said receptacle and extending vertically in parallel spaced relation with respect to said scale, means connecting each of the upper and lower end portions of said tube in communication with the interior of said re-

ceptacle, a pressure gauge in the means connecting the upper end of said tube to the interior of said receptacle, a discharge nozzle projecting from the top of said receptacle and adapted to be connected to a refrigerating system, an openable and closable valve in said nozzle for controlling the discharge of said refrigerant from said receptacle, and means encasing the bottom end portion adjacent the bottom of said receptacle for heating said receptacle, said last-mentioned means embodying a shallow container adapted to contain a body of heated water.

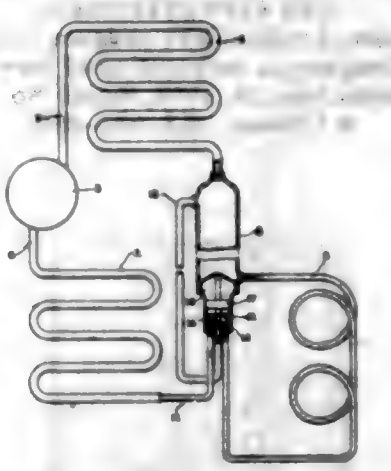
2,896,421
FOOD PRODUCT PREPARING AND DISPENSING MACHINE
Earl L. Rader, Burbank, Calif.
Application May 23, 1955, Serial No. 510,151
32 Claims. (Cl. 62—135)



1. In a machine for preparing and dispensing a refrigerated food product capable of fluid flow, a container adapted to hold a supply of fluid ingredients of the product, a closed chamber in which the product ingredients are subjected to a predetermined pressure greater than atmospheric pressure and refrigeration and from which the product is dispensed while being prepared for consumption, pump means interposed between said container and said chamber operable to transfer product ingredients from said container to said chamber in opposition to the pressure in said chamber, a motor operatively connected to said pump means, valve means operative to permit the flow of prepared product from said chamber when and as required, a pressure responsive switch interposed between said motor and a source of energy and operatively connected to the interior of said chamber, said switch being effective upon a pressure drop in said chamber deriving from withdrawal of product from said chamber to connect said motor and the energy source and to disconnect said motor and the energy source upon restoration of said predetermined pressure in said chamber through transfer of ingredients thereto, refrigeration means including heat absorbtion means engaging said chamber, and refrigeration control devices including devices effective to increase the rate of heat absorption from said chamber by said refrigeration means simultaneously with initiation of the said transfer of ingredients and during at least part of the time said motor is connected to the energy source and is causing said pump means to transfer ingredients to said chamber.

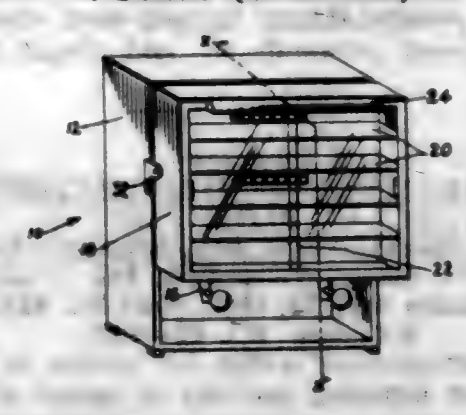
2,896,422
REFRIGERANT CONTROL MEANS
Leonard W. Atchison, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Application March 18, 1958, Serial No. 722,181
1 Claim. (Cl. 62—197)

A refrigeration system comprising a compressor, a condenser and an evaporator connected in refrigerant flow relationship, a receiver in said system between said condenser and said evaporator for storing liquid refrigerant from said condenser, an intermediate chamber in said system between said receiver and said evaporator, a first capillary for conducting liquid refrigerant from said receiver to said intermediate chamber and for creating a pressure drop between said receiver and said intermediate chamber, a second capillary for conducting refrigerant from said intermediate chamber to said evaporator and for creating a pressure drop between said intermediate chamber and said evaporator, a gas port in said intermediate chamber, a conduit connecting the upper portion



of said receiver with said gas port for conducting gaseous refrigerant to said intermediate chamber, a normally closed valve means closing said gas port to said intermediate chamber, said valve means operable to permit gas to flow into said intermediate chamber in response to an increase in pressure in said receiver above a predetermined amount whereby gaseous refrigerant is introduced into said intermediate chamber and thence into said second capillary to restrict the flow of liquid refrigerant through said second capillary thereby reducing the total refrigerant flow through the system.

2,896,423
PERISHABLE FOODS DISPENSER
James Daniel Pettinato, Clayville, N.Y.
Continuation of application Serial No. 628,908, December 17, 1956. This application March 11, 1959, Serial No. 799,389
4 Claims. (Cl. 62—249)

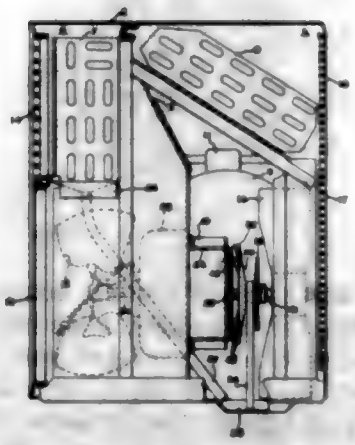


1. A perishable food display case and bulk milk dispensing mechanism comprising in combination a pair of juxtaposed generally rectangular, insulated compartments; a common uninsulated partition member separating said two compartments; a plurality of cooling coils mounted in the walls of at least one of said compartments; a pair of glass sliding doors slidably mounted to form the outer wall of one of said compartments; a plurality of display members mounted in said compartment having the glass sliding door outer wall and said other compartment being adapted to receive therein at least one large milk can; valve means mounted in the bottom of said milk can receiving compartment adapted to control the flow of milk from said milk can therein;

mined pressure, a connection for supplying at least a of substantially equal length extending in parallel rela-

air flow means operatively associated with said common partition member for utilizing a portion of the cooled air of said milk can receiving compartment to cool said other compartment; and hinge means mounted along one edge of said common partition and latch means along the opposite edge whereby one of said compartments may be pivotally separated from the other to permit access to the interior of said other compartment.

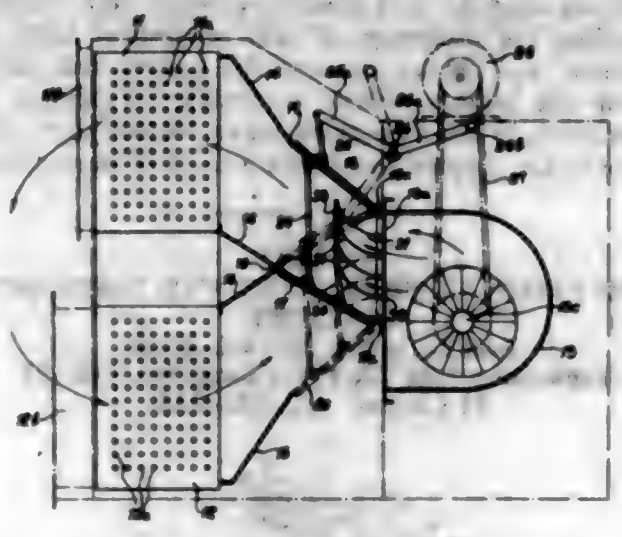
2,896,424
CONDENSATE DISPOSAL ARRANGEMENT FOR AIR CONDITIONER
Stanley E. Rose, Lyndon, Ky., assignor to General Electric Company, a corporation of New York
Application July 28, 1958, Serial No. 751,216
6 Claims. (Cl. 62—288)



1. A condensate water slinger for slinging water within the casing of an air conditioning apparatus comprising a fan mounted in the lower portion of said casing for circulating a stream of outside air through said casing for heat exchange purposes, a motor mounted in the lower portion of said casing and having a shaft for driving said fan, a sump in said casing for collecting condensate water from said air conditioning apparatus, a water slinger disk mounted on said shaft for rotation therewith, a belt depending into said sump and arranged for rotation through said sump by said fan shaft, said belt being disposed closely adjacent said water slinger disk to deposit condensate water carried from said sump by said belt during rotation thereof by said shaft wherein said water is thrown outwardly by said slinger disk into said casing.

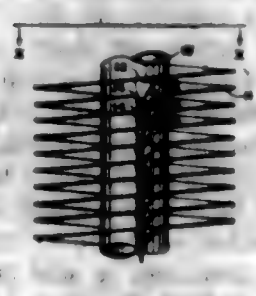
2,896,425
REFRIGERATING SYSTEM HAVING REVERSE FLOW
Frank H. Dunber, Miami, Fla., assignor to Frank J. Reilly, Winter Park, Fla.
Application April 22, 1957, Serial No. 654,188
6 Claims. (Cl. 62—282)

1. In a refrigerating system for cooling an enclosed chamber and including two sets of spaced evaporator coils, and an air blower having an air inlet and an air outlet for circulating a flow of air through the chamber by way of the coils, a device for controlling said flow which comprises air ducts communicating separately with said chamber through the spaces between the coils of the respective sets, said ducts having a dividing edge common to both ducts, a pair of dampers having a first position in which one of the dampers is in alignment with said edge and wherein the dampers connect one of the ducts to the blower inlet and the other duct to the blower outlet, said dampers having a second position in which the other damper is in alignment with said edge and wherein the dampers connect said one duct to the blower outlet and said other duct to the blower inlet, thereby reversing the direction of air flow through the coil sets and the chamber, and shifting mechanism operatively connected to the dampers for shifting them



from one position to the other and thereby moving the dampers alternately into alignment with said dividing edge.

2,896,426
HEAT EXCHANGE CONSTRUCTION
Robert W. Ayling, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Application March 1, 1957, Serial No. 643,426
5 Claims. (Cl. 62—285)



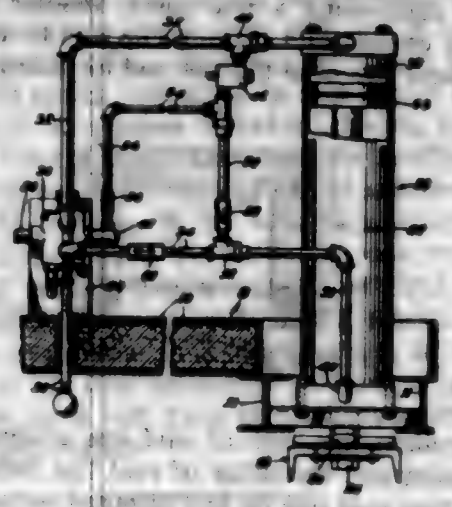
5. A heat exchange member comprising a conduit for the passage of a heat exchange medium, fin elements on said conduit with portions thereof at a higher level than other portions and lips on said fin elements for conducting condensate away from said fin elements, said lips being formed on adjacent fin elements in superposed stacked relationship, each lip being in contact with an adjacent lip.

2,896,427
HYDRAULIC SYSTEM FOR FREEZER
William E. Lauterbach and Peter Strutynski, Chicago, Ill., assignors to Dole Refrigerating Company, Chicago, Ill., a corporation of Illinois
Application December 13, 1956, Serial No. 628,885
7 Claims. (Cl. 62—341)

1. In a double contact freezer or the like, a housing, a plurality of freezer plates movably mounted therein so as to close and open, as a group, in accordian fashion, and fluid power means for closing and opening the plates including a power cylinder, piston and piston rod for moving the plates, a source of high pressure fluid and a sump, closing and opening sides between the fluid source and the power cylinder including lines connecting the source of high pressure fluid to each side of the piston, a control valve to place the source of high pressure fluid in communication with either the closing or the opening side of the power cylinder while venting the other side to the sump, a relief valve in communication with the closing side set to exhaust fluid therefrom at and above a predeter-

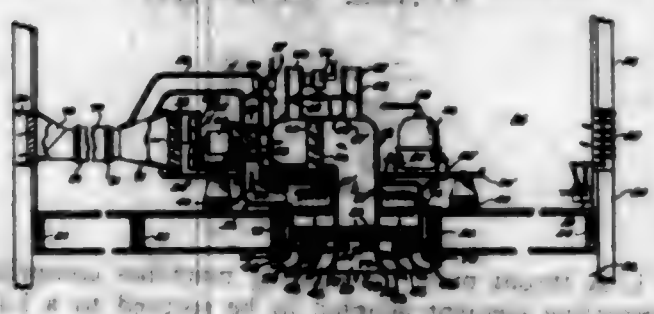
relationship, a receiver in said system between said con- to control the flow of milk from said milk can therein;

mined pressure, a connection for supplying at least a part of the exhausted fluid to the opening side, and a



return line for conveying any excess fluid from the relief valve to the sump.

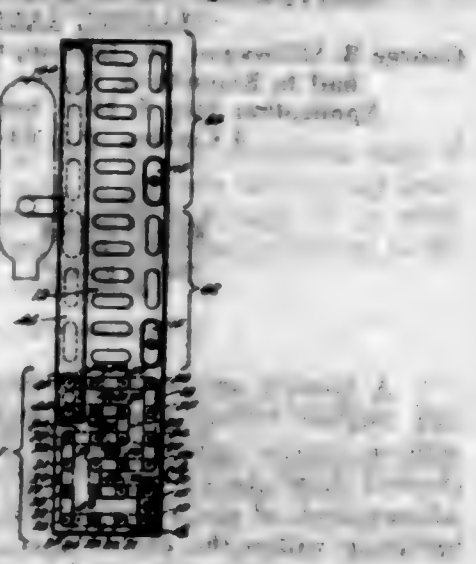
2,896,428
AIR CONDITIONING APPARATUS
Clyde R. Paton, Birmingham, Mich.
Application December 3, 1954, Serial No. 472,955
1 Claim. (Cl. 62—407)



In a combination cooling and ventilating system for either cooling a room or ventilating the room, a duct within a closed space without the room, said duct having an air inlet and an air outlet communicating with the room, a cooling element within said duct between the inlet and outlet thereof, a blower within said duct between said cooling element and said outlet, a heat dissipating element without said duct operatively connected to said cooling element, an exhaust fan without said duct inducing air flow over said heat dissipating element and discharging the air to outside atmosphere, an air exhaust from said duct on the outlet side of said blower and communicating with said fan, a valve controlling said duct outlet, a valve controlling said exhaust, one of said valves being open when the other is closed, means operable to actuate said valves, an exhaust air passage in said duct in communication with said fan, said exhaust air passage on the anterior side of said cooling element with respect to direction of air flow, a baffle within said duct directing air flow to said passage, an intake air passage in said duct on the posterior side of said cooling element and communicating with the intake of said blower, a valve controlling said exhaust air passage, a valve controlling said intake air passage, said exhaust and inlet passage valves either being both open or both closed, and means operable to actuate said exhaust and inlet passage valves.

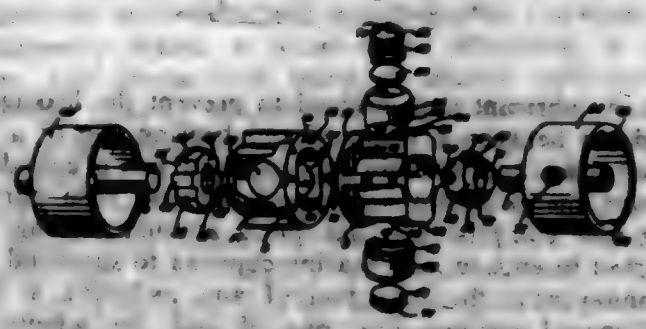
2,896,429
HEAT EXCHANGE DEVICE
John Kazmierski, Grosse Ile, Mich.
Application October 20, 1955, Serial No. 541,583
7 Claims. (Cl. 62—515)

2. In an evaporator core, a pair of oppositely disposed elongated supporting brackets, a plurality of tubes of substantially equal length extending in parallel relation between said brackets, the axes of said tubes being disposed at the intersections of planes parallel to and at right angles to the thickness of the evaporator core, means for connecting said tubes into a pair of nested conduit sections for carrying refrigerant fluid in two parallel paths, each of said sections consisting of a plurality of said tubes one of which is an inlet tube for the section and another one of which is an outlet tube for the section, said inlet tubes for said pair of sections being arranged adjacent each other in a parallel relation and



said outlet tubes for said pair of sections being likewise arranged adjacent each other and in a parallel relation, said connecting means including a common inlet connection for adjacent inlet tubes, a plurality of reversing connections supported by said brackets and connecting adjacent tubes in each of said sections in series for reverse flow of the refrigerant fluid, said reversing connections being so positioned that both conduit sections have the same number of tubes, a common outlet connection for adjacent outlet tubes, and a plurality of cooling fins on said tubes.

2,896,430
FLEXIBLE COUPLING CONSTRUCTION
Gordon L. Olson, Arlington, Mass.
Application March 10, 1958, Serial No. 720,331
6 Claims. (Cl. 64—7)



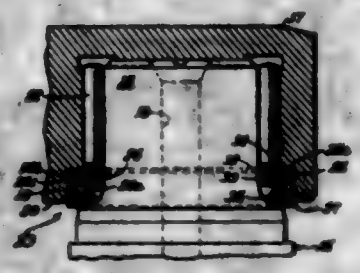
1. A universal joint construction for coupling rotatable bodies comprising a tubular casing, a universal joint mechanism mounted in the tubular casing in a position to engage with the rotatable bodies therewithin, said universal joint mechanism including joint components presenting opposed cylindrical surfaces, pivot means formed with respective mating surfaces, said mating surfaces supporting the opposed cylindrical surfaces for rotative movement through an arc of rotation which lies in a plane passing through the longitudinal axis of that rotatable body on which a respective joint component is engaged, said pivot means consisting of pivot elements slidably disposed through opposite side wall portions of the tubular casing, and retaining sleeve means

located externally of the tubular casing for confining the pivot elements in swivelling relationship in said side wall portions of the casing whereby a ball joint component and respective supporting pivot elements may move as a unit through an arc of rotation which lies in a plane at right angles to an arc of rotation of a respective longitudinal surface of the unit.

2,896,431
UNIVERSAL JOINT AND METHOD OF MAKING SAME
George B. Stillwagon, Jr., Dayton, Ohio, assignor of one-half to Kenneth G. Fraser, Dayton, Ohio
Application May 5, 1955, Serial No. 506,127
4 Claims. (Cl. 64—11)

1. A bonded universal joint comprising a pair of axially aligned tubular coupling members, each provided with an internal annular groove, a vulcanizable bonding element therebetween, a ball bearing positioned between adjacent ends of said coupling members, a packing member lying within the end of each coupling member for maintaining said ball bearing in position, and a spring ring sprung into each of said annular grooves to maintain said packing member and said ball bearing in place.

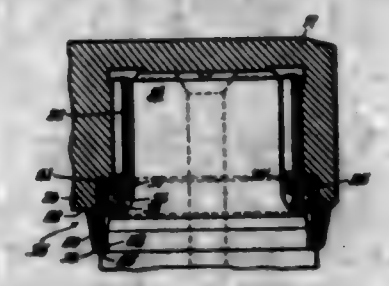
2,896,432
BEARING SEALS FOR UNIVERSAL JOINTS
Rudolph M. Hempel, Palatine, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application March 11, 1955, Serial No. 493,800
3 Claims. (Cl. 64—17)



1. A lubricant seal adapted to prevent the leakage of lubricant between a trunnion and bearing cup of a universal joint and wherein the trunnion has a cylindrical portion merging into a outwardly flaring base portion, said seal comprising a one piece annular sealing ring adapted to engage said bearing cup and to surround said trunnion near the base thereof and including at least two spaced resilient lips, one of said lips adapted to engage said cylindrical portion of said trunnion and the other of said lips being of greater diameter than said one lip and adapted to engage said outwardly flaring base portion.

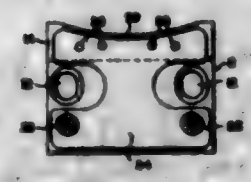
2,896,433
BEARING SEALS FOR UNIVERSAL JOINTS
Rudolph M. Hempel, Palatine, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Original application March 11, 1955, Serial No. 493,800. Divided and this application September 17, 1957, Serial No. 684,598
4 Claims. (Cl. 64—17)

2. A lubricant seal adapted to prevent the leakage of lubricant between a trunnion and bearing cup of a universal joint and wherein the trunnion has a cylindrical portion merging into an outwardly flaring base portion, said seal comprising a one piece annular sealing ring adapted to engage said bearing cup and to surround said trunnion near the base thereof and including at least two



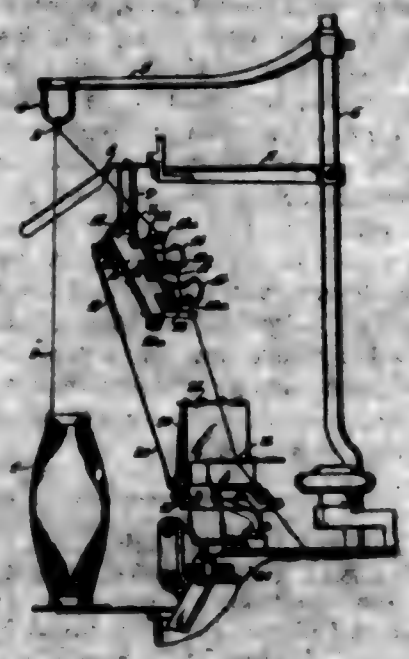
spaced resilient lips, one of said lips adapted to engage said trunnion and the other of said lips being of greater diameter than said one lip and disposed outwardly of said cup and adapted to engage said trunnion below said outwardly flaring base portion.

2,896,434
THROAT PLATE
George H. McKinley and Richard H. Whitehead, Laconia, N.H., assignors to Scott & Williams, Incorporated, Laconia, N.H., a corporation of Massachusetts
Application September 9, 1958, Serial No. 759,899
9 Claims. (Cl. 66—125)



1. A throat plate for knitting machines comprising a supporting element adapted to be secured to a knitting machine, a hard, brittle, non-metallic element providing at least one yarn guiding recess, and a spring member mounting the last mentioned element resiliently on the first mentioned element.

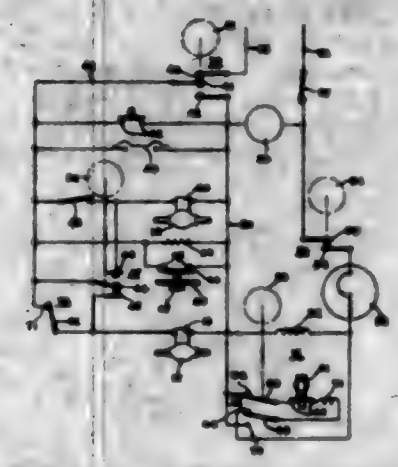
2,896,435
YARN TENSIONING DEVICE FOR CIRCULAR KNITTING MACHINE
Chester P. Berg, Birdsboro, Pa., assignor to Manor Hosiery Mills, Inc., Birdsboro, Pa.
Application August 6, 1956, Serial No. 602,378
1 Claim. (Cl. 66—146)



In a circular knitting machine including a cone of raw yarn, and a yarn tensioning device comprising stationary

aligned spools and a plurality of rocker arms having registering eyes mounted adjacent the ends thereof which are adapted to selectively move into and out of alignment with said spools to effect tensioning or relieve it, respectively, a return spring connected to said rocker arms and biasing them to the tension relieving position, a plurality of yarn feed fingers cooperable with the needles of said machine, spring means connecting one of said feed fingers, which controls knitting of the welt of a stocking, with said rocker arms against the action of said rocker arm return spring, whereby movement of said feed finger to the welt knitting position will relieve tension of said spring means and allow said return spring to move the rocker arms to the non tensioning position so as to knit said welt with loose raw yarn to produce a welt having substantial stretchability.

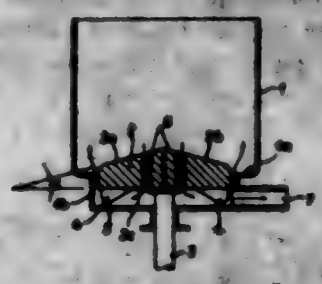
2,896,436
CLOTHES WASHER WITH AN IMPROVED ADJUSTABLE WATER LEVEL CONTROL SYSTEM
William R. Beechler, Clinton, Iowa, assignor to General Electric Company, a corporation of New York
Application June 25, 1958, Serial No. 744,439
10 Claims. (Cl. 68—12)



1. In a washing machine having an article and liquid receptacle: valve means for controlling the supply of liquid to said receptacle; electromagnet means for controlling said valve means, said electromagnet means opening said valve means when energized and closing said valve means when de-energized: an electrical circuit for said electromagnet means and means for controlling energization of said electromagnet means comprising normally open contacts arranged in said circuit in parallel with said electromagnet means, closing of said contacts causing de-energization of said electromagnet means by reason of the drop in the voltage across said electromagnet means, thermally responsive means arranged to close said contacts as the temperature of said thermally responsive means rises, means for heating said thermally responsive means during energization of said electromagnet means, said heating means being arranged in said circuit in parallel with said contacts, and means for varying the time required for said heating means to cause said thermally responsive means to close said contacts whereby varying liquid levels are provided in said receptacle.

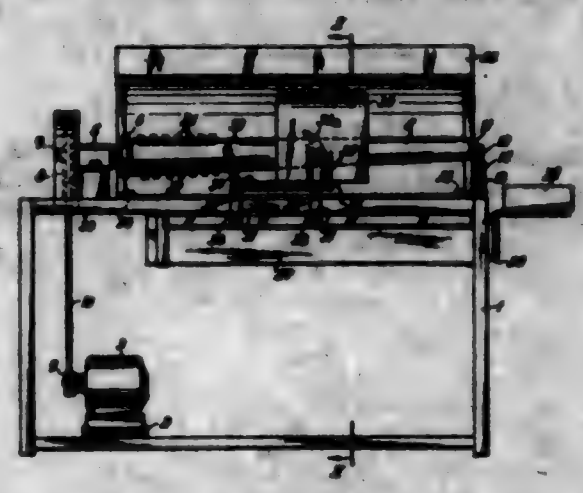
2,896,437
WASHING MACHINES
Karl Wuck, Styria, and Alois Krumm, Leoben, Austria
Application May 22, 1956, Serial No. 586,413
Claims priority, application Austria June 1, 1955
1 Claim. (Cl. 68—133)

A washing machine comprising a container having a plurality of walls, one of said walls having a substantially circular recess at its center, a substantially disk-shaped rotor rotatably mounted in said circular recess of said one of said walls, and said disk-shaped rotor having an end face facing the interior of said container and consisting exclusively of two smooth top faces inclined from a top edge line disposed along a diameter of said disk-



shaped rotor downwardly towards the peripheral edge of said disk-shaped rotor, each of said two inclined top faces being disposed in a plane forming an angle of no more than 30 degrees to a plane extending perpendicular to the axis of rotation of said rotor.

2,896,438
SCRAPING APPLIANCE, PARTICULARLY FOR MINK-SKINS
Sven Gösta Verner Larsson, Nogersund, Hallevik, Sweden, assignor to Paul Antic, Astoria, Oreg.
Application February 16, 1956, Serial No. 566,006
Claims priority, application Sweden February 25, 1955
12 Claims. (Cl. 69—46)



1. A scraping appliance for skins of furred animals, particularly mink-skins, and comprising in combination: a stationary frame, a scrape-stock journalled in said frame, said scrape-stock being of circular cross-section uniformly tapering towards one end of the stock, means for rotating said scrape-stock, means on said scrape-stock for stretching and fastening a skin spread-out in close engagement with the peripheral surface of said stock, said stock being rounded at its small end and being releasable from said frame at one end, at least, of the stock; and a scraping tool mounted on said frame so as to be displaceable along said scrape-stock as well as being swingable towards the stock in order to cause said scraping tool during the rotation of said stock to scrape said skin when fastened to the stock.

2,896,439
COMBINATION LOCK
Eugene W. Holmberg, Dania, Fla.
Application April 1, 1957, Serial No. 649,693
3 Claims. (Cl. 70—156)

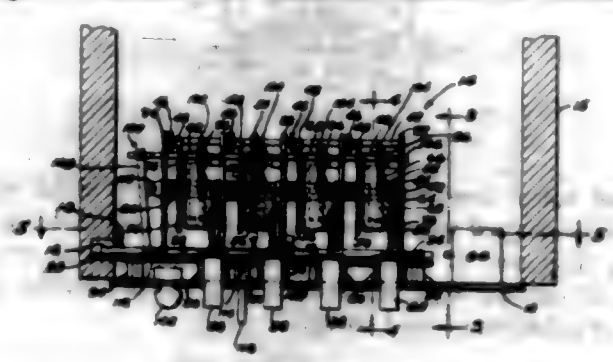
1. A combination lock comprising, in combination, a slide bolt mounted for engagement with a keeper, latch means for retaining the bolt in its locked position, a stationary shaft having a plurality of cams mounted for rotation thereon, each cam having a notch therein, a second shaft having a plurality of arms fast thereon, each

the supply of air to initially charge the train pipe to its normal pressure, means for reducing the pressure in means on each of the heads axially aligned with one

2. A lubricant seal adapted to prevent the leakage of lubricant between a trunnion and bearing cup of a uni-

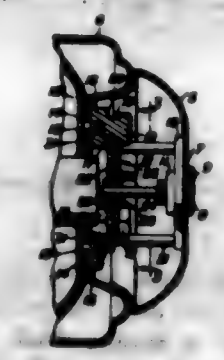
In a circular knitting machine including a cone of raw yarn, and a yarn tensioning device comprising stationary

arm carrying a roller, said arms cooperating with said cams, a plurality of ratchet casings mounted on said first shaft and operatively connected to their respective cams, said ratchet casings being spring urged in one direction of rotation, stop means for said ratchet casings, manually and individually operated means including push button operated resilient pawls for independently rotating each of said ratchet casings and cams in the opposite direction through a selected and different number of increments



of rotation to present the cam notches in alignment with their respective rollers, resilient holding pawls for retaining the casings in their moved position, a spring urged arm fast on said second shaft and operatively connected to said latch means for effecting rocking of said second shaft when all of the notches are aligned with their respective rollers whereby to effect unlatching of said bolt, and spring means for automatically retracting said bolt from engagement with its keeper when the bolt is unlatched.

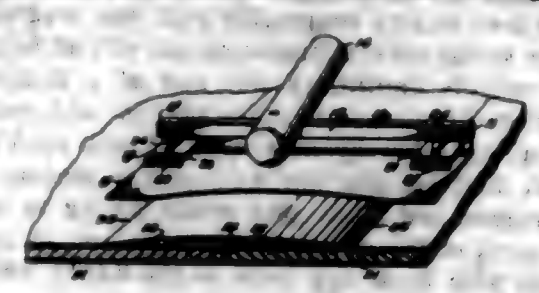
2,896,440
HUB CAP LOCK
Fred Rennteadt, Jr., Philadelphia, Pa., assignor of fifty percent to Carl Collin Whisler, Brooklawn, N.J.
Application November 12, 1957, Serial No. 695,765
2 Claims. (Cl. 70—258)



1. A lock for securing a hub cap to a vehicle wheel mounted on a hub, said lock comprising: threaded members securing the wheel to the hub, said members including heads on one end and shoulders spaced inwardly from said heads, a key operated lock mounted on the cap, a disc mounted on said lock in the cap, a plurality of rods fixed on said disc, a plate fixed on the rods and engageable with the shoulders, a rotary shaft journalled in said plate and operatively connected to the lock for actuation thereby, and a plurality of arms fixed rigidly on the shaft and rotatable thereby into engagement with said members behind the heads for anchoring the cap to said members.

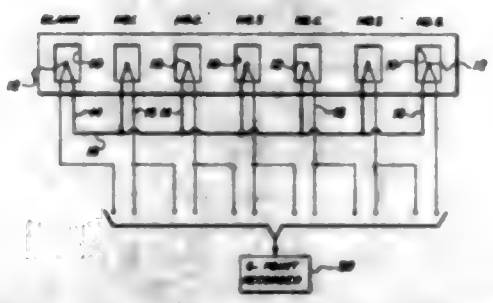
2,896,441
ADJUSTABLE JOINT TROWEL
Jo W. Tucker, El Paso, Tex.
Application April 26, 1956, Serial No. 580,889
3 Claims. (Cl. 72—136)

1. An adjustable joint trowel including a rectangular flexible blade having a working edge on one of its longitudinal margins, the blade being relatively wide and of greater length than width, a substantially coextensive frame member attached to the opposite longitudinal margin of said blade, a bracket attached to each end portion of the frame member and extending laterally therefrom in overlying spaced relation to said blade, the lateral projection of the brackets being not greater than one-half the width of said blade, support elements extending transversely of said blade in overlying engagement with its end portions and terminating between its longitudinal



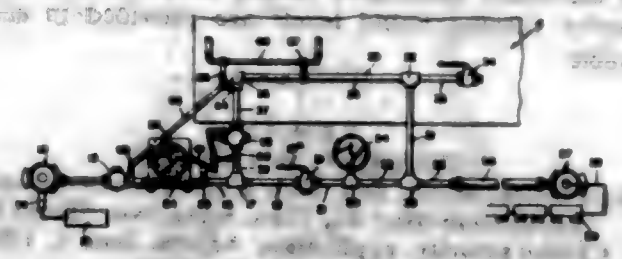
margins for preventing upward flexure of the end portions of the working edge while permitting upward flexure of the intermediate portion of said edge, and means for adjustably fastening the support elements to said brackets for transverse movement between the longitudinal margins of said blade to vary the curvature of said working edge when said blade is flexed.

2,896,442
MINERALOGICAL ANALYSIS
Florent H. Bailly, Pasadena, Calif.
Application July 2, 1956, Serial No. 595,161
2 Claims. (Cl. 73—15)



1. An earth logging method comprising taking a first sample from the earth, taking a second sample from the earth adjacent the first, taking a third sample from the earth adjacent the second, simultaneously heating the first and second samples through a temperature rise sufficient to cause a thermal reaction in at least one of the first and second samples, recording thermal reactions taking place in the first and second samples, simultaneously heating the second and third samples through a temperature rise sufficient to cause a thermal reaction in at least one of the second and third samples, and recording thermal reactions taking place in the second and third samples whereby the deviation in thermal activity of one sample from an adjacent sample may be determined.

2,896,443
TERMINAL AIR BRAKE TIME TESTING DEVICE
Ernest E. Andrews, Richmond, Va.
Application June 11, 1956, Serial No. 590,473
3 Claims. (Cl. 73—39)



1. An air brake testing apparatus comprising an air line for effecting a connection between a source of compressed air and a train pipe of a line of coupled cars whose brakes are to be tested, means for controlling

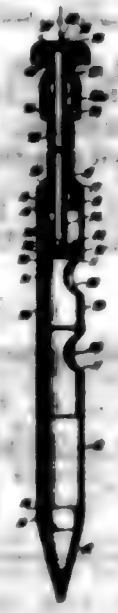
charge capacitor connected between said first coil and the

ly circular recess at its center, a substantially disk-shaped rotor rotatably mounted in said circular recess of said

rotation thereon, each cam having a notch therein, a second shaft having a plurality of arms fast thereon, each

the supply of air to initially charge the train pipe to its normal pressure, means for reducing the pressure in the train pipe to apply the brakes, a compressed air bypass supply leading around the first means for facilitating recharging the train pipe to release the brakes, a self-closing control valve in said bypass, said valve comprising a reciprocable plug and stem connected with the plug and spring means urging movement of the plug to valve closed position, spring actuated means acting against said stem in opposition to and with greater force than the first spring means to move the plug to valve open position, latch means for holding the spring actuated means from overcoming the force of the first spring means to maintain the valve closed, and a time controlled means for releasing the latch means to effect opening of the valve by the spring actuated means.

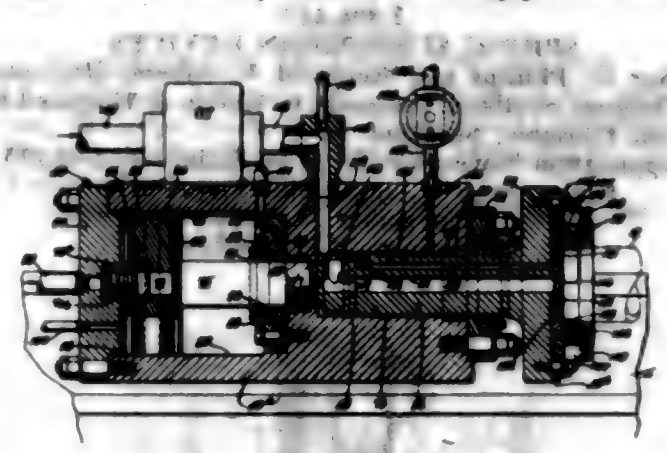
2,896,444
GRAIN PROBE
George W. Forman, Prairie Village, Kans., and Ralph D. George, Raytown, Mo., assignors to Butler Manufacturing Company, Kansas City, Mo., a corporation of Missouri
Application May 26, 1955, Serial No. 511,216
7 Claims. (Cl. 73—425.2)



1. A grain sample collecting device comprising a collecting chamber having a cylindrical outer shell having a plurality of vertically aligned grain receiving openings therein, a guide block attached to the inner wall of said outer shell and angularly displaced from said grain receiving openings, an inner tube concentric to said outer shell, a plurality of vertically aligned grain receiving openings therein of a number and spacing to match the openings in said outer shell when aligned therewith, and a slot in said inner tube wall to receive said guide block whereby movement of said tube is axial only and the tube and shell openings are maintained in line, a hollow handle attached to the top of said shell, gripping means on the top of said handle, a shaft in said handle of greater length than the handle, said shaft being attached to the upper end of the inner tube, a knob attached to the upper end of said shaft and resilient means between said knob and said grip urging the knob away from said grip.

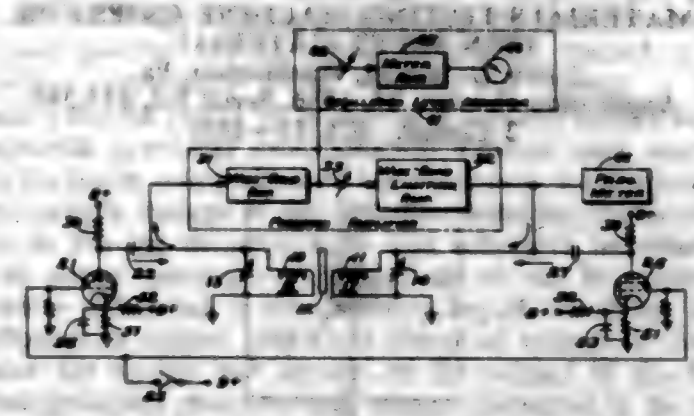
2,896,445
TUBULAR PIPE TESTING MACHINE
Arthur J. McNabb, Phoenixville, Pa., assignor to Phoenix Steel Corporation, Phoenixville, Pa., a corporation of Pennsylvania
Application August 23, 1956, Serial No. 605,242
15 Claims. (Cl. 73—49.6)

1. A machine for testing hollow tubular pipe comprising a base, a pair of laterally spaced heads, sealing means on each of the heads axially aligned with one another and adapted to engage the opposite ends of a length of pipe to be tested and to seal the ends of the pipe by axial pressure of the respective sealing means on the opposite ends of the pipe, fluid supply means for introducing fluid into the interior of a length of pipe on the machine and for supplying sufficient pressure on the fluid to produce a satisfactory test of pipe wall strength, and follow-up means, including piston surfaces



directly connected to the head and in line therewith within cylinder means, and supply duct means to the cylinder means in position to supply fluid to the cylinder means to act upon the piston means to oppose and exceed the force effect of testing fluid with a pipe being tested upon the head, urging the sealing means of one of the heads against the end of a pipe on the machine so that it follows any axial shortening of the pipe and preserves a fluid tight seal.

2,896,446
MAGNETOSTRICTIVE DISC TEST OSCILLATOR
Herbert O. Lewis, Canoga Park, Calif., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application March 8, 1957, Serial No. 644,838
3 Claims. (Cl. 73—67.2)



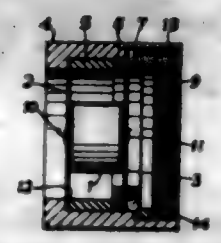
1. Testing means for magnetostrictive mechanically resonant discs, comprising a pair of coils having a space between them for receiving any of said magnetostrictive discs, a pair of capacitors respectively connected across each of said coils to resonate them at a frequency near the frequency of said disc, each of said coils being connected to ground on one side, feedback-amplifier means having its input connected to one of said coils and its output connected to the other of said coils, amplitude-limiting means included within said feedback-amplifier to limit its output amplitude, a frequency meter connected to the output of said amplifier means, transient high-current means connected serially with each of said coils and switching means for initially actuating said current means; said transient high-current means comprising first and second gas discharge tubes, first and second discharge capacitors, and a switch; with a direct-voltage source connected to one side of said switch, said first dis-

frame member attached to the opposite longitudinal margin of said blade, a bracket attached to each end portion

pressed air and a train pipe of a line of coupled cars whose brakes are to be tested, means for controlling

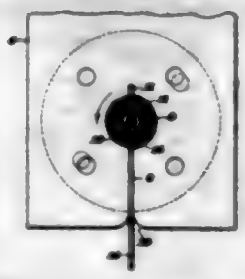
charge capacitor connected between said first coil and the plate of said first gas tube, said second discharge capacitor connected between the plate of said second tube and said second coil, a positive direct-current source connected to one side of said switch, and the other side of said switch connected to the control grids of said first and second discharge tubes.

2,896,447
SPRING SUSPENSION DEVICES
Arthur C. Phillips and Reginald V. Myers, Hillington, Glasgow, Scotland, assignors to Kelvin & Hughes Limited, Glasgow, Scotland
Application November 21, 1955, Serial No. 548,175
Claims priority, application Great Britain November 23, 1954
5 Claims. (Cl. 73—71)



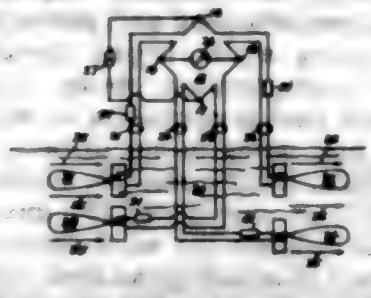
1. A spring suspension device comprising a body having a cylindrical bore, a leaf spring located in said bore having at least one arm, two rotatably adjustable abutment members also located in said bore, said abutment members having abutment surfaces engaging opposite surfaces of said arm, said abutment surfaces having edges effective to determine the effective length of said arm, said effective edges being maintained in constant alignment with each other and being adjustable along the length of the arm according to the rotary position of said abutment members in relation to said spring to vary the effective length of the arm, and retaining means for retaining the abutment members in said body.

2,896,448
MATERIALS TESTING MACHINE GRIPS FOR THIN SHEET MATERIAL
Lewis G. Haines, Washington, Pa.
Application October 11, 1956, Serial No. 615,346
2 Claims. (Cl. 73—103)



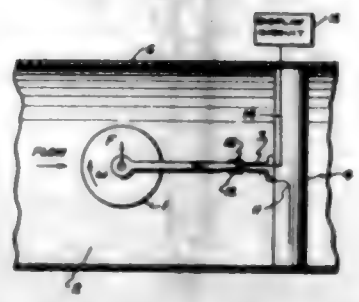
1. A specimen grip for holding sheet material to which load is applied in a straight line direction lengthwise of that portion of the sheet under test comprising, in combination, a grip body having a transverse opening therein, of substantially circular cross section and having a specimen receiving slot therein extending from one end of the body to the opening substantially radially thereof and lying in the plane of the lengthwise portion of the sheet under test, a pin disposed within said opening about the axis thereof and being of less cross sectional area than the opening so as to provide a space within which an end portion of the specimen may be drawn, said pin having a substantially radial slot which in one position is in alignment with the body slot so as to receive a specimen, and means for rotating said slotted pin so that a portion of the specimen is drawn within said space between the pin and opening.

2,896,449
FLUID FLOW METERS
Edwin E. Turner, West Roxbury, Mass., assignor to Raytheon Company, a corporation of Delaware
Application January 27, 1954, Serial No. 406,454
15 Claims. (Cl. 73—181)



1. Apparatus for measuring fluid flow velocity comprising an electroacoustic transducer, a source of alternating voltage connected to said transducer for energizing said transducer to produce a beam of sound energy, means supporting said transducer in a flowing fluid, said transducer being oriented in a position to project compressional wave energy in a prescribed direction having a substantial component parallel to the direction of fluid flow, and means for deriving a signal dependent upon the radiation resistance of said transducer.

2,896,450
MASS FLOWMETER
Henry L. Mason, Washington, D.C., assignor to the United States of America as represented by the Secretary of Commerce
Application May 17, 1955, Serial No. 509,126
7 Claims. (Cl. 73—194)



1. A mass flowmeter comprising a fluid flow channel, a rigid member positioned across said channel, an elastic yoke connected to said rigid member, a cylinder rotatably supported about its longitudinal axis in said channel by said elastic yoke with said longitudinal axis of rotation of said cylinder disposed at an angle to the direction of flow, motor means within said cylinder for driving it at a substantially constant angular velocity, and means for measuring the amount of bend in said yoke caused by the force exerted on said cylinder normal to said flow.

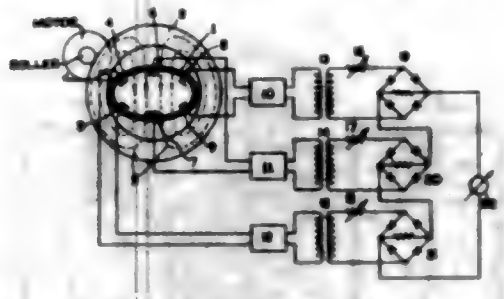
2,896,451
DEVICE FOR MEASURING THE FLOW SPEED OF A LIQUID
Herre Rinia, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application June 8, 1956, Serial No. 590,270
Claims priority, application Netherlands June 17, 1955
3 Claims. (Cl. 73—194)

1. A device for measuring the flow speed of a liquid flowing through a liquid conducting line, comprising means for producing a rotating magnetic field through said liquid at substantially right angles to the axis of said line, and means for measuring the electromotive force produced by the flow of said liquid in said magnetic field comprising a plurality of pairs of opposed spaced electrodes positioned in said liquid within said line, each of said pairs of electrodes being positioned in a different

in said channel for positioning said gyroscope ball and first torsion members connected between said gimbal ring

which said platen is reciprocated toward and away from

longitudinal plane from the others of said pairs of electrodes, means for rectifying the voltage across each of

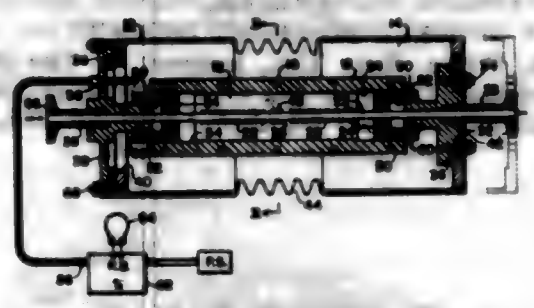


said pairs of electrodes, voltage indicating means, and means for simultaneously applying the rectified voltages in series combination across said indicating means.

2,896,452
FLOWMETER

Marcel Cogniat, Pierre-Benito, and Michel de Fromont, and Georges Serratrice, Lyon, France, assignors to Societe d'Electro-Chimie, d'Electro-Metallurgie et des Acieries Electriques d'Ugine, Paris, France, a corporation of France

Application January 23, 1958, Serial No. 710,674
Claims priority, application France January 24, 1957
7 Claims. (Cl. 73—204)

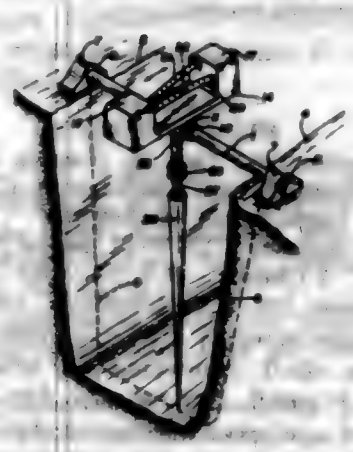


1. In a meter device, a housing comprising a pair of containers arranged one within another with an annular space between, means including end closure members for the housing affixing the location of the ends of the inner container with respect to the outer container of the housing, flow tube means having end portions lodged in said end closure members and having a midportion carrying heat dissipating and heat sensing resistor elements within said inner container, and means providing an expansion joint in the walls of the outer container for accommodation of the latter to changes in length of said inner body due to thermal expansion.

2,896,453
FLOW METER

Alfred J. Ryan, Denver, and William B. McDowell, Boulder, Colo.; said McDowell assignor to said Ryan

Application January 16, 1956, Serial No. 559,427
6 Claims. (Cl. 73—228)

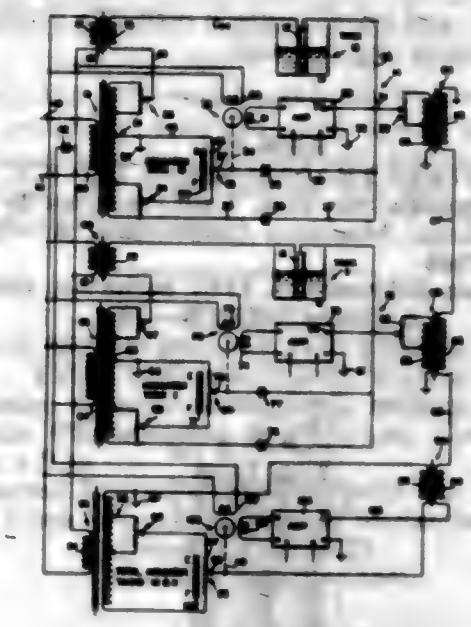


1. In a fluid flow meter having a vane and a pivoted vane supporting arm which is arranged to be progressively swung through an arc about its pivot in response to variations of flow acting on the vane, a body mounted on said arm and swingable upon its pivot in response to movement of said arm, at least one arcuate bubble-containing elongated spirit level tube mounted on said body and swingable through an arc therewith, and said tube having a decreasing radius of curvature from one end to the other.

2,896,454
CONDITION SENSING APPARATUS

John F. Storm, Minneapolis, and Reginald M. Williamson, Brooklyn Park, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application March 2, 1955, Serial No. 491,686
11 Claims. (Cl. 73—304)



1. Apparatus for indicating the total quantity of liquid in a plurality of individual containers, comprising: a plurality of bridge circuits each having an impedance type liquid quantity sensing means in one leg thereof, a rebalance impedance in an adjacent leg thereof, a first and a second source of voltage of a first and second characteristic providing discrimination between said sources in the leg in series with said sensing means, a third source of variable voltage of the first discriminating characteristic in the leg in series with said rebalance impedance, and means responsive to the voltage of said first characteristic connected in the detecting leg of the bridge and effective to control said third source of voltage to rebalance the bridge with respect to the voltage of the first discriminating characteristic; means connected in the detecting leg of each of said bridge circuits and effective to add the voltages of said second discriminating characteristic for each of said bridge circuits, and voltage responsive means connected to said last named means and effective to indicate total quantity of liquid in the plurality of containers.

2,896,455
GYROSCOPIC DEVICES

Ronald L. Bishop, Oceanside, Wendell D. Jewell, West Hempstead, Daniel Radov, New York, and Joseph Stattinger, Bayside, N.Y., assignors to American Bosch Arma Corporation, a corporation of New York

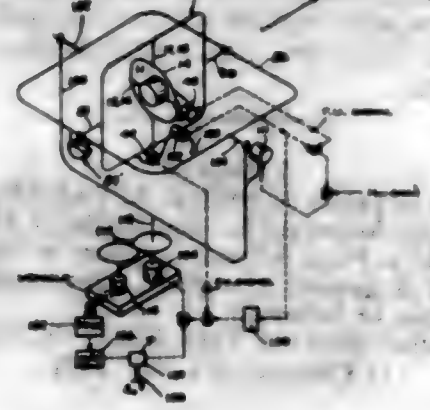
Application December 31, 1954, Serial No. 479,144
24 Claims. (Cl. 74—5.5)

9. In a device of the character described, a tank, a gyroscope ball suspended in said tank, said ball having an equatorial channel, said channel having its opposed sides diverging from the center outward and a gimbal ring

between the pin and opening.

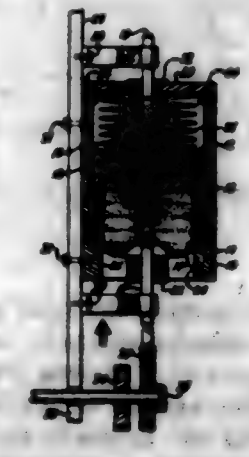
said pairs of electrodes being positioned in a different

in said channel for positioning said gyroscope ball and first torsion members connected between said gimbal ring



and said ball, and second torsion members connected between said gimbal ring and tank.

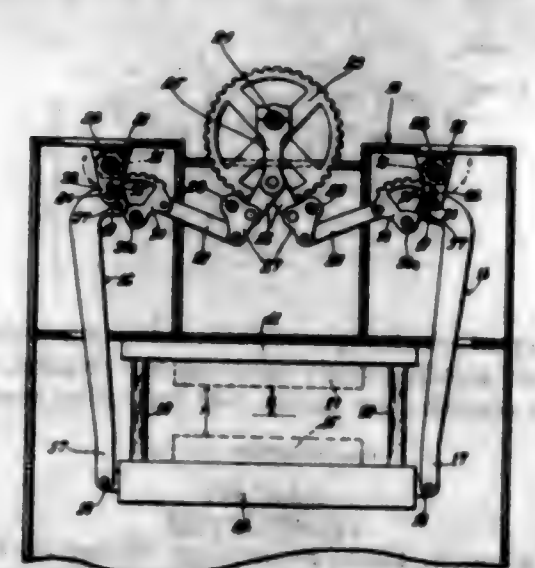
2,896,456
MOTION TRANSMISSION DEVICE
Jacob J. Hagopian, San Jose, Calif., assignor to International Business Machines Corporation, a corporation of New York
Application February 16, 1954, Serial No. 410,595
6 Claims. (Cl. 74—18)



1. A motion transmitting device including a driving member and a driven member, means interposed between said members for selectively controlling the transmission of force therebetween comprising an open ended container affixed to one said member and a flexible diaphragm sealing the opening of said container, said diaphragm being operatively affixed to the other said member, a magnetic liquid within said container normally displaceable by motion of said driving member distorting said diaphragm whereby said motion is absorbed, and means for selectively rendering said liquid non-displaceable so that motion is transmitted between said members.

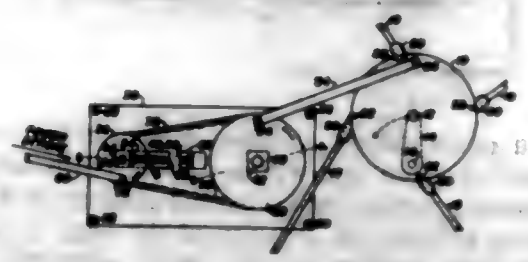
2,896,457
VARIABLE STROKE PRESS
William F. Longfield, Warren, Ohio, assignor to The Federal Machine & Welder Company
Application July 18, 1956, Serial No. 598,695
5 Claims. (Cl. 74—43)

1. A variable stroke press comprising a reciprocable platen having an extreme platen position, a crank pin off-set radially of an axis and movable in an arc thereabout, and link means extending between said crank pin and said platen for translating arcuate movement of the former to reciprocable movement of the latter, said crank pin being shiftable radially of said axis when said platen is in said extreme platen position to vary said off-set relationship and thereby vary the distance through which said platen is reciprocated toward and away from said extreme platen position and said crank pin being



simultaneously shiftable relative to said link means to provide for varying said off-set relationship while said platen remains fixed in said position.

2,896,458
WELL PUMPING DEVICE
Roger B. White, Vernon, Tex., assignor to The Pure Oil Company, Chicago, Ill., a corporation of Ohio
Application August 24, 1955, Serial No. 530,265
14 Claims. (Cl. 74—51)



1. A device for translating circular oscillatory motion into reciprocating motion of different magnitude comprising, in combination, eccentric means for providing circular oscillatory motion, a pitman pivotally connected at one end to a point removed from the center of said eccentric means, the other end of said pitman being pivotally connected to a rotatable driven means at a point removed from the center of rotation thereof, said rotatable driven means being connected to a second rotatable driven means having a diameter different from the diameter of said first driven means and means pivotally connected to said second driven means to be reciprocated thereby, whereby the reciprocating motion taken from said second driven means is of a different magnitude than that of said eccentric means.

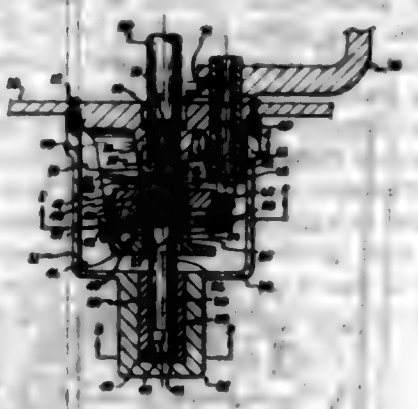
2,896,459
FLUID PUMP
Volney M. Jamison and Don H. Young, Phoenix, Ariz., assignors to Thunderbird Engineering Company, Phoenix, Ariz., a corporation of Arizona
Application February 15, 1957, Serial No. 640,485
4 Claims. (Cl. 74—60)

1. In a device for simultaneously rotating and reciprocating a piston on a frame, a spool fixed to said piston, a drive shaft connected to rotate said spool, flanges on said spool, and means for effecting axial reciprocation of said spool and piston during the rotation thereof comprising, a circular yoke surrounding said spool and positioned between said flanges, said circular yoke being pivotally supported at one side on said frame,

shaft being received in said worm with one end extend-

the arm into contacting relation with the annular cam

means on said frame connected at the other side of said yoke for adjustably angularly positioning said yoke relative to the axis of rotation of said piston, and ball bearing



means mounted at one circumferential position on said spool flanges engaging said yoke whereupon rotation of said spool and piston by said drive shaft effects axial reciprocation of said piston.

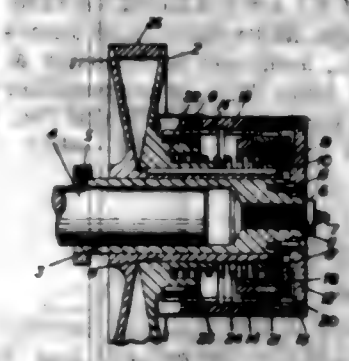
2,896,460

VARIABLE SPEED BELT TRANSMISSION MECHANISM

James Mitchell, Marfleet, Hull, England, assignor to J. H. Fenner and Company Limited, Hull, England, a British company

Application February 25, 1955, Serial No. 490,622

5 Claims. (Cl. 74—230.17)



1. A variable speed transmission comprising two pulleys, a V belt extending between said pulleys with said pulleys being adaptable for either adjusting the run of said belt or by varying the distance between the axes of the pulleys, one of said pulleys having conical flanges movable toward and away from each other, a coil spring coaxial with said one of said pulleys and bearing against the hub portion of one of said flanges, mechanism means contacting the other end of the spring for urging said flanges toward each other in response to the torque transmitted by the pulley, and the rate of the spring pressure being related to the action of the mechanism means so that under maximum power conditions the total force urging the flanges together is substantially constant throughout the range of the effective diameters of the flanges of the pulley.

2,896,461

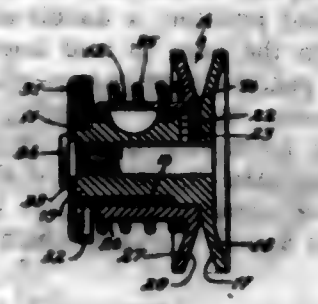
VARIABLE PITCH PULLEYS

John J. Grevich, New Richmond, Wis., assignor to Doughboy Industries, Inc., New Richmond, Wis., a corporation of Wisconsin

Continuation of application Serial No. 488,691, February 16, 1955. This application July 28, 1958, Serial No. 751,573

8 Claims. (Cl. 74—230.17)

1. A variable pitch pulley including a fixed pulley portion including a hub having an axial shaft socket therein and a frusto conical flange on the socketed end of said hub, the end of the hub adjacent to said flange being of larger diameter and the other end of said hub being of reduced diameter, a bearing encircling said reduced diameter hub portion and having an external diameter equal to the diameter of the larger diameter portion of said hub, a sleeve slidably supported on said bearing and having an end normally overlying the larger diameter portion of said hub, a second frusto conical flange on said



sleeve, said flanges having diverging surfaces, a flange means, threaded means extending through said flange means and extending axially into said hub, said flange means engaging said bearing and the end of the small diameter portion of said hub, and spring means interposed between said flange means and said second frusto conical flange, and means holding said hub, bearing and sleeve from relative rotation.

2,896,462

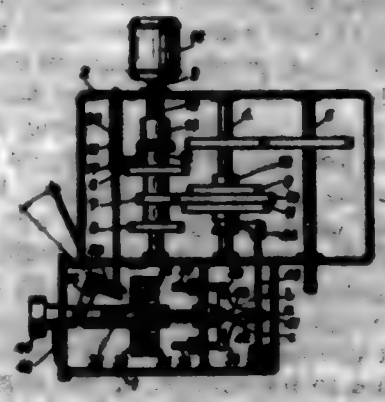
CHANGE SPEED BOX OF THE PRESELECTION TYPE FOR MACHINE TOOLS

André Mottu, Geneva, Switzerland, assignor to Societe Genevoise d'Instruments de Physique, Geneva, Switzerland, a firm

Application December 3, 1956, Serial No. 625,950

Claims priority, application Switzerland December 13, 1955

7 Claims. (Cl. 74—334)



1. In a change speed box of the preselecting type including a driving shaft, a power unit controlling the latter and a lever controlling the operation of the box, the provision of a threaded section having a high pitch and forming part of the driving shaft, a nut engaging said threaded section, means adapted to shift said nut in a direction parallel with the axis of the shaft, means for preventing said nut from rotating to constrain the shaft to turn upon shifting of the nut and means controlled by the lever of the change speed box for producing operation of the nut shifting means.

2,896,463

POWER STEERING UNIT

Edward A. Rockwell, Los Angeles, Calif.

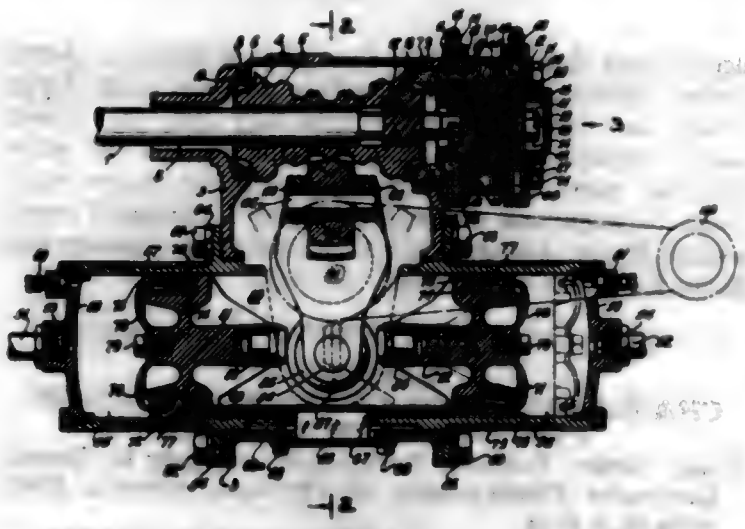
Application July 2, 1954, Serial No. 440,999

5 Claims. (Cl. 74—388)

2. In a power steering unit having a housing for mounting on a steering column, a manually controlled steering shaft mounted in the housing for rotation and limited axial movement, a hollow worm mounted for rotation in said housing and against axial movement, said steering

off-set relationship and thereby vary the distance through yoke being pivotally supported at one side on said frame.

shaft being received in said worm with one end extending therefrom, means in said housing defining a longitudinal bore through which the said one end of the steering shaft extends, a closure accessible to the outside of the housing for closing said bore, the end of said shaft journalled in said closure, said worm having a connection to said steering shaft so that rotation of the latter in either direction rotates the worm and moves the shaft axially from the vertical position, a double-acting master cylinder mounted in the bore in said housing and having a double-acting piston connected to said one end of the shaft, said master cylinder including means yieldingly opposing axial movement of the shaft from a neutral position so that axial movement of the shaft from said neutral position operates the master cylinder piston for producing fluid at low pressure which pressure varies in



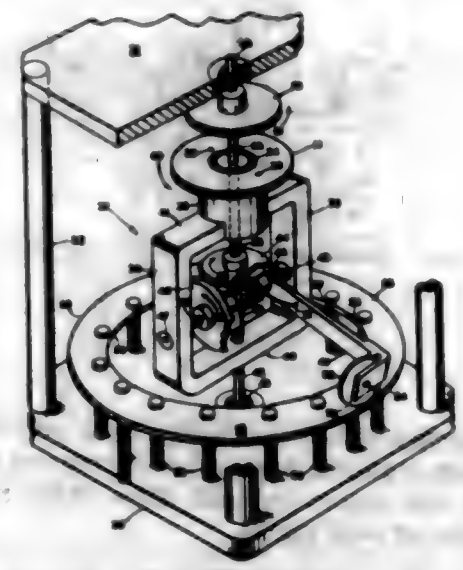
accordance with the movements of the steering shaft, a lever mounted in said housing for pivotal movement about an axis at right angles to said steering shaft and carrying a worm wheel at one end meshing with said worm so that rotation of said worm pivots the lever, said lever being connected so that pivotal movement thereof actuates the device to be steered, means in the housing defining axially alined power cylinders straddling the other end of said lever and arranged in the housing on an axis parallel to the steering shaft, said cylinders having power pistons mutually cooperating with the other end of the lever, a high fluid pressure circuit including said power cylinders, and control means responsive to said low pressure fluid for supplying power fluid via said high fluid pressure circuit to said power cylinders for operating the same in response to movements of the steering shaft, so that said power cylinder pistons pivot the lever.

2,896,464
VARIABLE COMPUTING METHOD AND APPARATUS

Paul Luther Reuter, Franklin Lakes, and Ernest Weiss, Maywood, N.J., assignors to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware

Application July 27, 1954, Serial No. 446,032
1 Claim. (Cl. 74—394)

A mechanical computer comprising a first gear and a second gear, a gimbal frame, a gimbal hub drivingly connecting the first gear to the gimbal frame, a third gear positioned within the gimbal frame, a shaft extending coaxially through the gimbal hub and drivingly connecting the third gear to the second gear, another shaft pivotally mounted within the gimbal frame and extending perpendicular to the first-mentioned shaft, a fourth gear and a control arm, said other shaft drivingly connecting said control arm to said fourth gear and positioning said fourth gear in driving engagement with said third gear, a flexible annular cam plate, said control arm having a free end portion, means biasing said free end portion of the arm into contacting relation with the annular cam plate, a base plate, a plurality of adjustable screws in operative engagement with said base and cam plates to vary the relative position of the cam plate, each of said screws

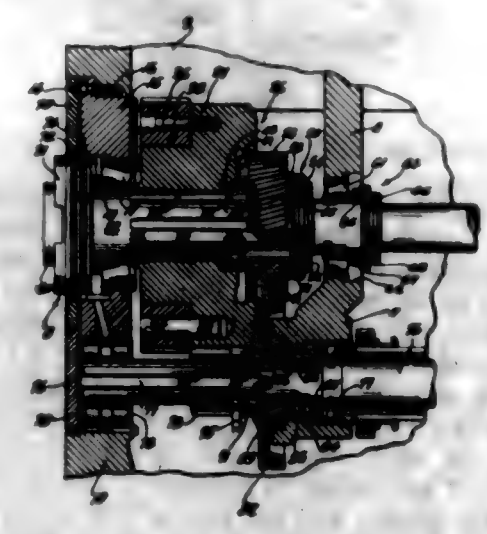


being independently adjustable to flex the annular cam plate into a predetermined contour for cooperation with the free end of the control arm so as to impart upon rotation of the first gear a rotation to the second gear varying with the contour of the annular cam plate.

2,896,465
BACKLASH ELIMINATOR

Joseph B. Armitage, Milwaukee, and James N. Flannery, West Allis, Wis., assignors to Kearney & Trecker Corporation, West Allis, Wis., a corporation of Wisconsin

Application June 13, 1955, Serial No. 515,052
10 Claims. (Cl. 74—409)



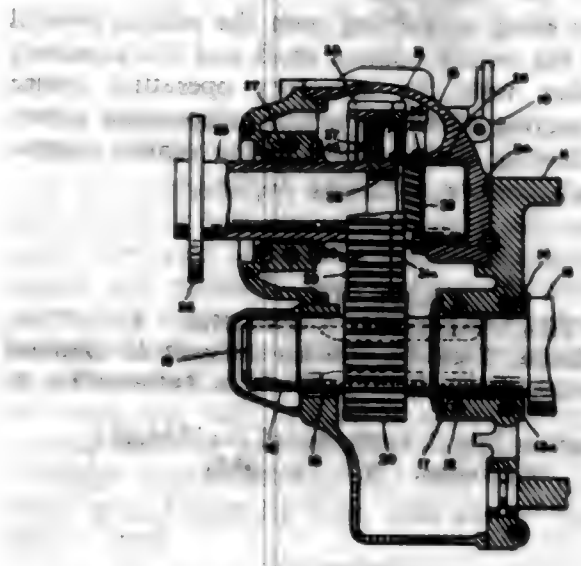
1. In a machine tool; a frame provided with a front wall having an enlarged opening and a rearwardly spaced wall having a smaller opening aligned with the opening in said front wall; a tool spindle assembly comprising a bearing carrier removably secured within the enlarged opening in said front column wall and being in turn provided with a flanged circular opening, an antifriction spindle bearing constrained against rearward movement within the opening formed in said bearing carrier, a tool spindle having a flanged forward end and a splined inner portion extending rearwardly through the inner race of said spindle bearing, a flywheel removably splined to said spindle rearwardly of said bearing, said flywheel being provided adjacent its outer rearward face with an internally formed spiral gear-like member concentric to the splined opening extending therethrough, an internally splined spiral gear having externally formed gear teeth and being removably splined to said spindle in meshing

from said source in accordance with the speed of rotation of one of said shafts, said bore being provided with a

ing column, vehicle control and steering shafts rotatably

engagement with the internal spiral gear-like member formed in said flywheel, a lock-nut threadedly engaging said spindle adapted to retain the inner face of said spindle flange, the inner race of said bearing, said flywheel and said spiral gear in tightly cooperating engagement whereby said flywheel and said spiral gear are rotatably urged into clamping engagement with the splined portion of said spindle; a second bearing constrained against forward movement within the opening formed in said rearwardly spaced column wall; and a second lock-nut threadedly engaging said spindle and being adjustably movable into abutting engagement with said bearing whereby said tool spindle assembly is removable from said column as a single unit after said second lock-nut is disengaged from said spindle and said bearing carrier is removed from said front column wall.

2,896,466
ANTI-BACKLASH DEVICE
William Wiseman, Muskegon, Mich., assignor to Continental Motors Corporation, a corporation of Virginia
Application February 7, 1958, Serial No. 713,813
8 Claims. (Cl. 74—440)

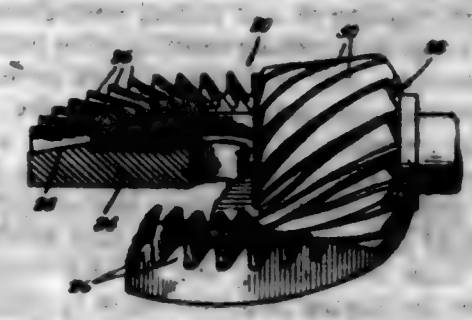


1. In an internal combustion engine for propeller driven aircraft and having a crankcase, a crankshaft carried thereby, and a propeller shaft, a driving gear operably connected with said crankshaft, a driven gear carried by said propeller shaft and comprising two axially aligned relatively angularly adjustable gear portions operably engaged with said driving gear, and control means automatically operable only at preselected engine speeds to angularly adjust said gear portions, thereby effecting anti-backlash locking engagement thereof with said driving gear at said selected engine speeds, said propeller shaft having a helical spline portion, one of said gear portions being fixed to said propeller shaft and the other of said gear portions having a helical spline engaged with said propeller shaft helical spline, said control means selectively operable to axially adjust said splined gear portion whereby same is angularly adjusted relative to said fixed gear portion due to said helical splines.

2,896,467
SKEW-AXIS GEARING WITH PLANE TOOTH GEAR
Oliver E. Saari, Schiller Park, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Application October 1, 1957, Serial No. 687,504
18 Claims. (Cl. 74—459.5)

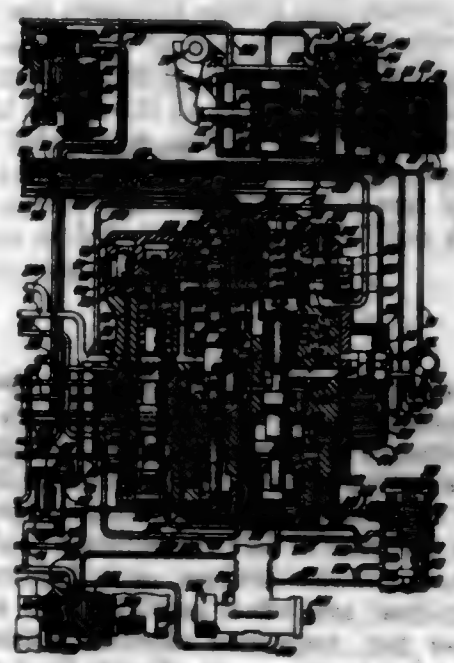
5. A right-angle skew-axis gearing comprising a relatively large face-type gear and a mating pinion, said gear having a plurality of plane teeth each of which is tangent at the pitch point thereof to the curve which is codirectional with the relative velocity vector at every point of the pitch-contact locus along which the pitch surfaces of the gear and pinion contact one another at a point of inflection of said curve, the gear teeth having unsymmetrical pressure angles, and the pinion is conjugate to the gear, wherein the coordinates of the pitch point are related to the center distance and the speed ratio of the gearing in accordance with

$$(Ky-x)^3+[Cx+z(Ky-x)][z(1+K^2)-C]=0$$



and wherein: x, y, and z represent a rectangular-coordinate system with the pinion axis coincident with the x-axis and the gear axis coincident with a line parallel to the y-axis and passing through the z-axis; C=center distance along the common perpendicular; and K=speed ratio, number of gear teeth/number of pinion teeth.

2,896,468
AUTOMATIC PLURAL STEP-RATIO TRANSMISSIONS
Forrest R. Cheek and Norman Reighard, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 23, 1954, Serial No. 457,975
6 Claims. (Cl. 74—472)



1. In a transmission for an engine driven vehicle, an input shaft, an output shaft, a source of fluid pressure, gearing between said shafts, hydraulically actuated devices for conditioning said gearing to provide a plurality of speed ratio driving connections between said shafts, a shift valve train including as an intermediate element, a shift valve so controlling supply of fluid from said source to said devices that in a first position of said shift valve said devices condition said gearing for a low speed ratio drive and in a second position of said shift valve said devices condition said gearing for a higher speed ratio drive, said shift valve train including terminal plug elements aligned with each end of said shift valve, said elements being slidable in a bore of a valve body, a throttle valve mechanism regulating pressure of fluid from said source in accordance with throttle position, governor valve mechanism regulating pressure of fluid

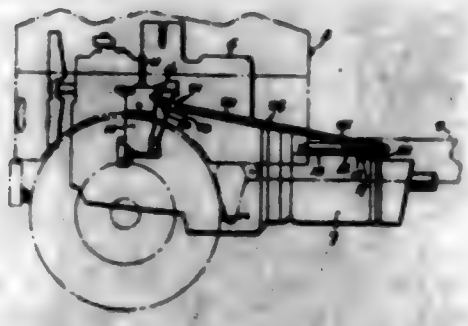
free end portion, means biasing said free end portion of and being removably splined to said spindle in meshing

from said source in accordance with the speed of rotation of one of said shafts, said bore being provided with a port in the part thereof in which said shift valve slides, fluid from said throttle valve entering said bore through said port and acting on an area of said shift valve to move said shift valve in one direction, fluid from said governor valve acting to move said shift valve in the other direction, said shift valve normally being moved from said first position to said second position over a predetermined range of opposing throttle valve pressures and governor pressures, said shift valve when in said second position covering said port and blocking the supply of throttle valve pressure to said area thereof, and means controlled by said throttle valve mechanism and operable when said shift valve is in said second position for delivering fluid under pressure from said source to said shift valve train for moving one of said terminal plug elements thereby forcing said shift valve to said first position, completion of movement of said shift valve from said second position to said first position uncovering said port and restoring the supply of throttle valve pressure to said area of said shift valve and reestablishing the relation of throttle valve pressures and governor pressure for normal shifting of said shift valve from said first position to said second position.

2,896,469
LOW-PROFILE SHIFT LINK FOR CAB-OVER-ENGINE VEHICLE

Robert C. Norris, Seattle, Wash., assignor to Pacific Car and Foundry Company, Seattle, Wash., a corporation of Washington

Application February 3, 1958, Serial No. 713,804
3 Claims. (Cl. 74—473)



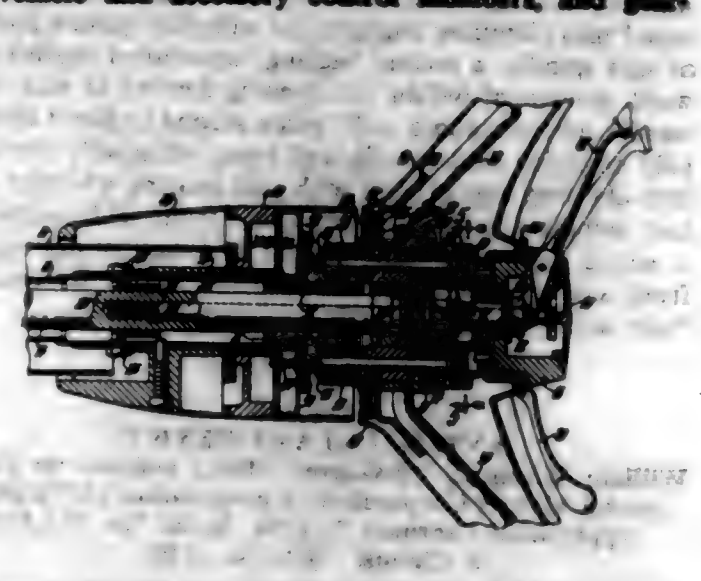
1. In an automotive vehicle having a change-speed transmission with the gear sets controlled by a responder bar surmounting the transmission and journaled for rocker and endwise motions between given limits on a horizontally disposed longitudinal axis, an impulse bar lying well to the front of said transmission and journaled for rocker and endwise motions on a horizontally disposed longitudinal axis offset laterally from the axis of the responder bar, respective universal joints for said bars having a front component of each fixed to the rear end of the related bar, and a rigid rod extending as a link diagonally between the two bars and fixedly coupled by its front end with the rear component of the front universal and by its rear end with the rear component of the rear universal, said coupled ends being each pointed forwardly on a coinciding axis traversing the intersections of the swivel axes of both of the universals.

2,896,470
VEHICLE CONTROLS

Francis H. Grady, Pontiac, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application July 29, 1957, Serial No. 674,825
11 Claims. (Cl. 74—484)

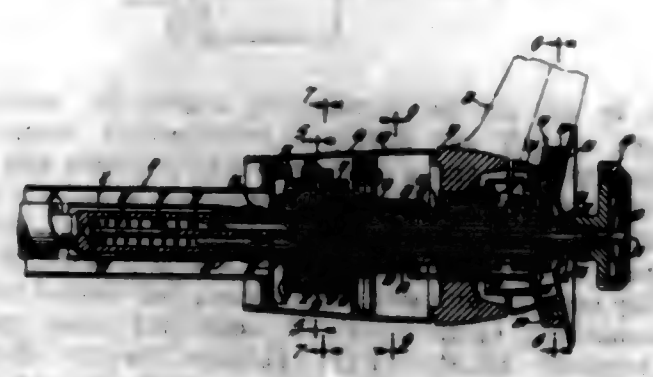
1. In combination with a vehicle steering column, a vehicle accessory operating device mounted on the steering column, vehicle control and steering shafts rotatably supported by the steering column, vehicle and accessory control members positionable in a plurality of settings, a steering wheel including a hub portion secured to the steering shaft between an end of the steering column and the vehicle and accessory control members, and gearing means for drive connecting both the vehicle control member with the vehicle control shaft and the accessory control member with the accessory operating device through the steering wheel to permit independent movement of the steering shaft relative to the vehicle control shaft and the accessory operating device.



2,896,471
TRANSMISSION CONTROL

Gilbert K. Hause, Franklin, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

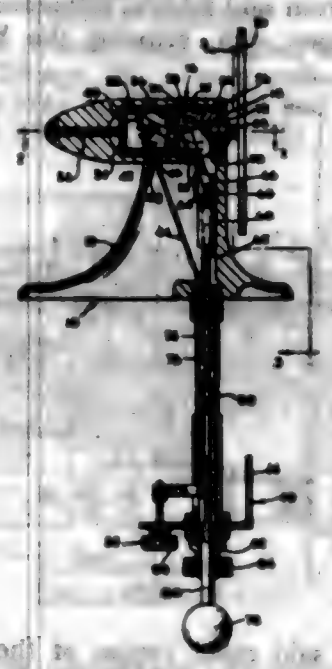
Application July 3, 1958, Serial No. 746,454
14 Claims. (Cl. 74—484)



1. In combination with a steering column, transmission control and steering shafts rotatably supported by the steering column, a rotatably and shiftably mounted transmission control member positionable in a plurality of transmission settings, a control dial provided with legends thereon corresponding to each of the transmission settings and positioned adjacent the transmission control member, a steering wheel including a hub portion drive connected to the steering shaft, the hub portion being so disposed as to have both the dial and transmission control member on one side and the steering column on the other side, planetary gearing both for drive connecting through the steering wheel the transmission control shaft and the transmission control member so as to permit independent movement of the steering and transmission control shafts and for interconnecting through the steering wheel the control dial and the steering column so as to maintain the control dial stationary with respect to the steering column, and means operative, when the transmission control member is shifted, to revolve the transmission control shaft to one of the settings.

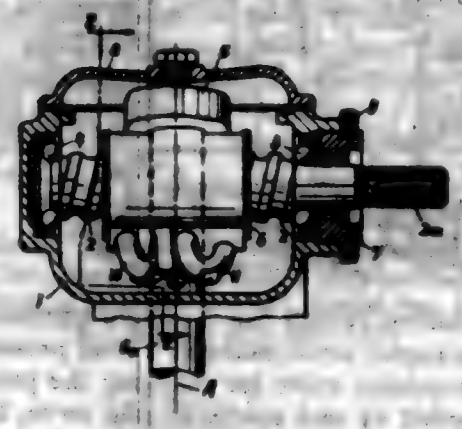
casing and operatively connected together to be rotated, motion of the diagonal to be reflected to said one end of

2,896,472
REMOTE CONTROL APPARATUS
James F. Sturbird, Sherman Oaks, and Nathan C. Becom, Studio City, Calif.
Application April 21, 1958, Serial No. 729,965
7 Claims. (Cl. 74—491)



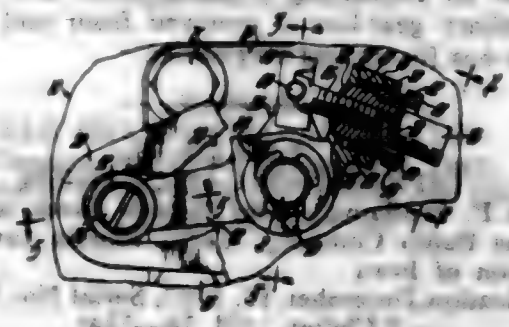
1. In combination: supporting structure providing a ball socket; a ball pivotable in said ball socket; a shaft carried by said supporting structure adjacent said ball socket and rotatable and reciprocable relative to said supporting structure, the axis of at least a portion of said shaft adjacent said ball socket intersecting the center of said ball; a link extending between said shaft portion and said ball; first pivot means pivotally interconnecting said link and said shaft; and second pivot means pivotally interconnecting said link and said ball at a point spaced laterally from said axis of said shaft portion.

2,896,473
STEERING MECHANISM FOR MOTOR VEHICLES
Eugen Stumpp, Stuttgart-Unterturkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Application January 27, 1954, Serial No. 406,412
Claims priority, application Germany January 30, 1953
4 Claims. (Cl. 74—499)



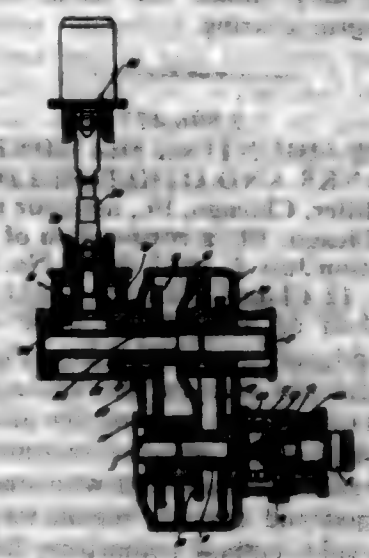
1. A ball bearing drive mechanism for steering devices in vehicles including a steering spindle having a worm, a nut displaceably positioned over said worm, a rocker arm connected with said nut, and a cross shaft crossing said worm and supporting said rocker arm, said rocker arm transmitting motion from said worm to said cross shaft, comprising a multi-part hollow body enclosing said mechanism including a housing provided with a dead-end bore, bearing means for supporting said spindle in said dead-end bore, said housing being provided with a first opening for the passage of said spindle, a first cover means for closing the gap formed in said first opening between said spindle and said housing with second bearing means for said spindle and adjusting means for said second bearing means, a second opening provided in said housing lying in a plane forming an angle with the plane of said first opening, and disposed in the side of said body adjacent said rocker arm to enable insertion thereof through said second opening, and another cover means for closing said second opening.

2,896,474
MOTION TRANSMITTING CONNECTION
John W. Rhodes, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 12, 1956, Serial No. 577,772
4 Claims. (Cl. 74—523)



1. The combination comprising, first and second relatively movable members, one of said members having an opening therein and a spherical seat adjacent said opening, first means swingably supported on the other of said members and extending within said opening, ball means rotatably supported by said seat, adjustable means operatively interconnecting said first means and said ball means and adjustable upon rotation of said ball means to adjust the relative spacing of said members with respect to each other, and means fixing the position of said ball means with respect to said seat to thereby fix the position of said adjustable means upon adjustment of the relative position of said members.

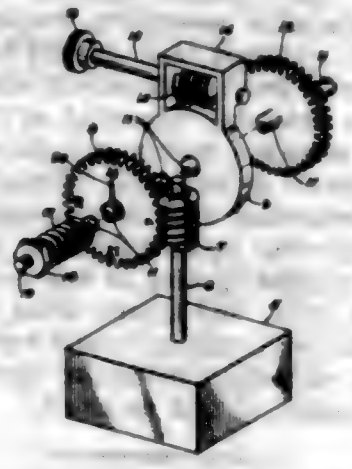
2,896,475
ACCESSORIES GEAR BOXES
Georges Garnier, Asnieres, France, assignor to Air-Equipement, Asnieres, France, a French company
Application July 21, 1955, Serial No. 523,469
Claims priority, application France July 27, 1954
2 Claims. (Cl. 74—665)



1. In combination, a gear-box for carrying and driving accessories on board aircraft including a casing, a plurality of gears supported by and enclosed within said

casing and operatively connected together to be rotated at the same time, one of said gears being adapted to be operatively connected to an engine of said aircraft, a clutch device inside said casing of said first gear-box adapted to connect and disconnect said connectable gear to and from said aircraft engine, an auxiliary gear-box operatively connectable to an auxiliary engine other than an engine of said aircraft and including a casing mounted on said casing of said first gear-box for driving accessories and gears supported by and enclosed within said casing of said auxiliary gear-box, said last casing being adapted to be removed from said casing of said first gear-box for driving accessories and means for automatically putting said clutch device of said gear-box for carrying and driving accessories in its disconnecting position when said casing of said auxiliary gear-box is mounted on said casing of said gear-box for driving accessories and for automatically putting again said clutch device in its connecting position when said casing of said auxiliary gear-box is removed from said casing of said gear-box for driving accessories.

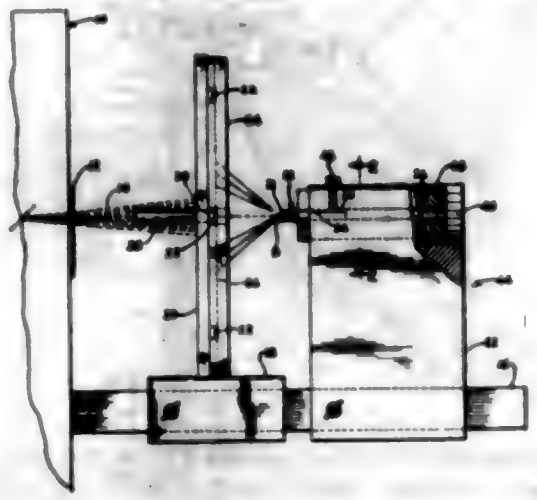
2,896,476
DIFFERENTIAL MECHANISM
Winston F. Williams, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application December 16, 1957, Serial No. 702,843
5 Claims. (Cl. 74—724)



1. A gear system comprising a source of motive power, a first worm gearing, an output shaft, a plate, a second worm gearing, said plate rotatably mounted between said first worm gearing and said second worm gearing on said shaft, and spring means holding the plate and said worm gearings in contact with each other whereby said second worm gearing may rotate the shaft without reacting on said first worm gearing.

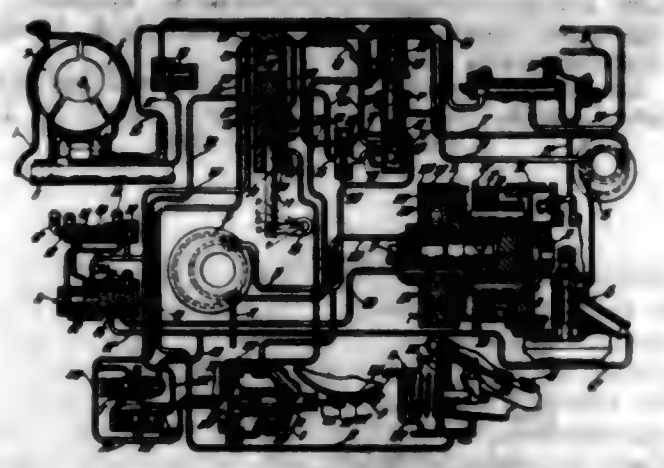
2,896,477
METHOD OF MOUNTING DIAMONDS IN TOOL SHANKS AND OTHER HOLDERS
Harold C. Miller, Chicago, Ill., assignor to Super-Cut, Inc., Chicago, Ill., a corporation of Illinois
Application July 2, 1957, Serial No. 669,492
12 Claims. (Cl. 76—101)

1. The method of mounting a loose diamond on a holder having fiducial reference indicia thereon establishing fiducial reference axes for the holder with the three principal crystallographic axes of the diamond bearing respective predetermined angular relationships with respect to said reference axes, and with one region of the diamond exposed and another region thereof embedded in the holder, said method comprising fixedly mounting the diamond on one end of a temporary positioning dop having fiducial reference indicia which, in combination with the longitudinal axis of the dop, establishes three fiducial reference axes for the dop, by causing said one region of the diamond to be adhered to said one end of the dop by a first adhesive, directing a beam of X-rays onto said other region of the diamond on the temporary dop and obtaining a crystal diffraction pattern of the diamond, ascertaining from said crystal diffraction pattern the angular deviation of said crystallographic axes of the diamond from said fiducial reference axes respectively of the temporary dop, bringing the holder into juxta-



position with said other region of the diamond on the temporary dop with the fiducial reference axes of the holder displaced angularly from the respective fiducial reference axes of the temporary dop by amounts equal to the ascertained deviations of axes, causing said other region of the diamond to be adhered to said holder by a second adhesive, and finally loosening said first adhesive to release the diamond from said temporary dop.

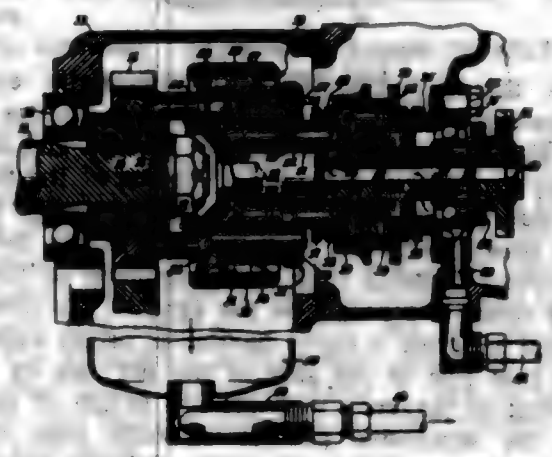
2,896,478
TRANSMISSION CONTROL SYSTEMS
Frank J. Winchell, Franklin, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 7, 1954, Serial No. 454,581
16 Claims. (Cl. 74—754)



1. In a control system for a vehicle transmission having a fluid actuated servo member, a fluid pressure source, a pressure regulator valve for changing the pressure level of fluid supplied by said source to said servo, a manually controlled selector valve adapted to supply said fluid at its regulated pressure level from said source to said servo to actuate the same, a shift valve, said selector valve at times supplying said fluid at its regulated pressure lever to said shift valve, said shift valve at times being operable to supply said fluid at its regulated pressure level from said selector valve to said servo to deactuate the same, and flow control means between hydraulically connecting the selector valve and said servo and controlling the rate of flow of said actuating fluid to and from said servo, said flow control means being responsive to vehicle speed

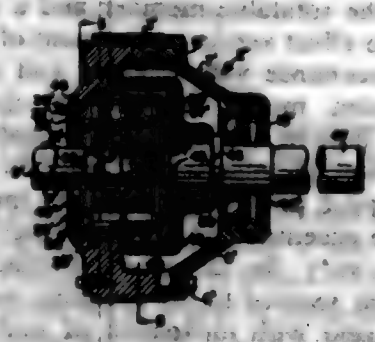
and changes in the level of pressure maintained by the pressure regulator valve whereby under different speed and pressure level conditions the servo is actuated at different rates.

2,896,479
TRANSMISSION
Donald W. Kelbel, Muncie, Ind., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application May 6, 1952, Serial No. 286,331
1 Claim. (Cl. 74—781)



In a transmission mechanism, the combination of a housing; a drive shaft constituting a power input shaft journalled and extending through one end of said housing; a power takeoff or driven shaft journalled and extended through an opposite end of said housing; a power output element carried by said driven shaft on the outside of said housing; spline means for directly connecting together said drive shaft and said driven shaft; a driven element concentrically disposed and journalled on said drive shaft; planetary gearing located between said power output element and said driven element and driven by said drive shaft and operative to drive said driven element; said planetary gearing comprising a sun gear formed on a sleeve shaft surrounding said driven shaft, a ring gear connected with said driven element, a planet gear in mesh with said sun gear and with said ring gear, and a planet gear carrier connected to said driven shaft; and a two-position synchromesh positive-type engaging device located within said housing axially between said planetary gearing and said power output element and effective in one position to lock together said sun gear and said planet gear carrier whereby said driven element is driven at a one-to-one speed ratio with respect to said drive shaft, said engaging device being effective in its second position to hold said sun gear stationary whereby said driven element is driven at an overdrive ratio with respect to said drive shaft.

2,896,480
CHANGE SPEED DEVICE
John S. Michie, Springfield, Ohio, assignor to Robbins & Myers, Inc., Springfield, Ohio, a corporation of Ohio
Application January 9, 1957, Serial No. 633,336
6 Claims. (Cl. 74—798)

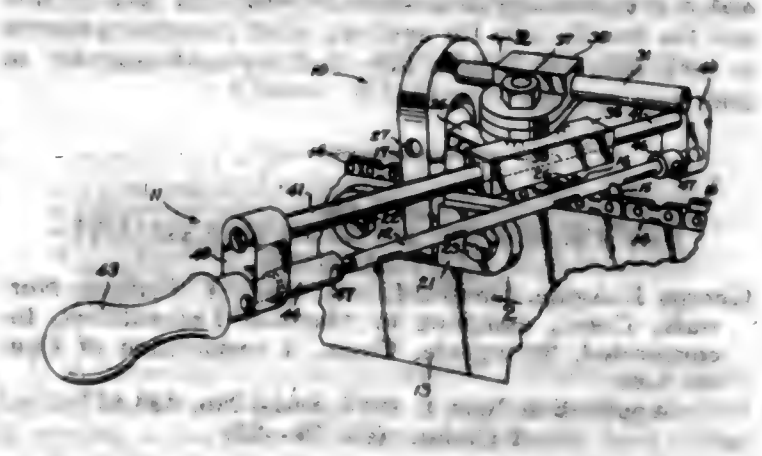


1. A change speed device having a housing, input and output power shafts on a common axis and extending into the housing in opposed relation, a first inner race secured on the input shaft, a first outer race secured against rotation relative to the housing and defining with the first inner race an annular cavity about the common axis, a second inner race supported on one of the shafts, a second outer race annularly disposed about the second inner race and forming with the second inner race an annular cavity about the common axis, said cavities being the same center distance from the common axis but of differing radial dimensions, compound rollers in the cavities engaged between the races and rotatable about the common axis and about axes parallel to the common axis, and means securing the output shaft to one of the said second races.

ERRATUM

For Class 76—101 see:
Patent No. 2,896,477

2,896,481
SAW SHARPENING APPARATUS
Clarence W. Hebbert, Gladstone, Oreg.
Application December 2, 1957, Serial No. 700,075
6 Claims. (Cl. 76—31)



2. Sharpening apparatus for sharpening the cutting elements of a saw comprising a clamping portion having depending leg portions spaced apart from each other and defining thereinbetween a slot for the reception of a saw blade, a locking member and mounting means mounting said locking member on said clamping portion intermediate said leg portions, said mounting means accommodating movement of the lower end of said locking member toward and away from the base of said clamping portion, a file carriage, and means mounting said file carriage outwardly to one side of said clamping portion, said last-mentioned means including an elongated bar portion affixed at its inner end to said clamping portion, and extending outwardly therefrom, a fastener member adjustably positionable along the length of said bar portion, and a guide portion slidably holding said file carriage secured to said fastener member.

2,896,482
SHARPENERS FOR KNIVES AND CUTTING IMPLEMENTS
Thomas Edward Hyde, Croydon, England
Application April 18, 1958, Serial No. 729,273
3 Claims. (Cl. 76—84)

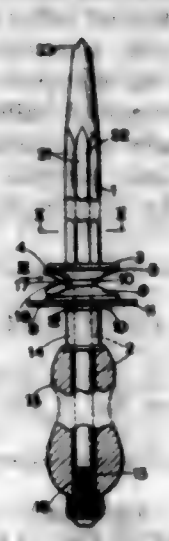
1. A sharpener device for the blades of knives and like cutting implements, comprising a honing rod having a honing portion and a stem portion forming a co-axial extension thereof at one end, opposed sharpener mounting discs on said stem, one fixed at the junction between the honing and stem portions, and the other in the form of an angularly adjustable ring, conical faces extending circumferentially about said discs with the smaller ends opposed,

nately limit the movement of said rack and thereby control rotation of the eccentric, and manually means for im-

groove and engaging said coil spring, said groove being

with the longitudinal axis of the dop, establishes three fiducial reference axes for the dop, by causing said one rate of flow of said actuating fluid to and from said servo, said flow control means being responsive to vehicle speed

said faces having radially disposed sharpener mounting grooves, a spacer hub between the opposed small ends of said faces, opposed sharpener ribs in said mounting grooves forming between any pair of ribs a bevel defining sharpening groove, a guard plate constituted as an assem-



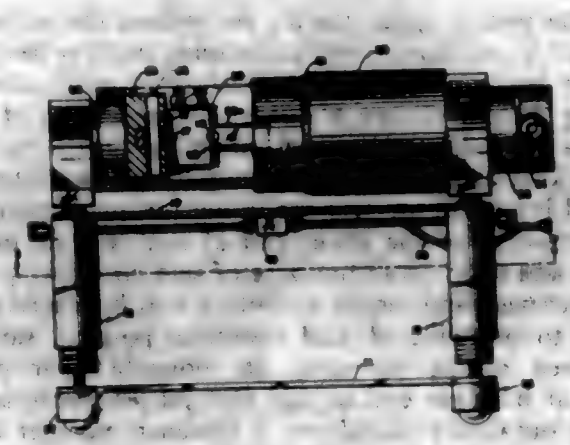
bly with said adjustable disc, a handle tube axially adjustable on said stem portion at the back of said guard plate, and a pressure applying screw between the said portion and the handle tube for applying axial clamping pressure to lock both the handle tube and the said assembly to said stem portion.

2,896,483

DEVICE FOR COLD WELDING EXHAUST TUBULATIONS

George J. Agule, Stamford, and Albert F. Fengler, Norwalk, Conn., assignors to Machlett Laboratories, Incorporated, Springdale, Conn., a corporation of Connecticut

Application June 1, 1954, Serial No. 433,697
1 Claim. (Cl. 78—82)



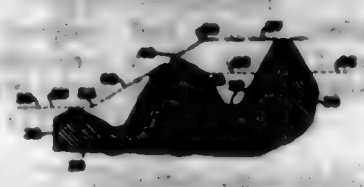
A device for cold welding and severing exhaust tubulations of electron tubes, comprising a base having a pair of spaced jaw supports thereon, pinching and severing jaws carried by the respective jaw supports, one of the jaws being movable in a plane in a direction toward the second jaw to position the jaws in severing engagement with a tubulation therebetween, means for applying pressure to said movable jaw of an amount sufficient to pinch the tubulation and to consequently elongate the tubulation in a direction normal to the plane of movement of the movable jaw, and resilient means connecting the jaw supports to the base whereby said jaw supports and jaws thereon are simultaneously movable in response to elongation of the tubulation by said jaws in the direction of said elongation and normal to the plane of movement of the movable jaw.

2,896,484

RELIEVED THREAD ROLLING DIE

Edward C. Hamm, Waynesboro, Pa., assignor to Landis Machine Company, Waynesboro, Pa., a corporation of Pennsylvania

Application May 28, 1956, Serial No. 587,855
3 Claims. (Cl. 80—6)



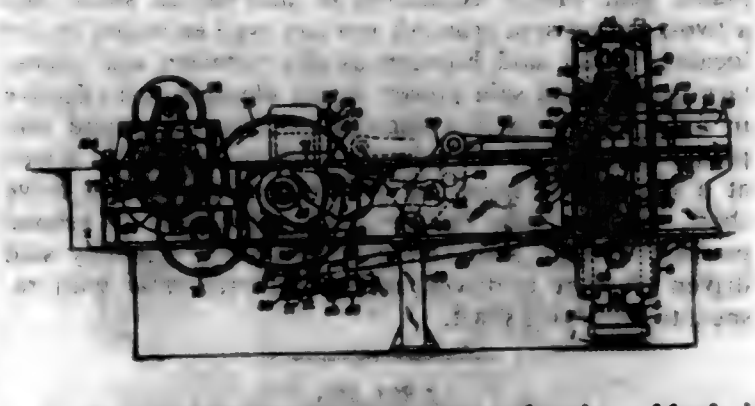
1. A thread rolling die of substantially cylindrical form having a plurality of thread forming ridges thereon, each ridge starting at one side of the die and extending helically around the cylindrical surface of the die to the other side thereof, each thread forming ridge having a profile constituted by a crest and side flanks, the start of each thread forming ridge being relieved so that a line joining successive points on the apex of the crest of the start will generate a curve having its origin substantially at the root line at the side of the die and its terminus at a point of tangency with the full height of the thread ridge, the successive profiles of each start from the beginning to the full height thereof being uniform and symmetrical about a perpendicular to the crest and the crests of successive profiles being similar to the crest of the full height section of the thread forming ridge, whereby the root formed by the thread starts and the root formed by the full height thread forming ridges of the die will be substantially identical in shape and width.

2,896,485

DRAW ROLLING MILL

Julius B. Tiedemann, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Continuation of abandoned application Serial No. 386,177, October 26, 1953. This application March 26, 1954, Serial No. 418,966
13 Claims. (Cl. 80—19)



1. In a metal forming apparatus wherein a blank is formed between a pair of pressure members with one of the members being disposed for vertical movement relative to the other of the members, a frame, a rotatable member disposed on said frame, a toggle mechanism interconnecting the rotatable member and a movable pressure member to effect vertical movement of said movable member in accordance with opening and closing of the toggle mechanism, means to open and close the toggle mechanism in desired sequence, an eccentric fixedly secured on the rotatable member for rotation therewith and forming the upper pivot for the toggle mechanism with rotation of the eccentric raising and lowering the toggle mechanism to vary the distance between the pressure members, a gear secured to the rotatable member, a rack engaging said gear with movement of said rack adapted to rotate the rotatable member and the eccentric, adjustable stop means associated with the rack to predetermi-

carriage movable longitudinally upon said lathe bed, a

2,896,492

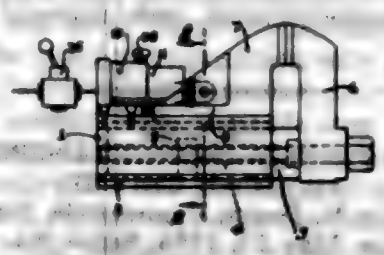
1. A change speed device having a housing, input and output power shafts on a common axis and extending into angularly adjustable ring, conical faces extending circumferentially about said discs with the smaller ends opposed,

nately limit the movement of said rack and thereby control rotation of the eccentric, and pressure means for imparting movement to the rack, with the rack moving a predetermined amount as established by the stop means adjustment and thereby setting the height of the movable pressure member with respect to the other pressure member.

2,896,486
PROCESS OF COLD ROLLING STEEL SHEETS
Jesse Donnelly, Hamilton, Ontario, Canada, assignor to Wallace McClung Donnelly, Hamilton, Ontario, Canada
No Drawing. Application August 28, 1952 Serial No. 306,953
1 Claim. (Cl. 80—60)

In the method of processing steel sheets to light gauges, the steps comprising: cold rolling each sheet; and during rolling, applying acidulated vegetable oil foots obtained in the caustic refining of vegetable oils as in the manufacture of vegetable shortening and margarine and consisting of between about fifty percent and seventy-five percent free fatty acid, about ten percent neutral oil and the remainder substantially water, to surfaces of the sheet being rolled to form a non-carbonizing lubricating film thereon achieving a close grained rolled finish for said sheet.

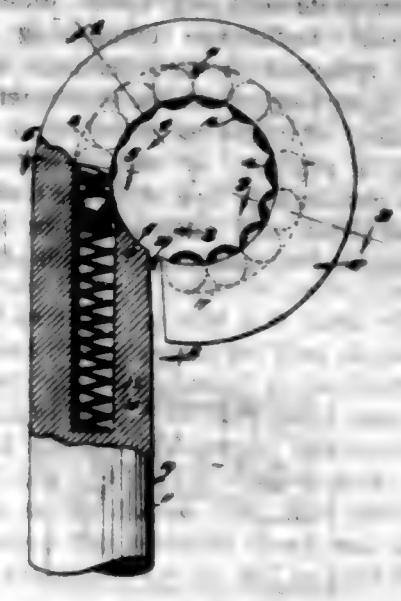
2,896,487
PRESSURE-FLUID-OPERATED VISE
Homer T. Seale, Alhambra, Calif.
Application April 14, 1958, Serial No. 728,155
8 Claims. (Cl. 81—17.2)



1. A pressure-fluid-operated vise, comprising: a vise structure including a pair of jaws, and means for slidably mounting at least one of the jaws; a shell forming a minor cylinder and a major cylinder and secured to said vise structure; a plunger having a minor piston, a major piston, and a stem extending from the minor piston and connected to said slidably mounted jaw; said shell and plunger defining a minor chamber open to atmospheric pressure, an intermediate chamber between said pistons, and a major chamber; a check-valve-controlled bypass from said major chamber to said intermediate chamber to admit pressure fluid to said intermediate chamber but prevent backflow therefrom; means for applying pressure fluid to said major chamber to move said plunger in one direction and to release pressure fluid therefrom, whereby pressure fluid in said intermediate chamber causes return movement of said plunger.

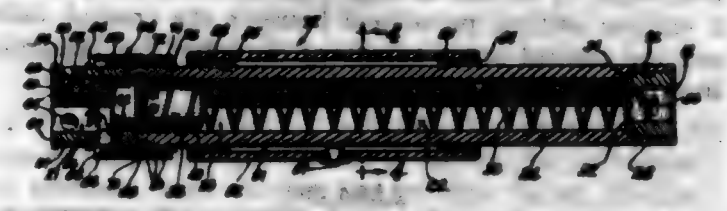
2,896,488
WRENCH
William W. L. Ahana, Honolulu, Territory of Hawaii
Application February 28, 1957, Serial No. 643,004
1 Claim. (Cl. 81—53)

In a wrench, a handle, a head on an end of said handle, there being a recess in said handle, a coil spring seated in said recess, said head being provided with a central circular opening, there being a groove arranged in the inner surface of said head and said groove communicating with said recess, a plurality of spherical bearings seated in said groove and engaging said coil spring, said groove being curved in cross section, and said groove being tapered so



that the groove is deeper at the portion adjacent the recess than it is at the other end thereof.

2,896,489
MAGAZINE-TYPE SOCKET WRENCH
Jens Axel W. Madsen, Sioux City, Iowa, assignor to Albertson & Company, Inc., Sioux City, Iowa, a corporation of Iowa
Application March 17, 1958, Serial No. 722,084
3 Claims. (Cl. 81—124.1)



1. A magazine-type socket wrench comprising a body having at one end thereof an elongated recess adapted to receive a plurality of fasteners, resiliently held means on the body dividing the recess into a storage chamber and a positioning chamber, said positioning chamber being disposed at the outer end of the recess and being of an axial length greater than the axial length of one fastener but less than the axial length of two fasteners, and means urging a fastener from the storage chamber to the positioning chamber, said dividing means being removable to permit fasteners to move from one chamber to the other, and said resiliently held dividing means including a detent extending into the path of a fastener as the latter moves in the recess from one chamber to the other, a spring on the wrench, and cam means interposed between the spring and detent and constructed to transmit the force of the spring to the detent, said spring force as transmitted through the cam being greater than the force of the means urging a fastener from the storage chamber to the positioning chamber, and means operable from the exterior of the wrench for moving the cam against the force of the spring to remove the spring force from the detent.

2,896,490
HYDRAULIC COPYING ATTACHMENT ON LATHES
Ottomar Von Zalowsky, Neuhausen am Rheinfall, Switzerland, assignor to Georg Fischer Aktiengesellschaft, Schaffhausen, Switzerland, a Swiss company
Application September 8, 1953, Serial No. 379,049
Claims priority, application Switzerland September 13, 1952
6 Claims. (Cl. 82—14)

1. In a lathe copying the outline of a template or pattern upon a work piece and having a lathe bed, a

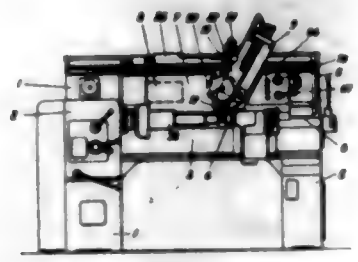
said bolt portion and connected to said bolt portion, said bolt portion being provided with at least two wedge-shaped

tions; a plurality of slots extending through the entire length of the nut and radially outwardly from the root

the direction of said elongation and normal to the plane of movement of the movable jaw.

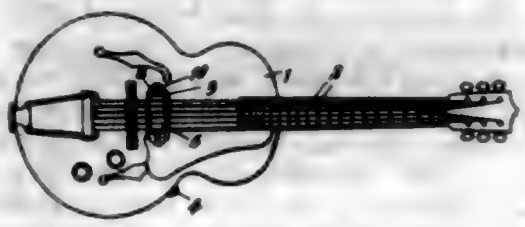
to rotate the rotatable member and the eccentric, adjustable stop means associated with the rack to predetermi-

carriage movable longitudinally upon said lathe bed, a tool-carrying copying slide slidably mounted in said carriage, a template-engaging feeler mounted on said slide; a control mechanism comprising a cylindrical control drum mounted on said carriage, means driving said drum in accordance with the movement of said carriage, a plurality of cams mounted upon said drum in radial planes, a plurality of control valves carried by said carriage mounted in line with the cams of a radial plane of said drum and adapted to be selectively engaged and actuated by said cams of the control drum, a



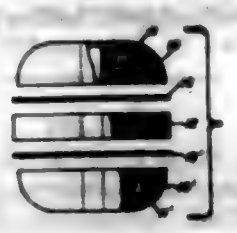
feed gear box carried by said carriage; means operatively connecting said feed gear box with said carriage for actuating said carriage and including first hydraulic means connecting certain of said control valves with said feed gear box for starting and stopping the actuation of said carriage by said feed gear box, second hydraulic means controlled by certain of said control valves for moving said copying slide, and third hydraulic means controlled by certain of said control valves for providing a relative shifting movement between the control valves and the control drum axially of the latter for presenting the cams of another radial plane to said valves.

2,896,491
MAGNETIC PICKUP FOR STRINGED MUSICAL INSTRUMENT
Seth E. Lover, Kalamazoo, Mich., assignor to Gibson, Inc., Kalamazoo, Mich.
Application June 22, 1955, Serial No. 517,171
1 Claim. (Cl. 84—1.15)



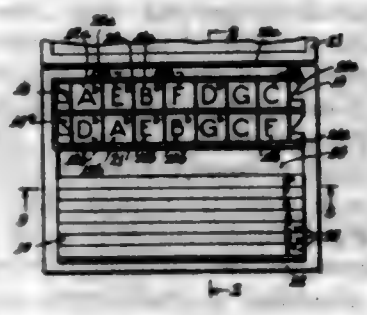
A magnetic pickup for a stringed musical instrument comprising an elongated permanent bar magnet magnetized from side to side, a plurality of pairs of cylindrical pole pieces of magnetizable soft iron material arranged at spaced intervals along said magnet with the pieces of each pair engaging opposite sides of the magnet and projecting thereabove, a first coil wound around all of the pieces on one side of said magnet, a second coil wound around all of the pieces on the other side of the magnet, one end of each coil being electrically connected to the end of the other with the coils extending in a clockwise direction about each group of pole pieces from the connection, means connected to said coils for connecting the other ends of said coils to an amplifier, and a case of non-magnetic material enclosing said magnet, pole pieces and coils, said case being adapted to be secured to a stringed musical instrument with each string of the instrument passing over a different pair of said pole pieces.

2,896,492
BEATER FOR DRUMS
Bruce W. Dunn, Roselle, N.J.
Application September 26, 1955, Serial No. 536,564
7 Claims. (Cl. 84—422)



4. A drum beater comprising a handle having a tapered end; a first bowl-shaped washer having a central hole and inserted over the tapered end of the handle; a lower approximately hemispherical body of cork having a felt covering attached to its arcuate surface and abutting the said first bowl-shaped washer; a flat central washer of solid felt cemented to the flat surface of the said lower body; an upper approximately hemispherical body of cork having a felt covering cemented to its arcuate surface and its flat surface attached to the said central washer; a second bowl-shaped washer having a central hole therein and abutting the covering of the upper body; a screw passing through the said second bowl-shaped washer and threaded into an axial hole formed in the tapered end of the handle, said screw clamping the upper and lower bodies between the two bowl-shaped washers; a ball tip having an axial bore therein communicating with an internal, enlarged-diameter groove; means securing said ball tip to the opposite end of the handle; and a wire spring secured to the ball tip, said spring having a central loop portion protruding from the axial bore of the tip, a pair of diversely-biased arms passing into such bore, and outwardly-curled ends disposed in the said groove.

2,896,493
MEANS FOR FACILITATING TRANSPOSITION OF MUSICAL CHORDS
Walter V. Peters, Cannondale, Conn.
Application May 11, 1956, Serial No. 584,203
4 Claims. (Cl. 84—473)



1. A transposing device comprising a support, guide means on said support defining at least two elongated channels having one end thereof open, a removable strip in each channel, said strips in relation to one another having uniformly spaced divisions therealong, providing indicia bearing spaces therebetween, the indicia of one strip defining chord designations of a particular key, the indicia of the other strip being corresponding chord designations of another key, whereby said corresponding chord designations may be readily noted for quick transposition.

2,896,494
ANCHOR BOLT WITH NUT ACTUATED EXPANSION WEDGES
Lester Lerick, White Plains, N.Y.
Application August 2, 1956, Serial No. 601,699
3 Claims. (Cl. 85—2.4)

1. A bolt assembly comprising a bolt portion, a threaded extension portion of substantially the same diameter as

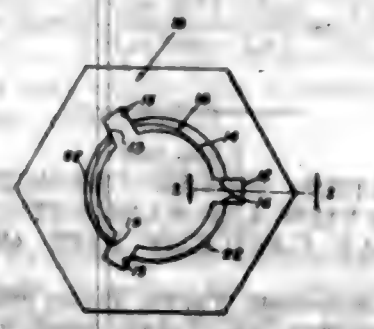
connected by flexible elements to biasing springs which

having an index of refraction of 1.517, the second prism

said bolt portion and connected to said bolt portion, said bolt portion being provided with at least two wedge-shaped recesses having walls defining said recesses sloping inwardly and forwardly and located diametrically opposed to each other below the surface of said bolt portion, said bolt portion and said threaded extension portion being provided with respective grooves extending parallel to the axis and extending the entire length of said bolt portion, said recesses being respectively located spaced from the ends of said grooves and communicating with said grooves and being greater in width than that of said grooves, wedge-shaped expansion means of a shape complementary to the shape of said recesses and fitted in said recesses, whereby said expansion means are normally flush with the diameter of said bolt portion, said expansion means each having a substantially enlarged rear end wall extending in transverse direction to and beyond the respective groove, each expansion means terminating opposite said enlarged wall in a substantially pointed forward end corresponding

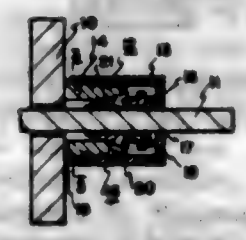
approximately to the width of the respective groove, guide rods arranged for movement, respectively, in said grooves and operatively connected with said expansion means whereby said guide rods may be displaced lengthwise of said grooves of said bolt portion thereby projecting at least said pointed ends of said expansion means beyond said recesses and away from the circumference of the bolt portion for gripping engagement with a wall defining an opening in which said bolt portion may be located for anchorage, a washer freely movable over said threaded extension portion and having inturned noses in alignment with and extending into said grooves, said guide rods having ends constructed for actuation and being engaged by said noses of said washer, said washer when advanced over said threaded portion being adapted to move said guide rods in said grooves and said expansion means from said recesses to a position beyond said circumference of said bolt portion, and means threadedly engaged with said threaded extension portion and abutting said washer to move the latter.

2,896,495
SELF-THREADING NUT
Loyal D. Crawford, Ann Arbor, Mich.
Application March 28, 1957, Serial No. 649,127
1 Claim. (Cl. 85—32)



The combination comprising soft, unthreaded bolt stock and a self-threading holding nut for forming its own thread on said bolt stock; said bolt stock having a diameter greater than the pitch diameter of said nut and less than the root diameter of said nut; said nut having a maximum of four common-nut thread convolutions; a plurality of slots extending through the entire length of the nut and radially outwardly from the crest of the nut threads to a depth exceeding the base of the threads; each of said slots defining a pair of side walls which intersect the threads to form a pair of oppositely disposed thread cutting faces on each of the intersected threads; each of said cutting faces being followed by an unbroken segment of thread to form swaging surfaces to assist in the formation of threads on said bolt stock; the ratio of the width of each of said slots to the length of an adjacent unbroken segment of thread being less than 1:2 whereby there is sufficient unbroken segment of thread to hold said nut on said bolt stock after a thread has been formed thereon; and the first thread portion at each end of the nut being tapered to facilitate the formation of a thread on said bolt stock; said taper being such that the thread at each end of the nut increases to full crest height within one thread convolution whereby the nut is adapted to be driven onto said bolt stock with either end leading and whereby there are sufficient full height threads remaining on the nut to hold it in place.

2,896,496
CLAMP NUT APPARATUS
Gerhart Jansen, Salt Lake City, Utah
Application January 31, 1958, Serial No. 712,545
9 Claims. (Cl. 85—36)



5. Clamp nut apparatus including, in combination, an externally threaded tubular carrier having first and second end portions, said second end portion being provided with an interior, tapered socket; externally tapered jaw means, for engaging an external elongate member, disposed interiorly of and cooperatively associated with said tapered socket; an internally threaded cap threaded onto said second end portion of said tubular carrier for advancement toward said jaw means; a compression spring cooperatively disposed between said jaw means and said cap; said jaw means comprising; a plurality of jaw elements each having a cylindrically concave, serrated, inner surface and a conically tapered, convex, outer surface, each of said jaw elements being provided with a lateral groove area at said outer surface and undercut at both sides thereof; and a strap spring disposed within all of said groove areas of said jaw elements, said strap spring (normally flat) being springingly constrained in a cylindrical disposition with opposite ends of same overlapping, spacing said jaw elements regularly with respect to each other in the circular pattern about said elongate member.

6. Apparatus according to claim 5 in which said groove areas of each of said jaw elements decline in the same direction as said conically tapered, convex outer surface of the respective jaw elements, said strap spring thereby being springingly constrained within said groove areas in frusto-conical configuration when said jaw elements are constrained in mutually parallel relationship.

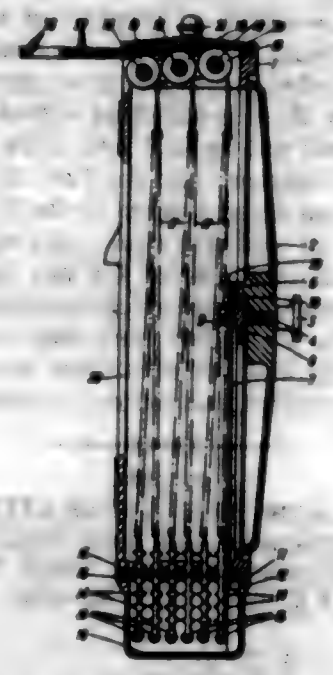
2,896,497
JACQUARD MACHINES
Frank Horsfield Haslam-Jones, West Bridgford, Nottingham, England, assignor to John Jardine Limited, New Basford, England
Application March 25, 1955, Serial No. 496,761
Claims priority, application Great Britain March 25, 1954
5 Claims. (Cl. 87—14)

4. In a textile machine having jacquard mechanism including horizontally movable thread guide members

string of the instrument passing over a different pair of said pole pieces.

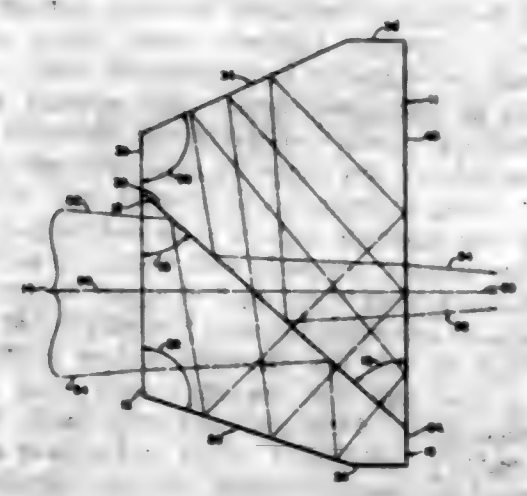
1. A bolt assembly comprising a bolt portion, a threaded extension portion of substantially the same diameter as

connected by flexible elements to biasing springs which are adjustable by adjustable anchoring members connecting tail ends of the springs to an anchorage, mounting means for the biasing springs and anchorage members to be disposed in vertical close group formation, comprising a support structure, and supported thereby,



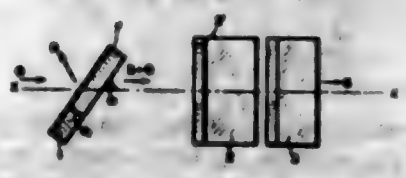
a close group of deflecting members for the flexible elements and an anchorage part, a close group of slots in the anchorage part, and blade-like elements, constituting the anchorage members, extending through these slots and having a plurality of oppositely directed lateral projections to allow for adjustments by turning movements of the blade-like elements.

2,896,498
DEROTATION PRISM
Chester Brandon, La Canada, Calif., assignor to Librascope, Incorporated, Glendale, Calif., a corporation of California
Application February 7, 1955, Serial No. 486,349
5 Claims. (Cl. 88—1)



1. A modified Schmidt prism for inverting the relative disposition of the rays in a light beam having a conical configuration, including, a first prism made from a material having an index of refraction of 1.517, the first prism having a first surface, and having a second surface contiguous to the first surface and forming an angle of 48° with the first surface to totally reflect light passing to it from the first surface, and having a third surface contiguous to the first surface and forming an angle of 108° with the first surface and coated with a material to reflect light; and a second prism made from a material having an index of refraction of 1.517, the second prism having a first surface parallel to the first surface on the first prism, and having a second surface contiguous to the first surface on the second prism and forming an angle of 48° with the first surface on the second prism, and having a third surface contiguous to the first surface on the second prism and forming an angle of 114° with the first surface on the second prism and coated with a material to reflect light and disposed relative to the second surface to obtain a total reflection by the second surface of the light passing to the second surface from the third surface and to obtain the passing through the first surface of the light reflected by the second surface.

2,896,499
COLOUR-SELECTIVE OPTICAL SYSTEM CORRECTED WITH REGARD TO ASTIGMATISM
Hendrik de Lang, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application February 12, 1957, Serial No. 639,764
Claims priority, application Netherlands February 24, 1956
2 Claims. (Cl. 88—1)

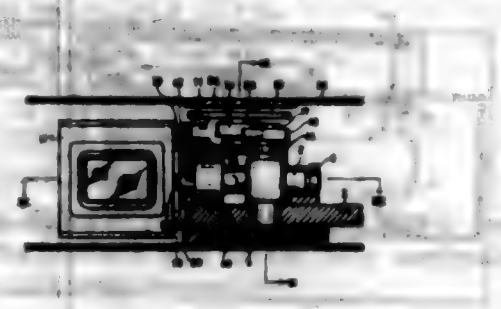


1. A color-selective optical system having a plurality of dichroic plane mirrors corrected with regard to astigmatism comprising as seen from the direction of projection of the non-divided light a first plano-parallel plate having a thickness d, and provided with a first color selective layer on the side where said light enters, said first plate having a refractive index n, and making an angle a with the optical axis of said system, a second plano-parallel plate positioned behind said first plate with respect to the path of light having a thickness d_2 and provided with a second color selective layer on the side remote from said first plate, said second plate having a refractive index n_2 and making an angle a_2 with the optical axis of said system, a third plano-parallel plate of transparent material positioned behind said second plate with respect to the path of light having a thickness d_3, said third plate having a refractive index n_3 and making an angle a_3 with the axis of the optical system, the angles a_2 and a_3 being displaced approximately 90° about the optical axis relative to the angle a_1, the thicknesses and the refractive indices of said plates together with the angles made by said plates with the optical axis being so chosen that:

$$\frac{(n_1^2-1)d_1\cos^2 a_1}{2(n_1^2-\cos^2 a_1)^{3/2}} \approx \frac{(n_2^2-1)d_2\cos^2 a_2}{(n_2^2-\cos^2 a_2)^{3/2}} \approx \frac{(n_3^2-1)d_3\cos^2 a_3}{(n_3^2-\cos^2 a_3)^{3/2}}$$

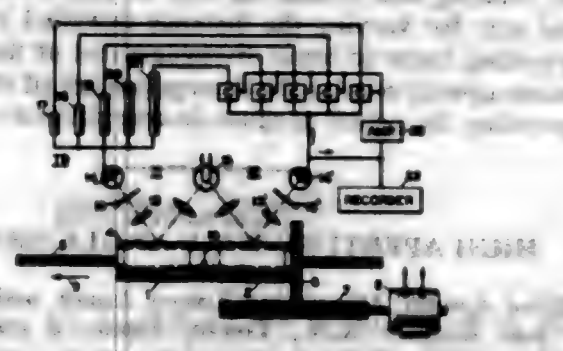
2,896,500
MAGNIFICATION POWER CHANGING MECHANISM FOR VIEW-AND-RANGE-FINDER HAVING ROTATABLE GALILEAN TYPE OPTICAL SYSTEM
Masamichi Kakunodate, Tokyo, Japan, assignor to Canon Camera Company, Inc., Tokyo, Japan, a corporation of Japan
Application January 3, 1957, Serial No. 632,315
Claims priority, application Japan April 21, 1956
1. A magnification power changing mechanism for view- and range-finders built into a camera housing, comprising a rotatable horizontal shaft, a support integral with the horizontal shaft, a plurality of Galilean telescopes

on the support angularly to each other with the optical axis of each telescope passing through the center of rotation of the support, each telescope having a different and predetermined magnifying power, a rotatable vertical shaft, gearing interconnecting the horizontal and vertical shafts, a knurled disc integral with the vertical shaft, the camera casing defining an aperture through which a



peripheral region of the knurled disk extends, an indicator dial connected to the top of the vertical shaft, an eyepiece with which the telescopes are alignable to view an object, and a plurality of indicia equal in number to the plurality of telescopes on one face of the dial for indicating the particular telescope of the plurality of aligned with the eyepiece.

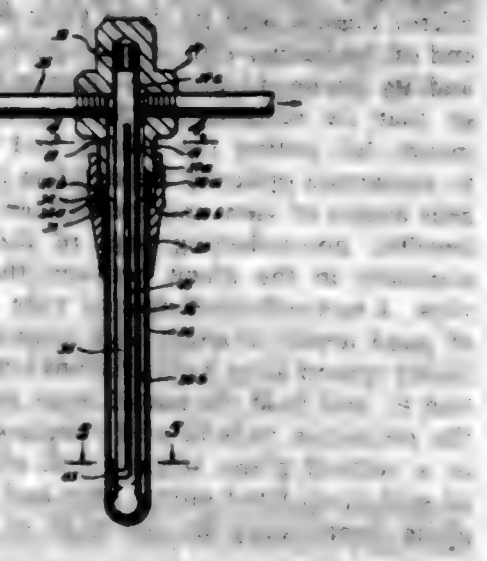
2,896,501
APPARATUS FOR OUTLINING CONTOURS
George M. Stumpe, New Hyde Park, N.Y., assignor to Fairchild, Inc., New York, N.Y., a corporation of Delaware
Application May 28, 1953, Serial No. 358,113
14 Claims. (Cl. 88—14)



3. In a photogrammetric apparatus, in combination: photoelectric means for simultaneously scanning two stereoscopic representations of a terrain to produce two cyclical waveforms, means for comparing said waveforms and producing a marking pulse each time successive points of minimum amplitude, inflection and maximum amplitude in one cycle of both waveforms are coincident, and means for simultaneously recording one of said waveforms and the marking pulses to produce a graphic representation of said terrain with a contour line outlined on said graphic representation.

2,896,502
COLORIMETER APPARATUS
Obert L. Nordin, Houston, Tex., assignor to Thornhill-Craver Company, Inc., Houston, Tex., a corporation of Texas
Application May 7, 1956, Serial No. 583,152
4 Claims. (Cl. 88—14)

3. A colorimeter cell assembly for use with a colorimeter comprising, a tubular transparent test cell closed at one end, a solid tubular transparent rod within and extending lengthwise of the cell, baffle means between the cell wall and rod on opposite sides of the rod and spaced from said closed end of the tube to direct fluid in a confined U-shaped path through the tube, and



means for directing fluid into and out of the cell on opposite sides of the baffle means.

2,896,503
MULTI-CAMERA IMAGE-PRODUCTION AND CONTROL
Philip Stanley Smith, Camden, N.J., assignor to Smith-Dietrich Corporation, a corporation of New York
Application March 8, 1956, Serial No. 570,169
14 Claims. (Cl. 88—16.6)

2. An apparatus for taking in sections images of a wide scene or object on a corresponding number of films for subsequent mosaic combining comprising two cameras each having a lens system, an aperture, and means for presenting film at the latter for image recording; each of said cameras having an angle of view less than the angle of the scene or object and said cameras having supporting means in the form of a base plate on which they are associated together with their optical axes in a horizontal plane for dividing between them the angle of the scene or object into two adjacent edge-adjoining fields of view for the taking of corresponding image sections that are intended to substantially match at their adjoining edges when mosaically combined, one of said cameras being positioned on said base plate with its optical axis coincident with the axis of one of said fields of view and with the common vertex of both angles of view coincident with the entrance pupil of its lens system and the other camera being laterally and angularly displaced therefrom on said base plate, there being a mirror having a reflecting surface positionable vertically in the path of the pencil of light rays coming from the object section in the other angle of view to bend the optical axis of the latter into coincidence with the optical axis of said other camera and to converge said pencil of light at the entrance pupil of its lens system whereby optically both cameras view their respective scene sections from substantially the same point and parallax effects are thereby alleviated, said mirror having a relatively sharp front vertical edge formed by a beveled non-reflecting surface that intersects

to reflect light; and a second prism made from a material

with the horizontal shaft, a plurality of Galilean telescopes

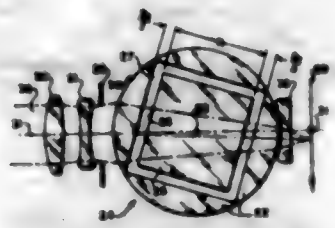
the reflecting surface at an acute angle, said base plate carrying a frame open at its front end and receiving said mirror therein with its sharp front edge at the open front end of the frame, with means coacting between the mirror and its frame adapted for manually setting the mirror so that its reflecting surface is vertical together with means for setting the mirror and its sharp front edge to demarcate optically the dividing line between the adjacent angles of view and the adjacent object sections, said bevelled non-reflecting edge of the mirror falling substantially in the plane between the adjacent angles of view, a non-reflecting opaque vane that is very thin and of good tensile strength, and means comprising two vertically spaced arms having means supporting them in relation to said base plate, said arms having secured thereto the respective ends of said vane and holding it taut and in a vertical plane aligned with and extending forward of said sharp front mirror edge and falling in the vertical plane demarcating the one angle of view from the other.

2,896,504

OPTICAL SYSTEM FOR NONINTERMITTENT MOTION PICTURES

Gerhard Schwesinger, Heidenheim (Brenz), Germany, assignor to the United States of America as represented by the Secretary of the Army

Application February 20, 1958, Serial No. 716,519
3 Claims. (Cl. 88—16.8)
(Granted under Title 35, U.S. Code (1952), sec. 266)



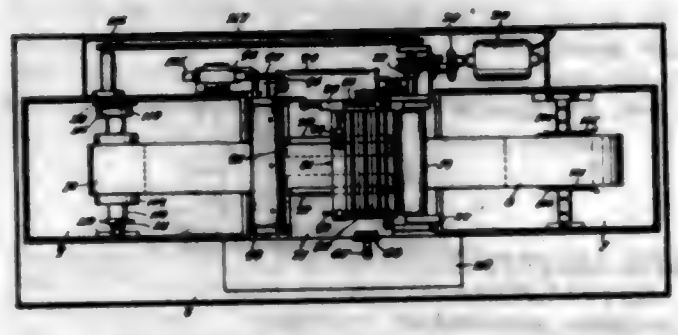
1. An optical system comprising an image forming lens and an image motion compensator, said compensator comprising at least two plane-parallel refracting elements of different refractive indices arranged in abutting relationship along the optical axis of the system and being rotatable as a unit about an axis perpendicular to and lying on the said optical axis thereby providing a two-element rotatable refractor, a variable optical wedge disposed on each opposite side of said rotating refractor along said optical axis, one of said optical wedges comprising a movable plano convex lens the convex surface of which lies on a circle having its center on the axis of rotation of said rotating refractor, said movable lens further forming a lens element of said image forming lens, said other wedge comprising an identical movable plano convex lens and a second lens fixed adjacent thereto on the optical axis of said system, the refractive index of each of said plano convex lenses and of said second lens being the same but different from the refractive indices of said rotating refractor, the refractive index of one element of said rotating refractor being substantially greater than the refractive index of said lenses and the refractive index of the other element of said refractor being less than the refractive index of said lenses, means for rotating said refractor and said movable lenses in synchronism, said variable optical wedges refracting said image beam in opposite directions whereby the result of refraction by said wedges and by said refractor is a lateral displacement of said image beam, said wedges further providing a medium embracing said rotating refractor having a refractive index with respect to which one element of said refractor has a relative index of refraction greater than unity and with respect to which the other element of said refractor has a relative index of refraction less than unity.

2,896,505

AUTOMATIC PHOTO PRINTING MACHINE

Carl T. Nations, Orlando, Fla., assignor to National Electronics Distributors, Incorporated, Orlando, Fla., a corporation of Florida

Application December 21, 1955, Serial No. 554,456
12 Claims. (Cl. 88—24)



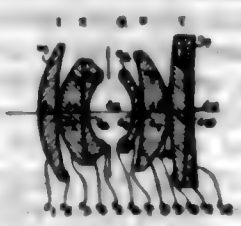
4. An automatic photographic printing machine including means for supporting a strip of unexposed photographic paper, an exposure table, a feed roll, a pressure roll for pressing the strip into contact with the feed roll to cause the strip to be moved across the exposure table, a drive shaft for said feed roll, a measuring roll rotatable on said drive shaft and located adjacent to the feed roll and adapted to be rotated by the strip independently of the feed roll as said strip is fed through the machine, an electric circuit, an electric motor in said circuit for driving said feed roll, a clutch between said motor and feed roll, an electric switch for controlling energization of the motor, a pinion rotated by said measuring roll, a clutch operating finger, a measuring disk, a stop on said disk for locating said finger in its starting position, a gear driven by said pinion for rotating said finger from its starting position to its clutch disengaging position, means for rotating said measuring disk to adjust the position of said stop for varying the distance travelled by the clutch operating finger to cause disengagement of the clutch, and means operable upon the disengagement of the clutch for operating the switch to cause de-energization of the motor.

2,896,506

HIGH APERTURE WIDE-ANGLE OBJECTIVE LENS

Hideo Azuma, Meguroku, Tokyo, Japan, assignor to Nippon Kogaku K.K., Tokyo, Japan, a corporation of Japan

Application June 5, 1956, Serial No. 589,554
3 Claims. (Cl. 88—57)



1. A high aperture, wide angle photographic objective comprising five components spaced from each other of which the first component I is a single meniscus collective lens with its convex surface toward the object side of the objective, the second component II is a meniscus dispersive component consisting of a positive lens cemented to a negative lens, the convex surface of the second component being towards the object side, the third component III is a single meniscus dispersive lens with its convex surface of radius r_7 towards the image side of the objective, the diaphragm being positioned between the surfaces of radii r_5 and r_6 of the second and third components respectively, the fourth component IV is a meniscus single collective lens with its convex surface of radius r_9 towards the image side, and the fifth component V is a collective component consisting of a posi-

tive lens cemented to a negative lens, the convex surface of radius r_{10} of the fifth component being towards the object side, the radii r_3, r_6, r_7, r_9 and r_{10}, and the axial thicknesses d_6 and d_8 of the third and fourth components meeting the following requirements in terms of the equivalent focal length f of the total objective array:

$$0.30\ f>r_3>0.17\ f,$$
$$0.30\ f>|r_6|>0.17\ f,$$
$$0.43\ f>|r_7|>0.28\ f,$$
$$0.53\ f>|r_9|>0.36\ f,$$
$$10\ f>r_{10}>1.3\ f,$$
$$0.07\ f>d_6>0.03\ f, \text{ and}$$
$$0.20\ f>d_8>0.10\ f,$$

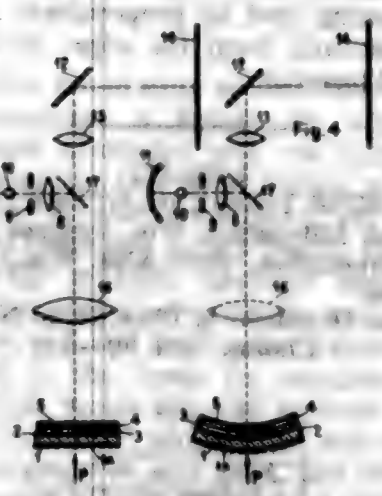
and the refractive index of each the first and fourth component and of the positive lens of the fifth component lies between 1.65 and 1.80.

2,896,507

ARRANGEMENT FOR AMPLIFYING THE LIGHT INTENSITY OF AN OPTICALLY PROJECTED IMAGE

Fred Maat, Willy Baumgartner, Fritz Held, and Ernst Baumann, Zurich, Switzerland, assignors to Gesellschaft zur Forderung der Forschung an der Eidg. Techn. Hochschule, Zurich, Switzerland

Application April 6, 1953, Serial No. 346,856
Claims priority, application Switzerland April 16, 1952
7 Claims. (Cl. 88—61)



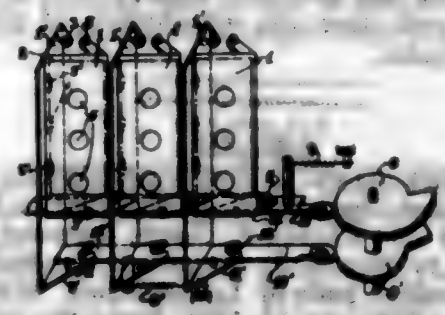
1. Apparatus for amplifying the brightness of an optically projected image comprising a strong light source, means forming the light from said source into a beam with a high degree of brightness as compared with that of said projected image, a system for projecting said beam to a screen, a multiple layer control means interposed in said system between said light source and screen for modulating said beam in a point-to-point manner, said multiple layer control means including a first electrode layer permeable to light, a photo-conducting layer at one side of said first electrode layer, a second electrode layer spaced from said first electrode layer with said photo-conducting layer therebetween, a source of voltage for application to said electrode layers to produce an electric field therebetween, said photo-conducting layer being disposed within said electric field, means for projecting in a point-to-point manner said image to be amplified onto the side of said photo-conducting layer through said first electrode layer, and a deformable layer overlying said photo-conducting layer and having a mirrored surface at which said beam is reflected, said second electrode layer being disposed in such relation to said deformable layer and photo-conducting layer as to effect deformation of said deformable layer and the mirrored surface thereof by corresponding changes in said electric field produced solely by variations in brightness of the image projected onto said photo-conducting layer.

2,896,508

DIAPHRAGM SUITABLE FOR PHOTOMETERS

Friedrich Biedermann, Munich-Unterhaching, Germany, assignor to AGFA Aktiengesellschaft

Application April 23, 1954, Serial No. 425,297
Claims priority, application Germany May 21, 1953
10 Claims. (Cl. 88—61)



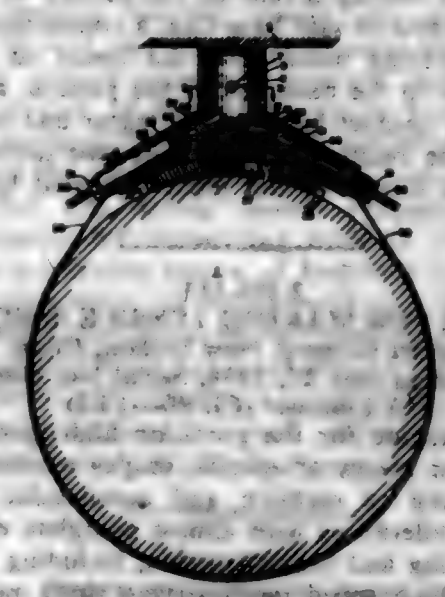
1. A diaphragm for continuously regulating a photometer aperture comprising two light obstructing elements, supports for said elements disposed in fixed positions relative to said aperture, said elements being arranged on said supports in a manner permitting each of said elements to be moved from an opened to a closed position to open and close said aperture, said light obstructing elements overlapping in said closed position over substantially all of said aperture, a common control means continuously variable over a range of positions being operatively coupled to each of said elements, said common control means being constructed and arranged for individually moving a first one of said two elements through a continuous sequence of positions from said opened to said closed position and for then individually moving the second of said elements through a continuous sequence of positions from said opened to said closed position, in said closed position said two elements being arranged one over the other before said aperture, and in said closed position a fraction of the light passing through said aperture being unobscured by said first element.

2,896,509

BOMB-RACKS

Daniel D. Musgrave, Cabin John, Md.

Application September 19, 1957, Serial No. 684,914
1 Claim. (Cl. 89—1.5)



A mechanism for suspending and releasing a store comprising a main support cylinder having a pair of lateral openings therein, a main piston disposed within said main cylinder, resilient means interposed between the store and said main piston urging said piston to a first position in said cylinder, a sling to support said store, auxiliary pistons and apertured rods at the ends of said

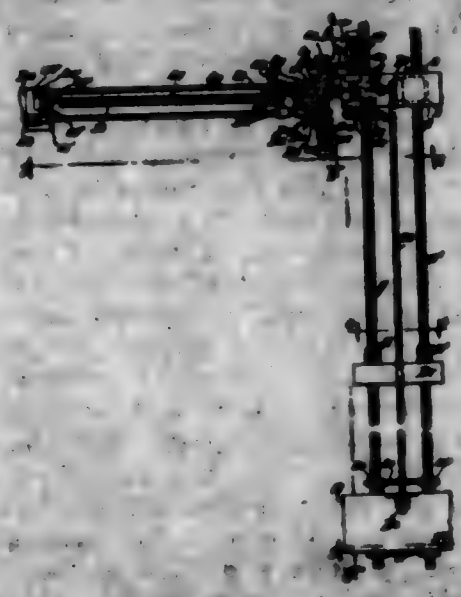
latched position preventing rotational movement of said

sling, a pair of auxiliary cylinders carried by said main support cylinder about said openings for receiving the ends of said rod and piston means, the ends of said rods passing thru said lateral openings into said main cylinder, detent means on said main piston separably engaging the apertures at the ends of said rods when said main piston is at said first position whereby said main piston releases said rods upon the introduction of pressure to said main cylinder.

2,896,510
THREAD-CUTTING MACHINE

Claude E. Guest, Springfield, Mass.; Myrtice E. Guest, executrix of said Claude E. Guest, deceased, assignor of one-half to Myrtice E. Guest and one-half to Jean A. Ensminger, both of Longmeadow, Mass.

Application February 13, 1956, Serial No. 565,210
7 Claims. (Cl. 90—11.56)



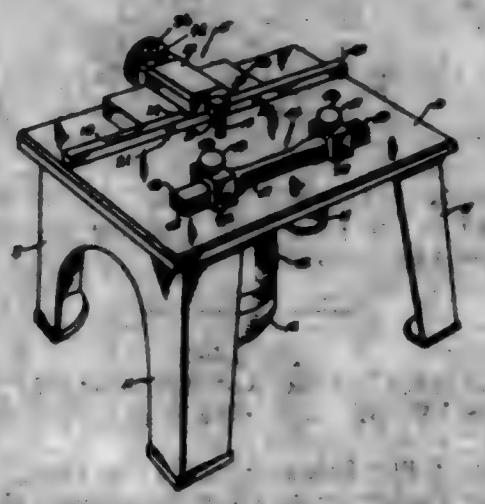
1. A thread-cutting machine comprising a driving means for rotating the work, a cutting tool, a second independent driving means for causing relative traverse between the tool and work, a pattern having an edge indicating by its distance from a base line the pitch of a variable-pitch thread to be cut upon the work, a tracer engageable with said edge of the pattern, operative means from the first driving means to the pattern to move the pattern transverse to said base line, a connection between the second driving means and the tracer to move the tracer parallel to the base line of the pattern, and means controlled by contact between the tracer and the pattern to regulate the relative speed of the two driving means to produce a thread of the pitch indicated by the pattern.

2,896,511
MACHINE FOR MAKING TENSILE SPECIMENS

Robert Sieburg, New Britain, Conn.

Application July 27, 1956, Serial No. 600,443
13 Claims. (Cl. 90—13.2)

1. In a machine for the precision high speed contour milling of test pieces of specific shapes required for the physical testing of metallic and nonmetallic materials within close tolerances with almost complete elimination of cold working and heat distortion, including a supporting table, a high speed motor-driven shaft mounted below said table, said shaft being provided with a rotary routing tool extending upwardly therefrom and projecting through the top of said table with its axis at right angles thereto, a horizontal slideway located above said tabletop in line with said tool, a movable slide in said slideway, a vertical guide sleeve larger in diameter than said tool mounted in said slide and eccentrically embracing said tool, a straight horizontal guide bar rigidly mounted above said table at right angles to said slideway, a micrometer screw mounted on the rear of said slide for permitting the successive manual adjustment of the position of said slide and said sleeve by small increments with respect to said routing tool, and a template having two contoured side edges for receiving the test piece to be machined, said template being smaller

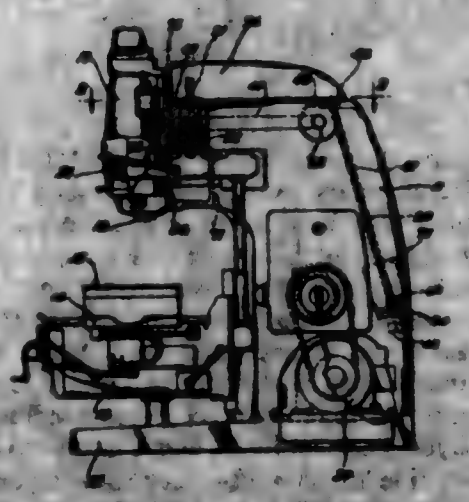


in width than the width of the desired finished test piece, said template being adapted to be manually moved longitudinally, repeatedly, with both side contoured edges in contact with said sleeve and said horizontal bar to cause said routing tool to progressively remove small amounts of material from the edges of the test piece carried by said template.

2,896,512
MACHINE TOOL COUNTERWEIGHT

Kurt A. Riedel, Milwaukee, Wis., assignor to Kearney & Trecker Corporation, West Allis, Wis., a corporation of Wisconsin

Application December 8, 1954, Serial No. 473,911
9 Claims. (Cl. 90—16)



9. In a machine tool, a frame, a spindle head slidably carried by said frame for selective vertical adjustment, said spindle head being bodily removable from said frame, a rack presenting rack teeth carried by said spindle head, a cooperating pinion journalled in said frame disposed to meshingly engage said rack whenever said spindle head is operatively mounted on said frame for slidable movement, a counterweight connected to said pinion exerting rotation in a direction for urging said rack and said spindle head upwardly whenever said spindle head is operatively mounted on said frame for slidable movement, and a latching device operatively associated with said pinion and said counterweight, said latching device being retained in unlatched position whenever said spindle head is operatively carried by said frame for vertical slidable movement, said latching device being actuated to

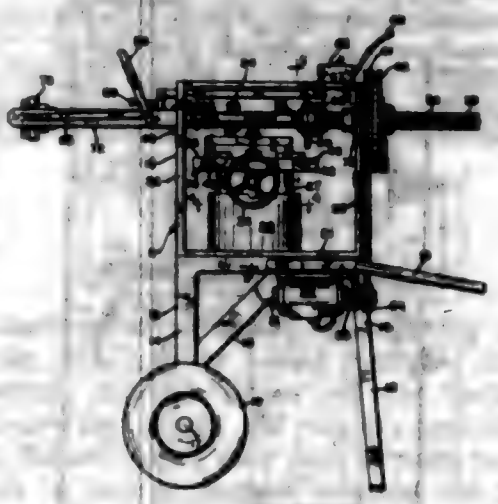
latched position preventing rotational movement of said pinion is response to said counterweight whenever said spindle head is bodily removed from said frame.

2,896,513

PORTABLE MACHINE FOR SHAPING OR CONTOURING RAILWAY CAR AXLE BEARING BLOCKS

Peter C. Thomas, Denver, and John C. Hurst, Adams County, Colo.

Application March 31, 1954, Serial No. 419,974
7 Claims. (Cl. 90—26)



1. A machine for shaping an axle bearing block to fit an axle, comprising a frame, an adjustable block-supporting table associated with the frame, means for raising and lowering said table relative to the frame, a shaft journalled on said frame above the table, a cutter head including adjustable cutters therein mounted on said shaft and axially movable therewith whereby to shape the block as the cutters advance, the end portion of the shaft in advance of said head being threaded, a two-part nut supported by the frame for engagement with said threaded portion, means disposed adjacent the course of movement of said shaft to disengage said nut and arrest advancing movement of said shaft, and means including a rack connected to said shaft and a pinion supported from the frame for effecting a rapid return movement of the shaft and cutter head while said nut is disengaged.

2,896,514

CONTROL SYSTEM

Jack Rosenberg, Pacific Palisades, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Application January 24, 1957, Serial No. 636,089
7 Claims. (Cl. 90—28.1)

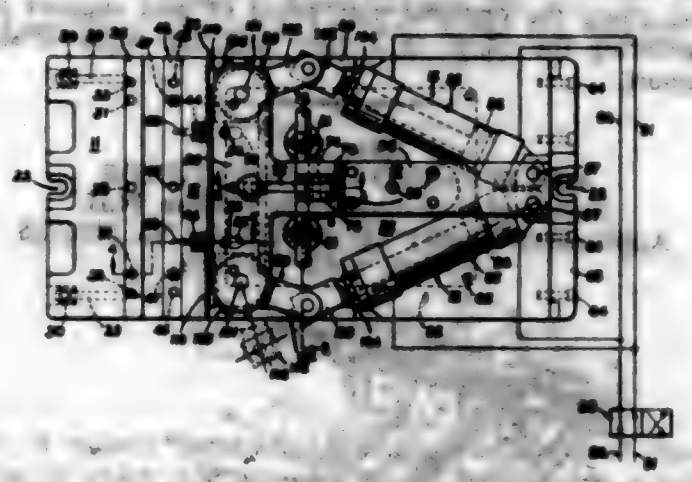
1. A control system for a gun barrel rifling machine of the type wherein a broach is rotated while being moved linearly through a gun barrel comprising means for moving said broach linearly, means for rotating said broach through an arc, first means for generating a pulse for every increment of said linear motion, second means for generating a pulse for every increment of said arc motion, means for deriving from the output of said first means a predetermined number of pulses representative of an increment length of broach arc travel desired per length of linear motion corresponding to said predetermined number of pulses, means to which output of said second means and said means for deriving is applied to provide an output representative of the difference in number of said pulses, and means to apply output from said last named means to provide a difference output to said means for rotating said broach to rotate said broach an increment of arc for each single count in said output.

2,896,515

VISE

Walter R. Alexander, Dayton, Ohio, assignor to Acme Precision Products, Inc., Dayton, Ohio, a corporation of Ohio

Application March 10, 1958, Serial No. 720,368
4 Claims. (Cl. 90—60)



1. A vise for clamping a workpiece in fixed position comprising, a stationary base, a first fixed jaw member extending outwardly from said base, a carriage slidably mounted on said base, indexing means for fixing said carriage rigidly in adjusted position on said base, a second jaw member slidably mounted on said stationary base between said first jaw and said carriage for reciprocating movement with respect to said first jaw member, means forming a lost-motion connection between said carriage and said second jaw member providing for limited clamping movement of said second jaw with respect to said carriage when said carriage is fixed to said base by said indexing means, a pair of laterally spaced cams each having a working face for contact with said second jaw mounted on said carriage for movement about a vertical pivot axis spaced from and adjacent said second jaw member, a pair of hydraulic motors having cylinders pivotally mounted on said carriage and diverging at equal angles from the center line of said base toward said second jaw member and having pistons reciprocally received therein, means for connecting each of said hydraulic motors to a common source of hydraulic operating fluid for the application of equal hydraulic fluid pressure thereto, and means connecting each of said cams to one of said pistons for pivotal movement of said cams in response to actuation of said pistons to exert clamping force against said second jaw urging it toward said first jaw and holding the workpiece firmly in fixed position.

2,896,516

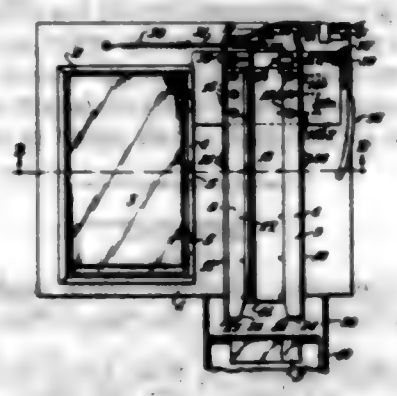
LINER INSERTING DEVICE

William J. Tilton and William T. Leslie, Middletown, Ohio, assignors to Raymond Bag Corporation, Middletown, Ohio, a corporation of Ohio

Application February 28, 1957, Serial No. 643,110
9 Claims. (Cl. 93—8)

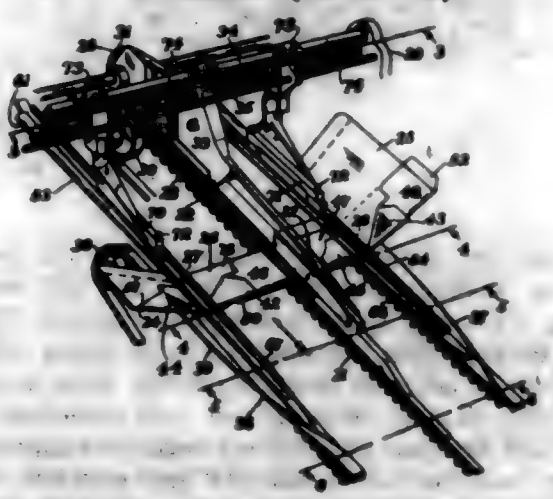
1. A liner inserting device comprising a platform, an elongated liner support overlying said platform in spaced relation therewith, said liner support being secured to said platform at one end only, whereby the remaining

end and the sides of said platform are free to be surrounded by an open ended bag, a folding board extending lengthwise of said support intermediate the opposite



side edges thereof, and vacuum means extending lengthwise along the opposite side edges of said support for registering the edges of a liner with the edges of said support.

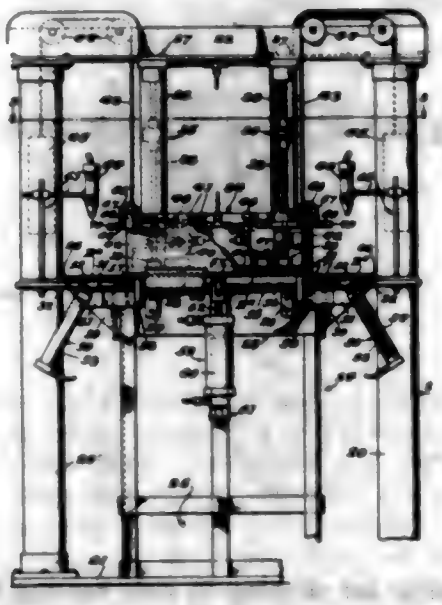
2,896,517
MULTI-FACED FOLDING GUIDE
Raymond A. Labombarde, Nashua, N.H.
Application January 12, 1956, Serial No. 558,726
5 Claims. (Cl. 93—49)



1. A unitary, multiple, folding guide for controlling the tabs and flaps of a plurality of box blanks advancing individually and successively along a path through the flap folding zone of a folding machine, said guide comprising an elongated body of self supporting material coextensive in length with said folding zone, said body having a flat, straight, strip extending the full length of one side thereof with a smooth underface and at least one straight edge and said body having an arched strip with a straight edge face affixed centrally of the upper face of said flat strip and a helical edge face commencing on the opposite side of the longitudinal axis of said body from the straight edge face thereof, at one end, but crossing over said longitudinal axis to merge with said straight edge face at the other end of said body and means for supporting said guide above the path of said blanks with said arched strip straddling the longitudinal path of the fold line of the flap being overfolded in said zone, the straight edge of said flat strip just inside said path and the underface of said flat strip just above the path of the main body of said blanks.

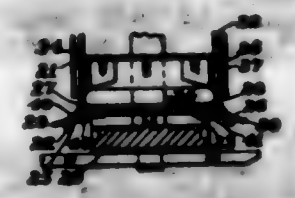
2,896,518
CARTON MAKING MACHINE
Alex S. Gibb, Hayward, Calif., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Application December 27, 1956, Serial No. 630,938
18 Claims. (Cl. 93—51)

1. A machine for constructing a carton from a blank having a rectangular body, side and end flaps joined to said body, and corner flaps joined to said side flaps; said machine comprising a rectangular throat frame dimensioned to underlie said body only, a rectangular plunger dimensioned for reception in said throat frame and mounted to normally closely overlie said body, corner flap folders mounted near the corners of said throat frame in positions to underlie said corner flaps respectively, side flap folders mounted at the sides of said throat frame in positions to normally underlie said side flaps respectively, operating means for raising said corner flap folders to upwardly fold said corner flaps to vertical positions, operating means for raising said side flap folders to upwardly fold said side flaps to vertical positions



against the sides of said plunger respectively, thereby moving the vertically positioned corner flaps inwardly at the ends of said plunger, adhesive spray guns mounted in positions to apply adhesive for connecting said corner and end flaps, operating means connected with said plunger for lowering the same to depress the partly folded blank into said throat frame, thereby causing upward folding of the end flaps against the vertically positioned corner flaps, pressing means mounted in position to press said end flaps and corner flaps tightly together while within said throat frame, operating means for said adhesive spray guns, and operating means for said pressing means.

2,896,519
BOX STACKING APPARATUS
Harold J. Goss, Nashua, N.H., assignor to International Paper Box Machine Company, Nashua, N.H., a corporation of New Hampshire
Application July 1, 1957, Serial No. 669,257
6 Claims. (Cl. 93—51)



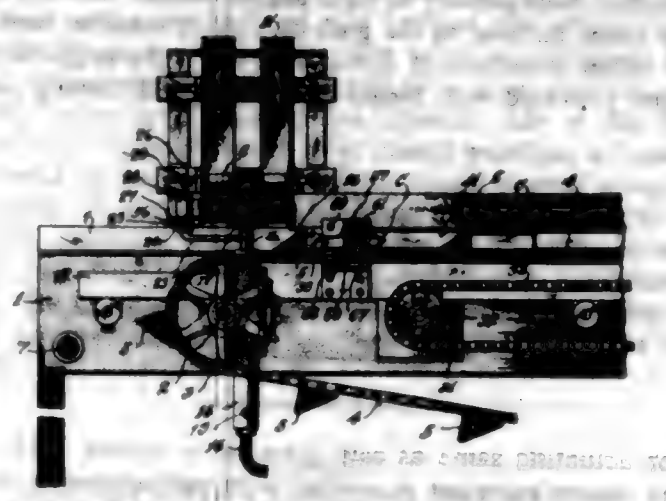
1. In plunger and channel apparatus for erecting tray boxes, said apparatus being of the type having a box magazine in extension of said channel for holding a stack of boxes folded, and advanced bottom foremost, by said apparatus, the combination of detent means having a face normally coplanar with the face of said plunger and normally extending outwardly from said plunger into the path of the rim of a box already formed by said plunger, said detent means being pivotally mounted on said plunger proximate the plane of the plunger face and movable to a position within the confines of said plunger by the folding of a box blank around said plunger in said channel.

carrier mounted for continuous rotation during oper- disposed on opposite sides of the exposure aperture of

2,896,520
MACHINE FOR HANDLING CARTONS TO BE FILLED

Robert O. Woolfer, Oak Tree, N.J.

Application February 29, 1956, Serial No. 568,530
13 Claims. (Cl. 93—53)

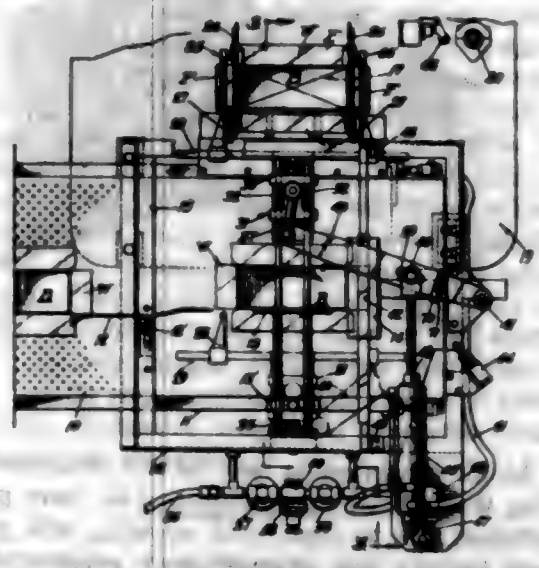


1. A machine having means for receiving cartons in folded style, said machine having conveyor chains with spaced pushers attached thereto and also having a runway to receive the cartons, and pressure applying devices to receive the cartons by their flaps to press them at the filling ends in such a manner whereby the flaps will readily open after they are pushed through the pressure devices by the chain pushers.

2,896,521
AUTOMATIC FEED FOR PAPER BOX WRAPPING MACHINES

George Howard Snyder, Jr., Wyncote, Pa., assignor to George H. Snyder, Inc., Philadelphia, Pa., a corporation of Pennsylvania

Application October 31, 1956, Serial No. 619,447
3 Claims. (Cl. 93—54)

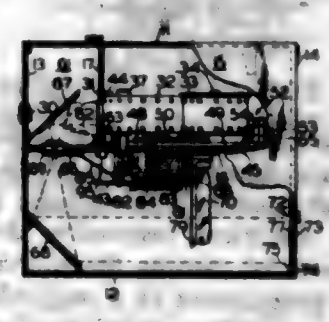


1. For a package wrapping machine having wrapping form blocks and means including a drive shaft for reciprocating said blocks from and to a package-receiving position, feed means comprising a carriage having package-engaging arms thereon normally positioned in registry with said blocks in the package-receiving position thereof, a framework including means slidably mounting said carriage for extension and return of the package-engaging arms from and to their normal position to an outer limit position to pick up a package and wrap, a carriage arm pivotally mounted at one end on said framework and pivotally mounting said carriage at the other end, a pneumatic cylinder, means mounting said cylinder on said framework, a double-acting reciprocating piston in said cylinder, means mounting the piston on said carriage arms to displace the same and effect extension and return of said package-engaging arms, pneumatic fluid supply and exhaust means for said cylinder including valve means operated by said drive shaft to effect reciprocation of said piston and displacement of said arms in timed relation to the reciprocation of the wrapping form blocks, a conduit connected to the pneumatic fluid exhaust means of said cylinder, and nozzle means in fluid communication with said conduit underlying the path of movement of said package-engaging arms, and operable upon operation of said piston to form a pneumatic fluid cushion partially supporting the packages and wrap during return of said package-engaging arms to their normal position.

2,896,522
PHOTO-IDENTIFICATION CAMERA

Cabot T. Stein, Chicago, Ill.

Application November 18, 1953, Serial No. 392,921
7 Claims. (Cl. 95—1.1)



1. A camera comprising a rectangularly shaped focal plane in which one frame of film is positionable, a wall mounted in said camera normal to said focal plane to divide said focal plane into two adjacent substantially identically shaped rectangular portions, a rectangularly shaped shutter being substantially split into two identical sections by a slot formed therein, said shutter pivotally mounted in said camera and through said wall with said slot cooperating with said wall so that said shutter is pivotable to simultaneously expose and to simultaneously cover said portions, a focusable lens for photographing a person, said lens mounted in said camera on one side of said wall so that said lens is focusable upon one of said portions of said focal plane when said shutter is pivoted to expose said portions, a second focusable lens for photographing a card, said second lens mounted within said camera on the other side of said wall, a frame for holding a card to be photographed, said frame mounted within said camera at the side thereof opposite from that in which said first lens is mounted, means providing access to said frame through the side of said camera at which said frame is mounted, and a pair of mirrors positioned one on each side of said second lens for directing the image of a card mounted in said frame through said second lens and onto the other portion of said focal plane on the other side of said wall in proper image relation to any image of a person directed by said first lens upon said one of said portions when said shutter is pivoted to expose said portions and means connected to said shutter for momentarily pivoting said shutter to simultaneously momentarily expose and cover said portions of said focal plane.

2,896,523
PHOTOTYPOGRAPH

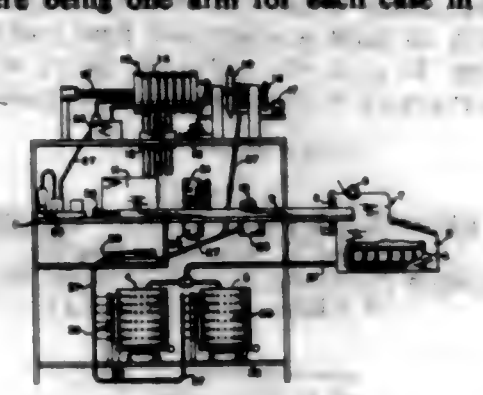
Cecil L. Tassel, Oklahoma City, Okla., assignor to Harris-Intertype Corporation, Cleveland, Ohio

Original application June 7, 1947, Serial No. 753,273. Divided and this application October 27, 1948, Serial No. 56,880
29 Claims. (Cl. 95—4.5)

1. In apparatus adapted for photographic printing upon light-sensitive film or the like, the combination of a

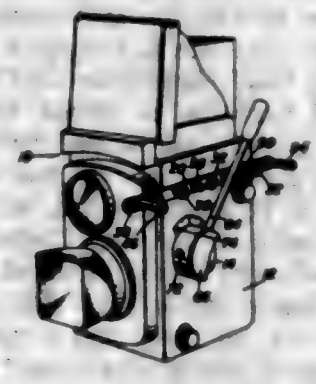
having a rectangular body, side and end flaps joined to nat.

carrier mounted for contiguous rotation during operation, said carrier having on its surface a master stencil of a font of characters, said font having a plurality of cases, a source of light located adjacent the carrier and adapted to flash when desired to cause a beam of light to pass through the stencil while the drum is rotating and expose film in accordance with the particular character of the stencil interposed in the beam during the flash, a plurality of arms mounted for rotation with said carrier, there being one arm for each case in said font



of characters, a character selector having as many controls as there are characters in a single case mounted in a fixed circular position adjacent the path of travel of said arms, an electrical responsive device on each of said arms capable of causing the source of light to flash in response to government by a particular control of said character selector and means for selecting a particular case from said font of characters by selectively connecting only one of said electrical responsive devices to said source of light at a time.

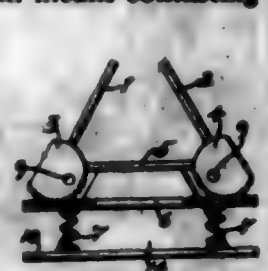
2,896,524
RAPID FOCUS CHANGER FOR CAMERA
Julius T. Warzybok and Emil J. Nobile, Jr., Perth Amboy, N.J.
Application December 2, 1955, Serial No. 558,694
6 Claims. (Cl. 95—45)



1. In a camera case having a focus knob together with a headed neck strap dowel on the same side thereof as the focus knob, an attachment comprising a bracket, means formed in said bracket and engaged with said headed dowel for mounting said bracket on said camera case, stops carried by said bracket and spaced from each other, means adjustably securing said stops to said bracket, a handle, and means adjustably connecting said handle to said knob for moving said knob in response to movement of said handle, said handle extending between and being limited in its travel by said stops.

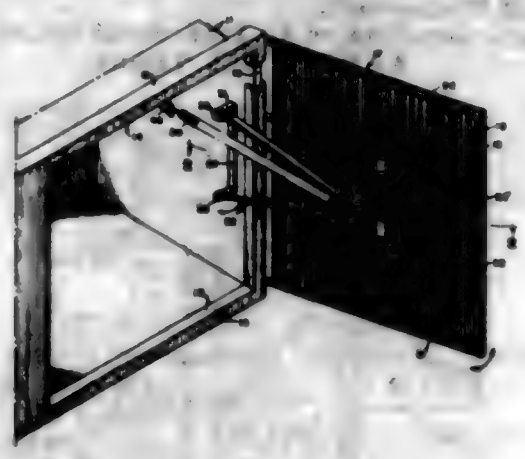
2,896,525
FOCAL PLANE SHUTTER
James D. Smith, Abilene, Tex.
Application April 5, 1954, Serial No. 422,910
5 Claims. (Cl. 95—58)

1. In combination, a camera, comprising a pair of axles parallel to each other supported by a camera frame and disposed on opposite sides of the exposure aperture of the camera, a pair of shutter blades each of sufficient size to close the exposure aperture and each fastened to one of said axles, means mounted on each axle for turning the blades thereon through a dihedral angle between closed position over said aperture closing same and open position substantially at right angles thereto with the shutter blade parallel to the path of light, a member movable in either direction at substantially a right angle to said axles provided with means contacting said turning means



for actuating same as said member is moved, said turning means being set in contact with said actuating means at such position that when one shutter blade is in closed position the other shutter blade is in open position and vice versa, said turning means being arranged to provide for more rapid angular advance, as said member is moved, of the shutter blade which is in closed position as its outward movement begins, and for slower angular advance of the blade which is in open position as its inward movement in the same direction of rotation begins.

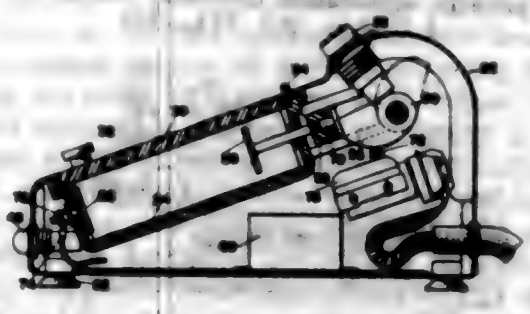
2,896,526
MOUNTING MEANS FOR A REMOVABLE GRILL
William Dye Wilson, Winters, Tex., assignor to Winters Manufacturing Company, Winters, Tex.
Application August 1, 1956, Serial No. 601,495
7 Claims. (Cl. 98—108)



1. An air conditioning unit cabinet structure having an opening through which conditioned air may pass, a grill of sufficient size to close said opening, said grill having inclined louvers and a continuous peripheral rim projecting inwardly from the outer surface of the grill and extending within the boundaries of said opening and having an outwardly extending flange projecting along the exposed surface of the cabinet adjacent the opening, a U-shaped bracket fixed by its bight portion to the inside of the cabinet, a V-shaped crane pivotally mounted by the free ends of its legs to said U-shaped bracket for movement about a first pivot axis, a U-shaped mount pivotally mounted on the apex of said V-shaped crane for swinging movement about a second pivot axis parallel to the first pivot axis of said crane on said bracket, an element connected to said U-shaped mount at one end and universally connected at its other end to said grill substantially at the center of gravity of said grill, a tension spring connected at one of its ends to said cabinet inwardly of

said U-shaped bracket and connected at its other end to the apex of said V-shaped crane, the said tension spring being adapted to pass transversely through the first pivot axis between the free ends of said V-shaped crane and said U-shaped bracket whereby the crane may be urged in a direction to maintain said crane projecting outwardly of said cabinet and alternately to a position, in which said crane is urged inwardly of said cabinet, the spring being positioned on the side of the first pivot axis adjacent the wall of the cabinet when the grill is in open position, the spring being positioned on the opposite side of the first pivot axis when the grill is in closed position, a handle mounted on said grill adjacent the center thereof whereby a person may grip said handle and position said grill in various angles of rotation and the inclined louvers in said grill may direct air in a selected direction in accordance with the angular position of said grill in said opening so that air may be directed up, down, to the left or to the right.

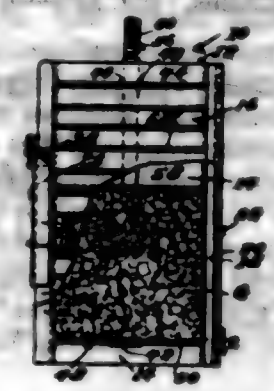
2,896,527
FRANKFURTER COOKING MECHANISM
Jacob S. Richman and Thomas R. East, Philadelphia, Pa.; said East assignor to said Richman
Application December 26, 1956, Serial No. 630,588
8 Claims. (Cl. 99—332)



5. A cooker for frankfurters comprising at least one frankfurter-receiving well, a pair of spaced electrodes disposed within said well, one of said electrodes being movable in a path towards and away from the other of said electrodes, cover means for said well, said cover means comprising a pivotable cover, pivotable means pivoted about a different pivot point than said cover, said pivotable means superposing said cover when said cover is superposed above said well, a switch operatively engaged with said pivotable means when said pivotable means is superposed above said cover, means for urging the movable electrode towards the other of said electrodes when the pivotable means superposes said cover, and means for urging the movable electrode away from the other of said electrodes when the pivotable means is pivoted away from said cover.

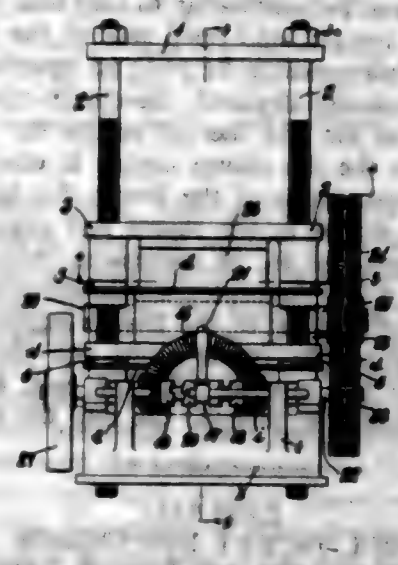
2,896,528
PATTY-FORMER AND COOKER
Peter C. Walters, Hamilton Square, and Ralph E. Davis, Trenton, N.J.
Application March 29, 1957, Serial No. 649,524
2 Claims. (Cl. 99—436)

1. A portable and manually operated patty former and cooker comprising a tubular body having a side wall and open ends, substantially semi-circular slots formed in and encircling one side of said side wall, said slots being spaced from each other and from the ends of the body, divider plates comprising disc bodies passed through said slots and fitting within said body, and handle means on the edges of the disc bodies projecting beyond the side wall for withdrawing the divider plates through the slots, and closure means for the ends of the body comprising diametrically opposed short slots in the body side wall at the ends of the body, and closure discs fitting the interior



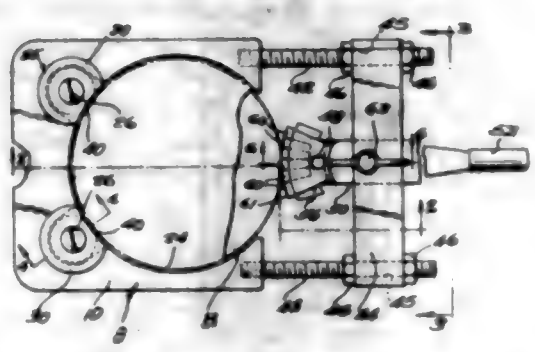
of the body having diametrically opposed lugs on their edges engaged in related short slots.

2,896,529
SCREW-COMPRESSOR
Shozo Shiokawa, Toyonaka City, Japan
Application March 24, 1955, Serial No. 496,537
Claims priority, application Japan April 18, 1954
6 Claims. (Cl. 103—230)



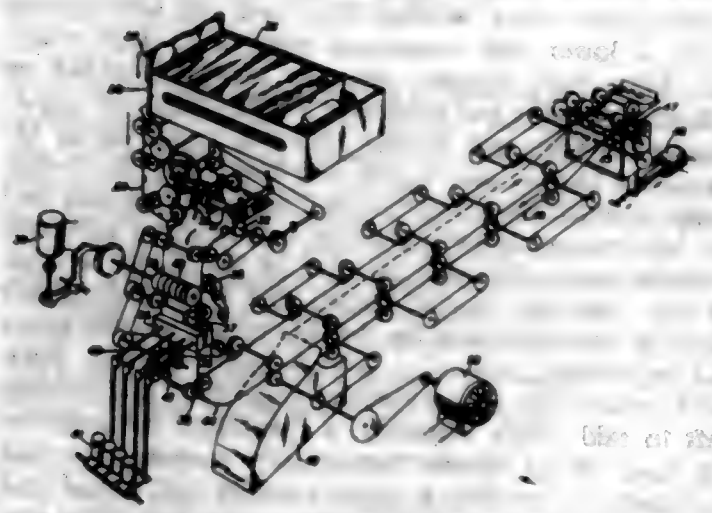
1. A press comprising in combination an upper load engaging member, a plurality of threaded shafts depending therefrom, a base through which said shafts extend, bearing means between said shafts above said base, rotatable means threaded on each of said shafts and connected to each other for simultaneous rotation, said rotatable means being between said base and said bearing means, a lower load supporting member through which said shafts pass, further rotatable means threaded on each of said shafts and connected to each other for simultaneous rotation, said further rotatable means being between said bearing means and said lower load supporting means, a clutch assembly mounted between said base and said lower load supporting means and engaged with said rotatable means threaded on each of the shafts between the base and the bearing means and with said further rotatable means between the bearing means and the lower load supporting means, a driving shaft on said base, clutch means for intermittently connecting said driving shaft to said clutch assembly, a crankshaft mounted on said base, thrust means eccentrically mounted on said crankshaft for exerting a thrust between said lower load supporting means and said bearing means through a material being pressed, said threaded shafts and said rotatable means threaded on said shafts between said base and said bearing means, and gearing means connecting said crankshaft and said driving shaft.

2,896,530
BOWLING BALL MARKER
James G. Bernard, Seattle, Wash.
Application December 6, 1957, Serial No. 701,925
6 Claims. (Cl. 101—4)



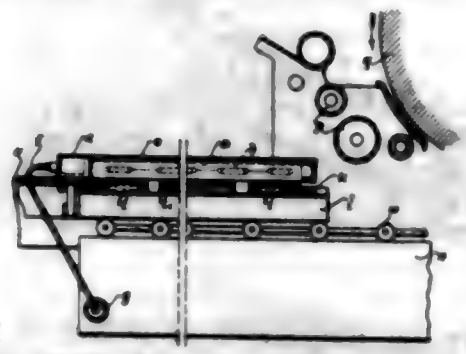
1. A bowling ball marker comprising: a frame having a ball-receiving recess opening upon one side of the frame; spaced, parallel, elongated studs projecting laterally outwardly from said side at opposite sides of the recess; a handle support bar extending transversely of the studs therebetween in confronting relation to said side of the frame, and supported at its ends upon the studs for adjustment longitudinally of the studs toward and away from said open side of the support frame; a pin mounted on said bar between the studs for rotation about an axis normal to the length of the studs, said pin including a collar eccentric to the pin axis; a handle lying crosswise of the bar in a plane perpendicular to said axis and extending at one end toward said open side of the frame, said handle having intermediate its ends an opening in which the collar is rotatably engaged; die clamp means carried by the handle at the end thereof nearer the frame; and dies engaged in the die clamp means in confronting relation to said open saide of the frame, for imprinting of a bowling ball seated in the recess and exposed in said open side in response to, in succession, pivoting of the handle on the collar to center a selected die in respect to the recess, adjustment of the handle support bar with the handle toward the frame along the studs to bring the selected die into contact with the ball, and rotation of the pin to force the selected die into the ball surface.

2,896,531
TOLL TICKET DISPENSERS
William Woodrow Dodge and Edward James Ryan, Jr., Binghamton, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application December 2, 1957, Serial No. 699,955
9 Claims. (Cl. 101—19)



1. A dispensing device for issuing tickets in the general form of business machine cards having a store of blank and unused cards, a print and punch station, a presentation station at which a card validated by marks printed thereon and punched therein is offered to a customer and a retrieval bin to which cards unappropriated by customers are moved and stored, a system of card chutes for guiding cards between said points, a plurality of card sensing contacts along said chutes at least one of which is operated whenever a card is present anywhere in said system of chutes, at said print nad punch station or at said presentation station, a plurality of devices for moving cards through said chutes so placed along said chutes that at least one of said devices will be in controlling relation to a card at any point along said chutes, a motor for operating said card moving devices, customer controlled contacts operated upon the arrival of a customer in juxtaposition to the said presentation station and released by the departure of the customer therefrom, said motor being controlled jointly by said customer controlled contacts and said card sensing contacts whereby said motor will be maintained in operation excepting only when said customer controlled contacts are at their normal unoperated positions and a card is properly seated in said print and punch station.

2,896,532
MACHINE FOR HEATING EMBOSSING MOULDS OF HIGH-SPEED CYLINDER PRESSES
Artur Büttner, Heidelberg, Germany, assignor to Schnellpressenfabrik Aktiengesellschaft Heidelberg, Heidelberg, Germany
Application March 16, 1954, Serial No. 416,617
Claims priority, application Germany March 19, 1953
1 Claim. (Cl. 101—25)

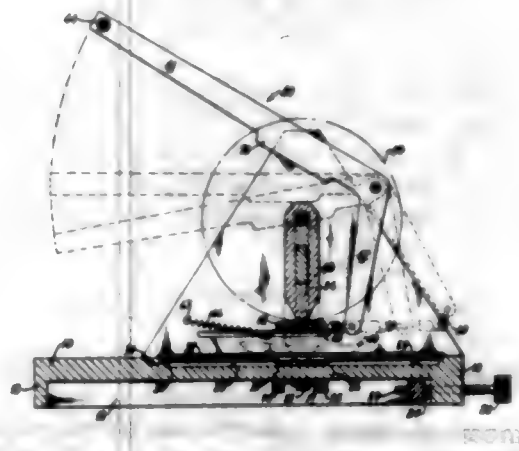


In a high-speed cylinder printing press having a machine frame; track means on said frame, a bed disposed for reciprocation on said track means between two end positions, at least one embossing mould carried by said bed, rack guard means supported by said frame, a casing, adjusting means vertically adjustably securing said casing to said rack guard means, heating means supported within said casing in a common plane and spaced from said bed and said embossing mould upon arrival of said bed at one of said end positions during reciprocation thereof so that heat may be radiated to said embossing mould by said heating means, said heating means including a plurality of heating elements, control means for actuating as many of said elements as required depending on the speed of operation of said reciprocating bed, an insulated cover supported by said casing above said heating means for reducing radiation of heat in a direction away from said bed, and an insulating layer means provided on said bed and below said embossing mould for insulating said frame from said heating means, the distance between said heating means and said mould being varied through said adjusting means to further control the amount of heat radiated to said mould.

2,896,533
CHECKWRITER
Samuel J. Baker, Brooklyn, Gerald S. Lazarus, Bethpage, and Judah R. Sassoon, Jackson Heights, N.Y.
Application February 4, 1958, Serial No. 713,248
5 Claims. (Cl. 101—101)

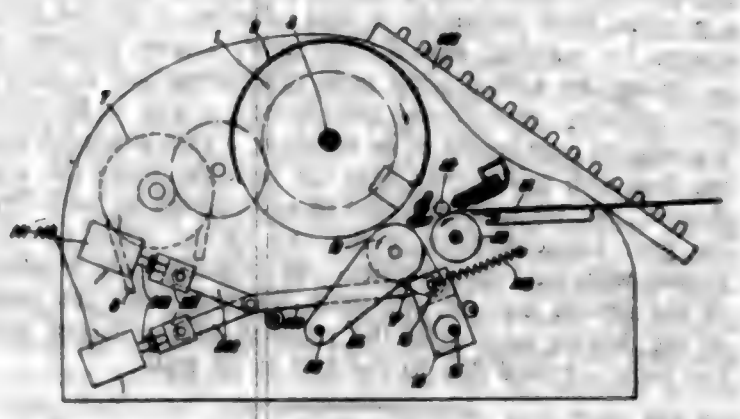
1. A checkwriter comprising a base; a pair of spaced-apart upright opposed arms secured rigidly to said base,

each of said arms having a guide slot vertically disposed therein; downwardly moveable suspending printing means captively disposed in said slots of said opposed arms; a vertically disposed coil spring secured at its top to the inside wall of a respective arm and secured at its bottom to said printing means; a pair of substantially right angle levers each pivotally secured interiorly to a respective upright arm at the apex of the right angle, said levers each having a top horizontal leg and a depending vertical leg, said top legs being disposed above said printing means; handle means connecting the top legs of said



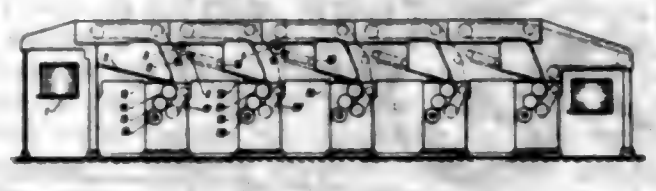
lever arms; an ink pad normally disposed beneath said printing means; a pair of horizontal spring means secured at the front of the spring to a respective upright arm and secured at the rear of the spring to said ink pad; and a pair of swingable wires each having hooks on each end and pivotally secured at one end to the rear of said ink pad and pivotally secured at the other end to a respective depending leg of said respective levers, whereby downward movement of said handle causes the ink pad to ink said printing means followed by moving said printing means downward to engage a check disposed therebelow.

2,896,534
INTERMITTENT SELECTIVE ROTARY PRINTING APPARATUS
Wilhelm Ritzerfeld, Berlin-Dahlem, and Gerhard Ritzerfeld, Berlin-Grunewald, Germany
Application April 24, 1957, Serial No. 654,876
Claims priority, application Germany April 28, 1956
28 Claims. (Cl. 101—132.5)



1. In a printing apparatus for intermittent selective printing, in combination, a frame; a printing roll carried for rotation about its axis by said frame and adapted to have a printing form fixed thereto; a counter-roll carried by said frame for movement to and from an operating position in close proximity to said printing roll for pressing a copy sheet against said printing form, said counter-roll having an axis parallel to that of said printing roll; an electrical moving device operatively connected to said counter-roll for moving the same to and from said operating position, said device including at least one electro-magnet responding at different speeds to electrical impulses of different intensity; generator means for generating electrical impulses sequentially during rotation of said printing roll and for applying said impulses to said electro-magnet and including selective control means for coordinating the application of said impulses with selected sections of said printing form when said selected sections are in printing position opposite said counter-roll; means for applying a voltage to said generator means; and means for adjusting the intensity of said impulses.

2,896,535
SHEET-FED ROTOGRAVURE MACHINE FOR MULTI-COLOUR PRINTING
Hans-Bernhard Schönemann, Wurzburg, Germany, assignor to Schnellpressenfabrik Koenig & Bauer Aktiengesellschaft, Wurzburg, Germany, a corporation of Germany
Application June 2, 1955, Serial No. 512,699
6 Claims. (Cl. 101—152)

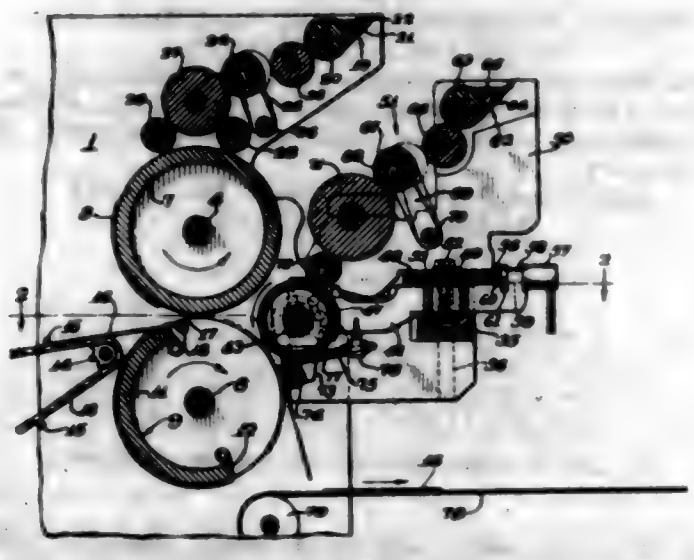


1. In a multi-colour high-speed intaglio sheet-fed rotogravure printing machine having a plurality of printing units arranged in a horizontal line one behind the other in close spaced relation and each having a feeding table means positioned adjacent its printing unit for feeding sheets thereto, a selective sheet turning and delivery means for each successive unit comprising a turning drum and an endless conveyor chain, said turning drum being positioned adjacent the endless conveyor chain for feeding sheets thereto and said endless conveyor chain being positioned over a portion of said feeding table means and intermediate the turning drum and the feeding table means, said endless conveyor chain being supported for turning in either direction, said chain in one direction of turning receiving sheets from said turning drum and in the opposite direction of turning receiving sheets directly, said chain having grippers for gripping a sheet in either direction of turning, an adjustable positionable actuator in the path of movement of said grippers for releasing a sheet, an adjustable positionable stop member positioned adjacent said feeding table in the path of movement of a sheet for limiting the travel of the sheets in one direction of turning of the endless chain.

2,896,536
ENVELOPE PRINTING MACHINE AND MULTICOLORED PRINTING ATTACHMENT THEREFOR
Ernst C. Sauerman, Chicago, Ill.
Application June 15, 1955, Serial No. 515,571
2 Claims. (Cl. 101—175)

1. In an envelope printing machine having a frame provided with spaced side frame members, a printing roll and a juxtaposed make-up roll carried upon said frame, said latter roll having a cut-away portion and a segmental cylindrical portion, means carried by said rolls for rotating said rolls in timed relationship to each other whereby an envelope blank passed between said rolls is printed

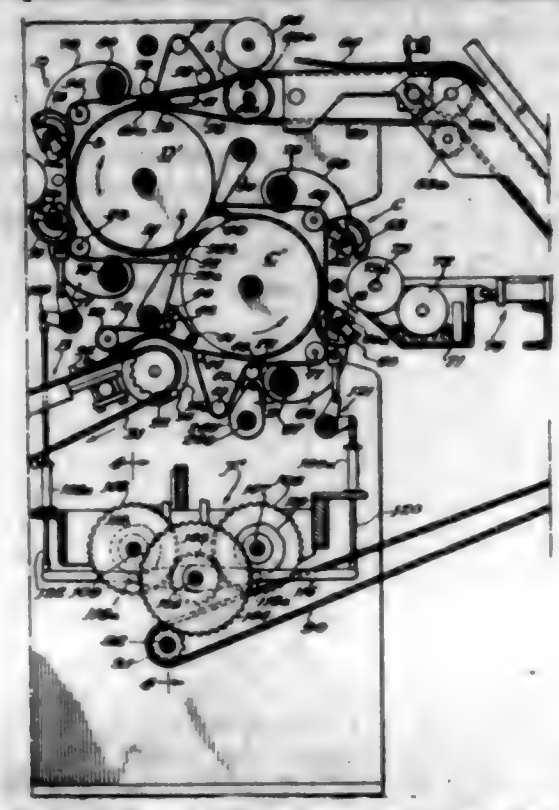
upon in a predetermined color, an attachment therefor for printing said envelope blank in an additional different color, said attachment comprising spaced frame plates each affixed to one of said side frame members, a horizontally disposed supporting member bridging said end plates with one end of said member pivotally mounted upon one of said end plates for swinging movement about a vertical axis and in a plane substantially parallel to the axis of said rolls, a pair of arms mounted in spaced relation upon said supporting member with an end of each arm having a bearing, a shaft journalled adjacent its ends in said bearings, a secondary printing roll mounted upon said shaft and carrying a printing plate with said last mentioned roll of substantially half the effective diameter of the make-up roll carried upon said frame, driving means carried by said secondary printing roll for engagement with the make-up roll rotating means for driving



said secondary printing roll at substantially the same surface speed and substantially half the angular speed as that of the make-up roll, means for locking the other end of said supporting member upon one of said side frame members to position said driving means in engagement with the rotating means of said make-up roll and to dispose said secondary printing roll at alternate revolutions in printing relationship with the segmental cylindrical portion of said make-up roll, a supporting bar carried by and bridging said arms above and in spaced parallel relation with said supporting member, frame members carried by said supporting bar, inking means for said secondary printing roll carried by said frame members and adjustable with said supporting bar, and adjusting screws for adjusting said supporting bar and said inking means relative to said secondary printing roll to ink said latter roll.

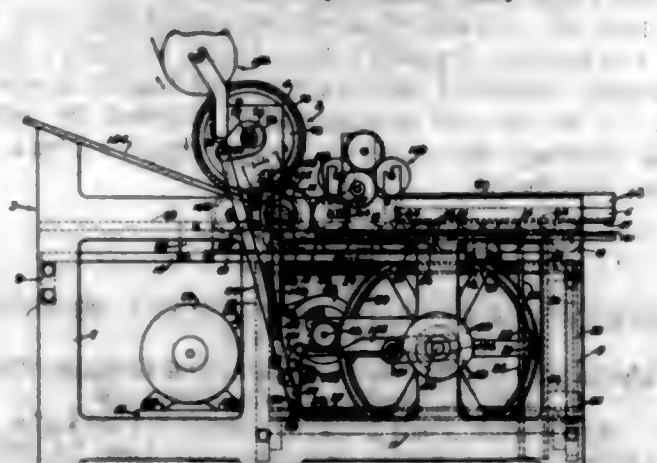
2,896,537
IMPRINTING MACHINE
Otho Kile, Homewood, Ill., and Ernest J. Serring, Easton, Pa., assignors to R. R. Donnelley & Sons Company, a corporation of Delaware
Continuation of application Serial No. 451,502, August 23, 1954. This application June 12, 1958, Serial No. 741,701
34 Claims. (Cl. 101—231)

34. In an imprinting machine, in combination: means to support pieces while they are imprinted seriatim; a pair of imprinting rollers adjacent said support means mounted for movement between an imprinting position and an idle position, only one of said rollers being in imprinting position at any given time and said one roller then applying a first particular imprint to a set of said pieces; power driven shifter means for reversing the positions of said rollers so that the other of said rollers may apply a second particular imprint to a succeeding set of said pieces; and initiator means to automatically initiate operation of said shifter means in correlation with



the number of pieces which have passed a given point in the machine.

2,896,538
OPERATING MEANS FOR BED-AND-CYLINDER PRINTING PRESS
Michael A. Dreiteser, Edgewood, R.I.
Application May 14, 1956, Serial No. 584,550
20 Claims. (Cl. 101—375)



1. In a printing press of the type comprising a rotary impression cylinder and a reciprocating bed for traversing a printing form relatively to said cylinder, a driving gear, means for rotating said driving gear, a gear adapted to be driven by said driving gear and connected to rotate said cylinder, said driven gear having a gap in its teeth for causing arrestment of its rotation, a cam-shaped member fast with said driven gear for rotation about the axis thereof, and means connected to and rotated by said driving gear concentrically of the axis of the latter for engaging with said cam-member for initiating the rotation of the driven gear to intermesh its teeth with the teeth of the driving gear after the rotation of the driven gear has been arrested due to the gap in its teeth.

2,896,539
INKING MECHANISM FOR PRINTING MACHINES
Ernst C. Sesemann, Chicago, Ill., assignor to Gaw-O'Hara Envelope Co., Chicago, Ill., a corporation of Illinois
Application May 6, 1957, Serial No. 657,439
4 Claims. (Cl. 101—366)

1. Means for feeding ink to a ductor or other ink distributing roll of a printing press or the like, compris-

section greater than that of said mems cylinder a

ing a pair of members one of which provides an elongated, stationary ink receptacle and the other an elongated, rotatable agitator mounted in and extending longitudinally of said receptacle, means for rotating said agitator, said receptacle having a longitudinal projection and apertures in and opening through the lower front wall of said re-

ceptacle and projection with said apertures disposed longitudinally of the receptacle and in spaced relation for supplying ink to said roll, control means for controlling the flow through said apertures, and means on said agitator for directing and discharging ink through the open apertures onto the roll.

2,896,540

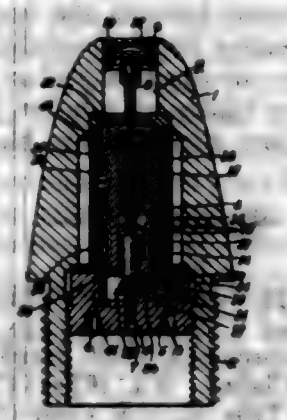
CONTROL DEVICE FOR THE PERCUSSION PIN OF A PROJECTILE FUSE

André Veluzat, Zurich, Switzerland

Application November 29, 1955, Serial No. 549,838

Claims priority, application Switzerland December 6, 1954

1 Claim. (Cl. 102—76)



A control device, for the hammer of a projectile fuse provided with muzzle and proximal trajectory safety and self-destruction devices, comprising a percussion pin displaceable by said hammer, a percussion spring operatively associated with said pin for displacing the same to effect a detonation, a dash pot including a mobile member and operatively associated with said pin for regulating the displacement thereof, a buffer fluid in said dash pot and being constituted by a silicone having a chain structure containing $Si(CH_3)_2$ groups and a substantially constant viscosity despite temperature changes, a further spring operatively associated with said dash pot for actuating the mobile member thereof, first locking means for locking the percussion pin in position and the mobile member in position against the action of said further spring and releasing the mobile member in response to rotation of the projectile, second locking means operatively associated with said mobile member and said percussion spring for controlling the percussion spring and releasing the same to actuate the percussion pin in response to the displacement of said mobile member, said dash pot defining axial and radial calibrated orifices, and a displaceable stud included in the first locking means and in the radial orifice for locking the mobile member in position, a displacement of the stud enabling displacement of the mobile member and escape of the buffer fluid through the orifices, a predetermined displacement of the mobile member closing off the radial orifice and preventing escape of fluid therethrough.

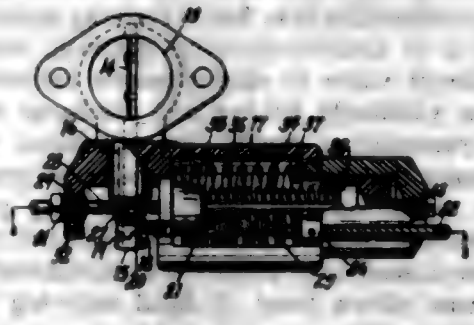
2,896,541

GOVERNOR CONTROL MECHANISM FOR PUMPS

Benjamin D. Barton, Battle Creek, Mich., assignor to American Fire Apparatus Company, Battle Creek, Mich.

Application November 26, 1954, Serial No. 471,467

8 Claims. (Cl. 103—19)



7. The combination with an internal combustion engine and a pump driven thereby, of a support, a fuel intake valve having a stem provided with a pinion, a manual adjusting means for said valve having a lost motion connection to said stem independent of said pinion and permitting opening and closing movement thereof through said pinion independently of said manual adjusting means, a control rod reciprocatingly mounted on said support and provided with a rack coacting with said pinion on said valve stem, a chamber member on said support provided with an inlet fluid connection to the pressure side of the pump and an outlet fluid connection to the suction side of the pump, a manually operated valve means for controlling the flow in said connections, a pressure actuated control rod actuating member disposed in said chamber, a first coil spring seated on said support and engaging said control rod to bias said control rod actuating member and control rod toward valve closing position, and a second coil spring seated on said support in surrounding relation to said first coil spring and provided with a thrust member adapted to be engaged by said control rod actuating member during the latter portion only of its stroke.

2,896,542

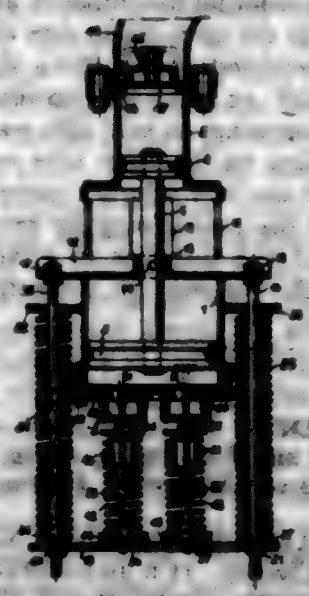
FLUID FEEDER AND PRESSURE INTENSIFIER FOR AUTOMATIC OPERATION BY USING THE INITIAL PRESSURE OF THE FLUID FED ITSELF

Renato Ferghieri, Milan, Italy

Application November 15, 1956, Serial No. 622,441

Claims priority, application Switzerland November 18, 1955

6 Claims. (Cl. 103—60)

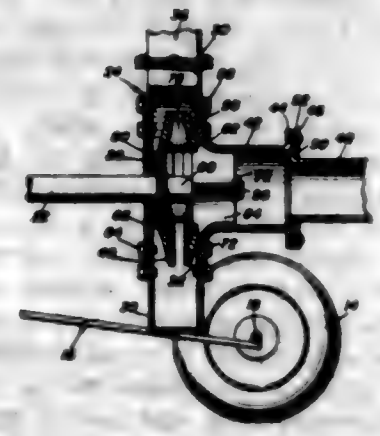


1. A fluid pressure intensifier comprising, in combination, a pump cylinder; a pressure cylinder having a cross

may apply a second particular imprint to a succeeding distributing roll of a printing press or the like, compris-

section greater than that of said pump cylinder; a pump piston located in said pump cylinder reciprocably between fluid-receiving and fluid-discharging positions; a pressure piston located in said pressure cylinder reciprocably between fluid-receiving and fluid-discharging positions; motion-transmitting means connecting said pistons for joint simultaneous movement in such a manner that when said pressure piston is in fluid-receiving position said pump piston is in fluid-discharging position, and vice-versa; a discharge valve in said pressure cylinder; first resilient means yieldingly linking said discharge valve to said motion-transmitting means for actuation thereby in such a manner that said discharge valve is open when said pressure piston reaches its fluid-receiving position; and second resilient means linking said pressure cylinder to said motion-transmitting means for permanently urging said pressure piston from its fluid-receiving into its fluid-discharging position.

2,896,543
IRRIGATION DITCH PUMPING APPARATUS WITH REVERSIBLE IMPELLER
Ethridge F. Ogles, Altus, Okla.
Application December 20, 1956, Serial No. 629,616
7 Claims. (Cl. 103—88)



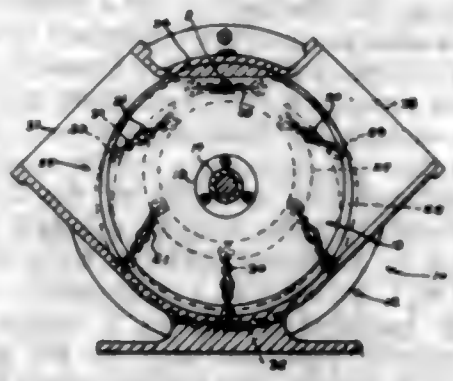
1. A liquid pumping apparatus comprising a generally cylindrical casing having side walls with an axial intake in one side wall, a tangential discharge and an impeller disposed within said casing, a drive shaft extending through the other side wall and being driven from a power source, said impeller being supported on the shaft and including a pair of identical side discs, each of which is provided with an enlarged central opening, said openings being identical a hub on the drive shaft extending into and rigidly closing the opening in one disk of the impeller, means releasably mounting the impeller on the shaft with the hub disposed in the opening in one disc whereby the impeller may be reversed on the drive shaft, said casing being provided with an enlarged opening in each side wall thereof, said openings in said side walls being identical, a mounting plate on the other side wall and journaling the drive shaft an inlet adapter mounted on the one side wall whereby the casing may be reversed, thus permitting rotation of the impeller in either direction for discharge from the casing at diametrically opposed tangential points.

2,896,544
DEEP WELL PUMP
Ethridge F. Ogles and J. C. Ogles, Alvin, Tex., assignors to W. H. Hinton and Robert H. Hinton, both of Altus, Okla.
Application April 19, 1956, Serial No. 579,262
5 Claims. (Cl. 103—102)

1. A deep well pump comprising an elongated tubular casing of constant cross sectional area, an elongated pump rod disposed in said casing, means for rotating said pump rod, bearing means rotatably supporting the rod in said casing, an impeller secured to said pump rod for rotation therewith, a bottom plate journaling said rod and disposed below said impeller in sealed relationship with the casing and being movable in relation thereto for removal, said bottom plate having a central opening for permitting passage of liquid, said impeller including spaced plates with substantially radial blades therebetween, the lower impeller plate having a central opening for receiving liquid from the opening in the bottom plate, the impeller

blades and upper impeller plate terminating in spaced relation to the casing, the outer edges of said blades being inclined inwardly and upwardly, a plurality of spiral deflector blades disposed between the impeller blades and the casing for deflecting liquid upwardly, and an inclined blade type impeller mounted on said rod in spaced relation to the deflector blades for rotation therewith and for receiving liquid from the deflector blades and moving the same upwardly.

2,896,545
TRANSLATIONAL PROPULSION PUMP
Robert V. Brulle, Chicago, Ill.
Application February 4, 1957, Serial No. 638,182
8 Claims. (Cl. 103—143)
(Granted under Title 35, U.S. Code (1952), sec. 266)



4. A liquid propulsion device comprising, a liquid pump assembly, and a casing housing said pump assembly having intake and discharge ports in opposite communication with said pump assembly, said pump assembly comprising a rotor shaft positioned in said casing transverse to the direction of liquid flow and adapted to be driven, a plurality of relatively elongated vanes mounted on said rotor shaft on axes parallel to and spaced from said rotor shaft for rotation about said rotor shaft at a velocity greater than the intake velocity of the liquid being pumped therethrough, and means for independently rotating said plurality of vanes simultaneous with their rotation about said rotor shaft, said means comprising, a channelled plate having a pair of substantially concentric grooves incorporated on the surface thereof loosely mounted on said rotor shaft adjacent

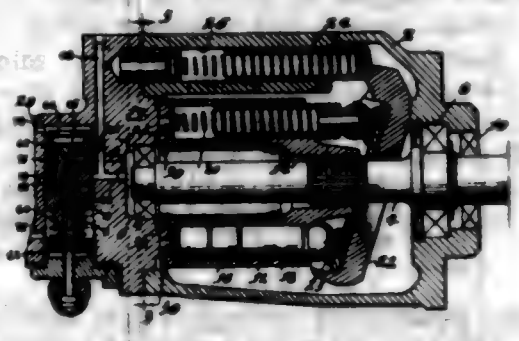
said plurality of vanes and fixedly mounted in said casing, and interconnecting means attached to each of said plurality of vanes and respectively engaged in each of said pair of grooves independently rotating each of said plurality of vanes on rotation of said rotor shaft, said pair of grooves terminating in a common groove portion to insure that each of said plurality of vanes are continuously and simultaneously pointing in a predetermined direction.

2,896,546

PORTING ARRANGEMENT FOR HYDRAULIC PUMPS AND MOTORS

Bruce H. Lundgren and Melvin M. Hunn, Rockford, Ill., assignors to Sundstrand Machine Tool Co., a corporation of Illinois

Application August 9, 1955, Serial No. 527,356
11 Claims. (Cl. 103—162)



1. In a hydraulic pump or motor having a rotatable cylinder block provided with a plurality of cylinders formed axially therein, a cylinder port for each cylinder and opening to an end face of the cylinder block and a piston reciprocable in each of said cylinders, a porting arrangement comprising; a port plate disposed adjacent the end face of the cylinder block and having an intake kidney and a discharge kidney formed therein, said kidneys being generally crescent-shaped and positioned in said port plate to communicate alternately with the cylinder ports upon rotation of the cylinder block, the inner and outer edges of at least one of said kidneys defining arcs of circles on said port plate, one arc having a center disposed on the axis of rotation of said cylinder block and a radius extending to one peripheral edge of the cylinder ports and the other arc having a second center spaced from the axis of rotation of said cylinder block and a radius equal to the distance between said second center and the other peripheral edge of the cylinder ports when positioned at the midpoint of said kidney.

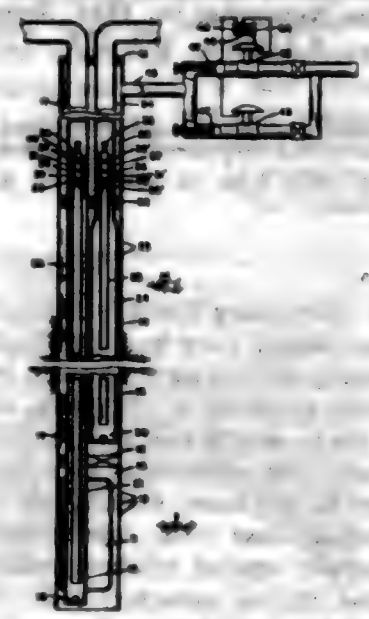
2,896,547

GAS LIFTING DUALLY-COMPLETED WELLS

William R. Franey, Wichita, Kans., and Malcolm C. Gillis, Oklahoma City, Okla., assignors to Pan American Petroleum Corporation, a corporation of Delaware

Application February 14, 1955, Serial No. 487,731
11 Claims. (Cl. 103—238)

1. An apparatus for separately producing widely-spaced upper and lower zones in a multiple-zone producing well comprising a gas chamber including a lower packer in the upper end of said well, packer means in said well between and isolating an upper section of said well through said upper zone from a lower section of said well through said lower zone, a gas inlet to said gas chamber, a gas conduit from said gas chamber through said upper section to said lower section, a lower zone tubing extending from said lower section up through said upper section and said gas chamber, first valve means at the inlet of said gas conduit to admit gas selectively from said gas chamber through said gas conduit into said lower section and lift well fluids from said lower section through said lower zone tubing, an upper zone tubing extending from said upper section up through said gas chamber, a fluid passage between said gas chamber and



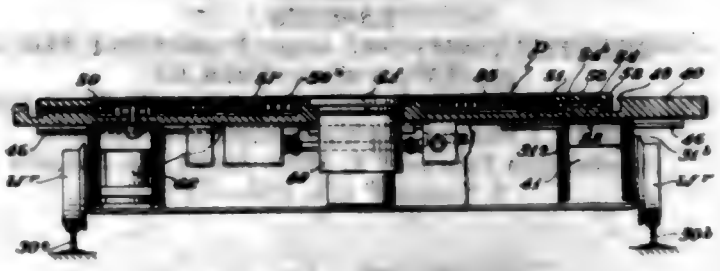
said upper section of said well, and second valve means in said fluid passage to admit gas selectively from said gas chamber into said upper section and lift well fluids from said upper zones through said upper zone tubing.

2,896,548

FREIGHT TRANSFER TERMINAL AND TRANSFER DOLLY

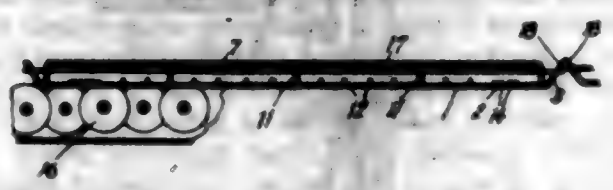
Andrew N. Obee, New York, N.Y.

Application July 28, 1954, Serial No. 446,263
9 Claims. (Cl. 104—48)



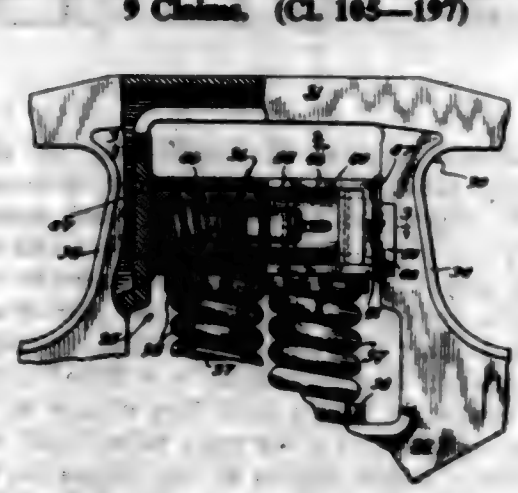
1. Apparatus, for use in transferring an elongate vehicle body, provided with downwardly directed kingpins near its opposite ends, respectively, each designed to be received in a socket in a wheeled support, and wherein the vehicle body has a socket at its underside substantially midway between its ends, from one pair of wheeled supports to another pair of wheeled supports, said apparatus comprising, in combination, a wheeled chassis of a normal maximum height such that it may be moved beneath the vehicle body in the space between the wheeled supports, motor means carried by the chassis for moving it from place to place, the chassis comprising a flat top member having therein a well in which is fixed a kingpin housing, a kingpin, whose upper portion is shaped to fit within the socket in the vehicle body, arranged to slide vertically within the housing, and means operative to project said kingpin, from a position where its upper end is substantially flush with the upper surface of the flat top member of the chassis, upwardly into the socket of a vehicle body positioned directly above the chassis, the upper end of the vertically movable kingpin having a socket for the reception of the lower end of a rigid conduit projecting downwardly from the central part of the socket in the underside of the vehicle body, the vertically movable kingpin being hollow and having telescopic parts providing a fluid passage leading from the socket in the upper end of said kingpin to a chamber in the lower end of the kingpin housing.

2,896,549
CARRYING RACK
John I. Swanson, Albion, Mich., assignor to Union Steel Products Company, Albion, Mich.
Application November 16, 1955, Serial No. 547,859
6 Claims. (Cl. 104—135)



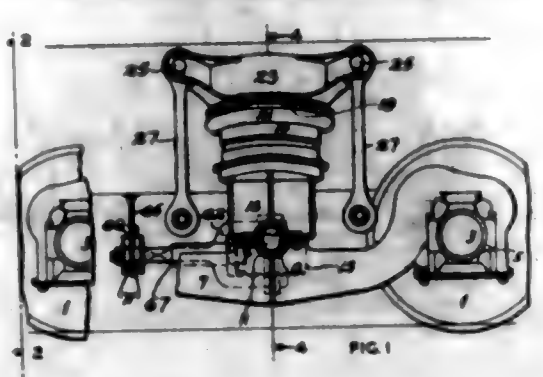
1. A rack compriaing laterally spaced outer and intermediate longitudinal base bars constituting runners and having upwardly projecting outwardly inclined ends, and cross members connecting said ends, side members disposed in a plane above said longitudinal base bars and having downwardly offset base crossbars integral therewith disposed at the inner sides of the upturned ends of said longitudinal base bars, intermediate crossbars disposed in laterally spaced relation upon the longitudinal base bars and having upturned ends fixedly secured to said side members, grid bars disposed upon said longitudinal base bars between said crossbars and fixedly secured to said longitudinal base bars, and guard rails disposed in embracing relation to the said upwardly projecting ends of said longitudinal bars and said crossbars and fixedly secured thereto in downwardly spaced relation to said side and end members, said guard rails coacting with the said side and end members to provide recesses with which the guard rail of a similar rack may engage thereby preventing the over-riding of adjacent racks as they are translated in thrust abutting relation.

2,896,550
BOLSTER DAMPING ARRANGEMENT FOR RAILWAY CAR TRUCKS
Cal W. Wulff, Chicago, Ill., assignor to Holland Company, Chicago, Ill., a corporation of Illinois
Application February 8, 1956, Serial No. 564,294
9 Claims. (Cl. 105—197)



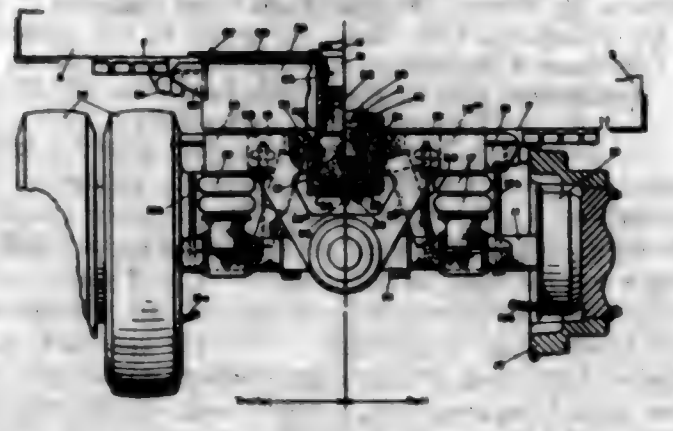
1. In a railway car truck including a side frame having spaced columns providing opposed vertical friction faces, and a bolster having one end thereof resiliently supported between said columns, said bolster end having side walls facing said columns and having top and bottom walls and internal walls rigidly interconnecting said top and bottom walls to form opposed internal housings, with said housings defining oppositely directed chambers opening outwardly through the side walls of said bolster, said internal walls including vertical rib structure rigidly interconnected with said top and bottom bolster walls and dividing said chambers, with each chamber also opening laterally through the end of said bolster, a friction-producing apparatus for each chamber and each including a movable spring seat, a control spring, and a friction block successively outwardly arranged within each chamber, each chamber accommodating its friction-producing apparatus with the control spring thereof in free expanded position during the installation of said apparatus in said chamber; and loading means within said bolster and movable therewith and interposed between each of said spring seats and said vertical rib structure, said loading means being actuatable through the end of said bolster for positioning said seats lengthwise in said chambers to load said blocks against said vertical friction faces through said control springs.

2,896,551
RAILWAY TRUCK AIR SPRING STRUCTURE
Richard L. Lich, Ferguson, Mo., assignor to General Steel Castings Corporation, Granite City, Ill., a corporation of Delaware
Application August 29, 1955, Serial No. 531,236
9 Claims. (Cl. 105—199)



1. In a railway truck, wheels and axles, an equalizer supported at its ends on said axles, a spring structure supported therefrom including a vertically collapsible and expandable air chamber, a yoke-like cap supported by said spring structure, swing hangers suspended from said cap at opposite sides of said spring structure and arranged to support a vehicle body from their lower ends, a valve in said chamber including a part movable vertically by the vertical movement of the upper and lower ends of said chamber relative to each other, a conduit for air under pressure leading to said valve, an exhaust conduit leading from said valve, said valve having inlet and exhaust ports connected to said conduits and alternately opened and closed by said valve as it is moved by the contraction and expansion of the chamber beyond predetermined points by the load on said swing hangers.

2,896,552
BODY SUPPORTING DOLLY FOR USE IN THE TRANSPORTATION OF FREIGHT
Andrew N. Obee, Cambridge, Mass.
Application January 24, 1955, Serial No. 483,541
22 Claims. (Cl. 105—215)



1. Apparatus for use in transporting goods from a shipping point to a distant destination by the use of highway and railway, said apparatus comprising an elongate goods container having a kingpin adjacent to each

ously moving concavely curved receiving surface, means opening, a frame for the opening enclosing a second

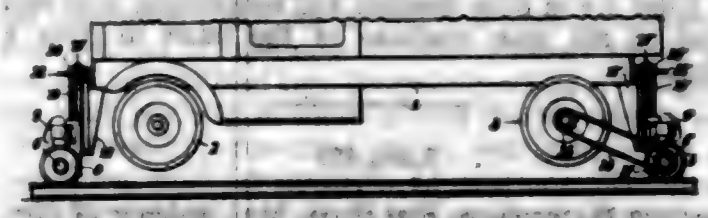
of its ends respectively, but which is devoid of permanently attached wheels, a plurality of independent dollies all of identical construction and each having spaced axles provided with hubs designed alternatively to receive conventional track wheels for travel along the highway or conventional railway wheels for travel on a railway track, each dolly having a socket designed to receive one of the kingpins of the container, said containers having its kingpins seated in the sockets of two of said dollies, respectively, when each of said dollies is provided with railway wheels, constituting a railway car body, wherein the container forms the sole connection between the dollies, the container being of such strength and rigidity as to be capable of sustaining the maximum traction force imposed when a plurality of railway cars, so constituted, are coupled together in series to form a train, said container with its spaced kingpins being operative to constitute the body of a truck for highway travel when, instead of having its kingpins seated in the sockets of dollies equipped with railway wheels, one of said kingpins is seated in the socket of such a dolly equipped with highway wheels instead of railway wheels while its other kingpin is seated in an appropriate socket provided in a power-driven tractor, designed for highway use, the container then constituting the only connection between the last-named dolly and the tractor.

2,896,553

MEANS FOR CONVERTING HIGHWAY MOTOR VEHICLES FOR RAILWAY TRAVEL

Alfred H. Whisler, Philadelphia, Pa.

Application October 4, 1955, Serial No. 538,342
4 Claims. (Cl. 105—215)



1. Attachment means for converting a standardized highway truck vehicle for travel on a railway track, said means comprising two similar self-contained units adapted to be applied respectively to the front and rear ends of the vehicle, each such unit including a vertical guide member removably secured by a screw bolt to a bracket pendent from an end cross bar of the chassis frame of the vehicle at the center; a slide constrained to up and down movement in the guide member and having oppositely-directed lateral projections; a transverse axle with flanged auxiliary track wheels at opposite ends thereof pivotally connected at the center to the slide; auxiliary compression springs interposed respectively between the distal ends of the lateral projections of the slide and the track wheel axle; and adjusting means associated with the guide member for lowering the slide from a normal raised position to bring the auxiliary wheels into engagement with the rails of the railway track and to raise the vehicle bodily for support solely by said auxiliary wheels.

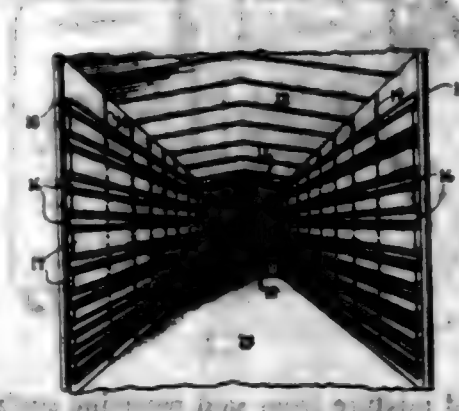
2,896,554

FREIGHT POSITIONING AND RETAINING APPARATUSES

Charles Richard Johnston, Chicago, Ill., assignor to Transportation Specialties Co., Chicago, Ill., a corporation of Illinois

Original application August 17, 1956, Serial No. 604,674. Divided and this application March 18, 1957, Serial No. 646,666
4 Claims. (Cl. 105—369)

1. An attaching head for a load supporting cross bar which has operative connection to a cross bar supporting member, said head having means for removably connecting said cross bar to said supporting member, said connecting means including a stationary upper jaw providing a horizontally extending unobstructed flush bearing surface engageable with and slidable on a portion of said supporting member, a lower jaw pivotally connected to said stationary jaw about an axis transversely with respect to the longitudinal axis of said cross bar, latch means carried by said lower jaw and adapted to engage and latch said head to the support member so as to prevent horizontal movement of said head relative thereto, said lower jaw when pivoted into a closed position with respect to the supporting member cooperates with said flush bearing surface of said upper jaw to prevent vertical movement of said head relative to said supporting member, and means carried by said stationary jaw and adapted to engage a portion of said lower jaw when it is pivoted into a closed position with respect to said upper jaw so as to latch said lower jaw in said closed position and to releasably latch the cross bar supporting member between said jaws.

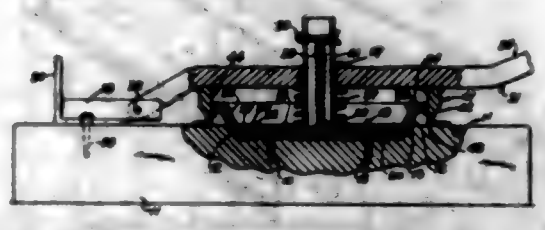


2,896,555

PIE CRUST FORMER

Richard D. Marcus, Jerry J. Zenes, and Alfred Preciado, San Francisco, Calif.

Application July 22, 1957, Serial No. 673,351
7 Claims. (Cl. 107—15)



1. A pie crust former comprising a base having a recess therein, a pie plate die fixedly secured in the bottom of said recess; said pie plate die serving to receive a succession of pie plates on which pie crust dough may be deposited, a two-section movable die; one of said sections of said two-section die being arranged in superposed relationship to the other of the sections, an arm pivotally secured to said base adjacent to said recess, and means yieldably mounting each section of said movable die independently on said arm in opposed relationship to said pie plate die; said two-section die forming the pie crust dough into a pie crust upon movement of said arm to bring said two-section die into pressing engagement with dough on a pie plate seated on said fixed pie plate die.

2,896,556

APPARATUS FOR CONTINUOUS MIXING OF FLOUR AND WATER (OR OTHER INGREDIENTS) IN THE MAKING OF DOUGH OR BATTER OR THE LIKE

John Sippel and Gerhardt J. Sippel, Allentown, N.Y.

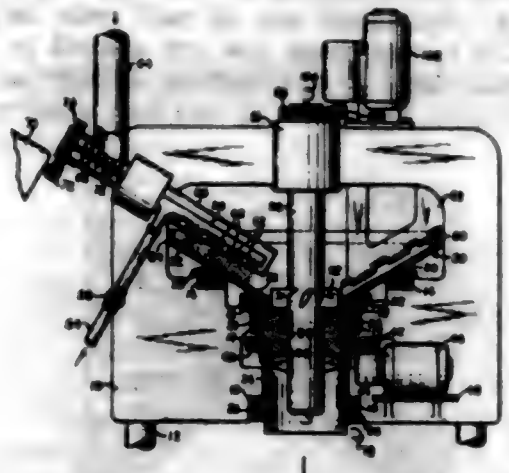
Application November 21, 1956, Serial No. 623,694
3 Claims. (Cl. 107—36)

1. Apparatus for producing a mixture of a powder and a liquid, such as flour and water, comprising a continu-

ing a movable spring seat, a control spring, and a friction block successively outwardly arranged within each chamber.

highway and railway, said apparatus comprising an elongate goods container having a kingpin adjacent to each

ously moving concavely curved receiving surface, means for continuously depositing said powder and said liquid on said receiving surface to form a mixture thereon in the form of a thin layer, scraping means for continuously

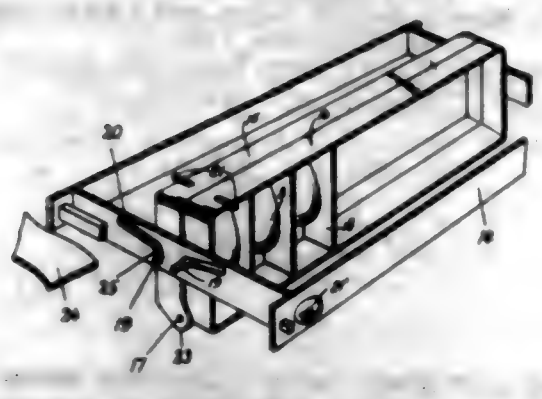


removing said mixture from said receiving surface immediately upon its formation thereon, and kneading means for continuously kneading said removed mixture immediately upon its removal from said receiving surface.

2,896,557
METHOD OF MANUFACTURING HOLLOW OBJECTS OF CHOCOLATE IN A TWO-PIECE MOULD

Kai Christian Sophus Aested, Copenhagen, and Carl Johansen, Lyngby, Denmark

Application May 4, 1954, Serial No. 427,598
Claims priority, application Denmark May 5, 1953
3 Claims. (Cl. 107—54)



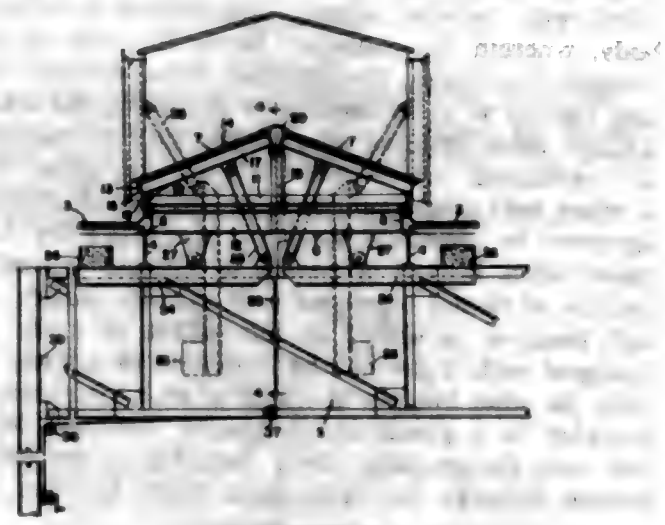
1. In the manufacture of hollow chocolate objects in two-piece moulds formed from two complementary mould halves, the steps which comprise, introducing molten chocolate into each mould half, inverting the mould halves to remove excess liquid chocolate contained in each mould half but to leave a chocolate shell in the mould half and simultaneously causing a chocolate fin to form along the peripheral edges of each chocolate shell, cooling the thus-formed shells, and assembling the chocolate shells to form a unitary object by melting the fin on each shell and pressing the melted fins of two chocolate shells together, whereby the two halves of the object are integrally united by the chocolate of the fins, and allowing the resulting object to cool.

2,896,558
ROOF HATCH

Norman E. Colburn, Jr., St. Clair Shores, Mich., assignor to Byrne Doors, Inc., Ferndale, Mich., a corporation of Michigan

Application December 18, 1953, Serial No. 398,925
4 Claims. (Cl. 108—16)

3. A hatch for a roof comprising a roof deck, spaced upwardly extending houses forming with the deck an opening, a frame for the opening enclosing a second opening, a pair of hatch leaves for closing said second opening, said leaves extending between said houses and being pivoted to said frame at opposite sides thereof for swinging movement about spaced parallel axes from a closed position extending toward each other over said frame to close said second opening to an open position extending substantially vertically upwardly from said

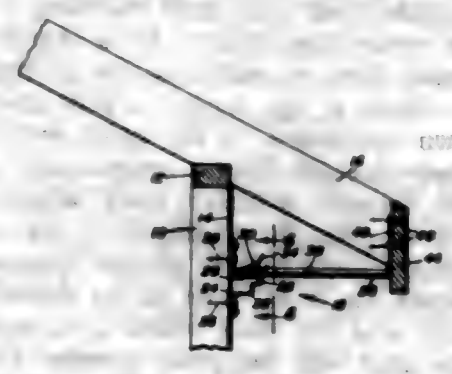


frame between said houses, means for swinging each of said leaves to open position, and means for normally holding each of said leaves in closed position, said houses extending upwardly above said frame at least to the level of the upper extremities of said leaves when the latter are in open position and cooperating with said leaves in the open positions of the latter to form a chimney.

2,896,559
METAL CORNICE

Meredith W. Stephens, Flat River, Mo., assignor of fifty percent to Walter La Rose, Flat River, Mo.

Application September 27, 1956, Serial No. 612,443
3 Claims. (Cl. 108—26)



1. In a roof construction, a locking plate having a lower ornamental portion adapted to be secured to an outer wall and having a horizontal upper portion and a flange integral therewith overlying said horizontal portion and defining, therewith, an outwardly opening horizontal pocket, an eave plate of generally L-shaped configuration in cross-section and presenting a horizontal portion and a vertical portion, said vertical portion being provided with means for attachement to the inner side of an associated facia board and the horizontal portion of the eave plate terminating in an edge received within said pocket of the locking plate, and said flange being slitted to present a plurality of side-by-side fingers some of which grip said edge of the eave plate and others of which are deformed upwardly for securement to an outside wall.

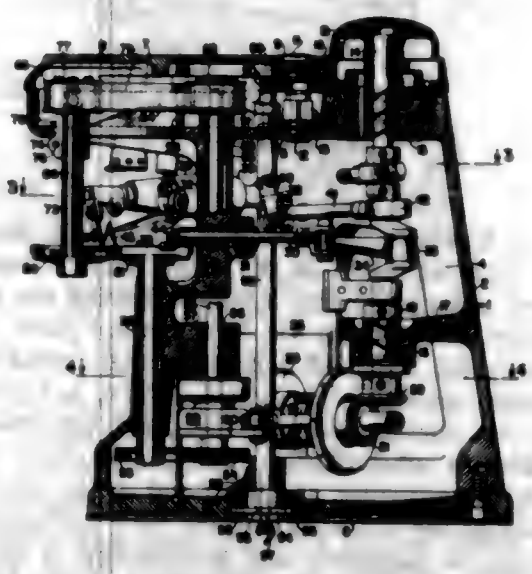
2,896,563
ZIGZAG STITCH ATTACHMENT FOR SEWING

2,896,565

2,896,560
FEEDING MECHANISMS FOR SEWING MACHINES

Hans Hacklander, Warren Township, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Original application December 19, 1955, Serial No. 553,806. Divided and this application March 26, 1957, Serial No. 648,529
2 Claims. (Cl. 112—18)



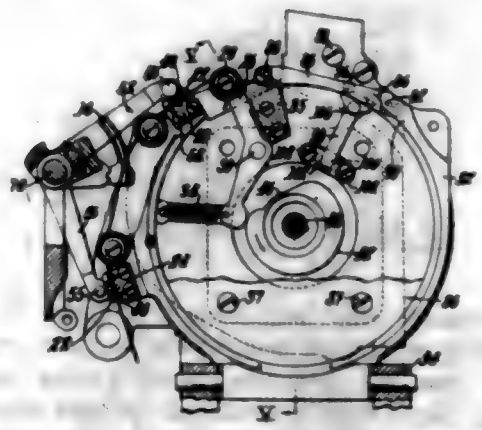
1. In a sewing machine of the hosiery seamer type having a frame including a hollow vertically disposed standard and a bracket arm surmounting said standard, stitching mechanism and feeding mechanism for advancing work past said stitching mechanism, said feeding mechanism comprising a pair of opposed feed cups, means for supporting a first one of said feed cups for movement into and out of operative relation relatively to the second one of said feed cups comprising a feed cup supporting shaft pivotally mounted in said bracket arm, a lever arm operatively connected at one end to said feed cup supporting shaft for imparting pivotal movement to said feed cup supporting shaft upon pivotal movement of said lever arm, an operator-actuated pull rod operatively connected to the other end of said lever arm for pivoting said lever arm and thereby pivoting said feed cup supporting shaft in a direction to move said first one of said feed cups out of operative relation relatively to said second one of said feed cups when said operator-actuated pull rod is tensioned, and adjustable means for biasing said lever arm in the opposite direction comprising an adjusting rod having an out-of-round cross section, said frame having an internally threaded bore arranged on an axis parallel to the axis of said operator-actuated rod with the extension of the axis intersecting an intermediate point on said lever arm and in which bore said adjusting rod is disposed, said lever arm having an aperture alined with the axis of said bore and through which said adjusting rod extends, an externally threaded element threaded into said bore and having an aperture conforming to the cross section of said adjusting rod and through which said adjusting rod extends whereby adjustment of said threaded element longitudinally of said bore is effected when said adjusting rod is turned, and a spring surrounding said rod and operatively engaged at one end with said lever arm and at the other end with said threaded element.

2,896,561
LOCK STITCH SHOE SEWING MACHINES

Fred Ashworth, Wenham, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., and Boston, Mass., a corporation of New Jersey

Application April 9, 1956, Serial No. 576,996
11 Claims. (Cl. 112—57)

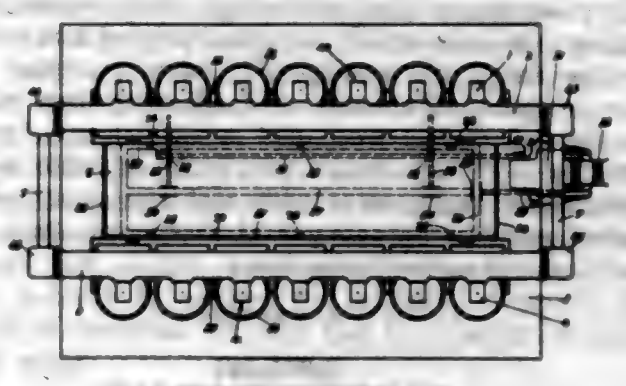
1. A lock stitch shoe sewing machine having stitch-forming devices including a hook needle, a locking thread case, a rotary loop taker for passing loops of needle thread over the thread case, a take-up for giving up thread to the loop taker, for pulling each loop of needle thread from the loop taker after having been passed over the locking thread case and thereafter for setting each stitch in the work and a resilient needle thread engaging member for holding the needle thread yieldingly while each needle loop is being pulled from the loop taker, in combination with means including mechanism for actuating the thread engaging member and for rendering it inoperative to yield after the needle thread loop has been pulled from the loop taker.



2,896,562
MULTI-NEEDLE TABLE EMBROIDERY MACHINE

Kurt Scheibel and Margarethe Scheibel, Dresden, Germany, assignors to VEB Spezialnaehmaschinenwerk Limbach, Limbach-Oberfrohna, Germany

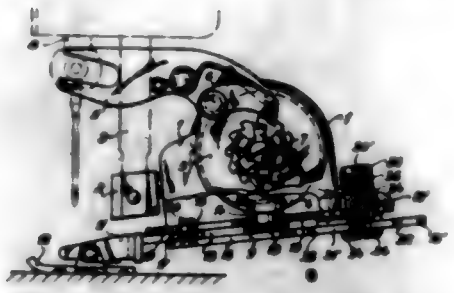
Application November 21, 1955, Serial No. 547,999
1 Claim. (Cl. 112—103)



In a multi-needle table embroidery machine, the combination of: a pair of oppositely arranged spaced series of embroidering implements, each series of embroidering implements including a row of needles and a cooperating row of loopers, a table extending between said rows of needles and loopers, a carrier for carrying a plurality of embroidering frames in operative relation to said series of embroidering implements, said carrier being movable on said table and being accommodated substantially in the space between said spaced series of embroidering implements, first actuating means operatively connected with cooperating needles and loopers at one side of the machine, second actuating means operatively connected with cooperating needles and loopers at the other side of the machine, a drive common to both actuating means, a first disengageable coupling means operatively interconnected with said first actuating means and said drive, and second disengageable coupling means operatively interconnected with said second actuating means and said drive.

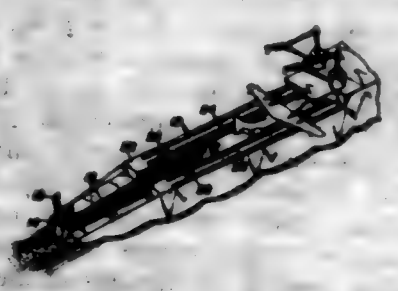
upwardly extending houses forming with the deck an which are deformed upwardly for securement to an outside wall.

2,896,563
ZIGZAG STITCH ATTACHMENT FOR SEWING MACHINES
Carl H. Würker, Aistaig am Neckar, Germany
Application December 5, 1956, Serial No. 626,370
Claims priority, application Germany June 19, 1956
7 Claims. (Cl. 112—160)



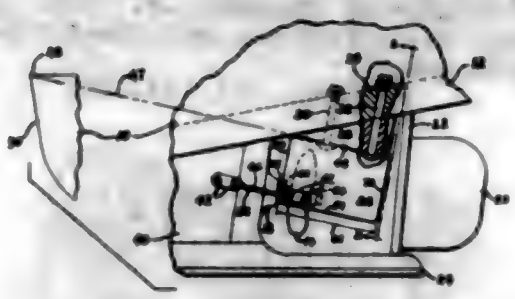
1. A zigzag stitch attachment for use in connection with sewing machines, comprising support means having a center line, an adjusting lever having spaced ends, first pivot mean fixedly arranged on said support means, said adjusting lever being disposed on said first pivot means for pivotal movement thereabout, a setting slide, hinge means carried by said adjusting lever adjacent one of said ends thereof whereby the part of said adjusting lever between said first pivot means and said hinge means constitutes a lever arm of constant length, said setting slide being articulated to said hinge means, second pivot means carried by said setting slide, and a cloth displacing lever slidably accommodating said second pivot means for movement longitudinally of said cloth displacing lever, said second pivot means extending into and being guided in said support means for slidable displacement substantially lengthwise of said center line of said support means whereby the location of said second pivot means and thus the pivot axis and effective length of said cloth displacing lever may be adjusted longitudinally of the cloth displacing lever by pivotal displacement of said adjusting lever about said first pivot means and consequent displacement of said setting slide substantially longitudinally of said cloth displacing lever, said setting slide being provided with a pair of spaced abutments, said adjusting lever having a second arm remote from said constant length lever arm provided with stop means selectively shiftable to a first position for engagement with said abutments and to a second position bypassing said abutments upon pivotal movement of said adjusting lever.

2,896,564
RAMP FOR SEAPLANE
Kenneth E. Wright, Vienna, Va.
Application March 23, 1955, Serial No. 496,359
7 Claims. (Cl. 114—43.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



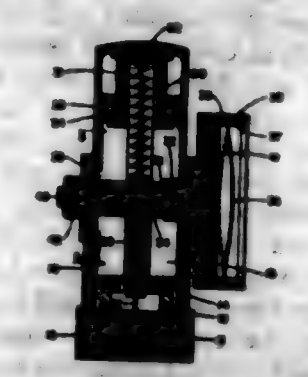
1. A seaplane ramp comprising a flared upwardly concave structure having an open, wide end and an open, narrow end, said structure comprising a plurality of adjacent, longitudinally extending, interconnected inflatable members, said ramp being adapted to have its narrow end maintained above water and its wide end submerged.

2,896,565
HYDRAULIC FLOW CONTROL PLATE
George E. Stevens, Watertown, Mass.
Application November 28, 1956, Serial No. 624,771
4 Claims. (Cl. 115—42)



1. A hydraulic flow control plate for a boat having a prow with an apex at the front end, a keel centrally thereof, a propeller and a rudder behind the propeller at the stern of the boat; the flow control plate having substantially the shape of a portion of a cylinder over said propeller, including two curved sides, a front and back ends, the curved sides of the plate circumscribing the propeller to substantially a horizontal plane through the axis of the propeller, the front end of the plate extending forward of the propeller and the back end extending rearward of the propeller and terminating at the rudder, a brace at each side of the plate fixed to the plate and the keel, said plate being tilted diagonally to said boat on a line with the apex of the prow and having an area proportioned for providing substantial hydraulic stern lift during forward motion of the boat.

2,896,566
TIRE PRESSURE INDICATOR
Gavin W. Laurie, Sr., and Gavin W. Laurie, Jr., Springfield, Pa.
Application October 28, 1957, Serial No. 692,687
8 Claims. (Cl. 116—34)



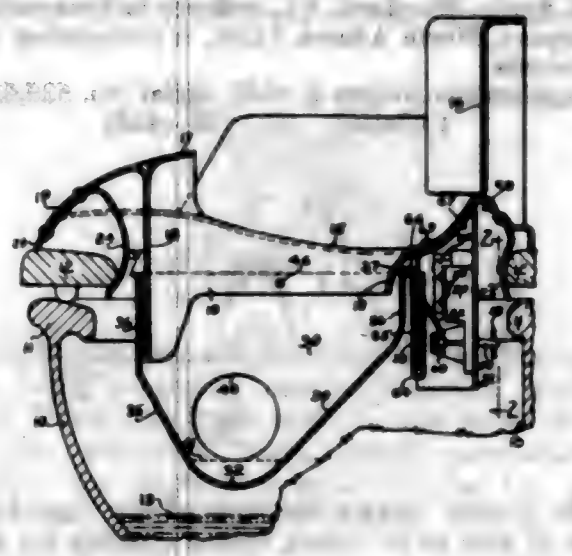
1. In combination with a tire valve stem, a tire pressure indicator comprising a body detachably secured to said valve stem, an indicator chamber attached to said body, a snap diaphragm having characteristics to retain either an inwardly or outwardly bowed position depending upon forces applied to change its position with an audible click, said diaphragm being attached to said chamber and extending across said chamber in air-tight relation closing said chamber to the atmosphere, an air passage in said body in communication with the interior of said chamber behind said diaphragm, means in said body to admit air under pressure from said valve stem to said air passage and chamber, and means secured to said body and positioned rearwardly of said diaphragm adjustably limiting the inwardly bowed position of said diaphragm whereby the pressure of air in said chamber as required to provide a force to move said diaphragm from the inwardly bowed position to the outwardly bowed position with an audible click is variably predetermined.

2,896,567

CHILD TRAINING NURSERY TOILET DEVICE

Austin Gilmour, Portland, Oreg.

Application November 14, 1957, Serial No. 696,515
5 Claims. (Cl. 116—67)



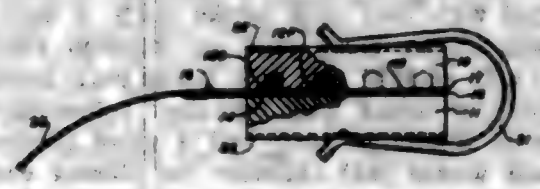
1. A child training device for positioning on a flush toilet-bowl seat, said bowl having a normal water level, said training device comprising an annular small-sized seat having a rim and a flange depending from said rim into the bowl in the operative position of the device, a receptacle having an open top, a bottom and a flush opening laterally above said bottom, said receptacle being pivotally mounted on said flange and movable about said pivotal mounting when unbalanced by the deposition of matter on said bottom, said lateral flush opening being located above said normal water level for cleaning passage of water therethrough upon flushing of said bowl, a power-operated musical device fixedly mounted on the annular seat adjacent said receptacle, said musical device having a releasable member for holding same inoperative, and actuating means carried by said receptacle for moving said releasable member to operate said musical device upon the aforementioned unbalanced pivotal movement of said receptacle.

2,896,568

TEMPERATURE INDICATING DEVICES

Dean E. Pryor, Gonzales, and John C. Baker, Alhambra, Calif.

Application May 6, 1957, Serial No. 657,261
7 Claims. (Cl. 116—114.5)



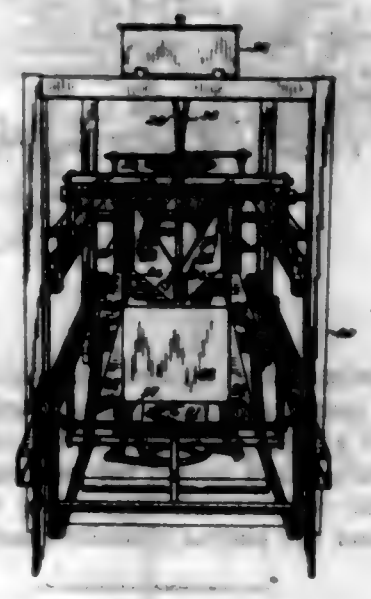
1. In a device for recording maximum temperatures of refrigerators and the like, the combination which comprises two blocks having mating surfaces, one of the blocks being provided with a series of wells spaced from each other over its mating surface, a plurality of substances having different melting points disposed respectively in the wells, a reversible removable sheet having one side composed of absorbent material and the other side of impermeable material disposed between the two mating surfaces and covering the wells and projecting outside of the two blocks, and means for clamping the blocks together with the sheet between their mating surfaces with either of the two sides facing the wells.

2,896,569

APPARATUS FOR APPLYING ADHESIVE TO THE FLAPS OF CASES OR CARTONS

John L. Ferguson, Sr., and Richard C. Talbot, Joliet, Ill., assignors to J. L. Ferguson Company, Joliet, Ill., a corporation of Illinois

Original application January 19, 1954, Serial No. 404,976. Divided and this application May 7, 1957, Serial No. 657,521
5 Claims. (Cl. 118—3)



5. In a machine for applying adhesive to two outer flaps of a case whereby such flaps may be made to adhere to inner flaps to seal such case, means for moving a case along a definite path, roller means for engaging the outer surface of each of said outer flaps of such case to restrain said flaps from bending outwardly substantially beyond parallelism with the sides of the case to which the flaps are connected, means for applying adhesive to the inner surface of each of said outer flaps while said flaps are so restrained, said adhesive applying means including a plurality of normally closed pressure operable valves, a member for supporting said valves in a common plane, means for supplying adhesive under pressure to said valves, and valve moving means including linkage connected to said valve support member, a first control means adapted to engage said linkage to effect intermittent movement of said valves toward and away from said roller means, and second control means connected to said linkage and effective to move said linkage into engagement with said first control means when said case flap is in proper position to receive the adhesive, whereby the adhesive is deposited on said flap in a series of small discrete areas.

2,896,570

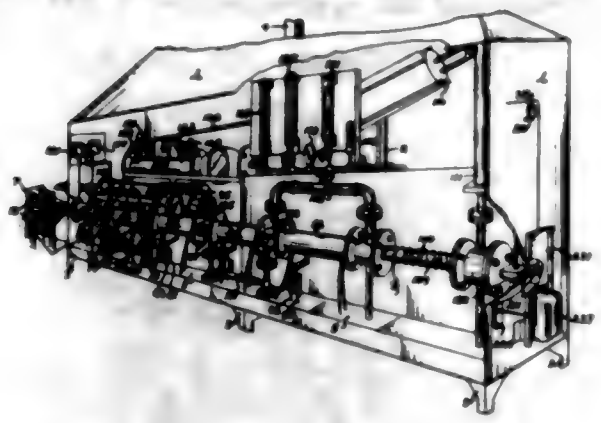
APPARATUS FOR METALLIZING STRAND MATERIAL

Herman R. Nack, Columbus, and Howard J. Hosmer and John R. Whitacre, Dayton, Ohio, assignors to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio

Application August 16, 1954, Serial No. 449,993
4 Claims. (Cl. 118—48)

1. In a machine for gas plating metal onto long continuous length flexible filaments or strands of material as the same is continuously moved lengthwise and without impairing the flexibility and physical characteristics of the material, said machine comprising a train made up of elongated heaters and elongated gas plating chambers having an outlet at one end and an inlet at the opposite end through which the strand is moved, said heaters and gas plating chambers being arranged in pairs consisting of a heater and a gas plating chamber and wherein the outlet from the heater is connected to the inlet of the gas plating chamber and the outlet of the gas plating

chamber is connected to the inlet to a heating chamber in the train, means comprising conduit connections from a source of inert gas under pressure and to the inlet and outlet of said gas plating chamber for fluid sealing the same against the passage of plating gas from the gas



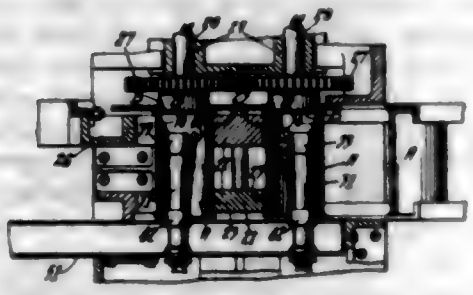
plating chamber, and means comprising conduits connected to a source of liquid coolant and to the opposite ends of said gas plating chamber for cooling both ends of said chamber, and means for moving the material to be gas plated continuously therealong through the train of heaters and gas plating chambers and to storage.

2,896,571

SPRAY HEAD WITH PROTECTIVE SHIELD

Nelson Geertsen, Oak Park, Ill., assignor to American Can Company, New York, N.Y., a corporation of New Jersey

Application February 11, 1955, Serial No. 487,578
5 Claims. (Cl. 118—318)



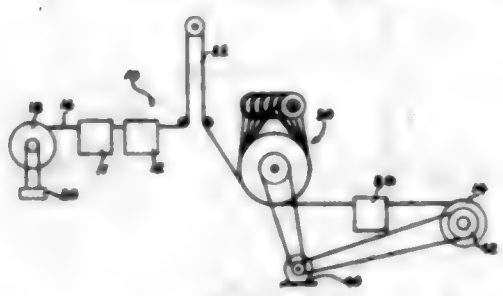
1. In a machine for spraying interior surfaces of containers with a liquid coating material, the combination of means for supporting said containers in a substantially horizontal position, spraying means disposed adjacent said support for projecting a spray of atomized coating material onto the interior walls of said containers, said spraying means including an exposed hollow body member having a free outer end and a spraying nozzle disposed at said free outer end of said body member, said body member being connected to a source of compressed air for supplying said compressed air to said nozzle, means for inserting said nozzle and a predetermined portion of said body member into said containers in a substantially horizontal direction for a spraying operation, a collar carried by and movable with said body member, said collar being spaced inwardly from said nozzle and disposed at the inner end of said inserted portion and provided with an internal recess, an aperture formed in said body member for supplying compressed air from the interior of said body member to said recess, and means formed in said collar for receiving compressed air from said recess and for projecting said compressed air as a curtain along and around said nozzle and substantially the entire inserted portion of said exposed body member to prevent the deposition and accumulation thereon of excess coating material existing as a mist inside of said containers and the consequent dripping of said accumulated coating material onto the interior walls of said containers.

2,896,572

NON-SLIP FRICTION DRIVE

Earl J. Burke, Stamford, Vt., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts

Application August 1, 1955, Serial No. 525,626
4 Claims. (Cl. 118—420)



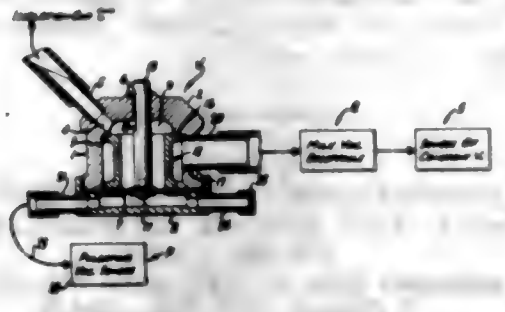
4. In a wire tinning machine of the type having a source of wire to be tinned, means resisting the drawing of wire from the source, a tinning bath, and a rewind collector for tinned wire, the combination with a means to draw the wire through the tinning bath at constant speed, said drawing means comprising a first roll, a second roll consisting of a plurality of freely rotatable sheaves in proximity to the first roll and at an angle to the first roll, and drive means for said first roll of sufficient force to overcome the resisting means.

2,896,573

MILKING MACHINE AND TEAT CUP ASSEMBLY THEREFOR

Oscar W. Schalm and Daniel O. Noorlander, Davis, Calif., assignors to The Regents of The University of California, Berkeley, Calif.

Application May 14, 1957, Serial No. 659,820
9 Claims. (Cl. 119—14.36)



1. A milking machine comprising: a valve chamber provided with four milk intake ports, a milk discharge port and an air bleed port; an inflation assembly connected with each of said milk intake ports through a flexible hose; a closed milk container communicating with said milk discharge port; and a valve closure member disposed within said chamber for closing each of said milk intake ports and opening said air bleed port simultaneously and for alternately opening said milk intake ports and closing said air bleed port simultaneously, said valve closure member thereby operating alternately to open or close said intake and discharge ports.

2,896,574

MILKING CLAW FOR A MILKING MACHINE

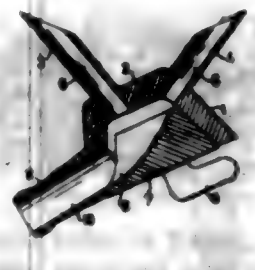
Johannes Peter Larsen, Copenhagen, Denmark

Application May 13, 1957, Serial No. 658,778
Claims priority, application Denmark May 15, 1956
8 Claims. (Cl. 119—14.54)

1. A milking machine milking claw comprising a cup-shaped casing having an end wall and a flaring side wall,

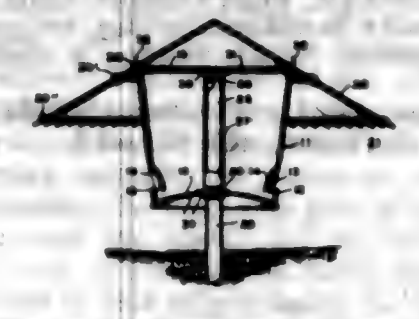
the slot, said cam member having a central cam surface sleeve for longitudinal sliding movement

whereby it is open opposite said end wall, a plurality of inlet tubes communicating with the interior of the casing, at least one of said tubes extending from the end wall and at least one extending from a portion of the side wall, said tubes being in diverging relation relative to each other, a milk outlet tube extending from the side wall substantially opposite said second-named inlet tube,



and a cock plug rotatably mounted in the open portion of the casing in sealing relation therewith, said plug having a recess registrable with the inlet tubes and said outlet tube, said casing being normally positioned with the outlet tube inclined downwardly, the axis of the plug normally extending at an angle oblique to the vertical.

2,896,575
QUAIL FEEDER
Charles H. Scruggs, Tampa, Fla.
Application March 10, 1958, Serial No. 720,182
6 Claims. (Cl. 119—51)



1. A feeder for quail or the like comprising a container including a transverse bottom and surrounding side wall, said side wall including at least one inwardly extending portion terminating in a downwardly disposed jagged edge portion spaced above said bottom and defining an opening in said side wall to prevent direct lateral access into said container, said side wall including an upwardly disposed transverse jagged edge portion bordering said opening and defining a continuation of said first mentioned jagged edge portion to further insure against direct lateral access into said container, a pair of upstanding opposed bracket portions on said side wall having aligned transverse openings, a cover having spaced transverse openings removably receiving said bracket portions therethrough with the transverse openings of the bracket portions overlying said cover, and means engaging said transverse openings in said bracket portions and overlying the cover for retaining the same in position on the container.

2,896,576
COMBINATION POCKET KNIFE AND PEN
Albert M. Baer, New York, N.Y., assignor to Imperial Knife Associated Companies, Inc., New York, N.Y., a corporation of Rhode Island
Application November 1, 1956, Serial No. 619,858
3 Claims. (Cl. 120—1)

1. A combination pocket knife and pen comprising an elongated frame including a pair of parallel lining plates, an elongated back spring located between said plates, said spring extending longitudinally in a direction parallel to the length of the frame and being disposed approximately centrally between the opposite longitudinal edges of the frame, plural means securing said spring to said lining plates, said securing means being spaced inwardly from the ends of said spring whereby to leave said ends free, a knife blade, means pivotally mounting said knife blade adjacent one end of the frame and bearing on one free end of the spring to one side of said spring, said spring and plates defining an elongated pocket on the side of the frame opposite from the knife blade, a tang, means pivotally mounting said tang adjacent the other end of the frame and bearing on the other end of the spring to the opposite side thereof, a metal tube, a pen having a ball point tip located at one end of said tube and a ball point cartridge within the tube, associ-

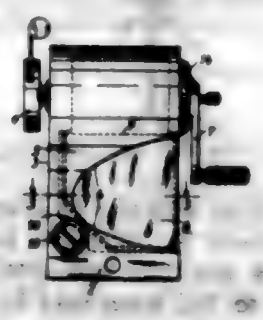
ated means at the other end of the tube and on the tang for detachably coupling the tube and tang upon rotation of the tube whereby the tube with the ball point pen is detachably secured to the tang, said ball point tip being narrower than the spring, said tube being wider than the thickness of the frame and at the end remote from the tang tapering to approximately the diameter of the ball point tip, said lining plates being notched in registry over almost the infolded length of the ball point pen, said ball point tip being located in protected position in the back between the lining plates when the pen is infolded.

2,896,577
RETRACTABLE WRITING DEVICE
Carl Merryman, Oak Park, and Frank J. Stoeberl, Chicago, Ill., assignors to Dure-O-Lite Pencil Company, Melrose Park, Ill., a corporation of Delaware
Application November 30, 1956, Serial No. 625,284
3 Claims. (Cl. 120—42.03)

3. A retractable writing instrument comprising a tubular housing having a slot formed in its upper end, said slot being disposed transversely of the housing and extending continuously through opposite lateral wall portions of the upper end of the housing, a writing member slidable in the housing longitudinally thereof and having an open upper end and a writing point at its opposite end, said writing point being adapted to extend from the housing when the writing member is in writing position, a coil spring within the housing and engaging the housing and writing member for urging the writing member inwardly of the housing into a retracted carrying position, a cam member located in said slot and being rotatably supported on a fixed pivot, said fixed pivot extending normal to the slot whereby said cam member is rotatable from side to side throughout the extent of

the slot, said cam member having a central cam surface located relatively close to the fixed pivot, said cam member also having a cam face on each side of said central cam surface and which are disposed at a greater distance from the fixed pivot, said coil spring maintaining the open end of the writing member in contact with the cam member whereby the central cam surface will locate the writing member in a retracted carrying position and whereby the cam faces will locate the writing member into a projected writing position, and a detent formed in each cam face relatively adjacent the intersection of the face with the central cam surface to thereby form a projecting point, whereby a projecting point of the cam member may enter the open end of the writing member to thereby releasably latch the writing member in said projected writing position.

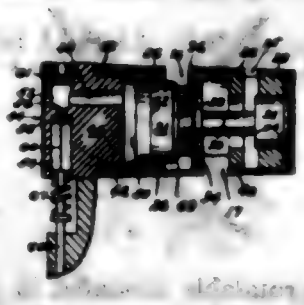
2,896,578
PENCIL SHARPENING MACHINE WITH A REMOVABLE CHIP CONTAINER
Erhard Settmann, Stein, near Nurnberg, and Willy (Wilhelm) Schafer, Nurnberg, Germany
Application June 11, 1956, Serial No. 590,726
Claims priority, application Germany June 14, 1955
1 Claim. (Cl. 120—96)



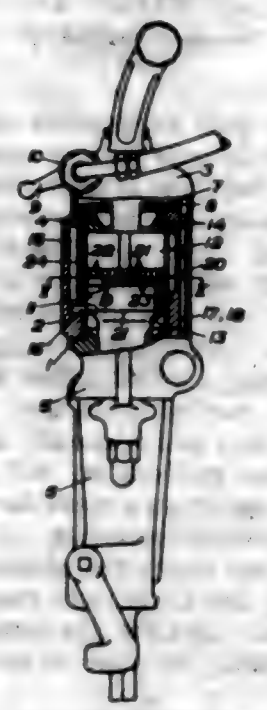
A portable pencil sharpener comprising a housing having a base, side and end walls, the upper portion of one of said end walls being provided with an aperture adapted to receive the tip of a pencil to be sharpened, clamping means for said pencil carried by said end wall adjacent said aperture, a rotatable shaft supported by said housing adjacent said aperture, a cutter member carried by said shaft, a removable transparent chip container located within said housing and disposed beneath said cutter, the side walls of said housing being provided with parabolic-shaped cutouts facilitating removal of said chip container and being so disposed that the strength of said housing is not impaired, the apex of said parabolic-shaped cutouts extending in the direction of said end wall carrying said clamping means and in close proximity to said end wall, said housing being provided with a cylindrical compartment adjacent said apex of said cutouts and said base and adapted to receive a spare cutter member, a crank member carried by said shaft exteriorly of said housing and of sufficient weight that it will normally extend downwardly due to gravity towards said base in overlying relationship and directly in front of said chip container, thereby preventing removal of said container and its contents during transporting of said pencil sharpener.

2,896,579
CONTROL VALVE CONSTRUCTION FOR PNEUMATIC POWER TOOLS
Lee R. Campbell, Royal Oak, Mich.
Application September 9, 1957, Serial No. 682,823
10 Claims. (Cl. 121—21)

1. Triggering means for a pneumatic fastener driver comprising a sleeve; inlet, outlet and exhaust ports formed through the wall of said sleeve, said ports each being spaced longitudinally along said sleeve, a closure member at each end of said sleeve, a valve mounted in said sleeve for longitudinal sliding movement, one end of said valve having a poppet head, the other end of said valve having a land of lesser effective transverse area than the under side of said poppet head, a valve seat member interposed between said inlet and outlet ports and coacting with the head of said valve to normally seal said inlet port from said outlet port, a second valve seat member interposed between said outlet and exhaust ports and coacting with said lesser land to normally connect said exhaust port with said outlet port, means venting one end of said sleeve to atmosphere through one of said closure members, the other of said closure members normally sealing the other end of said sleeve and including selectively operable means for venting the other end of said sleeve to atmosphere.



2,896,580
PNEUMATIC PERCUSSION TOOLS
Jan Kristian Holde, Stockholm, Sweden, assignor to Aftiebolaget Copco Aktiebolag, Nacka, Sweden, a corporation of Sweden
Application May 21, 1957, Serial No. 660,547
7 Claims. (Cl. 121—35)



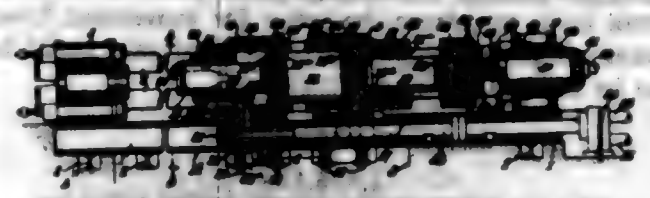
1. In a pneumatic percussion tool, a casing forming a cylinder, a hammer piston reciprocable in said cylinder, a first working chamber for compressed air in said cylinder for producing the working stroke of said piston, a second working chamber for compressed air in the cylinder for producing the return stroke of the piston, means for admitting compressed air to said first working chamber, a piston controlled main outlet in the cylinder wall of the first working chamber, and a piston controlled auxiliary outlet in the cylinder wall of the first working chamber of less area than said main outlet and disposed so as to be uncovered by the piston during the working stroke before the piston uncovers the main outlet.

2,896,581

HYDRAULIC PRESS CONSTRUCTION

Reginald Victor Rowles and Bertram T. Gowing, Gloucester, England, assignors, by mesne assignments, to Anglo-American Extrusion Company, a corporation of Delaware

Application August 27, 1956, Serial No. 606,343
5 Claims. (Cl. 121—38)



1. In a hydraulic press, a frame; two axially aligned horizontal cylinders mounted on said frame with their adjacent inner ends spaced axially from each other; a unitary piston structure comprising a first piston part extending through the inner end of one of said cylinders and being reciprocable therein, a second piston part extending through the inner end of the other of said cylinders and being reciprocable therein; a piston rod projecting outwardly through the outer end of said one of said cylinders, and a tail rod projecting outwardly through the outer end of said other of said cylinders; packings in the inside walls of said cylinders adjacent to the inner ends thereof and being accessible for servicing through the space between said cylinder inner ends; a third cylinder mounted on said frame in axial alignment with and spaced outwardly from the outer end of said other of said cylinders, said third cylinder having an inner end relatively adjacent to said other of said cylinders and an outer end relatively remote from said other of said cylinders; a pre-stroke ram reciprocable in said third cylinder and projecting towards said other of said cylinders; means connecting the projecting part of said pre-stroke ram to the outer end of said tail rod for relative axial adjustment, said pre-stroke ram being engageable with said outer end of said third cylinder for limiting movement of said pre-stroke ram and said unitary piston structure, and the axial adjustment of said pre-stroke ram relative to said unitary piston structure determining selective limits of movement of said unitary piston structure; a pipe extending under said cylinders parallel to the common axis thereof; means stationarily mounting one end of said pipe; a bore in one of said cylinders receiving a portion of said pipe remote from its stationarily mounted end for relative sliding movement; and a passage extending from the interior of said one of said cylinders to the interior of the portion of said pipe which extends through said bore, the relative sliding movement of said pipe and said bore permitting operation effected straining movement of said one of said cylinders without stressing said pipe.

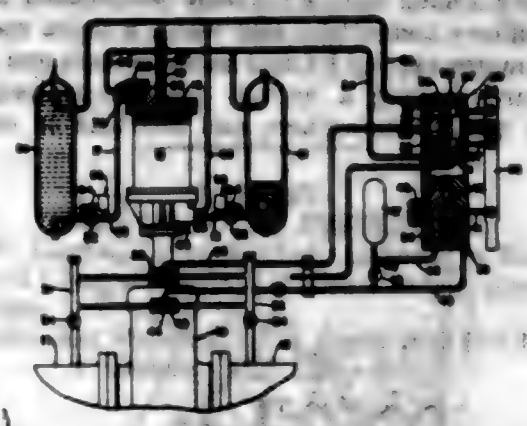
2,896,582

GATE VALVE SNUBBING MECHANISM

Elmer H. Justice, Greensburg, Kans., assignor to Shafer Valve Company, Mansfield, Ohio, a corporation of Ohio

Application April 16, 1958, Serial No. 728,998
6 Claims. (Cl. 121—38)

1. In a piston-cylinder operator for a gate valve having a stem, snubbing mechanism at each end of the cylinder for reducing the pressure transmitted to the valve stem at the end of each piston stroke, said mechanism including a fluid conduit for connecting the end of the operator cylinder alternately with a source of pressure fluid and with exhaust, a snubber valve in said conduit, spring-actuated means normally holding said valve open and extending into the end of said cylinder for engagement with said piston to close the snubber valve near the end of the piston stroke, a pressure relief valve having a front end communicating with said conduit between the cylinder and the snubber valve and having a rear end of reduced area, a by-pass connecting said relief valve with said fluid conduit beyond said snubber valve, and a con-



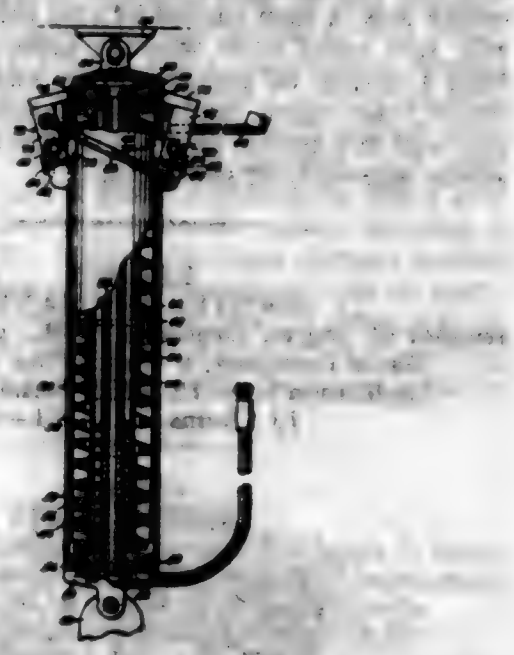
duit connecting said reduced area with the fluid supply conduit for the opposite end of the cylinder for urging said relief valve toward closing position at a reduced pressure proportionate to said reduced area.

2,896,583

COUNTERBALANCING HYDRAULIC CYLINDER

Jarvis A. Stinreed, Mercer Island, Wash., assignor to the United States of America as represented by the Secretary of the Army

Application December 28, 1956, Serial No. 631,386
4 Claims. (Cl. 121—40)



1. In a hydraulic cylinder assembly, a tubular cylinder, a piston within said cylinder, means for introducing fluid into said cylinder, a cap fixed to said cylinder, a tubular sleeve mounted to said cap enclosing and concentric to said cylinder, a mounting plate carried by said piston, a cylindrical cover attached to said plate concentric to said piston and encompassing said sleeve, a helical compression spring located between said sleeve and said cylinder engaging said cap and mounting plate and lock means mounted on said cover for engagement with said sleeve, whereby said cylinder assembly may be held in an expanded position.

2,896,584

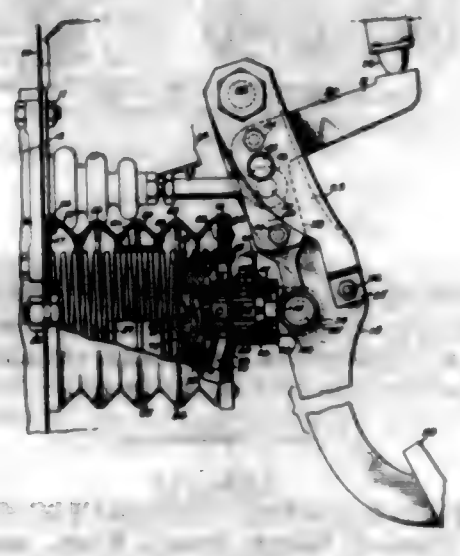
BOOSTER MOTOR CONTROL MECHANISM

David T. Ayers, Jr., and Edward Govan Hill, Birmingham, Mich., assignors to Kelsey-Hayes Company, a corporation of Delaware

Application April 2, 1954, Serial No. 420,488
6 Claims. (Cl. 121—41)

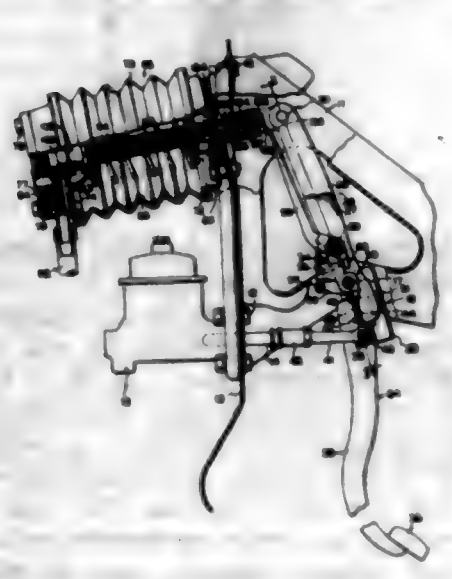
1. A power mechanism comprising a power operable rod, a pedal lever pivoted at one end for turning move-

ment on a fixed axis and depending from said fixed axis and provided with a pedal pad at its other end, a second lever pivoted to said first lever for turning movement on a second axis spaced from said first axis, a fluid motor comprising a fixed wall, a movable wall spaced therefrom and a bellows connecting said walls, a valve mechanism for said motor carried by said movable wall and comprising a valve having a normal position connecting said chamber to the atmosphere and movable in one direc-



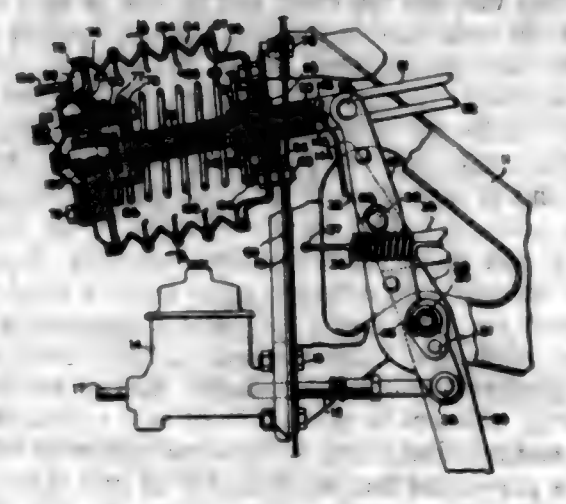
tion from said position to connect said chamber to a source of vacuum, means pivotally connecting said movable wall to said second lever at a point spaced from said second axis, a stem carried by said valve and engageable with said pedal lever whereby movement of the latter from a normal off position moves said valve in said direction, and means for limiting movement of said movable wall to a normal off position, said rod being arranged wholly externally of said motor.

2,896,585
BOOSTER MECHANISM
Jeannot G. Ingres, Dearborn, Mich., assignor to Kelsey-Hayes Company, a corporation of Delaware
Application June 15, 1955, Serial No. 515,636
13 Claims. (Cl. 121—41)



1. A booster mechanism comprising a member to be operated, a power lever, a fixed pivot supporting said power lever, a motor having a power operable unit engaging said power lever to operate the latter upon energization of said motor, a control mechanism connected between a power source and said motor and operable to control said motor, a pivoted control lever engaging said control mechanism and biased to a normal off position to move said control mechanism to a position disconnecting said motor from said source, means biasing said control mechanism to an operative position whereby it moves to such position when released by movement of said control lever from a normal off position to connect said motor to said source, a pedal lever pivotally supported by said power lever for movement independently of said control lever and connected to said member to be operated and to said power lever, and a trigger pivoted with respect to said power lever and engaging said pedal lever and said control lever to release the latter for movement from its normal off position upon movement of said pedal lever from its normal position.

2,896,586
FLUID PRESSURE OPERATED MOTOR
David T. Ayers, Jr., Birmingham, Mich., assignor to Kelsey-Hayes Company, a corporation of Delaware
Application March 9, 1956, Serial No. 570,516
15 Claims. (Cl. 121—41)

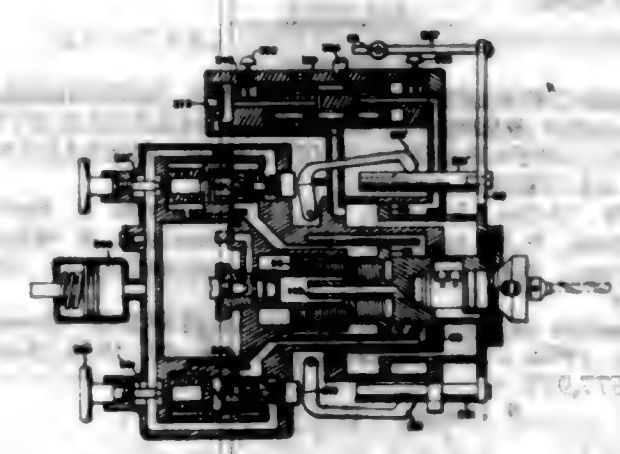


1. A fluid pressure motor comprising a stationary head, a movable head and a bellows connecting said heads and forming therewith a motor chamber, a piston rod connected to said movable head, a vacuum chamber in said movable head connected to a source of vacuum, a control chamber in said movable head communicating with said motor chamber, a valve seat formed in said movable head between said vacuum and control chambers, a valve normally engaging said seat, a first spring biasing said valve toward said seat, a second valve seat in said control chamber having its interior communicating with the atmosphere, said second valve seat normally being out of contact with said valve whereby said control chamber communicates with the atmosphere, a second spring stronger than said first spring biasing said second valve seat toward said valve to engage said valve and lift it from said first valve seat to disconnect said control chamber from the atmosphere and connect it to said vacuum chamber, and a manually controllable third spring connected to transmit a force to said second valve seat, said third spring being stronger than said second spring to normally hold said second valve seat out of contact with said valve.

2,896,587
HYDRO-PNEUMATIC ACTUATOR FOR A MOTOR-DRIVEN SPINDLE
Ralph R. Hause, Montpelier, Ohio
Application November 12, 1953, Serial No. 391,525
10 Claims. (Cl. 121—45)

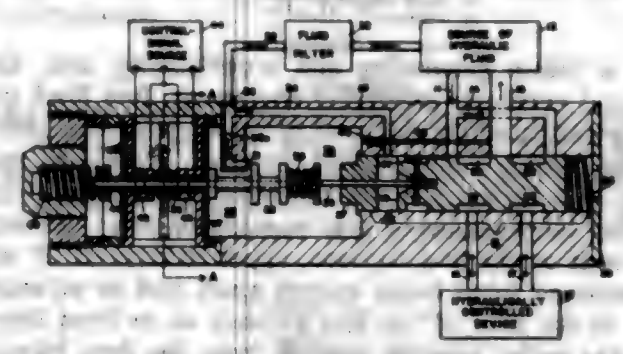
1. In combination with a motor driven spindle assembly a hydro-pneumatic system comprising a first tubular member for said spindle assembly, a second tubular member coaxial with respect to said first member forming a cylinder for the hydraulic system, and a third tubular member coaxial with said second member forming a cylinder for said pneumatic system, piston means on said spindle assembly for each of said cylinders, interconnecting passage means between the two sides of the cylinder of

the hydraulic system divided by one of said piston means, said interconnecting passage means including adjustable needle valve means, sleeve valve means in said pneumatic system, interconnected passage means connecting the two portions of the cylinder of said pneumatic system divided by the other of said piston means with said sleeve valve, means for initiating the forward movement of said spindle assembly with said pneumatic system, automatic



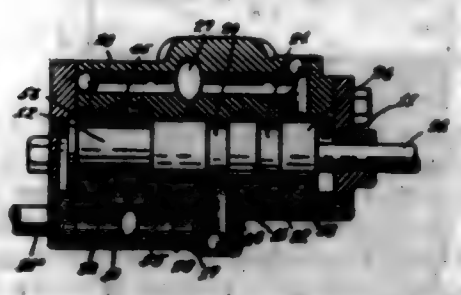
means for reversing the direction of motion of said spindle assembly at a predetermined point in its movement in the first-mentioned direction, and further needle valve means in parallel with said first needle valve means operated by the movement of said spindle assembly to determine the opening of said further valve means, whereby the instantaneous position of both said needle valve means determines the rate of movement of said spindle.

2,896,588
ELECTRO-HYDRAULIC SERVO VALVE
Paul F. Hayner and Zenny Olsen, Nashua, N.H., assignors, by mesne assignments, to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Application April 4, 1956, Serial No. 576,216
11 Claims. (Cl. 121—46.5)



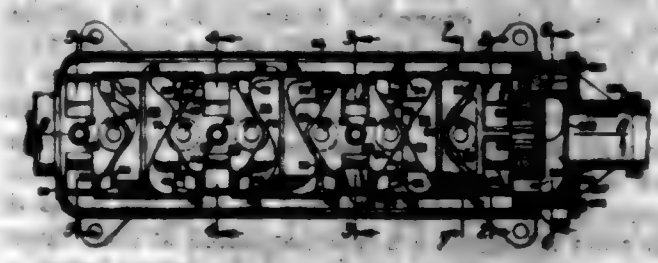
1. A two-stage, hydraulic servo valve, comprising: a valve body including passages for fluid under pressure; control valve means disposed in said body and having a control slide piston-valve movably mounted within said body for controlling the flow of fluid through said passages; pilot valve means disposed in said body and having a pilot variable fluid-pressure chamber, a pilot low pressure chamber, a pilot fluid control port interconnecting said chambers, and a pilot valve member movably mounted with respect to said port for motion along an axis for varying the effective size of the opening of said port to change the fluid-pressure in said variable chamber, said variable chamber being hydraulically directly coupled to an end of said piston-valve to effect motion thereof relative to said body along the same axis as said pilot member and opposing the motion of said pilot valve member; motor means for displacing said pilot valve member relative to said port in response to a control signal to supply a flow of fluid from said control valve means; bias means coupled to said movable pilot member for developing a bias force acting on said pilot member opposing said motor means; and resilience means mechanically coupling said pilot member and said piston-valve, the motion of said piston-valve tending to oppose said pilot member and said bias means to restore said pilot member to an equilibrium position, thereby, to produce degenerative feedback between said control and said pilot valve means and provide said two-stage, hydraulic servo valve.

2,896,589
HYDRAULIC SYSTEM
Charles V. Gagen, Lafayette, Ind., assignor to Ross Gear and Tool Company, Inc., Lafayette, Ind., a corporation of Indiana
Application March 5, 1958, Serial No. 719,366
5 Claims. (Cl. 121—46.5)



1. In a hydraulic system including a source of liquid under pressure, a motor having a cylinder and a piston reciprocable therein, a valve, first and second passages connecting said valve to opposite ends of said cylinder, a supply passage connecting said source to said valve, said valve including a body and a reciprocable element movable in opposite directions from a neutral position in said body to direct liquid from the supply passage alternatively into said first and second passages, said valve element when in neutral position preventing liquid flow from said supply passages, hydraulic means including a pressure chamber for urging said valve element toward neutral position when displaced therefrom, and an auxiliary valve means operable in response to differences of pressure in said first and second passages for connecting said chamber to the passage in which the higher pressure exists.

2,896,590
FLUID MOTOR
Robert M. Bush, Raymond W. Jensen, and Louis T. King, Phoenix, Ariz., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Application April 5, 1957, Serial No. 650,933
17 Claims. (Cl. 121—119)



1. In a fluid operated motor the combination of: a housing having a bore therein; a shaft rotatably mounted in said housing concentric with said bore; piston means in said bore and concentrically mounted on said shaft; spline means interconnecting said piston means and said shaft, said spline means permitting said piston means to slide axially of said shaft and said bore and coupling said piston means to said shaft in rotary driving relation therewith; passage means for conducting motive fluid to and from opposite ends of said piston means; a rotary valve member carried by said shaft and communicating with opposite ends of said piston means and disposed to

conduct fluid between said passage means and said piston means; cam and cam follower means concentric with said shaft and operable at the opposite ends of said piston means for causing said piston means to rotate about and reciprocate along the axis of said shaft when motive fluid is conducted to and from opposite ends of said piston means.

2,896,591

FURNACE WALL FOR FORCED ONCE-THROUGH BOILER

Wilbert W. Schroeder, Jackson Heights, N.Y., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware

Application July 15, 1957, Serial No. 671,770
1 Claim. (Cl. 122—235)

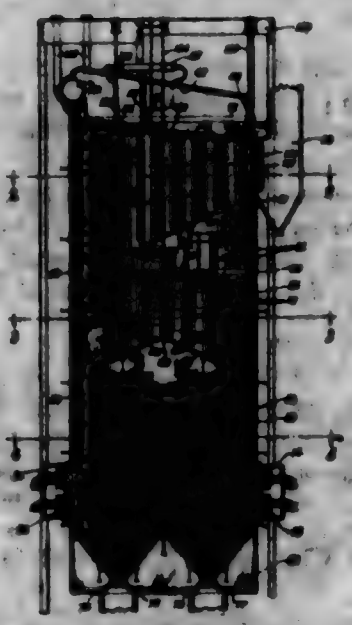
In a once-through boiler the combination of a vertical furnace of rectangular transverse section having its front and rear walls sloped inwardly and terminating in spaced relation thereby forming a hopper bottom with an opening at the bottom thereof, the lower portion of the furnace having the inner surface of the walls lined with tubes which comprise one group of side by side parallel tubes connected at their opposite ends to common inlet and outlet headers and extending up and down the furnace wall from the furnace bottom and a location intermediate the top and bottom of the furnace and covering half the circumference of the furnace from adjacent the center of the front wall across an end wall to adjacent the center of the back wall, each vertical run of the entire group of adjacent tubes forming in effect a panel with the lower ends of the panels being exteriorly of the furnace bottom, means connected with the tubes of each panel at the upper region thereof and effective to support the tubes from this region for expansion downwardly, the number of tubes in the group and the width of the furnace walls being such that there is a symmetrical arrangement of panels on the walls with their being only complete panels on each wall and being at least two panels on the front and back walls and at least four panels on the end wall, the groups of tubes being disposed so that the tubes of adjacent pairs of panels are interconnected at their upper and lower ends by return bends with the return bends at the upper end being completely intermeshed so as to lie flat and parallel with the wall, the return bends at the lower end of one of the adjacent pair of panels on the end wall being crossed in a manner to interconnect the tubes in these adjacent panels in reverse order from the center of each panel outward, and the return bends at the lower end of other panels on the end wall being crossed only with respect to a limited number of the tubes of each pair of panels that are nearest each other in a manner so that the laterally extending portion of each return bend is of sufficient length to accommodate substantial differential expansion of the tubes in the panels, the tubes of the interconnected panels on the front and rear walls extend downwardly along the wall to the opening in the furnace bottom and then laterally horizontally outward a sufficient distance to accommodate a substantial differential expansion of the tubes of these panels and with the return bends interconnecting these tubes being intermeshed, the other half of the furnace circumference being lined with another and similarly disposed group of tubes.

2,896,592

METHOD OF VAPOR GENERATION, SUPERHEATING AND REHEATING, AND MULTIPLE FURNACE APPARATUS THEREFOR INCLUDING GAS RECIRCULATION

Lewis W. Heller, Yardley, Pa., and Charles S. Smith, Westfield, N.J., assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Continuation of application Serial No. 193,832, November 3, 1950. This application April 11, 1956, Serial No. 577,912
9 Claims. (Cl. 122—240)



1. In a steam generating and superheating unit, first and second vertically extending contiguous fuel fired furnaces, upwardly extending rows of steam generating tubes along the outside walls of said furnaces, a dividing wall between said furnaces including a row of upright steam generating tubes, some of said generating tubes delineating the roof of the first furnace, upper extensions of said last mentioned tubes being spaced apart and so arranged relative to the roof of the first furnace as to form therewith a gas outlet passage leading from the first furnace into the second furnace at a position intermediate the height of the second furnace, a convection steam reheater positioned across gas flow in said gas outlet passage from the first furnace, means forming a gas outlet passage leading from the second furnace and positioned at an elevation higher than the outlet of the first furnace, a superheater in the gas outlet passage from the second furnace, and means controllably recirculating furnace gases from a position downstream of the superheating zone directly to either one or both of said furnaces to regulate either or both superheating and reheating.

2,896,593

METHOD FOR OPERATING TWO-CYCLE ENGINES

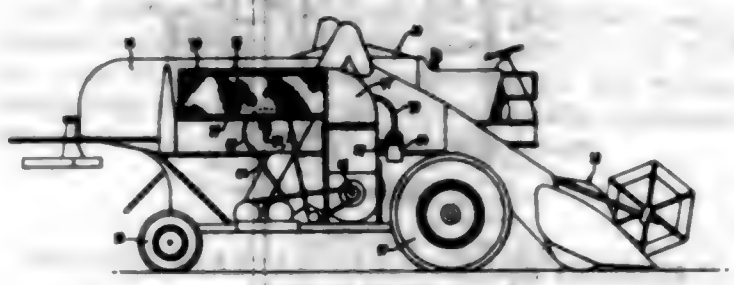
Lawrence R. Blumenschein, Chelsea, Mich.

No Drawing. Application August 8, 1955
Serial No. 527,163
2 Claims. (Cl. 123—4)

1. A method of avoiding carbon and sludge residues on the parts of a two-cycle engine upon combustion and

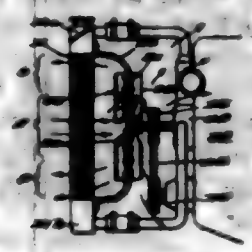
of reducing gum formation on the engine parts during storage of a two-cycle engine, which comprises operating a said two-cycle engine on a fuel consisting essentially of a mixture of lead-free, straight run gasolene, and a small but effective amount, from about 6% to about 9% by volume of the whole, of polymers of olefins of which the monomers have not more than five carbon atoms.

2,896,594
AIR INTAKE SYSTEM FOR HARVESTING MACHINES
Robert Ashton, Toronto, Ontario, Canada, assignor to Massey-Ferguson Limited, a Canadian company
Application May 26, 1958, Serial No. 737,556
4 Claims. (Cl. 123—41.04)



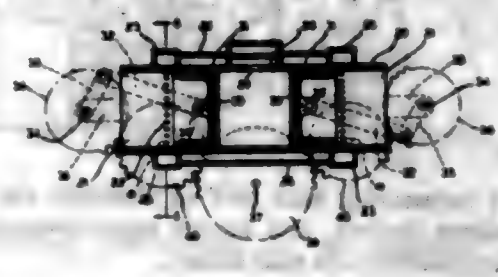
1. An air intake system for a harvesting machine having a fan for drawing air through a compartment, comprising, in combination, an elongated chamber defining a substantially unobstructed air conduit and being supported on the side of the machine, a duct connecting said chamber and said compartment, a pair of screened air intake openings extending substantially the full length of said chamber and opening into the conduit defined thereby, and an elongated shutter pivoted within said chamber on an axis permitting the shutter to swing from closing one air intake opening to closing the other air intake opening, and means for swinging said shutter so as to alternately cut off the air intake through said openings and thus allow foreign material held against the screens by the airflow therthrough to fall free when the airflow is interrupted.

2,896,595
METHOD AND APPARATUS FOR COOLING OF RADIATORS OF ENGINES AND THE LIKE
Alvaro Guillo-Quevedo, Guatemala City, Guatemala
Application March 21, 1957, Serial No. 647,689
14 Claims. (Cl. 123—41.49)



1. Apparatus for cooling the radiator of an internal combustion engine or the like, comprising a housing adjacent said radiator, the interior of said housing being in communication with air passing through said radiator, said housing having an outlet opening therein, fan means and means for driving the same for drawing air into said housing through central portions of said radiator, said fan means comprising means for blowing a part of said air outwardly from said housing through marginal portions of said radiator and means for simultaneously propelling a part of said air outwardly through said housing opening and away from said housing, said means for blowing air through marginal portions of said radiator comprising propeller type blades disposed laterally of said opening for driving centrifugally and toward said marginal portions of said radiator air drawn through the portion of said radiator opposite said opening.

2,896,596
DOUBLE PISTON INTERNAL COMBUSTION ENGINE
Erich Abrahams, Milwaukee, Wis.
Application June 21, 1957, Serial No. 667,139
2 Claims. (Cl. 123—51)

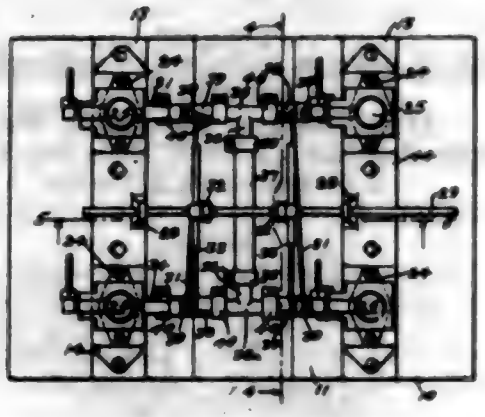


1. In a four stroke internal combustion engine comprising a cylinder, two pistons reciprocally mounted in opposite ends of said cylinder, said cylinder being provided with a plurality of auxiliary spaced exhaust ports extending around the periphery of each end of said cylinder, said auxiliary exhaust ports being uncovered by said pistons at the outer end of their strokes, crank shafts arranged at opposite ends of said cylinder interconnected with each other by gearing to move said pistons toward and away from each other, a combustion chamber mounted on and communicating with said cylinder midway of its ends, intake and exhaust passages communicating with said chamber, fuel injection means mounted within said intake passage, an intake valve mounted in said chamber for controlling the admittance of air and fuel from said fuel injection means through said intake passage and into said chamber, and an exhaust valve mounted within said chamber for controlling said exhaust passage, said intake and exhaust valves being connected to said gearing to open and close in timed relation with said pistons, said fuel injection means being connected with said gearing to open and close in timed relation with said pistons, said exhaust valve being timed to open before the exhaust stroke begins, said inlet valve being timed to open before the exhaust stroke is finished for the admission of air to said cylinder and also being timed to remain open after said pistons have closed said auxiliary exhaust ports at the beginning of a compression stroke and to close before said pistons have completed the compression stroke, said fuel injection means being actuated only when said intake valve is open during the compression stroke, said exhaust valve and said auxiliary exhaust ports scavenging said cylinder and cooling said cylinder, said combustion chamber, said intake and exhaust valves and said auxiliary exhaust ports twice during each cycle of operation.

2,896,597
CARBURETOR ADAPTER FOR INTERNAL COMBUSTION ENGINES
Robert E. Patrick, Hapeville, Ga.
Application August 7, 1957, Serial No. 676,819
1 Claim. (Cl. 123—52)

A carburetor adapter replacing an intake manifold on a V block engine comprising a pair of spaced support members secured in parallel relation to said engine, a pair of upstanding domes formed in each of said support members with said domes each overlying and communicating with a pair of adjacent inlet ports in said engine, a carburetor supported in upright position on and secured to each of said domes, a pair of spaced parallel transversely extending conduits extending between and de-

tachably secured to one dome of each pair of domes communicating said domes for equalizing the pressures therein, conduit means extending parallel to said support



members connecting said pair of conduits for equalizing the pressures therein, and means simultaneously controlling the carburetors on said domes.

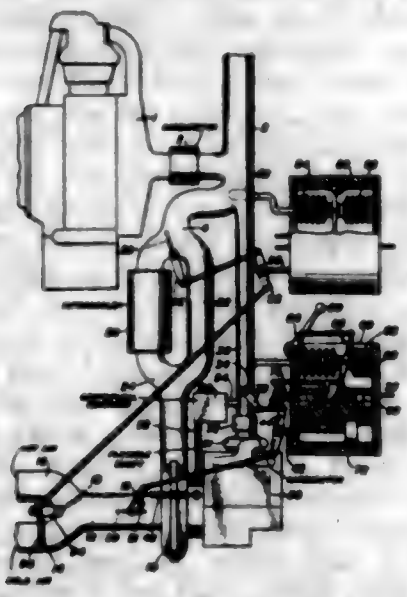
2,896,598

ENGINE AIR INDUCTION CONTROL APPARATUS

Ferdinando Carlo Reggio, Norwalk, Conn.

Application December 29, 1951, Serial No. 264,146, which is a division of application Serial No. 772,886, September 8, 1947, now Patent No. 2,581,334, dated January 1, 1952, which is in turn a division of application Serial No. 443,109, May 15, 1942, now Patent No. 2,516,911, dated August 1, 1950. Divided and this application May 11, 1954, Serial No. 429,097

8 Claims. (Cl. 123—119)



1. A supercharging conditioning and control system for a propulsion powerplant having a plurality of main combustion engines each provided with an air intake; said system comprising: an air compressor, a combustion motor driving the compressor and having an air intake, conduit means connecting the discharge side of said compressor to the air intake of each of said engines and to the air intake of said motor, cooler means associated with said conduit means for removing compression heat, a throttle valve arranged in series with said compressor for controlling the pressure of the air supplied to said engines over a predetermined range of operation, additional valve means for controlling the motor variably to regulate the compression ratio of said compressor, a first automatic device including temperature sensing means for controlling said cooler means to regulate the temperature of the air supplied to said engines and motor, a second automatic device including pressure sensing means for controlling said throttle valve and said additional valve means, datum-varying means for said second automatic device, and a manually operable control member for operating said datum-varying means.

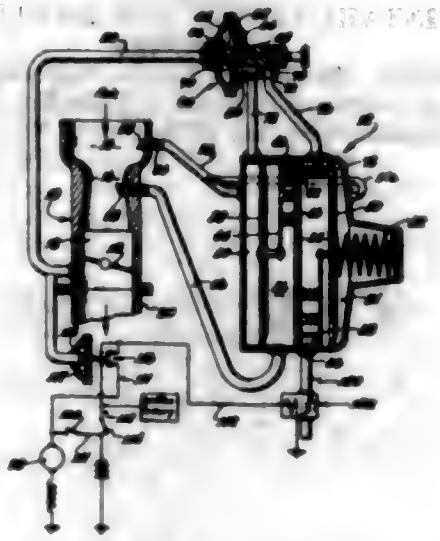
2,896,599

GASEOUS FUEL FEED SYSTEMS, WITH AUTOMATIC STARTING AND IDLING CONTROL, FOR INTERNAL COMBUSTION ENGINES

Roy F. Ensign, Fullerton, Calif., assignor to Ensign Carburetor Company, Fullerton, Calif., a corporation of California

Application May 19, 1958, Serial No. 736,321

27 Claims. (Cl. 123—120)



1. In a gaseous fuel feed system for internal combustion engines, said system comprising a carbureter having an air and mixture passage adapted to feed mixture into the intake manifold of an engine, said passage having an air intake, a venturi throat and a throttle, a gas pressure regulator having a delivery chamber with a diaphragm subject on one face to the pressure in that chamber, an inlet for said chamber controlled by an inlet valve, connection between the valve and diaphragm such that diaphragm movement toward the delivery chamber causes the valve to open, a reference pressure chamber at one face of the diaphragm, a bleeding passage communicating the reference pressure chamber to the air and mixture passage, and an outlet for the delivery chamber feeding gas therefrom to the venturi throat, the regulator normally delivering to the venturi throat at a predetermined normal pressure; the combination of, a source of gas under a substantially uniform pressure higher than the pressure existent at the carbureter air intake, a pressure feed passage leading from said source to the reference chamber, a normally closed valve in said passage, and means, actuated by virtue of engine operation, acting to open said valve, each of said bleeding and pressure feed passages being restricted, said restricted passages being so related in effective size that, with the normally closed valve open, the pressure in the reference chamber is controllably modified with relation to that existent in the air and mixture passage, thus controlling the delivery pressure of the regulator.

2,896,600

CONTROL SYSTEM FOR AN INTERNAL COMBUSTION ENGINE, PARTICULARLY FOR MOTOR VEHICLES

Hans O. Schoenberg, Stuttgart-Hoffmannden, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany

Original application March 23, 1954, Serial No. 418,192, now Patent No. 2,808,038, dated October 1, 1957. Divided and this application December 8, 1955, Serial No. 551,943

Claims priority, application Germany April 2, 1953

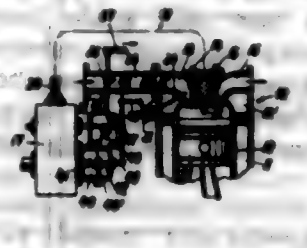
12 Claims. (Cl. 123—140)

1. A control system for an internal combustion piston engine of the type adapted to compress a fuel-gas mixture

retain a missile in connection therewith, an elongated

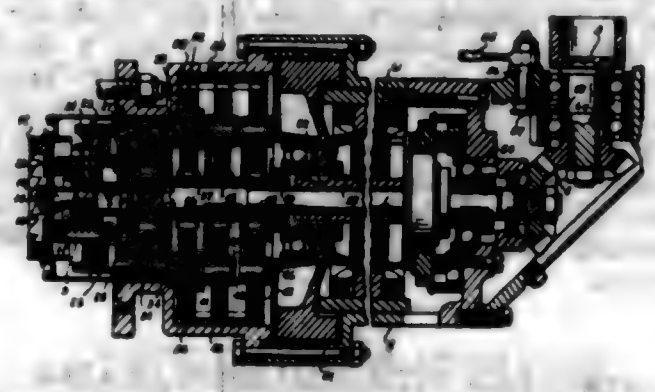
as operative open and an inoperative closed position rela-

produced by a fuel pump prior to its ignition by a spark plug with an auxiliary circuit containing a fluid circulating therethrough the temperature of which is proportional to the temperature of the engine, comprising adjustable regulating means operative in dependence on the position thereof to variably determine the ratio of the fuel and air



in said mixture, a single temperature responsive means responsive simultaneously to the temperature of said fluid and to the temperature of the combustion air, and motion transmitting means connecting said adjustable regulating means with said temperature responsive means.

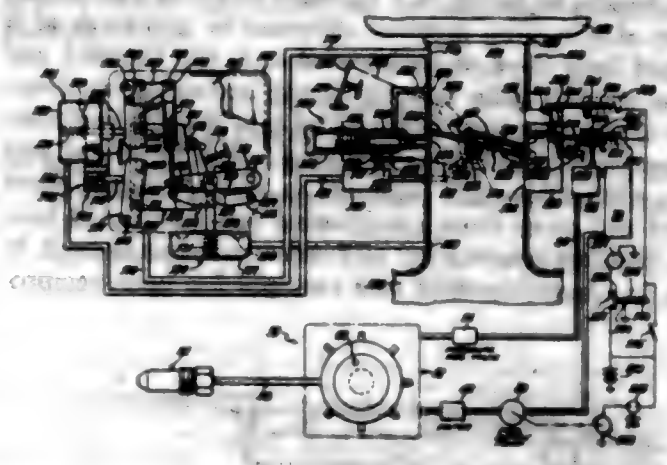
2,896,601
ENGINE STARTER DUO TORQUE CLUTCH MECHANISM
Henry Troeger, Ramsey, and Howard F. Hoefener, Riverdale, N.J., assignors to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Application February 25, 1955, Serial No. 490,512
3 Claims. (Cl. 123—179)



1. The combination in a duo degree torque transmitting clutch including a disc pack and a pressure plate normally exerting pressure upon the disc pack to hold the discs thereof in frictional engagement with one another for transmission of torque therethrough, means for transmitting torque through the pack from a particular direction and means for reducing the extent of the pressure of the pressure plate upon the pack in direct proportion to the degree of this torque transmitted, means for transmitting torque through the disc pack from the opposite direction and means for increasing the pressure of the pressure plate upon the pack when torque is transmitted from this latter direction.

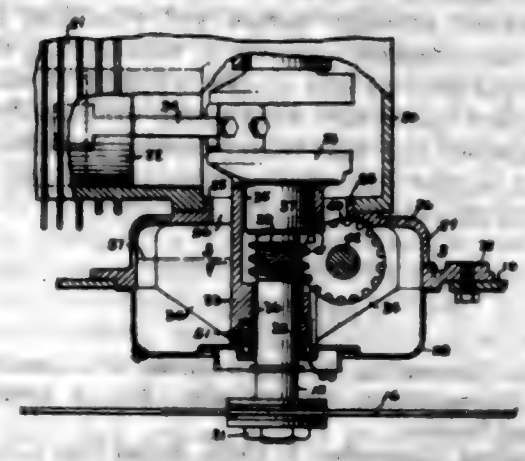
2,896,602
FUEL INJECTION SYSTEM
Elnar S. Dahl, Decatur, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application March 12, 1957, Serial No. 645,475
14 Claims. (Cl. 123—179)

1. A fuel supply apparatus for an internal combustion engine comprising an air intake conduit connected to the cylinders of the engine, a fuel delivery pump driven by said engine, a plurality of nozzles respectively positioned adjacent said cylinders and connected with said fuel delivery pump to be supplied with fuel therefrom, mechanism for starting said internal combustion engine, and an auxiliary fuel providing means for supplying an air-fuel mixture into said air inlet conduit and thereby to said engine cylinders and under the control of said



engine starting mechanism to be rendered effective thereby.

2,896,603
POWER TAKE-OFF FOR LAWN MOWERS
Gilbert E. Beebe and Russell L. Morden, Lansing, Mich., assignors to Motor Wheel Corporation, Lansing, Mich., a corporation of Michigan
Application February 27, 1956, Serial No. 567,826
3 Claims. (Cl. 123—195)



1. In an internal combustion engine, the combination comprising a body, a vertical crank shaft having a crank, said body including an opening in the lower end thereof through which said crank shaft projects downwardly, a bearing adapter mounted on said body below said opening and having a hub projecting upwardly into said opening into said body, said hub having an axial bore, said crank shaft having the lower portion thereof projecting downwardly through said axial bore and supported exclusively by said hub, means surrounding said hub and cooperating with said adapter to form an oil reservoir, a worm fixed on the portion of said crank shaft which extends downwardly through the opening in said body, a horizontal power take-off shaft journaled in said adapter on opposite sides of said worm, one end of said power take-off shaft projecting through a portion of said adapter, and a worm gear fixed on said power take-off shaft and meshing with said worm on the lower portion of said crank shaft, at least a portion of said worm and worm gear projecting downwardly below the normal level of oil in said reservoir.

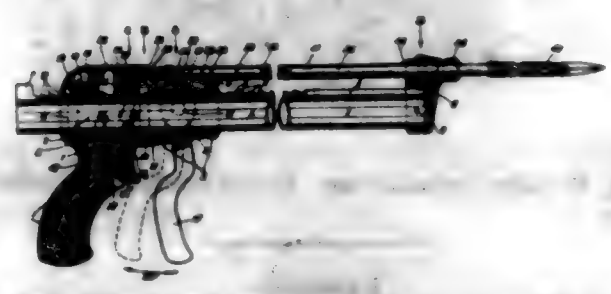
2,896,604
UNDERWATER GUN
Dimitri Ivanowitch Rebikoff, Cannes, France
Application July 31, 1956, Serial No. 601,239
Claims priority, application France November 7, 1955
7 Claims. (Cl. 124—22)

1. An underwater gun for firing a missile, comprising a handle, means mounted to said handle to releasably

for operating said datum-varying means.

engine of the type adapted to compress a fuel-gas mixture

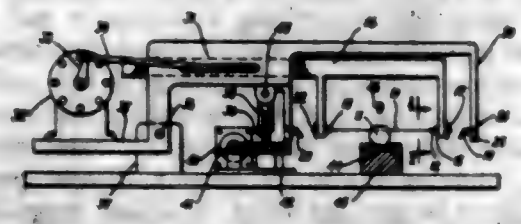
retain a missile in connection therewith, an elongated loading member having a rack portion slideably mounted to said handle to travel in a forward and rearward direction, an elastic sling member disposed in the form of a U-shaped loop open at its forward end, the forward end portions of said sling member being connected to transversely spaced forward portions of said loading member, the closed end of said loop engaging a rear portion of said missile, a lever pivotally mounted to said handle, to move forward and away from confronting portion of said handle, a pawl connected to said lever and positioned to engage successive teeth of said rack portion upon reciprocation of said lever to advance said member in a forward direction as said lever is moved toward said confronting portion and means to releasably retain said member in such advanced position when said lever is moved away from such confronting portion and a barrel fixedly mounted to said loading member between said transversely spaced forward portions thereof and extending longitudinally in the direction of travel of said loading member and about the path of said missile whereby as said lever is reciprocated said elastic sling means are stretched, said loading member and said barrel moving forwardly relative to said missile and whereby upon release said missile is projected forwardly through said barrel.



2,896,605
TOOLS

Elmer O. Thompson, Meadowbrook, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Application November 7, 1956, Serial No. 620,838
4 Claims. (Cl. 125—16)



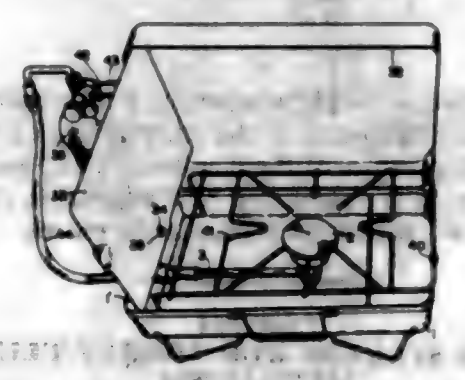
1. The method of sawing with an abrasive wire which comprises: performing a primary, reciprocatory movement of the wire along the axis thereof; and applying a force to the wire during a predetermined phase of such movement to perform a secondary, intermittent movement of the wire, about the axis thereof.

2,896,606
TRANSPORTABLE STOVES OR RANGES

Karl Gunnar Ross, Enskede, Bengt-Olof Johansson, Bromma, Sten Sune Axelsson, Hägersten, and Sten Åke Andersson, Alvsjö, Sweden, assignors to Aktiebolaget Bahco, Stockholm, Sweden, a corporation of Sweden

Application August 16, 1954, Serial No. 450,138
Claims priority, application Sweden August 19, 1953
3 Claims. (Cl. 126—38)

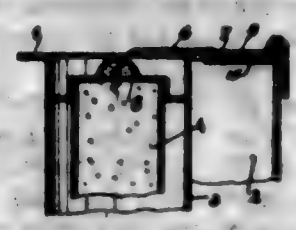
1. A portable gaseous fuel burning stove comprising, in combination, a rectangular box, a lid hingedly connected to one longitudinal side of said box for rotation between an operative open and an inoperative closed position relative to said box, said lid when in said operative position lying in a plane perpendicular of the longitudinal central plane of said box, said box defining a compartment for removably supporting the gaseous fuel burner and at least one gaseous fuel storage container having a circular bottom flange, a guide plate secured at one longitudinal extremity of said box for releasably positioning said container within said box, said guide plate including a transversely extending flange lying substantially parallel to said longitudinal central plane of said box and tapering toward each side thereof, said plate having at least one centrally disposed notch for receiving said circular bottom flange of said container to maintain releasably said container in a predetermined position within said box, a windshield hingedly connected for rotation about a transverse axis between an inoperative position parallel to said lid and an operative position perpendicular thereto to the inside of one longitudinal extremity of said lid adjacent to said one longitudinal extremity of said box, a bracket secured to said guide plate extending upwardly beyond the upper edge of said box into the path of movement of said windshield, said bracket having securement means for releasably engaging the adjacent edge of said windshield when rotated to said operative position to maintain said windshield and said lid in said respective operative positions.



2,896,607
FOOD CAN WITH IMMERSION HEATER

Adolf Eder, Linz, Austria, assignor to Etablissement EPOK, Vaduz, Liechtenstein

Application April 11, 1956, Serial No. 577,545
Claims priority, application Austria April 28, 1955
14 Claims. (Cl. 126—262)

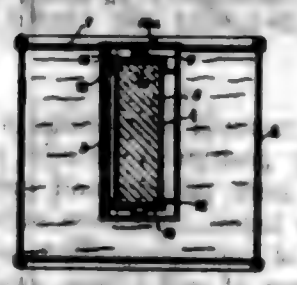


3. In combination a food can comprising a shell, a cover closing said shell at one end and a bottom closing the other end of said shell, a partition dividing the interior of said shell into two spaces and joined to said cover, food material stored in one of said spaces, a heating composition combustible without supply of air to heat said food material, said heating composition being contained in the other of said spaces, a body of bonded igniting composition contained in said other space and adapted to ignite said heating composition, a pull-off wire extending from the outside of said can through said cover and at least part of said body of igniting composition and adapted to cause said igniting composition to be ignited by friction when said wire is being pulled out of said can, said cover comprising a portion adapted to form an opening through which said one space communicates with the outside air, and a safety

holder for said speculum having a ring portion tele- members therethrough and having teeth extending later-

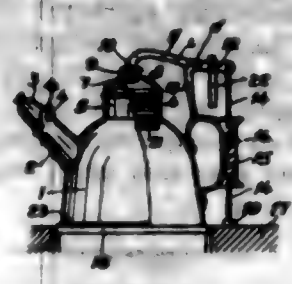
device removably attached to said cover and normally closing said opening and holding the pull-off wire outside said can close to said cover to prevent the pulling of said wire, said safety device being arranged first to expose said opening and only thereafter to release said wire from the outside of the cover when said safety device is being removed from said cover.

2,896,606
IMMERSION HEATER
Adolf Eder, Linz, Austria, assignor to Etablissement EPOK, Vaduz, Liechtenstein
Application April 11, 1956, Serial No. 577,546
Claims priority, application Austria April 20, 1955
24 Claims. (Cl. 126—262)



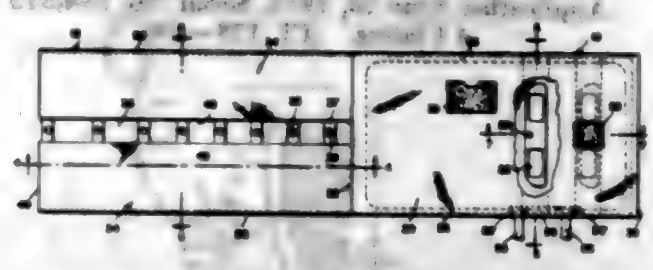
1. An immersion heater comprising a sealed container and a heating cartridge having a cross-section smaller than that of the container and inserted in the latter, said heating cartridge comprising a heating composition combustible without a supply of air and an igniter in position to ignite said composition and having an activating portion extending to the exterior of said container, said heating cartridge and container defining between them a space which surrounds said cartridge and is filled with air, and partitions extending from said cartridge to said container and dividing said space into a plurality of separate chambers having substantially no air communication between them.

2,896,609
COFFEE PREPARING APPARATUS
Göste Jacobsson, Gullspang, Sweden, assignor to Bertil Adamsson, Otterbacken, Sweden
Application February 3, 1955, Serial No. 485,964
Claims priority, application Sweden February 11, 1954
6 Claims. (Cl. 126—374)



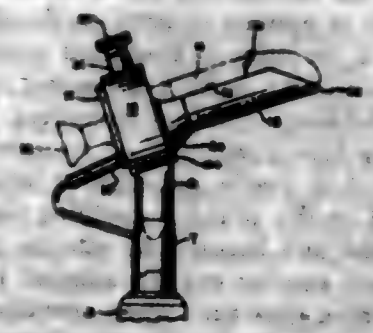
1. In combination with a liquid heating vessel adapted to be placed upon heating means mounted in the upper surface of a fixed support, said vessel having a casing with an opening in the upper portion thereof and a lower portion adapted to rest on said heating means; the invention which comprises pressure responsive means actuated by vapor pressure within the vessel casing for partially lifting said vessel from said heating means comprising a piston adapted to close the casing opening and vertically slidably movable in said casing opening, a substantially vertical lifting bar slidably movable relative to said casing and adapted to cooperate at its lower end with said fixed support, and a lever pivotally connected intermediate its ends to said casing, one end of said lever being connected to said piston and the other end of said lever being connected to said lifting bar, whereby upon increase of vapor pressure within said vessel, said piston will move upwardly to pivot said lever in a direction to cause said lifting bar to raise the vessel from the heating means.

2,896,610
SPHYGMOMANOMETER CUFFS
Irving A. Spoleman, Brooklyn, N.Y., assignor to Propper Manufacturing Company, Inc., Long Island City, N.Y., a corporation of New York
Application December 19, 1956, Serial No. 629,308
10 Claims. (Cl. 128—2.05)



1. A sphygmomanometer cuff or similar blood flow restricting device comprising an elongate body of flexible material and having a substantial width, the body comprising an inner end section and an outer end section, the inner section being in the form of a flat envelope, an inflatable bag within the envelope, the outer end section comprising two elongate band portions in spaced apart relation providing an elongate window opening therebetween, a plurality of ribs disposed across the opening in spaced apart relation longitudinally thereof, and co-operative attaching means provided on the ribs and on the inner end section respectively whereby a selected one of the ribs may be attached to the inner end section when the sections are placed in over-lapping relation, said ribs being of a length less than the width of the body and having their ends disposed within and covered by as well as secured to the band portions, and said co-operative attaching means comprise an aperture in each rib in the part thereof exposed in the window opening with a hook secured to and projecting from one side face of the outer end section, and in which cuff each of said band portions comprises a front side lamination and a rear side lamination, said laminations having secured together outer longitudinal edges and having infolded inner longitudinal edge portions lying together between the laminations, with said infolded portions being joined to form a longitudinal series of transverse pockets in each of which an end portion of a rib extends and is secured.

2,896,611
ORIFICIAL INSTRUMENT CONSTRUCTION
William C. Moore, Skaneateles, N.Y., assignor to Welch Allyn, Inc., Skaneateles, N.Y., a corporation of New York
Application August 8, 1957, Serial No. 677,845
7 Claims. (Cl. 128—3)

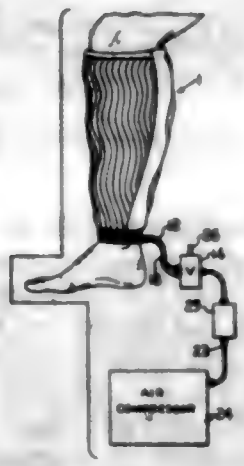


1. In a diagnostic instrument for the examination of a body cavity, a substantially tubular speculum adapted to enter the cavity, said speculum being open at both ends with a closed ring portion adjacent the proximal end, a

to one longitudinal side of said box for rotation between space communicates with the outside air, and a safety

holder for said speculum having a ring portion telescopically engageable with said speculum ring portion, and means on said holder and engageable with said speculum ring portion to effect rotation of the latter, said rotation effecting means also acting to releasably hold said two ring portions in engagement with one another.

2,896,612
PHYSICAL THERAPEUTIC APPARATUS
Rolland H. Bates and Carl Pantermoller, Milwaukee, Wis.
Application June 28, 1956, Serial No. 594,515
4 Claims. (Cl. 128—60)



1. A physical therapeutic apparatus adapted to be applied to a portion of the body comprising, a sheet of flexible material having a first series of closed internal passages formed therein and having a second series of closed internal passages alternately spaced with said first series, each of said passages having a sinuous configuration and being generally coextensive with adjacent passages, and means for alternately supplying fluid pressure to said first and second series of passages to alternately apply pressure to adjacent portions of the body.

2,896,613
FACE LIFTING DEVICE
Adolph M. Brown, Beverly Hills, Calif.
Application August 2, 1957, Serial No. 676,034
1 Claim. (Cl. 128—76)

In a device for minimizing facial senescence wherein a liquid adhesive is applied directly to the skin for attachment thereto, a plurality of elongated resilient tensioning members dimensioned to have a normal length less than the distance between auditory members, a plurality of anchoring members consisting of an open mesh fabric portion adapted to enable penetration into the liquid adhesive applied to the skin for enabling the fabric to become embedded and become an integral part of the adhesive layer and another portion adapted to be connected to said tensioning members when stretched to urge said tensioning members in the direction towards each other and away from the face; a buckling member; said tensioning members having their other extremities opposite their points of connection to said anchor members engaged by said buckling member; said buckling member being adapted to permit endwise sliding of the tensioning members therethrough and having teeth extending laterally in side by side parallel relationship into engagement with the hair shafts for anchorage.

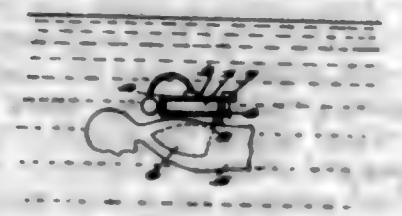
2,896,614
CERVICAL CANNULAS
Otto L. Schmitt and Frederick E. Lawrence, Denver, Colo., assignors to Larro' Laboratories, Inc., Denver, Colo., a corporation of Colorado
Application June 6, 1958, Serial No. 740,331
3 Claims. (Cl. 128—131)

1. A cervical cannula comprising: a tubular stem portion; an axially positioned passage extending the full length of said stem portion and opening to both extremities of the latter; a concave button formed on the outer extremity of said stem portion, said passage opening through the center of said button; two oppositely flaring prongs formed on the inner extremity of said stem portion, said passage opening between said prongs, the stem portion, the button, and the prongs are molded as a unit from an elastic plastic and having resilient conical discs surrounding said stem portion in spaced-apart relation, there being ports communicating between the exterior of said stem portion and the axial passage therein.

2,896,615
PROTECTIVE COVER FOR AN EYE
Paul Saigeti, Tel Aviv, Israel
Application May 21, 1957, Serial No. 660,641
Claims priority, application Israel May 26, 1956
1 Claim. (Cl. 128—132)

A protective cover for an eye comprising an eye-cup having a rim with face fitting edges, said eye-cup being adapted to be removably supported on a spectacle lens by means of a suction cup detachably mounted in a central aperture in the base of the eye-cup, small apertures for ventilation being provided between the base and the rim of the eye-cup and an opaque plate mounted within the eye-cup over said small ventilating apertures, but spaced therefrom.

2,896,616
ARRANGEMENT IN BREATHING APPARATUS FOR USE UNDER WATER
Mans Mansson Arborelius and Claes Erik Gunnar Lundgren, Stockholm, Sweden
Application July 3, 1956, Serial No. 595,721
4 Claims. (Cl. 128—142)



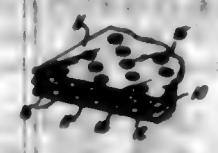
1. An oxygen breathing apparatus for under-water use, comprising a breathing bag which is provided with loading means responsive to the position of the breathing bag

with respect to the diver wearing said bag for compressing the breathing bag when the breathing bag is above the chest of the diver and for expanding the breathing bag when the breathing bag is below the chest of the diver so as to compensate for the difference between the hydrostatic pressure acting on the breathing bag and the diver's chest owing to different depth positions thereof, said means being connected with one rigid wall of a breathing bag comprising two rigid walls connected together in the manner of a hinge.

2,896,617
AIR SUPPLIED HOOD STRUCTURE
Wesley A. Gibbons, Birmingham, Mich.
Application November 3, 1955, Serial No. 544,732
13 Claims. (Cl. 128—145)

1. An air diffuser for an air supplied hood comprising, a support adapted to be secured on a hood, means forming on said support a body of material permeable to the passage of air, said body having hollow form, a conduit projecting into the interior of said body, said conduit being adapted to be connected to a source of air under pressure, said conduit having a portion with plurality of axially and circumferentially spaced outlet ports therein, said ports opening directly against the material forming said body, the exterior of said body being exposed to the interior of a hood on which said support is secured, whereby to pass air through said body into a hood, said body having resilient cellular construction for diffusing the air passing therethrough and deadening the sound thereof, said body being formed of a sheet of felt folded upon itself to a U-shape with said conduit projecting between the folds, the legs of the U engaging said portion of said conduit.

2,896,618
CORRUGATED DRESSING
Robert John Schaefer, Plainfield, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Application January 21, 1958, Serial No. 710,245
19 Claims. (Cl. 128—156)

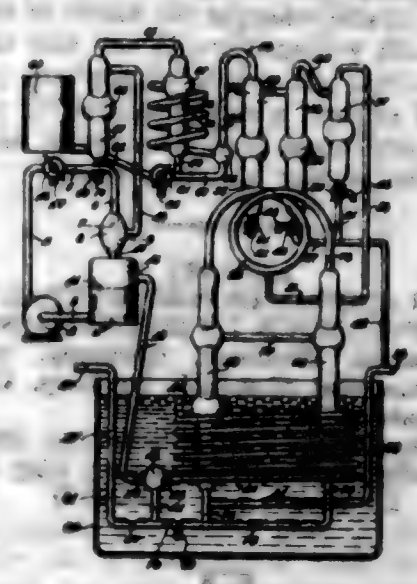


3. A dressing comprising an absorbent pad having at least one embossed surface containing a plurality of bosses, a flexible water insoluble perforated film covering the embossed face of said pad and bonded to said pad at the point of contact of said bosses with said film.

2,896,619
APPARATUS FOR HANDLING FLUID BLOOD
David Bellamy, Jr., Framingham, Mass., assignor to Fenwal Laboratories, Inc., Ashland, Mass., a corporation of Massachusetts
Application October 14, 1954, Serial No. 462,239
5 Claims. (Cl. 128—214)

4. A blood handling apparatus comprising a flexible collapsible bag, the bag of a size to store a blood donation, a flexible collapsible collecting tube having one end opening through and integrally sealed into a wall of the bag, the tube of a length to present in line a plurality of individual sealed segments to store a like number of blood aliquots for sampling, typing, cross-matching, and culturing purposes, transverse demarcations integrally raised at segmenting intervals on the tube wall, said demarcations conditioning the tube for dividing by closing and sealing thereat into said individual aliquot-storing segments, and like symbol formations integrally raised on an external wall area of the bag and each segment, said formations positively and lastingly identifying and matching said aliquots with said donation.

2,896,620
BLOOD ARTERIALIZING METHOD AND APPARATUS THEREFOR
Jean-Louis Tremblay, Quebec, Quebec, Canada
Application November 28, 1955, Serial No. 549,420
7 Claims. (Cl. 128—214)



1. A blood arterializing apparatus comprising in combination a spherical mixing chamber, a first tube opening at the bottom of said chamber for supplying liquid venous blood thereto, a second tube in communication with said spherical mixing chamber at the side of the latter for supplying oxygen under a predetermined constant pressure to said mixing chamber, a third tube in communication with said mixing chamber at substantially the same level as said second tube, means to regulate the oxygen pressure in said second tube such that the blood in said mixing chamber will be maintained at a level substantially opposite the communication of said mixing chamber with said third tube so as to cause flowing of said blood into said third tube as discrete quantities of blood alternating with oxygen bubbles, said oxygen bubbles occupying the entire cross-sectional area of said third tube to separate

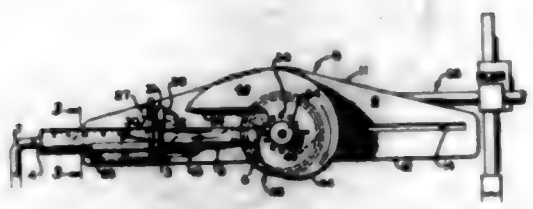
being adapted to permit endwise sliding of the tensioning

ing means responsive to the position of the breathing bag

adjacent discrete quantities of blood, said third tube being only slightly upwardly inclined and having a sufficient length to maintain said oxygen bubbles and said discrete quantities of blood in mutual contact for a period of time sufficient to effect arterialization of the blood, the cross-sectional areas of said first, second and third tubes and of their communications with said mixing chamber being substantially equal to one another.

plug which separates said chambers from one another, shuts the chambers off towards the exterior and serves as an injection plunger, a cannula having a bore connected to one of said chambers, a mandrel fitting into said bore of said cannula, a sealing plug connected to said mandrel, sealing the outlet end of said cannula, and a hollow plunger rod surrounding said cannula, said hollow plunger rod being provided with an abutment serving to hold said sealing plug in fixed sealing position.

2,896,621
MOTOR DRIVEN SYRINGE
John J. Rodriguez, Berkeley, Calif.
Application April 16, 1957, Serial No. 653,230
5 Claims. (Cl. 128—218)

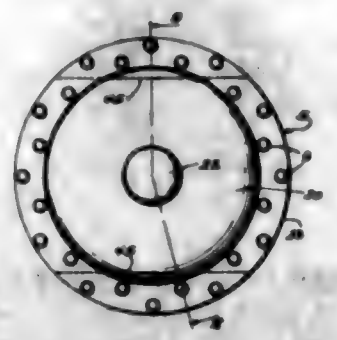


1. A motor driven syringe including a frame, a syringe comprising a body member having a barrel and a lip on said barrel and a reciprocable plunger within said barrel, a bracket associated with said frame for securing said syringe to said frame, said bracket comprising a member adapted to be secured to said frame, a V-shaped cradle provided in a surface of said member and serving as a cradle for the barrel of said syringe, an adjustable clamp spaced from said member, said adjustable clamp being provided with a slanting surface and serving to embrace the lip on the body of said syringe, the axis of said slanting surface being arranged transversely with respect to the axis of said V-shaped cradle, and means for securing said clamp in a fixed position with respect to said cradle whereby the barrel of said syringe is carried by said V-shaped cradle and said clamp locks said syringe within said cradle by applying pressure to the lip of said syringe, a motor secured to said frame, and a spiral cam driven from said motor and coacting directly with the plunger of said syringe.

2,896,622
INJECTION AMPOULES FOR SEVERAL MEDIA AND INTENDED TO BE USED ONCE
Willi Hittermann, Ellendorf, Germany, assignor to Chemie Grunenthal G.m.b.H., Stolberg, Germany, a body corporate of Germany
Application May 17, 1955, Serial No. 508,871
Claims priority, application Germany May 28, 1954
2 Claims. (Cl. 128—272)

1. An injection ampoule for a number of media and intended to be used once, comprising chambers intended to accommodate different media, a single unitary resilient

2,896,623
BREAST PAD AND METHOD OF MANUFACTURE
Edward L. Fitzgerald, Green Bay, Wis., assignor to Disan Manufacturing Company, Green Bay, Wis., a corporation of Wisconsin
Application October 12, 1955, Serial No. 540,829
3 Claims. (Cl. 128—280)



1. A breast pad comprising an outwardly convex multi-ply disk having adjacent its center a further outwardly convex portion providing a nipple-receiving pocket, the outwardly convex and pocket-forming portions of said disk being of substantially uniform thickness and density and comprising material of substantially like absorptive capacity, the disk being provided with an outer rim having at intervals embossed protuberances in which fibers of the several plies are interlocked.

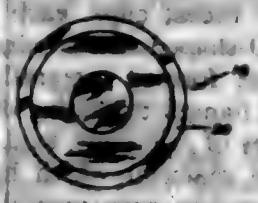
2,896,624
COLOSTOMY BELT
Gaspare Robert Candido, Londonville, N.Y., assignor to National Surgical and Chemical Company, Inc., Albany, N.Y., a corporation of New York
Application June 25, 1956, Serial No. 593,733
6 Claims. (Cl. 128—283)

1. A colostomy unit comprising a flexible disc having diametrically opposed extensions and a centrally located aperture, a flexible bag having an open end, said bag extending through the aperture in said disc and having portions of said bag adjacent its open end folded outwardly over the portions of the disc subsisting only between said extensions.

2,896,625
COLOSTOMY DRESSING
Fannie B. Austin, Silver Spring, Md.
Application December 18, 1956, Serial No. 629,168
6 Claims. (Cl. 128—283)

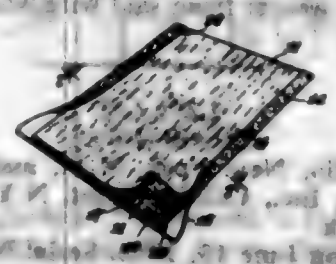
1. A colostomy dressing consisting of a wet medicament pad backed by and marginally overlaid by a multi-

layer cellulose wadding, a sheet of water repellent fabric in juxtaposition with that face of wadding opposite the



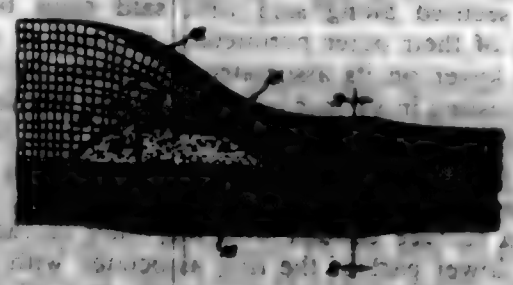
wet pad, and said fabric sheet having an extended marginal edge peripherally about the wadding.

2,896,626
DISPOSABLE ABSORBENT PAD
Edward H. Voigtman, Neenah, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Continuation of application Serial No. 340,522, Mar. 5, 1953. This application June 17, 1958, Serial No. 742,544
9 Claims. (Cl. 128—287)



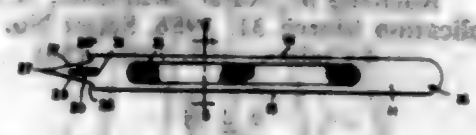
1. A single use absorbent pad comprising a filling of absorbent material of selected thickness, a cover sheet of a pervious material substantially co-extensive in width with said filler material and a flexible protective backing sheet comprising a thin film of thermoplastic material having a loose web of fibrous material embedded in one face thereof and extending only partially therethrough, said backing sheet having marginal side portions folded over the margins of the top surface of said absorbent filler material, the fiber-free side of said folded over portions of said protective backing sheet being in face to face engagement and heat-sealed to said cover sheet along lines spaced from the side edges of one of said sheets so as to maintain the cover sheet, filler material, and backing sheet in assembled relation and so as to leave edge strips which are free of attachment to the underlying sheet and which have a tendency to rise therefrom.

2,896,627
SANITARY NAPKIN
Kenneth J. Harwood, Neenah, Wis., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Continuation of application Serial No. 522,092, July 14, 1955. This application June 17, 1958, Serial No. 742,545
12 Claims. (Cl. 128—290)



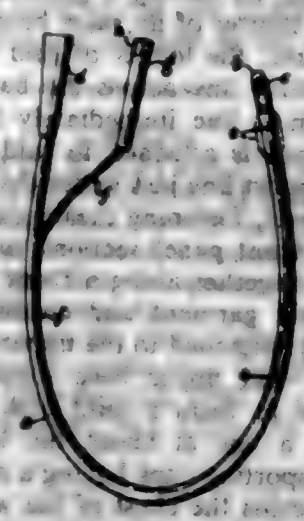
1. An absorbent pad comprising a body of fluid absorbent, fibrous material, a fluid resistant baffle sheet, and a fibrous wrapper disposed about said pad body and baffle sheet, said baffle sheet comprising a web of fibers embedded in a thin plastic film, said baffle sheet being so disposed in said pad that frictional engagement is established between the fibrous surface of said baffle sheet and an adjacent fibrous surface in said pad thereby preventing relative sliding movement therebetween.

2,896,628
BLOOD LANCETS
Irving A. Spielman, Brooklyn, N.Y., assignor to Prosper Manufacturing Company, Inc., Long Island City, N.Y., a corporation of New York
Application June 12, 1957, Serial No. 665,227
3 Claims. (Cl. 128—314)



2. A disposable lancet of metal having a main body portion terminating in a pointed portion, and means associated with the pointed portion for both reinforcing the point and for enlarging the puncture in the patient's skin to an extent substantially greater than the thickness of the body of the lancet, which means comprise a depression on one face of the pointed portion and a corresponding projection of the opposite face with the depression shaped to have a pen part connected with the handle part that is rib-shaped in cross-section.

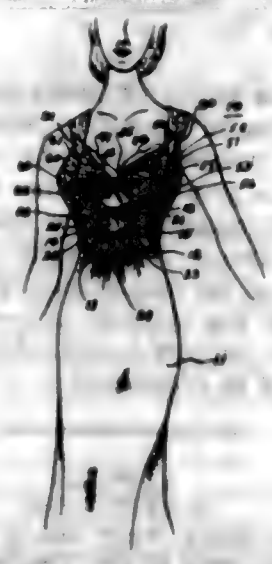
2,896,629
CATHETERS
John Henry Warr, Hove, England
Application April 8, 1957, Serial No. 651,437
Claims priority, application Great Britain February 8, 1957
2 Claims. (Cl. 128—349)



1. A pierceable self-sealing plug of resilient material designed for use in conjunction with the inflating tube of a catheter and with hypodermic syringe, said plug having a side wall and inner and outer end walls, said side wall adapted to seal the mouth of the inflating tube, said inner end wall being adapted to face the interior of the inflating tube, said outer end wall being adapted to extend within the mouth of the inflating tube and being provided adjacent said side wall with a circular wall portion merging along the inner surface thereof with a right circular cone-shaped wall surface extending toward said inner end wall, said circular wall portion being provided with a convex and curved section adapted to project above the mouth of the inflating tube and adjacent said side wall for positioning the hypodermic syringe within said circular wall portion, said right circular cone-shaped wall surface forming a tapering blind opening in said plug which is coaxial with said circular wall portion for guiding and centering the point of the hypodermic

syringe, said blind opening having a vertex spaced from said inner end wall to leave a relatively thin frangible self-sealing wall through which the point of the hypodermic syringe guided and centered within said blind opening is adapted to be repetitively inserted, the vertex angle of said right circular cone-shaped wall surface being such as to prevent penetration of the point of the hypodermic syringe through said last mentioned wall surface and ensure repetitive penetration of the point of the hypodermic syringe through said vertex.

2,896,630
NIGHTGOWN
Rochelle M. Adler, Scarsdale, N.Y.
Application March 31, 1958, Serial No. 725,372
4 Claims. (Cl. 128—454)

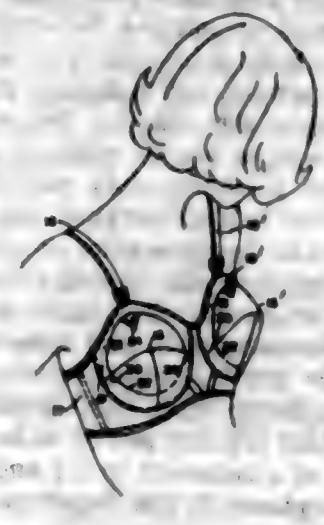


1. A garment embodying a brassiere top having breast cups, comprising a midriff portion, a skirt attached thereto, said midriff comprising an elastic fabric rear panel characterized by its having a generally trapezoidal configuration, the shorter of its bases being oriented to waist-level of a wearer, the longer of said bases of said panel forming a natural line across the back of a wearer approximately on a line immediately below the shoulder blades, front panels attached to said waistband defining upper base support line just under the breasts of a wearer at a natural level, fastening means on the remaining two edges of said front panel sections, said fastening means being brought together along a front line to permit front opening of said garment and consisting of ties, breast supporting cups attached to the upper edge of said midriff section along said upper base support line and being shaped natural to form a joint with said elastic midriff section along a line at about the base of the breasts, said breast supporting cups having a central tie for fastening together across the chest of the wearer, and shoulder support continuing from loops in said supporting cups to corresponding loops on the upper edge of the rear section of the midriff portion.

2,896,631
BRASSIERE
Lester Wilfred Block, Culver City, Calif.
Application July 14, 1958, Serial No. 748,423
5 Claims. (Cl. 128—475)

1. In a brassiere having a pair of breast cups and a pair of flat U-shaped wires surrounding the lower edges of said breast cups, said wires having their flat sides extending substantially parallel to the body of the wearer when said brassiere is in use, a pair of resilient pads mounted in said breast cups, each of said pads having a substantially U-shaped lower edge, a substantially U-shaped flat flange formed integrally with each of said breast pads, said flanges extending downwardly along the entire lower edges of said pads, said flanges being formed of resilient foam material which has been permanently compressed to a thickness several times less than its normal thickness to provide greater firmness and reduced compressibility, said flanges being disposed between said wires and the body of the wearer when said brassiere is in use, a U-shaped pair of stitches surrounding the lower edge of each of said breast cups, said stitches extending on opposite sides of said wire to define a pair of channels in which said wires are held, at least one of each of said pairs of stitches extending through the flange of one of said breast pads, said stitches holding said breast pad in position within said breast cup and also holding said flange so that it is disposed adjacent to said wire and extends parallel to the flat side of said wire between said wire and the body of the wearer to cushion the body of the wearer from said wire when said brassiere is in use.

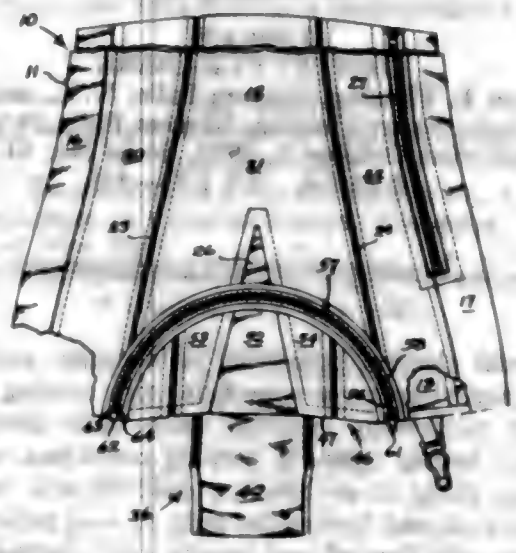
2,896,632
BRASSIERES
Flavia Di Tullio, New York, N.Y., assignor to Sacony Foundations, Inc., College Point, N.Y., a corporation of New York
Application June 19, 1958, Serial No. 743,039
6 Claims. (Cl. 128—484)



1. In combination with a brassiere having a pair of breast cups and shoulder straps; a pair of flat rings of pliable material; each cup being positioned that its mouth rim surrounds both the upper and under sides of a breast when the brassiere is worn; each cup having a slit at the side edge region of the garment and at the breast-bone region; each cup being positioned through a ring; opposite regions of each ring being positioned through the slits of its associated cup; the outer perimeter of each ring being congruent with the mouth rim of the cup it is on and secured along said rim; said rings being free inwardly of their outer perimeters; the part of each ring which is lower on its associated cup, being interior such cup and resting in surface contact with the interior surface of its associated cup for contact surface with the underside of the breast and the part of each ring which is higher on its associated cup, being exterior said cup and resting in surface contact with the outer surface of said cup; the lower part of the ring associated with each cup, being in continuation of the upper part of said ring; the width of the lower portion of each ring being of a dimension so it is adapted to serve as a sling to support the underside of a breast and the width of the upper portion of the ring being of a dimension adapted to

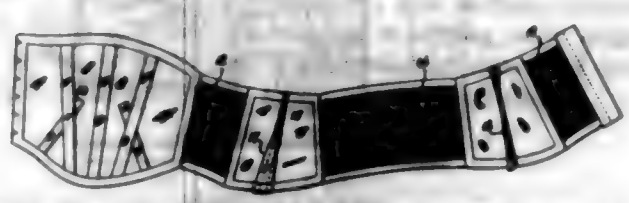
conceal substantially any irregularities occurring in the contour of the upper portion of the cup it is associated with; one end of each shoulder strap being secured to the very top region of each ring respectively.

2,896,633
GARMENT
Velda McKee, Portland, Oreg.
Application October 20, 1958, Serial No. 768,293
7 Claims. (Cl. 128—526)



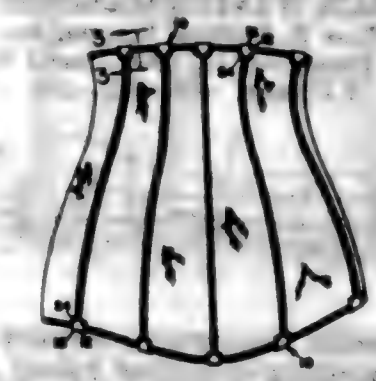
1. A lady's garment comprising a body part adapted snugly to be fitted on the lower trunk portion of a wearer and to encompass the buttocks and abdomen of a wearer, said body part having front and back sections for covering the lower trunk front and back areas, respectively, an elongated flap portion secured at one end to the back section of said body part intermediate opposite sides of the section, said flap portion terminating at its other end in an attachment panel section having opposite end edges arranged on opposite sides, respectively, of said flap portion, and means detachably securing the attachment panel section to the front section of said body portion, the latter means comprising elongated slide fastener means extending continuously substantially the distance between the opposite end edges of the attachment panel section, said slide fastener means describing a continuously curving sweep between the end edges of the attachment panel section.

2,896,634
MATERNITY GIRDLE
Salkud N. Boder, Brooklyn, N.Y.
Application February 5, 1958, Serial No. 713,445
2 Claims. (Cl. 128—558)



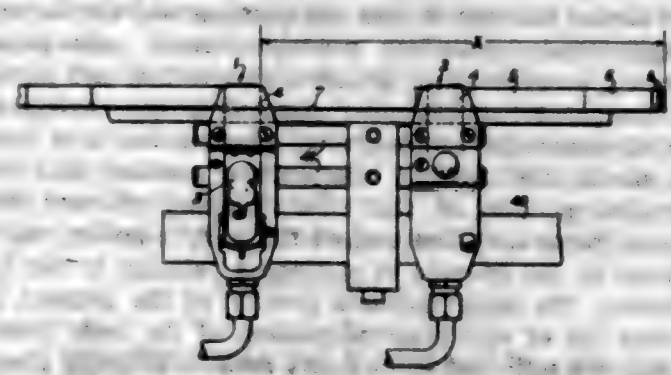
1. A maternity girdle, comprising an inelastic panel conforming to the shape of the lower abdomen between the hip bones and from a point above the crotch to a point above the navel, a pair of vertically extending laterally elastic bands, one attached to each side of said panel, extending to the middle of the side of the wearer, a laterally elastic back panel extending across the flat section of the back but not quite to the outwardly projecting portion of the ilium, and a side pair of inelastic panels each extending around the ilium and having their ends attached to the free edges of each of said elastic panels, said back panel and said inelastic panels extending vertically substantially from a point above the line of the navel to the lower edge of said front panel.

2,896,635
CORSET RIB GUARD
Marcus H. Bookis, Denver, Colo.
Application November 19, 1958, Serial No. 774,959
1 Claim. (Cl. 128—568)



In a garment, the combination which comprises outer and inner tubular layers of material, laterally spaced stiffening ribs positioned between the layers of material and extended from the lower to the upper end of the garment, protective guards, U-shaped in cross section, having side plates connected by arcuate portions extended over upper and lower edges of the garment and positioned over the ends of the ribs therein, the side plates having nodes on inner surfaces thereof and openings therethrough, the nodes gripping the fabric of the corset and retaining the fabric in position in relation to the ribs, the nodes and openings being positioned at the corners of the free edges of the guards, and the said corners of the free edges being arcuate, and stitches extended through the openings of the side walls of the guards and into the material of the garment, the stitches being positioned on opposite sides of the ribs and thereby retaining the guards in position in relation to the ribs.

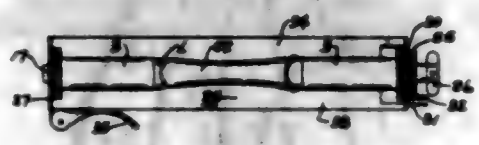
2,896,636
DETECTOR DEVICE SUITABLE FOR USE WITH CIGARETTE-MAKING MACHINES
Gordon Francis Wellington Powell and Richard Graham Crosland, both of Deptford, London, England, assignors to Molins Machine Company, Limited, London, England, a British company
Application January 20, 1958, Serial No. 710,000
Claims priority, application Great Britain January 25, 1957
5 Claims. (Cl. 131—21)



1. Apparatus for detecting spacing and motion faults in a succession of workpieces moving in spaced relationship, comprising a first photoelectric detector having a photoelectric cell and means for directing a beam of light thereon, said cell becoming illuminated as the trailing end of a workpiece passes out of the light beam directed on to said cell, a second photoelectric detector having a photoelectric cell and means for directing a beam of

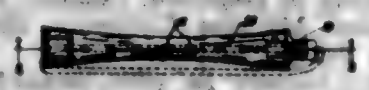
light thereon, said last named cell being obscured as the leading end of the succeeding workpiece passes into the light beam directed on to the cell of said second detector, a relay, and a circuit connecting said cells and said relay for energizing said relay on illumination of the cell of said first detector unless the cell of said second detector is concurrently obscured.

2,896,637
HAIR WAVING MANDREL
Rose E. Melaro, Verona, Pa.
Application December 13, 1956, Serial No. 628,181
2 Claims. (Cl. 132—34)



1. A combination croquignole and spiral wave forming mechanism comprising a mandrel having a croquignole section, shafts concentric with the central longitudinal axis of the croquignole section and extending from each end of said section, a cylindrical spiral winding section mounted for rotation on each shaft, clutch means operatively connecting each spiral winding section with the shaft on which it is mounted whereby the spiral winding sections may rotate in the same but only one direction relative to the croquignole section, and a holding device for preventing rotation of the mandrel when it is close to the scalp and hair is wound thereon, said clutch means permitting rotation of the spiral winding sections in a direction opposite to the direction of rotation of the croquignole section when hair is being wound thereon to bring the mandrel to the holding device when in operative position, and separate means on the holding device for each spiral winding section to restrain rotation of those sections in a direction to unwind the hair.

2,896,638
PERMANENT WAVING ROD
Conrad P. Kerman, Minneapolis, Minn.
Application December 30, 1957, Serial No. 705,988
10 Claims. (Cl. 132—43)

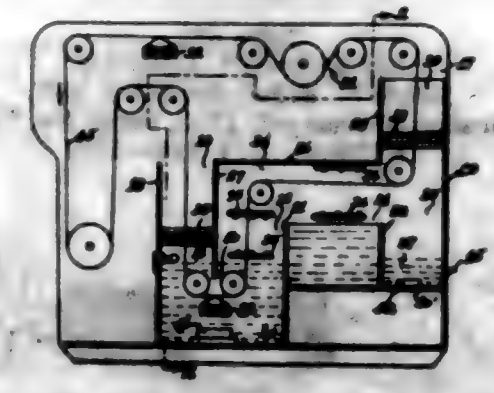


1. A hair-curling device comprising an elongated body member upon which hair is to be wound, said body member having first and second end portions and also having a longitudinally extending passage therein, said passage opening in an endwise direction at said first end portion, an elongated hair-clamping element in the passage and having inner and outer terminal portions and also having an elastic and flexible intermediate portion, said inner terminal portion of the hair clamping element being spaced from said first end of the body member and anchored in the passage in stationary relation to the body member, the outer terminal portion of the element projecting out of said first end portion of the body member a distance sufficient to facilitate manual gripping thereof, means on the body member at said first end portion cooperatively constructed and arranged in relation to the outer terminal portion of the hair-clamping element for anchoring the outer terminal portion of the hair-clamping element and preventing retraction thereof into the passage, additional means on the body member spaced longitudinally along the exterior thereof from said first end portion and cooperatively constructed and arranged in relation to the outer terminal portion of the hair-clamping element for releasably anchoring the outer terminal portion of the hair clamping element to hold the intermediate elastic portion along the exterior of the body member in hair-clamping relation thereto, the intermediate elastic portion of the hair clamping element being dimensioned to be under tension continuously to be normally fully retracted in the passage with only the outer terminal portion projecting slightly from the body member, whereby to prevent hair from becoming entangled with the hair-clamping element when hair is being wound on the body member.

2,896,639
DENTAL CLEANERS
Margaret E. Fleming, Niagara Falls, N.Y., assignor to John Stuart Fleming, Niagara Falls, N.Y.
Application October 1, 1956, Serial No. 613,247
1 Claim. (Cl. 132—93)

A dental cleaner, consisting of a major strip of thin flexible paper having a superficial thin coating of water repellant reinforcing material upon both sides thereof, said strip having opposite parallel cushioned soft edges extending along it as borders, each of said soft edges being beveled and having the pulp of said paper exposed upon one side thereof and having said coating upon its non-beveled side supporting said soft edge against undue vertical yielding during movement of said strip between adjacent teeth, the beveled side of one of said soft edges being located upon one side of said strip, the beveled side of the opposite soft edge being located upon the opposite side of said strip, said major strip being provided with a plurality of weakened tear lines indented in said coating defining minor dental cleaner strips adapted to be torn from said major strip along said indented tear lines, the identation of said tear lines in said coating facilitating an accurate tear along said lines.

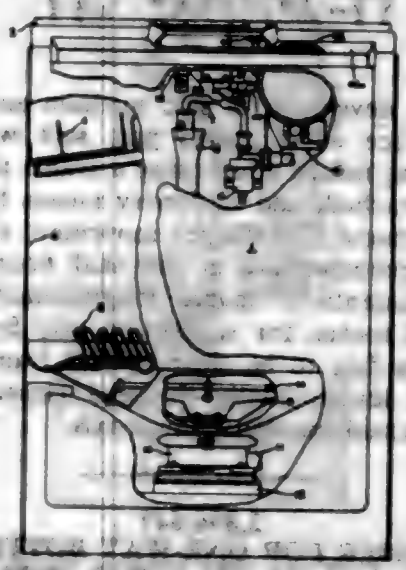
2,896,640
DEGREASING APPARATUS
Max Randall, Spring Valley, N.Y., and Martin Randall, Bergenfield, N.J., assignors to Ramco Equipment Corp., New York, N.Y., a corporation of New York
Application August 7, 1957, Serial No. 676,896
4 Claims. (Cl. 134—57)



1. In a degreasing apparatus of the character described, the combination of a tank for holding degreasing liquid, a container for receiving a supply of degreasing vapor, a degreasing vapor generating means arranged to supply such vapor into said container; said generating means including a heating means adapted to vaporize a supply of degreasing liquid, a duct leading from said vapor container into the tank and opening downwardly therein at a level below that of the liquid in said tank whereby the lower portion of said duct is filled with liquid thereby effecting a seal to block the vapor; said container having an exit opening, cooling means at the upper por-

tion of the tank above the liquid level for maintaining the vapor at a predetermined level there when the level of the liquid in said tank falls below the opening of the duct which is in said tank, a conveyor system arranged to transport work to be cleaned, first down into the liquid in the tank, then upwardly through said duct and thence into the vapor in said container and then out of said vapor container through said exit opening and means for deactuating said heating means, controlled by the level of the liquid in the tank and arranged to operate when said level falls to a predetermined position.

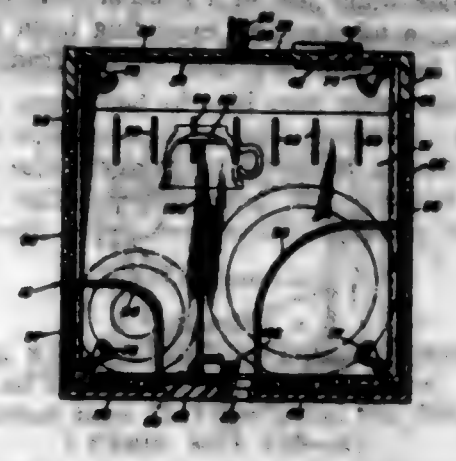
2,896,641
DISHWASHER WITH COVER LATCHING MECHANISM
Melvin R. Kauffman and John A. Dichon, Jr., Louisville, Ky., assignors to General Electric Company, a corporation of New York
Application July 24, 1957, Serial No. 673,909
4 Claims. (Cl. 134—58)



1. A dishwasher comprising timer control means, a washing compartment, electrically energized means for circulating water therein, a cover for said compartment, a catch on said cover, an interlock switch for interrupting the circuit supplying energy to said water circulating means, a latch member mounted adjacent said compartment for pivotal movement from an unlocked position to a locked position in engagement with said catch, means for biasing said latch member to said unlocked position, cam means operatively connected with said catch for engaging and moving said latch member to its locked position as the cover is closed, trigger means for releasably retaining said latch member in said locked position, said trigger means including means for actuating said switch to closed circuit position only when said latch member is in said locked position, and means operated by said timer control means for actuating said trigger means so as to open said switch and release said latch member for movement to said unlocked position.

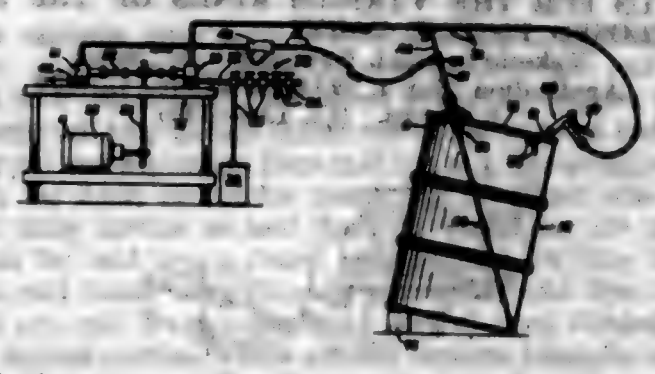
2,896,642
DISHWASHER
James J. Lilly, Chicago, Ill.
Application January 4, 1956, Serial No. 557,270
7 Claims. (Cl. 134—93)

1. A dishwasher comprising a receptacle provided with side walls, a bottom and an open top, a closure for said open top, spray conduits connected with said closure, means communicating with said conduits for connection with a source of liquid under pressure, spray pipes disposed at the bottom of said receptacle, liquid conducting means connecting said conduits and pipes for delivering liquid from the conduits into said pipes, said liquid conducting means including first liquid conducting pipes in said closure and having inner ends registered with said means and outer open ends, second liquid conducting pipes in said receptacle walls and having open ends which confront and are registered with said outer ends of said



first pipes when said closure is on said receptacle, and a spray head located at each corner of said closure and said receptacle and communicated with said liquid conducting pipes.

2,896,643
CLEANING EQUIPMENT
Dean C. Ottesen, Dayton, Ohio, assignor to Ottesen Solvents Inc., Dayton, Ohio, a corporation of Ohio
Application April 24, 1957, Serial No. 652,133
5 Claims. (Cl. 134—99)

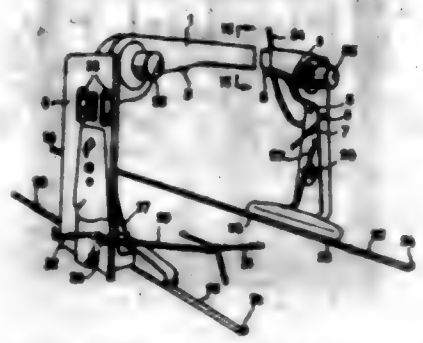


1. Apparatus of the character described for use with an inflammable solvent to clean a drum of predetermined diameter and length having two spaced bung openings adjacent the periphery of the top thereof, comprising a pressure pump having an inlet adapted for connection to a source of solvent, a spray nozzle proportioned to extend through one of said bung openings, means connecting the outlet of said pressure pump to said nozzle to deliver solvent thereto for discharge within the drum, a suction probe receivable through the other of said bung openings and of greater length than the distance from said other opening to the opposite side of the bottom of the drum, a suction pump, means connecting said suction probe to the inlet of said suction pump to withdraw solvent and dissolved material from within said drum, and means carried by said suction probe for illuminating the interior of said drum for visual inspection thereof through said one opening.

2,896,644
MOTOR VEHICLE WASHING PLANT
Roberto Emanuel, Turin, Italy, assignor to Emanuel di Giuseppe e Roberto Emanuel & C. S.A.S., Turin, Italy
Application October 2, 1957, Serial No. 687,734
1 Claim. (Cl. 134—99)

In a vehicle washing apparatus, a substantially U-shaped hollow sheet metal frame in an inverted upright position adapted to span the body of the vehicle, the U-shaped frame comprising a pair of wheeled legs and a bracing section interconnecting the legs, blower housings formed by the sheet metal frame in transition zones between the bracing section and the legs, an air

blower accommodated in each housing in the frame, a substantially downwardly directed slot-shaped blowing nozzle in the bracing section extending throughout the span of the frame, a rotary water jet supported from each leg to emanate water jets in a general direction towards the other leg, a tubular arm extending from a root section of one leg within the span of the frame, the said



tubular arm being pivoted on the respective leg for swinging in a horizontal plane beneath the vehicle body, a rotary jet mounted rotatably in a horizontal plane on the free end of the tubular arm, and control means supported from the said one leg for controlling the blowers, rotary jets and swinging movements of the tubular arm.

2,896,645

PORTABLE WASHING AND CLEANING APPARATUS FOR THE VARIOUS KINDS OF THE ENCLOSED ENGINE PARTS

Takeshi Iwasaki, Kawasaki City, Japan

Application May 4, 1954, Serial No. 427,504
2 Claims. (Cl. 134—111)

1. A portable washing and cleaning apparatus for enclosed engine members comprising a tank, a vacuum pump connected to said tank for creating a vacuum therein, an oil supply tank, a nozzle for being inserted in said engine, a pipe connecting said nozzle to said oil supply tank, a reversible pressure and vacuum pump interconnected in said pipe, a valve connected in said first mentioned pipe between said nozzle and said reversible pump for controlling the flow therethrough, a suction nozzle also for being inserted in said engine, a pipe connecting said suction nozzle to said vacuum tank, a valve connected in said second pipe for controlling the flow therethrough, a filter tank for cleaning said oil connected to said first mentioned pipe, a by-pass pipe connecting said valves for at times diverting flow between said first and second mentioned pipes, whereby said first-mentioned nozzle can be used to supply cleaning oil into said engine or draw the same away in repeating cycles, means for drawing cleaned oil from said filter tank to said oil supply tank and a portable carriage supporting all of the aforementioned elements.

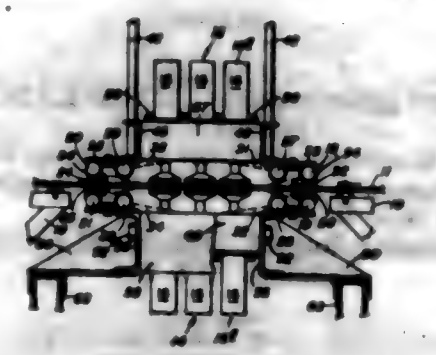
2,896,646

MACHINE FOR VIBRATION TREATMENT OF SURFACES

Robert M. Watson, North Hollywood, Calif., assignor to Bendix Aviation Corporation, North Hollywood, Calif., a corporation of Delaware

Application May 5, 1954, Serial No. 427,736
2 Claims. (Cl. 134—122)

1. A machine of the type described for treating the upper face of an object moving therepast through a fixed path extending parallel to one dimension of said face, said machine comprising: an electromechanical vibrator having a working face vibrating in direction normal thereto; means supporting said vibrator in stationary position with said working face in closely spaced parallel relation to the adjacent boundary of the said fixed path, said working face extending horizontally the full width of said object face whereby all portions of the latter pass in close proximity to said working face; means for directing a liquid medium into the space between said working face and said object face where-



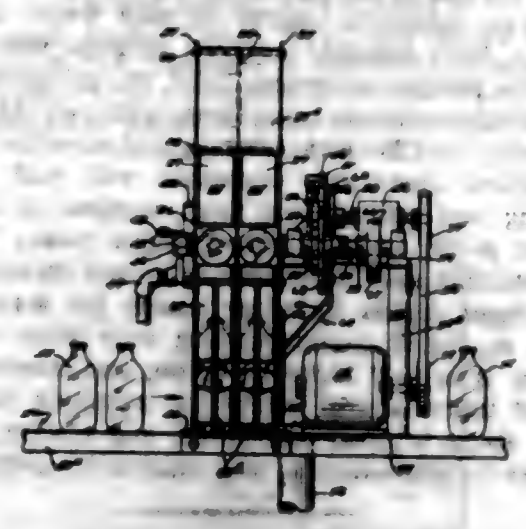
by waves are developed in said medium and applied to said object face as it moves past said working face; said supporting means comprising a frame to which said vibrator is attached, and stationary means hingedly supporting said frame for swinging movement about a transverse axis approximately in the said boundary of the path and substantially spaced longitudinally from said vibrator, and means for supporting said frame adapted to rest on the face to be cleaned, said frame-supporting means being longitudinally disposed closer to said vibrator than is said transverse hinge axis.

2,896,647

RINSER FOR ONE-WAY BOTTLES

John W. Thomson, Jr., Menlo Park, Calif., assignor to Owens-Illinois Glass Company, a corporation of Ohio

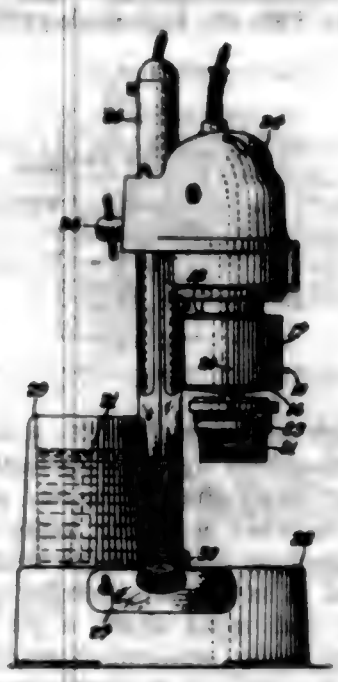
Application May 24, 1955, Serial No. 510,653
4 Claims. (Cl. 134—133)



1. In apparatus of the character described, a rotatable hollow cylindrical hub mounted with its axis disposed horizontally, an annular series of bottle receiving pockets extending radially outward from the periphery of said hub, each pocket being open at its outer end and at opposite sides whereby bottles may enter and leave the pockets along a path substantially parallel to the axis to the hub, vertical plates closing the opposite sides of the pockets except at that point at which the pockets open directly downward, each pocket having a bottle neck centering cushion at the hub end, each cushion having an axial opening providing communication between the interior of the hub and a pocket, an upwardly inclined cleaning fluid nozzle within the hub, means for effecting intermit-

tent rotation of the hub and pockets to bring the latter successively into register with the nozzle, automatic means for effecting flow of the cleaning fluid through the nozzle each time a pocket is brought into register with the nozzle, and an upwardly opening catch-pan mounted in the lower portion of the hub and of sufficient width to receive cleaning fluid draining from all of the pockets when positioned with their axes above a horizontal center line through the hub.

2,896,648
ULTRASONIC CLEANER AND DEGREASER
Max A. Lasarus, South Orange, N.J.
Application August 25, 1955, Serial No. 756,898
4 Claims. (Cl. 134—147)

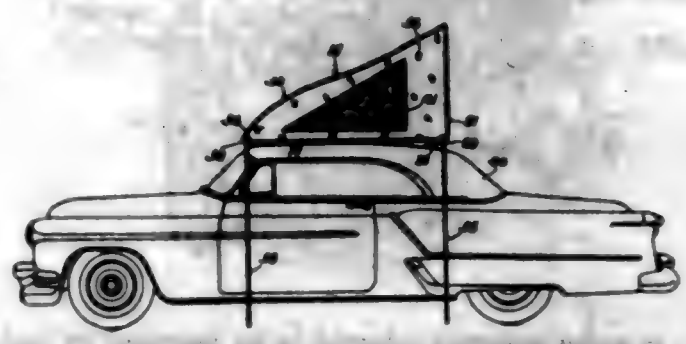


1. An ultrasonic cleaner and degreaser comprising a shaft, a driving means for the shaft, an ultrasonic means surrounding the shaft above the lower end of the shaft, a foraminous basket attached to the lower end of the shaft, a cup surrounding the basket and a portion of the ultrasonic means for holding a cleansing liquid in contact with the basket and the portion of the ultrasonic means.

2,896,649
APPARATUS FOR CLEANING BY ULTRASONIC VIBRATIONS
Hunter Clayton Fridley, Staunton, Va.
Application November 19, 1957, Serial No. 697,471
1 Claim. (Cl. 134—184)

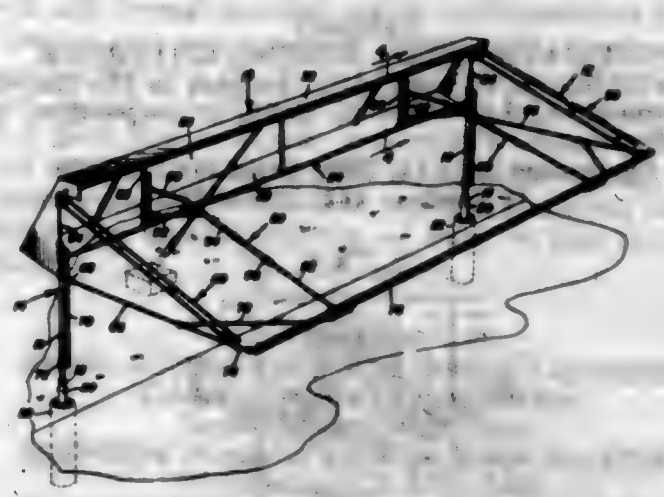
In a device of the character described comprising a housing having an open top, a metallic receptacle fixed in said housing for reception of a cleaning fluid, a material receiving basket suspended from said housing for submergence in the cleaning fluid in said receptacle, a chamber within the housing beneath said receptacle, said chamber having a filling of plaster of Paris and a vertically disposed open shield, a brass filler ring embedded within the plaster of Paris, a pulsating unit mounted upon said filler ring and extended upwardly through said open shield, said pulsating unit having an iron core and a coil winding, the upper end of said core terminating closely adjacent the bottom wall of said receptacle, a rheostat mounted in said housing in electrical circuit with the coil of said pulsating unit, and said rheostat being in electrical circuit with a source of alternating current.

2,896,650
CAMPING ATTACHMENT FOR AUTOMOBILES
Leo Elsner, Albuquerque, N. Mex.
Application June 13, 1956, Serial No. 591,149
1 Claim. (Cl. 135—1)



A camping attachment for automobiles comprising a floor, a top portion hingedly connected to one end of said floor, flexible sides connected to said top portion and a sectional drop curtain connected to the forward end of said top and depending from said top to a line contiguous with the floor, means for connecting the lower edge of said drop curtain to said floor, a reinforcing rib provided for said top, a frame provided for the drop curtain, said frame being hingedly attached to said floor and said top, said frame comprising vertical bars, divided at the central portion, which provide sections hingedly connected together so that the camping attachment can be folded to a small compact.

2,896,651
PORTABLE CAR PORT
Alfred A. Hilligoss, Des Plaines, Ill.
Application January 9, 1958, Serial No. 708,019
4 Claims. (Cl. 135—7.1)



1. A car port comprising a pair of supporting standards and a horizontal truss secured to and extending between the upper ends of the latter, a collapsible roof frame secured to said standards and truss and projecting laterally therefrom, said roof frame including an end rail, end rafters detachably secured to said end rail and

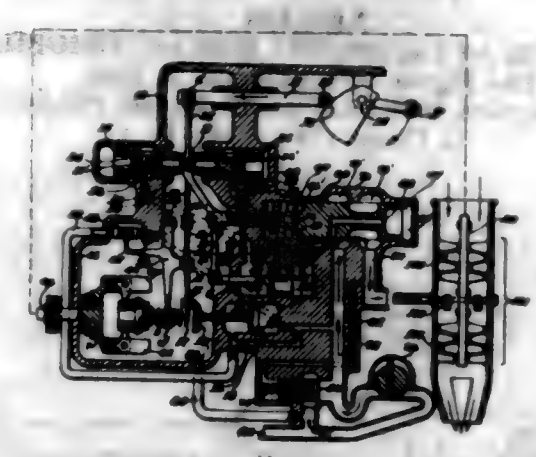
each pivoted to said truss for vertical swinging movement upon the latter, a pair of intermediate rafters each pivoted to said truss for horizontal swinging movement upon the latter, means securing said intermediate rafters to said end rail, a cover secured to said truss and supported upon said collapsible roof frame when in open position.

2,896,652

GAS TURBINE ISOCHRONOUS GOVERNOR

Earl G. Gostich and Warren H. Cowles, Detroit, Mich., assignors to Holley Carburetor Company, Detroit, Mich., a corporation of Michigan

Application May 6, 1953, Serial No. 353,404
11 Claims. (Cl. 137—34)



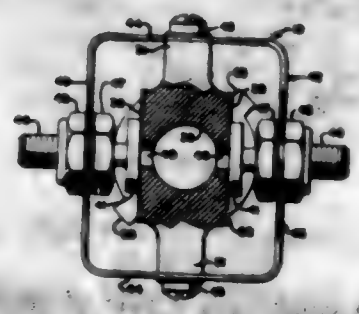
11. A speed governor adapted to be operated by and to control an engine comprising an engine speed control device, centrifugal means adapted to be driven at a speed proportional to engine speed and including an element movable thereby, spring means opposing movement of said element by said centrifugal means in response to a predetermined change in speed of the latter, means for adjusting the effectiveness of said spring means, control means operable to initiate adjustment of said spring means in a direction to restore said element to its previous position upon movement of said element in response to said change in speed of said centrifugal means and to continue such adjustment until said element returns to its previous position, means connected to said element operable to effect substantially instantaneous adjustment of said engine speed control device corresponding to the movement of said element, and means operable responsive to the difference in position of said element due to such movement to initiate a slow additional adjustment of said device in the same direction.

2,896,653

PNEUMATIC SPEED SENSING GOVERNOR

Elmer D. Martin, Phoenix, Ariz., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California

Application June 11, 1958, Serial No. 741,426
10 Claims. (Cl. 137—54)



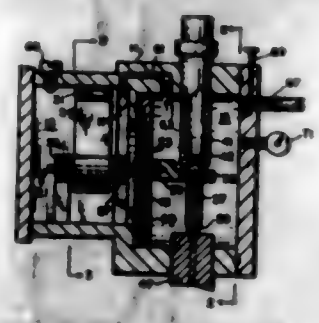
10. In a governor: a body formed for operative engagement with a rotatable member for rotary movement therewith, said body forming a fluid pressure chamber with inlet and outlet ports, a pair of ports being disposed on opposite sides of said body; an endless rectangular open-sided frame of resilient strap-type material secured at opposite ends to the ends of said body; and valve elements adjustably secured to opposite sides of said frame, the resilience of the latter serving to urge said valve elements into engagement with the sides of said body to close said pair of ports, centrifugal force caused by the rotation of said body and frame serving to move said valve elements away from said body and open said ports.

2,896,654

TORSIONALLY MOUNTED JET PIPE RELAY

Olaf A. Gunnarsen, Long Branch, N.J.

Application August 11, 1958, Serial No. 754,585
4 Claims. (Cl. 137—83)
(Granted under Title 35, U.S. Code (1952), sec. 266)



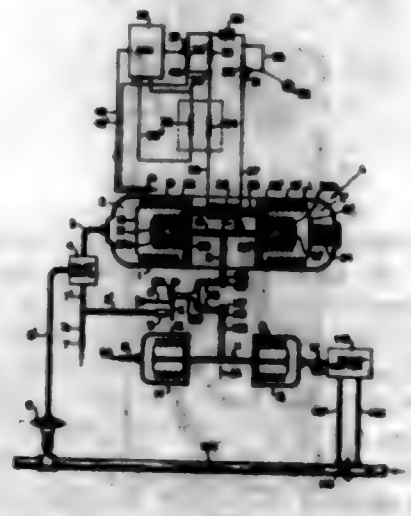
1. In a jet pipe relay mechanism, a housing divided into a pair of chambers by a rotary-flexible diaphragm member, an input shaft attached to and passing through said diaphragm member, a torque motor located in one chamber and attached to said input shaft, a hydraulic jet nozzle located in said other chamber and disposed at right angles to said input shaft, a jet rotor attached to said input shaft with one end thereof being substantially at the shaft axis and in proximity to the said jet nozzle, a pair of ports located in said housing adjacent the other end of said rotor pipe, a restricted passage between said chambers, an exhaust port in said second chamber and adjustable valve means to control the effective area of said exhaust port.

2,896,655

CONTROL APPARATUS WITH ELECTRO-MAGNETIC RATE AND RESET

Harry J. Hartz, Philadelphia, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application January 4, 1955, Serial No. 479,819
27 Claims. (Cl. 137—86)



1. In a control instrument of the known type comprising first and second chambers each having a flexible wall, a conduit connecting said chambers, said internal wall of said chambers acting as a means for holding a

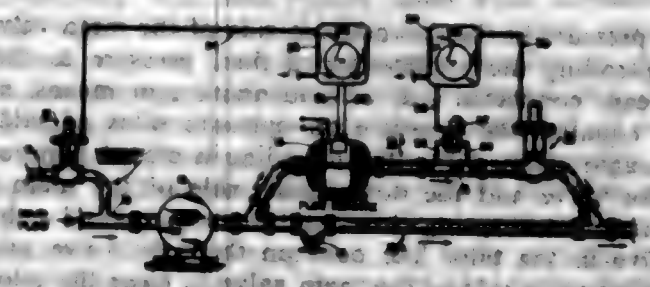
liquid with magnetizable particles suspended therein, means for subjecting said liquid in said first chamber to a variable compressive force, and means for subjecting liquid in said second chamber to a compressive force whereby liquid is caused to pass through said conduit into or out of said second chamber as the first compressive force is increased and decreased, means for subjecting liquid in said conduit to a magnetizing force which is regulable to vary the viscosity of the liquid in said conduit, said means comprising a conductor coiled about said conduit and having elongated extensions including a source of current and adjustable impedance, the latter being located at a distance from said control instrument and a thermistor in said conductor and means responsive to the ambient temperature surrounding the control instrument for increasing and decreasing the temperature of said thermistor as said ambient temperature increases and decreases.

2,896,686

VISCOSITY MEASUREMENT SYSTEM

Albert Allen, Sharon, and Leland K. Spink, Foxboro, Mass., assignors to The Foxboro Company, Foxboro, Mass., a corporation of Massachusetts

Application March 15, 1956, Serial No. 571,752
1 Claim. (Cl. 137—92)



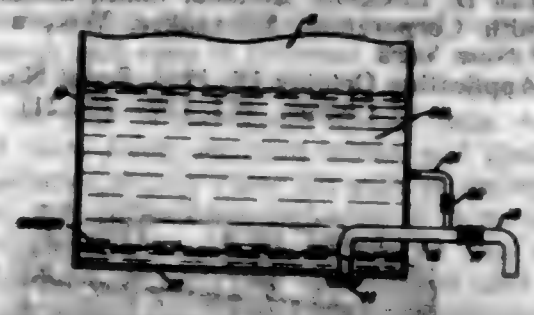
A system wherein the viscosity of an electrically conductive flowing liquid is continuously measured and controlled, said system comprising a main flow pipe for carrying said liquid, a pump in said pipe for impelling said liquid therealong, a viscosity variance pipe entering said main flow pipe upstream of said pump whereby said pump acts as a viscosity additive mixing device in said main flow pipe, a control valve in said viscosity variance pipe, a branch pipe from said main flow pipe at a point downstream of said pump, a restrictor valve in said main flow pipe downstream of said branch pipe take-off point for so restricting said main flow pipe as to provide a full liquid flow through said branch pipe, a re-entry of said branch pipe into said main flow pipe downstream of said restrictor valve, a flow control system in said branch pipe, said flow control system comprising a magnetic flow meter flow sensing unit in said branch pipe in a continuation of said pipe in diameter, open to full flow therethrough and responsive only to volumetric flow of said liquid therethrough without flow disturbing structure and without viscosity change response, a control instrument operable by the output of said magnetic flow meter sensing unit, and a control valve in said branch pipe downstream of said magnetic flow meter sensing unit, said flow control valve being connected to said control instrument for operation thereby, a restricter nozzle in said branch pipe upstream of said magnetic flow meter flow sensing unit, said nozzle comprising an upstream branch pipe diameter entrance, an inwardly tapering downstream extending body terminating in a truncation of said taper to provide a relatively small downstream nozzle exit disposed centrally of said branch pipe and spaced from the inner walls thereof, a pair of pressure taps in and open to said branch pipe, one upstream and one downstream of said restrictor nozzle, a differential pressure unit to which said flow taps are connected to operate said unit in accordance with the differential pressure across said restrictor nozzle and consequently responsive to both flow and viscosity changes in said branch pipe, a viscosity control instrument responsive to the output of said differential pressure unit, and an operating connection from said viscosity control instrument to said viscosity control valve in said viscosity variance pipe, whereby said flow control system maintains a constant flow in said branch pipe without viscosity change error in said flow control system, and whereby a true constant flow is provided in said viscosity control system which accordingly responds in terms of differential pressure to the viscosity changes only, in said liquid in said branch pipe, to adjust said viscosity variance valve to the degree necessary to maintain constant viscosity in said liquid in said main flow pipe.

2,896,657

TANK DRAIN SYSTEM

Roy B. Uhl, Lansing, Ill., and Edgar J. Lustenschwab, Highland, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Application September 21, 1955, Serial No. 535,552
4 Claims. (Cl. 137—172)



1. A liquid hydrocarbon storage tank containing a minor amount of water which forms a bottom water layer and a major amount, relative to said water present, of liquid hydrocarbon which forms an upper hydrocarbon layer, said tank being provided with drain system which permits withdrawing substantially all of the lower water layer, said drain system comprises a first conduit which extends upwardly from near the interior bottom of said tank and substantially horizontally through the wall of said tank to a point beyond the exterior wall of said tank the exterior end of said first conduit being below the horizontal portion thereof and the level to which said water layer is to be withdrawn, a second conduit communicating with the interior of said tank at a point normally occupied by liquid hydrocarbon and with the exterior portion of said first conduit, and valved means positioned in said second conduit and in the horizontal part of said first conduit adapted for withdrawal of water from said tank through said first conduit and termination of flow from the tank to said portion through said second conduit and alternatively for flow of liquid hydrocarbon through said second conduit and said portion of said first conduit back into said tank, said second conduit and said first conduit between the wall of said tank and said valve means being normally full of liquid hydrocarbon thereby eliminating possible freezing of water in said first conduit.

2,896,658

REGULATOR-VAPORIZER FOR A LIQUEFIED GAS CARBURETION SYSTEM

Ernst P. Kenne, Dublin, Tex.

Application December 23, 1954, Serial No. 476,253
10 Claims. (Cl. 137—340)

10. A vaporizer for a liquefied petroleum gas fuel carburetor system including a closed housing adapted to be subjected to an external source of heat for heating the walls of the housing and establishing a vapor zone in said housing, a chamber tube disposed within and surrounded by said housing in spaced non-heat exchange relationship

2,896,662

MULTIPLE DISTRIBUTION VALVE

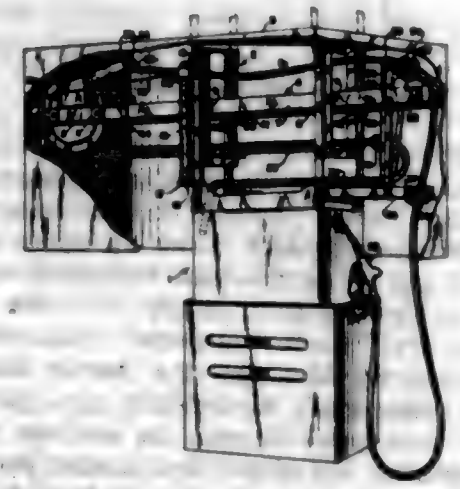
2,896,664

NORMALLY OPEN THREE-WAY VALVE

thereto, the tube having an inlet and an outlet passage spaced from its inlet and opening into said housing, said housing having an outlet spaced from the tube outlet passage for discharging warm vaporized fuel gas from

said housing, and a pressure-reducing regulator having a diaphragm exposed to the housing outlet, the regulator having a fuel gas inlet and an outlet opening into said tube through the tube inlet for expanding fuel gas into said tube and establishing a cold zone therein.

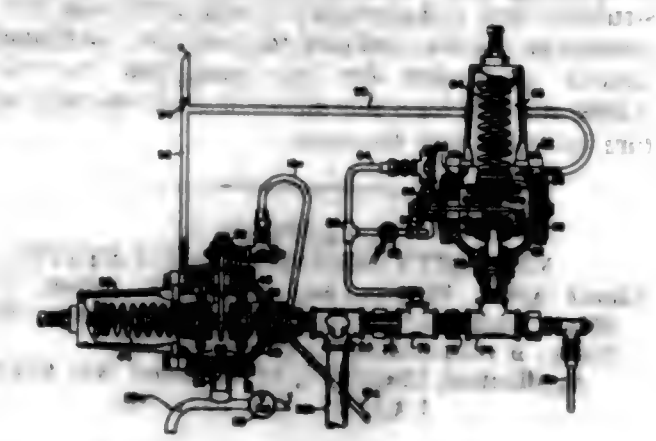
2,896,659
DISPENSER APPARATUS FOR LIQUID PETROLEUM PRODUCTS
Charles D. Erickson, Arcadia, Calif., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Application October 25, 1956, Serial No. 618,318
7 Claims. (Cl. 137—355.21)



1. In a liquid dispensing apparatus, a frame, a horizontally extending trough secured to the frame, a delivery pipe for the liquid being dispensed extending through the dispensing apparatus to a location adjacent to one end of the trough, a flexible dispensing hose coupled to the delivery pipe and extending in a horizontally opening loop within the frame and outwardly from the frame with the lower reach of the hose being disposed in the trough, said hose being extendable in response to a pulling force with the loop moving generally parallel with respect to said trough to pick up succeeding increments of the hose from the trough, and means carried by the frame and exerting a force on the hose in opposition to said pulling force to return the hose to a retracted position upon removal of the pulling force and to maintain the hose in the retracted position.

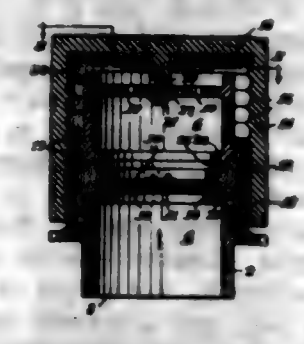
2,896,660
AUTOMATIC PRESSURE REGULATING VALVE
Raymond P. Lefiuk, Neville Island, Pa., assignor to The Chaplin-Fulton Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application May 2, 1956, Serial No. 582,696
10 Claims. (Cl. 137—456)

1. A fluid pressure regulator for maintaining a substantially constant pressure in a fluid supply line comprising a main valve in the supply line for controlling fluid through the line, diaphragm means for actuating the main valve, a pilot line having connections to said main line at points on the downstream and upstream sides of said main valve, which connections being each connected to a pilot valve, said pilot valve having connections to opposite sides of the diaphragm means whereby one side of the diaphragm means may be subjected to upstream fluid pressure and the other side to downstream pressure and pressures on opposite sides of the main valve may actuate said diaphragm means and the main valve, a spring connected to said valve opposing the action on the diaphragm of upstream pressure and tending to close the valve, said pilot valve having means exposed through said pilot line



to pressure in the downstream side of the main valve for controlling the application of fluid pressure to the upstream connected side of said diaphragm means, means to equalize the pressure on opposite sides of said diaphragm means when the pilot line is closed between the pilot valve and the downstream side of the main valve whereby said spring closes said main valve, and a shut-off valve in the pilot line between the pilot valve and the downstream side of the main valve to close the pilot line when pressure in the pilot line drops below a predetermined value, said shut-off valve having means exposed to pressure in said downstream side to actuate said shut-off valve.

2,896,661
PRESSURE RELIEF VALVE
Earl M. Becker, Pittsburgh, and John J. Bridge, Turtle Creek, Pa., assignors to Mine Safety Appliances Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application January 3, 1955, Serial No. 479,488
6 Claims. (Cl. 137—512.3)

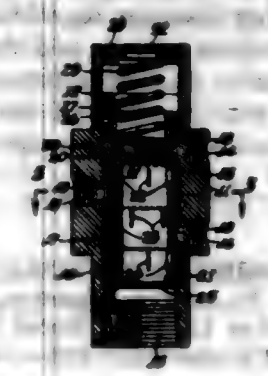


1. A pressure relief valve comprising a housing forming communicating fluid inlet and outlet chambers, a valve seat formed on the end of said housing around said outlet chamber, a coil spring surrounding and attached at one end to said housing, a rotatable valve head having a side wall being spaced from the housing and open at its lower end to provide a continually open fluid passage therebetween, and arranged concentrically with said spring and having threads receiving the unattached coils of said spring, said head engaging said seat to close said outlet chamber when said head is adjustably threaded on said spring, said spring controllably holding said head closed against said seat but yielding at predetermined fluid pressures to disengage the head and seat.

ber to provide flow between said inlet and outlet ports, stantially enclosing the outer surface of said pipe section,

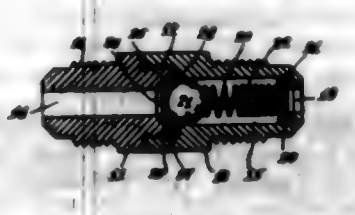
operate said unit in accordance with the differential pres- by said housing in spaced non-fluid exchange relationship

2,896,662
MULTIPLE DISTRIBUTION VALVE
John V. Thomas, Pasadena, Calif.
Application September 7, 1956, Serial No. 608,565
2 Claims. (Cl. 137—538)



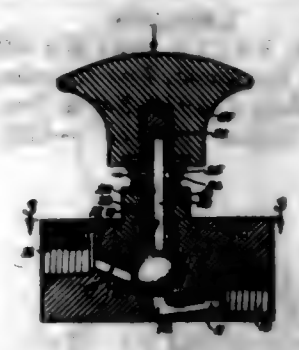
1. A multiple distribution valve, comprising in combination: a tubular valve body structure having an inlet at one axial end and a series of radiating outlets, a hollow valve element slidable in said valve body, said valve element being closed at one end and having a skirt directed toward said inlet, said skirt having a plurality of axially extending slits extending therethrough intermediate its ends so disposed and oriented to register simultaneously with said outlets upon axial movement of said valve element, yieldable means acting against the closed end of the valve element tending to urge said valve element toward said inlet to dispose said slits out of registry wth said outlets, the closed end of said valve element forming a pressure area responsive to pressure of fluid entering the inlet to move said slits into a degree of registry with said outlets corresponding to the pressure of the entering fluid, the valve element having a continuous annular groove in the outer surface thereof intersecting each one of the slits at the end thereof remote from the inlet for diverting axial leakage of fluid between the body structure and the valve element into said slits.

2,896,663
CHECK VALVE WITH VALVE SEAT OF RESILIENT MATERIAL
Carl M. Mesa, Indianapolis, Ind.
Application February 28, 1955, Serial No. 490,756
3 Claims. (Cl. 137—539)



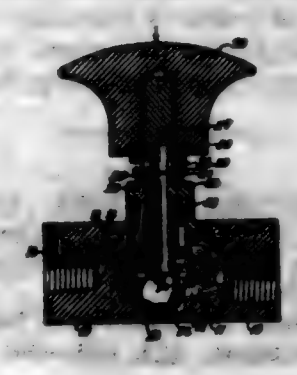
3. A check valve, comprising first and second screw-threadedly interconnected members having aligned passages the adjacent ends of which are counterbored, a screen and an annular screen retainer within the counterbore of the first member, an O-ring seal overlying said retainer and having an internal diameter less than the external diameter of said retainer, said O-ring seal comprising an annular body of compressible material having a substantially circular shape in cross-section, said seal bearing against the bottoms of the counterbores in said two members and against the side of the counterbore of the first member, a valve member movable axially into and out of engagement with said seal, and a helical compression spring in the counterbore of the second member having portions of different flexibility acting on said valve member to urge it to seating engagement on said O-ring.

2,896,664
NORMALLY OPEN THREE-WAY VALVE
Mathias J. Lieser, Chicago, Ill., assignor to Mead Specialties Company, Inc., Chicago, Ill., a corporation of Illinois
Application August 17, 1955, Serial No. 528,953
5 Claims. (Cl. 137—620)



1. In a three-way valve structure having a casing provided with an inlet port for pressure fluid, an outlet port, and a valve member in open communication with said ports, a stem having an exhaust passage therein and being longitudinally movable through said chamber between a position wherein said stem extends into said chamber and a position wherein said stem is retracted from said chamber, but being normally biased toward the position wherein said stem is retracted from said chamber, said inlet port being disposed at an end of said chamber in the path of movement of said stem, and a resilient ball valve freely mounted within said chamber and being shiftable therein along the path of movement of said stem, said valve, when said stem is in retracted position, being urged into engagement with said stem by the admission of pressure fluid through said inlet port and being compressed thereby along one dimension and expanded along another dimension into sealing engagement with the walls of said chamber to seal an exhaust passage of said stem, said valve, when said stem is in the extended position, being shifted correspondingly to seal said inlet port.

2,896,665
NORMALLY CLOSED THREE-WAY VALVE
Mathias J. Lieser, Chicago, Ill., assignor to Mead Specialties Company, Inc., Chicago, Ill., a corporation of Illinois
Application August 25, 1955, Serial No. 530,497
6 Claims. (Cl. 137—629)



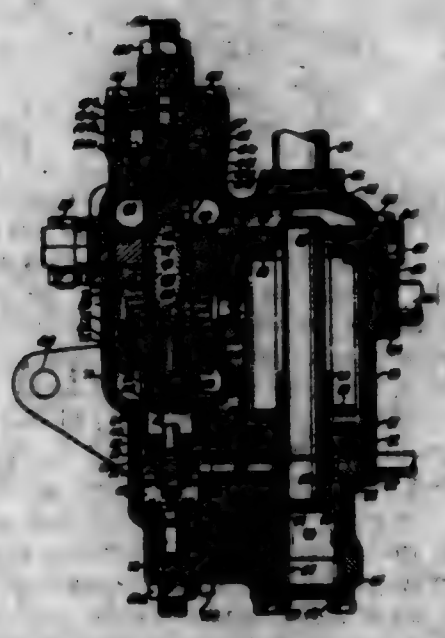
1. In a valve structure, a casing providing a valve chamber communicating with an inlet port and an outlet port and having a valve seat in the upper portion thereof, the inlet communicating with said valve chamber at a spaced distance below said valve seat and providing a sealing wall therebetween, a resilient ball valve freely mounted within said chamber and being dimensioned for longitudinal movement therein, said valve being adapted to engage said valve seat to seal the same and then to flatten into engagement with said sealing walls between the inlet passage and the valve seat, and a reciprocating stem adapted to extend through said valve seat and to move said resilient valve toward the bottom of said cham-

and having the other leg thereof, of a length somewhat rotatably mounted on said bar in parallel relation there-

ing a main valve in the supply line for controlling fluid through the line, diaphragm means for actuating the main closed against said seat but yielding at predetermined fluid pressures to disengage the head and seat.

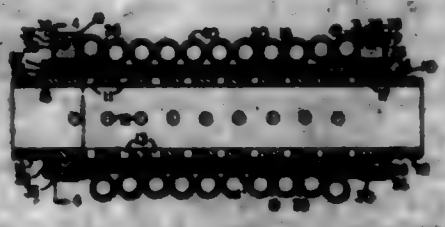
ber to provide flow between said inlet and outlet ports, said stem being provided with a longitudinal exhaust passage open at the bottom end of the stem, said passage being closed by contact between said stem and said resilient ball valve.

2,896,666
BRAKE VALVE MECHANISM
Edward A. Rockwell, Los Angeles, Calif.
Application July 2, 1954, Serial No. 440,995
16 Claims. (Cl. 137—622)



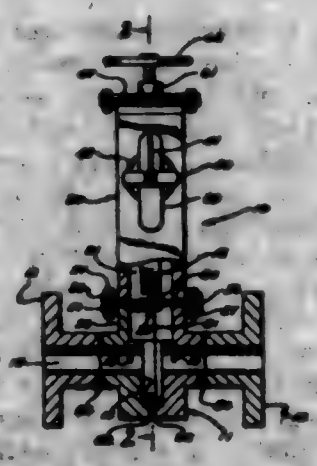
1. A control valve comprising a valve body having inlet, working and return ports, said inlet port and said return port being connected to a source of pressure fluid, a valve element in said body, means for actuating said valve element from the control line of a hydraulic impulser system for communicating the inlet port with the working port upon application of impulser pressure, and the working port with the return port upon release of impulser pressure, and a liquid compensating valve means associated with said control valve for communicating the return port of said control valve with the impulser line for transmitting fluid to maintain the control line filled, said liquid compensation valve means including a movably mounted operator subject to return port pressure and impulser line pressure and movable in response to the difference between said pressures and a liquid compensation valve element arranged to be opened by said operator upon a predetermined drop in said impulser line pressure.

2,896,667
DAMPENER FOR PIPE LINES
Joseph F. Jumbo, Pittsburgh, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Application July 27, 1956, Serial No. 600,613
3 Claims. (Cl. 138—30)



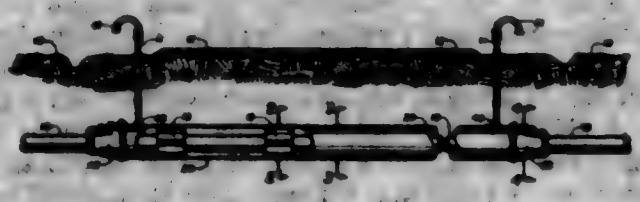
1. Pulsation dampening apparatus for use with a conduit carrying a fluid under variable pressure, comprising, in combination, a pipe section for connecting to said conduit, said pipe section having a plurality of distending orifices in the wall thereof, resilient sleeve means substantially enclosing the outer surface of said pipe section, spring means including a helical spring coiled around the outside of said sleeve means and applying pressure toward the outer surface of said sleeve means, and means interposed between said spring means and said sleeve means for preventing damage to said sleeve means by contact with said helical spring, said damage preventing means consisting of a pair of substantially semi-cylindrical shield members, the edges of said semi-cylindrical shield members overlapping with respect to each other.

2,896,668
ORIFICE FITTING
Melvin N. Allen, Houston, Tex.
Application May 18, 1948, Serial No. 909,249
20 Claims. (Cl. 138—44)



1. An orifice fitting, comprising a body having a flow passage therethrough, a chamber disposed laterally of the body, an opening connecting the flow passage and chamber, an orifice plate carrier, means for moving the carrier through said opening between a position across the flow passage and a position within the chamber, an exit from the chamber through which the orifice plate may be passed, valve means for closing the opening when the carrier has been moved into the chamber, means for venting the chamber, and means automatically responsive to actuation of the carrier moving means for opening the venting means subsequent to movement of the carrier into the chamber.

2,896,669
PIPE CASEMENT
Jack L. Broadway and Hal L. White, North Zulch, Tex.
Application January 11, 1957, Serial No. 633,693
4 Claims. (Cl. 138—65)



1. A spacer for spacing an encased pipe substantially concentrically within a casement comprising, in combination, a tubular body having a longitudinal slit therein on the upper portion thereof permitting said member to be placed about an encased pipe without being placed over the end thereof; and a plurality of elongate fins, having an "L" shaped cross-section, fastened at substantially equal intervals to the outside of the said tubular body, parallel to each other and to the axis of the said body,

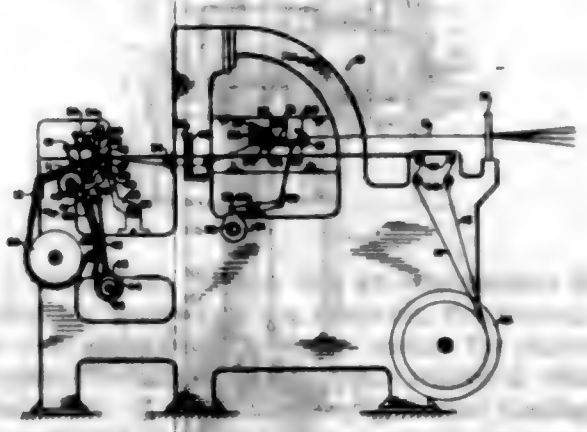
O-ring.

move said resilient valve toward the bottom of said cham-

and having the other leg thereof, of a length somewhat less than the difference between the inside diameter of a casement and the outside diameter of a pipe to be encased, projecting radially therefrom, with the corners of said radially projecting legs rounded to assist in the skidding of said pipe to be encased, and two of said upward radially projecting fins fastened adjacent and parallel to the slit in the said tubular body with the legs of the said two fins extending away from the said slit, and holes therein to allow the legs of the said fins to be drawn together by means of bolts extending therethrough having nuts thereon.

2. The spacing member of claim 1 in combination with a pipe casement and an encased pipe.

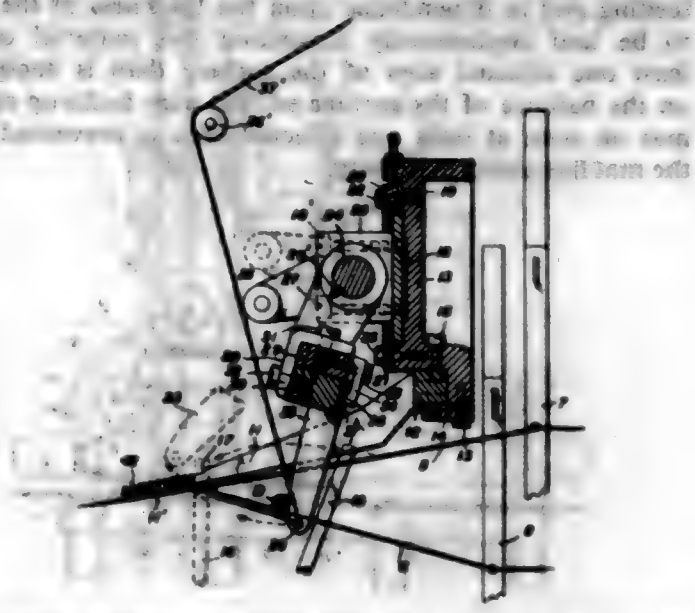
2,896,670
APPARATUS FOR MAKING PILE FABRIC
Walter A. Rice, Amsterdam, N.Y., assignor to Mohasco Industries, Inc., Amsterdam, N.Y., a corporation of New York
Application March 27, 1958, Serial No. 724,459
7 Claims. (Cl. 139—36)



1. A loom for making a pile carpet containing pile warp yarns and binder warp yarns in two sets interlaced with picks of filling yarn, which comprises shedding means forming the binder warp yarns into a series of sheds with the yarns of the two sets in respective upper and lower lines of the sheds and the positions of the yarns of the two sets reversed in successive sheds, means for inserting a pick of filling yarn in each shed, lay and reed means for beating up the inserted picks, means for guiding the pile warp yarns to cause them to lie in the lower line of each shed, means acting after the insertion of each pick to raise a loop of each pile yarn to extend above the inserted pick, means entering each raised loop of pile yarn and supporting the loop in raised position, the supporting means acting to support a series of loops of each pile yarn, and means for severing the raised loops to release them from the supporting means, the severing means acting to sever a loop of each yarn each time another loop of the yarn is raised and added to the supported series.

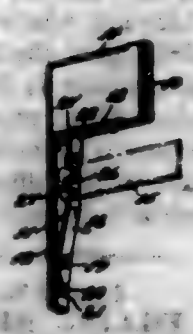
2,896,671
APPARATUS FOR WEAVING LOOP PILE FABRICS
Orvin J. Park and Basil U. Cotner, Bloomsburg, Pa., assignors to The Magee Carpet Company, Bloomsburg, Pa., a corporation of Pennsylvania
Application March 20, 1956, Serial No. 572,457
18 Claims. (Cl. 139—46)

1. A loom attachment for weaving pile fabrics, comprising in combination with a loom, a series of gauge wires mounted on the loom and extending parallel to the warps a reciprocating bar mounted above said gauge wires for movement transversely of said wires, a shaft rotatably mounted on said bar in parallel relation thereto, a series of pile carrying needles extending from said



shaft, and means for oscillating said shaft to swing said needles into and out-of the warp.

2,896,672
LOOM HARNESS
John J. Kaufmann, Jeanestown, Pa., assignor to Steel Heddle Manufacturing Company, Philadelphia, Pa., a corporation of Pennsylvania
Application September 26, 1956, Serial No. 612,293
5 Claims. (Cl. 139—92)



1. In a loom harness heddle frame comprising top and bottom rails connected by end struts and having heddle supporting rods mounted therein, the means for supporting and securing the heddle rods in the frame comprising the provision of apertures at the ends of the heddle rods and, at each corner of the frame, a flat metal spring member, said spring members each having one end fixedly secured to a portion of the frame, and said spring members each having a portion extending through the aperture in one end of one of the heddle rods and having a projecting lip on one side face thereof to maintain the engagement of the spring member with the end of the heddle rod.

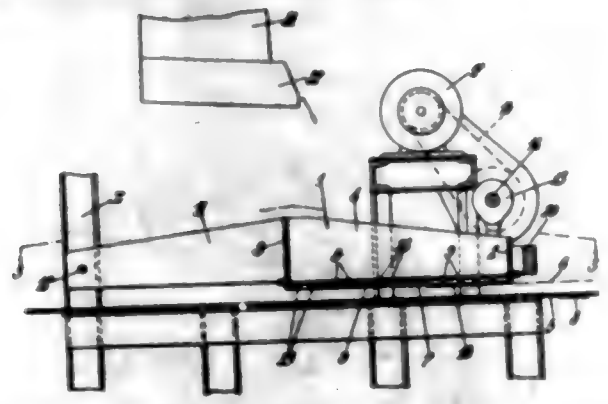
2,896,673
FORMING A MAT OR LAYER OF DISCRETE MATERIAL
Leonid Mills and John Anderson Adams Kay, London, England, assignors to British Artificial Resin Company Limited, London, England
Application May 6, 1957, Serial No. 657,306
Claims priority, application Great Britain May 8, 1956
9 Claims. (Cl. 141—1)

1. A method of forming a mat of discrete material comprising feeding such material from a source of supply toward a receiving surface, interposing a vibratory tray having a perforate bottom between source and surface, maintaining a head of material on the tray and a deposition of material on the surface extending over a com-

for riding along the guide tracks to control the flow of wardly toward said sight opening, and a drill bit arranged

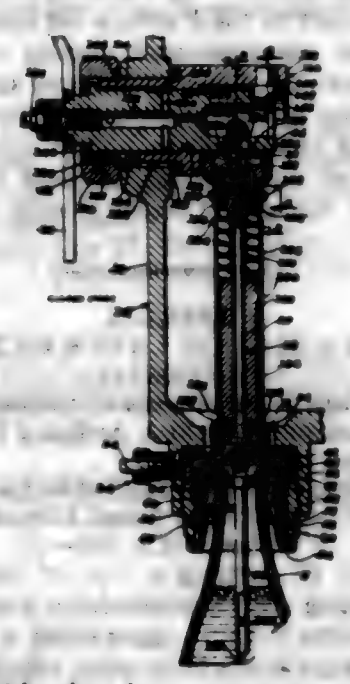
orifice in the wall thereof, resilient sleeve means sub- parallel to each other and to the axis of the said body.

plete transverse extent of the bottom of the tray, imparting relative transverse movement between source and surface while continuously vibrating the tray and during feeding and in dependence upon the thickness of the mat to be laid continuously depositing less material on at least one selected area of the surface than is deposited on the balance of the surface so that over build-up of the mat on such at least one selected area is prevented and the mat has uniform density.



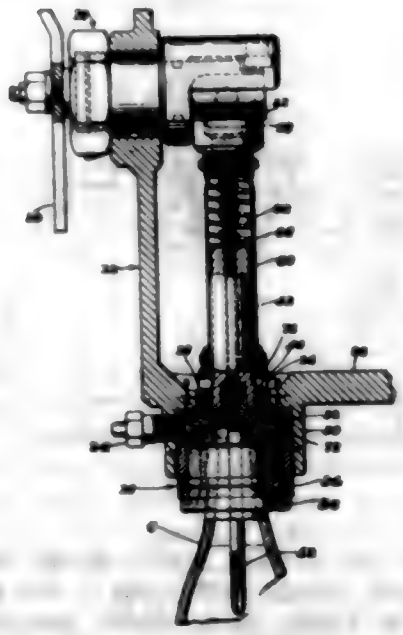
3. Apparatus for laying a mat of discrete material on a supporting surface comprising a vibratable tray including a frame, a bottom structure secured to the frame and including spaced elements through which material fed to the tray can pass, means supporting the tray so that the under-surface of the bottom is spaced from the supporting surface a distance equal to the desired thickness of the mat to be laid, so that vibration of the tray will strickle the top surface of the mat, and imperforate surface filling means secured to some of said elements and selectively disposed over at least one area of the bottom of the tray, said surface filling means having a number, size and location relative to the bottom of the tray that is dependent upon the thickness of the mat to be laid so that less material is deposited on the surface underlying such surface filling means than on the balance of the surface, whereby over build-up of the mat in the area underlying such surface filling means is prevented and the mat has uniform density.

2,896,674
FILLING HEAD
Carl L. Day, Frederick E. Fauth, Harry F Finke, and Marie Alphons Reymann, Jr., Baltimore, Md., assignors to Crown Cork & Seal Company, Inc., Baltimore, Md., a corporation of New York
Application October 26, 1955, Serial No. 542,811
29 Claims. (Cl. 141—39)



1. The combination in a counterpressure filler, of a reservoir for liquid and a superposed body of gas, a container engaging nozzle structure in the lower portion of said reservoir, a liquid passage extending from said reservoir to said nozzle structure, a liquid valve in said liquid passage, said liquid valve including an actuating stem extending upwardly within said reservoir, a gas flow tube extending from said nozzle structure upwardly within said reservoir, said liquid valve actuating stem and said gas flow tube being concentric and movable vertically with respect to each other, a gas valve carried on the upper end of said gas flow tube, a cam journalled in a side wall of said reservoir and rotatable about a horizontal axis to control said gas valve and said liquid valve actuating stem, and an actuating arm on said cam exteriorly of said reservoir.

2,896,675
FILLING HEAD
John G. Voelker, Baltimore, Md., assignor to Crown Cork & Seal Company, Inc., Baltimore, Md., a corporation of New York
Application June 5, 1957, Serial No. 663,804
9 Claims. (Cl. 141—39)



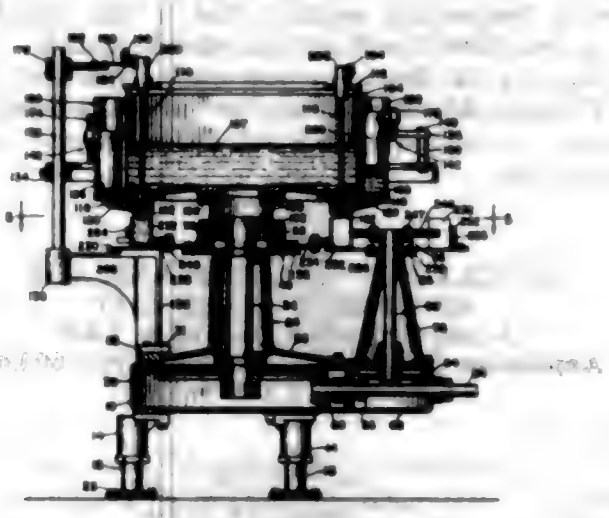
1. In a filling valve for use with a counterpressure filler of the type having a reservoir for liquid and a superposed body of gas; a nozzle structure adapted to be supported on a bottom apertured wall of the reservoir, said nozzle structure having a liquid passage therethrough communicating with the aperture in the wall of the reservoir, a web extending transversely of said liquid passage and defining a plurality of circumferentially spaced holes in said liquid passage, a gas tube carried centrally by said web and extending upwardly into the superposed body of gas in the reservoir and downwardly beneath said nozzle structure, an annular resilient liquid valve element adapted to engage a surface of said nozzle structure circumscribing the holes defined by said web, means to flex said liquid valve upwardly for providing liquid flow, and a rigid washer-shaped element carried beneath said resilient liquid valve element for preventing downward deflection of said resilient liquid valve into the holes of said web when said liquid is in closed position.

2,896,676
CONTAINER FILLING MACHINE
Everett S. Minard, Laguna Beach, Calif., assignor, by mesne assignments, to Chemetron Corporation, a corporation of Delaware
Application January 16, 1956, Serial No. 559,229
17 Claims. (Cl. 141—146)

1. In a device of the class described provided with guide tracks having particular configurations and means

of said guiding members being provided with a trans- a pair of spaced, opposed, substantially L-shaped flanges

for riding along the guide tracks to control the flow of fluent material from a reservoir sequentially into a plurality of containers guided in their movement by first and second feed stars at least initially along a platform, the combination of casing means, a drive shaft extending through the casing means, a first housing extending upwardly from the casing means in supported relationship to the casing means and having a flange portion at a lower position with bosses extending upwardly from the flanges for supporting the guide tracks at particular positions above the bosses in accordance with the functions of the different guide tracks, a first shaft extending upwardly through the first housing in driven relationship to the drive shaft, a support member mounted on the drive shaft at a position above the first housing and



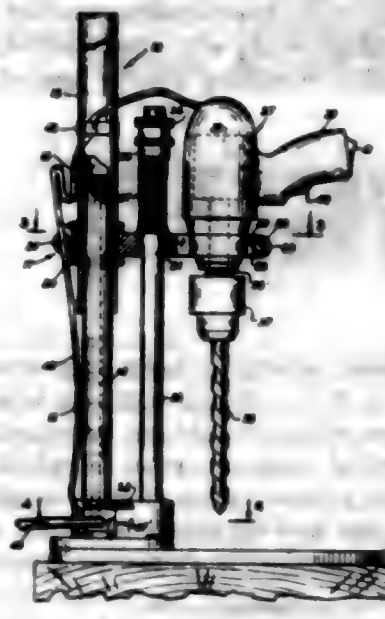
having a bottom rim portion and an intermediate shoulder portion for supporting the reservoir, the second feed star, the containers and the control means for movement of the control means along the guide tracks to obtain a sequential filling of the containers, a second housing extending upwardly from the casing means in supported relationship to the casing means and having a surface at an upper position for supporting the containers during at least the movement of the containers with the first feed star, a second shaft extending upwardly through the second housing in driven relationship to the drive shaft, and a second support member mounted on the second drive shaft at a position above the second housing for holding the first feed star for rotary movement in accordance with the rotation of the shaft and in coupled relationship to the first feed star.

2,896,677
AIR DRILL

Henry H. Paynaut, Portland, Oreg., assignor to Timber Structures, Inc., Portland, Oreg., a corporation of Oregon

Application October 4, 1957, Serial No. 688,328
4 Claims. (Cl. 144—134)

1. A portable drill press for drilling a vertical hole in a work piece having a horizontally disposed upper surface comprising a base adapted to be slid about upon the upper surface of the work piece and having a sight opening therethrough, a vertically disposed piston and cylinder assembly comprising a piston element and a cylinder element telescoped together, one element of said assembly being fixed to said base and the other element thereof being longitudinally and rotatably movable and guided by the fixed element, a vertical guide post fixed to said base and extending alongside said assembly, a motor mounting bracket fixed to said movable element and including a portion embracing said guide post and a motor mounting portion, a motor mounted on said motor mounting portion, a vertically disposed drill chuck driven by said motor and movable therewith, said drill chuck projecting downwardly toward said sight opening, and a drill bit engaged in said chuck and movable through said sight opening

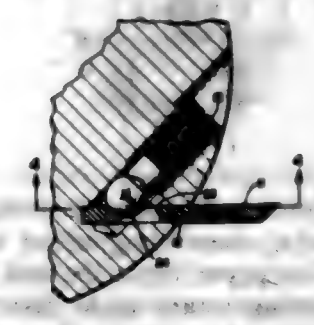


upon relative telescoping movement of the elements of said piston and cylinder assembly.

2,896,678
BLADE ANCHORAGE MEANS FOR MOLDING HEAD

John W. Edgemond, Jr., Los Altos, Calif., assignor to Yuba Power Products, Inc., Menlo Park, Calif., a corporation of California

Application December 16, 1957, Serial No. 702,883
5 Claims. (Cl. 144—235)



1. In a molding head assembly comprising a head and a plurality of blades, the head having a plurality of slots which extend transversely thereof and a similar number of threaded bores intersecting said slots, each of said slots accommodating a blade, an indentation on the leading face of each of said blades, each of said threaded bores accommodating a threaded screw and a secondary member, said secondary member being adapted to engage the indentation on the forward face of said blade.

2,896,679
SCREENING DEVICE FOR A REVOLVING TOOL

Wilhelmus Johannes Schouten, Maarssen, Netherlands, assignor to N. V. Het Spoorwegbouwbedrijf, Utrecht, Netherlands, a Dutch limited-liability company of the Netherlands

Application December 23, 1957, Serial No. 704,465
Claims priority, application Netherlands December 21, 1956
6 Claims. (Cl. 144—251)

1. A combined guide and screening means for a rotary milling cutter or a similar rotary tool, said means comprising two opposed separate similar guiding members having coplanar working surfaces, said guiding members being longitudinally spaced from each other to provide a recess between the opposed ends thereof through which the tool projects into engagement with a work piece being moved past said guiding members during operation; each

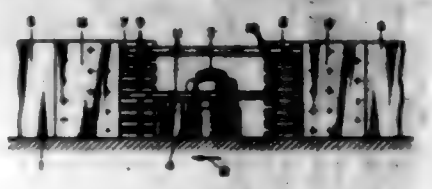
the plate, a shaft fixed with respect to said knife and pas-

2,896,685

1. The combination in a counterpressure filler, of a reservoir for liquid and a superposed body of gas, a con-

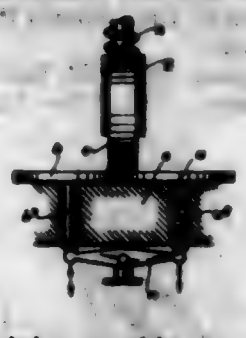
1. In a device of the class described provided with guide tracks having particular configurations and means

of said guiding members being provided with a transversely extending groove in the working surface thereof, a complementary cover plate secured in each of said transversely extending grooves, the working surface of each of said guiding members being also provided with a plurality of longitudinally extending closely spaced parallel



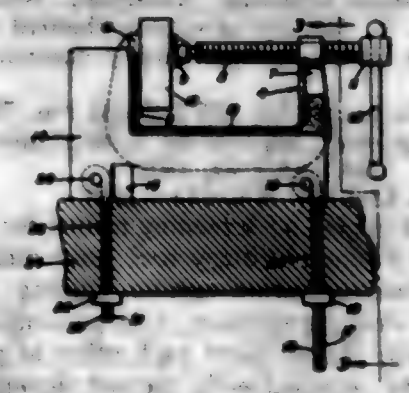
grooves which extend outwardly from said transversely extending grooves to the opposing ends of said guiding members, said recess being bridged by longitudinally extending spaced parallel rods the ends of which are removably mounted in selected ones of said longitudinally extending grooves, and locking means by which said rods are locked in said longitudinally extending grooves.

2,896,680
VENEER JOINING MACHINE
Gerhard Ortel, Rietberg, Westphalia, Germany, assignor to the firm Heinrich Kuper, Rietberg, Westphalia, Germany
Application July 26, 1957, Serial No. 674,505
Claims priority, application Germany August 1, 1956
4 Claims. (Cl. 144—279)



1. In a veneer joining machine, a device for feeding veneer strips, pressing their longitudinal edges together and sticking adhesive paper tapes thereon, comprising a pair of counter-running rotary plate discs flying closely adjacent each other in a common plane and supported on axles, a pressure roller cooperating with said pair of plate discs and driven thereby as the veneer strips pass between said pair of plate discs and said pressure roller, and means associated with said pair of plate discs and allowing adjustment of said plate discs in opposite directions from said common plane in dependency upon each other.

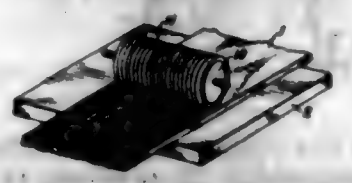
2,896,681
BENCH CLAMP
Joseph Olson, Portland, Oreg.
Application April 9, 1957, Serial No. 651,742
2 Claims. (Cl. 144—284)



1. A clamp comprising: a substantially U-shaped frame, a pair of opposed co-acting jaws on said frame,

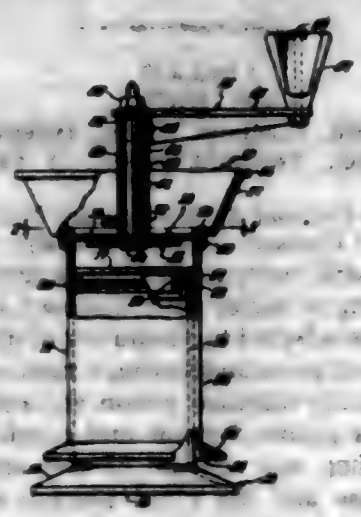
a pair of spaced, opposed, substantially L-shaped flanges on the bight and one end portion of the frame, said flange projecting past the edges of said bight and one end portion of the frame and having straight, right angularly related outer edges engageable with the support for mounting said frame selectively in a horizontal or vertical position thereon, and means for securing the frame on the support, said means including a bolt pivotally mounted between the flanges at the angle of the L and insertable through the support when the frame is in either position thereon, and a retaining nut threaded on said bolt, said means further including a bolt pivotally mounted between the flanges at one end portion thereof and insertable through the support, said flanges having notches therein, the second named bolt being swingable between and frictionally engageable with the flanges when in inoperative position, and a nut threaded on said second named bolt and engageable with the support for securing the frame in position thereon and further being engageable in the notches with the flanges for securing the second named bolt in inoperative position therebetween.

2,896,682
SINGLE PLY VENEER PLANK AND METHOD OF MAKING IT
Armin Elmendorf, Palo Alto, Calif.
Application August 17, 1956, Serial No. 604,644
6 Claims. (Cl. 144—309)



1. The method of treating veneer including the steps of providing a single ply of green veneer, forming a plurality of grooves in one surface of said ply parallel to the grain while in its green state, then reducing the moisture content of said ply to a point below its equilibrium moisture while the veneer is held under constraint.

2,896,683
FOOD GRINDER
Charles R. Bowland, Spring Valley, Ill.
Application August 20, 1957, Serial No. 679,297
2 Claims. (Cl. 146—192)



1. In a food grinder, the combination of a tubular shell adapted to contain food, a perforated plate positioned across an end of the shell and through which the food is forced, a piston slidable within the shell for acting on the food and forcing it through the perforated plate, a rotatable knife in contact with the inner surface of the perforated plate for cutting the food as it passes through

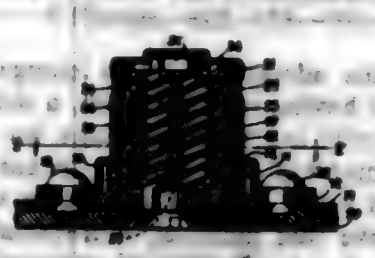
by said seating surfaces when the tire is mounted on said

2,896,689

and movable therewith, said drill chuck projecting down- moved past said guiding members during operation; each

the plate, a shaft fixed with respect to said knife and passing through the plate, a knife rotating handle having a sleeve portion disposed about the shaft and resting on the outer surface of the plate, a nut for tightening the handle and knife with respect to said plate, said plate being formed with a plurality of tabs on its periphery and said shell being provided with a like number of tab receiving recesses, each of said tabs and corresponding recess being provided with mating surfaces one of which is slanted so that the plate may be rotated by means of said handle when said nut is tightened in order to tighten the plate with respect to the shell due to the wedging action of the slanted surfaces.

2,896,684
LOCKING SLEEVE CONTRACTABLE BY WEDGING THREADS TO ENGAGE A STUD
Victor F. Zaboklicki, Summit, N.J.
Application September 7, 1956, Serial No. 608,446
1 Claim. (Cl. 151—19)



A fastening device comprising in combination: an internally threaded receptacle; an inherently contracted resilient split sleeve therein having an external thread which initially engages with a predetermined clearance the thread in the receptacle, said internal threads of the receptacle providing a wide included angle in the range of 125° to 150° to obtain releasable wedging when the sleeve and receptacle are urged axially in opposite directions, said sleeve also being internally threaded; a stud adapted for threaded engagement in said sleeve, the threads on the stud having greater pitch diameter than the internal threads in the sleeve when the sleeve is in its inherently contracted condition whereby said stud and sleeve threads are adapted to engage with frictional resistance when the stud is screwed into the sleeve and to cause the sleeve to dilate and thereby reduce said predetermined clearance, the engaging threads on said stud and sleeve having a substantially narrower included angle than the engaging threads on said receptacle and sleeve, the further rotation of the stud to screw it home moving the sleeve longitudinally to ride upon and be compressed by the taper of the external threads of the sleeve wedging against the internal threads of the receptacle; means for blocking the receptacle and sleeve against relative rotation; and said stud being formed with a tapering integral projection on the end of its shank opposite its head, said projection being coaxial with the stud and converging longitudinally away from the stud body from a diameter commensurate with the smallest diameter of the contracted internal threads in the sleeve to a lesser diameter, said projection being adapted to centralize the stud when inserted in the contracted sleeve to facilitate bringing the stud into threaded engagement with the sleeve and dilate the sleeve, the end convolution of the threads of said stud nearest said projection being of a larger major diameter than the remaining convolutions of said threads; and a resilient split ring having an inner diameter commensurate with the major diameter of said remaining convolutions but less than the major diameter of said end convolution slidably encircling the portion of the stud having threads of the remaining convolutions, said ring being releasably retained on the stud by said threaded end portion of larger major diameter when the stud is disengaged from the sleeve.

2,896,685
ANTISKID DEVICE
John W. McClelland, Philadelphia, Pa., assignor of one-half to George H. Mensch, Jr., Philadelphia, Pa.
Application April 11, 1957, Serial No. 652,217
11 Claims. (Cl. 152—214)

1. In combination, a rim, a tire on said rim, a pair of anchoring devices attached to the opposite sides of said rim, a chain assembly applicable about said tire and including a pair of semirigid side cables each having an abutment on each end engageable by one of said anchoring devices, a track assembly for supporting said chain assembly, supporting means for said track assembly attachable to a car body, hydraulic means for longitudinally shifting said track assembly, and detent means for holding said track assembly in a shifted position.

2,896,686
EMERGENCY TRACTION DEVICE FOR MOTOR VEHICLES
Nat Berlin, Merrick, N.Y.
Application June 6, 1958, Serial No. 740,324
5 Claims. (Cl. 152—225)

1. A traction device for a wheel and tire, comprising a main rectangular plate, a rectangular slide plate adapted to slide on a portion of the main plate, a pair of J-shaped traction bars secured by spring means to each of the plates, and locking means removably securing the slide plate to the main plate, said locking means tensioning said spring means when the bars are angularly disposed on diametrally opposed sides of said tire, said locking means comprising a lever having a spring wire U-shaped loop pivotally attached thereto, a hook on the main plate for engaging the bight of said loop under spring tension, a threaded pin carried by the slide plate for entering an aperture in said lever, and a wing nut for securing the lever to the slide plate.

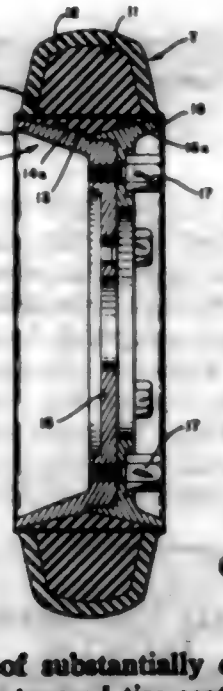
2,896,687
TIRE AND WHEEL ASSEMBLY
Cornelius W. Smith, Grosse Pointe, and Ralph L. Seger, Jr., and Lawrence W. Rerem, Detroit, Mich., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Application November 10, 1954, Serial No. 467,962
2 Claims. (Cl. 152—310)

1. A tire and rim assembly comprising, a rim having a pair of flanges, providing a pair of oppositely tapered tire seating surfaces, one of said flanges being removably clamped to the other to permit mounting and demounting of a tire thereon, a tire seated on said tire seating surfaces, said tire having a base of resilient rubber tapered inwardly from the marginal edges thereof and engaging said tapered seating surfaces, the inner diameter of said base when said tire is unmounted being less than the diameter of said flanges at corresponding points thereof so that radially directed forces are applied to said base

an end of an elongated article in a position adjacent said deformable material between a pair of intermediate

frame, a pair of opposed co-acting jaws on said frame, perforated plate for cutting the food as it passes through

by said seating surfaces when the tire is mounted on said rim, an inextensible solid annular band surrounding said base and bonded thereto to prevent circumferential stretching of the tire, said band being of substantially the same width as said base and of a diameter at the



marginal edges thereof substantially equal to the maximum diameter of the tapered tire seating surfaces of the rim so that said base is confined between said band and said tire seating surfaces of said flanges, and an annular outer ring of cushion stock bonded to the outer surface of said band.

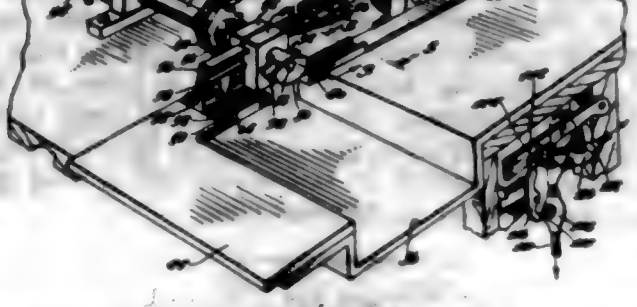
2,896,688

MACHINE HAVING A PIVOTED FORMER AND CLAMP FOR FORMING FLATTENED HELICAL COILS

Nicholas Guevara, Bronx, N.Y.

Application June 7, 1954, Serial No. 434,956

8 Claims. (Cl. 153—40)



1. In a machine for forming flattened helical coils of tubing or the like, a bending former mounted for oscillatory motion about an axis, said former having a circular portion with a helical groove therein and a flattened side, guide means for directing the tubing to be bent through said groove, an oscillatory clamp mounted in substantial alignment with said guide means on the far side of said bending former, means for operating said clamp to engage the portion of the tubing projecting beyond the bending former, means for oscillating said clamp through an angle of about 180° around said bending former so as to bend the tubing into the helical groove thereof, means for returning said clamp to initial position, and means for rotating said bending former so as to bring the flat side thereof under the bent portion of the tubing and thereby permit the bent tubing to be advanced without interference from the helical groove.

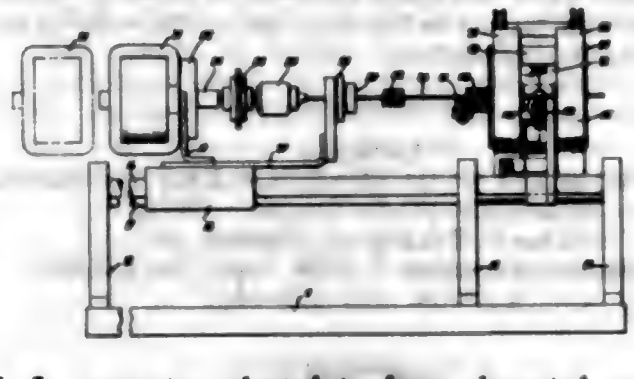
2,896,689

APPARATUS FOR FORMING A HELICAL WIRE COIL ON AN AXIALLY TRAVELING ROTATING MANDREL AND HAVING FIXED GUIDE GROOVES TO IRON SAID COIL ONTO SAID MANDREL

Richard A. Arms, Menlo Park, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California

Application December 28, 1954, Serial No. 478,143

10 Claims. (Cl. 153—67)



1. In apparatus adapted to form elongated material into helical coils having uniform pitch, a driven mandrel on which said coils are wound, means for driving said mandrel, said mandrel and driving means adapted to move axially, as a coil is being formed, a winding head adapted to receive said mandrel, non-rotatably mounted guide means having a plurality of substantially equally spaced grooves mounted in said winding head, said grooves having a V-shaped configuration and a depth such that the elongated material protrudes therefrom whereby the outer surface of the elongated material is engaged by the adjacent groove portion to provide a frictional drag on the material which serves to iron the same onto the mandrel, said grooves engaging adjacent convolutions of the coil over a substantial axial distance as said coil is being formed to determine the pitch and average out any variations therein, a first cylindrical means rotatably mounted in said winding head and disposed adjacent said mandrel whereby it presses against the coil, and a second cylindrical means yieldably and rotatably mounted in said winding head and serving to yieldably bearing against the coil.

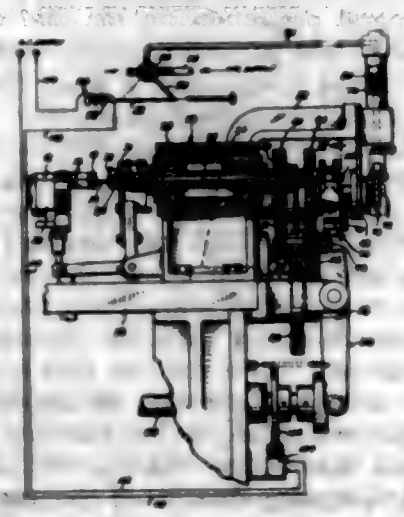
2,896,690

INERTIA-TYPE OVERWIND DEVICE FOR A FILAMENT COILING MACHINE

Harold H. Meininger, Roseland, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application April 12, 1957, Serial No. 652,465

10 Claims. (Cl. 153—67)



1. The combination with an article coiling machine of a coiling head for supporting a mandrel and gripping

when the stud is disengaged from the sleeve.

so that radially directed forces are applied to said base

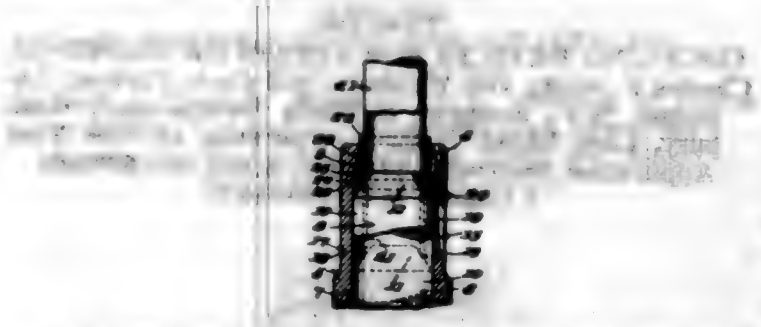
an end of an elongated article in a position adjacent said mandrel, and an overwind device comprising a first rotatable member for rotating said coiling head to cause said elongated article to be coiled about said mandrel and to thus produce a wound article, a second rotatable member connected to said first rotatable member by a lost motion connection and rotatable therewith, and means for rotating said second rotatable member a predetermined amount for winding said article, said first rotatable member being adapted by its inertia and by said connection to limitedly continue its rotation after said second rotatable member ceases its rotation, to add an additional fractional turn to said wound article.

2,896,691

HAND TOOL FOR FLARING TUBE ENDS

Carl E. Klumm, Cleveland, and Louis D. Blank, Wickliffe, Ohio, assignors to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio

Application December 18, 1953, Serial No. 399,681
5 Claims. (Cl. 153—79)



4. A hand tool for flaring a tube end and effecting an assembly thereof in a sleeve including an end enlargement providing an abutment shoulder and having therein a tube flare defining surface, said tool comprising a generally cylindrical body having an end bore of a diameter for slidably receiving the sleeve, and a counterbore of a diameter for slidably receiving the sleeve enlargement and terminating at said end bore in a shoulder presented for abutting engagement with the sleeve shoulder, and a plunger slidably mounted in and reciprocable in the counterbore and having a coniform tube end engaging and flaring end, said body having a T-shaped side slot presenting a wide portion for receiving the sleeve and the sleeve enlargement, and a narrow portion extending through the body shoulder and the adjacent end of the body and narrower than the diameters of the sleeve and its enlargement, thereby to provide a body shoulder extending more than half way about the circumference of a sleeve in shoulder abutting contact therewith, the longitudinal extent of the head or the wide portion of the T-slot being of a size to admit freely the sleeve and the sleeve enlargement, so that a sleeve with a tube end therein can be inserted laterally into the counterbore and then be moved longitudinally to place the sleeve in the bore with the sleeve shoulder against the body shoulder and the tube end opposite and in axial alignment with the plunger, said counterbore axially overlapping said narrow portion of said T-slot whereby said sleeve enlargement when within said overlapping portion of said counterbore will be retained by said narrow portion against lateral displacement from said counterbore.

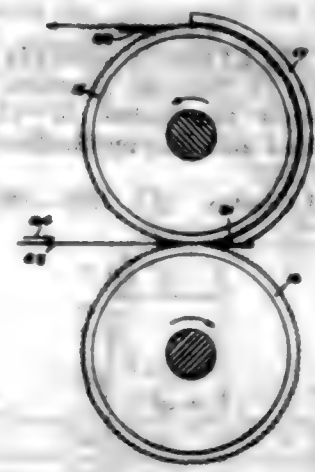
2,896,692

METHOD OF MAKING CUSHIONING PAPER

Camillo Villoresi, Milan, Italy, assignor to Societa per Azioni Fabbriche Fiammiferi ed Affini, Milan, Italy, a corporation of Italy

Application November 22, 1954, Serial No. 478,469
7 Claims. (Cl. 154—33.05)

1. The method of forming a cushioning sheet material which comprises feeding a moisture-containing sheet of deformable material between a pair of intermeshing impression members heated to a temperature between 100° C. and 480° C., to form initially impressed parallel zigzag rows of corrugations in the sheet, moving the impressed sheet in continuing contact with one of said members through a confining channel immediately adjacent said one member, while maintaining the temperature of



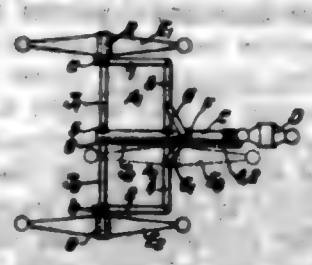
said one member within said range, and simultaneously causing the formation of steam within said channel by evaporating the moisture of the heated sheet therein, so that the steam confined in said channel tends to force air from the channel and from the depressions of said sheet, thereby to prevent scorching of the sheet and cause the initial impressions of said sheet to receive a more permanent set.

2,896,693

FOLDABLE INVALID OR BATH CHAIR

Gert Schladebach, Hanau am Main, Germany, assignor to Adam Wilhelm Loiz, Offenbach am Main, Germany

Application March 25, 1954, Serial No. 418,709
Claims priority, application Germany April 7, 1953
3 Claims. (Cl. 155—30)



1. A foldable invalid wheel chair comprising, in combination, a pair of running wheels, a steering wheel, and a central longitudinal support member, said steering wheel being mounted upon one rear end of said support member, a running wheel support assembly on each side of said support member adjacent to the opposite forward end of said support member, each said running wheel support assembly supporting one of said running wheels and including means for displacing said running wheel between an extended operative position spaced transversely outwardly from said forward end of said support member to a collapsed inoperative position alongside said support member and adjacent to said steering wheel whereby a substantial reduction in width and length of said chair is accomplished in moving said chair between said operative and inoperative position respectively, each said moving wheel assembly comprising a horizontally disposed parallelogram-shaped link assembly at either side of said central support member, a foremost and a rear member of said parallelogram disposed at right angles to said central support member, means for pivotally connecting the inner ends of said foremost and rear members to said central support member, means for pivotally con-

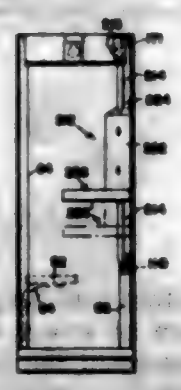
drical bore extending through said housing; a spoke from the pump to the burner nozzle, a modulating valve

vanced without interference from the helical groove.

of a coiling head for supporting a mandrel and gripping

necting the outer ends of said foremost members to the running wheel axles for swinging movement of the running wheels together with the said foremost and rear members to a position alongside the said central support member in parallel relation thereto, and connecting links in the said parallelogram for connecting the outer ends of said foremost and rear members to one another.

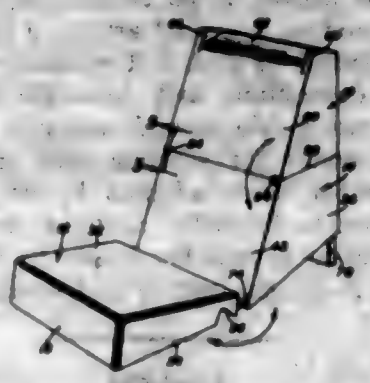
2,896,694
TELEPHONE BOOTH
Percival H. Sherren, Jamaica, N.Y.
Original application September 3, 1952, Serial No. 307,630. Divided and this application April 20, 1956, Serial No. 579,542
3 Claims. (Cl. 155—78)



1. In a telephone booth, the combination comprising a horizontally extending base structure including an upper frame, a lower frame, and a member interposed between said upper frame and a marginal portion of said lower frame, said upper frame, marginal lower frame portion and interposed member conjointly forming upright side walls adapted for extending peripherally about said booth, said upper frame being adapted for mounting the side walls of said booth, and said member being operative to prevent the transmission of sound vibrations between said upper and lower frames, a seat structure, and seat structure support means, said seat structure including a seat and an upright seat support post, said seat structure support means including a pair of horizontally extending plate members vertically spaced one above the other and extending transversely across and close in a corner-forming portion of said upright side walls of the base structure thereby to provide maximum unobstructed floor space in the booth, the upper one of said plate members being affixed to said upper frame and provided with an opening for slidably receiving said seat support post and the lower one of said plate members being affixed to said lower frame and provided with a fixed abutment for the lower terminal of said seat support post for transmitting the load due to the weight of said seat and its occupant directly to said marginal lower frame portion, said seat support post being curved upwardly and inwardly from said plate members to said seat.

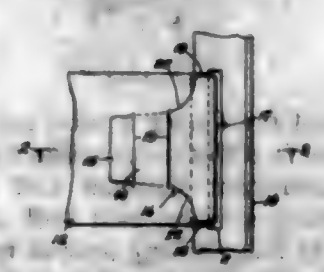
2,896,695
CONVERTIBLE SEAT
Helen B. Ashworth, Palo Alto, Calif.
Application February 2, 1956, Serial No. 562,995
8 Claims. (Cl. 155—153)

1. A furniture unit convertible between a hassock and chair comprising a first, a second and a third section, said first section having a surface which constitutes a seat when the unit is arranged as a hassock or arranged as a chair, said second and third units each having sides, an angulated surface at the front edges of said sides and which when said unit is arranged as a chair are coplanar, a hinge connecting the inner edge of said first section to the lower edge of said surface of said second section, means including a hinge connecting said second and third sections together at the junctions of said surfaces of said second and third sections so that said second and third sections are movable to a position with said surfaces superimposed on each other when said unit is



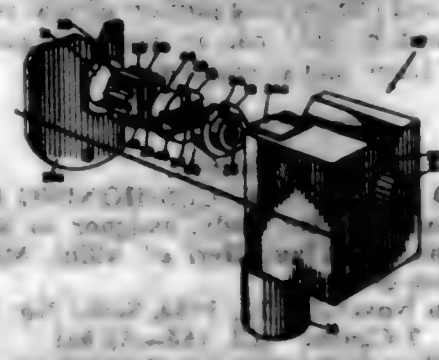
adjusted to form a hassock, and said first section hingedly movable about said hinge to a position with the surface opposite said seat forming a surface superposed over the lower part of said second section.

2,896,696
COUPLING DEVICES FOR STRAPS OR WEBBINGS
Charles P. Molla, Old Westbury, and Carlo Troisno, Copiague, N.Y., assignors to Molla Incorporated, Westbury, Long Island, N.Y., a corporation of New York
Application November 27, 1957, Serial No. 699,301
1 Claim. (Cl. 155—187)



In webbing of the character described, comprising an elongated wide extensible strap, reinforcing coupling hook devices attached to ends of the strap, each of said devices comprising a wide portion slightly less in width than the width of the strap and encircling the curved end portion of the strap, the hook portion having spaced sides, said curved end portion of the strap including an end extending beyond a free edge at one side of the hook portion, the other side of the hook portion having an integral elongated tongue arranged upon the upper surface of the strap, and a bar member fashioned from the material of the strap overlying and frictionally engaging said tongue to retain the device against displacement from the strap end.

2,896,697
SPOKE TIGHTENING HEAD
Leonard Shakesby, Toronto, Ontario, Canada, assignor to Canada Cycle and Motor Company Limited, Weston, Ontario, Canada
Application May 14, 1957, Serial No. 659,146
3 Claims. (Cl. 157—1.5)



1. A nipple turning head for a bicycle spoke tightening machine, said head comprising a housing; a cylin-

which comprises feeding a moisture-containing sheet of

necting the inner ends of said foremost and rear members to said central support member, means for pivotally con-

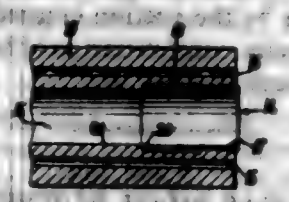
drical bore extending through said housing; a spoke accommodating slot in said housing leading into said bore; a gear rotatably mounted in said bore; a spoke nipple contacting member rotatably mounted in said bore; a junction member rotatably mounted in said bore and disposed between said gear and said nipple contacting member; a first set of cooperating ridge and groove surfaces between said gear and said junction member, allowing relative sliding of said members in one direction transversely of the axis of said bore; a second set of cooperating ridge and groove surfaces between said junction member and said contacting member allowing relative sliding of said members in another direction transversely of the axis of said bore; means for rotating said gear; an axial bore of somewhat larger diameter than a bicycle spoke in each of said gear, said junction member and said nipple contacting member; and alignable spoke accommodating slots in each of said gear, said junction member and said nipple contacting member, whereby a spoke may be located within said axial bores.

2,896,698

BLOWPIPE NOZZLE AND METHOD OF MANUFACTURE

Andrew J. Zobrick, Westfield, N.J., assignor to Union Carbide Corporation, a corporation of New York

Application September 15, 1954, Serial No. 456,219
10 Claims. (Cl. 153—27.4)



10. A blowpipe nozzle having an axial bore for oxidizing gas and a series of smaller diameter passageways for fluid fuel extending longitudinally of the nozzle and radially outside of said axial bore, a tapered seat at the head end portion of said nozzle outside the axial bore and between it and said passageways, a larger tapered seat farther from the head end of said nozzle and radially outside said passageways, the head end portion of said axial bore underlying said larger seat being of greater diameter than the remainder thereof, and a stainless steel reinforcing sleeve of a maximum wall thickness less than the smaller diameter of said fluid fuel passageways inserted in said greater diameter axial bore portion and having a cylindrical inner surface of the same diameter as and flush with the remaining portion of said axial bore for supporting said first mentioned seat against collapse when it is pressed against a correspondingly tapered complementary seat portion by a clamping nut, the inserted end portion of said sleeve having a larger outside diameter and greater wall thickness than the remainder thereof and having peripheral serrations on its outer surface, the nozzle material underlying said larger tapered seat being swaged into said serrations, and the nozzle material underlying said first seat being swaged into contact with the smaller outside diameter and wall thickness portion of said sleeve to prevent said larger diameter portion of said sleeve from coming out of the greater diameter head end portion of said axial bore.

2,896,699

BURNER HEATED OIL SUPPLY SYSTEM

Elroy M. Rudish, Milwaukee, Wis., assignor to Cleaver-Brooks Company, a corporation of Wisconsin

Application January 18, 1954, Serial No. 589,847
3 Claims. (Cl. 158—36)

1. In a system for supplying viscous oil to a burner nozzle, a pump, an oil supply line for conducting oil from the pump to the burner nozzle, a modulating valve in the oil supply line between the pump and the burner nozzle for regulating the flow of oil to the burner nozzle, a pressure-relief valve in the oil supply line between the pump and the modulating valve, a return line connecting the pressure-relief valve to the source, a heater intermediate the pressure-relief valve and the modulating valve for elevating the temperature of oil pumped to the modulating valve, a pressure-reducing valve in the oil supply line between the heater and the modulating valve for reducing oil pressure at the modulating valve to a predetermined value, a recirculation line leading from the modulating valve to the return line, an orificed-gate valve in the recirculation line for limiting

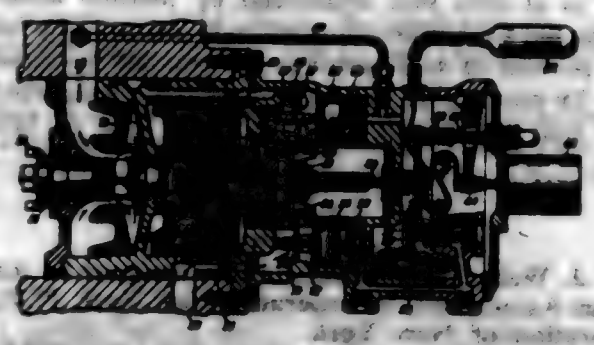
the flow of heated oil through the bypass line to a volume less than the capacity of the heater, a manually adjustable back-pressure valve in the recirculation line intermediate the orificed-gate valve and the return line for regulating the pressure drop across the orifice so as to vary the volume of oil recirculated to the source, a bypass line connected to the oil supply line and the recirculation line bypassing the pressure-reducing valve, the modulating valve, the orificed-gate valve and the back-pressure valve, and a manually controllable bypass valve in the bypass line effective when opened to subject the recirculation line to the full pressure of the pump to establish circulation on initiating operation after extended periods of shutdown.

2,896,700

FUEL SUPPLY SYSTEMS FOR GAS TURBINE ENGINES

William Donald McCourty, Wolverhampton, England, assignor to H. M. Hobson Limited, London, England, a British company

Application January 18, 1956, Serial No. 560,038
Claims priority, application Great Britain January 24, 1955
3 Claims. (Cl. 158—36.4)



1. Fuel supply apparatus for controlling the speed of a gas turbine engine during acceleration thereof to a controlled speed, comprising an engine driven fuel pump, a fuel supply conduit between the pump and the engine having therein two flow control orifices in series, an over-fuelling control valve controlling one of said orifices, said over-fuelling control valve being effective to prevent

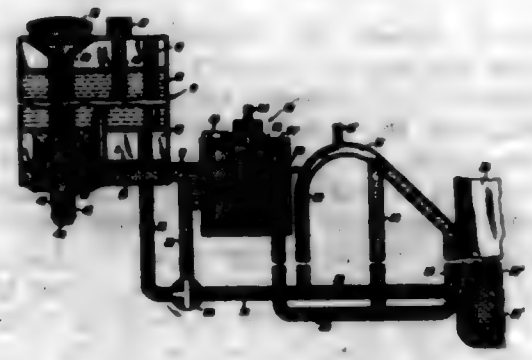
sections together at the junctions of said surfaces of ing machine, said head comprising a housing; a cylin-

excessive over-fueling during an initial critical range of engine speed, a speed governor comprising a speed-responsive element and an acceleration-responsive element, a metering valve controlling the other of said orifices, an initially closed servo valve, means operated by both elements of said governor for exerting on said servo valve a force tending to open it in response to increase in engine speed, means responsive to opening of the servo valve for actuating the metering valve to regulate the amount of fuel supplied to the engine during subsequent acceleration thereof to the controlled speed and to maintain the engine speed at the controlled value when attained, a device responsive to air intake temperature arranged to exert on the servo valve a force tending to close it and increasing with air intake temperature, and means for adjusting the datum of said temperature responsive device.

2,896,701
LIQUID CONVEYING APPARATUS

Robert A. Von Linde, Planegg, near Munich, Walter Baier, Stockdorf, near Munich, and Alfons Hartmann, Munchen-Pasing, Germany, assignors to Wilhelm Baier, K.G., Stockdorf, near Munich, Germany

Application September 30, 1955, Serial No. 537,834
Claims priority, application Germany October 7, 1954
7 Claims. (Cl. 158—40)



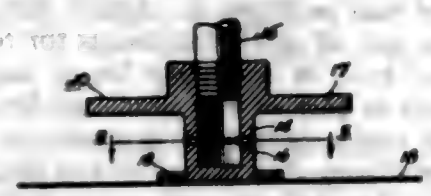
1. In a liquid consuming system, a consumer, a fuel tank at a higher level than said consumer, means to maintain a fuel level below a maximum in said tank, an outlet in the lower part of said fuel tank, fuel conduit means between said outlet to said consumer, a thermal feed system including a riser forming part of said fuel conduit means, said riser having an upper end at a level above said maximum fuel level in said tank, a portion of said fuel conduit means leading from said upper and downward to said consumer, means for heating at least a portion of said riser at a level lower than the lowest point of said outlet for lifting the fuel in said riser to at least said upper end by thermal action from where the fuel flows through said descending fuel conduit portion to said consumer, a conduit by-passing said riser by connecting the latter at a point somewhat lower than said upper end with the lower end of said riser.

2,896,702
BROILER BURNER

Earl J. Weber, Bay Village, Ohio, assignor to American Gas Association, Incorporated, New York, N.Y., a corporation of New York

Application August 4, 1954, Serial No. 447,744
2 Claims. (Cl. 158—99)

1. A broiler burner adapted to effect preheating and even distribution of heat over a large area, comprising a hollow burner head, means to feed fuel gas under pressure and unmixed to the burner head, said burner head having no outlet openings other than spaced ports with their axes arranged circumferentially substantially in a horizontal plane through which fuel gas unmixed with air is adapted to pass whereby the ignited gas burns in spaced luminous yellow flames of substantial length extending radially from said ports, a substantially imperforate upper baffle parallel to the plane of the ports and extending laterally a sufficient distance on all sides of said burner head and above said ports to collect and hold unignited gases for enhancing flame carry-over on ignition and for stabilizing the flames, said upper baffle having a diameter at least twice as great as the diameter of said burner head, and a substantially imperforate lower baffle parallel to the upper

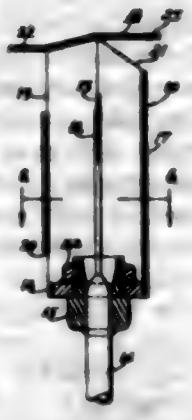


baffle and below said ports, said lower baffle extending further laterally on all sides of said burner head than said upper baffle for stabilizing the flames by shielding them from food vapors resulting from the broiling operation, the diameter of said upper baffle being approximately one-half the diameter of said lower baffle, the relative lateral dimensions and the spacing between the upper and lower baffles being selected to promote ingress of combustion air by the suction created by the burning of the gas jets whereby combustion is able to occur between the baffles and close to the ports.

2,896,703
GAS PILOT BURNER

Earl J. Weber, Bay Village, Ohio, assignor to American Gas Association, Incorporated, New York, N.Y., a corporation of New York

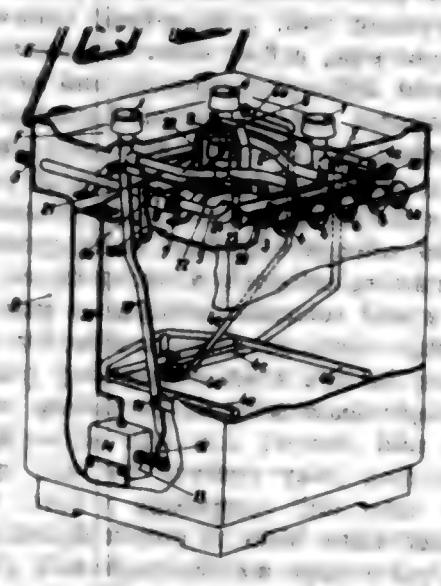
Application August 4, 1954, Serial No. 447,704
2 Claims. (Cl. 158—115)



1. A gas pilot burner adapted to produce a stabilized pilot flame at very low B.t.u. input levels of the order of 50 B.t.u. per hour, comprising a gas supply line, a thin walled tubular burner tip capable of being heated at its port end to a temperature which will support combustion at said slow rate of gas flow, said burner tip having an outside diameter of the order of .025 inch coupling means associated with said tip and connecting said tip to said gas supply line, means for maintaining the gas flow to rates of the order of .025 to .10 cubic feet per hour at linear velocities not exceeding 30 feet per second depending upon the B.t.u. content of the gas, said burner tip on ignition of said gas producing a bead-like flame partially enveloping and heating said burner tip, whereby the temperature of said bead-like flame is increased and maintained at a stable combustion temperature by radiation from said heated burner tip.

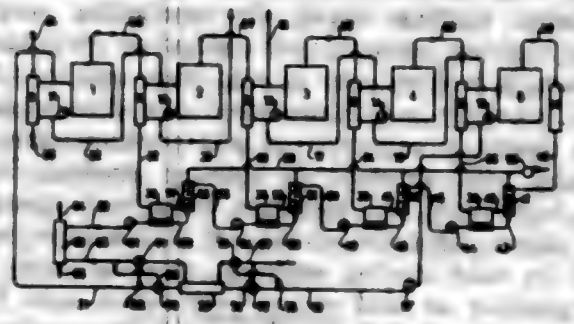
steam inlet valve in said steam supply pipe and down-

2,896,704
ELECTRIC IGNITING DEVICES FOR GAS STOVES OR THE LIKE
Heinz Alewald, Gelsenkirchen, Germany, assignor to Messrs. Metallwerke Gebr. Seppelfricke G.m.b.H., Gelsenkirchen, Germany, a German company
Application November 21, 1955, Serial No. 547,972
7 Claims. (Cl. 158—115)



1. In a gas stove or the like, the combination of a burner, a gas regulating tap therefor, a gas conduit extending from said tap to said burner, said tap including an actuating stem slidable axially from an initial non-rotatable position to a second position wherein it may be rotated between fully closed and fully open settings through an intermediate position wherein it may be rotated to adjust the burner flame, a self-contained magnetic induction apparatus having a high tension spark gap disposed adjacent said burner and including a slidable actuating core, a secondary conduit for delivering gas to said spark gap, an actuating bar slidable transversely to the axis of the stem of said tap and operatively connected to said core, and means carried by said stem and operatively engageable with said bar only when the stem is slid to its second position for sliding the bar by rotation of the stem, whereby the stem when in its intermediate position may be rotated to adjust the burner flame without sliding said bar.

2,896,705
EVAPORATION OF LIQUIDS
Torsten Ramén, Stockholm, Sweden
Application March 23, 1956, Serial No. 573,397
3 Claims. (Cl. 159—47)

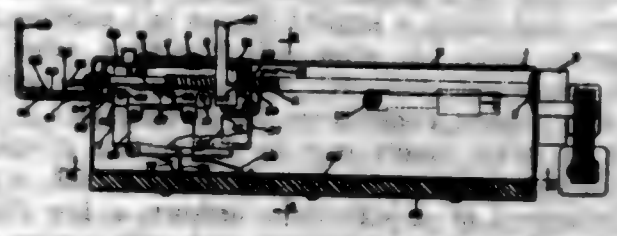


1. A method of evaporating a liquid in an evaporation system comprising a plurality of stages, each stage having a separate heating body individually associated therewith and each stage operating at a different evaporating temperature, said method comprising the steps of: evaporating said liquid simultaneously in all of said stages, passing the vapors driven off during the evaporation in a particular heating stage as a heating medium into the heating body of a stage which operates at a lower temperature than said particular stage and therein condensing the vapors so generated to form a first condensate, separating the gases and uncondensed vapors from the heating side of the heating body of the evaporating stage having the next higher evaporating temperature than said lower temperature stage which are the gases and vapors generated in the evaporator stage next higher than the particular stage, passing said gases and uncondensed vapors in countercurrent to and in direct contact with said first condensate whereby said last mentioned uncondensed vapors are at least partially condensed and merge with and heat said first condensate and so form a second condensate, passing said second heated condensate in indirect heat exchange with the liquid being introduced into an evaporating stage which operates at a temperature no lower than the next higher temperature above said particular stage, and exhausting the gases and the vapors which remain uncondensed after said passage in countercurrent.

2,896,706
FOLDING CANOPY FOR VENDING STAND TRAILERS
Socrates J. Schantz, St. Louis, Mo.
Application April 1, 1957, Serial No. 649,974
9 Claims. (Cl. 160—62)

9. A collapsible canopy comprising a roof member, a roof supporting member and a pair of spaced supporting side members, means for retaining said roof member upon a vertical wall in hinged relation, means for retaining said roof supporting member upon the roof member in hinged relation, said roof supporting member having means biasing it to a position perpendicular to the roof member, means for supporting said side members upon the wall in hinged relation, and catch means on said side members engaging a hooked element on said roof supporting member for supporting the same and the roof member in an elevated canopy assembled position, said roof supporting member being disengageable from the side members and adapted to be lowered from the elevated to a lowered substantially vertical position, said side members being oppositely swingable with respect to said wall from a position substantially flush with the wall to a substantially perpendicularly extending roof supporting position.

2,896,707
TIME MECHANISM FOR CONDUCTING A SELECTED ONE OF A PLURALITY OF SEQUENCES OF OPERATIONS
Gresham N. Jennings, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Application August 5, 1957, Serial No. 676,236
5 Claims. (Cl. 161—1)



1. In combination, a housing having a travelling framework therein, a shaft in said housing, a timer motor for driving said shaft, a manually operable plunger extend-

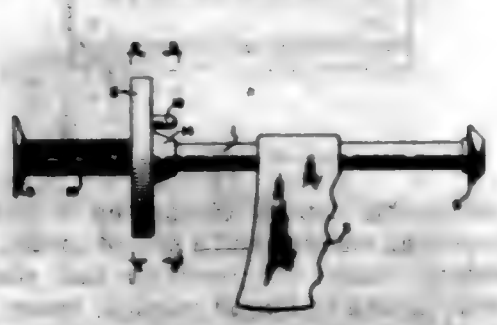
opens said blow-back valve, closes said relief valve, tion box and each having an inwardly facing, longitudi-

no outlet openings other than spaced ports with their axes arranged circumferentially substantially in a horizontal

tained at a stable combustion temperature by radiation from said heated burner tip.

ing outwardly of said housing and arranged for disengaging said framework from said shaft when moved in a first direction and for engaging said framework with said shaft when moved in a second direction, a cut-off switch mounted upon said framework, means attached to said plunger for contacting said switch when said plunger moves to shaft disengaging position and for moving out of contact with said switch when said plunger moves to shaft engaging position, a switch carriage carried by said framework, a cover for said housing having a plurality of parallel recesses therein, each recess including cam surfaces and each recess corresponding to a single complete sequence of operation, switches mounted upon said carriage and having follower arms biased into contact with the surfaces of a selected recess thereby to operate said carriage-mounted switches while being carried by said framework along a selected recess, and means for shifting said carriage transversely of said recesses to engage said follower arms in a selected recess for movement therealong and while said plunger occupies its shaft-disengaging position.

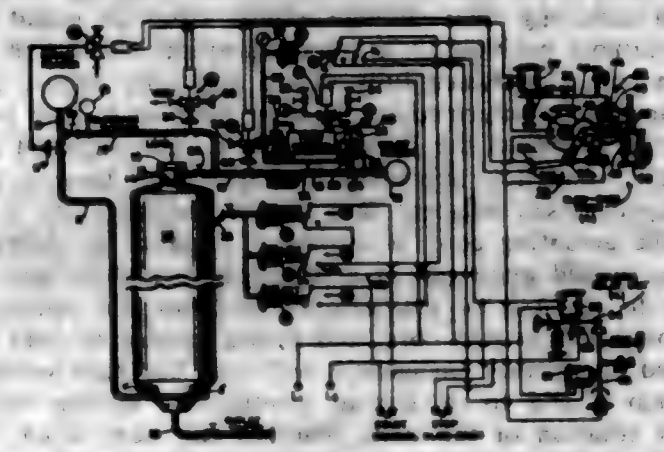
2,896,708
TOY SPEEDOMETER
Richard H. Bair, Camp Hill, Pa., assignor to The Hubley Manufacturing Company, Lancaster, Pa.
Application June 22, 1956, Serial No. 593,186
5 Claims. (Cl. 161—18)



1. A timing device for a toy speedometer comprising a sighting tube, an eyepiece mounted on one end of the tube, a sighting glass having spaced markings thereon mounted on the other end of the tube, a casing mounted on said sighting tube between the ends thereof, a disc carried within said casing for rotary movement relative to the tube, said casing being provided with an arcuate slot and said disc being provided with a handle projecting through the casing slot, a spring mounted about said tube and secured at one end to the eye piece and at its other end to the disc, and an hour glass timing and calculating means carried by said disc, the said sighting glass markings being correlated with the timing and calculating means to indicate in operation the speed of a moving vehicle.

2,896,709
DIGESTER RELIEF SYSTEM
Henry O. Ehrlemann, Sharon, and Henry S. Drinker, Concord, Mass., assignors to The Foxboro Company, Foxboro, Mass., a corporation of Massachusetts
Application May 11, 1956, Serial No. 584,210
1 Claim. (Cl. 162—238)

A paper manufacture digester system wherein a digester tank is charged with wood chips and chemical liquor, and steam is applied thereto in a cooking process whereby gases are given off through a relief system and the wood chips are reduced to paper pulp, said digester system comprising, in combination: a digester tank, a steam supply pipe to the bottom of said tank, a side-wall pressure tap in said digester tank, a parallel arrangement of a high limit bellows, a low limit bellows, and a set point bellows each with a pipe connection to said side-wall pressure tap, a relief pipe extending out from the top of said tank, a blow-back pipe connecting said steam supply pipe to said relief pipe, a steam inlet valve in said steam supply pipe and downstream of the blow-back pipe connection to said steam supply pipe, a blow-back valve in said blow-back pipe, a relief valve in said relief pipe and downstream of the blow-back pipe connection to said relief pipe, a venturi tube in said relief pipe downstream of said relief valve, a differential pressure unit operable through pressure taps in said venturi tube, an output pipe from said differential pressure unit, a blow-back bellows connected to said output pipe, a flow control instrument also connected to said differential pressure unit output pipe, set point adjustment means for said control instrument, electrical means for operating said set point adjustment means in accordance with the action of said set point bellows, an output pipe from said control instrument to said relief valve, a blow-back holding relay unit comprising a starting solenoid, a spring biased contact arm movable by said solenoid to engage a pair of electrical holding relay contacts, a latch arm for holding said contact arm in said contact engaging position, and a holding relay release solenoid for lifting said latch arm to release said contact arm and allow disengagement of said holding relay contacts by said spring bias, a blow-back timer unit comprising a timer holding solenoid, a timer motor with an output driven gear thereon, a floating pivot gear meshed with said driven gear, a fixed pivot gear meshed with said floating pivot gear, a terminal gear unit meshed with said fixed pivot gear,



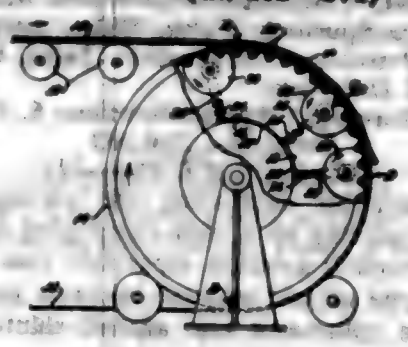
a spring biased latching arm operable by said timer solenoid to engage and immobilize said terminal gear unit, a spring biased timer switch, and a spring biased timer switch actuating lever pivotally mounted on and connecting the center shafts of said floating pivot gear and said fixed pivot gear, whereby actuation of said timer solenoid and said timer motor causes said actuating lever to move to operate said timer switch, an electrical starting circuit for energizing said holding relay starting solenoid and including switches at said blow-back bellows and at said high and low limit bellows, whereby a predetermined low flow in said relief pipe results in actuation of said starting solenoid if the digester tank pressure is between predetermined high and low limits, an electrical blow-back operation circuit which, upon the closing of said holding relay contacts by said starting solenoid, simultaneously provides energization to said steam inlet valve, said blow-back valve, said relief line valve, said timer solenoid, and said timer motor, with all of said operation circuit items except said timer solenoid continued in energization by the maintenance of said timer switch in its unoperated position and by the maintenance of said holding relay contacts in mutual engagement by said holding relay latch arm, and with said timer solenoid continued in energization by the maintenance of said engagement of said holding relay contacts without regard for the action of said timer switch, whereby the starting engagement of said holding relay contacts closes said steam valve,

body of a stage which operates at a lower temperature than said particular stage and therein condensing the

work therein, a shaft in said housing, a timer motor for driving said shaft, a manually operable plunger extend-

opens said blow-back valve, closes said relief valve, latches said timer terminal gear, and starts said timer motor and said gear train timer lever movement, and a release circuit which is operable in two stages, first by the actuation of said timer switch by said timer lever at the end of a predetermined blow-back period of operation of said timer motor, whereby said valves and said timer motor are de-energized to re-establish the operation of said digester tank and by the holding of said timer switch, as actuated, to prevent new blow-back action before relief flow is again established in said relief pipe, and second, by the actuation of said holding relay release solenoid when a sufficient relief pipe flow expands said blow-back bellows a predetermined amount, whereby said holding relay latch arm is lifted to release said holding relay contacts for disengagement resulting in de-energization of said timer solenoid to allow said timer switch to return to its initial unoperated position, whereby said entire digester system is again in condition for blow-back action upon the occurrence of said predetermined low flow condition in said relief pipe.

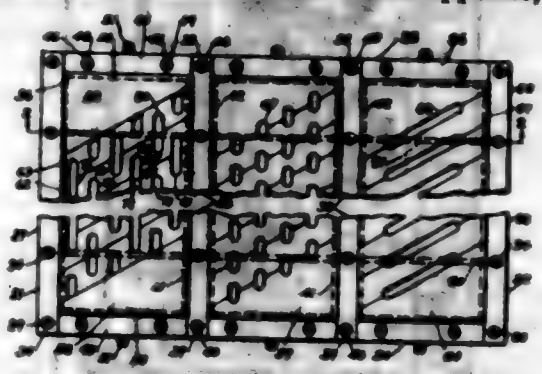
2,896,710
SUCTION COUCH ROLL DEVICE
Roger Wells, Plattsburgh, N.Y., assignor to Diamond Gardner Corporation, a corporation of Delaware
Application October 16, 1956, Serial No. 616,162
7 Claims. (Cl. 162—371)



1. A couch roll, comprising a rotatable cylindrical roll having a plurality of radial perforations at intervals on its periphery, a fixed vacuum chamber mounted within the roll for applying suction to a portion of the periphery of the roll during its rotation to suck excess liquid from a sheet of wet pulp passing thereabout, a fixed pressure chamber mounted within the roll adjacent to the vacuum chamber for applying a blast of compressed air to a portion of the periphery of the roll to blow the sheet of pulp off the roll, a plurality of standpipes mounted one for each in the perforations for preventing residual liquid from being blown out of the roll by the blast of compressed air, said standpipes being flush with the outer periphery of the roll and projecting radially inwardly from the inner periphery thereof a distance sufficient to trap the maximum quantity of residual liquid expected to collect within the roll, and means mounted at the juncture of the chambers with the inner periphery of the roll for forming air-tight seals therebetween and for sealingly covering the inner ends of the standpipes as they are advanced therepast during rotation of the couch roll.

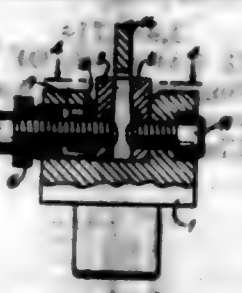
2,896,711
SUCTION BOX COVER
Bruno E. Prevost, West Bedford, Mass., assignor to John W. Bolton & Sons, Inc., Lawrence, Mass., a corporation of Massachusetts
Application July 11, 1955, Serial No. 521,820
6 Claims. (Cl. 162—374)

1. A cover for a paper machine suction box, said cover comprising a pair of metal side rail members each co-extensive with, and adapted to be affixed on one of the opposite, longitudinally extending side walls of a suction box and each having an inwardly facing, longitudinally extending, continuous tongue thereabout; at least one intermediate metal rail member, co-extensive with said metal side rail members and positioned in the space therebetween, each of said intermediate metal rail members being adapted to be affixed at each opposite end thereof to one of the laterally extending end walls of a suction box and having an outwardly facing, longitudinally extending, continuous tongue on each opposite side thereof; a plurality of metal end lock members, each adapted to be affixed to one of the opposite, lateral-



ly extending end walls of a suction box between adjacent ends of an adjacent pair of said rail members and each end lock member having block clamping means thereon, and a plurality of separate elongated wood blocks, having suction perforations therethrough from an end-of-grain upper face to an end-of-grain lower face and adapted to fill the space between each pair of adjacent rail members, each said elongated block abutting along its opposite side faces with adjoining blocks and having a tongue groove in each opposite end face slidably supported on the adjacent longitudinally extending tongue of a side or intermediate rail member.

2,896,712
ADJUSTABLE MOUNTING FOR SLITTING TOOL STRUCTURES
Karl Brunner, Stuttgart-Weil im Dorf, and Gerhard Gabriel, Waiblingen (Rems), Germany, assignors to Trumpf & Co., Stuttgart-Weil im Dorf, Germany
Application May 14, 1957, Serial No. 659,013
Claims priority, application Germany May 16, 1956
11 Claims. (Cl. 164—58)

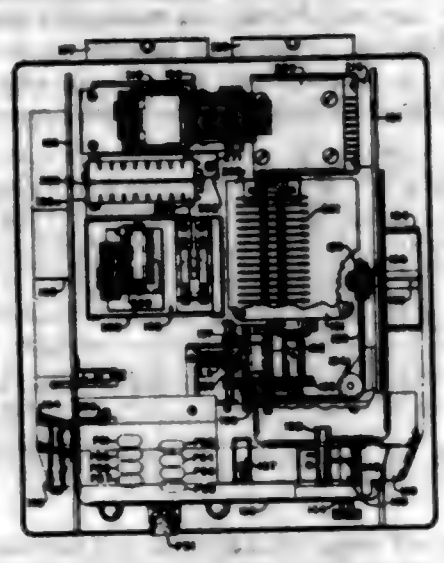


1. A slitting tool for cutting a sheet made of metal and similar material, comprising in combination, a die member and a matrix member, said matrix member including a knife-holder, a pair of spaced main knives in said holder disposed in substantially longitudinal direction of a slit to be cut in said sheet, one of said main knives being firmly secured in said holder, the other of said main knives being spacedly adjustable with respect to said one main knife, means in said matrix member for adjusting said other main knife relative to said one main knife, a first transverse knife laterally displaceable in said matrix and disposed forwardly of the cutting direction of said slitting tool, means associated with said first transverse knife for slidably and laterally displacing same, and a second transverse knife in said matrix arranged rearwardly of said pair of longitudinally disposed main knives, said die member being formed with a cutting edge for cooperating with said rearwardly disposed transverse knife.

steps of piercing the casing with a solid object to make oil pipe, said annular ...

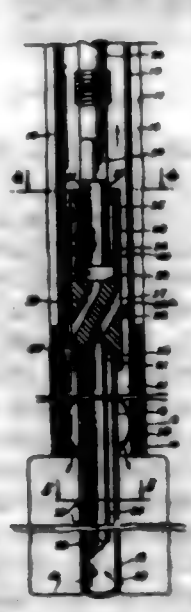
out from the top of said tank, a blow-back pipe con- of said timer switch, whereby the starting engagement necting said steam supply pipe to said relief pipe, a of said holding relay contacts closes said steam valve,

2,896,713
RECORDING DEVICES
Elmer A. Gerteumann, Dayton, Ohio, assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Application December 2, 1955, Serial No. 550,728
6 Claims. (Cl. 164—111)



5. In an apparatus for the recording of data, the combination comprising a plurality of data-representing means; a first set of conductors, each conductor in said set being connected to a corresponding data-representing means; a plurality of punch-selecting means for selecting punches for operation to record data in accordance with a predetermined code; a second set of conductors, each conductor in the second set being connected to one of the punch-selecting means; an encoding member in which the two sets of conductors terminate in coordinate juxtaposed relationship to each other; and unidirectional conducting means selectively positioned on the encoding member to interchangeably interconnect the two sets of conductors for control of the punch-selecting means by the data-representing means according to any desired encoding system, the unidirectional conducting means eliminating the possibility of back circuits which might otherwise cause erroneous punch selection, and being shiftable from one connecting position to another to change the encoding system.

2,896,714
GRAVEL PACKING OF WELLS
Cecil C. Killingsworth, Los Angeles, Calif.
Application November 5, 1956, Serial No. 620,324
10 Claims. (Cl. 166—15)



6. An improved method of gravel packing a well cavity enlarged about a screen pipe in the cavity, which comprises introducing gravel by fluid flow from above into the cavity about the screen pipe to fill the cavity, said gravel having been classified to a particle size where substantially all of the particles can pass through the apertures of the screen pipe, and applying mechanical shocks and vibrations to the screen pipe, washing out the loose and dislodged particles upwardly from within the screen pipe and out of the well, while introducing more of the classified gravel to keep the cavity full, until settling of the gravel particles of the pack into stable arrangement and particularly bridged across the screen apertures, has been effected.

2,896,715
HYDRAULIC CEMENTS
Rufus V. Jones, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Application May 5, 1952
Serial No. 286,182
19 Claims. (Cl. 166—31)

11. In the method of cementing a casing in a well which comprises pumping down through the casing and upwardly in the annular space between the casing and the borehole an aqueous hydraulic cement slurry, the step of adding to the cement slurry a hydraulic cement thickening time extending agent selected from the group consisting of acid starch sulfate and salts of acid starch sulfate.

2,896,716
PLUGGING FORMATIONS WITH ASPHALT
James Wilburn Spurlock, Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
No Drawing. Application June 6, 1958
Serial No. 740,282
7 Claims. (Cl. 166—32)

1. A method for decreasing the permeability of a formation penetrated by a well comprising injecting acetone and an asphalt solution separately into said formation, the volume of said acetone being at least about 20 percent of the volume of said asphalt solution.

2,896,717
AVOIDING INCREASED WATER PRODUCTION IN FRACTURING OPERATIONS
George C. Howard, Tulsa, Okla., assignor to Pan American Petroleum Corporation, a corporation of Delaware
No Drawing. Application December 28, 1956
Serial No. 631,067
4 Claims. (Cl. 166—33)

1. In a method for treating an oil-bearing formation penetrated by a well in which a fracturing fluid is injected into the well and then into said formation under sufficient pressure to fracture the formation, and in which a water-bearing zone is closely associated with said oil-bearing formation, the improvement comprising introducing into said well and into said formation ahead of at least a portion of said fracturing fluid a volume of treating solution equal to at least about 5 percent of the volume of fracturing fluid, said treating solution consisting essentially of from about 40 to about 60 percent by weight of rosin polymers having an average molecular weight of at least about 450 and a softening point of at least about 100° C. and from about 60 to about 40 percent by weight of an oil-soluble solvent for said rosin polymers, said solvent being miscible in all proportions with water.

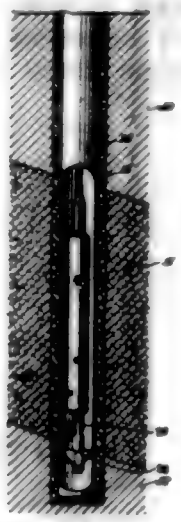
2,896,718
METHOD OF AND APPARATUS FOR COMPLETING WELLS
Theodore A. Kibby, San Tome, Venezuela, assignor to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Application August 3, 1955, Serial No. 526,171
3 Claims. (Cl. 166—35)

3. A method of completing a well in which a casing is cemented in the producing formation, comprising the

the opposite, longitudinally extending side walls of a suc-

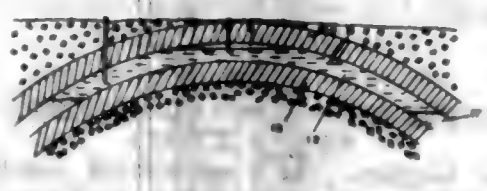
for cooperating with said rearwardly disposed transverse knife.

steps of piercing the casing with a solid object to make an opening therethrough, and simultaneously striking the inner surface of the casing about the periphery of the opening pierced in the casing with said solid object to



apply a sharp physical shock to the casing sufficient to fracture the cement surrounding the pierced portion of the casing to form small cracks in the cement communicating between the producing formation and the opening pierced in the casing.

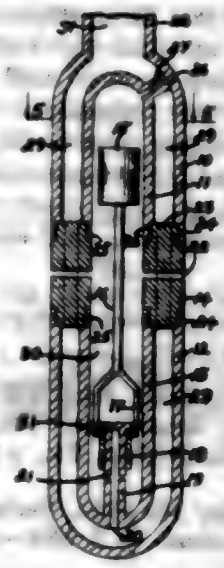
2,896,719
OIL RECOVERY PROCESS
Gilman A. Hill, Englewood, Colo., assignor to Petroleum Research Corporation, Denver, Colo., a corporation of Colorado
Application February 3, 1956, Serial No. 563,301
10 Claims. (Cl. 166—42)



1. The method of increasing the total recovery of oil from an oil reservoir having a gas zone in an oil bearing formation from which some oil has been displaced which comprises creating a continuous downwardly extending gas-water interface by admitting to an upper portion of the gas zone and permitting to drain down therethrough a quantity of water sufficient to produce continuity of the water phase through a substantial area of the gas zone but insufficient to break the continuity of the gas phase therein, permitting oil to move downwardly along the gas-water interface and accumulate below the zone, and producing the accumulated oil.

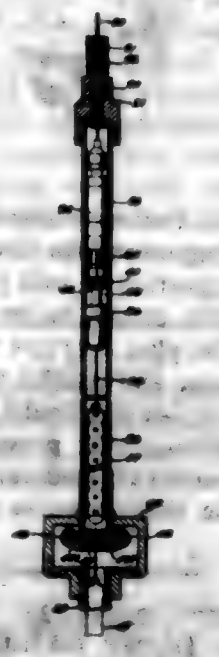
2,896,720
OIL AND GAS SEPARATOR
Herman L. Martin, Andrews, Tex.
Application June 7, 1957, Serial No. 664,392
3 Claims. (Cl. 166—54)

1. In an oil and gas separator an annular coupling, an upper and a lower inner capsule attached to said coupling on the inside, said lower inner capsule having a pipe rising from its bottom, an upper and a lower outside capsule attached to said coupling on the outside, said upper outside capsule communicating at its top with the oil pipe, said coupling provided with radial holes for the passage of fluid from the outside inward to a central space and vertical holes for the passage of oil upward in the annualr space between said outside and inside



capsules, said upper inside capsule provided with a port leading outward through said upper outside capsule, and means to control the flow of oil through said pipe from said central space to said annular space.

2,896,721
THROUGH-TUBING PERFORATING SYSTEMS
William R. Cannaday, Houston, Tex., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Application August 2, 1955, Serial No. 525,893
4 Claims. (Cl. 166—55.5)



1. In a well having tubing therein terminating in a lower open end spaced above the well bottom, apparatus for perforating the well below the lower end of said tubing, comprising the combination of: supporting means disposed in said tubing adjacent said lower open end; a retrievable mandrel adapted to be lowered through said tubing to seat on said supporting means; lowering means for lowering and seating said mandrel on said supporting means, said lowering means including means for detaching said lowering means from said mandrel when said mandrel is seated on said supporting means; a gun arranged to be fired by electrical firing means in said gun;

string; a slip expander including an upwardly diverging open at its ends and attachable to said pipe; a first valve

prises introducing gravel by fluid flow from above into the cavity about the screen pipe to fill the cavity, said

3. A method of completing a well in which a casing is cemented in the producing formation, comprising the

an elongated flexible member interconnecting said mandrel and said gun, and arranged to suspend said gun from said mandrel at a position a substantial distance below said lower end of said tubing when said mandrel is seated on said supporting means; an electrical contact disposed at the upper end of said mandrel in electrical communication with the electrical firing means in said gun; and a go-devil containing an electrical current supply means adapted to be lowered through said tubing above said mandrel, after said first mentioned lowering means is removed from said tubing, and having an electrical contact electrically connected to said current supply means and engageable with the said electrical contact on said mandrel, to supply current to said electrical firing means to fire said gun.

2,896,722
DUMP BAILER
William E. Barnes, Beaumont, Tex., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Application May 10, 1956, Serial No. 583,968
5 Claims. (Cl. 166—162)

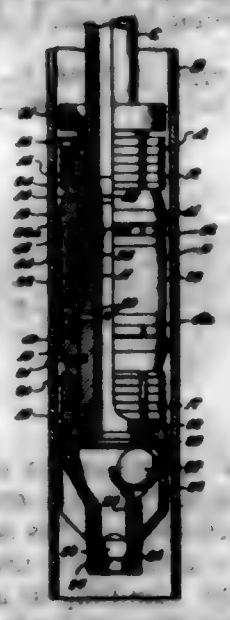
1. A dump bailer bottom comprising a longitudinally apertured plug having means for connection with a bailer, a valve seat in the aperture of said plug transversely apertured to release the dump bailer contents, a slidable valve member in the plug aperture positioned to sealably engage the valve seat and extend through the plug, said valve member being longitudinally apertured to form a passageway therethrough, a pressure responsive valve means in said passageway, and latch means in the plug engageable with the slidable valve member in closed and open positions.

2,896,723
DUMP BAILER
William E. Barnes, Beaumont, Tex., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Application May 10, 1956, Serial No. 583,967
11 Claims. (Cl. 166—166)

1. A bailer dump bottom for use in well tubing connected by collars comprising a housing, means for connecting said housing with a bailer, a valve seat in the connecting means, a valve head cooperatively engaging said valve seat, a valve rod positioning said valve head in the valve seat and extending from the valve head longitudinally through said housing, trigger means operably mounted on said valve rod extending through the housing to operatively contact the tubing collars and means mounted on the valve rod and extending into frictional engagement with said housing to releasably hold

the valve head in the seat until withdrawn by operation of the trigger means.

2,896,724
COLD FLOW PREVENTING PACKING STRUCTURES
John R. Baker, Pasadena, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Application August 26, 1957, Serial No. 680,102
14 Claims. (Cl. 166—204)



1. A packing structure, including a non-metallic packing member adapted to engage a companion wall, an abutment adjacent said member and having a tapered expander surface, a first split functionally integral ring engaging said packing member, a second split functionally integral ring engaging said tapered surface and said first ring and circumferentially slidable on said first ring, and means securing said rings to one another for joint movement toward engagement with the companion wall in response to movement of the packing member into engagement with the companion wall.

2,896,725
COMBINATION PACKER AND TUBING ANCHOR
John E. Reed, Santa Maria, Calif.
Application November 19, 1956, Serial No. 623,011
1 Claim. (Cl. 166—216)

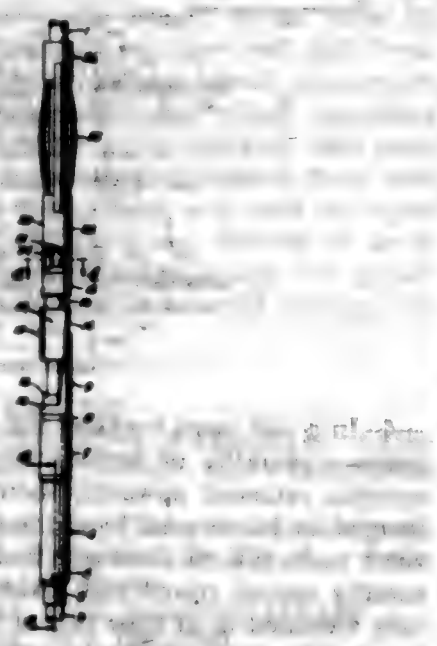
A tubing anchor, comprising: a tubular mandrel adapted to be connected to the lower end of a tubing

means that movably support said frame means; digging cutting blade and projecting radially from said head at

upper outside capsule communicating at its top with the

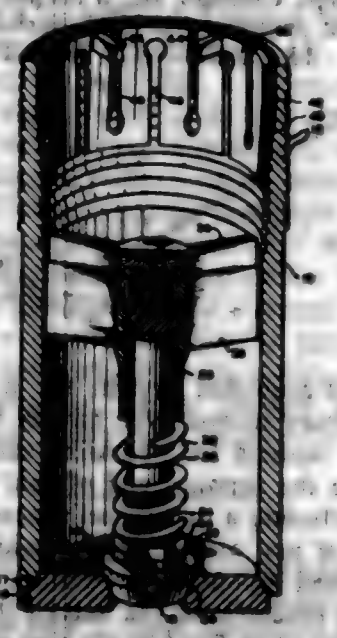
mandrel is seated on said supporting means; a gun arranged to be fired by electrical firing means in said gun;

string; a slip expander including an upwardly diverging expander face, said slip expander being slidable on said mandrel and having an initially upper position and a lower position on said mandrel; a slip axially slidable on said mandrel and divergently slidable relative to said mandrel axis on said expander face between a lower laterally retracted and an upper laterally expanded position relative to said slip expander; releasable means for fixing said slip in an initially upper position on said mandrel whereby on movement of said slip expander from its upper to its lower position relative to said



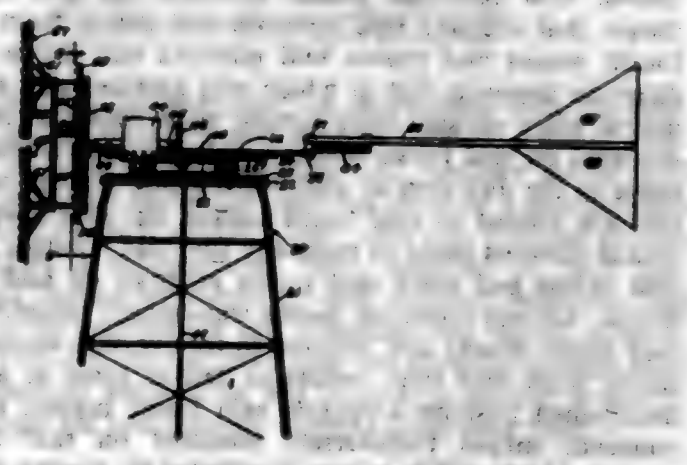
mandrel said slip is forced upwardly along said divergent expander face against a surrounding casing to secure said mandrel and tubing string thereto; said releasable means including a collar on said mandrel a shear element extending through said collar into said mandrel, said element being shearable upon application of predetermined tension on said tubing string while said slip is wedged against said casing thereby to release said slip for movement to a lower retracted position relative to said slip expander, thereby to permit withdrawal of said tubing string and said tubing anchor from said casing.

2,896,726
VALVE DEVICE HAVING PLUG-ACTUATED CHECK VALVE
Roy A. Bebo, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application October 11, 1954, Serial No. 461,415
10 Claims. (Cl. 166—229)



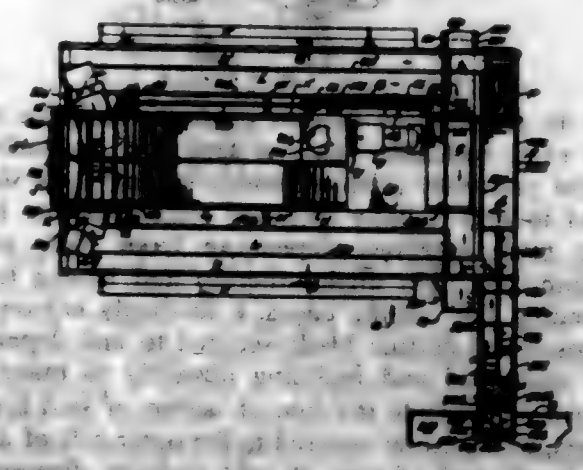
1. An improved valve device for use in a string of well pipe comprising an imperforate tubular member open at its ends and attachable to said pipe; a first valve seat across said tubular member fixed thereto; a first pressure release valve closing on said first valve seat; a second valve seat in said first valve disposed in the plane of said first valve seat when said first valve is closed; a second valve closing on said second valve seat, one of said valves being fluid pressure operable to permit upward flow thru said member and the other valve being fluid pressure operable to prevent upward flow and to permit downward flow thru said member; and means slidably engaging said tubular member and adapted to also engage said valve which permits upward flow thru said member to hold same in closed position.

2,896,727
APPARATUS FOR HARNESSING THE POWER OF THE WIND
James A. Gordon, Douglas, Ariz.
Application September 30, 1957, Serial No. 687,172
3 Claims. (Cl. 170—36)



1. A windmill comprising a tower, a circular track secured to the upper end of said tower and arranged horizontally thereon, a second circular track positioned in spaced parallel relation above said first circular track, a horizontal frame positioned between said circular tracks, trunnion wheels interposed between said tracks journalled on said horizontal frame supporting said second name track for rotary movement on said first name track, a horizontally extending framework secured to said second name track, a plurality of wind wheels journaled in said framework, means coupling said wind wheels for joint effort, vanes extending vertically on said framework, and means on said framework for selectively holding said vanes in alignment with said framework and at an angle to said framework.

2,896,728
COMBINATION POTATO DIGGER AND SORTER
Whettine B. Pridy, Glendale, Calif.
Application April 5, 1957, Serial No. 650,952
10 Claims. (Cl. 171—130)



1. A potato digging and sorting device adapted to be drawn by power means, including: frame means; wheel

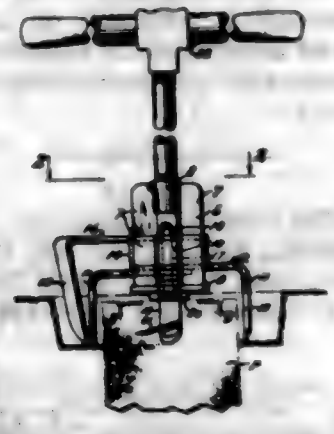
positioned with the axis thereof in a substantially fixed and the steering mechanism of the vehicle, hydraulic

ably mounted on said valve rod extending through the housing to operatively contact the tubing collars and

A tubing anchor, comprising: a tubular mandrel adapted to be connected to the lower end of a tubing

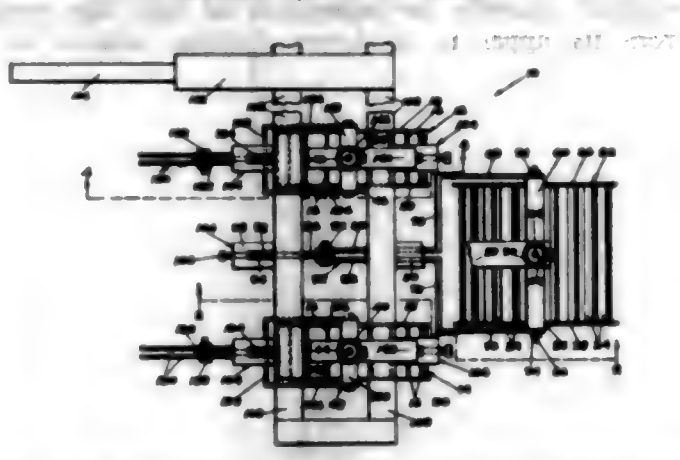
means that movably support said frame means; digging means supported from said frame means; first conveyor means supported on said frame means that is adapted to receive potatoes and debris unearthed by said digging means; second open-work, endless belt conveyor means supported on said frame means that receives said potatoes and debris and moves same rearwardly from said digging means; third open-work, endless belt conveyor means having an upwardly disposed first portion adjacent the underside of the uppermost longitudinal portion of said conveyor means; said third conveyor means having a second portion that extends rearwardly from said second conveyor means, said first portion and upper longitudinal portion cooperating to support potatoes and debris thereon, but said second portion permitting potatoes and debris deposited thereon from said conveyor means to fall downwardly therethrough; fourth conveyor means mounted on said frame means below said second portion of said third conveyor means that receive said potatoes and debris therefrom and move same transversely relative to said frame; fifth conveyor means mounted on said frame means that receives said potatoes and debris from said fourth means and moves said potatoes and debris in a direction opposite that in which said potatoes and debris moved when on said third means; sixth conveyor means mounted on said frame that is parallel to and adapted to move in the direction as said fifth means; support means that are affixed to said frame means, on which support means laborers stand to manually sort said potatoes from said debris and place said sorted potatoes on said sixth means; seventh conveyor means transversely mounted on said frame means and adapted to receive said sorted potatoes from said sixth means to deliver same at a predetermined position alongside said frame means; eighth conveyor means transversely mounted on said frame means, which eighth means is adapted to receive debris from said fifth means and discharge same outwardly to one side of said frame means; and power means that selectively drive said conveyor means at desired speeds.

2,896,729
BOUNDARY MARKER EXPOSURE TOOL
Adrian G. Brechlin, Waukesha, Wis.
Application December 5, 1955, Serial No. 551,117
2 Claims. (Cl. 172—19)



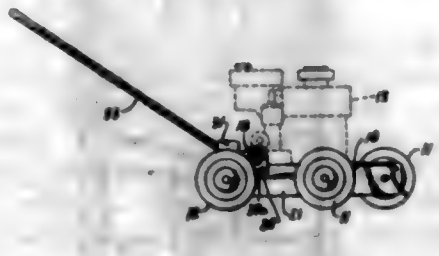
1. In a boundary marker exposure tool, the combination of a rotatable head, a series of circumferentially spaced relatively narrow blades having their shanks secured to and radially disposed relative to the head and their blade portions depending from their shanks at substantially right angles thereto and having lengthwise extending side cutting edges, a relatively narrow radially disposed sod cutting blade secured to and depending below said head and inclining inwardly to make a cone-shaped cut outside the line of action of said first named blades, and a cutter secured to the outer side of and above the lower end of one of said radially disposed blades and having a downwardly inclined free cutting edge to cut the soil between said radially disposed blades and said sod cutting blade and projecting radially from said head at least as far as the lower end portions of said sod cutting blade.

2,896,730
ROLLING CRUST BREAKER
Clarence A. Spurgin, Alliance, Nebr.
Application August 15, 1956, Serial No. 604,218
4 Claims. (Cl. 172—158)



4. In a soil crust breaker, the combination which comprises a plurality of horizontally disposed yokes having uprights extended upwardly therefrom, the uprights being formed to be secured by clamps to tool bars of a cultivator rack, spaced discs with radially disposed circumferentially spaced round rods extended therebetween rotatably mounted in at least two of the yokes and positioned to straddle rows of plants, spaced discs having radially disposed circumferentially spaced slats extended therebetween rotatably mounted in at least one of the yokes and positioned to travel between rows of plants, vertically disposed yokes extended upwardly from the horizontally disposed yokes and having posts extended upwardly therefrom, means for mounting the posts on the tool bars of the cultivator rack, equalizing springs extended around the posts and positioned on opposite sides of mounting means of the posts on the tool bars of the cultivator rack, and means on the posts for adjusting the tension of the springs for adjusting the positions of the yokes, discs, rods, and bars whereby the round rods work the soil around the plants and the slats scrape weeds from areas between the plants.

2,896,731
SELF-PROPELLED MOWER
Stanley Z. Siwek, Chicago, Ill., assignor to Pioneer Gen-E-Motor Corp., Chicago, Ill., a corporation of Illinois
Application January 14, 1959, Serial No. 786,719
13 Claims. (Cl. 180—19)



1. In a self-propelled system for a wheel supported tool of the rotary mower type having a platform with a power means thereon for operating said tool and means for supporting the forward end of said platform, the improvement including a rear wheel mounting plate pivoted at each side of and at the rear of said platform, a rear supporting wheel mounted for rotation on each said plate about an axis eccentric to the axis of the mounting plate pivot, a bearing plate fixed to the rear of said platform at each side thereof, a rotary power shaft journaled for rotation in upstanding portions of said bearing plates and

well pipe comprising an imperforate tubular member drawn by power means, including: frame means; wheel

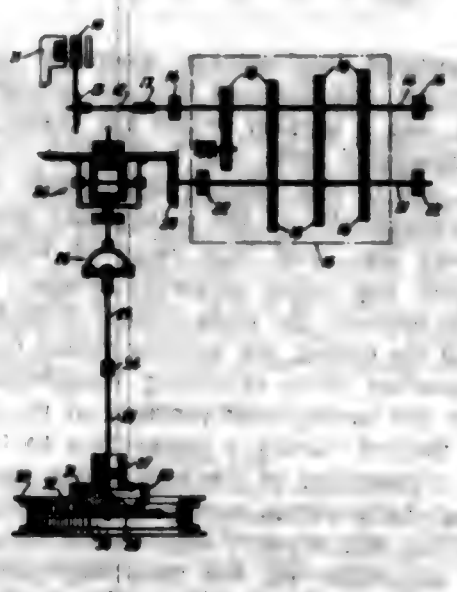
positioned with the axis thereof in a substantially fixed position above said base and forwardly of said rear wheels, means driving said shaft from said power means, friction driving elements carried by said power shaft and positioned for engagement with said rear supporting wheels upon downward movement of said base relative to said wheels, a guiding handle having side portions pivoted to said mounting plates and extending upwardly and rearwardly therefrom, an abutment rod carried by and extending between said mounting plates and engageable with said handle upon a predetermined downward movement of said handle, said handle pivots being located on said mounting plates at positions such that downward movement of said handle and a forced engagement with said abutment rod moves said wheel mounting plates away from said friction drive elements, said bearing plates having other portions upstanding from said base and positioned for engagement with said rod upon a predetermined downward movement thereof so as to limit the downward movement of said rod and movement of said rear wheels away from said driving elements.

2,896,732

DEVICES FOR SUPPRESSING PARASITIC CURRENTS IN VEHICLES WITH ELECTROMAGNETIC CLUTCHES

Jean Maurice and Michel Rist, Paris, France, assignors to Societe Anonyme Francaise du Ferodo, Paris, France, a corporation of France

Application April 16, 1957, Serial No. 653,189
11 Claims. (Cl. 188—70)



1. In an automotive vehicle having a chassis, an electromagnetic clutch including a friction disc, a gear box including primary and secondary shafts, said primary shaft being driven by said disc, a differential driven by said secondary shaft, wheels, lateral shafts driven by said differential and driving said wheels, said shafts and differential forming a mechanical transmission between said disc and said wheels having an appreciable electrical conductivity, and bearing means for supporting said transmission under said chassis, a device for preventing parasitic high-frequency electric currents produced in the vicinity of said friction disc to reach along said transmission to said wheels, said device comprising a conductibility releasing means located in said transmission at a point under said chassis far remote from said wheels.

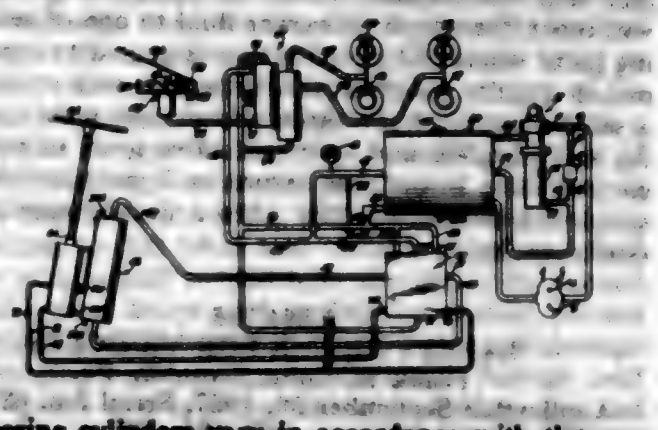
2,896,733

POWER STEERING SYSTEM

Edward A. Rockwell, Los Angeles, Calif.

Application July 2, 1954, Serial No. 440,993
17 Claims. (Cl. 180—79.2)

4. In a control system for a vehicle, the combination comprising, hydraulic cylinders for operating the brakes and the steering mechanism of the vehicle, hydraulic means for adjusting the pressure in said cylinders including dual hydraulic circuits connected to the brake and steering cylinders respectively, each said circuit including a low pressure section having means for controlling the pressure in said section manually, and a high pressure section, each said high pressure section including a valve controlling the pressure in the corresponding cylinder, means through which the pressure in the low pressure sections controls the valves to make the pressure in the brake



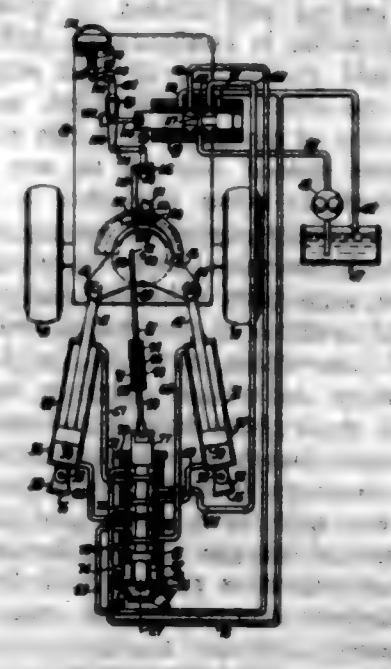
and steering cylinders vary in accordance with the pressure in the respective low pressure section, a pump common to both circuits providing high pressure power fluid and including means for deriving fluid at a substantially constant residual pressure, each said low pressure section including a compensating valve supplied by said last-named means with fluid at said residual pressure, and means for controlling said compensating valves so as to admit fluid to the corresponding low pressure section when the residual pressure in the respective section drops, to maintain the low pressure sections filled with fluid.

2,896,734

HYDRAULIC STEERING SYSTEM FOR JOINTED VEHICLES

Michael Toth, Springfield, Ill., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Application September 27, 1957, Serial No. 686,612
7 Claims. (Cl. 180—79.2)



4. A steering system for a vehicle having a dirigible unit with one or more ground engaging wheels pivotally mounted for relative horizontal angling of said unit about a vertical axis, said vehicle having a hydraulic circuit including a pump, a reservoir, and supply and return lines to conduct pressure fluid to and from a pair of double acting hydraulic steering jacks operatively connected at one end to said vehicle and at the other end to torque arms on said dirigible unit, said steering system comprising: a main control valve having a slid-

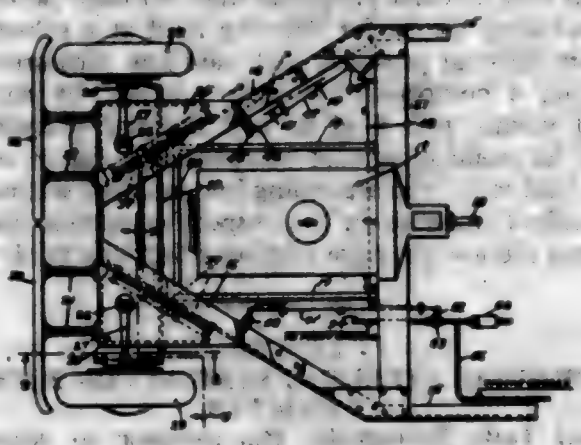
to the outer casing adjacent said inlet opening than the end of said vessel below said chamber, said partition

and having a downwardly inclined free cutting edge to cut the soil between said radially disposed blades and said sod

each side thereof, a rotary power shaft journaled for rotation in upstanding portions of said bearing plates and

able valve spool and a neutral position in which pressure fluid is directed to said steering jacks so as to hold said jacks in hydraulic restraint, said main control valve being operatively interposed in said supply and return lines; an auxiliary follow up valve having a slidable valve spool and being interposed between said steering jacks and said main control valve; a first motion transmitting means operatively connecting said dirigible unit and said valve spool of said auxiliary follow up valve so that said valve spool of said auxiliary follow up valve will block the supply of power fluid to one of said steering jacks when said dirigible unit is angled to a predetermined angular position with respect to said vehicle; and a second motion transmitting means operatively connecting said dirigible unit with said valve spool of said main control valve in order to return said main control valve spool to a neutral position when a desired angular position is reached.

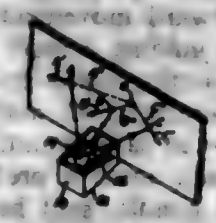
2,896,735
SAFETY FRAME FOR VEHICLES
Frank W. Bohn, Scranton, Pa.
Application September 30, 1957, Serial No. 687,244
4 Claims. (Cl. 180—83)



1. In a safety frame for motor vehicles comprising a chassis, a pair of forwardly converging members at the forward end of said chassis, in combination with shear plates box-like in configuration and comprising a plurality of side plates, one of said side plates being thicker than the other said side plate, said thick plate having a plurality of elongated openings in both horizontal and vertical spaced relation to one another, said converging members being U-shaped in cross-sectional view, said converging members having a plurality of openings in both horizontal and vertical spaced relation to one another, a plurality of headed pins passing through said elongated openings in said plates and in said openings of said converging members, said pins thereby slidably securing said shear plates to said converging members, said shear plates having a plurality of recesses in both horizontal and vertical spaced relation to one another, roller bearings in said recesses providing rolling contact between said shear plates and said converging members, a pair of bumper supports horizontally secured at one of their respective ends to said shear plates, and a pair of bumpers secured to the other ends of said bumper supports.

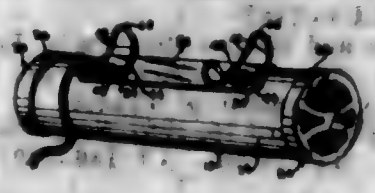
2,896,736
ACOUSTIC SYSTEM
John E. Karlson, West Hempstead, N.Y.
Application August 15, 1955, Serial No. 528,364
1 Claim. (Cl. 181—36)

An acoustic system comprising a loudspeaker, an enclosure for said speaker having a tapered opening through which the sound waves issue and by which the several frequencies thereof are equalized in phase and confined in a limited dispersion pattern, and a vertical sound-reflecting surface, said enclosure being disposed with its speaker and tapered opening in such positions relative to the vertical sound-reflecting surface as to direct the sound waves at an inclined acute angle against said reflecting



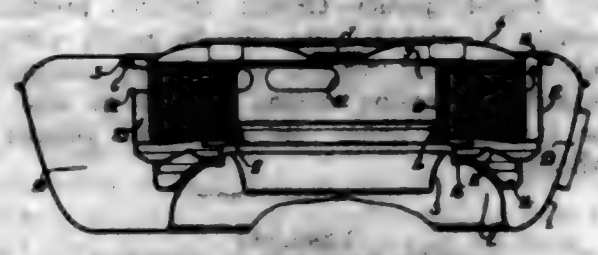
surface for reflection therefrom in a path which avoids the said speaker and its said enclosure, the reflected waves being thereby also equalized in phase with a virtual sound source located behind said reflecting surface.

2,896,737
EXTENSION LOUD SPEAKER
Gerald Gellman, Brooklyn, N.Y., assignor to Orbit Industries, Inc., Brooklyn, N.Y., a corporation of New York
Application August 25, 1955, Serial No. 756,807
3 Claims. (Cl. 181—31)



1. A portable loud-speaker assembly comprising a tubular casing, end closures thereon, support means on the casing, and a speaker within the casing, said casing being of elongated form, and being of a constant diameter from end to end thereof, the support means being spaced longitudinally of the casing, and including loop-like support legs, said legs being of elongated form, said support legs being arcuately bowed, the portions of the legs midway the ends thereof extending adjacent the wall of the casing, the support means further including a mounting plate extending longitudinally of and secured to the casing, said portions of the legs midway the ends thereof having a connection to the mounting plate, the connection of the legs to the mounting plate comprising clamp plates mounted on the mounting plate and overlying the support legs, the clamp plates being rotatably adjustable on the mounting plate for correspondingly rotatably adjusting the support legs.

2,896,738
AIR CLEANER AND SILENCER UNIT
Joseph B. Sebok, Dearborn, Mich., assignor, by mesne assignments, to Purolator Products, Inc., Rahway, N.J., a corporation of Delaware
Application April 22, 1955, Serial No. 503,163
3 Claims. (Cl. 181—35)



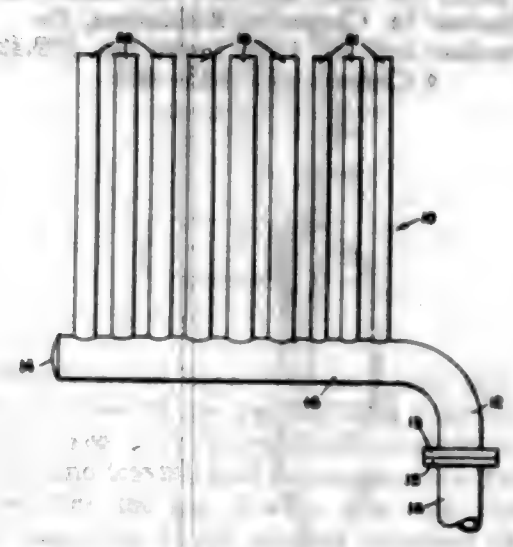
1. In a silencer for engine noises, an outer casing having an air inlet opening, an inner casing disposed within the outer casing and extending between the top and bottom thereof to provide a volume chamber for sound attenuation, said inner casing positioned nearer

comprising, hydraulic cylinders for operating the brakes

end to torque arms on said dirigible unit, said steering system comprising: a main control valve having a slid-

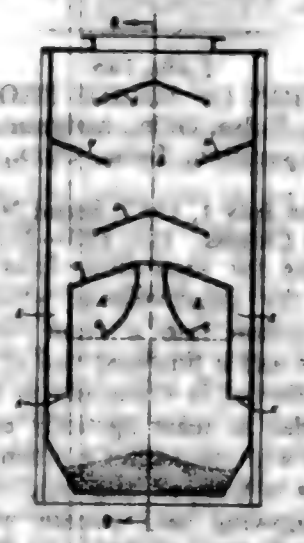
to the outer casing adjacent said inlet opening than the side of said inner casing opposite said inlet opening, said inner casing being imperforate a predetermined distance therearound in the part nearer said inlet opening to provide tuning channels for said volume chamber, said inner casing having an opening therein beyond said channels, and said casings having an opening leading from the inside of said inner casing.

2,896,739
MOTOR VEHICLE MUFFLER
Manfred H. Karas, Hamilton, Ontario, Canada
Application August 12, 1957, Serial No. 677,706
3 Claims. (Cl. 181—46)



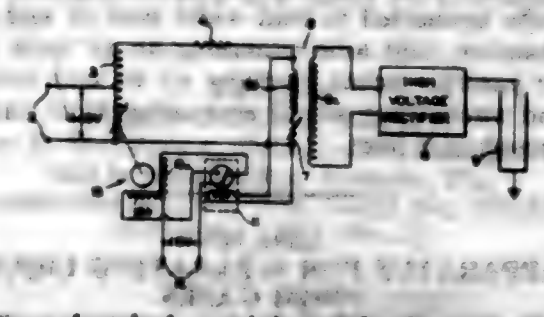
1. A muffler for attachment to the exhaust pipe of an internal combustion engine of an automotive vehicle comprising, in combination, an L-shaped conduit having a base leg and an angularly related leg closed at its outer end, and a plurality of substantially horizontally outwardly extending fully open discharge pipes of diverse sizes associated with said angularly related leg, said discharge pipes being divided into a plurality of groups of pipes of different cross sectional area, all of the pipes in each group being of the same cross sectional area.

2,896,740
GAS WASHING APPARATUS
Roy Macgregor Drummond, Hove, England
Application May 26, 1958, Serial No. 737,914
8 Claims. (Cl. 183—3)



1. Gas washing apparatus comprising a fluid tight vessel having an inlet for gas to be washed and an outlet for washed gas, partition means within the vessel providing a vertical chamber communicating with said outlet, means for providing a body of washing liquid within the lower end of said vessel below said chamber, said partition means also including a transverse portion extending at least across said chamber above the surface of said liquid, means providing an opening in said transverse partition portion, means defining an inlet passage from said inlet through said partition means into the space between said transverse partition portion and the liquid surface, downwardly open baffle means rigid with said transverse partition portion flaring outwardly and downwardly from said opening extending into said space and terminating in horizontal edge structure disposed at about the level of said liquid surface, said horizontal edge structure being so constructed and arranged that at least one portion of the horizontal edge structure is opposed, with respect to a vertical plane through the opening, to another portion of said horizontal edge structure, and means providing at least one impingement surface within said chamber above said opening, so that when said outlet is at reduced fluid pressure with respect to said inlet the gas to be washed enters said space below said transverse partition portion and passes over said horizontal edge structure and through the converging baffle means to discharge through said opening against said impingement surface where gas and liquid separation is effected, the gas rising further in the chamber toward the outlet and liquid containing material to be washed out separating therefrom, the relative locations of said horizontal edge structure and said liquid surface being such that gas passing over said opposed edge portions results in upward oppositely angularly related gas-liquid sprays that forcibly intermingle within the baffle means mainly below said opening.

2,896,741
VOLTAGE CONTROL SYSTEM FOR ELECTROSTATIC PRECIPITATORS
Harry A. Winternute, Plainfield, N.J., assignor to Research Corporation, New York, N.Y., a corporation of New York
Application October 11, 1956, Serial No. 615,317
5 Claims. (Cl. 183—7)



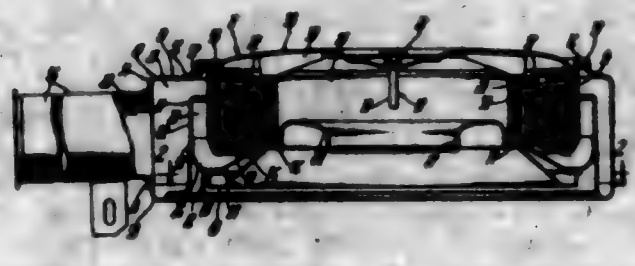
1. In an electrical precipitator having a low-voltage input, a high-voltage step-up transformer, a high-voltage rectifier supplied by said transformer, and precipitator electrodes supplied by said rectifier; voltage control means for energizing the precipitator electrodes under a wide range of operating conditions requiring a large variation of input current to the primary of said transformer, comprising a voltage regulator connected between the low-voltage input circuit and the transformer primary for adjusting the voltage supply to the primary, a low-ohmage impedance in series with said primary winding, and means for adjusting said voltage regulator to maintain the total voltage across the series combination of primary winding and said impedance substantially constant despite variations in primary current level.

2,896,742
CLEANER SILENCER ASSEMBLY
John D. McMichael, Swartz Creek, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 18, 1956, Serial No. 615,134
1 Claim. (Cl. 183—15)

A cleaner silencer structure comprising one annular wall having inner and outer concentrically disposed parts,

in a limited dispersion pattern, and a vertical sound-re- sound attenuation, said inner casing positioned nearer

said inner and outer parts being formed to provide inner and outer annular depressions on opposite sides of said one annular wall, said outer annular depression providing an annular filter chamber, said inner annular depression being formed around an outlet leading from said filter chamber, annular filter means having a cover and being removably disposed in said filter chamber, said annular filter means being spaced from the lower and outer sides of said outer part of said wall to provide an annular inlet leading to said filter chamber and the lower part of said filter means, another annular wall disposed around the outer side of said outer part of said one annular wall and having lower and outer sides, said lower side of said another annular wall being eccentrically secured to said outer side of said outer part of said one annular wall to provide an annular inlet chamber communicating with said filter chamber through said



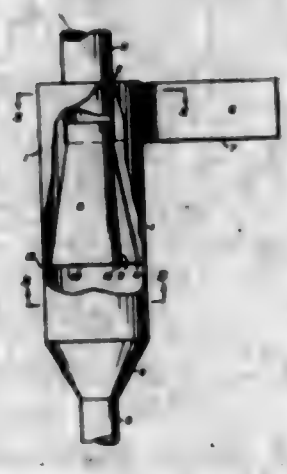
annular inlet, said annular inlet chamber being of increasing width from a narrow part to a diametrically opposed wider part, resilient gasket means disposed between the outer edge of said cover and said filter means and supporting said cover and said filter means on the edge of the outer side of said other annular wall, resilient gasket means disposed between the lower part of said filter means and engaging said one annular wall between said inner and outer parts of said one annular wall and supporting said filter means on said one annular wall, means removably securing said filter means and said cover on said resilient gasket means, and an elongated tube connected to said wider part of said annular inlet chamber, said tube providing an air inlet and impedance passage means applying air to said annular air inlet and attenuating sound emanating from said structure through said inlet.

2,896,743
APPARATUS FOR SEPARATING LIQUID FROM GASES
Grant D. Bradshaw, Beaver, Pa., assignor to Bradshaw & Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application March 26, 1956, Serial No. 573,777
3 Claims. (Cl. 183—71)

3. Apparatus for separating liquid from gas in which it is carried comprising an elongated horizontal tubular body of quadrangular section, means for introducing gas to be treated into one end of the body, said body having a series of spaced internal baffles attached to one side wall and extending toward but terminating short of the opposite side wall and extending the full distance between the top and bottom walls, said baffles being di-

sides, a similar series of spaced baffles on the opposite side wall intermediate the baffles of the first series and providing like pockets, a screen over each pocket formed by each series of baffles in a plane that is divergent to the baffle forming the pocket which it covers, each baffle having at its outer end a reversely-turned flange that converges toward the opposite side wall and forming with said opposite side wall a passageway of decreasing dimension in the direction of the gas flow through the tubular body, and which opens directly toward and substantially normal to the screen over the next pocket.

2,896,744
MATERIALS SEPARATION APPARATUS AND METHOD OF MATERIALS SEPARATION
Harlow M. Chapman, Bethlehem, Pa.
Application July 20, 1956, Serial No. 599,197
4 Claims. (Cl. 183—83)



1. In a collector or the like, the combination with means forming a substantially cylindrical separating chamber, means for introducing tangentially thereinto a stream of fluid containing finely divided particles of greater density than the fluid, said means providing an axial exhaust passage from the chamber, of a baffle extending in the chamber from the lower end of said last mentioned means angularly outwardly and downwardly and providing a slot communicating with said exhaust passage lying substantially in a radial plane from the chamber axis spaced from the plane of said introducing means at least as far as the plane of that diameter of the chamber which parallels said introducing means having side edges diverging outwardly and downwardly in said radial plane.

2,896,745
SEPARATION OF SOLIDS FROM GASES
Richard Mangan, Tulsa, Okla., assignor to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware
Application July 1, 1957, Serial No. 668,986
5 Claims. (Cl. 183—122)

1. In a process for separating fines from a gaseous stream thereof, the improvement which comprises introducing said stream into a zone containing at least one filter element and a fluidized bed of relatively coarse solid particles different in composition from that of said fines, said particles at least partially encompassing and in direct contact with said filter element whereby a portion of said fines is trapped and held on the surface of said particles, allowing said stream which is now depleted with respect to said fines, to pass through said filter element and continuing this operation until the

for providing a body of washing liquid within the lower wall having inner and outer concentrically disposed parts,

velocity such that the fines in said pores become dislodged therefrom and the cake formed on the surface of said element is removed by the scouring or abrasive action of said coarse particles on said surface in said zone, said fines removed from said pores and said surface collecting in an upper portion of said zone, selec-

tively removing said fines from said zone and continuing the reversed flow of gas through said filter element until said fines have been substantially completely removed from said zone leaving said coarse particles therein, thereafter reversing the gas flow so that said stream passes through said zone in the original direction of flow, and repeating the above cycle.

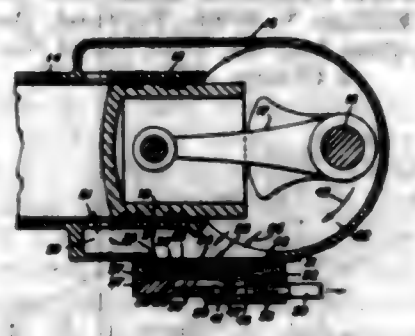
2,896,746

AUTOMATIC OILING DEVICE FOR CHAIN SAWS

Austin Gudmundsen, Inglewood, Calif., assignor to McCulloch Motors Corporation, Los Angeles, Calif., a corporation of Wisconsin

Application November 23, 1956, Serial No. 624,891

5 Claims. (Cl. 184—15)



1. In an automatic chain oiling means for a chain saw device having a two cycle engine provided with a cylinder having a fuel inlet port in the side wall thereof and a fuel passage leading from the engine crankcase along the side of the cylinder to the fuel inlet opening; an oil accumulator contiguous to said passage exposed to the oil containing, gaseous fuel mixture which flows through said passage, said oil accumulator comprising an oil collector in which oil from the mixture accumulates; walls forming an outlet passage for conducting oil from said oil collector, said outlet passage being adapted to be connected to a duct for conveying oil to the chain of the chain saw device; fluid flow controlling means operating in said passage to control the flow of oil from said oil collector; and means operating in response to periodic increases in gas pressure in said crankcase due to reciprocation of the pistons of the engine to admit spaced quantities of gas into said duct to separate the oil flow therein into spaced quantities.

2,896,747

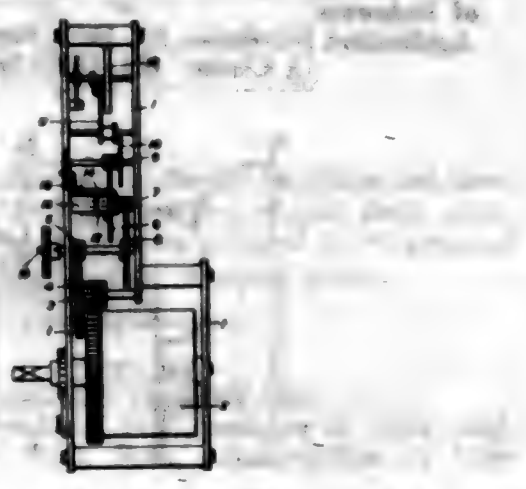
APPARATUS FOR TRANSMITTING MOTION UNDER THE POSITIVE CONTROL OF AN ESCAPEMENT MECHANISM

Christopher Frederick Webb, London, England, assignor to Bell Punch Company Limited, London, England, a British company

Application August 18, 1954, Serial No. 450,746

Claims priority, application Great Britain September 1, 1953

5 Claims. (Cl. 185—37)



1. Apparatus for developing uniform rotary motion comprising a train of gears, a spring coupled to one end of said train, an escapement coupled to the other end of said train, and means to minimize variations in torque in said gear train at the end thereof adjacent said escapement, said means including two gears of said train mounted coaxially of each other, a stationary barrel mounted coaxially of said two gears, a spiral spring fastened at one end to a point fixed with respect to one of said two gears and at the other end to a point fixed with respect to the other of said two gears, said spiral spring having some of its coils disposed about said barrel, and means to limit relative rotation of said two gears to a fraction of a revolution.

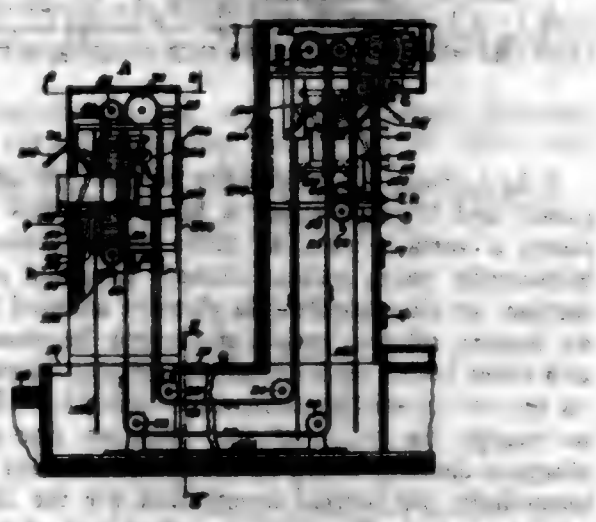
2,896,748

CURB SERVICE DEVICE

Sherman E. McClintock, Orlando, Fla., assignor of one-half to Paul J. Stine, Orlando, Fla.

Application July 23, 1956, Serial No. 599,517

16 Claims. (Cl. 186—1)



1. In a service device, the combination of a sender's tower and a receiver's tower, a tunnel connecting said towers, one of said towers provided with an opening, primary endless chain means extending through said towers and said tunnel, carrier means, and means connecting said carrier means to said primary chain means, and means for causing said carrier means to be projected through said opening, said last named means having

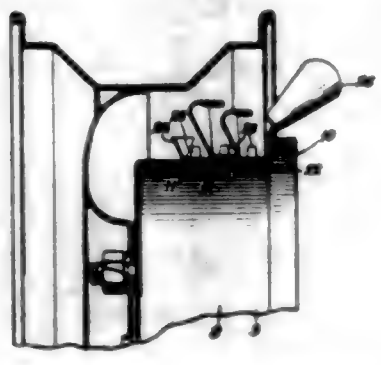
said horizontal portion having a length substantially edges inwardly of and adjacent one of said end edges,

so as to provide along with the top and bottom walls of the tubular body a succession of pockets closed on three

pressure drop across said filter element, thereafter reversing the gas flow through said filter element at a

means for maintaining said carrier means in upright position during its projection through said opening, said carrier having lid means, and means for automatically opening said lid means at the time said carrier is projected through said opening.

2,896,749
COOLING MEANS FOR BRAKE DRUMS
James K. Gaylord, Chicago, Ill., assignor to Gaylord Products, Incorporated, Chicago, Ill., a corporation of Delaware
Application November 23, 1953, Serial No. 393,613
1 Claim. (Cl. 188—264)

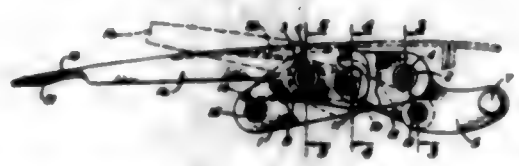


In a cooling device for detachable circumferential rigid clamping engagement around the annular outer surface of a brake drum of an internally expanding brake comprising, a generally ring-shaped body comprising ring segments interconnected by mechanical fastening means, said segments being urged toward each other by said mechanical fastening means to clamp the body tightly against the outer surface of a brake drum, said body comprising radially superimposed contacting inner and outer sheet metal sections carrying struck up heat radiating fins.

2,896,750
TELESCOPING ASSEMBLY
Jay M. Eibel, Los Altos, Calif.
Application April 20, 1956, Serial No. 579,690
3 Claims. (Cl. 189—14)

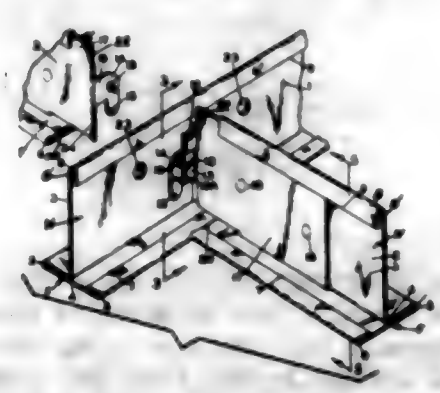
1. In a telescoping assembly of the type adapted to be raised and lowered about a horizontal axis and rotated about a vertical axis, an outer boom section, an inner telescoping boom section slidably mounted in said outer section, an elongate flexible element adapted to be driven to impart relative axial movement between the inner and outer boom sections, a cam member pivotally mounted on one of said sections and having a surface adapted to engage the other of said sections, one end of said elongate element being attached to said cam member intermediate the pivotal connection for the cam member and the cam surface and the other end of said elongate element being anchored to said one section, means fastened to said cam member for yieldably urging the cam surface of said cam member into engagement with said other section, and adjustable means affixed to said elongate element to stress the yieldable means and to thereby maintain said cam surface out of engagement with said other section during normal operation of said telescoping assembly, the yieldable means serving to urge said cam member into engagement with said other section to push said one section against said other section upon breaking of the elongate element to prevent collapse of the telescoping assembly.

2,896,751
TOGGLE BOLT LATCH
Bernard W. Henricks, Northridge, Calif., assignor to Clark Hartwell, doing business under the name of Hartwell Aviation Supply Company, Los Angeles, Calif.
Application November 16, 1956, Serial No. 622,578
2 Claims. (Cl. 189—35)



1. A toggle bolt latch, comprising: a mounting frame adapted for fixed installation in a surrounding structure; a handle lever having a handle end and an operating end, said handle lever disposed within said frame and fulcrumed about a first fixed axis intermediate its ends between a position flush with said structure and an angular position wherein said handle end extends from said structure and the operating end is depressed into said structure; a toggle element journaled in said frame about a second fixed axis; a lever member journaled with said handle lever about said first fixed axis and extending to said operating end thereof; a link member joining said lever member and toggle element for moving said toggle element between an extended and a retracted position on movement of said lever member and link member; and a lost motion connection between said lever member and said handle lever to permit limited free movement of said handle lever thereby to raise said handle end thereof for manual engagement before retraction of said toggle element.

2,896,752
SUSPENDED CEILING GRID CONSTRUCTION
William V. Wilde, Portland, Oreg.
Application May 11, 1956, Serial No. 584,249
2 Claims. (Cl. 189—36)



1. Connecting means for ceiling grid members having vertically disposed web portions, comprising a vertically disposed loop on the web portion of one member with the upper portion of said loop extending farther from the web portion than the lower portion of said loop and forming with the web portion a vertically extending slot of semi-keyhole shape with the upper portion wider than the lower portion thereof, and a flat hook-like portion on the end of the web portion of another member disposed perpendicular to the one member, said hook-like portion being at right angles to its web portion and including a horizontal portion secured to the web portion and a downwardly extending finger on the free end of said horizontal portion and spaced from the web portion,

rotatable extension power shaft coaxial with and spaced from a cam means for generating a magnetic field link-

into spaced quantities.

through said opening, said last named means having

said horizontal portion having a length substantially equal to the width of said loop and said finger being of such size that it may pass through said loop whereby said hook-like portion extends through said loop with said finger and web portion snugly straddling said loop, and a detent on said hook-like portion at the junction of said horizontal portion and said finger and protruding from said hook-like portion a distance greater than the narrow portion but less than the wider portion of said slot and abuts the adjacent edge of said loop retaining said hook-like portion in said loop after said detent has been passed through the wide portion of said slot and lowered into juxtaposition with the narrow portion thereof.

2,896,753

AUTOMATIC FIRE WINDOW

Herman C. Knobel, Westbury, N.Y., assignor to S. H. Pomeroy Company, Inc., New York, N.Y., a corporation of New York

Application June 20, 1956, Serial No. 592,643
2 Claims. (Cl. 189—74)

1. A self-closing window comprising an adjustable upper sash, a spring urged striker member engageable with said sash for moving the sash to closed position, a fusible connection for maintaining said striker member in inoperative position, but disconnectable to release said striker member when subjected to heat, sash locking means retractable to permit the sash to be raised to closed position but movable to operative position to prevent the sash from falling to open position when closed by the striker member, a pair of fixed members spaced apart, said striker member being accommodated therebetween in inoperative position, and aligned openings in at least one of said fixed members and the striker member for receiving the fusible connection.

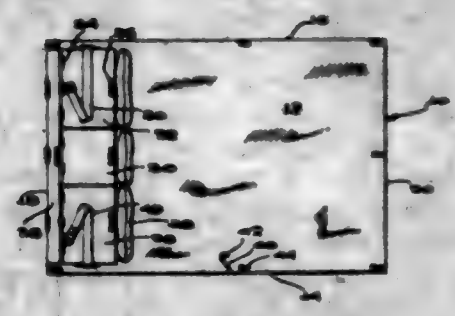
2,896,754

CAMPING PACK

Edward R. Wendnack, Dover, N.J.

Application December 26, 1957, Serial No. 704,158
3 Claims. (Cl. 190—43)

1. A camping pack comprising a flexible sheet having spaced side edges and an end edge extending between each of the adjacent ends of said side edges, said sheet being adapted to be spread upon a ground surface so that one face abuts and rests upon said surface, a plurality of separate receptacles each having an open top fixedly positioned upon the other face of said sheet so that the receptacles extend transversely between the side edges inwardly of and adjacent one of said end edges, an openable and closable cover extending over the open top of each of said receptacles, and spaced means arranged along each of said side and end edges for reception of anchoring elements for fixedly attaching said sheet to said ground surface, the portion of said sheet unoccupied by said receptacles being adapted to be wrapped about said receptacles to form a closed pack.

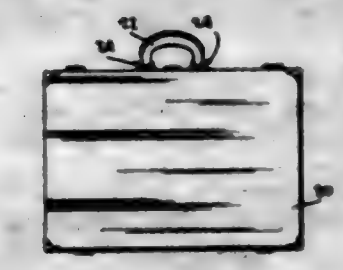


2,896,755

LUGGAGE HARDWARE

David Levine, New York, N.Y., assignor to Crest Lock Co., Inc., New York, N.Y., a corporation of New York

Application July 18, 1956, Serial No. 597,820
6 Claims. (Cl. 190—58)



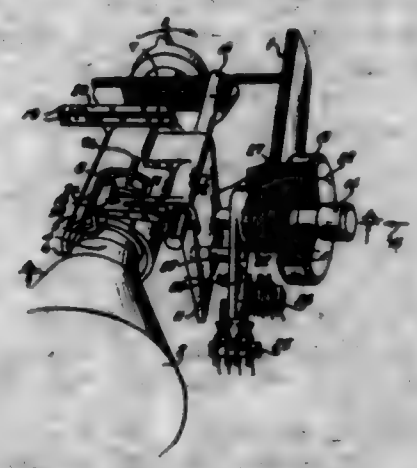
1. A post for a luggage post loop, which post includes a handle mounting portion and an attaching shank and wherein the attaching shank is provided with a blind bore running from the free end of the shank inwardly of the post; said post having a chamfer on the free end of the attaching shank around the mouth of the blind bore to provide a narrow edge that facilitates penetration of the attaching shank through a wall of a piece of luggage.

2,896,756

COUPLING ARRANGEMENT ESPECIALLY FOR USE IN CINEMATOGRAPHIC DEVICES OR THE LIKE

Herbert Göpfert, Dresden, and Josef Bönisch, Dresden, Weisser Hirsch, Germany, assignors to VEB Zeiss Ikon Dresden, Dresden, Germany

Application October 10, 1956, Serial No. 615,094
13 Claims. (Cl. 192—.084)



1. In a clutch arrangement for a precision device, the combination of: a rotatable incoming power shaft, a

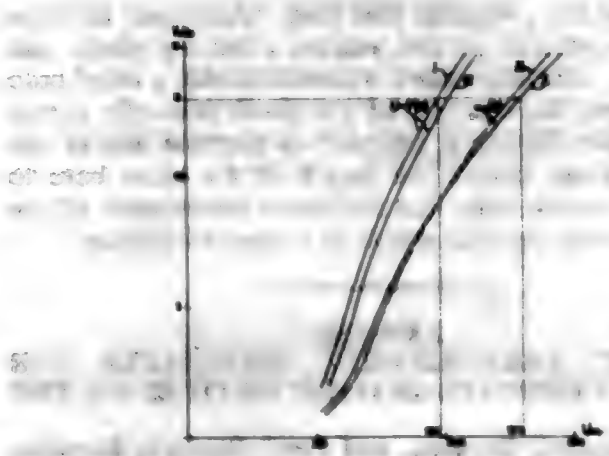
rotatable outgoing power shaft coaxial with and spaced from said incoming power shaft, a coupling spring wound around said incoming power shaft, said coupling spring normally operatively engaging said incoming power shaft for rotation with the latter, said coupling spring being capable of being conditioned for disengagement of its operative engagement with said incoming power shaft, said outgoing shaft having a cylindrical sleeve member surrounding said incoming shaft and said spring, said cylindrical sleeve member having a side recess, said coupling spring having two axially spaced end portions extending outwardly through said recess, one selectively, of said end portions, depending upon the direction of rotation of said incoming power shaft, being in operative engagement with said sleeve member for rotating said outgoing power shaft together with said incoming power shaft, and controlling means being adjustable between at least one effective position and an ineffective position, the other end portion of said coupling spring projecting outwardly for abutting engagement with said adjustable controlling means when the latter is in its effective position, whereby said outgoing power shaft is held in a predetermined position and said coupling spring is conditioned for disengagement of its operative engagement with said incoming power shaft.

2,896,757

ELECTRIC POWER-SUPPLY DEVICE FOR AUTOMATIC ELECTROMAGNETIC MOTOR VEHICLE CLUTCHES

Lucien Palys, Paris, France, assignor to Societe d'Etudes et d'Applications Industrielles Commerciales et Immobilieres, Inter-Technique, Paris, France, a French body corporate

Application March 29, 1957, Serial No. 649,347
Claims priority, application France March 31, 1956
8 Claims. (Cl. 192—3.5)



1. In an electrical system of a motor vehicle of the type comprising a storage battery, a dynamo having two main brushes, a cut-out switch coupling said battery to said main brushes of said dynamo, and an electromagnetic clutch having a control coil; an auxiliary brush disposed on said dynamo and so positioned relative to said main brushes as to obtain a voltage lower than that obtained between said main brushes, and connecting means for supplying power from said dynamo to said clutch control coil through said auxiliary brush.

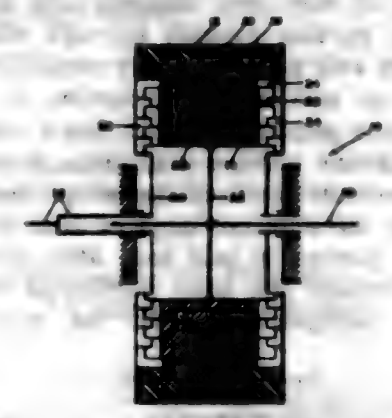
2,896,758

MAGNETIC CLUTCH

Ralph L. Jaeschke, Kenosha, Wis., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio

Application September 24, 1954, Serial No. 458,068
6 Claims. (Cl. 192—21.5)

1. In a magnetic coupling comprising a pair of relatively movable input and output members separated to form a gap means for generating a magnetic field linking said members, magnetic material located in said gap,



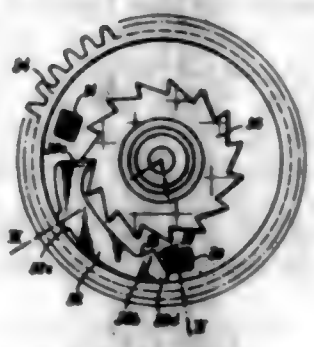
said magnetic material consisting of particles, each of said particles having at least a portion thereof consisting entirely of an alloy of only aluminum and iron.

2,896,759

COUPLING DEVICE INCORPORATING A FREE WHEEL MECHANISM CHIEFLY FOR USE IN TIME-PIECES

Marc Hugenin, Geneva, Switzerland, assignor to Montres Rolex S.A., Geneva, Switzerland

Application April 13, 1953, Serial No. 348,399
Claims priority, application Switzerland July 25, 1952
5 Claims. (Cl. 192—46)



1. A free-wheel coupling device, chiefly for timepieces, comprising a first revoluble component member provided with an annular recess, a ratchet wheel rigidly secured inside said recess coaxially therewith, at least one catch including at its ends noses adapted to engage the teeth of the ratchet wheel, said catch being adapted to pivot freely through its medial part against the outer wall of the annular recess, a second component part coaxial with the wheel and including a disc overlying the ratchet and the catch in the recess and two pins rigid with said disc and engaging the annular recess in register with the ends of the catch for engaging with the latter.

2,896,760

CHANGE-SPEED GEAR TRANSMISSION WITH BLOCKING SYNCHRONIZATION FOR MOTOR VEHICLES

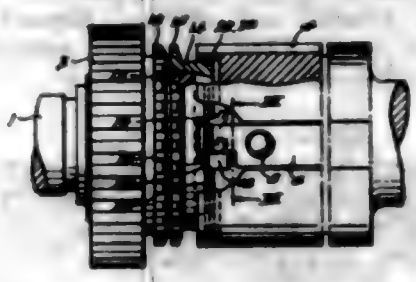
Helmut Hebbinghaus, Testo, Rhineland, Germany, assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware

Application December 5, 1957, Serial No. 702,571
Claims priority, application Germany December 20, 1956
2 Claims. (Cl. 192—53)

1. In a change-speed gear transmission with locking synchronization for motor vehicles, a main shaft, a sleeve member, a hub carried by said main shaft, a spline connection between said hub and said sleeve member adapted to accommodate relative axial movement therebetween, axial grooves formed in said hub, inserts slidably received in said grooves, detent means for connecting said sleeve member and said inserts, a gear encircling said shaft, a synchronizer ring situated between said gear and said

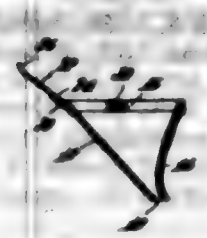
that the receptacles extend transversely between the side combination of: a rotatable incoming power shaft, a

sleeve member, a plurality of recesses formed in said synchronizer ring, each recess being adapted to receive one end of a separate one of said inserts, a cam element positively carried by said shaft and situated between an insert and one side of an associated recess, said last-mentioned recess and said cam element being formed with mutually engageable chamfered surfaces, friction clutch means for frictionally connecting said synchronizer ring and said gear when said synchronizer ring is urged in one axial direction, said inserts being adapted to urge said



synchronizer ring in an axial direction to energize said clutch means and said cam element being adapted to exert an axial force on said synchronizer ring during a speed change when said gear and said main shaft are rotating at different speeds thereby supplementing the axially directed synchronizing force of said inserts and means for providing a lost motion connection between said inserts and said synchronizer ring whereby the latter is inhibited from shifting in said one axial direction when said main shaft is disconnected from said gear.

2,896,761
TOLL COLLECTION HOPPER
Gardner L. Grant, Providence, and Richard L. Care, Rumford, R.I., assignors, by direct and mesne assignments, to Grant Development Company, Providence, R.I., a corporation of Rhode Island
Application December 7, 1956, Serial No. 626,912
1 Claim. (Cl. 193—2)

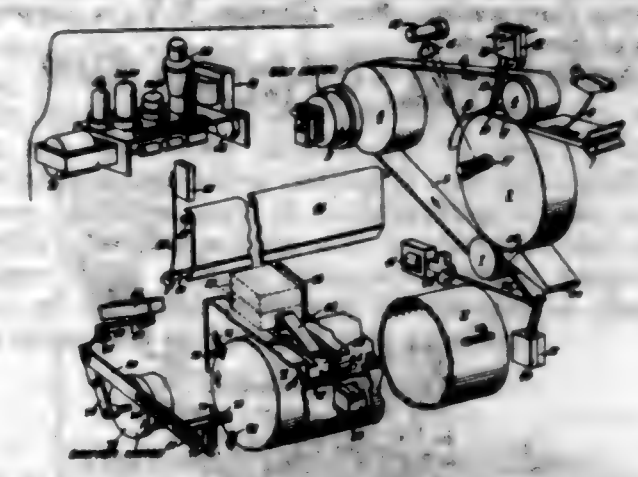


A transversely, elongate coin receiving hopper for a fare collection box designed to receive a multiple coin fare in a toll lane, said hopper having a substantially rectangular open mouth with its long dimension adapted to parallel the line of moving traffic, said mouth being defined by a rigid, substantially rectangular rim, downwardly extending, converging front, rear and end walls terminating in an open, substantially rectangular, elongate coin slot, long enough to pass the largest coin expected to be deposited, and only wide enough to pass one coin at a time, said converging walls constituting a large open catch pocket, the dimensions of which are great in proportion to the dimension of coins to be tossed into it, into which coins may be tossed from a somewhat distant moving vehicle without danger of loss of the coins by rebound or failure to catch the coins, said rim definitively outlining the mouth of the hopper to aid in pocketing the coins, the converging surfaces of the end and back walls being inwardly convex and the front wall being flat and proportioned to dampen rebound, the coin slot underlying the forwardly convex portion of the rear wall to minimize hanging, an upwardly inclined extension along the rim at the top of the front wall containing a groove at its inner side, lengthwise thereof, and an elongate guard strip of flexible self-supporting sheet material disposed with one edge in the groove and its inner surface substantially flush with and constituting a continuation of the inner surface of the front wall, means fastening said edge of the guard to the extension and an inwardly convex lip lengthwise of the upper edge of the guard strip.

2,896,762
BUMPER MAT FOR PIPE
Burton J. Stansbury, Bakersfield, Calif.
Application April 22, 1955, Serial No. 503,243
1 Claim. (Cl. 193—41)

A bumper mat for pipe comprising a portable elongated base, a concave saddle fixedly mounted on top of said base, a thick walled cylindrical bumper pad formed of a nonmetallic resilient material mounted in said saddle, said saddle partly encircling said bumper pad, said bumper pad projecting above the base to receive a falling pipe thereon, and a plurality of bolts extending through the wall of the bumper pad and into the saddle to removably secure said bumper pad to the saddle, said base being vertically tapered from one end to the other.

2,896,763
VENDING MACHINE
David G. Glaser, Londonville, N.Y., and Leonard P. Seifert, Easton, Pa., assignors to Lehigh, Inc., Easton, Pa., a corporation of Pennsylvania
Application July 23, 1954, Serial No. 445,322
17 Claims. (Cl. 194—4)



1. In a vending machine, the combination with an exciter lamp; of means for focusing a narrow beam of light from said lamp in a zone in fixed spaced relation thereto; means for moving a bill having a multiplicity of closely and uniformly spaced parallel lines thereon, when inserted in said machine, at a substantially fixed rate with said lines moving through the focal zone of said beam to be scanned thereby; means positioned to be illuminated by said beam during the scanning of said lines for producing an electric current proportional to the intensity of the illumination thereof as affected by said lines; switches actuatable by said bill when inserted in said machine for energizing said lamp and said bill-moving means; a bill-situated switch for stopping said bill-moving means when the bill has moved to a predetermined position; means for effecting a delivery of goods from said machine; means normally maintaining said delivery means inoperable; and means responsive to said current when varying at a predetermined rate for rendering said delivery means operable.

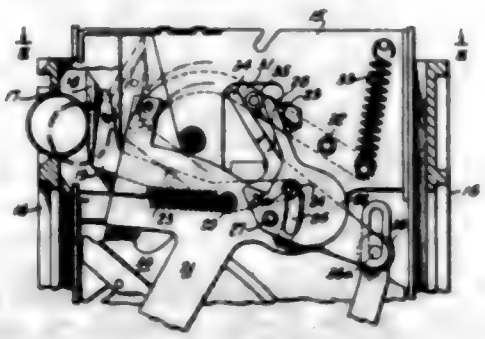
2,896,764

DOOR CLOSING AND ACTUATING MECHANISM FOR PARKING METERS

James O. Ramos, Washington, Conn., assignor to The Michaels Art Bronze Company, Incorporated, Covington, Ky., a corporation of Kentucky

Original application June 30, 1949, Serial No. 102,189, now Patent No. 2,721,641, dated October 25, 1955. Divided and this application August 18, 1955, Serial No. 529,286

8 Claims. (Cl. 194—72)



2. In a mechanism for closing an entrance slot in a housing, the combination comprising a lever pivotally mounted within the housing, a strut pivotally mounted on said lever at a point spaced from the pivotal mounting thereof, said strut having a free end movable upwardly in an arcuate path with respect to said coin entrance slot in said housing, said free end normally being positioned opposite said entrance slot, and latch means engaging with and restricting pivotal movement of the strut relative to the lever during movement of the lever and the strut for a predetermined distance in one direction.

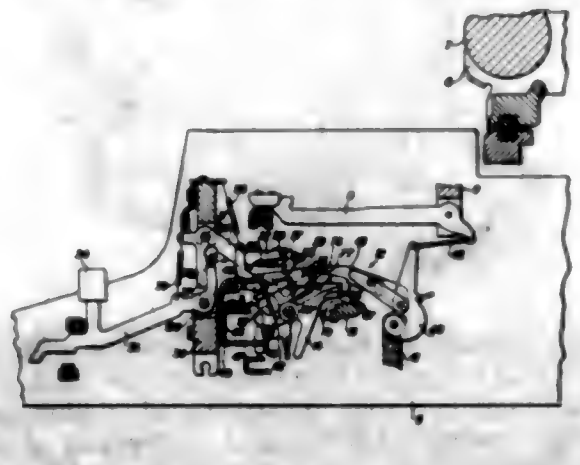
2,896,765

TRIP PAWL CONTROL MECHANISM

John A. Enders, Simsbury, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York

Application April 8, 1958, Serial No. 727,899

5 Claims. (Cl. 197—17)



1. In a type action for a typewriter, a type bar operating linkage, a key operated linkage, a driven power roll, and means controlled by said key operated linkage for operatively coupling said type bar operating linkage to said power roll; said means comprising, a trip pawl connected to said type bar linkage and being movable into and out of operative engagement with said power roll, latch means mounted on said type bar operating linkage for normally releasably retaining said pawl out of engagement with said power roll, said latch means being movable to normal and release positions, and means controlled by said key operated linkage for moving said latch means to said release position wherein said trip pawl is free to move into operative engagement with said power roll, said last mentioned means including a means for retaining said latch means in said release position until said type bar operating linkage partakes of its operative stroke.

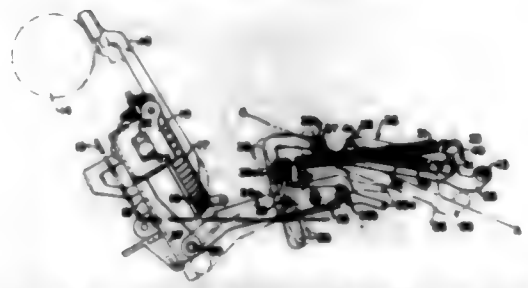
2,896,766

TYPEWRITER CASE SHIFT MECHANISM

Joseph P. Berkdoll, Groton, N.Y., assignor to Smith-Corona Marchant Inc., Syracuse, N.Y., a corporation of New York

Application September 30, 1957, Serial No. 686,926

16 Claims. (Cl. 197—74)



15. In a typewriting machine having an operation-effecting element reciprocal to and from a normal stationary position; the improvement comprising means for moving said element from its normal stationary position including a cushioning thrust link comprising two identical parts slidably secured together and adapted to move longitudinally, one with respect to the other, and an extension spring, each end of which is secured to a respective one of said identical parts to bias said parts to fully extended relation, each of said two parts being centrally slotted and said spring lying in said slots.

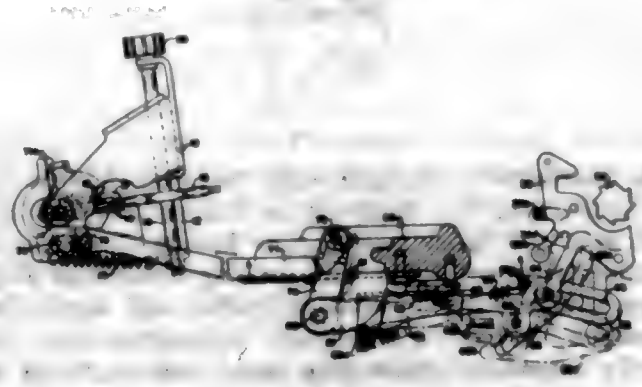
2,896,767

SPACING MECHANISM FOR POWER OPERATED TYPEWRITER

Joseph P. Berkdoll, Groton, N.Y., assignor to Smith-Corona Marchant Inc., Syracuse, N.Y., a corporation of New York

Application April 8, 1958, Serial No. 727,898

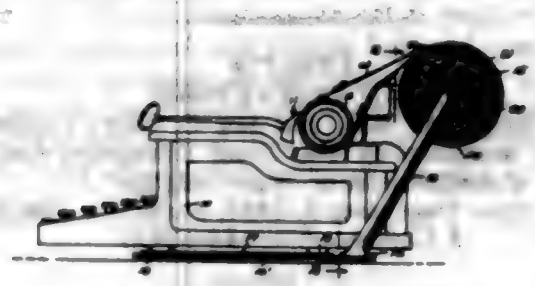
6 Claims. (Cl. 197—82)



1. In a power operated typewriter or like machine, a frame, a carriage mounted on said frame for letter spacing travel, a carriage escapement mechanism adapted to be operated for effecting incremental letter spacing movements of the carriage, a power driven rotary member for effecting the movement of the instrumentalities of the typewriter, means including an actuator lever adapted to be moved in a curved path by said rotary member from a rest position to an operated position, control means including a keyboard space bar for initiating the movement of said actuator lever from rest to operated position, a rock shaft journaled in said frame, a first arm secured to said shaft and connected to said escapement mechanism for operation thereof, a second operating arm secured to said shaft and having cam means thereon, a cooperating cam engaging part borne on said actuating lever and adapted to oscillate said operating arm to rock said shaft during movement of said actuator lever from rest to operated position, and a control lever pivotally

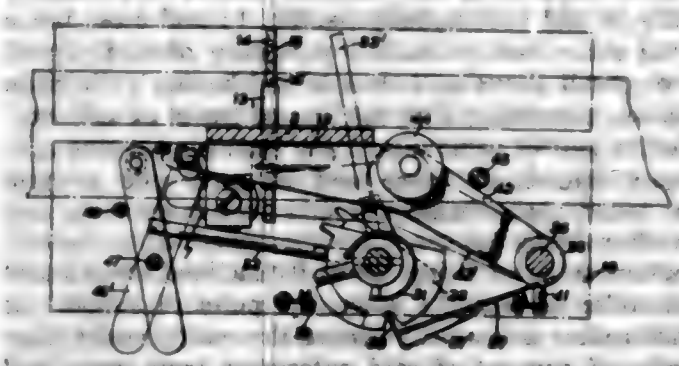
secured to said operating arm and engaging said cam engaging part, said control lever being spring biased to resist the movement of said cam engaging part with respect to said cam means during movement of said actuator lever from rest to operated position and to assist the movement of said cooperating parts during the return movement of said actuator lever from operated to rest position.

2,896,768
TYPEWRITER ATTACHMENT
Donald Doolittle, San Gabriel, Calif.
Application March 21, 1955, Serial No. 495,578
2 Claims. (Cl. 197—133)



1. An attachment for use with a typewriter having a carriage and a platen, comprising a supporting member having a base on which said typewriter is mounted, supporting arms secured to and rising from said base, bearings formed at the upper ends of said arms, a shaft mounted in said bearings and slidable transversely of said supporting arms, the ends of said shaft extending substantial distances beyond said supporting arms, a paper roll on said shaft adapted to be fed to the platen of the typewriter positioned on said base, and mechanism for removably securing said roll on said shaft.

2,896,769
PROFILE READER AND CONVEYOR SYSTEMS
Alfred Freeman and Doris Rachel Freeman, both of Isham, near Kettering, England
Application September 14, 1956, Serial No. 609,946
Claims priority, application Great Britain February 7, 1955
5 Claims. (Cl. 198—38)

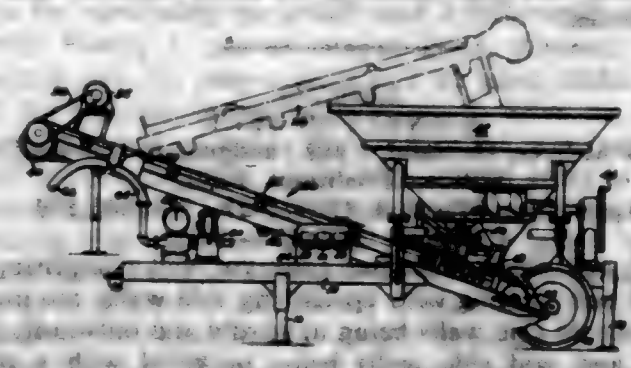


1. A profile-reading mechanism as set forth, comprising a support, a spindle on said support, a plurality of feeler discs spaced along said spindle and individually pivotable on this spindle, each said disc having a contact edge for sliding engagement by part of a passing profile, and having a recess therein spaced from this contact edge, a trip-operating member pivotally mounted on said support and having a marginal part movable into the recesses in the feeler discs when all these recesses are brought into alignment by rotation of the discs predetermined individual amounts corresponding to an approved passing profile, spring means urging said trip-operating member in a direction to engage said marginal part thereof in said recesses, and a trip device operable by said trip-operating member.

2,896,770
PORTABLE CONCRETE BATCH PLANT
Ruben Bellver Rees and Robert Hartsell Rees, Brownwood, Tex.
Application February 8, 1957, Serial No. 639,847
1 Claim. (Cl. 198—53)

A portable concrete batch plant comprising an elongate elevator having an endless conveyor mounted thereon including an upper flight extending substantially the full length of the elevator, a supporting framework fixed to an intermediate portion of said elevator and depending therefrom, a pair of wheels secured to said supporting framework at the lower end thereof supporting said elevator in forwardly, upwardly inclined relation, a motor mounted on said supporting framework beneath said elevator and drivingly connected to said endless conveyor, an open, generally rectangular hopper frame fixed to the rear end of said elevator and including a base having a pair of side members straddling said rear end of the elevator and disposed at an acute angle with respect thereto, said hopper frame also including corner uprights rising perpendicularly from said side members with the forward uprights straddling said rear end of the elevator whereby the rear extremity of said elevator is confined within said hopper frame, a hopper mounted in said hopper frame and including a gravity discharge spout for discharging concrete into the lower end of said upper conveyor flight, the angularity of said base of the hopper frame with respect to the elevator being such as to permit said base to rest flat upon the supporting surface for the batch plant, a removable wheeled axle assembly for supporting the rear of said batch plant, and means carried by said base for the hopper frame and said wheeled axle assembly and detachably interengaged to locate said axle assembly in supporting relation to said batch plant, said means including pairs of uprights fixed to said axle assembly providing saddles, and leg elements fixed to said hopper frame received within said saddles, whereby the rear of the batch plant may be elevated to disengage the same from said wheeled axle assembly.

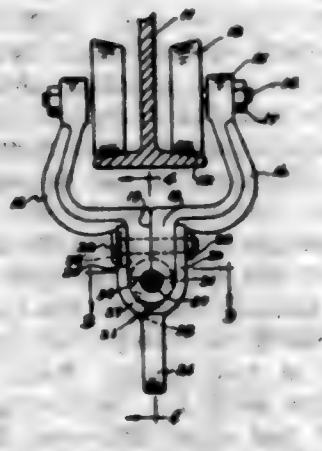
2,896,771
PORTABLE CONCRETE BATCHER
Ferris J. Mecham, Reno, Nev., assignor to Sierra Engineering Co., Inc., Reno, Nev., a corporation of Nevada
Application July 3, 1957, Serial No. 669,726
3 Claims. (Cl. 198—54)



1. A portable concrete batching plant comprising a wheeled framework, a power-operated elevating belt conveyor mounted on said framework, a hopper for aggre-

gate carried by said framework with its lower discharge end disposed above a lower portion of said conveyor, a pair of flow-controlling discharge gates at the bottom of said hopper spaced from one another in the direction of belt movement to deposit aggregate thereon from said hopper in two layers, a second hopper for pulverulent cement, and a cement conveyor positioned to receive cement from said second hopper and having its discharge end between said gates to deposit cement upon the aggregate issued from one gate and beneath the aggregate issuing from the other gate; whereby the pulverulent cement is protected from wind action during transport of the mixture by said elevating belt conveyor.

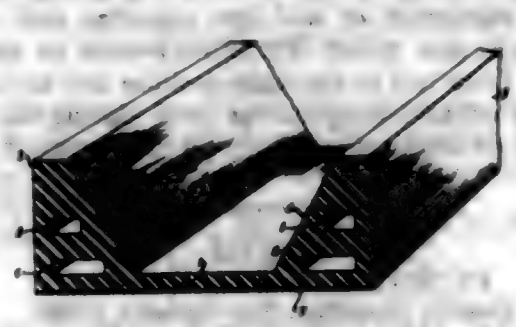
2,896,772
CABLE CONVEYOR
Leo T. Daigle, Detroit, Mich., assignor to Dearborn Fabricating & Engineering Company, Detroit, Mich., a corporation of Michigan
Application August 12, 1957, Serial No. 677,664
5 Claims. (Cl. 198—177)



1. A cable conveyor adapted for suspension from and movement along a flanged beam comprising an upright body adapted to support a load and having a upwardly opening recess extending longitudinally therethrough, there being a flattened bottom wall on the body interior at the base of said recess, there being a horizontally elongated semi-circular recess formed in said bottom wall intermediate its ends defining end thrust shoulders therein, said recess terminating at is ends in elongated semi-circular slots of reduced radius formed in said bottom wall adapted to receive portions of a pair of aligned cables, registering cylindrical buttons secured on the ends of said cables nested within said elongated recess retainingly engaged by said shoulders, and a pair of opposed upright arms carrying rollers at their upper ends, their lower ends terminating in a pair of opposed engaging downwardly depending holddowns lugs nested within the said upwardly opening recess, said lugs having undercut means to cooperatively and snugly receive said buttons and cables, and bolts extending transversely through said body and lugs securing the same together and to said cables.

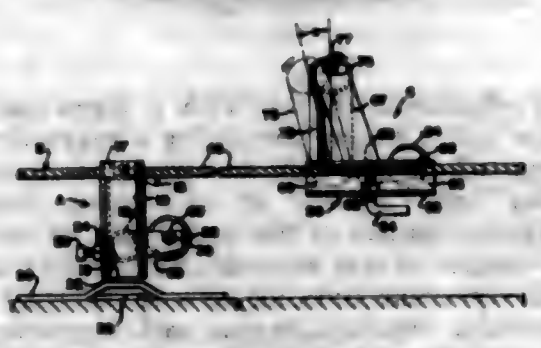
2,896,773
CONVEYOR BELT
Albert A. Syce, Oakland, Calif., assignor to Marshall A. Stillman, Piedmont, Calif.
Application March 4, 1957, Serial No. 643,590
4 Claims. (Cl. 198—201)

3. A one piece elastomer conveyor belt comprising a central bed merging with upstanding side walls, the inner faces of said side walls being upwardly and outwardly inclined and said side walls being provided with a plurality of vertically spaced, transversely elongated, continuous cavities of rectangular cross-section extending therethrough, and wherein the outer walls of the cavities in each of said side walls lie in a common plane and wherein the upper inner corners of said cavities lie in a



common plane paralleling the face of their associated side wall.

2,896,774
BELT CONVEYORS
John B. Long, Oak Hill, and Jeff C. Clay, Fayetteville, W. Va., assignors to The Long Company, Oak Hill, W. Va., a corporation of West Virginia
Application December 3, 1957, Serial No. 700,444
5 Claims. (Cl. 198—202)



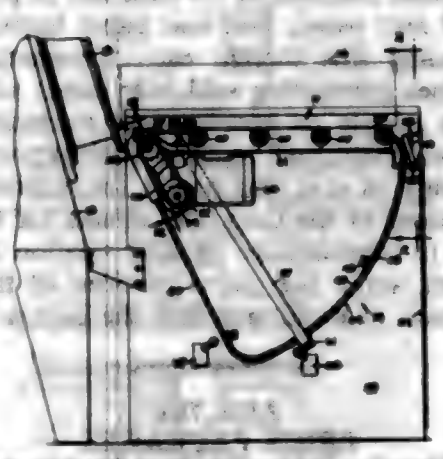
1. In a conveyor of the endless belt type, the combination of a plurality of standards; a pair of substantially parallel, flexible strands supported by said standards; a plurality of conveying units; and bracket means supporting said conveying units upon said strands for canting in accordance with the flexure of said strands; said conveying units each including a rigid cross brace having one of said bracket means secured to each end thereof, said cross brace extending crosswise between said strands and supporting said bracket means in juxtaposition for attachment to said strands, a pair of side rollers and a central roller, a pair of arms secured to said cross brace, said arms supporting said central rollers substantially centrally of and substantially parallel to said cross brace with the entire belt contacting periphery of said central roller disposed above said strands and having a direction of rotation coincident with the line of travel of said endless belt, a pair of arms supporting each of said side rollers upon said cross brace and to each side of said central roller, the outermost of said arms supporting said side rollers being longer than the inner arms thereof, said outermost arms being upwardly inclined toward said central roller so that the outermost point of support of said side rollers is inwardly toward the central roller from the point of support of said outermost arms upon said cross brace, said outermost arms thereby supporting said side rollers angularly outwardly divergent from said cross brace with the entire belt contacting periphery of said side rollers disposed above said strands, said cross brace forming a pivot axis for said arms supporting said rollers; said bracket means having a strand overlying portion of sufficient length longitudinally of said strands to support said cross brace upon said strands with the entire belt contacting periphery of said rollers above said strands and with the axis of rotation of said rollers substantially normal to the line of travel of the belt when the belt is aligned and under a normal centered load, said bracket means forming a pivot for the pivoting of said cross brace when the belt is under an off-center or other than normal load that exerts a misaligning force on the belt,

one of the planetary gears, and a clamping member en-

2,896,780

the forward moving pressure of the belt when the same is under an offcenter or other than normal load that exerts a misaligning force on the belt causing the belt to bear hard against the belt contacting periphery of said side rollers and transmitting a pivoting force to said cross brace through the greater length of the outermost arms supporting said side rollers, said cross brace pivoting and canting said conveying units in proportion to the moving off-center or other than normal pressure of the load on the endless belt, said pivoting action being permitted by the mounting of said bracket means upon said flexible strands and the coacting flexure of said flexible strands, said canting inclining the upper ends of said side rollers forwardly a greater distance than the inner ends thereof and inclining the axis of rotation of said side rollers so that the direction of rotation thereof is angularly toward the central portion of said endless belt and angularly disposed in the direction of the movement of the belt in proportion to the off center or other than normal load and speed of movement of the belt, said canting thereby orienting and training the belt with respect to said conveying unit.

2,896,775
TRANSFER MECHANISM
Harold N. Ipsen, Rockford, Ill.
Application June 26, 1957, Serial No. 668,250
7 Claims. (Cl. 198—221)

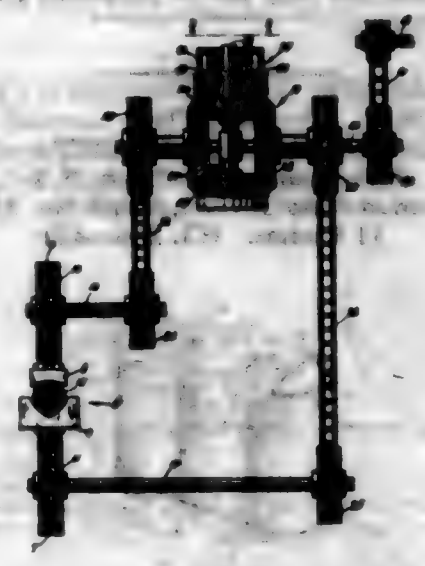


1. Transfer mechanism comprising an elongated platform composed of a plurality of parallel horizontal rollers extending transversely of the platform and laterally spaced apart, two parallel endless chains, one disposed on each side of said platform and each having a horizontal run extending along the platform and an arcuate run extending downwardly from the horizontal run adjacent one end of the platform, the center of said arcuate run being disposed adjacent the other end of the platform and beneath the upper sides of said rollers, two parallel elongated bars, one disposed on each side of said platform and each having one end pivotally connected to the arcuate run of the adjacent chain, stationary support means located adjacent the centers of said chains between two of said rollers, abutment means on the free ends of said bars and resting on said support means, a reversible power actuator for advancing said chains to move the pivoted ends of said bars up along the arcuate run and then along said horizontal run thereby to move said bars endwise and project the same beyond said platform, a cam operable during such endwise movement of said bars to guide the bar ends up onto the tops of said rollers, means for reversing said actuator to retract said bars, said abutment means being operable during movement of the bars in one direction to engage a workpiece and move the same along a path beyond the end of said platform, and an elongated member spanning and connected to said chains in advance of the pivoted ends of said bars to move the workpiece along said platform.

2,896,776
HARVESTER
Karl C. King, Morrisville, Pa.
Application May 14, 1957, Serial No. 659,029
4 Claims. (Cl. 198—233)

1. A harvester comprising a tractor, a framework extending upward from the tractor and having a platform adjacent the top thereof, a circular track on said platform, a carriage movable on said track about the center thereof, suspending means carried by said carriage, a horizontal conveyor supported by said suspending means and movable thereby to selected elevated positions, an elevating conveyor extending upward from adjacent one end of the horizontal conveyor for discharging crops received from the horizontal conveyor into a truck, and means for moving said carriage and both said conveyors about the center of said track from a harvesting position in which the horizontal conveyor extends transversely with respect to the longitudinal axis of the tractor to a traveling position in which the horizontal conveyor extends substantially parallel to the longitudinal axis of the tractor.

2,896,777
DIFFERENTIAL DRIVE APPARATUS
Cecil A. Hallen, Westfield, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application June 13, 1957, Serial No. 665,405
2 Claims. (Cl. 203—227)



1. In a system for advancing an elongated article, a tractor capstan having opposing article contacting members for advancing the article and a differential gearing device having a pair of output gears, planetary gears meshed with the output gears and an input spider member for spinning the planetary gears to drive the output gears, a source of power for driving the input member, and means connecting each of the output gears to corresponding ones of said opposing members, of a brake for resisting the rotation of the planetary gears on the spider comprising an extension on the spider and movable therewith and fixed with respect to the rotatable planetary gears, a cylindrical portion on the extension with axially extending slots dividing said portion into a plurality of segments, friction braking surfaces on the inner surfaces of the segments, a cylindrical member positioned within the cylindrical portion and affixed to and rotatable with

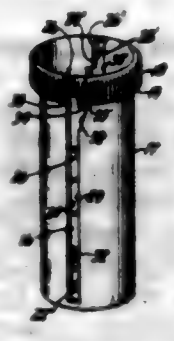
each of the latter walls, said flanged portion extending

2,896,783

thereof, and wherein the outer walls of the cavities therethrough, and wherein the outer walls of the cavities normal load that exerts a misaligning force on the belt,

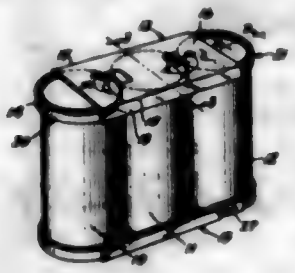
one of the planetary gears, and a clamping member encircling the slotted cylindrical portion for holding the braking surfaces in friction engagement with the cylindrical member.

2,896,778
COSMETIC CONTAINER
Robert B. Heppard, Cheshire, Conn., assignor to The Eyelet Specialty Company, Waterbury, Conn., a corporation of Connecticut
Application May 18, 1956, Serial No. 585,682
8 Claims. (Cl. 206—56)



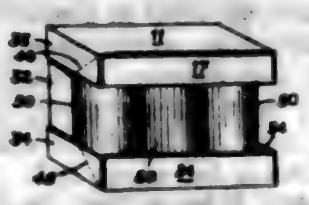
1. A cosmetic container, comprising inner and outer relatively rotatable tubular members having elongated cams formed therein, said cams extending to said open end, a carrier cup slidable within said inner member and including follower means simultaneously engaging the cams of both said members, each of said cams including a propulsion edge, whereby upon relative rotation of said members in one direction said propulsion edges cooperate with said follower means to propel said cup toward said open end, one of said propulsion edges of one of said cams having a recess therein near but short of open end of said one cam, and a cam follower abutment in said recess, whereby said cup and follower means may be inserted in said open end but, once inserted past said recess, said cup may not be propelled past said abutment of said recess.

2,896,779
PACKAGING DEVICE
Jack Armel, New York, N.Y.
Application June 3, 1955, Serial No. 512,918
11 Claims. (Cl. 206—65)



5. A can package comprising a plurality of chimed cans in a row, a first holder retaining one set of corresponding can ends, and a second holder retaining the opposite set of corresponding can ends, each said holder comprising a closed band of paperboard or the like encircling said row of cans adjacent the chimes at one end thereof, whereby two semicircular ends of said band are defined between two parallel stretches thereof, a plurality of chime-engaging tabs formed out of the material of the semicircular ends of said band and folded adjacent the inner surfaces of said ends, the projecting ends of said tabs being in direct locating engagement with chimes of said cans, whereby substantially continuous chime-engaging support is obtained for said cans at said semicircular ends, and a connecting panel permanently connecting said stretches and overstanding parts of the adjacent chimed ends of all cans in said row.

2,896,780
CARTONS
Glenn E. Stubbs, Hamilton, Ohio, assignor, by mesne assignments, to Diamond Gardner Corporation, a corporation of Delaware
Application January 13, 1956, Serial No. 559,039
5 Claims. (Cl. 206—65)



1. A carton for packaging and displaying chimed cans and like articles comprising a rear panel and top and bottom panels connected to opposite sides of said rear panel along fold lines, said top and bottom panels being slightly less in width than the diameter of the chime portions of the cans to be packaged and each having a series of flaps extending from the edge thereof opposite from said rear panel, each said series including an outer flap attached to the associated said panel, an intermediate flap attached to said outer flap, and an inner flap attached to said intermediate flap, said flaps in each said series cooperating to provide upper and lower front walls defining a central open space across the front of the carton, each of said walls having portions adapted to lock over adjacent chimed portions of the cans and to press the cans against said rear panel, said rear panel having longitudinally extending slits therein each terminating adjacent said fold lines connecting said rear panel with said top and bottom panels to provide tabs projecting substantially coplanar with said top and bottom panels and defining openings in said rear panels for receiving adjacent chimed portions of the cans, and means for holding said front walls in substantially parallel relation to said rear panel to lock about the chime portions of the cans and retain the cans in position within the carton.

2,896,781
BRICK PACKAGES
Daniel Douglas Demarest, Port Washington, N.Y.
Original application August 24, 1954, Serial No. 451,758, now Patent No. 2,790,546, dated April 30, 1957. Divided and this application August 23, 1956, Serial No. 605,295
1 Claim. (Cl. 206—65)

A brick package comprising an assembly of pre-formed bricks of predetermined size and shape, said assembly including a plurality of superimposed layers of brick, a plurality of vertically spaced supporting body portions each extending completely under one of said layers, and each enclosing the lower portions of one of said layers, each body portion being formed from a substantially rectangular blank, a pair of opposite peripheral portions of each said blank being folded upwardly to form opposite side walls of the body portion, each of said opposite side walls extending upwardly along and in abutting relationship with the adjacent bricks in the layer above the blank, a second pair of opposite peripheral portions of each said blank being folded upwardly to form opposite side walls, each of the latter walls extending upwardly along and in abutting relationship with the adjacent wall of the layer of bricks supported on said blank, each of the latter walls extending upwardly to the top of the latter layer, a flanged portion attached to

platform.

of the segments, a cylindrical member positioned within the cylindrical portion and affixed to and rotatable with

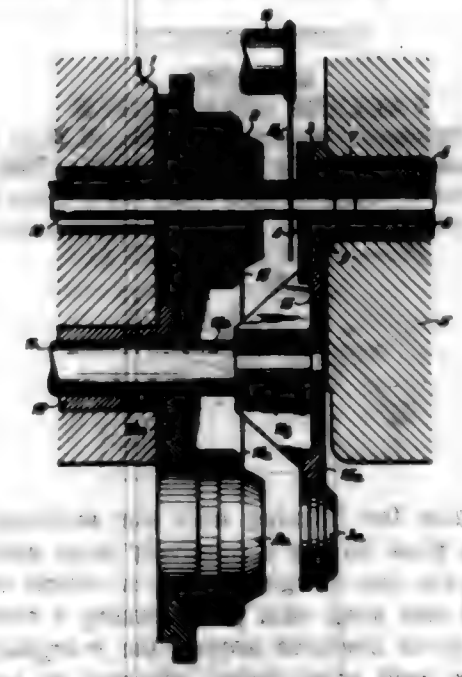
each of the latter walls, said flanged portion extending horizontally inwardly over the top of and in contact with the upper surface of the latter layer of bricks, and a plurality of adhesive tapes passing below the lowermost of the body portions parallel to the lower surface thereof, said tapes passing upwardly across the sides, ends and across the top of the package, whereby to secure said blanks and said bricks against separation relative to each other, certain of said binding tapes being parallel to each other and disposed at substantially right angles to certain other of said binding tapes, said other of said binding tapes being substantially parallel to each other, each of said binding tapes comprising reinforced, pressure sensitive adhesive tape.

2,896,782

TOOL ARRANGEMENT FOR SEVERING THE EXTRUDED PRODUCT IN DIRECTLY OPERATING EXTRUSION PRESSES

Peter Billen, Leverkusen-Kupperteg, Germany, assignor to Schloemann Aktiengesellschaft, Duesseldorf, Germany

Application April 16, 1956, Serial No. 578,245
Claims priority, application Germany April 16, 1955
3 Claims. (Cl. 207—1)



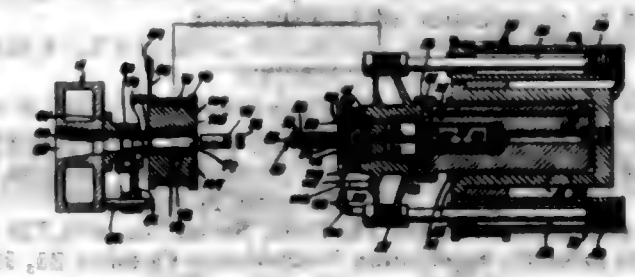
1. A tool arrangement for severing an extruded product from a discard in a direct-acting extrusion press, particularly in a press for the extrusion of steel tubes, comprising: a container formed with a cylindrical bore, this container being movable in the direction of extrusion, a pressing disc slidable in the container bore, a press ram for impelling the pressing disc along the container bore, a rotatable and axially displaceable shaft parallel to the axis of the container bore, an arm mounted fast upon the shaft, a die-holder secured to the arm and adapted in one position to bear against the container co-axially with the container bore, an extrusion die mounted in the die-holder and adapted to be swung, by rotation of the shaft, into and out of a position in axial alignment with the container bore, the said shaft, arm, die-holder and die being adapted to move longitudinally with the container when the container is retracted, a counter-support adapted to take up the pressure exerted by the press ram through the pressing disc upon the material that is being extruded, and a saw adapted to be introduced between the counter-support and the die when the container is retracted from the counter-support and to sever the extruded product from the discard, leaving the discard still in the container.

2,896,783

MANDREL POSITIONING AND RAM ARRESTING APPARATUS

Carl G. A. Swanson, Kenmore, N.Y., assignor, by mesne assignments, to Lake Erie Machinery Corporation, Buffalo, N.Y., a corporation of New York

Application July 6, 1954, Serial No. 441,225
6 Claims. (Cl. 207—3)



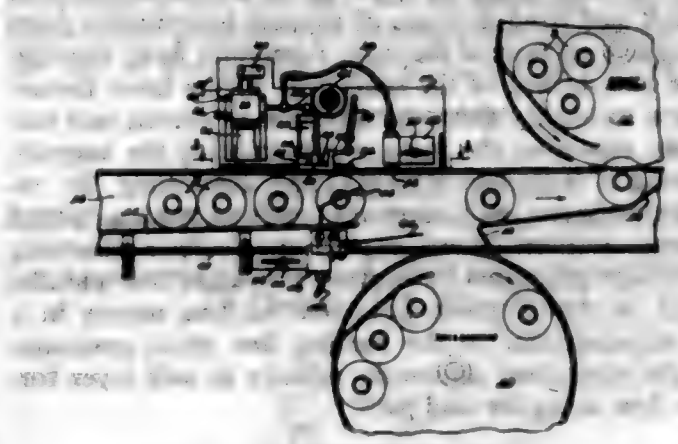
1. In a press for extruding metal shapes, a die platen adapted to carry a die forming the exterior of said shapes, a cylinder platen carrying a main cylinder housing a main ram structure projectable toward and from said die platen, an extrusion stem projecting from said main ram structure toward said die, a billet container structure having a through bore in line with said die and extrusion stem and movably mounted between said main ram structure and die for movement parallel with said extrusion stem; the combination therewith of means for ejecting the severed discard and any dummy block from said through bore following the forming of the extrusion, and severing the end of the extrusion at which the discard is formed, comprising a ring rotatably mounted on one of said structures on an axis generally parallel with the movement of said ram structure, a protuberance on said ring projecting toward the other of said structures, said other of said structures being provided with a recess to receive said protuberance, and means arranged to rotate said ring to bring it into and out of register with said recess.

2,896,784

ARTICLE SEGREGATING MECHANISM

William H. Greenmyer, Los Angeles, Calif., assignor to Owens-Illinois Glass Company, a corporation of Ohio

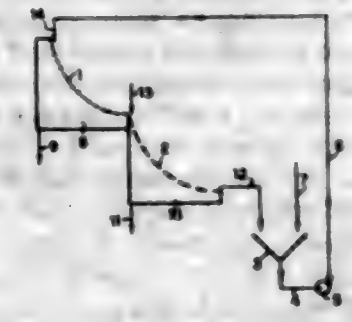
Application August 18, 1953, Serial No. 374,934
3 Claims. (Cl. 209—82)



1. Apparatus for segregating bottles and like articles according to predetermined differences in their external surface configuration, comprising, a horizontal continuously moving conveyor for carrying bottles seriatim and in an upright position into and through a segregating zone, segregating means in said zone comprising, means for supplying air under pressure, an air flow control valve connected to the air pressure supply means, a solenoid for opening said valve, a movable gate for retarding movements of bottles in said zone, an air operated device connected to said valve for moving said gate, an air nozzle connected to the valve and positioned rearwardly of the gate to direct a stream of air

across the path of travel of the bottles for moving selected bottles out of said path of travel, means for energizing the solenoid including an electrical circuit, a normally closed switch openable by contact with bottles moved out of said path of travel, a normally open switch closable by bottles moving along said path and which are to be segregated from the others to thereby energize the solenoid, and a time delay switch closable incident to and by energization of said solenoid.

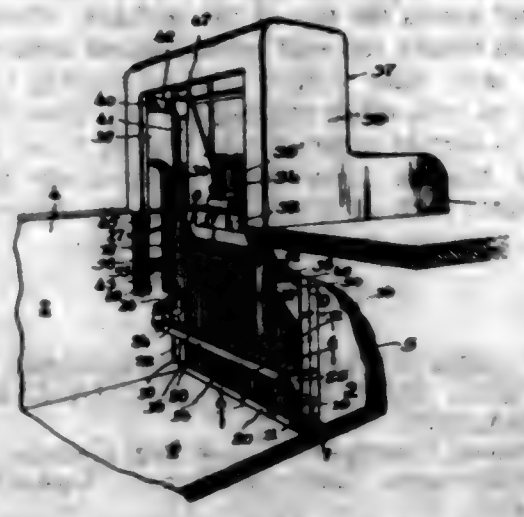
2,896,785
METHOD FOR SEPARATING FINE MATERIAL
Freerk J. Fenstra, Heerlen, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands
Application October 18, 1956, Serial No. 616,728
Claims priority, application Netherlands October 21, 1955
4 Claims. (Cl. 209—273)



1. A process of separating according to particle size a fine, fibrous particle containing material having no or few particles considerably coarser than the particle size of separation which comprises the steps of establishing at a receiving position a layer formation flow with a minimum initial velocity of the material and a suspending liquid together with an auxiliary material inert with respect to the fine material and having a particle size considerably coarser than the particle size of separation; supporting one surface thereof to locally define the direction of travel of said layer formation flow; interrupting the support of said one surface a fixed distance measured in the direction of flow while permitting the layer formation flow, due to its velocity, to continue substantially in the said defined direction; separating, by blocking part of the layer formation flow, a layer of a thickness smaller than half said fixed distance of support interruption from the said one surface of the layer formation flow; supporting the one surface of the remainder of the layer formation flow to locally define its direction of travel; and successively repeating the steps of interrupting the support, separating a layer by blocking, and supporting the remainder between said receiving position and a spaced discharge position along a path generally conforming to a surface generated by moving a straight line parallel to itself so that a given point on the line moves in a plane perpendicular to the moving line while maintaining a predetermined minimum velocity in said layer formation flow along the said path.

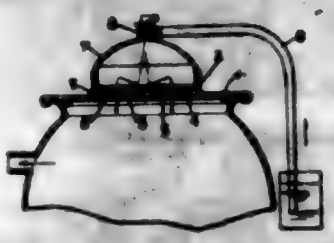
2,896,786
COMMINUTING DEVICE
William H. Lamnert, Skokie, Ill., assignor to Chicago Pump Company, a corporation of Delaware
Application October 27, 1955, Serial No. 543,064
5 Claims. (Cl. 210—173)

1. In combination with a vertically disposed screen, a comminuting unit mounted for vertical reciprocatory movement adjacent one face of said screen, a pair of inverted L-shaped frame supports secured to opposite ends of said comminuting unit, each of said inverted L-shaped frame supports comprising a vertical arm extending upwardly from the end of said comminuting unit in parallel relationship to said face of the screen and a horizontal arm extending forwardly from the upper end of said vertical arm at right angles to the face of said screen, said frame supports being movable pivotally relative to the screen, whereby said comminuting unit may



swing outwardly from said screen upon engagement with an oversize solid, and a pair of guide tracks extending parallel to said screen in forwardly spaced relationship thereto, each of said horizontal arms having its forward end slidably engaged with one of said guide tracks.

2,896,787
VACUUM MILK FILTER
Michael Reuzen, Lowville, N.Y.
Application April 15, 1958, Serial No. 728,616
5 Claims. (Cl. 210—406)



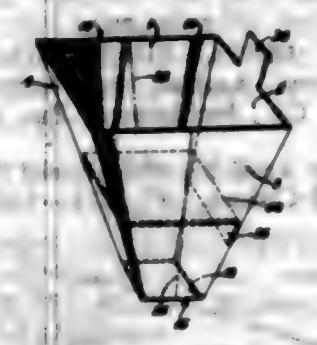
1. Apparatus for filtering milk for sediment testing, comprising a plate having a relatively large unobstructed aperture therein the marginal edge of which defines an unobstructed test area, said plate having a row of relatively small ports disposed around the marginal edge of said aperture, said ports being adjacent to and spaced from said marginal edge, a filter disc disposed in overlying relation over said aperture and all of said ports, and having a central filter area defined by the marginal edge of said plate aperture, and a surrounding supporting area overlying said ports, an impervious flexible sealing gasket overlying said filter disc and having an aperture corresponding to and in alignment with said plate aperture, and means for establishing a pressure differential on opposite sides of said plate, to secure said gasket and clamp the surrounding area of said filter disc over and around the ports in said plate, and to cause the flow of milk through the filter area of said filter disc, from the gasket side thereof to the plate side thereof.

2,896,788
FOLDABLE STRAINER DEVICE
Charles C. Hoffberger, Baltimore, Md.
Application August 26, 1957, Serial No. 680,195
1 Claim. (Cl. 210—473)

A disposable strainer device made of a foldable paper material comprising upstanding side walls forming an approximate square configuration in cross-section, said device being open at both ends, said side walls forming an approximate pyramidal configuration, strainer means

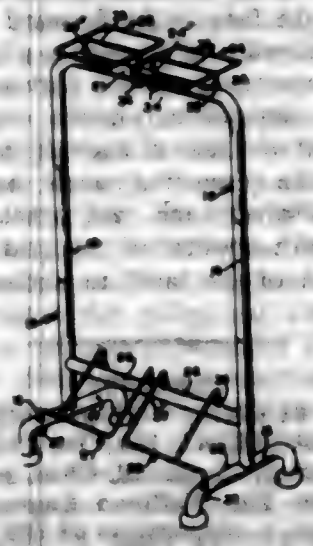
end cup-shaped member capable of receiving the other alternatively to lie flat substantially in the plane of the

adapted for positioning laterally between said side walls and intermediate said open ends, said strainer means comprising a flap secured to one of said side walls, said flap having a fold line adjacent to said one side wall permitting said strainer means to be positioned alternately to said one side wall and downwardly approximately perpendicularly thereto, said flap having a frame approximating the shape of said cross-sectional configura-



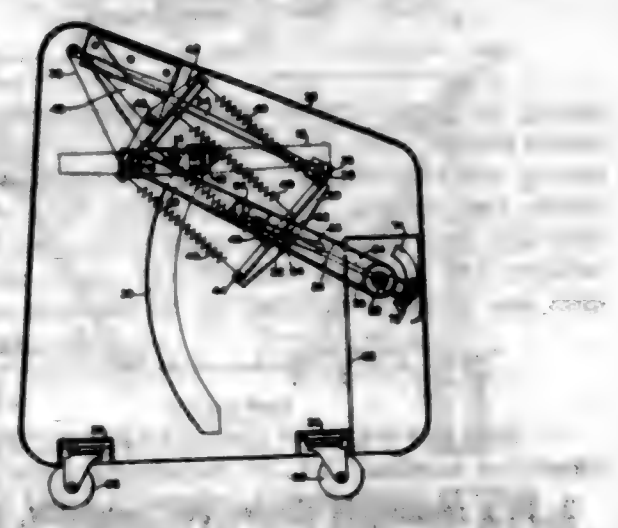
tion, said frame having a central aperture therethrough, and means to strain fluids over said aperture, at least one pair of opposed side walls having fold lines therein to permit said walls to be folded inwardly, said flap being secured to a side wall other than one of said opposed side walls, said fold lines permitting said device to be folded flat for packaging and opened for use with said strainer means swiveled downwardly in said lateral position.

2,896,789
GARMENT RACKS
Salvatore Sano, New Rochelle, and Leonard Wolin, White Plains, N.Y., assignors to Saw Mill River Industries, Inc., Yonkers, N.Y., a corporation of New York
Application September 18, 1956, Serial No. 761,832
11 Claims. (Cl. 211—37)



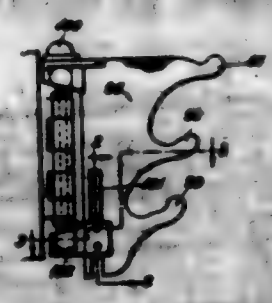
1. In a garment rack of the character described, foot structure, a substantially rectangular frame mounted upright on said foot structure whereby the top and bottom rails of said frame are horizontal; each of said top and bottom rails comprising two sections; the meeting end portions of the associated sections of each of said top and bottom rails being in contact; each pair of such associated end portions having a set of aligned holes therethrough; each such set of aligned holes being a single open-ended passage; means through the single passage in the bottom rail, securing the sections of said bottom rail together, a shelf member having two spaced rods extending downwardly therefrom; each of said rods having a lateral protuberance thereon; said protuberances being equi-distant from the plane of the shelf; one of said rods being threaded at its lower end; one of the sections of said top rail having a hole therein spaced from the single passage therein; the threaded rod being positioned through said passage in the top rail and the other rod being positioned with its bottom end in said hole which is in one of the sections of said top rail whereby the said protuberances rest on said top rail and a nut screwed tight on said threaded rod whereby the top rail sections are secured to each other and the shelf is secured to said top rail.

2,896,790
SELF-LEVELING, STORING AND DISPENSING APPARATUS
Leo R. Bell, Packanack Lake, N.J., and Robert L. Holloway, Snyder, N.Y., assignors to American Machine & Foundry Company, a corporation of New Jersey
Application November 16, 1954, Serial No. 468,832
10 Claims. (Cl. 211—69)



1. A self-leveling, storing and dispensing apparatus comprising a base, an upright framework extending upwardly from said base, a carrier movable up and down relative to said framework, means for maintaining said carrier horizontal as the carrier travels up and down, counterbalancing spring means anchored at one end to said framework, a member having an arcuate slot which is concentric to the anchorage of said spring means when said apparatus is fully loaded, means connecting the other end of said spring means to said arcuate slot, said connecting means being adjustable along said slot, means connecting said carrier to the member having said arcuate slot for counterbalancing material placed on said carrier by means of said springs, and an adjusting member for moving said adjustably connecting means along said arcuate slot to change the capacity of said apparatus.

2,896,791
PORTABLE SUPPORTS
Christopher Baker, Willow Grove, Pa.; Anne S. Baker, executrix of said Christopher Baker, deceased
Application November 9, 1954, Serial No. 467,778
2 Claims. (Cl. 211—86)



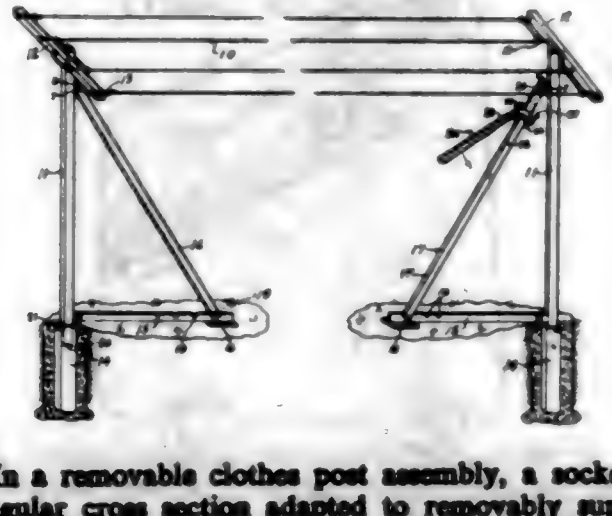
1. A support adapted to be detachably connected to door hinges comprising a plate having a plurality of hook-shaped fingers formed therewith on one edge of said plate, a cup-shaped member capable of receiving a hinge pintle head therein being mounted on an edge of said plate opposite to said fingers, said plate having a slot extending substantially parallel to said second mentioned edge, a sec-

travel along the boom, a turntable rotatably supported member mounted in said frame to receive the stems of a

wardly from the end of said communicating unit in par- an approximate pyramidal configuration, strainer means

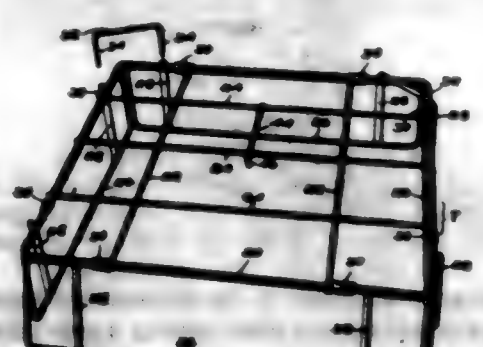
cond cup-shaped member capable of receiving the other pintle head of said hinge therein, said second member having a slot slidably receiving said plate therein and a key in said plate slot for guiding the movement of said second member along said second edge and means for tightening said second member to said plate at desired positions therealong whereby said cup-shaped members can be adjustably positioned relative to one another.

2,896,792
APPARATUS FOR REMOVABLY SUPPORTING AND TENSIONING CLOTHESLINES
William L. Bodine, Elyria, Ohio
Application April 1, 1955, Serial No. 498,594
4 Claims. (Cl. 211—119.15)



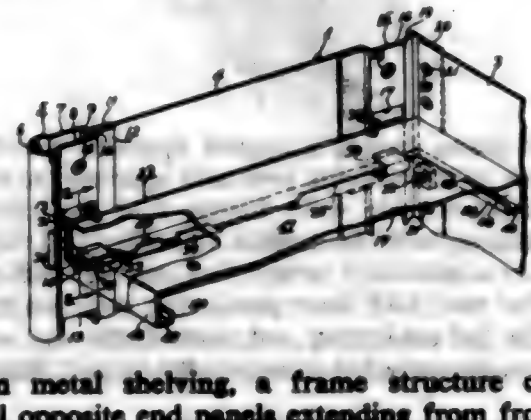
2. In a removable clothes post assembly, a socket of rectangular cross section adapted to removably support an upright post therein, said socket having a pivoting pin connecting opposite sides thereof; a locking pin extending partially into said socket from one of the other of said rectangular sides of said socket, said locking pin fixed to said socket and located at right angles to said pivoting pin; and a removable post having a lower end of rectangular cross section substantially smaller than said socket to fit therein to permit relative swinging movement between said post and said socket, said end of said post having a pair of notches at the lower edge of opposite sides of said end to fit over said pivot pin in said socket and an opening in one of the other sides of said rectangular lower end of said post to receive said locking pin on said socket, to retain said post in said socket when said post is swung to upright position with said notched end thereof pivoted on said pivot pin in said socket.

2,896,793
DISPLAY STAND
John A. Bogart, Jr., Wakefield, Mass., assignor to Forbes Lithograph Manufacturing Company, Boston, Mass., a corporation of Massachusetts
Application January 12, 1956, Serial No. 558,658
5 Claims. (Cl. 211—132)



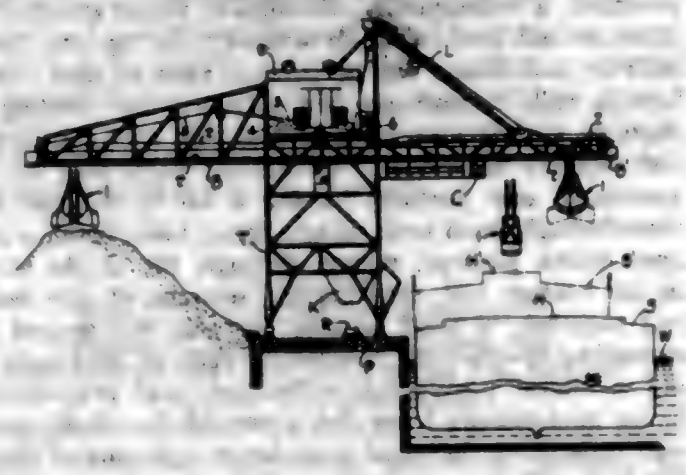
1. A display stand which includes a tray having a polygonal bottom and a circuit of sides hinged thereto alternatively to lie flat substantially in the plane of the bottom or to be erected generally perpendicular thereto, the sides having tubular elements near and in spaced parallel relation to their ends and removable locking members having central portions spanning the angles of the bottom and parallel end portions entering tubular portions of the sides adjacent to such angle for holding the sides erect.

2,896,794
METAL SHELVING
Edward M. Jarvis, Ambler, Pa., assignor to Standard Pressed Steel Co., Jenkintown, Pa., a corporation of Pennsylvania
Application April 27, 1956, Serial No. 581,231
8 Claims. (Cl. 211—136)



1. In metal shelving, a frame structure comprising vertical opposite end panels extending from front to rear and means for interconnecting the rear edges of said panels, each of the end panels consisting of a sheet of metal having at its forward upright edge a shaped section conferring rigidity to said edge and including a flat vertical face offset laterally from the plane of the said sheet toward the opposite end panel, said face having a plurality of apertures, a corresponding offset face at the rear edge of each of the said metal sheets in parallel alignment with the face at the forward edge of the sheet and having a plurality of apertures aligned transversely with the said apertures of the forward face, brackets having integral downturned hooks engaged in aligned apertures at front and rear of each of the panels to attach the brackets to the respective panels, and a latch carried by and adjustable on each said bracket and having a part engaging with another of the said apertures in one adjusted position of the latch to anchor the bracket to the panel.

2,896,795
CLAMSHELL BUCKET - TURNING MECHANISM FOR BULK MATERIAL HANDLING APPARATUS
Bernard H. Kersting, Cleveland, Ohio, assignor, by mesne assignments, to The Wellman Engineering Company, Cleveland, Ohio, a corporation of Ohio
Application June 18, 1956, Serial No. 591,977
16 Claims. (Cl. 212—61)



1. In an apparatus of the character described, the combination of a horizontal boom, a carriage mounted to

port for portions of said containers and leaving other

2,896,801

tioned through said passage in the top rail and the other

subtantially parallel to said second mentioned edge, a sec-

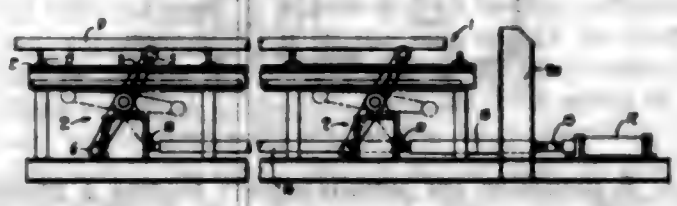
travel along the boom, a turntable rotatably supported on the carriage, a clamshell bucket and holding and closing lines therefor, operating drums for said lines mounted in fixed relation to the boom, a sheave for each reach of each line, a support for each sheave, means for pivotally mounting each support on the turntable to swing about a vertical axis, the vertical reaches leading to the bucket from said sheaves along the axis of and through said pivot means, whereby the position pattern of the vertical reaches with relation to the bucket and to each other is maintained as the turntable is rotated to position the bucket with its long dimension parallel with the boom or transversely thereto.

2,896,796

PIPE LOWERING DEVICE

James W. Schuetz, Pittsburgh, Pa., assignor, by mesne assignments, to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware

Application November 4, 1957, Serial No. 694,330
6 Claims. (Cl. 214—1)



1. Apparatus for lowering pipe, tubes and other objects comprising parallel transversely spaced downwardly sloping entry skids having stops at their respective ends and parallel transversely spaced downwardly sloping discharge skids lower than said entry skids, a plurality of transversely spaced, parallel beams, means rotatably supporting said beams at a level between said entry and discharge skids for rotation in a plane extending transversely thereof about an axis extending parallel therethrough, an upper entry pipe support rotatably supported at one end of each said beam and a lower discharge pipe support rotatably supported at the opposite end of each said beam, said upper and lower pipe supports, respectively, being supported at the corresponding ends of said beams, a bifurcated crank arm fixedly secured to each said beam and adapted to rotate the same, said crank arms being mutually parallel, a hydraulic cylinder having a piston adapted for reciprocal movement therein and adapted to be selectively actuated for movement in a predetermined direction, a connecting rod pivotally secured to and interconnecting said piston and the adjacent said crank arm and a connecting rod pivotally secured to and interconnecting each adjacent pair of said crank arms whereby to connect said piston and crank arms in series for equal and corresponding motion and an end stop disposed at the end of said apparatus toward which the pipe or objects to be lowered are displaced while being lowered, said pipe supports being sloped inwardly and forwardly, away from said entry skids, to define a cradle for said pipe, said cradle of said upper and lower pipe supports respectively being forwardly, relative to said entry skids, of said entry skid stops and upward pipe supports respectively by a distance at least as great as the radius of the pipe or objects to be lowered.

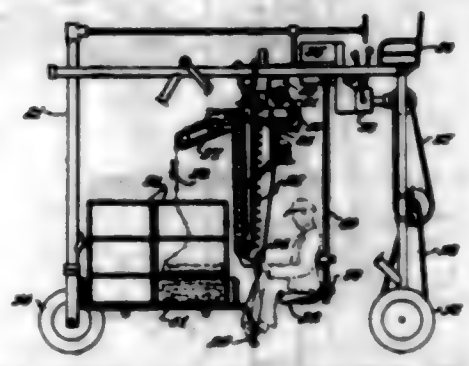
2,896,797

APPARATUS FOR PROCESSING TOBACCO

John W. Bell, Jr., Paris, Ky.

Application January 19, 1955, Serial No. 482,900
11 Claims. (Cl. 214—6.5)

1. Apparatus for processing tobacco which includes a wheel supported frame and operator controlled motor means for driving same through a field of tobacco, a member mounted in said frame to receive the stems of a plurality of tobacco leaves as placed thereon by an operator, said member being movable from a receiving position to a clamping position, conveyor means supported by said frame to move leaves from said member in groups, means to drive said conveyor means, a looping



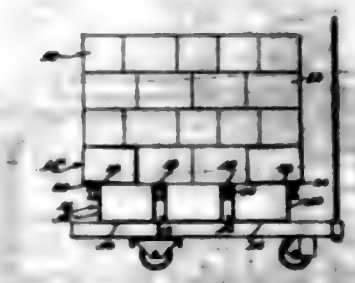
station to which said conveyor means brings the groups of tobacco leaves, a supply source of string, needle means at said looping station to affix the stems of the groups of leaves to said string, means to actuate said needle means, and linkage between said member and said conveyor driving means whereby movement of said member to clamping position by an operator actuates said conveyor means.

2,896,798

ARTICLE HANDLING PALLET MEANS

Albert F. Colley, Charleston, W. Va., assignor to Owens-Illinois Glass Company, a corporation of Ohio

Application November 18, 1953, Serial No. 392,952
1 Claim. (Cl. 214—10.5)



A pallet for supporting a plurality of stacked cartons comprising a rectangular sheet of paperboard having a multiplicity of spaced parallel scores extending between a pair of opposed edges and defining the side margins of a plurality of panels, said sheet folded on the scores to position certain panels in a common horizontal plane and other panels in a different horizontal plane, vertical panels interconnecting said certain and other panels, outwardly oppositely directed flaps provided at the upper margin of the endmost vertical panels and a pair of tongues formed by transverse slits in said flaps and folded inwardly from the upper margins of the latter to overlie and contact upper surfaces of cartons resting upon two of the horizontal panels and be gripped between said surfaces and other cartons immediately thereabove.

2,896,799

RACK STRUCTURE

Donald J. McIntosh and Robert W. Crane, Detroit, Mich., assignors to McIntosh Stamping Corporation, Detroit, Mich., a corporation of Michigan

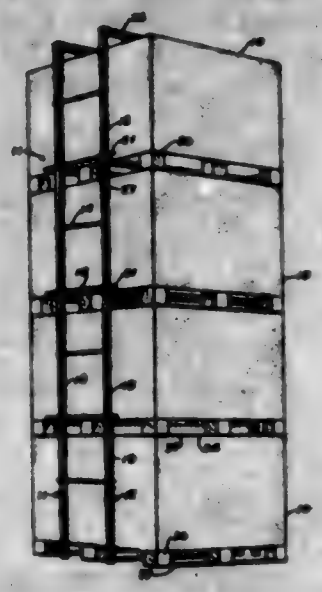
Application December 15, 1955, Serial No. 553,267
17 Claims. (Cl. 214—10.5)

15. A method of storing goods which comprises, providing a plurality of containers having generally form retaining walls adequate to contain goods but inadequate of themselves to resist buckling under the weight of other containers in loaded condition stacked thereon, placing the goods in said containers, arranging said containers one above the other in a stack, providing vertical sup-

polygonal bottom and a circuit of sides hinged thereto

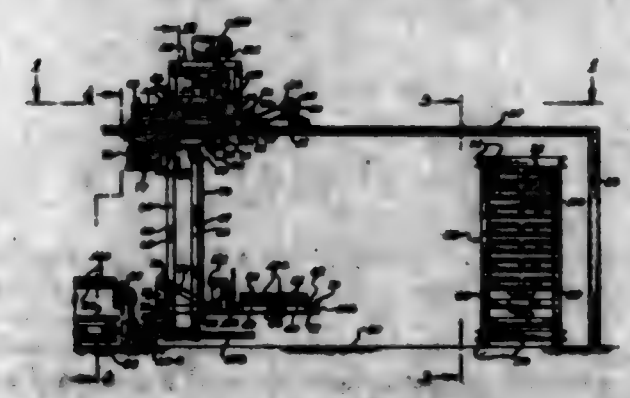
bination of a horizontal boom, a carriage mounted to

port for portions of said containers and leaving other portions thereof unsupported, and leaving the unsup-



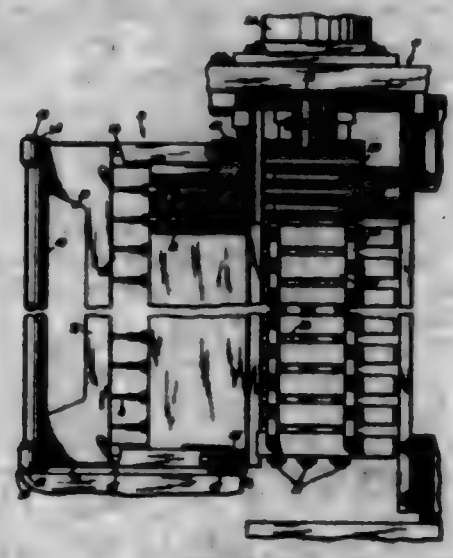
ported portions of adjacent containers in the stack free to interengage to provide lateral stability for the stack.

2,896,800
PALLET HANDLER FOR CONCRETE BLOCK MACHINES
Paul M. Thomas and Lawrence W. Pat Wright, Phoenix, Ariz., assignors to Builders Equipment Company, Phoenix, Ariz., a corporation of Arizona
Application January 7, 1958, Serial No. 707,686
6 Claims. (Cl. 214—16.4)



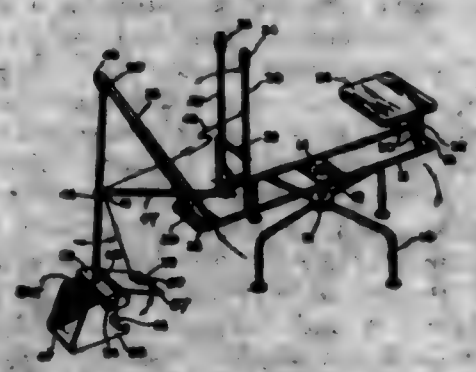
1. In a pallet handler for transferring pallets between a block machine conveyor means and a pallet rack, a frame, a carriage reciprocatably mounted on said frame for movement to and from the pallet rack, a cross movement frame reciprocatably mounted on said carriage for movement at right angles to the movement of said carriage to and from said block machine conveyor means, a pallet handler frame pivotally mounted on said cross movement frame for swinging movement about a vertical axis thereon, a platen vertically reciprocatable on said pallet handler, a pair of oppositely movable probe fingers mounted on said platen adapted to engage vertically disposed facing surfaces on the guide rails of said pallet rack, power means on said platen to oppositely extend and retract said probe fingers, a master potentiometer on said platen adapted to be adjusted by the movement of said probe fingers, an adjustable stop mounted on said carriage having an abutment surface engaging said cross movement frame to limit movement of said cross movement frame away from the block machine conveyors, a slave potentiometer connected to be adjusted by the movement of said stop, a reversible drive motor connected to adjust said stop, and a position control device electrically connected to both of said potentiometers and to said reversible drive motor to control the energization of said reversible drive motor in response to the relative position

2,896,801
ARTICLE FEEDING MAGAZINE FOR INSULATOR COVER CURING MACHINE
Jack M. Kamins, New York, N.Y., and Frank Wahl, North Bergen, N.J., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application May 14, 1957, Serial No. 659,101
6 Claims. (Cl. 214—16.6)



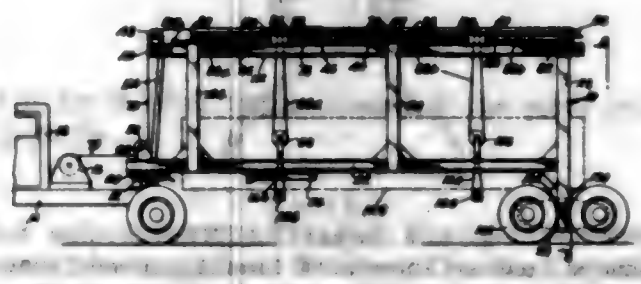
1. A magazine for simultaneously feeding a plurality of articles to a like number of spaced receiving areas of a machine having a projection mounted at a given position relative to the receiving areas, the magazine comprising pockets spaced from each other according to the spacing of the receiving areas of the machine, an ejecting element mounted for movement relative to the pockets to move the articles simultaneously from the pockets into their respective receiving areas, means disposed at a given position relative to the pockets to receive the projection and to cooperate therewith to align the pockets with the receiving areas, and a latch normally holding the ejecting element against movement and actuable by the projection when received by the aligning means to release the ejecting element for movement.

2,896,982
TOY
Norris Hope, Camp Borden, Ontario, and Clifford A. Stearn, Angus, Ontario, Canada
Application March 31, 1958, Serial No. 725,232
2 Claims. (Cl. 214—138)



1. A child's toy comprising: a base for supporting the operational parts of said toy resting on a surface, a frame swingably and rockably mounted on said base, a boom projecting upwardly and outwardly therefrom, an operating lever pivotally mounted adjacent the upper extremity of said boom and extending downwardly therefrom, a shovel mounted adjacent the lower extremity of said operating lever and adapted to contact such surface and means for moving said operating lever about said pivot

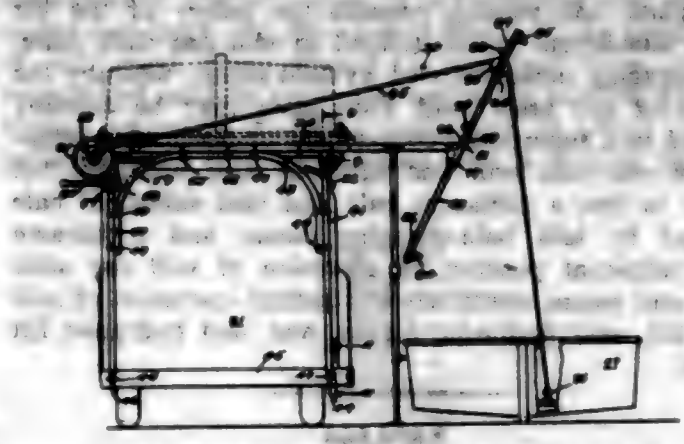
2,896,983
STRADDLE TRAILERS
Chester C. Clifton, Denver, Colo., assignor to Mighty Mover Corporation, Denver, Colo., a corporation of Colorado
Application November 12, 1957, Serial No. 695,958
14 Claims. (Cl. 214—396)



1. A trailer to be pivotally attached to the fifth wheel of a tractor carrying a winch comprising, an open-bottomed body adapted to receive a load hoisted vertically therein, supporting wheels at the rear end of the body, connecting means at the front end of the body adapted to effect a pivotal connection with the fifth wheel of a tractor, pulley tracks on top of the body extending in the direction of the length thereof and arranged in spaced relation adjacent each side, pulley assemblies including longitudinally spaced pulley elements mounted on each track for relative rolling movement about substantially horizontal axes, fixed pulley elements mounted at one end of each track for rotation about substantially vertical axes, a first cable having the free ends thereof attached to the body adjacent the other ends of the tracks and the portion between the free ends passing over the pulley assemblies and around the fixed pulley elements, the portions of the first cable lying between the pulley elements of each pulley assembly being drawn downwardly therebetween to provide a return bend, running pulley elements supported within the return bends formed in the first cable, means depending from the running pulley elements for effecting attachment with a load to be hoisted into the body, fixed pulley means mounted at the front end of the body between the sides thereof for rotation about a substantially horizontal axis, pivoted pulley means mounted on the front end of the body for pivotal movement about a substantially vertical axis and rotational movement about a substantially horizontal axis, said pivoted pulley means being located directly behind the tractor winch and in position such that the axis of pivotal movement thereof is coincident with the axis of pivotation between the tractor and trailer, said pivot axis of the pulley means being tangent thereto at a point spaced rearwardly from the axis of rotation, and a second cable operatively connecting that portion of the first cable lying between the fixed pulley elements and extending over the fixed pulley means at the front of the body and under the pivoted pulley means to the winch on the tractor.

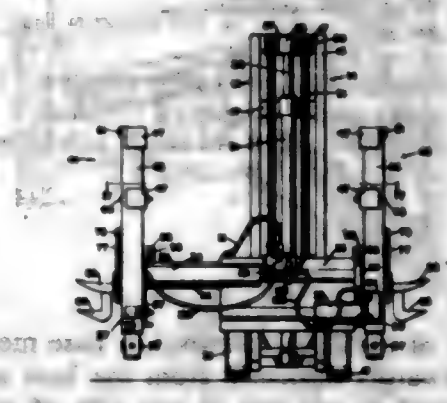
2,896,994
CAR TOP BOAT CARRIER
Harold P. Ingram, Woodburn, Oreg.
Application November 6, 1957, Serial No. 694,763
5 Claims. (Cl. 214—450)

1. A car top boat carrier comprising a frame supported above a vehicle, an extension frame detachably secured to said first frame at one end thereof, adjustable means on said extension frame supporting said extension frame from the ground, tracks extending transversely of each of said frames, a boat support means transversely movable on said frames from a tilted loading position on said extension frame to a horizontal loaded position on said first named frame, and cable means on said first named frame engaging with said boat for initially bringing said boat into contact with said boat support



means and then moving said support means into loaded position on said first named frame.

2,896,995
COTTON BALE RESAMPLING AND BREAKOUT DEVICE
Lonnie D. Rigsby, Memphis, Tenn.
Application August 4, 1958, Serial No. 752,900
7 Claims. (Cl. 214—620)



1. In combination with an industrial truck, cotton bale handling means comprising a main lift connected to the front of said truck, a pair of horizontally disposed reciprocable arms forward of said lift, said arms extending oppositely transversely across said truck and each having a distal end, said distal ends being respectively disposed at opposite sides of said lift, means connecting said arms to said lift for raising and lowering said arms to establish a selected position of elevation of said arms, hydraulic means for selectively reciprocating said arms horizontally, a pair of plate-like members, the distal ends of said arms being respectively rigidly attached to the rearward part of said plate-like members, each said plate-like member being perpendicular to its related said arm and extending forwardly therefrom, a pair of lift frame attachment means respectively detachably connected to said plate-like members, whereby said lift frame attachments are respectively coupled to said distal ends for movement therewith; said lift frame attachment means each comprising a pair of opposed tracks, means interconnecting said tracks, means detachably fixing the inner part of the lower portion of said tracks to the outer face of its related said plate-like member, a slide plate mounted on and outwardly of said tracks, guide means, brace means attaching said guide means to said slide plate, said guide means engaging within said tracks, stop means carried by the upper and outer part of said tracks overlying said brace means for limiting upward movement of said slide plate relative to said tracks, hydraulic lift means mounted in and anchored to said lift frame attachment means between said tracks and coupled to said slide plate for raising and lowering said slide plate along said tracks; prongs fixed to and projecting out-

of said body, a bail secured to said body in alignment with the partition, and a reinforcing member forming an

is positioned on the upper end of the vessel; the over-

of said potentiometers.

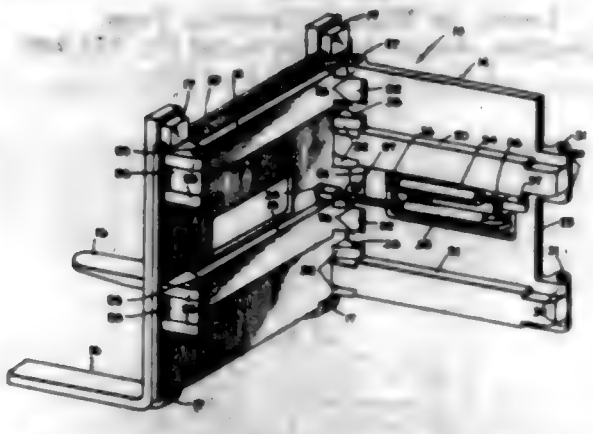
point.

wardly from each said slide plate, pulley means suspended from each said lift frame attachment means, a chain detachably engaged with the prongs of one said slide plate and passing beneath the pulley of the lift frame attachment means related to said one slide plate, bale-engaging means carried by said chain, whereby the prongs of the other said slide plate may be forcibly inserted in a superposed cotton bale by horizontal extension of one said arm and lifted by said hydraulic lift means to free a subjacent bale and said subjacent bale engaged by said bale-engaging means and withdrawn from subjacent position by elevation of said one slide plate, and means selectively controlling operation of said main lift, said hydraulic means, and said hydraulic lift means.

2,896,806
PLATFORM PIVOTING MEANS FOR INDUSTRIAL TRUCK

Frank A. Veneenberg, Strafford, Pa., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut

Application June 15, 1956, Serial No. 591,753
3 Claims. (Cl. 214—730)



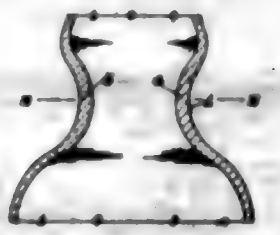
1. In a truck of the class described, a base member, a load carrier forwardly displaced from the base member, a first link pivoted at one end to one side of said base member and at its other end to one side of said load carrier, a second link similarly pivoted to said base member and load carrier but in opposed relation to said first link, said links lying in a juxtaposed initial relation to said base member and load carrier and therebetween, hydraulic means positioned between said base member and load carrier for rotating said load carrier and first link together about the pivot between said first link and base member whereupon said link moves with said load carrier while the second link remains in its juxtaposed relation to said base member, and hydraulic means positioned between said base member and load carrier for rotating said load carrier with said second link about the pivot between said second link and base member whereupon said first link will remain in juxtaposed relation to said base member.

2,896,807
TUBULAR GLASS CONTAINERS SUCH AS AMPOULES, PHIALS AND THE LIKE

George Stanley Shaw, Liverpool, England, assignor to Glass Containers (Medical) Limited, Liverpool, England

Application February 19, 1954, Serial No. 411,453
5 Claims. (Cl. 215—32)

1. A glass ampul comprising a tubular body having a constricted neck portion, means for preweakening said constricted portion generally in the zone of lease diameter, the ratio of the thickness of the wall of said constricted portion in said preweakened zone to the outside diameter in said zone being not less than 8 to 10%, depending on the outside diameter, said ratio being 8% for ampuls having an outside diameter of about 10 millimeters or more in said zone and 10% for ampuls having an outside diameter of about 4 millimeters in said zone, the ratio being inversely proportional to the outside diameter of the constricted portion in said zone, the thickness of the wall of said constricted portion increasing progressively toward and adjacent each side of said means

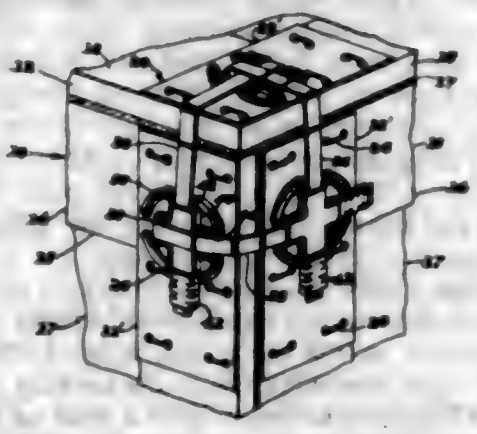


for preweakening, said means for preweakening being sufficient to facilitate intentional breakage at said zone by the application of a bending moment thereto by the fingers and thumbs but insufficient to cause inadvertent breakage during the normal handling in cleaning, filling and transportation.

2,896,866
BOX-LIKE STRUCTURE

Hugh R. Papy, Walter C. Carson, and Edward C. Rowley, Savannah, Ga.

Application April 30, 1958, Serial No. 731,920
10 Claims. (Cl. 217—66)



4. In combination: a box-like structure comprising a plurality of abutting panels disposed at an angle to each other and forming the corners of the structure; and means fastening said panels together at the corners and making the structure a composite rigid unit, said means including a plurality of substantially planar metal plates and a plurality of flexible metal straps, each of said metal plates having a cruciform struck-out portion defining a pair of strap-receiving slots positioned at substantially right angles to each other, means securing one of said plates to and lying in a substantially planar relationship with the surface of each panel in the proximity of the corners of the structure, said plates being positioned on the panels at the corners of the structure and having one of said slots aligned with one of the slots of another of said plates in the same corner while the other of said slots is aligned with one of the slots of still another of said plates in the same corner, each of said straps being secured at its ends through aligned slots of adjacent plates to the cruciform struck-out portion of said plates.

2,896,869
NESTING PAIL

Parke H. Metzger and Edith B. Metzger, West Chester, Pa.

Application November 1, 1956, Serial No. 619,752
1 Claim. (Cl. 220—20)

A partitioned, nesting synthetic plastic receptacle having a tapered body, an open-ended double walled partition extending completely through the lower portion of said body, the upper terminus being below the top edge

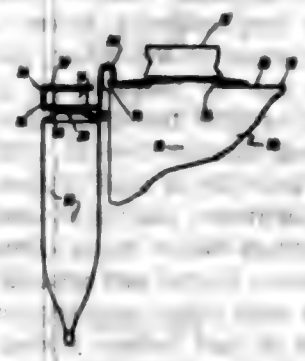
tion on said first named frame, and cable means on said

along said tracks; prongs fixed to and projecting out-

of said body, a bail secured to said body in alignment with the partition, and a reinforcing member forming an

anchor for the bail which extends to the upper part of the partition.

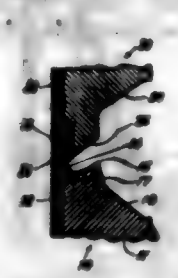
2,896,810
DETACHABLE CLIP
Elmer Malvenna, Mount Pleasant, Ontario, Canada, assignor to S. C. Johnson & Son, Racine, Wis.
Application March 5, 1956, Serial No. 569,413
Claims priority, application Canada August 26, 1955
3 Claims. (Cl. 220—23.4)



3. In combination (1) a container having a body portion comprising a side wall and two end walls each intersecting said side wall and a vertical flange at one end of said body portion, a pouring spout attached to the same end of said body portion as said vertical flange, said spout having at its juncture a cross sectional area less than the container end to which the spout is attached, and an enveloping cap detachably secured to said pouring spout, (2) an auxiliary package having a constricted portion adjacent one end of said package, and (3) a demountable clip attaching said auxiliary package to said container, said clip comprising an attaching portion including a deformable arcuate portion having an opening therein receiving said spout, said attaching portion being clamped against said end wall by said cap, and a bracket portion extending outwardly from said body portion, said bracket portion having a locking means engaged with said vertical flange to restrain said clip from rotation about said spout, and a retaining means including a receiving slot opened toward said body portion of said container assembled with said auxiliary package about said constricted portion, and a deformable clamping means abutting said one end adjacent the constricted portion of said auxiliary package.

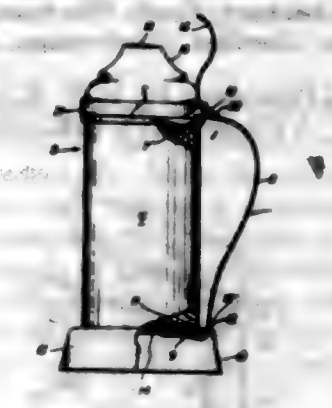
2,896,811
WELDED AND BOLTED CLOSURE FOR HIGH PRESSURE VESSEL
Robert U. Blaser and Magnus Christensen, Alliance, Ohio, assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Application February 23, 1956, Serial No. 567,119
11 Claims. (Cl. 220—63)

1. In combination an upright cylindrical pressure vessel having an open upper end, said vessel having an interior lining of stainless steel metal; a closure head for said vessel having an interior lining of stainless steel; a lining portion of one of said vessel and head extending longitudinally in overlapping relation with a lining portion of the other of said vessel and head when the head is positioned on the upper end of the vessel; the overlapped surfaces of said lining portions being in spaced parallel relation and forming an annular gap extending outwardly at a small angle to the common axis of said vessel and head; the rim of said head and the upper end of said vessel being shaped to conjointly form an upwardly and radially outwardly extending welding groove, having outwardly diverging walls both of which extend outwardly and upwardly, whose root is formed by said



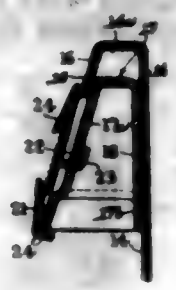
lining portions; said annular gap intersecting the root of said groove; and a seal weld deposit in said welding groove including root weld metal, of substantially the same composition as that of said linings, in engagement with said lining portions and closing the outer end of said gap; the root of said welding groove having a width and contour such as to admit a metal removing tool completely into said groove for machining out said seal weld deposit.

2,896,812
COASTER AND HOLDER FOR BEVERAGE CAN
Edward J. Paprocki, Hollswood, N.Y.
Application April 26, 1957, Serial No. 655,365
1 Claim. (Cl. 220—85)



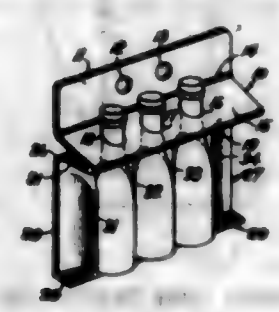
A combined coaster and holder for releasably and resiliently holding a cylindrical container which has a rim on its opposite ends, a bottom including a recessed cup provided with an upstanding rim with an opening therein, said cup of the coaster being adapted to receive and hold the bottom of the container therein, the coaster also having an outwardly flared and downwardly extending supporting skirt, a bell-shaped top, a curved resilient spring handle member extending between the top and coaster, the upper end portion of the handle terminating in a downturned flange, the top being pivoted to an upper end portion of the handle adjacent the downturned flange, the lower end of the handle extending through the opening and having a part thereof extending therebeyond, the said extending part of the handle being rigidly affixed to an underside adjacent portion of the bottom of the coaster, a finger engageable means mounted on the top, the lowermost edge of the skirt being in a lower plane than the said extending part of the handle, the skirt thus forming a firm support for the combined coaster and holder, and the container being resiliently and releasably held by the handle and bottom when the flange of the upper end of the handle is extended over an adjacent upper portion of the container and when the lower portion of the container is seated in the recessed bottom of the coaster.

2,896,813
REFRIGERATOR CRISPER PAN ASSEMBLY
Harland W. Whitmore, Libertyville, Ill., assignor, by mesne assignments, to Amana Refrigeration, Inc., Amana, Iowa, a corporation of Iowa
Application November 25, 1955, Serial No. 548,816
3 Claims. (Cl. 220—94)



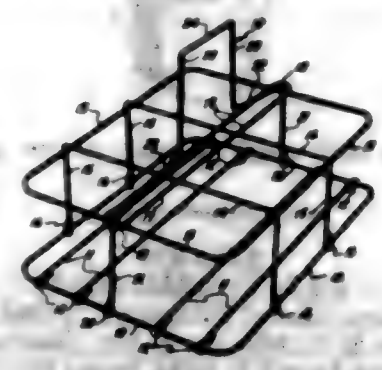
2. In combination, an open-top receptable provided with an open return bent downwardly extending flange cooperating with an adjacent upright wall of the receptacle to form a downwardly open pocket, a downwardly opening inverted channel secured within and extending below said pocket and constituting a hollow handle for the reception of the fingers of a hand, the front wall of said channel having a lower edge spaced from and forwardly of the front wall of said pan, and a trim plate overlying the lower edges of said downwardly extending flange and the adjacent front wall of said inverted channel and secured to said adjacent wall of the channel.

2,896,814
BOTTLE CARRIER
William M. Altenburg, South Windham, Maine, assignor to Diamond Gardner Corporation, a corporation of Delaware
Application December 12, 1957, Serial No. 702,351
2 Claims. (Cl. 220—116)



1. An integral one piece molded pulp carrier having a plurality of necked bottles therein and comprising a body section adapted when in use to be generally vertically extending and having an upper margin, a handle section upwardly of said body section, said handle section having a lower margin, a pair of neck engaging sections integrally connected along a generally horizontal fold line, one of said neck engaging sections being integrally joined to the lower margin of said handle section along a second fold line and the other of said neck engaging sections being integrally joined to the upper margin of said body section along a third fold line, said neck engaging sections constituting the sole connection between said handle section and said body section and extending and converging outwardly of the plane of said body section and handle section and having spaced and aligned holes therein, the necked bottles having the necks thereof extending through said holes, whereby when said handle section is lifted, the angle between said neck engaging sections will increase to thereby clamp the necks of the bottles.

2,896,815
CARRIER TRAY FOR CONTAINERS
Mildred F. Longan, Baldwin Park, Calif., assignor to Renfro-Franklin Company, Baldwin Park, Calif., a corporation of California
Application October 11, 1957, Serial No. 689,647
8 Claims. (Cl. 220—117)



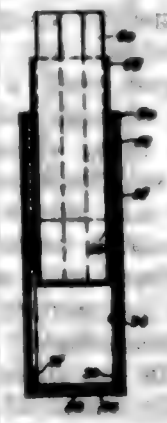
1. A wire tray for carrying containers comprising a substantially rectangular bottom frame, four support wires extending longitudinally across said bottom frame from one end thereof to the other, each of said support wires having a pair of loops at its opposite ends, said loops extending around the ends of said bottom frame and being secured thereto, two of said support wires being disposed on one side of said bottom frame and spaced from said bottom frame and from each other, the other two of said support wires being disposed on the other side of said bottom frame and spaced from said bottom frame and from each other, said support wires being parallel to the sides of said bottom frame, the area adjacent the center of said bottom frame being open, a substantially rectangular upper frame disposed above said bottom frame and spaced therefrom, a pair of spacer wires extending transversely across said upper frame from one side thereof to the other, each of said spacer wires having a side portion extending substantially vertically from said upper frame to said lower frame, each of said spacer wires having a pair of loops at its opposite ends, said loops extending around and being secured to the sides of said bottom frame, said spacer wires being substantially equidistantly spaced from the ends of said upper frame and from each other, said spacer wires extending parallel to the ends of said upper frame, the portions of said spacer wires which cross said upper frame being secured thereto, a pair of center wires extending parallel to the sides of said upper frame adjacent and on opposite sides of the longitudinal axis of said upper frame from one end of said frame to the other, the ends of said center wires extending beyond the ends of said upper frame to form a pair of rings joining the ends of said center wires, said rings protruding slightly beyond the ends of said upper frame, each of said center wires being secured to said spacer wires and to the ends of said upper frame adjacent the midportions thereof, and a handle having a pair of loops at its opposite ends, said loops extending around and being secured to the ends of said bottom frame adjacent the midportions thereof, said handle having side portions extending vertically upwardly from said bottom frame to said upper frame, the upper ends of said side portions being secured to the ends of said upper frame adjacent the midportions thereof, said handle having a pair of angular portions which extend inwardly and upwardly from the ends of said upper frame toward the center thereof, said handle having a pair of upright portions which extend vertically upwardly from the inner ends of said angular portions above the center of said upper frame, said upright portions being joined at their upper ends by a horizontal bail, said upright portions being spaced apart from each other a distance less than the distance between said spacer wires, so that the handle of one tray can extend through the open space adjacent the

rality of rods with one end of each loosely abutting the

2,896,821

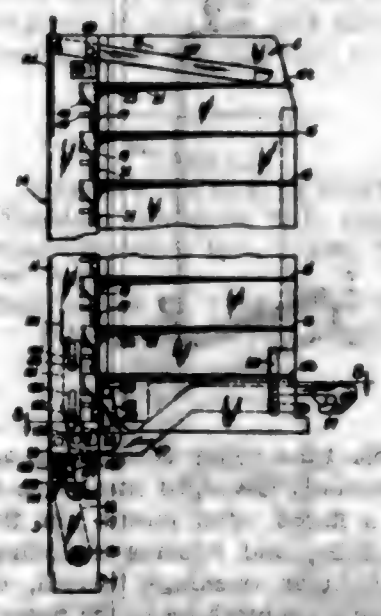
center of the bottom and upper frames of an identically formed tray disposed thereabove, the opposite sides of said handle extending through said rings, so that said rings prevent displacement of said handle with respect to said upper frame.

2,896,816
DISPENSING PACKAGE
Jerry B. Twigg, Bethesda, Md.
Application February 25, 1957, Serial No. 642,211
13 Claims. (Cl. 221—64)



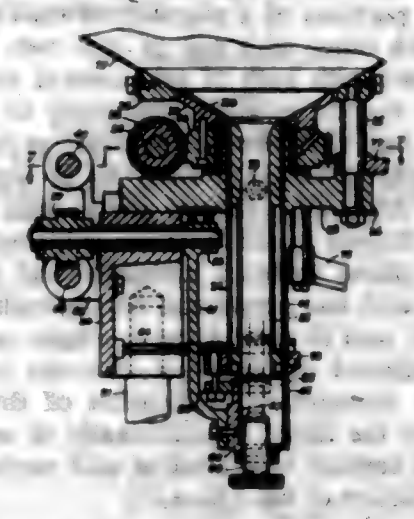
1. A package for dispensing articles contained therein consisting of a tube, a box telescopically slidable in said tube and having a dispensing opening therein, an ejector in said box movable toward and away from said dispensing opening, and means enabling the selective coupling of the tube with the ejector.

2,896,817
DISPENSING MECHANISM FOR VENDING MACHINES
Alvin W. Holstein, Lemay, Mo., assignor to National Vendors, Inc., St. Louis, Mo., a corporation of Missouri
Application August 27, 1956, Serial No. 606,434
16 Claims. (Cl. 221—96)



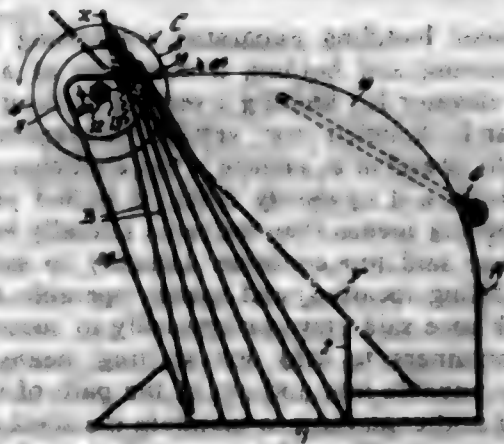
1. Article dispensing mechanism comprising a support, a plurality of shelves pivotally mounted on the support for swinging movement about horizontal axes located one above another and equally spaced, each shelf having a downwardly directed flange at one end constituting its rearward end, the height of said flange corresponding to the spacing of the shelf axes, each shelf having its axis at the lower edge of the flange, each shelf having a catch movably mounted thereon at its rearward end on the back of its flange, means on the support engageable by the catches for holding the shelves each in a generally horizontal article-carrying position, and means located in the rear of the shelves in back of the flanges for successively operating the catches starting with the catch on the lowermost shelf successively to release the shelves starting with the lowermost shelf.

2,896,818
BOBBIN FEEDING MECHANISM FOR SPOOLING MACHINES
James Dove Wilford Taylor, Hazel Grove, England
Application October 6, 1953, Serial No. 384,461
9 Claims. (Cl. 221—178)



1. Bobbin feeding mechanism comprising, in combination, stationary hopper means having inwardly and downwardly inclined walls and being formed with a bottom orifice, said hopper means being adapted to hold a plurality of bobbins; a rotary bobbin-orienting member having an upright axis and a downwardly and inwardly inclined inner annular surface and being formed with an aperture at the lower end of said annular surface, said bobbin-orienting member being located underneath said orifice with said annular surface forming a continuation of said inclined hopper walls; and a stationary tubular chute located underneath said bobbin-orienting member and extending downwardly from the same, said chute having at the upper end thereof a downwardly and inwardly inclined annular surface forming a continuation of said annular surface of said bobbin-orienting member whereby said bobbin-orienting member rotates bobbins until the same roll on said annular surface of said chute and pass in upright position into said chute.

2,896,819
SINGLE DELIVERY WELDING ROD CONTAINER
Charles R. Rutz, Newark, and Vincent I. Ferrante, Orange, N.J.
Application December 11, 1956, Serial No. 627,581
3 Claims. (Cl. 221—283)



1. A single delivery apparatus for rods comprising a support having bottom and side elements to hold a plu-

bottles.

one tray can extend through the open space adjacent the

rality of rods with one end of each loosely abutting the bottom element of the support and with the rods leaning by gravity in one direction at an angle to the vertical, a rod delivery device having two coaxial conical surfaces providing a V-shaped circumferential groove between them of a size and shape to receive a plurality of rods between them with one and only one rod in frictional contact with both of said surfaces at the same time, means mounting said device on said support for rotation about a horizontal axis above said bottom element and coaxial with said conical surfaces providing for the leaning of the upper end portions of a plurality of rods against said device and each other with one of said rods in wedging frictional contact with both of said conical surfaces, and means on said support to guide a plurality of rods simultaneously into said circumferential groove so that said one rod will be gravitationally pressed by at least some of the other rods into said V-shaped groove, and said device upon rotation thereof in one direction will fractionally lift said one rod alone endwise upwardly and project the upper end of said rod above the corresponding ends of the other rods, said device having a weight or mass providing for continued rotation thereof under its own momentum after momentary application of driving force thereto and for the lifting longitudinally of any rod that is in frictional contact with both of said conical surfaces during such rotation of the device.

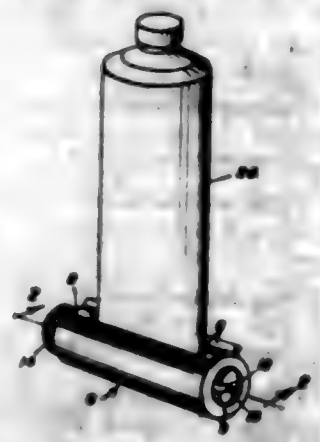
2,896,820
CONTAINER EJECTING MECHANISM
Willis E. Clark, Los Angeles, and John E. Beall, Glendale, Calif.
Application April 3, 1953, Serial No. 346,762
11 Claims. (Cl. 221—210)

10. Container handling apparatus comprising a support for receiving and holding a container at a filling location, an elevator for holding a vertical stack of nested containers and mounted for vertical movement, first shifting means operable to engage a top container of said stack and displace it upwardly from its nested position, additional shifting means then movable laterally and acting to displace said top container laterally to said support at the filling location, and means operable to progressively advance said elevator upwardly to successively feed said containers to said first shifting means, there being a stop movable into and out of the path of upward movement of said containers to maintain the stack against upward movement with said top container, and control means for actuating said stop in predetermined timed relation to the upward movement of said first shifting means.

2,896,821
GLASS SLIDE DISPENSER
Wilson Stegeman, Santa Rosa, Calif.
Application October 7, 1957, Serial No. 688,687
5 Claims. (Cl. 221—259)

1. A glass slide dispenser comprising a box-shaped magazine having a bottom wall, opposed side walls, a front wall and a rear wall, a rotatable shaft projecting perpendicularly through said side walls adjacent the bottom wall and being closer to the front wall than to the rear wall, said shaft having a frictional surface thereon between said side walls and a manually rotatable portion extending exteriorly of said magazine, said frictional surface having an upper portion lying substantially above the rear portion of said bottom wall, said magazine being thus adapted to receive a stack of glass slides therein with the slides being supported on the upper portion of the frictional surface of said shaft and the rear of said bottom wall, and a discharge slot wider than the thickness of one of said slides formed in the front wall in alignment with the inclined lowermost of the slides supported on said frictional surface, said slot having its upper edge spaced from the bottom wall at a height to allow the lowermost of said slides to pass through the discharge slot upon a rotation of said shaft while intercepting the next adjacent slide to prevent discharge thereof.

2,896,822
COLLAPSIBLE TUBE ROLLER
Leonard J. Senger, Syracuse, N.Y.
Application May 16, 1957, Serial No. 659,561
2 Claims. (Cl. 222—99)



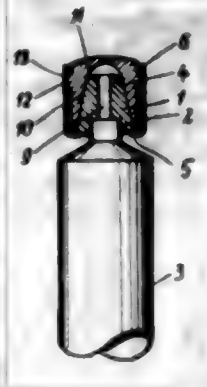
1. A collapsible tube roller comprising an elongated housing of substantially C-shaped transverse section, said housing having a flared open mouth for the reception of a collapsible tube, said housing including end walls having aligned circular openings therein, one of said openings including a counterbore in the outer face of one end wall, a key rotatably journaled in said openings, said key including a cylindrical body, an enlargement on one end of said body, said enlargement being in contact with the outer surface of the other end wall, a knob on said enlargement for allowing easier rotation of said body, a longitudinal slot formed in said body from the other end thereof whereby the body is bifurcated for receiving the bottom of a collapsible tube, segment-shaped flanges extending outwardly from the other end of said body and removably disposed in said counterbore whereby said flanges may be pressed together for allowing passage of said body through said openings when removal thereof is desired.

direction away from said one longitudinal wall and pro- plate-like member, an elongate slot in the bottom of

2,896,823
TUBE HOLDER

Gaston Birger Fog Waagepetersen, Helsingor, Denmark

Application April 17, 1956, Serial No. 578,704
Claims priority, application Denmark June 17, 1955
2 Claims. (Cl. 222—105)

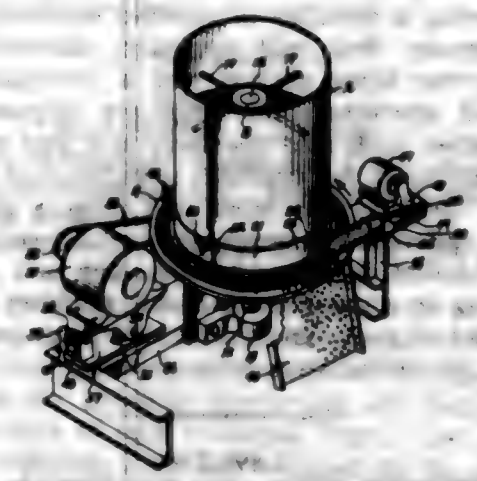


1. A holder for container tubes of the type having internally threaded removable caps comprising, in combination, a bracket comprising a back plate and two opposite disposed side walls extending forwardly from the back plate, an internally threaded mouthpiece adapted to be screwed on a tube replacing the removable cap of the tube and having an opening through which the contents of the tube may be removed, a cap in said holder pivotally mounted between the side walls and having a cavity for releasably receiving the mouthpiece mounted on said tube and sealing it, each of the side walls being provided with a lower-end shoulder portion projecting laterally in a direction toward the opposite side wall an extent sufficiently for releasably engaging a portion of a peripheral surface of a lower end of the mouthpiece and jointly holding the mouthpiece snugly in said pivoted cap when the mouthpiece and tube are disposed in substantially a vertical, downwardly depending position with the tube disposed hanging between the shoulder portions, whereby said tube held in the holder is removed therefrom by pivoting it in a direction away from the back plate to a position other than a vertical downwardly depending position and is replaced in the holder by inserting the mouthpiece in said cap and subsequently pivoting the cap and tube so that the tube is in said depending position.

2,896,824
ROTARY TABLE FEEDER

William M. Sheldon, Elizabeth, N.J., assignor to Metals Disintegrating Company, Inc., Union, N.J., a corporation of New Jersey

Application August 28, 1956, Serial No. 606,755
8 Claims. (Cl. 222—168)

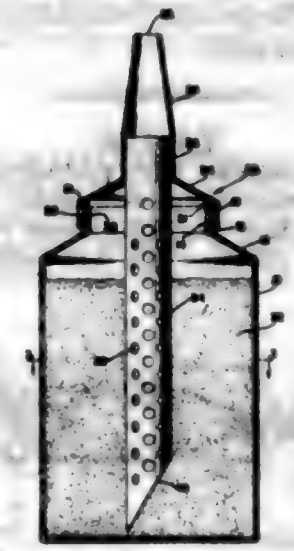


5. In a rotary feeder having a receptacle for material to be fed out at a predetermined constant rate including a rotatable table, side walls rotatable simultaneously therewith and spaced therefrom, and means for deflecting a predetermined amount of said material from within said receptacle off the edge of said table, the improvement comprising concentric grooves on the surface of said table and cooperating with the said side walls of restrain said material from being broadcast at random where said material has a very low angle of repose, said deflecting means including counter rotating brush means cooperating with said grooves for dislodging said material from said grooves, means for biasing said brush means into contact with the surface of said table, means located over the edge of said table and adjacent to said restraining means for dislodging any material that becomes stuck in said restraining means.

2,896,825
DISPENSING DEVICE

William L. Jackson, Buna, Tex.

Application October 15, 1956, Serial No. 616,006
1 Claim. (Cl. 222—211)



A dispensing device comprising a container having a flexible side wall and a closed bottom wall, a conical neck extending upwardly from said container side wall, a thickened cylindrical externally threaded flange extending upwardly from said conical neck, a thin flexible unthreaded flange extending upwardly and slightly inclined inwardly from said threaded flange, a dispensing cap having a dispensing nozzle open at its end on one end of said cap and a thickened depending skirt on the other end of said cap, said skirt being unthreaded adjacent its cap end and internally threaded adjacent its open end to complement said threaded portion of said neck flange portion, a tube extending from within said nozzle to a position within said container adjacent said container bottom wall, said unthreaded flexible flange portion being arranged to expand upwardly and outwardly into sealing engagement against the unthreaded portion of said cap skirt under pressure created by manual squeezing of said container wall.

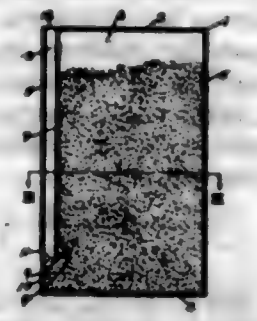
2,896,826
MEASURING DISPENSER

Gustave O. Matter, Portland, Oreg.

Application February 11, 1957, Serial No. 639,568
4 Claims. (Cl. 222—455)

1. A dispensing container comprising a container body having top and bottom walls and longitudinal walls between the top and bottom walls, there being an outlet at the top wall end of the container body, a channel wall extending longitudinally of the container body in spaced relation with one longitudinal wall and forming an inner side of a dispensing channel leading to and communicating with said outlet, the inner end of the channel wall remote from said outlet being spaced from said bottom wall, said inner end of the channel wall being provided with a flange extending at right angles therefrom in a

direction away from said one longitudinal wall and providing a shelf parallel with and spaced from said bottom wall for holding a predetermined quantity of material thereon for dispensing through said dispensing chan-



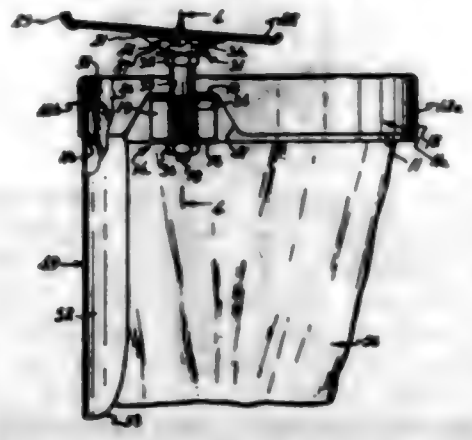
nel, and a deflector strip joining the free edge of said flange to said channel wall, the deflector strip, the flange and the inner end of said channel wall forming a triangle reinforcing said flange and maintaining the same parallel to said bottom wall.

2,896,827
PLASTIC CONTAINERS
Jan Peter Stern, Woodside, N.Y.
Application July 22, 1955, Serial No. 523,769
16 Claims. (Cl. 222—490)

5. In a container structure a closure therefor comprising a tubular member of flexible sheet material one end of which forms the external opening of said container structure, the portion of said tubular member adjacent the external opening thereof being flattened and collapsed so that opposite sides of said flattened portion are normally in contact with each other, said collapsed and flattened portion of the tubular member being provided with a spring-like structure forming interlocking corrugations in said opposite sides of said flattened portion when said spring-like structure is in its normal position of minimum elastic deformation, said interlocked corrugations forming a secure closure for said container when said spring-like structure is in said normal position, elastic deformation of said spring-like structure diminishing and disengaging the interlocked corrugations of said flattened portion whereby the contents of the container can escape therefrom through the external opening of the tubular member.

2,896,828
REFUSE BAG HOLDER
George E. Bunta, Springville, Calif.
Application May 21, 1956, Serial No. 586,230
4 Claims. (Cl. 224—42.46)

1. In a refuse bag holder of the type adapted to be mounted on the dashboard of an automobile, a support band, a clamping band mounted on the outside of said support band and adapted to engage the top side edges of a bag folded over the support band, said clamping band having its upper edge crimped inwardly to hold the the clamping band in place and means adapted for mounting said support band upon the dashboard of an automobile whereby said bag holder may be moved between a receiving position and an out-of-the-way position, said means comprising a flat plate-like member adapted to be secured to the underturned edge of the dashboard of an automobile, an arcuate recess in said plate-like member, an elongate slot in the bottom of said recess, a threaded member extending through said slot and having its head slidably accommodated in said recess, a U-shaped bracket fixed to said support band,



the bracket having holes through which the threaded member extends, and means for adjustably tightening said threaded member on said U-shaped bracket to vary the frictional engagement between the threaded member and the U-shaped bracket.

2,896,829
TUMBLER TRAY
James W. Bright, Glendale, Calif., assignor to Burroughs Manufacturing Corp., Los Angeles, Calif., a corporation of California
Application March 18, 1957, Serial No. 646,793
6 Claims. (Cl. 224—48)

5. In a tumbler rack with tumblers, the combination of: a frame; a plurality of tumbler support rings pivotally mounted in said frame with the pivot axes of said rings parallel to each other and positioned adjacent a side of said frame; and a plurality of tumblers of a predetermined length and of a cross section not exceeding a predetermined maximum diameter, a tumbler removably mounted in each of said rings respectively with the center of gravity of the tumbler below the pivot axis of the ring, and with the tumbler projecting downward from the ring a first distance greater than a second distance between said pivot axes and said side of said frame, said frame having a plurality of tumbler receiving apertures slightly greater than said maximum diameter, each of said apertures being aligned with a corresponding ring when said apertures and rings are disposed parallel to each other with said apertures and said side of said frame positioned on opposite sides of said rings, said apertures being spaced from said rings a distance less than the difference between said predetermined length and said second distance whereby when said side of said frame rests on a plane surface, said tumblers are moved upward out of engagement with said rings and into said apertures for withdrawal from the tray.

2,896,839
COMBINED STEP AND STAIRWAY AND EXTENSION LADDER
Roger L. Bair, Baltimore, Md.
Application May 21, 1957, Serial No. 660,585
5 Claims. (Cl. 228—25)

1. In a combination stepladder of the type comprising a step section and a prop section, each section having

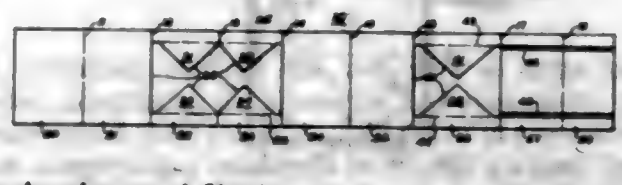
spaced flat parallel side rails with parallel inner and outer edges and steps and rungs, respectively, carried by the side rails, spaced parallel brackets rigid with the step section adjacent the upper end thereof and extending over the outer sides of the rails of the prop section and having hook-shaped portions extending around the outer edges of and slidably embracing the side rails of the prop section permitting longitudinal movement of the prop section relative to the step section, pins projecting outwardly from the side rails of the prop section, said brackets having hook-shaped recesses formed in their upper sides and pivotally engaging said pins and serving to prevent relative movement upwardly or downwardly between the two sections and permitting the pins to be disengaged for vertical sliding of the prop section relative to the step section, a hook rigid with the step section positioned to engage a selected rung of the prop section when slid upwardly in parallel position to support it as an extension ladder, a bracing spreader pivoted to the step section and having a spring hook to engage a substantial portion of the length of a rung of the prop section when it is at an angle to the step section, and a top step on the step section having a rigid transversely extending projecting portion adapted to engage a rung of the prop section when the prop section is at an angle thereto and in a relative elevated position and while the side rails thereof are embraced by said hook-shaped portions of said brackets at their outer edges to hold the rung beneath and in engagement with said top step projecting portion.

2,896,831
BOARDING LADDER
La Verne O. Ellingson, Monrovia, Calif., assignor to Quik-N-Easy Products, Ltd., Monrovia, Calif., a corporation of California
Application May 12, 1958, Serial No. 734,749
5 Claims. (Cl. 228—54)

1. A boat boarding ladder for use on small boats comprising an inverted U-shaped tubular frame having rung means extending between and secured to the legs of said frame, means for pivotally supporting said ladder from the bight portion of said U-shaped frame, said supporting means including a bracket adapted to be anchored to the free board of a boat and having an upwardly opening deep groove therein for detachably supporting said ladder from the bight portion of said tubular frame, a wide U-shaped member secured to the bight portion of said ladder and having a straight bight portion parallel to and closely spaced from the bight portion of the ladder frame, said bracket having a lip projecting upwardly and disengageable from the bight portion of said

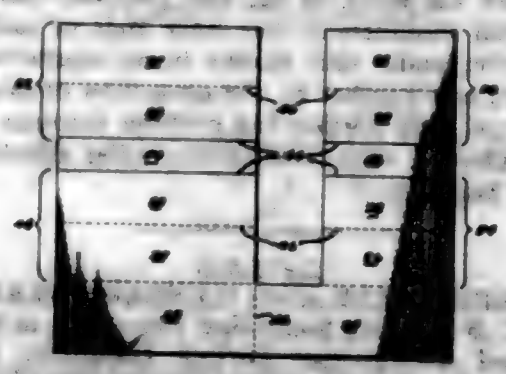
wide U-shaped member only when the ladder is swung outwardly from the boat through a predetermined angle generally normal to the side of said lip.

2,896,832
PACKAGING WITH CORNER SADDLE MEANS
Dan R. Lane, Dallas, Tex., assignor to Lane Container Company, Dallas, Tex., a corporation of Texas
Application July 5, 1955, Serial No. 519,854
6 Claims. (Cl. 229—14)



1. An elongated fiberboard sheet adapted to be folded transversely of the length thereof at a plurality of points to form at least seven panels with five panels intermediate the end panels such that the first four of said five panels are of approximately the same dimensions as said end panels and the fifth of said five panels is of width approximately 1.43 times the width of said end panels, the first, second and fifth of said five panels each having a rectangular window therein of width equal the width of each said panel and having triangular flaps dependable and foldable from the top and bottom of each window.

2,896,833
PROTECTIVE CORNER PAD FOR PACKING MIRRORS AND THE LIKE
Robert N. Markham, Greensboro, N.C., assignor to Highland Container Company, Incorporated, a corporation of North Carolina
Application June 19, 1956, Serial No. 592,352
2 Claims. (Cl. 229—14)

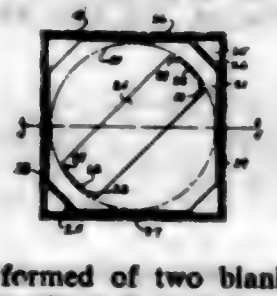


1. A blank for forming a protective corner pad for glass mirrors and the like, said blank being formed of corrugated paperboard and comprising edge protecting panels integrally hinged endwise along a fold line for folding to right angular relation with respect to each

of the carton body walls into an adhesive receiving inner with said handle portion extending across said opening

other, first pairs of side protecting panels foldably connected in sidewise series at one side of each of said edge protecting panels for inward doubling and folding in respective right angular relation thereto along fold lines parallel to the side of said edge protecting panels, one of said pairs of side protecting panels being spaced from the fold line between the edge protecting panels a distance substantially equal to the width of said side protecting panels, and connecting panels foldably joined in sidewise series with each of said first pairs of side protecting panels and having second pairs of side protecting panels likewise foldably joined respectively thereto along fold lines parallel to the side of said edge protecting panels, said connecting panels being proportioned for disposition at the respective inner faces of said edge protecting panels in an extent locating said second pairs of side protecting panels for doubling and folding in right angular relation at the other side of said edge protecting panels in respective opposed relation to said first pairs of side protecting panels, whereby said panels may be disposed to form a channel in cross-section that extends lengthwise in right angularly related legs.

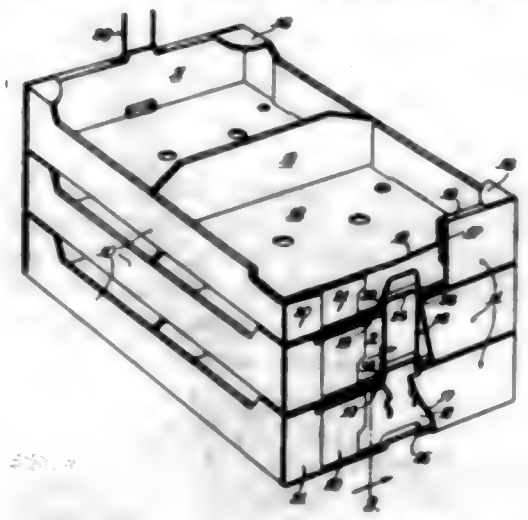
2,896,834
CAKE LIFT
William P. Frankenstein, Cincinnati, Ohio
Application September 28, 1953, Serial No. 382,549
1 Claim. (Cl. 229—30)



In a cake lift formed of two blanks, the first blank providing the cake lift body member substantially rectangular in plan and of an area at least as great as the cake to be lifted thereon and with, at least, two opposite corners of the blank biased with respect to the adjacent sides, said cake lift body portion having a slit formed therein inwardly of each of said two opposite biased corners, said second blank providing the lift mechanism and including a central body portion of a length substantially equal to the distance across the aforementioned cake lift body member opposite biased corners, said second blank outwardly of its central body portion having integrally, hingedly, connected therewith lift arms with each lift arm having width and a length substantially equal to the height of the cake on the cake lift body member, said second blank central body portion having ends inwardly of each of the lift arms integral, hinge connections of a width substantially equal to the width of said lift arms and the remaining portion of the second blank central body portion of a width substantially greater than the width of the end portions thereof providing radial shoulders at the inner ends of said central body portion ends, said blanks being operatively connected with one another by the projection of said second blank central body portion end portions through the cake lift body member slits to have the radial shoulders outwardly of said slits.

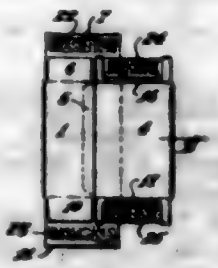
2,896,835
STACKING TRAY AND HANDLE THEREFOR
George C. Burkhardt, South San Francisco, and Clinton Eastwood and Joseph Portola Hamilton, Oakland, Calif., assignors to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Application August 7, 1956, Serial No. 602,542
3 Claims. (Cl. 229—34)

1. In a stacking tray, a body substantially rectangular in plan and having a bottom wall panel and side and end walls secured to and extending upward from said panel, said end walls respectively comprising a plurality of panels including spaced apart inner and outer panels and a fold strip bridging the space between and integrally secured to the upper edges of said inner and outer panels, said fold strips respectively having a lengthwise slot therein and said bottom wall panel having slots aligned with said fold strip slots, and a handle of substantially elongated inverted U-shape at each end of said body having adjacent the lower end of each of its arms a loop disposed substantially perpendicular thereto and in the plane of said handle and comprising an upper finger and a lower finger, said loops receiving the portions of said



fold strip adjacent the ends of said slot therein with said upper fingers at the upper faces of said portions and said lower fingers at the lower faces of said portions effective for restraining said handle against vertical movement in either direction relative to said end wall said handle having members extending from said lower fingers downward between said inner and outer end wall panels, said members being provided with vertically spaced bends extending in alternatively opposite directions substantially perpendicular to and bridging the space between said inner and outer panels, said bends being in pressure contact with the inner faces of said inner and outer panels and in cooperation therewith holding said handle in substantially vertical alignment with said end wall.

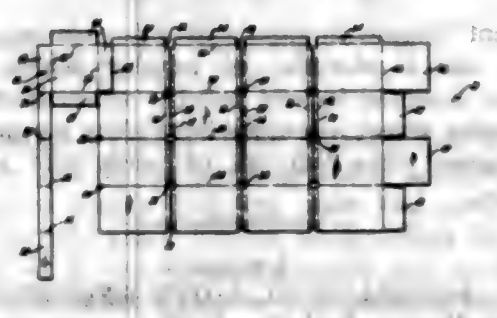
2,896,836
CARTON WITH SELF-SEALING END CLOSURES
Frank D. Bergstein, Cincinnati, Ohio, assignor to Bergstein Packaging Trust
Application December 14, 1956, Serial No. 628,365
3 Claims. (Cl. 229—37)



1. In a self-sealing carton structure, a rectangular body composed of a plurality of body walls in side-by-side articulation, said carton body being flat-folded so as to have two adjacent body walls overlying and juxtaposed to two other adjacent body walls thereunder, a first closure flap hingedly connected to an end edge of one of said underlying body walls, a second closure flap articulated to the corresponding end edge of one of the overlying body walls, said second closure flap being divided along a hinge line paralleling the said end edges

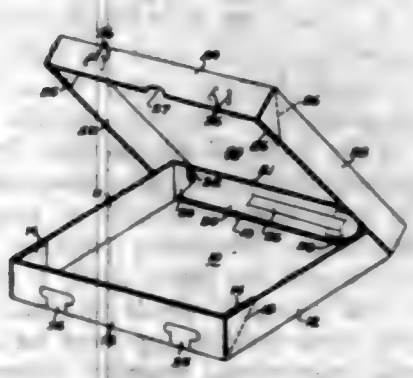
of the carton body walls into an adhesive receiving inner part and a frame forming outer part, said frame forming outer part being folded along said hinge line to overlie said inner part and having a substantial portion thereof cut away to expose the underlying portion of said inner part, said first closure flap being longer than the inner part of said second closure flap so as to have a portion thereof projecting beyond said folded second closure flap, and a coating of adhesive on said first flap confined to the projecting portion thereof and on the inner part of said second flap confined to the portion thereof exposed by said frame part.

2,896,837
SEVERABLE FROZEN FOOD CARTON
Edward J. Rinocci, Jackson Heights, N.Y.
Application September 23, 1957, Serial No. 685,594
6 Claims. (Cl. 229—51)



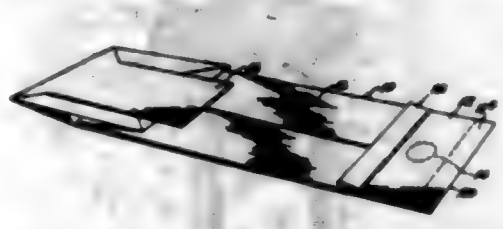
1. In a blank of elongated length to form a food package having separable compartments, a plurality of pairs of closely spaced fold lines formed on each blank transverse to the length thereof, each of said plurality of pairs of closely spaced fold lines being spaced from the other along the length of said blank, a plurality of weakened lines one each between each of said pairs of said closely spaced fold lines to provide a line along which the length of the blank may be separated, a plurality of relatively spaced lengthwise fold lines each crossing said pairs of transverse fold lines, and cut-outs in said blank at each of said crossings of said fold lines.

2,896,838
BOX
Glenn E. Struble, Hamilton, Ohio, assignor, by mesne assignments, to Diamond Gardner Corporation, a corporation of Delaware
Application January 25, 1957, Serial No. 636,418
2 Claims. (Cl. 229—52)



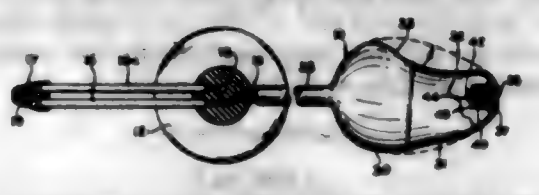
1. In a box including telescoping top and bottom sections integrally joined through a wall panel, said panel having a generally rectangular opening therein having sides of substantially greater length than the opposite ends thereof, flap means normally closing said opening, the combination of a backing strip for said wall panel having longitudinally extending slits therein defining a flexible handle portion of a width no greater than the width of said opening and of greater length than said opening, opposite ends of said strip beyond the ends of said slits being secured to the interior surface of said wall panel with said handle portion extending across said opening between opposite sides thereof, one end of said handle being integrally hinged to said strip along a fold line extending beneath one end of said opening, the other end of said handle extending beyond the other end of said opening, a hinge piece formed from said strip and connected to said other end of said handle along a fold line spaced from said other end of said opening, said hinge piece having a folding connection with said strip spaced approximately midway between said other end of said opening and said last mentioned fold line providing for movement of said last mentioned fold line into a position beneath said other end of said aperture and for consequent flexure of said handle portion out of the plane of said handle strip extending through said opening into a carrying position outwardly of said wall panel.

2,896,839
PACKAGE FOR DRINK-FORMING POWDERS
James F. Barnes, Van Nuys, Calif., and Elmer F. Rebholz, St. Louis, Mo., assignors to Foil Process Corporation, Van Nuys, Calif., a corporation of California
Application July 26, 1955, Serial No. 524,316
1 Claim. (Cl. 229—62)



A container adapted for use with a drink-forming powder, comprising a collapsible and expandable carton of waterproof sheet material, said carton in expanded condition comprising a rectilinear tube with a closed top and bottom, two oppositely-disposed side walls of said tube being pleated to extend inwardly when said carton is collapsed, the other two side walls of said tube being flat when said carton is collapsed, the top wall of said carton having a central fold line extending thereacross between said two pleated sides and arranged to permit said top to fold outwardly onto itself when said carton is collapsed, each of the centrally divided portions of said top wall forming an extension of the adjacent one of said flat side walls when said carton is collapsed, and releasable closure means comprising a flap extending from said central fold line of said top wall over one-half of said top wall, said covered portion of said top wall providing an opening of smaller dimensions than said flap.

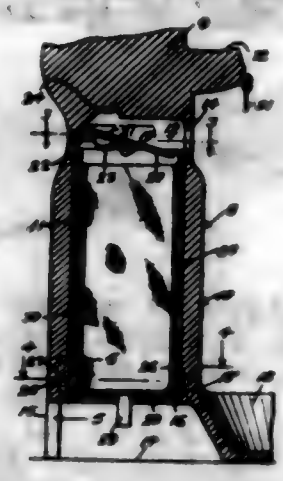
2,896,840
AIR BULB FOR ATOMIZERS AND METHOD OF MAKING SAME
Adolph R. Hendry, Portland, Oreg.
Application November 20, 1956, Serial No. 623,376
2 Claims. (Cl. 230—169)



1. A compressible molded rubber air bulb having a rounded shape and adapted, after being squeezed and released, to return to said rounded shape by the resilience of the rubber to produce suction, said bulb having inlet and outlet end portions vulcanized together, said inlet end portion having an inwardly extending boss molded integrally therewith, said boss being provided with a passageway opening through the outer wall of said bulb

and extending inwardly to a point short of the inner end of said boss, the inner end of said boss being cut transversely substantially therethrough but leaving an uncut portion to provide an integral flap valve at the inner end of said passage, said uncut portion of said flap valve forming a hinge for said valve, said boss having a transverse thickness sufficient to cause it to be substantially rigid under squeezing pressure applied to the bulb and said valve being sufficiently thin to be flexible for opening and closing against said boss, the movable edges of said valve being spaced from the sides of said boss and guarded thereby from the sides of the bulb when the bulb is squeezed, said boss projecting into the interior of the bulb a sufficient distance to space said valve from the end of the bulb, and said outlet portion having an air outlet passage therein.

2,896,841
CHEWING GUM DEPOSITORY
Esta L. Malone, Seminole, Okla.
Application January 3, 1958, Serial No. 707,023
3 Claims. (Cl. 232—43.2)



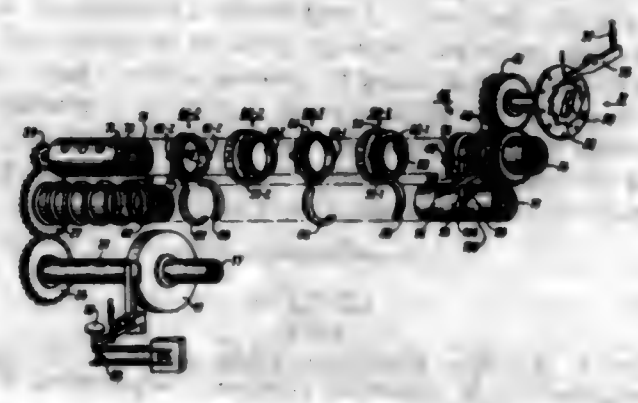
1. A chewing gum depository comprising an elongated upright housing having a chamber extending longitudinally thereof and opening through the lower end of the housing and having a closed upper end, a container having an open top, said container being detachably mounted in the housing chamber through the open bottom thereof, said housing having a front portion provided with an inlet opening communicating with the upper end of the chamber above the open upper end of said container, a teeter plate, means mounting the teeter plate for vertical rocking movement in the upper portion of said chamber about a horizontal pivot axis, said teeter plate being disposed at an incline downwardly and forwardly and having a lower forward end normally disposed in a closed position adjacent a portion of the open top of the container and beneath and adjacent said inlet opening, and in close proximity to the closed upper end of the chamber, and means associated with the plate and housing and limiting rocking movement to the teeter plate and normally returning the teeter plate to the closed position thereof, said forward end of the teeter plate being swingable downwardly and rearwardly into the container and into an open position of the teeter plate.

2,896,842
TOTALIZER CONTROL MECHANISM FOR CALCULATING MACHINES
Louis M. Lierens, Long Island City, N.Y.
Original application July 29, 1950, Serial No. 176,741. Divided and this application December 6, 1951, Serial No. 260,232
39 Claims. (Cl. 235—60)

1. In a calculating machine, a stationary frame, a totalizing unit comprising a gear frame mounted on said stationary frame for limited linear bodily movement relative thereto, a plurality of gear assemblies rotatably mounted in said gear frame, means mounted on said stationary frame for imparting both clockwise and counterclockwise rotary movement to said gear assemblies when said gear frame is in either of its limiting positions, a number wheel frame mounted on said gear frame for

movement therewith and pivotal movement relative thereto, and a plurality of number wheel assemblies rotatably mounted in said number wheel frame, each of said number wheel assemblies including a pinion adapted to be moved into and out of mesh with a said gear assembly.

2,896,843
MECHANICAL SHIFT REGISTER
Jonathan Hunter, Berkeley, Calif., assignor to Marchant Research, Inc., a corporation of California
Application August 23, 1957, Serial No. 679,818
11 Claims. (Cl. 235—61)

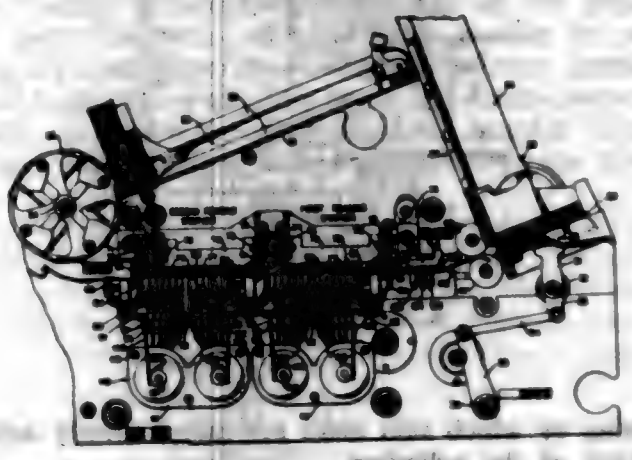


1. A shift register comprising a drive shaft rotatable in one direction, a plurality of ordinally arranged numeral wheels frictionally mounted upon the drive shaft, means for adjusting a first numeral wheel to a discrete value representative position, respective detents for preventing rotation of the numeral wheels with the drive shaft, an interordinal member frictionally mounted on the drive shaft between each respective pair of numeral wheels, respective detents for preventing rotation of the interordinal members with the drive shaft, a respective stop lug fixed on each numeral wheel and each interordinal member, a respective contact lug fixed on each numeral wheel and each interordinal member, control means operable first to disable the detents of the interordinal members while the numeral wheel detents hold the numeral wheels in fixed position to permit the interordinal members to rotate with the drive shaft to the extent permitted by contact of a contact lug on the member with a stop lug on its adjacent numeral wheel, and operable second to disable the detents of the numeral wheels while the interordinal member detents hold the members in fixed position, to permit the numeral wheels to rotate with the drive shaft to the extent permitted by contact of their respective contact lugs with the stop lugs of their adjacent lower order interordinal members.

2,896,844
ACCOUNTING MACHINE CONTROLLED BY DIFFERENTLY CODED CARDS

Robert L. Roth, Briarcliff Manor, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application October 25, 1956, Serial No. 618,362
17 Claims. (Cl. 235—61.9)

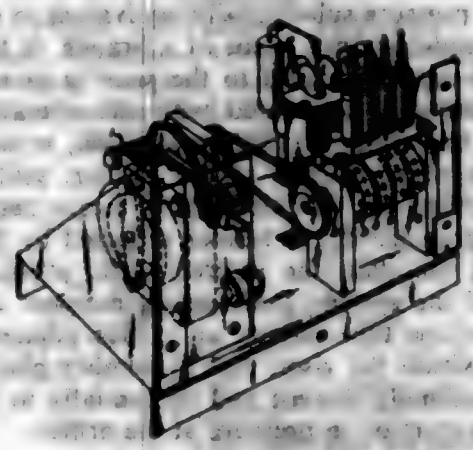


9. In a machine controlled by separate data elements bearing entry control designations coded according to a first code, or a second different code and designations separate from said entry control designations for designating the kind of code, printing means and entry accumulating means both responsive to a common entry code to receive said entries, analyzing means to analyze said entry control designations on each of said elements, means for sensing said kind of code designations for detecting the code of the element analyzed by said analyzing means, and means controlled by said sensing means when operable according to the first and second codes to cause under control of said analyzing means the conversion of said first and second codes to said common entry code to control said printing means and to read out entries in said common entry code into said accumulating means.

2,896,845
MECHANICAL CHARACTER DISPLAY DEVICE FOR ELECTRONIC MEANS

John G. Hansen, Pittsford, and Robert H. Rugaber and Joseph P. Welsh, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Application July 16, 1958, Serial No. 748,946
11 Claims. (Cl. 235—132)

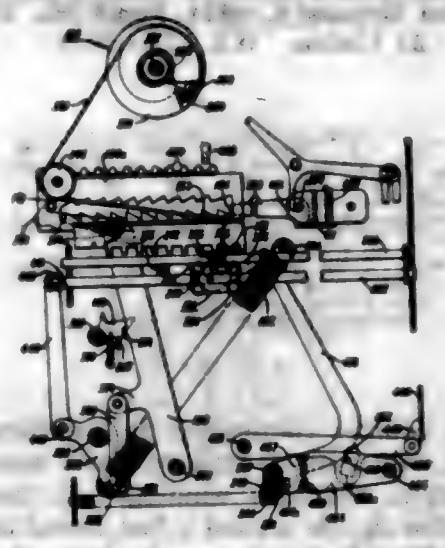


1. A character display device consisting of a constantly rotating shaft, a plurality of wheels each having a series of characters on the tread thereof, said wheels being loosely mounted on said shaft, each said wheel being associated with said shaft by a slip clutch, a pin normally engaging each said wheel to prevent rotation thereof, each said wheel having a plurality of reflecting surfaces, a source of light and photoelectric means responsive to light from said source transmitted thereto by reflection from said reflecting surfaces, means for withdrawing said pin from engagement with said wheel to allow rotation thereof, and counting means responsive to said photoelectric means successively operated by passage of said reflecting surfaces into transient cooperative relationship with said photoelectric means for releasing said pin into engagement with said wheel when a given count is reached by said counting means.

2,896,846
TEN-KEY VALUE AND DECIMAL POINT INDEXING MECHANISM

Howard M. Dustin, Oakland, Calif., assignor to Smith-Corona Marchant Inc., a corporation of New York

Original application March 7, 1952, Serial No. 275,259, now Patent No. 2,702,668, dated February 22, 1955. Divided and this application October 11, 1954, Serial No. 461,414
3 Claims. (Cl. 235—145)

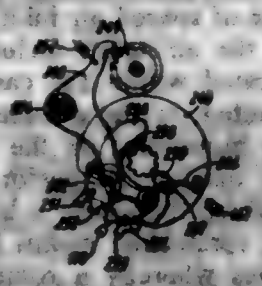


1. In a calculating machine having a register including numeral wheels and actuators therefor, means operable to ordinally shift the actuators relative to the numeral wheels, a value entry mechanism, a device operable under control of the value entry mechanism to adjust the actuators in accordance with a selected value, means operable by the value entry mechanism to shift the device one order relative to the actuators for each ordinal adjustment of the actuators, and mechanism operable to maintain the shifted position of the device relative to the actuators during the operation of the actuator shift mechanism.

2,896,847
OVERTHROW PREVENTING LOCK MECHANISM FOR NUMERAL WHEELS

Eugene E. Reynolds, Richmond, Calif., assignor to Smith-Corona Marchant Inc., a corporation of New York

Original application November 29, 1954, Serial No. 471,694, now Patent No. 2,832,540, dated April 29, 1958. Divided and this application January 6, 1958, Serial No. 707,316
6 Claims. (Cl. 235—131)



1. A calculating machine having a register comprising a plurality of ordinally arranged numeral wheels

and a respective clutch permanently associated with each numeral wheel, each clutch being cyclically operable for rotation in either of two directions, means for engaging and disengaging the clutch during each cycle of operation thereof in either direction to cause positive and negative advance of the numeral wheel, a detent normally disengaged from the numeral wheel, cyclically operable means for moving the detent to engage the numeral wheel at the end of advance of the numeral wheel in one direction, and mechanism responsive to the clutch disengaging means for moving the detent to engage the numeral wheel at the end of advance of the numeral wheel in the other direction.

2,896,848

MAGNETIC CORE SHIFT REGISTER COUNTER

William Miehle, Havertown, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Application October 8, 1954, Serial No. 461,246
21 Claims. (Cl. 235—167)

1. A pulse counter comprising the combination of a first group of static bistable-state magnetic elements having input, output, and shift windings and connected to pass information signals around a first closed loop, a second group of bistable-state magnetic elements having input, output, and shift windings and connected to pass information signals around a second closed loop, means for entering at least one reference signal into at least one of the elements of the first group, means responsive to the pulses to be counted for effecting circulation of the reference signal around the closed loop of said first group, means for entering at least one reference signal into at least one element of the second group, means responsive to the recurrent presence of the reference signal in one of the elements of the first group for advancing the reference signal of the second group from one element to another element thereof, and means responsive to the presence of a reference signal in one of said second group elements to produce an output signal.

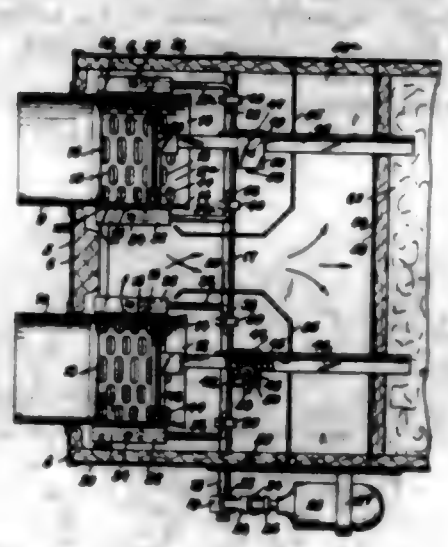
2,896,849

AIR CONDITIONING APPARATUS HAVING CONTROLLED VOLUME AND TEMPERATURE AIR FLOW

Peter Argentieri and Harry Dunishkrach, Danbury, and Thomas L. Day, Bethel, Conn.

Application May 5, 1955, Serial No. 506,382
7 Claims. (Cl. 236—13)

1. In an apparatus of the character described, a casing having a wall, a pair of spaced air inlets entering through said wall, each of the air inlets including a perforated cylinder wholly located within the casing, a perforated sleeve slidably mounted on the outside of each cylinder and adapted by its movement on the same to align or partially or wholly dealign its perforations with those in the cylinder on which the sleeve is located, a rotatable shaft in the casing, connecting means between the shaft and the outer sleeves whereby a rotative movement of the shaft will cause the said outer sleeves to be simultaneously shifted on their respective cylinders, and temperature-controlled means for rotatively moving the shaft, an imperforate disk adjustable axially through each of said cylinders, and means located externally of the



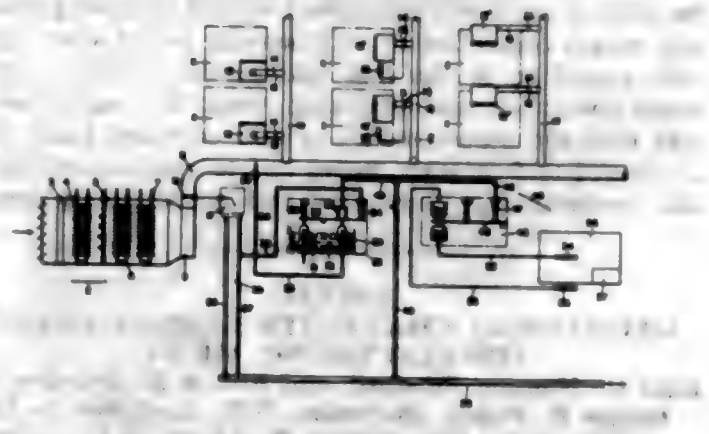
housing by which said disks are independently adjusted in each of the cylinders.

2,896,850

AIR CONDITIONING CONTROL SYSTEM

Carlyle M. Ashley, Fayetteville, N.N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware

Application April 27, 1953, Serial No. 351,164
3 Claims. (Cl. 236—92)



3. In a static pressure regulating system for use in air conditioning systems designed in accordance with the principle of static pressure regain, the combination of a sensing member to be placed in the header of the system to reflect a pressure substantially equivalent to static pressure at a predetermined point of a branch of the system, actuating means connected to the sensing member, reset means operatively associated with the actuating means responsive to variation in solar radiation, means to vary the volume of air supply to the header, said actuating means actuating the volume-varying means responsive to change in pressure in the header reflected by the sensing member to maintain the desired static pressure in the branches of the system, said sensing member comprising a closed hollow tube having an orifice adjacent its end extending within the riser, and a member placed on the tube longitudinally thereof and tangentially to the orifice to cause a reduction in pressure at the orifice.

2,896,851

THERMAL CONTROL DEVICE FOR CONTAINER

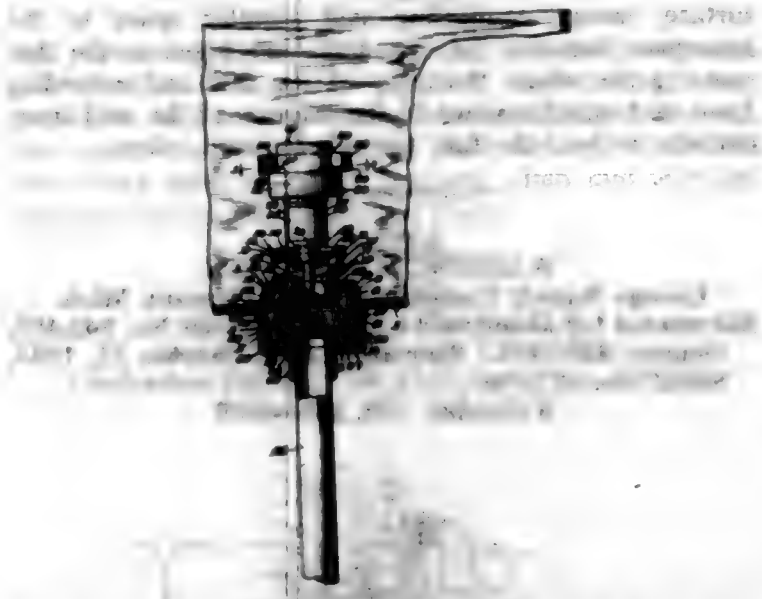
George E. Hansen, Elmwood Park, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois

Application November 25, 1957, Serial No. 698,594
5 Claims. (Cl. 236—93)

1. In a thermostatic relief valve for mounting within a vessel such as a tank or the like, the combination of a valve body, a reciprocally movable closure member there-

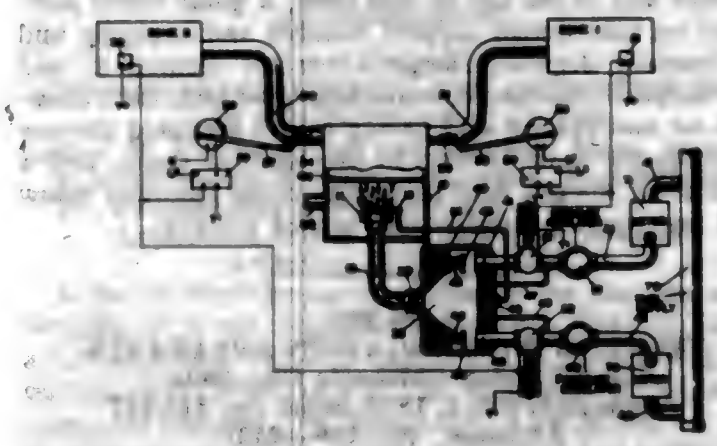
the exterior of said cavity, at least one opening being provided into said duct for the admission thereto of [fuel] from part, a disc having a nozzle for atomizing the fuel

for normally seated within the body, a temperature responsive element cooperating with the said closure member to move the latter member predeterminately from its seat within said body upon predetermined expansion of said temperature responsive element, means for positioning the said temperature responsive element within the valve body, the latter positioning means including a sleeve member having axially aligned apertures, the said sleeve member adjacent the lower one of the aligned sleeve apertures having an outer flange portion for supporting the said temperature responsive element thereon, the said body having inwardly projecting means cooperating with said sleeve to align the latter member axially with said body, resilient means supported by the sleeve



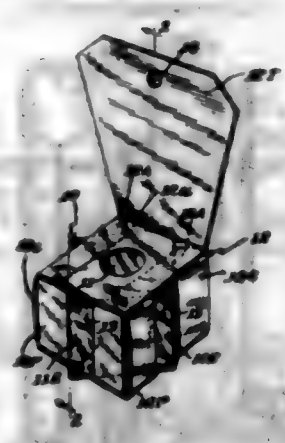
flange portion engaging a lower end limit of the temperature responsive element, the upper end portion of said body having an opening to permit the insertion and removal therethrough of said temperature responsive element vertically from said body opening, a transversely movable washer cooperating with the said temperature responsive element to overlie and retain said latter element within said body, the said body having oppositely disposed side openings for effecting the insertion and removal of the said washer transversely of the body member following predetermined compression of the said resilient means and predetermined axial movement of the said temperature responsive element in a direction toward the closure member seat.

2,896,852
FUEL METERING SYSTEM
Irvin Bitterl, Columbus, Ohio, assignor of one-half to Earl Bougher, Columbus, Ohio
Application May 6, 1957, Serial No. 657,443
10 Claims. (Cl. 237—2)



1. In combination with a system having various zones in which the temperature is to be controlled by supplying temperature influencing medium thereto, a common fluid fuel controlled unit connected to the various zones for supplying said temperature influencing medium to the various zones, means connected to said unit for supplying fluid fuel to said unit to operate it to supply said temperature influencing medium in accordance with the requirements of the various zones, said means including an individual fuel conduit for each zone which leads to said unit and is connected thereto, a valve in each fuel conduit for controlling the flow of fuel therefrom to said unit, means in each zone responsive to temperature in such zone and connected to the valve for such zone conduit for controlling the valve in accordance with the requirements of such zone, and a meter connected to each fuel conduit ahead of said valve for measuring the amount of fuel supplied therefrom to said unit.

2,896,853
PACKAGED INSECT REPELLENT
Frank J. Curran, Downers Grove, Ill.
Application January 10, 1958, Serial No. 708,184
7 Claims. (Cl. 239—57)



1. A packaged insect repellent comprising a block of vaporizable material including an encasing skin of tearable air-impervious material wrapped thereabout and sealing the same and a disposable packaging box of semi-rigid material like paperboard formed with a plurality of window-like openings at spaced points thereabout, said box defining a chamber for housing said block with portions of said block projecting through said openings for selective exposure to the atmosphere upon removal of the portions of said skin overlying the same.

2,896,854
PROTECTING DEVICE FOR WINDOW OF OPTICAL HOUSING
Carl M. Noble and Charles H. Angell, Danville, Ill., assignors to Electric Eye Equipment Company, Danville, Ill., a corporation of Delaware
Application July 10, 1956, Serial No. 596,898
9 Claims. (Cl. 239—105)

9. A device of the class described having a body in which a cavity is provided, a transparent member disposed in said cavity adjacent one end thereof and fully closing same off, means covering said cavity at its opposite end and having provided therein a central opening of substantially smaller cross sectional area than that of the cavity at its closed-off end, an air distributing duct being provided in said device separate from and disposed about

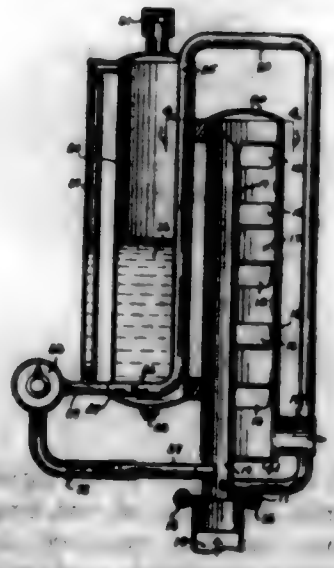
cured in a portion of said sockets of said connectors in communicating relation, forming a substantially square

defining a liquid flow path from the region of said pan adjacent said one side to a region of said pan adjacent

pressure-controlled means for rotatively moving the shaft, valve body, a reciprocally movable closure member there-

the exterior of said cavity, at least one opening being provided into said duct for the admission thereto of transparent gas, such as air, at a pressure greater than that of the ambient atmosphere, said duct and said cavity being so connected adjacent said covering means as to distribute gas emerging from the duct substantially uniformly about the periphery of the cavity and to direct same out of said opening in the cover in a movement away from said transparent member wherein the said covering means comprises a plate member disposed over the end of said cavity and said body has guide means securing said plate member in position and readily slidable thereto to remove the said plate member and give access to the interior of said cavity for cleaning the same.

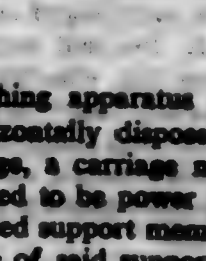
2,896,855
CHEMICAL APPLICATOR FOR USE WITH INTERNAL COMBUSTION ENGINES
Dan O. Neville, Pocahontas, Iowa
Application June 18, 1958, Serial No. 742,820
6 Claims. (Cl. 239—129)



2. In a chemical applicator, a pipe having two end portions and adapted to have one end portion operatively connected to the exhaust pipe of an internal combustion engine, a cylinder having a closed top and a bottom having a pipe opening embracing said pipe; said pipe having its end portion opposite from its end portion that is adapted to be operatively connected to an exhaust pipe extending substantially the inside length of said cylinder and terminating in spaced relationship near the inside closed top of said cylinder; said pipe being eccentrically mounted in said cylinder, and having an outside diameter substantially less than that of the inside diameter of said cylinder, a chemical supply container, a conduit having one end communicating with the inside of said pipe means and its other end communicating with the inside of said pipe means at a different location with its length extending through said container; said conduit having an intake passageway communicating with the inside bottom area of said container and an air passageway communicating with the inside top area of said container.

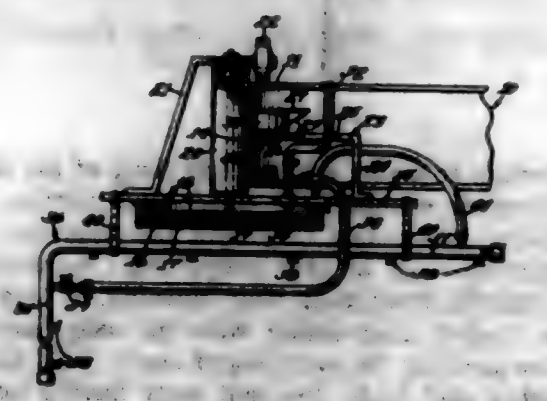
2,896,856
VAPORIZER FOR DIESEL ENGINES
Arthur Kravitz, Budapest, Hungary, assignor to Licencia Találmányokat Értékesítő Vállalat, a firm
Application December 21, 1956, Serial No. 629,898
3 Claims. (Cl. 239—132)

1. In a fuel injector for diesel engines, an inner cylinder having a fuel-pressure operated valve therein, an outer cylinder enveloping said inner cylinder and spaced therefrom leaving a fuel-leading interspace around the said inner cylinder, said outer cylinder having a bottom part, a disc having a nozzle for atomizing the fuel and a bearing surface engaging the said bottom of the outer cylinder, said bottom and said disc having juxtaposed grooves therein defining an annular space, the annular space being situated around the said bearing



surface, means connecting said annular space to the interspace between the cylinders, and bores in the disc crossing the whole thickness of the disc and extending from said annular space to the interior of the said inner cylinder to lead the fuel towards the said valve.

2,896,857
WASHING APPARATUS
George Russell Tompkins, Mount Pleasant, Mich.
Substituted for abandoned application Serial No. 543,455, October 28, 1955. This application October 22, 1956, Serial No. 617,596
5 Claims. (Cl. 239—185)



1. A vehicle washing apparatus comprising a closed track having a horizontally disposed flange and a vertically disposed flange, a carriage movably mounted on said track and adapted to be power driven and including a horizontally disposed support member, a casing secured to the lower surface of said support member, a turbine wheel rotatably mounted in said casing and including a plurality of blades, means for rotating said turbine wheel, a vertically disposed shaft extending upwardly from said casing and projecting through said support member, a roller mounted on said shaft and having driving engagement with the outer surface of said vertically disposed flange, a second support member secured to said first support and to the top of said shaft, a guide wheel journaled on said second support member and engaging said horizontally disposed flange, a bracket secured to said first support member and extending upwardly, shaft members on said bracket and having rollers mounted thereon engaging the inner surface of said vertical flange, and a generally L-shaped fluid discharge means mounted below said first support member and carried thereby.

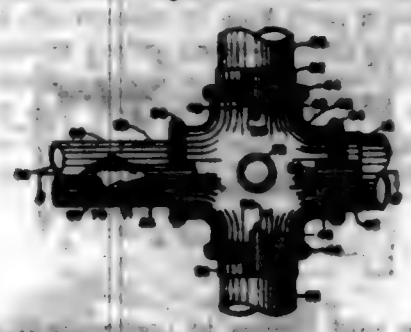
2,896,858
TELESCOPING IRRIGATION APPARATUS
Joel S. Price, Oklahoma City, Okla.
Application July 5, 1955, Serial No. 519,947
3 Claims. (Cl. 239—212)

1. A portable apparatus for dispensing irrigation fluid, comprising a plurality of connectors having communicating pipe sockets therein, a castor assembly supporting each of said connectors, a plurality of irrigation pipes se-

conduit through which the pulsationless paint under pres-

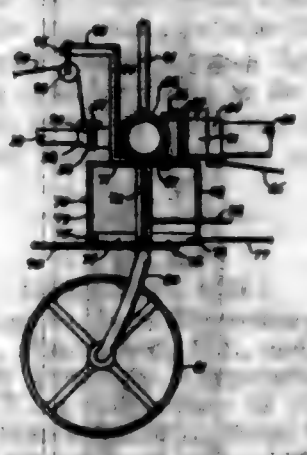
coiled coil spring having female conical surfaces on its

cured in a portion of said sockets of said connectors in communicating relation forming a substantially square frame for the apparatus and a flow path for the irrigation fluid, a plurality of telescoping pipes secured to said connectors and extending outwardly from said frame,



said telescoping pipes being of a size to telescope through said connectors into the pipes of said frame, spray nozzles on said connectors and telescoping pipes, and support means on said telescoping pipes for supporting said telescoping pipes in raised positions when said telescoping pipes are extended from said frame.

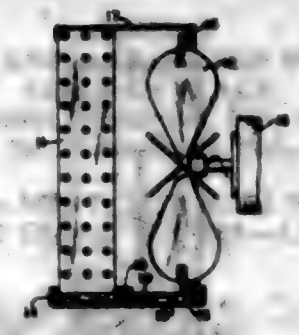
2,896,859
IRRIGATION APPARATUS
Joel S. Price, Oklahoma City, Okla.
Application February 28, 1955, Serial No. 490,903
8 Claims. (Cl. 239—213)



1. A portable irrigation apparatus for dispensing irrigation fluid, comprising a plurality of caster assemblies, an irrigation pipe fitting secured on each of said caster assemblies and having a plurality of communicating pipe sockets therein, a plurality of pipes permanently secured at their opposite ends in said fittings in communicating relation and in a substantially square configuration to form a flow path for the irrigation fluid and supporting members for the apparatus, a plurality of irrigation conduits removably secured in the remaining sockets and extending outwardly from said first-mentioned pipes, and sprinklers communicating with all of said pipes and conduits for spraying the irrigation fluid.

2,896,860
CONDENSATE DISPOSAL ARRANGEMENT FOR AIR CONDITIONING UNITS
Arthur H. Eberhart, East Longmeadow, Mass., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application July 8, 1955, Serial No. 596,669
4 Claims. (Cl. 239—229)

1. In air conditioning apparatus or the like, the combination of a pan adapted to contain a body of liquid, a fan adapted to blow air across and in contact with the surface of the liquid in said pan, means for lifting liquid from said pan and into the stream of air moved by said fan, the stream of air issuing from said fan tending to move the body of liquid in said pan to one side of the pan and away from said lifting means whereby the level of liquid is lowered at said lifting means, and means defining a liquid flow path from the region of said pan adjacent said one side to a region of said pan adjacent said lifting means, said path defining means comprising an elongated member disposed on the bottom of said pan and extending from the region of said pan adjacent said one side to the region of said pan adjacent said lifting means, said member extending upwardly from the bottom of the pan to a region above the level of liquid in said pan for shielding said liquid flow path from the air issuing from said fan.



2,896,861
FIRE NOZZLE
John O. Hruby, Jr., Burbank, Calif., assignor to John Drew, Gerald W. Frazier, and John O. Hruby, Jr., copartners, doing business as Irrigation Engineering & Manufacturing Co.
Application November 4, 1955, Serial No. 545,905
14 Claims. (Cl. 239—237)

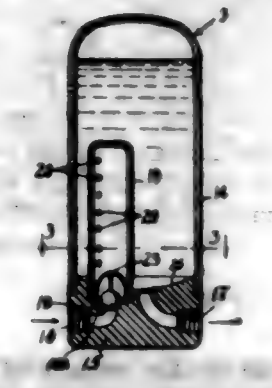
1. A fluid discharge device comprising a cap having an orifice extending therethrough, a plurality of fluid discharge sub-assemblies positioned in the cap and spaced around and proximate said orifice, each sub-assembly comprising a tubular body providing a fluid passageway through the cap, said body having an aperture formed therein for admitting fluid into the body, said aperture being inclined with respect to the radii of the body for causing swirling of fluid in the body, and an elongate stem arranged longitudinally in the body, stop means on the stem engageable with the body for retaining the stem in the body, said stem being rotatable on its axis and gyratable in the body with the axis of the stem inclined with respect to the axis of the body.

2,896,862
ACCUMULATOR
James A. Bode, Cleveland, Ohio
Application April 18, 1955, Serial No. 502,065
4 Claims. (Cl. 239—332)

1. The combination with a paint pressure system having a pump therein whose delivery has pulsations therein, of an accumulator providing an upright generally cylindrical chamber for air and paint under pressure and having separate inlet and outlet ports leading thereinto from the bottom, a conduit connected to the delivery port of said pump and to such inlet port for flow of paint under pressure delivered by said pump into and out of said chamber, an upwardly extending tubular diffuser in said accumulator having an inlet at its lower end in communication with said inlet port and a lateral diffusing outlet below the paint level in said chamber and effective to substantially eliminate pulsation in the paint emerging from such outlet port, another conduit connected to such outlet port, and a spray gun connected to said another

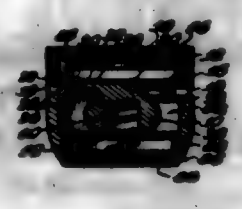
rim at the top of said drain sleeve in the area thereof sur- and means disposed within said shirt and operable through

conduit through which the pulsationless paint under pressure from said accumulator outlet is discharged in finely subdivided form, such diffusing outlet being of relatively narrow circumferential extent in relation to the diameter of such inlet port and being directed non-radially toward



the side wall of said chamber to effect swirling, wiping motion of the paint circumferentially around said chamber to increase the path of travel of the paint from such inlet port to such outlet port and to facilitate cleaning of said accumulator when changing from a paint of one color or composition to another.

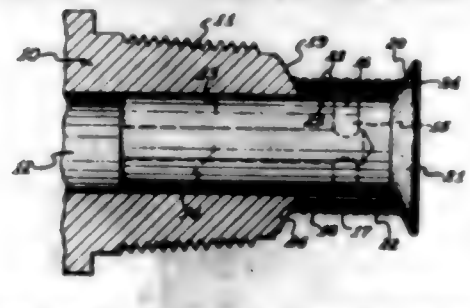
2,896,863
NON-CLOGGING AERATOR FOR FAUCETS
Harold Shames, New York, and Sidney J. Shames, Ardsley, N.Y.
Application September 10, 1956, Serial No. 608,754
23 Claims. (Cl. 239—431)



1. A liquid aerator comprising a barrel having its upstream end adapted for connection to a source of liquid, said barrel having air inlets therein, means within said barrel for breaking up the flow of liquid passing therethrough and for mixing the liquid with air ingested through said air inlets, whereby the liquid issuing from the downstream end of the barrel has small bubbles disseminated throughout, said means including a pair of members having adjacent mating surfaces which form liquid flow passageways therebetween, one of said members adapted to be moved apart from the other member, whereby the surfaces of said members which are adapted to mate to form said liquid flow passageways are exposed, to be flushed by liquid passing through the aerator, a screen-type support member carried by said barrel and extending across the barrel adjacent the downstream end thereof, an elongated coil spring having one end thereof engaging said screen-type member and the other end thereof engaging said one of the pair of members, said spring being of a length and spring constant to urge said one member upstream and apart from said other member, and said one member being movable downstream against the bias of said spring and into mating position with said other member by the force of the liquid entering said aerator.

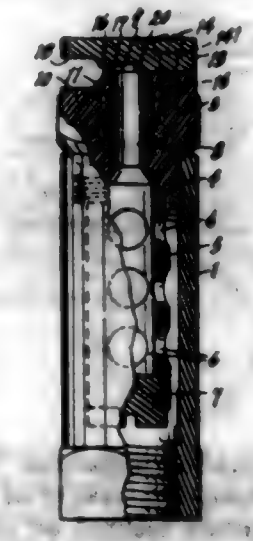
2,896,864
INJECTION NOZZLE
Volney M. Jamison and Don H. Young, Phoenix, Ariz., assignors to Thunderbird Engineering Company, Phoenix, Ariz., a corporation of Arizona
Application May 19, 1958, Serial No. 736,194
2 Claims. (Cl. 239—451)

1. An injection nozzle comprising a fitting member having a pair of spaced facing conical surfaces, a tightly coiled coil spring having female conical surfaces on its end portions engaging said conical surfaces of said fitting forming a pressure chamber inside of said spring and between said conical surfaces of said fitting, and con-



duit means in said fittings in communication with said pressure chamber to supply fluid pressure in said pressure chamber to expand said spring so that the conical surfaces on the ends of said spring move outwardly of the conical surfaces of said fitting.

2,896,865
SPRAY HEAD
William K. Hamilton, Bangor, Mich., assignor to W. L. Hamilton & Company, Bangor, Mich., a corporation of Michigan
Application April 28, 1953, Serial No. 351,649
5 Claims. (Cl. 239—521)



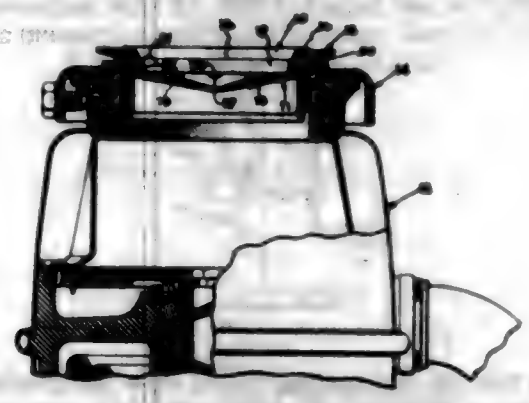
1. A spray nozzle comprising a main body element having a longitudinally extended jet-producing bore therethrough, a spreader element carried by said body element, spacer means overlying said bore spacing said spreader element axially from said body element in intersecting relation to a projection of said bore, said spacer means having undersurfaces which converge downwardly toward said bore, one of said elements having a flat surface which is normal to the axis of the bore, and the other of said elements having a flat surface which slopes from said spacer means toward said normal surface and terminates in closely spaced relation thereto below the bore.

2,896,866
BAFFLE AND STOPPER FOR WASTE DISPOSAL UNIT
Robert W. Hyde, Cincinnati, Ohio, assignor, by mesne assignments, to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware
Application May 24, 1954, Serial No. 431,895
5 Claims. (Cl. 241—100.5)

5. The combination of a drain sleeve adapted to be installed in a sink having a garbage disposer associated therewith, and a baffle device for the opening of said drain sleeve, said baffle device comprising a metal ring having an upper outwardly flaring flange seated upon the

2,896,870

rim at the top of said drain sleeve in the area thereof surrounding said opening, the portion of said ring immediately below said flange being channel-shaped in cross section so as to provide a groove extending circumferentially around the outside of said ring, a baffle member, said baffle member having an upstanding peripheral flange, at least one bead extending circumferentially around the inner face of said upstanding flange, said bead engaged in the groove of the ring to fasten the baffle thereto and a plurality of wedge-shaped fingers extending inwardly

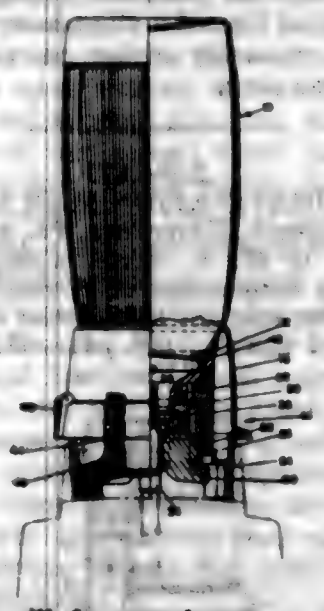


from the lower edge of said upstanding flange beneath the lower rim of said ring, said fingers collectively forming a shallow cone normally substantially closing said drain opening, and said fingers being made of thin readily flexible rubber-like material characterized by its ability to bend downwardly readily when a flow of water runs onto the baffle to open the baffle to the extent of maintaining only a thin screen of water over the baffle, whereby waste may pass through the baffle without hindrance thereby.

2,896,867
GRINDING MILL

Angelo C. De Angelis, New Shrewsbury, and Harry E. Butterfield, Jr., Maplewood, N.J., assignors, by mesne assignments, to Dynamics Corporation of America, New York, N.Y., a corporation of New York

Application March 11, 1957, Serial No. 645,105
6 Claims. (Cl. 241—259)

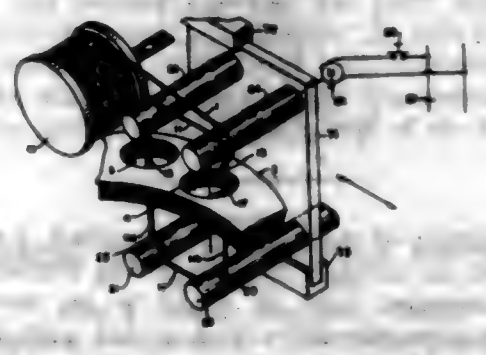


1. A grinding mill for attachment to the shaft of an electrically driven blender having retaining means carried by its base for a removable container, the said attachment comprising, a housing, relatively rotatable grinding elements supported axially within said housing, means for feeding material to said grinding elements, the said housing including a depending skirt, means carried by said skirt for engagement with the blender container supporting means for operatively positioning said housing upon the blender base with said grinding elements in axial alignment with the motor drive shaft, said grinding elements being also supported for relative movement axially, and means disposed within said skirt and operable through the bottom of said skirt for relatively moving said grinding elements axially whereby to adjust the degree of grind.

2,896,868
METHOD OF AND APPARATUS FOR WINDING COILS IN PLACE

Henry T. Machlanski, Westwood, N.J., assignor to Kearfott Company, Inc., Little Falls, N.J., a corporation of New York

Application May 7, 1952, Serial No. 286,474
10 Claims. (Cl. 242—1.1)

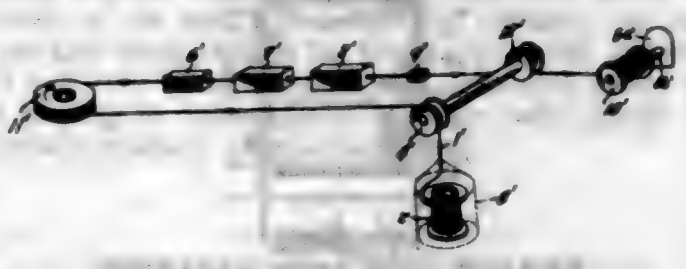


8. Mechanism for winding a coil in place in a slotted magnetizable core structure, from a supply spool or wire, comprising a pair of rollers for each end of each slot in which a coil side is to be positioned, means for positioning the rollers at the ends of each slot to define and maintain a tangential winding path between the rollers at the respective ends of said slots and within a middle zone in the slot in order to avoid frictional rubbing contact of the wire against the core structure, and means for driving the rollers in predetermined directions at each end of said slots to circulate and reel the wire within the confines of the slots, and directly in place, to accumulate the number of turns desired in the final winding in position in each slot.

2,896,869
WIRE TINNING SYSTEMS

Otto Haugwitz, La Celle Saint Cloud, France, assignor to Ste Anonyme Geoffroy-Delore, Paris, France, a French company

Application December 13, 1957, Serial No. 702,703
1 Claim. (Cl. 242—35)



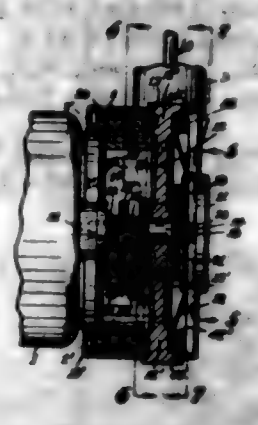
In a wire hot-processing system, supply means providing a supply of wire, a hot treating station positioned to receive the wire downstream of said supply, a rotatable take-up reel means rotatable for pulling the wire from the supply means through said station, said take-up means being positioned substantially adjacent to said supply means, a pair of sheaves mounted on a common freely rotatable shaft, a first of said sheaves having a portion of the wire adjacent the supply means looped therearound and the second of said sheaves having a portion of the wire adjacent the take-up means looped therearound, and a pulley downstream of said first sheave but upstream of said second sheave to reverse the direction of travel of said wire in passing from said first sheave to said second sheave, whereby said first sheave is driven from the second sheave, as the second sheave is driven by the wire moving in response to said take-up reel.

porting said member, mounting the same for movement

casing, switch means including a lever at the outside of

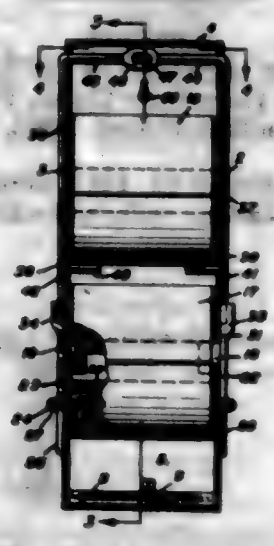
having a pair of spaced facing conical surfaces, a tightly having an upper outwardly flaring flange seated upon the

2,896,870
CLUTCHING MECHANISM
James F. Ulrich, Brecksville, Ohio, assignor to The Tocco Mfg. Co., Cleveland, Ohio, a corporation of Ohio
Application April 4, 1955, Serial No. 498,985
6 Claims. (Cl. 242—54)



1. In a device of the character described, a coil storage chamber, an elongate flexible driving element having one end connected with an object to be moved, and having a portion thereof coiled within said chamber, rotatable element gripping means adjacent said chamber for coiling and uncoiling said element in said chamber, and a wall separating said storage chamber from said rotatable means, said wall having a helically arranged ramp or opening therethrough for guiding said element in its movement in either direction to and from said storage chamber.

2,896,871
ROLL PAPER STORAGE RECEPTACLE AND DISPENSING HOLDER
James E. Woodruff, Oakland, Calif.
Application May 11, 1954, Serial No. 429,037
10 Claims. (Cl. 242—55.3)

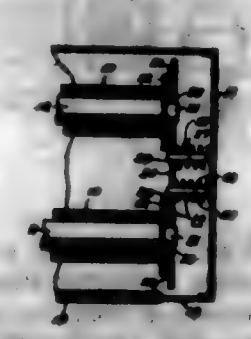


6. In a storage receptacle and dispensing holder for rolls of paper or the like, spaced apart roll supporting members for engaging the core of a first roll to support said roll at a predetermined position, supporting means for a replacement roll above said predetermined position mounted for movement to hold and release said replacement roll, movable mechanism supporting said spaced apart members for inward and outward movement whereby said members can be engaged and released from said core of said first roll, means interconnecting said movable mechanism and the replacement roll supporting means to release said replacement roll upon release of the core of said first roll, and means mounted for movement with said mechanism for automatically catching the replacement roll upon release of said core and holding said replacement roll at said predetermined position for proper registry with said spaced apart roll supporting members.

2,896,872
MEANS FOR REELING CODED TAPE
Jasper Gilbert Drusser, Cranston, R.I., assignor to Drusser Products Incorporated, Cranston, R.I., a corporation of Rhode Island
Application October 6, 1955, Serial No. 538,979
2 Claims. (Cl. 242—61)

1. A reel for flat reeling coded tape comprising a stand providing a bearing, a shaft rotatably carried in said bearing, a flat plate secured to said shaft and having a first arcuate concave edge surface with end edge tape receiving surfaces at each end of said arcuate surface and a further edge surface joining the said end edge surfaces, said end edge surfaces having abutments remote from said concave edge surface, said end edge surfaces defined by second arcuate surface portions which taper toward each other and extend from said abutments to the said first edge surface and said tape receiving surface portions being oriented with respect to the first concave edge surface so that a substantial portion thereof lies on the first edge surface portion side of a line tangent to said first arcuate edge surface and perpendicular to said shaft, whereby the arcuate extent of said second surface portions initiate release of the tape from the reel and said arcuate concavity is of a sufficient extent so that the tape may be gripped at the center thereof between the fingers of one's hand without pinching the plate of the reel, said flat plate having secured thereto at least at one end thereof a clip means which is adapted to receive and releasably anchor one end of the tape to be wound on the plate.

2,896,873
VEHICLE DESTINATION SIGN MECHANISM
Harry Yale Magooch, Havertown, Pa., assignor, by mesne assignments, to H. K. Porter Company, Inc., Pittsburgh, Pa., a corporation of Pennsylvania
Application July 15, 1953, Serial No. 368,054
2 Claims. (Cl. 242—67.4)



1. In a device for displaying the destination or route of a vehicle, a pair of roller units, means for revolubly mounting said units, curtain material on said units, and mechanism operable for actuating said units so as to display a selected portion of said curtain material said unit mounting means comprising a member extending transversely of said units and having journaled therein corresponding end portions of said units, means for sup-

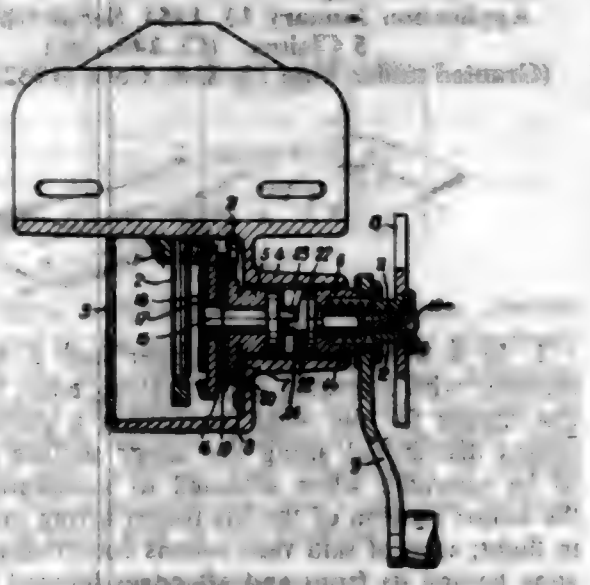
a bed, a pair of ground wheels at opposite sides of the walls defining an axially extending hemicylindrical

alignment with the motor drive shaft, said grinding elements being also supported for relative movement axially,

sheave is driven by the wire moving in response to said take-up reel.

porting said member, mounting the same for movement axially of said units and securing the same against movement transversely of said units, and means pressing said member into abutting frictional engagement with said corresponding end portions of said units.

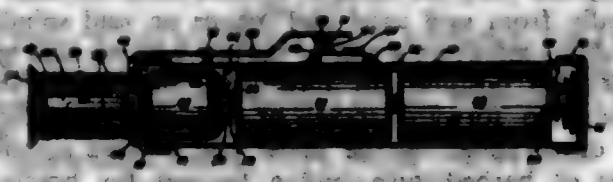
2,896,574
DRIVING MEANS FOR FISHING REELS
Karl Nurmse, Svanguta, Sweden, assignor to Ab Urfabriken, Svanguta, Sweden, a corporation of Sweden
Application July 15, 1957, Serial No. 671,882
Claims priority, application Sweden July 16, 1956
3 Claims. (Cl. 242—84.45)



1. A driving mechanism for a fishing reel rotatably mounted in a frame comprising a driving gear rotatably mounted in said frame for driving said reel; a first crank shaft member rotatably mounted in said frame colinearly with respect to said driving gear, said first crank shaft member being also axially movable within said frame; a second crank shaft member rotatably mounted in said frame colinearly with respect to said driving gear intermediate said driving gear and said first crank shaft member, said first and second crank shaft members having cooperating axial abutments at adjacent ends thereof causing said second shaft member to be rotated in a reel winding direction upon rotation of said first crank shaft member in the reel winding direction; pawl means preventing rotation of said second crank shaft member in the opposite direction; spring means maintaining said gear in frictional engagement with said second crank shaft member comprising a rod longitudinally slidable with respect to and coaxially extending through said second and first shaft members, said gear being mounted on one end of said rod, and a spring at the other end of said rod axially biasing said first crank shaft member into abutment engagement with said second crank shaft member; and means for increasing the tension of said spring means comprising cam surfaces on the adjacent ends of said first and second crank shaft members to axially displace said first crank shaft member away from said second shaft member upon rotation of said first crank shaft member in the winding direction.

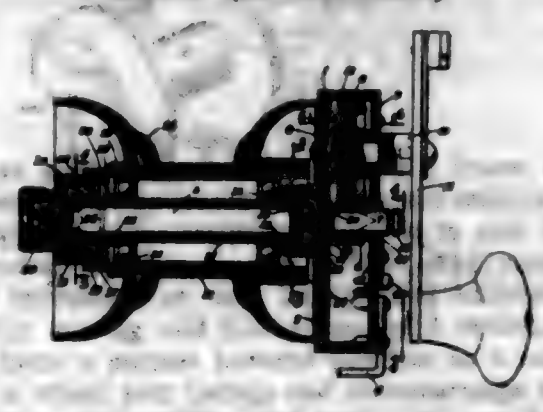
2,896,575
MOTOR DRIVE FISHING REEL
Willis E. Reed, Clovis, and Ralph J. Cummings, Berwyn, Ill.
Application October 28, 1955, Serial No. 543,774
9 Claims. (Cl. 242—84.53)

1. In a motor drive fishing reel, a hollow casing, an electric motor and battery cells therefor mounted end to end in the casing, a line winding reel connected to the motor and projecting endwise therefrom at the end of the casing, switch means including a lever at the outside of the casing for closing a circuit to the motor from the battery cells for rotating the reel and the lever having a brake arm to engage the reel tending to stop it, a switch closing device at one end of the lever having a spring



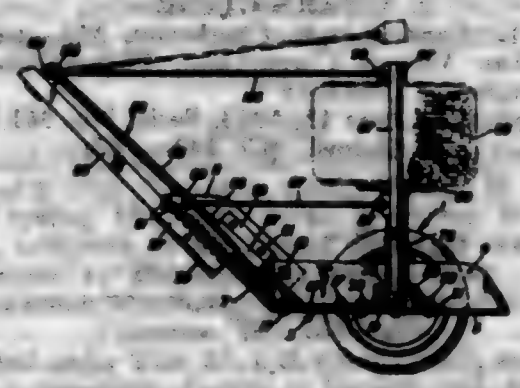
engaging and tending to move the lever and open the switch, pivoting means intermediate the ends of the lever, and the brake arm at the other end extending over the end of the casing and moved into engagement with the reel by the spring at the opposite end of the lever.

2,896,576
FISHING REEL WITH SPOOL CONTROL MECHANISM
Roy L. Bogar, Stockton, Calif.
Application December 8, 1955, Serial No. 551,888
7 Claims. (Cl. 242—84.54)



2. A fishing reel comprising a housing, a spool, a stationary sleeve rigid with and projecting from the front face of the housing, a rotary spool supporting sleeve turnably mounted on the stationary sleeve, the spool being non-rotatably mounted on said rotary sleeve, an axle slidably projecting through the stationary sleeve and turnably supported thereby, hand means to rotate the axle, means connecting the axle and rotary sleeve in driving relation and disengageable from said sleeve by advance of the axle a predetermined distance, one end of the axle being exposed for finger engagement whereby said axle may be so advanced, and releasable means on the housing to automatically latch the axle against retractive movement when so advanced.

2,896,577
PORTABLE WIRE REEL HOLDER
Charles H. Vaughn, Mount Sterling, Ky.
Application March 17, 1958, Serial No. 721,823
4 Claims. (Cl. 242—86.5)



1. A portable wire reel holder for unwinding barbed wire from a reel comprising a two wheeled cart having

from the sides and in spaced relation longitudinally of said fuselage adjacent the forward and rearward ends

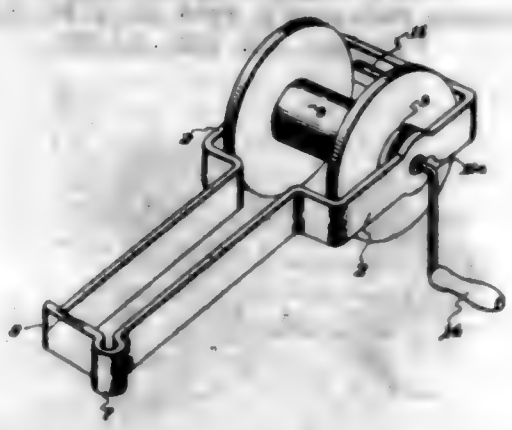
of the craft, and means for apportioning the signal of said side slip or skid sensing means to provide an input

members.

transversely of said units and having journaled therein corresponding end portions of said units, means for sup-

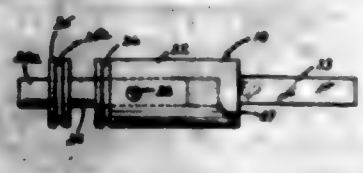
a bed, a pair of ground wheels at opposite sides of the bed, an axle for said wheels transverse to and above said bed, means mounting said bed on said axle in underslung position to provide the cart with a low center of gravity, a tongue extending forwardly from said bed for pulling the cart, an upright spindle fixed to and rising centrally from said axle, and means on said spindle for rotatably supporting a reel of barbed wire on said spindle in elevated position for unwinding of barbed wire in response to forward travel of the cart, a detachable hold down collar on the upper end of said spindle for a reel of barbed wire, and a tie rod for bracing the spindle against rearward pull of barbed wire being unwound from a reel, said rod being terminally pivoted to said collar and tongue for upward swinging to detach said collar.

2,896,878
KITE STRING REEL
Oscar L. Wetzel, Tulsa, Okla.
Application January 8, 1954, Serial No. 403,828
1 Claim. (Cl. 242—99)



A flexible element reeling device comprising a U-shaped frame of inherently resilient material including opposing arms and a transverse web connecting adjoining ends of the arms, a reel having opposing ends, means rotatably mounting the reel transversely between the arms with the ends thereof confronting the inner surfaces of the arms, said arms having axially extending ends projecting beyond the reel and movable toward and away from each other, one of said ends having an inturned, lateral end portion provided with an inner toothed surface and having a spring loop connecting the lateral end portion to the arm and the other end terminating in a tooth end terminal disposed substantially at right angles to the toothed surface and lockingly engageable selectively with the toothed surface which is biased by the spring loop into engagement with the terminal to hold the arms in adjustable clamping relation with the ends of the reel for braking the reel against rotation.

2,896,879
YARN GUIDE
Charles D. Vandenburgh, Charleston, Md., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware
Application June 12, 1953, Serial No. 361,351
3 Claims. (Cl. 242—157)



1. A double-strand yarn-guide assembly comprising a non-metallic cylindrical body member, walls defining an annular groove adjacent one end of said body member, walls defining an axially extending bore in said body member, a non-metallic spindle movable into and out of said bore, an annular yarn guide mounted on said spindle, walls defining an annular yarn contacting surface on said guide, means for moving the spindle into and out of the bore of the body member, and means for locking the spindle with respect to the body member.

2,896,880
ROTARY SPOILERS FOR USE IN LATERAL CONTROL OF AN AIRPLANE
Raymond D. Vogler, Hampton, Va., assignor to the United States of America as represented by the Secretary of the Navy
Application January 13, 1954, Serial No. 403,945
5 Claims. (Cl. 244—42)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In a wing having an upper and a lower surface together with a leading and a trailing edge, a lateral control means for the wing comprising a plurality of vane means distributed along the upper surface of said wing to be operable when actuated to substantially decrease the major portion of the lift forces acting upon said wing in flight; each of said vane means comprising a vane, said vane having its front and aft edges located between said wing trailing and leading edges, and means secured to said vane mounting the latter for rotary motion about an axis approximately normal to said upper surface of said wing.

2,896,881
AERODYNAMIC AIR BRAKE AND LIFT SPOILER FOR AIRCRAFT
John S. Attinello, Falls Church, Va.
Application April 29, 1955, Serial No. 505,077
10 Claims. (Cl. 244—42)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In an airplane having a wing extending from each side thereof, spanwise extending openings in the upper surfaces of said wings, means in each wing to expel gas at high velocity from within said wing through one of said openings located in said wing, each of said means comprising a plurality of pipes extending spanwise of said wing in juxtaposition with one of said openings, each of said pipes having a slot therein and being independently rotatable from a first position in which said slot expels gas through said one of said openings substantially perpendicularly to the normal air flow and a second position in which said slot expels gas through said one of said openings parallel to and in the direction of the normal air flow, and means to supply gas under pressure to said pipes.

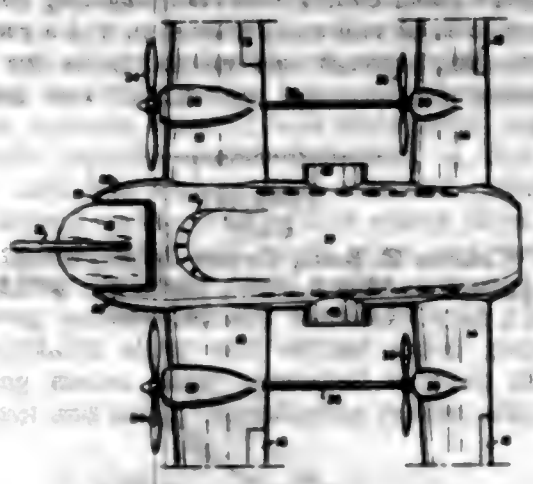
2,896,882
PROPULSION ARRANGEMENT ON MULTI WING AIRCRAFT
Adolph Nelson, East Orange, N.J.
Application November 12, 1954, Serial No. 468,217
1 Claim. (Cl. 244—55)

A heavier-than-air craft comprising, a fuselage, forward and rearward wing sets fixedly outstanding laterally

grip member releasably attached therein, said grip mem-

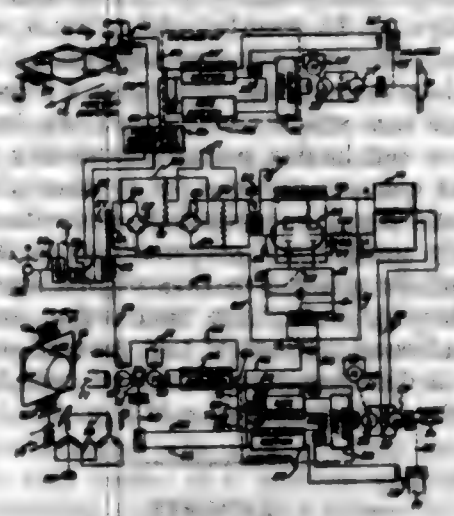
with two of said holes in said support panel being spaced

from the sides and in spaced relation longitudinally of said fuselage adjacent the forward and rearward ends thereof, wheels for the rollable ground support of said fuselage, flight control means for said aircraft, propeller means for the propulsion of the craft in flight carried by both of said wing sets at each side of the fuselage, engines mounted in one of said wing sets selectively engageable



with and to drive both of said propeller means, electric motors mounted in the other of said wing sets selectively engageable with and to drive one of said propeller means, secondary batteries carried by the fuselage to power said motors, electric generators associated with and to charge said batteries, and windwheels in driving relation with said generators exteriorly exposed between the wing sets at each side of the fuselage.

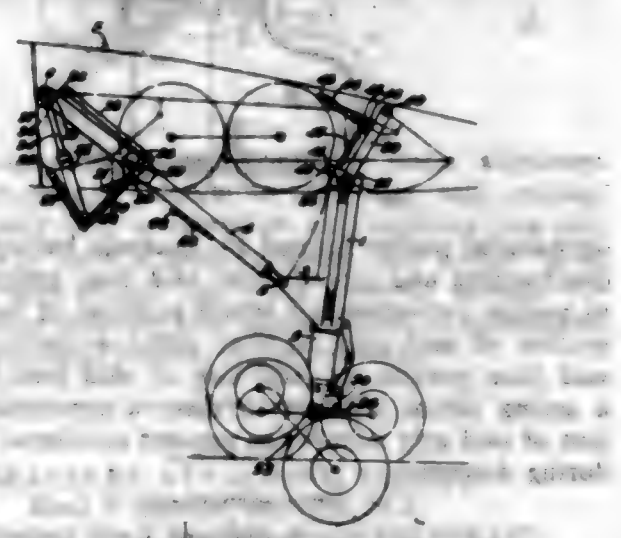
2,896,883
AIRCRAFT AUTOMATIC PILOT
Richard E. Anderson, Great Neck, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Application January 12, 1956, Serial No. 481,437
11 Claims. (Cl. 244—77)



1. In an aircraft automatic pilot with a directional reference and synchro providing a signal in accordance with the displacement of the craft from a predetermined heading, means providing a signal in accordance with the rate of change of the displacement signal, servo means for controlling the heading of the craft operated by the signals of the synchro and rate signal means, a bank reference and synchro providing a signal in accordance with the displacement of the craft from a level condition about its fore and aft axis, and servo means for controlling the craft about its fore and aft axis operated by the signal of the bank reference synchro; the combination of, means for providing a signal for biasing the banking servo means and heading servo means to initiate a turn of the craft at an established rate and a fixed banking angle, signal means operable in the turn for sensing side slip or skid

of the craft, and means for apportioning the signal of said side slip or skid sensing means to provide an input to the rate signal means and an input to the turn rate biasing signal means and thereby coordinate the initially established turn rate of the craft with its actual turn rate.

2,896,884
RETRACTABLE AIRCRAFT LANDING GEAR
Jack Perdue, Great Sankey, Warrington, England, assignor to Electro-Hydraulics Limited, Warrington, England, a company of Great Britain
Application July 6, 1954, Serial No. 441,453
8 Claims. (Cl. 244—102)



1. In an aircraft construction having a frame, a linkage connected to said frame for movement relative thereto, and undercarriage support connected to said linkage for movement relative to said linkage, and means for effecting movement of said linkage and undercarriage support for moving said linkage and said undercarriage support from a normal lowered position to a retracted position in which said linkage and undercarriage support are nested together within said frame: the combination therewith of means for positioning said undercarriage support in nested relation with said linkage, said positioning means comprising first and second members disengaged from each other when said linkage and undercarriage support are in said normal lowered position; means mounting one of said members for movement with said undercarriage support; and means mounting the other of said members on said linkage in the path of movement of said one of said members in a position to be engaged by said one of said members prior to the end of the retracting movement of said linkage and said undercarriage support and to continue to be engaged by said one of said members during the final part of retracting movement of said linkage and undercarriage support, said members being relatively slidable when engaged, the continued engagement of said members during the final part of said retracting movement causing relative movement between said members and between said undercarriage support and said linkage during said last part of said retracting movement to position said undercarriage support and said linkage in nested relation upon completion of said retracting movement.

2,896,886
PARACHUTE RIPCORD GRIP RETAINER
Hammond R. May, Torrance, Calif., William H. Stuchey, Silver Spring, Md., and Sylvus L. Porter, El Centro, Calif., assignors to the United States of America as represented by the Secretary of the Navy
Application March 29, 1957, Serial No. 649,581
3 Claims. (Cl. 244—149)
(Granted under Title 35, U.S. Code (1952), sec. 266)

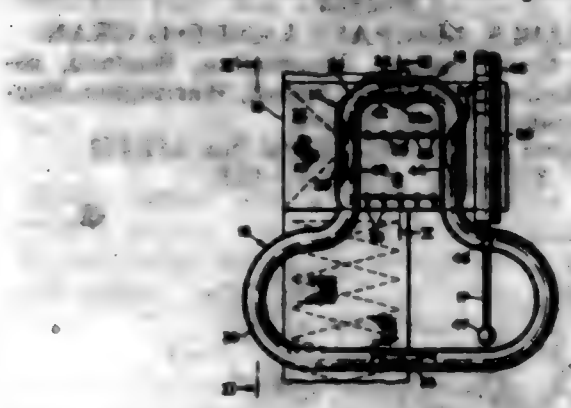
1. In a parachute having a harness and ripcord, a quick disconnect comprising a clip member and a ring-like

arm and arranged to follow said arcuate guide, adjust- apertures receiving said lug therethrough, said annular

non-metallic cylindrical body member, walls defining an annular groove adjacent one end of said body member,

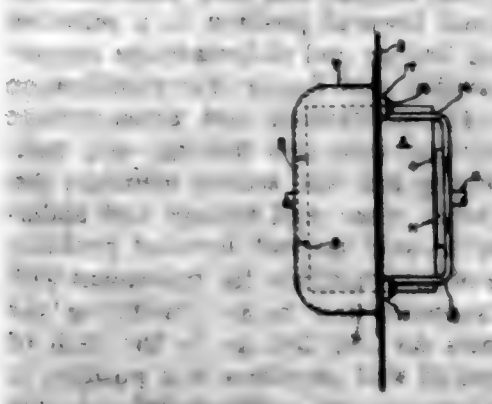
A heavier-than-air craft comprising, a fuselage, forward and rearward wing sets fixedly outstanding laterally

grip member releasably attached therein, said grip member being connected to said ripcord and including an attaching portion and an integral handle portion, said handle portion being of a size to receive the entire hand of the user for pulling the ripcord, said clip member being made of resilient sheet material having a base portion for attachment to said harness, said base portion having an



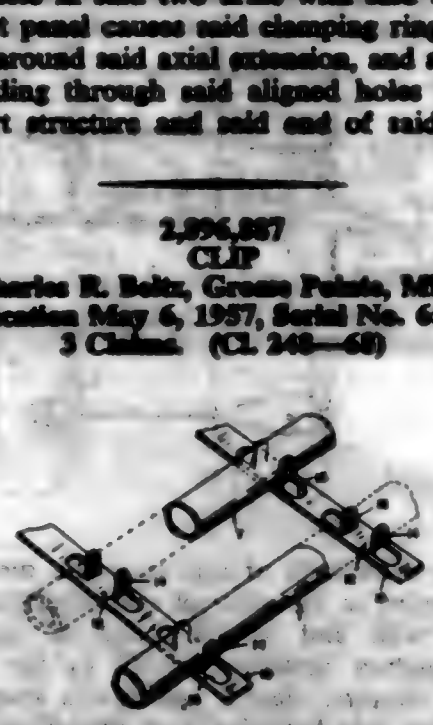
open-ended pocket formed by channels having free ends overhanging and spaced from said base portion slidably to receive corresponding lateral portions of the attaching portion of said grip member along a plane parallel to said base portion, at least one of said free ends being a spring detent resilient to clasp a corresponding portion of said grip member to prevent accidental separation during descent.

2,896,886
MOTOR MOUNT
John P. Slattery, Louisville, Ky., and Elmer E. Heinze, Erie, Pa., assignors to General Electric Company, a corporation of New York
Application October 28, 1957, Serial No. 692,731
3 Claims. (Cl. 248—15)



3. In combination with a motor having a pair of annular collars extending axially from opposite ends thereof, a mounting and clamping assembly comprising a support panel having an aperture larger than the outer periphery of said motor through which said motor extends with the shaft of said motor approximately normal to said support panel, an end-bell attached around the outer circumference of said aperture on one side of said panel and provided with shoulders thereon for supporting one of said annular collars of said motor, means on the opposite side of said panel for supporting the other end of said motor, a clamping ring adapted to receive said other annular collar, said clamping ring having a gap therein to permit contraction of said ring around said other annular collar, a plurality of radially extending arms arranged around said clamping ring and rigidly attached thereto, at least two of said arms being spaced equi-distant on opposite sides of said gap, all of said arms extending outwardly in spider-like fashion around said motor but spaced therefrom and having ends which abut against said opposite side of said support panel, said ends of all of said arms having bolt holes formed therein, said aforementioned two arms having ends spaced a particular distance apart when said ring is in the uncontracted state, said support panel having a plurality of bolt holes therein with two of said holes in said support panel being spaced a shorter distance apart than said ends of said aforementioned two arms extending from opposite sides of said gap, said remaining bolt holes in said panel aligning with said bolt holes in said remaining arms extending from said ring whereby movement of said two arms to align said bolt holes in said two arms with said bolt holes in said support panel causes said clamping ring to contract and clamp around said axial extension, and a plurality of bolts extending through said aligned holes for securing said support structure and said end of said motor into position.

2,896,887
CLIP
Charles R. Boltz, Grosse Pointe, Mich.
Application May 6, 1957, Serial No. 657,350
3 Claims. (Cl. 248—68)



3. A device for laterally supporting a plurality of members such as flexible tubes or the like in a predetermined spaced relation comprising a plate having a plurality of spaced pairs of legs struck out from said plate with the legs of each pair turned toward each other to extend laterally outwardly from one side of said plate in spaced opposed relation to each other, the portion of said plate between each pair of legs cooperating with said legs to define a generally U-shaped clip the legs of which are adapted to frictionally engage the opposite sides of the member and retain it on said base, the opposed member gripping surfaces of the legs of each pair having portions concave in a direction lengthwise of said legs which connect into the inner surface of said base and having portions extending in continuation of said concave portions for substantially the entire length of said legs the longitudinal elements of which are substantially straight and perpendicular to the plate and which terminate at the free ends of said legs in rounded portions curving away from each other, said first and second mentioned portions of said opposed surfaces being convex in a direction transversely of said legs for substantially the entire length of said legs.

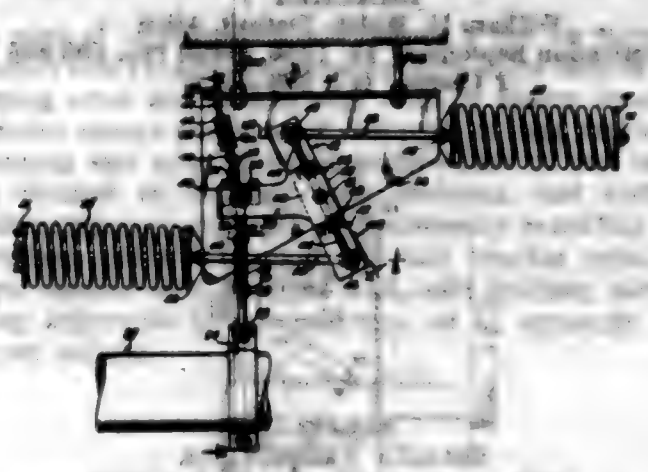
2,896,888
SPRING SUPPORT
Joseph Kaye Wood, Stamford, Conn., assignor to General Spring Corporation, New York, N.Y.
Application October 7, 1953, Serial No. 384,691
20 Claims. (Cl. 248—54)

1. A spring support for exerting a constant supporting force upon a load movable upwardly and downwardly within a limited range and constrained to follow a predetermined path which may have combined vertical and horizontal components of motion comprising a frame, a lever assembly, said lever assembly having a load-supporting arm and first and second spring levers, a main pivot connecting said lever assembly to said frame, said spring levers extending on substantially diametrically opposite sides of said main pivot, an arcuate guide on said load-supporting arm concentric with said main pivot, a load pivot having an axis parallel with said main pivot and being adjustably mounted on said

fitting, legs pivotally mounted to the first mentioned ears

to secure said receptacle to a support, said securing means

arm and arranged to follow said arcuate guide, adjusting means to move said load pivot along said arcuate guide concentric with the main pivot to adjust the angular relationship of said load pivot and said spring levers, means connecting the load to be supported to said load pivot so as to produce a turning moment on said lever assembly about said main pivot, first and second spring means, first anchoring means mounting said first spring means on said frame, second anchoring means mounting said second spring means on said frame, said first and second anchoring means being on substantially diametrically opposite sides of said main pivot and being substantially equally spaced therefrom, a first radial guide on said first spring lever, a second radial guide on said second spring lever, a first spring pivot having an axis parallel with said main pivot and being adjustable along said first radial guide, a second spring pivot having an axis parallel with said main pivot and being adjustable along said second radial guide, said first spring means being connected between said first spring pivot and said first anchoring means, said second



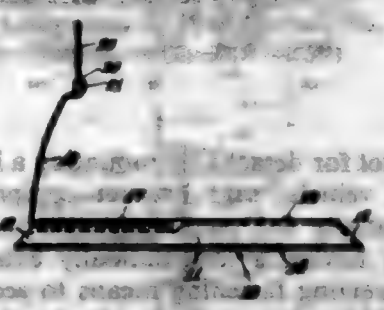
spring means being connected between said second spring pivot and said second anchoring means, whereby the turning moments of said first and second spring means on said lever system add up about said main pivot to oppose the load turning moment while the radial strut forces exerted by said first and second spring means on said lever system oppose each other and cancel each other out so as to produce substantially no resultant spring force on said main pivot, an adjusting member arranged to move each of said spring pivots along its respective radial guide to control said spring turning moments, for regulating the load capacity of the support, indicator means on one of said adjustable spring pivots adjacent a portion of said frame to show the load capacity adjustment, an auxiliary spring actuable by said load-supporting arm at a point along the path of travel of said load-supporting arm, said auxiliary spring being connected to said frame at a position generally above said load-supporting arm, and screw means for adjusting the point at which said load-supporting arm actuates the actuation of said auxiliary spring.

2,896,989
FLEXIBLE RETAINER
Russell R. Hershberger and Shirrell C. Richey, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 2, 1957, Serial No. 687,906
3 Claims. (Cl. 248—72)

3. In combination, a retainer and a support structure for said retainer and an article to be supported on said structure by said retainer, said support structure having an aperture formed therein, said retainer having a hollow lug integrally formed thereon adjacent one end, said lug having an annular barb formed therein and axially spaced on said lug from said retainer, said support structure aperture receiving said lug therethrough, said annular barb locking said retainer to said support structure, said retainer further having a second lug integrally formed therewith and extending therefrom in a direction opposite said first lug and having an annular barb formed thereon in spaced relation to said retainer, said retainer

having an aperture formed therein in linear alignment with and in spaced relation to said lugs, said retainer being reversely bent intermediate said aperture and said second lug to form a loop receiving said article being supported, said second lug being received through retainer aperture whereby said annular barb is interlocked with the apertured portion of said retainer.

2,896,890
BRACELET ATTACHING DEVICE
Emil F. Hlavac, Sayville, N.Y.
Application April 16, 1957, Serial No. 653,113
6 Claims. (Cl. 248—122)

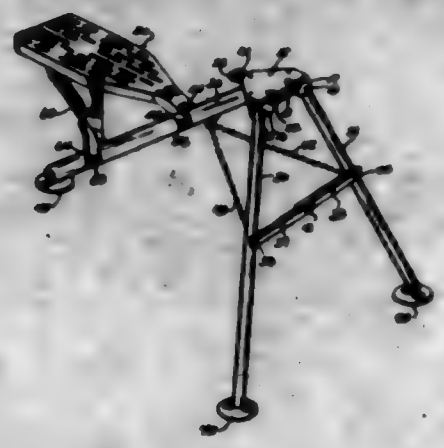


1. A device for assisting in the attaching of a bracelet to the wrist of a wearer, comprising a generally flat, low base adapted to be supported on a horizontal surface, said base having a substantially flat, top supporting surface defining a rest on which the wrist may be placed, said supporting surface and base being devoid of upstanding obstructions to the wrist at and adjoining said rest; a flexible upright attached to the base and extending upward therefrom; and means including straight spaced blades on said upright, extending upward therefrom for releasably holding the clasp of the bracelet, said base and upright being arranged to enable the wrist of the wearer to rest on and against them respectively, and said holding means being disposed at a height above the base approximately equal to the thickness of the said wrist.

2,896,891
INSTRUMENT-SUPPORTING TRIPOD WITH SEAT
W. Arthur Ernst, Racine, Wis., assignor to Howard Industries, Inc., Racine, Wis., a corporation of Wisconsin
Application March 26, 1956, Serial No. 573,815
5 Claims. (Cl. 248—168)

1. In a tripod, the combination with a planiform head plate having edge margin portions inclined to the plane of said plate to constitute laterally spaced depending ears, of a separately fabricated fitting having mounting portions secured in face relation to the under side of the plate and unitarily providing inclined ear means complementary to the ears first mentioned and further providing ear means substantially at right angles to the ear means of said

fitting, legs pivotally mounted to the first mentioned ears and complementary ear means aforesaid, and another



leg pivotally connected to the last mentioned ear means of said fitting.

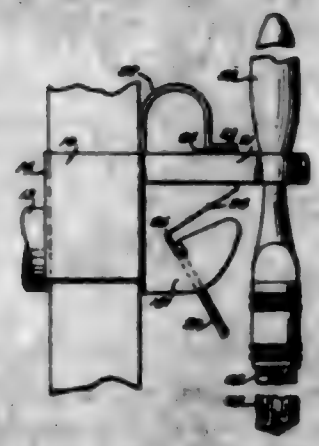
2,896,892
MONEY HOLDERS FOR MOTOR VEHICLES
Anthony I. Bernardinelli, Yonkers, N.Y.
Application January 9, 1956, Serial No. 558,145
2 Claims. (Cl. 248—305)

1. A bracket for detachably mounting a holder for legal tender on a vehicle, said bracket comprising an elongated substantially flat rectangular member, one end of said member having a longitudinally extending slot for adjustably receiving fastening means to secure said member to the vehicle, the opposite end of said member being of reduced width to provide shoulders and being centrally bifurcated to provide spaced substantially parallel tenons, the outer side edge of each tenon being beveled from the upper and lower surfaces and an outwardly extending lip on the outer side edge of each tenon adjacent the outer end, the beveled portions extending between said shoulders and said lips.

2,896,893
ACCESSORY FOR VENETIAN BLINDS
Marianne Oliver, New Bedford, Mass.
Application April 16, 1956, Serial No. 578,282
2 Claims. (Cl. 248—266)

1. A holder for receiving and engaging the bottom rail of a Venetian blind for holding the blind against inward and outward sway in respect to a wall opening in which the blind is mounted comprising, an open topped U-shaped receptacle having a depth greater than the thickness of the blind bottom rail it is to receive, means to secure said receptacle to a support, said securing means comprising a U-shaped bracket composed of a pair of horizontal legs and a vertical leg interconnecting the horizontal legs, one of the horizontal legs being secured to the bottom of the receptacle, the other horizontal leg being provided with an internally threaded opening, a U-shaped clamp having a pair of horizontal legs interconnected by a vertical leg, one of the horizontal legs of the clamp being disposed between the horizontal legs of the bracket, the other horizontal leg of the clamp being disposed beneath that leg of the bracket having the threaded opening therein, said last named clamp leg being provided with an opening, and a threaded thumb screw passing loosely through the last named opening and having threaded engagement with the aforesaid threaded opening of the bracket, the parts operating as and for the purpose described.

2,896,894
PAINT BUCKET AND BRUSH SUPPORTING BRACKET
William H. Welch, Detroit, Mich.
Application September 10, 1956, Serial No. 608,946
1 Claim. (Cl. 248—211)



A paint bucket and brush support comprising a bracket including a plate of rectangular formation, a first arm extending from one longitudinal edge of said plate at right angles thereto, said arm having a curved recess in one longitudinal edge thereof, providing a hook formation for engaging a rung of a ladder, a second arm extending from the opposite longitudinal edge of the plate at right angles thereto and in parallel spaced relation to said first arm, a web extending from the outer longitudinal edge of said second arm at right angles thereto, an L-shaped slot comprising a first portion extending from the free edge of said web toward the second arm and having an extension disposed at right angles to said first portion to receive a bail of a bucket, and a handle ring integral with said second arm and having a flange thereon secured to a tab on said web and extending upwardly therefrom, and a spring clip secured to the outer face of said web adjacent the upper transverse edge of said web in parallel relation therewith to receive a handle of a paint brush so that the paint brush is positioned over the bucket to catch paint dripping from the brush.

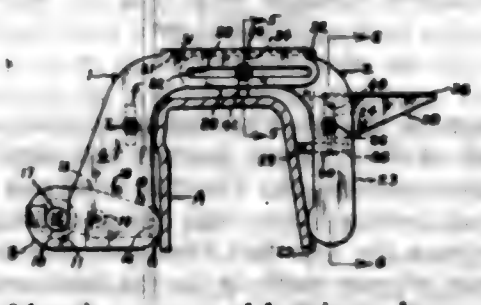
2,896,895
ADJUSTABLE BRACKET FOR HOLDING SMALL FIXTURES
Daniel S. Sprano, Detroit, Mich.
Application November 18, 1957, Serial No. 697,268
3 Claims. (Cl. 248—220)

1. A bracket for supporting bath room fixtures, such bracket comprising an inner and an outer member, each including a pair of downwardly extending, laterally spaced legs formed with arcuate abutments for engage-

when the parts are in assembled relation with the free-edge portion of the second wall member in the space formed between the first wall and one side wall of the

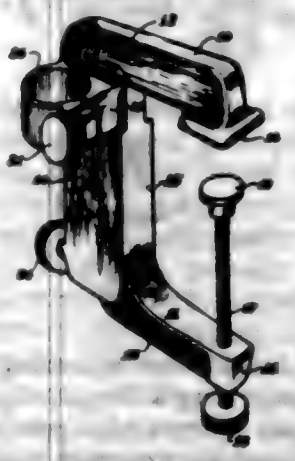
end wall connecting said front and rear walls in spaced apart parallel relation, the upper portions of said rear wall and said end wall being separated to form a slot

ment with a wall of a bath tub, a pair of arms each respectively horizontally extended from the upper end of a respective leg, said pairs of legs being spaced to straddle a bath tub wall, each leg and associated arm being formed of sheet material and occupying a substantially vertical plane, the arms of each member extending toward and slidably lapping the corresponding arm of the other member, each arm being formed with a horizontally elongated slot, such slots being registrable with each other, a bridging member extending between



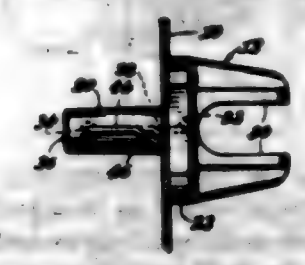
the pairs of lapping arms and bearing a key on each end thereof, said keys respectively engaging in the slots of said lapping arms and guiding said arms in sliding travel to selective spaced positions of said pairs of legs, means for clamping said arms to the respective ends of said bridging element to maintain such positions, said bridging element having a plurality of downwardly extending lugs providing the sole support for said bracket upon the upper surface of a bath tub wall, said bridging element being adjustable to seat said lugs on an arcuately contoured surface.

2,896,896
ACCESSORY CLAMP
Milton R. Revzin, Youngstown, Ohio
Application January 28, 1955, Serial No. 484,807
1 Claim. (Cl. 248—229)



In a C-type accessory clamp of the type having primary and secondary clamp adjusting means the improvement comprising a first inverted L-shaped clamping part having a horizontally extending leg portion and a downwardly extending leg portion, said downwardly extending leg portion being of greater length than said horizontally extending leg portion and having an inwardly opening U-shaped cross section throughout its length, a second L-shaped clamping part having a horizontally extending leg portion and an upwardly extending leg portion, said upwardly extending leg portion being of longer length than said horizontally extending leg portion of said second L-shaped member and having a generally T-shaped cross section throughout its length, said upwardly and downwardly extending leg portions being adapted to fit in nesting relation with the exposed flange of said T-shaped cross section overlying the end portions of said U-shaped cross section, a pivot pin pivotally interconnecting said L-shaped clamping parts, said pivot pin being adjacent the corner of said first mentioned clamping part and pivotally supporting the end of said upwardly extending portion of said second mentioned L-shaped clamping part, said downwardly extending leg portion of said first mentioned clamping part having a boss thereon adjacent the lower end thereof, an adjusting screw received in said boss and extending through said downwardly extending leg portion and into engagement with said upwardly extending leg portion whereby upon manipulation of said adjusting screw said clamping parts are caused to pivot in a clamping direction, said horizontal leg portion of one of said L-shaped clamping parts having an inwardly facing clamping pad thereon, said horizontal leg portion of the other of said L-shaped clamping parts having an adjustable opposing clamping pad thereon, the distance from said adjusting screw to said pivot pin being greater than the distance from said pivot pin to the clamping pad carried by said horizontally extending leg portion of said first mentioned clamping part whereby there is substantial multiplication of the clamping forces exerted upon tightening of said adjusting screw, a clamping ring carried integrally with said first mentioned clamping part along a side wall of said downwardly extending portion, said clamping ring defining a tubular opening adjacent the outer surface of said side wall having its longitudinal axis parallel with said side wall.

2,896,897
SPRING LOCK FASTENER WITH ANGULAR ARM ENDS
Ernest Schlueter, Troy, N.Y.
Application September 6, 1955, Serial No. 532,550
3 Claims. (Cl. 248—239)



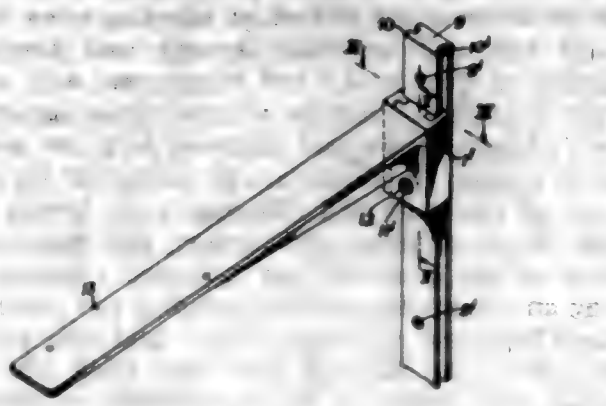
2. A supporting device comprising a plastic locking stud comprising a shank having an outer head having a supporting part; and a locking member of spring wire having an inwardly turned U-shaped part in said stud around which part the stud is cast, said wire having two arms connected to the U-shaped part at the inner end of the shank and disposed longitudinally on opposite sides of the stud, the free end part of the arms being straight and bent back at an obtuse angle, to the longitudinal part, in planes perpendicular to, and on opposite sides of, a plane determined by the longitudinal parts, said free end part extending to near said head.

2,896,898
BRACKET OR THE LIKE CLAMPS
Alexander Penn, London, England, assignor to John Wilkins & Co. Limited
Application June 3, 1957, Serial No. 663,186
Claims priority, application Great Britain June 11, 1956
5 Claims. (Cl. 248—245)

1. A two-part bracket or the like clamp comprising a first channel member having an integrally formed first planar wall member extending from the bottom wall of the channel member spaced from and parallel to the side walls thereof, a second channel member having one of its side walls extended to form a second planar wall member of substantially the dimensions of the first wall member, a projection on the upper marginal edge portion of the second wall member extending inwardly from the inner surface thereof, the first wall member having its upper edge notched to accommodate the projection

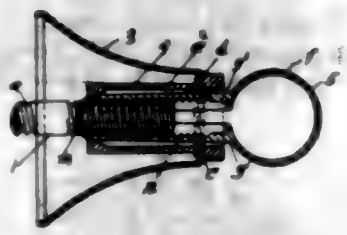
for pressing the roughened surfaces of the clamping second position within said chamber, a valve member

when the parts are in assembled relation with the free-edge portion of the second wall member in the space formed between the first wall and one side wall of the



first channel member and the other side wall of the first channel member is in alignment with the side wall of the second channel member.

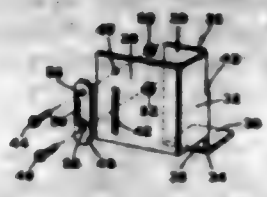
2,896,899
MEANS FOR MOUNTING A RAIL
William J. Rouan, Detroit, Mich., assignor to Safety Bath Rail, Inc., Dearborn, Mich.
Application July 29, 1955, Serial No. 525,298
10 Claims. (Cl. 248—251)



1. For mounting a rail horizontally adjacent but spaced from a vertical wall, an elongated bolt having its inner end formed to be secured to and thus mounted on said wall with the bolt projecting at right angles to said wall, the bolt having its other outer end exposed, a centrally bored sleeve positioned axially over the exposed end of the bolt and having on its outer end a flange, a conical bell separate from the sleeve and positioned axially over the exposed end of the bolt and having its smaller end formed with a central aperture removably receiving the sleeve and positioned between the wall and the sleeve flange, and a clamping band formed of thin springy metal and having a looped bight arranged outside the sleeve flange for receiving the rail and having a pair of parallel legs of arcuate cross section integral with the bight and disposed within the sleeve and positioned axially over the exposed end of the bolt which is thus between it and the sleeve, and clamping means on the sleeve which squeezes the legs of the band towards each other and towards the bolt to clamp these legs against the bolt.

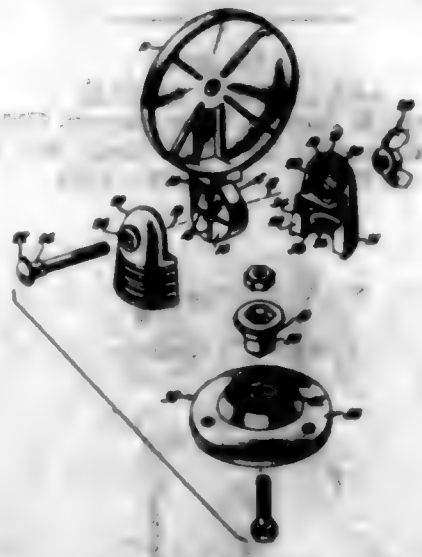
2,896,900
CURTAIN HANGING DEVICE
Walter H. Fiedler, Arlington, Va.
Application August 30, 1955, Serial No. 531,447
1 Claim. (Cl. 248—262)

A curtain rod supporting bracket for mounting one end of a curtain rod on a Venetian blind supporting end box wherein the Venetian blind supporting end box has a front closure wall slidably pivoted at its upper edge adjacent to the top portion of the end box and has a Venetian blind end supporting bottom wall; said bracket comprising a vertical front wall on which a curtain rod a hook is arranged to be attached, a vertical rear wall, an end wall connecting said front and rear walls in spaced apart parallel relation, the upper portions of said rear wall and said end wall being separated to form a slot, the lower edge of said rear wall extending below the lower edge of said front wall, and a horizontal wall extending rearwardly from the lower edge of said rear wall, said rearwardly extending horizontal wall being arranged



to be supported on the Venetian blind end supporting bottom wall of the end box between the blind end supporting bottom wall and the Venetian blind end supported thereon, said vertical rear wall being arranged to be secured between the Venetian blind end and the slidably pivoted front closure wall up to the limit provided by said connecting end wall.

2,896,901
UNIVERSAL BRACKET
Sidney E. Levy and Bernard C. Sharp, White Plains, N.Y., assignors to University Loudspeakers, Inc., White Plains, N.Y., a corporation of New York
Application April 2, 1957, Serial No. 650,270
9 Claims. (Cl. 248—278)



2. A universal bracket for mounting a device of the type described, comprising a tongue depending from the device havnig a pair of parallel, oppositely directed surfaces disposed around an axis and roughened by serrations; a pair of rigid clamping members, each having a longitudinal axis, a reference plane disposed generally along this axis, and also having a transverse axis in a plane perpendicular to the longitudinal axis thereof; a portion of each clamping member being roughened by serrations disposed around said transverse axis in a plane parallel to the reference plane and offset therefrom, said roughened surfaces on said clamping members being adapted to fit coaxially over the roughened surfaces on the tongue; a hole in each of said clamping members and said tongue disposed along said transverse axis; a hollow generally hemicylindrical portion on each clamping member disposed concentrically around the longitudinal axis thereof subjacent to said roughened surface portion, said clamping members when assembled having a plane of hemicylindrical partition lying substantially in the reference plane; the lower outer end of each hemicylindrical portion being generally flat and perpendicular to said longitudinal axis, and having at least one serration thereon; a bolt disposed in the holes along said transverse axis

ing said L-shaped clamping parts, said pivot pin being adjacent the corner of said first mentioned clamping part

the inner surface thereof, the first wall member having its upper edge notched to accommodate the projection

for pressing the roughened surfaces of the clamping members onto cooperating surfaces of the tongue and for joining the hemicylindrical portions to form a hollow cylinder, the hollow portion thereof being cylindrical at the outer end and undercut at the inner end in the form of a conoidal frustum; a base including a substantially cylindrical portion disposed about a longitudinal axis, the top or upper part of the cylindrical portion being expanded into the shape of a conoidal frustum with its base uppermost and adapted for fitting within the conoidally undercut portions of said hollow cylinder, a serrated portion on said base member symmetrically disposed around said axis adjacent to said cylindrical portion and adapted to fit the serrations on the hemicylindrical portions of said clamping members, and a flange portion extending from said serrated portion, whereby said bolt provides unitary means for interlocking said clamping members with said tongue at any selected angle around said transverse axis and cooperatively presses the annular undercut portion of the clamping members against the conoidal portion of said base, thereby pressing the serrations in the cylinder against those in the base and affixing the cylinder rigidly in any selected position around said longitudinal axis.

2,896,902

SUPPORTING STIRRUP FOR TRACKS

John N. Graber, Middleton, Wis., assignor to Graber Manufacturing Company, Inc., Middleton, Wis., a corporation

Application May 9, 1956, Serial No. 583,828
1 Claim. (Cl. 248—262)

As a new article of manufacture, a stirrup for detachably and removably securing a C-shaped drapery rod in place formed from an integral single piece of material comprising an attaching leg, a supporting foot formed on one end of said leg and extending substantially at a right angle thereto and shaped to partially conform to the transverse configuration of a C-shaped drapery rod to be associated therewith and including an arcuate lip portion for embracing the upper curved edge of the rod, and a depressible latch arm including a straight body portion and a curved resilient bight portion connecting the outer end of the straight portion with the end of the attaching leg remote from said foot, said straight portion extending over said leg in spaced relation thereto toward said foot and terminating short of said foot for engaging the inner face of a rod only at a point remote from the bottom curved edge of the rod and at a point remote from said lip when a rod is sprung into the foot.

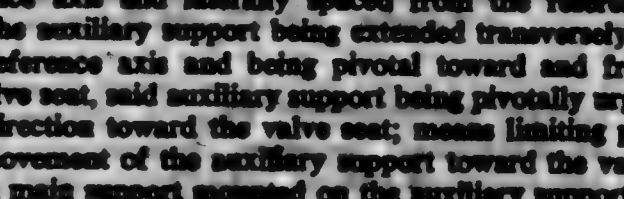
2,896,903

CUT-OFF DEVICE

Carlos R. Cassilas, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas

Application March 5, 1957, Serial No. 643,973
10 Claims. (Cl. 251—63)

1. A cut-off device comprising a housing having a chamber therein, a first conduit means extending from the exterior of said housing into said chamber, a second conduit means extending from the exterior of said housing into said chamber and terminating in a valve seat in said chamber, said valve seat being movable from a first to a second position within said chamber, a valve member mounted in said chamber, means to move said valve member from a first position remote from both of said valve seat positions to a second position, the construction and arrangement of said valve member and said valve seat being such that said valve member is seated on said



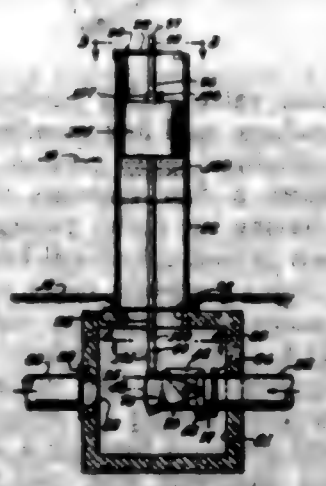
valve seat to interrupt fluid flow therethrough only when said valve member and said valve seat are in their second positions, a spring means to bias said valve seat to its first position, and condition responsive means to move said valve seat to its second position against the bias of said spring means upon the presence of a predetermined condition.

2,896,904

GATE VALVE

Ernest L. Nerlinger, Porterville, Calif.

Application November 13, 1956, Serial No. 621,910
6 Claims. (Cl. 251—147)

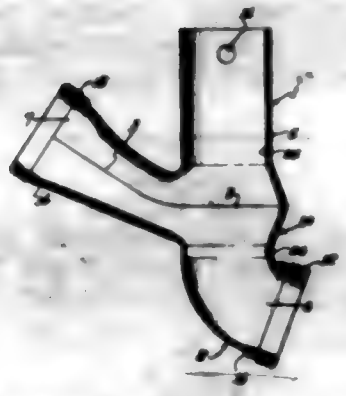


1. A gate valve comprising a conduit having an opening circumscribed by a valve seat having an axis of reference normal to the seat and centrally thereof; an auxiliary support mounted for pivotal movement about an axis spaced from the seat in the direction of the conduit therefrom, said pivot axis being right-angularly related to the reference axis and laterally spaced from the reference axis, the auxiliary support being extended transversely of said reference axis and being pivotal toward and from the valve seat, said auxiliary support being pivotally urged in a direction toward the valve seat; means limiting pivotal movement of the auxiliary support toward the valve seat; a main support mounted on the auxiliary support in spaced relation to the pivot axis of the auxiliary support for pivotal movement about an axis parallel to said pivot axis of the auxiliary support, a valve plate borne by the main support for sealingly engaging the valve seat, the main support being pivoted between a predetermined valve position in which the valve is in alignment with and spaced axially from the valve seat and an open position in which the valve plate is spaced laterally from the valve seat, coacting means establishing contact between the main support and the auxiliary support upon movement of the main support about its axis from open position to said predetermined valve position, the pivotal arrangement of said supports in conjunction with said coacting means being such that upon continued movement of the main support beyond said predetermined valve position a unitary movement of the main support and auxiliary support about the auxiliary support axis will be effected to move

comprising a vertical front wall on which a curtain rod a hook is arranged to be attached, a vertical rear wall, an longitudinal axis, and having at least one serration thereon; a bolt disposed in the holes along said transverse axis

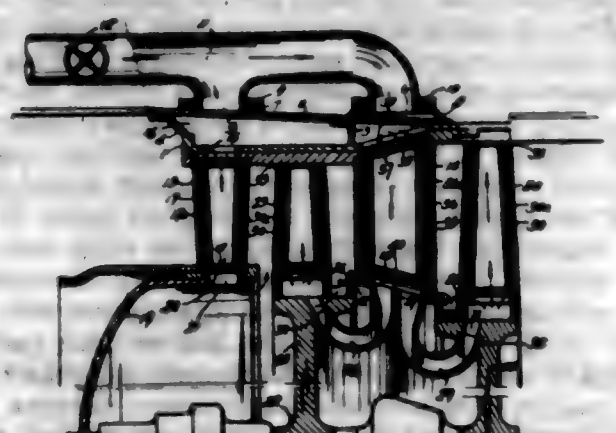
the valve plate substantially axially into sealing engagement with the valve seat; upon movement of the valve plate from engagement with the valve seat the main support and auxiliary support pivot as a unitary member about the auxiliary support axis to move the valve plate substantially axially to the predetermined valve position wherein said auxiliary support is stopped by said limiting means and continued movement moves said main support about its axis to open position, and operating means attached to the main support.

2,896,905
PREFABRICATED VALVE
Theodore A. Stahlin, Pasadena, Calif.
Application September 13, 1954, Serial No. 455,645
7 Claims. (Cl. 251—366)



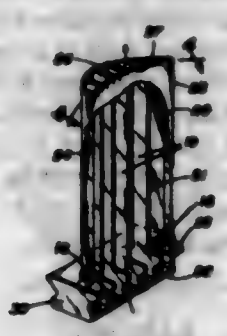
1. A sheet metal valve casing comprising: first and second casing members, said first member having a vertically directed cylindrical body portion, the inner wall of which constitutes a first seamless valve seat, said second member having an outlet passage extending at an angle to the axis of said cylindrical body portion, said first and second casing members being so formed as to mate and when secured together they define an inclined inlet passage which is in communication and in substantial axial alignment with said outlet passage, said second casing member having an inner wall between the inlet and outlet passages forming a second seamless valve seat in axial alignment with said first valve seat.

2,896,906
TURBINE COOLING AIR METERING SYSTEM
William J. Durkin, Johnson County, Kans., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application March 26, 1956, Serial No. 574,859
1 Claim. (Cl. 253—39.1)



In a power plant having an air compressor, a tubular housing for passing a driving fluid stream in an axial direction, a plurality of first and second stage stator vanes secured on the inner circumference of said housing, a circumferential casing mounted on, spaced from, and surrounding said housing defining an annular cooling air passage therebetween, said stator vanes being provided with internal radial passages interconnected with said manifold and having outlets in their tips, air inlet means connected to said circumferential casing for supplying cooling air to said manifold from said compressor, a rotor shaft mounted for rotation in said housing, a disk mounted on said shaft having a flange with openings adapted for fluid communication with said outlets in said stator tips, a plurality of first stage rotor blades secured to said disk and radially extending therefrom in operable relation with said first stage stator vanes, a first casing means secured at one end to said flange on said disk and extending axially downstream to the upstream edge of said second stage stator vanes, said casing means surrounding and being radially spaced from said shaft thereby defining a first portion of a split circumferential manifold around said shaft, said first stage rotor blades being provided with internal passages having outlets in their tips and extending radially through said first stage rotor blades in communication with said first portion of said split circumferential manifold around said shaft through said openings in said flange, a second disk member mounted on said shaft downstream from said first disk, a second plurality of second stage rotor blades secured to said second disk and radially extending therefrom in operable relation with said second stage stator vanes, a second casing surrounding and spaced from said shaft having one end secured to the upstream side of said second disk thereby defining a second portion of said split circumferential manifold around said shaft, the other end of said second casing extending upstream and terminating on the downstream side of said second stage stator vanes thereby defining with the downstream end of said first casing a circumferential inlet radially aligned with the second stage stator outlets, said second stage rotor blade being provided with internal passages having outlets in their tips and extending radially through said second stage rotor blades whereby cooling air leaving said stator vanes will enter said annular passage portions around said shaft and pass through said first and second stage rotor blades and into the driving fluid stream from the tips of the rotor blades.

2,896,907
AIR-COOLED BLADE
John C. Freche, Fairview Park, Ohio, assignor to the United States of America as represented by the Secretary of the Navy
Application September 28, 1955, Serial No. 537,313
1 Claim. (Cl. 253—39.15)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A rotor for turbines and the like comprising a rotor having a rim with circumferentially spaced grooves extending across the periphery of said rim, said grooves having side walls curved reversely inward and radially extending air ducts formed in the rotor and connected with the grooves to supply coolant thereto, and a lightweight blade mounted radially on the rotor rim, said blade comprising a plurality of flat strips forming ribs, said ribs being positioned in parallel face-to-face relationship and spaced apart substantially along the chord of the blade, the depth of the faces of said ribs progressively increas-

forming with the said other arm an angle of less than

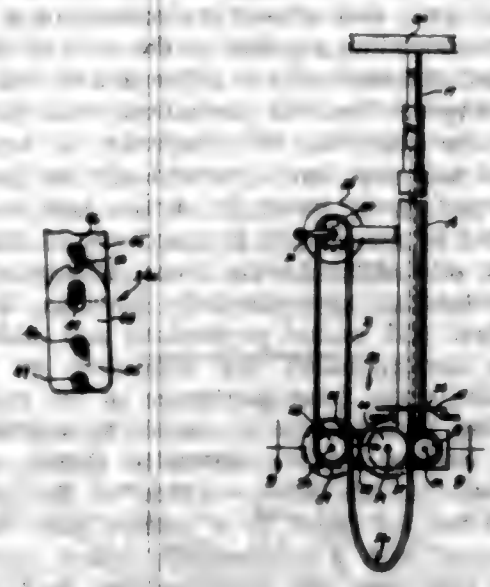
ing from the end ribs to the intermediate ribs, a thin, concave-convex, impermeable aircraft foil shell enclosing and attached to the side edges of said ribs, the shell and rib faces cooperating to form coolant channels, the channels at the leading and trailing edges of said blade having transverse areas reduced over those of intermediate channels whereby the velocity of coolant in said channels will be a maximum at the leading and trailing edges, the bottom of each rib terminating in a rib plate, the rib plates having a shape complementary to the curved walls of said spaced grooves and cooperating with said grooves to secure the blade to the rotor rim, the upper edges of said rib plates projecting beyond the surface of the rotor rim when the blade is secured thereto, thin, flat spacer plates positioned between said rib plates whereby said ribs are in equally-spaced relationship, said spacer plates being uniformly apertured to permit equal coolant flow in each channel, and a base plate overlying the upper edges of said rib plates, said base plate having an aperture with a narrow, upstanding flange conforming in contour to the external surface of said shell, said base plate being permanently secured to said upper edges of said rib plates and said flange being permanently secured to the base of said shell, said base plate further having turn-down edges which engage the surface of the rotor rim whereby the coolant is prevented from escaping from said ducts and from said channels.

2,896,906

FLUORESCENT FIXTURE HOIST

Robert H. Stone, Semora, Calif.

Application June 20, 1957, Serial No. 666,904
5 Claims. (Cl. 254—1)



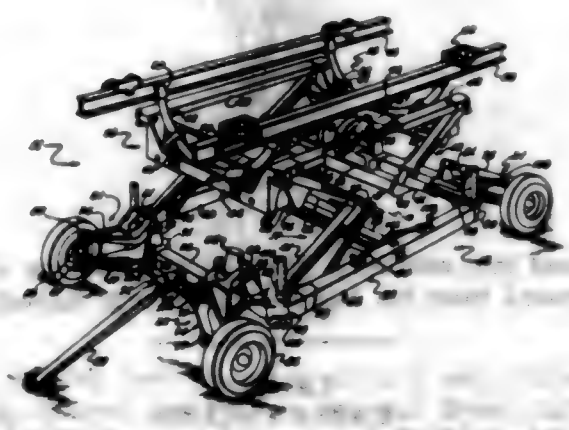
1. A lifting hoist comprising, in combination, a base, a main cylinder secured to said base, a plurality of telescoping members adjustably supported upon said base for movement between a retracted and an extended position, manually operated means for selectively effecting said movement of said telescoping members, said manually operated means comprising a lift chain having a plurality of pivotally connected links, one end of said lift chain being connected to the inner one of said telescoping members, drive means for effecting longitudinal movement of the opposite end of said lift chain, and means associated with adjacent ones of said links intermediate said one end of said lift chain and said drive means for rigidifying said pivotally connected links for exerting a compressive axial force therethrough, each of said links comprising a pair of identical sides each having a base and an inwardly offset end portion, an outermost and an innermost pin extending through the bases of each pair of sides, each said offset end portion defining a longitudinal slot and a terminal recess, said outermost pin being slidably and pivotally received within the longitudinal slots of the inwardly offset portions of the next adjacent link, and said terminal recesses displaceably receiving the innermost pin of said next adjacent link.

2,896,909

ELEVATING DOLLY

Allan J. Taylor, Pacific Palisades, Calif., assignor to Northrop Aircraft, Inc., Hawthorne, Calif., a corporation of California

Application November 4, 1955, Serial No. 544,850
5 Claims. (Cl. 254—9)



1. An elevating dolly comprising: a rectangular base structure having fore and aft ends; wheel assemblies mounted at each corner of said base structure normally supporting said base structure in a horizontal attitude; an elevating structure; a plurality of elongated lower links each having a plain and an enlarged end; a plurality of elongated upper links corresponding ends of which are respectively pivotally attached to the enlarged ends of said lower links to provide a plurality of individual link assemblies one of which is mounted at each corner of said base structure; said individual link assemblies providing means mounting said elevating structure on said base structure and allowing said elevating structure to be moved through an operating range between raised and lowered positions when predetermined relative angular movement is imparted to said upper and lower links; a depending plate member mounted at the other end of each of said upper links; first cross-members attached to and extending between the depending plate members located respectively at the fore and aft ends of said base structure; second cross-members attached to and extending between the said enlarged ends located respectively at the fore and aft end of said base structure; and a pair of elongated bidirectional power means the ends of which are respectively pivotally attached to the said first and second cross-members located at the fore and aft end of said base structure and function to impart said relative angular movement to said upper and lower links.

2,896,910

CARPENTER'S TOOL

Guy R. Cooper and Robert Tomlin, Monson, Wash., assignors to Dan Gordon, Chelan, Wash.

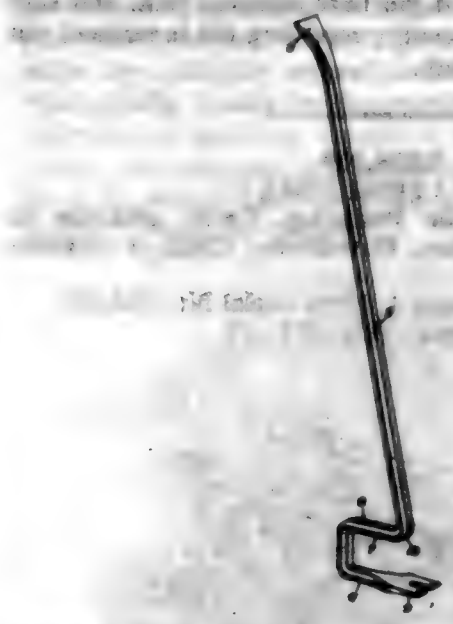
Application May 18, 1956, Serial No. 589,225
1 Claim. (Cl. 254—131)

A one piece carpenter's tool comprising a U-shaped member having arms perpendicularly joined to and integral with a straight bight part, one arm of said member being longer than the other arm thereof and having a sharpened edge on the free end thereof extending at right angles to the plane of said member, said bight and said arms each having substantially planar interior and exterior surfaces, a handle integral with the end of the other arm remote from the bight of said member and

circumferential casing mounted on, spaced from, and surrounding said housing defining an annular cooling air

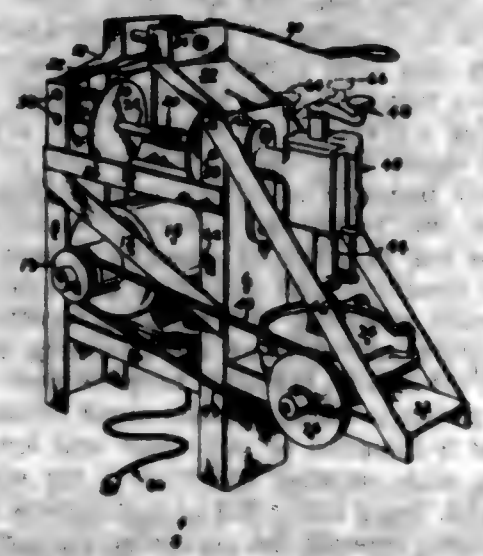
spaced apart substantially along the chord of the blade, the depth of the faces of said ribs progressively increas-

forming with the said other arm an angle of less than 90°, the handle and the end of the other arm forming an



abutment that overlies a point on the said one arm that is removed from the said sharpened edge thereof.

2,896,911
CABLE PULLER
Edward F. Carpenter, Oklahoma City, Okla.
Application March 31, 1955, Serial No. 498,296
4 Claims. (Cl. 254—134.3)



1. An electric cable puller, including: a pair of channel iron members rigidly connected in parallel spaced-apart relation forming a frame, said frame having a laterally extending support; a reel journaled between said members in spaced relation with respect to one end of said frame; a flexible element rigidly connected at one end to said reel; outwardly converging channel iron supports rigidly connected to the end of said channel iron members adjacent said reel; a pulley journaled between the converging ends of said outwardly converging supports, the diametric dimension of said pulley being less than the transverse width of each said channel iron support, one common side of said channel iron supports adjacent said pulley being adapted to contact an electrical junction box around the opening therein, whereby said flexible element may be entrained over said pulley in angular relation to the longitudinal axis of said frame; a gear train mounted on said lateral support, said gear train having a driven pulley; a clutch carried by said frame, said clutch connecting said gear train to said reel; and an electric motor having a drive pulley drivably connected to said gear train pulley, whereby said motor driving said gear train coacts with said clutch for winding said flexible element on said reel.

2,896,912
SAFETY APPARATUS
Gabriel Fangier, Brun, and Raymond Ferlier, Lyon, France
Application November 9, 1956, Serial No. 621,449
Claims priority, application France November 15, 1955
3 Claims. (Cl. 254—189)

1. A safety apparatus including a casing adapted to be secured to a fixed support, a pulley revolubly fitted inside the casing, a return spring yieldingly urging the pulley into a predetermined angular starting position, an elongated flexible tension member wound upon the periphery of the pulley and one end of which is fixedly attached to the pulley, the other end of said tension member extending outwardly of the casing to carry a load, a stationary drum normally rigid with the casing and facing coaxially the pulley, two first projections rigid with the pulley and extending parallel to the rotational axis of the pulley and arranged symmetrically to either side of said axis, two second projections rigid with the pulley, also extending parallel to the axis of the pulley and arranged symmetrically to either side of said axis, the distances between the first projections and the axis of the pulley approximating those between the second projections and said axis, two symmetrically designed brake shoes mounted freely inside the drum, each brake shoe being carried by one of said first and one of said second projections, said shoes having inner substantially plane surfaces extending approximately between the corresponding first and second projections and slidingly engaging the corresponding first projection on the side thereof facing away from the center of the pulley, said shoes having furthermore an outer substantially part cylindrical braking surface normally slightly eccentric with reference to the inner surface of the drum and separated from the latter by a narrow gap, each shoe being provided with a substantially round recess fitted with some play over the corresponding second projection, springs urging the two shoes towards each other to normally provide for contact between the second projections and the outer surfaces of the recesses in the corresponding shoes, the rotation of the pulley at a speed above a predetermined value providing for a shifting and slightly tilting movement of the shoes under the action of their intertia over the corresponding first projections bringing said braking surfaces into wedging coaxial engagement with the inner periphery of the drum.

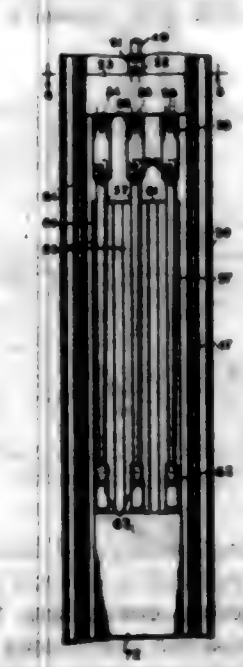
2,896,913
APPARATUS FOR DRILLING LATERAL OPENINGS IN WELL BORES
Charles D. Holmes and Howard H. Holmes, Tulsa, Okla., assignors to Anglodrill Corporation, Tulsa, Okla., a corporation of Oklahoma
Application October 18, 1956, Serial No. 615,157
5 Claims. (Cl. 255—1.6)

3. Apparatus for drilling a plurality of openings in a well bore substantially at right angles to the axis of said

2,896,916

on its underside; a rigid tubular connecting rod secured

bore comprising a plurality of elongated substantially tubular rigid guides including sections which are curved so that parts of the guides extend substantially at right angles to said bore, means connected with said guides for positioning them at the desired point within the well bore, a drive motor supported independently of said guides and movably engaging the last-named means and having a single armature shaft, gearing connected with and driven by said armature shaft and including a plurality of separate driven output shafts, a corresponding number of rigid bearing assemblies engaged within said



guides and shiftable lengthwise thereof, rotary shafts journaled within said bearing assemblies and having corresponding ends connected with said output shafts and turned thereby, a corresponding number of flexible drive shaft assemblies engaging within said elongated guides and movable lengthwise thereof and having rotary parts connected with and driven by said shafts of the bearing assemblies, and a drill bit connected with the rotary part of each drive shaft assembly for drilling said openings substantially at right angles to the axis of the well bore when the flexible shaft assemblies are fed longitudinally in one direction through said guides.

2,896,914

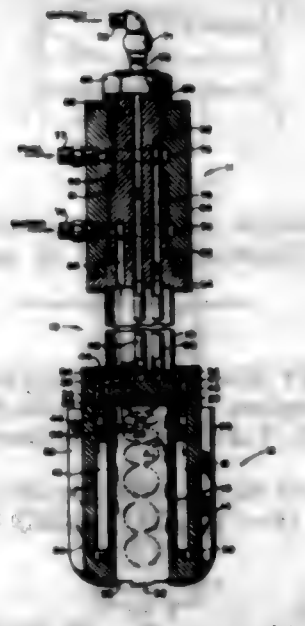
THERMAL DRILL AND DRILLING PROCESS

Martin A. Ryan, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application June 16, 1955, Serial No. 515,940
20 Claims. (Cl. 255—1.3)

1. A thermal drill comprising in combination a body member having fuel and oxygen inlets; a pair of conduits connecting with said inlets and extending from said member; a burner nozzle connected with the ends of said conduits remote from said member; a cylindrical internal combustion chamber of greater length than diameter and disposed axially in said nozzle having an outlet in the end thereof remote from said conduits; first conduit means in said nozzle connected with the inlet end of said combustion chamber and with one of said pair of conduits, said first conduit means being directed and disposed so as to introduce and pass fluid helically around the axis of said chamber; and second conduit means connected with the other of said pair of conduits and with the inlet end of said combustion chamber radially outside of said first conduit means, said second conduit means being directed and disposed so as to introduce and pass fluid along and adjacent the wall of said chamber parallel with its axis.

15. A process for thermal drilling in an earth formation which comprises burning a mixture of a combustible fluid fuel and free oxygen-containing gas in an elongated confined combustion zone of circular transverse section and having a greater length than diameter at the shear interface between an annular mass of one of the components of said mixture passed longitudinally along the periphery of said zone and an axial mass of the other com-



ponent swirling helically adjacent said one component; directing effluent combustion gas and flame from the outlet of said zone against an earth formation so as to separate material from said formation in the path of the effluent and form a hole therein; and removing separated material from the hole.

2,896,915

METHOD OF DRILLING WELLS

Walter J. Weiss, Sugar Land, and Richard H. Graves and Wilbur L. Hall, Bellaire, Tex., assignors to The Texas Company, New York, N.Y., a corporation of Delaware

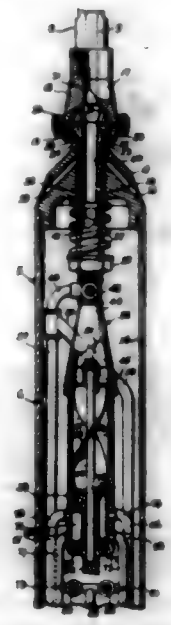
No Drawing. Application April 12, 1957
Serial No. 652,369
4 Claims. (Cl. 255—1.3)

1. In the drilling of a bore hole through a heaving shale formation wherein an aqueous drilling fluid is passed through the bore hole during the drilling operation and wherein the drilling fluid comprises a hydratable clayey material dispersed in an alkaline aqueous filtrate phase and a dispersing agent for said clayey material therein, said aqueous phase consisting essentially of a saturated aqueous calcium hydroxide solution and a water soluble calcium salt which has a solubility in said aqueous phase greater than that of calcium hydroxide dissolved therein to yield a calcium ion concentration in said aqueous phase of at least 200 parts per million by weight, said aqueous phase having a pH not greater than 12.6 and wherein during the drilling operation the numerical value of M_f/P_f of the drilling fluid tends to exceed 3.0 when said calcium salt dissolved in said aqueous phase is an inorganic calcium salt and 5.0 when said calcium salt dissolved in said aqueous phase is an organic calcium salt, M_f being the number of ccs. of N/50 H_2SO_4 required to titrate 1 cc. of said aqueous phase to methyl orange end point and P_f being the number of ccs. of N/50 H_2SO_4 required to titrate 1 cc. of said aqueous phase to phenolphthalein end point, the improvement which comprises maintaining said aqueous phase saturated with calcium hydroxide and adjusting the M_f/P_f value of the drilling fluid when the value exceeds 3.0 to a value below 3.0 when said calcium salt is an inorganic salt and when the value exceeds 5.0 to a value below 5.0 when said calcium salt is an organic calcium salt by adding to said drilling fluid a suitable amount of an alkaline material selected from the group consisting of lime and an alkali metal hydroxide.

driving said gear train coacts with said clutch for winding said flexible element on said reel.

5. Apparatus for drilling a plurality of openings in a well bore substantially at right angles to the axis of said

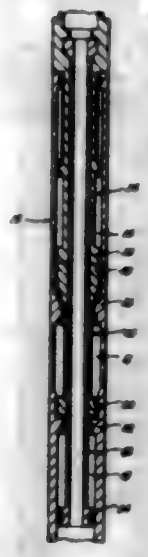
2,896,916
DRILLING EQUIPMENT
William E. Clavier and Raymond F. Bonaight, Portland, and George H. Eaton, Beaverton, Oreg.
Application October 2, 1956, Serial No. 613,476
3 Claims. (Cl. 255—4.4)



1. In a well drilling tool adapted to be run into a well bore, said well drilling tool having a housing portion, and cutting mechanism mounted at one end of said housing portion having abrading edges for cutting obstructions encountered by said tool, fluid motor means carried within said housing portion, said motor means comprising a double acting fluid ram having a piston element mounted for reciprocation in said housing portion, and a motor control mechanism operable to direct fluid under pressure alternately to opposite sides of said piston element independently of the position of said piston element, said motor control mechanism comprising valve means regulating the supply of pressure fluid to opposite ends of said piston element and a valve motor adjusting said valve means to admit pressure fluid alternately to opposite sides of said piston element, and means connecting said piston element to said cutting mechanism whereby reciprocation of said piston element actuates said cutting mechanism.

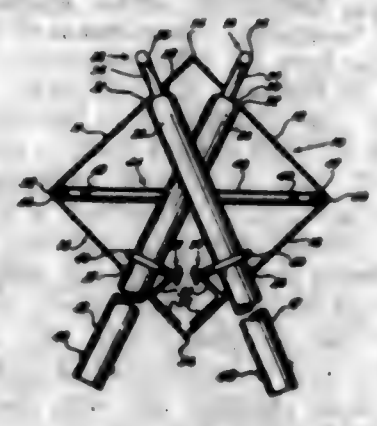
2,896,917
HYDROSTATICALLY BALANCED JAR
Edward C. McGarrahan, Houston, Tex., assignor to Houston Oil Field Material Company, Inc., Houston, Tex., a corporation of Delaware
Application August 29, 1957, Serial No. 681,107
5 Claims. (Cl. 255—27)

1. A hydrostatically balanced jar for use in a well bore comprising; a substantially tubular first member adapted for insertion in the well bore having upper and lower aligned piston chambers; an axial passageway connecting said piston chambers; an elongate support member having a longitudinal passageway throughout and having a portion extending into the upper piston chamber, said support member being slidable relative to the first member; engageable stop means on the first member and support member to limit upward movement of the support member relative to the first member; an elongate hammer element slidable in the first member having a longitudinal passageway throughout and including a piston located in the upper piston chamber; means within the first member for urging the hammer element violently upward; delay means associated with the hammer element retarding upward movement of the hammer element during an initial part of its upward movement; a balancing piston in the lower piston chamber exposed to well fluid pressure on its underside; a rigid tubular connecting rod secured to the support member and balancing piston and slidably extending through the passageway connecting the piston chambers and the passageway through the hammer element, said balancing piston having a fluid passageway therethrough in communication with the interior of the tubular connecting rod, said balancing piston having an exposed underside of area approximately equal to the area occupied by the wall thickness of the connecting rod and the wall thickness of the least diameter portion of the support member exterior of the first member;



means in the passageway connecting the piston chambers to sealingly engage the connecting rod against fluid passage exterior of the connecting rod; said portion of the support member extending into said upper piston chamber engaging said hammer element to force the hammer element downwardly thereby cocking the jar on such downward movement of the support member relative to the first member; the delay means delaying for a substantial period the occurrence of a blow by said hammer element until the support member may be elevated to engage the stop means and exert a direct upward stress on said first member.

2,896,918
ROAD BARRICADE
Theodore S. Ward, Des Moines, Iowa
Application February 20, 1957, Serial No. 641,355
5 Claims. (Cl. 256—64)



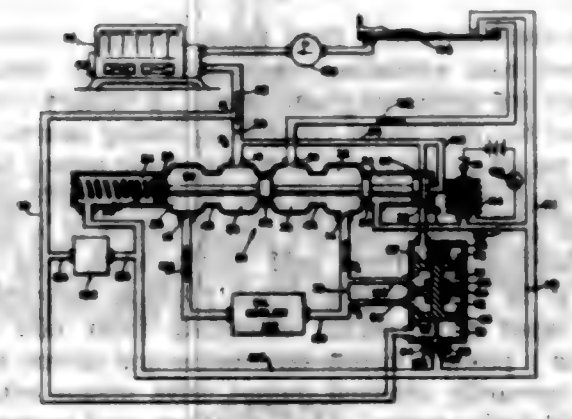
1. A tubular member having formed therein an opposed pair of slots, means for supporting said member comprising, an elongated element, a shoulder formed at one end of said element, said element being insertable through both said slots whereby the inner side of said member adjacent one slot contacts said shoulder and whereby the other end of said element is in a ground engaging position, and pivotal means attached to said member internally thereof for holding said element in a manner whereby said element is movable lengthwise of

parallel to the wavefronts of said waves, and for imparting movement to portions of said mixture at said

2,896,924
MIXING DEVICE

said pivotal means to a position into and out of said slots and further whereby said element is pivotally movable in a plane substantially parallel to the longitudinal axis of said member, to a folded position within said member while remaining operatively connected to said pivotal means.

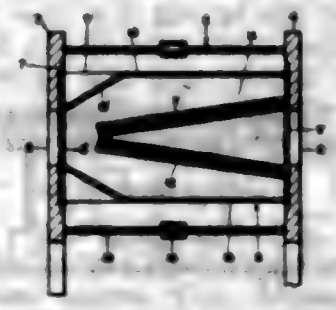
2,896,919
OIL COOLER EMERGENCY BY-PASS VALVE
Walter D. Teague, Jr., Alpine, N.J., assignor to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Application November 30, 1949, Serial No. 130,157
9 Claims. (Cl. 257—2)



9. In a pressurized lubricating system, the combination comprising an oil cooler, a delivery conduit for delivering oil to said oil cooler, a return conduit for returning oil from said oil cooler, and valve means for by-passing said oil cooler, said valve comprising a casing including a first inlet and outlet for connection in and to form a part of said delivery conduit, a second inlet and outlet for connection in and to form a part of said return conduit, a resiliently biased plunger slidably mounted in said casing and constructed and arranged to communicate said first and second inlets with their respective outlets in a first predetermined position whereby the oil passes through said oil cooler and to communicate said first inlet with said second outlet in a second predetermined position whereby said oil by-passes said oil cooler, an orifice in each of said inlets, first passageway means communicating the upstream pressure of said first inlet orifice to one end of said plunger, second passageway means communicating the downstream pressure of said first inlet orifice to the opposite end of said plunger, and bleed valve means communicating with said first and second inlet orifices and responsive to the pressure differentials across said first and second inlet orifices to control the pressure in said first passageway means, said bleed valve means effective in response to a predetermined pressure differential across said second inlet orifice to control the pressure in said first passageway means to position said plunger in said first predetermined position, and effective upon a change in said predetermined pressure differential across said second inlet orifice to position said plunger in the second predetermined position thereof.

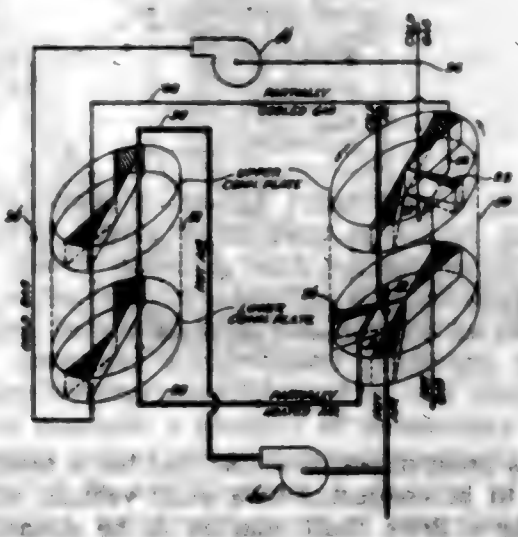
2,896,920
REGENERATOR STRUCTURE
Peter Anthony Weiler, Syracuse, N.Y., assignor to Carrier Corporation, Syracuse, N.Y., a corporation of Delaware
Application June 13, 1953, Serial No. 361,270
8 Claims. (Cl. 257—6)

1. A regenerator housing including two circular plates having openings therein, each plate having a plurality of grooves in one wall, a plurality of conduit members adapted to engage the grooves of the two plates to form a plurality of chambers, each chamber containing a matrix member, said grooves being disposed to permit said conduit members to align the chambers with the



openings in the plates, and means connecting the plates to hold the housing in a unitary assembly.

2,896,921
ROTARY REGENERATIVE AIR PREHEATER
Peter Hodson, Wellsville, N.Y., assignor to The Air Preheater Corporation, New York, N.Y., a corporation of New York
Application May 2, 1955, Serial No. 505,206
3 Claims. (Cl. 257—6)



1. In an air preheater arrangement for transferring heat from a stream of heating fluid to a stream of air or other fluid to be heated, a first and second rotary regenerative air preheater each having spaced passageways for a heating fluid and air or other fluid to be heated; sector plates at opposite ends of each preheater having spaced ports for said streams of heating fluid and fluid to be heated, the ports sustaining fluid flow from the first preheater being radially divided into a plurality of sections separating the heating fluid and the fluid to be heated into hot and relatively cool fluid streams; and ductwork directing the hot heating fluid and the relatively cool air from the first preheater to the spaced passageways of said second air preheater.

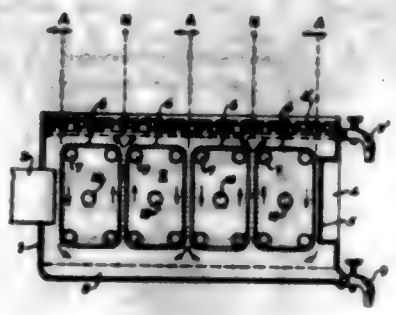
2,896,922
ULTRASONIC MEANS FOR CHANGING THE HOMOGENEITY OF MIXTURES
Reimar Pohlman, Darmstadt, Germany, assignor to Dr. Lehfeldt & Company, G.m.b.H., a corporation of Germany
Application June 23, 1955, Serial No. 517,600
Claims priority, application Germany November 15, 1954
7 Claims. (Cl. 259—1)

1. Apparatus for changing the homogeneity of a mixture of substances of different densities, comprising means for producing standing waves of ultrasonic energy in said mixture, said waves having nodes of minimum particle velocity and antinodes of maximum particle velocity and conveyor means for imparting movement to portions of said mixture at said nodes in a direction

the lower piston chamber exposed to well fluid pressure

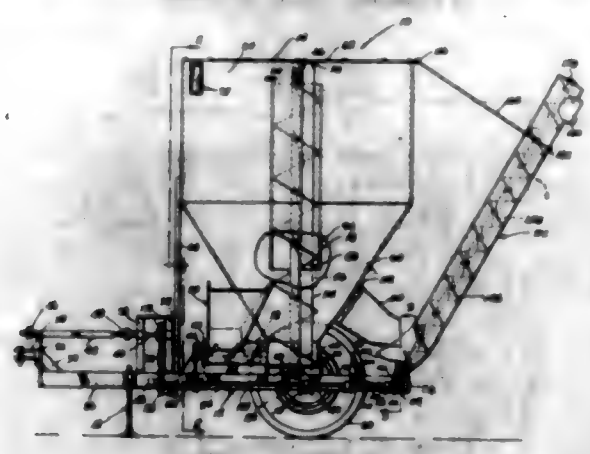
member internally thereof for holding said element in a manner whereby said element is movable lengthwise of

parallel to the wavefronts of said waves, and for imparting movement to portions of said mixture at said



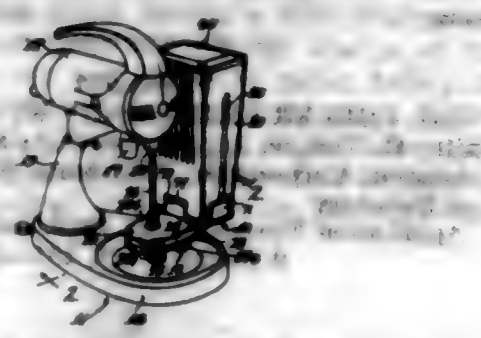
antinodes in the direction opposite to said first-named direction.

2,896,923
PORTABLE FEED MIXER
Arthur J. Luscombe, Dolliver, Iowa
Application May 25, 1956, Serial No. 587,252
2 Claims. (Cl. 259—8)



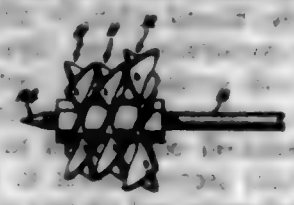
2. In a grain mixing machine that has a mobile frame adapted to be connected to a draft vehicle, said frame supporting a drive shaft adapted to be connected to a power take-off of the drive vehicle and supporting a longitudinal approximately horizontally disposed conveyor, a mixing body having tapered side walls which are funnelled downwardly and inwardly, one of said side walls at the lower portion thereof having an inlet in registry with said conveyor, a mixing auger disposed approximately vertically in said mixing body and having a generally vertical axis of rotation, means drivingly connecting the mixing auger to the drive shaft, a mixing auger casing in which said mixing auger is disposed, said casing having an inlet at the lower end thereof and located in the tapered wall part of said body to accept grain from the lower part of said mixing body and transported upwardly in said body, said auger casing having an outlet near the top thereof to spill the grain into the top portion of said mixing body where it falls by gravity into the lower portion, so that the grain is continuously circulated in said mixing body in response to rotation of said mixing auger, and outlet means connected with the lower portion of said mixing body for the withdrawal of grain therefrom, a housing communicated with the outlet means, an unloading auger operably mounted in said housing, power transfer means drivingly connecting the unloading auger to the drive shaft, said power transfer means including means for permitting the unloading auger and housing to be horizontally and vertically pivoted, and clutch means interposed between the drive shaft and unloading auger, permitting the mixing auger to be driven independently of the unloading auger or simultaneously with the unloading auger when material is discharged thereby from the mixing body.

2,896,924
MIXING DEVICE
Ivar Jepsen, Oak Park, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Application November 9, 1955, Serial No. 546,836
4 Claims. (Cl. 259—106)



1. In combination, a food mixer having a motor and a support base extending under said motor, means on said base for supporting said motor, a unitary drive attachment for said mixer comprising casing means, cooperating means on said base and said casing means for supporting said casing means on said base in a predetermined position, a platform on said casing means in a position offset horizontally from said motor when said casing means is in said predetermined position, upwardly directed input drive means extending from said casing means in a position below said motor and driven by said motor, upwardly directed output drive means extending from said casing means at said platform, and transmission means in said casing means drivingly interconnecting said input drive means and said output drive means.

2,896,925
MIXING DEVICE
Daniel N. Place, Troy, N.Y.
Application April 25, 1955, Serial No. 503,429
1 Claim. (Cl. 259—134)



A mixing device comprising a shaft adapted to be retained in rotating means, said shaft having a threaded portion adjacent one end thereof, three circular series of blades coaxially mounted on said shaft over said threaded portion, spacers on said shaft between adjacent series of said circular series of blades, members threaded on said threaded portion of said shaft to retain said blades and spacers on said shaft as a unitary assembly, each of said circular series comprising six blades constituting contiguous sectors of equal angular width with corresponding blades of all said series being axially aligned, the blades of that series remote from said one end of said shaft being from one and one-half to two times the depth of the blades of the other two series, the blades of said other two series being of equal depth, said spacers having an axial dimension substantially equal to the depth of the blades of said other two series, the blades of said three series cooperating with said spacers to form a screw of uniform pitch.

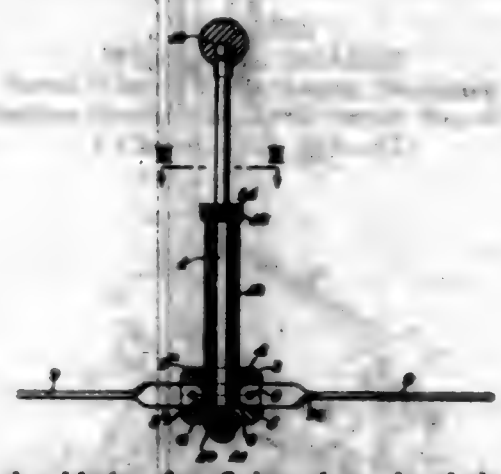
2,896,926
DEVICE FOR MIXING OR TREATING FLUIDS OR FREE-FLOWING POWDERS
Harold Eric Chapman, Erdington, Birmingham, England
Application November 28, 1956, Serial No. 623,414
Claims priority, application Great Britain
January 10, 1956
2 Claims. (Cl. 259—146)

1. A liquid mixing device comprising a central rod, a hub on the rod, blades hinged to, and peripherally

drilling in an available rock face spaced holes transversing the projected area of said excavation; successively charg-

lower open end positioned above the barren cap rock of said sulfur deposit, packing means arranged in said casing

spaced around the hub, means below the hub for supporting the blades in extended positions in a plane substantially at right-angles to the axis of the rod, an upper clamping member above the hub for engaging the inner



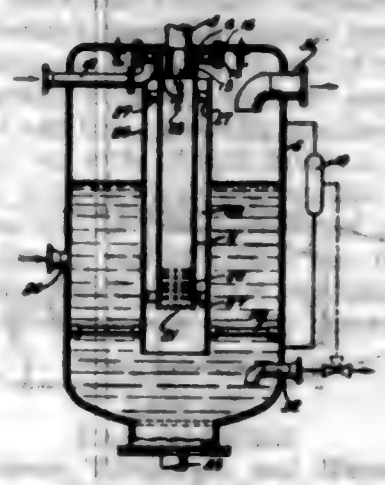
ends of the blades for fixing them in their extended positions, a tube on the rod engaging the upper clamping member and a nut engaging a screwed portion of the rod for releasably securing the tube and the upper clamping member against axial movement.

2,896,927

GAS AND LIQUID CONTACTING APPARATUS

Richard E. Nagle, New Rochelle, N.Y., and Du Bois Eastman, Whittier, Calif., assignors to Tennco Inc., a corporation of Delaware

Application September 26, 1956, Serial No. 612,211
2 Claims. (Cl. 261—39)



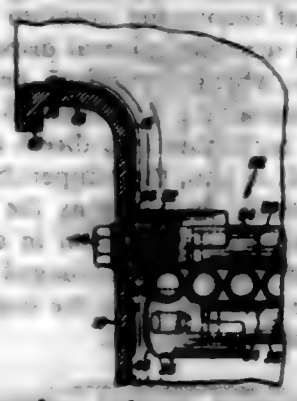
1. In a gas scrubbing apparatus wherein gas at elevated temperature is intimately contacted with cooling liquid by introducing said gas into a body of said liquid, the improvement which comprises, in combination, a vessel providing a liquid space and a vapor space; a vertically disposed conduit having an open end extending below the normal liquid level in said vessel for introducing said gas into said vessel into direct contact with said liquid contained therein; means for introducing said gas at said elevated temperature into the upper portion of said conduit; a tubular section open at both ends surrounding said conduit and forming an annular passageway for fluid intermediate said tubular section and said conduit, said tubular section extending from a point below the lowermost end of said conduit to a point within the vapor space within said vessel and along substantially the entire length of said conduit containing said gas in normal operation; means defining an annular passageway surrounding said gas inlet means at the upper end of said conduit arranged for continuously introducing and substantially uniformly distributing said liquid directly into contact with the inner wall of said conduit at the point of introduction of said hot gas thereto whereby during operation of said apparatus said conduit is protected from overheating by said hot gases due to the combined effect of cooling of said inlet pipe by said liquid along the inner wall thereof and by liquid carried upwardly through said first mentioned annular passageway along the outside of said inlet conduit by the gas lift effect of said gas stream; and means for withdrawal of gas from the vapor space within said vessel.

2,896,928

FRACTIONATING COLUMN

Alec V. Osborne, Mexico City, Mexico, assignor to Pfaudler Permutit Inc., Rochester, N.Y., a corporation of New York

Continuation of abandoned application Serial No. 560,582, January 23, 1956. This application February 21, 1958, Serial No. 716,737
5 Claims. (Cl. 261—113)



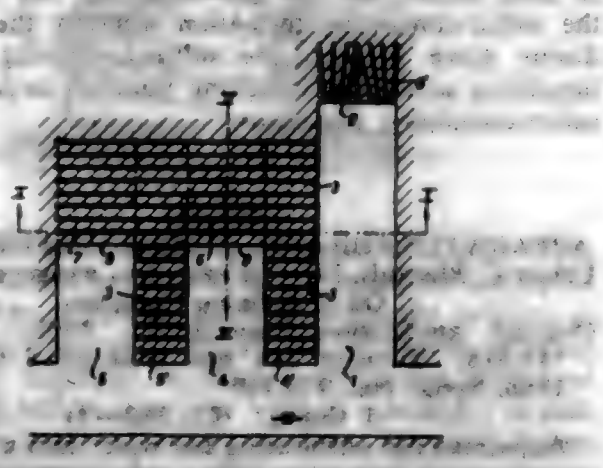
1. A fractionating column comprising a glass-lined metallic shell having a plurality of access providing manholes spaced vertically and circumferentially from one another therein, and a plurality of fractionating tray units spaced vertically from one another in said shell and each comprising a plurality of supporting brackets of corrosion-resisting material fixed to said shell below an adjacent manhole, a plurality of transversely extending, supporting rods of corrosion-resisting material removably supported by said brackets, a plurality of closely spaced, parallel, tray-forming rods of corrosion-resisting material extending transversely of and removably supported by said supporting rods, a pair of upper brackets of corrosion-resisting material fixed to said shell at opposite sides thereof and a rod of corrosion-resisting material removably supported by said upper brackets for holding said tray-forming rods on said supporting rods.

2,896,929

METHOD OF DRIVING ROCK EXCAVATIONS

Erik I. Jonsäll, Djursholm, and Karl G. Olsson, Tumba, Sweden

Application September 8, 1958, Serial No. 759,648
Claims priority, application Sweden February 25, 1958
6 Claims. (Cl. 262—1)



6. A method for driving a continuous rock excavation separate from a drilling space comprising the steps of

bustion chamber through the closed end of said one devices interposed in thrust relation between the rum-

drilling in an available rock face spaced holes transversing the projected area of said excavation; successively charging said holes with explosives along selected portions thereof corresponding to said projected area and spaced from said available face; causing the explosive charges to explode to break loose the material over said projected area leaving a wall portion between the excavation and the drilling space and clearing away the broken material from the excavation through the blasted portion of the same.

2,896,930

METHOD OF RECOVERING URANIUM FROM UNDERGROUND DEPOSIT

John Roger Menke, Scarsdale, N.Y., assignor to Nuclear Development Corporation of America, a corporation of New York

No Drawing. Application June 10, 1954
Serial No. 436,940
3 Claims. (Cl. 262—3)

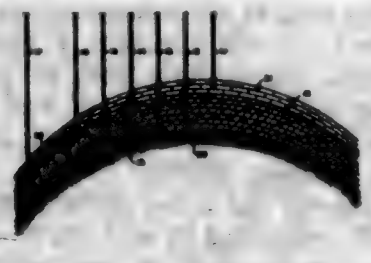
1. The method of recovering uranium from an underground deposit of a uranium mineral dispersed in an acid-consuming gangue which comprises delivering a cold aqueous solution containing less than 50 grams per liter of an alkali metal carbonate into direct contact with the underground deposit in situ, the temperature of said solution being substantially the same as the temperature of the deposit, maintaining the solution in contact with the uranium-bearing deposit for a prolonged period of time, then recovering the solution from the deposit, and recovering uranium from the solution.

2,896,931

MINING OF SULFUR BY LIQUEFACTION OF THE SULFUR

Urban C. Marquis, New Orleans, La., assignor to Humble Oil & Refining Company

Application January 22, 1958, Serial No. 710,516
4 Claims. (Cl. 262—3)



1. A method for mining sulfur which comprises injecting a sufficient amount of gas into the pore spaces of the cap rock and the underlying sulfur-containing formation of a porous sulfur deposit to displace substantially all of the water contained in said cap rock and the sulfur-containing formation, removing the displaced water from the cap rock and the sulfur-containing formation, injecting hot water at a temperature sufficient to melt sulfur into the gas-containing cap rock above the sulfur-containing formation whereby the hot water drains down through the sulfur-containing formation liquefying same, and removing liquefied sulfur from the sulfur-containing formation.

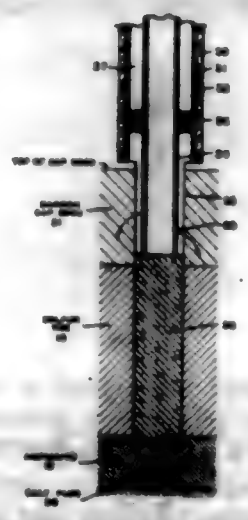
2,896,932

APPARATUS FOR HOT WATER SULFUR MINING

Urban C. Marquis, New Orleans, La., assignor to Humble Oil & Refining Company

Original application January 22, 1958, Serial No. 710,516. Divided and this application October 28, 1958, Serial No. 770,169
1 Claim. (Cl. 262—3)

Apparatus for introducing hot water into a well drilled to penetrate a subsurface sulfur deposit which comprises, in combination, a casing cemented in said well having its lower open end positioned above the barren cap rock of said sulfur deposit, packing means arranged in said casing adjacent the lower open end, and a perforated liner positioned with its upper end movably arranged in said packing means and with its lower end in an open hole below the casing, said open hole terminating at a level above the sulfur deposit, said liner moving vertically within said packing means and casing on flowing hot water down the casing through the perforated liner.

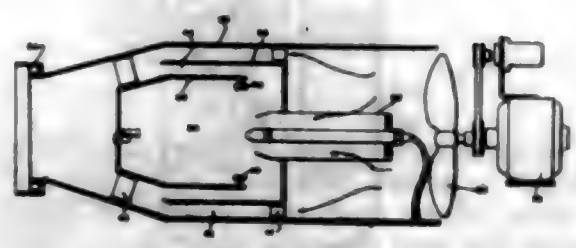


2,896,933

PORTABLE HEATER

Glenn Barnes, Dayton, Ohio, assignor to Master Vibrator Company, Dayton, Ohio, a corporation of Ohio

Application April 23, 1953, Serial No. 350,741
3 Claims. (Cl. 263—19)

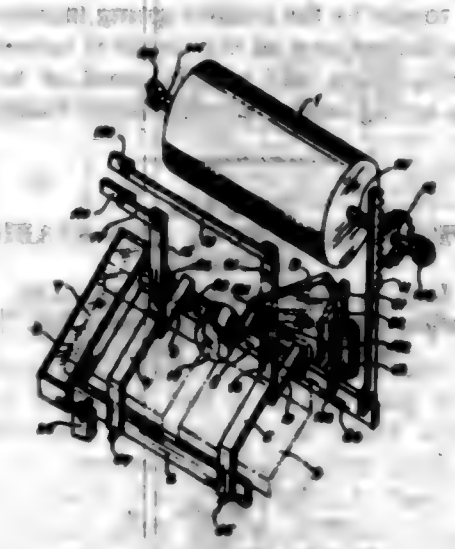


1. A space heater, including a housing receiving a draft of forced air at one end thereof and discharging it at the opposite end, a fixed pair of telescoping reversely directed cup-shaped container like members in said housing defining a combustion chamber, one of said members having side walls spaced from the side walls of the housing providing an extended restricted flow passage for forced air thereabout and having a closed end facing counter to the direction of air flow in the housing and an open end facing in the direction of air flow, said other member having an open end received in the open end of said one member and a closed end facing in the direction of air flow, said other member being spaced from said one member to define a longitudinally extended circuitous flow path from the interior of said other member to the exterior of the combustion chamber and extending to restrict the flow passage through said housing adjacent said opposite end of said housing and beyond said one member, and a fuel burner received in the com-

first-named flange and each of the flanges of said damping connecting the intermediate pivot of the toggle to the

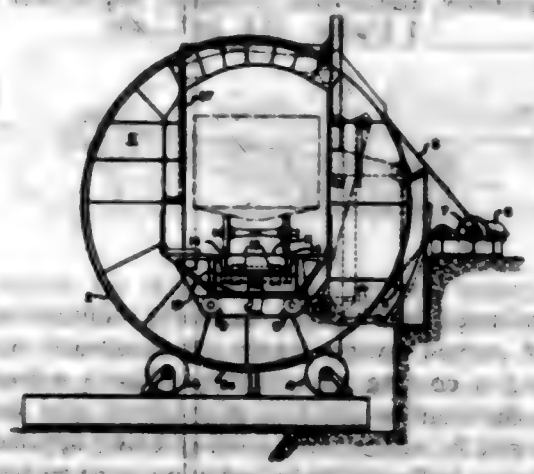
bustion chamber through the closed end of said one member and extending toward and substantially into said other member.

2,896,934
WEIGHING SCALES
Soren Wistoft, Copenhagen, Denmark
Application January 14, 1955, Serial No. 481,848
2 Claims. (Cl. 265—62)



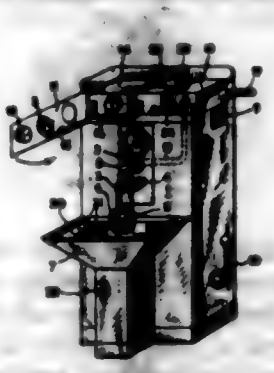
1. A pendulum scale comprising a base plate, a housing upstanding along one edge of said base plate, an indicator drum rotatably disposed within said housing, a main scale beam having a rear arm and a front arm, said arms being disposed parallel to the longitudinal axis of said drum, a pendulum rotatably disposed above said beam and connected therewith, driving means interconnecting said beam and said drum, a pair of weighing plate supporting brackets extending laterally across said rear and front arms and being pivotally mounted thereon, an upright support on each of said brackets, substantially horizontal stay rods to which said upright supports are pivotally connected, the rear portions of said brackets, said upright supports, said horizontal stay rods, said rear arm, said driving means, and said pendulum being situated within said housing substantially beneath said drum.

2,896,935
CAR DUMPER
Boris M. Osojnak, Pittsburgh, and Richardson Gray, Mount Lebanon Township, Allegheny County, Pa., assignors to Heyl & Patterson, Inc., Pittsburgh, Pa., a corporation of Pennsylvania
Application March 8, 1956, Serial No. 570,383
15 Claims. (Cl. 265—71)



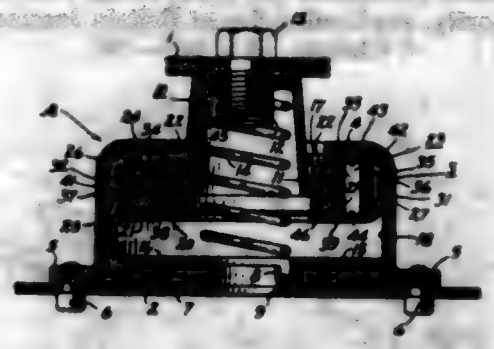
1. A car dumper comprising a substantially invertible supporting structure, means in the supporting structure and invertible therewith for supporting when in upright position a car to be dumped, a plurality of weighing devices interposed in thrust relation between the supporting structure and the first mentioned means and means constructed and arranged to sustain tensile stress and also to sustain compressive stress connecting the weighing devices with the supporting structure and the first mentioned means.

2,896,936
SYSTEM FOR HIGH-FREQUENCY HEATING OF WORK PIECES
Laurent Blok and Geeltjes Zwanenburg, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application February 24, 1956, Serial No. 567,576
Claims priority, application Netherlands March 5, 1955
2 Claims. (Cl. 266—4)



1. High frequency heating apparatus for heating a work piece, comprising switching means for applying heating energy to said work piece for a predetermined period of time, cooling means for applying a cooling medium to said work piece, means for starting the operation of said switching means and said cooling means, and means comprising said switching means for delaying the operation of said cooling means for a predetermined period of time after the actuation of said starting means upon continuous actuation of said starting means, and for preventing the operation of said cooling means upon actuation of said starting means for an interval less than said last-mentioned period of time.

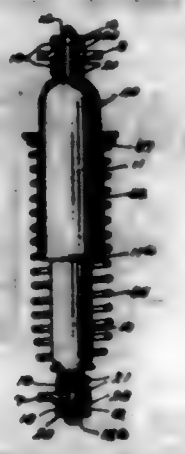
2,896,937
VIBRATION ISOLATOR WITH VARIABLE DAMPING
Keith W. Miller, Logansport, Ind., assignor to The General Tire & Rubber Company, a corporation of Ohio
Application September 13, 1957, Serial No. 683,831
7 Claims. (Cl. 267—1)



1. A vibration isolator comprising an internally cylindrical housing having vertical axis, a rigid core having an annular flange projecting radially outwardly relative to said axis, an externally cylindrical piston-like damping ring slidably engaging the internal cylindrical surface of said housing and mounted for vertical movement in said housing, said damping ring having inner marginal flanges directly above and below said first-named flange, means for yieldably positioning said core vertically and horizontally relative to said damping ring including an annular sponge of elastomeric material mounted between said

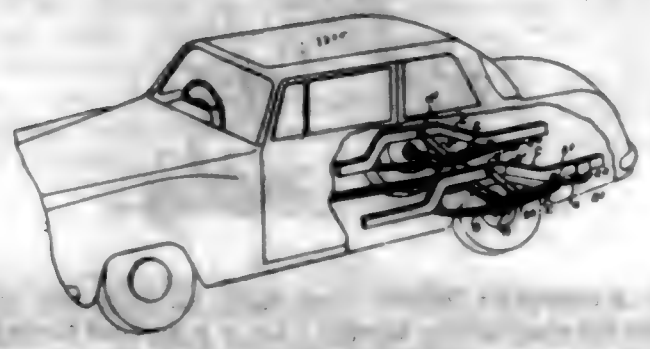
first-named flange and each of the flanges of said damping ring, and spring means applying an upward force to said core and an opposite downward force to said housing and biasing said core upwardly relative to said housing and normally holding said piston-like member at the upper end of said housing.

2,896,938
VEHICLE SUSPENSION DEVICE
Brooks Walker, Piedmont, Calif., assignor to Monroe Auto Equipment Company, Monroe, Mich., a corporation of Michigan
Original application May 6, 1954, Serial No. 427,927. Divided and this application October 10, 1958, Serial No. 769,967
4 Claims. (Cl. 267—8)



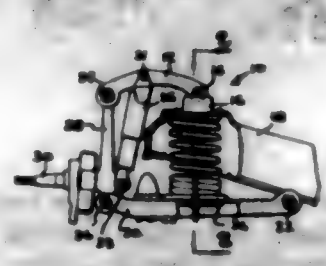
2. In a suspension device, a hydraulic direct-acting tubular shock absorber having relatively movable telescopic parts, a coil spring disposed substantially concentrically with respect to said shock absorber, means on one of said relatively movable shock absorber parts engaging and supporting one end of said coil spring, means on the other of said relatively movable shock absorber parts engaging and supporting the opposite end of said coil spring, and an elongated nonmetallic resilient tubular spacer sleeve fitted over said shock absorber and resisting lateral movement of said coil spring so that the coil spring is maintained in substantially concentric relationship with respect to said shock absorber.

2,896,939
MEANS FOR CONTROLLING THE MAIN SPRINGS OF A VEHICLE SUSPENSION
Frank Woodhead, Far End, Yarm, England
Application December 10, 1956, Serial No. 627,385
Claims priority, application Great Britain January 5, 1956
6 Claims. (Cl. 267—16)



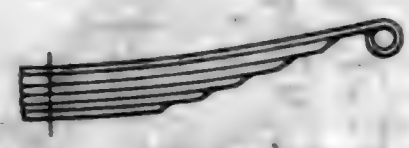
1. In a vehicle having a chassis, transverse axle structure and a longitudinally extending main spring at each side of the vehicle supporting the chassis on said axle structure, means for controlling each main spring comprising a toggle having two arms of different lengths, an intermediate pivot connecting said arms and pivots connecting the arms at the remote ends of the toggle to the chassis and main spring respectively, and a tension spring connecting the intermediate pivot of the toggle to the chassis, the longer arm of the toggle being pivotally connected to the chassis and the shorter arm of the toggle being pivotally connected to the main spring, and the toggle arm being of such relative lengths and their pivots being so arranged that the longer toggle arm depends from the chassis in all operative positions of the main spring, and while the main spring is in its normally loaded position the shorter arm is substantially parallel to the main spring and the force applied to the intermediate pivot of the toggle by the tension spring increases progressively as the shorter arm of the toggle is moved upwardly or downwardly from said parallel position by deflection of the main spring under varying loads thereon.

2,896,940
COIL SPRING LOWERING AND STABILIZING DEVICES
Jose A. Lightbourn, El Paso, Tex.
Application August 29, 1958, Serial No. 757,996
8 Claims. (Cl. 267—20)



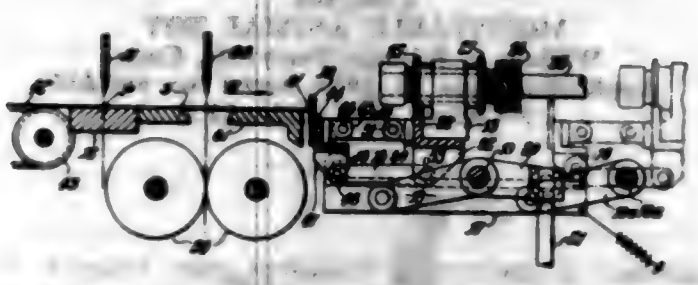
1. A coil spring automobile wheel suspension comprising a chassis member, upper and lower control arms pivoted on said member, an upper spring seat member mounted on said chassis member, a lower spring seat member on said lower control arm, a vertical coil spring having an upper end engaged in said upper seat member and the lower end engaged in said lower seat member, and clamp means applied to one of said spring seats and engaging and compressing together a limited number of convolutions of the spring adjacent to said one seat member, some of said limited convolutions being in contact with each other, and spacer means being engaged between and spacing others of the limited convolutions from each other.

2,896,941
LAMINATED SPRING
Eugen Stump, Stuttgart-Untertürkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Application September 12, 1955, Serial No. 533,830
Claims priority, application Germany September 16, 1954
1 Claim. (Cl. 267—49)



A laminated leaf spring assembly comprising a plurality of curved spring leaves superimposed upon each other and a coating of normally viscous nylon applied only to the convex surfaces of each of said leaves and also around its edges, said coating being applied to said spring leaves individually by spraying so as to form, when solidified, a strongly adhering, wear resistant, moisture-proof and protective coating on the exposed surfaces of the lowermost leaf, the surfaces between each pair of leaves and the edges of the leaves.

2,896,942
PAPER SHEET FOLDING MACHINES
Stanley Reginald Fry and Denis Vernon McCormick, both of Letchworth, England, assignors to Cameo (Machinery) Limited, Letchworth, England, a British company
Application February 5, 1957, Serial No. 638,306
Claims priority, application Great Britain February 6, 1956
8 Claims. (Cl. 270—84)

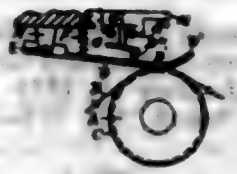


1. In a sheet handling machine having a machine drive, sheet conveying means for moving a paper sheet along a given linear path, a sheet perforator comprising a stationary die block and a co-operating movable perforator blade for perforating said sheet along a transverse line at a predetermined position along said path, first lay stop means for arresting said sheet from travel along said linear path at the position appropriate to the operation of said first sheet perforator, a second sheet operation-performing device for performing a second operation on said sheet at a position having a predetermined relationship to the line of perforations made by said sheet perforator, second lay stop means for arresting said sheet from movement along said path at a second position appropriate to the operation of said second sheet operation-performing means, time controlled mechanism coupled to said machine drive for moving said first lay stop from a first and sheet obstructing position to a second non-obstructing position to allow said sheet to move from said first lay stop into engagement with said second lay stop at a time subsequent to operation of said sheet perforator and prior to the operation of said second sheet operation-performing means and reciprocating sheet gripper means for engaging the forward edge of said sheet free to pull said sheet from said die block of said perforator at said first arrested position towards said second arrested position after operation of said sheet perforator.

2,896,943
CONTINUOUS AUTOMATIC CLAMPING DEVICE
William Lewi, Merrick, N.Y.
Application January 30, 1958, Serial No. 712,221
5 Claims. (Cl. 271—2.1)

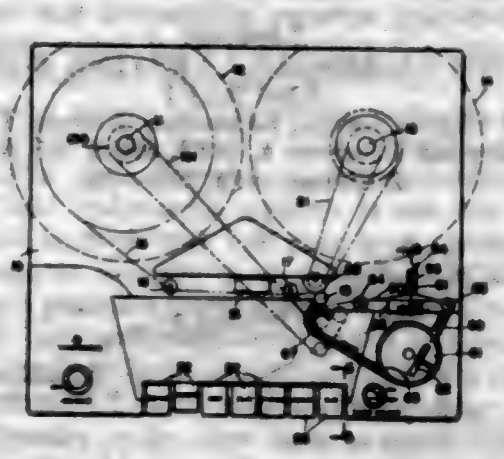
1. A device for skin packaging discrete material comprising a top pair of spaced-apart U-shaped circuitous tracks, a bottom pair of U-shaped spaced-apart circuitous tracks, said top and said bottom tracks uniting to form a common opposed U-shaped horizontally disposed track section of substantially twice the track width of said top and bottom tracks; a first plurality of frames hingedly secured to one another to form a chain disposed in said top track, and a second plurality of frames hingedly secured together to form a chain disposed in said bottom track; and a pair of opposed hinge pins disposed in interlocking relationship in successive U-shaped frames and said pins being in opposed vertical relationship in the respective opposed top and bottom tracks, each of said pins having a portion exteriorly protruding beyond said frames, and a roller rotatable secured to said protruding portion whereby said rollers of said hinge pins of respective superimposed frames disposed in said common horizontally disposed track sections squeeze said frames together in moving clamped relationship rigidly and immoveably seize a sheet of material held therebetween.

2,896,944
AUTOMATIC WEB BREAK DETECTOR IN THE ROLLING PRESS
Shinkei Shiba, Tokyo, Japan
Application January 17, 1956, Serial No. 559,731
5 Claims. (Cl. 271—2.3)



1. In a machine having an electrical brake circuit, the combination of a roll having a narrow circular groove extending around the periphery thereof and over which roll and groove a web is fed, a web break detecting mechanism comprising a detecting arm having a groove entering portion thereof in alignment with and enterable into said roll groove upon a break in the web at said roll, means mounting said detecting arm for movement of said groove entering portion into said roll groove, spring means urging said groove entering portion of said detecting arm to bear against the web at the location of said roll groove, and electrical switch means including contact means actuated by movement of said groove entering portion of said detecting arm into said roll groove upon a break in the web at said roll for energizing the electrical brake circuit independent of said roll for stopping said machine.

2,896,945
TAPE RECORDING AND REPRODUCING APPARATUS
Herbert Waldman, Brooklyn, N.Y., assignor, by mesne assignments, to Robosonic National Industries Corp., New York, N.Y., a corporation of Delaware
Application May 8, 1957, Serial No. 657,931
11 Claims. (Cl. 271—2.3)



1. A tape recording and reproducing apparatus comprising, in combination, first tape guiding means including a supply reel and a take-up reel and guide rollers for guiding the tape from one reel to the other, a common drive means including a motor driven capstan and a movably mounted first driving roller, first control means controlling the position of said roller for moving the same into and out of driving engagement with said

2,896,950
BOARD GAME

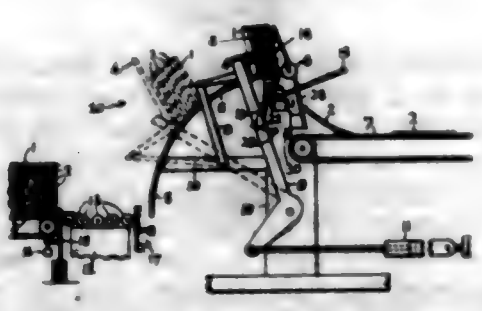
be visibly displayed through said windows, each representation so displayed being different and said represents-

necting the arms at the remote ends of the toggle to the chassis and main spring respectively, and a tension spring

the lowermost leaf, the surfaces between each pair of leaves and the edges of the leaves.

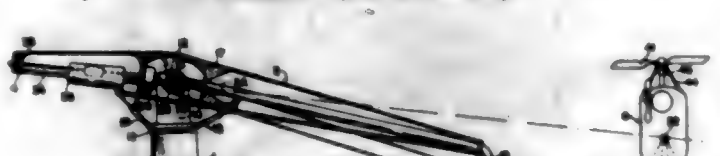
capstan and said tape; second tape guiding means including guide members for guiding an endless second tape along a predetermined closed path of travel, a movably mounted second driving roller, said guide member guiding the endless tape between the capstan and the second roller in engagement with the latter, and a second control means for moving the second roller into an operative position in which the capstan, the endless tape and the second roller are in driving engagement with each other and into an inactive position respectively; and actuating means coacting with said control means for operating the same selectively and independently of each other.

2,896,946
SHEET FEEDING APPARATUS
Harold Barratt, Thomas Newton Forrester, and George Herbert Wilson, Coventry, England, assignors to Courtaulds Limited, London, England, a British company
Application January 7, 1957, Serial No. 632,748
Claims priority, application Great Britain January 11, 1956
12 Claims. (Cl. 271—6)



1. Apparatus for feeding stacks of rigid sheets of uniform thickness stack by stack to a picker operating at a uniform rate comprising at least one carrier for carrying a stack to the picker, means to load a stack onto the carrier, a high speed driving mechanism to move the carrier to present the first sheet of the said stack to the picker, a low speed driving mechanism to move the carrier to present subsequent sheets to the picker at a rate corresponding to the rate of operation of the picker, a feeler operative upon a stack being presented to the picker to disengage the high speed driving mechanism and engage the low speed driving mechanism, and a detector operative when the last sheet of a stack has been picked to disengage the low speed driving mechanism and cause the high speed driving mechanism to present a loaded carrier to the picker.

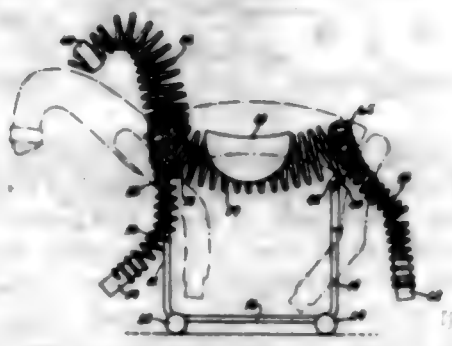
2,896,947
CAPTIVE PASSENGER CARRYING POWERED AIRCRAFT
Peter Charles Jacobs, Edmonton, Alberta, Canada
Application February 4, 1957, Serial No. 638,104
2 Claims. (Cl. 272—34)



1. In a captive passenger carrying powered aircraft having a pylon with an arm attached at a point along its length to the pylon for rotational and vertical movement with respect to the pylon and an adjustable counterweight at one end of the arm, a passenger carrying powered aircraft mounted pivotally at the opposite end of the arm for universal movement with respect to the said pivotal mounting, controls within the aircraft re-

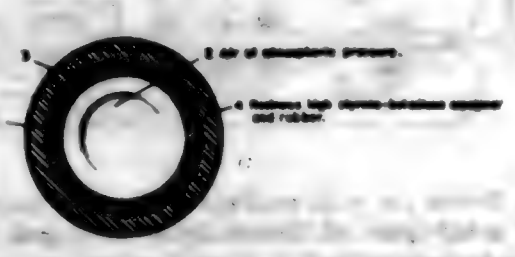
actable between the aircraft and the arm to move the aircraft universally with respect to the pivotal mounting, a lifting propeller mounted above the aircraft to operate in a fixed horizontal plane with respect to the aircraft and a propeller mounted on the aircraft to operate in a fixed vertical plane with respect to the aircraft to rotate the aircraft about the said pivotal mounting.

2,896,948
MOUNTABLE ANIMAL TOY
William A. Brodrib, Terryville, Conn.
Application June 28, 1957, Serial No. 668,635
9 Claims. (Cl. 272—53.1)



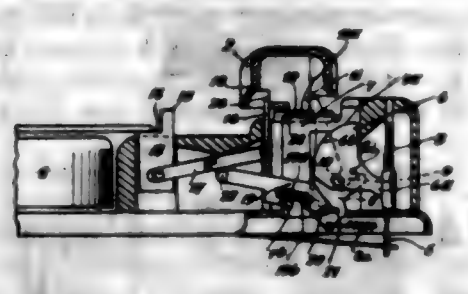
1. In a mountable animal toy, the combination of a frame having forward and rearward supports in fixed relationship to each other, a longitudinal spring for the body of the animal which spring has an upper central portion adapted for supporting a rider and has generally upright downwardly extending portions near its forward and rearward ends, means connecting said generally upright end portions near the bottoms thereof respectively with said forward and rearward supports for movements about forward and rearward transverse horizontal axes upon downward and upward movements of said central portion of the spring, said forward and rearward end portions swinging respectively rearwardly and forwardly upon downward movement of the central portion of the spring and said forward and rearward end portions swinging respectively forwardly and rearwardly upon upward movement of the central portion of the spring, a head and front legs connected with said forward end portion of the spring for movement therewith about said forward transverse axis, and rear legs connected with said rearward end portion of the spring for movement therewith about said rearward transverse axis.

2,896,949
TENNIS BALLS
Henry Christian Louis Dunker, Halsingborg, Sweden
Application March 15, 1954, Serial No. 416,258
Claims priority, application Sweden August 22, 1950
11 Claims. (Cl. 273—61)



1. A tennis ball, comprising a hollow structure of rubber, and a resinous high styrene-butadiene copolymer incorporated in at least a spherical annulus of said structure in a proportion of 10 to 45 parts thereof per 90 to 55 parts of rubber, calculated on the basis of 85% styrene in said copolymer, and a gas filling within said hollow structure at substantially atmospheric pressure.

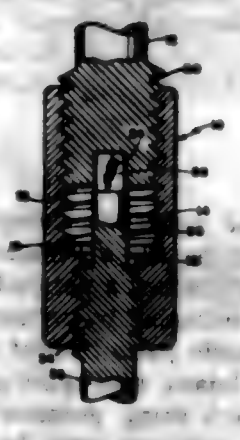
2,896,953
TONE ARM MOUNTING FOR GRAMOPHONES
Harry da Costa, Sunnybrook, London, and James Alexander Lee, Walthamstow, London, England, assignors to The Plessey Company Limited, Ilford, England, a British company
Application September 10, 1954, Serial No. 455,213
Claims priority, application Great Britain September 17, 1953
12 Claims. (Cl. 274—15)



1. A device for positioning a gramophone tone arm, comprising a base member, a platform mounted in said base member for up and down movement and having a horizontal surface for supporting the tone arm in a radially slidable manner, a pusher member for radially moving the tone arm across said platform, a manually operable actuating member movable between a first and second position, and means for operatively coupling said actuating member to said platform and pusher member respectively, said coupling means being so constructed as to raise, during the initial part of the movement of the actuating member from said first position to said second position, said platform to engage and lift the tone arm while leaving the pusher member clear of the tone arm, and to operate during the further part of such movement of said actuating member, said pusher member to slide the tone arm across said platform, while

body to define flexible fingers therebetween having continuous longitudinal edges, and elastic material filling said slots full length and bonded to said body to accommodate expansion of said body without opening said slots to entry of dirt therein.

2,896,955
TOOL HOLDER AND TOOL ASSEMBLY
Walter A. Treppard, San Diego, Calif.
Application June 26, 1958, Serial No. 744,814
3 Claims. (Cl. 279—7)



1. A tool holder and tool assembly, comprising: a generally cylindrical sleeve having a large, axial screw threaded bore at one end, and a smaller screw threaded bore coaxial and communicating therewith at the other end; said large bore having a generally flat shoulder at its end adjacent the small bore; the pitch of the threads in said small bore being substantially greater than the pitch of the threads in said large bore; a drive spindle having a screw threaded end engageable in said large bore; said screw threaded end having a generally flat end

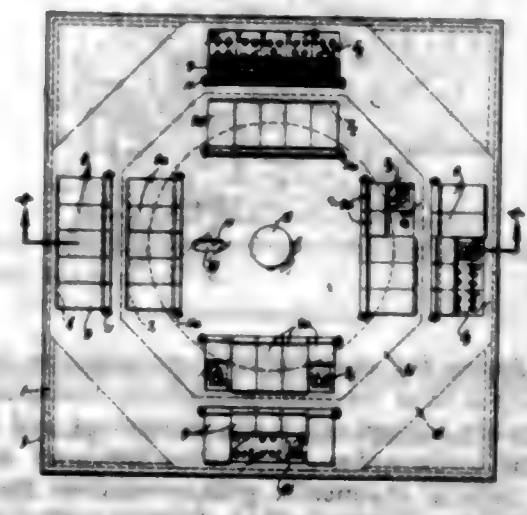
and a pair of opposed hinge pins disposed in interlock- same into and out of driving engagement with said

2,896,950
BOARD GAME
Arpad Rasti, Brewster, N.Y., and James Brunet, Newtown, Conn., assignors to Production and Marketing Company, Newtown, Conn., a co-partnership
Application August 24, 1956, Serial No. 606,022
8 Claims. (Cl. 273—131)

6. A board game apparatus comprising, in combination, a game board having an imperforate playing surface upon which is disposed a network of spots representing positions to be occupied by certain playing pieces and one or more separable parts thereof during the progress thereof across the board, said spots on the major central portion of the board being quincunxially arranged and each connected to adjacent spots by rectilinear and diagonal lines indicative of the permissible paths of movement from position to position, certain of said spots at one side of the board constituting base positions from which the pieces of one player advance at the outset of the game, similar spots at the opposite side of the board constituting base positions for the playing pieces of an opponent, the base positions for the pieces of a given player also constituting goal positions for the pieces of the opposite opponent; a plurality of compound playing pieces, each of said compound pieces comprising a plurality of component playing elements loosely combined with and easily separable from the other components of such playing piece, each component element of a playing piece having unobstructed free passage axially of the others in either axial direction and each element when in playing position resting independently on its own bottom upon the playing surface, individually movable from position to position either diagonally or rectilinearly on the board, and also combinable with other component elements during play, each element of a given piece being of a different structural configuration, whereby only unlike pieces may be combined at any position.

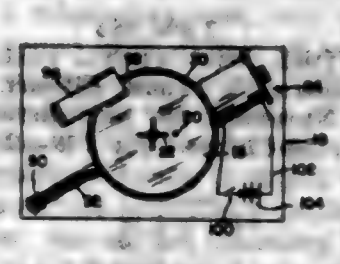
2,896,951
SOLITAIRE CARD GAME DEVICE
Richard C. Snow, Gilmanton, N.H.
Application July 14, 1958, Serial No. 748,502
4 Claims. (Cl. 273—148)

4. A game board for simulating a card game for solitaire play comprising a base member and a removable cover member engageable therewith to form a flat closed receptacle of regular symmetrical form, a rotatable shaft journaled in the center of said cover member, said cover member having a first plurality of groups of windows formed adjacent to the periphery thereof, said groups being uniformly spaced around said periphery and each group comprising an equal number of windows each shaped to display therethrough the representation of a playing card, and a second plurality of groups of like windows formed therein, each window of said second plurality being alined inwardly of said cover member with a window of said first plurality, a shutter movably attached to said cover member adjacent to each window of each plurality thereof optionally to open or occult the adjacent window, a set of two inserts of sheet material, each insert bearing around its periphery representations of playing cards arranged in groups so spaced as to be visibly displayed through said windows, each representation so displayed being different and said representations being arranged at random so that each group simultaneously displayed represents a hand at cards and the groups collectively represent the distribution of cards from a single deal from a shuffled pack, a first insert of said set being dimensioned to display the representations



thereon through said first plurality of windows and a second insert of said set being dimensioned to lie wholly within the representations on said first insert and to display the representations thereon through the windows of said second plurality thereof, means on said base member for retaining said first insert oriented with respect to said windows, and means for securing said second insert concentrically to said shaft for rotation therewith.

2,896,952
AUDIBLE SIGNAL DEVICE
Stanley C. Wurm, Detroit, Mich.
Application August 1, 1955, Serial No. 525,704
4 Claims. (Cl. 274—1)

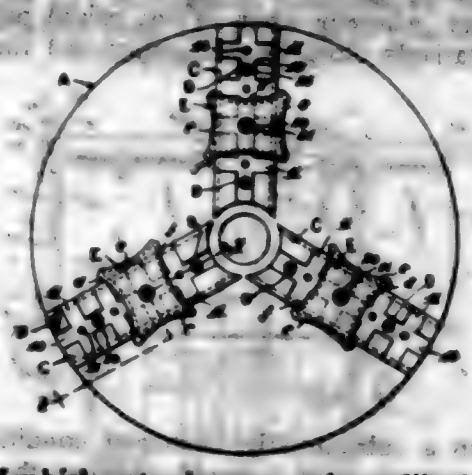


1. In a signal device of the type having an endless sound track and a rotatable member operatively connected to said sound track for rotating the latter, mechanism for rotating said rotatable member in a given direction comprising a reciprocable member movable in opposite directions between limits, a gear secured to said rotatable member for rotation as a unit therewith, a rack carried by said reciprocable member at one side of said gear adapted to mesh with said gear upon movement of said reciprocable member in one direction to one limit to rotate said rotatable member in said given direction, a second rack carried by said reciprocable member at the opposite side of said gear adapted to mesh with said gear upon movement of said reciprocable member in the opposite direction to its other limit to rotate said rotatable member in said given direction, said gear having a projection thereon, and abutments on said reciprocable member respectively engageable by said projection when said reciprocable member reaches its limits of movement to simultaneously step rotation of said gear without overrunning, said sound track being rotated one complete revolution by the movement of said reciprocable member from one limit to the other and return.

tending, narrow, deep, radial slots opening at their ends upon the respective end surfaces and opening over their full lengths upon said side surface, the slots at their ends extending, in the sense of a direction radially of the body, from said side surface to a location spaced radially outwardly from said bore, whereby to define shoulders at opposite ends of each slot, the slots extending the full radial distance from the side surface to said bore throughout the portions of the lengths of the slots disposed between the shoulders; and a key selectively insertable in any one of the slots and extending the full length of the body with its ends flush with said end surfaces, said key having an outer longitudinal edge flush with the side surface to hold the key against displacement in a direction radially outwardly of the body when the collet is gripped in said holder, the key having a projection on its inner longitudinal edge extending radially inwardly of the bore to engage in said groove of the shank, the key having at its opposite ends angular surfaces complementary to said shoulders and engaging the same to hold the key against displacement both longitudinally of the body and radially inwardly of the body, said body having an additional longitudinally extending, radial slot extending the full length of the body and the full radial distance between the bore and said side surface through said shoulders, the shoulders extending as continuous rings interrupted solely by the last-named slot, over the full circumference of the body at the ends thereof.

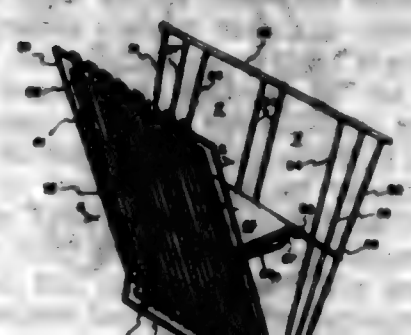
2,896,957
DRILL CHUCK WITH SPRING-LOADED COLLET
Howard Vermette, Hammond, Ind.
Original application April 2, 1957, Serial No. 650,234, now Patent No. 2,855,207, dated October 7, 1958. Divided and this application January 24, 1958, Serial No. 711,005
12 Claims. (Cl. 279—58)

arcuate marginal work engaging faces on said jaw member

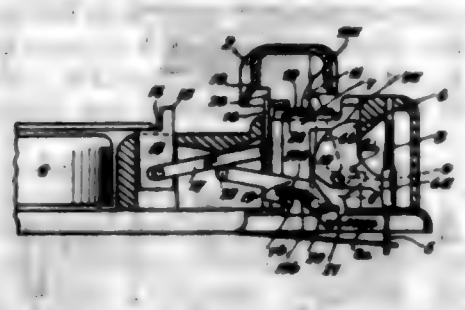


adjacent of which extend on arcs the radii of which are of different lengths.

2,896,959
COLLAPSING BABY SEAT FOR NESTING CARRIERS
Fred W. Young, Oklahoma City, Okla., and Clyde L. McNeil, Grand Rapids, Mich., assignors to Sylvan N. Goldman, Oklahoma City, Okla.
Application April 7, 1954, Serial No. 421,622
3 Claims. (Cl. 280—33.99)

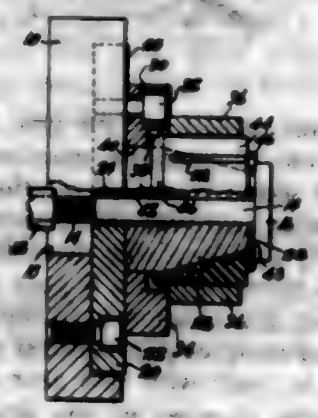


2,896,953
TONE ARM MOUNTING FOR GRAMOPHONES
Harry de Costa, Snaresbrook, London, and James Alexander Lee, Walthamstow, London, England, assignors to The Plessey Company Limited, Ilford, England, a British company
Application September 10, 1954, Serial No. 455,213
Claims priority, application Great Britain September 17, 1953
12 Claims. (Cl. 274—15)



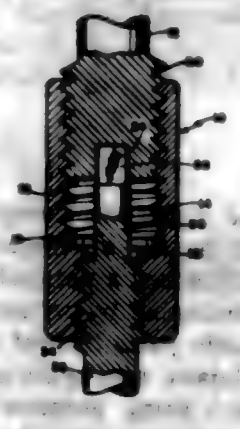
1. A device for positioning a gramophone tone arm, comprising a base member, a platform mounted in said base member for up and down movement and having a horizontal surface for supporting the tone arm in a radially slidable manner, a pusher member for radially moving the tone arm across said platform, a manually operable actuating member movable between a first and second position, and means for operatively coupling said actuating member to said platform and pusher member respectively, said coupling means being so constructed as to raise, during the initial part of the movement of the actuating member from said first position to said second position, said platform to engage and lift the tone arm while leaving the pusher member clear of the tone arm, and to operate during the further part of such movement of said actuating member, said pusher member to slide the tone arm across said platform, while return movement of the actuating member from the second position to the first causes the platform to be lowered out of engagement with the tone arm.

2,896,954
WORK MOUNTING CHUCK
Frederick I. Ernest, Elkhart, Ind.
Application November 16, 1955, Serial No. 547,062
10 Claims. (Cl. 279—2)



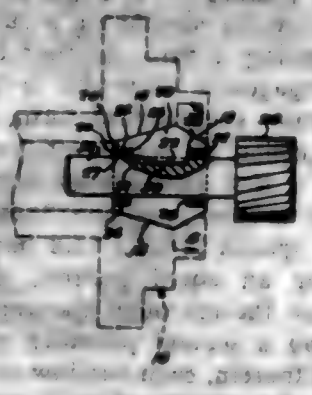
1. An expanding chuck adapted to be mounted on a tapered nose to be shifted axially thereon in opposite directions to selectively expand and contract the same, comprising a metal body adapted for normal snug sliding fit in a work piece and having an axially extending tapered bore therethrough, said body having two sets of longitudinally and radially extending equispaced slots therein arranged in alternate relation, the slots of one set extending to one end of said body and those of the other set extending to the other end of said body, said slots extending between the inner and outer surfaces of the body for the major portion of the length of said body to define flexible fingers therebetween having continuous longitudinal edges, and elastic material filling said slots full length and bonded to said body to accommodate expansion of said body without opening said slots to entry of dirt therein.

2,896,955
TOOL HOLDER AND TOOL ASSEMBLY
Walter A. Troppard, San Diego, Calif.
Application June 26, 1958, Serial No. 744,814
3 Claims. (Cl. 279—7)



1. A tool holder and tool assembly, comprising: a generally cylindrical sleeve having a large, axial screw threaded bore at one end, and a smaller screw threaded bore coaxial and communicating therewith at the other end; said large bore having a generally flat shoulder at its end adjacent the small bore; the pitch of the threads in said small bore being substantially greater than the pitch of the threads in said large bore; a drive spindle having a screw threaded end engageable in said large bore; said screw threaded end having a generally flat end face for contact with said shoulder, and a non-circular axially extending socket in said flat end face; a tool having a shank; a screw threaded portion on said shank engageable in said small bore; a reduced diameter shank extension extending axially from said screw threaded portion and having a key end thereon shaped to fit closely into said socket; both of said bores being screw threaded in a common direction, whereby rotation of said sleeve about said drive spindle and said tool simultaneously causes the tool to be drawn toward and to abut the drive spindle to seat said key end in said socket.

2,896,956
KEYED COLLET
Alberta J. Ann, Minersville, Pa.
Application December 13, 1957, Serial No. 702,625
1 Claim. (Cl. 279—46)



A collet for engaging a tool shank having a longitudinal groove, comprising: a collet body adapted to be gripped by a collet holder and formed with a side surface and with end surfaces, said body having an axial bore opening upon both end surfaces for receiving said shank, said body having a plurality of identical, longitudinally ex-

tending, narrow, deep, radial slots opening at their ends upon the respective end surfaces and opening over their full lengths upon said side surface, the slots at their ends extending, in the sense of a direction radially of the body, from said side surface to a location spaced radially outwardly from said bore, whereby to define shoulders at opposite ends of each slot, the slots extending the full radial distance from the side surface to said bore throughout the portions of the lengths of the slots disposed between the shoulders; and a key selectively insertable in any one of the slots and extending the full length of the body with its ends flush with said end surfaces, said key having an outer longitudinal edge flush with the side surface to hold the key against displacement in a direction radially outwardly of the body when the collet is gripped in said holder, the key having a projection on its inner longitudinal edge extending radially inwardly of the bore to engage in said groove of the shank, the key having at its opposite ends angular surfaces complementary to said shoulders and engaging the same to hold the key against displacement both longitudinally of the body and radially inwardly of the body, said body having an additional longitudinally extending, radial slot extending the full length of the body and the full radial distance between the bore and said side surface through said shoulders, the shoulders extending as continuous rings interrupted solely by the last-named slot, over the full circumference of the body at the ends thereof.

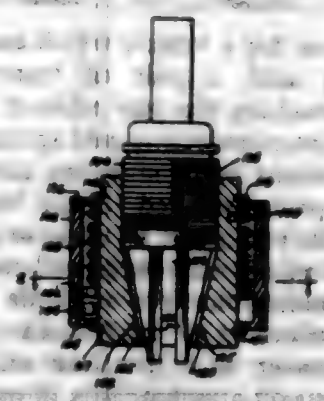
2,896,957

DRILL CHUCK WITH SPRING-LOADED COLLET

Howard Vermette, Hammond, Ind.

Original application April 2, 1957, Serial No. 650,234, now Patent No. 2,855,207, dated October 7, 1958. Divided and this application January 24, 1958, Serial No. 711,805

12 Claims. (Cl. 279—58)



1. A drill chuck of the type having a collet and movable jaws therein, said collet capable of rotation to separate or bring said jaws together in a tool holding operation, and a hand wheel mounted on said collet, a spring motor connected between said hand wheel and collet and cooperating dogs on said hand wheel and collet for effecting a hammer action on said collet whenever said spring motor is loaded and released.

2,896,958

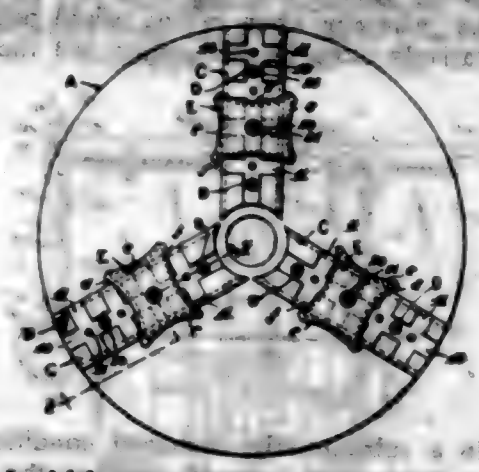
WORK HOLDING JAWS FOR CHUCKS

Charles E. Strenge, Santa Barbara, Calif.

Application June 23, 1958, Serial No. 743,530

5 Claims. (Cl. 279—123)

1. A chuck jaw attachment for the master jaw of a chuck comprising an adaptor, means for connecting said adaptor to a master jaw, said adaptor having an upper face with channels therein, a jaw member having a bottom face, ribs on said bottom face engageable in said channels, said jaw member also having an axial bolt hole, a bolt in said hole having threaded engagement with said adaptor, and a plurality of longitudinally concave arcuate marginal work engaging faces on said jaw member



adjacent of which extend on arcs the radii of which are of different lengths.

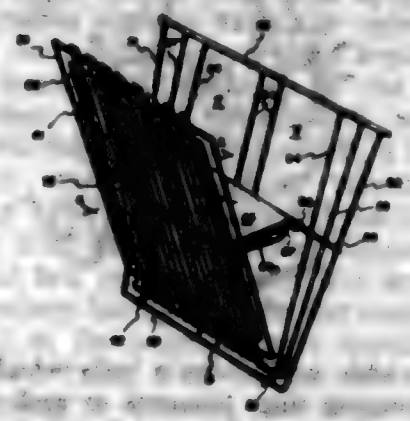
2,896,959

COLLAPSING BABY SEAT FOR NESTING CARRIERS

Fred W. Young, Oklahoma City, Okla., and Clyde L. McNeil, Grand Rapids, Mich., assignors to Sylvan N. Goldman, Oklahoma City, Okla.

Application April 7, 1954, Serial No. 421,622

3 Claims. (Cl. 280—33.99)



1. In a collapsible baby seat assembly for use with a hinged gate of a telescoping cart, said gate including vertical and horizontal stays, certain of said stays being spaced to define leg openings, a panel member having its bottom portion hinged at the bottom of said gate for swinging movement, a child seat structure including upper and lower oppositely facing U-shaped structures, the upper U-shaped structure including a transversely extending frame member, one of said structures having its end portions pivoted about a horizontal stay of said end gate below said leg openings and the other structure having its end portions formed with lateral extensions, said lateral extensions projecting through said panel for engaging the same to limit its outward swinging movement, and a seating surface supported by said U-shaped structures and secured to said frame member and said horizontal stay of said end gate, and means on the panel member for supporting said seat structure in horizontal position.

2,896,960

HAND BARROWS

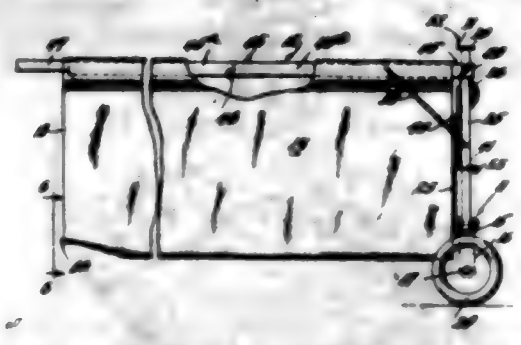
William S. Whiting, Jr., Camden, S.C.

Application February 16, 1953, Serial No. 714,339

8 Claims. (Cl. 280—36)

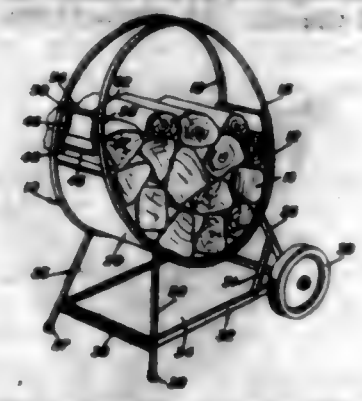
1. A hand barrow affording an expansible and collapsible portable receptacle and comprising, in combination, a wheeled truck located at one end of the barrow, a pair of substantially parallel side bars extending from said truck and terminating in handle portions at their ends remote from said truck, means for operatively connecting the other ends of the side bars to the truck for supporting them, a fabric sheet secured along opposite side edges to the respective side bars; and means for adjusting said side bar supporting means relatively to the

truck to lower and raise the side bars and at the same time respectively spread the side bars apart and move them together, whereby when in one raised position the bars are relatively close to each other and the sheet is



supported in a substantially U-shaped condition as for transport, and when in lowered position the bars are quite far apart and close to ground level and the fabric sheet is spread full width adjacent the ground as for loading.

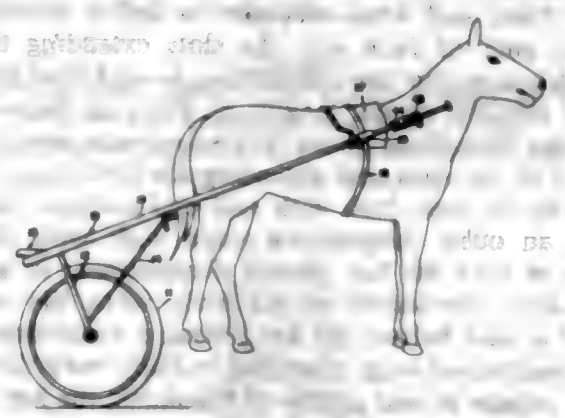
2,896,961
MOBILE LOG CADDY
Paul H. Low, Carmel, Calif.
Application April 22, 1957, Serial No. 654,237
2 Claims. (Cl. 280—47.26)



1. A log caddy comprising a body which has two upwardly converging rings adjacent to each other at their upper parts and spaced from each other at their lower parts, an upwardly opening and arcuate bottom attached to the lower parts of said rings and on which logs are adapted to be supported and interlocked by frictionally contacting each other, said body having side openings through which the logs are adapted to be passed when placing them on the caddy and when removing them, a plurality of legs depending from said rings, a pair of wheels supported by two of said legs, a handle by which to pull the caddy, a transverse spindle extending between said rings between the upper and lower parts thereof and secured to said rings on sides thereof opposite to those near which said wheels are disposed, means mounting said handle on said spindle for swinging movement, at least one stop connected to said handle near said handle mounting means and protruding laterally outwardly of one side of the handle in a direction approximately parallel to said spindle and a sufficient distance to strike a portion of one of said rings and thereby limit the pivotal movement of said handle on said spindle whereby one end of the caddy can be lifted in response to an upward force applied to the handle and of sufficient strength to bring said stop against said portion of said one of said rings and elevate a part of the caddy so that it is supported on said wheels.

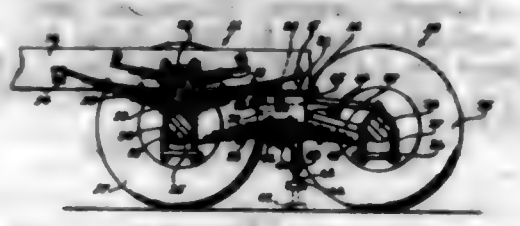
2,896,962
SULKY INCLUDING ADJUSTABLE SEAT
Clarence F. Gaines and John R. Gaines, Sherburne, and Chester C. De Pew, Norwich, and William J. Carry, Farmingdale, N.Y.; said John R. Gaines, De Pew and Carry assignors to said Clarence F. Gaines
Application December 31, 1956, Serial No. 631,964
2 Claims. (Cl. 280—63)

1. A handicapping sulky for harness racing comprising a frame including a pair of substantially parallel draft tongues, wheels supporting said frame for movement along the ground, means for weighting said sulky to vary the vertical downward component of force at the point of attachment of said tongues to a horse for



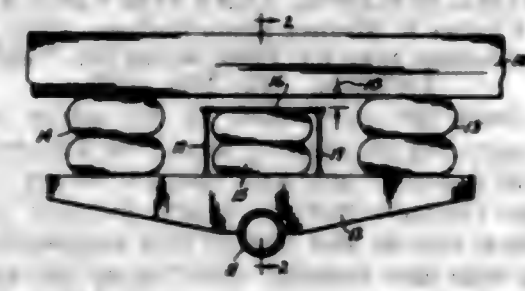
effecting a predetermined amount of handicap upon the horse, said means comprising weight members attached to the free ends of said tongues, and means connecting said weight members to said tongues for longitudinal shifting movement of the weight members along said tongues.

2,896,963
DETACHABLE LOAD-BEARING SPRING AND AXLE ASSEMBLY FOR VEHICLES
Michael Rassum, Youngstown, Ohio
Application March 15, 1956, Serial No. 571,799
11 Claims. (Cl. 280—104.5)



5. An attachment for a vehicle which comprises at least one load-bearing axle, a pair of transversely spaced springs, means attaching the rear ends of said springs to said axle, means interconnecting said springs intermediate their ends, said means interconnecting comprising a bolster block, said springs secured to said block, said block mounting releasible means for securing said attachment to a vehicle, means on a spring-supported axle of a vehicle for detachably holding the forward ends of said springs whereby a load centered on said means interconnecting is distributed between said first and said second mentioned axles when said attachment is in operative relation with said vehicle, said attachment further comprising stabilizing and torque rods, said rods pivotally connected at one set of ends to said block, and said rods pivotally connected at their other set of ends to said first mentioned axle.

2,896,964
VEHICLE SWAY CONTROL AND OVERLOAD SYSTEM
Lionel P. Cornwall, Grosse Pointe, Mich.
Application June 10, 1957, Serial No. 664,709
5 Claims. (Cl. 280—104.5)



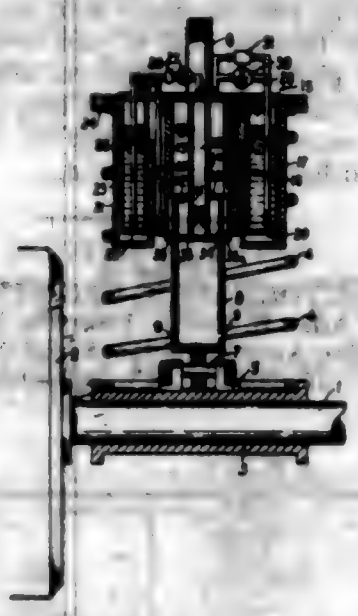
1. In a vehicle suspension system, the combination of a frame including a pair of spaced side members, a

of the interfitting parts and overlying the outside face of

members attached to the bottom of said bed frame and

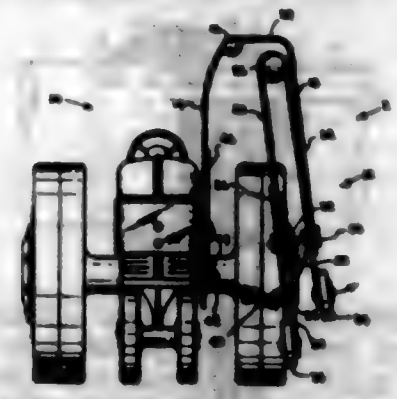
pair of elongated axle members disposed longitudinally under the respective side members of said frame, a first pair of air cushions interposed between the respective axle members and frame side members and in constant abutment therewith, a second pair of air cushions disposed in tandem with the first pair of air cushions and interposed between the respective axle members and frame side members, and means for compressibly maintaining the second pair of cushions at a maximum height of less than the normal height of the first pair of cushions whereby the cushions in the second pair may become actuated only when the cushions in the first pair are partially compressed.

2,896,965
AUTOMATIC FLUID PRESSURE ACTUATED LEVELING ARRANGEMENT FOR VEHICLES
George C. Moustakis, Danvers, Mass.
Application February 4, 1957, Serial No. 637,952
1 Claim. (Cl. 280—124)



In a vehicle having an axle, a frame, and resilient suspension means therebetween, means for automatically controlling the elevation of at least one of said suspension points on said frame relative to the axle comprising fluid pumping means including a piston and a cylinder connected between said frame and said axle and responsive to relative movement therebetween to produce fluid flow under pressure, a piston and cylinder type actuator connected between said frame and said resilient suspension means and positioned so as to be capable of compensating for deflections of said resilient suspension under various loading conditions on said vehicle, fluid conduit means interconnecting said pumping means and said actuator, said fluid conduit means including a flow limiting type shock absorber, a fluid source connected to said pumping means, means for shunting the output of said pumping means back to said fluid source over a preselected range of relative vertical positions of the piston and cylinder of said pumping means, said shunting means including a tapered slot presenting an effective area which increases as said piston and cylinder are moved away from each other in said shunting range, fluid conduit means interconnecting said actuator and said fluid source through said shunting means, said last mentioned fluid conduit means including a tapered slot, the effective area of said last mentioned tapered slot being controlled by the relative positions of said pumping means piston and cylinder, and a flow limiting orifice in said last mentioned fluid conduit means.

2,896,966
ANTI-TILT ATTACHMENT FOR TRACTORS
Floyd E. Cunningham, Minneapolis, Minn.
Application June 12, 1958, Serial No. 741,982
8 Claims. (Cl. 280—150)



1. An anti-tilting attachment for a tractor comprising a frame consisting of a first upright member secured to a side portion of the tractor frame, a depending member hinged adjacent the top of the upright member, a second upright member secured to the depending member adjacent to its lower end and extending upwardly adjacent the inside of the first depending member to adjacent the top of the first depending member, a first pin pivotally mounting the upper end of the second upright member, a second depending member having its upper end pivotally mounted on said first pin, a third depending member secured intermediate the ends of the second depending member, a second pin pivotally mounting the lower end of the third depending member, a lateral member having its outer end pivotally mounted on said second pin, the inner end of the lateral member pivotally mounted on a third pin means secured adjacent the lower end of the said first upright member, the second of said depending members having its lower end extending below the lower end of the second upright member whereby upon the tractor being tilted on the side upon which the anti-tilt frame is mounted, the lower end of said second depending member engages the ground and the said second depending member is moved upwardly and the lateral member is pivoted upwardly on the said second and third pins thereby swinging the second upright member outwardly on said first pin whereby the lower end of the said second upright member engages the ground thus preventing the tractor from tilting over.

2,896,967
SUPPORT AND JACK FOR SEMI-TRAILERS
Thomas B. Dalton, Muskegon, Mich., assignor to West Michigan Steel Foundry Co., Muskegon, Mich., a corporation of Michigan
Application March 27, 1953, Serial No. 345,213
3 Claims. (Cl. 280—150.5)

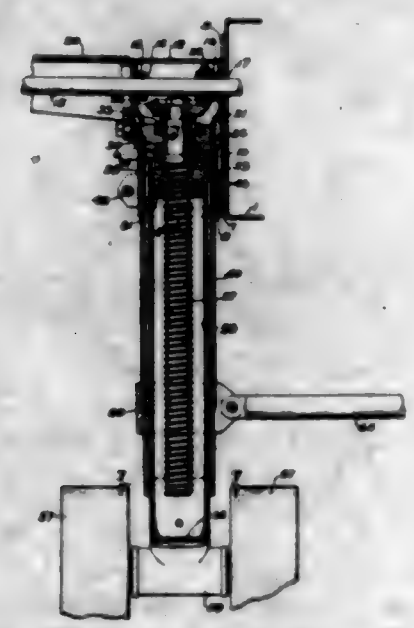
1. In a support structure for a semi-trailer having a structural member, a housing adapted to be secured to the structural member and having a downwardly extending part, a supporting leg having its upper end portion interfittingly disposed with respect to said part of said housing, the housing and supporting leg having substantially aligned openings therein the inner one of which is relatively small and the outer one of which is relatively large, a locking pin having a portion with a relatively large diameter and a portion with a relatively small diameter and a generally radial intermediate shoulder, said locking pin being disposed in said apertures, said shoulder engaging an outwardly disposed surface of the inner of the interfitting parts to position said large diameter and small diameter portions thereof respectively in said large and small openings, said locking pin securing the supporting leg to the housing fixedly, and a contractable band tightened in position around the outer

centrally within the connector in fixed relation thereto for engaging and disengaging a movable valve member

2,896,973
PIPE JOINT WITH FLEXIBLE INTERNAL SLEEVE
Sumner D. Witte, Detroit, Mich.

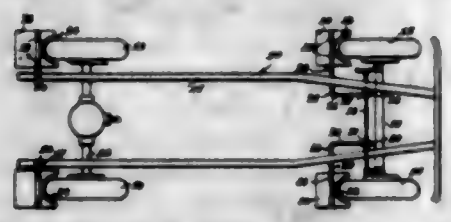
1. A handicapping sulky for harness racing comprising a frame including a pair of spaced side members, a

of the interfitting parts and overlying the outside face of the locking pin, said band engaging said outer interfitting part with force adequate to remain frictionally secured in said position, said force being inadequate to



distort significantly either of said interfitting parts, said band being expansible to facilitate removal of said locking pin and detachment of said supporting leg from said housing.

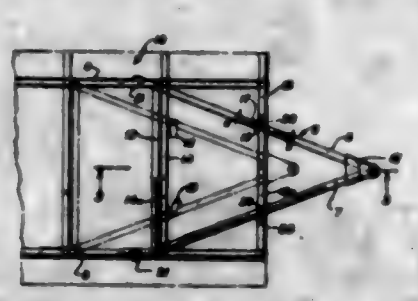
2,896,968
SAFETY SHIELD FOR VEHICLE WHEELS
Matt Bodnaruk, Bottle Lake, Alberta, Canada
Application June 4, 1957, Serial No. 663,426
1 Claim. (Cl. 280—154.5)



In a vehicle, a chassis including spaced apart side bars, a movable idler bar extending transversely with respect to the front portion of the side bars, said vehicle further including front and rear wheels, a bracket secured to the rear portion of each of said side bars and each bracket including a first portion secured to the upper surface of the side bar, a second portion extending downwardly from said first portion and arranged at right angles thereto, a third portion arranged at right angles to said second portion and said third portion being longer than said first and second portions, a curved shield secured to said third portion and said curved shield being provided with an arcuate recess for receiving a portion of the rear wheel therein, a pair of spaced apart support members each having a collar mounted on said idler bar, securing elements extending through said collars and into engagement with idler bar, said support member further including a first section extending rearwardly from said collar, a second section arranged at right angles to said first section, and a shield secured to said second section and provided with an arcuate recess for receiving a portion of the front wheel.

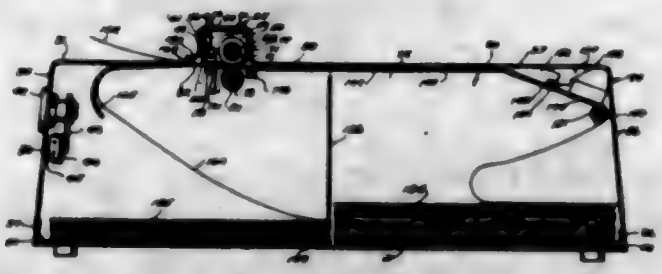
2,896,969
RETRACTABLE HITCH STRUCTURE FOR HOUSE TRAILERS OR THE LIKE
John Carty, Phoenix, Ariz.
Application January 10, 1958, Serial No. 708,151
3 Claims. (Cl. 280—491)

3. In a house trailer having a bed frame, retractable hitch structure including, in combination, transverse members attached to the bottom of said bed frame and longitudinally disposed on the front portion of said trailer frame; said transverse members each being composed of a transverse upper bar and a transverse lower bar and vertical stops extending between said bars adapted to contact the sides of an A shaped tongue frame; said transverse frame bars forming a horizontal slideway for said A shaped tongue frame, said slideway being open at the front to permit slidable forward ex-



tension of said tongue frame in said slideway between the upper and lower bars of said transverse bed frame members, forward motion of said tongue being limited by contact of its side members with said vertical stops; a hitch at the forward end of said tongue frame, and wedge means pivotally mounted on said tongue at the point adjacent said stop when said tongue is in extended position for securing said tongue to said bed frame when in forwardly extended position.

2,896,970
AUTOGRAPHIC REGISTERS
Allen B. Cooke, Danville, Ill.
Application August 4, 1958, Serial No. 752,714
10 Claims. (Cl. 282—16)



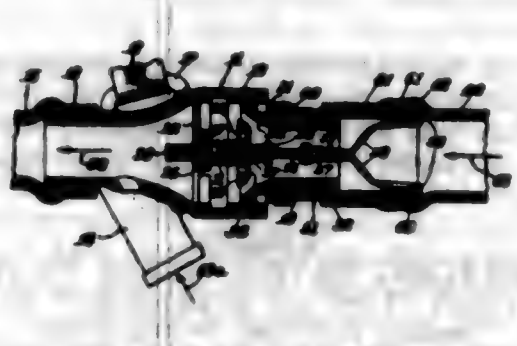
1. A register comprising a housing of substantially rectangular shape, having a storage space for unused tickets at one end and another storage space for used tickets at the other end, the said housing having an open top, closed by two covers pivoted on the ends of the housing, one of said covers having a rectangular window opening exposing one of a continuous series of perforated and punched tickets, a table member carried by the housing below said window to provide a backing for the act of writing on said tickets, said tickets being arranged in sets with a suitable reproducing medium for making records on the lower tickets, a first feed roller rotatably mounted on the side walls of the housing and a second feed roller rotatably mounted on one of said covers, the feed rollers being separable for placement of tickets in the machine, meshing gears carried by the rollers for synchronized drive, and means connected to the rollers to place the rollers in proper rotative position for re-meshing of the gears after separation by lifting the cover to place the tickets.

2,896,971
VALVE ACTUATOR FOR FLUID CONNECTOR
Joseph F. Kolar, Chicago, Ill.
Application August 31, 1954, Serial No. 453,377
7 Claims. (Cl. 284—4)

1. An attachment for a tubular fluid connector comprising valve actuating means adapted to be disposed

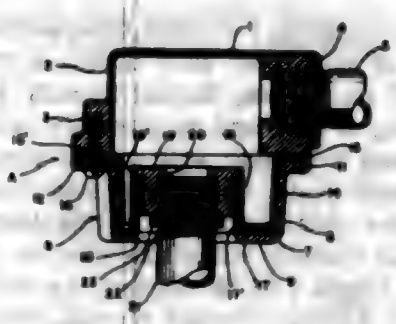
tion and including a base portion integrally attached to least one substantially semi-circumferential area thereof

centrally within the connector in fixed relation thereto for engaging and disengaging a movable valve member carried by a companion fitting to which the connector is detachably securable at one open end thereof, a plurality of divergent supports extending outwardly from said valve actuating means toward opposite wall portions of the connector, and resilient clip means at the outer ends



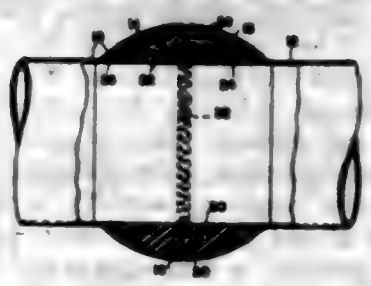
of said supports adapted to provide a resilient detachable snap-fit over the opposite open end of the connector for holding the attachment in substantially rigid assembled relation therewith whereby said actuating means is adapted to engage and disengage the valve member when the connector is respectively connected to and disconnected from the companion fitting.

2,896,972
FIXTURE HANGERS
Marshall G. Zavertnik, St. Louis, Mo., assignor to Killark Electric Mfg. Co., St. Louis, Mo., a corporation of Missouri
Application May 8, 1957, Serial No. 657,875
1 Claim. (Cl. 285—50)



A hanger for a depending electric light fixture adapted to be secured to a splice box, said fixture hanger comprising a cover shell, said cover shell having a circumferential flat wall and a bottom flat wall with a central opening therein and an upper peripheral flange, a union ring suspended within said cover shell above said bottom wall, said ring having a bore to receive therein and suspend therefrom a depending conduit, a rubbery moisture impervious gasket comprising substantially spaced inner and outer concentric sleeves connected by a bottom wall, said inner sleeve of said gasket covering and being bonded in facewise contact to substantially the outer surface of the side of said ring, said outer sleeve and bottom wall of said gasket covering and being bonded in facewise contact to the inside surface of the circumferential wall and inside surface of said bottom wall, respectively, of said cover shell, said outer sleeve having a peripheral flange at its upper end adapted to be positioned between the flange of said cover shell and said splice box, said inner sleeve having the lower end of its inside surface undercut and projecting below the lower end of said union ring, the diameter of the opening in the bottom wall of said cover shell being substantially greater than the outside diameter of said conduit but smaller than the outer diameter of said inner sleeve.

2,896,973
PIPE JOINT WITH FLEXIBLE INTERNAL SLEEVE
Sumner D. White, Detroit, Mich.
Application January 26, 1953, Serial No. 333,255
3 Claims. (Cl. 285—81)



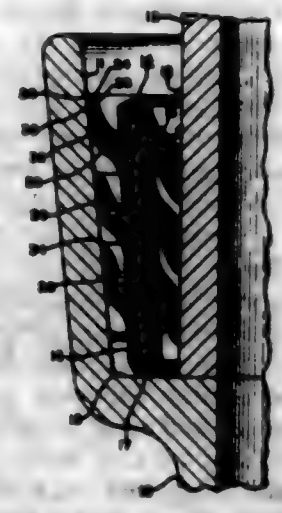
1. Tube coupling construction comprising a pair of aligned rigid tubes having end portions provided with radially inwardly extending abutted flange portions at the ends thereof, a connecting and sealing gasket of annular shape extending into the adjacent end portions of said tubes, said gasket having end portions of tapered wall thickness defined by inner and outer surfaces converging toward its ends to form thin flexible sealing lips, one of said surfaces being cylindrical, the other of said surfaces being smoothly convexly curved in axial section, the outer surface of said gasket having an annular groove intermediate its ends, the portions of said gasket at opposite sides of said groove fitting snugly within the inner surfaces of the end portions of said tubes, said inwardly extending flange portions being received in said groove and being in abutment with each other, the material of said gasket being sufficiently yieldable and resilient to provide for movement of said inwardly extending flange portions over the end portions of said gasket into said groove and return of the material adjacent said groove into engagement with the inner surfaces of said inwardly extending flange portions to prevent relative separation between said inwardly extending flange portions, and rigid coupling means located within the end portions of said tubes and between the inner surfaces of said tubes and the outer surface of said gasket, said coupling means being constructed to provide for the application of pressure developed within said gasket to the inner sides of said flange portions, the inner surface of said gasket defining a flow passage of a size sufficient to provide for substantially unrestricted fluid flow therethrough, the tapered wall thickness of the end portions of said gasket and the interfitting relation between the end portions of the tubes and gasket being effective to develop balanced forces within the material of said gasket as a result of pressure of fluid acting against the inner surface of said gasket which assist said gasket in holding said inwardly extending flange portions against relative separation.

2,896,974
BELL AND SPIGOT JOINT WITH PLURAL FLEXIBLE LIP TYPE SEAL
Russell J. Bush, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 2, 1957, Serial No. 650,222
1 Claim. (Cl. 285—110)

The combination, comprising, a bell-mouthed sewer-tile pipe section including a base and an inner axial wall, a mating spigot sewer-tile pipe section located in substantially concentric relation thereto including an outer axial wall, both said inner and outer axial walls having surfaces subject to appreciable dimensional variation and imperfections, and an elastomeric annular seal therebetween, including, an axially elongated and substantially cylindrical main body portion inserted in spaced relation between the inner and outer wall surfaces and having one end portion adjacent to the base of the bell-mouthed section, a plurality of substantially duplicate annular inner and outer ribs each of uniform circumferential cross sec-

pling apart, a sleeve mounted upon and projecting for-

tion and including a base portion integrally attached to said cylindrical main body portion on opposite sides thereof substantially opposite each other, each rib in a free state being inclined and having a substantially triangular cross sectional configuration, said configuration being defined by an annular fillet at the jointure of said rib with said main body portion on the side of said rib in the direction of incline, a first straight side portion joined at one end to said fillet and extending from said fillet away from said main body portion for a major portion of the radial height of said rib, a convexly curved portion joined at one end to the other end of said first straight side portion, a first concavely curved portion joined at one end to the other end of said convexly curved portion and extending toward said main body portion, a second straight side portion joined at one end to the other end of said concavely curved portion and extending toward said main body portion, and a second concavely curved portion joined at one end to the other end of said second straight side portion, and at the other end to said main body portion, the chordal length of said second concavely curved portion being substantially equal to the length of said second straight side portion, said convexly



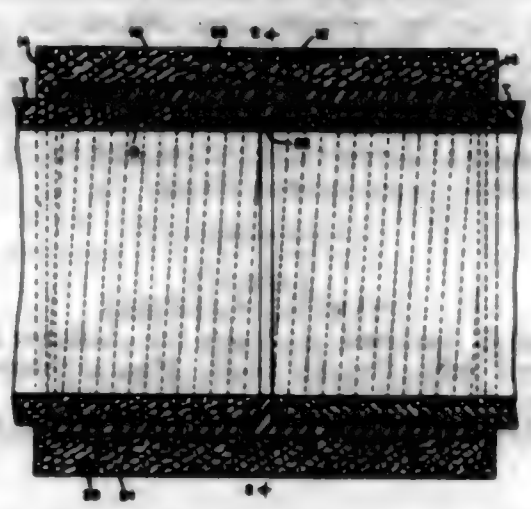
curved portion and said first concavely curved portion forming therebetween a feather edged tip extending opposite the direction of rib incline, said tip being the only portion of said rib not falling within the limits of said subetantially triangular configuration, the radial height of each rib in a free state being greater than the radial thickness of said main body portion, the axial thickness of each rib being less than its radial height, each rib being spaced from the others an axial distance greater than the axial thickness thereof, said inner ribs being inclined in a direction opposite the direction of inclination of said outer ribs, said seal being deflected from its free state with each rib bent in the direction of its incline into contact with a corresponding axial wall with subetantially the entire surface of each rib from the feather edged tip thereof to the line of juncture between the second straight side portion and the second concavely curved portion lying substantially along said corresponding axial wall, the points of maximum sealing contact for each rib being established at the points of contact of said feather edged tip and said line of juncture with said corresponding axial wall, with the first straight portion and the convex portion of each rib radially spaced from both the main body portion and the adjacent rib.

2,896,975
PIPE MANIFOLD AND METHOD OF MAKING
Ralph L. Wahl, Elgin, and Edward W. Schmecht, Chicago, Ill., assignors to Cribben and Sexton Company, Chicago, Ill., a corporation of Illinois
Application October 19, 1955, Serial No. 541,462
5 Claims. (Cl. 285—219)

1. In a manifold for gas ranges and the like, a generally cylindrical pipe, said pipe being deformed in at least one substantially semi-circumferential area thereof to reinforce the same, the deformed area comprising a flat top wall and relatively flat side walls inclined down-

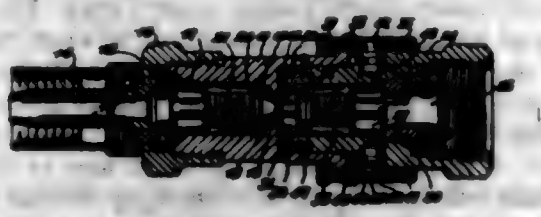
wardly and outwardly therefrom and terminating along a plane passing through the longitudinal axis of said pipe, said flat top wall having a circular opening therethrough threaded to receive a valve-equipped outlet structure.

2,896,976
PIPE COUPLING HAVING MEANS TO PROVIDE FOR COLD FLOW OF A RESILIENT SLEEVE
Sumner D. White, Detroit, Mich.
Application July 12, 1954, Serial No. 442,750
1 Claim. (Cl. 285—230)



Structure for coupling two rigid non-metallic pipes, the adjacent ends of said pipes each having formed thereon coarse external rectangular helical threads, a rigid tubular sleeve having at each end an inwardly extending abutment flange, and a tubular soft rubber connector fitted snugly within said sleeve, the ends of said connector abutting said flanges, said connector having intermediate its ends an integral radially extending annular locating and sealing flange adapted to be engaged by said pipe ends, said connector having internal threads extending from its ends to said sealing flange, said internal threads being higher and narrower than the thread grooves in said pipes, said grooves and internal threads having the same pitch, the interior surface of said sleeve having a helical V-shaped relief channel therein concentric to and in radial alignment with the threads in said connector, whereby when said connector and pipes are screwed into coupling relation said higher connector threads are distorted and said relief channel will receive displaced connector material.

2,896,977
BAYONET LOCK COUPLING
Howard J. Hansen, Bay Village, Ohio, assignor to The Hansen Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Application December 30, 1954, Serial No. 478,834
1 Claim. (Cl. 285—277)



In a pipe coupling, first and second coupling members, spring means tending to force the members of the cou-

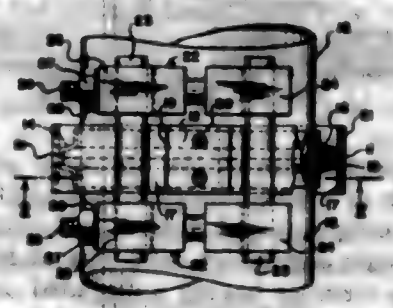
pling apart, a sleeve mounted upon and projecting forward from the first of said members, a plurality of radial pins set into the second member, the projecting portion of said sleeve slidably receiving a portion of said second member and having bayonet slot means therein adapted to receive said pins, each of said slot means having a longitudinal portion and a lateral offset portion, each offset portion being shaped to provide a cavity extending generally parallel to the longitudinal portion in the direction toward the open end of the slot, each of said pins being a separate element having a base radially insertable into a bore in the second member, said base and said bore having laterally interlocking deformed means normally preventing radial movement of said pin, the outer end of said base being substantially flush with the said portion of said second member, said pin having an extension portion projecting radially from said outer surfaces of said base and being reduced in size with respect to said base and said bore forming a shoulder at said outer end, said bore being larger than the offset portions of said slot means and said extension portion of said pins being of less size than said slot means whereby said second member may be inserted into the projecting portion of said sleeve with the extension portions of the pins passing axially and circumferentially in said slot means and whereby said shoulder means will underlie said sleeve member adjacent said slot means and prevent accidental loss of said pin means.

2,896,978

FLANGED PIPE COUPLING HAVING AN EXTERNAL WELDED BAND CLAMP

Ernest A. Schumacher, Baltimore County, Md., assignor to The Martin Company, Middle River, Md., a corporation of Maryland

Application May 24, 1956, Serial No. 587,695
2 Claims. (Cl. 285—408)



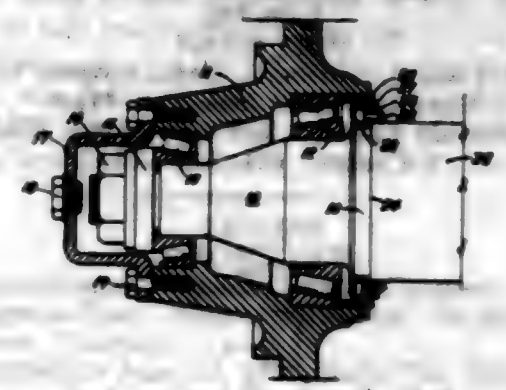
1. A semi-permanent duct assembly comprising in combination a pair of duct sections aligned in end-to-end relation, each of said duct sections having an outwardly extending flange at one end, coupling means for engaging said flanges to retain said ducts tightly in end-to-end relation comprising at least one arcuate coupling element having a recess therein adapted to be received over said flanges, and a flexible sheet metal band adapted to be encircled about said coupling means, with one end of said band in exposed, overlapping relationship, said coupling means being of less circumference than the circumference of said flanges so as to leave space between the ends of said coupling means, said band being maintained under tension, to hold said coupling means tightly about said flanges, by said exposed end of said band being welded to said band so that the ends of said band are in contact with each other only on their overlapping surfaces, whereby said band can be quickly removed by inserting a cutter in the space between the ends of said coupling means and severing said sheet metal band, thereby providing access to said coupling means and in turn said duct assembly.

2,896,979

HUB SEALING MEANS

Allen J. Stephens, Denver, Colo.

Application May 9, 1958, Serial No. 734,212
6 Claims. (Cl. 286—11)



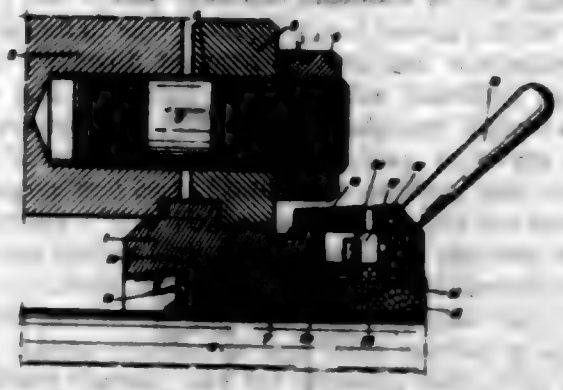
1. Means sealing a wheel hub on an axle spindle comprising: a hub ring fitted in said hub about said spindle; an annular throat member projecting radially inward from said hub ring toward said spindle; a sealing ring sleeve fitted over said spindle within said hub ring; an annular skirt carried by said sealing ring sleeve, said skirt projecting axially toward and into contact with said throat member; resilient means formed on and connecting said skirt and sleeve and acting to continuously urge said skirt in an axial direction toward said throat member; and an annular rigid confining band positioned to prevent radial expansion of said skirt.

2,896,980

PISTON ROD STUFFING BOXES

Leonide Dicky, Paris, France, assignor to S. N. Marep, Paris, France, a corporation of France

Application March 22, 1956, Serial No. 573,273
Claims priority, application France April 1, 1955
2 Claims. (Cl. 286—34)



1. In a stuffing box for a piston rod movably mounted in a member having a pressurized cavity within which the piston moves, in combination, a stuffing box body rigidly secured in said member cavity, a conical opening through the stuffing box body with the small end of the opening facing inwardly of the member cavity, a resilient packing ring having a conical body portion corresponding to the conicity of the stuffing box opening and having an axially extending cylindrical extension on the periphery of the small end of the packing ring, a cylindrical cavity extending through said packing ring receiving said piston rod, said packing ring being disposed within said stuffing box cavity with the larger end of the packing ring exposed for application of a force moving the ring inwardly of the said stuffing box cavity and the smaller end disposed wholly within the said cavity, a presser member movably mounted on said stuffing box for application of pressure against the large end of the packing ring, said presser member upon advancement of the packing ring along the stuffing box cavity causing compression of the ring into contact with said piston rod and the deformation of the cylindrical peripheral extension of the packing ring into conformity with the conical face of the stuffing box providing addi-

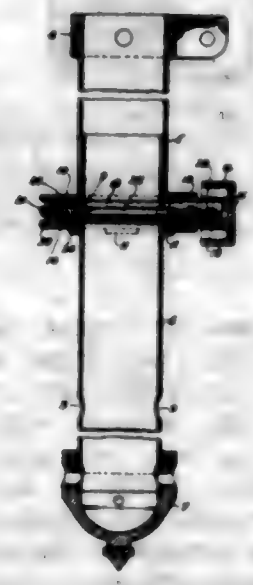
erally cylindrical pipe, said pipe being deformed in at spring means tending to force the members of the cou-

tional pressure of the small end of the packing ring upon the piston rod and the conical face of the stuffing box.

2,896,981
ROD JOINT
James S. Coomey, Attleboro, Mass., assignor to Pylon Company, Inc., Attleboro, Mass.
Application August 5, 1953, Serial No. 372,562
2 Claims. (Cl. 287—20.5)

2. A permanently joined structure comprising a sheet metal terminal having a sleeve struck up thereon at one end, the interior of said sleeve being of a first metal and the exterior thereof being of a second metal, said metals being firmly bonded together; and a solid wire end extending into said sleeve, said wire being of said first metal; said sleeve and said wire being upset to provide a head on said wire end snugly enveloped by said upset sleeve on all sides, including at least portions of the top and underneath surfaces of said head, that portion of said upset sleeve which lies adjacent said underneath surface being in the form of squeezed-together return fold layers of the material of said sleeve.

2,896,982
ADJUSTABLE LEG OR THE LIKE
Bernard E. Wallace, Exton, Pa.
Application June 6, 1957, Serial No. 663,957
8 Claims. (Cl. 287—58)

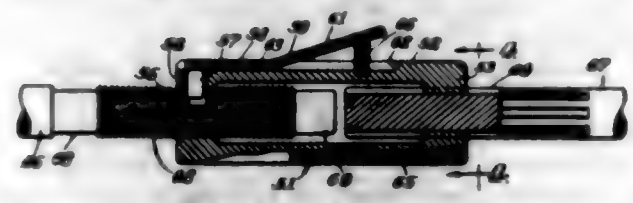


1. An adjustable leg or the like comprising a pair of telescoping members the outer of which is provided at one end with a collar, opposed transverse bolt holes in the collar and the adjacent wall of the said outer member, a bolt adapted to slide in said holes, a longitudinal slot on the side of the bolt, a transverse slot near the inner end of the bolt crossing said longitudinal slot, a pin carried by the collar and arranged to project inwardly from the collar into said slots, a series of pairs of opposed bolt holes in the inner member adapted to be aligned with the holes in the outer member upon relative movement between the members, and spring means biasing the bolt inwardly, the bolt being adapted to be held in its outmost position upon rotation theretof to bring said transverse slot into register with said pin.

2,896,983
PIVOTED COUPLING AND SHIM THEREFOR
Orton G. Stone, Bloomingdale, Mich.
Application April 8, 1955, Serial No. 500,248
3 Claims. (Cl. 287—100)

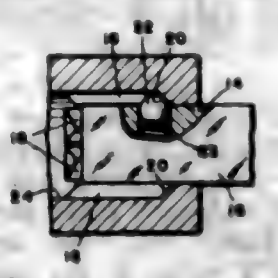
1. A shim adapted for use in journal connected couplings, the shim comprising a body member having a concavely curved edge, a flat side surface extending along and radially outwardly from said edge, and a beveled side surface on the opposite side from said flat surface comprising concentric beveled areas of substantial radial width extending outwardly from said edge and of substantially different pitch, the pitch of the inner area adjacent said edge being substantially less than that of the surrounding area and merging into the same, the body member having a hole adjacent one end thereof and an outwardly opening notch in its outer edge adjacent the other end thereof, and a helically coiled spring, one end of which is retainingly engaged in said hole and the other end terminating in an eye detachably engageable in said notch, the spring acting to impart yielding thrust to the body member when the shim is operatively associated with coacting journalled coupling members.

2,896,984
SHAFT COUPLING
Edward J. Schaefer, Fort Wayne, Ind.
Application December 28, 1956, Serial No. 631,190
11 Claims. (Cl. 287—108)



1. A coupling device of the character described, comprising a pair of substantially aligned shafts, a coupling member for coupling said shafts, said coupling member having a driving connection with one of said shafts, and said coupling member having a threaded connection with the other of said shafts, and releasable means on said coupling member engageable in driving relation with said other shaft in only one position rotatively and longitudinally of said other shaft.

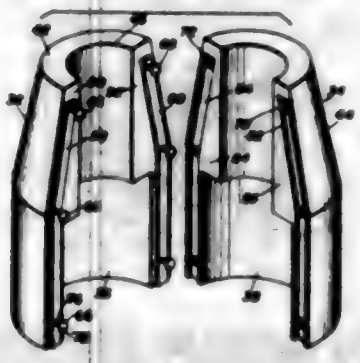
2,896,985
SOCKET
Willi Brantz, Sherbrooke, Quebec, Canada, assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Application August 28, 1956, Serial No. 604,920
3 Claims. (Cl. 287—119)



1. A socket element to be rotated by a rotatable member having a detent, comprising a tubular member having a socket formed at one end portion thereof adapted to receive a fastener and having an opening at the opposite end portion thereof adapted to receive the

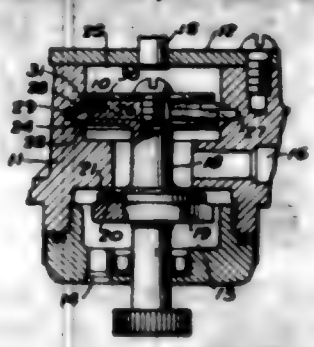
rotatable member, said opening being defined by flat surfaces formed in the inner periphery of said tubular member, and a longitudinal groove formed in one of said surfaces adapted to receive the detent to releasably engage the rotatable member to the socket and terminating short of the end of the last said portion to effect such engagement, said rotatable member being removable from said element by only relative longitudinal movement therebetween.

2,896,986
TELEVISION MAST FREEZE GROMMET
Berto Scampo, Cherry, Ill.
Application June 13, 1955, Serial No. 514,958
2 Claims. (Cl. 288—19)



1. A television mast grommet comprising a pair of grommet sections made of resilient material, each of said sections having a hollow semi-cylindrical portion and an integrally connected truncated semi-conical portion, said semi-cylindrical portions having a bore, said truncated semi-conical portions having a bore coaxial with the bore of said semi-cylindrical portion and of a smaller diameter, said coaxial axes constituting a longitudinal central axis of the grommet sections, said sections having pairs of abutting longitudinal walls with parts thereof parallel to said central axis, the walls of one of said sections having longitudinally extending tongues thereon with parts of said tongues parallel to said central axis, the walls of the other of said sections having longitudinally extending grooves therein with parts of said grooves parallel to said central axis, projections on said tongues, said projections having stems and enlarged heads at the outer ends of said stems, said walls with said grooves having recesses which communicate with said grooves, said stems and heads of said projections interlocking in said recesses and said tongues seated in said grooves to hold said sections fastened together.

2,896,987
PRESSURE SEAL STRUCTURE
Theodore F. W. Meyer, Delray Beach, Fla., assignor to Equi-Flex Products, Incorporated, Detroit, Mich., a corporation of Michigan
Application December 9, 1955, Serial No. 552,867
13 Claims. (Cl. 288—19)



1. In an apparatus having two elements mounted for relative linear movement and having means forming generally apposed grooves, a seal for providing a fluid tight seal between said elements, said seal being formed of a relatively flexible material such as rubber, plastic or the like, said seal having one edge portion engaged within a groove in one of said elements and having another edge portion engaged within a groove on the other of said elements so that said seal extends generally transversely of the direction of relative movement of said elements, said seal being flexible responsively to fluid pressure at one side of said seal so that at least one of said edge portions sealingly engages against its respective groove wall, said seal also being flexible between said edge portions to facilitate relative linear movement of said elements while the seal at said one edge portion is maintained.

2,896,988
DOOR LOCK
Erwin Hitzelberger, Stuttgart-Rohr, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Application May 23, 1955, Serial No. 510,322
In Germany October 1, 1948
Public Law 619, August 23, 1954
Patent expires October 1, 1968
7 Claims. (Cl. 292—83)

1. A door lock comprising a support including a front plate, a leaf spring member mounted on the inside and near one end of said front plate and having a main portion integral therewith adapted for resilient movement relative to said end, said main portion including an upper spring portion and a bent portion adjacent thereto and adjacent the middle of said main portion, said bent portion overhanging one end of said main portion, said bent portion forming a latch portion adapted to lock the door, said front plate having an actuating member adjacent said one end for positively moving said one end and thereby moving said main portion for positively moving said main portion from a closing position of said latch portion to an opening position thereof, and for releasing said main portion so as to enable movement of said latch portion to the closing position by the resilience of said leaf spring member, said front plate having an upper closure portion extending over said upper spring portion, said front plate further having a lower closure portion extending over said actuating member, said upper closure portion and said lower closure portion having spaced parts providing an aperture through which said latch portion projects.

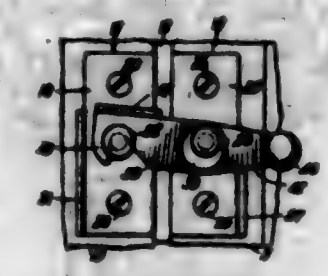
2,896,989
CAM TYPE LATCH
Yale W. Ehret, Elkhart, Ind., assignor to The Adlake Company, Elkhart, Ind., a corporation of Illinois
Application October 2, 1957, Serial No. 687,681
2 Claims. (Cl. 292—114)

1. In a device for successively latching and drawing together a pair of relatively movable sash members or the like into tightly locked edgewise abutting engagement, a latch mechanism comprising, a mounting plate attachable to one of the members adjacent the abutting edge thereof, a cylindrical mounting pin secured to said plate and projecting normally therefrom, said pin having an enlarged head portion at its outer end, a cylindrical bushing having a longitudinally extending bore extending therethrough with the axis of said bore being disposed

held in its outmost position upon rotation theretof to bring said transverse slot into register with said pin.

having a socket formed at one end portion thereof adapted to receive a fastener and having an opening at the opposite end portion thereof adapted to receive the

intermediate the axis and periphery of said bushing, the bore in said bushing being of a size to receive said mounting pin whereby said bushing is freely and eccentrically rotatable on said pin intermediate said mounting plate and said enlarged head portion of said pin, an elongated locking lever having one end secured to said bushing for rotating the same relative to said mounting pin, knob means on the other end of said lever for rotating the same, an elongated latch arm having one end cylindrically bored and disposed about said bushing for free rotation relative to said bushing and the locking lever secured thereto, hook means formed on the other end of said latch arm for latching engagement with a keeper pin mounted adjacent the abutting edge of the other relatively movable member, and finger-engageable means on



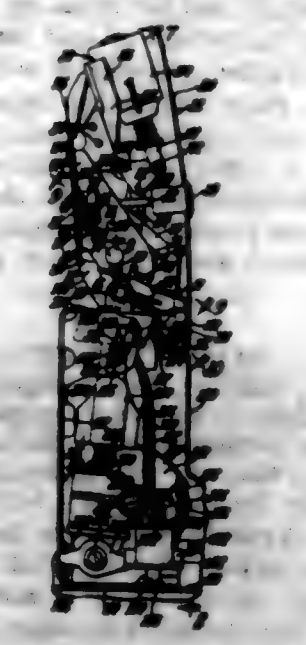
said latch arm for rotating said latch arm into latching engagement with the keeper pin when said bushing is in a first position determined by said lever in which the center axis of said bushing is disposed between the keeper pin and said mounting pin, said bushing then being adapted to be rotated by said locking lever relative to said hooked latch arm from said first position to a second position in which said mounting pin is disposed between the keeper pin and the axis of said bushing, the eccentricity of said bushing during said rotation thereof by said locking lever between said first and second positions drawing the hook engaged keeper pin and said mounting pin toward each other and providing a positive, over-center locking action for tightly locking the two relatively movable members in abutting engagement.

2,896,990

VEHICLE CLOSURE LATCH

Louis P. Garvey, Detroit, and Clyde H. Schamel, Royal Oak, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application January 6, 1956, Serial No. 557,713
13 Claims. (Cl. 292—229)



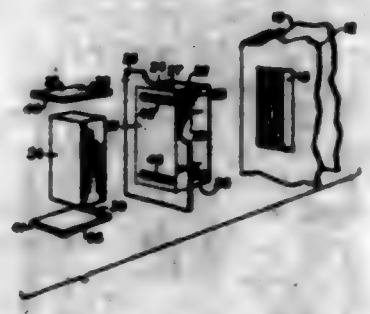
1. In a latch mechanism, the combination comprising, latch means movable to locked and unlocked positions, striker means bodily movable to a number of positions and being engageable by said latch means in locked position in at least one of said positions, means for bodily moving said striker means to said number of positions, and control means actuated by movement of said latch means from locked to unlocked positions when said striker means is in said one of said positions for actuating said means to bodily move said striker means from said one of said positions to another of said positions.

2,896,991

MAGNETIC DOOR HOLDER

William C. Martin, Jr., Wooster, Ohio, assignor to Magni-Power Company, Wooster, Ohio, a corporation of Ohio

Application July 17, 1956, Serial No. 598,292
3 Claims. (Cl. 292—251.5)



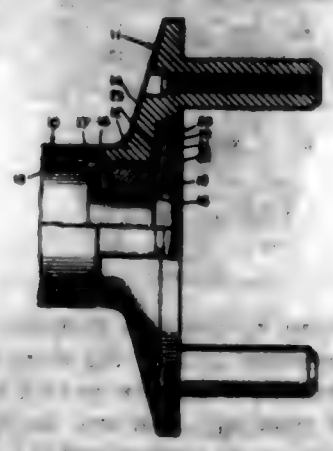
1. A magnetic door holder assembly adapted for repeated insertion in an aperture in a panel comprising; a housing having a face wall, a back wall and first and second side walls; the walls defining a magnet cavity therebetween, a permanent magnet disposed in said cavity, said face wall having first and second pole piece apertures therein, first and second pole pieces in abutment with the ends of the magnet and each extending into one of the pole piece apertures, said face wall including laterally extending flange portions extending outwardly past said side walls, said side walls each having at least one external rib projection disposed transversely with respect to said flange portions, said external ribs each having first and second ends and a tapering thickness dimension increasing from the first to the second end, the second end of each rib being disposed between the first end and one of the flange portions, the second end of each rib being spaced from said flange portion to define a panel receiving recess therebetween, said housing being formed of a yieldable material, and said walls including the ribs being yieldable to permit repeated positioning of the entire assembly in a panel aperture with side edges of the panel disposed in said recesses and to permit repeated removal therefrom of the entire assembly as a unit.

2,896,992

KNOB MOUNTING AND SECURING MEANS

Mathias M. Check, Valley Forge, Pa., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut

Application April 25, 1955, Serial No. 503,637
3 Claims. (Cl. 292—346)



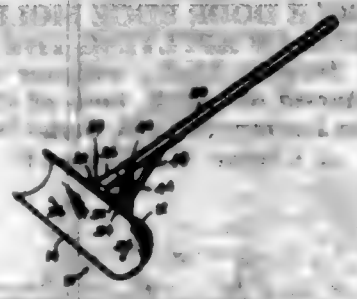
1. In a knob mounting of the type in which a shank on the knob rotates in an opening in a mounting member

latch pivot pin axis being straight, and said latch-hook aligned engaging sides co-operating by their engagement

entire outer periphery of the body above the belt line, longitudinally extending cantilever beam means provid-

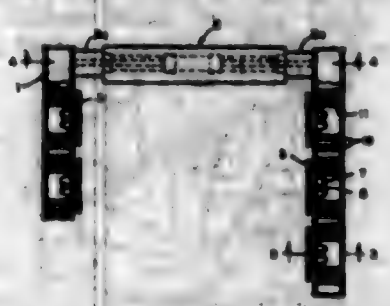
in bearing relation thereto, with a portion on the shank spun over an end surface of the mounting member to retain the knob, the improvement comprising a washer between said spun over portion of the knob shank and said end surface of the mounting member, said washer formed with an opening, and a portion of said shank spun into said opening in said washer to lock said washer to said knob so that said washer rotates with the knob relatively to said mounting member.

2,896,993
SNOW SHOVEL
Joseph A. Pollock, Des Moines, Iowa
Application February 11, 1957, Serial No. 639,318
5 Claims. (Cl. 294—54)



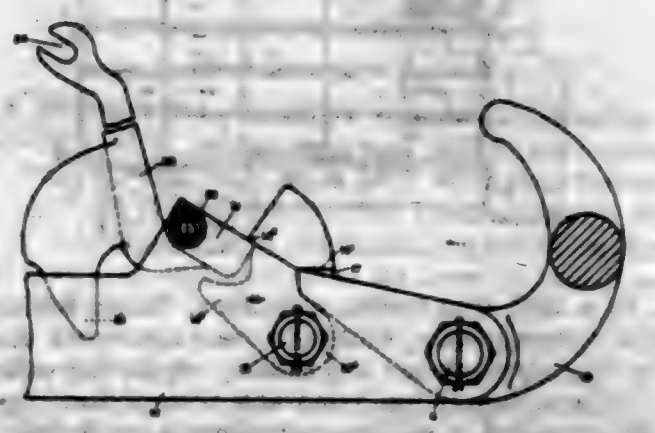
1. In a manually operated push type shovel having a blade and handle extending therefrom, a means to selectively turn said blade to the right and left relative to the direction of travel while said blade is being pushed, said means comprising a tubular collar pivotally secured at one end to the rear of said blade so as to limit said collar to only a lateral pivotal movement relative to said blade, a pair of rigid braces each pivotally connected at one respective end to opposite end portions of said blade on the rear side thereof, said braces converging rearwardly of said blade with their other respective ends being pivotally connected at a point spaced below said collar, a rigid strap connected at one end to said handle and pivotally connected at the other end to the converged ends of said braces, one end portion of said handle slidably rotatably disposed within said collar, and said handle rotatable about its longitudinal axis in two opposite directions respectively whereby said converged ends of said braces will move in the opposite direction said handle is rotated and said blade is turned in the direction of the rotation.

2,896,994
CLAMPING DEVICE FOR INDUSTRIAL TRUCKS
Herbert Fischer, Mulheim (Ruhr), Germany, assignor to Ruhr Intrans Hubstapler G.m.b.H., a German company
Application March 22, 1955, Serial No. 495,968
Claims priority, application Germany March 24, 1954
8 Claims. (Cl. 294—63)



1. In a clamping device, a pair of straight hollow jaw members positioned in spaced apart parallel relation, means for operating said jaw members toward and away from each other, a plurality of pairs of flat longitudinally extending clamp pads mounted on the said jaw members, the different ones of each pair of pads being located respectively on opposite jaw members in confronting relation, a guide member rigidly connected centrally on the back of each pad and extending through an opening in a jaw member, a pair of trunnion portions on each said guide member within the jaw member, a pair of brackets for each guide member connected to the jaw member, the said brackets having recesses therein arranged to receive the said trunnion portions for providing seats for the trunnion portions when the clamp pads are at rest and guides for the trunnion portions when the pads move, a pair of annular disc springs for each pad located adjacent the ends thereof and within the adjacent jaw member, pin means between each said spring and the adjacent end of a pad for transmitting the force of the spring to the pad, and the said springs and trunnion members and brackets being arranged so that each pad is yieldable when material is being clamped between a pair of pads and is rockable about a rectilinearly movable vertical axis.

2,896,995
PIVOTALLY-MOUNTED MOORING HOOK
Robert Randolph Stephens, London, England, assignor to The Monarch Controller Company Limited, London, England, a British company
Application July 17, 1956, Serial No. 598,372
4 Claims. (Cl. 294—83)



1. A device for locking a pivotally mounted hook in operative position in which it is to be engaged by one end of a cable or like member and for subsequently releasing the lock to enable the hook to drop into a position in which it releases said cable or like member, said device comprising two horizontally spaced elongate side plates, three pivot pins connected between the side plates so as to extend there across in parallel spaced relationship longitudinally of the side plates, a hook, having outer and inner ends, pivotally mounted between said plates and between its ends on the pivot pin nearest one end of the plates with its outer or hooked end projecting from the side plates at said end substantially longitudinally of the elongate plates and tending to drop around its said pivot pin normal to said pin axis under the action of gravity, a locking and releasing latch pivotally mounted on the intermediate of said pivot pins and a two-armed lever having long and short arms pivotally mounted on the third of said pivot pins, the latch having a section extending from one side of its pivot pin, said section being notched on opposite sides, one notch facing the hook pivot pin and the other the lever pivot pin, the notch facing the hook pivot pin having one side facing and parallel to the latch pivot pin axis and substantially normal to and intersecting a plane through the axis of the latch pivot pin, said hook inner end being longer than the distance between the pivot pin centers of the hook and latch and at its extremity extending into the latch notch facing the hook pivot pin and having one side aligned with and engaging the pivot pin parallel notch side on the latch when in latch-hook locking position, lines in the aligned sides normal to the plane through the

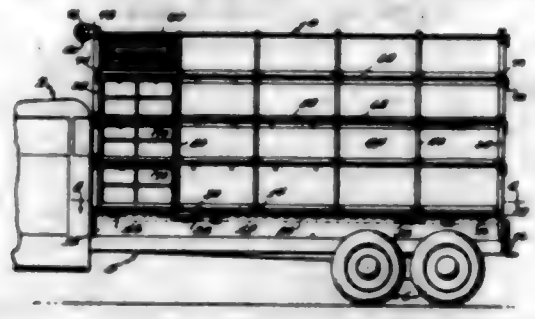
adapted to receive the latch means when the latch means is operative, the keeper having a latch means receiving raised ridges extending to the extremity of the trailing edge of the door and resulting in a trailing edge having

strict means bodily movable to a number of positions and being engageable by said latch means in locked position in at least one of said positions, means for bodily

1. In a knob mounting of the type in which a shank on the knob rotates in an opening in a mounting member

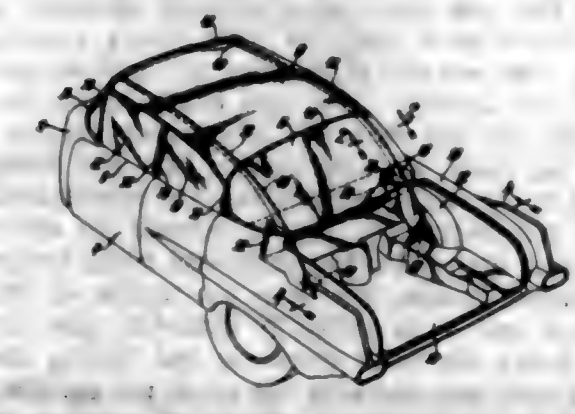
latch pivot pin axis being straight, and said latch-hook aligned engaging sides co-operating by their engagement in the locking position of said latch to restrain releasing movement of said hook, the short arm of said lever extending and being movable within the latch notch facing the lever pivot pin and means to urge the lever into latch locking position, the arrangement being such that on turning said lever in one direction the end of its short arm is pressed against one latch notch side in the notch facing the lever pivot pin to thereby turn said latch into and hold it in said locking position, whilst on turning said lever in the opposite direction the end of said short lever arm is pressed against the other latch notch side of said last named notch to thereby turn said latch into the release position in which said hook is released from said latch, whereupon said hook drops around its pivot pin into the release position.

2,896,996
FOWL TRANSPORTER
William M. Atwater, Pittsboro, and Paul B. McCoy, New Hill, N.C.
Application April 24, 1958, Serial No. 730,555
1 Claim. (Cl. 296—3)



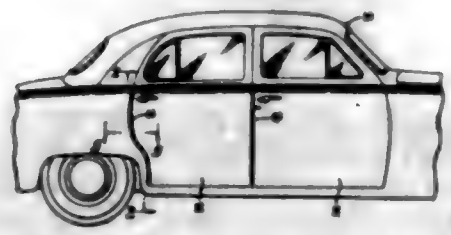
In a fowl transporter, a sectional frame having fowl cage compartments: transverse tracks mounted upon the the transporter chassis and slidably supporting sections of said frame; hinged top, removable bottom fowl cages slidably contained in said compartments; a crank shaft juxtaposed with said transverse tracks; cable and pulley means interconnecting said sections of said frame and said crank shaft, said crank shaft selectively separating and joining said sections; and a folding platform attached to an abutting side of one of said sections, outer access to said slidably contained cages within said sections being from without the transporter and inner access being provided by separation of said sections and being facilitated by said folding platform.

2,896,997
AUTOMOTIVE VEHICLE BODY
Gelasio F. Garcia, Detroit, and Joseph R. Schemansky, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application July 3, 1957, Serial No. 669,871
5 Claims. (Cl. 296—28)



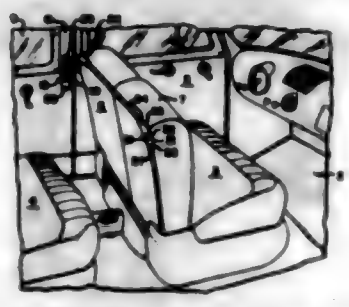
1. In an automotive vehicle body having a roof and side, front and rear windows defining substantially the entire outer periphery of the body above the belt line, longitudinally extending cantilever beam means providing the sole support for the roof rearwardly of said front window and having its free end terminating rearwardly of the front window, said beam means extending along the underside of the roof and downwardly from the rear end thereof in spaced relation interiorly of the body from said side and rear windows, whereby the supporting of said roof does not interrupt the continuity of transparency of said body periphery rearwardly of the front window, and means within the body fixedly anchoring the rearwardly and downwardly extended end of the beam means below the belt line.

2,896,998
AUTOMOBILE DOOR EDGE MOLDING AND METHOD OF APPLYING THE SAME
Robert Adell, Detroit, Mich., assignor to Franklin Z. Adell and Marvin M. Adell, both of Detroit, Mich.
Application January 3, 1955, Serial No. 479,380
1 Claim. (Cl. 296—44)



In an automobile body having a door with a trailing edge, a plurality of spring steel clips provided on said edges, each of said clips being bent to a generally U-shaped cross section to provide an inner leg and an outer leg and a rounded connecting portion, at least one retaining tooth provided on the inner leg of each clip and pointing away from said rounded portion, said clips embracing the trailing edge and exerting resilient pressure thereon for retaining themselves in place on the edge, an ornamental and edge protective molding originally comprising a straight strip having a U-shaped cross section and made of relatively soft sheet metal adapting said strip to be bent beyond its elastic limit by hand and to retain the form so imparted to it without appreciable spring-back, said piece being fitted over said clips to cover said trailing edge and bent in the process of such fitting to the longitudinal curvature corresponding to that of the trailing edge.

2,896,999
SAFETY DEVICE FOR VEHICLES
Boles Liebenstine, Du Bois, Pa.
Application November 29, 1955, Serial No. 549,619
1 Claim. (Cl. 296—44)



In a vehicle, a body, a seat having a foldable back in the body, latch means adapted to be rendered operative and inoperative at will extending when operative between the upper portion of the foldable back of the seat and a portion of the body generally at the side of the upper portion of the foldable back of the seat for holding the foldable back of the seat against folding and a keeper

said body to mount said top thereon for movement be-

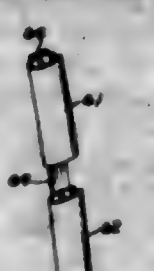
side edges thereof and transverse walls extending in-

adapted to receive the latch means when the latch means is operative, the keeper having a latch means receiving slot and a spring member behind the slot to resiliently engage the latch means and thereby assist in maintaining it in operative position.

2,897,000
PIVOTED ARM REST ASSEMBLY FOR VEHICLE BODY
Peter McBride Hart, Royal Oak, and Aloys Charles Hoilerbach, Grosse Pointe Park, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 12, 1956, Serial No. 627,850
5 Claims. (Cl. 296—44)

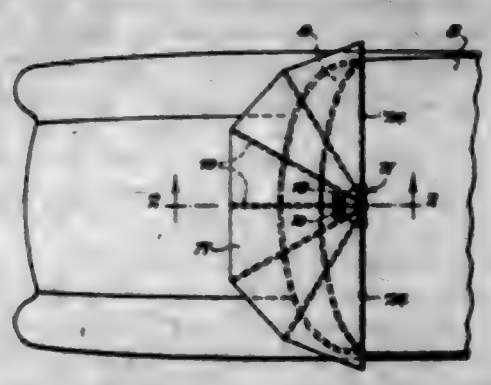
1. In combination with a vehicle body panel having an opening therein, an arm rest support having opposite sides, an arm rest mounted on one side of said support, hinge pin means secured to said support, means rotatably mounting said hinge pin means on said panel to thereby mount said support on said panel for movement between a first position wherein said one side of said support fits within said opening substantially flush with said panel, with said arm rest being disposed outwardly thereof in an operative position, and a second position wherein the opposite side of said support fits within said opening substantially flush with said panel, with said arm rest being disposed inwardly thereof in an out of the way position, and means on said panel engageable with said hinge pin means in said first and second positions of said support to resiliently retain said support in each of said positions against movement toward the other of said positions.

2,897,001
ORNAMENTAL AND PROTECTIVE MOLDING FOR AUTOMOBILE DOOR EDGES
Robert Adell, Detroit, Mich.
Application December 31, 1957, Serial No. 706,320
1 Claim. (Cl. 296—44)



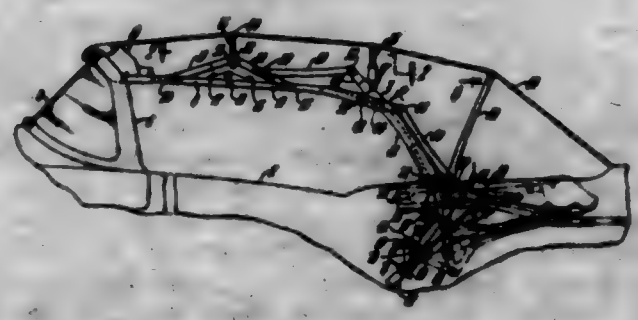
An ornamental and edge protective molding for an automobile door having its outside surface provided with raised ridges extending to the extremity of the trailing edge of the door and resulting in a trailing edge having its thickness vary along its length because of said ridges, said molding comprising an elongated flat strip of metal and a plurality of molding sections of a U shape cross section spot welded to said strip to provide a molding adapted to cover said trailing edge only in those places of the trailing edge which are free from said ridges.

2,897,002
RAIN VISOR FOR AUTOMOBILES
Frederick Yovich, Buffalo, N.Y., assignor of one-half to Frank Cletti, Weirton, W. Va.
Application August 19, 1957, Serial No. 678,879
3 Claims. (Cl. 296—95)



1. A rain visor for automobile windshields including a supporting member having upper and lower plates spaced apart, stays having their inner ends extending between said plates and pivoted thereto, said plates engaging said stays to hold the same in substantially parallel relation to said plates, an arm secured to the lower of said plates and extending forwardly therefrom, a suction cup secured to the front end of said arm in position to engage the top of the automobile, another suction cup mounted on the rear end of said lower plate for cooperation with said automobile top, a flexible sheet of waterproof material to which said stays are secured at intervals, two of said stays being mounted to swing outwardly toward the opposite sides of said supporting member, and suction cups mounted on said last mentioned stays for cooperation with the automobile top to hold said last mentioned two stays in their outer positions to spread said flexible material over the windshield above the same.

2,897,003
CONVERTIBLE TOP LINKAGE AND ACTUATING MEANS
Joseph L. Leiß, Birmingham, and Samuel C. Pollock, Royal Oak, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 26, 1955, Serial No. 509,843
5 Claims. (Cl. 296—117)

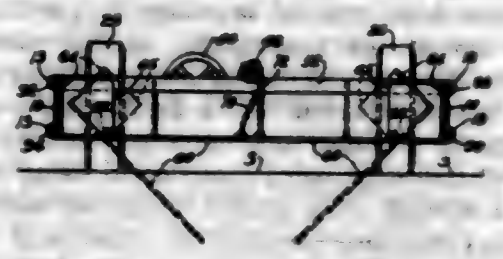


1. In a convertible vehicle body, the combination comprising, a foldable top frame including a rear rail section, means swingably mounting said rear rail section on

2,897,006

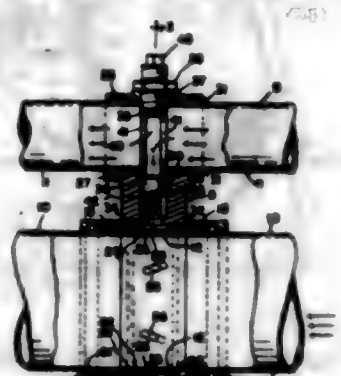
said body to mount said top thereon for movement between raised and lowered positions, operating means for so moving said top frame, power arm means pivotally connected adjacent one end thereof to said top frame for controlling the folding and unfolding movement thereof, lever means pivoted on said rear rail section at a point spaced radially from the pivot of said rear rail section on said body for swinging movement of said lever means with said rail section and swinging movement thereon, means pivotally interconnecting said lever means and said power arm means adjacent the other end of said power arm means, link means swingably mounted on said body at a point spaced radially from the pivot of said rear rail section on said body for swinging movement in the same direction as said rear rail section and in a different arc than said lever means, and means pivotally connecting said link means to said lever means to control swinging movement of said lever means about its pivot on said rear rail section upon swinging movement of said rail section and lever means about the pivot of said rail section on said body, the several pivots of said lever means and link means and the length of said link means being arranged such that said link means biases said lever means in an opposite direction about the pivot thereof on said rear rail section than the direction of swinging movement of said rear rail section to thereby place a variable restraint upon the action of said power arm means.

2,897,904
MINE VEHICLE
Kenneth M. Sheets, Richlands, Va.
Application December 6, 1955, Serial No. 551,364
1 Claim. (Cl. 298—25)



As a vehicle for use mainly in thin seam coal mining operations, a shuttle car the maximum width of which is slightly less than half the maximum length thereof and the maximum height of which is approximately one-third of said width, said car comprising: a frame including vertical side walls extending along the respective sides of the car at locations at which said car is of maximum width; front and rear wheels rotatably mounted upon and rollably supporting said frame in positions offset laterally inwardly from the respective side walls, said side walls defining between them a load-receiving, generally rectangular compartment at the corners of which the several wheels are disposed, said frame being formed open over the area of the bottom of the compartment; a pair of doors pivotally mounted upon the frame, the pivot axes of the doors extending longitudinally of the car at locations paralleling and spaced laterally inwardly from the side walls, said doors being swingable on their pivots between normally closed and open, load-discharging positions, the doors having inner side edges abutting in the closed positions of the doors and having outer side edges in close proximity to the respective, adjacent side walls, the pivot axes of the doors being spaced inwardly from said outer side edges thereof whereby the outer side edges of the doors move upwardly and the inner side edges downwardly when the doors swing to said open positions thereof, the doors including upstanding longitudinal walls formed upon said outer side edges thereof and transverse walls extending inwardly from the respective ends of the longitudinal walls of the several corners of the compartment, said longitudinal and transverse walls of the doors being equal in height to the height of the side walls of the frame, the several transverse walls extending the full distance between the outer side edges of the doors and the adjacent pivot axes of the doors; and frame-supported, door-suspension means connected to the doors and operative under the control of a user to return the doors to their closed positions following movement thereof to their open, load-discharging positions.

2,897,905
FLUIDIZED PRESSURE SYSTEM
Sumner D. Wiltse, Detroit, Mich.
Application March 11, 1957, Serial No. 645,117
10 Claims. (Cl. 302—24)



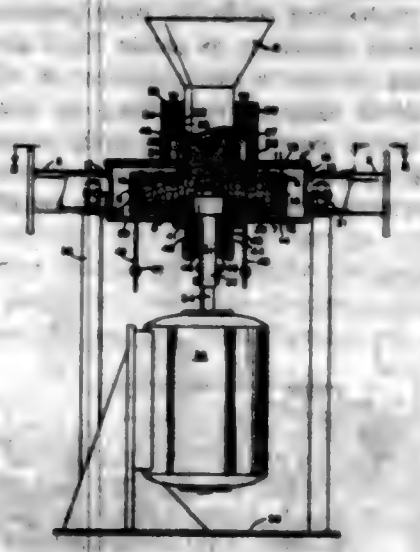
1. In a system of the class described, a main conduit through which fluidized material under pressure may be conveyed, a separate auxiliary conduit through which a fluid under pressure may be conveyed, said main conduit comprising a series of longitudinally spaced tubes and tubular spacers between and anchored to adjacent ends of said tubes, the inside diameter of said spacers being substantially the same as the inside diameter of said tubes so that the passage between adjacent tubes is uninterrupted, said auxiliary conduit being spaced laterally from and substantially parallel to said main conduit, said auxiliary conduit comprising a series of longitudinally spaced tubes, fittings having portions embracing adjacent ends of the tubes of said auxiliary conduit and having tubular portions sleeved upon said tubular spacers, means for conducting fluid under pressure from said auxiliary conduit to said main conduit to serve as a booster for said fluidized material, including annular passages between said tubular spacers and the tubular portions of said fittings, passages in said fittings in communication with said annular passages in said tubular spacers, and passages inclining from said annular passages at diametrically spaced points thereof and opening into said main conduit in the direction of travel of fluidized material therein, and means controlling the supply of fluid under pressure from said auxiliary conduit to said main conduit including spring pressed valves in the passages in said fittings, and rotatable members between and serving as spacers for the adjacent ends of the tubes of said auxiliary conduit, said rotatable members threadedly engaging portions aforesaid of said fittings and having end portions within the passages in said fittings serving as seats for said spring pressed valves, said rotatable members having passages for admitting fluid under pressure from the interior of said auxiliary conduit to said valve seats and being accessible and adjustable from the exterior of said fittings to vary the tension of the valve springs to vary the action of said valves.

2,897,906

PARTICLE-FORM SOLID MATERIAL SUPPLY APPARATUS

Donald MacK. McLaren, Glasgow, Scotland, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Application March 28, 1956, Serial No. 574,506
19 Claims. (Cl. 302—36)



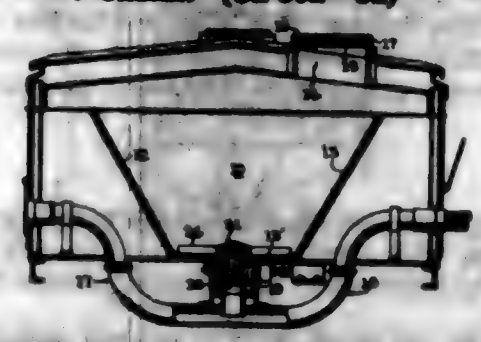
1. In a system for supplying particle-form solid material from a region containing gaseous fluid at one pressure to a region containing gaseous fluid at a higher pressure, a casing having an inlet for the introduction of a gaseous fluid under said higher pressure and an outlet for the discharge of said material conveyed by gaseous fluid, a hollow rotatable rotor disposed within said casing, means for introducing particle-form solid material into said rotor, sealing means providing a fluid-tight relationship between said casing and said rotor, said rotor having a discharge outlet opening to the higher pressure region and a peripheral wall constructed to constrain and compact the particle-form solid material across said rotor outlet upon the application of centrifugal force on said material to seal against flow of gaseous fluid between said regions, driving means for said rotor, extracting means in the region of higher pressure for dislodging a portion of the compacted particle-form solid material from said rotor outlet into the region of higher pressure, while the gaseous fluid under said higher pressure flowing through said casing conveys said material thus dislodged through said casing outlet to a point of use, and means responsive to a change in the weight of said material in said rotor for controlling the level of the material in said rotor.

2,897,907

PNEUMATIC MATERIAL HANDLING APPARATUS

Eugene A. Neeben, Alexandria, Va., assignor to Fruit Growers Express Company, Washington, D.C., a corporation of Delaware

Application October 20, 1953, Serial No. 768,233
7 Claims. (Cl. 302—52)



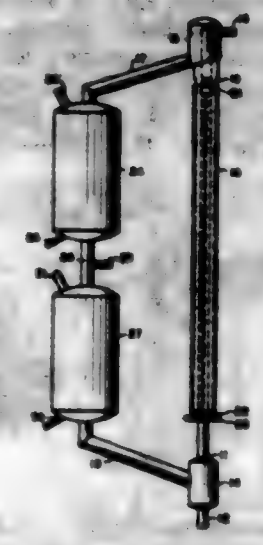
1. A pneumatically unloadable railway car for transporting finely divided bulk material comprising in combination: means defining a closed lading space having a floor of substantially less area than the upper portion thereof and a centrally positioned material outlet aperture; an open top closed housing exterior of said lading space and enclosing said outlet aperture; means for connecting said housing to a source of vacuum; an open bottom closed top reciprocable carriage slidably mounted on said floor and defining therewith a closed fluid conduit opening continuously to said aperture; a pair of suction nozzles, one mounted on each end of said carriage and communicating with the interior thereof; and means within said housing operative when energized to reciprocate said carriage longitudinally of said lading space over said outlet aperture.

2,897,908

PEBBLE FLOW RATE CONTROLLER

Lloyd E. Dean, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application December 21, 1953, Serial No. 399,477
5 Claims. (Cl. 302—53)



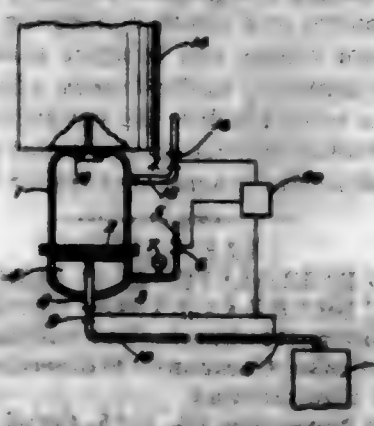
1. A process for elevating solid particulate heat-exchange material comprising substantially spherical pebbles of a diameter in the range of about ½" to 1" from a zone of elevated temperature to a zone of substantially higher temperature which comprises suspending said material in a stream of ascending hot gas in a lift tube introduced thereto at a temperature substantially that of said pebbles so as to transport the material to a separation vessel surrounding the upper end of said tube; and substantially cooling said gas at least in a substantial uppermost section of said tube so as to reduce the transport effect of the gas and the velocity of said particulate material as it passes through the upper section of said lift tube, thereby decreasing the tendency of said material to impinge on the roof of said vessel and avoiding thermal shock to said pebbles.

2,897,909

CONVEYOR SYSTEM FOR FINE SOLIDS

Omer A. Gleaves, Jr., and John Albert Reisten, Charlottesville, Va., assignors to A-S-H Industries, Inc., Narberth, Pa., a corporation of Pennsylvania

Application November 12, 1957, Serial No. 695,842
4 Claims. (Cl. 302—53)



1. A system for handling fine solids comprising the steps of charging a quantity of fine solids into a pressure

chamber, closing the chamber, admitting air under pressure into the chamber in a manner to fluidize the solids near an outlet from the chamber and to build up a predetermined air pressure in the chamber, opening a pipe communicating with the outlet from the chamber and allowing solids and air to flow through the pipe while continuing the admission of air into the chamber, and closing the pipe at two spaced-apart places and thereby retaining a quantity of solids and air under pressure between said places, opening the chamber, recharging it with solids and air under pressure and then opening the pipe at said two spaced places.

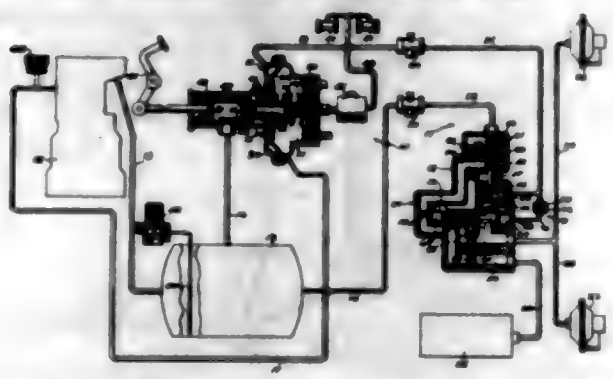
2,897,010

FLUID PRESSURE BRAKING SYSTEM FOR TRACTOR-TRAILER VEHICLES

Stephen Voroch, deceased, late of Elyria, Ohio, by Margaret Voroch, administratrix, Elyria, Ohio, assignor to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware

Application September 21, 1955, Serial No. 535,589

2 Claims. (Cl. 303—10)



1. A closed system for tractor-trailer vehicle brakes comprising a compressor on the tractor having an inlet, an outlet, and a clearance volume chamber to limit the pressure output of the compressor to a predetermined value above atmospheric pressure, a tractor reservoir connected with said outlet for the storage of compressed air at said predetermined value, a brake motor on the tractor for applying the tractor brakes, a brake actuator on the trailer for applying the trailer brakes, a trailer reservoir, a relay-emergency valve on the trailer having a connection with said actuator, a connection with said tractor reservoir, a connection with said motor and a connection with said trailer reservoir, said relay-emergency valve including an exhaust connection and also including pressure actuated means responsive to an increase in pressure of compressed air in said motor connection to connect the trailer reservoir connection to the actuator connection to energize said actuator to apply the trailer brakes, and responsive to a decrease in pressure of compressed air in said motor connection to connect the actuator connection with the exhaust connection, means including a check valve for conducting compressed air from said exhaust connection to the motor connection only, and means including a first valve for conducting compressed air from the tractor reservoir to the motor and motor connection to respectively apply the tractor brakes and energize said pressure actuated means to apply the trailer brakes, and said means including also a second valve for conducting compressed air from said motor connection and motor to the compressor inlet to release the tractor and trailer brakes.

2,897,011

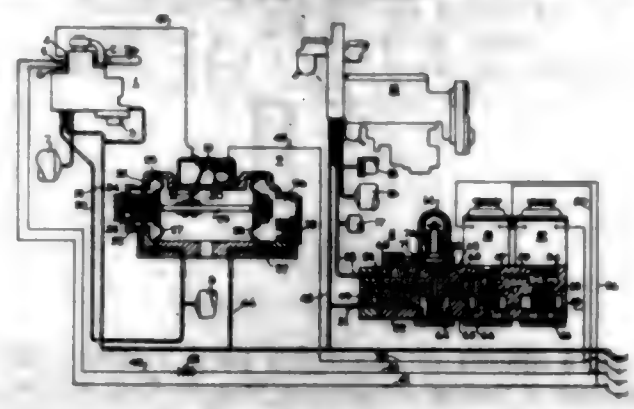
COMBINED PNEUMATIC AND ELECTRO-PNEUMATIC BRAKE CONTROL APPARATUS

George L. Cotter, Pittsburgh, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Application November 28, 1955, Serial No. 549,372

12 Claims. (Cl. 303—16)

1. In a brake equipment for a train of cars, in combination, a brake cylinder on each car, a brake pipe normally charged with fluid under pressure, a control reservoir on each car normally charged with fluid under pressure equivalent to the normal pressure in the brake pipe, a brake controlling valve device of the graduated application and graduated release type on each car subject oppositely to the pressures in the brake pipe and brake cylinder against that in the control reservoir, operable upon a reduction of brake pipe pressure below the control reservoir pressure to cause fluid under pressure to be supplied to the brake cylinder to effect a brake application of a degree according to the differential between the brake pipe pressure and the control reservoir pressure, and operable upon an increase in brake pipe pressure after a brake pipe reduction to effect a brake



release of a degree according to the decrease in differential between the brake pipe pressure and control reservoir pressure, and also operable during a brake application responsively to a decrease in control reservoir pressure resulting in reduction of the differential between the brake pipe pressure and the control reservoir pressure for effecting a brake release, first electrically controlled valve means operable to effect a concurrent reduction in brake pipe pressure locally on each car of the train to cause said brake controlling valve devices to effect a brake application, and second electrically controlled valve means operable to effect release of control reservoir pressure during a brake application to cause said brake controlling valve devices to effect a prompt brake release operation locally on each car of the train.

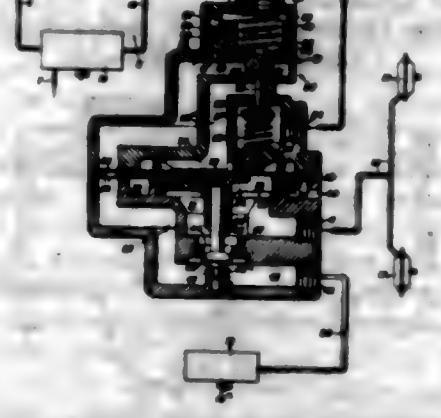
2,897,012

RELAY EMERGENCY VALVE

Stephen Voroch, deceased, late of Elyria, Ohio, by Margaret Voroch, administratrix, Elyria, Ohio, assignor to Bendix-Westinghouse Automotive Air Brake Company, Elyria, Ohio, a corporation of Delaware

Application April 7, 1955, Serial No. 499,829

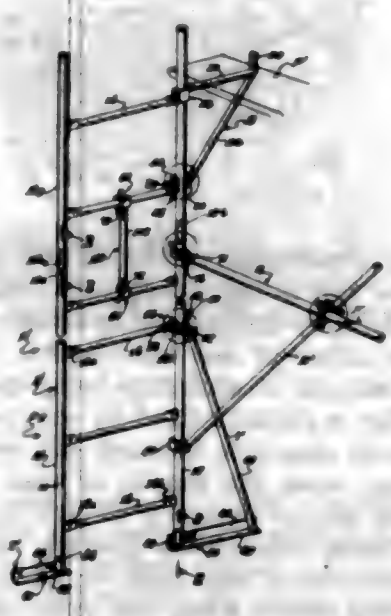
9 Claims. (Cl. 303—29)



1. In a fluid operated tractor-trailer braking system of the type having a main fluid pressure reservoir on the tractor, a fluid pressure reservoir on the trailer, brake chambers on the tractor and trailer, emergency and service lines connected with the tractor reservoir, and a brake valve in the service line on the tractor, a relay emer-

gency valve on the trailer comprising a casing having a fluid pressure responsive member therein dividing the casing into an inlet chamber and an outlet chamber, means for connecting said emergency line with the trailer reservoir, a valve operable by movement of said member for connecting the trailer reservoir and outlet chamber, means for connecting the service line to the inlet chamber so that fluid pressure conducted thereto will move said member and operate said valve to apply the trailer brakes in service, means to conduct fluid pressure from the trailer reservoir to said inlet chamber to apply the trailer brakes in emergency, said last named means including a differential valve device operable in accordance with the differential in pressures existing in the emergency line and in the trailer reservoir, and resilient means acting on said differential valve device for normally maintaining the latter in closed position to prevent communication between the trailer reservoir and the inlet chamber.

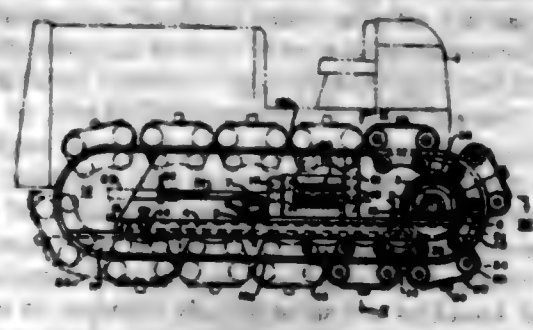
2,897,013
KNOCKDOWN SCAFFOLD
Preston P. Delp, El Cajon, Calif.
Application August 30, 1954, Serial No. 452,769
4 Claims. (Cl. 304—2)



2. A knock-down scaffolding comprising: multiple platform supporting elements adapted to be vertically superimposed in a detachable relationship, said elements including vertical tubes and horizontal braces therebetween flattened vertically adjacent their tube attachment ends; lateral extension platform supports including horizontal and diagonal braces having oppositely disposed U-shaped tube engaging members vertically slotted for releasable attachment with said flattened ends of said horizontal braces; and diagonal connecting means between the vertical tubes of said spaced platform supporting elements, said connecting means including tube engaging manual quick release clamping members.

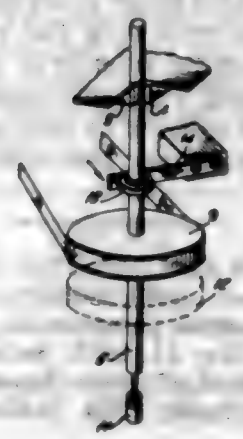
2,897,014
TRACKS FOR CRAWLER TYPE MACHINES
Frank H. Darragh, Jr., Beaver Falls, Pa., assignor to Darragh Mechanisms, Inc., a corporation of Pennsylvania
Application October 4, 1956, Serial No. 613,873
11 Claims. (Cl. 305—10)

1. A track unit for a crawler type machine comprising machine support means, a single endless rail connected to and supporting said support member, said rail having a load-bearing portion and a shoe return portion, a plurality of spaced apart shoes mounted on said rail, each of said shoes having inner rail followers on a pair of axes and outer rail followers, on a pair of axes link means



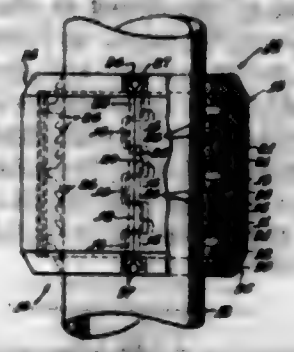
pivotally connecting adjacent shoes, and drive means to cause movement of said shoes along said rail.

2,897,015
OSCILLATION-FREE JOURNALLING DEVICE FOR MAGNETIC RECORDING APPARATUS
Fritz Knochenhauer, Berlin-Schmeckwitz, Germany, assignor to VEB Funkwerk Köpenick, Berlin-Kopenick, Germany
Application August 8, 1956, Serial No. 602,811
2 Claims. (Cl. 308—2)



1. In an oscillation-free bearing device for journalling the cylindrical sound axle of a magnetic recording apparatus, the combination comprising a bearing member formed with a pair of planar bearing surfaces arranged at an angle with respect to each other, and means for pressing the cylindrical axle longitudinally in the bight formed by said bearing surfaces, said means comprising a pressure roller acting against said axle.

2,897,016
REMOVABLE DRILL PIPE PROTECTOR
Reuben C. Baker, Coalinga, Calif., assignor to Baker Oil Tools, Inc., Los Angeles, Calif., a corporation of California
Application September 26, 1955, Serial No. 536,570
1 Claim. (Cl. 308—4)



In a drill pipe protector: an annular collar member of pliant, elastic material split substantially longitudinally at one side thereof and having longitudinally extending contactable opposed faces on opposite sides of said split; a generally cylindrical sleeve embedded in said member between its inner and outer walls and extending circumfer-

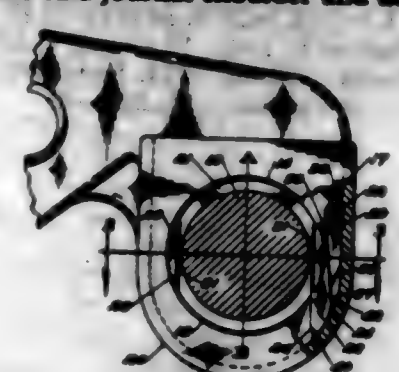
entially thereabout; said sleeve comprising sections having interleaved hinged knuckles remote from said split lying inwardly of the outer wall of said member and spaced outwardly of the inner wall of said member so that said knuckles are substantially centered in said member radially thereof with a substantial thickness of said material disposed between said knuckles and each of said walls; a hinge pin passing through said knuckles; said sections having lock knuckles on opposite sides of said split lying inwardly of the outer wall of said member and spaced outwardly of the inner wall of said member so that said lock knuckles are substantially centered in said member radially thereof with a substantial thickness of said material disposed between said lock knuckles and each of said walls; said lock knuckles being adapted to interleave with each other; said opposed faces abutting one another when said lock knuckles on opposite sides of said split are aligned; lock means extending through said interleaved and aligned lock knuckles to hold said sleeve and member in contracted position with said faces abutted against each other; a cylindrical surface conforming to and substantially central of said sleeve passing through the axes of said interleaved hinge knuckles and lock knuckles; each section comprising an inner ply integral with and merging at its opposite ends into said hinge knuckles and lock knuckles, a first outer ply integral with and extending from said hinge knuckles along the exterior of said inner ply, a second outer ply intgeral with and extending from said lock knuckles along the exterior of said inner ply, said outer plies overlapping each other, and means securing said plies together.

2,897,017
BEARING
Hiroyoshi Kobodera, Shinjuku-ku, Tokyo-to, Japan
Application May 21, 1956, Serial No. 586,897
Claims priority, application Japan May 30, 1955
3 Claims. (Cl. 308—15)

1. A bearing comprising a bearing body and a lining therefor, said body and lining being provided with cut-away portions providing opposed edges in symmetrical relation to a vertical axial plane and in angular relation of between 90° and 180° to each other, said lining having engagement with said body for initial rotational movement about the common axis of the body and lining and for subsequent rotation about one end thereof for facilitating positioning of the lining in the body and for removal thereof from the body, said lining being provided with a unitary central collar and opposite and unitary collars, said body being provided with arcuate recesses in which said collars are disposed, and means removably securing said lining and said body against relative rotation about said common axis in the assembled position of the lining in said body with said edges axially aligned relative to said common axis.

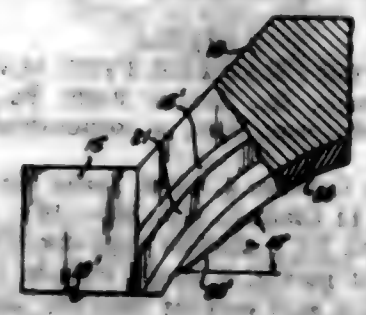
2,897,018
JOURNAL BOX AXLE STOP
Thomas W. Potter, Chicago, Ill., assignor to Journal Box Servicing Corporation, Indianapolis, Ind., a corporation of Indiana
Application March 11, 1957, Serial No. 645,242
4 Claims. (Cl. 308—38)

1. The combination with a railway car journal box, having a dust guard well at its rear end defined by two spaced apart, approximately vertical walls extending down opposite box sides and across the floor of the box in general U-shaped marginal contours, providing a U-shaped entering well therebetween, wherein the floor of the well is arcuate thereacross, turning upwardly by its end portions and rounding into the side walls between said vertical walls, a journal freely extending by a shoulder across said well walls into the box, and a bearing resting on that part of the top side of said journal beyond said shoulder and within said box: of a pair of axle stops, one carried by said box and entering between said vertical walls on each side of said journal shoulder spaced from said bearing; each axle stop comprising two members; one of said members having a portion entering between and extending along said vertical walls, a lower end of said portion having an arcuate end bearing on said floor in the zone thereof rounding into said well side walls, and said one member having a journal stop head planar face extending across an upper extent of said portion and directed toward said journal shoulder and across and clear



of said vertical walls; the second of said members being wedge shaped and fitting slidingly between said vertical walls and bearing by opposing faces between said side wall and an upper extent of said one member; the head faces of said one member in each stop being spaced apart one from the other a distance fixed by said wedge members for the selected clearance between said journal shoulder and said head faces; the impact of said shoulder upon travel of said journal laterally of said box against said head faces being transmitted through said heads, said upper portion extent, and said wedge member to said well side walls; means fixing the lower end of said one member to said box; said second member extending by a portion above said one member; means fixing said second member portion to said box upon said heads being spaced apart with said head faces being approximately in vertical parallelism to receive said journal shoulder rotatively therebetween; and means fixing the second member portions to said box to retain relatively vertically disposed positions of the two members and maintain said spacing apart of said heads.

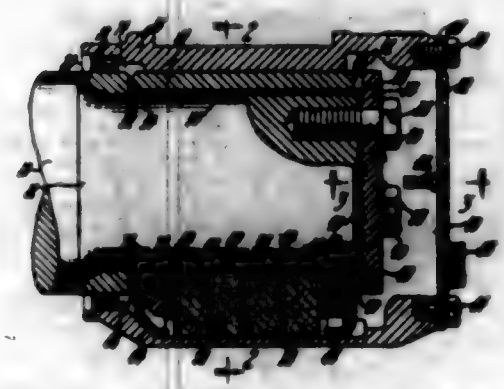
2,897,019
RAILROAD JOURNAL BEARING
William J. Finn, Pawling, N.Y., assignor to Texaco Inc., a corporation of Delaware
Application December 21, 1956, Serial No. 629,915
2 Claims. (Cl. 308—79.1)



1. In combination with a journal box and an axle having a journal end rotatable therein, said journal end

having an upstanding flange at its outer edge, a load supporting bearing of standard AAR dimensions mounted in said journal box in contact with said journal end of said axle within said flange, said bearing having a liner with longitudinal edges chamfered their entire lengths, the chamfered edges being beveled at an angle varying from 30° to 45° with respect to the base of said bearing, each beveled surface at said chamfered edges extending from each respective edge of said liner to the intersection with a plane passing through each respective edge parallel to said base of said bearing and spaced about 1/4" therefrom.

2,897,020
JOURNAL BEARING ASSEMBLY
William J. Purchas, Jr., Carmel, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application February 10, 1955, Serial No. 714,157
2 Claims. (Cl. 308—88)

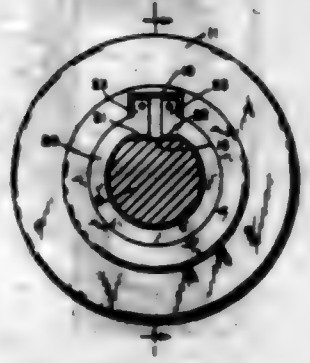


1. A journal and bearing assembly comprising an axle, a journal on said axle having a hardened wear-resistant sleeve secured on the surface thereof, an annular bearing positioned about said sleeve, the lower portion of said bearing having an opening therein, a wick-type lubricator positioned in contact with said sleeve through said opening, a thrust ring positioned on said axle adjacent the inner end of said sleeve, a thrust plate positioned on the outer end of said journal, a spacer plate interposed between said thrust plate and the end of said journal, at least one ear formed integrally with said spacer plate and engaged with correspondingly positioned slots formed in the end of said sleeve, said bearing being positioned between said ring and said plate with the ends thereof in alignment with a surface of said ring and said plate, a housing surrounding said journal, bearing and lubricator, an oil seal provided between the inner end of said housing and said ring to preclude loss of lubricant, a pair of wick-type lubricators positioned within said housing adjacent the thrust surfaces of said ring and said thrust plate for lubricating said surfaces, a spring clip secured to the upper end of said ring and plate lubricators, said clip and lubricator being adapted to be snapped into position within a groove formed on the lower end surfaces of said bearing, said housing being closed so as to inhibit free exchange of atmosphere therein wherein said journal and said bearing assembly form substantially a sealed unit, at least one passage extending from end-to-end of said bearing for the purpose of interconnecting the chambers formed at the inner and outer ends of said housing and separated by said bearing, and a spring biased relief valve in said housing at its outer end for reducing pressure build-up in said chambers.

2,897,021
BALL BEARING
Roy H. Zollman, Lorain, Ohio, assignor to The Thew Shovel Company, Lorain, Ohio, a corporation of Ohio
Application February 13, 1956, Serial No. 714,974
13 Claims. (Cl. 308—199)

1. A ball bearing spacer comprising a rigid tubular housing, and a ball-contacting component in said housing, said component having an annular peripheral portion that is substantially inflexible in an axial direction and having inwardly extending, axially spaced apart annular spring portions that are resiliently deformable in an axial direction and that form an annular cavity therebetween, the opposite faces of said spring portions being formed with ball contacting surfaces that move axially toward each other as said spring portions yield under the influence of crowding action of adjacent balls, and the opposite faces of said peripheral portion also being formed with ball contacting surfaces which limit the extent of crowding action of adjacent balls.

2,897,022
MOUNTING FOR ROLLER BEARINGS
Americo Morelli, Torrington, Conn., assignor to The Torrington Company, Torrington, Conn., a corporation of Maine
Application September 5, 1957, Serial No. 682,116
5 Claims. (Cl. 308—208)



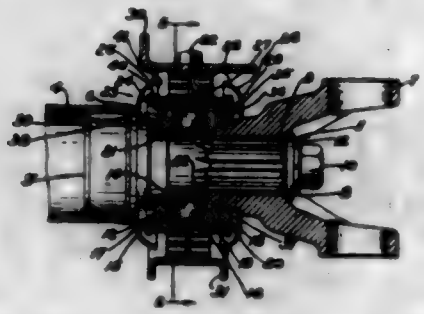
1. A cam follower bearing assembly comprising a stud shaft forming an inner raceway for a bearing, an outer race surrounding the shaft, antifriction members between the outer race and shaft, a washer fitted to each end of the outer race, a peripheral groove in the shaft opposite each washer, a resilient split ring carried by each groove and engaging the adjacent washer, said washers each having a recess with a pocket, the adjacent groove of the shaft having a removed chordal segment portion and the associated split ring having a chordal segment portion received in said removed chordal segment portion of the groove and ends located in said pocket.

2,897,023
MIDSHIP BEARING SUPPORT
Robert R. Bashbaugh and Philip J. Mantecuti, Toledo, Ohio, assignors to Rotax Corporation, Toledo, Ohio, a corporation of Virginia
Application April 5, 1954, Serial No. 420,967
4 Claims. (Cl. 308—194)

1. A shaft center bearing including a rubber bracket having an opening therethrough, a rotatable shaft ex-

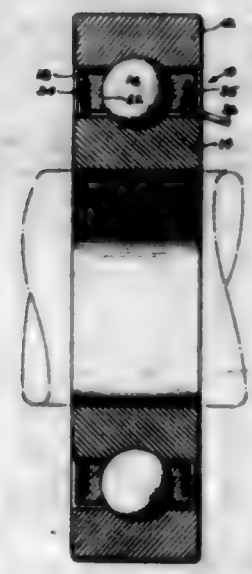
... the combination with a railway car journal box, having a journal end rotatable therein, said journal end

tending through said opening, a shaft bearing retained in said bracket opening only by the shape of the rubber bracket adjacent the opening, said rubber bracket being provided with two staggered series of slots opening inwardly from each side thereof separated by a thin central



wall to render said bracket soft and flexible to offer low resistance to spinning forces due to shaft eccentricity so that said shaft passes through its critical speed well below the normal operating range of said shaft, and a peripheral reinforcement for said rubber bracket.

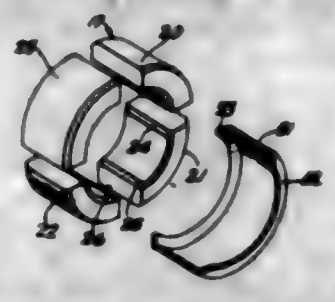
2,897,824
SEPARATOR FOR ANTIFRICTION BEARING
Paul F. Chenea, Lafayette, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application February 20, 1956, Serial No. 566,438
4 Claims. (Cl. 308—201)



1. A separator for an antifriction bearing comprising a rotatable annular metal member having an intercommunicating open pore structure, said member having a series of circumferentially spaced pockets for antifrictionally receiving and rotatably guiding bearing elements, said member being provided with a lubricant-receiving recess extending alongside a plurality of the pockets, means to direct lubricant under pressure into the recess, and the metal of said member closing off the ends of the pores at its peripheral surface and at its end surfaces of said member whereby lubricant fed into the recess will be directed through the separator and into said pockets.

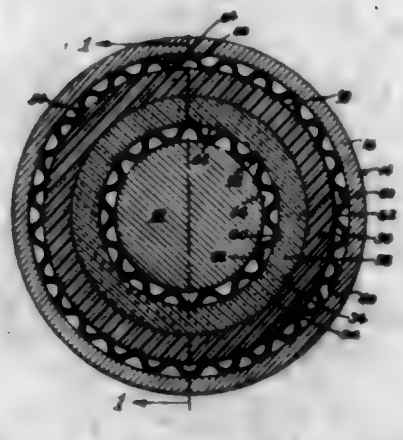
2,897,825
FUEL PUMP BEARING
Douglas R. Nicherson, Pasadena, Calif., assignor, by mesne assignments, to Crane Co., Chicago, Ill., a corporation of Illinois
Application December 19, 1955, Serial No. 553,969
3 Claims. (Cl. 308—237)

1. A bearing and shaft assembly comprising a steel shaft, a carbon bushing split into a plurality of segments and a sleeve surrounding said segments, said sleeve being



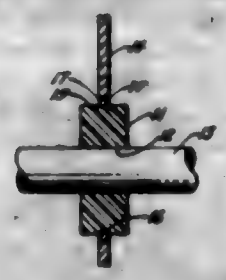
formed of a metal having a higher co-efficient of thermal expansion than the material of the shaft.

2,897,826
EXPANSION COMPENSATING SLEEVE BEARING UNIT
John Haller and Lewis W. Alexander, Northville, Mich., assignors to Helex Corporation, a corporation of Michigan
Application June 13, 1955, Serial No. 515,106
9 Claims. (Cl. 308—238)



1. A nylon sleeve bearing unit adapted to be mounted in a bearing mounting bore of a bearing supporting structure for rotatably supporting a rotary machine element, said bearing unit comprising a peripherally-continuous nylon sleeve having a bore therein adapted to rotatably support the rotary machine element, said nylon sleeve also having a peripheral surface dimensioned to provide a predetermined radial clearance space between it and the bearing supporting structure bore in which it is intended to be mounted, and a radially-yieldable resilient annular expansion member disposed outwardly of and in engagement with said nylon sleeve, said expansion member being of relatively thin spring material with multiple axially-elongated undulations therein spaced at intervals around the periphery thereof.

2,897,827
BEARING STRUCTURE
Walter S. Sutowski, Brecksville, Ohio
Application February 27, 1956, Serial No. 568,946
4 Claims. (Cl. 308—238)



1. A bearing device comprising the combination of an annular member of nylon, said annular member having a round opening extending therethrough for receiving a pivot member, said opening having a cylindrical surface

respective ends of each said bar, a pair of spacer blocks

cover therefor, said cabinet having alined apertures which

end for reducing pressure build-up in said chambers.

having an opening therethrough, a rotatable shaft ex-

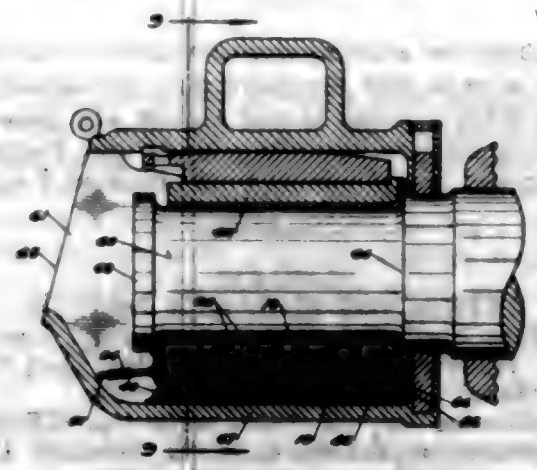
of nylon adapted to bearingly engage said pivot member to permit relative rotative movement therebetween, said annular member having an outer circumferential wall, said wall having a groove formed therein substantially equidistant the axial ends thereof and extending around the circumference of the annular member, and a supporting member having an open space therein, said supporting member in the plane of said groove embracing and radially compressing said annular member and being disposed in said groove, the interengagement of said supporting member and the side walls of said groove retaining the annular member against axial displacement relative to the supporting member.

2,897,028

JOURNAL LUBRICATOR

Thomas W. Potter, Chicago, Ill., assignor to Journal Box Servicing Corporation, Indianapolis, Ind., a corporation of Indiana

Application December 4, 1956, Serial No. 626,254
3 Claims. (Cl. 308—243)



1. A lubricator comprising a generally rectangular envelope made of ducking and closed at both ends and having top and bottom faces with intervening side walls; an ear extending laterally from each of two adjacent corners at one end of the envelope and each ear having an eye therethrough; means reinforcing said eye and maintaining said ear in erect condition; a tongue integrally extending from the opposite end of the envelope and having at least one eye therethrough; a core of combed and commonly aligned wool fibers within, completely filling and resiliently distending the envelope; a plurality of loops of yarn attached to and extending from a limited area on each of the top and bottom faces, said areas extending substantially throughout the lengths of said faces between said ends and terminating laterally thereof short of said side walls, said tongue having end portions of said top and bottom faces extending therein, and end portions of said side walls folded between the top and bottom faces.

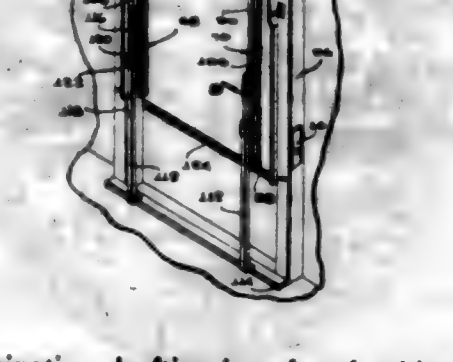
2,897,029

OPERATING TABLE APPARATUS FOR GRAVITY EXPOSURE OF THE HEART

Bernard Maisel, Englewood, N.J., assignor of one-half to Cornell Research Foundation, Inc., Ithaca, N.Y., and one-half to New York Heart Association, Inc., New York, N.Y.

Application April 9, 1958, Serial No. 727,472
6 Claims. (Cl. 311—7)

1. Operating table apparatus for use in gravity exposure operations comprising first and second spaced platforms in a common plane, said platforms having a width of from 15 to 20 inches, a narrow bridge member extending longitudinally between said platforms, said bridge member being detachable from one of said platforms and telescoping within the other platform, first and second pairs of legs depending from opposite sides of said first and second platforms, respectively, each of said legs including a foot portion adapted to rest upon the top surface of an operating table for supporting said platforms, and an arm portion extending outwardly and downwardly from each leg below the level of the foot portion thereof, each arm portion being adapted to be clamped to the



side of the operating table for stabilizing the position of the leg, and a supporting element extending down from at least one of said platforms adapted to rest upon the top surface of an operating table for applying supporting force to said platform at a point near to the juncture with said bridge member.

2,897,030

COMBINATION STORAGE CABINET AND DRAFTING BOARD

Leo A. Ficarella, Joliet, Ill.

Application December 13, 1957, Serial No. 702,741
1 Claim. (Cl. 311—16.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

In a combination drafting board and cabinet comprising a pair of upstanding hollow posts defining a substantially rectangular form, a pair of cross braces extending across and secured to the tops and bottoms respectively of said posts, an upper hollow cross piece extending between said posts and spaced below said top brace, a lower crosspiece extending between said posts, a back connected to said posts, said upper and lower cross pieces and said back forming a storage compartment, a generally rectangular drafting board hinged along its rearward edge on said lower cross piece for movement in a horizontal axis from an inactive vertical stored position to an active horizontal position normal to said posts, means carried by and within said posts and operatively connected to said board for holding said board in said inactive position, a foldable supporting structure for said drafting board comprising a pair of spaced elongated bars secured, one each to the under surface of said drafting board and extending longitudinally along and being disposed adjacent a side thereof from a point near the rearward end to a point beyond the center of said board, a pair of aligned stop blocks secured to and depending from the

associated cam member to exert pressure against the associated levering and locking integer when said handle is raised or lowered.

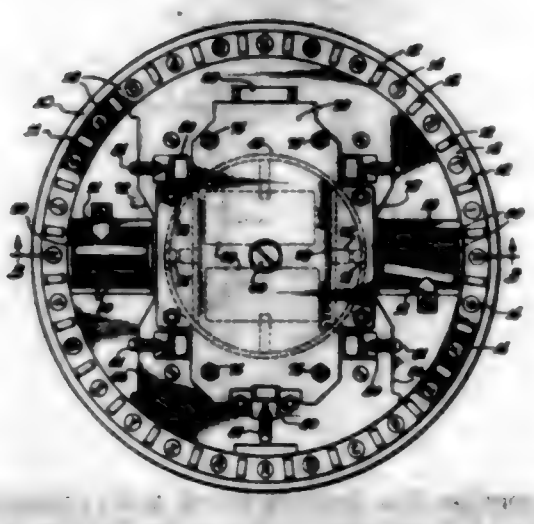
lying flat against said panels, said folded end portions defining respective rear seams having inner and outer

3 Claims. (Cl. 308—237)

1. A bearing and shaft assembly comprising a steel a round opening extending therethrough for receiving a pivot member, said opening having a cylindrical surface

respective ends of each said bar, a pair of spacer blocks secured to the under surface of said board adjacent the forward end thereof, their lower faces being in the same plane with the lower faces of said stop blocks and in longitudinal alignment therewith, an inverted U-shaped channel member secured to the lower surfaces of said stop blocks and said spacer blocks to form a guideway between said channel member and said elongated bar, a pair of support legs hinged one each at its forward edge to the inner portion of channel member, means for automatically extending and retracting said legs as said board is moved from and to its stored position comprising a pair of flanged rollers adapted to ride, one each, on said channel members, a pair of depending hanger bars carried by each roller, a pair of connecting bars hinged at one of their ends to the lower end of a said leg and hinged at their other end to a pair of said hanger bars on a said roller, positioning means for said drafting board comprising a first pair of bars, hinged at their outer ends to an intermediate point to said connecting bars, a second pair of hollow bars, hinged at their inner ends to said bottom cross braces, said first pair of bars being telescopically received in said second pair of hollow bars, and means for adjusting the length of telescopic movement of said pairs of bars comprising an adjustable clamp secured on each said first pair of bars and an adjustable clamp being secured on said second pair of bars, said clamps on said first pair of bars adapted to abut said clamps on said second pair of bars to limit said telescopic travel.

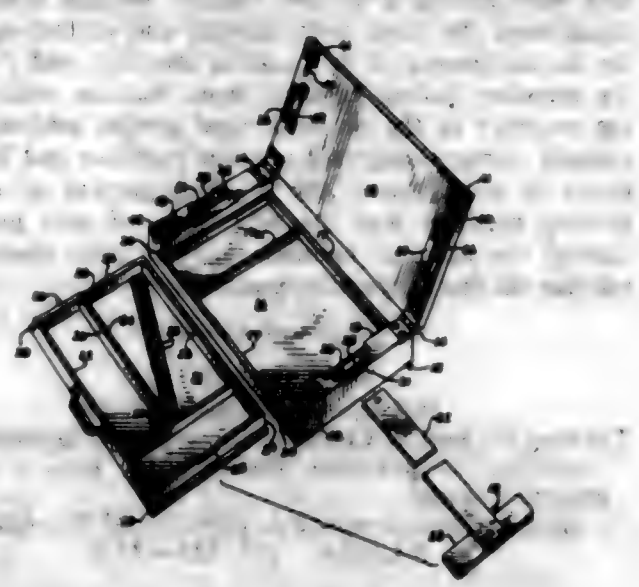
2,897,031
TELEPHONE BASE DIRECTORY
James Ernest Frost, Los Angeles, Calif.
Application June 2, 1958, Serial No. 739,091
6 Claims. (Cl. 312—183)



1. A directory comprising a base, a circular ring disc slideably mounted on the base having a series of knobs rigidly mounted at the perimeter thereof and having an index system at the perimeter thereof spaced apart by the knobs, a raised platform on said disc spaced inwardly from the knobs and index system, said platform having grooves extending radially thereon, a collar at the inside edge of the disc abutting on the platform, index cards removably mounted in the grooves, and a cover mounted on the base, spanning the platform, and having a viewing port therein above the cards.

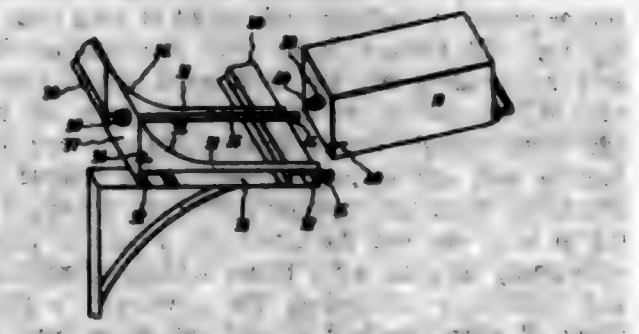
2,897,032
DRAFTING KIT ASSEMBLY
Jacob E. Kremer, Chicago, Ill.
Application May 14, 1956, Serial No. 584,684
2 Claims. (Cl. 312—231)

2. A drafting kit assembly comprising a storage cabinet, a drawing board fitted on said cabinet to provide a cover therefor, said cabinet having alined apertures which permit the insertion of a T-square therethrough when the cabinet is closed by the drawing board, a T-square inserted through said apertures, means on the drawing board and



on the cabinet for abutting opposite sides of said inserted T-square so as to lock the board onto the cabinet, and a drawer slidably mounted in said cabinet, said drawer having surfaces abutting opposite sides of said T-squares so as to be locked in said cabinet by the inserted T-square.

2,897,033
EXTRACTOR-ENGAGER DEVICE
Wilbur Silas Ford, Burwood, near Sydney, New South Wales, Australia, assignor to Amalgamated Wireless (Australasia) Limited, Sydney, Australia
Application July 28, 1955, Serial No. 525,038
Claims priority, application Australia December 13, 1954
3 Claims. (Cl. 312—320)



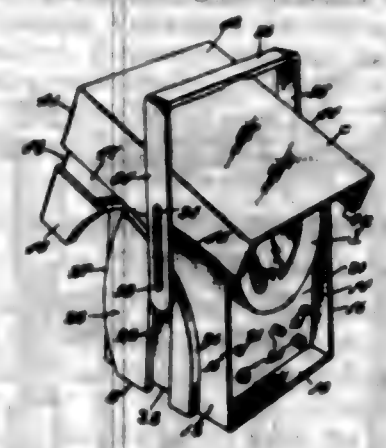
1. A mechanical extractor-engager device for use with a box-like electric unit designed for mounting in a rack, said device comprising in combination a U-shaped handle having short arms, a hinge-block for each of said arms adapted to be secured to the front of a box-like electric unit, each of said arms having a first pivot pin journaled in its associated hinge-block, a cam member eccentrically fixed to each pivot pin, an extension pin fixed to each cam member and extending from said cam member parallel to and offset from the associated first pivot pin, a second pivot pin on each hinge-block, a levering and locking integer associated with each hinge block and having first and second longitudinal slots arranged in longitudinal alignment, said first longitudinal slot being adapted to receive the associated second pivot pin to permit the pivotal and longitudinal movement of said associated levering and locking integer, said second longitudinal slot being adapted to receive the associated extension pin and having a recess in the side adjacent the associated cam member to provide a track for said cam member, a bracket adapted to be affixed to said rack immediately below each levering and locking integer, and a nose portion on each levering and locking integer for engaging a socket in the associated bracket to cause the

2,897,037
RECORDING MEANS

actions on the chart by the two styli being simultaneously effective at spaced positions on the recording surface

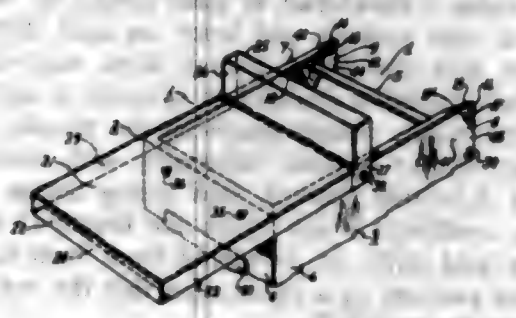
associated cam member to exert pressure against the associated levering and locking integer when said handle is raised or lowered.

2,897,834
INSTRUMENT CASES
George H. Kalen, Fort Washington, Pa.
Application February 3, 1958, Serial No. 712,746
12 Claims. (Cl. 312—327)



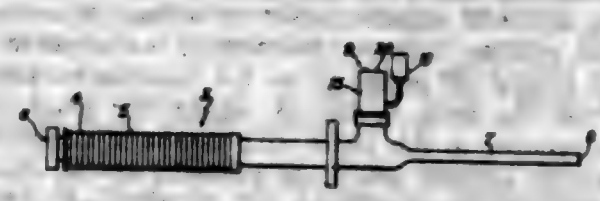
7. An instrument case having a body portion provided with a bottom wall and spaced side walls and an instrument supporting panel between said side walls, each of said side walls having thereon forwardly and rearwardly facing curved faces, a cover portion having a top wall, a front wall and side walls exteriorly slidably disposed with respect to said first mentioned side walls, said cover side walls having rearwardly facing curved margins complemental in shape to the forwardly facing faces of the body side walls, the side walls of one of said portions having a pair of axially aligned pivotal connections and the side walls of the other of said portions having a pair of elongated slots extending therealong, said slots and said pivotal connections being in slidable engagement for preventing separation of said portions and permitting positioning said cover portion as a support for said body portion at a plurality of tilted positions of said body portion.

2,897,835
APPLIANCE HOUSING
Dorman D. Dorsey, Jacksonville, Fla.
Application February 12, 1957, Serial No. 639,785
1 Claim. (Cl. 312—330)



An appliance housing comprising, in combination, a generally rectangular metal cabinet body, said cabinet body comprising an upstanding front wall, an upstanding rear wall, a pair of upstanding side walls joining said front and rear walls and having respective extensions extending rearwardly of said rear wall, each said extension having an upper rear corner portion constituting an ear portion, each said wall ear portion having an outer surface, said rear wall having side ends bent into respective rearwardly projecting panels, each said panel having a rear edge, said panels lying flat against said extensions, said extensions having respective end portions folded back around the respective said rear edges and lying flat against said panels, said folded end portions defining respective rear seams having inner and outer surfaces, said seams being locked together by dimpling, said dimpling forming dimples on said inner surfaces and upsetting rounded knobs to protrude from said outer surfaces of said seams, each said wall ear portion being provided with one of said knobs, a detachable metal cover comprising a main generally horizontal rectangular surface portion and having a downwardly projecting front flange and a pair of downwardly projecting side flanges along the corresponding edges of said main portion, said front flange terminating along its lower edge in an inwardly extending lip, said main surface portion extending rearwardly into an upwardly curved rear splash guard portion, each said side flange having a lower rear corner portion constituting a respective side flange ear portion located generally below said splash guard portion, each flange ear portion having a respective inner and outer surface, each said flange ear portion having a respective circular opening receiving a respective said knob of said side wall ear portion when said cover is closed on said cabinet, said knobs having outermost portions approximately flush with the respective outer surfaces of said flange ear portions, said inner surface of said flange ear portion at each side lying against said outer surface of said respective wall ear portion when said cover is in said predetermined closed position, at least one of said ear portions at each respective side of said housing being resilient, each of said knobs of said wall ear portions having a central perforation therein, a respective headed self-tapping sheet metal screw engaged in each of said perforations, the heads of said screws being larger than said openings and engaging the respective outer side flange surface, and lip-engageable means affixed to said front wall of said cabinet engaged by said lip when said cover is in said predetermined closed position.

2,897,836
METHOD OF EVACUATION
Alfred J. Gale, Lexington, and Richard J. Connor, Medway, Mass., assignors to High Voltage Engineering Corporation, Burlington, Mass., a corporation of Massachusetts
Application April 18, 1957, Serial No. 653,606
6 Claims. (Cl. 316—25)



1. A method of process pumping a closed system which evolves limited amounts of gas, which method comprises the following steps: (1) connecting the closed system to a first getter-ion pump, (2) connecting the closed system to a second getter-ion pump, each of said getter-ion pumps including getter-evaporation means and ionization means, (3) connecting a fore pump to said second getter-ion pump and reducing pressure to normal fore-vacuum pressure, (4) heating the getter elements of said second getter-ion pump, but not to evaporation temperature, (5) heating the getter elements of said first getter-ion pump, but not to evaporation temperature, (6) closing off said second getter-ion pump from said fore pump, (7) evaporating at least part of the getter in said second getter-ion pump, (8) closing off the connection between said second getter-ion pump and said closed system, and (9) evaporating at least part of the getter in said first getter-ion pump, at least one of said ionization means being operative throughout the process.

not, a drawing board fitted on said cabinet to provide a

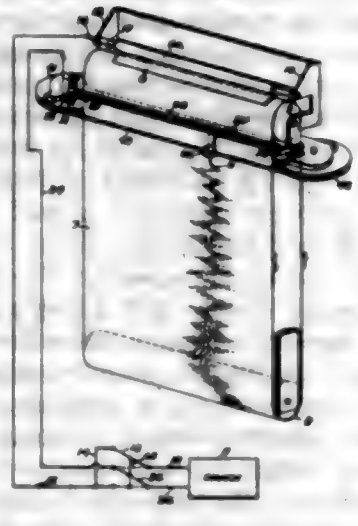
engaging a socket in the associated bracket to cause the

2,897,837

RECORDING MEANS

Marvin L. Toff, South Acton, Mass., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware

Application July 27, 1955, Serial No. 524,730
1 Claim. (Cl. 346—31)



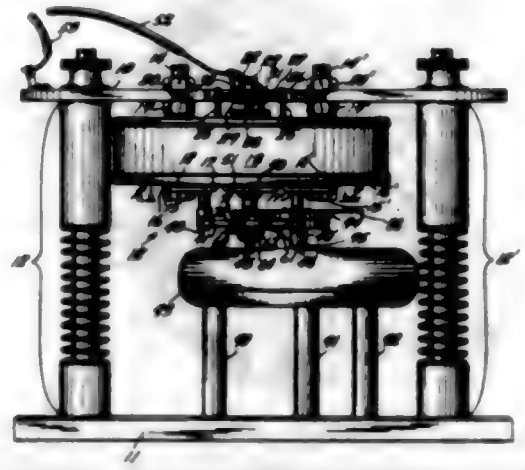
A recording mechanism comprising a chart in the form of an endless web having its recording surface impregnated with a substance which is responsive to a unidirectional flow of electric current to produce a discoloration and responsive to the flow of electric current in the reverse direction to remove such discoloration, carrier means on which said chart is mounted, said carrier means causing the recording surface of said chart to travel along a closed path, a movable marking stylus contacting the recording surface of the chart, means to translate said first stylus transversely to the direction of the chart surface movement, electrically conducting rail means supported by the carrier means to guide said marking stylus in its translatory movements relative to the chart, an erase stylus, electrically conductive means secured to said carrier means for supporting said erase stylus, said erase stylus being resiliently biased in its supported position into firm contact with the recording surface of the chart, said erase stylus being of sufficient width as to contact the recording surface of the chart over a distance substantially coextensive with the maximum extent of the transverse movement of which said marking stylus is capable while recording, a source of electrical potential, means to connect the negative side of said source of potential to the conductive support means for the erase stylus to render the erase stylus positive relative to the chart, and means to connect the positive side of said source of potential to the conductive guide rail support means for the marking stylus to render the marking stylus negative relative to the chart so that signals transmitted from the source cause the recording surface of the chart to be discolored by contact with the electrically negative marking stylus and cause any discoloration of the recording surface caused by the marking stylus to be removed by contact with the erase stylus, the marking and marking removal actions on the chart by the two styli being simultaneously effective at spaced positions on the recording surface of the chart.

2,897,838

LOW ENERGY MINIATURE-SIZE RECORDER

Bernard Vonnegut, Schenata, Mass., assignor to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts

Application February 4, 1955, Serial No. 486,869
5 Claims. (Cl. 346—123)



1. A recording instrument comprising in combination, a low energy sensitive element movable in angular deflection and generative or torque causing said deflection and varying in valve from 0 dyne/cm. to 50 dyne/cm. at the most, said torque being generated in accordance with the value of a physical quantity sensed by said element and said torque having a value T at full scale deflection, an inscribing stylus having a wear-resistant needle tip adapted to inscribe a trace of width *w* of the deflections of said sensitive element in a record sustaining layer comprised of a thin incohesive deposit of fine particles adhering loosely to the smooth surface of a supporting underbody and susceptible to dislodgment from said surface by said stylus to thereby form said trace, said layer and underbody together comprising a record member, stylus arm means coupling said sensitive element and stylus to provide for linked angular deflections thereof, resilient means coupled to said stylus through a rigid length of said stylus arm means providing a force-attenuating lever, and adapted through said lever to urge said stylus lightly against said surface of said record member, said stylus arm means being subjected to a static load torque of value *t* developed at least partly by the friction drag of said surface and layer on said stylus and operable on said stylus arm means when said stylus is urged by said sensitive element to inscribe in said layer and restoring spring means opposing the torque of said sensitive element by a force increasing with increase in the angular deflection thereof, said spring means having a restoring coefficient which limits the length D of path traveled by said stylus in deflecting from zero to maximum torque position to a value such that the ratio w/D approximates the ratio t/T.

2,897,039

INTERMEDIATES FOR THE PRODUCTION OF COBALT PHTHALOCYANINES

Fritz Baumann, Leverkusen-Bayerwerk, and Berthold Bienert, Heinrich Vollmann, and Georg Rösch, Leverkusen-Wiesdorf, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application October 6, 1953
Serial No. 384,504

Claims priority, application Germany October 11, 1952

16 Claims. (Cl. 8—1)

2. The process of producing new complex cobalt compounds capable of being converted into cobalt phthalocyanine which comprises heating within a temperature range of 150–230° C., 1 mol of a cobalt salt, about 4–6 moles of a compound selected from the group consisting of phthalic acid anhydride, phthalic acid, phthalimide and phthalodinitrile, at least 4 mols of a compound selected from the group consisting of urea and biuret, as catalyst for the reaction a member selected from the group consisting of a molybdenum compound and titanium tetrachloride and in the presence of ammonium nitrate, stopping the heating when a yellow to brown red solid is formed, the simultaneously formed cobalt phthalocyanine has disappeared, recovering the reaction product and reacting the latter with about the same amount of a member selected from the group consisting of lower alkyl polyamines and lower alkyl ether polyamines at room to water bath temperature and recovering the basic complex cobalt compound formed.

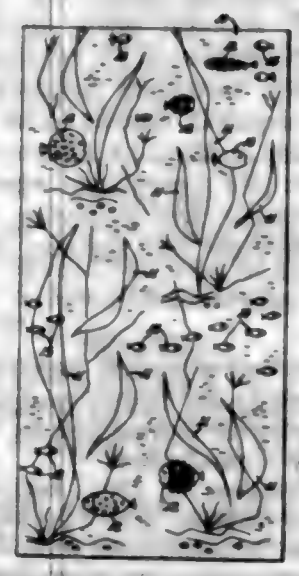
2,897,040

PROCESS AND COMPOSITION FOR DYEING PATTERNS INTO PLYWOOD WALL PANELING

Joseph P. Kneisel, La Canada, Calif., assignor to Pacific Wood Products Co., Los Angeles, Calif., a corporation of California

Application August 3, 1956, Serial No. 601,898

7 Claims. (Cl. 8—6.5)



1. A method of dyeing wood to produce a decorative pattern thereon, comprising the step of silk screening said pattern onto the wood utilizing an azo dye dispersed in a vehicle containing a solution of a resinous material which is compatible with said dye.

2,897,041

PROCESS TO REDUCE THE FELTING AND CREASING OF WOOL

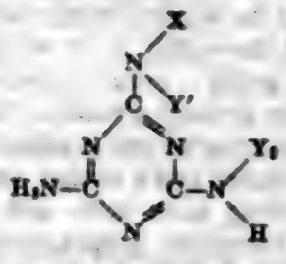
Alois Kleemann, Basel, and Rudolf Keller and Jakob Bindler, Riehen, near Basel, Switzerland, assignors to J. R. Geigy A.-G., Basel, Switzerland, a Swiss firm

No Drawing. Application June 25, 1956
Serial No. 593,375

Claims priority, application Switzerland July 18, 1955

6 Claims. (Cl. 8—127.6)

1. A process of chlorinating wool in an aqueous acid bath to make the wool fast to felting and creasing, which comprises chlorinating at a pH of 1.5 to 3.5, wool which contains 0.1 to 0.6% based on the weight of the wool of a triazinyl compound of the formula



wherein X represents a member selected from the group consisting of β-mono- and β,γ-di-hydroxy substituted saturated hydrocarbon radicals containing 2 to 6 carbon atoms, one of Y_1 and Y_2 represents hydrogen, and the other one of Y_1 and Y_2 represents a member selected from the group consisting of hydrogen, saturated hydrocarbon radicals containing 1 to 8 carbon atoms, and β-mono- and β,γ-dihydroxy substituted saturated hydrocarbon radicals containing 2 to 6 carbon atoms, by chlorinating the said wool with an alkali metal salt of hypochlorous acid at a temperature of 10 to 60° C., and thereafter rinsing and treating the wool with a dechlorinating agent.

2,897,042

METHOD FOR INCREASING PILL RESISTANCE AND DENSITY OF BLENDED STAPLE POLYETHYLENE TEREPHTHALATE AND CELLULOSIC FABRICS BY APPLYING SPECIFIC CHEMICAL SHRINKING AGENTS FOR THE POLYETHYLENE TEREPHTHALATE

John R. Helix, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application June 30, 1955
Serial No. 519,230

4 Claims. (Cl. 8—130.1)

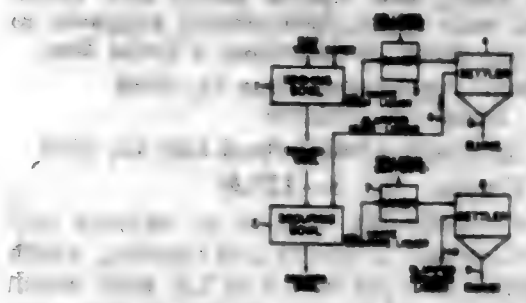
1. A method for increasing the pill resistance and density of a fabric made from a blend of staple textile fibers and containing from 25% to 95%, by weight, of polyethylene terephthalate staple fibers and from 5% to 75%, by weight, of a non-pilling cellulosic fiber, comprising the step of shrinking the polyethylene terephthalate fibers an average of at least 18% of their lengths so that the non-pilling staple fibers in the fabric, which shrink less than the polyethylene terephthalate fibers, bunch up into the surface of the fabric by treating said fabric for at least two minutes with an aqueous liquor containing from 0–4% by weight of ortho-phenylphenol and from 0–7% by weight of meta-cresol, with the sum of the percentage of the ortho-phenylphenol and ¼ the percentage of meta-cresol in the liquor equaling from 1 to 5.75%, said liquor being at a temperature of from about 160° F. to its boiling temperature.

2,897,843

PROCESS OF CLARIFYING AQUEOUS SUINT BATH CONTAINING GREASE AND SCOURING RAW WOOL WITH THE PURIFIED BATH

Willis Feng, Richmond, Calif., assignor to the United States of America as represented by the Secretary of Agriculture

Application November 10, 1955, Serial No. 546,293
2 Claims. (Cl. 8—139)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A process for scouring wool which comprises washing raw wool with substantially pure water, separating the wash liquor and the washed wool, the wash liquor having an alkaline pH due solely to its suint content, adding to the wash liquor solely a minor proportion of colloidal, dispersible bentonite to form a mixture having an alkaline pH, allowing the mixture to stand without altering its pH to form a clarified liquor and a sludge, separating the clarified liquor containing suint salts and water from the sludge containing bentonite, grease, and dirt, and thereafter scouring the washed wool with said clarified liquor.

2,897,844

PRODUCTION OF ARTIFICIAL PROTEIN THREADS, FIBRES, FILAMENTS AND THE LIKE

Robert L. Wormell, Coventry, England, assignor to Courtaulds Limited, London, England, a British company

No Drawing. Application July 29, 1957
Serial No. 674,586
Claims priority, application Great Britain August 24, 1956
6 Claims. (Cl. 18—54)

1. A process for the production of regenerated protein threads which comprises extruding an aqueous alkaline solution of a protein chosen from the group consisting of lactic casein, peanut protein, soya bean protein and castor bean protein through a jet into a sulphuric acid coagulating bath in which is dissolved a trivalent chromium salt, stretching the resultant thread at least 100 per cent in a stretching bath at a temperature of at least 50° C., said bath containing a trivalent chromium salt and at least one salt chosen from the group consisting of sodium sulphate and aluminium sulphate and hardening the stretched thread in a hardening bath also containing a trivalent chromium salt and at least one salt chosen from the group consisting of sodium sulphate and aluminium sulphate, the coagulating, stretching and hardening baths each containing the equivalent of at least 10 grams per liter of Cr_2O_3.

2,897,845

EXTRACTION OF URANIUM

Robert D. Kistler and David D. Robb, Columbus, Ohio, assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application February 6, 1950
Serial No. 142,704
8 Claims. (Cl. 23—14.5)

1. A process for extracting uranium from carnotite ores, comprising adding about 10% of sodium chloride and adding at least 5% by weight of vanadium pentoxide per 1% by weight of uranium to the ore, roasting the mixture thus obtained and leaching the roasted mass with an aqueous solution of alkali carbonate.

2,897,846

SEPARATION OF THORIUM FROM URANIUM BY EXTRACTION

Edward G. Bohlmann, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application October 16, 1951
Serial No. 251,620
19 Claims. (Cl. 23—14.5)

1. A process of separating uranium values from thorium values, comprising providing an aqueous phase of a maximum nitric acid content of 3 N and a tributyl phosphate phase, one of said phases initially containing said uranium and thorium values dissolved; thoroughly contacting said two phases whereafter said thorium values are preferentially contained in said aqueous phase, while said uranium values are preferentially contained in said tributyl phosphate phase; and separating said two phases.

2,897,847

METHOD OF DISSOLVING METALLIC URANIUM

Wallace W. Schulz, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application February 26, 1954
Serial No. 416,728
4 Claims. (Cl. 23—14.5)

1. A process of dissolving uranium metal comprising contacting the uranium with a mixture of concentrated nitric acid and ortho-phosphoric acid at elevated temperatures.

2,897,848

URANIUM RECOVERY PROCESS

John W. Stevenson, Webster Groves, Mo., and Robert G. Werkema, Granite City, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application May 2, 1956
Serial No. 582,304
6 Claims. (Cl. 23—14.5)

1. A process of recovering uranium values from magnesium fluoride slag obtained in the reduction of uranium tetrafluoride with magnesium, comprising grinding said slag to a particle size of about —325 mesh; roasting the slag in air at a temperature of between 350 and 525° C. for a maximum period of time of approximately three hours; cooling the roasted slag in an atmosphere of carbon dioxide; neutralizing the slag with dilute aqueous sulfuric acid to a pH value of below 9.5; leaching the neutralized slag with an aqueous solution containing at least 8 percent by weight of sodium bicarbonate and an oxidizing agent, the total quantity of carbonate in said solution being about 25 percent in excess of that stoichiometrically required to convert the uranium oxide to a carbonate complex; filtering an insoluble uranium-depleted residue from a uranium-containing supernatant; adding an aqueous solution of sodium hydroxide to said supernatant whereby the uranium values are precipitated, and separating the uranium-containing precipitate from the aqueous solution.

2,897,849

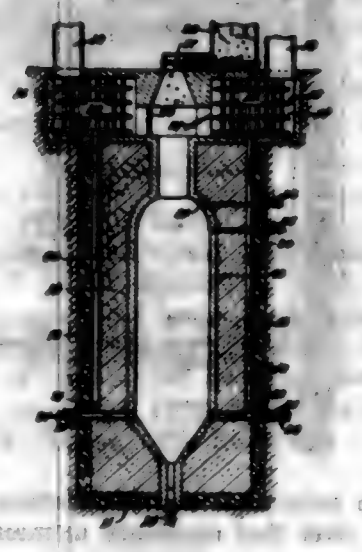
TREATMENT OF FISSION PRODUCT WASTE

John B. Hall, Blackfoot, Idaho, assignor to the United States of America as represented by the United States Atomic Energy Commission

Application October 28, 1957, Serial No. 692,989
3 Claims. (Cl. 23—21)

1. A method for concentrating aqueous waste solutions obtained from processing uranium-aluminum fuel elements comprising spraying the solution on a bed of burning coke, whereby the water and other volatile constituents in the solution including ruthenium are heat-vaporized and the nitrates in the solution are heat-decomposed

into the volatile gaseous oxides of nitrogen, conducting away the resulting mixture of gases into a first separate vessel, and thereafter passing chlorine through said bed



whereby the aluminum, niobium-95, and zirconium-95 decomposition products are converted to chlorides, conducting away said chlorides in an admixed gaseous state and condensing them in a second separate vessel.

2,897,050

SEPARATION OF RARE EARTH VALUES BY MEANS OF A CATION EXCHANGE RESIN

Sigmund Jaffe, Plainfield, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Application April 28, 1954
Serial No. 426,277
4 Claims. (Cl. 23—22)

2. A method for the separation of rare earths which comprises reacting a sulfonated polystyrene cation exchange resin with an oxidizing agent selected from the group consisting of hydrogen peroxide and ozone at a temperature below 100° C. without charring said resin to produce a purified mildly oxidized resin substantially free from dark colored impurities, adsorbing an aqueous solution of water soluble inorganic salts of rare earths on a uniformly light colored column of said purified resin, stirring that portion of said resin column containing rare earth adsorbed resin to form therefrom a uniform bed at the top of the column, passing an eluting agent through said column thereby separating the various rare earths into visibly distinct, regular, horizontal colored bands, and collecting successive portions of eluate corresponding to said distinct colored bands.

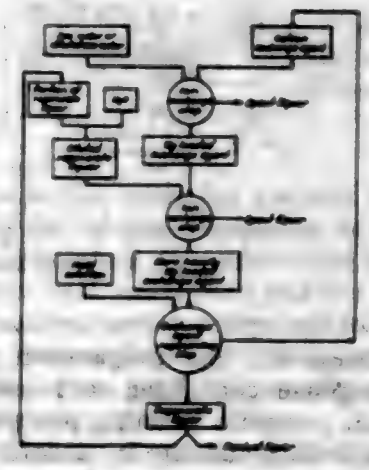
2,897,051

TREATMENT OF SOLUTIONS COMPRISING SIMILARLY CHARGED MONOVALENT AND POLYVALENT IONS TO CONCENTRATE THE POLYVALENT IONS

William F. McIlhenny and Albert B. Baker, Freeport, James A. Clarke, Lake Jackson, Tex., and William C. Bauman, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Application May 2, 1955, Serial No. 505,431
9 Claims. (Cl. 23—91)

1. In a method of treating an aqueous starting solution of monovalent and polyvalent ions having the same kind of electrical charge to concentrate the polyvalent ions wherein the starting solution is (1) contacted with an ion exchange agent effective in chemically absorbing the polyvalent ions and the ion exchange agent is (3) thereafter contacted with a regenerating agent containing a higher concentration of monovalent ions, having said kind of electrical charge, than the starting solution, whereby a regenerate liquor richer in the polyvalent ions than the starting solution is formed, the combination of the steps (1) and (3), just-mentioned, together with an intervening step of (2) treating the ion exchange agent, which has been contacted with the starting solution and which is loaded with ions chemically absorbed from the



starting solution, with an aqueous liquor having a composition corresponding approximately to that of a liquor obtainable by diluting a portion of said regenerate liquor with at least an equal volume of an aqueous liquid selected from the group consisting of water, a portion of said starting solution, and mixtures of water and the starting solution.

2,897,052

METHOD FOR PREPARING STABLE POTASSIUM NITROSO DISULFONATE

Hans Joachim Teuber, Frankfurt am Main, Germany

No Drawing. Original application June 26, 1952, Serial No. 294,713, now Patent No. 2,782,216, dated February 19, 1957. Divided and this application November 19, 1956, Serial No. 622,821
Claims priority, application Germany July 24, 1951
2 Claims. (Cl. 23—101)

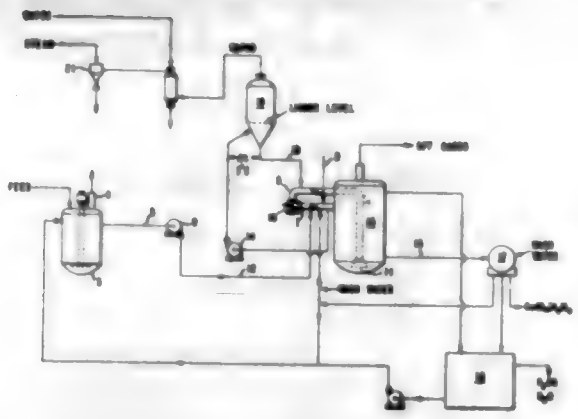
1. In a process of preparing the substantially pure and stable potassium metal salt of nitroso disulfonic acid, the steps comprising adding acetic acid to an aqueous solution of substantially pure sodium nitrite and sodium hydrogen sulfite, said sodium nitrite and sodium hydrogen sulfite being reacted in the molar proportion of 1 mol to about 2 mols, admixing to the resulting solution of the sodium metal salt of hydroxylamine disulfonic acid an excess of substantially pure ammonia, adding portion by portion to the resulting solution following its preparation an aqueous solution of substantially pure potassium permanganate, thereby maintaining the temperature of the reaction mixture between about 0° C. and about 5° C., substantially completely removing the precipitated manganese dioxide from the reaction solution by repeated filtration, adding an aqueous solution of an excess of a substantially pure, water soluble potassium metal salt, said solution being substantially saturated at 30° C., to the filtrate, cooling the reaction mixture by means of ice, rapidly filtering off the precipitated potassium metal salt of nitroso disulfonic acid, recrystallizing said salt from substantially pure potassium hydroxide solution, washing the recrystallized salt with a substantially pure water miscible organic solvent free from reducing impurities to remove adhering potassium hydroxide therefrom, drying the salt, and storing the dried salt thereby excluding air, moisture, and acids.

2,897,053

2,897,853
WET PROCESS FOR PHOSPHORIC ACID MANUFACTURE

Hans Svanoe, Warren, Pa., assignor to Struthers Wells Corporation, Warren, Pa., a corporation of Maryland

Application February 26, 1954, Serial No. 412,883
4 Claims. (Cl. 23—165)



1. In a process for the preparation of phosphoric acid from phosphate containing rock and sulfuric acid the steps which comprise reacting phosphate rock with phosphoric acid substantially in accord with this reaction:

(1) $Ca_3(PO_4)_2+4H_3PO_4=3CaH_4(PO_4)_2$

thereafter reacting the resulting reaction mixture with sulfuric acid substantially in accord with this reaction:

(2) $3CaH_4(PO_4)_2+3H_2SO_4=3CaSO_4+6H_3PO_4$

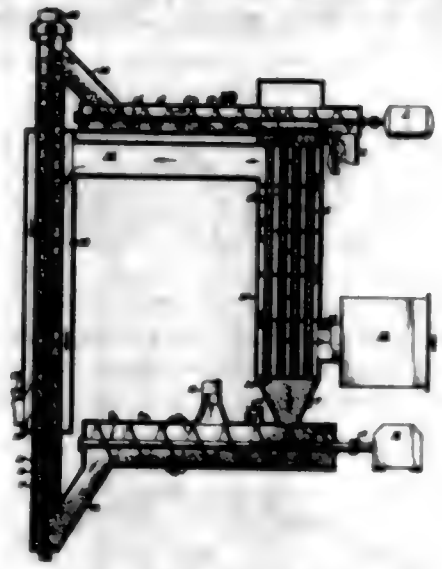
forming a suspension of growing crystals of calcium sulfate in mother liquor from the reaction mixtures of Reactions 1 and 2, withdrawing a stream of mother liquor from the suspension, adding sulfuric acid and the reaction product of Reaction 1 to the withdrawn stream in such proportions that crystals of calcium sulfate will not immediately form by crystallizing from the stream, withdrawing a separate stream of mother liquor from the suspension, removing from the separate stream by vaporization an amount of water the heat of vaporization of which is equivalent to the amount of reaction heat of said Reactions 1 and 2, combining the thus treated streams and returning the combined streams to said suspension.

2,897,854
THERMAL DECOMPOSITION OF SLUDGES

Hunter Miley, Petrolia, Pa., assignor to L. Sonnebora Sons, Inc., a corporation of Delaware

Original application December 9, 1954, Serial No. 474,256. Divided and this application October 6, 1955, Serial No. 538,988
12 Claims. (Cl. 23—177)

1. Process of thermally decomposing sludges, resulting from the treatment of hydrocarbon oils with sulfuric acid, for the conversion to sulfur dioxide and a residue of coke, which comprises maintaining a continuously moving body of coke particles in continuous circulation in a closed cycle, adding sludge to said body at a point in said cycle, and intimately mixing said sludge with said coke particles at the point of introduction, forming an intimate mixture of said sludge with said coke particles, substantially indirectly heating said body of coke particles as it circulates in said closed cycle, the mass of said coke particles at the point of mixing with said sludge being at least 5 times the mass of said sludge, and the temperature of said coke particles being sufficiently in excess of the temperature of said sludge at the time of mixing to produce a mixture at least at the decomposition temperature of said sludge and below a temperature at which any substantial quantities of hydrocarbon vapor will be driven off from the sludge, whereby said sludge is substantially immediately decomposed and SO_2 is substantially immediately liberated, conducting away the



sulfur dioxide produced and abstracting any excess of coke particles over that necessary to maintain said body.

2,897,855
SULFUR TETRAFLUORIDE ADDUCTS

Earl L. Muetterties, Chadds Ford, Pa., and William D. Phillips and William Channing Smith, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

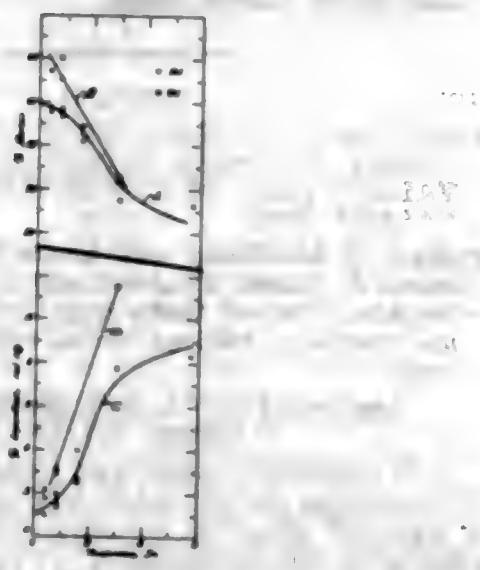
No Drawing. Application December 28, 1956
Serial No. 631,038
10 Claims. (Cl. 23—285)

3. The process of purifying sulfur tetrafluoride contaminated with sulfur hexafluoride which comprises the steps of (1) contacting the sulfur tetrafluoride with a tertiary amine and thereby forming a sulfur tetrafluoride-tertiary amine adduct and (2) subsequently recovering pure sulfur tetrafluoride from the adduct, said tertiary amine having (*a*) the substituents on the nitrogen atom selected from the group consisting of hydrocarbon and monoxahydrocarbon radicals of up to twelve carbons, (*b*) only carbon immediately linked to the nitrogen and (*c*) at most one carbon linked to the nitrogen free of hydrogen.

2,897,856
PRODUCTION OF ELEMENTAL BORON BY MAGNESIUM REDUCTION

Nelson P. Nies, Pasadena, and Edgar W. Fajans, Los Angeles, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

Application October 18, 1956, Serial No. 616,774
3 Claims. (Cl. 23—209)



1. The method of producing high purity elemental boron which comprises intimately admixing finely

posed below said outlet tube means and adapted to re-

duit adjacent its closed end; a plurality of gas passage-

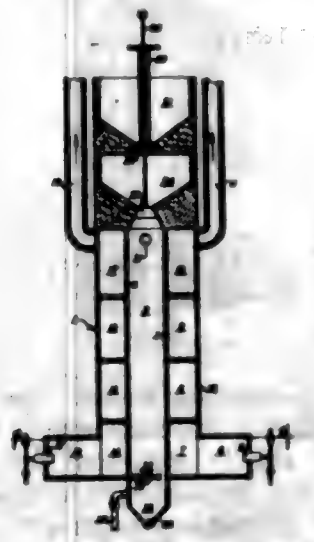
divided anhydrous B_2O_3 and particulate magnesium to form a reaction mass, arranging said reaction mass in a layer having as its smallest dimension a thickness of from about ½ inch to about 2 inches, preheating said admixture at a temperature of from about 400° to about 700° F., initiating the reaction by directing an open flame upon a portion of the surface of said reaction mass, removing the flame once the reaction starts and recovering elemental boron produced by the reaction.

2,897,057

PROCESS OF WINNING ELEMENTAL PHOSPHORUS

Louis Burgess, Jersey City, N.J., assignor to Sam Tour and himself; Murray Burgess and Eddie Burgess Beitler, executors of said Louis Burgess, deceased

Application August 25, 1955, Serial No. 530,507
15 Claims. (Cl. 23—223)



1. Process of winning phosphorus from oxygenated ores containing the same which comprises forming a briquetted coke throughout which the ore is disseminated in the form of particles in a supporting structure of carbon, thereafter heating the coke so formed in a heating zone to a temperature at which reduction proceeds with formation of carbon monoxide and phosphorus in gas phase while maintaining same substantially free from direct contact with combustion gases and free from substantial electric arc heating, maintaining such temperature until at least the major part of the phosphorus content of said ore has been liberated, said coke containing sufficient excess carbon over that consumed in the reduction to substantially prevent deterioration of the briquettes during the reduction and to hold the residual particles of said ore apart and prevent agglomeration of the same, conducting away said carbon monoxide and phosphorus in gas phase, separating phosphorus therefrom and removing residual carbon and residual ore particles from said heating zone, in solid form.

2,897,058

ALBUMIN DETECTING METHOD AND MEANS

Alexander Galat, Yonkers, N.Y.

No Drawing. Application May 8, 1957
Serial No. 657,731
10 Claims. (Cl. 23—230)

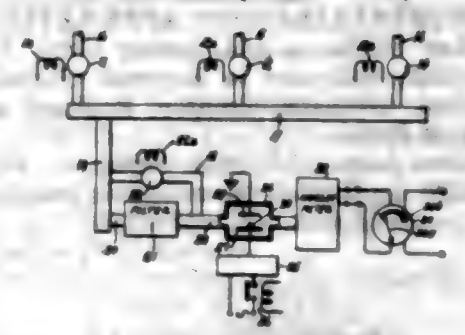
1. The composition of matter comprising a solution of a weak organic acid and an ester of tetrabromophenolphthalein in a water soluble tertiary alcohol selected from the group consisting of tertiary butyl alcohol and diacetone alcohol.

2,897,059

PROCESS AND APPARATUS FOR GAS DETECTION

Frank W. Van Luik, Jr., Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Application June 29, 1956, Serial No. 594,820
13 Claims. (Cl. 23—232)



1. An apparatus for detecting gaseous carbon compounds in a mixture of gases including in combination, means to free said mixture of condensation nuclei, means adapted to receive said nuclei-free mixture to convert a portion of said gaseous carbon compound to condensation nuclei including corona discharge means, and means to detect said condensation nuclei to provide a measure of said gaseous carbon compound.

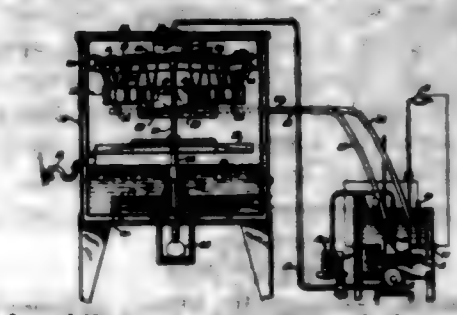
12. In a method for detecting gaseous carbon compounds in a volume of gas steps comprising freeing a selected portion of said gas of condensation nuclei, reacting the gaseous carbon compound with a metallic element to form the carbonyl of said metal, the carbonyl thus formed being capable of forming condensation nuclei upon disassociation, detecting the condensation nuclei resulting from disassociation to provide a measure of the amount of the gaseous carbon compounds.

2,897,060

ACCELERATED CONDENSATION CORROSION TESTING SYSTEM

Edgar A. Dieman, Crown Point, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Application April 30, 1956, Serial No. 581,486
4 Claims. (Cl. 23—253)



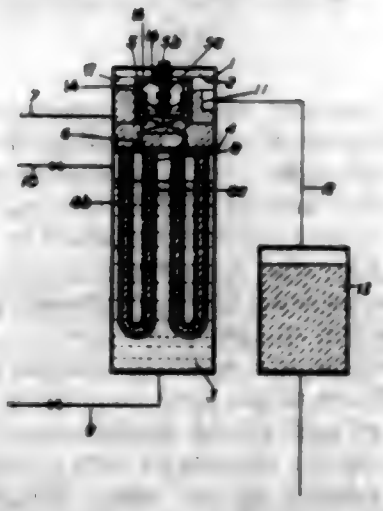
1. A humidity test apparatus of the type comprising cabinet means for maintaining a humidity atmosphere at an elevated temperature, and a rotating stage within said cabinet means, said stage having means for supporting a plurality of test panels, the improvement which comprises heat exchanger means integral with a test panel on such rotating stage, said heat exchanger means including a fluid receiving chamber, an inlet tube for said chamber, an outlet tube for said chamber, hook means at the upper ends of said inlet tube and said outlet tube for suspending said heat exchanger means on said rotating stage, circulating fluid manifold tank means disposed within said cabinet and supported on said rotating stage, an inlet for said manifold tank means in an upper wall thereof, a plurality of vent spouts arranged about the periphery of said manifold tank adjacent the bottom thereof, flexible connector tubes disposed between the discharge ends of said spouts and said inlet tube means, exterior cooling tank means, conduit means extending between said cooling tank and said manifold tank, pump means on said conduit means, an annular collecting trough within said cabinet dis-

at which any substantial quantities of hydrocarbon vapor will be driven off from the sludge, whereby said sludge

1. The method of producing high purity elemental boron which comprises intimately admixing finely

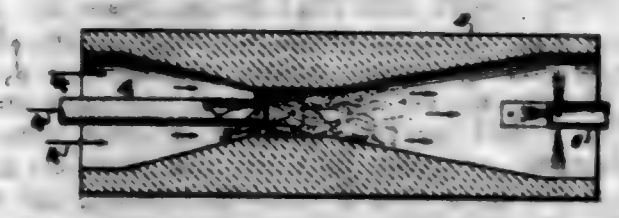
posed below said outlet tube means and adapted to receive flow therefrom, conduit manifold means for receiving the waste from said collecting trough means, and second conduit means for returning fluids from said manifold tank means to said cooling tank.

2,897,061
CRYSTALLIZATION APPARATUS
Gilbert Arthur Williams and Arthur Firth, Norton-on-Tees, England, assignors to Imperial Chemical Industries Limited, Millbank, London, England, a corporation of Great Britain
Application August 16, 1956, Serial No. 604,396
Claims priority, application Great Britain August 22, 1955
2 Claims. (Cl. 23—273)



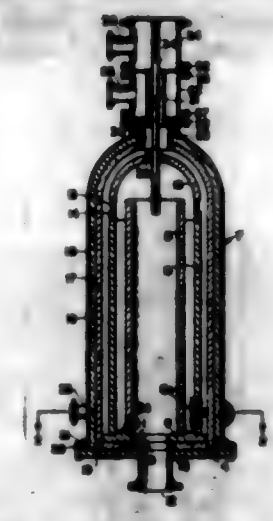
1. Apparatus for forming a crystalline precipitate from a liquid comprising a pumping chamber bounded at its bottom by a tube plate, a cylindrical septum extending from said tube plate into said pumping chamber and enclosing the central portion of said tube plate, an impeller mounted in said pumping chamber in axial alignment with said septum, a cooling chamber bounded at its top by said tube plate, a plurality of U-shaped cooling tubes disposed in said cooling chamber and communicating with said pumping chamber through said tube plate, each cooling tube having one leg communicating with said pumping chamber inside said septum and the other leg communicating with said pumping chamber outside said septum, a vortex breaker including an open-ended cylinder of greater diameter than said septum in said pumping chamber, said open-ended cylinder being spaced above and arranged in coaxial relation to said septum and having a plurality of holes in its wall.

2,897,062
GAS REACTOR
William L. Minnick, Minneapolis, Minn., assignor to Phillips Petroleum Company, a corporation of Delaware
Application February 5, 1954, Serial No. 406,528
4 Claims. (Cl. 23—277)



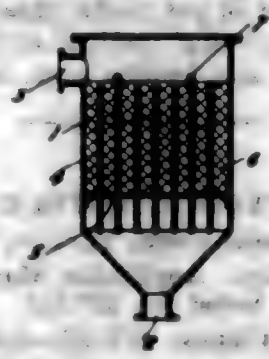
1. A gas reactor comprising a first conduit open at each end and adapted for flow of fluid therethrough; a venturi section in said conduit comprising a converging section, a throat section and a diverging section; a longitudinally movable second conduit terminating in a closed end and coaxially disposed within said first conduit with its closed end within the converging section of said venturi section and longitudinally movable from said position to a position within the throat of said venturi section; a plurality of passageways through said second conduit disposed radially around said second conduit adjacent its closed end; a plurality of gas passageways through said first conduit in radial alignment with the passageways in said second conduit; a third conduit disposed coaxially within said first conduit and terminating in a closed end adjacent the diverging section of said venturi section; and a plurality of passageways through said third conduit disposed radially around and adjacent its closed end and a passageway through its closed end.

2,897,063
REACTOR WITH CONCENTRIC ANNULAR PASSAGES
Irwin L. Breier, Lafayette, Calif., assignor to Shell Development Company, New York, N.Y., a corporation of Delaware
Application January 28, 1957, Serial No. 636,566
5 Claims. (Cl. 23—284)



1. A reactor comprising several concentric, radially spaced, tubes defining therebetween at least two outer and one central, axially elongated flow channels, said tubes providing flow passageways situated alternately at opposite ends of consecutive tubes and placing the said flow channels into serial communication to form a folded channel, transverse wall means for each tube other than the innermost, said wall means closing the end of the respective tube which adjoins a flow passageway in communication with an adjoining inner flow channel, thereby confining said flow spaces for serial flow of reactants in alternating axial directions, inlet means at one end of said folded channel, outlet means at the other end of said folded channel, and an auxiliary inlet at the closed end of at least one of said tubes.

2,897,064
CATALYTIC OVENS
Louis Feuilletier and Robert Desmond, Lyon, France, assignors to Societe d'Electro-Chimie d'Electro-Metallurgie et des Acieries Electriques d'Ugine, Paris, France, a corporation of France
Application May 14, 1956, Serial No. 584,618
Claims priority, application France May 27, 1955
1 Claim. (Cl. 23—288)



A fixed bed catalytic reaction oven for the fluorination of chloromethane comprising a substantially vertical reaction chamber, a gas inlet opening in the lower part of said chamber, a gas outlet opening in the upper part

above 450° F. in which solvent polycyclic hydrocarbons predominate and constitute the essential component and

said manifold, said device comprising a float chamber adapted to contain a body of combustible fuel in liquid

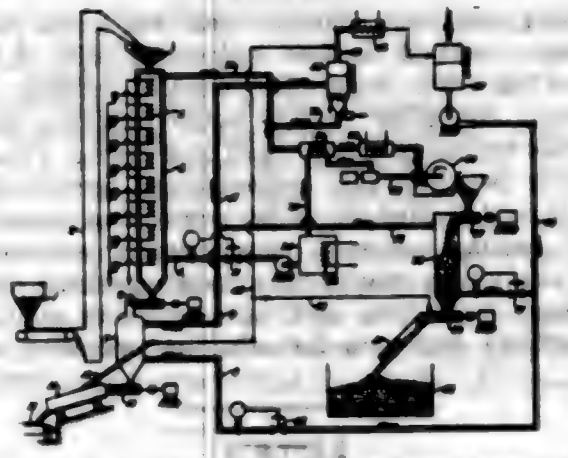
of said chamber, a perforated supporting plate removably positioned in said chamber, a mass of catalyst supported by said plate, a plurality of substantially vertical solid rods of a thermally-conducting material fixed to said supporting plate and substantially uniformly spaced throughout said mass of catalyst, said solid rods projecting under said mass of catalyst and through the supporting plate toward said gas inlet opening, thereby preheating the gas entering said inlet opening before it reaches the catalytic mass, said rods being located within said catalyst mass to conduct heat from one part of the mass to a second part of the mass to equalize the temperature throughout the mass, and a removable cover on said chamber to permit easy removal of said plate, said mass of catalyst particles and said solid rods.

2,897,865

RECOVERY OF ELEMENTAL SULFUR FROM SULFUR BEARING SOLID MINERAL MATTER

Robert G. Capell, Pittsburgh, James H. Wright, Verona, and William A. Gruse, Wilkinsburg, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Application June 18, 1956, Serial No. 592,124
8 Claims. (Cl. 23—312)



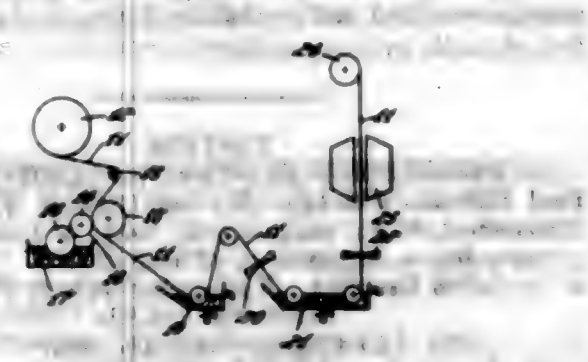
1. An extraction process for the recovery of elemental sulfur from solid mineral matter containing it which comprises contacting the mineral matter with a liquid bis-(alkanol) disulfide to form a solution of sulfur in the disulfide, and thereafter cooling the solution to precipitate elemental sulfur therefrom.

2,897,866

ELECTRICAL CAPACITORS

Peter Edward Graham and Ronald Christopher Smith, Wandsworth, London, England, assignors to A. H. Hunt (Capacitors) Limited, London, England, a British company

Application October 12, 1956, Serial No. 615,669
1 Claim. (Cl. 41—42)



A method of preparing flexible electrode-bearing strip material for making capacitors, comprising the steps of depositing a thin layer of aluminium metalization onto at least one surface of a carrier strip, delimiting electrode areas on the metalized surface by applying a solution of sodium hydroxide, having a concentration of approximately 60% by weight and a viscosity of approximately 800 centistokes to selected areas of said metalized surface by means of a demetalizing roller having a periphery patterned to correspond to the areas of metalization to be removed, removing the residual products of reaction and any excess of reagent by washing, and drying the thus prepared strip.

2,897,867

ALCOHOL-CONTAINING GASOLINE COMPOSITION

William J. Sparks and David W. Young, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application November 26, 1954
Serial No. 471,492
2 Claims. (Cl. 44—56)

1. A method of pressuring a motor fuel to a Reid vapor pressure of about 13 to 15 p.s.i. to form a final gasoline product having a Research octane number of at least 80, which comprises debutanizing a hydrocarbon base stock boiling in the gasoline boiling range and containing substantial amounts of catalytically cracked heavy naphtha boiling between about 300° and 420° F., depentanizing a reformed naphtha, mixing said naphthas, adding to said butane-free mixture 4 to 10% isopropyl alcohol and thereafter pressurizing said resulting mixture with 13 to 18% by volume of butane.

2,897,868

MOTOR FUEL

John P. Pellegrini, Jr., Blawnox, and Helen I. Thayer, Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Application July 21, 1955
Serial No. 523,627
4 Claims. (Cl. 44—56)

1. A motor fuel having reduced preignition tendencies consisting essentially of a gasoline containing about 1 to about 3 cubic centimeters of tetraethyl lead per gallon of gasoline; about 0.2 to about 1.5 times the theoretical amount of an organic phosphorus compound selected from the group consisting of hexamethylphosphoramide and tricresyl phosphate required to convert the lead to lead phosphate; and an alkoxy compound selected from the group consisting of methylal and 1,1,3,3-tetraethoxypropane, wherein the molecular ratio of the alkoxy compound to tetraethyl lead is about 1:1 to about 10:1.

2,897,869

MOTOR FUEL

Allen E. Brehm, Griffith, Ind., Martin Hamer, Chicago, Ill., and Lawrence D. La Croix, Jr., Porter, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application April 2, 1956
Serial No. 575,336
2 Claims. (Cl. 44—58)

1. An additive for gasoline for incorporating into gasoline an amount of tetraethyllead in the range of .5 to 5 ml. per gallon, which additive consists essentially of tetraethyllead, a phosphorus-containing reaction product prepared by reacting 1 to 50 percent of a phosphorus sulfide with a butylene polymer having a molecular weight in the range of 125 to 50,000 at a temperature in the range of 200 to 600° F. in a non-oxidizing atmosphere for at least one hour and thereafter neutralizing with potassium hydroxide, the amount of reaction product in the additive providing at least .01 mole but not more than 2.00 moles of phosphorus per mole of lead present in the additive, and a normally liquid hydrocarbon solvent which boils

from the group consisting of di-tertiary-butyl-para-cresol, diphenylamine, beta naphthol, butylated hydroxy anisole, a primary aromatic amino developing agent in the presence of a color coupler having the following formula:

above 450° F. in which solvent polycyclic hydrocarbons predominate and constitute the essential component and which solvent constitutes on a weight basis about 25 percent to 95 percent of said additive.

2,897,870

MOTOR FUEL COMPOSITIONS

Stanley R. Newman and Robert Y. Heisler, Fishkill, N.Y., assignors to Texaco Inc., a corporation of Delaware

No Drawing. Application May 14, 1957
Serial No. 658,960
7 Claims. (Cl. 44—63)

1. A normally liquid hydrocarbon fuel containing an epoxide of an aliphatic ester of a monoethylenic fatty acid having from 12 to 24 carbon atoms wherein the aliphatic portion is the residue of a compound selected from the group consisting of aliphatic hydrocarbyl alcohols having from 1 to 10 carbon atoms, glycols, and glycerine, said epoxide being present in an amount sufficient to suppress the deposit forming tendencies of the fuel.

2,897,871

GASOLINE FUELS

Lewis F. Gilbert, Detroit, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application June 30, 1953
Serial No. 365,265
4 Claims. (Cl. 44—69)

1. Improved fuel for spark ignition internal combustion engines consisting essentially of gasoline, from about 0.53 to about 6.34 grams of lead per gallon as an organolead antiknock agent, a scavenging amount of organic halide material capable of reacting with lead during combustion in a spark ignition internal combustion engine to form relatively volatile lead salts containing halogen, and a dialkyl benzene phosphonate, said benzene phosphonate having benzene bonded directly to phosphorus, said alkyl groups containing from one to about four carbon atoms, said phosphonate being present in said fuel in amount such that the phosphorus-to-lead atom ratio is from about 0.1:3 to about 1.6:3.

2,897,872

MOTOR FUELS

John Henry Dehane Hooper and David Tulloch McAllan, Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a British joint-stock corporation

No Drawing. Application November 15, 1956
Serial No. 622,259
Claims priority, application Great Britain November 24, 1955
5 Claims. (Cl. 44—69)

5. A high octane, high volatility motor gasoline in which the active ingredients therein consist of a blend of between about 40% and 60% by volume of a high octane, low volatility component consisting of the higher boiling fraction of a platformate constituting between 40% and 60% by weight of the reformate, and between 60% and 40% by volume of a high octane, high volatility component consisting of the lower boiling fraction of a catalytically cracked gasoline, said lower boiling fraction having an end boiling point between 80° and 120° C., and a minor amount of tetra ethyl lead, said gasoline having a Research Octane Number of at least 100 with 1.5 cc. of tetra ethyl lead/IG and a 40% to 55% volume recovery at 100° C.

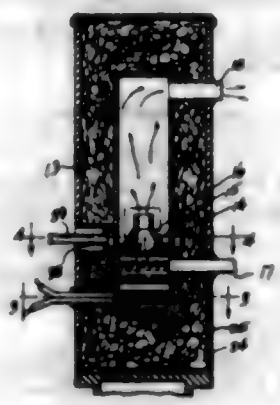
2,897,873

GASIFIER FOR LIQUID FUELS

Easton H. Shipp, Sullivan, Ind.

Application September 28, 1956, Serial No. 612,713
3 Claims. (Cl. 48—103)

1. The combination with an intake manifold of a device for forming a combustible fuel vapor-air mixture in said manifold, said device comprising a float chamber adapted to contain a body of combustible fuel in liquid form positioned contiguous to said manifold, an upstanding closed casing positioned adjacent said chamber, a horizontally disposed plate extending across the interior of said casing adjacent to and spaced from the lower end of said casing and subdividing the casing into a liquid receiving chamber and a vaporizing chamber, there being an aperture in said plate, a baffle member positioned above said plate and forming with said plate a baffle chamber, the upper end of said baffle chamber having an outlet discharging into said vaporizing chamber, a first conduit



connecting said float chamber with said liquid receiving chamber, a second conduit connecting said vaporizing chamber to said manifold, electric heating means operatively connected to said liquid receiving chamber, a confined enclosure exteriorly of said casing, a thermally responsive switch in said enclosure and operatively connected to said heating means for controlling the operation of said heating means, a ring chamber surrounding a part of said casing contiguous to said vaporizing chamber, and means conducting heat from said ring chamber to said confined enclosure for effecting operation of said switch.

2,897,874

MANUFACTURE OF ABRASIVE ARTICLES

Cyril Aubrey Redfarn, London, England

No Drawing. Application July 18, 1955
Serial No. 522,837
Claims priority, application Great Britain July 19, 1954
8 Claims. (Cl. 51—298)

1. An abrasive article comprising abrasive grains bonded with a heat cured phenolic resin which is the aldehyde condensation product of the preformed reaction product of an inorganic esterifying agent selected from the class consisting of boric acid, the phosphoric acids, polyfunctional chlorine derivatives of the phosphoric acids and phosphorus trichloride, with a polyhydroxy aromatic compound having an unsubstituted position in the nucleus reactive with formaldehyde, said reaction product containing at least one esterified phenolic hydroxy group for each molecule of the polyhydroxy aromatic compound and a substantial proportion of unesterified phenolic hydroxy groups.

2,897,875

INHIBITOR FOR BUFFING COMPOUND

Paul Gibson, Chicago, Ill., and Bonnie J. Bogdanoff, Syracuse, N.Y., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois

No Drawing. Application July 5, 1957
Serial No. 669,936
14 Claims. (Cl. 51—304)

12. A new lime based buffing compound which comprises: a binding material containing a fatty acid selected from the group consisting of stearic acid, palmitic acid, and mixtures thereof, a lime based buffing compound, and at least about 0.01% of a fat antioxidant selected

ducing said pasteurized carbon dioxide-containing beverage while still hot into said heated and sterilized con-

70% by separating the juices from the meats; separately concentrating said removed juices, mixing the meats in

from the group consisting of di-tertiary-butyl-para-cresol, diphenylamine, beta naphthol, butylated hydroxy anisole, and propyl gallate.

2,897,076
ABRASIVE ARTICLE
Arthur M. Sega, Philadelphia, Pa., assignor to Simonds Abrasive Company, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Application July 31, 1956
Serial No. 601,127
11 Claims. (Cl. 51—307)

1. An abrasive body comprising abrasive grain bonded in a ceramic bond consisting essentially of a fluorine-containing mica and a borosilicate glass consisting essentially of from about 40% to about 60%, by weight, of silica, from about 20% to about 35% of boron trioxide, from about 10% to about 15% of alumina, and from about 5% to about 15% of a material selected from the group consisting of alkali and alkaline earth metal oxides, and mixtures thereof, said mica and said glass comprising separate phases of said bond, and said mica phase comprising from about 45% to about 65%, by weight, of said bond.

2,897,077
PLUTONIUM-URANIUM-TITANIUM ALLOYS
Arthur S. Coffinberry, Los Alamos, N. Mex., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application April 10, 1957
Serial No. 652,069
4 Claims. (Cl. 75—122.7)

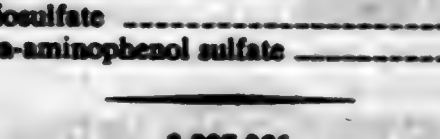
1. A neutronic reactor fuel alloy consisting essentially of from 15 to 60 atomic percent titanium with the remainder uranium and plutonium in the ratio of from 90 to 50 atoms of uranium to 10 to 50 atoms of plutonium, the predominant phase constituent of said alloy having a hexagonal crystal structure of the $(U,Pu)_2Ti$ type.

2,897,078
FREE-CUTTING STAINLESS STEEL
Seiji Nishifdori, Chita-gun, Aichi-ken, Japan
No Drawing. Application July 9, 1958
Serial No. 747,338
Claims priority, application Japan July 10, 1957
1 Claim. (Cl. 75—124)

Free-cutting stainless steel consisting essentially of from about 0.03% to about 0.2% carbon, from about 0.1% to about 1.5% silicon, from about 0.1% to about 2.0% manganese, from about 11.0% to about 20.0% chromium, at least one element selected from the group consisting of phosphorus, sulphur, and selenium in an amount of from about 0.04% to about 0.50%, at least one alloying ingredient selected from the group consisting of zirconium and molybdenum in an amount of from about 0.05% to about 1.0%, from about 0.5% to about 3.0% copper, from about 0.5% to about 3.0% aluminum, and a balance of substantially all iron.

2,897,079
PRODUCTION OF COLORED PHOTOGRAPHIC IMAGES WITH OXODIAZOLE COUPLERS
Arthur Henri De Cat, Mortsel-Antwerp, and Raphaël Karel Van Poucke, Mechlin, Belgium, assignors to Gevaert Photo-Producten N.V., Mortsel, Belgium, a Belgian company
No Drawing. Application March 21, 1957
Serial No. 647,473
Claims priority, application Great Britain March 23, 1956
6 Claims. (Cl. 96—55)

1. A process for the production of a colored photographic image, which comprises developing a reducible silver salt image in a photographic element by means of a primary aromatic amino developing agent in the presence of a color coupler having the following formula:



wherein R represents a member selected from the group consisting of an alkyl radical and an aryl radical.

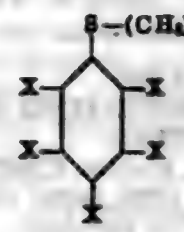
2,897,080
COMBINED PHOTOGRAPHIC DEVELOPING AND FIXING BATH
Sidney Teiser, Rochester, N.Y., and Walter R. Sammons, Chicago, Ill., assignors, by mesne assignments, to The Lawyers' Co-Operative Publishing Company, Rochester, N.Y., a corporation of New York
Application September 2, 1955, Serial No. 532,160
2 Claims. (Cl. 96—61)

1. A combined photographic developing and fixing bath solution composed essentially of water having dissolved therein substantially the following material in substantially the following proportions, viz:

	Parts by weight
Sodium sulfite	309
Hydroquinone	155
Sodium hydroxide	129
Potassium bromide	103
Sodium thiosulfate	896
Methyl-para-aminophenol sulfate	56

2,897,081
ANTIFOGGING AGENT AND BACTERICIDE FOR PHOTOGRAPHIC EMULSIONS
Fritz Dersch and Millet R. De Angelus, Binghamton, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Application December 30, 1957
Serial No. 705,729
6 Claims. (Cl. 96—66)

1. A light-sensitive photographic material comprising a base and a light-sensitive silver halide emulsion, said light-sensitive material containing as an antifoggant a compound of the following constitution:

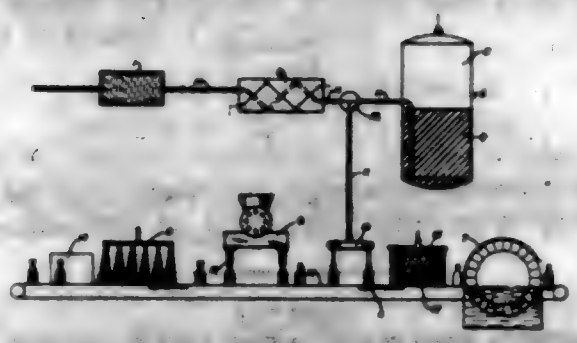


wherein R is selected from the class consisting of hydrogen, an aliphatic radical, aryl, aralkyl and a cation; X is halogen and *n* is a whole number of from 1 to 3.

2,897,082
METHOD FOR FILLING CONTAINERS WITH CARBON-DIOXIDE CONTAINING BEVERAGES
Bruno Kaiser, Hamburg, Germany
Application March 12, 1956, Serial No. 570,770
Claims priority, application Germany March 11, 1955
6 Claims. (Cl. 99—49)

1. A method of filling containers adapted to be used for direct consumption with carbon dioxide-containing beverages comprising the steps of heating a carbon dioxide-containing beverage to the pasteurization temperature thereof for sufficient time to pasteurize the same, providing a container adapted to be used for direct consumption, heating and sterilizing said container, intro-

ducing said pasteurized carbon dioxide-containing beverage while still hot into said heated and sterilized con-



tainer with a counter-pressure filler, and sealing said container.

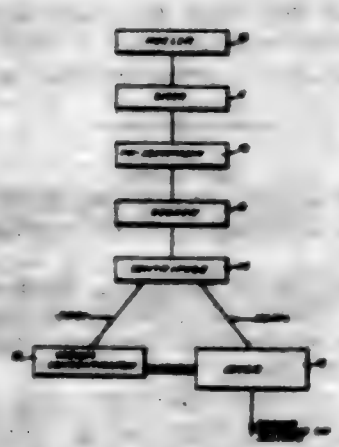
2,897,063
DRYING OF SWISS WHEY
Maurice E. Hall, La Grange, and James F. Lucasey, Sullivan, Ill., and Dale Heinck, Rochester, Ind., assignors to Armour and Company, Chicago, Ill., a corporation of Illinois
No Drawing. Application January 11, 1957
Serial No. 633,541
9 Claims. (Cl. 99—67)

1. In a method of preparing a drum dryable Swiss whey to form an expanded particle product, comprising incorporating in said whey prior to drying an amount of formaldehyde sufficient to prevent increase in acidity of said whey at about the value of the whey issuing from the curd-whey separator.

2,897,064
COFFEE PRODUCT AND METHOD OF MANUFACTURE
David D. Peebles, Davis, Calif., assignor, by mesne assignments, to Foremost Dairies, Inc., San Francisco, Calif., a corporation of New York
Application February 9, 1956, Serial No. 564,397
4 Claims. (Cl. 99—71)

1. In a process for the manufacture of a dry coffee product, drying a hydrous coffee concentrate to produce a finely divided powder, moistening the particles of the powder whereby they are made sticky and causing the sticky particles to contact and adhere together in the form of moist porous aggregates, and then removing excess moisture from the unchanged aggregates.

2,897,065
PROCESS OF CONCENTRATING PIMIENTO PEPPERS
Eric E. Todd, Malibu, Calif.
Application August 15, 1955, Serial No. 528,418
1 Claim. (Cl. 99—103)



The process of concentrating peppers comprising the steps of peeling and dicing the pepper meats, heating the meats to bleed juices therefrom, reducing the weight of the mixture of said meats and juices by approximately 70% by separating the juices from the meats; separately concentrating said removed juices, mixing the meats in the absence of dehydration thereof and the concentrated juices to form a concentrated product with said juices absorbed in said meats.

2,897,066
COLD SWELLING STARCH PRODUCT
Ernest A. Sowell, St. Louis, and Richard L. Curtis, Ferguson, Mo., Barbara A. Hall, Chicago, Ill., and Barrett L. Scullet, Clayton, Mo., assignors to Anheuser-Busch, Incorporated, St. Louis, Mo., a corporation of Missouri
No Drawing. Application February 15, 1957
Serial No. 640,327
4 Claims. (Cl. 99—139)

1. A cold swelling starch product containing as the principal and essential starch ingredients pregelatinized potato starch and pregelatinized wheat starch, the starches having been intimately mixed prior to gelatinization whereby the wheat starch coacts with the potato starch to cause the potato starch to lose its usual tough, rubbery, tenacious characteristics and results in a product which forms a tender, firm, and smooth gel when mixed with cold water, said starch product being substantially free of any deleterious flavor upon aging.

2,897,067
FOOD PACKAGE
Joseph R. Lawler, Western Springs, Ill., assignor to Tee-Pak, Inc., Chicago, Ill., a corporation of Illinois
Application March 5, 1956, Serial No. 569,431
5 Claims. (Cl. 99—171)

3. A food package comprising an elongated tube of multi-layer plastic film laminate in which the film layers are inherently self-cohesive, means sealing over the ends of said tube after the introduction of the food product to be stored therewithin, an uninterrupted thermal seal formed lengthwise of said tube and interjoining overlapping edge portions thereof, and at least one area along the length of said thermal seal which is weakened by the introduction of a layer of bond resisting material intermediate said overlapping edge portions, the outermost free edge portion of said plastic material forming a tab member which may be manually engaged opposite said weakened area of said seal such that pulling of said tab member toward said seal serves to dislodge an encircling band of said plastic material having substantially parallel sides lying generally in planes transverse to the longitudinal axis of said package, said band's width being defined substantially by the lengthwise extent of said weakened area.

2,897,068
PROCESS FOR CANNING FRESH PRUNES
Eugene A. Beane, Gilroy, Calif.
No Drawing. Application December 20, 1956
Serial No. 629,449
6 Claims. (Cl. 99—186)

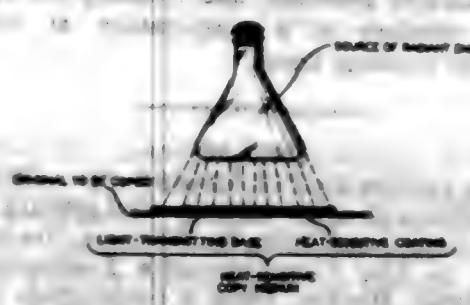
6. The process of preserving fresh prunes consisting of the steps of dipping freshly picked prunes in a solution at water temperature of from 185° F. to 195° F. containing a 4% to 5% alkaline reagent for a period of

from 2 to 3 minutes, then immediately rinsing the prunes with cold water after removal of the prunes from such solution to remove powdery bloom from the prunes, then dehydrating the prunes at a temperature ranging from 175° F. to 185° F. until the moisture content of the prunes is reduced to a point within the range of from 45% to 55% of the original moisture content thereof, then again dipping the prunes for a period of 2 minutes in a solution at 185° F. to 195° F. temperature containing at least a 1% and not more than a 2% alkaline reagent followed by a cold water wash to remove the remaining bloom from the prunes, then placing the prunes in jars and preheating the jars and prunes therein by subjecting them to a 190° F. heat for approximately 25 minutes, inverting the jars and prunes for removing water from the jars and prunes, lidding the jars and placing the lidded jars with fruit therein in an autoclave, subjecting the lidded jars to a heat of 214° F. to 230° F. within the autoclave for a period of from 45 minutes to 90 minutes and then gradually cooling the jars and prunes therein.

2,897,089
METHOD OF PRINTING COLOR PHOSPHOR PATTERNS
Hayo Ahlberg and Günter K. Wessel, Syracuse, N.Y., assignors to General Electric Company, a corporation of New York
Application March 14, 1956, Serial No. 571,465
6 Claims. (Cl. 117—8.5)

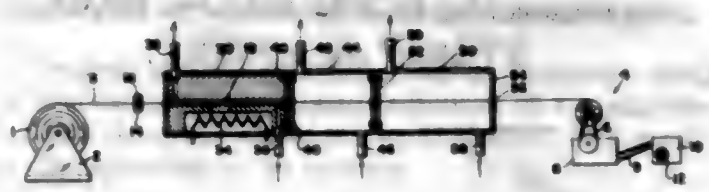
1. In the art of making a screen for a cathode ray tube of the type having an electron beam and an electron permeable grid between which and the screen is formed an accelerating electron field and wherein the screen consists of a target material adapted to be scanned by the electron beam, the steps comprising applying to the screen support member of the tube a coating of an electron-sensitive target material-retainable resist, exposing said resist with an electron beam in a pattern corresponding to the scan pattern of the beam of the cathode ray tube, applying said target material to at least the electron exposed portions of the resist, and removing the unexposed portions of the resist.

2,897,090
HEAT-SENSITIVE COPYING PAPER
Max Van Dam, Newton, N.J., assignor to Anken Chemical & Film Corporation, Newton, N.J.
Application April 11, 1957, Serial No. 652,103
12 Claims. (Cl. 117—36)



1. A heat-sensitive copying sheet for producing copies of printed or graphic subject matter by exposure of said sheet, in contact with said subject matter, to radiant energy, said copying sheet having applied thereto the combination of a bismuth compound and a tin derivative reducing agent capable of reacting with said bismuth compound in the presence of heat to produce metallic bismuth.

2,897,091
METHOD OF HIGH SPEED GAS PLATING OF SYNTHETIC RESINS
Howard J. Homer and John R. Whitacre, Dayton, Ohio, assignors to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio
Application October 27, 1954, Serial No. 464,935
3 Claims. (Cl. 117—47)

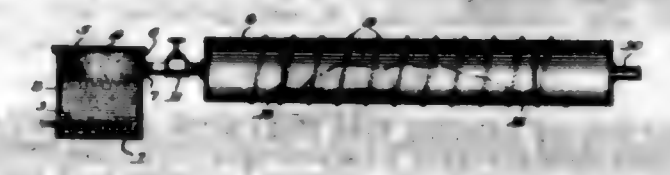


1. In the method of metallizing heat-sensitive organic filamentary materials which comprises the steps of moving the material in continuous lengths through a heated chamber to raise the temperature of the material and then moving the material while heated into a gas plating chamber and in contact with a metal bearing thermally decomposable gaseous metal compound which is heat-decomposed at the temperature of said material whereby metal is deposited on the material, the improvement which consists in raising the skin temperature of the material at the surface only higher than the temperature of said thermally-decomposable compound and sufficient to cause the skin portion of the material to soften without raising the temperature of the body portion to a point where it softens, and contacting the material while thus heated with said thermally decomposable compound to effect metal deposition.

2,897,092
POLYETHYLENE
Alexander Andrew Miller, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Application December 16, 1955, Serial No. 553,485
12 Claims. (Cl. 117—47)

1. A process of reducing the permeability of polyethylene which comprises (1) pretreating polyethylene so as to render it more capable of being bonded, (2) applying thereto a polyvinyl alcohol containing at least 10% water based on the weight of the polyvinyl alcohol and (3) cross-linking the resulting water-containing polymer by irradiating it with ionizing radiation having energy equivalent to at least 5×10^4 electron volts to a dose of $1\text{–}100\times10^6$R.

2,897,093
PROCESS OF SILICONIZING
Harry A. Eckman, Chicago, Ill., assignor to Crane Co., Chicago, Ill., a corporation of Illinois
Application March 2, 1955, Serial No. 491,777
7 Claims. (Cl. 117—53)



1. The process of siliconizing an article comprising exposing at least a portion of the article while at an elevated temperature and in an atmosphere substantially free from oxygen both free and combined to a source of only a single reagent consisting of $SiCl_4$, said reagent being brought into contact with the article in the presence of SiC whereby to effect regeneration of the reagent $SiCl_4$ after reaction in the siliconizing process.

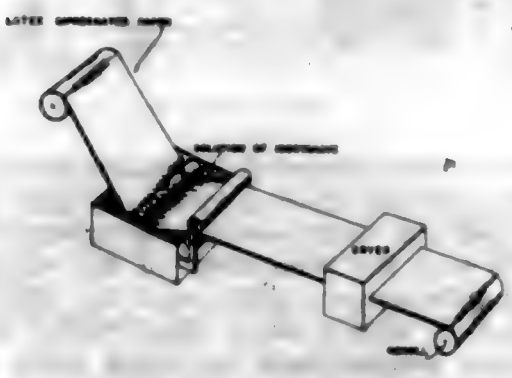
2,897,894

PROCESS OF TREATING LATEX IMPREGNATED PAPER WITH AN ISOCYANATE AND RESULTANT ARTICLE

Norman J. Hayes, Arlington, and William C. Ross, Winchester, Mass., assignors to W. R. Grace & Co., a corporation of Connecticut

Application May 11, 1954, Serial No. 429,119

6 Claims. (Cl. 117—62)



1. The process for improving the characteristics of latex-impregnated paper wherein the latex is coagulated which comprises treating the said impregnated paper with a solution of an isocyanate, the latex impregnant of said paper being selected from the group consisting of natural and artificial rubber latex.

2,897,895

METHOD OF PRODUCING ALUMINIZED PAPER

William B. Wolfson, West Newton, Paul J. King, Newton Centre, Charles A. Beer, Needham, and Philip J. Clough, Reading, Mass.; said Beer and said Clough assignors to National Research Corporation, Cambridge, Mass., a corporation of Massachusetts, and said Wolfson and said King assignors to Consolidated Paper Bag Company, Somerville, Mass., a corporation of Massachusetts

No Drawing. Application March 1, 1955
Serial No. 491,532

5 Claims. (Cl. 117—70)

1. The process of coating paper to provide a shiny aluminum surface thereon which comprises the steps of applying a film of water glass to the paper, baking the water glass film at a temperature on the order of 170°–200° F., applying a second film of water glass over the first film, baking the second water glass film at a temperature on the order of 170°–200° F. and above, and passing the thus coated and baked paper over a source of aluminum vapors in a chamber evacuated to a free air pressure of less than 5 microns Hg abs. to deposit a thin adherent shiny film of aluminum on said baked water glass coating.

2,897,896

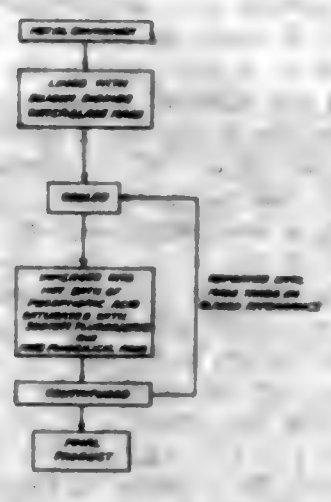
PROCESS OF LINING THE INTERIOR OF A METAL CONTAINER WITH ACID-RESISTANT COATING

Alexander Karatzas, New Halkidon, Athens, and Marina Hondroposlos, Piraeus, Greece

Application October 13, 1955, Serial No. 540,354

2 Claims. (Cl. 117—70)

1. A method of treating a set mass consisting of silicon dioxide-water glass to eliminate the high porosity thereof which comprises the formation and deposition within the pores of said set mass of silicon dioxide-water glass, of sodium fluosilicate, said formation and deposition being obtained by immersing the set mass into a hot solution



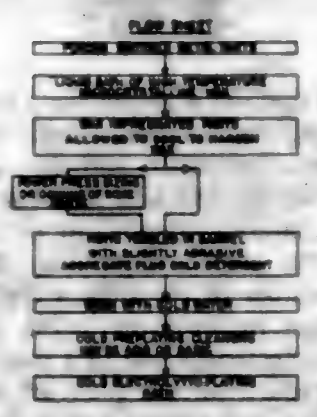
of phosphoric acid saturated with sodium fluosilicate and fluosilicic acid.

2,897,897

PROCESS OF PREPARING POROUS SINTERED METAL PARTS FOR METAL PLATING

Milton F. Smith, Birmingham, and Henry F. Latva, Dearborn, Mich., assignors, by mesne assignments, to The Bunting Brass and Bronze Company, Toledo, Ohio, a corporation of Ohio

Application August 4, 1955, Serial No. 526,541
3 Claims. (Cl. 117—102)



1. The method of preparing a porous sintered metal article for plating which comprises immersing the article in melted microcrystalline wax which is solid at room temperature to fill the surface pores and cover the surface of the article, cooling the article to harden the filler material, tumbling the article in a bath of detergent material at a temperature at which said filler material remains hard, said bath containing chips of natural or synthetic rock-like material, and cleaning the article in a pre-plating solution at a temperature at which said filler material remains hard.

2,897,898

METALLIZED COPOLYMERS OF ACRYLONITRILE AND VINYL CHLORIDE

Howard J. Homer and John R. Whitacre, Dayton, Ohio, assignors to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio

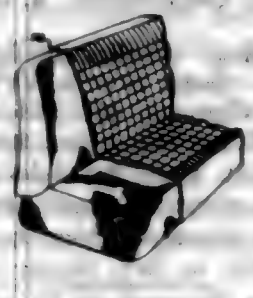
Application October 28, 1954, Serial No. 463,376
7 Claims. (Cl. 117—107)

1. An anti-static covering for seat cushions, belting, drapes and the like comprising a copolymer in fabric form composed of strands of acrylo-nitrile and vinyl chloride and having a metal impregnant throughout bonded integrally therewith but resistant to passage of substantial amounts of electricity, said metal being deposited throughout the body of said fabric by thermal

pass through a 100-mesh screen and more than 86% by

2,897,106

decomposition of a heat-decomposable gaseous compound of the metal in contact therewith, the resultant



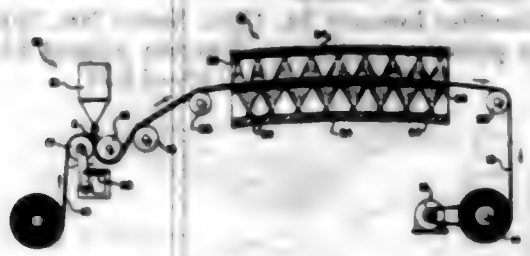
metallized fabric having a conductivity of about two million ohms per inch.

2,897,099

METHYL CELLULOSE COATED POLYESTER TAPE

Carl de Gaudhi, Greenlawn, N.Y.

Application August 31, 1955, Serial No. 531,793
2 Claims. (Cl. 117—138.8)



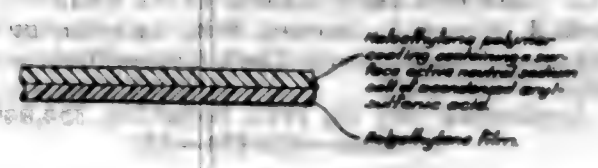
1. A tape of polyester terephthalate film, said tape having a continuous coating of dry methyl cellulose adhering directly to one surface thereof, said coated tape being normally flat and having no tendency to curl due to shrink stresses present in the coating of dry methyl cellulose.

2,897,100

COATING POLYETHYLENE WITH HALOETHYLENE POLYMERS AND COMPOSITE ARTICLES THEREBY OBTAINED

Dallas G. Greuley, Midland, and Harold J. Townsend, Saginaw, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Application December 3, 1956, Serial No. 625,938
16 Claims. (Cl. 117—138.8)



1. Method for coating a polyethylene article with a haloethylene polymer resin which comprises applying, as a coating composition, a layer of a latex emulsion of a haloethylene polymer resin in which there has been incorporated a minor proportion of a surface active polyelectrolyte material over the polyethylene surface, said surface active polyelectrolyte material containing a plurality of ionizable groups in its molecule which is a water-soluble neutral sodium salt of condensed arylsulfonic acids in a coating composition consisting of a latex emulsion of said haloethylene polymer resin; and subsequently drying the applied latex emulsion of the haloethylene polymer resin to effect a solid deposition of resin on the surface of the polyethylene.

2,897,101

PRINTING AND DYEING COMPOSITIONS AND PROCESS OF TREATING TEXTILES

Wilhelm Grenlich, Leverkusen-Bayerwerk, Andreas Schmitz and Wilhelm Berisenbach, Koln-Stammheim, and Erwin Muller, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application January 4, 1957
Serial No. 632,407
Claims priority, application Germany January 7, 1956
22 Claims. (Cl. 117—139.5)

1. Process of treating textiles which comprises using as a binding agent, an aqueous emulsion of a copolymer by weight from (*a*) about 0.5 to 25 percent of a monomer corresponding of the formula

$$A-\underset{\underset{O}{\|}}{C}-N(R_1)-CH_2-OR_2$$

wherein A stands for a member selected from the group consisting of $CH_2=CH-$

$$CH_2=\underset{\underset{CH_3}{|}}{C}-$$

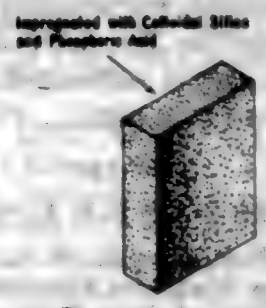
and $ROOCCH=CH-$, the radical R being a radical of an aliphatic alcohol, R_1 means a radical selected from the group consisting of hydrogen, alkyl, aralkyl and aryl and R_2 stands for an alkyl radical and mixtures of said monomers, and (*b*) about 75 to 99.5 percent by weight of compounds which contain at least one polymerizable double bond and are free of methylol alkyl ether groups.

2,897,102

OXIDATION RESISTANT GRAPHITE AND METHOD FOR MAKING THE SAME

Joseph C. Fisher, Jr., Boron, Ohio, assignor to Union Carbide Corporation, a corporation of New York

Application July 1, 1957, Serial No. 668,932
9 Claims. (Cl. 117—169)



4. A method for improving the oxidation resistance of graphite articles containing not more than 0.5 percent iron, which method comprises sequentially impregnating said articles at reduced and increased pressures with an aqueous colloidal silica solution, drying the treated article at about 100° C., impregnating the dried article with phosphoric acid solution, and drying the article, said phosphoric acid having a teadency to disappear at the temperatures to which said articles are exposed in normal use, thereby becoming ineffective for its purpose, said silica serving to react with said phosphoric acid to form a silicon phosphorus oxygen complex at such temperatures, thus inhibiting loss of said phosphoric acid from said articles.

2,897,103

TOBACCO PRODUCTS AND PROCESS THEREFOR

Alfred M. Gottscho, Lancaster, Pa., assignor to General Cigar Co., Inc., New York, N.Y., a corporation of New York

No Drawing. Application August 5, 1957
Serial No. 676,391
12 Claims. (Cl. 131—17)

1. In tobacco smoking products in which particles of dry ground tobacco are held together in a coherent form by a binding agent, the improvement of tobacco dry ground to particles of which more than 99% by weight

said one sheet, whereby said other sheet has marginal side areas which extend beyond the marginal side edges of said one sheet, and the outwardly facing surface of

2,897,111

DIPHENYL DISPERSIONS FOR THE IMPREGNATION OF PAPER

the pores of said set mass of silicon dioxide-water glass, posited throughout the body of said fabric by thermal

pass through a 100-mesh screen and more than 86% by weight pass through a 200-mesh screen to yield increased tensile strength in said coherent form.

2,897,104

SILICONE RESIN REMOVER AND METHOD

Ira J. Duncan, Detroit, Mich., assignor to Detrex Chemical Industries, Inc., Detroit, Mich., a corporation of Michigan

No Drawing. Application April 20, 1954
Serial No. 424,512
6 Claims. (Cl. 134—29)

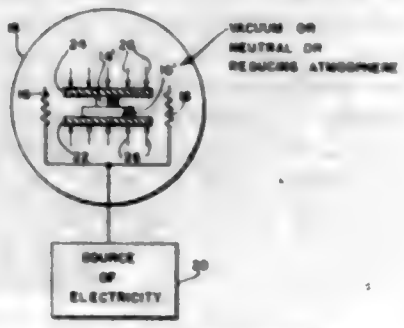
5. In a process for removing a hardened silicone resin glaze from an associated article having a surface containing tin without appreciably attacking said surface, the steps which comprise contacting the hardened silicone resin with a composition essentially by weight of about .02–5% alkali metal hydroxide, 1–97% by weight liquid hydrogen solvent comprising a crude oil distillation fraction having a boiling range falling between 212° and 540° F. and substantially the balance co-solvent selected from the group consisting of ethylene glycol monomethyl ether, diethylene glycol monomethyl ether, ethylene glycol monopropyl ether, ethylene glycol monobutyl ether, diethylene glycol propyl ether, diethylene glycol butyl ether, propylene glycol methyl ether, propylene glycol ethyl ether, dipropylene glycol methyl ether, ethylene glycol monoethyl ether, tripropylene glycol methyl ether, and diethylene glycol monoethyl ether, said co-solvent being capable of and present in sufficient amount to dissolve substantially all of said alkali metal base and to mix with said chlorinated hydrocarbon to form a homogeneous liquid, maintaining said contact for a time period sufficient to modify the hardened silicone resin glaze, maintaining said composition at about 55°–75° C. during the contact period, separating the aforesaid composition from the article, and removing the modified silicone resin by rinsing the surface of said article with water.

2,897,105

FORMATION OF P–N JUNCTIONS

Lloyd P. Hunter, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application April 19, 1952, Serial No. 283,222
9 Claims. (Cl. 148—1.5)



1. The method of making junction-type transistors by joining first and second semiconductor specimens of one conductivity type with a third semiconductor specimen of the other conductivity type, said method comprising the steps of stressing the first and second semiconductor specimens against the third semiconductor specimen at opposite surfaces of the third semiconductor specimen, and heating the specimens to a value of temperature whereat the first and second specimens coalesce with the third specimen only at the respective opposite surfaces of the third specimen.

2,897,106

MOISTURE RESISTANT BRAZING ROD

William G. Morrison, Jr., Niagara Falls, N.Y., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Application July 19, 1955
Serial No. 523,117
3 Claims. (Cl. 148—23)

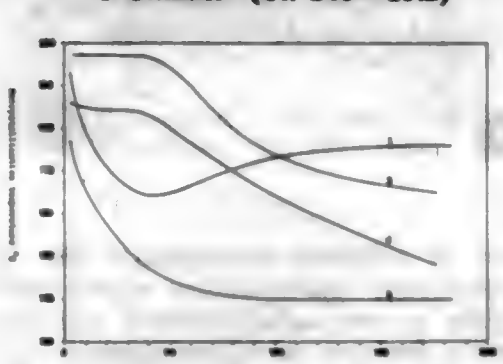
1. A brazing flux coating composition for a brazing rod exhibiting high stability under changing humidity conditions, the composition consisting of 16% to 20% powdered sodium tetraborate pentahydrate, 56% to 60% boric acid, and 20% to 28% binder material, said binder material being so disposed as to substantially coat all the particles of sodium tetraborate pentahydrate to prevent premature chemical reaction between said sodium tetraborate pentahydrate and said boric acid in the presence of moisture prior to reaching fusion temperatures.

2,897,107

ANNEALING PROPERTIES OF COPPER

Sölve Carlén, Vasteras, and Sven Anders Lundquist, Skelleftehamn, Sweden, assignors to Bolidens Gruvaktiebolag, Skelleftehamn, Sweden, a joint-stock company limited of Sweden

Application January 26, 1956, Serial No. 561,611
Claims priority, application Sweden August 24, 1955
3 Claims. (Cl. 148—13.2)



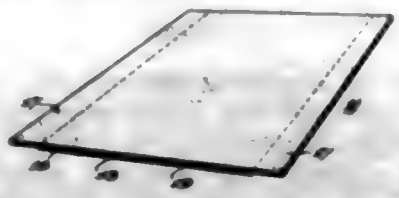
3. In a method for improving the annealing properties of electrolytically pure copper which, due to its containing sulfur and metallic elements as impurities, said sulfur being in a quantity of up to 25 grams per ton of copper, has a recrystallization temperature of above 200° C. the improvement which comprises adding between about 10–40 grams of lead per ton of copper whereby the recrystallization temperature is lowered to below 200° C. and then heat treating the copper to a temperature between about 400° C. and 600° C.

2,897,108

DISPOSABLE ABSORBENT PAD

Kenneth J. Harwood, Neenah, Wis., assignor, by mesne assignments, to Kimberly-Clark Corporation, a corporation of Delaware

Application May 11, 1953, Serial No. 354,040
1 Claim. (Cl. 154—50)



A disposable sanitary handkerchief comprising at least two superposed sheets of creped, absorbent, cellulosic tissue, said tissue having a basis weight in the range of from about 4 to 11 pounds per 3000 square feet (uncreped) and having a crepe ratio of from about 1.05 to 2.3, one of said sheets being of generally rectangular shape, the other of said sheets being similarly shaped and being symmetrically positioned on said one sheet, said other sheet being of a length coextensive with that of said one sheet and having a width somewhat greater than

said one sheet, whereby said other sheet has marginal side areas which extend beyond the marginal side edges of said one sheet, and the outwardly facing surface of said one sheet and the similarly facing marginal side areas only of said other sheet being bonded throughout substantially their entire area to a continuous film of moisture-impervious, flexible thermoplastic material, said thermoplastic material being between about 0.15 and 1.5 mils in thickness, said bond being effected by fibers of said tissue sheets which are partially embedded in but do not extend through said thermoplastic material.

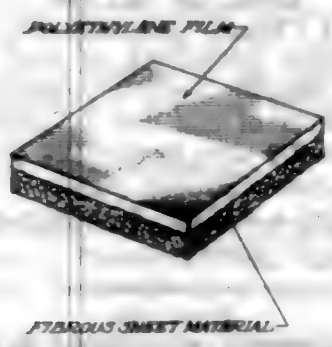
2,897,109

PLASTIC FILM PRODUCT

Edward H. Voigtman, Neenah, Wis., assignor, by mesne assignments, to Kimberly-Clark Corporation, a corporation of Delaware

Application May 31, 1955, Serial No. 511,932

3 Claims. (Cl. 154—59)



1. An improved plastic film product comprising a plastic film combined with a single sheet of stretchable weak fiber web, the web being creped thereby providing apices on its surface, said product having a stretchability between about 5 and about 130 percent and having substantially the same handleability characteristics as said plastic film, the film having a thickness of between about .15 mil and about 1.5 mils, and the fiber web comprising a cellulosic tissue having a basis weight between about 4 and about 12 pounds per 3000 square feet before creping and having a tensile strength not exceeding about twice the tensile strength of the film and not less than about one-half the tensile strength of the film, said web being bonded to the film substantially only along its apices, whereby said handleability and stretchability are provided to said improved plastic film product, and said bond being effected by fibers of said web which are partially embedded in but do not extend through said plastic film whereby the impermeability of said film is not materially impaired.

2,897,110

METHOD OF DESTROYING FUNGI AND NEMATODES EMPLOYING TRIMETHYL THIOPHOSPHITE

Carleton B. Scott, Pomona, Calif., assignor, by mesne assignments, to Collier Carbon and Chemical Corporation, a corporation of California

No Drawing. Application April 19, 1957
Serial No. 653,752

6 Claims. (Cl. 167—22)

1. The method of controlling the growth of fungi and nematodes which comprises supplying to the habitat thereof a fungicidal and nematocidal amount of trimethyl thiophosphite.

2,897,111

DIPHENYL DISPERSIONS FOR THE IMPREGNATION OF PAPER

Arthur John Lloyd, deceased, late of Jordans, England, by Marion Amy Lloyd, Newton St. Loe, and Grahame Arnold Lloyd, Clifton, England, administrators, and Iris Winifred Preston, Iver, England, assignors to Monsanto Chemicals Limited, London, England, a British company

No Drawing. Application December 28, 1955
Serial No. 555,770

10 Claims. (Cl. 167—30)

1. An aqueous dispersion containing 20% to 30% by weight of diphenyl wherein the particles of the said diphenyl are of a diameter in the range of 0.0001 to 0.04 inch, the dispersing agent being a non-toxic water-soluble salt of a copolymer of styrene and maleic anhydride.

2,897,112

PEST COMBATING COMPOSITIONS

Arthur Douglas Harford, Sunbury-on-Thames, and Herbert Ward Vernon, London, England

Application December 27, 1956, Serial No. 630,957
Claims priority, application Great Britain January 6, 1956

1 Claim. (Cl. 167—30)

An improved pest combating composition, suitable for combating houseflies, consisting essentially of a pyrethrin, diphenylmethane and acetophenone in a hydrocarbon distillate fraction, the total amount of pyrethrin being 0.02–0.6% by weight of said composition, the ratio of the weight of acetophenone to pyrethrin lying in the range 5:1 to 15:1 and the ratio of the weight of diphenylmethane to pyrethrin lying in the range 5:1 to 15:1.

2,897,113

FUNGICIDAL COMPOSITIONS COMPRISING 6-ALKYL-3-CYCLOHEXYL-3,4-DIHYDRO-2H-1,3-BENZOXAZINES AND METHOD OF USE

Richard H. Greenhagen and Lois L. Fritz, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application April 30, 1956
Serial No. 581,314

9 Claims. (Cl. 167—33)

1. A fungicidal composition comprising at least 2% by weight of a 6-alkyl-3-cyclohexyl-3,4-dihydro-2H-1,3-benzoxazine wherein the alkyl radical contains from 3 to 12 carbon atoms, inclusive, and an inert carrier selected from the group consisting of a finely divided inert solid, a surface active dispersing agent, and a mixture of a water-immiscible organic liquid and a surface active emulsifying agent.

2,897,114

FUNGICIDAL COMPOSITION

Thomas W. Sauls, College Park, Ga., assignor to Tennessee Corporation, New York, N.Y., a corporation of New York

No Drawing. Application November 14, 1956
Serial No. 621,999

8 Claims. (Cl. 167—42)

1. A fungicidal composition adapted when mixed with water to form a wet spray containing a dispersed suspension of water-insoluble polyvalent metal salt of dodecylbenzene sulfonic acid as an active fungicidal ingredient, said composition comprising a dry, comminuted, substantially free-flowing physical mixture of a water-soluble dodecylbenzene sulfonate of the group consisting of the sodium and potassium sulfonates and a water-soluble polyvalent metal salt of the group consisting of the water-soluble salts of zinc, copper, barium, iron, manganese, magnesium, calcium, lead and mercury, said mixture being packaged for distribution in the dry state and said sulfonate and said water-soluble metal salt having approximately stoichiometric proportions and adapted to react

when added to water to form a stable aqueous suspension of a finely divided dispersed precipitate of said water-insoluble metal salt of dodecylbenzene sulfonic acid.

2,897,115

PROCESS FOR EXTRACTING AND RECONSTITUTING WITCH HAZEL

Matthew Edward Dullaghan, Wilmington, Del., and Harold Robert Hochstadt, Fresh Meadows, N.Y., assignors to Humphreys Medicine Company, Inc., New York, N.Y., a corporation of New York

No Drawing. Application October 28, 1955
Serial No. 543,610
6 Claims. (Cl. 167—62)

1. The method of extracting and reconstituting witch hazel which comprises mixing activated carbon with witch hazel water substantially free of alcohol to adsorb the witch hazel essence from the water, separating the carbon odorant adsorbate from the liquid, eluting the witch hazel essence from the carbon odorant adsorbate by mixing said adsorbate with 50% to 95% ethanol, separating the eluted solution from the carbon and adding water to the eluted solution.

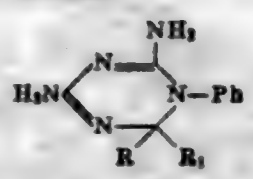
2,897,116

DIHYDROTRIAZINES WITH ANTHELMINTIC PROPERTIES

George H. Hitchings, Yonkers, and Barbara Roth, Scarsdale, N.Y., assignors to Burroughs Wellcome & Co. (U.S.A.), Inc., Tuckahoe, N.Y., a corporation of New York

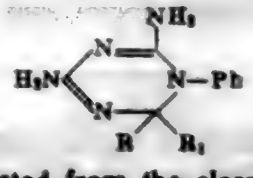
No Drawing. Application November 1, 1957
Serial No. 693,800
7 Claims. (Cl. 167—65)

1. A dihydrotriazine selected from the class consisting of those having the formula



wherein Ph is selected from the class consisting of 2,6-dimethylphenyl, 2-ethylphenyl and 2-butylphenyl radicals and R and R_1 represent lower alkyl groups and taken together are selected from the class consisting of the tetramethylene and pentamethylene divalent radicals and their non-toxic salts.

7. A method for the elimination of a pinworm infestation which comprises the administration of a dihydrotriazine selected from the class consisting of those having the formula



wherein Ph is selected from the class consisting of 2,6-dimethylphenyl, 2-ethylphenyl and 2-butylphenyl radicals and R and R_1 represent lower alkyl groups and taken together are selected from the class consisting of the tetramethylene and pentamethylene divalent radicals and their non-toxic salts.

2,897,117

INSULIN PROCESS

Robert Gordon Remmen, Toronto, Ontario, Canada, assignor to The Governors of the University of Toronto, Toronto, Ontario, Canada

No Drawing. Application February 10, 1955
Serial No. 487,449
12 Claims. (Cl. 167—75)

1. The process of recovering Insulin from Insulin-containing pancreas gland material, which comprises extracting the gland material at a pH between pH 3.5 and pH 6.5 with aqueous alcohol in the presence in the extraction mixture of salt of the class consisting of sodium chloride, calcium acetate, and ammonium chloride, using alcohol having not more than two carbon atoms and in a concentration and amount to produce in the resulting extract an alcohol concentration between about 45% and about 75%, and using salt in an amount to produce at least half saturation of the extract, concentrating the extract to partially reduce the alcohol content thereof and thereby decreasing the fat-solvent property thereof while substantially maintaining the Insulin in solution, treating the concentrated extract with a fat solvent to remove fat therefrom, concentrating the de-fatted extract to substantially remove the alcohol therein and cause the salt carried over from said extraction to become effective to salt-out from the so-treated extract a solid Insulin-containing material, and recovering such solid material.

2,897,118

STABLE VITAMIN A COMPOSITIONS

John E. Allegretti, North Bergen, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Application May 24, 1957
Serial No. 661,299
13 Claims. (Cl. 167—81)

1. A composition comprising an ester of vitamin A and antioxidants therefor uniformly dispersed throughout the reaction product of one part of formaldehyde with about 10 to about 100 parts of partially hydrolyzed casein having an alpha-amino nitrogen content of 0.5 to 7%, said composition having a vitamin A activity of about 10,000 to 500,000 units per gram.

2,897,119

STABLE POWDERED OIL SOLUBLE VITAMINS AND METHOD OF PREPARING STABLE POWDERED OIL SOLUBLE VITAMINS

Howard J. Dunn, San Pedro, Calif., assignor to Van Camp Sea Food Company, Inc., San Pedro, Calif., a corporation of California

No Drawing. Application November 12, 1957
Serial No. 695,498
16 Claims. (Cl. 167—81)

1. A method for producing stable powdered oil-soluble vitamins from an oxygen-stable vitamin oil concentrate, comprising: homogenizing said vitamin oil concentrate in a water solution of lactose and gum chosen from the group consisting of gum arabic and gum ghatti, and spray-drying the homogenized mixture to encapsulate the vitamin oil particles in microbeads of gum and lactose.

2,897,120

LOW VISCOSITY CMC PHARMACEUTICAL VEHICLE

John P. Cronin and Arnold J. Hennig, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application May 4, 1954
Serial No. 427,676
20 Claims. (Cl. 167—82)

1. An aqueous vehicle for insoluble medicinal agents comprising about 0.1 to about one percent of a low viscosity alkaline salt of carboxymethylcellulose and about 0.1 to about three percent of a hydrophilic polyvinyl compound selected from the group consisting of polyvinyl pyrrolidone and polyvinyl alcohol.

2,897,121

PHARMACEUTICAL COMPOSITION

John G. Wagner, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application June 4, 1957
Serial No. 663,340
13 Claims. (Cl. 167—82)

1. A process for producing a medicament protected by an enteric material which includes the step of coat-

consisting of OH, and an ester group derived from hy- electrolyte solution, comprising at least one electrodialy-

ing said medicament with a thin film comprising a finely divided mineral solid whose crystals are micaceous in form and having a particle size less than about fifty microns dispersed in a hydrolyzed styrene-maleic anhydride copolymer which is more than fifty percent hydrolyzed.

2,897,122

ENTERIC COATED PRODUCT

John F. Millar, Valois, Quebec, Canada, assignor to Charles E. Frosst & Co., Montreal, Quebec, Canada, a corporation of the Province of Quebec

No Drawing. Application September 30, 1957
Serial No. 686,863
Claims priority, application Canada October 4, 1956
4 Claims. (Cl. 167—82)

1. A solid medicinal oral dosage unit containing at least one medicinal agent, comprising a shaped core containing a medicinal agent surrounded by an enteric film or layer of a partially esterified polyvinyl alcohol in which the hydroxyl groups of the vinyl groups are partly esterified by phthalic acid, partly acetylated, and partly unreplaced, said partially esterified polyvinyl alcohol having a degree of polymerization of from 600 to 800, a phthalyl content within the range of from 60 to 70%, an acetyl content of from 1.6 to 6.0%, said enteric coating being substantially insoluble in the stomach juices, substantially soluble in the intestinal fluids and soluble in 90–95% ethyl alcohol.

2,897,123

PLASMINOGEN STERILIZATION

Heron O. Singher, Plainfield, N.J., assignor to Ortho Pharmaceutical Corporation, a corporation of New Jersey

No Drawing. Application September 21, 1956
Serial No. 611,382
5 Claims. (Cl. 195—66)

1. A method of treating plasminogen which comprises heat-treating at a temperature of about 60° C. for about 10 hours an aqueous solution of plasminogen having a pH not less than 3 and not greater than 6.5, and an ionic strength not greater than 0.3.

2,897,124

PRETREATING THORIUM FOR ELECTROPLATING

John G. Beach and Glenn R. Schaer, Columbus, Ohio, assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application October 19, 1954
Serial No. 463,338
2 Claims. (Cl. 204—1.5)

1. The method of pretreating a thorium surface prior to electroplating which comprises vapor blasting the surface, anodically pickling in a 5 to 15% by volume aqueous hydrochloric acid bath with a current of 125 to 250 amperes per square foot for 3 to 5 minutes at room temperature, chemically pickling the surface in a 5 to 15% by volume of aqueous sulfuric acid for 3 to 5 minutes at room temperature, and then rinsing the surface with water.

2,897,125

ELECTROLYTIC PROCESS FOR PRODUCING OXIDE COATINGS ON ALUMINUM AND ALUMINUM ALLOYS

John B. Franklin, Norwalk, Calif., assignor to Sanford Process Co., Inc., Los Angeles, Calif., a corporation of California

No Drawing. Application June 21, 1954
Serial No. 438,349
12 Claims. (Cl. 204—58)

1. A process for coating aluminum and aluminum alloy metal articles with a hard and tough coating of oxide of aluminum, which comprises passing an electric current through an electrolytic cell containing an electrolyte maintained at a reduced temperature with said article forming the anode, said electrolyte comprising a water solution of an electro-anodizing acid, establishing the voltage applied across said cell at a value in a range operative to produce a measurable coating of oxide of aluminum on the article without burning, establishing said applied voltage at successively higher values by voltage increments, each said voltage increment being chosen to reestablish approximately the current initially obtained at the first-mentioned voltage, and maintaining the voltage at each said established value until said current decreases by a material percentage.

2,897,126

VITREOUS SILICA AND ITS MANUFACTURE

Henri George, Paris, France, assignor to Quartz & Silice S.A., Paris, France, a corporation of France

Application December 2, 1955, Serial No. 550,712
Claims priority, application France March 5, 1955
4 Claims. (Cl. 204—130)

3. The method of removing absorption bands at about 2–3 microns or at about 2450 angstroms from substantially pure vitreous silica that has been molded from quartz crystals having no included OH ions and which have been ground to between 200 and 300 mesh and fused without a flame slowly under vacuum; comprising heating the vitreous silica to between 850° C. and 1300° C. and subjecting the heated silica to a D.C. potential of from 500 v./cm. to 1000 v./cm. until a veil forms in the silica and travels to one surface thereof.

2,897,127

METHOD OF PRODUCING CROSS-LINKED POLYVINYL ALCOHOL

Alexander A. Miller, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Application August 29, 1955, Serial No. 531,181
6 Claims. (Cl. 204—154)

1. A process of preparing cross-linked polyvinyl alcohol comprising (1) irradiating an ester of polyvinyl alcohol with electrons having energy equivalent to at least 5×10^4 electron volts to a radiation dose in the range of 1×10^6 to 5×10^7 r. and (2) deacylating said ester.

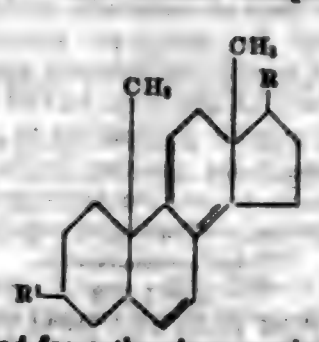
2,897,128

STEROID COMPOUNDS AND THEIR PREPARATION

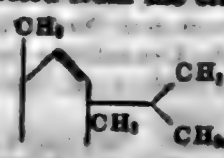
Gerald D. Laubach, Jackson Heights, N.Y., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Original application March 17, 1954, Serial No. 416,936, now Patent No. 2,877,221, dated March 10, 1959. Divided and this application May 10, 1957, Serial No. 658,234
4 Claims. (Cl. 204—158)

1. A process which comprises dissolving in a stable organic solvent system a steroid compound having the formula



where R is selected from the class consisting of



—$COCH_2OH$ and an ester thereof wherein the ester group is derived from hydrocarbon carboxylic acids having from 1 to 7 carbon atoms, and R^1 is selected from the class

been deactivated by use in the reforming reaction, where- version zone containing a granular solid hydrocarbon

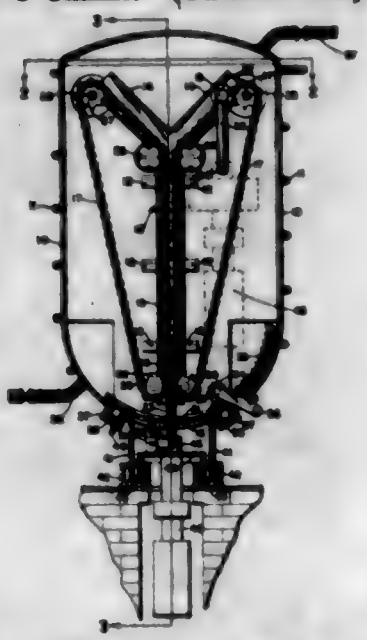
consisting of OH, and an ester group derived from hydrocarbon carboxylic acids having from 1 to 7 carbon atoms, contacting the resulting solution with oxygen in the presence of an oxidation activator and of light, and recovering the resulting peroxide of said compound.

2,897,129

ELECTRODE HANDLING AND STORING APPARATUS

Elmer D. Dilling, Las Vegas, Nev., assignor to Titanium Metals Corporation of America, New York, N.Y., a corporation of Delaware

Application March 4, 1957, Serial No. 643,788
5 Claims. (Cl. 204—225)



1. Electrode handling and storing apparatus comprising; a hollow shell having an aperture in the bottom thereof, a pair of corresponding Y-shaped guide members, spaced apart in parallel planes and fixedly attached interiorly to the side of said shell, a pair of cross bars with their ends movably engaging said guide members and having electrode attaching means suspended therefrom, two corresponding pairs of endless flexible inextensible hoisting and lowering means, each following a path up the leg, out an arm and back from the outer end of the arm to the bottom of a leg of said Y-shaped guide members and being guided in its described path by rotatable elements located at the bottoms of the legs, at the neck and at ends of the arms of said Y-shaped members, each corresponding pair of said flexible inextensible hoisting and lowering means being connected by one of said cross bars, a depending flange surrounding the aperture in the bottom of said shell and forming an open-bottom compartment adapted to be sealed to the top of an electrolytic cell, means operable from outside said compartment for actuating detachable means for locking said electrode attaching means onto an electrode, means operable from outside said shell for selectively actuating each corresponding pair of flexible inextensible hoisting and lowering means whereby an electrode locked to said electrode attaching means may be transported to and from storage in said shell through the aperture in the bottom thereof, and a gate closeable to seal the aperture in the bottom of said shell during storage of an electrode therein.

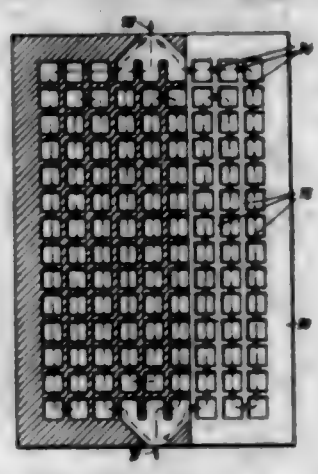
2,897,130

APPARATUS FOR ELECTRODIALYZING LIQUIDS

Arend Hubregt de Haas van Dorsser, The Hague, and Cornelis van Hoek, Wassenaar, Netherlands, assignors to Nederlandse Centrale Organisatie voor Toegepast-Natuurwetenschappelijk Onderzoek, Netherlands, a corporation of the Netherlands

Continuation of abandoned application Serial No. 154,096, April 5, 1950. This application January 18, 1956, Serial No. 559,958
3 Claims. (Cl. 204—301)

1. An apparatus for continuously electrodialyzing an electrolyte solution, comprising at least one electrodialysis cell and electrodialysis membranes bordering the opposite sides of said electrodialysis cell, said cell having an inlet and an outlet for said electrolyte solution, and a spacer in said cell in contact with both of said membranes, said spacer being constituted by a plate having over its whole area contiguous to the electrodialyzing surface of said membranes a substantially uniform thickness of less than 10 mm., said plate being cut away completely at a multiplicity of locations spaced apart over said area to provide in a pattern between said membranes a multiplicity of distinct completely open spaces separated each from others by intervening remaining portions of said plate, each of said intervening plate portions sym-



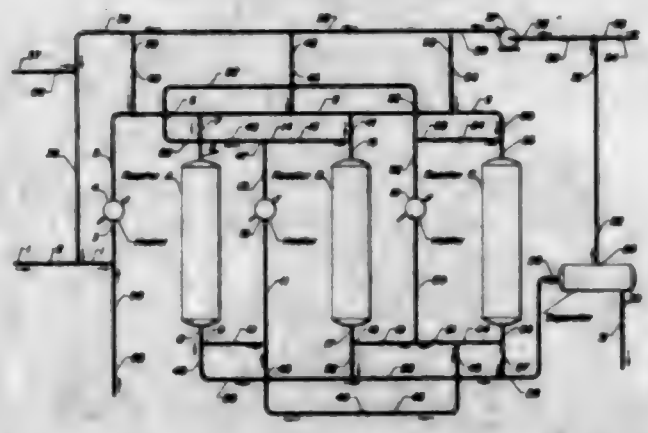
metrically contacting both of said membranes at its opposite sides, said membranes lying against said plate portions and closing the opposite sides of each of said open spaces to form said spaces into distinct chambers, said chambers being interconnected, each with at least one other, by turbulence-promoting narrow throats extending through said intervening plate portions, said chambers and said throats collectively forming between said membranes at least one elongated winding passageway for said solution extending parallel to said membranes from said inlet to said outlet.

2,897,131

REMOVAL OF ARSENIC WITH DEACTIVATED PLATINUM CATALYST AND SUBSEQUENT REFORMING

Charles V. Berger, Western Springs, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Application November 25, 1953, Serial No. 394,449
6 Claims. (Cl. 208—65)



1. In a process for the reforming of a gasoline fraction containing arsenic impurities in the presence of a catalyst comprising alumina and platinum in a concentration of from about 0.1% to about 1% by weight, wherein said gasoline fraction is passed in series through a plurality of zones each containing a portion of said catalyst, the method of obtaining a substantially uniform product for a long period of time, which comprises contacting said gasoline fraction at a temperature of from about 500° to 750° F. first with the catalyst which previously had

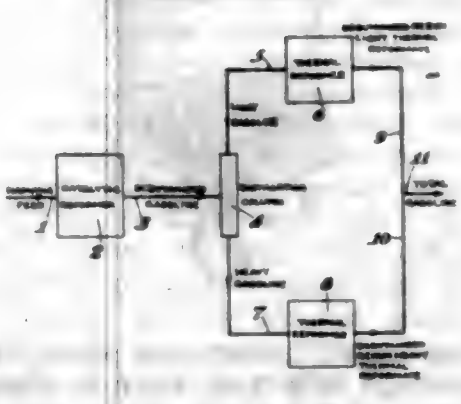
ion proportion of a difficulty reducible adsorbent oxide compact moving stream, introducing said gas into said

been deactivated by use in the reforming reaction, whereby to remove the arsenic impurities, and then at a temperature of from about 850° to about 1000° F. with the catalyst in the remainder of said zones to effect the reforming.

2,897,132
THERMAL REFORMING OF A CATALYTIC REFORMATE

Warren Nevin Norton Knight, Sunbury-on-Thames, England, assignor to The British Petroleum Company Limited, London, England, a British joint-stock corporation

Application November 15, 1956, Serial No. 622,337
Claims priority, application Great Britain November 24, 1955
3 Claims. (Cl. 208—65)

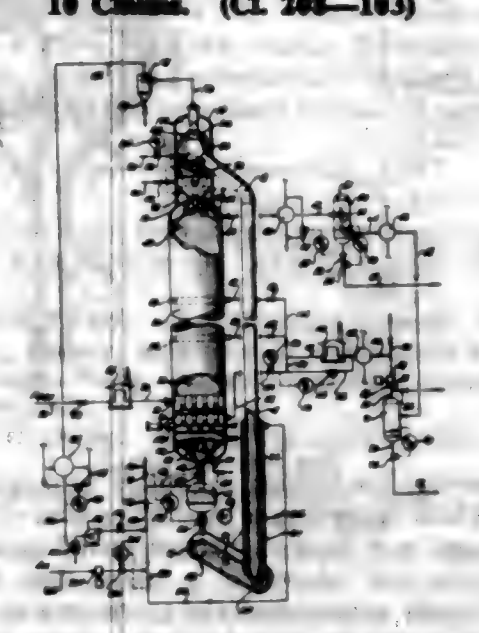


1. A process for producing gasoline of increased octane number from a liquid catalytic reformate, which reformate is a product of a hydroforming process in which is used a platinum-containing catalyst, comprising separating the catalytic reformate into a high boiling liquid fraction and a low boiling liquid fraction, thermally reforming two fractions separately, each at a temperature within the range 1000° to 1200° F. and a pressure within the range 200 to 1200 p.s.i.g., but at different severities, the low boiling fraction being reformed at the greater severity, and blending the products of the thermal reforming operations.

2,897,133
HYDROCARBON TREATMENT PROCESS AND APPARATUS

Clyde H. O. Berg, Long Beach, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

Application June 25, 1954, Serial No. 439,443
10 Claims. (Cl. 208—103)



1. In a process for the conversion of gasoline boiling range hydrocarbons which comprises maintaining a conversion zone containing a granular solid hydrocarbon conversion contact material, and passing a gasoline boiling range hydrocarbon through said conversion zone at gasoline conversion conditions of pressure, temperature, and composition to produce a converted gasoline vapor containing a relatively small amount of detrimental hydrocarbon derivatives of high boiling range, the improved method of treating the effluent converted gasoline vapor from said conversion zone to remove said detrimental hydrocarbon derivatives and eliminate necessity for redistillation thereof as an overhead product which comprises passing said effluent gasoline into a first cooling zone, passing a coolant therethrough to cool said effluent to a temperature below its dew point to condense between about 0.5% and about 5% by volume of said effluent forming a first condensate containing said detrimental hydrocarbon derivatives and leaving an uncondensed portion, passing the mixture tangentially into a separator zone, centrifugally separating said first condensate from said uncondensed portion of effluent vapor, maintaining a liquid level of said first condensate in said separator zone by detecting said level and controlling the rate of removal of said first condensate therefrom, controlling the degree of condensation in said first cooling zone by detecting the rate of flow of said first condensate from said separator zone and controlling the rate of flow of said coolant through said first cooling zone in accordance therewith, and subsequently further cooling said uncondensed portion of effluent vapor in a second cooling zone to form a second condensate comprising the liquid gasoline conversion product substantially free of said detrimental hydrocarbon derivatives without the necessity of rerunning said liquid product.

2,897,134
SILICA-ALUMINA-CHROMIUM PHOSPHATE CATALYST AND HYDROCARBON CRACKING THEREWITH

Alfred E. Hirschler, Springfield, and Edward J. Janoski, Philadelphia, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Application December 29, 1954
Serial No. 478,535
2 Claims. (Cl. 208—111)

2. Process of cracking which comprises contacting a petroleum fraction boiling in the range of from 375° F. to 500° F. with a catalyst consisting essentially of, in percent by weight, 70 to 93.5% silica, 6 to 20% alumina and 0.5 to 10% chromium phosphate the silica-alumina component of the catalyst having a cracking activity index of at least 30 at a temperature within the range of from 450° C. to 540° C., a space velocity of from 0.5 to 3 and a pressure of about atmospheric, and recovering gasoline of high octane rating from the reaction mixture.

2,897,135
HYDROCARBON CONVERSION PROCESS AND CATALYST

Thomas F. Doumani, Whittier, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Application January 31, 1957
Serial No. 637,365
18 Claims. (Cl. 208—112)

14. In a catalytic hydrocracking process wherein a hydrocarbon fraction boiling above the gasoline range is contacted with a catalyst in the presence of added hydrogen at a temperature between about 800° and 1100° F., and a pressure between about 500 and 5000 p.s.i.g. to effect a substantial conversion of said hydrocarbon fraction to hydrocarbons boiling in the gasoline range, and wherein said catalyst comprises as an essential active ingredient a minor proportion of a transitional metal compound, said active ingredient being distended on a ma-

material from said smaller tubes, said conduit means defining a particle-free space lying externally of said

6. A method of sweetening petroleum products which comprises mixing sour petroleum products with an aque-

1. An apparatus for continuously electrodialyzing an

jor proportion of a difficulty reducible adsorbent oxide carrier which contains a substantial amount of silica and possesses acidic cracking activity, the improvement which comprises utilizing in said process a catalyst of the above description which has been further modified by treatment thereof in its calcined, activated form with ozone at a temperature between about —50° and 570° F. for a period of time sufficient to effect substantial absorption of ozone, and then reducing the ozonized catalyst with hydrogen at a temperature which, at least during the terminal period of contacting, is between about 500° and 1200° F.

2,897,136

CATALYTIC CRACKING PROCESS USING A CATALYST WHOSE CARBON FACTOR HAS BEEN IMPROVED

William A. Pardee, Fox Chapel, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Application December 29, 1953
Serial No. 401,071
16 Claims. (Cl. 208—119)

1. A process for the improvement of the carbon factor of a cracking catalyst which has lost selectivity through extended use, said cracking catalyst comprising a composite of silica and an oxide of a metal selected from the group consisting of aluminum, boron, zirconium, beryllium, titanium and mixtures thereof, comprising passing a gas consisting essentially of vapors of a chloride of at least one of said metals other than silicon present in the catalyst derived from a source external of the catalyst at an elevated temperature in the range of 200° to 1200° F. in contact with the catalyst and thereafter purging the catalyst of metal chlorides.

2,897,137

PLATINUM CATALYST

Eugene F. Schwarzenbek, Montclair, N.J., assignor to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

No Drawing. Application December 16, 1953
Serial No. 398,647
13 Claims. (Cl. 208—140)

1. A hydrocarbon conversion process which comprises contacting a hydrocarbon reactant under conversion conditions including a temperature of about 600° F. to about 1250° F., a pressure of about 1 atmosphere to about 2000 p.s.i.g., and a weight space velocity of about 0.01 to about 15, with a contact material comprising particles of a catalyst containing about 1 to about 25% by weight of platinum supported on a carrier material in physical admixture with particles of a carrier material in an amount sufficient to provide an average platinum concentration of about 0.05 to about 0.95% by weight of the mixture.

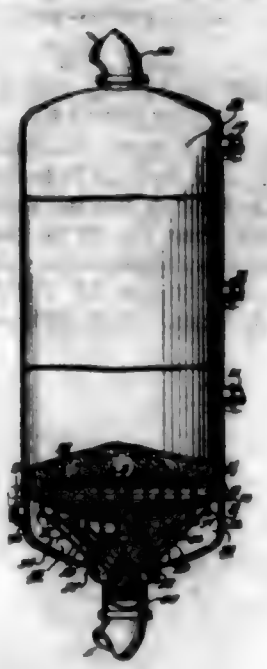
2,897,138

CONTACTING SOLIDS AND GASES

David B. Ardern, Moylan, Pa., assignor to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware

Application March 31, 1951, Serial No. 218,660
9 Claims. (Cl. 208—165)

5. In a process wherein gas flows upwardly through a compact bed of granular contact material contained within a confined contact zone, the steps which comprise: withdrawing a plurality of confined compact moving streams of solids from said bed at locations uniformly distributed across the lower region of said bed a substantial distance above the lower end of said contact zone, thereby separating said compact bed into a uniformly gravitating upper portion and a static lower layer, passing said confined streams of solids downwardly through a solids-free plenum directly beneath said contact zone and thereafter merging the same into a single compact moving stream, introducing said gas into said plenum, passing said gas upwardly as a plurality of confined streams from said plenum into the bottom region of said static layer to engage said solids at locations uniformly distributed across the bottom cross-



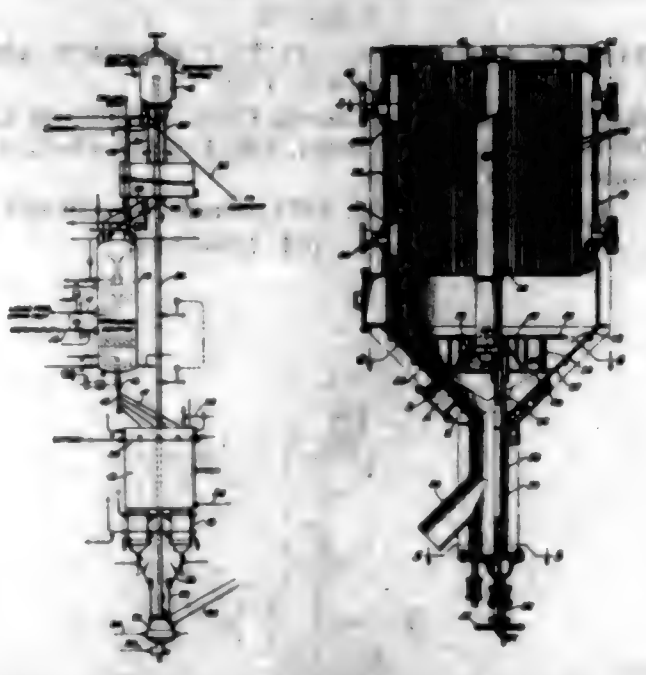
sectional area of said contact zone, passing said gas first upwardly through said static layer to effect complete lateral dispersion of said gas therein with consequent reduction in velocity and then upwardly through said gravitating upper portion of the bed, and withdrawing said gas at the upper end of said contact zone.

2,897,139

TEMPERATURE CONTROL IN A MOVING BED SYSTEM EMPLOYED FOR HYDROCARBON CONVERSION

Eric V. Bergstrom, Short Hills, and Edward R. J. Serf, Fanwood, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

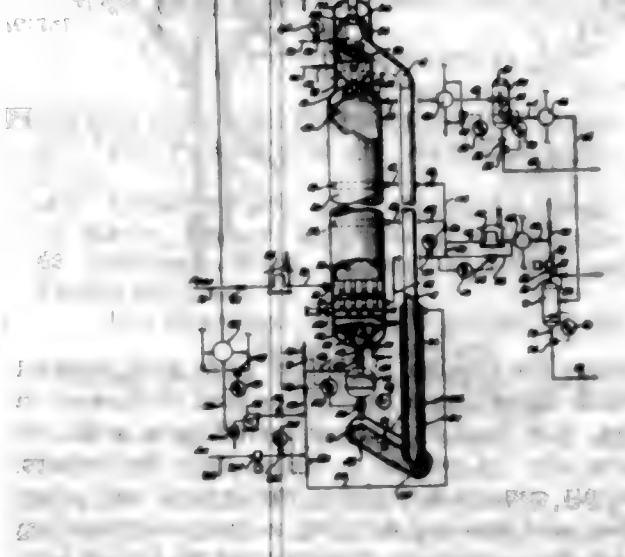
Application January 14, 1955, Serial No. 481,802
5 Claims. (Cl. 208—165)



1. Apparatus for cooling a particle form solid contact material which comprises a housing, a heat exchanger in said housing, said heat exchanger including a series of vertical tubes one of which is larger than the others, means to supply contact material to the tops of said tubes, means within said housing defining a space surrounding said tubes for the circulation therearound of a fluid heat exchange medium, conduit means for receiving contact

taining below about 0.1 to 3.0 percent by weight of sul-

2,897,144



1. In a process for the conversion of gasoline boiling range hydrocarbons which comprises maintaining a con-

2,897,135

HYDROCARBON CONVERSION PROCESS AND CATALYST

Thomas F. Doumani, Whittier, Calif., assignor to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Application January 31, 1957
Serial No. 637,365
18 Claims. (Cl. 208—112)

14. In a catalytic hydrocracking process wherein a hydrocarbon fraction boiling above the gasoline range is contacted with a catalyst in the presence of added hydrogen at a temperature between about 800° and 1100° F., and a pressure between about 500 and 5000 p.s.i.g. to effect a substantial conversion of said hydrocarbon fraction to hydrocarbons boiling in the gasoline range, and wherein said catalyst comprises as an essential active ingredient a minor proportion of a transitional metal compound, said active ingredient being distended on a ma-

material from said smaller tubes, said conduit means defining a particle-free space lying externally of said housing, a conduit extending from the bottom of said larger tube to said free space, a metering valve in said last-mentioned conduit whereby the amount of material from said large tube that may fall freely on the moving body of cooled contact material is controllable.

4. In a moving bed conversion process in which a hot granular contact material is gravitated through a reaction zone and a regeneration zone as a compact mass in an enclosed cyclic system, the improved method of cooling the hot contact material comprising the steps of: passing the contact material through the cooling zone as a plurality of separated compact flowing main streams, maintaining the said main streams in indirect heat exchange relationship with a cooling liquid throughout the entire length of said main streams in said cooling zone, recombining the said main streams of contact material below the cooling zone into a single compact gravitating stream, whereby the flow rate of contact material through the separated main streams is determined solely by the flow rate of the single gravitating stream below the cooling zone, passing a portion of the contact material downwardly through the cooling zone through a limited number of control streams of substantially different cross-sectional area than the cross-sectional area of the main gravitating streams and as compact gravity flowing streams, maintaining said control streams in indirect heat exchange relationship with a cooling liquid throughout the entire length of the control streams in said cooling zone, metering the flow of the control streams below the cooling zone to thereby determine the ratio of flow of contact material between the main streams and the control streams, and recombining the control streams with the single compact gravitating stream of contact material below the cooling zone whereby temperature adjustment of the contact material is obtained while maintaining the number of main and control streams through the cooling zone constant and while maintaining each stream in indirect heat exchange relationship with a cooling liquid throughout the entire length of the stream in said cooling zone, the main gravitating streams of contact material being released from lateral confinement below the cooling zone to form a free surface of a contact material bed at the angle of repose of the contact material, the contact material passed through the control streams being metered above the level of the free surface so formed and being dropped in free fall onto this surface to combine with the contact material bed, and the contact material being withdrawn as a single stream below the surface of said bed a sufficient distance to effect uniform mixing of the contact material from the control streams with the contact material from the main streams, whereby a substantially uniform temperature is provided in the combined stream of contact material.

2,897,140

PROCESS FOR THE OXIDATION OF MERCAPTANS IN THE PRESENCE OF ALKALI AND SULFUR DYE

André Ginion, Paris, and Edouard Joseph Weisang, Le Havre, France, assignors to Compagnie Francaise de Raffinage, Paris, France, a societe anonyme of French Republic

No Drawing. Application April 5, 1955
Serial No. 499,498
Claims priority, application France April 7, 1954
7 Claims. (Cl. 208—204)

1. A method of converting a sulphydryl contained in hydrocarbon compounds to disulphide, which comprises mixing the said hydrocarbon compounds with an aqueous alkaline solution of an alkali metal hydroxide, containing a dye of the "sulphur dyes" group, in the presence of an oxidizing gas.

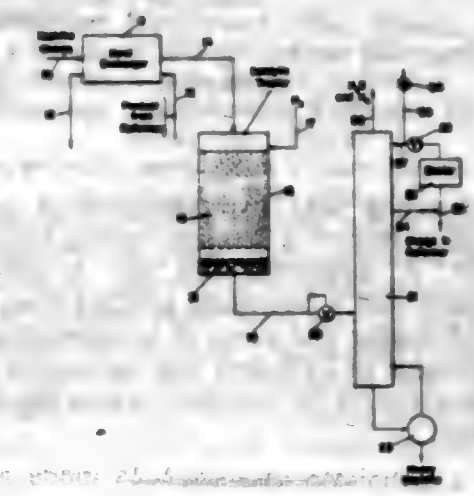
6. A method of sweetening petroleum products which comprises mixing sour petroleum products with an aqueous alkaline solution of an alkali metal hydroxide containing a "sulphur dye" selected from the group consisting of hydrone blue, solane blue R, sulphanol green 2J, dark green sulphanol B, brown sulphanol BR, blue sulphanol B, Laval cachou, black sulphanol B and blue sulphanol RB.

2,897,141

HYDRODESULFURIZATION OF REFORMER CHARGE

Earl M. Honeycutt, West Chester, and Frank R. Shuman, Chester Springs, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Application August 31, 1956, Serial No. 607,327
2 Claims. (Cl. 208—209)



1. In the preparation of a naphtha feed stock for reforming in the presence of a sulfur-sensitive catalyst, the steps which comprise heating said naphtha to a temperature of 500–700° F. under sufficient pressure to maintain the naphtha in liquid phase, feeding the heated naphtha in liquid phase to a treating zone containing a bed of desulfurizing catalyst, feeding hydrogen to such zone and maintaining therein an atmosphere of hydrogen at a pressure above 200 p.s.i.g. and sufficient to keep the naphtha in liquid phase, percolating the naphtha at a temperature within the range of 500–700° F. and below its critical temperature through the catalyst bed whereby hydrogen dissolves in the naphtha and organic sulfur compounds are converted to hydrogen sulfide, maintaining above the effluent outlet a level of liquid naphtha, containing unreacted dissolved hydrogen and hydrogen sulfide, which seals the undissolved hydrogen atmosphere within the treating zone, withdrawing as effluent from the treating zone a stream consisting essentially of liquid naphtha containing dissolved hydrogen and hydrogen sulfide without withdrawing vapor phase hydrogen along with such effluent, feeding said stream to a fractionating column and operating said column to strip essentially all the dissolved hydrogen and hydrogen sulfide from the naphtha.

2,897,142

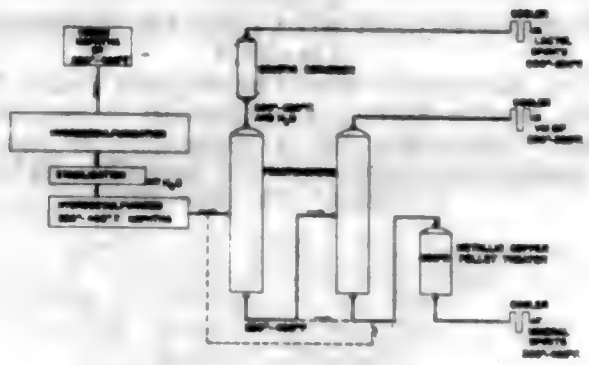
HYDRODESULFURIZATION OF NAPHTHAS FOLLOWED BY TREATMENT WITH EITHER METALLIC COPPER OR SILVER

William L. Jacobs, Crystal Lake, and Weldon G. Annable, Mundelein, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Application July 2, 1956, Serial No. 595,250
4 Claims. (Cl. 208—212)

1. The process for producing naphthas which pass the distillation-corrosion test from hydrocarbon mixtures of petroleum origin containing deleterious sulfur compounds which comprises separating a virgin naphtha fraction con-

taining below about 0.1 to 3.0 percent by weight of sulfur compounds and having a boiling range of about 200° to 400° F. from said hydrocarbon mixture, subjecting said virgin fraction to hydrodesulfurization at a temperature of about 780° F. in the presence of hydrogen and a catalyst capable of promoting hydrodesulfurization, separating a hydrogen sulfide-free hydrodesulfurized product containing about 0.005 weight percent total sulfur com-



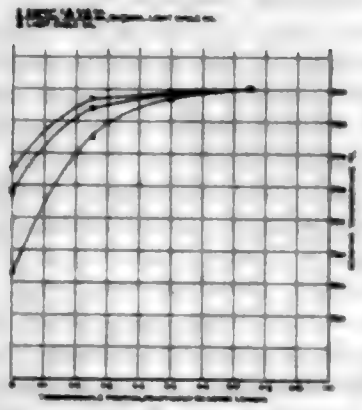
pounds, subjecting said hydrodesulfurized product to fractionation to recover a fraction boiling between about 300° to 400° F., subjecting said 300° to 400° F. fraction to contact with a free metal selected from the group consisting of copper and silver at a temperature of 450° F. in the absence of hydrogen and recovering a naphtha product characterized by its ability to pass the distillation-corrosion test.

2,897,143

HYDROCATALYTIC DESULPHURISATION OF PETROLEUM HYDROCARBONS

Ronald Lester, Sunbury-on-Thames, and Hubert Thomas Porter, London, England, assignors to The British Petroleum Company Limited, London, England, a corporation of Great Britain

Application January 16, 1956, Serial No. 559,354
Claims priority, application Great Britain January 18, 1955
7 Claims. (Cl. 208—213)



1. A process for the hydrocatalytic desulfurization of petroleum hydrocarbons comprising contacting the feed-stock in the liquid phase with a sulfur-resistant hydrogenation catalyst in a reaction zone at a reaction temperature selected to achieve the required desulfurization and at a pressure such that the feed-stock is maintained in the liquid phase, and setting the inlet temperature of the incoming feedstock below the selected reaction temperature necessary for the required desulfurization and at a level at which the heat of reaction will raise the temperature of the incoming feedstock to the selected reaction temperature over a comparatively short inlet portion of the catalyst bed.

2,897,144

REMOVAL OF METALLIC CONTAMINANTS FROM HYDROCARBON OILS WITH A FOAMING AGENT

Herman Bieber, Linden, and Ibrahim A. Eldib, Roselle, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application December 11, 1957, Serial No. 702,040
8 Claims. (Cl. 208—251)

1. An improved process for removing surface active constituents from a hydrocarbon oil which comprises foaming a portion of said oil with a non-reactive gas and separately recovering foam containing surface active compounds and oil substantially reduced in surface active constituents.

2,897,145

PREPARATION OF ODORLESS NAPHTHAS USING SILICA GEL

George W. Ayers, Chicago, and Walter J. Sandner, Carpentersville, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Application September 22, 1955
Serial No. 536,618
4 Claims. (Cl. 208—307)

1. The method of preparing storage-stable, odor-free naphthas from hydrocarbon mixtures which are odor-free but unstable and tend to form odorous compounds during storage which consists in distilling said hydrocarbon mixtures in the presence of between about 0.001 to 0.5 weight percent of silica gel based on the amount of said hydrocarbon mixture, at a pressure of between about 10 to 200 mm. of mercury and in the presence of about 20 to 200 weight percent based on the amount of said hydrocarbon mixture of an inert, vaporizable diluent whereby the formation of odorless products is prevented and collecting a storage-stable, odor-free hydrocarbon distillate.

2,897,146

DISTILLATION

Paul M. Waddill, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

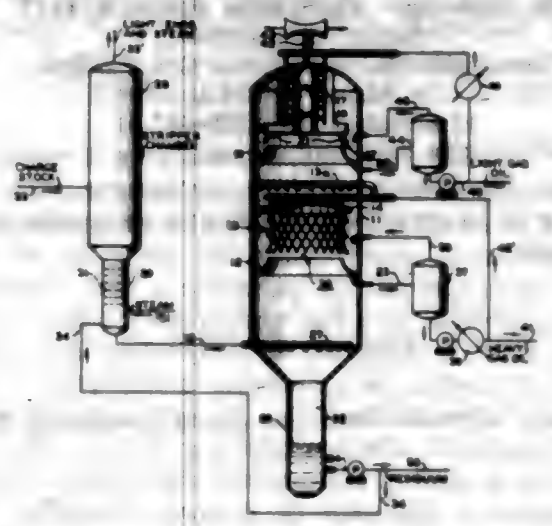
Application December 13, 1954, Serial No. 474,664
33 Claims. (Cl. 208—364)

2. In a vacuum distillation of a hydrocarbon residuum, the method which comprises introducing said residuum into a lower portion of an upright distillation zone; passing vapors formed from flash vaporization of said residuum in said zone upwardly to a point above a first liquid collecting means and above said means into unobstructed contact with a vertically extended laterally directed cooling spray so as to condense at least a portion of said vapors into said first liquid collecting means; passing remaining uncondensed vapors upwardly to a point above a second liquid collecting means and above said second liquid collecting means into contact with a condensing spray to condense remaining vapors; collecting condensate in a condensate collector means disposed beneath said condensing spray and so adapted and arranged

the tank, such lowering of the liquid level permitting the completion of the step of violent agitation without the

2,897,152

as to transfer said collected condensate to said second liquid collecting means while preventing contact of upwardly rising vapors with said condensate being transferred; transferring said collected condensate from said



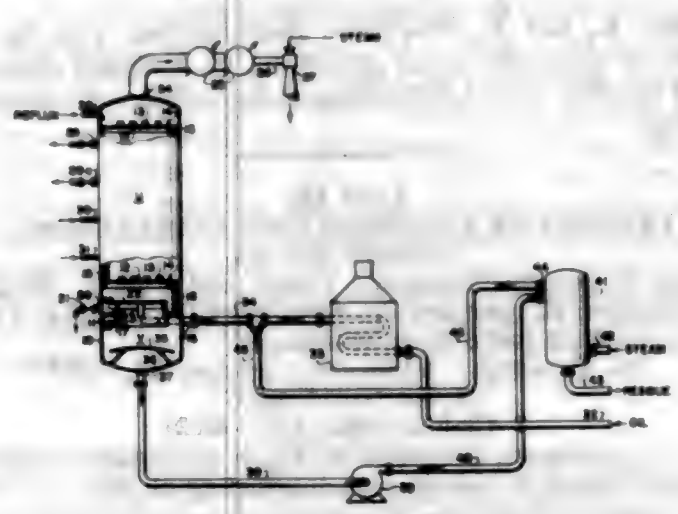
condensate collector means to said second liquid collecting means, recovering condensate from at least one of said first and second liquid collecting means, and recovering residuum from a lowermost portion of said distillation zone.

2,897,147

METHOD AND APPARATUS FOR DISTILLATION

Cornelis Lely and Willem Sebastiaan van der Lang, The Hague, Netherlands, assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

Application August 29, 1957, Serial No. 681,037
Claims priority, application Netherlands September 14, 1956
9 Claims. (Cl. 208—366)



1. In a process for distilling a hydrocarbon mixture at sub-atmospheric pressure wherein the hydrocarbon mixture to be distilled is passed as a feed stream tangentially into a confined vortex zone and separated therein by centrifugal action into a vaporous fraction and a liquid fraction, the vaporous fraction is discharged from said vortex zone and rectified, and the liquid fraction is stripped with steam, the improvement which comprises withdrawing the said liquid fraction from the vortex zone, steam-stripping the withdrawn liquid fraction in a stripping zone which is isolated from said vortex zone by introducing steam into the stripping zone and producing an overhead top product and a residue, withdrawing said top product from the stripping zone, and introducing the withdrawn top product tangentially into said vortex zone.

3. Apparatus for the distillation of a mixture comprising: walls enclosing a vortex chamber, said chamber having a tangential side inlet for the admission of a heated feed stream to be distilled, a vapor overflow outlet and a liquid underflow outlet at the bottom; a rectifying column connected to said overflow outlet to receive vapor therefrom; a stripping column having a feed inlet connected to said underflow outlet to receive liquid from the said chamber, said stripping column having a top-product outlet and a residue outlet; and recycle conduit means connecting said top-product outlet to the vortex chamber disposed to introduce the top product from the stripping column tangentially into the vortex chamber, said stripping column being isolated from the vortex chamber against the passage of fluid into the latter except through said recycle conduit means.

2,897,148

PROCESS OF PURIFYING AND UTILIZING RESIDUAL WATERS RESULTING FROM THE MANUFACTURE OF PAPER PULP PREPARED BY THE SODA PROCESS

Pierre Laboureur, Neuilly-sur-Seine, France, assignor to Societe d'Etudes et d'Applications Biochimiques, Jouy-en-Josas, France, a corporation of France

No Drawing. Application February 23, 1955 Serial No. 490,139
Claims priority, application France March 3, 1954
10 Claims. (Cl. 210—11)

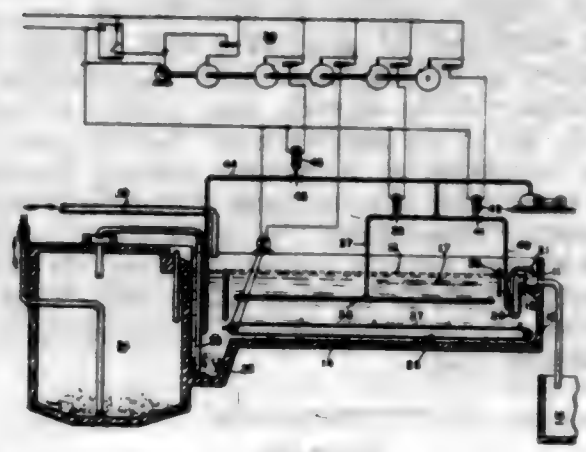
1. A process of treating residual waters resulting from the manufacture of paper pulp prepared by the soda process to purify said waters to render them substantially harmless to streams where they may be discharged, and simultaneously to produce commercially valuable fermentation products, which comprises first, treating the residual waters with an acid in an amount sufficient to create a pH of 4 to 4.5 in the waters; heating the waters to between about 45–50° C. to precipitate a major portion of the suspended organic matter in the waters; separating any precipitated organic matter from the residual waters to produce a primary effluent; then treating the primary effluent with a fermentation agent selected from the group consisting of *Torula utilis*, *Rhodotorula rubra* and species of Saccharomyces; agitating the primary effluent at a temperature between about 25–30° C. to form commercially valuable fermentation products; and separating the fermentation products from the effluent.

2,897,149

SEWAGE SCUM REMOVAL

Llewellyn B. Griffith, Arlington, Va.

Application September 29, 1954, Serial No. 459,185
3 Claims. (Cl. 210—48)



1. The method of removing scum from a primary settling sewage tank in a manner to decrease the ratio of water to sludge solids in the material transferred from the tank to a digester; which method consists in lowering the level of the liquid surface in the primary tank by removing from the tank a quantity of clear liquid, immediately thereafter breaking up the scum floating in the tank at the lowered level by violent agitation to release carbon dioxide gas from the scum made buoyant thereby, so the solids of the scum will fall to the bottom of

inlet portion of the catalyst bed.

neath said condensing spray and so adapted and arranged

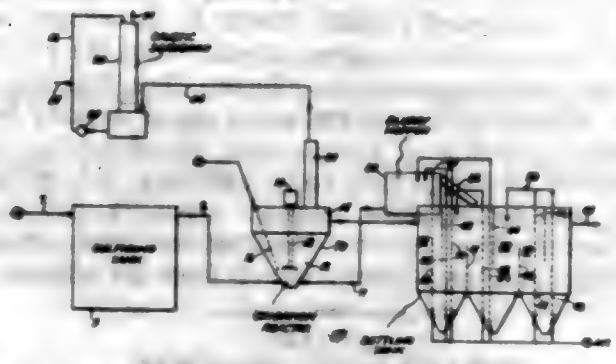
the tank, such lowering of the liquid level permitting the completion of the step of violent agitation without the passing of material from the primary settling tank, then collecting the settled sludge solids, and finally transferring the collected sludge solids to the digester in a period not exceeding two hours after collection of the sludge to avoid sticking of the solids to the wall of the tank.

2. A sewage tank having a scum baffle near the exit end of the tank, a sump below the major portion of the bottom of the tank, a weir for determining the normal liquid level in the tank, means for scraping solids settling on the bottom of the tank into the sump, piping for transferring collected sludge from the sump to a digester, means for discharging air between the bottom of the tank and the scum layer to violently agitate the scum layer, and means located adjacent the weir for lowering said normal liquid level in the tank by a chosen amount, said last named means including a level-lowering pipe having its entry end between the exit end of the tank and the scum baffle and at the height of the chosen lowered level, whereby when the lowering is done at a period of minimum flow into the tank the liquid passing through the level-lowering pipe will be substantially pure water.

2,897,150
PURIFICATION OF WATER

Isaac Bencowitz, Newgulf, Tex., assignor to Texas Gulf Sulphur Company, New York, N.Y., a corporation of Texas

Application July 11, 1957, Serial No. 671,325
2 Claims. (Cl. 210—63)



1. A process which comprises passing a water stream containing hydrogen sulfide, calcium sulfide, sodium sulfide, polythionates, thiosulfates, and polysulfides to a zone containing iron and thus producing an iron compound containing sulphur, passing the water stream containing the iron compounds to an aeration zone, passing a recycled slurry of hydrous ferric oxide supported on elemental sulphur to the aeration zone, passing an oxygen containing gas to the aeration zone, thereby converting the iron compound to a reaction product containing hydrous ferric oxide and elemental sulphur, separating a water product substantially free of the iron compound from the reaction product, separating a slurry of hydrous ferric oxide supported on elemental sulphur from the reaction product and recycling at least part of the slurry to the aeration zone.

2,897,151
VAPORIZING FIRE EXTINGUISHER FLUID

Keith H. Birkett, Hickman Mills, Mo., assignor to Superior Products Company, Kansas City, Mo., a corporation of Missouri

No Drawing. Application September 7, 1956
Serial No. 608,431
2 Claims. (Cl. 252—8)

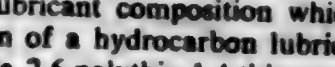
2. A composition adapted for use in extinguishing fires composed of 40% trichloroethylene by volume, 40% perchloroethylene by volume, and 20% by volume chlorobromomethane.

2,897,152
LUBRICATING OILS

John Scotchford Elliott and Eric Descamp Edwards, London, England, assignors to C. C. Wakefield & Company Limited, London, England, a British company

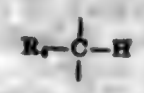
No Drawing. Application March 4, 1957
Serial No. 643,544
Claims priority, application Great Britain
March 8, 1956
11 Claims. (Cl. 252—47.5)

1. A lubricating composition consisting essentially of a mineral lubricating oil base containing from 0.05 percent up to 10 percent by weight of a compound having the formula:

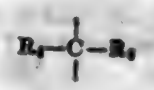


where X is selected from the group consisting of

R_1 and R_2 being lower alkyl radicals, and an aliphatic hydrocarbon chain of five carbon atoms attached to the nitrogen atom so as to form a ring structure, R is selected from the group consisting of —CH_2—,



and



where R_4 and R_5 are lower alkyl radicals, and R_3 is selected from the group consisting of a phenyl radical and an alkyl radical containing no more than eight carbon atoms.

2,897,153
LUBRICANT COMPOSITIONS CONTAINING THIOPYRONES

Clyde S. Scanley, Stamford, Conn., and Ellis K. Fields, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application January 11, 1955
Serial No. 481,267
9 Claims. (Cl. 252—48.2)

1. A lubricant composition which comprises a major proportion of a hydrocarbon lubricating oil base and an oil soluble 2,6-polythio-1,4-thiopyrone which contains at least one alkyl hydrocarbon group in the 2,6 positions imparting oil solubility thereto in an amount at least sufficient to impart protection against oxidative deterioration of the hydrocarbon base oil.

2,897,154
BLEACHING AND DISINFECTING COMPOSITIONS

Lazslo L. Low, La Habra, Calif., assignor to Purex Corporation, Ltd., South Gate, Calif., a corporation of California

No Drawing. Application July 30, 1956
Serial No. 600,694
13 Claims. (Cl. 252—99)

1. As a product, a uniform mixture of trichlorocyanuric acid which in itself gives off lachrymatory chloramine volatiles, and a solid deodorant constituting between about 0.01 to 10% of the product acting to render the product unobjectionably lachrymatory, said deodorant being of the group consisting of silver nitrate, silver phosphate, silver oxide, silver carbonate and mercuric nitrate.

weight of iron which comprises oxidizing an alumina-iron

alkylene radical and X stands for a member of the group

2,897,155

PROCESS FOR PREPARING A DETERGENT COMPOSITION CONTAINING ANHYDROUS FORM II TRIPOLYPHOSPHATE

John P. McNaught, Waldwick, and Jack R. Bryant, Tenafly, N.J., assignors to Lever Brothers Company, New York, N.Y., a corporation of Maine

No Drawing. Application July 27, 1955
Serial No. 524,820
5 Claims. (Cl. 252—109)

1. The process of preparing a free flowing heat dried detergent composition containing from about 25% to about 40% of primarily anhydrous Form II sodium tripolyphosphate and a minimum of decomposition products thereof comprising adding last any anhydrous Form II sodium tripolyphosphate to an aqueous slurry of the detergent composition containing an organic detergent of the group consisting of water-soluble alkali metal soaps and water-soluble non-soap synthetic detergents plus water-soluble inorganic builder salts to form a slurry having only sufficient moisture to maintain a pumpable and sprayable slurry, the slurry having a temperature in the range from about 160° F. to about 200° F.; agitating the slurry within said temperature range for a period not more than about one hour; and then heat drying the slurry.

2,897,156

MANUFACTURE OF ALKYL BENZENE SULFONATE DETERGENTS

Allen H. Lewis, Berkeley, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Application September 14, 1951, Serial No. 246,701
6 Claims. (Cl. 252—161)

1. In the process of manufacturing alkyl aryl sulfonate detergents by sulfonating C_9 to C_{18} monoalkyl benzenes, adding water to the sulfonation reaction product mixture, settling the resulting mixture to separate a sulfonic acid phase and a sulfuric acid phase, and neutralizing the sulfonic acid phase with sodium hydroxide, the method of substantially reducing the time required to effect said phase separation which comprises adding to said alkyl benzenes from at least 5 to 10% by weight, based thereon, of an aromatic hydrocarbon material from the group consisting of benzene and toluene prior to said sulfonation.

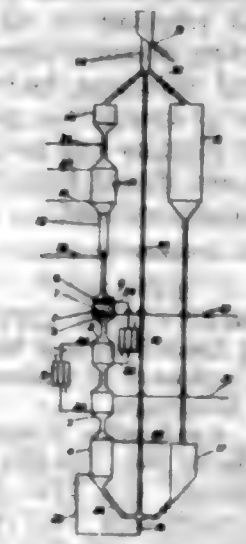
2,897,157

PROCESS FOR THE CONTINUOUS REGENERATION OF A GRANULAR CATALYST

Reginald Edwin Goddard, Norton-on-Tees, England, assignor to Imperial Chemical Industries Limited, a corporation of Great Britain

Application June 12, 1953, Serial No. 361,327
Claims priority, application Great Britain July 11, 1952
3 Claims. (Cl. 252—418)

1. A process for the continuous regeneration into active condition of a granular catalyst which has become coated with carbonaceous material, comprising flowing the catalyst under gravity through a first zone wherein it is treated with an inert gas to free it from reactants, thereafter flowing the catalyst sequentially under gravity through at least three separate regeneration zones, and flowing a stream of regenerating oxidizing gas co-currently with said catalyst through each of said regeneration zones, said gas being cooled intermediate said zones, the sole supply of regenerating gas being introduced to the bottommost regeneration zone and the inlet regenerating gas for each higher zone consisting of the outlet gas from the next lower zone, the catalyst temperature and amount of carbonaceous material burnt off in each zone being controlled by the composition, proportion and temperature of said oxidizing gas so that the maximum catalyst temperature is maintained below a temperature which would be injurious to said catalyst.

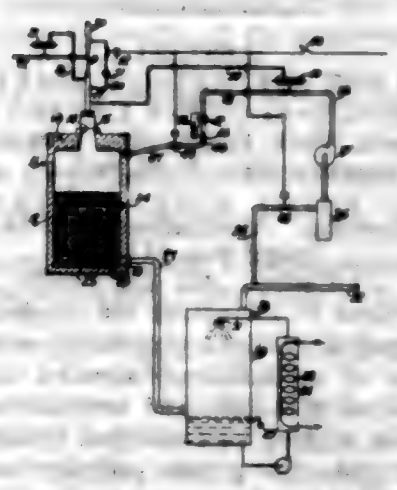


2,897,158

GAS GENERATOR

Charles W. Sonnenbacher, Toledo, and Jack Huebler, Sylvania, Ohio, assignors to Surface Combustion Corporation, Toledo, Ohio, a corporation of Ohio

Application September 19, 1955, Serial No. 535,022
7 Claims. (Cl. 252—372)



1. In a gas generator containing a catalyst a method of operation, under conditions which will not overheat said catalyst, which includes the steps of forming a substantially stoichiometric air-fuel mixture, igniting said mixture, substantially completing combustion of the ignited mixture, in a combustion chamber to form combustion products passing the products through a catalyst, cooling the products, continuously recirculating a portion of the products to the combustion chamber and blending them with the initially generated products after substantial combustion of said air-fuel mixture but before passing said products through the catalyst, whereby complete combustion of the air-fuel mixture is obtained while maintaining the temperatures of the catalyst below 2200° F.

2,897,159

CATALYST MANUFACTURE

James Hoekstra, Evergreen Park, and Edward Michalko, Chicago, Ill., assignors by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application June 25, 1956
Serial No. 593,346
3 Claims. (Cl. 252—448)

1. A method for preparing spherical alumina-iron oxide particles containing from about 10% to about 35% by

weight of iron which comprises oxidizing an alumina-iron hydrosol containing sufficient iron to yield an ultimate composite containing from about 10% to about 35% by weight of iron until substantially all of the iron is in the ferric state, blending hexamethylenetetramine with the oxidized hydrosol and dispersing the mixture in the form of droplets in a water-immiscible gelling medium, removing the resultant alumina-iron hydrogel spheres from the gelling medium and drying them to produce the desired alumina-iron oxide particles.

2,897,160

HYDROGENATION CATALYST

Harold W. Fleming, Louisville, and Ronald E. Reitmeier, Anchorage, Ky., assignors to Chemetron Corporation, a corporation of Delaware

No Drawing. Application February 10, 1958
Serial No. 714,052
6 Claims. (Cl. 252—455)

1. A shaped hydrogenation catalyst suitable for the selective hydrogenation of acetylene in the presence of olefins, said catalyst comprising finely divided cobalt-molybdena supported upon a carrier formed into catalyst shapes, the cobalt-molybdena being present in an amount between about 2.5 percent and about 15 percent by weight of the catalyst and the molal ratio of cobalt to molybdena being between about 1 to 3 and about 3 to 1, and the carrier comprising set hydraulic cement and bonding clay, the amount of cement being between about 20 percent and about 85 percent and the amount of clay being between about 10 percent and about 50 percent by weight of the carrier.

2,897,161

PROCESS FOR PREPARING COBALT-MOLYBDENUM-ALUMINA CATALYST

Henry Erickson, Park Forest, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Application April 16, 1957
Serial No. 653,055
3 Claims. (Cl. 252—465)

1. In a method of increasing the crushing strength of calcined extruded catalyst consisting essentially of a major portion of an activated alumina and minor but effective portions of cobalt and molybdenum, the steps which comprise soaking said calcined catalyst with water in the liquid phase for a time sufficient to provide catalyst particles of increased strength upon recalcination and calcining the thus treated catalyst.

2,897,162

WATER-SOLUBLE ORGANIC NITROGEN COMPOUNDS

Arthur Lowe, James Albert Moyse, and Alan Metcalf Wooler, Blackley, Manchester, England, assignors to Imperial Chemical Industries Limited, a corporation of Great Britain

No Drawing. Application August 5, 1954
Serial No. 448,126
Claims priority, application Great Britain August 14, 1953
15 Claims. (Cl. 260—2)

1. Water-soluble organic nitrogen compounds obtained by heating together in the absence of water and at a temperature between 70° and 200° C., with evolution of ammonia, (1) an N-substituted dicyandiamide selected from the group consisting of dicyandiamides of the formula

$$ANX—C(NH)—NHCN$$

and

$$\begin{array}{l} NX—C(NH)—NHCN \\ | \\ R \\ | \\ NX—C(NH)—NHCN \end{array}$$

wherein A stands for an aryl radical, R stands for an alkylene radical and X stands for a member of the group consisting of hydrogen and an alkyl radical, and (2) a linear polyalkyleneimine of the formula

$$Y—[(CH_2)_n—NH—]_m—(CH_2)_nNH_2$$

wherein Y stands for a member of the group consisting of $—NH_2$, OH and halogen, n is a whole number from 2 to 6 and m is a whole number greater than zero.

2,897,163

PRODUCTION OF POLYMERIC MATERIALS FROM POLYOXYALKYLENE POLYOLS AND BUTADIENE DIEPOXIDE

Jared W. Clark, Charleston, and Alfred E. Winslow, Scott Depot, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application July 9, 1956
Serial No. 596,428
14 Claims. (Cl. 260—2)

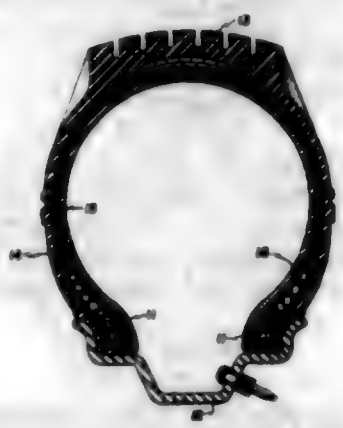
1. A process for producing a high molecular weight polyhydric oxyhydrocarbon product which comprises heating and reacting a polyoxyalkylene glycol having an average molecular weight of at least 600 with butadiene diepoxide in the presence of an alkali metal alcoholate of the polyoxyalkylene glycol, said butadiene diepoxide being present in amounts from about 0.2 mole to about 20 moles per mole of polyoxyalkylene glycol at a temperature of from about 25° C. to about 250° C.

2,897,164

BUTYL RUBBER CO-VULCANIZATES

Francis P. Ford, Watchung, and James V. Fusco, Fanwood, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application December 30, 1955, Serial No. 556,511
7 Claims. (Cl. 260—5)



1. A composition comprising a co-vulcanizable admixture of about 1 to 99 parts by weight of a rubbery copolymer containing a major proportion of a C_4–C_8 isoolefin and a minor proportion of a C_4–C_{10} multiolefin with about 1 to 99 parts by weight of a highly unsaturated rubber selected from the group consisting of natural rubber, rubbery copolymers of butadiene and styrene, rubbery copolymers of butadiene and acrylonitrile, and mixtures thereof, sulfur, and 2 to 30 parts of a co-vulcanization aid selected from the group consisting of oxides of bismuth, cuprous oxide and mixtures thereof.

2,897,165

WATER-IN-LACQUER EMULSION COMPRISING ALKYD RESIN, SOLVENT AND WATER

Charles S. Rowland, Tenafly, and Helen D. Zucker, Paramus, N.J., assignors to Interchemical Corporation, New York, N.Y., a corporation of Ohio

No Drawing. Application April 29, 1955
Serial No. 505,028
2 Claims. (Cl. 260—19)

1. A water-in-lacquer textile decorating emulsion, the water phase of which comprises water and diammonium

phosphate, and the lacquer phase of which comprises a volatile water-immiscible organic solvent containing, as an emulsifying resin, an alkyd resin having an acid number of no more than 3, said alkyd resin consisting of the reaction product of (A) phthalic anhydride, (B) fatty oil acids selected from the group consisting of soya fatty acids, linseed fatty acids, and dehydrated castor oil fatty acids, the weight of said fatty oil acids being between about 4 and about 6 times the weight of said phthalic anhydride, (C) an acid catalyzed phenoxyethanol-formaldehyde condensate having a melting point on the order of 75° C. and prepared from a substantially equimolar mixture of phenoxyethanol and formaldehyde, and (D) a linear polymeric polyhydric alcohol having aliphatic chains and aromatic nuclei united through ether oxygen and having 5 to 20 hydroxyl groups per molecule and having a molecular weight between about 400 and 4000, the said polymeric polyhydric alcohol having been made by condensing dihydroxydiphenyl dimethyl methane with epichlorohydrin in the presence of alkali; the weight ratio of phenoxyethanol-formaldehyde condensate and linear polymeric polyhydric alcohol varying between 4:1 and 1:2 and their total weight being at least equal to the combined weight of said phthalic anhydride and said fatty oil acid and not more than one-and-one-half times said combined weight.

2,897,166

PROCESS FOR THE PREPARATION OF COATING OF SOFT RESINS FROM POLYISOCYANATES AND COMPOUNDS CONTAINING HYDROXYL GROUPS

Kurt Eitel and Fritz Schmidt, Leverkusen, and Gustav Mauthe, Opladen, Germany, assignors, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Application November 5, 1954
Serial No. 467,216
Claims priority, application Germany November 6, 1953
6 Claims. (Cl. 260—22)

1. A process which comprises applying to a porous surface a solution in an inert organic solvent of a polyisocyanate, a soft polyfunctional resin comprising a polyester prepared from a polybasic carboxylic acid and a substantial excess of a polyhydric alcohol and a metallic soap selected from the group consisting of titanium and zirconium metallic soaps, and subsequently allowing the solution applied to said surface to dry to thereby obtain a high luster, smooth, crater-free coating.

2,897,167

PROCESS FOR POLYMERIZING MONOMERIC MATERIALS COMPRISING CONJUGATED DIOLEFINS AND METHYL ISOPROPENYL KETONE

Robert R. Dreisbach and George B. Sterling, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application March 5, 1956
Serial No. 569,247
13 Claims. (Cl. 260—23)

1. In a process for making a rubber-like copolymer in the form of a synthetic latex by polymerizing a mixture of monomeric ingredients comprising a conjugated diolefin and an unsaturated ketone, the method of inhibiting the occurrence of precoagulated polymer which comprises forming and maintaining at a polymerization temperature not higher than 10° C. an emulsion containing (1) a monomeric material comprising from 40 to 80 percent by weight of at least one conjugated diolefin selected from the group consisting of butadiene-1,3 and isoprene, and from 60 to 20 percent by weight of at least one copolymerizable monoethylenically unsaturated organic compound selected from the group consisting of methyl isopropenyl ketone and mixtures of methyl isopropenyl ketone and at least one vinylidene compound selected from the group consisting of acrylonitrile, vinylidene chloride, lower alkyl vinyl ethers containing from 1 to 4 carbon atoms in the alkyl radical, lower alkyl esters of acrylic acid containing from 1 to 4 carbon atoms in the alkyl radical and monovinyl aromatic compounds selected from the group consisting of monovinyl aromatic hydrocarbons of the benzene series and nuclear halogenated monovinyl aromatic hydrocarbons of the benzene series, said monomeric material consisting of at least 5 percent by weight of methyl isopropenyl ketone, and (2) an aqueous phase consisting of water containing at least one anionic emulsifying agent selected from the group consisting of alkali metal salts of fatty acids of tall oil, alkali metal salts of sulfated aliphatic alcohols containing at least 12 carbon atoms in the molecule, and alkali metal salts of disproportionated rosin acid, in amount effective to emulsify the monomeric material, an oxidant-reductant catalyst composition comprising a water-soluble iron salt containing the iron in a condition such that the iron can change its valence state reversibly, an organic hydroperoxide as an oxidant, an organic compound selected from the group consisting of glucose, levulose, sorbose, invert sugar and sodium sulfoxylate formaldehyde, as a reductant, said catalytic composition being effective to polymerize the monomeric material and said emulsion having a pH value between 7 and 12 and containing the monomeric material (1) and the aqueous phase (2) in a ratio of from 10 to 100 parts by weight of the monomeric material per 100 parts of the aqueous phase, and continuing the polymerization at temperatures between 1° and 10° C. until at least 90 percent by weight of the monomeric material is polymerized.

2,897,168

METHOD OF INCREASING THE PARTICLE SIZE OF SYNTHETIC RUBBER LATEX POLYMERIZATE

Robert W. Brown, Naugatuck, Conn., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Application May 2, 1955
Serial No. 505,531
4 Claims. (Cl. 260—29.7)

1. The method of increasing the particle size of a butadiene polymer synthetic rubber latex having a weight ratio of synthetic rubber to water phase in the range from .5/1 to 1.2/1 and having an average particle diameter, based on the weight of the particles, of from 600 to 3000 Angstrom units which comprises mixing water-insoluble organic liquid swelling agent for the synthetic rubber selected from the group consisting of hydrocarbons and halogenated hydrocarbons with the latex in amount to increase the weight ratio of organic phase, viz. synthetic rubber and swelling agent, to water phase to the range from 1.4/1 to 3/1, maintaining the latex in contact with the swelling agent at a temperature between the freezing point of the latex and 100° C. without formation of additional polymer until the average particle diameter of the latex has increased at least 300 Angstrom units, and removing the swelling agent.

2,897,169

PLASTICIZED POLYVINYL HALIDE POLYMERS

Joachim Dazzi, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application July 9, 1956
Serial No. 596,427
6 Claims. (Cl. 260—31.4)

1. A flexible composition comprising polyvinyl chloride plasticized with a preformed dicarboxylate polymer selected from the class consisting of normally liquid homo-

polymers and normally liquid copolymers of esters of the formula:

ROOCH:CHCOOR'

in which R and R' are selected from the class consisting of alkyl radicals of from 1 to 8 carbon atoms and alkoxyalkyl radicals of from 3 to 6 carbon atoms, said homopolymers and copolymers consisting only of said esters in polymerized form, and said polymeric dicarboxylate being from 5% to 50% by weight of the weight of the flexible composition.

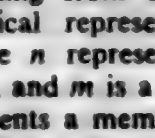
2,897,170

ANTISTATIC TREATMENT WITH A QUATERNARY AMMONIUM COMPOUND CONTAINING A POLYETHENEOXY GROUPING AND PRODUCTS THEREOF

Arnold H. Gruber, Stamford, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application April 9, 1954
Serial No. 422,265
16 Claims. (Cl. 260—32.6)

1. A water-insoluble, organic article which in a dry state normally has a tendency to accumulate static charges of electricity thereon, said article having deposited at least on outer surfaces thereof an antistatic composition comprising a quaternary ammonium compound represented by the general formula



wherein R represents a member of the group consisting of aliphatic hydrocarbon and alicyclic hydrocarbon radicals containing at least 7 carbon atoms, R' designates a radical represented by the formula $-(C_nH_{2n}O)_mH$ where n represents a positive integer from 2 to 4, inclusive, and m is a positive integer and is at least 3, R'' represents a member of the group consisting of alkyl and hydroxyalkyl radicals containing from 1 to 5 carbon atoms, inclusive, and a radical represented by the formula $-(C_nH_{2n}O)_mH$ where n represents a positive integer from 2 to 4, inclusive, and m is a positive integer and is at least 3, R''' represents a member of the group consisting of hydrogen, alkyl and hydroxyalkyl radicals containing from 1 to 5 carbon atoms, inclusive, and a radical represented by the formula $-(C_nH_{2n}O)_mH$ where n represents a positive integer from 2 to 4, inclusive, and m is a positive integer and is at least 3, and Y represents an anion, the amount of the said quaternary ammonium compound which is associated with the said article corresponding to from 0.2% to 15% of the weight of the dry, untreated article, and said quaternary ammonium compound lessening the tendency of the said article to accumulate static charges of electricity thereon.

2,897,171

PROCESS FOR IMPROVING THE FLOWING QUALITIES OF PHENOL-FORMALDEHYDE MOLDING COMPOSITIONS AND MOLDING COMPOSITIONS RESULTING THEREFROM

Ludwig Czerny, Wiesbaden-Sonnenberg, and Joseph Schmitz, Wiesbaden-Biebrich, Germany, assignors to Chemische Werke Albert, Wiesbaden-Kastel (Amoneburg), Germany, a corporation of Germany

No Drawing. Application June 15, 1953
Serial No. 361,836
Claims priority, application Germany June 25, 1952
16 Claims. (Cl. 260—32.8)

1. A process for improving the flowing qualities of heat-hardenable, phenol-formaldehyde resin, molding compositions which comprises swelling the surface layer of said compositions by applying thereto in vaporous form a swelling solvent for the resin therein in a quantity which causes the composition to take up not more than 3.5% thereof by weight, said solvent being selected from the group consisting of ammonia, aldehydes, alcohols, and ketones, and vaporizable at a temperature below 100° C.

2,897,172

SALTS OF HYDROLYZED POLYACRYLATE ESTERS AND SOLUTIONS THEREOF

Arthur Maeder, Basel, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Application October 29, 1954
Serial No. 465,752
Claims priority, application Switzerland November 5, 1953
11 Claims. (Cl. 260—33.4)

6. A solution in a water-soluble aliphatic alcohol of low molecular weight of a polymer of acrylic acid ethyl ester, which contains carboxyl groups neutralized with a member selected from the group consisting of alkali and triethanolamine, said polymer being soluble in water and also soluble at ordinary temperature and in a closed container, at least in combination with another organic solvent in chloro fluoroalkanes which are gaseous at ordinary temperature and pressure, and which polymer is produced by polymerizing ethyl acrylate in solution in a water-soluble aliphatic alcohol of low molecular weight and hydrolyzing subsequently in the resulting polymer solution a sufficient proportion of the ester groups to render the alkali and triethanolamine salts of the polymer soluble in water.

2,897,173

PROCESS FOR COMPOUNDING A CONJUGATED DIOLEFIN POLYMER WITH A SILICEOUS FILLER AND AN ORGANOHALOSILANE

Fitzhugh W. Boggs, Upper Montclair, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

No Drawing. Application December 12, 1951
Serial No. 261,361
2 Claims. (Cl. 260—41.5)

1. The process which comprises commingling a sulfur-vulcanizable elastomer selected from the group consisting of rubbery copolymers of a major proportion of isobutylene and a minor proportion of a conjugated diolefin hydrocarbon and conjugated diolefin polymer synthetic rubbers, a filler selected from the group consisting of precipitated hydrated silica and precipitated hydrated calcium silicate, said filler having an average particle size less than 0.1 micron, and an organohalosilane selected from the group consisting of saturated aliphatic and cycloaliphatic organohalosilanes and aromatic organohalosilanes in which the halogen is selected from the group consisting of chlorine, bromine and iodine, and effecting chemical reaction between said filler and said organohalosilane with the liberation of hydrogen halide corresponding to said halogen, subsequently incorporating vulcanizing ingredients with the resulting mixture, and vulcanizing the resulting mixture.

2,897,174

STYRENE-ALLYL ALCOHOL-ACRYLIC ESTER TERPOLYMERS, PROCESS FOR PREPARING SAME AND COATING COMPOSITION THEREFROM

Earl C. Chapin, Springfield, Mass., and Richard F. Smith, Delmar, N.Y., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application January 10, 1955
Serial No. 481,003
9 Claims. (Cl. 260—43)

1. A terpolymer consisting of an allyl alcohol component, a styrene component and an acrylic ester component, the amount of allyl alcohol component in the terpolymer varying between 1 and 40% by weight, the

amount of styrene component in the terpolymer varying between 10 and 90% by weight, and the amount of acrylic ester component in the terpolymer varying between 2 and 70% by weight; said terpolymer having been prepared by the process which comprises mixing the allyl alcohol component, the styrene component and the acrylic ester component together and heating the resulting mixture to a temperature of 100–250° C. under autogenous pressure for from 15 to 60 minutes; said styrene component being a member of the group consisting of styrene, ring substituted alkyl styrenes, ring substituted chlorostyrenes, ring substituted alkyl chlorostyrenes and mixtures thereof; said acrylic ester component being a member of the group consisting of the saturated alkyl esters of acrylic and methacrylic acids, said alkyl group containing from 1 to 12 carbon atoms; and said allyl alcohol component being a member of the group consisting of allyl and methallyl alcohols and mixtures thereof.

8. A coating composition comprising an organic solvent solution of (1) a thermosetting resin taken from the group consisting of phenol-, urea- and melamine-formaldehyde condensation products and (2) a terpolymer of claim 1.

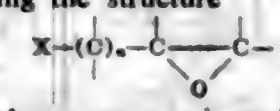
2,897,175

PROCESS FOR THE PRODUCTION OF EPOXY RESINS

Brian Russell Howe, Cardiff, and John Harry Wallice Turner, Cowbridge, Glamorgan, Wales

No Drawing. Application May 31, 1955
Serial No. 512,310
Claims priority, application Great Britain June 9, 1954
8 Claims. (Cl. 260—43)

1. A process for the production of an epoxy resin which comprises bringing a novolak resin which is the condensation product of a monohydric phenol with an aldehyde into intimate contact with an ethylenically unsaturated non-aromatic hydrocarbon which contains from 3 to 12 carbon atoms and an acidic alkylation catalyst to produce a thermoplastic product and then etherifying said thermoplastic product with a haloepoxyalkane, said haloepoxyalkane having the structure



wherein X is a halogen atom, *n* is an integer not greater than 8, and the free valences are satisfied by members selected from the group consisting of hydrogen and hydrocarbon groups.

2,897,176

CHLORINE-CONTAINING RESINOUS COMPOSITIONS AND IMPROVED METHOD FOR PROCESSING THE SAME

Joseph F. Rocky, Union, and Frank R. Nissel, Plainfield, N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application June 14, 1956
Serial No. 591,290
5 Claims. (Cl. 260—45.5)

1. A composition of matter capable of being calendered at high speeds into films comprising a vinyl chloride polymer and polyethylene, said polyethylene being present in an amount of from about 0.01 percent to about 0.03 percent by weight of said vinyl chloride polymer.

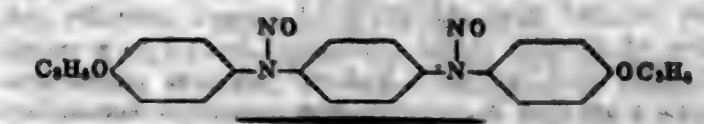
2,897,177

N-NITROSO BIS(ALKOXYPHENYL)PHENYLENEDIAMINES

Ching C. Tung, Nitro, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application July 19, 1955
Serial No. 523,119
4 Claims. (Cl. 260—45.9)

3. A sulfur vulcanizable diene hydrocarbon rubber composition containing a small amount sufficient to inhibit exposure cracking of the compound of the structure



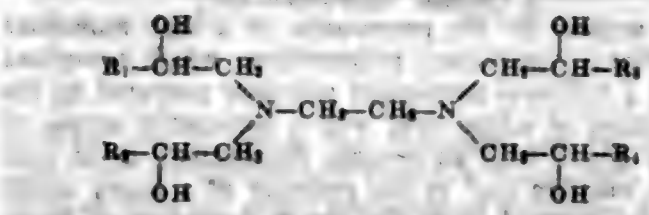
2,897,178

STABILIZED POLY(ETHYLENE OXIDE)

Fred N. Hill, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Application May 29, 1956
Serial No. 587,953
13 Claims. (Cl. 260—45.9)

1. A composition comprising poly(ethylene oxide) having a reduced viscosity of at least 1.0 as measured at a concentration of 0.2 gram of said poly(ethylene oxide) in 100 milliliters of acetonitrile at 30° C., and as a stabilizer therefor a compound of the formula:



wherein each of R_1, R_2, R_3 and R_4 is a member selected from the group consisting of hydrogen and methyl.

2,897,179

HARDENER FOR EPOXY RESIN COMPOSITION

Leon Shechter and John Wynstra, Union County, and Norman H. Reinking, Morris County, N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application July 18, 1956
Serial No. 598,531
9 Claims. (Cl. 260—47)

1. Hardenable composition comprising a mixture of a compound containing terminal 1,2-epoxy groups and having an epoxy functionality greater than one selected from the group consisting of glycidyl polyethers of polyhydric phenols and N-glycidyl aromatic amines and an alicyclic amine corresponding to the following formula:

wherein R, R′ and R^3 are members selected from the group consisting of hydrogen and an alkyl containing up to 8 carbon atoms, said alicyclic amine being present in an amount sufficient to harden the composition.

2,897,180

METHOD FOR THE PREPARATION OF IMPROVED RESINOUS POLYALCOHOLS AND COMPOSITIONS THEREBY OBTAINED

Alexander M. Partansky, Concord, and Paul G. Schrader, Antioch, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application January 26, 1956
Serial No. 561,683
15 Claims. (Cl. 260—58)

1. Method which comprises etherifying a phenol-formaldehyde novolak which is based essentially on the common, tri-functional phenol, C_6H_5OH, and which has from three to ten phenolic units per molecule, in the presence of between about 0.2 and 1.5 percent by weight, based on the weight of the novolak being etherified, of an alkali metal hydroxide catalyst and at a temperature between about 100 and 220° C. with, initially, for each phenolic unit in the novolak from about 0.05 to about

2,897,185

1.0 mole of styrene oxide and then with from about 1.2 to about 0.25 mole of a relatively more reactive organic oxide selected from the group of organic epoxides consisting of alkylene oxides containing from 2 to 4 carbon atoms in their molecule; hydroxy alkylene oxides containing from 3 to 5 carbon atoms in their molecule; and aryl glycidyl ethers, and continuing the reaction until at least about 70 percent of the phenolic hydroxyl groups originally present in the novolak are etherified.

2,897,181

PRODUCTION OF POLYURETHANES

Erwin Windemuth, Leverkusen-Bayerwerk, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application October 6, 1954
Serial No. 460,761
Claims priority, application Germany October 7, 1953
3 Claims. (Cl. 260—75)

1. A process for the preparation of a high molecular weight linear non-porous polyurethane which comprises reacting a hydroxyl-terminated polyester prepared by the esterification of adipic acid with a substantial excess of ethylene glycol with an organic diisocyanate in an acid reaction medium and in the presence of a heavy metal compound selected from the group consisting of ferric chloride, ferric acetyl acetonate, iron pentacarbonyl, iron acetoacetic ester, iron cyclopentanone carboxylic acid ester and the corresponding compounds of nickel, cobalt, zinc, lead, aluminum, manganese, and magnesium, the acidity of the reaction medium being provided by a substantial amount, up to about .1% by weight based on the polyester, of terephthalic acid chloride.

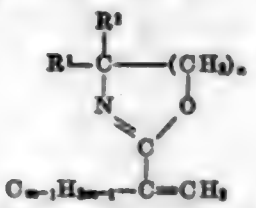
2,897,182

OXAZINE AND OXAZOLINE POLYMERS

Peter L. de Benneville and Leo S. Luskin, Philadelphia, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application September 6, 1957
Serial No. 682,286
10 Claims. (Cl. 260—85.5)

1. A composition of matter comprising a polymer of a monomer of the general formula



in which R^1 and R^2, when taken individually, are alkyl radicals one being methyl and the other containing from one to eight carbon atoms, R^1 and R^2, when taken together, form a divalent saturated aliphatic hydrocarbon group containing four to nine carbon atoms which together with the carbon atom unto which R^1 and R^2 are both bonded form a five- to six-sided carbocycle, n is an integer from one to two inclusive, and m is an integer from one to two inclusive.

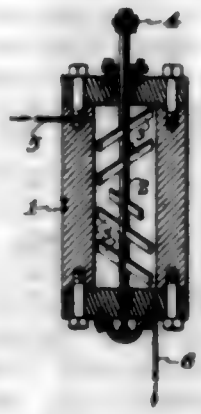
2,897,183

CONSTANT ENVIRONMENT PROCESS FOR POLYMERIZING ETHYLENE

Robert J. Christl and Milton J. Roedel, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application January 13, 1954, Serial No. 403,888
6 Claims. (Cl. 260—94.9)

1. In a continuous process for the preparation of normally solid homopolymers of ethylene, the step which comprises conducting the homopolymerization of ethylene at temperatures between 40° C. and 350° C. and pressures between 50 and 3000 atmospheres and in the presence of an ethylene polymerization initiator in an environment in which the ratio of homopolymer to unreacted ethylene throughout the reaction is maintained at a substantially-constant ratio between 0.05 and 0.50 by main-



taining end-to-end mixing of between 30 and 200 average number of circuits of the reacting mixture in accord with the equation:

$$NC=\frac{Gr}{Gf}$$

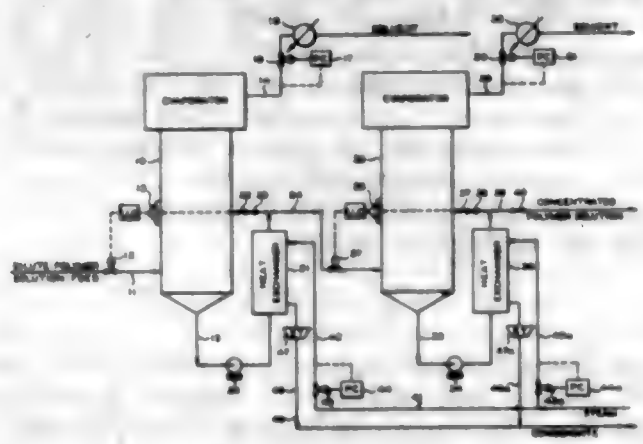
in which NC is the number of circuits, Gr is the end-to-end circulation in pounds per hour and Gf is the inlet ethylene rate in pounds per hour.

2,897,184

POLYMER-SOLVENT SEPARATION PROCESS

Harvey S. Kimble and Norman F. McLeod, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Application July 5, 1956, Serial No. 595,942
4 Claims. (Cl. 260—94.9)



1. In a process for the production of a normally solid polymer of an aliphatic 1-olefin having from 2 to 8 carbon atoms per molecule with no side branching nearer the double bond than the 4-position polymerized in the presence of a catalyst containing chromium oxide associated with at least one oxide selected from the group consisting of silica, alumina, zirconia, and thoria in a normally liquid solvent selected from the group consisting of naphthenic hydrocarbons and paraffinic hydrocarbons having not over 12 carbon atoms per molecule wherein a solution is formed comprising from 0.5 to 4 weight percent of said polymer in said solvent, the improved method of concentrating said solution which comprises introducing said solution into a first evaporation zone, evaporating solvent in said first zone at a rate of about 6 to 16 gallons per hour per square foot of evaporator cross-sectional area, thereby forming an intermediate solution comprising from 3 to 5 weight percent of said polymer, transferring said intermediate solution to a second evaporation zone, evaporating solvent in said second zone at a rate below the rate in said first zone and in the range of about 1 to 10 gallons per hour per square foot of evaporator cross-sectional area, thereby forming a final solution comprising 6 to 9 weight percent of said polymer, and transferring said final solution to subsequent polymer recovery steps.

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comprises subjecting the plant leaf to the action of arti-

2,897,185
METHOD AND APPARATUS FOR SOLVENT EXTRACTION OF OLEORESIN FROM ORGANIC CONCENTRATES

Eric E. Todd, Malibu, Calif.

Application August 9, 1957, Serial No. 677,284
5 Claims. (Cl. 260—109)

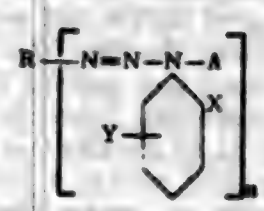
1. The method of solvent extraction of oleoresin from organic oleoresin-containing concentrates comprising charging a cylindrical vessel with said concentrates; filling said vessel with a solvent for oleoresin from the top down; pumping a portion of said solvent from the bottom of said vessel; introducing steam into the top of said vessel; and applying air under pressure to the top of said vessel to expel downwardly all hot vapors and solvent.

2,897,186
DIAZOAMINO DYE INTERMEDIATES

Julius Miller, Newark, N.J., and Dominic Del Guidice, Astoria, N.Y., assignors to Pharma-Chemical Corp., Bayonne, N.J., a corporation of New Jersey

No Drawing. Application February 21, 1956
Serial No. 568,159
19 Claims. (Cl. 260—140)

1. A dye intermediate having the following structural formula:



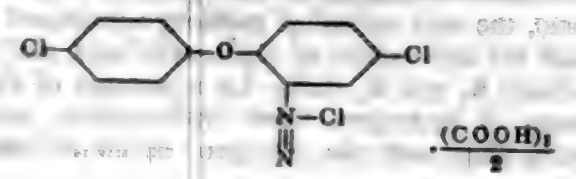
wherein R is a residue taken from the class consisting of diazotized and tetrazotized aromatic mono- and diamines, said amines being free from sulfonic and carboxylic acid groups, A is a radical taken from the class consisting of alkyl and hydroxy-alkyl having 1 to 5 carbon atoms, X is a single radical taken from the class consisting of carboxylic acid and sulfonic acid, Y is a radical in a position taken from the class consisting of meta and para to the nitrogen and taken from the class consisting of hydrogen, halogen, nitro, alkyl, alkoxy and hydroxyalkyl, the alkyl groups having from 1 to 5 carbon atoms, and *n* is 1 when a monoamine is used and *n* is 2 when a diamine is used.

2,897,187
SOLID, STABLE DIAZONIUM COMPOUND AND A PROCESS OF PREPARING THE SAME

Wilhelm Koch, Offenbach (Main), Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Application July 26, 1955
Serial No. 524,583
Claims priority, application Germany August 7, 1954
3 Claims. (Cl. 260—141)

1. The diazonium compound of the formula:

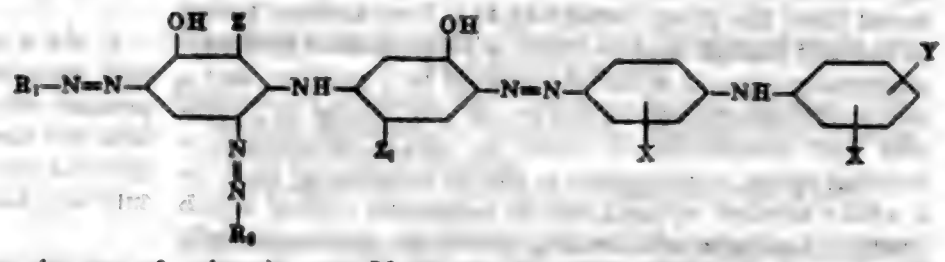


2,897,188
POLYAZO-DYESTUFFS

Josef Weinert, Frankfurt am Main, and Helmut Gies, Hofheim (Taunus), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, Frankfurt am Main, Germany

No Drawing. Application November 21, 1957
Serial No. 697,812
Claims priority, application Germany
November 28, 1956
6 Claims. (Cl. 260—144)

1. The polyazo-dyestuffs corresponding to the following general formula:



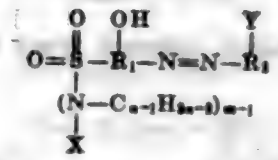
wherein one X stands for hydrogen and the other X stands for the sulfonic acid group, Y represents a member selected from the group consisting of hydrogen, nitro and acetylamino, Z stands for a member selected from the group consisting of hydrogen and the group N=N—R_3, Z_1 stands for a member selected from the group consisting of hydrogen and the group N=N—R_4, R_1 and R_2 represent members selected from the group consisting of radicals of the benzene and diphenylamine series, R_3 represents a radical of the diphenylamine series and R_4 represents a member selected from the group consisting of radicals of the benzene, naphthalene and diphenylamine series.

2,897,189
METALLIFEROUS AZO-DYESTUFFS

Alfred Fasciati, Bottmingen, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Application October 17, 1955
Serial No. 541,041
Claims priority, application Switzerland
December 21, 1951
11 Claims. (Cl. 260—147)

1. A complex cobalt compound containing one atom of cobalt bound in complex union to substantially two molecules of a monoazo dyestuff free from sulfonic acid groups and containing a single carboxylic acid group, which monoazo dyestuff corresponds to the formula



wherein Y represents a member of the group consisting of an amino and a hydroxyl group, R_1 represents a benzene radical bound to the azo linkage in ortho-position relatively to the hydroxyl group, R_2—Y represents the radical of a coupling component free from sulfonic and carboxylic acid groups and bound to the azo linkage in a position vicinal to the substituent Y, *n* represents a whole number up to 7, *m* a whole number up to 2 and X a benzene radical which contains as single salt forming group the said carboxylic acid group.

2,897,190
METALLIFEROUS AZO-DYESTUFFS

Alfred Fasciati, Bottmingen, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

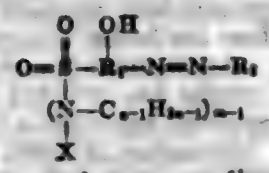
No Drawing. Application October 17, 1955
Serial No. 541,042
Claims priority, application Switzerland
December 21, 1951
7 Claims. (Cl. 260—147)

1. A complex chromium compound containing one atom of chromium bound in complex union with sub-

imino radical, the alkylene radical of which contains from 4 to 6 carbon atoms, and therapeutically useful basic addition salts thereof.

gen and methyl and R'' at both the 3 and 20 positions

stantially two molecules of a monoazo dyestuff free from sulfonic acid groups and containing a single carboxylic acid group, which monoazo dyestuff corresponds to the formula



wherein R_1 represents a benzene radical bound to the azo linkage in ortho-position relatively to the hydroxyl group, R_2 represents the radical of a coupling component selected from the group consisting of a 5-pyrazolone bound to the azo linkage in 4-position, a chlorinated 1-hydroxynaphthalene bound to the azo linkage in 2-position, and a 2-hydroxynaphthalene bound to the azo linkage in 1-position and containing at most as single substituent a bromine atom, *n* represents a whole number up to 7, *m* a whole number up to 2 and X a benzene radical which contains as single salt forming group the said carboxylic acid group.

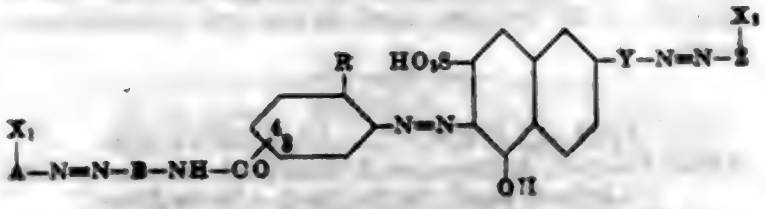
2,897,191

METALLISABLE TRISAZO DYESTUFFS

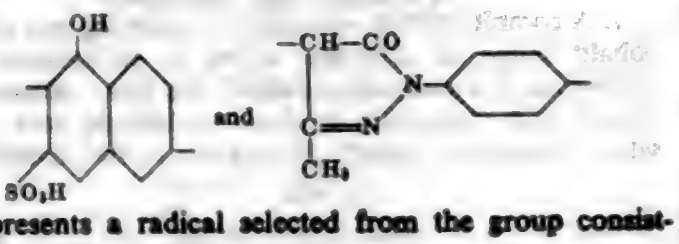
Werner Bossard, Riehen, near Basel, and Rudolf Dürig, Basel, Switzerland, assignors to J. R. Geigy A.-G., Basel, Switzerland

No Drawing. Application November 18, 1958
Serial No. 772,676
Claims priority, application Switzerland December 6, 1957
8 Claims. (Cl. 260—159)

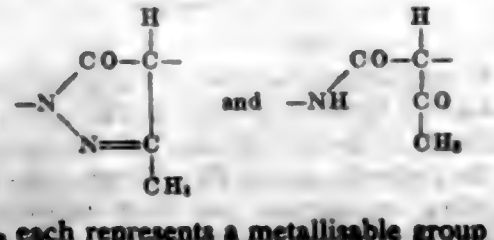
1. The trisazo dyestuff of the formula



wherein A and Z each represents radicals selected from the group consisting of the benzene and naphthalene series, B represents a radical selected from the group consisting of



Y represents a radical selected from the group consisting of



X_1 and X_2 each represents a metallisable group in o-position to the azo group selected from the group consisting of —OH and —COOH, and R represents a lower alkyl radical, said trisazo dyestuff containing at most three naphthalene radicals.

2,897,192

PROCESS FOR THE TREATMENT OF THE GENUS AMARYLLIDACEA, LILIACEA AND RELATED SPECIES

Gustav J. Nord, Asheville, N.C.

No Drawing. Application April 8, 1957
Serial No. 651,171
7 Claims. (Cl. 260—210.5)

1. Process for the extraction of glycosides from steroidal saponin-bearing plant materials of a genus of the group consisting of Amaryllidacea and Liliacea, which comprises subjecting the plant leaf to the action of artificial radiant energy raising the internal temperature of the leaf to about 85° C., and separating the juice from the leaf by mechanical pressure.

2,897,193

SULFURIC ACID ESTERS OF DEXTRANIC ACID

Leo J. Novak, Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio

No Drawing. Application May 28, 1954
Serial No. 433,301
3 Claims. (Cl. 260—234)

1. As a new product, an alkali metal salt of sulfuric acid ester of the carboxylated polymer obtained as by-product when native dextran is split into segments suitable for use as blood plasma extenders by the dextran-splitting enzyme produced by the mold *Aspergillus wentii*, said salt having a sulfur content between 3% and 20%.

2,897,194

NITRATES OF DEXTRANIC ACID AND PROCESS THEREFOR

Leo J. Novak, Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio

No Drawing. Application May 28, 1954
Serial No. 431,267
5 Claims. (Cl. 260—235)

1. As a new composition of matter, a nitrate of the carboxylated polymer obtained by introducing the dextran-splitting enzyme produced by the mold *Aspergillus wentii* into an aqueous solution of dextran of relatively high molecular weight, holding the solution until the dextran is split into segments of relatively low molecular weight by the action of the enzyme, precipitating and separating the hydrolyzed dextran from the solution, and recovering the carboxylated polymer formed as by-product in the dextran-splitting from the supernatant, said nitrate being prepared by reacting said carboxylated polymers with fuming nitric acid at a temperature of about —10° C., and having an average degree of substitution with respect to nitrate groups between about 0.1 and about 2.0.

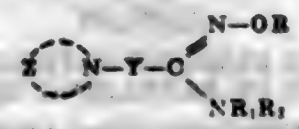
2,897,195

HETEROCYCLO-LOWER ALKANOAMIDOXIME COMPOUNDS

Robert Paul Mull, Florham Park, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey

No Drawing. Application September 18, 1957
Serial No. 684,649
11 Claims. (Cl. 260—239)

1. A member of the group consisting of compounds of the formula:



in which the radical

stands for an alkyleneimino ring, the alkylene radical of which contains from six to nine carbon atoms as chain members, Y represents an alkylene radical containing from one to five carbon atoms, R stands for a member of the group consisting of hydrogen, the acyl radical of an unsubstituted lower alkanoic acid, the acyl radical of benzoic acid, the acyl radical of methoxy-substituted benzoic acid and the acyl radical of piperonylic acid, and each of the radicals R_1 and R_2 stands for a member of the group consisting of hydrogen, lower hydrocarbon, and when taken together with the nitrogen, of an N,N-alkylene-

atom of chromium bound in complex union with sub-

imino radical, the alkylene radical of which contains from 4 to 6 carbon atoms, and therapeutically useful acid addition salts thereof.

3. Hexahydro-1-azepine propionamidoxime dihydrochloride.

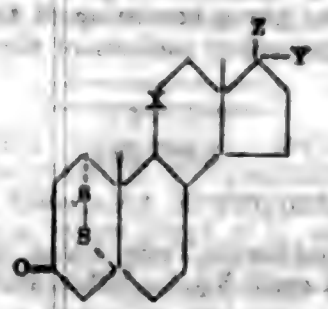
2,897,196

1α,5α-EPIDITHIOPREGNANE-3,20-DIONE AND DERIVATIVES THEREOF

Robert C. Tweit, Wilmette, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Application March 27, 1958
Serial No. 724,278
6 Claims. (Cl. 260—239.5)

1. A compound having the formula



wherein X is selected from the group consisting of methylene, hydroxymethylene and carbonyl, Y is selected from the group consisting of hydroxy and hydrogen and Z is selected from the group consisting of acetyl, hydroxyacetyl and lower alkanoyloxyacetyl.

2,897,197

PREPARATION OF 7,11-DIKETO-STEROIDS

John M. Chemerda, Metuchen, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Original application August 3, 1951, Serial No. 240,281, now Patent No. 2,749,337, dated June 5, 1956. Divided and this application October 5, 1953, Serial No. 384,317
9 Claims. (Cl. 260—239.55)

1. The process which comprises reacting a 7-keto-11-acyloxy-cyclopentanopolyhydrophenanthrene compound selected from the group which consists of Δ^{22}-3,11-bis(lower alkanoyloxy)-7-keto-ergostene and 7-keto-11-(lower alkanoyloxy)-tigogenin 3-(lower alkanoate) with a hydrolyzing agent comprising an alcoholic solution of an alkali metal hydroxide to produce the corresponding 7-keto - 11 - hydroxy-cyclopentanopolyhydrophenanthrene compound, and reacting said 7-keto-11-hydroxy-cyclopentanopolyhydrophenanthrene compound with an oxidizing agent comprising chromic acid to form the corresponding 7,11 - diketo - cyclopentanopolyhydrophenanthrene compound.

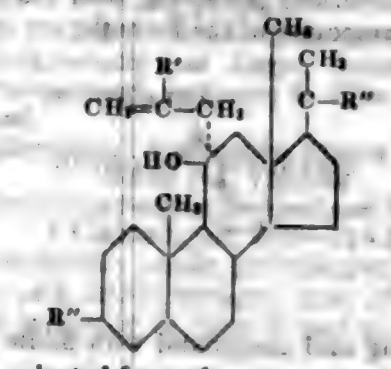
2,897,198

11α-ALKENE-11β-HYDROXY-5β-PREGNANES

William J. Wechter and Gunther S. Fonken, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Delaware

No Drawing. Application February 12, 1959
Serial No. 792,725
5 Claims. (Cl. 260—239.55)

1. 11α - allylated - 11β - hydroxy - 5β-pregnanes represented by the following formula:



wherein R' is selected from the group consisting of hydrogen and methyl and R'' at both the 3 and 20 positions represents the same substituent and is selected from the group consisting of carbonyl oxygen (=O) and a cyclic ketal radical of the formula

wherein *n* is selected from the integers one and two and R is selected from the group consisting of hydrogen and a lower-alkyl radical containing from one to six carbon atoms, inclusive.

2,897,199

4,9α-DIHALO-11-OXYGENATED DERIVATIVES OF PROGESTERONE

Howard J. Ringold and Enrique Batres, Mexico City, Mexico, assignors to Syntex S.A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Application September 10, 1958
Serial No. 760,668
Claims priority, application Mexico September 11, 1957
17 Claims. (Cl. 260—239.55)

16. 4-chloro-9β,11β-oxido-Δ^4-pregnen-3,20-dione.

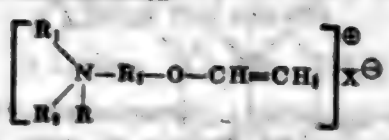
2,897,200

NEW POLYMERIZABLE VINYL ETHER QUATERNARY AMMONIUM COMPOUNDS

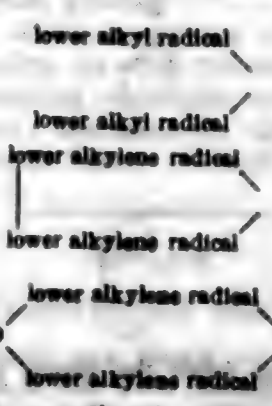
Arthur Maeder, Basel, and Otto Albrecht, Neuewelt, near Basel, Switzerland, assignors to Ciba Limited, Basel, Switzerland

No Drawing. Application October 25, 1954
Serial No. 464,600
Claims priority, application Switzerland October 30, 1953
4 Claims. (Cl. 260—247.2)

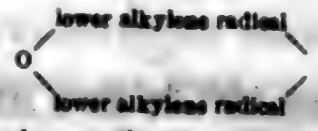
1. A new quaternary polymerizable vinyl ether which corresponds to the formula



wherein R is a radical selected from the group consisting of the gylcidyl radical and the carboxamido-methyl radical; R_1 and R_2 form a member selected from the group consisting of

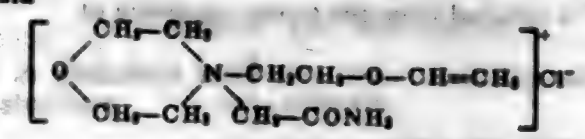


and



R_3 is a lower alkylene radical in which two carbon atoms are linked to each other; and X represents an anion.

4. The quaternary ammonium compound of the formula



2,897,201

EPOXY QUATERNARY AMMONIUM COMPOUNDS

Otto Albrecht, Neuewelt, near Basel, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Application May 23, 1955
Serial No. 510,529
Claims priority, application Switzerland May 26, 1954
2 Claims. (Cl. 260—268)

1. A water-soluble quaternary ammonium compound containing oxirane rings which is obtained by quaternating

2,897,204

SUBSTITUTED PIPERIDINES AND METHODS

2,897,208

group consisting of Amaryllidacea and Liliacea, which taken together with the nitrogen, of an N,N-alkylene-

1 mol of the condensation product from 1 mol of an N-alkyl-propylene diamine in which the alkyl radical contains 16 to 18 carbon atoms and 7 mols of ethylene oxide and which condensation product contains two tertiary amino groups and is present in its free state, with 2 mols of epichlorhydrin in a nonaqueous medium at temperatures ranging from 70 to 120° C.

2. A water-soluble quaternary ammonium compound containing oxirane rings which is obtained by quaternating 1 mol of the condensation product from 1 mol of piperazine and 2 mols of ethylene oxide and which condensation product contains two tertiary amino groups and is present in its free state, with 2 mols of epichlorhydrin in a non-aqueous medium at temperatures ranging from 70 to 120° C.

2,897,202

3-KETO-4-AZA-Δ^1-STEROIDS AND METHOD OF PREPARING SAME

Bernard S. Wildi, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

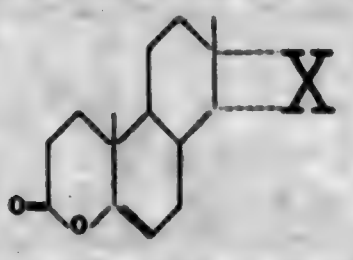
No Drawing. Application March 19, 1956
Serial No. 572,235

6 Claims. (Cl. 260—287)

1. As a new compound, Δ^1-4-azapregnen-3,20-dione.

2. As a new compound, Δ^1-17α-acetoxy-4-aza-testen-3-one.

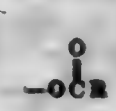
3. A method of preparing 3-keto-4-aza-Δ^1-steroids which comprises heating a compound of the structure:



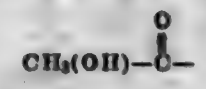
in which X is selected from the group consisting of

and

and R' is selected from the group consisting of —H, —OH and



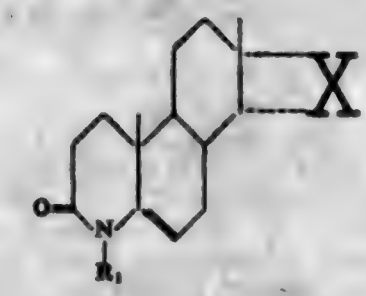
and R'' is selected from the group consisting of



—H, —OH, CH_3CH_2—,

—$CH(CH_3)(CH_2)_3CH(CH_3)_2$, RCOO and

—$CH(CH_3)CH{=}CH{-}CH(CH_3){-}CH{-}(CH_2)_2$, and R is selected from the group consisting of —H and lower alkyl, to temperatures of 100 to 250° C. in the presence of a compound selected from the group consisting of ammonia, methyl amine, n-propyl amine, n-butyl amine, isopropyl amine, 2-methyl-3-amino-propane, n-pentyl amine, n-hexyl amine, 2-methyl-4-amino-butane, n-octyl amine, cyclohexyl amine, cyclohexylmethyl amine, (2-phenylethyl)amine and (1-phenylethyl)amine to produce a compound of the structure:



in which X has the meaning set forth above, and R_1 is selected from the group consisting of hydrogen and the monovalent hydrocarbon radicals of the amine reactants set forth above.

2,897,203

PURIFIED PYRIDOXINE, ANALOGS AND PROCESS

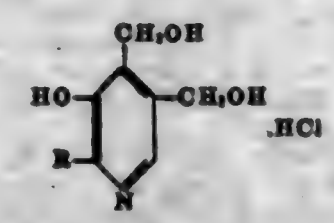
Gino Carrara and Emilio Testa, Milan, Italy, assignors to Lepetit S.p.A., Milan, Italy

No Drawing. Application February 8, 1956
Serial No. 564,324

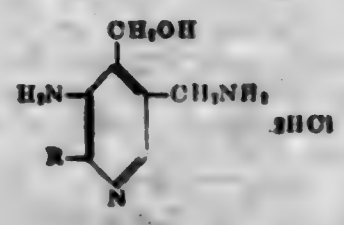
Claims priority, application Great Britain February 10, 1955

11 Claims. (Cl. 260—295)

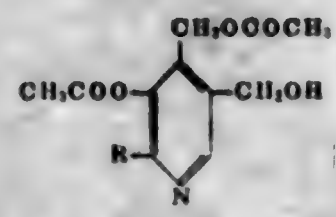
1. A process for preparing an analytically pure compound of formula



wherein R represents a member of the group consisting of phenyl and lower alkyl radicals having 1 to 8 carbon atoms, which comprises diazotizing one mole of a compound of the formula



dissolved in aqueous 2 to 3% sulfuric acid containing about two moles of an alkali metal bromide, with 2 to 3 moles of an alkali metal nitrate at 80° C., adding to the obtained mixture sulfuric acid to a content of about 5%, heating the mixture at 80° C. for 7 to 8 hours, adjusting to pH between 7 and 8 with an alkali metal hydroxide, stirring the solution at 0° to 5° C., for 15–60 minutes with acetic anhydride, extracting with ethyl acetate the intermediate compound of the formula



and hydrolyzing said compound with dilute hydrochloric acid.

2,897,211

acetoxy group and R^3 is an organic radical selected from

wherein R' is selected from the group consisting of hydro-

1. A water-soluble quaternary ammonium compound containing oxirane rings which is obtained by quaternating

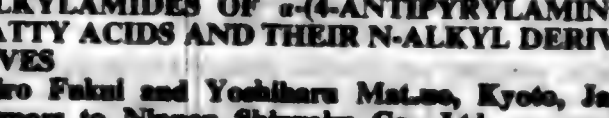
2,897,204

SUBSTITUTED PIPERIDINES AND METHODS FOR MAKING SAME

Frank A. Cutler, Jr., Westfield, and John M. Chemerda, Metuchen, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Application July 15, 1957
Serial No. 671,699
13 Claims. (Cl. 260—294.3)

1. A member of the group consisting of a compound having the formula—



wherein R^1 and R^2 are lower alkyl groups and R^3 is selected from the class consisting of hydrogen and lower alkanoyl groups, and non-toxic acid addition salts thereof.

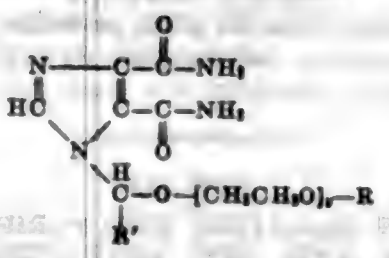
2,897,205

1-ETHERIFIED OXYALKYL IMIDAZOLE-4,5-DICARBOXAMIDES, INTERMEDIATES AND PROCESS

William J. Leanza, Staten Island, N.Y., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Application June 27, 1958
Serial No. 744,910
20 Claims. (Cl. 260—309)

1. A compound having the formula



wherein R is a hydrocarbon radical having less than nine carbon atoms, R' is selected from the class consisting of hydrogen and lower alkyl, and y has a value of 0 to 2.

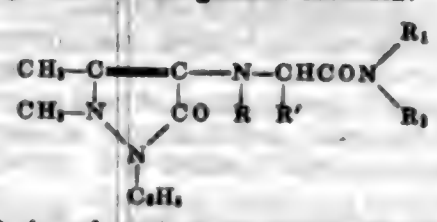
2,897,206

DIALKYLAMIDES OF α-(4-ANTIPYRYLAMINO)-FATTY ACIDS AND THEIR N-ALKYL DERIVATIVES

Tomijiro Fukui and Yoshiharu Matsuo, Kyoto, Japan, assignors to Nippon Shinyaku Co., Ltd., a company of Japan

No Drawing. Application June 24, 1958
Serial No. 744,054
6 Claims. (Cl. 260—310)

1. A compound of the general formula:



in which R is selected from the group consisting of hydrogen and a lower alkyl radical, R' is selected from the group consisting of hydrogen and a lower alkyl radical, R_1 is a lower alkyl radical, and R_2 is a lower alkyl radical.

2,897,207

NEW PHTHALOCYANINE DYESTUFFS

Christian Zickendraht and Eugen Johann Keller, Binningen, Switzerland, assignors to Ciba Limited, Basel, Switzerland

No Drawing. Application March 18, 1958
Serial No. 720,654
Claims priority, application Switzerland March 18, 1957
4 Claims. (Cl. 260—314.5)

1. Acetone-soluble copper phthalocyanine tetrasulfonic acid amide, each amide nitrogen atom of which bears an alkoxyalkyl group of at least 3 and at most 5 carbon atoms.

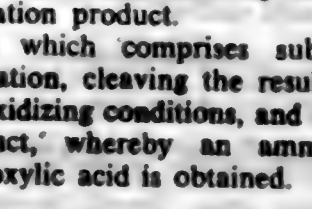
2,897,208

PROCESS FOR MAKING OXIRANE COMPOUNDS

Benjamin Phillips, Charleston, and Paul S. Starcher, South Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application December 17, 1956
Serial No. 628,551
6 Claims. (Cl. 260—326)

1. As new epoxides, 4,5-epoxycyclohexane-1,2-dicarboximides characterized by the general formula:



wherein R represents members selected from the group consisting of hydrogen and alkyl groups containing from 1 through 12 carbon atoms and R_1 through R_6 represent members selected from the group consisting of hydrogen and lower alkyl groups, the sum of the number of carbon atoms in R_1 through R_6 not exceeding twelve.

2,897,209

SYNTHESIS OF GLUTAMIC ACID

Rudolph Kodras, Skokie, Ill., assignor to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Application April 29, 1957
Serial No. 655,494
9 Claims. (Cl. 260—326.3)

1 A process for preparing a substance convertible, by ammoniation, into an ammonium salt of pyrrolidonecarboxylic acid, which comprises subjecting acrolein dimer to ozonization, and cleaving and oxidizing the resulting ozonization product.

2. A process which comprises subjecting acrolein dimer to ozonization, cleaving the resulting ozonization product under oxidizing conditions, and ammoniating the oxidation product, whereby an ammonium salt of pyrrolidonecarboxylic acid is obtained.

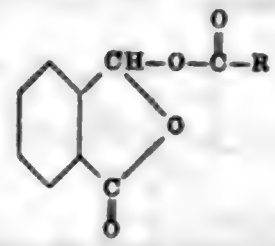
2,897,210

PHTHALIDYL ESTERS OF ALKANOIC ACIDS

Donald D. Wheeler and David C. Young, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application August 3, 1956
Serial No. 602,069
3 Claims. (Cl. 260—343.3)

1. A phthalidyl ester of a lower aliphatic acid having the structure



wherein R represents an alkyl group containing from 2 to 7 carbon atoms, inclusive.

10. In a process for the manufacture of compounds the group consisting of hydrogen and acyl, in which the

amine, cyclohexyl amine, cyclohexylmethyl amine, acid.

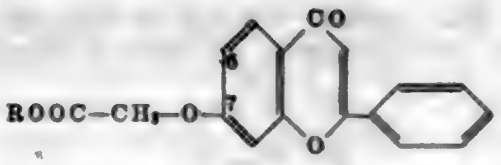
2,897,211

HYDROXYCHROMONE DERIVATIVES AND METHOD OF PREPARING THE SAME

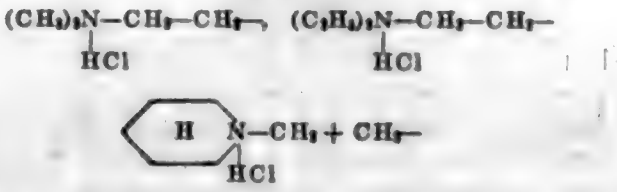
Paolo De Ro, Milan, Italy, assignor to Dr. Recordati-Laboratorio Farmacologico S.p.A., Milan, Italy

Application October 30, 1956, Serial No. 619,313
Claims priority, application Italy November 2, 1955
8 Claims. (Cl. 260—345.2)

1. A coronaro-dilatory compound having the general formula



wherein R is selected from the group consisting of:



H, Na, K, and an alkyl radical containing 1 to 6 carbon atoms.

2,897,212

3-HYDROXY-11-KETO-BISNORALLOCHOLENIC ACID AND THE ESTERS THEREOF

Earl M. Chamberlin, Westfield, and John M. Chemerda, Metuchen, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Original application September 20, 1951, Serial No. 247,563, now Patent No. 2,854,451, dated September 30, 1958. Divided and this application November 29, 1957, Serial No. 704,222
5 Claims. (Cl. 260—397.1)

1. A compound from the group consisting of 3-hydroxy-11-ketobisnorallocholanic acid, lower alkyl esters of 3-hydroxy-11-ketobisnorallocholanic acid and the 3-acyloxy derivatives thereof wherein the acyl substituent is a lower fatty acid radical.

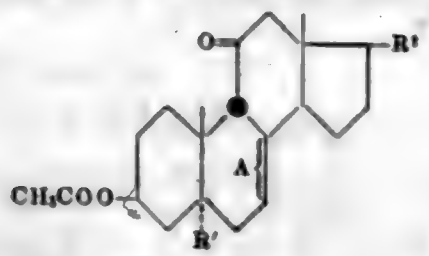
2,897,213

9-BETA-HYDROGEN-11-KETO STEROIDS

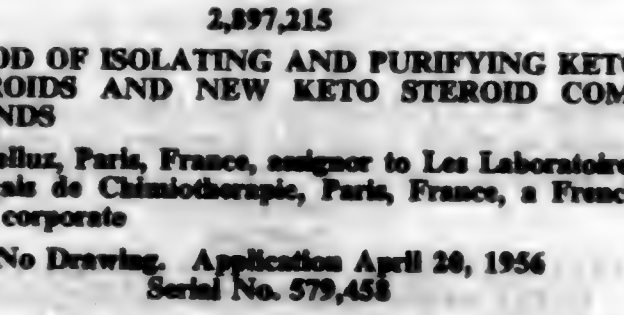
Ewart Ray Herbert Jones, Harold Bernard Henbest, and Gilbert Frederick Woods, Manchester, David Ernest Hathway, Wembley, and Gordon Haydn Thomas, Acton, London, England, assignors to Glaxo Laboratories Limited, Greenford, England, a British company

No Drawing. Application May 21, 1953
Serial No. 356,906
Claims priority, application Great Britain
May 22, 1952
19 Claims. (Cl. 260—397.2)

1. A steroid compound having the general formula



where A is selected from the group consisting of a single bond and a double bond, R^1 is a member of the group consisting of a hydrogen atom, a hydroxy group and an acetoxy group and R^2 is an organic radical selected from the group consisting of



and where the dot at the 9-position signifies the presence of a β-hydrogen atom.

2. 3β-acetoxy-22:23-dibromo-11-keto-9β-ergostane.

2,897,214

3-HYDROXY-11-KETO-Δ^{22}-ERGOSTENE AND ESTERS THEREOF

Earl M. Chamberlin, Westfield, and John M. Chemerda, Metuchen, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey

No Drawing. Original application September 20, 1951, Serial No. 247,563, now Patent No. 2,854,451, dated September 30, 1958. Divided and this application November 29, 1957, Serial No. 704,221
3 Claims. (Cl. 260—397.2)

1. A compound from the group consisting of 3-hydroxy-11-keto-Δ^{22}-ergostene and 3-acyloxy-11-keto-Δ^{22}-ergostene wherein the acyl substituent is a lower fatty acid radical.

2,897,215

METHOD OF ISOLATING AND PURIFYING KETO STEROIDS AND NEW KETO STEROID COMPOUNDS

Leon Velluz, Paris, France, assignor to Les Laboratoires Français de Chimiotherapie, Paris, France, a French body corporate

No Drawing. Application April 20, 1956
Serial No. 579,458
Claims priority, application France December 11, 1952
14 Claims. (Cl. 260—397.4)

3. The benzilic acid hydrazones of keto steroids selected from the group consisting of cis-testosterone and trans-testosterone.

4. In a process of purifying and isolating cis-testosterone from a solution containing cis- and trans-testosterone, the steps comprising adding benzilic acid hydrazide to said solution, allowing the reaction mixture to stand at room temperature until condensation of said benzilic acid hydrazide with cis- and trans-testosterone is completed, filtering off the precipitated benzilic acid hydrazone of cis-testosterone from the dissolved benzilic acid hydrazone of trans-testosterone, and dissociating, by hydrolysis, the separated benzilic acid hydrazone of cis-testosterone to substantially pure cis-testosterone.

2,897,216

PROCESS FOR THE PREPARATION OF STEROIDAL DIENES AND INTERMEDIATES OBTAINED THEREBY

Eugene P. Oliveto, Bloomfield, and David H. Gould, Leonia, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Application November 1, 1954
Serial No. 466,207
10 Claims. (Cl. 260—397.45)

7. 2,4-dibromopregnane-11β,17α,21-triol-3,20-dione 21-acetate.

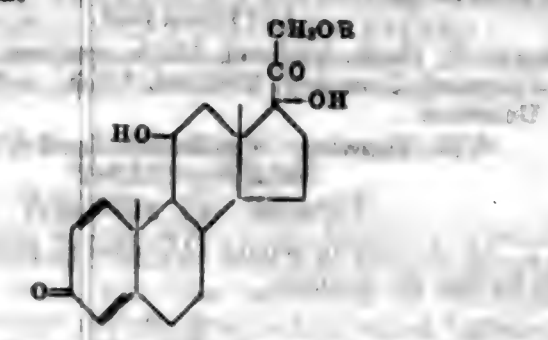
2,897,223

KETONIC ORGANIC THIOSULFATES

2,897,227

S-(CHLOROPHENYL) O,O-DIALKYL PHOSPHORO

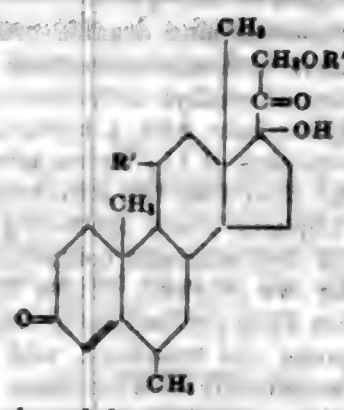
10. In a process for the manufacture of compounds of the formula:



wherein R is lower alkanoyl, the step which comprises heating and reacting a compound of the group consisting of normal and allo-pregnane-2,4-dibromo-11β,17α-diol-21-OR-3,20-diones, wherein R is as above defined, with a high-boiling organic base, until di-dehydrobromination has been effected at the 1,2- and 4,5-positions.

2,897,217
6-METHYL ANALOGUES OF CORTISONE, HYDROCORTISONE AND 21-ESTERS THEREOF
George B. Spero, Kalamazoo Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
No Drawing. Application November 23, 1956
Serial No. 623,768
8 Claims. (Cl. 260—397.45)

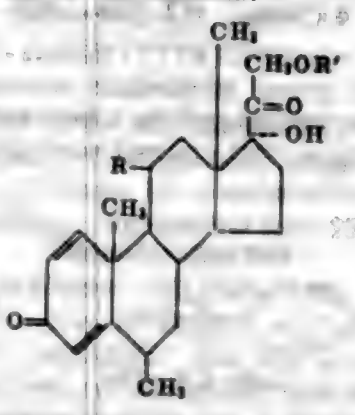
1. A compound of the formula:



wherein R' is selected from the group consisting of 11β-hydroxy and 11-keto, and wherein R'' is selected from the group consisting of hydrogen and acyl, in which the acyl group is of a hydrocarbon carboxylic acid containing from one to twelve carbon atoms, inclusive.

2,897,218
6-METHYL-1-DEHYDRO ANALOGUES OF CORTISONE, HYDROCORTISONE AND 21-ESTERS THEREOF
Oldrich K. Sebek and George B. Spero, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
No Drawing. Application November 23, 1956
Serial No. 623,776
12 Claims. (Cl. 260—397.45)

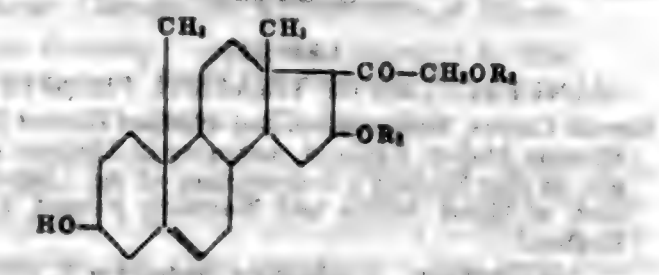
1. A compound of the formula:



wherein R is selected from the group consisting of 11β-hydroxy and 11-keto, and wherein R' is selected from the group consisting of hydrogen and acyl, in which the acyl group is of a hydrocarbon carboxylic acid containing from one to twelve carbon atoms, inclusive.

2,897,219
Δ¹-20-KETO-3:16:21-TRIHYDROXY-PREGNENES AND ESTERS THEREOF
Albert Wettstein, Basel, Charles Meystre, Arlesheim, and Walter Voser, Basel, Switzerland, assignors to Ciba Pharmaceutical Products, Inc., Summit, N.J.
No Drawing. Application June 3, 1954
Serial No. 434,336
Claims priority, application Switzerland June 12, 1953
3 Claims. (Cl. 260—397.47)

3. A compound of the formula:



in which R_2 and R_3 stand for lower alkyl carbonyl groups.

2,897,220
PREPARATION OF TRIORGANOSILANES
Herbert Jenkner, Hannover-Wulfel, Germany, assignor to Kali-Chemie Aktiengesellschaft, Hannover, Germany
No Drawing. Application May 28, 1956
Serial No. 587,465
Claims priority, application Germany May 28, 1955
18 Claims. (Cl. 260—448)

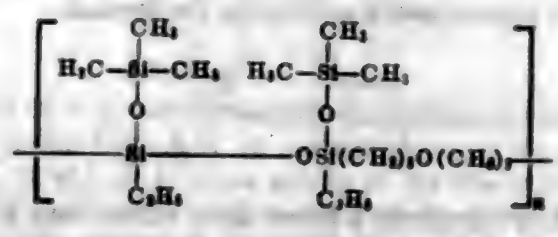
1. A method for the preparation of trialkylsilanes comprising reacting hexaalkyldisiloxanes with an alkyl aluminum compound of the formula R'_mAlH_{3-m}, wherein R' is alkyl and *m* is a positive integer of less than 4, at a temperature of about 100° to 300° C. when said *m* is 3, and at a temperature of about 10° to 200° C. when said *m* is a positive integer of less than 3.

2,897,221
SYMMETRICAL DIPHENYLDIMETHYLDIVINYLDISILOXANE AND ITS USES
Donald R. Weyenberg, University Park, Pa., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan
No Drawing. Application January 5, 1956
Serial No. 557,442
1 Claim. (Cl. 260—448.2)

Symmetrical dimethyldiphenyldivinyldisiloxane.

2,897,222
ALLYL ETHER-SILICONE COPOLYMER
Donald L. Bailey, Snyder, N.Y., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Application December 17, 1957
Serial No. 703,253
1 Claim. (Cl. 260—448.2)

A linear allyl ether-silicone copolymer represented by the formula:



wherein (*n*) represents a simple multiplier.

2,897,223
KETONIC ORGANIC THIOSULFATES

Van R. Gaertner, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application October 15, 1957
Serial No. 690,211
3 Claims. (Cl. 260—453)

1. An organic thiosulfate selected from the class consisting of alkali metal and ammonium salts of an S-[α-(ar-alkyl-aroyl)alkyl] thiosulfate wherein the ar-alkyl radical has from 8 to 18 carbon atoms, the other alkyl radical has from 1 to 4 carbon atoms and the aroyl radical has from 7 to 11 carbon atoms.

2,897,224
MANUFACTURE OF TRIALKYL PHOSPHITES

Harold Coates, Wombourne, and William Hubert Hunter, Shepton Mallet, England, assignors to Minister of Supply, in Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland, London, England

No Drawing. Application September 9, 1952
Serial No. 308,727
Claims priority, application Great Britain December 12, 1951
16 Claims. (Cl. 260—461)

1. Process for the production of lower unsubstituted trialkyl phosphites, which process comprises reacting a cuprous halide with phosphorus trichloride and with a lower unsubstituted alkanol to produce a cuprous halide-trialkyl phosphite complex and subjecting the said complex to controlled decomposition under conditions which liberate the trialkyl phosphite.

2,897,225
PROCESS FOR PRODUCING STABLE HALOARYL PHOSPHATES OF LOW ACIDITY

Raymond B. Tierney, Beacon, and Robert H. Krug, Cornwall, N.Y., assignors to Texaco Inc., a corporation of Delaware

No Drawing. Application May 31, 1955
Serial No. 512,305
4 Claims. (Cl. 260—461)

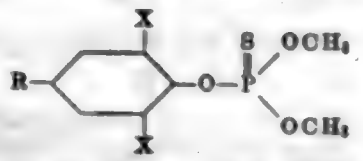
1. A process for producing a stable haloaryl phosphate of low acidity which comprises contacting said haloaryl phosphate under anhydrous conditions with at least 2 weight percent of anhydrous sodium carbonate at a temperature between 60 and 160° F. for a minimum of at least 15 minutes.

2,897,226
O-(2,6-DICYCLOHEXYL-4-LOWER-ALKYLPHENYL) O,O-DIMETHYL PHOSPHOROTHIOATES

Edgar C. Britton and Henry Tolkmith, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application April 4, 1956
Serial No. 575,958
4 Claims. (Cl. 260—461)

1. An O-(2,6-dicyclohexyl-4-lower-alkylphenyl) O,O-dimethyl phosphorothioate having the formula



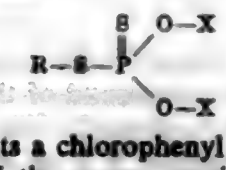
in which R represents a lower alkyl radical and X represents a cyclohexyl radical.

2,897,227
S-(CHLOROPHENYL) O,O-DIALKYL PHOSPHORODITHIOATES

Harold R. Slagh, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application April 4, 1956
Serial No. 575,962
5 Claims. (Cl. 260—461)

1. An S-(chlorophenyl) O,O-dialkyl phosphorodithioate having the formula



wherein R represents a chlorophenyl radical and X represents a member of the group consisting of methyl and ethyl.

2,897,228
ORGANO-PHOSPHORUS CONDENSATION PRODUCTS

Carleton B. Scott, Pomona, and William L. Wasley, Santa Ana, Calif., assignors to Union Oil Company of California, Los Angeles, Calif., a corporation of California

No Drawing. Application August 3, 1956
Serial No. 602,874
15 Claims. (Cl. 260—461)

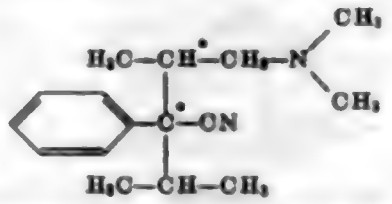
1. A phosphorus-containing organic product obtained by reacting an alkyl trithiometaphosphate selected from the class consisting of methyl trithiometaphosphate and ethyl trithiometaphosphate with a hydrocarbon selected from the class consisting of (1) hydrocarbons containing at least one but not more than two ethylenic double bonds contained in an aliphatic chain containing from 2 to 16 carbon atoms, (2) hydrocarbons containing at least one but not more than two ethylenic double bonds contained in a 5- to 6-carbon atom cycloaliphatic ring, and (3) copolymers of isoprene and butadiene, said reaction being carried out at a temperature between about 10° and about 250° C. and under sufficient pressure to maintain said reactants substantially in the liquid phase, said reactants being contained in said product in substantially equimolecular proportions.

2,897,229
PHENYL ACETONITRILE COMPOUNDS AND A PROCESS OF MAKING SAME

Werner Stuchmer, Eldagsen, near Hannover, and Siegfried Funke, Hannover, Germany, assignors to Kali-Chemie Aktiengesellschaft, Hannover, Germany, a stock company

No Drawing. Application February 8, 1955
Serial No. 486,978
Claims priority, application Germany February 9, 1954
4 Claims. (Cl. 260—465)

1. The α-isopropyl-α-(1-methyl-2-N-dimethylamino ethyl) phenyl acetonitrile compounds selected from the group consisting of the α-isopropyl-α-(1-methyl-2-N-dimethylamino ethyl) phenyl acetonitrile of the formula



and its acid addition salts wherein * signifies an asymmetric carbon atom.

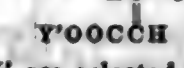
2,897,230

ADDUCTS OF ALKYLATED AROMATIC HYDROCARBONS AND FUMARATE ESTERS

Joachim Dazzi, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application November 23, 1954
Serial No. 470,798
15 Claims. (Cl. 260—475)

1. An adduct of one mole of an alkylated aromatic hydrocarbon having a total of from 9 to 27 carbon atoms and selected from the class consisting of alkylated benzenes, alkylated naphthalenes and alkylated biphenyls having one hydrogen atom attached to the α-carbon atom of a branched-chain alkyl group thereof, and from 2 to 20 moles of a fumarate of the formula



in which Y and Y' are selected from the class consisting of alkyl and alkoxyalkyl radicals of from 1 to 8 carbon atoms, said adduct having been formed by heating the alkylated aromatic hydrocarbon with the fumarate at a temperature of from 200° C. to 300° C.

9. The method which comprises heating, at a temperature of from 200° C. to 300° C., a mixture of an alkylated aromatic hydrocarbon having a total of from 9 to 27 carbon atoms and selected from the class consisting of alkylated benzenes, alkylated naphthalenes and alkylated biphenyls having one hydrogen atom attached to the α-carbon atom of a branched-chain alkyl group thereof, and a fumarate of the formula

in which Y and Y' are selected from the class consisting of alkyl and alkoxyalkyl radicals of from 1 to 8 carbon atoms, and recovering from the resulting reaction product an adduct in which one mole of the alkylated aromatic hydrocarbon is combined with from 2 to 20 moles of the fumarate.

2,897,231

METHOD FOR THE RECOVERY OF AZELAIC ACID FROM A MIXTURE OF OXIDIZED ACIDS

Sigismund J. Niegowski, Philadelphia, and Allison Maggiolo, Merion, Pa., assignors to The Welsbach Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application June 2, 1958
Serial No. 739,807
5 Claims. (Cl. 260—485)

1. In a method for recovering azelaic acid from a mixture of oxidized acids produced by the ozonization of unsaturated fatty acids selected from the group consisting of oleic acid, linoleic acid and mixtures thereof, cleavage and subsequent oxidation to carboxylic acids, the step of esterifying the mixed oxidized acids to increase substantially the yield of the ester of azelaic acid and then recovering the ester of azelaic acid by fractional distillation.

2,897,232

PHTHALIC ACID SEPARATION PROCESS

Joseph Paul O'Brien, Whiting, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application June 13, 1957
Serial No. 665,609
4 Claims. (Cl. 260—525)

1. A separation process which comprises contacting a mixture of solid isophthalic acid and terephthalic acid, having a mole ratio of isophthalic acid to terephthalic acid less than about 8, with liquid dimethylformamide-water-salt solvent in an amount not more than that sufficient to theoretically dissolve all of the isophthalic acid in said mixture, separating undissolved acids from a solution of acids in solvent, and recovering acids from said solution which recovered acids are a mixture containing isophthalic acid and terephthalic acid in a mole ratio of at least about 8, wherein said solvent consists of about 10 volume percent of water, about 90 volume percent of dimethylformamide and substantially a saturation amount of sodium chloride.

2,897,233

PROCESS FOR THE SEPARATION OF AMINO ACIDS

Emil Kaiser, Chicago, Ill., assignor to Armour and Company, Chicago, Ill., a corporation of Illinois

No Drawing. Application February 6, 1956
Serial No. 563,454
3 Claims. (Cl. 260—534)

1. A process for separating a mixture of amino acids derived from the hydrolysis of a naturally occurring protein comprising esterifying said mixture to obtain a mixture of amino acid esters containing a free basic amino group, contacting the said mixture with phosgene to produce a mixture of isocyanato acid esters having different boiling points, fractionally distilling to separate the resulting mixture into different boiling components, and converting said isocyanato compounds to the corresponding amino acids.

2,897,234

ANTIBIOTIC PURIFICATION

Bernard Heinemann, East Syracuse, and Irving R. Hooper, Fayetteville, N.Y., assignors to Bristol Laboratories Inc., Syracuse, N.Y., a corporation of New York

No Drawing. Application April 18, 1956
Serial No. 578,872
1 Claim. (Cl. 260—559)

The process of recovering substantially chlortetracycline-free tetracycline from a solid mixture of tetracycline and chlortetracycline which comprises slurrying said solid mixture in a minimal amount of aqueous mineral acid of about pH 2.5, using no less than 0.1 milliliter of aqueous acid per milligram of chlortetracycline, until substantially all of said chlortetracycline has dissolved and for at least about sixteen hours, and then collecting the purified, solid, undissolved tetracycline.

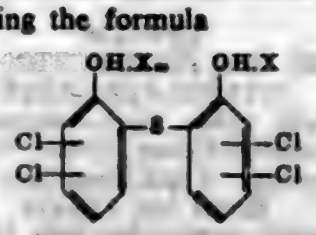
2,897,235

AMINE SALTS OF 2,2'-THIOBIS (4,6-DICHLOROPHENYL)

Milton Kosmin, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application March 20, 1956
Serial No. 572,626
3 Claims. (Cl. 260—567.5)

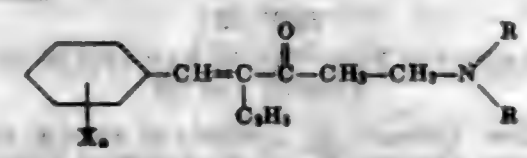
1. A salt having the formula



in which X is a salt-forming N-alkenylpolyalkylenepolyamine having from 8 to 18 carbon atoms in the alkenyl radical, from 2 to 4 amino groups in the molecule, from 2 to 3 carbons atoms in the alkylene chain and from 1 to 3 alkylene groups in the molecule and *m* is an integer of 0 to 1.

2,897,236
BENZYLIDENE-DIALKYLAMINO-HEXANONES AND THEIR ACID ADDITION SALTS
Rodney D. Moon, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Application July 25, 1957
Serial No. 674,013
4 Claims. (Cl. 260—570.5)

1. A 4-benzylidene-1-dialkylamino-3-hexanone having the formula



wherein X represents a halogen having the atomic number from 17 to 35, inclusive, *n* represents an integer from 0 to 5, inclusive, and each R represents lower alkyl; and, the acid addition salts of said hexanone selected from the group consisting of the hydrochloride, the hydrosulfate and the hydrobromide.

2,897,237
SUBSTITUTED TETRAHYDRONAPHTHALENES
Marion S. Carpenter, Nutley, William M. Easter, Jr., Hasbrouck Heights, and Thomas F. Wood, Little Falls, N.J., assignors to The Givaudan Corporation, New York, N.Y., a corporation of New Jersey
No Drawing. Application December 14, 1953
Serial No. 398,208
10 Claims. (Cl. 260—592)

1. 6 - lower - alkyl - substituted, 7 - acetyl - 1,1,4,4-tetramethyl-1,2,3,4-tetrahydronaphthalenes.

2,897,238
METHOD FOR THE SEPARATION OF CARBONYL COMPOUNDS
Otmar Töppel, Aschaffenburg (Main), Germany, assignor to Aschaffenburger Zellstoffwerke A.G., Aschaffenburg, Germany
No Drawing. Application August 18, 1955
Serial No. 529,343
Claims priority, application Germany August 19, 1954
13 Claims. (Cl. 260—600)

1. A method for separating aldehydic carbonyl compounds from solutions containing the same by means of ion exchangers comprising the steps of charging a cation exchanger selected from the group consisting of porous polymeric sulfonic acid, polystyrene sulfonic acid, polymeric phenol sulfonic acid, and polymeric carboxylic acid type cation exchanger, with hydrogen ions and then with a partially dehydrogenated ammonia derivative selected from the group consisting of hydroxyl amine, hydrazine, mineral acid salts thereof, and phenyl hydrazinium chloride, thereby making said cation exchanger sorptive for aldehydes and charging the resulting carbonyl-sorptive exchanger with a solution containing carbonyl compounds, and acidically eluting the resulting absorbed aldehydic carbonyl compounds from the cation exchanger.

2,897,239
PROCESS FOR THE PRODUCTION OF CUMENE HYDRO-PEROXIDE
Nino Rovelli, Milan, Italy, assignor to Società Italiana Resine, Milan, Italy
No Drawing. Application May 20, 1958
Serial No. 736,470
Claims priority, application Italy May 27, 1957
9 Claims. (Cl. 260—610)

1. The process of manufacture of cumene-hydroperoxide from cumene mixtures containing at least over 20% by weight of alpha-methylstyrene which comprises adding to the mixture an amount in the range of 0.1 to 2.0 weight percent of calcium carbonate and water, bringing the mixture at a temperature from about 85° C. to about 115° C. into intimate contact with molecular oxygen containing gases while water content of the reaction mixture is maintained constant by continuously adding therein the required amounts of water.

2,897,240
1,2,3,4,7-PENTACHLOROBICYCLO-[2.2.1]-2,5-HEPTADIENE ETHERS
Hyman M. Molotsky, Chicago, Ill., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois
No Drawing. Application April 8, 1957
Serial No. 651,174
6 Claims. (Cl. 260—611)

1.

wherein R is selected from the group consisting of aliphatic, cycloaliphatic and aryl hydrocarbon radicals containing up to 14 carbon atoms.

2,897,241
1-ETHYNYLCYCLOHEXYL PROPARGYL ETHER
Edward John Watson, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Application June 30, 1958
Serial No. 745,330
2 Claims. (Cl. 260—611)

1. 1-ethynylcyclohexyl propargyl ether.

2,897,242
α,α'-BIS(5-CUMYL-2-HYDROXYPHENYL) MESITOL
David J. Beaver, Richmond Heights, and Paul J. Stoffel, Florissant, Mo., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application September 18, 1953
Serial No. 381,116
1 Claim. (Cl. 260—619)

α,α'-Bis(5-cumyl-2-hydroxyphenyl)mesitol.

2,897,243
PREPARATION OF PURE MYRISTIC ALCOHOL
Michel Rousses and Yves Bourgeois, Bezons, France, assignors to Société Anonyme dite: Société des Produits Chimiques de Bezons, Bezons, France
No Drawing. Application May 20, 1958
Serial No. 736,462
Claims priority, application France May 28, 1957
2 Claims. (Cl. 260—638)

1. The method of preparing pure myristic alcohol, comprising, alkali-splitting castor oil, distilling the octanol-2 and octanone-2 from the residue of the alkali-splitting reaction, entraining the residue stripped of octanol-2 and octanone-2 with superheated steam at about 150 to 250° C. in the presence of alkali lye in an amount not less than that corresponding to the saponification index of said residue, and recovering pure myristic alcohol from the distillation condensate.

2,897,244
PURIFICATION PROCESS
Charles M. Selwitz, Pittsburgh, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Application March 21, 1957, Serial No. 647,671
8 Claims. (Cl. 260—643)

1. A process for the purification of an alcohol selected from the group consisting of primary alcohols having

olefin selected from the group consisting of propene, alkylation products are formed, said aluminum chloride-

from 12 to 18 carbon atoms in the molecule and secondary alcohols containing from 9 to 41 carbon atoms in the molecule contaminated with an oxygenated impurity which comprises converting the alcohol to the corresponding borate ester, extracting such ester with a polar oxygenated solvent at a temperature of about 30° to about 150° C. and thereby dissolve said impurity but not said borate ester, and thereafter hydrolyzing said borate ester to recover the purified alcohol.

2,897,245

PRODUCTION OF AROMATIC HYDROCARBONS

Lloyd C. Fetterly, El Cerrito, Calif., assignor to Shell Development Company, New York, N.Y., a corporation of Delaware

Application December 27, 1955, Serial No. 555,595

13 Claims. (Cl. 260—668)

1. A process for the production of durene and recovery of para-xylene from mixed xylenes which comprises contacting in a condensation zone a mixture of C_8 aromatics containing at least meta- and para-xylene and a C_9 aromatics stream consisting essentially of pseudocumene, obtained from sources described hereinafter, with formaldehyde in the presence of an acidic catalyst selected from the group consisting of liquid acid catalysts containing sulfuric acid as active ingredient and solid acidic catalysts selected from the group consisting of silica gel containing from 0.1 to 15% by weight of an adsorbed mineral acid and calcined silica alumina composite containing from 0.1 to 13% alumina to produce a condensation product containing at least the corresponding diarylmethanes of only a portion of the C_8 aromatics and of pseudocumene, separating the effluent from said condensation zone by fractional distillation into a first C_8 aromatics stream, a first C_9 aromatics stream consisting essentially of pseudocumene and a stream containing at least a portion of said condensation product, hydrocracking at least a portion of said condensation product at an elevated temperature under hydrocracking conditions in the presence of hydrogen and of a high melting essentially neutral inorganic substance having hydrogenating activity, selected from the group consisting of oxides, sulfides, and composites thereof of group VI to group VIII metals having atomic numbers of at least 24 and of activated carbon, as catalyst, subjecting the hydrocracked product to fractional distillation to recover therefrom a second C_8 aromatics stream, a second C_9 aromatics stream and a C_{10} aromatics stream containing at least about 90% durene, separating said second C_9 aromatics stream to recover therefrom a third C_9 aromatics stream consisting essentially of pseudocumene, returning to said condensation zone at least said second C_9 stream and said first and third C_9 streams, and recovering para-xylene and durene in high purity from said first C_8 stream and said C_{10} stream, respectively.

2,897,246

ALKYLATION PROCESS WITH TREATED SILICA-ALUMINA CATALYST

Adrianus de Keizer, Amsterdam, Netherlands, and John Norton Wilson, Berkeley, Calif., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

No Drawing. Application December 28, 1955
Serial No. 555,742
Claims priority, application Netherlands
December 28, 1954
4 Claims. (Cl. 260—671)

1. An alkylation process for the preparation of monocyclic isopropyl-substituted aromatic hydrocarbons which comprises contacting in liquid phase at a temperature of from 160° to 300° C. and at a liquid hourly space velocity in the range from 4 to 100 v./v./hr. a mixture comprising isopropyl-substituted aromatics of the formula

$$C_6H_{6-n}(C_3H_7)_n$$

wherein n is an integer from 1 to 4 (inclusive) and including propylene and a substantial proportion of cumene, the mole ratio of aromatic to olefin in said mixture being at least 3:1, with an acidic silica-alumina catalyst which has been subjected, after preparation, to heating in the presence of water vapor at a temperature between 400° and 900° C. and recovering as product polyisopropyl benzenes resulting from the propylation of said cumene.

2,897,247

LIGHT SCATTERING DEVICE AND CONTROL SYSTEM

Eldon J. Marak, Dewey, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application June 16, 1955, Serial No. 515,941
10 Claims. (Cl. 260—683.15)

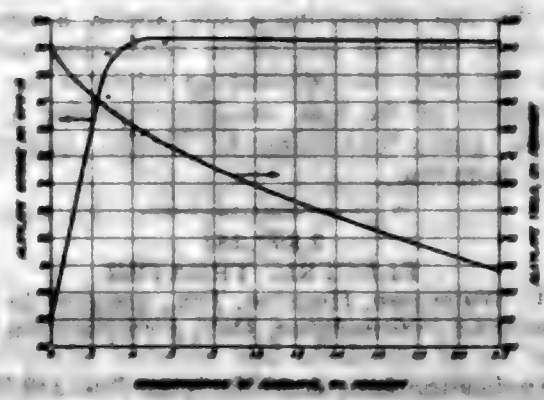
2. The method of controlling a polymerization process to obtain a product having a desired molecular weight which comprises transmitting a beam of radiation into a sample of the polymerization product material, measuring the ratio of radiation scattered from said sample at a given angle to the transmitted radiation, and adjusting the pressure in the polymerization reactor so that the measured radiation ratio is maintained at a preselected value.

2,897,248

ALKYLATION

Alan K. Roebuck, Dyer, Ind., and Bernard L. Evering, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Application June 6, 1956, Serial No. 589,674
6 Claims. (Cl. 260—683.53)

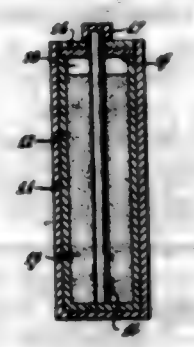


1. The process of alkylating isoparaffins with olefins which comprises introducing isobutane and at least one

olefin selected from the group consisting of propene, butene-2, and isobutene into a reaction zone, therein intimately contacting in the liquid phase the isobutane and olefin with an aluminum chloride-ether catalyst under alkylation reaction conditions and in the presence of a mono-nuclear aromatic hydrocarbon in the amount of between about .001 and 1.5 weight-percent based upon isobutane and olefin present in the reaction zone whereby alkylation products are formed, said aluminum chloride-ether catalyst containing more than one but less than two mols of aluminum chloride per mol of ether and being formed of a solution of aluminum chloride in at least one ether selected from the group consisting of dimethyl ether and diethyl ether, removing the alkylation products from said reaction zone, and recovering a gasoline boiling range alkylate from the alkylation products.

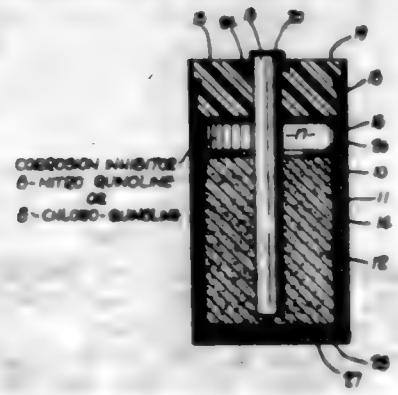
ELECTRICAL

2,897,249
PRIMARY CELLS
Richard Glicksman, Highland Park, and Clarence K. Morehouse, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Application December 17, 1957, Serial No. 703,331
25 Claims. (Cl. 136—102)



1. In a primary cell, the combination of an anode selected from the group consisting of magnesium, aluminum, and zinc, with a cathode including a depolarizer consisting of an organic oxidizing substance in which the oxidizing properties of said substance are due at least in part to polyvalent iodine in a positive oxidation state chemically combined to a carbon atom in said substance.

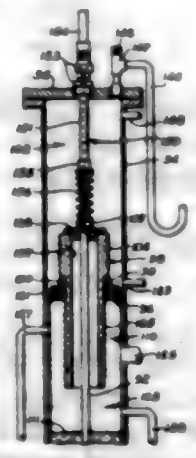
2,897,250
CORROSION INHIBITORS FOR DRY CELLS
Edward M. Klopp, Medina, Ohio, assignor to P. R. Mallory & Co. Inc., Indianapolis, Ind., a corporation of Delaware
Application March 27, 1957, Serial No. 648,848
5 Claims. (Cl. 136—107)



1. A dry cell comprising a zinc anode, a separator, a depolarizing mix, an electrolyte containing ammonium chloride and zinc chloride and an inhibitor for preventing corrosion of the zinc anode comprising a material from the group consisting of 8-nitro quinoline and 8-chloro quinoline.

2,897,251
ELECTRIC TREATER
Logan C. Waterman, Houston, Tex., assignor to Petrolite Corporation, Wilmington, Del., a corporation of Delaware
Application June 5, 1953, Serial No. 359,795
15 Claims. (Cl. 174—16)

1. In an electric treater the combination of: a closed vessel adapted to contain a liquid under pressure; an insulator housing connected to said vessel and providing an open lower end in open communication with the interior of said vessel, the liquid in said vessel tending to rise in said housing; an insulator; a conductor secured in fluid-tight relation to said insulator; means for connecting said insulator to said housing in substantially fluid-tight relationship, said insulator providing a lower portion exposed to the interior of said housing, said conductor extending into said vessel through said lower open end of said housing, there being an annular chamber within said housing around said lower portion of said insulator and around a portion of said conductor; and



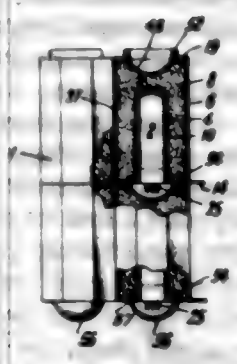
circulation means for continuously circulating a dielectric gas through said annular chamber and for maintaining a constantly renewed volume of gas therein around said lower portion of said insulator, said circulation means including a gas inlet pipe means communicating with said annular chamber at one position, a gas outlet pipe means communicating with said annular chamber at another position, and flow means for continuously delivering gas to said inlet pipe means and withdrawing gas from said outlet pipe means in substantially like volume, said flow means including control means for controlling the flow of said gas through at least one of said pipe means.

2,897,252
SHIELD AND PACKAGE FOR ELECTRON DISCHARGE DEVICE
Eugene J. Martin, Westbury, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application March 11, 1955, Serial No. 493,725
8 Claims. (Cl. 174—35)

2. A carton adapted for use in the transporting and mounting an electrical device having external electrical connectors, said carton comprising an elongated shell having an inner wall and an elongated octagonally shaped outer wall having faces lying in planes substantially parallel to the longer axis of said shell, said inner wall defining a cavity having an opening at one end of said shell and adapted to receive said electrical device, through which openings said connectors protrude; said outer wall defining an inwardly extending depression at the opposite end of said shell, said depression adapted to enclose the

ductor, said end portions having a pitch coarse enough a keyboard formed by a plurality of keys corresponding

connectors protruding from a like carton detachably joined to said carton; an annular recess in the portion of said shell surrounding the opening of said cavity; an annular projection on the portion of said outer wall surrounding said inwardly extending depression, said projection adapted to engage detachably, during the transportation of said device, the annular recess in the shell of a like carton; and a joining means disposed on the outer sides of said shell for joining said carton sidewise to at least one other like carton during the transportation and utilization of said electrical device, said joining means comprising a plurality of adhesive coatings applied to alternate faces of said octagonal outer wall.

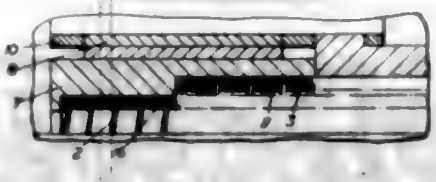


2,897,253

MECHANICAL PROTECTION OF ELECTRIC CABLES

Edward Leslie Davey, Hale, and William Young Murray, Prescot, England, assignors to British Insulated Callender's (Submarine Cables) Limited, London, England, a British company

Application October 6, 1955, Serial No. 538,944
Claims priority, application Great Britain October 13, 1954
4 Claims. (Cl. 174—70)



2. In combination a casing for a joint or other accessory of a submarine cable and a composite sleeve of varying flexibility for preventing severe deformation of the cable where it enters the casing comprising at least two nested lengths of tubing formed of interlocking helical turns of profiled metal strip each attached at one end to the casing, the innermost length being of a diameter such that the cable entering the casing can be threaded through it and the remaining lengths each being shorter than the underlying length and arranged so that the part of the sleeve projecting from the casing is of stepped diameter, and an elongated metal member inserted in at least some of the helical grooves between the interlocking turns of the profiled strip of at least one of the lengths of tubing to make the change in flexibility of the sleeve from a maximum at the free end to a minimum at the fixed end more gradual.

2,897,254

SELF GUIDING ARCUATE SET ELECTRIC CABLE

Wesley E. Dickinson, Santa Clara County, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application June 21, 1956, Serial No. 592,787
9 Claims. (Cl. 174—117)

1. An electrical cable comprising a flexible steel tape having a transverse arcuate "set" therein extending longitudinally thereof for providing rigidity thereto normal to the thin dimension thereof, a thin insulating layer affixed to said tape, and a plurality of spaced flexible strips of conducting material attached to said insulating

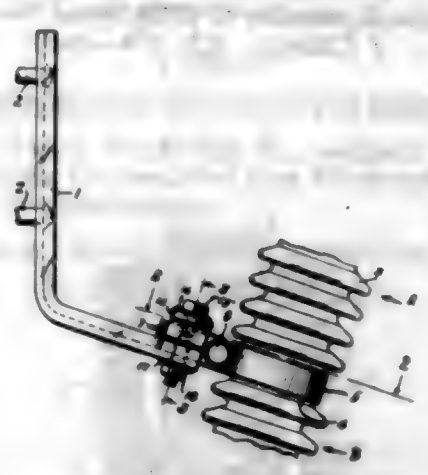
layer, said strips extending longitudinally of said tape and being thin in the dimension corresponding to the thin dimension of the tape, whereby stresses set up in said strips when bending said tape are minimized.

2,897,255

SHOCK ABSORBERS FOR ELECTRICAL DEVICES

Robert A. Geselbracht, Florissant, Mo., assignor to James R. Kearney Corporation, St. Louis, Mo., a corporation of Missouri

Application May 18, 1956, Serial No. 585,858
5 Claims. (Cl. 174—163)



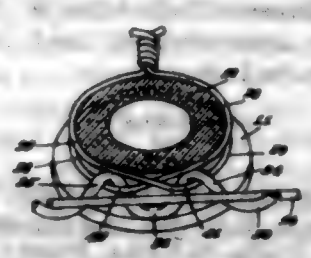
1. The combination with an electrical device having a relatively rigid hanger for supporting the same in place for use, of a member rigidly fixed to a part of said electrical device, a channel-shaped portion formed on said hanger, a cap arranged in spaced relation with respect to said portion of said hanger, said cap being in the shape of a channel inverted with respect to and aligned with said portion of said hanger, parts of said member being compressedly held between said portion and said cap, a resilient element, and means extending through openings formed through said cap and through said portion of said hanger and extending through said resilient element for compressing said resilient element.

2,897,256

LINE WIRE SUPPORT

Harry L. Kitselman and Alvin W. Holmes, Muncie, Ind., assignors to Indiana Steel & Wire Company, Inc., Muncie, Ind., a corporation of Indiana

Application July 31, 1956, Serial No. 601,309
8 Claims. (Cl. 174—173)

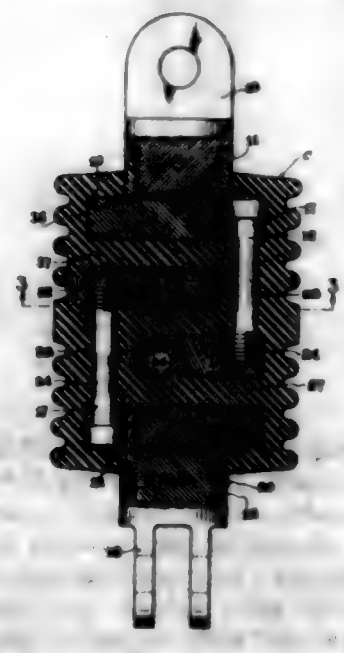


1. In combination with a line conductor, means for supporting and securing said conductor at an intermediate point of its length, said means comprising a supporting member, a unitary reinforcement of hard wire having helically formed end portions surrounding said con-

1. In an electric heater the combination of: a closed vessel adapted to contain a liquid under pressure; an

ductor, said end portions having a pitch coarse enough to permit their ready application to or removal from the conductor and a diameter such that they elastically grip the conductor, a pair of axially spaced offsets intermediate said end portions and between which a portion of the supporting member is received to locate the reinforcement in fixed position axially of itself with respect to the supporting member, that portion of the reinforcement lying between said spaced offsets being displaced far enough from the axis of said end portions to be out of contact with the conductor, and a tie member extending around said supporting member and through said offsets to draw the offsets into engagement with the supporting member, said tie member being free from contact with said conductor.

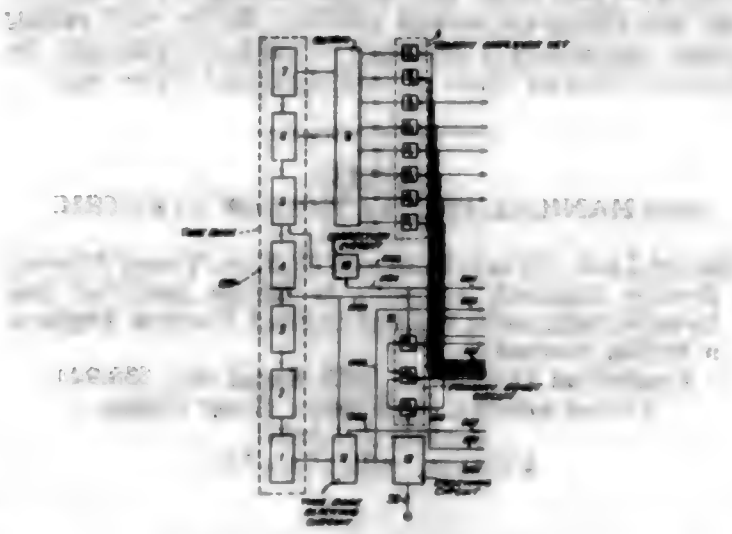
2,897,257
INSULATED LINK
Carl B. Ingram, El Monte, and Louis E. Watson, Claremont, Calif.
Application September 8, 1958, Serial No. 759,486
4 Claims. (Cl. 174—183)



1. An insulated coupling assembly comprising four relatively flat metallic plates of similar external size and configuration lying parallel to one another and separated by dielectric material, said plates comprising a pair of end plates and a plurality of center plates, each of the center plates having a plurality of threaded axial bolt holes and an equal number of enlarged cutout portions arranged alternately and equiangularly adjacent the periphery thereof, said end plates having a plurality of axial apertures equal in number and disposition to the number of bolt holes in said center plates, each of said end plates carrying bolts having heads seated in the said apertures therein, said bolts extending through cutout portions in the next adjacent center plate and into threaded engagement with threaded bolt holes in the more remote center plate, the outer faces of said end plates having clevis means attached thereto.

2,897,258
ELECTRONIC TELEPRINTER
Roger P. Sourgens, Bolivven, and Raymond A. Chollet, Boissy-St-Leger, France
Application August 1, 1957, Serial No. 675,730
Claims priority, application France August 2, 1956
4 Claims. (Cl. 178—2)

2. An electronic transistor teleprinter apparatus for receiving and transmitting start-stop telegraph signals having *n* code elements comprising a receiver trigger device connected to the reception lead of a telegraphic line, a keyboard formed by a plurality of keys corresponding to the several characters to be signalled and acting upon *n* transmission element contacts and a general transmission contact, a transmitter trigger device connected to the transmission lead of said telegraphic line, a time-base constituted by an oscillator, a plurality of cascade-connected binary frequency-dividers adapted to be energized either by said receiver trigger device or by said general transmission contact, a matrix of bus bars connected to said frequency-dividers, a plurality of *n* gate circuits connected to the bus bars of said time-base and controlled by the receiver trigger device and the general transmission contact, a plurality of *n* binary storage circuits including each a first stage and a second stage, the circuits of the first stage having their inputs connected respectively both to said *n* gate circuits and to said *n* transmission element contacts and their outputs connected to the inputs of the second stage, the circuits of the second stage having their outputs connected both to the transmitter trigger device and to a plurality of *n* code electromagnets, a correction circuit associated with the time base and reducing the duration of the cycle of the time-



base when the teleprinter apparatus is receiving, a transmission-reception trigger circuit including a first and a second stage respectively associated with the first and second stages of the binary storage circuits, a first reset device associated with the time-base controlled at the same time by said time-base, the first transmission-reception trigger circuit stage and the second transmission-reception trigger circuit stage and controlling the reset of the first binary storage circuit stage and of the first transmission-reception trigger circuit stage and the transfer from said stages respectively to the second binary storage circuit stage and second transmission-reception trigger circuit stage, and a second reset device associated with the time-base and resetting to a rest position the second binary storage circuit stage and the second transmission-reception trigger circuit stage, and controlled by the time-base.

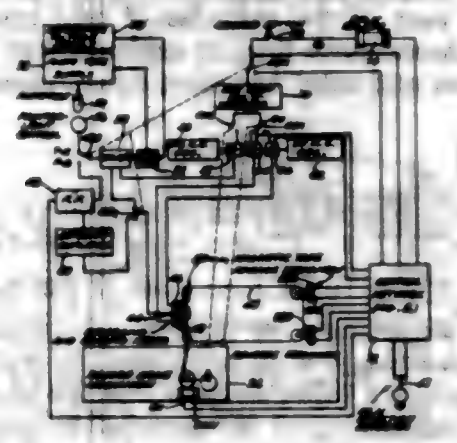
2,897,259
AUTOMATIC PRINT TIMER
Thomas P. Dixon, Los Angeles, and Samuel E. Howes, Glendale, Calif., assignors to Technicolor Corporation, Hollywood, Calif., a corporation of Maine
Application June 25, 1957, Serial No. 667,356
10 Claims. (Cl. 178—5.2)

10. In a printing-timer apparatus for reels of motion-picture negative film having an indication of scene changes thereon said printing-timer apparatus being of a type wherein for each of a plurality of color channels there is a phototube having its own source of operating potentials, each said phototube providing electrical signals representative of point-by-point transmission of light from a color-image-aspect negative frame, and there is

2,897,262

sisting of low and high frequency components of three

included cathode-ray tube apparatus at the output of all said color channels for presenting a positive in color responsive to signals from said channels, the improvement in each channel of said printing-timer apparatus comprising means for selectively varying the operating potentials applied to said phototube to vary its response, means for encoding each setting of said means for selectively varying operating potentials, means for recording output from said means for encoding including a recording medium, means for recording on said medium, means for sensing changes of scene in said motion-picture negative film, means for moving said recording medium each time a scene change is sensed by



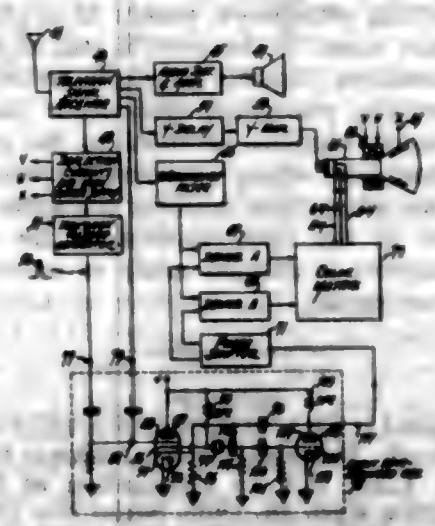
said means to provide a fresh recording space under said means for recording on said medium, means for reading what is recorded on said recording medium, means for controlling said means for selectively varying said operating potentials responsive to output from said means for reading, and means for moving said recording medium in reverse responsive to a scene change being sensed to pass the recorded coding for the next scene under said means for reading.

2,897,260

COLOR TELEVISION

Norbert D. Larky, Somerville, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Application July 28, 1954, Serial No. 446,321
3 Claims. (Cl. 178—5.4)



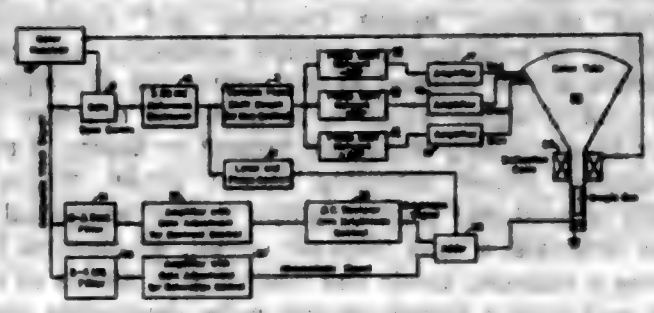
1. In a color television receiver, said color television receiver adapted to receive a color television signal, said color television signal including a color synchronizing burst, said color synchronizing burst having a predetermined frequency and phase, a burst synchronized oscillator, comprising in combination, a piezo-electric crystal tuned to present a substantially non-reactive series impedance at the frequency of said color synchronizing burst, a plurality of phase shift amplifier devices, each of said phase shift amplifier devices having an input terminal and an output terminal means for incorporating said piezo-electric crystal with said plurality of phase shift amplifier devices to provide a phase shift and amplifying circuit operatively connected to said piezo-electric crystal and having the phase shift required to develop oscillation at the frequency of said color synchronizing burst, said last named means comprising means for coupling the output terminal of one of said plurality of phase shift amplifier devices to the input terminal of another of said phase shift amplifier devices and means for coupling the output terminal of said other phase shift amplifier device to the input terminal of said one phase shift amplifier device via said piezo-electric crystal, and means for injecting said color synchronizing burst into said piezo-electric crystal to filter said color synchronizing burst and injection-lock the oscillations produced in conjunction with said piezo-electric crystal at a frequency and phase prescribed by said color synchronizing burst.

2,897,261

DETECTOR FOR NTSC COLOR RECEIVER

Charles H. Jones, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application February 21, 1955, Serial No. 489,585
31 Claims. (Cl. 178—5.4)



1. In a color television receiver having means providing a composite video signal including a color subcarrier and horizontal sync pulses, the combination of a gate connected to said means for receiving sync bursts and horizontal sync pulses therefrom, a reference oscillator connected to said gate, said sync pulses gating said gate to pass separated sync bursts to said oscillator, a color tube having a fluorescent screen for producing a polychromatic image, said screen having a plurality of groups of fluorescent lines for producing primary color components of said image, said fluorescent lines being arranged on said screen in a continuous color sequence, said tube having a control electrode and a cathode, filter means directly connected between said means providing a composite video signal and said control electrode of said color tube for adjusting the level of the chromaticity portion of the frequency spectrum of said composite video signal with respect to the brightness portion, means for sweeping said screen with the electron beam from said cathode, and means using the output of said oscillator for synchronizing the sweeping of said groups of fluorescent lines with the appearance of chromaticity signals between said control electrode and cathode to cause said fluorescent lines to be excited by the electron beam in a continuous color sequence.

N adjacent parallel paths whose total width equals the length of the character matrix, N being a number not less than five, there being only a single scanning element

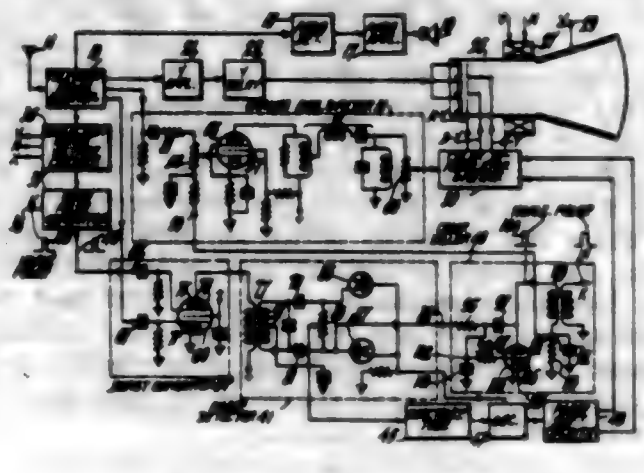
2,897,266

TELEVISION FIELD-IDENTIFICATION SYSTEM

Donald Richman, Fresh Meadows, N.Y., assignor to

vice connected to the reception lead of a telegraphic line, from a color-image-aspect negative frame, and there is

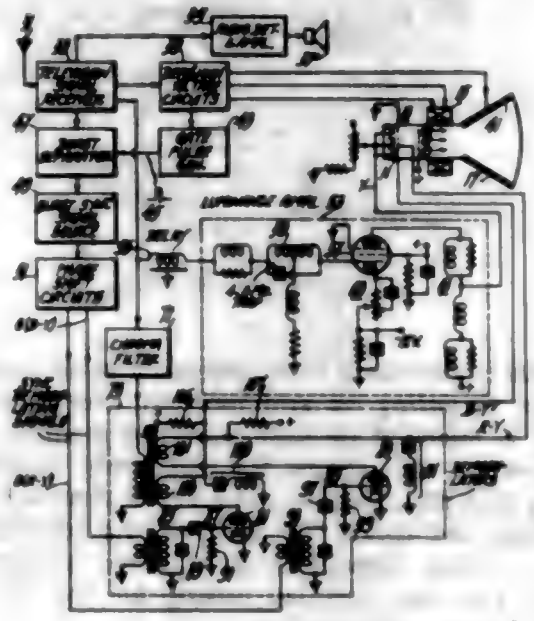
2,897,262
COLOR TELEVISION RECEIVERS
Gordon F. Rogers, Lincolnwood, Ill., assignor to Radio Corporation of America, a corporation of Delaware
Application June 27, 1955, Serial No. 518,057
2 Claims. (Cl. 178—5.4)



1. In a color television receiver, the combination of, a source of television signals having horizontal retrace intervals and occurring according to either of two modes of signals, said first mode of signals describing color television signal transmission and including color synchronizing bursts having prescribed frequency and phase and occurring at predetermined intervals, and said second mode of signals representing monochrome signal transmission and characterized by the absence of said color synchronizing bursts, a chrominance signal amplifier circuit for amplifying at least a first prescribed frequency range of said television signal and having a gain control terminal, means coupling said chrominance amplifier to said source, a burst separating and phase detection circuit coupled to said source for developing a first control signal which is indicative of whether said color synchronizing bursts are present or absent, a pulse developing circuit including output circuit means at which is produced positive pulses during horizontal retrace intervals, a time constant circuit, an electron tube having a cathode, anode and control grid, means to connect said output circuit of said pulse developing circuit and said time constant circuit to provide a series current path between the cathode and anode of said electron tube so that said pulses drive said anode positive with respect to said cathode, potential divider means operatively connected to said pulse developing means to provide said positive pulses at a reduced amplitude, resistance means to apply said first control signal and said reduced-amplitude positive pulses from said phase separating and detection circuit and said potential divider respectively to the control grid of said electron tube to cause said electron tube to conduct current through said time constant circuit in response to said positive pulses only during said second mode of signals and means coupling said time constant circuit to said gain control terminal so that the potential developed across said time constant circuit in response to the circuit conducted through said electron tube disables said chrominance amplifier for the effective amplification of signals applied thereto.

2,897,263
COLOR REPRODUCTION USING BRIGHTNESS SIGNAL ALONE AS SUBSTITUTE FOR GREEN SIGNAL
Max Hutchinson Mesner, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application January 24, 1956, Serial No. 561,872
8 Claims. (Cl. 178—5.4)

2. In a color television receiver adapted to receive a color television signal including a luminance signal consisting of low and high frequency components of three component colors, color synchronizing bursts and a chrominance signal, said chrominance signal including modulations representative of a plurality of color difference signals, the combination of, a color kinescope having a first, second and third electron gun each having a cathode and a control grid, said color kinescope also including a target area including red, blue and green color light emitting phosphors, each of said phosphors controllable by the emission of one of said electron guns, means to amplify said luminance signal, said means including a luminance signal output terminal and a luminance signal reference terminal, means to apply said amplified luminance signal from said signal output terminal to each of the cathodes of said trio of electron guns, a chrominance filter to separate said chrominance signal from said color television signal, means responsive



to said color synchronizing bursts to develop a plurality of demodulating signals each having a prescribed and different phase, a demodulator circuit responsive to said chrominance signal and selected synchronous demodulating signals to produce a blue color difference signal and a red color difference signal, means to apply said red color difference signal to the control grid of the electron gun whose emission controls the light output of said red light emitting phosphors, means to apply said blue color difference signal to the control grid of the electron gun whose emission controls the light emission of said blue light emitting phosphors and means coupling said luminance signal reference terminal to the control grid of the electron gun whose emission controls the light emission of the green light emitting phosphors such that signal control of the light emission of the green light emitting phosphors is effected solely in accordance with said luminance signal.

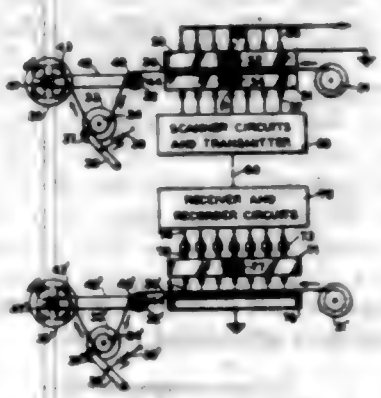
2,897,264
SIGNAL TRANSMISSION SYSTEM
Albert F. Death, Hartsdale, N.Y., assignor to Faximile, Inc., New York, N.Y., a corporation of Delaware
Application April 18, 1955, Serial No. 501,897
2 Claims. (Cl. 178—6.6)

1. A graphic signal transmission system for transmitting and recording readable characters under conditions of continuous random noise where the signal-to-noise ratio is less than unity, of prolonged fading occurring randomly on different signal transmission frequencies, and of echoes occurring for time periods of random lengths, comprising a tape carrying characters to be scanned, each of the characters conforming in length and width to a rectangular matrix of predetermined length and width, N scanning elements disposed in a staggered pattern in

N adjacent parallel paths whose total width equals the length of the character matrix, N being a number not less than five, there being only a single scanning element in each of the paths so that each element scans only

$$\frac{1}{N}$$

of the length of said matrix, said scanning elements being spaced apart from each other along the length of the tape over a distance at least five times the width of the



character matrix, the spacing of elements in adjacent paths exceeding the width of said matrix, means for transmitting on different frequencies of a predetermined bandwidth the signals generated by the respective scanning elements, the transmission frequencies for signals generated by those elements disposed closest together being furthest apart in said bandwidth, and means for advancing the tape lengthwise at a predetermined speed past said scanning elements such that each character is scanned in a time less than the longest of the echo and flat fading times of the transmitted signals.

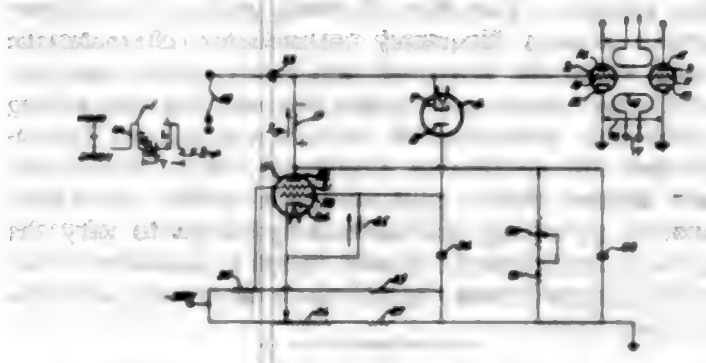
2,897,265

PULSE CIRCUITRY STABILIZATION

Albert A. Auerbach, New York, N.Y., assignor to the United States of America as represented by the Secretary of the Air Force

Application July 23, 1957, Serial No. 673,749

6 Claims. (Cl. 178—71)



1. Apparatus to establish and automatically maintain a preselected D.C. voltage level at the control grid of a first discharge device drawing grid current comprising means to feed a signal consisting of positive and negative impulses by way of a capacitor to said control grid electrode, a second electron discharge device having grid, anode and cathode electrodes operating to establish said D.C. voltage level, said anode electrode of said second device being connected to said control grid of said first device by way of a resistor, a single diode serving to maintain said D.C. voltage level, having anode and cathode electrodes and only being responsive to said positive and negative impulses applied to said cathode electrode of said diode, said diode interconnecting said first device and said second device, a variable voltage source connected to said cathode electrode of said second device, and means for controlling the gain of said second device.

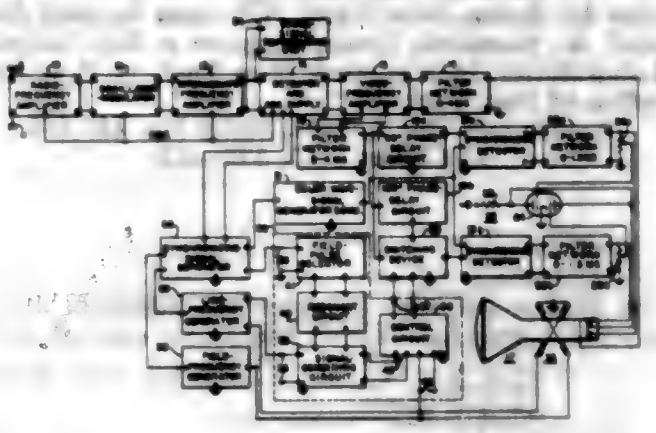
2,897,266

TELEVISION FIELD-IDENTIFICATION SYSTEM

Donald Richman, Fresh Meadows, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois

Continuation of application Serial No. 259,171, November 30, 1951. This application November 16, 1956, Serial No. 623,279

6 Claims. (Cl. 178—7.3)



2. In an odd-line interlaced television system a field-identification system comprising: a circuit for supplying line-frequency pulses and groups of field-frequency pulses and subject to supply spurious noise pulses, said groups of field-frequency pulses having one time relation with respect to said line-frequency pulses during one group of fields and another time relation during interlaced fields; means including a pulse-responsive circuit coupled to said supply circuit for developing a control signal uniquely representative of one of said groups of field-frequency pulses but also subject to develop said control signal in response to at least some of said noise pulses; means for utilizing said control signal; and means including a disabling circuit coupled to said pulse-responsive circuit and said means for utilizing and responsive to said control signal for substantially diminishing the response of said utilizing means to said control signal for an interval substantially less than the interval between successive groups of said field-frequency pulses.

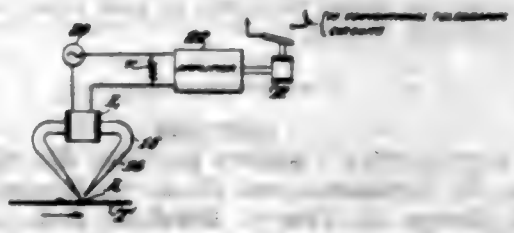
2,897,267

RECORDING AND TRANSLATING OF INTELLIGENCE

David C. Prince, Schenectady, N.Y.

Application May 8, 1953, Serial No. 353,795

1 Claim. (Cl. 178—17)



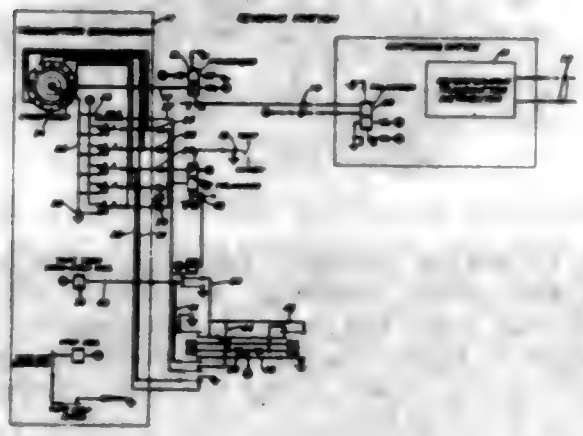
The method of storing and translating intelligence comprising the steps of applying a magnetic material having a low retentivity to a non-magnetic web only over discontinuous discrete areas thereof which are of uniform size and shape and which are selected and irregularly spaced according to a predetermined code, said discrete areas of magnetic material being of a color contrasting to the color of the web and being arranged in a row of groups of discrete areas, each group corresponding to a predetermined symbol, thereby to form a coded record of intelligence depicted by discrete visible areas which are coextensive with discrete areas of magnetic material of low retentivity, setting up a localized magnetic field apart

determined delay interval following the replacement of the receiver and consequent displacement of the switch

directly to said point of access, and means including said last named means for controlling the disposition of coins

from the web and with reference to which the web is movable, and translating said intelligence by bringing said discrete areas of the web into the magnetic field to cause a change in the flux thereof, and transforming the resulting flux changes into corresponding electrical variations.

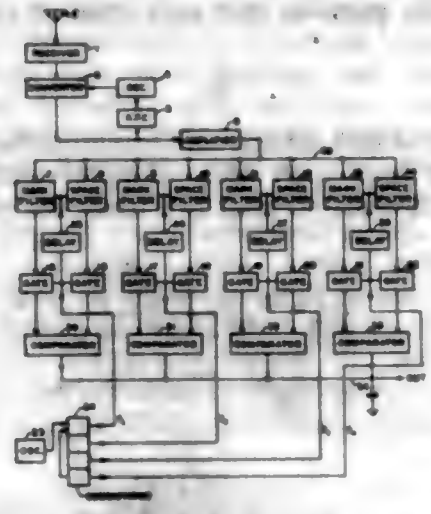
2,897,268
CIPHER TELEGRAPH SYSTEM
Walter M. Bacon, New York, N.Y., and Bernard Ostendorf, Jr., Stamford, Conn., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application May 5, 1954, Serial No. 427,692
12 Claims. (Cl. 178—22)



4. In a telegraph system for transmitting enciphered messages, a transmitter adapted to transmit under control of a perforated tape, a recorder having a telegraph signal receiver therein, a channel of transmission interconnecting said transmitter and said recorder, signal combination sensing means and signal combination generating means, responsive to said sensing means associated with said transmitter for automatically causing the transmission of a signal sequence differing only from the signal sequence in the tape by the insertion of a particular signal after each occurrence of a particular other signal, and space discharge counting tube means associated with said recorder for precluding response of the recorder to said inserted signal, said space discharge counting tube means comprising first space discharge means for timing an interval approximating the duration of a teletypewriter character, second space discharge means responsive to said first space discharge means for timing an interval equal in duration to that of a single signal element in said character, and third space discharge means, jointly responsive to said second space discharge means and to said signal receiver, for identifying the signal elements of said other signal and of said particular signal.

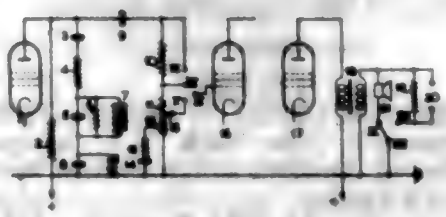
2,897,269
FREQUENCY SHIFT KEYED RECEIVER
Arthur W. Alphonsar and Clyde W. Baxter, Rochester, and George A. Franco, Pittsford, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Application October 25, 1957, Serial No. 692,426
6 Claims. (Cl. 178—88)

1. In combination in a receiver, a source of telegraphic signals of distinctive mark and space frequencies, a plurality of pairs of resonant circuits coupled to the source of said signals, the Q of said resonant circuits being relatively high, one resonant circuit of each pair being resonant to the mark frequency and the other resonant circuit of each pair being resonant to the space frequency; said resonant circuits being free-running so that applied frequencies cause progressively higher oscillatory voltages; pulse means connected to said resonant circuits for quenching said voltages, the quenching pulses being successively applied to said pairs of resonant circuits; a gate in the output of each resonant circuit, control cir-



cuits for the gates, said control circuits being synchronized with the mentioned quenching pulses.

2,897,270
CIRCUIT-ARRANGEMENT FOR USE IN MAGNETIC RECORDERS
Ferdinand Helpap, Baden, Vienna, Austria, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application July 7, 1955, Serial No. 520,592
Claims priority, application Austria July 9, 1954
2 Claims. (Cl. 179—1)



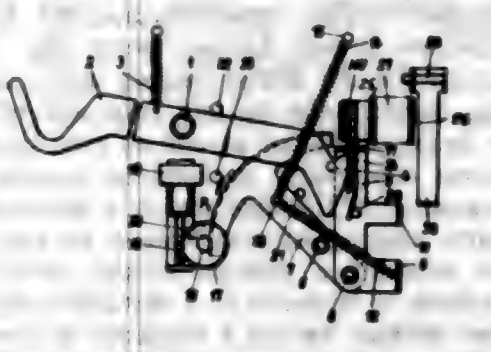
1. A circuit arrangement comprising an input circuit, means for applying a signal to said input circuit, an output circuit, a plurality of loads, each of said loads having a distinct frequency transmission characteristic different from the other of said loads, means coupled between said input and output circuits for controlling the frequency characteristic of said signal, and switching means for connecting a selected one of said loads to said output circuit, said switching means comprising means for operating said controlling means to vary the frequency characteristic of said signal to conform to the frequency transmission characteristic of the said selected one of said loads.

2,897,271
COIN RETURN IN TELEPHONE PAY STATIONS
Arno Horn, Heinrich Langner, and Max Müller, Munich, Germany, assignors to Siemens & Halske Aktiengesellschaft, Munich, Germany, a corporation of Germany
Application April 25, 1955, Serial No. 503,550
In Germany January 28, 1950
Public Law 619, August 23, 1954
Patent expires January 28, 1970
4 Claims. (Cl. 179—6.3)

1. In a telephone pay station having a switch hook for supporting a receiver and having circuit-control contact means to be actuated upon displacement of said switch hook responsive to removal of the receiver incident to initiation of a call, and having a coin chute for receiving coins; a device for governing the actuation of said contact means and for holding coins against discharge into a suitable coin return receptacle and for releasing uncollected coins at the termination of a pre-

2,897,274
RADIO RELAY STATION WITH DROP-

determined delay interval following the replacement of the receiver and consequent displacement of the switch hook into normal position thereof at the completion of a call extended from said station, said device comprising a pivotally mounted blocking member for holding said coils against discharge from said coin chute, a leverlike arm rotatably journalled at a fixed point intermediate its opposite ends, said arm carrying at one end thereof a toothed arcuate segmentlike member geared with a speed governor and carrying at the other end thereof a control lever rotatably journalled thereon, a fixedly disposed guide bracket, actuating means extending from said switch hook for lifting said control lever incident to displacement of said switch hook responsive to replacement of said receiver, part of said control lever sliding during such lifting thereof along part of said guide bracket, said control lever during the lifting thereof rotating said leverlike arm and therewith said toothed segmentlike member into operating position against the force of a first spring means attempting to keep it in normal position, second spring means for angularly tilting and control lever in its lifted position to disengage said control lever from said actuating means extending from said switch hook, said first spring means exerting a force on said leverlike arm to rotate it and therewith said toothed segmentlike member back to normal position, said speed governor geared with said segmentlike member being effective to slow down the rotation thereof to normal position, said leverlike arm moving said control lever which is pivotally journalled thereto correspondingly from its lifted position back to its normal position entirely out of engagement with said actuating means extending from said switch hook with part of said control lever sliding in engagement with said guide bracket, means operated by said control lever at a point during its motion back to normal for actuating said blocking member to permit discharge of said uncollected coins, said second spring means exerting a force on said control lever for tilting it in a direction corresponding to its normal position, and means carried by said control lever for governing the actuation of said contact means.



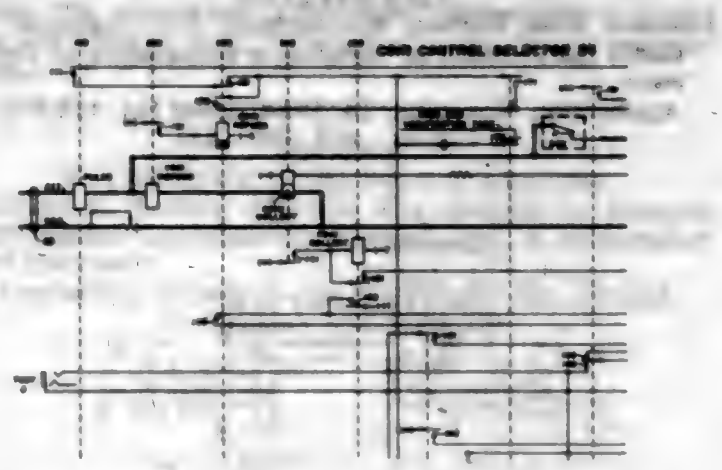
2,897,272

COIN CONTROL TELEPHONE SYSTEM

Ernest H. Getzert and William W. Pharis, Rochester, N.Y., assignors to General Dynamics Corporation, a corporation of Delaware

Application July 26, 1955, Serial No. 524,528
10 Claims. (Cl. 179—6.3)

1. A telephone system comprising a two-way trunk circuit, a coin control trunk line, coin control means having access to said trunk circuit, means for controlling said coin control means over said coin control trunk line, conversation switching means, a conversation carrying trunk line, means for seizing said conversation switching means from said trunk circuit on calls which are incoming over said conversation trunk line, said trunk circuit having a single point of access for coin control, an operator's position, means responsive to control extended from said operator's position over said coin control trunk line for causing said coin control means to be connected directly to said point of access, and means including said last named means for controlling the disposition of coins



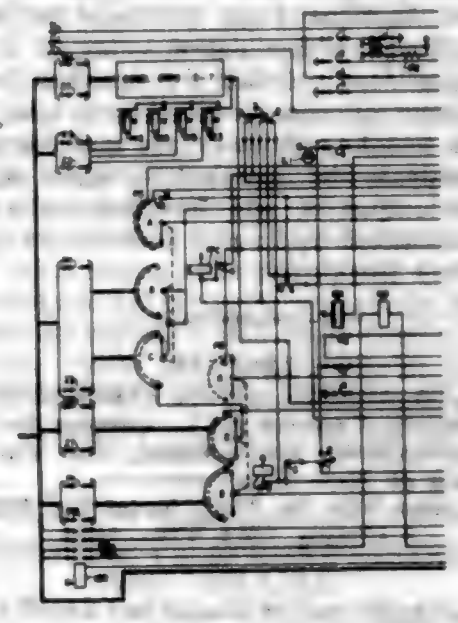
on both incoming and outgoing calls which may be extended through said trunk circuit, and said conversation carrying trunk line.

2,897,273

AUTOMATIC TOLL TICKETING TELEPHONE SYSTEM

Ivan V. Coleman, Naperville, and Jack W. Tanner, Park Ridge, Ill., assignors to General Telephone Laboratories, Incorporated, Chicago, Ill., a corporation of Delaware

Application June 27, 1957, Serial No. 668,534
12 Claims. (Cl. 179—7.1)

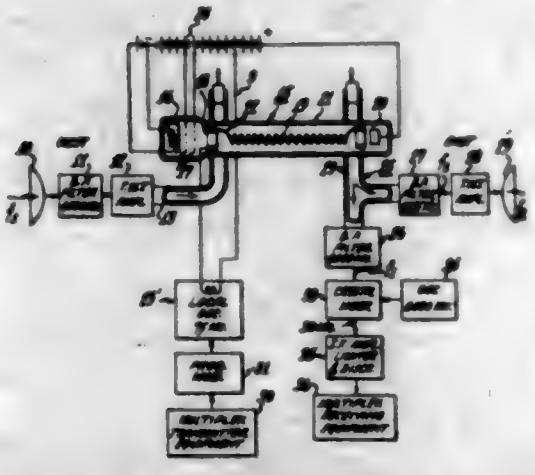


1. In an automatic telephone system, a first exchange, a toll ticketing repeater arranged to process toll calls from a branch exchange and from its own exchange, a toll incoming trunk circuit, said incoming trunk having access to said toll ticketing repeater, a branch exchange, a repeater in said branch exchange, said repeater paired with said toll incoming trunk in said first exchange, carrier equipment in each exchange, said carrier equipment having first, second and third carrier channels interconnecting said repeater in said branch exchange and said incoming trunk in said first exchange, said repeater in said branch exchange having means for accepting loop impulses from a subscriber and sending these pulses via said first channel of said carrier, a calling station directory number detector in said branch exchange, said detector causing said repeater to record said calling subscriber directory number within itself, said repeater forwarding said calling station identity to said first exchange as a series of impulses via said second carrier channel in synchronism with impulses received from the incoming trunk via said third channel of said carrier equipment.

ing station, means for receiving dialled pulse trains from registered code as received by the translation equip-

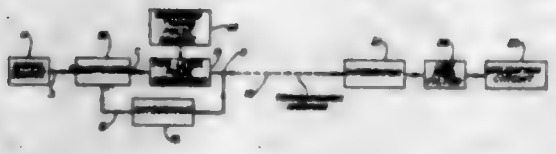
for quenching said voltages, the quenching pulses being releasing uncollected coins at the termination of a pre-

2,897,274
RADIO RELAY STATION WITH DROP CHANNELING
Edmond John Forbes, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application November 24, 1954, Serial No. 470,976
5 Claims. (Cl. 179—15)



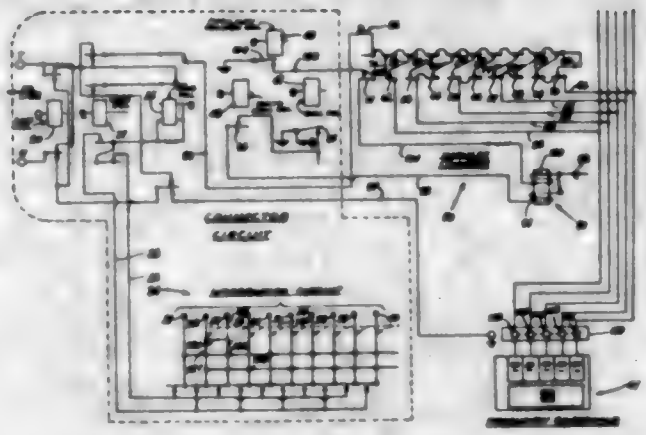
1. A radio relay station comprising a traveling wave tube having two inputs; means to apply a received intelligence modulated radio frequency signal at frequency f_1 to one of said inputs, a source of intelligence modulated local oscillations at frequency f_0 coupled to the other of said inputs, whereby energy at two radio frequencies f_1 and f_2 (where $f_2=f_1$ plus or minus f_0) is available at the output of said traveling wave tube, the amplitude of the signal from said local oscillator being such as to provide a modulation index of substantially 1.4, a bandpass filter to select the signal at frequency f_2 from the output of said traveling wave tube, means to transmit the signal f_2 derived from said bandpass filter, a second bandpass filter to select the signal at frequency f_1 from the output of said traveling wave tube, and means to demodulate said signal at frequency f_1 to obtain the intelligence therefrom.

2,897,275
DELTA MODULATION COMPANDER
Fritz K. Bowers, Convent, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application May 16, 1955, Serial No. 508,608
9 Claims. (Cl. 179—15.6)



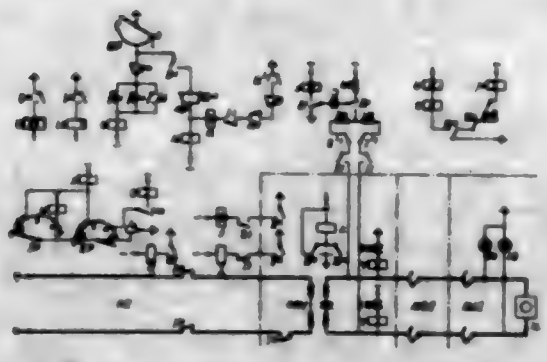
1. In a data modulation encoder, an input circuit, an output circuit, a differentiator connected to said input circuit, a compression circuit connected to the output of said differentiator, a subtracter having one input connected to the output of said compression circuit and the other input connected to said output circuit, an integrator connected to the output of said subtracter, and two-level pulse generation means for receiving signals from said integrator and applying pulses to said output circuit.

2,897,276
DIAL CONTROL SELECTIVE RINGING APPARATUS
William J. Camp, Dallas, Tex.
Application September 13, 1954, Serial No. 455,691
13 Claims. (Cl. 179—17)



1. A selective ringing apparatus adapted for use in a dial telephone system having means for supplying pulsing current for the dialed ringing digit, and means for selecting between the tip and ring side of the line in response to the dialing of an odd or even ringing digit said apparatus comprising an impulse counter responsive to the number of the digit dialed, a plurality of separate selective ringing sources, means in said impulse counter for applying a selected ringing source to the telephone system in response to a particular digit dialed, said impulse counter having a sequence of contact sets adapted to be operated by energizing means within said counter responsive to the number of pulses in said pulsing current corresponding to the ringing digit dialed, means for applying a selected ringing source through said contact sets responsive to the numerical value of said ringing digit, said ringing source applying means including strapping means within the impulse counter for applying the same ringing source for a consecutive pair of digits, and means for restoring said impulse counter to a non-operated position upon the completion of a call, said restoring means including reverse energizing means for restoring said contact sets to normal, said reverse energizing means including a control circuit which is partially set up by the first pulse of said pulsing current and which is completed by means actuated by the completion of the call upon hanging-up.

2,897,277
ZONE PROHIBITING CIRCUIT
Fritz Schmidt, Stuttgart-Zuffenhausen, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Application August 19, 1953, Serial No. 375,255
Claims priority, application Germany August 23, 1952
4 Claims. (Cl. 179—18)



1. A circuit arrangement for telephone systems, at which certain connections can only be established at authorization of the calling station, comprising a call-

defined thereon a plurality of main tracks divided into

2,897,283
MULTIOFFICE INTERLOCKED SIGNALING

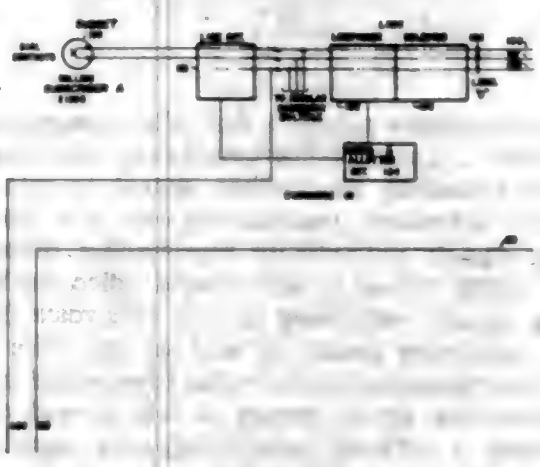
ing station, means for receiving dialled pulse trains from said calling station, an outgoing line, means for normally transferring said pulse trains to said outgoing line, means operated by predetermined ones of said pulse trains for blocking said transferring means to prevent the application of pulses to said outgoing line, switching means for rendering said blocking means inoperative, and means connected in parallel to the speaking wires of said calling station, if said station is authorized to make connections determined by said predetermined pulse trains, for operating said switching means when a call is initiated by said station.

2,897,278

AUTOMATIC TELEPHONE SYSTEM

William H. Blashfield, Galion, Ohio, assignor to North Electric Company, a corporation of Ohio

Application November 16, 1954, Serial No. 469,187
20 Claims. (Cl. 179—18)



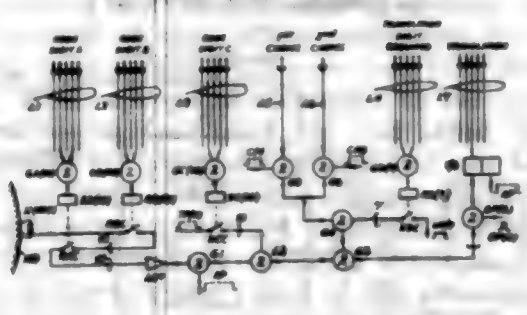
1. In an automatic telephone system, register means for registering the value of each digit of the calling party number, connector means, means in said connector for marking the value of the calling directory number therein, means for simultaneously transferring the complete number on said register means to said connector marking means, and direct selection means in said connector operative to directly select the subscriber line corresponding to the number transferred to said marking means.

2,897,279

AUTOMATIC TELEPHONE EXCHANGE SYSTEMS

John Edward Flood and Ronald S. Hopkins, London, England, assignors, by mesne assignments, to Siemens Edison Swan, Limited, London, England, a British company

Application November 21, 1956, Serial No. 623,669
Claims priority, application Great Britain November 24, 1955
13 Claims. (Cl. 179—18)



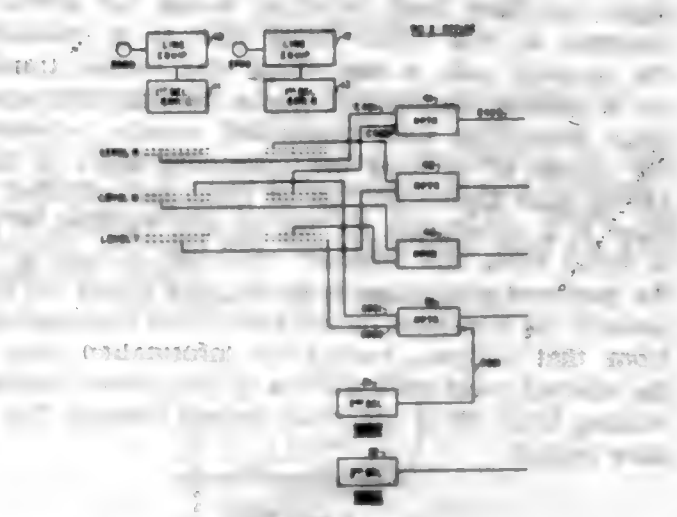
1. Translating equipment for automatic switching systems exemplified by automatic telephone exchanges, employing an information storage device adapted for the storage at different addresses thereon of digital translation information corresponding to different codes, means for receiving from a register-sender separate from said equipment a code registered therein for which translation is required, and means responsive to such a registered code as received by the translation equipment for selecting the address on the storage device at which the appropriate translation information is stored and for sending such information back to the register-sender.

2,897,280

INTER-OFFICE TRUNKING SYSTEM

Clarence E. Lemax, Chicago, Ill., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware

Application December 26, 1956, Serial No. 630,626
10 Claims. (Cl. 179—18)



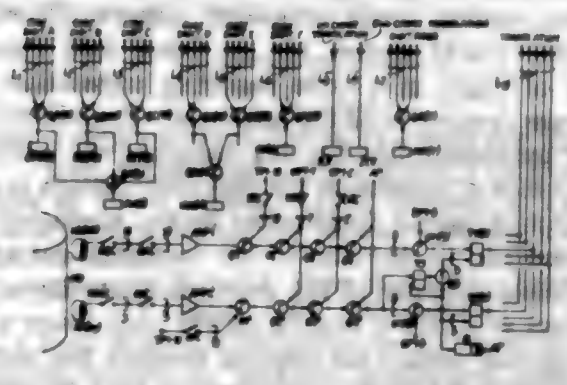
1. In a telephone system comprising a plurality of exchanges interconnected by two-wire trunks, a first exchange and a second exchange, a plurality of said trunks sequentially seizable as first choices at said first exchange and terminating in said second exchange, others of said trunks sequentially accessible as first choices at said second exchange, further ones of said trunks sequentially accessible at said second exchange as last choices, a chain circuit rendered operative when a predetermined number of the first choice trunks accessible at said first exchange have been seized and are in use simultaneously, means controlled by the operation of said chain circuit to remove said last choice trunks from accessibility at said second exchange and rendering said last choice trunks accessible to the first exchange as sequential last choices.

2,897,281

AUTOMATIC TELEPHONE SYSTEMS AND THE LIKE

John Edward Flood and Ronald Sydney Hopkins, London, England, assignors, by mesne assignments, to Siemens Edison Swan Limited, London, England, a British company

Application January 24, 1957, Serial No. 636,192
Claims priority, application Great Britain January 24, 1956
13 Claims. (Cl. 179—18)



1. Translating equipment for providing translations of digital codes, comprising in combination: a continuously operable information storage device having effectively

and applying pulses to said output circuit.

authorization of the calling station, comprising a call-

defined thereon a plurality of main tracks divided into addresses for the serial storage of digital translation information pertaining to codes requiring translation for a given number of digits thereof and a plurality of auxiliary tracks divided into addresses for the serial storage of translation information pertaining to codes requiring translation for a greater number of digits; a plurality of reading heads associated respectively with the main and auxiliary tracks; means for receiving a code requiring translation; main track selection means responsive to the values of the received code digits in said given number thereof for selecting a main track address containing a translation pertinent to said values of these digits; auxiliary track selection means for selecting, in response to said values being such as to indicate that the received code is one which may require translation for a greater number of digits, at least the auxiliary track containing such translation; means responsive to the values of at least the remaining digits of a code having such greater number of digits and effective, when there is a translation for the greater number of digits, to select from said auxiliary track the address at which the pertinent translation is stored; and means for passing towards the translator output translation information read from that address, translation information read from the selected main track address by the relevant main track reading head being otherwise passed towards the translator output.

2,897,282

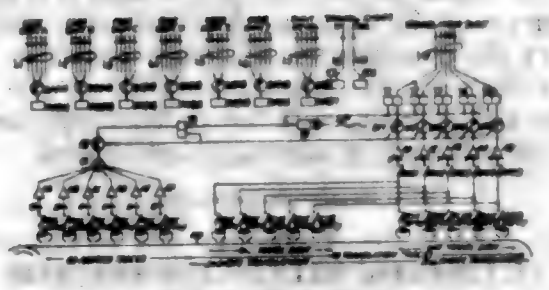
AUTOMATIC TELEPHONE EXCHANGE SYSTEMS

Ronald Sydney Hopkins, London, England, assignor, by mesne assignments, to Siemens Edison Swan Limited, London, England, a British company

Application January 24, 1957, Serial No. 636,197

Claims priority, application Great Britain January 24, 1956

16 Claims. (Cl. 179—18)



1. Translating equipment for providing translations for digital codes, comprising in combination: a continuously operable information storage device as having translation storage tracks effectively defined thereon for the parallel storage at some addresses of translations pertaining to codes requiring translation for a certain maximum number of digits, and at other addresses of translations pertaining to codes requiring translation for a lesser number of digits; reading heads associated respectively with the translation tracks means for receiving said maximum number of digits of a code requiring translation; selection means responsive to the combined values of the digits in said maximum number for selecting an address, if any, at which a translation for that combination is stored, said selection means functioning in the absence of such translation and in response to the combined values of at least a lesser number of the received digits for selecting an address at which a translation for such lesser number is stored; and means for passing towards the output of the translator, translation information read by the reading heads from whichever address the selection means may have selected.

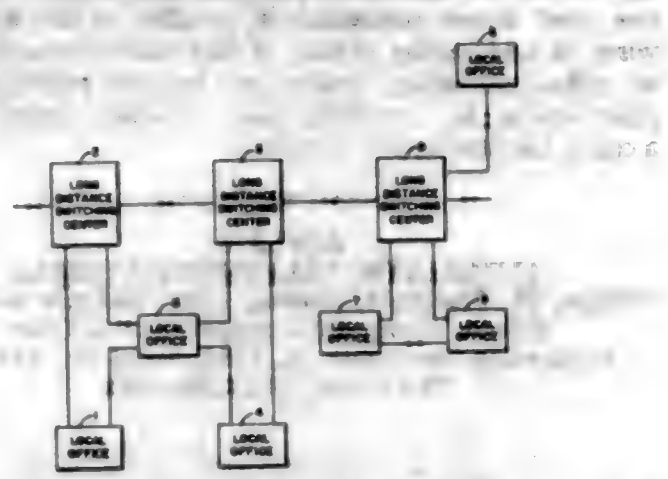
2,897,283

MULTIOFFICE INTERLOCKED SIGNALING TELEPHONE SYSTEM

James G. Pearce, Rochester, and Matthew P. Tublois, Penfield, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Application April 18, 1958, Serial No. 729,351

24 Claims. (Cl. 179—18)



3. In a telephone system, a first office comprising a register sender, a second office comprising switching equipment for extending connections, means in said register sender for selectively transmitting one of a plurality of selecting signals individually representing different numerical digital values to said second office, each of said selecting signals comprising at least two voice frequency signals, registering means in said second office for registering the numerical digital value represented by the received selecting signal, means in said second office for transmitting a different acknowledgment signal to said register sender for each selecting signal received, each of said acknowledgment signals comprising at least two voice frequency signals and at least one of the voice frequency signals comprising each acknowledgment signal being of a different frequency than the voice frequency signals comprising the corresponding selecting signal, means in said register sender for transmitting a seize signal to said second office only if the acknowledgment signal received from the second office is correct for the selecting signal transmitted to the second office, and means in said second office responsive to the receipt of said seize signal for controlling said switching equipment to extend the connection in accordance with the numerical digital value registered in said registering means.

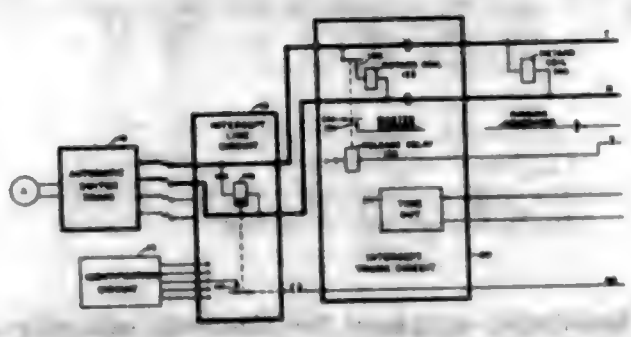
2,897,284

TRUNK SWITCHING CIRCUIT

Ernest H. Getnert, Rochester, N.Y., assignor to General Dynamics Corporation, a corporation of Delaware

Application November 4, 1955, Serial No. 544,895

12 Claims. (Cl. 179—27)



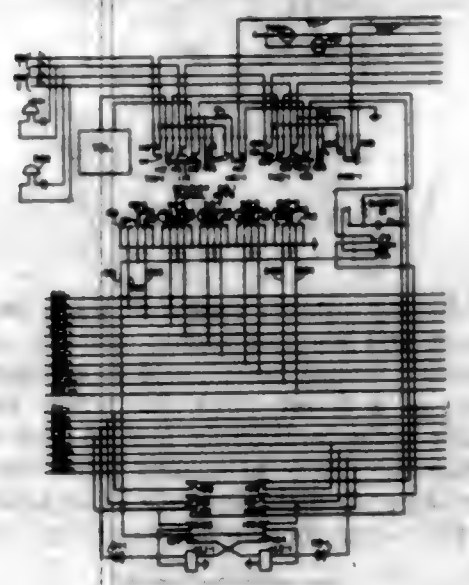
1. In a telephone system, a plurality of subscriber lines at least one of which is given call intercept service, a plurality of trunk lines, automatic switch means for extending calls between said subscriber lines and over said trunk lines, said switch means having access to said trunk lines on a particular preference basis, trunk switch-

speed longitudinally in a substantially straight path, a

converting the stage immediately ahead of a power stage

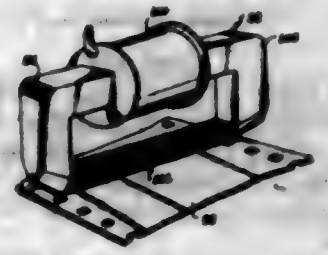
ing means for selecting between said trunk lines in another order of preference, an intercept line circuit, means responsive to a call extended over said automatic switch means directed to said one of said lines that is given intercept service for connecting said automatic switch means to said trunk switching means via said line circuit, and means responsive to said last named means for causing said trunk switching means to select between said trunks in said other order of preference.

2,897,285
INTERCOMMUNICATING SYSTEM
Rudolph Frank Stehlik, Antwerp, Belgium, assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware
Application January 14, 1957, Serial No. 633,948
25 Claims. (Cl. 179—31)



1. In an intercommunication system, a plurality of stations, a first and a second intercom trunk common to said stations, a first battery feed relay individual to said first trunk, a second battery feed relay individual to said second trunk; each of said stations having a first line relay individual to said first trunk, a second line relay individual to said second trunk, an individual signal, and a plurality of call keys respectively corresponding to the other said stations; a first common operating circuit for supplying operating current for said first line relays controlled by said first battery feed relay, a second common operating circuit for supplying operating current for said second line relays controlled jointly by said first and second battery feed relays, means responsive to the operation of the key at a first calling station corresponding to a desired first called station for operating said first line relays of the calling and called stations over said first common operating circuit, means responsive to the operation of said calling station first line relay for operatively connecting said first trunk to said calling station and for operating said first battery feed relay over said first trunk, a signalling circuit completed responsive to the operation of said first battery feed relay and said called station first line relay by the continued operation of said key for operating the signal at said called station, means responsive to the operation of said first battery feed relay for disabling said first common operating circuit to prevent operation of the first line relays of the remaining stations and for enabling said second common operating circuit to permit operation of the second line relays of said remaining stations, means responsive to the operation of the key at a second calling one of said remaining stations corresponding to second called one of said remaining stations for operating the second line relays of said second calling and called stations over said second enabled common operating circuit, means responsive to the operation of said second calling station line relay for operatively connecting said second trunk to said second calling station and for operating said second battery feed relay over said second trunk, a second signalling circuit completed responsive to the operation of said second battery feed relay and said second called station second line relay by the continued operation of said last mentioned key for operating the signal at said second called station, and means for completing a first talking connection over said first trunk between said first calling and called stations when said first called station answers and for completing a second talking connection over said second trunk between said second calling and called stations when said second called station answers.

2,897,286
VARIABLE AREA MAGNETIC RECORDING APPARATUS
Ralph B. Atkinson, Los Angeles, and Steven G. Ellis, Van Nuys, Calif.; said Ellis assignor to said Atkinson
Original application December 15, 1951, Serial No. 261,892. Divided and this application June 29, 1954, Serial No. 440,894
12 Claims. (Cl. 179—100.2)

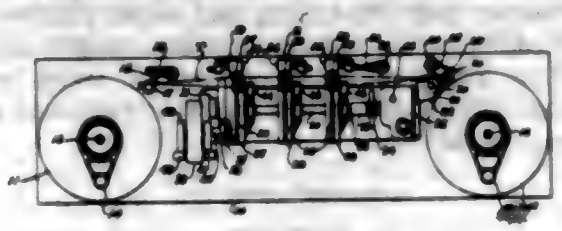


1. In a variable area magnetic recording head for producing on a longitudinally moving elongated magnetizable recording medium a permanent magnetic record of an electrical signal in which the height of said record transversely of said medium varies in correspondence with variations of the instantaneous amplitude of said signal, the combination of: an electromagnet for producing a magnetomotive force corresponding to said signal; magnetic conductor means of low reluctance, comprising a pair of members spaced from each other and each extending from one pole of said electromagnet; and a magnetic pole structure of a length substantially equal to the maximum width of the resulting magnetic record, having a relatively high reluctance from end to end, extending from one of said magnetic conductor means to the other and adapted to be disposed transversely across said longitudinally moving medium with one surface in contact with said medium, whereby the ends of said pole structure are located at opposite edges of said magnetic record and are magnetized oppositely and in accordance with said magnetomotive force, flux from said pole structure passing through said recording medium to magnetize the latter, with the concentration of flux being greatest at the ends of said pole structure, adjacent said magnetic conductors, and decreasing toward the middle of said pole structure.

2,897,287
LONG TIME CONTINUOUS MAGNETIC RECORDING WITH DELAYED MONITORING
William H. Lyon, Orange, Conn., assignor to The Soundscriber Corporation, New Haven, Conn., a corporation of Connecticut
Application July 12, 1954, Serial No. 442,800
1 Claim. (Cl. 179—100.2)

In a long playing continuous sound recording and reproducing apparatus, wherein intelligence may be permanently recorded in parallel, equally spaced successive transverse tracks on a continuously wide moving magnetic tape, mechanism for moving said tape at a uniform

speed longitudinally in a substantially straight path, a rotating shaft parallel to said path, a recording drum carried on said shaft for rotation therewith, and having equally spaced sound transducer heads mounted therein, a plurality of pickup drums also mounted on said shaft and having equally spaced sound transducer heads, said pickup drums being spaced from said recording drum by distances equal to a multiple of the distance between said



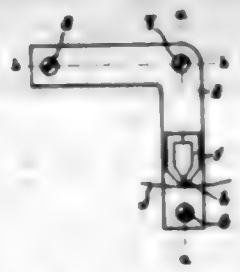
successive recorded tracks, whereby said intelligence may be continuously monitored at a plurality of delayed intervals of time sufficient to permit interested parties to be alerted and permitted to listen in to the intelligence recorded on said tape, said tape also forming a permanent record of the sound recorded thereon, for future transcription whenever desired.

2,897,288

DEVICE FOR ADJUSTING THE AIR-GAP POSITION OF MAGNETIC HEADS

Jan Wijchman, Emmasingel, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Application December 6, 1954, Serial No. 473,363
Claims priority, application Netherlands December 8, 1953
4 Claims. (Cl. 179—100.2)



1. A device for adjusting the position of a magnetic head having an air-gap comprising a plate, said magnetic head being fixedly mounted on said plate, a housing, and means for adjustably affixing said plate to said housing comprising three independent members engaging said plate and said housing in selected positions, said members forming two mutually perpendicular intersecting axes in the plane of said plate, one of said axes passing coaxially through said air-gap, two of said independent members being aligned with said air-gap on said one of said axes, and resiliently deformable means positioned between said plate and said housing whereby said head is selectively arcuately movable about said two intersecting axes thereby providing three point adjustment of said head.

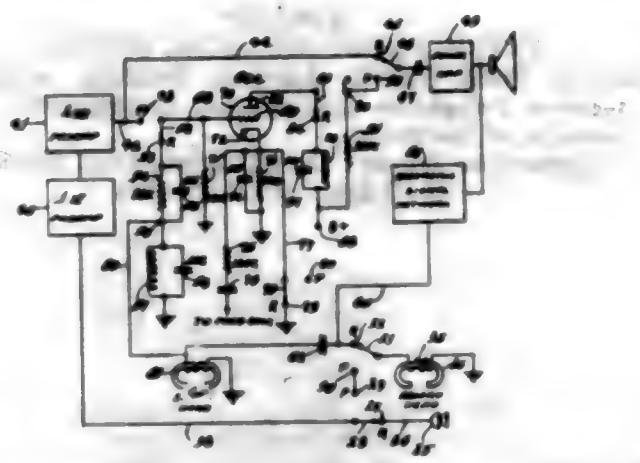
2,897,289

MAGNETIC RECORDER-REPRODUCER

Carl W. Clarus, Chicago, Ill., assignor to Revere Camera Company, Chicago, Ill., a corporation of Delaware

Application January 28, 1955, Serial No. 484,694
4 Claims. (Cl. 179—100.2)

1. In a magnetic recorder-reproducer of the type having a transducer head for recording or reproducing and having an erase head and amplifier stages with a speaker, the combination of successive amplifier stages ranging in power handling capacity from pre-amplifiers to driver stages and thence to power stages, switching means for converting the stage immediately ahead of a power stage into a driver stage during playback and into an oscillator during recording, said switching means providing an audio-frequency channel from a pre-amplifier stage directly to a power stage during recording and providing a direct channel from the output of the oscillator to the erase head, connections between said erase and recording heads for feeding said recording head some oscillator power for bias during recording, most of the oscillator power going to the erase head, said oscillator stage during



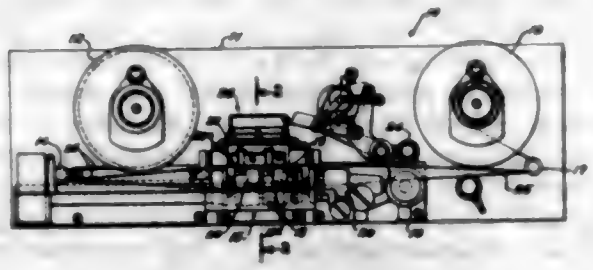
recording having a power output of the order of about 1 watt or more and being sufficiently great to insure erasing and to provide biasing power, said stage during playback functioning as a driver stage, the power input to said driver stage being sufficiently low so that a preceding pre-amplifier stage may adequately supply the same, said system having such high efficiency as to allow the power amplifier to be used for monitoring during recording.

2,897,290

AUTOMATIC TRACKING DEVICE FOR TRANSVERSE SOUND TRACK TAPE RECORDERS

William H. Lyon, Orange, Conn., assignor to The Soundscriber Corporation, New Haven, Conn., a corporation of Connecticut

Application December 14, 1956, Serial No. 628,417
13 Claims. (Cl. 179—100.2)



1. An automatic tracking device for reproducing intelligence recorded along spaced parallel tracks impressed transversely across a wide magnetic tape, comprising, in combination, drive means, means controlled by said drive means for longitudinally moving said tape, pick-up means, means controlled by said drive means for moving said pick-up means across said tape at a speed slightly different from the tracking disposition with respect to one of said record tracks for reproducing the intelligence recorded therealong, sensing means spaced with respect to said pick-up means, said sensing means being disposed between two of said recorded tracks, and means controlled by electrical impulses induced in said sensing means when it engages one of said tracks by virtue of said pick-up means moving at said speed slightly different from the tracking disposition, for restoring said tape into synchronism with said pick-up means.

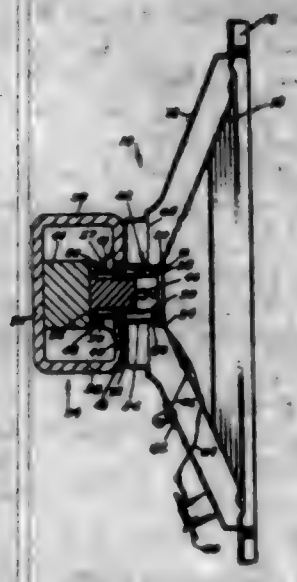
in energization of the other of said winding means, said

ducting devices inserted between the reactor windings in

of said second calling station line relay for operatively

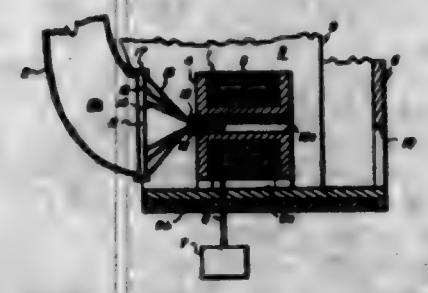
netic tape, mechanism for moving said tape at a uniform

2,897,291
SOUND REPRODUCER
Ambrose Burke, Scituate, R.I.
Application December 12, 1955, Serial No. 552,315
3 Claims. (Cl. 179—115.5)



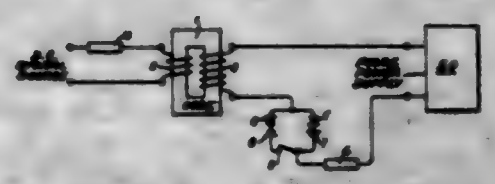
1. A loudspeaker of the electrodynamic type, comprising a substantially frustro-conical speaker cone, first and second voice coil bobbins mounted concentrically with respect to each other, means securing one of said voice coil bobbins to said speaker cone in axially extending relation therefrom, means comprising an insulating and spacing collar attached to one of said voice coil bobbins and attached to and supporting said other voice coil bobbin in spaced relation and defining therebetween an annular sound compression chamber, means for creating a magnetic field in juxtaposition to each of said bobbins, said magnetic means comprising a first pole having a core portion extending within the inner of said bobbins, a second pole comprising a tubular portion extending into said sound compression chamber, and pole faces disposed adjacent the outer surface of the outer of said bobbins and cooperating with said second pole to form a gap, said second pole tubular portion having on the inner surface a non-magnetic metallic coating to isolate the magnetic field of said second pole from the magnetic field of said first pole.

2,897,292
HIGH FIDELITY LOUDSPEAKER
Francois Joseph Gérard van den Bosch, Borgerhout-Antwerp, Belgium
Application April 19, 1956, Serial No. 579,354
7 Claims. (Cl. 179—115.5)



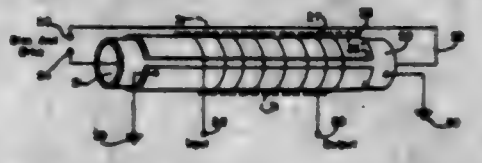
2. The arrangement of an electro-acoustic device, comprising, in combination, a cabinet, a moving coil loudspeaker in said cabinet and comprising a magnet having a central bore, a speech coil freely floatingly disposed in said bore in one end of said magnet, an element having a plurality of frusto-conical parts, each part having a small end opening and a large end opening, the end of said element having the small end openings being rigidly attached to said speech coil, said combination further comprising an exponential horn having a narrow and a wide opening, flexible connecting means attached to the end of said exponential horn having the narrow opening, on the one hand, and to the end of said element having the large end opening, on the other hand, said flexible connecting means maintaining said element and said speech coil freely floating, a folded horn in said cabinet and connected to the other end of said magnet, and rubber means on said cabinet for supporting said device free from contact with any wall or piece of furniture.

2,897,293
MAGNETIC AMPLIFIERS WITH BIASED RECTIFIERS
Raymond E. Morgan and Hugh M. Ogle, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York
Application June 11, 1954, Serial No. 436,068
15 Claims. (Cl. 179—171)



1. A pulse power operated magnetic amplifier circuit comprising a saturable reactor having a control winding, a power winding, and a saturable magnetic core linking said windings; a pulse power supply connected in series with said power winding and producing periodic power pulses having a pulse duration considerably less than the period between successive pulses; and output circuit means including a rectifier and a source of unidirectional electromotive force poled in opposition to one another and connected in series circuit relation with each other and with said power winding and said pulse power supply, the average potential of said source of electromotive force being at least equal to the average potential of said periodic power pulses, whereby the magnetic flux in said core is reestablished at a control flux level in the intervals between successive power pulses supplied by said pulse power supply.

2,897,294
TRANSVERSE MAGNETIC TRAVELING WAVE AMPLIFIERS
Daniel M. Lipkin, Philadelphia, Pa., assignor, by mesne assignments, to Sperry Rand Corporation, a corporation of Delaware
Application March 17, 1955, Serial No. 494,908
8 Claims. (Cl. 179—171)



1. A traveling wave transverse magnetic amplifier comprising a saturable magnetic element, a plurality of winding means linked to at least a part of said element for producing magnetic fields respectively in first and second transverse directions of magnetization in the same part of said element, means for energizing at least a part of each of said winding means simultaneously and at least a part of each of said winding means in a varying amount to produce varying fields in both said directions and with the energizations being such that the net magnetizing force produced by said winding means when energized is sufficient to drive said same part of said element to substantial saturation, a conductive element mounted adjacent said magnetic element in capactive relation to at least one of said winding means, and means for deriving from a part of one of said winding means output signals that vary in accordance with the variations

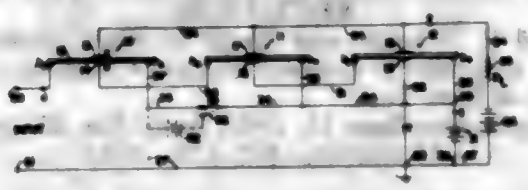
in energization of the other of said winding means, said output signal deriving means including a common return circuit connected to said conductive element.

2,897,295

CASCADED TETRODE TRANSISTOR AMPLIFIER

Richard J. Zelinka, Lino Lakes, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application June 28, 1956, Serial No. 594,618
13 Claims. (Cl. 179—171)



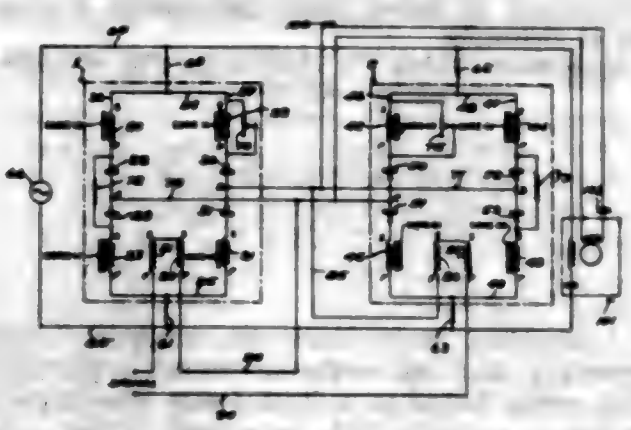
1. A signal amplifying device comprising: a plurality of tetrode transistors, each of said transistors including a collector electrode, an emitter electrode, and first and second base electrodes; load means; a source of electrical potential; means directly interconnecting said collector electrodes and further connecting said collectors through said load means and said source of electrical potential to the emitter of the last of said plurality of transistors; a source of bias potential; means connecting said bias potential source intermediate the emitter electrode of the last of said plurality of transistors and said second base electrodes in a polarity direction to tend to provide a reverse bias across the emitter junctions; means connecting the first base electrode of the first of said plurality of transistors to a source of signal; and means directly connecting the emitter electrode of each save the last of said plurality of transistors to the first base of the subsequent of said plurality of transistors.

2,897,296

MAGNETIC AMPLIFIER

Theodor A. Buchhold, Schenectady, N.Y., assignor to Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N.Y., a corporation of Delaware

Application November 23, 1956, Serial No. 623,963
5 Claims. (Cl. 179—171)



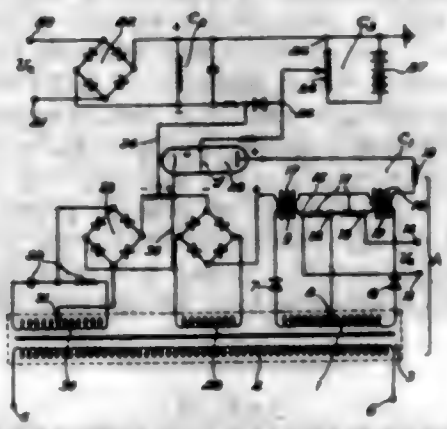
1. A single stage full wave magnetic amplifier comprising two pairs of closed magnetic circuits, an alternating current line, two pairs of impedance dividers, each impedance divider of one pair of impedance dividers having a reactor winding arranged on each magnetic circuit of one pair of magnetic circuits, each impedance divider of the other pair of impedance dividers having a reactor winding arranged on each magnetic circuit of the other pair of magnetic circuits, a resistor device connected between one side of the line and one side of each pair of impedance dividers, a second resistor device connected between the other side of the line and the other side of each pair of impedance dividers, two unidirectional conducting devices inserted between the reactor windings in each impedance divider, said devices being poled in the same direction in each pair of impedance dividers, the devices in one pair of impedance dividers being oppositely poled to the devices in the other pair of impedance dividers, two resistors, each resistor shunting the two unidirectional devices in one impedance divider of the pair of impedance dividers, a conductor connecting each of the impedance dividers of one pair of impedance dividers with one impedance divider of the other pair of impedance dividers, said conductive means being connected at the junction point of the two devices in each impedance divider and a series control circuit including four control windings, an output circuit connected to said conductors being therefore in bridge connection across each of said pairs of impedance dividers, one control winding disposed on each magnetic circuit and the four control windings being arranged in push-pull flux relationship with respect to each pair of magnetic circuits, said series control circuit being connected to said conductors whereby induced voltages in the control circuit are subject to the control of the output voltages.

2,897,297

MAGNETIC AMPLIFIERS

Rose Berthe Pauline Saintesprit, née Mesnier, Charville, France, assignor to Lignes Telegraphiques et Telephoniques, Paris, France, a joint-stock company of France

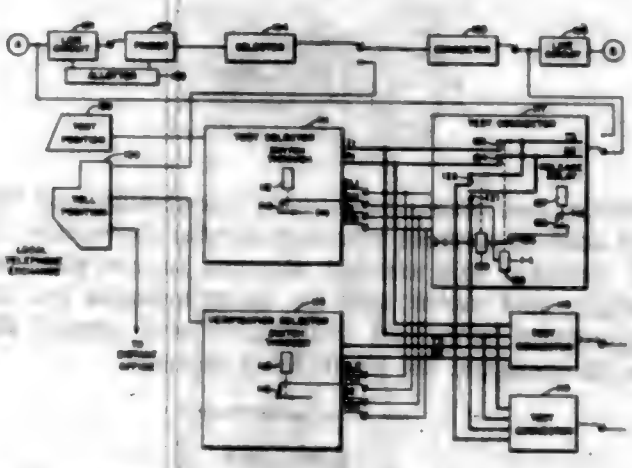
Application March 5, 1957, Serial No. 644,107
Claims priority, application France May 29, 1956
4 Claims. (Cl. 179—171)



2. A device for reducing the distortion of signals in a chain of magnetic amplifiers comprising: a magnetic amplifier adapted to have a signal voltage applied thereto and comprising primary and secondary windings, said primary winding adapted to have an input voltage applied thereto, and a control circuit connected to said secondary winding and comprising a gas filled tube having an anode, a grid and a cathode, means to supply an alternating voltage of the same frequency as the amplifier input voltage, to rectify said alternating voltage and to apply said voltage as thus rectified to said anode, signal voltage circuit means to receive a signal voltage, and rectify, filter and apply said signal voltage as thus rectified and filtered to the grid of said tube, means to supply an alternating voltage of the same frequency as said amplifier input voltage, to shift the phase of and to rectify said alternating voltage and to apply said voltage as thus phase shifted and rectified as a blocking voltage to the grid of said tube said tube becoming conductive when the blocking voltage passes through zero while a signal voltage from said signal voltage circuit means is applied to said grid, whereby the incoming signal is converted into a signal comprising as many rectified alternations as there are passages through zero of the magnetic amplifier input voltage throughout the duration of said signal voltage.

said row of switch assemblies and adapted to be engaged energizing and de-energizing the drive means for said

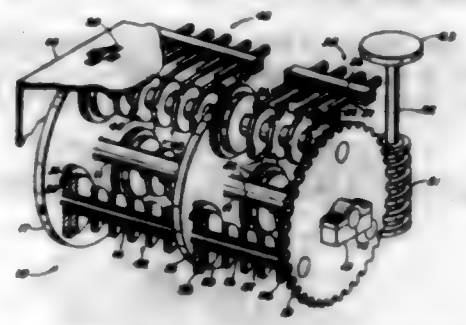
2,897,298
TEST CONNECTOR CIRCUIT
Robert K. Kaye and William W. Pharis, Rochester, N.Y., assignors to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Application June 5, 1957, Serial No. 663,844
5 Claims. (Cl. 179—175.2)



1. A telephone system comprising a plurality of groups of lines, a plurality of test connectors, each one of said connectors having access to a separate one of said groups of lines, each of said connectors including first and second respective pairs of incoming talking conductors and a pair of outgoing talking conductors normally disconnected from each of said first and second pairs of incoming talking conductors, each of said connectors further including first signal-operated means responsive to a first signal applied thereto for connecting said pair of outgoing talking conductors thereof solely to said first pair of incoming talking conductors and second signal-operated means responsive to a second signal applied thereto for connecting said pair of outgoing talking conductors thereof solely to said second pair of incoming talking conductors, a first selector including a pair of talking conductors multipled to the first pair of incoming talking conductors of each of said plurality of connectors and first switching means coupled to each of said connectors and responsive to directive signals applied thereto for selectively seizing any one of said connectors and applying said first signal solely to said first signal-operated means of said seized one of said connectors only in response to the seizure thereof by said first selector, a second selector including a pair of talking conductors multipled to the second pair of incoming talking conductors of each of said plurality of connectors and second switching means coupled to said connectors and responsive to directive signals applied thereto for selectively seizing any one of said connectors, and means in each of said connectors for applying said second signal to said second signal-operated means in response to the seizure thereof and the failure of said first signal-operated means to operate.

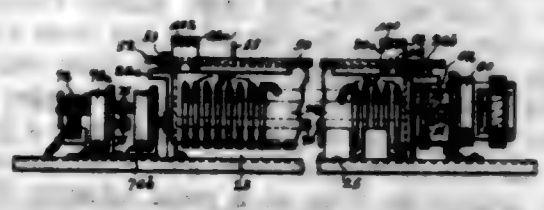
2,897,299
INFORMATION STORAGE DRUM
Robert A. Colby, Marion, and Harry M. Passman, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application July 22, 1957, Serial No. 673,269
1 Claim. (Cl. 200—6)

In a shaft positioning system of the type having a plurality of control conductors for binary control, each control conductor having two electrical conditions, and said electrical conditions being applied to said control conductors in different permutations corresponding to the different digits of the decade numbering system; an information storage device for retaining a plurality of sets of digital information in binary permutation and for applying individually any selected one of said permutations to said conductors comprising, a switch assembly having a plurality of two-position switches, each switch having a follower arm with first and second positions corresponding to the two electrical conditions respectively to be applied by the respective switch to a corresponding one of said control conductors, a plurality of cam sets, each cam set having a rotary cam for each of said switch followers, an indicia wheel and an axle, said indicia wheel and said rotary cams being spaced apart and coaxially mounted on said axle, a drum having a pair of drum head plates, said drum being rotatably mounted on its longitudinal axis, the axles of said cam sets being spaced apart and rotatably mounted between said drum heads, said axles being parallel to said axis and equal distances



therefrom, said switch assembly being disposed relative to said drum for positioning said followers on a line parallel to the axis of said drum, said followers engaging the peripheries of corresponding cams of a selected cam set, each of said cam sets having different detented positions corresponding to different digits, means for rotating said cam sets on their respective axles to different ones of said detent positions for operating said switches in different permutations of said first and second electrical conditions, and means for rotating said drum to different indexed positions for engaging said followers with different ones of said cam sets, whereby said switches are operated in different permutations determined by the digital positions of successively selected cam sets.

2,897,300
CONTROLLING SWITCH MECHANISM FOR LUMINARIES
Alan M. King, St. Lambert, Quebec, Canada
Application May 2, 1958, Serial No. 732,612
14 Claims. (Cl. 200—33)



1. A time switch mechanism adapted to control the selective intermittent energization of a plurality of electrical circuits singly and in sequence and to maintain each of said selective energizations for a delayed constant period of time, said mechanism comprising in combination a plurality of individual switch assemblies disposed in at least one aligned row with each switch assembly having a pivotally mounted actuating member and controlling a single circuit, intermittently driven switch actuation controlling means including a contact member adapted to engage and pivot said switch assemblies switch actuating members in sequence to a first position closing said switches, said controlling means being mounted adjacent to and adapted to intermittently travel the length of said row of switch assemblies in even increments, a driving means for said controlling means, a first controlling switch connected to and adapted to intermittently energize said driving means, and a constantly driven switch restoring means mounted adjacent to and extending the length of

2,897,304
VIBRATOR

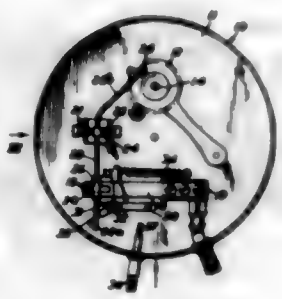
said carrier means to said neutral position; a pivot stud

between the other side of the line and the other side of each pair of impedance dividers, two unidirectional con-

magnetic amplifier input voltage throughout the duration of said signal voltage.

said row of switch assemblies and adapted to be engaged in sequence by said switch assemblies actuating members on individual intermittent actuation by said controlling means contact member and to individually and continuously restore in a predetermined delayed constant period of time switch assemblies thus initially actuated.

2,897,301
MEANS FOR AUTOMATICALLY SWITCHING ON THE PARKING LIGHTS OF VEHICLES
Albert Lewis Burnett and John Harold Showell, Cheltenham, England
Application April 3, 1957, Serial No. 650,530
3 Claims. (Cl. 200—35)



1. Means for switching on the parking lights of a vehicle comprising the combination with a clock mechanism including a spring-loaded gearwheel which rotates in synchronism with an hour hand of the clock mechanism, a shaft on which said gearwheel freely rotates and is axially slidable, and a cam surface, fixed relatively to said gearwheel for rotation and axial sliding movement therewith, to cause said gearwheel to move axially and outwardly under the influence of its spring-loading along said shaft upon reaching a predetermined angular position, of a spring blade anchored at one end to said clock mechanism, a contact carried by the free end of said spring blade, a further contact with which said contact cooperates and arranged inwardly of said contact with respect to the clock mechanism so that a gap is left between the contacts, a lever pivoted intermediate its ends, a pivot carried by the clock mechanism for said lever about which the lever rocks in a plane normal to said gearwheel, one end of said lever resting upon the free end of said spring blade at a point adjacent said contact whilst its opposite end cooperates with the outer face of said gearwheel outward axial sliding movement of which causes rocking movement of the lever about said pivot to move said spring blade and close said contact and said further contact, a spring-loaded trigger pivotally mounted on the clock mechanism to rock in a plane normal to the axis of the gearwheel and which presses transversely against the lever at a point adjacent the spring blade before axial movement of the gearwheel occurs and automatically moves under its spring-loading to a position in which it overlies the lever when said axial movement of the gearwheel has taken place so that the lever is held in the position in which said contact and said further contact are closed, and manually operable means for returning the trigger to its original position against the spring loading.

2,897,302
CONTROL MECHANISM AND SHAFT LOCK
James H. Godfrey, Berlin, and Kestutis Daniljonaitis, Newington, Conn., assignors to The Stanley Works, New Britain, Conn., a corporation of Connecticut
Application August 7, 1958, Serial No. 753,790
12 Claims. (Cl. 200—42)

1. The control mechanism comprising a power-driven rotatable shaft having an irregularly shaped cross section at one portion in its length, a control element for energizing and de-energizing the drive means for said shaft, a locking bar, means supporting said bar for generally pivotal movement relative to said shaft, said bar having a locking portion engageable with the irregularly shaped portion of said shaft to lock said shaft against

rotation, and means operatively connecting said bar and said control element whereby pivotal movement of said bar actuates said control element to energize and de-energize said motor, said bar being movable into locking engagement with said shaft after said control element has de-energized the shaft drive means.

2,897,303
FLASHLIGHT SWITCH
Eugen Engert, Ellwangen, Jagst, Germany, assignor to Pertrix-Union G.m.b.H., Ellwangen, Jagst, Germany
Original application May 20, 1957, Serial No. 660,212. Divided and this application April 3, 1958, Serial No. 726,139
2 Claims. (Cl. 200—60)

1. Control means for flashlights comprising, in combination, a switch housing of substantially elongated form; contact means located inside said housing, said contact means including a stationary contact member located inside said switch housing and insulated therefrom, and adapted for electrical connection with a part of said flashlight intended to carry current when said contact means are in circuit-closing position, and a first movable contact member operable to and from a circuit-closing position in which said first movable contact member contacts said stationary contact member, and a second movable contact member operable to and from a circuit-closing position in which said second movable contact member contacts said stationary contact member, said first and second movable contact members being superimposed to each other at their mounting ends, and spaced from each other at their operative ends; actuating means for operating said contact means, including a first actuating member slidable in the lengthwise direction of said switch housing and connected to said first and second movable contact members at their superimposed mounting ends, means for holding said first actuating member selectively in one of several positions so that in one selected position said first movable contact member is in contact with said stationary contact member, and a push button member movable transversely of said housing for operating said second movable contact member.

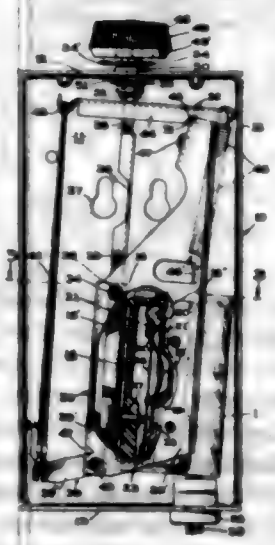
plying individually any selected one of said permutations

driving means, and a constantly driven switch restoring means mounted adjacent to and extending the length of

2,897,304
HUMIDISTAT

Thomas K. Kjellman, Timonium, and Leevan E. Wood, Glen Arm, Md., assignors to Bendix Aviation Corporation, Baltimore, Md., a corporation of Delaware

Application November 13, 1958, Serial No. 773,781
14 Claims. (Cl. 200—61.06)

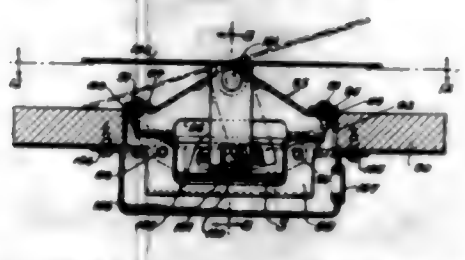


5. A humidistat including a humidity element in the form of a length of humidity-responsive material, an electric switch unit having a resilient contact member adapted to move to circuit make-and-break positions; means for actuating said contact member comprising an actuating lever having an arm projecting free and an adjusting lever having a free end spaced from said arm with said humidity element connected between said arm and free end of said adjusting lever; an adjusting member for manually positioning said adjusting lever to adjust the tension of said humidity element, a second lever arranged to actuate said contact member independently of said first-named actuating lever, and means for manually controlling said second lever.

2,897,305
TREADLE TYPE VEHICLE TURN INDICATING EQUIPMENT

John J. Spicer, Jr., Philadelphia, Pa., assignor to Industrial Enterprises, Inc., a corporation of New York

Original application August 25, 1955, Serial No. 530,556, now Patent No. 2,846,533, dated August 5, 1958. Divided and this application February 17, 1958, Serial No. 715,785
1 Claim. (Cl. 200—61.29)



A foot-operated device for a vehicle turn signal system comprising: a generally U-shaped housing, the mouth of the U being oriented upwardly and one side of the U being arranged to form an aperture; a cover plate disposed over the mouth of the U-shaped housing; a control switch mounted inside of said U-shaped housing including a switch housing inside of which are mounted an insulated base with a plurality of fixed terminals, a movable carrier means mounted on the base and having a neutral position and two settable positions, the carrier means having bridging contacts adapted to engage said fixed contacts in a predetermined manner in said positions, an operating stud projecting outwardly of the switch housing and through said aperture and a spring to normally urge said carrier means to said neutral position; a pivot extending between the sides of said U-shaped housing near the top thereof; a treadle mounted on said pivot and having a downwardly extending arm provided with a slot engaging said operating stud, the treadle being adapted to be depressed by the foot of the operator whereby to move the carrier means from neutral to either settable position, said spring returning said carrier means to said neutral position when the operator's foot is released from the treadle.

2,897,306
ACCELERATION RESPONSIVE MICROSWITCH

Preston R. Weaver, Nyack, N.Y., assignor to the United States of America as represented by the Secretary of the Navy

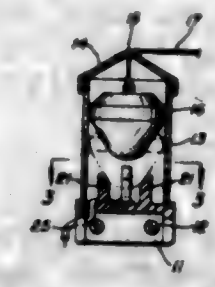
Original application June 29, 1954, Serial No. 440,299, now Patent No. 2,867,382, dated January 6, 1959. Divided and this application October 11, 1957, Serial No. 689,685
9 Claims. (Cl. 200—61.45)
(Granted under Title 35, U.S. Code (1952), sec. 266)

2. An acceleration responsive microswitch comprising a body having an opening therethrough, a terminal fixed to said body on one side of said opening, a first contact fixed to said body on the other side of said opening, a flexible leaf fixed at one end thereof to said terminal and extending over said opening and having its other end operatively positioned to engage said first contact, a second contact on said other end of said leaf, and means attached to said leaf to move in said opening in response to acceleration for moving said second contact on said leaf into and out of engagement with said first contact.

2,897,307
ALARM SWITCH

Robert G. Johnston, Youngstown, Ohio

Application April 29, 1958, Serial No. 731,783
3 Claims. (Cl. 200—61.83)



1. An alarm switch comprising an enclosure including a base portion having a plurality of spaced upstanding guides thereon, a pair of spaced upstanding metal prongs on said base portion, said guides and prongs positioned in a circumferential arrangement, a weight suspended in said enclosure above said metal prongs and guides, means suspending said weight comprising a frangible flexible elongated member extending outwardly from said enclosure and secured in stationary position at its outermost end, said weight having a metal surface.

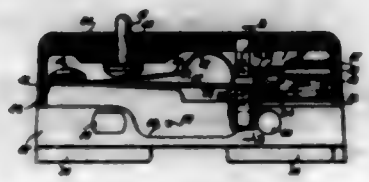
2,897,308
SNAP ACTING SWITCH

Edward S. Fergus, Worthington, Ohio, assignor, by mesne assignments, to Robertshaw-Fulton Controls Company, Greensburg, Pa., a corporation of Delaware

Application May 17, 1956, Serial No. 585,412
3 Claims. (Cl. 200—67)

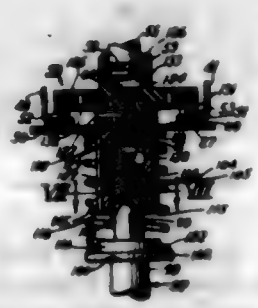
1. A snap acting switch including a switch housing, and comprising within said housing: at least one fixed

contact; at least one operating member of magnetic material with a movable contact thereon adapted to engage said fixed contact; spring means for operating said member with a snap action; actuating means for causing said operating member to be displaced with a sudden snap action relative to the fixed contact by said spring means; a magnet in said switch housing adjacent said magnetic



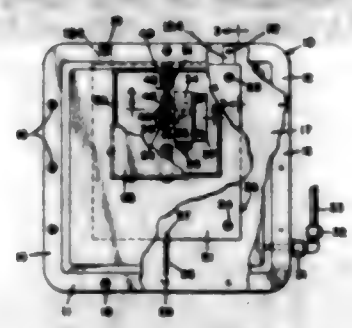
operating member exerting a force on said member to urge it in the direction of the fixed contact to increase the contact pressure between it and said movable contact; said fixed contact having a main portion with a contact surface and with an aperture therethrough; and, a leaf spring secondary contact carried by said fixed contact and having a protrusion yieldably extending through said aperture.

2,897,309
SPEED-RESPONSIVE SWITCH MECHANISM
Glenn T. Randel, Mountain Lake Park, Md.
Application March 6, 1957, Serial No. 644,277
11 Claims. (Cl. 200—80)



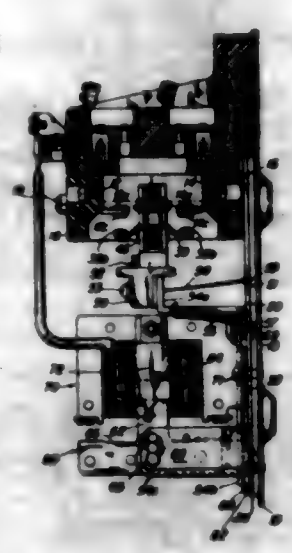
1. In a speed-responsive switch mechanism having a fixed contact element and a cooperating contact assembly movable relatively to two operating positions with respect to the fixed contact element for controlling the condition of an associated electrical circuit and stop means fixing one operating position of said assembly: a rotatable shaft adapted to be rotated at varying speeds; a rotor rotatable with said shaft; a pair of diametrically opposed centrifugal elements coaxially disposed with respect to said rotor; means for pivotally connecting said centrifugal elements and rotor to accommodate movement of the former toward and away from their axis of rotation as a function of their speed of rotation; means biasing said centrifugal elements toward their axis of rotation; an element operably connected to said centrifugal elements for reciprocable movement thereby; releasable means interconnecting the reciprocable element and said contact assembly to effect concurrent reciprocable element and contact assembly movement so long as said contact assembly is not at said one operating position and to accommodate movement of said reciprocable element relative to said contact assembly after said contact assembly is at said one operating position, whereby pivotal movement of the centrifugal elements is imparted to the latter to selectively establish it in its two operating positions responsive to minute reciprocations of the reciprocable element at any selected position thereof intermediate the limits defining its full operating stroke for controlling the condition of said electrical circuit.

2,897,310
PRESSURE CONTROL DEVICES
Godfrey E. Swanson, Hopkins, Minn.
Application August 8, 1957, Serial No. 677,806
10 Claims. (Cl. 200—83)



1. A pressure controlled device comprising a case having two sections with marginal portions overlying one another, a diaphragm of thin flexible material having its edges clamped between the marginal portions of said sections and forming with one of the sections a chamber, a rigid plate attached to said diaphragm with its edges disposed inwardly of the clamped edges, said diaphragm and plate forming a movable unit, strap hinges constructed of thin flexible material with relatively high tensile strength secured to said unit at the locality of one of the edges of said plate and to said case at the marginal portion of one of the sections thereof, means acting between said plate and case and maintaining said strap hinges taut, means for conducting the pressure controlling fluid to said chamber and motion transmitting means connected to said plate.

2,897,311
CONTACT SUPPORTING MEANS FOR ELECTROMAGNETIC SWITCHES
Harold E. Schleicher, West Hartford, Conn., assignor to The Arrow-Hart & Hegeman Electric Company, Hartford, Conn., a corporation of Connecticut
Application June 14, 1956, Serial No. 591,413
13 Claims. (Cl. 200—87)



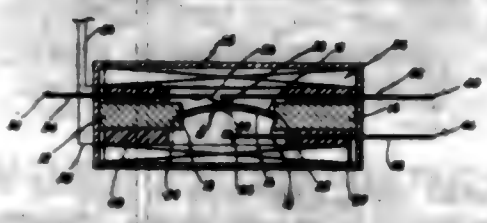
1. In an electric switch, a pair of separate fixed contact members each having oppositely facing contact surfaces on opposite sides thereof, a bridging contact member having contact surfaces engageable with and disengageable from one or the other of similarly facing pairs of said fixed contact surfaces, a cage affording a mounting for said bridging contact, a carrier movable between two positions on which said cage is secured, means on said cage for interchangeably mounting said bridging contact in spaced positions in the cage, while said cage remains secured on said carrier, with its contact surfaces facing one of said pairs of fixed contact surfaces when in one position and facing the opposite of said fixed contact surfaces when in the other position

to render the closing means ineffective after a predeter-

2,897,317

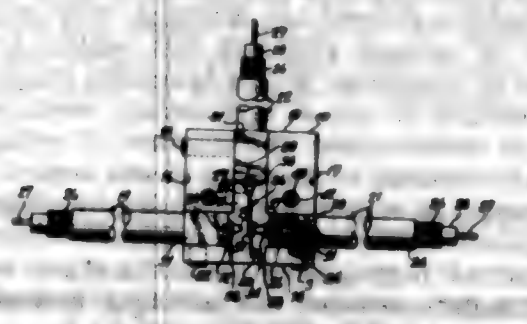
in said cage, and means in said cage to bias said bridging contact member toward said fixed contact members in each of the alternate positions of said bridging contact.

2,897,312
MAGNETOSTRICTION SWITCH
Robert M. Ziegler, Jr., Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Application June 3, 1957, Serial No. 664,880
1 Claim. (Cl. 200—87)



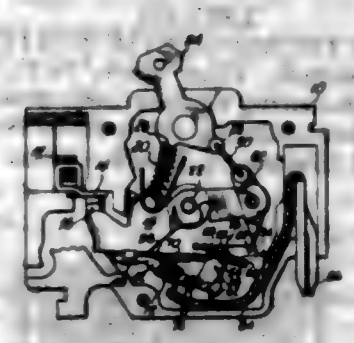
A magnetostrictive switching device comprising, in combination: a housing; a pair of permanent magnets disposed in said housing in spaced face opposed relationship; an annular, bimetallic magnetostrictive switch member disposed intermediate said faces of said permanent magnets; notches in said faces of said permanent magnets for receiving a peripheral edge of said switch member, said switch member being normally concave; a contact carried by a central area of said switch member; a pair of fixed contacts positioned within said housing and in coextensive axial alignment with said contact carried by said switch member; an electromagnet disposed within said housing and about said switch member and said permanent magnets; and means electrically insulating said electromagnet from said permanent magnets, said permanent magnets serving to induce a constant bias on said switch member toward flection thereof between said fixed contacts whereby, upon energization of said electromagnet, to effect flection of said switch member and movement of said contact carried thereby from one of said fixed contacts to the other, deenergization of said electromagnet serving to permit return of said switch member to an original position thereof.

2,897,313
COAXIAL CABLE SWITCH
Edward S. Burgess, Rutherford, N.J.
Application January 24, 1958, Serial No. 711,106
9 Claims. (Cl. 200—87)



1. A switch unit comprising a body of conductive material having a pair of intersecting grooves each of equal depth and width and having a cover over said grooves forming a cavity in one of said grooves, a pair of coaxial cables of predetermined characteristic impedance each having a central conductor and a spaced, sleeve conductor surrounding the central conductor, said cables having respective ends thereof disposed in said grooves, a contact at the end of one of said central conductors, a flat, movable element of conductive material having one end thereof secured to the other of said central conductors disposed in said one of said grooves within said cavity and having the other end thereof biased into engagement with said contact at the end of said one central conductor, said movable element being proportioned to the cavity dimensions to produce a constant capacitance per unit length of the cavity, whereby the characteristic impedance along said cavity is maintained substantially equal to the characteristic impedance of said coaxial cables, means for securing said sleeve conductors in said grooves to said body, whereby said body constitutes a common outer conductor for said cables, and means for separating said movable element from engagement with said contact.

2,897,314
CIRCUIT BREAKERS WITH THERMAL AND MAGNETIC TRIPPING
Thomas M. Cole, Harrison, N.Y., assignor to Federal Pacific Electric Company, a corporation of Delaware
Application June 11, 1956, Serial No. 590,712
20 Claims. (Cl. 200—88)



1. A circuit breaker having a pair of contacts and operating means therefor including a handle operable to open and close the contacts, a spring-biased releasable member effective when released to cause trip-free opening of the contacts, and automatic release means normally cooperating with and restraining said releasable member and effective to disengage and release said releasable member in response to overloads, said release means including a current-responsive bimetal having a portion that deflects in response to current, a pivot and a pivoted latch thereon normally engaging and arresting said releasable member and operatively connected to said bimetal for disengaging and releasing said releasable member in response to overload, said latch having a recessed formation open at one side and having confining portions on the other three sides for receiving said pivot, and a spring having one end thereof arranged to act against the latch so as to bias the latch both pivotally toward said normal position restraining said releasable member and in the direction to maintain assembly of the latch on its pivot.

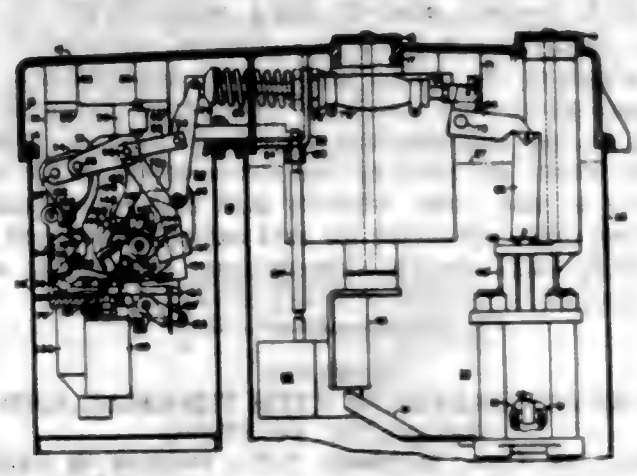
2,897,315
AUTOMATIC RECLOSER
Frank L. Cameron, Huntingdon Township, Westmoreland County, Pa., and Hamilton Brooks, Bloomington, Ind., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application May 29, 1956, Serial No. 738,836
13 Claims. (Cl. 200—89)

1. In a circuit interrupter, separable contacts, an operating mechanism for said contacts, electroresponsive means operable to actuate said mechanism to effect separation of said contacts, means responsive to separation of said contacts to actuate the operating means to close the contacts, counting means actuated by the operating means, means operable to reset the counting means only when no additional separation occurs within a predetermined time after reclosing of the contacts following a separation, and means operated by the counting means

said electrical circuit.

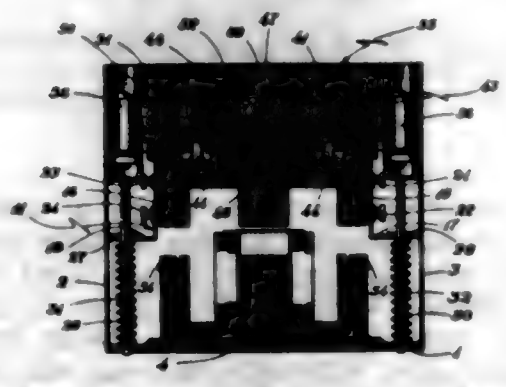
of said fixed contact surfaces when in the other position

to render the closing means ineffective after a predetermined count of successive separations each following



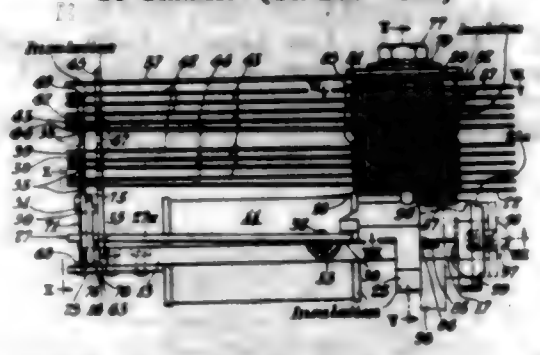
the reclosing operation of the previous separation in less time than said predetermined time.

2,897,316
ELECTROMAGNETIC SWITCH
Charles F. Brauneck, Glen Cove, N.Y., assignor to Murray Manufacturing Corporation, Brooklyn, N.Y.
Application September 4, 1957, Serial No. 682,023
5 Claims. (Cl. 200—104)



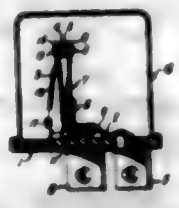
1. An electromagnetic switch, comprising a base member, a pair of side members attached to opposite sides of said base member, an E-shaped electromagnet core mounted on said base member between said side members, a coil surrounding the center leg of the core and extending beyond the end thereof, an E-shaped armature similar in shape to said electromagnet and movably mounted parallel to said electromagnet, the direction of movement being in a plane perpendicular to said base and the center leg of the armature core being dimensioned to be normally free of said coil when not attracted by said electromagnet and adapted to move into the extending portion of said coil when attracted by said electromagnet, a frame member in the shape of a U, means securing said armature to the underside of the cross arm of said U, linkage arms pivotally connected to the opposite leg members of said U and to said side members respectively, the connection to the side members being such that the movement of said armature is substantially linear and perpendicular to said base, an insulating bridge member rigidly mounted on said side members, a plurality of contacts mounted in pairs in spaced alignment on said bridge member, contact carrying means attached to said armature and extending through holes provided therefor in said bridge member, a plurality of bridging contacts secured to said contact carrying means and positioned to shunt respective pairs of said spaced contacts, means positioned between said base member and said armature adapted normally to separate said armature from said electromagnet, whereby said bridging contacts are separated from said spaced contacts, and when said electromagnet is energized, the armature is attracted thereto causing said bridging contacts to engage said respective pairs of contacts.

2,897,317
ELECTROMAGNETIC SWITCHING DEVICES
Andrew Hufnagel, Penn Township, Allegheny County, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Application October 29, 1957, Serial No. 693,070
18 Claims. (Cl. 200—104)



1. A contact stack comprising a plurality of contact springs, insulating wafers interposed between adjacent ones of said springs, a supporting structure for said contact stack, each of said insulating wafers having at least one opening therethrough aligned with the opening of adjacent wafers for forming at least one passageway through said contact stack, bolt means extending through said opening securing said contact stack to said supporting structure, each of said contact springs being positioned adjacent to and free of confining engagement with said bolt means, and said bolt means being adjustably secured to said support structure to permit each of said springs to be removed from said contact stack without disassembling said stack.

2,897,318
THERMOSTATIC SWITCH
Dan Finch, Berkeley, Calif.
Application July 16, 1956, Serial No. 597,919
4 Claims. (Cl. 200—122)



1. A thermostatic switch comprising: a supporting member; a first contact member supported by said supporting member; a bimetallic element supported by said supporting member; a second contact member carried by said bimetallic element and arranged to be brought into and out of contact with said first contact member in response to movement of said bimetallic element; a first lead connected to one of said contact members and arranged to communicate with a source of voltage; a second lead connected to the other of said contact members and arranged to be grounded through a translating device; and a non-thermally insulated resistance element having a low thermal heat capacity connected at one end to said second contact member and arranged to communicate with ground at its other end.

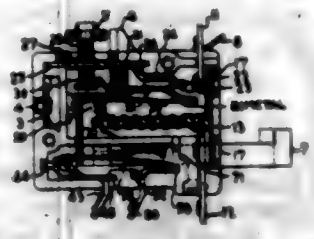
2,897,319
ELECTRIC SWITCH
Ernst R. Wolff, Bloomington, Ill., assignor to General Electric Company, a corporation of New York
Application June 26, 1958, Serial No. 744,696
9 Claims. (Cl. 200—122)

1. An overload protective device comprising an electric heater, a bimetallic strip member extending generally parallel to and closely spaced from said heater, one end of said bimetallic strip being movable toward said heater upon an increase in temperature of said bimetallic strip,

lation with respect to each other and with respect to

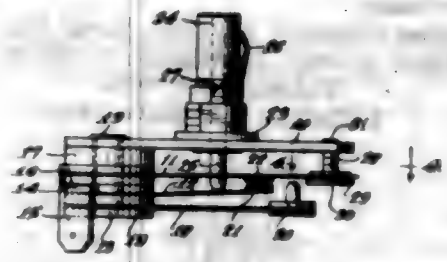
surface a stagnation region of sufficient volume to encom-

stop means limiting said movement of said movable end toward said heater, means supporting said bimetallic strip



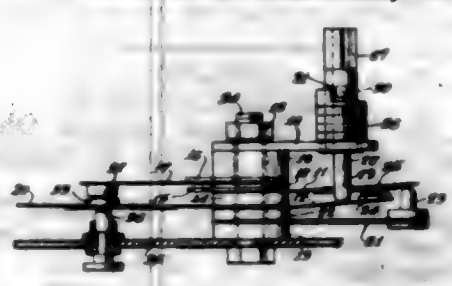
adjacent its other end, and means providing for movement of said supported end of said bimetallic strip after said movable end engages said stop means.

2,897,320
TEMPERATURE RESPONSIVE ELECTRIC SWITCH
Fred D. Patti, Morris, Ill.
Application April 30, 1958, Serial No. 731,906
10 Claims. (Cl. 200—138)



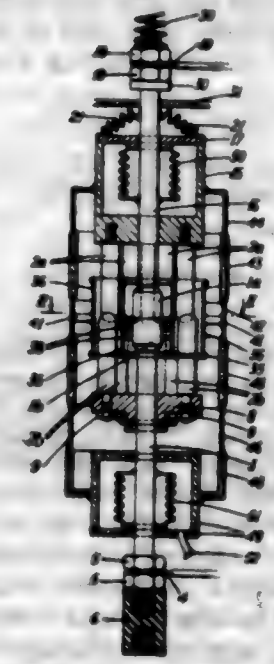
1. A temperature responsive electric switch having a pair of elongated contact blades including a first contact blade and a second contact blade, an elongated thermally responsive actuator blade, a rigid support having a first portion on which said blades are fastened at one end thereof in stacked aligned relation with the first blade and said actuator blade in straddling relation to said second blade and said support and said second blade in straddling relation to said first blade, said support having a second and third portion arranged progressively away from said first portion, a manually adjustable member mounted on said second portion of the support with which the second blade cooperates to set the position of the latter between a selected retracted "on" position and an advanced "off" position, said actuator blade being operative in response to a predetermined variation from a selected operating temperature to position the first blade between circuit opening and circuit closing positions when said second blade is in "on" position, and means obstructing movement of said first blade to "on" position when said second blade is in "off" position including a stop projecting from said third portion of the support with which the first blade is engageable.

2,897,321
CONTROL UNIT FOR ELECTRIC HEATING APPLIANCES
Fred D. Patti, Morris, Ill.
Application April 30, 1958, Serial No. 732,067
5 Claims. (Cl. 200—138)



1. In a control unit for an electric heating appliance, a switch having a pair of elongated metal contact blades including a first contact blade and a second contact blade, an elongated temperature responsive bimetallic blade, a mounting post, stack means for rigidly clamping said first and second contact blades and said bimetallic blade at one end thereof on said mounting post with said bimetallic blade and said first contact blade in straddling relation to said second contact blade, said first contact blade being movable relative to said second contact blade in response to movement of the bimetallic blade in the direction of said first contact blade, said stack means including a pair of wiring terminals and a second pair of elongated metal contact blades, one of said first named pair of contact blades being conductively joined to one of said wiring terminals, the other of said first named pair of contact blades being conductively joined to one of said second pair of contact blades, and the other of said second pair of contact blades being conductively joined to the second of said wiring terminals, and insulating spacers in said stack means including a spacer by which the wiring terminal and said contact of the first named pair of contact blades conductively joined to said latter wiring terminal are separated from the other of said wiring terminals, and a spacer by which the blade of the first named pair of contact blades and the blade of the second named pair of contact blades in conductively joined relation are separated from the other blade of said second named pair of contact blades and the other blade of said first named pair of contact blades, one of said second named pair of contact blades being movable relative to the other of said second named pair of contact blades between circuit closing and circuit opening positions and biased in circuit opening position whereby movement of the first contact blade into contact closing position relative to said second contact blade is ineffective to close an electrical circuit through said first and second contact blade via said wiring terminals except when said second named pair of contact blades are in circuit closing position.

2,897,322
ELECTRICAL SWITCHING APPARATUS
Michael Peter Reece, Greenford, England, assignor to E.R.A. Patents Limited, Leatherhead, England, a British company
Application April 16, 1957, Serial No. 653,098
Claims priority, application Great Britain April 24, 1956
7 Claims. (Cl. 200—146)



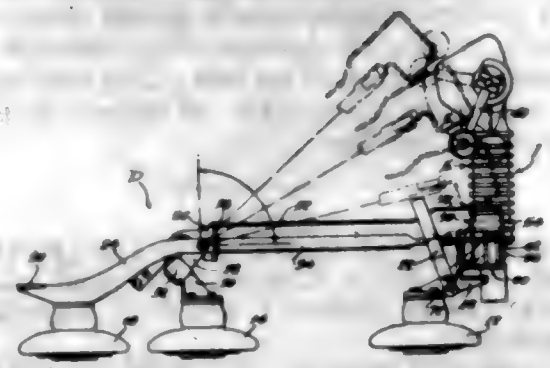
1. A circuit breaker for alternating current comprising a highly evacuated envelope, a main pair of cooperating metallic electrodes mounted in said envelope, at least two auxiliary pairs of cooperating metallic electrodes mounted in said envelope in laterally spaced re-

tacts to engage said respective pairs of contacts.

upon an increase in temperature of said bimetallic strip,

lation with respect to each other and with respect to said main electrodes, said auxiliary electrodes being formed of a metal of lower arcing voltage than said main electrodes and each of said auxiliary pairs being connected electrically in parallel with said main pair, and means for operating said breaker, said means acting during the breaking operation first to separate only the cooperating electrodes of the said auxiliary pairs, whereby in operation to interrupt a current, bridges of electrode metal form and then explode between said cooperating electrodes of said auxiliary pairs, and said means then acting to separate the electrodes of said main pair, the electrodes of the said main and said auxiliary pairs being such that an arc at the said main pair causes the formation of arcs at all the auxiliary pairs and such that an arc at any one of the auxiliary pairs causes the formation of arcs at all the auxiliary pairs the engaging surfaces of the main electrodes as they are about to separate, being in a common plane passing through a contact surface of at least one electrode of each of said auxiliary pairs of electrodes, whereby an arc at the main pair produces arc-initiating energy which travels in said plane and causes formation of arcs at all said auxiliary pairs.

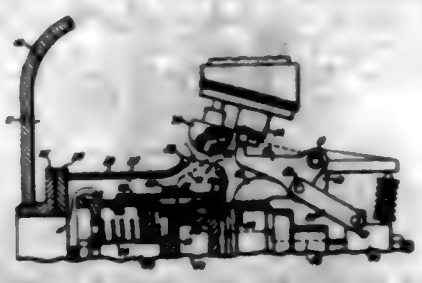
2,897,323
SWITCH MEANS
Fred John Kraus and Edward K. Olendzki, Chicago, Ill., assignors to H. K. Porter Company (Delaware), Chicago, Ill., a corporation of Delaware
Application May 22, 1958, Serial No. 737,168
7 Claims. (Cl. 200—146)



1. In the combination of a disconnect switch having a rotatable and arcuately movable switch blade and an arcuately movable supporting part, and an interrupter switch having an actuator arm actuated in response to arcuate movement of the disconnect switch blade, the improvement comprising interrupter actuating means fixed to the said supporting part and arcuately movable with the blade for non-rotary engagement with the actuator arm of the interrupter switch.

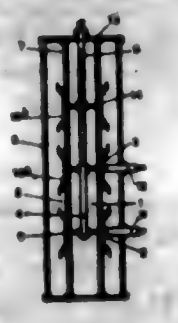
2,897,324
FLUID BLAST CIRCUIT INTERRUPTER
Harold N. Schneider, Springfield, Pa., assignor to General Electric Company, a corporation of New York
Application October 9, 1957, Serial No. 689,122
7 Claims. (Cl. 200—148)

1. In a fluid blast circuit interrupter, a pair of separable contacts for establishing a circuit-interrupting arc, means for causing a blast of arc-extinguishing fluid to be directed into said arc, a conductive exhaust member electrically connected to one of said contacts and defining downstream from said arc a passageway for said fluid blast, a conductive probe of arc-resistant refractory material projecting from a wall of said passageway transversely into the path of fluid flowing through said passageway, said probe having an upstream surface of non-streamlined configuration facing the fluid blast for coacting with said fluid blast to form upstream from said surface a stagnation region of sufficient volume to encompass a substantial portion of the terminal of said arc,



said fluid blast acting to drive one terminal of said arc from one of said contacts onto said probe and into captured relationship within said stagnation region.

2,897,325
ELECTRIC SWITCHES FOR HIGH VOLTAGE
Hendrik A. Hidde Nijland, Laren, Netherlands, assignor to N.V. COQ, Utrecht, Netherlands, a company of the Netherlands
Application February 12, 1957, Serial No. 639,767
Claims priority, application Netherlands February 15, 1956
1 Claim. (Cl. 200—150)



A switch for high voltage currents comprising, two vertical fluid-tight substantially concentric radially spaced tubular casings each adapted to be filled with an insulating fluid, the inner one of said casings being of electrically non-conductive material, at least three vertically spaced fixed contacts mounted on said inner casing and extending inwardly thereof, at least two lead-in-conductors directly electrically connected only to the two lowermost ones of said fixed contacts respectively, each fixed contact situated above the said two lowermost fixed contacts lacking a direct connection with a lead-in-conductor, an axially displaceable conductive contact-rod mounted for reciprocation in the axis of the inner casing and adapted to be removed from and inserted into said inner casing through a top end thereof, said contact-rod being operative between a closed circuit position in which it engages and electrically interconnects the two lowermost fixed contacts and an open circuit position in which it engages and electrically interconnects all fixed contacts with the exception of the lowermost one, and at least three vertically spaced electrically conductive screen elements surrounding the space within the inner casing and mounted on said casing removed from the inner surface thereof, each screen being conductively connected to a corresponding fixed contact and extending axially a given length in both directions away from its corresponding fixed contact.

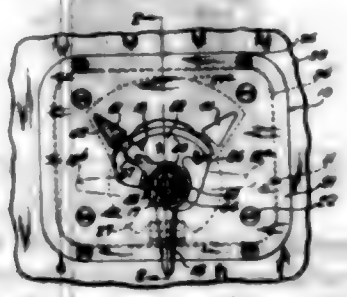
2,897,326
ELECTRIC SWITCH
Angelo R. De Vito, Cleveland Heights, Ohio, assignor, by mesne assignments, to Lisle W. Menzimer, Rockford, Ill., as trustee
Original application August 23, 1957, Serial No. 679,968. Divided and this application November 22, 1957, Serial No. 698,158
9 Claims. (Cl. 200—167)

1. An electric switch comprising, first and second stationary contact means located at spaced points, a movable

shape and circumferentially disposed about said body, the

2,897,331

contact means selectively movable in opposite directions to closed-switch positions in engagement with said stationary contact means and having a normal open-switch position intermediate said closed-switch positions, actuating means operable for producing a forward movement of said movable contact means for moving the latter from said normal position to one of said closed-switch positions, spring means subject to being stressed during said forward movement and effective for imparting a return movement to said movable contact means for returning the latter to said normal position, indicating means including an indicator member movable to different



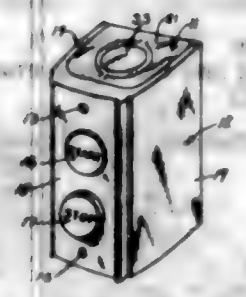
indicating settings representative of said closed-switch positions of said movable contact means, pick-up means operable to move said indicator member to said indicating settings during said forward movement of said movable contact means and being ineffective on said indicator member during said return movement of said movable contact means, said pick-up means comprising a pick-up member movable relative to said indicator member by said actuating means, a pair of spaced abutment portions carried by one of the two last-mentioned members, and an engageable portion carried by the other of said two last-mentioned members and extending between and engageable by said abutment portions.

2,897,327

CONTROL-STATION

Woodrow A. De Smidt, Whitefish Bay, Fred F. Loeck, River Hills, and Cedric T. Zarwell, Shorewood, Wis., assignors to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin

Application November 12, 1957, Serial No. 695,599
3 Claims. (Cl. 200—168)



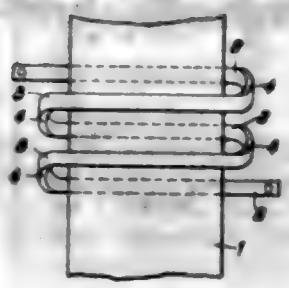
3. In an electrical switch, the combination comprising: a boxlike enclosure, comprising a base adapted to be secured to a support, and a cover; a plurality of first assembly contacts; a plurality of terminals; means conductively connecting each terminal to certain of the first assembly contacts; means mounting the terminals, the first assembly contacts, and the connecting means, within the enclosure on the base; a plurality of cooperating assembly contacts, to conductively engage respectively the first assembly contacts, when the cover is in place on the base; switching mechanism, for conductively connecting together certain of the cooperating assembly contacts; means mounting the cooperating assembly contacts and the switching mechanism within the enclosure on the cover; means for actuating the switching mechanism from outside the enclosure; and means to secure the cover in place on the base; characterized by the means for actuating the switching mechanism including: a push-button, bearing a legend, and reciprocable inwardly and outwardly with respect to the cover; stop means, carried by the cover, and limiting the outward and inward movement of the button; a push-bar, irrotational with respect to the button, constrained to move inwardly with the button, but free to move further inwardly than constrained by the button, and having a portion confinable against rotation with respect to the cover, the opposite end of the push-bar from the button being graspably exposed when the button has been pushed to its extreme inward position; confining means carried by the cover, and engaging the confinable portion of the push-bar, in a series of selectable positions of rotation of the push-bar, throughout the extent of motion of the push-bar with the button, but free of such engagement, when the push-bar has been grasped and pulled further inward; and spring means opposing the inward movement of the push-bar; whereby the button may be properly oriented for reading the legend thereon, regardless of the orientation of the switch.

2,897,328

METHOD OF PROGRESSIVELY HEATING SHEET METAL AND AN INDUCTION COIL FOR PERFORMING THE METHOD

Fritz Alf, Remscheid, and Vincenz Soul and Josef Lenze, Andernach, Germany, assignors to Deutsche Edelstahlwerke Aktiengesellschaft, Krefeld, Allgemeine Elektricitäts-Gesellschaft, Berlin-Grunewald, and Stahl- und Walzwerke Rasselstein, Andernach Aktiengesellschaft, Neuwied, Germany

Application March 17, 1958, Serial No. 721,916
Claims priority, application Germany March 23, 1957
3 Claims. (Cl. 219—10.41)



1. Method of progressively inductively heating ferritic strip, of a thickness not less than 0.10 mm. or more than 0.35 mm. to a temperature not less than 200° C. or more than 300° C. by means of at least one induction coil embracing the strip and operating with current at medium frequency, and at a power density of not exceeding 20 watts/sq. cm.

2,897,329

ZONE MELTING APPARATUS

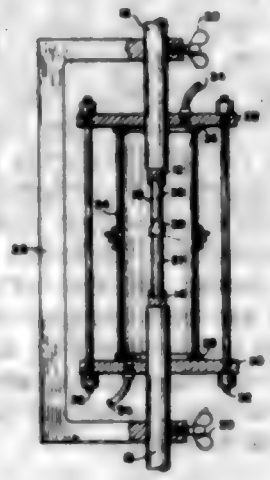
Herbert F. Mataré, West End, N.J., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Application September 23, 1957, Serial No. 685,652
4 Claims. (Cl. 219—10.43)

1. An apparatus for zone refining an elongated body of a polycrystalline friable semiconductor comprising means to end-support said body in a controlled atmosphere; a first induction coil circumferentially disposed about a portion of said body intermediate its ends, said coil, when energized at a first frequency, establishing within said body a molten zone which extends in length over a small fraction of the entire length of said body and which extends in cross section entirely through said body, said zone being disposed symmetrically about a plane perpendicular to the axis of said coil and passing through the center of said coil; a first liquid-solid interface of said zone being positioned above said plane, a second liquid-solid interface of said zone being positioned below said plane; a second induction coil having a frustro-conical

ing with said fluid blast to form upstream from said tionary contact means located at spaced points, a movable

shape and circumferentially disposed about said body, the base of said second coil being adjacent said second interface and downwardly displaced therefrom, the top of said second coil being below its base, said second coil,



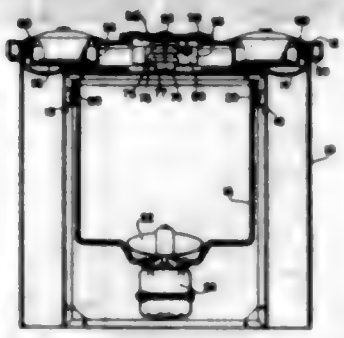
when energized at a second and lower frequency, being electromagnetically coupled to said zone and exerting a levitational force thereon, said zone being held stably in position by said levitational force and by surface tension.

2,897,330

UTILITIES ISLAND FOR KITCHENS

John P. Hopkins, Mercer Island, Wash.

Application October 22, 1957, Serial No. 691,771
1 Claim. (Cl. 219—19)



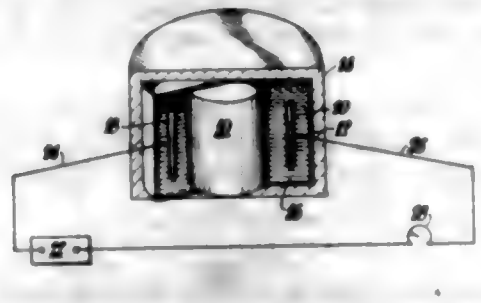
A utilities island for kitchens, comprising: a substantially cylindrical base member of work table height; an outer base housing member formed of substantial sheet material and forming the principal support for said island; a concentrical top for said island disposed on roller means for revolution in Lazy Susan fashion; a plurality of heating elements disposed, at spaced intervals, in recesses supported from said top, with the top cooking surfaces disposed below said top to provide retaining means for vessels disposed upon said elements when the top is revolved; a plurality of control means one for each heating element, secured to said top adjacent the heating element it serves; peripheral stiffening means for said top; a plurality of female plug-in electrical connectors disposed on a plate secured to and coaxially disposed with respect to said top; and means for supplying heating energy to said heating elements; a plurality of dining table segments detachably secured, below the level of said island top, to the outer housing member at normal using height; said outer base housing having a concentrically disposed rail around its upper periphery and spaced away from the said housing, a plurality of rail supporting brackets secured to said housing, one at each segmental eating table, the upper end of said bracket having an outward, horizontal overhanging channel adapted to engage the inner end of said table segments and each of said table segments having a notch on the lower portion of said segment adapted to engage said rail in a manner to coact with said channel to secure said segment in its using position.

2,897,331

TEMPERATURE CONTROL DEVICE

Maynard D. McFarlane, Corona del Mar, and Cecil A. Crafts, Pasadena, Calif., assignors to Robertshaw-Fulton Controls Company, Greensburg, Pa., a corporation of Delaware

Application November 9, 1955, Serial No. 545,860
6 Claims. (Cl. 219—20)



1. In a temperature control device, the combination comprising a container, an electrically conductive fusible material in said container having a fusion temperature coincident with a temperature to be maintained by said device and a high latent heat of fusion, a second container carried within said first mentioned container in heat transfer relationship with said fusible material and being heated thereby, a pair of electrodes connected to circuit means positioned in said fusible material for passing an electric current through said fusible material to heat same to the fusion temperature and produce a liquid-solid state thereof, the liquid content of said liquid-solid state being operable to vary the electrical resistance of said fusible material to thereby vary the heating current passing therethrough, said electrical resistance and said liquid content of said fusible material being adapted to constantly increase until the heat gained thereby and the heat lost therefrom reach a point of equilibrium.

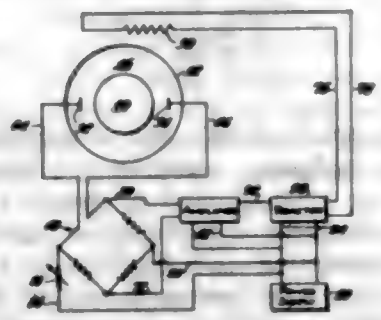
2,897,332

TEMPERATURE CONTROL DEVICE

Maynard D. McFarlane, Corona del Mar, and Cecil A. Crafts, Pasadena, Calif., assignors to Robertshaw-Fulton Controls Company, Greensburg, Pa., a corporation of Delaware

Original application November 9, 1955, Serial No. 545,860. Divided and this application March 27, 1957, Serial No. 648,973

10 Claims. (Cl. 219—20)

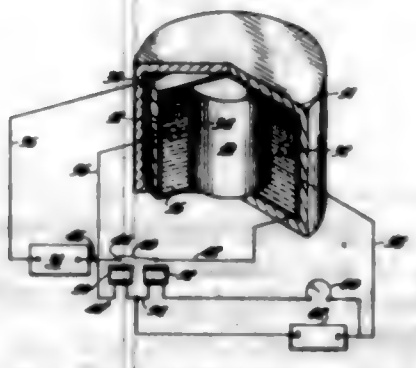


1. In a system for controlling a condition within a space, the combination comprising a container housing a heating element of fusible material having a predetermined fusion temperature, a control circuit including means for heating said material to fuse the same, an electrical bridge circuit having one leg thereof connected in series with said material for unbalancing said bridge circuit in accordance with resistance variations in said material during the fusion thereof, and means for detecting the unbalance of said bridge circuit for controlling energization of said means for heating said element.

coil, and connected to the coil supporting member by a

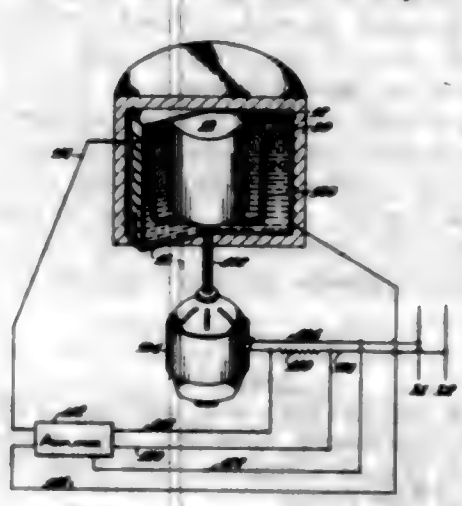
respectively, adjacent said portions thereof; and means

2,897,333
TEMPERATURE CONTROL DEVICE
Maynard D. McFarlane, Corona del Mar, and Cecil A. Crafts, Pasadena, Calif., assignors to Robertshaw-Fulton Controls Company, Greensburg, Pa., a corporation of Delaware
Original application November 9, 1955, Serial No. 545,860. Divided and this application March 27, 1957, Serial No. 648,974
7 Claims. (Cl. 219—20)



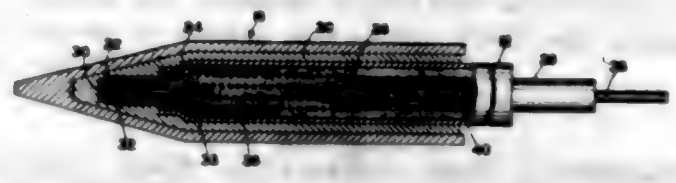
1. In a condition controlling device, the combination comprising a container, a heating element of conductive fusible material disposed in said container and having a predetermined fusion temperature and a high latent heat of fusion, a second container carried within said first mentioned container in heat transfer relationship with said heating element, means associated with said first mentioned container for heating said heating element to the fusion temperature thereof, and circuit means including switch means and a pair of sensing electrodes connected to said heating element for controlling the energization and de-energization of said heating means in response to changes in the resistance of said heating element.

2,897,334
TEMPERATURE CONTROL DEVICE
Maynard D. McFarlane, Corona del Mar, and Cecil A. Crafts, Pasadena, Calif., assignors to Robertshaw-Fulton Controls Company, Greensburg, Pa., a corporation of Delaware
Original application November 9, 1955, Serial No. 545,860. Divided and this application March 27, 1957, Serial No. 648,975
7 Claims. (Cl. 219—20)



1. In a system for controlling a condition within a space, the combination comprising a container containing a fusible material, a control circuit including means for heating said material to fuse the same, and control means including a stirring means disposed in said material and responsive to the viscosity of said material in the slurry stage of fusing the same for varying the heat applied to said material, said slurry stage of said material being adapted to maintain a constant temperature over a wide range of heat applied by said means for heating said material at the melting point of the same.

2,897,335
TEMPERATURE CONTROLLED SOLDERING IRON
Thomas E. Finch, Shelbyville, Ind., assignor to General Electric Company, a corporation of New York
Application June 23, 1958, Serial No. 743,589
6 Claims. (Cl. 219—26)



4. A temperature controlled resistance heater comprising an elongated metal sheath, a hollow resistance heating element extending longitudinally within the sheath, a hollow terminal disposed at least partially within the sheath and connected to one end of the heating element, a temperature sensitive control element disposed within the sheath adjacent the other end of the heating element, an electrical connector for the control element connected at one end to the control element and extending longitudinally of and the heating element including a helical wire conductor disposed within the heating element in electrically insulated spaced relation and extending in opposite directions from the center of the heating element toward the opposite ends respectively of the heating element, the end of said helical conductor extending toward said other end of the heating element being electrically connected to said temperature sensitive control element, and a straight electrical conductor extending from the end of the helical conductor next adjacent said one end of the heating element longitudinally of and within said hollow terminal in electrically insulated spaced relation.

2,897,336
ELECTRIC CIGARETTE LIGHTER
Gilbert Benham Taber, Washington, D.C.
Application October 13, 1958, Serial No. 767,838
5 Claims. (Cl. 219—32)

1. A cigarette lighter comprising a dry cell with a metal case and a positive pole, a disk of insulation, a shaft connected thereto, conductive coating formed on the underside of said disk, said disk having an opening dividing the coating and forming electric leads to the said pole and said case respectively, a wire filament across the disk opening connected diametrically to the said leads on each side of the openings, and means adapted to bias said disk to an off-circuit position.

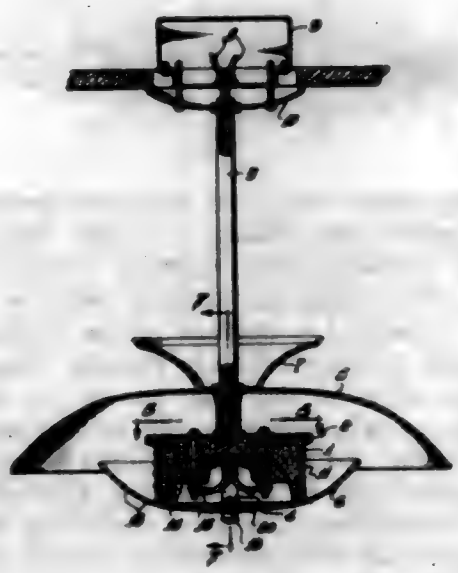
2,897,337
RADIANT CEILING HEATER
Robert D. Schiff, Los Angeles, Calif.
Application August 12, 1957, Serial No. 677,707
8 Claims. (Cl. 219—34)

8. An overhead electric space heater comprising the combination of: a coil supporting member having a body and a marginally outwardly extending lip at the upper end of the body; an electrical resistance heating coil supported on the external surface portion of said coil-supporting member below said lip, suspension means adapted to suspend said member from a room ceiling, and comprising a hollow metal tube carrying electric current wires from a ceiling outlet to the electrical resistance heating

in its using position.

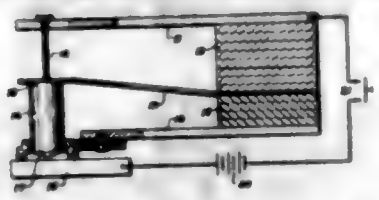
gization of said means for heating said element.

coil, and connected to the coil supporting member by a hickey; a first reflecting element of generally open umbrella shape superimposed over the coil supporting member, and rigidly mounted on the ceiling suspension element in fixed relation to the coil supporting member by suitable spacing and support means; a second reflecting



element of generally cup shape with outwardly curving sides also mounted on said ceiling suspension element and superimposed in turn over the first reflecting element; and a perforated bowl shaped member connected to said ceiling suspension element and disposed below said coil supporting member.

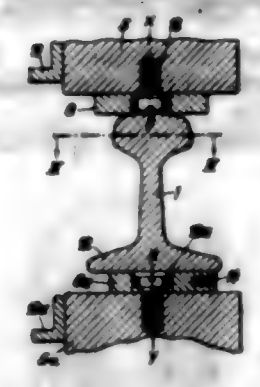
2,897,338
METAL MEMBER FUSING DEVICE
Clyde H. Haynes, Elyria, Ohio, assignor, by mesne assignments, to Svenska Aktiebolaget Gasaccumulator
Application August 11, 1953, Serial No. 373,605
10 Claims. (Cl. 219—98)



1. A device for electrically melting the surface of a member and then urging the member towards a workpiece, said device comprising, a support, a carrier movable on said support for holding the member in a definite position next adjacent the workpiece, means urging said carrier to move on the support to move the member towards the workpiece, and a temperature responsive device controlling said means, said temperature responsive device comprising a fuse in electrical series connection with the member and workpiece and mechanically restraining movement of said carrier along said support until the fuse melts.

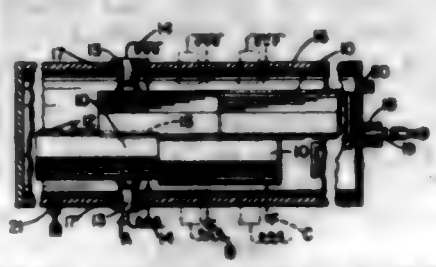
2,897,339
RESISTANCE WELDING MACHINE
Hans A. Schlatter, Zollikon (Zurich), Switzerland
Application October 14, 1957, Serial No. 690,019
Claims priority, application Switzerland October 15, 1956
7 Claims. (Cl. 219—101)

1. In a resistance welding machine, in combination, a pair of electrically conductive blocks adapted to be located in the electrical circuit of the machine respectively adjacent portions of a pair of workpieces which are to be welded together at said portions thereof; a pair of electrically conductive contact elements respectively engaging said blocks and being adapted to engage said workpieces, respectively, adjacent said portions thereof; and means adjustedly connecting each contact element to the block engaging the same for adjusting the position of each con-



tact element on the block engaging the same, whereby the positions of said contact elements with respect to each other may be regulated to promote uniform heating of the workpieces.

2,897,340
FABRICATION OF CONSUMABLE ELECTRODES
Robert J. Krieger, Las Vegas, Nev., assignor to Titanium Metals Corporation of America, New York, N.Y., a corporation of Delaware
Application September 3, 1957, Serial No. 681,686
4 Claims. (Cl. 219—117)



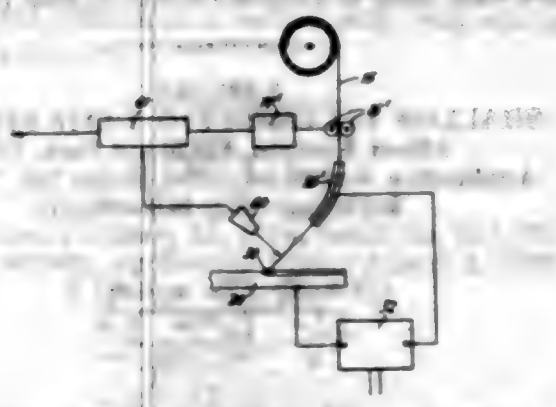
1. A method for fabricating a consumable electrode from subdivided metal which comprises; compressing said subdivided metal into elongated compacts having the form of a semi-section of a fabricated electrode with lands projecting from the section faces thereof, assembling a plurality of said compacts in section face to section face relationship and staggered longitudinally so that a portion of the length of each compact overlays a portion of the length of a facing compact with lands on said compacts abutting land free areas on facing compacts, pressing the overlaid portions of facing compacts together to place the compact section faces substantially in contact and during such pressing passing sufficient electric current through said overlaid compact portions to form a weldment out of each land and to thereby weld said compacts into an integrated, fabricated consumable electrode structure.

2,897,341
FUSIBLE METALLIC ARC METAL WORKING
Meredith H. MacKnight, Hartville, Ohio, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Application February 11, 1954, Serial No. 409,682
5 Claims. (Cl. 219—130)

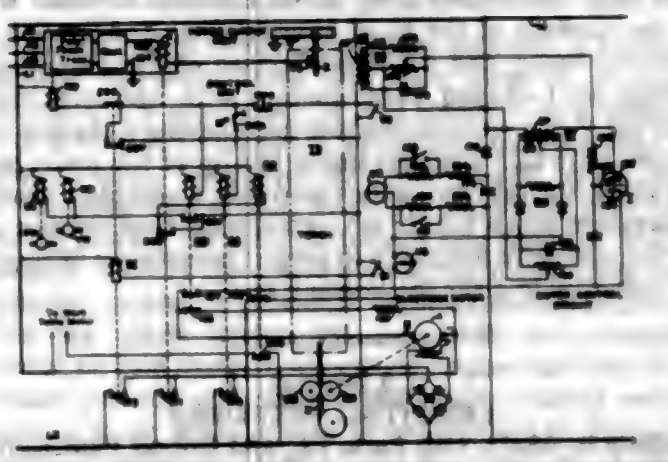
1. In an electric arc metal deposition process in which metal is deposited onto a fusible metal workpiece by energy liberated from at least one arc maintained between fusible metallic electrodes, one of which may comprise the metal workpiece, while at least one of such electrodes is fed toward an arc as it is fused; the novel steps comprising supplying to such process energy sufficient to maintain the arc voltage at at least its normal value plus additional energy, in excess of the arc liberated energy by an amount of the order of the arc

inwardly away from said one wall of said casing in a prisms whereby the lamps emit most of the direct light

liberated energy; and utilizing such excess energy in heating the fed electrodes to a value such that the electrode temperature equals the melting temperature at a point upstream of the arcing end thereof.

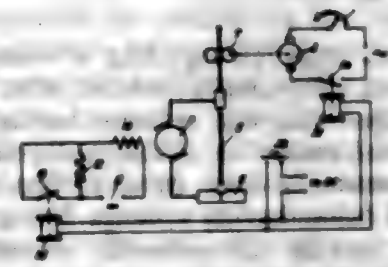


2,897,342
ARC WELDING APPARATUS
Harry J. Bichsel, East Aurora, and Alfred J. Bocinck, Clarence, N.Y., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application December 29, 1955, Serial No. 556,143
2 Claims. (Cl. 219—130)



1. Arc welding apparatus for welding work with a consumable electrode in a shield of gas comprising in combination, power supply means to be connected to said electrode and work when actuated impressing a potential for producing an arc between said electrode and work, shielding gas supply means when actuated supplying gas to shield said arc, a motor to be connected to said electrode for advancing said electrode to said work, an electric discharge device having an anode, a cathode and a control electrode, normally open circuit means for connecting said anode and cathode in energizing relationship with said motor so that the speed of said motor is determined by the current conducted between said anode and cathode, a first control circuit for said device including said control electrode and cathode and also including means for impressing a first biasing potential between said control electrode and cathode to cause said device to have a first conductivity, a second control circuit for said device including said control electrode and cathode and also including means for impressing a second biasing potential between said control electrode and cathode to cause said device to have a second conductivity higher than said first conductivity, said first biasing potential impressing means including means connected across said second biasing potential for deriving said first biasing potential as a selectable fraction of said second biasing potential, said first circuit being normally closed and said second circuit normally open, selectively operable means connected to said circuit means, said power supply means and said gas supply means for closing said circuit means and actuating said power supply means and said gas supply means substantially simultaneously, whereby said electrode is advanced to said work at a speed corresponding to said first conductivity and after said electrode contacts said work a closed electrical circuit is established through said electrode and work through which arc current flows, and means responsive to said closed circuit while closed as aforesaid and connected to said first and second control circuits for closing said second circuit and opening said first circuit.

2,897,343
METHOD AND APPARATUS FOR AUTOMATIC ARC WELDING WITH A FUSIBLE ELECTRODE
Pierre Regnauld, Le Vesinet, and Boris Bogatchoff, Paris, France, assignors to L'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude, Paris, France
Application October 4, 1956, Serial No. 614,020
Claims priority, application France October 11, 1955
25 Claims. (Cl. 219—135)



1. In an arc welding process using a fusible metal electrode fed automatically and a welding current source the voltage of which is constant or varies inversely to the intensity under normal welding conditions, a procedure for avoiding the formation of a crater in the welded seam when the electrode feed is slowed down, which comprises causing the voltage and intensity of the welding current to decrease gradually and simultaneously with the speed of electrode feed.

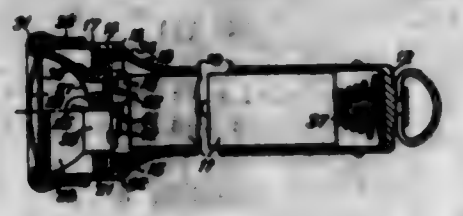
2,897,344
INSTRUMENT PANEL ILLUMINATOR
George Peterson, Jr., Wayne, Pa., assignor to Penn Keystone Corporation, Conshohocken, Pa., a corporation of Pennsylvania
Application May 2, 1957, Serial No. 656,537
6 Claims. (Cl. 240—8.16)

1. An instrument panel illuminator for an instrument having a casing, a sight opening in one wall of the casing and a dial within the casing adjacent the sight opening, comprising: a bracket member mounted within said casing outwardly adjacent the peripheral edge of said sight opening, said bracket comprising a body portion extending transversely of the casing and side wall portions on said body portion projecting therefrom toward the edge of the sight opening, a light source within said casing carried by said bracket body portion positioned outwardly adjacent the peripheral edge of said sight opening, and a plurality of spaced parallel louvers carried by said bracket wall portions and positioned intermediate said light source and said sight opening, said louvers extending angularly toward said instrument dial and diverging

said blocks and being adapted to engage said workpieces, liberated energy by an amount of the order of the ac-

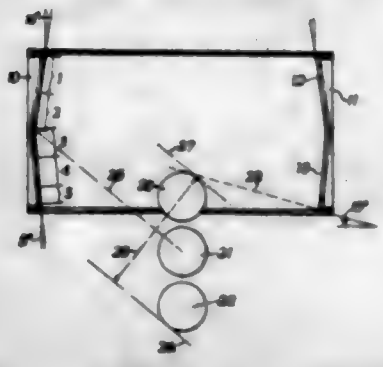
inwardly away from said one wall of said casing in a direction from the peripheral edge of the sight opening toward the center of the sight opening so that the light rays from said light source are prevented from passing through the sight opening by said louvers but may pass between said louvers toward said dial.

2,897,345
ELECTRIC LAMP
Vernon Walter Monger, Southampton, and Stuart Netherwood Barker, Hythe, England
Application April 22, 1957, Serial No. 654,290
10 Claims. (Cl. 240—10.66)



1. An electric lamp, comprising a metallic battery-casing having an open end, a metallic reflector of a size to enter said open end, said reflector having an external rim and a central socket for a lamp bulb, said rim being of external diameter at least equal to that of said open end, a resilient collar having a flange fitting around said open end and having an outwardly extending portion supporting said rim normally concentric with and in condition for rotation relative to said casing, and contact means for closing the battery circuit to said lamp bulb by relative rotation of said casing and reflector, said reflector rim being normally spaced from said open end and forming alternative contact means for closing said circuit by relative axial movement instead of relative rotation of said casing and reflector whereby the battery circuit to said lamp bulb may be intermittently closed by moving said reflector rim into engagement with said casing.

2,897,346
ELECTRIC LANTERNS
Richard William Stevens, London, England
Application June 28, 1955, Serial No. 518,605
Claims priority, application Great Britain June 29, 1954
1 Claim. (Cl. 240—25)

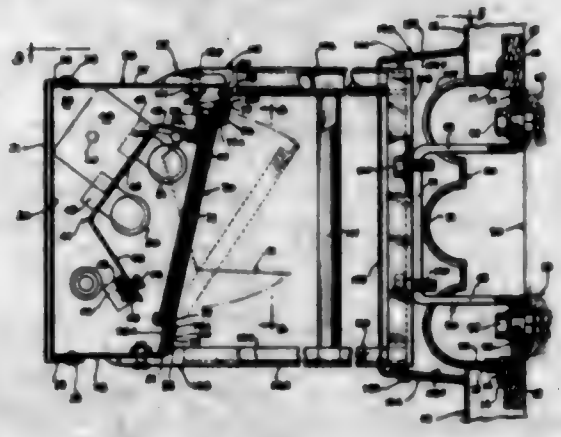


A lighting fixture comprising a refractor panel having a vertical array of horizontal prisms arranged in an upper group and a lower group, the upper group of prisms in said vertical array having their bases in a plane inclined inwardly and upwardly to direct light by total internal reflection at one face and by refraction, the lower group of prisms having their bases in a plane inclined inwardly and downwardly and a vertical array of tubular electric discharge lamps, each lamp being substantially horizontal, and only one of the lamps in said plurality being in the same horizontal plane as any of said prisms, but all of said lamps being positioned with respect to said refractor panel so that at least part of the upward light from each lamp will be redirected downwardly by said prisms whereby the lamps emit most of the direct light in a lateral direction and the upward component of light above each lamp is reflected down by said prisms.

2,897,347
SHALLOW FLUORESCENT LAMP FIXTURE
Albert Kartzen, Highland Park, Ill.
Application August 18, 1958, Serial No. 755,690
2 Claims. (Cl. 240—51.11)

1. A shallow fluorescent lamp fixture comprising in combination: a main metallic housing plate defining a rectangular roof web and depending skirts along three sides of the roof web, the main housing plate also defining a shallow inwardly turned depending lip along its fourth side; an elongated metallic wireway plate secured to the main housing plate flush with the skirt thereof on the side opposite to the fourth side, the wireway plate having a divider plate secured to its inboard edge and curving upwardly to the roof web to define a closed elongated wireway space and a V-slot along the inboard edge of the wireway plate; fluorescent lamp socket elements disposed within the confines of the main housing plate and outside the wireway space; and a diffuser formed of flexible material having an L-shaped conformation with one edge fitting into the V-slot and the opposite edge having a shallow outturned lip which registers under the lip of the main housing plate, the diffuser serving to define a complete shallow fluorescent lamp fixture of rectangular cross-section and having sufficient flexibility to permit removal by flexing the lip inwardly to clear the housing lip.

2,897,348
LIGHTING FIXTURES
William S. Akely, Oak Park, Ill., and Robert Paul Karlen, Pittsburgh, Pa., assignors to Guardian Light Company, Oak Park, Ill., a corporation of Illinois
Application February 20, 1956, Serial No. 566,701
8 Claims. (Cl. 240—73)

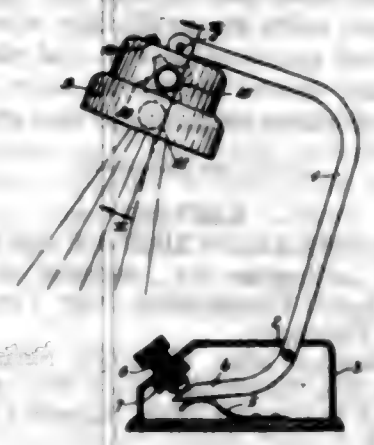


6. In a lighting fixture for illuminating a vertical wall, a housing having an open front, a lamp supporting reflector member, pivotally mounted within said housing adjacent the top thereof for movement from a retracted position within said housing, in which said reflector member faces downwardly and forwardly with respect to said open front, to a secondary position in which said reflector member is swung outwardly and upwardly toward said open front, a light transmissive shield pivotally mounted adjacent the lower edge of said open front for movement from a closed position, in which said shield closes said open front, downwardly and forwardly to an open position exposing the reflector, means for releasably

unidirectional pulses thereto to shift by increments the said motor; a second switching system for controlling the

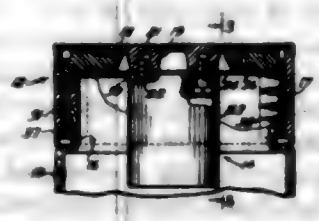
holding said shield in closed position, and bracket means secured to said housing and extending forwardly therefrom to afford a cantilever structure supporting said fixture in spaced relation to a vertical wall with said open front facing the wall.

2,897,349
STAND LAMP
André Ciret, Paris, France
Application February 24, 1956, Serial No. 567,579
Claims priority, application France March 2, 1955
2 Claims. (Cl. 240—81)



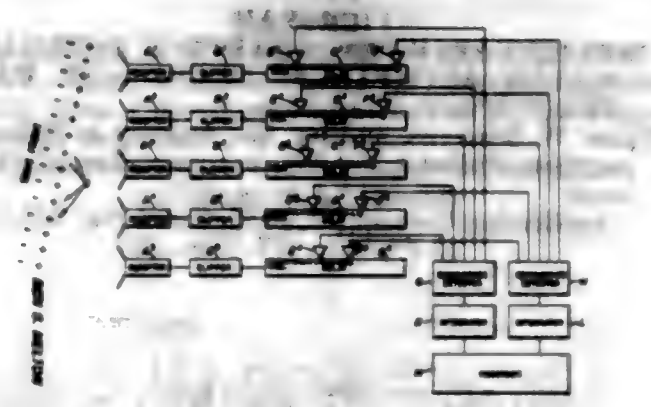
2. A stand lamp comprising a base member, a standard extending upwardly from said base member, a shade mounted at the upper part of said standard and comprising an open side substantially facing said base member, an exposed electric lamp bulb mounted in said shade adjacent the open side of said shade for projecting light rays inwardly toward the inner surface of said shade as well as outwardly directly from said bulb through said open side, a reflector means of prismatic form extending crosswise within the shade behind the said bulb and rotatably mounted on said shade to selectively dispose any one of its surfaces towards said bulb, a differently colored reflecting element on each surface of said prismatic form for selectively reflecting colored light rays into the path of light rays projected directly from said bulb through the open side of said shade, and a handle for rotatably moving said reflector means.

2,897,350
LIGHTING FIXTURE HAVING RESILIENTLY MOUNTED DIFFUSER GLOBE
Preston A. Jones, San Rafael, Calif., assignor to Preacolite Manufacturing Corporation, Berkeley, Calif., a corporation of California
Application May 28, 1957, Serial No. 662,286
10 Claims. (Cl. 240—128)



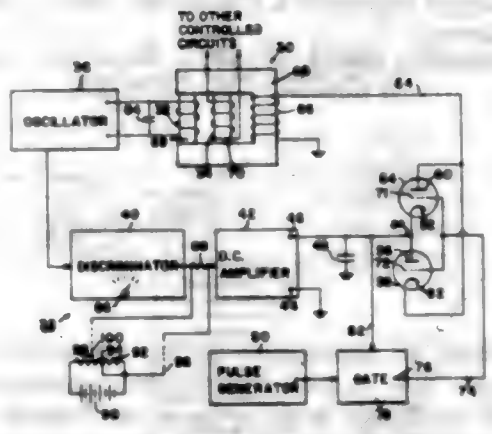
1. A lighting fixture comprising a housing having a top wall and a depending side wall, a lamp socket, means for securing said lamp socket in said housing, a pair of opposed arcuate internally threaded segments disposed within and extending along said housing adjacent the juncture of said walls and having angularly related portions disposed adjacent said top and side walls respectively, and means resiliently urging the portion of each segment adjacent said top wall towards said top wall while permitting limited rocking movement of the segments away from the top wall.

2,897,351
APPARATUS FOR TESTING FOR THE EXISTENCE OF SIGNALS IN THE PRESENCE OF OVERRIDING NOISE
Ben S. Melton, Bethesda, Md.
Application March 2, 1953, Serial No. 339,817
8 Claims. (Cl. 250—20)



1. An apparatus for testing for the existence of signals in the presence of overriding noise, comprising a plurality of antennas positioned in the paths of oncoming wave fronts, receptors connected with said antennas, delay lines connected to said receptors and having take-off taps, coincidence detectors connected to said take-off taps, and a recorder connected to each coincidence detector, one of said take-off taps being adjusted to render its associated coincidence detector responsive to wave front impulses having a given phase delay relationship with respect to the antennas, and another of said take-off taps being adjusted so that its associated coincidence detector will respond to impulses having another phase relationship to said antennas, said recorders recording instantaneous polarity coincidences of impulses appearing at said take-off taps.

2,897,352
SYSTEM USING MAGNETIZED CONTROLLABLE INDUCTOR OPERATED STEPWISE TO CONTROL FREQUENCY AND THE LIKE
William R. Smith-Vaniz, Jr., Norwalk, Conn., assignor to C.G.S. Laboratories, Inc., Stamford, Conn.
Application August 16, 1954, Serial No. 449,881
11 Claims. (Cl. 250—20)



3. A radio receiver control system comprising a radio receiver including a frequency tuning circuit, controllable inductance means coupled to said frequency tuning circuit and including saturable magnetic material, electromagnetic means for regulating the saturation of said saturable material including a control winding and a control core portion of high effective retentivity such as to hold said saturable magnetic material at a significant degree of saturation in the absence of any current in said control winding, an electrical pulse generating circuit connected to said control winding and arranged to apply

2,897,356
PHASE STABILIZED PULSE GENERATOR

by one of said tubes the voltage then applied to the cathodes of the remaining said tubes is such as to prevent

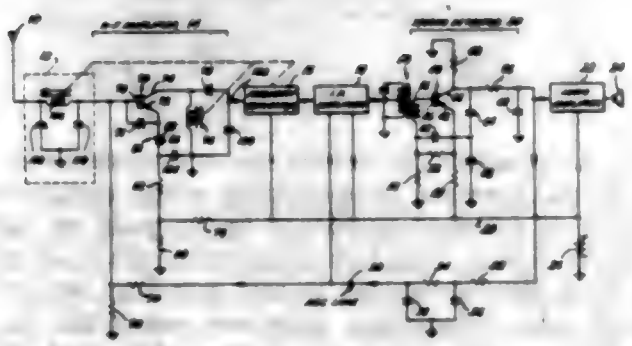
magnetic condition of said control core portion in a first sense, and control means coupled to said control core portion and actuable to shift the magnetic condition of said control core portion in the opposite sense.

2,897,353

NON-LINEAR DEVICE VARYING IMPEDANCE MATCH BETWEEN ANTENNA AND RADIO FREQUENCY STAGES

Walter W. Schweins, Ardsley, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Application October 20, 1955, Serial No. 541,659
13 Claims. (Cl. 250—20)



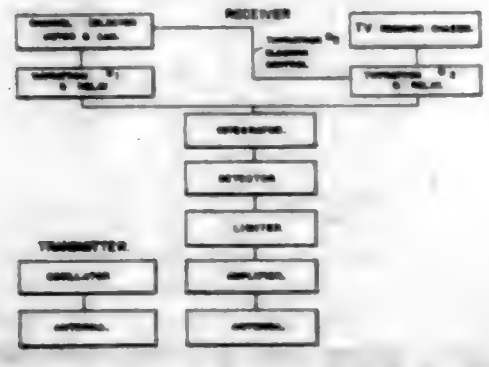
8. A signal-translating system comprising a transistor having emitter, base and collector electrodes; a non-linear direct-current-conductive impedance element having one terminal connected to said emitter electrode of said transistor; means for applying an input signal between said base electrode of said transistor and the other terminal of said non-linear element; means responsive to said input signal for supplying to said base electrode a control voltage the magnitude of which is directly dependent on the amplitude of said input signal; and means for deriving from said collector electrode an output signal produced in response to said input signal.

2,897,354

REMOTE CONTROL SYSTEM FOR A TELEVISION RECEIVER

Joseph G. Andre Bourget, Chicago, Ill., and Christian Carl Pfitzer, Cincinnati, Ohio, assignors to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware

Application March 15, 1957, Serial No. 646,253
6 Claims. (Cl. 250—20)



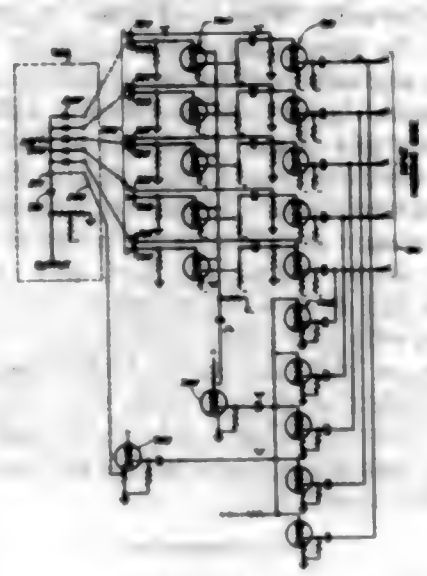
3. In a system for controlling the application of power to the chassis of a television and for controlling the operation of the tuner of said television, said tuner being driven by an electric motor, the combination comprising: a generator remote from said television for generating pulses of magnetic energy in the audio frequency range; a receiver mounted on said television chassis for receiving, amplifying and detecting said pulses of magnetic energy; a first switching system for controlling the operation of application of power to said television chassis; a first electronic valve for controlling said first switching system; a second electronic valve for controlling said second switching system, said second electronic valve being normally conditioned for non-conduction; means for simultaneously coupling said detected pulses of magnetic energy to said first electronic valve and to said second electronic value to render said first electronic valve conductive to operate said first switching system to energize said motor; and means associated with said motor and said first switching system for de-energizing said motor after a predetermined interval and for conditioning said second electronic valve for conduction, whereby a second series of detected pulses coupled to said electronic valves will render said second electronic valve conductive to control the application of power to said chassis.

2,897,355

DIODE COINCIDENCE GATE

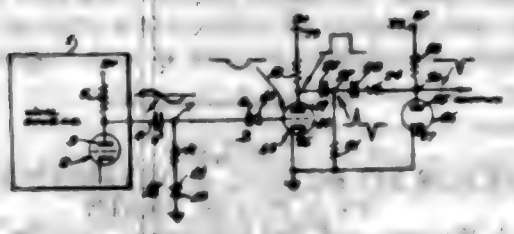
Arnold Lesti, Arlington, Va., assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Original application May 15, 1948, Serial No. 27,296, now Patent No. 2,619,548, dated November 25, 1952. Divided and this application August 23, 1952, Serial No. 305,973
4 Claims. (Cl. 250—27)



1. A decoder for accepting a distinctive code designation appearing on one or more of a set of n conductors as one or more simultaneous voltages, comprising $n\times2$ terminals, means for connecting each of said n conductors with a separate pair of said $n\times2$ terminals, said connecting means including means for producing a voltage on the first of said pair of $n\times2$ terminals when a voltage appears on the associated n conductor and means for producing a voltage on the second of said pair of $n\times2$ terminals when no voltage appears on said associated n conductor, a source of voltage, an output terminal, a dropping resistor connected between said source of voltage and said output terminal, n connecting paths connecting said output terminal to a predetermined combination of n of said $n\times2$ terminals, said combination including one terminal of each of said pairs of $n\times2$ terminals, and a unidirectional current-carrying device in each connecting path, so poled as to permit current to flow through said dropping resistor when the terminal to which said path is connected has no voltage thereon, whereby the voltage on said output terminal is raised to substantially the voltage of said source only when all the terminals connected thereto have a voltage thereon so as to block all the unidirectional current-carrying devices connected to said output terminal.

George W. Gray, Lambertville, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application August 21, 1953, Serial No. 375,587
7 Claims. (Cl. 250—27)

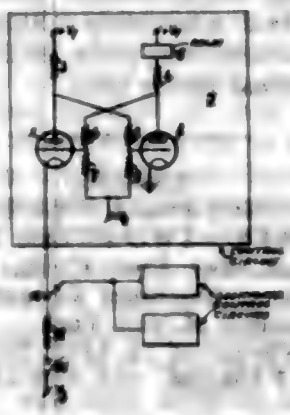


1. A wave translating circuit comprising a vacuum tube including cathode, grid, and plate electrodes; means to apply a positive potential to said plate relative to said cathode, means connecting said cathode to a point of reference potential, an input wave source, means including, in the order named, a coupling capacitor and a first diode coupling said wave source to the grid of said vacuum tube; a resistor and a second diode connected in series from the junction point between said coupling capacitor and said first diode to said point of reference potential, a differentiator circuit coupled to the plate of said vacuum tube, and means coupled to the output of said differentiator circuit to clip the output pulses of one polarity from said differentiator circuit.

2,897,357

CIRCUIT FOR TRIGGERING ONE OF A PLURALITY OF COMMON CATHODE COUPLED CONTROL CIRCUITS

Pieter Harkema, Hilversum, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application June 3, 1954, Serial No. 434,215
Claims priority, application Netherlands June 4, 1953
2 Claims. (Cl. 250—27)

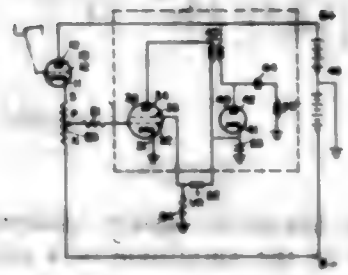


1. A circuit arrangement for actuating one of a plurality of individual control circuits, each said individual control circuit comprising an electronic trigger circuit adapted to alternately occupy two electrically stable conditions and comprising a discharge tube having a cathode and a control electrode, means for biasing said tube to cut-off in a first one of said conditions, means for biasing said tube for conduction in the second of said conditions, means for increasing the voltage at said control grid when said tube becomes conductive, a common point connected electrically to the cathodes of said tube of all of said individual control circuits, a source of voltage, a resistor, and actuating means comprising a switch for connecting said resistor between said common point and said source of voltage thereby to apply said voltage to all of said cathodes, said voltage having a value to enable all of said tubes to become conductive, said resistor having a value with respect to said voltage value such that upon conduction said remaining tubes from becoming conductive, whereby only one of said tubes becomes conductive in response to the actuation of said switch.

2,897,358

ADJUSTABLE HORIZONTAL SWEEP CIRCUIT

Robert F. Casey, Pompton Plains, N.J., assignor to Allen B. Du Mont Laboratories, Inc., Clifton, N.J., a corporation of Delaware
Application August 6, 1954, Serial No. 448,176
6 Claims. (Cl. 250—27)

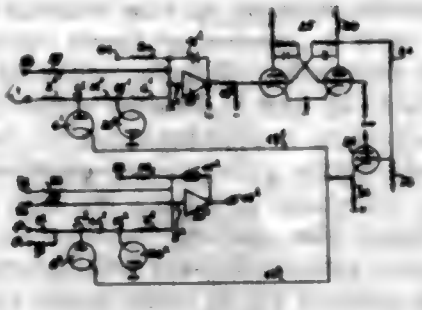


1. In combination with a sweep generator having boost voltage circuitry, a sweep amplitude control circuit comprising: means to provide input signals progressively variable from a large amplitude at a low D.C. level to a small amplitude at a relatively high D.C. level; an amplifier having a control grid and a screen grid; means to apply said input signals to said control grid; and means to apply to said screen grid a high potential during the application of said large amplitude, low D.C. level input signals, and a low potential during the application of said small amplitude, high D.C. level input signals.

2,897,359

ELECTRONIC SWITCHING MEANS

Francois Henri Raymond, Saint-Germain-en-Laye, and Monique Berthe Lilamand, Paris, France, assignors to Societe d'Electronique et d'Automatisme, Courbevoie, France
Application October 6, 1954, Serial No. 460,722
Claims priority, application France November 28, 1953
22 Claims. (Cl. 250—27)

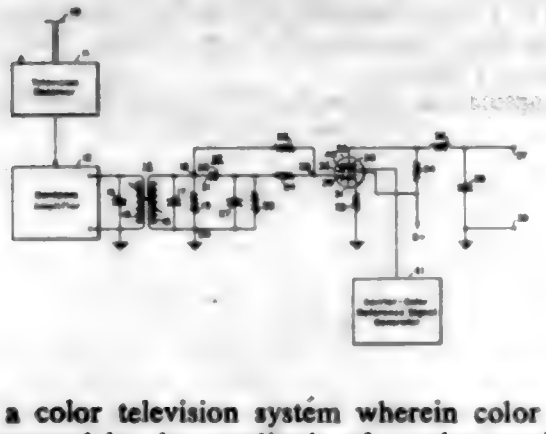


1. An electronic switch comprising in combination a series resistance attenuator, means for applying to one end thereof an electric input signal to be derived with a predetermined attenuation at the other end thereof, a diode element having one of its electrodes connected to an intermediate point of said attenuator, at least one further diode element having one of its electrodes connected to a further point of said attenuator which is below the first in the direction of transmission, and separate means for selectively biasing both diode elements to be substantially simultaneously non-conducting and substantially simultaneously conducting, respectively; the latter means including means for biasing said diode elements differentially so as to reduce the residual voltage at said further diode element with respect to that at the first diode element.

2,897,360
COLOR TELEVISION SYNCHRONOUS DEMODULATOR CIRCUIT

Charles W. Baugh, Jr., Montgomery Township, Somerset County, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application August 17, 1955, Serial No. 529,008
4 Claims. (Cl. 250—27)

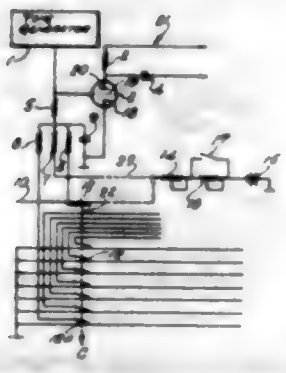


1. In a color television system wherein color signals are represented by the amplitude of a color carrier at a plurality of phase angles, a circuit for recovering a color signal represented by the amplitude variations of the color carrier comprising in combination, a source of waves including a modulated carrier color signal, demodulation means coupled to said source for operating on a portion of said modulated carrier signal to derive a signal having substantially the amplitude characteristics of the modulation envelope, a source of color carrier reference corresponding to one of said phase angles, and a synchronous modulator coupled to said sources and said demodulation means so as to modulate said color carrier reference in accordance with said carrier color signal and said derived signal.

2,897,361
CIRCUIT ARRANGEMENT FOR ELECTRICAL MUSICAL INSTRUMENTS

Ernst Schreiber, Berlin, Germany, assignor to VEB Werk für Fernmeldewesen, Berlin-Oberschoeweide, Germany

Application January 31, 1956, Serial No. 562,571
Claims priority, application Germany April 21, 1955
4 Claims. (Cl. 250—27)

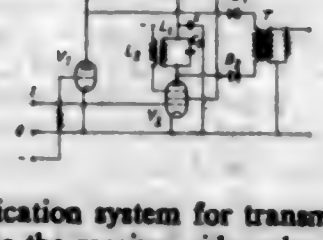


1. In an electrical musical instrument having a plurality of keys; a tone attack and decay control arrangement for each key, comprising an electronic vacuum tube provided with a cathode and a grid, grid bias means including a resistor connected to said grid, and a source of voltage connected between said resistor and said cathode capacitance means connected in parallel with said grid bias means and defining with the latter an R–C circuit controlling in accordance with its time constant the rate of increase and decrease of bias voltage applied to said grid, additional resistance means arranged for connection in parallel with said resistor, and switch means operable by a respective key, said switch means being open upon depression of said respective key for disconnecting said additional resistance means from said resistor, and being closed upon release of said respective key for connecting said additional resistance means to and in parallel with said resistor, whereby the tone decay duration is reduced, a second resistor, and second switching means operable by said respective key for connecting the second resistor in parallel with said capacitance means upon depression of said respective key and for disconnecting one terminal of said second resistor from said capacitance means upon release of said respective key.

2,897,362
MEANS FOR SELECTING A DETERMINED PULSE IN A PULSE TRAIN

Stig Erik Warring and Jarl Mornmar Thorsén, Hagersten, Sweden, assignors to Telefonaktiebolaget L M Ericsson, Stockholm, Sweden, a corporation of Sweden

Application February 14, 1956, Serial No. 565,502
Claims priority, application Sweden March 16, 1955
3 Claims. (Cl. 250—27)

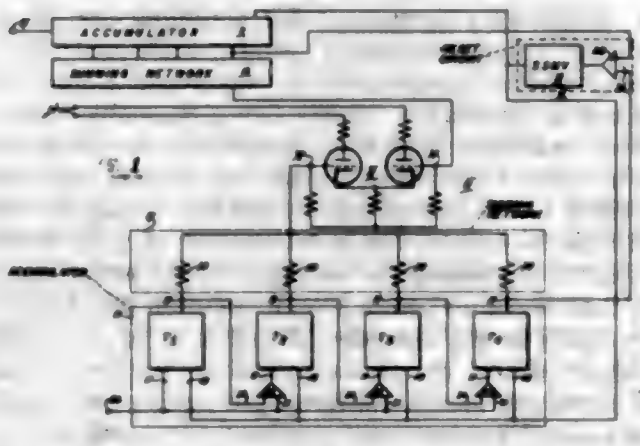


1. A communication system for transmitting from the transmitter side to the receiver side pulse trains including intelligence pulses of equal duration spaced by substantially uniform time intervals, the transmitter side of said system comprising means for generating a non-modulated synchronizing pulse having the same duration as all the other pulses in a pulse train, and means for causing said synchronizing pulse to appear in the time interval between two pre-determined pulses in the pulse train; and the receiver side of said system comprising means for generating an alternating voltage having a frequency constant and equal to the inverted value of said uniform time intervals between the intelligence pulses in the pulse trains, coincidence circuit means and circuit means for simultaneously feeding to said coincidence means said alternating voltage and pulse train including the synchronizing pulse, said coincidence means passing synchronized pulses only.

2,897,363
SYSTEM FOR DERIVING A PHASE ERROR SIGNAL BETWEEN TWO PULSE TRAINS

Henry L. Gorgas, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application November 15, 1957, Serial No. 696,867
7 Claims. (Cl. 250—27)



1. A system for providing a control voltage corresponding to the relative phase displacement between correspondingly positioned pulses of first and second pulse trains, said system comprising in combination first and second

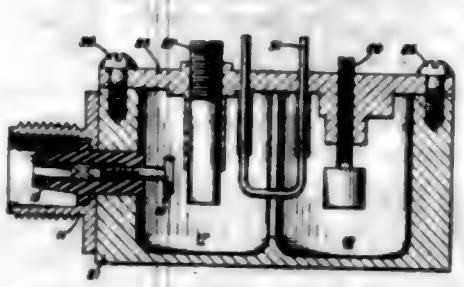
accumulators associated respectively with said first and second pulse trains, each of said accumulators having a plurality of bistable devices and means interconnecting said devices to cause successive said devices to be operated from one state to another sequentially in response to successive pulses of the associated pulse train, first and second summing means associated respectively with said first and second accumulators for providing first and second voltages each of which is variable in steps corresponding to the number of pulses entered into the associated accumulator, and comparison means responsive to said first and second voltages for providing a control voltage which is a function of the relative phase displacement of said first and second pulse trains.

2,897,364

TUNED BAND-PASS CRYSTAL HOLDER

William C. Farmer, Baltimore, Md., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application November 9, 1955, Serial No. 546,015
1 Claim. (Cl. 250—31)



A crystal holder comprising: input coaxial line means for connection to a source of input signal, a high Q resonant cavity, a low Q resonant cavity which is an open circuit tapped coaxial line, said cavities being formed in a conductive base, said low Q resonant cavity having a center conductor and an outer conductor, means for individually tuning said high Q and low Q cavities, input coupling means for coupling a signal from said input coaxial line means to said high Q resonant cavity, crystal retaining means for loading said low Q resonant cavity and directly connecting one terminal of a crystal to the center conductor of said low Q cavity, output means for connecting the other terminal of said crystal and the outer conductor of said low Q cavity to an output circuit, and adjustable loop coupling means having a first position for decoupling and a second position for the maximum coupling of said low Q cavity and said high Q cavity, said loop coupling means in said first position being in contact with the base of said holder to thereby decouple said cavities, means for tuning said cavities for maximum output when said loop coupling means is in said first position, said loop coupling means being adjustably moved to said second position to provide maximum coupling without returning said cavities, whereby wide band selectivity is obtained with practically no insertion loss over a given pass band.

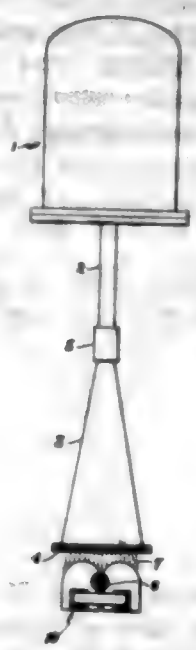
2,897,365

IRRADIATION METHOD AND APPARATUS

Davis R. Dewey II, Lincoln, and John G. Trump, Winchester, Mass., assignors to High Voltage Engineering Corporation, Cambridge, Mass., a corporation of Massachusetts

Application October 8, 1956, Serial No. 614,661
3 Claims. (Cl. 250—49.5)

1. Apparatus for irradiating an object with high-energy electrons comprising in combination an electron accelerator adapted to produce a beam of electrons whose cross-section is extended in at least one plane, means for supporting an object to be irradiated in the path of said beam, and means for producing two substantially parallel but substantially oppositely oriented magnetic fields in the path of said beam of extended cross section such



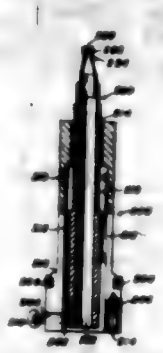
that the electrons converge upon the object from several aspects.

2,897,366

EXTERNALLY ADJUSTABLE ELECTRON MICROSCOPE FOCUSING AID

Lee D. Cochran, Kensington, Md., assignor to Canal Industrial Corporation, Bethesda, Md., a corporation of Maryland

Application April 1, 1958, Serial No. 725,615
5 Claims. (Cl. 250—49.5)



1. In combination with an electron microscope having electro-magnetic lenses in column, a lens aperture cap positioning assembly, externally adjustable including: an insert seated axially within one lens, an externally centerable core held by the insert and in axial relation thereto, said core retaining the aperture within the back focal plane of the lens and a housing removably sealed against the bottom of the objective lens, said housing mounting externally manipulable core positioning means, the positioning means being sealed in the housing in engageable relation to the core.

2,897,367

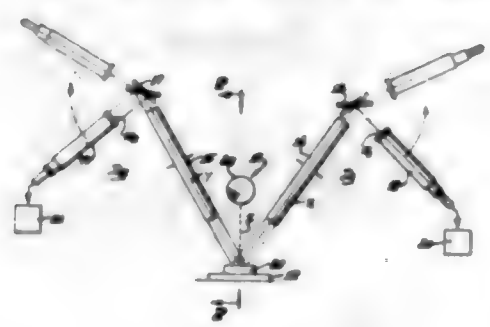
SPECTROSCOPY

George Andermann, Los Angeles, and Joseph Wesley Kemp, La Canada, Calif., assignors, by mesne assignments, to Applied Research Laboratories, Inc., Glendale, Calif., a corporation of Delaware

Application April 25, 1956, Serial No. 580,583
14 Claims. (Cl. 250—53)

1. In a system for determining the concentration of an element in a test sample of a mixture of chemicals by measuring the strength of X-rays emitted from the element forming only a part thereof, the improvement which comprises exposing said test sample to a heterochromatic beam of X-rays some of which fall within an X-ray absorption region of said element, monochromatizing X-rays

emerging from said sample at a first wavelength characteristic of the fluorescent X-ray emission spectrum of said element to provide a first monochromatic X-ray beam, monochromatizing X-rays scattered from said sample at a wavelength different from any wavelength characteristic of the emission spectrum of said element to provide a second monochromatic X-ray beam, separately



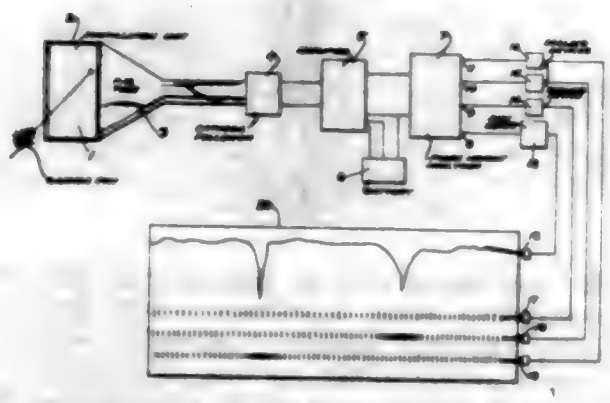
detecting both monochromatic X-ray beams, making a measurement of the ratio of intensities of said detected X-ray beams, similarly making a measurement of such ratio for at least one related sample containing a known concentration of said element, and comparing said measurements to ascertain the concentration of said element in said test sample.

2,897,368

AERIAL GEOPHYSICAL EXPLORATION WITH SCINTILLATION SPECTROMETER

Hans T. F. Lundberg, Toronto, Ontario, and Robert W. Pringle, Kenneth I. Roulston, and George M. Brownell, Winnipeg, Manitoba, Canada

Application March 18, 1954, Serial No. 417,154
7 Claims. (Cl. 250—71)



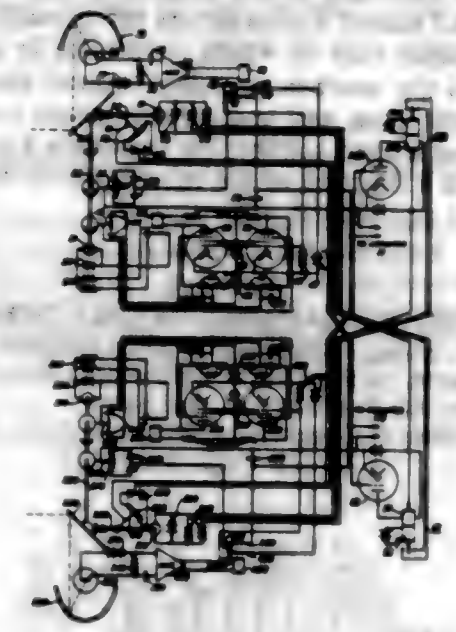
1. An instrument designed and adapted for aerial geophysical exploration in the search for and identification of mineral deposits such as ores, oil and gas comprising, means for reacting to the impact of gamma rays from the earth's surface by the production of photon scintillations, photomultiplier means operatively connected with the said gamma ray reacting means for receiving such scintillations and converting them into photoelectrons sufficient to produce voltage pulses, means for amplifying said pulses, pulse height analysing means for receiving such amplified pulses and discriminating them both integrally and differentially, and means operatively connected with said analysing and discriminating means for simultaneously producing records showing both amplitude variations in total gamma ray intensity received from the terrain being explored and density variations in gamma ray intensity derived from at least one selected source of the rays in said terrain, the said scintillation means being of such size as to enable the simultaneous production of both said records and of a thickness greater than the range of secondary particles produced in said scintillation means by the gamma radiation.

2,897,369

RADIATION SENSITIVE SCANNING SYSTEM

Raymond W. Ketchledge, Jamaica, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application December 28, 1944, Serial No. 570,181
13 Claims. (Cl. 250—83.3)



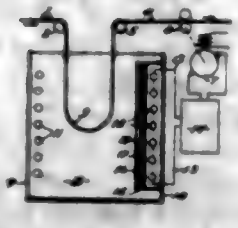
1. A signal translating system comprising wave energy responsive means, means for actuating said first means to scan a field in one dimension, operating means actuated in accordance with energy received by said first means, and means controlled in accordance with energy emanating from an object in said field for actuating said first means to align it with said object in a second dimension.

2,897,370

LOOP CONTROL WITH PHOTOTUBES

John D. Souter, Lyndhurst, Ohio, assignor to The Clark Controller Company, Cleveland, Ohio, a corporation of Ohio

Application April 16, 1956, Serial No. 578,429
6 Claims. (Cl. 250—219)



1. In a control apparatus, a vertically extending source of light; a photo tube having a vertically extending light sensitive element; a first, second and third vertical wall of opaque material, spaced apart and substantially parallel, and between the photo tube and the light source, the third wall being spaced from the photo tube; a depending loop of opaque sheet material between the light source and the first wall; means causing the loop to lengthen and shorten; first, second and third windows in a horizontal series in the respective first, second and third walls, comprising each a hole through the wall, the holes being of substantially the same size, and smaller than the sensitive element of the photo tube and horizontally aligned with each other and with the sensitive element; the walls being spaced apart so that a conical beam of light from the source may enter the first hole along the upper edge thereof and emerge along the lower edge of the third hole, and enter along the lower edge of the first hole and emerge along the upper edge of the third hole, the emerging beam impinging on and illuminating the sensitive element; the beam passing freely through the second hole; and the light source and the loop being spaced from the first wall far

enough so that the conical beam is of substantial vertical thickness and will be gradually intercepted by the loop when it lengthens, and gradually reduce the illumination of the sensitive element.

2,897,371

SPECTROSCOPY

Maurice F. Hasler, Glendale, Calif., assignor, by mesne assignments, to Applied Research Laboratories, Inc., Glendale, Calif., a corporation of Delaware

Application August 1, 1956, Serial No. 601,565
17 Claims. (Cl. 250—83.3)

15. In a device for measuring the thickness of a coating of one material on a base of another material in an object under investigation: means including a source of X-rays for directing X-rays through said coating toward said base material whereby such X-rays penetrate said coating and X-rays are returned from said object through the external surface of said coating; means for detecting such returned X-rays in two different wavelength ranges, the intensities of said X-rays in said two wavelength ranges being different functions of the thickness of said coating; and means for measuring the ratio of the intensities of the detected X-rays in said two ranges.

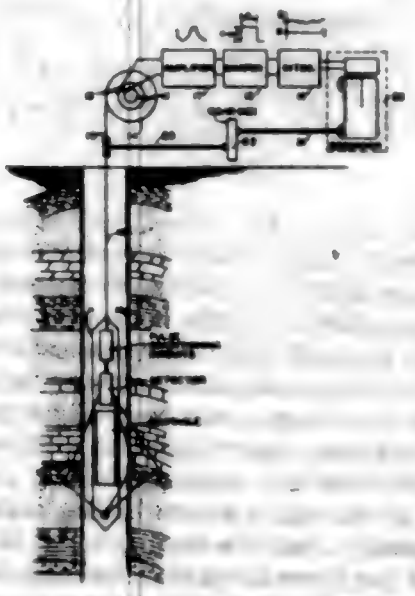
2,897,372

DIRECTIONALLY SENSITIVE SHALLOW IONIZATION CHAMBERS FOR NEUTRON WELL LOGGING

Robert E. Fearon and Jess M. Thayer, Tulsa, Okla., assignors to Well Surveys, Inc., a corporation of Delaware

Original application July 30, 1949, Serial No. 107,806, now Patent No. 2,712,081, dated June 28, 1955. Divided and this application April 19, 1954, Serial No. 423,971

11 Claims. (Cl. 250—83.6)



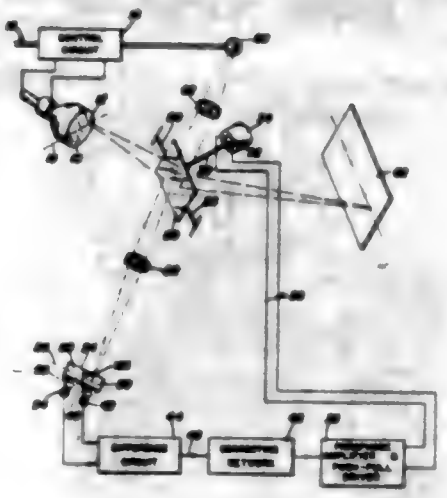
3. An apparatus for producing a neutron log of a well that comprises a source of fast neutrons, means for traversing the well with the source to effect bombardment of the formations with fast neutrons, means disposed adjacent said source and adapted for movement therewith for detecting fast neutrons which have been diffused by the formations and returned to the well, said detecting means comprising a shallow ionization chamber sensitive to direction of incident fast neutrons, means for recording signals resulting from said detection in correlation with the depth at which detection occurred, means for transmitting the signals from the detector to the recording means.

2,897,373

SERVO PROJECTOR

Arnold Lesti, Arlington, Va., assignor to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Application June 18, 1954, Serial No. 437,848
38 Claims. (Cl. 250—201)



1. A light energy servo system comprising a primary source of moving light, means responsive to the instantaneous positions of said light for producing electrical signals, a reflective member arranged to direct said primary light to said means, means operatively connected with said member and said responsive means for deflecting said member to positions corresponding to the intensity and sense of the signals, and a secondary light source reflected by said member thereby following movements of the primary light.

2,897,374

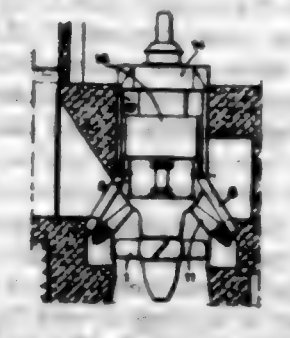
WITHDRAWN

2,897,375

LOW-HEAD VERTICAL-SHAFT HYDRO-ELECTRIC SET

Charles Marie Fevre, Le Creusot, France, assignor to Société des Forges et Ateliers du Creusot, Paris, France, a French company

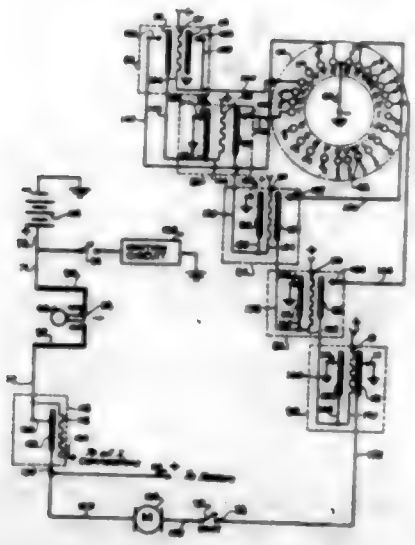
Application November 23, 1956, Serial No. 623,960
Claims priority, application France November 30, 1955
3 Claims. (Cl. 290—52)



1. In a low-head vertical-shaft hydro-electric set including a turbine wheel having a hub, a spiral chamber, an annular outlet duct for said chamber, a cylindrical metal caisson forming a central lining for said chamber

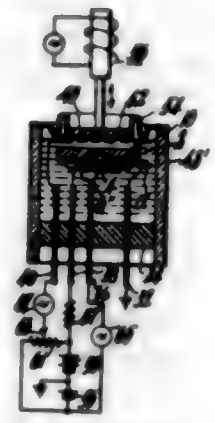
and having a diameter substantially equal to the diameter of said wheel, a truncated conical portion of said caisson forming a central core for said outlet duct and fairing into the hub of said wheel, inclined pre-guiding blades supporting said caisson in said chamber and distributor blades articulated about their long axis and substantially normal to the profile of said truncated conical portion, said wheel being mounted in said outlet duct.

2,897,376
CODE SET KEYLESS STARTER FOR AUTOMOBILES
Werner Rieckman, Mattituck, N.Y.
Application September 4, 1958, Serial No. 759,062
5 Claims. (Cl. 307—10)



5. A control device for activating a starting circuit in a motor vehicle including a series connected starter motor and a starter switch, comprising a rotatable dial positionable in a plurality of positions, certain of said positions constituting a predetermined coded sequence, means operatively connecting said dial and circuit whereby said circuit is closed upon rotation of said dial to each of said certain positions in said predetermined coded sequence, said means comprising a second dial having a safety switch disposed in said circuit for normally deactivating the circuit, said safety switch being operable to close said circuit for rotating the first-named dial to said certain positions in turn, said means further comprising a series of electric time delay relays, each of said relays including a relay circuit, a plurality of contact elements arranged circularly, certain of said elements being connected respectively to the relay circuits, the first-named dial being positioned to close said relay circuits in said predetermined coded sequence, a power supply source connected to said starting circuit in circuit with the last relay in said series of relays, said power supply source being directly connected to said starter motor and starter switch when said last relay is actuated, and another time delay relay connected in said starting circuit, said other time delay relay being connected to others of said contact elements and operative to open said starting circuit when the first-named dial is in other positions than said certain positions, said series of relays each including a heater element, two bimetallic elements, and two fixed contact elements normally open and out of contact respectively with the bimetallic elements, one of the bimetallic elements and one of the fixed contact elements constituting a holding circuit for said heater element in each relay in said series of relays, the other bimetallic element and the other fixed contact element providing means for completing a power supply circuit to the heater element in each succeeding relay in said series of relays.

2,897,377
SEMICONDUCTOR SURFACE TREATMENTS AND DEVICES MADE THEREBY
Herbert Nelson and Arnold Moore, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Application June 20, 1955, Serial No. 516,388
10 Claims. (Cl. 307—88.5)



9. An electrical device comprising a body of a semiconductive material selected from the group consisting of germanium and silicon, a first electrode in rectifying contact with said body for injecting minority charge carriers therein, a second electrode in rectifying contact with said body and in cooperative relation to said first electrode for collecting said carriers, an electric field-sensitive surface recombination inhibitor in contact with said body for reducing the recombination rate of said carriers, and means to produce an electric field in said inhibitor adjacent to said body for selectively varying the recombination rate of said carriers.

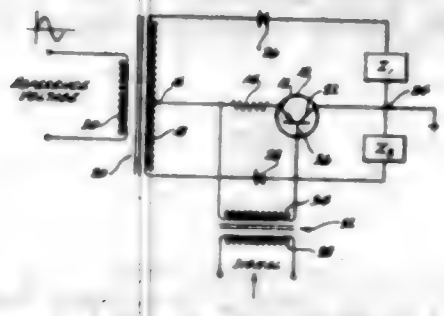
2,897,378
SEMI-CONDUCTOR SIGNAL TRANSLATING CIRCUITS
John Paul Jones, Jr., Pottstown, Pa., assignor to Navigation Computer Corporation, a corporation of Pennsylvania
Application December 14, 1955, Serial No. 553,173
3 Claims. (Cl. 307—88.5)

1. A transistor signal translating circuit comprising, in combination, a transistor having a current gain of less than unity as defined by the ratio of collector current increments to base current increments and including base, emitter, and collector electrodes, means including an input terminal providing a source of input pulses of predetermined polarity, means coupling said input terminal with said base electrode, means providing a voltage wave in response to said input pulses having a first portion of said one polarity and a second portion of an opposite polarity, said last named means including a damped parallel resonant circuit connected between said base and emitter electrodes for applying said voltage wave to said base electrode through said coupling means to initially drive said transistor into saturation and for subsequently rapidly reducing the collector current flow of said transistor, and means for deriving an output voltage pulse of said opposite polarity and having a relatively rapid rise and fall time from said collector electrode.

2,897,379
TRANSISTOR PHASE DISCRIMINATOR

James G. Hinsdale, Scottsdale, Ariz., assignor to Lear, Incorporated, Santa Monica, Calif.

Application October 25, 1956, Serial No. 618,380
10 Claims. (Cl. 307—88.5)

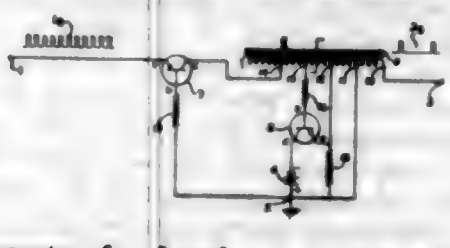


1. A phase discriminator comprising first and second load impedance elements each having a pair of terminals, one of each pair being connected to a point of reference potential, first and second unidirectionally conductive devices, a transformer including a secondary winding having end terminals and a center-tap, said first and second unidirectionally conductive devices being connected respectively between the end terminals of said secondary winding and the other terminals of said load impedance elements, said uni-directionally conductive devices being connected in back-to-back relation between said other terminals and said end terminals, a transistor having an emitter electrode, a base electrode and a collector electrode, means connecting said emitter electrode and collector electrodes between said center-tap and said point of reference potential, means to apply a reference alternating voltage of fixed frequency to said transformer and means to apply a cyclical signal voltage of said frequency between said base electrode and one of said emitter and collector electrodes.

2,897,380
MAGNETIC PULSE COUNTING AND FORMING CIRCUITS

Carl Neitzert, Chatham Township, Morris County, N.J., assignor to General Time Corporation, New York, N.Y., a corporation of Delaware

Application September 19, 1957, Serial No. 684,888
11 Claims. (Cl. 307—106)

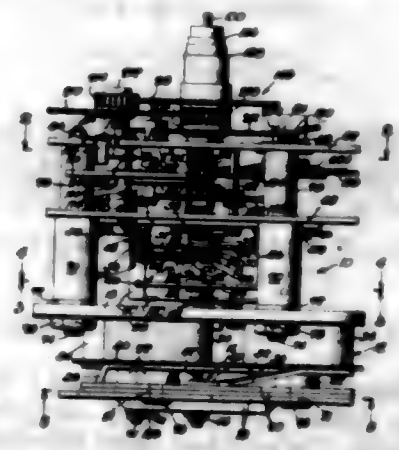


11. Apparatus for forming an output pulse for each selected count of one or more input pulses comprising a saturable reactor core having a substantially rectangular hysteresis loop and a rising magnetization characteristic beyond the loop saturation level, a multiple turn winding on said core including a plurality of taps having numbers of turns between them, means for applying input pulses between selected input taps having the number of turns between them for driving the core from a negative to a positive saturation level by pulse current flow during the number of pulses in said selected count and further to drive the core beyond said saturation level by saturation current flow during a portion of the last pulse in said count, a switching circuit comprising junction transistor having first, second, and, third electrodes, a single source of direct current voltage, means connecting said first electrode to an intermediate winding tap, means connecting said second electrode in series with said source to a tap removed in turning in one winding direction with respect to said intermediate tap, for resetting the core to its negative saturation level when resetting conduction between said first and second electrodes is not blocked, means connecting the third electrode to a tap removed in turns in the other winding direction from said intermediate tap to apply an induced resetting current unblocking potential between the first and third electrodes during the core flux drop upon termination of said saturation current and further during resetting of the core to negative saturation, and an output circuit winding on said core for supplying output pulses induced by the resetting flux change.

2,897,381
COMMUTATOR-TYPE ELECTRIC MOTOR OF REGULATED OUTPUT TORQUE

Walter Kohlhagen, Elgin, Ill., assignor to The E. Ingraham Company, Bristol, Conn., a corporation of Connecticut

Application May 1, 1957, Serial No. 656,280
1 Claim. (Cl. 310—40)



In a motor, the combination with a field structure having coils, and a rotor structure, a commutation device for sequentially energizing said coils to produce in said field structure a rotary magnetic field for driving said rotor structure in phase therewith, said device including rotary and fixed units of which one unit is a commutator with conductive segment elements and the other unit is a set of brush elements, with the elements of said fixed unit electrically connected with said coils and said rotary unit being in substantial axial alignment with said rotor structure; bearing means for said rotary unit; a preloaded spiral coiled spring interposed and forming the sole driving connection, as well as serving as a flexible coupling, between said rotor structure and rotary unit and urging the latter in the drive direction of the former; companion stop shoulders on said rotor structure and rotary unit, respectively, permitting relative rotation between said rotary unit and rotor structure through a limited range within part of which the latter may turn in phase with the magnetic field, and to one end of which said spring will, on deenergization of said coils, urge said rotary unit and rotor structure so that the latter will continue in the same phase relation with the magnetic field on reenergization of the respective coils, the stop shoulder on said rotary unit being electrically insulated from at least one of said elements thereof; and electrical connectors between a current source and said elements of said rotary unit, including said spring and an electrical connection between the latter and the other element of said rotary unit.

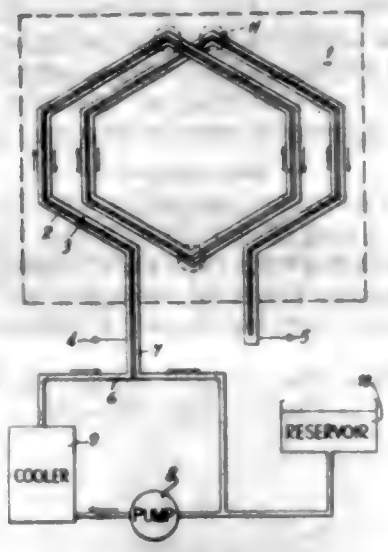
2,897,382
DYNAMO-ELECTRIC MACHINES

John Ivan Hamill, Cawston, near Rugby, England, assignor to The British Thomson-Houston Company Limited, London, England, a British company

Application February 4, 1958, Serial No. 713,228
Claims priority, application Great Britain
February 4, 1957
5 Claims. (Cl. 310—64)

1. A dynamo-electric machine having a multi-phase winding, each phase of said winding being formed by hol-

low conductors containing passageways for the flow of cooling liquid, said conductors being connected together to form two parallel paths for cooling liquid, an

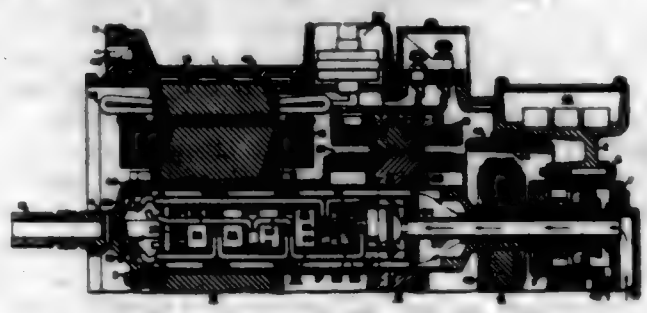


inlet and outlet for cooling liquid at one end of said phase winding, and an interconnection between said parallel paths at the opposite end of said phase winding.

2,897,383
ALTERNATING CURRENT DYNAMOELECTRIC MACHINE

Robert C. Barrows, Lima, and Herman J. Braun, Shawnee Township, Allen County, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application March 12, 1957, Serial No. 645,616
7 Claims. (Cl. 310—68)



1. An alternating current dynamoelectric machine comprising a stator member including a stator core carrying an alternating current armature winding, a rotor member including a hollow shaft and a field structure on the shaft carrying a direct current field winding, exciting means for said field winding including an exciter having a stationary direct current field member, an armature member mounted on said shaft and carrying an alternating current armature winding, a rectifier assembly disposed within the hollow shaft, means for electrically connecting the rectifier assembly between the exciter armature winding and said direct current field winding to supply direct current excitation thereto, and means for directing a cooling fluid into said hollow shaft to flow therethrough in heat exchange relation with the rectifier assembly.

2,897,384
SELF-STARTING SYNCHRONOUS MOTOR

Willi Müller, Sonceboz, Switzerland, assignor to Société Industrielle de Sonceboz S.A. Horlogerie Industrielle et Appareils et Instruments électriques, Sonceboz, Switzerland

Application December 5, 1956, Serial No. 626,402
Claims priority, application Switzerland December 15, 1955
4 Claims. (Cl. 310—163)

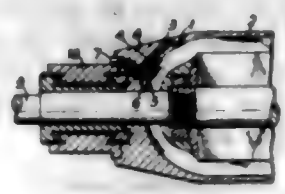
1. In a self-starting synchronous motor, in combination with a Ferraris system stator, a compound rotor comprising, a rotatable single-piece cylindrical core portion of a non-magnetic material, a plurality of electrically conductive rings mounted circumferentially on said core portion forming an asynchronous rotor, said conductive rings comprising rings of non-magnetic material and of tempered steel disposed alternately on said core portion, at least one permanently magnetized ring of a material

substantially free of eddy currents and low in hysteresis losses mounted on an end face of said core portion and coaxially with said first mentioned rings forming a synchronous rotor, and the core portion being provided with a bead and a flange each circumferentially disposed on opposite ends of said core portion cooperating to fix all of said rings on said core portion.

2,897,385
ARMATURE WINDING CONNECTORS

Harold W. Powell, Merton Park, London, England, assignor to Kango Electric Hammers Limited, London, England, a British company

Application July 1, 1957, Serial No. 669,288
Claims priority, application Great Britain July 2, 1956
5 Claims. (Cl. 310—234)

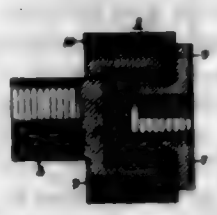


1. An electric motor armature having a shaft, a core fixed on said shaft, a commutator structure secured on said shaft spaced from said core and comprising a plurality of risers, a winding assembly on said core and having a plurality of connections leading to the risers of said commutator, and a continuous resinous mass encasing said connections, characterised in that each of said encased connections is snugly sheathed in a slightly yieldable material which retains its resiliency when encased in said resinous mass, the sheathed connection having a length in excess of that required to extend directly from the winding to the appropriate commutator riser within the tunnel-like path provided by the connection encasing mass to admit of straightening out of the connection to compensate for relative movements between the winding-supported core and the commutator due to differential expansion.

2,897,386
SELF-CLEANING INSULATOR FOR BRUSH HOLDER STUD

Samuel P. Jones, Erie, Pa., assignor to General Electric Company, a corporation of New York

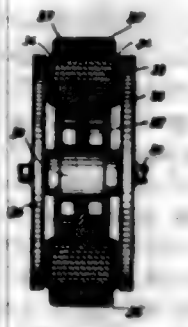
Application August 6, 1953, Serial No. 372,727
2 Claims. (Cl. 310—239)



1. A self-cleaning insulator for a brush holder stud arranged inside a dynamoelectric machine between a brush holder and a grounded metal frame member of

the machine and subject to repeated high current flashovers in the presence of oil and dirt accumulations on its surface during operation of the machine, comprising a mechanically strong cylindrical insulator fastened at opposite ends to the brush holder and the frame member respectively and of a sufficient dielectric strength and length to prevent dielectric failures therethrough at voltages normally present during operation and thereover in the absence of such dirt and oil accumulations, and comprising further a polytetrafluoroethylene sleeve circumferentially covering at least part of the length of the outer surface of the stud, said sleeve being at least approximately 1/16 inch thick to prevent destruction by a flashover whereby said flashover over the surface will vaporize only a surface layer which, prior to the flashover, would support any detrimental dirt accumulations thereon and thus the vaporization will provide a clean polymer surface of renewed high creepage resistance.

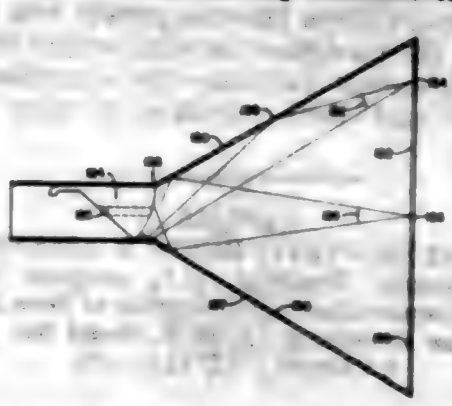
2,897,387
INDUCTION MOTOR
Otto Walter, Oerelina, Switzerland, assignor to Elektro-Motoren A.G., Zug, Switzerland
Application May 23, 1956, Serial No. 163,579
Claims priority, application Switzerland May 24, 1949
5 Claims. (Cl. 310—268)



1. In an induction motor adapted to operate at a predetermined voltage, in combination, a stator having a plurality of identical poles which are located apart from each other by identical distances so as to provide a plurality of equal spaces between said poles; a rotatably mounted, magnetic member located between said poles and having a plurality of arms equal in number to the number of poles and which are equally spaced from each other and extend toward said poles, each of said arms having a width greater than each of said spaces and being located non-symmetrically over said spaces so that each of said arms overlaps one of a pair of adjacent poles by a greater amount than it overlaps the other of said pair of adjacent poles, whereby, when the predetermined voltage is increased, each of said arms of said member is rotated toward said one of said poles to overlap the same to a greater extent; stop means engaging one of said arms of said member for preventing the rotation of the latter in one direction of rotation; and spring means operatively connected to said member and urging the same in said one direction of rotation.

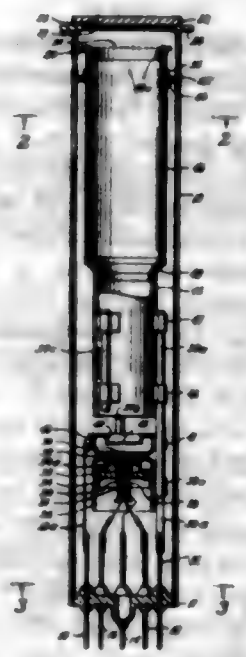
2,897,388
DIRECTED RAY TUBE AND THE LIKE
David M. Goodman, Wantagh, N.Y.
Application July 18, 1955, Serial No. 522,609
9 Claims. (Cl. 313—65)

1. A structure comprising: a housing containing a member which emits electro-magnetic radiation with a frequency in the range extending from the infra-red to that of ultra-violet upon excitation by a scanning beam of energy, said member comprising discrete elements extending over a substantial area which provide said radiation means comprising a lens within said housing and separated therefrom for collecting and transmitting at least a portion of the emitted electro-magnetic radiation, said lens being positioned symmetrically with respect to the radiation producing elements to the extent



that it picks up substantially equal amounts of the emitted radiation independent of the location of the discrete elements which produce said radiation.

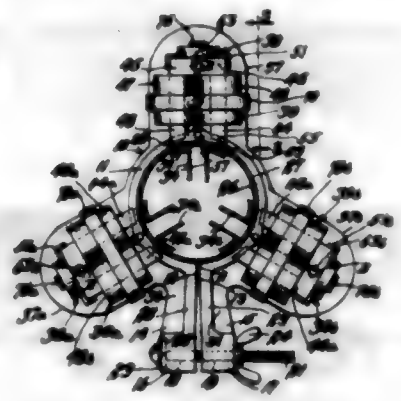
2,897,389
BULB AND BULB SPACER FOR CAMERA TUBE
Francis J. Salgo, Dallas, Tex., assignor to General Electrodynamics Corporation, Garland, Tex., a corporation of Texas
Application August 24, 1956, Serial No. 606,094
1 Claim. (Cl. 313—65)



A television camera tube comprising a cylindrical bulb made of precision tubing having an internal diameter tolerance of the order of plus or minus a thousandth of an inch, an end piece closing one end of said bulb, a light distribution responsive means closing the other end of said bulb, an electron beam forming means disposed inside said bulb and including at one end thereof a cylindrical electrode portion, said portion being spaced radially inward and separated from said glass bulb, said electrode portion being made of thin gauge sheet metal of the order of magnitude of a few thousandths of an inch thick, foraminous means extending transversely of the axis of said cylindrical electrode portion closing off the space inside said portion against passage therethrough of any particles of a size of the order of a thousandth of an inch in maximum dimension or larger, means supporting said beam forming means at the other end thereof from said end piece, and means supporting said beam forming means near the first said end thereof and blocking off the annulus between said cylindrical portion and the inside of said bulb to prevent passage therethrough of particles of the aforesaid size, the last said means comprising a ring of resilient sheet metal of a thin gauge of the order of magnitude of a few

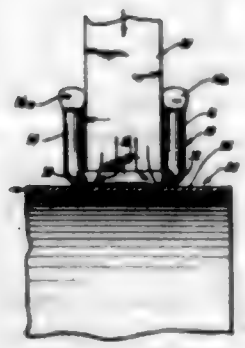
thousandths of an inch thick, said ring having a sleeve portion fitted snugly around said cylindrical electrode portion and secured thereto and a barrier portion flaring from said sleeve portion into engagement with the inside of said bulb, the maximum diameter of said flaring portion when unstressed exceeding the maximum internal diameter of said bulb providing a light force fit therebetween.

2,897,390
MAGNETIC CONVERGENCE ASSEMBLY
Theodore Jensen, Westfield, N.J., assignor to Glaser-Steers Corporation, a corporation of New Jersey
Application December 23, 1955, Serial No. 554,972
5 Claims. (Cl. 313—77)



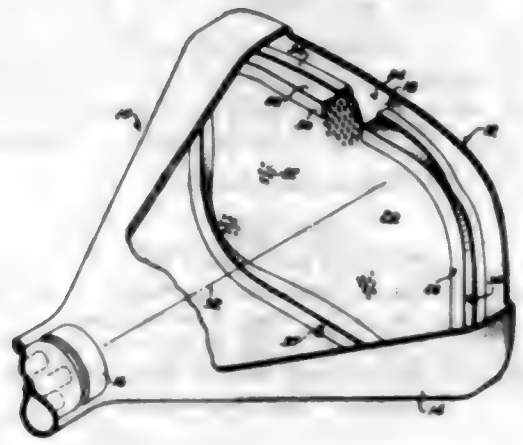
1. A colored television convergence device comprising a U-shaped ferromagnetic core having leg portions and a connecting cross portion adapted to pass flux therethrough, a permanent magnet on said cross piece to provide a permanent flux through and across the open ends of said legs, an electromagnetic coil wound on said legs, a tubular member positionable immediately adjacent to the neck of a cathode ray tube, a radially extending mounting plate secured to said tubular member and having a panel spaced from said tubular member extending lateral to said plate and generally parallel to said tubular member, said ferromagnetic core fitting snugly between said panel and said tubular member to hold said core from radial and circumferential movement and said panel and tubular member formed in a space to axially position said core and electromagnet against said plate, and means secured to said plate holding said core against said plate to prevent axial movement of said core and electromagnet so that said core and electromagnet are firmly fixed in position.

2,897,391
STUDDED ELECTRODE AND METHOD OF MANUFACTURE
George B. Erskine, Emporium, Pa.
Application April 2, 1957, Serial No. 650,118
4 Claims. (Cl. 313—82)



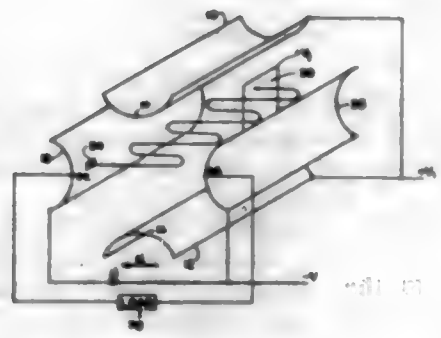
1. As a new article of manufacture, an electrode including a sleeve-like body, and at least one U-shaped stud including legs connected by a bight, said stud being fabricated of wire stock of substantially circular cross-section and having the undersurface of said bight facing said body, said undersurface being formed with spaced apart projections contacting said body, and welds at said projections joining said stud to said body.

2,897,392
COLOR TELEVISION TUBE MASK AND FRAME ASSEMBLY
Joseph P. Flore, Chicago, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Application February 9, 1956, Serial No. 564,434
2 Claims. (Cl. 313—92)



1. In a color television image-reproducer having an envelope of substantially rectangular cross-section, a spherically curved luminescent screen, a spherically curved parallax mask spaced from said screen, and means including at least one electron gun for projecting through said mask a plurality of electron beam components along paths approaching said screen at different angles of incidence to selectively impinge respective different groups of elemental areas thereof: a generally rectangular-shaped mask supporting frame having a peripherally continuous substantially L-shaped cross-section and symmetrically disposed about the central axis of said envelope, said frame having a ring portion extending transversely with respect to said axis and a flange portion substantially parallel to said axis extending from said ring portion toward said screen, the leading edge of said flange portion having a contour substantially corresponding to the intersection with said envelope of a spherical surface substantially parallel to said screen, and said mask being in full peripheral contact with said leading edge and affixed to said flange portion.

2,897,393
STROPHOTRON
Stanley A. Iorio, Long Island City, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application September 17, 1957, Serial No. 684,590
3 Claims. (Cl. 313—156)



1. A strophotron comprising at least one elongated, electrically conductive accelerator extending in a given

trode, the axis of said first helix being coincident with ing an image of said display surface on to a different

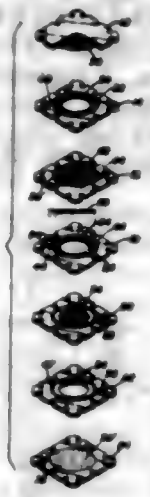
direction; first and second separate, electrically conductive reflectors extending in said direction and disposed about said accelerator to define a plane of symmetry extending through said accelerator and equidistantly between said reflectors, said plane extending in said given direction; an electrically conductive planar collector positioned adjacent one end of said accelerator, said collector being substantially coincident with said plane of symmetry; and means to establish a time invariant magnetic field about said reflectors, said accelerator and said collector, the magnetic field vector pointing in a direction perpendicular to said plane of symmetry.

2,897,394

CERAMIC WAFER, ELECTRONIC TUBE

Charles P. Marsden, Jr., Washington, D.C., and Frank H. Brewer, Kensington, Md., assignors to the United States of America as represented by the Secretary of the Navy

Application August 31, 1953, Serial No. 377,748
6 Claims. (Cl. 313—245)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An electric space discharge device comprising an envelope enclosing a chamber, said envelope consisting of a stack of flat ceramic wafers of uniform size and configuration, each wafer being provided with a plurality of notches in the periphery thereof, the corresponding notches of said wafers being aligned, at least one of the wafers that is disposed between two other wafers having an aperture that defines said chamber, the two end wafers of said stack being imperforate, metallic bonding means disposed between each of said wafers and sealing said wafers into a single unit, an anode and cathode applied respectively to said end wafers in contact respectively with the metallic bonds between said end wafers and the wafers respectively adjacent thereto, a portion of each of the metallic bonds between at least said last mentioned wafers extending to at least one wafer notch respectively, at least said last mentioned notches being metalized.

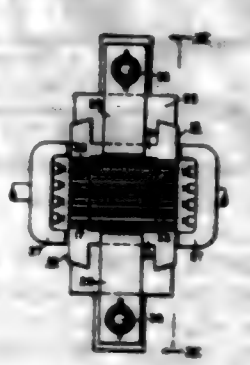
2,897,395

GRID ELECTRODES FOR ELECTRIC DISCHARGE DEVICES

Carl F. Miller, Bath, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application August 18, 1955, Serial No. 529,382
3 Claims. (Cl. 313—350)

1. In the art of manufacturing electron discharge devices, the method of fabricating a grid electrode including the steps of forming a grid frame member having grid frame side members connected by grid frame cross-bar members of a material having a linear coefficient of thermal expansion greater than 10×10^{-6} per degree centigrade, winding wire of a material having a linear coefficient of thermal expansion less than 10×10^{-6} per degree centigrade to form grid lateral wires, placing a cooling member having a mass substantially greater than that of said grid frame member in heat conductive contact with said grid frame cross-bar members, circulating a cooling fluid over portions of said cooling member, attaching said grid lateral wires to said grid frame side members by the application of heat to a substantial portion of said grid frame side members such that heat energy flows into said cross bar members, and simultaneously conducting said heat energy from said cross-bar members at a rate such that the temperature differential between said cross-bar members and said grid lateral wires is such that the grid wire laterals are not stretched beyond their limit of elasticity.

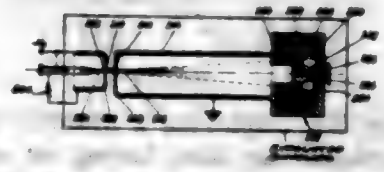


2,897,396

ELECTRON EMITTING SYSTEM

Manfred von Ardenne, Dresden-Weisser Hirsch, Germany, assignor to VEB Vakutronik Dresden, Dresden, Germany

Application January 24, 1956, Serial No. 561,064
Claims priority, application Germany May 10, 1955
10 Claims. (Cl. 315—3)



1. A field emission electron emitting system, comprising a cold cathode having a surface having an area of the order of 10^{-5} square cm., a main cathode located at a central portion of said surface having an area of the order of 10^{-7} square cm. having a relatively low work function and the remainder of said surface having a relatively high work function, a plane anode juxtaposed to said surface of said cathode at a distance of the order of 10^{-3} cm. therefrom, the spacing between said surface and said anode being substantially constant in the vicinity of the main cathode said anode having an opening commensurate with and opposite to the portion of the cathode which has a low work function, and means for producing a parallel electrostatic suction field between the anode and the cathode of the order of 10^{7} volts per cm. whereby the suction field extracts electrons from the main cathode portion having a current density of the order of 10^{3} amperes per square cm. and directs the extracted electrons through the opening in the anode.

2,897,397

TRAVELING WAVE TUBE

Albert Wiley Friend, Bala-Cynwyd, Pa., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

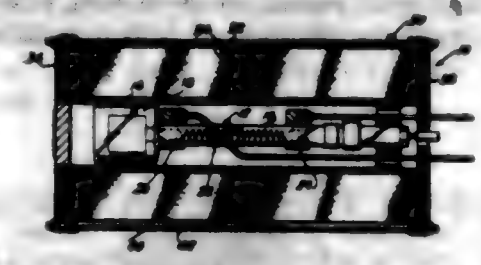
Application April 21, 1955, Serial No. 502,763
1 Claim. (Cl. 315—3.5)

In a travelling wave tube, an electron gun for producing an electron beam; a collector electrode for collecting said beam; a first helix constituted by electrically conductive material and interposed between said gun and said elec-

fabricated of wire stock of substantially circular cross-

electrically conductive accelerator extending in a given

trode, the axis of said first helix being coincident with the path of said beam; and a second helix constituted by an electrically conductive continuous metal ribbon surrounding said tube in the region of said first helix, said second helix having an inner diameter substantially



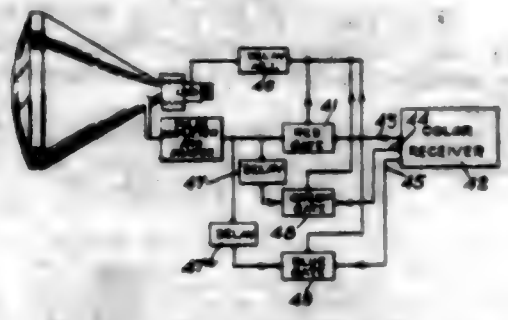
greater than the outer diameter of said first helix, the axis of said second helix being coincident with that of said first helix, the edges of said ribbon being transverse to the axis of both helices, the surfaces of said ribbon being electrically non-conductive.

2,897,398

SYSTEM FOR SELECTED TRANSMISSION, STORAGE, DISPLAY, CODING OR DECODING OF INFORMATION

David M. Goodman, Westagh, N.Y.

Application August 5, 1954, Serial No. 448,039
9 Claims. (Cl. 315—10)



1. A system for displaying a plurality of colors comprising: a cathode ray tube having an electron gun, a display screen, and electron-beam indexing means; a switching arrangement to gate periodically modulating-information applied to said cathode ray tube; detection means that provide indexing pulses when the electron beam of said cathode ray tube impinges upon said beam indexing means; means that generate a train of pulses from said indexing pulses, said train of pulses being applied to operate sequentially said switching arrangement; said display screen comprising strips of materials that generate different colors when scanned by said electron beam; and pulse-shaping means to provide said train of pulses with individual pulses that have a duration in time substantially less than the time required for said electron beam to traverse one of said strips of materials.

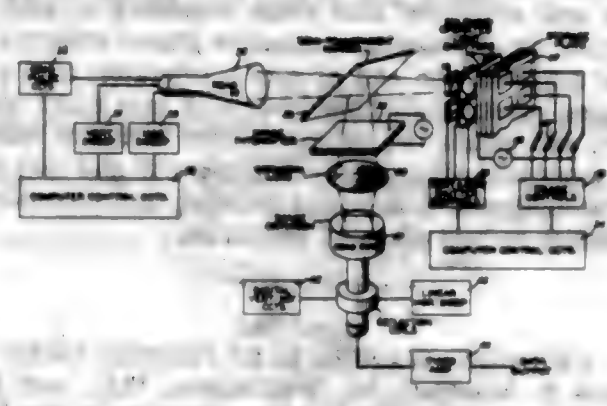
2,897,399

MEMORY DEVICES

Richard L. Garwin, Scarsdale, Haskell A. Reich, Bronx, and Sol Triebwasser, Brooklyn, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application January 25, 1957, Serial No. 636,413
10 Claims. (Cl. 315—10)

1. A memory device consisting of a means for displaying a plurality of items of information coded in discrete spots of light on a substantially plane display surface, an image storage plate placed in parallel relation thereto, said image storage plate having a fine grain matrix of bistable light cells each capable of being triggered to an active state by incident light, and a plurality of lenses interposed between said display surface and said image storage plate, said plurality of lenses being each for focusing an image of said display surface on to a different and separate area of said image storage plate and a light gate for each said lens, and means for selectively operat-



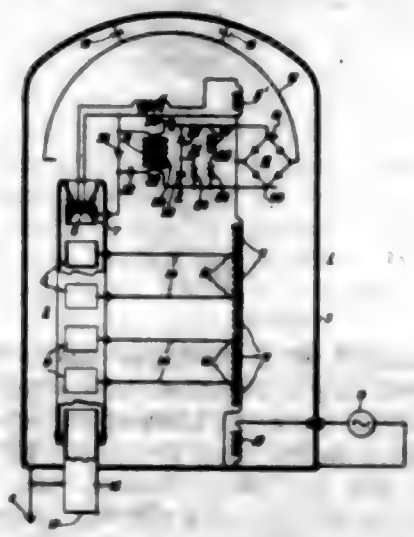
ing said light gates to selectively expose said different and separate areas of said image storage plate to images of said display surface.

2,897,400

ADJUSTABLE BIAS FOR ELECTRON BEAM APPARATUS

Willem F. Westendorp, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Application October 24, 1956, Serial No. 618,139
6 Claims. (Cl. 315—14)



1. A system for producing a biasing voltage for high voltage electron beam apparatus in timed relation to an alternating supply voltage for said electron beam apparatus, comprising a network connected to respond to the dielectric current flowing between the high voltage parts of said apparatus ground exteriorly of said electron beam apparatus, said network including means providing a reference voltage and means responsive to the magnitude of said dielectric current for energizing said beam apparatus from said reference voltage to prevent the flow of electron beam current for that portion of the dielectric current wave that exceeds a predetermined value.

2,897,401

MAGNETRON AMPLIFIER

Beverly Donald Knupfer, Spring Lake Heights, N.J., assignor to the United States of America as represented by the Secretary of the Army

Application August 29, 1955, Serial No. 531,303
3 Claims. (Cl. 315—39.63)
(Granted under Title 35, U.S. Code (1952), sec. 266)

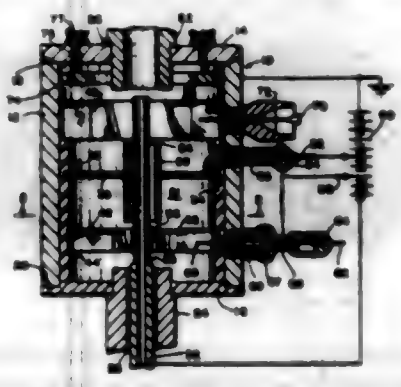
1. A magnetron amplifier comprising an anode structure including axially aligned input and output cavity resonators, each having an equal number of interiorly extending radially disposed anode members, a cathode coaxial with said cavity resonators and spaced therefrom and electron emissive only within said input resonator,

in series with said element, means associated with said element to provide a series resonant circuit with said

2,897,407

NEGATIVE-PHASE-SEQUENCE RESPONSIVE

the input resonator anode members being uniformly slanted at a prescribed angle of not less than 20 degrees nor more than 45 degrees with respect to the cathode axis, the end surfaces of each of said input resonator anode members facing said cathode emissive portion being uniformly spaced from the cathode axis, means for establishing discrete electric fields between said cathode and each of said resonators, means adjacent said cathode and said anode structure for establishing a magnetic field com-



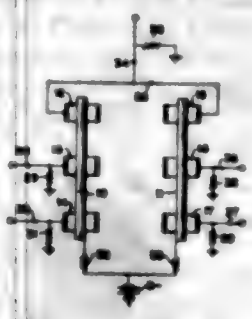
mon to both resonators and perpendicular to said electric fields, means for introducing high-frequency radio energy into said input resonator for producing between the ends of said slanted anode members and said cathode a spoked rotating electron space charge having an axial motion whereby said rotating space charge is injected into said output resonator to excite said output resonator into amplified oscillations at said high-frequency energy, and means coupled to said output resonator for extracting therefrom said amplified high-frequency energy.

2,897,402

MULTI-PHANOTRON SWITCHING TUBE

Helmut John Geisler, Wappingers Falls, and Donald R. Young, Poughkeepsie, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application May 28, 1953, Serial No. 357,957
6 Claims. (Cl. 315—84.6)



1. In combination, an electric discharge device comprising a sealed envelope having terminal prongs and containing an ionizable gaseous atmosphere at glow discharge pressure, a plurality of cylindrical cathodes mounted within said envelope, indirect heating means for said cathodes, a plurality of anode rings positioned about each individual cathode in spaced relationship thereto, and circuit connections between said prongs and corresponding ones of said cathodes and anodes.

2,897,403

FLUORESCENT LAMP LIGHTING CIRCUIT

Wilson A. Charbonneaux, Dayton, Ohio

Application May 25, 1953, Serial No. 356,965
4 Claims. (Cl. 315—103)

1. A lighting circuit comprising a single pin hot cathode type fluorescent lamp, a line connected to a source of current having an RMS potential greater than the normal operating potential of the lamp but less than the ionization potential of said lamp, one terminal of said lamp being connected to one side of the line, a choke coil, a capacitor, and a relay forming a series circuit, said series circuit being connected to the other terminal of the lamp and to the other side of the line, and a shunt circuit across the terminals of the lamp and adapted to be opened and closed by the relay, so that when said

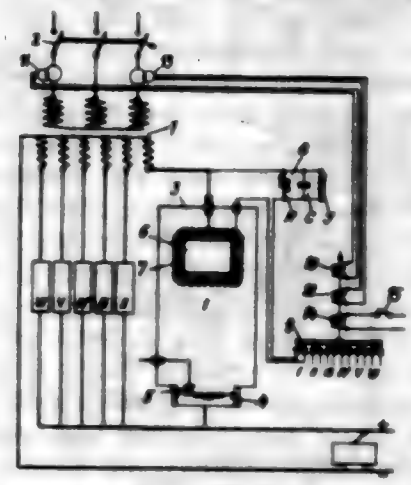
potential is applied across the line, current will flow through the capacitor, choke coil and shunt circuit to charge the capacitor, and when the voltage across the capacitor reaches a peak value in excess of the ionization potential of the lamp, the relay will open the shunt circuit and the capacitor will discharge through the lamp.

2,897,404

GRID-CONTROLLED MERCURY-ARC RECTIFIER

Dezsö Csillingh, Budapest, Hungary, assignor to "Licencia" Találmányokat Értékesítő Vállalat, Budapest, Hungary, a Hungarian company

Application September 22, 1955, Serial No. 535,929
Claims priority, application Hungary September 27, 1954
8 Claims. (Cl. 315—205)



1. A grid-controlled mercury vapor rectifier system comprising a polyphase transformer having a primary and a plurality of secondary circuits, a polyphase supply line connected to said primary circuit, a mercury vapor rectifier having its main discharge path in each of the secondary circuits, each rectifier having an anode, a cathode, and grid means screening the anode, each rectifier having its anode connected in series with the corresponding secondary circuit and its cathode connected to a common load, a circuit for each rectifier connected between the anode and grid for deriving a voltage from a voltage on the anode and applying it to the grid, a contactor in each grid-anode circuit, and means responsive to an overload in any portion of the system for simultaneously actuating the contactors in the grid-anode circuit of each rectifier to open the grid-anode circuits.

2,897,405

CONTROL CIRCUITS FOR LUMINOUS DISPLAY DEVICES

George R. Briggs and Jan A. Rajchman, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Application October 1, 1958, Serial No. 764,602
7 Claims. (Cl. 315—250)

1. A control circuit for a light producing element requiring a relatively large voltage for operation comprising in combination, means providing a source of alternating operating power having a predetermined frequency for energizing said element, inductor means connected

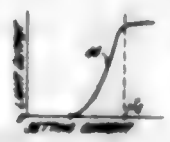
2,897,409

HEATING PROCESS

2,897,411

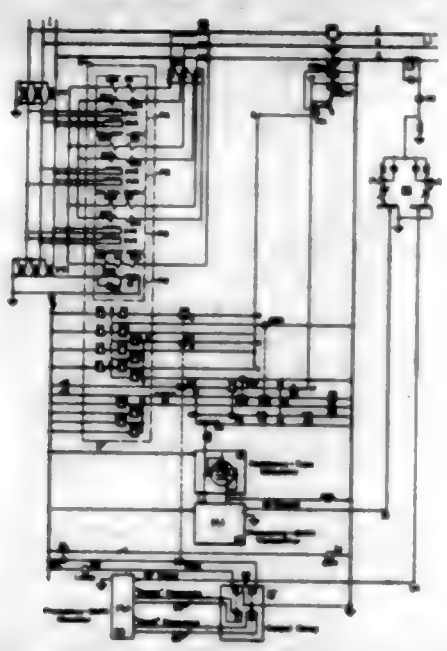
storage plate, said plurality of lenses being each for focus- and electron emissive only within said input resonator,

in series with said element, means associated with said element to provide a series resonant circuit with said inductor means at said predetermined frequency, and



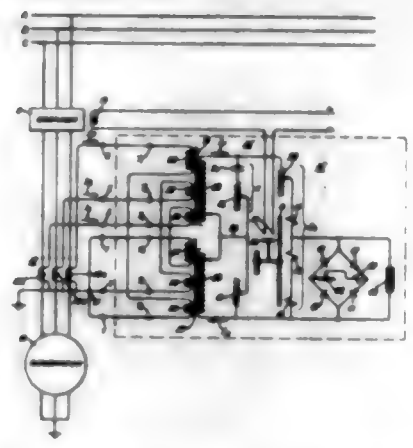
coupling means including a transfluxor device for controlling the application of power from said source to said series resonant circuit.

2,897,406
FREQUENCY-SHIFT CARRIER DISTANCE RELAY
Herbert W. Lenzner, East Orange, and George D. Rockefeller, Jr., Morris Plains, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application September 15, 1955, Serial No. 534,580
10 Claims. (Cl. 317—27)



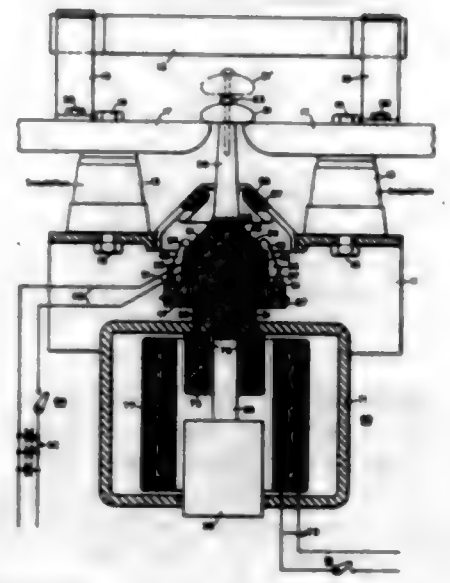
1. Communicating-channel protective-relaying equipment for the fault-protection of a line-section of a commercial-frequency power line, comprising, at each terminal of the protected line-section, a communicating-channel means for transmitting either a normally continuous signal or an occasional different signal from that terminal to the other terminal of the protected line-section, both of said signals being distinctive of the terminal from which they are transmitted, a fault-responsive means for responding to a power-line fault with an in-flowing fault-power direction at that terminal of the protected line-section, a means for causing said communicating-channel means to cease transmitting its continuous signal and to start transmitting its occasional signal and for also performing a fault-protecting function in response to a response of said fault-responsive means, a means for blocking a fault-protecting operation in response to the receipt of the continuous signal from said other terminal of the protected line-section, a test-circuit means for arbitrarily causing said communicating-channel means to cease transmitting its continuous signal and to start transmitting its occasional signal, a test-canceling means for incapacitating said test-circuit means in response to a power-line fault, a first indicating means for indicating a failure to receive the continuous signal from the other terminal of the protected line-section, and a second indicating means for indicating the receipt of the occasional signal from said other terminal.

2,897,407
NEGATIVE-PHASE-SEQUENCE RESPONSIVE APPARATUS
William C. Morris, Havertown, Pa., assignor to General Electric Company, a corporation of New York
Application November 3, 1953, Serial No. 390,820
10 Claims. (Cl. 317—47)



1. A filter for segregating the negative-phase-sequence components of three-phase currents, comprising a resultant voltage producing network having complementary impedance phase shifting circuits in series, three separate phase-to-neutral energizing circuits, and magnetic coupling means connected between each of said energizing circuits and each of said impedance circuits.

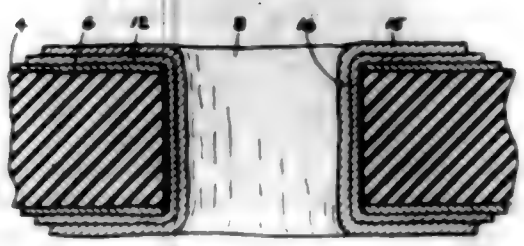
2,897,408
CIRCUIT INTERRUPTER
Fritz Kesselring, Kusnacht, Zurich, and Samuel Hämmerli, Oberengstringen, Switzerland, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany
Application March 30, 1956, Serial No. 575,227
Claims priority, application Germany April 6, 1955
16 Claims. (Cl. 317—60)



1. A circuit breaker having stationary and movable contact means, electromagnetic means operable when energized to apply a force to said movable contact means to start said movable contact means in opening direction, stored energy means operable to then move said movable contact means to full open position, restraining means normally restraining only said stored energy means in operative condition, said movable contact means after being started in opening direction by the force applied thereto by said electromagnetic means engaging and actuating said restraining means to non-restraining position and permitting said stored energy means to then move said movable contact means to open position.

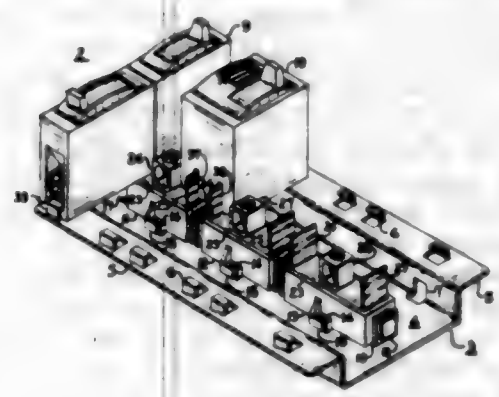
including a core and an energizing coil wound on said ing member and said first disc, and magnetic particles

2,897,409
PLATING PROCESS
Joseph J. Gitto, Brooklyn, N.Y., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Application October 6, 1954, Serial No. 460,613
2 Claims. (Cl. 317—101)



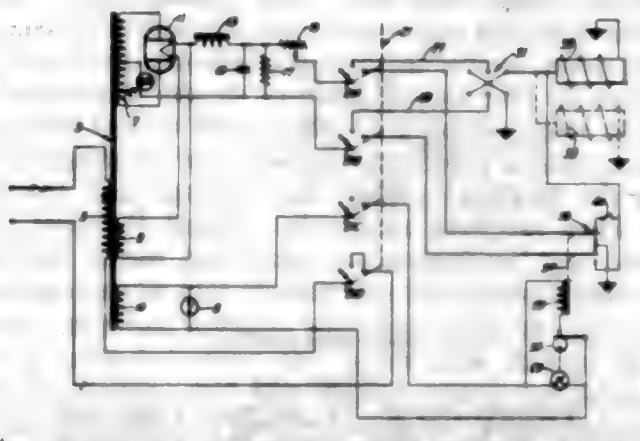
1. A terminal board for a printed circuit assembly comprising in combination a plural layer conductive coating for connecting two conductors, an underlayer of said plural layer conductive coating composed of metal particles selected from the group consisting of copper, nickel, iron, zinc and aluminum in a suitable vehicle and having a particle size of less than about 250 mesh, an electrodeposited conductive layer overlying said underlayer forming the outer layer of said plural layer coating, a resinous dielectric base carrying said plural layer coating, conductors on exposed surfaces of said resinous dielectric base connected by said plural layer coating and an aperture through said base containing said plural layer coating, and an exposed surface on said aperture covered by said underlayer whereby the conductors on each surface of said base are connected by said plural layer coating and a conductive layer of non-migratory particles is in contact with said exposed area of said base.

2,897,410
PLUG-IN TYPE CIRCUIT BREAKER PANELBOARD
Herman J. Hammerly, Plainville, Conn., assignor to General Electric Company, a corporation of New York
Application March 7, 1955, Serial No. 492,405
9 Claims. (Cl. 317—119)



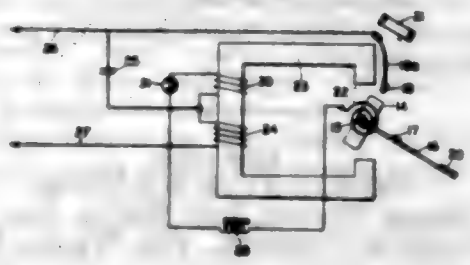
1. A circuit breaker panelboard comprising a support, an insulating mounting base on said support, circuit breaker connecting means on said mounting base comprising a relatively thin wide flat strip of conductive material having its opposite end portions bent up to provide contact-blade portions, wire connecting terminal means carried by the central portion of said strip between said contact blade portions for electrically connecting said strip to a source of electric power, and retaining means passing through said support and said conducting strip and engaging said wire connecting means for retaining said wire connecting means on said strip and said strip on said insulating base.

2,897,411
ELECTROMAGNET AND CONTROL CIRCUIT
Ivan H. Brown and Reuben H. Gordon, Vallejo, Calif., assignors to Gordon-Brown Company, Vallejo, Calif., a partnership
Application August 17, 1956, Serial No. 604,653
1 Claim. (Cl. 317—123)



An electromagnet comprising: an elongated case of a nonmagnetic material; at least one paramagnetic core within said case substantially coextensive with said case; a solenoid surrounding said core and substantially coextensive therewith; said core having a tip positioned adjacent one end of said nonmagnetic case, the tip of said core adjacent said nonmagnetic case being slotted to provide two poles of the same polarity spaced a short distance from each other; an inert plastic material filling the space between said core and said case; means for supplying high voltage direct current electricity to said electromagnet; and control means positioned between said source of direct current electricity and said electromagnet, said control means comprising a first switch whereby said current may be conducted to a first circuit or a second circuit, said first circuit having a reversing switch therein whereby the current may manually be caused to flow in either direction, said second circuit having in association therewith a double pole, double throw reversing switch and automatic means whereby said switch is reversed at a slow cyclic rate and an auxiliary switch leading from said double pole, double throw switch whereby one side of the line may be interrupted to give a pulsing flow of unidirectional current.

2,897,412
PULSE RESPONSIVE RELAY
Daniel M. Longenecker, Reading, and Harvey H. Chamberlain, Marblehead, Mass., assignors to General Electric Company, a corporation of New York
Application December 28, 1955, Serial No. 555,969
2 Claims. (Cl. 317—147)



1. A relay responsive to electrical pulses having a predetermined repetition frequency and a predetermined carrier frequency comprising a pivotally mounted magnetic vane, switch means associated with said vane and arranged to be open when said vane is in a first position and closed when said vane is in a second position, means biasing said vane to said first position, said magnetic vane, said switch means and said biasing means being mechanically resonant as a system at said repetition frequency of said electrical pulses, electromagnetic means

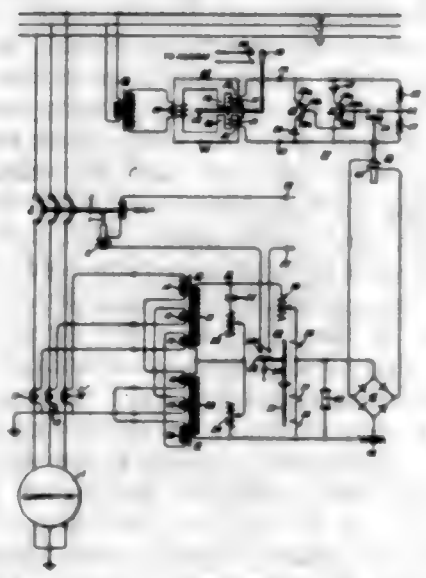
spectively engageable with a curved surface of an adjacent armature, the algebraic sum of the radii of each pair of

from said first mentioned lug; a base plate formed with a plurality of slots, said slots being spaced to receive the

said movable contact means to open position.

including a core and an energizing coil wound on said core and connected to be energized by said electrical pulses, a capacitor connected in circuit with said coil such that the capacitor and the coil form a series resonant circuit at the carrier frequency, said electromagnetic means being arranged to urge said vane away from said first position when said coil is energized by said electrical pulses and swing said mechanically resonant system including said vane in synchronism with said electrical pulses at ever increasing amplitudes until said vane reaches its said second position, means responsive only to said electrical impulses which have voltage amplitudes greater than a predetermined value for substantially limiting the electrical current flow through said energizing coil when the peak amplitudes of said electrical pulses exceed said predetermined value, and means associated with said vane to hold said vane in said second position.

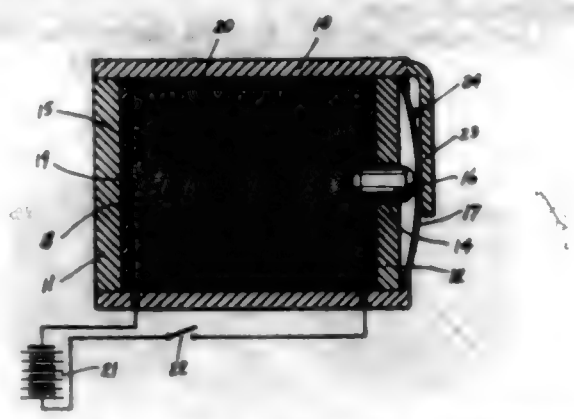
2,897,413
IMPEDANCE CHANGING CIRCUIT
Merwyn E. Hodges, Philadelphia, Pa., assignor to General Electric Company, a corporation of New York
Application May 24, 1956, Serial No. 587,018
6 Claims. (Cl. 317—148.5)



1. In combination, a pair of alternating voltage supply terminals, an impedance connected across said terminals, a pair of transistors each having an emitter, a collector and a base, the emitter-collector circuits of said transistors being connected reversely in parallel across said terminals, a separate rectifier connected in the collector circuit of each transistor poled to block current in the low-impedance direction between associated collector and base, and switching means for connecting the bases of said transistors to an intermediate point of said impedance to establish across said terminals two asymmetric reversely poled relatively low impedance conducting paths.

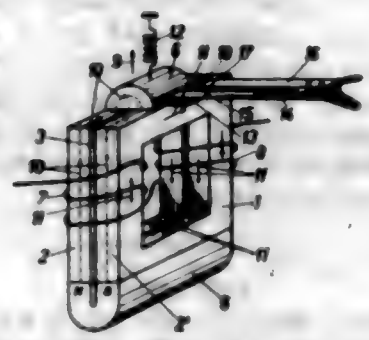
2,897,414
FREEZE TYPE SOLENOID
Stephen Edward Thomas, Fort Wayne, Ind., assignor to The Magnavox Company, Fort Wayne, Ind., a corporation
Application April 15, 1955, Serial No. 501,639
5 Claims. (Cl. 317—159)

1. A solenoid comprising a cylindrical magnetic structure closed at one end by a first disc and at the other end by a second disc having a centrally disposed aperture, a cylindrical member extending between said first and second discs concentrically of said aperture, a winding mounted on said cylindrical member, a work performing member normally positioned within said aperture, a coil spring extending between said work performing member and said first disc, and magnetic particles filling said cylindrical member and surrounding the coils of said spring, whereby said particles may be free to



move when said winding is de-energized to permit movement of said spring and may be frozen in fixed position with respect to one another in response to energization of said winding to prevent movement of said spring.

2,897,415
HOLDING MAGNET SYSTEM
Franz Stöckl, Vienna, Austria, assignor to Optische Anstalt C. P. Goerz, Ges. m.b.H., Vienna, Austria
Application September 30, 1957, Serial No. 687,200
5 Claims. (Cl. 317—171)



1. In combination in a magnetic structure, a magnetic circuit including a permanent magnetic, an armature, a yoke, and electrical coils on the yoke, the yoke comprising two identical yoke parts each having the form of a closed frame including two crosspieces and at least two arms connecting said crosspieces, said yoke parts lying parallel one beside the other, a zone of low magnetic permeability separating said parts, said yoke parts having two outside surfaces each of which extends perpendicular to the plane of the frame and each of which lies in a single plane with the corresponding surface of the other yoke part, said permanent magnet forming a source of magnetic flux and engaging said yoke in one of the planes thus formed, said magnet having two poles each of which lies on said outside surface of one of said yoke parts, the armature engaging in its rest position said yoke in the other of the planes thus formed and bridging the gap between the two yoke parts, and at least one electrical coil for displacing the magnetic flux in the yoke situated on the arms connecting the crosspieces.

2,897,416
ELECTROMAGNETIC DEVICES
Charles A. Packard, Weirsdale, Fla.
Application January 24, 1958, Serial No. 710,955
16 Claims. (Cl. 317—195)

1. An electromagnetic device including magnetizable core structure and an exciting coil therefor, and an armature system comprising at least two armatures pivotally mounted for angular movement in the same direction about their respective pivotal axes upon excitation of said coil, each of said armatures having curved surfaces re-

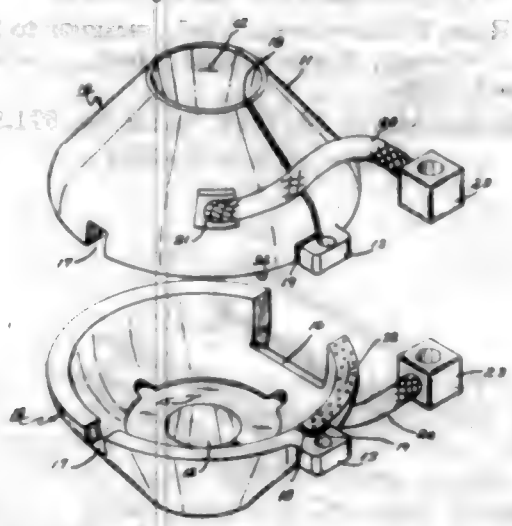
said wire connecting means on said strip and said strip on said insulating base.

mechanically resonant as a system at said repetition frequency of said electrical pulses, electromagnetic means

spectively engageable with a curved surface of an adjacent armature, the algebraic sum of the radii of each pair of said curved surfaces at each point of their successive

points of engagement being substantially equal to the distance between the pivotal axes of their corresponding armatures.

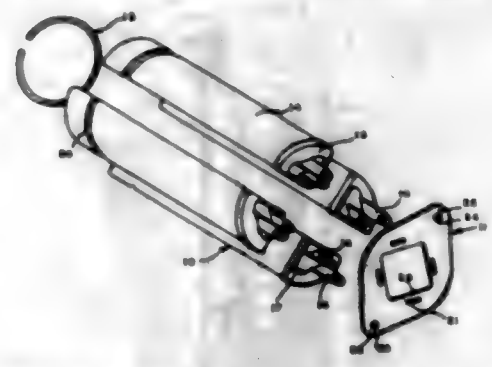
2,897,417
FIXTURE FOR MAGNETIZING TOROIDAL PERMANENT MAGNETS
Francis X. MacDonough, Stoneham, and Leslie M. Vant, Reading, Mass., assignors to Bomac Laboratories Inc., Beverly, Mass., a corporation of Massachusetts
Application October 17, 1957, Serial No. 690,767
2 Claims. (Cl. 317—203)



1. A fixture for use in the impulse method of magnetizing paired toroidal magnets oppositely disposed on a magnetron tube having tubular extensions, said fixture comprising a pair of similar frusto-conical shaped metallic members adapted to completely envelop the magnetron magnets when said members are in mating relationship with the large ends in contact, each of said metallic members having wall structure commencing at the large end defining a hollow portion dimensioned to conform to the configuration of each magnet, a connector tab laterally disposed at a point along the peripheral edge adjacent the large end, said member being bisected throughout its length by means of a slot commencing adjacent to said tab to thereby define an open ended loop of large mass and current conducting means secured to said member along the outer surface thereof for connection to an impulse magnetizing apparatus.

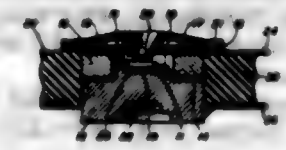
2,897,418
MEANS FOR PACKAGING MULTIPLE UNIT CAPACITOR
Clinton B. Call, Oceanside, Calif.
Application January 9, 1956, Serial No. 558,143
2 Claims. (Cl. 317—230)

1. A multiple unit capacitor housing comprising: a plurality of removable single unit capacitor housings, each said housing having a solder lug depending from the base thereof, said base being open to permit a second solder lug to extend therethrough parallel to and spaced from said first mentioned lug; a base plate formed with a plurality of slots, said slots being spaced to receive the first mentioned solder lug of each single capacitor housing unit to thereby secure the base ends of each said single capacitor housing units in assembled relation; means re-



movably disposed adjacent the upper ends of said single housing units to secure the upper ends thereof in assembled relation, said last named means comprising a friction engaging ring encompassing all of said individual units.

2,897,419
SEMICONDUCTOR DIODE
Frank L. Howland, Morristown, and John W. West, Millington, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of Delaware
Application March 1, 1957, Serial No. 643,269
5 Claims. (Cl. 317—234)

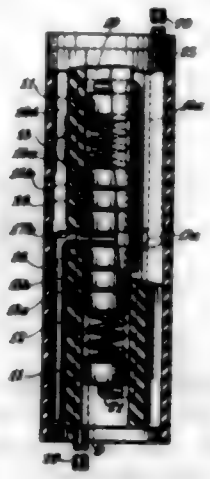


1. A semiconductor device assembly comprising a metal base member, a ceramic washer member mounted on said base member and defining a cavity therewith, a metal washer member mounted on said ceramic member and a metal cover member bonded to said metal washer member, said base member having a central pedestal including a raised circular margin therearound and a central protuberance thereon, a semiconductive body having at least one p-n junction therein mounted on said pedestal and engaging said protuberance, said cover member comprising a resilient diaphragm having a protuberant central portion for contacting said semiconductive body with a pressure independent of the deformation of said cover member when said cover member is bonded to said washer member.

2,897,420
RECTIFIER ASSEMBLY
Kenneth Stanley Butt, London, England, assignor to Westinghouse Brake and Signal Company, Limited, London, England
Application March 20, 1957, Serial No. 647,420
Claims priority, application Great Britain March 29, 1956
9 Claims. (Cl. 317—234)

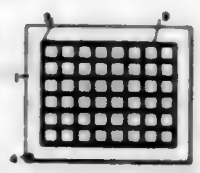
7. A dry metal rectifier assembly comprising a tubular case of electrically insulating material, said case including pairs of opposed grooves in the outer surface thereof, said grooves extending generally lengthwise of the case from one end to the other end thereof, connectors in the form of metal wires or narrow metal strips arranged to pass through the walls of said case across the interior thereof, a stack including at least one laminar metal rectifier element held in predetermined position within said tubular case by said connectors, each of said connectors associated with a different pair of grooves and having portions thereof constrained to

lie in said grooves, the grooves of each pair being in diametrically opposed relation, one end of each of the connectors being bent down into a respective groove on said case and the other end of each of the connectors being bent down into said diametrically opposed groove



of said pair, at least one of the ends of said connectors extending beyond the ends of said case for connection to an external circuit, and an outer covering of an electrically insulating material and in the form of a sleeve slipped over said tubular case, and those portions of said connectors lying in said grooves.

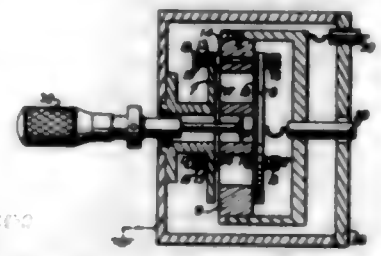
2,897,421
PHOTOTRANSISTOR DESIGN
Andrew P. Kruper, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application August 11, 1954, Serial No. 449,224
4 Claims. (Cl. 317—235)



1. A photoelectric device comprising a plate of one conductivity type material selected from the group consisting of silicon and germanium, an inclusion zone on one surface of said plate of opposite conductivity type material to form a P–N junction with said plate material, said inclusion zone defining a predetermined geometrical pattern on the surface of said plate, said geometrical pattern on the surface of said plate being characterized by areas of said one conductivity type material separated by areas of said opposite conductivity type material said areas having a P–N junction between them, said P–N junction having a comparatively large exposed photosensitive area, all said areas of said one conductivity type material being connected to form one electrode, and all said areas of said opposite conductivity type material being connected to form another electrode, and a counter electrode on the opposite surface of said plate of the same conductivity material as said inclusion zone and forming a P–N junction with said plate material.

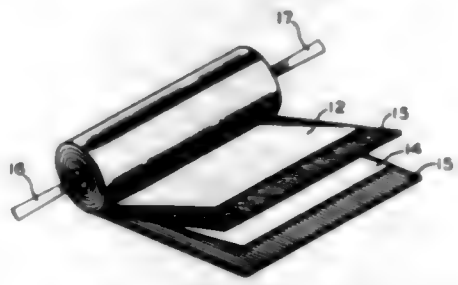
2,897,422
THREE ELECTRODE CAPACITOR
Bogumil M. Wojciechowski, New York, N.Y., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application May 11, 1955, Serial No. 507,624
3 Claims. (Cl. 317—249)

1. A three electrode capacitor comprising two direct capacitance electrodes, a third electrode of low temperature coefficient material having parallel faces with a central aperture and a plurality of other apertures therethrough, means including quartz spacers for mounting the direct capacitance electrodes on opposite faces of the third electrode, an electrically conductive element, means for movably mounting the element to and in conductive connection with one of the direct capacitance



electrodes to permit moving the element within the central aperture in the third electrode for changing the capacitance between the direct capacitance electrodes, means connected to the third electrode for shielding one of the direct capacitance electrodes and means connected to the other direct capacitance electrode for shielding the shielding means connected to the third electrode.

2,897,423
ELECTROSTATIC CAPACITOR
Sidney D. Ross, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Application March 14, 1956, Serial No. 571,574
1 Claim. (Cl. 317—258)



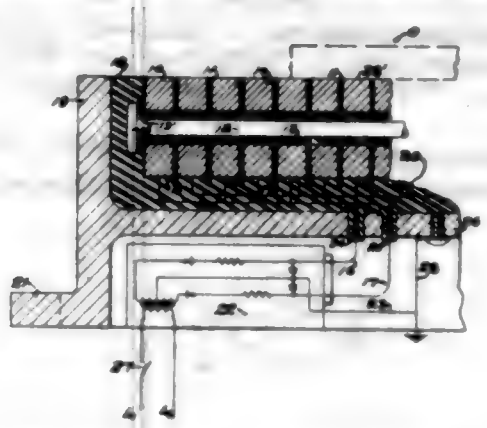
An electrostatic capacitor capable of operation at 150° C. for extended periods comprising a plurality of electrodes separated by a porous dielectric spacer, a high temperature dielectric impregnant composition impregnated in said spacer consisting of a linear copolymer of a mixture of isobutylene and diolefin in the range of from .5 to 10% by weight of said copolymer, said copolymer having average molecular weight of from 1200 to about 1400 and an iodine number of from 20 to about 70 and high resistivity and a low power factor, and anthraquinone substituted with at least one t-butyl group admixed in said copolymer in the range of from 0.1% to about 10% by weight of said copolymer.

2,897,424
ELECTROSTATIC APPARATUS
Robert W. Waring, Fairfield, Conn.
Application November 10, 1953, Serial No. 391,297
24 Claims. (Cl. 317—262)

20. A laminated structure for use with an electrostatic apparatus comprising a plurality of annular-shaped laminae made from a material having a volume resistivity of between substantially 10^2 and 10^{16} ohm centimeters; a plurality of similarly-shaped layers of electrically insulating material located between adjacent laminae; means for holding said laminae and layers of electrically insulating material in intimate contact to provide a hollow, cylindrical laminated structure; and a layer of material having a volume resistivity less than substantially 10^2

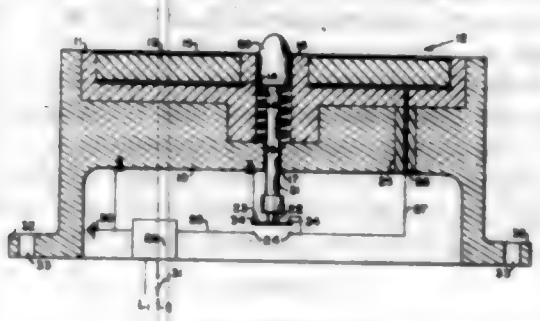
direct current over a range comprising a motor adapted

ohm centimeters intimately and permanently attached to one of the peripheral surfaces of each of said laminae,



and separated from each other by said layers of electrically insulating material.

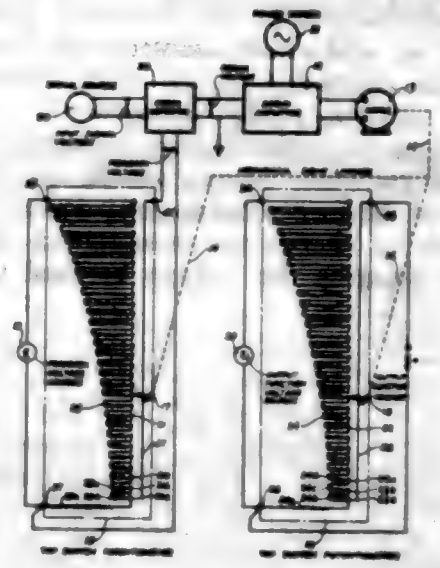
2,897,425
METHOD OF AND APPARATUS FOR PRODUCING ELECTROSTATIC FORCE
Robert W. Waring, Fairfield, Conn.
Application October 21, 1958, Serial No. 777,804
59 Claims. (Cl. 317—262)



1. Apparatus comprising in combination, a supporting structure; an element comprising a material having a volume resistivity in excess of 10^3 ohm centimeters mounted on said supporting structure; a layer of material having a volume resistivity less than 10^3 ohm centimeters intimately and permanently attached to one face of said element; an insulating member between said element and said supporting structure; a power pack adapted to provide substantially equal amounts of electric charge of opposite polarity at its respective poles; means for connecting said power pack and said layer in series relation with a conducting object adapted to be moved relatively to, and in cooperation with said element; and a layer of material having a volume resistivity in excess of that of said first-mentioned material between said object and said first-mentioned material.

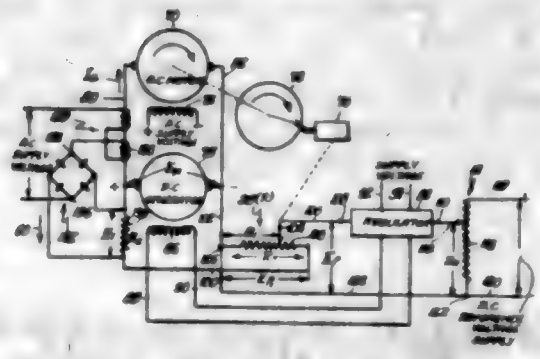
2,897,426
CONSTANT PERCENTAGE STEP POTENTIOMETER SERVOMECHANISM
William Hotine, Beaumont, Calif., assignor to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware
Application October 25, 1957, Serial No. 692,332
11 Claims. (Cl. 318—28)

1. In a servomechanism having an error detector to compare input and feedback voltages and a mechanical driving means controlled by the output voltage of said error detector, a feedback potentiometer connected to said error detector, a source of feedback voltage having a predetermined voltage output with respect to the maximum input signal to said error detector, an output function potentiometer, a source of output voltage, a plurality of potentiometer contacts, potentiometer brushes for moving over said contacts, said brushes being connected to said mechanical driving means, said potentiometers comprised of individual resistors attached to said contacts, each resistor having a predetermined value with respect to other



resistors associated with said potentiometers whereby a constant resistance maximum percentage change is produced as said brushes are driven over said contacts.

2,897,427
CONSTANT SURFACE SPEED REGULATOR
William J. Bradburn, Jr., Milwaukee, Wis., assignor to The Louis Allis Co., Milwaukee, Wis., a corporation of Wisconsin
Application October 19, 1956, Serial No. 617,089
3 Claims. (Cl. 318—145)



1. An adjustable speed drive for maintaining the linear surface speed of a rotating member constant regardless of changes in the diameter thereof, comprising: a direct current motor driving said rotating member and having an armature and field winding; a direct current generator having a field winding; means for impressing the output of said generator across said armature; regulator means for regulating the voltage applied to said generator field winding; a source of substantially constant direct current voltage; means for applying said voltage to the field winding of said motor; a source of direct current voltage proportional to the speed of rotation of said rotating member; potentiometer means across which said last named voltage is applied; a movable arm in said potentiometer electrically connected in the control circuit of said regulator means; means for moving said potentiometer arm directly in accordance with variations in the diameter of said rotating member; a source of direct current supply voltage connected in said control circuit in opposition to the voltage obtained from said potentiometer; and a source of supply voltage for said regulator means.

2,897,428
MOTOR-GENERATOR POWER SUPPLY SYSTEMS
Floyd V. Wilkins, Packanack Lake, N.J.
Application December 2, 1955, Serial No. 550,687
11 Claims. (Cl. 322—36)

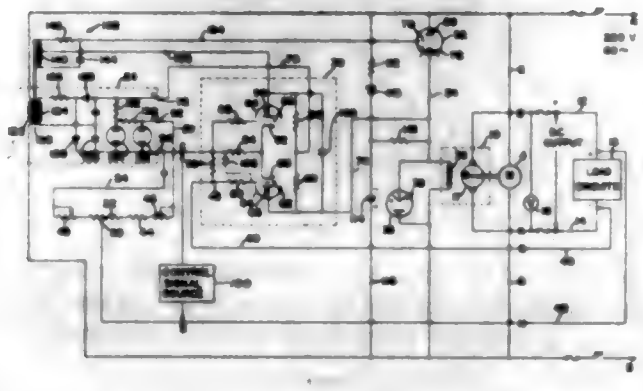
1. Motor-generator supply apparatus adapted to provide direct current and to control the voltage of said

2,897,432

output voltage which varies inversely with said control

ture coefficient material having parallel faces with a cen- cylindrical laminated structure; and a layer of material having a volume resistivity less than substantially 10^8

direct current over a range comprising a motor adapted to be energized from an electrical power source, a generator having separate field and armature windings, output connections secured to said armature, said armature being driven by said motor, controllable unidirectional current means connected to the field winding of the generator, a control circuit connected to the output connections from the armature and connected to said controllable unidirectional current means to control the energization of the field winding, said control circuit being adjustable to change the energization of the field winding for changing the voltage between said output



connections, and a residual field bucking circuit for reducing the residual magnetism of the generator field structure at low output voltages connected to said field winding and continuously urging current through said field winding in the opposite direction from that of the current from said controllable unidirectional current means, said residual field bucking circuit including a source of direct current and circuit means connecting said source of direct current across said field winding with a polarity that is continuously opposed to the polarity which is developed across said field winding by the current from said controllable unidirectional current means.

2,897,429

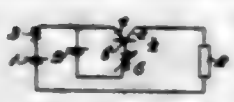
SUPPLY CIRCUIT TRANSISTOR CURRENT CONTROL FOR ELECTRIC LOADS

Pieter Johannes Wilhelmus Jochems, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Application June 7, 1954, Serial No. 434,899

Claims priority, application Netherlands June 19, 1953

9 Claims. (Cl. 323—4)



1. An electrical circuit arrangement comprising a current source, a load, and means for supplying a substantially constant current from said source to said load, said means comprising a junction transistor having an emitter electrode and a collector electrode connected in series between said source and said load and having a base electrode, said emitter electrode being connected to said current source and said collector electrode being connected to said load said transistor being characterized by a substantially constant collector current as determined by the base current thereof substantially independently of the voltage applied to said collector electrode, and means for supplying a constant current to said base electrode.

2,897,430

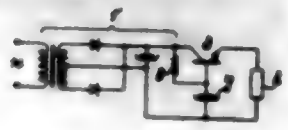
STABILIZED TRANSISTOR ELECTRICAL POWER SUPPLY

Jan Te Winkel, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Application September 29, 1954, Serial No. 459,151

Claims priority, application Netherlands October 2, 1953

1 Claim. (Cl. 323—22)



A stabilized power supply circuit for a two-terminal electric consuming device, comprising a two-terminal direct-voltage power supply source subject to having voltage variations, a transistor having emitter, collector and base electrodes, means connecting said collector electrode to a terminal of said power supply source, means connecting said emitter electrode to a terminal of said consuming device, a resistor connected directly between said base and collector electrodes whereby said base electrode is biased in the forward direction by voltage from said supply source thereby providing a relatively low value of direct-current resistance in the collector-emitter path of said transistor, and a capacitor connected between said base electrode and the remaining said terminals of the supply source and consuming device, thereby smoothing said forward bias voltage applied to said base electrode and providing a relatively high impedance to said voltage variations of said supply source.

2,897,431

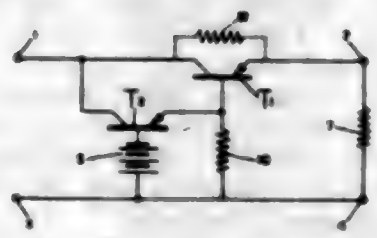
VOLTAGE STABILIZING CIRCUIT

Eric Wolfendale, Horley, England, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Application July 7, 1955, Serial No. 520,567

Claims priority, application Great Britain August 11, 1954

3 Claims. (Cl. 323—22)

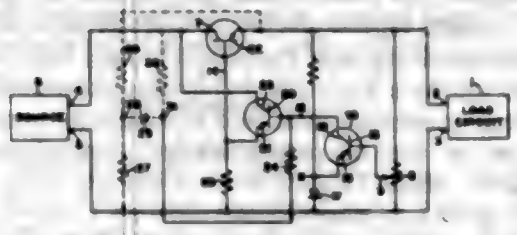


1. A circuit arrangement for stabilizing the voltage applied to a load by a source of D.C., said D.C. source and said load each having two terminals, comprising a transistor having emitter, collector and base electrodes, a collector-emitter path and an emitter-collector current gain substantially equal to one, means for connecting said collector-emitter path in series between one of the terminals of said D.C. source and one of the terminals of said load, said emitter being connected to said load, a voltage reference source interposed between said base and the other of the terminals of said D.C. source and said load, and means connected to said D.C. source terminal and interposed between said base and said reference source for directly controlling the magnitude of the current supplied to said base by said D.C. source to provide a substantially constant stabilized voltage, said last-mentioned means supplying a current to said base which is substantially greater in magnitude than that supplied by said reference source.

supply to said heater; a first rectifier; a second A.C. con- electrolytes and a variable load resistor calibrated in terms

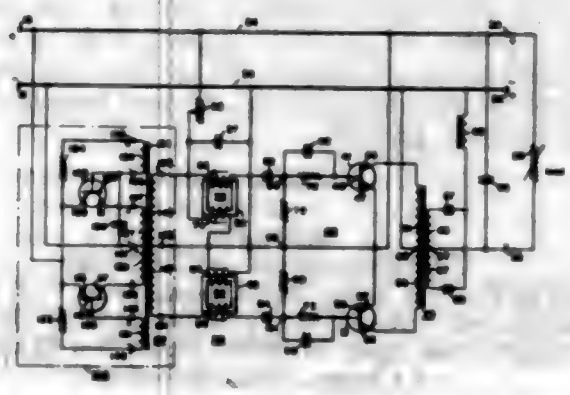
mechanical driving means, said potentiometers comprised vide direct current and to control the voltage of said

2,897,432
ELECTRICAL SIGNAL REGULATOR
James M. Jackson, Chittenango, N.Y., assignor to General Electric Company, a corporation of New York
Application May 17, 1957, Serial No. 659,932
8 Claims. (Cl. 323—22)



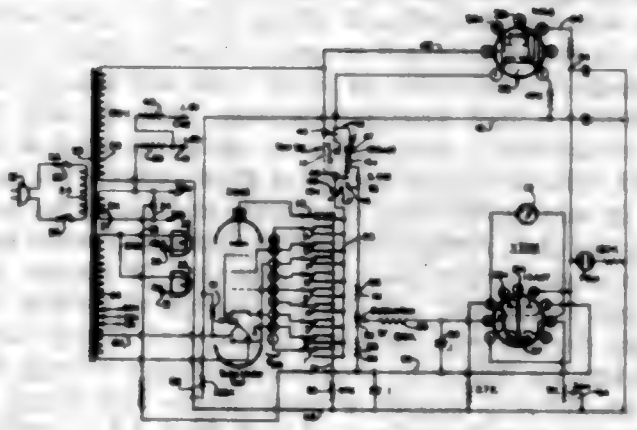
1. In combination, an input signal source, a load circuit, an adjustable impedance means for regulating the amount of said signal being applied from said source to said load circuit connected in series between an output terminal of said input signal source and an input terminal of said load circuit, a reference signal source, a source of a further signal having an amplitude determined by the amount of said input signal applied to said load circuit, a first transistor stage for comparing the amplitudes of said reference and further signals to derive a control signal, a second transistor stage for amplifying said control signal, said impedance means responsive to said amplified control signal for adjusting the amount of said input signal applied to said load circuit, means for energizing said transistor stages comprising means responsive to the input signal available on said input terminal for providing an amplitude regulated signal, and means responsive to the regulated input signal available on said input terminal and said amplitude regulated signal for supplying a regulated signal of amplitude greater than that available on said input terminal.

2,897,433
DIRECT CURRENT VOLTAGE REGULATOR
Rudy P. Puthovich, Franklin Township, Westmoreland County, and George J. Thompson, Ross Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application April 30, 1958, Serial No. 731,928
8 Claims. (Cl. 323—100)



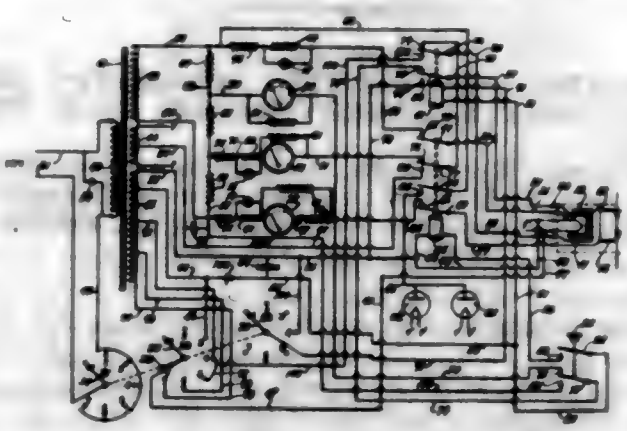
4. In an electrical control circuit, the combination comprising, a source of direct current having a substantially constant voltage for supplying current to a load circuit including a load, inverter means connected to said source for producing an internating current output, magnetic amplifier means having a control winding disposed to be responsive to a control signal applied thereto, said magnetic amplifier means being connected in circuit relation with said inverter means for changing said alternating current output to pulses of alternating polarity having a width which varies inversely with said control signal, and rectifier means connected in circuit relation between said magnetic amplifier means and said load circuit to be responsive to said pulses for providing a unidirectional output voltage which varies inversely with said control signal, the sum of said unidirectional voltage and the voltage of said source being applied to said load circuit.

2,897,434
TUBE TESTER
Jacob Anthes, Fort Atkinson, Wis.
Application June 27, 1957, Serial No. 668,466
15 Claims. (Cl. 324—23)



15. In a tube tester, a test socket having a plurality of terminals, a tube to be tested disposed in said socket, a plurality of push-button switches connected to said terminals respectively, a standard source of relatively low D.C. potential coupled in common to said push-button switches whereby actuation of a selected one of said switches couples said standard source to the socket terminal connected to said selected switch, a relatively high impedance circuit coupled to said test socket, said high impedance circuit including a variable impedance, a vacuum tube voltmeter circuit coupled to said variable impedance in said high impedance circuit for indicating the potential developed in at least a portion of said high impedance circuit upon actuation of said selected switch thereby to indicate the worth of said tube under test, and means for coupling said standard source to said high impedance circuit whereby said voltmeter circuit may be calibrated for operation in said tube worth test with said standard source by variation of said variable impedance.

2,897,435
UNITS FOR ANALYZING, REJUVENATING, AND REPAIRING TELEVISION PICTURE TUBES
David N. Fistell, Denver, Colo.
Application September 19, 1958, Serial No. 762,058
1 Claim. (Cl. 324—23)



A unit for testing and repairing television picture tubes of the type having a heater, a cathode, a grid and an anode comprising: a first A.C. supply; a second A.C. supply; a filament circuit connecting said second A.C. supply with the tube heater for energizing the latter; a first A.C. conductor leading from one terminal on said first A.C.

base electrode.

said reference source.

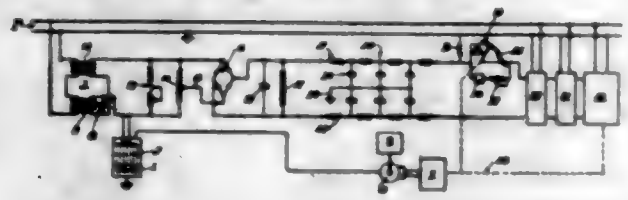
supply to said heater; a first rectifier; a second A.C. conductor leading from an opposite terminal on said first A.C. supply to said first rectifier; a D.C. conductor leading from said rectifier to said anode; a shunt circuit connected between said first and second A.C. conductors containing a first, second and third resistor in series; a first reduced-voltage circuit connected to said shunt circuit between the first and second resistors and leading to the tube cathode; a second reduced voltage circuit connected to said shunt circuit between the second and third resistors and leading to the tube grid; a cathode current meter in series with the first reduced voltage circuit; a grid current meter in series with said second reduced voltage circuit; an anode current meter in series with said second A.C. conductor; a first gaseous discharge lamp in said first A.C. conductor; a second gaseous discharge lamp in said second reduced voltage circuit; a third gaseous discharge lamp in said second A.C. conductor; and means for energizing said A.C. current supplies so that said gaseous lamp will indicate current flow and direction of current flow and said meters will indicate the amount of current flow in their respective circuits, and a third A.C. supply having multi-taps for delivering progressively higher voltage than said second A.C. supply in combination with means for connecting any desired tap of said third A.C. supply to said heater in superimposed relation to the current supply to said heater from said second A.C. supply, a second rectifier connected to said first A.C. conductor in low-voltage high-current relation, a D.C. circuit including said last mentioned rectifier and the tube heater to supply low-voltage high-current D.C. to the heater, means for connecting said second rectifier to said first A.C. conductor and simultaneously opening said first, second and third reduced voltage circuits to place said meters out of service when said low-voltage high-current D.C. is flowing, said means for simultaneously connecting said second rectifier to said first A.C. conductor and simultaneously opening said meter circuits comprising a first relay arranged to actuate a first, second and third as well as a fourth switch blade, the first blade being normally in circuit with said first A.C. conductor, the second blade being normally in circuit with the second reduced voltage circuit, the fourth blade being normally in circuit with the D.C. conductor, so that when said first relay is actuated said first A.C. conductor, said second reduced voltage circuit and said D.C. conductor are opened, and a two-bladed press button switch, the first blade of which is in circuit with said first relay to close an actuating circuit thereto and the second blade of which is in circuit with the first reduced voltage circuit so that when said press button switch is actuated, the first relay will be actuated and all meter circuits will be broken.

2,897,436

INDICATING AND CONTROL APPARATUS FOR ELECTROLYTE CONCENTRATION AND THE LIKE

Alfred Douty, Wyncote, Pa., assignor to Anchem Products, Inc., Ambler, Pa., a corporation of Delaware

Application September 29, 1954, Serial No. 459,020
2 Claims. (Cl. 324—30)



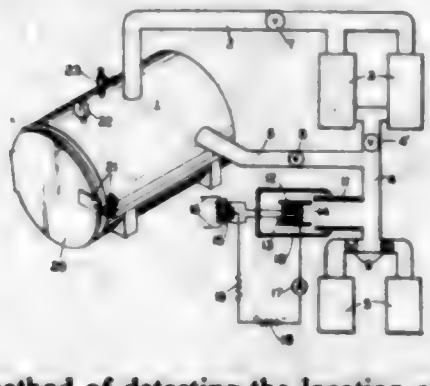
1. Apparatus for controlling the concentration of a solution of electrolytes comprising: a first closed circuit including a regulated source of A.C. voltage, a conductance cell having electrodes immersible in a solution of electrolytes and a variable load resistor calibrated in terms of solution temperature to develop an A.C. sensing voltage in accordance with change in concentration of electrolytes; a second closed circuit connected with said first circuit and including means to abstract a desired proportion of the sensing voltage across said load resistor and a rectifier to rectify said proportion of the sensing voltage; a third closed circuit connected with said second circuit for receiving said rectified voltage, the third closed circuit including a D.C. self-balancing potentiometer; and mechanism connected with said third circuit providing for regulation of the concentration of electrolytes in said solution.

2,897,437

VACUUM LEAK DETECTION

Walton E. Briggs and John A. Roberts, Lynnfield Center, Mass., assignors to General Electric Company, a corporation of New York

Application June 5, 1957, Serial No. 663,853
5 Claims. (Cl. 324—33)



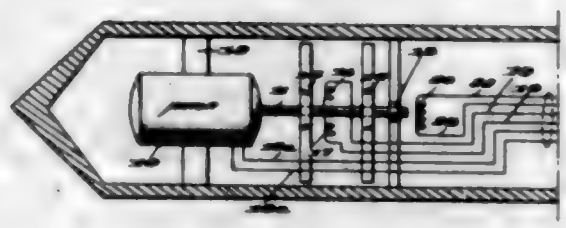
1. The method of detecting the location of a leak in a vacuum system which comprises placing within said system a diode having electrodes exposed to the space within said vacuum system, applying an electrical potential difference between said electrodes of said diode, one of said electrodes being a heated anode sensitized for positive ion emission in the presence of a gas capable of facilitating the formation of positive ions at said sensitized anode, applying said gas progressively to localized areas of the exterior surface of said vacuum system to locate said leak by the introduction of said gas into said system through said leak and detecting its presence therein by observing changes in the current flow between said electrodes of said diode caused by the formation of positive ions at its said heated anode by said gas, and maintaining the stability and sensitivity of said diode by maintaining in said vacuum system at the electrodes of said diode a controlled pressure within the range of from one micron to two hundred microns.

2,897,438

CASING JOINT DETECTOR

Robert E. Fearon, Tulsa, Okla., assignor to Well Surveys, Incorporated, Tulsa, Okla., a corporation of Delaware

Application April 19, 1954, Serial No. 423,968
9 Claims. (Cl. 324—34)



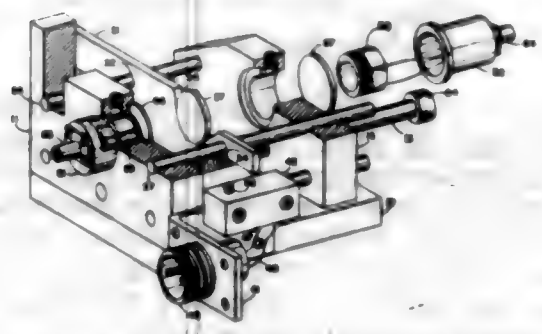
1. Apparatus for indicating the occurrence of a casing joint in a cased borehole that comprises induction coil means, at least two magnetic flux generating means vertically displaced on opposite sides of said coil means for generating magnetic fluxes continuously rotating rela-

2,897,442

2,897,444

tive to said coil means and said casing about an axis substantially parallel to the axis of said casing and substantially perpendicular to the axes of said coil means, means including said casing for providing flux paths for said fluxes, and means to measure the voltage induced in said coil means by said rotating magnetic fluxes, said flux generating means being oppositely polarized on opposite sides of said coil means and so spaced therefrom that the voltage induced therein is substantially zero in uniform casing.

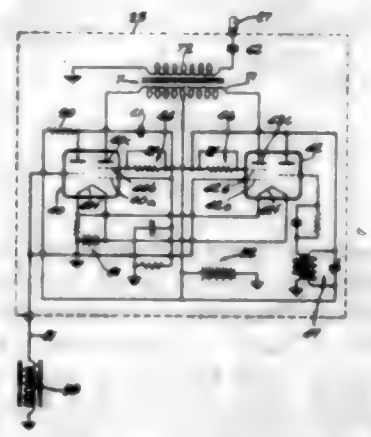
2,897,439
MAGNETOSTRICTIVE RESONANT-DISC TEST JIG
Michael S. Bann, Pacoima, and Herbert O. Lewis, Canoga Park, Calif., assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application April 1, 1957, Serial No. 649,839
4 Claims. (Cl. 324—34)



4. Apparatus for testing a magnetostrictive cylindrical disc comprising a base, a back member fixed uprightly to said base, an adjustable upright member, a pair of pins fixed to said back member and slideably received through openings in said adjustable member to support it with respect to said base, an adjustment screw received through said back member and adjustable support to enable adjustment of the spacing between them, a pair of cylindrical housings made of non-permeable conducting material, one of said housings received through said back member, the other of said housings received through said adjustable member in axial alignment with said one housing, a pair of coil forms received in said housings respectively, a pair of coils wound about said coil forms respectively, a pair of coil covers respectively received over the ends of said housings flush with the inner surface of said back member and adjustable support respectively, respective coils provided on said coil forms near the inner ends of said housings, a pivoting pin and a stop pin received on opposite sides of said housings between said back member and adjustable member, a disc support formed with a V-shaped groove and pivotably supported on one side of its groove by said pivoting rod, the pivoting movement of said disc support being limited by said stop rod, the magnetostrictive disc receivable in said groove for being aligned axially with said coils when said disc support engages said stop rod, a switch being supported with respect to said base, and an actuating member being provided with said switch and being engageable with said disc support as it engages said stop rod.

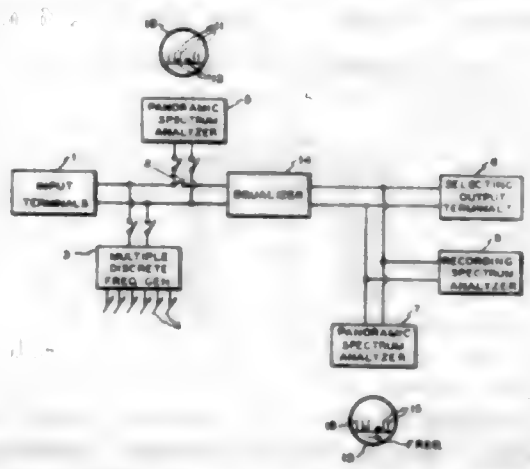
2,897,440
EARTH WELL CASING DISCONTINUITY DETECTOR
Millo M. Hawthorne, Houston, Tex., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Application April 12, 1955, Serial No. 500,862
9 Claims. (Cl. 324—37)

1. A casing joint detector for providing a signal when moved past a joint in a steel casing in an earth borehole, comprising in combination: means including a container adapted to be traversed through the casing; magnetomotive force-producing means in said container for producing magnetic flux in a path such as to include a longitudinally extending section of the casing when the container is in the casing; potential generating means in inductive relation with the magnetic flux in said path, for generating an electric potential in response to changes in magnetic flux in said path; means providing an alternating potential in said container; means in said container including a pair of electron tubes each having an electron discharge path each comprising a cathode, at least two control electrodes and an anode; impedance means interconnecting the anodes of said tubes and having an



intermediate tap from which anode current is drawn; means for applying said alternating potential in like phase to one control electrode of each of said tubes; means including connections to apply at least part of the generated potential of said potential generating means in opposite phase relationship to the other of said control electrodes of said tubes; and a signal producing means responsive to unbalanced flow of current in said impedance means on either side of said tap thereof for producing a signal indicative of variations in reluctance of said magnetic flux path incident to traversal of said first-named means past a joint in said casing.

2,897,441
PANORAMIC TEST SYSTEM
Bernard Schlessel, Brooklyn, N.Y.
Application December 27, 1955, Serial No. 555,344
2 Claims. (Cl. 324—58)



1. A system for testing the frequency response of a long carrier transmission line, wherein said line carries at least one signal continuously in normal service, wherein the system is operative without interrupting that service, comprising means for impressing on said line at one position thereof a distribution of discrete continuous wave signals of known amplitudes subsisting at predetermined single frequencies all non-interfering with said at least one signal, and a panoramic spectrum analyzer coupled with said line at a position thereof remote from said one position, said panoramic spectrum analyzer arranged and adapted to present a visual display of all said signals in terms of their relative amplitudes and of their frequencies.

tion rate of said series of pulses until equilibrium is generate a magnetic field in which said system is operable

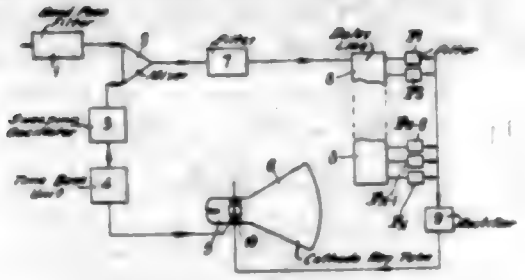
tance cell having electrodes immersible in a solution of for generating magnetic fluxes continuously rotating rela-

2,897,442

FREQUENCY SPECTRUM ANALYZERS

Peter Maurice Wright and Percy Samuel Brandon, Chelmsford, England, assignors to Marconi's Wireless Telegraph Company Limited, London, England

Application October 13, 1953, Serial No. 385,830
Claims priority, application Great Britain October 24, 1952
6 Claims. (Cl. 324—77)



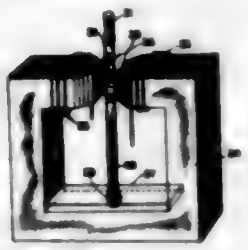
1. A frequency spectrum analyzer comprising a frequency modulated sweep oscillator having a predetermined repetition frequency, a mixer in which are mixed signals within a band of frequencies to be analyzed and oscillations from said frequency modulated sweep oscillator, a display arrangement comprising a cathode ray tube, means for applying a voltage from said sweep oscillator to deflecting means on the cathode ray tube whereby one coordinate deflection is synchronized with the sweep oscillator, a dispersive network comprising delay line means, means for applying the output of said mixer through the dispersive network, whereby a delay is imposted in dependence upon the input frequency to the line, and a plurality of narrow band filters having mutually different transmission frequencies to a common output circuit wherein the outputs from all the filters combine simultaneously to form a pulse which supplies the other coordinate deflection to said cathode ray tube.

2,897,443

MOVING MAGNET OSCILLOGRAPH

Lewis I. Mendelsohn and Harold T. Fanz, Lynn, Mass., assignors to General Electric Company, a corporation of New York

Application November 1, 1955, Serial No. 544,210
2 Claims. (Cl. 324—97)



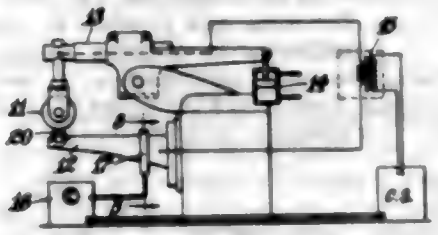
1. A galvanometer motor or the like comprising the combination of a stator structure having opposed spaced salient poles, a slender and generally cylindrical permanent magnet rotor member, means anchoring one end of said rotor member to said stator structure in a magnetically insulated relationship and positioning said rotor member between said poles, said rotor member being diametrically magnetized and disposed between said poles in a position wherein the flux from said rotor and the flux passing between said poles remain substantially perpendicular for small angular movements of said rotor member about the longitudinal axis thereof, and said anchoring means anchoring said rotor member end at a position remote from said poles such that torsion forces in said slender rotor member tend to restore said member to a neutral angular position about said longitudinal axis.

2,897,444

ELECTRICAL MEASURING MEANS FOR MEASURING WELDING CURRENT FLOW

Alfons John Gerscia and Robert Findlay Rodger, Derby, England, assignors to Rolls-Royce Limited, Derby, England, a British company

Application September 6, 1955, Serial No. 532,657
Claims priority, application Great Britain September 16, 1954
7 Claims. (Cl. 324—103)



1. Electrical measuring apparatus for measuring the welding current in intermittently-operated alternating-current welding apparatus which includes a pair of welding electrodes and which is arranged to give successive current flows each of equal time duration, comprising input means including electro-magnetically-operated pick-up means and adapted to produce a pulsating output which is determined by the instantaneous current flow in the welding circuit which includes the welding electrodes, integrator means connected to the pick-up means to have said pulsating output fed thereto for each said time duration and adapted to produce at the end of each of said time durations an output which is determined by the total welding current flow in a welding cycle and by a selected time factor, a memory circuit including a condenser connected to be charged by the output of the integrator means and also including an indicator device giving a reading determined by the charge on said condenser, and triggering means producing a first triggering signal actuating means to start the integrator means at the commencement of welding current flow in a welding cycle, producing a second triggering signal actuating means to discharge the condenser of the memory circuit on cessation of welding current flow in said welding cycle, and producing a third triggering signal immediately following the discharge of the condenser of the memory circuit actuating means to permit recharging of the condenser of the memory circuit by the output of the integrator means arising from the flow of welding current which has just ceased.

2,897,445

TIME SERIES CURRENT CONVERSION

Edmund E. Goodale, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

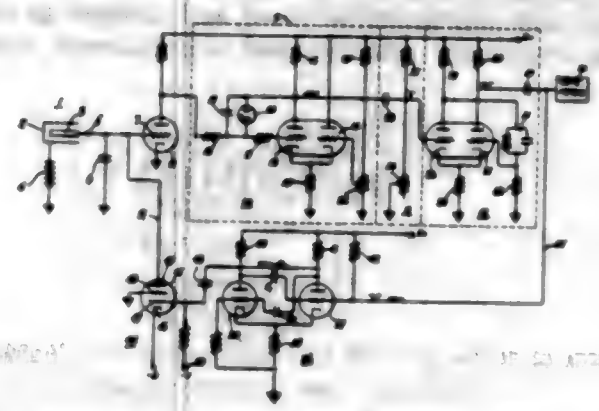
Application August 9, 1957, Serial No. 677,311
4 Claims. (Cl. 324—111)

1. In a converting apparatus for producing a series of pulses having a repetition rate dependent upon the magnitude of a unidirectional current, the combination comprising a storage capacitor charged by the unidirectional current to be converted, means to produce a series of pulses having a repetition rate proportional to said current, said means including a generating means for generating a series of pulses of a rate varying in response to the instantaneous charge level on said capacitor, discharge means actuated by said pulse generating means to discharge said capacitor partially by removing fixed increments of charge from said capacitor at the repeti-

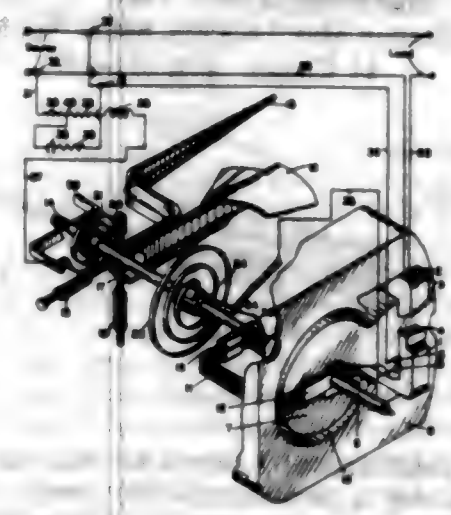
responsive to said beat frequency for controlling the fre- of frequencies within a predetermined band of fre-

terms of their relative amplitudes and of their frequencies.

tion rate of said series of pulses until equilibrium is achieved and the charge removed equals the charge deposited by said unidirectional current and the repetition rate is a measure of said current.



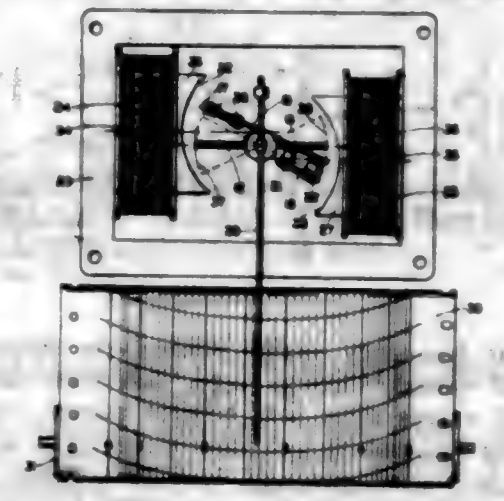
2,897,446
A.-C. WATTMETER
Harold Rich, Lynn, Mass., assignor to General Electric Company, a corporation of New York
Application May 27, 1955, Serial No. 511,582
5 Claims. (Cl. 324—142)



1. A wattmeter comprising a stationary coil adapted to be energized in accordance with the current in an alternating current load circuit, a movable coil the ends of which are adapted to be connected to and energized in accordance with the voltage across said load circuit, means for supporting said coils in mutually inductive relation whereby their respective energizations cause said movable coil to deflect an amount proportional to the product of said energizations, capacitance means connected across the ends of said movable coil and across the load circuit voltage forming a localized circuit with the movable coil such that load voltage is applied between the ends of the movable coil and the capacitance, and inductance means connected in said localized circuit in non-inductive relationship with said coils for compensating for the mutual inductance of said coils.

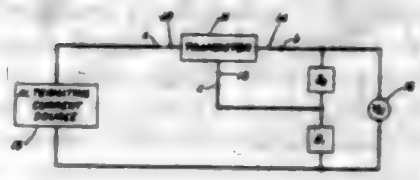
2,897,447
ELECTRICAL MEASURING INSTRUMENT OF THE IRON VANE TYPE
Earl W. Clark, East Lynn, Mass., assignor to General Electric Company, a corporation of New York
Application March 13, 1956, Serial No. 571,332
7 Claims. (Cl. 324—147)

1. An electrical measuring instrument comprising a repulsion vane system adapted for operation within a magnetic field and including a fixed vane and a radially extending magnetic vane member movable about a pivotal axis within said field in accordance with a magnetic torque exerted thereon, and an electromagnet adapted to generate a magnetic field in which said system is operable, said electromagnet comprising a magnetic core having field forming poles, said poles being disposed relative to said vane system such as to be non-concentric and surrounding the path described by the edge of said movable vane remote from said axis upon the generation of said



magnetic field so that the said poles form with said movable magnetic member a progressively diminishing gap therebetween in a radial direction as said member is deflected in an upecale direction whereby a magnetic attraction torque acts upon said movable member during energization of said electromagnet.

2,897,448
CIRCUIT FOR MEASURING ALPHA OF TRANSISTORS
Gordon Raisbeck, Basking Ridge, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application June 23, 1953, Serial No. 363,608
15 Claims. (Cl. 324—158)



1. In combination, a transistor having three electrodes, means connecting said transistor as an amplifier having an input and an output, a load impedance connected to the output of said amplifier, a source of alternating current, means for applying current from said source to said input, a second impedance, means for passing through said second impedance substantially the same current applied to said input, means for measuring the net voltage developed across both said load impedance and said second impedance, and means for adjusting said net voltage to substantially zero, whereby the current amplification factor of said transistor is given by the ratio of said second impedance to the sum of said second impedance and said load impedance.

2,897,449
ANTI-IMAGE DEVICES
Kenneth T. Larkin, Wayland, Mass., assignor to Raytheon Manufacturing Company, Waltham, Mass., a corporation of Delaware
Application November 12, 1954, Serial No. 468,355
7 Claims. (Cl. 331—4)

3. In combination, a first frequency source for generating a plurality of frequencies, a second frequency source for generating a plurality of frequencies, heterodyning means connected to said first and second frequency sources for producing a beat frequency, control means

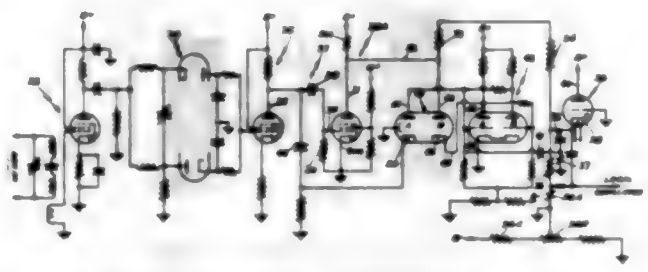
of a sawtooth waveform by integration in said capacitor,

ferrite slabs longitudinally disposed within said cavity ad-

a neutral angular position about said longitudinal axis.

increments of charge from said capacitor at the repeti-

responsive to said beat frequency for controlling the frequency of said second source whereby said beat frequency is maintained at a predetermined value, disabling means including charging and discharging means for disabling said control means when said beat frequency is lost and for varying the frequency of said second frequency source through a range of frequencies such that



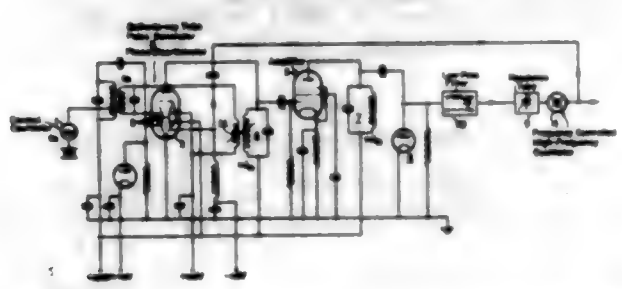
said beat frequency varies successively through a first range of values, through zero, and through a second range of values after said control means are disabled, means for reactuating said control means as said beat frequency is varied through said first range of values whereby said control means operates to maintain said beat frequency at said predetermined value as said beat frequency is varied through said second range of values.

2,897,450

AUTOMATIC FREQUENCY CONTROL

Christopher Edmund Gervaise Bailey, Tower Hill, Dorking-Surrey, England, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Application September 11, 1956, Serial No. 609,302
Claims priority, application Netherlands September 23, 1955
5 Claims. (Cl. 331—18)



1. An automatic frequency correction circuit comprising an oscillator to be controlled, a frequency-control circuit connected to said oscillator, a control oscillator circuit, a phase-discriminating mixer stage having two input circuits respectively connected to receive the oscillations from said control oscillator circuit and the oscillations from said oscillator to be controlled, whereby said mixer produces a pulsatory control voltage which varies in accordance with any frequency variation between the frequencies of said control oscillator circuit and said oscillator to be controlled, a low-pass filter, means connected to apply said control voltage through said low-pass filter to said frequency-control circuit, and a feedback circuit connected to feed said pulsatory control voltage to said mixer input circuit which is connected to receive the oscillations from said control oscillator circuit.

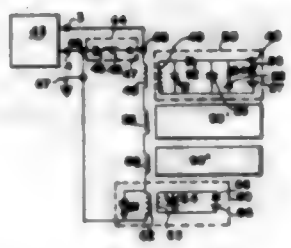
2,897,451

MULTIFREQUENCY DEVICES AND SYSTEMS ASSOCIATED THEREWITH

Robert B. Hammett, New Orleans, La.

Application February 27, 1958, Serial No. 717,989
30 Claims. (Cl. 331—60)

1. A selective electronic system comprising an exciting device, said device including means for selectively generating simultaneous basic oscillations at a plurality of frequencies within a predetermined band of frequencies, and a plurality of secondary circuits, wherein said secondary circuits are tuned to different frequencies within said predetermined band and coupled to said exciting device for selective and simultaneous excitation



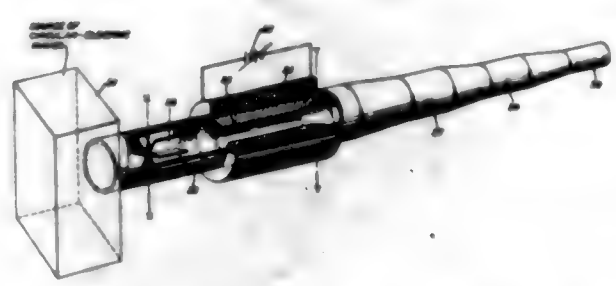
thereby, and wherein said secondary circuits include means for automatically causing said secondary circuits to operate in either of two stable states, at least one of which is oscillatory, during operation of the system.

2,897,452

NONLINEAR TRANSMISSION MEDIA

George C. Southworth, Chatham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application May 14, 1956, Serial No. 584,565
14 Claims. (Cl. 331—76)



10. In combination, a source of electromagnetic wave signals having a fundamental frequency; a section of wave guiding transmission line for supporting said signals coupled at one end to said source; an element of material characterized by the parameters of dielectric constant and permeability, at least one of said parameters of said material having a nonlinear response relative to applied signal strength for a given region of signal strength; said element being coupled to said section of said line in the path of said signals; the strength of said signals from said source being sufficient to drive said material into its nonlinear region; and a linear signal receiving means selectively receptive to a frequency substantially different from said fundamental frequency coupled to the other end of said section of transmission line.

2,897,453

SAWTOOTH WAVEFORM GENERATORS

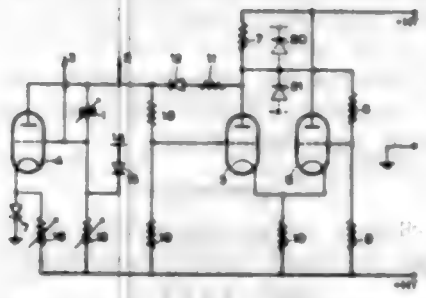
Hugh Lyon Mansford, Uxbridge, England, assignor to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain

Application January 31, 1956, Serial No. 562,557
Claims priority, application Great Britain February 3, 1955
3 Claims. (Cl. 331—145)

7. A sawtooth waveform generator comprising an amplifier having an input electrode and an output electrode, a path including a capacitor connected from said output electrode to said input electrode, an integrating impedance for applying potential to said input electrode, an output impedance for applying potential to said input electrode, and a switch having one condition in which said impedances are enabled to cause the generation of one stroke

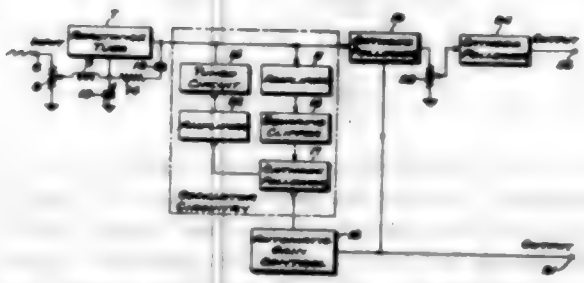
resonator, a probe coaxial with said resonator and enter- cal to one another and disposed in parallel relation, and

of a sawtooth waveform by integration in said capacitor, and having another condition in which said impedances



are disabled for integration and the capacitor is conditioned for discharge through said amplifier.

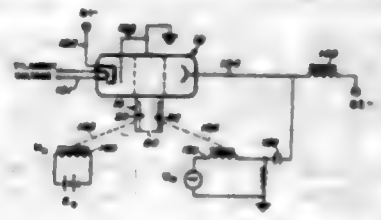
2,897,454
SWEEP GENERATOR
Herbert O. Lewis, Canoga Park, Calif., assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application April 9, 1957, Serial No. 651,717
4 Claims. (Cl. 331—180)



1. A sweep generator circuit including input means having applied thereto input signals of generally sawtooth wave form, a reactance tube having input and output terminals, the input terminal of said reactance tube connected to said input means and receiving said input signals, a phase-shifting means, said phase-shifting means connected across the input and output terminals of said reactance tube, an oscillatory means, said oscillatory means including said reactance tube, a tuned circuit, amplifier means, clipping means, and a first cathode follower; said amplifier means, said clipping means and said first cathode follower being connected in cascade across said tuned circuit as feedback means; a second cathode follower connected to said tuned circuit, an automatic gain control means, said second cathode follower connected to said automatic gain control means and applying thereto the output signals from said second cathode follower, output signals from said automatic gain control means connected to said first cathode follower to control the amplitude of the output signal from said tuned circuit, and output means connected to said second cathode follower for removing therefrom output signals of constant amplitude generated in response to said sawtooth input signals.

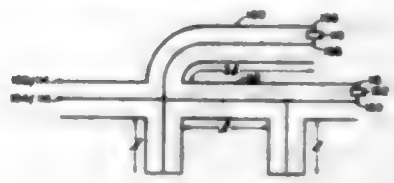
2,897,455
MAGNETICALLY TUNED KLYSTRON
George R. Jones, Greenbelt, John C. Cacheris, Bethesda, and Clyde A. Morrison, Hyattsville, Md., assignors to the United States of America as represented by the Secretary of the Army
Application September 30, 1957, Serial No. 687,386
4 Claims. (Cl. 332—7)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A magnetically tuned klystron comprising in combination: a klystron having an iris adapted to be coupled to an external cavity, a cavity having a rectangular cross section and serving as said external cavity, said iris being coupled to one end of said cavity, said cavity having an output iris at its other end, a pair of rectangular ferrite slabs longitudinally disposed within said cavity adjacent to the short sides of said cavity, and means for applying a tuning magnetic field to said ferrite slabs in a



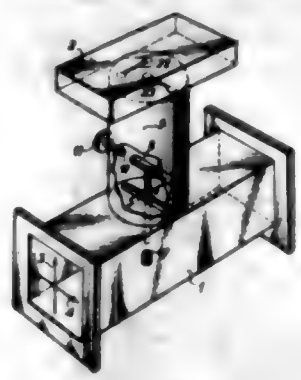
direction substantially parallel to the short sides of said cavity, the oscillation frequency of said klystron being dependent upon the magnitude of said field.

2,897,456
DISSIPATIONLESS DIFFERENTIAL PHASE SHIFTERS
Donovan V. Geppert, Mountain View, Calif., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application February 28, 1956, Serial No. 568,310
10 Claims. (Cl. 333—9)



1. A differential phase shifter for producing two outputs having an approximately constant phase difference over a wide frequency range comprising a transmission line section having a pair of input terminals and a pair of output terminals, a π-network having a pair of input terminals connected in parallel with the input terminals of said transmission line section and a pair of output terminals, said π-network consisting of two transmission line stubs of equal length shunted across a series transmission line and spaced apart a distance equal to the stub length, and first and second terminating impedances respectively connected across the output terminals of said transmission line section and across the output terminals of said π-network.

2,897,457
RESONANT DIRECTIONAL COUPLER WITH SQUARE GUIDE
Pierre G. Marié, Paris, France
Application July 2, 1956, Serial No. 595,460
Claims priority, application France July 4, 1955
2 Claims. (Cl. 333—10)



2. A directional coupler comprising a general square guide conveying a TE_{10} mode wave and a TE_{01} mode wave, a first circular cavity resonator coupled to a first face of said square guide by a first coupling system comprising a slot perpendicular to the general square guide axis and diametrical with respect to the circular cavity

prising an end connecting flange formed by a conductive site said saddle thereby to secure said core to said

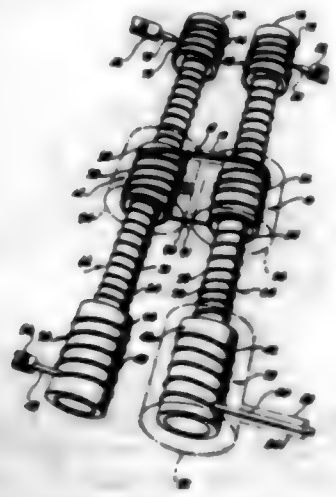
generating simultaneous basic oscillations at a plurality pedances are enabled to cause the generation of one stroke

resonator, a probe coaxial with said resonator and entering through the slot inside the square guide, a metallic rod supporting the probe, radial with respect to the first cavity resonator and parallel to the slot of said first coupling system, and a tuning plug inside said first resonator and opposite the rod, a first rectangular guide coupled to said first circular cavity resonator by a two-slot coupling system, a second circular cavity resonator coupled to a second face of the square guide perpendicular with the first face by a second coupling system identical with the first coupling system and a second rectangular guide coupled to said second circular cavity resonator by a second two-slot coupling system, whereby the energy of the TE_{10} mode wave is collected at one end of the first rectangular guide and the energy of the TE_{01} mode wave is collected at one end of the second rectangular guide.

2,897,458
SHUTTER FOR WAVEGUIDES
Bernard D. Berkowitz, Waltham, Mass., assignor to Microwave Associates, Inc., Burlington, Mass., a corporation of Massachusetts
Application October 16, 1957, Serial No. 690,517
3 Claims. (Cl. 333—13)

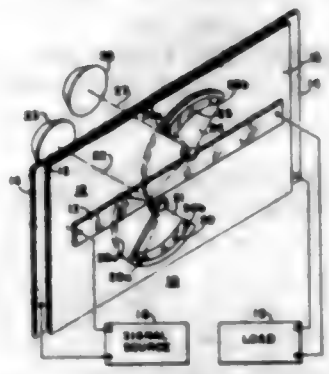
1. A shutter gap device for electromagnetic waveguides comprising: first electrode means having a cylindrical tip portion arising from a transverse bearing surface; second electrode means in substantial axial alignment with the first electrode means, having an axial recess which fits said cylindrical tip portion with some play, and terminating in a transverse bearing surface substantially matching said first bearing surface; and means for mounting said electrode means with movement relatively to each other in axial direction; said recess being somewhat longer than said tip portion such that upon closing of the gap with said movement mechanical contact takes place at said bearing surfaces and not at said tip portion, and eccentricity between the two electrodes is taken up by said play.

2,897,459
PHASE SHIFTER
Louis Stark, Gardena, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Application February 8, 1957, Serial No. 639,169
12 Claims. (Cl. 333—31)



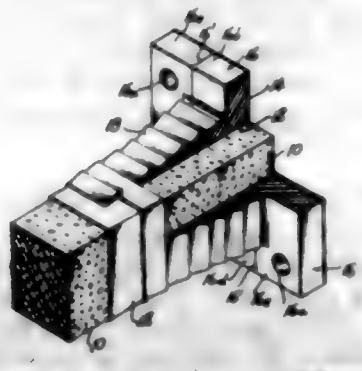
1. A single-ended transmission line phase shifter comprising: two helical transmission lines substantially identical to one another and disposed in parallel relation, and two short helix sections, each surrounding one of said helical transmission lines, whereby each of said transmission lines is electromagnetically coupled to its associated helix section, one end of each of said short helix sections being electrically interconnected, and each of said helix sections being adapted for lateral displacement along said helical transmission lines.

2,897,460
TRANSMISSION-LINE IMPEDANCE-MATCHING APPARATUS
Richard La Rosa, Levittown, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Application June 25, 1954, Serial No. 439,285
9 Claims. (Cl. 333—33)



1. Strip-transmission-line impedance-matching apparatus comprising: a strip transmission line for translating a signal of predetermined operating frequency; impedance-matching means for individually introducing susceptance at one or the other of two distinct points along the main transmission line, said means including a pair of curved approximately one-quarter wavelength sections of strip line at the operating frequency thereof; and a pair of means for individually rotating the one-quarter wavelength sections of strip line about fixed points adjacent to the main transmission line to match the impedance on one side of the one-quarter wave-length sections to the impedance on the other side of the one-quarter wavelength sections.

2,897,461
WAVE GUIDE CONSTRUCTION
Fred Edmund Ashbaugh and Paul B. Kennedy, Seattle, Wash., assignors to Boeing Airplane Company, Seattle, Wash., a corporation of Delaware
Application September 14, 1953, Serial No. 379,888
4 Claims. (Cl. 333—95)



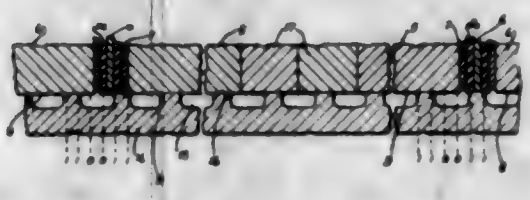
1. A wave guide for electromagnetic wave propagation comprising an elongated continuous low-density foam dielectric core of substantially rigid predetermined wave guide form and a relatively thin conductive metal layer adhered to the sides of said core and forming a continuous shell surrounding the same insufficiently thick to impart appreciable stiffness and rigidity of itself to the wave guide, said core imparting stiffness and rigidity to the completed wave guide, said wave guide additionally com-

exterior flanges forming the channel, said frame being relation longitudinally within the sheath, compacted in-

ing an output iris at its other end, a pair of rectangular axis and diametrical with respect to the circular cavity

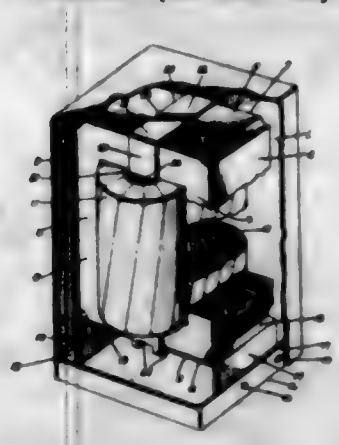
prising an end connecting flange formed by a conductive metal flange electrically contiguous to an end of the conductive metal shell, and a backing element adhered to the metal flange and to the shell at the base of said flange.

2,897,462
VARIABLE RELUCTANCE ELECTROMAGNETIC DEVICE
David F. Brower, Torrance, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Application June 1, 1956, Serial No. 588,711
7 Claims. (Cl. 336—30)



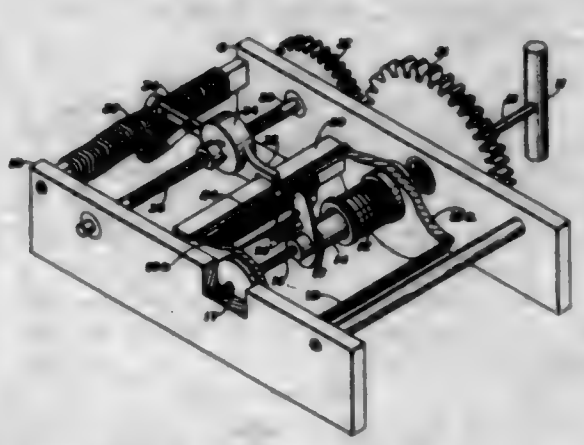
1. An incremental displacement detector comprising; a scale of magnetic material having a scale path thereon defined by a sequence of spaced grooves and lands forming a plurality of similar scale divisions along one surface thereof, a core member having at least two legs in substantially side-by-side relation and having a coil thereon, the ends of said legs terminating in adjacent pole faces disposed in confronting relation with said surface of said scale, said core member and said scale being relatively movable to afford effective movement of said core member along said scale path, one pole face having a width less than one scale division and the other pole face having a width corresponding to and spanning the dimension across a predetermined plurality of scale divisions, providing magnetic resolution of said scale divisions only at said one pole face.

2,897,463
MOUNTING STRUCTURE FOR STATIONARY INDUCTIVE DEVICE
William L. Denham, Fort Wayne, Ind., assignor to General Electric Company, a corporation of New York
Application January 4, 1956, Serial No. 557,272
9 Claims. (Cl. 336—65)



1. An inductive device comprising a substantially rectangular laminated core having a coil-receiving leg formed thereon; a coil member positioned on said leg; a mounting saddle arranged against a laminated side of said core substantially perpendicular to said leg and with its side edges generally parallel respectively with the opposite faces of said core; and fastening means comprising strap means having portions extending parallel to said leg respectively across opposite faces of said core between said coil and said core, and portions bent substantially perpendicular to said first-named portions into engagement respectively with the respective side edges of said saddle and with the laminated side of said core opposite said saddle thereby to secure said core to said saddle and to clamp the laminations of said core.

2,897,464
LINEAR TUNING CURVE INDUCTOR
La Verne E. Miller, Marion, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application January 9, 1957, Serial No. 633,257
4 Claims. (Cl. 336—136)



1. A tuning mechanism for an oscillator comprising an inductance element, a sealed container, a rotatable threaded shaft extending through said container, said inductance element including a coil member rigidly mounted to the inside of said container and a core member threadedly mounted to said shaft within said container, said core member being moved axially to change its relationship with said coil member in response to relative rotation between said core member and said shaft, cam means fixed to the inside wall of said container, follower means fixed to said core member and engaging said cam means, means for pivoting said container for rotation about the axis of said shaft, said follower means cooperating with said cam means in response to rotation of said shaft to rotate said core member slightly relative to said container during axial motion of said core member thereby to vary within predetermined limits the rate of axial motion of said core member relative to the rotation of said shaft simultaneously with the axial motion of said core member, means external to said container responsive to the rotation of said shaft for rotating said container slightly simultaneously with axial motion of said core member, said last means thereby varying further the rate of axial motion of said core member relative to the rate of rotation of said shaft.

2,897,465
ASSEMBLY RETAINERS
George A. Timmerman, Lakewood, Ohio
Application July 27, 1955, Serial No. 524,663
1 Claim. (Cl. 336—210)

A retainer for embracing and retaining a pluraliy of components incorporated in an electrical transformer or the like comprising a substantially rectilinear open frame of channel formation having upstanding interior and

2,897,469
MOLDED SELF-GROUNDING ELECTRICAL PLUG

2,897,471

exterior flanges forming the channel, said frame being formed of substantially resilient sheet material proportioned to encircle and closely to embrace four exterior surfaces of said assembly in pressure contact, said frame having elements rising from directly opposed portions of the interior flange thereof formed with offset free ends, said elements being inclined inwardly towards the opening thereof, said free ends thereof being offset substantially at right angles thereto and being inclined to the plane of the frame towards said opening to engage in pressure contact a fifth surface of said assembly disposed substantially perpendicular to said other surfaces and designed to locate said frame at a predetermined point on said assembly, and resilient tongues of less height than said elements rising from said interior flange of said channel frame and inclined inwardly to overlie said opening in said frame, said tongues having free edges capable of engaging at least two of said first mentioned exterior surfaces opposed to one another, said edges of said tongues being capable of biting into said opposed surfaces to maintain said frame against retraction from said predetermined located position on said assembly.

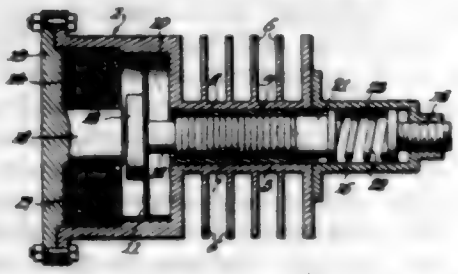
2,897,466

BALANCED CARBON PILE

Alois B. Essex, Glendale, and Elmer E. Garrett, Freeport, N.Y., and Henry F. McKenney, Weston, Mass., assignors to Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N.Y., a corporation of Delaware

Application November 23, 1956, Serial No. 623,844

7 Claims. (Cl. 338—105)



1. A variable resistance mechanism of the character described for use on vehicles subjected to rapid accelerations and decelerations, said mechanism comprising a carbon pile, a spring diaphragm by which a compressive pressure is exerted upon one end of said carbon pile, an armature secured to said diaphragm in axial alignment with said carbon pile, spring means by which pressure is exerted upon the other end of said carbon pile in opposition to the pressure exerted by said spring diaphragm, a freely floating counterbalancing shiftable weight interposed between said spring means and the said other end of said carbon pile in axial alignment with said carbon pile and said armature, a solenoid disposed in axial alignment with said armature and said carbon pile and operative when energized to attract said armature and thereby decrease the compressive pressure exerted upon said carbon pile, said counterbalancing weight being operative to counteract the reaction of said armature against said carbon pile due to acceleration of said variable resistance mechanism, the reaction of said weight against said carbon pile due to acceleration being equal and opposite to the reaction of said armature.

2,897,467

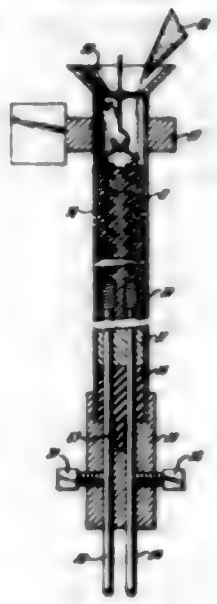
SHEATHED TUBULAR ELECTRICAL HEATER

Robert D. Bremer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application May 4, 1955, Serial No. 505,960

1 Claim. (Cl. 338—239)

An electric heater including an outer tubular sheath, two electrical conductors extending side by side in spaced relation longitudinally within the sheath, compacted insulating means within said sheath surrounding and holding said conductors in spaced relation, spaced metal terminals protruding from one end of said sheath and each having its inner end connected to one of said conductors, and a plug of resilient elastic synthetic rubber surrounding and holding said terminals parallel to but spaced from each other and also holding said terminals spaced



from the adjacent portion of the sheath, said plug having its major portion permanently held under radial compression abutting the insulating means solely by the gripping of the contacting portions of the sheath within an end of the sheath and also having a minor portion protruding from an end of the sheath, said plug having an integral fin protruding outwardly from said minor portion between said terminals for preventing arcing over the surface of the plug between the terminals.

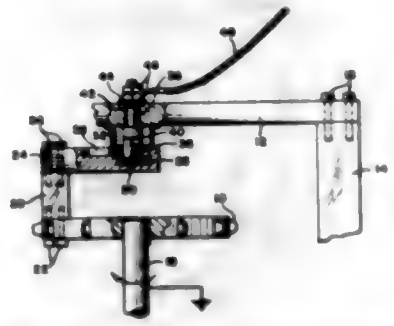
2,897,468

MAGNETIC ROTARY CONTACT

La Rue V. Regelman, Emporium, Pa., assignor to Sylvania Electric Products Inc., a corporation of Massachusetts

Application October 5, 1956, Serial No. 614,241

3 Claims. (Cl. 339—8)



1. An electrical connection between two spaced apart conductors rotative with respect to each other about an axis of rotation, one of said conductors being provided with a cup concentric with the axis of rotation and with a first permanent magnet having a pole exposed to contents of the cup, the second of said conductors terminating in a second permanent magnet having a pole projecting into the cup with the projecting pole of opposite polarity to the said pole of the first magnet and a particulate magnetic material in the cup sufficient to bridge the space between the named poles of the two magnets and form the sole electrically conductive path therebetween.

2,897,473

lower surface of said body, the greatest diameter of said

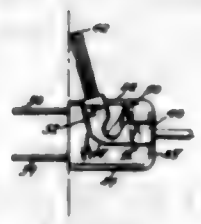
saddle and with the laminated side of said core oppo- of channel formation having upstanding interior and

2,897,469

MOLDED SELF-GROUNDING ELECTRICAL PLUG CONSTRUCTION

Milton Morse, Bronx, N.Y.

Application April 9, 1957, Serial No. 651,684
2 Claims. (Cl. 339—14)



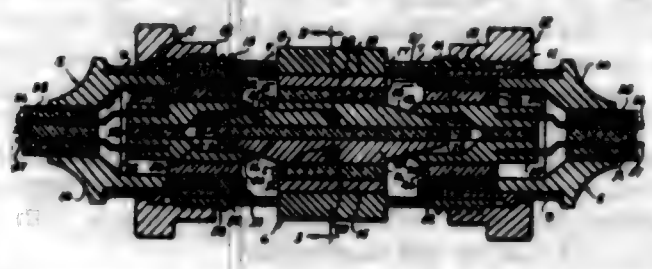
1. A self-grounding electrical attachment plug comprising: a molded plug body, at least one power prong within said plug body, a grounding element including a grounding prong and a flexible grounding prong support, said grounding prong support having a mounting member formed integrally with respect to said plug body and a prong supporting portion interconnected to said mounting member through a resilient bend portion of reduced cross section, said resilient bend portion being offset with respect to the principal axis of said grounding prong, whereby a force exerted axially upon said grounding prong will cause said bend portion to flex in a predetermined direction.

2,897,470

CONNECTORS

Stephen Louis Klassen, Fair Lawn, N.J., assignor to Thermo Electric Co., Inc., a corporation of New Jersey

Application October 21, 1955, Serial No. 541,888
1 Claim. (Cl. 339—89)



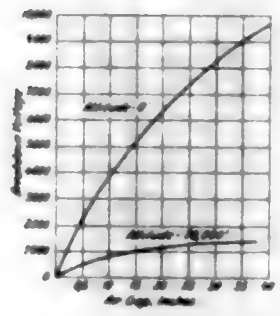
A connector having end and middle separable sections, each of said sections comprising a housing and contact unit insulated in said housing, the contact unit of the middle section being a double ended member split to form two spaced contact elements with insulation therebetween, the ends of said contact unit tapering outwardly to form conical projections, each of said contact elements having transverse openings communicating with an enlarged opening in a side of the middle housing, said openings receiving the prongs of insulated leads, the contact unit of each end section being a tubular member split to form two spaced contact elements with insulation therebetween extending from the outer end of the tubular member inwardly to a point intermediate both ends thereof, the inner end of said tubular member defining a socket having a beveled surface at the inner end of the latter to provide a ring-like contact surface effecting a cleaning or wiping action for one of said conical projections entering part way into said socket, insulated leads extending into the housings of said end sections and electrically connected in alignment with the contact elements therein, respectively, the contact elements and leads of said middle section being aligned with and electrically connected with the contact elements and leads of said end sections in a pair of spaced and insulated lines, means to draw said sections into assembled relation, the electrically connected contact members and leads of each line being of the same material, the material of one line being different from that of the other.

2,897,471

HIGH VOLTAGE CONNECTOR

Donald R. De Tar, Stratford, Conn., assignor to Winchester Electronics, Incorporated, Norwalk, Conn., a corporation of Connecticut

Application January 30, 1956, Serial No. 562,115
6 Claims. (Cl. 339—94)



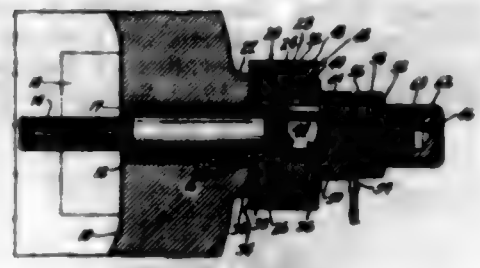
6. A miniature type electrical connector for use at high voltages and at high altitudes which comprises a connector body formed from a relatively rigid insulating material, said body having a plurality of spaced recesses in one face thereof, a plurality of contacts extending through said body in spaced relation to each other, each of said contacts having an exposed portion projecting into one of the recesses, a separate member formed from a relatively rigid insulating material surrounding the exposed portion of each of the contacts and extending into the recesses in which said exposed portion is located and a sealing ring of resilient material interposed between each of the separate members and the surfaces of the connector body forming the sides of said recesses, said rings being under compression and forming air-tight seals between the separate insulating members and the connector body whereby the air-path along the face of the connector body between the exposed portions of the contacts is interrupted.

2,897,472

AUXILIARY TERMINAL SEAL

William M. O'Brien, Rockville, Conn.

Application June 18, 1958, Serial No. 742,951
5 Claims. (Cl. 339—94)



1. A terminal seal for an electric motor unit which is hermetically sealed in a casing and which has an original terminal extending through an opening in said casing, said terminal seal comprising an annular dielectric body, a retaining nut and a crown of conducting material mounted on said terminal, said body having a counterbore of different diameter on each face with gaskets in each of said counterbores, said crown having an internally threaded bore for connection of said crown to said terminal and an externally threaded surface surrounding said internally threaded bore and extending over at least a portion of the length of said threaded bore, said body, nut and crown coacting whereby said gaskets are partially compressed in said counterbores and the faces of said body abut the respective casing and crown faces.

after a time delay, a plurality of gating means each adapted apart relation the combination which comprises a cou-

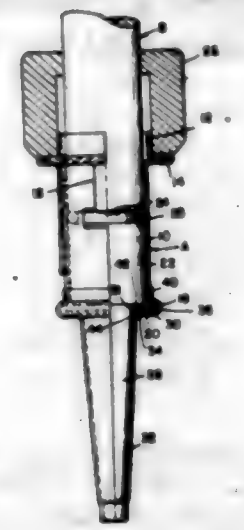
two electrical conductors extending side by side in spaced therebetween.

2,897,473

BOOTED ELECTRICAL RECEPTACLE

Robert M. Heller, Birmingham, Mich., assignor to Watts Electric & Mfg. Co., Birmingham, Mich., a corporation of Michigan

Application July 2, 1956, Serial No. 595,345
1 Claim. (Cl. 339—101)



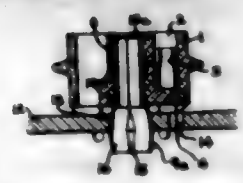
An electrical receptacle comprising a tubular metallic shell having at one end thereof a laterally projecting open return bent annular flange providing an inwardly opening annular channel, the outermost side of said annular channel projecting inwardly and providing an axial opening for an electrical conductor, and a plastic boot for said shell provided in alignment with said axial opening with an axially extending sleeve for said electrical conductor, said sleeve having an annular portion constituting an endwise extension thereof projecting through said axial opening and overlying the inner edge of said flange, said sleeve also having spaced portions projecting laterally from said annular portion, one of said spaced portions extending into and substantially filling said channel, the other of said spaced portions enveloping and disposed in surface-to-surface relation with exterior surfaces of said channel, said annnular portion connecting said spaced laterally projecting portions aforesaid and protecting the electrical conductor from engagement with the inner edge of said flange.

2,897,474

ELECTRICAL COMPONENT AND ATTACHING MEANS THEREFOR

Clarence William Heath, Bleasby, England, assignor, by mesne assignments, to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware

Application December 8, 1954, Serial No. 473,930
3 Claims. (Cl. 339—128)



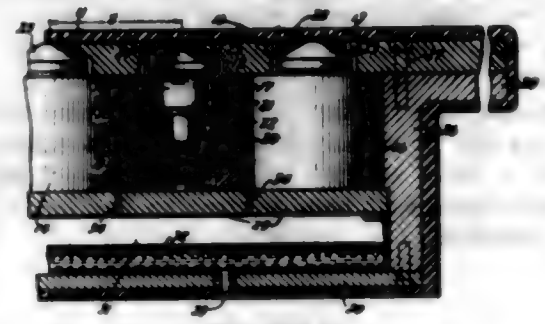
1. An electrical component comprising a body of insulating material having upper and lower surfaces, said insulating material having a central, axially extending opening therein and a plurality of openings circularly disposed around said central opening, said plurality of openings each having a metal contact member carried by said body, said contact members having a terminal element extending through said openings in the lower surface of said body and disposed outwardly therefrom, a mounting contact member disposed in said central opening and having resilient enlarged shoulder means immediately adjacent one end thereof, and disposed outwardly of the lower surface of said body, the greatest diameter of said shoulder means being larger than the diameter of said central opening and gradually decreasing toward said lower surface of said body, said shoulder means permitting engagement with a supporting panel through an aperture formed therein in alignment with the central opening in said insulating body, the opposite free end of said mounting contact member being disposed below the upper surface of said insulating body.

2,897,475

MOVABLE ACTUATING COIL TRANSDUCER ARRAY

Wilbur T. Harris, Southbury, Conn., assignor to The Harris Transducer Corporation, Woodbury, Conn., a corporation of Connecticut

Application April 13, 1954, Serial No. 422,787
11 Claims. (Cl. 340—9)



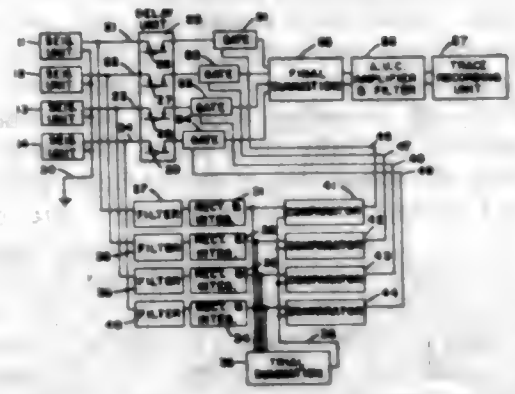
1. In a transducer of the character indicated, a passive baffle plate of acoustically hard material having two relatively small laterally spaced openings in the radiating face thereof and spaced by an amount representing a small fraction of a wavelength at the desired response frequency, flexible diaphragm means peripherally secured at each of said openings and covering each of said openings, magnetic-circuit means establishing air gaps adjacent the non-radiating side of said baffle and symmetrically disposed with respect to the axes of said openings, and electrodynamic driving means in said respective gaps and extending in direct force-transmitting relation with the back side of each of said diaphragms.

2,897,476

SEISMIC SIGNAL-TO-NOISE RATIO

Moses B. Widess, Tulsa, Okla., assignor to Pan American Petroleum Corporation, a corporation of Delaware

Application October 5, 1955, Serial No. 538,721
6 Claims. (Cl. 340—15)



1. Apparatus for seismic geophysical surveying comprising, in combination, means for producing a plurality of seismic signals, each corresponding to the seismic waves received by a seismometer sub-group forming part of a seismometer group which is normally combined for recording as a single trace, a plurality of delay and reproducing means each adapted to reproduce one of said signals

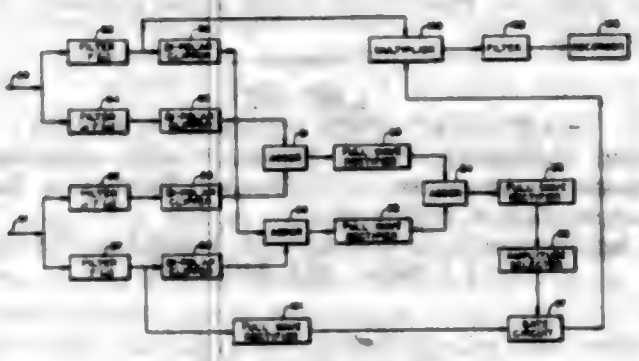
after a time delay, a plurality of gating means each adapted to control the transmission of signals to a summation circuit by one of said reproducing means, a plurality of filters each connected to one of said signal-producing means, a plurality of amplitude-responsive means each connected to one of said filters and adapted to produce an electrical output proportional to the magnitude of the corresponding filter output averaged over a time interval about equal in length to said time delay, means for producing an electrical comparison voltage proportional to the average value of the outputs of all of said amplitude-responsive means, a plurality of comparator means each connected to one of said amplitude-responsive means and to said comparison voltage producing means, each of said comparator means being adapted to produce an electrical control signal which changes sharply whenever the ratio of the corresponding amplitude-responsive means output to said comparison voltage exceeds a predetermined value, each of said comparators being connected to a corresponding one of said gating means, and said control signal being adapted to act on said gating means to prevent transmission to said summation circuit of large-amplitude seismic signals received from a given sub-group but not present on all of the sub-groups forming said seismometer group.

2,897,477

SIGNAL COHERENCE MEASUREMENT

Joe P. Lindsey, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application April 18, 1958, Serial No. 729,300
14 Claims. (Cl. 340—15)



1. Seismic signal transforming apparatus comprising means to establish a first electrical signal which varies in amplitude in accordance with vibrations received by a seismometer; means to establish a second electrical signal which varies in amplitude in accordance with vibrations received by a seismometer; means to establish a third electrical signal which is representative of the derivative of said first signal; means to establish a fourth electrical signal which is representative of the derivative of said second signal; means to compare said first, second, third and fourth signals; and means responsive to said means to compare, to combine said first and second signals to establish a fifth signal when the output of said means to compare exceeds a preselected value.

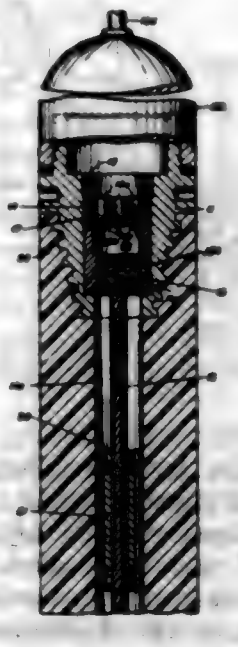
2,897,478

EXPLORING UNIT FOR ACOUSTICAL WELL LOGGING

Gerald C. Summers, Dallas, and Wilton Gravley, Carrollton, Tex., assignors, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York

Application February 13, 1956, Serial No. 565,204
7 Claims. (Cl. 340—18)

1. In an acoustic well logging unit having acoustic transducers to be maintained in a predetermined spaced-apart relation the combination which comprises a coupling member between said transducers comprising a hollow elongated rubber jacket secured in a fluid-tight relation at each end thereof to one end of said transducers, a flexible elongated strain member extending through said rubber jacket and secured at each end thereof to one of said transducers, a plurality of weights secured to said



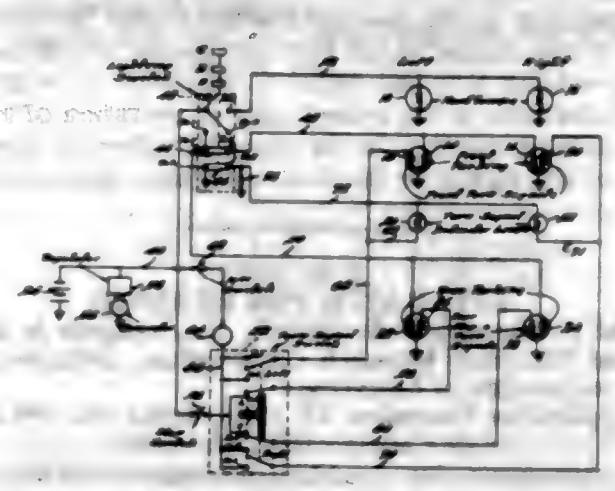
strain member at spaced points therealong, each of said weights having cross-sectional dimensions approximately equal the inner dimensions of said jacket and each providing a mass which is large compared with that of the corresponding length of said strain member, and a fluid completely inundating said strain member and said weights within said rubber jacket.

2,897,479

VEHICULAR SIGNAL SYSTEM

Curtis W. Keogin, Grosse Pointe, Mich.

Application July 18, 1955, Serial No. 522,552
4 Claims. (Cl. 340—74)



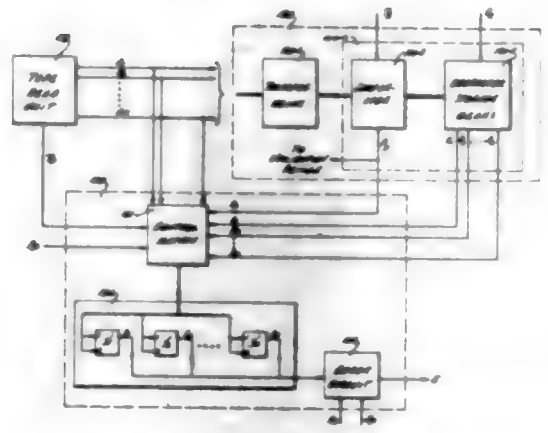
1. In an automobile electrical system, a source of voltage, a headlamp, an auxiliary lamp, a switch having a first position in which said source is connected to said headlamp, a second position in which said source is connected to said auxiliary lamp, and a third position in which said source is disconnected from both of said lamps, an indicator-lamp, means including said switch in its first position for causing said indicator-lamp to emit light of a first visible intensity, means including said switch in its second position for causing said indicator-lamp to emit light of a higher intensity, and means including said switch in its third position for causing said indicator lamp to emit light of a still higher intensity.

2,897,480

ERROR DETECTING SYSTEM

Tom T. Kumagai, West Los Angeles, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Application July 27, 1954, Serial No. 446,130
5 Claims. (Cl. 340—147)



1. In combination for determining an error between a first plurality of signals digitally representing a first quantity and a second plurality of signals digitally representing a second quantity, a check register including a plurality of bistable members having first and second states of operation, a control matrix including a plurality of "and" networks and "or" networks connected in a logical pattern and coupled to the bistable members for receiving the signals in the first and second pluralities and for passing to each bistable member in the check register the signals representing a different digital position upon the occurrence of signals having characteristics representing particular indications to obtain a triggering of the bistable member from one state of operation to the other upon the introduction of the signals to the bistable member, the control matrix including at least one "or" network for initially passing signals to the bistable members to trigger the bistable members to their first states of operation, and an error circuit including at least one "and" network and at least one "or" network connected in a logical interrelationship and coupled to the bistable members for providing a first signal to represent a lack of any error upon the occurrence of first states of operation in the bistable members after the introduction of the signals in the first and second pluralities and for providing a second signal to represent an error upon the occurrence of the second state of operation of at least one bistable member in the plurality after the introduction of the signals in the first and second pluralities.

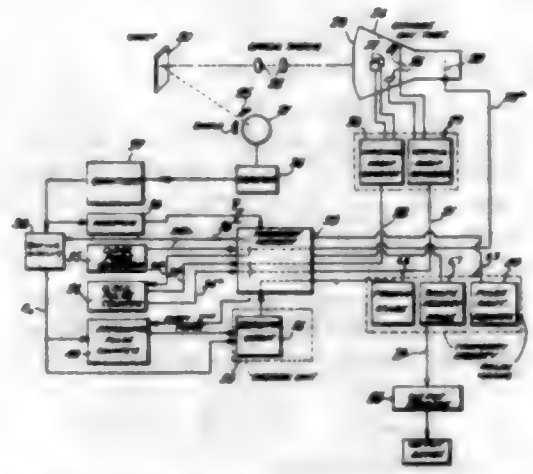
2,897,481

APPARATUS FOR READING

David H. Shepard, Falls Church, Va., assignor to Intelligent Machines Research Corporation, Arlington, Va., a corporation of Maryland

Application December 17, 1953, Serial No. 399,227
19 Claims. (Cl. 340—149)

4. Apparatus for reading intelligence-bearing items during continuous movement thereof comprising means for scanning a plurality of times the area of each item to be read in scanning lines extending substantially parallel to the direction of travel of the items and progressing downward perpendicularly to the direction of travel of the items, means for sensing the occurrence and absence of portions of the item intercepting any one of at least a pair of spaced sampling spots located uniformly along each scanning line, the sampling spots of the plurality of scanning lines being located in two vertical columns symmetrically spaced at opposite sides of the center of the scanning field, means for producing recognition and nonrecognition signals in accordance with the conditions sensed by the sensing means at the sampling spots, analyzing means including a plurality of comparator circuits and counter circuits for sensing the occurrence of preselected sequences and recurrences of said recognition and nonrecognition signals, storage means for recording for the duration of one scanning cycle the sensing of certain sequences and recurrences of recognition and nonrecognition signals by said analyzing means, other storage means for recording for the dura-



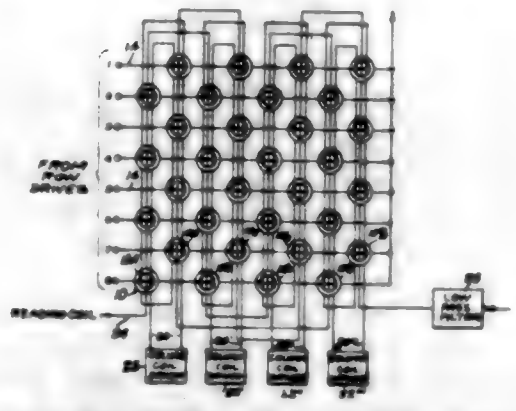
tion of the scanning of an item being read certain recordings by the first mentioned storage means together with sensing of selected sequences and recurrences of said recognition and nonrecognition signals by said analyzing means, and signal generating means producing an output device actuating signal immediately following complete scanning of an item and conditioned by said storage means in response to the accumulated recorded conditions therein to provide an output signal indicative of the item read.

2,897,482

MAGNETIC CORE MEMORY SYSTEM

Milton Rosenberg, Santa Monica, Calif., assignor, by mesne assignments, to Telemeter Magnetics, Inc., a corporation of California

Application September 2, 1954, Serial No. 453,863
6 Claims. (Cl. 340—174)



1. In a magnetic matrix memory system of the type including a plurality of cores of magnetic material having substantially rectangular hysteresis characteristics said cores being arranged in columns and rows, each column of cores being folded over with one-half the cores in the column being adjacent the other half of the cores in a column while the cores are maintained in the same discrete row alignment as would exist with nonfolded columns of cores, a plurality of row coils each of which is connected to all the cores in a different row, a plurality of column coils each of which is inductively coupled to all the cores in a different one of said columns, a column coil being coupled to one-half the cores in a column with a sense opposite to that with which it is coupled to the cores in the other half of said column the improvement consisting of a reading coil comprising a winding in the

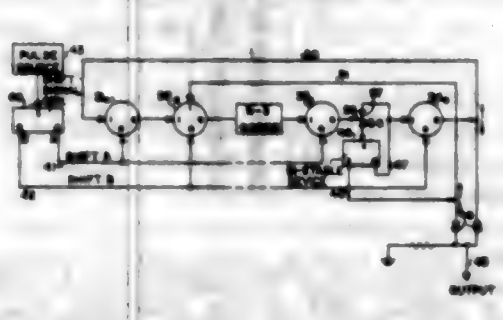
same sense on every core the windings in every half-column of cores being connected in series to form series-connected half-column windings, means coupling together one end of alternate ones of said series-connected half-column windings, and means coupling the other ends of said series-connected half-column windings to form a single reading coil for said memory wherein unwanted voltages are substantially cancelled.

2,897,483

HIGH-SPEED COUNTER

David Loev, Plymouth, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan

Application October 8, 1954, Serial No. 461,240
6 Claims. (Cl. 340—174)



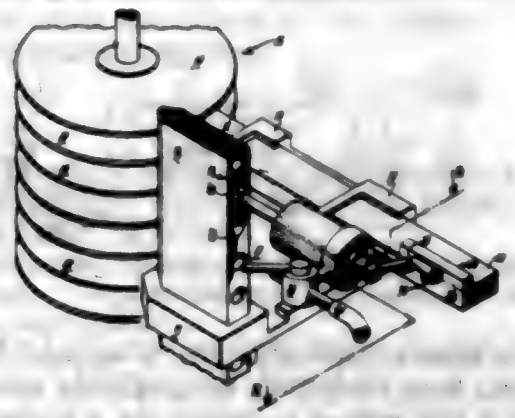
1. A counter for counting every Nth signal, where N is any odd number other than "1," said counter comprising, in combination: a group of bistable storage elements equal in number to $N+1$, each of said storage elements having input, shift and output circuits; first and second bistable switching elements each having a complementing input circuit and two output circuits, each of said switching elements being adapted to deliver a current pulse from one or the other of its two output circuits when the said element is switched from one of its stable states to the other; means coupling an output circuit of each of the first N—1 number of storage elements directly to the input circuit of the following storage element, thereby to establish a row of N storage elements in which one of the elements is identified as the first storage element, the next as the second storage element, and the last as the Nth storage element; means coupling an output circuit of said Nth storage element to the complementing input circuit of said first of said bistable switching elements; an output circuit for said counter; means coupling one of the output circuits of said first switching element to said counter output circuit and to an input circuit of said second storage element in parallel; means coupling the other of said output circuits of said first switching element to an input circuit of the $(N+1)$th storage element, whereby signals are delivered alternately to the counter output circuit and to the $(N+1)$th storage element in response to successive output signals from the Nth element; means coupling an output circuit of said $(N+1)$th storage element to an input circuit of said first storage element and to said counter output circuit in parallel; means for entering a reference signal in said first of the storage elements; means for applying the pulses to be counted to the complementing input circuit of said second bistable switching element; means coupling one of the output circuits of said second switching element to the shift circuits of alternate of said $N+1$ number of storage elements; and means coupling the other output circuit of said second switching element to the shift circuits of the other alternate storage elements of said $N+1$ number of elements, thereby to shift said reference signal from said first storage element down the line of storage elements in step-by-step fashion in response to the signals to be counted, whereby output signals are derived alternately from the Nth and the $(N+1)$th storage elements in response to the shifting therefrom of said reference signal.

2,897,484

ACCESS MECHANISM

Norman A. Vegel, Palo Alto, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application January 23, 1956, Serial No. 560,595
6 Claims. (Cl. 340—174)



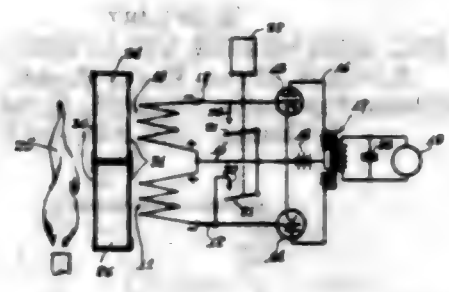
6. A recording apparatus comprising in combination a plurality of coaxially disposed, axially spaced recording media each having a plurality of circumferentially disposed, radially spaced recording tracks, a transducer positionable from each of said tracks to another preselected said track, a way member disposed parallel to said axis and spaced radially therefrom, a carriage member positionable axially to preselected locations along said way corresponding to said spaced media, an arm member supported by said carriage member for movement radially with respect to said axis, means for mounting said transducer in the distal end of said arm member, a mechanical interlock device mounted on said carriage member operable in one position to lock said carriage member to said way and in another position to lock said arm member to said carriage member, and means for actuating said device from said one position under the control of the radial position of said arm member.

2,897,485

HEAT DETECTOR FOR HYDROCARBON FLAMES

John B. Johnson, Maplewood, N.J., assignor, by mesne assignments, to McGraw-Edison Company, Elgin, Ill., a corporation of Delaware

Application April 7, 1955, Serial No. 499,913
6 Claims. (Cl. 340—227)



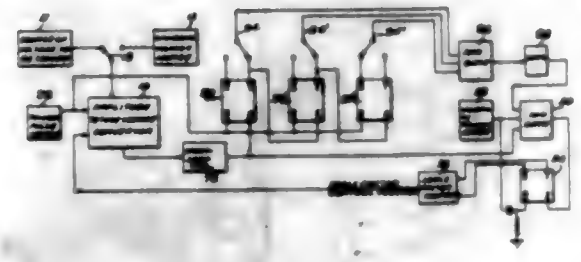
1. Electrical apparatus selectively responsive to a flame having a characteristic emission spectrum which is peaked at a given wave length due to a particular gaseous means present in the flame, comprising sensing means including two sensing devices one of which is exposed to radiant energy from said flame throughout a given spectrum including said certain wave length, a radiation filter between said flame and the other of said sensing devices containing said same gaseous means for absorbing the peak energy in said spectrum at said certain wave length while passing radiation throughout at least the remaining portion of said given spectrum, amplifying means connected to said sensing device for providing an output voltage according to the difference in response of said devices, and current-energizable means connected to the output of said amplifying means.

2,897,498

BANDWIDTH COMPRESSION SYSTEM

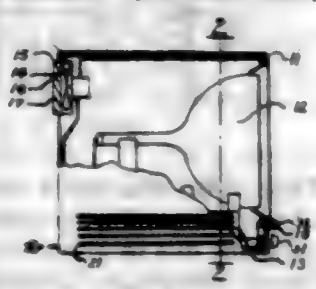
deviation comprising shielding means generally parallel to said median plane and laterally beyond said transducers

2,897,486
ANALOG-TO-DIGITAL CONVERSION SYSTEM
Matthew Arnold Alexander and Raymond Stuart-Williams, Pacific Palisades, Calif., assignors, by mesne assignments, to Telemeter Magnetics, Inc., a corporation of California
Application August 30, 1954, Serial No. 452,805
9 Claims. (Cl. 340—347)



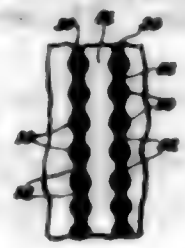
8. A system for converting a voltage from analog to digital form comprising an integrating network, means to which said voltage is applied for a predetermined interval and to which said integrating network is coupled to provide an output pulse having a width determined by the rate of integration of said network means and the amplitude of said voltage, an oscillator responsive to the output from said means to provide a plurality of pulses, the number of said plurality being determined by the width of the output pulse, a counter to which said plurality of pulses are applied to establish a voltage pattern representative of the count of said pulses, a plurality of gates responsive to a predetermined voltage pattern provided by said counter to provide an output pulse, means to delay said pulse for an interval between pulses, an And gate, means to apply the output of said means to delay to said And gate, means to apply the output of said oscillator to said And gate, said And gate providing an output signal upon coincidence of the application of pulses to said And gate, a flip-flop having a first and a second condition of stability, means to apply said And gate output to said flip-flop to drive it to its second condition of stability, means responsive to said flip-flop being in its first condition to provide a first voltage and being in its second condition to provide a relatively lower second voltage, and means to apply said first or said second voltages to said integrating network to control its rate of integration.

2,897,487
COOLING MEANS FOR TELEVISION RECEIVERS
Edwin H. Owen, Cedar Rapids, Iowa
Application September 26, 1955, Serial No. 536,661
2 Claims. (Cl. 340—367)



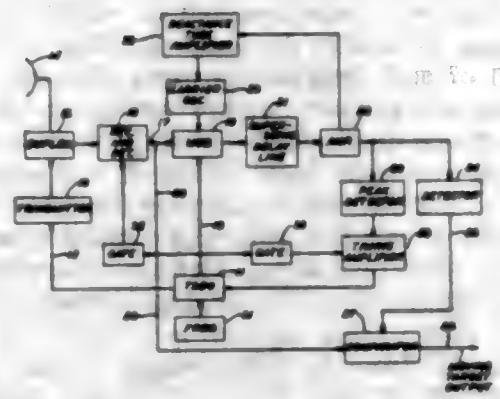
1. In combination with a television receiving set having an enclosed cabinet, a picture tube mounted in the forward wall thereof and a rectangular chassis mounted immediately below said tube, a plurality of openings in the forward wall of said cabinet at the lowermost portion thereof below the picture tube, a second plurality of openings on both sides of said cabinet adjacent said chassis, a plurality of openings in said chassis in registry with said adjacent cabinet openings, a second plurality of openings in said chassis in communication with the upper portion of said cabinet, a fan positioned in said cabinet at the uppermost rearward portion thereof and adapted to cause air to be drawn upwardly through said chassis openings and said cabinet openings upwardly through said cabinet and outwardly therefrom, and directional means mounted in front of said fan to cause the air to be ejected from said cabinet in a predetermined direction.

2,897,488
TELEVISION PICTURE CLARIFIER
Daniel K. Rigney and Catherine E. Carpenter, Chicago, Ill.
Application May 22, 1953, Serial No. 356,712
3 Claims. (Cl. 340—369)



1. A television receiver comprising a television tube having a screen, and means affording spaced vertical opaque lines across the screen area, said lines being substantially equal in number per inch to the horizontal light lines electro-optically produced on the screen, each opaque line being in the form of a chain of dots of convexly rounded contour.

2,897,489
CIRCUITS FOR IMPROVING THE STABILITY OF ULTRASONIC DELAY LINES
Frank E. De Motte, New Vernon, Eugene C. Denton, Morris Plains, N.J., and Thomas R. Hoffman, Schenectady, N.Y., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application March 27, 1957, Serial No. 648,943
10 Claims. (Cl. 343—7.7)



1. In a timing circuit adapted for use in a moving target indicating system, means for generating timing signal pulses in response to input triggering pulses, a carrier oscillator, means receiving the carrier signal from said carrier oscillator and modulating the same with the timing signal pulses from said timing signal generating means, a delay line operative to delay the output of said modulating means for a predetermined period of time, detector means responsive to the output of said delay line for deriving delayed versions of said timing signal pulses, means for applying the delayed timing signal pulses as input triggering pulses to said timing signal generating means, and means for feeding back a portion of the carrier output of said delay line to the input of the carrier oscillator to phase lock the carrier signal of said oscillator to the carrier output of said delay line.

therefrom of said reference signal.

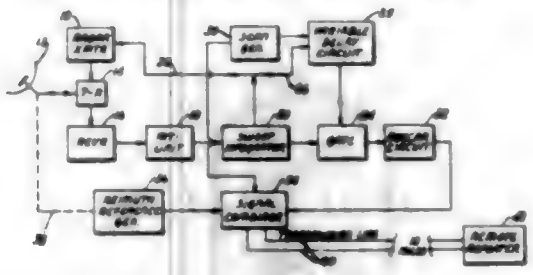
output of said amplifying means.

2,897,490

BANDWIDTH COMPRESSION SYSTEM

David E. Sunstein, Bala-Cynwyd, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Application December 11, 1952, Serial No. 325,407
6 Claims. (Cl. 343—17.1)



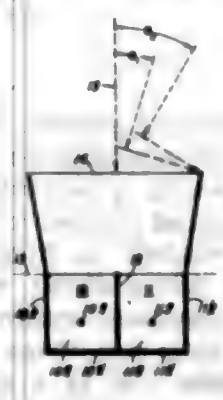
1. A system for generating a signal of relatively narrow bandwith containing the intelligence present in a wide bandwidth signal comprising a repetitive series of trains of pulses of short duration, said system comprising a recirculating signal type sweep integrator having a delay time integrally related to the repetition period of said pulse trains, said sweep integrator including input means for receiving said wide bandwidth signal, a gate circuit connected to the output of said sweep integrator, said gate circuit being normally inoperative to pass signals supplied thereto, means associated with said gate circuit for rendering it periodically operative to pass signals from said sweep integrator, said last mentioned means being arranged to cause the interval between successive operative intervals of said gate circuit and a selected reference time in the next preceding pulse train to vary in steps, said steps being not greater than the duration of said short duration pulses, said operative intervals being short compared to the duration of said short duration pulses, and means connected to the output of said gate circuit for increasing the time duration of signals passed thereby.

2,897,491

PHASE SATURABLE TRANSDUCER

David Wilbur Young, Jr., Van Nuys, Calif., assignor to Bendix Aviation Corporation, North Hollywood, Calif., a corporation of Delaware

Application January 22, 1957, Serial No. 635,480
8 Claims. (Cl. 343—100)



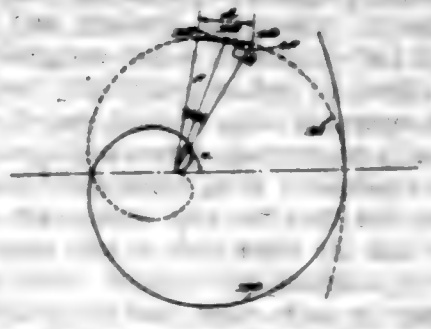
1. In space wave receiving apparatus responsive to space waves impinging thereon to generate two separate electrical waves of relative phase dependent upon the direction of approach of the received space waves to said apparatus: a pair of transducers for converting space waves into electrical waves, said transducers being positioned side by side in a common frontal plane and symmetrically disposed on opposite sides of a common longitudinal median plane perpendicular to said frontal plane whereby the respective electrical waves generated thereby in response to a space wave differ in phase increasingly with the angle of the space wave to said median plane; and means for limiting the said phase deviation comprising shielding means generally parallel to said median plane and laterally beyond said transducers and extending from a front edge positioned in front of said frontal plane rearwardly at least to said frontal plane, whereby space waves approaching said apparatus at angles of incidence exceeding a predetermined value reach said transducers by refraction around said front edge of said shielding means and impinge on said transducers at a constant angle determined by the position of said front edge relative to said faces.

2,897,492

ARRANGEMENT IN RADIO RECEIVERS FOR COOPERATION WITH DISTANCE INDICATING RADIO BEACONS

Carl-Erik Granqvist, Lidingo, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Stockholm-Lidingo, Sweden, a corporation

Application December 30, 1952, Serial No. 328,571
7 Claims. (Cl. 343—113)



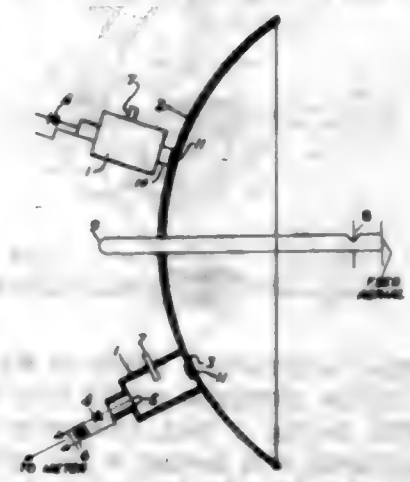
1. A receiver for ascertaining the distance from a radio transmitter, said receiver comprising a rotating directional antenna, a fixed antenna, an amplifier to independently amplify the signal received from each antenna, a rectifier to rectify each amplified signal, and a measuring instrument for comparing the output intensities from said rectifiers whereby an indication of distance can be obtained.

2,897,493

MONITORING MEANS FOR REFLECTOR TYPE AERIALS

Lawrence George Thomas, Alexandria, Sydney, Australia, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Application February 16, 1955, Serial No. 488,553
6 Claims. (Cl. 343—703)

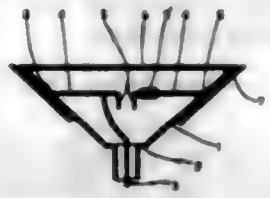


1. An aerial system comprising an extended conductive reflector, an antenna mounted in cooperative relation with said reflector on one side thereof and a monitor means for energy from said antenna comprising a cavity resonator, having an aperture, positioned on the other side of said reflector and tunable to the operating frequency of said antenna, said reflector being provided with a coupling aperture, and means for providing a conductive connection around and interconnecting said apertures to supply energy to said resonator.

2,897,498

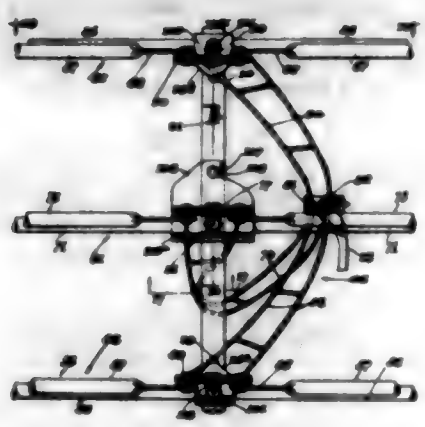
2,897,499

2,897,494
RADIATOR FOR SHORT-WAVE DEVICES
Ole Gunnar Scholz, Hamburg-Neugraben, Germany, assignor to North American Philips Company Inc., New York, N.Y., a corporation of Delaware
Application June 17, 1957, Serial No. 665,890
Claims priority, application Germany June 15, 1956
6 Claims. (Cl. 343—749)



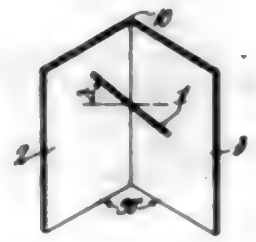
6. A radiator for short-wave devices, comprising a funnel-like section having sides forming a relatively small cross-section at one end and a relatively large cross-section aperture at the other end, said aperture having a width substantially equal to the half wavelength of energy in said radiator, means for loading and tuning said radiator, said last-mentioned means comprising a pair of projections affixed to and in electrically conductive connection with opposing sides of said section and extending substantially transversely across said aperture, the side ends of said projections being separated from each other by a distance less than the half wavelength of energy in said radiator and the inner ends of said projections being bent to form substantially parallel arms in relatively close proximity to each other, said projections extending substantially parallel to the electric field vector of said radiator, and means for applying input electrical energy to at least one of said projections.

2,897,495
FOLDABLE ANTENNA STRUCTURES
Alexander F. Carthay, Kerhonkson, N.Y., assignor, by mesne assignments, to Channel Master Patent Corp., Greensboro, N.C., a corporation of North Carolina
Original application April 9, 1954, Serial No. 422,173. Divided and this application January 18, 1955, Serial No. 485,575
14 Claims. (Cl. 343—803)



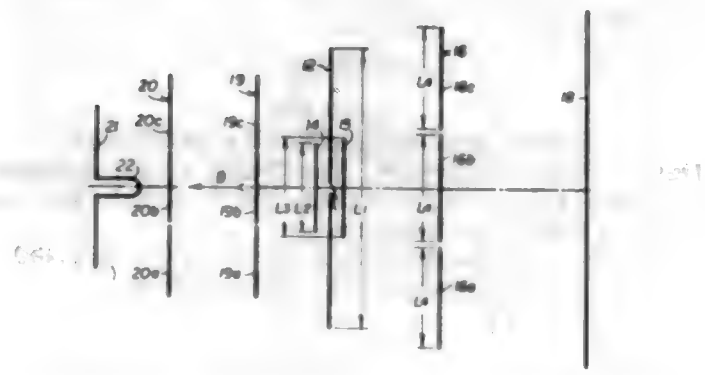
1. An antenna comprising a dipole of the folded type formed by a narrow elongated planar loop of rigid conductive material having a long uninterrupted side and a parallel interrupted side having a gap substantially at the center thereof, said sides being joined at their ends, an insulating terminal block secured to the ends of said interrupted side on either side of said gap, a conductive supporting post for said dipole, means pivotally securing said uninterrupted side to said supporting post at the center of said latter side and in conductive relation thereto, with the axis of said pivot in the plane of said loop, and a rigid strut extending from the center of said terminal block to the center of said uninterrupted side for rigidly maintaining said two dipole sides in substantially parallel relationship.

2,897,496
CORNER REFLECTOR ANTENNA
Oakley M. Woodward, Jr., Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application January 12, 1955, Serial No. 481,392
8 Claims. (Cl. 343—818)



1. A corner reflector antenna comprising a pair of reflecting surfaces arranged to intersect at an angle having a vertex located at said intersection of said surfaces and a bisector plane, a radiating element positioned within said angle at a given distance from said vertex in a plane perpendicular to said bisector plane of said angle and at a given angle other than zero and ninety degrees with respect to said bisector plane, whereby said antenna is effective to radiate and to receive a directive circularly polarized radio field.

2,897,497
SELECTIVE MULTIPLE CHANNEL TV ANTENNAS
Lewis H. Finneburgh, Jr., Shaker Heights, Ohio
Application March 13, 1959, Serial No. 799,170
9 Claims. (Cl. 343—819)

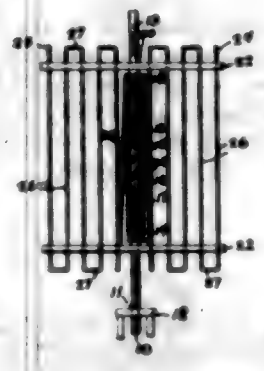


1. A television receiving antenna comprising a driven dipole dimensioned for resonance as a half-wave dipole at a low band frequency, a pair of nondriven dipoles disposed in closely spaced parallel relationship with said driven dipole, one centrally in front of and the other centrally behind the driven dipole with reference to a desired direction of maximum sensitivity, said nondriven dipoles being spaced from said driven dipole in the range of about 1% to about 7% of a half-wave length at said low band frequency, and the electrical lengths of said nondriven dipoles being about a half-wave at substantially different high band frequencies, said lengths being respectively selected to render the driven dipole responsive with pronounced gain peaks in the high band on two high band channels separated by at least one intervening channel, and a high band reflector disposed in spaced parallel relationship with said driven dipole and behind the same with reference to said desired direction of maximum sensitivity and substantially farther from the driven dipole than either of said pair of nondriven dipoles, said reflector being dimensioned and spaced from said driven dipole for reflector action at substantially the lower of said two high band channels.

2,897,498
BEAM ANTENNA

Stanley H. Byquist, Salina, Kans., assignor of nine-tenths to E. W. Freeman, Yankton, S. Dak.

Application August 12, 1957, Serial No. 677,613
3 Claims. (Cl. 343—834)

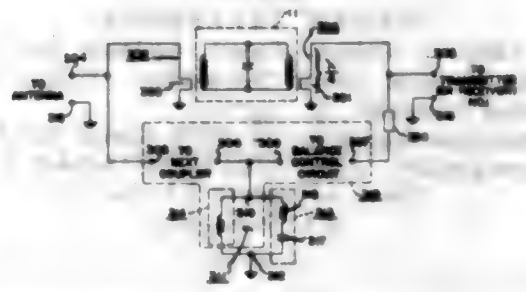


1. A beam antenna comprising a front grid and a rear reflector grid, said grids being substantially of the same configuration and including vertically positioned horizontally spaced parallel integral elements, said grids being horizontally spaced and substantially parallel to each other, said front grid including a pair of grid portions, said antenna including a bifilar coil, each of said grid portions being electrically connected to each component winding of said bifilar coil, a variable inductance coil connected to the closed portion of said bifilar coil, a coaxial cable, one of the leads of said coaxial cable being connected to said variable inductance coil, the other lead of said coaxial cable being connected medially to the rear reflector grid.

2,897,499
UHF ANTENNA MULTICOUPLER SYSTEM OR THE LIKE

James W. Marshall, Long Beach, and Harold W. Cowan, Gardena, Calif., assignors to Hoffman Electronics Corporation, a corporation of California

Application February 7, 1956, Serial No. 563,920
12 Claims. (Cl. 343—850)



1. In combination, a first cavity having an adjustable tuning stub, a second cavity having an adjustable tuning stub and disposed in proximity with respect to said first cavity, first means for coupling energy to said first cavity, second means for coupling energy from said cavity, first, second, third, and fourth coaxial receptacles fixedly disposed with respect to said second cavity, said third and fourth coaxial receptacles being insulated from said second cavity, said coaxial receptacles each having a central connector, said central connector of said first coaxial receptacle coupled to said first means, said central connector of said second coaxial receptacle coupled to said second means, and choke means intercoupling said third and fourth coaxial receptacles with said first and second means respectively, said choke means being fixedly disposed with respect to said tuning stub of said second cavity.

185,735
TABLE LEG

185,739
HEAD OF A GOLF PUTTER

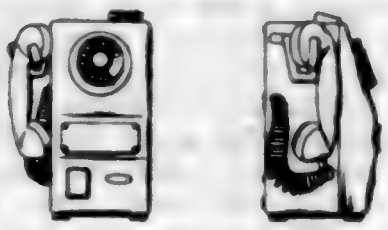
tially parallel relationship.

substantially the lower of said two high band channels.

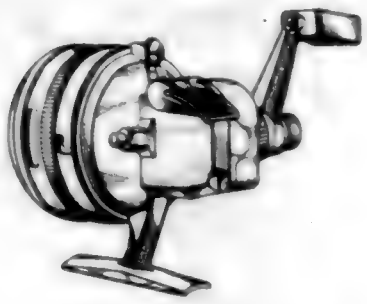
DESIGNS

JULY 28, 1959

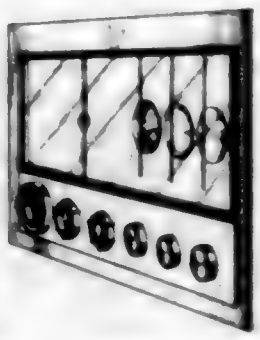
185,729
PUBLIC TELEPHONE
Chuta Aikawa, Tokyo, Japan, assignor to Kabushiki Kaisha Tamura Denki Seisakusho, Tokyo, Japan, a Japanese company
Application December 30, 1958, Serial No. 53,974
Claims priority, application Japan October 7, 1958
Term of patent 14 years
(Cl. D26—14)



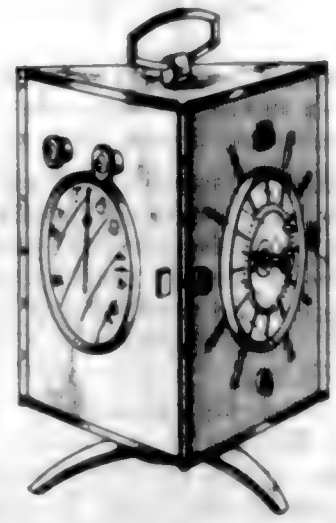
185,730
ENCLOSED SPOOL FISHING REEL
Richard E. Beger, Jersey City, N.J., assignor to The Lionel Corporation, New York, N.Y., a corporation of New York
Application June 30, 1958, Serial No. 51,600
Term of patent 14 years
(Cl. D31—4)



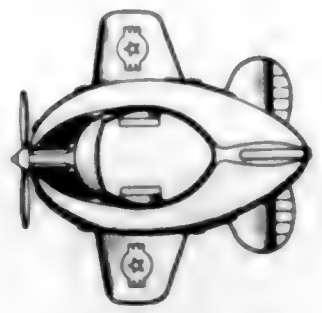
185,731
RADIO CONTROL PANEL
Melvin H. Boldt, Glenview, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Application August 28, 1958, Serial No. 52,435
Term of patent 14 years
(Cl. D26—14)



185,732
COMBINED CLOCK AND RADIO
Melvin H. Boldt, Glenview, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Application December 24, 1958, Serial No. 53,896
Term of patent 14 years
(Cl. D56—4)



185,733
SAND PLANE
Bernard J. Cagan, Los Angeles, and Alfred E. Ziroli, Manhattan Beach, Calif., assignors to Eldon Manufacturing Company, Los Angeles, Calif., a corporation of California
Application February 18, 1958, Serial No. 49,686
Term of patent 14 years
(Cl. D34—15)



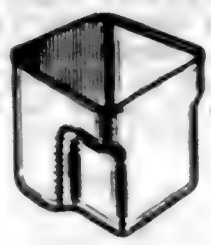
185,734
VAGINAL MEDICATOR
Gaston Chappaz and Jean Boës, Paris, France
Application January 27, 1958, Serial No. 49,411
Term of patent 14 years
(Cl. D83—1)

185,742
TELEPHONE MOUNTING

185,746
SPECTACLE DISPLAY RACK

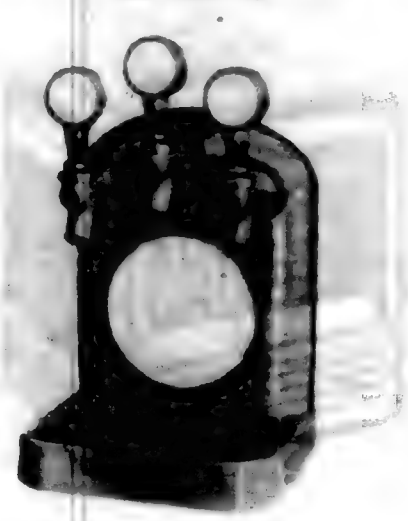
185,735
TABLE LEG
Morton R. Cohen, Chicago, Ill.
Application March 11, 1957, Serial No. 45,193
Term of patent 14 years
(Cl. D33—14)

185,736
CANISTER OR SIMILAR ARTICLE
William Edward Cole, London, England, assignor to Craxfords Limited, London, England
Application December 30, 1958, Serial No. 53,975
Claims priority, application Great Britain July 1, 1958
Term of patent 14 years
(Cl. D44—6)

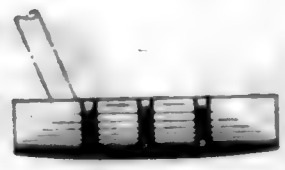


185,737
SIGN OR SIMILAR ARTICLE
Kenneth G. Cook, Elizabeth, N.J.
Application November 18, 1958, Serial No. 53,410
Term of patent 14 years
(Cl. D1—12)

185,738
BEVERAGE DISPENSER UNIT
Richard T. Cornelius, Minneapolis, Minn.
Application February 6, 1957, Serial No. 44,775
Term of patent 14 years
(Cl. D2—3)

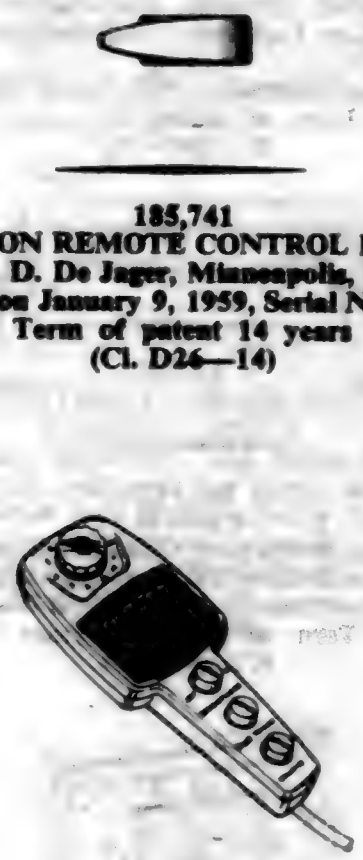


185,739
HEAD OF A GOLF PUTTER
Morris B. Crawford, Los Angeles, Calif.
Application February 24, 1959, Serial No. 54,724
Term of patent 14 years
(Cl. D34—5)



185,740
CASING FOR HOUSING A HEARING AID AMPLIFIER, MICROPHONE, AND BATTERY, OR SIMILAR ARTICLE
Byron R. Criswell, Waukegan, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Application March 14, 1957, Serial No. 45,258
Term of patent 14 years
(Cl. D26—14)

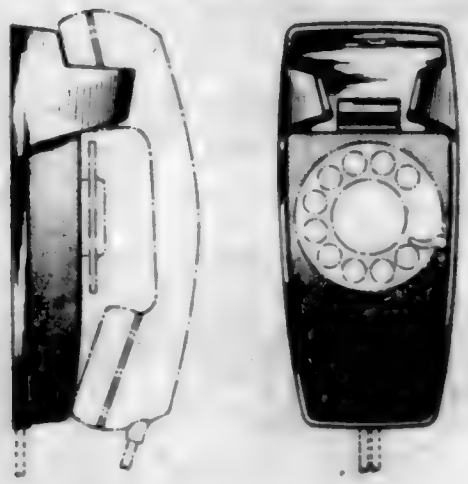
185,741
TELEVISION REMOTE CONTROL HANDSET
Bruce D. De Jager, Minneapolis, Minn.
Application January 9, 1959, Serial No. 54,124
Term of patent 14 years
(Cl. D26—14)



185,749
KIT

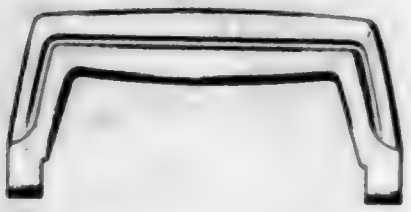
185,752
BACK FOR FOOTBALL SHOULDER PADS

185,742
TELEPHONE MOUNTING
Henry Dreyfuss, South Pasadena, Calif., and Robert H. Hose, Mountainside, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application December 10, 1958, Serial No. 53,724
Term of patent 14 years
(Cl. D26—14)

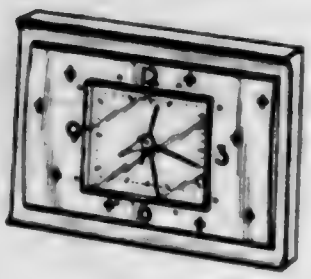


185,743
TERMINAL CONNECTOR LUG
John J. Edwards, Roselle, N.J., assignor to The Thomas & Betts Co., Elizabeth, N.J., a corporation of New Jersey
Application April 30, 1958, Serial No. 50,671
Term of patent 14 years
(Cl. D26—1)

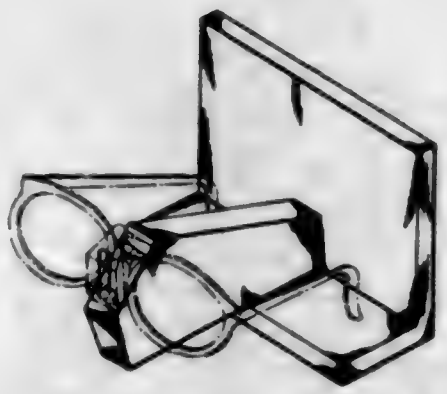
185,744
LUGGAGE HANDLE
Joseph Finkelstein, Glenside, Pa., assignor to Philadelphia Brief Case Company, Philadelphia, Pa., a partnership
Application March 23, 1959, Serial No. 55,105
Term of patent 14 years
(Cl. D87—2)



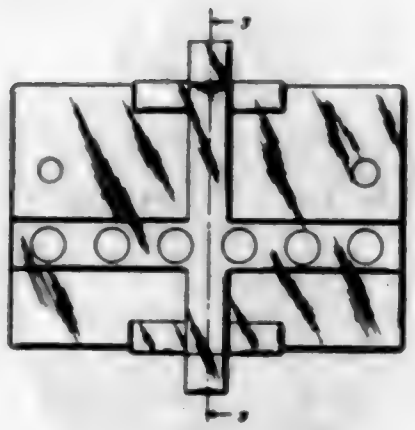
185,745
CLOCK
Gordon Florian, Bridgeport, Conn., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Application June 20, 1958, Serial No. 51,454
Term of patent 14 years
(Cl. D42—7)



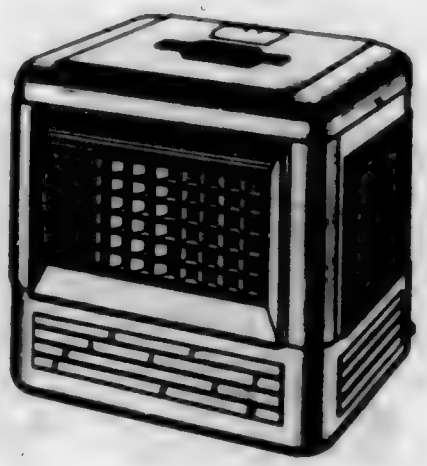
185,746
SPECTACLE DISPLAY RACK
Anthony De Witt Glover, Austin, Tex.
Application March 13, 1958, Serial No. 50,822
Term of patent 14 years
(Cl. D88—9)



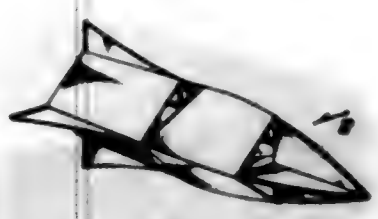
185,747
BATTERY SHIELD
Morris F. Glyer, Sacramento, Calif., assignor to R. E. Dietz Company, Syracuse, N.Y.
Application April 11, 1958, Serial No. 50,441
Term of patent 14 years
(Cl. D26—5)



185,748
PORTABLE EVAPORATIVE COOLER
Adam D. Goetti, Albert B. Goetti, and Edward C. Klotz, Jr., Phoenix, Ariz.
Application November 9, 1956, Serial No. 43,714
Term of patent 14 years
(Cl. D62—4)

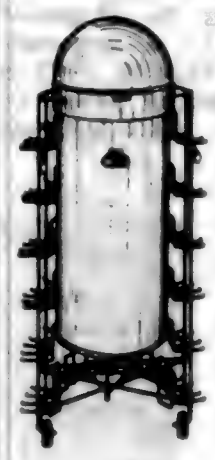


185,749
KITE
Clyde H. Gossett, Van Nuys, Calif.
Application February 13, 1959, Serial No. 54,597
Term of patent 14 years
(Cl. D34—15)

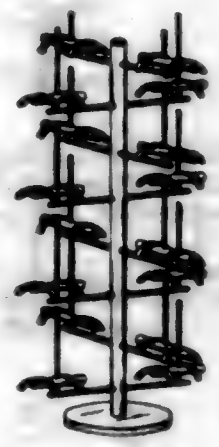


185,750
PIPE RACK
Ernest A. Goyette, Richton Park, Ill.
Application March 9, 1959, Serial No. 54,909
Term of patent 14 years
(Cl. D85—2)

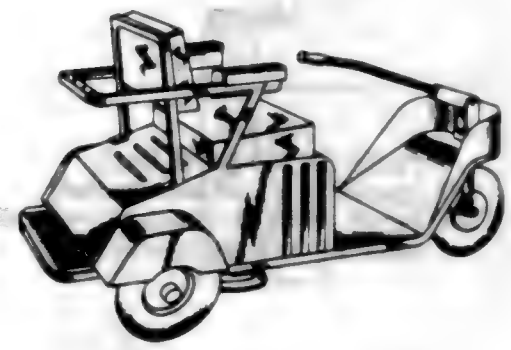
185,751
PUSH CART OR SIMILAR ARTICLE
Samuel Hammer, New York, N.Y.
Application July 7, 1958, Serial No. 51,656
Term of patent 7 years
(Cl. D14—3)



185,752
RACK FOR FOOTBALL SHOULDER PADS OR THE LIKE
Toby Harper, Delph, Ark.
Application May 26, 1958, Serial No. 51,987
Term of patent 7 years
(Cl. D80—9)



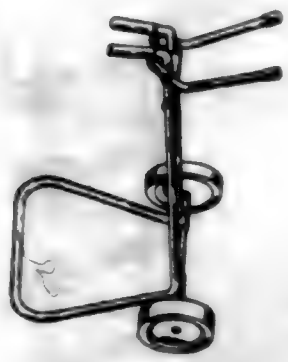
185,753
GOLFING VEHICLE OR SIMILAR ARTICLE
William A. Jensen, Addison, Ill.
Application January 6, 1959, Serial No. 54,949
Term of patent 14 years
(Cl. D14—3)



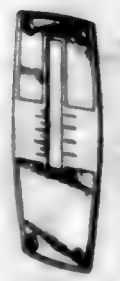
185,754
COMBINATION CLOSURE CAP AND POURING SPOUT
Calvitte L. Jones, Brookfield, and James B. Taylor III, Fairfield, Conn., assignors, by mesne assignments, to American Flange and Manufacturing Co., Inc., New York, N.Y., a corporation of Delaware
Application April 4, 1958, Serial No. 50,340
Term of patent 14 years
(Cl. D58—26)

185,761
DRESSER

185,755
CARRIER FOR OUTBOARD MOTOR
John W. Klages, Columbus, Ohio, assignor to The Columbus Auto Part Company, Columbus, Ohio, a corporation of Ohio
Application March 17, 1959, Serial No. 55,026
Term of patent 14 years
(Cl. D14—3)

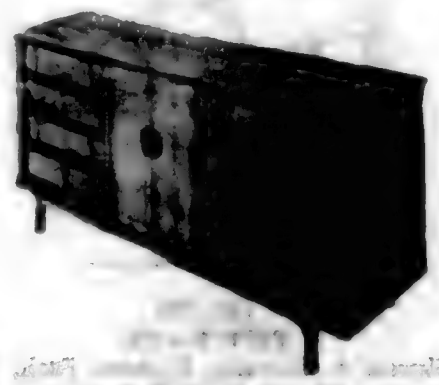


185,756
STITCH INDICATOR PLATE FOR SEWING MACHINES
Frederick H. Leigh, New York, N.Y., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Application April 5, 1957, Serial No. 45,599
Term of patent 14 years
(Cl. D70—2)

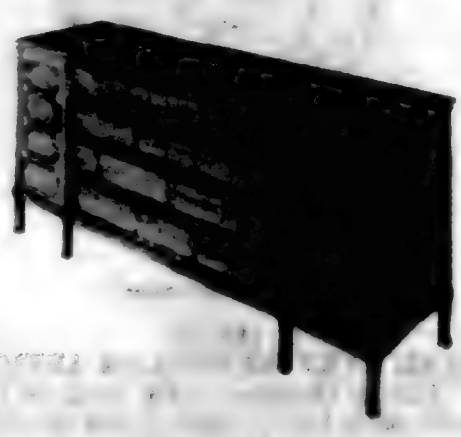


185,757
ANTENNA HOUSING OR SIMILAR ARTICLE
Ralph N. Leonard, Crystal Lake, Ill., assignor to The Radion Corporation, Crystal Lake, Ill., a corporation of Illinois
Application March 11, 1959, Serial No. 54,940
Term of patent 7 years
(Cl. D26—14)

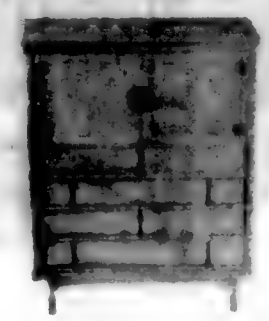
185,758
TRIPLE DRESSER BASE
John J. Lubberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Thomasville Chair Company, Thomasville, N.C., a corporation of North Carolina
Application May 20, 1959, Serial No. 55,992
Term of patent 14 years
(Cl. D33—6)



185,759
TRIPLE DRESSER BASE
John J. Lubberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Thomasville Chair Company, Thomasville, N.C., a corporation of North Carolina
Application May 20, 1959, Serial No. 55,993
Term of patent 14 years
(Cl. D33—6)



185,760
CHEST
John J. Lubberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Thomasville Chair Company, Thomasville, N.C., a corporation of North Carolina
Application May 20, 1959, Serial No. 55,994
Term of patent 14 years
(Cl. D33—6)



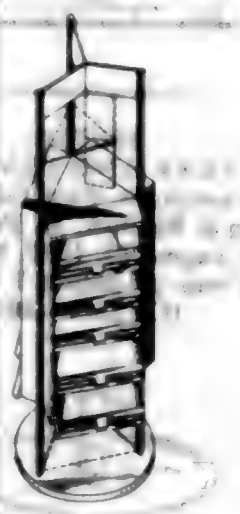
185,768

185,771

185,761
DRESSER
John J. Lubberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Thomasville Chair Company, Thomasville, N.C., a corporation of North Carolina
Application May 28, 1959, Serial No. 55,995
Term of patent 14 years
(Cl. D33—6)

185,762
CHEST
John J. Lubberts and Lambert J. Mulder, Grand Rapids, Mich., assignors to Thomasville Chair Company, Thomasville, N.C., a corporation of North Carolina
Application May 28, 1959, Serial No. 55,996
Term of patent 14 years
(Cl. D33—6)

185,763
DISPLAY STAND FOR PACKAGED MERCHANDISE OR THE LIKE
Buford M. King, Jr., Northbrook, Ill., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
Application August 21, 1957, Serial No. 47,463
Term of patent 14 years
(Cl. D86—9).

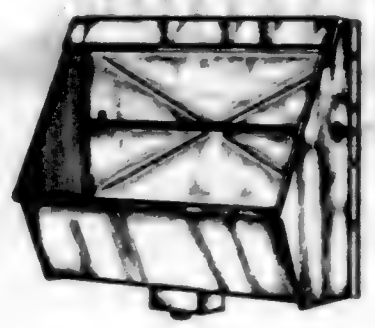


185,764
CONNECTOR TRIM CAP FOR ROLL-UP AWNINGS
Donald MacLachlan, Riverside, Calif., assignor to Bridgeport Brass Company, Bridgeport, Conn., a corporation of Connecticut
Application November 24, 1958, Serial No. 53,499
Term of patent 14 years
(Cl. D21—6)

185,765
FOOD AND DRINK MIXER
Alfred W. Madl, Milwaukee, Wis., assignor to The John Oster Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin
Application February 13, 1959, Serial No. 54,598
Term of patent 14 years
(Cl. D44—1)

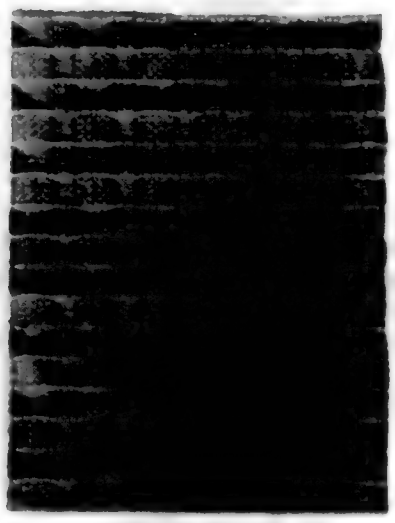
185,766
CHILD'S TOILET SEAT
Robert Mamaskin, Chicago, Ill.
Application January 26, 1959, Serial No. 54,316
Term of patent 14 years
(Cl. D4—5)

185,767
URINAL
Harry P. McCann, Seattle, Wash.
Application March 17, 1958, Serial No. 50,668
Term of patent 14 years
(Cl. D4—5)

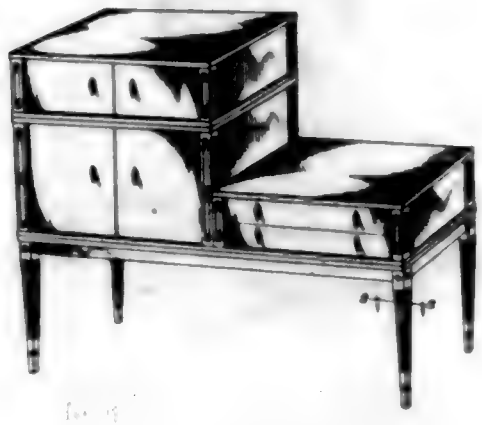


185,775

185,768
PUFFED TEXTILE FABRIC
Douglas D. McCord, New York, N.Y., assignor to Chicopee Mills, Inc., a corporation of New York
Application September 3, 1957, Serial No. 47,573
Term of patent 14 years
(Cl. D92—1)

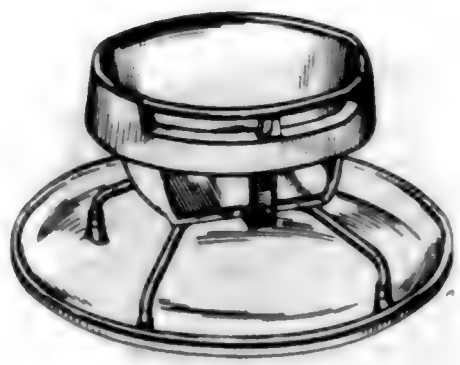


185,769
CABINET
Ernst Meer, Los Angeles, Calif.
Application January 5, 1959, Serial No. 54,043
Term of patent 14 years
(Cl. D33—19)

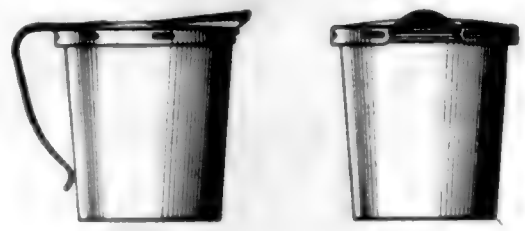


185,770
SETTEE
Ernst Meer, Los Angeles, Calif.
Application January 5, 1959, Serial No. 54,044
Term of patent 14 years
(Cl. D15—11)

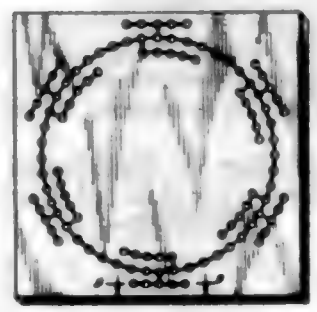
185,771
CHILD'S ROCKING SEAT
Thomas Charles Mills, Wheaton, Ill., assignor to Manning Manufacturing Corporation, Chicago, Ill., a corporation of Illinois
Application January 26, 1959, Serial No. 54,386
Term of patent 14 years
(Cl. D15—6)



185,772
PITCHER
Keith B. Mount, New Providence, N.J., and Clark D. Sims, Elmhurst, Ill., assignors to Lily-Tulip Cup Corporation, New York, N.Y., a corporation of Delaware
Application March 10, 1959, Serial No. 54,925
Term of patent 14 years
(Cl. D44—21)

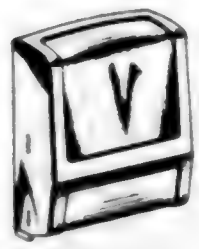


185,773
GAMEBOARD
James C. Murr, Redondo Beach, Calif.
Application September 2, 1958, Serial No. 52,468
Term of patent 14 years
(Cl. D34—5)



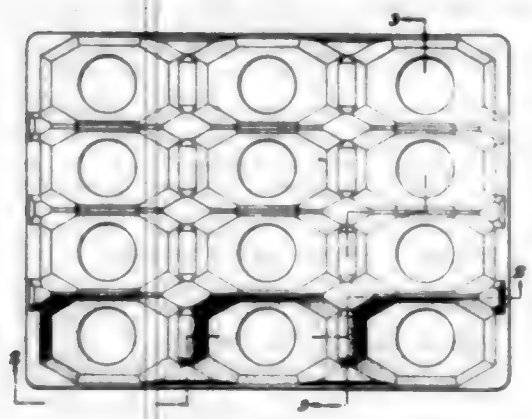
185,774
COMBINED TRAY AND REMOVABLE BOWL
Robert A. Passolt, St. Paul, Minn., assignor to Brown & Bigelow, St. Paul, Minn.
Application August 14, 1957, Serial No. 47,362
Term of patent 7 years
(Cl. D44—10)

185,775
TISSUE DISPENSING CABINET
Frederic P. Plotkin and Philip Shore, Los Angeles, Calif.
Application December 24, 1958, Serial No. 53,906
Term of patent 14 years
(Cl. D4—3)



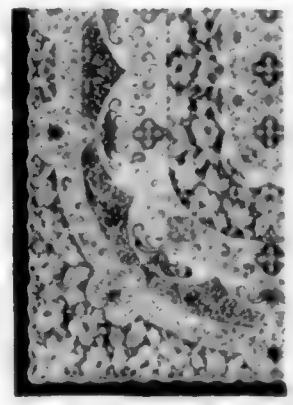
185,776
COMBINED TOOTH BRUSH, PASTE TUBE HOLDER, AND SAVINGS BANK
Neil R. Renn and Madeline S. Renn, Progress, Pa.
Application April 30, 1958, Serial No. 50,670
Term of patent 14 years
(Cl. D4—3)

185,777
PACKING TRAY FOR BOTTLES
Gerald L. Robbins, East Vassalboro, Maine, assignor to Keyes Fibre Company, Portland, Maine, a corporation of Maine
Application September 25, 1957, Serial No. 47,867
Term of patent 14 years
(Cl. D58—13)



185,778
SOAP DISH
Louis Sharpe, Los Angeles, Calif., assignor to Franklin Brass Manufacturing Co., Los Angeles, Calif., a partnership
Application December 29, 1958, Serial No. 53,950
Term of patent 14 years
(Cl. D4—3)

185,779
TABLECLOTH
William Wolf, Philadelphia, Pa., assignor to Quaker Lace Company, Philadelphia, Pa.
Application February 12, 1959, Serial No. 54,581
Term of patent 7 years
(Cl. D92—26)



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Renn, Madeline S.: *See*—
Renn, Neil R. and M. S. 185,776.

Taylor, James B., III: *See*—
Jones, Calvitte L., and Taylor. 185,754.

LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 28TH DAY OF JULY, 1959

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Ang, Choh-Yi, to P. R. Mallory & Co., Inc. High-strength high-density tungsten base alloys. Re. 24,674, 7–28–59, Cl. 29—182.

Black-Clawson Co., The: *See*—
Martindale, James H. Re. 24,677.

Du Mont, Allen B., Laboratories, Inc.: *See*—
Hoagland, Kenneth A. Re. 24,673.

Gerber, Harry, to Simplex Industrial Products, Inc. Alarm system. Re. 24,672, 7–28–59, Cl. 340—276.

Hoagland, Kenneth A., to Allen B. Du Mont Laboratories, Inc. Electrostatic electron lens. Re. 24,673, 7–28–59, Cl. 315—16.

Mallory, P. R., & Co., Inc.: *See*—
Ang, Choh-Yi. Re. 24,674.

Martindale, James H., to The Black-Clawson Co. Paper machinery. Re. 24,677, 7–28–59, Cl. 210—415.

Orchard Brothers Incorporated: *See*—
Zarnowski, Frank J. Re. 24,675.

Simplex Industrial Products, Inc.: *See*—
Gerber, Harry. Re. 24,672.

Van der Lely, Ary: *See*—
Van der Lely, Cornelis and A. Re. 24,676.

Van der Lely, C., N.V.: *See*—
Van der Lely, Cornelis and A. Re. 24,676.

Van der Lely, Cornelis and A., to C. van der Lely, N.V. Raking device having a rake wheel bearing crank extending in forward direction. Re. 24,676, 7–28–59, Cl. 56—377.

Zarnowski, Frank J., to Orchard Brothers Inc. Awnings. Re. 24,675, 7–28–59, Cl. 160—235.

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Aikawa, Chuta, to Kabushiki Kaisha Tamura Denki Seisakusho. Public telephone. 185,729, 7–28–59, Cl. D26—14.

American Flange and Mfg. Co., Inc.: *See*—
Jones, Calvitte L., and Taylor. 185,754.

Beger, Richard E., to The Lionel Corp. Enclosed spool fishing reel. 185,730, 7–28–59, Cl. D31—4.

Bell Telephone Laboratories, Inc.: *See*—
Dreyfuss, Henry, and Hose. 185,742.

Boës, Jean: *See*—
Chappas, Gaston, and Boës. 185,734.

Boldt, Melvin H., to Zenith Radio Corp. Radio control panel. 185,731, 7–28–59, Cl. D26—14.

Boldt, Melvin H., to Zenith Radio Corp. Combined clock and radio. 185,732, 7–28–59, Cl. D56—4.

Bridgeport Brass Co.: *See*—
MacLachlan, Donald. 185,764.

Brown & Bigelow: *See*—
Passolt, Robert A. 185,774.

Cagan, Bernard J., and A. E. Ziroli, to Eldon Mfg. Co. Sand plane. 185,733, 7–28–59, Cl. D34—15.

Chappas, Gaston, and J. Boës. Vaginal medicator. 185,734, 7–28–59, Cl. D23—1.

Chicopee Mills, Inc.: *See*—
McCord, Douglas D. 185,768.

Cohen, Morton R. Table leg. 185,735, 7–28–59, Cl. D33—14.

Cole, William E., to Craxfords Ltd. Canister or similar article. 185,736, 7–28–59, Cl. D44—6.

Columbus Auto Parts Co., The: *See*—
Klages, John W. 185,755.

Cook, Kenneth G. Sign or similar article. 185,737, 7–28–59, Cl. D1—12.

Cornelius, Richard T. Beverage dispenser unit. 185,738, 7–28–59, Cl. D2—3.

Crawford, Morris B. Head of a golf putter. 185,739, 7–28–59, Cl. D34—5.

Craxfords Ltd.: *See*—
Cole, William E. 185,736.

Criswell, Byron R., to Zenith Radio Corp. Casing for housing a hearing aid amplifier, microphone and battery, or similar article. 185,740, 7–28–59, Cl. D26—14.

De Jager, Bruce D. Television remote control handset. 185,741, 7–28–59, Cl. D26—14.

Dietz, R. E., Co.: *See*—
Glyer, Morris F. 185,747.

Dreyfuss, Henry, and R. H. Hose, to Bell Telephone Laboratories, Inc. Telephone mounting. 185,742, 7–28–59, Cl. D26—14.

Edwards, John J., to The Thomas & Betts Co. Terminal connector lug. 185,743, 7–28–59, Cl. D26—1.

Eldon Mfg. Co.: *See*—
Cagan, Bernard J., and Ziroli. 185,733.

Finkelstein, Joseph, to Philadelphia Brief Case Co. Luggage handle. 185,744, 7–28–59, Cl. D87—2.

Florian, Gordon, to Sunbeam Corp. Clock. 185,745, 7–28–59, Cl. D42—7.

Franklin Brass Mfg. Co.: *See*—
Sharpe, Louis. 185,778.

Glover, Anthony D. Spectacle display rack. 185,746, 7–28–59, Cl. D80—9.

Glyer, Morris F., to R. E. Dietz Co. Battery shield. 185,747, 7–28–59, Cl. D26—6.

Goetti, Adam D. and A. B., and E. C. Klotz, Jr. Portable evaporative cooler. 185,748, 7–28–59, Cl. D62—4.

Goetti, Albert B.: *See*—
Goetti, Adam D. and A. B., and Klotz. 185,748.

Gossett, Clyde H. Kite. 185,749, 7–28–59, Cl. D34—15.

Goyette, Ernest A. Pipe rack. 185,750, 7–28–59, Cl. D85—2.

Hammer, Samuel. Push cart or similar article. 185,751, 7–28–59, Cl. D14—3.

Harper, Toby. Rack for football shoulder pads or the like. 185,752, 7–28–59, Cl. D80—9.

Hose, Robert H.: *See*—
Dreyfuss, Henry, and Hose. 185,742.

Jensen, William A. Golfing vehicle, or similar article. 185,753, 7–28–59, Cl. D14—3.

Jones, Calvitte L., and J. B. Taylor, III, to American Flange and Mfg. Co., Inc. Combination closure cap and pouring spout. 185,754, 7–28–59, Cl. D58—26.

Kabushiki Kaisha Tamura Denki Seisakusho: *See*—
Aikawa, Chuta. 185,729.

Keyes Fibre Co.: *See*—
Robbins, Gerald L. 185,777.

King, Buford M., Jr., to The Upjohn Co. Display stand for packaged merchandise or the like. 185,763, 7–28–59, Cl. D80—9.

Klages, John W., to The Columbus Auto Parts Co. Carrier for outboard motor. 185,755, 7–28–59, Cl. D14—3.

Klotz, Edward C.: *See*—
Goetti, Adam D. and A. B., and Klotz. 185,748.

Leigh, Frederick H., to The Singer Mfg. Co. Stitch indicator plate for sewing machines. 185,756, 7–28–59, Cl. D70—2.

Leonard, Ralph N., to The Radion Corp. Antenna housing or similar article. 185,757, 7–28–59, Cl. D26—14.

Lily-Tulip Cup Corp.: *See*—
Mount, Keith B., and Sims. 185,772.

Lionel Corp., The: *See*—
Beger, Richard E. 185,730.

Lubberts, John J., and L. J. Mulder, to Thomasville Chair Co. Triple dresser base. 185,758, 7–28–59, Cl. D33—6.

Lubberts, John J., and L. J. Mulder, to Thomasville Chair Co. Triple dresser base. 185,759, 7–28–59, Cl. D33—6.

Lubberts, John J., and L. J. Mulder, to Thomasville Chair Co. Chest. 185,760, 7–28–59, Cl. D33—6.

Lubberts, John J., and L. J. Mulder, to Thomasville Chair Co. Dresser. 185,761, 7–28–59, Cl. D33—6.

Lubberts, John J., and L. J. Mulder, to Thomasville Chair Co. Chest. 185,762, 7–28–59, Cl. D33—6.

MacLachlan, Donald, to Bridgeport Brass Co. Connector trim cap for roll-up awnings. 185,764, 7–28–59, Cl. D21—6.

Madl, Alfred W., to The John Oster Mfg. Co. Food and drink mixer. 185,765, 7–28–59, Cl. D44—1.

Manning Mfg. Corp.: *See*—
Mills, Thomas C. 185,771.

Manushkin, Robert. Child's toilet seat. 185,766, 7–28–59, Cl. D4—5.

McCann, Harry P. Urinal. 185,767, 7–28–59, Cl. D4—5.

McCord, Douglas D., to Chicopee Mills, Inc. Puffed textile fabric. 185,768, 7–28–59, Cl. D92—1.

Meer, Ernst. Cabinet. 185,769, 7–28–59, Cl. D33—18.

Meer, Ernst. Settee. 185,770, 7–28–59, Cl. D15—11.

Mills, Thomas C., to Manning Mfg. Corp. Child's rocking seat. 185,771, 7–28–59, Cl. D15—6.

Mount, Keith B., and C. D. Sims, to Lily-Tulip Cup Corp. Pitcher. 185,772, 7–28–59, Cl. D44—21.

Mulder, Lambert J.: *See*—
Lubberts, John J., and Mulder. 185,758–185,762.

Murr, James C. Gameboard. 185,773, 7–28–59, Cl. D34—5.

Oster, John, Mfg. Co., The: *See*—
Madl, Alfred W. 185,765.

Passolt, Robert A., to Brown & Bigelow. Combined tray and removable bowl. 185,774, 7–28–59, Cl. D44—10.

Philadelphia Brief Case Co.: *See*—
Finkelstein, Joseph. 185,744.

Plotkin, Frederic P., and P. Shore. Tissue dispensing cabinet. 185,775, 7–28–59, Cl. D4—3.

Quaker Lace Co.: *See*—
Wolf, William. 185,779.

Radion Corp., The: *See*—
Leonard, Ralph N. 185,757.

Renn, Madeline S.: *See*—
Renn, Neil R. and M. S. 185,776.
Renn, Neil R. and M. S. Combined tooth brush, paste tube holder and savings bank. 185,776, 7–28–59, Cl. D4—3.
Robbins, Gerald L., to Keyes Fibre Co. Packing tray for bottles. 185,777, 7–28–59, Cl. D58—13.
Sharpe, Louis, to Franklin Brass Mfg. Co. Soap dish. 185,778, 7–28–59, Cl. D4—3.
Shore, Philip: *See*—
Plotkin, Frederic P., and Shore. 185,775.
Sims, Clark D.: *See*—
Mount, Keith B., and Sims. 185,772.
Singer Mfg. Co., The: *See*—
Leigh, Frederick H. 185,756.
Sunbeam Corp.: *See*—
Florian, Gordon. 185,745.
Taylor, James B., III: *See*—
Jones, Calvitte L., and Taylor. 185,754.
Thomas & Betts Co., The: *See*—
Edwards, John J. 185,743.
Thomasville Chair Co.: *See*—
Lubberts, John J., and Mulder. 185,758–185,762.
Upjohn Co., The: *See*—
King, Buford M., Jr. 185,763.
Wolf, William, to Quaker Lace Co. Tablecloth. 185,779, 7–28–59, Cl. D92—26.
Zenith Radio Corp.: *See*—
Boldt, Melvin H. 185,731.
Boldt, Melvin H. 185,732.
Criswell, Byron R. 185,740.
Ziroli, Alfred E.: *See*—
Cagan, Bernard J., and Ziroli. 185,733.

Arrighini, Artil, and G. A. Van Sickle, to Rockwall Co. Out-
Baker Oil Tools, Inc.: *See*—

7–28–59, Cl. D14—3.

Leonard, Ralph N. 185,757.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 28TH DAY OF JULY, 1959

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ACF Industries, Inc.: *See*—
Lesti, Arnold. 2,897,273.

AGFA Akt.: *See*—
Biedermann, Friedrich. 2,896,508.

A-S-H Industries, Inc.: *See*—
Glanniny, Omer A., Jr., and Rolston. 2,897,009.

Aasted, Kai C. S., and C. Johansen. Method of manufacturing hollow objects of chocolate in a two-piece mould. 2,896,557, 7–28–59, Cl. 107—54.

Ab Urfabriken: *See*—
Nurmse, Karl. 2,896,874.

Abraham, Erich. Double piston internal combustion engine. 2,896,596, 7–28–59, Cl. 123—51.

Acme Precision Products, Inc.: *See*—
Alexander, Walter B. 2,896,515.

Adamson, Bertil: *See*—
Jacobsson, Gösta. 2,896,600.

Adell, Franklin Z.: *See*—
Adell, Robert. 2,896,998.

Adell, Marvin M.: *See*—
Adell, Robert. 2,896,998.

Adell, Robert, to F. Z. and M. M. Adell. Automobile door edge molding and method of applying the same. 2,896,998, 7–28–59, Cl. 295—44.

Adell, Robert. Ornamental and protective molding for automobile door edges. 2,897,001, 7–28–59, Cl. 296—44.

Adlake Co., The: *See*—
Ehret, Yale W. 2,896,989.

Adler, Rochelle M. Nightgown. 2,896,630, 7–28–59, Cl. 128—454.

Agule, George J., and A. F. Fengler, to Machlett Laboratories, Inc. Device for cold welding exhaust tubulations. 2,896,483, 7–28–59, Cl. 78—82.

Ahana, William W. L. Wrench. 2,896,488, 7–28–59, Cl. 81—53.

Ahlburg, Hayo, and G. K. Wessel, to General Electric Co. Method of printing color phosphor patterns. 2,897,089, 7–28–59, Cl. 117—8.5.

Air-Equipment: *See*—
Garnier, Georges. 2,896,475.

Air Preheater Corp., The: *See*—
Hodson, Peter. 2,896,921.

Air Products Inc.: *See*—
Shanley, James J. 2,896,415.

Air Reduction Co., Inc.: *See*—
Jaffe, Sigmund. 2,897,050.

Aitken, Melvin N. Orifice fitting. 2,896,668, 7–28–59, Cl. 138—44.

Akely, William S., and R. P. Karlen, to Guardian Light Co. Lighting fixtures. 2,897,348, 7–28–59, Cl. 240—73.

Aktiebolaget Bahco: *See*—
Ross, Karl G., Johansson, Axelsson, and Andersson. 2,896,606.

Albany Felt Co.: *See*—
Costello, Walter P. 2,896,302.
Frederick, Edward R., and Bartholomew. 2,896,263.

Albertson & Co., Inc.: *See*—
Madsen, Jens A. W. 2,896,489.

Albrecht, Otto: *See*—
Maeder, Arthur, and Albrecht. 2,897,200.

Albrecht, Otto, to Ciba Ltd. Epoxy quaternary ammonium compounds. 2,897,201, 7–28–59, Cl. 260—268.

Alderman, Leon D., R. E. Hobbs, Jr., and M. Maeser, to United Shoe Machinery Corp. Component inserting machines. 2,896,208, 7–28–59, Cl. 1—2.

Alderman, Leon D., C. P. Cardani, E. S. Kant, and H. B. Kimball, to United Shoe Machinery Corp. Machines for cutting, forming and fastening components. 2,896,213, 7–28–59, Cl. 1—102.

Aleweld, Heinz, to Messrs. Metallwerke Gebr. Sepelfricke G.m.b.H. Electric igniting devices for gas stoves or the like. 2,896,704, 7–28–59, Cl. 158—115.

Alexander, Lewis W.: *See*—
Haller, John, and Alexander. 2,897,026.

Alexander, Matthew A., and R. Stuart-Williams, to Telemeter Magnetics, Inc. Analog-to-digital conversion system. 2,897,486, 7–28–59, Cl. 340—347.

Alexander, Walter B., to Acme Precision Products, Inc. Vise. 2,896,515, 7–28–59, Cl. 90—60.

Alf, Fritz V. Seul, and J. Lenze, to Deutsche Edelstahlwerke Akt., Allgemeine Elektricitats-Gesellschaft, and Stahl-und Walswerke Rasselstein/Andernach Akt. Method of progressively heating sheet metal and an induction coil for performing the method. 2,897,328, 7–28–59, Cl. 219—10.41.

Allegretti, John E., to Merck & Co., Inc. Stable vitamin A compositions. 2,897,118, 7–28–59, Cl. 167—81.

Allen, Albert, and L. K. Spink, to The Foxboro Co. Viscosity measurement system. 2,896,656, 7–28–59, Cl. 137—92.

Allen-Bradley Co.: *See*—
De Smidt, Woodrow A., Loock, and Zarwell. 2,897,327.

Allen, Thomas E. Rat traps. 2,896,361, 7–28–59, Cl. 43—131.

Allis-Chalmers Mfg. Co.: *See*—
Toth, Michael. 2,896,734.

Allis, Louis, Co., The: *See*—
Bradburn, William J., Jr. 2,897,427.

Alphenaar, Arthur W., C. W. Baxter, and G. A. Franco, to General Dynamics Corp. Frequency shift keyed receiver. 2,897,269, 7–28–59, Cl. 178—88.

Altenburg, William M., to Diamond Gardner Corp. Bottle carrier. 2,896,814, 7–28–59, Cl. 220—116.

Amalgamated Wireless (Australasia) Ltd.: *See*—
Ford, Wilbur S. 2,897,032.

Amana Refrigeration, Inc.: *See*—
Whitmore, Harland W. 2,896,813.

Amchem Products, Inc.: *See*—
Douty, Alfred. 2,897,436.

American Bosch Arma Corp.: *See*—
Bishop, Ronald L., Jewell, Radov, and Statsinger. 2,896,455.

American Brass Co., The: *See*—
Young, Ralph. 2,896,310.

American Can Co.: *See*—
Geertsen, Nelson. 2,896,571.

American Cyanamid Co.: *See*—
Gruber, Arnold H. 2,897,170.

American Fire Apparatus Co.: *See*—
Barton, Benjamin D. 2,896,541.

American Gas Assn., Inc.: *See*—
Weber, Earl J. 2,896,702.
Weber, Earl J. 2,896,703.

American Machine & Foundry Co.: *See*—
Bell, Leo R., and Holloway. 2,896,790.

American Radiator & Standard Sanitary Corp.: *See*—
Hyde, Robert W. 2,896,866.

American Viscose Corp.: *See*—
Vandenburgh, Charles D. 2,896,879.

American Window Glass Co.: *See*—
Crandon, Albert S., Jr. 2,896,376.

Andeen, Richard E., to Sperry Rand Corp. Aircraft automatic pilot. 2,896,883, 7–28–59, Cl. 244—77.

Andermann, George, and J. W. Kemp, to Applied Research Laboratories, Inc. Spectroscopy. 2,897,367, 7–28–59, Cl. 250—53.

Andersson, Sten A.: *See*—
Ross, Karl G., Johansson, Axelsson, and Andersson. 2,896,606.

Andrews, Ernest E. Terminal air brake time testing device. 2,896,443, 7–28–59, Cl. 73—39.

Angell, Charles H.: *See*—
Noble, Carl M., and Angell. 2,896,854.

Angledrill Corp.: *See*—
Holmes, Charles D. and H. H. 2,896,913.

Anglo-American Extrusion Co.: *See*—
Rowles, Reginald V., and Gowing. 2,896,581.

Anheuser-Busch, Inc.: *See*—
Sowell, Ernest A., Curtin, Hall, and Scallet. 2,987,086.

Ann, Alberta J. Keyed collet. 2,896,956, 7–28–59, Cl. 279—46.

Annable, Weldon G.: *See*—
Jacobs, William L., and Annable. 2,897,142.

Anthes, Jacob. Tube tester. 2,897,434, 7–28–59, Cl. 324—23.

Anthony, Benjamin F., to Oglebay Norton Co. Apparatus for producing a veneer lining upon inner wall of hot tops. 2,986,266, 7–28–59, Cl. 18—59.

Applied Research Laboratories, Inc.: *See*—
Andermann, George, and Kemp. 2,897,367.
Hasler, Maurice F. 2,897,371.

Arborelius, Mans M., and C. E.-G. Lundgren. Arrangement in breathing apparatus for use under water. 2,896,616, 7–28–59, Cl. 128—142.

Ardern, David B., to Houdry Process Corp. Contacting solids and gases. 2,897,138, 7–28–59, Cl. 208—165.

Ardolino, Anthony G. Doll baby and walker toy. 2,896,371, 7–28–59, Cl. 46—102.

Argentieri, Peter, H. Daninhirsch, and T. Day. Air conditioning apparatus having controlled volume and temperature air flow. 2,896,849, 7–28–59, Cl. 236—13.

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Ellman, Gilbert M. 2,896,365.

Armel, Jack. Packaging device. 2,896,779, 7–28–59, Cl. 206—65.

Armington, George E., to General Motors Corp. Loader-articulated frame. 2,896,344, 7–28–59, Cl. 37—110.

Armitage, Joseph B., and J. N. Flannery, to Kearney & Trecker Corp. Backlash eliminator. 2,896,465, 7–28–59, Cl. 74—409.

Armour and Co.: *See*—
Hull, Maurice E., Lucasey, and Hoback. 2,897,063.
Kaiser, Emil. 2,897,233.

Arms, Richard A., to Hewlett-Packard Co. Apparatus for forming a helical wire coil on an axially traveling rotating mandrel and having fixed guide grooves to iron said coil onto said mandrel. 2,896,689, 7–28–59, Cl. 153—67.

Aronson, Ben J., to Aronson Hanger Covers, Inc. Apparatus for covering wire garment hangers. 2,896,383, 7–28–59, Cl. 53—51.

Aronson Hanger Covers, Inc.: *See*—
Aronson, Ben J. 2,896,383.

Bendix Aviation Corp.: *See*—

Boker, Samuel J., G. S. Lazarus, and J. R. Sassoon. Check-

Arrighini, Artil, and G. A. Van Sickle, to Rocwall Co. Outside corner clamp for prefabricated wall forms. 2,896,300, 7-28-59, Cl. 25—131.
Arrow Fastener Co., Inc.: *See*—
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Arrow-Hart & Hegeman Electric Co., The: *See*—
Schleicher, Harold E. 2,897,311.
Aschaffenburger Zellstoffwerke A.G.: *See*—
Töppel, Otmar. 2,897,238.
Ashbaugh, Fred E., and P. B. Kennedy, to Boeing Airplane Co. Wave guide construction. 2,897,461, 7-28-59, Cl. 333—95.
Ashley, Carlyle M., to Carrier Corp. Air conditioning control system. 2,896,850, 7-28-59, Cl. 236—92.
Ashton, Robert, to Massey-Ferguson Ltd. Air intake system for harvesting machines. 2,896,594, 7-28-59, Cl. 123—41.04.
Ashworth, Fred, to United Shoe Machinery Corp. Lock stitch shoe sewing machines. 2,896,561, 7-28-59, Cl. 112—57.
Ashworth, Helen B. Convertible seat. 2,896,695, 7-28-59, Cl. 155—153.
Atchison, Leonard W., to General Electric Co. Refrigerant control means. 2,896,422, 7-28-59, Cl. 62—197.
Atkinson, Ralph B., and S. G. Ellis; to said Ellis assor. to said Atkinson. Variable area magnetic recording apparatus. 2,897,286, 7-28-59, Cl. 179—100.2.
Atlas Copco Aktiebolag: *See*—
Holdo, Jan K. 2,896,580.
Attinello, John S. Aerodynamic air brake and lift spoiler for aircraft. 2,896,881, 7-28-59, Cl. 244—42.
Atwater, William M., and P. B. McCoy. Fowl transporter. 2,896,996, 7-28-59, Cl. 296—3.
Auerbach, Albert A., to United States of America, Air Force. Pulse circuitry stabilization. 2,897,265, 7-28-59, Cl. 178--7.1.
Auken Chemical & Film Corp.: *See*—
Van Dam, Max. 2,897,090.
Austin, Fannie B. Colostomy dressing. 2,896,625, 7-28-59, Cl. 128—283.
Austin, Mary I. Doll with disposable hand and foot members. 2,896,372, 7-28-59, Cl. 46—157.
Autio, Paul: *See*—
Larsson, Sven G. V. 2,896,438.
Avco Mfg. Corp.: *See*—
Bourget, Joseph G. A., and Pfitzer. 2,897,354.
Axelsson, Sten S.: *See*—
Ross, Karl G., Johansson, Axelsson, and Andersson. 2,896,606.
Ayers, David T., Jr., and E. G. Hill, to Kelsey-Hayes Co. Booster motor control mechanism. 2,896,584, 7-28-59, Cl. 121—41.
Ayers, David T., Jr., to Kelsey-Hayes Co. Fluid pressure operated motor. 2,896,586, 7-28-59, Cl. 121—41.
Ayers, George W., and W. J. Sandner, to The Pure Oil Co. Preparation of odorless naphthas using silica gel. 2,897,-145, 7-28-59, Cl. 208—307.
Ayling, Robert W., to Carrier Corp. Heat exchange construction. 2,896,426, 7-28-59, Cl. 62—285.
Azuma, Hideo, to Nippon Kogaku K.K. High aperture wide-angle objective lens. 2,896,506, 7-28-59, Cl. 88—57.
B.G.S. Shoe Corp.: *See*—
Browning, George, Jr. 2,896,340.
Babcock & Wilcox Co., The: *See*—
Blaser, Robert U., and Christensen. 2,896,811.
Heller, Lewis W., and Smith. 2,896,592.
MacKusick, Meredith H. 2,897,341.
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Back, Leonard, and W. Haas, to The Interstate Folding Box Co. Folding device for paperboard carriers. 2,896,382, 7-28-59, Cl. 53—48.
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Starbird, James F., and Bacom. 2,896,472.
Bacon, Walter M., and B. Ostendorf, Jr., to Bell Telephone Laboratories, Inc. Cipher telegraph system. 2,897,268. 7-28-59, Cl. 178—22.
Baer, Albert M., to Imperial Knife Associated Companies, Inc. Knife handle. 2,896,321, 7-28-59, Cl. 30—164.
Baer, Albert M., to Imperial Knife Associated Companies, Inc. Combination pocket knife and pen. 2,896,576, 7-28-59, Cl. 120—1.
Baer, Charles A.: *See*—
Wolfson, William B., King, Baer, and Clough. 2,897,095.
Baeslack, Alfred J.: *See*—
Bichsel, Harry J., and Baeslack. 2,897,842.
Baier, Walter: *See*—
Von Linde, Robert A., Baier, and Hartmann. 2,896,701.
Baier, Wilhelm, K.G.: *See*—
Von Linde, Robert A., Baier, and Hartmann. 2,896,701.
Bailey, Christopher E. G., to North American Philips Co., Inc. Automatic frequency control. 2,897,450, 7-28-59, Cl. 331—18.
Bailey, Donald L., to Union Carbide Corp. Allyl ether-silicone copolymer. 2,897,222, 7-28-59, Cl. 260—448.2.
Bailly, Florent H. Mineralogical analysis. 2,896,442, 7-28-59, Cl. 73—15.
Bair, Richard H., to The Hubley Mfg. Co. Toy speedometer. 2,896,708, 7-28-59, Cl. 161—18.
Bair, Roger I. Combined step and stairway and extension ladder. 2,896,830, 7-28-59, Cl. 228—25.
Baker, Albert B.: *See*—
McIlhenny, William F., Baker, Clarke, and Bauman. 2,897,051.
Baker, John C.: *See*—
Pryor, Dean E., and Baker. 2,896,568.
Baker, John R., to Baker Oil Tools, Inc. Cold flow preventing packing structures. 2,896,724, 7-28-59, Cl. 166—204.
Baker Oil Tools, Inc.: *See*—
Baker, John R. 2,896,724.
Baker, Reuben C. 2,897,016.
Baker, Reuben C., to Baker Oil Tools, Inc. Removable drill pipe protector. 2,897,016, 7-28-59, Cl. 308—4.
Banker, Oscar H., to New Products Corp. Accessory drive. 2,896,477, 7-28-59, Cl. 74—752.
Bann, Michael S., and H. O. Lewis, to Collins Radio Co. Magnetostrictive resonant-disc test jig. 2,897,439, 7-28-59, Cl. 324—34.
Banta, George E. Refuse bag holder. 2,896,828, 7-28-59, Cl. 224—42.46.
Barkdoll, Joseph P., to Smith-Corona Marhant Inc. Typewriter case shift mechanism. 2,896,766, 7-28-59, Cl. 197—74.
Barkdoll, Joseph P., to Smith-Corona Marchant Inc. Spacing mechanism for power operated typewriter. 2,896,767, 7-28-59, Cl. 197—82.
Barker, Stuart N.: *See*—
Meager, Vernon W., and Barker. 2,897,345.
Barnes, Glenn, to Master Vibrator Co. Portable heater. 2,896,933 7-28-59, Cl. 263—19.
Barnes, James F., and E. F. Rebhols, to Foil Process Corp. Package for drink-forming powders. 2,896,839, 7-28-59, Cl. 229—62.
Barnes, William E., to Sun Oil Co. Dump bailer. 2,896,722, 7-28-59, Cl. 166—162.
Barnes, William E., to Sun Oil Co. Dump bailer. 2,896,723, 7-28-59, Cl. 166—166.
Barratt, Harold, T. N. Forrester, and G. H. Wilson, to Courtlauds Ltd. Sheet feeding apparatus. 2,896,946, 7-28-59, Cl. 271—6.
Barron, Curtis L. Top form for concrete conduits. 2,896,301, 7-28-59, Cl. 25—131.5.
Barrows, Robert C., and H. J. Braun, to Westinghouse Electric Corp. Alternating current dynamoelectric machine. 2,897,383, 7-28-59, Cl. 310—68.
Bartholomew, George A.: *See*—
Frederick, Edward R., and Bartholomew. 2,896,263.
Bartkewitz, Paul. Means for cleaning and dressing footwear and the like. 2,896,236, 7-28-59, Cl. 15—134.
Barton, Benjamin B., to American Fire Apparatus Co. Governor control mechanism for pumps. 2,896,541, 7-28-59, Cl. 103—19.
Bates, Rolland H., and C. Pantermoller. Physical therapeutic apparatus. 2,896,612, 7-28-59, Cl. 128—60.
Batres, Enrique: *See*—
Ringold, Howard J., and Batres. 2,897,199.
Baugh, Charles W., Jr., to Westinghouse Electric Corp. Color television synchronous demodulator circuit. 2,897,360, 7-28-59, Cl. 250—27.
Baum, Alvan: *See*—
Carlsen, Earl W., and Baum. 2,896,384.
Bauman, William C.: *See*—
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Baumann, Ernst: *See*—
Mast, Fred, Baumgartner, Held, and Baumann. 2,896,507.
Baumann, Fritz, B. Bienert H. Vollmann, and G. Rosch, to Farbenfabriken Bayer Akt. Intermediates for the production of cobalt phthalocyanines. 2,897,039, 7-28-59, Cl. 8—1.
Baumgartner, Willy: *See*—
Mast, Fred, Baumgartner, Held, and Baumann. 2,896,507.
Baxter, Clyde W.: *See*—
Alphenaar, Arthur W., Baxter, and Franco. 2,897,269.
Beach, John G., and G. R. Schaer, to United States of America, Atomic Energy Commission. Pretreating thorium for electroplating. 2,897,124, 7-28-59, Cl. 204—1.5.
Beall, John E.: *See*—
Clark, Willis E., and Beall. 2,896,820.
Beaver, David J., and P. J. Stoffel, to Monsanto Chemical Co. α,α'-bis(5-cumyl-2-hydroxyphenyl) mesitol. 2,897,242, 7-28-59, Cl. 260—619.
Becker, August, and N. G. Kane. Centrifugal feed device. 2,896,412, 7-28-59, Cl. 60—54.5.
Becker, Earl M., and J. J. Bridge, to Mine Safety Appliances Co. Pressure relief valve. 2,896,661, 7-28-59, Cl. 137—512.3.
Bede, James A. Accumulator. 2,896,862, 7-28-59, Cl. 239—332.
Beder, Salimi N. Maternity girdle. 2,896,634, 7-28-59, Cl. 128—558.
Beitler, Eddie B.: *See*—
Burgess, Louis. 2,897,057.
Bell, John W., Jr. Apparatus for processing tobacco. 2,896,797, 7-28-59, Cl. 214—5.5.
Bell, Leo E., and R. L. Holloway, to American Machine & Foundry Co. Self-leveling, storing and dispensing apparatus. 2,896,790, 7-28-59, Cl. 211—49.
Bell Punch Co. Ltd.: *See*—
Webb, Christopher F. 2,896,747.
Bell Telephone Laboratories, Inc.: *See*—
Bacon, Walter M., and Ostendorf. 2,897,268.
Bowers, Fritz K. 2,897,275.
De Motte, Frank E., Denton, and Hoffman. 2,897,489.
Howland, Frank L., and West. 2,897,419.
Ketchledge, Raymond W. 2,897,369.
Raisbeck, Gordon. 2,897,448.
Southworth, George C. 2,897,452.
Bellamy, David, Jr., to Fenwal Laboratories, Inc. Apparatus for handling fluid blood. 2,896,619, 7-28-59, Cl. 128—214.
Belts, Charles R. Clip. 2,896,887, 7-28-59, Cl. 248—68.
Bencowitz, Isaac, to Texas Gulf Sulphur Co. Purification of water. 2,897,150, 7-28-59, Cl. 210—63.

Brower, David F., to Hughes Aircraft Co. Variable reluc-
Canal Industrial Corp.: *See*—

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Kjellman, Thomas K., and Wood. 2,897,304.
Reuter, Paul L., and Weiss. 2,896,464.
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Bendix-Westinghouse Automotive Air Brake Co.: *See*—
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Benight, Raymond F.: *See*—
Clavier, William E., Benight, and Eaton. 2,896,916.

Berardinelli, Anthony J. Money holders for motor vehicles. 2,896,892, 7-28-59, Cl. 248—205.

Berg, Chester P., to Manor Hosier Mills, Inc. Yarn tensioning device for circular knitting machine. 2,896,435, 7-28-59, Cl. 66—146.

Berg, Clyde H. O., to Union Oil Co. of California. Hydrocarbon treatment process and apparatus. 2,897,133, 7-28-59, Cl. 208—103.

Berger, Carl, to Union Carbide Corp. Method and apparatus for freeze dehydration. 2,896,418, 7-28-59, Cl. 62—58.

Berger, Charles V., to Universal Oil Products Co. Removal of arsenic with deactivated platinum catalyst and subsequent reforming. 2,897,131, 7-28-59, Cl. 208—65.

Bergstein, Frank D., to Bergstein Packaging Trust. Carton with self-sealing end closures. 2,896,836, 7-28-59, Cl. 229—37.

Bergstein Packaging Trust: *See*—
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Bergstrom, Eric V., and R. R. J. Sorf, to Socony Mobil Oil Co., Inc. Temperature control in a moving bed system employed for hydrocarbon conversion. 2,897,139, 7-28-59, Cl. 208—165.

Berkowitz, Bernard D., to Microwave Associates, Inc. Shutter for waveguides. 2,897,458, 7-28-59, Cl. 333—13.

Berlenbach, Wilhelm: *See*—
Graulich, Wilhelm, Schmitz, Berlenbach, and Muller. 2,897,101.

Bernadt, William F.: *See*—
Staffordt, Linn T., and Bernadt. 2,896,311.

Bernard, James G. Bowling ball marker. 2,896,530, 7-28-59, Cl. 101—4.

Bichsel, Harry J., and A. J. Baeslack, to Westinghouse Electric Corp. Arc welding apparatus. 2,897,342, 7-28-59, Cl. 219—130.

Bieber, Herman, and I. A. Eldib, to Esso Research and Engineering Co. Removal of metallic contaminants from hydrocarbon oils with a foaming agent. 2,897,144, 7-28-59, Cl. 208—251.

Biedermann, Friedrich, to AGFA Akt. Diaphragm suitable for photometers. 2,896,508, 7-28-59, Cl. 88—61.

Bienert, Berthold: *See*—
Baumann, Fritz, Bienert, Vollmann, and Roech. 2,897,039.

Billen, Peter, to Schloemann Akt. Tool arrangement for severing the extruded product in directly operating extrusion presses. 2,896,782, 7-28-59, Cl. 207—1.

Bindler, Jakob: *See*—
Kleemann, Alois, Keller, and Bindler. 2,897,041.

Birkett, Keith H., Superior Products Co. Vaporising fire extinguisher fluid. 2,897,151, 7-28-59, Cl. 252—8.

Bishaf, Morris, to Stein Bros. Mfg. Co. Safety belt and buckle structure. 2,896,284, 7-28-59, Cl. 24—75.

Bishop, Ronald L., W. D. Jewell, D. Radov, and J. Statsinger, to American Bosch Arma Corp. Gyroscopic devices. 2,896,455, 7-28-59, Cl. 74—5.5.

Bittorf, Irvin, ¼ to E. Bougher. Fuel metering system. 2,896,852, 7-28-59, Cl. 237—2.

Bizak, Louis D.: *See*—
Klamm, Carl E., and Bizak. 2,896,691.

Blaser, Robert U., and M. Christensen, to The Babcock & Wilcox Co. Welded and bolted closure for high pressure vessel. 2,896,811, 7-28-59, Cl. 220—63.

Blashfield, William H., to North Electric Co. Automatic telephone system. 2,897,278, 7-28-59, Cl. 179—18.

Blaw-Knox Co.: *See*—
Schuetz, James W. 2,896,796.

Block, Lester W. Brassiere. 2,896,631, 7-28-59, Cl. 128—475

Blok, Lourens, and G. Zwanenburg, to North American Philips Co., Inc. System for high-frequency heating of work pieces. 2,896,936, 7-28-59, Cl. 266—4.

Blythe, Lawrence D. Egg dryer. 2,896,337, 7-28-59, Cl. 34—218.

Bobo, Roy A., to Phillips Petroleum Co. Valve device having plug-actuated check valve. 2,896,726, 7-28-59, Cl. 166—225.

Bodine, William L. Apparatus for removably supporting and tensioning clothes lines. 2,896,792, 7-28-59, Cl. 211—119.15.

Bodnaruk, Matt. Safety shield for vehicle wheels. 2,896,968, 7-28-59, Cl. 280—154.5.

Boeing Airplane Co.: *See*—
Ashbaugh, Fred E., and Kennedy. 2,897,461.

Bogar, Roy L. Fishing reel with spool control mechanism. 2,896,876, 7-28-59, Cl. 242—84.54.

Bogart, John A., Jr., to Forbes Lithograph Mfg. Co. Display stand. 2,896,793, 7-28-59, Cl. 211—132.

Bogatenkoff, Boris: *See*—
Regnauld, Pierre, and Bogatenkoff. 2,897,343.

Bogdanoff, Bonnie J.: *See*—
Gibson, Paul, and Bogdanoff. 2,897,075.

Bogue, Fitzhugh W., to United States Rubber Co. Process for compounding a conjugated diolefin polymer with a siliceous filler and an organohalosilane. 2,897,173, 7-28-59, Cl. 260—41.5.

Bohlmann, Edward G., to United States of America, Atomic Energy Commission. Separation of thorium from uranium by extraction. 2,897,046, 7-28-59, Cl. 23—14.5.

Bohn, Frank W. Safety frame for vehicles. 2,896,735, 7-28-59, Cl. 180—83.

Boker, Samuel J., G. S. Lazarus, and J. R. Sassoon. Checkwriter. 2,896,583, 7-28-59, Cl. 101—101.

Bolidens Gruvaktiebolag: *See*—
Carlén, Olve, and Lundquist. 2,897,107.

Bolton, John W., & Sons, Inc.: *See*—
Prevost, Bruno E. 2,896,711.

Bomac Laboratories Inc.: *See*—
MacDonough, Francis X., and Vant. 2,897,417.

Bonisch, Josef: *See*—
Gopfert, Herbert, and Bonisch. 2,896,756.

Bookah, Marcus H. Corset rib guard. 2,896,635, 7-28-59, Cl. 128—568.

Borg-Warner Corp.: *See*—
Dahl, Einar S. 2,896,602.
Hempel, Rudolph M. 2,896,432.
Hempel, Rudolph M. 2,896,433.
Kelbel, Donald W. 2,896,479.

Boritz, Nat. Emergency traction device for motor vehicles. 2,896,686, 7-28-59, Cl. 152—225.

Bossard, Werner, and R. Dürig, to J. R. Geigy, A.-G. Metallisable trisazo dyestuffs. 2,897,191, 7-28-59, Cl. 260—159.

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Bittorf, Irvin. 2,896,852.

Bourgeois, Yves: *See*—
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Bourget, Joseph G. A., and C. C. Pfitzer, to Avco Mfg. Corp. Remote control system for a television receiver. 2,897,354, 7-28-59, Cl. 250—20.

Bowers, Eric H., and O. Thoma, to Dowty Hydraulic Units Ltd. and O. Thoma. Hydraulic power transmission. 2,896,411, 7-28-59, Cl. 60—53.

Bowers, Fritz K., to Bell Telephone Laboratories, Inc. Delta modulation compander. 2,897,275, 7-28-59, Cl. 179—15.6.

Bowland, Charles R. Food grinder. 2,896,683, 7-28-59, Cl. 146—192.

Bozzo, Eugene A. Process for canning fresh prunes. 2,897,088, 7-28-59, Cl. 99—186.

Braatz, Willi, to Ingersoll-Rand Co. Socket. 2,896,985, 7-28-59, Cl. 287—119.

Bradburn, William J., Jr., to The Louis Allis Co. Constant surface speed regulator. 2,897,427, 7-28-59, Cl. 318—145.

Bradshaw & Co.: *See*—
Bradshaw, Grant D. 2,896,743.

Bradshaw, Grant D., to Bradshaw & Co. Apparatus for separating liquid from gases. 2,896,743, 7-28-59, Cl. 183—71.

Brandon, Chester, to Librascope, Inc. Derotation prism. 2,896,498, 7-28-59, Cl. 88—1.

Brandon, Percy S.: *See*—
Wright, Peter M., and Brandon. 2,897,442.

Braun, Emil, to Carl Freudenberg, Kommanditgesellschaft auf Aktien. Apparatus for the manufacture of thin artificial edible sausage casings. 2,896,254, 7-28-59, Cl. 18—14.

Braun, Herman J.: *See*—
Barrows, Robert C., and Braun. 2,897,383.

Brauneck, Charles F., to Murray Mfg. Corp. Electromagnetic switch. 2,897,316, 7-28-59, Cl. 200—104.

Brechlin, Adrian G. Boundary marker exposure tool. 2,896,729, 7-28-59, Cl. 172—19.

Brehm, Allen E., M. Hamer, and L. D. La Croix, Jr., to Standard Oil Co. Motor fuel. 2,897,069, 7-28-59, Cl. 44—58.

Breier, Irwin L., to Shell Development Co. Reactor with concentric annular passages. 2,897,063, 7-28-59, Cl. 23—284.

Bremer, Robert D., to General Motors Corp. Sheathed tubular electrical heater. 2,897,467, 7-28-59, Cl. 338—239.

Brenner, Karl, and G. Gabriel, to Trumpf & Co. Adjustable mounting for slitting tool structures. 2,896,712, 7-28-59, Cl. 164—58.

Brewer, Frank H.: *See*—
Marsden, Charles P., Jr., and Brewer. 2,897,394.

Brewer, Robert F., J. A. Hosford, and J. W. McGrath, to Western Electric Co., Inc. Automatic control for assembly machines. 2,896,313, 7-28-59, Cl. 29—203.

Bridge, John J.: *See*—
Becker, Earl M., and Bridge. 2,896,661.

Briggs, George R., and J. A. Rajchman, to Radio Corp. of America. Control circuits for luminous display devices. 2,897,405, 7-28-59, Cl. 315—250.

Briggs, Walton E., and J. A. Roberts, to General Electric Co. Vacuum leak detection. 2,897,437, 7-28-59, Cl. 324—33.

Bright, James W., to Burroughs Mfg. Corp. Tumbler tray. 2,896,829, 7-28-59, Cl. 224—48.

Bristol Laboratories Inc.: *See*—
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British Artificial Resin Co. Ltd.: *See*—
Mitlin, Leonid, and Kay. 2,896,673.

British Insulated Callender's (Submarine Cables) Ltd.: *See*—
Davey, Edward L., and Murray. 2,897,253.

British Petroleum Co. Ltd., The: *See*—
Hooper, John H. D., and McAllan. 2,897,072.
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British Thomson-Houston Co. Ltd., The: *See*—
Hamill, John I. 2,897,382.

Britton, Edgar C., and H. Tolkmith, to The Dow Chemical Co. O-(2,6-dicyclohexyl-4-lower-alkylphenyl) O,O-dimethyl phosphorothioates. 2,897,226, 7-28-59, Cl. 260—461.

Broadway, Jack L., and H. L. White. Pipe casement. 2,896,669, 7-28-59, Cl. 138—65.

Brock, Herbert W. Machine for packaging articles. 2,896,387, 7-28-59, Cl. 53—141.

Brodrib, William A. Mountable animal toy. 2,896,948, 7-28-59, Cl. 272—53.1.

Brönnimann, Albert J. Precision gun sight. 2,896,326, 7-28-59, Cl. 33—50.

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Brower, David F., to Hughes Aircraft Co. Variable reluctance electromagnetic device. 2,897,462, 7–28–59, Cl. 336—30.

Brown, Adolph M. Face lifting device. 2,896,613, 7–28–59, Cl. 128—76.

Brown, Ivan H., and R. H. Gordon, to Gordon-Brown Co. Electromagnet and control circuit. 2,897,411, 7–28–59, Cl. 317—123.

Brown, Robert W., to United States Rubber Co. Method of increasing the particle size of synthetic rubber latex polymerisate. 2,897,168, 7–28–59, Cl. 260—29.7.

Brown, William H., to Clauss Cutlery Co. Package opener. 2,896,318, 7–28–59, Cl. 30—2.

Brownell, George M.: *See*—
Lundberg, Hans T. F., Pringle, Roulston, and Brownell. 2,897,368.

Browning, George, Jr., to B. G. S. Shoe Corp. Platform unit for shoes. 2,896,340, 7–28–59, Cl. 36—30.

Brulle, Robert V. Translational propulsion pump. 2,896,545, 7–28–59, Cl. 103—143.

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Rosti, Arpad, and Brunot. 2,896,950.

Bryant, Jack R.: *See*—
McNaught, John P., and Bryant. 2,897,155.

Buchhold, Theodor A., to Sperry Rand Corp., Ford Instrument Co. Division. Magnetic amplifier. 2,897,296, 7–28–59, Cl. 179—171.

Buechler, William R., to General Electric Co. Clothes washer with an improved adjustable water level control system. 2,896,436, 7–28–59, Cl. 68—12.

Bugbird, Herbert C. Apparatus for cleaning leaves from high gutters. 2,896,239, 7–28–59, Cl. 15—144.

Builders Equipment Co.: *See*—
Thomas, Paul M., and Wright. 2,896,800.

Bunting Brass and Bronze Co., The: *See*—
Smith, Milton F., and Latva. 2,897,097.

Bured, Inc.: *See*—
Marsh, Charles W. 2,896,386.

Burgess, Edward S. Coaxial cable switch. 2,897,313, 7–28–59, Cl. 200—87.

Burgess, Louis, deceased; M. Burgess and E. B. Beitler, executors, to S. Tour and himself. Process of winning elemental phosphorus. 2,897,057, 7–28–55, Cl. 23—223.

Burgess, Murray: *See*—
Burgess, Louis. 2,897,057.

Burke, Ambrose. Sound reproducer. 2,897,291, 7–28–59, Cl. 179—115.5.

Burke, Earl J., to Sprague Electric Co. Non-slip friction drive. 2,896,572, 7–28–59, Cl. 118—420.

Burkhalter, Robert R., and P. J. Mazziotti, to Dana Corp. Midship bearing support. 2,897,023, 7–28–59, Cl. 308—184.

Burkhardt, George C., C. Eastwood, and J. P. Hamilton, to Container Corp. of America. Stacking tray and handle therefor. 2,896,835, 7–28–59, Cl. 229—34.

Burnett, Albert L., and J. H. Showell. Means for automatically switching on the parking lights of vehicles. 2,897,301, 7–28–59, Cl. 200—35.

Burroughs Corp.: *See*—
Loev, David. 2,897,483.
Miehle, William. 2,896,848.

Burroughs Mfg. Corp.: *See*—
Bright, James W. 2,896,829.

Burroughs Wellcome & Co. (U.S.A.), Inc.: *See*—
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Bush, Robert M., R. W. Jensen, and L. T. King, to The Garrett Corp. Fluid motor. 2,896,590, 7–28–59, Cl. 121—119.

Bush, Russell J., to General Motors Corp. Bell and spigot joint with plural flexible lip type seal. 2,896,974, 7–28–59, Cl. 285—110.

Buske, Gilbert E., and R. L. Morden, to Motor Wheel Corp. Power take-off for lawn mowers. 2,896,603, 7–28–59, Cl. 123—195.

Butler Mfg. Co.: *See*—
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Butt, Kenneth S., to Westinghouse Brake and Signal Co., Ltd. Rectifier assembly. 2,897,420, 7–28–59, Cl. 317—234.

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De Angelis, Angelo C., and Butterfield. 2,896,867.

Büttner, Artur, to Schnellpressenfabrik Akt. Machine for heating embossing moulds of high-speed cylinder presses. 2,896,532, 7–28–59, Cl. 101—25.

Byquist, Stanley H., 9/10 to E. W. Freeman. Beam antenna. 2,897,498, 7–28–59, Cl. 343—834.

Byrne Doors, Inc.: *See*—
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Cacheris, John C.: *See*—
Jones, George R., Cacheris, and Morrison. 2,897,455.

California Research Corp.: *See*—
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Call, Clinton B. Means for packaging multiple unit capacitor. 2,897,418, 7–28–59, Cl. 317—230.

Cambanis, Louis. Clothes protector for ironing boards. 2,896,346, 7–28–59, Cl. 38—111.

Camco (Machinery) Ltd.: *See*—
Fry, Stanley R., and McCormick. 2,896,042.

Cameron, Frank L., and H. Brooks, to Westinghouse Electric Corp. Automatic recloser. 2,897,315, 7–28–59, Cl. 200—89.

Camp, William J. Dial control selective ringing apparatus. 2,897,276, 7–28–59, Cl. 179—17.

Campbell, Howard N., to Paramount Textile Machinery Co. Method of and apparatus for forming hosiery package. 2,896,880, 7–28–59, Cl. 53—3.

Campbell, Lee R. Control valve construction for pneumatic power tools. 2,896,579, 7–28–59, Cl. 121—21.

Canada Cycle and Motor Co. Ltd.: *See*—
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Cochran, Lee D. 2,897,366.

Canalizo, Carlos R., to Otis Engineering Corp. Cut-off device. 2,896,903, 7–28–59, Cl. 251—63.

Candido, Gaspare R., to National Surgical and Chemical Co., Inc. Colostomy belt. 2,896,624, 7–28–59, Cl. 128—283.

Cannaday, William R., to Dresser Industries, Inc. Through-tubing perforating systems. 2,896,721, 7–28–59, Cl. 166—55.5.

Canon Camera Co., Inc.: *See*—
Kakunodate, Masamichi. 2,896,500.

Capell, Robert G., J. H. Wright, and W. A. Gruse, to Gulf Research & Development Co. Recovery of elemental sulfur from sulfur bearing solid mineral matter. 2,897,065, 7–28–59, Cl. 23—312.

Caplan, Alexander. Hair cutting device. 2,896,320, 7–28–59, Cl. 30—30.

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Care, Richard L.: *See*—
Grant, Gardner L., and Care. 2,896,761.

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Carlsen, Earl W., and A. Baum. Automatic box filler. 2,896,384, 7–28–59, Cl. 53—59.

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Zietz, Alex, and Carmody. 2,896,400–407.

Carpenter, Catherine E.: *See*—
Rigney, Daniel K., and Carpenter. 2,897,488.

Carpenter, Edward F. Cable puller. 2,896,911, 7–28–59, Cl. 254—134.3.

Carpenter, Marion S., W. M. Easter, Jr., and T. F. Wood, to The Givaudan Corp. Substituted tetrahydronaphthalenes. 2,897,237, 7–28–59, Cl. 260—592.

Carrara, Gino, and E. Testa, to Lepetit S.p.A. Purified pyridoxine, analogs and process. 2,897,203, 7–28–59, Cl. 260—295.

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Ashley, Carlyle M. 2,896,850.
Ayling, Robert W. 2,896,426.
Weiler, Peter A. 2,896,920.

Carry, William J.: *See*—
Gaines, Clarence F. and J. R., De Pew, and Carry. 2,896,962.

Carson, Walter C.: *See*—
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Carthay, Alexander F., to Channel Master Patent Corp. Foldable antenna structures. 2,897,495, 7–28–59, Cl. 343—803.

Carty, John. Retractable hitch structure for house trailers or the like. 2,896,969, 7–28–59, Cl. 280—491.

Casey, Robert F., to Allen B. du Mont Laboratories, Inc. Adjustable horizontal sweep circuit. 2,897,358, 7–28–59, Cl. 250—27.

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Cedarstaff, Victor E. Slide for a necktie. 2,896,217, 7–28–59, Cl. 2—150.

Celley, Albert F., to Owens-Illinois Glass Co. Article handling pallet means. 2,896,798, 7–28–59, Cl. 214—10.5.

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Chamberlin, Earl M., and J. M. Chemerda, to Merck & Co., Inc. 3-hydroxy-11-keto-bisnorallocholenic acid and the esters thereof. 2,897,212, 7–28–59, Cl. 260—397.1.

Chamberlin, Earl M., and J. M. Chemerda, to Merck & Co., Inc. 3-hydroxy-11-keto Δ⁴-ergostene and esters thereof. 2,897,214, 7–28–59, Cl. 260—397.2.

Chambers, John. Method of making oral dentures. 2,896,265, 7–28–59, Cl. 18—55.1.

Chance, Ray. Dredge. 2,896,341, 7–28–59, Cl. 37—58.

Channel Master Patent Corp.: *See*—
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Chapin, Earl C., and R. F. Smith, to Monsanto Chemical Co. Styrene-allyl alcohol-acrylic ester terpolymers, process for preparing same and coating composition therefrom. 2,897,174, 7–28–59, Cl. 260—43.

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Chapman, Harlow M. Materials separation apparatus and method of materials separation. 2,896,744, 7–28–59, Cl. 183—83.

Chapman, Harold E. Device for mixing or treating fluids or free-flowing powders. 2,896,926, 7–28–59, Cl. 259—140.

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Check, Mathias M., to The Yale & Towne Mfg. Co. Knob mounting and securing means. 2,896,992, 7–28–59, Cl. 292—348.

Cheek, Forrest R., and N. Reighard, to General Motors Corp. Automatic plural step-ratio transmissions. 2,896,468, 7–28–59, Cl. 74—472.

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Chemerda, John M., to Merck & Co., Inc. Preparation of 7,11-diketo-steroids. 2,897,197, 7–28–59, Cl. 260—239.55.

Chemetron Corp.: *See*—
Fleming, Harold W., and Reitmeier. 2,897,160.
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Hitzelberger, Erwin. 2,896,988.
Scherenberg, Hans O. 2,896,600.

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Chenea, Paul F., to General Motors Corp. Separator for anti-friction bearing. 2,897,024, 7–28–59, Cl. 308—201.
Cheney, Charles W. Fastenings for travel goods. 2,896,294, 7–28–59, Cl. 24—250.
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Chris, Theodore S. Sliding doors. 2,896,274, 7–28–59, Cl. 20—19.
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Christl, Robert J., and M. J. Roedel, to E. I. du Pont de Nemours and Co. Constant environment process for polymerizing ethylene. 2,897,183, 7–28–59, Cl. 260—94.9.
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Cirot, Andre. Stand lamp. 2,897,349, 7–28–59, Cl. 240—81.
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Clark, Jared W., and A. E. Winslow, to Union Carbide Corp. Production of polymeric materials from polyoxyalkylene polyols and butadiene diepoxide. 2,897,163, 7–28–59, Cl. 260—2.
Clark, Willis E., and J. E. Beall. Container ejecting mechanism. 2,896,820, 7–28–59, Cl. 221—210.
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Clavier, William E., R. F. Benight, and G. H. Eaton. Drilling equipment. 2,896,916, 7–28–59, Cl. 255—4.4.
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Cleaver-Brooks Co.: *See*—
Rulseh, Elroy M. 2,896,699.
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Coates, Harold, and W. H. Hunter, to Minister of Supply, in Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland. Manufacture of trialkyl phosphites. 2,897,224, 7–28–59, Cl. 260—461.
Cochran, Lee D., to Canal Industrial Corp. Externally adjustable electron microscope focusing aid. 2,897,366, 7–28–59, Cl. 250—49.5.
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Cohn, David, to Model Plastic Corp. Dolls' heads provided with sleeping eyes. 2,896,373, 7–28–59, Cl. 46—169.
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Cole, Thomas M., to Federal Pacific Electric Co. Circuit breakers with thermal and magnetic tripping. 2,897,314, 7–28–59, Cl. 200—88.
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Coke, Allen B. Autographic registers. 2,896,970, 7–28–59, Cl. 282—16.
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Cornwall, Lionel P. Vehicle sway control and overload system. 2,896,964, 7–28–59, Cl. 280—104.5.
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Cotman, Lawrence. Cleaning device. 2,896,241, 7–28–59, Cl. 15—184.
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Crandon, Albert S., Jr., to American Window Glass Co. Apparatus for drawing sheet glass. 2,896,876, 7–28–59, Cl. 49—17.
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Crosh, Harry W. Drip and spatter guard attachment for a paint roller. 2,896,244, 7–28–59, Cl. 15—248.
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Csillingh, Dezsö, to "Licencia" Talalmanyokat Ertekesito Vallalat. Grid-controlled mercury-arc rectifier. 2,897,404, 7–28–59, Cl. 315—205.
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Cunningham, Floyd E. Anti-tilt attachment for tractors. 2,896,966, 7–28–59, Cl. 280—150.
Cunningham, Ira. Automatic equalizer adjustment mechanism for reel type lawn mowers. 2,896,390, 7–28–59, Cl. 56—249.
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Dahl, Einar S., to Borg-Warner Corp. Fuel injection system. 2,896,602, 7–28–59, Cl. 123—179.
Daigle, Leo T., to Dearborn Fabricating & Engineering Co. Cable conveyor. 2,896,772, 7–28–59, Cl. 198—177.
Dailey, Glenn H. Reversible side delivery hay rake. 2,896,-388, 7–28–59, Cl. 56—22.

Daimler-Benz Akt.: *See*—
Hitzelberger, Erwin. 2,896,988.
Scherenberg, Hans O. 2,896,600.
Stump, Eugen. 2,896,473.
Stump, Eugen. 2,896,941.

Dalton, Thomas B., to West Michigan Steel Foundry Co. Support and jack for semi-trailers. 2,896,967, 7–28–59, Cl. 280—150.5.

Damijonaitis, Kestutis: *See*—
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Dana Corp.: *See*—
Burkhalter, Robert R., and Mazziotti. 2,897,023.

Dane, Bruce W. Beater for drums. 2,896,492, 7–28–59, Cl. 84—422.

Daninhirsch, Harry: *See*—
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Da Re, Paolo, to Dr. Recordati-Laboratorio Farmacologico S.p.A. Hydroxychromone derivatives and method of preparing the same. 2,897,211, 7–28–59, Cl. 260—345.2.

Darragh, Frank H., Jr., to Darragh Mechanisms, Inc. Tracks for crawler type machines. 2,897,014, 7–28–59, Cl. 305—10.

Darragh Mechanisms, Inc.: *See*—
Darragh, Frank H., Jr. 2,897,014.

Dassaud, Robert: *See*—
Fouilletier, Louis, and Dassaud. 2,897,064.

Davey, Edward L., and W. Y. Murray, to British Insulated Callender's (Submarine Cables) Ltd. Mechanical protection of electric cables. 2,897,253, 7–28–59, Cl. 174—70.

Davis, Frank L. Web end connector. 2,896,288, 7–28–59, Cl. 24—230.

Davis, Ralph B.: *See*—
Walters, Peter C., and Davis. 2,896,526.

Day, Carl L., F. E. Fauth, H. F. Finke, and M. A. Reymann, Jr., to Crown Cork & Seal Co., Inc. Filling head. 2,896,674, 7–28–59, Cl. 141—39.

Day, Thomas: *See*—
Argentieri, Peter, Daninhirsch, and Day. 2,896,849.

Dazzi, Joachim, to Monsanto Chemical Co. Plasticized polyvinyl halide polymers. 2,897,169, 7–28–59, Cl. 260—31.4.

Dazzi, Joachim, to Monsanto Chemical Co. Adducts of alkylated aromatic hydrocarbons and fumarate esters. 2,897,230, 7–28–59, Cl. 260—475.

Dean, Gilbert L., and H. O. Kramer. Fish lure hooks. 2,896,355, 7–28–59, Cl. 43—35.

Dean, Lloyd E., to Phillips Petroleum Co. Pebble flow rate controller. 2,897,008, 7–28–59, Cl. 302—53.

De Angelis, Angelo C., and H. E. Butterfield, Jr., to Dynamics Corp. of America. Grinding mill. 2,896,867, 7–28–59, Cl. 241—259.

De Angelus, Millet R.: *See*—
Dersch, Fritz, and De Angelus. 2,897,081.

Dearborn Fabricating & Engineering Co.: *See*—
Daigle, Leo T. 2,896,772.

De Benneville, Peter L., and L. S. Luskin, to Rohm & Haas Co. Oxazine and oxazoline polymers. 2,897,182, 7–28–59, Cl. 260—85.5.

De Cat, Arthur H., and R. K. Van Poucke, to Gevaert Photo-Producten N.V. Production of colored photographic images with oxodiazole couplers. 2,897,079, 7–28–59, Cl. 96—55.

De Fromont, Michel: *See*—
Cogniat, Marcel, de Fromont, and Serratrice. 2,896,452.

De Ganahl, Carl. Methyl cellulose coated polyester tape. 2,897,099, 7–28–59, Cl. 117—138.8.

De Keiser, Adrianus, and J. N. Wilson, to Shell Development Co. Alkylation process with treated silica-alumina catalyst. 2,897,246, 7–28–59, Cl. 260—671.

De Lang, Hendrik, to North American Philips Co., Inc. Colour-selective optical system corrected with regard to astigmatism. 2,896,499, 7–28–59, Cl. 88—1.

Del Guidice, Dominic: *See*—
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Delp, Preston P. Knockdown scaffold. 2,897,013, 7–28–59, Cl. 304—2.

Demarest, Danield D. Brick packages. 2,896,781, 7–28–59, Cl. 206—65.

De Motte, Frank E., E. C. Denton, and T. R. Hoffman, to Bell Telephone Laboratories, Inc. Circuits for improving the stability of ultrasonic delay lines. 2,897,469, 7–28–59, Cl. 343—7.7.

Denham, William L., to General Electric Co. Mounting structure for stationary inductive device. 2,897,463, 7–28–59, Cl. 336—65.

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Denton, Eugene C.: *See*—
De Motte, Frank E., Denton, and Hoffman. 2,897,469.

De Pew, Chester C.: *See*—
Gaines, Clarence F. and J. R., De Pew, and Carry. 2,896,962.

Dersch, Fritz, and M. R. De Angelus, to General Aniline & Film Corp. Antifogging agent and bactericide for photographic emulsions. 2,897,081, 7–28–59, Cl. 96—66.

De Smidt, Woodrow A., F. F. Loock, and C. E. Zarwell, to Allen-Bradley Co. Control-station. 2,897,327, 7–28–59, Cl. 200—168.

De Tar, Donald R., to Winchester Electronics, Inc. High voltage connector. 2,897,471, 7–28–59, Cl. 339—94.

Detrex Chemical Industries, Inc.: *See*—
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Deuth, Albert F. Signal transmission system. 2,897,264, 7–28–59, Cl. 178—6.6.

Deutsche Edelstahlwerke Akt., Allgemaine Elektricitats-Gesellschaft: *See*—
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De Vito, Angelo R. to L. W. Mensimer. Electric switch. 2,897,326, 7–28–59, Cl. 200—167.

Dewey, Davis R., II, and J. G. Trump, to High Voltage Engineering Corp. Irradiation method and apparatus. 2,897,365, 7–22–59, Cl. 250—49.5.

De Witt, Leslie, Jr. Airfoil for toy aircraft. 2,896,370, 7–28–59, Cl. 46—79.

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Struble, Glenn E. 2,896,780.
Struble, Glenn E. 2,896,838.
Wells, Roger. 2,896,710.

Diana Mfg. Co.: *See*—
Fitzgerald, Edward L. 2,896,623.

Dicken, John A., Jr.: *See*—
Kauffman, Melvin R., and Dicken. 2,896,641.

Dickinson, Wesley E., to International Business Machines Corp. Electric cable self guiding arcuate set. 2,897,254, 7–28–59, Cl. 174—117.

Dickey, Leonide, to S. N. Marep. Piston rod stuffing boxes. 2,896,980, 7–28–59, Cl. 286—34.

Dieman, Edgar A., to Standard Oil Co. Accelerated condensation corrosion testing system. 2,897,060, 7–28–59, Cl. 23—253.

Dilling, Elmer D., to Titanium Metals Corp. of America. Electrode handling and storing apparatus. 2,897,129, 7–28–59, Cl. 204—225.

Di Tullio, Flavia, to Sacony Foundations, Inc. Brassieres. 2,896,632, 7–28–59, Cl. 128—484.

Dixon, Thomas P., and S. E. Howse, to Technicolor Corp. Automatic print timer. 2,897,259, 7–28–59, Cl. 178—5.2.

Dodge, William W., and E. J. Ryan, Jr., to International Business Machines Corp. Toll ticket dispensers. 2,896,531, 7–28–59, Cl. 101—19.

Doherty, William H. Shoe arch support apparatus. 2,896,229, 7–28–59, Cl. 12—1.

Doherty, William H. Arch support shoe bottoming methods and apparatus. 2,896,255, 7–28–59, Cl. 18—17.

Dole Refrigerating Co.: *See*—
Lauterbach, William E., and Strutynski. 2,896,427.

Donnelley, R. R., & Sons Co.: *See*—
Kile, Otho, and Sarring. 2,896,537.

Donnelly, Jesse, to W. McC. Donnelly. Process of cold rolling steel sheets. 2,896,486, 7–28–59, Cl. 80—60.

Donnelly, Wallace McC.: *See*—
Donnelly, Jesse. 2,896,486.

Doolittle, Donald. Typewriter attachment. 2,896,768, 7–28–59, Cl. 197—133.

Dorsey, Dorman D. Appliance housing. 2,897,035, 7–28–59, Cl. 312—330.

Doughboy Industries, Inc.: *See*—
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Doumani, Thomas F. Union Oil Co. of California. Hydrocarbon conversion process and catalyst. 2,897,135, 7–28–59, Cl. 208—112.

Douty, Alfred, to Amchem Products, Inc. Indicating and control apparatus for electrolyte concentration and the like. 2,897,436, 7–28–59, Cl. 324—30.

Dow Chemical Co., The: *See*—
Britton, Edgar C., and Tolkmith. 2,897,226.
Dreisbach, Robert R., and Sterling. 2,897,167.
Grenley, Dallas G., and Townsend. 2,897,100.
Gruenhagen, Richard H., and Fritts. 2,897,113.
McIlhenny, William F., Baker, Clarke, and Bauman. 2,897,051.
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Partansky, Alexander M., and Schrader. 2,897,180.
Slagh, Harold R. 2,897,227.
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Dreisbach, Robert R., and G. B. Sterling, to The Dow Chemical Co. Process for polymerizing monomeric materials comprising conjugated diolefins and methyl isopropenyl ketone. 2,897,167, 7–28–59, Cl. 260—23.

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Hawthorne, Millo M. 2,897,440.

Dresser, Jasper G., to Dresser Products Inc. Means for reeling coded tape. 2,896,872, 7–28–59, Cl. 242—61.

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Dresser, Jasper G. 2,896,872.

Drew, John: *See*—
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Drinker, Henry S.: *See*—
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Droitcour, Michael A. Operating means for bed-and-cylinder printing press. 2,896,538, 7–28–59, Cl. 101—275.

Drummond, Roy M. Gas washing apparatus. 2,896,740, 7–28–59, Cl. 183—3.

Dubberke, Walter H. Method for positioning a wheel upon an axle member. 2,896,315, 7–28–59, Cl. 29—400.

Dullaghan, Matthew E., and H. R. Hochstadt, to Humphreys Medicine Co., Inc. Process for extracting and reconstituting witch hazel. 2,897,115, 7–28–59, Cl. 167—62.

Du Mont, Allen B., Laboratories, Inc.: *See*—
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Dunbar, Frank H., to F. J. Reilly. Refrigerating system having reverse flow. 2,896,425, 7–28–59, Cl. 62—282.

Duncan, Ira J., to Detrex Chemical Industries, Inc. Silicone resin remover and method. 2,897,104, 7–28–59, Cl. 134—29.

Dunderman, Fred J. Domestic oil burner electrode gauge. 2,896,334, 7–28–59, Cl. 33—180.

Fevre, Charles M., to Societe des Forges et Ateliers du

Franklin, John B., to Sanford Process Co., Inc. Electrolytic

Dungler, Julien. Drying of fabrics, papers, cardboards, and other lengthy materials. 2,896,335, 7-28-59, Cl. 34—68.

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Dunker, Henry C. L. Tennis balls. 2,896,949, 7-28-59, Cl. 273—61.

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Mol, Evert A. J. 2,896,253.
Musttertties, Earl L., Phillips, and Smith. 2,897,055.

Dupree, Marion R., to J. J. and M. D. Dennard. Grass trimmer. 2,896,389, 7-28-59, Cl. 56—239.

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Durkin, William J., to United States of America, Navy. Turbine cooling air metering system. 2,896,906, 7-28-59, Cl. 253—39.1.

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Dure-O-Lite Pencil Co.: *See*—
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Dustin, Howard M., to Smith-Corona Marchant Inc. Ten-key value and decimal point indexing mechanism. 2,896,846, 7-28-59, Cl. 235—145.
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Eannarino, George, to Sarkes Tarzian, Inc. Rectifier electroforming process. 2,896,305, 7-28-59, Cl. 29—25.3.

East, Thomas R.: *See*—
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Huber, John R. 2,896,296.

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Eastwood, Clinton: *See*—
Burkhardt, George C., Eastwood, and Hamilton. 2,896,835.

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Eberiel, Herman J., and F. T. May, to Westinghouse Electric Corp. Lamp fabrication. 2,896,806, 7-28-59, Cl. 29—25.11.

Eckman, Harry A., to Crane Co. Process of siliconizing. 2,897,093, 7-28-59, Cl. 117—58.

Eder, Adolf, to Etablissement EPOK. Food can with immersion heater. 2,896,607, 7-28-59, Cl. 126—262.

Eder, Adolf, to Etablissement EPOK. Immersion heater. 2,896,608, 7-28-59, Cl. 126—262.

Edgemond, John W., Jr., to Yuba Power Products, Inc. Blade anchorage means for molding head. 2,896,678, 7-28-59, Cl. 144—235.

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Ehrisman, Henry O., and H. S. Drinker, to The Foxboro Co. Digester relief system. 2,896,709, 7-28-59, Cl. 162—238.

Eigner, Leo. Camping attachment for automobiles. 2,896,650, 7-28-59, Cl. 135—1.

Eitel, Kurt, F. Schmidt, and G. Mauthe, ½ to Farbenfabriken Bayer Akt., and ½ to Mobay Chemical Co. Process for the preparation of coating of soft resins from polyisocyanates and compounds containing hydroxyl groups. 2,897,166, 7-28-59, Cl. 260—22.

Eitel, Jay M. Telescoping assembly. 2,896,750, 7-28-59, Cl. 189—14.

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Electric Steel Foundry Co.: *See*—
Pekiay, William P. 2,896,845.

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Ellingson, La Verne O., to Quik-N-Easy Products, Ltd. Boarding ladder. 2,896,831, 7-28-59, Cl. 228—54.

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Ellman, Gilbert M., to Aristo-Craft Products. Collapsible stand. 2,896,365, 7-28-59, Cl. 45—121.

Elmendorf, Armin. Single ply veneer plank and method of making it. 2,896,682, 7-28-59, Cl. 144—309.

Elston, William A., L. A. McElwee, J. W. Moore, Jr., and W. C. Tomerlin, Jr., to United Gas Corp. Apparatus for detecting irregularities in surfaces. 2,896,382, 7-28-59, Cl. 33—178.

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Emanuel, Roberto, to Emanuel di Giuseppe e Roberto Emanuel & C. S.A.S. Motor vehicle washing plant. 2,896,644, 7-28-59, Cl. 134—99.

Enders, John A., to Royal McBee Corp. Trip pawl control mechanism. 2,896,765, 7-28-59, Cl. 197—17.

Engert, Eugen, to Petrix-Union G.m.b.H. Flashlight switch. 2,897,303, 7-28-59, Cl. 200—60.

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Ensign, Roy F. 2,896,599.

Ensign, Roy F., to Ensign Carburetor Co. Gaseous fuel feed systems, with automatic starting and idling control, for internal combustion engines. 2,896,599, 7-28-59, Cl. 123—120.

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Erickson, Charles D., to A. O. Smith Corp. Dispenser apparatus for liquid petroleum products. 2,896,659, 7-28-59, Cl. 137—355.21.

Erickson, Henry, to Sinclair Refining Co. Process for preparing cobalt-molybdenum-alumina catalyst. 2,897,161, 7-28-59, Cl. 252—465.

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Ernest, Frederick I. Work mounting chuck. 2,896,954, 7-28-59, Cl. 279—2.

Ernst, W. Arthur, to Howard Industries, Inc. Instrument-supporting tripod with seat. 2,896,891, 7-28-59, Cl. 248—168.

Erskine, George B. Studded electrode and method of manufacture. 2,897,391, 7-28-59, Cl. 313—82.

Essex, Alois B., E. E. Garrett, and H. F. McKenney, to Sperry Rand Corp., Ford Instrument Co. Division. Balanced carbon pile. 2,897,466, 7-28-59, Cl. 338—105.

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Eder, Adolf. 2,896,608.

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Roebuck, Alan K., and Evering. 2,897,243.

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Faidley, Hunter C. Apparatus for cleaning by ultra-sonic vibrations. 2,896,649, 7-28-59, Cl. 134—184.

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Farmer, William C., to United States of America, Navy. Tuned band-pass crystal holder. 2,897,284, 7-28-59, Cl. 250—31.

Fasciati, Alfred, to Ciba Ltd. Metalliferous azo-dyestuffs. 2,897,189, 7-28-59, Cl. 260—147.

Fasciati, Alfred, to Ciba Ltd. Metalliferous azo-dyestuffs. 2,897,190, 7-28-59, Cl. 260—147.

Faugier, Gabriel, and R. Fertier. Safety apparatus. 2,896,912, 7-28-59, Cl. 254—159.

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Fearon, Robert E., and J. M. Thayer, to Well Surveys, Inc. Directionally sensitive shallow ionization chambers for neutron well logging. 2,897,372, 7-28-59, Cl. 250—83.6.

Fearon, Robert E., to Well Surveys, Inc. Casing joint detector. 2,897,428, 7-28-59, Cl. 324—34.

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Ferguson, John L., Sr., and R. C. Talbot, to J. L. Ferguson Co. Apparatus for applying adhesive to the flaps of cases or cartons. 2,896,569, 7-28-59, Cl. 118—3.

Fernandez, Frank C. Protective hood. 2,896,215, 7-28-59, Cl. 2—8.

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Gies, Helmut: *See*—

Fevre, Charles M., to Societe des Forges et Ateliers du Creusot. Low-head vertical-shaft hydro-electric set. 2,897,375, 7-28-59, Cl. 290—02.

Ficarella, Leo A. Combination storage cabinet and drafting board. 2,897,030, 7-28-59, Cl. 311—16.5.

Fiedler, Walter H. Curtain hanging device. 2,896,900, 7-28-59, Cl. 248—262.

Fields, Ellis K.: *See*—
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Finch, Dan. Thermostatic switch. 2,897,318, 7-28-59, Cl. 200—122.

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Fink, Heinrich, to SKF Kugellagerfabriken G.m.b.H. Spindle drive for a spinning and twisting machine. 2,896,895, 7-28-59, Cl. 57—102.

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Finn, William J., to Texaco Inc. Railroad journal bearing. 2,897,019, 7-28-59, Cl. 308—79.1.

Finneburgh, Lewis H., Jr. Selective multiple channel TV antennas. 2,897,497, 7-28-59, Cl. 343—819.

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Firnhaber, Miles S., to Sealtite Insulation Mfg. Corp. Apparatus for manufacturing mineral wool and the like. 2,896,256, 7-28-59, Cl. 18—2.5.

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Fischer, Wilbur E. Component mounting clamp. 2,896,295, 7-28-59, Cl. 24—263.

Fisher, Joseph C., Jr., to Union Carbide Corp. Oxidation resistant graphite and method for making the same. 2,897,102, 7-28-59, Cl. 117—169.

Fistell, David N. Units for analyzing, rejuvenating and repairing television picture tubes. 2,897,435, 7-28-59, Cl. 324—23.

Fitzgerald, Albert J., to General Electric Co. Framing structure and toggle retainer thereof. 2,896,275, 7-28-59, Cl. 20—56.4.

Fitzgerald, Edward L., to Diana Mfg. Co. Breast pad and method of manufacture. 2,896,623, 7-28-59, Cl. 128—280.

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Fleming, John S.: *See*—
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Fleming, Margaret E., to J. S. Fleming. Dental cleaners. 2,896,639, 7-28-59, Cl. 132—93.

Flexsleev, Inc.: *See*—
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Flood, John E., and R. S. Hopkins, to Siemens Edison Swan Ltd. Automatic telephone exchange systems. 2,897,279, 7-28-59, Cl. 179—18.

Flood, John E., and R. S. Hopkins, to Siemens Edison Swan Ltd. Automatic telephone systems and the like. 2,897,281, 7-28-59, Cl. 179—18.

Foil Process Corp.: *See*—
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Fong, Willie, to United States of America, Agriculture. Process of clarifying aqueous suint bath containing grease and scouring raw wool with the purified bath. 2,897,043, 7-28-59, Cl. 8—139.

Fonken, Gunther S.: *See*—
Wechter, William J., and Fonken. 2,897,198.

Fontein, Freerk J., to Stamicarbon N.V. Method for separating fine material. 2,896,785, 7-28-59, Cl. 209—273.

Forbes, Edmond J., to Radio Corp. of America. Radio relay station with drop channeling. 2,897,274, 7-28-59, Cl. 179—15.

Forbes Lithograph Mfg. Co.: *See*—
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Ford, Francis P., and J. V. Fusco, to Esso Research and Engineering Co. Butyl rubber co-vulcanizates. 2,897,164, 7-28-59, Cl. 260—5.

Ford Motor Co.: *See*—
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Ford, Wilbur S., to Amalgamated Wireless (Australasia) Ltd. Extractor-engager device. 2,897,033, 7-28-59, Cl. 312—320.

Foremost Dairies, Inc.: *See*—
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Forghieri, Renato. Fluid feeder and pressure intensifier for automatic operation by using the initial pressure of the fluid fed itself. 2,896,542, 7-28-59, Cl. 103—50.

Forman, George W., and R. D. George, to Butler Mfg. Co. Grain probe. 2,896,444, 7-28-59, Cl. 73—425.2.

Forrester, Thomas N.: *See*—
Barratt, Harold, Forrester, and Wilson. 2,896,946.

Foulletier, Louis, and R. Dussaud, to Societe d'Electro-Chimie d'Electro-Metallurgie et des Acieries Electrique d'Ugine. Catalytic ovens. 2,897,064, 7-28-59, Cl. 23—288.

Foxboro Co., The: *See*—
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Ehrisman, Henry O., and Drinker. 2,896,709.

Franco, George A.: *See*—
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Franey, William R., and M. C. Gillis, to Pan American Petroleum Corp. Gas lifting dually-completed wells. 2,896,547, 7-28-59, Cl. 103—238.

Frankenstein, William P. Cake lift. 2,896,834, 7-28-59, Cl. 229—30.

Franklin, John B., to Sanford Process Co., Inc. Electrolytic process for producing oxide coatings on aluminum and aluminum alloys. 2,897,125, 7-28-59, Cl. 204—58.

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Stillwagon, George B., Jr. 2,896,431.

Frasier, Gerald W.: *See*—
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Freche, John C., to United States of America, Navy. Air-cooled blade. 2,896,907, 7-28-59, Cl. 253—39.15.

Frederick, Edward R., and G. A. Bartholomew, to Albany Felt Co. Method of changing the bulk density of powdered materials. 2,896,263, 7-28-59, Cl. 18—48.

Freeman, Alfred and D. R. Profile reader and conveyor systems. 2,896,769, 7-28-59, Cl. 198—38.

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Freeman, Alfred and D. R. 2,896,769.

Freeman, E. W.: *See*—
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Freibott, Leonard W., to Crown City Die Casting Co. Adjustable handle and mounting flange construction for shower valves. 2,896,222, 7-28-59, Cl. 4—191.

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Gaines, Clarence F. and J. R., C. C. De Pew, and W. J. Carry, said J. R. Gaines, De Pew and Carry assors., to said C. F. Gaines. Sulky including adjustable seat. 2,896,962, 7-28-59, Cl. 280—63.

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Galat, Alexander. Albumin detecting method and means. 2,897,058, 7-28-59, Cl. 23—230.

Gale, Alfred J., and R. J. Connor, to High Voltage Engineering Corp. Method of evacuation. 2,897,036, 7-28-59, Cl. 316—25.

Garcia, Gelasio F., and J. R. Schemansky, to General Motors Corp. Automotive vehicle body. 2,896,997, 7-28-59, Cl. 296—28.

Gardella, Adriano and C. Multi-drawing frame particularly adapted for use on high-speed spinning frame. 2,896,269, 7-28-59, Cl. 19—13.

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Garvey, Louis P., and C. H. Schamel, to General Motors Corp. Vehicle closure latch. 2,896,990, 7-28-59, Cl. 292—229.

Garwin, Richard L., H. A. Reich, and S. Triebwasser, to International Business Machines Corp. Memory devices. 2,897,390, 7-28-59, Cl. 315—10.

Gatzert, Ernest H., and W. W. Pharis, to General Dynamics Corp. Coin control telephone system. 2,897,272, 7-28-59, Cl. 179—6.3.

Gatzert, Ernest H., to General Dynamics Corp. Trunk switching circuit. 2,897,284, 7-28-59, Cl. 179—27.

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Gellman, Gerald, to Orbit Industries, Inc. Extension loud speaker. 2,896,737, 7-28-59, Cl. 181—31.

Graulich, Wilhelm, A. Schmitz, W. Berlenbach, and E. Muller, to Farbenfabriken Bayer Aktiengesellschaft. Printing and

Hanna, Edward C., to Landis Machine Co. Relieved thread rolling die. 2,896,484, 7-28-59, Cl. 80—6.

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Petterly, Lloyd C., to Shell Development Co. Production of aromatic hydrocarbons. 2,897,245, 7-28-59, Cl. 260—668.

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Godfrey, James H., and K. Damijonaitis, to The Stanley Works. Control mechanism and shaft lock. 2,897,302, 7-28-59, Cl. 200—42.
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Goossens, Louis A. Reinforced concrete product machine. 2,896,297, 7-28-59, Cl. 25—41.
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Grant, Gardner L., and R. L. Care, to Grant Development Co. Toll collection hopper. 2,896,761, 7-28-59, Cl. 193—2.

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Griffith, Llewellyn B. Sewage scum removal. 2,897,149, 7–28–59, Cl. 210—48.
Grosnois, Richard. Drafting implements. 2,896,325, 7–28–59, Cl. 33—27.
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Guest, Claude E., deceased; M. E. Guest, executrix, ½ to M. E. Guest, and ½ to J. A. Enzenbacher. Thread-cutting machines. 2,896,510, 7–28–59, Cl. 90—11.56.
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Guillo-Quevedo, Alvaro. Method and apparatus for cooling of radiators of engines and the like. 2,896,595, 7–28–59, Cl. 123—41.49.
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Burkhardt, George C., Eastwood, and Hamilton. 2,896,835.
Hamilton, W. L., & Co.: *See*—
Hamilton, William K. 2,896,865.
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Hammerly, Herman J., to General Electric Co. Plug-in type circuit breaker panelboard. 2,897,410, 7–28–59, Cl. 317—119.
Hammett, Robert B. Multifrequency devices and systems associated therewith. 2,897,451, 7–28–59, Cl. 331—60.
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Hanna, Edward C., to Landis Machine Co. Relieved thread rolling die. 2,896,484, 7–28–59, Cl. 80—6.
Hansen, George E., to Crane Co. Thermal control device for container. 2,896,851, 7–28–59, Cl. 236—93.
Hansen, Howard J., to The Hansen Mfg. Co. Bayonet lock coupling. 2,896,977, 7–28–59, Cl. 285—277.
Hansen, John G., R. H. Rugaber, and J. P. Welsh, to General Dynamics Corp. Mechanical character display device for electronic means. 2,896,845, 7–28–59, Cl. 235—132.
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Harford, Arthur D., and H. W. Vernon. Pest combating compositions. 2,897,112, 7–28–59, Cl. 167—30.
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Harris, Samuel. Dental flasks. 2,896,259, 7–28–59, Cl. 18—33.
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Harris, Wilbur T., to The Harris Transducer Corp. Movable actuating coil transducer array. 2,897,475, 7–28–59, Cl. 340—9.
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Henrichs, Bernard W. 2,896,751.
Hartz, Harry J., to Minneapolis-Honeywell Regulator Co. Control apparatus with electro-magnetic rate and reset. 2,896,655, 7–28–59, Cl. 137—86.
Harwood, Kenneth J., to Kimberly-Clark Corp. Sanitary napkin. 2,896,627, 7–28–59, Cl. 128—290.
Harwood, Kenneth J., to Kimberly-Clark Corp. Disposable absorbent pad. 2,897,108, 7–28–59, Cl. 154—50.
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Hasler, Maurice F., to Applied Research Laboratories, Inc. Spectroscopy. 2,897,371, 7–28–59, Cl. 250—83.3.
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Hause, Ralph R. Hydro-pneumatic actuator for a motor-driven spindle. 2,896,587, 7–28–59, Cl. 121—45.
Hawthorne, Millo M., to Dresser Industries, Inc. Earth well casing discontinuity detector. 2,897,440, 7–28–59, Cl. 324—37.
Hayes, Norman J., and W. C. Ross, to W. R. Grace & Co. Process of treating later impregnated paper with an isocyanate and resultant article. 2,897,094, 7–28–59, Cl. 117—62.
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Heath, Clarence W., to United-Carr Fastener Corp. Electrical component and attaching means therefor. 2,897,474, 7–28–59, Cl. 339—128.
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Jaeschke, Ralph L., to Eaton Mfg. Co. Magnetic clutch.

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Hempel, Rudolph M., to Borg-Warner Corp. Bearing seals for universal joints. 2,896,433, 7-28-59, Cl. 64—17.
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Herne, William L. Writing implement. 2,896,348, 7-28-59, Cl. 40—19.
Herrmann, Heinrich, to Schumag Schumacher Metallwerke Gesellschaft mit beschrankter Haftung. Feeding attachments. 2,896,379, 7-28-59, Cl. 51—215.
Hermann, Otto, to Kalle & Co. Akt. Process for transversely stretching a thermoplastic sheet. 2,896,262, 7-28-59, Cl. 18—48.
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Hill, Gilman A., to Petroleum Research Corp. Oil recovery process. 2,896,719, 7-28-59, Cl. 166—42.
Hilligoss, Alfred A. Portable car port. 2,896,651, 7-28-59, Cl. 135—7.1.
Hilti, Martin. Stud driving device. 2,896,200, 7-28-59, Cl. 1—47.
Hinsdale, James G., to Lear, Inc. Transistor phase discriminator. 2,897,379, 7-28-59, Cl. 307—88.5.
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Ogles, Ethridge F. and J. C. 2,896,544.
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Hlavac, Emil F. Bracelet attaching device. 2,896,890, 7-28-59, Cl. 248—122.
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Holmes, Charles D. and H. H., to Angledrill Corp. Apparatus for drilling lateral openings in well bores. 2,896,913, 7-28-59, Cl. 255—1.6.
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Hopponen, Leo, deceased, by M. Hopponen, executrix. Windshield wiper system. 2,896,245, 7-28-59, Cl. 15—253.
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Hunt, John M. Resilient reloading clip for revolvers. 2,896,353, 7–28–59, Cl. 42—89.

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Hüttermann, Willi, to Chemie Grunenthal G.m.b.H. Injection ampoules for several media and intended to be used once. 2,896,622, 7–28–59, Cl. 128—272.

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Hyde, Thomas E. Sharpeners for knives and cutting implements. 2,896,482, 7–28–59, Cl. 76—84.

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Jackson, James M., to General Electric Co. Electrical signal regulator. 2,897,432, 7–28–59, Cl. 323—22.

Jackson, William L. Dispensing device. 2,896,825, 7–28–59, Cl. 222—211.

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Jaffe, Sigmund, to Air Reduction Co., Inc. Separation of rare earth values by means of a cation exchange resin. 2,897,050, 7–28–59, Cl. 23—22.

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Jemison, Volney M., and D. H. Young, to Thunderbird Engineering Co. Injection nozzle. 2,896,864, 7–28–59, Cl. 239—451.

Jenkner, Herbert, to Kali-Chemie Akt. Preparation of triorganosilanes. 2,897,220, 7–28–59, Cl. 260—448.

Jennings, Gresham N., to General Electric Co. Time mechanism for conducting a selected one of a plurality of sequences of operations. 2,896,707, 7–28–59, Cl. 161—1.

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Salm, Arthur, and Johnson. 2,896,290.

Johnson, John B., to McGraw-Edison Co. Heat detector for hydrocarbon flames. 2,897,485, 7–28–59, Cl. 340—227.

Johnson & Johnson: *See*—
Schaefer, Robert J. 2,896,618.

Johnson, Ralph L. Picture mount. 2,896,351, 7–28–59, Cl. 40—158.

Johnson, S. C., & Son: *See*—
Mulvenna, Elmer. 2,896,810.

Johnson, Tiny L. Lubricating system for fly frames. 2,896,394, 7–28–59, Cl. 57—67.

Johnston, Charles R., to Transportation Specialties Co. Freight positioning and retaining apparatuses. 2,896,554, 7–28–59, Cl. 105—369.

Johnston, Robert G. Alarm switch. 2,897,307, 7–28–59, Cl. 200—61.83.

Jones, Charles H., to Westinghouse Electric Corp. Detector for NTSC color receiver. 2,897,261, 7–28–59, Cl. 178—5.4.

Jones, Ewart R. H., H. B. Henbest, G. F. Woods, D. E. Hathway, and G. H. Thomas, to Glaxo Laboratories Ltd. 9-beta-hydrogen-11-keto steroids. 2,897,213, 7–28–59, Cl. 260—397.2.

Jones, George R., J. C. Cacheris, and C. A. Morrison, to United States of America, Army. Magnetically tuned klystron. 2,897,455, 7–28–59, Cl. 332—7.

Jones, John P., Jr., to Navigation Computer Corp. Semiconductor signal translating circuits. 2,897,378, 7–28–59, Cl. 307—88.5.

Jones, Percy, (Twinlock) Ltd.: *See*—
Sewell, Frederick R. 2,896,247.

Jones, Preston A., to Prescolite Mfg. Corp. Lighting fixture having resiliently mounted diffuser globe. 2,897,350, 7–28–59, Cl. 240—128.

Jones, Rufus V., to Phillips Petroleum Co. Hydraulic cements. 2,896,715, 7–28–59, Cl. 166—31.

Jones, Sam P. Regulator-vaporizer for a liquefied gas carburetion system. 2,896,638, 7–28–59, Cl. 137—340.

Jones, Samuel P., to General Electric Co. Self-cleaning insulator for brush holder stud. 2,897,386, 7–28–59, Cl. 310—239.

Jorgensen, Bernhardt, to United Shoe Machinery Corp. Fastener driving devices. 2,896,231, 7–28–59, Cl. 12—12.2.

Journal Box Servicing Corp.: *See*—
Potter, Thomas W. 2,897,018.
Potter, Thomas W. 2,897,028.

Jumba, Joseph F., to Westinghouse Air Brake Co. Dampener for pipe lines. 2,896,667, 7–28–59, Cl. 138—30.

Justice, Elmer H., to Shafer Valve Co. Gate valve snubbing mechanism. 2,896,582, 7–28–59, Cl. 121—38.

Kaiser, Bruno. Method for filling containers with carbon-dioxide containing beverages. 2,897,082, 7–28–59, Cl. 99—49.

Kaiser, Emil, to Armour and Co. Process for the separation of amino acids. 2,897,233, 7–28–59, Cl. 260—534.

Kakunodate, Masamichi, to Canon Camera Co., Inc. Magnification power changing mechanism for view-and-range-finder having rotatable Galilean type optical system. 2,896,500, 7–28–59, Cl. 88—1.5.

Kalen, George H. Instrument cases. 2,897,034, 7–28–59, Cl. 312—327.

Kali-Chemie Akt.: *See*—
Jenkner, Herbert. 2,897,220.
Stuehmer, Werner, and Funke. 2,897,229.

Lange, Richard, to Hodes-Lange Corp. Method and apparatus for treating and filling ampoules. 2,896,381, 7–28–

Licencia Találmányokat Értékesito Vállalat: *See*—
Kravits, Arthur. 2,896,856.

Kalle & Co. Akt.: *See*—
Herrmann, Otto. 2,896,262.
Kamins, Jack M., and F. Wahl, to Western Electric Co. Article feeding magazine for insulator cover curing machine. 2,896,801, 7–28–59, Cl. 214—16.6.
Kane, Neil G.: *See*—
Becker, August, and Kane. 2,896,412.
Kango Electric Hammers Ltd.: *See*—
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Kant, Edwin S.: *See*—
Alderman, Leon D., Cardani, Kant, and Kimball. 2,896,213.
Kaplan, Philip D.: *See*—
Godwin, Charles J., Hurowitz, Kaplan, Siegel, and Zebley. 2,896,314.
Karatzas, Alexander, and M. Hondropoulou. Process of lining the interior of a metal container with acid-resistant coating. 2,897,096, 7–28–59, Cl. 117—70.
Karlen, Robert P.: *See*—
Akely, William S., and Karlen. 2,897,348.
Karlson, John E. Acoustic system. 2,896,736, 7–28–59, Cl. 181—30.
Karmaxin, John. Heat exchange device. 2,896,429, 7–28–59, Cl. 62—515.
Kauffman, Melvin R., and J. A. Dicken, Jr., to General Electric Co. Dishwasher with cover latching mechanism. 2,896,641, 7–28–59, Cl. 134—58.
Kaufmann, John J., to Steel Heddle Mfg. Co. Loom harness. 2,896,672, 7–28–59, Cl. 139—92.
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Machlanski, Henry T. 2,896,868.
Kearney, James R., Corp.: *See*—
Gesellschap, Robert A. 2,897,255.
Kearney & Trecker Corp.: *See*—
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Riedel, Kurt A. 2,896,512.
Keating, John H., to Monarch Aluminum Mfg. Co. Grinding and polishing machine. 2,896,378, 7–28–59, Cl. 51—145.
Keegin, Curtis W. Vehicular signal system. 2,897,479, 7–28–59, Cl. 340—74.
Keibel, Donald W., to Borg-Warner Corp. Transmission. 2,896,479, 7–28–59, Cl. 74—781.
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Kleemann, Alois, Keller, and Bindler. 2,897,041.
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Schwarsenbek, Eugene F. 2,897,137.
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Ingres, Jeannot G. 2,896,585.
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Andermann, George, and Kemp. 2,897,367.
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Ashbaugh, Fred E., and Kennedy. 2,897,461.
Kenny, Leslie W. Invisible auxiliary trousers and skirt belt. 2,896,220 7–28–59, Cl. 2—319.
Kenyon, William A., to William Kenyon & Sons Inc. Endless driving belt for spinning machines. 2,896,396, 7–28–59, Cl. 57—104.
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Kenyon, William A. 2,896,396.
Kersting, Bernard H., to The Wellman Engineering Co. Clamshell bucket-turning mechanism for bulk material handling apparatus. 2,896,795, 7–28–59, Cl. 212—81.
Kesler, Robert D., and D. D. Rabb, to United States of America, Atomic Energy Commission. Extraction of uranium. 2,897,045, 7–28–59, Cl. 23—14.5.
Kesselring, Fritz, and S. Hämmerli, to Siemens-Schuckertwerke Akt. Circuit interrupter. 2,897,408, 7–28–59, Cl. 317—60.
Ketchledge, Raymond W., to Bell Telephone Laboratories, Inc. Radiation sensitive scanning system. 2,897,369, 7–28–59, Cl. 250—83.3.
Kibby, Theodore A., to Gulf Oil Corp. Method of and apparatus for completing wells. 2,896,718, 7–28–59, Cl. 166—35.
Kile, Otho, and E. J. Sarring, to R. R. Donnelley & Sons Co. Imprinting machine. 2,896,537, 7–28–59, Cl. 101—231.
Killark Electric Mfg. Co.: *See*—
Zavertnik, Marshall G. 2,896,972.
Killingsworth, Cecil C. Gravel packing of wells. 2,896,714, 7–28–59, Cl. 166—15.
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Harwood, Kenneth J. 2,897,108.
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Voigtman, Edward H. 2,897,109.
Kimble, Harvey S., and N. F. McLeod, to Phillips Petroleum Co. Polymer-solvent separation process. 2,897,184, 7–28–59, Cl. 260—94.9.
King, Alan M. Controlling switch mechanism for luminaries. 2,897,300, 7–28–59, Cl. 200—33.
King, Karl C. Harvester. 2,896,776, 7–28–59, Cl. 198—233.
King, Paul J.: *See*—
Wolfson, William B., King, Baer, and Clough. 2,897,095.
Kinsbach, Robert B. Automatic tubing spider assembly. 2,896,292, 7–28–59, Cl. 24—249.
Kitselman, Harry L., and A. W. Holmes, to Indiana Steel & Wire Co., Inc. Line wire support. 2,897,256, 7–28–59, Cl. 174—173.
Kivela, Stanley E. Sizing gauge for hardware items. 2,896,333, 7–28–59, Cl. 33—178.
Kjellman, Thomas K., and L. E. Wood, to Bendix Aviation Corp. Humidistat. 2,897,304, 7–28–59, Cl. 200—61.06.
Klamm, Carl E., and L. D. Bisak, to Parker-Hannifin Corp. Hand tool for flaring tube ends. 2,896,691, 7–28–59, Cl. 153—79.
Klassen, Stephen L., to Thermo Electric Co., Inc. Connectors. 2,897,470, 7–28–59, Cl. 339—89.
Kleemann, Alois, R. Keller, and J. Bindler, to J. R. Geigy, A.-G. Process to reduce the felting and creasing of wool. 2,897,041, 7–28–59, Cl. 8—127.6.
Kloote, George E., G. D. Meier, and J. A. Potchen, to Haskelite Mfg. Corp. Enclosures for refrigerated areas. 2,896,271, 7–28–59, Cl. 20—4.
Klopp, Edward M., to P. R. Mallory & Co. Inc. Corrosion inhibitors for dry cells. 2,897,250, 7–28–59, Cl. 136—107.
Knebel, Herman C., to S. H. Pomeroy Co., Inc. Automatic fire window. 2,896,753, 7–28–59, Cl. 189—74.
Kneisel, Joseph P., to Pacific Wood Products Co. Process and composition for dyeing patterns into plywood wall paneling. 2,897,040, 7–28–59, Cl. 8—6.5.
Knight, Warren N. N., to The British Petroleum Co. Ltd. Thermal reforming of a catalytic reformate. 2,897,132, 7–28–59, Cl. 208—65.
Knochenhauer, Fritz, to VEB Funkwerk Kopenick. Oscillation-free journalling device for magnetic recording apparatus. 2,897,015, 7–28–59, Cl. 308—2.
Koch, Wilhelm, to Farbwerke Hoechst Akt. vormals Meister Lucius & Bruning. Solid, stable diazonium compound and a process of preparing the same. 2,897,187, 7–28–59, Cl. 260—141.
Kodras, Rudolph, to International Minerals & Chemicals Corp. Synthesis of glutamic acid. 2,897,209, 7–28–59, Cl. 260—326.3.
Kohlhagen, Walter, to The E. Ingraham Co. Commutator-type electric motor of regulated output torque. 2,897,381, 7–28–59, Cl. 310—40.
Kolar, Joseph F. Valve actuator for fluid connector. 2,896,971, 7–28–59, Cl. 284—4.
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Zickendraht, Christian, and Koller. 2,897,207.
Korsmo, Conrad P. Permanent waving rod. 2,896,638, 7–28–59, Cl. 132—42.
Kosmin, Milton, to Monsanto Chemical Co. Amine salts of 2,2'-thiobis(4,6-dichlorophenyl). 2,897,235, 7–28–59, Cl. 260—567.5.
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Krase, Fred J., and E. K. Olendzki, to H. K. Porter Co. (Delaware). Switch means. 2,897,323, 7–28–59, Cl. 200—146.
Kravits, Arthur, to Licencia Találmányokat Értékesito Vállalat. Vaporizer for diesel engines. 2,896,856, 7–28–59, Cl. 239—132.
Kremer, Jacob E. Drafting kit assembly. 2,897,032, 7–28–59, Cl. 312—231.
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Krieger, Robert J., to Titanium Metals Corp. of America. Fabrication of consumable electrodes. 2,897,340, 7–28–59, Cl. 219—117.
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Kruper, Andrew P., to Westinghouse Electric Corp. Phototransistor design. 2,897,421, 7–28–59, Cl. 317—235.
Kubodera, Hisayoshi. Bearing. 2,897,017, 7–28–59, Cl. 308—15.
Kumagai, Tom T., to Hughes Aircraft Co. Error detecting system. 2,897,480, 7–28–59, Cl. 340—147.
Kumpfer, Beverly D., to United States of America, Army. Magnetron amplifier. 2,897,401, 7–28–59, Cl. 315—39.63.
Kuper, Heinrich: *See*—
Ortel, Gerhard. 2,896,680.
Kuras, Manfred H. Motor vehicle muffler. 2,896,739, 7–28–59, Cl. 181—46.
Kurtz, Robert A. Fish lure. 2,896,357, 7–28–59, Cl. 43—42.36.
Kurtzon, Albert. Shallow fluorescent lamp fixture. 2,897,347, 7–28–59, Cl. 240—51.11.
Labomberde, Raymond A. Multi-faced folding guide. 2,896,517, 7–28–59, Cl. 93—49.
Laboureur, Pierre, to Societe d'Etudes at d'Applications Biochimiques. Process of purifying and utilizing residual waters resulting from the manufacture of paper pulp prepared by the soda process. 2,897,148, 7–28–59, Cl. 210—11.
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Lane Container Co.: *See*—
Lane, Dan R. 2,896,832.
Lane, Dan R., to Lane Container Co. Packaging with corner saddle means. 2,896,832, 7–28–59, Cl. 229—14.

Lange, Richard, to Hodes-Lange Corp. Method and apparatus for treating and filling ampoules. 2,896,381, 7–28–59, Cl. 53—37.
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Lehnert, William H., to Chicago Pump Co. Comminuting device. 2,896,786, 7–28–59, Cl. 210—173.
Lanthier, Camille. Fishhook. 2,896,359, 7–28–59, Cl. 43—43.16.
Larkin, Kenneth T., to Raytheon Mfg. Co. Anti-image devices. 2,897,449, 7–28–59, Cl. 331—4.
Larky, Norbert D., to Radio Corp. of America. Color television. 2,897,260, 7–28–59, Cl. 178—5.4.
La Rosa, Richard, to Hazeltine Research, Inc. Transmission-line impedance-matching apparatus. 2,897,460, 7–28–59, Cl. 333—33.
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Larsen, Johannes P. Milking claw for a milking machine. 2,896,574, 7–28–59, Cl. 119—14.54.
Larsson, Sven G. V., to P. Autio. Scraping appliance, particularly for mink-skins. 2,896,438, 7–28–59, Cl. 69—46.
Latenser, James S. Insulating sealed wall or window panel. 2,896,272, 7–28–59, Cl. 20—.5.
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Laurie, Gavin W., Sr., and Gavin W., Jr. 2,896,566.
Lauire, Gavin W., Sr., and Gavin W., Jr. Tire pressure indicator. 2,896,566, 7–28–59, Cl. 116—34.
Lauterbach, William E., and P. Strutynski, to Dole Refrigerating Co. Hydraulic system for freezer. 2,896,427, 7–28–59, Cl. 62—341.
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Teiser, Sidney, and Sassaman. 2,897,080.
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Lazarus, Max A. Ultrasonic cleaner and degreaser. 2,896,648, 7–28–59, Cl. 134—147.
Leanza, William J., to Merck & Co., Inc. 1-etherified oxyalkyl imidazole-4,5-dicarboxamides, intermediates and process. 2,897,205, 7–28–59, Cl. 260—309.
Lear, Inc.: *See*—
Hinsdale, James G. 2,897,379.
Lee, James A.: *See*—
Da Costa, Harry, and Lee. 2,896,953.
Lefon, Henry. Fasteners for conveyor belts and the like. 2,896,282, 7–28–59, Cl. 24—33.
Lehfeldt, Dr., & Co., G.m.b.H.: *See*—
Pohlman, Reimar. 2,896,922.
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Gisser, David G., and Seifert. 2,896,763.
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Lelli, Joseph L., and S. C. Pollock, to General Motors Corp. Convertible top linkage and actuating means. 2,897,003, 7–28–59, Cl. 296—117.
Lely, Cornelis, and W. S. Van Der Laag, to Shell Development Co. Method and apparatus for distillation. 2,897,147, 7–28–59, Cl. 208—366.
Lensner, Herbert W., and G. D. Rockefeller, Jr., to Westinghouse Electric Corp. Frequency-shift carrier distance relay. 2,897,406, 7–28–59, Cl. 317—27.
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Alf, Fritz, Seul, and Lense. 2,897,328.
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Carrara, Gino, and Testa. 2,897,203.
Lerick, Lester. Anchor bolt with nut actuated expansion wedges. 2,896,494, 7–28–59, Cl. 85—2.4.
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Lester, Ronald, and H. T. Porter, to The British Petroleum Co. Ltd. Hydrocatalytic desulphurisation of petroleum hydrocarbons. 2,897,143, 7–28–59, Cl. 208—213.
Lesti, Arnold, to International Standard Electric Corp. Diode coincidence gate. 2,897,355, 7–28–59, Cl. 250—27.
Lesti, Arnold, to ACF Industries, Inc. Servo projector. 2,897,373, 7–28–59, Cl. 250—201.
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Levine, David, to Crest Lock Co., Inc. Luggage hardware. 2,896,755, 7–28–59, Cl. 190—58.
Levy, Sidney E., and B. C. Sharp, to University Loudspeakers, Inc. Universal bracket. 2,896,901, 7–28–59, Cl. 248—278.
Lewi, William. Continuous automatic clamping device. 2,896,943, 7–28–59, Cl. 271—2.1.
Lewis, Allen H., to California Research Corp. Manufacture of alkyl benzene sulfonate detergents. 2,897,156, 7–28–59, Cl. 252—161.
Lewis, Herbert O.: *See*—
Bann, Michael S., and Lewis. 2,897,439.
Lewis, Herbert O., to Collins Radio Co. Magnetostrictive disc test oscillator. 2,896,446, 7–28–59, Cl. 73—67.2.
Lewis, Herbert O., to Collins Radio Co. Sweep generator. 2,897,454, 7–28–59, Cl. 331—180.
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Schmidt, Hans, and Dunkel. 2,896,316.
Lich, Richard L., to General Steel Castings Corp. Railway truck air spring structure. 2,896,551, 7–28–59, Cl. 105—199.
Lieser, Mathias J., to Mead Specialties Co., Inc. Normally open three-way valve. 2,896,664, 7–28–59, Cl. 137—620.
Lieser, Mathias J., to Mead Specialties Co., Inc. Normally closed three-way valve. 2,896,665, 7–28–59, Cl. 137—620.
Lightbourn, Jose A. Coil spring lowering and stabilizing devices. 2,896,940, 7–28–59, Cl. 267—20.
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Lilly, James J. Dishwasher. 2,896,642, 7–28–59, Cl. 134—93.
Lindsey, Joe P., to Phillips Petroleum Co. Signal coherence measurement. 2,897,477, 7–28–59, Cl. 340—15.
Lipkin, Daniel M., to Sperry Rand Corp. Transverse magnetic traveling wave amplifiers. 2,897,294, 7–28–59, Cl. 179—171.
Lipschutz, Frank K., to Louisville Cap Corp. Foldable cap. 2,896,218, 7–28–59, Cl. 2—195.
Little, Arthur D., Inc.: *See*—
Vonnegut, Bernard. 2,897,038.
Litzaw, Edgar M. Combination utility shelf. 2,896,363, 7–28–59, Cl. 45—28.
Liubauskas, Boles. Safety device for vehicles. 2,896,999, 7–28–59, Cl. 296—44.
Llorens, Louis M. Totalizer control mechanism for calculating machines. 2,896,842, 7–28–59, Cl. 235—60.
Lloyd, Arthur J., deceased (by M. A. and G. A. Lloyd, administrators), and I. W. Preston, to Monsanto Chemicals Ltd. Diphenyl dispersions for the impregnation of paper. 2,897,111, 7–28–59, Cl. 167—30.
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Lloyd, Marion A.: *See*—
Lloyd, Arthur J., and Preston. 2,897,111.
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Lofink, Raymond P., to The Chaplin-Fulton Mfg. Co. Automatic pressure regulating valve. 2,896,660, 7–28–59, Cl. 137—456.
Lomax, Clarence E., to General Telephone Laboratories, Inc. Inter-office trunking system. 2,897,280, 7–28–59, Cl. 179—18.
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Long, John B., and Clay. 2,896,774.
Long, John B., and J. C. Clay, to The Long Co. Belt conveyors. 2,896,774, 7–28–59, Cl. 198—202.
Longan, Mildred F., to Renfro-Franklin Co. Carrier tray for containers. 2,896,815, 7–28–59, Cl. 220—117.
Longenecker, Daniel M., and H. H. Chamberlain, to General Electric Co. Pulse responsive relay. 2,897,412, 7–28–59, Cl. 317—147.
Longfield, William F., to The Federal Machine & Welder Co. Variable stroke press. 2,896,457, 7–28–59, Cl. 74—43.
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Love, Leslie G. Over center locking clamp. 2,896,293, 7–28–59, Cl. 24—249.
Lover, Seth E., to Gibson, Inc. Magnetic pickup for stringed musical instrument. 2,896,491, 7–28–59, Cl. 84—1.15.
Low, Laszlo L., to Purex Corp., Ltd. Bleaching and disinfecting compositions. 2,897,154, 7–28–59, Cl. 252—99.
Low, Paul H. Mobile log caddy. 2,896,961, 7–28–59, Cl. 280—47.26.
Lowe, Arthur, J. A. Moyse, and A. M. Wooler, to Imperial Chemical Industries Ltd. Water-soluble organic nitrogen compounds. 2,897,162, 7–28–59, Cl. 260—2.
Lucas, John G. Combination fish hook and bait holder. 2,896,360, 7–28–59, Cl. 43—44.2.
Lucasey, James F.: *See*—
Hull, Maurice E., Lucasey, and Holback. 2,897,083.
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Uhll, Roy B., and Luetzelschwab. 2,896,657.
Lundberg, Hans T. F., R. W. Pringle, K. I. Roulston, and G. M. Brownell. Aerial geophysical exploration with scintillation spectrometer. 2,897,368, 7–28–59, Cl. 250—71.
Lundgren, Bruce H., and M. M. Hann, to Sundstrand Machine Tool Co. Porting arrangement for hydraulic pumps and motors. 2,896,546, 7–28–59, Cl. 103—162.
Lundgren, Claes E. G.: *See*—
Arborelius, Mans M., and Lundgren. 2,896,616.
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Luscombe, Arthur J. Portable feed mixer. 2,896,923, 7–28–59, Cl. 259—8.
Luskin, Leo S.: *See*—
De Benneville, Peter L., and Luskin. 2,897,182.
Lyon, William H., to The Soundscriber Corp. Long time continuous magnetic recording with delayed monitoring. 2,897,287, 7–28–59, Cl. 179—100.2.
Lyon, William H., to The Soundscriber Corp. Automatic tracking device for transverse sound track tape recorders. 2,897,290, 7–28–59, Cl. 179—100.2.
MacDonough, Francis X., and L. M. Vant, to Bomac Laboratories Inc. Fixture for magnetizing toroidal permanent magnets. 2,897,417, 7–28–59, Cl. 317—203.
Machlanski, Henry T., to Kearfoot Co., Inc. Method of and apparatus for winding coils in place. 2,896,868, 7–28–59, Cl. 242—1.1.
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Agule, George J., and Fengler. 2,896,483.

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Molotsky, Hyman M., to Velsicol Chemical Corp. 1,2,3,4,7-

MacKusick, Meredith H., to The Babcock & Wilcox Co. Fusible metallic arc metal working. 2,897,341, 7-28-59, Cl. 219—130.
MacMillan, Donald M. Inside curing rim. 2,896,280, 7-28-59, Cl. 18—45.
Madsen, Jens A. W., to Albertsen & Co., Inc. Magazine-type socket wrench. 2,896,489, 7-28-59, Cl. 81—124.1.
Maeder, Arthur, to Ciba Ltd. Salts of hydrolysed polyacrylate esters and solutions thereof. 2,897,172, 7-28-59, Cl. 260—33.4.
Maeder, Arthur, and O. Albrecht, to Ciba Ltd. New polymerizable vinyl ether quaternary ammonium compounds. 2,897,200, 7-28-59, Cl. 260—247.2.
Maeser, Mieth: *See*—
Alderman, Leon D., Hobbs, and Maeser. 2,896,208.
Magee Carpet Co., The: *See*—
Park, Orrin J., and Cotner. 2,896,671.
Mageoch, Harry Y., to H. K. Porter Co., Inc. Vehicle destination sign mechanism. 2,896,873, 7-28-59, Cl. 242—67.
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Niegowski, Sigismund J., and Maggiolo. 2,897,231.
Magnavox Co., The: *See*—
Thomas, Stephen H. 2,897,414.
Magni-Power Co.: *See*—
Martin, William C., Jr. 2,896,991.
Maisel, Bernard, ½ to Cornell Research Foundation, Inc., and ½ to New York Heart Association, Inc. Operating table apparatus for gravity exposure of the heart. 2,897,029, 7-28-59, Cl. 311—77.
Mallory, P. R., & Co. Inc.: *See*—
Klopp, Edward M. 2,897,250.
Malone, Esta L. Chewing gum depository. 2,896,841, 7-28-59, Cl. 232—43.2.
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Berg, Chester P. 2,896,435.
Mansford, Hugh L., to Electric & Musical Industries Ltd. Sawtooth waveform generators. 2,897,453, 7-28-59, Cl. 331—145.
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Giroud, Marcel. 2,896,399.
Marak, Eldon J., to Phillips Petroleum Co. Light scattering device and control system. 2,897,247, 7-28-59, Cl. 260—683.15.
Marchant Research, Inc.: *See*—
Hunter, Jonathan. 2,896,843.
Marconi's Wireless Telegraph Co. Ltd.: *See*—
Wright, Peter M., and Brandon. 2,897,442.
Marcus, Richard D., J. J. Zones, and A. Preciado. Pie crust former. 2,896,555, 7-28-59, Cl. 107—16.
Marié, Pierre G. Resonant directional coupler with square guide. 2,897,457, 7-28-59, Cl. 333—10.
Markham, Charles W., Jr., V. H. Meyer, and W. R. Wade, to United Shoe Machinery Corp. Two-station sole prespotting and attaching machines. 2,896,233, 7-28-59, Cl. 12—33.6.
Markham, Robert N., to Highland Container Co., Inc. Protective corner pad for packing mirrors and the like. 2,896,833, 7-28-59, Cl. 229—14.
Marks, Ronald H. Continuous process and apparatus for making paper yarn. 2,896,303, 7-28-59, Cl. 57—32.
Marlin, Elmer D., to The Garrett Corp. Pneumatic speed sensing governor. 2,896,653, 7-28-59, Cl. 137—54.
Marlo, Arvid: *See*—
Strauss, Arvid. 2,896,352.
Marola, Americo, to The Torrington Co. Mounting for roller bearings. 2,897,022, 7-28-59, Cl. 308—208.
Marquis, Urban C., to Humble Oil & Refining Co. Mining of sulfur by liquefaction of the sulfur. 2,896,931, 7-28-59, Cl. 262—3.
Marquis, Urban C., to Humble Oil & Refining Co. Apparatus for hot water sulfur mining. 2,896,932, 7-28-59, Cl. 262—3.
Marsden, Charles P., Jr., and F. H. Brewer, to United States of America, Navy. Ceramic wafer, electronic tube. 2,897,394, 7-28-59, Cl. 313—245.
Marsh, Charles W., to Bured, Inc. Braid packaging machine. 2,896,386, 7-28-59, Cl. 53—113.
Marshall, James W., and H. W. Cowan, to Hoffman Electronics Corp. UHF antenna multicoupler system or the like. 2,897,499, 7-28-59, Cl. 343—850.
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Martin, Eugene J., to Sylvania Electric Products Inc. Shield and package for electron discharge device. 2,897,252, 7-28-59, Cl. 174—35.
Martin, Herman L. Oil and gas separator. 2,896,720, 7-28-59, Cl. 166—54.
Martin, William C., Jr., to Magni-Power Co. Magnetic door holder. 2,896,991, 7-28-59, Cl. 292—251.5.
Maruyama, Taketo, T. Sakamoto, S. Tamura, E. Kawahara, and T. Okubo, to Toyo Rayon Co., Ltd. Apparatus for producing special rayon yarn. 2,896,252, 7-28-59, Cl. 18—8.
Mason, Henry L., to United States of America, Commerce. Mass flowmeter. 2,896,450, 7-28-59, Cl. 73—194.
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Ashton, Robert. 2,896,594.
Mast, Fred, W. Baumgartner, F. Held, and E. Baumann, to Gesellschaft zur Forderung der Forschung an der Eidg. Techn. Hochschule. Arrangement for amplifying the light intensity of an optically projected image. 2,896,507, 7-28-59, Cl. 88—61.
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Mataré, Herbert F., to Sylvania Electric Products Inc. Zone melting apparatus. 2,897,329, 7-28-59, Cl. 219—10.43.
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Matter, Gustave O. Measuring dispenser. 2,896,826, 7-28-59, Cl. 222—455.
Maurice, Jean, and M. Rist, to Societe Anonyme Francaise Du Ferodo. Devices for suppressing parasitic currents in vehicles with electro-magnetic clutches. 2,896,782, 7-28-59, Cl. 180—70.
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Eitel, Kurt, Schmidt, and Mauthe. 2,897,166.
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McClintock, Sherman E., ½ to P. J. Stine. Curb service device. 2,896,748, 7-28-59, Cl. 186—1.
McCollister, Howard M. Reading material holder for beds. 2,896,364, 7-28-59, Cl. 45—82.
McCourty, William D., to H. M. Hobson, Ltd. Fuel supply systems for gas turbine engines. 2,896,700, 7-28-59, Cl. 158—36.4.
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Gudmundsen, Austin. 2,896,746.
McDowell, William B.: *See*—
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McElwee, Lorin A.: *See*—
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McFarlane, Maynard D., and C. A. Crafts, to Robertshaw-Fulton Controls Co. Temperature control device. 2,897,331, 7-28-59, Cl. 219—20.
McFarlane, Maynard D., and C. A. Crafts, to Robertshaw-Fulton Controls Co. Temperature control device. 2,897,332, 7-28-59, Cl. 219—20.
McFarlane, Maynard D., and C. A. Crafts, to Robertshaw-Fulton Controls Co. Temperature control device. 2,897,333, 7-28-59, Cl. 219—20.
McFarlane, Maynard D., and C. A. Crafts, to Robertshaw-Fulton Controls Co. Temperature control device. 2,897,334, 7-28-59, Cl. 219—20.
McGarrahan, Edward C., to Houston Oil Field Material Co., Inc. Hydrostatically balanced jar. 2,896,917, 7-28-59, Cl. 255—27.
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McIlhenny, William F., A. B. Baker, J. A. Clarke, and W. C. Bauman, to The Dow Chemical Co. Treatment of solutions comprising similarly charged monovalent and polyvalent ions to concentrate the polyvalent ions. 2,897,051, 7-28-59, Cl. 23—91.
McIntosh, Donald J., and R. W. Crane, to McIntosh Stamping Corp. Rack structure. 2,896,799, 7-28-59, Cl. 214—10.5.
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McKee, Velda. Garment. 2,896,633, 7-28-59, Cl. 128—526.
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McKinley, George H., and R. H. Whitehead, to Scott & Williams, Inc. Throat plate. 2,896,434, 7-28-59, Cl. 66—125.
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McNaught, John P., and J. R. Bryant, to Lever Brothers Co. Process for preparing a detergent composition containing anhydrous form 11 tripolyphosphate. 2,897,155, 7-28-59, Cl. 252—109
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Lieser, Mathias J. 2,896,665.
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Meager, Vernon W., and S. N. Barker. Electric lamp. 2,897,345, 7-28-59, Cl. 240—10.68.
Mecham, Ferris J., to Sierra Engineering Co., Inc. Portable concrete batcher. 2,896,771, 7-28-59, Cl. 198—54.
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Melaro, Rose E. Hair waving mandrel. 2,896,637, 7-28-59, Cl. 132—34.
Melton, Ben S. Apparatus for testing for the existence of signals in the presence of overriding noise. 2,897,351, 7-28-59, Cl. 250—20.
Mena, Carl M. Check valve with valve seat of resilient material. 2,896,663, 7-28-59, Cl. 137—539.
Mendelsohn, Lewis I., and H. T. Faus, to General Electric Co. Moving magnet oscillograph. 2,897,443, 7-28-59, Cl. 324—97.
Menke, John R., to Nuclear Development Corp. of America. Method of recovering uranium from underground deposit. 2,896,930, 7-28-59, Cl. 262—3.

Nagle, Richard E., and D. Eastman, to Texaco Inc. Gas and liquid contacting apparatus. 2,896,927, 7-28-59, Cl.
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Chamberlin, Earl M., and Chemerda. 2,897,214.
Chemerda, John M. 2,897,197.
Cutler, Frank A., Jr., and Chemerda. 2,897,204.
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Merryman, Carl, and F. J. Stoeberl, to Duro-O-Lite Pencil Co. Retractable writing device. 2,896,577, 7–28–59, Cl. 120—42.03.
Mesner, Max H., to Radio Corp. of America. Color reproduction using brightness signal alone as substitute for green signal. 2,897,263, 7–28–59, Cl. 178—5.4.
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Sheldon, William M. 2,896,824.
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Miley, Hunter, to L. Sonneborn Sons, Inc. Thermal decomposition of sludges. 2,897,054, 7–28–59, Cl. 23—177.
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Miller, Alexander A., to General Electric Co. Method of producing cross-linked polyvinyl alcohol. 2,897,127, 7–28–59, Cl. 204—154.
Miller, Alexander A., to General Electric Co. Polyethylene. 2,897,092, 7–28–59, Cl. 117—47.
Miller, Carl F., to Westinghouse Electric Corp. Grid electrodes for electric discharge devices. 2,897,895, 7–28–59, Cl. 313—350.
Miller, Harold C., to Super-Cut, Inc. Method of mounting diamonds in tool shanks and other holders. 2,896,477, 7–28–59, Cl. 76—101.
Miller, Julius, and D. Del Guidice, to Pharma-Chemical Corp. Diazoamino dye intermediates. 2,897,186, 7–28–59, Cl. 260—140.
Miller, Keith W., to The General Tire & Rubber Co. Vibration isolator with variable damping. 2,896,937, 7–28–59, Cl. 267—1.
Miller, La Verne E., to Collins Radio Co. Linear tuning curve inductor. 2,897,464, 7–28–59, Cl. 336—136.
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Minard, Everett S., to Chemetron Corp. Container filling machine. 2,896,676, 7–28–59, Cl. 141—146.
Minarik, William L., to Phillips Petroleum Co. Gas reactor. 2,897,062, 7–28–59, Cl. 23—277.
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Mitchell, James, to J. H. Fenner and Co. Ltd. Variable speed belt transmission mechanism. 2,896,460, 7–28–59, Cl. 74—230.17.
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Morrill, Frank B., to James Hunter Machine Co. Needle loom. 2,896,303, 7–28–59, Cl. 28—4.
Morris, William C., to General Electric Co. Negative-phase-sequence responsive apparatus. 2,897,407, 7–28–59, Cl. 317—47.
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Moslo, Ernest P. Apparatus for injection molding of plastic articles. 2,896,258, 7–28–59, Cl. 18—30.
Moss, Rodney D., to The Dow Chemical Co. Benzylidene-dialkylamino-hexanones and their acid addition salts. 2,897,236, 7–28–59, Cl. 260—570.5.
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Moustakis, George C. Automatic fluid pressure actuated leveling arrangement for vehicles. 2,896,965, 7–28–59, Cl. 280—124.
Moy, Hammond R., W. H. Shockey, and S. E. Porter, to United States of America, Navy. Parachute ripcord grip retainer. 2,896,885, 7–28–59, Cl. 244—149.
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Mungen, Richard, to Pan American Petroleum Corp. Separation of solids from gases. 2,896,745, 7–28–59, Cl. 183—122.
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Nations, Carl T., to National Electronics Distributors, Inc. Automatic photo printing machine. 2,896,505, 7-28-59, Cl. 88—24.
Natta, Giulio, and G. Crespi, to Montecatini Societa Generale per l'Industria Mineraria e Chimica. Method of making shaped articles of crystalline polystyrene. 2,896,264, 7-28-59, Cl. 18—55.
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Neitzert, Carl, to General Time Corp. Magnetic pulse counting and forming circuits. 2,897,380, 7-28-59, Cl. 307—106.
Nelson, Adolph. Propulsion arrangement on multi wing aircraft. 2,896,882, 7-28-59, Cl. 244—55.
Nelson, Herbert, and A. Moore, to Radio Corp. of America. Semiconductor surface treatments and devices made thereby. 2,897,377, 7-28-59, Cl. 307—88.5.
Neville, Don O. Chemical applicator for use with internal combustion engines. 2,896,855, 7-28-59, Cl. 239—129.
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Newman, Stanley R., and R. Y. Heisler, to Texaco Inc. Motor fuel compositions. 2,897,070, 7-28-59, Cl. 44—63.
New York Heart Association, Inc.: *See*—
Maisel, Bernard. 2,897,029.
Nickerson, Douglas B., to Crane Co. Fuel pump bearing. 2,897,025, 7-28-59, Cl. 308—237.
Niegowski, Sigismund J., and A. Maggiolo, to The Welsbach Corp. Method for the recovery of azelaic acid from a mixture of oxidized acids. 2,897,231, 7-28-59, Cl. 260—485.
Nies, Nelson P., and E. W. Fajans, to United States Borax & Chemical Corp. Production of elemental boron by magnesium reduction. 2,897,056, 7-28-59, Cl. 23—209.
Nippon Kozaku K. K.: *See*—
Azuma, Hideo. 2,896,506.
Nippon Shinyaku Co., Ltd.: *See*—
Fukui, Tomijiro, and Matsuo. 2,897,206.
Nishikiori, Seiji. Free-cutting strainless steel. 2,897,078, 7-28-59, Cl. 75—124.
Nissel, Frank R.: *See*—
Rocky, Joseph F., and Nissel. 2,897,176.
Noble, Carl M., and C. H. Angell, to Electric Eye Equipment Co. Protecting device for window of optical housing 2,896,854, 7-28-59, Cl. 239—105.
Noorlander, Daniel O.: *See*—
Schalm, Oscar W., and Noorlander. 2,896,573.
Norbom, Ragnar A., to Fruit Growers Express Co. Pneumatic material handling apparatus. 2,897,007, 7-28-59, Cl. 302—52.
Nord, Gustav J. Fabrication of products from agave lechuguilla. 2,896,267, 7-28-59, Cl. 19—8.
Nord, Gustav J. Process for the treatment of the genus amaryllidacea liliacea and related species. 2,897,192, 7-28-59, Cl. 260—210.5.
Nordin, Obert L., to Thornhill-Craver Co., Inc. Colorimeter apparatus. 2,896,502, 7-28-59, Cl. 88—14.
Norman, Richard M., R. W. Powell, and K. E. Sherer, to National Automatic Tool Co., Inc. Injection molding machine. 2,896,257, 7-28-59, Cl. 18—30.
Norrie, Robert C., to Pacific Car and Foundry Co. Low-profile shift link for cab-over-engine vehicle. 2,896,469, 7-28-59, Cl. 74—473.
North Electric Co.: *See*—
Blashfield, William H. 2,897,278.
North American Philips Co., Inc.: *See*—
Bailey, Christopher E. G. 2,897,450.
Blok, Lourens, and Zwanenburg. 2,896,936.
De Lang, Hendrik. 2,896,490.
Harkema, Pieter. 2,897,357.
Helpap, Ferdinand. 2,897,270.
Jochems, Pieter J. W. 2,897,429.
Rinia, Herre. 2,896,451.
Scholz, Ole G. 2,897,494.
Te Winkel, Jan. 2,897,430.
Wijchman, Jan. 2,897,288.
Wolfendale, Eric. 2,897,431.
Northrop Aircraft, Inc.: *See*—
Taylor, Allan J. 2,896,909.
Northup, Ernest L. Gate valve. 2,896,904, 7-28-59, Cl. 251—147.
Novak, Leo J., to The Commonwealth Engineering Co. of Ohio. Sulfuric acid esters of dextranic acid. 2,897,193, 7-28-59, Cl. 260—234.
Novak, Leo J., to The Commonwealth Engineering Co. of Ohio. Nitrates of detranic acid and process therefor. 2,897,194, 7-28-59, Cl. 260—235.

Noyes, Joseph C., Jr.: *See*—
Ilenda, Frank P., and Noyes. 2,896,280.
Nuclear Development Corp. of America: *See*—
Menke, John R. 2,896,930.
Nurmse, Karl, to Ab Urfabriken. Driving means for fishing reels. 2,896,874, 7-28-59, Cl. 242—84.45.
Nyselius, Gustav. Means for controlling the operation of die casting apparatus automatically and in timed relation. 2,896,279, 7-28-59, Cl. 22—68.
Obes, Andrew N. Freight transfer terminal and transfer dolly. 2,896,548, 7-28-59, Cl. 104—48.
Obes, Andrew N. Body supporting dolly for use in the transportation of freight. 2,896,552, 7-28-59, Cl. 105—215.
O'Brien, Joseph P., to Standard Oil Co. Phthalic acid separation process. 2,897,232, 7-28-59, Cl. 260—525.
O'Brien, William M. Auxiliary terminal seal. 2,897,472, 7-28-59, Cl. 339—94.
Odermatt, Alois. Machine for introducing rubber pins into throughgoing holes in a leather sole for foot-wear. 2,896,232, 7-28-59, Cl. 12—17.
O'Donnell, William J., to Republic Aviation Corp. Turbojet convertible to a ramjet. 2,896,408, 7-28-59, Cl. 60—35.6.
Ogle, Hugh M.: *See*—
Morgan, Raymond E., and Ogle. 2,897,293.
Oglebay Norton Co.: *See*—
Anthony, Benjamin F. 2,896,266.
Ogles, Ethridge F. Irrigation ditch pumping apparatus with reversible impeller. 2,896,543, 7-28-59, Cl. 103—88.
Ogles, Ethridge F. and J. C., to W. H. and R. H. Hinton. Deep well pump. 2,896,544, 7-28-59, Cl. 103—102.
Ogles, J. C.: *See*—
Ogles, Ethridge F. and J. C. 2,896,544.
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Maruyama, Taketo, Sakamoto, Tamura, Kawahara, and Okubo. 2,896,252.
Olendzki, Edward K.: *See*—
Krase, Fred J., and Olendzki. 2,897,323.
Oliver, Mariano. Accessory for Venetian blinds. 2,896,893, 7-28-59, Cl. 248—208.
Oliveto, Eugene P., and D. H. Gould, to Schering Corp. Process for the preparation of steroidal dienes and intermediates obtained thereby. 2,897,216, 7-28-59, Cl. 260—397.45.
Olsen, Joseph. Bench clamp. 2,896,661, 7-28-59, Cl. 144—304.
Olsen, Zenny: *See*—
Hayner, Paul F., and Olsen. 2,896,588.
Olson, Gordon L. Flexible coupling construction. 2,896,430, 7-28-59, Cl. 64—7.
Olsson, Karl G.: *See*—
Janelid, Erik I., and Olsson. 2,896,929.
Olsson, Karl G., to Casius Corp. Ltd. Apparatus particularly for the removal of the upper expansion layer from open casting moulds in the manufacture of porous light-weight concrete. 2,896,298, 7-28-59, Cl. 25—104.
Optische Anstalt C.P. Goerz, Ges. m.b.H.: *See*—
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Orbit Industries, Inc.: *See*—
Gellman, Gerald. 2,896,737.
Ortel, Gerhard, to H. Kuper. Veneer joining machine. 2,896,680, 7-28-59, Cl. 144—279.
Ortho Pharmaceutical Corp.: *See*—
Singher, Heron O. 2,897,123.
Osborne, Alec V., to Pfaudler Permutit Inc. Fractionating column. 2,896,928, 7-28-59, Cl. 261—113.
Osojnak, Boris M., and R. Gray, to Heyl & Patterson, Inc. Car dumper. 2,896,935, 7-28-59, Cl. 265—71.
Ostendorf, Bernard, Jr.: *See*—
Bacon, Walter M., and Ostendorf. 2,897,268.
Otis Engineering Corp.: *See*—
Canalizo, Carlos R. 2,896,903.
Ottoson, Dean C., to Ottoson Solvents Inc. Cleaning equipment. 2,896,643, 7-28-59, Cl. 134—99.
Ottoson Solvents Inc.: *See*—
Ottoson, Dean C. 2,896,643.
Owen, Edwin H. Cooling means for television receivers. 2,897,487, 7-28-59, Cl. 340—367.
Owens-Illinois Glass Co.: *See*—
Celley, Albert F. 2,896,798.
Greenamyer, William H. 2,896,784.
Sherman, Orville B. 2,896,251.
Thomson, John W., Jr. 2,896,647.
Owens, Robert G., and E. Kroll, to International Latex Corp. Flexible container. 2,896,237, 7-28-59, Cl. 15—136.
Pacific Car and Foundry Co.: *See*—
Norrie, Robert C. 2,896,469.
Pacific Wood Products Co.: *See*—
Kneisel, Joseph P. 2,897,040.
Packard, Charles A. Electromagnetic devices. 2,897,416, 7-28-59, Cl. 317—195.
Palensky, William A. Toy airplane having retractable landing gear. 2,896,369, 7-28-59, Cl. 46—76.
Palys, Lucien, to Societe d'Etudes et d'Applications Industrielles Commerciales et Immobilieres, Inter-Technique. Electric power-supply device for automatic electromagnetic motor vehicle clutches. 2,896,757, 7-28-59, Cl. 192—3.5.
Pan American Petroleum Corp.: *See*—
Franey, William R., and Gillis. 2,896,547.
Howard, George C. 2,896,717.
Mungen, Richard. 2,896,745.
Spurlock, James W. 2,896,716.
Wideas, Moses B. 2,897,476.
Pantermoller, Carl: *See*—
Bates, Rolland H., and Pantermoller. 2,896,612.
Paprocki, Edward J. Coaster and holder for beverage can. 2,896,812, 7-28-59, Cl. 220—85.
Papy, Hugh R., W. C. Carson, and E. C. Rowley. Box-like structure. 2,896,808, 7-28-59, Cl. 217—66.

Molin Inc.: *See*—
Molin, Charles P., and Troiano. 2,896,696.

for metallizing strand material. 2,896,570, 7–28–59, Cl. 118—48.

Paramount Textile Machinery Co.: *See*—
Campbell, Howard N. 2,896,380.

Pardee, William A., to Gulf Research & Development Co. Catalytic cracking process using a catalyst whose carbon factor has been improved. 2,897,136, 7–28–59, Cl. 208—119.

Park, Orrin J., and B. U. Cotner, to The Magee Carpet Co. Apparatus for weaving loop pile fabrics. 2,896,671, 7–28–59, Cl. 139—46.

Parker-Hannifin Corp.: *See*—
Klumm, Carl E., and Bizak. 2,896,691.

Partansky, Alexander M., and P. G. Schrader, to The Dow Chemical Co. Method for the preparation of improved resinous polyalcohols and compositions thereby obtained. 2,897,180, 7–28–59, Cl. 260—38.

Passman, Harry M.: *See*—
Colby, Robert A., and Passman. 2,897,299.

Paton, Clyde R. Air conditioning apparatus. 2,896,428, 7–28–59, Cl. 62—409.

Patrick, Robert E. Carburetor adapter for internal combustion engines. 2,896,597, 7–28–59, Cl. 123—52.

Patti, Fred D. Temperature responsive electric switch. 2,897,320, 7–28–59, Cl. 200—138.

Patti, Fred D. Control unit for electric heating appliances. 2,897,321, 7–28–59, Cl. 200—138.

Payzant, Henry H., to Timber Structures, Inc. Air drill. 2,896,677, 7–28–59, Cl. 144—104.

Pearce, James G., and M. P. Tubinis, to General Dynamics Corp. Multioffice interlocked signaling telephone system. 2,897,283, 7–28–59, Cl. 179—18.

Pearson, Charles, Jr.: *See*—
Glass, Marvin L., and Pearson. 2,896,367.

Peburn, Frank A., to Style Footwear Co., Inc. Apparatus for applying wrappers to shoe soles. 2,896,230, 7–28–59, Cl. 12—1.

Peebles, David D., to Foremost Dairies, Inc. Coffee product and method of manufacture. 2,897,084, 7–28–59, Cl. 99—71.

Peklay, William P., to Electric Steel Foundry, now by change of name to Electric Steel Foundry Co. Tooth assembly. 2,896,343, 7–28–59, Cl. 37—142.

Pellegrini, John P., Jr., and H. I. Thayer, to Gulf Research & Development Co. Motor fuel. 2,897,068, 7–28–59, Cl. 44—56.

Penn, Alexander, to John Wilkins & Co. Ltd. Bracket or the like clamps. 2,896,898, 7–28–59, Cl. 248—245.

Penn Keystone Corp.: *See*—
Peterson, George, Jr. 2,897,344.

Perdue, Jack, to Electro-Hydraulics Ltd. Retractable aircraft landing gear. 2,896,884, 7–28–59, Cl. 244—102.

Perin, Gaston, to L. H. J. Van Eessel. Apparatus for hydrocultivation. 2,896,374, 7–28–59, Cl. 47—12.

Peroni, Carlo. Process for obtaining a velvet-like coating or covering material. 2,896,304, 7–28–59, Cl. 28—72.

Personal Products Corp.: *See*—
Winch, Allen R. 2,896,242.

Peters, Walter V. Means for facilitating transposition of musical chords. 2,896,493, 7–28–59, Cl. 84—473.

Petersen, Mauritz E. Satellite globe. 2,896,338, 7–28–59, Cl. 35—46.

Peterson, George, Jr., to Penn Keystone Corp. Instrument panel illuminator. 2,897,344, 7–28–59, Cl. 240—8.16.

Petrix-Union G.m.b.H.: *See*—
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Petroleum Research Corp.: *See*—
Hill, Gilman A. 2,896,719.

Petrolite Corp.: *See*—
Waterman, Logan C. 2,897,251.

Petter, John. Collapsible pre-fabricated building. 2,896,273, 7–28–59, Cl. 20—2.

Pettinato, James D. Perishable foods dispenser. 2,896,423, 7–28–59, Cl. 62—249.

Pfaudler Permutit Inc.: *See*—
Osborne, Alec V. 2,896,928.

Pfitzer, Christian C.: *See*—
Bourget, Joseph G. A., and Pfitzer. 2,897,354.

Pfizer, Chas., & Co., Inc.: *See*—
Laubach, Gerald D. 2,897,128.

Pharis, William W.: *See*—
Gatzert, Ernest H., and Pharis. 2,897,272.
Kaye, Robert K., and Pharis. 2,897,298.

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Philco Corp.: *See*—
Schweiss, Walter W. 2,897,353.
Sunstein, David E. 2,897,490.
Thompson, Elmer O. 2,896,605.

Phillips, Arthur C., and R. V. Myers, to Kelvin & Hughes Ltd. Spring suspension devices. 2,896,447, 7–28–59, Cl. 73—71.

Phillips, Benjamin, and P. S. Starcher, to Union Carbide Corp. Process for making oxirane compounds. 2,897,208, 7–28–59, Cl. 260—326.

Phillips Drill Co.: *See*—
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Phillips Petroleum Co.: *See*—
Bobo, Roy A. 2,896,726.
Dean, Lloyd E. 2,897,008.
Jones, Rufus V. 2,896,715.
Kimble, Harvey S., and McLeod. 2,897,184.
Lindsey, Joe P. 2,897,477.
Marak, Eldon J. 2,897,247.
Meade, Leonard P. 2,896,417.
Minarik, William L. 2,897,062.
Ryan, Martin A. 2,896,914.
Waddill, Paul M. 2,897,146.

Phillips, William D.: *See*—
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Phoenix Steel Corp.: *See*—
McNabb, Arthur J. 2,896,445.

Pickwick Co.: *See*—
Pitts, Robert D., and Corey. 2,896,249.

Pillsbury Co., The: *See*—
Gidlow, Rolf G. 2,896,291.

Pioneer Gen-E-Motor Corp.: *See*—
Siwek, Stanley Z. 2,896,731.

Pinette, Robert M. Automatic can opener. 2,896,319, 7–28–59, Cl. 30—4.

Pitts, Robert D., and F. C. Corey, to Pickwick Co. Poultry processing equipment. 2,896,249, 7–28–59, Cl. 17—45.

Place, Daniel N. Mixing device. 2,896,925, 7–28–59, Cl. 259—134.

Plessey Co. Ltd., The: *See*—
Da Costa, Harry, and Lee. 2,896,953.

Plotnick, Irwin J. Artificial denture. 2,896,324, 7–28–59, Cl. 32—2.

Pohlman, Reimar, to Dr. Lehfeldt & Co., G.m.b.H. Ultrasonic means for changing the homogeneity of mixtures. 2,896,922, 7–28–59, Cl. 259—1.

Pollock, Joseph A. Snow shovel. 2,896,993, 7–28–59, Cl. 294—54.

Pollock, Samuel C.: *See*—
Lelli, Joseph L., and Pollock. 2,897,003.

Pomeroy, S. H., Co., Inc.: *See*—
Knebel, Herman C. 2,896,753.

Porter, H. K., Co. (Delaware): *See*—
Krase, Fred J., and Olendzki. 2,897,323.

Porter, H. K., Co., Inc.: *See*—
Mageoch, Harry Y. 2,896,873.

Porter, Hubert T.: *See*—
Lester, Ronald, and Porter. 2,897,143.

Porter, Sylvan E.: *See*—
Moy, Hammond R., Shockey, and Porter. 2,896,885.

Potter, Thomas W., to Journal Box Servicing Corp. Journal box axle stop. 2,897,018, 7–28–59, Cl. 308—38.

Potter, Thomas W., to Journal Box Servicing Corp. Journal lubricator. 2,897,028, 7–28–59, Cl. 308—243.

Powell, Daniel R. Rotary checking fixture. 2,896,330, 7–28–59, Cl. 33—174.

Powell, Gordon F. W., and R. G. Crosland, to Molins Machine Co. Ltd. Detector device suitable for use with cigarette-making machines. 2,896,636, 7–28–59, Cl. 131—21.

Powell, Harold W., to Kango Electric Hammers Ltd. Armature winding connectors. 2,897,385, 7–28–59, Cl. 310—234.

Powell, Russell W.: *See*—
Norman Richard M., Powell, and Sherer. 2,896,257.

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Marcus, Richard D., Zones, and Preciado. 2,896,555.

Prescolite Mfg. Corp.: *See*—
Jones, Preston A. 2,897,350.

Preston, Iris W.: *See*—
Lloyd, Arthur J., and Preston. 2,897,111.

Prevost, Bruno E., to John W. Bolton & Sons, Inc. Suction box cover. 2,896,711, 7–28–59, Cl. 162—374.

Price, Joel S. Telescoping irrigation apparatus. 2,896,858, 7–28–59, Cl. 239—212.

Price, Joel S. Irrigation apparatus. 2,896,859, 7–28–59, Cl. 239—213.

Pridy, Whetstine B. Combination potato digger and sorter. 2,896,728, 7–28–59, Cl. 171—130.

Prince, David C. Recording and translating of intelligence. 2,897,267, 7–28–59, Cl. 178—17.

Pringle, Robert W.: *See*—
Lundberg, Hans T. F., Pringle, Roulston, and Brownell. 2,897,368.

Proctor Electric Co.: *See*—
Hortman, Harvey E., Jr. 2,896,347.

Production and Marketing Co.: *See*—
Rosti, Arpad, and Brunot. 2,896,950.

Propper Mfg. Co., Inc.: *See*—
Speelman, Irving A. 2,896,610.
Speelman, Irving A. 2,896,628.

Pryor, Dean E., and J. C. Baker. Temperature indicating devices. 2,896,568, 7–28–59, Cl. 116—114.5.

Purchas, William J., Jr., to General Motors Corp. Journal bearing assembly. 2,897,020, 7–28–59, Cl. 308—88.

Pure Oil Co., The: *See*—
Ayers, George W., and Sandner. 2,897,145.
Jacobs, William L., and Annable. 2,897,142.
White, Roger B. 2,896,458.

Purex Corp., Ltd.: *See*—
Low, Laszlo L. 2,897,154.

Purolator Products, Inc.: *See*—
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Putkovich, Rudy P., and G. J. Thompson, to Westinghouse Electric Corp. Direct current voltage regulator. 2,897,433, 7–28–59, Cl. 323—100.

Pylon Co., Inc.: *See*—
Cooney, James S. 2,896,981.

Quartz & Silice S.A.: *See*—
George, Henri. 2,897,126.

Quik-N-Easy Products, Ltd.: *See*—
Ellingson, La Verne O. 2,896,831.

Rabb, David D.: *See*—
Kesler, Robert D., and Rabb. 2,897,045.

Raber, Anna S.: *See*—
Raber, Christopher. 2,896,791.

Raber, Christopher, deceased; A. S. Raber, executrix. Portable supports. 2,896,791, 7–28–59, Cl. 211—86.

Rabinowitz, Albert. Foot protector. 2,896,339, 7–28–59, Cl. 36—10.

Raby, Claude H. Attachment for bulldozer moldboards. 2,896,343, 7–28–59, Cl. 37—98.

Racine, Armand J., to L. L. and W. L. Shorette. Combination cleaning device. 2,896,240, 7–28–59, Cl. 15—148.

Rader, Earl L. Food product preparing and dispensing machine. 2,896,421, 7–28–59, Cl. 62—135.

Roth, Barbara: *See*—
Hitchings, George H., and Roth. 2,897,116.

Scallet, Barrett L.: *See*—
Sowell, Ernest A., Curtin, Hall, and Scallet. 2,897,086.

Radio Corp. of America: *See*—
Briggs, George R., and Rajchman. 2,897,405.
Forbes, Edmond J. 2,897,274.
Glicksman, Richard, and Morehouse. 2,897,249.
Gray, George W. 2,897,356.
Larky, Norbert D. 2,897,260.
Mesner, Max H. 2,897,263.
Nelson, Herbert, and Moore. 2,897,377.
Rogers, Gordon F. 2,897,262.
Woodward, Oakley M., Jr. 2,897,496.
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Bishop, Ronald L., Jewell, Radov, and Statsinger. 2,896,455.
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Rajchman, Jan A.: *See*—
Briggs, George R., and Rajchman. 2,897,405.
Ramco Equipment Corp.: *See*—
Randall, Max and M. 2,896,640.
Ramén, Torsten. Evaporation of liquids. 2,896,705, 7–28–59, Cl. 159—47.
Ramun Michael. Detachable load-bearing spring and axle assembly for vehicles. 2,896,963, 7–28–59, Cl. 280—104.5.
Randall, Martin: *See*—
Randall, Max and M. 2,896,640.
Randall, Max and M., to Ramco Equipment Corp. Degreasing apparatus. 2,896,640, 7–28–59, Cl. 134—57.
Randol, Glenn T. Speed-responsive switch mechanism. 2,897,309, 7–28–59, Cl. 200—80.
Raymond Bag Corp.: *See*—
Tilton, William J., and Leslie. 2,896,516.
Raymond, Francois H., and M. B. Lilamand, to Societe d'Electronique et d'Automatisme. Electronic switching means. 2,897,359, 7–28–59, Cl. 250—27.
Raytheon Co.: *See*—
Turner, Edwin E. 2,896,449.
Raytheon Mfg. Co.: *See*—
Larkin, Kenneth T. 2,897,449.
Tolf, Marvin L. 2,897,037.
Read, Leslie J., and T. P. Higgins, to Corduroy Rubber Co. Low compression resistant sealing gasket. 2,896,276, 7–28–59, Cl. 20—69.
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Barnes, James F., and Rebholz. 2,896,839.
Rebikoff, Dimitri I. Underwater gun. 2,896,604, 7–28–59, Cl. 124—22.
Redfarn, Cyril A. Manufacture of abrasive articles. 2,897,074, 7–28–59, Cl. 51—298.
Reece, Michael P., to E.R.A. Patents Ltd. Electrical switching apparatus. 2,897,322, 7–28–59, Cl. 200—146.
Reed, John E. Combination packer and tubing anchor. 2–896,725, 7–28–59, Cl. 166—216.
Reed, Maurice J. Contour pillow. 2,896,227, 7–28–59, Cl. 5—338.
Reed, Willis E., and R. J. Cummings. Sporting tackle. 2,896,354, 7–28–59, Cl. 43—21.
Reed, Willis E., and R. J. Cummings. Motor drive fishing reel. 2,896,875, 7–28–59, Cl. 242—84.53.
Regelman, La Rue V., to Sylvania Electric Products Inc. Magnetic rotary contact. 2,897,468, 7–28–59, Cl. 339—8.
Reggio, Ferdinando C. Engine air induction control apparatus. 2,896,598, 7–28–59, Cl. 123—119.
Regnauld, Pierre, and B. Bogatenkoff, to L'Air Liquide, Societe Anonyme pour l'Etude et l'Etude et l'Exploitation de Procedes Georges Claude. Method and appartaus for automatic arc welding with a fusible electrode. 2,897,343, 7–28–59, Cl. 219—135.
Reich, Haskell A.: *See*—
Garwin, Richard L., Reich, and Triebwasser. 2,897,399.
Reighard, Norman: *See*—
Cheek, Forrest R., and Reighard. 2,896,468.
Reilly, Frank J.: *See*—
Dunbar, Frank H. 2,896,425.
Reinking, Norman H.: *See*—
Shechter, Leon, Wynstra, and Reinking. 2,897,179.
Reising, Francis M. Excavating machine. 2,896,342, 7–28–59, Cl. 37—97.
Reitmeier, Ronald E.: *See*—
Fleming, Harold W., and Reitmeier. 2,897,160.
Renfro-Franklin Co.: *See*—
Longan, Mildred F. 2,896,815.
Republic Aviation Corp.: *See*—
O'Donnell, William J. 2,896,408.
Research Corp.: *See*—
Wintermute, Harry A. 2,896,741.
Reuter, Paul L., and E. Weiss, to Bendix Aviation Corp. Variable computing method and apparatus. 2,896,464, 7–28–59, Cl. 74—394.
Revere Camera Co.: *See*—
Claras, Carl W. 2,897,289.
Revzin, Milton R. Accessory clamp. 2,896,896, 7–28–59, Cl. 248—229.
Reymann, Maria A., Jr.: *See*—
Day, Carl L., Fauth, Finke, and Reymann. 2,896,674.
Reynolds, Eugene E., to Smith-Corona Marchant Inc. Overthrow preventing lock mechanism for numeral wheels. 2,896,847, 7–28–59, Cl. 235—131.
Rhodes, John W., to General Motors Corp. Motion transmitting connection. 2,896,474, 7–28–59, Cl. 74—522.
Rice, Walter A., to Mohasco Industries, Inc. Apparatus for making pile fabric. 2,896,670, 7–28–59, Cl. 139—38.
Rich, Harold, to General Electric Co. A.-C. wattmeter. 2,897,446, 7–28–49, Cl. 324—142.
Richey, Shirrell C.: *See*—
Hershberger, Russell R., and Richey. 2,896,889.
Richman, Donald, to Haseltine Research, Inc. Television field-identification system. 2,897,266, 7–28–59, Cl. 178—7.3.
Richman, Jacob S., and T. R. East; said East assor. to said Richman. Frankfurter cooking mechanism. 2,896,527, 7–28–59, Cl. 99—332.
Rieckman, Werner. Code set keyless starter for automobiles. 2,897,376, 7–28–59, Cl. 307—10.
Riedel, Kurt A., to Kearney & Trecker Corp. Machine tool counterweight. 2,896,512, 7–28–59, Cl. 90—16.
Riel, Harold K. Applicator. 2,896,238, 7–28–59, Cl. 15—137.
Riemenschneider, Lawrence E. Method for operating two-cycle engines. 2,896,593, 7–28–59, Cl. 123—1.
Rigney, Daniel K., and C. E. Carpenter. Television picture clarifier. 2,897,488, 7–28–59, Cl. 340—369.
Rigsby, Lonnie D. Cotton bale resampling and breakout device. 2,896,805, 7–28–59, Cl. 214—620.
Ringold, Howard J., and E. Batres, to Syntex S.A. 4,9a-dihalo-11-oxygenated derivatives of progesterone. 2,897,199, 7–28–59, Cl. 260—239.55.
Rinia, Herre, to North American Philips Co., Inc. Device for measuring the flow speed of a liquid. 2,896,451, 7–28–59, Cl. 73—194.
Rist, Michel: *See*—
Maurice, Jean, and Rist. 2,896,732.
Risucci, Edward J. Severable frozen food carton. 2,896,837, 7–28–59, Cl. 229—51.
Ritzerfeld, Gerhard: *See*—
Ritzerfeld, Wilhelm and G. 2,896,534.
Ritzerfeld, Wilhelm, and G. Intermittent selective rotary printing apparatus. 2,896,534, 7–28–59, Cl. 101—132.5.
Robbins & Myers, Inc.: *See*—
Michie, John S. 2,896,480.
Roberts, John A.: *See*—
Briggs, Walton E., and Roberts. 2,897,487.
Robertshaw-Fulton Controls Co.: *See*—
Fergus, Edward S. 2,897,308.
McFarlane, Maynard D., and Crafts. 2,897,331.
McFarlane, Maynard D., and Crafts. 2,897,332.
McFarlane, Maynard D., and Crafts. 2,897,333.
McFarlane, Maynard D., and Crafts. 2,897,334.
Robertson, Frank A. Thumb tack tool. 2,896,211, 7–28–59, Cl. 1—49.8.
Robosonic National Industries Corp.: *See*—
Waldman, Herbert. 2,896,945.
Rockefeller, George D., Jr.: *See*—
Lensner, Herbert W., and Rockefeller. 2,897,406.
Rockwell, Edward A. Power steering unit. 2,896,463, 7–28–59, Cl. 74—388.
Rockwell, Edward A. Brake valve mechanism. 2,896,666, 7–28–59, Cl. 137—622.
Rockwell, Edward A. Power steering system. 2,896,733, 7–28–59, Cl. 180—79.2.
Rocky, Joseph F., and F. R. Nissel, to Union Carbide Corp. Chlorine-containing resinous compositions and improved method for processing the same. 2,897,176, 7–28–59, Cl. 260—45.5.
Rocwall Co.: *See*—
Arrighini, Artil, and Van Sickle. 2,896,300.
Rodger, Robert F.: *See*—
Garscia, Alfons J., and Rodger. 2,897,444.
Rodrigues, John J. Motor driven syringe. 2,896,621, 7–28–59, Cl. 128—218.
Rodriguez, Emil, to Jacoby-Bender, Inc. Bracelet end attachment. 2,896,289, 7–28–59, Cl. 24—235.
Roebuck, Alan K., and B. L. Evering, to Standard Oil Co. Alkylation. 2,897,248, 7–28–59, Cl. 260—683.53.
Roedel, Milton J.: *See*—
Christi, Robert J., and Roedel. 2,897,183.
Rogers, Gordon F., to Radio Corp. of America. Color television receivers. 2,897,262, 7–28–59, Cl. 178—5.4.
Rohm & Haas Co.: *See*—
De Benneville, Peter L., and Luskin. 2,897,182.
Rolls-Royce Ltd.: *See*—
Garscia, Alfons J., and Rodger. 2,897,444.
Rolston, John A.: *See*—
Gianniny, Omer A., Jr., and Rolston. 2,897,009.
Roman, Michael. Vacuum milk filter. 2,896,787, 7–28–59, Cl. 210—406.
Romans, Robert G., to The Governors of the University of Toronto. Insulin process. 2,897,117, 7–28–59, Cl. 167—75.
Romsteadt, Fred, Jr., 50% to C. C. Whisler. Hub cap lock. 2,896,440, 7–28–59, Cl. 70—258.
Ronan, William J., to Safety Bath Rail, Inc. Means for mounting a rail. 2,896,899, 7–28–59, Cl. 248—251.
Rorem, Lawrence W.: *See*—
Smith, Cornelius W., Seger, and Rorem. 2,896,687.
Rosch, Georg: *See*—
Baumann, Fritz, Bienert, Vollmann, and Rosch. 2,897,039.
Rose, Stanley E., to General Electric Co. Condensate disposal arrangement for air conditioner. 2,896,424, 7–28–59, Cl. 62—280.
Rosenberg, Jack, to General Dynamics Corp. Control system. 2,896,514, 7–28–59, Cl. 90—28.1.
Rosenberg, Milton, to Telemeter Magnetics, Inc. Magnetic core memory system. 2,897,482, 7–28–59, Cl. 340—174.
Ross Gear and Tool Co., Inc.: *See*—
Gagen, Charles V. 2,896,589.
Ross, Karl G., B.-O. Johansson, S. S. Axelsson, and S. A. Andersson, to Aktiebolaget Bahco. Transportable stoves or ranges. 2,896,606, 7–28–59, Cl. 126—38.
Ross, Robert H.: *See*—
Ross, Ruben B. and R. H. 2,896,770.
Ross, Ruben B. and R. H. Portable concrete batch plant. 2,896,770, 7–28–59, Cl. 198—53.
Ross, Sidney D., to Sprague Electric Co. Electrostatic capacitor. 2,897,423, 7–28–59, Cl. 317—258.
Ross, William C.: *See*—
Hayes, Norman J., and Ross. 2,897,094.
Rosti, Arpad, and J. Brunot, to Production and Marketing Co. Board game. 2,896,950, 7–28–59, Cl. 273—131.

Schweiss, Walter W., to Philco Corp. Non-linear device varying impedance match between antenna and radio frequency stages. 2,897,353, 7–28–59, Cl. 250—20.
Simonds Abrasive Co.: *See*—
Suga, Arthur M. 2,897,076.

Roth, Barbara: *See*—
Hitchings, George H., and Roth. 2,897,116.

Roth, Robert L., to International Business Machines Corp. Accounting machine controlled by differently coded cards. 2,896,844, 7–28–59, Cl. 235—61.9.

Roulston, Kenneth I.: *See*—
Lundberg, Hans T. F., Pringle, Roulston, and Brownell. 2,897,368.

Rousseau, Michel, and Y. Bourgeois, to Societe Anonyme dite: Societe des Produits Chimiques de Bezons. Preparation of pure myristic alcohol. 2,897,243, 7–28–59, Cl. 260—638.

Rovelli, Nino, to Societa Italiana Resine. Process for the production of cumene hydroperoxide. 2,897,239, 7–28–59, Cl. 260—610.

Rowland, Charles S., and H. D. Zucker, to Interchemical Corp. Water-in-lacquer emulsion comprising alkyd resin, solvent and water. 2,897,165, 7–28–59, Cl. 260—19.

Rowles, Reginald V., and B. T. Gowing, to Anglo-American Extrusion Co. Hydraulic press construction. 2,896,581, 7–28–59, Cl. 121—38.

Rowley, Edward C.: *See*—
Papy, Hugh R., Carson, and Rowley. 2,896,808.

Royal McBee Corp.: *See*—
Enders, John A. 2,896,765.

Rubin, Lewis J., to Arrow Fastener Co., Inc. Hammer type staplers. 2,896,210, 7–28–59, Cl. 1—49.

Rugaber, Robert H.: *See*—
Hansen, John G., Rugaber, and Welsh. 2,896,845.

Ruhr Intrans Hubstapler G.m.b.H.: *See*—
Fischer, Herbert. 2,896,994.

Rulseh, Elroy M., to Cleaver-Brooks Co. Burner heated oil supply system. 2,896,699, 7–28–59, Cl. 158—36.

Rutz, Charles R., and V. J. Ferrante. Single delivery welding rod container. 2,896,819, 7–28–59, Cl. 221—203.

Ryan, Alfred J., and W. B. McDowell; said McDowell assor. to said Ryan. Flow meter. 2,896,453, 7–28–59, Cl. 73—228.

Ryan, Edward J., Jr.: *See*—
Dodge, William W., and Ryan. 2,896,531.

Ryan, Martin A., to Phillips Petroleum Co. Thermal drill and drilling process. 2,896,914, 7–28–59, Cl. 255—1.8.

Rysnar, John W., to National Aluminate Corp. Chemical method of bark removal in forestry by using boroarsenates. 2,896,375, 7–28–59, Cl. 47—57.5.

SKF Kugellagerfabriken G.m.b.H.: *See*—
Fink, Heinrich. 2,896,395.

S. N. Marep: *See*—
Dicky, Leonide. 2,896,980.

Saari, Oliver E., to Illinois Tool Works. Skew-axis gearing with plane tooth gear. 2,896,467, 7–28–59, Cl. 74—459.5.

Sacony Foundations, Inc.: *See*—
Di Tullio, Flavia. 2,896,632.

Safety Bath Rail, Inc.: *See*—
Ronan, William J. 2,896,890.

Sainteesprit, Rose B. P., nee Meunier, to Lignes Telegraphiques et Telephoniques. Magnetic amplifiers. 2,897,297, 7–28–59, Cl. 179—171.

Sakamoto, Tutae: *See*—
Maruyama, Taketo, Sakamoto, Tamura, Kawahara, and Okubo. 2,896,252.

Salgo, Francis J., to General Electrodynamics Corp. Bulb and bulb spacer for camera tube. 2,897,389, 7–28–59, Cl. 313—65.

Salm, Arthur, and C. V. Johnson, to Arthur Salm, Inc. Pocket implement with retainer for apertured articles. 2,896,290, 7–28–59, Cl. 24—239.

Salm, Arthur, Inc.: *See*—
Salm, Arthur, and Johnson. 2,896,290.

Sampo, Barto. Television mast freeze grommet. 2,896,986, 7–28–59, Cl. 288—19.

Sanders Associates, Inc.: *See*—
Hayner, Paul F., and Olsen. 2,896,588.

Sandner, Walter J.: *See*—
Ayers, George W., and Sandner. 2,897,145.

Sanford Process Co., Inc.: *See*—
Franklin, John B. 2,897,125.

Sans, Salvatore, and L. Weiss, to Saw Mill River Industries, Inc. Garment racks. 2,896,789, 7–28–59, Cl. 211—37.

Sanzenbacher, Charles W., and J. Huebler, to Surface Combustion Corp. Gas generator. 2,897,158, 7–28–59, Cl. 252—372.

Sarkes Tarzian, Inc.: *See*—
Eannarino, George. 2,896,305.

Sarring, Ernest J.: *See*—
Kile, Otho, and Sarring. 2,896,537.

Sassaman, Walter R.: *See*—
Teiser, Sidney, and Sassaman. 2,897,080.

Sassoon, Judah R.: *See*—
Boker, Samuel J., Lazarus, and Sassoon. 2,896,533.

Sattmann, Erhard, and W. Schafer. Pencil sharpening machine with a removable chip container. 2,896,578, 7–28–59, Cl. 120—96.

Sauerman, Ernst C. Envelope printing machine and multicolored printing attachment therefor. 2,896,536, 7–28–59, Cl. 101—175.

Sauerman, Ernst C., to Gaw-O'Hara Envelope Co. Inking mechanism for printing machines. 2,896,539, 7–28–59, Cl. 101—306.

Sauls, Thomas W., to Tennessee Corp. Fungicidal composition. 2,897,114, 7–28–59, Cl. 167—42.

Saunders, Charles. Boat construction. 2,896,228, 7–28–59, Cl. 9—6.

Sauter, John D., to The Clark Controller Co. Loop control with phototubes. 2,897,370, 7–28–59, Cl. 250—219.

Saw Mill River Industries, Inc.: *See*—
Sans, Salvatore, and Weiss. 2,896,789.

Sawyer's Inc.: *See*—
Golden, Kenneth E. 2,896,350.

Scallet, Barrett L.: *See*—
Sowell, Ernest A., Curtin, Hall, and Scallet. 2,897,086.

Scanley, Clyde S., and E. K. Fields, to Standard Oil Co. Lubricant compositions containing thiopyrones. 2,897,153, 7–28–59, Cl. 252—48.2.

Schaefer, Edward J. Shaft coupling. 2,896,984, 7–28–59, Cl. 287—108.

Schaefer, Robert J., to Johnson & Johnson. Corrugated dressing. 2,896,618, 7–28–59, Cl. 128—156.

Schaer, Glenn R.: *See*—
Beach, John G., and Schaer. 2,897,124.

Schafer, Willy (Wilhelm): *See*—
Sattmann, Erhard, and Schafer. 2,896,578.

Schalm, Oscar W., and D. O. Noorlander, to The Regents of The University of California. Milking machine and teat cup assembly therefor. 2,896,573, 7–28–59, Cl. 119—14.36.

Schamel, Clyde H.: *See*—
Garvey, Louis P., and Schamel. 2,896,990.

Schantz, Socrates J. Folding canopy for vending stand trailers. 2,896,706, 7–28–59, Cl. 160—62.

Scheibel, Kurt and M., to VEB Spezialnaehmaschinenwerk Limbach. Multi-needle table embroidery machine. 2,896,562, 7–28–59, Cl. 112—103.

Scheibel, Margarethe: *See*—
Scheibel, Kurt and M. 2,896,562.

Schell, Carl M., to General Motors Corp. Refrigerating apparatus. 2,896,312, 7–28–59, Cl. 29—157.3.

Schemansky, Joseph R.: *See*—
Garcia, Gelasio F., and Schemansky. 2,896,997.

Scherenberg, Hans O., to Daimler-Benz Akt. Control system for an internal combustion engine, particularly for motor vehicles. 2,896,600, 7–28–59, Cl. 123—140.

Schering Corp.: *See*—
Oliveto, Eugene P., and Gould. 2,897,216.

Schiff, Robert D. Radiant ceiling heater. 2,897,337, 7–28–59, Cl. 219—34.

Schladebach, Gert, to A. W. Lehr. Foldable invalid or bath chair. 2,896,693, 7–28–59, Cl. 155—30.

Schlatter, Hans A. Resistance welding machine. 2,897,339, 7–28–59, Cl. 219—101.

Schloemann Akt.: *See*—
Billen, Peter. 2,896,782.

Schleicher, Harold E., to The Arrow-Hart & Hegeman Electric Co. Contact supporting means for electromagnetic switches. 2,897,311, 7–28–59, Cl. 200—87.

Schlessel, Bernard. Panoramic test system. 2,897,441, 7–28–59, Cl. 324—58.

Schlueter, Ernest. Spring lock fastener with angular arm ends. 2,896,897, 7–28–59, Cl. 248—239.

Schmecht, Edward W.: *See*—
Wahl, Ralph L., and Schmecht. 2,896,975.

Schmidt, Fritz, to International Standard Electric Corp. Zone prohibiting circuit. 2,897,277, 7–28–59, Cl. 179—18.

Schmidt, Hans, and G. Dunkel, to Licentia Patent-Verwaltungs-G.m.b.H. Method for producing twin pistons. 2,896,316, 7–82–59, Cl. 29—411.

Schmidt, Fritz: *See*—
Eitel, Kurt, Schmidt, and Mauthe. 2,897,166.

Schmidt, Samuel S. Automatic hydraulic power unit. 2,896,410, 7–28–59, Cl. 60—52.

Schmitt, Otto L., and F. E. Lawrence, to Larré Laboratories, Inc. Cervical cannulas. 2,896,614, 7–28–59, Cl. 128—131.

Schmitz, Andreas: *See*—
Graulich, Wilhelm, Schmitz, Berlenbach, and Muller. 2,897,101.

Schmitz, Joseph: *See*—
Czerny, Ludwig, and Schmitz. 2,897,171.

Schneider, Harold N., to General Electric Co. Fluid blast circuit interrupter. 2,897,324, 7–28–59, Cl. 200—148.

Schnellpressenfabrik Akt.: *See*—
Büttner, Artur. 2,896,532.

Schnellpressenfabrik Koenig & Bauer Akt.: *See*—
Schunemann, Hans-Bernhard. 2,896,535.

Schoenfeld, Donald B.: *See*—
Schoenfeld, Milton H. and D. 2,896,243.

Schoenfeld, Milton H. and D. B. Venetian blind slat-cleaning device. 2,896,243, 7–28–59, Cl. 15—244.

Scholz, Ole G., to North American Philips Co., Inc. Radiator for short-wave devices. 2,897,404, 7–28–59, Cl. 343—749.

Schouten, Wilhelmus J., to N.V. Het Spoorwegbouwbedrijf. Screening device for a revolving tool. 2,896,679, 7–28–59, Cl. 144—251.

Schrader, Paul G.: *See*—
Partansky, Alexander M., and Schrader. 2,897,180.

Schreiber, Ernst, to VEB Werk für Fernmeldewesen. Circuit arrangement for electrical musical instruments. 2,897,361, 7–28–59, Cl. 250—27.

Schroedter, Willburt W., to Combustion Engineering, Inc. Furnace wall for forced once-through boiler. 2,896,591, 7–28–59, Cl. 122—235.

Schuetz, James W., to Blaw-Knox Co. Pipe lowering device. 2,896,796, 7–28–59, Cl. 214—1.

Schulz, Wallace W., to United States of America, Atomic Energy Commission. Method of dissolving metallic uranium. 2,897,047, 7–28–59, Cl. 23—14.5.

Schumacher, Ernest A., to The Martin Co. Flanged pipe coupling having an external welded band clamp. 2,896,978, 7–28–59, Cl. 285—408.

Schumag Schumacher Metallwerke Gesellschaft mit beschrankter Haftung: *See*—
Herrmann, Heinrich. 2,896,379.
Walkling, Helmuth. 2,896,377.

Schunemann, Hans-Bernhard, to Schnellpressenfabrik Koenig & Bauer Akt. Sheet-fed rotogravure machine for multicolour printing. 2,896,535, 7–28–59, Cl. 101—152.

Schwarzenbek, Eugene F., to The M. W. Kellogg Co. Platinum catalyst. 2,897,137, 7–28–59, Cl. 208—140.

Schweiss, Walter W., to Philco Corp. Non-linear device varying impedance match between antenna and radio frequency stages. 2,897,353, 7-28-59, Cl. 250—20.

Schwesinger, Gerhard, to United States of America, Army. Optical system for non intermittent motion pictures. 2,896,504, 7-28-59, Cl. 88—16.8.

Scott, Carleton B., to Collier Carbon and Chemical Corp. Method of destroying fungi and nematodes employing trimethyl thiophosphite. 2,897,110, 7-28-59, Cl. 167—22.

Scott, Carleton B., and W. L. Wasley, to Union Oil Co. of California. Organo-phosphorus condensation products. 2,897,228, 7-28-59, Cl. 260—461.

Scott & Williams, Inc.: *See*—
McKinley, George H., and Whitehead. 2,896,434.

Scruggs, Charles H. Quail feeder. 2,896,575, 7-28-59, Cl. 119—51.

Seale, Homer T. Pressure-fluid-operated vise. 2,896,487, 7-28-59, Cl. 81—17.2.

Sealtite Insulation Mfg. Corp.: *See*—
Firnhaber, Miles S. 2,896,256.

Searle, G. D., & Co.: *See*—
Tweit, Robert C. 2,897,196.

Sebek, Oldrich K., and G. B. Spero, to The Upjohn Co. 6-methyl-1-dehydro analogues of cortisone, hydrocortisone and 21-esters thereof. 2,897,218, 7-28-59, Cl. 260—397.45.

Sebok, Joseph B., to Purolator Products, Inc. Air cleaner and silencer unit. 2,896,738, 7-28-59, Cl. 181—35.

Seger, Ralph L., Jr.: *See*—
Smith, Cornelius W., Seger, and Rorem. 2,896,687.

Seifert, Leonard P.: *See*—
Glaser, David G., and Seifert. 2,896,763.

Selwitz, Charles M., to Gulf Research & Development Co. Purification process. 2,897,244, 7-28-59, Cl. 260—643.

Serratrice, Georges: *See*—
Cogniat, Marcel, de Fromont, and Serratrice. 2,896,452.

Seul, Vincenz: *See*—
Alf, Fritz, Seul, and Lenze. 2,897,328.

Sewell, Frederick R., to Percy Jones (Twinlock) Ltd. Support member. 2,896,247, 7-28-59, Cl. 16—42.

Shafer Valve Co.: *See*—
Justice, Elmer H. 2,896,582.

Shakesby, Leonard, to Canada Cycle and Motor Co. Ltd. Spoke tightening head. 2,896,697, 7-28-59, Cl. 157—1.5.

Shames, Harold and S. J. Non-clogging aerator for faucets. 2,896,863, 7-28-59, Cl. 239—431.

Shames, Sidney J.: *See*—
Shames, Harold and S. J. 2,896,863.

Shanley, James J., to Air Products Inc. Liquefied gas pressurizing systems. 2,896,415, 7-28-59, Cl. 62—21.

Sharp, Bernard C.: *See*—
Levy, Sidney E., and Sharp. 2,896,901.

Shaw, George S., to Glass Containers (Medical) Ltd. Tubular glass containers such as ampoules, phials and the like. 2,896,807, 7-28-59, Cl. 215—32.

Shaw, Truman B. Fishing lure. 2,896,856, 7-28-59, Cl. 43—42.28.

Shechter, Leon, J. Wynstra, and N. H. Reinking, to Union Carbide Corp. Hardener for epoxy resin composition. 2,897,179, 7-28-59, Cl. 260—47.

Sheldon, William M., to Metals Disintegrating Co., Inc. Rotary table feeder. 2,896,824, 7-28-59, Cl. 222—168.

Shell Development Co.: *See*—
Breier, Irwin L. 2,897,063.
De Keizer, Adrianus, and Wilson. 2,897,246.
Fetterly, Lloyd C. 2,897,245.
Lely, Cornelis, and Van der Laag. 2,897,147.

Shepard, David H., to Intelligent Machines Research Corp. Apparatus for reading. 2,897,481, 7-28-59, Cl. 340—149.

Sherer, Kenneth E.: *See*—
Norman, Richard M., Powell, and Sherer. 2,896,257.

Sherman, Orville B., to Owens-Illinois Glass Co. Machine for molding plastic materials. 2,896,251, 7-28-59, Cl. 18—5.

Sherron, Percival H. Telephone booth. 2,896,694, 7-28-59, Cl. 155—78.

Shiba, Shuhei. Automatic web break detector in the rolling press. 2,896,944, 7-28-59, Cl. 271—2.3.

Shiokawa, Shozo. Screw-compressor. 2,896,529, 7-28-59, Cl. 100—290.

Shipp, Easton H. Gasifier for liquid fuels. 2,897,073, 7-28-59, Cl. 48—103.

Shockey, William H.: *See*—
Moy, Hammond R., Shockey, and Porter. 2,896,885.

Shorette, Louis L.: *See*—
Racine, Armand J. 2,896,240.

Shorette, William L.: *See*—
Racine, Armand J. 2,896,240.

Shoumatoff, Nicholas, to West Virginia Pulp and Paper Co. Apparatus for drying web material. 2,896,336, 7-28-59, Cl. 34—86.

Showell, John H.: *See*—
Burnett, Albert L., and Showell. 2,897,301.

Shuman, Frank R.: *See*—
Honeycutt, Earl M., and Shuman. 2,897,141.

Sieburg, Robert. Machine for making tensile specimens. 2,896,511, 7-28-59, Cl. 90—13.2.

Siegel, Earl W.: *See*—
Godwin, Charles J., Hurowitz, Kaplan, Siegel, and Zebley. 2,896,314.

Siemens Edison Swan Ltd.: *See*—
Flood, John E., and Hopkins. 2,897,279.
Flood, John E., and Hopkins. 2,897,281.
Hopkins, Ronald S. 2,897,282.

Siemens & Halske Akt.: *See*—
Horn, Arno, Langner, and Müller. 2,897,271.

Siemens-Schuckertwerke Akt.: *See*—
Kesselring, Fritz, and Himmerli. 2,897,408.

Sierra Engineering Co., Inc.: *See*—
Mecham, Ferris J. 2,896,771.

Simonds Abrasive Co.: *See*—
Suga, Arthur M. 2,897,076.

Sinclair Refining Co.: *See*—
Erickson, Henry. 2,897,161.

Singer Mfg. Co., The: *See*—
Hacklander, Hans. 2,896,560.

Singher, Heron O., to Ortho Pharmaceutical Corp. Plasminogen sterilization. 2,897,123, 7-28-59, Cl. 195—66.

Sippel, Gerhardt J.: *See*—
Sippel, John and G. J. 2,896,556.

Sippel, John and G. J. Apparatus for continuous mixing of flour and water (or other ingredients) in the making of dough or batter or the like. 2,896,556, 7-28-59, Cl. 107—30.

Siwek, Stanley Z., Pioneer Gen-E-Motor Corp. Self-propelled mower. 2,896,731, 7-28-59, Cl. 180—19.

Skeens, Kenneth M. Mine vehicle. 2,897,004, 7-28-59, Cl. 298—25.

Slagh, Harold R., to The Dow Chemical Co. S-(chlorophenyl) O,O-dialkyl phosphoro-dithioates. 2,897,227, 7-28-59, Cl. 260—461.

Slattery, John P., and E. E. Helmo, to General Electric Co. Motor mount. 2,896,886, 7-28-59, Cl. 248—15.

Smith, A. O., Corp.: *See*—
Erickson, Charles D. 2,896,659.
Tiedemann, Julius B. 2,896,485.

Smith, Charles S.: *See*—
Heller, Lewis W., and Smith. 2,896,592.

Smith, Cornelius W., R. L. Seger, Jr., and L. W. Rorem, to United States Rubber Co. Tire and wheel assembly. 2,896,687, 7-28-59, Cl. 152—310.

Smith-Corona Marchant Inc.: *See*—
Barkdoll, Joseph P. 2,896,766.
Barkdoll, Joseph P. 2,896,767.
Dustin, Howard M. 2,896,846.
Reynolds, Eugene E. 2,896,847.

Smith-Dieterich Corp.: *See*—
Smith, Philip S. 2,896,503.

Smith, James D. Focal plane shutter. 2,896,525, 7-28-59, Cl. 95—58.

Smith, Milton F., and H. F. Latva, to The Bunting Brass and Bronze Co. Process of preparing porous sintered metal parts for metal plating. 2,897,097, 7-28-59, Cl. 117—102.

Smith, Philip S., to Smith Dieterich Corp. Multi-camera image-production and control. 2,896,503, 7-28-59, Cl. 88—16.6.

Smith, Richard F.: *See*—
Chapin, Earl C., and Smith. 2,897,174.

Smith, Ronald C.: *See*—
Graham, Peter E., and Smith. 2,897,066.

Smith-Vaniz, William R., Jr., to C. G. S. Laboratories, Inc. System using magnetised controllable inductor operated stepwise to control frequency and the like. 2,897,352, 7-28-59, Cl. 250—20.

Smith, William C.: *See*—
Muetterties, Earl L., Phillips, and Smith. 2,897,055.

Smouse, Charles L. Apparatus for charging a refrigerating system with a predetermined amount of refrigerant. 2,896,420, 7-28-59, Cl. 62—125.

Snow, Richard C. Solitaire card game device. 2,896,951, 7-28-59, Cl. 273—148.

Snyder, George H., Inc.: *See*—
Snyder, George H., Jr. 2,896,521.

Snyder, George H., Jr., to George H. Snyder, Inc. Automatic feed for paper box wrapping machines. 2,896,521, 7-28-59, Cl. 93—54.

Societa Italiana Resine: *See*—
Rovelli, Nino. 2,897,239.

Societa per Azioni Fabbriche Fiammiferi ed Affini: *See*—
Villoresi, Camillo. 2,896,692.

Societe Anonyme dite: Societe des Produits Chimiques de Besons: *See*—
Roussos, Michel, and Bourgeois. 2,897,243.

Societe Anonyme Francaise Du Ferodo: *See*—
Maurice, Jean, and Rist. 2,896,732.

Societe d'Electro-Chimie, d'Electro-Metallurgie et des Acieries Electriques d'Ugine: *See*—
Cogniat, Marcel, de Fromont, and Serratrice. 2,896,452.
Foulletier, Louis, and Dasseaud. 2,897,064.

Societe d'Electronique Et d'Automatisme: *See*—
Raymond, Francois H., and Lilamand. 2,897,359.

Societe des Forges et Ateliers du Creusot: *See*—
Fevre, Charles M. 2,897,375.

Societe d'Etudes et d'Applications Biochimiques: *See*—
Laboureur, Pierre. 2,897,148.

Societe d'Etudes et d'Applications Industrielles Commerciales et Immobilieres, Inter-Technique: *See*—
Palva, Lucien. 2,896,757.

Societe Genevoise d'Instruments de Physique: *See*—
Mottu, Andre. 2,896,462.

Societe Industrielle de Sonceboz S.A. Horlogerie Industrielle et Appareils et Instruments Electriques: *See*—
Müller, Willi. 2,897,384.

Socony Mobil Oil Co., Inc.: *See*—
Bergstrom, Eric V., and Sorf. 2,897,139.
Summers, Gerald C., and Gravley. 2,897,478.

Songer, Leonard J. Collapsible tube roller. 2,896,822, 7-28-59, Cl. 222—99.

Sonneborn, L., Sons, Inc.: *See*—
Miley, Hunter. 2,897,034.

Sorf, Edward R. J.: *See*—
Bergstrom, Eric V., and Sorf. 2,897,139.

Soundscriber Corp., The: *See*—
Lyon, William H. 2,897,287.
Lyon, William H. 2,897,290.

Sourgens, Roger P., and R. A. Chollet. Electronic teleprinter. 2,897,258, 7-28-59, Cl. 178—2.

Sylvania Electric Products Inc.: *See*—
Friend, Albert W. 2,897,397.
Geppert, Donovan V. 2,897,456.

Tierney, Raymond B., and R. H. Krug, to Texaco Inc. Process for producing stable haloaryl phosphates of low acidity. 2,897,225, 7-28-59, Cl. 260—461.

Southworth, George C., to Bell Telephone Laboratories, Inc. Nonlinear transmission media. 2,897,452, 7–28–59, Cl. 331—76.

Sowell, Ernest A., R. L. Curtin, B. A. Hall, and B. L. Scallet, to Anheuser-Busch, Inc. Cold swelling starch product. 2,897,086, 7–28–59, Cl. 99—139.

Sparks, William J., and D. W. Young, to Esso Research and Engineering Co. Alcohol-containing gasoline composition. 2,897,067, 7–28–59, Cl. 44—56.

Speelman, Irving A., to Propper Mfg. Co., Inc. Sphygmomanometer cuffs. 2,896,610, 7–28–59, Cl. 128—2.05.

Speelman, Irving A., to Propper Mfg. Co., Inc. Blood lancets. 2,896,628, 7–28–59, Cl. 128—314.

Speese, Daniel S. Adjustable bracket for holding small fixtures. 2,896,895, 7–28–59, Cl. 248—226.

Spero, George B.: *See*—
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Spero, George B., to The Upjohn Co. 6-methyl analogues of cortisone, hydrocortisone and 21-esters thereof. 2,897,217, 7–28–59, Cl. 260—397.45.

Sperry Rand Corp.: *See*—
Andeen, Richard K. 2,896,883.
Lipkin, Daniel M. 2,897,294.
Whiteley, Charles A. 2,896,307.

Sperry Rand Corp., Ford Instrument Co. Division: *See*—
Buchhold, Theodor A. 2,897,296.
Essex, Alois B., Garrett, and McKenney. 2,897,466.

Spewak, Morwell. Protective covering for bathing suit. 2,896,216, 7–28–59, Cl. 2—46.

Spicer, John J., Jr., to Industrial Enterprises, Inc. Treadle type vehicle turn indicating equipment. 2,897,305, 7–28–59, Cl. 200—61.29.

Spickelmier, Carl F.: *See*—
Gillespie, Russell A. 2,896,248.

Spicklemire, Betty S.: *See*—
Gillespie, Russell A. 2,896,248.

Spink, Leland K.: *See*—
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Sprague Electric Co.: *See*—
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Gitto, Joseph J. 2,897,409.
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Spurgin, Clarence A. Rolling crust breaker. 2,896,730, 7–28–59, Cl. 172—158.

Spurlock, James W., to Pan American Petroleum Corp. Plugging formations with asphalt. 2,896,716, 7–28–59, Cl. 166—32.

Stafford, Linn T., and W. F. Bernadt, to General Electric Co. Method and apparatus for aligning slotted laminations. 2,896,311, 7–28–59, Cl. 29—155.61.

Stahl-und Walzwerke Rasselstein/Andernach Akt.: *See*—
Alf, Fritz, Seul, and Lenze. 2,897,328.

Stamicarbon N.V.: *See*—
Fontein, Freerk J. 2,896,785.

Stamps, George M., to Faximile, Inc. Apparatus for outlining contours. 2,896,501, 7–28–59, Cl. 88—14.

Standard Oil Co. (Indiana): *See*—
Brehm, Allen E., Hamer, and La Croix. 2,897,069.
Dieman, Edgar A. 2,897,060.
O'Brien, Joseph P. 2,897,232.
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Scanley, Clyde S., and Fields. 2,897,153.
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Zletz, Alex, and Carmody. 2,896,400–2,896,407.

Standard Pressed Steel Co.: *See*—
Jarvis, Edward M. 2,896,794.

Stanley Works, The: *See*—
Godfrey, James H., and Damijonaitis. 2,897,302.

Stansbury, Burton J. Bumper mat for pipe. 2,896,762, 7–28–59, Cl. 193—41.

Starbird, James F., and N. C. Bacom. Remote control apparatus. 2,896,472, 7–28–59, Cl. 74—491.

Starcher, Paul S.: *See*—
Phillips, Benjamin, and Starcher. 2,897,208.

Stark, Louis, to Hughes Aircraft Co. Phase shifter. 2,897,459, 7–28–59, Cl. 333—31.

Statsinger, Joseph: *See*—
Bishop, Ronald L., Jewell, Radov, and Statsinger. 2,896,455.

Ste Anonyme Geoffrey-Delore: *See*—
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Stearn, Clifford A.: *See*—
Hope, Norris, and Stearn. 2,896,802.

Steel Heddle Mfg. Co.: *See*—
Kaufmann, John J. 2,896,672.

Steen, Harford K., to Interstate Bag Co., Inc. Paper strap and method for making same. 2,896,397, 7–28–59, Cl. 57—154.

Stegeman, Wilson. Glass slide dispenser. 2,896,821, 7–28–59, Cl. 221—259.

Stehlik, Rudolph F., to General Telephone Laboratories, Inc. Intercommunicating system. 2,897,285, 7–28–59, Cl. 179—31.

Stehlin, Theodore A. Prefabricated valve. 2,896,905, 7–28–59, Cl. 251—366.

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Stein, Cabot T. Photo-identification camera. 2,896,522, 7–28–59, Cl. 95—1.1.

Stephens, Allen J. Hub sealing means. 2,896,979, 7–28–59, Cl. 286—11.

Stephens, Meredith W., 50% to W. La Rose. Metal cornice. 2,896,550, 7–28–59, Cl. 108—26.

Stephens, Robert R., to The Monarch Controller Co. Ltd. Pivotally-mounted mooring hook. 2,896,993, 7–28–59, Cl. 294—83.

Sterling, George B.: *See*—
Dreisbach, Robert R., and Sterling. 2,897,167.

Stern, Jan P. Plastic containers. 2,896,827, 7–28–59, Cl. 222—490.

Stevens, George E. Hydraulic flow control plate. 2,896,565, 7–28–59, Cl. 115—42.

Stevens, Richard W. Electric lanterns. 2,897,346, 7–28–59, Cl. 240—25.

Stevenson, John W., and R. G. Werkema, to United States of America, Atomic Energy Commission. Uranium recovery process. 2,897,048, 7–28–59, Cl. 23—14.5.

Stillwagon, George B., Jr., ½ to K. G. Fraser. Universal joint and method of making same. 2,896,431, 7–28–59, Cl. 64—11.

Stiltner, Marshall A.: *See*—
Syce, Albert A. 2,896,773.

Stine, Paul J.: *See*—
McClintock, Sherman E. 2,896,748.

Stixrood, Jarvis A., to United States of America, Army. Counterbalancing hydraulic cylinder. 2,896,583, 7–28–59, Cl. 121—40.

Stöckl, Franz, to Optische Anstalt C.P. Goerz, G.m.b.H. Holding magnet system. 2,897,415, 7–28–59, Cl. 317—171.

Stoeberl, Frank J.: *See*—
Merryman, Carl, and Stoeberl. 2,896,577.

Stoffel, Paul J.: *See*—
Beaver, David J., and Stoffel. 2,897,242.

Stone, Orton G. Pivoted coupling and shim therefor. 2,896,983, 7–28–59, Cl. 287—100.

Stone, Robert H. Fluorescent fixture hoist. 2,896,908, 7–28–59, Cl. 254—1.

Storm, John F., and R. M. Williamson, to Minneapolis-Honeywell Regulator Co. Condition sensing apparatus. 2,896,454, 7–28–59, Cl. 73—304.

Strauss, Arvid, now by change of name A. Mario. Artificial articles imitating natural articles. 2,896,352, 7–28–59, Cl. 41—10.

Strauss, Charles E. Work holding jaws for chucks. 2,896,958, 7–28–59, Cl. 279—123.

Strausser, Arlan E. Fishing rig. 2,896,358, 7–28–59, Cl. 43—42.72.

Struble, Glenn E., to Diamond Gardner Corp. Cartons. 2,896,780, 7–28–59, Cl. 206—65.

Struble, Glenn E., to Diamond Gardner Corp. Box. 2,896,830, 7–28–59, Cl. 229—52.

Struthers Wells Corp.: *See*—
Svanoe, Hans. 2,897,053.

Strutynski, Peter: *See*—
Lauterbach, William E., and Strutynski. 2,896,427.

Stuart-Williams, Raymond: *See*—
Alexander, Matthew A., and Stuart-Williams. 2,897,486.

Stuehmer, Werner, and S. Funke, to Kali-Chemie Akt. Phenyl acetonitrile compounds, and a process of making same. 2,897,229, 7–28–59, Cl. 260—465.

Stultz, Samuel E. Separable and reversible snap fastener. 2,896,287, 7–28–59, Cl. 24—211.

Stump, Eugen, to Daimler-Benz Akt. Steering mechanism for motor vehicles. 2,896,473, 7–28–59, Cl. 74—499.

Stump, Eugen, to Daimler-Benz Akt. Laminated spring. 2,896,941, 7–28–59, Cl. 267—49.

Style Footwear Co., Inc.: *See*—
Peburn, Frank A. 2,896,230.

Sugn, Arthur M., to Simonds Abrasive Co. Abrasive article. 2,897,076, 7–28–59, Cl. 51—307.

Summers, Gerald C., and W. Gravley, to Socony Mobil Oil Co., Inc. Exploring unit for acoustical well logging. 2,897,478, 7–28–59, Cl. 340—18.

Sunbeam Corp.: *See*—
Jepson, Ivar. 2,896,924.

Sundstrand Machine Tool Co.: *See*—
Lundgren, Bruce H., and Hann. 2,896,546.

Sun Oil Co.: *See*—
Barnes, William E. 2,896,722.
Barnes, William E. 2,896,723
Hirschler, Alfred E., and Janoski. 2,897,134.
Honeycutt, Earl M., and Shuman. 2,897,141.

Sunstein, David E., to Philco Corp. Bandwidth compression system. 2,897,490, 7–28–59, Cl. 343—17.1.

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Superior Products Co.: *See*—
Birkett, Keith H. 2,897,151.

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Sanzenbacher, Charles W., and Huebler. 2,897,158.

Sutowski, Walter S. Bearing structure. 2,897,027, 7–28–59, Cl. 308—238.

Svanoe, Hans, to Struthers Wells Corp. Wet process for phosphoric acid manufacture. 2,897,053, 7–28–59, Cl. 23—165.

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Granqvist, Carl-Erik. 2,897,492.
Haynes, Clyde H. 2,897,338.

Swanson, Carl G. A., to Lake Erie Machinery Corp. Mandrel positioning and ram arresting apparatus. 2,896,783, 7–28–59, Cl. 207—3.

Swanson, Godfrey E. Pressure control devices. 2,897,310, 7–28–59, Cl. 200—83.

Swanson, John I., to Union Steel Products Co. Carrying rack. 2,896,549, 7–28–59, Cl. 104—135.

Swicegood, Hamilton F.: *See*—
Swicegood, Lucy-Jim D. and H. F. 2,896,226.

Swicegood, Lucy-Jim D. and H. F. Bedding. 2,896,226, 7–28–59, Cl. 5—320.

Swift & Co.: *See*—
Gibson, Paul, and Bogdanoff. 2,897,075.

Swords, Robert W. Apparatus for boring and facing work pieces. 2,896,308, 7–28–59, Cl. 29—26.

Syce, Albert A., to M. A. Stiltner. Conveyor belt. 2,896,773, 7–28–59, Cl. 198—201.

Sylvania Electric Products Inc.: *See*—
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Geppert, Donovan V. 2,897,456.
Iorio, Stanley A. 2,897,393.
Martin, Eugene J. 2,897,252.
Matare, Herbert F. 2,897,329.
Regelman, La Rue V. 2,897,468.

Syntex S.A.: *See*—
Ringold, Howard J., and Batres. 2,897,199.

Szabo, Pál. Shrinkage counter for looms. 2,896,320, 7–28–59, Cl. 33—129.

Szigeti, Paul. Protective cover for an eye. 2,896,615, 7–28–59, Cl. 128—132.

Taber, Gilbert B. Electric cigarette lighter. 2,897,336, 7–28–59, Cl. 219—32.

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Ferguson, John L., Sr., and Talbot. 2,896,569.

Tamura, Shiro: *See*—
Maruyama, Taketo, Sakamoto, Tamura, Kawahara, and Okubo. 2,896,252.

Tansel, Cecil L., to Harris-Intertype Corp. Phototypograph. 2,896,523, 7–28–59, Cl. 95—4.5.

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Coleman, Ivan V., and Taugner. 2,897,273.

Taylor, Allan J., to Northrop Aircraft, Inc. Elevating dolly. 2,896,909, 7–28–59, Cl. 254—9.

Taylor, James D. W. Bobbin feeding mechanism for spooling machines. 2,896,818, 7–28–59, Cl. 221—178.

Teague, Walter D., Jr., to Bendix Aviation Corp. Oil cooler emergency by-pass valve. 2,896,919, 7–28–59, Cl. 257—2.

Technicolor Corp.: *See*—
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Teiser, Sidney, and W. R. Sassaman, to Lawyers' Co-Operative Publishing Co. Combined photographic developing and fixing bath. 2,897,080, 7–28–59, Cl. 96—61.

Telefonaktiebolaget L M Ericsson: *See*—
Warring, Stig E., and Thorsén. 2,897,362.

Telemeter Magnetics, Inc.: *See*—
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Te Winkel, Jan, to North American Philips Co., Inc. Stabilised transistor electrical power supply. 8,897,430, 7–28–59, Cl. 323—22.

Texaco Inc.: *See*—
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Nagle, Richard E., and Eastman. 2,896,927.
Newman, Stanley R., and Heisler. 2,897,070.

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Texas Co., The: *See*—
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Texas Gulf Sulphur Co.: *See*—
Bencowitz, Isaac. 2,897,150.

Thayer, Helen I.: *See*—
Pellegrini, John P., Jr., and Thayer. 2,897,068.

Thayer, Jean M.: *See*—
Fearon, Robert E., and Thayer. 2,897,372.

Thermo Electric Co., Inc.: *See*—
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Thew Shovel Co., The: *See*—
Zellman, Roy H. 2,897,021.

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Thomann, Bernard M. Surveying apparatus. 2,896,327, 7–28–59, Cl. 33—74.

Thomas, Arthur J. Pool with inflatable wall. 2,896,221, 7–28–59, Cl. 4—172.

Thomas, Gordon H.: *See*—
Jones, Ewart R. H., Henbest, Woods, Hathway, and Thomas. 2,897,213.

Thomas, John V. Multiple distribution valve. 2,896,662, 7–28–59, Cl. 137—538.

Thomas, Lawrence G., to International Standard Electric Corp. Monitoring means for reflector type aerials. 2,897,493, 7–28–59, Cl. 343—703.

Thomas, Paul M., and L. W. P. Wright, to Builders Equipment Co. Pallet handler for concrete block machines. 2,896,800, 7–28–59, Cl. 214—16.4.

Thomas, Peter C., and J. C. Horst. Portable machine for shaping or contouring railway car axle bearing blocks. 2,896,513, 7–28–59, Cl. 90—26.

Thomas, Stephen E., to The Magnavox Co. Freeze type solenoid. 2,897,414, 7–28–59, Cl. 317—159.

Thompson, Elmer O., to Philco Corp. Tools. 2,896,605, 7–28–59, Cl. 125—16.

Thompson, George J.: *See*—
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Thompson, Herbert L. Fresh water recovery process and apparatus for use in same. 2,896,419, 7–28–59, Cl. 62—58.

Thomson, John W., Jr., to Owens-Illinois Glass Co. Rinser for one-way bottles. 2,896,647, 7–28–59, Cl. 134—133.

Thornhill-Craver Co., Inc.: *See*—
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Thorsén, Jarl M.: *See*—
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Jemison, Volney M., and Young. 2,896,864.

Tiedemann, Julius B., to A. O. Smith Corp. Draw rolling mill. 2,896,485, 7–28–59, Cl. 90—19.

Tierney, Raymond B., and R. H. Krug, to Texaco Inc. Process for producing stable haloaryl phosphates of low acidity. 2,897,225, 7–28–59, Cl. 260—461.

Tilton, William J., and W. T. Leslie, to Raymond Bag Corp. Liner inserting device. 2,896,516, 7–28–59, Cl. 93—8.

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Tinnerman, George A. Assembly retainers. 2,897,465, 7–28–59, Cl. 336—210.

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Dilling, Elmer D. 2,897,129.
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Todd, Eric E. Process of concentrating pimiento peppers. 2,897,085, 7–28–59, Cl. 99—103.

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Tolf, Marvin L., to Raytheon Mfg. Co. Recording means. 2,897,037, 7–28–59, Cl. 346—21.

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Britton, Edgar C., and Tolkmith. 2,897,226.

Tomerlin, William C., Jr.: *See*—
Elston, William A., McElwee, Moore, and Tomerlin. 2,896,332.

Tomlin, Robert: *See*—
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Tompkins, George R. Washing apparatus. 2,896,857, 7–28–59, Cl. 239—185.

Tonkin, Josephine. Crib rocker. 2,896,225, 7–28–59, Cl. 5—109.

Töppel, Otmar, to Aschaffenburger Zellstoffwerke A.G. Method for the separation of carbonyl compounds. 2,897,238, 7–28–59, Cl. 260—600.

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Marola, Americo. 2,897,022.

Toth, Michael, to Allis-Chalmers Mfg. Co. Hydraulic steering system for jointed vehicles. 2,896,734, 7–28–59, Cl. 180—79.2.

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Trans-Oceanic: *See*—
Welschhof, Peter. 2,896,286.

Transportation Specialties Co.: *See*—
Johnston, Charles R. 2,896,554.

Tremblay, Jean-Louis. Blood arterializing method and apparatus therefor. 2,896,620, 7–28–59, Cl. 128—214.

Treppard, Walter A. Tool holder and tool assembly. 2,896,955, 7–28–59, Cl. 279—7.

Tresio, Nicholas. Sink stopper. 2,896,223, 7–28–59, Cl. 4—286.

Triebwasser, Sol: *See*—
Garwin, Richard L., Reich, and Triebwasser. 2,897,399.

Troeger, Henry, and H. F. Hoefener, to Bendix Aviation Corp. Engine starter duo torque clutch mechanism. 2,896,601, 7–28–59, Cl. 123—179.

Troiano, Carlo: *See*—
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Trump, John G.: *See*—
Dewey, Davis R., II, and Trump. 2,897,365.

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Tubinis, Matthew P.: *See*—
Pearce, James G., and Tubinis. 2,897,283.

Tucker, Jo W. Adjustable joint trowel. 2,896,441, 7–28–59, Cl. 72—136.

Tung, Ching C., to Monsanto Chemical Co. N-nitroso bis (alkoxyphenyl) phenylenediamines. 2,897,177, 7–28–59, Cl. 260—45.9.

Tung, Shao E., to Constock Liquid Methane Corp. Methane liquefaction cycle. 2,896,414, 7–28–59, Cl. 62—12.

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Turner, John H. W.: *See*—
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Twigg, Jerry B. Dispensing package. 2,896,816, 7–28–59, Cl. 221—64.

Uhll, Roy B., and E. J. Luetzelschwab, to Standard Oil Co. Tank drain system. 2,896,657, 7–28–59, Cl. 137—172.

Ulrich, James F., to The Tenna Mfg. Co. Clutching mechanism. 2,896,870, 7–28–59, Cl. 242—54.

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Zebrick, Andrew J. 2,896,698.

Union Oil Co. of California: *See*—
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NOTE.—First number=class, second number=subclass, third number=patent number

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Classification of Designs

D 1—	12:	185,737	D14—	3:	185,755	D26—	14:	185,741	D33—	14:	185,735	D44—	6:	185,736	D80—	9:	185,746
D 2—	3:	185,738	D15—	6:	185,771			185,742		19:	185,769		10:	185,774			185,752
D 4—	3:	185,775		11:	185,770			185,757	D34—	5:	185,739		21:	185,772			185,763
		185,776	D21—	6:	185,764	D31—	4:	185,730			185,773	D56—	4:	185,732	D83—	1:	185,734
		185,778	D26—	1:	185,743	D33—	6:	185,758		15:	185,733	D58—	13:	185,777	D85—	2:	185,750
	5:	185,766		6:	185,747			185,759			185,749		26:	185,754	D87—	2:	185,744
		185,767		14:	185,729			185,760	D42—	7:	185,745	D62—	4:	185,748	D92—	1:	185,768
D14—	3:	185,751			185,731			185,761	D44—	1:	185,765	D70—	2:	185,756		26:	185,779
		185,753			185,740			185,762									

Reg. No. 588,288 (EMPRESS), James J. Boultress, Pearl 642,432, same, filed Nov. 12, 1956, D.C., E.D.N.Y. (Brooklyn),

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE
July 28, 1959 Volume 744 Number 4

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 282,703 (PING PONG), Parker Brothers, Inc., Bats and rackets of the tennis type for games; **Reg. No. 282,707**, same, Hollow composition and like balls for indoor bat or racket games, table games, tennis-type games, etc.; **Reg. No. 294,468**, same, Table and parts thereof especially constructed for a game; **Reg. No. 296,570**, same, A game played with rackets and balls, filed May 1, 1958, D.C., E.D.N.Y. (Brooklyn), Doc. C-19734, *Parker Bros. Inc. v. The Plas-tric Co., Inc.*

Reg. No. 282,707. (See Reg. No. 282,703.)

Reg. No. 294,468. (See Reg. No. 282,703.)

Reg. No. 497,820 (GEMSTONE), Robinson and Sverdlik, Semi-precious and precious stones intended to be set in rings or other specially designed jewelry, filed Nov. 16, 1951, D.C., S.D.N.Y., Doc. 71/115, *Robinson and Sverdlik, Inc. v. Ralph, Louise and Damon Peicini, doing business as Leading Jewelry Manufacturing Co. and Lede.* Order of dismissal for lack of prosecution May 22, 1959.

Reg. No. 497,985 (UMBRELLA AND DESIGN), Marcus Breier's Sons, Sports wear and wearing apparel made of wool, cotton, rayon and mixtures thereof, etc., filed June 12, 1953, D.C., S.D.N.Y., Doc. 85/357, *Marcus Breier Sons, Inc. v. Arkansas Co., Inc.* Order of dismissal for lack of prosecution May 25, 1959.

Reg. No. 500,261 (MANHUNT!), Magazine Enterprises, Inc., Comic magazine published monthly, filed Oct. 3, 1955, D.C., S.D.N.Y., Doc. 102/395, *Vincent Sullivan v. Keble News Co. and Flying Eagle Publications, Inc.* Order of dismissal for lack of prosecution May 27, 1959.

Reg. No. 520,570. (See Reg. No. 282,703.)

Reg. No. 530,220 (HONEYWELL), Minneapolis-Honeywell Regulator Co., Thermostatic regulating and controlling switches, filed Mar. 25, 1958, D.C., N.D. Ill. (Chicago), Doc. 59c491, *Minneapolis-Honeywell Regulator Co. v. M. J. Shannon, doing business as The Honeywell Co., Inc.* Trademark held valid and infringed. Judgment by default; injunction granted May 15, 1959.

Reg. No. 532,220 (ST. MARY'S AND DESIGN), St. Mary's Woolen Manufacturing Co., Woolen blankets, filed Dec. 10, 1958, D.C., S.D.N.Y., Doc. 140/332, *St. Mary's Woolen Mfg. Co. v. Rainbow Girl Coat Co., Inc.* Judgment by consent, injunction granted May 22, 1959.

CONDITION OF TRADEMARK APPLICATIONS AS OF MAY 31, 1959

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 10,387
Date of oldest new application ..... Nov. 3, 1958
Date of oldest amended application ..... Jan. 8, 1959

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 16, 19, 21, 23, 24, 25, 26, 30, 31, 32, 33, 34, 35, 36, 44, 50	1-12-59	3-16-59
(II) R. F. SHRYOCK, Classes 6, 18, 27, 28, 45, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks Class 200	12-26-58	2-1-59
(III) K. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 20, 22, 29, 37, 38, 39, 40, 41, 42, 43, 45, 47, 48, 49, 52; and Certification Marks	11-3-58	1-8-59
Renewals (All Classes)	4-30-59	5-25-59
Sec. 12 (c) Publications (All Classes)	5-4-59	5-4-59

Applications filed during the month of May 1959—2,129

Registrations Issued ..... 368—No. 682,345 to No. 682,712
Renewals Issued 39

For the quarter—April 1, 1959 through June 30, 1959

Applications filed 6206
Registrations issued 4789
Renewals issued 980
Cancellations under Section 8 1281

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

Reg. No. 535,236 (EMPRESS), James J. Boultrous, Pearl rings, earrings, pearls and necklaces, filed Oct. 13, 1955, D.C., S.D.N.Y., Doc. 104/85, *Empress Pearl Syndicate* v. *Empress Pearl Co., Inc. and Sendor Podolsky*. Order of dismissal for lack of prosecution May 27, 1959.

Reg. No. 549,982 (ADMIRAL), Admiral Corporation, Radio receiving sets and parts thereof, vacuum or electron tubes, electrically operated record players, etc., filed June 2, 1953, D.C., S.D.N.Y., Doc. 85/253, *Admiral Corp.* v. *Paul E. Feder, doing business as Sigmé Sewing Machine Co.* Order of dismissal for lack of prosecution May 22, 1959.

Reg. No. 568,635 (LITTLE LEAGUE BASEBALL), Little League Baseball, Inc., Services in connection with the development of sportsmanship, clean play and athletic ability in young boys thru planned baseball program; **Reg. No. 642,422**, same, filed Nov. 12, 1958, D.C., E.D.N.Y. (Brooklyn), Doc. C-19191, *Little League Baseball Inc.* v. *Little Basketball League, Inc. and Henry Levis.* Consent judgment, injunction granted May 25, 1959.

Reg. No. 567,035 (DESIGN OF CHILD), D. F. Duncan, Inc., Bandalore toy spinning tops, filed Mar. 12, 1959, D.C., S.D.N.Y., Doc. 144/32, *Donald F. Duncan, Inc.* v. *W. H. Schies, Inc. and Samuel M. and Bertram G. Coplon, doing business as S. Coplon and Son.* Stipulation and order of dismissal May 27, 1959.

Reg. No. 642,422. (See Reg. No. 568,635.)

Reg. No. 662,661 (LEG LOUNGER), Hassocks and foot rests, Gleitsman's, Inc.; **2,838,097**, Gleitsman & Fuerst, Ottomans, filed May 20, 1959, D.C., E.D. Pa. (Philadelphia), Doc. 26372, *Gleitsman's, Inc.* v. *Oromoe, Inc.*

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 40,196. J. J. Warren, South, Inc., Greenville, S.C. Filed Nov. 6, 1957.

SEX-SAL-LINKS

For Baby Chicks.
First use Apr. 3, 1957.

SN 51,423. Celanese Corporation of America, New York, N.Y. Filed May 12, 1958.

[redacted]

Owner of Reg. Nos. 600,202, 612,392, and 651,867.
For Textile Fibers, Including Staple Fibers and Continuous Filaments.
First use not later than July 15, 1955.

SN 52,019. United States Rubber Company, New York, N.Y. Filed May 20, 1958.

KRALON

For Granular Rubber-Resin Compositions.
First use Apr. 17, 1958.

SN 55,702. Peerless Coals Incorporated, Cleveland, Ohio. Filed July 21, 1958.

FLAMING ARROW

For Coal.
First use May 1, 1926.

SN 58,245. Reichhold Chemicals, Inc., Detroit, Mich. Filed Sept. 2, 1958.

CO-RELEES

For Liquid Sand Conditioner Composed Primarily of a Blend of Fatty Acids With Petroleum Used as a Parting Agent for Cores.
First use July 14, 1958.

SN 65,959. Judson Nurseries, Inc., Bristol, Ind. Filed Jan. 16, 1959.

Jud-Pak

For Packaged, Root-Wrapped, Dormant, Fruit and Flower Bearing Plants.
First use Mar. 1, 1948.

SN 66,563. Plicose Manufacturing Corporation, New York, N.Y. Filed Jan. 27, 1959.

PLICOSE

Owner of Reg. No. 372,659.
For Plastic Film.
First use in the year 1950.

SN 67,029. Superbar Company, Potosi, Mo. Filed Feb. 3, 1959.

SUPERBEN

For Ground Bentonite for Use in Drilling Mud.
First use at least as early as Jan. 15, 1959.

Class 2—Receptacles

SN 29,712. Flambeau Plastics Corp., Baraboo, Wis. Filed May 9, 1957.

Flex-aire

For Clothes Hampers Formed From Plastic Material.
First use Mar. 4, 1957.

SN 51,379. Max A. Strauss, d.b.a. Mastra Company, Cleveland, Ohio. Filed May 9, 1958.

TOTEMASTER

For Manually Portable Cases Designed for Use by Service Personnel.
First use Feb. 20, 1958.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 52,526. Stowcraft Inc., Stowe, Vt. Filed May 26, 1958.

Stowcraft

For Pocketbooks, Luggage, and Crocheted Jute Bags.
First use Sept. 26, 1955.

Class 4—Abrasives and Polishing Materials

SN 65,300. Electrolux Corporation, New York, N.Y. Filed Jan. 5, 1959.

ELECTROLUX

Owner of Reg. Nos. 195,691, 562,427, and others.
For Floor Waxes and Furniture Polish.
First use in March 1947.

Class 5—Adhesives

SN 19,063. Velveray Corporation, New York, N.Y., assignee of Rarolite Chemical Co. Inc., Raritan, N.J. Filed Nov. 9, 1956.

VELVETEX

For Adhesives Useful in Flocking on Sheet Textile Materials and Also Useful for Attachment of Wall Paper and Wall Coverings to Walls.
First use Oct. 15, 1956.

SN 58,266. Robert Leo St. James, Rockland, Mass. Filed Sept. 2, 1958.

Tile Bond

The drawing is lined for red but no claim is made to color.
For Wall Tile Adhesives.
First use Jan. 7, 1957.

SN 59,826. Kentile, Inc., Brooklyn, N.Y. Filed Sept. 30, 1958.

KENTILE
CRYSTALITE VINYL TILE
ADHESIVE No. 8

"Vinyl Tile Adhesive No. 8" is disclaimed apart from the mark. Owner of Reg. Nos. 580,340, 653,613, and others.
For Adhesive for Installing Vinyl Tile.
First use Aug. 11, 1958.

SN 64,937. Edward Sabella, d.b.a. Interstate Adhesive Company, Farmingdale, N.Y. Filed Dec. 26, 1958.

CRAFT ADHESIVE

The word "Adhesive" is disclaimed.
For Tile Adhesive.
First use Oct. 29, 1958.

Class 6 — Chemicals and Chemical Compositions

SN 65,622. Birds-Off, Inc., McKeesport, Pa. Filed Jan. 12, 1959.

"NO-LITE"

For Bird Repellent for Application to Bird Roosting Areas.
First use on or about Nov. 15, 1958.

SN 66,661. Technical Research Company, Seattle, Wash. Filed Jan. 28, 1959.

TEREBOND

For Priming Compositions, Primarily for the Purposes of Promoting Adhesion and Inhibiting Corrosion.
First use Dec. 2, 1955.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 47,652. Haveg Industries, Inc., Wilmington, Del. Filed Mar. 13, 1958.

MISSILEON

Owner of Reg. No. 655,386.
For Finished Parts for Jet Missiles Made From High Temperature Resistant Plastic Material.
First use Dec. 4, 1956.

SN 65,318. McCormick Selph Associates, Hollister, Calif. Filed Jan. 5, 1958.

For Gas Generators and Items Employed in the Firing and Stage Separation of Rockets and Missiles, Said Items Consisting of Pressure Terminals, Initiator Squibs, Igniters, Explosive Connectors, Explosive Bolts, Gas Generators.
First use July 12, 1954.

SN 66,947. Jose Ramon Somavia, Hollister, Calif. Filed Feb. 2, 1959.

CONDOR

For Rifles and Ammunition.
First use in June 1955.

Class 10 — Fertilizers

SN 64,939. United-Heckathorn, Richmond, Calif. Filed Dec. 26, 1958.

GIBB

For Chemical Spray To Be Applied to Plants and Fruits To Stimulate Their Growth.
First use Dec. 5, 1958.

SN 66,995. Chase Protected Cultivation Limited, Shepperton, Middlesex, England. Filed Feb. 3, 1959.

SEA MAGIC

For Plant Nutrient and Pest Deterrent.
First use in January 1958; in commerce in or about February 1958.

SN 67,543. International Minerals & Chemicals Corporation, Skokie, Ill. Filed Feb. 11, 1959.

BIG CATCH

For Fish Pond Plant Food.
First use Mar. 26, 1958.

Class 12 — Construction Materials

SN 39,532. Kaiser Aluminum & Chemical Corporation, Oakland, Calif. Filed Oct. 25, 1957.

SHADESCREEN

For Louvered Screening Material.
First use May 26, 1948.

SN 42,375. Hallmark Plastics Corporation, South Hackensack, N.J. Filed Dec. 13, 1957.

ZES-TILE

For Simulated Brick or Tile Patterned Plastic Sheets for Interior or Exterior Use.
First use July 10, 1957.

SN 55,925. Jim-Ray Corp., Flushing, N.Y. Filed July 24,

SN 55,269. Republic Foil & Metal Mills, Inc., Danbury, Conn. Filed July 14, 1958.

SN 42,376. Hallmark Plastics Corporation, South Hackensack, N.J. Filed Dec. 13, 1957.

JOY-TILE

For Simulated Brick or Tile Patterned Plastic Sheets for Interior or Exterior Use.
First use July 10, 1957.

SN 42,377. Hallmark Plastics Corporation, South Hackensack, N.J. Filed Dec. 13, 1957.

C TEX

For Simulated Brick or Tile Patterned Plastic Sheets for Interior or Exterior Use.
First use July 10, 1957.

SN 42,378. Hallmark Plastics Corporation, South Hackensack, N.J. Filed Dec. 13, 1957.

ZEST-TILE

For Simulated Brick or Tile Patterned Plastic Sheets for Interior or Exterior Use.
First use July 10, 1957.

SN 51,712. A. P. Green Fire Brick Company, Mexico, Mo. Filed May 15, 1958.

YUKON

For Firebrick.
First use Mar. 28, 1958.

SN 51,818. The Robinson Brick and Tile Company, Denver, Colo. Filed May 16, 1958.

ROBCO

Applicant claims no exclusive right in the representation of the goods. Owner of Reg. No. 617,043.
For Brick and Structural Glazed Tile.
First use on or about Mar. 12, 1958.

SN 52,538. Wood Conversion Company, St. Paul, Minn. Filed May 28, 1958.

MICRO-PERF

For Fibrous Acoustic Panel and Tile.
First use May 19, 1958.

SN 55,229. Emulsified Asphalts, Incorporated, Chicago, Ill. Filed July 14, 1958.

MULTEX

For Bituminous or Resinous Base Surface Sealers for Paved Surfaces.
First use May 14, 1954.

SN 63,303. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed Nov. 28, 1958.

EVERGLEAM

For Vinyl Counter Tops.
First use Sept. 23, 1958.

SN 66,279. Aluminum Company of America, Pittsburgh, Pa. Filed Jan. 22, 1959.

CAL-TAB

For Mixtures of a Cement and an Aggregate for Making Cast Refractories.
First use Oct. 5, 1956.

SN 66,280. Aluminum Company of America, Pittsburgh, Pa. Filed Jan. 22, 1959.

PHOS-TAB

For Mixtures of Alumina and an Aggregate To Be Mixed With Phosphoric Acid To Form a Castable Mix for Making Refractories.
First use Apr. 4, 1955.

SN 66,289. The Eckel Corporation, Cambridge, Mass. Filed Jan. 22, 1959.

TEC

For Foil Barrier Paper for Doors Serving as a Moisture Barrier.
First use on or about Apr. 1, 1958.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 41,319. Harlow C. Stahl Company, Detroit, Mich. Filed Nov. 25, 1957.

CHEF-STYLED

For Hollow-Ware.
First use June 1, 1954.

SN 44,382. Druckluft-Bedarf Dipl. Ing. K. Weinhold K.G., Dusseldorf, Germany. Filed Jan. 21, 1958.

"HOCO"

Priority Claimed Under Sec. 44(d) on German application filed Oct. 15, 1957; Reg. No. 721,852 dated Feb. 6, 1959.
For Fittings for Liquids and Gases; Fittings for Compressed Air Piping, Pneumatic Tools and Implements; Hose-Connecting Devices, Particularly for High-Pressure Piping.
First use Nov. 8, 1957; in commerce Nov. 8, 1957.

SN 49,878. Spun Aluminum Products Corp., New York, N.Y. Filed Apr. 17, 1958.

For Aluminum Cooking and Serving Vessels, Woven Wire Racks, Grates and Baskets, Both Bare and Plastic Coated, for Hotel, Restaurant, Institutional and Industrial Use.
First use Mar. 15, 1945.

SN 66,981. Ed-Berl Products, Inc., Baldwin, N.Y. Filed Feb. 2, 1959.

SN 71,866. Garry Laboratories, Inc., Buffalo, N.Y. Filed Apr. 13, 1959.

SN 55,925. Jim-Ray Corp., Flushing, N.Y. Filed July 24, 1958.

PENN

For Locks, Door Handles, Knobs, and Hinges.
First use in 1877.

SN 36,583. Reuel C. Parrish, d.b.a. Central Machine and Tool Company, Enid, Okla. Filed Aug. 4, 1958.

The pictorial portion of the mark disclosing a lever arm is disclaimed apart from the mark.
For Hose and Pipe Couplings.
First use Jan. 2, 1957.

SN 64,475. Kinkead Industries Incorporated, Chicago, Ill. Filed Dec. 17, 1958.

HAMMERTONE

For Carpet Holder and Binder Bars.
First use Nov. 26, 1958.

SN 65,753. Crouse-Hinds Company, Syracuse, N.Y. Filed Jan. 13, 1959.

WEDGTITE

For Pipe and Conduit Hangers.
First use June 1, 1924.

SN 66,249. Star Heel Plate Co., Inc., Newark, N.J. Filed Jan. 21, 1959.

For Army Heel Rim Plates.
First use Sept. 16, 1958.

Class 14 — Metals and Metal Castings and Forgings

SN 44,827. Earle M. Jorgensen Company, Los Angeles, Calif. Filed Jan. 28, 1958.

J-45

For Steel Plate and Bars.
First use Nov. 8, 1957.

SN 46,535. Eutectic Welding Alloys Corporation, Flushing, N.Y. Filed Feb. 25, 1958.

LOW TEMP

Owner of Reg. Nos. 536,839 and 412,038.
For Alloys in Various Forms Suitable for Welding, Brazing, Soldering, and Hard Surfacing Operations.
First use Apr. 15, 1946.

SN 55,269. Republic Foil & Metal Mills, Inc., Danbury, Conn. Filed July 14, 1958.

ELECTRO-DRY

For Aluminum Foil.
First use May 6, 1958.

SN 68,116. The Colorado Fuel and Iron Corporation, Denver, Colo. Filed Feb. 20, 1959.

STEM-PAK

For Wire.
First use Jan. 14, 1959.

Class 15 — Oils and Greases

SN 37,384. John N. Stone, d.b.a. Industrial Oil Sales Co., Houston, Tex. Filed Sept. 17, 1957.

The words "Lubricants for Industry" are disclaimed.
For Penetrating Oil, Motor Tune Up Oil, Lubricating Oil, and Grease.
First use Oct. 23, 1956.

SN 44,940. Tower Oil Company, Chicago, Ill. Filed Jan. 29, 1958.

GREZALL

For Lubricating Greases.
First use during February 1948.

SN 66,921. Oklahoma Oil Co., Chicago, Ill. Filed Feb. 2, 1959.

For Gasoline.
First use on or about Oct. 29, 1958.

SN 66,950. Southwest Grease & Oil Co., Inc., Wichita, Kans. Filed Feb. 2, 1959.

LOAD-A-PAK

For Wheel Bearing Grease.
First use Dec. 23, 1958.

SN 65,708. Reed & Carnrick, Jersey City, N.J. Filed Jan. 12, 1959.

SN 66,464. Medical Research Pty. Limited, State of New South Wales, Australia. Filed Jan. 26, 1959.

SN 66,981. Ed-Berl Products, Inc., Baldwin, N.Y. Filed Feb. 2, 1959.

SIL-LUBE

For Lubricant for Electronic Timers, Volume Controls and Switches.
First use on or about Jan. 10, 1956.

SN 67,793. International Harvester Company, Chicago, Ill. Filed Feb. 16, 1959.

HY-TRAN

For Hydraulic and Transmission Fluid.
First use Aug. 14, 1958.

Class 16—Protective and Decorative Coatings

SN 39,401. Kerr Chemicals, Inc., Park Ridge, Ill. Filed Oct. 23, 1957.

KERPON

Owner of Reg. No. 560,206.
For Solutions Used Primarily for Coating the Inside of Drums and Tanks To Provide a Protective Lining Therefor.
First use Sept. 1, 1954.

SN 60,723. Godfrey L. Cabot, Inc., Boston, Mass. Filed Oct. 16, 1958.

CAB-O-LITE

Owner of Reg. Nos. 581,869, 674,016, and others.
For Wollastonite, a Pigment Used as an Ingredient of Paints and Varnishes.
First use Oct. 25, 1957.

SN 65,194. Zep Manufacturing Corporation, Atlanta, Ga. Filed Dec. 31, 1958.

ZEP-O-SEAL

For Quick Drying Penetrating Composition for Application as a Coating to Floors of Wood, Concrete, or Cement.
First use March 1951.

SN 66,485. Permanent Pigments, Inc., Norwood, Ohio. Filed Jan. 26, 1959.

pastoil

For Artists' Supplies, and in Particular Oil Pastels.
First use July 9, 1958.

SN 71,365. Garry Laboratories, Inc., Buffalo, N.Y. Filed Apr. 13, 1959.

GARRY'S IT

Owner of Reg. Nos. 604,943, 673,233, and others.
For Liquid Preparation Applied in Spray Form With a Resultant Film to Sundry Parts Composed of Wood, Metal, Rubber and Other Materials for the Purposes of Rustproofing, Waterproofing, Lubrication, Sealing and Elimination of Noise.
First use on or about Nov. 4, 1958.

SN 71,366. Garry Laboratories, Inc., Buffalo, N.Y. Filed Apr. 13, 1959.

it

Owner of Reg. Nos. 604,943, 673,233, and others.
For Liquid Preparation Applied in Spray Form With a Resultant Film to Sundry Parts Composed of Wood, Metal, Rubber, and Other Materials for the Purposes of Rustproofing, Waterproofing, Lubrication, Sealing and Elimination of Noise.
First use on or about Nov. 4, 1958.

SN 71,394. Anna T. Long, d.b.a. Thelma's Ceramic Studio, Reseda, Calif. Filed Apr. 13, 1959.

MARGLOTEX

For Unfired Ceramic Stain.
First use Mar. 20, 1959.

Class 18—Medicines and Pharmaceutical Preparations

SN 65,059. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed Dec. 30, 1958.

OTUMPON

Owner of German Reg. No. 712,660, dated Apr. 8, 1958.
For Pharmaceutical Preparation for Use in the Treatment of Infectious Diseases.

SN 65,170. Vigor-Wealth Corporation of America, Greenville, S.C. Filed Dec. 31, 1958.

VIGOR-WEALTH

For Food Supplement Consisting of Vitamins, Minerals, and Proteins.
First use Oct. 31, 1958.

SN 65,171. The Wander Company, d.b.a. Smith-Dorsey, Chicago, Ill. Filed Dec. 31, 1958.

RENISONS

For Preparation Used as a Myocardial Stimulant.
First use Dec. 12, 1958.

SN 65,706. RX Pharmaceuticals, Inc., University City, Mo. Filed Jan. 12, 1959.

SED-A-PED

For Sedative Preparation.
First use Feb. 10, 1954.

SN 65,707. Reed & Carnrick, Jersey City, N.J. Filed Jan. 12, 1959.

SYCOTROL

For Medicinal Preparation for the Treatment of Psychoneuroses.
First use Jan. 2, 1959.

SN 65,708. Reed & Carnrick, Jersey City, N.J. Filed Jan. 12, 1959.

MODUTROL

For Medicinal Preparation for the Treatment of Peptic Ulcers and Other Gastrointestinal Complaints.
First use Jan. 2, 1959.

SN 66,021. The Chattanooga Medicine Company, Chattanooga, Tenn. Filed Jan. 19, 1959.

CARDUI

Owner of Reg. Nos. 128,649 and 227,534.
For Tablets for Relieving Functional Menstrual Pain, Cramps, Tenseness, and Headache.
First use June 25, 1958.

SN 66,203. Carter Products, Inc., New York, N.Y. Filed Jan. 21, 1959.

BUTAMATE

For Pharmaceutical Preparation for the Treatment of Depression Affecting the Central Nervous System.
First use Dec. 12, 1958.

SN 66,206. Dermik Pharmacal Co., Inc., Brooklyn, N.Y. Filed Jan. 21, 1959.

BLEMAK

For Antiseptic, Peeling, Keratolytic Lotion for the Treatment of Acne Vulgaris, Simple Acne, Pimples and Blackheads of the Face and Back Area Common to Teen-Agers.
First use Dec. 8, 1958.

SN 66,208. Dermik Pharmacal Co., Inc., Brooklyn, N.Y. Filed Jan. 21, 1959.

Q-TONE

For Medicated Antiseptic Cream Useful in Soothing Inflammatory, Irritated, Reddened, Chapped Skin Conditions Usually Associated With Atopic Dermatitis, Eczema, Pruritis and Similar Dermatological Manifestations.
First use Dec. 8, 1958.

SN 66,209. Dermik Pharmacal Co., Inc., Brooklyn, N.Y. Filed Jan. 21, 1959.

HYTONE

For Medicated Cream Useful in Soothing Inflammatory, Irritated, Reddened, Chapped Skin Conditions Usually Associated With Atopic Dermatitis, Eczema, Pruritis and Similar Dermatological Manifestations.
First use Dec. 8, 1958.

SN 66,213. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Jan. 21, 1959.

PECUDIN

Owner of German Reg. No. 710,203, dated Jan. 21, 1958.
For Chemotherapeutic Agents for Animals.

SN 66,281. American Home Products Corporation, d.b.a. Wyeth Laboratories, New York, N.Y. Filed Jan. 22, 1959.

MEPERGAN

For Analgesic Preparation.
First use Jan. 13, 1959.

SN 66,464. Medical Research Pty. Limited, State of New South Wales, Australia. Filed Jan. 26, 1959.

FERROIDS

Owner of Australian Reg. No. 127,363, dated Apr. 18, 1956.
For Medical Preparation for the Treatment of Hypochromic Anaemia, Known as Iron Deficiency Anaemia, and Secondary Anaemia.

SN 66,537. Drugmaster, Inc., St. Louis, Mo. Filed Jan. 27, 1959.

MONAT

For Analgesic Tablets.
First use Jan. 6, 1959.

SN 66,549. International Laboratories, Inc., Rochester, N.Y. Filed Jan. 27, 1959.

NEUTRACID

Owner of Reg. No. 347,847.
For Preparation To Be Used as an Aid in Correcting Stomach Acidity.
First use Jan. 1, 1937.

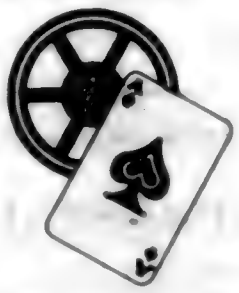
SN 66,911. Marion Laboratories, Inc., Kansas City, Mo. Filed Feb. 2, 1959.

CYSAN

For Medicinal Preparation for Hematinic Use To Improve Hemoglobin of the Blood.
First use Dec. 19, 1958.

Class 19—Vehicles

SN 49,121. The C. S. Card Iron Works Co., Denver, Colo. Filed Apr. 7, 1958.



For Mine Cars, Mine Car Trucks and Wheels, and Mine Hoist and Tipple Vehicles.
First use Jan. 1, 1940.

SN 53,631. Nissan Jidosha Kabushiki Kaisha, Kanagawa-ku, Yokohama, Japan. Filed June 16, 1958.

DATSUN

Owner of Japanese Reg. No. 299,850, dated Mar. 18, 1938.
For Ships and Vehicles—Namely, Automobiles, Buses, Motor Trucks, Patrol Cars, Motor Cycles, Ambulances, Truck Tractors, Tank Trucks, and Parts Thereof.

SN 53,632. Nissan Jidosha Kabushiki Kaisha, Kanagawa-ku, Yokohama, Japan. Filed June 16, 1958.

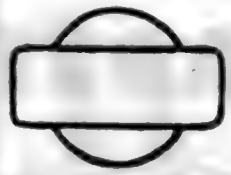
NISSAN

Owner of Japanese Reg. No. 464,230, dated Apr. 8, 1955.
For Ships and Vehicles—Namely, Automobiles, Buses, Motor Trucks, Patrol Cars, Motor Cycles, Ambulances, Truck Tractors, Tank Trucks, and Parts Thereof.

SN 66,396. American Bosch Arma Corporation, Hempstead, N.Y. Filed Jan. 23, 1959.

SN 70,591. Fidelity Electric Company, Inc., Lancaster, Pa.

SN 53,633. Nissan Jidosha Kabushiki Kaisha, Kanagawa-ku, Yokohama, Japan. Filed June 16, 1958.



Owner of Japanese Reg. No. 299,851, dated Mar. 18, 1938.
For Ships and Vehicles—Namely, Automobiles, Buses, Motor Trucks, Patrol Cars, Motor Cycles, Ambulances, Truck Tractors, Tank Trucks, and Parts Thereof.

SN 53,634. Nissan Jidosha Kabushiki Kaisha, Kanagawa-ku, Yokohama, Japan. Filed June 16, 1958.

Owner of Japanese Reg. No. 238,358, dated Nov. 22, 1932.
For Ships and Vehicles—Namely, Automobiles, Buses, Motor Trucks, Patrol Cars, Motor Cycles, Ambulances, Truck Tractors, Tank Trucks, and Parts Thereof.

SN 53,635. Nissan Jidosha Kabushiki Kaisha, Kanagawa-ku, Yokohama, Japan. Filed June 16, 1958.

NISSAN

Owner of Japanese Reg. No. 266,023, dated June 17, 1935.
For Ships and Vehicles—Namely, Automobiles, Buses, Motor Trucks, Patrol Cars, Motor Cycles, Ambulances, Truck Tractors, Tank Trucks, and Parts Thereof.

SN 59,321. Northrop Corporation, Beverly Hills, Calif., by change of name from Northrop Aircraft, Inc., Beverly Hills, Calif. Filed Sept. 22, 1958.

Owner of Reg. Nos. 548,275 and 662,169.
For Thrust Propulsion-Direction Devices Applied to Aircraft and Parts Thereof.
First use Feb. 9, 1955.

SN 59,531. Gaddis Bros. Mfg. Co., Inc., Walford, Iowa. Filed Sept. 25, 1958.

PAK-MASTER

For Motor Truck and Trailer Bodies for Bulk Transport and Parts Therefor.
First use Jan. 24, 1956.
Subj. to Intf. with SN 61,820.

SN 61,820. Leach Company, Oshkosh, Wis. Filed Nov. 3, 1958.

PACKMASTER

For Refuse Collecting and Transporting Vehicles and Separate Mobile Containers for Use Therewith.
First use in the latter part of 1948.
Subj. to Intf. with SN 59,531.

SN 62,033. Parker Products Company, Delaware, Ohio. Filed Nov. 6, 1958.

Swirl

For Dollies and Mechanics' Creepers and Seats With Rollers or Casters.
First use Jan. 22, 1949.

SN 67,805. The Metropolitan Body Company, Bridgeport, Conn. Filed Feb. 16, 1959.

METRO-MITE

Owner of Reg. Nos. 345,861, 629,910, and others.
For Commercial Motor Vehicles—Namely, Trucks and Particularly Bodies Used on Multi-Stop Chassis and Structural Parts.
First use Oct. 15, 1958.

SN 68,096. Airstream Trailer Sales, Inc., Jackson Center, Ohio. Filed Feb. 20, 1959.

GLOBE TROTTER

For House Trailers.
First use in 1952.

SN 68,097. Airstream Trailer Sales, Inc., Jackson Center, Ohio. Filed Feb. 20, 1959.

FLYING CLOUD

For House Trailers.
First use in 1950.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 63,813. Electronic Systems Engineering Co., Oklahoma City, Okla. Filed Dec. 8, 1958.

LIMPANDER

For Electrical Apparatus—Namely, a Pre-Amplifier Circuit for Audio Control.
First use May 11, 1957.

SN 64,514. Wells Manufacturing Company, Inc., d.b.a. Wells Electronics Company, South Bend, Ind. Filed Dec. 17, 1958.

WEECOIL

For Electrical Transformers and Oscillator Coils and Subminiature Inductors.
First use June 1958.

SN 64,557. Perfection Mica Company, Chicago, Ill. Filed Dec. 18, 1958.

INTER-8

For Electrical Conductors With Low Pickup and Radiation Characteristics.
First use Dec. 11, 1958.

SN 59,713. Gebr. Heller Maschinenfabrik GMBH., Nurtingen,

SN 71,406. Mustang Motor Products Corporation, Glendale,

SN 66,396. American Bosch Arma Corporation, Hempstead, N.Y. Filed Jan. 26, 1959.

L-CAP

For Broad Band Interference Suppressors for Electronic Equipment.
First use Apr. 2, 1957.

SN 68,720. Mosier Research Products, Inc., Danbury, Conn. Filed Mar. 2, 1959.

RADI-MATIC

For Barriers of Wire for Fencing Areas To Be Protected Against Intrusion for Use With Radio Transmitters and Receivers for Limited Range Operation; Security Alarm Systems for the Protection of Industrial, Military and Other Areas Against Intrusion; Fence Antenna Systems; and Electronic Amplifiers and Guard Units for Use in Security Systems.
First use July 18, 1958.

SN 69,798. Electric Regulator Corporation, Norwalk, Conn. Filed Mar. 18, 1959.

ROTO-JET

For High Speed Electrical Switches.
First use Jan. 8, 1959.

SN 69,899. P. R. Mallory & Co. Inc., Indianapolis, Ind. Filed Mar. 19, 1959.

STA-LOC

For Resistors, Rheostats, and Resistor Controls.
For use Aug. 1, 1957.

SN 69,944. Bradlow, Inc., Los Angeles, Calif. Filed Mar. 20, 1959.

SOL-BRITE

For Electric Lamp Bulbs.
First use Sept. 23, 1958.

SN 70,241. Niagara Electric Fluorescent Fixture Co. Inc., Buffalo, N.Y. Filed Mar. 25, 1959.

NEFLO

For Incandescent anr Fluorescent Lamps.
First use Feb. 2, 1959.

SN 70,313. Pass & Seymour, Inc., Syracuse, N.Y. Filed Mar. 26, 1959.

ROCKER-GLO

For Electric Wall Switches.
First use Feb. 13, 1959.

SN 70,591. Fidelity Electric Company, Inc., Lancaster, Pa. Filed Mar. 31, 1959.

LOADSTAR

For Electric Generator.
First use July 1, 1957.

SN 70,672. Peerless Products Industries, Chicago, Ill. Filed Apr. 1, 1959.

PPi

For Television Antennas.
First use on or about June 15, 1958.

Class 22 — Games, Toys, and Sporting Goods

SN 42,979. Go Kart Manufacturing Co., Inc., Monrovia, Calif., assignee of G.P. Enterprises, Inc., Monrovia, Calif. Filed Dec. 24, 1957.

Go Kart

For Miniature Gasoline Engined Propelled Automobiles.
First use July 20, 1957.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 56,452. Columbus McKinnon Chain Corporation, Tonawanda, N.Y. Filed Aug. 1, 1958.

POWER-FLEX

For Power and Free Conveyor Systems and Components.
First use May 7, 1958.

SN 56,453. Columbus McKinnon Chain Corporation, Tonawanda, N.Y. Filed Aug. 1, 1958.

MONOFLEX

For Free Rail Conveyor Systems and Components.
First use May 7, 1958.

SN 56,454. Columbus McKinnon Chain Corporation, Tonawanda, N.Y. Filed Aug. 1, 1958.

POWERLINK

For Power Rail Conveyor Systems and Components Thereof.
First use May 7, 1958.

SN 64,835. Northrop Corporation, Beverly Hills, Calif., by

SN 51,547. Broyhill Furniture Factories, Lenoir, N.C. Filed

Subj. to Intf. with SN 59,531.

Characteristics.
First use Dec. 11, 1958.

SN 59,713. Gebr. Heller Maschinenfabrik GMBH., Nurtingen, Wurttemberg, Germany. Filed Sept. 29, 1958.

For Machine Tools and Controls and Parts Therefor—Namely, Horizontal, Special, and Vertical Single and Multi-Way Boring Machines; Centering and Ending Machines; Gang, Pillar, and Radial Type Drilling Machines; Horizontal, Single and Double Spindle Planer, Thread, and Vertical Milling Machines; Small, Heavy-Duty and Special Foundry and Vertical Mitre Circular Saws; Rail Sawing and Drilling Machines; Saw Blade and Tool Grinding Machines; and Hydraulic Controls and Drives for Same, Including, Control and Feed Units, Motors and Pumps.
First use in 1931; in commerce prior to 1952.

SN 61,526. Western Machinery Company, San Francisco, Calif. Filed Oct. 28, 1958.

MOBIL-MILL

For Semi-Portable Equipment for the Beneficiation of Metallic Minerals and Non-Metallic Minerals by Heavy Media Separation.
First use Jan. 20, 1958.

SN 61,790. Erdco Engineering Corporation, Addison, Ill. Filed Nov. 3, 1958.

ERDCO

For Packaging Machinery.
First use Dec. 7, 1956.

SN 63,360. Sterling Precision Corporation, Elmira, N.Y. Filed Nov. 28, 1958.

AMERICAN LAFRANCE

Owner of Reg. Nos. 125,861 and 178,503.
For Engine Driven Fire Apparatus; Hand-Propelled, Wheeled Fire Extinguishers; Fire Extinguishing Systems, and Hand Fire Extinguishers.
First use in or about January 1921.

SN 65,276. Universal Metal Products Company, Saranac, Mich. Filed Jan. 2, 1959.

Stroll'n Spray

Applicant disclaims the word "Spray" apart from the mark as shown.
For Compressed Air Sprayers.
First use Aug. 8, 1958.

SN 67,865. Firth Brown Tools Limited, Sheffield, England. Filed Feb. 17, 1959.

SPEEDICUT "CHIPBREAKER"

For Twist Drills for Industrial Use in Heavy Duty Machines.
First use March 1955; in commerce June 12, 1958.

SN 71,406. Mustang Motor Products Corporation, Glendale, Calif. Filed Apr. 13, 1959.

MUSTANG

Owner of Reg. No. 438,384.
For Internal Combustion Engines of Under a Hundred Horsepower for Use in Motorcycles and Light-Weight Vehicles.
First use at least as early as June 9, 1949.

Class 24—Laundry Appliances and Machines

SN 66,975. Worldsbest Industries, Inc., Cudahy, Wis. Filed Feb. 2, 1959.

SORTA-CART

For Movable Bag Type Receptacle for Sorting Laundry.
First use Jan. 5, 1959.

SN 67,981. Philco Corporation, Philadelphia, Pa. Filed Feb. 18, 1959.

DUOMATIC

For Electric Washing and Drying Machines.
First use in or about November 1952.

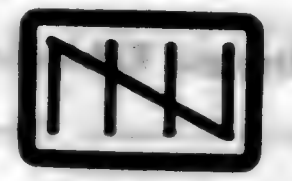
Class 26—Measuring and Scientific Appliances

SN 36,989. Asahi Optical Co., Ltd., Chuo-ku, Tokyo, Japan. Filed Sept. 11, 1957.

ASAHI PENTAX

Owner of Reg. Nos. 587,247 and 648,245.
For Cameras and Parts Thereof.
First use Dec. 12, 1956; in commerce Mar. 26, 1957.

SN 54,986. The Denominator Company, Inc., New York, N.Y. Filed July 9, 1958.



Owner of Reg. Nos. 552,491 and 126,145.
For Group of Individual Unit Counters.
First use Feb. 25, 1950.

SN 64,634. Northrop Corporation, Beverly Hills, Calif., by change of name from Northrop Aircraft, Inc., Beverly Hills, Calif. Filed Dec. 23, 1958.

For Electronic Products Comprising: Missile Guidance Systems, Aircraft Flight Control Systems, Testing Systems and Supporting Equipment of the Electronic Type, and Parts Thereof and Therefor.
First use Nov. 26, 1958.

Class 33—Glassware

Class 35—Belting, Hose, Machinery Pack-

First use Feb. 18, 1959.

First use May 7, 1958.

SN 64,835. Northrop Corporation, Beverly Hills, Calif., by change of name from Northrop Aircraft, Inc., Beverly Hills, Calif. Filed Dec. 23, 1958.

For Electronic Products Comprising: Missile Guidance Systems, Aircraft Flight Control Systems, Testing Systems and Supporting Equipment of the Electronic Type, and Parts Thereof and Therefor.
First use Nov. 26, 1958.

Class 29—Brooms, Brushes, and Dusters

SN 66,067. Milwaukee Dustless Brush Co., Milwaukee, Wis. Filed Jan. 19, 1959.

MD

For Cleaning Materials, Particularly Brushes and Brooms.
First use Apr. 15, 1943.

Class 30—Crockery, Earthenware, and Porcelain

SN 66,704. Del-Craft Company, Inc., Waukesha, Wis. Filed Jan. 29, 1959.

For China Dinnerware.
First use Sept. 10, 1958.

Class 31—Filters and Refrigerators

SN 53,613. Hankison Corporation, Canonsburg, Pa. Filed June 16, 1958.

CONDENSIFILTER

For Dehydrating and Cleaning Equipment for Gaseous Substances.
First use about October 1941.

Class 32—Furniture and Upholstery

SN 39,863. Dan-Gee Products, Chatham, N.J. Filed Oct. 31, 1957.

Applicant disclaims "Creations in Wood."
For Products Made of Wood and Used for Displaying Merchandise, Such as Counter Stands, Cabinets, Chests, Hanging Shelves, Picture Frames, Bottle Racks.
First use in October 1954.

SN 51,547. Broyhill Furniture Factories, Lenoir, N.C. Filed May 13, 1958.

COLORULE

For Upholstery Fabrics Sold Only as a Component Part of Furniture.
First use on Oct. 10, 1957.

SN 55,051. The Daho Products Company, Inc., Columbus, Ohio, assignee of The Daho Products Company, Columbus, Ohio. Filed July 10, 1958.

The words "Kwik Stik" are disclaimed apart from the mark as shown.
For Mirrors for General Use.
First use June 12, 1958.

SN 63,470. Merkle-Korff Gear Company, Chicago, Ill. Filed Dec. 1, 1958.

MOTIONDISER

For Turntable Used in Conjunction With Display Stands, Display Cases, Display Tables or the Like.
First use May 31, 1957.

SN 64,127. Add-A-Comb, Inc., New York, N.Y. Filed Dec. 12, 1958.

ADD-A-COMB

For Sectional Cellarets.
First use Sept. 24, 1958.

SN 68,287. Lufkin Rule Company, Saginaw, Mich. Filed Feb. 24, 1959.

TURNOVER TARGET

For Display Boards for Measuring Tapes, Folding Rules and the Like.
First use Jan. 6, 1959.

SN 70,738. The Porta-Products Company, Dallas, Tex. Filed Apr. 2, 1959.

PORTA-NURSERY

For Portable Baby Nursery.
First use Jan. 15, 1959.

SN 73,525. Visirecord, Inc., New York, N.Y. Filed May 12, 1959.

VIS tronic

For Filing Containers and Units for Cards and Forms.
First use Apr. 24, 1959.

SN 53,519. Livingston Audio Products Corporation, Caldwell, N.J. Filed June 13, 1958.

SN 68,042. Bandera Enterprises, Chicago, Ill. Filed Mar. 2, 1959.

BANDERA

First use March 1955; in commerce June 12, 1958.

First use Nov. 26, 1958.

Class 33—Glassware

SN 52,216. Foster-Forbes Glass Company, Marion, Ind. Filed May 23, 1958.

Moderne Coal

For Glass Bottles.
First use on or about July 1, 1930.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 53,702. The Electro-Temp Corporation, Springfield, Mass. Filed June 17, 1958.

For Complete Space Heating and Cooling Systems Including Electrically Operated and Controlled Interconnected Tanks, Heaters, Coolers, Pumps, Blowers, and Tanks for Buildings.
First use Mar. 1, 1958.

SN 55,274. Howard V. Schweitzer, d.b.a. Schweitzer Equipment Company, Cleveland, Ohio. Filed July 14, 1958.

HYDREX

For Hydraulic Air-Conditioning Spray Booths and Dust-Collecting Equipment and Replacement Parts Therefor.
First use Mar. 26, 1958.

SN 56,298. Clements Mfg. Co., Chicago, Ill. Filed July 30, 1958.

QUIK-HEAT

For Blow Torches, Hot and Cold Air Blowers, Furnace Blowers.
First use June 27, 1958.

SN 66,449. Industrial Combustion Inc., Milwaukee, Wis. Filed Jan. 26, 1959.

HEV-E-DUTY

For Combination Gas and Oil Burners and Gas Burners.
First use Feb. 7, 1957.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 53,683. Wolverine Fabricating & Mfg. Co., Inc., Inkster, Mich. Filed June 16, 1958.

Alum-N

For Gaskets and Gasket Materials.
First use Apr. 9, 1958.

SN 67,917. American Thermoplastics Products Corp., Union, N.J. Filed Feb. 18, 1959.

ATCO

For Water Hose.
First use Dec. 1, 1958.

SN 67,921. Belting Industries Co. Inc., Irvington, N.J. Filed Feb. 18, 1959.

BINCO

For Rubber Transmission Belts.
First use Oct. 14, 1958.

SN 68,066. Lassiter Corporation, Charlotte, N.C. Filed Feb. 19, 1959.

PERMAGLOSS

For Conveyor Belting.
First use in September 1955.

SN 68,157. M & H Retreading Co., Inc., d.b.a. M & H Tire Co., Watertown, Mass. Filed Feb. 20, 1959.

RACEMASTER

For Tires.
First use Jan. 5, 1952.

SN 68,395. Bishop David Freeman Co., Evanston, Ill. Filed Feb. 25, 1959.

BISHOP

For Flexible Hose.
First use on or about Dec. 20, 1958.

Class 36—Musical Instruments and Supplies

SN 46,512. Vox Productions Inc., New York, N.Y. Filed Feb. 24, 1958.

For Phonograph Records.
First use Oct. 19, 1957.

First use in October 1954.

First use Apr. 24, 1959.

SN 53,519. Livingston Audio Products Corporation, Caldwell, N.J. Filed June 13, 1958.

LIVING SOUND

For Pre-Recorded Magnetic Tape Recordings.
First use May 1, 1958.

SN 56,515. Louis Zwicki, Copenhagen, Denmark. Filed Aug. 1, 1958.

The representation of the piano apart from the mark as shown is disclaimed.

For Grand Pianos and Pianos, Parts Thereof and Accessories Thereto.
First use Sept. 30, 1937; in commerce Mar. 13, 1956.

SN 63,586. Laurel Records, Incorporated, Cape May, N.J. Filed Dec. 3, 1958.

LAUREL

For Phonograph Records.
First use Dec. 2, 1958.

SN 64,177. Imperial Records, Inc., Hollywood, Calif. Filed Dec. 12, 1958.

KNIGHT

For Mechanically Grooved Phonograph Records of the Disc Type.
First use Sept. 27, 1958.

SN 68,259. Hispavox Sociedad Anonima, Madrid, Spain. Filed Feb. 24, 1959.

HISPA VOX

Owner of Spanish Reg. No. 286,863, dated Mar. 29, 1957.
For Phonograph Records of All Kinds, Including Microgrooved Ones, Magnetic Bands, Apparatus, Instruments, and Devices for Impression, Control, and Reproduction of Sonorous Registrations and Electronic Apparatus in General.

SN 68,642. Bandera Enterprises, Chicago, Ill. Filed Mar. 2, 1959.

BANDERA

For Mechanically Grooved Phonograph Records and Needles, Albums, and Envelopes Therefor.
First use July 19, 1958.

SN 68,693. M. Hohner, Inc., New York, N.Y. Filed Mar. 2, 1959.

HOBBY

For Harmonicas.
First use Feb. 17, 1959.

SN 68,859. Webaor, Inc., Chicago, Ill. Filed Mar. 3, 1959.

ROYALITE

For High Fidelity Tape Recorder and Parts Thereof.
First use Jan. 10, 1959.

SN 69,100. Delmar Williams, d.b.a. Airway Records, Dayton, Ohio. Filed Mar. 6, 1959.

AIRWAY

For Phonograph Records.
First use Sept. 2, 1958.

Class 37—Paper and Stationery

SN 46,788. West Virginia Pulp and Paper Company, New York, N.Y. Filed Feb. 27, 1958.

X-10

For Uncreped Stretchable Paper.
First use Jan. 5, 1958.

SN 48,489. Liberty Corrugated Container Corporation, Brooklyn, N.Y. Filed Mar. 26, 1958.

LAMITITE

For Corrugated and Fiber Material Sold in Roll Form for Making Cartons, Liners for Cartons, Display Cards, and Display Pieces.
First use Jan. 15, 1958.

SN 52,584. Oneida Paper Products, Inc., Clifton, N.J. Filed May 29, 1958.

FUL-LOK

For Bags Made of Paper, Plastic, Foil, and/or Laminations Thereof.
First use Feb. 29, 1936.

SN 55,569. California Test Bureau, Los Angeles, Calif. Filed July 18, 1958.

SCOREZE

Owner of Reg. No. 574,112.
For Partially Printed Personality and Achievement Tests Including Reading Tests.
First use Feb. 25, 1950.

SN 56,953. Fox River Paper Corporation, Appleton, Wis. Filed Aug. 11, 1958.

FOXLINE

Owner of Reg. No. 533,584.
For Writing, Printing, and Blueprint Paper.
First use July 19, 1958.

SN 57,899. Hammermill Paper Company, Erie, Pa. Filed Aug. 26, 1958.

HAMMERMILL GRAPHICOPY PAPERS

Applicant disclaims the word "Papers" and the representation of the goods apart from the mark as shown. Owner of Reg. No. 137,793.
For Paper for Writing, Printing, Duplicating, and Office Use.
First use Aug. 21, 1958.

Class 38—Prints and Publications

SN 65,689. Old Ben Publishing Company, Inc., Chicago, Ill. Filed Jan. 12, 1959.

WEENIE WEE TALES

For Series of Booklets.
First use Aug. 29, 1958.

SN 65,690. Old Ben Publishing Company, Inc., Chicago, Ill. Filed Jan. 12, 1959.

WEE WEENIE TALES

For Series of Booklets.
First use Aug. 29, 1958.

SN 65,744. Warner-Lambert Pharmaceutical Company, Morris Plains, N.J. Filed Jan. 12, 1959.

ORBIS

For Quarterly Magazine for Employees.
First use Dec. 22, 1958.

SN 66,240. Simmons-Boardman Publishing Corporation, New York, N.Y. Filed Jan. 21, 1959.

RAILWAY LOCOMOTIVES AND CARS

Owner of Reg. No. 584,444.
For Monthly Magazine.
First use Sept. 12, 1952.

SN 66,631. New York Herald Tribune Inc., New York, N.Y. Filed Jan. 28, 1959.

IMPROVE Your GAME

For Syndicated Newspaper Column Panel or Section.
First use Apr. 14, 1958.

SN 66,716. The Good News Broadcasting Association, Lincoln, Nebr. Filed Jan. 29, 1959.

GOOD NEWS BROADCASTER

For Religious Periodical.
First use January 1956.

SN 66,717. The Good News Broadcasting Association, Lincoln, Nebr. Filed Jan. 29, 1959.

YOUTH AMBASSADOR

For Religious Periodical.
First use November 1957.

SN 66,735. Outboard Magazines, Inc., Jacksonville, Fla. Filed Jan. 29, 1959.

OUTBOARD PROGRESS

For Periodic Publication.
First use June 15, 1957.

SN 66,788. The Inquirer and Mirror Publishing Company (Incorporated), Nantucket, Mass. Filed Jan. 30, 1959.

THE INQUIRER AND MIRROR

For Weekly Newspaper.
First use Mar. 3, 1879.

SN 66,913. Medical Economics, Inc., Oradell, N.J. Filed Feb. 2, 1959.

PHYSICIANS' DESK REFERENCE

Owner of Reg. No. 626,998.
For Periodical Publication, a Periodical Reference Book Dealing With Pharmaceutical Specialties and Biologicals.
First use during December 1946.

SN 67,439. The Church of God (Universal), Inc., Hagerstown, Md. Filed Feb. 10, 1959.

THE WAY OF TRUTH

For Monthly Publication.
First use Jan. 1, 1948.

SN 67,441. Committee for International Economic Growth, Washington, D.C. Filed Feb. 10, 1959.

ECONOMIC WORLD

For Monthly Newspaper.
First use Jan. 20, 1959.

SN 67,725. American Trucking Associations, Inc., Washington, D.C. Filed Feb. 5, 1959.

For Transportation Newsletter Published Periodically.
First use Oct. 6, 1958.

Class 39—Clothing

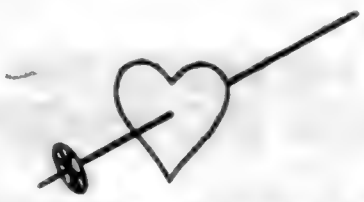
SN 34,536. Invertère Coat Company Limited, Newton Abbot, South Devon, England. Filed July 29, 1957.

Owner of British Reg. No. 754,870, dated June 19, 1956.
For Coats.

SN 37,460. E. H. Taliaferro, d.b.a. E. H. Taliaferro Manufacturing Company and "Elon of California," San Diego, Calif. Filed Sept. 18, 1957.

For Men's, Women's, and Children's Cotton and Elasticized Swim Suits and Sun Wear.
First use in 1949.

SN 41,712. Claus F. Obermeyer, Aspen, Colo. Filed Dec. 3, 1957.



For Men's, Women's, Boys', and Girls' Sweaters, Headbands, Ski Caps, Socks, Woolen Stockings, Parkas, Hoods, Sport Shirts, Ski Boots.
First use May 5, 1954.

SN 46,175. Valstar S.p.A. Italiana, Milan, Italy. Filed Feb. 19, 1958.

VITA

Priority claimed under Sec. 44(d) on Italian application filed Dec. 6, 1957; Reg. No. 134,423, dated Jan. 28, 1958. The meaning of the Italian word "Vita" is "life."
For Raincoats, Overcoats, Coats, Dresses, Jackets, and Trousers.

SN 46,517. Weinberg Corporation, Chicago, Ill. Filed Feb. 24, 1958.

MANSION

For Men's and Boys' Suits, Jackets, Coats, Trousers, Vests, and Outer Coats.
First use Feb. 10, 1958.

SN 52,382. Berkshire Knitting Mills, Wyomissing, Pa. Filed May 27, 1958.

"Nyloc"

For Hosiery.
First use Apr. 23, 1958.

SN 54,106. Smart Novelty Blouse Co., Inc., New York, N.Y. Filed June 23, 1958.

TOP-EZE

For Ladies', Misses', and Girls' Blouses.
First use Apr. 1, 1958.

SN 57,473. Gene Gooch, d.b.a. Outdoor Man, Knoxville, Tenn. Filed Aug. 19, 1958.

OUTDOOR MAN

For Thermal Knit Long Underwear for Sportsmen.
First use Apr. 1, 1958.

SN 58,826. Bear Brand Hosiery Co., Chicago, Ill. Filed Sept. 12, 1958.

Comfort-aid

For Women's Hosiery.
First use June 27, 1958.

SN 61,759. Accurate Millinery Company, New York, N.Y. Filed Nov. 3, 1958.

BRIGITTE

For Fur Felt Women's Hat Bodies for Use by Hat Manufacturers.
First use Apr. 1, 1958.

SN 62,011. C. F. Hathaway Co., Waterville, Maine. Filed Nov. 6, 1958.

The representation of the man shown in the drawing is that of a living individual, Baron George Benn Wrangell, whose consent is of record.
For Men's Outer Dress and Sport Shirts.
First use in January 1953.

SN 62,568. Mar-Gaye, Inc., Philadelphia, Pa. Filed Nov. 17, 1958.

MAR-GAYE

For Children's Sportswear—Namely, Slacks, Sportskirts, and Coordinate Tops.
First use June 6, 1958.

SN 67,409. United States Borax & Chemical Corporation, Los Angeles, Calif. Filed Feb. 9, 1959.

SN 63,413. Brower Industries, Inc., New York, N.Y. Filed Dec. 1, 1958.

SN 63,849. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Dec. 8, 1958.

PASTORALE

For Brassieres.
First use Nov. 20, 1958.

SN 63,850. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Dec. 8, 1958.

SINFONIA

For Brassieres.
First use Nov. 20, 1958.

SN 63,851. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Dec. 8, 1958.

TOCCATA

For Brassieres.
First use Nov. 20, 1958.

SN 63,852. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Dec. 8, 1958.

BERCEUSE

For Brassieres.
First use Nov. 20, 1958.

SN 63,853. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Dec. 8, 1958.

EPISODE

For Brassieres.
First use Nov. 20, 1958.

SN 63,854. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Dec. 8, 1958.

IMPROVISATION

For Brassieres.
First use Nov. 20, 1958.

SN 63,855. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Dec. 8, 1958.

INNOVATION

For Brassieres.
First use Nov. 20, 1958.

SN 63,856. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Dec. 8, 1958.

OCTAVE

For Brassieres.
First use Nov. 20, 1958.

SN 64,347. The Silvertex Company, Philadelphia, Pa. Filed Dec. 15, 1958.

LAMBSMERE

For Men's, Boys', Women's, and Children's Outer Garments—Namely, Suits, Coats, Vests, Pants, Slacks, Jackets, Skirts, Overcoats, Topcoats, Raincoats, Mackinaws, Dusters, Ulsters, Shirts, and Sport Shirts.
First use Oct. 1, 1958.

SN 64,517. Allied Stores Corporation, New York, N.Y. Filed Dec. 18, 1958.

TUFF-EZE

For Boys', Girls', Infants', and Teenage Shoes, Slippers, and Boots Made of Leather, Fabric, and Rubber, and/or a Combination of Such Materials.
First use in December 1935.

SN 65,075. Dowager Hats, Inc., New York, N.Y. Filed Dec. 30, 1958.

Dowa

Owner of Reg. No. 555,460.
For Women's Hats.
First use January 1956.

SN 65,267. Sande's, Lt'd., Laredo, Tex. Filed Jan. 2, 1959.

SANDPARK

For Men's Clothing—Namely, Suits, Sport Coats, Topcoats, Slacks, and Jackets.
First use Oct. 10, 1958.

SN 65,518. Russell Records, Inc., Ventura, Calif. Filed Jan. 8, 1959.

TAPCO

For Dance Taps.
First use Aug. 20, 1956.

SN 65,520. Stedfast Rubber Company, Inc., Boston, Mass. Filed Jan. 8, 1959.

FLEXTRA

For Rubber-Containing Box Toe and Counter Blanks for Use in Shoemaking, and Sheet Material From Which Said Blanks Are Cut.
First use Jan. 24, 1955.

SN 65,533. Bulluck Hosiery, Inc., New York, N.Y. Filed Jan. 9, 1959.

CAPSALL

For Hosiery.
First use June 18, 1942.

SN 65,536. Craddock-Terry Shoe Corporation, Lynchburg, Va. Filed Jan. 9, 1959.

MONSEIGNEUR

For Shoes.
First use Nov. 5, 1958.

SN 65,748. Admiral Shoe Corporation, Maynard, Mass. Filed Jan. 13, 1959.

ARPEGGIOS

For Women's and Misses' Shoes.
First use Dec. 19, 1958.

SN 66,637. The Angus Park Woolen Co. Inc., Hanover, Conn. Filed Jan. 28, 1959.

SN 50,915. Oxygen Equipment and Service Company, Chicago, Ill. Filed May 2, 1958.

SN 67,409. United States Borax & Chemical Corporation, Los Angeles, Calif. Filed Feb. 9, 1959.

ROSEMARY

For Diapers.
First use Jan. 22, 1959.

SN 68,306. Nord-Ray Belt Mfg. Inc., New York, N.Y. Filed Feb. 24, 1959.

WINDSOR

For Belts for Men, Boys, and Ladies.
First use Apr. 5, 1958.

SN 68,405. International Shoe Company, d.b.a. Sundial Shoe Company, St. Louis, Mo. Filed Feb. 25, 1959.

Guildcraft

For Shoes.
First use Dec. 9, 1954.

SN 68,606. Saks & Company, New York, N.Y. Filed Feb. 27, 1959.

SAKSWRAP

Owner of Reg. Nos. 304,947, 620,917, and others.
For Women's, Misses', and Children's House Dresses.
First use Feb. 16, 1959.

Class 40 — Fancy Goods, Furnishings, and Notions

SN 41,225. Assembled Products of Williamsport, Inc., Williamsport, Pa. Filed Nov. 25, 1957.

SHOWOFF

For Packaged Narrow Fabric Textile Trimmings.
First use in September 1954.

SN 62,639. Vulcanized Rubber and Plastics Company, New York, N.Y. Filed Nov. 17, 1958.

ETON

For Pocket Combs.
First use Oct. 22, 1958.

SN 62,945. Muscatine Pearl Works, Muscatine, Iowa. Filed Nov. 21, 1958.

PEARLKIST

For Buttons Made of Non-Precious, Non-Metallic Materials.
First use July 2, 1958.

SN 63,413. Brower Industries, Inc., New York, N.Y. Filed Dec. 1, 1958.

Cushion-Curl

For Hand Hair-Curlers.
First use Oct. 28, 1958.

SN 64,703. E-Z Beauty Products Co., Chester, Pa. Filed Dec. 22, 1958.

E-Z

For Tubes Used as Hair Curlers.
First use Aug. 6, 1958.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 29,808. Malden Fur Fabrics Mills, Inc., d.b.a. Malden Limited, Lawrence, Mass., by change of name from Malden Mills, Inc., Lawrence, Mass. Filed May 10, 1957.

KOALA

For Pile Fabric Made of Synthetic Fibers.
First use Apr. 8, 1957.

SN 38,688. J. P. Stevens & Co. Inc., New York, N.Y., assignee of D. B. Fuller & Co. Inc., New York, N.Y. Filed Oct. 10, 1957.

KARENA

Owner of Reg. No. 199,150.
For Textile Fabrics in the Piece of Cotton and Rayon.
First use Mar. 7, 1957.

SN 54,482. Blankets, Inc., Chicago, Ill. Filed June 30, 1958.

6 IN 1

For Outdoor Blankets.
First use Mar. 1, 1958.

SN 54,483. Blankets, Inc., Chicago, Ill. Filed June 30, 1958.

SNAP-PAK

For Outdoor Blankets.
First use Aug. 1, 1957.

SN 63,477. The Orr Felt & Blanket Company, Piqua, Ohio. Filed Dec. 1, 1958.

ORRLASKAN

Owner of Reg. No. 418,063.
For All-Wool and Part-Wool Woven Cloth for Use in Men's, Women's, and Children's Coats and Jackets.
First use Oct. 30, 1958.

SN 66,142. The Crosse & Blackwell Company, Baltimore, Md. Filed Jan. 29, 1959.

Class 47 — Wines

SN 66,637. The Angus Park Woolen Co. Inc., Hanover, Conn. Filed Jan. 28, 1959.

AAA Angus Park FABRICS

No claim is made to the exclusive use of the word "Fabrics" apart from the mark as shown.

For Textile Fabrics of Wool, Silk, Cotton, Rayon and Combinations of the Same in the Piece.

First use Mar. 14, 1930.

SN 66,723. The Jaunty Fabric Corporation, New York, N.Y. Filed Jan. 29, 1959.

CREPE AVANT

Without waiving its common law rights applicant makes no claim to the word "Crepe" apart from the mark as shown.

For Broad Woven Crepe Fabric of Silk, Nylon, and Other Synthetic Fibers, and Combinations Thereof.

First use Nov. 19, 1958.

Class 44—Dental, Medical, and Surgical Appliances

SN 25,267. Charles J. Oringer, New York, N.Y. Filed Feb. 28, 1957.

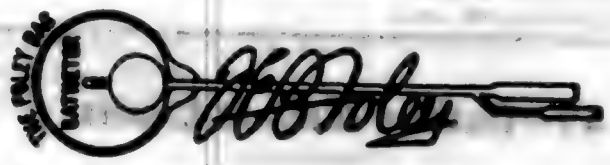
DR. ORINGER'S CHIRO-PEDIC BELT

The word "Belt" being the name of the goods is disclaimed.

For Corrective Belt for Therapeutic Purposes.

First use Dec. 21, 1956.

SN 45,157. Foley Bag Catheter, Inc., Akron, Ohio. Filed Feb. 3, 1958.



Applicant claims no exclusive rights in the configuration of the goods, per se, or in "Catheter" as the name of the goods identified herein.

For Urological and Endoscopic Instruments Such as Catheters.

First use Oct. 11, 1957.

SN 45,862. The Columbus Dental Manufacturing Company, Columbus, Ohio. Filed Feb. 14, 1958.

Steele's AG

Owner of Reg. Nos. 98,365, 585,476, and others.

For Dental Backings and Facings Formed From Precious Metals.

First use July 20, 1886.

SN 50,915. Oxygen Equipment and Service Company, Chicago, Ill. Filed May 2, 1958.

OXY-QUIK

For Oxygen Inhalators and Emergency Oxygen Breathing Equipment.

First use Feb. 24, 1958.

SN 61,997. Samuel J. Dante, d.b.a. Litchfield County Manufacturing Company, Thomaston, Conn. Filed Nov. 6, 1958.

PADLE-ESE

For Exerciser for Polio Patients.

First use Oct. 10, 1958.

SN 65,115. Modern Aids, Inc., New York, N.Y. Filed Dec. 30, 1958.

SUNFLO

For Electrically Operated Air Purifier for Non-Industrial Use.

First use Dec. 2, 1958.

Class 45—Soft Drinks and Carbonated Waters

SN 691,481. The Julep Company, Sycamore, Ill. Filed July 18, 1955. Sec. 2(f).

JULEP

Owner of Reg. No. 324,770.

For Flavoring Syrups and Concentrates Used in Making Soft Drinks, and Ready-to-Use Fountain Syrups.

First use in 1911.

SN 55,078. Mission of California, Inc., New Haven, Conn. Filed July 10, 1958.

Applicant disclaims exclusive right to use of the term "Cola."

For Cola-Flavored Soft Drink and Syrups, Concentrates, Bottlers' Bases and Extracts To Be Used in Making the Same.

First use June 3, 1958.

Class 46—Foods and Ingredients of Foods

SN 65,144. Cagle's, Inc., Atlanta, Ga. Filed Dec. 31, 1958.

For Frozen Poultry and Frozen Poultry Parts.

First use on or about Oct. 1, 1955; on or about Jan. 1, 1950, as to "Cagle's Pride."

Class 50—Merchandise Not Otherwise... Class 51—Cosmetics and Toilet Preparations

SN 66,142. The Crosse & Blackwell Company, Baltimore, Md. Filed Jan. 20, 1959.

Owner of Reg. Nos. 658,894 and 670,343.

For Tuna a la King, Anchovy Paste, Orange Marmalade, Tomato Cocktail, Fancy Cocktail Cleaned Shrimp, Chili (With Beans); Canned Meats—Namely, Corned Beef Hash, Lamb and Beef Stew—Tomato Juice, Tomato Ketchup, Mincemeat, Pickles, Vegetable Relishes; Sauces—Namely, Barbecue, Cocktail, Mint, Hard Sauce, and Seafood Cocktail Sauces; Canned Soups, and Canned Tomatoes.

First use May 31, 1957.

SN 66,517. Weidner Canning Co. Inc., Plymouth, Ind. Filed Jan. 26, 1959.

WEIDNER'S

Owner of Reg. No. 577,802.

For Pickles, Sweet Relish, and Pickled Peppers and Cauliflower.

First use Mar. 1, 1952.

SN 66,709. Farmers Produce Co. of Willmar, Minn., Willmar, Minn. Filed Jan. 29, 1959.

JENNIE-O

For Fresh Frozen Oven Ready Young Turkeys.

First use 1951.

SN 66,783. General Baking Company, New York, N.Y. Filed Jan. 30, 1959.

Mrs. Walker's

For Bread.

First use on or about Nov. 1, 1952.

SN 66,784. General Baking Company, New York, N.Y. Filed Jan. 30, 1959.

Standish Farms

Owner of Reg. No. 536,189.

For Bread.

First use on or about Oct. 18, 1952.

SN 66,973. Wesson Oil & Snowdrift Co., Inc., New Orleans, La. Filed Feb. 2, 1959.

101

Owner of Reg. No. 601,103.

For Shortening Made of Hydrogenated Vegetable Oil.

First use Nov. 28, 1958.

Class 47—Wines

SN 48,478. The Globe Distributing Company, Washington, D.C. Filed Mar. 26, 1958.

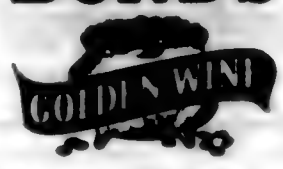
Owner of Reg. No. 314,008.

For Wines.

First use Dec. 17, 1957.

SN 48,479. The Globe Distributing Company, Washington, D.C. Filed Mar. 26, 1958.

BOND'S



No claim is made to "Golden Wine" apart from the mark as shown. Owner of Reg. No. 314,008.

For Wines.

First use Jan. 14, 1958.

SN 51,210. Milan Wineries, Detroit, Mich. Filed May 7, 1958.

NATURE BOY

For Wines.

First use Mar. 6, 1958.

SN 60,380. Julius Wile Sons & Co., Inc., New York, N.Y. Filed Oct. 9, 1958.

St. Vincent

For Burgundy Wines.

First use Mar. 12, 1952.

Class 49—Distilled Alcoholic Liquors

SN 67,181. The American Distilling Company, d.b.a. Pacmar Distilling Company, San Francisco, Calif. Filed Feb. 6, 1959.

GINBAR

For Gin.

First use Oct. 6, 1958.

SN 67,697. Robert McNish and Company Limited, Glasgow, Scotland. Filed Feb. 13, 1959.

Macnish

Owner of Reg. Nos. 411,761, 662,060, and others.

For Whisky.

First use in or about September 1956; in commerce in or about September 1956; on or about Jan. 1, 1929, as to "Macnish" in association with the words "The Grand."

Class 50—Merchandise Not Otherwise Classified

SN 58,244. Real Things Inc., Oklahoma City, Okla. Filed Sept. 2, 1958.

For Gifts, Souvenirs, and Tourist Novelties—Namely, Fossil Shark Teeth, Seahorses, Starfish, Horny Toad Eggs, Red Soil, and the Like.
First use Aug. 21, 1958.

SN 61,799. Fortner & Perrin, Inc., Glendale, Calif. Filed Nov. 3, 1958.

TOPPER
Executive

Owner of Reg. No. 531,014.
For Wire Trousers Hanger.
First use Sept. 16, 1958.

SN 64,447. Animal Trap Company of America, Lititz, Pa. Filed Dec. 17, 1958.

VICTOR
Conibear

Owner of Reg. Nos. 65,538, 98,809, and 433,186.
For Animal Traps.
First use May 23, 1958.

SN 64,708. Fortner & Perrin, Inc., Glendale, Calif. Filed Dec. 22, 1958.

TOPPER
President

For Wire Trousers Hanger.
First use Sept. 16, 1958.

SN 66,183. George T. Weisbeck, Williamsville, N.Y. Filed Jan. 20, 1959.

ROMAN HEALTH CAPE

For Flexible Waterproof Sheet Attachable to the Top of a Bath Tub To Form a Vapor Chamber.
First use Jan. 15, 1959.

Class 51—Cosmetics and Toilet Preparations

SN 65,535. Sarah Coventry, Inc., Newark, N.Y., assignee of Christy, Inc., Newark, N.Y. Filed Jan. 9, 1959.

DIANA DEERING

Owner of Reg. No. 566,893.
For Dry Skin Cream, Foundation Cream, Hand Cream, Conditioning Cream, Lubricating Cream, Oily Skin Cleanser, Dry Skin Cleanser, Skin Cleanser, Personal Deodorant in Cream and Liquid Form, Dusting Powder, Face Powder, Liquid Hand Lotion, Liquid Beauty Cream, Liquid Foundation Film, Liquid Skin Balm, Nail Polish, Nail Polish Base Coat, Liquid Cuticle Remover, Nail Polish Remover, Perfume, Cream Cologne, Rouge, and Lipstick.
First use July 1943.

Class 52—Detergents and Soaps

SN 32,277. Acme Chemical Company, Milwaukee, Wis. Filed June 20, 1957.

MEDIKO

For Liquid Soap.
First use Jan. 8, 1929.

SN 50,578. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Apr. 28, 1958.

SPECIAL H

For Alkaline Paint Remover and Metal Cleaning Composition.
First use July 1930.

SN 50,581. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Apr. 28, 1958.

P-1075

For Two Phase, Solvent Type Compound for Carbon Removal and Paint Stripping.
First use Dec. 24, 1952.

SN 55,291. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed July 14, 1958.

21 STRIPPER

No claim is made to the word "Stripper" apart from the mark as shown.
For Alkaline Composition for Removing Paint and the Like From Metallic Surfaces.
First use Mar. 22, 1954.

SN 55,292. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed July 14, 1958.

2789

For Formulated, Solvent Mixture for Desealing Integral Fuel Tanks and for Removing Resin and Rubber Base Sealing, Molding and Vulcanizing Compounds From Metallic Surfaces.
First use Aug. 19, 1954.

SN 55,293. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed July 14, 1958.

B.N.

For Alkaline Cleaner Composition Particularly Useful for the Electrocleaning of Steel and the Like.
First use during 1939.

SN 55,294. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed July 14, 1958.

11

For Alkaline Cleaner Composition Particularly Useful as a Heavy Duty Vat Cleaner for Steel and the Like.
First use during 1942.

SN 55,295. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed July 14, 1958.

20

For Emulsion Cleaner.
First use Jan. 22, 1952.

SN 55,296. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed July 14, 1958.

75

For Acidic Cleaning Composition Particularly Useful for Cleaning Exterior Surfaces of Railroad Equipment.
First use Apr. 21, 1952.

SN 55,297. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed July 14, 1958.

NO. 90

For Formulated, Alkaline Composition Particularly Useful for the Electrocleaning of Steel and the Like.
First use during 1948.

SN 55,298. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed July 14, 1958.

468

For Industrial Emulsion Cleaner.
First use Oct. 6, 1954.

SN 55,299. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed July 14, 1958.

548

For Alkaline Cleaning Composition Particularly Useful for the Cleaning of Exterior Surfaces of Railroad Equipment.
First use Sept. 8, 1954.

SN 65,926. Champion Chemicals, Inc., Midland, Tex. Filed Jan. 16, 1959.

GYPTRON

For Chemical Composition To Remove and Dissolve Scale in Oil Wells, Pipe Lines, and the Like.
First use July 3, 1958.

SN 67,324. Dumas Milner Corporation, Jackson, Miss. Filed Feb. 9, 1959.

MYSTIC FOAM

Owner of Reg. Nos. 664,542 and 675,307.
For Cleaning Preparation Having Incidental Deodorising Properties for Upholstery, Furniture, Carpets, Draperies, Tapestries, and Other Fabrics.
First use Dec. 15, 1933.

SN 67,942. King Kullen Grocery Co., Inc., Jamaica, N.Y. Filed Feb. 18, 1959.

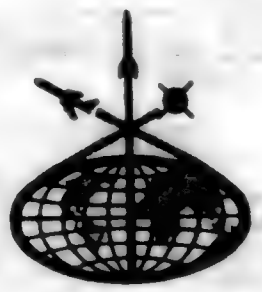
LITTLE KING

For Laundry Detergent.
First use Oct. 17, 1957.

SERVICE MARKS

Class 101 — Advertising and Business

SN 67,274. Air Force Association, Washington, D.C. Filed Feb. 9, 1959.



For Staging Joint Exhibitions of Aircraft, Spacecraft, and Guided Missiles.
First use July 17, 1958.

Class 102 — Insurance and Financial

SN 66,712. First-Citizens Bank & Trust Company, Smithfield, N.C. Filed Jan. 29, 1959.

"Add-omatic Savings"

No claim is made to the word "Savings" apart from the mark shown.
For Savings Account Services.
First use Mar. 23, 1958.

Class 107 — Education and Entertainment

SN 64,091. National Education Association of the United States, d.b.a. Future Teachers of America and National Education Association, Washington, D.C. Filed Dec. 11, 1958.

FUTURE TEACHERS OF AMERICA

For Stimulating and Maintaining the Interest of Good Students in Junior and Senior High Schools in Becoming Teachers, and in Organizing and Maintaining Local and State Units of a National Organization of Such Students.
First use June 28, 1937.

682,385. UNITED WOOD. United Wood Corporation. SN

682,416. KOOLFRAME. Borg-Warner Corporation. SN

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

682,345. RHOMOSA BRAND AND DESIGN. Rhodesian Wattle Company, Limited. SN 35,600. Pub. 5–12–59. Filed 8–15–57.

682,346. FIN 'N FEATHER CLUB. Fin 'n Feather Farm, Inc., d.b.a. Fin 'n Feather Club. SN 49,147. Pub. 5–12–59. Filed 4–7–58.

682,347. SANTOTUBE. Monsanto Chemical Company. SN 59,555. Pub. 5–12–59. Filed 9–25–58.

682,348. ESTREL. Eastman Kodak Company. SN 63,007. Pub. 5–12–59. Filed 11–24–58.

Class 2—Receptacles

682,349. SHOWER CADDY. Coffey-Hoyt Products, Inc., assignee of By-Me Products, Inc. SN 34,115. Pub. 5–12–59. Filed 7–22–57.

682,350. BOND STREET AND DESIGN. Bond Street Ltd. SN 36,274. Pub. 5–12–59. Filed 8–27–57.

682,351. FLOW-PACK. Titan Pallet Co. Inc. SN 46,254. Pub. 5–12–59. Filed 2–20–58.

682,352. LIFT-PACK. Titan Pallet Co. Inc. SN 46,255. Pub. 5–12–59. Filed 2–20–58.

682,353. THE MARKETEER. Harry Steiner. SN 51,515. Pub. 1–6–59. Filed 5–12–58.

682,354. KOASTER KIT. National Laboratories, Inc. SN 59,753. Pub. 5–12–59. Filed 9–29–58.

682,355. RAPID-ROLL. Gailyn Packaging Corp. SN 60,130. Pub. 5–12–59. Filed 10–6–58.

Class 4—Abrasives and Polishing Materials

682,356. GLASS WAX. Gold Seal Company. SN 541,384. Pub. 5–14–57. Filed 12–16–47.

Class 5—Adhesives

682,357. ACE AND DESIGN. Ace Rubber Company, Inc., assignee of Ace Rubber Company. SN 18,283. Pub. 5–12–59. Filed 10–29–56.

682,358. GRIPPER. Standard Tile Company Incorporated: SN 62,629. Pub. 5–12–59. Filed 11–17–58.

682,359. LEPAGE'S. Johnson & Johnson. SN 63,065. Pub. 5–12–59. Filed 11–24–58.

682,360. LEPAGE'S. Johnson & Johnson. SN 63,066. Pub. 5–12–59. Filed 11–24–58.

Class 6—Chemicals and Chemical Compositions

682,361. SKEETER SKAT. Hans C. Bick, Inc. SN 700,710. Pub. 5–12–59. Filed 12–28–55.

682,362. CERAMIX. Pittsburgh Plate Glass Company, assignee of The Pierce Corporation of West Virginia, by change of name from Barium Reduction Corporation. SN 16,413. Pub. 5–5–59. Filed 9–26–56.

682,363. SIMAZIN. Geigy Chemical Corporation. SN 16,536. Pub. 5–12–59. Filed 9–27–56.

682,364. CHEMICAL RESEARCH INTERMED ETC. AND DESIGN. Dr. Peter Borchert, d.b.a. Chemical Research & Intermediates Laboratories. SN 33,530. Pub. 5–12–59. Filed 7–11–57.

682,365. ETAZIN. Geigy Chemical Corporation. SN 39,138. Pub. 5–12–59. Filed 10–18–57.

682,366. SEAKURE. Delmonte Plastics Corporation. SN 45,462. Pub. 5–12–59. Filed 2–7–58.

682,367. DRY ACID. Bradford J. Cotey, d.b.a. Cotey Chemical Company. SN 46,424. Pub. 5–12–59. Filed 2–24–58.

682,368. TRIETAZINE. Geigy Chemical Corporation. SN 48,091. Pub. 5–12–59. Filed 3–20–58.

682,369. GLICO-FITA. Eli Lilly and Company. SN 49,000. Pub. 5–12–59. Filed 4–3–58.

682,370. TEREBEC. Dr. Beck & Co. G.m.b.H. SN 53,996. Pub. 5–12–59. Filed 6–23–58.

682,371. ZELL. Elastizell Corporation of America. SN 58,844. Pub. 5–12–59. Filed 9–12–58.

682,372. FLUOREX. American Fluoride Corporation. SN 61,020. Pub. 5–12–59. Filed 10–21–58.

682,373. MELPREX. American Cyanamid Company. SN 61,105. Pub. 5–12–59. Filed 10–22–58.

682,374. KERO-X. National Lead Company. SN 62,946. Pub. 5–12–59. Filed 11–21–58.

682,375. LECTRO. National Lead Company. SN 62,947. Pub. 5–12–59. Filed 11–21–58.

682,376. DESIGN OF LETTER A. Armour and Company. SN 62,986. Pub. 5–12–59. Filed 11–24–58.

682,377. PRESTONE. Union Carbide Corporation. SN 64,363. Pub. 4–7–59. Filed 12–15–58.

Class 7—Cordage

682,378. DELTA AND DESIGN. Nylon Net Company. SN 59,322. Pub. 5–12–59. Filed 9–22–58.

Class 9—Explosives, Firearms, Equipments, and Projectiles

682,379. RAYBAR. Ithaca Gun Company, Inc. SN 683,297. Pub. 4–3–56. Filed 3–11–55.

Class 10—Fertilizers

682,380. PLANTABBS. Plantabbs Corporation. SN 58,445. Pub. 5–12–59. Filed 9–5–58.

Class 12—Construction Materials

682,381. FRESH AS PAINT—FOREVER AND DESIGN. Malvern Brick and Tile Company. SN 30,915. Pub. 5–12–59. Filed 5–28–57.

682,382. CABAN-A-ROOM. Endure-a-Lifetime Products, Inc. SN 36,505. Pub. 5–12–59. Filed 8–30–57.

682,383. C-C EXTERIOR. Douglas Fir Plywood Association. SN 38,029. COLLECTIVE MARK. Pub. 5–12–59. Filed 9–30–57.

682,384. CAROLINE. The Babcock Company. SN 38,791. Pub. 5–12–59. Filed 10–14–57.

682,438. ACNECARE. Chas. Pfizer & Co., Inc. SN 57,410. Pub. 3–3–59. Filed 6–18–58.

Class 21—Electrical Apparatus, Machines,

Guided Missiles.
First use July 17, 1958.

First use June 28, 1937.

682,385. UNITED WOOD. United Wood Corporation. SN 39,431. Pub. 5–12–59. Filed 10–23–57.

682,386. REDY-SIL. Lumbermans Wholesale Supply Corp. SN 39,881. Pub. 5–12–59. Filed 10–31–57.

682,387. BAR-LOK. Speedy Manufacturing Co. SN 43,631. Pub. 5–12–59. Filed 1–8–58.

682,388. E-Z POUR. Inland Steel Products Company, assignee of Gabriel Steel Company. SN 45,556. Pub. 5–12–59. Filed 2–10–58.

682,389. PATIO MAGIC. Daryl Industries, Inc. SN 46,606. Pub. 3–31–59. Filed 2–26–58.

682,390. VICFIL. American Vermiculite Corporation. SN 47,225. Pub. 5–12–59. Filed 3–7–58.

682,391. PENNTROWEL. Pennsalt Chemicals Corporation. SN 50,184. Pub. 5–12–59. Filed 4–22–58.

682,392. RESIN-TITE WEATHERIZED. Roseburg Lumber Co. SN 50,732. Pub. 5–12–59. Filed 4–30–58.

682,393. LANAIDOR. Agalite Bronson Co. SN 51,763. Pub. 5–12–59. Filed 5–16–58.

682,394. MAGNAFRAX. The Carborundum Company. SN 53,116. Pub. 5–12–59. Filed 6–9–58.

682,395. KENTILE CRYSTALITE. Kentile Inc. SN 53,268. Pub. 2–3–59. Filed 6–10–58.

682,396. MONARCH WALL AND DESIGN. Davidson Enamel Products, Inc. SN 54,014. Pub. 5–12–59. Filed 6–23–58.

682,397. BEAM-STRUT. Tube-Strut Corp. SN 54,336. Pub. 5–12–59. Filed 6–26–58.

682,398. PREMETCO. Preformed Metal Products Co., Inc. SN 55,809. Pub. 5–12–59. Filed 7–22–58.

682,399. AWNAIR AND DESIGN. Awnair Corp. of America. SN 56,686. Pub. 5–12–59. Filed 8–6–58.

682,400. SUN-SEAL. T-K Roofing Manufacturing Co. SN 58,128. Pub. 5–12–59. Filed 8–29–58.

682,401. WILLIAMETTE AND DESIGN. Willamette Valley Lumber Co. SN 58,278. Pub. 5–12–59. Filed 9–2–58.

682,402. SHADOWLINE. Leon Kite Woodworking Co. SN 58,645. Pub. 5–12–59. Filed 9–9–58.

682,403. BILD-A-FLEX. Republic Steel Corporation. SN 60,630. Pub. 5–12–59. Filed 10–14–58.

682,404. LO-SET. Mexico Refractories Company. SN 61,833. Pub. 5–12–59. Filed 11–3–58.

682,405. ARISTOCRAT. Vois Concrete Materials Co. SN 62,047. Pub. 5–12–59. Filed 11–6–58.

682,406. METAL-ON. Johns-Manville Corporation. SN 62,302. Pub. 5–12–59. Filed 11–12–58.

682,407. DAN-D. Wahlfeld Mfg. Co. SN 62,339. Pub. 5–12–59. Filed 11–12–58.

682,408. BAKERLOK. Baker Oil Tools, Inc. SN 62,445. Pub. 5–12–59. Filed 11–14–58.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

682,409. CIRCLE SEAL AND DESIGN. Loyola University Foundation, assignee of James-Pond-Clark. SN 587,335. Pub. 8–5–52. Filed 11–4–49.

682,410. TOPSEAL. Fabricated Products Company. SN 648,092. Pub. 9–6–55. Filed 6–2–53.

682,411. SPUD-SPIKE. Paul K. Dawson, d.b.a. Superior Imagineering. SN 37,870. Pub. 5–12–59. Filed 9–26–57.

682,412. WILLIAMSBURG 4 CWXX ETC. AND DESIGN. Williamsburg Restoration, Incorporated. SN 56,223. Pub. 5–12–59. Filed 7–28–58.

682,413. WILLIAMSBURG. Williamsburg Restoration, Incorporated. SN 56,224. Pub. 5–12–59. Filed 7–28–58.

682,414. HI MOL. Carlon Products Corporation. SN 61,782. Pub. 5–12–59. Filed 11–3–58.

682,415. GLIDRAULIC. The Illinois Lock Company. SN 63,313. Pub. 5–12–59. Filed 11–28–58.

682,416. KOOLFRAME. Borg-Warner Corporation. SN 63,688. Pub. 5–12–59. Filed 12–5–58.

Class 14—Metals and Metal Castings and Forgings

682,417. STANDARD. New York Solder Company Inc. SN 33,093. Pub. 5–12–59. Filed 7–2–57.

682,418. TRI-TUNG. Uddeholm Company of America, Inc. SN 59,865. Pub. 5–12–59. Filed 9–30–58.

682,419. CRUCIBLE STEEL COMPANY OF AMERICA AND DESIGN. Crucible Steel Company of America. SN 61,696. Pub. 5–12–59. Filed 10–31–58.

682,420. COILCOAT. National-Standard Company. SN 63,342. Pub. 5–12–59. Filed 11–28–58.

Class 15—Oils and Greases

682,421. DESIGN OF CADUCEUS. Sun Oil Company. SN 6,762. Pub. 5–12–59. Filed 4–19–56.

682,422. ROUND-WORLD AND DESIGN. American Overseas Petroleum Corporation. SN 12,324. Pub. 3–5–57. Filed 7–18–56.

Class 16—Protective and Decorative Coatings

682,423. EPOCON. Permagile Corporation of America. SN 27,815. Pub. 9–3–57. Filed 4–9–57.

682,424. DIAMOND GLO. Professional Paints, Inc., d.b.a. Professional Paint Co. SN 46,479. Pub. 2–3–59. Filed 2–24–58.

682,425. SYNPLAST. American-Marietta Company. SN 53,761. Pub. 5–12–59. Filed 6–18–58.

682,426. TRUSCON SUPERCOAT. Republic Steel Corporation. SN 54,094. Pub. 5–12–59. Filed 6–23–58.

682,427. UVITRON. Lawter Chemicals, Inc. SN 58,210. Pub. 12–30–58. Filed 9–2–58.

682,428. U-V-SORB. Lawter Chemicals, Inc. SN 58,211. Pub. 1–6–59. Filed 9–2–58.

682,429. COOK & DUNN HARMONY COLORS ETC. AND DESIGN. Cook & Dunn Paint Corp. SN 59,379. Pub. 5–12–59. Filed 9–23–58.

682,430. QUALITY TUFF. General Paint & Varnish Company Inc. SN 62,548. Pub. 5–12–59. Filed 11–17–58.

682,431. TANKAMASTIC. American Tank and Tower Company. SN 62,822. Pub. 5–12–59. Filed 11–20–58.

Class 17—Tobacco Products

682,432. MERCEDES. A. Batschari, Manufacture de Cigarettes, Société Anonyme. SN 50,958. Pub. 5–12–59. Filed 5–5–58.

682,433. KINGS WAY. Brown & Williamson Tobacco Corporation. SN 62,729. Pub. 5–12–59. Filed 11–19–58.

Class 18—Medicines and Pharmaceutical Preparations

682,434. MIRACLE RUB. De Witt S. Bowser. SN 19,347. Pub. 5–12–59. Filed 11–16–56.

682,435. PRIMOTESTON. Schering Aktiengesellschaft. SN 38,303. Pub. 5–12–59. Filed 10–3–57.

682,436. "MANN" AND DESIGN. "Mann" Chemical Corporation. SN 51,359. Pub. 5–12–59. Filed 5–9–58.

682,437. BANARIN. Pharmaceuticals, Incorporated. SN 57,164. Pub. 1–13–59. Filed 8–13–58.

682,496. PNEUMACLEAN. Pneumatic Scale Corporation, Limited. SN 52,064. Pub. 5–12–59. Filed 5–21–58.

682,525. LYTLE. Lytle Engineering & Mfg. Co. SN 29,372. Pub. 5–12–59. Filed 5–3–57.

16,536. Pub. 5–12–59. Filed 9–27–56.

Pub. 5–12–59. Filed 10–14–57.

682,438. ACNECARE. Chas. Pfizer & Co., Inc. SN 57,410. Pub. 3–3–59. Filed 6–16–58.

682,439. PACKALINE. John R. Simpkins, d.b.a. The Simpkins Farm. SN 57,505. Pub. 5–12–59. Filed 8–19–58.

682,440. TRIAMINIC JUVELETS. The Wander Company, d.b.a. Smith-Dorsey. SN 58,084. Pub. 5–12–59. Filed 9–9–58.

682,441. VETAME. Olin Mathieson Chemical Corporation. SN 59,325. Pub. 5–12–59. Filed 9–22–58.

682,442. BENGAMA. Francisco L. Anselmi, d.b.a. the Flar Medicine Co. SN 59,442. Pub. 5–12–59. Filed 9–24–58.

682,443. DITRAN. Lakeside Laboratories, Inc. SN 59,627. Pub. 5–12–59. Filed 9–26–58.

682,444. TRABANE. Lakeside Laboratories, Inc. SN 59,628. Pub. 4–7–59. Filed 9–26–58.

682,445. HEP-FORTE. Marlyn Co., Inc. SN 59,632. Pub. 5–12–59. Filed 9–26–58.

682,446. UNICELLES. Hiss Pharmacal Company, Inc. SN 59,726. Pub. 5–12–59. Filed 9–29–58.

682,447. SEPTI-STAT. Stansbury Chemical Company. SN 60,002. Pub. 5–12–59. Filed 10–2–58.

682,448. SURGAIRE. American Cyanamid Company. SN 60,201. Pub. 5–12–59. Filed 10–7–58.

682,449. APTINE. Aktiebolaget Astra, Apotekarnes Kemiska Fabriker. SN 60,716. Pub. 5–12–59. Filed 10–16–58.

682,450. DUO-AQUA-DRIN. McKesson & Robbins, Incorporated. SN 60,945. Pub. 5–12–59. Filed 10–20–58.

682,451. IVY FOAM. Chas. Pfizer & Co., Inc. SN 61,076. Pub. 5–12–59. Filed 10–21–58.

682,452. SURGAMYCIN. American Cyanamid Company. SN 61,103. Pub. 5–12–59. Filed 10–22–58.

682,453. TRICIDIN. Boyle & Company. SN 61,162. Pub. 5–12–59. Filed 10–23–58.

682,454. HYDELTRONE. Merck & Co., Inc. SN 61,196. Pub. 5–12–59. Filed 10–23–58.

682,455. BEPREMI. American Home Products Corporation, d.b.a. Wyeth Laboratories. SN 61,243. Pub. 5–12–59. Filed 10–24–58.

682,456. ECUACOR. American Home Products Corporation, d.b.a. Wyeth Laboratories. SN 61,244. Pub. 5–12–59. Filed 10–24–58.

682,457. INSTIL. American Home Products Corporation, d.b.a. Whitehall Laboratories. SN 61,247. Pub. 5–12–59. Filed 10–24–58.

682,458. CALMALOID. The G. F. Harvey Company, Inc. SN 61,286. Pub. 5–12–59. Filed 10–24–58.

682,459. AZONAMIDE. The G. F. Harvey Company, Inc. SN 61,287. Pub. 5–12–59. Filed 10–24–58.

Class 19—Vehicles

682,460. CHAMP-ALL MULTI-HAUL. Gerald L. Kuhl, d.b.a. Champall Manufacturing Company. SN 44,189. Pub. 5–12–59. Filed 1–17–58.

682,461. SKODA AND DESIGN. Zavody V. I. Lenina Plzen, Narodni Podnik. SN 54,461. Pub. 5–12–59. Filed 6–27–58.

682,462. MIGHTY-GRIP. Nationwide Brake Centers, Inc. SN 59,210. Pub. 5–12–59. Filed 9–19–58.

682,463. STAND-GUARD. Bunny Bear Inc. SN 62,830. Pub. 5–12–59. Filed 11–20–58.

682,464. H AND DESIGN. Highway Trailer Company. SN 63,055. Pub. 5–12–59. Filed 11–24–58.

682,465. GARNISHIELDS. Auto Ventshade, Inc. SN 63,207. Pub. 5–12–59. Filed 11–26–58.

682,466. DRY-FLO. General American Transportation Corporation. SN 63,302. Pub. 5–12–59. Filed 11–28–58.

682,467. MILSCO. Milsco Manufacturing Company. SN 63,337. Pub. 5–12–59. Filed 11–28–58.

Class 21—Electrical Apparatus, Machines, and Supplies

682,468. E-Z WIRE. Eagle Electric Mfg. Co., Inc. SN 10,147. Pub. 10–7–58. Filed 6–13–56.

682,469. CORY. Cory Corporation. SN 28,334. Pub. 5–12–59. Filed 4–17–57.

682,470. PPI AND DESIGN. Pilgrim Products Incorporated. SN 39,088. Pub. 5–12–59. Filed 10–17–57.

682,471. WESTRONICS. Westronics, Inc. SN 42,098. Pub. 5–12–59. Fild 12–9–57.

682,472. D AND DESIGN. Digitronics Corp. SN 42,205. Pub. 5–12–59. Filed 12–11–57.

682,473. AEROWIRE ENCLOSED IN DIAMOND. Insul-8-Corp. SN 54,233. Pub. 5–12–59. Filed 6–25–58.

682,474. ARMAG. Dynacor Inc. SN 56,469. Pub. 5–12–59. Filed 8–1–58.

682,475. TV LIFE SAVER. Wuerth Tube-Saver Corporation. SN 56,673. Pub. 6–2–59. Filed 8–5–58.

682,476. SUNLUX. Sunbeam Lighting Company. SN 56,890. Pub. 5–12–59. Filed 8–8–58.

682,477. GRIDALOY M. Molecu-Wire Corporation. SN 59,200. Pub. 3–10–59. Filed 9–19–58.

682,478. DEODOR-LITE. Edward S. Gremse, d.b.a. Atlantic Ultraviolet Co. SN 60,514. Pub. 5–12–59. Filed 10–13–58.

682,479. SPACEMASTER. West Chemical Products, Inc. SN 60,586. Pub. 5–12–59. Filed 10–13–58.

682,480. MULTI-WELD. General Salvage Corporation. SN 61,364. Pub. 5–12–59. Filed 10–27–58.

682,481. AEROVENT. Aerovent Fan Company, Inc. SN 61,761. Pub. 5–12–59. Filed 11–3–58.

682,482. TURNFLEX. Yankee Metal Products Corp. SN 62,124. Pub. 5–12–59. Filed 11–7–58.

Class 22—Games, Toys, and Sporting Goods

682,483. LU MAR. Louis Marx & Company, Inc. SN 34,861. Pub. 5–12–59. Filed 8–2–57.

682,484. COIT'S. Colt Ranch, Incorporated. SN 50,975. Pub. 5–12–59. Filed 5–5–58.

682,485. HUM-BUG. Fred Arbogast Company, Inc. SN 58,820. Pub. 5–12–59. Filed 9–12–58.

682,486. CRESCENT. A. J. Hollander & Co., Inc. SN 60,409. Pub. 5–12–59. Filed 10–10–58.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

682,487. DESIGN OF SWEEP WITH ORANGE COLORED TRIANGLE. The Empire Plow Company. SN 24,946. Pub. 5–12–59. Filed 2–25–57.

682,488. DESIGN OF SWEEP WITH BROWN COLORED TRIANGLE. The Empire Plow Company. SN 24,947. Pub. 5–12–59. Filed 2–25–57.

682,489. HAY-O-VATOR. Sam Mulkey Company. SN 27,455. Pub. 9–3–57. Filed 4–3–57.

682,490. SCOTT. O. M. Scott and Sons Company. SN 28,647. Pub. 5–12–59. Filed 4–22–57.

682,491. COLES. Steels Engineering Products Limited. SN 41,053. Pub. 5–12–59. Filed 11–20–57.

682,492. EC AND DESIGN. H. F. Livermore Corporation. SN 44,721. Pub. 5–12–59. Filed 1–27–58.

682,493. HI-JACK. Olympic Foundry Company. SN 50,516. Pub. 5–12–59. Filed 4–28–58.

682,494. "CONDUMATIC." Chamor Mfg. Corp. SN 50,773. Pub. 5–12–59. Filed 5–1–58.

682,495. LOADMOR. American Equipment Corporation. SN 51,407. Pub. 11–18–58. Filed 5–12–58.

Class 30—Crockery, Earthenware, and Class 36—Musical Instruments and Supplies

63,313. Pub. 5–12–59. Filed 11–28–58.

57,164. Pub. 1–13–59. Filed 8–13–58.

682,496. PNEUMACLEAN. Pneumatic Scale Corporation, Limited. SN 52,064. Pub. 5–12–59. Filed 5–21–58.

682,497. ROLLAX. Anton Bertil Gronberg. SN 52,116. Pub. 5–12–59. Filed 5–22–58.

682,498. E-Z-CARVE. E-Z-Cook, Inc. SN 53,598. Pub. 5–12–59. Filed 6–16–58.

682,499. SHEAFFER'S. W. A. Sheaffer Pen Company. SN 53,657. Pub. 5–12–59. Filed 6–16–58.

682,500. SKODA AND DESIGN. Zavody V. I. Lenina Plzen, Narodni Podnik. SN 54,458. Pub. 5–19–59. Filed 6–27–58.

682,501. K-KIDDE AND CIRCLE DESIGN. Walter Kidde & Company, Inc. SN 54,620. Pub. 5–12–59. Filed 7–1–58.

682,502. KIDDE. Walter Kidde & Company, Inc. SN 54,621. Pub. 5–12–59. Filed 7–1–58.

682,503. G–310. Gehl Bros. Manufacturing Co. SN 54,852. Pub. 5–12–59. Filed 7–7–58.

682,504. "JIFFY." Anderson Machine and Tool Works, Inc. SN 55,829. Pub. 5–12–59. Filed 7–23–58.

682,505. ELGIN AND DESIGN. Standard Sewing Equipment Corp. SN 57,852. Pub. 5–12–59. Filed 8–25–58.

682,506. HAMMERDRIL. Mission Manufacturing Company. SN 59,317. Pub. 5–12–59. Filed 9–22–58.

682,507. HAMMERBIT. Mission Manufacturing Company. SN 59,318. Pub. 5–12–59. Filed 9–22–58.

682,508. CECO AND DESIGN. Chandler-Evans Corporation, assignee of Pratt & Whitney Company, Incorporated. SN 60,626. Pub. 5–12–59. Filed 10–14–58.

682,509. PIVOT. Pivot Punch & Die Corporation. SN 60,787. Pub. 5–12–59. Filed 10–16–58.

682,510. PORTA-MIX. Graybill Industries, Inc. SN 61,116. Pub. 5–12–59. Filed 10–22–58.

682,511. P & D. P & D Sales Co. SN 61,202. Pub. 5–12–59. Filed 10–23–58.

682,512. SPACEMATIC. The Newall Engineering Company Limited. SN 62,215. Pub. 5–12–59. Filed 11–10–58.

682,513. FOSTER-WUCHER AND DESIGN. Foster Yates & Thom Limited. SN 62,347. Pub. 5–12–59. Filed 11–12–58.

682,514. BORIZER. The Heald Machine Company. SN 62,393. Pub. 5–12–59. Filed 11–13–58.

682,515. KENMORE. Sears, Roebuck and Co. SN 62,795. Pub. 5–12–59. Filed 11–19–58.

682,516. ANGLGEAR AND DESIGN. Airborne Accessories Corporation. SN 63,200. Pub. 5–12–59. Filed 11–26–58.

682,517. QUIETFLITE. Outboard Marine Corporation. SN 63,244. Pub. 5–12–59. Filed 11–26–58.

682,518. WESTOVER. Imperial Knife Associated Companies, Inc. SN 63,315. Pub. 5–12–59. Filed 11–28–58.

682,519. OASIS. Imperial Knife Associated Companies, Inc. SN 63,317. Pub. 5–12–59. Filed 11–28–58.

682,520. AMPOMATOR. AMP Incorporated. SN 63,626. Pub. 5–12–59. Filed 12–4–58.

Class 24—Laundry Appliances and Machines

682,521. PANTEX PERK-X-TRACTOR. Pantex Manufacturing Corporation. SN 57,968. Pub. 5–12–59. Filed 8–27–58.

682,522. MAGICMATIC. Marquette Appliances, Inc. SN 63,329. Pub. 5–12–59. Filed 11–28–58.

682,523. TEMP-HOLD. Keever Starch Company. SN 63,720. Pub. 5–12–59. Filed 12–5–58.

Class 26—Measuring and Scientific Appliances

682,524. BIRCHIE. F. J. Birchie. SN 16,300. Pub. 5–12–59. Filed 10–12–56.

682,525. LYTLE. Lytle Engineering & Mfg. Co. SN 29,372. Pub. 5–12–59. Filed 5–3–57.

682,526. SPRAYJET. Bijur Lubricating Corporation. SN 37,853. Pub. 5–12–59. Filed 9–26–57.

682,527. SPRAYMIST. Bijur Lubricating Corporation. SN 37,855. Pub. 5–12–59. Filed 9–26–57.

682,528. SPRAYCOOL. Bijur Lubricating Corporation. SN 37,857. Pub. 5–12–59. Filed 9–26–57.

682,529. „XENAR." Jos. Schneider & Co., Optische Werke. SN 47,000. Pub. 5–12–59. Filed 3–3–58.

682,530. MINELCO ETC. Miniature Electronic Components Corporation. SN 47,201. Pub. 5–12–59. Filed 3–6–58.

682,531. MINELCO. Miniature Electronic Components Corporation. SN 47,202. Pub. 5–12–59. Filed 3–6–58.

682,532. TWO WING DESIGN. Bell & Howell Company. SN 50,677. Pub. 5–12–59. Filed 4–30–58.

682,533. FOCORECT. Kurt Kirchhoff. SN 16,702. Pub. 5–26–59. Filed 10–1–56.

682,534. TWO WING DESIGN. Bell & Howell Company. SN 50,764. Pub. 5–12–59. Filed 5–1–58.

682,535. EXACTA. Exacta-Continental Bureaumaschinenwerk Gesellschaft mit beschraenkter Haftung. SN 51,707. Pub. 5–12–59. Filed 5–15–58.

682,536. OVAL DESIGN. Narda Ultrasonics Corporation. SN 53,628. Pub. 5–12–59. Filed 6–16–58.

682,537. HI-T. Guiton Industries, Inc. SN 57,072. Pub. 5–12–59. Filed 8–12–58.

682,538. SCANATRON. J. F. Crosfield Limited. SN 59,032. Pub. 5–12–59. Filed 9–17–58.

682,539. COMPCO. Compco Corporation. SN 60,483. Pub. 5–12–59. Filed 10–13–58.

682,540. ULTRAGRAPH. Automation Instruments, Inc. SN 60,791. Pub. 5–12–59. Filed 10–17–58.

682,541. TRICROMETER. J. R. Moore. SN 61,422. Pub. 5–12–59. Filed 10–27–58.

682,542. KAL-SPARK. Kal-Equip Company. SN 62,691. Pub. 5–12–59. Filed 11–18–58.

682,543. KAL-TACH. Kal-Equip Company. SN 62,692. Pub. 5–12–59. Filed 11–18–58.

Class 28—Jewelry and Precious-Metal Ware

682,544. MAGIC MOMENT. Empire Crafts Corporation. SN 60,121. Pub. 5–12–59. Filed 10–6–58.

682,545. DATING REGULAR. David Karp Company, Inc., d.b.a. Hand Kraft. SN 60,823. Pub. 5–12–59. Filed 10–17–58.

682,546. RICINI AND DESIGN. J. B. Malcolm & Company, Inc. SN 60,829. Pub. 5–12–59. Filed 10–17–58.

682,547. GLAMOURCRAFT. Coro, Inc. SN 61,033. Pub. 5–12–59. Filed 10–21–58.

682,548. FAITHFUL FOREVER. Feature Ring Co., Inc. SN 61,111. Pub. 5–12–59. Filed 10–22–58.

682,549. HEARTBAND. E. H. Tepe Company, Inc. SN 61,451. Pub. 5–12–59. Filed 10–27–58.

682,550. VICTORIA. Granat Bros. SN 61,806. Pub. 5–12–59. Filed 11–3–58.

682,551. ONEIDA. Oneida Ltd. SN 61,847. Pub. 5–12–59. Filed 11–3–58.

682,552. C.M.J. Corydon M. Johnson Co., Inc. SN 62,015. Pub. 5–12–59. Filed 11–6–58.

682,553. SEA WINGS. The International Silver Company. SN 62,301. Pub. 5–12–59. Filed 11–12–58.

Class 29—Brooms, Brushes, and Dusters

682,554. KITCHEN TIGER. Truly-Magic Products, Inc. SN 53,065. Pub. 5–12–59. Filed 6–6–58.

682,555. K. S. H. Kress and Company. SN 61,572. Pub. 5–12–59. Filed 10–29–58.

682,603. PIC-A-POP. Manes Fabrics Co., Inc. SN 57,698.

682,623. LI'L GENERAL AND DESIGN. Li'l General

Class 30—Crockery, Earthenware, and Porcelain

682,556. PLANTATION COLONIAL AND DESIGN. Carl Forslund, Inc. SN 43,446. Pub. 5–12–59. Filed 1–6–58.

682,557. SAUCY BOAT. Carl Forslund, Inc. SN 50,473. Pub. 5–12–59. Filed 4–28–58.

682,558. FLINTRIDGE. Flintridge China Company. SN 63,818. Pub. 5–12–59. Filed 12–8–58.

Class 32—Furniture and Upholstery

682,559. WHEEL-A-WAY AND DESIGN. Smith & Davis Manufacturing Company. SN 51,297. Pub. 5–12–59. Filed 5–8–58.

682,560. BABY-FORM. Trimble, Inc. SN 54,353. Pub. 5–12–59. Filed 6–26–58.

682,561. "SEE ALL" REFLECTOR. Norman Industries, Inc. SN 62,777. Pub. 5–12–59. Filed 11–10–58.

Class 33—Glassware

682,562. ANCHORWHITE. Anchor Hocking Glass Corporation. SN 63,790. Pub. 5–12–59. Filed 12–8–58.

Class 34—Heating, Lighting, and Ventilating Apparatus

682,563. FLAME FLOATS. Holen Imports, Inc. SN 47,195. Pub. 5–12–59. Filed 3–6–58.

682,564. HOLLY MAID. Hollywood Water Heater Company. SN 51,127. Pub. 11–18–58. Filed 5–6–58.

682,565. WILLIAMSBURG 4 CWXX ETC. AND DESIGN. Williamsburg Restoration, Incorporated. SN 56,222. Pub. 5–12–59. Filed 7–28–58.

682,566. WILLIAMSBURG. Williamsburg Restoration, Incorporated. SN 56,225. Pub. 5–12–59. Filed 7–28–58.

682,567. OPPO-MATIC. Eigen Manufacturing Corporation. SN 58,177. Pub. 5–12–59. Filed 9–2–58.

682,568. LOUVAIRE. Air Devices, Inc. SN 63,385. Pub. 5–12–59. Filed 12–1–58.

682,569. SCOOPTROL. Air Devices, Inc. SN 63,386. Pub. 5–12–59. Filed 12–1–58.

682,570. SCOOPMASTER. Air Devices, Inc. SN 63,387. Pub. 5–12–59. Filed 12–1–58.

682,571. CONTROLAIRE. Air Devices, Inc. SN 63,388. Pub. 5–12–59. Filed 12–1–58.

682,572. REPRESENTATION OF SUNBURST. Bickley Furnaces, Incorporated. SN 63,410. Pub. 5–12–59. Filed 12–1–58.

682,573. EW AND DESIGN. Ellis & Watts Products, Inc. SN 63,435. Pub. 5–12–59. Filed 12–1–58.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

682,574. ACE. Ace Rubber Company, Inc., assignee of Ace Rubber Company. SN 18,284. Pub. 5–12–59. Filed 10–29–56.

682,575. CAT & DOG. The Rubber Shop, Inc., d.b.a. The Royal Rubber Company. SN 23,754. Pub. 5–12–59. Filed 7–15–57.

682,576. HEXSEAL. Hamilton Kent Manufacturing Company. SN 48,413. Pub. 5–12–59. Filed 3–25–58.

682,577. RACEWAY. The Goodyear Tire & Rubber Company. SN 62,755. Pub. 5–12–59. Filed 11–19–58.

Class 36—Musical Instruments and Supplies

682,578. SAMSON. Esther Kavaleky. SN 54,867. Pub. 2–3–59. Filed 7–7–58.

682,579. GOYA. Hershman Musical Instrument Co., Inc. SN 59,893. Pub. 5–12–59. Filed 10–1–58.

682,580. BOMARC. Bomarc Record Co., Inc. SN 61,690. Pub. 5–12–59. Filed 10–31–58.

Class 37—Paper and Stationery

682,581. DOVE MILL AND DESIGN. The Mead Corporation. SN 41,658. Pub. 5–12–59. Filed 12–2–57.

682,582. GESTELITH. Gestetner Limited. SN 42,472. Pub. 5–12–59. Filed 12–16–57.

682,583. DURAKOTE. Springfield Coated Paper Corp. SN 42,995. Pub. 5–12–59. Filed 12–24–57.

682,584. CUNAPOST. Cuna Supply Cooperative. SN 52,632. Pub. 5–12–59. Filed 5–22–58.

682,585. KWIK CHEK. American Guidance Service, Inc. SN 58,001. Pub. 3–31–59. Filed 8–28–58.

Class 38—Prints and Publications

682,586. WICKS PICKS. John Ferraiolo. SN 44,533. Pub. 5–12–59. Filed 1–23–58.

682,587. TATTOO. B & W Products, Inc. SN 48,229. Pub. 3–31–59. Filed 3–24–58.

682,588. PHOTOFACT. Howard W. Sams & Co., Inc. SN 49,619. Pub. 5–12–59. Filed 4–14–58.

682,589. HOWARD W. SAMS. Howard W. Sams & Co., Inc. SN 49,619. Pub. 5–12–59. Filed 4–14–58.

682,590. THE WORLD IS YOUR STAGE. Eda Di Maggio, d.b.a. Eda Edson. SN 50,461. Pub. 5–12–59. Filed 4–28–58.

682,591. SANI-FACTS. Wyandotte Chemicals Corporation. SN 58,970. Pub. 5–12–59. Filed 6–20–58.

682,592. DIAL-A-SPICE. Roberts Pacific, Ltd. SN 57,569. Pub. 5–12–59. Filed 8–20–58.

682,593. SCREENBILL. Worldmark Press, Inc. SN 58,134. Pub. 5–12–59. Filed 8–18–58.

682,594. BANNER. Benziger Brothers, Inc. SN 61,773. Pub. 5–12–59. Filed 11–3–58.

682,595. FAIRMARK. Larry E. Klump Company, Inc. SN 61,814. Pub. 5–12–59. Filed 11–3–58.

682,596. TO THE MOON. Stratoflex, Inc. SN 61,971. Pub. 5–12–59. Filed 11–5–58.

Class 39—Clothing

682,597. LAZY PALS AND DESIGN. Shoe Corporation of America. SN 575,934. Pub. 6–30–53. Filed 3–23–49.

682,598. IMPERIA COTTONS. The Joseph & Feiss Company. SN 36,445. Pub. 5–12–59. Filed 8–29–57.

682,599. MADE RITE. Eugene Potter Thornton and Elizabeth P. Thornton. SN 37,988. Pub. 9–2–58. Filed 9–27–57.

682,600. FASHION-EASE. The Scholl Mfg. Co., Inc. SN 48,936. Pub. 10–28–58. Filed 4–2–58.

682,601. SAND DABBERS. Farah Manufacturing Company, Inc. SN 62,848. Pub. 6–23–59. Filed 11–20–58.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

682,602. LANO-FAB. Thomas Wilson & Co., Inc. SN 36,133. Pub. 4–29–58. Filed 8–23–57.

Class 48—Malt Beverages and Liquors

682,678. ADAM'S APPLE. Colgate-Palmolive Company.

682,603. PIC-A-POP. Manes Fabrics Co., Inc. SN 57,698. Pub. 5–12–59. Filed 8–22–58.

682,604. CAPE COD CLE-NET AND DESIGN. Alyce H. Matthews, d.b.a. Cape Cod Cle-Net Company. SN 58,218. Pub. 5–12–59. Filed 9–2–58.

Class 43—Thread and Yarn

682,605. RHOVYLON. Societe Rhovyl. SN 60,714. Pub. 5–12–59. Filed 9–23–58.

Class 44—Dental, Medical, and Surgical Appliances

682,606. RHEUMOVIL. Polymer Industrie Chimiche Societa per Azioni. SN 44,042. Pub. 5–12–59. Filed 1–15–58.

682,607. SLENDEROLL. Profile, Inc., by change of name from Profile Slenderizing Salon. SN 51,584. Pub. 5–12–59. Filed 5–13–58.

682,608. ESTRO. Estro, Inc., by change of name from Chicagoland Nagara Cycloid Massage, Inc. SN 55,903. Pub. 5–12–59. Filed 7–24–58.

682,609. LUBRI-KLEEN AND DESIGN. Midwest Dental Mfg. Co. SN 56,985. Pub. 5–12–59. Filed 8–11–58.

682,610. PD CORP. AND DESIGN. Precision Dynamics Corporation. SN 60,178. Pub. 5–12–59. Filed 10–6–58.

682,611. SECURLINE. Precision Dynamics Corporation. SN 60,179. Pub. 5–12–59. Filed 10–6–58.

Class 45—Soft Drinks and Carbonated Waters

682,612. BAR-B. Coca-Cola Bottling Company of Los Angeles. SN 62,526. Pub. 5–12–59. Filed 11–17–58.

Class 46—Foods and Ingredients of Foods

682,613. OVEN-FRESH. Weston Biscuit Company, Inc., assignee of Superior Biscuit Company. SN 677,825. CONCURRENT USE. Pub. 5–12–59. Filed 12–6–54.

682,614. MAMMAL-LAC. Midwest Dried Milk Company, d.b.a. Midwest. SN 11,180. Pub. 5–12–59. Filed 6–28–56.

682,615. MILNOT. Milnot Company. SN 24,060. Pub. 5–12–59. Filed 2–8–57.

682,616. LENI. Morrie L. Schrager, d.b.a. Leni Foods. SN 34,558. Pub. 5–12–59. Filed 7–29–57.

682,617. CUP-PAC AND DESIGN. Temp-Rex Corp. SN 34,873. Pub. 5–12–59. Filed 8–2–57.

682,618. HAWTHORN MELLODY. Hawthorn-Mellody Farms Dairy, Inc. SN 38,146. Pub. 5–12–59. Filed 10–1–57.

682,619. REPRESENTATION OF FANTASTIC MAN. King Kullen Grocery Co., Inc. SN 41,458. Pub. 5–12–59. Filed 11–27–57.

682,620. SWEET LIFE AND DESIGN. Sweet Life Products Corporation, by change of name from Sweet Life Brands, Inc. SN 41,729. Pub. 5–12–59. Filed 12–3–57.

682,621. COFYBRETH. Ricardo Rubio Vivanco and Raleigh Augustus Gibson. SN 43,285. Pub. 5–12–59. Filed 12–31–57.

682,622. O-SO-GOOD. The Instant Products Manufacturing Company, d.b.a. O-So-Good Food Products Co. SN 44,711. Pub. 5–12–59. Filed 1–27–58.

682,623. LI'L GENERAL AND DESIGN. Li'l General Stores, Inc. SN 48,294. Pub. 5–12–59. Filed 3–24–58.

682,624. MISTLETOE. Butler Coal & Grain Company. SN 49,247. Pub. 5–12–59. Filed 4–8–58.

682,625. SUPER-DIET. Food Science Corporation. SN 49,266. Pub. 5–12–59. Filed 4–8–58.

682,626. CERTI-WHIP. The Capital City Products Company. SN 50,446. Pub. 5–12–59. Filed 4–28–58.

682,627. MONEY MAKER. Camilla Cotton Oil Company. SN 51,170. Pub. 5–12–59. Filed 5–7–58.

682,628. SUPERESIN. Fritzsche Brothers, Inc. SN 51,890. Pub. 5–12–59. Filed 5–19–58.

682,629. BUTTER FLAKE. G. P. Gundlach & Co., Inc. SN 52,480. Pub. 5–12–59. Filed 5–28–58.

682,630. GOLD CUP. Hoffman Candy Company. SN 56,962. Pub. 5–12–59. Filed 8–11–58.

682,631. MALBO AND DESIGN. Jack's Cookie Co., Inc., assignee of Malbis Bakery Corporation. SN 57,083. Pub. 5–12–59. Filed 8–12–58.

682,632. FLAVOR RITE. The Richlow Manufacturing Company. SN 57,714. Pub. 5–12–59. Filed 8–22–58.

682,633. ST. ANTHONYS. The Rock Rift Timber Corporation. SN 58,135. Pub. 5–12–59. Filed 8–27–58.

682,634. BELLE FLEUR. Stauffer and Sons Incorporated. SN 58,674. Pub. 5–12–59. Filed 9–9–58.

682,635. FLAGSHIP. Admiral Packing Company. SN 58,689. Pub. 5–12–59. Filed 9–10–58.

682,636. ADMIRAL. Admiral Packing Company. SN 58,691. Pub. 5–12–59. Filed 9–10–58.

682,637. GOLDEN TONE. Potato Products Corporation. SN 59,060. Pub. 5–12–59. Filed 9–17–58.

682,638. ESKIMO LADY-FINGERS. Eskimo Pie Corporation. SN 59,460. Pub. 5–12–59. Filed 9–24–58.

682,639. STAR DUST. Fruzola Company of St. Louis, d.b.a. Fruzola Co. SN 59,782. Pub. 5–12–59. Filed 9–29–58.

682,640. VIGOR SWIG. G. P. Gundlach & Co., Inc. SN 59,892. Pub. 5–12–59. Filed 10–1–58.

682,641. CLAUSSEN. C. F. Claussen & Sons, Inc. SN 60,112. Pub. 5–12–59. Filed 10–6–58.

682,642. WILKINS AND DESIGN. John H. Wilkins Company, Inc. SN 61,014. Pub. 5–12–59. Filed 10–20–58.

682,643. CIRCUS AND REPRESENTATION OF ELEPHANT AND DESIGN. Circus Foods Inc. SN 61,465. Pub. 5–12–59. Filed 10–27–58.

682,644. MISS GOLDY. S. & W. Poultry Farms, Inc. SN 62,327. Pub. 5–12–59. Filed 11–12–58.

682,645. GOLDEN RISE. American Foods Inc. SN 62,438. Pub. 5–12–59. Filed 11–14–58.

682,646. PIONEER MOON. Leaf Brands, Inc. SN 62,470. Pub. 5–12–59. Filed 11–14–58.

682,647. FLEET MIX. Safeway Stores, Incorporated, d.b.a. Conway Oil Co. SN 62,490. Pub. 5–12–59. Filed 11–14–58.

682,648. CONSAUL. Lee A. Consaul Company. SN 62,527. Pub. 5–12–59. Filed 11–17–58.

682,649. PIK-O-SPICE. Dodge & Olcott, Inc. SN 62,535. Pub. 5–12–59. Filed 11–17–58.

682,650. MAM-ZEL. Medallion Fruit Sales, Inc. SN 62,577. Pub. 5–12–59. Filed 11–17–58.

682,651. RIVER GEM. Arvida Fruit Co. SN 62,666. Pub. 5–12–59. Filed 11–18–58.

682,652. QUARTET. Exeter Grape Growers, d.b.a. Cal-Bob-Roy-Merlin. SN 63,012. Pub. 5–12–59. Filed 11–24–58.

682,653. IRONWOOD. Leo M. Kunisaki. SN 68,709. Pub. 5–12–59. Filed 3–2–59.

Class 47—Wines

682,654. HI FI. Chateau Wines Corporation. SN 60,343. Pub. 5–12–59. Filed 10–9–58.

Class 106—Material Treatment

Collective Membership Marks

Class 48—Malt Beverages and Liquors

682,655. BIG D. Drewrys Limited, U.S.A., Inc. SN 52,479. Pub. 5–12–59. Filed 5–28–58.

Class 49—Distilled Alcoholic Liquors

682,656. TWENTY-ONE BRANDS, INC. AND DESIGN. "21" Brands, Inc. SN 20,499. Pub. 5–12–59. Filed 12–5–56.

682,657. HENCO. Schieffelin & Co. SN 48,797. Pub. 5–12–59. Filed 3–31–58.

682,658. BRAS D'OR. Schieffelin & Co. SN 48,798. Pub. 5–12–59. Filed 3–31–58.

682,659. OLD WATERFALL. Old Waterfall Distilling Company. SN 49,179. Pub. 5–12–59. Filed 4–7–58.

682,660. OLD WATERFALL AND DESIGN. Old Waterfall Distilling Company. SN 49,294. Pub. 5–12–59. Filed 4–8–58.

682,661. OLD MUSEUM. Barton Distilling Company. SN 61,687. Pub. 5–12–59. Filed 10–31–58.

Class 50—Merchandise Not Otherwise Classified

682,662. PHOENIX HARBURG AND DESIGN. Phoenix Gummiwerke Aktiengesellschaft. SN 34,005. Pub. 1–21–58. Filed 7–18–57.

682,663. DB DAVID BRADLEY. Sears, Roebuck and Co. SN 50,406. Pub. 5–12–59. Filed 4–25–58.

682,664. MAGI-CARPETS. American Wiper and Waste Mills, d.b.a. The Nu-Towel Company. SN 52,848. Pub. 3–31–59 Filed 6–4–58.

682,665. SELL-A-PROMPTER. General Motors Corporation. SN 57,203. Pub. 3–31–59. Filed 8–14–58.

682,666. SKY-CAMP. Pop-Tent Corporation, assignee of Lawrence E. Pugsley. SN 58,239. Pub. 5–12–59. Filed 9–2–58.

682,667. NIAGARA. Niagara Plastics Company. SN 62,595. Pub. 5–12–59. Filed 11–17–58.

682,668. W AND DESIGN. A. H. Wirz, Inc. SN 62,646. Pub. 5–12–59. Filed 11–17–58.

682,669. FIBRE-MATE. Jas. H. Matthews & Co. SN 63,085. Pub. 5–12–59. Filed 11–24–58.

682,670. TROPICAL SEA AND DESIGN. Howard F. Benson, d.b.a. Benson Company. SN 63,408. Pub. 5–12–59. Filed 12–1–58.

682,671. STARLITE. Revlis Company. SN 63,551. Pub. 5–12–59. Filed 12–2–58.

682,672. REVLIS. Revlis Company. SN 63,552. Pub. 5–12–59. Filed 12–2–58.

Class 51—Cosmetics and Toilet Preparations

682,673. LITHE FORM. Erica Jenis, Inc. SN 15,189. Pub. 5–12–59. Filed 9–6–56.

682,674. BEAUTY CURL. Richard Hudnut. SN 30,164. Pub. 5–12–59. Filed 5–16–57.

682,675. CLICK CHANGE. Elizabeth Arden Sales Corporation. SN 33,395. Pub. 5–12–59. Filed 7–9–57.

682,676. TIZIAN. Ferdinand Mulhens, d.b.a. Eau de Cologne- & Parfumerie-Fabrik Glockengasse No. 4711, Gegenuber der Pferdepost von Ferd. Mulhens. SN 44,738. Pub. 5–12–59. Filed 1–27–58.

682,677. PRINCESS PACE. The Procter & Gamble Company. SN 56,877. Pub. 5–12–59. Filed 8–8–58.

682,678. ADAM'S APPLE. Colgate-Palmolive Company. SN 59,029. Pub. 5–12–59. Filed 9–17–58.

Class 52—Detergents and Soaps

682,679. BULL DOG "RINSE AWAY" ETC. AND DESIGN. Gillespie Varnish Company, assignee of The Bulldog Corporation. SN 9,521. Pub. 11–11–58. Filed 6–4–56.

682,680. BIOTHERM. Societe Francaise des Cosmetiques Biologiques. SN 48,589. Pub. 10–7–58. Filed 3–27–58.

682,681. DUCHESS. West Coast Grocery Company. SN 54,917. Pub. 5–12–59. Filed 7–7–58.

682,682. A-M AND DESIGN. American-Marietta Company. SN 60,081. Pub. 5–12–59. Filed 10–6–58.

682,683. A-M. American-Marietta Company. SN 60,082. Pub. 5–12–59. Filed 10–6–58.

682,684. CUT & CURL. Cut & Curl, Inc. SN 62,879. Pub. 5–12–59. Filed 11–13–58.

682,685. AQUA-DESCENCE. Nutrilite Products, Inc. SN 62,598. Pub. 5–12–59. Filed 11–17–58.

Service Marks

Class 101—Advertising and Business

682,686. THE AGRIVAC SYSTEM OF FARM ACCOUNTING. Electronic Farm Records, Inc. SN 27,287. Pub. 5–12–59. Filed 4–1–57.

682,687. HOME IMPROVEMENT PRODUCTS SHOW AND DESIGN. National Combination Storm Window and Door Institute, Inc. SN 30,925. Pub. 5–12–59. Filed 5–28–57.

682,688. JITNEY-JUNGLE. Jitney-Jungle Incorporated. SN 45,392. Pub. 5–12–59. Filed 2–6–58.

682,689. HAVE GAVEL WILL TRAVEL AND DESIGN OF A GAVEL. The Effron Corporation. SN 56,629. Pub. 5–12–59. Filed 8–5–58.

682,690. REPRESENTATION OF ANIMATED DROP OF WATER AWWA. American Water Works Association, Inc. SN 58,145. Pub. 5–12–59. Filed 9–2–58.

Class 102—Insurance and Financial

682,691. LET WORGESS DO YOUR WORRYING AND DESIGN. Worgess Insurance Agency. SN 13,497. Pub. 5–12–59. Filed 8–6–56.

682,692. REINVESTMENT PLAN RP AND DESIGN. Merritt F. Conway, d.b.a. Conway Mortgage Company. SN 43,299. Pub. 5–12–59. Filed 1–2–58.

682,693. SPACED CIRCLES DESIGN. Melvin Schlesinger, d.b.a. Schlesinger Realty Co. SN 59,854. Pub. 5–12–59. Filed 10–21–58.

Class 103—Construction and Repair

682,694. ELECTRO-VIVE AND DESIGN. Southwestern Fur Service, Inc. SN 57,930. Pub. 5–12–59. Filed 8–26–58.

Class 104—Communication

682,695. THE NORTHWEST'S 50,000-WATT GIANT. Mid-West Radio-Television, Inc. SN 33,277. Pub. 5–12–59. Filed 7–5–57.

682,707. B. Heller & Company, Chicago, Ill. SN 46,143. Filed P.R. 2–19–58; Am. S.R. 5–8–59.

682,709. Cosimo Amato S.p.A., Naples, Italy. SN 59,452. Filed P.R. 9–24–58; Am. S.R. 4–15–59.

Class 106 — Material Treatment

682,696. PETRECO. Petrolite Corporation. SN 43,868. Pub. 5–12–59. Filed 1–13–58.

Class 107 — Education and Entertainment

682,697. CIBA IN THE TRADITION OF RESEARCH. Ciba Pharmaceutical Products Inc. SN 19,571. Pub. 5–12–59. Filed 11–20–56.

Collective Membership Marks

Class 200

682,698. MEMBER HBA ETC. AND DESIGN. Home Builders Association of Greater Kansas City. SN 36,188. Pub. 5–12–59. Filed 8–26–57.

682,699. INTER-FRATERNAL MASONIC, ETC. AND DESIGN. The Inter-Fraternal Masonic Relations Commission. SN 62,465. Pub. 5–12–59. Filed 11–14–58.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptacles

682,700. Liapenard Mfg. Corp., Brooklyn, N.Y. SN 56,674. Filed P.R. 6–24–58; Am. S.R. 2–16–59.

JUG-N-BAG

For Insulated Carrying Bag With Removable Rigid Container.
First use in January 1958.

Class 15 — Oils and Greases

682,701. Topsall Lubricants, Inc., Kenmore, N.Y. SN 20,416. Filed 12–4–56.

KLEENLUBE

For Lubricating Greases.
First use Apr. 6, 1955.

Class 18 — Medicines and Pharmaceutical Preparations

682,702. Curt H. Abel, d.b.a. Novis Co., Flushing, N.Y. SN 42,684. Filed P.R. 12–19–57; Am. S.R. 5–26–59.

For Medicinal-Antiseptic Mouth Wash Concentrate.
First use Nov. 18, 1957.

Class 27 — Horological Instruments

682,703. Fabrique d'Horlogerie Nikles, Haute-Savoie, France. SN 63,932. Filed P.R. 12–9–58; Am. S.R. 6–2–59.

NIKLES

Priority claimed under Sec. 44(d) on French Reg. No. 600, dated Oct. 3, 1958 (Saint-Julien-en-Genevois, Haute Savoie); Natl. Inst. No. 115,257.
For Watches, Clocks, Chronometers and Parts Thereof.

Class 46 — Foods and Ingredients of Foods

682,704. Golden Gate Salami Company, San Francisco, Calif. SN 11,850. Filed P.R. 7–10–56; Am. S.R. 12–2–58.

E-Z OPEN PAK

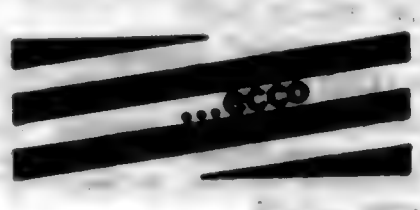
For Packaged Luncheon Meats in a Cellophane Tear Open Package.
First use Sept. 21, 1955.

682,705. Lewis-Harwood & Co. Inc., d.b.a. Lewis-Harwood Co., Inc., Hempstead, N.Y. SN 16,705. Filed P.R. 9–14–56; Am. S.R. 6–1–59.

DE-FOAM

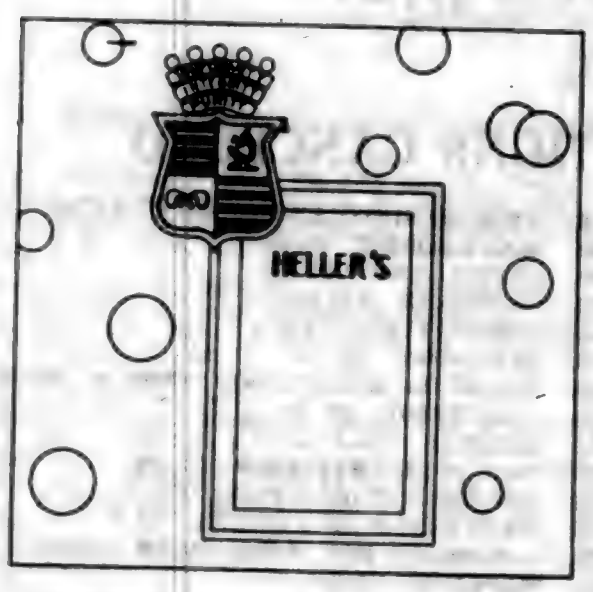
For De-Foaming Additive Used in Connection With Dairy Products.
First use Apr. 11, 1956.

682,706. Franck Industria Nazionale dei Succedanei al Caffè S.p.A., Milan, Italy. SN 34,686. Filed P.R. 7–31–57; Am. S.R. 5–20–59.



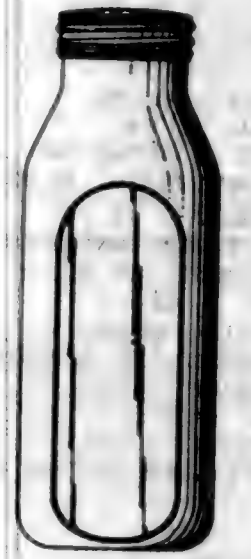
Owner of Italian Reg. No. 129,907, dated Nov. 6, 1956.
For Substitutes of Coffee.

682,707. B. Heller & Company, Chicago, Ill. SN 46,143. Filed P.R. 2–19–58; Am. S.R. 5–8–59.



For Seasoning for Meats and Meat Products.
First use Sept. 1, 1957; 1894 as to "Heller's."

682,708. Francesco Bertolli, S.p.A., Lucca, Italy. SN 54,372. Filed P.R. 6–27–58; Am. S.R. 1–8–59.



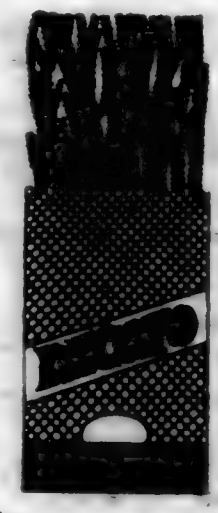
The mark comprises the contour or conformation of the bottle in which the goods are sold. Owner of Italian Reg. No. 49,354, dated May 21, 1954.
For Edible Olive Oil.

682,709. Cosimo Amato S.p.A., Naples, Italy. SN 59,452. Filed P.R. 9–24–58; Am. S.R. 4–15–59.

amato

For Macaroni.
First use 1896; in commerce June 1955.

682,710. Don Alvarado Company, Decoto, Calif. SN 61,372. Filed 10–27–58.



For Fresh Vegetables.
First use June 22, 1955.

682,711. T. Wall & Sons Ltd., London, England. SN 64,669. Filed P.R. 12–19–58; Am. S.R. 5–20–59.

WALL'S

Owner of British Reg. Nos. 762,879, dated Feb. 26, 1957, and 769,280, dated Sept. 16, 1957.
For Sausages, Black Puddings, Canned Meats, Preserved Meats, Canned Soups, Fish Pastes, Meat Pastes, Lard (for Food), and Dripping (for Food), and Ice Cream.

Class 50—Merchandise Not Otherwise Classified

682,712. Industrial Products Company, Philadelphia, Pa. SN 55,324. Filed P.R. 7–15–58; Am. S.R. 5–28–59.

YELL-O-CONES

For Barricade Devices for Temporary or Emergency Use, as for Indicating Danger Areas, Traffic Channels, or the Like.
First use May 9, 1958.

TRADEMARK REGISTRATIONS RENEWED

124,746. McNEIL. Cl. 18. 8–11–19.
125,921. WARREN'S. Cl. 37. 7–8–19.
125,922. CAMEO. Cl. 37. 7–8–19.
127,045. CALIFORNIA STAR AND DESIGN. Cl. 46. 10–21–19.
362,790. SHARK SKIN. Cl. 31. 11–29–38.
364,219. GLORIA. Cl. 36. 1–24–39.
366,325. ELAST-O-CROTCH. Cl. 39. 4–11–39.
367,270. LLAVE DEL HORNO. Cl. 46. 5–9–39.
367,533. JANE SEYMOUR AND DESIGN. Cl. 51. 5–23–39.
367,758. PERSPECTIVE. Cl. 12. 5–30–39.
367,874. ROCKET. Cl. 21. 5–30–39.
367,973. CARIBSPUN AND DESIGN. Cl. 42. 6–6–39.
368,026. OLD HERBARY. Cl. 51. 6–6–39.
368,128. XYNOMINE. Cl. 6. 6–6–39.
368,572. MAGNAVOX DUETTE. Cl. 36. 6–27–39.
368,681. ARROW. Cl. 39. 6–27–39.
368,711. UNACAINE. Cl. 18. 6–27–39.
368,740. THE MAINLINER AND DESIGN. Cl. 39. 6–27–39.
368,741. LUXURY. Cl. 39. 6–27–39.
369,920. OCTAVIO TWILLS. Cl. 39. 8–8–39.
369,942. DIANNE. Cl. 39. 8–8–39.
370,032. DUOSONIC. Cl. 36. 8–15–39.
370,193. TABLE QUEEN. Cl. 46. 8–22–39.
370,276. BABY MAE. Cl. 42. 8–22–39.
370,586. GERMAKO. Cl. 46. 8–29–39.
370,587. GERMOLOAF. Cl. 46. 8–29–39.
370,588. GERMOWHEAT. Cl. 46. 8–29–39.
370,589. GERMOVIT. Cl. 46. 8–29–39.
370,954. BUGLE. Cl. 15. 9–12–39.
370,968. TENOL. Cl. 15. 9–12–39.
371,370. NUMERAL CREPE. Cl. 39. 9–26–39.
371,801. VITA RIPE. Cl. 46. 10–10–39.
371,855. WEARONIZED. Cl. 39. 10–10–39.
371,952. THE KEY TO QUALITY. Cl. 42. 10–17–39.
372,341. BILTMORE. Cl. 49. 10–31–39.
372,382. SPANTEX. Cl. 18. 10–31–39.
372,520. 5 PHASE. Cl. 44. 10–31–39.
372,576. SKI. Cl. 46. 11–7–39.
372,577. ASTATIC. Cl. 21. 11–7–39.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

657,564. CENT-A-DAY ETC. AND DESIGN. Cl. 18. 1–21–58.
661,098. CONDOTTI. Cl. 42. 4–29–58.
661,937. RAIN-EZE. Cl. 39. 5–20–58.

Section 8

301,389. SOLVOLUBRIC. Cl. 52. 2–28–33.
303,052. CHAMPION. Cl. 23. 5–9–33.
358,388. WEMCO. Cl. 23. 7–12–38.
381,788. SUPIN. Classes 1, 6, and 16. 10–8–40.
560,859. TRIMODAN. Cl. 18. 7–1–52.
563,146. AIR-FREE. Cl. 39. 8–19–52.
572,964. BAROMIX AND DESIGN. Cl. 1. 4–7–53.
574,321. PERMAMIX. Cl. 12. 5–12–53.

The following registrations issued June 9, 1953

575,361. FAVORA. Cl. 46.
575,362. DUNLOP. Cl. 1.
575,369. SUNFLOWER. Cl. 6.
575,370. SEALTITE. Cl. 2.
575,372. FIBREEN-X. Cl. 1.
575,378. BROWNIE. Cl. 6.
575,380. AROMIKOL. Cl. 23.
575,384. SAMSON. Cl. 23.
575,385. AERODYNE AND DESIGN. Cl. 23.
575,386. STA-BO-K. Cl. 6.
575,390. COUNT RUMFORD AND DESIGN. Cl. 18.
575,394. TRUSTY-ARCTICICER AND DESIGN. Cl. 31.
575,398. MASTER. Cl. 23.
575,400. KALITE. Cl. 26.
575,411. THYLOSE PRODUCTS AND DESIGN. Cl. 18.
575,417. REPCO AND DESIGN. Cl. 31.
575,418. WHATTASPOUT. Cl. 13.
575,419. CARBIDIZED. Cl. 30.
575,420. FRANKLY'S AND DESIGN. Cl. 42.
575,422. SEABROOK. Cl. 39.
575,425. LIPORUN. Cl. 18.
575,427. GOLDENLOCKS AND DESIGN. Cl. 39.
575,431. SILOR. Cl. 38.
575,432. PREVUE HIT PARADE AND DESIGN. Cl. 38.
575,435. REPRESENTATION OF HANDS AND TUBING. Cl. 13.
575,436. PYORRH-EX. Cl. 18.
575,439. INFRA-BAR. Cl. 26.
575,443. TRUMBULLITE. Cl. 21.
575,448. NEWARK P. & PP CO. AND DESIGN. Cl. 2.
575,450. RANGER AND DESIGN. Cl. 26.
575,452. ECONOMATIC. Cl. 23.
575,453. ELECTROMATIC. Cl. 23.
575,455. DESIGN OF A CAT. Cl. 39.
575,458. WEAR THE GAINOR ETC. AND DESIGN. Cl. 39.
575,461. E's IN CIRCLE DESIGN. Cl. 39.
575,467. AS ENDURING AS THE MOUNTAIN AND DESIGN. Cl. 42.
575,468. D-O. Cl. 31.
575,470. TRAINING. Cl. 38.
575,473. NOBUL. Cl. 44.
575,474. SANI SQUARE SOX AND DESIGN. Cl. 39.
575,475. GREENWOOD. Cl. 23.
575,477. STERLING. Cl. 23.
575,480. AMINOX. Cl. 18.
575,483. SUPREME OILTANNED AND DESIGN. Cl. 1.
575,484. RIBOFOUR. Cl. 18.
575,487. TARGET CENTER AND DESIGN. Cl. 42.
575,488. UNCLE WILLIE WALRUS AND DESIGN. Cl. 26.
575,492. BARREL & BOX AND PACKAGES. Cl. 38.
575,493. WOOD PRODUCT AND DESIGN. Cl. 38.
575,495. CALLATOME. Cl. 26.
575,501. MEGA-SCORE. Cl. 22.
575,504. KILGORE'S PLANT-O-CIDE. Cl. 6.
575,508. TEMP-RESISTO AND DESIGN. Cl. 42.
575,520. MARY BOOTH. Cl. 39.
575,530. DEORALAMO. Cl. 42.
575,536. CATIONEX. Cl. 18.
575,554. TESTRAVIT. Cl. 18.
575,556. SER-O-CON. Cl. 44.
575,566. BERMUDA HONEYMOON SERIES. Cl. 28.
575,568. SUBURBIOR. Cl. 39.
575,571. BERMAR. Cl. 2.
575,573. SARAH LEE KITCHEN. Cl. 46.
575,574. GROTESQUE OF A KING. Cl. 1.
575,575. GROTESQUE OF A QUEEN. Cl. 1.
575,579. AMERICAN BOY WITH MARK TRAIL. Cl. 38.
575,581. TAPLINE. Cl. 2.
575,582. MEG MADISON AND DESIGN. Cl. 39.
575,584. PLYPAK. Cl. 19.
575,588. GLOVE GROOM. Cl. 2.
575,594. SYMBOL-TAC. Cl. 38.
575,598. THE CHECKERBOARD HOUSE ETC. AND DESIGN. Cl. 42.
575,599. CHEMROK. Cl. 31.
575,605. AGRI-TEPP. Cl. 44.
575,608. THE MITRON. Cl. 39.
575,610. HOLLI-HOOD. Cl. 39.
575,612. VI-DODEX. Cl. 18.
575,614. GREFA. Cl. 6.
575,615. FIRE AWAY. Cl. 18.
575,616. KIMTROL. Cl. 19.
575,618. WILLARD & GILES INC. AND REPRESENTATION OF A LOOM. Cl. 42.
575,619. ALKA-PHYLLS. Cl. 18.
575,621. SPACE STAMPS AND DESIGN. Cl. 38.
575,627. DURALUCENT. Cl. 31.
575,629. MR. BIG. Cl. 22.
575,631. NYLOQUILD. Cl. 42.
575,645. COTE-O-ARMS AND DESIGN. Cl. 19.
575,648. FORT-O-LON. Cl. 42.
575,649. VICTOR. Cl. 22.
575,652. FORT-KRINK. Cl. 42.
575,658. THE DIAMOND MATCH COMPANY DESIGN. Cl. 2.
575,660. BIKINI. Cl. 30.
575,661. COLONNADE. Cl. 30.
575,664. TETRIDE. Cl. 6.
575,665. PENNY-A-POUND. Cl. 38.
575,668. RUXIN AND DESIGN. Cl. 18.
575,679. SPEAR & SHIELD AND DESIGN. Cl. 6.
575,684. PILLOW PETS. Cl. 42.
575,686. FLAVOTEBEN. Cl. 18.
575,689. KONOGEN. Cl. 18.
575,693. ANCHOR'S THE WAY. Cl. 102.
575,695. TECH-LETTER. Cl. 101.
575,698. HAPPY BIRTHDAY TO YOU. Cl. 107.
575,701. THE ROOTIE KAZOOTIE CLUB. Cl. 107.
575,703. LITTLE KANAWHA BRAND AND DESIGN. Cl. 46.
575,705. LUM-BR-COTE. Cl. 12.
575,708. SWISTYLE. Cl. 46.
575,709. EZY GRIP AND DESIGN. Cl. 26.
575,713. REINKE. Cl. 23.
575,715. RAP-A-COIN AND DESIGN. Cl. 26.
575,719. PERLEBRIGHT. Cl. 52.
575,727. ATKINS. Cl. 18.
575,728. TRIPLE TREAT. Cl. 46.
575,730. GRID GARD. Cl. 13.
575,731. THE OLD SETTLER AND DESIGN. Cl. 22.
575,732. TRUCLEEN. Cl. 24.
575,733. AQUA-PRO. Cl. 26.
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Sinclair Refining Co., New York, N.Y. 370,988, ren. 7–28–59. Cl. 15.
Simpkins Farm, The: *See*— Simpkins, John R.
Simpkins, John R., d.b.a. The Simpkins Farm, Lebanon, Ohio. 682,439, pub. 5–12–59. Cl. 16.
Sirchio, F. J., Merlin, N.J. 682,524, pub. 5–12–59. Cl. 26.
Smith & Davis Mfg. Co., St. Louis, Mo. 682,559, pub. 5–12–59. Cl. 32.
Societe Francaise des Cosmetiques Biologiques, Nice, France. 682,680, pub. 10–7–58. Cl. 52.
Societe Rhovyl, Paris, France. 682,605, pub. 5–12–59. Cl. 43.
Sochett, Phillip S., Los Angeles, Calif. 575,709, canc. Cl. 26.
Southern Acid & Sulphur Co., Inc.: *See*— Mathieson Chemical Corp.
Southwestern Fur Service, Inc., Dallas, Tex. 682,694, pub. 5–12–59. Cl. 108.
Space Stamps Co., New York, N.Y. 575,621, canc. Cl. 38.
Speedy Mfg. Co., Oelwein, Iowa. 682,387, pub. 5–12–59. Cl. 12.
Springfield Coated Paper Corp., Camden, N.J. 682,583, pub. 5–12–59. Cl. 37.
Squibb, E. R., & Sons, New York, N.Y., to Mathieson Chemical Corp., Saltville, Va. 575,536, canc. Cl. 18.
Standard Sewing Equipment Corp., New York, N.Y. 682,506, pub. 5–12–59. Cl. 23.
Standard Tile Co. Inc., Brooklyn, N.Y. 682,358, pub. 5–12–59. Cl. 5.
Stanard-Tilton Milling Co., Alton, Ill., to Russell-Miller Milling Co., Wilmington, Del. 370,193, ren. 7–28–59. Cl. 46.
Stansbury Chemical Co., Seattle, Wash. 682,447, pub. 5–12–59. Cl. 18.
Sta-Products Co.: *See*— Shoffeitt, William A.
Stauffer and Sons Inc., Blue Mounds, Wis. 682,634, pub. 5–12–59. Cl. 46.
Stratoflex, Inc., Fort Worth, Tex. 682,596, pub. 5–12–59. Cl. 38.
Steels Engineering Products Ltd., Durham, England. 682,491, pub. 5–12–59. Cl. 23.
Steinam, A., Co., Inc., New York, N.Y. 367,973, ren. 7–28–59. Cl. 12.
Steiner, Harry, New York, N.Y. 682,353, pub. 1–6–59. Cl. 2.
Stewart, James E., Minneapolis, Minn. 575,705, canc. Cl. 12.
Sunbeam Lighting Co., Los Angeles, Calif. 682,476, pub. 5–12–59. Cl. 21.
Sun Oil Co., Philadelphia, Pa. 682,421, pub. 5–12–59. Cl. 15.
Superba Cravats, Inc.: *See*— Cohn, H. C., & Co.
Superior Biscuit Co.: *See*— Weston Biscuit Co. Inc.
Superior Imagineering: *See*— Dawson, Paul K.
Supervision Publishing Co. Inc., New York, N.Y. 575,470, canc. Cl. 38.
Sweet Life Brands, Inc.: *See*— Sweet Life Products Corp.
Sweet Life Products Corp., by change of name from Sweet Life Brands, Inc., Schenectady, N.Y. 682,620, pub. 5–12–59. Cl. 46.
T-K Roofing Mfg. Co., Chester, W. Va. 682,400, pub. 5–12–59. Cl. 12.
Temp Resisto Corp., New York, N.Y. 575,506, canc. Cl. 42.
Temp-Rex Corp., White Plains, N.Y. 682,617, pub. 5–12–59. Cl. 46.
Tennessee Supply Co., Greeneville, Tenn. 575,878, canc. Cl. 6.
Tepe, E. H., Co., Inc., South Bend, Ind. 682,549, pub. 5–12–59. Cl. 28.
Terrytoons, Inc., New Rochelle, N.Y. 575,488, canc. Cl. 28.
Thornton, Elizabeth P.: *See*— Thornton, Eugene P., and Elizabeth P. Thornton.
Thornton, Eugene P., and Elizabeth P. Thornton, Greensboro, N.C. 682,599, pub. 9–2–58. Cl. 39.
Tinling, Inc., New York, N.Y. 575,455, canc. Cl. 39.
Titan Pallet Co. Inc., New York, N.Y. 682,351, pub. 5–12–59. Cl. 2.
Titan Pallet Co. Inc., New York, N.Y. 682,352, pub. 5–12–59. Cl. 2.
Titmus Optical Co., Inc., Petersburg, Va. 575,439, canc. Cl. 26.
Tepsall Lubricants, Inc., Kenmore, N.Y. 682,701. Cl. 15.
Torbert Laboratories, Inc., New Rochelle, N.Y. 575,619, canc. Cl. 18.
Trans-Arabian Pipe Line Co., New York, N.Y., and Beirut, Lebanon. 575,581, canc. Cl. 2.
Trimble, Inc., Rochester, N.Y. 682,560, pub. 5–12–59. Cl. 22.
Truly-Magic Products, Inc., Buffalo, N.Y. 682,554, pub. 5–12–59. Cl. 29.
Trusty Manufacturers, Inc., La Porte, Ind. 573,294, canc. Cl. 31.

Tube-Strut Corp., Los Angeles, Calif. 682,397, pub. 5–12–59. Cl. 12.
"21" Brands, Inc., New York, N.Y. 682,656, pub. 5–12–59. Cl. 49.
Uddeholm Co. of America, Inc., New York, N.Y. 682,418, pub. 5–12–59. Cl. 14.
Union Carbide Corp., New York, N.Y. 682,377, pub. 4–7–59. Cl. 6.
United Elastic Corp., Easthampton, Mass. 575,467, canc. Cl. 42.
United Merchants and Manufacturers, Inc., New York, N.Y. 575,648, canc. Cl. 42.
United Merchants and Manufacturers, Inc., New York, N.Y. 575,652, canc. Cl. 42.
U.S. Plastisol, Inc., Cleveland, Ohio. 661,937, canc. Cl. 39.
United Wood Corp., West Memphis, Ark. 682,385, pub. 5–12–59. Cl. 12.
Universal Dental Co., Philadelphia, Pa. 372,520, ren. 7–28–59. Cl. 44.
Vivanco, Ricardo R., and Raleigh A. Gibson, Mexico City, Mex. 682,621, pub. 5–12–59. Cl. 46.
Vols Concrete Materials Co., St. Louis, Mo. 682,405, pub. 5–12–59. Cl. 12.
Vulcan Rubber Products, Inc., Brooklyn, N.Y. 575,735, canc. Cl. 50.
Wahlfeld Mfg. Co., Peoria, Ill. 682,407, pub. 5–12–59. Cl. 12.
Wall, T., & Sons Ltd., Acton, London, England. 682,711. Cl. 46.
Wander Co., The, Chicago, Ill. 682,440, pub. 5–12–59. Cl. 18.
Warren, S. D., Co., Boston, Mass. 125,921, ren. 7–28–59. Cl. 37.
Warren, S. D., Co., Boston, Mass. 125,922, ren. 7–28–59. Cl. 37.
Welch Nurseries, Inc., The, Shenandoah, Iowa. 575,574, canc. Cl. 1.
Welch Nurseries, Inc., The, Shenandoah, Iowa. 575,575, canc. Cl. 1.
West Chemical Products, Inc., Long Island City, N.Y. 682,479, pub. 5–12–59. Cl. 21.
West Coast Grocery Co., Tacoma, Wash. 682,681, pub. 5–12–59. Cl. 52.
West Side Dairy: *See*— Wyttenbach, Franz.
Western Machinery Co., San Francisco, Calif. 358,388, canc. Cl. 23.
Weston Biscuit Co. Inc., Passaic, N.J., from Superior Biscuit Co., Seattle, Wash. 682,613, pub. 5–12–59. Cl. 46.
Westronics, Inc., Fort Worth, Tex. 682,471, pub. 5–12–59. Cl. 21.
Wilkins, John H., Co., Inc., Washington, D.C. 682,642, pub. 5–12–59. Cl. 46.
Willamette Valley Lumber Co., Dallas, Oreg. 682,401, pub. 5–12–59. Cl. 12.
Willard & Giles Inc., New York, N.Y. 575,618, canc. Cl. 42.
Williamsburg Restoration, Inc., Williamsburg, Va. 682,412, pub. 5–12–59. Cl. 13
Williamsburg Restoration, Inc., Williamsburg, Va. 682,413, pub. 5–12–59. Cl. 13.
Williamsburg Restoration, Inc., Williamsburg, Va. 682,565, pub. 5–12–59. Cl. 34.
Williamsburg Restoration, Inc., Williamsburg, Va. 682,566, pub. 5–12–59. Cl. 34.
Willson Products, Inc., Reading, Pa. 575,605, canc. Cl. 44.
Wilson, Thomas, & Co., Inc., New York, N.Y. 682,602, pub. 4–29–58. Cl. 42.
Wirs, A. H., Inc., Chester, Pa. 682,668, pub. 5–12–59. Cl. 50.
White, James H., Brooklyn, N.Y. 575,417, canc. Cl. 31.
White Sea & Baltic Co., P. & I. Danischewsky, Ltd., The, London, England. 381,788, canc. Cl. 16.
Wong, Howard, d.b.a. European Coast Chemical House, New York, N.Y. 575,679, canc. Cl. 6.
Worgess Insurance Agency, Battle Creek, Mich. 682,691, pub. 5–12–59. Cl. 102.
Worldmark Press, Inc., New York, N.Y. 682,593, pub. 5–12–59. Cl. 38.
Wret Publishing Co., Inc., Minneapolis, Minn. 575,578, canc. Cl. 38.
Wuerth Tube-Saver Corp., Detroit, Mich. 682,475, pub. 6–2–59. Cl. 21.
Wyandotte Chemicals Corp., Wyandotte, Mich. 682,591, pub. 5–12–59. Cl. 38.
Wyeth Laboratories: *See*— American Home Products Corp.
Wyttenbach, Franz, d.b.a. West Side Dairy, Sauk City, Wis. 575,708, canc. Cl. 46.
Yankee Metal Products Corp., Norwalk, Conn. 682,482, pub. 5–12–59. Cl. 21.
Zavody V.I. Lenina Plzen, Narodni Podnik, Plzen, Czechoslovakia. 682,461, pub. 5–12–59. Cl. 19.
Zavody V.I. Lenina Plzen, Narodni Podnik, Plzen, Czechoslovakia. 682,500, pub. 5–19–59. Cl. 23.

U. S. GOVERNMENT PRINTING OFFICE: 0—1959

Disclaimers

Pat. 2,880,197, H. Gerlich, Process for coating polyethylene

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

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PATENTS

NOTICES

Foreign Patents Received in the Scientific Library as of June 30, 1959

Country	Date received	Highest number
Australia:		
(*Abstracts*)	June 14, 1959	43,343
(*Patents*)	June 25, 1959	219,518
Austria	June 29, 1959	203,700
Belgium	June 23, 1959	537,800
Canada	June 29, 1959	578,446
Denmark	June 4, 1959	86,630
Egypt	Apr. 2, 1959	1,398
Finland	Mar. 2, 1959	29,790
France:		
(*Patents*)	June 29, 1959	1,180,600
(*Additions*)	June 29, 1959	70,700
Germany:		
(*Auslegeschriften*)	May 13, 1959	1,054,390
(*Patents*)	June 1, 1959	1,037,978
Great Britain	June 29, 1959	814,870
India	Feb. 2, 1959	60,884
Ireland	May 18, 1959	21,900
Italy	Nov. 12, 1958	558,700
Japan	June 10, 1959	3,650
Netherlands	June 8, 1959	91,093
Norway	June 23, 1959	98,985
Philippines	June 29, 1956	217
Poland	Mar. 12, 1959	41,718
Sweden	June 8, 1959	166,957
Switzerland	June 25, 1959	337,805
U.S.S.R.	June 18, 1959	117,999
Yugoslavia	Feb. 17, 1955	16,461

Australia: First 2,000 incomplete
Belgium: First printed 493,079
Canada: First printed 453,746
Czechoslovakia: Latest 81,300/1952
Finland: First printed 19,428
First 500 incomplete
Hungary: First received 5,792
Latest 140,582/1951
Ireland: Missing 1–10,000
Italy: First 243,000 incomplete
Yugoslavia: First received 10,001

Patents Available for Licensing or Sale

2,437,525. Crocheted Hat and Method of Producing the Same. Velma C. Harvel, 2011 Mimosa Lane, Vernon, Tex.

2,579,998. Serving Machine (Winding Wire Around Splice in Wire or Rope). Estate of Samuel J. Woods, Marjorie Woods Sargent, executrix, 120 Malbone Road, Newport, R.I.

2,838,202. Combined Cup, Stand and Handle for Beverage Cans. Ernest A. Joerren (Co-owner), 20 Pierrepont St., Brooklyn 1, N.Y.

2,875,764. Brassiere. Mrs. Anna M. Benson, Route 1, Box 685, Florin, Calif.

2,881,789. Safety Lock Valve for Fuel Line. Joseph Finazzo, St. Louis, Mo. Correspondence to: Gravely, Lieder & Woodruff, 705 Olive St., St. Louis 1, Mo.

2,890,687. Thermo Hydraulic Valve (for Control of Fans in Cooling Systems of Automotive Engines). Eugene H. Richmond, 620 St. Clair Abrams Ave., Tavares, Fla.

General Electric Company is prepared to grant non-exclusive licenses under the following listed 9 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 6 patents may be addressed to: Patent Counsel, Turbine Division, General Electric Company, 1 River Road, Building 53, Schenectady 5, N.Y.

2,707,204. Treated Mica Paper Insulation.

2,867,999. Close-Coupled Rotor Assembly With Thrust-Transmitting Flexible Coupling for Turbine-Gear Unit.

2,869,323. Gas Turbine Powerplant With Steam Injection.

2,869,324. Gas Turbine Powerplant Cycle With Water Evaporation.

2,870,880. Power Supply Systems.

2,878,785. Hydraulic Speed Governing System With Reset Relay.

Applications for license under the following 3 patents may be addressed to: General Electric Company, Component Products Division, 1635 Broadway, Fort Wayne, Ind. Attention Patent Counsel.

2,874,309. Combination Starter Motor and Magneto for Internal Combustion Engines.

2,883,635. Electrical Coil and Terminal Assembly.

2,887,644. Frequency Multiplier Circuit.

Classification Order No. 283

The following transfer is hereby ordered to take effect on Monday, July 13, 1959:

From Division 94 to Division 49
Class 255, EARTH BORING, Subs. 1 through 78.

M. C. ROSA,
Director, Patent Examining Operation.

Classification Order No. 284

The following transfers are hereby ordered to take effect on Tuesday, July 14, 1959:

From Division 30 to Division 35
Class 133, COIN HANDLING
Class 194, CHECK-CONTROLLED APPARATUS
Class 221, ARTICLE DISPENSING
Class 312, SUPPORTS, CABINET STRUCTURES, Subs. 35 thru 97.1.

From Division 44 to Division 54
Class 250, RADIANT ENERGY, Subs. 41.9, 71.5, 83.1, and 84.5
Class 313, ELECTRIC LAMP AND DISCHARGE DEVICES, Subclass 61.

From Division 67 to Division 30
Class 209, CLASSIFYING, SEPARATING AND ASSORTING SOLIDS, Subs. 1 thru 70, 127 thru 506.

M. C. ROSA,
Director, Patent Examining Operation.

New Applications Received During June 1959

Patents	7,109
Designs	466
Plant Patents	14
Reissues	21
Total	7,610

Issue

Patents	1,094	No. 2,897,500 to No. 2,898,593, incl.
Designs	52	No. 185,780 to No. 185,831, incl.
Plant Patents	2	No. 1,856 to No. 1,857, incl.
Total	1,148	

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1959

Total number of pending applications (excluding Designs)	198,248
Total number of pending Design applications	7,204

Disclaimers

2,313,582.—*Merrill M. Kistner*, Chicago, Ill. STEAM HAND IRON. Patent dated Mar. 9, 1943. Disclaimer filed July 3, 1959, by the assignee, *Steam Iron Corporation*.

Hereby enters this disclaimer to claim 1 of said patent; the patentee approving.

2,614,240.—*Maurice E. Bivens*, Schenectady, N.Y. ELECTRIC SEQUENCE AND TIMING CIRCUITS. Patent dated Oct. 14, 1952. Disclaimer filed July 1, 1959, by the assignee, *General Electric Company*.

Hereby enters this disclaimer to claims 1, 2, 3, 13, and 14 of said patent.

2,752,560.—*Floyd A. Baker*, Los Angeles, Calif. MAGNETIC AMPLIFIERS. Patent dated June 26, 1956. Disclaimer filed July 1, 1959, by the assignee, *Westinghouse Electric Corporation*.

Hereby enters this disclaimer to claims 1, 2, 3, 4, and 6 of said patent.

2,816,067.—*Frederick A. Keidel*, Wilmington, Del. ELECTROLYTIC DRYING METHOD. Patent dated Dec. 10, 1957. Disclaimer filed June 29, 1959, by the assignee, *E. I. du Pont de Nemours and Company*.

Hereby enters this disclaimer to claims 1 and 2 of said patent.

Adverse Decisions in Interferences

In the designated interferences involving the indicated claims of the following patents final decisions have been rendered that the respective patentees were not the first inventors with respect to the claims listed.

Pat. 2,689,197, H. Gerlich, Process for coating polyethylene articles, decided June 26, 1957, Interference No. 87,749, claim 6.

Pat. 2,725,420, V. K. Zworykin, Color television image reproduction, decided Feb. 24, 1959, Interference No. 88,032, claims 1, 5, and 7.

Pat. 2,726,895, A. F. Bohlen, Mobile overhead irrigating device, decided Mar. 5, 1959, Interference No. 88,973, claim 4.

Pat. 2,734,182, J. A. Rajchman, Magnetic matrix and computing devices, decided May 21, 1959, Interference No. 88,650, claim 13.

Pat. 2,762,552, R. J. Hickin, Reclosable carton, decided May 19, 1959, Interference No. 88,764, claim 1.

Pat. 2,782,562, B. M. Baker, Horizontal seismometer, decided May 11, 1959, Interference No. 89,267, claims 1, 2, 4, 5, and 6.

Pat. 2,802,261, G. Hayek, Dry-shaving apparatus with a flexible shear plate, decided June 2, 1959, Interference No. 89,590, claim 1.

Pat. 2,816,618, J. O. Minter and T. B. Hensley, Well tubing stop, decided May 29, 1959, Interference No. 89,894, claims 1, 2, 3, 4, 5, and 6.

Pat. 2,817,325, K. Meissner, Control device for internal combustion engines, decided June 29, 1959, Interference No. 89,666, claims 1, 2, 3, 7, and 8.

Pat. 2,837,240, P. Mashberg, Aerosol valve, decided May 26, 1959, Interference No. 90,022, claim 4.

Board of Appeals Decisions Rendered in the Month of June 1959

Examiner affirmed	209
Examiner affirmed in part	16
Examiner reversed	24
Total	249

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	Now	Amended

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1959

Total number of pending applications (excluding Designs)	196, 248
Total number of pending Design applications	7, 004
Total number of applications awaiting action (excluding Designs)	87, 060
Total number of Design applications awaiting action	1, 931
Date of oldest new application	July 7, 1958
Date of oldest amended application	June 16, 1958

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 32, 42, 46, 50, 58, 59, 60, 62, 64.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	18, 26, 37, 41, 43, 44, 49, 51, 54, 69.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 37, 56, 61, 81, 82.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 36, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 30, 33, 38, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 12, 29, 32, 35, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 28, 30, 32, 48, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Excavating; Planting; Plant Husbandry; Scattering Unloaders; Harrows and Diggers; Plows	12-3-58	12-1-58
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	12-3-58	12-3-58
3. (VII) MARMELSTEIN, N. (WINDHAM, B. K., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Electrical Resistors	1-5-59	12-30-58
4. (VI) FALLER, E. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	12-3-58	12-3-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	10-6-58	10-1-58
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	12-3-58	12-1-58
7. (IV) GONSALVES, J. E. (ANDERSON, E. G., acting), Optics	11-3-58	11-3-58
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	1-3-59	1-3-59
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	12-15-58	12-15-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	12-11-58	12-3-58
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	12-3-58	12-3-58
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	11-20-58	12-1-58
13. (III) BRALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	12-1-58	12-1-58
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	8-25-58	8-18-58
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	12-3-58	12-1-58
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	11-10-58	11-10-58
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	12-30-58	12-29-58
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	12-10-58	11-19-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	12-3-58	12-3-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Seals; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	12-1-58	12-1-58
21. (III) MADER, R. C., Textiles	12-30-58	12-17-58
22. (VI) PAUL, E. (acting), Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	12-3-58	11-20-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	7-7-58	7-7-58
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	12-19-58	12-19-58
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	1-2-59	1-2-59
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	12-1-58	11-3-58
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	1-3-59	1-3-59
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Clutches or Brakes; Fluid Current Conveyors; Pressure Modulating Relays; Wheel Substitutes	12-1-58	12-1-58
29. (V) FRITZ, M. M., Tools; Woodworking; Buttons, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	12-15-58	12-15-58

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	12-1-58	12-1-58
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Polypropylenes, Polyisobutylenes); Mineral Oils	2-2-59	2-24-59
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Agitation; Fire Extinguishers	12-15-58	12-12-58
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs; Building Structures	12-1-58	11-12-58
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Separating and Assorting Solids (part)	8-18-58	8-16-58
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	2-2-59	2-2-59
36. (V) EVANS, R. L., Measuring and Testing (part)	8-12-58	8-14-58
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	12-3-58	12-1-58
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	12-8-58	12-16-58
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	1-16-59	1-16-59
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	12-10-58	12-15-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	1-5-59	1-2-59
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	10-15-58	10-15-58
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	12-4-58	12-2-58
44. (II) EVANS, N. H., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	9-2-58	9-2-58
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	1-19-59	1-7-59
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	12-1-58	12-3-58
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	12-10-58	12-8-58
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	11-13-58	11-10-58
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass; Earth Boring	12-2-58	12-1-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	10-6-58	10-1-58
51. (II) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas; Oscillators	11-3-58	11-3-58
52. (V) LE ROY, C. A., Supports and Racks	1-12-59	1-12-59
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	12-3-58	12-1-58
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	1-15-59	1-15-59
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	11-3-58	11-4-58
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-12-58	12-1-58
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting and Punching	9-10-58	9-19-58
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Punching	12-2-58	12-9-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	9-26-58	11-10-58
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	11-3-58	11-3-58
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	11-18-58	11-21-58
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	12-15-58	12-15-58
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	12-5-58	12-1-58
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	10-7-58	10-1-58
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	1-2-59	1-2-59
66. (V) LISANN, L., Geometric Instruments; Measuring and Testing (part)	9-4-58	9-2-58
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators	12-1-58	12-1-58
81. (III) MONCURE, J. A., Industrial Arts	3-18-59	4-13-59
83. (III) GRAY, M. A., Household, Personal and Fine Arts	3-23-59	3-23-59
91. BAILEY, J. S., Laminated Fabrics	11-4-58	11-3-58
92. GAUSS, H., Detectors, Miscellaneous Electron Tube Circuits	10-24-58	10-8-58
93. WAHL, R. A., Metal Bending; Web Feeding	10-1-58	10-3-58
94. BERLOWITZ, W., Gas Separation	11-21-58	10-15-58
95. ANGEL, C. D., Masonry and Concrete Structures; Time-Controlling Apparatus; Packed Rod Joints; Joint Packings	11-3-58	10-21-58
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part), i. e., Polyethylenes	2-19-59	10-17-58

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during August 1959, except those which may have been extended under the provisions of the Veterans Patent Extension Act (54 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to abortened terms under the provisions of Public Law 593. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1959*.

Patents..... Numbers 2,881,307 to 2,894,887, inclusive
Plant Patents..... Numbers 537 to 542, inclusive

[1] Government counsel urges that this action is U.S. Court of Customs and Patent Appeals

DECISIONS IN PATENT AND TRADEMARK CASES

United States Court of Appeals
District of Columbia Circuit

MERLIN M. EVANS v. ROBERT C. WATSON, COMMISSIONER OF PATENTS, ET AL.

No. 15,118. Decided July 16, 1959

[— U.S. App. D.C. —; — F.2d —; — USPQ —]

1. CIVIL ACTION—DECLARATORY JUDGMENT—INJUNCTION—JUSTICIABLE CONTROVERSY—EXHAUSTION OF ADMINISTRATIVE REMEDIES.

Where in an action for declaratory judgment and injunction, brought by appellant-plaintiff against the Commissioner of Patents and the Secretary of Commerce, appellees-defendants, asking that an amendment of Rule 345 be declared void, appellees urged that the action was premature and did not present a justiciable controversy, and that appellant could not maintain the action because he had failed to exhaust his administrative remedies, *Held* by the appellate court, "We disagree."

2. SECTIONS 31 AND 32 OF TITLE 35, UNITED STATES CODE—CONSTRUCTION—ADVERTISING.

"Plaintiff * * * urges that, since § 32 provides penalties for fraudulent advertising, it necessarily follows that ordinary non-fraudulent advertising is proper. But § 31 provides that the Commissioner of Patents may prescribe regulations governing the recognition and conduct of those representing applicants or other persons before the Patent Office. These two sections should be construed together."

3. SAME—SAME—SAME—AMENDED RULE 345.

"The Congress provided that fraudulent advertising should be ground for disbarment, and left to the discretion of the Commissioner of Patents the determination of what other conduct is improper for those practicing before the Patent Office. The regulation under attack is not unreasonable and, therefore, not invalid. Nor is it an extraordinary one. The record discloses that under the Treasury Statute, 5 U.S.C. § 261, the Veterans Administration Statute, 38 U.S.C. § 102, the Department of the Interior Statute, 5 U.S.C. 493, and under regulations adopted by the Commissioner of Patents pursuant to 35 U.S.C. §§ 6, 31 and 32, Trademark, Rules of Practice, all essentially similar statutes, similar regulations have been adopted. * * * That the prior Commissioners of Patents did not adopt such a regulation, and that one Commissioner doubted his authority to do so, is not conclusive or even persuasive. The court has no right to substitute its view for that of the Commissioner of Patents."

APPEAL from the United States District Court for the District of Columbia.

AFFIRMED.

Al Philip Kane, with whom *Charles V. Koons* was on the brief, for Merlin M. Evans.

Donald B. MacGuineas, Attorney, Department of Justice, with whom *Assistant Attorney General Doub* and *Samuel D. Slade*, Attorney, Department of Justice, were on the brief, for Robert C. Watson, Commissioner of Patents, et al.

F. Trowbridge vom Baur, *William B. Jones*, *James P. Hume*, *Herbert E. Forrest*, and *Timothy J. May* filed a brief on behalf of the Special Committee of the American Bar Association, as amicus curiae, urging affirmance.

Andrew B. Beveridge, *Perry S. Patterson*, and *Raymond G. Larroca* filed a brief on behalf of the Bar Association of the District of Columbia, as amicus curiae, urging affirmance.

C. Willard Hayes, *William H. Webb* and *Virgil E. Woodcock* filed a brief on behalf of the American Patent Law Association, as amicus curiae, urging affirmance.

Before EDGERTON, BASTIAN, and BASTIAN, *Circuit Judges*

PER CURIAM:

Plaintiff (appellant) filed this action against the Commissioner of Patents and the Secretary of Commerce, defendants (appellees), in the District Court for declaratory judgment and injunction, asking that an amendment of Rule 1.345, Rules of Practice before the Patent Office, hereinafter set forth, be declared void. The complaint alleged that plaintiff is a non-lawyer, admitted since 1926 to practice before the Patent Office as a registered patent attorney; and that on August 27, 1957, the Commissioner of Patents, with the approval of the defendant Secretary, published in the Federal Register notice of his proposal to amend the rules of the Patent Office in order "to prohibit advertising to solicit patent business."

After a public hearing, at which plaintiff appeared, the following rule was promulgated forbidding all advertising from and after January 1, 1959:[1]

"Section 1.345 *Advertising.* (a) The use of advertising, circulars, letters, cards, and similar material to solicit patent business, directly or indirectly, is forbidden as unprofessional conduct, and any person engaging in such solicitation, or associated with or employed by others who so solicit, shall be refused recognition to practice before the Patent Office or may be suspended, excluded or disbarred from further practice.

"(b) The use of simple professional letterheads, calling cards, or office signs, simple announcements necessitated by opening an office, change of association, or change of address, distributed to clients and friends, and insertion of listings in common form (not display) in a classified telephone or city directory, and listings and professional cards with biographical data in standard professional directories shall not be considered a violation of this rule.

"(c) No agent shall, in any material specified in paragraph (b) of this section or in papers filed in the Patent Office, represent himself to be an attorney, solicitor or lawyer."

Plaintiff alleges that since 1926 he has earned his livelihood as a registered patent attorney. He further alleges that his practice has been predicated on lawful advertising approved by the Patent Office, and that, should he be required to stop advertising, his business, and consequently his livelihood, would be seriously affected and that he and other persons similarly situated will be forced out of the business of representing persons before the Patent Office and will suffer irreparable damage in the loss of their livelihoods.

On May 8, 1959, the District Court entered its order denying plaintiff's motion for summary judgment, granting defendants' motion to dismiss, and dismissing the complaint.

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[1] The effective date of this rule was extended to July 1, 1959.

[1] Government counsel urges that this action is premature and does not present a justiciable controversy, and that plaintiff cannot maintain the action because he has failed to exhaust his administrative remedies. We disagree.

Plaintiff urges that, under 35 U.S.C. §§ 6, 31 and 32, the Commissioner of Patents did not have the lawful authority to promulgate the regulation; that 35 U.S.C. § 6 requires that rules made by the Commissioner of Patents must not be inconsistent with law; that the Congress has repeatedly recognized that advertising by patent attorneys is lawful and is permitted under 35 U.S.C. § 32 and, further, that the Patent Office has so interpreted the law for at least 75 years.

The pertinent parts of the United States Code, 35 U.S.C. §§ 31 and 32, provide as follows:

"§ 31. *Regulations for agents and attorneys.* The Commissioner, subject to the approval of the Secretary of Commerce, may prescribe regulations governing the recognition and conduct of agents, attorneys, or other persons representing applicants or other parties before the Patent Office, and may require them, before being recognized as representatives of applicants or other persons, to show that they are of good moral character and reputation and are possessed of the necessary qualifications to render to applicants or other persons valuable service, advice, and assistance in the presentation or prosecution of their applications or other business before the Office.

"§ 32. *Suspension or exclusion from practice.* The Commissioner may, after notice and opportunity for a hearing, suspend or exclude, either generally or in any particular case, from further practice before the Patent Office, any person, agent, or attorney shown to be incompetent or disreputable, or guilty of gross misconduct, or who does not comply with the regulations established under section 31 of this title, or who shall, by word, circular, letter, or advertising, with intent to defraud in any matter, deceive, mislead, or threaten any applicant or prospective applicant, or other person having immediate or prospective business before the Office. The reasons for any such suspension or exclusion shall be duly recorded. . . ."

[2] Plaintiff first urges that, since § 32 provides penalties for fraudulent advertising, it necessarily follows that ordinary non-fraudulent advertising is proper. But § 31 provides that the Commissioner of Patents may prescribe regulations governing the recognition and conduct of those representing applicants or other persons before the Patent Office. These two sections should be construed together.

[3] The Congress provided that fraudulent advertising should be ground for disbarment, and left to the discretion of the Commissioner of Patents the determination of what other conduct is improper for those practicing before the Patent Office. The regulation under attack is not unreasonable and, therefore, not invalid. Nor is it an extraordinary one. The record discloses that under the Treasury Statute, 5 U.S.C. § 261, the Veterans Administration Statute, 38 U.S.C. § 102, the Department of the Interior Statute, 5 U.S.C. 496, and under regulations adopted by the Commissioner of Patents pursuant to 35 U.S.C. §§ 6, 31 and 32, Trademark, Rules of Practice, all essentially similar statutes, similar regulations have been adopted.[1] That the prior Commissioners of Patents did not adopt such a regulation, and that one Commissioner doubted his authority to do so, is not conclusive or even persuasive. The court has no right to substitute its view for that of the Commissioner of Patents.

We have reviewed the other points urged by plaintiff and find them to be without merit.

The judgment of the District Court is affirmed.

AFFIRMED.

[1] So far as appears, these regulations have never been attacked.

U.S. Court of Customs and Patent Appeals

IN RE RENNERFELT

No. 6468. Decided April 22, 1959

[— CCPA —; 265 F.2d 945; 121 USPQ 454]

1. PATENTABILITY—INVENTION—EXPERIMENTING AND SELECTING.

With respect to appellant's contentions that thin thrust bearing rollers are resilient and are deformed in the sense that they yield elastically when subjected to a heavy load, and that the friction due to rotation of adjacent rollers at different speeds will be less with thin than with thick rollers, *Held* that it "does not appear, * * *, that any sudden or unexpected change in those values takes place when the particular proportions specified in the claims are employed," and *Held* that "the problem is merely one of experimenting with rollers of various proportions and selecting those which give the best results."

2. SAME—PARTICULAR SUBJECT MATTER—THRUST BEARING.

Claims to a thrust bearing *Held* unpatentable as defining nothing more than obvious modifications of the structure shown by the reference patent.

APPEAL from the Patent Office. Serial No. 312,000.

AFFIRMED.

Eugene J. Roberts and *Pierce, Scheffler & Parker* for appellant.

Clarence W. Moore (*Arthur H. Behrens* of counsel) for the Commissioner of Patents.

Before WORLEY, *Acting Chief Judge*, and RICH, MARTIN, and JOHNSON (retired), *Associate Judges*

WORLEY, *Acting Chief Judge*, delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals of the United States Patent Office affirming the rejection by the Primary Examiner of claims 15 to 19, inclusive, the only remaining claims of appellant's application for a patent on a thrust bearing, which appellant alleges constitutes a patentable improvement over the prior art.

Since it is necessary to consider the appealed claims individually, they are all reproduced below.

15. In a thrust bearing for a shaft, a roller holder arranged concentrically on said shaft, one race member on each side of said holder, a plurality of cylindrical roller sets in said holder, the axis of each set being directed radially with respect to the axis of the shaft, each set comprising a plurality of disc-ring shaped rollers having a hole diameter of approximately one half of the outer diameter and having a thickness less than one tenth of said outer diameter, the discs being disposed freely and independently rotatable side by side between an inner and outer stop in said holder with sufficient clearance for any roller to be deformed elastically when the roller set is subjected to a local high speed.

16. In a thrust bearing for a shaft, a cage shaped holder arranged concentrically on said shaft, one race member on each side of said holder, a plurality of cylindrical roller sets in pockets in said holder, the axis of each set being directed radially with respect to the axis of the shaft, each set comprising a plurality of disc-ring shaped rollers having a hole diameter of approximately one half of the outer diameter and having a thickness less than one tenth of said outer diameter, the discs being disposed freely and independently rotatable side by side between an inner and an outer stop in said holder with sufficient clearance for any roller to be deformed elastically when the roller set is subjected to a local high speed.

17. In a thrust bearing for a shaft, a roller holder consisting of a central support with radially projecting pins and arranged concentrically on said shaft, one race member on each side of said holder, one cylindrical roller set on each one of said pins, each set comprising a plurality of disc-ring shaped rollers having a hole diameter of approximately one half of the outer diameter and having a thickness less than one tenth of said outer diameter, the disc being disposed freely and independently rotatable side by side between an inner and an outer stop in said holder with sufficient clearance for any roller to be deformed elastically when the roller set is subjected to a local high speed.

18. A thrust bearing as claimed in claim 17, in which a bush is mounted on said pins, said bush determining the clearance between said inner and outer stop.

19. A thrust bearing as claimed in claim 17, in which the rollers are journalled on said pins under a radial clearance amounting to at least 0.5% of the roller diameter.

The single reference relied on by the Board was

Rennerfelt, 914,075, March 2, 1909.

is fully equivalent thereto. Merely using a bush to amount of clearance provided is without patentable

The structure disclosed by appellant's application comprises a vertical shaft journaled at its lower end in a fixed support, and an annular member surrounding and keyed to the shaft and spaced from the support. The bearing which constitutes the alleged invention lies between and abuts the annular member and the support. It comprises upper and lower bearing plates which surround the shaft and are secured to the member and support respectively, and a roller cage surrounding the shaft between the plates. In one embodiment, the cage takes the form of a plate having three spaced pockets cut through from its upper to its lower surfaces, each pocket being adapted to hold a number of disks or rollers in such a position that the axis of each group passes through the center line of the shaft. The rollers extend beyond the cage at the top and bottom and have rolling contact with the bearing plates. When the shaft turns the rollers rotate on their own axes and also revolve, with the cage, about the axis of the shaft.

In an alternative embodiment the roller supporting structure takes the form of a substantially cubical block having a central opening between two opposite faces through which the shaft passes. Each of the four remaining faces of the block has a centrally projecting pin upon which the rollers are supported. Each pin is surrounded by a bush having a flange at its outer end. The rollers surround the bushes and are held axially between the block faces and the flanges, the length of the bush slightly exceeding the combined length of the rollers so that a small amount of play is allowed.

As illustrated, there are six rollers in each group and appellant's specification states that the thickness of each roller "ought to be less than one fifth of the diameter and preferably amounts to one tenth of the diameter or less," and that the rollers "have an inner diameter which exceeds one fourth of the outer diameter and preferably amounts to at least half the roller diameter."

It is stated in appellant's brief that the patentee Rennerfelt is his father and that the structure claimed here represents an improvement over that of the patent. The patent shows a thrust bearing comprising an arrangement of a shaft, bearing plates, and rollers similar to the second embodiment of appellant's application, but using only three groups of rollers instead of four. In the patented device, most of the rollers have a thickness of about one-fifth of their diameter, although two of the groups include auxiliary rollers or washers having a thickness not greater than one-tenth of their diameter. The thinner rollers are included so that the rollers of the different groups will not follow the same paths around the shaft, as they would do if all of them were of uniform thickness. The inner diameter of the rollers in the patent is slightly more than one third of their outer diameter. The pins which support the rollers in the reference are not provided with bushes, but the inner portion of each pin, on which the rollers are supported, is comparatively large. A smaller threaded portion of each pin projects beyond the rollers and receives a washer which is held against the larger part of the pin by a nut, so that the rollers are held against axial movement, except for a slight clearance which results from the fact that the large portion of each pin is slightly longer than the combined thickness of the rollers which it supports.

The features primarily relied on by appellant, and included in each of the appealed claims, are that the inner diameter of the rollers is approximately one-half their outer diameter, and that their thickness is less than one-tenth of their outer diameter. As above noted, the inner roller diameter in the reference is about one-fifth of the outer diameter. We agree with the Patent Office tribunals that those differences have not been shown to involve anything more than a matter of degree, changes which we think obvious.

While the claimed ratios are indicated as "preferable" in appellant's application, it is pointed out that the inner roller diameter need merely exceed one-fourth, and the roller thickness be less than one-fifth of the outer diameter. Thus there is no significant difference between the proportions of the reference rollers and those suggested as suitable in appellant's application. The application does not allege, and there is nothing of record to show, that there is any critical difference between the preferred proportions which are recited in the claims and those which are merely indicated as suitable.

[1] Appellant contends that thin rollers are resilient and are deformed in the sense that they yield elastically when subjected to a heavy load, and also that the friction due to rotation of adjacent rollers at different speeds will be less with thin than with thick rollers. It does not appear, however, that any sudden or unexpected change in those values takes place when the particular proportions specified in the claims are employed. We share the views expressed below that the problem is merely one of experimenting with rollers of various proportions and selecting those which give the best results.

In addition to the proportions above discussed, claim 15 states that the rollers are provided with sufficient clearance to allow any roller to be deformed elastically. The rollers in the reference are provided with a clearance which appears to be at least as large as those of appellant's application and which would therefore permit deformation as required by claim 15. Aside from the features above considered, claim 15 is fully met by the Rennerfelt patent and the rejection of that claim was therefore proper.

Claim 16 is similar to claim 15, but is limited to appellant's first embodiment in which the rollers are mounted in pockets in a holder. It was held by the Board that such an arrangement presents no patentable advantage over what is set forth in claim 15 and, in our opinion, that position is sound. Appellant has not contended that claim 16 includes any feature which would render it patentable, apart from those recited in claim 15.

Claim 17 adds to the combination of claim 15 the statement that the rollers are supported on radially projecting pins. Such an arrangement is shown in the Rennerfelt patent and, accordingly, claim 17 is unpatentable thereover for the same reasons as claim 15.

Claim 18, which depends on claim 17, contains the further limitation that a bush is mounted on each pin to determine the clearance between the stops which hold the rollers in place. The Rennerfelt patent does not show such a bush, but each pin has a large portion which supports the rollers and determines the clearance in the same way as appellant's bush, and which

attached.

Rennerfelt, 914,075, March 2, 1909.

is fully equivalent thereto. Merely using a bush to provide increased diameter instead of enlarging the pin itself would be an obvious expedient.

Claim 19, which is also dependent on claim 17, specifies that the rollers are mounted on the pins under a radial clearance of at least 0.5% of the roller diameter. We agree with the Board that such a clearance is disclosed in the reference; moreover, the exact amount of clearance provided is without patentable significance.

[2] Appellant's arguments have been carefully considered, but we are of the opinion the appealed claims define nothing more than obvious modifications of the structure shown by the reference.

The decision is affirmed.

AFFIRMED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

1,895,538, A. Buchi, Internal combustion engine; 2,113,077, same, Supercharged internal combustion engine, filed Mar. 2, 1955, D.C., S.D.N.Y., Doc. 99/114, *Alfred J. Buchi* v. *Alco Products, Inc.* Consent decree and judgment for dismissal with prejudice June 12, 1959.

1,113,077. (See 1,895,538.)

2,255,312, C. Ellis, Ethylenic-alpha-beta synthetic resins, filed June 2, 1959, D.C., S.D.N.Y., Doc. 146/336, *Ellis Foster Co.* v. *American Cyanide Co.*

2,344,151, M. Kasser, Method and apparatus for treating perishable articles, filed Jan. 28, 1955, D.C. Ariz. (Phoenix), Doc. 2174–Phx., *Vacuum Cooling Co., Inc. et al.* v. *Goetz Ice Co., Inc. et al.* Dismissed by stipulation with prejudice Nov. 8, 1956.

2,351,004, M. Camras, Method and means of magnetic recording; 2,351,005, same, Magnetic recorder; 2,351,007, same, Magnetic recording head; 2,523,261, same, Apparatus for magnetic recording; 2,365,191, R. E. Zenner, Eddy current shields in electromagnetic transducer heads; 2,372,506, M. Camras, Magazine type magnetic recording and reproducing device; 2,666,721, M. Camras, Magnetic recorder with pressure shoe for record; 2,645,500, same, Magnetic recorder; 2,659,541, same, Drive mechanism for magnetic recorders, filed May 10, 1957, D.C., S.D.N.Y., Doc. 120/196, *Armour Research Foundation of Illinois Institute of Technology* v. *Janrus Cameru, Inc. et al.* Stipulation and order of dismissal June 3, 1959.

2,351,005. (See 2,351,004.)

2,351,007. (See 2,351,004.)

2,394,206, E. Berdach, Undergarment, filed Sept. 16, 1955, D.C., S.D.N.Y., Doc. 103/266, *Lily of France, Inc.* v. *Reflex Foundations, Inc.* Order of dismissal for lack of prosecution May 27, 1959.

2,431,379, M. Marty, Bodies with movable parts, filed May 29, 1959, D.C., E.D.N.Y. (Brooklyn), Doc. C–19809, *Frank and Paul Kohner et al.* v. *Famus Corporation et al.*

2,441,960, P. Eisler, Manufacture of electric circuit components; Re. 24,165, same; 2,706,697, same, filed May 25, 1959, D.C. Md. (Baltimore), Doc. 11421, *Technograph Printed Circuits, Ltd. et al.* v. *Bendix Aviation Corp.*

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2,452,531. (See 2,452,529.)

2,456,789. (See 2,452,529.)

2,666,961. (See 2,351,004.)

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2,565,191. (See 2,351,004.)

2,572,596. (See 2,351,004.)

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2,771,756. (See 2,771,759.)

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PLANT PATENTS

GRANTED AUGUST 4, 1959

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

1,856
ROSE PLANT

Maurice Combe, Grenoble, France, assignor to Ilgenfritz Nurseries, Inc., Monroe, Mich., a corporation of Michigan

Application December 3, 1958, Serial No. 778,044

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of strong and upright habits of plant growth, good resistance to mildew and blackspot, good bud form, a somewhat camellia-shaped form of the blooms, a distinctive two-toned rose and white general color tonality of the blooms, and good persistence of the flower color until the petals fall.

10

1,857
ROSE PLANT

Marcel Robichon, Pithiviers, Loiret, France, assignor to Ilgenfritz Nurseries, Inc., Monroe, Mich., a corporation of Michigan

Application December 10, 1958, Serial No. 779,511

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of a strong habit of plant growth, full form and strong tea fragrance of the blooms, and a distinctive tinting of the white general color tonality of the blooms, with the tips of the petals having a delicate tint of pink, creating an overall appearance of delicate pink color, particularly in the center of the flower.

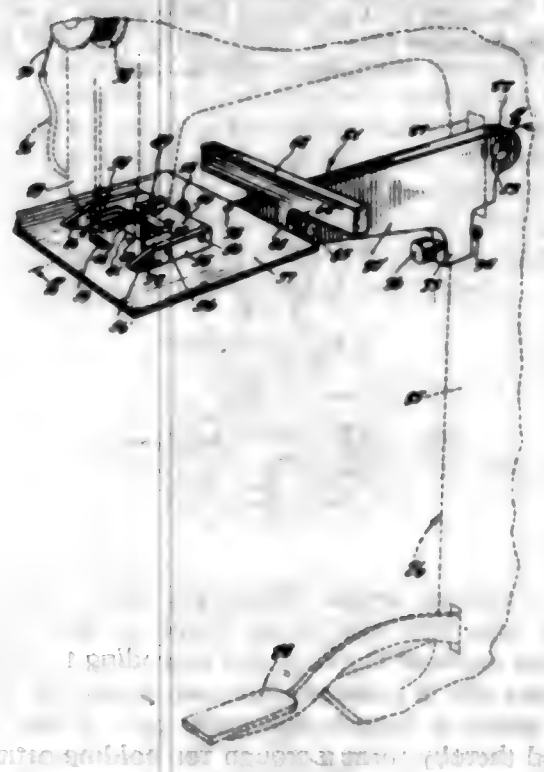
housing and a rear housing, staple driving means mounted into transversely underlying relation to said

PATENTS

GRANTED AUGUST 4, 1959

GENERAL AND MECHANICAL

2,897,500
STAPLING DEVICE
Murray J. Lang, New York, N.Y.
Application January 19, 1956, Serial No. 560,090
3 Claims. (Cl. 1—3)

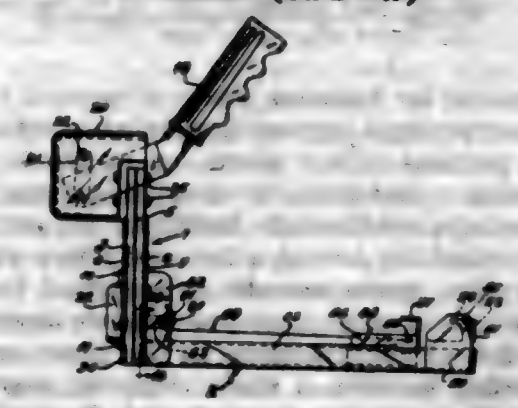


1. A device for stapling L-shaped corner spacer members to knocked-down cartons comprising in combination, a staple press including a standard, a foot pedal actuating the press, a stapling head, a supporting arm, means for securing said supporting arm to said standard at substantially right angles thereto with the free end of said supporting arm extending outwardly below said stapling head, transverse track means mounted on said supporting arm below said stapling head, slide means adapted to move along said track means, an upstanding member carried by said slide means, base plate means secured to said supporting arm above said track means, said base plate means having an opening therethrough adapted to permit the sliding movement of said upstanding member to either of two extreme positions, and positioning means carried by said upstanding member and adapted to receive thereunder the knocked-down carton with the upstanding member being received intermediate the ends of the closure flaps whereby to position the knocked-down carton on said base plate means, said positioning means including a pair of depending stops at each end adapted to cooperate with said upstanding member to slidably receive therebetween and position the corner spacer member in proper relationship to said knocked-down carton and to permit the movement of the carton and spacer member together to three different positions whereby to secure the three sections of the spacer member to the side, end and closure portions of the knocked-down carton, and anvil means carried by said supporting arm adapted to cooperate with said stapling head.

2,897,501
MACHINE FOR DRIVING SASH PINS OR THE LIKE
Charles H. True, Jr., Kenilworth, and Harold W. King, Arlington Heights, Ill., assignors to Spotnails, Inc., Evanston, Ill., a corporation of Illinois
Original application September 2, 1950, Serial No. 183,812, now Patent No. 2,734,192, dated February 14, 1956. Divided and this application July 7, 1955, Serial No. 521,558
11 Claims. (Cl. 1—46)

1. In combination in a fastener driving machine, means defining a body structure including a fastener supporting and feed magazine, the forward end of the magazine having a discharge opening, a generally U-shaped nose member having a front wall opposite the end of the magazine and side walls embracing the sides of the forward portion of the body structure, a driving blade reciprocable between said nose member and the discharge end of the magazine, a back-up plate between the back face of the driving blade and the adjacent forward end of said body structure and cooperating with the nose member to define a fastener driving guideway within which the driving blade is operable, said back-up plate having a doorway opening therethrough for passage of the fastening elements successively from said magazine chamber into said guideway, the width of said guideway and said blade being slightly greater than the width of said doorway opening so that the blade is supported front and back throughout its operative driving stroke, and said back-up plate having a rearwardly extending flange thereon overlying a supporting shoulder on the body structure for thereby retaining the back-up plate against downward displacement during driving strokes of the blade, said backup plate having edge portions thereof in retained engagement with said side walls of the nose chamber.

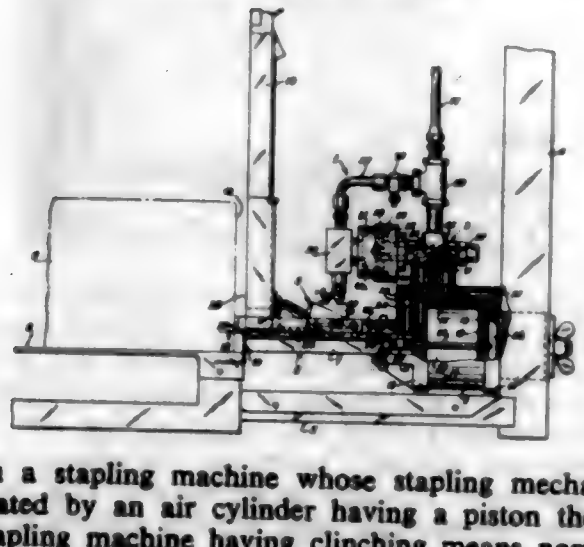
2,897,502
STAPLING MACHINE
Werner Schaefroth, Herrin, Ill.
Application January 17, 1958, Serial No. 709,500
8 Claims. (Cl. 1—49)



1. A stapling machine having a casing with a front

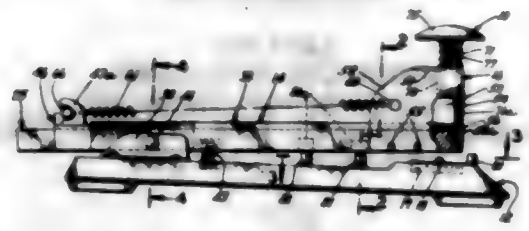
housing and a rear housing, staple driving means mounted in said casing, a pair of anvil holders each having an anvil thereon operatively mounted within said casing, said anvil holders being pivotally mounted on a common pivot, said pivot extending through an opening in the front housing, adjustment means mounted on the outside of said front housing, said adjustment means having a pin therethrough extending into said front housing, the distance between said pin and said common pivot being adjustable for controlling the depth of the penetration of said anvils through the material being stapled.

2,897,503
AIR OPERATED CONTROL MEANS FOR STAPLING MACHINES
Werner Schafroth, Herrin, Ill.
Application March 26, 1956, Serial No. 573,796
6 Claims. (Cl. 1—101)



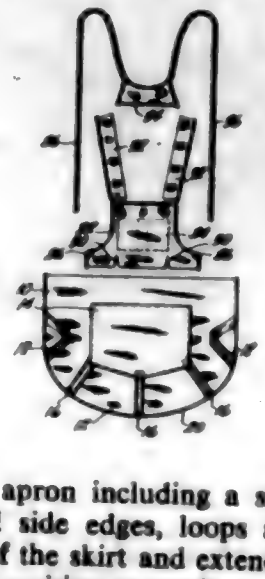
1. In a stapling machine whose stapling mechanism is actuated by an air cylinder having a piston therein, said stapling machine having clinching means normally retracted therein and a bottom edge beyond which staple clinching means are adapted to project, movable means normally extending beyond said bottom edge and adapted to be moved toward said bottom edge by a carton to be stapled, a trip mechanism connected to said movable means, said trip mechanism adapted to actuate an air valve for directing a source of air under pressure first to one side of the piston in said air cylinder to drive and clinch a staple and then to the opposite side of said piston to retract the stapling mechanism while said movable means are adjacent to said bottom edge.

2,897,504
MACHINES FOR BINDING SHEETS OF MATERIAL
Erving J. Shapiro, Glencoe, Ill.
Application April 19, 1956, Serial No. 579,203
4 Claims. (Cl. 1—187)



1. A machine for fastening sheets of material together in a stack comprising a supporting member on which marginal edge portions of said sheets can be placed, means for supporting a substantially inverted L-shaped sheet fastener having a substantially horizontal leg and a substantially vertical leg having a free end above said supporting member, means movable in a vertical plane for moving such an inverted L-shaped fastener downwardly from said first mentioned means in said plane and onto said supporting member, a single clinching groove provided on said supporting member and disposed at an angle relative to said plane for moving said vertical leg into transversely underlying relation to said horizontal leg during said downward movement of said inverted L-shaped member to clamp together inner edge portions of sheets on said supporting member, said groove including a cam portion at one end aligned in said plane and initially engageable by the free end of said vertical leg during commencement of transverse movement thereof, and sheet aligning means on said supporting member to locate the inner edges of said sheets to be clamped in spaced relation to said cam portion to enable the free end of said vertical leg to clear the inner edge portions of the sheets to be clamped without penetrating the sheets.

2,897,505
APRON FOR CARRYING ARTICLES
Matilda C. Lipscomb, Little Rock, Ark.
Application May 7, 1957, Serial No. 657,660
7 Claims. (Cl. 2—48)



1. A carrying apron including a skirt portion with a bottom edge and side edges, loops at spaced locations along the edges of the skirt and extending transversely of said edges and in position to receive an arm of the wearer of the apron to support the lower part of the skirt portion and thereby form a trough for holding articles to be carried, one of the loops being connected to the skirt portion adjacent to the bottom edge, and another of the loops being connected to the apron at a location along one side edge of the skirt portion so as to hold up a part of the skirt that forms an end for the trough.

2,897,506
RIB TYPE VENTILATED GARMENT CONSTRUCTION
Leon S. Carter, Beaufort, S.C., assignor of twenty percent to Donald S. Polk, Beaufort, S.C.
Application August 10, 1956, Serial No. 603,384
1 Claim. (Cl. 2—87)

A ventilated garment construction comprising a main body panel of moisture impervious material, a plurality

2,897,510

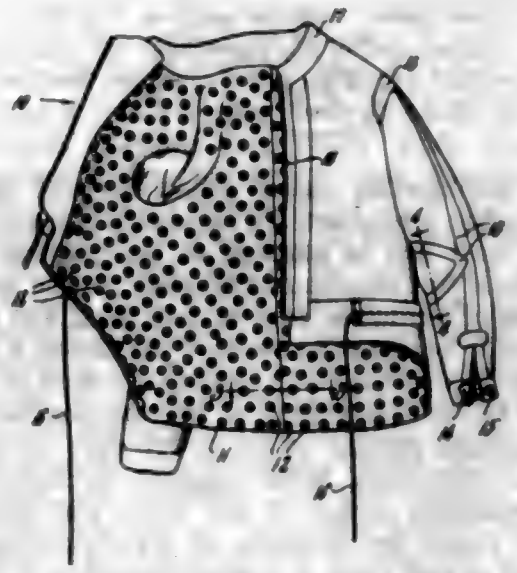
of elongated flexible ribs mounted on the interior surface of said panel in substantially a vertical relation, each of said ribs having a generally rectangular transverse cross-sectional shape, said body panel having a longitudinally elongated recess receiving the longitudinal outer edge portion of each of the ribs, each of said ribs having a plurality of longitudinally spaced and centrally arranged passageways therethrough, said passageways being inclined downwardly and outwardly, said body panel having a plurality of vertically spaced and aligned apertures in alignment with the passageways in the ribs, the longitudinal axis of the apertures forming an extension of the longitudinal axis of the passageways to prevent passage of water through the passageways when the body panel is disposed vertically, each of said ribs having a plurality of transversely extending notches with the ends of the notches communicating with the side edges of the ribs interiorly of the inner surface of the body panel for assuring air flow through the notches even if the inner surface of a rib is engaged with an underlying surface, each of said passageways having an inner end communicating with the lower wall of a transverse notch inwardly of the inner surface of the rib thereby assuring unobstructed air flow through the passageways and apertures from the exterior surface of the body panel to the interior surface thereof.

2,897,507
RAINCOAT
Joseph Kaplan, Baltimore, Md.
Application October 7, 1957, Serial No. 688,657
2 Claims. (Cl. 2—87)

1. A raincoat comprising a single piece of material folded along a horizontal line to form shoulders and having a neck hole tangential to said fold, said material being cut from said neck hole to the edge thereof and provided with fastening means along the edges so formed, seams at the sides of said coat parallel to said edges forming the sides of the torso of said coat, said material being cut inwardly at the tops of said seams to form arm holes and being cut outwardly above said inward cuts to said fold to form shoulder overhangs, the distance from one edge of said material to the other along said fold being greater than the distance from one said seam to the other, said inward arm hole cuts extending inward of said seams substantially the same distance that said overhangs extend outward of said seams.

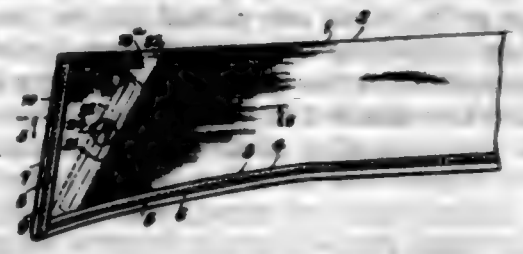
2,897,508
COLD WEATHER GARMENTS
Don M. Bushore, Severna Park, Md., and Nueberne H. Brown, Jr., South Bend, Ind., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Application April 11, 1952, Serial No. 281,878
1 Claim. (Cl. 2—93)

A thermally insulating garment having a body covering portion and a limb covering portion including a joint covering portion, comprising flexible liquid-impermeable and gas-impermeable sheet material conforming to the shape of said body and limb, said material having in its interior a multitude of cells not in communication with each other, and integral with said sheet material a large number of spaced substantially regularly arranged and substantially uniformly shaped blunt low projections on the inner surface of the sheet and adapted to face said body and limb except at the areas adjacent the regions of said body and limb where bending of a joint occurs, said sheet material being adapted to be spaced from said body and limb by said projections, and said garment being supple and smooth-surfaced at the



area adjacent the regions of said body and limb covering portions where bending of a joint occurs; whereby said body and limb may be thermally insulated from inclement ambient temperatures, whereby circulation of air of substantially body temperature may be afforded on the surface region of said body and limb, and whereby mobility of the joint may be unimpaired.

2,897,509
COLLAR AND METHOD OF MAKING COLLARS
Thomas Dow Almlie, Metuchen, N.J., assignor to Phillips-Van Heusen Corporation, New York, N.Y., a corporation of New York
Application May 3, 1956, Serial No. 582,522
1 Claim. (Cl. 2—132)



A shirt collar construction comprising a collar body having inner and outer plies stitched together along its lower and forward edges, a reinforcement piece consisting of a two-ply generally triangulated section of fabric having generally parallel upper and lower edges and converging side edges being longer than the lower edge and attached only at the forward end of the collar body, said piece having one of its side edges and its upper and lower edges attached to corresponding edges of the collar body by said stitching, the plies of the reinforcement piece adjacent the other side edge being stitched together on parallel lines to provide a stay-receiving pocket, the piece being attached to the collar body while the piece is under tension and while the collar body and piece are being sewed into a neckband and with the transverse width of the material of the collar body being greater than the length of the reinforcement piece whereby the reinforcement piece is maintained under constant tension to resist upward and outward curl of the collar body, and a stay contained in the pocket and carried solely by the reinforcing piece.

angle relative to said plane for moving said vertical leg

11 ventilated garment construction comprising a main body panel of moisture impervious material, a plurality

2,897,510
SPORTS CAP OR HAT ACCESSORY
Christina Ethel Forbes-Robinson, Lakewood, Calif.
Application August 15, 1955, Serial No. 528,332
2 Claims. (Cl. 2—172)

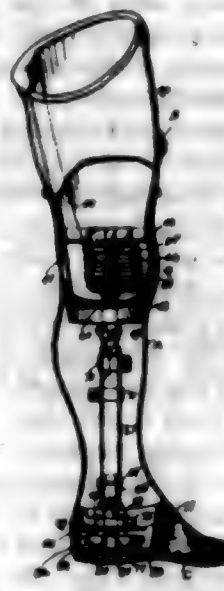
1. A combination ladies' sports cap and hair shield that includes: a substantially circular crown piece; a continuous band that is attached to the periphery of said crown piece and extends thereabround; a brim attached to a portion of the lower edge of said band and extending substantially horizontally outward therefrom; a hood that is formed of a substantially rectangular sheet of a flexible material and that depends by an edge portion thereof from the remaining portion of the lower edge of said band; means to removably fasten together the oppositely disposed depending corners of said hood; and means to removably fasten the midpoint of the depending edge of said hood to said band at a point thereon over said brim.

2,897,511
ATTACHMENT FOR A HAT
Madeline Esther Blair, Brooklyn, N.Y.
Application February 18, 1958, Serial No. 714,362
2 Claims. (Cl. 2—185)

1. In combination with a woman's hat having a substantially circular shaped upright band attached at its lower edge to the inside rim of said hat, an attachment for said hat comprising a double thickness band folded back upon itself along the upper edge thereof with ornamental false hair attached to and depending from one of said folds and a plurality of spaced apart magnetizable elements attached to the other one of said folds, said hat having a like plurality of substantially equally spaced apart magnetizing elements attached to the upright band of said hat, said upright band being adapted to extend between the folds of said attachment band with said magnetizable and magnetizing elements in contiguous relation whereby said attachment is held on said hat with said ornamental hair depending therefrom and with the lower ends thereof extending below the rim of said hat.

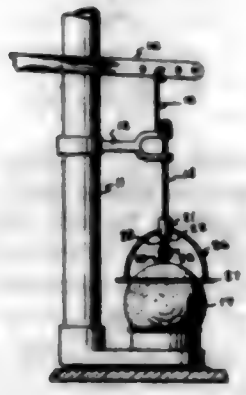
2,897,512
ARTIFICIAL LIMBS
Charles E. Sackett, San Francisco, Calif.
Application August 30, 1956, Serial No. 607,015
1 Claim. (Cl. 3—22)

An artificial leg embodying in its construction an upper open ended bucket member equipped with a horizontal base, an alignment table adjustably secured relative to said base, a knee portion assembly connected to said alignment table, said assembly including a pair of meshing gear segments, a housing surrounding the gear segments for confining the meshing noise thereof to the housing, an outer housing secured to and depending from said bucket member, a combined ankle and foot assembly, a shin portion connected to and interposed between the knee portion assembly and the combined ankle and foot assembly, means associated with said shin portion for obtaining height adjustments of the same, said



bucket portion adapted to retain and snugly receive therein the remaining stump of a severed human leg, and a flexible covering for said artificial leg.

2,897,513
FLUSH VALVE FOR TOILET TANKS
Thomas Rosenberg, New York, N.Y.
Application January 14, 1958, Serial No. 708,776
1 Claim. (Cl. 4—57)



A flush valve unit for use in a flush tank having a water outlet valve seat and an overflow pipe, a guide bracket supported by the overflow pipe, comprising a valve lift rod having a lower threaded end and slidably guided for vertical movements in the free end of said bracket, a vertically disposed trunnion having an internally threaded bore receiving the lower threaded end of said lift rod, equally spaced arcuate shaped support arms having upper ends thereof secured to said trunnion, the lower ends of said arms being connected at equally spaced points upon an annular shunting ring, said trunnion also having an eye on the lower end thereof, a ball valve having an aperture in the upper end thereof, swivel means connecting said trunnion eye and said ball aperture comprising at least one ring and an eyelet suspended therefrom, the ring being connected to said trunnion eye, the eyelet being connected to said ball aperture, said shunting ring being of a diameter greater than the ball valve permitting free swinging movements of the ball valve therewithin and said swivel means being of a length to suspend said ball valve at a level to contact said shunting ring at points above the horizontal medial axis of the ball valve.

2,897,514

FOLDING SHOWER DOOR

Solomon M. Collins, Detroit, Mich., assignor to Kinkead Industries Incorporated, Chicago, Ill., a corporation of Illinois

Application June 17, 1957, Serial No. 665,954
5 Claims. (Cl. 4—154)

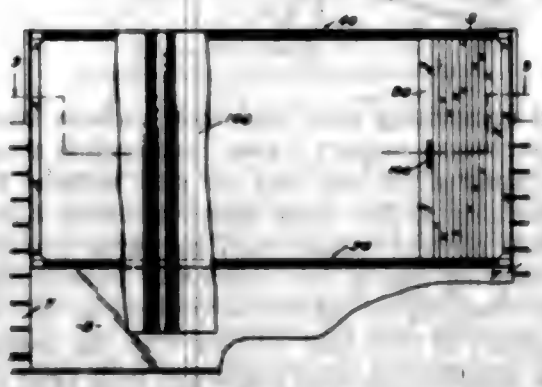
1. A foldable closure device for use as a shower door for a bath enclosure which comprises in combination upper and lower spaced parallel horizontal tracks to be mounted along a bath enclosure opening and having respective side grooves facing toward the enclosure, a sheet of horizontally foldable water repellant material for closing said opening and extending vertically to overlie said grooves, sheet supports and means for securing them to the sheet in pairs regularly spaced along the sheet, the supports of any said pair comprising vertically aligned upper and lower supports associated with the upper and lower sheet edges and upper and lower tracks, each said support including a slide member entering the said groove in the associated track and slidable therealong, each said track including groove-associated retaining means cooperating with its associated slide members to retain them in sliding association with the groove of such track against transverse horizontal forces and against forces toward the other track.

2,897,515

FOLDING SHOWER DOOR

Solomon M. Collins, Detroit, Mich., assignor to Kinkead Industries Incorporated, Chicago, Ill., a corporation of Illinois

Application June 21, 1957, Serial No. 667,237
5 Claims. (Cl. 4—154)



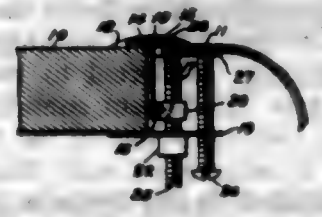
1. A foldable sliding closure combination for an access opening of a shower bath enclosure, comprising upper and lower track rails for placement horizontally along the opening, each rail having a track side adjacent to the enclosure and having an end-to-end track groove extending along an intermediate portion of its track side, a horizontally foldable upright composite water-repellant closure sheet, and means for supporting the closure sheet slidingly from said rails with its marginal portions adjacent to the track side thereof to close and open the said opening when unfolded and folded, the closure sheet having an unfolded length sufficient to bridge the said opening horizontally and being of such width that it extends vertically across both track-rail grooves but terminates short of the outer limits of the said track sides, the closure sheet comprising a series of horizontally successive interconnected upright sheet elements each extending entirely across the sheet and being of a length determinative of the said width of the sheet, the said sheet elements comprising a series of stanchions and alternately interspersed pliant interstanchion panels which are individually foldable and unfoldable horizontally, each panel having an enlarged joining portion along each vertical margin thereof, the stanchions including means defining marginal vertical channels which slidingly receive the enlarged joining portions of the panels and hold the panels and stanchions together horizontally while permitting relative vertical sliding movement, each stanchion having a separate bracket member for each end portion thereof overlapping the stanchion on the face thereof adjacent to the said track side of the associated rail and opposite the said track groove thereof, means for securing each bracket member to its stanchion, each bracket member having a cap portion which closely overlaps the associated end of the stanchion and closes the associated end of such of the said vertical channels as are defined in the stanchion, thereby preventing vertical sliding movement between the stanchion and any adjacent one of said interstanchion panels, each said bracket having a slide member fixed therewith and entering the associated track groove, the said slide members comprising the said means for supporting the closure sheet.

2,897,516

MOUNTING CLAMP AND FRAME FOR SINKS AND LAVATORIES

Tom B. Enoch, Bartlesville, Okla., assignor of one-fifth to J. Frank Church, Bartlesville, Okla.

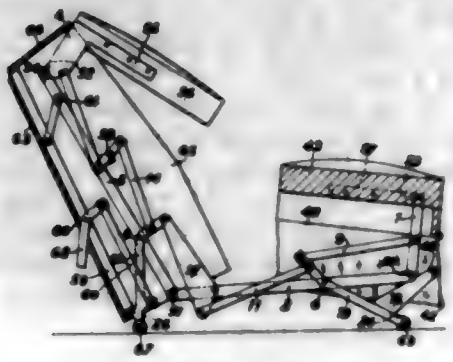
Application August 8, 1955, Serial No. 526,979
21 Claims. (Cl. 4—187)



1. In combination with a sink having a horizontal rim and a cabinet top having a sink opening slightly larger than the margin of said rim, a frame around said rim comprising an upwardly arcuate member adapted to engage along one edge the upper surface of said cabinet top and along the other edge the upper surface of said rim so as to bridge the space between said cabinet top and said rim; a flange along the underside of said arcuate member having an L-shaped cross section integral with said member along its outer edge, one arm of said L extending horizontally inwardly in spaced-apart relation to said member along a portion of its width and the other arm extending downwardly between the outer edge of said rim and the edge of the cabinet top surrounding said opening; an upwardly and inwardly turned edge on the lower portion of the downwardly extending arm; a series of clamping plates at spaced intervals along the lower surface of said cabinet top and extending toward said sink, each of said plates comprising a substantially flat member having a pair of spaced-apart openings therein, one directly below the outer edge of said rim and the other closer to the body of said sink; a threaded rod extending vertically through said hole directly under said rim edge in slidable relation with said plate and engaging the lower side of said sink rim; a nut on said threaded rod above said plate having a horizontal slot in one of its edges adapted to engage the upturned edge of said downwardly extending arm; a nut on said rod below said plate adapted to exert upward force on same; a bolt threaded through the other of said holes engaging the bottom of said sink

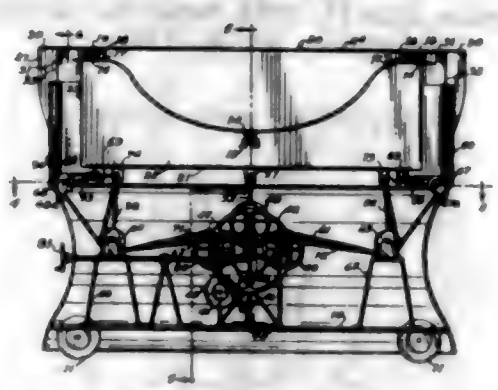
and adapted to apply a downward pressure on said plate and cooperate with the nut below said plate in applying a clamping action between said plate and the horizontal arm of said flange and hold said arcuate member in close engagement with said cabinet top and said sink rim.

2,897,517
FOLDING BED ADAPTED WHEN FOLDED TO CONSTITUTE A SEAT WITH BACK
Albert Ducrot, Paris, France
Application November 12, 1957, Serial No. 695,864
Claims priority, application France March 13, 1957
1 Claim. (Cl. 5—42)



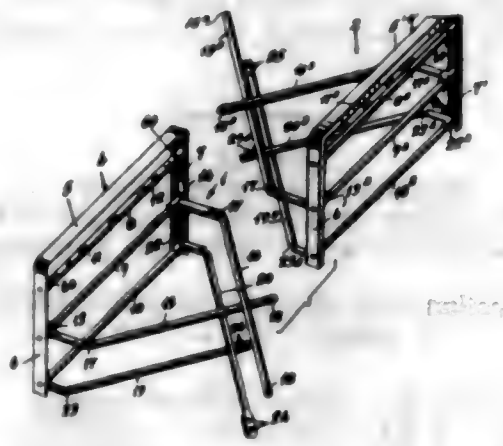
A metal apparatus adapted to be converted at will into a bed or a seat with a back, the whole mechanism thereof being concealed in the seat condition of the apparatus, which comprises a frame made of angle-irons, said frame consisting of three pairs of parallel longitudinal members pivoted on one another in succession and of transverse bracing elements at their ends to define the width of said frame, a pair of fittings having the shape of inverted L's which are pivotally connected to two of the end corners of said frame, an element constituting the back or the head of the bed, according to the position of the apparatus, which is secured on said fittings, other fittings which are secured to the opposite corners of the frame, a chest-like element constituting the seat or the foot of the bed, according to the position of the apparatus, which is secured on said other fittings, two pairs of parallel legs bearing on the floor and hingedly mounted respectively on the intermediate longitudinal members of the frame and on the end longitudinal members of the frame on the side of the back or the head of the bed, a pair of link assemblies hingedly interconnected to one another, also pivoted on said frame, on the elements forming the head of the bed, and on the two pairs of legs, in order to permit the synchronous unfolding and folding movements of the frame, props secured on said legs pivoted on the intermediate longitudinal members of the frame and extending obliquely towards the element constituting the foot of the bed, said props being arranged to be retracted under the seat in the closed position and to bear on the floor in the unfolded position, a third, collapsible pair of legs located underneath the frame members on the side of the head of the bed and another set of hingedly interconnected links also pivoted on said legs mounted on said end frame members, on said third pair of legs and on said end frame members, a chest secured on said other set of links so as to bear against said end frame members in the closed position of the apparatus and to be retracted beneath said end frame members in the unfolded position without interfering with the angular movement of the back and head of the bed relative to the frame of the bed, and a flexible upholstery secured along the lower edge of the seat-forming chest-like element to form an extension of said chest-like element at the foot of the bed.

2,897,518
INFANT CARE APPARATUS
Grady B. Parramore, Marietta, Ga.
Application July 25, 1956, Serial No. 600,813
10 Claims. (Cl. 5—109)



1. In a device of the character defined, an infant carriage, movable means supporting said carriage and motor means for moving said carriage, said motor means selectively providing rocking, gliding and vertical reciprocation of said carriage, said motor means being selectively applicable for moving said carriage in any of said motions and including a pivotal mounting and frictionally engageable means for engagement with individual frictional carriage driving devices.

2,897,519
FOLDING BED
Aristide Carletti, Rome, Italy
Application March 11, 1957, Serial No. 645,159
Claims priority, application Italy March 12, 1956
7 Claims. (Cl. 5—177)

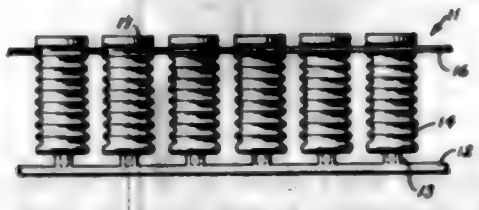


1. A bed comprising head and foot portions each including a transverse support frame, longitudinal elements pivotally connected, at one end, to said support frame to permit rocking of the latter about a lateral axis, the opposite ends of said longitudinal elements having cooperative securing means for detachably connecting the longitudinal elements of said head portion to the longitudinal elements of said foot portion with the connected longitudinal elements in axial alignment with each other, tension accepting means detachably connecting the support frame of said head portion to the support frame of said foot portion at locations disposed below said lateral rocking axes of the related support frames, a rest surface portion of a resilient metal fabric, and means detachably connecting the opposite ends of said rest surface portion to the support frames of said head and foot portions at locations above said lateral rocking axes of the support frames so that the rocking of said support frames induced by tensioning of said rest surface portion is opposed by said tension accepting means, each of said longitudinal elements including a first short section extending radially with respect to said lateral rocking axis of the related support frame and a second, relatively long section hingedly joined to said first section to swing relative to

pages to form separate books, aligning the separated books each held together by the disposable

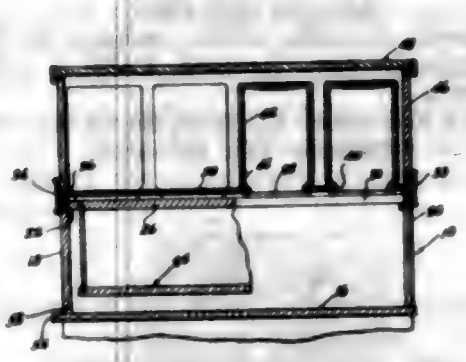
the latter between an operative position in axial alignment with said first section and a stored position where said second section is parallel to said rocking axis of the related support frame.

2,897,520
RESILIENT SUPPORT ASSEMBLY
Wylie B. Bradford, Elmwood Park, Ill.
Application February 4, 1958, Serial No. 713,170
3 Claims. (Cl. 5—348)



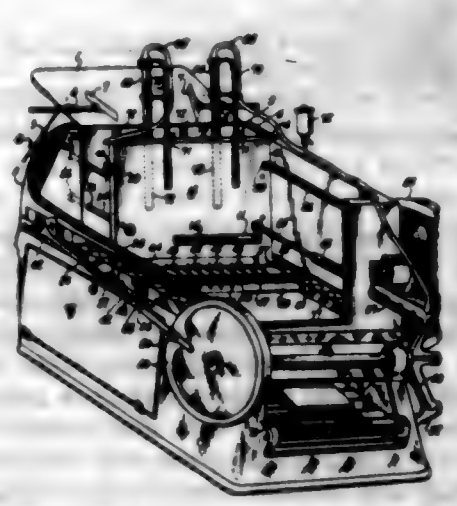
1. In a resilient support assembly, a base member, a plurality of upstanding sealed bellows members, depending axial studs on the bottoms of the bellows members threadedly engaged in the base member, and a top wall member fixedly mounted parallel to and above said base member and formed with guide apertures slidably receiving the top portions of said bellows members, said top portions extending slidably through said guide apertures and projecting above said top wall member and being distributed in a substantially uniform manner over said top wall member to define a resilient support for a mattress or the like.

2,897,521
BEEHIVE
James F. Sexton, Fries, Va.
Application November 1, 1957, Serial No. 693,952
1 Claim. (Cl. 6—2)



In a beehive, a receptacle adapted to house a queen bee and a colony of working bees and including a bottom, spaced side walls rising from said bottom, an end wall extending between each of the adjacent ends of said side walls and rising from said bottom, the top extending over the space defined by said side walls and end walls adjacent the upper ends of said last-mentioned walls and supported upon the upper ends of said side and end walls, said top being provided with a plurality of slots arranged in parallel spaced relation, each of said slots being of a size to permit ready egress of only working bees therethrough, and a ledge extending about the inner face of each of said end walls inwardly of the upper ends of the latter, a plurality of upstanding brood frames arranged in face-to-face abutting relation positioned within said receptacle and supported from said ledges, each frame having an upper frame member provided with a relieved portion intermediate its ends, the relieved portions of the adjacent upper frame members defining a slot of a size to permit ready egress of only working bees therethrough, an upstanding connector frame conformably shaped to fit about the upper end of said receptacle superimposed upon and having the lower end portion embracingly engaging said side and end walls adjacent the upper ends of the last-mentioned walls, another ledge extending about and projecting from the inner face of said connector frame intermediate the ends thereof and engaging the upper ends of said receptacle side and end walls, a platform bridging the space defined by said another ledge and supported upon said another ledge, said platform having a plurality of openings arranged in spaced relation, and a plurality of transparent jars each including an open end and a closed end, each jar being arranged in an upright position with the open end extending through an opening in said platform and facing the slots in said top and supported in the platform and the closed end spaced above the platform.

2,897,522
AUTOMATIC BOOK AND SHEET-BINDING MACHINE
Spyros Michael Fotiades, Athens, Greece
Application March 28, 1952, Serial No. 279,238
8 Claims. (Cl. 11—1)



1. A binding machine comprising a frame, a press plate and a backing plate linked together for limited movement away from each other and slidable in said frame in opposed relationship to each other, means for slidably reciprocating said press plate into and out of engagement with binding means in said frame, during said movement into engagement said press plate being slidable against said backing plate to compress a stack of leaves inserted between the plates to carry said stack into engagement with said binding means which binds the stack of leaves together, during said movement out of engagement said press plate being freely slidable away from said backing plate to automatically release the bound stack of leaves and to automatically move the backing plate out of said engagement when the press plate has reached the limited movement away from the backing plate.

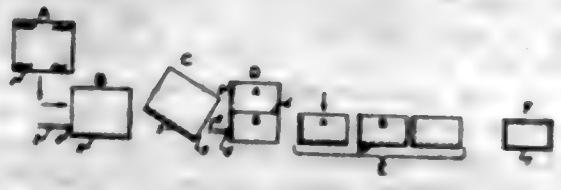
2,897,523
METHOD AND APPARATUS FOR PREPARING AND BINDING BOOKS
Anthony J. Allegretti and Raymond P. Fischer, Chicago, Ill., assignors to The Cuneo Press, Inc., Chicago, Ill., a corporation of Illinois
Application October 14, 1957, Serial No. 689,895
3 Claims. (Cl. 11—1)

1. The method of binding books which includes assembling a stack of signatures, each having a plurality of parallel printed pages arranged side by side, head to head and foot to foot, binding the signatures together on a side parallel to the printed lines by disposable stitching rotating the signatures through an angle of ninety degrees, cutting the signatures apart between adjacent

ment at the foot of the bed.

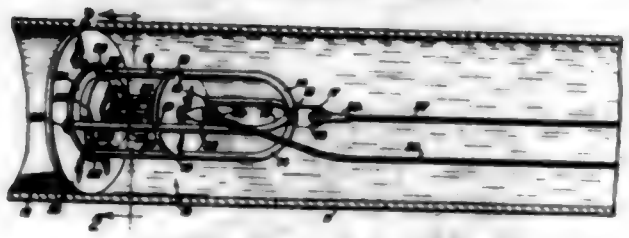
hingedly joined to said first section to swing relative to

pages to form separate books, aligning the separated books each held together by the disposable stitching, one



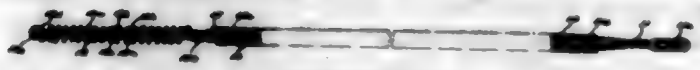
book behind the other, then binding each book along an edge perpendicular to the printed lines, and then trimming to remove the disposable stitching.

2,897,524
SEWER CLEAN-OUT TOOL
Roy W. Varner and James W. Brown, Abilene, Tex.
Application April 3, 1958, Serial No. 726,243
5 Claims. (Cl. 15—104.3)



1. A sewer clean-out tool for passage through elongated sewer pipes comprising a frame including a plurality of speced apart parallel longitudinally extending frame members, a circular plate extending transversely of said frame intermediate the opposite ends thereof and secured to each of said frame members, a second circular plate extending parallel to said first circular plate and secured to said frame adjacent one end thereof, a flexible disk engaging said second plate, means detachably secured to said frame clamping said flexible disk to said second plate, said last named means, said flexible disk and said second named plate having an axial bore extending therethrough, a valve mounted on said frame for closing said bore, a cable secured to said frame for controlling the movement of said tool, and a control cable for opening said valve secured to said valve whereby water pressure bearing against said tool may be released.

2,897,525
PORTABLE GUN BORE CLEANER
Donald F. Goodwin, Mayfield Heights, and John X. Sopkovick, Cleveland, Ohio
Application November 23, 1953, Serial No. 393,621
7 Claims. (Cl. 15—104.165)

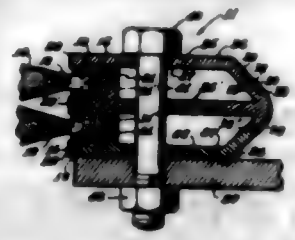


1. A gun barrel cleaner comprising an elongated body means substantially unyielding in at least one axial direction and laterally bendable for coiling, a member on one end having an eye, and a barrel cleaning brush member on the other end being formed by twisting two wires helically with bristles extending laterally therebetween, the end of said wires extending beyond the end of the bristles and forming a portion for detachably engaging with said eye carrying member, whereby said cleaner may either assume a straight end to end position when used for barrel cleaning or be coiled, when not in use, into a compact form for carrying with the ends detachably connected together.

2,897,526
NOZZLE-APPLICATOR FOR SHAVING LATHER
Norman Leslie Doctoroff, San Francisco, Calif., assignor of one-third to Winifred M. Colombo, San Francisco, Calif.
Application September 30, 1955, Serial No. 537,829
1 Claim. (Cl. 15—139)

An applicator for pressurized shaving lather or the like comprising a flexible soft compact resilient substantially flat pad adapted for spreading the lather and provided with vent means extending through from top to bottom of the pad, a backing plate substantially coextensive with and normally in contact with the bottom of said pad and to which plate said pad is secured and sealed around its margins, port means extending through said backing plate in offset relation to said vent means, an unsealed area providing lateral passage for the lather between said vent and port means, and a second plate spaced rearward of said backing plate marginally secured and sealed thereto to form a chamber therebetween, a hollow neck extension projecting rearwardly from said chamber and providing a communication to the outlet of a container.

2,897,527
BRUSH HOLDER
Lloyd E. Jones, Arcadia, Calif., assignor to Industrial Brush Company, Inc., Arcadia, Calif., a corporation of California
Application December 21, 1953, Serial No. 399,485
9 Claims. (Cl. 15—183)

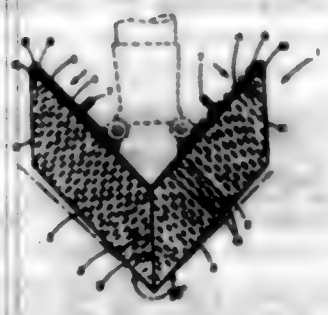


8. A metal bar for use with a mating bar of similar construction to provide a brush holder and provided with an external surface, a major internal surface paralleling the external surface, an upper longitudinal edge portion, a lower longitudinal edge portion extending angularly from and terminating in a lower margin lying beyond the major internal surface, a longitudinal rib extending from the internal surface and located between said upper and lower longitudinal edge portions, and means on said lower margin to facilitate alignment of said bar with the corresponding margin of a mating bar.

2,897,528
SPONGE ELEMENT FOR MOPS
Nathaniel B. Greenleaf, Toronto, Ontario, Canada, assignor to Sponge Products Corporation, Chicago, Ill.
Application January 11, 1955, Serial No. 481,348
8 Claims. (Cl. 15—244)

1. A mopping element comprising a pair of elongated sponge sections having a grain running in one

direction thereof, each sponge section presenting a longitudinally extending lower working face and upper backing-receiving face, and having the sponge grain running perpendicular to said lower working face, and a longitudinally extending face cut on a bias to said lower



working face to form an acute angle therebetween, and a fabric piece adhered over a substantial area of said backing-receiving faces of said sponge sections, and connecting said sections with said bias cut faces arranged in contiguous relation to form an elongated V-shaped sponge assembly.

2,897,529
WINDSHIELD WIPER BLADE ASSEMBLY AND PRESSURE DEVICE THEREFOR
Fred A. Krahn, Hebert, Ind., assignor to The Anderson Company, a corporation of Indiana
Application June 1, 1954, Serial No. 433,403
15 Claims. (Cl. 15—245)

3. A pressure distributing assembly comprising a pair of pressure members and a bridge for use with a windshield wiper blade, each of said members being provided with a seat, each end of the bridge having a projection disposed on a seat, and resilient means carried by each of the members for detachably holding the projections on the seats.

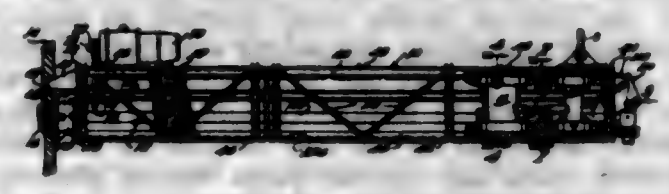
2,897,530
WINDSHIELD WIPER BLADE AND PRESSURE DEVICE THEREFOR
John W. Anderson, Gary, Ind.
Application April 14, 1955, Serial No. 501,233
11 Claims. (Cl. 15—245)

1. A windshield wiper comprising: a blade assembly having a resilient wiping element and a resiliently flexible support therefor having reduced end extremities forming with an intermediate portion thereof a pair of abutment means, a pressure-distributing device having a pair of secondary yokes with the ends of the yokes respectively mounted on said end extremities with the inner ends of the secondary yokes located on opposite sides of the abutments, connections connecting the ends of the primary yoke with the secondary yokes, the connections between the primary yoke and secondary yokes being detachable while the secondary yokes are mounted on the support, and means extending from the connections and located externally of the device for facilitating the operation of the connections.

2,897,531
TOOTH BRUSH BRISTLE CLAMP
David A. Calabrese, Arlington, Va.
Application April 7, 1958, Serial No. 726,693
2 Claims. (Cl. 15—257)

1. A clamp for retaining the shape of tooth brush bristles while drying, said clamp comprising a base, sides and one end, said sides being of a lesser height than the over-all height of a tooth brush head and bristles, the other end of the clamp and that portion of the clamp opposite said base being open whereby a tooth brush head may be slid into said clamp through said open end with free ends of bristles projecting from said clamp, said one end sloping towards said open end with the edge of said one end remote from said base being offset from the opposite edge thereof a distance at least equal to the distance of set back of bristles of the tooth brush from the end of the head remote from the tooth brush handle whereby that portion of said one end adjacent said base engages and functions as a stop for a tooth brush head and that portion of said one end remote from said base engages endmost bristles.

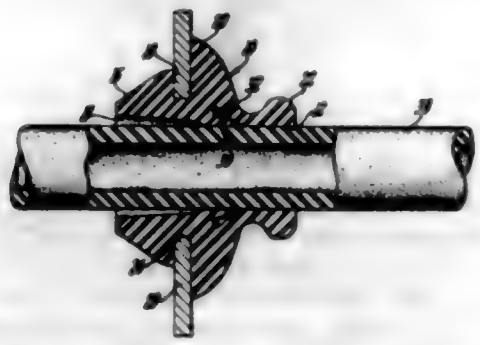
2,897,532
RETRACTABLE SOOT BLOWER OF THE LONG TRAVEL TYPE
William F. Candieri, Lancaster, Ohio, assignor to Diamond Power Specialty Corporation, Lancaster, Ohio, a corporation of Ohio
Application November 19, 1954, Serial No. 469,908
6 Claims. (Cl. 15—317)



1. In a soot blower construction of the long travel type, a generally tubular hollow stationary supporting truss adapted to be mounted appurtenant and substantially perpendicular to the wall of a boiler setting or the like, a lance tube mounted in said truss for longitudinal movement into and from the same and to positions of varying projection therefrom, said lance tube being substantially smaller than said truss, a driving carriage longitudinally movably mounted in and guided by said truss and connected to said lance tube, to actuate the latter, said lance tube also being rotatable in said truss, a motor, means drivable by the motor and also carried by said truss for moving the carriage and lance tube longitudinally and for rotating said lance tube with respect to said carriage and truss, including a drive shaft journaled in the truss and extending parallel to the lance tube and to the path

of movement of the carriage, and power transmission means in said carriage having a single torque input portion slidably keyed on said shaft and rotatably drivable thereby, said transmission having two power output portions, one such output portion reacting longitudinally against said truss to move said carriage and lance tube longitudinally, and the other such output portion reacting angularly upon the lance tube to rotate the latter.

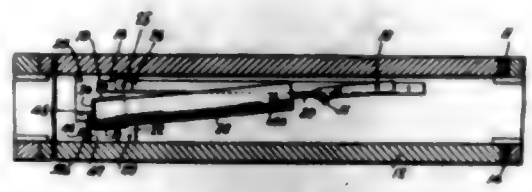
2,897,533
GROMMETS, BUSHINGS AND THE LIKE
Douglas T. Bull, St. Clair Shores, and Arkady A. Lobanoff, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application February 16, 1956, Serial No. 565,850
1 Claim. (Cl. 16—2)



A grommet for receiving a cylindrical part comprising a flexible walled tubular member having a passage formed therethrough and an external groove formed therein, a retaining flange formed from said tubular member externally thereof and overlying said groove to retain said tubular member in an aperture in a supporting piece, said passage through said tubular member being tapered from a diameter slightly larger than the cylindrical part received within said member to a diameter slightly smaller than the part received in said tubular member to provide a snug fit about the part received therein, a bead formed on the end of said tubular member and having the neck thereof between said bead and said external retaining flange, an annular internal groove formed in said tubular member and within said passage and of a diameter greater than the internal diameter of said passage, and an annular flange formed from said tubular member and within said passage and extending thereinto, said flange having an internal diameter smaller than the diameter of said passage to force said flange against the part received in said passage and into said internal annular groove, said internal and external flanges being disposed for concurrent movement into sealing engagement with the part received in said tubular member and the supporting piece on which the tubular member is mounted, said bead providing for pivotal movement of the part received in said tubular member about said internal flange without affecting the seal provided by said internal flange.

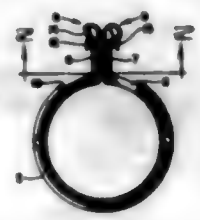
2,897,534
DOOR CHECK
Ernest J. Pickerell, Oskaloosa, Iowa
Application February 17, 1956, Serial No. 566,286
2 Claims. (Cl. 16—70)

1. A door check comprising a pair of pivotally interconnected links, means pivotally securing one of said links to a door hinged in a frame, means pivotally securing the other of said links to the door frame, an elongated cylinder, means pivotally securing one end of said cylinder to the door frame, said last-named means including an L-shaped bracket adapted to be secured to said cylinder, a base plate adapted to be secured to the door frame, means pivotally securing one side of said bracket to the base plate, a right angular lug carried by said base plate, a bar loosely extending through said lug and said L-shaped bracket, a spring about said bar, and means tensioning said spring, a plunger slidable in said cylinder, a plunger rod fixed at one end of said plunger and secured at the opposite end thereof to the pivotal connection between said links, a spring in said cylinder about said rod constantly urging said plunger rearwardly, air



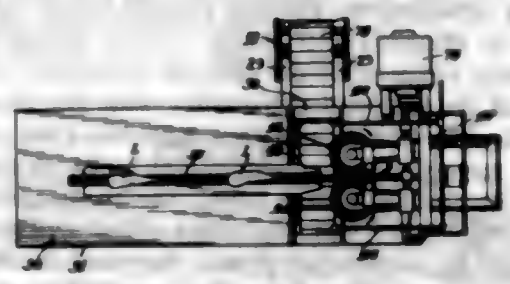
vents in said cylinder adjacent the opposite ends thereof, a ball check valve in said plunger permitting free passage of air from one end of said cylinder to the other upon opening of the door but restricting said passage upon closing of the door, and a stop carried by one of said links limiting the angular displacement of said links one relative to the other.

2,897,535
MOLDED CURTAIN HANGER
Franklin Radler, Maplewood, N.J., assignor to Manufacturers Supply Co., New York, N.Y., a copartnership
Application December 3, 1956, Serial No. 625,804
2 Claims. (Cl. 16—87.2)



1. A molded curtain hanger comprising a resilient split ring with notched jaws, each of said jaws having a clamping portion which is smooth on one side of its transverse center line and is provided with a barb extending therefrom on the other side of said transverse center line, the barb on one of said jaws being on one side of the transverse center line and the barb on the other of said jaws being on the other side of the transverse center line, said hanger being initially molded in the form of a resilient split ring with said jaws extending in side by side spaced parallel alignment with their clamping portions facing away from one another and with said barbs projecting outwardly in laterally offset relationship.

2,897,536
POULTRY BONING MACHINE
Ralph W. Bergstrom and Harold D. Linkemann, Worthington, Minn., assignors to Campbell Soup Company, Camden, N.J., a corporation of New Jersey
Application April 4, 1958, Serial No. 726,460
12 Claims. (Cl. 17—1)



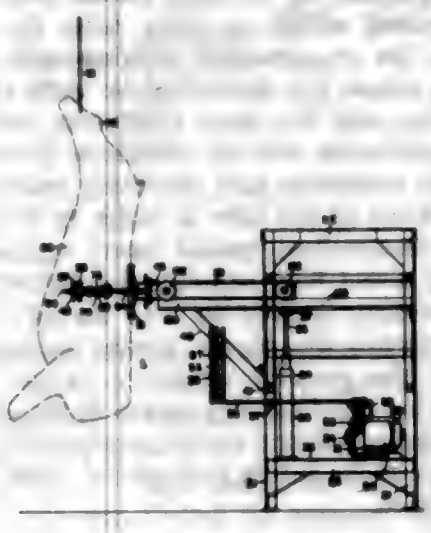
1. A poultry boning machine comprising a support, a pair of stripping rolls, means mounting said rolls in op-

position on said support for rotation about spaced, parallel axes, means connected to said rolls for rotating them in opposite directions, means on said support for conveying poultry legs past and between said rolls including an endless conveyor element, a plurality of leg carrying hooks secured in spaced relation on said conveyor element, and means for driving said conveyor element, and a guide extending along said conveyor element for guiding into the nip of said rolls legs carried on said hooks.

2,897,537
HIDE PULLER

Carl Oscar Schmidt, Jr., Wyoming, Ohio, assignor to The Cincinnati Butchers' Supply Company, Cincinnati, Ohio, a corporation of Ohio

Application June 8, 1956, Serial No. 590,166
9 Claims. (Cl. 17—21)



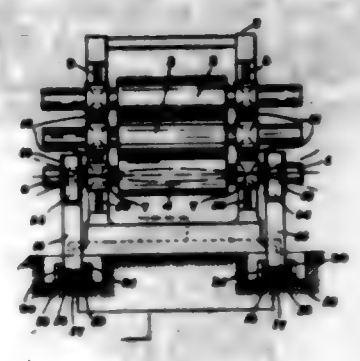
1. Apparatus for stripping from a conveyor-suspended animal carcass a hide partially severed at the belly to provide opposed flaps of hide to be grasped and pulled, said apparatus comprising in combination, a main frame, a freely shiftable carriage slidably mounted on said main frame so as to be reciprocable transversely of the direction of conveyor travel toward and from the backbone of the animal, a back rest on the carriage to abut the backbone, and means on the carriage shiftably supporting the back rest for movement in substantial parallelism with the line of carriage movement, a pair of hide grippers mounted on the carriage for movement in unison therewith, said grippers being spaced apart to flank the carcass and grip the hide flaps at opposite sides of the carcass, and means on the carriage for providing relative movement between the back rest against the backbone and said carriage while the carriage adjusts itself to the position of the carcass, and the grippers hold the hide flaps, for stripping the hide from the carcass.

2,897,538
MEANS FOR BENDING THE ROLLS OF ROLLING MACHINES

Uriel G. Shapiro and Thomas S. Rochester, both of Walls-end-on-Tyne, England, assignors to Commercial Plastics Limited, Wallsend-on-Tyne, England, a British company

Application November 12, 1957, Serial No. 695,906
Claims priority, application Great Britain November 15, 1956
5 Claims. (Cl. 18—2)

1. A rolling machine comprising a frame; at least two cooperating rolls each mounted in bearings in opposite sides of the frame one of said rolls being extended at each end beyond the frame; auxiliary free bearing units independent of the frame bearings and encircling the extended ends of said roll; a lever arm rigid with each auxiliary bearing unit; and means for acting on the two lever arms

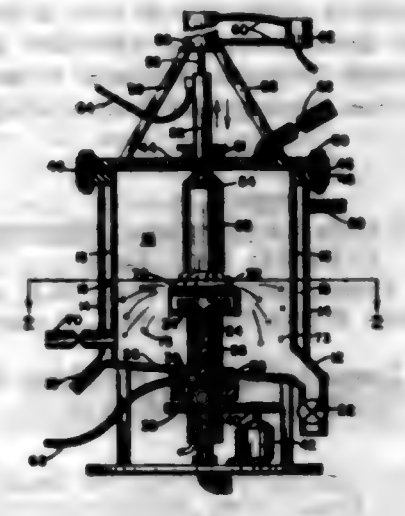


to move them angularly relatively to one another in a plane which contains the axes of said roll and of an adjacent roll, so as to bend the said roll about its middle.

2,897,539
DISINTEGRATING REFRACTORY METALS

John E. McMillan, Henderson, Nev., assignor to Titanium Metals Corporation of America, New York, N.Y., a corporation of Delaware

Application March 25, 1957, Serial No. 648,310
8 Claims. (Cl. 18—2.6)



1. Apparatus for disintegrating refractory metals comprising an enclosing shell, means for suspending a consumable electrode of said refractory metal interiorly from the top of said shell, means for supporting and rotating a table inside said shell and below the bottom of said electrode, means for maintaining an electric arc between the bottom of said electrode and refractory metal on the top of said table to progressively melt said electrode thereby to deposit on said rotating table molten metal which is thrown off said table by centrifugal force in the form of discrete particles, and means for cooling said particles.

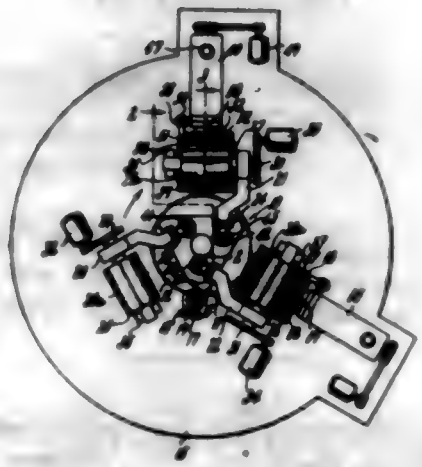
2,897,540
APPARATUS FOR MAKING PNEUMATIC TIRES

Thomas J. Rhodes, Clifton, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

Application January 19, 1955, Serial No. 482,823
3 Claims. (Cl. 18—5)

1. An apparatus for assembling a pneumatic tire casing, comprising in combination a support, an arm pivotally attached to said support, means for rotating said arm about said pivotal attachment, a drum adapted to carry a tire carcass rotatably mounted toward one end of said arm, an extruding device spaced from said support, a head assembly attached to the delivery end of said extruder comprising an annular shell composed of

two diametrically split haves, one such half being fixed to the extruder and the other such half being hinged to said fixed half, means for moving said hinged half away from said fixed half to facilitate depositing said drum within said shell by movement of said pivotal arm, a supporting member adjacent said shell for supporting said drum concentrically therewith when the drum is



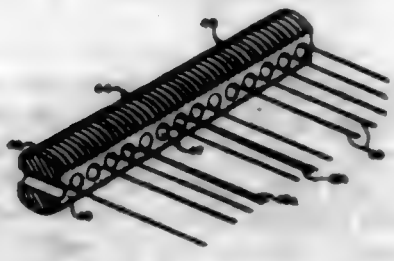
deposited within the shell, the inner surface of the shell being spaced from the drum when so supported so as to define therewith a cavity for at least a portion of a tire tread, said shell having an extrusion passageway leading therethrough from said extruder to said passageway, and means for rotating said drum within said shell.

2,897,541

APPARATUS FOR EXTRUDING SHEETS WITH STRIPED PATTERN

Camille Dante Orsini, Highland Park, N.J., assignor to Nixon Nitration Works, Nixon, N.J., a corporation of New Jersey

Application December 3, 1956, Serial No. 625,866
2 Claims. (Cl. 18—12)



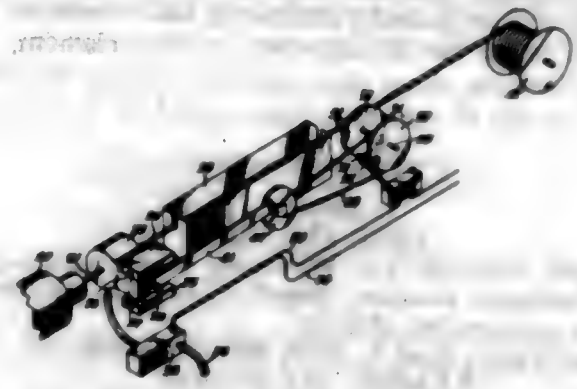
1. In apparatus for extruding a thermoplastic material containing luster-producing particles into substantially a sheet form, orienting means to produce a pleasing appearance on said sheet including a rod member disposed substantially transversely of the flow of said thermoplastic material, said rod member having openings in the direction of its width and circumferential grooves to accommodate at least some of the thermoplastic material during said flow, wires secured at one end to the rod member and having their ends free and extending from at least some of said openings in the direction of flow of said thermoplastic material, at least the openings and grooves serving to orient light-reflecting surfaces of said luster-producing particles contacted thereby to produce spaced lustrous areas on said sheet which are continuous and generally parallel the direction of movement of said sheet, the shades and intensities of said lustrous areas and the widths thereof being effected by the grouping and distribution of the wires along the rod member.

2,897,542

APPARATUS FOR FORMING COAXIAL CABLES

Hans D. Isenberg, Wilmette, Ill.

Application December 5, 1952, Serial No. 324,314
12 Claims. (Cl. 18—13)



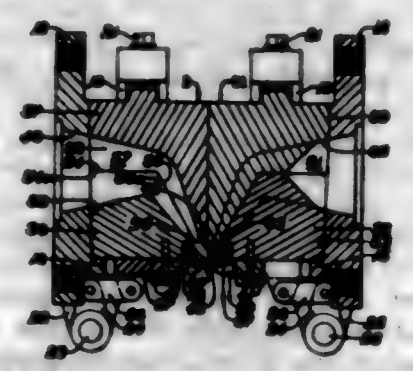
1. In an apparatus for forming cables from an inner conductor disposed within an outer tube, the combination of means for continuously moving said conductor and said tube, means for distorting the walls of the tube into engagement with the inner conductor, means operated in time correlation with the conductor moving means for periodically rendering said distorting means effective to distort the walls of the tube in order to form the distortions at predetermined spaced apart regions of said tube, means to direct fluid adjacent the distorting means and against the distortions in the tube during each operation of the distorting means, and means operated in synchronism with the periodic operating of the distorting means for moving the distorting means in the direction of movement of the conductor and at substantially the same rate as said movement during each period when said walls are being distorted.

2,897,543

MULTI-PART EXTRUDER HEAD

Roger D. Weston, Cuyahoga Falls, and Fred K. Berns, Akron, Ohio, assignors to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

Application February 24, 1953, Serial No. 716,975
7 Claims. (Cl. 18—13)

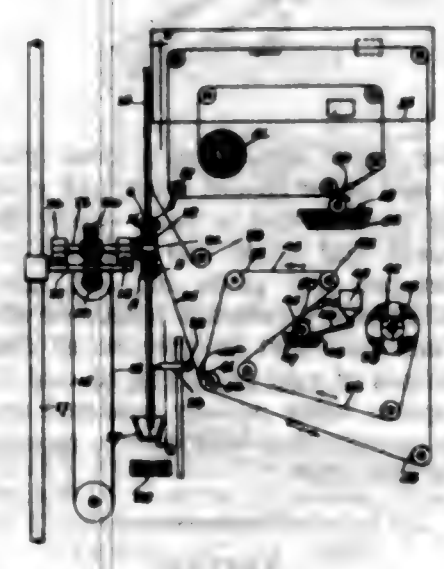


2. A duplex die head for connection between a pair of substantially axially opposed tubers for forming and uniting strips of plastic material issuing from said tubers, said die head comprising a pair of axially opposed end wall portions for attachment to the tubers, a pair of side wall portions formed separate from said end wall portions but disposed to extend in spaced relation between said end wall portions, means removably connecting said side wall portions to said end wall portions to define a chamber, two cavity block assemblies removably disposed in said chamber in abutting relation, each assembly having a cavity therein for conducting plastic issuing from its respective tuber to a discharge nozzle with which the cavity of the other assembly also communicates, and means fastening each said block assembly rigidly within said chamber for removal independently of the other assembly.

2,897,544
MACHINE FOR THE CONTINUOUS CASTING OF FILMS DIRECTLY FROM SOLUTION

Alvin M. Marks, Bocchlurst, N.Y., assignor to Mortimer M. Marks, Bocchlurst, N.Y.

Application June 16, 1953, Serial No. 362,043
8 Claims. (Cl. 18—15)

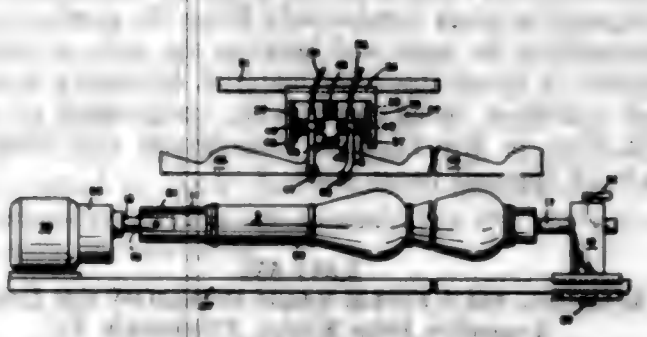


1. Apparatus for the continuous casting of flexible films from solution comprising, a source of casting material in solution, a rotatably mounted casting member in the form of a glass disc, a casting surface upon said casting member, a line connected at one end to the solution source and having its opposite end disposed so as to direct a stream of solution upon the casting surface, a source of rotary power connected to the casting member to continuously revolve the casting member past the dispensing end of the line and rolls adjacent the casting surface to remove the film therefrom after the solution has become sufficiently solidified.

2,897,545
METHOD OF AND APPARATUS FOR SHAPING TUBING MEMBERS

William E. Meissner, Devon, Pa.

Application October 10, 1955, Serial No. 539,400
7 Claims. (Cl. 18—19)

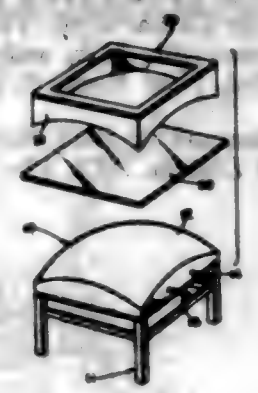


1. A method of providing a tubing with a series of outwardly arched portions spaced along its length including the steps of sequentially softening selected wall areas of the tubing at longitudinally spaced intervals, exerting a continuously acting expansive force on the softened wall areas to impart a radially outward arching thereto, supporting the tubing against axial movement during the softening and arching thereof, and stabilizing the selected softened and arched wall areas while the expansion force is applied to set the same in their arched positions.

2,897,546
PROCESS FOR FORMING OF STRETCHED SHEET MATERIAL

Robert J. Clapp, Downey, Morton E. Latham, Alhambra, and John G. Stansbury, La Canada, Calif., assignors to Swedlow Plastics Company, Los Angeles, Calif., a corporation of California

Application October 28, 1955, Serial No. 543,499
7 Claims. (Cl. 18—56)

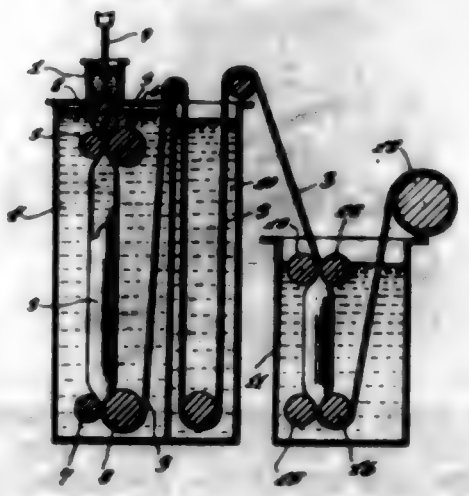


1. A process for forming flat stretched thermoplastic sheet material of tough laminar structure into curved contours without substantial decrease in toughness and resistance to crazing and fracturing of such material, comprising the steps of mechanically forming the sheet at a temperature below the thermoplastic temperature of said material to a curved contour while imparting stresses therein, holding the sheet to said contour while heating the same to a temperature sufficiently high and for a sufficient length of time to impart a measurable amount of shrinkage in a flat specimen of said stretched sheet subjected to the same temperature conditions as said contoured sheet, but below the temperature at which more than about 3 percent shrinkage of said flat specimen occurs, and cooling said sheet while continuing to hold the sheet to said contour.

2,897,547
PROCESS FOR PRODUCING SYNTHETIC SAUSAGE CASING FROM ALGINATES OR ALGINIC ACID

Richard Weingand, Walsrode, Germany

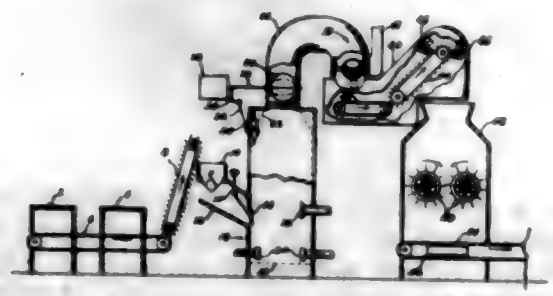
Application May 27, 1955, Serial No. 511,721
3 Claims. (Cl. 18—57)



1. A process for the prevention of longitudinal extension of tubular sausage casing, made by extrusion of solutions of alginates, when filled with meat and suspended from a supporting beam, said process consisting of conducting said casing, during its production from an alginate solution by means of extrusion through an annular nozzle into a precipitating bath, through a portion of said bath without longitudinal tension and traction, and then subjecting said casing, while still in said bath

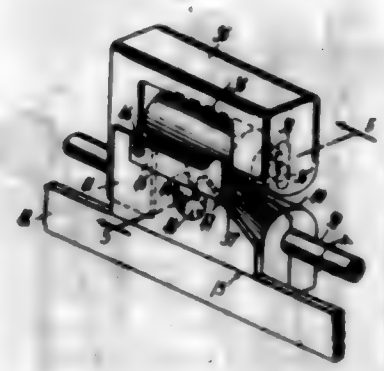
but prior to its final coagulation, to a mechanical longitudinal traction, while preventing a transverse shrinkage, said traction being sufficient to permit at most only a slight shrinkage of the final casings when suspended from the supporting beam.

2,897,548
METHOD AND APPARATUS FOR OPENING AND CLEANING FIBERS
Irvin Barnett, Somerville, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York
Application January 2, 1953, Serial No. 329,360
6 Claims. (Cl. 19—72)



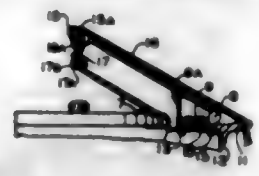
1. Apparatus for opening, cleaning and mixing fibers comprising, a chamber, fluid jet means positioned to discharge fluid jets into a lower portion of said chamber, a fiber entry port in a wall of said chamber above said jet means, a fluid outlet port in a wall of said chamber adjacent an upper portion thereof, a filter element extending over said fluid outlet port, a fiber outlet port in a wall of said chamber adjacent an upper portion thereof, and means for closing said fiber outlet port while said fluid outlet port is open and for closing said fluid outlet port while said fiber outlet port is open.

2,897,549
WEB CONDENSING APPARATUS FOR A CARDING MACHINE
Peter S. Paterson, Saco, Maine, assignor to Saco-Lowell Shops, Boston, Mass., a corporation of Maine
Application January 6, 1956, Serial No. 557,690
5 Claims. (Cl. 19—150)



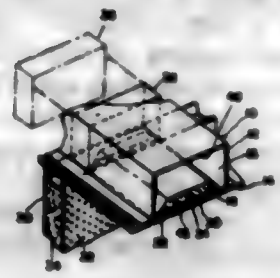
1. In a carding machine apparatus for forming a web of fibers into a sliver, said apparatus comprising: a pair of calendering rolls, drive means to rotate one roll of said calendering rolls to advance the web; cantilever support means mounting the other calendering roll for rotation with the said one roll; a sliver forming member disposed in front of said calendering rolls, said member defining a horn-shaped passageway to form the web into a sliver, and having a cut-away portion communicating between one edge thereof and said passageway.

2,897,550
SLIVER GUIDE FOR TEXTILE COILER
Robert D. Carmichael and James S. Meek, Hampton, Ga., assignors to Southern States Equipment Corporation, a corporation of Georgia
Application September 27, 1956, Serial No. 612,497
5 Claims. (Cl. 19—159)



1. A sliver coiler comprising a sliver guide, an inlet passage for said coiler spaced from said guide and movable relative thereto, and a guide spacer fixed in position relative to said guide and disposed in a position generally between said guide and said inlet for maintaining a substantially constant length of sliver between said guide and said inlet irrespective of changes in the relative positions of said guide and of said inlet passage, said guide spacer being initially rendered operable automatically in coordination with relatve movement of said guide and of said inlet.

2,897,551
SOUND ABSORBING STRUCTURE
Joseph J. Gruber, Depew, and Joseph J. De Falco, Buffalo, N.Y., assignors to Fenestra, Incorporated, Detroit, Mich., a corporation of Michigan
Application January 15, 1957, Serial No. 634,274
8 Claims. (Cl. 20—4)

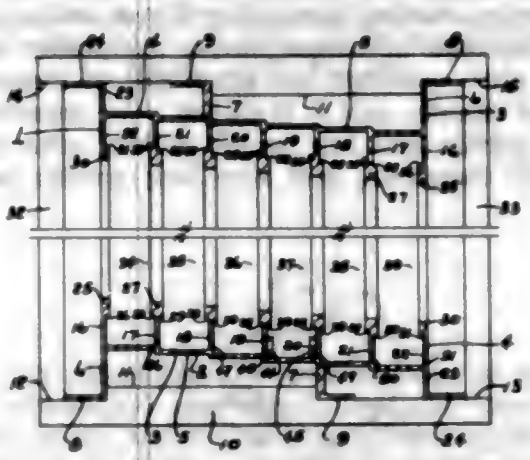


1. In a building construction, an elongated hollow, acoustical panel having a multiplicity of small perforations in a wall thereof, sound absorbing material within said panel and spaced inwardly from said perforated wall to define an elongated chamber therewith, and means for arresting the transmission of sound along said chamber longitudinally of said panel comprising a fibrous resiliently compressible block substantially filling the panel at a point intermediate its ends and between the ends of adjacent sections of sound absorbing material, said block in assembled condition being appreciably compressed to retain said block in firm frictional engagement with inner surfaces of opposed panel walls.

2,897,552
SLIDING MULTIPLE SASH WINDOW OR DOOR
Augustine John Kiefer, Pittsburgh, Pa.
Application February 4, 1957, Serial No. 638,113
9 Claims. (Cl. 20—19)

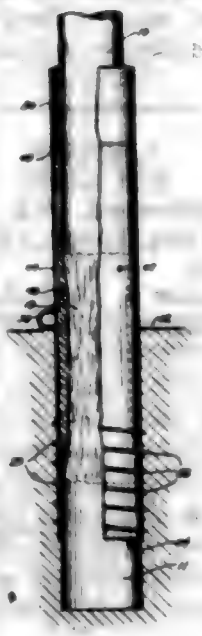
1. A lateral sliding multiple sash window or door closure mounted in a base frame and lined with a metal frame of connected lintel, sill and jamb members formed of a web having a series of sash seats arranged in cascade on the lintel and sill, characterized in that said cascade seats are opposed grooves formed between parallel rails extending inwardly from said web, outwardly extending marginal flanges along the inside and outside of said lintel and sill of said metal frame to support said web with said cascaded seats in spaced relation from said

base frame, and an inwardly extending section on the lintel and sill of said base frame fitting the inner faces of



said flanges, said sill and lintel of said metal frame having the same structure but inverted relative to each other.

2,897,553
UTILITY POLE REINFORCEMENT
Mitchell G. Gerrow, Appleton, Wis.
Application December 11, 1957, Serial No. 702,081
7 Claims. (Cl. 20—100)

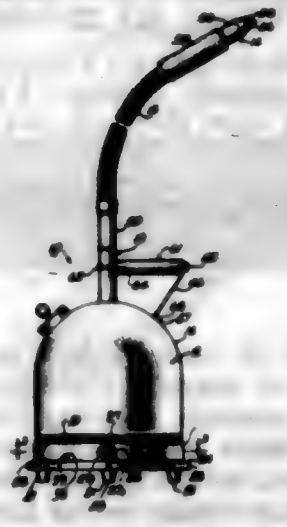


1. As a new article of manufacture, a split sleeve for reinforcement of a pole standing in the earth, the said sleeve comprising sections having means for connecting the sections about the standing pole, the internal cross section of the connected sections closely approximating the cross section of the pole at the level at which it will be engaged by the lower end of said sections, and the sections being externally provided with screwthread means pitched to screw the connected sections into the earth when the sections are rotated upon the pole about which they are connected.

2,897,554
INHALATOR
George H. Myrick, Rochester, Minn.
Application April 3, 1956, Serial No. 575,856
7 Claims. (Cl. 21—119)

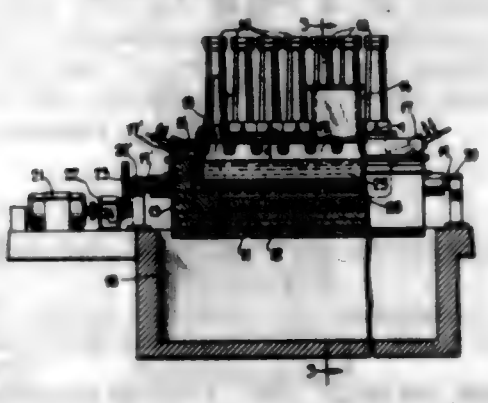
5. A nozzle for use in connection with an inhalator, said nozzle comprising an open ended mixing chamber, a vapor inlet extending through an imperforate wall in the bottom of said chamber toward said open end, said inlet including a tube extending a substantial distance from said wall into said chamber, and said chamber being perforated near the end of said tube, the perforations being disposed only at a substantial distance from said wall, whereby air from the surroundings is mixed with vapor to provide a substantially droplet-free mixture od vapor and air for delivery to a patient from the open end of said mixing chamber and an evaporating chamber disposed in said nozzle.

7. An inhalator comprising a vaporizing chamber enclosed by an upper dome telescopically positioned over the upper portion of an inverted cup-shaped housing, the portion of said housing which is positioned within said



dome being rounded, a heater mounted centrally of the rounded portion of said housing for heating the contents of said vessel, a flexible delivery tube protruding from the top of said dome and communicating with the interior thereof, and a combined mixing chamber and delivery nozzle disposed on the outer end of the flexible tube for mixing the vapor generated in said vessel with a generous amount of the surrounding atmosphere before directing it in a predetermined direction.

2,897,555
STEEL INGOT MAKING COMPOSITION, METHOD AND APPARATUS
Seiji Nishikiori, Hinaga, Chita-machi, Chita-gun, Aichi-ken, Japan
Application October 22, 1957, Serial No. 691,750
Claims priority, application Japan December 22, 1956
6 Claims. (Cl. 22—64)



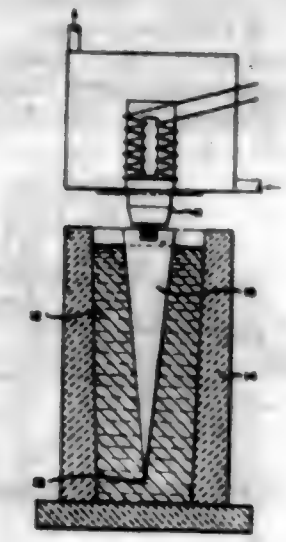
1. A method of casting steel ingots which comprises providing a ladle containing molten steel and a molten metal oxide composition substantially inert with respect to the steel and having a substantially lower specific gravity such that the same rises to the surface of the steel, pouring said composition from the surface of the steel into an inclined mold while decreasing the angle of inclination thereof to bring said composition initially into contact with the interior walls of the mold, allowing the portion of the composition adjacent the mold walls to solidify, and while further decreasing the angle of inclination pouring said steel into said mold over the surfaces thereof coated with solid composition and still further decreasing the angle of inclination until the open end of

said mold is beneath the pouring opening in said ladle, and permitting the coating composition remaining molten to rise to the surface of the steel whereby a solid metal oxide barrier is provided between the steel and the ingot mold.

2,897,556
METHOD OF CORING HOLES IN CASTINGS
Joseph Chisi, West Hempstead, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Application September 4, 1957, Serial No. 681,943
3 Claims. (Cl. 22—200)

1. The method of coring a hole in a casting, comprising the steps of inserting a rod in a braided sleeve of heat resistant material, said rod being of a material which retains its shape at the temperature of the molten material to be cast, stretching said sleeve longitudinally to make it conform closely to the surface of said rod, securing the sleeve-covered rod in the desired position in the mold, pouring the casting, removing the rod from the sleeve after solidification of the casting, and applying tension to the sleeve to reduce its cross sectional dimensions and facilitate its removal from the cast hole.

2,897,557
METAL CASTING
Nathaniel B. Ornitz, Golden Beach, Fla., assignor to Blaw-Knox Company, Pittsburgh, Pa., a corporation of Delaware
Application September 19, 1956, Serial No. 610,776
17 Claims. (Cl. 22—216)



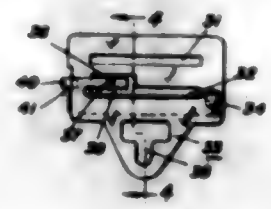
1. The method of forming homogeneous cast metal structures comprising the steps of pouring molten metal into a mold, inserting a metal member fusible at the temperature of the molten metal into the molten mass and subjecting said metal member to vibrations.

2,897,558
SHOE BUCKLE OR LATCH
Fernando M. Renci, Providence, R.I.
Application February 7, 1957, Serial No. 638,714
11 Claims. (Cl. 24—71)

1. A latch buckle for a shoe having a pair of uppers and a strap attached to one upper and extending across to the other upper, comprising a flat base mounted on said other upper, said base comprising integrally connected rectangular portions of unequal width, each of said portions having upstanding flanges on opposite side edges, one pair of flanges having a plurality of spaced aligned pivot openings, the other pair of flanges having extruded detents, and a U-shaped wire member having a base portion and two spaced parallel arms extending integrally therefrom, said wire base portion being piv-

otally mounted adjacent the outer end of said strap and the ends of said arms being pivotally mounted in a selected pair of said aligned openings in said flanges, whereby when said wire member is pivoted to closed position said arms will extend outside one pair of flanges and inside the other pair of flanges and will snap by said detents to be resiliently retained in closed position by said detents.

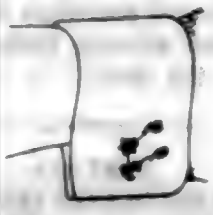
2,897,559
BUCKLES
Hans Erdmann, Maplewood, N.J., assignor to Waldes Kohinoor, Inc., Long Island City, N.Y., a corporation of New York
Application October 8, 1953, Serial No. 384,946
3 Claims. (Cl. 24—73)



1. A two-part buckle for cooperation with a belt strap, one part comprising a substantially rectangular frame having a pair of longitudinally spaced transverse slots enabling one end portion of the strap disposed in longitudinal direction with respect to the buckle to be threaded upwardly through the rearward slot and downwardly through the forward slot of said buckle, the other buckle part comprising a combined buckle-to-strap fastener and strap clamping member pivotally connected to the frame at a point thereof disposed generally to one side of the forward slot thereof for swinging movement in a plane closely parallel to and underlying the plane of the frame, said member having a forwardly extending portion provided with means for fastening the buckle as a whole to the other end of the strap and including a clamping arm which is spaced a substantial distance from the pivot point and extends generally transversely of the frame and is normally disposed just rearwardly of said forward slot thereof, said clamping arm having a forward clamping edge which tends to move toward the forward edge of said forward slot thereby to clamp the belt portion extending through said slot against said forward edge responsive to pull exerted on the strap causing said buckle parts to swing away from one another.

conveying reach of an endless belt conveyor comprising bar for swivelly mounting said buckle on a shoe, said

2,897,560
CUFF LINK
Clement S. Marien, Attleboro, Mass., assignor to Swank, Inc., a corporation of Delaware
Application April 15, 1957, Serial No. 652,993
1 Claim. (Cl. 24—90)



A cuff link comprising a V-shape member of generally uniform cross-section providing spaced center posts and a connecting bridge, said bridge being of rectangular cross-section having flat sides, a hollow head embracing said bridge, and spring means in said head engaging the flat sides of said bridge to hold it in position, and separate decorative heads secured to the free ends of each of said posts.

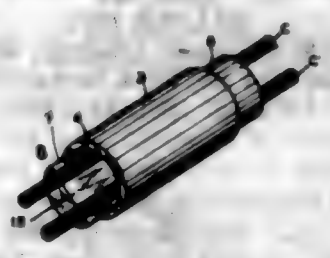
2,897,561
FASTENER
Charles Meglbow, Irvington, N.J.
Application November 10, 1954, Serial No. 468,020
2 Claims. (Cl. 24—95)

1. A fastener comprising an insert member and a receiving member, said insert member having a head with a pair of yieldably spaced-apart and substantially readily bendable legs projecting therefrom in a common direction, said receiving member comprising a plate with a plurality of spaced apertures formed therein, a plurality of ribs separating said apertures, a spreader means between a pair of said ribs, and a guide means positioned rearwardly of said ribs and communicating with a pair of said spaced apertures, said guide means being protruded portions of said plate.

2,897,562
CUFF LINK
Clement S. Marien, Attleboro, Mass., assignor to Swank, Inc., a corporation of Delaware
Application July 11, 1956, Serial No. 597,113
2 Claims. (Cl. 24—97)

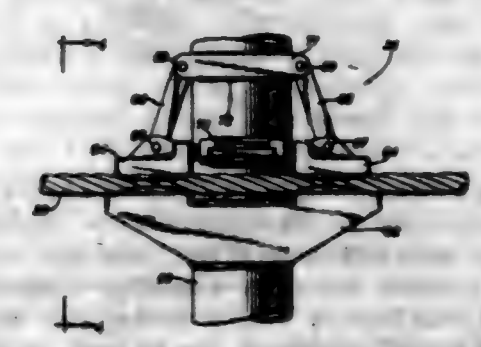
1. A cuff link for a shirt sleeve having button holes at the meeting edge thereof comprising a substantially V-shaped member, the opposite arms of which are adapted to extend over the opposite edges of the cuff, one of the arms provided with a flat head having an open center to register with a button hole in one edge of the cuff, a post hingedly attached at one end to the other arm, a flat head at the other end of the post, said post and its head being adapted to pass through the button holes of the cuff, said post being of a length to position its head in the same plane with the head of the one arm, the head on the post being of a size to nest within the open center of the flat head and be completely spaced therefrom and means at the hinge connected to the other arm and completely independent of the one arm to selectively hold said heads in nesting relation or permit said post to move into a position in substantial alignment with the arm to which it is pivoted and beyond the end of said arm for passing through said button holes.

2,897,563
AIRCRAFT CABLE CLAMPS
George J. Jenevich, Phoenix, Ariz.
Application July 21, 1958, Serial No. 749,773
4 Claims. (Cl. 24—126)



1. A clamp for joining cables consisting of an outer shell having an opening of uniform sectional size throughout its length, a pair of cable clamping wedges operating within said shell and having outer surfaces conforming to the interior of said shell, and inwardly positioned faces aligned with the longitudinal center of said shell, said inwardly positioned faces of said wedges each having grooves on each side of center, the cross-sectional shape of said grooves defining a portion of a circular arc; one of the said grooves on the face of each of said wedges having a smooth surface and tapering in depth and width in one direction and the surfaces of the other groove being formed with arcuate slanting furrows adapted to mate with the outer surface of a cable to be clamped; said wedges being placed within said shell so that each of the said grooves in the faces of opposite wedges form channels to receive cables to be clamped; one half of each channel conforming to the surface of a cable and adapted to move with the cable when under tension, and the other half of said channel being smooth and adapted to slide relative to said cable; each of said grooves forming channels on each side of said pair of wedges with the direction of taper reversed relative to the channel on the other side of said wedge faces whereby tension in opposite directions on said cables will draw said wedges into said outer shell and tighten the cables in the grooves forming said channels in said wedges.

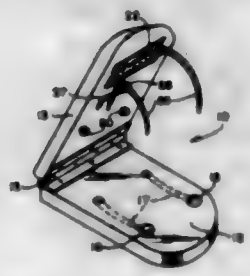
2,897,564
TENSION MECHANISM FOR AN EXTENSIBLE CONVEYOR
James W. Hardy, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Application March 5, 1956, Serial No. 569,599
1 Claim. (Cl. 24—134)



A structure of the class described for taking a reactive force from a flexible strand supporting the load

conveying reach of an endless belt conveyor comprising a support standard having opposed portions engageable with opposite surfaces of a mine seam and the like, a saddle supported on said standard and adapted to receive a flexible strand, and means for maintaining such flexible strand in said saddle at a desired tension on said strand including a pair of shoes spaced from each other along said strand, a pair of links each pivotally connected between one of said shoes and said support standard, said links being angularly disposed relative to one another, and a turnbuckle connected between said shoes and effective to force said shoes against the strand by movement of said shoes relative to each other.

2,897,565
DIAPER PIN
John S. Courtney, Grafton, W. Va.
Application May 28, 1958, Serial No. 738,560
1 Claim. (Cl. 24—157)

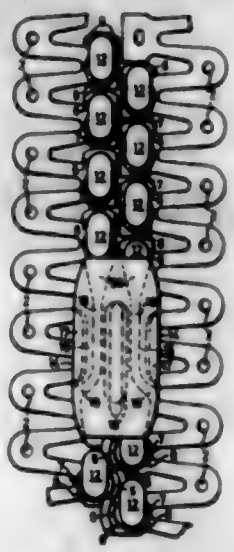


A safety fastener comprising a main base member, a complementary base member, hinge means connecting one end of said members together for rotation between open and closed positions, at least one pin pivotally supported upon said complementary base member and normally extending toward the main base member, said main base member having a bore extending longitudinally through said main base member to receive said pin, said bore being of arcuate configuration, said pin being of similar arcuate configuration, the distal end of said bore from said hinge means being widely flared for receiving and guiding said pin during said closing movement of said base members, a spring loop carried by said complementary base member limiting the outward movement of said pin upon said complementary base member, said complementary base member having a recess in communication with the proximal end of said bore relative to said hinge means for receiving the terminal end of said pin therein in said closed position of said base members.

2,897,566
SWIVEL SHOE BUCKLE
Larry Albiniano, Providence, R.I., assignor to F. Ronci Co., Inc., Centredale, R.I., a corporation of Rhode Island
Application August 4, 1958, Serial No. 753,030
1 Claim. (Cl. 24—188)

A buckle adapted to be swivelly mounted on a shoe, said buckle comprising a rectangular frame having spaced parallel side bars and integral front and rear bars, a pair of spaced parallel crossbars extending transversely between said side bars, a tongue having one end formed into a loop extending around one of said crossbars, said tongue crossbar extending upwardly out of the plane of said side bars, and means associated with said other crossbar for swivelly mounting said buckle on a shoe, said means including a wide central portion on said other crossbar having a central rivet opening, said side bars being arcuate to position said front and rear bars and said tongue crossbar away from the surface of a shoe when said buckle is mounted on a shoe by riveting through said rivet opening, whereby said buckle will swivel on the shoe with said front and rear bars and said tongue crossbar and tongue loop portion positioned out of contact with the surface of the shoe.

2,897,567
BUTT SEAM JOINTS FOR SHEET MATERIAL AND THE LIKE
Franz Karl Hübner, Malmo, Sweden
Application December 28, 1955, Serial No. 555,991
Claims priority, application Sweden October 6, 1955
3 Claims. (Cl. 24—205.13)

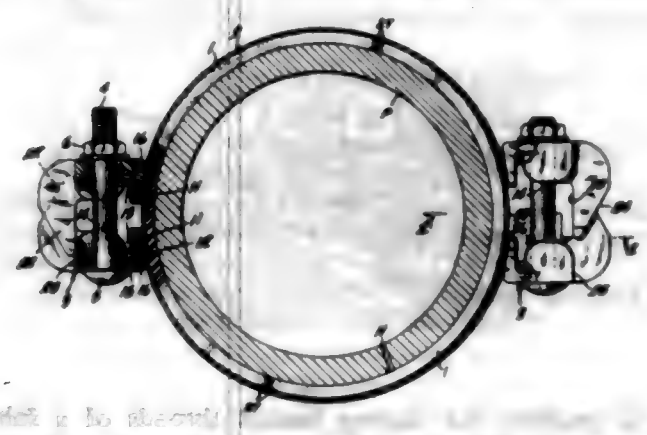


1. A butt seam joint for pieces of sheet material, comprising a row of pivot members each including a stem and a head and mounted on each of said pieces by means of said stem adjacent and in fixed relation to the edge to be jointed, the stem of each pivot member including an upper enlarged portion terminated by said head, flat locking members pivotally mounted one around the stem of each of said pivot members to be capable of a turning movement through 90° between locked and unlocked positions, hook means on said locking members, said hook means on each locking member in one row interengaging in the said locked position with said hook means on two adjacent locking members in the other row located in staggered relation to the locking members in said one row, a resilient leaf member positioned around the stem of each pivot member and engaged by the associated locking member to turn positively therewith about said stem, said leaf member cooperating with said enlarged stem portion to hold said locking member in the unlocked position thereof, and sliding means supported and guided by the heads of said pivot members and capable of being moved along said edges in engagement with said locking members for causing said turning movement towards the locked position thereof when moved in one direction and for causing said turning movement towards the unlocked position thereof when moved in the other direction.

2,897,568
CONDUIT CLAMP
Howard L. Hoke, Bradford, Pa., assignor to Dresser Industries, Inc., Dallas, Pa., a corporation of Delaware
Application August 20, 1957, Serial No. 679,168
12 Claims. (Cl. 24—279)

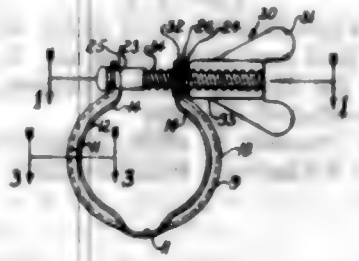
1. A conduit clamp comprising split sleeve means extending circumferentially of the conduit with opposite

ends spaced circumferentially, a pair of lugs secured respectively to said spaced ends of said sleeve means, said lugs extending radially outwardly from said sleeve means and facing each other, tension means connecting said lugs with one another and operable to draw said lugs together, said tension means acting on said lugs radially outwardly of said sleeve means and applying a moment tending to roll the radially outer portions of said lugs toward one another, each of said lugs having a bearing surface extending substantially parallel to the direction of pull of



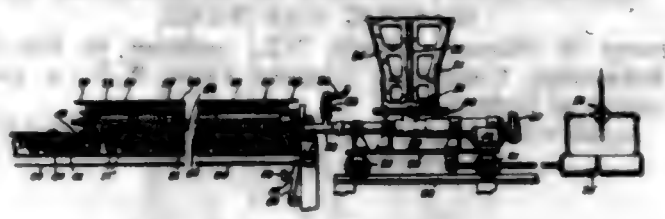
said tension means and circumferentially extending portions projecting beyond the face of the respective lug and overlapping the bearing portions of the other of said lugs so as to bear in a radial direction on said bearing surface of the other of said lugs to resist the rolling of said lugs by the pull of said tension means, said circumferentially extending portions sliding in a circumferential direction on said bearing portions to guide said lugs in substantially rectilinear movement as they are drawn toward one another by said tension means.

2,897,569
CLAMPS
Donald E. Kastner, Kenosha, Wis., assignor to L. C. Thomsen & Sons, Inc., Kenosha, Wis.
Application December 8, 1958, Serial No. 778,853
2 Claims. (Cl. 24—279)



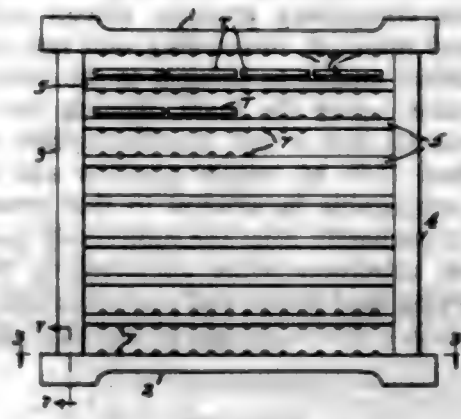
1. The combination in a clamp comprising a clamping band having a circular extent of stock which is channel-shaped in transverse section and has inwardly directed side walls and juxtapositioned ends, each end bent upwardly at an angle from the body of said band to provide parallel extending ears, one of said ears being a continuation of said walls, the other ear being of a continuation of said walls which has been flattened to provide a straight back surface, said first mentioned ear provided with a rectangularly shaped opening, while the other ear is provided with an enlarged circular opening, a thumb screw assembly, said assembly including a finger grip and a reduced forward portion mounted on said second ear, said forward portion including a barrel-like body being internally threaded, a draw bolt, one end of said bolt mounted in said first ear with the threaded end, movable in said barrel body which encloses the threaded end of said bolt.

2,897,570
APPARATUS FOR MAKING COMPOSITE SLABS
Harold R. Carper, Indianapolis, Ind., assignor, by direct and mesne assignments, of 35 20/36 percent to Carl F. Spickelmier, 32 8/36 percent to Edith S. Greer, and 32 8/36 percent to Betty S. Spickelmire, all of Indianapolis, Ind.
Application June 16, 1953, Serial No. 361,983
9 Claims. (Cl. 25—1)



1. In apparatus of the type described, an elongated table for supporting a slab having a longitudinal passage, a carriage, means adjacent one end of said table for supporting and guiding said carriage for movement along a path in alignment with the table, a grouting pumping means including an outlet fitting mounted on said carriage with said outlet fitting aligned with said passage, means for advancing said carriage toward the slab to bring said outlet fitting into communication with said passage, and abutment means on said table and engageable with the slab to prevent movement of the slab along the table under the influence of the pressure exerted on it by said outlet fitting.

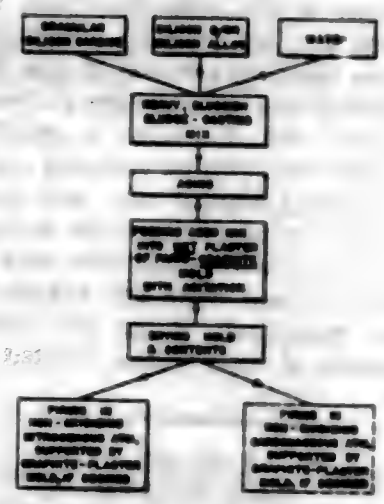
2,897,571
TILE SETTER
Leonard Kupchinsky and Fred A. Layne, East Liverpool, Ohio, assignors, by mesne assignments, to Ferro Corporation, a corporation of Ohio
Application November 7, 1955, Serial No. 545,324
1 Claim. (Cl. 25—153)



A reversible knock-down tile setter all parts of which are interchangeable comprising generally horizontally extending elongated top and bottom members alike in construction, each of said members being provided with a plurality of spaced sockets adjacent the ends thereof, side walls alike in construction and having projecting portions adapted to be inserted in said sockets, said projecting portions of said side walls being received in said sockets in generally snug relation, said side walls being in generally stable relation with said top and bottom members when assembled therewith and extending in generally vertical planes, each of said side walls being provided with a plurality of substantially equally spaced slots arranged in opposed and parallel relation with respect to the slots in the other of said side walls, and a plurality of setter plates alike in construction and having projecting portions adapted to detachably fit in said slots, the horizontal faces of said setter plates being provided with a plurality of substantially equally spaced parallel ribs extending transverse with respect to said plates and generally parallel to the planes of said side

walls, the face of each of said top and bottom members which is disposed in confronting relation to an adjacent setter plate being provided with an upraised rib arrangement generally similar to that of a face of each of said setter plates.

2,897,572
REFRACTORY BODIES AND METHOD OF MAKING THE SAME
George R. Hanson, Niton, N.J., assignor to The Carborundum Company, Niagara Falls, N.Y., a corporation of Delaware
Application January 28, 1955, Serial No. 484,847
8 Claims. (Cl. 25—156)

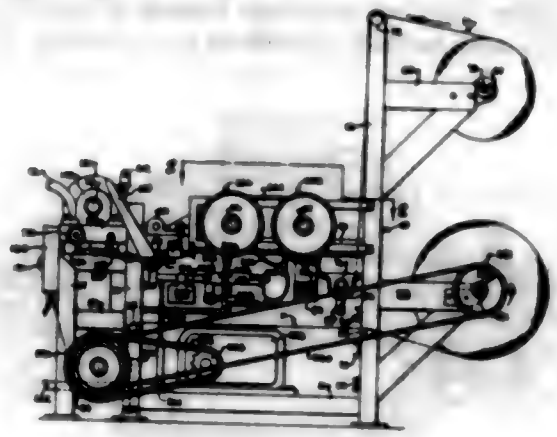


1. A method of making bonded silicon carbide articles of manufacture comprising preparing an intimate raw batch mixture comprising granular silicon carbide, and a silicon-based material, moistening said raw batch mixture with further mixing to bring it to the consistency of a sluggish mass, aging the mass, feeding the aged raw batch of material into a wet plaster-graphite mold containing at least 15% by weight graphite and containing free water comparable in amount to that present in the mold body immediately after the mold body has been hydrated to set condition while subjected to mechanical vibration, drying said mold and contents, and firing the molded article in a non-oxidizing, nitrogenous atmosphere.

2,897,573
CERAMOPLASTIC AND METHOD OF MANUFACTURING SAME
Philip S. Hemingway, Little Falls, N.J., assignor to Mycalex Corporation of America, Clifton, N.J., a corporation of New York
No Drawing. Application July 19, 1957 Serial No. 672,888
8 Claims. (Cl. 25—156)

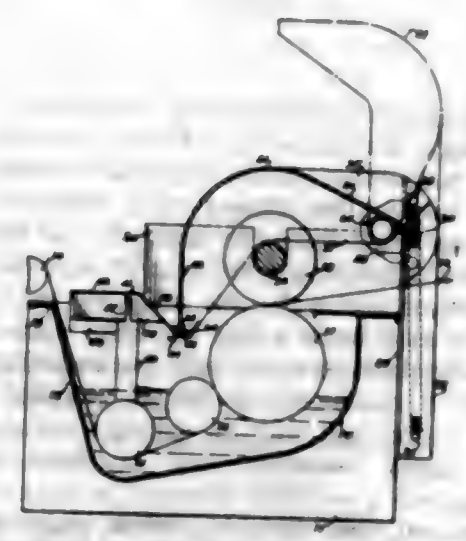
3. A method of making hot pressed material of the vitreo-crystalline type wherein micaceous crystals form a part of the crystalline phase, and the vitreous phase of said material and another part of the crystalline phase thereof are both formed by the reaction of alkali silico fluoride and alumina, comprising the steps of mixing alkali silico fluoride, alumina and micaceous material, heating said mixture to a temperature which causes the alkali silico fluoride and the alumina to react to form a liquid, compressing said heated mixture, and cooling said mixture whereby to cause said liquid to form a multiplicity of dispersed crystals forming the other part of the crystalline material and a glass acting as a binder for said crystalline phase.

2,897,574
PILE CUTTING MACHINE
Grady H. Sanders, Graniteville, S.C., assignor to Graniteville Company, Graniteville, S.C., a corporation of South Carolina
Application February 6, 1957, Serial No. 638,548
8 Claims. (Cl. 26—10)



1. A machine for cutting floated threads of a fabric to form a pile thereon, said machine having only a single cutting unit comprising a series of spaced circular cutter blades mounted for rotation on a substantially horizontal axis, means for rotatably driving said cutters, means for feeding the fabric past said series of cutters, a guide for each cutter adapted to enter the fabric between the body portion thereof and the pile forming thread, a cutter guide support spaced in advance of said cutters and having means thereon for supporting the ends of said guides remote from the fabric in stationary position during normal operation of the machine, means for lowering and raising said cutter guide support out of and into engagement with the cutter guides to facilitate repair and replacement of said guides, a movable fabric platen adjacent said cutters, and safety means responsive to movement of said cutter guide support for preventing operation of said driving means for said cutters and the means for feeding the fabric past said cutters.

2,897,575
VAPOR HOOD FOR SIZE BOX
Gaines Lamar Ball and Jack Hemrick, West Point, Ga., assignors to the Bates-Cook Company, West Point, Ga., a corporation of Georgia
Application January 5, 1956, Serial No. 557,504
6 Claims. (Cl. 28—28)



1. An enclosure for the open top of a size vat including a generally arcuate hood extending when closed over

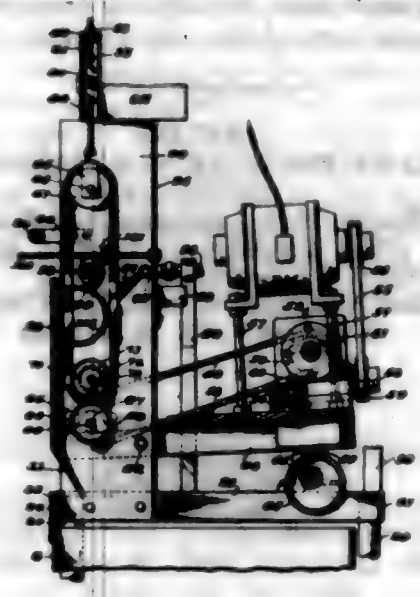
2,897,579
CUT-OFF TOOL
2,897,581
METHOD OF MAKING

only a portion of said top and including therein a heater adjacent one edge on a gently sloping portion of said hood for precluding the discharge of condensate from said edge, a trough adjacent an opposed edge on an upright portion of said hood for delivering condensate from the sides of said opposed edge, means for pivotally mounting said hood independently of said vat for bodily movement about an axis at the forward edge thereof adjacent said heater, an auxiliary hood adapted when closed to cover the remaining area of said open top, and means for pivotally mounting said auxiliary hood independently of said vat for pivotal movement on an axis substantially central thereof.

2,897,576
APPARATUS FOR DULLING NYLON AND LIKE FIBERS

Reinhold F. Stoewer and Ralph W. Pitman, Scranton, Pa., assignors to Grove Silk Company, Scranton, Pa., a corporation of Pennsylvania

Application May 12, 1954, Serial No. 429,244
29 Claims. (Cl. 28—58)



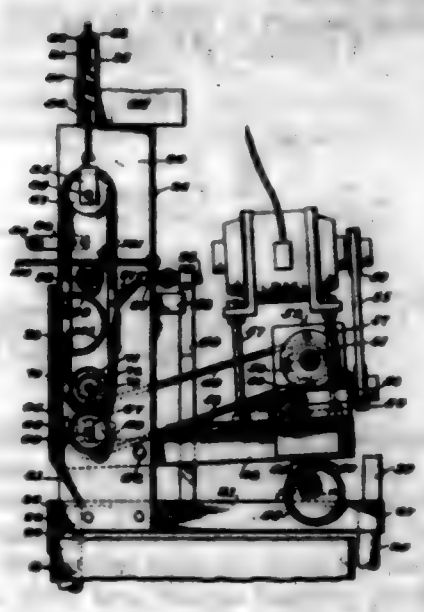
1. A machine for dulling nylon and like fibers, comprising a frame, a first pressure roller journalled in the frame, a bearing system rockably pivoted on said frame, a second pressure roller journalled on said system with its surface in yielding contact with the surface of the first pressure roller, a tension roller and means for pulling the same away from the pressure rollers, said bearing system being weighted whereby to cause the same to move on its pivot for pressing the second roller against the first roller, and means mounted on said bearing system for rotating said second pressure roller.

2,897,577
METHOD OF DULLING NYLON AND LIKE MATERIALS

Reinhold F. Stoewer, Scranton, Pa., assignor to Grove Silk Company, Scranton, Pa., a corporation of Pennsylvania

Original application May 12, 1954, Serial No. 429,244. Divided and this application April 11, 1955, Serial No. 500,630
14 Claims. (Cl. 28—72)

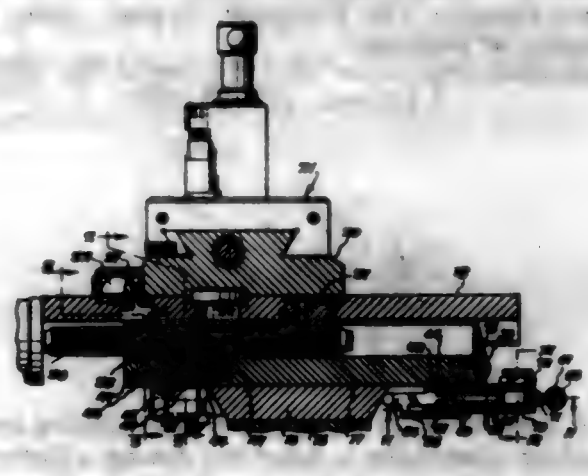
1. The method of dulling nylon and like fibers which comprises supplying a finely divided moistened indenting material into a mass of the fibers, passing the total mass between pressure rollers, at least one said roller having a resiliently yielding surface whereby to procure a kneading action of the fibers and indenting material, and repeating the passage until the surfaces of the fibers have received indentations over their areas.



2,897,578
COMPOUND SLIDE REST

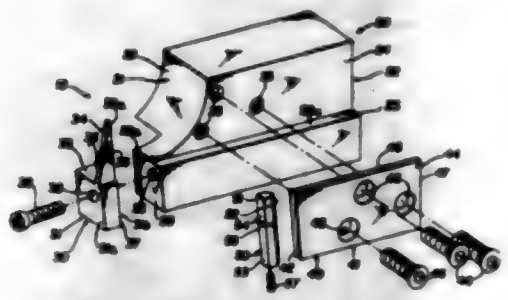
David W. Strom, Elmira, N.Y., assignor to Hardinge Brothers, Inc., Elmira, N.Y.

Application July 30, 1957, Serial No. 675,119
3 Claims. (Cl. 29—1)



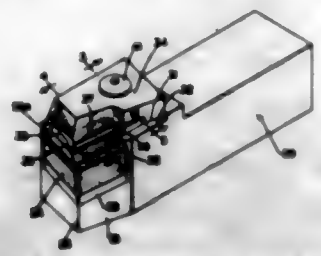
3. A slide rest adjustably mounted on a machine bed having downwardly converging side edges, said slide rest having a base provided with a part engageable with one of said side edges, a plunger movable into and out of locking engagement with the other side edge, a lever pivotally connected with said plunger, a link pivoted at one end on said slide rest and at its other end on said lever and movable relatively to said lever and said slide rest when said lever moves said plunger into and out of position to lock said slide rest on said bed, and a latch movable into a position to engage said link after limited movement thereof to hold said plunger in a position to permit movement of said slide rest lengthwise of said bed, but preventing removal of said slide rest from said bed, said latch being movable into another position out of the path of movement of said link to permit said plunger to be withdrawn to a greater distance from said other side edge to permit said slide rest to be removed from said bed.

2,897,579
CUT-OFF TOOL
Raymond E. Novkov, Akron, Ohio, assignor to Manchester Machine & Tool Company, Akron, Ohio, a corporation of Ohio
Application January 6, 1956, Serial No. 557,785
6 Claims. (Cl. 29—96)



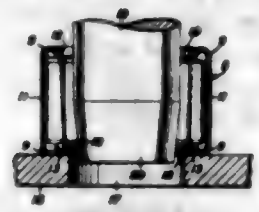
1. A cut-off tool of the character described, comprising: a tool body having front and rear surfaces and a supporting ledge surface interconnecting said front and rear surfaces; a support blade having a longitudinal edge portion thereof received on said ledge with one face of said blade being abutted against said body and having a front edge surface that is disposed inwardly of said front surface of said tool body when said blade is positioned on said ledge; a clamping block having a base portion thereof releasably retained against said front surface of said tool body and having an elongate arm portion thereof overlying said frontal edge surface of said support blade; a cutting bit of elongate configuration receivable between said spaced arm and said front edge surface of said support blade and being supported at one end thereof by said ledge.

2,897,580
INSERT TOOL HOLDER
William W. Huber, Canton, Ohio, assignor to United States Ceramic Tile Company, Canton, Ohio, a corporation of Delaware
Application September 14, 1956, Serial No. 609,967
3 Claims. (Cl. 29—96)



1. A tool holder for an indexible insert cutting tool, said tool holder comprising a metal bar having a forward end and a rear end, there being a pocket in the forward end of the bar shaped to conform to the insert tool, said pocket being open through the end and one side and the top of the bar, a shim seat upon the bottom wall of the pocket, the insert tool being located upon the shim seat and having a cutting edge adjacent said one side of the bar, a chip breaker upon the top of the insert tool, a clamping screw attaching the clamp to said metal bar at a point between the chip breaker and the rear end of the bar, a heel portion upon the clamp having a single line contact with the bar at a point between said clamping screw and the rear end of the bar, there being an elongated transverse opening in the clamp through which the clamping screw is located, an adjustment screw located transversely through the front of the clamp and contacting the clamping screw, and a leaf spring surrounding the clamping screw between the clamp and the bar, said leaf spring having a downwardly curved skirt and upwardly disposed ears located in said elongated opening, one of said ears having an aperture through which the adjustment screw is located.

2,897,581
METHOD OF MAKING ROLLER BEARINGS
John H. Cowles, Forestville, and Robert H. White and Sidney F. Clark, Torrington, Conn., assignors to The Torrington Company, Torrington, Conn., a corporation of Maine
Application August 26, 1955, Serial No. 530,708
2 Claims. (Cl. 29—148.4)



1. The method of assembling a cylindrical needle bearing which comprises inserting a series of needle rollers loosely within an outer cylindrical race having spaced inwardly turned end flanges, sliding a slightly conical continuous sheet metal grid axially within the race with the bars of the grid separating the needle rollers, said grid having a fluted leading end band of less diameter than the inner diameter of the series of rollers and a following end band fitting loosely within the opposite flange of the outer race, and expanding the leading end band to the same loose fit within the corresponding end flange with the bars of the grid parallel.

2,897,582
METHOD OF PRODUCING A BALL-BEARING ASSEMBLY
William J. Blazek, New Lexington, and James J. Strnad, Bedford, Ohio, assignors to Lempco Products, Inc., Bedford, Ohio, a corporation of Ohio
Application November 8, 1955, Serial No. 545,696
3 Claims. (Cl. 29—148.4)

1. In the manufacture of a ball-bearing assembly, the method which comprises: forming a plurality of relatively spaced, substantially radially extending openings in the wall of a cylindrical, tubular bearing retainer; depositing in each of said openings a ball element; and thereafter grooving at least one of the cylindrical wall surfaces of said retainer along a multiplicity of relatively closely spaced, continuous lines to displace portions of the material of which said retainer is composed partially across an end of each of said openings and thereby form at said end of each of said openings an integral fin precluding accidental removal of a ball element from said end of the opening.

2,897,583
METHOD OF FUSING METAL TO GLASS ARTICLES
Mihai D. Patrichi, Woodland Hills, Calif., assignor to Networks Electronic Corporation, Van Nuys, Calif., a corporation of California
Application October 15, 1956, Serial No. 616,091
4 Claims. (Cl. 29—155.5)

3. A method of fabricating an hermetically sealed electrical circuit component device of high electrical and mechanical requirements, and of cylindrical form wherein respective terminal, grommet, ferrule and barrel parts are sealed, one within another in the order named, wherein said barrel and the periphery of said grommet are substantially cylindrical, wherein said ferrule is substantially

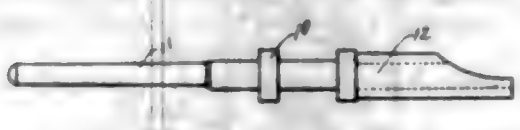
rigid and embodies a radial flange sealed to the end of said barrel and a substantially cylindrical collar extending from the inner margin of said flange into the barrel in adjacent concentric relation to the inner wall thereof and encircling and sealed to the periphery of said grommet, and wherein said barrel and grommet parts are of glass having strength and thermal characteristics equivalent to those of Pyrex glass and said terminal and ferrule parts are of metal having the characteristics of Kovar metal; said method comprising the following steps: fusing the terminal into the grommet and the grommet into said collar and thereby sealing these parts to one another; cleaning, drying and then coating the end surface of the barrel with a thin coating consisting essentially of a suspension of noble metal particles in a solvent having

the evaporating, suspending and non-residue properties of toluene; then heating the coated barrel to the range of approximately 1140° Fahrenheit to simultaneously anneal the barrel and to fuse the noble metal particles into a molecular film having a thickness in the range of .0005" to .005", bonded to said barrel; electrodepositing a layer of copper upon said noble metal film; electrodepositing a coating of noble metal upon said ferrule; then assembling the barrel and ferrule with a ring of silver solder; and finally heating the assembly of glass and metal parts and solder to cause the solder to liquify and flow into the joint between said noble metal coating on the ferrule and said copper layer on the barrel, whereby to bond said noble metal coating to said copper layer and thereby seal said flange to the end of said barrel.

2,897,584
GOLD PLATED ELECTRICAL CONTACT AND SIMILAR ELEMENTS

Karl Schumpelt, Union, N.J., assignor to Sel-Rex Corporation, Belleville, N.J., a corporation of New Jersey

Application May 22, 1957, Serial No. 660,955
2 Claims. (Cl. 29—199)



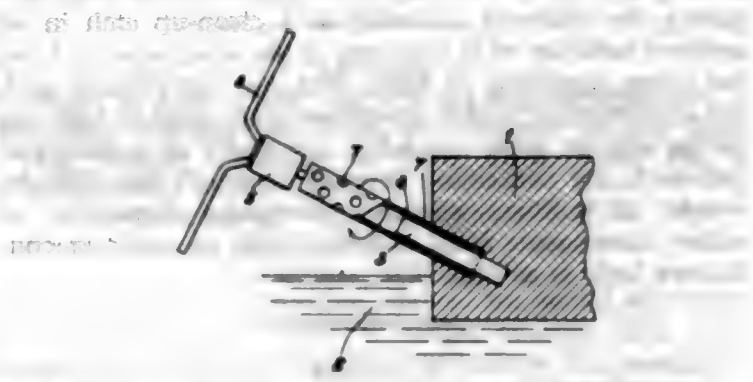
1. As an article of manufacture which is resistant to corrosion and to tarnishing by diffusion, a basis metal, a layer of silver deposited on said basis metal, a layer of gold about .00001" to .00002" thick on the outside surface thereof and a layer of about .0000025" to .000005" in thickness of a barrier metal selected from the group consisting of platinum, ruthenium, rhodium and palladium between the silver layer and the gold layer, said barrier metal layer being bonded to said silver at one side and to the gold layer at the other side thereof.

2,897,585
METHOD FOR REMOVAL OF THE CURRENT SUPPLY BOLTS FROM ALUMINUM ELECTROLYSIS FURNACES

Gerhard Bodewein, Grevenbroich-Orken (Lower Rhine), Germany, assignor to Vereinigte Aluminium-Werke A.-G., Bonn, Germany, a corporation of Germany

Application June 6, 1955, Serial No. 513,383
Claims priority, application Germany June 5, 1954
1 Claim. (Cl. 29—401)

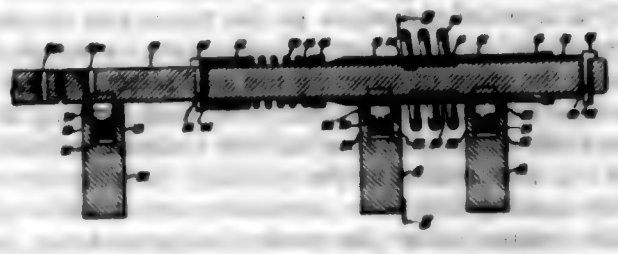
In a method for withdrawing a bolt having a portion embedded in a pre-burned continuous anode of an aluminum electrolysis furnace with the aid of a hollow drill driven by an electric motor having arms, the steps comprising selecting a hollow drill having an internal diameter slightly larger than said bolt, whereby the drill may be telescoped over the bolt and be guided and centered by the bolt, positioning said drill to surround said bolt and driving said drill with said motor, and muscularly feeding said drill by axially directed pressure applied to said arms, whereby said drill will remove all of the material surrounding throughout the external periphery of said bolt thereby freeing the bolt from its embedment, applying the muscular feed forces and simultaneously a momentum compensating force to the arms in such a relationship that an average adult muscular force will be sufficient to counteract the rotary momentum generated by the drilling and transmitted to the arms, and subsequently manually removing the bolt freed from its embedment.



2,897,586
METHOD FOR ASSEMBLING MULTIPLE-SECTION CYLINDERS

James W. Hatch, Los Angeles, Calif., assignor to Monarch Engineering Corporation, Gardena, Calif., a corporation of California

Application June 13, 1955, Serial No. 514,983
4 Claims. (Cl. 29—467)

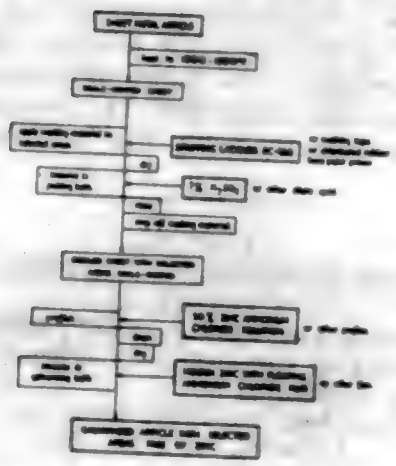


1. A method of fabricating a relatively long barrel for an oil well pump or the like, including the steps of: forming a series of relatively short cylindrical sections with mating tapered male and female ends of conical curvature; positioning two of said sections with their adjacent ends nested together; inserting a mandrel into the two sections for accurate coaxial longitudinal alignment of the sections; placing metallic bonding material at the juncture of the nested ends of the two sections; placing an induction heating coil around the nested ends of the two sections; energizing said coil for a time period sufficient to heat said nested ends and the bonding material to cause the bonding material to melt and to penetrate the spaces between the mating surfaces of the two ends by capillary action with consequent bonding of the two sections together; and continually rotating said two sections in unison during the bonding operation thereby to equalize forces tending to bow the two sections during the bonding operation.

2,897,587
METHOD OF FABRICATING SEMICONDUCTOR DEVICES
George L. Schnable, Lansdale, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Application May 23, 1955 Serial No. 510,536
1 Claim. (Cl. 29—487)

In the fabrication of a semiconductor device comprising the steps of soldering a conductor to a structure including a body of semiconductive material and then subjecting the soldered assembly to a clean-up etch in an aqueous solution of at least one of the acids selected from the group consisting of nitric acid and hydrofluoric acid, the improvement which comprises employing in said soldering step an alloy consisting essentially of indium and cadmium and containing between about 40 and 80% by weight of indium, whereby substantial deposition of solder components from said etch bath on said semiconductive body is avoided.

2,897,588
SELECTED AREA GALVANIZING METHOD
Herbert Chapman, Toronto, Ontario, Canada, assignor to General Steel Wares Limited, Toronto, Ontario, Canada, a corporation
Application December 12, 1955, Serial No. 552,297
7 Claims. (Cl. 29—527)



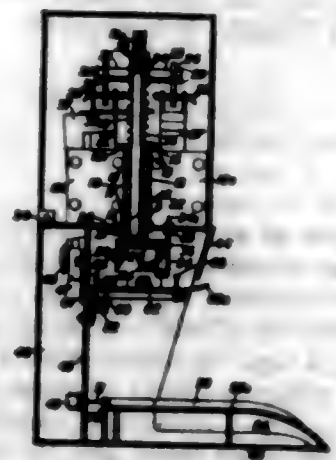
1. A method of galvanizing a sheet metal article coated with a layer of the oxide of the metal and having areas selected for joining parts of the article by welding, comprising the steps of covering the said selected areas with a masking material impervious to an acid pickling bath and destructible by a galvanizing bath containing molten zinc, pickling the article in the pickling bath to remove the oxide coating from the remaining areas and retain the oxide coating under the masked selected areas, and immersing the article in the galvanizing bath whereby the said remaining areas are galvanized and the retained oxide coating on the said selected areas keeps them in a zinc-free condition for welding the masking material being substantially wholly destroyed before the galvanizing step is completed.

2,897,589
CAN OPENING AND KNIFE SHARPENING DEVICE
Walter H. Bodle, Montebello, Calif., assignor to Union Die Casting Company, Whittier, Calif., a corporation of California
Application December 4, 1956, Serial No. 626,114
12 Claims. (Cl. 30—4)

1. A can opener comprising a supporting body having a generally vertical wall, a drive wheel rotatably mounted to said body at a side thereof and adapted to engage the underside of a can bead and act thereagainst to turn the can, means for rotatably driving said wheel, a cutter assembly removably and movably attached to said side of the body and including a generally vertical mounting plate removably mounted adjacent said wall of the body and shiftable relative thereto, and a cutter carried by said plate at a location closely adjacent and above said drive wheel for engaging and cutting the top of a can, means for shifting said plate downwardly and upwardly relative to said body wall to shift said cutter into and out of cutting position with respect to said wheel, said removable cutter assembly including a hold down part for engaging a can bead and urging the bead downwardly during a cutting operation, said part having a

first portion turned upwardly at the inner side of said plate and confined between said plate and said body wall for vertical sliding movement when the removable plate is attached to the wall, said part having a second portion projecting outwardly from the bottom of said first portion and having an undersurface adapted to engage the can bead and urge it downwardly, a spring carried by said mounting plate and bearing downwardly against the upper side of said second portion of the hold down part to press the can bead downwardly, and means at said inner side of the mounting plate engageable with said first portion of the hold down part to limit its range of downward movement by the spring.

2,897,590
AUTOMATIC BEER CAN OPENER
Charles L. Meadows, Homer, La., assignor of twenty-five percent to John D. Basinger and twenty-four percent to Danny R. Moore
Application September 29, 1958, Serial No. 764,159
9 Claims. (Cl. 30—4)

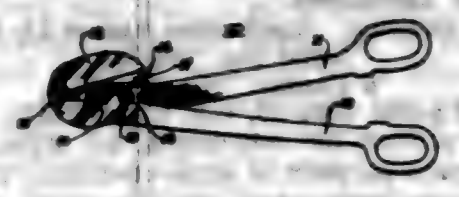


1. An automatic can opener adapted to open cans of varying heights comprising a housing having an electrically operated plunger carrying cutting member mounted vertically therein, a cross arm secured to said plunger and movable therewith, switch means operated by said cross arm when said plunger is descending to cut off said electric operation, spring means urging said plunger upward, a base portion adapted to receive cans of different heights, an anti-splash plate positioned over the top of a can to be opened having an opening therein conforming to the shape and size of said cutting member, and yieldable spring means enabling a can to be inserted under said anti-splash plate on said base and holding said anti-splash plate in close relationship with the top of the can to be opened.

dinally of its respective edge with the free ends of said prongs pointing toward, and being spaced from, each

2,897,600

2,897,591
CUTTING SHEARS OF THE PULL TYPE
Salvatore James Nastasi, Cold Spring, and Dominick A. Quattrociocchi, Poughkeepsie, N.Y.
Application November 13, 1958, Serial No. 773,733
6 Claims. (Cl. 30—253)



1. Cutting shears of the pull type comprising, in combination, two movable elements hinged together for rotary movement about a common pivot axis at the same end thereof, each of said elements defining a handle arm and a cutting blade extending in the same direction from the pivot axis thereof, the handle arm and cutting blade of one element opposing the handle arm and cutting blade of the other element, a working edge formed on the opposing face of each of the cutting blades, the said working edges being in line longitudinally with the common pivot axis when the blades are in a closed position, and a pivot bolt arranged through an offset bearing portion formed as a part of each element adjacent the common pivot axis thereof.

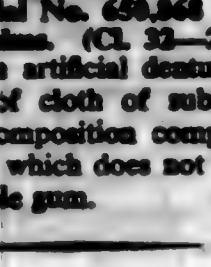
2,897,592
CUSHION FOR ARTIFICIAL DENTURES AND WAX-GUM COMPOSITION THEREFOR
Julius Hollander and Bernard S. Sobreen, Philadelphia, Pa.
No Drawing. Application April 5, 1957
Serial No. 650,868
4 Claims. (Cl. 32—2)

1. A cushion for an artificial denture consisting of a relatively thin layer of cloth of substantially U-shape impregnated with a composition comprised of a water-insoluble paraffin wax which does not melt at body temperature and a vegetable gum.

2,897,593
CUSHION FOR ARTIFICIAL DENTURES AND WAX-PLASTICIZER COMPOSITION THEREFOR
Julius Hollander and Bernard S. Sobreen, Philadelphia, Pa.
No Drawing. Application April 5, 1957
Serial No. 650,869
9 Claims. (Cl. 32—2)

1. A cushion for an artificial denture consisting of a relatively thin layer of cloth of substantially U-shape impregnated with a composition comprised of a water-insoluble wax which does not melt at body temperature and a plasticizer.

2,897,594
DENTURE WITH CHECK VALVE MEANS
Stanley J. Kopec, Northville, and George W. Leiter, Novi, Mich.
Application December 3, 1956, Serial No. 626,895
7 Claims. (Cl. 32—3)

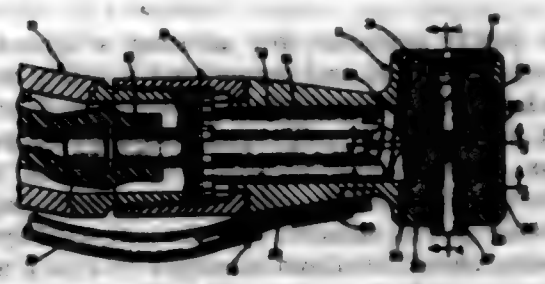


1. A denture comprising a cavostructure having teeth thereon, said cavostructure having an upwardly directed channel therein adapted to receive the gum of a user, said channel having a bead disposed around the inside of the sides thereof adapted to provide a seal between said cavostructure and the gum of a user, a bore through said cavostructure, a bore through one of said teeth communicating with said bore through said cavostructure, said bore in said tooth being counterbored from the outside end thereof, a ball shaped check valve in said counterbore, and a compression type spring urging said ball into engagement with the end surface defining one end of said counterbore.

2,897,595
PORCELAIN TYPE DENTURE COMPOSITION
Pyungtoo William Lee, York, Pa., assignor to The Dentists' Supply Company of New York, York, Pa., a corporation of New York
No Drawing. Application May 1, 1956
Serial No. 582,041
12 Claims. (Cl. 32—8)

1. A ceramic composition adapted for dental prosthesis comprising not over 70% by weight of high silica glass comparatively free from other substances, the remainder comprising essentially a powdered feldspathic flux material not over approximately 40 microns in size.

2,897,596
FLUID-DRIVEN DENTAL HANDPIECE CONSTRUCTION
John A. Maurer, Canton, Ohio, assignor to The Weber Dental Manufacturing Company, Canton, Ohio, a corporation of Ohio
Application January 3, 1958, Serial No. 707,859
8 Claims. (Cl. 32—27)



1. Fluid-driven dental handpiece construction including an elongated handle having an end portion, a turbine casing connected to said handle end portion, plastic sleeve means mounted coaxially in said turbine casing, a turbine having a longitudinally extending peripheral surface having impelling means formed therein, bearing means rotatably mounting the turbine in the plastic sleeve means and coaxially with said sleeve means, said sleeve means surrounding said bearing means between said bearing means and the turbine casing and extending over the peripheral surface of the turbine between said surface and said turbine casing for insulating the bearing means from said casing and deflecting fluid escaping from the turbine impelling means which would normally strike the casing, means for supplying fluid to the turbine for rotating said turbine, means for exhausting fluid from the turbine, and means operably connected to the turbine for holding a dental burr.

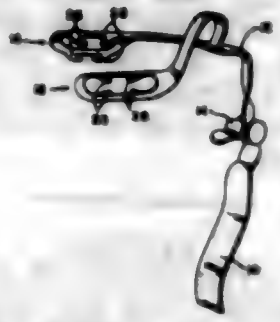
2,897,597
DENTAL COTTON ROLL HOLDER
Chester S. Ivory, Bala Cynwyd, Pa.
Application August 20, 1958, Serial No. 756,226
1 Claim. (Cl. 32—39)

A holding device for holding an elongated, cylindrical dental cotton roll, said device including a pair of jaws having elongated spaced parallel edges, and a pair of spaced prongs carried by each of said edges, the prongs of each pair being spaced from, and extending longitu-

tary tube for receiving grain from said pipe, a stationary

thetic nylon fabric material, dampening said fabric cylin-

dinally of its respective edge with the free ends of said prongs pointing toward, and being spaced from, each other, whereby engagement of one end portion of said roll with one of said prongs by pressure of said roll in the direction of its longitudinal axis against said prong

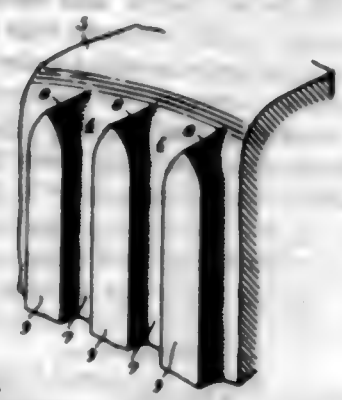


deflects said roll into an arcuate shape which is not wholly eliminated by engagement of the other end portion of said roll with the other of said prongs by reverse pressure of said other end portion of said roll against the other of said prongs.

2,897,598
DENTAL APPLIANCE
Harold D. Keeling, La Porte, Ind.
Application March 5, 1957, Serial No. 644,843
10 Claims. (Cl. 32—64)

1. A dental appliance for creating a separation between adjacent teeth and comprising a spring metal element adapted to be arranged between said teeth, said element having horizontally and vertically spaced tooth engaging elements, one element engaging one tooth at one side thereof, and the other element engaging an adjacent tooth at the adjacent side thereof, said spring element being constructed and arranged to create a spreading pressure or force against said adjacent teeth.

2,897,599
ELECTRODE CLAMP FOR ELECTRIC FURNACE
Yuji Kamatani, Ishikawa Prefecture, Japan
Application October 2, 1957, Serial No. 687,703
Claims priority, application Japan March 4, 1957
1 Claim. (Cl. 13—16)

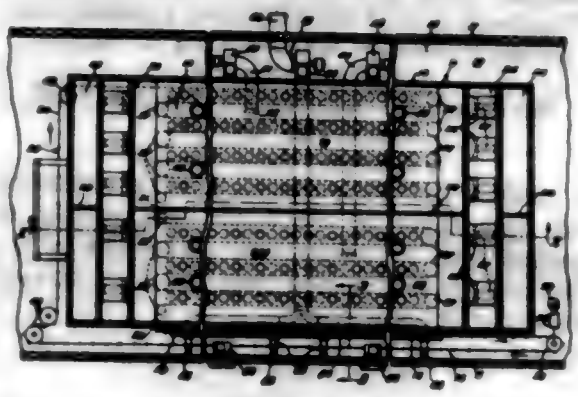


An electrode clamp having an elongated laterally curved surface adapted to conform to the surface of the electrode, said clamp surface being provided with a series of longitudinally extending spaced contact members, the surfaces of which are curved longitudinally in conformity with the surface of the electrode, the respective ends of said contact members being pointed to provide enlarged openings to the grooves formed between said contact members.

2,897,600
PROCESS OF DEHYDRATING BIOLOGICAL MATERIALS
Robert P. Graham and Amon H. Brown, El Cerrito, and William D. Ramage, Berkeley, Calif., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Application August 13, 1953
Serial No. 754,904
6 Claims. (Cl. 34—5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In a process for dehydrating an organic material wherein frozen particles of water-containing organic material are contacted with a solid adsorbent while maintained under vacuum and at a temperature regulated to keep the particles in a solid state during the dehydration, the improvement which comprises coating the particles with a very finely-divided, inert, water-insoluble, solid material prior to contacting the particles with the solid adsorbent whereby to inhibit coherence of the particles with one another and with the solid adsorbent.

2,897,601
METHOD AND MEANS FOR OBTAINING HIGH MOISTURE REMOVAL
Charles S. Hulton, Carl W. Mullenhagen, and Roger G. Wiedenbein, Cincinnati, Ohio, assignors to The Kirk & Blum Manufacturing Company, Cincinnati, Ohio, a corporation of Ohio
Application April 6, 1956, Serial No. 576,719
9 Claims. (Cl. 34—21)

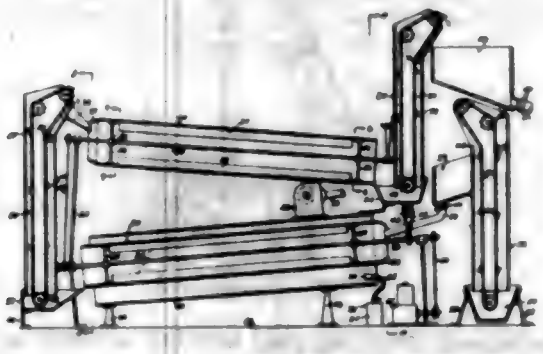


1. The method of high moisture removal from wet laminated fiber tubes on mandrels on which they were formed, which includes the steps of repeatedly subjecting contiguous portions of the outer face of each tube to impingement by heated velocity air streams directed laterally against said face for taking moisture from said face only, evacuating the moisture containing air in closely adjacent lateral areas corresponding generally in number and volume to the several velocity streams while intermittently permitting the residual moisture in the tube body to redistribute itself in the direction of the tube face from which the moisture is removed and continuing said cycle to attain a desired low moisture content in the tube body, then cooling the tube and permitting the low retaining moisture of absorption in the fibers thereof to further redistribute to substantial uniformity throughout the tube wall, then removing the tube from the mandrel.

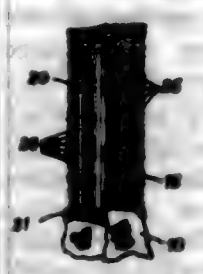
2,897,602
PORTABLE GRAIN DRYER
John K. Hines and John E. Hines, Jr., Centerview, Mo.
Application April 18, 1958, Serial No. 729,435
1 Claim. (Cl. 34—63)

In a portable grain dryer, a wheeled support member, a bin on one end of said support member for receiving grain from a source of supply, an elevator for raising grain upwardly from said bin, a trough for receiving grain discharged from the upper end of said elevator, a discharge pipe connected to said trough, an inclined ro-

tary tube for receiving grain from said pipe, a stationary casing surrounding said tube, a heater on said support member for supplying heat to the space between said tube and casing, a tray for receiving grain from the lower end of said tube, a conveyor for raising grain upwardly from said tray, a guide member for receiving grain discharged from the upper end of said conveyor, an inclined drum for receiving grain from said guide member, a blower for directing air into said drum and into said tube, a pan for receiving grain from the lower end of said drum, a lift for moving grain upwardly from said pan, and a hopper for receiving grain from the upper end of said lift, a motor on said support member, a first shaft extending through said tube and operated by said motor, arms connecting said shaft to said tube so that rotation of said first shaft will cause rotation of said tube, a second shaft mounted below said pan and driven by said first shaft, a third shaft on the lower end of said lift, said third shaft being driven by said second shaft so as to provide power for operating the lift, a fourth shaft driven by said third shaft, said fourth shaft forming part of said elevator, said fourth shaft constituting the power driving shaft for the elevator, a fifth shaft driven by said first shaft, a sixth shaft driven by said fifth shaft, said sixth shaft forming part of said conveyor and defining a power driving shaft for the conveyor, and a seventh shaft driven by said first shaft and connected to said drum for causing rotation of said drum.



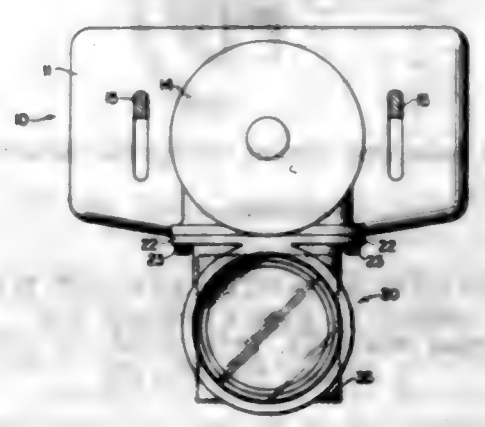
2,897,603
FLEXIBLE, EXTENSIBLE, AND COLLAPSIBLE TEXTILE FABRIC TUBE
Elza Behrman, New York, N.Y.
Application April 24, 1958, Serial No. 731,580
31 Claims. (Cl. 34—99)



8. As a new article of manufacture, an axially collapsible and extensible flexible tube of synthetic woven fabric having in the walls thereof substantially permanently heat set contiguous circumferential pleats, the pleated portions of said walls extending substantially throughout the length of said tube providing stiffening of said tube to maintain a self-sustained open cross-section in the absence of other bracing members.

11. The method of manufacturing an axially extensible and flexible tube of the character described which comprises the steps of forming a cylinder of woven synthetic nylon fabric material, dampening said fabric cylinder, drawing said cylinder over a cylindrical mandrel having a predetermined diameter less than the diameter of said nylon fabric cylinder to form contiguous circumferential pleats substantially throughout the length of said fabric cylinder, and heat treating said pleated cylinder while on said mandrel to impart a substantially permanent set to said pleats.

2,897,604
DEMONSTRATION ACCESSORY FOR VACUUM CLEANERS
George H. Scott, Lakewood, Ohio, assignor to The Scott & Fetzer Company, Cleveland, Ohio, a corporation of Ohio
Application February 20, 1957, Serial No. 641,356
2 Claims. (Cl. 35—13)

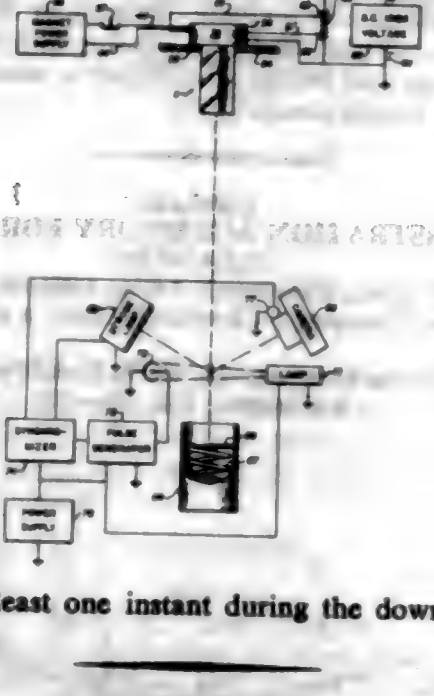


1. An accessory for demonstrating the cleaning effectiveness of a vacuum cleaner and simultaneously imparting a sales message, comprising a hollow body, the walls of which define a demonstration chamber, at least a portion of said walls comprising a transparent observation area, means for connecting the hollow body to the exhaust passageway of a vacuum cleaner for establishing communication between the exhaust passageway and the demonstration chamber, a discharge aperture opening from said demonstration chamber to the exterior thereof, an air permeable dirt filter removably supported in said discharge aperture, a supporting member for establishing such removable support, said member contacting the downstream side of said filter and comprising a filter-member-contacting face, the various portions of which lie on a common geometrical surface, said face being hidden by said filter from view through said transparent observation area, said face defining an intelligence-conveying image, said image being developable to view through said transparent observation area by operation of a vacuum cleaner with which the demonstration accessory has been associated.

2,897,605
METHOD AND APPARATUS FOR DETERMINING CHARGED PARTICLE MOTION
Quentin A. Kerns, Orinda, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application April 10, 1958, Serial No. 727,751
12 Claims. (Cl. 35—19)

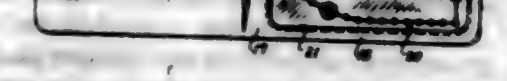
1. In analog apparatus for determining the motion of charged particles in an electric field, the combination comprising a charged electrode structure simulating said electric field, at least one small conducting element disposed within said electrode structure and simulating a charged particle therein, means dropping said electrode structure at a free fall rate whereby said conducting element is rendered effectively weightless and is electrostatically accelerated within said charged electrode structure analogously with the motion of said charged particle within

said electric field, and means displaying the instantaneous position of said conducting element within said electrode



structure at least one instant during the downward motion thereof.

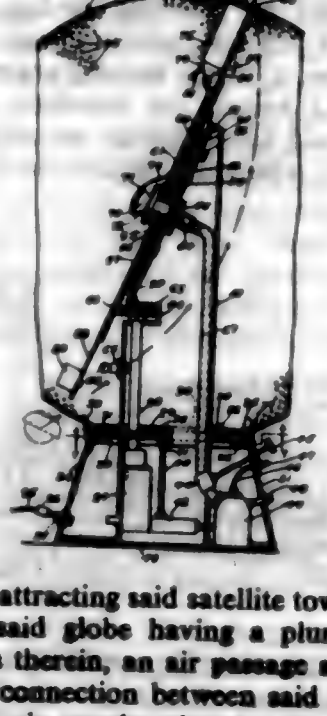
2,897,606
COMBINATION ROSARY PLATE AND WALLET
Anthony G. Ross, Lyndhurst, N.J.
Application March 21, 1956, Serial No. 573,048
1 Claim. (Cl. 35—23)



In combination with a wallet having a pocket formed therein and having two opposed walls, a rectangular plate bearing on one surface thereof an embossed representation of a rosary and having the other surface thereof smooth, one of the walls of the pocket having a large rectangular portion thereof cut away to provide a window whence the edges of said one of the walls surrounding the window provide a rectangular frame for the window, said plate having a length and width in excess of the length and width of the window, said embossed representation having a length and width smaller than the length and width of the window, the plate being positioned in the pocket with the smooth surface thereof positioned against the other wall of the pocket and with said embossed representation positioned within and exposed through the window, the thickness of the plate through at least some of the elements of the embossed representation near the edges of the plate being greater than the distance between the circumferential edge of the frame and said other of the walls whence said elements project through the window.

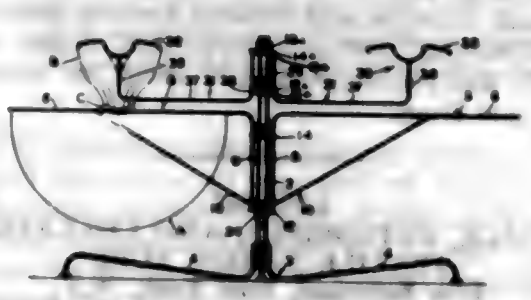
2,897,607
SIMULATED ORBITING ARTIFICIAL SATELLITE
Alexander C. Park, Sacramento, Calif.
Application April 3, 1958, Serial No. 726,879
6 Claims. (Cl. 35—46)

1. In a simulated orbiting artificial satellite the combination of a base, a globe mounted for rotation about a vertical axis on said base, means in said base for rotating said globe, an artificial satellite rotatable about said globe in a predetermined orbit on an axis angularly disposed relative to said vertical axis, means in said globe for rotating said satellite, an electric motor and a compressed air supply in said base, connected gears driven by said motor for rotating said globe, a rotatable disk in said base angularly disposed relative to the axis of rotation of said globe, gearing between said disk and said motor for rotating said disk, a solenoid carried by said disk adjacent to the periphery of said globe, energization



of said solenoid attracting said satellite towards said globe, the surface of said globe having a plurality of closely spaced apertures therein, an air passage surrounding said solenoid, and a connection between said air passage and said compressed air supply whereby air passing through said aperture repels said satellite from contact with said globe.

2,897,608
ROTARY DISPLAY RACKS FOR CLOTHING
Leone Avey Langendorf, Phoenix, Ariz.
Application February 11, 1957, Serial No. 639,426
1 Claim. (Cl. 35—56)



A rotary rack for display of shirtwaists and skirts in superposed position consisting of a base, a vertical cylindrical column extending upward from said base, a thrust collar on the lower portion of said column, a plurality of radially extending skirt hanger brackets pivotally mounted on the lower portion of said column and supported by said thrust collar, each consisting of a top horizontal member adapted to support a skirt in an extended spread-out manner, a vertical member depending from the inner end of said horizontal member, parallel to said column, an angular brace member connecting the lower end of said vertical member with the outer portion of said horizontal member and vertically spaced bearing plates attached to said vertical member and journalled on said vertical column; the bearing plates of adjacent brackets being disposed on said vertical column in bearing relation, one above the other, with the lowermost plate bearing on said thrust collar; an upper thrust collar on said column above said skirt hanger brackets, a plurality of radially extending shirtwaist supporting brackets pivotally supported on the upper portion of said column, supported by said upper thrust collar, and adapted to rotate around said column in a horizontal plane above and independently of said skirt hangers, each

shirtwaist bracket consisting of an upwardly extending arm disposed adjacent and parallel to said column, a bar extending horizontally from the lower end of said upwardly extending arm, a shirtwaist hanger on the outer end of said horizontally extending arm, and bearing plates attached in spaced relation onto said arm and inwardly extending from said upwardly extending arm, and journalled on the upper portion of said column; the bearing plates of adjacent shirtwaist supporting brackets being disposed one above the other in supporting relation on said column, with the lowermost bearing plate bearing on the upper thrust collar on said column.

2,897,609
STORAGE SHOE HEEL
Lawrence R. Bodkin, Jacksonville, Fla.
Application March 19, 1956, Serial No. 572,418
13 Claims. (Cl. 36—1)

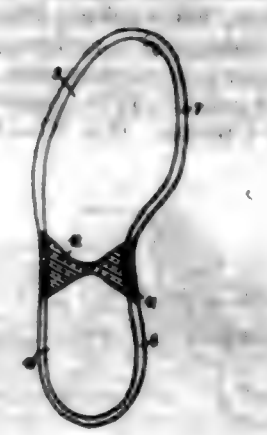
1. In a shoe having a sole member including an integral heel portion, an arcuate guard element affixed to the heel portion of said sole member and depending therefrom and forming therewith a walled socket having an opening, a movable heel member fitting said socket, said movable heel member having a forward end and a rearward end, a hinge attaching said forward end to said sole member, said opening being positioned and proportioned to pass said movable member into and out of said socket as said movable member is swung on said hinge, releasable friction catch means carried by and disposed within said socket and cooperative catch means on said movable member engageable with said first catch means when said movable member is in housed position in said socket, said catch means being disposed spaced from the axis of said hinge, said movable member having a surface portion engaging a portion of the wall of said socket and having a storage chamber opening through said surface portion and normally closed by said socket wall portion when said movable member is housed in said socket and accessible when said movable member is swung from said socket.

2,897,610
HEAT INSULATED, GUSSET-TYPE, WATERPROOF FOOTWEAR
Michele Campagna, Bristol, R.I., assignor to Bristol Manufacturing Corporation, Bristol, R.I., a corporation of Rhode Island
Application May 28, 1953, Serial No. 358,037
1 Claim. (Cl. 36—4)

In combination, a heat-insulated rubber boot having top, angle and foot portions, which boot comprises a moisture-impervious lining sock and a moisture-impervious outer shell, means so uniting the lining sock and the outer shell as to permit relative movement of their opposed surfaces while forming between them an air-tight chamber, the boot top having a throat opening extending downwardly from its upper edge, said lining sock and outer shell being united leak-tight at the upper edge of the top and at opposite margins of the throat opening, heat-insulating material within the chamber between the lining sock and outer shell, an expansible gusset bridging the throat opening, said gusset having foldable wings whose outer margins are adhered in leak-tight contact with the outer shell at opposite sides respectively of the throat opening, the gusset comprising a main ply of moisture-impervious material which is thin and flexible and whose lateral portions constitute the wings, and a central ply of moisture-impervious material narrower than and overlying the central portion only of

the main ply and whose margins are adhesively bonded leak-tight to the main ply thereby providing between said plies an air-tight chamber, heat-insulating material within said last-named chamber, said chamber being of a width such that when the throat opening is closed the heat-insulating material within said chamber extends laterally in overlapping relation with the forward edges of the heat-insulating material in the chamber between the lining sock and the outer shell.

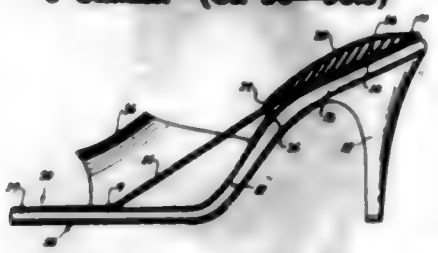
2,897,611
SHOE SOLES WITH TWISTABLE SHANK
Johannes Schaller, Offenbach (Main), Germany
Application December 13, 1955, Serial No. 552,945
Claims priority, application Germany December 20, 1954
1 Claim. (Cl. 36—30)



A shoe sole comprising, a sole portion; a heel portion spaced longitudinally from said sole portion; and a shank portion intermediate and connecting said sole and heel portions, said sole, shank and heel portions having lateral edges in continued mutual alignment; said shank portion including inserted therein and connected therewith a first wedge-shaped insert portion extending along and tapering from one of said lateral edges towards said center of said shank portion, a second wedge-shaped insert portion extending along and tapering from the other of said lateral edges towards said center, and a third insert portion intermediate and integrally connecting said first and second insert portions and having a dimension longitudinally of said sole substantially less than the maximum dimension of said first and second insert portions in the same direction, said insert portions extending through the entire thickness of said sole forming part of the same and being more flexible than the other portions

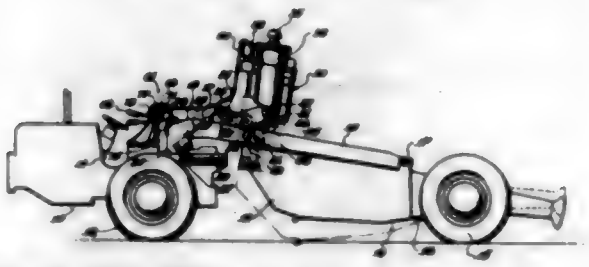
thereof, for substantially reducing the resistance of said sole in said shank portion against twisting about a line extending longitudinally of said sole, whereby the sole structure will be capable to follow the natural movement of the foot during walking.

2,897,612
SOCK LINING UNIT HAVING A BUILT-IN BRIDGING ELEMENT
Jack Meltzer, Hollywood, Calif.
Application May 23, 1958, Serial No. 737,408
6 Claims. (Cl. 36—58.5)



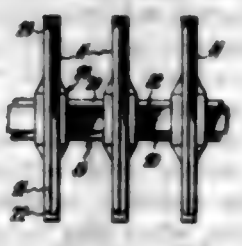
1. A sock lining unit for securement within a shoe and having a built-in resiliently yieldable bridging element, said unit comprising forward and rearward sections, the forward section having a narrowed rear part defining the bridging element, the rearward section having a front edge stitched to the underside of the forward section along a transverse line at the front end of said bridging element, said rearward section having a transverse slot, a lining piece underlying and secured marginally to the rear end of said rearward section to define a pocket on the underside of the latter, said bridging element passing rearwardly through said slot into said pocket, and a stretchable elastic lying entirely within said pocket and secured at one end to the rear edge of said rearward section and at the other end to the rear edge of said bridging element.

2,897,613
HYDRAULIC CARRYING-LOCK FOR EARTH-WORKING SCRAPERS
Trevor O. Davidson, Milwaukee, Wis., and Gottfried J. Storatz, Park Ridge, Ill., assignors to International Harvester Company, a corporation of New Jersey
Application April 25, 1956, Serial No. 580,627
10 Claims. (Cl. 37—126)



1. In a wheeled scraper having a frame, a scraper bowl supported on said frame for relative movement from a lowered to a raised position, raising and lowering mechanism on said frame and connected to said bowl, and operator's control means connected to said raising and lowering mechanism; a lock assembly for said scraper bowl comprising, a fluid extensible device including a fluid casing pivotally mounted on said frame, a fluid cylinder in said casing, a fluid reservoir in said casing, a piston movably positioned in said cylinder, a piston rod connected to said piston, means pivotally connecting said rod to said scraper bowl, a first bypass conduit adapted to provide for communication between said reservoir and said fluid cylinder, a check valve in said conduit adapted to permit the flow of fluid from said reservoir to said fluid cylinder during movement of said piston toward said reservoir in response to upward movement of said bowl, a fluid return conduit communicating with said fluid cylinder and said reservoir, a pressure operated valve associated with said fluid return conduit adapted to open said return conduit to permit the flow of fluid between said cylinder and said reservoir during the open position of said pressure operated valve whereby said piston is free to move relative to said fluid cylinder in response to movement of said bowl, means controlling said pressure operated valve comprising a fluid pressure chamber having pressure operated means for actuating said pressure operated valve, a source of fluid under pressure adapted to supply pressure to said fluid pressure chamber, control valve means adapted to control the flow of fluid under pressure from said fluid pressure source to said pressure chamber for actuating said pressure operated valve, a control member connected to said control valve means and to said operator's control means, said control member being movable for opening the control valve means to direct fluid to said pressure operated valve to open the same during simultaneous actuation of said operator's control means to lower said bowl, and a second fluid bypass conduit having openings communicating with said fluid cylinder on opposite sides of said piston during a lowered working position of said bowl to permit the free bypass of fluid between portions of said fluid cylinder above and below said piston, said pressure operated valve and said check valve being closed when said bowl is raised to a position above said working position wherein said piston is locked in said fluid cylinder against movement tending to lower said bowl during inaction of said raising and lowering mechanism.

2,897,614
LAND CLEARING RAKE
Thomas A. Billings, Orlando, Fla.
Application October 11, 1957, Serial No. 689,596
8 Claims. (Cl. 37—145)

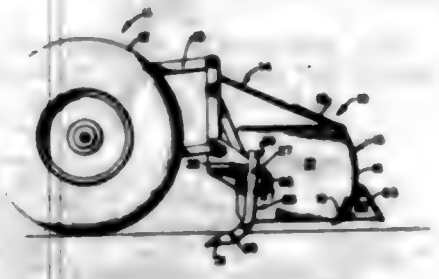


1. A land clearing rake comprising a horizontal cross beam having a front wall and parallel upper and lower walls, said upper and lower walls having rails thereon projecting oppositely therefrom and extending along said cross beam, a plurality of rake teeth each having a mounting yoke removably supporting said teeth in parallel vertical planes for sliding lateral adjustment on said cross beam, said mounting yoke including a pair of vertically spaced leg portions having parallel surfaces and an interconnecting base surface defining a rearwardly opening channel shaped recess spaced to closely fit said cross beam walls, the surfaces of said leg portions having transverse grooves therein for slidably receiving said rails and being dimensioned to permit slight tilting of said teeth about a vertical axis through said yoke, and threaded adjustable means in one of said leg portions projectable into contact with said beam for frictionally locking the associated tooth in a desired position of adjustment along said cross beam.

2,897,615
ATTACHMENT FOR SCRAPER
Donald W. Hills and Oliver K. Grimm, Menlo Park, Calif., assignors to Hipp Welding Works, Palo Alto, Calif.
Application October 29, 1957, Serial No. 693,176
4 Claims. (Cl. 37—145)

1. A scraper of the character described comprising a scraper member having a rear wall adapted to carry a

scraper blade, side members extending forwardly from opposite ends of the rear wall, a cross member extending between said side members forwardly of the rear wall, said cross member being formed with slots to slidably receive scarifier members, and a keeper member for each



scarifier member, each such keeper member comprising mutually perpendicular head, body and tail portions, each said keeper member being insertable in its slot adjacent a scarifier member and being also removable from said slot and detachable from the scraper.

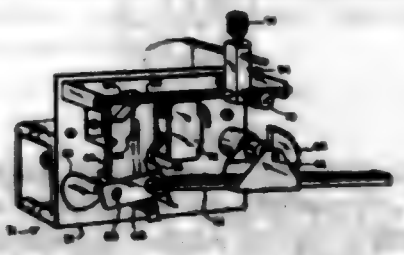
2,897,616
IRONING CORD GUIDE ATTACHMENT FOR IRONING BOARDS
Alpha D. Edwards, Wichita Falls, Tex.
Application February 13, 1957, Serial No. 639,907
1 Claim. (Cl. 38—104)

An ironing cord guide for use in combination with an ironing board and with an iron having a cord leading therefrom, comprising; a pair of opposed, inwardly facing, open throat C-clamp members, the open throats of said C-clamp members being parallel, the lower side of each of said C-clamp members being apertured and threaded, a wing screw mounted within each of said threaded apertures of said C-clamps to threadably engage the lower portion of the respective C-clamp members, a pair of loops on the upper side of each of said C-clamp members, which loops face in the same direction and have the axes thereof in aligned relation, the axes of which loops are at a right angle to the open throats formed in the respective C-clamp members, a pair of tubular members telescoped together, the outer ends of said tubular members being flattened, each of said tubular members having the end portion thereof bent at a 90 degree angle a spaced distance from the outer extremity thereof, a loop formed on the flattened portion of each of the respective ends of said tubular member so the axes of said loops will be in axially aligned relation, and which loops register with the respective loops of said C-clamp members, a pin interconnecting said respective loops of said C-clamp members with the respective loops of said tubular members, said flattened portions of said tubular members being adapted to complementally engage with the upper face of an ironing board to support said tubular members horizontally outward from an end thereof when in one position, and being adapted to fold in close fitting relation onto the ironing board when in another position.

2,897,617
MULTIPLE SIGN ARRANGEMENT FOR USE WITH TAXIMETERS OR THE LIKE
Wilhelm Haupt, Villingen, Schwarzwald, Germany, assignor to Kienzle Apparate G.m.b.H., Villingen, Schwarzwald, Germany
Application November 14, 1956, Serial No. 622,139
Claims priority, application Great Britain November 14, 1955
6 Claims. (Cl. 40—52)

1. A multiple sign arrangement for use with taximeters or the like, comprising, in combination, a panel carrying three inscriptions which are visible on one face of said panel; a pair of slides overlapping said one face of said panel; means supporting said slides for shifting movement between a reset position and an operating position, said slides each being separately shiftable between its reset and operating position, and said slides rendering only one of two of said inscriptions visible when one of said slides is in its operating position while the other slide is in its rest position and rendering only the other of said two inscriptions visible when said one slide is in its rest position while the other slide is in its operating position while the third of said inscriptions remains invisible, and said slides rendering only the third inscription visible when both slides are in their rest position; and manually operable means operatively connected to said slides for selectively shifting the same to said positions thereof.

2,897,618
AUTOMATIC PAGE TURNING APPARATUS
Clarence H. Russell, Minneapolis, Minn.
Application November 13, 1956, Serial No. 621,879
1 Claim. (Cl. 40—184)

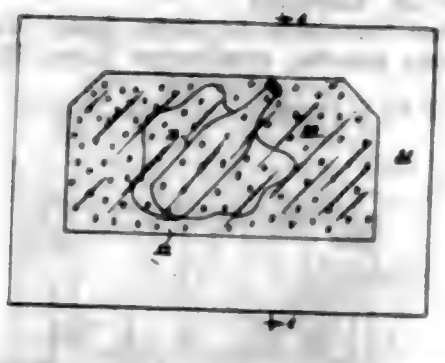


In an automatic page turning device, a sloped platform adapted to support a book, a driving motor, a pivoted arm extending in a plane normal to said platform at an upper edge of said platform, means connecting said motor to said arm, a second arm pivotally mounted on an extremity of said first arm and extending in said plane, a pressure foot attached to one extremity of said second arm, said pressure foot comprising a predetermined amount of soft adhesive material whereby upon said pressure foot contacting the surface of a page of the book said foot will adhere thereto to lift a page upon a reverse movement of said second arm, said foot changing shape with excessive pressure upon engaging said page, and adjustable spring means for connecting said first and second arms, said spring means limiting the force that can be exerted by said motor in moving said pressure foot against the page thereby preventing the deformation of said material.

flected position, and an electric circuit between the battery of said flashlight and the supported end of said spring

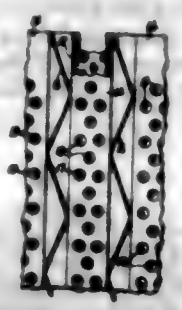
hooks being substantially in a single plane, a generally rectangular elongated upright trigger bar, said trigger

2,897,619
SNOWFALL SIMULATING APPARATUS
Frederick A. Zenz, Roslyn Harbor, N.Y.
Application August 10, 1956, Serial No. 603,369
6 Claims. (Cl. 40—106.25)



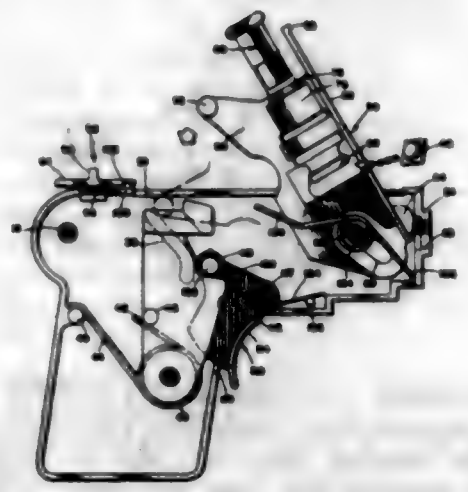
1. In a device wherein a snowfall is simulated by the fall of snowlike particles through a display area, an endless conveyor surrounding said display area for transporting the snow-like particles from below said area to a region thereabove, said conveyor being adapted to discharge substantially all of said particles as said conveyor begins its travel above said display area, means located above the display area for receiving the discharged particles, said means being adapted to permit the limited passage of said discharged particles therethrough, and means for sweeping the particles across said last named means whereby the passage of particles therethrough takes place across the width of said means to effect the fall of particles across the entire display area.

2,897,620
PREFABRICATED SURFACES
Albert J. Fitzgerald, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Original application August 9, 1950, Serial No. 178,515, now Patent No. 2,742,116, dated April 17, 1956. Divided and this application September 26, 1955, Serial No. 536,552
2 Claims. (Cl. 41—34)



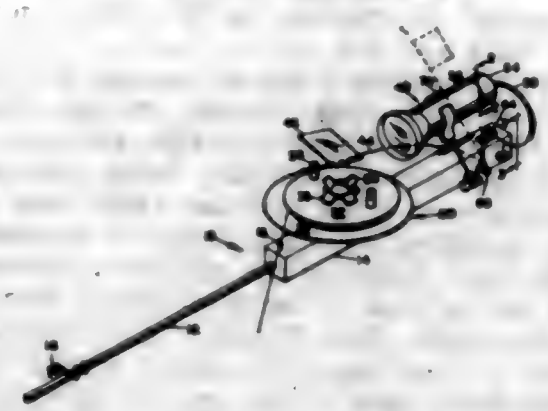
1. A decorative panel comprising alternate first and second sets of longitudinally extending channel members each including a bottom portion and integral planar side portions outstanding from the opposite side edges of the bottom portion, the side portions of adjacent channel members being interlocked in mutually overlapping relation and forming thereby the sole means of connection of said channel members, the bottom portions of each of one set of channel members being adapted to be perforated, the overlapping portions of the channel side portions being adapted to clamp therebetween marginal portions of sheet ornamental material backing the bottom portions of said one set of channel members and viewable through the perforations thereof, and a longitudinally extending resilient member of undulatory form compressed between and outwardly urging at longitudinally spaced points confronting adjacent channel side portions to press the overlapping side portions together, said resilient members being slidably removable in a direction normal to the channel bottom portions and without longitudinal movement relative to said channels to permit ready disassembly of said panel.

2,897,621
TOY CAP GUN WITH HAMMER COCKING MEANS
Robert S. Long, Westerville, Ohio, assignor to Kilgore, Inc., Westerville, Ohio, a corporation of Ohio
Application July 22, 1958, Serial No. 750,129
14 Claims. (Cl. 42—54)



9. In a toy gun, a frame defining a barrel and a handle, a gate pivotally mounted in said barrel and forming the upper face thereof, said gate having a cap receptacle formed therein and including a rear extension to which is joined a cocking bar, said gate having a slot formed therein providing for limited longitudinal shifting of said gate during the reloading operation, lever means pivotally mounted in said frame and engageable by said cocking bar for pivotal movement to a cocked position upon depression of said gate, and trigger means engaging said lever means and movable inwardly to release said lever means from the cocked position.

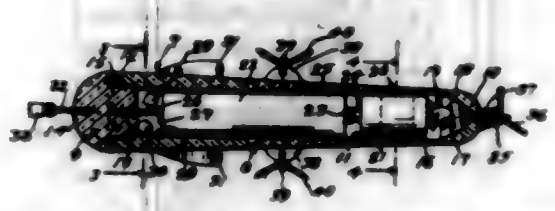
2,897,622
FISHING RIGS
Ralph T. Belko, Schofield, Wis.
Application May 31, 1956, Serial No. 588,421
2 Claims. (Cl. 43—17)



1. A fishing rod and reel comprising an elongated handle for said rod, a shaft supported on said handle and projecting therefrom, the axes of said handle and said shaft being substantially perpendicular to one another, a spool rotatably mounted on the projecting portion of said shaft, said spool having a central drum for storing line between two end discs, said discs being of substantially greater diameter than said drum and the disc closest to said handle being of substantially greater diameter than the other disc, a winding nob projecting from the surface of said other disc, a conductive spring wire supported at one end on said handle, detent means on said nob for retaining said wire in a deflected position for a predetermined rotative position of said reel, a battery flashlight having an exposed metallic barrel, means for removably mounting said flashlight on said handle in position for said barrel to be contacted by said wire only in its unde-

flected position, and an electric circuit between the battery of said flashlight and the supported end of said spring wire to light said flashlight when said detent releases said wire to permit the same to spring to said undeflected position.

2,897,623
INTERMITTENTLY ILLUMINATED FISHING LURE
Fred M. Flournoy, Wilsonville, Ala.
Application July 2, 1958, Serial No. 746,243
5 Claims. (Cl. 43—17.6)

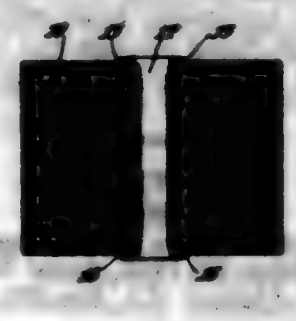


1. An intermittently illuminated fishing lure comprising a lure body having a sealed chamber and including a translucent portion, a light bulb, a battery, and means forming an electric circuit connecting the light bulb and battery, said light bulb, battery and means being contained within the chamber of said body portion, an actuating means fixed to and disposed externally of the body portion and actuated by movement of the fishing lure through the water for causing said body portion to rotate about the axis thereof, said means forming the electric circuit including a make and break switch having two radially spaced contacts fixed to and rotating with the body portion, one of said contacts moving in a circular path around the axis of the other contact when the body portion is revolved about its axis, and said switch including a third contact loosely confined in the chamber of the body portion and disposed to be engaged and carried by said first mentioned contact during a part of each revolution of the lure body for elevating said loose contact to a position from which the loose contact will move by gravity to momentarily bridge said spaced contacts to complete the electric circuit and to thereafter move out of engagement with both of said spaced contacts to break the electric circuit.

2,897,624
CONSERVATION FISHHOOKS
Frederick O. Yakel and John H. Yakel, Pomona, N.Y.
Application June 27, 1958, Serial No. 745,147
1 Claim. (Cl. 43—36)

A conservation fishhook comprising a coil spring, a pair of diverging arms integrally extending from opposite ends of said coil spring and normally biased apart thereby, an inwardly offset portion integrally formed on the ends of said arms opposite said spring, an elongated shank integrally secured to the end of each of said offset portions opposite said arm and extending at an angle thereto generally away of said arms, a barbless pointed relatively short hook integrally formed on each of said shanks on the end thereof opposite said offset portions, said hooks extending outwardly at an angle sloping slightly toward said coil spring, said arms, offset portions, shanks and hooks being substantially in a single plane, a generally rectangular elongated upright trigger bar, said trigger bar having an arcuate notch formed in the lower end thereof, the upper end portion of said trigger bar having a bore, a flexible line having one end secured to said coil spring with said line threaded through said bore, said trigger bar and stop plate having the arcuate notch therein releasably engaged over said shanks with said shanks in adjacent parallel relation in a preselected adjustable position between said offset portions and said hooks near the center of gravity of the said fishhook, said shanks extending generally perpendicularly to said trigger bar to suspend said fishhook in a generally horizontal position, said trigger bar limiting the depth of penetration of the shanks in the fish's mouth and being releasable from said shanks by engagement with the fish's mouth or by sharply pulling on said line whereby said shanks are biased apart by said spring to embed said hooks in the mouth of a fish.

2,897,625
NOVEL FLOAT
Donald H. Spitzli, Summit, N.J., and Nicholas R. Dollde, Flushing, N.Y., assignors, by mesne assignments, to Akron Products, Inc., Paterson, N.J., a corporation of New Jersey
Application October 11, 1955, Serial No. 539,904
4 Claims. (Cl. 43—43.1)



1. An improved fishnet float comprising an expanded, closed-cell, buoyant, plastic member having a channel traversing it and a hollow sleeve member seated within said channel, the ends of said sleeve member being flared over the plastic member at the openings of the channel; said sleeve member being constructed of a metal selected from the class consisting of aluminum and copper and said sleeve member being sufficiently light so as to not impair the buoyancy of said float.

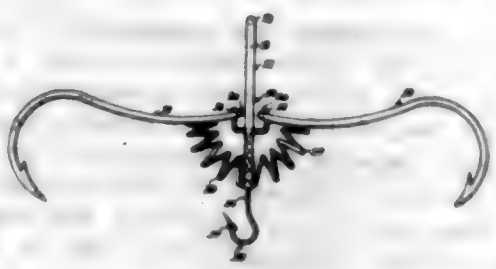
2,897,626
FISH HOOK DISGORGERS
Charles W. Butler, Moline, Ill.
Application December 5, 1955, Serial No. 551,122
3 Claims. (Cl. 43—53.5)

1. A fish disgorger comprising, in combination, a cylindrical rod pointed at one end, a handle consisting of a wire spiral giving a firm grip mounted axially at the other end of said rod, said rod having a spiral groove near the end that is pointed, and a stud extending radially through said rod beyond said groove suitable for attachment of a fish line which may be wound into said groove.

2,897,627
BIRD TRAP
Louis J. Neid, St. Paul, Minn.; Pauline E. Neid executrix of said Louis J. Neid, deceased
Application March 3, 1955, Serial No. 491,836
2 Claims. (Cl. 43—65)

1. A bird trap comprising, a bird-retaining enclosure having a ceiling, a floor and a side wall structure, said side wall structure having a framed opening intermediate the ceiling and floor and of a size sufficient to permit a bird with closed wings to pass therethrough, but of insufficient size to permit the same bird to fly therethrough, a walking surface mounted externally of said opening and terminating inwardly substantially at the lower edge of said opening, a horizontal baffle having a downwardly facing wing-guarding surface mounted internally of said opening and terminating outwardly substantially at the upper edge of said opening, and an upright baffle surface disposed at each side of said framed opening and extending inwardly to underlie said horizontal baffle whereby to prevent birds which have entered said enclosure from flying through the opening or from alighting in flight upon the lower edge of the framed opening.

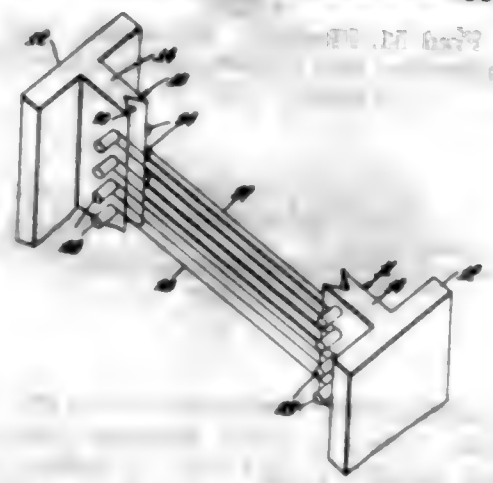
2,897,628
FISHHOOK
Milford E. Thibodeau, Scarborough, Maine
Application May 29, 1958, Serial No. 736,760
1 Claim. (Cl. 43—89)



In a device of the character described, a shank including a pair of spaced apart legs, a curved web joining the outer ends of said legs together, a pair of aligned spring members arranged in end-to-end relation with respect to each other and said spring members being secured to said legs, a trigger including a stem slidably mounted between said spring members and legs, a hook on one end of the stem, spaced parallel opposed fingers on the other end of said stem, a pair of holding hooks mounted for movement towards and away from each other, said holding hooks being secured to the outer ends of said spring members, said holding hooks being provided with eyes for selective engagement with said fingers.

2,897,629
APPARATUS FOR ELECTRICALLY DESTROYING INSECTS AND THE LIKE
Walter R. Jeeman, Scottsdale, Ariz.
Application February 6, 1957, Serial No. 638,647
8 Claims. (Cl. 43—112)

1. An electric destroyer assembly for insects and the like, comprising a pair of insulator members of predetermined length, each having a longitudinal rib, said members being held spaced with said ribs aligned and in facing relation, abutments spaced longitudinally along opposite sides of each rib, a first electrode wire for carrying current of one polarity serially wound around and between abutments extending from one set of common sides of said ribs, a second electrode wire for carrying current of the opposite polarity serially wound around and between abutments extending from the opposite set



of common sides of said ribs, said abutments being closely spaced to dispose the reaches of said wires in close proximity whereby an insect attempting to pass through said reaches shorts therebetween, and an end of each of said insulator members having a socket adapted for receiving a projection on the respective ends of similar insulator members of another assembly to mechanically connect said assemblies.

2,897,630
TOY HAND GRENADE
Harry Horowitz and Abraham Schneiderman, New York, N.Y.
Application April 29, 1958, Serial No. 731,810
4 Claims. (Cl. 46—196)

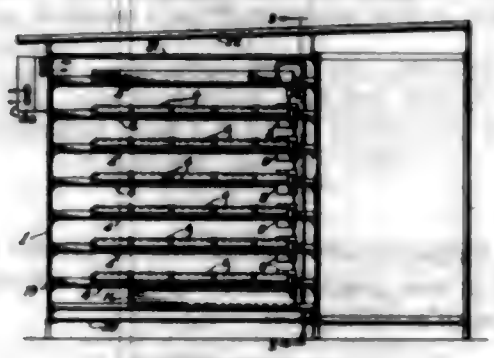
4. A cap firing mechanism for use with a toy grenade comprising: a generally planar member having first and second ends, a first pivotal mounting means disposed on said planar member substantially at said first end, a second pivotal mounting means disposed on said planar member between said first and second ends, said second pivotal mounting means including means for supporting a paper cap upon said planar member, a hammer member pivotally supported by said second pivotal mounting means, and resilient means for urging said hammer member in a direction toward said cap supporting means to detonate a cap supported thereby; means connected to said first pivotal mounting means for holding said hammer means against the action of said resilient means in a non-detonating position, said last mentioned means including a second generally planar member having first and second ends, said first end being connected to said first pivotal mounting means, said second end having third pivotal mounting means thereon, and latching means mounted upon said third pivotal mounting means selectively engageable with said second end of said first planar member, said latching means including a handle element, a portion of which overlies said second planar member, said handle element being formed of flexible material.

2,897,631

APPARATUS FOR SOILLESS PLANT CULTIVATION

Louis Albert Howsley, Jr., and Roger Lewis Malone, Denton, Tex., assignors to First State Bank of Denton, Denton, Tex., trustee

Application March 22, 1957, Serial No. 647,803
1 Claim. (Cl. 47—1.2)



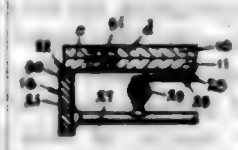
Apparatus for soilless plant cultivation comprising a cabinet defining a substantially air-tight chamber and having a plurality of culture trays arranged in tiers therein, and means for maintaining the temperature of the air within the chamber at an optimum temperature which may be lower than the prevailing atmospheric temperature while at the same time regulating the humidity thereof, the cabinet having a roof, a floor, and sides each insulated against heat and cold, the roof of the cabinet being formed of opaque material capable of reflecting light and the sides of the cabinet being formed at least in part by one or more panels each consisting of two sheets of glass spaced apart from each other to provide a dead air space between them, the panels being capable of admitting sunlight to the chamber while at the same time substantially insulating the chamber against heat and cold.

2,897,632

METHOD OF PRODUCING PATTERN-CUT BENT GLASS SHEETS

Ival G. Fowler, Toledo, and Donald W. Dunipace, Perrysburg, Ohio, assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Application October 27, 1954, Serial No. 464,952
9 Claims. (Cl. 49—79)



1. A method of bending block size sheets of glass that are to be subsequently pattern cut so that the pattern-cut bent sheets will have a greater resistance to edge breakage, which comprises bending a block size sheet while at its bending temperature, gradually cooling the bent sheet from bending temperature through the annealing temperature range, cooling a substantially continuous band-like area of the block size sheet spaced inwardly of the outer edge thereof more rapidly than contiguous areas to form an area which is in regional compression through the thickness of the sheet, and subsequently pattern cutting the block size sheet along a line running through said compression area.

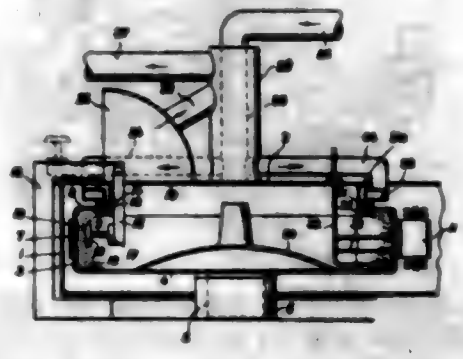
2,897,633

POLISHING APPARATUS

Erich Bühr, Stuttgart-Feuerbach, and Paul Wellner, Geislingen (Steige), Germany

Application January 30, 1957, Serial No. 637,282
Claims priority, application Germany February 11, 1956
11 Claims. (Cl. 51—7)

1. In a polishing apparatus, in combination, support means; a substantially cup-shaped drum mounted on said support means for rotation relative thereto, said drum having a bottom portion, an upstanding annular wall portion, and an inwardly directed annular flange portion; stationary covering means on said support means and arranged near the inner rim of said flange portion but spaced therefrom so that said drum may rotate freely relative to said covering means and so that an annular gap is formed between said flange portion and said covering means; and blower means including nozzle means



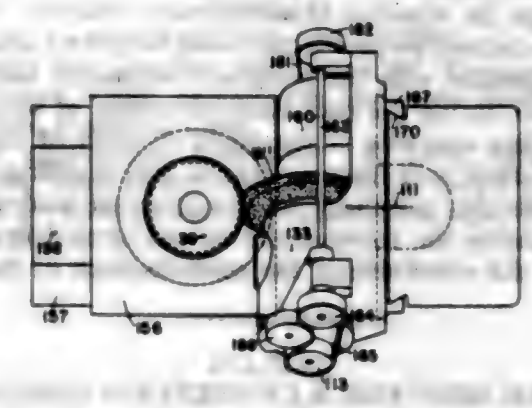
arranged above said gap for moving air through said gap from the exterior of said drum to the interior thereof during rotation of said drum, whereby a mass of granular material in said drum will during rotation thereof be centrifuged against said upstanding wall portion thereof into the space beneath said flange portion while individual granular particles will be prevented from leaving said space through said gap by the air moving therethrough in the opposite direction.

2,897,634

METHOD AND APPARATUS FOR PRODUCING HELICAL GEARS

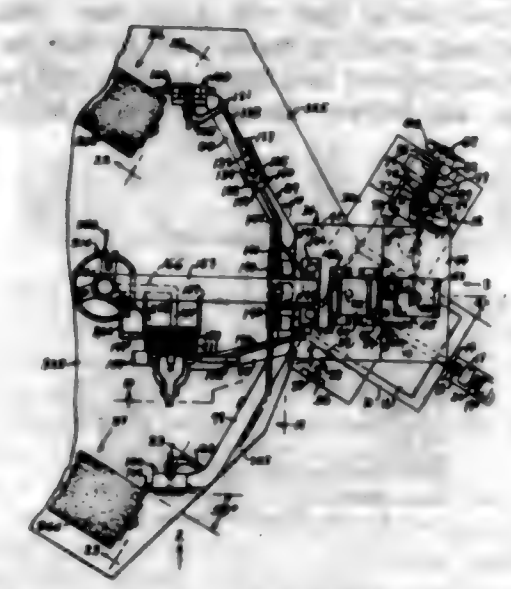
Ernest Wildhaber, Brighton, N.Y.

Application November 27, 1953, Serial No. 394,645
25 Claims. (Cl. 51—52)



11. In a machine for grinding helical gear teeth, a rotatable tool support, a rotary disc-shaped grinding wheel having a curved axial profile secured to said tool support to rotate coaxially therewith, a rotary work support, a pivoted carrier on which said tool support is mounted, said carrier being oscillatable about an axis parallel to the axis of said tool support and displaced from the axis of said tool support in a direction approximately radial of the axis of said work support, means for adjusting said tool support on said carrier to offset the axis of said grinding wheel from the axis of said carrier in said direction, means for turning said carrier on its axis in time with rotation of said work support, and means for effecting a further relative motion between the tool support and work support in the direction of the axis of the work support and in time with the rotation of the work support.

2,897,635
DRILL POINTING MACHINE
Alexander Stephanoff, Detroit, Mich.
Application November 16, 1956, Serial No. 622,683
14 Claims. (Cl. 51—84)



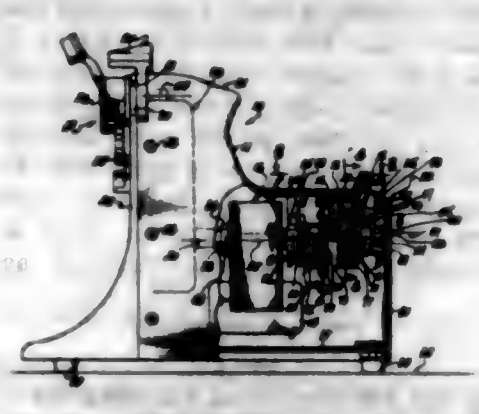
1. A machine for grinding points on drills comprising: a base having a longitudinal axis; a rotary drill carrying fixture movably mounted on said base and rotatable in a vertical plane about a horizontal axis disposed at an acute angle to the longitudinal axis of said base; means for moving said fixture on said base in a direction transversely to the longitudinal axis of said base; means for rotating said fixture; releaseable clamping means on said fixture for releasably holding a plurality of drills; a pair of laterally spaced apart rotatable grinding wheels, each having a longitudinal axis and being disposed with their longitudinal axes horizontal and parallel to the longitudinal axis of said base; said grinding wheels being disposed adjacent the path of travel of the drill holding means on said fixture; and, means for moving said fixture forwardly and backwardly on said base in a direction parallel to the longitudinal axis of said base and the longitudinal axes of said grinding wheels and in timed relation to the rotation of said fixture, whereby, each of the drills carried by said fixture will be moved into grinding engagement with the periphery of one of said grinding wheels during the backward wovement of said fixture for grinding one side of the point on each of the drills, and, the drills will then be moved into grinding engagement with the periphery of the other of said grinding wheels during the forward movement of said fixture for grinding the other side of the point on each of the drills.

2,897,636
WORK REST FOR A CENTERLESS GRINDER
Roger S. Pyne, Longmeadow, and Albert H. Tompkins, East Longmeadow, Mass., assignors, by mesne assignments, to Van Norman Industries, Inc., Springfield, Mass., a corporation of Massachusetts
Application November 28, 1956, Serial No. 624,920
2 Claims. (Cl. 51—103)

1. A centerless grinding machine comprising a grinding wheel and a regulating wheel which are movable relatively toward and away from each other in a transverse plane, a rest for supporting work in the machine including an elongated base member extending generally normal to the said plane and between the grinding wheel and the regulating wheel, the said base member having a transversely curved top surface providing a swivel seat, an elongated upper member having a bottom surface complementary to the aforesaid surface and seated thereon whereby the upper member can be pivoted clockwise and counterclockwise on the base member as viewed from an end thereof, means for securing the upper member to the base member in pivoted positions thereon, and a work-supporting blade secured to the upper member

to extend longitudinally thereof and to project upwardly between the said grinding and regulating wheels for engagement with a workpiece.

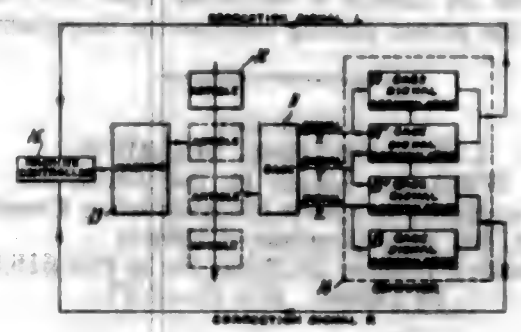
2,897,637
ELECTRIC KNIFE SHARPENER
Walter H. Bodle, Montebello, Calif., assignor to Union Die Casting Company, Whittier, Calif., a corporation of California
Application January 15, 1958, Serial No. 709,146
4 Claims. (Cl. 51—128)



4. A knife sharpening device comprising a housing, an electric motor in said housing having a rotatably driven shaft, a second shaft removably mounted in an active position in the housing and driven by said first shaft, a grinding wheel carried by said second shaft for sharpening a knife, said housing including a main section and a removable cover section at the location of said grinding wheel, fastening means for detachably securing said cover section in a predetermined assembled position relative to said main section of the housing, said cover section being apertured to allow contact of said grinding wheel with a knife to sharpen the knife when the cover section is in said assembled position, a bearing rotatably journalling said second shaft near a first end thereof, locking shoulder means carried by said cover section and adapted by movement of said cover section to said assembled position to clamp said bearing against said main housing section in a predetermined active position and to thereby lock said second shaft in its active grinding position, a boss structure carried by said main housing section carrying means for journalling the second end of said second shaft, said second end being detachable from said boss structure only by axial movement, one of said body sections being constructed to block said axial detachment of the second shaft from the boss structure when said cover section is in its assembled position, said bearing and said second shaft and grinding wheel being freed by said locking shoulder means for detachment from the boss structure and complete removal from the housing when the cover section of the housing is detached from the main section, a first gear in the housing driven by said motor, and a second gear carried by said second shaft and adapted to engage and be driven by said first gear when the shaft is locked in said active position thereof, said second gear being freely movable out of engagement with said first

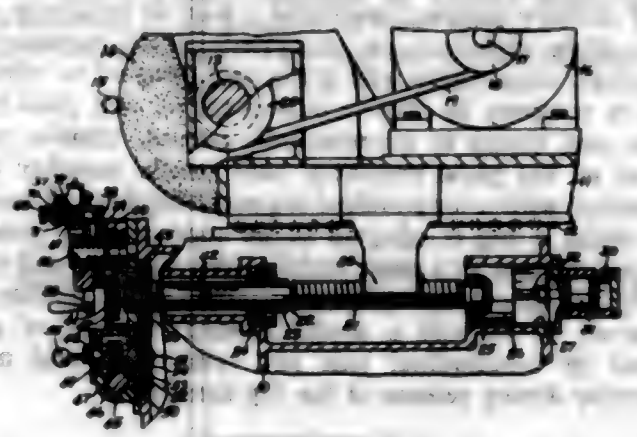
gear upon removal of the second shaft and grinding wheel from the housing.

2,897,638
PROCESS CONTROL APPARATUS
Paul Maker, Birmingham, Mich., assignor to Bryant Chucking Grinder Co., Springfield, Vt., a corporation of Vermont
Continuation of applications Serial No. 453,921, September 2, 1954, and Serial No. 491,506, March 1, 1955. This application June 13, 1956, Serial No. 591,161
31 Claims. (Cl. 51—165)



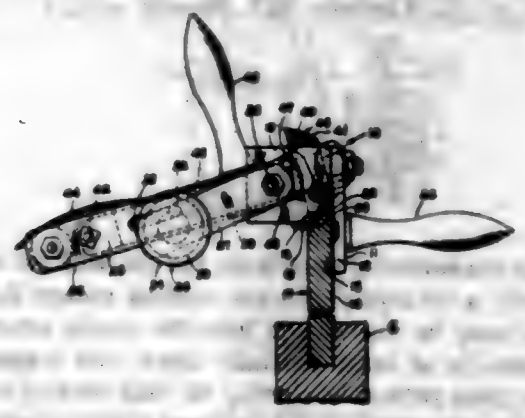
5. A statistical control system comprising: means for producing an output having a characteristic falling within a range of measure; means for controlling the characteristic of said output; measuring means for sensing said characteristic of said output and providing output signals indicative of the occurrences of characteristics of said output falling within at least two portions of said range of measure, and computer means to determine the respective numbers of said output signals having occurred and their orders of occurrence and providing a correcting signal to said controlling means in response to the occurrences in given sequences of predetermined numbers of said measuring means signals to control said characteristic.

2,897,639
GRINDING MACHINE
Olva E. Hill, West Boylston, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Application February 18, 1957, Serial No. 640,813
12 Claims. (Cl. 51—165)



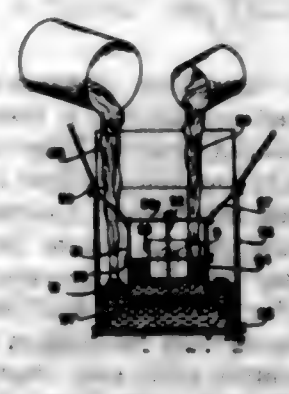
1. In a grinding machine having a transversely movable wheel slide, a rotatable grinding wheel thereon, a feeding mechanism to feed said slide in either direction, a rotatable feed wheel to actuate said feeding mechanism, an adjustable stop abutment on said feed wheel, a stop pawl arranged in the path of movement of said abutment, and a compensating mechanism on said feed wheel including a pair of independent fluid pressure actuated pawl and ratchet mechanisms to adjust the position of said stop abutment in either direction so as to compensate for oversize or undersize work.

2,897,640
PORTABLE KNIFE SHARPENER
Joseph A. Hermann and Raymond W. Lorence, Sr., Akron, Ohio
Application August 3, 1956, Serial No. 601,912
4 Claims. (Cl. 51—173)



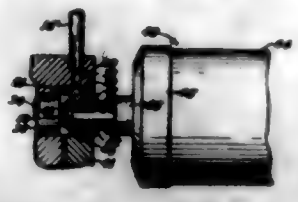
1. A device for sharpening a cutter blade having an elongated beveled cutting edge portion, comprising a rigid holder having fixedly spaced longitudinally extending guide portions for downwardly engaging opposing sides of the beveled edge portion of the blade, whereby the holder is adapted to be firmly but longitudinally slidably self-supported directly on said cutting edge portion while the blade is held affixed in a vertical plane with said edge portion presented upwardly, a rigid member rigidly affixed to said holder to extend freely away from the same and to be supported thereby at an angle to said vertical plane of the blade while the holder is supported on said cutting edge portion, a rigid element pivoted on said free end of said member to extend inwardly in reverse direction toward said holder, and abrasive means on the inner end of said element including an abrasive surface presented inwardly, the blade thereby adapted to be sharpened by sliding said holder longitudinally of the blade frictionally to engage said abrasive surface inwardly against the beveled face of the blade.

2,897,641
PACKAGING METHODS
Eli Simon, Los Angeles, and Frank W. Thomas, North Hollywood, Calif., assignors to Lockheed Aircraft Corporation, Burbank, Calif.
Original application December 11, 1951, Serial No. 261,854, now Patent No. 2,780,350, dated February 5, 1957. Divided and this application April 27, 1956, Serial No. 582,616
16 Claims. (Cl. 53—3)



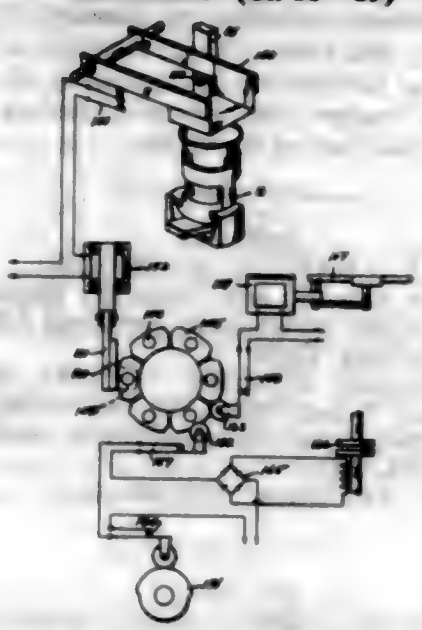
1. A method of packaging fragile articles to be packaged comprising: positioning the fragile article to be packaged in a container in spaced relation to the walls thereof, introducing a liquid, foamable, plastic-forming reaction mixture into said container, and foaming said mixture to form a solid, cellular plastic, energy-absorbing sheath that surrounds said article.

2,897,642
METHOD AND APPARATUS FOR PRESSURIZING DRIERS
Evan Jones, Evanston, and Joseph A. Palcer, Chicago, Ill., assignors to Henry Valve Company, Incorporated, Melrose Park, Ill., a corporation of Illinois
Application January 14, 1958, Serial No. 708,949
11 Claims. (Cl. 53—7)



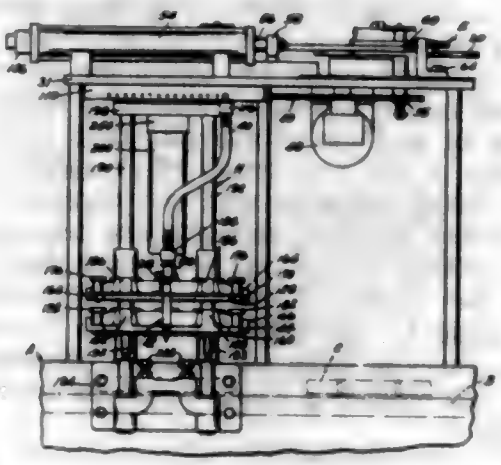
1. Article pressurizing apparatus for use with an article provided with a rotatably closable sealing means through which a gas may be introduced into the article when said sealing means is at least partially open and trapped in said article upon rotatable closing of said sealing means, said apparatus comprising gas delivery means controlled by valve means, receiving means for said sealing means in communication with said gas delivery means, releasable holding means associated with said receiving means to fix said sealing means therein for article pressurization therethrough and subsequent rotational closing of same, and operating means for said valve means to control the delivery of gas into said article through said sealing means.

2,897,643
APPARATUS FOR APPLYING CLOSURES TO FLEXIBLE CONTAINERS
Carl Byrd, Chicago, Ill., assignor to Standard Packaging Corporation, Chicago, Ill., a corporation of Virginia
Application March 29, 1956, Serial No. 574,768
23 Claims. (Cl. 53—39)



1. In a machine for filling containers and applying closures to the filled containers: a frame structure; a power driving mechanism mounted upon said frame structure; an intermittently movable, endless conveyor driven by said power driving mechanism; a container magazine; a container-dispensing unit; a means for detecting the absence of a container upon said conveyor; a filling unit; a drive mechanism for said filling unit; an electric clutch for coupling the filler-driving mechanism with said filling unit; an electric control unit; said electric control unit having a cycling switch for controlling said electric clutch, whereby said filling unit dispenses material into a container during the dwell time between movements of the conveyor; a safety control system associated with said electric control unit; said safety control system actuated by said container-detecting means for controlling the operation of said clutch, thereby preventing dispensing of material in the absence of a container at the filling station; a closure-applying and sealing unit; said closure-applying and sealing unit comprising a magazine for closures and a vacuum-type head; said head functioning to extract a closure from said magazine and to apply said closure to a filled container; said container-detecting means controlling said electric control unit for preventing extraction of a closure from said closure magazine in the absence of a container at the closure-applying and sealing station; a solenoid operated by said container-detecting means; means controlled by the solenoid for connecting a source of vacuum with said head; and a second electric control system comprising a pressure controlled switch, said pressure controlled switch operating in the event no closure is extracted from the magazine to render the power driving mechanism inoperative.

2,897,644
LUG INSERTING MACHINE
Grant N. Willis and Lionel H. Seccombe, Jr., Bristol, Conn., assignors to Cinch Manufacturing Corporation, Chicago, Ill., a corporation of Illinois
Application October 29, 1956, Serial No. 618,854
14 Claims. (Cl. 53—247)

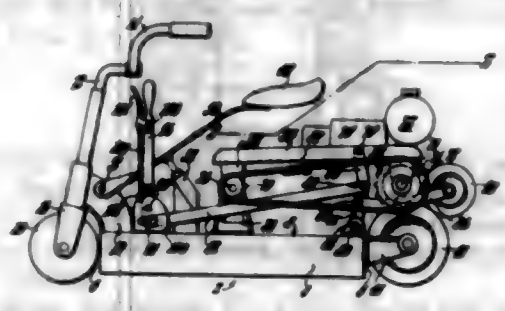


13. In a machine for automatically inserting lugs in a panel and the like of the type having means to automatically transport a lug from a supply to a delivery station and to effect disengagement of the lug and transport means when said lug and delivery station are in registry, lug orienting and inserting means communicating with said delivery station comprising a pair of relatively movable plate members, an elongated nozzle member supportingly engageable with a lug and adapted to release a lug in response to relative movement of said plate members, and means to automatically provide relative movement of the plate members, said nozzle member being provided with a longitudinal lug receiving bore in one end of which a lug is adapted to be supported in predetermined relation to a panel and the like, said one end of the bore having a longitudinal and lateral cross section constructed to provide a predetermined rotation of a lug about its longitudinal axis and relative to said nozzle member during release of the lug therefrom.

2,897,645
LAWN MOWER REVERSIBLE FRICTIONAL DRIVE
Frederic J. Veillette, Williamsett, Mass.
Application March 10, 1958, Serial No. 720,136
6 Claims. (Cl. 56—25.4)

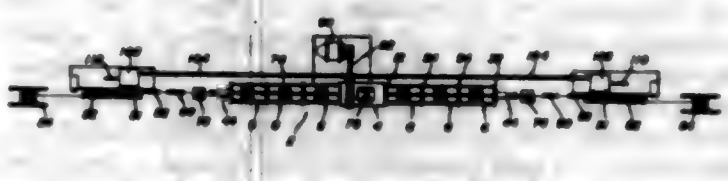
1. In a power driven lawn mower of the type having a horizontal base provided with front and rear ends, a power unit on said base having a drive shaft, a steering wheel supporting the front end of said base, and transversely spaced base supporting wheels journalled at the rear end of said base, a main drive shaft connected to the shaft of

said power unit and bearings carried by said base forwardly of the rear end thereof rotatably supporting said shaft transversely of said base, a rigid beam having a forward end pivoted on said drive shaft for swinging of a rear end thereof between upper and lower positions, a driven shaft journalled in the rear end of said beam and driving connections between said driven shaft and said main shaft, a drive roll fixed on said driven shaft engageable with one of said supporting wheels in lower position of the rear end of said beam and disengageable therefrom in upper position thereof whereby said wheel may be rotated by said roll in lower position of said beam end, a manually operable shifting member mounted



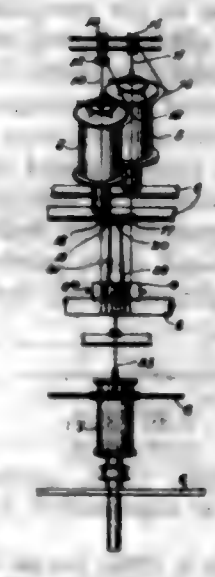
on said base for movements in opposite directions, interconnecting means connecting said shifting member and base and beam adapted and arranged whereby as said shifting member is moved in one direction the end of said beam is positioned in lower position and when said member is moved in an opposite direction the end of said beam is moved to upper position, a rotatable reverse drive roll operatively connected to said interconnecting means and operable thereby in upper position of said beam end to contact said reverse roll with said drive roll and said one supporting wheel and in lower position of said beam end to contact said reverse roll with said one supporting wheel only, a cutter shaft mounted in said base for rotation on a vertical axis, and friction driving connections between said cutter and main shafts.

2,897,646
REVERSIBLE UNIVERSAL STRANDING AND LAYING MACHINE
William H. Simcoe, Hamden, and Michael R. Vennett, New Haven, Conn., assignors to United States Steel Corporation, a corporation of New Jersey
Application January 15, 1958, Serial No. 709,138
8 Claims. (Cl. 57—58.3)



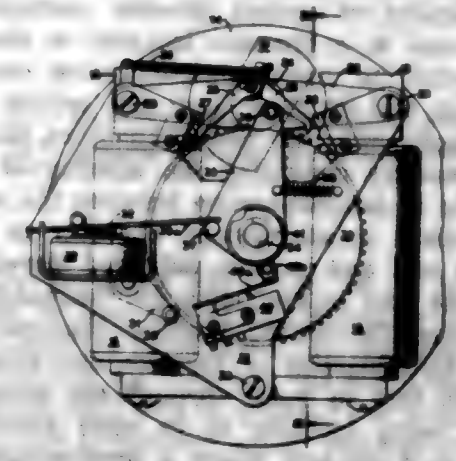
7. A stranding machine comprising a rotor, said rotor having at least two bays at each end thereof, a wire carrying spool in each of said bays, means for rotating said rotor selectively in either direction, a twister head at each end of said rotor, a closing die at the exit end of each twister head, a hauloff mechanism at the exit end of each twister head, means for driving said hauloff mechanisms in synchronism with the rotation of said rotor, means for disengaging said last named means, and means for causing said hauloff mechanisms to rotate in the same direction regardless of the direction of rotation of said rotor.

2,897,647
MACHINES FOR THE MANUFACTURE OF CORDS OR THE LIKE
Joseph Woods and Harold Schofield, Rochdale, England, assignors to John Bright & Brothers Limited, Lancashire, England
Application October 28, 1955, Serial No. 543,564
Claims priority, application Great Britain July 13, 1955
1 Claim. (Cl. 57—60)



In a multi-purpose unitary machine for the manufacture of cords, a plurality of supply bobbins each positively rotating in a single direction and from which dry yarns are drawn and twisted in one direction, a take-up bobbin rotated in a direction opposite to the direction of rotation of the supply bobbins of said plurality thereof, a triple roller system disposed between said supply and take up bobbins and having at least one driven roller and providing a pair of nips at each pass of the yarns for holding the twist while the ends of the twisted yarns are brought together, the brought-together ends of the yarns being cabled en route from the rollers of said roller system to said take-up bobbin, the speed of rotation of the supply bobbins of said plurality thereof and said take-up bobbin being related to the speed of rotation of the rollers of said roller system, the direction of twist in the yarns being reversed in the cabling.

2,897,648
MARINE TIME SYSTEM
Allan C. Cargill, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application March 5, 1957, Serial No. 644,125
6 Claims. (Cl. 58—26)

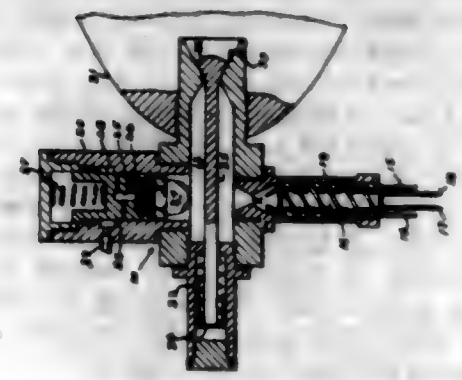


1. In an electrically operated clock mechanism, the combination of an electromagnet, means for periodically

therein for displacing a hydraulic liquid therefrom, said the liquid containing cylinder of the first pair to act on

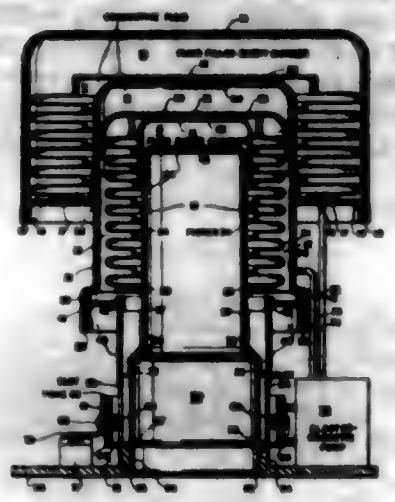
energizing said electromagnet, a pivotally mounted armature adapted to be oscillated in response to the energization and de-energization of said electromagnet, time indicating means, a ratchet wheel connected to said time indicating means, a forward drive pawl and a reverse drive pawl pivotally and eccentrically mounted on said armature and adapted to coact with said ratchet wheel, a second electromagnet and means for selectably energizing said second electromagnet, a pivotally mounted lever associated with said second electromagnet, and adapted to be actuated in response to the energization and de-energization of said second electromagnet, and a stud mounted on said lever and positioned relative to said drive pawls whereby when said second electromagnet is in its normal de-energized position the stud renders said reverse drive pawl ineffective as the ratchet wheel driving means during the oscillatory movement of said armature and when said second electromagnet is in its energized position the stud renders said forward drive pawl ineffective as the ratchet wheel driving means during the oscillatory movement of said armature.

2,897,649
IGNITER
Robert Roddy, Pasadena, Calif., assignor to the United States of America as represented by the Secretary of the Air Force
Application July 3, 1956, Serial No. 595,800
6 Claims. (Cl. 60—39.82)



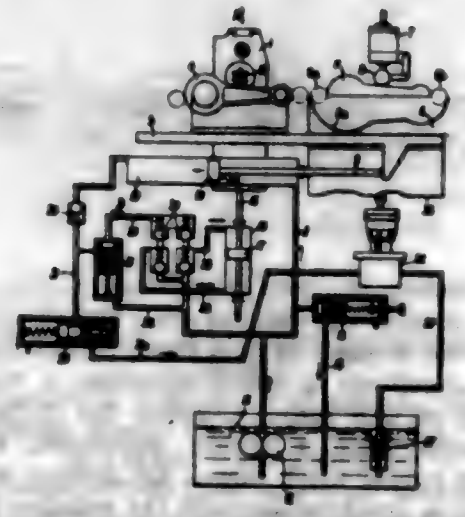
6. An igniter including a first ignition chamber, a second ignition chamber in communication with the first ignition chamber, means to admit fuel to the first ignition chamber, means to ignite the fuel in the first ignition chamber, piston means having nozzle means in communication with said second ignition chamber and having a plurality of spaced grooves movable therewith in response to a pressure increase in the second ignition chamber to open communication between a supply of fuel and oxidizer and said second ignition chamber for ignition in the second chamber, said piston means progressively increasing the number of grooves formed therein in communication between the supply of fuel and oxidizer in said second chamber to increase the supply of fuel and oxidizer delivered thereto as the pressure in the first ignition chamber increases, a passage connecting the second ignition chamber with a main combustion chamber or the like, and valve means to control the flow of flame through the passage, said valve means being movable to its open position only on response to a pressure above a predetermined pressure in the second chamber to open the passage to allow a flame of sufficient heat intensity to enter the combustion chamber.

2,897,650
FLUID ACTUATOR
William L. Carlson, Jr., Bloomington, and Raymond C. Erickson, Minneapolis, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application August 28, 1957, Serial No. 680,793
15 Claims. (Cl. 60—52)



1. In a pressure operated actuator of the class described: a housing having a plurality of substantially concentric pressure tight chambers; said housing further having two relatively movable outer sections which are sealed in a pressure tight relationship by flexible means; a first said chamber being gas filled; a second said chamber being filled with a fluid and differentially variable in volume with said first chamber; a third said chamber being filled with said fluid and connected to said second chamber by means including a pump; a fourth said chamber filled with a noncompressible fluid; said third and fourth chambers having a common flexible wall; and said fourth chamber further having one of said movable outer sections as a portion thereof; said portion moving in response to the movement of said flexible wall as the volume of said third chamber is varied upon operation of said pump.

2,897,651
HYDRAULIC FEED CONTROL FOR PROFILING MACHINES AND THE LIKE
Kurt Bregenzer, Ulm (Danube), Germany, assignor to Fritz Kopp, Ulm (Danube), Germany
Application December 20, 1955, Serial No. 554,354
Claims priority, application Germany December 24, 1954
7 Claims. (Cl. 60—97)



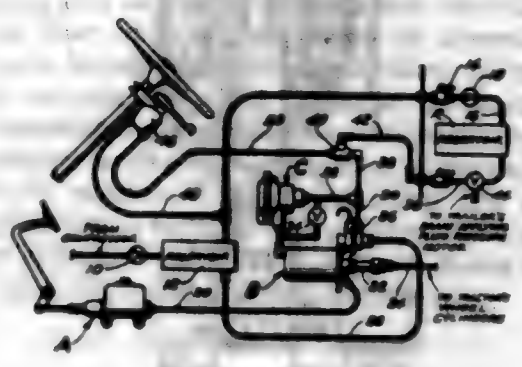
1. A hydraulic control circuit for a profiling machine having a work carrier and a tool carrier movable in mutually perpendicular directions, said circuit comprising, in combination, a first cylinder and a first piston slidable

therein for displacing a hydraulic liquid therefrom, said first piston being adapted to be connected with one of the machine carriers for movement therewith; a second cylinder and a second piston slidable therein for displacing a hydraulic liquid therefrom, said second piston being adapted to be connected with the other of the machine carriers for movement therewith; first conduit means leading from said first cylinder for receiving the liquid displaced therefrom by said first piston; second conduit means leading from said second cylinder for receiving the liquid displaced therefrom by said second piston; third conduit means communicating with said first and second conduit means for receiving therefrom the liquid displaced from both of said cylinders; and flow control means connected with said third conduit means for limiting the rate of liquid flow therethrough.

2,897,652
POWER OPERATED PRESSING MACHINES
Thomas Bradley Walker and Robert Ernest English, Kendal, England, assignors to Isaac Braithwaite & Son Engineers Limited, Kendal, England, a corporation of Great Britain
Application September 17, 1956, Serial No. 610,233
7 Claims. (Cl. 60—97)

1. A fluid actuated power unit for operating a device in which a long movement requiring a relatively low pressure is first required to bring two members adjacent to one another but not in pressure contact, followed by a short movement necessitating a higher pressure to bring them into pressure contact, comprising a pair of cylinders in tandem, one cylinder being adapted to be connected to a source of fluid pressure and the other being adapted to contain a liquid, a piston in each cylinder, a common piston rod on which the pistons are mounted, the said piston rod being adapted to be connected to the member to be operated, a second pair of cylinders also in tandem, one cylinder being adapted to be connected to a source of fluid pressure and the other containing a liquid, a piston in each cylinder, a common piston rod on which the pistons are mounted, the area of the piston in the cylinder of said second pair connected to the source of fluid pressure being greater than the area of the piston in the associated liquid containing cylinder, a conduit between the liquid containing cylinders of the two pairs, means for admitting fluid under pressure to the fluid pressure cylinder of the first pair to give the long movement at a low pressure, and means for subsequently admitting fluid pressure to the fluid pressure cylinder of the second pair to cause the piston thereof to move and apply pressure to the liquid in its associated liquid cylinder, such liquid under pressure being transmitted through said conduit to the liquid containing cylinder of the first pair to act on the piston thereof and exert an increased pressure on the common piston rod, thereby giving a small movement of the latter at a higher pressure.

2,897,653
TRAILER SYNCHRONIZING VALVE
Earl R. Price, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application September 23, 1957, Serial No. 685,698
9 Claims. (Cl. 60—97)



1. In a system for regulating flow of fluid from a pressure source to first and second fluid pressure motors: a control valve supplied with pressure from said source, first flow communication means communicating the discharge of said control valve with said first fluid pressure motor, second flow communication means communicating the discharge of said control valve with said second fluid pressure motor, a back pressure valve in said first flow communication means for restricting flow from said control valve to said first fluid pressure motor, a spring for urging said back pressure valve closed when said spring is loaded, means responsive to pressure in said system for loading said spring as the pressure in said system builds up from a first generally predetermined level, and means for permitting flow past said last mentioned means in the reverse direction.

2,897,654
PILES FOR MARINE STRUCTURES
Frederic R. Harris, deceased, late of New York, N.Y., by Michael S. Lebenthal, Lawrence, and Monroe Percy Bloch and Florence R. Downs, New York, N.Y., executors, assignors to Frederic R. Harris, Inc., New York, N.Y., a corporation of New York
Original application April 22, 1949, Serial No. 89,062. Divided and this application February 8, 1951, Serial No. 210,074
1 Claim. (Cl. 61—53)

A hollow elongated pile to be set up in water, said pile having its one end to be uppermost closed, and a transverse partition forming with the pile adjacent said end a closed buoyant air chamber, the other end of the pile having a large head with an opening and a removable plug in the opening to exclude water, and one or more pipes extending through the first-named end and said chamber and partition to said opening, the pile having a vent outside said chamber in one side of said pile adjacent said partition on the side thereof towards said head.

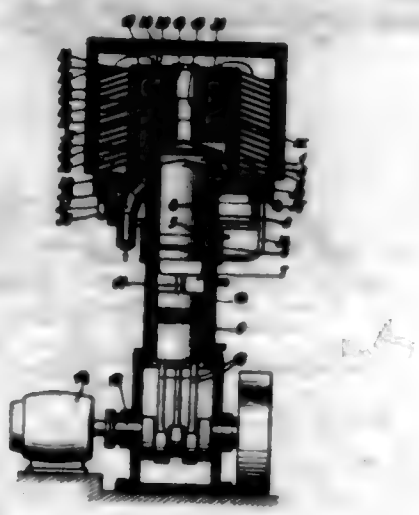
large capacity on a conveying means for storage therein at about atmospheric pressure, said container being sub- ing means to subcool the same, a main throttle valve

2,897,655

SYSTEM COMPRISING A COLD-GAS REFRIGERATOR AND A HEAT EXCHANGER

Cornelius Otto Jonkers and Jacob Willem Laurens Köhler, Emmasingel, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Application January 12, 1955, Serial No. 481,485
Claims priority, application Netherlands January 13, 1954
2 Claims. (Cl. 62—6)



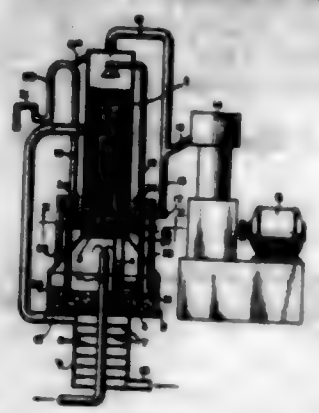
1. A heat exchanger system for use with a water-cooled cold gas refrigerator provided with an interconnected freezer, regenerator and cooler and a first heat exchanger in which a medium is cooled, comprising a second heat exchanger for precooling said medium by thermal contact with the cooling water of said cold-gas refrigerator and separating out at least a part of said impurities of said medium, said second heat exchanger being located at the entrance to said first heat exchanger, said second heat exchanger comprising a plurality of pipes through which cooling water flows, an inlet for said cooling water, and a conduit connecting said pipes to said cooler.

2,897,656

GAS-FRACTIONATING SYSTEM

Johannes van der Stor, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Application October 27, 1955, Serial No. 543,218
Claims priority, application Netherlands March 30, 1955
10 Claims. (Cl. 62—40)



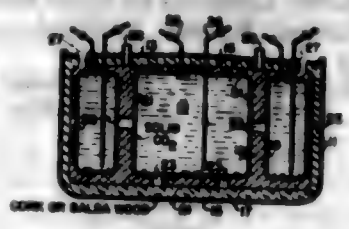
1. A gas fractionating system comprising a gas fractionating column, a boiler in which at least a part of the high boiling fraction evaporates, a source of cold to condense the low boiling fraction, transport means conveying a part of said condensed liquid as a washing liquid to said column and another part being carried off from said system, a first conduit connecting said column to said boiler and extending below the liquid level in said boiler, second and third conduits connected between the boiler and the column in order to transport vapor from the boiler to the column, said second and third conduits being in the form of an inverted U with one end adapted to be closed and opened by the rise and fall of liquid in the boiler and an outlet connecting said second and third conduits to said column, a third part of said condensed liquid being in heat exchanging relationship with at least one of the second and third conduits, and means whereby the quantity of heat delivered by the U to said transport means determines the quantity of washing liquid delivered to the column.

2,897,657

STORAGE AND TRANSPORTATION OF LIQUEFIED GAS

Walter H. Rupp, Mountainside, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application December 13, 1955, Serial No. 552,788
1 Claim. (Cl. 62—45)



A method of storage for bulk marine transportation of hydrocarbons such as methane which are normally gaseous at atmospheric temperature and pressure and which have critical temperatures below the sublimation temperature of solid carbon dioxide under atmospheric pressure, which method comprises liquefying said hydrocarbons and cooling them to a temperature below the boiling point thereof at atmospheric pressure; introducing said liquefied hydrocarbons at the reduced temperature into a first confined storage zone disposed within and occupying a substantial portion of the hold region of the hull structure of a marine vessel adapted for the carriage of cargoes in bulk, said hull structure being characterized by an inner liner of a substantially rigid insulation material in spaced relation exteriorly to said first confined storage zone leaving a second confined storage zone between said first storage zone and said insulation material; encasing said first storage zone with a layer of solid carbon dioxide substantially filling said second storage zone; venting said first and said second storage zones to maintain both said liquefied hydrocarbons and said solid carbon dioxide substantially at atmospheric pressure, whereby heat transfer through said hull structure and said liner thereof to said solid carbon dioxide is at least partially compensated by sublimation of the latter, and heat transfer from said solid carbon dioxide to said hydrocarbons is at least partially compensated by vaporization of the latter at atmospheric pressure.

2,897,658

METHOD AND APPARATUS FOR UNLOADING COLD LOW TEMPERATURE BOILING LIQUIDS FROM STORAGE RESERVOIR

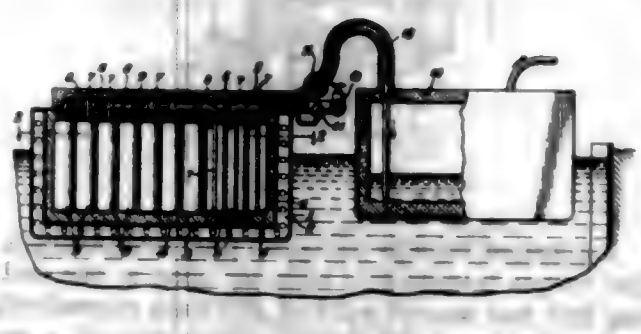
Sterling Beckwith, Lake Forest, Ill., assignor, by mesne assignments, to Comstock Liquid Methane Corporation, a corporation of Delaware

Application March 16, 1955, Serial No. 494,727
2 Claims. (Cl. 62—55)

1. The method of transporting liquefied methane in large volumes at about atmospheric pressure from one point to another remote point and transferring the liquefied methane into a receiver at the remote point for storage and distribution comprising the steps of introducing the cold liquefied methane into an insulated container of

under pressure being transmitted through said conduit to partition on the side thereof towards said head.

large capacity on a conveying means for storage therein at about atmospheric pressure, said container being such that heat in sufficient amount is transferred through the insulated walls of the container into the cold liquefied methane continuously to vaporize a small portion of the liquefied methane contained therein, discharging vaporized methane from the container during transportation to maintain the pressure within the container at about ambient pressures, and preventing the discharge of the vaporized methane from the container when at the remote point to cause the build-up of pressures within the container sufficient to cause the displacement of the liquefied gas from the transport container to the storage container, the amount of heat transmission through the insulated container being such as to facilitate the maintenance of pressure conditions for continuous transfer, the container having a dip tube extending to the bottom portion thereof through which the liquefied methane is displaced in response to the build-up of pressure within the container.

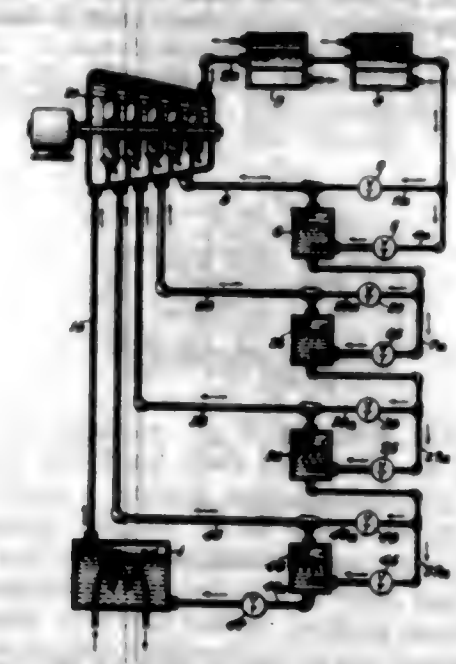


2,897,659

APPARATUS FOR GAS AND LIQUID COOLING IN COMPRESSOR PLANTS WITH TWO- OR MULTISTAGE COOLING CIRCUIT

Frantisek Wergner, Prague, Czechoslovakia, assignor to CKD Stalingrad narodni podnik, Prague-Vysocany, Czechoslovakia

Application August 4, 1955, Serial No. 526,392
Claims priority, application Czechoslovakia August 9, 1954
3 Claims. (Cl. 62—505)



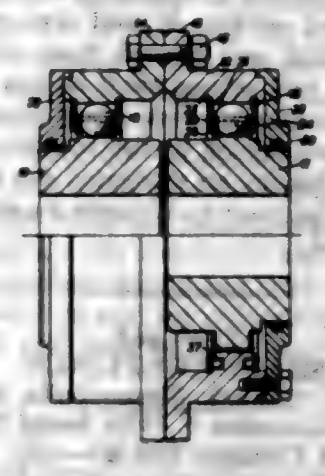
1. In a refrigerating system having a centrifugal compressor with multiple stages in a common housing, an evaporator containing a refrigerant, means supplying refrigant vapor from said evaporator to said compressor to pass through all of the stages of the latter to be compressed thereby, condensing means receiving the compressed refrigerant vapor from the compressor, cooling means receiving liquified refrigerant from said condensing means to subcool the same, a main throttle valve receiving the subcooled liquified refrigerant from the cooling means and emitting a mixture of refrigerant vapor and liquid refrigerant at a medium pressure which is less than the pressures in said condensing and cooling means, a medium-pressure economizer receiving said mixture from the main throttle valve and operative to separate refrigerant vapor from the liquid refrigerant, means for returning the separated liquid refrigerant from said economizer to said evaporator, and conduit means extending from the economizer to the suction side of a related middle stage of the multi-stage compressor for supplying the separated refrigerant vapor from the economizer to the related middle stage; the combination of a by-pass conduit opening into said conduit means and receiving liquid refrigerant from said cooling means in advance of the main throttle valve and having an auxiliary throttle valve therein to atomize the liquid refrigerant received by said by-pass conduit for mixing with the refrigerant vapor from the economizer so that the middle stage of the compressor to which the mixture of refrigerant vapor and atomized liquid refrigerant is supplied acts on vapor having a relatively low enthalpy thereby to reduce the power required to drive said middle stage of the compressor.

2,897,660

TRANSMISSION COUPLINGS FOR SHAFTS AND THE LIKE

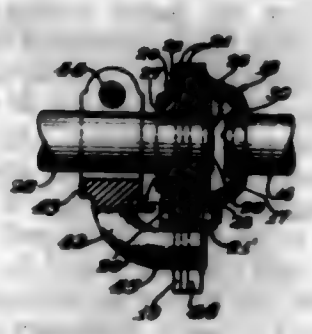
Louis P. Crossé, Huddersfield, England

Application August 1, 1958, Serial No. 752,671
Claims priority, application Great Britain August 8, 1957
7 Claims. (Cl. 64—6)



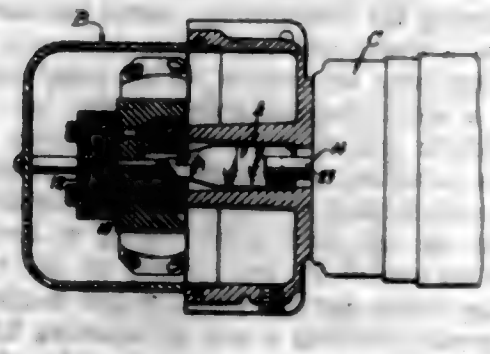
1. A coupling for transmitting power between a hub member and a sleeve member which surrounds the hub member comprising an annular set of metal balls each engaged in a semicylindrical groove in the hub member and in a similar groove in the sleeve member, each of said grooves extending in the axial direction of said members, being each formed on a single radius slightly greater than that of the ball, said radius having its centre coincident with the axis of the ball radially of said members, and retaining means carried by one of said members, said retaining means including a pair of retaining fingers for each ball, said fingers being on opposite sides of the ball and extending into the grooves of the other member, the free ends of the fingers being spaced apart a distance smaller than the diameter of the ball, whereby all the balls are carried by and form a permanent assembly with one of said members, each pair of fingers being spaced apart from each other between their free ends and their roots, a distance greater than the diameter of the ball to permit a limited rolling movement of the ball engaging both grooves with a working clearance when said members are in axial alignment, said fingers also retaining the balls centrally placed in the grooves within desired limits.

2,897,661
CLUTCH CONTROL MECHANISM
Joseph A. Hanemann, Fort Wayne, Ind., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Application January 23, 1957, Serial No. 635,711
6 Claims. (Cl. 64—16)



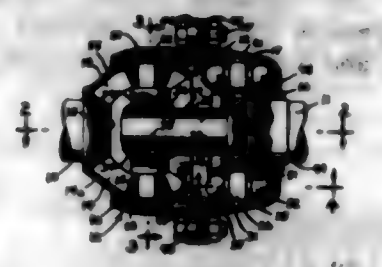
1. A combination of a pair of relatively movable support structures; a first shaft; bearing means carried by one of said support structures for rotatably supporting one end of said first shaft, said bearing means permitting said first shaft to move angularly with respect to said support structure; a second shaft journalled in the other of said support structures; bearing means carried by said second shaft for supporting the end of said first shaft remote from that end rotatably supported by said one of said support structures, said bearing means permitting said first shaft to move angularly with respect to said second shaft; and means for interconnecting said first and second shafts whereby rocking movement of one of said shafts effects simultaneous rocking of the other of said shafts including a substantially L-shaped arm fixed to said first shaft, the free end portion of said arm having a longitudinal axis parallel and spaced from the longitudinal axis of said shaft, said second shaft having a substantially flat plate fixed thereto, said plate being disposed in a plane substantially perpendicular to the rotational axis of said second shaft and having an elongated slot extending from one edge thereof adapted to slidingly receive the free end portion of said arm.

2,897,662
SHAFT COUPLINGS
John T. Gendek, Minneapolis, Minn.
Application November 5, 1956, Serial No. 620,328
8 Claims. (Cl. 64—15)



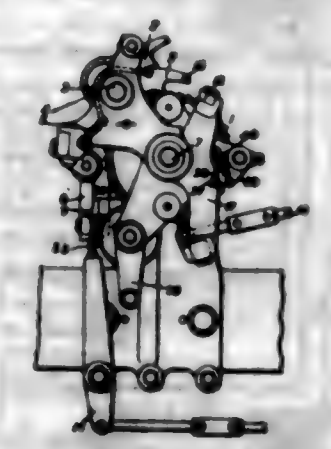
2. A shaft coupling for use in combination with a pair of shafts, the shafts having slotted ends, the slots extending into the shafts on diametrical planes through the axis of the shafts, the coupler including an elongated body having substantially flat end portions, notches extending axially into said flat end portions, the notches being substantially equal in width to the diameter of the corresponding shaft engaged and the slots in said shafts being substantially equal in width to the thickness of the flattened ends.

2,897,663
CONSTANT VELOCITY UNIVERSAL JOINT
Edmund B. Anderson, Rockford, Ill., assignor of one-half to Walter H. Stark, Rockford, Ill.
Application January 6, 1959, Serial No. 785,234
13 Claims. (Cl. 64—21)



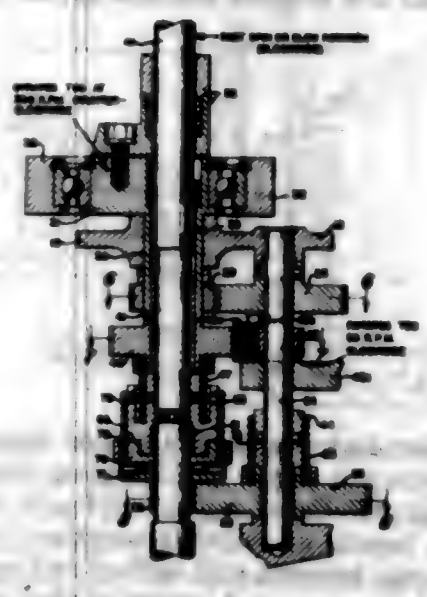
1. A constant velocity universal joint comprising a first hollow torque transmitting member open at one end and having first and second pairs of raceways respectively intersecting the inner and outer surfaces thereof, a second torque transmitting member, a plurality of equalizing levers mounted on said second member for pivotal movement relative thereto about an axis intermediate the ends of the levers, first and second elements mounted coaxial with said second torque transmitting member for rotation relative thereto, said first element engaging one end portion of said levers and extending internally of said first torque transmitting member, a first pair of outwardly extending trunnions on said first element extending outwardly thereof into said first pair of raceways, said second element engaging the other end portion of said levers and extending around said first torque transmitting member externally thereof, and a second pair of inwardly extending trunnions on said second element extending into said second pair of raceways in said first torque transmitting member.

2,897,664
STRAIGHT BAR KNITTING MACHINE
Denis Winfield, Shepshed, and Ernest Starr, Wilford, Nottingham, England, assignors to William Cotton Limited
Application February 15, 1954, Serial No. 410,354
Claims priority, application Great Britain December 31, 1953
13 Claims. (Cl. 66—82)



1. In a straight bar knitting machine the combination of a pattern device constructed and arranged for a wide range of pattern selections to be made manually e.g. for fashioning of differently shaped articles, a second pattern device constructed and arranged for predetermined pattern selections to be made automatically e.g. for fashioning identically shaped articles, and control means for rendering each pattern device operative and inoperative independently of the other.

2,897,665
WASHING MACHINE
Lester M. Miller, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 29, 1954, Serial No. 439,970
4 Claims. (Cl. 68—23)

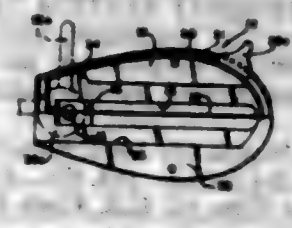


1. In combination: a casing; a bulkhead dividing said casing into a tub compartment and a power compartment; a tub in said tub compartment; a power unit in said power compartment; power transmitting mechanism passing through said bulkhead from said power unit to said tub for producing an agitation action by gyrating the axis of said tub in one direction while simultaneously rotating said tube at relatively slow speed about said axis in the opposite direction and for producing a wringing action by a relatively high speed rotation of said tub; a counterbalancing weight in said tub compartment to counterbalance said gyrating movement of said tub; and means passing through said bulkhead to drive said counterbalancing weight from said power unit in counterbalancing movement.

2,897,666
KEY LOCKABLE LATCH STRUCTURE
Alfred G. Gumpert, Caldwell, N.J., assignor to Presto Lock Co., Garfield, N.J., a limited partnership
Application October 7, 1955, Serial No. 539,121
2 Claims. (Cl. 70—70)

1. A latch structure for a receptacle comprising separable parts the front walls of which are aligned in a common plane, a latching means comprising an internal frame member adapted to be affixed to the front wall of one of said receptacle parts and having outwardly projecting longitudinal top and bottom walls, and an external longitudinally movable hollow latching member having inwardly projecting longitudinal top and bottom walls and end walls, the longitudinal walls being slidably supported by the top and bottom walls of the frame member for endwise movement of the latching member relative to said frame member; a keeper member adapted to be affixed to the front wall of the other of said receptacle parts in opposition to said latching means and provided with catch tongue means, the top wall of the internal frame member having admission means through which said catch tongue means is received, the top wall of the external latching member having admission means through which said catch tongue means can pass, longitudinal movements of the latching member being operative to engage the top wall thereof with and disengage the same from said catch tongue means, a V-shaped spring, means to affix one leg of said spring to an end of the internal frame member with the other leg of said spring disposed to thrustingly engage the adjacent end wall of the latching member, whereby to longitudinally move the latter in one direction to a position stopped by the opposite end of the frame member, in which position the latching member engages the catch tongue means with latching effect releasable by manually effected longitudinal movement of the latching member in the opposite direction.

2,897,667
KEY CASE
Frank E. Tayler, Wichita, Kans.
Application October 1, 1957, Serial No. 687,397
2 Claims. (Cl. 70—456)



1. A key case comprising, in combination, a pair of base plates, a flat center plate intermediate said base plates, means releasably securing said base and center plates together, each of said base plates defining a longitudinal keyway for slidably receiving a key, manually operated means selectively effecting reciprocating longitudinal movement of the key in each said keyway between the retracted and an extended position, each of said base plates having a groove recessed below said keyway and extending parallel therewith, a plate slidably supported within said groove for effecting longitudinal movement of the key carried by said plate, said manually operated means comprising a selector button slidably supported upon each of said base plates, a lug secured to said plate within said groove for engagement with a key, and means connecting said selector button to said lug comprising a flexible cable, said button and said plate being secured to opposite ends of said cable.

2,897,668
BUILDING CONSTRUCTION
Phillip Graham, Pittsburgh, Pa.
Application December 1, 1951, Serial No. 259,354
1 Claim. (Cl. 72—49)

A precast, cementitious building panel of substantially rectangular outline, said panel having a bowed cross-section, said outer and inner surfaces of said panel having planes of identical curvature, the end portions of said cross-section being truncated, the extremities of said truncated end portions being in planes which are substantially parallel to each other and are substantially perpendicular to the subtended chord of said cross-section, said panel having a continuous groove formed in the perimetrical edge thereof throughout the entire periphery, including said truncated end portions, for receiving mortar grout for keying together similar panels when placed in edge-to-edge relationship, a multiplicity of prestressed metal reinforcing strands arranged in grid for-

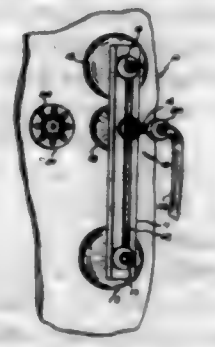
mation and extending through a medial plane of said panel, the ends of said strands projecting outwardly from said groove, the ends of said strands including metallic fastening means, the fastening means on opposite edges being identically spaced and in alignment, said fastening means being in the form of eyes along two adjoining edges of said panel, and in the form of clevises along the other two adjoining edges of said panel, said eyes and clevises having apertures facing said planes of said outer and inner surfaces to facilitate entry of pins transversely of said surfaces through said fastening means, the centers of the said apertures being substantially in registry with the center of the gap between two joined panels, whereby when two panels of the construction recited above are placed in edge-to-edge relationship, an eye of one panel will align with a clevis of the adjoining panel so that a fastening pin element may be extended through them for fastening together the reinforcing strands of both panels.

2,897,669

STATIC INSTRUMENT SYSTEM TEST ADAPTER

Joseph B. Villiers, Jr., Baltimore, Md., and Ronald E. Luck, Allen, Mich., assignors to the United States of America as represented by the Secretary of the Air Force

Application March 15, 1957, Serial No. 646,508
5 Claims. (Cl. 73—4)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An aircraft static system test adapter for securing and supporting the test hose of a static instrument tester in airtight relation with a static port, comprising: a bar member having an elongated continuous slotted portion extending therethrough, holding means to position the slotted portion in rigid, spaced relation over the static port including a pair of end suction clamp members adjustably mounted in said slotted portion in depending relation to said bar member, and a test hose attachment fitting having a slidably adjusted tubular body portion adjustably carried in said slotted portion between said end suction clamp members and having an air passage therethrough, said fitting adapted for attachment to the test hose at one end in spaced relation on one side of said body portion and having a flexible sealing member at the opposite end thereof in spaced relation on the other side of said body portion in surrounding, overlapping, suction-contact relation to the static port to establish airtight communication between said test hose and the static port.

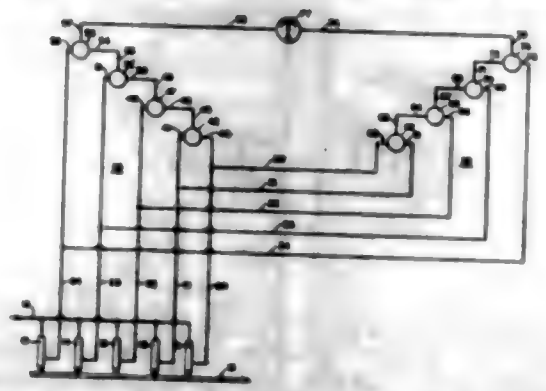
2,897,670

SINGLE INDICATOR AIR GAGE CIRCUIT

Robert F. Bentley, Pontiac, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application August 31, 1956, Serial No. 607,312
9 Claims. (Cl. 73—37.5)

1. An air gage system for measuring the flatness of a surface comprising a plurality of air gages each having a back pressure chamber therein, a first pressure selective device connected to the back pressure chambers of two of said plurality of air gages, a second pressure selective device connected to said first pressure selective device and to the back pressure chamber of a third of said plurality of gages, said second pressure selective device having an output proportional to the smallest of the spacings between said surface and any one of said plurality of air gages; a third pressure selective device connected in parallel with said first pressure selective device, a fourth pressure selective device connected to said third pressure selective device and to the back pressure chamber of said third of said plurality of gages, said fourth pressure selective device having an output proportional to the largest of the spacings between said surface and any one of said plurality of air gages, and means coupled and responsive to the outputs of said second and said fourth pressure selective devices.

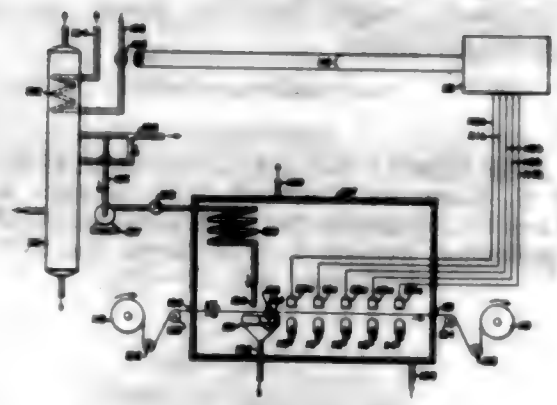


2,897,671

APPARATUS FOR DETERMINING THE EVAPORATION END POINT OF VOLATILE LIQUIDS

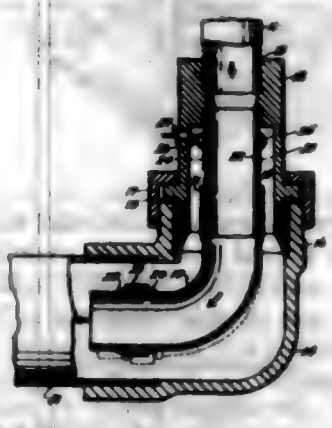
James M. Phelan, Cranford, and James A. Wilson, Stanhope, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application November 21, 1955, Serial No. 548,050
7 Claims. (Cl. 73—53)



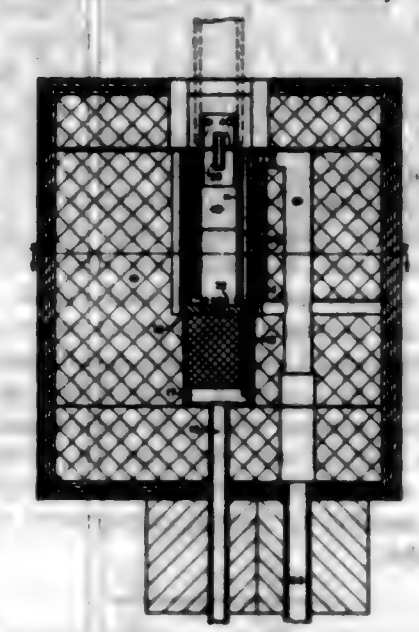
1. An apparatus for measuring the evaporation rate of a volatile liquid, comprising means for emission of a linear series of individual light beams of substantially equal and constant intensity, a corresponding series of light sensitive elements wherein each element is interposed in one of said beams and spaced from said emission means along the path of said beam, means for passing an elongated strip of a translucent wettable material between said series of light sensitive and light emission means in a path intercepting said beams, means for at least partially wetting said strip of wettable material with a controlled portion of said volatile material in advance of the first light beam and light sensitive element in said series, means for substantially completely drying said wetted strip in advance of the last beam and light sensitive means in said series, and means for electrically exhibiting the difference in intensity of light transmitted by said strip to the first light sensitive means in said series, and that transmitted to any selected light sensitive means subsequent thereto in said series.

2,897,672
FLOW METER
Frederick Kemp Glasbrenner, North Syracuse, and William Emmanuel Lyons, Rexford, N.Y., assignors to General Electric Company, a corporation of New York
Application October 27, 1955, Serial No. 543,128
5 Claims. (Cl. 73—228)



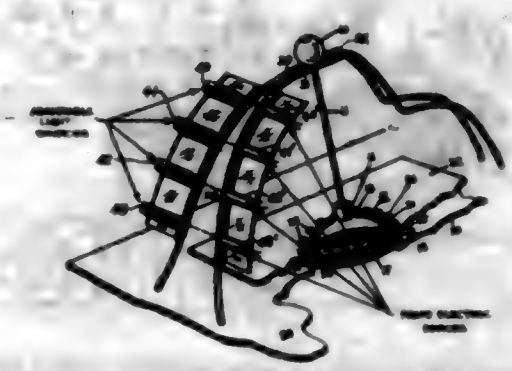
3. A fluid flow meter comprising: an elbow chamber adapted to be connected in a fluid supply line; a tube including an elbow for changing the direction of flow of the fluid, said tube having a reduced wall section adjacent its upstream end, the upstream end of the tube being connected to said chamber and the downstream end of the tube being unsupported within the chamber; and strain gages bonded to the reduced wall section of said tube for sensing the reactive force caused by the change in direction of flow of the fluid.

2,897,673
HYGROMETERS
Russell George Wylie, Randwick, New South Wales, Australia, assignor to Commonwealth Scientific and Industrial Research Organization, East Melbourne, Victoria, Australia, a body corporate of Australia
Application June 1, 1955, Serial No. 512,525
Claims priority, application Australia June 9, 1954
14 Claims. (Cl. 73—336.5)



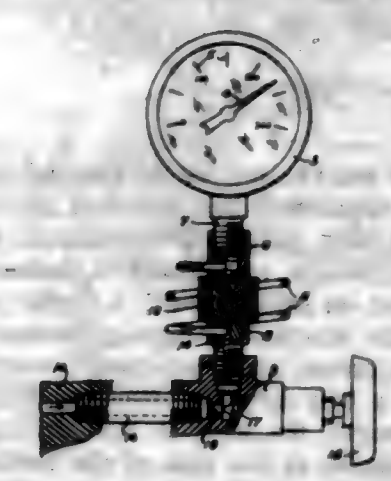
1. A hygrometer comprising an ionic crystal element, an enclosure for the crystal element, means for bringing the gas whose humidity is to be measured into the enclosure and into contact with the crystal element at a temperature substantially equal to that of the crystal element, a resistance measuring unit to detect the electrical surface resistance of the crystal element and changes in that resistance, automatic means under the control of the resistance measuring unit for varying the temperature of the crystal element and bringing it to and maintaining it at a temperature such that the said resistance comes to and remains at a substantially constant value, and means for indicating the said temperature.

2,897,674
IMPACT DEVICES FOR ELECTRONIC GOLF DRIVE INTERPRETERS
Alvin L. McNeill, Lonsin, N.J., assignor to Victor Development Co., Camden, N.J., a corporation of New Jersey
Application January 7, 1955, Serial No. 480,546
9 Claims. (Cl. 73—379)



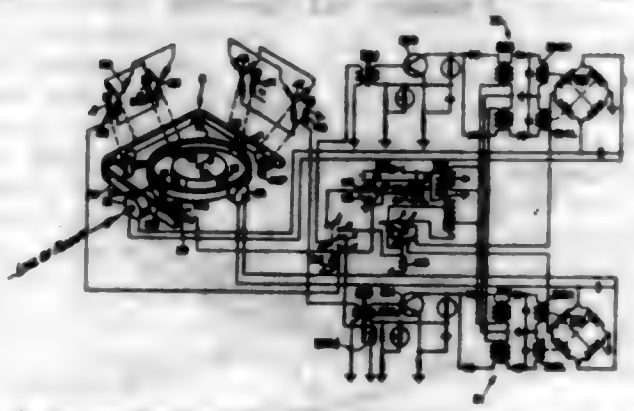
1. An impact mechanism comprising a generally hemispherical hermetically sealed gas-filled resilient element, rod means terminating in and mounted on the element in datum angularity thereto, ball simulation means on the rod means to receive impacts to force the rod means to a position out of datum to distort the element and increase the pressure of the gas therein to assist in returning the rod means to its datum angularity after an impact, and means to generate at least two temporally successive signals representative each of the location of said rod means at a position in the path traversed thereby in response to such impact.

2,897,675
GAUGE MOUNTING
Erich J. Kocher and Sylvester A. Tomkowiak, Milwaukee, Wis., assignors to The Viter Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin
Application May 15, 1957, Serial No. 659,403
3 Claims. (Cl. 73—420)



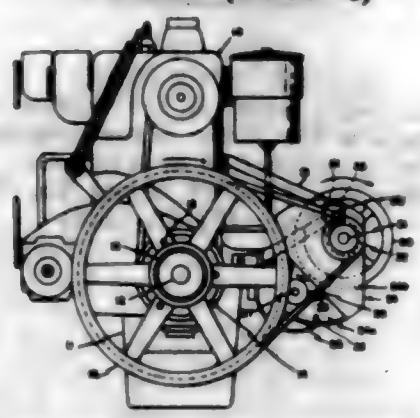
1. In a mounting for a gauge having an oscillatory indicating pointer cooperable with indicia on the face of the gauge, a primary mounting fitting having therein a passage communicable with a source of gauge actuating media, a secondary mounting fitting carried by the gauge in spaced relation to said primary fitting and having therein a passage for transmitting gauge actuating media to oscillate the pointer, a helical flexible tube providing a passage connecting said fitting passages and partially supporting the gauge, and a resilient buffer block interconnecting said fittings independently of said tube and providing an auxiliary soft cushion support for the gauge, said buffer block being disposed within the helix of said tube and having a passageway therethrough to maintain the space between said fittings.

2,897,676
GYROSCOPE
John C. Karlson, Brooklyn, N.Y., assignor to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Application May 9, 1956, Serial No. 583,758
8 Claims. (Cl. 74—5.41)



1. A system for erecting a gyro vertical about the bank and pitch axes comprising bank and pitch signal devices, bank and pitch erection means, and means for operating said bank and pitch erection means simultaneously from said bank signal means for an initial predetermined period of time and thereafter operating said bank erection means from said bank signal means and said pitch erection means from said pitch signal means.

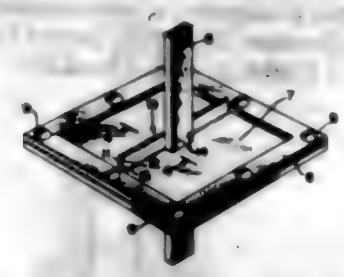
2,897,677
INTERNAL COMBUSTION ENGINE STARTER
Samuel R. Wood, Camden, Ark.
Application May 18, 1956, Serial No. 585,640
11 Claims. (Cl. 74—8)



1. In a starter mechanism for an internal combustion engine having a crankshaft and a driven element operatively connected with said said crankshaft, a support, said starter mechanism comprising a frame structure pivotally mounted on said support, a starter motor carried by said frame structure, a driving element mounted in said frame structure and operatively connected with said motor, and a belt drivingly connecting said driving and driven elements, the axis of said driving element being located relative to the axis of the motor and the frame structure pivot to utilize the torque of said motor when activated for moving said frame structure in a direction effecting separation of the driving element axis from the axis of said driven element whereby to apply tension on said belt.

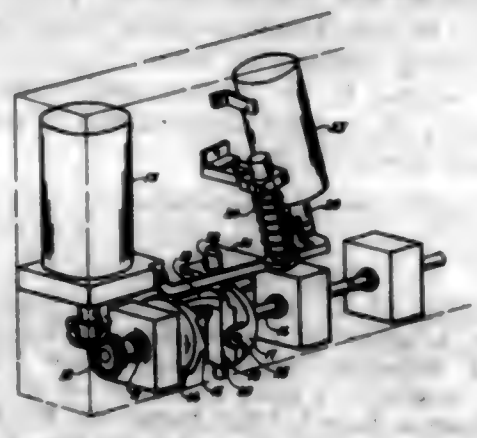
2,897,678
FLEXIBLE SEAL AND PIVOT
Robert J. Wagner, Feasterville, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application September 15, 1954, Serial No. 456,284
12 Claims. (Cl. 74—18.1)

1. A combined pivot and seal, including, a fixed member, a thin sheet having a portion attached to said member and a portion spaced from said member, a strip extending across one face of the sheet at the spaced portion thereof and secured thereto as to reinforce the sheet, and a beam more than twice as thick as said sheet



passing through said sheet adjacent said strip and secured to said strip and spaced from said member, and means causing relative movement between said member and said beam while one of said elements is held stationary.

2,897,679
ELECTRICALLY CONTROLLED CLUTCH
Nelson L. Bronich, Torrance, Calif., assignor to the United States of America as represented by the Secretary of the Air Force
Application August 2, 1956, Serial No. 601,847
2 Claims. (Cl. 74—125.5)

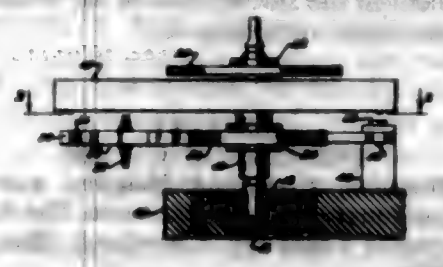


1. A clutch mechanism comprising a continuously rotating driving member, a normally stationary driven member, a plurality of ratchet teeth equally spaced on one face of said driving member, a pawl member pivotally mounted on said driven member and arranged to be swung into and out of engagement with said ratchet teeth, said pawl member being provided with an integral cam engaging portion, a flat cam member having a shaped cut-out portion for interlocking with the cam engaging portion of said pawl, said cam member being pivotally mounted on a fixed portion of said clutch mechanism and arranged for movement in a plane extending through the axis of rotation of said clutch mechanism into contact with said cam engaging portion for swinging said pawl out of engagement with said ratchet, and means effective at the will of the operator to swing said cam member out of contact with the cam engaging portion of said pawl member to permit engagement of said pawl with said ratchet.

2,897,680
DRIVING MECHANISM FOR AN INDEX WHEEL
Daniel Fritsch, Lancaster, Pa., assignor to Hamilton Watch Company, Lancaster, Pa., a corporation of Pennsylvania
Application December 31, 1956, Serial No. 631,689
2 Claims. (Cl. 74—126)

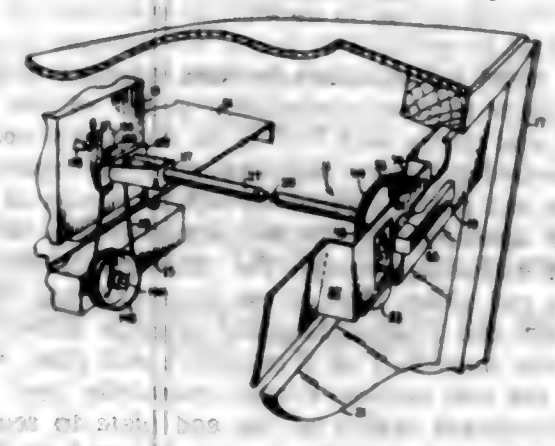
1. An index wheel driving mechanism for watches comprising a toothed index wheel mounted for rotation, an oscillating shaft, a collet frictionally mounted on said oscillating shaft, a spiral spring freely mounted for expansion and contraction supported by said collet at a first end only, said spiral spring lying substantially in a plane and having a second end engageable with the teeth

of said index wheel to drive it a fraction of a turn, said spiral spring further being unrestrained from the point



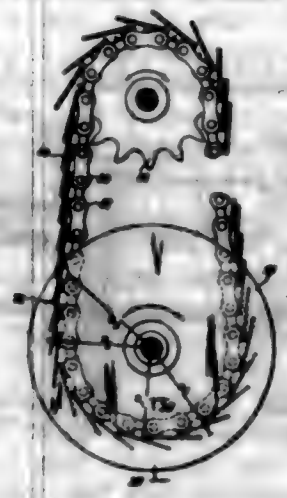
of contact of said second end with said teeth through an angle in excess of 180°.

2,897,681
TUNING MECHANISM
Donald J. Cross and William F. Scanlon, Tonawanda, N.Y., assignors to Sylvania Electric Products Inc., a corporation of Massachusetts
Application September 16, 1957, Serial No. 684,283
8 Claims. (Cl. 74—157)



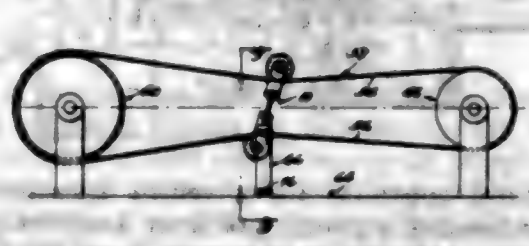
1. A drive mechanism comprising a drive shaft, a ratchet coupled to the drive shaft, actuating means mounted for movement about the shaft, a pawl pivotally mounted upon said actuating means for moving said ratchet from an initial position to a final position, biasing means coupled to said pawl for pivoting said pawl into engagement with said ratchet, and spring means bearing against said actuating means and said biasing means mounted to flex during movement of said actuating means to said final position and for returning said actuating means to the initial position.

2,897,682
VARIABLE SPEED DRIVE
Edmund C. Johnson, Granville, Ohio
Application May 11, 1956, Serial No. 584,269
7 Claims. (Cl. 74—230.17)



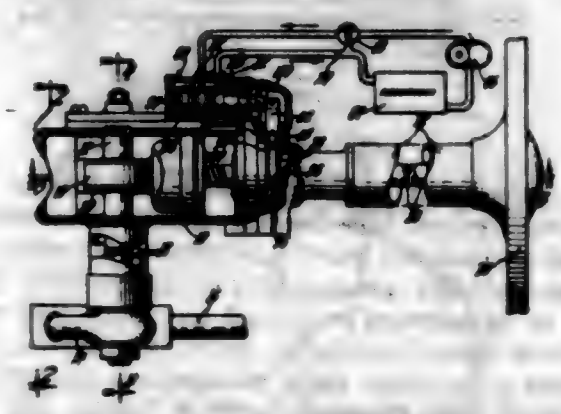
1. A drive assembly comprising a toothed wheel, a variable pitch cone sheave, an articulated chain mating with and driven by said toothed wheel and passing around said sheave, and a plurality of keystone shaped locking members having one end thereof attached to said chain and the other end free, said free ends being of a greater width than said connected ends whereby said members drive said sheave through positive locking engagement.

2,897,683
BELT TIGHTENERS
Russell H. Carver, Hope, Ark.
Application September 13, 1957, Serial No. 683,985
6 Claims. (Cl. 74—242.1)



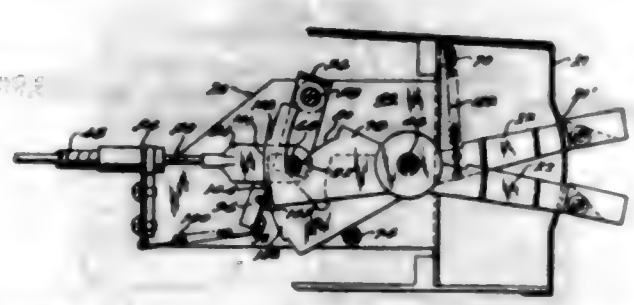
1. A belt tightener consisting of two pairs of opposed and reversed roller brackets, belt roller assemblies journaled on and extending between the brackets of each pair, and tightening screw means extending between and spacing and connecting related ones of the brackets of the pairs, said roller assemblies comprising shafts having body portions terminating at their ends in reduced pintles defining shoulders at the ends of the bodies, said pintles having threaded ends threaded in related brackets, bearings on the pintles engaged with said shoulders, and hollow rollers spacedly circumposed on the shafts and having bored-out end portions receiving and secured to the bearings, and stabilizer brackets fixed to the brackets of one of said pairs for mounting on a support.

2,897,684
IN-LINE HYDRAULIC POWER STEERING GEAR
Clovis W. Lincoln, Phillip B. Zeigler, and Henry S. Smith, Saginaw, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 21, 1954, Serial No. 431,422
5 Claims. (Cl. 74—388)



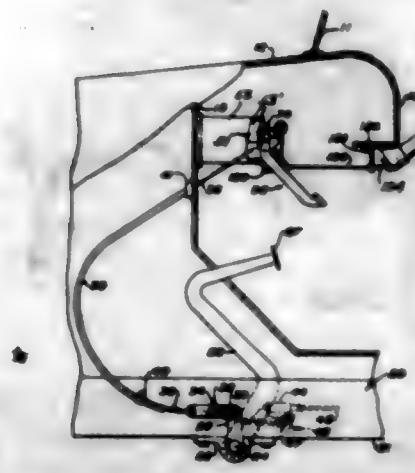
1. A fluid power steering gear including a rock shaft having tooth means associated therewith and confined within a casing lending support to said shaft, a steering shaft having a worm end extending into said casing, a piston member within said casing having tooth means complementary to said first-mentioned tooth means, said piston member being formed to accommodate and envelop said end of said steering shaft and a ball nut surrounding said end, the ball nut being so held within said piston as to preclude relative axial movement therebetween, a source of fluid pressure, and valve means in circuit with said source and said casing through which one side or the other of said piston is pressurized as determined by the direction said steering shaft is rotated, said valve being operably connected to said steering shaft for actuation thereby on the application of manual effort to said steering shaft.

2,897,685
CONTROL APPARATUS FOR VEHICLE TRANSMISSION
Fred G. Thannhauser, Royal Oak, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application February 6, 1956, Serial No. 563,468
6 Claims. (Cl. 74—473)



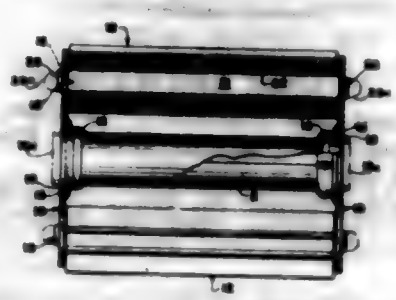
1. Control apparatus for a vehicle transmission including a housing, a plurality of lever members pivotally mounted in said housing and movable from inactive positions to applied positions and from applied positions to inactive positions, means yieldably urging said lever members toward their inactive positions, rocker means pivotally carried by said housing including a control pin spaced from the pivotal axis of said rocker means, means operably connected to said control pin and adapted to be connected to said transmission, each of said lever members having slots provided with camming surfaces adapted to engage said control pin to rotate said rocker means to different predetermined positions and each lever having a substantially arcuate surface with stop means thereon, and means cooperatively engageable with the stop means on said lever members for holding each lever member in its applied position.

2,897,686
MECHANISM CONTROL
Robert S. Hinsey, Toledo, Ohio, assignor, by mesne assignments, to The Bingham-Herbrand Corporation, a corporation of Ohio
Application January 20, 1954, Serial No. 405,183
4 Claims. (Cl. 74—540)



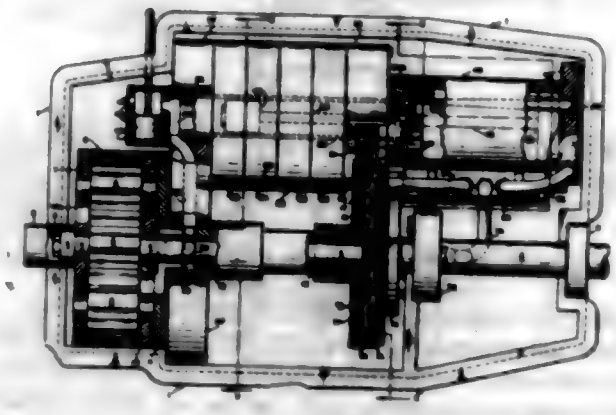
1. Mechanism for controlling brakes of a vehicle including, in combination, a support, a foot-operated lever member pivotally mounted upon the support, said lever member being formed of substantially matched sheet metal sections secured together, one end of said lever member being shaped to provide a foot pad portion, said sheet metal sections being spaced throughout a portion of their length, the spaced portions being disposed astraddle the support, a gear journaled upon the support, a gear sector secured to the sections of the lever member, the teeth of the sector being in mesh with said gear, a sheave secured to said gear, said sheave having a slot formed therein, a cable connected with the brakes of the vehicle and having a portion engageable with the periphery of the sheave, said cable having an anchor member adapted for engagement in the slot formed in the sheave wheel for anchoring the cable to the sheave.

2,897,687
PEDAL STRUCTURE
Alvin P. Douglas, Cleveland Heights, and Gilbert B. Hahn, Lyndhurst, Ohio, assignors to The Murray Ohio Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Application July 22, 1957, Serial No. 673,442
2 Claims. (Cl. 74—594.4)



1. A pedal for children's bicycles, tricycles or juvenile pedal-driven vehicles comprising: a pair of like spaced parallel end plates each having an outwardly open centrally formed depression with a round central aperture and opposite end portions provided with like pairs of spaced slot-like apertures; a tubular journal sleeve with end portions extending through the central apertures of respective end plates, said sleeve having spaced inwardly from each end a circumferential shoulder formation engaging the inner side of a respective end plate and also having the end portion flanged outwardly over the depressed adjacent region of the end plate to secure the same against the shoulder; a pair of tread blocks each having a longitudinal opening therethrough; and a pair of elongated sheet metal spacer elements each extending through a corresponding tread block for supporting the same between said end plates; each said element having at each end a pair of spaced tabs projecting through a said pair of slot-like apertures of an end plate and externally clinched thereover and an adjacent end edge as an abutment shoulder engaging the inner side of the plate; whereby the end plates, sleeve and spacers are rigidly secured in spaced relation.

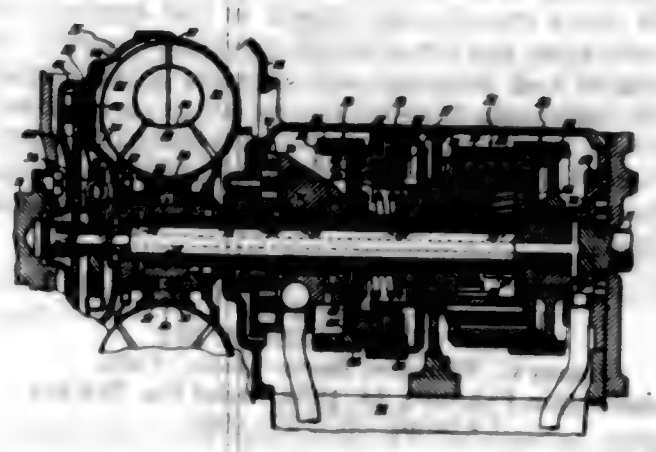
2,897,688
HYDRAULIC TRANSMISSION MECHANISM
Clinton Lee Graybill, Superior, Mont., assignor to Graybill Industries, Inc., Spokane, Wash., a corporation of Montana
Application September 12, 1955, Serial No. 533,800
3 Claims. (Cl. 74—687)



1. A power transmission device comprising a power input shaft and a power output shaft, a fluid pressure gen-

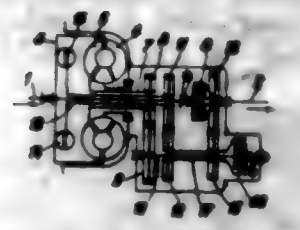
erator and an epicyclic gearing both driven by the power input shaft, the output shaft being driven by the epicyclic gearing, a plurality of hydraulic motors geared to the epicyclic gearing, a fluid pressure distributing cylinder having an opening at one of its ends, a first valve adapted to close and open said opening to thereby selectively deliver fluid pressure from said fluid pressure generator to said motors or to bypass it away from the motors, said cylinder having a restricted discharge opening at its opposite end, a second fluid pressure generator driven by the power output shaft, piston means slidably mounted within said distributing cylinder, a valve communicating with and adapted to control the flow of pressure from said second generator to the interior of said distributing cylinder to move said piston means in one direction when said opening at said one end of the cylinder is closed by said first valve is thereby progressively close off said restricted opening and thereby direct the output of said first mentioned fluid pressure generator to said hydraulic motors to retard and finally stop their rotation in one direction whereby upon increased speed of rotation of said power input shaft the resultant increase of fluid pressure from the first mentioned fluid pressure generator will reverse the direction of rotation of said hydraulic motors to thereby increase the speed of rotation of said power output shaft through said epicyclic gearing.

2,897,689
TRANSMISSION
Mieczyslaw J. Waclawek, Chicago, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application November 22, 1954, Serial No. 470,226
5 Claims. (Cl. 74—688)



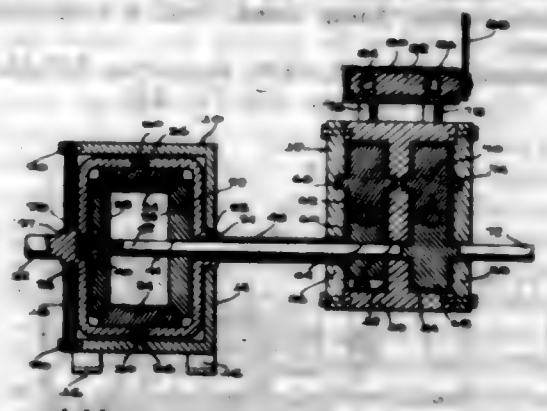
1. In a transmission, the combination of a drive shaft, a driven shaft, a hydraulic torque converter having an impeller driven by said drive shaft and a runner or driven element and a stator or reaction element, means including a gear set for effecting a relatively low speed power train between said shafts and including said impeller driving said runner, means for effecting an intermediate speed power train between said shafts exclusive of said torque converter, means for effecting a relatively high speed power train between said shafts and including said impeller driving said runner, brake means for holding said stator against reverse rotation so that said torque converter is effective for multiplying torque in both said low and high speed power trains, brake means for selectively holding said runner from rotation, and means including a clutch for effectively connecting said stator through said gear set with said driven shaft so that when said clutch and said last-named brake means are engaged said driven shaft is driven in the reverse direction through said torque converter.

2,897,690
MULTI-SPEED GEAR TRANSMISSION
Albert Maier, Friedrichshafen, Germany, assignor to Zahnradfabrik Friedrichshafen, Friedrichshafen am Bodensee, Germany
Application November 28, 1956, Serial No. 624,924
Claims priority, application Germany December 1, 1955
5 Claims. (Cl. 74—720)



1. In a multi-speed gear transmission, a drive shaft, a torque converter having an impeller thereof keyed to said drive shaft; a fluid clutch having an impeller thereof keyed to said drive shaft, said fluid clutch being of a type controlled by filling or emptying of the clutch fluid; a plurality of gear pairs of differing ratio wherein the gears of each pair are in constant engagement, said converter having a turbine connected to drive a gear of one of said pairs, said fluid clutch having a turbine connected to drive a gear of another of said pairs; a driven shaft, and means for connecting the respective driven gear of said gear pairs to said driven shaft, including a clutch intermediate said driving and driven shafts for effecting direct drive.

2,897,691
VARIABLE SPEED TRANSMISSION
Robert E. Lowe, Kansas City, Mo.
Application March 1, 1957, Serial No. 643,329
4 Claims. (Cl. 74—757)



1. A variable speed transmission comprising: relatively rotatable, coaxially aligned first, second, and third shafts; means to selectively prevent rotation of the second and third shafts; a gear housing rigid at one end with the first shaft and having an opening at its other end, the second shaft being hollow and being journalled in said bearing opening, the third shaft being extended through the second shaft; a planetary gear carried by the housing and rotating on the housing about an axis extending radially of the common axis of the housing and of the several shafts; and second and third gears rigid with the second and third shafts respectively, mounted within the housing in mesh with the first gear, said means for selectively preventing rotation of the second and third shafts comprising pumps having driving connections with the second and third shafts linking the respective pumps for operation during rotation of the second and third shafts, fluid conduits one extending from the input to the output of one pump and the other extending from the input to the output of the other pump, and valve means for selectively controlling flow of fluid through the respective conduits, the valve means including a separate valve for each conduit, the valves of the respective conduits being connected for conjoint operation.

2,897,696
SHEET METAL PANEL DRILL

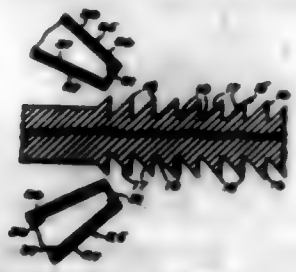
uring said reduction of thickness, and varying the annual

2,897,692

PROCESS FOR FILE MAKING

Donald O. Bochner, Lancaster, and Thomas E. Mercier, Fitchburg, Mass., assignors to Simonds Saw and Steel Company, Fitchburg, Mass., a corporation of Massachusetts

Application June 9, 1955, Serial No. 514,246
1 Claim. (Cl. 76—24)



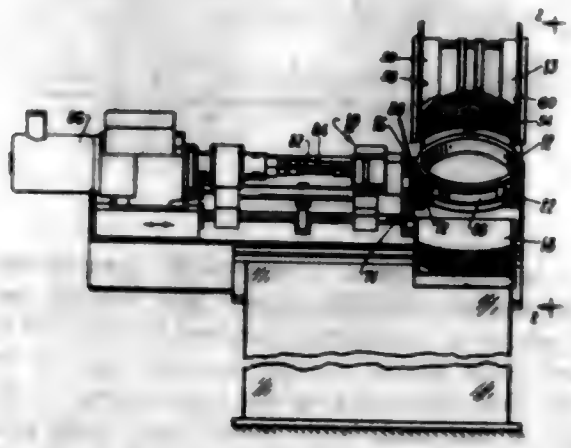
In the manufacture of files wherein in the forming of the teeth there is left at the edge portions defined by the juncture of the front and back faces a chisel-upset capping edge burr, the step of honing the outer portions of the burr-capped teeth by a wide straight linear thin sheet-like high-pressure sand blast of the order of 150–170 lbs. p.s.i. directed normally at and laterally across only the upper portion of the teeth back faces so as to impinge solely upon the outer edge portions of only the back faces of the teeth and under such close proximity thereto and such duration of blast as to remove only the teeth cap burrs while leaving intact the other metal of the file blank to present maximum initial tooth height and the desired sharp firm uniform cutting crests for the teeth.

2,897,693

DRILLING APPARATUS

Charles N. Menz, Troy, N.Y., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware

Application May 28, 1956, Serial No. 587,664
12 Claims. (Cl. 77—22)



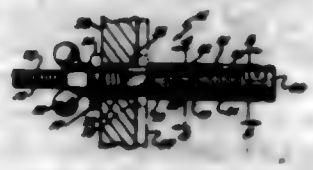
1. An apparatus for drilling spaced openings in arcuate lining segments comprising a rotatable circular member having at least one arcuate indentation in the perimeter thereof, means operatively associated with said circular member for producing rotation thereof, a device in conjunction with said circular member which holds the circular member against rotation at selected angular positions to position the lining segment at selected locations along the length thereof, a pair of reciprocable drilling elements which produce laterally spaced apart openings in the lining segment when the segment is moved lengthwise past the drills by a selected amount and thereafter held in a selected angular position, the operation of said drilling elements being coordinated with said device which holds the circular member in the selected angular position, an elevated magazine for storing lining segments therein, a feeder mechanism which is actuatable responsively to location of said circular member, said feeder mechanism being arranged to dispense singular lining segments, a retaining element which holds the lining segment against the periphery of the circular members, and a storage means for receiving drilled lining segments.

2,897,694

UMBRELLA CLAMP

Kenneth R. Carney, Lakewood, Calif., assignor to Northrop Aircraft, Inc., Hawthorne, Calif., a corporation of California

Application October 21, 1957, Serial No. 691,377
3 Claims. (Cl. 77—62)



1. A jig-type tool comprising: a plate having a threaded aperture formed therein and a clamp member secured in said aperture; said clamp member including an elongated bolt-like member having a head portion and a partially threaded shank; a sleeve slideably mounted on said shank and which has an outer threaded portion; a pair of elongated arms having head and foot ends; said head ends being pivotally attached to the head portion of said bolt-like member; a plurality of tie members each of which has one end pivotally attached to said sleeve and the other end pivotally attached to a respective one of said arms at approximately the midpoint thereof; a spring mounted on said bolt-like member between said head and the adjacent end of said sleeve continuously urging said bolt-like member in a direction to effectively increase the distance between said head and sleeve; said clamp member being mounted in said aperture with the threaded portion of said sleeve engaging the threads in said aperture and with said arms and tie members positioned entirely on one side of said plate and said threaded shank extends from the other side of said plate; and nut means mounted on said threaded shank for urging said bolt-like member in a direction to decrease the distance between said head and the adjacent end of said sleeve when rotated in one direction.

2,897,695

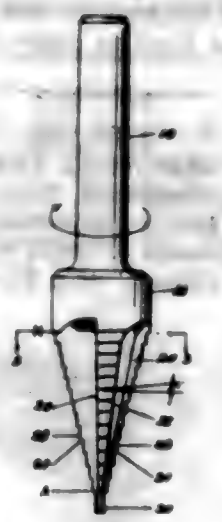
DRILL COUNTERSINK BIT

James C. Winslow, Sierra Madre, Calif.

Application February 24, 1959, Serial No. 794,958
7 Claims. (Cl. 77—66)

1. A combination drill bit comprising a forward fluted drill body which has a given diameter at its tip end and is back tapered to a smaller diameter adjacent its rear end, a rotary cutter at the rear end of said body having a larger diameter than the body, and the rear end of said body being radially enlarged to said given diameter to form a pilot section for said cutter.

2,897,696
SHEET METAL PANEL DRILL
Henry R. Tisserant, Jackson Heights, N.Y.
Application January 13, 1956, Serial No. 558,975
1 Claim. (Cl. 77—67)

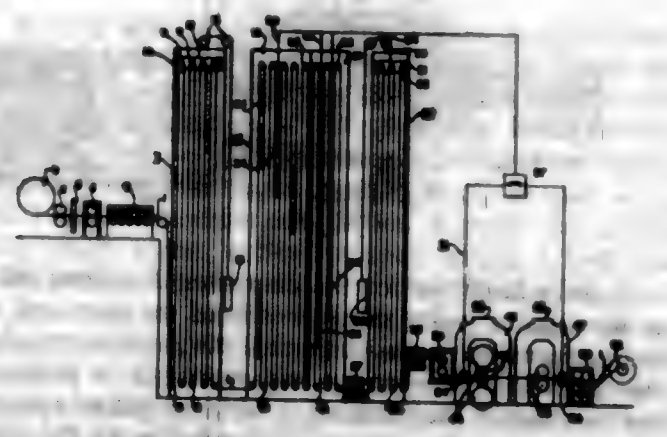


A multi-diameter sheet metal cutting tool having a rotary body shaped in steps of progressively increasing diameter wherein each step has a plurality of peripheral coplanar cutting edges angularly spaced; said body having angularly spaced cylindrical sectors between steps corresponding to said peripheral cutting edges; said sectors being cylindrical for substantially the full distance between steps so as to maintain said tool in true center when cutting holes of progressively increasing diameter; a surface extending from each peripheral cutting edge being inclined to the respective plane of each group of peripheral cutting edges to effect a cutting clearance.

2,897,697
METHOD OF ROLLING URANIUM
Cyril S. Smith, Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application July 18, 1949
Serial No. 105,453
4 Claims. (Cl. 80—60)

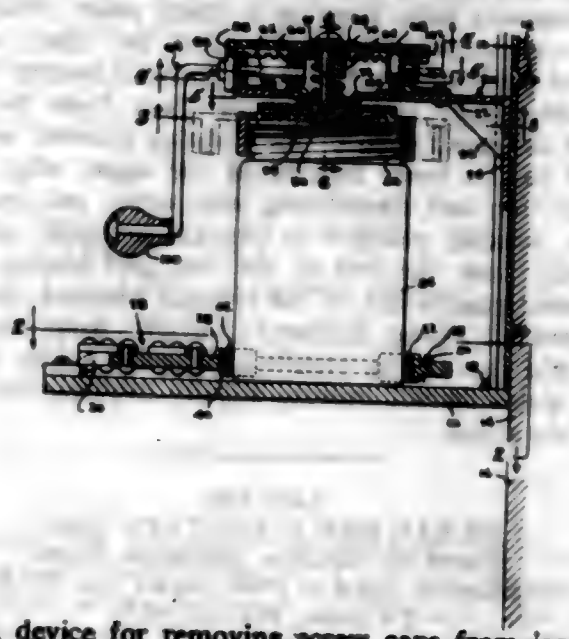
1. In a method of working uranium metal the step which comprises rolling the metal at a temperature between 100° C. and 300° C.

2,897,698
CONTINUOUS TREATMENT OF METAL STRIP
Lawson Van Ormer, Aliquippa, Pa., assignor to Jones & Laughlin Steel Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Application April 6, 1955, Serial No. 499,647
4 Claims. (Cl. 80—60)



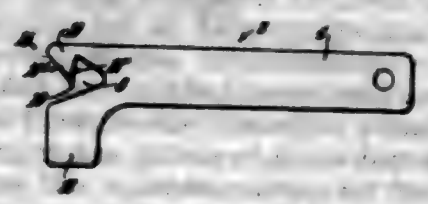
1. The process of treating metal strip in the form of strand comprising continuously annealing said strip, cold working said strip, thereby reducing its thickness, measuring said reduction of thickness, and varying the annealing in accordance with said measurement to correct for any non-uniformity in reduction of thickness.

2,897,699
DEVICE FOR REMOVING JAR SCREW CAPS
Oscar D. Anderson, Jr., Baltimore, Md.
Application August 8, 1958, Serial No. 753,963
4 Claims. (Cl. 81—3.32)



1. A device for removing screw caps from jars comprising an upstanding backing member adapted to be abuttingly secured to a vertical surface above a floor level, a shelf projecting from one side of and carried by said backing member, a bracket arranged in superimposed relation with respect to said shelf and carried by said backing member, a holding element adapted to embrace the lower end portion of a jar arranged in an upright position spaced above and adjacent said shelf and fixedly carried by said shelf, a vertically disposed shaft having the portion adjacent the lower end journaled in said bracket, a rotatable horizontally disposed gear spaced above said bracket and carried by the portion of said shaft adjacent the upper end, a housing including a pair of opposed jaws movable toward and away from each other positioned at a level above said holding element to embrace a screw cap of a screw-capped jar when supported in said holding element, said housing being connected to said shaft for rotation therearound as an axis, means drivingly connecting said shaft to said movable jaws, means operatively connected to said shaft for for urging said housing into braking contact with said bracket, and drive means operatively connected to said gear for effecting the rotation of the latter.

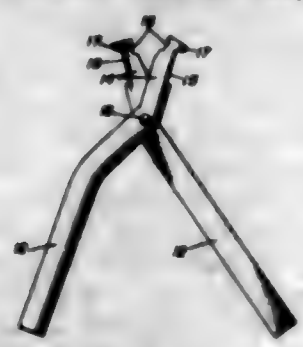
2,897,700
TOOL FOR REMOVING END OF COLLAPSIBLE WALLED TUBE
William D. Kirkpatrick and Arthur L. Newman, Kelseyville, Calif., assignors to Red Devil Tools, Union, N.J., a corporation
Application January 3, 1958, Serial No. 707,002
1 Claim. (Cl. 81—3.34)



A tool for removing the end wall from the adjacent side wall of a collapsible tube by cutting through the said side wall adjacent said end wall comprising, an elon-

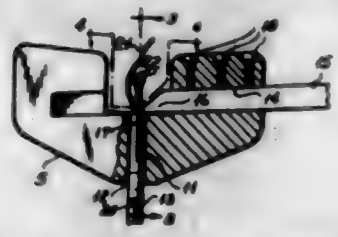
gated flat strip of relatively rigid and relatively thin metal having a rear elongated handle portion and a forward end portion formed with a heel and a piercing element, the heel portion extending laterally outwardly relative to a lower edge of the handle portion and being in the same plane as the handle portion, an upper edge of the heel portion inclining inwardly and upwardly from the forward end edge of the tool, the piercing element being disposed at the upper side of the forward portion and having relatively converging outer and inner elongated sides forming a sharp point directed towards and disposed upwardly from the upper edge of the heel portion, an edge of the forward portion extending downwardly and rearwardly away from the upper end of the inner edge of the piercing element and connected to the inner portion of the upper edge of the heel portion and cooperating with upper and rear edge of the piercing element to provide a throat extending inwardly from the end of the tool and having an enlargement rearwardly of the piercing element, the piercing element being displaced laterally from the plane of a side face of the handle and heel portions with the sharp point thereof curving slightly towards but spaced from the plane.

2,897,701
SICKLE BAR PLIER TYPE TOOL
Frank M. Straiche, Hamilton, Mont.
Application April 9, 1956, Serial No. 576,943
1 Claim. (Cl. 81—5.1)



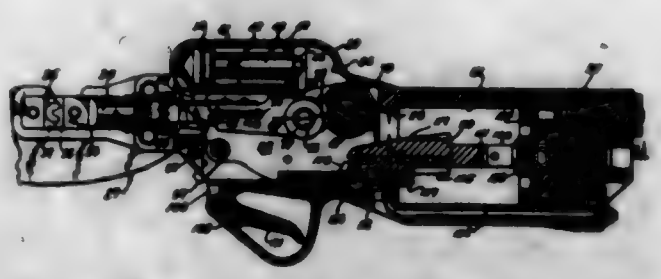
For use in disassembling and reassembling a mowing machine sickle bar construction which is characterized by a pitman having channel-shaped arms the free ends of which are cupped to provide socket members for retention of a cooperating ball on a cutter bar; a hand tool of a pliers-type which is adapted for gripping and spreading the arms apart and also for gripping and clamping the ball by way of sockets provided therefor in diametrically opposite sides of the ball comprising, a pair of duplicate companion levers having outer end portions overlapped and pivoted together, said levers having relatively long portions to one side of the pivot point constituting handles, and relatively short portions on the other side of the pivot point providing a pair of jaws, the juxtaposed lengthwise surfaces of said levers being flat from end to end so that the jaws and handles may swing past each other in either desired direction, the terminal ends of said jaws having T-heads formed integrally therewith, the respective end portions of said heads projecting laterally with respect to the respective longitudinal edges of the jaws and at right angles to the axes of the jaws, the juxtaposed surfaces of said T-heads being flat and coplanar with the flat surfaces of the jaws, the lengthwise edges of the jaws on corresponding sides of the jaws being recessed, the recesses being in proximity to the adjacent projecting ends of the T-heads to cooperate with said heads in seating and gripping flanges on the arms of the pitman whereby said recesses may be engaged with said flanges and the coacting respective T-heads interposed between the channel portions of the arms in a manner to permit said arms to be spread apart for purposes of freeing the aforementioned ball, the other lengthwise edges of said jaws being provided with relatively long clearance notches extending from the T-heads toward but terminating short of the pivot connection, whereby the respective projecting portions of the T-heads cooperable therewith may be advantageously used in a manner permitting the jaws to straddle the ball and the end portions of the head to enter the sockets.

2,897,702
SKINNING TOOL
Joseph J. Ghiglia, Waldwick, N.J., assignor to Thermo Electric Co., Inc., a corporation of New Jersey
Application October 4, 1957, Serial No. 688,286
4 Claims. (Cl. 81—9.5)



2. A skinning tool comprising a body having a face provided with a pair of spaced members extending from said face, said body being formed with a bore extending therethrough and having an outlet opening through said face, one of said members being provided with a slot extending obliquely relative to said bore, a cutter mounted in said slot in parallelism therewith, said cutter having a cutting edge projecting partly over said outlet end for penetrating and peeling the outer sheath of an electric lead disposed in sliding and close fitting relation within said bore upon spiral rotation of said lead therein towards said edge whereby to expose an end portion of a conductor contained within said sheath and spaced therefrom, said members being of a definite spatiality to permit ready access to the peeled shaving of the sheath for detaching the shaving from the lead and withdrawal of said body from the lead over the exposed end portion, and anchoring means carried by said one member and engaging said cutter for maintaining the latter fixed in said slot, said anchoring means being operable to permit adjustment of said cutter within said slot to limit penetration of said edge to substantially that of said outer sheath whereby to preclude damage to said conductor by said edge.

2,897,703
HYDRAULICALLY ACTUATED CRIMPING TOOL
Howard R. Fischer and Marcel P. D'Hoore, Utica, N.Y., assignors to Chicago Pneumatic Tool Company, New York, N.Y., a corporation of New Jersey
Application July 10, 1957, Serial No. 670,976
18 Claims. (Cl. 81—15)



1. In a hand tool of the character described including a housing, a yoke member affixed to one end of the housing and having a stationary jaw, and a movable jaw member closable upon the stationary jaw; a piston chamber formed in the housing, a holding piston movable in the latter chamber, in parallel relation to the movable jaw, an arm connecting the piston with the movable jaw member for movement of the latter upon movement of the piston, a spring load normally loading the piston in

mined diameter as the latter are fed past the cutting

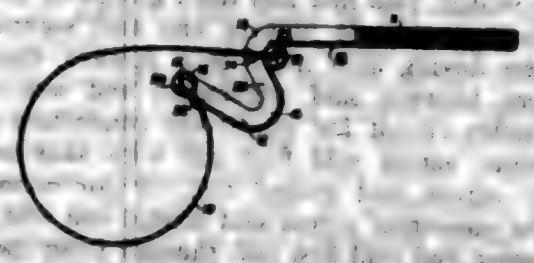
2,897,709

a particular direction wherein the movable jaw member is held moved to a position closed upon the stationary jaw, and control means for controlling admission of pressure air to the piston chamber to drive the piston in the opposite direction against the spring load so as to move the movable jaw member to open position.

2,897,704
PREDETERMINED TORQUE RELEASE, RATCHET-TYPE WRENCH
Robert Glen Woods, Huntington Park, Calif.
Application July 19, 1957, Serial No. 673,064
15 Claims. (Cl. 81—52.4)

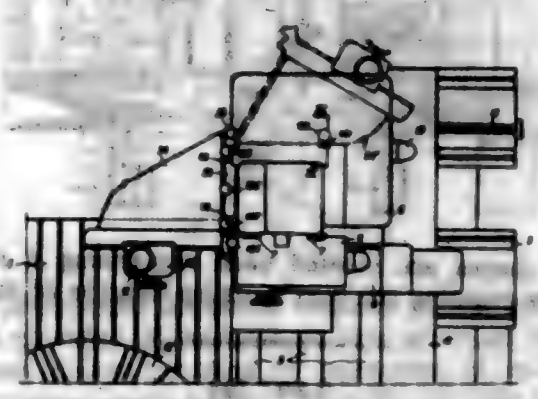
2. A torque wrench comprising: a load engaging member; a lever pivotally connected to said member on the axis of said member; a slidable plunger carried by said lever; spring means urging said plunger towards said member; and a camming element between said plunger and said member.

2,897,705
STRAP WRENCH
Walter I. Rieman, Whitesboro, N.Y., assignor to Utica Drop Forge & Tool Corp., Utica, N.Y., a corporation of New York
Application February 13, 1957, Serial No. 639,995
4 Claims. (Cl. 81—64)



1. A strap wrench, comprising, a ridged actuation handle having a hand grip end portion and a drive end portion, said handle being a bar having a first reverse bend creating a cradle recess, a second reverse bend forward of the first bend, said drive end portion thereby having a general S curve shape, a pivot cross pin carried at the forward end of the drive end portion, a cradle pin cradled in said cradle recess, a flexible strap having a first yoke end with spaced loop portions wrapped around opposite ends of said pivot cross pin, said strap having a second yoke end with spaced loop portions wrapped around opposite ends of the cradle pin, said second end of the strap having a slot between the spaced loop portions, said handle bar passing through said slot, whereby said strap second end is pivotally slung in said first recess bend and is free to be shifted along the handle away from the deepest portion of said first reverse bend.

2,897,706
MILLING AND BORING MACHINE
Charles William Berthier, Le Cete, Bizy-Vernon, France, assignor to Societe Anonyme dite: Societe Nouvelle de Construction de Machines-Outils et d'Outillages-Precedes C.W.B., Paris, France
Application May 29, 1953, Serial No. 358,269
Claims priority, application France December 14, 1948
11 Claims. (Cl. 82—2)



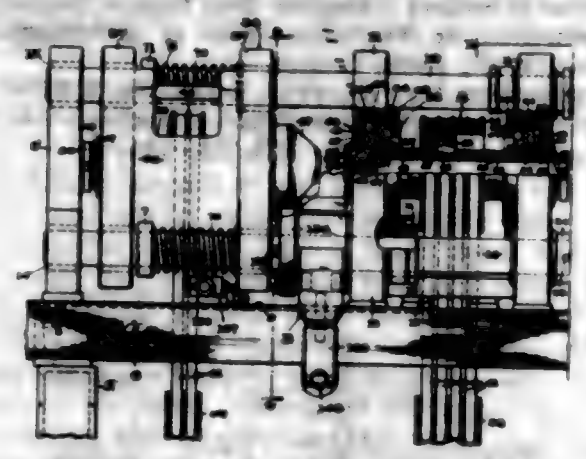
1. A machine tool which comprises an upright providing a vertical slideway thereon, a member supported by said upright for movement thereof upwardly and downwardly along said vertical slideway of said upright, an arm, means supporting said arm on said vertically movable member for upward and downward movement of said arm together with said member and connecting said arm and said member to provide for pivotal movement of said arm with respect to said member on a vertically extending axis between an operative and an inoperative position angularly spaced about said axis, said arm in said operative position being in bearing relation to said vertically movable member at a point on said vertically movable member spaced from said axis transversely of said axis, means for connecting said arm in said operative position to said member to hold said arm in said bearing relation to said member, said pivoted arm providing a slideway extending thereon horizontally, and a tool carrying member supported on said pivoted arm for movement thereof along said horizontal slideway of said pivoted arm, said slideway of said arm when said arm is in said operative position being disposed with its length extending in the direction from said upright member toward the position of a work piece to support said tool carrying member in a selected position along said slideway of said arm for a machining operation on said work piece by a tool carried by said tool carrying member, said arm in said inoperative position disposing said tool carrying member and said tool out of position for operation on said work piece.

2,897,707
APPARATUS FOR SIZING AND FINISHING BAR STOCK
Joseph M. Curtz, Jr., and Donald E. Nestor, Lykens, Pa., assignors to Reiff & Nestor Company, Lykens, Pa., a corporation of Pennsylvania
Application April 19, 1955, Serial No. 502,316
10 Claims. (Cl. 82—2.5)

1. A bar turning machine, comprising a plurality of axially spaced and coaxially aligned bar supporting means each including means for rotating a bar and permitting successive bars to be advanced axially from one supporting means to another, means between adjacent supporting means for feeding successive bars axially, and relatively fixed bar cutting means adjacent to one supporting means for cutting successive bars to a predeter-

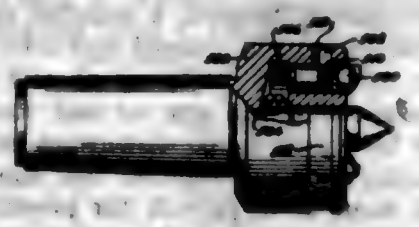
for purposes of freeing the aforementioned ball, the other the piston, a spring load normally loading the piston in

mined diameter as the latter are fed past the cutting means, said bar supporting means between which the



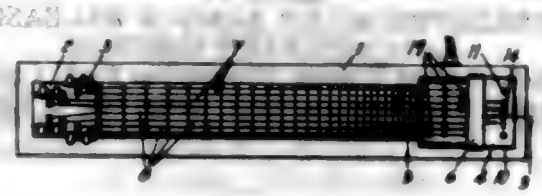
feeding means are located each comprising a rotatable collet for gripping the bars to cause rotation of the latter.

2,897,708
AUTOMATIC DRIVING CENTER
Thaddeus Alfred Kostyrka, Stuttgart, Germany
Application August 3, 1953, Serial No. 372,014
Claims priority, application Germany August 4, 1952
5 Claims. (Cl. 82—33)



1. A driving center for engaging and driving a rotated workpiece, said driving center comprising an elongated drive sleeve having a drive end and an elongated passage extending axially inwardly from said drive end, an elongated center point located within said axial passage and extending beyond said drive end, biasing means located within said axial passage and engaging said center point to urge said center point axially outwardly with respect to said drive end, said drive sleeve having an annular chamber positioned axially inwardly from said drive end and surrounding said center point, said drive sleeve also having a plurality of passages extending axially inwardly from said drive end and communicating with said annular chamber, said passages being located radially with respect to the sleeve axis and being disposed about said center point, a plurality of drive pins corresponding in number to the number of said sleeve passages, there being a drive pin located in each passage and each drive pin having a drive shoulder extending axially beyond the drive end of said drive sleeve, means carried by said drive sleeve and engaging each drive pin to prevent turning movement of said drive pin within the passage in which it is located but permitting said drive pin to move in an axial direction with respect to said passage, each drive pin having an end which is projected into said annular chamber when the drive pin moves axially inwardly with respect to the drive end of said drive sleeve, a shoulder member on said center point positionable within the axial extent of said annular chamber when said center point is moved axially inwardly with respect to the drive end of said drive sleeve, and means located within said annular chamber and surrounding said center point to transmit force from any of said drive pins to said center point shoulder when any of said drive pins moves axially inwardly with respect to the drive end of said drive sleeve to restrain said center point by the action of said force force transmitting means against further movement axially inwardly with respect to the drive end of said drive sleeve.

2,897,709
ELECTRICAL PICKUP FOR STRINGED MUSICAL INSTRUMENTS
Theodore M. McCarty and Seth E. Lover, Kalamazoo, Mich., assignors to Gibson, Inc., Kalamazoo, Mich.
Application November 7, 1956, Serial No. 620,882
20 Claims. (Cl. 84—1.15)



1. An electrical pickup for a musical instrument having metallic bass and treble strings comprising a base having an anchor for said strings on its top and an electrical switch with two moving contacts on its bottom, a common control for moving each of said contacts between the contacts of two sets of four contacts and projecting above said base, a first coil positioned flatwise on said base under said bass strings and terminating short of said treble strings, a second coil positioned flatwise on said base under all said strings, a third coil positioned flatwise on said base under said treble strings and terminating short of said bass strings, all said coils having approximately the same number of turns and said first and third coils being thicker and narrower than said second coil, said third coil being located closely adjacent said bridge and the other coils being positioned successively in edge to edge relation to said third coil, a first condenser of the order of .05 microfarad mounted on the frame of said switch, a second condenser relatively smaller than said first condenser and of the order of .003 microfarad mounted on the frame of said switch, electrical connections connecting said coils in series in counterclockwise direction around said third coil then clockwise around said second coil then counterclockwise about said first coil, said series connections forming an output circuit, a first group of magnets extending through said first coil and projecting upwardly under each of said bass strings, a second group of magnets extending through said second coil and projecting upwardly under each of said strings, a third group of magnets extending through said third coil and projecting upwardly under each of said treble strings, said first and third groups of magnets having their south pole upward and said second group of magnets having their north pole upward, electrical connections between said condensers and said switch and said series circuit for selectively connecting said larger condenser across said first coil with said smaller condenser across said second coil, or for connecting said smaller condenser across said second coil with said larger condenser and said first coil shunted from the circuit, or for connecting said smaller condenser across said third coil and shunting out said first coil with said larger condenser omitted from the circuit, or for connecting said larger condenser across said first coil with said smaller condenser connected across said third coil.

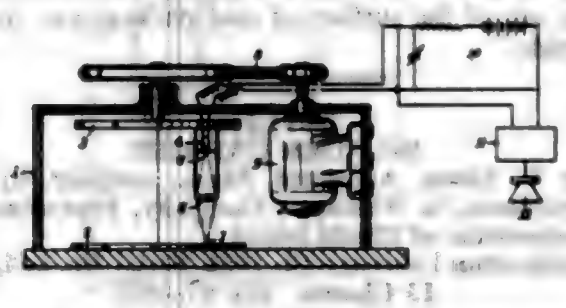
2,897,710
APPARATUS FOR MAKING CIRCULAR SOUND TRACKS
Yves Lemoine, Marigny, France
Application September 9, 1955, Serial No. 533,454
3 Claims. (Cl. 84—1.28)

1. A sound recording system of the type producing records of sounds of a predetermined frequency translatable into musical tones on a circular track of a light sensitive disk, comprising a light source the light emission of which is directed towards the light sensitive disk

2,897,714
METHOD OF AND DEVICE FOR CHARGING

the strand guide, a lead off guide post extending from

and is controlled by electric currents, means producing said currents, including means producing periodic variations of said light emission controlling currents at a predetermined frequency, thus producing a periodic variation of the light emitted towards the light sensitive disk at the said predetermined frequency, and means producing a relative rotation of light source and light sensitive disk around an axis which is located at a distance



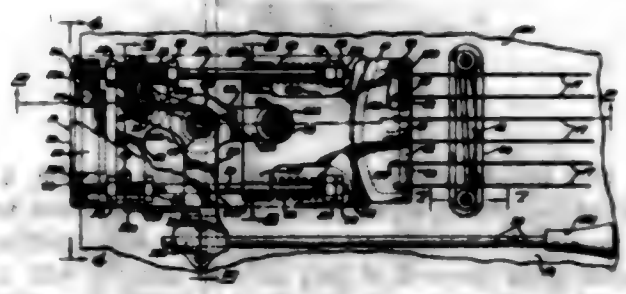
from the light source, at a rotational speed measured in c.p.s. which is an integral fraction of the frequency of the light emission controlling currents measured in c.p.s., thus producing a re-entrant sound track with a number of recorded light signals which is equal to the quotient of predetermined frequency and rotational speed.

2,897,711

TREMOLO DEVICE FOR STRINGED MUSICAL INSTRUMENTS

Jack L. Matthew and Albert Pasturi, Detroit, Mich.

Application September 17, 1958, Serial No. 761,557
5 Claims. (Cl. 84—313)



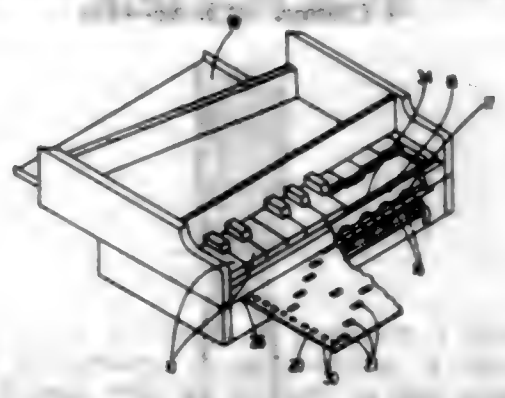
1. In a stringed musical instrument, a tremolo device comprising an anchor plate fixed to the body of said instrument including a transverse anchor pivot, a pair of longitudinally disposed laterally spaced carrier rods connected at one end to said pivot, a transverse anchor bar telescoped on said carrier rods and fixed thereto in a selected position adjacent said anchor pivot, a tail piece telescoped on said carrier rods in longitudinal spaced relationship with respect to said transverse anchor bar, a lever system longitudinally connecting said tail piece to said anchor bar movable to reciprocate said tail piece with respect to said anchor bar, said tail piece being formed at its forward end to receive and anchor the strings of said stringed instrument in laterally spaced relationship, compression spring means on said carrier rods having one end thereof disposed in abutment with said tail piece, means adjusting said spring means to resiliently position said tail piece in a desired neutral position, and a tremolo operating arm extending from said lever system and disposed alongside said strings in spaced relationship thereto adapted to move said lever system and said tail piece to change the compression of said spring means responsive to manual lateral movement of said operating arm whereby to produce tremolo effects, release of said operating lever from any position to which it may be moved permitting said spring means to return said tail piece to its normal position.

2,897,712

EDUCATIONAL KEYBOARD MUSICAL INSTRUMENT

Charles J. Merchant, Cleveland Heights, Ohio, assignor of fifteen percent to Walter J. Brauer, Lakewood, Ohio

Application January 24, 1955, Serial No. 483,679
4 Claims. (Cl. 84—477)



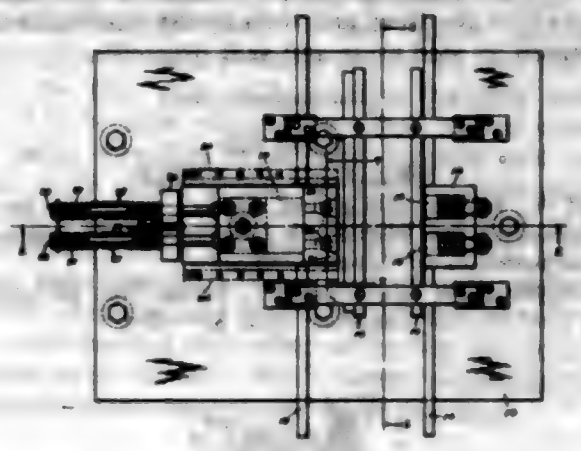
1. An educational keyboard musical instrument comprising: a plurality of transparent keys arranged to form a keyboard, means actuated by operation of said keys for producing musical notes, a plurality of light sources positioned respectively below individual ones of said keys, means connected with said light sources for continuously energizing same, an effectively opaque record member mounted for movement over the light sources and below the keys and formed with perforations positioned to be moved into selective registration with the light sources to illuminate the key to be played, and means operated by the keys when played for moving said record member.

2,897,713

STAKING APPARATUS

Julius Dorigo, Wilmington, Del., assignor to Remington Arms Company, Inc., Bridgeport, Conn., a corporation of Delaware

Application December 18, 1956, Serial No. 629,090
7 Claims. (Cl. 86—16)



1. Apparatus for staking assembled ammunition mounted in belts comprising in combination a belted ammunition trackway having a work station; a die block at said work station reciprocable transversely to said trackway and having therein recesses disposed to axially engage and peripherally support individual rounds of ammunition at one extent of die block reciprocation, staking punches in said die block mounted for reciprocation in a common plane transverse to said recesses, each of said punches being disposed to enter one of said recesses for staking engagement with a round of ammunition supported therein, means for intermittently transferring rounds of ammunition to said work station including a toothed transfer bar disposed longitudinally of said trackway and quadralateral linkage supporting said transfer bar for intermittent translation along said trackway in engagement with said ammunition; and a common drive shaft actuating said transfer means, said die block, and said staking punches in synchronism.

drive sleeve.

sion of which is directed towards the light sensitive disk

2,897,714
METHOD OF AND DEVICE FOR CHARGING EXPLOSIVE PROJECTILES
Michel Précoul, Paris, France, assignor to Societe Technique de Recherches Industrielles et Mecaniques, Strim, Paris, France, a French society
Application December 17, 1954, Serial No. 476,086
4 Claims. (Cl. 86—20)

1. A method of charging by casting the cavity of a projectile body of the hollow-charge type having a liner comprising placing above the casting opening of the projectile to be charged a mass of explosive supply, said opening having the same axis as the lining axis of the hollow charge, said explosive supply comprising a molten explosive containing in suspension in the form of finely divided solid particles, a more powerful and more dense explosive than said molten explosive, the volume of said mass being greater than the cavity to be filled, placing said mass in communication through said axial casting opening with the interior of said projectile, subjecting said mass and said filled projectile to a prolonged heating at a temperature at least equal to the melting temperature of the molten explosive but less than the melting temperature of the solid explosive in suspension for a period sufficient to settle the more dense explosive about the liner and then finally cooling the assembly formed by said mass and said projectile.

2,897,715
BRAIDER CARRIER
Robert V. Olsen, Attleboro, Mass., assignor, by mesne assignments, to Wamsutta Company, Providence, R.I., a corporation of Rhode Island
Application May 6, 1957, Serial No. 657,442
3 Claims. (Cl. 87—56)

1. In a braider carrier having a base, a supply bobbin spindle extending from the base, a fixed strand guide intermediate the ends of the spindle for receiving a strand from the surface of a supply package at one side of a plane including the axis of the spindle and the center of the strand guide, a lead off guide post extending from the base to a height substantially the length of the traverse of the strand on the supply package and located on the other side of said plane in a position so that a line from its center to the axis of the spindle will make an acute angle with the plane on that side of the axis of the spindle on which the fixed strand guide is located whereby a strand from the package may be passed in the same clockwise direction as the strand is on the package about said guide post and then about the package to contact a substantial arc of the surface of said package and thence to said guide.

2,897,716
BRAIDER CARRIER
Robert V. Olsen, Attleboro, Mass., assignor, by mesne assignments, to Wamsutta Company, Providence, R.I., a corporation of Rhode Island
Application February 10, 1956, Serial No. 564,786
13 Claims. (Cl. 87—57)

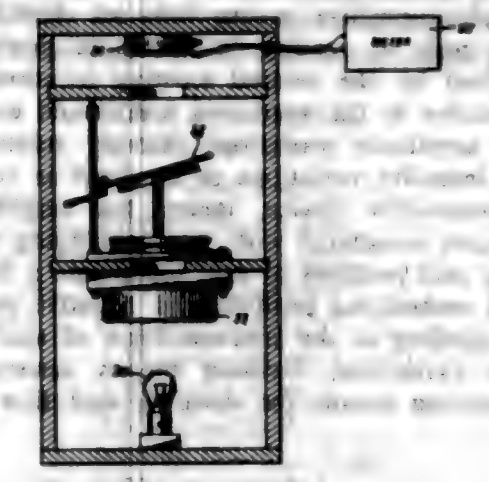
1. In a braider carrier, a supply bobbin spindle, a post removed therefrom, a functionally rigid thrust plate swingably mounted on said post and normally at a position engageable with the end of said bobbin spindle, and a clip carried by said plate and detachably engageable with said spindle for holding said plate in said normal position.

8. In a braider carrier having a base, a supply bobbin spindle extending from said base, a plurality of tension posts extending from said base in parallel relation with each other, a tension member slidably mounted on two of said posts, the radius of the axes of the two posts from the center of the bobbin spindle being unequal.

2,897,717
ORIENTATION DEVICE FOR TRANSPARENT ELEMENT
William B. Farrington, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Application November 9, 1955, Serial No. 545,823
4 Claims. (Cl. 88—14)

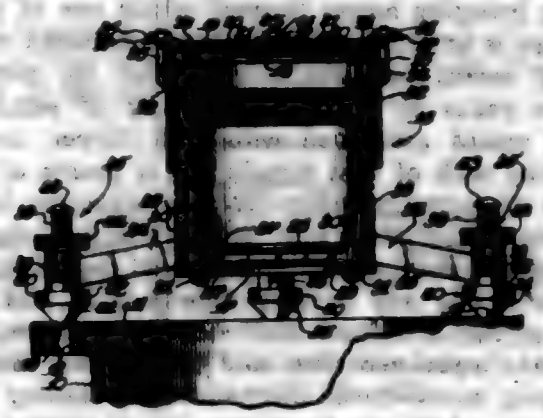
1. Apparatus for determining the orientation for maximum light transmission through a translucent object having appreciable thickness, comprising: a tilted, rotatable annular member; a second member having a central transparent portion for receiving the translucent object; light source means and light intensity measuring means on opposite sides of said central transparent portion of said second member; said second member having a reduced diameter portion; roller bearings disposed between the outer periphery of said reduced diameter portion and the inner periphery of said tilted, rotatable member; two separated vertical guide members mounted to one side of

said tilted, rotatable member; and an extension member mounted on said second member, said extension member



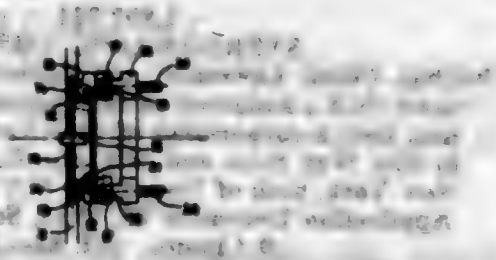
being adapted to move vertically within said guide members as said tilted, rotatable member is rotated.

2,897,718
DIMENSION MEASURING OPTICAL SIGHTING DEVICE
Gerrald R. Kerr, St. Louis, Mo., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application December 12, 1955, Serial No. 552,666
2 Claims. (Cl. 88—14)



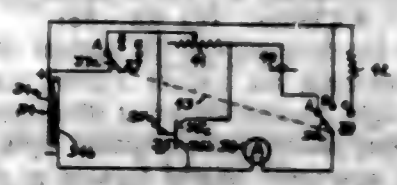
1. A sighting device comprising two tubular sections having their inner ends in threaded connection with one another, a lens, a rectangular glass secured to the lens, a pair of annular members clamping the rectangular glass at the corners, means attaching one annular member to the outer end of one tubular section, the other annular member, the lens, and the rectangular glass lying within said outer end of the said one tubular section, a ground glass inscribed with two concentric circles and being positioned at the outer end of the other tubular section, two rings applied to opposite sides of the ground glass at the periphery thereof, one ring engaging the outer end of the said other tubular section, threaded members fixed to the exterior of the said other member in circumferentially spaced relationship to one another and projecting beyond the outer end of the said other member, washers applied to the threaded members against the other ring, and nuts engaging the threaded members against the washers, and supporting means acting between the said one tubular section and the object upon which the sighting device is to operate for conjointly tilting the lens and the ground glass with respect to the object.

2,897,719
FILM GUIDES
Hans Tiller, Kilchberg, Zurich, Switzerland, assignor to Cyclopic Anstalt für Optik und Mechanik In Vaduz, Furstentum, Liechtenstein
Application June 13, 1955, Serial No. 515,129
Claims priority, application Switzerland June 12, 1954
2 Claims. (Cl. 88—17)



1. For use in a camera or projector, a film guiding apparatus comprising, in combination, a film guiding member formed with an aperture so that when film is located opposite said aperture light may pass through both the aperture and the film; a pair of elongated substantially parallel and rigid runners extending in the direction of film movement past said aperture, respectively located at opposite sides of said aperture, and respectively carried by said film guiding member for respective turning movement about a pair of axes extending longitudinally along said runners, said runners having film engaging surfaces having more than a single line contact with the film and spaced from each other by a distance at least as great as the width of a film frame to leave untouched the picture frame area of the film both on its emulsion side and its emulsion-free side; pressure means located opposite said film guiding member and including a pair of pivotable film engaging portions spaced from each other by the same distance that said runner means are spaced from each other and respectively directed toward said film engaging surfaces of said runners for pressing side edge portions of a film strip respectively against said film engaging surfaces of said runners, said film engaging portions of said pressure means being located substantially nearer to said runner means than the remainder of said pressure means so that the latter contacts the film only with its film engaging portions; a pair of lever arms respectively fixed to and extending in the same direction from said runners and located opposite each other; a pair of nut members pivotally carried by said lever arms, respectively; a pair of oppositely threaded screws threadedly engaging said nut members and extending toward each other; and a turnbuckle threadedly engaging said screws for simultaneously drawing the same toward each other or moving the same away from each other to turn said runners simultaneously in opposite directions respectively about said axes.

2,897,720
LIGHT METER
Franklin F. Offner, Chicago, Ill.
Application December 2, 1954, Serial No. 472,651
6 Claims. (Cl. 88—23)



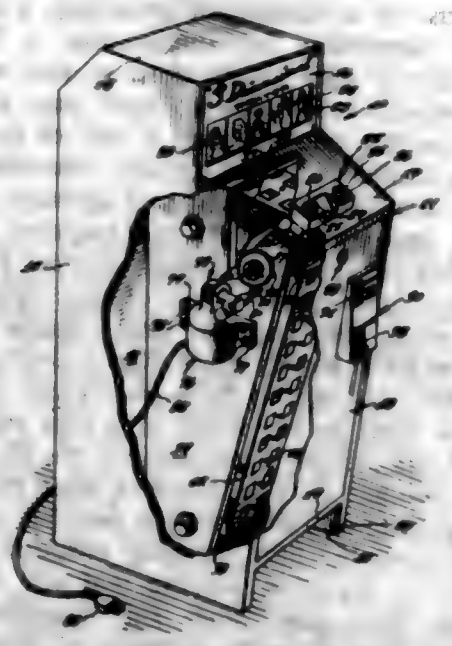
1. A photoelectric exposure meter comprising, in circuit combination, a barrier layer type photoelectric cell, an electric indicating meter, a junction type transistor interposed between said cell and said indicating meter for amplifying the current output of said cell prior to applying said output to said indicating meter, and means for

increasing the collector current of said transistor to effect a reduction in the base input resistance of said transistor at low light values, said transistor collector current increasing means comprising resistive means connected to the base of said transistor and to a source of electromotive force external to said cell.

2,897,721
STEREOSCOPIC VIEWER

Nathan Cohn, Lawrence, and Raymond Enseritz, Levittown, N.Y., assignors of fifty percent to Camera Services, Inc., a corporation of New York, and fifty percent to Rite Way Sales and Mfg. Co. Inc., a corporation of New York, both of New York, N.Y.

Application December 28, 1953, Serial No. 400,673
9 Claims. (Cl. 88—31)



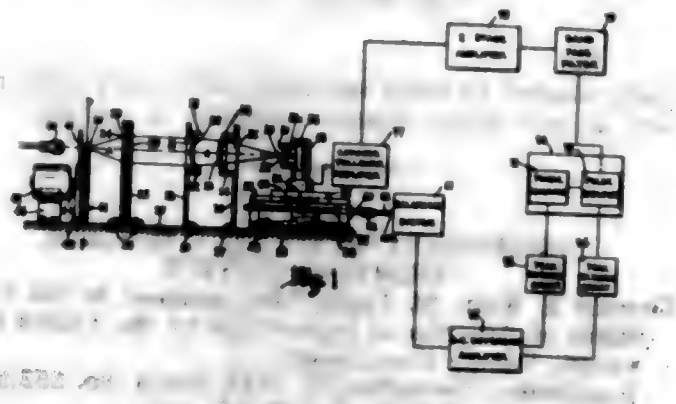
1. A stereoscopic viewer comprising a hollow housing, a first idler guide drum rotatably mounted within said housing, a second parallel and spaced idler guide drum rotatably mounted within said housing, an internal shaft rotatably mounted within said housing, a belt transport central sprocket keyed onto said shaft within said housing, an endless resilient and flexible belt having longitudinally spaced openings along the central portion, hollow mounting means engageable with said openings for both mounting a plurality of stereoscopic pictures and for successively receiving the teeth of said belt transport sprocket during rotation of the latter, means for driving said shaft and sprocket, means for automatically stopping said driving means after a predetermined movement of said belt means and stereoscopic viewing means mounted on said housing whereby to observe said stereoscopic slides.

2,897,722
MEANS AND METHOD OF TESTING LENSES

Roy C. Gunter, Jr., Dodge, Donald B. Whitney, Southbridge, and Robert E. Haynes, Sturbridge, Mass., assignors to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

Application November 27, 1953, Serial No. 394,546
8 Claims. (Cl. 88—56)

1. A device for determining the optical characteristics of a lens comprising an optical system having means for projecting light from a source of illumination through a lens under test, photosensitive means optically aligned with said light, apertured means located at a given position between said lens under test and said photosensitive means, means positioned between said source of illumination and said lens under test for interrupting the light at a controlled plurality of spaced intervals and for producing a pair of alternately existing images focused substantially in the plane of said apertured means for introducing spatial intensity characteristics in said light as received by said photosensitive means, means for effectively scanning said means for interrupting the light to add temporal intensity variations to said spatial intensity characteristics and which may be converted by said photosensitive means into an electrical signal having a pair of readily interpretable portions each characterized by the related existing locations of said images relative to the apertured means and each having temporal amplitude variations directly related to the temporal intensity variations of the light as received by said photosensitive device, means for amplifying said signal, means associated with said amplifying means for converting said portions of said signal into a first pulsating signal embodying positive and negative pulses controlled according to the characteristics of said temporal amplitude variations, dividing means associated with said converting means for dividing said first pulsating



signal into a pair of signals each similar in character to said first-mentioned pulsating signal and further embodying inverting means through which one of said pair of signals is inverted, clipper means associated with said dividing means for eliminating either the positive or negative peaks of the respective pair of signals, converting means associated with said clipper means for converting each of said signals into a source of current capable of operating motor-driven mechanism, interpreting means associated with said converting means for interpreting means associated with said converting means for interpreting any existing difference in said pair of signals as received from said converting means, balancing means associated with said interpreting means and embodying motor-driven mechanism for shifting the lens under test and the photosensitive means relative to each other an amount sufficient to compensate for the difference in said pair of signals.

2,897,723
PHOTOGRAPHIC OBJECTIVE FOR TAKING OR PROJECTION

Johannes Berger, Heidenheim (Brenz), and Guenther Lange, Koenigsbronn, Germany, assignors to Carl Zeiss, Heidenheim (Brenz), Wuerttemberg, Germany

Application March 23, 1956, Serial No. 573,367
Claims priority, application Germany April 7, 1955
9 Claims. (Cl. 88—57)

1. A photographic objective for taking or projection containing six lenses of which the first and the second

fixed to said plates and depending therefrom, a cable clamp on the terminating end of said cable bracket in through an opening in said base to occupy a position be-

are collective lenses, the third and the fourth are dispersive lenses and the fifth and the sixth are collective lenses wherein all surfaces whose radii of curvature are numerically smaller than 90% of the focal length turn their concave side towards the air space found between the third and the fourth lenses characterized in that the following conditions are simultaneously fulfilled:

$$1.25 \cdot \bar{r}_s < D_s < 1.60 \cdot \bar{r}_s$$
$$0.50 \cdot f < D_s < 0.70 \cdot f$$
$$0.35 \cdot f < \bar{r}_s < 0.48 \cdot f$$
$$1.80 \cdot \bar{r}_s < D_s < 2.20 \cdot \bar{r}_s$$
$$0.80 \cdot \bar{r}_s < D_s < 1.10 \cdot \bar{r}_s$$
$$0.20 \cdot f < D_s < 0.30 \cdot f$$
$$0.25 \cdot f < \bar{r}_s < 0.35 \cdot f$$
$$1.30 \cdot r_s < r_s < 1.50 \cdot r_s$$
$$0.20 \cdot f < r_s < 0.30 \cdot f$$
$$0.30 \cdot f < r_s < 0.45 \cdot f$$
$$0.25 \cdot f < D_s - D_s < 0.40 \cdot f$$
$$0.75 \cdot f < L < 0.95 \cdot f$$
$$2.0 \cdot D_s < D_s < 2.5 \cdot D_s$$

the symbols having the significance as follows:

f=the focal length of the objective,

$\bar{r}_s$=the arithmetic mean of the absolute amounts of the radius of the front surface of the second lens and the radius of the rear surface of the fifth lens,

D_s=the axial separation of these two surfaces,

$\bar{r}_s$=the arithmetic mean of the absolute amounts of the radii of the surfaces r_s and r_s bordering upon the diaphragm space

$$\left(\bar{r}_s = \frac{r_s + |r_s|}{2}\right)$$

D_s=the length of the diaphragm space=d_s,

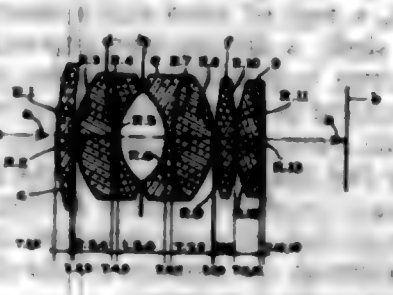
L=the overall length of the objective=the axial separation of the two external surfaces.

2,897,724

LARGE-APERTURE OBJECTIVE

Raymond Rosier, Asnieres, France, assignor to Societe d'Optique et de Mecanique de Haute Precision, Paris, France, a company of France

Application May 9, 1957, Serial No. 658,170
Claims priority, application France May 11, 1956
3 Claims. (Cl. 88—57)



1. Objective having a very large aperture and having a focal length F, comprising five separate optical components, between two of which a diaphragm is disposed, the said five optical components being, in the direction of propagation of incident light, a convergent lens of focal length F_1, convex in front, a thick meniscus component, convex in front, whereof the front and rear radii of curvature are respectively R_2 and R_3, a thick meniscus component, concave in front, whereof the front radius of curvature is R_6, a biconvex lens whereof the front and rear radii of curvature are respectively R_8 and R_{10}, and a convergent biconvex component, the values of F, F_1, R_2, R_4, R_6, R_9 and R_{10} satisfying the inequalities:

$$2F < F_1 < 4F$$
$$0.65F < R_2 < 0.85F$$
$$0.4F < R_4 < 0.5F$$
$$0.9F < \left|\frac{R_6}{R_9}\right| < 1.1F$$
$$2F < R_8 < 4F$$
$$2F < |R_{10}| < 4F$$

and the convergent biconvex component having two lens elements in contact the contact surfaces thereof being concave toward the incident light and satisfying the inequalities:

$$R_{12} > 4R_{11}$$

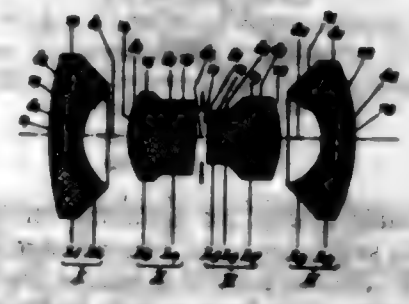
where R_{12} is large and the corresponding lens element approaches plano-convex.

2,897,725

OPTICAL SYSTEM WITH LARGE EFFECTIVE IMAGE ANGLE

Günter Klemt and Karl Heinrich Macher, Kreuznach, Rhineland, Germany, assignors to Jos. Schneider & Co., Kreuznach, Rhineland, Germany, a corporation of Germany

Application February 3, 1958, Serial No. 712,916
Claims priority, application Germany February 14, 1957
4 Claims. (Cl. 88—57)



1. An optical objective system consisting of four air-spaced members including an inner pair of collective members enclosing a diaphragm space and an outer pair of dispersive members encompassing said inner pair; the forward member of said outer pair consisting of a first element in the shape of a negative meniscus lens and a second element in the shape of a positive meniscus lens cemented onto said first element; the forward member of said inner pair consisting of a negatively refracting third element and a positively refracting fourth element cemented onto said third element; the rear member of said inner pair consisting of a negatively refracting fifth element, a biconvex sixth element cemented onto said fifth element and a negatively refracting seventh element cemented onto said sixth element; the rear member of said outer pair consisting of an eighth element in the shape of a positive meniscus lens and a ninth element in the shape of a negative meniscus lens cemented onto said eighth element; the forward and rear members of said outer pair being separated from the corresponding members of said inner pair by two air spaces in the shape of positive meniscus lenses whose center thicknesses total between 20% and 40% of the overall focal length of the system.

2,897,726

ADJUSTABLE MIRROR ASSEMBLY FOR MOTOR VEHICLES

James Tyrell Clark, Nahcomis School, Fla.

Application July 2, 1956, Serial No. 595,242
1 Claim. (Cl. 88—93)

An adjustable mirror assembly for vehicles comprising a pair of clamping plates adapted to be fastened in a complementary assembly about the internal periphery of a perforation formed in a support, a cable bracket

the web, the web having notches in said hem portions tion wherein it acts on at least one of said webs, said

fixed to said plates and depending therefrom, a cable clamp on the terminating end of said cable bracket in a position substantially displaced from said clamping plates, a sphere adjustably mounted between said clamping plates, a tubular extension on diametrically opposite sides of said sphere extending in a substantially downwardly and upwardly direction, a bore extending lineally through said sphere and said tubular extension and forming an internal cylindrical bearing, a shaft member mounted within said cylindrical bearing with one end of said shaft member projecting downwardly into the tubular extension on one side of said sphere and the other end of said shaft member projecting upwardly above the tubular extension on the other side of said sphere and axially revolvable in said cylindrical bearing and supporting a mirror on the upper extremity thereof, a lever arm connected with the lower end of said shaft member and rotatably engaging the lower end of said downwardly projecting tubular extension and extending radially to a position adjacent said cable clamp, a cable casing clamped

within said cable clamp, an actuating cable axially adjustable within said casing and connected at one end with said lever arm, remote control means at the opposite end of said actuating cable for remotely controlling the displacement thereof within said casing and correspondingly controlling the annular displacement of said shaft member and in which said shaft member carries a frustoconical shaped resilient collar adjacent the upper end thereof establishing frictional engagement with the upper peripheral edge of the upwardly projecting tubular projection on said sphere and wherein the lower end of said shaft member terminates short of the lower end of the downwardly projecting tubular extension on said sphere, adjustable means interposed between the connection of said lever arm with the lower end of said shaft member for axially adjusting the shaft member lineally within said cylindrical bearing against the tension of said frustoconical shaped resilient collar, the under surface of which abuts with said upper periphery of the upwardly projecting tubular projection on said sphere.

2,897,727

CHAIR WITH MOVING SEAT AND MIRROR

Luther G. Simjian, Greenwich, Conn., assignor to The Reflectone Corporation, Stamford, Conn., a corporation of Connecticut

Application June 13, 1955, Serial No. 515,804
1 Claim. (Cl. 88—97)

In a combination of the class described, a leg supported base, a seat, means mounting said seat in overlying relation to said base for rotation on a central axis relatively to said base, a mirror, a mirror support, means mounting said mirror support on said base for rotation on an axis in linearly spaced relation to the central axis of the seat mounting but parallel thereto with said support holding said mirror in a position above said seat, an actuator rod fixed to said seat and extending downwardly therefrom through an opening in said base to occupy a position between said central axis and the axis of mounting of said mirror support in a line extending from said mirror support axis to said central axis when said seat is in an initial central position, means whereby said actuator rod rotates said mirror support as said seat rotates, and a

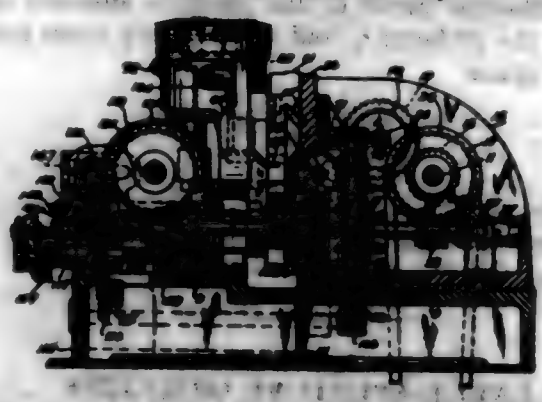
coiled spring fixed at one end to said actuator rod and fixed at its other end to said base at the axis of rotation of said mirror support, whereby said spring lies with its axis in said line extending between said actuator and the axis of rotation of said mirror support when said seat is in said central position, whereby to resist rotation of said seat from said central position.

2,897,728

UNIVERSAL GEAR HOBBING MACHINE

Anthony J. Vannelli, West Orange, N.J.

Application June 20, 1955, Serial No. 516,513
3 Claims. (Cl. 90—4)



1. In a gear generating machine a longitudinally disposed drive shaft, pivotal gear generating means, a gear train driving said generating means, a second gear train connected to said drive shaft, bevel gear connections between said first and second gear trains whereby said generating means may be driven in any pivotal position, a vertical shaft, a pair of gears and a worm mounted on said vertical shaft, a driving gear disposed intermediate said pair of gears to selectively drive one of said pair of gears in a clockwise or counterclockwise direction, a screw connecting said worm with the generating means to feed longitudinally said generating means and a third gear train connecting the drive shaft with the driving gear whereby the direction of feed of said generating means may be maintained although the rotation of the drive shaft and said generating means is reversed.

2,897,729

APPARATUS FOR THE MANUFACTURE OF DRAW CORD BAGS

George H. Ashton, Sappington, and Robert C. Mueller, Affton, Mo., assignors to Bemis Bro. Bag Company, St. Louis, Mo., a corporation of Missouri

Application October 5, 1955, Serial No. 538,647
25 Claims. (Cl. 93—8)

1. In an apparatus for manufacturing draw cord bags from a continuous web of heat sealable material having two superimposed walls joined along one longitudinal edge of the web and having textile cords contained in heat-sealed hem portions extending along the other edge of

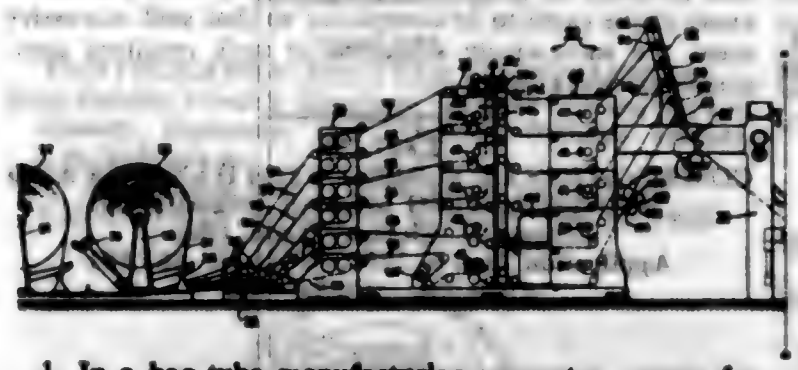
the web, the web having notches in said hem portions spaced at bag width intervals, the cords extending longitudinally of the web through said hem portions and traversing the notches, means for intermittently feeding forward a length of the web corresponding to the desired bag width, with the web stationary during dwell intervals between successive feeding operations, means operative during said dwell intervals for gathering portions of the cords exposed in a notch and pulling them out of the notch to form a loop including portions of both cords extending out from the notch and severing the loop, and means following the loop-pulling means for holding the cords against rearward movement while the loop-pulling means is operating.

2,897,730

APPARATUS FOR MANUFACTURING BAG TUBES

Randolph McKim Browning, Pensacola, Fla., assignor to St. Regis Paper Company, New York, N.Y., a corporation of New York

Application November 7, 1955, Serial No. 546,363
30 Claims. (Cl. 93—36)



1. In a bag tube manufacturing apparatus, means for drawing therethrough a plurality of webs from a plurality of rolls, means for forming same into a flattened tube, a web working device for acting on at least one of said webs before being formed into a tube, a second device for acting on such formed tube, one of said webs having indicia thereon separated by a selected interval, means for determining the position of each indicium with respect to a norm position at the time of a selected position in each cycle of operation of such web working device, means for adjusting the speed of operation of such web working device in response to the departure of said web working device and said indicia from a selected norm phase relation, said web working device forming a series of characteristics upon at least one of said webs, means for determining the position of each such characteristic with respect to a second norm position located in advance of said tube former at the time of a selected position in each cycle of such second device, and means for adjusting the speed of such second device in response to a selected departure of such characteristics and said second device from a preselected norm phase relation.

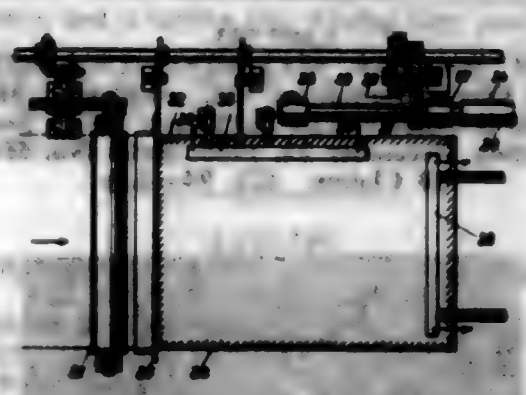
29. In a bag tube manufacturing apparatus, means for drawing therethrough a plurality of webs from a plurality of rolls, a tube former, a web working device having a region of action wherein it acts on at least one of said webs, a second web working device having a region of action wherein it acts on at least one of said webs, said web working devices being situated in advance of the tube former and being constructed and arranged for acting on such webs in a cyclical manner, a rotatable driving element, a first rotatable driven element drivably connected to one of such web working devices, a second rotatable driven element drivably connected to the other of such web working devices, means for mounting said driven elements with the axes of rotation thereof in coincidence, means for mounting said driven elements as a group and said driving element as an individual for movement relative to one another whereby the axis of the latter is adjustably positionable relative to the axes of the group of said driven elements, and means for operatively interconnecting said driving element and said first and second driven elements for movement at speeds which vary periodically relative to one another during each cycle as a function of the degree of departure of the axis of said driving element from the coincident axes of said driven elements as a group, said driven elements being connected to such driving element for such speed variation 180° out of phase with one another, said cyclically operative web working devices being adjusted for movement whereby their respective regions of action occur 180° out of phase.

2,897,731

METHOD AND MACHINE FOR MAKING PAPER TUBES

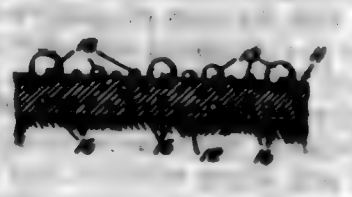
Christian Major, Tübingen, Wurttemberg, Germany

Application September 22, 1953, Serial No. 381,565
Claims priority, application Germany September 22, 1952
8 Claims. (Cl. 93—79)



1. In a machine for winding tubes consisting of sheets, in combination, a winding spindle including a winding portion having axially extending holding means; transporting means for transporting a web consisting of a sheet material in axial direction and in the plane of said winding spindle into a cutting off position located with said transporting means being spaced from said winding spindle in axial direction with respect to the same and being located transversely at one side of said winding spindle so that the web is transported radially spaced from said winding spindle with one longitudinal edge of the web adjacent to said spindle; cutting means extending transverse to the axis of said winding spindle spaced from the same in axial direction and adapted to cut off sheets in said plane from said web; shifting means movable in the direction transverse to the axis of said winding spindle and adapted to shift cut-off sheets from said cutting off position into said inserting position in which one longitudinal edge of each cut-off sheet is aligned with said holding means in axial direction while said sheets remain in said plane; and feeding means movable in axial direction between a first position located at one end of said holding means and a second position located at the other end of said holding means and adapted to insert into said holding means cut-off sheets shifted by said shifting means into said inserting position.

2,897,732
HIGHWAY MARKER COMPRISING UNSATURATED ALKYD RESIN AND GLASS BEADS AND METHOD OF MAKING SAME
Leroy W. Slauger, Baltimore, Md., assignor to Baltimore Paint & Color Works, Baltimore, Md., a firm
Application December 22, 1955, Serial No. 554,870
11 Claims. (Cl. 94—1.5)

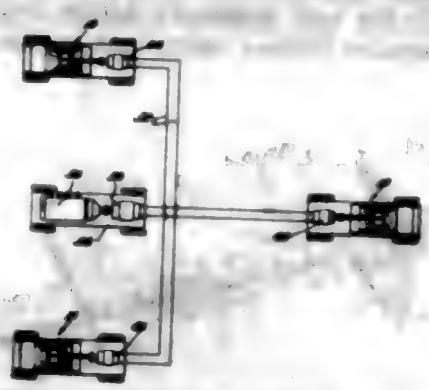


1. A combined highway and surface marker comprising a road adapted to receive automotive traffic, the upper surface of which is coated with a reflecting pigmented composition, said composition consisting substantially entirely of a plurality of small glass spheres having an average diameter up to 13 mils, light reflecting pigment and a resin, said resin comprising the product of the reaction of a polyester resin and a vinylidene monomer copolymerizable therewith which was catalyzed by a peroxide catalyst suitable for catalyzing the reaction, said polyester resin being the reaction product of a dihydric alcohol and an ethylenically unsaturated dicarboxylic acid, the reaction between said polyester resin and said monomer catalyzed by said catalyst occurring on said road surface to form a solid incorporating the glass spheres and pigment adherent to said road surface and resistant to the abrasion of traffic.

2,897,733
TRAFFIC MARKER, MATERIAL, AND METHOD
Leroy W. Slauger, Baltimore, Md., assignor to Baltimore Paint & Color Works, Baltimore, Md., a firm
Application December 22, 1955, Serial No. 554,871
10 Claims. (Cl. 94—1.5)

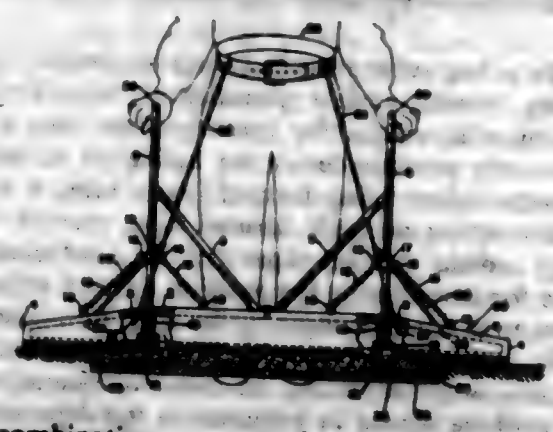
1. A combined highway and surface marker comprising a road adapted to receive automotive traffic, the upper surface of which is coated with a reflecting pigmented composition, said coating having a thickness of 10 to 30 mils, said composition having 97–100% solids content and essentially the same wet and dry film thickness, said composition consisting substantially entirely of light reflecting pigment and a resin, said resin comprising a mixture of alkyd resins and epoxy resins catalyzed by a suitable catalytic agent to a thermoset solid, said epoxy resin comprising at least one glycidyl polyether of a dihydric phenol, said polyethers having a chain of alternating glyceryl and divalent aromatic radicals united by ether oxygen with glyceryl radicals in terminal position, said alkyd resin being a glycerol phthalate resin, the reaction involving the catalyst occurring on said road surface to form a solid incorporating the pigment adherent to said road surface and resistant to the abrasion of traffic.

2,897,734
SONIC BEAM EARTH COMPACTING SYSTEM
Albert G. Bodine, Jr., Van Nuys, Calif.
Application September 21, 1956, Serial No. 611,163
2 Claims. (Cl. 94—22)



1. In a method of compacting earth, the steps of: independently coupling a plurality of compressional wave generators to the earth to be compacted, operating each of said generators at a natural frequency of the generator and earth when so coupled whereby to generate compressional waves and propagate said waves through the earth, maintaining the individual generators at substantially the same frequency, so that the individual compressional waves originating from the generators are capable of coaction as components of a resultant compressional wave pattern, establishing a compressional wave amplitude, generator spacing and generator phase relationship at which the compressional waves from the individual generators overlap and coact to form a downwardly directed resultant compressional wave beam whose wave pattern is of greater amplitude than that of a single compressional wave from a single generator, and moving said plurality of generators progressively over successive areas of the earth to be compacted so that said successive areas are successively subjected to such resultant compressional wave beam.

2,897,735
COMBINATION OF SCREED WITH HANDLES AND MANIPULATING MEANS THEREFOR
Ernesto D. Alessio, Akron, Ohio
Application June 6, 1957, Serial No. 663,951
4 Claims. (Cl. 94—45)

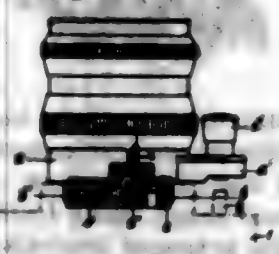


1. In combination, a screed with spaced handles attached thereto and means for manipulating the screed which comprises a belt and means for connecting the belt with the assembly of the screed and handles, the belt being adapted to be worn by a workman and being connected to said assembly at points substantially equidistant from the longitudinal midpoint thereof permitting the screed to be moved from side to side as the workman sways his body, the screed comprising a frame with a straight edge across the bottom thereof, and the handles extending upwardly from the screed at positions substantially equidistant from the midpoint of the straight edge to about the height of said workman's hands while standing upright by which handles pressure can be applied to the straight edge.

2,897,736
THREAD COUPLING FOR PHOTOGRAPHIC OBJECTIVES OR THE LIKE

Karl Heinz Schulz, Kreuznach, Rhineland, Germany, assignor to Jos. Schneider & Co., Optische Werke, Kreuznach, Rhineland, Germany, a firm of Germany

Application November 8, 1956, Serial No. 621,133
Claims priority, application Germany November 19, 1955
3 Claims. (Cl. 95—11)

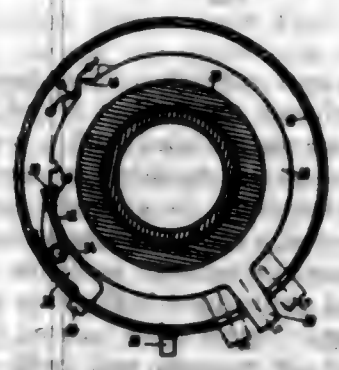


1. A photographic objective adapted to be removibly mounted on a camera body, comprising an objective body having an eccentric appendage positionable to register with a co-acting element on said camera body, a threaded ring mounted on said objective body in axially fixed position but with freedom of rotation relative thereto about the objective axis, the threads of said ring mating with complementary threads on said camera body, said objective body having an exposed seating surface surrounding said ring and positioned for engagement with a co-operating surface on said camera body, an operating arm for said ring rigid with the latter and extending substantially radially outwardly therefrom, and a pair of peripherally space abutments on said objective body straddling said operating arm with clearance, thereby limiting the extent of rotation of said ring relative to said objective body.

2,897,737
PHOTOGRAPHIC SHUTTER CONSTRUCTION

Kurt Gebele, Munich, Germany, assignor to Hans Deckel, Munich, Germany, and Friedrich Wilhelm Deckel, Zug, Switzerland

Application May 9, 1956, Serial No. 583,702
Claims priority, application Germany May 11, 1955
7 Claims. (Cl. 95—11.5)

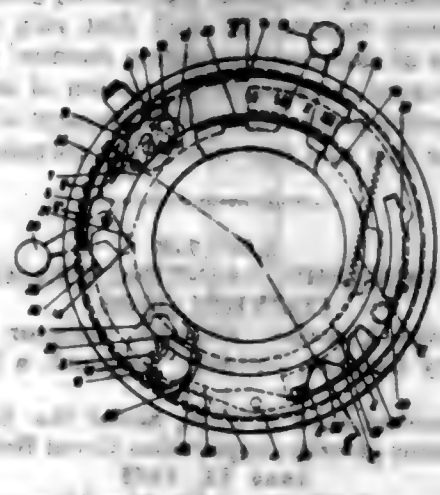


1. A photographic shutter assembly comprising a housing, a lens having an optical axis, a shutter speed adjusting ring movable circumferentially on said housing about said optical axis as a center of rotation, a photoflash synchronizer adjusting member having a manually operable part projecting from said housing and movable circumferentially about said optical axis as a center, means mounted on a circumferentially immovable part of said shutter assembly and having positive locking engagement with said synchronizer adjusting member for locking said synchronizer adjusting member against circumferential movement to prevent accidental undesired movement thereof by accidental contact with a finger of an operator while moving said speed adjusting ring circumferentially, and manually operable release means responsive to manual pressure in a direction substantially different from circumferential movement for releasing said locking means from said locking engagement with said synchronizer adjusting member.

2,897,738
SETTING ARRANGEMENTS FOR FLASH SHUTTERS

Johannes Weise and Rolf Noack, Dresden, Germany, assignors to VEB Zeiss Ikon Dresden, Dresden, Germany

Application September 20, 1956, Serial No. 611,069
Claims priority, application Germany September 21, 1955
9 Claims. (Cl. 95—11.5)

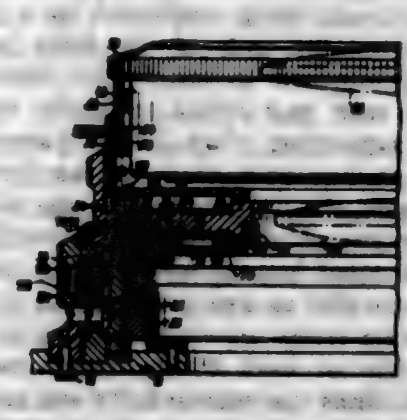


1. In a photographic lens shutter, the combination of a releasable shutter tensioning ring, a flash contact device including a flash retarding mechanism, a first settable means for rendering said flash contact device inoperative, a delaying mechanism for self exposures, said tensioning ring including a means for operating said retarding mechanism and another means for coupling said delaying means to said tensioning ring when said tensioning ring is released from tensioned condition, a second settable means for rendering said coupling means inoperative, and a setting ring having four positions and including two means cooperative with said settable means, respectively, so as to provide for any selective combination of operative or inoperative conditions of both said settable means.

2,897,739
PHOTOGRAPHIC CAMERA WITH INTERCHANGEABLE LENS MOUNT

Kurt Gebele, Munich, Germany, assignor to Hans Deckel, Munich, Germany, and Friedrich Wilhelm Deckel, Zug, Switzerland

Application January 13, 1956, Serial No. 559,058
Claims priority, application Germany January 5, 1955
9 Claims. (Cl. 95—45)



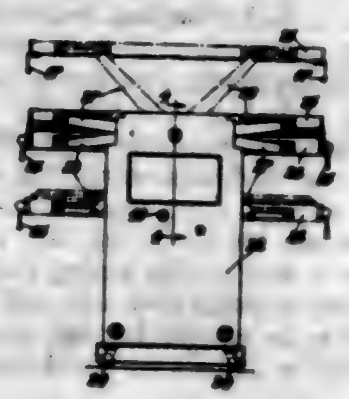
1. The combination with a photographic camera body having a front wall and an optical axis extending substantially perpendicular to said front wall, of a first ring member mounted on said front wall for rotation about said optical axis as a center and restrained against axial movement with respect to said front wall, a second ring member telescopically arranged with respect to said first ring member and in screw threaded engagement therewith, interengaging parts on said second ring member and said camera body for holding said second ring member against rotation while permitting axial movement thereof, so that when said first ring member is rotated with respect to said

spaced therefrom, one end of said cylindrical portion of said inner casing being secured to the end of said outer

mold, filling the mold with sausage meat from the closed

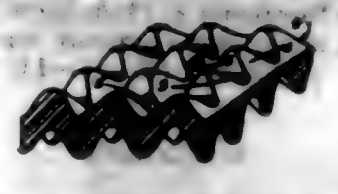
camera body the screw threaded engagement thereof with said second ring member will cause axial movement of said second ring member, a detachable lens mount, cooperating bayonet engagement parts on said lens mount and said second ring member for attaching said lens mount to said second ring member to be supported thereby, a focus adjusting member rotatable on said lens mount, and detachable connecting means for operatively connecting said focus adjusting member to said first ring member so that rotation of said focus adjusting member on said lens mount will cause corresponding rotation of said first ring member, thereby producing axial movement of said second ring member and said lens mount for focusing.

2,897,740
PHOTOGRAPHIC PRINTING FRAMES OR COPYHOLDERS
George Perrin, Crawley, England, assignor to Pictorial Machinery Limited, Crawley, England, a British company
Application June 5, 1956, Serial No. 589,429
Claims priority, application Great Britain June 23, 1955
3 Claims. (Cl. 95—73)



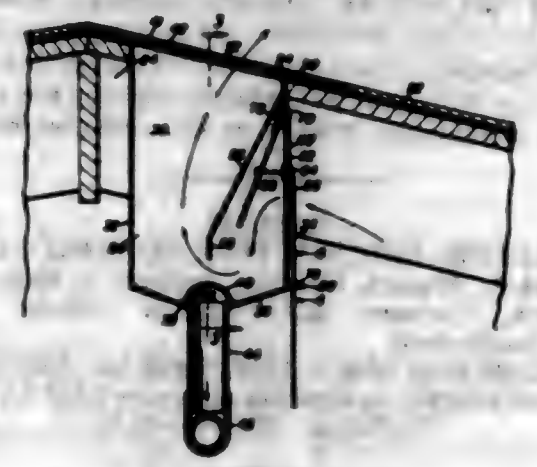
1. A photographic holding frame comprising in combination a first frame member including a transparent sheet, a second frame member including a support for supporting sheet material between the said transparent sheet and the said support, and two pairs of links constituting sole means interconnecting and supporting said frame members, the two links in each pair being arranged in X relation and being supported by a pivot at their inter-connection, the ends of the links being pivotally and slidably attached to the frame members whereby the links in each pair rotate relatively to one another about their supporting pivot as the frame members are moved towards and away from one another to close and open the frame, the pairs of links being disposed respectively at opposite sides of the frame members, the links being all of equal length, whereby the two frames are maintained parallel to one another, the frame members the links being freely movable relative to one another, and the weight of each of the frame members acting through the links to substantially counter-balance the weight of the other frame member, whereby the frame members may be manually moved apart and towards one another with little effort and remain automatically in any relative positions to which they are moved, at least one track arm rotatable about a pivot at the intersection of a pair of the links, means carried by one of the frame members and constrained by the track arm for movement along a direction radial to the axis of that pivot, and releasable means for locking the track arm against movement about that pivot and with the said direction vertical, thereby to maintain the frame members horizontal during closing and opening of the frame.

2,897,741
VENTILATOR COVER
Hans A. Marais, Dayton, Ohio
Application March 19, 1957, Serial No. 647,106
14 Claims. (Cl. 98—1)



1. An air ventilating structure including, a plurality of sheets of flexible impermeable material joined at their edges to form a bag-like enclosure, air inlet means for said enclosure, said sheets being further connected intermediate their edges at spaced intervals, a network of intercommunicating channels formed in the surface of said enclosure and spaced apertures defined in one outer sheet, said apertures being formed in groups at least a portion of which exit in said channels to insure complete ventilation of the body covered.

2,897,742
ROOF VENTILATOR
Jake R. Rybura and Charles F. Bonner, Pine Bluff, Ark.
Application August 19, 1957, Serial No. 679,007
4 Claims. (Cl. 98—42)



1. In a flush roof ventilator, the combination of a box including a perforate top wall, a plurality of side walls and a sloped bottom provided with a water drain opening a marginal frame provided on said top wall for mounting the ventilator in a roof opening flush with the outer surface of a roof, one side wall of said box having an air passage therein, an openable closure for said air passage, and an inclined baffle plate provided in said box and having its upper edge secured to said one side wall above said air passage, said baffle plate extending downwardly and inwardly from said one side wall and having its lower edge disposed below the air passage and above said drain opening.

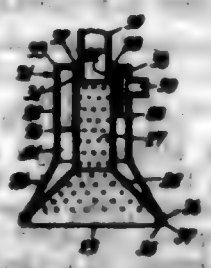
2,897,743
SUCTION NOZZLE
Israel H. Marantz, Forest Hills, N.Y., assignor to Columbia Cable & Electric Corporation, a corporation of New York
Original application March 26, 1952, Serial No. 278,553. Divided and this application February 7, 1956, Serial No. 564,001
1 Claim. (Cl. 98—115)

As an article of manufacture, a suction nozzle comprising an outer casing having a cylindrical portion closed at one end with an outwardly flaring portion at its other end defining a mouth, an inner casing having a cylindrical portion of smaller diameter than the cylindrical portion of the outer casing and axially aligned therewith and

with said synchronizer adjusting member.

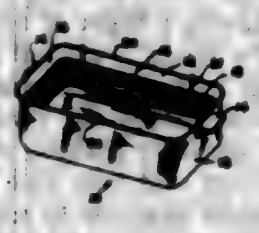
when said first ring member is rotated with respect to said

spaced therefrom, one end of said cylindrical portion of said inner casing being secured to the end of said outer casing, said cylindrical portion of said inner casing having an outwardly flared portion at the other end thereof defining a mouth, the latter being secured to the mouth of the outer casing to provide a seal therebetween, said inner casing having a plurality of perforations distributed over



substantially the entire wall surface thereof, said outer casing having a gas inlet port leading into the chamber defined between said inner and outer casings, a baffle plate positioned in said chamber between said inner and outer casings and aligned with said gas inlet port to deflect the gas from said inlet port away from the opposed portion of the inner casing, said closed end of said outer casing having a port leading into the inner casing.

2,897,744
MARGINAL CONTAINER FOR HOUSEHOLD ROASTER
Francis B. Crowley, Grosse Pointe Park, Mich.
Original application January 21, 1954, Serial No. 405,285, now Patent No. 2,849,945, dated September 2, 1958. Divided and this application March 14, 1958, Serial No. 721,410
2 Claims. (Cl. 99—339)



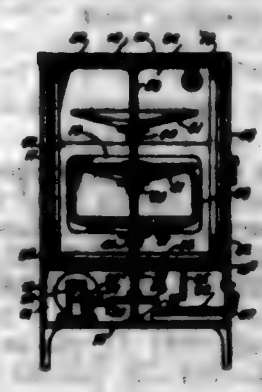
1. In combination with a main food cooking vessel open at the top thereof, the upper edge thereof defining a rim, a supplemental food container removably disposed within the vessel at a level below the rim and at a distance above the bottom of the vessel, said supplemental food container comprising connected spaced opposed side food receiving units, each unit including a bottom wall and spaced inner and outer side walls extending upwardly from the bottom wall, the inner walls of said units being spaced from each other to provide a central opening, permitting access to and inspection of the food in the bottom of the main food cooking vessel, the area of said opening being greater than the area of the supplemental food container, said units having openings formed therein, permitting the vapors from the food being cooked in the main vessel to permeate the food into the supplemental food container, and suspension hooks extending upwardly from the upper edge of the outer side walls of said supplemental food container engaging with the rim of the main food cooking vessel.

2,897,745
ROTARY MOLD FOR SAUSAGE
Bill Nichols and Richard W. Ruth, Waterloo, Iowa, assignors to Ruth Packing Company, Waterloo, Iowa, a corporation of Iowa
Application January 16, 1957, Serial No. 634,473
17 Claims. (Cl. 99—427)

16. The method of molding sausages of uniform weight comprising the steps of enclosing one end of a hollow mold, filling the mold with sausage meat from the closed end to provide a uniform emulsion density throughout the mold, enclosing the other end of the hollow mold,

heating the mold to cure the sausage meat therein, opening at least one enclosed end of the mold, and ejecting the cured sausage from the mold.

2,897,746
COMBINATION COOKER AND WARMER
Clair E. Hilgers, Dallas, Tex.
Application June 7, 1956, Serial No. 590,843
5 Claims. (Cl. 99—443)

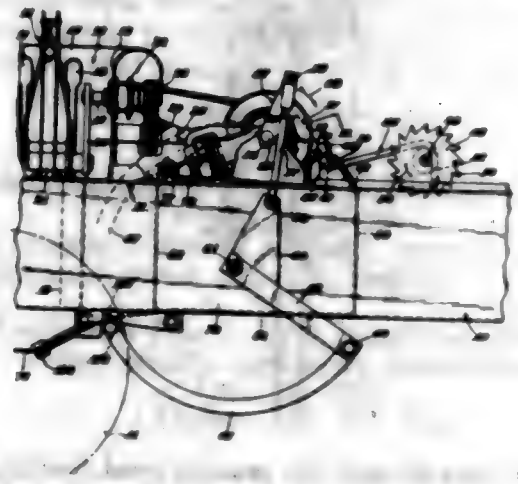


1. A broiler comprising: A cabinet having an upper oven compartment, a door providing access to the interior of the oven compartment, a lower compartment disposed below said oven compartment, a vertical shaft extending from the lower compartment upwardly into the oven compartment, means in the lower compartment for rotating said vertical shaft, and a plurality of shallow coniform trays supported on said vertical shaft and removable laterally from said shaft through said door; a drain pan disposed between the lower compartment and the oven compartment to receive drippings from food cooked on said trays, and a removable drip pan disposed in the lower compartment for receiving fluids from the drain pan, said drain pan having a drain pipe extending into the lower compartment.

2,897,747
WIRE TWISTER FOR BALERS
Patrick L. May, Memphis, Tenn., assignor to International Harvester Company, a corporation of New Jersey
Application November 2, 1956, Serial No. 620,083
10 Claims. (Cl. 100—4)

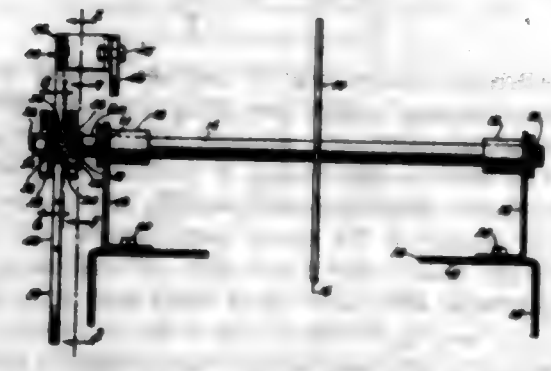
1. A wire twister for balers having a bale forming chamber, a source of wire supply, needle means on one side of said bale-forming chamber adapted to carry a

strand of wire across the bale forming chamber, means gripping said strand of wire on the side of the bale forming chamber opposite the needle means, spiral hook means spaced from said means gripping said strand and having the strand of wire hooked thereover, means for compressing material to be baled in said bale forming chamber against said strand crossing the chamber and causing the strand to be extended by pulling from the source of wire supply, means to actuate the needle means when a bale of desired length has been formed, said



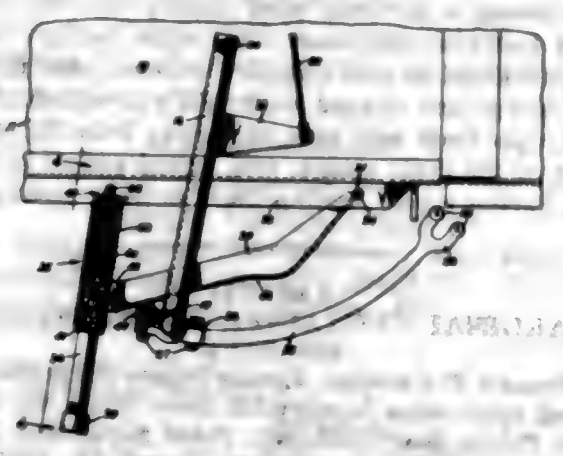
needle means carrying a looped strand across the bale forming chamber and laying the inner portion of said looped strand into said spiral hook means and said means gripping the wire strand, means intertwisting three portions of wire strand in an inline twist, means rotating said spiral hook means to strip said twist and to successively hold the outer of said looped portions of strand carried by the needle means out of the presently made twist and to then drop it into the spiral hook means to form part of the succeeding twist.

2,897,748
HAY BALER
Edwin B. Nolt, New Holland, and Eugene J. Haupt, Lancaster, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Application March 26, 1957, Serial No. 648,526
3 Claims. (Cl. 100—4)



1. In an automatic hay baler, a bale case through which bales are progressively moved as they are formed, a shaft, a metering wheel fixedly mounted on said shaft and projecting into said bale case, said shaft and metering wheel being rotatable responsive to bale movement, a movable trip arm, a drive wheel mounted on said shaft and engaging said trip arm, means connecting said drive wheel to said shaft whereby the drive wheel may rotate with the shaft and impart movement to said trip arm and may over-run said shaft, said last named means comprising a pair of cup-shaped members fixedly mounted on said shaft, a spacer separating said members, said drive wheel being freely rotatable on said spacer, one member of said pair of members having an arcuate slot concentric to the rotational axis of said shaft, a pin on said drive wheel projecting through said slot, said drive wheel being rotatable relative to said shaft until the pin thereon assumes a position in one end of said slot on rotation of the shaft, being free, however, to over-run the shaft an amount equal to the movement of said pin to the end of said slot opposite said one end, and a torsion spring interposed between said drive wheel and one of said pair of members operative to store energy when said drive wheel over-runs to return the drive wheel to starting position.

2,897,749
HAY BALER
Wilhelm Vutz, New Holland, and Alexander A. Mittenbergs, Lancaster, Pa., assignors to Sperry Rand Corporation, New Holland, Pa., a corporation of Delaware
Application December 21, 1956, Serial No. 629,993
3 Claims. (Cl. 100—19)



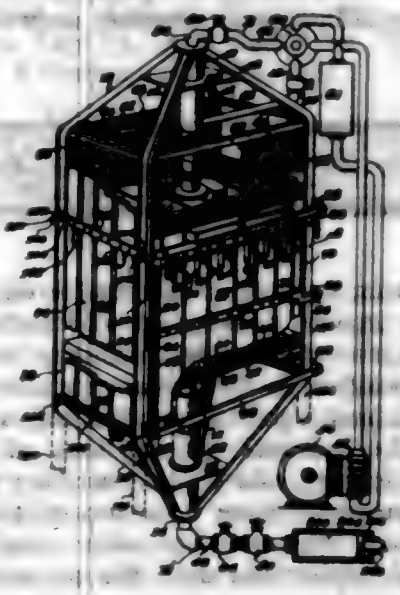
1. An improvement in a hay baler having a bale case, a yoke straddling said bale case and pivotally connected thereto, said yoke having a bight at one side of said bale case on which needle means is carried and having a position of rest wherein said needle means is disposed outside of the bale case, means for pivoting said yoke in one direction to an operative position wherein said needle means projects through said bale case and then pivoting the yoke in the opposite direction to return it to said position of rest, and means for braking the return of said yoke, the improvement residing in said braking means which comprises a lever having one end pivotally connected to said bale case and extending angularly outwardly therefrom into the path of movement of said yoke, means for urging the end of said lever opposite said one end outwardly comprising a rod having one end pivoted to said bale case, a sleeve slidable on said rod, a spring interposed between said one end of said rod and said sleeve, and means for connecting said opposite end of said lever to said sleeve, and stop means on the opposite end of said rod and engageable with said sleeve for limiting the outward sliding movement thereof and thereby the angular extension of said lever when said yoke is in said operative position, said yoke when returning from said operative position to said position of rest engaging said lever and pivoting it about said one end toward said bale case against the resistance of said resilient means, said resilient means on pivoting of said lever storing energy for assisting in initiating the next movement of said yoke toward operative position.

2,897,750
COTTON PRESS
Francis M. Wagnon, Berger, Tex.
Application May 1, 1956, Serial No. 581,919
7 Claims. (Cl. 100—244)

1. A cotton press comprising a press box having pairs parallel sides, said press box having opening means, a reciprocating primary pressing member having cover

roller, said reciprocating drive means comprising an end- ing line formed by the gravel

means, a pressure responsive secondary pressing member movable in said box on one side of said opening means, said reciprocating primary pressing member being movable from a limit of movement on the opposite side of said opening means to a point on the said one side of said opening means whereby to continuously press the cotton in thin sheets, a hydraulic means for causing reciprocation of said primary pressing member, and for operating said secondary pressing member, and bleed valve means operatively associated with said secondary pressing member, said press box including frame members having inclined sides at the opposite ends of the said press box, said

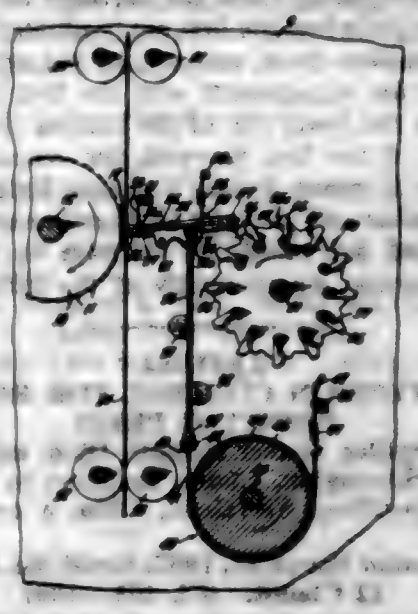


frame members extending from the pairs of sides of said press box toward each other and toward an extension of the central axis of said press whereby said inclined sides form, substantially apexes at the opposite ends of said box, means for supporting said hydraulic means on said inclined sides substantially adjacent each apex, said last named means including means for supporting said hydraulic means for said primary pressing member solely by said inclined portions at one of the ends of said press box and means for supporting said hydraulic means for said secondary pressing member solely by the inclined portions at the other end of said press box.

2,897,751
DATING DEVICE
William F. Lidke, Kansas City, Mo.
Application August 1, 1956, Serial No. 601,456
2 Claims. (Cl. 101—29)

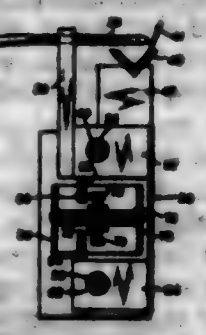
1. A dating device including concentric ring members, one having a portion backing the other, dies on the ring members adapted to be selectively registerable upon turning one of the ring members relative to the other, means for retaining the ring members in concentric relation, said backing ring member having scallops aligning with the dies on inner and outer peripheries thereof and said other ring member having scallops aligning with the dies thereon for registering with the scallops of the backing ring member to align the dies when turning one of the ring members with respect to the other.

2,897,752
HIGH SPEED PRINTING APPARATUS
Gustav V. A. Mahurez, Binghamton, and Richard H. Harrington, Vestal, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application December 28, 1956, Serial No. 631,168
7 Claims. (Cl. 101—93)



1. In a high speed printer, a rotating type wheel having a plurality of characters spaced along its periphery, a rotating element synchronized with the type wheel, a plurality of hammers pivoted on the rotating element and carried along a circular path, a firing pin assembly including a firing pin slidably mounted in a movable carrier resiliently biased to a position in which one end of the pin is adjacent to the type wheel and its other end is adjacent to the circular path, the firing pin being adapted to urge data receiving means against the characters, and means to shift the carrier and place the other end of the firing pin in the circular path at a selected time to receive a hammer blow and print a selected character on the data receiving means.

2,897,753
DAMPENING APPARATUS FOR OFFSET PROCESS PRINTING PRESSES
Leonard G. Ernlager, Brooklyn, N.Y.
Application January 17, 1958, Serial No. 709,703
1 Claim. (Cl. 101—148)



In an offset printing press, a plate cylinder, an offset printing plate removably mounted thereon, an inking roller mounted for inking engagement with said offset printing plate, and water feeding means situated adjacent the inking roller and adapted to feed water thereto, said water feeding means comprising a nozzle directed at the inking roller and an elevated water reservoir feeding into said nozzle, whereby the water contents of said reservoir are fed by gravity through said nozzle and against said inking roller, a carriage being provided to support said nozzle, and reciprocating drive means being operably connected to said carriage to cause it and the nozzle to move longitudinally of the inking roller in reciprocating fashion, whereby the water flow from said nozzle is directed against the entire effective length of the inking

series at that elevation, thereupon releasing the lower- pond within the shotshell immediately adjacent the body

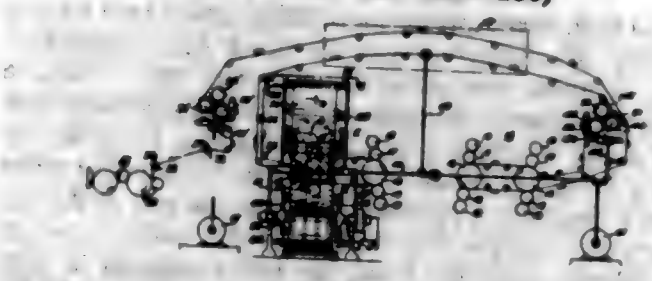
each end of the inking roller, said chain having upper and lower runs extending longitudinally of said inking roller, one of said sprockets being connected to rotary drive means to cause continuous movement of the endless chain, a first pin projecting laterally from said chain, a second pin projecting from the carriage for engagement with the first pin when the first pin is situated in the upper run of the endless chain, and a third pin projecting from the carriage for engagement with the first pin when the first pin is in the lower run of the endless chain, whereby engagement of the first pin with the second pin causes the carriage to move in one direction longitudinally of the inking roller and whereby engagement of the first pin with the third pin causes the carriage to move in the opposite direction longitudinally of the inking roller.

2,897,754

WEB TENSION CONTROL FOR ROTARY PRINTING PRESS

William R. Spiller, Shaker Heights, Ohio, and Thomas H. Johnson, Stonington, Conn., assignors to Harris-Intertype Corporation, Cleveland, Ohio, a corporation of Delaware

Application March 21, 1957, Serial No. 647,641
12 Claims. (Cl. 101—180)



1. In a web type printing press including press drive means, a device for feeding the web from a rotatably supported web roll to the printing cylinders of the press comprising a driving member engageable with the outer peripheral surface of the web roll to rotate the latter at the speed of the driving member, a floating roller, means connected to said floating roller and continuously urging the latter into engagement with the web with a constant force to tension the web, a differential gearing unit having an output member connected to said driving member to drive the latter and first and second input elements, the output member being driven at a speed dependent on the directions and speeds of rotations of said input elements, means for driving said first input element in timed relationship to the press drive means, an infinitely variable speed transmission having an output element and an input element and a control member for adjusting the ratio of the speed of the output element to the speed of the input element, means driving the input element of said transmission in timed relationship to the press drive means, means connecting the output element of said variable speed transmission to said second input element of the differential, and means connected to said control member and responsive in a continuous manner to the movements of said floating roller to vary the speed of said output element continuously in accordance with the movements of said floating roller and in a direction to oppose the movement of the floating roller.

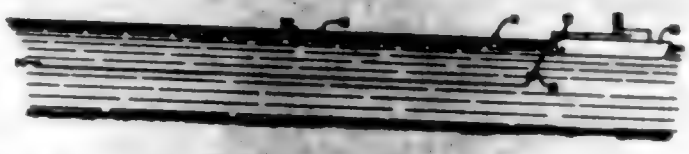
2,897,755

RING ACTUATED LOCKING ELECTRODE FOR A TOWED FIRING LINE

George M. Pavey, Jr., Dallas, Tex., assignor to Marine Research Company, Dallas, Tex.

Application May 21, 1958, Serial No. 736,835
17 Claims. (Cl. 102—16)

1. In a surveying system for seismic exploration of submerged areas from a vessel, the combination of a firexposed to the surrounding water near the trailing end thereof of generally cylindrical configuration, said electrode having a pair of diametrically disposed slots therein, a pair of resilient locking members secured to said electrode and movable within said slots from an initial locking position to a release position, said locking members each having a movable end portion and an arcuate central portion normally extending outwardly from the cylindrical contour of the electrode for moving the locking member to said release position as the central portion is moved inwardly from an initial position to substantial coincidence with the cylindrical surface of the electrode, a metallic contact member encircling said elec-



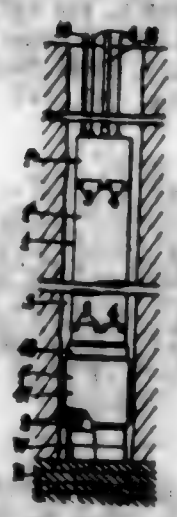
trode and having an annular surface therein for slideably engaging the arcuate portions of said locking members sufficiently to move the locking members momentarily to said release position as the contact member slides along said electrode, and a pair of substantially L-shaped projections on the movable end portions of said locking members for locking said contact member thereto when the locking members have been moved to said release position whereby the contact member remains locked by said L-shaped projections until the arcuate portions of said locking members are moved to said release position by a second contact member moving into operative engagement therewith as the second contact member slides along said electrode.

2,897,756

METHOD OF SINKING WELLS BY MEANS OF EXPLOSIVE CHARGES

Louis Berins, Buffalo, Maurice H. Sind, Depew, and Maurice J. Zublosk, Tonawanda, N.Y., assignors to Randel Tool Company, Inc., Buffalo, N.Y., a corporation of New York

Original application February 21, 1957, Serial No. 638,749. Divided and this application March 21, 1957, Serial No. 647,716
10 Claims. (Cl. 102—21)

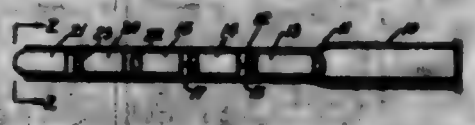


1. The method of sinking wells wherein there is a preformed well opening which extends to cap-rock or a rock stratum substantially equal in hardness to cap-rock, which utilizes explosive charges, including shaped charges, in a vertical series wherein the charges are in mutually adjacent relation and which includes a cycle of operations consisting sequentially of, initially lowering the series to a determined elevation above the bottom surface of the well opening which constitutes the target and supporting the

housing having a discharge passage leading from the ciprocating member to a relatively low pressure fluid to

series at that elevation, thereupon releasing the lowermost charge from the series and depositing it in operative relation to the target surface, moving the series downward through a single step in connection with the release of the lowermost charge so that the succeeding charge then becomes the lowermost charge and the series is maintained at the said determined elevation above the bottom surface of the well opening, and thereafter detonating the deposited charge.

2,897,757
GUN CARTRIDGE
Jacob I. Kulbeck, Roscoe, Ill.
Application July 15, 1955, Serial No. 522,361
3 Claims. (Cl. 102—39)

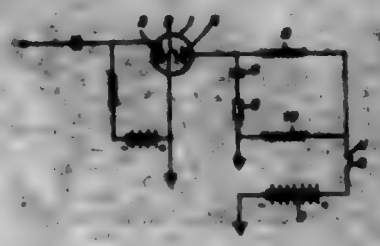


1. A cartridge comprising a casing having an open end adapted to receive an explosive charge, a barrel arranged in longitudinal alignment with respect to the open end of said casing and secured to the open end of said casing, a main projectile element positioned in said barrel and having one end supported in the open end of said casing, and a plurality of subsidiary projectile elements arranged in end to end spaced relation positioned in said barrel forwardly of said main projectile element and having a first subsidiary projectile element adjacent main projectile element, means engaging said main projectile element and including a rod-like element offset from the longitudinal axis of said barrel engaging said first subsidiary projectile element connecting said first subsidiary projectile element to said main projectile element for movement in a direction at an angle to the longitudinal axis of said barrel upon ejection of said main projectile element by the firing of the explosive charge in said casing, a second subsidiary projectile element being adjacent the first subsidiary projectile element, said means engaging said first subsidiary projectile element and including a rod-like element offset from the longitudinal axis of said barrel engaging said second subsidiary projectile element connecting said second subsidiary projectile element to said first subsidiary projectile element for movement in a direction at an angle to the longitudinal axis of said barrel opposite to that of said first subsidiary projectile element.

2,897,758
METALLIC SHOTSHELL
Charles R. Miller, Hamden, Morton L. Robinson, Woodbridge, and William B. Woosley, Hamden, Conn., assignors to Olin Mathieson Chemical Corporation
Application September 17, 1956, Serial No. 610,321
1 Claim. (Cl. 102—42)

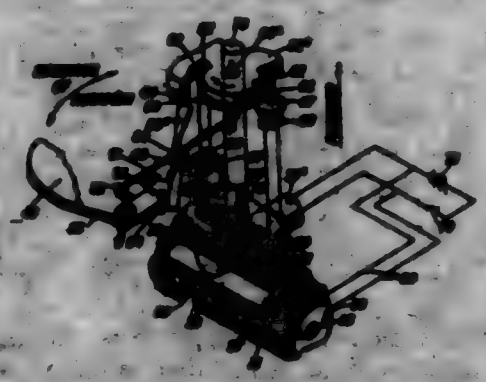
In combination, an aluminum shotshell having a cylindrical body and an integrally formed head portion defining a one piece structure; a generally tubular, open-ended partition member formed of resilient plastic material disposed within the shotshell immediately adjacent the body thereof and in the region generally occupied by a shot column, said member comprising a single sheet of material having opposed ends and furled into tubular form, said ends being in proximity to one another and free of physical attachment, said member being operative to protect the shot against deformation while emerging from said shotshell and from a shotgun and being further operative to unfurl and fall free of the shot column as it proceeds from the muzzle of the gun.

2,897,759
ELECTRICAL ARMING CIRCUIT
Wilbur S. Hinman, Jr., Falls Church, Va., assignor to the United States of America as represented by the Secretary of the Navy
Application January 6, 1944, Serial No. 517,220
1 Claim. (Cl. 102—70.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)



In an electrically operable fuze having associated electrically operable means for initiating the detonation of the fuze, a thyratron having an anode, a cathode, and a grid, said grid being adapted to be connected to the associated electrically operable means, a first circuit comprising a capacitance and detonator connected in series, a second circuit comprising a resistance, a switch, and a source of substantially steady direct current connected in series, said circuits being connected in parallel between the anode and cathode of the thyratron, and a bleeder resistor of high resistance shunting the capacitance so that no potential can be built up on said capacitance before said switch is closed, whereby the detonator is prevented from firing until after a fixed, predetermined period of time has elapsed after said switch is closed.

2,897,760
SAFETY DEVICE
Lewis M. Mott-Smith, Houston, Tex., assignor to the United States of America as represented by the Secretary of the Navy
Application April 2, 1943, Serial No. 481,643
1 Claim. (Cl. 102—84)



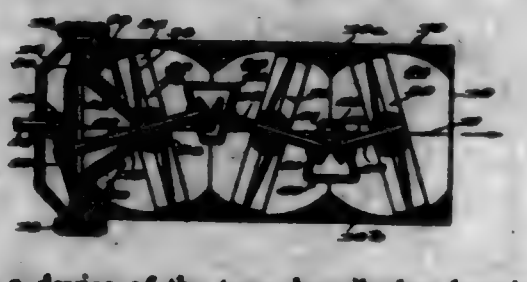
A safety device for use in rotary projectiles, said device comprising a housing, clock-work mechanism in said housing, said mechanism including a driving element operable by centrifugal force, a locking rod normally bearing against a portion of said element and thus being prevented from shifting but being released when the drive element has moved a predetermined amount in driving the remainder of the clock-work mechanism, an electrically operable detonating squib in the housing, the

evacuation passage responsive to the flow of pump fluid

stantially solid cylindrical rotatable shaft member, a

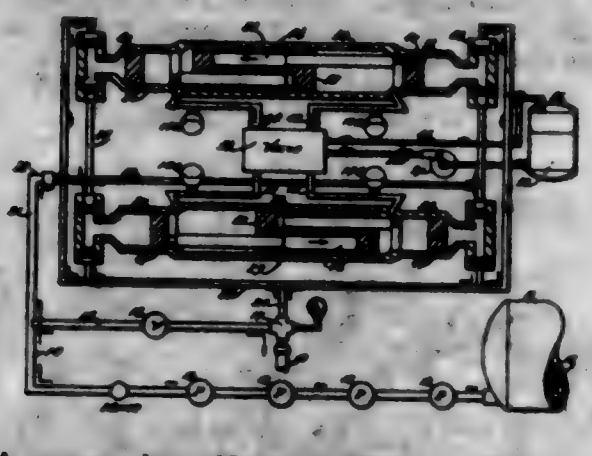
housing having a discharge passage leading from the squib, a gate normally closing said passage but movable by centrifugal force to open the latter, said gate normally being locked against such motion by the locking rod, resilient means urging the said rod away from said gate and against the driving element to cause the rod to shift after the said element has moved out of its way, and a conductor short-circuiting the squib, said conductor being located adjacent the gate and in the path of motion of the latter, whereby the conductor is mechanically disrupted by the gate upon actuation of the said gate.

2,897,761
NUTATING PROPELLER PUMP
Robert Roy, Jr., Bradford, Pa., assignor of one-third to Virginia Burdick Roy and one-third to Rosa Roy Lynch, both of Bradford, Pa.
Application December 30, 1955, Serial No. 556,529
19 Claims. (Cl. 103—6)



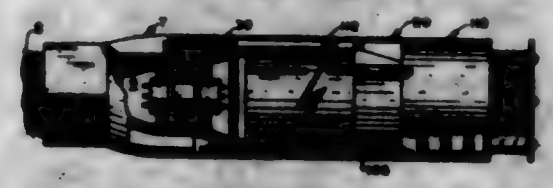
1. In a device of the type described, a housing having a longitudinal axis and a pair of communicating chambers arranged successively along said axis, a propeller in each of said chambers, a drive shaft for each propeller, the propellers extending radially from their respective drive shafts, said drive shafts extending into the respective chambers at an angle to said axis, and adjacent ends of said shafts being coupled rotatively, and means coupled to one of said shafts for rotating it about its axis and simultaneously nutating said shaft about a point in said chamber.

2,897,762
PRESSURE INTENSIFIER
Irving S. Heuvener, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Application December 26, 1956, Serial No. 629,670
15 Claims. (Cl. 103—52)



1. A pressure intensifier comprising a cylinder for relatively low pressure fluid, a member mounted within said cylinder for free reciprocating movement axially thereof, said member being provided with axial bores opening from both ends thereof, corresponding tubes relatively fixed in both end walls of said cylinder and extending respectively into corresponding bores of the axially movable member, said tubes and bores together constituting high pressure fluid cylinders and pistons, means for imposing the pressure of the fluid in said high pressure fluid cylinders on an energy absorbing medium, and means for selectively subjecting the respective ends of the reciprocating member to a relatively low pressure fluid to cause reciprocating movement thereof, the movement of said member in one direction pressurizing fluid in one set of bores and tubes and movement of said member in the opposite direction pressurizing fluid in another set of tubes and bores.

2,897,763
SEPARABLE MOTOR-PUMP CONNECTOR
George W. Wright, Yoder, Ind., assignor to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana
Application June 17, 1957, Serial No. 666,048
24 Claims. (Cl. 103—87)

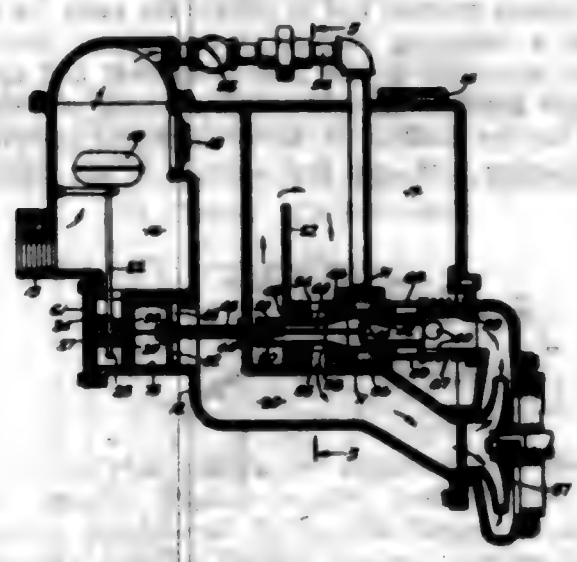


1. A liquid passage and electrical conductor connector structure comprising first means, including a submersible motor-pump unit, having a central axis and defining a first, substantially axially directed, open ended discharge passage for liquid under pump pressure and defining a junction cavity having an end opening adjacent that of said passage, a first electric connector element mounted on said first means, in said opening, and projecting substantially axially therefrom, a connector body, having a central axis, defining a liquid discharge cavity at one end and defining a junction chamber having an axial opening at the end opposite from said cavity, said body having means at one end for sealingly connecting said liquid cavity in communication with a delivery pipe and having means for sealingly connecting said chamber in communication with an electric conduit, a second electric connector element mounted on said body, in said chamber opening, and projecting substantially axially from said chamber, said body defining a substantially axially directed second liquid passage extending from said discharge cavity, past said chamber and having an axially directed opening adjacent said second element, axially extending means on said body and said first means for aligning said connector elements for endwise engagement and said first and second passages for endwise communication, means for axially drawing together and fastening said connector body and said first means to hold said connector elements engaged and said passages in communication and means disposed to seal off said connector elements from the liquid in said passages when said connector body and said first means are fastened together.

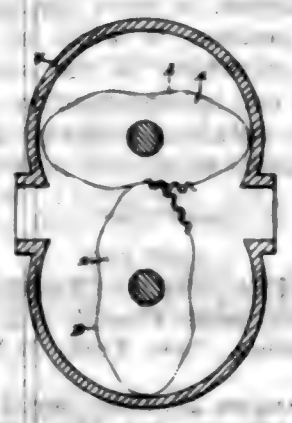
2,897,764
PUMP PRIMING ARRANGEMENT
Herbert E. Tracy, Alhambra, Calif., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application February 3, 1956, Serial No. 563,327
16 Claims. (Cl. 103—113)

10. In a pump having a casing, inlet and outlet chambers in said casing, a pump chamber in said casing, flow controlling means including a multiple valve housing in said casing, a barrel shiftably disposed in said valve housing for movements between first and second position, and means defining an evacuation passage extending from said inlet chamber to said valve housing, means for directing the flow of pump fluid through said barrel into said outlet chamber, means normally maintaining said barrel in said first position when the fluid is below a given level in said chamber, said barrel having means for effecting the suction of gas from said inlet chamber through said

evacuation passage responsive to the flow of pump fluid through the barrel, said barrel and said valve housing having means forming a passage for the flow of fluid from said outlet chamber back to said pump chamber when said barrel is in said first position, means for shifting said barrel to the second position responsive to the fluid level in one of said chambers, and said barrel and said flow directing means having ports registered when said barrel is in said second position for establishing fluid communication between said pump chamber and said outlet chamber.



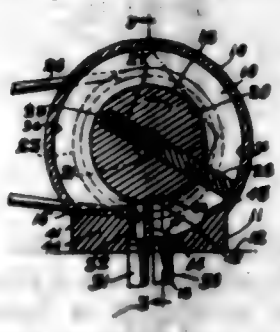
2,897,765
DRIVING APPARATUS COMPRISING MODIFIED ELLIPTIC GEAR WHEELS
Akitoshi Kitano, Sakyo-ku, Kyoto, Japan
Application December 6, 1955, Serial No. 551,450
Claims priority, application Japan December 7, 1954
4 Claims. (Cl. 103—126)



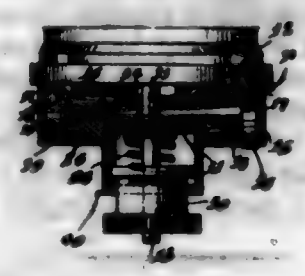
1. In a driving pump, the combination of a first gear and a second gear both mounted for rotation about their centers and operatively positioned with their teeth in mesh for all angular positions; each of said gears being of modified elliptical form such that the pitch line in the region of the minor axis is closer to the center than a true ellipse and the pitch line in the region of the major diameter is closer to the center than said ellipse; said first and second gears functioning as impellers to drive fluid through said pump.

2,897,766
HIGH PRESSURE PUMP
Roy E. Randebaugh, Scott, Ohio
Application October 22, 1956, Serial No. 617,385
3 Claims. (Cl. 103—136)

1. A high pressure pump comprising, in combination, a closed hollow substantially cylindrical casing having an inlet side and an outlet side and formed with a solid rectangular base portion for supporting the same, a substantially solid cylindrical rotatable shaft member, a pair of circular bearing plates rotatably mounting said rotatable shaft member at opposite ends thereof, said plates forming the ends of said casing, pulley means connected externally from one end of said rotatable shaft member for driving the same, an abutment at the bottom of said casing on the interior thereof embodying a vertical wall and having an outwardly and downwardly extending cam surface which joins at its outer end to the interior wall of said outlet side of said casing, the outer end of said cam surface and the interior wall of said casing defining a smooth surface, the inner end of said cam surface defining a sharp inner edge with said vertical wall and extending the entire length of the casing, said sharp inner edge of said cam surface being in slidable contact with said rotatable shaft member, said abutment having an outlet opening adjacent to the vertical wall thereof extending downwardly therethrough with an outlet conduit connected thereto, an inlet conduit communicating with the interior of said casing on the inlet side thereof and located adjacent to the vertical wall of said abutment, said rotatable shaft member having a transverse rectangular slot extending through one longitudinal side thereof and terminating short of the opposite side thereof, said slot extending the entire length of said casing, a rectangular piston plate slidably mounted within said rectangular slot for lateral movement therewithin, spring means carried within said slot by said rotatable shaft member for urging said piston plate outwardly against the curved interior surface of said casing, the outer longitudinal edge of said piston plate being curved so as to ride the curved interior surface of said casing and to move the fluid thereahead as said rotatable member rotates to force the fluid outwardly through said outlet opening and outlet conduit and to be entirely retracted within said slot at said inner edge as it rides said cam surface to create a reduced pressure and to draw the fluid inwardly through said intake conduit.



2,897,767
TUBE FLEXING PUMP
Nat Cordis, Silver Lake, Wis.
Application December 31, 1956, Serial No. 631,847
6 Claims. (Cl. 103—149)



1. An apparatus comprising a body having a substantially cylindrical cup, an annular groove in the base of said cup adapted to accommodate a loop of flexible tubing, a drive shaft extending axially through said cup, a pressure plate carried by the said shaft and comprising a removable cover for the said cup, a roller carried by the periphery of said pressure plate, said roller projecting beyond the planar surface of said pressure plate, a com-

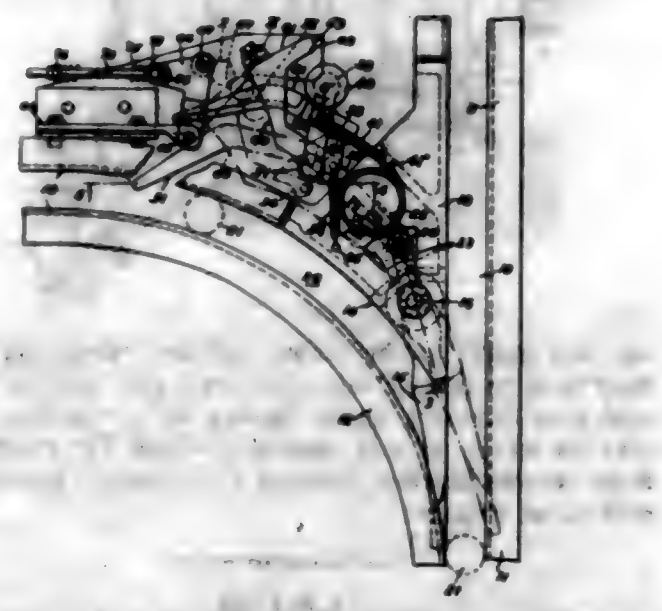
pression ring interposed said groove and said pressure plate, said roller contacting one surface of said compression ring, means removably carried by said shaft maintaining said pressure plate in a plane perpendicular to the said shaft and for axially adjusting the position thereof with respect to the base of said cup, and motor means driving the said shaft to revolve the said pressure plate and hence said roller.

2,897,768
DEEP WELL PUMP
James A. Perry, Taft, Calif.
Application May 18, 1956, Serial No. 585,824
2 Claims. (Cl. 103—179)

1. In a deep well pump, the combination of an elongated pump body to be submerged in liquid in a well bore and including a pair of relatively axially reciprocable parts, one of said parts comprising an axial outer sleeve open at one end and closed at the other end, said sleeve comprising the outer wall of said pump body, the other part comprising a cylindrical inner sleeve member extending concentrically into said outer sleeve through said open end of the latter, said inner sleeve being radially spaced from said outer sleeve so as to provide an annular space between said sleeves, the open end of said outer sleeve having an internal annular shoulder for restricting flow of liquid from one end of said space and the inner end of said inner sleeve member having an external annular shoulder for restricting flow of liquid from the other end of said space, said space between said shoulders forming a first chamber in the pump body and the interior of said outer sleeve inwardly of said inner sleeve member defining a second chamber in said pump body, said outer sleeve having ports opening to said respective chambers through which liquid in the well bore is alternately drawn into and expelled from said chambers to the exterior of the pump body when said parts are relatively reciprocated with said body submerged in the liquid, and cooperating liquid pumping means on said parts independent of said chambers, operable by relative reciprocation of said parts and including a suction opening on one part and a discharge opening on the other part.

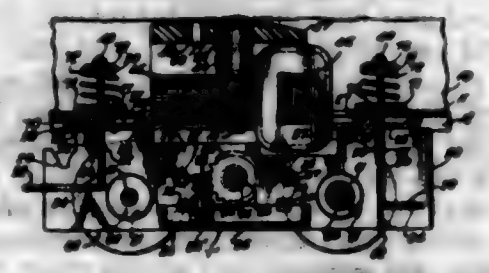
2,897,769
MULTIPLE CHOKE SWITCH MECHANISM
Leonard J. Bishop and Robert Hasse, Birmingham, Mich., assignors to Mechanical Handling Systems, Inc., Detroit, Mich., a corporation of Michigan
Application November 6, 1957, Serial No. 694,865
15 Claims. (Cl. 104—88)

1. A conveyer and switch mechanism to control the selective travel of objects through a switch zone, comprising rail means acting on said objects to guide the same to and from said switch zone for selective switching at said zone, a switch at said zone movable between positions for switching and non-switching action on said objects, a first control element movable between first and second positions to respectively hold said switch in a non-switching position and to release the same for movement to a switching position, a first signal device operatively connected to said control element and actuable by objects approaching said switch to move said element to said second position, a second movable control element coacting with said first element in the control of



said switch, said switch having a portion engageable by said second control element in two different switch holding positions of the latter in which said second control element holds the switch in non-switching position, a second signal device actuable by switched objects, means operatively connecting said second signal device with said second control element to move the latter to and from a switch release position, in which said second control element permits movement of the switch to switching position, and said two holding positions, and means moving said switch to switching position upon movement of both control elements to release position.

2,897,770
TOY ELECTRIC LOCOMOTIVES
Joseph L. Bonanno, South Orange, N.J., assignor to The Lionel Corporation, New York, N.Y., a corporation of New York
Application August 22, 1956, Serial No. 605,586
8 Claims. (Cl. 105—49)

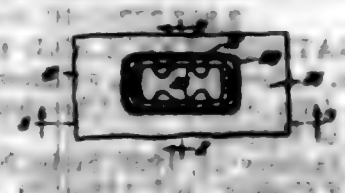


1. In a toy locomotive, a platform having depending sides and two opposite coaxial arcuate slots centrally disposed with respect to the platform sides each extending laterally in an arc on each side of the locomotive longitudinal axis, a wheeled truck having a horizontal plate received between the platform sides which limit movement of the unit and also having two upwardly extending members entering the slots said members being of a size to permit movement along said slots and having widened portions, and spring means biased between the platform and the widened portions of the upwardly extending mem-

of said unit comprising a blend of fluid silicones within is rotated, said annular block provided with bores

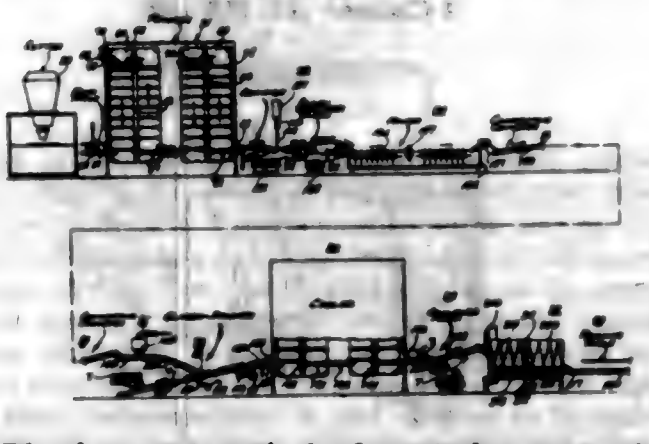
bers to hold the horizontal plate against the lower surface of the platform whereby the upwardly extending members move laterally within said slots and the propulsion unit may swing about a vertical axis.

2,897,771
LADING TIE ANCHORS
Malcolm S. Johnson, Flossmoor, Ill., assignor to Illinois Railway Equipment Company, Chicago, Ill., a corporation of Illinois
Application June 10, 1957, Serial No. 664,832
11 Claims. (Cl. 105—369)



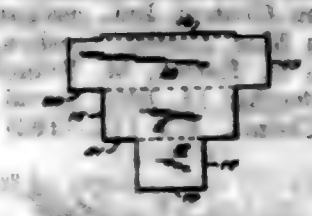
5. In a railway gondola car construction, a lower upwardly opening channel member with its side flanges underlying and secured to the side flanges of an upper downwardly opening parallel channel member to form one of the top side chords of the car, the web portions of said channel members having generally rectangular registering oblong apertures, tube means having a generally rectangular oblong cross section extending between each pair of registering apertures for receiving therethrough either a lading tie rod or a flexible lading tie, means holding each tube means in position between a pair of registering apertures, and a pair of ribs extending inwardly from the longer sides of each tube means intermediate the ends thereof providing a generally circular section midway said ends for fitting closely with a lading tie securing rod having a cylindrical cross section and laterally supporting the same, the upper and lower ends of the ribs of each pair tapering from a maximum height at the mid section of each tube means to the upper and lower ends thereof.

2,897,772
METHOD AND APPARATUS FOR THE PRODUCTION OF COMESTIBLES
Herbert T. Hunter, Catonsville, Md., assignor to DCA Food Industries Inc., New York, N.Y., a corporation of New York
Application September 30, 1955, Serial No. 537,763
8 Claims. (Cl. 107—54)



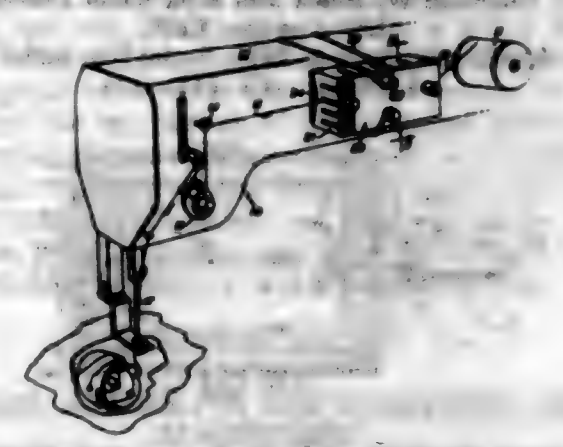
1. The improved method of producing yeast-raised baked products, comprising depositing a plurality of cut pieces of yeast-containing dough upon a first tray, feeding said loaded tray into a proofing zone, intermittently transporting said tray through said proofing zone, maintaining the temperature and humidity of said proofing zone within predetermined limits whereby to effect the controlled raising of said pieces of dough, separating said pieces of dough from said tray, transporting said pieces of dough continuously through a cooking zone, depositing said cooked pieces of dough upon a second tray, introducing said second tray carrying said cooked pieces of dough into a cooling zone, and intermittently transporting said second tray of cooked pieces of dough through said cooling zone maintained at predetermined temperature and humidity conditions, and wherein said pieces of unraised dough are placed upon a perforated cloth which, in turn, is carried upon said first tray through said proofing zone, said cloth being separated from said first tray after leaving said proofing zone and said pieces of dough being thereafter separated from said cloth.

2,897,773
SHINGLE
Herbert Abrahams, New York, N.Y., assignor to The Ruberoid Co., New York, N.Y., a corporation of New Jersey
Application January 29, 1954, Serial No. 407,837
6 Claims. (Cl. 108—7)



1. A shingle adapted to be laid in courses with like shingles to provide a roof covering of at least two thicknesses of material at all points, having substantially T-shaped exposure patterns, said shingle having a rectangular head portion, a rectangular shank portion, and an intermediate portion, all three of the same vertical height, the head and shank portions each respectively having straight unbroken vertical parallel side edges, each of said edges consisting of a single continuous straight line, the width and area of the head portion being substantially equal to the combined width and area, respectively, of the intermediate and shank portions, substantially the entire intermediate and shank portions being exposed and the entire head portions being covered when said shingle is laid in courses with like shingles, whereby the total area of the shingle is only substantially twice the exposed area thereof.

2,897,774
METHOD AND ARTICLE FOR LUBRICATING SEWING MACHINES AND THE LIKE
William W. Alexander, Atlanta, Ga., assignor to The Distributor's Group, Inc., Atlanta, Ga., a corporation of Georgia
Application February 4, 1958, Serial No. 713,172
2 Claims. (Cl. 112—256)



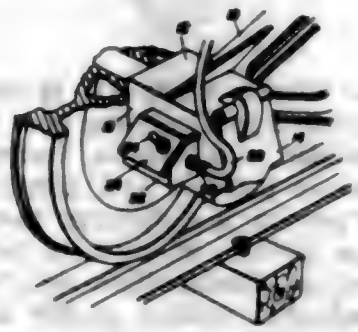
1. As an article of manufacture, usable in association with moving thread passing through sewing machines and wherein thread-contacted elements of such machines are lubricated by the moving thread itself: a liquid silicones lubricant carrying unit removably adapted to selective positioning on such machine between a source of thread supply and its station of thread tensioning, the silicones

selective travel of objects through a switch zone, com-

and the widened portions of the upwardly extending mem-

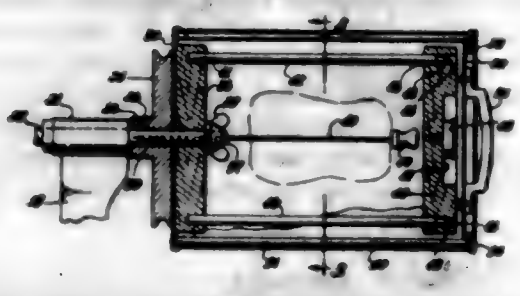
of said unit comprising a blend of fluid silicones within the range of 200–350 centistokes viscosity, said blend having substantial percentages respectively of fluid silicone of a viscosity of approximately 200 centistokes and fluid silicone of a viscosity of approximately 350 centistokes, opposed silicones saturated thread lubricant pads within the unit, said unit including means for confining the pads whereby the pads may envelop and coat the thread without soaking the said thread, said means comprising a holder for the pads including a cover therefor, and said holder including at least one thread inlet aperture and at least one aligned thread outlet aperture, both said apertures being disposed adjacent opposed surfaces of the pads, means on the container facilitating selective positioning thereof upon the machine as aforesaid.

2,897,775
HOTBOX SIGNAL
William H. Theesn, Goshen, Ind., assignor of forty per-cent to Carolyn Mae Theesn, Goshen, Ind., and ten percent to John R. Rarick, St. Francisville, La.
Application September 16, 1958, Serial No. 761,348
6 Claims. (Cl. 116—102)



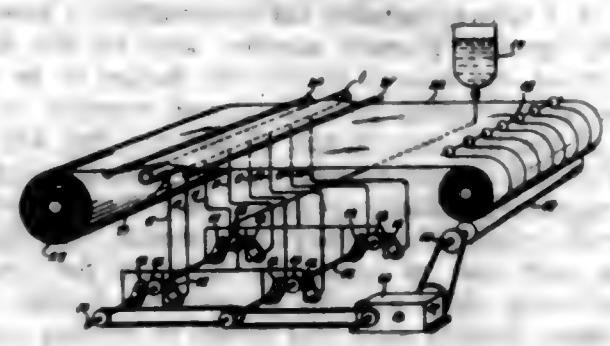
1. A safety attachment for a journal box to detect a rise in temperature in the journal box beyond a predetermined level, said safety device comprising a heat sensing element, a valve, means for connecting said valve to a source of air under pressure, a rotary cam operated by said heat sensing element and operatively connecting said sensing element to said valve to actuate said valve when said heat sensing element detects a heat condition in the journal box beyond said predetermined level and thereby opens said valve to admit air to pass through said valve, and signal producing means operatively connected with said valve and actuated in response to the passing of air through said valve.

2,897,776
DUSTER
Emerson W. Block and Zike Alvin Ferrel, Los Angeles, Calif.
Application July 1, 1957, Serial No. 669,272
1 Claim. (Cl. 118—13)



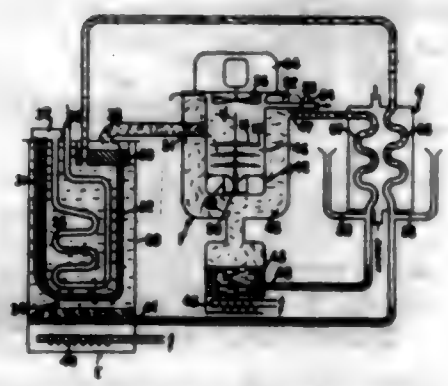
A duster as disclosed, including an imperforate drum having a base closing one end thereof and a removable cover for closing the opposite end, an annular block within said drum and engaging the base, a shaft passed through said base of said annular block, means for securing the block, shaft, and base in working relationship for simultaneous turning movement when the shaft is rotated, said annular block provided with bores adapted to receive one end of elongated rods extending parallel to the drum axis, in spaced relationship, and a block provided with an annular series of transverse bores for receiving the other end of said rods, defining a cage, elongated flight members secured to the inner surface of the drum and spaced from the cage for lifting dusting material within the drum and dropping the same during drum rotation, said shaft provided with an axial bore and a spit extending axially of said drum and detachably received within said axial bore.

2,897,777
IMPREGNATING DEVICE AND PROCESS
Milton O. Schur, Asheville, N.C., assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia
Application January 26, 1956, Serial No. 561,541
6 Claims. (Cl. 118—38)



1. In a dispensing device a hollow member having an inner wall, a plurality of resilient gasket means slidably received in said hollow member and spaced from each other, means to releasably expand said gasket means into sealing engagement with the inner wall of said hollow member to define a plurality of individual compartments adapted to contain a fluid, means to supply to each of said compartments with a fluid to be dispensed therefrom, and an opening in each of said compartments through which said fluid is dispensed.

2,897,778
APPARATUS FOR EPILAMIZING SURFACES
Fritz Heid, Robert Petermann, and Willi Maag, Zurich, Switzerland
Application December 9, 1954, Serial No. 474,260
Claims priority, application Switzerland December 15, 1953
4 Claims. (Cl. 118—48)



1. Apparatus for epilamizing the surfaces of articles to be lubricated comprising a carburettor, an epilamizing chamber adapted to contain the articles to be epilamized and a cooling system, said carburettor comprising a vessel adapted to contain a volatile liquid, means for heating the liquid in said vessel, means for conveying vapor from said vessel to said cooling system, means for conveying liquid produced by condensing said vapor from said cooling system back to said vessel, a U-shaped tube in said vessel adapted to contain epilamizing agent in liquid

source of low pressure fluid connected to said main ram

der interconnected between the piston and ram and a

form, a porous filling in one leg of said U-shaped tube, means for passing a gas through said U-shaped tube and means for conveying said gas carrying epilamizing agent to said epilamizing chamber, said epilamizing chamber comprising an inner chamber adapted to contain articles to be epilamized, said inner chamber being connected to receive gas carrying epilamizing agent from said carburettor, an outer chamber surrounding and spaced apart from said inner chamber, a boiler adapted to deliver the vapors of a volatile liquid into the space between said inner and outer chambers, a conduit for conveying vapors from said space to said cooling system and a conduit for returning liquid condensate from said cooling system to said boiler.

2,897,779
PIPE LINING APPARATUS
Albert G. Perkins, Grand Island, N.Y., assignor to Perkins Pipe Linings, Inc., Grand Island, N.Y.
Application June 6, 1958, Serial No. 740,471
10 Claims. (Cl. 118—306)

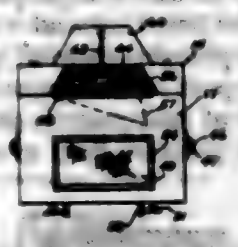
8. In a pipe lining applicator machine adapted to travel through a pipe to be lined, wheel means adapted to tread on the pipe wall, comprising a wheel body rotatably mounted on said machine, and tread means comprising a plurality of roller means disposed about the periphery of the wheel body and rotatably mounted therein on axes transverse to the rotational axis of the wheel body.

2,897,780
ANIMAL ATTACHMENT PROVIDING ARTIFICIAL HORNS
Richard E. Ayres, Woodlake, Calif.
Application July 22, 1957, Serial No. 673,481
4 Claims. (Cl. 119—1)

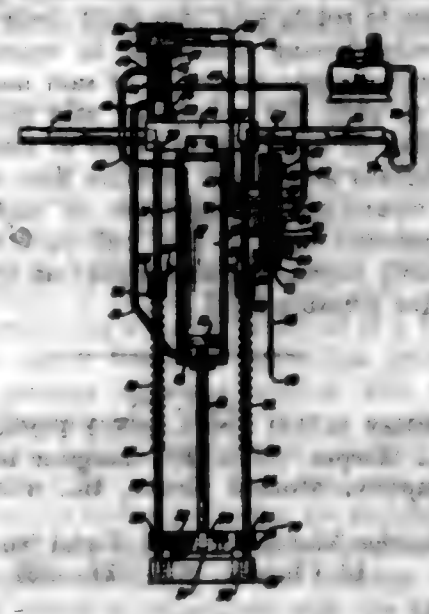
1. An artificial horn attachment for a polled animal having a head and a lower jaw comprising an upper rigid plate complementary to and adapted to fit on the top of the head of such a polled animal; a pair of elongated rigid rods having inner ends rigidly secured to the upper plate on opposite sides thereof and in generally coaxial relation, and outer ends outwardly extended from the plate to constitute artificial horns for the animal; a rigid lower plate complementary to and adapted to fit under the lower jaw of the animal; and means releasably adjustably interconnecting the plates.

2,897,781
ANIMAL CARRIER FOR VEHICLES
James M. Olson, Bellview, Minn.
Application April 22, 1958, Serial No. 730,100
2 Claims. (Cl. 119—19)

1. An animal carrier comprising a rigid box-like receptacle, means to detachably secure said receptacle to the trunk door of a motor vehicle, the front portion of said receptacle being formed with a ventilating opening, a closure plate pivoted to the front portion of said receptacle adjacent said opening and being swingable upwardly into obstructing relation thereto, a transverse flap member hinged to the top of said receptacle and projecting upwardly therefrom, and flexible cable means connecting said flap member to said closure plate, whereby said closure plate will be swung upwardly into obstructing relation to said opening responsive to a predetermined amount of air pressure caused by forward motion of the receptacle acting on said flap member and rotating same rearwardly.



2,897,782
IMPACT TOOLS OPERATED BY COMPRESSIBLE PRESSURE FLUID
Harold T. Kennedy, Glen Ridge, N.J.
Application June 25, 1957, Serial No. 667,770
17 Claims. (Cl. 121—39)



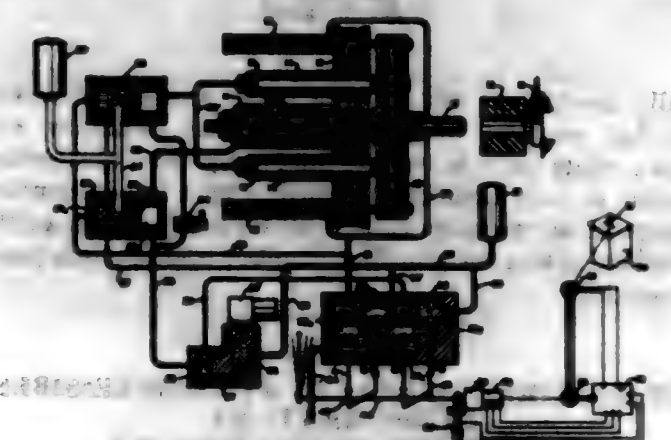
1. A pneumatic hammer comprising, in combination, a cylinder; a piston reciprocably movable in said cylinder; a piston rod on said piston; a hammer head connected to said piston rod for movement thereby into a projected and into a retracted position; a spring fixedly held at one end with respect to said cylinder in a position to be engaged at its other end and compressed by said head within the end portion of the retraction stroke; and control means for admitting, in sequence, compressed air first against one side of the piston to retract said hammer and compress the spring, and then against the other side of the piston to project said head by the joint power of the admitted air and of said expanding spring.

2,897,783
CONTROL APPARATUS FOR EXTRUSION PRESS MACHINERY
Ernest Dreixler, Leominster, Mass., assignor to Lombard Corporation, Youngstown, Ohio, a corporation of Ohio
Application October 9, 1953, Serial No. 385,090
5 Claims. (Cl. 121—38)

1. In an extrusion press having an extrusion ram reciprocable within a main ram cylinder and a pull-back cylinder, hydraulic fluid control apparatus comprising a

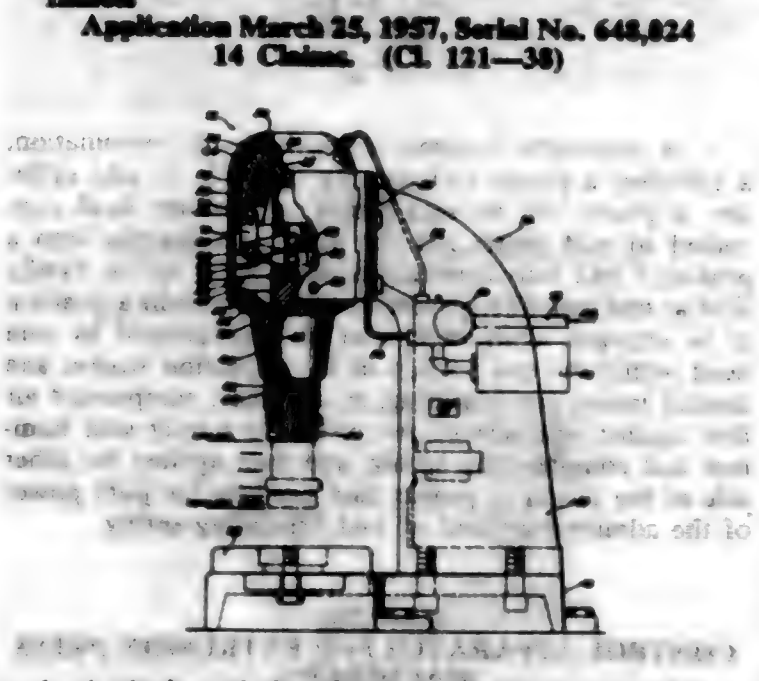
from said sources to said compartments so as to effect rela- fluid passage means communicatively connecting said

source of low pressure fluid connected to said main ram cylinder to effect rapid initial movement of said ram during a cycle of operation, a source of high pressure fluid, a high pressure valve assembly comprising a plurality of ports and a separate valve for each port operated by a common cam shaft, means comprising second valve means to direct high pressure fluid into said main ram cylinder, said second valve means having a chamber with a plunger therein, said valve having an inlet and outlet port and a pilot control port, means comprising a pair of said ports in said high pressure valve for directing high pressure fluid to said pilot control port



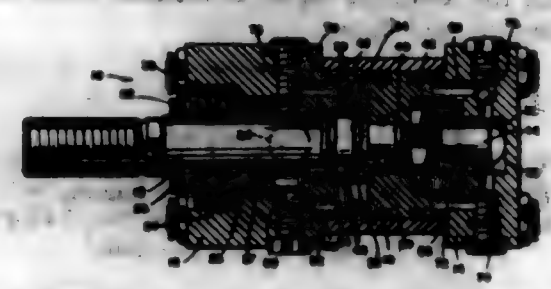
to move said plunger to block said outlet port whereby high pressure fluid is blocked from said main ram cylinder, means to rotate said cam shaft comprising a motor for selectively driving said shaft in opposite directions whereby upon proper actuation of said motor said shaft is rotated to shift the valves for said pair of ports to block the flow of high pressure fluid to said pilot control port and thereby allow high pressure fluid to flow to said ram, and means comprising other of said ports to admit high pressure fluid to said pull-back cylinder while simultaneously connecting said main ram cylinder to said source of low pressure fluid.

2,897,784
PRESS WITH ENCLOSED TOGGLES
Leonard L. Harper, Niles, Ill., assignor to Crane Packing Company, Morton Grove, Ill., a corporation of Illinois
Application March 25, 1957, Serial No. 648,824
14 Claims. (Cl. 121—38)



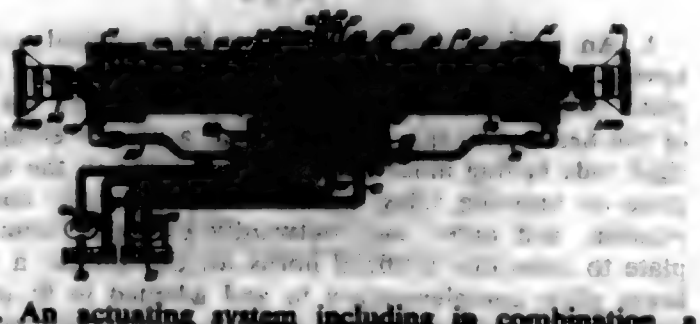
1. A device of the character disclosed comprising a cylinder defining a chamber, a piston reciprocable in the chamber and entirely enclosed therein by the cylinder, a ram reciprocable in the cylinder in coaxial alignment with the piston and having a portion in the chamber and a portion extending through an opening in the cylinder to the exterior, force multiplying means in the cylinder interconnected between the piston and ram and a fixed portion of the cylinder operative for multiplying the force imposed on the ram by the piston in one direction of movement of the piston and ram, and means for imposing force on one side of the piston effective for moving the piston and ram in the said one direction.

2,897,785
CYLINDER CUSHIONING STRUCTURE
Alva H. Ortman, Crown Point, Ind.
Application January 2, 1958, Serial No. 706,902
6 Claims. (Cl. 121—38)



1. In a cylinder construction in which there are provided a reciprocating piston and piston rod, a tubular chamber within which said piston moves, cylinder heads at the ends of the chamber, means in said heads for admitting and exhausting fluid from said chamber to drive said piston and rod, and structure in at least one head for cushioning the piston and rod at the end of its stroke in said chamber toward said one head comprising, means for trapping a portion of the fluid being exhausted from said chamber and means for throttling the flow thereof from said chamber, said trapping means including a cylindrical bore formed in said one head coaxial with said piston and rod and having a generally radially extending bottom wall, a removable bushing seated in said bore with an end face thereof juxtaposed relative to said bottom wall, the piston and rod having an extension telescopically entering into said bushing at the end of the said stroke to prevent fluid from exhausting by way of said bushing, packing means between said end face and bottom wall radially displaced from both the rod and peripheral edges of the bushing to prevent escape of fluid between bushing and bore.

2,897,786
TWIN ACTUATOR ASSEMBLY
Howard M. Geyer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 10, 1954, Serial No. 474,540
4 Claims. (Cl. 121—40)



1. An actuating system including in combination, a fluid pressure operated twin actuator assembly comprising a cylinder, means dividing said cylinder into two compartments separated from fluid communication with each other, a piston disposed in each compartment and means operatively interconnecting said pistons for relative simultaneous movement in opposite directions, a pair of fluid pressure sources, each pressure source being connected to its own compartment, and a single valve connected between said sources and said compartments for controlling the simultaneous application of pressure fluid

tacle, means to detachably secure said receptacle to the cylinder, hydraulic fluid control apparatus comprising a

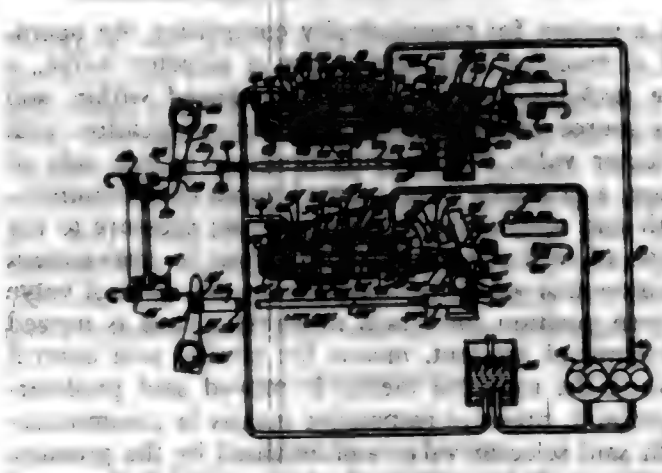
from said sources to said compartments so as to effect relative simultaneous movement between said pistons, said single valve also connected between each said source and each compartment for controlling individual application of pressure fluid from one operative source to one said compartment in the event of failure of the other said source for supply of pressure fluid for the other said compartment while said twin actuator assembly is fully operable from either pressure source individually due to said means operatively interconnecting said pistons for relative simultaneous movement in opposite directions.

2,897,787

SERVO-MOTOR

Lauri J. Kivista, Chicago, and Thomas R. Seddon, Roselle, Ill., assignors to International Harvester Company, a corporation of New Jersey

Application July 29, 1955, Serial No. 525,219
10 Claims. (Cl. 121—41)



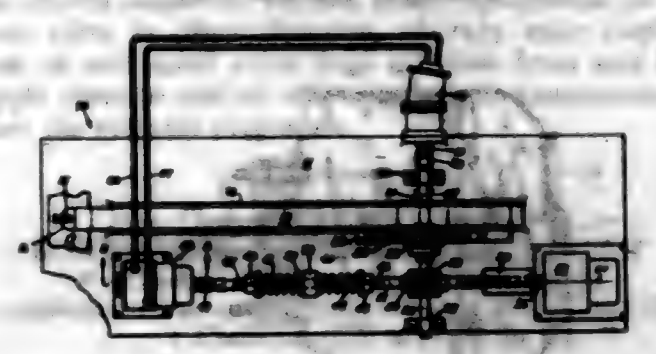
1. A fluid operated servo-motor comprising a casing, a reciprocable work member including a piston disposed in the rearward portion of said casing, a front cylinder chamber and a rear cylinder chamber disposed in the rearward portion of said casing, a front end wall and a rear end wall disposed in said casing, one end of said work member projecting through said rear end wall, a first bore axially disposed in said front end wall, the other end of said work member projecting slidably in said first bore, a fluid bypass chamber disposed in said casing, said bypass chamber being positioned adjacent to and forwardly of said front end wall, a second bore axially disposed in said casing adjacent to and forwardly of said bypass chamber, a pressure relief valve element disposed in said casing and projecting slidably into said second bore and adapted for movement in a forward direction when fluid pressure in said bypass chamber exceeds a predetermined limit, a compartment in said casing disposed adjacent to and forwardly of said bypass chamber, one end of said relief valve element projecting into said bypass chamber and the other end projecting into said compartment, stop means disposed on the other end of said relief valve element adapted to limit axial movement thereof in a rearward direction, a captive spring disposed in said compartment adapted to urge said relief valve element in a rearward direction, a third bore axially disposed in said work member, a control valve means disposed in said casing, said control valves means having a valve control member slidably disposed in said third bore, an externally mounted manually operable control lever adapted to engage said valve control member, one end of said valve control member projecting rearwardly of said work member and adapted for axial movement in a forward direction with said control lever, a source of fluid under pressure including fluid return means, said source of fluid under pressure communicatively connected to said rear cylinder chamber and said bypass chamber, said fluid return means communicatively connected to said compartment, a first fluid passage means communicatively connecting said front cylinder chamber and said compartment, a second fluid passage axially disposed through said relief valve element, and said control valve means being movable axially in said first bore and bypass chamber for communicating for fluid flow said bypass chamber and said second fluid passage when said valve control member is moved rearwardly in relation to said work member and alternately terminating fluid flow from said bypass chamber to said second passage when said valve control member is moved forwardly in relation to said work member.

2,897,788

SERVO CONTROL FOR RACK MECHANISM

Roy Rosebrook, Montebello, Calif., assignor to Trw-Trace Corporation, El Monte, Calif., a corporation of California

Application February 25, 1957, Serial No. 642,282
2 Claims. (Cl. 121—41)



1. In combination, a pair of members of a machine tool, one of said members being movable relative to the other member, and means for relatively moving said members comprising: a hydraulic motor interconnected between said members for exerting force to cause the relative movement between them; a spool valve for controlling application of power to the hydraulic motor, said spool valve comprising a sleeve mounted to a first of said members, said sleeve having a cylindrical spool passage therein, said passage having a central axis and being defined by an interior wall in the sleeve, a pair of motor supply grooves in said wall which are axially spaced from each other, and which are in fluid communication with opposite sides of the hydraulic motor for supplying to and discharging from said motor hydraulic fluid for powering the same, a cylindrical spool in said passage, said spool having an axis which is coincident with the passage axis and which is axially slidable in full peripheral contact with the said wall, a pair of peripheral exhaust grooves in said spool, a peripheral pressure groove in said spool between said exhaust grooves, said spool grooves being spaced apart from each other, a pressure port through said sleeve in fluid communication with said pressure groove, a pair of exhaust ports in said sleeve in fluid communication with the exhaust grooves, the spool valve having a null control position wherein the spool is centered in the passage with the pressure groove equally spaced relative to the motor supply grooves, and a pair of actuating control positions, wherein the spool is axially displaced along the axis with the pressure groove in fluid communication with only one of the motor supply grooves, and with one of the exhaust grooves fluidly interconnecting the other of said motor supply grooves to an exhaust port, a different actuating control position resulting from shifting the spool in each axial direction; means for supplying hydraulic fluid under pressure to said pressure port; a signal shaft having an axis coincident with the axis of the spool, said signal shaft bearing against the spool for the purpose of shifting the spool in the sleeve; bias means forcing the spool against the signal shaft; said signal shaft being mounted to the same first member for rotary and axial movement relative thereto;

first object, a sleeve slidably positioned in the cylinder

necting the groove with the bore of the actuator mem-

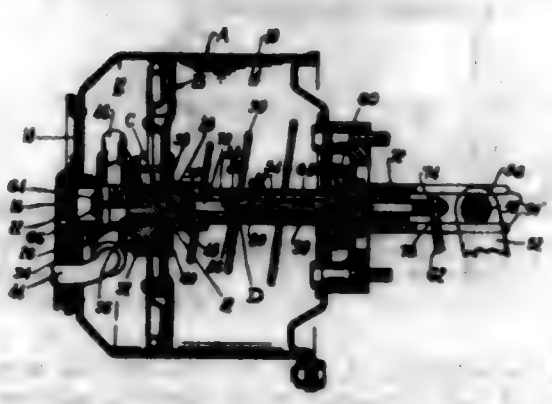
a worm on, integral with, and concentric with said signal shaft; a worm gear mounted to said first member and engaged to said worm; a rack on the second one of said members; a gear engaged to said rack and driving said worm gear; and signal means for rotating said signal shaft, whereby rotation of said signal shaft by the signal means axially shifts the signal shaft to move the spool so that the valve assumes one of its operative control positions, thereby passing hydraulic fluid under pressure to the motor and relatively moving said members, said rack driving the gear, worm gear and thereby shifting the signal shaft so as to tend to restore the valve to its null control position.

2,897,789

SEMI-POSITIVE VALVE ACTUATOR

Richard H. Roebuck, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware

Application June 7, 1957, Serial No. 664,325
3 Claims. (Cl. 121—41)



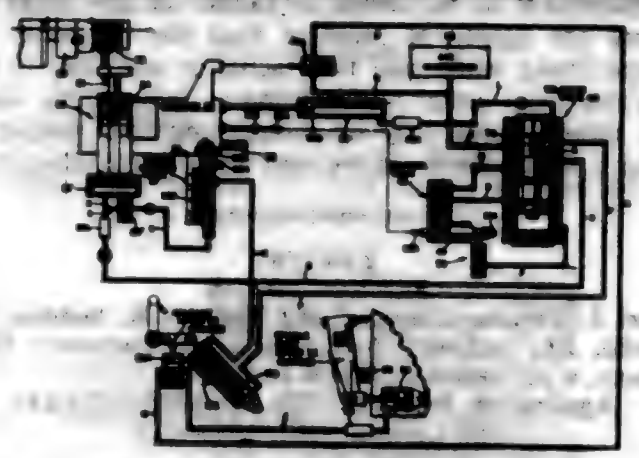
1. In a fluid pressure servo-motor control system; a power chamber, a movable wall in said power chamber, a driven member having an abutment adapted to be forced in a first direction, a force transmitting member carried by said movable wall and having an abutment surface for forcing said abutment of the driven member in said first direction but permitting said abutment to be freely moved away from said abutment surface in said first direction without moving said movable wall, a control lever constructed and arranged to provide relative movement with respect to said abutment and to move along with said driven member, a control valve carried by said movable wall, said control valve comprising a poppet valve seat member, a poppet member for closing off said valve seat, one of said seat and poppet members being faced with a resilient material and said control valve being constructed and arranged to produce a pressure differential across said movable wall which urges said movable wall in said first direction when one of said poppet or seat members is moved in said first direction away from the other of said members, force transmitting mechanism comprising a rod and a telescoping tubular member one of which is connected to said movable one of said poppet and seat members and the other of which is connected to said control lever, said mechanism being constructed and arranged to permit movement of said lever away from said valve structure but permitting said lever to force said poppet and valve seat into engagement with each other, and said mechanism including detent means for transmitting up to a predetermined amount of valve opening force from said control lever to said movable one of said poppet and seat members, whereby sufficient force can be exerted upon said valve structure by said control lever when moved in said one direction to prevent sticking of the poppet against its seat while at the same time permitting the control lever and driven member to be moved away from the movable wall in the power chamber.

2,897,790

FLUID CONTROL SYSTEM FOR MACHINE TOOLS

Luther E. Lee, Takoma Park, Md.

Application March 29, 1957, Serial No. 649,580
7 Claims. (Cl. 121—45)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a system for automatically controlling the operation of a machine tool comprising a selector valve, a pressure responsive piston slidably arranged within said valve, a source of fluid pressure in communication with said selector valve for applying pressure to one side of the piston, a normally open control valve in communication with said selector valve for supplying pressure to the other side of said piston, movable means in engagement with said control valve for maintaining said control valve in an open position until said movable means is moved a predetermined amount, means for closing said control valve when the movable means is moved said predetermined amount, pressure responsive means in communication with said selector valve and actuated by the pressure from said one side of the piston, a slidably mounted thread counter valve in communication with said pressure responsive means and movable from an initial position to an operating position when the pressure therein has reached a predetermined value to initiate operation of said movable means, means connected to and controlled by said pressure responsive means for applying the pressure to said counter valve, a normally closed release valve in engagement with said movable means and in communication with said selector valve and actuated to an open position as said movable means is moved said predetermined amount for releasing the pressure at said other side of the piston to allow the piston to be moved from an initial position to a final position by said pressure at said one side of the piston as said control valve is closed, means, including a slide valve carried by and movable with said piston for reducing the pressure to said pressure responsive means as the piston is moved to said final position, vent means in communication with said selector valve and said pressure responsive means for venting said pressure means as pressure therein is reduced to a predetermined value, means disposed within said counter valve and actuated in response to said reduction of pressure, port means disposed within said counter valve for exhausting the pressure within said valve as said last named means is actuated, and means disposed within said counter valve for moving the counter valve from said operating position to said initial position as said pressure therein is exhausted.

2,897,791

CUSHIONING MEANS FOR HYDRAULIC ACTUATING MEANS

James H. Routledge, Bellwood, Ill., assignor to International Harvester Company, a corporation of New Jersey

Application January 24, 1957, Serial No. 636,102
4 Claims. (Cl. 121—46)

1. Cushioning means comprising a cylinder having both ends closed and having one end connected to a

2,897,794

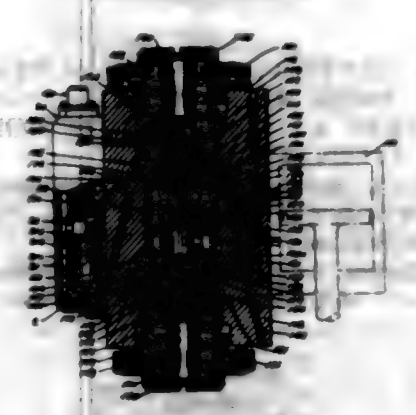
ber, an elevated horizontally arranged liquid and va-

communicatively connected to said compartment, a first member for rotary and axial movement relative thereto;

first object, a sleeve slidably positioned in the cylinder and provided with a plurality of recesses in its inner surface, a piston disposed in the sleeve, a piston rod secured to the piston and projecting through the other end of the cylinder and connected to a second object, the piston and piston rod being provided with a passage extending from a location intermediate the ends of the piston for discharging a fluid and the piston being provided with a circular groove in its periphery formed by a

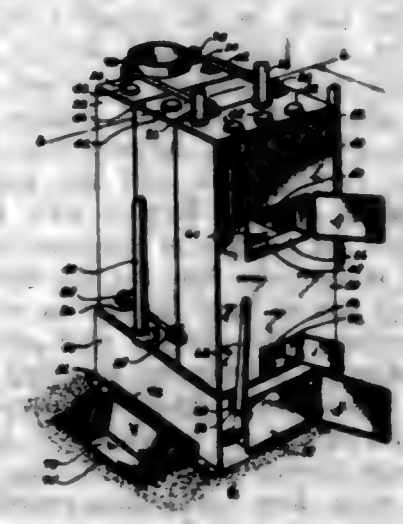
bounding wall and a plurality of holes extending from the bounding wall of the groove to the passage, the sleeve and piston moving relative to each other and each recess being successively in communication with the groove as the sleeve and piston move relative to each other and a chamber being formed between the piston and the sleeve and said other end of the cylinder and fluid flowing through the respective recess into the groove through the holes and out the passage as the piston and the sleeve move toward said other end of the cylinder.

2,897,792
SERVO VALVES
George T. Baltus and Martin P. Wolpin, Tonawanda, Bert Smith, Jr., Williamsville, and Joseph S. Lechcik, Buffalo, N.Y., assignors, by mesne assignments, to Hydraulic Research & Manufacturing Co., Burbank, Calif., a corporation of California
Application March 5, 1954, Serial No. 414,488
1 Claim. (Cl. 121—46.5)



A servo valve of the character described comprising a casing having an input fluid supply passageway and fluid exhaust passageway means, separate power output fluid passageways for connection to a hydraulic actuator, the casing being formed with a cylindrical recess, a plurality of sleeve members mounted within the recess, said plurality of members comprising a centrally disposed inlet sleeve member and an actuator sleeve member disposed at each side of said inlet sleeve member and an exhaust sleeve member disposed at the outer end of each of said actuator members, the sleeve members being formed with registering cylindrical bores, the inlet sleeve member being formed with a peripheral groove and an enlarged central bore connected by radial ports, the annular groove of the inlet sleeve member being in communication with the input fluid supply passageway, each of the actuator sleeve members being formed with a peripheral groove and a plurality of radial ports connecting the groove with the bore of the actuator member, the grooves of said actuator sleeve member being in communication with different ones of the power output fluid passageways of the actuator, each of the exhaust sleeve members being formed with a peripheral groove in communication with said exhaust passageway means and formed with a counterbore, radial ports connecting said counterbores and the grooves of said members, a spool valve slidably mounted in the sleeve members and formed with an inlet cavity in the region of said inlet sleeve member, said spool means being formed with surface cavities in the region of said actuator sleeve members, said spool means being formed with an axial passageway extending throughout its length and formed with a restricted orifice at each end thereof terminating at each end in a pressure chamber, said spool means having a lateral passageway extending from said axial passageway and opening into the input fluid groove of the spool means, resilient means tending to maintain said spool means in neutral position in said sleeve members, and control means for causing axial displacement of said spool valve in either direction, whereby upon displacement of said spool valve fluid will flow from said fluid supply input to one of said output fluid passageways to cause the actuator to operate.

2,897,793
BOILER WITH CENTRAL HEATING UNIT
Paul Zarzecny, Trenton, N.J.
Application September 18, 1957, Serial No. 683,124
2 Claims. (Cl. 122—165)



1. In a water boiler including a hollow base and a double walled casing inclosing a water circulating space, said casing being seated on the top edge of said base, said water circulating space having water inlet and outlet connections, the lower end of said casing being open and defining a combustion chamber having therein a fuel burning appliance, a central heating unit above said appliance said unit comprising a pair of horizontal water containers in vertically spaced relation and spaced from the wall of said casing, said containers having a pair of hollow wing sections connecting them together and with opposite sides of the casing in intercommunicating relation with the water circulating space therein, the portions of said wing sections between said containers being spaced apart from each other, said wing sections extending from the upper edge of the upper container to a plane immediately above the lower end of said casing, the bottom walls of said wing sections being inclined from their junction with opposite sides of the casing to their junction with said lower container thereby forming with the bottom wall of said container an arch immediately above said fuel burning appliance.

at the bottom of said furnace chamber having its ends

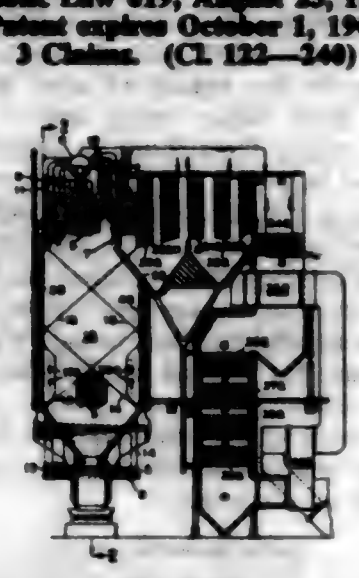
2,897,796
ROTARY INTERNAL COMBUSTION ENGINE

2,897,794

STEAM GENERATING UNIT WITH PLURAL COMBUSTION CHAMBERS SEPARATED BY A PARTITION WALL OF STEAM GENERATING TUBES

Heinrich Otto and August Mogk, Oberhausen, Rhineland, Germany, assignors to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Application March 21, 1955, Serial No. 500,226
In Germany October 1, 1948
Public Law 619, August 23, 1954
Patent expires October 1, 1968
3 Claims. (Cl. 122—240)



1. In a steam generating and superheating unit, a furnace having walls including steam generating tubes, other steam generating tubes in row alignment transversely of the furnace and dividing the furnace into a plurality of combustion chambers, the walls of said furnace having indentations adjacent the ends of the division wall, steam generating tubes in the opposite walls of said furnace adjacent the ends of said division wall being bent out of their wall alignment to extend across said division wall and to be attached thereto, the lower portion of each of said bent furnace wall tubes being aligned in one furnace wall and the upper portion being aligned in an opposite furnace wall, fuel burners arranged adjacent the corners of the combustion chambers so as to tangentially fire the combustion chambers, there being sets of these burners in each combustion chamber adjacent the division wall and positioned in said indentations, a superheater receiving steam generated in the furnace wall tubes and arranged to be heated by the furnace gases, gas-pass wall means forming a gas passage leading from the furnace gas outlet, and steam and water flow connections providing for the flow of water to the inlets of the steam generating tubes and including a steam water drum and upper and lower furnace wall headers with the headers disposed exteriorly of the combustion chambers, the furnace wall tubes extending to positions wherein they are connected to the upper and lower headers outside of the combustion chambers.

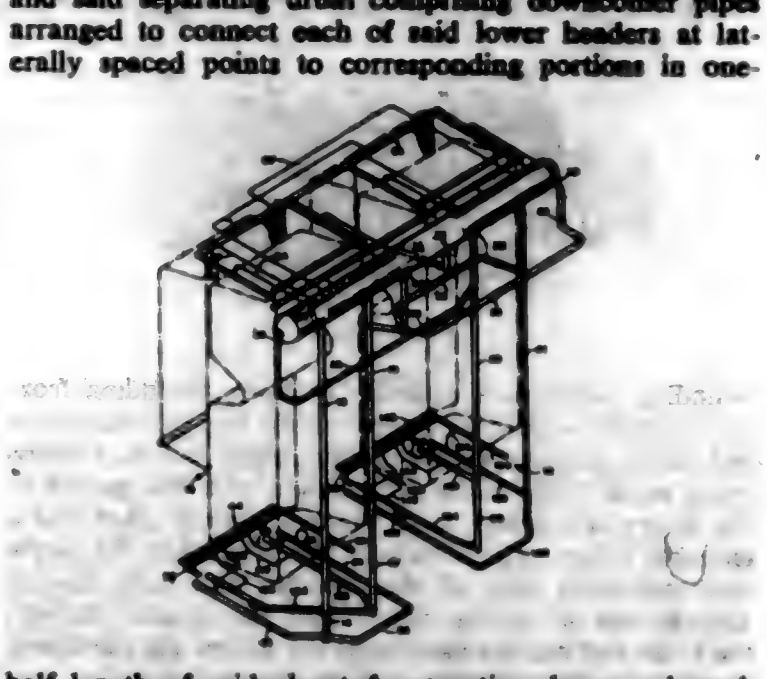
2,897,795

PLURAL FURNACE SINGLE DRUM STEAM GENERATING UNIT

Will H. Rowand, Short Hills, N.J., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Application October 24, 1955, Serial No. 542,314
5 Claims. (Cl. 122—406)

3. A vapor generating plant comprising a pair of vapor generating units, each of said units having walls defining a vertically elongated furnace chamber, a row of vertically arranged vapor generating tubes lining a wall of said furnace chamber, a horizontally arranged lower header connected to the lower ends of said generating tubes, a horizontally arranged upper header connected to the upper ends of said generating tubes, and means for independently firing said furnace chamber, an elevated horizontally arranged liquid and vapor separating drum extending continuously along the upper ends of both of said vapor generating units parallel to the plane of said vapor generating tubes and substantially coextensive with the distance between the outer side walls of said vapor generating units, and means for maintaining a fluid circulation between the vapor generating tubes of both of said vapor generating units and said separating drum comprising downcomer pipes arranged to connect each of said lower headers at laterally spaced points to corresponding portions in one-



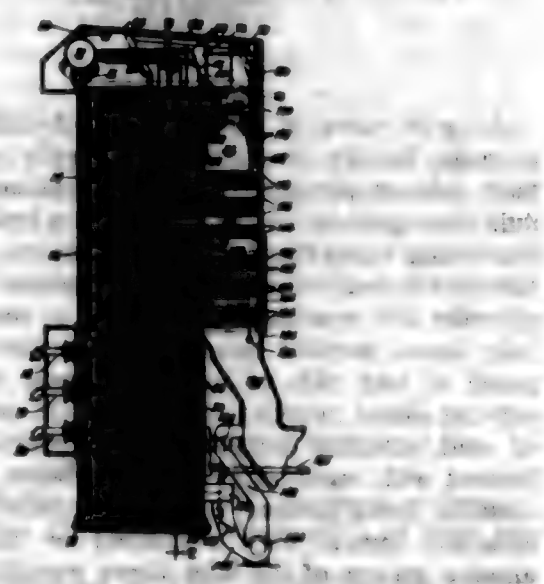
half length of said elevated separating drum, a branch pipe connecting each of said downcomer pipes at a point above the level of the corresponding lower head to a portion of said separating drum remote from said first connection and in the remaining half-length of the drum receiving the downcomer pipes connected to said other vapor generating unit lower header, whereby liquid from longitudinally spaced portions of said separating drum is separately collected in each downcomer pipe, and circulator tubes connecting each of said upper headers to said elevated separating drum.

2,897,796

STEAM GENERATING AND SUPERHEATING UNIT WITH RECIRCULATED GAS INTRODUCTION AT ONE END OF HOPPER BOTTOM FURNACE

Paul H. Koch, Bernardsville, N.J., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Application August 5, 1954, Serial No. 448,861
4 Claims. (Cl. 122—478)



1. A vapor generating and superheating unit comprising vertical front, rear and side walls defining a vertically elongated furnace chamber, wall means forming a hopper

delay train explosive means a predetermined time after firing, a firing means which includes: a transverse parti-

ber, said cylinder head having a bore open to said com-

peripheral groove and a plurality of radial ports con- immediately above said fuel burning appliance.

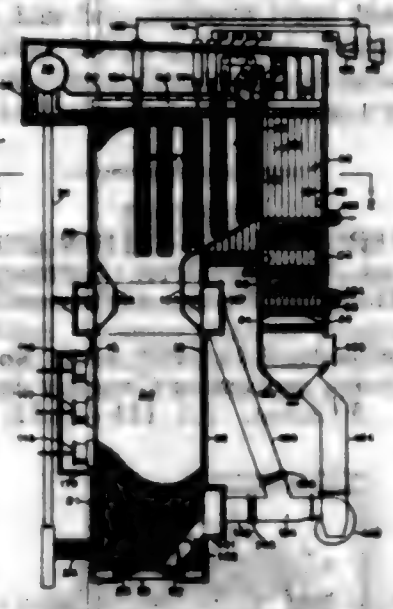
at the bottom of said furnace chamber having its ends defined by said front and rear walls and its longitudinal axis normal to the plane of said front and rear walls, vapor generating tubes lining the side and end walls of said furnace chamber and hopper, fuel burning means in said front wall at an elevation above the upper end of said hopper and arranged to discharge burning fuel in a direction substantially parallel to the longitudinal axis of said hopper, a gas pass opening to the upper part of said furnace chamber, a convection superheater in said gas pass, and a gas recirculation system including gas discharge ports in said rear wall at an elevation below the level of said fuel burning means and adjacent the upper end of said hopper, and means for withdrawing heating gases from said gas pass downstream of said superheater and discharging the withdrawn gases through said gas discharge ports.

2,897,797

STEAM GENERATING, SUPERHEATING, AND REHEATING UNIT, AND METHOD EFFECTED THEREBY

Paul H. Koch, Bernardsville, N.J., assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey

Application June 13, 1956, Serial No. 591,136
10 Claims. (Cl. 122—478)



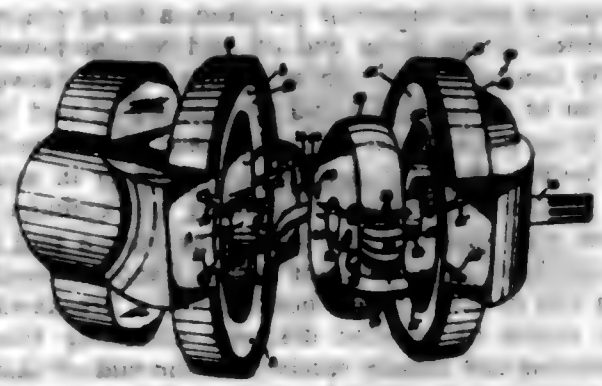
4. In a steam generating unit of the character described, furnace wall means including steam generating tubes defining the boundaries of a vertically elongated furnace chamber, fuel burning means for firing the furnace chamber at its lower part, a predominantly radiantly heated steam reheater formed in part by widely spaced platens of serially connected tube sections disposed in the upper part of the furnace chamber and distributed thereacross, other wall means including steam generating tubes defining a laterally disposed convection heating gas pass the inlet of which communicates with the upper part of said furnace chamber, a predominantly convectionally heated secondary steam superheater formed by a bank of closely spaced upright tubes disposed in said gas pass rearwardly of the reheater, a similarly constructed convection primary superheater disposed in said gas pass rearwardly of the secondary superheater, heating gas recycling means constructed and arranged to withdraw heating gases after loss of heat therefrom to the primary superheater and to introduce recycled gases as tempering gases into the furnace chamber at a position close to the reheater and between the fuel burning means and the reheater, and gas recycling means constructed and arranged to withdraw gases after loss of heat therefrom to the primary superheater and to introduce the withdrawn gases as recirculated gases into the furnace chamber at a position below the fuel burning means.

2,897,798

ROTARY INTERNAL COMBUSTION ENGINE

Benton Schroeppel, Beech Grove, Ind.

Application July 2, 1956, Serial No. 595,513
16 Claims. (Cl. 123—13)



1. A rotary internal combustion engine comprising block means formed to provide an annular piston chamber, a rotor journalled for rotation about the axis of said chamber, a plurality of pistons carried by said rotor and peripherally spaced thereon, said pistons being arranged to travel in said annular chamber, said block means being formed with a first combustion chamber normally closed by one end face of said rotor and with a second combustion chamber normally closed by the opposite end face of said rotor, a first shutter mounted for rotation about an axis perpendicular to the axis of said rotor and intersecting said annular chamber at two points, a second shutter mounted for rotation in coaxial relation to said first shutter and intersecting said annular chamber at two other points, said shutters being disposed, respectively, at opposite sides of the axis of said rotor, said block means being provided with a fuel intake port and with an exhaust port for spent gases, and said rotor being formed to provide: a first passage always in communication with said intake port and with said annular chamber immediately behind one of said pistons, a second passage always in communication with said exhaust port and with said annular chamber immediately ahead of said one piston, a third passage alternately in communication with said combustion chambers and always in communication with said annular chamber immediately ahead of another of said pistons, and a fourth passage alternately in communication with said combustion chambers in reverse order with respect to said third passage and always in communication with said annular chamber immediately behind said other piston; each of said shutters being formed with a peripherally-elongated port therethrough, and means providing a driving connection between said rotor and said shutters to rotate the shutters in timed relation to said rotor to open said annular chamber for passage of said pistons and to define a closed compartment behind each piston and a closed compartment ahead of each piston during a part of each cycle of said rotor.

2,897,799

EXPLOSIVE CUTTER FOR PARACHUTE LINES

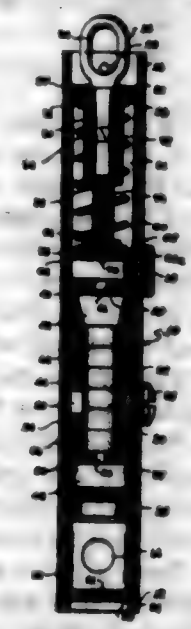
Joe A. Stupian, El Monte, Calif., assignor to Ordnance Specialties, Inc., El Monte, Calif., a corporation of California

Application July 29, 1957, Serial No. 674,880
1 Claim. (Cl. 123—24)

In an explosive parachute line cutter of the type in which a piston-type cutter knife at the cutting end of a tubular housing is impelled against a reefing line by a

and means for independently firing said furnace chamber vertical front, rear and side walls defining a vertically elongated furnace chamber, wall means forming a hopper

delay train explosive means a predetermined time after firing, a firing means which includes: a transverse partition in said tubular housing spaced from the starting end of said delay train to provide an explosion chamber; a primer means positioned in a recess on the firing end side of said partition, said primer means being in communication with said explosion chamber through a restricted opening in said transverse partition; a firing pin cylinder supported in the firing end of said tubular housing coaxially therewith but with an annular space between the exterior of said cylinder and the interior of said housing, said firing pin cylinder having a base of enlarged diameter seating against a counterbore shoulder in said firing end; means for holding said firing pin cylinder firmly against said shoulder and said firing end; a pull section member having a connection means disposed towards the firing end of said tubular housing and a breakaway coupling means of reduced diameter extending from said connection and closely received in the end of said firing pin cylinder, a shoulder being formed between said connection means and said breakaway coupling means to



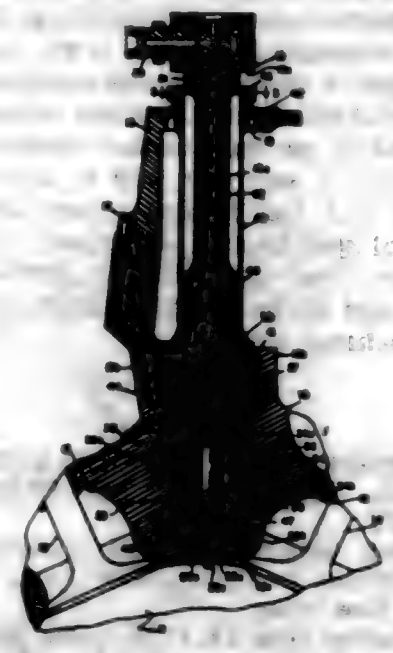
limit the length of said pull member received in said firing pin cylinder; a firing pin member closely received in said firing pin cylinder and longitudinally slidable therein, and including coupling means mating with the breakaway coupling means of said pull member, and adapted to break away when said pull member is withdrawn from the end of said cylinder toward the firing end of said tubular housing; a striking head piston at the end of said firing pin member, said piston being reciprocable in said tubular housing adjacent said transverse partition; a helical spring means disposed in the annular space around said firing pin cylinder and around the part of said firing pin member projecting from said firing pin cylinder, and seated at one end against the base of said firing pin cylinder and at the other end against said striking head on the end of said firing pin member; a removable safety screw received in the side wall of said tubular housing between said transverse partition and said striking head piston; and a striking head projecting from said striking head piston toward said primer, said striking head being shorter in projecting length than the separation provided between said transverse partition and said striking head piston by said safety screw.

2,897,800
FUEL INJECTION NOZZLE CONSTRUCTION AND MOUNTING

Herbert H. Hass, Royal Oak, Mich., assignor, by mesne assignments, to Continental Motors Corporation, Muskegon, Mich., a corporation of Virginia

Application May 18, 1956, Serial No. 585,720
19 Claims. (Cl. 123—32)

1. In a fuel injection type internal combustion engine having a cylinder head provided with a combustion chamber, said cylinder head having a bore open to said combustion chamber, an insert member secured in said bore and supporting a fuel injection nozzle assembly, said bore and said insert member having corresponding reduced diameter portions adjacent said combustion cham-

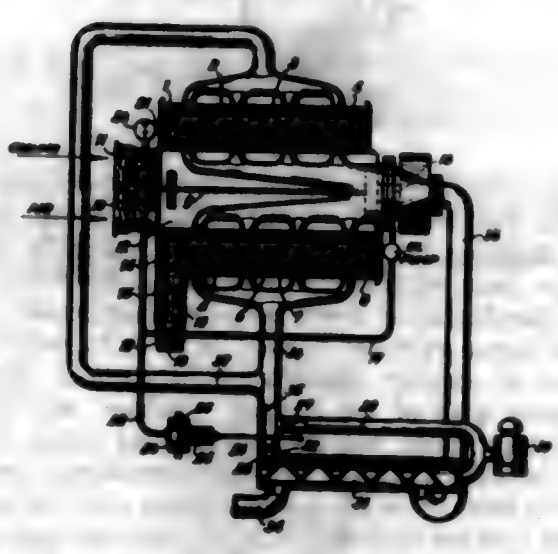


ber, said bore thereby provided with an inner shoulder supporting said insert member, and said insert member reduced diameter portion provided with a protective flange at the end adjacent said combustion chamber to lock the insert member to said bore reduced diameter portion.

2,897,801
INTERNAL COMBUSTION ENGINE

Richard Klotz, Koln-Buchforst, Germany, assignor to Klockner-Humboldt-Deutz Aktiengesellschaft, Koln, Germany

Application April 14, 1958, Serial No. 728,185
Claims priority, application Germany April 20, 1957
3 Claims. (Cl. 123—41.12)



2. In combination with an internal combustion engine: a cooling device for supplying cooling means to said engine; slip clutch means for drivingly connecting said cooling device to said engine, said clutch means being variable as to its slip; air intake means arranged for conveying combustion air to said engine, said air intake means comprising a main line for primarily conveying non-preheated air to said engine and also comprising a branch line with heating means associated therewith for conveying pre-heated air to said engine; first throttle means arranged in said main line and movable from a reduced passage position, in which the passage of air through said main line to said engine is reduced over the maximum possible passage of air through said

the stroke of a piston connected thereto with respect operable throttle control for selecting a maximum desired

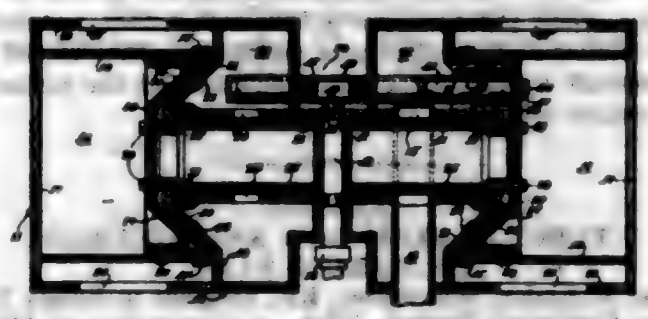
main line to said engine, into an increased passage position for conveying an increased quantity of air through said main line to said engine, and vice versa; second throttle means arranged in said branch line and movable from a reduced passage position, in which the passage of preheated air through said branch line to said engine is reduced over the maximum possible passage of preheated air through said branch line to said engine, into an increased passage position for conveying an increased quantity of preheated air through said branch line to said engine, and vice versa; said first and second throttle means being interconnected in such a way that when said first throttle means is in increased passage position said second throttle means will be in reduced passage position, and vice versa; temperature responsive means movable in a first direction in response to the temperature of said engine dropping below a certain temperature range to bring about an increase in the slip of said clutch means, said temperature responsive means also being movable in a second direction in response to the engine temperature increasing above said certain temperature range to decrease the slip of said clutch means; and control means operatively connected to said first and second throttle means and operable in response to the movement of said temperature responsive means in said first direction for moving said first throttle means into reduced passage position and said second throttle means into increased passage position, said control means also being adapted in response to said temperature responsive means moving in said second direction to move said first throttle means into increased passage position and to move said second throttle means into reduced passage position.

2,897,803

REDUCED LENGTH FREE PISTON ENGINE

C. Paul Kolthoff, Jr., Naperville, Ill., assignor to International Harvester Company, a corporation of New Jersey

Application December 10, 1956, Serial No. 627,296
3 Claims. (Cl. 123—46)



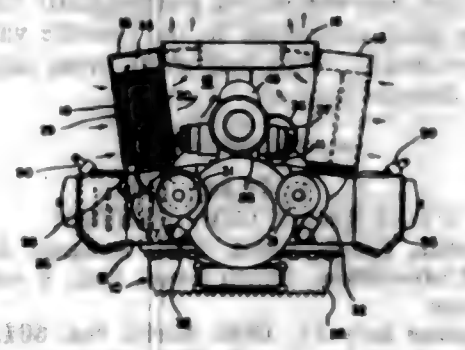
1. A free piston engine comprising a casing having a cylinder, energy accumulating chambers on said casing disposed at opposite ends of said cylinder, said accumulating chambers each having an outer wall and an inner wall longitudinally spaced from said outer wall, a compressed air chamber adjacent each inner wall, said compressed air chamber being positioned between said accumulating chambers, said inner walls being of generally frusto-conical shape, tapering generally outwardly and away from said accumulating chambers, valves on said frusto-conical inner walls adapted to provide for communication between said compressed air and accumulating chambers, portions of said inner walls being disposed longitudinally inwardly from the ends of the cylinder, a pair of longitudinally opposed power pistons in said cylinder for reciprocation therein, a compressor piston connected to each power piston, each compressor piston being positioned for reciprocation within said accumulating chamber, and an outer wall and inner wall on each compressor piston, the inner wall of each compressor piston being of frusto-conical shape and generally complementing the inner wall of each accumulating chamber in at least one position of said pistons.

2,897,802

ENGINE CONSTRUCTION

Herbert H. Hass, Royal Oak, Mich., assignor, by mesne assignments, to Continental Motors Corporation, Muskegon, Mich., a corporation of Virginia

Application July 16, 1957, Serial No. 672,335
8 Claims. (Cl. 123—41.49)



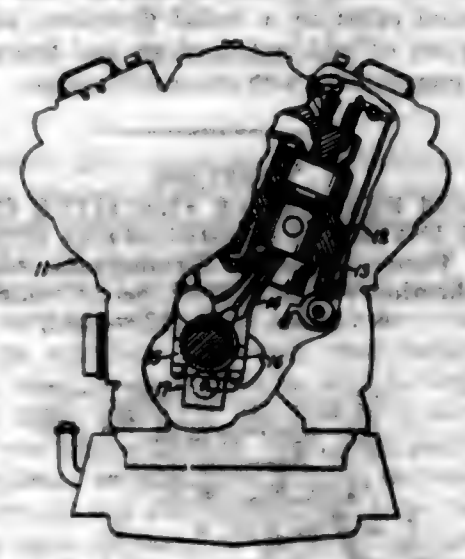
1. An internal combustion engine comprising a crankcase structure and substantially horizontally opposed cylinder block structures integral therewith, each of said cylinder block structures having a coolant jacket and a substantially vertically disposed radiator structure mounted directly on the upper face of said coolant jacket and directly openly connected therewith, said radiators being laterally spaced from each other, a cooling air fan structure disposed between said spaced radiator structures and vertically spaced from the upper surface of said crankcase structure, said radiators, cooling air fan, and crankcase and cylinder block structures constructed and arranged to form an elongated substantially box-like integral power plant package enclosing an intermediate air space, and means circulating engine coolant through said cooling jacket and radiator structures.

2,897,804

MEANS TO VARY THE COMPRESSION RATIO OF AN INTERNAL COMBUSTION ENGINE DURING OPERATION

William R. Crooks, Mount Vernon, Ohio, assignor to The Cooper-Bessemer Corporation, Mount Vernon, Ohio, a corporation of Ohio

Application January 15, 1958, Serial No. 709,048
6 Claims. (Cl. 123—48)



1. Apparatus for varying the compression ratio of an internal combustion engine, said apparatus comprising an eccentric shell interposed between a throw of a crankshaft and a connecting rod of the engine for varying the effective length of the connecting rod and thus

to said second sleeve actuable by said cam to move said

in insufficiency of said quantity of air, and resilient means

the stroke of a piston connected thereto with respect to a cylinder of the engine, and means responsive to an oil pressure in the engine for locking said shell in at least two different positions with respect to a throw of the crankshaft, whereby a thick portion of said shell will be locked in a position on the side of the crankshaft throw toward the connecting rod and the piston of the engine when the pressure is low and a thin portion of said shell will be locked in a position on the side of the crankshaft toward the connecting rod and the piston of the engine when the pressure is high.

2,897,805

TUBULAR PUSH ROD AND METHOD OF MAKING SAME

Elmer E. Etzler, Winchester, Ky., assignor to Bundy Tubing Company, Detroit, Mich., a corporation of Michigan

Application November 8, 1957, Serial No. 695,384
12 Claims. (Cl. 123—90)

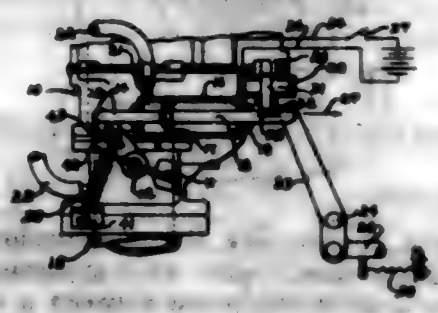
8. A tubular push rod comprising, a length of tube having open end portions, each end portion having at least three generally radially inward projections at circumferentially spaced locations, a member disposed within each of said end portions and being engaged by said projections so that said member is substantially centered on a predetermined center within said end portion, the apposed portions of said member and the tube interior extending circumferentially between said projections being spaced apart in a radial direction, said members projecting out of said end portions and being formed for operative engagement with other mechanism.

2,897,806

VACUUM RESPONSIVE THROTTLE CONTROL FOR INTERNAL COMBUSTION ENGINES

Porter Lendrum, Birmingham, Ala.

Application March 8, 1957, Serial No. 644,826
6 Claims. (Cl. 123—103)



1. In a throttle valve control system for internal combustion engines having an intake manifold, a manually operable throttle control for selecting a maximum desired open position of the throttle valve, means to move the throttle valve from a partially open position to said desired open position comprising a fluid pressure responsive device having a movable part operatively connected to the throttle valve, means operatively connecting the device in fluid pressure transmitting relation with the manifold, and means urging the throttle valve toward closed position with a force which is greater at partially closed throttle valve position than at full open throttle valve position.

2,897,807

THROTTLE CONTROL FOR INTERNAL COMBUSTION ENGINES

Porter Lendrum, Birmingham, Ala.

Application December 8, 1953, Serial No. 778,769
6 Claims. (Cl. 123—103)

1. In throttle control means for internal combustion engines having an intake manifold and a manually operated throttle valve control, a substantially fluid-tight chamber having at least some portions of its inner peripheral walls curved, end walls for the chamber, a pair of concentrically disposed independently movable shafts disposed in the chamber adjacent the center thereof, vanes on the shafts dividing the chamber into two sections and having portions making substantially fluid-tight sealing contact with the curved peripheral walls and said end walls, means connecting one section of said chamber to the atmosphere, means connecting the other section to the sub-atmospheric pressure in the intake manifold, means connecting one of said shafts to the manual throttle control and the other thereof to the throttle valve of the carburetor, and stop means for mechanically limiting rotation of the shaft connected to the throttle valve in response to rotation of the other shaft upon actuation of the manual throttle control.

2,897,808

FUEL INJECTION SYSTEM

Ward C. Suttle, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware

Application July 31, 1956, Serial No. 601,182
6 Claims. (Cl. 123—140)

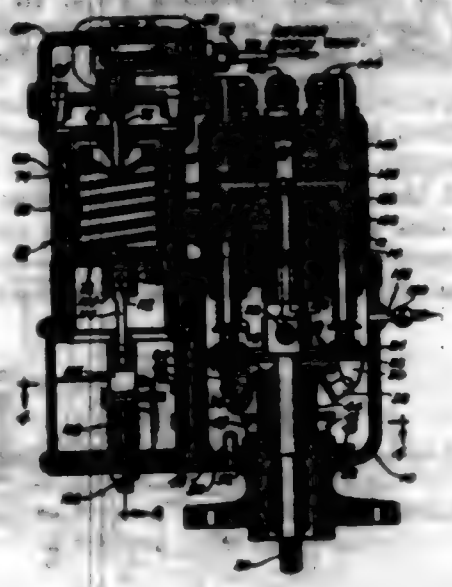
1. In a fuel injection system for an internal combustion engine having an induction passage, a housing, a shaft in said housing, a thrust member pivotally mounted on said shaft, a cylinder in said housing, a pump plunger in said cylinder, a spring adapted to urge said plunger into engagement with said member, a first sleeve reciprocably mounted on said shaft, means connecting said first sleeve to said member, a second sleeve reciprocably mounted on said first sleeve and adapted for engagement with said means, a wall in said housing movable in response to changes in induction passage pressure, a bellows responsive to changes in atmospheric pressure, servo means connecting said bellows and wall for influencing the position of said wall, a cam rotatably and slidably mounted on said wall, a device responsive to engine temperature operatively connected to said cam for urging said cam in a direction transverse the direction of movement of said wall, and a control member operatively connected

false back wall slab and said front wall slab; said false back and end wall slabs and said front wall slab having

2,897,813

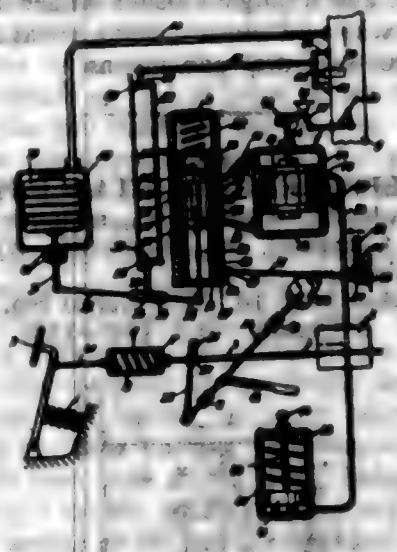
FOOD SERVICE EQUIPMENT UNIT

to said second sleeve actuable by said cam to move said second sleeve in engagement with said means whereby



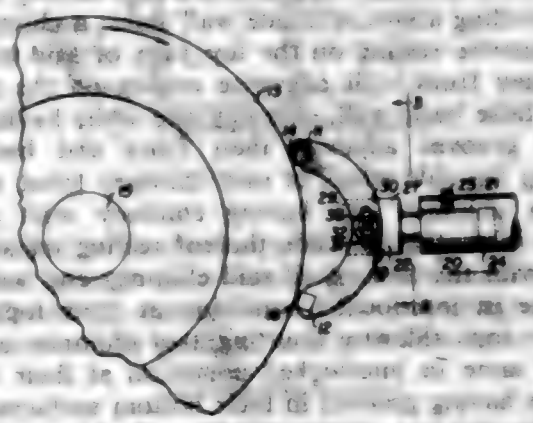
said first sleeve guides said means to move said thrust member about its pivot to change the stroke of said plunger.

2,897,809
CONTROL SYSTEM FOR AN INTERNAL COMBUSTION ENGINE
Hans-Joachim M. Förster, Stuttgart-Bad Cannstatt, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Application July 31, 1957, Serial No. 675,801
Claims priority, application Germany July 31, 1956
11 Claims. (Cl. 123—140)



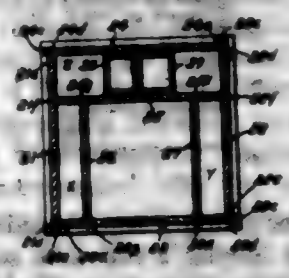
1. Control system for an internal combustion engine of the type in which a fuel-air mixture is compressed in each cycle of operation comprising a movable fuel control member determining the quantity of fuel injected per cycle, an actuating member movable by the operator and connected with said fuel control member, a throttle valve determining the quantity of air admitted per cycle to the intake pipe of the engine, means responsive to the vacuum prevailing in said intake pipe, an actuator connected with said throttle for the adjustment thereof and controlled jointly by said vacuum-responsive means and by said control member, a re-setting device coordinated to said control member for moving same in a fuel-quantity-reducing direction, means controlled by said actuator for activating said re-setting device when said actuator, after having opened said throttle valve, continues its movement in the throttle-valve-opening direction under control by said vacuum-responsive means owing to excessively low atmospheric pressure resulting in insufficiency of said quantity of air, and resilient means for connecting said actuating member movable by the operator with said movable fuel control member.

2,897,810
WHEEL DRESSING TOOL
Flory M. D'Amato, Cleveland, Ohio
Application December 17, 1956, Serial No. 628,767
6 Claims. (Cl. 125—11)



3. A dressing tool for an abrasive wheel, comprising, a spanner member having first and second extremities, a first wheel dressing tool carried by said spanner at said first extremity, a second wheel dressing tool carried by said spanner at said second extremity, a mounting member adapted to be secured to a tool carrier of a grinding machine, swivelable means mounting said spanner on said mounting member, the distance from said first dressing tool to said swivelable means and the distance from said second dressing tool to said swivelable means being less than the distance between said first and second dressing tools, and means to lock the spanner into a selected position of spanner adjustment.

2,897,811
OUTDOOR FIREPLACE
Roger A. Antinac, Pontiac, Mich.
Application July 25, 1956, Serial No. 599,956
1 Claim. (Cl. 126—9)



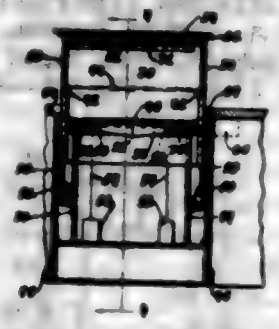
An outdoor grill composed of demountably mounted interlocked concrete slabs comprising a base slab having an upper face equipped with intercommunicating grooves located adjacent its edges for receiving and holding the bottom edges of interlocked overlapped wall slabs thereon, wall slabs including back, front, and end wall slabs disposed on said base slab with their bottom edges in said base slab grooves thereby interlocking with said base slab; each said wall slab having a vertical groove adjacent one outer vertical edge; said wall slabs each having an inner vertical edge lying in the vertical groove of the next wall slab so that said wall slabs rest and interlock with each other in a "domino" pattern; said end wall slabs each having an intermediate vertical groove spaced from said back wall slab, a false back wall slab disposed in said end wall slab intermediate grooves; said false back wall slab and said front wall slab having false end wall receiving vertical grooves; false end walls disposed in the false end wall slab receiving grooves of said

bers disposed entirely within said combustion chamber and exposed to flame impingement therein, each of said

angular prisms rotatably mounted adjacent each other and being rotatably adjustable around the optical axis of

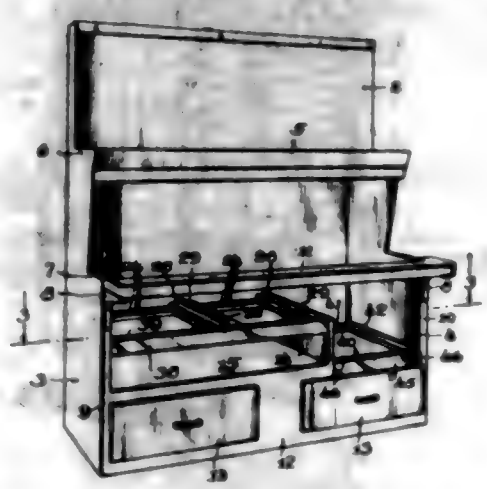
false back wall slab and said front wall slab; said false back and end wall slabs and said front wall slab having horizontal shelf edge receiving grooves; a shelf disposed in said front wall slab and said false back and end wall slab receiving grooves for supporting at least one burner unit; said false back wall having at least one aperture for ventwise communicating with at least one burner unit; at least one flue endwise disposed on said base slab between said back wall and said false back wall and having an aperture ventwise communicating with said false back wall aperture and having an upper end extending above said side wall slabs; a chimney back wall edgewise resting on the top edge of said back wall, a chimney front wall edgewise resting on the top edge of said false back wall, chimney end walls having paired vertical grooves adjacent their front and back edges receiving the side edges of said chimney front and back walls, a chimney cap having chimney wall receiving grooves in the bottom side thereof resting on and interlocked with the tops of all said chimney end walls holding same in interlocked condition at their tops; paired fireplace tops sidewise abutting said chimney end walls holding same in interlocked condition at their bottoms; said tops having grooves in their bottom surfaces adapted to receive the top edges of said wall slabs to hold the tops of said wall slabs in interlocked condition, and at least one burner resting on said shelf having an aperture ventwise communicating with said false back wall aperture and said flue aperture; each of said base slab grooves having at least one end leading through the edge of said base slab providing a water drain for said base slab grooves.

2,897,812
DOMESTIC APPLIANCE
Leonard N. Albrecht, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 3, 1955, Serial No. 479,507
2 Claims. (Cl. 126—19)



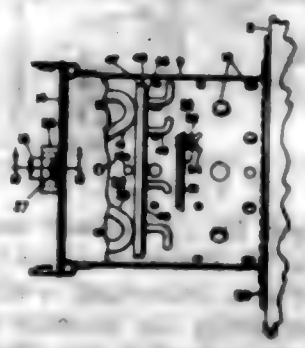
1. A cabinet including a top extending generally horizontally, said top having a movable section forming the top of an oven compartment, said compartment having a normally stationary bottom wall, said compartment also having side and rear walls connected to said movable section extending in telescoping relationship with said bottom wall and continuing below said bottom wall, said side walls being provided with supports for a rack, a bottom oven rack resting upon said bottom wall, said bottom wall having peripheral portions substantially aligned with said supports but offset sufficiently to clear said supports when said supports are lowered beneath said bottom wall, another oven rack located above said bottom rack resting by gravity upon said supports when said supports are above said bottom wall, said another rack resting by gravity on said bottom rack and being lifted off said supports by said bottom rack when said supports are moved below said bottom wall, heating means associated with said bottom wall for heating said compartment, and means for raising said movable section with said side and rear walls in various amounts to enlarge the oven compartment to various sizes.

2,897,813
FOOD SERVICE EQUIPMENT UNIT
James C. Schindler, Berwyn, Carl E. Spring, Worth, and Albin T. Tobiasz, Norwood Park, Ill., assignors to Leitner Equipment Company, a corporation of Illinois
Application January 8, 1953, Serial No. 330,336
1 Claim. (Cl. 126—39)



In a food service equipment unit, a back wall, a pair of walls extending forwardly from said back wall, a pair of spaced tracks extending between said pair of walls, one of said tracks being adjacent said back wall and the other being adjacent the front edges of said pair of walls, a plurality of pairs of base supporting rails mounted on said tracks, interengageable means on said base supporting rails and tracks to hold said base supporting rails against accidental displacement from selective laterally spaced relationship, each of said pairs of base supporting rails being adapted to support an item of cooking equipment thereon, a drip pan means supported under said tracks, said drip pan means extending under a plurality of said pairs of rails, and a single closure hinged to said second mentioned track, said closure being swingable into position to conceal said drip pan means.

2,897,814
HIGH EFFICIENCY PORTABLE HEATER
Ralph A. Anderson, Moline, Ill., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Application June 10, 1955, Serial No. 514,578
2 Claims. (Cl. 126—110)



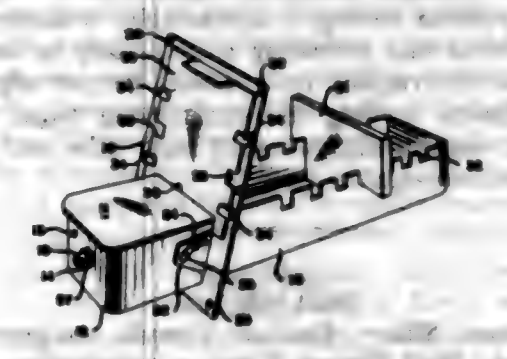
1. An improved construction for air heaters of the type having outer casing means defining a substantially enclosed space, a combustion chamber casing disposed within said outer casing means and partially occupying said space, a cover plate for said combustion chamber casing with a nozzle receiving opening therein surrounded by an annular recess thereabout, a fuel nozzle having a surface containing a fuel spray discharging orifice mounted in said nozzle receiving opening axially of said annular recess for introducing a fuel spray into said combustion chamber casing, and air impelling means for directing a flow of unheated air within said space and against the front side of said cover plate, said construction comprising a plurality of generally U-shaped conduit mem-

owing to excessively low atmospheric pressure resulting

posed in the false end wall slab receiving grooves of said

bers disposed entirely within said combustion chamber and exposed to flame impingement therein, each of said conduit members having inlet means extending through said cover plate and exposed to the space on the front side thereof to receive a portion of said flow of incoming unheated air externally of said combustion chamber casing and outlet means positioned to discharge said incoming air through said plate in heated condition into said annular recess and in substantially tangential relation to said orifice containing surface of said fuel nozzle to prevent ice formation thereon when said units are used in severe cold weather operations without substantial interference with said fuel spray discharge therefrom.

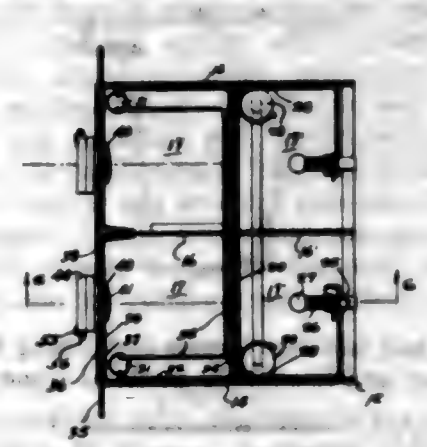
2,897,815
HUMIDIFIERS
Milton Perlman, Detroit, Mich., assignor to Auto-Flo Corporation, Detroit, Mich.
Application September 19, 1957, Serial No. 684,882
1 Claim. (Cl. 126—113)



In a humidifier, an open top horizontally disposed water pan having means extending through one of its walls for supplying water thereto, a substantially vertically disposed mounting frame between the ends of and surrounding the pan, means securing the pan in the frame whereby the frame, when mounted on a furnace, can mount the pan in an opening thereof with a front part of the pan outside of and in front of the furnace and a rear part of the pan inside of the furnace, said rear part having means for supporting evaporator plates thereon, the frame having an access opening extending upwardly from the pan, the access opening being of a size to permit ready access to and removal of the evaporator plates, a removable pan cover rested on the open top of the front part of the pan and covering said front part open top and extending through the mounting frame, and an access cover removably mounted on the frame for covering the access opening and having its lower edge rested upon and engaging and thus holding said removable pan cover down on said pan, said access cover being mounted on said frame by a means permitting up and down adjustment of the access cover and the forward removal of it from said frame.

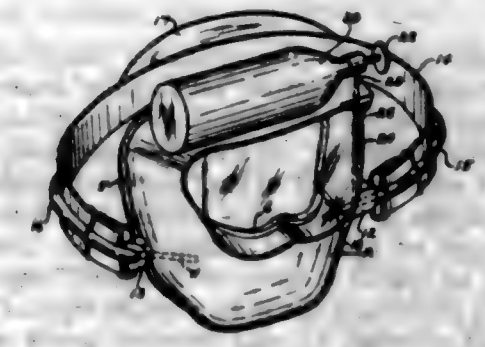
2,897,816
STEREO TRAINING UNIT
Edwin C. Williams, Merrill, Wis.
Application September 13, 1957, Serial No. 683,899
3 Claims. (Cl. 128—76.5)

1. A training stereoscope of the character described comprising a housing having a pair of side-by-side compartments, means to support stereoscopic slides in the rear portions of said compartments, means to selectively illuminate the rear portions of the compartments, a lens-supporting plate slidably mounted on the forward end of said housing transverse to the compartments and being adjustable laterally relative to the compartments, respective lenses mounted on the supporting plate inwardly adjacent the compartments, and respective prism assemblies mounted on the lens-supporting plate forwardly adjacent the lenses, each prism assembly comprising a pair of triangular prisms rotatably mounted adjacent each other and being rotatably adjustable around the optical axis of the adjacent lens, the pairs of prisms having transverse,



closely adjacent inside faces, means gearingly coupling the prisms of each pair for simultaneous rotation in opposite directions, and an outwardly projecting operating arm secured to one prism of each pair of prisms.

2,897,817
MASK
Ramón Fernández Marina, Santurce, San Juan, Puerto Rico
Application June 28, 1954, Serial No. 439,658
2 Claims. (Cl. 128—141)

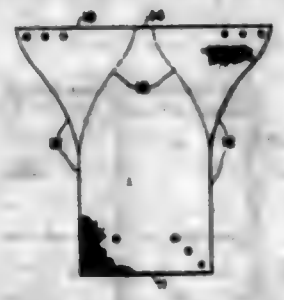


1. A diving mask comprising a viewing chamber covering the eyes of the wearer, a breathing chamber covering only the nose of the wearer to thereby permit the mouth of the wearer to be uncovered, a partition conforming to the features of the wearer separating the said chambers, and a strap for holding said mask in place during use, a duct extending laterally through each side wall of the breathing chamber and opening therein, said ducts being interconnected outside said mask by a flexible tube coextensive with the strap, a container for oxygen mounted on said mask, an additional duct formed in the side wall of said mask, one end of which opens into one of the said lateral ducts, the other end of which is connected to the oxygen container and control means associated with the container for regulating the supply of oxygen to the breathing chamber.

2,897,818
DIAPER
Howard A. Perry, Jr., George E. Perry, and Harry G. Perry, Athens, Ga.
Application January 8, 1954, Serial No. 402,934
2 Claims. (Cl. 128—284)

1. A diaper including coextensive front and rear outer layers defining a generally rectangular body having outwardly extending corners along one end edge thereof formed by outwardly directed side edges of ogee curvature, and a liner formed by a plurality of coextensive layers disposed within said outer layers, said liner having a reduced terminal portion disposed at said one end edge formed by inwardly directed side edges of ogee curvature, the configuration of the inwardly directed side edges of

said liner being complementary to the configuration of the outwardly directed side edges of said outer layers, said



outer layers and said liner layers comprising folded sheets of outer layer and liner layer material respectively.

2,897,819
DIAPER PANTS
Phyllis L. Colby, Sanger, Calif.
Application February 7, 1957, Serial No. 638,788
6 Claims. (Cl. 128—284)

1. Diaper pants of the character described comprising superposed, coextensive, rectangular areas of flexible sheet material marginally joined along one side to define independently-foldable, separately-manipulable, like sheet sections, a seam parallel to and spaced inwardly from the joined margins of said areas uniting the latter to define therebetween an open-end channel at the joined side of the areas, an elastic member of less lenth than said channel loosely traversing the major length thereof, means securing end portions of said member when in stretched condition to the walls of said channel inwardly adjacent the ends of the latter, whereby to reflect normal retraction of said member as a shortening of the channel length with consequent gathering of the area material between the secured ends of said member, and reinforcements in the channel end portions outwardly from the attachments of the elastic member thereto for coaction with diaper-attaching means.

2,897,820
SURGICAL NEEDLE GUIDING INSTRUMENT
Robert Tanber, Philadelphia, Pa.
Application October 23, 1956, Serial No. 617,796
7 Claims. (Cl. 128—334)

1. A surgical instrument of the character described comprising a rectilinear mid-portion, a tubular end portion curved in approximate conformity with a curved surgical needle and adapted to receive at least the point of such needle after its passage through living tissue and means proximate the free extremity of said end portion disposed in the passage therein in the zone of its least radius operative to maintain the needle out of contact with said extremity to thereby inhibit passage of the tissue therebetween during insertion of the needle into said end portion.

2,897,821
BUOYANT BATHING BRASSIERE
Lovie E. Lerner, Edwardsburg, Mich.
Application July 21, 1958, Serial No. 749,966
8 Claims. (Cl. 128—479)

1. A buoyant bathing brassiere comprising a body portion, including a buoyant filler and a confining sheath, a back strap extending between opposite ends of said body when worn, said filler constituting an elongated normally flat unicellular sheet of substantially uniform thickness having a central portion of reduced width and similar end portions having rounded bottom edges, each filler end portion having a substantially V-shaped notch formed therein and extending substantially to the center thereof and interrupting the rounded bottom edge thereof, and means holding the confronting edges of said notches in engagement, whereby each filler end portion assumes concavo-convex shape.

2,897,823
BRASSIERE
Pierre Amyot, Sillery, Quebec, Canada, assignor to Serong, Inc., West Haven, Conn., a corporation of Connecticut
Application May 1, 1957, Serial No. 656,350
4 Claims. (Cl. 128—483)

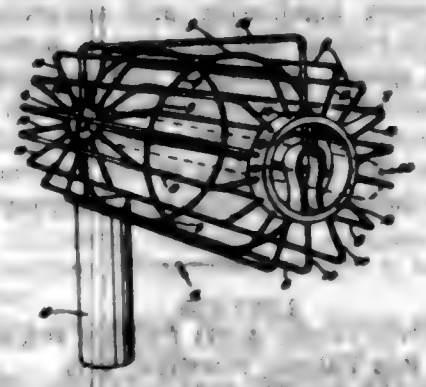
1. A brassiere embodying a pair of breast pockets adjacently arranged, and free of attachment to one another, a first side section having its front edge secured to the outer edge of a first one of said breast pockets, a second side section having its front edge secured to the outer edge of the second of said breast pockets, a pair of crossed diaphragm bands located below said breast pockets, each diaphragm band being wider at one end than at the other end, a first one of said diaphragm bands having its narrower end secured along a portion of the front edge of said first side section and the upper edge portion underlying said first breast pocket secured along the lower edge of said first breast pocket, the remaining upper edge portion of said first diaphragm band extending freely below said second breast pocket and having its wider end secured along a portion of the front edge of said first side section, the lower edges of said diaphragm bands extending across the bottom of the brassiere in a criss-cross angular arrangement from a point below one breast pocket to a point below the other breast pocket and from one side of the front of the garment to the other, and in which the narrower end of each of said diaphragm bands is secured to an adjacent side section directly below the correspondingly attached breast pocket and in which the wider end of each of said diaphragm bands is secured along an adjacent side section directly below a correspondingly attached breast pocket, a portion of each of said wider ends being in lapping relation to the narrower end of the other of said diaphragm bands.

hollow teeth through which the chemical in said con- upper portion of said receptacle having a valve seat there-

2,897,823
FOUNDATION GARMENT
Morris M. Scheinberg, New York, N.Y., assignor to De Luxe Girdlecraft Co., Inc., New York, N.Y., a corporation of New York
Application November 29, 1957, Serial No. 699,811
4 Claims. (Cl. 128—542)

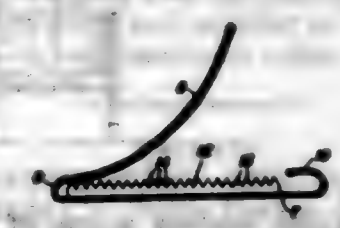
1. A foundation garment comprising a permanently tubular waist-encircling body having an upper continuous edge and a lower continuous edge and having a one-piece front panel at its front, extending the full distance from its upper to its lower edge and constituting a relatively large portion of the front of said body, said front panel being adapted for disposition across the abdomen of the wearer and being of material having comparatively little resistance to stretch; and a pair of reinforcing panels of material having greater resistance to stretch, extending substantially horizontally across and in front of the front panel and having diagonally extending upper edges crossing each other, each of said reinforcing panels being permanently connected along substantially its full lower edge with substantially the full lower edge of the front panel and being permanently connected with both of the opposite lower side edges of said front panel and spanning the lower area thereof, thereby to provide additional support to said lower area, a portion of one side of said front panel and spanning the lower area thereof, thereby to provide additional support to said lower area, a portion of one side edge of each one of the reinforcing panels being joined permanently with the entire juxtaposed side edge of the other reinforcing panel, which juxtaposed side edge is coextensive with said portion of one side edge.

2,897,824
SAFETY CIGARETTE HOLDER
Max V. Compton, Watsonville, Calif., assignor of one-tenth to Gadget-of-The-Month Club, Inc., Los Angeles, Calif., a corporation of California
Application November 1, 1957, Serial No. 693,896
3 Claims. (Cl. 131—174)



1. A safety cigarette holder, comprising: an elongated, open framework, cigarette-enclosing structure having an inlet end and a closed end and including radially disposed longitudinal bars and transverse support bars for said radially disposed longitudinal bars; a ring, defining said closed end, whereon said longitudinal bars are fixedly attached at one end thereof; frictional cigarette retaining means at said inlet end, said cigarette retaining means including a support ring, a cigarette gripper, and actuating means; an aperture on the top of said support ring; said actuating means being cooperable for deforming said cigarette gripper into an oval shape, whereby a cigarette may be inserted therein, and being cooperable, upon release thereof, for allowing said cigarette gripper to return to its normal position thereby enabling a cigarette to be retained within said cigarette enclosing structure, said actuating means comprising a movable arm having one end fixedly attached to said ring at said inlet and a free actuating end, communicating through said aperture in said support ring, in contiguous contact with the top of said inverted substantially U-shaped cigarette gripper; handle means adjacent said closed end; said cigarette gripper being of fireproof material and being cooperable for extinguishing a lighted cigarette.

2,897,825
DEVICES FOR WOMEN'S HAIR
Mary R. Wagner, Rochester, N.Y.
Application November 1, 1956, Serial No. 619,884
1 Claim. (Cl. 132—48)



A device for women's hair, comprising: a body member; an arm hingedly attached adjacent one end thereof to said body member, said arm being smooth and unobstructed on its under side; means on said body member for engaging the opposite end of said arm for holding said arm in predetermined spaced relationship with said body member for closing said device; and a resilient strip of soft rubberlike material separate from said body member but adhered to said body member along the side thereof facing said smooth underside of said arm, said strip being as wide as said arm and being formed with a plurality of substantially transversely extending flexible projections, said strip having a plurality of substantially transversely extending grooves alternating with said projections, said projections being distortable upon engagement with hair compressed between said smooth underside of said arm and said resilient strip when said device is closed whereby the hair is forced into and firmly gripped in said grooves.

2,897,826
FOUNTAIN COMB AND FORMULA MEASURING AND MIXING DEVICE
Salvatore S. Di Vito, Philadelphia, Pa.
Application January 6, 1958, Serial No. 707,268
1 Claim. (Cl. 132—114)

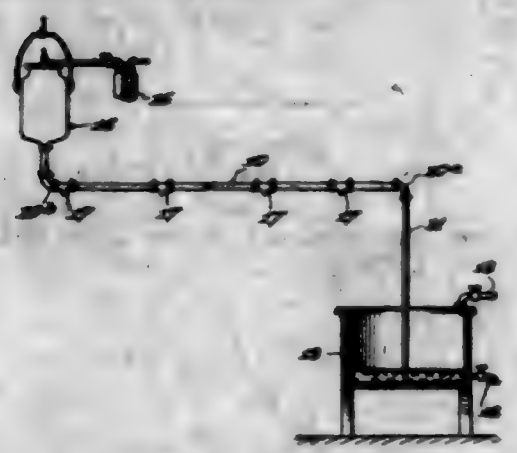
A combined fountain comb and formula measuring and mixing device including a hollow, transparent, flexible container for receiving a liquid chemical to be applied to the hair, said container having a reduced, externally threaded neck, the interior of said container and said neck being smooth to facilitate thorough cleaning thereof and to prevent contamination of the chemicals placed in said container, quantitative graduations on said container to indicate the amount of various chemicals introduced thereinto, and a hollow comb-like member communicating with said container and having open ended

said tube, an air pressure supply tube extended from the fitting, and a spray hose extended from the lower part

into such release position to render the member ineffective to hold the overspeed valve such that the afore-

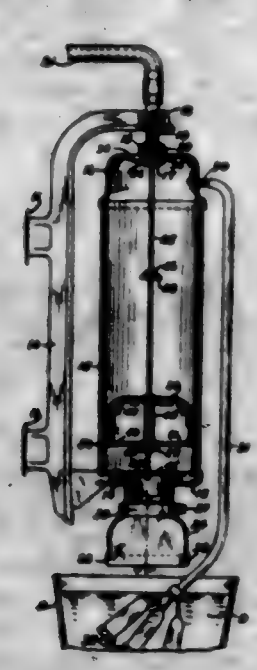
hollow teeth through which the chemical in said container may flow, one end of said comb-like member being internally threaded for engagement with said neck.

2,897,827
PIPELINE WASHING APPARATUS
Clarence W. Dreesgeld, Centralia, Ill.
Application October 22, 1954, Serial No. 463,855
3 Claims. (Cl. 134—56)



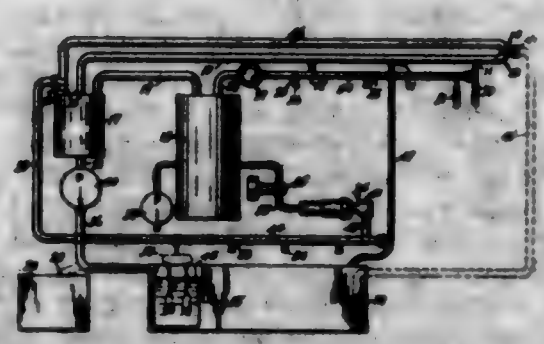
1. A milk pipe line washing system of the character described, comprising: a receptacle having an outlet adapted to be connected to the milk pipe line; means for periodically applying vacuum to said receptacle and venting said receptacle to atmosphere to flush a washing solution back and forth through the pipe line and into said receptacle; a float responsive to the level of washing solution in said receptacle for controlling the application and venting of vacuum therein; and an auxiliary chamber surrounding said float and in fluid communication with said receptacle through an inlet opening, said auxiliary chamber having a single outlet opening for delaying the application of vacuum to the system to permit complete emptying of the pipe line, said outlet opening being a constantly open restricted outlet of a predetermined amount smaller than said receptacle outlet.

2,897,828
DAIRY EQUIPMENT
Lloyd F. Bender, Hayward, Wis.
Application August 9, 1956, Serial No. 603,021
6 Claims. (Cl. 134—56)



1. In a milking machine parts washer, a receptacle having an inlet port for cleansing liquid, a closure for the upper portion of said receptacle having a valve seat thereon, a member above and spaced from said seat and having coaxial superimposed large and small bores therein, an upright reciprocable rod mounted within said receptacle and having thereon a valve cooperable with said seat and with said member to alternately connect the interior of said receptacle with a source of vacuum and with the ambient atmosphere, said rod having superimposed large and small plungers thereon slidable along and cooperable with said bores respectively and also having a passage constantly connecting the interior of said receptacle with the space between said plungers, a float operable by the liquid within said receptacle to reciprocate said rod, and liquid discharge means at the lower portion of said receptacle.

2,897,829
MEANS FOR CLEANING IN-PLACE PIPE LINES
Bradford L. Arrington and Arthur M. Bullard, Petaluma, Calif., assignors to Holm Tractor & Equipment Company, Petaluma, Calif.
Application May 28, 1954, Serial No. 433,242
5 Claims. (Cl. 134—99)



1. An in-place pipe line cleaning system comprising a solution container, a communicating connection from said solution container to said pipe line, a source of subatmospheric pressure in communication with said pipe line, a make-and-break valve in communication with said communicating connection, operating means for actuating said valve through a series of cycles including closing said valve for making vacuum for drawing a volume of solution into said communicating connection and said pipe line and opening said valve for breaking the vacuum for admitting atmospheric air through said volume for release for return flow of a portion of said volume and thereby creating frothing therein, with the following closing of said valve regathering and advancing the remainder of said volume and drawing in another volume of solution in spaced relation to said remainder, and a discharge connection in communication with said container, and a pump in communication with said pipe line for discharging the remainders of the volumes back to said container following surging travel through the pipe line.

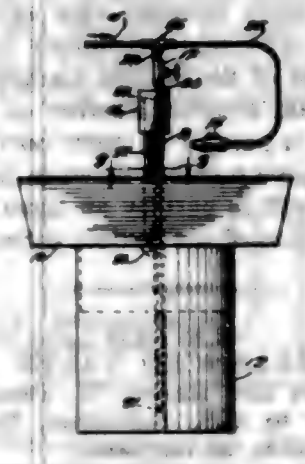
2,897,830
CLEANING TOOL AND PARTS WASHER
Ben Palmer, Hartford, Wis.
Application October 25, 1956, Serial No. 618,296
3 Claims. (Cl. 134—99)

2. A tool and parts washer comprising a drum positioned with the axis vertically disposed, an open tool and parts retaining tray positioned on the drum, a filter carried by and depending from the tray, a pipe positioned at one side of the tray and extended into the drum, a head on the upper end of the pipe, a vent extended from the upper part of the drum to the upper part of the head, a pressure tube extended from the point spaced above the lower end of the drum upwardly through the pipe and head, a fitting on the upper end of the tube, a valve in

2,897,834
MEANS FOR AUTOMATICALLY SELECTING THE

plurality of slits one each between each pair of ports and

said tube, an air pressure supply tube extended from the fitting, and a spray hose extended from the lower part



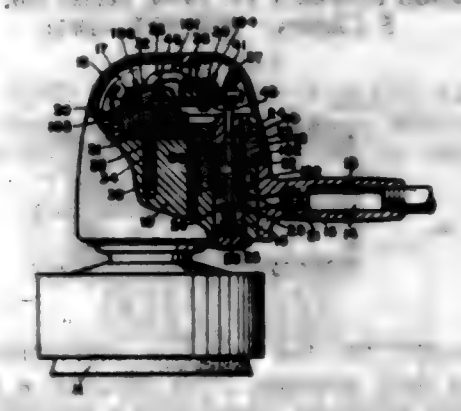
of the head for spraying fluid from the drum over tools and parts in the tray.

2,897,831
TENTS AND LIKE STRUCTURES
Odd G. A. Lidén, Johanneshov, Sweden
Application October 16, 1956, Serial No. 616,234
2 Claims. (Cl. 135—4)

1. A tent frame structure comprising a plurality of pairs of opposed longitudinally spaced legs, gabled frames connected transversely between the upper ends of the pairs of legs, hinge-like fittings at the junctures of the legs with said frames and with respect to which said legs are movable outwardly for erection and movable inwardly against said frames for collapsibility, tubular sleeves extending longitudinally from said fittings, frame members extending longitudinally between adjacent pairs of legs and the ends of which are fitted into said sleeves, said longitudinal frame members being movable inwardly against said gabled frames, plate-like fittings secured under the rigde portions of said gabled frames, and tubular roof ridge members extending longitudinally between said plate-like fittings and having depending end pins removably receivable in apertures in said plate-like fittings.

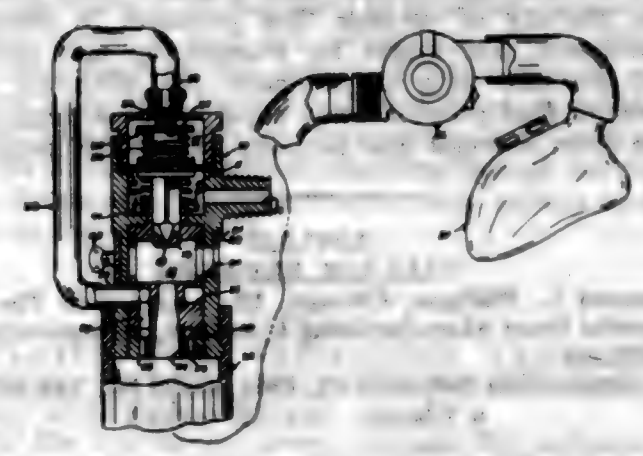
2,897,832
OVERSPEED SAFETY DEVICE
Francis A. Jimerson, Athens, Pa., assignor to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Application December 31, 1956, Serial No. 631,533
4 Claims. (Cl. 137—27)

1. A safety device for a rotating pressure fluid operated motor, the combination of a casing and a reciprocatory overspeed valve therein movable into a position to cut off the pressure fluid supply to the motor, resilient means for constantly urging said overspeed valve into said position whenever the motor is operating, a member holding said overspeed valve against movement in said position and movable into a position to release said overspeed valve, means releasably holding said member against movement into such release position, a centrifugally operated overspeed governor responsive to the speed of the motor and adapted to move said member into such release position to render the member ineffective to hold the overspeed valve such that the aforementioned resilient means moves the overspeed valve into said cutoff position whenever the motor speed ex-



ceeds a predetermined limit, said means being manually resettable to its original holding relation with said member solely by return of said member to its original holding position with said overspeed valve.

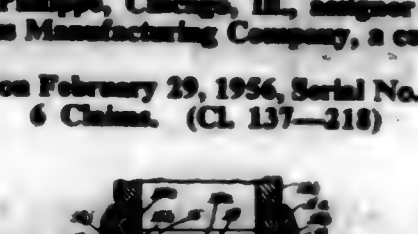
2,897,833
RESPIRATORY APPARATUS
Henry W. Seeler, Dayton, Ohio
Application February 14, 1956, Serial No. 565,515
8 Claims. (Cl. 137—64)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A fluid mixing device including a housing, said housing having an inlet chamber and a mixing chamber therein, said mixing chamber having an opening therein for admission of a fluid, means to vary the size of said opening, inlet means to supply a second fluid having a constant pressure to said inlet chamber, valve-controlled outlet means in said inlet chamber directing flow of said second fluid through the mixing chamber at a pressure below atmospheric pressure to induce flow of the first fluid through the opening into the mixing chamber, outwardly diverging passage means to conduct the mixed fluid from the mixing chamber to a container at a pressure above atmospheric pressure, said inlet chamber having a diaphragm therein positioned above the inlet means of said inlet chamber to form an upper and a lower chamber portion sealed from each other in communication with opposite sides of said diaphragm and controlling the flow of said second fluid through said outlet means, and pressure fluid transfer means in communication between said upper chamber portion and the interior of said container to transmit the pressure in said container to the upper surface of said diaphragm to increase or decrease the flow of said second fluid through said valve-controlled outlet means and the proportional flow of said first fluid induced thereby through said opening to mix therewith on any change of pressure in the container and thereby maintain a substantially constant pressure in the container for any altitude.

ing an inlet port for cleansing liquid, a closure for the head, a fitting on the upper end of the tube, a valve in

2,897,834
MEANS FOR AUTOMATICALLY SELECTING THE HIGHEST OR LOWEST PRESSURE FROM A GROUP OF CHANGING FLUID PRESSURES
Arthur C. Stuchl, Rockville, Md.
Application February 19, 1954, Serial No. 411,324
5 Claims. (Cl. 137—101)

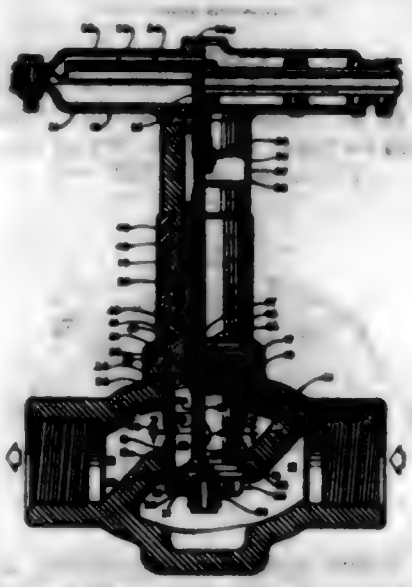


1. Apparatus for the selection and transmission of an extreme fluid pressure from amongst a plurality of variable fluid pressures, comprising a plurality of similar housings, means dividing each of said housings into a first sealed chamber and a second sealed chamber, a one-way valve in each of said housings to permit fluid to flow between said first and second chambers in but a single direction, means connecting said first chambers each to individual sources of variable fluid pressure, the extreme pressure of which is to be selected and transmitted, means interconnecting each of said second chambers to provide a common chamber, means including a bleed orifice for providing continuous flow within said common chamber thereby permitting said common fluid pressure and the extreme fluid pressure from amongst said plurality of variable fluid pressures to reach an equilibrium, and means for transmitting said common fluid pressure to a remote point for utilization, said common fluid pressure being equal to the extreme pressure from amongst said plurality of variable pressures.

2,897,835
VACUUM BREAKER
Howard L. Phillippe, Chicago, Ill., assignor to The Imperial Brass Manufacturing Company, a corporation of Illinois
Application February 29, 1956, Serial No. 568,457
6 Claims. (Cl. 137—218)

3. In a valve device, body means providing a passage for the flow of fluid therethrough having an inlet, an outlet and a laterally opening vent intermediate the inlet and outlet, valve means spanning the passage and located intermediate the inlet and the outlet comprising: a rigid valve seat member upstream of the vent and having a center axis, said valve seat member further having at least three ports arranged concentrically of said center axis and an annular portion outwardly of the ports; an annular valve seat coaxially spaced from the valve seat member downstream of the vent and aligned with said outer portion thereof; and a movable valve element for alternatively closing said ports and sealingly bridging the space between said outer portion and said annular valve seat to close the vent, said valve element comprising a flexible member having an outer annular portion sealingly secured to the periphery of said outer portion of the valve seat member and the body means upstream of the vent and extending inwardly toward said axis a distance at least equal to the spacing between the periphery of said outer portion of the valve seat member and said annular valve seat, and a mid-portion provided with a plurality of slits one each between each pair of ports and extending outwardly from said axis to a circle extending medially of the ports concentrically of said axis, whereby alternatively the space between said valve seat member and said annular valve seat is sealingly bridged solely by the annular portion of the flexible member and each port by a seating of said flexible member on said valve seat member is closed in part by an outer portion of said mid-portion of the flexible member between the outer ends of the flanking slits and in part by an inner portion of said outer annular portion of the flexible member.

2,897,836
BALANCED VALVE
Clifford M. Peters and Robert W. Dimmig, Longview, Tex., assignors to U.S. Industries, Inc., New York, N.Y., a corporation of Delaware
Application June 13, 1956, Serial No. 591,077
11 Claims. (Cl. 137—454.5)



1. A valve comprising, a body having a flow passageway therethrough, a valve seat across the passageway, a valve member reciprocally mounted in the passageway and cooperable with the seat controlling flow through the passageway, a pressure responsive member operably connected to the valve member and exposed on opposite sides to upstream and downstream pressure respectively when the valve is closed, said pressure responsive member having an effective area substantially equal to that of the valve member within said seat to balance out at least in part the effect of pressure on the valve member, a restriction in the passageway downstream of the valve seat of smaller size than the passageway through the valve seat when the valve is open across which substantially all of the pressure drop across the valve is taken when the valve is open, and means for reciprocating the valve member toward and away from its seat to open and close the valve, said pressure responsive member being situated between the valve member and the reciprocating means.

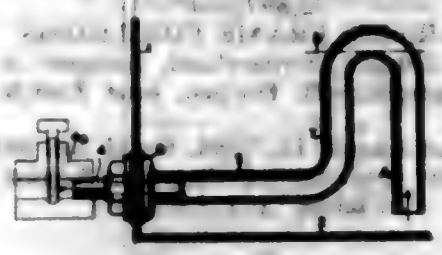
2,897,837
DEVICE FOR DRAWING STERILIZED LIQUIDS FROM A VESSEL
Jacob van Wijgen, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application December 6, 1955, Serial No. 551,439
Claims priority, application Netherlands December 16, 1954
5 Claims. (Cl. 137—391)

1. A discharge duct for drawing sterilized liquids from a receptacle, comprising valve means for closing and opening said discharge duct and a tube joined to said

web of a cellulose derivative, a plurality of glass fiber

reciprocating said brackets and the parts secured thereto

valve means and having part thereof in said receptacle, said part comprising an upwardly directed portion of predetermined length, a downwardly directed portion positioned between said upwardly directed portion and said valve means and a substantially horizontal portion between said downwardly directed portion and said valve

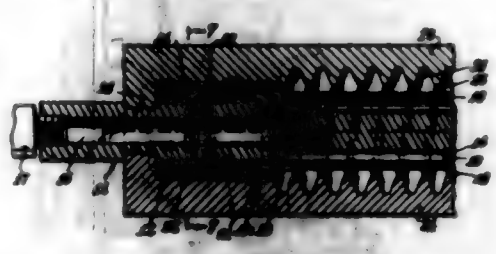


means, said predetermined length having a magnitude such that, starting with said tube filled with air, the air pressure in said tube maintains the liquid therein below the highest point in said upwardly directed portion when said valve means is closed and said receptacle is filled with liquid above said highest point.

2,897,838
HEAT EXCHANGER
William O. Webber and Delmas A. Smith, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware
Application July 29, 1957, Serial No. 674,287
3 Claims. (Cl. 138—38)

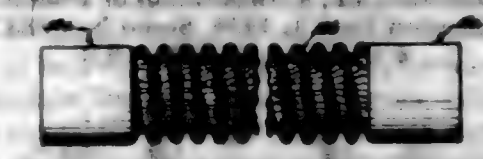
1. A heat exchanger tube adapted for use in a heat exchanger of the shell and tube type, said tube having improved heat transfer characteristics and having an elongated crimped wire longitudinally arranged therein, and a plurality of horizontally spaced apart discs secured to the wire on the inner side of the crimps, said wire being arranged against the wall of the tube and said disc being substantially coaxial with the tube.

2,897,839
HOSE
Fred T. Roberts and Robert E. Roberts, Wilton, Conn.
Original application April 4, 1956, Serial No. 576,655, now Patent No. 2,779,976, dated February 5, 1957. Divided and this application July 16, 1956, Serial No. 598,092
7 Claims. (Cl. 138—56)



1. A hose having at each end thereof an attaching portion for connecting said hose to a rigid tubular connector and comprising a sleeve formed of elastomeric material, and an annular expansible and contractible clamping member having the annular portions thereof completely embedded in said sleeve and comprising two coils of opposite pitch, each coil having their ends overlapped and terminating in outwardly projecting arms extending beyond the sides of the sleeve, said coils being positioned in side by side relation with their inner arms in juxtaposition and the outer arms connected together, said arms enabling said clamping member to be operated to expand when telescoping the sleeve and connector, and said clamping member contracting to clamp the sleeve to the connector to form a seal therewith.

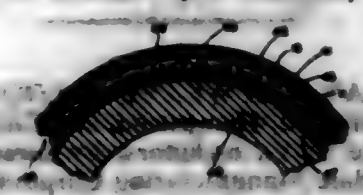
2,897,840
HOSE AND METHOD OF MAKING SAME
Fred T. Roberts and Robert E. Roberts, Wilton, Conn.
Application June 10, 1957, Serial No. 664,520
17 Claims. (Cl. 138—56)



1. The method of making a fabric reenforced, helically corrugated flexible hose comprising applying an open mesh, stretchable fabric over a tube of moldable elastomeric material, inserting the assembly into a heated mold cavity of larger diameter than the assembly and having helically corrugated walls, applying fluid pressure to the interior of the tube to expand the tube and stretch the open mesh fabric and to cause the elastomeric material to be pressed through the open mesh in said fabric and into engagement with the corrugated walls of the mold cavity to mold the corrugated hose, and setting the hose in molded shape.

11. A mold-formed helically corrugated reenforced hose comprising a tubular body of moldable elastomeric material having at least one tubular layer of stretchable open mesh fabric therein, said body having helically corrugated walls with the fabric thereof being in stretched condition to conform to the corrugations of the walls and with the elastomeric material extending through the mesh in the fabric and forming a smooth outer surface on the helically corrugated wall.

2,897,841
INSULATED PIPE, REINFORCED LAMINATED SHEET MATERIAL AND METHOD OF MAKING THE SHEET MATERIAL
In Wai Hui and Samuel Kruty, Chicago, Ill., assignors to Dearborn Chemical Company, Chicago, Ill., a corporation of Illinois
Application May 2, 1955, Serial No. 505,211
14 Claims. (Cl. 138—64)



1. A laminated sheet material comprising a thin base sheet of a cellulose derivative, a plurality of unconnected reinforcing strands adhesively secured to said base sheet, a thermoplastic film overlying said base sheet, and a layer of microcrystalline wax interposed between said strands and said thermoplastic film bonding said film to said strands.

9. The method of making laminated sheet material which comprises applying a coating of adhesive onto a thin moving web of a cellulose derivative, continuously laying a plurality of reinforcing strands lengthwise of the adhesive coated web, spraying a film of molten microcrystalline wax onto the moving web over said strands, applying a thermoplastic film over and in contact with the strands while the wax is still fluid, and thereafter cooling the resulting laminate to cause said thermoplastic film to be tightly bonded to said strands.

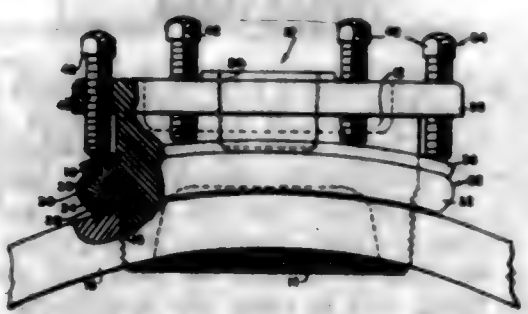
12. An insulated pipe structure comprising a pipe having wrapped thereabound, a covering comprising a base

2,897,846

effect simultaneous movement thereof, each of said mem-

web of a cellulose derivative, a plurality of glass fiber strands adhesively secured to said base web, a film of microcrystalline wax covering said strands and extending between said strands, and a thermoplastic film bonded to said film of microcrystalline wax.

2,897,842
PIPE FITTING WITH RETAINED GASKET SEALING MEANS
John J. Smith, Decatur, Ill., assignor to Mueller Co., Decatur, Ill., a corporation of Illinois
Application June 1, 1956, Serial No. 588,700
6 Claims. (Cl. 138—92)

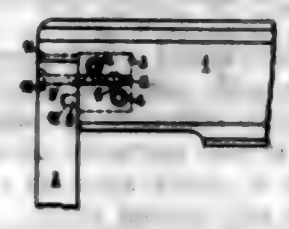


6. A fitting comprising: a body having an end for securement to a pipe; sealing ring means of substantially uniform cross-section, said body having a cylindrical portion adjacent said end receiving said sealing ring means, said sealing ring means having an inner annular sealing surface facing in the direction of said body end, and a transverse abutment surface facing in the opposite direction; a follower ring of flexible material mounted on said body portion and having a transverse abutment surface for engagement with the transverse abutment surface of said sealing ring means; and means for moving the entire follower ring in engagement with said sealing ring means in the direction of said body end and for moving diametrically opposed portions of the transverse abutment surface of said follower ring in engagement with said sealing ring means a distance greater than the distance of movement of diametrically opposed portions of the transverse abutment surface of said follower ring disposed approximately one quadrant out of phase with said first mentioned diametrically opposed portions and for maintaining said follower ring against movement in the opposite direction.

2,897,843
LAY FOR WEAVING LOOMS
Walter A. Sherwood, Hempstead, and Thomas D. Verrill, Farmingdale, N.Y., assignors, by mesne assignments, to Farmingdale Manufacturing Corporation, Baltimore, Md., a corporation of Maryland
Application October 17, 1956, Serial No. 616,403
11 Claims. (Cl. 139—188)

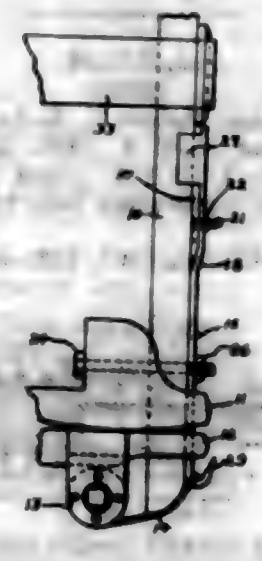
1. A lay assembly and support for weaving looms having stationary shuttle boxes comprising, vertical end brackets, a reed assembly secured to and extending between said brackets, a race plate secured to and extending between said brackets, means supporting said brackets for reciprocating horizontal motion, driving means for reciprocating said brackets and the parts secured thereto between the beat-up position and a predetermined retracted position, and connecting rod assemblies connecting said driving means to said brackets, said connecting rod assemblies being resiliently variable in length.

2,897,844
HARNESS FRAME FOR LOOMS
Martin Graf, Horgen, Switzerland, assignor to Grob & Co. Aktiengesellschaft, Horgen, near Zurich, Switzerland
Application August 16, 1956, Serial No. 604,467
Claims priority, application Switzerland August 17, 1955
7 Claims. (Cl. 139—91)



1. In a harness frame including carrier bars detachably joined at their ends to side support members, each joint comprising in combination a single bore extending longitudinally into the carrier bar from the end thereof and having an interior screw thread therein, a screw bolt extending transversely through the side support member into said bore in engagement with said interior screw thread in the bore, interlocking means on said carrier bar and side support member preventing relative rotation of the carrier bar and side support member on said screw bolt when said screw bolt is tightened, and locking means in said bore engaging said screw bolt to retain the same in tightened position.

2,897,845
PICKER STICK ATTACHMENT
William R. Vickers, Lanett, Ala., assignor to Georgia-Alabama Supply Company, a corporation of Georgia
Application February 15, 1956, Serial No. 565,725
3 Claims. (Cl. 139—154)



1. In an attachment for a picker stick having lug and parallel motion straps associated therewith, an elongated vertical member having an upper section and a lower section slidably connected for vertical adjustment relative to each other, means maintaining said upper and lower sections in vertical alignment with each other, means for attaching said lower section to the picker stick, means adjacent the lower end of said lower section for attaching the parallel motion strap, and means adjacent the upper end of said upper section for attaching the lug strap.

of drop wires, and second cam means carried by said

an applicator unit including a stationary conduit com-

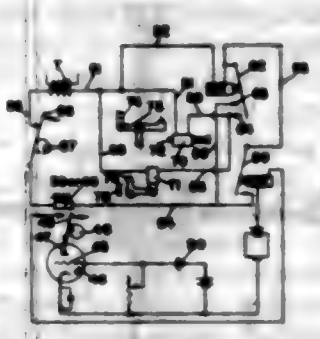
743 O.G.—8

2,897,846

WEFT DETECTING SYSTEM FOR PICK AND PICK AUTOMATIC LOOM

Richard G. Turner, Worcester, Mass., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts

Application March 31, 1958, Serial No. 724,935
7 Claims. (Cl. 139—232)



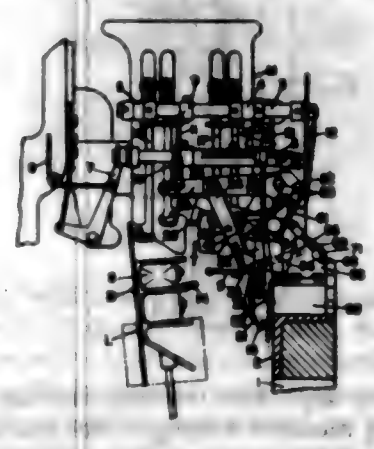
1. In a weft detecting system for a pick and pick weft replenishing loom having a lay and shifting shuttle boxes at each end and a reserve weft magazine at one end, the shuttle boxes at said one end comprising a sub-cell structure of at least one shuttle cell and an upper shuttle cell vertically separable from said sub-cell structure and having shifting movement from a low shuttle-receiving position to a high transfer position to receive a bobbin from the magazine, electric weft detector means at the opposite end of the loom effective on any selected beat of the loom to detect the weft in the shuttle next to be picked to said one end, normally open electric circuit means including the detector means, electromagnetic means controlled by the circuit means effective when the latter is closed to cause said shifting movement of said one cell to its high position to receive a bobbin from the magazine, the shifting boxes at the magazine end being in low position when said one shuttle cell is in low shuttle-receiving position, and a normally open electric switch on the lay at the magazine end in said circuit means closed by said last named shifting boxes when the latter are in low position only and when thus closed, provided the detector means indicates weft exhaustion, closing said circuit means.

2,897,847

THREAD EXTRACTING MEANS FOR WEFT REPLENISHING LOOMS

Albert Cederlund, Worcester, Mass., assignor to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts

Application June 19, 1958, Serial No. 743,123
19 Claims. (Cl. 139—256)



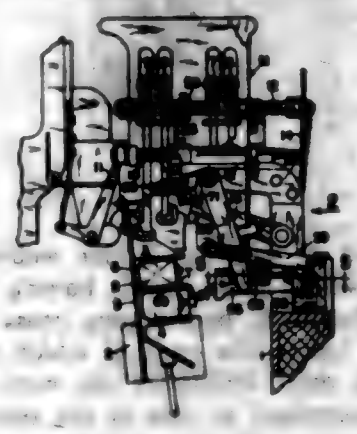
19. In a thread controlling unit for a weft replenishing loom having a pair of pivotal supports on the loom frame and an actuator movable incident to replenishment, a supporting structure having a pivoted pair of thread pick-up members thereon and rotatable about one of said supports by said actuator, a pin connecting said members to effect simultaneous movement thereof, each of said members coacting with said supporting structure to respectively clamp and trap a weft thread at different points thereof, a pair of levers pivoted on said structure each of which has a notch to receive said pin independently of each other to positively lock said members against pivotal movement until they are unlocked and each of which has means to guide said pin toward the notches, yielding means capable of holding said levers in locking relationship with said pins and capable of moving one of said levers to effect movement of said pin after unlocking has occurred, a thread engaging structure rotatable about the other of said supports and having a forwardly facing hook to engage the weft thread between said points, a lever also rotatable about the other of said supports with respect to said thread engaging structure, yielding means connected to said thread engaging structure and said lever and movable bodily with the latter to effect a lost motion connection therebetween, a connector having one end pivoted on said supporting structure and the other end pivoted on said lever to transmit motion to the latter when the supporting structure moves to effect movement of the thread engaging structure after the lever has moved a predetermined distance, and stop means on said unit for said structure to limit motion of the latter independently of each other.

2,897,848

THREAD CONTROL FOR WEFT REPLENISHING LOOM

Albert Cederlund, Worcester, William E. Kimmel, Millbury, and Onias J. Le Blanc, North Oxford, Mass., assignors to Crompton & Knowles Corporation, Worcester, Mass., a corporation of Massachusetts

Application August 28, 1957, Serial No. 680,756
23 Claims. (Cl. 139—260)



11. In a weft replenishing loom having a lay and a reserve bobbin magazine, vertically shifting shuttle boxes on the lay below the magazine, a third cutter mechanism, an operator for the cutter mechanism, and means causing the operator to actuate the cutter mechanism when the magazine is set for a replenishing operation and only when the boxes are in their raised position.

2,897,849

STOP MOTION FOR TERRY WEAVE LOOMS

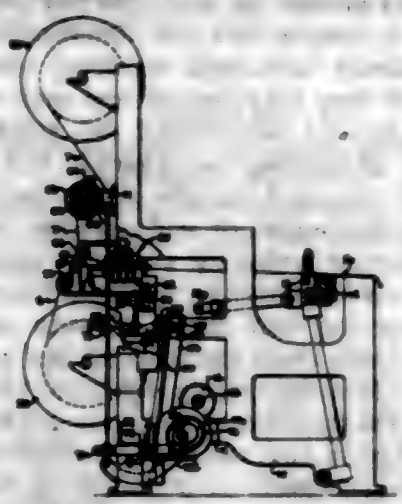
Eugene Wilson, Cliffside, N.C.

Application January 9, 1958, Serial No. 707,950
6 Claims. (Cl. 139—353)

1. In a pile loom for weaving terry cloth or the like having a terry warp, a bank of drop wires at times supported by the terry warp, means to stop the loom when any drop wire of said bank is not supported, and a shaft driven in timed relation to operation of the loom, the combination therewith of terry warp slackening means for intermittently slackening said terry warp, first cam means carried by said shaft and operatively connected to said terry warp slackening means to at times actuate the same, a drop wire supporting plate positioned below said bank

for reciprocating horizontal motion, driving means for ing the lug strap.

of drop wires, and second cam means carried by said shaft and operatively connected to said plate to move the same into engagement with said drop wires for supporting said drop wires, said drop wire supporting plate being movable in a straight vertical path beneath said bank of drop wires.

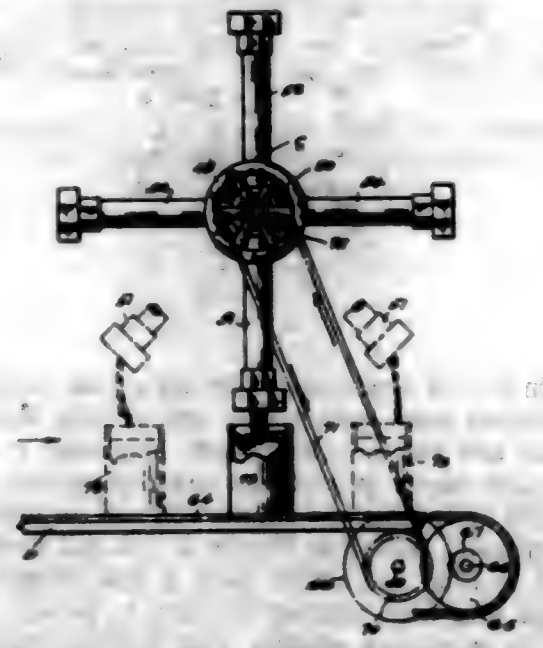


2,897,850
LADDER WEBBING
Matthias Stephenson, Sale, and John Sellers, Cheriey, England, assignors to Thomas French & Sons Limited, Manchester, England, a British company
Application November 1, 1955, Serial No. 544,259
11 Claims. (Cl. 139—384)

1. A method of weaving ladder webbing comprising at least two woven main bands having a row of only partially longitudinally overlapping cross straps between adjacent main bands, the ends of which cross straps are secured to the main bands by the weft thereof during weaving, characterised in that at the overlying portions of two consecutive cross straps the same weft is laid alternately firstly between all the warps of one cross strap and then between all the warps of the other to form small groups of weft of at least three picks each and then severing the weft trails between such groups, whereby the said severed groups of weft give an almost fully woven effect at such portions of the cross strape.

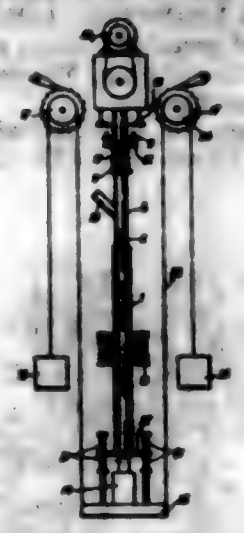
2,897,851
APPARATUS FOR DE-AIRING FILLED CONTAINERS
Donald N. Meldrum, Malvern, Pa., assignor to National Foam System, Inc., a corporation of Delaware
Application September 26, 1957, Serial No. 686,507
2 Claims. (Cl. 141—70)

1. In an apparatus for replacing air with an inert gas in filled containers, a mixing head, a pressure vessel for storage of a foam-forming solution, a source of supply of an inert gas under pressure, conduit means for conducting said pressurized gas directly to the interior of said storage vessel to pressurize the solution therein and for conducting said pressurized solution and gas each directly to the interior of said mixing head for mixing the same together for provoking the formation of foam, an applicator unit including a stationary conduit communicating with said mixing head for receiving the solution gas mixture therefrom, and foam generating and discharge means revolubly mounted upon said conduit, said foam generating and discharge means being provided with a plurality of nozzles extending radially of the conduit and operative to register successively with a



discharge port formed in said conduit, each of said nozzles being packed with discrete elements that conjointly form therebetween a multiplicity of restricted tortuous passages for flow of the solution-gas mixture therethrough and generation of a low-velocity stream of foam, and conveyor means for presenting containers respectively in position beneath said nozzles for successively receiving the controlled charges of foam therefrom.

2,897,852
FILLING CYLINDRICAL TUBES WITH A POWDERED MATERIAL
Florimond Aristide Jules Douchet, Paris, France, assignor to Societe Alsacienne de Constructions Mecaniques, Paris, France
Application July 14, 1954, Serial No. 443,364
Claims priority, application France July 29, 1953
5 Claims. (Cl. 141—75)



1. In a packing apparatus, in combination, a support; a tubular packing member having a free end and mounted on said support for reciprocating movement relative thereto in axial direction between an operative position wherein said free end engages a material to be packed and an inoperative position spaced therefrom; a tubular central member arranged substantially concentrically within said packing member so that said members define an annular space therebetween; closure means on said

a portion of said core, a removable cover enclosing one said member and said insert in a direction at right angles

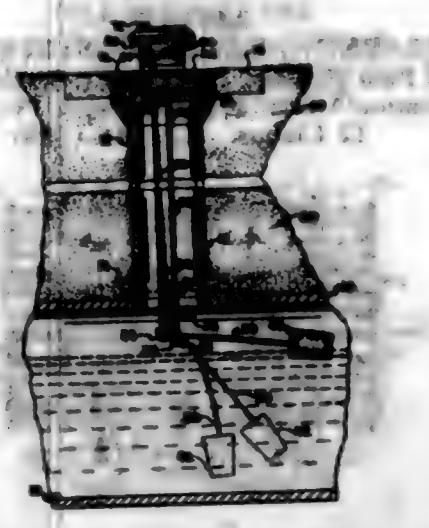
central member and extending outwardly therefrom so as to be adapted to engage said packing member in the region of said free end thereof, said central member being mounted for movement with said packing member while the latter moves between said operative and inoperative positions thereof and for movement relative thereto in said axial direction between a closed position wherein said closure means engage said packing member in said region thereof and close the corresponding end of said annular space thereof and an open position spaced from said closed position; material supply means in communication with said annular space for conveying thereinto the material to be packed; and operating means for holding said central member in said open position thereof when said packing member is in said inoperative position thereof, for moving said central member to said closed position thereof during movement of said packing member from said inoperative position thereof to an intermediate position intermediate said operative and inoperative positions, and for maintaining said central member in said closed position thereof during movement of said packing member from said intermediate position thereof to said operative position thereof and also while said packing member is in said operative position thereof, said operating means including spring means connected to said packing member and to said central member for maintaining the latter in said closed position thereof, and stationary abutment means associated with the upper end of said tubular central member and adapted to be engaged by said central member while the same moves with said packing member during movement of the latter from said operative position thereof into said intermediate position thereof whereby said central member is moved from said closed position thereof into said open position thereof during movement of said packing member from said intermediate position thereof toward said inoperative position thereof.

2,897,853

FILLING INDICATOR FOR UNDERGROUND TANKS

Roland W. Austine, York, Pa.

Application November 12, 1957, Serial No. 695,830
9 Claims. (Cl. 141—95)



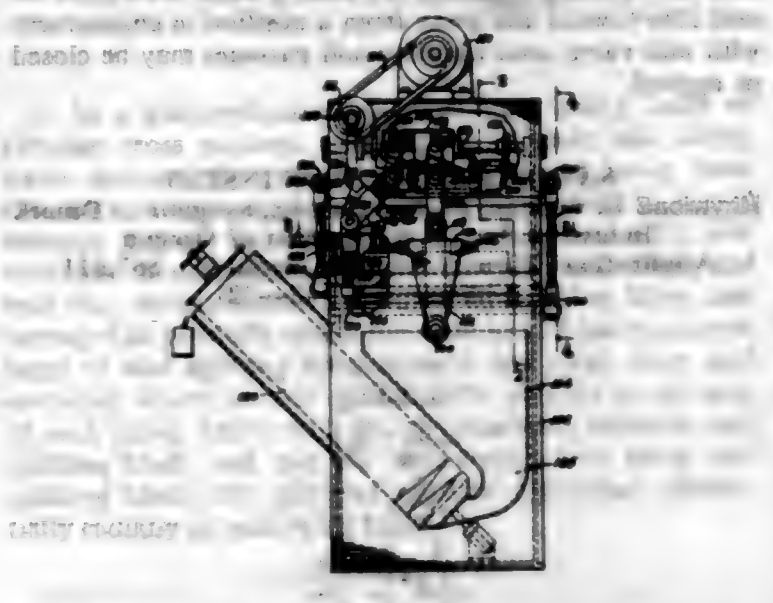
1. A filling indicator assembly for a tank installed beneath the surface of the ground and having a fill pipe extending upwardly from the filling opening in the top of the tank to a flush fitting at the surface of the ground, said indicator assembly comprising in combination, an annular supporting collar connectable to the interior of said flush fitting coaxially with said fill pipe and the opening in said collar being of a size to receive a filling nozzle of fluid delivery means, an elongated supporting rod adjustably extendable and supportable within said fill pipe longitudinally, means to secure said upper end of said supporting rod to said collar in a predetermined position relative thereto, a float lever pivotally connected adjacent one end thereof to the lower end of said supporting rod and having a float on the longer end thereof, an elongated indicator rod pivotally connected at the lower end thereof to said float lever a short distance from the pivotal connection of said lever to said supporting rod and arranged to extend upwardly through said fill pipe and slidably relative to said collar, whereby the movement of the upper end of said indicator rod relative to said collar when the liquid level reaches said float indicates said situation, and positioning means projecting laterally from said supporting rod a predetermined distance above the pivot thereon for said float lever and operable to engage the lower end of said fill pipe when positioning said assembly therein to determine the operable range of positions of the float relative to the upper surface of the tank, whereby when the liquid with which the tank is being filled reaches the float when in fullest depending position further filling will elevate said float and raise the upper end of said indicator rod relative to said collar to afford visual indication of the extent to which the tank has been filled.

2,897,854

METHOD AND APPARATUS FOR FORMING SEAMLESS CAPSULES

Stephen T. Moreland, Grosse Pointe Park, Mich.

Application October 20, 1954, Serial No. 463,528
5 Claims. (Cl. 141—242)



5. In a capsulating apparatus, a housing having a generally cylindrical metering cavity therein for receiving capsulating material, said metering cavity having a discharge opening adjacent one end thereof, a mold provided with a cavity, the mouth of which communicates with said discharge opening to receive capsulating material from said cavity, a piston movable axially in said metering cavity, means for filling the metering cavity with capsulating material, means for moving the piston axially towards the discharge opening in said metering cavity to discharge capsulating material into the cavity of said mold and means for rotating said piston about its longitudinal axis while the piston is moved axially toward the discharge opening.

2,897,855

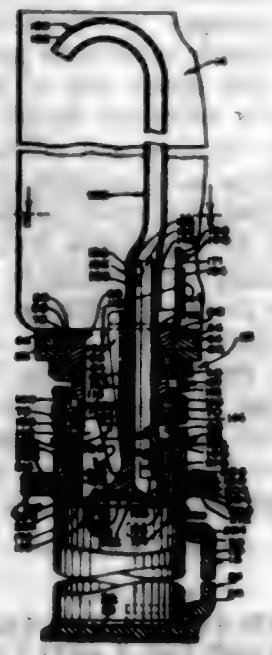
CONTAINER FILLING VALVE

Leslie Vadas, Los Gatos, Calif., assignor to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware

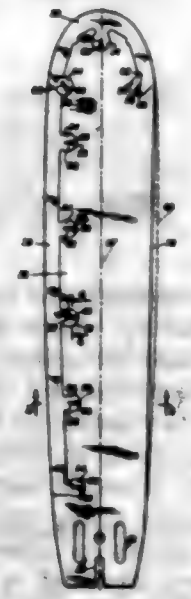
Application December 28, 1955, Serial No. 555,596
30 Claims. (Cl. 141—286)

1. A can filling valve comprising an elongated core having a pair of longitudinal slots, a bushing encircling

a portion of said core, a removable cover enclosing one of said slots to define a vent passage throughout substantially the entire length of said core, a valve head provided on said core at one end thereof, and a sleeve encircling a second portion of said core adjacent said bushing, said bushing and said sleeve cooperating to enclose the other of said slots to define a liquid flow passage, and said sleeve being mounted for sliding axial movement on said core toward and away from a position in engagement with said valve head whereby said passages may be closed or opened.

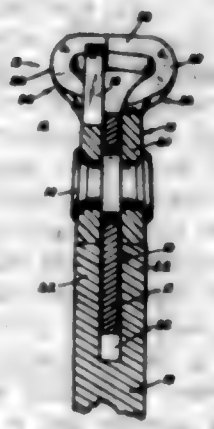


2,897,856
SAW BAR WITH NOSE INSERT
Raymond R. Carlton, Portland, Oreg., assignor to Omark Industries, Inc., a corporation of Oregon
Application February 24, 1956, Serial No. 567,611
11 Claims. (Cl. 143—32)



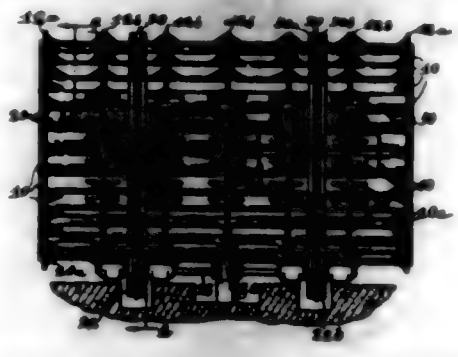
1. A chain-saw saw bar comprising a flat, parallel sided base member of elongate configuration having means on one end for attaching the member to a chain saw motor, an insert attached to said base member at the end thereof opposite the first mentioned end and defining a rounded nose and saw chain guide, said insert having a plurality of integral projections each formed with an enlarged head and a plurality of complementary apertures in said base member cooperatively receiving and snugly engaging said projections, said projections and said apertures being defined by walls extending at right angles to said parallel sides whereby said insert may be mounted or detached from said base member by relative movement between said member and said insert in a direction at right angles to the plane of said sides, and means securing said inserts and member against accidental separative movement.

2,897,857
SAW CHAIN CUTTERS WITH THIN CUTTING PORTION AND THICK BASE
Raymond R. Carlton, Portland, Oreg., assignor to Omark Industries, Inc., a corporation of Oregon
Application April 29, 1957, Serial No. 655,828
3 Claims. (Cl. 143—135)



1. A saw chain tooth formed of a metal plate and comprising a body element having rivet apertures therein and having an integral cutter element projecting from one edge of said body element and including a reversely bent shank portion extending outwardly from the outer surface of said body element and a toe portion extending laterally of said body element from said shank portion inwardly past the inner surface of said body element, the opposite edge of said body element providing a bearing surface for sliding on a guide bar, said body element having a portion of increased thickness extending from said opposite edge toward said rivet aperture at least a major portion of the distance between said opposite edge and said rivet apertures, said inner surface being flat adjacent said opposite edge and said bearing surface being flat throughout its area and extending to and intersecting said inner surface.

2,897,858
DEBARKING-DRUM CONSTRUCTION
Thomas Paul Hanson, Lennoxville, Quebec, Canada
Application March 17, 1958, Serial No. 721,909
12 Claims. (Cl. 144—208)



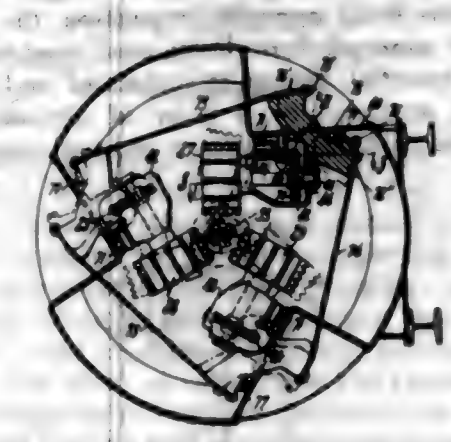
1. A barking drum comprising a cylindrical framework made up of a plurality of axially spaced plates of annular formation disposed on edge radially, each of said plates containing a corresponding plurality of regularly and circumferentially spaced openings extending therethrough, a plurality of elongated members of constant, circular cross section supported by and extending longitudinally between said plates in cylindrical formation with each of said members fitting through one aligned row of said openings in said plates, and connecting means securing said members to said plates at each intersection therewith.

oriented medially of the respective side walls, and in which a pair of secondary ribs are provided for each

quiver may be carried on the body of a user, the back

2,897,859
LOG-CENTERING BARKER FEEDING MECHANISM

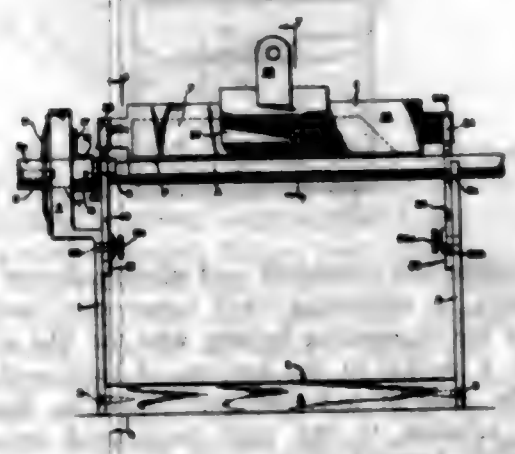
Rupert E. Annis, Jr., Salem, Mass., assignor to Improved Machinery, Inc., Nashua, N.H., a corporation of Maine
Application January 4, 1956, Serial No. 557,313
5 Claims. (Cl. 144—247)



5. Apparatus for axially feeding a log through a barking mechanism including three substantially equi-length arms, pivot means mounting said arms each for swinging movement about an axis parallel to the line of feed, means supporting the pivot means at points on the corners of an imaginary equilateral triangle having a center coinciding with the center of the line of feed, log gripping means mounted on the inner portion of each arm to engage logs to support and guide them substantially coincident with the center of the triangle, pneumatic compression spring biasing means resiliently urging the arms and thus the log gripping means toward the center of the line of feed, means to limit the extent of relative pivotal movement of said arms moving said log gripping means in a direction toward the center of said line of feed, and mechanical connecting means extending between adjacent arms radially outwardly of said pivot means so that any swinging movement of one arm about its pivot means is transmitted to the other two arms in substantially the same degree.

2,897,860
FLETCHING JIG

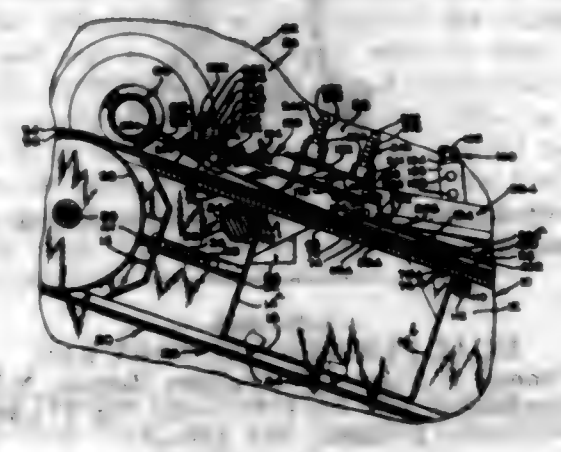
Royce H. Martin, Everett, Wash.
Application November 13, 1956, Serial No. 621,776
6 Claims. (Cl. 144—289)



1. A multipurpose fletching jig comprising, spaced end walls disposed upwardly with respect to a horizontal base, one of said end walls having a notch at its upper edge for cradling the shaft of an arrow for angular movement, an arrow positioning bracket assembly offset outwardly of the upper portion of the other end wall and having an opening, a socket element rotatable in said opening and extending to either side of the bracket, said socket element having therein a spring nock gripping member and a transverse key, said member and key engaging the nock of an arrow shaft to hold the same against undesirable angular and rotational movement relative thereto, a pair of identical circular degree scales on the outer and inner faces of said bracket, and a pointer for each scale mounted radially on opposite portions of the socket element which extend to either side of the bracket.

2,897,861
PINEAPPLE SIZER AND ERADICATOR

Richard B. Leslie, Jr. and Leslie Vadas, Los Gatos, Calif., assignors to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware
Application February 21, 1956, Serial No. 566,882
10 Claims. (Cl. 146—6)



7. In a pineapple treating machine, a sizing knife of circular cross section, a conveyor adjacent said sizing knife arranged for adjustment toward and away from the same, a bar associated with said conveyor in spaced relation thereto and arranged for movement with said conveyor, a splitting blade between said sizing knife and said bar, means associated with said splitting blade and arranged to pivotally attach the same to said bar for movement of said splitting blade toward and away from said conveyor about an axis substantially parallel to the axis of said sizing knife, and means connected between said splitting blade and said bar and arranged to bring said splitting blade into adjusted position extending substantially radially of said sizing knife.

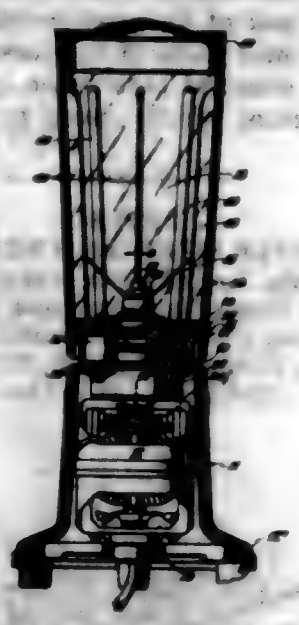
2,897,862
LIQUIFIER

Nickolas Maiz, Chicago, Ill., and Raymond J. Brazki, Grand Haven, Mich., assignors to Dormeyer Corporation, Chicago, Ill., a corporation of Illinois
Original application April 5, 1951, Serial No. 219,366, now Patent No. 2,758,623, dated August 14, 1956. Divided and this application November 22, 1955, Serial No. 548,466
2 Claims. (Cl. 146—68)

1. A container for use in liquifier apparatus, comprising an elongated hollow body having side walls equipped at one end with a bottom wall extending thereacross and at the other end thereof being adapted to receive a cover, a plurality of primary ribs projecting inwardly from said side walls and being spaced apart thereabout, a plurality of secondary ribs projecting inwardly from said side walls intermediate said primary ribs, said ribs extending upwardly from said bottom wall to adjacent the opposite end portion of the side walls and the primary ribs having a substantially greater inward projection than that of the secondary ribs, and cutter blades positioned within said hollow body adjacent said bottom wall and being rotatable with respect thereto, said hollow body having a generally square-shaped configuration to define a plurality of corners, in which said primary ribs are

from said base member by relative movement between

oriented medially of the respective side walls, and in which a pair of secondary ribs are provided for each



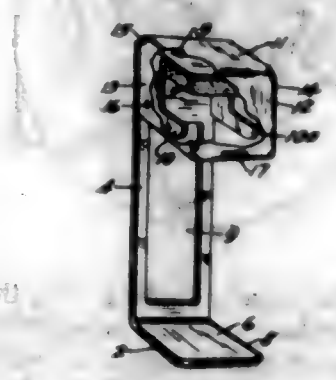
corner of the hollow body and are oriented one on each side thereof.

2,897,863
DUAL PURPOSE LAUNDRY BAG
Thomas F. Somers, Jr., Pelham Heights, N.Y.
Application July 15, 1957, Serial No. 671,844
1 Claim. (Cl. 150—1)

An improved, washable, water-and-wear-resistant dual purpose laundry bag comprising a generally rectangular shaped body of quick-drying plastic material having a closed bottom and sides with an open top, said body having a myriad of closely spaced relatively large holes through it to provide ventilation during laundry storage and free water flow during laundering, a draw string cord confined around the top edge of said bag and of such length as to adapt it to pull said top edge together and close it, said cord being adapted to suspend said bag from a hook, and a side flap extending from the top of the bag about half way down its side and which can be opened or closed to permit clothes to be inserted into said bag while its top is closed, and means to fasten said flap to hold clothes in the bag during laundering, said means comprising a series of said snap fasteners spaced along said flap.

2,897,864
QUIVER
George S. Schmidt, St. Paul, Minn.
Application July 10, 1957, Serial No. 671,873
1 Claim. (Cl. 150—1.5)

A quiver for arrows comprising a back portion, a lower arrow-support platform, an upper arrow-support platform, a top cover, and strap means whereby said quiver may be carried on the body of a user, the back portion of said quiver having a major dimension and a minor dimension, said major dimension, during use of said quiver, extending in a somewhat vertical direction along the back of the user, said lower arrow-support platform said upper-support platform each projecting from said back portion at about a 90° angle thereto, said two platforms being opposed in position, the under surface of said upper platform being cushioned with a layer of resilient material, the upper surface of said lower platform being protected by a layer of abrasion resistant material, said cushioned platform and said protected plat-



form being spaced apart from each other a distance slightly less than the over-all length of arrows to be carried in said quiver, whereby said arrows may be maintained within said quiver solely by downward pressure exerted upon them by said resilient material, said back portion being provided with two arms, said top cover being pivotally affixed to said upper arrow-support platform and, in closed position, extending downwardly from the top of said quiver over said arms, said arms being spaced apart substantially so as to bear against inner surfaces of said top cover and thereby hold the same in closed position.

2,897,865
COMBINED CHILD'S HANDBAG AND CARRYING PACKAGE
Sidney Jackman, New York, N.Y.
Application September 8, 1958, Serial No. 759,509
1 Claim. (Cl. 150—34)

In a transparent container and display device for children's socks, a mounting card removably mounted in the device for supporting hoisery and the like in display condition, a pocket at the bottom of said card, for receiving the ends of a folded pair of socks that lies in overlying relation to the card, said card and bottom pocket being formed from a single piece of foldable material, said piece having transverse fold lines adjacent its bottom and along which the piece is folded to define said pocket, there being a pair of fold lines adjacent the bottom end of the piece, the fold lines being oppositely curved and being extended into convergence at each side of the piece for effecting an elliptical cross section of the pocket so that any teadency of the socks to shift laterally in one or the other direction is stopped before the socks can move fully to the adjacent side edge.

said anti-skid elements into respective positions of use and and passes to one side of said anvil and the lead terminal

2,897,866

KEY HOLDER

Dominic Di Noble, Detroit, Mich.

Application August 6, 1957, Serial No. 677,192
1 Claim. (Cl. 150—46)

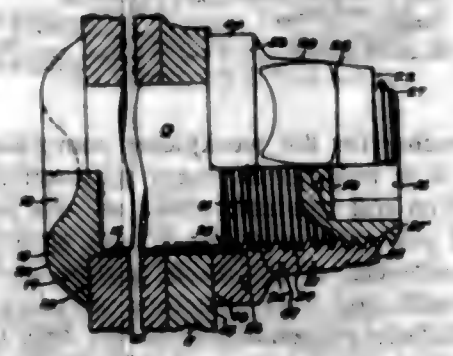
A key holder comprising, in combination, a flexible cover member, a plurality of spring clips, each clip adapted for releasably supporting a single key, a single clip retaining member for pivotally supporting said clips in sliding contact upon said cover member, said cover member being foldable between an open key exposing position and a key enclosed enveloping position, means for securing said cover in said closed key enveloping position, said single clip retaining member for pivotally supporting said clips to said cover member comprising a rivet extending through a central portion of said cover member and defining a pivotal bearing for said clips, said pivotal clips being maintained substantially in sliding contact with the central portion of said cover member and with their free ends movable between the ends of said cover member at all times, said means for securing said cover in said closed key enveloping position comprises a male and female snap fastener element secured each to an opposite end of said cover member, and the free ends of said clips extending normally away from each other in longitudinal alignment.

2,897,867

LOCK NUT HAVING PIVOTING CONCAVE BEARING END AND INWARDLY DEFORMED TIP TO EFFECTUATE UNIFORMLY STRESSED THREADS

Joseph La Terra, Torrance, Calif.

Application May 6, 1957, Serial No. 657,373
6 Claims. (Cl. 151—21)



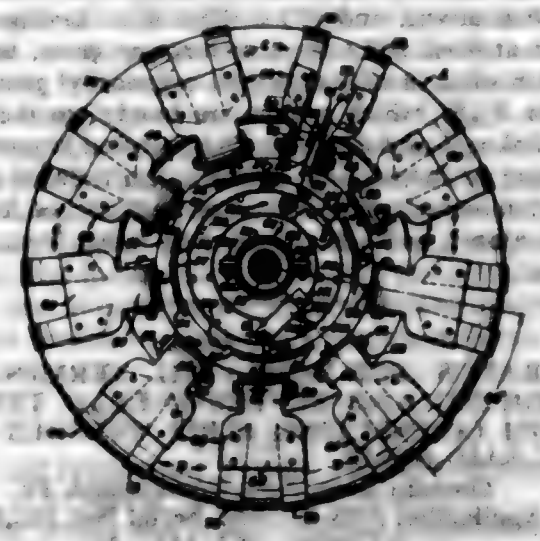
1. A nut for use in cooperation with a bolt including a head and a shank, having a male thread of V-section; said nut including: a tubular intermediate body, a locking collar, and a work engaging flange, said collar and flange constituting respective end portions of the nut and being coaxial and integral with said body said tubular body and collar being tapered in axial cross-section with a continuing decrease in wall thickness from a maximum-thickness area of integral junction with said flange to a minimum wall thickness at the tip of said collar, said body and collar having an internal thread of V-section mating with said bolt thread and of uniform pitch and helical continuity including a normal portion in said body and a locking portion in said collar extending to the adjacent end of the nut, said locking portion being reduced in radius uniformly throughout its full circumference below the radius of said normal portion, by a reduction in the range of 1% to 4% of the radial depth of said nut thread, whereby said collar is adapted to be expanded smoothly within its elastic limit by passage of said threaded section of the bolt therethrough, thereby to grip the bolt by hoop tension so as to lock the nut securely to the bolt and to endure repeated separations and recouplings of the nut and bolt without loss of locking efficiency or damage to the threads thereof, said flange having a concave frusto-conical work engaging seat subtending an angle of between 0.5 degree and 3 degrees to a plane normal to the axis of the nut, said flange being proportioned and arranged with relation to said tubular body so as to have an average axial thickness substantially as great as its radial thickness, with said radial thickness being approximately twice the average radial thickness of said tubular body, and so as to have its inner wall located at approximately the same radius as the root of said internal thread, whereby said flange is distortable under the axial loading thereof against the work when the fastener is normally tightened, with a Belleville washer deflection, to a substantially flat condition in which said seat is in full contact with the work and in which the turns of said normal thread portion adjacent the work are expanded and said locking collar is contracted so as to shift the loading of said internal thread away from the work and thereby distribute the load between the several turns of said normal thread portion in accordance with elongation of said threaded section under load tension.

2,897,868

ANTI-SKID DEVICE FOR VEHICLES

Joseph W. Putt, Forty Fort, and Lamar E. Chamberlain, Hanover, Pa.

Application November 4, 1953, Serial No. 771,867
11 Claims. (Cl. 152—216)



1. In an anti-skid device for mounting upon a ground wheel of a vehicle, said ground wheel including a wheel rim and a tire, and having a fixed axle member adjacent said ground wheel; the combination of a frame engaging said fixed axle member, clamping means movably supported by said frame, control means mounted upon said frame for cooperatively moving said clamping means, a sliding double ring assembly, means mounted upon said clamping means for supporting said sliding double ring assembly in juxtaposition with respect to said clamping means, a plurality of anti-skid elements mounted upon one of the rings of said sliding double ring assembly, anti-skid element actuating means operatively connected to each of said anti-skid elements, control mechanism for said anti-skid element actuating means operatively connected to the other ring of said sliding double ring assembly, cooperatively engaging means provided upon said clamping means and said last mentioned ring of said sliding double ring assembly for actuating said control mechanism, said clamping means and said sliding double ring assembly having operative intervengagement for moving

gages said stop member, whereupon further rotation of other so as to project the ends of the blades into the

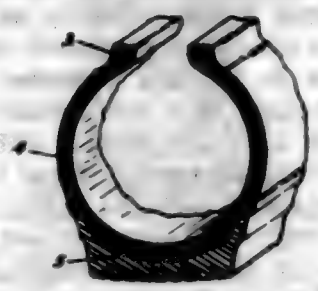
said anti-skid elements into respective positions of use and non-use, and means mounted upon said rim for cooperative engagement with said sliding double ring assembly for cooperative rotation of said sliding double ring assembly and said anti-skid elements.

2,897,869

SILOXANE RUBBER TIRE

Keith E. Polmanteer, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

Application February 15, 1957, Serial No. 640,595
5 Claims. (Cl. 152—330)



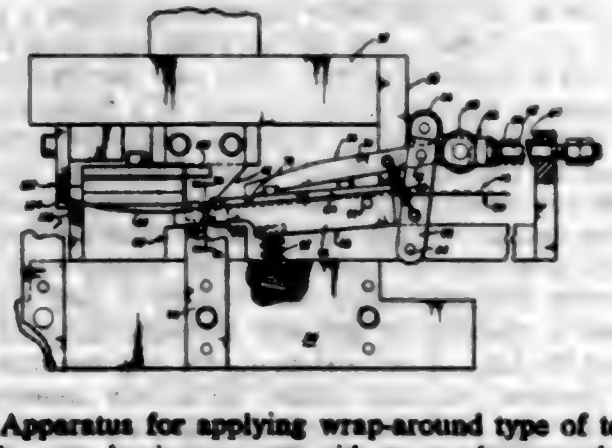
1. A tire for wheeled vehicles comprising silicone rubber reinforced with metal cords, said silicone rubber consisting essentially of (1) a polysiloxane of at least 1,000,000 cs. viscosity at 25° C. in which siloxane the organic radicals are selected from the group consisting of monovalent hydrocarbon radicals and halogenated monovalent hydrocarbon radicals, there being on the average from 1.99 to 2 inclusive of said organic radicals per silicon atom, (2) from 1 to 10 parts by weight per 100 parts by weight of (1) of an aliphatic hydrocarbon silicate in which the aliphatic hydrocarbon radicals contain less than 10 carbon atoms, and (3) a silica filler having a surface area of at least 100 square meters per gram, the surface of which silica is saturated with organosilyl groups of the formula R'_nSi, which groups are bonded to the silica by SiOSi linkages and in which R' is selected from the group consisting of monovalent hydrocarbon radicals and halogenated monovalent hydrocarbon radicals, of less than 7 carbon atoms, and n has an average value from 2 to 3 inclusive.

2,897,870

APPARATUS FOR APPLYING TERMINALS BY CRIMPING AND SEVERING LEAD TERMINAL FROM CONNECTING STRIP WITHOUT SEVERING SAID STRIP

Quentin Berg, New Cumberland, Pa.

Application May 7, 1956, Serial No. 582,993
3 Claims. (Cl. 153—1)



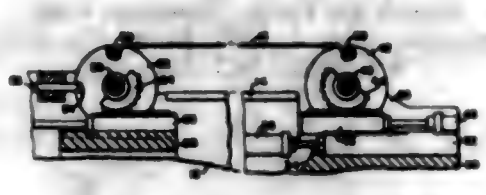
1. Apparatus for applying wrap-around type of terminal elements having an open side to conductors wherein the terminal elements are disposed in parallel and each integrally connected at one end thereof in close-coupled arrangement to one side of a connecting strip, said apparatus comprising a stationary anvil, means for feeding a strip of such terminal elements in a path leading to said anvil so that such connecting strip is disposed laterally of and passes to one side of said anvil and the lead terminal element is positioned on said anvil and projects laterally therefrom in overlapping relation with respect to said anvil, with the anvil backing up such lead terminal and with the open side of said terminal facing away from said anvil, guide means engageable with a conductor, which extends across said path and connecting strip, so as to leave the end of such conductor free and projecting in the same direction as said lead terminal and in aligned overlapping relation with respect thereto, said guide means locating such free end of the conductor in position for application of said lead terminal thereto with the conductor disposed in overlapping transverse relation with respect to said connecting strip and with the lead terminal disposed between said anvil and said conductor and with the open side of said lead terminal facing and aligned with the free end of said conductor, a crimping die disposed opposite said anvil and cooperable therewith by movement toward the same for crimping said terminal on the free end of said conductor, said crimping die and anvil being offset laterally of and out of alignment with the path of movement of said connecting strip, said die being engageable with the sides of said terminal element for crimping the same around the end of said conductor, and a cutoff operable by movement of said crimping die for severing said lead terminal from said connecting strip without severing said connecting strip, said crimping die engaging and holding said lead terminal on said anvil from a time prior to severing of such terminal from said strip until completion of the crimping operation.

2,897,871

SHEET STRETCHER

Sheldon Earl Wells, Youngstown, Ohio, assignor to Lombard Corporation, Youngstown, Ohio, a corporation of Ohio

Application July 15, 1957, Serial No. 671,910
6 Claims. (Cl. 153—35)

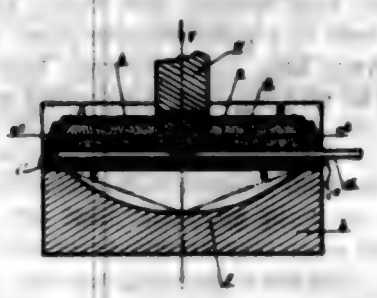


6. A stretcher for flat workpieces comprising, in combination, a base member having a substantially flat table portion, a first roll rotatable about an axis positioned at one end of said table portion, a track structure located at the opposite end of said table portion and below the surface thereof, said track structure extending in a direction substantially perpendicular to the axis of said first roll, a stop member at the end of said track structure adjacent said table portion, a carriage freely movable on said track structure from a position outwardly of said table portion to a position in close proximity to said table portion where it abuts said stop member, a second roll mounted on said carriage and rotatable about an axis which is substantially parallel to said first-mentioned axis, means on the outer peripheries of said rolls and extending along the longitudinal length thereof for clamping the opposite ends of a flat workpiece positioned on said table portion while said carriage is in its position outwardly of the table portion, means for rotating said first roll through 90 degrees after the said opposite ends are clamped, means for locking said first roll after it has rotated through 90 degrees, and means for rotating said second roll in a direction opposite to the direction of said first roll whereby said carriage is forced to traverse said track structure toward the table portion while the workpiece is lifted to a position where its plane is tangential to the peripheries of said rolls, said movement of the carriage toward the table portion continuing until it en-

lapped tube edges to a point internally of the tube laterally beyond said edges while its other leg extends longitudi- actuating link, a guiding link, a pivotal connection be-

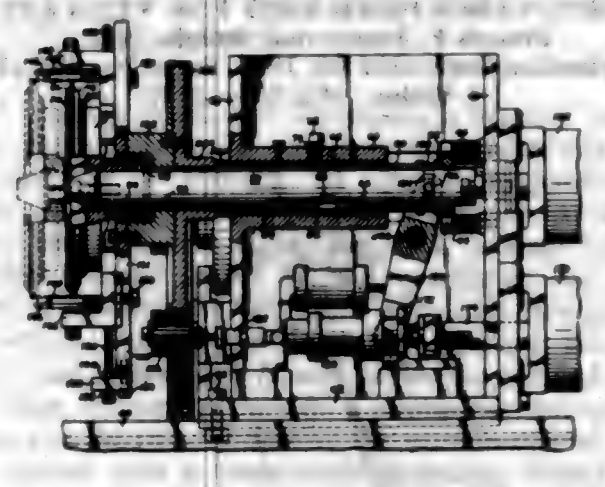
gages said stop member, whereupon further rotation of at least one of said rolls will cause stretching in said workpiece.

2,897,872
METHODS AND APPARATUS FOR BENDING TUBES
Andre Huet, Paris, France
Application June 13, 1956, Serial No. 591,132
1 Claim. (Cl. 153—48)



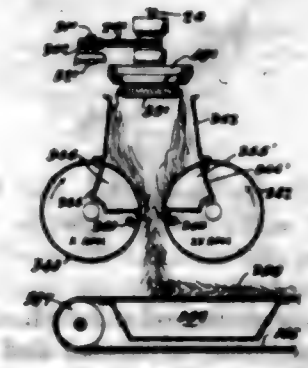
In an apparatus for bending a tube while filled with a body of resilient porous material comprising a die and a punch for shaping the tube therebetween to define a convex portion and a concave portion, in combination, a perforated tube receivable in the body of the resilient porous filling material contained in said tube on the side of the axis of said tube adjacent said convex portion, said perforated tube being connectable to a source of water to conduct water in a plurality of streams into direct contact with said filling material, and a flexible plate receivable axially in said tube within said body of filling material and dimensioned to intercept the interior surface of said tube along two axial surface lines to provide a partition therebetween to confine part of said body to filling material adjacent said concave portion and to confine the remainder of said body of filling material adjacent said convex portion of the tube, the said remainder of said body receiving said perforated tube.

2,897,873
READING MACHINE
Robert A. Mayne, Dayton, Ohio
Application April 25, 1955, Serial No. 503,420
14 Claims. (Cl. 153—59)



1. A machine for forming curled beads on the margins of a blower wheel having a plurality of equally spaced arcuate blades integral with marginal rims, one on each end of the blades, said marginal rims projecting axially and outwardly from the ends of the blades, said machine including a pair of blade positioning plates, one for each end of the blower wheel, said plates having a plurality of marginally disposed bevelled notches, one for each of the blades, axially movable means for supporting said plates, said means when moved axially and outwardly acting to spread the plates to clear the marginal rims of the blower wheel and when moved axially inwardly after the blower wheel has been inserted moving the plates toward each other so as to project the ends of the blades into the notches, a plurality of expansion sectors abutting the said plates on the side opposite the notches, means for expanding said sectors so as to force the sectors outwardly into contact with the inner margins of the rims, and means having an axial movement supporting a plurality of rollers rotatably mounted, said rollers having grooves engaging the outer margins of the rims to form beads thereon.

2,897,874
METHOD AND APPARATUS OF FORMING, PROCESSING AND ASSEMBLING FIBERS
Charles J. Stalego and Henry J. Snow, Newark, Ohio, assignors to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Application December 16, 1955, Serial No. 553,451
12 Claims. (Cl. 154—37)



10. Apparatus of the character disclosed, in combination, a frame, a hollow rotor journaled for rotation on the frame, means for flowing a stream of molten fiber-forming material from a supply into the rotor, said rotor being formed with a plurality of orifices in a wall thereof, means for rotating the rotor to project the material through said orifices in the form of elongated bodies, means for directing an annularly shaped, high velocity gaseous blast into engagement with the bodies to attenuate the bodies to fibers, a pair of cylindrical members having foraminous surfaces upon which the attenuated fibers are deposited, means for rotating the members at different speeds and in directions to modify the orientation of the fibers and to combine the fibers collected thereon into a web, and means for applying a coating material to the fibers.

2,897,875
ART OF FORMING TUBES FROM THERMOPLASTIC SHEET MATERIAL
Kenneth A. Roach and Erwin Hillman, Milwaukee, Wis., assignors to Millprint, Inc., Milwaukee, Wis., a corporation of Delaware
Original application October 5, 1953, Serial No. 384,020, now Patent No. 2,780,275, dated February 5, 1957. Divided and this application October 27, 1955, Serial No. 543,200
2 Claims. (Cl. 154—42)

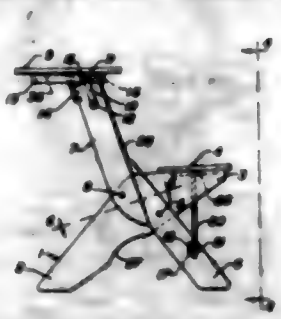
1. In a device for longitudinally heat seaming thermoplastic tubular stock, means for longitudinally and rectilinearly advancing tubular folded flat thermo-plastic stock with its opposite side edges loosely overlapped medially of one wall of the flat tube, a relatively flat pad fixedly confined within the advancing tube between both of said overlapped edges and the opposite tube wall, a unitary thin L-shaped support having one leg fixedly mounted externally of the tube and extending from a point outwardly of the tube transversely between the loosely over-

said arms, said bight portion being interrupted interme- of the vertical plane of the rear end of the seat, the im-

anvil so that such connecting strip is disposed laterally of

lapped tube edges to a point internally of the tube laterally beyond said edges while its other leg extends longitudinally within the tube beyond said overlapped edges and away from the inner end of said first mentioned leg between said pad and said opposite tube wall to support the pad and to space it from said opposite wall, and a heat sealing element coacting externally with said overlapped tube edges in opposition to said pad to form a longitudinal seam on the tube along said edges.

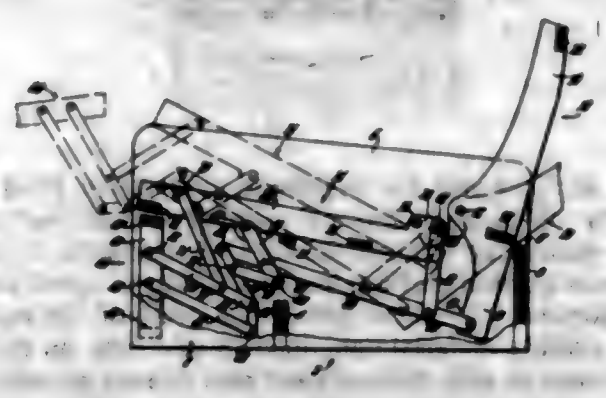
2,897,876
COLLAPSIBLE COMBINATION BENCH AND TABLE
Abraham L. Austin, Hinsdale, Ill.
Application December 6, 1955, Serial No. 551,335
9 Claims. (Cl. 155—43)



1. In a device consisting of a bench convertible into a table, comprising a pair of spaced end members each having a rearwardly extending portion serving as a rear leg support and an attached forwardly projecting leg, a seat attached to and connecting said end members, an upright attached to each of said end members and terminating in a horizontal top edge, a back resting on the forward edges of said uprights and rotatable into a horizontal position resting on the top edges of said uprights, and a linkage bar rotatably connecting a bearing on the rear side of said back with a bearing in said upright below said horizontal top edge, an improvement in said device which enables the end members, including the rear leg portions of said end members, the forward legs, the uprights and back to be folded into a substantially flat assemblage of components in essentially planar relationship with each other, further characterized in that said forward leg is pivotably attached to said end member at a point beneath said seat and in a relatively forward position on said end member, said upright is pivotably attached at its lower end to said end member at a point beneath said seat and to the rear of said forward leg, said forward leg having an upwardly projecting extension beyond the said point of pivotal connection with said end member which rests on the forward edge of said upright when the device is in its bench-table form and which pivots away from said upright when the device is folded.

2,897,877
RECLINING CHAIR
Albert P. Krikorian, Agawam, Mass.
Application October 8, 1956, Serial No. 614,538
10 Claims. (Cl. 155—106)

1. An article of repose comprising, a support having spaced opposite side walls, a seat, first coaxial pivotal connections between said seat and the side walls of said support, a back-rest, second coaxial pivotal connections between said back-rest and the side walls of said support and being independent of and spaced from said first pivotal connections, said back-rest including a downward extension rigid therewith, a leg-rest, a pair of linkage mechanisms, each linkage mechanism of said pair thereof including, an actuating link pivotally connected to the downward extension of said back-rest, a primary connecting link pivotally connected to said seat and to said actuating link, a guiding link, a pivotal connection between said guiding link and seat independent of said first and second pivotal connections, a pivotal connection between said actuating and guiding links, a first pair of links including a primary and secondary links swingably connected with each other, said primary link being swingably connected to said actuating link at a point remote from the pivotal connection of said primary connecting and actuating links, a second pair of links including a tertiary and quadrary links swingably connected with each other, said tertiary link being swingably connected to said seat at a point remote from its connection with said quadrary link, said quadrary link being swingably connected to said leg-rest, connecting means engaged



with said first and second pairs of links for coordinating movements thereof, said secondary link being swingably connected to said leg-rest at a point remote from its connection with said primary link and below the swingable connection between said quadrary link and said leg-rest, and a secondary connecting link swingably connected to said primary connecting link and the primary link of said first pair of links, all adapted and arranged whereby said guiding links guide said actuating links angularly relative to said support effecting the angularization of said seat upon reclination of said back-rest and said actuating links and said primary and secondary connecting links cooperatively actuate said pairs of first and second pairs of links in coordinated movement effecting the shifting of said leg-rest upon reclination of said back-rest.

2,897,878
REMOVABLE HEAD REST FOR VEHICLES
Francis P. Mangovan, Buffalo, N.Y.
Application September 20, 1957, Serial No. 685,193
1 Claim. (Cl. 155—174)

A head support assembly for the occupant of a vehicle, said vehicle having a seat and a back therefor, said head support comprising a substantially open main frame having an inverted substantially U-shaped configuration including a bight portion from the end of which depends a pair of spaced confronting arms, a sheet of flexible material extending between and secured to the distal ends of said arms to prevent spreading of said arms and to protectively cover the portion of said seat back between

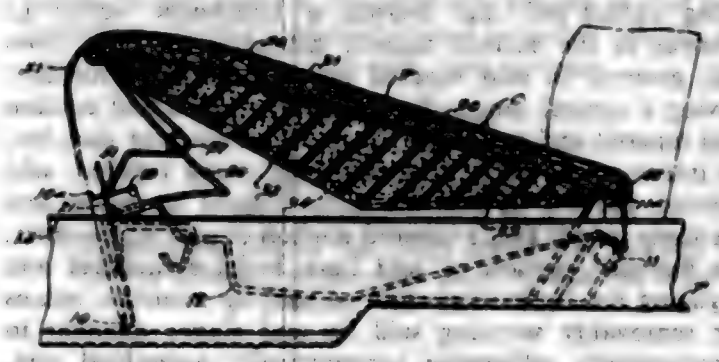
2,897,882

2,897,884

wheel has been inserted moving the plates toward each wardly of the tube transversely between the loosely over-

said arms, said bight portion being interrupted intermediate its ends to form an integral inverted substantially U-shaped bracket projecting away from said bight, said inverted bracket including a bight portion from the ends of which extend a pair of spaced and confronting arms, a substantially C-shaped main clamping jaw having a bight portion from the ends of which extend a pair of arms, said clamping jaw bight and said arms engaging around the arms of said bracket, said bight of said C-shaped jaw having a substantially centrally disposed aperture formed therein, a clamping plate, said clamping plate engaging against those sides of said arms remotely disposed with respect to said last named bight, said clamping plate having a centrally disposed aperture formed therein in alignment with said aperture of said bight of said C-shaped jaw, means extending through said aperture in said bight and said clamping plate to rigidly secure said C-shaped clamping jaw on said arms of said brackets at any selected position thereon, a backing plate having a head rest pad secured thereto, and a pair of L-shaped hanger arms secured to the backing plate and having their respective foot portions projecting outwardly therefrom, said foot portions being pivotally connected to said arms of said C-shaped clamping jaw, and means projecting laterally from said main frame for extension across the top of said seat back to releasably support said assembly on said seat back.

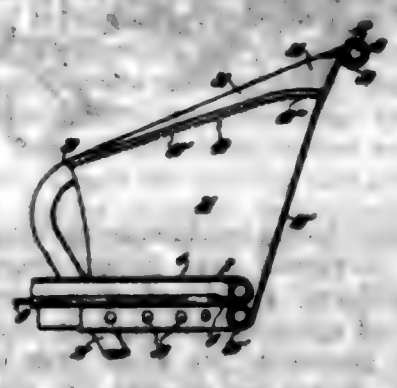
2,897,879
CUSHION SPRING UNIT
Warren D. Brown and Dallas L. Sprinkle, Birmingham, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application July 25, 1957, Serial No. 674,120
4 Claims. (Cl. 155—179)



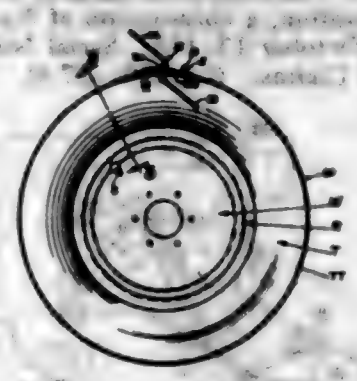
1. A cushion spring unit comprising a support having spaced, opposed, rails and a resilient load supporting surface including a plurality of spaced, longitudinally straight, load supporting wire rods bridgingly extending between said rails and a relatively thick resilient pad of foam-like material seated on and enveloping the load supporting portions of said rods, said rods having the end portions thereof projecting from opposite sides of said pad and at least one of said projecting rod end portions being formed to provide a depending jack-spring element and the other projecting end portion of said rods being formed with a transversely extending torsion bar spring element.

2,897,880
CHAIR CONSTRUCTION
Richard L. Paulsel, Northampton, Mass., assignor to Hampden Specialty Products, Inc., Easthampton, Mass., a corporation
Application July 7, 1958, Serial No. 746,745
2 Claims. (Cl. 155—191)

1. In chair construction including, a leg supported horizontal seat having opposite sides and a rear end with opposite arms spaced above the opposite sides of the seat inclining rearwardly and upwardly to an upper transverse rear back member disposed rearwardly outwardly of the vertical plane of the rear end of the seat, the improvement comprising, a body supporting structure of relatively yieldable material including a main body member and a marginal member, said main body member having a lower marginal portion secured to opposite sides and rear end of the seat and extending upwardly therefrom to an upper marginal portion, said marginal member having an outer marginal portion secured along said back member and arms and extending inwardly therefrom to an inner marginal portion, said upper and inner marginal portions of said main body and marginal members being joined by seaming in the shape of a U having a concave rear portion and opposite side portions extending therefrom to forward portions of said arms, said concave rear portion of said seaming being disposed forwardly and inwardly of said back member and upwardly relative to the horizontal plane of said seat whereby the upper back portion of an occupant of the chair is supported by the concave portion of the seaming forwardly of and away from said back member.



2,897,881
BEAD SEATING TOOL FOR TUBELESS TIRES
Walter August Bichmann, Minneapolis, Minn., assignor to Bichmann Manufacturing Company, Osseo, Minn., a corporation of Minnesota
Application April 25, 1956, Serial No. 583,651
3 Claims. (Cl. 157—1.21)



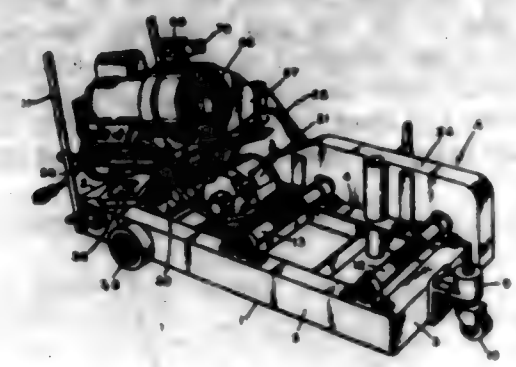
1. A tool for deflecting the beads of a tubeless tire after it has been mounted on a rim and preparatorily to inflating the tire comprising a frame moderately bent so as to fit approximately the curvature of the tire with which it is used, said frame being of such size that it subtends an arc of the tire tread circumference of the tire, said frame being made up of two generally flat elongated bars bent so as to provide journal surfaces therebetween when the bars are secured together in at least a partial overlapping relationship, said journal surfaces supporting a winding shaft crosswise on the frame when it is placed on a tire, a winding shaft journaled in said journaled surfaces, a thin flexible strand having one end attached to one end of the frame so as to extend in a direction normal to said shaft, said strand being formed as a loop and having its other end extend along the other end of the frame and attached to the winding shaft for winding on the shaft in the manner of a clock spring and a crank on the shaft for turning said shaft.

thereof with each in laterally spaced relation to each of the others; the pump, rotor and motor having rotary

by the related pins and tends to assume a vertical position depending from said axis, and chains extending along

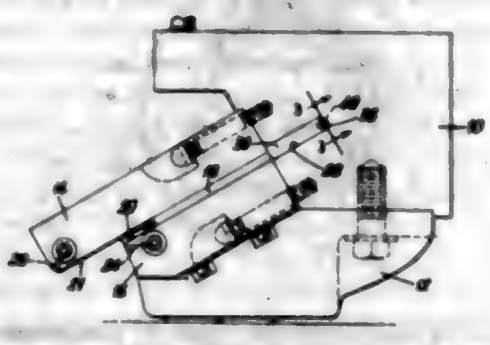
connecting link pivotally connected to said seat and to said protectively cover the portion of said seat back between

2,897,882
TIRE TREAD SURFACING MACHINE
Harry B. Barrett, Clayton, Mo.
Application June 8, 1956, Serial No. 590,285
4 Claims. (Cl. 157—13)



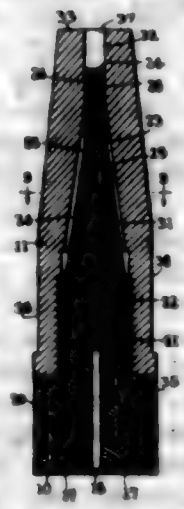
2. A tire-tread facing machine comprising a base-frame adapted for movement over garage floors and similar supporting surfaces, a pair of spaced parallel rollers mounted in and extending horizontally across the frame to underlie a pneumatic tire which rests thereon in upright position, means for rotating the rollers in unison and thereby turning the tire, an arcuate plate mounted on said frame and being provided with opposed conical margins, a slide shiftably mounted on said plate and being provided with depending conical rollers movable along conical margins, an auxiliary slide operatively mounted on said slide, threaded means rotatable in said slide and threadedly engaged in said auxiliary slide for shifting said auxiliary slide toward and away from said tire along a path radially of said conical margins, means for shifting said plate, slide, and auxiliary slide in unison along a path parallel to said rollers, and means mounted on said auxiliary slide for disposition against the tread-face of the tire to remove a portion of the surface thereof as a tire is rotated.

2,897,883
THERMOCHEMICAL DESURFACING HEAD
Alfred J. Miller, Westfield, N.J., assignor to Union Carbide Corporation, a corporation of New York
Application October 17, 1957, Serial No. 690,856
4 Claims. (Cl. 158—27.4)



1. In apparatus for thermochemically scarfing metal bodies, a surface conditioning head having upper and lower surfaces therein defining therebetween a wide continuous slot adapted to discharge a sheet-like stream of oxidizing gas in a zone extending across a metal body, said slot being adapted to be disposed at an acute angle of impingement to the work surface of said metal body, said head having a recess in back of said slot of greater thickness than said slot, and an individual throw-away metering orifice plate of greater thickness than said slot removably mounted in said recess in back of said slot and having transversely distributed orifices for passages aligned with said slot and extending the full depth of said plate for supplying oxidizing gas to the rear of said wide continuous slot, the portion of said head forming said upper surface having an abutment engaging the front of said orifice plate to hold it in said recess, and being removable for access to said orifice plate.

2,897,884
CUTTING TORCH TIP CONSTRUCTION
Melvin E. Fee, Honolulu, Territory of Hawaii
Continuation of application Serial No. 313,547, October 7, 1952. This application January 13, 1958, Serial No. 708,482
2 Claims. (Cl. 158—27.4)

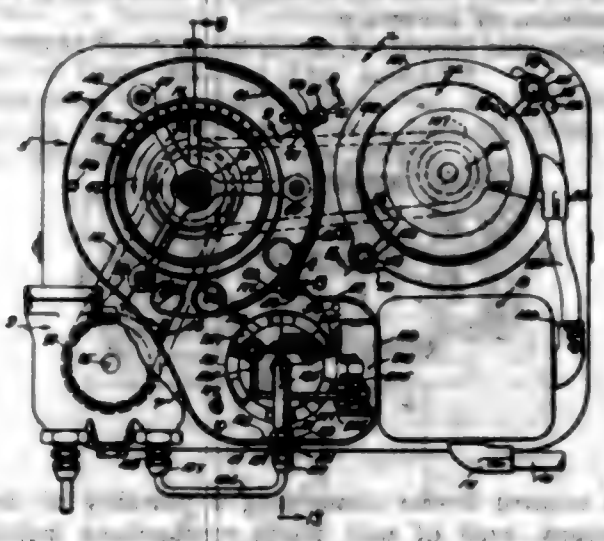


1. A cutting torch construction convertible to enable the burning of high or low grade gaseous fuel comprising in combination: a tip member having a central longitudinal passage for oxygen and having a concentric series of passages for combustible gases surrounding said central passage, an intermediate portion of the length of said tip member being tapered longitudinally, said tapered portion having a concentric series of grooves in the surface thereof extending forward from said combustible gas passages, the forward portion of said tip member being cylindrical and having a concentric series of grooves in the surface thereof extending forward from said grooves in said tapered portion; a sleeve member having a central longitudinal bore to receive and enclose said tapered and cylindrical portions of said tip member, an intermediate portion of said bore being tapered, said tapered portion having the same degree of taper and the same length as the tapered portion of said tip member, the forward portion of said bore being cylindrical and engaging the forward portion of said tip member; means for removably securing said tip and sleeve member in longitudinally adjustable concentrically assembled relation, said means including mating screw threaded portions on said tip and sleeve and a shoulder rearward of the threaded portion of said tip to limit the rearward longitudinal positions of said sleeve relative to said tip by an amount corresponding to concentric engagement of the tapered portions of said members, a spacing means arranged concentrically about said tip, abutting on said shoulder, and against which the rearmost portion of said sleeve is caused to abut in assembled relation, thus effecting radial spacing of the tapered portions of said tip and sleeve members forming a mixing chamber, said spacing means being removable from the assembly to permit the rear portion of said sleeve to abut on said shoulder and thus close the grooves on the tapered portion of said tip.

2,897,885
FLUID FUEL BURNER
Ralston M. Sherman, Glastonbury, Conn., assignor to The Silent Glow Oil Burner Corporation, Hartford, Conn., a corporation of Connecticut
Application June 29, 1954, Serial No. 440,112
9 Claims. (Cl. 158—76)

1. An oil burner having an oil pump, air fan rotor, and motor for driving said pump and rotor; a supporting panel; means separately and directly mounting said pump, rotor and motor on said panel at one and the same side

thereof with each in laterally spaced relation to each of the others; the pump, rotor and motor having rotary operating shafts normal to said panel and extending therethrough to the opposite side thereof in parallel spaced relation; means connecting the motor shaft in driving relation to the pump and rotor shafts comprising pulleys on said shafts at said opposite side of said panel and driving belts passing about said pulleys, all of said shafts terminating, and said pulleys being positioned, close to said

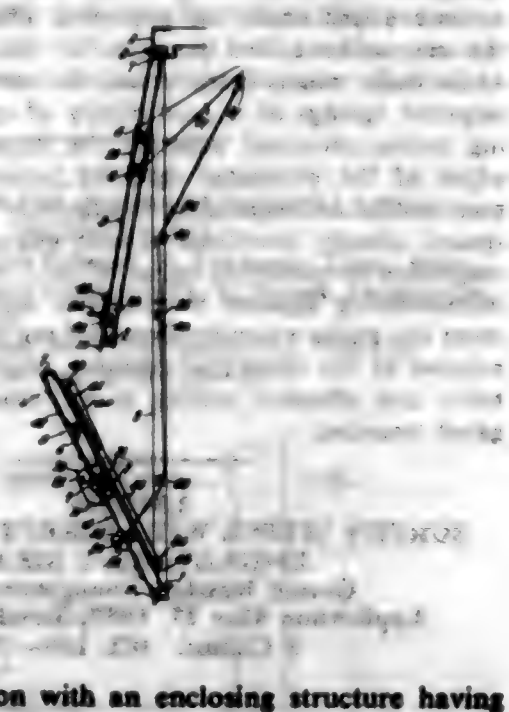


opposite side of said panel to provide for positioning said opposite side thereof in closely adjacent relation to a heater supplied by said burner; the panel being formed with an opening in laterally spaced relation to said rotor; a blast tube at said opposite side of said panel projecting therefrom in normal relation thereto with its end adjacent said panel in registry with said opening; and means carried by said panel at the same side thereof as said rotor forming a casing for said rotor and a conduit placing said casing in communication with said opening.

2,897,886
SLIDING CLOSURE
Alfio Pistolli, Milan, Italy
Application March 15, 1955, Serial No. 494,391
Claims priority, application Italy March 16, 1954
3 Claims. (Cl. 160—33)

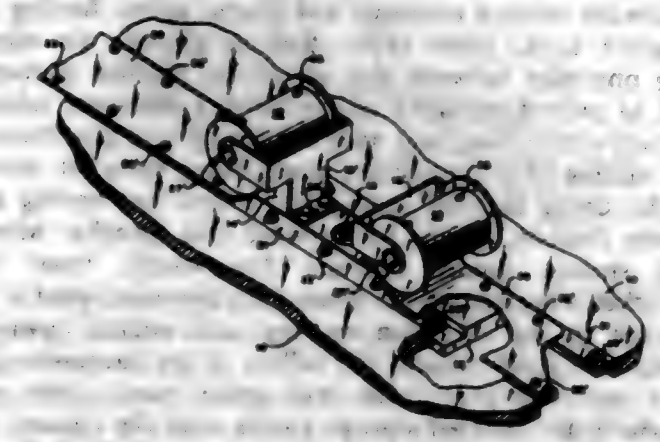
1. A sliding closure for a window or door opening lying in a vertical plane, comprising a plurality of closure elements adapted to be arranged in the vertical plane of the opening one above the other in edge-to-edge relationship across the opening to close the latter, guide means extending along the opposite sides of the opening, pins projecting from the opposite ends of each closure element adjacent the upper edge of the latter and carrying rollers received in said guide means, so that each closure element is independently swingable about an axis defined by the related pins and tends to assume a vertical position depending from said axis, and chains extending along said guide means at the opposite sides of the opening and connected to said pins of the closure elements at locations along the chains that are spaced apart by distances greater than the distance between said pins of adjacent closure elements when the latter are gravitationally urged into edge-to-edge contacting relationship so that, when said chains are tensioned upwardly, the successive closure elements are spaced apart, freeing the adjacent edges from each other to provide air admitting openings between the successive closure elements, and to permit swinging of the closure elements relative to each other about said axes defined by said pins thereof, the sliding closure; further comprising sprocket wheels at the upper ends of said guide means and having said chains thereon, means for rotating said sprocket wheels, and storage guides inclined downwardly from said sprocket wheels so that, when said sprocket wheels are rotated in the direction moving said chains upwardly along said guide means, the rollers of the successive closure elements pass from said guide means onto said downwardly inclined storage guides with the closure elements hanging vertically from the axes defined by the related pins for compact face-to-face storage along said inclined storage guides.

2,897,887
MANUALLY OPERATED FOLDING PANEL
Edward E. Miller, Alexandria, Va., and Finch Stowell, Elmhurst, Ill.
Application February 26, 1958, Serial No. 717,792
4 Claims. (Cl. 160—97)
(Granted under Title 35, U.S. Code (1952), sec. 266)



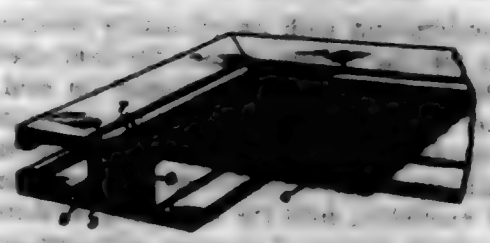
1. In combination with an enclosing structure having an opening therein, closure means for said opening comprising a first panel hingedly mounted on said structure adjacent to the top of said opening, a second panel hingedly mounted on said structure adjacent to the bottom of said opening, a lever member attached to said first panel extending into the enclosing structure, a plurality of fulcrum members disposed adjacent to the edges of said panels and substantially aligned with the planes thereof when the panels are in the closed position, a flexible element connected to said lever arm and to said second panel and in contact with said fulcrum members whereby movement of one panel causes simultaneous movement of the other panel, said first and second panels being continuously counterbalanced during movement between closed and open position.

2,897,888
MOVABLE CLOSURE FOR A SLOT
Leo Dragonetti, Plymouth Meeting, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Application May 28, 1956, Serial No. 587,913
5 Claims. (Cl. 160—99)
(Granted under Title 35, U.S. Code (1952), sec. 266)



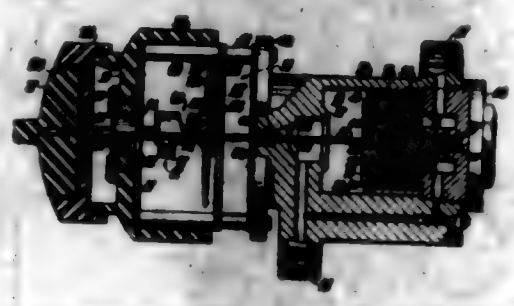
1. In a movable closure for an elongated opening in a structure having a dolly means adapted to receive a protruding element and mounted for movement along the elongated opening, and a pair of negative springs requiring application of a force for uncoiling them respectively including coiled portions rotatably mounted on said dolly means and extended uncoiled portions terminating in outer ends which are fixedly held with securing means to the opposite ends of said elongated opening, said extended uncoiled portions of said negative springs together with said dolly means forming a closure for said elongated opening, said force effecting a continuous arcuate displacement of a portion immediately adjacent the respective coiled portions of said negative springs as the dolly means is traversed, the combination with said negative springs of a multiplicity of spaced male retaining means mounted adjacent the respective longitudinal edges of the elongated opening projecting into engagement with a corresponding multiplicity of correspondingly spaced closely interfitted female engaging means in the respective longitudinal edges of said negative springs for immobilizing against incremental longitudinal displacement the entire extended uncoiled portions of said springs relative to the elongated opening, thereby imparting stability and effective sealing to the closure for said elongated opening.

2,897,889
SCREEN SPLINE WITH DIRECT FRICTIONAL ENGAGEMENT MEANS
Gerald Kessler, Youngstown, Ohio
Application May 27, 1957, Serial No. 661,671
5 Claims. (Cl. 160—392)



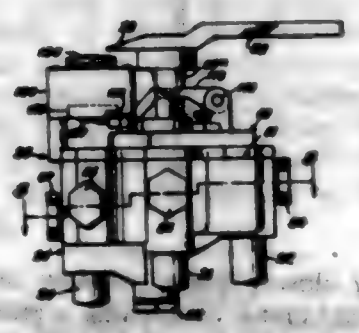
1. In combination, a screen having apertures, a frame member having a longitudinal channel in the face thereof, and means for fastening said screen in said channel comprising an elongated resilient plastic spline member of uniform composition, said spline member being slightly thicker in cross-section than the width of said channel and having a plurality of plastic spike-like protuberances of the same uniform composition as the rest of the spline member extending outwardly from its surface, the cross-section of each said protuberance being sufficiently small to pass freely through the apertures of the screen into frictional contact with the walls of said channel.

2,897,890
TIME AND TIMED DELAY CONTROL
Roy Crawford Dent, Greensburg, Pa., assignor to Robertshaw-Fulton Controls Company, Greensburg, Pa., a corporation of Delaware
Application October 7, 1955, Serial No. 539,895
5 Claims. (Cl. 161—1)



2. A control device comprising a plurality of detent mechanisms, each of said detent mechanisms including a bearing surface and an element having a surface coaxially disposed relative to said bearing surface and being movable into frictional engagement therewith, means for applying a force to each of said movable elements tending to impart slidable movement thereto relative to each of said bearing surfaces respectively, said bearing surface of one of said detent mechanisms being constructed and arranged to render said frictional engagement effective to produce a resistive force tending to prevent said slidable movement substantially balanced by the force tending to produce said slidable movement, another of said detent mechanisms being constructed and arranged to render said frictional engagement effective to produce a resistive force tending to prevent said slidable movement slightly less than the force tending to produce said slidable movement, and timer control means operable on said elements for controlling the slidable movement thereof.

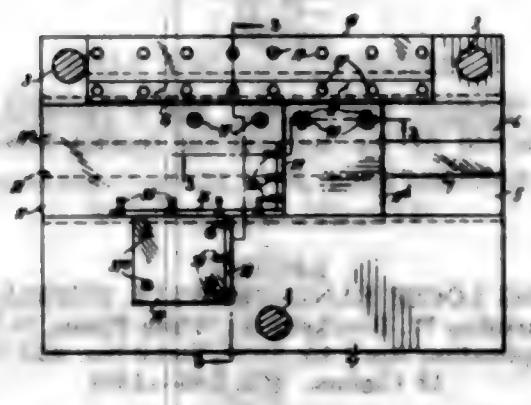
2,897,891
VALVE FOR WATER SOFTENING
Arnold Norgaard, St. Charles, Ill., assignor to Clayton Mark & Company, Evanston, Ill., a corporation of Delaware
Application March 16, 1953, Serial No. 341,585
5 Claims. (Cl. 161—7)



1. A multiposition valve for a water softening system operable through a plurality of positions including a normal soften position, said valve including a casing having a hard water inlet, a consumption outlet, a drain outlet, and first and second tank passageways, means including a multiposition control means and a plurality of valve elements controlled thereby for selectively operating said

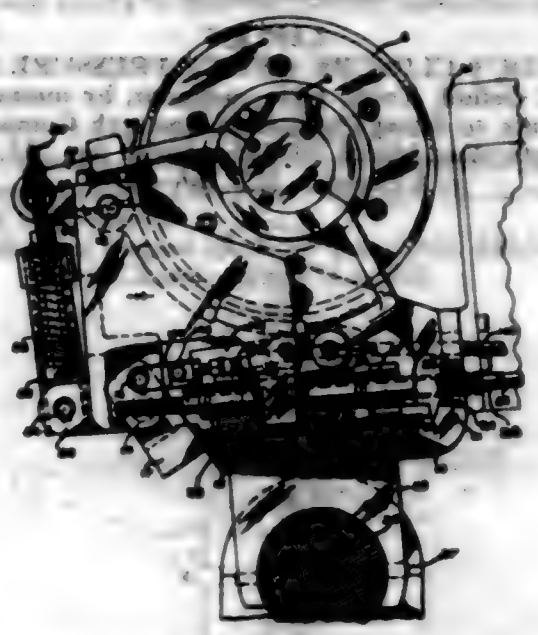
valve to its normal soften position in which the inlet is connected to a first tank passageway, and means including time controlled auxiliary valve means selectively operable in said soften position for connecting a second of said tank passageways concurrently to said drain and consumption outlets and for gradually closing said drain outlet.

2,897,892
ADJUSTABLE CUTTING DIES
Clarence G. Dusenbe, Webster Groves, Mo., assignor to Moloney Electric Company, St. Louis, Mo., a corporation of Delaware
Continuation of application Serial No. 321,639, November 28, 1952. This application June 20, 1956, Serial No. 592,686
3 Claims. (Cl. 164—31)



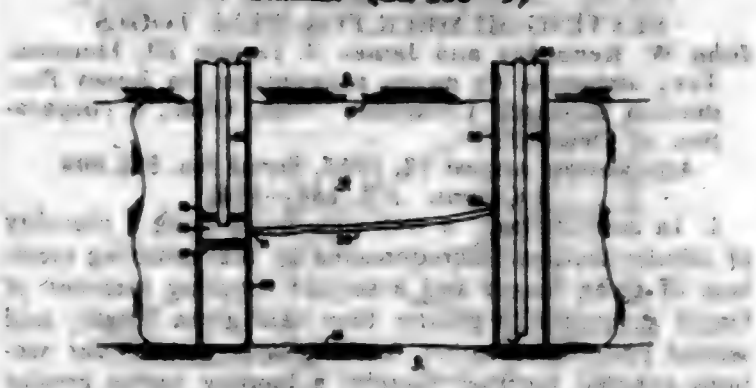
1. Apparatus for making a stepped cut across a strip comprising a bed, a head movable toward and away from the bed, a first transverse cutting blade fixed to the bed, a second transverse cutting blade fixed to the head and cooperable with the first transverse blade for making a first transverse cut extending partially across the strip from one edge of the strip, a first block mounted for sliding movement on the bed in the direction of the length of the strip at one end of the first transverse blade, means for clamping said first block to the bed at various positions of adjustment on the bed, a first longitudinal cutting blade fixed to and movable with said first block across said one end of the first transverse blade and adapted to extend longitudinally in one direction from said one end of the first transverse blade for different distances according to the adjustment of said first block, a third transverse cutting blade fixed to and movable with said first block and extending transversely from one end of said first longitudinal blade in the opposite direction from said first transverse blade, a second longitudinal cutting blade fixed to the head and cooperable with the first longitudinal blade in any position of the latter to make a longitudinal cut in the strip having one end coincident with the inner end of said first transverse cut and extending longitudinally in said one direction from the inner end of said first transverse cut, said second longitudinal blade extending longitudinally from that end of said second transverse blade corresponding to said one end of the first transverse blade in said one direction and extending past said one end of said first longitudinal blade and adapted to overlap the first longitudinal blade for different longitudinal cutting distances according to the adjustment of said first block, a second block mounted for sliding movement on the head in the direction of the length of the strip, means for clamping said second block to the head at various positions of adjustment on the head, and a fourth transverse cutting blade fixed to and movable with said second block and cooperable with said third transverse blade for making a second transverse cut extending across the strip from the other end of said longitudinal cut to the other edge of the strip.

2,897,893
SCORE-CUT SLITTING MECHANISM
Leonard Rockstrom, Manhasset, and Leon A. Schmidt, Staten Island, N.Y., assignors to Cameron Machine Company, Brooklyn, N.Y., a corporation of New York
Application January 26, 1954, Serial No. 406,646
10 Claims. (Cl. 164—69)



1. In a score-cut slitting mechanism for slitting a running web having a cutter roll, a parallel rocking cutter bar and a plurality of slitting wheels including mountings therefor mounted individually on the cutter bar, the combination of constantly operating individual resilient means on each wheel mounting to urge the wheels into operative relation with the cutter roll, separate means to rock the cutter bar to move the wheels as a group into operating relation with the cutter roll and individual fluid pressure means independent of said resilient and rocking means to precisely vary the pressure between each wheel and the roll.

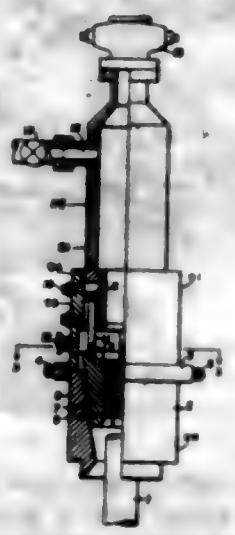
2,897,894
RECOVERY OF OIL FROM SUBTERRANEAN RESERVOIRS
Arthur L. Draper and Edward F. Johnson, Tulsa, Okla., assignors, by mesne assignments, to Jersey Production Research Company
Application June 29, 1956, Serial No. 594,925
7 Claims. (Cl. 166—9)



1. A process for recovering oil from a subterranean oil-bearing reservoir penetrated by two laterally spaced wells, which comprises: injecting a liquefiable oil solvent having a viscosity less than and a density different from the reservoir oil through a first of said wells into the reservoir, the point of solvent injection being in the upper part of the reservoir when the solvent is less dense than the oil and in a lower part of the reservoir when the solvent is more dense than the oil, injecting the solvent in a quantity sufficient to advance it toward the second of said wells at an apparent rate through the reservoir of greater than two feet per day, following the injection of the solvent with the injection of an oil-

displacing fluid, and withdrawing oil from the reservoir through at least one of said wells at a point vertically spaced from the injection point, the point of withdrawal being below said injection point when the solvent is less dense than the oil and above said injection point when the solvent is more dense than the oil.

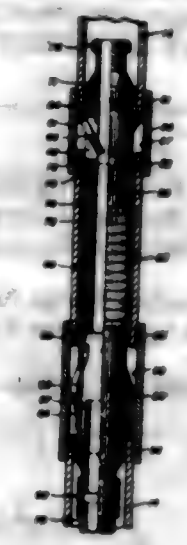
2,897,895
BLOWOUT CLOSURE DEVICE PRESSURE HEAD
John E. Ortloff, Tulsa, Okla., assignor, by mesne assignments, to Jersey Production Research Company
Application March 30, 1956, Serial No. 575,007
6 Claims. (Cl. 166—95)



1. A device adapted for bringing under control wild wells having a pipe string extending above the surface of the earth which comprises a housing adapted to be positioned over the end of the pipe string, said housing being characterized by having at its lower end thereof an inwardly continuous and uninterrupted sloping shoulder member, a clamping device adapted to slide downwardly and inwardly along said shoulder member so as to make tight contact with said pipe string, said clamping device being characterized by containing on its inner surface upwardly biting teeth elements, driving means for moving said clamp along said shoulder and to seat said clamp along said pipe means for inserting a sealing fluid into said housing above said clamping device, and means for closing off the upper end of said housing.

2,897,896
SEATING MEMBER FOR WELL TOOLS
John W. Kennedy and James R. Dublin III, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Application August 12, 1955, Serial No. 528,004
3 Claims. (Cl. 166—134)

1. In combination: a well pipe comprising a plurality of tubular sections interconnected by first coupling members of given length and a second coupling member of length substantially greater than said given length; said second coupling member forming with the tubular sections coupled together thereby a landing recess greater in length than the recesses between adjacent pairs of the pipe sections above said second coupling member, and coupled together by coupling members of said given length said landing recess having an outer diameter at least as great as the outer diameter of said well pipe tubular sections; a removable mandrel insertable into said well pipe; locking means movably arranged on said mandrel; means on said mandrel biasing said locking means outwardly of said mandrel; said locking means being of greater length than and adapted to slide past the recesses between adjacent pairs of pipe sections above said second coupling member to enter said landing recess; said locking means including a downwardly facing shoulder adapted to engage the upper edge of the lower of the tubular sections coupled together by said second coupling member, to stop downward movement of said



mandrel through said tubing; and expansible sealing means carried by the mandrel for sealing between the mandrel and the pipe.

2,897,897
TESTING LOOSE SAND OIL WELL FORMATIONS
Christian W. Brunkeloman, White Plains, N.Y.
Application April 16, 1954, Serial No. 423,795
28 Claims. (Cl. 166—186)

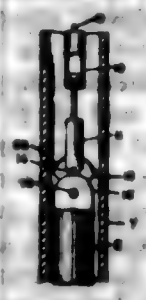
1. A testing tool for producing sandladen fluid from a selected formation interval in a well substantially filled with liquid, comprising tubing extending into the well bore to a point adjacent said formation interval, said tubing having upper and lower non-communicating sections separated by a closure, upper and lower packers in spaced relation on said tubing below said closure engageable with the surrounding well bore wall to define an annular chamber about the tubing isolating the selected formation interval, a by-pass conduit communicating said isolated annular chamber with said upper tubing section, said lower tubing section having an opening in the wall of the same below said closure and above said upper packer communicating the well bore outside said tubing above said upper packer with the well bore below the lower of said packers, a sleeve slidably engaged on the tubing between the packers and subject to possible holding effect of sand accumulating in said annular chamber, said sleeve having ports for flow of fluid therethrough, one-way valving means for said ports arranged to prevent inward flow but permit outward flow through the sleeve,

cutter is moved along to facilitate the cutting action, said cutting blade being provided with vertically disposed cutting knife portions at each side extending forwardly of the main blade with their cutting edges formed along the lower edges thereof and inclined forwardly and upwardly relative to the forward cutting edge and the flat plane of the main blade for cutting the sod from the turf at the edges of the sod as the cutter ad-

2,897,903
DRAFT-PROPELLED IMPLEMENT
Richard W. Buskmeyer, Rockford, Ill., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin
Application January 12, 1953, Serial No. 330,828
18 Claims. (Cl. 172—263)

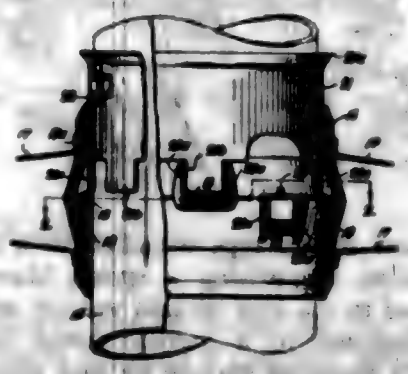
means for releasably retaining the lower of said packers and said sleeve in an initial upper position on the tubing, said means being releasable by manipulation of the tubing in the event of the sleeve becoming sand-locked to the well bore wall and enabling lifting of the tubing to a higher position relative to the sleeve and lower packer, said tubing and said sleeve having means cooperative in said lifted, higher position of the tubing for fluidly communicating the section of tubing below the upper of said packers with said chamber via the ports in said sleeve, thereby permitting circulation of fluid down the annulus between the well wall and tubing above the upper packer, through the opening in the tubing wall above the upper packer into the section of tubing below, then outwardly through said ports of the sleeve and said one-way valving means into said annular chamber, and upwardly through said by-pass conduit into the upper section of tubing to clear the chamber of collected sand.

2,897,898
WELL APPARATUS BRAKE
John S. Wynn, Beaumont, Tex., assignor to Pan American Petroleum Corporation, a corporation of Delaware
Application April 20, 1956, Serial No. 579,606
8 Claims. (Cl. 166—212)



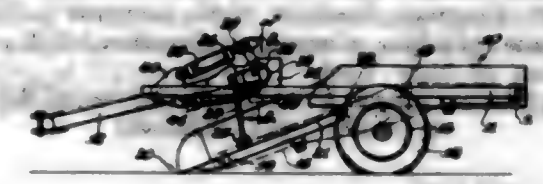
1. An apparatus including a tool for use within a tubular member, a dog, a pivot connection between said dog and said tool allowing said dog to assume a running position with said tool and a braking position extending laterally from said tool a distance equal to the internal diameter of said tubular member minus the outside diameter of said tool, a suspension means, a second pivot connection between said dog and said suspension means suspending said tool coaxially with said suspension means, whereby a tension stress between said pivot connection and said second pivot connection maintains said dog in said running position, and a compression stress between said pivot connection and said second pivot connection maintains said dog in said braking position.

2,897,899
TOOL MOUNTINGS
Jesse E. Hall, Sr., Weatherford, Tex.
Original application November 14, 1951, Serial No. 256,194, now Patent No. 2,797,756, dated July 2, 1957. Divided and this application June 26, 1957, Serial No. 668,212
5 Claims. (Cl. 166—241)



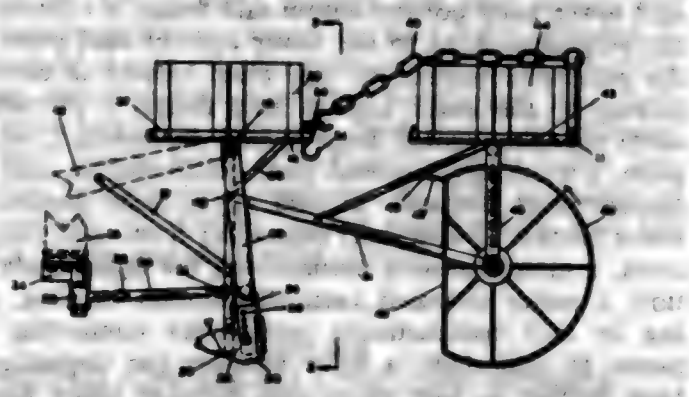
1. A mounting for the application of well tools to the exterior of a well casing comprising an annular race adapted to surround the casing, the bore of the race tapered axially throughout a portion of its length, the smallest diameter of said bore being appreciably larger than the outside diameter of said casing, a plurality of wedge roller enclosures within the race, and a wedge roller in each enclosure, said wedge rollers operable upon movement of the race in one direction to move between the race and casing to prevent further movement in such direction.

2,897,900
POTATO DIGGER
Edwin F. Huddle, Elmwood Park, Ill., assignor to International Harvester Company, Chicago, Ill., a corporation of New Jersey
Application August 27, 1957, Serial No. 680,462
9 Claims. (Cl. 171—126)



1. In a digger for root crops such as potatoes, a traveling support, a digger frame mounted on the support, a transversely extending blade carried by the digger frame adapted to penetrate the soil in a relatively wide path to raise the potatoes from the ground, lift means on the support operatively connected to the digger frame for raising and lowering the later relative to the support, comprising a transverse rockshaft connected at its ends to said digger frame for raising and lowering the latter and said blade upon rocking the shaft, means for rocking said shaft to raise and lower the frame, and means mounted on the support and operable independently of said lift means for rocking said shaft about an axis extending at an angle to a horizontal transverse line parallel to said blade.

2,897,901
SOD-CUTTING DEVICE
Frank N. Grube, Karl W. Greene, Jr., and Gary R. Grube, Columbus, Ohio
Application May 15, 1956, Serial No. 585,053
1 Claim. (Cl. 172—20)



A sod cutter comprising supporting and transporting means for operating along the surface of the turf and a horizontally disposed main cutting blade extending in a flat plane transversely of the cutter with its cutting edge directed forwardly and at a lower level than the level where the turf surface is engaged by said supporting and transporting means so as to cut sod of a predetermined thickness as the cutter is moved along the turf, means for moving the cutting blade back and forth relative to the direction of movement of the cutter as the

by said predetermined force therebetween will actuate first movable member coupled to the said accelerator

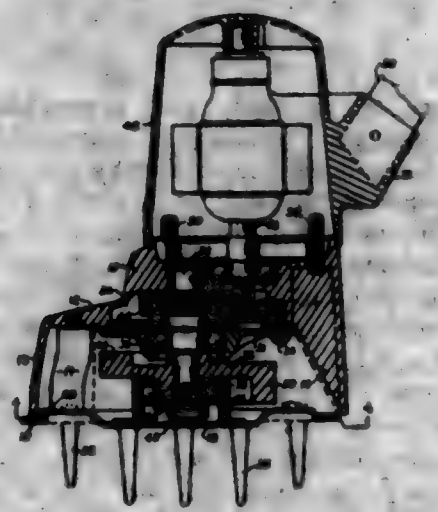
cutter is moved along to facilitate the cutting action, said cutting blade being provided with vertically disposed cutting knife portions at each side extending forwardly of the main blade with their cutting edges formed along the lower edges thereof and inclined forwardly and upwardly relative to the forward cutting edge and the flat plane of the main blade for cutting the sod from the turf at the edges of the sod as the cutter advances, means for measuring and severing predetermined lengths of the sod which has been previously cut by said blade, said means comprising a flat wheel connected by means pulling it along with the cutter at a position behind the cutting blade, said flat wheel being provided with a chordal flat section and a transversely extending severing blade at one end of the flat section of the wheel.

2,897,902

POWER OPERATED ORBITAL MOTION TOOL

Arthur N. Emerson, Nedrow, N.Y., assignor to The Porter-Cable Machine Company, Syracuse, N.Y., a corporation of New York

Application March 12, 1956, Serial No. 570,749
2 Claims. (Cl. 172—40)



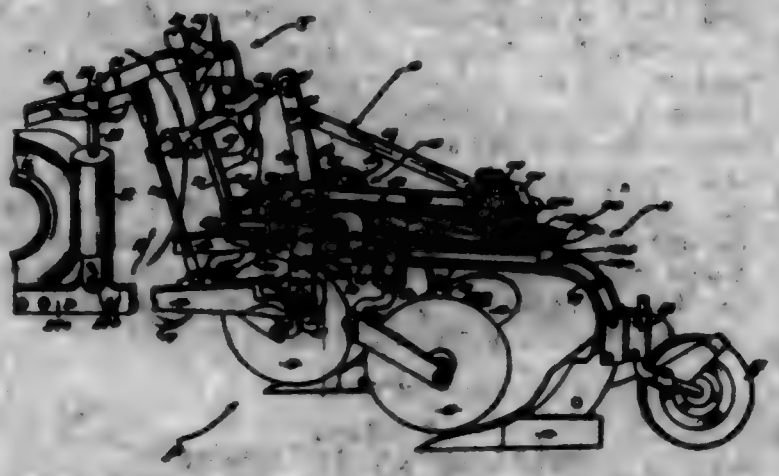
1. A power-operated, hand-manipulated, earth working tool comprising a body having upper and lower portions of circular form, said lower portion being of greater diameter than said upper portion and being positioned eccentrically thereto, said body being formed with an enclosed gear compartment, said lower body portion having a depending circular flange, a plurality of flexible posts fixed at their upper ends to and depending from said lower body portion within said flange, a circular tool carrying plate fixed to the lower ends of said posts with the peripheral portion of said plate located in close adjacency to the lower edge of said flange, a plurality of earth engaging prongs fixed to and depending from said plate, a vertically disposed shaft journalled in said gear compartment coaxially of said lower body portion, the lower portion of said shaft depending from said compartment, a motor housing mounted on the upper body portion, a motor disposed vertically in said housing, gearing in said compartment operatively connecting said motor to said shaft, a drive member for imparting orbital motion to said plate, said member being fixed to the lower end of said shaft and having a low hub portion formed with a surface eccentric to the axis of said shaft, a bearing mounted on said eccentric surface, a cylindrical member fixed to said plate and encircling said bearing, said drive member being formed with an arcuate shaped depending counterweight portion movable in a path encircling said bearing, said drive member being also formed with an upwardly extending arcuate shaped counterpoised portion, and means for detachably affixing said drive member to the lower end of said shaft.

2,897,903

DRAFT-PROPELLED IMPLEMENT

Richard W. Bushmeyer, Rockford, Ill., assignor to J. I. Case Company, Racine, Wis., a corporation of Wisconsin

Application January 12, 1953, Serial No. 330,828
18 Claims. (Cl. 172—263)



1. A mounted implement in combination with a tractor having at the rear thereof three substantially triangularly spaced attaching elements, said implement including a draft beam adapted to be connected to said attaching elements for up and down movement and for tilting movement, an implement frame carrying at least one ground working tool, interengaging means between said implement frame and said draft beam for propelling said ground working tool by reason of the forward movement of said draft beam, said interengaging means being constituted to permit sideward swinging movement of said implement frame relative to said draft beam and to separate upon relative longitudinal movement between the draft beam and the frame in one direction and releasable upon the attainment of a predetermined load, and interlocking means between the implement frame and the draft beam for stabilizing the implement frame with respect thereto for causing tilting of the implement frame in accordance with tilting of the draft beam.

2,897,904

TRACTOR MOUNTED PLOW

Roy F. Schwegler, Davenport, Iowa, assignor to J. I. Case Company, Racine, Wis.

Application March 15, 1954, Serial No. 416,285
6 Claims. (Cl. 172—269)

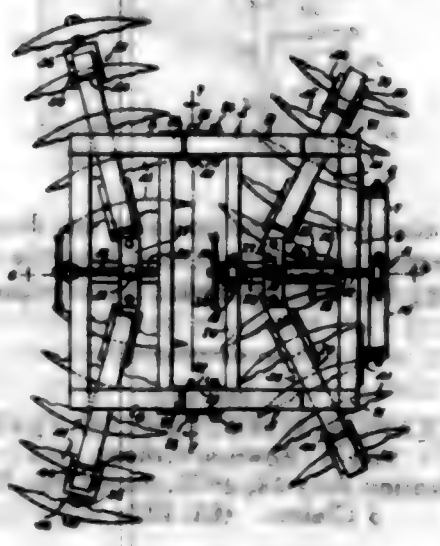
1. In a plow of the type attached to a draft vehicle, the combination comprising a spring biased latch pivotally attached to the rear of said vehicle and adapted to release in response to a predetermined force, a plow frame, a latch engaging surface on said plow frame, said vehicle and said plow frame being arranged for said latch to yieldingly lock onto said latch engaging surface where-

exterior of a well casing comprising an annular race

tive to the direction of movement of the cutter as the

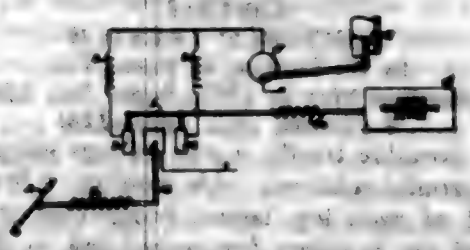
by said predetermined force therebetween will actuate said spring biased latch and thereby effect an unlocking of said plow from said draft vehicle, said draft vehicle and said plow frame having a common pivot axis about which said plow can swing laterally with respect to said vehicle, said pivot axis being spaced rearwardly of said vehicle and maintained during operation in fixed relation thereto.

2,897,905
TANDEM DISC HARROW
Henry F. McCluskey, Marietta, Ga.
Application July 3, 1957, Serial No. 669,748
1 Claim. (Cl. 172—581)



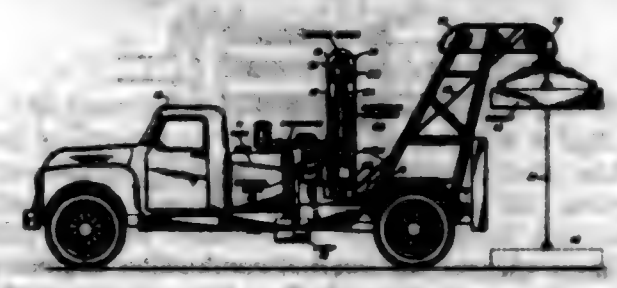
A disc harrow comprising a frame including a front section and a rear section, each of said sections including an outer cross bar, an inner cross bar, and side bars, means detachably securing said side bars in aligned relation, said means including a pivot whereby upon release of the detachable securing means said rear section may be pivotally swung over said front section, a center bar in each section, plates movably mounted on each center bar, horizontal bars pivoted at their ends to said plates, means movably connecting said horizontal bars at an intermediate point to said side bars, a threaded bar on each plate, a second bar on a cross bar of each section, a threaded rod extending through each second bar and engaging each threaded bar, a handle on each threaded rod for moving its associated plate to vary the angle of its associated horizontal bar and disc harrows supported by each horizontal bar.

2,897,906
AUTOMATIC SPEED CONTROL DEVICE FOR AUTOMOTIVE VEHICLES
Antoine Breeder, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France, a corporation of France
Application November 7, 1955, Serial No. 545,469
Claims priority, application France November 6, 1954
6 Claims. (Cl. 180—82.1)



1. An automatic control device for the engine of an automobile vehicle enabling a constant running speed to be obtained for a given position of an accelerator control provided in said vehicle, the vehicle having a speed indicator device, the said control device comprising: a first movable member coupled to the said accelerator control and adapted to move in correspondance therewith; a second movable member associated with said speed indicator device; a forked portion connected rigidly with one of said members, the fork including arms located one on each side of the other member; means whereby movement of either of said members causes contacting engagement thereof with the other of said members and a direct thrust therebetween; a motor driven in accordance with said thrust for controlling the engine of said vehicle so as to vary the speed to restore the said members to a position in which they are spaced from each other, and an elastic device coupling said first movable member to said accelerator control.

2,897,907
WEIGHT HANDLING MECHANISM
Alvis E. Blount, Tobias Flatow, and Frank L. Chalmers, Houston, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Application August 31, 1955, Serial No. 531,704
2 Claims. (Cl. 181—.5)



1. Apparatus for generating seismic waves comprising a truck, a substantially vertically extending cylinder formed to provide discharge port means adjacent the lower end thereof and arranged on said truck, a piston slidably arranged in said cylinder, a first rotatable sheave means positioned above said cylinder and arranged on said piston for movement therewith, a second rotatable sheave means mounted on said truck below said cylinder, a third rotatable sheave means supported on said truck spaced from said first and second sheave means, an unguided, substantially free-falling heavy weight adapted to impinge on the earth's surface when dropped, a cable arranged on said sheave means having end attached to said truck and the other end attached to said weight, hydraulically-operated valve means arranged in said cylinder below said piston adapted to control the flow of fluid through said port means, and a hydraulic system arranged on said truck adapted to supply fluid to said cylinder to move said piston upwardly thereby elevating said associated weight and to actuate said valve means to discharge fluid from said cylinder, said port means being of sufficient size to cause substantially instantaneous discharge of fluid contained in said cylinder to thereby permit substantially free fall of said piston and associated weight.

2,897,908
SOUND ABSORBING UNIT AND BUNDLE THEREOF
Gustave Bernhofsky, Chicago, Ill., assignor to The Celotex Corporation, Chicago, Ill., a corporation of Delaware
Application October 4, 1956, Serial No. 613,935
2 Claims. (Cl. 181—33)

1. An acoustical correction unit comprising a parallelepiped space enclosing casing comprised of a shape retaining sheet forming a plurality of the sides of the casing and mounted on the interior surface thereof blocks of sound absorbing material, such blocks of sound absorbing material substantially co-extensive with and mounted

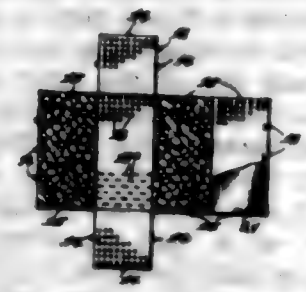
legs for spreading the legs to pivot said brackets relative

2,897,914

and drive member to the lower end of said shaft.

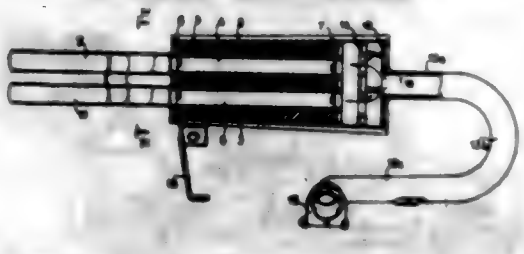
to yieldingly lock onto said latch engaging surface where-

on the interior surface of two of said sides of the casing contiguous to a third side thereof, each of such blocks



of sound absorbing material of a thickness substantially one-half the width of said third side of the casing.

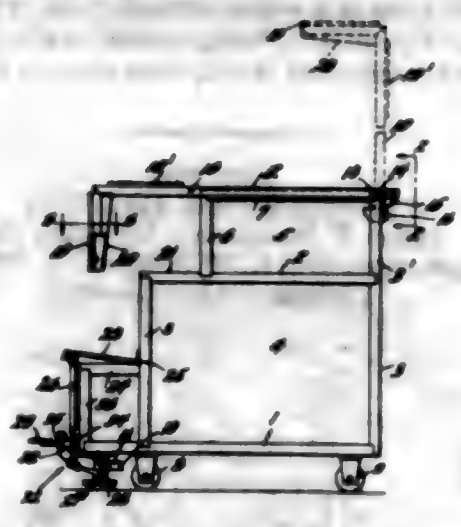
2,897,909
SILENCER FOR MOTOR VEHICLES
Carlo Abarth, Turin, Italy, assignor to Abarth & Co., Turin, Italy
Application June 16, 1958, Serial No. 742,085
Claims priority, application Italy August 7, 1957
1 Claim. (Cl. 181—59)



Exhaust silencer for internal combustion engines more particularly on the Renault-Dauphine sport car, characterized in that the silencer comprises: a flattened substantially frusto conical casing having a forward expansion chamber subdivided by a perforated partition into two compartments and a rear silencing chamber comprising two perforated tubes insulated by sound deadening material from the casing, the said two tubes being connected with two outlet tubes for exhaust of the gases to the outside, the gas expansion chamber being connected through a tube of substantial length to the exhaust manifold of the engine; in that the tubes arranged within the casing are supported at their ends by a pair of plates, the expansion chamber being confined between the first plate supporting the tubes and a plate connected with the exhaust manifold, a third plate being interposed with staggered holes between the two first mentioned plates; in that the tube leading from the silencer to the exhaust manifold comprises a first rectilinear portion extending along the axis of the silencer casing, a cranked portion, a further rectilinear portion extending rearwardly, a further cranked portion, a rectilinear upwardly extending portion and a fitting for attachment to the exhaust manifold; and in that a further tube is arranged within the tube leading from the exhaust manifold to the silencer and contacts at three regions at least with the inner walls of the first mentioned tube.

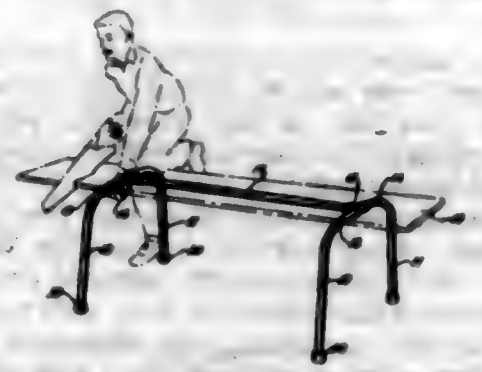
2,897,910
REFERENCE SERVICE CART
Orus C. Steely, Dallas, and Ivan D. Eyler, Fort Worth, Tex.
Application March 18, 1955, Serial No. 495,367
6 Claims. (Cl. 182—15)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A cart provided with supporting wheels secured to the front and rear of the cart, a plurality of fixed steps at the rear end of the cart and integral therewith, a floor locking device carried by the rear end of the cart, means associated with the first step for depressing the locking device to engage the floor and raise the rear wheels from the floor as the operator mounts the first step, the cart then being supported at the rear in fixed locked position with the rear wheels off the floor, the rear end supported by the floor locking device and the front end supported by the front wheels thereby forming a non-skid stable foundation on the floor surface, and means for releasing



the locking device after the operator has descended from the cart thereby returning to the floor the rear wheels and removing the locking device from engagement with the floor.

2,897,911
COLLAPSIBLE SUPPORTING TRESTLE
Van B. Bowers, Athens, Ala.
Application July 28, 1955, Serial No. 524,927
3 Claims. (Cl. 182—155)



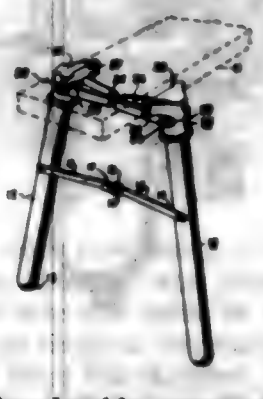
2. A work support of general utility comprising a pair of U-shaped members arranged in spaced generally parallel relation, a strut extending between the bight portions of the U-shaped members, connecting means between each end of the strut member and the bight portion of the adjacent U-shaped member providing a pivotal connection for the said adjacent U-shaped member permitting said adjacent U-shaped member to be collapsed and lie generally in the plane of said strut member, means to fix each U-shaped member in its parallel supporting position, and yieldable covering material on the strut member and the U-shaped members extending above the coupling members to provide a supporting surface for flat articles without rocking of such articles.

2,897,912
PORTABLE TRESTLE
Jo W. Tucker, El Paso, Tex.
Application May 3, 1957, Serial No. 656,831
6 Claims. (Cl. 182—226)

1. In a portable trestle, a pair of legs adapted to support a horizontal relatively wide member, a bracket at the upper end of each leg, lateral projections at the upper margins of the brackets for embedding in the sides of the member, link means extending between and having loose pivotal connection with the lower portions of said brackets to permit limited movement of said brackets relative to each other for embedding and disembedding the projections, toggle means pivotally connecting the

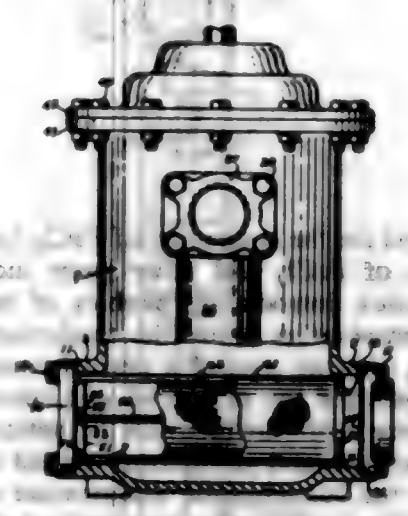
indicator device, the said control device comprising: a ing material substantially co-extensive with and mounted

legs for spreading the legs to pivot said brackets relative to the link means and embed said projections, and shoulder means on said brackets between said link means and projections for bearing against the underside of the member upon initial engagement of said brackets therewith to position said projections for bearing against the underside of the member upon initial engagement of said brackets therewith to position said projections below its



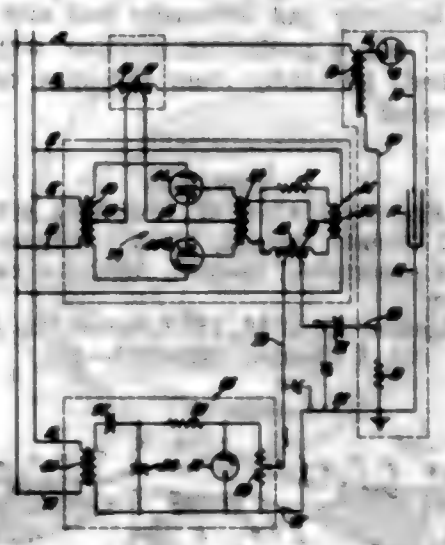
upper surface, the shoulder means moving away from each other and bearing against said link means when said brackets are pivoted to embed said projections so as to urge said link means away from the member for equalizing the forces exerted on said brackets and maintaining the same angular relationship between each leg and the member, said link means being adjustable in length to permit spacing of said brackets in accordance with the width of the member.

2,897,913
GAS SEPARATOR AND ELIMINATOR
William L. Hudson, Fort Wayne, Ind., assignor to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana
Original application August 15, 1955, Serial No. 528,489. Divided and this application August 21, 1956, Serial No. 605,921
6 Claims. (Cl. 183—2.5)



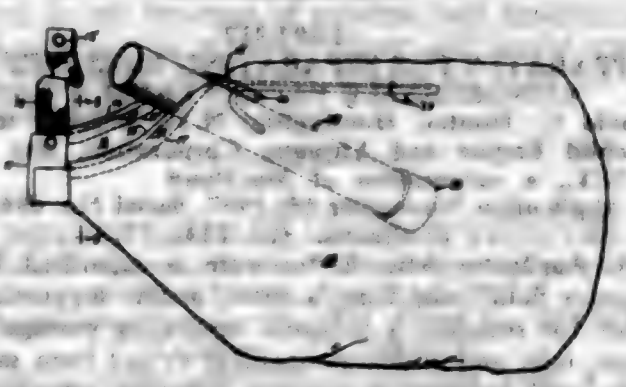
1. In a gas separator, the combination of a body and a cover forming a separator and gas venting chamber, said body including bosses disposed on its lower, opposite side portions defining axially aligned exterior openings of similar size and shape, said body including means defining a liquid discharge channel having an inlet adjacent the bottom of the chamber and its outlet at the side of the body near the top of the chamber, a cylindrical strainer disposed with its ends resting within said aligned openings, means for holding the strainer in place and for sealing the joint between the strainer and body and baffle means in the lower portion of said chamber disposed to prevent the direct passage of liquid from the strainer to the inlet of the discharge channel.

2,897,914
CONTROL SYSTEM FOR ELECTROSTATIC PRECIPITATION
James B. Camp, Fairfield, and Daniel J. Reed, Jr., Birmingham, Ala., assignors to United States Steel Corporation, a corporation of New Jersey
Application February 16, 1955, Serial No. 488,492
3 Claims. (Cl. 183—7)



1. The combination, with an electrostatic precipitator having an energizing circuit which includes a high voltage transformer and a rectifier, said precipitator and said rectifier being connected in series with the secondary winding of said transformer, of a control for varying the potential applied to said precipitator inversely with respect to the dust concentration comprising a variable impedance in series with the primary winding of said transformer, a resistor in series with the secondary winding of said transformer for producing a direct current voltage drop proportional to the current flow through said precipitator, means for producing a constant direct current reference voltage larger than said voltage drop and opposed thereto, a control circuit to which said voltage drop and said reference voltage are applied to produce a current whose value is a function of their difference and hence varies inversely with respect to the precipitator current, and means for regulating the magnitude of said impedance in accordance with the current in said control circuit.

2,897,915
DUST BAG ASSEMBLY
Ralf C. Hastrup, Altadena, Calif.
Application May 31, 1957, Serial No. 662,670
6 Claims. (Cl. 183—51)



1. In a dust bag for use in the collection of dust from a machine operation in which a stream of air and dust is discharged, the combination comprising a neck band secured to said bag and adapted to fit around a dust discharge tube, said neck band when fitted around said tube having its ends adjacent each other and defining a transverse opening into said bag, a longitudinal opening in

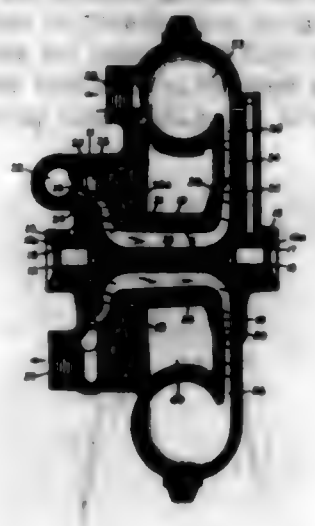
said bag, one end of each side of said longitudinal opening being adjacent an end of said neck band, the other ends of the two sides of said longitudinal opening being joined to form an apex at the lower or forward end of said longitudinal opening, a rib in the wall of said bag along each side of said longitudinal opening to give a beaded edge to each of said sides, said ribs at their forward ends near the apex of said longitudinal opening extending inwardly and forwardly into said bag and being formed into a projecting member within said bag which extends forwardly from the apex of said longitudinal opening.

2,897,916
CLEANING AND SILENCING MEANS
Delbert C. Probst, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 10, 1957, Serial No. 652,044
8 Claims. (Cl. 183—62)

1. A cleaner silencer assembly for internal combustion engines and the like and comprising, a hood having wall means adapted to be moved to open or close an engine compartment in a motor vehicle or the like, an induction system inlet device having inlet means for supplying air to an internal combustion engine in said engine compartment, said hood wall means being disposed adjacent and in spaced relation to said inlet means when said hood is closed upon said engine compartment, a closure device secured to the inner surface of said hood wall means and providing closure wall means, said hood wall means and said closure wall means forming an air chamber between said hood and said closure device, said closure device being formed to provide air outlet means leading from said chamber, air inlet means formed in said closure wall means and leading to said chamber for supplying air to said chamber, air filter means within said chamber and between said chamber inlet means and said chamber outlet means, and means on one of said devices and adapted to seal against the other for connecting said chamber outlet means to said induction system inlet means when said hood wall means is moved to close said engine compartment.

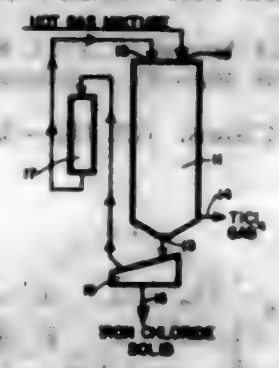
2,897,917
APPARATUS FOR SEPARATING MOISTURE AND CONDENSABLE VAPORS FROM A GAS
David U. Hunter, Huntington, N.Y., assignor to Fairchild Engine and Airplane Corporation, Bay Shore, N.Y., a corporation of Maryland
Application November 15, 1957, Serial No. 696,853
10 Claims. (Cl. 183—77)

1. Apparatus wherein moisture is separated from a gaseous fluid comprising a rotor, means supporting said rotor for rotation, a moisture separating passage in the rotor, inlet and discharge openings to and from said passage, said passage including a moisture separating upstream portion wherein the distance between the axis of rotation of the rotor and the surface of the passage remote from the axis of rotation of the rotor continues to decrease from the inlet opening throughout the moisture separating portion of the passage, whereby moisture carried by the gaseous fluid passing through the passage is moved by centrifugal force toward the surface of the passage remote from the axis of rotation and then along said surface toward the inlet opening, and means laterally offset from the inlet end of the passage



for directing the fluid against the rotor for imparting rotation thereto, said laterally offset means preventing interference with the moisture discharged by centrifugal force from the upstream end of the rotor passage.

2,897,918
SEPARATION OF HALIDES
Joseph S. Schlotthauer, Henderson, Linden E. Snyder, Las Vegas, and Leland E. Lyons, Boulder City, Nev., assignors to Titanium Metals Corporation of America, New York, N.Y., a corporation of Delaware
Application July 2, 1957, Serial No. 669,672
4 Claims. (Cl. 183—119)



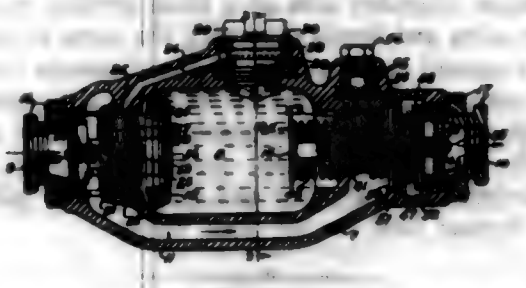
1. A method for the separation of $FeCl_3$ from a hot gaseous mixture of $FeCl_3$ and other gases including $TiCl_4$ which comprises; introducing pebbles of inert material cooled to a temperature above the condensation temperature of $TiCl_4$ into the tops of a pair of contact columns, introducing into the top of one of said columns said hot gaseous mixture, withdrawing from the bottom of said one column the pebbles and gas mixture cooled to a temperature between the condensation temperature of $FeCl_3$ and 30° C. above the condensation temperature of $FeCl_3$, passing said cooled gas mixture into the bottom of the other column and upwardly therethrough thereby to condense $FeCl_3$ on the surfaces of pebbles flowing downwardly therein, withdrawing the residual gases stripped of $FeCl_3$ from the top of said other column at a temperature above the condensation temperature of $TiCl_4$, withdrawing pebbles with condensed $FeCl_3$ from the bottom of said other column at a temperature below the condensation temperature of $FeCl_3$ and above the condensation temperature of $TiCl_4$, separating $FeCl_3$ from the pebbles by mechanical means, cooling said pebbles from said columns to a temperature above the condensation temperature of $TiCl_4$ and returning the cooled pebbles for reintroduction into said columns.

adjacent said disk structure and arranged to move axially clamping the same to said piston means, a restricted bleed

2,897,919
AIRLINE OILER

Raymond P. Dolliver, North Olmsted, Ohio, assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Application March 21, 1957, Serial No. 647,549
13 Claims. (Cl. 184—55)

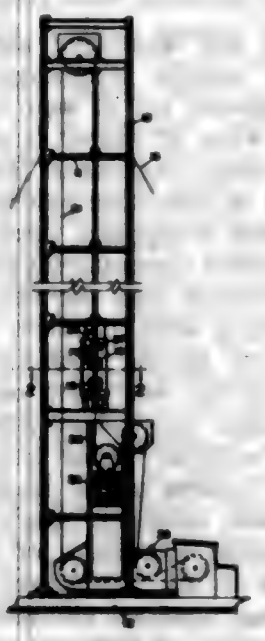


1. An airline oiler comprising, a casing having therein an oil confining chamber and being provided with an air inlet at one side and with an air outlet at the opposite side of said chamber interconnected by an air passage segregated from the chamber, a flexible diaphragm spanning said chamber and coacting along one face with the oil in said chamber but having its opposite face sealed from said oil, means for admitting air under pressure from said inlet to said sealed diaphragm face to subject the confined oil to pressure by distorting the diaphragm, conduit means movable by said diaphragm and being communicable with said chamber to normally deliver the pressure subjected oil into the air stream delivered from said inlet through said outlet via said passage, and a shut-off valve for the air flow operable by the movement of said conduit means.

2,897,920
EMERGENCY BRAKE FOR ELEVATOR CARS

Henry E. Falter and Robert A. Vaughan, Columbus, Ohio, assignors, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware

Application January 28, 1958, Serial No. 711,692
8 Claims. (Cl. 187—88)

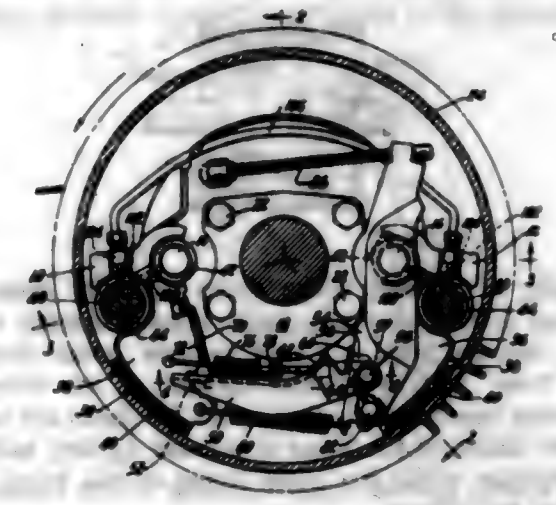


1. In combination with an elevator car movable vertically along a guide rail, a brake roller carried by the car for engaging the guide rail, means for moving the roller into engagement with the guide rail, said means comprising a wedge shoe carried by the car on the exterior of one of the vertical walls thereof, said shoe being mounted on a support attached to the wall of the car, said shoe having an angled surface cooperating with a reversely angled surface on said support, said angled surfaces extending outwardly from said car, and means operable from within the car for moving said shoe relative to said support.

2,897,921
BRAKE

Richard T. Burnett, South Bend, Ind., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware

Application November 16, 1953, Serial No. 392,177
31 Claims. (Cl. 188—70)



1. For use in combination with a rotatable member having three friction element engaging surfaces, a brake assembly comprising a support member, a pair of oppositely located anchoring means secured to said support member, a first and a second brake unit pivotally associated with said anchoring means, each of said brake units including a mounting portion, a shoe portion, and oppositely actuated disk elements located radially intermediate said mounting and shoe portions and adapted to produce pivotal actuation of said brake unit about said anchoring means, an applying lever having a pinned connection with said second brake unit and pivotal thereon, a strut interconnecting said applying lever and said first brake unit, said strut having a pinned connection with said applying lever permitting pivotal movement of said lever thereon, a stepped connection between said strut and first brake unit enabling successive increments of adjustment of the shoe portion of said second brake unit according to extent of wear of the lining thereon, a second anchoring means associated with said first brake unit limiting extent of pivotal actuation of said first brake unit and defining retracted position of the shoe portion thereof, means yieldably retaining the shoe portion of said first unit in retracted position, and resilient means interconnecting said first unit and applying lever for urging the shoe portion of said second unit to retracted position, said strut being adapted to transmit braking torque of said second unit to apply the shoe portion of said first unit during braking in one direction of rotation, said applying lever being arranged for movement about said pinned connections fulcruming respectively thereon to apply the shoe portions of each of said units.

2,897,922
DOUBLE LINED BRAKES FOR VEHICLES

William P. Canepa, Bronx, N.Y., assignor of one-fourth to Mary Martin, New York, N.Y.

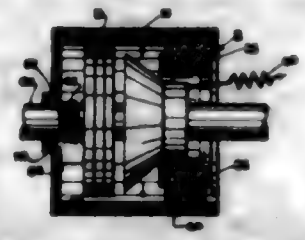
Application October 23, 1957, Serial No. 691,869
2 Claims. (Cl. 188—76)

1. In a brake assembly, a rotatable axle, a brake drum on said axle having internal circular and cylindrical surfaces, a sliding disk structure disposed in said drum and floatingly slidable on said axle, said structure being normally spaced from the circular surface of the drum by spring means, said disk structure comprising a circular metal plate having heat resistant friction inducing linings on inner and outer surfaces thereof, a first generally conical brake shoe with a flat base disposed on the axle

periphery of said hub, said drum element having its outer

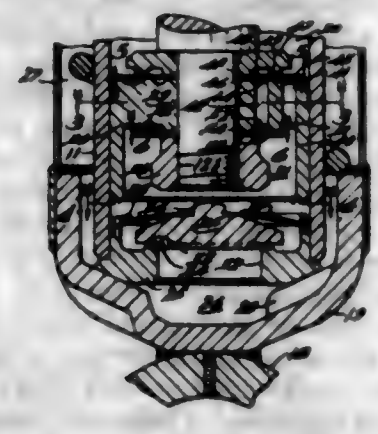
each tongue, respective tongue engaging means secured

adjacent said disk structure and arranged to move axially on the axle to press said band against the adjacent one of said linings and to press the other one of said linings into contact with said circular surface, a brake band disposed on said axle in said drum, said band comprising a resilient generally cylindrical ring with heat resistant friction linings on inner and outer surfaces thereof, and



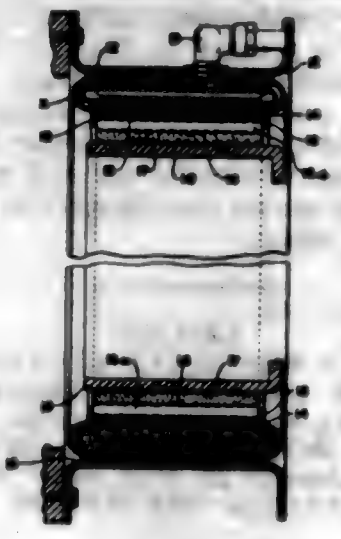
a plurality of arcuate brake shoes pivotally disposed in the drum around the axle, said band normally clinging to and loosely fitted on said arcuate brake shoes and spaced from said cylindrical surface of the drum, said band being expansible so that when the shoes are actuated the outer lining of the band is pressed against said cylindrical surface while the inner lining of the band is contacted by said shoes.

2,897,923
SHOCK ABSORBER
John M. Agar, Highland Park, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application October 25, 1956, Serial No. 618,288
5 Claims. (Cl. 188—88)



1. In a vehicle hydraulic shock absorber, a working cylinder, a reservoir, piston means reciprocable in said cylinder and partitioning the same into a compression chamber and a rebound chamber, the rebound chamber being closed and the compression chamber being in communication with said reservoir, said piston means having a port therethrough, a resilient disc valve at the rebound chamber side of said piston means, said valve having a yieldable portion overlying and normally closing said port and being progressively yieldable therefrom responsive to increasing pressure in said compression chamber resulting from increasing velocity of compression movement of said piston means above low velocity boulevard driving conditions, thereby to open said port progressively for fluid flow from the compression to the rebound chamber, said piston means also having a second port therethrough, a second resilient disc valve at the compression chamber side of said piston means, said second valve having a yieldable portion overlying said second port and being yieldable therefrom responsive to increasing pressure in said rebound chamber resulting from increasing velocity of rebound movement of said piston means above said low velocity boulevard driving conditions, thereby to open said second port progressively for fluid flow from the rebound to the compression chamber, a clamping member adjacent the rebound chamber side of a fixed portion of the first named disc valve and firmly clamping the same to said piston means, a restricted bleed duct between said clamping member and the rebound chamber side of said first named disc valve, one end of said duct opening into said rebound chamber and the other end communicating with said second port through an opening in said first named disc valve to bypass the latter valve, a second clamping member adjacent the compression chamber side of a fixed portion of said second disc valve and firmly clamping the same to said piston means, a second restricted bleed duct between the surface of said piston means and the side of said second disc valve opposite the latter's compression chamber side, one end of the second bleed duct opening into said compression chamber and the other end opening into said second port to bypass said second disc valve.

2,897,924
ACTUATING DIAPHRAGM AND WEAR-SHOE ASSEMBLY FOR FLUID-ACTUATED CLUTCHES AND BRAKES
Thomas L. Fawick, Cleveland, Ohio, assignor to Fawick Corporation, a corporation of Michigan
Application March 9, 1955, Serial No. 493,117
2 Claims. (Cl. 188—152)



1. A diaphragm and wear-shoe assembly comprising a fluid-distensible annular diaphragm formed with a circumferentially spaced set of wear-shoe-anchoring recesses defined by walls of rubber having interlock portions, the rubber being continuous from each recess to the next, and a set of wear-shoe assemblies, each of said wear-shoe assemblies comprising interlock means at its positions of termination circumferentially of the assembly and directly interlocked with the interlock portions of the said recess-defining walls of rubber of respective ones of the said recesses against both circumferential and radial movement of the wear-shoe assembly in relation to the said diaphragm, the defined interlock portions of the recess-defining walls of rubber comprising as to each of the recesses an element of the diaphragm interlocked in direct contact with interlock means of the wear-shoe assembly against axial movement of the wear-shoe assembly in relation to the diaphragm, and material of the diaphragm being confined circumferentially and radially by direct contact of elements of the single wear-shoe assembly.

2,897,925
REINFORCED CAST BRAKE DRUM AND METHOD OF CONDITIONING USED BRAKE DRUMS
Oscar W. Strohm, Pittsburgh, Pa.
Application February 13, 1953, Serial No. 336,666
2 Claims. (Cl. 188—218)

1. A cast steel brake drum comprising a hub for attachment to a vehicle wheel and a cylindrical drum element providing an internal braking surface cast integrally with and projecting axially outwardly from the

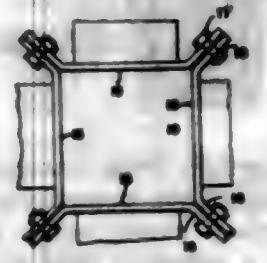
operable from within the car for moving said shoe relative to said support.

on inner and outer surfaces thereof, a first generally conical brake shoe with a flat base disposed on the axle

periphery of said hub, said drum element having its outer surface undercut for at least a portion of its axial length extending from its outer edge inwardly toward said hub, the radial thickness of such undercut portion being such

that heat generated at said internal braking surface is ineffective to cause "heat checking" at said braking surface, and a steel reinforcing ring on said undercut portion for limiting its expansion in a radial direction.

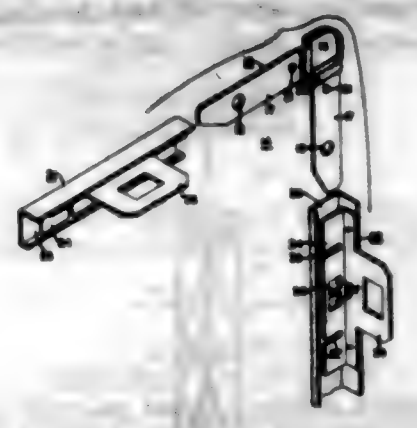
2,897,926
BUILDING STRUCTURE
Harry E. Hawthorne, Houston, Tex.
Application January 12, 1955, Serial No. 481,325
2 Claims. (Cl. 189—3)



1. A combination wall and column structure comprising, a corrugated panel member, a strip portion secured along the vertical side edges of said panel member, said strip portion extending longitudinally of said panel member, said strip portion being of greater width than the depth of said corrugated panel member and having each of its vertical edges positioned angularly at approximately 135° relative to the side of the strip portion secured to the vertical edges of said panel member, a second corrugated panel member aligned with and adjacent said first named corrugated panel member but in spaced relation thereto, a strip portion secured along the vertical side edges of said second corrugated panel member and in spaced relation to said strip portion on said first named corrugated panel member, said strip portion on said second corrugated panel member being of greater width than the depth of said second corrugated panel member and having each of its vertical edges positioned angularly at approximately 135° relative to the side of the strip portion secured to the vertical edges of said second corrugated panel member, and additional strip portions of similar construction as said strip portions on said panel members and fitting between said strip portions on each of said adjacent, spaced corrugated panel members, said angularly positioned edges of adjacent strip portions being in contact, and means securing adjacent angularly positioned edges of said strip portions together, said means thereby interconnecting said strip portions and thereby forming a column supporting said adjacent panel members.

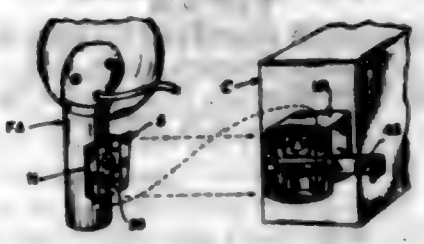
2,897,927
JOINTURE BETWEEN MEMBERS OF A PRE-FABRICATED STRUCTURE
Albert J. Fitzgerald, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Application May 19, 1955, Serial No. 509,573
2 Claims. (Cl. 189—36)

1. A frame comprising a plurality of channel shaped sheet metal side members connected by corner members, each corner member including a pair of angularly extending sheet metal tongues and a stop adjacent the base of each tongue, respective tongue engaging means secured along the length of each side member adjacent an end thereof and including a sheet metal flange member spaced parallel to an interior surface of the side member to define with said surface a tongue-receiving slot, each tongue extending into a respective slot with the corresponding stop facing the adjacent end of the respective side member, each said tongue having an aperture having side edges inclined toward each other in the direction of



the extremity of the tongue, tongue locking means including a pair of spaced openings in each flange member defining therebetween an integral strap narrower than a corresponding tongue aperture, each said strap being in registry with said inclined edges of said tongue aperture and being deformed into said aperture in camming engagement with said inclined edges to draw together the end of the side member and the opposing stop, and an outstanding boss on the tongue resiliently engaging said flange member to prevent play of said tongue in said slot.

2,897,928
COUPLERS FOR CAMERA ATTACHMENTS OR THE LIKE
Guenther Selig, Chicago, Ill., assignor to Rennel Industries, Inc., Chicago, Ill., a corporation of Illinois
Application February 15, 1956, Serial No. 565,659
4 Claims. (Cl. 189—36)



1. A coupler of the kind described and comprising a pair of parts respectively formed with a guide means and a holding element complementally interfitted and coupling the parts securely together, one of said parts being provided with a spring-urged catch movable along a linear path between latching and releasing positions and the second of said parts being formed with one sloping cam edge engaging the catch in the latching position of the catch, said second part being formed with a second sloping cam edge engageable by the catch in its releasing position, and said cam edges converging one relative to the other in a direction proceeding toward the released position of the catch, said second cam edge also being engageable with the catch in its latching position.

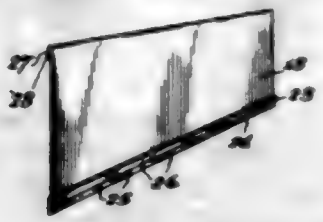
2,897,929
PILLARS OR COLUMNS
Phillip C. Lindeman, Dallas County, Tex., assignor to Dallas Iron and Wire Works, Inc., Dallas, Tex., a corporation of Texas
Application September 11, 1953, Serial No. 379,499
3 Claims. (Cl. 189—36)

1. A pillar including: at least one vertical support standard adapted to extend between an upper fixed struc-

ture and a lower fixed structure; and a bracing frame comprising a lower bracing plate adapted to be anchored to said lower fixed structure, an upper bracing plate, said plates having registering apertures through which said standard extends, said apertures of said plates being of substantially the same size as said standard, and a plurality of laterally separate vertical members spaced from and about said standard and between said upper and lower bracing plates, said vertical members having flat vertical surfaces, each of said bracing plates comprising a horizontal portion and a continuous integral

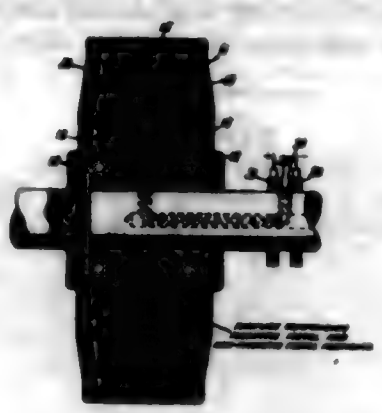
peripheral flange extending substantially vertically from said horizontal portion, the flange of the lower bracing plate being adapted to rest on said lower fixed structure, each of said bracing plates having a boss extending in the opposite direction to its flange, said aperture extending through said boss, said boss of each bracing plate having a plurality of rectilinear side faces extending substantially vertically upon the horizontal portion of said plate and spaced uniformly from the peripheral edge of said plate and engaged with the flat vertical surfaces of said vertical members to prevent rotative movement of said vertical members about their vertical axes.

2,897,930
METAL BUILDER'S CONSTRUCTION MATERIAL
Theodore Primich, Gary, Ind.
Application September 27, 1955, Serial No. 536,861
3 Claims. (Cl. 189—36)



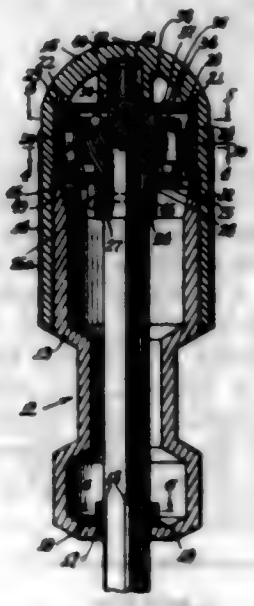
1. A sheet metal building member adapted to cover horizontally a plane surface comprising an elongated rectangular sheet having its lower edge portion folded over toward the back of the sheet in contiguous relation and reversely folded in spaced relation to said first fold a distance equivalent to slightly more than twice the thickness of said sheet to form a downwardly facing female member, said latter folded portion extending beyond the first folded edge, a plurality of inclined locking lugs struck forwardly from the surface of the latter extending edge portion, said lugs being arranged at spaced intervals along said extending edge portion and each having an inner edge parallel to the edge of said sheet, a plurality of apertures interposed between said lugs for receiving fastening nails or screws, the upper longitudinal edge of said sheet being folded rearwardly in contiguous relation to form a male member having a rear portion extending downward a distance slightly less than the distance between the inner edges of the lugs and the reverse fold forming the upper end of the female member, whereby said male member is arranged to sequentially engage the lugs of an identical member in a progressive manner.

2,897,931
CLUTCH WITH MAGNETIC POWDER MIXTURE FOR FORCE TRANSMITTING DEVICES
Fritz Didusseu, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Application December 27, 1954, Serial No. 477,665
2 Claims. (Cl. 192—21.5)



1. A magnetic particle force transmitting device having a low unlocking torque comprising, a pair of relatively movable members having an air gap therebetween, means for creating a magnetic field across said air gap, and a resilient metallic powder disposed within said air gap, said powder consisting of a mixture of approximately 88% magnetic powder and approximately 12% non-magnetic titanium sponge powder.

2,897,932
RATCHET-TYPE TOOLS AND CLUTCHES THEREFOR
Porter S. Morgan, Westport, Conn., assignor to Morgan Development Laboratories, Inc., Westport, Conn., a corporation of Delaware
Application February 24, 1955, Serial No. 490,383
13 Claims. (Cl. 192—44)

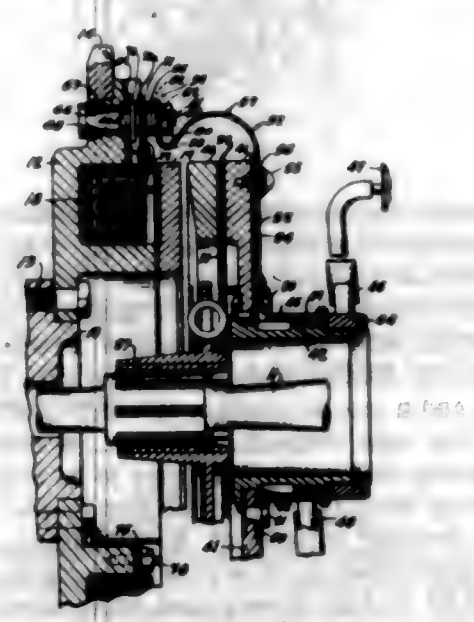


1. A ratchet-type tool having a tool shank; an operating handle rotatably and axially shiftably coupled to the shank; a clutch for connecting and disconnecting the handle and tool shank in all rotative positions of the former on the shank, said clutch including cooperating converging working surfaces on the handle and shank respectively and rolling wedging members located between the same with locating means for the rolling members; and control means operatively associated with

with the cross-sectional configurations of said grooves, each of said rollers having a longitudinal bore extending whereby the flow of granular contact particles through the conduits is controlled at the desired flow rate.

said locating means including antifriction thrust bearing means effective between the outer end portion of the handle and the associated end portion of the shank when the handle is initially axially shifted and rotated relative to the shank for moving said rolling clutch members into position to be wedged between said cooperating converging surfaces upon continued rotation of the handle in the same direction.

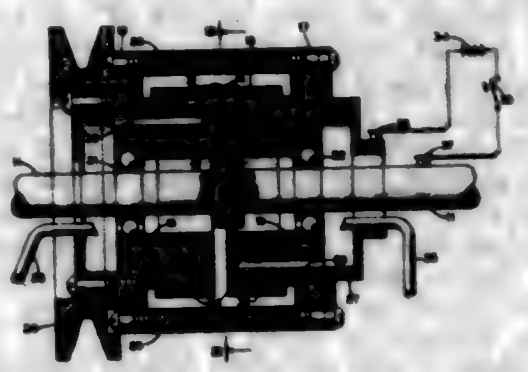
2,897,933
ELECTROMAGNETIC CLUTCH
Jean Maurice, Ablon, and Michel Rist, Paris, France, assignors to Societe Anonyme Francaise Du Ferodo, Paris, France, a corporation of France
Application November 16, 1954, Serial No. 469,261
Claims priority, application France November 17, 1953
5 Claims. (Cl. 192—84)



1. An electromagnetic clutch comprising a driving shaft, an electromagnet member secured to said driving shaft, an armature member disposed facing said electromagnet member, means for mechanically connecting said armature member rigid in rotation with said electromagnet member and axially movable with respect thereof, a coil in said electromagnet member for axially attracting when energized said armature member towards said electromagnet member, an inner plate secured to said electromagnet member, an outer plate secured to said armature member, said plates being axially spaced apart from said electromagnet members, a driven shaft, a friction disc rigid in rotation with said driven shaft and grasped between said plates when said coil is energized and said armature member is thereby attracted towards said electromagnet member, a collector ring secured to said outer plate, a stationary electrical brush applied against said collector ring, and a conductive element for electrically connecting said coil with said collector ring, said element comprising an elastic blade extending externally of said plates and armature member and having an arcuate section in an axial plane and spaced from said plates.

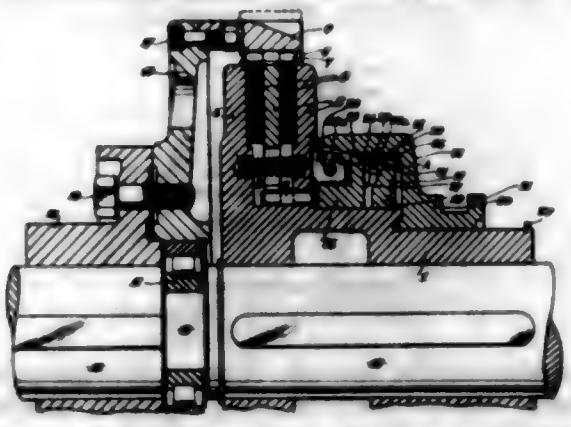
2,897,934
ELECTROADHESIVE CLUTCH
Clyde J. Fitch, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application August 15, 1956, Serial No. 604,133
9 Claims. (Cl. 192—84)

1. An electroadhesive device comprising a semicopductive member, a conductive member superimposed on said semiconductive member and having a surface shaped to present a plurality of spaced transverse areas of contact with said semiconductive member, said areas of contact isolated from one another by separations between said members, means for imparting relative sliding motion to said members in a direction substantially perpendicular



to said transverse areas of contact and means for applying an electrical potential difference between said members.

2,897,935
FRICTION CLUTCHES
Arthur Croft, Rawdon, Leeds, England, assignor to Crofts (Engineers) Limited, Bradford, England, a British company
Application April 29, 1957, Serial No. 655,582
1 Claim. (Cl. 192—93)



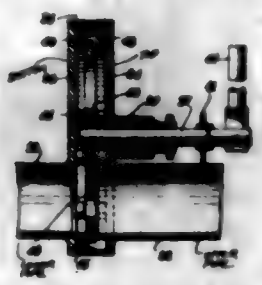
In a friction clutch connecting axially-aligned driving and driven shafts, a hub mounting secured to said driving shaft, said hub mounting having a first pressure plate clutch element rigidly connected thereto and a second pressure plate clutch element slidably mounted on said hub mounting for axial movement with respect thereto, said driven shaft having friction discs connected thereto and extending intermediate said first and second pressure plates, spring-loading means normally urging said pressure plates apart, and mechanical operating means for urging said second pressure plate toward said first pressure plate; the improvement wherein said mechanical operating means comprises a pair of annular members coaxially mounted on said hub mounting, a first one of said annular members being secured to said hub mounting and the second of said annular members being axially slidably movable on said hub mounting relative to said first annular member, said second annular member being intermediate and spaced from both said first annular member and said second pressure plate element, said annular members having an equal number of radially disposed and oppositely-arranged guide grooves formed in the opposing faces thereof, each of said grooves having throughout its length a curved cross-sectional configuration, the grooves of one of said annular members having bearing faces which are radially outwardly inclined with respect to the plane of the opposing face of the other of said annular members, a plurality of barrel-shaped rollers intermediate the oppositely-arranged grooves of said annular members, the longitudinal axes of said rollers being perpendicular to the axes of the associated grooves and said rollers having peripheral configurations identical

able in the path of the movable indexing means for limit-

from their confronting sides, said coin slot being disposed

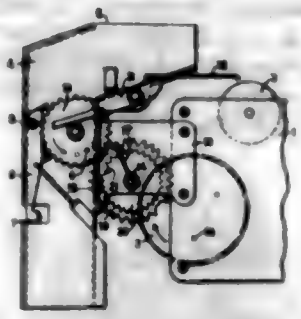
with the cross-sectional configurations of said grooves, each of said rollers having a longitudinal bore extending therethrough, a deformable annular retaining element extending through the bores of each of said rollers, said second annular member having a screw-threaded outer peripheral portion at that end thereof adjacent said second pressure plate, a split adjusting collar threadably connected to the threaded peripheral portion of said second annular member, said collar bearing against said second pressure plate element, and an operating collar slidably mounted on said hub mounting for axial movement with respect thereto, said collar surrounding said annular members and having an internal cam profile the section of smallest diameter of which is substantially cylindrical and arranged to urge the rollers radially inwardly in their grooves upon axial movement of said operating collar to displace the movable annular member away from the stationary annular member and thereby effect clutch engagement of the clutch pressure plate elements.

2,897,936
MOVING BED FLOW CONTROL VALVE
Robert R. Collins, Beaumont, Tex., assignor to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York
Application January 5, 1956, Serial No. 557,491
2 Claims. (Cl. 193—32)



1. A system for the flow of a compact gravitating stream of granular contact particles comprising in combination a first conduit, a second conduit and a valve connecting said conduits for controlling the flow between said conduits, said valve comprising a valve housing having a cylindrical wall and a circular flat top and bottom members connected to form a unitary structure, the valve housing being mounted with its axis at an angle greater than the angle of repose of all the material being transferred and not exceeding about 45 degrees with the horizontal, a rotatable shaft centrally located within said valve housing, with one end projected through the center of said housing, a circular disc plate centrally attached to the end of said rotatable shaft within said housing, bearing members within said housing adapted to prevent misalignment of said circular disc plate without impeding rotary motion thereof, a dust tight packing about the exterior of said rotatable shaft and attached to said housing, means attached to the exterior of said rotatable shaft for rotating the shaft, the said first conduit attached to the top of said housing at a location substantially displaced from the center thereof and at substantially the lowest elevation of said top, the portion of said second conduit attached to the bottom of said housing being in substantial alignment with the portion of said first conduit attached to the top of said housing and cooperating therewith for transfer of a compact gravitating column of solids from the first to the second conduit, the end of said portion of the first conduit and the end of said portion of the second conduit being spaced away from the surface of the disc plate so as to avoid physical contact between the conduit ends and the disc plate, said circular disc plate being provided with apertures near its outer edge located uniformly about the circular disc plate and graded in size, said apertures adapted to be brought separately into alignment with the first and second conduits, whereby the flow of granular contact particles through the conduits is controlled at the desired flow rate.

2,897,937
COIN MECHANISMS FOR SAVINGS CLOCKS AND SIMILAR SAVINGS AUTOMATONS
Frederik Vilhelm Larsen, Copenhagen, Denmark, assignor to Dansk Spare-Selskab, Copenhagen, Denmark
Application April 16, 1957, Serial No. 653,231
Claims priority, application Denmark November 15, 1956
1 Claim. (Cl. 194—19)



A control mechanism for savings clocks, comprising in combination a clockwork including a barrel wheel; a frame attached to the clockwork and having a coin receiving and discharging duct, a lever mounted on said frame and movable between a first position in which it extends into said coin duct to be actuated by a coin passing therethrough, and a second position in which it allows the passage of the coin through said duct, a rotary arresting wheel having teeth on its periphery to be engaged by said lever during its motion from said first to said second position for stepwise turning of said arresting wheel away from a stop position in which it prevents the normal operation of said clockwork, and a mechanism for transmitting impulses from said clockwork to said arresting wheel for turning the latter stepwise towards said stop position, said impulse transmitting mechanism comprising at least one pin mounted on the barrel wheel of said clockwork, a shaft journalled in said frame and carrying a toothed star wheel cooperating directly with said pin to be turned stepwise thereby during the rotation of said barrel wheel, an arm carried by said shaft and cooperating during the rotation of said star wheel with the teeth of said arresting wheel for turning it stepwise towards said stop position, a separate ratchet wheel secured to said shaft, and a resilient arresting pawl cooperating with said ratchet wheel, the teeth of which are regularly distributed along the ratchet wheel periphery except for a zone thereof with which said arresting pawl cooperates in the period of impulse transmission to said arresting wheel, said ratchet wheel at said zone being provided with an indentation having a width and depth greater than that of the notches of the regularly distributed teeth and the side walls of said indentation being so formed that an angular lead is imparted to said shaft by said arresting pawl during said period.

2,897,938
AUTOMATIC PARKING METERS
Robert W. Hamilton, Oklahoma City, Okla., assignor to Magee-Hale Park-O-Meter Company, Oklahoma City, Okla., a corporation of Delaware
Application May 24, 1956, Serial No. 587,114
4 Claims. (Cl. 194—72)

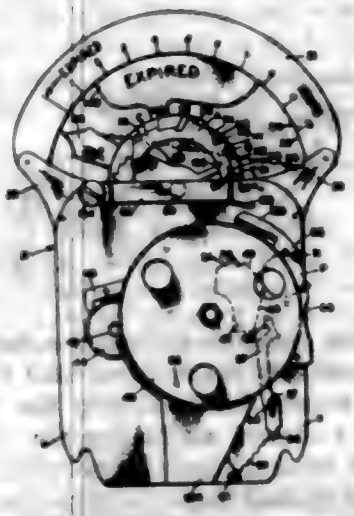
4. In a cumulative re-set mechanism for automatic power driven parking meters capable of receiving at least three coins of varying diameters and denomination and comprising an indicator disc releasable to move in one direction relative to a time scale, an indexing ring adapted to be locked with the indicator disc for simultaneous movement thereof in said direction, detent means mov-

said actuating cam when said pilot cam is engaged with

2,897,943
CARRIAGE RETURN CONTROL ARRANGEMENT

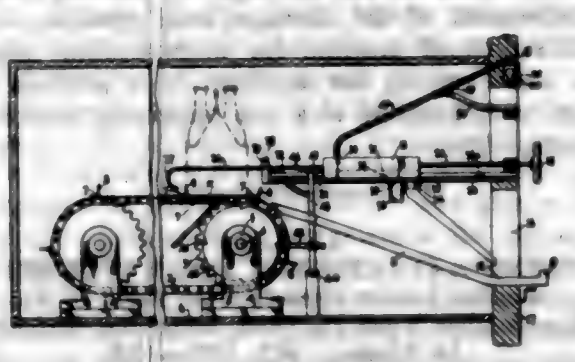
isolated from one another by separations between said and said rollers having peripheral configurations identical

able in the path of the movable indexing means for limiting the movement of the indexing means and its complementary indicator disc in said direction, a pivotal lever adapted for movement into the path of the detent means, a plurality of teeth of variable radius provided on the indexing ring wherein each tooth is complementary to a



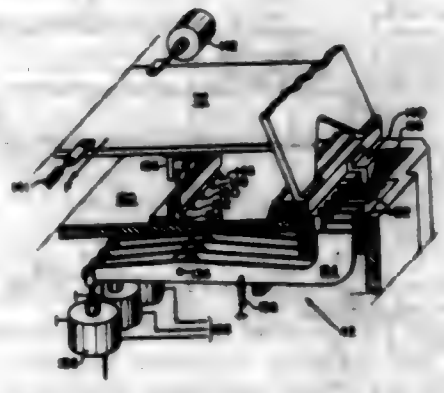
particular size coin, and selectively movable means responsive to insertion of a coin of the smallest diameter of the multiple coins for moving the pivotal lever into a position preventing engagement of the detent means with a portion of the teeth on the indexing ring yet providing for subsequent engagement of a particular tooth for the coin of smallest diameter.

2,897,939
VENDING MACHINE
Elston J. Mayhew, North Augusta, Ontario, Canada
Application January 23, 1956, Serial No. 560,645
4 Claims. (Cl. 194—79)



1. In a plural-coin vending machine having a compartmented article-holding conveyor which is movable in increments to vend one article at each vending operation, lugs adjacent each compartment, a conveyor advancing means to engage the lugs, a manual operating means, and means for mechanically coupling the conveyor advancing means with the manual operating means with a coin to provide a vending operation the improvement, comprising, in combination, a longitudinally extending guide having inner and outer ends and mounted adjacent said conveyor, a pair of blocks, each block having inner and outer ends, confronting and outer sides and top and bottom surfaces, said pair of blocks being side by side and slidably mounted for reciprocating longitudinal movement in said guide, a stop in said guide adjacent its inner end, a coin receipt compartment communicating with said guide through an aperture spaced outward from said stop, means for biasing said blocks toward said stop, a handle attached to the first of said pair of blocks, an advancing element attached to the second of said pair of blocks, said blocks having registering slot portions which together provide a coin slot, said coin slot transversely extending across a portion of each of said blocks from their confronting sides, said coin slot being disposed in a vertical direction having a mouth at the top surfaces of said pair of blocks and being closed at the bottom by said guide, said slot having a depth to hold at least two coins in edge to edge relation, one coin being on top of the other, said second of said pair of blocks having a recess in its confronting face, said recess extending upwardly from said guide and terminating at that portion of said coin slot in which said top coin adjoins the next adjacent coin, said recess being transversely coextensive with said portion of said coin slot, and said recess extending longitudinally from said coin slot outwardly to said aperture, whereby said top coin keys said pair of blocks together upon movement of said blocks toward registry of said coin slot with said aperture of said coin receipt compartment.

2,897,940
CARRIAGE SHIFTING DEVICE
Rene Higonnet, Cambridge, and Louis Moyroud, West Medford, Mass., assignors to Graphic Arts Research Foundation, Inc., Cambridge, Mass., a corporation of Delaware
Original application August 23, 1947, Serial No. 770,328, now Patent No. 2,790,362, dated April 30, 1957. Divided and this application March 7, 1957, Serial No. 644,643
Claims priority, application France March 20, 1947
11 Claims. (Cl. 197—12)

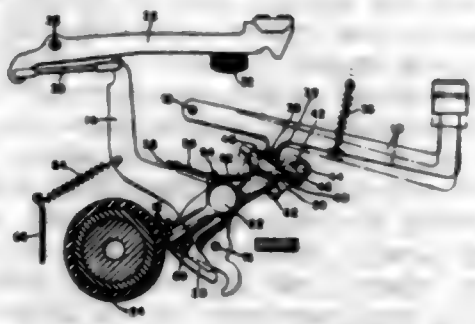


1. Apparatus for accurately indexing a movable carriage comprising, in combination, a stop member on the carriage, a number of accurately positioned interference members supported for selective interposition in front of said stop member, a circuit to actuate said interference members according to a selected position of the carriage, means continuously tending to urge the carriage in one direction, and means operative to move the carriage in the opposite direction if and only if the selected position is in said opposite direction from the previous position.

2,897,941
TYPE BAR TRIP MECHANISM
Ronald D. Dodge, Lexington, Ky., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application November 12, 1957, Serial No. 695,949
7 Claims. (Cl. 197—17)

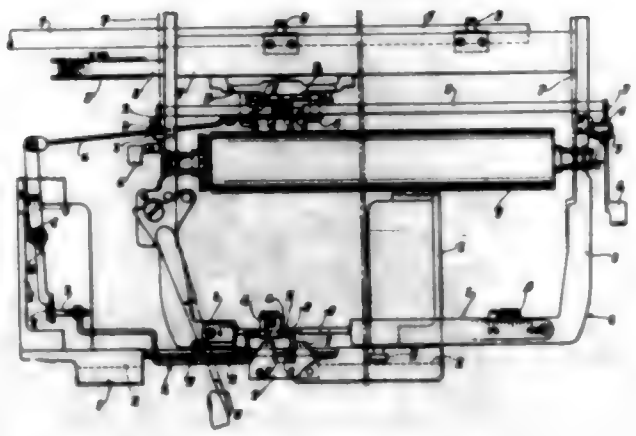
1. An improved type bar drive mechanism for a typewriter having a power driven roller comprising, a cam lever with an associated type bar, means mounting said cam lever and said type bar for movement from a rest position to a print position, a manipulatable key lever, and means responsive to manipulation of said key lever for initiating a type bar print stroke comprising, a pilot cam, an actuating cam, means pivotally supporting said cams on said cam lever for selective engagement with said power roller, means operable by said key lever for engaging said pilot cam with said power roller, and means operative to drivingly connect said pilot cam and

said actuating cam when said pilot cam is engaged with said power roller for moving said actuating cam into



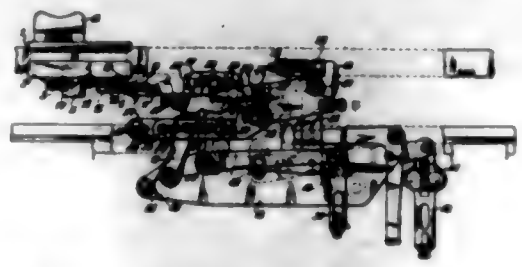
engagement with said power roller whereby said cam lever and said type bar are moved to said print position.

2,897,942
CARRIAGE OVERBANKING ELIMINATION
Lester E. Keene, deceased, late of Wellesley, Mass., by Thelma Keene, executrix, Wellesley, Mass., assignor to Underwood Corporation, New York, N.Y., a corporation of Delaware
Application February 18, 1957, Serial No. 640,889
2 Claims. (Cl. 197—63)



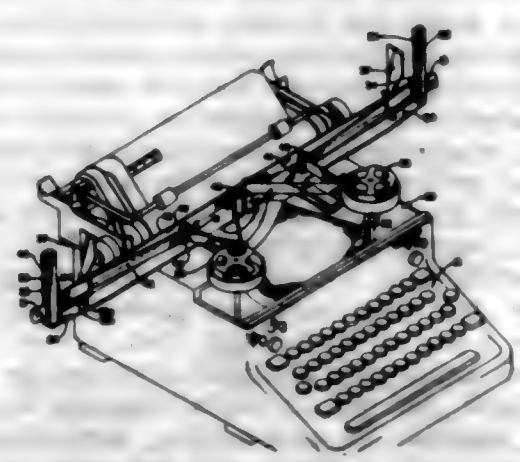
1. In a typewriting machine having a main frame, in combination, a carriage mounted on said frame to travel oppositely in a letter-feed and a return direction and being impositively urged in said letter-feed direction, letter-feed control means for said carriage comprising a member having teeth at regular intervals congruent with required letter-feed steps of the carriage, means connecting said carriage with said member to letter-feed in synchronism therewith and letter-feed escapement means, adjustable carriage-return limiting means for said carriage, said limiting means and said connecting means associated with carriage portions which are offset with respect to each other transversely of the direction of travel of the carriage, and means operated by the carriage late in its return approach to the position whereat said limiting means becomes effective, to engage the teeth of said member and thereby to bring said member to rest in a definite position related to the return limit afforded by said limiting means, said connecting means comprising a resilient provision allowing return overtravel of the carriage portion thereat independently of said member, the carriage being of light structure so that the portion thereof associated with said connecting means is subject momentarily to carriage-flexing overtravel at the conclusions of returns through the assertion of stored momentum thereof as the portion of the carriage which is associated with said limiting means becomes arrested.

2,897,943
CARRIAGE RETURN CONTROL ARRANGEMENT
Rudolf Neidhardt, Nurnberg, Germany, assignor to Triumph Werke Nurnberg Aktiengesellschaft, Nurnberg, Germany
Application September 21, 1955, Serial No. 535,590
Claims priority, application Germany September 22, 1954
25 Claims. (Cl. 197—66)



1. In a business machine including a stationary frame and a carriage movably mounted on said frame, in combination, drive means for returning the carriage in a return direction; a control mechanism for controlling and in activating said drive means and including an operating member mounted on said frame for movement between an inoperative position and a switch-off position, and connected to said drive means for inactivating the same when said operating member is in said switch-off position; a margin stop means adjustably mounted on the carriage and including first and second actuating members for consecutively shifting during return movement of the carriage said operating member from said inoperative to said switch-off position for disconnecting said drive means, said first actuating member shifting said operating member in a preliminary carriage position so that the carriage moves further due to inertia, and said second actuating member shifting said operating member in another carriage position corresponding to the normal beginning of a line and stopping the carriage; and a terminal stop fixed on the carriage for shifting during return movement of the carriage, said operating member to said switch-off position for disconnecting said drive means and stopping the carriage in a position of the carriage corresponding to a line beginning before a normal printed line.

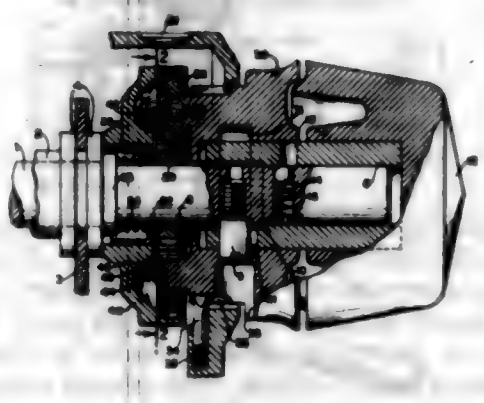
2,897,944
COPYING ATTACHMENT FOR TYPEWRITERS
Beulah Louise Henry, New York, N.Y.
Application April 25, 1958, Serial No. 731,039
16 Claims. (Cl. 197—153)



1. An attachment for a typewriter having a frame, a platen carriage mounted for reciprocatory movement with respect to the frame, and an inked ribbon adapted to cooperate with type bars to cause imprints on paper about the platen and fed from a payoff spool to a takeup spool, said attachment comprising, means for guiding at least one auxiliary ribbon to a position between the regular inked ribbon and the platen in vertical alignment with

the regular ribbon, a portion of said auxiliary ribbon extending along the entire axial length of the platen in all positions thereof, and means for maintaining said ribbon portion under tension, said tensioning means comprising vertically extending bifurcated members located adjacent the platen at opposite sides of said ribbon portion, each said bifurcated member having one arm offset from the other providing a sharp bend in said ribbon about said bifurcations to place a frictional drag on the said portion of said auxiliary ribbon.

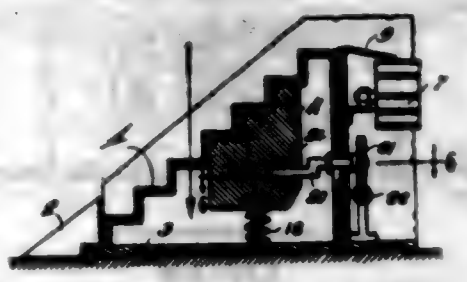
2,897,945
LINE INDICATOR
Vincent J. Gilmore, Wappingers Falls, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application July 9, 1956, Serial No. 596,541
6 Claims. (Cl. 197—189)



1. A device for indicating the position of a paper sheet relative to the line of typing on the platen of a typewriter comprising, in combination, a shaft supporting said platen and having a portion extending from one end thereof, a sleeve shaped member slidably mounted on the extending portion of said shaft, means connecting said sleeve shaped member for rotation with said shaft but permitting limited movement axially of the latter, a driving gear freely mounted on said sleeve shaped member, clutch means for connecting said driving gear in driven relation with said sleeve shaped member, said clutch means being engaged by axial movement of said sleeve in one direction and disengaged by movement in the opposite direction, a spring urging said sleeve in a direction to engage said clutch means, a ring gear rotatably supported on said shaft portion, a cylindrical member rotatably supported on said shaft portion, detent means normally holding said cylindrical member against rotation, a gear rotatably supported by said cylindrical member and meshing with said driving gear and said ring gear, a projection on said cylindrical member, a lug on said ring gear engageable with said projection, a spring connected at its ends to said ring gear and said cylindrical member and tending to rotate them in opposite directions, a stationary frame portion adjacent to said ring gear and having an index line thereon, an indicator scale on said ring gear cooperating with said index line to provide a visual indication of the angular position of said gear, and means including a knob for moving said sleeve axially to disengage said clutch means and for rotating said platen shaft.

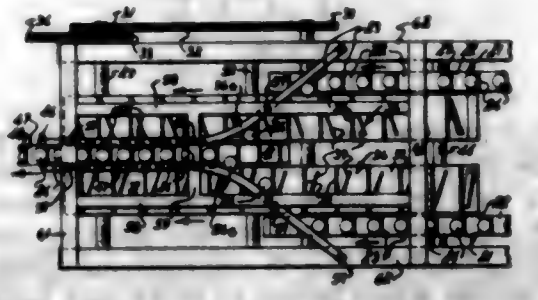
2,897,946
LOADER-BAR, CONTROL TUBE, AND COAL LOADING MACHINE
Myron T. Coffman, Ellamore, W. Va.
Application August 13, 1954, Serial No. 449,753
3 Claims. (Cl. 198—10)

3. A coal loader comprising a movable base, a longitudinally extending loader-bar mounted on said base, said loader-bar having a multiplicity of longitudinally extending steps therein, means for biasing said bar to move to a vertically upward position, and means for moving said bar downwardly intermediate the vertically upward movement thereof in which said means for moving said bar downwardly includes a counterweight beneath said bar



and driving means extending through said counterweight for imparting movement thereto in a substantially vertical direction, said counterweight including steps in the upper surface thereof which are contiguous with at least two of the steps in said loader-bar.

2,897,947
CURVED GUIDE RAIL FOR CONTAINER CONVEYOR TRANSFER
Robert F. Krupp and Jan K. Wagner, Oakland, Calif., assignors to Gerber Products Company, Fremont, Mich., a corporation of Michigan
Application December 3, 1956, Serial No. 625,672
3 Claims. (Cl. 198—28)



1. A conveyor system for containers comprising a first conveyor, a second conveyor adjacent and substantially parallel to said first conveyor, means for advancing said conveyors, and a guide rail elevated above the surface of said conveyors to shift containers handled by said system from said first conveyor to said second conveyor, said guide rail having a straight stretch adjacent the edge of said first conveyor opposite said second conveyor and a curved stretch intermediate said straight stretch and the edge of said second conveyor nearest said first conveyor, said curved stretch comprising a circular arc having a minimum radius expressed by the formula

$$R_c = \frac{[1+(\tan \alpha)^2]^{3/2} V^2}{386\,\mu} - r$$

wherein R_c is said minimum radius, α is the angle between said straight stretch and said conveyors, r is the radius in inches of the containers handled, V is the velocity of said first conveyor in inches per second, and μ is the coefficient of friction between said container and said first conveyor.

2,897,948
ELEVATING TURNTABLE FOR CONVEYORS
Albert E. Cranston, Jr., Oak Grove, Oreg.
Application August 20, 1957, Serial No. 679,285
13 Claims. (Cl. 198—33)

1. A turntable machine comprising roller conveyor means for moving a load onto and off said machine, drive means for said conveyor means, a vertically movable rotatable platform located along and below said conveyor means, said platform having a raised position above the top of said conveyor for turning a load which it has lifted off said conveyor, and control means arranged to

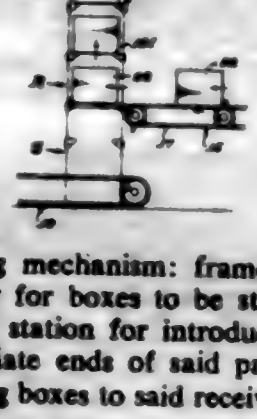
ing successive sheets in a generally horizontal path to a

semblies for supporting the troughed belt, at least part

render said conveyor drive means inoperative during the lifting and turning of said platform and to render said

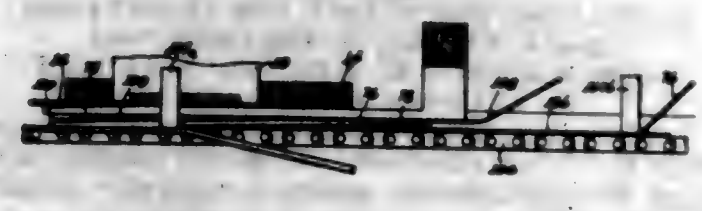
drive means operative in response to the lowering of said platform.

2,897,949
BOX-STACKING MECHANISM
Joseph C. Huinking, Pomona, Calif., assignor to Pomona Foundry, Inc., Pomona, Calif., a corporation of California
Application May 12, 1954, Serial No. 429,256
24 Claims. (Cl. 198—35)



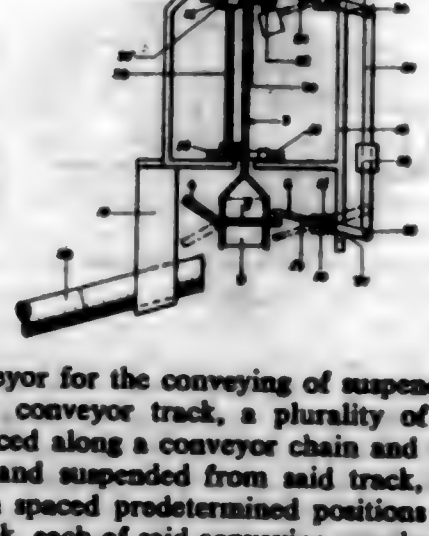
1. In a stacking mechanism: frame means providing a vertical pathway for boxes to be stacked; means providing a receiving station for introducing boxes to said pathway intermediate ends of said pathway; means for successively feeding boxes to said receiving station; means carried by the frame means to move said boxes as received in spaced relation along said pathway in one direction away from said receiving station to accumulate a selected number of boxes to be stacked; a stack discharge opening provided by said frame means; a stack discharge conveyor means extending through said opening across said pathway; means for reversing direction of movement of said boxes carried by said moving means to move said boxes toward said discharge conveyor means whereby a first box is deposited on said discharge conveyor means and the remainder of said boxes are stacked one upon the other to form a stack; and means operative after said stack is formed to actuate said discharge conveyor means to move said stack through said stack discharge opening.

2,897,950
MACHINE FOR ASSEMBLING STORAGE BATTERY PLATES AND SEPARATORS
Leland G. Reed, Van Nuys, Calif., assignor to L. G. Reed Corporation, Van Nuys, Calif., a corporation of California
Application September 7, 1956, Serial No. 608,615
3 Claims. (Cl. 198—35)



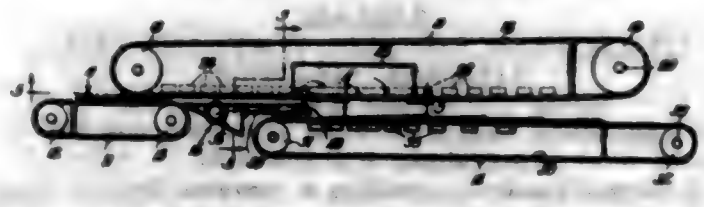
1. In a battery plate assembling machine, the combination of a gathering conveyor, a support arranged over the conveyor, means for depositing a battery plate on the support, means for depositing a separator in partial overlapping relation to the battery plate, pickup pins on the conveyor arranged to engage the plate as the conveyor moves and move the plate from a support beneath the separator and onto the conveyor, and means for retarding movement of the separator in the direction of movement of the conveyor until the separator is engaged by the pickup pins.

2,897,951
CONVEYORS
Henry C. Jonson, Kungsbacka, Sweden, assignor to Aktiebolaget Valida Maskiner, Kungsbacka, Sweden, a corporation of Sweden
Application November 27, 1956, Serial No. 624,527
2 Claims. (Cl. 198—38)



1. A conveyor for the conveying of suspended articles comprising a conveyor track, a plurality of conveying members spaced along a conveyor chain and movable in series along and suspended from said track, a plurality of stations in spaced predetermined positions along said conveyor track, each of said conveying members having a plurality of carrying elements upon any one of which an article may be suspended to be carried by said conveying member as the latter moves along said track, each of said carrying elements in each of said conveying members comprising a spindle rotatably mounted in said conveying member and having a finger projecting obliquely to the axis of rotation thereof, each of said spindles being rotatable independently of the others of said spindles from a first position in which said finger will extend obliquely upwards to retain an article suspended thereon to a second position in which said finger will extend obliquely downwards whereby an article carried thereby will be released for discharge from said finger under the influence of gravity, and means in at least certain of said stations for rotating solely one of said spindles from said first position to said second position whereby to discharge in said station any article which may be suspended by said one finger.

2,897,952
METAL SHEET HANDLING APPARATUS
Dario Buccicone, Gary, Ind., assignor to Buccicone Engineering Company, Inc., Gary, Ind., a corporation of Indiana
Application June 18, 1957, Serial No. 666,385
18 Claims. (Cl. 198—41)



1. A method of handling sheets of magnetic material in a continuous processing line, which comprises deliver-

also having a blunt end for being engaged by the leading end of the workpiece upon completion of a drum and the mutually entangled long resilient filaments, each having

ing steps therein, means for biasing said bar to move to

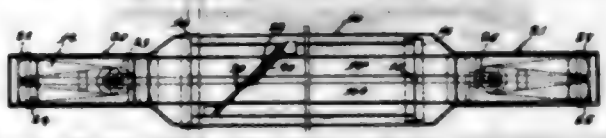
lifted off said conveyor, and control means arranged to

ing successive sheets in a generally horizontal path to a horizontally disposed overhead magnetic conveyor, delivering a stream of air upwardly across the path of movement of the sheets and deflecting the stream of air downwardly against the top surface of each successive sheet as the trailing end of the sheet passes the stream of air and reaches a position in advance thereof for depositing the same on a surface beneath the magnetic conveyor whereby to force the sheet downwardly for release by the magnetic conveyor.

2,897,953
CONVEYORS
Laszlo Namenyi-Katz, London, England, assignor to Epsylon Research and Development Company Limited, Feltham, Middlesex, England
Application September 27, 1957, Serial No. 686,758
Claims priority, application Great Britain September 28, 1956
5 Claims. (Cl. 198—127)

1. A conveyor comprising a plurality of substantially parallel shafts, a plurality of hollow conveyor elements mounted on each of said shafts for independent rotation about said shaft, said conveyor elements being mounted on said shaft in close contact end to end so that their interior form a tubular duct, internal vanes in said hollow conveyor elements, means for supplying pressurised gas to one end of at least some of said tubular ducts whereby a stream of gas may be passed through said duct to act on said vanes to tend to rotate the conveying elements on their respective shafts, thus propelling articles in contact with the outsides of said conveying elements.

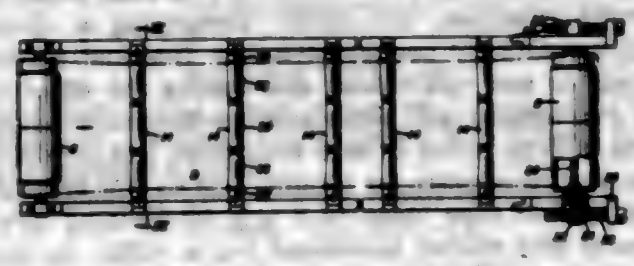
2,897,954
STRAIGHT LINE TAPE-TYPE POULTRY FEEDER
Nat Cordis, Silver Lake, Wis.
Application December 7, 1953, Serial No. 396,699
5 Claims. (Cl. 198—181)



1. A stock feeder comprising an undivided trough means to which a feed supply is charged, an endless flat tape within said trough means, opposed flights of said tape being juxtaposed along the bottom thereof, an idler turn-around at one end of said trough means and a drive turn-around at the other end of said trough means, each said turn-around including a housing arranged in alignment with an end of the trough, a first tape guide means in alignment with a first portion of said trough bottom, a second tape guide means in alignment with a second portion of said trough bottom, and roller means comprising a system of more than two and less than six rollers all having their axis parallel to each other axis and to the direction of travel of the tape along said trough between said first and second tape guide means.

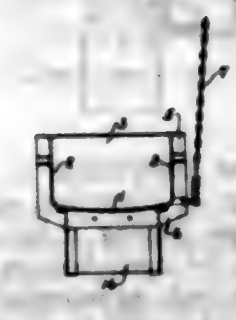
2,897,955
TROUGHED BELT CONVEYOR
Harry C. Morrow, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Application May 13, 1957, Serial No. 658,725
4 Claims. (Cl. 198—202)

1. A troughed belt conveyor comprising a pair of end rolls for supporting said belt and a plurality of roll assemblies for supporting the troughed belt, at least part of said roll assemblies including a center roll having its axis substantially parallel to the axis of the end rolls, a roll on each side of said center roll having its axis



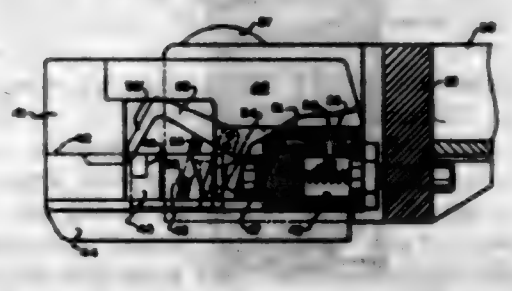
extending upwardly from said center roll toward the direction of approach of said belt, and a roll at the outer end of each of said last named rolls having its axis extending upwardly therefrom away from the direction of approach of said belt.

2,897,956
VIBRATING CHUTES
Emile Dumond, Paris, France
Application March 31, 1955, Serial No. 498,413
2 Claims. (Cl. 198—220)



1. A material handling apparatus of the vibratory chute type that comprises a trough-like chute open at the rear end to receive a mass of loosely held particles of material, means for vibrating the chute in directions to move the material forwardly through the chute, for discharge thereof at the forward end of the chute, horizontally disposed partitions located in relatively-spaced relation in the chute adjacent and extending from the discharge end thereof rearwardly for a distance less than the length of chute and in a position where their rear edges will be engaged by the mass of material and divide it into multiple vertically-spaced layers for advancement from the rear end to the front end of the chute.

2,897,957
EJECTOR FOR GRIPPER JAWS
Ralph R. Turner, Warwick Neck, R.I., assignor to Lombard Corporation, Youngstown, Ohio, a corporation of Ohio
Application May 17, 1954, Serial No. 430,122
4 Claims. (Cl. 285—24)



1. In a draw carriage having a grip block mounting a pair of divergently related and movable grip bits, a slide block mounted in said carriage for movement along an axis generally coincident with the central axis of said pair of grip bits, said slide block being connected to said pair of grip bits for opening and closing the same and

2,897,962

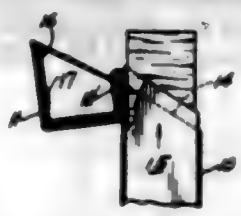
being confined on the body by said border, the spacing

the conveyor, means for depositing a battery plate on

in a continuous processing line, which comprises deliver-

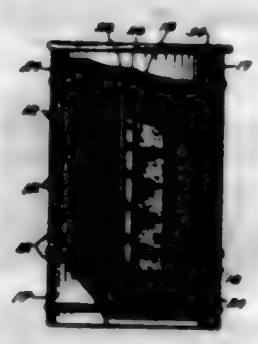
also having a blunt end for being engaged by the leading end of the workpiece upon completion of a draw and the consequent opening of said grip bits, power means to move said slide block in a grip bit closing direction, means to cushion the movement of said slide block in the opposite direction, an ejector comprising a U-shaped member pivotally connected at the free end of one of its legs to said slide block and having the other of its legs overhanging said blunt end but normally spaced out of the path of travel of said workpiece, and a fixed abutment on said carriage for rotating said ejector upon movement of said slide block in a grip bit opening direction to cause said second mentioned leg to strike the leading end portion of said workpiece to deflect the same outwardly of the blunt end of said slide block.

2,897,958
CIGARETTE CASE
Howard A. Tarleton, Rye, N.Y., and Edward H. Rothrock, Honesdale, Pa., assignors to Black, Starr & Gorham, a corporation of Delaware
Application April 4, 1957, Serial No. 650,593
2 Claims. (Cl. 206—41)



1. A cigarette case comprising a rectangular tube for receiving a package of cigarettes, said package being of the cardboard type, having a lid openable at one end, said case having an open bottom at one end and a lid at the opposite end, substantially conforming to the shape of the lid on the package of cigarettes, whereby the package of cigarettes may be inserted into the case from the bottom, the plane of the opening of the case being substantially identical with the plane of the opening of the package of cigarettes placed therein, and means in the lid of the cigarette case for grasping the lid of the package, whereby the opening and the closing of the lid of the case will open and close the package, and whereby on the opening of the lid the entire package is automatically raised out of the metal case a small amount and in addition in this position the entire package may be pushed out of the case from the bottom.

2,897,959
SHOCK ABSORPTIVE PACKAGING
John L. Gretz, Milford, Conn., assignor, by mesne assignments, to The B. F. Goodrich Company, Akron, Ohio, a corporation of New York
Application September 27, 1952, Serial No. 311,871
7 Claims. (Cl. 206—46)



1. In shock absorptive packaging, a cushioning pad comprising a coiled strip of open filamentary material wound upon itself about an axis to form a roll, said material incorporating a spaciously intersticed network of mutually entangled long resilient filaments, each having a thin all-over coating of a vulcanized dispersion of elastomer bonding said filaments together only at spots of mutual contact or close proximity in such relationship that a preponderance of said filaments have their lengths oriented in directions paralleling said axis of the roll, and said coiled strip being wound upon itself with sufficient tightness to compress the inner coils of the said roll thereby to cause the said spot bonded filaments to bow individually in the said interstices of the said network of the said material.

2,897,960
PRESSURE-SENSITIVE ADHESIVE TAPE
Harold J. Revoir, St. Paul, Minn., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware
No Drawing. Application April 11, 1958
Serial No. 727,768
4 Claims. (Cl. 206—59)

1. Pressure-sensitive adhesive tape capable of being wound in roll form and unwound therefrom in normal use, and of being pressed into adhesive-to-adhesive contact and separated therefrom, without offsetting of the adhesive layer, said tape consisting essentially of a thin flexible deformation-resistant polyvinyl chloride film backing and a coating of pressure-sensitive adhesive firmly adherently bonded thereto by an intervening thin continuous adhesive primer layer comprising (*a*) about 25–70 parts by weight of a rubbery terpolymer of about 5–20 percent of acrylonitrile with correspondingly 95–80 percent of butadiene and styrene in the approximate weight ratio of 1:1 to 8:1, and (*b*) correspondingly 75–30 parts of a rubbery copolymer of butadiene and styrene.

2,897,961
ADHESIVE BANDAGE
Frederick J. Bush, Rahway, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Application May 2, 1956, Serial No. 582,172
11 Claims. (Cl. 206—63.2)

6. An adhesive bandage package unit comprising an adhesive bandage including an adhesive tape presenting an adhesive surface, an imperforate wrapper sheet of flexible material facing the adhesive side of the tape and serving as the sole enwrapment on the adhesive side of the tape except for a section of said tape at one end, said wrapper sheet also serving as a facing member for said adhesive surface and extending along substantially the full length of said tape, said wrapper sheet having an end portion near said end of the adhesive tape extending in freeable position to serve as a first finger tab by which said wrapper sheet may be peeled off said surface in the process of withdrawing the adhesive bandage from its enwrapment, and an insert of flexible sheet material located between the wrapper sheet and the tape near said end of the tape so as to be substantially covered by said wrapper sheet and having a section attached to the adhesive surface of the tape near said end, said insert terminating at its ends near said end of the tape and having an outer fold between said insert section and said wrapper sheet hinged about a fold line for opening action towards the other end of said tape, said outer fold being free from attachment to said end portion of the wrapper sheet but being overlapped by said end portion of the wrapper sheet.

2,897,965

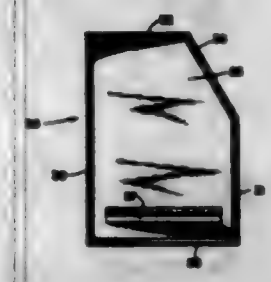
secting the bolt opening, the bolt having a passage through

rolls for supporting said belt and a plurality of roll as- pair of grip bits for opening and closing the same and

2,897,962
STERILE PACKAGING
Eli A. Zeckhelm, South Plainfield, N.J., assignor to Johnson & Johnson, a corporation of New Jersey
Application March 16, 1956, Serial No. 571,913
17 Claims. (Cl. 206—63.5)

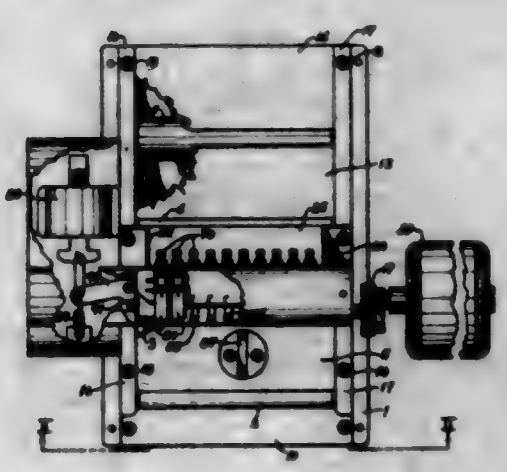
1. A package comprising a board having an aligned series of spaced apart apertures, front and back cover layers secured to the faces of the board and enclosing the apertures to form article holding pockets, the board having a line of perforations adjacent one edge of the package and being divided along its said edge into sections respectively opposite the apertures, whereby a section of the edge of the package can be broken by bending forward along the said line of perforations, hinging on the front layer, and used for peeling off the front layer over the corresponding aperture.

2,897,963
FLOOR AND CAR MAT
Whitman Byers, Jr., Washington, D.C.
Application October 2, 1956, Serial No. 613,581
1 Claim. (Cl. 206—72)



As a new article of manufacture, a car and floor mat made of substantially rigid plastic material comprising a substantially flat body, said body being of a substantially uniform thickness throughout its area, said body being substantially rectangular in shape, and having one corner cut away to conform to the interior configuration of a car floor, a raised border integral with said body and extending entirely about said body, said border being tapered and of less thickness than the thickness of said body, and an integral upstanding rib, slightly less in height than the height of said border, and of substantially greater thickness than the thickness of said border or of body, said rib extending parallel to but slightly spaced from an adjacent side border of said body and greatly spaced from the border opposite said adjacent border, the distance from said rib to said border opposite said adjacent border being of a length to provide a flat space sufficient to contain an average size shoe, the ends of said rib being slightly spaced from the adjacent borders of said body, said rib having a bevelled upper edge on the side toward said opposite border, whereby an article of footwear may be supported with the heel portion thereof supported on said rib and the sole portion thereof supported on said body within said border to thereby drain any moisture from the footwear, the drainage being confined on the body by said border, the spacing of the ends of the rib from the side borders permitting free flow of drained fluid to the adjacent edge of the body regardless of the angle of inclination of the car.

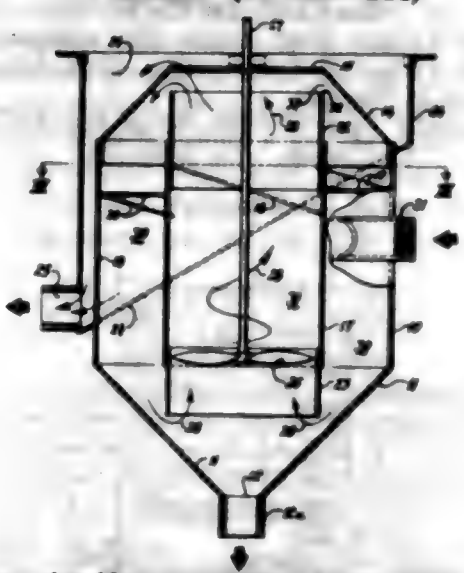
2,897,964
GAGING DEVICE
Harry Clark Foster, East Alton, Ill., assignor to Olin Mathieson Chemical Corporation, East Alton, Ill., a corporation of Virginia
Application April 9, 1958, Serial No. 727,420
13 Claims. (Cl. 209—71)



1. In combination, a receptacle member for carrying in accurate disposition with reference to one side of said member at least one array of articles accessible from at least the opposite side of said member, and a probing device for said articles comprising a frame, including a conveyor chute, said member being adapted for passage through said chute, said frame having mounted thereon on one side of said chute gage anvil means engageable with respect to said one side of said member as it passes with said array along said chute, a battery of gage feeler means mounted on said frame on the other side of said chute opposite said anvil means in spaced movable relationship with respect to said anvil means and engageable on said accessible side with respect to said articles for detecting departure of said articles from a predetermined minimum dimension, means for indicating the presence of a defective article upon its detection by said feeler means, forward stop means on said frame engageable with cooperating means on said receptacle member for preventing substantial passage of said array including a defective article beyond said battery of feeler means while permitting retraction of said receptacle member, motivator means for rendering said stop means inoperative, gage control means responsive to said feeler means for energizing said motivating means and said indicator means in alternation, rearward stop means normally engageable with mating means on said receptacle member for allowing unhindered passage of said receptacle member and only limited retraction sufficient to the extent necessary to withdraw said member and to uncover said array of articles, whereby upon detection of a defective article said control means automatically energizes said indicator means and causes said forward stop means to simultaneously prevent further passage of said receptacle member while said rearward stop means renders said receptacle member capable of being retracted sufficiently to permit removal of said defective article and replacement of it with an acceptable one as a condition precedent to disengagement of said forward stop means from said receptacle member and further progress of the receptacle member to completion of said passage.

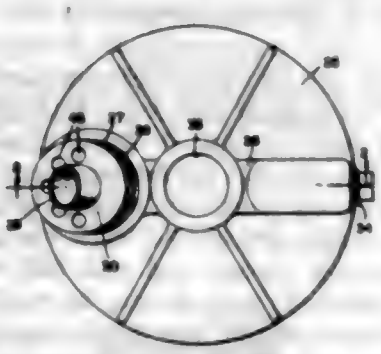
tion of said channel constituting a Venturi tube having a top and an apex portion with a closed pointed end; said

2,897,965
CONTINUOUS VORTICAL CLASSIFIER
Norris Goodwin, San Francisco, Calif., assignor to Norris Goodwin and G. G. Sanders, San Francisco, Calif., jointly as trustees, and doing business as Goodwin Classifier Company
Application September 8, 1953, Serial No. 378,707
3 Claims. (Cl. 209—211)



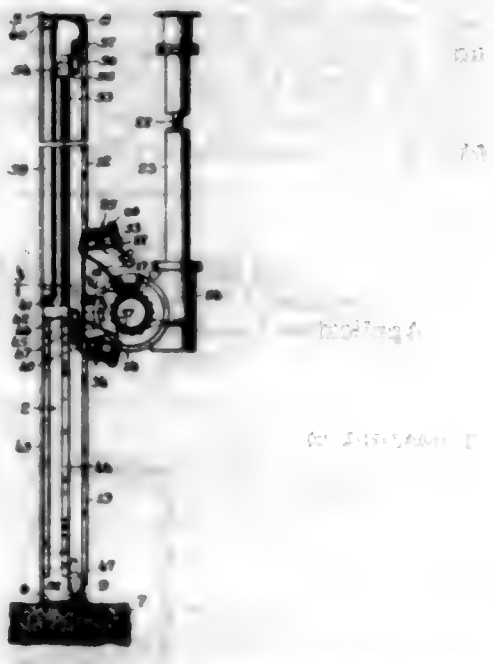
1. A wet classifier comprising in combination a cylindrical shell having a conical bottom and a top each tapering axially to a reduced diameter, a central underflow outlet in said bottom and a central overflow outlet in said top over the lip thereof, a cylindrical sleeve member of substantially the same diameter as said top outlet interior of said shell concentric therewith and projecting into said conical bottom and top but spaced axially therefrom, providing an annular chamber and an inner chamber, solid lateral spacer members in said annular chamber adjacent the top thereof securing said sleeve to said shell, an axial flow impeller mounted adjacent the lower end of said sleeve for rotation in a plane perpendicular to the wall of said sleeve and a feed inlet through said shell to said annular chamber below said spacer members.

2,897,966
FILTER UNIT
Kingsley E. Humbert, Jr., Gastonia, N.C., assignor to Wix Corporation, Gastonia, N.C., a corporation of North Carolina
Application May 24, 1955, Serial No. 510,678
15 Claims. (Cl. 210—168)



1. Means for mounting an oil filter on an automotive engine body having in association with a lubrication system a wall provided with a recess into which outflowing lubricating oil is received from the system and a hollow stud in and projecting from the bottom of the recess by which oil returns to the system; said mounting means comprising a substantially flat plate having a top side and an under face and being of a size to cover said recess and having a bolt opening therethrough for alignment with said hollow stud, a bolt for extension through said bolt opening into the hollow stud, the plate having an oil return bore extending therethrough substantially parallel with the plane of the said under face thereof and intersecting the bolt opening, the bolt having a passage through the inner end portion only thereof and connecting the bore with the hollow stud, a body having an end joined to an edge portion of the plate and having means by which there may be coupled therewith a filter unit having an inlet and an outlet, a conduit extending through said body and having an end opening through the said under face of the plate for receiving oil from the recess, said conduit opening at its other end through the other end of the body to discharge into the inlet of an attached filter, said oil return bore having an intake end opening through the body at a location to receive oil from the outlet of an attached filter, and a pressure opened valve means for admitting oil into said oil return bore from the recess over which the plate is secured when in use.

2,897,967
DOUBLE RAKE COMMINUTING DEVICE
Robert M. Arthur, Fond du Lac, Wis., assignor to Chicago Pump Company, a corporation of Delaware
Application September 9, 1955, Serial No. 533,362
7 Claims. (Cl. 210—173)



1. A comminuting device comprising a pair of screens interposed transversely in a sewage stream with the upper edge of one screen spaced from the lower edge of the other, a cutting cylinder and comb positioned in said stream between said screens, a rake mounted on each of said screens, and means to move said rakes alternately toward the edges of their respective screens adjacent said cutting cylinder, to thereby move sewage solids intercepted by each screen to said cutting cylinder at staggered intervals.

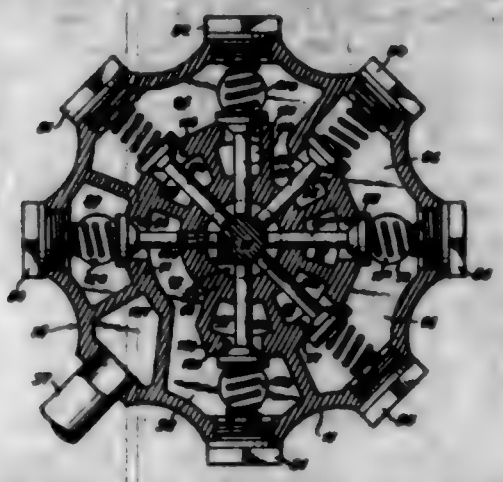
2,897,968
VALVE FOR WATER-SOFTENERS
Arnold Nergaard, St. Charles, Ill., assignor to Clayton Mark & Company, Evanston, Ill., a corporation of Delaware
Application December 13, 1952, Serial No. 325,792
22 Claims. (Cl. 210—278)

1. A valve unit for a water softening system comprising a valve casing having a plurality of water chambers therein, a single rotary cam shaft in said casing and, a plurality of internal axially movable spring-pressed valve members for opening and closing ports within the casing between said water chambers, a plurality of cams on said cam shaft arranged to actuate said internal valve members, said casing having a channel therein between two ports controlled by said internal valve members, a per-

tangentially to the wall thereof, a first outlet disposed adjacent said one end, a hollow member formed of

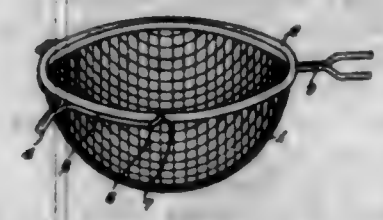
2,897,975
DISPLAY FIXTURE HAVING IMPROVED ART

tion of said channel constituting a Venturi tube having a constricted orifice communicating with a brine delivering



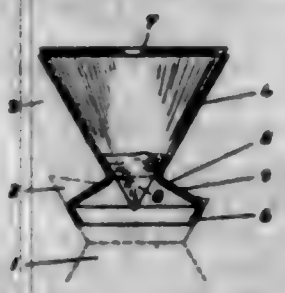
passageway, whereby flow of water in said channel draws brine into said channel and therein dilutes the brine.

2,897,969
STRAINER CONSTRUCTIONS
Paul Ernst Bader, Esslingen (Neckar), Mettingen, Germany, assignor to Elco Products Company, Chicago, Ill., a corporation of Illinois
Application August 26, 1957, Serial No. 680,361
6 Claims. (Cl. 210—471)



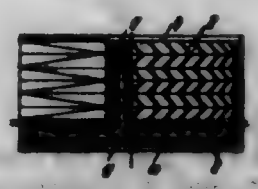
1. In a strainer, a bowl shaped strainer body, a band at the rim of the strainer, a wire bail connected to said band for swinging movement between upward and downward positions and engageable with the underside of the band when in upward position, a pair of ears formed integrally with said bail and extending outwardly from said bowl, said ears when in downward position being simultaneously engageable with a supporting surface below the underside of the bowl to limit tilting of the strainer body about an axis at right angles to the axis of swinging movement of the bail while said latter axis is in horizontal position.

2,897,970
FILTRATION EQUIPMENT, ESPECIALLY FOR MAKING COFFEE
Peter Schlumbohm, New York, N.Y.
Application March 8, 1957, Serial No. 644,818
3 Claims. (Cl. 210—474)



1. Filtration accessory for coffee carafes with a conically flared pouring mouth, characterized by a truncated, hollow conical funnel having an upper open wide end and a lower open narrow end and sidewalls walling the space between the two openings; a disposable conical paper filter having an upper portion with an open top and an apex portion with a closed pointed end; said upper portion being disposed in the funnel and supported by its side walls, said closed pointed end extending out of the narrow open end of the funnel into a walled space having an open bottom and upper and lower side walls which are integral with the side walls of the funnel; the lower side walls being conically shaped, their diameter narrowing towards the open bottom and corresponding to the conically flared pouring mouth of the carafe, whereby the filtration accessory during filtration can be supported by the pouring mouth engaging said lower side walls, with the mechanically vulnerable pointed filter end being shielded and being held above the liquid-capacity lever of the carafe.

2,897,971
FILTERING CARTRIDGE FOR LIQUIDS AND GASES
Lucien Victor Gewiss, Ville d'Avray, France
Application November 12, 1954, Serial No. 468,499
Claims priority, application France November 28, 1953
2 Claims. (Cl. 210—493)



1. A filtering cartridge of generally cylindrical shape having an empty axial space of cylindrical shape, comprising a continuous sheet of filtering material formed with equal pleats arranged in tiers substantially parallel to the geometrical axis of the cartridge, said tiers of pleats extending throughout the height of the cartridge and being arranged radially from the empty axial space to the outer periphery of the cartridge with the pleats of the adjacent tiers engaging one with another.

2,897,972
SEPARATOR
Madison M. Cannon, Wellesley, Mass., assignor to Bird Machine Company, South Walpole, Mass., a corporation of Massachusetts
Application March 28, 1956, Serial No. 574,594
3 Claims. (Cl. 210—512)

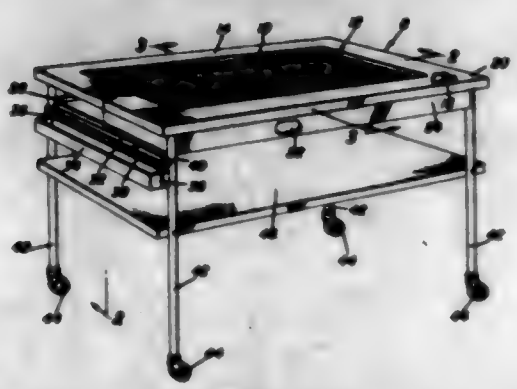
1. Apparatus for separating solid particles in liquid suspensions comprising an elongated chamber of circular cross-sectional configuration, means for introducing a stream of the suspension into one end of said chamber,

named common plane, said end frames further including

the chambers defined by said panels and to in part collapse

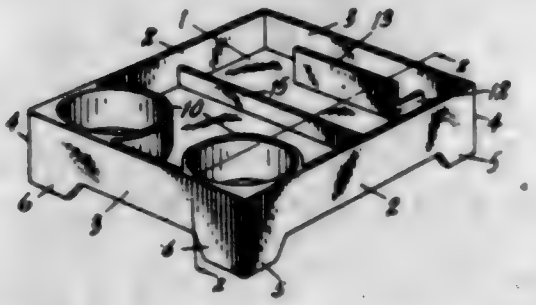
tangentially to the wall thereof, a first outlet disposed adjacent said one end, a hollow member formed of rubber-like elastic material secured solely at one end to the other end of said chamber to provide a second outlet for said chamber through the other end of said member, said member being exposed to be freely distorted in any direction to clear said second outlet of accumulated solid material tending to obstruct the same.

2,897,973
DISH AND UTENSIL DRIER
Ethel M. Sizemore, Sturgeon, Ky.
Application April 8, 1957, Serial No. 651,462
4 Claims. (Cl. 211—41)



1. A drying table for sterilized domestic utensils such as dishes, silverware and the like comprising a horizontal table top embodying an article supporting screen marginally surrounded by a cooperating rigid horizontal frame, vertical roller-equipped legs attached to corner portions of said frame, vertical rail members supported between the legs in a plane below the bottom side of said frame and defining a depending skirt, said skirt being open at one end just beneath the corresponding end of said frame, an inclined drip-collecting-gravity-draining pan supported beneath said screen and frame and within the confines of and hidden by said skirt, the lower end of said pan being open and having a downwardly bent drainage deflecting lip, and a trough removably supported from adjacent legs and in communicative alignment with the open end of said pan.

2,897,974
SERVICE TRAY ADAPTED FOR USE IN AUTOMOBILES AND IN OTHER RELATIONS
Maurice E. Cook, Kalamazoo, Mich.
Application April 16, 1956, Serial No. 578,569
1 Claim. (Cl. 211—74)

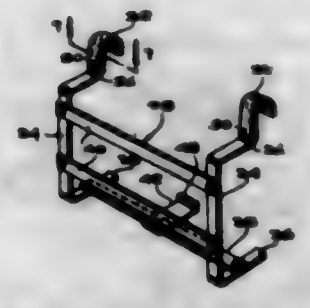


A unitary service tray formed of plastic and adapted for use in automobiles and in other relations and comprising a rectangular bottom, upstanding side and end walls integral therewith and having downwardly projecting leg members at the ends thereof, said side walls and leg members merging at the corners of the tray, and downwardly projecting intermediate supports spaced laterally from each other and spaced from the side and end walls and being of less height than the legs to coact therewith in stabilizing the tray upon a transversely curved surface.

2,897,975
DISPLAY FIXTURE HAVING IMPROVED ARTICLE SUPPORTING BACK PORTION
Harry J. Rubenstein, Kansas City, Mo.
Application May 11, 1953, Serial No. 354,268
1 Claim. (Cl. 211—106)

In a display fixture, an upright standard, a tray consisting of a continuous length of wire presenting a U-shaped bottom having a horizontal bight secured to the standard and a pair of parallel, spaced legs extending forwardly from the bight in a common plane, an upright stretch joined to the forwardmost end of each leg respectively, the stretches being parallel in a common plane, an outwardly extending arm on the uppermost end of each stretch respectively, the arms being disposed perpendicular to their respective stretches on a common line, a substantially horizontal side piece extending rearwardly from the outermost end of each arm respectively, the pieces being parallel in a common plane, and a horizontal rear portion joining the rearwardmost end of each side piece respectively and lying in a vertical plane spaced forwardly from and parallel to the bight; and a continuous length of wire presenting a rectangular back portion having a horizontal lower end secured to said legs intermediate the bight and the stretches and lying in a vertical plane disposed forwardly of and parallel to the rear portion, a horizontal upper end secured to the standard above the bight and parallel thereto, and a pair of spaced, inclined sides secured to said rear portion intermediate their ends, interconnecting the upper end and the lower end and extending upwardly and rearwardly from the latter between the side pieces.

2,897,976
BOOK RACK ATTACHMENT FOR CHAIRS
Jones Ivey Miller, Greenville, Tex.
Application June 7, 1957, Serial No. 664,434
1 Claim. (Cl. 211—113)



A book rack for suspension from a chair back, comprising a pair of identically formed, transversely spaced hooks of inverted J-shape adapted for engagement over a chair back, each of said hooks including a short front leg and a long rear leg, the rear legs of the hooks being straight and being disposed in a common plane; a pair of identically formed, transversely spaced, forwardly opening, C-shaped end frames having straight, upper legs lying in a common plane, perpendicular to the common plane of the rear legs of the hooks, said upper legs of the end frames having front ends fixedly secured to the lower extremities of the rear legs of the hooks in the common plane of the hooks, said upper legs being disposed, over their full lengths, rearwardly of said first

the pivotal connection of said link in said support during

2,897,983

conical paper filter having an upper portion with an open stream of the suspension into one end of said chamber.

named common plane, said end frames further including straight, elongated bight portions extending downwardly from the rear extremities of the upper legs in a common plane parallel to the first named plane and lower legs rigid with and projecting forwardly from the lower extremities of said bight portions in a common plane parallel to the common plane of the upper legs of the end frames, the lower legs of the end frames being slightly longer than the upper legs thereof so as to have their front ends disposed forwardly of the first named plane; a bottom bar extending between and fixedly connected at its opposite ends to the lower legs of the respective end frames, at a location between the common plane of the rear legs of the hooks; and the common planes of said bight portions of the end frames; a clamping bar connected to and projecting forwardly from the bottom bar intermediate the respective end frames, said clamping bar projecting forwardly beyond the forward extremities of the lower legs of the end frames, the clamping bar at its forward end having an upwardly directed lip for engagement with the lower edge portion of a chair back the top edge portion of which is straddled by said hooks and a plurality of retaining bars disposed substantially in the common plane of said bight portions and extending between and connected to the bight portions, said retaining bars being spaced longitudinally of the bight portions to provide means for retaining between the end frames articles supported on said bottom bar.

2,897,977

COLLAPSIBLE ADVERTISING OR DISPLAY DEVICE

Kenneth T. Buttery, Kalamazoo, Mich., assignor to Sutherland Paper Company, Kalamazoo, Mich.

Application April 19, 1954, Serial No. 423,905
5 Claims. (Cl. 211—135)

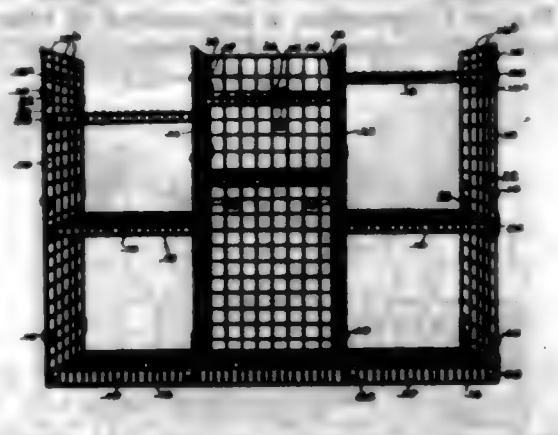
1. A collapsible and erectable display device of sheet material cut and scored to provide a back panel having a central downward extension, laterally spaced horizontal panels having scored connection to the bottom edges of the main back panel at the sides of said extension thereof, an intermediate horizontal panel having scored connections to the lower edge of said main back panel extension, a recessed vertical panel having scored connection to the front edges of said side and intermediate horizontal panels, a bottom panel having scored connections to the lower edge of said vertical panel, an auxiliary back panel having scored connection to the rear edge of said bottom panel and disposed at the rear of said main back panel and fixedly secured thereto, the aforesaid parts being erectably and collapsibly foldable on said scored connections thereof and when erected defining laterally spaced open ended chambers of rectangular section, and collapsible brace members each comprising inner and outer laterally spaced vertical panels swingably connected at their rear edges to said auxiliary back panel, and a vertical connecting panel having scored connections to their front edges, said brace member being dimensioned to supportingly fit between said back, horizontal, vertical and bottom panels when in erected position and close the ends of the chambers defined by said panels and to in part collapse against and in part to project laterally of the rear wall when in collapsed position, the outer of said brace members being provided with strut extensions on their rear edges.

2,897,978

STORAGE RACKS

Marshall H. Beckner, Washington, Pa., assignor to Wire-Tex Corporation, Washington, Pa., a corporation of Pennsylvania

Application April 5, 1957, Serial No. 651,075
3 Claims. (Cl. 211—148)



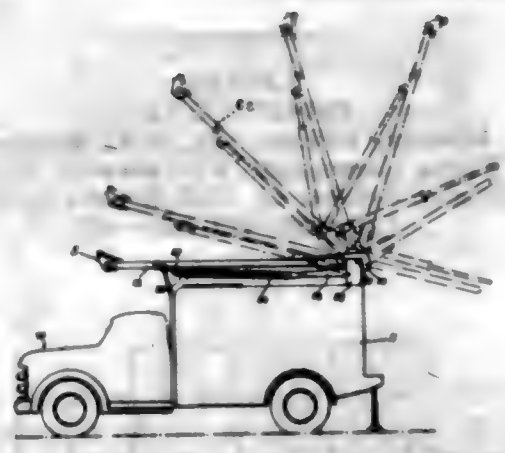
1. A rack assembly that comprises side walls and a partition wall, all of wire mesh structure, vertically spaced shelves with vertically bent end portions between each side wall and the partition wall, a back wall of wire mesh form connected to at least two of the other walls, at their vertical edges, connections that secure the rear edges of the shelves to the back wall, and tensioned hook-like connections that hold the bent end portions of each shelf and the adjacent walls in flatwise engagement with one another.

2,897,979

PORTABLE BOOM

James Howard Holna, Rocky River, and Herman J. Troche, Fairview Park, Ohio, assignors to J. H. Holna Corporation, Cleveland, Ohio, a corporation of Ohio

Application September 23, 1957, Serial No. 685,661
9 Claims. (Cl. 212—8)

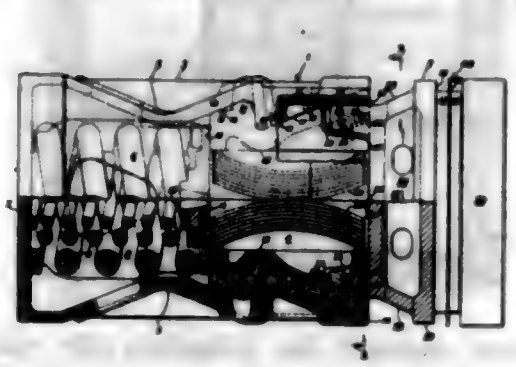


1. In a portable boom pivotably mounted at one end on a support for swinging movement about a horizontal axis from a storage position to a load supporting position and through a load supporting operating range, extensible erecting means for said boom attached at one end to the boom outwardly therealong with respect to the pivotal connection of the boom and said support to swing the boom and at the other end to said support, said extensible erecting means including an extensible arm and a link pivotally joined to each other at their extremities, said link pivotally connected at its other end to said support adjacent but in spaced relation to the pivotal axis of said boom, fulcrum retaining means co-acting with said link to retain the fulcrum of said extensible erecting means at

provided with driving means adapted to drive said rollers over substantially its entire upper surface, vertical end

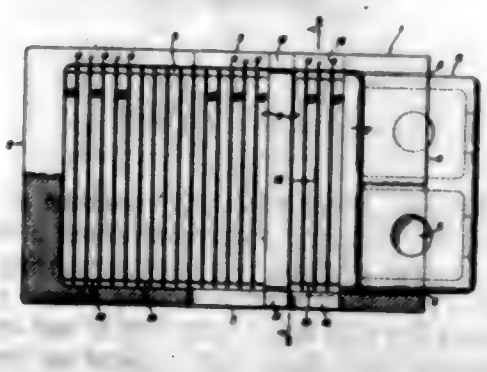
the pivotal connection of said link in said support during the portion of the path of rotation of said boom from the storage position to the load supporting position, and fulcrum shifting means co-acting with said link to shift the fulcrum of said extensible erecting means from the pivotal connection of said link in said support to the pivotal connection joining said link and said extensible arm in their extremities during the load supporting operating range.

2,897,980
DRAFT MECHANISM
Emil H. Blattner, Williamsville, N.Y., assignor to Symington Wayne Corporation, a corporation of Maryland
Application December 14, 1953, Serial No. 397,832
9 Claims. (Cl. 213—32)



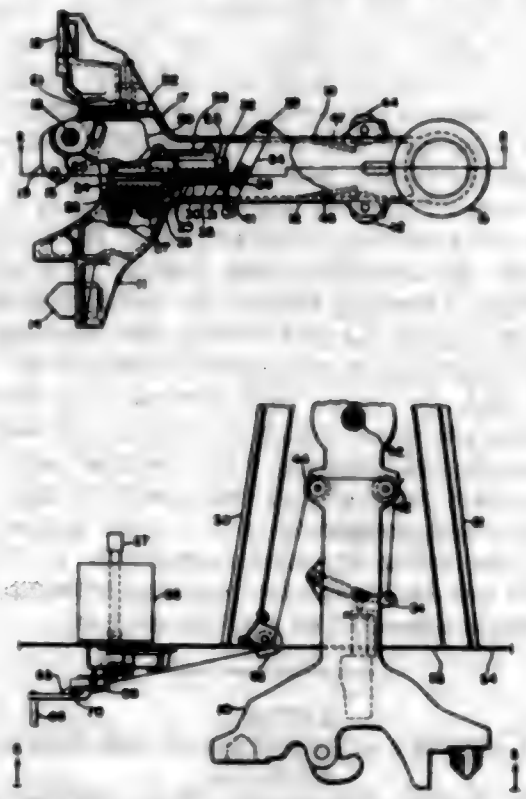
9. A draft gear comprising a friction housing open at one end, counterpart wedges in and frictionally engaging opposite longitudinal sides of said housing, spring means in said housing for urging said wedges laterally and forwardly thereof, a plunger, laterally spaced portions on said plunger, said portions projecting rearwardly of said plunger into said housing and in an expanded condition of said gear seating in slots in and embracing said wedges, sloping surfaces on said wedges defining outwardly facing walls of said slots and dovetailing with correspondingly sloping surfaces on said plunger portions for interlocking said plunger and wedges in normal position, and guideways extending longitudinally of said housing and each opening into one of said slots for slidably receiving and guiding said portions and therethrough said plunger during longitudinal movement thereof relative to said housing.

2,897,981
DRAFT GEARS
Emil H. Blattner, Williamsville, N.Y., assignor to Symington Wayne Corporation, a corporation of Maryland
Application October 21, 1955, Serial No. 542,013
7 Claims. (Cl. 213—45)



1. A draft gear comprising a housing open at one end, a plunger in said open end and restricted in outward movement relative to said housing, a pocket in said housing intermediate a closed end thereof and said plunger, said pocket being restricted only on two opposite sides by said housing, a rubber cushion in said pocket, and a floating follower block in said pocket and dividing said rubber cushion longitudinally into a plurality of parts.

2,897,982
DRAFT COUPLER AND UNCOUPLING APPARATUS
Ernst A. Larrson, Mansfield, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a corporation of New Jersey
Application October 14, 1955, Serial No. 540,461
9 Claims. (Cl. 213—100)



5. An uncoupling apparatus adapted to be mounted at the end of a car for unlocking a draft coupler to uncouple the car from an adjacent car comprising a vertically disposed coupler operating lever with a pivot at the upper end thereof and a handle at the lower end thereof for operating a coupler control cable, a switch operating mechanism comprising a horizontal shaft extending outwardly from the end of the car with a radial operating lever transversely disposed across the outside of the coupler operating lever and a radially extending arm, an over-center link connected to the arm and a mount for the over-center link adapted to be secured to the end of the car, and means interlocking the said levers comprising a flange along the outside of the coupler operating lever and a projection on the inside of the switch lever and outwardly from the coupler operating lever for holding the coupler operating lever when the switching lever is normally disposed in a horizontal position and in one position of the over-center link and releasing the coupler operating lever when the switching lever is disposed in a downward position and in a second position of the over-center link.

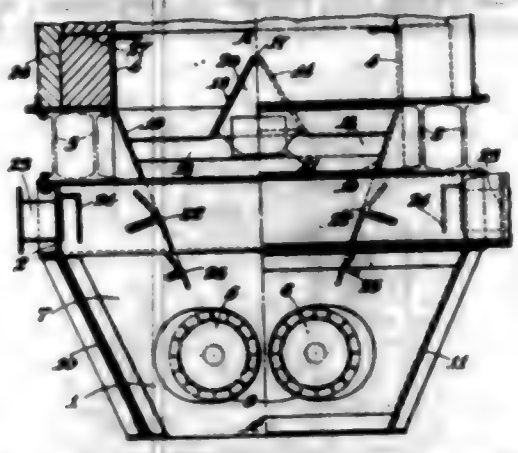
2,897,983
DISCHARGE MEANS FOR CONTAINERS OR VERTICAL RETORTS
Daniel Stewart, Broxburn, West Lothian, Scotland, assignor to Scottish Oils Limited, Glasgow, Scotland, a British company
Application January 16, 1956, Serial No. 559,139
Claims priority, application Great Britain January 17, 1955
3 Claims. (Cl. 214—18)

1. A vertical retort of rectangular cross-section having, at the bottom thereof, a gas inlet section and, below said gas inlet section, a discharge section, said discharge section comprising a pair of rollers, said rollers having surface irregularities to assist movement of the material to be discharged, being mounted with axes parallel to the retort side walls and in a horizontal plane and being

2,897,987

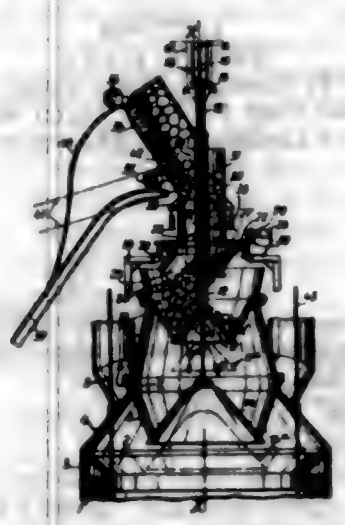
ments independently of said sleeve member, means oper-

provided with driving means adapted to drive said rollers in such manner that the surfaces of the rollers in adjacency move upwards, said gas section having gas inlet ports and comprising side walls and louvre plates together constituting converging guide plates having openings for



admitting gas to the retort introduced by said gas inlet ports; and, a baffle disposed in said gas inlet section, said baffle comprising surfaces inclined to the horizontal providing a ridge over the line of symmetry of the pair of rollers.

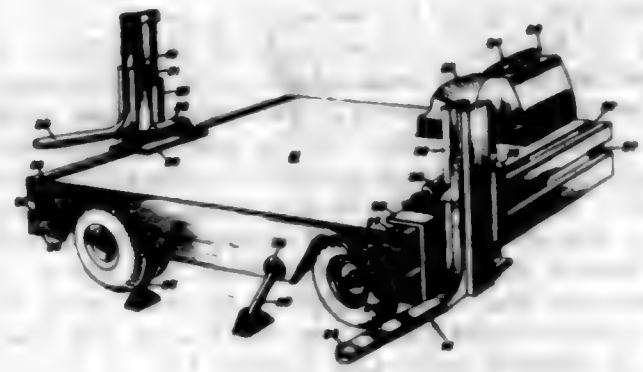
2,897,984
CHARGING APPARATUS FOR BLAST FURNACE
Jean Marie Marcel Angeard, Metz, France
Application April 30, 1954, Serial No. 426,869
Claims priority, application France May 16, 1953
13 Claims. (Cl. 214—35)



1. In a charging apparatus having a vertical axis for charging a blast furnace with ore comprising fines and medium and large pieces: an ore inlet aperture disposed on said axis, a deflecting device disposed below the inlet aperture obliquely of said axis and having a lower discharge edge which is disposed nearer to said axis than to a vertical geometric cylinder based on the inlet aperture, and a feeding device for feeding the ore into the inlet aperture on the same side of said axis as said discharge edge, whereby there is provided a free passage for the fines which are able to fall in the form of a thin stream from the feeding device through the inlet aperture and past said discharge edge whereas the medium and large pieces of ore are received and deflected by the deflecting device toward said stream of fines.

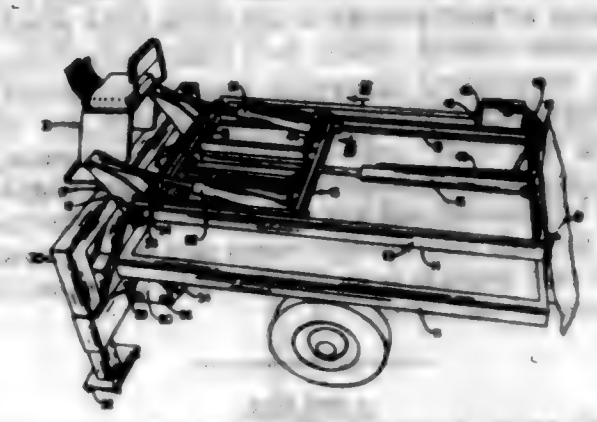
2,897,985
SELF-LOADING TRUCK
David J. Carlson, Vienna, and Gerald J. Geyer, Springfield, Va.
Application August 22, 1956, Serial No. 605,679
15 Claims. (Cl. 214—75)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A material handling apparatus comprising a box-like body having a flat upper surface of uniform level over substantially its entire upper surface, vertical end walls terminating at said upper surface, guide means extending along each of said vertical end walls, a carrier slidably disposed within each of said guide means, power means for moving said carriers along said guide means, tower members pivotally mounted on each of said carriers for tilting movement in the vertical plane, each of said towers having vertical slots formed therein, a load



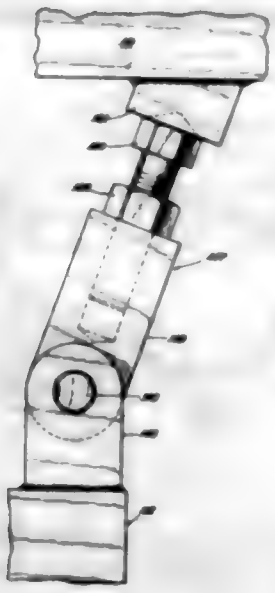
engaging device slidably seated within each of said slots, each of said load engaging devices including a horizontal extension, and an arm pivotally mounted at the outer end of said extension for rotatable movement in a plane substantially parallel to said flat upper surface, power means for selectively tilting each of said towers, power means for selectively raising and lowering each of said load engaging devices, and power means for selectively rotating each of said arms in respect to said extensions.

2,897,986
MECHANICAL SHOVEL APPARATUS FOR TRANSPORT VEHICLES
Charles J. Davis, Wichita, Kans., assignor, by mesne assignments, to Massey-Ferguson Inc., a corporation of Maryland
Application April 25, 1957, Serial No. 655,134
10 Claims. (Cl. 214—131)



4. In an apparatus for mounting a power shovel on the bed of a transport vehicle, the combination comprising, a carriage movably mounted on the bed of the vehicle for movement toward and from a working position at the after end of the vehicle, said power shovel including a frame, a cradle for supporting the power shovel frame, means carried by the carriage for pivotally mounting the cradle for movement between a raised position wherein the power shovel frame is carried above the vehicle bed, and a lower position wherein the power shovel frame is carried adjacent the after end of the vehicle bed, a foot member supported by the power shovel frame for engagement with the ground in the lower position of the cradle, and bracing means supported by said power shovel frame and connectible to said vehicle bed, said foot member and bracing means serving to brace the power shovel frame while the power shovel is operated.

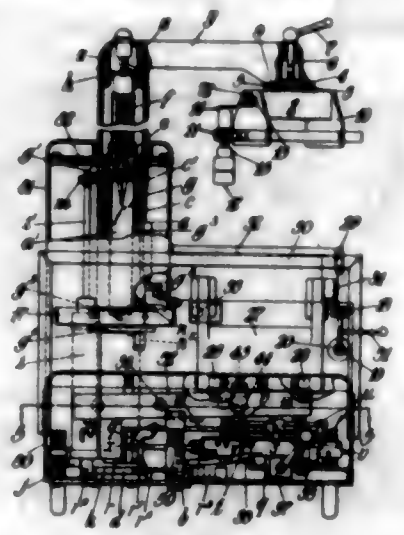
2,897,987
TRACTOR LOADERS
K. Gustaf A. Johansson, Wilmette, Ill., assignor to The Frank G. Hough Co., a corporation of Illinois
Application December 3, 1956, Serial No. 625,869
3 Claims. (Cl. 214—140)



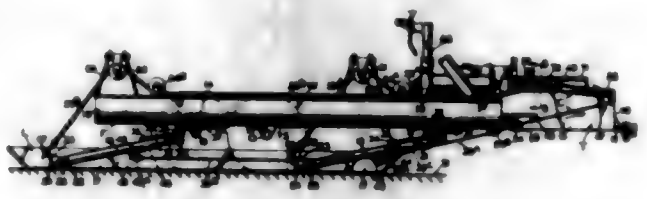
1. In combination, a tractor traction means, a tractor body, a forwardly extending tool means carried by said body and operable to apply loads to said body tending to move the forward end of said body downwardly, pivot means mounting said body on said tractor traction means for pivoting about a transverse axis positioned intermediate the ends of said tractor traction means and said body at a point providing a substantially balanced unit of said body and said tool means, removable means for securing the rearward end of said body and the rearward end of said traction means against any pivotal movement therebetween, an extensible and retractable member pivotally mounted on said tractor traction means forwardly of said pivot means, the outer end of said retractable member being formed to have a cone-shaped surface, and a block carried by the underside of said body forwardly of the pivot axis of said extensible and retractable member to said tractor traction means, said block being formed to have a cone-shaped depression therein engageable with said cone-shaped surface of said member for further securing said body against any pivotal movement relative to said tractor traction means and for distributing part of any load of said tool means to said tractor traction means through said member when said cone-shaped surface of said member is mounted within said cone-shaped depression of said block.

2,897,988
CRATING AND DECRATING OF BOTTLES
Arthur Graham Enock and Henry William Longville, London, England, assignors to Graham-Enock Manufacturing Company Limited, London, England
Application April 23, 1954, Serial No. 425,188
Claims priority, application Great Britain March 8, 1954
5 Claims. (Cl. 214—309)

1. Apparatus for handling bottles or other containers comprising bottle transfer means which is vertically reciprocable and also oscillatable about a vertical axis in order to transport the bottles between bottle pick-up and discharge positions, a pressure fluid circuit comprising pressure fluid operated crate clamping means and pressure fluid operated means for vertically reciprocating the bottle transfer means, said bottle transfer means having a sleeve member mounted for oscillatory movements about a vertical axis, a lifting column surrounding said sleeve member and mounted for vertical reciprocatory movements independently of said sleeve member, means operatively connecting the lifting column with the sleeve member to give to the former the oscillatory movements of the latter, a transfer arm secured to the lifting column, a lifting head secured to said arm, and means upon said head for gripping the bottles or containers, a pressure fluid operated unit in said pressure fluid circuit for lowering and raising the lifting column comprising a cylinder carried by the oscillating sleeve and a piston secured by its rod to the lifting column, and a control valve in said pressure fluid circuit operable by the crate as it is clamped to release pressure fluid for operating said pressure fluid operated unit.



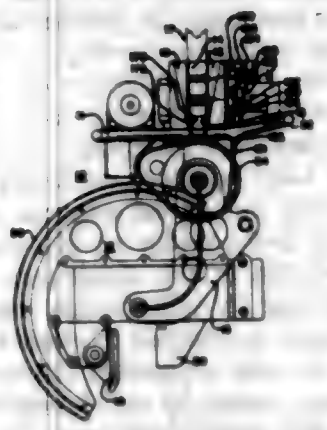
2,897,989
CRATE CART
John P. Hounsell, Hood River, Oreg.
Application May 17, 1957, Serial No. 659,833
5 Claims. (Cl. 214—390)



1. A crate cart comprising a horizontal tubular frame having a substantially U-shaped configuration including a pair of generally horizontal spaced apart side frames and a pair of spaced parallel transverse horizontal tubular frame members integrally connecting said side frames, wheels journalled on said side frames supporting said tubular frame in spaced relation to the ground, a pair of opposed horizontal lifting bars positioned in spaced parallel relation beneath said frame, a pair of spaced parallel arms extending from opposite end portions of each of said bars to spaced points on said side frames, means including horizontal and vertically extending pivots securing the one end of each of said arms to said side frames, means including horizontally and vertically extending pivots securing the other end of each of said arms to said lifting bars, said arms supporting said lifting bars beneath said frame for lateral and for vertical swinging movement, a plurality of cables connected to said lifting bars at longitudinally spaced points and extending to one end of said frame, and a hydraulic means on said tubular frame for moving said cables to initially swing said lifting bars horizontally inwardly into load engaging position with continued movement of said cable swinging said lifting bars vertically to lift the load with respect to the ground.

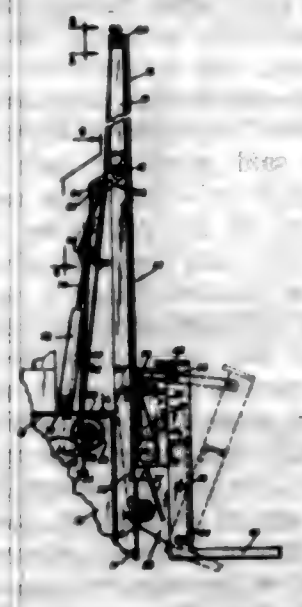
the outer leg of said clip having an inturned portion de- a thread formed in the body of said connector, a dia-

2,897,990
TONGS
Edgar Homer Kendall, Alliance, Ohio, assignor to Heppenstall Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application May 24, 1957, Serial No. 661,384
6 Claims. (Cl. 214—658)



1. In a tongs, apparatus comprising, in combination, a control head, a connector unit swingably supported by and depending from said head, an arcuate body supported by and centrally connected to said unit for rotation generally about a horizontal axis, rotational means respectively on said head and body in engagement at all times, pressure fluid means on said head to actuate said first-named means and rotate said body in a corresponding direction between its arcuate ends, opposed gripping means mounted on said body and relatively movable in the plane of said body, means on said head in pressure fluid communication with said gripping means through articulated members to actuate said gripping means substantially independently of said rotational means, extensible means respectively pivotally connected between said head and unit, means to cause said extensible means to change length to follow changes in the relative positions of said head and unit, and automatic means to lock said extensible means at a selected position to fix the distance between said head and unit.

2,897,991
LIFT CARRIAGE CONTROL MEANS
Harold A. Wagner, Portland, Oreg.
Application October 28, 1957, Serial No. 692,829
2 Claims. (Cl. 214—701)



1. A lift vehicle comprising a wheeled chassis, an upright track tower mounted at one end of said chassis, carriage guiding track means extending along said tower, a carriage guided by said track means for ascending and descending movement along said tower, a material handling device mounted on said carriage, said device comprising an upright back portion and a forwardly projecting load supporting portion secured thereto at a lower point thereof, transverse pivot means securing said material handling device at a lower point thereof to said carriage at a lower point thereof, a winch drum on said chassis near the base of said tower, a pair of tower sheaves coaxially mounted for independent rotation at the top of said tower, a lower carriage sheave on said carriage, an upper carriage sheave on said carriage, a material handling device sheave at the top of said upright back portion, three intermediate sheaves coaxially mounted for independent rotation at an intermediate point on said tower, a piston and cylinder device pivotally mounted on said chassis near the base of said tower and extending upwardly toward said intermediate sheaves, a floating sheave mounted at the upper end of said piston and cylinder device, a carriage control cable fastened to said winch drum at one end, then passing successively around said winch drum, then up and past one of said intermediate sheaves, then up and over one of said tower sheaves, then downward to said carriage and being fastened to said carriage at its other end, a material handling device cable also fastened to said winch drum at one end, then passing successively around said winch drum in the same direction as said carriage cable, then up and over another of said intermediate sheaves, then down and under said floating sheave, then upwardly past the third of said intermediate sheaves, then up and over the other of said tower sheaves, then down and under said lower carriage sheave, then up and over said upper carriage sheave, then forwardly and partly around said material handling device sheave, then back to and being attached to said carriage at its other end, means to rotate said winch drum to wind in or pay out both cables to the same extent simultaneously, and means to extend or contract said piston and cylinder device whereby the angular relation of said material handling device to said carriage may be varied while said carriage is moving up or down the tower or is stationary at any elevation thereon.

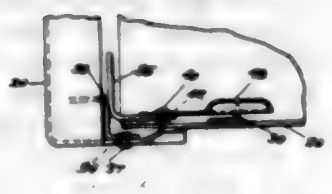
2,897,992
CLOSURE AND SPRING CLIP ASSEMBLY ADAPTED FOR USE WITH A TEST TUBE AND THE LIKE
Walter J. Nungester, Ann Arbor, Mich., assignor to Aircraft Precision Products, Inc., Oak Park, Mich., a corporation of Michigan
Application May 27, 1957, Serial No. 661,726
11 Claims. (Cl. 215—38)

1. A closure and spring clip assembly adapted for use with a test tube and the like, comprising a closure adapted to be sleeved upon the open end of a test tube, and means for holding said closure against displacement when sleeved upon the test tube, including a spring clip straddling and extending longitudinally of a side wall of said closure, the inner leg of said clip having a longitudinally bowed portion adapted to extend lengthwise of and frictionally engage the outer surface of said test tube, and

mitted and mounted for vertical reciprocatory move- vertically to lift the load with respect to the ground.

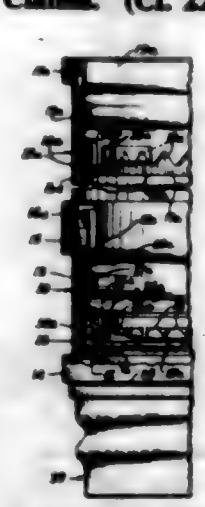
the outer leg of said clip having an inturned portion detachably engaging a recess in said closure and retaining said clip in assembled relation with said closure.

2,897,993
ENCLOSURE DOOR CATCH
Walter William Uecker, North Hills, Pa., and Salvatore Sori, Woodbury, N.J., assignors to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Application July 13, 1956, Serial No. 597,782
2 Claims. (Cl. 217—60)



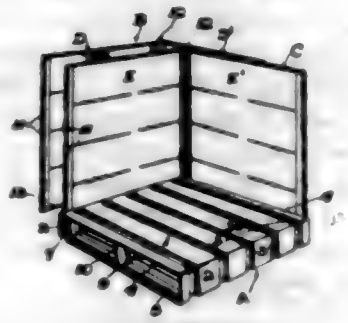
1. A latching mechanism for latching an enclosure cover in a predetermined position with respect to a cooperating enclosure; said latching mechanism being connected between said enclosure cover and said enclosure; said latching mechanism comprising a spring means and a catch means; said spring means being connected to said enclosure cover; said catch means being connected to said enclosure; said spring means being comprised of a flat spring having an aperture therein and a curved lip along a portion of its periphery; said catch means having an inclined surface being positioned to be engageable with said curved lip of said flat spring to deflect said flat spring in a first direction from a normal position and to thereafter be entered into said aperture of said spring whereupon said flat spring returns from said deflected position responsive to movement of said enclosure cover to an open cover position; said flat spring aperture being maintained in operative position with respect to said catch means in said open cover position under jarring conditions by the biasing properties of said flat spring; said cover being pivotally secured to said enclosure about an axis extending in a second direction; said first and said second directions being substantially parallel to each other; said cover being movable from said open cover position only by means not previously recited directly engaging said flat spring and deflecting said spring in said first direction.

2,897,994
COOPERATING CONTAINER
Carl E. Foss, Roslyn, N.Y.
Application August 12, 1953, Serial No. 373,733
16 Claims. (Cl. 220—4)



6. A container comprising a body, a male connector having a central opening secured to one end of said body, a thread formed in the body of said connector, a diaphragm and diaphragm attaching means having a threaded portion engaging the thread on said connector for closing said opening, a female connector part having a central opening secured to the other end of said body, a thread formed in the body of said female connector, said male connector having a size and shape to connect with the female connector of another identical container and said female connector having a size and shape to connect with the male connector of another identical container, diaphragm rupturing means surrounding the opening of the last said connector, a removable protective closure at least partially enclosing said male connector and a plug having an external threaded portion of the same size and contour as the external surface of the threaded portion of the diaphragm attaching means sealing the opening in said female connector whereby said container may be coupled to other similar containers upon removal of said protective closures with the diaphragm rupturing means of one container rupturing the diaphragm of the other container to form said containers into a single substantially unitary structure.

2,897,995
COLLAPSIBLE CONTAINER AND PALLET ASSEMBLY
Alvin J. Farrar, Cleveland, Ohio, assignor to Republic Steel Corporation, Cleveland, Ohio, a corporation of New Jersey
Application March 25, 1954, Serial No. 418,637
1 Claim. (Cl. 220—6)



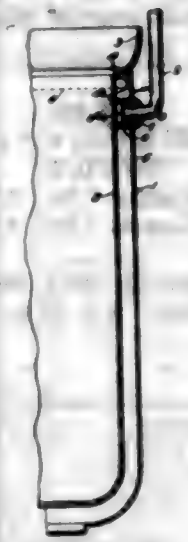
A container assembly, comprising, in combination, a pallet having a top provided with opposite downturned skirt portions and horizontal exposed edge portions disposed opposite each other between said skirt portions, wall means cooperating with said pallet top for forming a container space, said wall means including two wall forming sections, each section comprising a pair of panels hingedly connected together at adjacent vertical edges thereof, one of said panels of each section having an out-turned flange at its bottom edge resting on the upper marginal portion of the pallet top adjacent a downturned skirt portion, and the other of said panels of each section having an inturned flange at its bottom edge disposed at a lower elevation than said out-turned flange of the other panel for engagement beneath an exposed horizontal edge portion of the pallet, means for connecting the opposite corners of said sections, whereby, the panels of the wall forming sections are interlocked with the pallet against vertical movement in either direction relative to the top of said pallet, said pallet having a vertical reinforcement disposed intermediate said skirt portions and whose opposite vertical ends are disposed adjacent said inturned flanges, and a horizontal bracket rigidly supported on the lower face of each flange and having a notch therein for receiving a corresponding end of said vertical reinforcement, whereby opposite pairs of panels are restrained against lateral shifting in relation to the top of the pallet.

the container periphery and overlying the respective ad- ring is lightly seated in said groove the ends of the

2,897,996
DOUBLE WALLED CONTAINER

Ralph B. Billig, Westlake, and Manuel S. Ziskin, Mayfield Heights, Ohio, assignors to Kromex Corporation, Cleveland, Ohio, a corporation of Ohio

Application November 22, 1957, Serial No. 698,312
7 Claims. (Cl. 220—15)

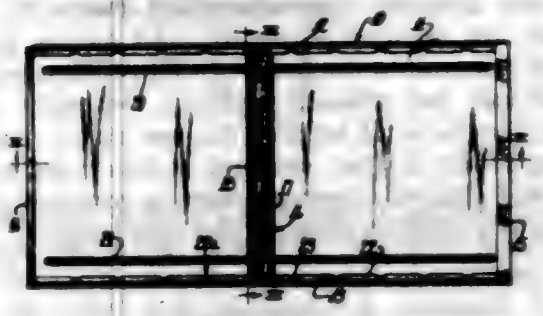


1. A double walled container comprising an inner receptacle having a pair of diametrically opposed outwardly extending outwardly open sockets on the outer wall thereof, an outer receptacle having a pair of diametrically opposed holes therein, said inner receptacle having an outwardly flared top portion engaging said outer receptacle to aid in positioning said inner receptacle in said outer receptacle with said holes and sockets aligned and with the walls of said receptacles being spaced from each other, bearing means seated in the holes in said outer receptacle and extending into said sockets in said inner receptacle, and a bail engaging and journalled in said bearing means to aid in retaining said bearing means in position and to hold said inner and outer receptacles in operative engagement.

2,897,997
DRAWER CONSTRUCTION AND METHOD OF MAKING SAME

Richard W. Stiles, St. Charles, Ill., assignor to Aurora Equipment Company, Aurora, Ill., a corporation of Illinois

Application January 19, 1956, Serial No. 560,178
5 Claims. (Cl. 220—22)

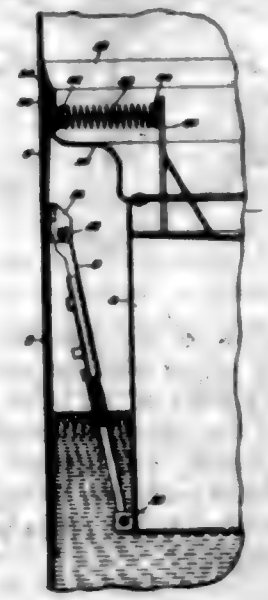


1. A drawer for relative sliding disposition in a cabinet structure, a relatively thin flat divider having transversely aligned recessed areas on its thin transversely spaced edges, said drawer comprised of a bottom and wall structure including upstanding side walls, said side walls having longitudinally spaced transversely aligned rib areas of substantially greater longitudinal dimension than the thickness of the thin transversely spaced divider edges depending out of the vertical planes of the side walls and lying internally of the drawer between the side walls, means sustaining the bottom edge of the divider in bottomed engagement against the bottom including transversely aligned vertical grooved areas disposed between the rib areas, said means also including longitudinally aligned protuberances lying within the confines of the grooved areas and disposed internally of the drawer, said divider being movable vertically between said rib areas in said grooved areas locking said divider against longitudinal movement and with said protuberances lodged within said recessed areas locking said divider against vertical movement.

2,897,998
FLOATING ROOF SEAL ARRANGEMENT

Reign C. Ulm, Schererville, Ind., assignor, by mesne assignments, to Union Tank Car Company, Chicago, Ill., a corporation of New Jersey

Application August 28, 1956, Serial No. 604,909
4 Claims. (Cl. 220—26)



1. In a seal arrangement for a storage tank comprising a cylindrical shell with a roof arranged to float on product in the shell, a rim peripherally arranged around the roof and spaced from the shell, a flexible shoe surrounding the roof and supported from said rim, a flexible fabric peripherally arranged around the roof and having its opposed edges secured to the upper edge of the rim and adjacent the upper edge of the shoe, respectively, to substantially seal the space between the rim and the shell, secondary seal means comprising a substantially continuously non-metallic element secured to the top of the shoe and having at least a portion thereof interposed between the shoe and the shell, said element having an upwardly directed scraping edge flexibly contacting the shell, flap means mounted on the shoe adjacent the upper edge thereof and extending upwardly above the secondary seal means to present upwardly directed edge means flexibly engaging the shell, and coiled spring means interposed between and in pressured engagement with the roof and the shoe and engaging the shoe at points immediately adjacent the upper edge thereof.

2,897,999
CONTAINER WITH TRAY LIDS

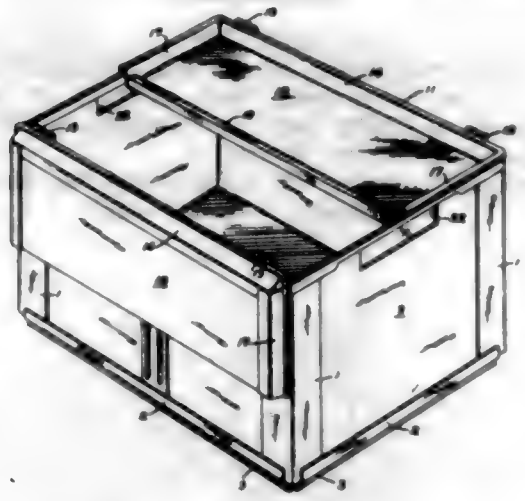
Ray H. Bishop, San Francisco, Calif.

Application March 6, 1956, Serial No. 569,869
1 Claim. (Cl. 220—39)

In a container stackable on the top of an adjacent container, the combination with a skeleton container frame, having vertical members connected at the top thereof by a reinforced rim and at the bottom by strips with inward flanges, and having a removable liner supported on said flanges and covering the bottom and sides of said skeleton frame; of a top structure for the container comprising a pair of lid sections complemental to cover the entire top of the skeleton frame, each lid section including a reinforced outer frame along the sides thereof adjacent

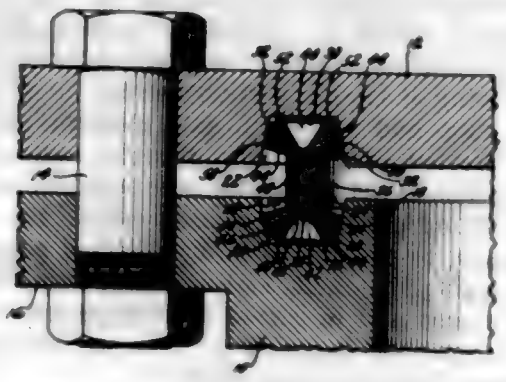
having a central opening secured to one end of said body, to the top of the pallet.

the container periphery and overlying the respective adjacent portions of said reinforced rim, hinge connection between one side of each reinforced frame and the adjacent side of the reinforced rim to permit swinging of said lid section away from said reinforced rim and to a generally vertical position along the outside of the adjacent vertical side of the container, and a tray bottom recessed from said reinforced frame inwardly of the container so



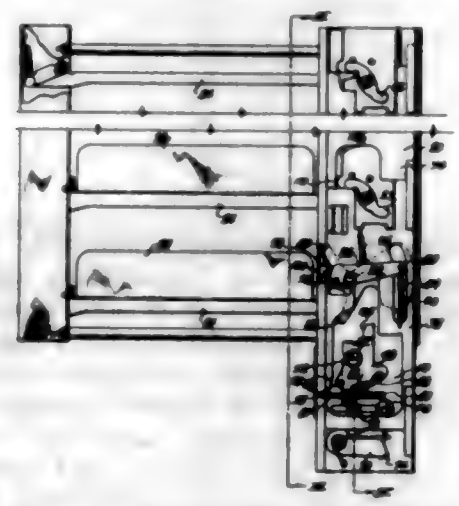
as to cover the portion of the container defined by said frame, a reinforcing inside edge on each lid section adjacent to the meeting edge of the other lid section being recessed inwardly of the container relatively to the plane of said reinforced frame, and bottom projections from said bottom strips of said container fitting into the recessed tray along said reinforced frame of an adjacent container for stacking such containers.

2,898,000
O-RING PRESSURE SEAL
William F. Hanny, Torrington, Conn., assignor to United Aircraft Corporation, East Hartford, Conn., a corporation of Delaware
Application January 30, 1957, Serial No. 637,223
4 Claims. (Cl. 220—46)



1. In a seal ring for a two-part fluid container having confronting annular grooves in said parts the bottom walls of which are flat and parallel and the side walls of which converge toward the bottom walls of said grooves, said seal ring comprising a stainless steel member having a thin web portion adapted to lie perpendicular to the bottom walls of said grooves and integral enlargements at its ends which are annular and somewhat semicircular in cross section and adapted to enter within said grooves, said enlargements having annular recesses formed therein opposite the bottoms of said grooves dividing each of said enlargements into a pair of lobes each of which has a curved surface which engages an inclined side wall of a groove in a continuous narrow annular band, the spacing of the curved surfaces on said pairs of lobes and the width of said grooves being such that when said seal ring is lightly seated in said grooves the ends of the lobes are spaced from the bottom walls of said grooves, means for drawing said container parts together to press said converging side walls against said lobes and to urge the latter toward each other and also into engagement with the bottoms of said grooves, whereby to provide four narrow peripheral bands of continuous engagement between said ring and each part of said container.

2,898,001
MULTI-DRINK LOCKING GATE PROTECTION DEVICE
Elmer C. Johnson, Kansas City, Mo., assignor to The Vendo Company, Kansas City, Mo., a corporation of Missouri
Application October 29, 1956, Serial No. 619,848
8 Claims. (Cl. 221—125)



1. In captive mechanism for vending machines, a support; a series of reciprocable devices carried by the support; resilient means yieldably biasing the devices in one direction to one end of the path of travel thereof; releasable lock means normally holding the devices against movement in the opposite direction to the opposite end of said path of travel; means for releasing said lock means, permitting movement of the devices in said opposite direction to said opposite end of said path of travel against the action of said resilient means; and structure for holding said devices intermediate said ends of said path of travel and against return movement in said one direction under influence of said resilient means upon gradual release of the devices, said structure including stop means within the path of movement of one of said devices in said one direction for engagement therewith when the devices are released gradually, and having parts yieldable in response to the force of said resilient means when the devices are released suddenly, whereby said structure is incapable of holding the one device upon sudden release of the devices, said stop means being on the support, said structure having a member movable on the one device to a position clearing the stop means.

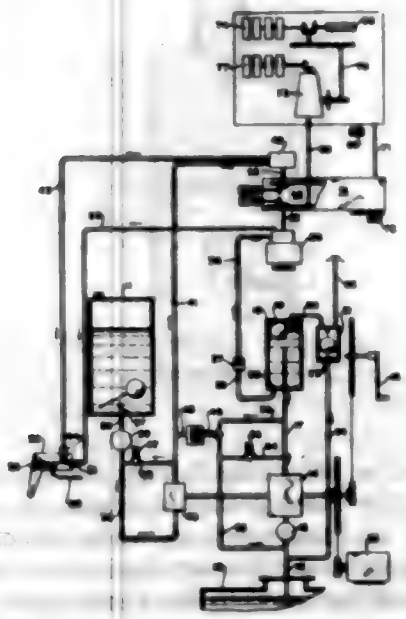
2,898,002
APPARATUS FOR METERING AND DISPENSING LIQUID MIXTURES
Andre Francois M. Blanchet, Saint-Denis, and Jean Gustave A. M. J. Meyer, Neuilly-sur-Seine, France, assignors to SATAM-Societe Anonyme pour Tous Appareillages Mecaniques, Paris, France
Application March 6, 1957, Serial No. 644,352
Claims priority, application France March 9, 1956
13 Claims. (Cl. 222—26)

1. In a system for metering and dispensing a mixture of liquids and including a first metering device for a first liquid, a second metering device for a second liquid, variable drive means interconnecting the first and second metering devices, selectively operable means for adjusting

thereby, air motor means for powering the pumps, valve means controlled by the first pump and controlling the

sealed from the other, a valve controlled air inlet at one end of said container for introducing air into the com-

the variable drive means to vary the proportions of the mixture of said first and second liquids, and means associated with said metering devices for registering the total price of the mixture delivered; an improved price registering means comprising input means operable in proportion to the volume of mixture metered, transmission means operated by said input means, said transmission means including a plurality of output elements independently adjustable thereto, a price indicator operable by said output elements, and means including said



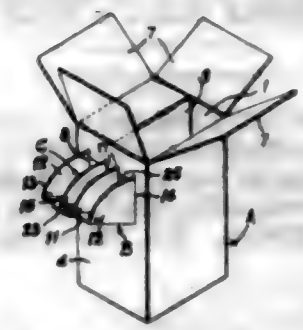
selectively operable means for selectively rendering one of said output elements at a time effective to operate said price indicator, the arrangement being such that the output element rendered effective by said selectively operable means reflects the predetermined unit price of the liquid mixture selected by operation of said selectively operable means, said predetermined unit price being arbitrarily determinable independently of the proportions of the mixture.

2,896,004

COMBINED MULTIPLE COMPARTMENT CONTAINER AND POURING SPOUT

Milton H. Klausmeier, Summit, N.J., assignor to Seal-Spout Corporation, Newark, N.J., a corporation of New Jersey

Application February 4, 1958, Serial No. 713,245
2 Claims. (Cl. 222—129)



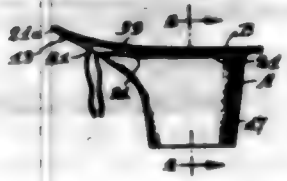
1. The combination of a container having a partition therein providing a plurality of separate compartments each for a different dry fluent commodity, the container having a wall in which there is a discharge opening for each of said compartments, and a combined closure and spout including a body portion formed of a single piece of material of a size simultaneously to overlie and close all of said discharge openings, a sector shaped wall projecting integrally and angularly from each end of said body portion, and a plurality of other similar sector shaped walls secured to and projecting angularly from said body portion between the first-mentioned sector shaped walls each in spaced relation to the next adjacen sector shaped wall, each of said sector shaped walls frictionally engaging a side edge of one of said discharge openings, said sector shaped walls having arcuate edges concentric with one end edge of said body portion, and means hingedly connecting said body portion along said edge thereof to said container wall at one end of said discharge openings.

2,898,003

INDIVIDUAL CONTAINER DISPENSER

James R. Wilson, St. Valentine, Quebec, and Rene Harbec, Ville Amard, Quebec, Canada

Application December 17, 1956, Serial No. 628,683
9 Claims. (Cl. 222—107)



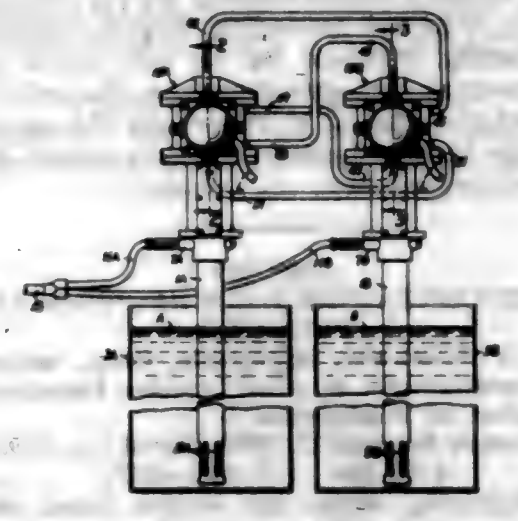
1. A dispensing package comprising a receptacle well having a base and a wall extending upwardly therefrom to merge with an outwardly extending substantially flat peripheral lip, said well including a relatively large body portion and a relatively narrow bay portion projecting from the body portion in a spout, the lip portion continuing about the top of the spout and presenting a bifurcation, the lip portion throughout being substantially flat, the body being of a plastic material, a web of soft pliable material heat sealed to the lip along a sealing strip and closing the well including the bay, and a tearing member extending across the spout portion extending between the lip and web, the tearing of the strand being adapted to sever the web across the spout portion and leave an opening at said spout portion through which the contents of the well can be squeezed for dispensing.

2,898,005

DISPENSING APPARATUS

Lutwin C. Rotter, Maplewood, Mo., assignor to The McNeil Machine & Engineering Company, Akron, Ohio, a corporation of Ohio

Application September 3, 1957, Serial No. 681,841
9 Claims. (Cl. 222—135)



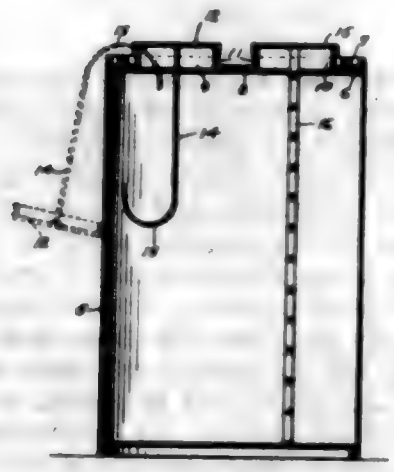
1. A proportioning system comprising first and second reciprocating pumps each adapted to deliver a predetermined amount of material upon a stroke thereof, the first pump being adapted to be supplied from a source of a first material, the second pump being adapted to be supplied from a source of a second and different material, means connecting together the delivery of the two pumps for mixing together of the two different materials delivered

width of said grooves being such that when said seal

variable drive means interconnecting the first and second metering devices, selectively operable means for adjusting

thereby, air motor means for powering the pumps, valve means controlled by the first pump and controlling the operation of the second pump and valve means controlled by the second pump and controlling the operation of the first pump for effecting sequential acition the pumps such that the first makes a stroke in one direction, after which the second makes a stroke in one direction, after which the first makes a stroke in the opposite direction, and after which the second makes a stroke in the opposite direction.

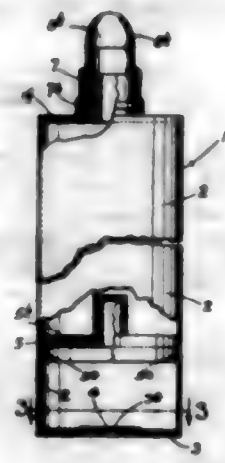
2,898,006
PAINT CAN LID
William A. Taylor, Detroit, Mich.
Application October 29, 1957, Serial No. 693,124
1 Claim. (Cl. 222—154)



The combination with a can having an annular channel formed in the upper end thereof, of a cover for said can, comprising a disc-like body, a depending annular rib formed on said cover adapted to seat in said channel sealing the cover, said cover having a pouring opening spaced a substantial distance from the edge of said cover, an upstanding annular flange surrounding said pouring opening terminating a substantial distance above said channel and said disc-like body providing a pouring spout, a flanged cap for closing said pouring opening, said cap having a hook on the underside thereof adapted to extend into said can when said cap is in closed position and to engage over said upstanding flange when said cap is removed to prevent loss of said cap, said disc-like body having a second opening therein comprising an air opening, a second upstanding flange surrounding said second opening, a second cap for said second opening, and a measuring stick extending from the under side of said second cap adapted to extend into the can substantially to the bottom thereof when said second cap is in closed position.

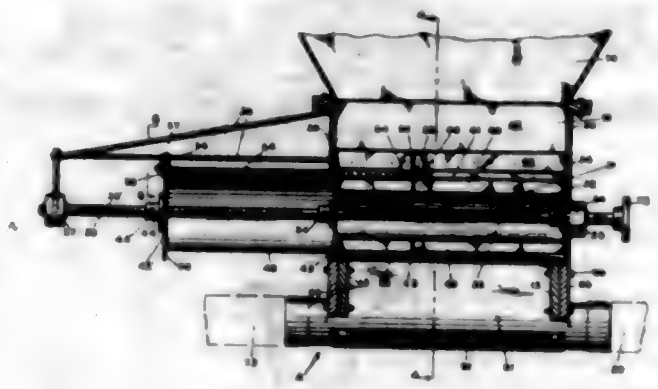
2,898,007
ELASTIC CONTAINER WITH RECIPROCATING PLUNGER
Benjamin F. Gasaway, Milwaukie, Oreg., assignor, by mesne assignments, to Flo-Container Incorporated, a corporation of Washington
Application January 17, 1956, Serial No. 559,549
4 Claims. (Cl. 222—212)

1. A dispensing device for viscous liquid materials comprising an elongated container of uniform cross-section throughout a substantial portion of its length having flexible and resilient side walls along its longitudinal dimension, a floating stiff plunger element free to traverse the longitudinal dimension of said container, said plunger element dividing the interior of said container into two compartments, each of said compartments being unobstructed across its entire transverse dimension, one adjacent each end of the container and each substantially sealed from the other, a valve controlled air inlet at one end of said container for introducing air into the compartment adjacent said one end, and a liquid dispensing spout at the other end of said container for discharging liquid from the other compartment, said liquid dispensing spout having an aperture extending therethrough communicating at its inner end with said other compart-



ment and a valve structure having flexible and elastic wall elements for closing said aperture by constriction of a portion of said aperture, said valve structure accommodating unidirectional flow of liquid from the interior of said other compartment to the atmosphere, said aperture being the only passage leading from the interior of said other compartment to the atmosphere.

2,898,008
AIRBORNE SEEDER
Stanley L. Hillwick and Wayne M. Cooper, Yakima, Wash., assignors to Economy Pest Control, Yakima, Wash., a corporation of Washington
Application November 26, 1957, Serial No. 699,864
1 Claim. (Cl. 222—303)



A dispenser comprising an elongated hopper, a semi-cylindrical housing secured beneath said hopper co-extensive therewith, an elongated shaft extending axially through said housing and journalled for rotation therein, an elongated drum mounted on said shaft in said housing for rotation with said shaft, a plurality of radial fins projecting outwardly of said drum and extending from one end thereof to the other, a second drum having a diameter greater than that of said fins for adjustably enclosing said fins from one end thereof to vary the exposed dispensing portions of said fins to control the quantity of material dispensed from said hopper, means supporting said second drum on said shaft for axial sliding movement thereon, an inner end wall supported on said second drum having portions thereof extending radially inwardly into each of the spaces between said fins, and means for axially adjusting said second drum with respect to said first drum.

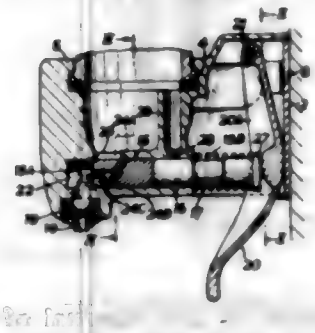
means for positioning it in place, said body having a

the internal surface of said neck, said ribs and grooves

2,896,009
APPARATUS FOR DISPENSING PASTES, CREAMS AND LIQUIDS

Edward Ramsay Green, Westminster, London, England, assignor to Newton, Chambers & Company Limited, Thorncliffe, England, a British company

Application December 19, 1955, Serial No. 554,022
Claims priority, application Great Britain August 12, 1955
16 Claims. (Cl. 222—368)

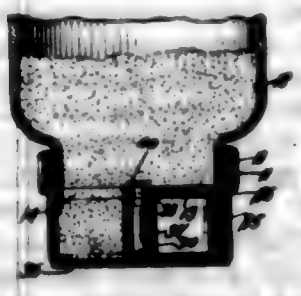


1. Apparatus for dispensing measured quantities of a fluent substance, comprising a body having a cylinder and a feed orifice leading to said cylinder, a storage container for said fluent substance mounted on said body in direct communication with said feed orifice, a non return delivery valve in said cylinder, an exteriorly operable slidable piston in said cylinder functioning as a cut-off valve when moved inwards, inward movement of the piston displacing a predetermined amount of substance from a trapping space in front of said piston through said non-return delivery valve, and means to rotate said piston about its longitudinal axis to vary the quantity of fluent substance delivered at each stroke of said piston.

2,896,010
MEASURING AND DISPENSING DEVICE

Solomon Tepper, Rockville Centre, N.Y.

Application July 13, 1955, Serial No. 521,930
2 Claims. (Cl. 222—339)



1. A measuring and dispensing device for a container comprising a cap member having a bottom wall and means extending from one side of said wall for releasably engaging the mouth of said container, said bottom wall having a sector shaped opening therein, a disk spaced from the other side of said cap wall, a post extending from the central portion of said disk and fixed to a central portion of said cap wall, a cylindrical member located between the other side of said cap wall and said disk and arranged for oscillatory movement relative thereto, said cylindrical member having an axial hub portion for passing said post and partition means extending radially outward of said hub portion to provide a pair of adjacent sector shaped compartments, said cylindrical member further including a sector shaped end wall portion located at the outer end of said member for closing one of said compartments, the other compartment being open at the opposite ends of said member, said disk having a sector shaped opening angularly displaced from the opening in said cap wall, said cylindrical member being movable from a position wherein one end of said other compartment registers with the opening in said cap wall while the other end thereof is closed by said disk to permit filling with the contents of said container, to a second position wherein said other compartment is closed at said one end thereof by said cap wall while the other end of said other compartment registers with the opening in said disk to permit dispensing the contents of said other compartment, and resilient means enclosed within said one compartment for returning said cylindrical member from its second position to its first position.

2,896,011
MEASURING AND DISPENSING DEVICE

Herbert O'Brien Benton, Concord, N.C.

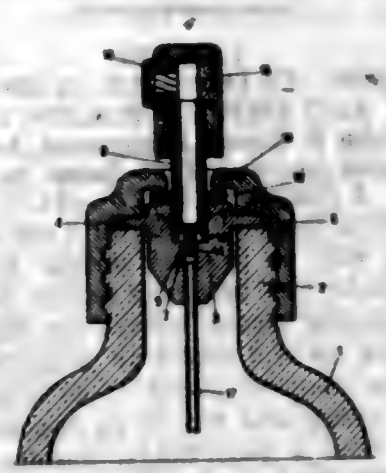
Application October 25, 1957, Serial No. 692,326
4 Claims. (Cl. 222—368)

1. In a measuring and dispensing device, a rectangular top wall, a curved wall member extending from said top wall and said wall member being provided with an outlet opening therein, a flange depending from said wall member, a pair of spaced parallel vertically disposed side walls, and each of said side walls including upper circular portions adjacent the ends of said wall member, each of said side walls further including a lower portion extending between said top wall and flange, a drum rotatably mounted between the circular portions of said side walls, said drum including spaced parallel vertically disposed end pieces and a cylindrical wall section having an opening therein, the opening in said drum being mounted for movement into and out of registry with the opening in said wall member, a shaft extending through the circular portions of said side walls and connected to said drum, and a crank connected to said shaft, and clamp means connected to said top wall and flange, said clamp means comprising pivotally mounted plates arranged contiguous to the inner surface of said top wall and said flange, teeth on said plates, and securing elements connected to said plates.

2,896,012
SPRAYING VALVE FOR CONTAINERS OF SUBSTANCES MIXED WITH A VOLATILE PROPELLANT

Franco Galeazzi, Milan, Italy

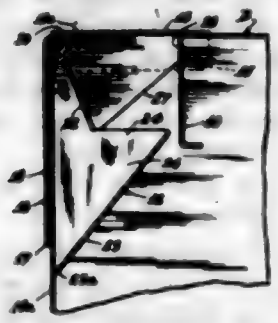
Application July 31, 1956, Serial No. 601,198
Claims priority, application Italy August 12, 1955
3 Claims. (Cl. 222—394)



1. A spraying valve for containers of substances mixed with a volatile propellant, comprising a one-piece resilient body fitted into the mouth of a container and having

means for positioning it in place, said body having a vertical bore extending therethrough and through its upper and lower ends, a dipping tube fitted in the lower end of the bore and extending downwardly into the container, said upper end of the bore being counterbored, a tubular outlet member seated in the counterbore and having a closed lower end provided with an inlet means and having a solid depending valve projection fitted in the bore and closing off the bore to control the flow of the substance therethrough, said means for positioning the body in place including a laterally outstanding flange on the body adapted to seat on the outer end of the mouth and said tubular member having a laterally outstanding flange adapted to seat on the upper end of the body and a cap member adapted to be fitted onto the container and having inwardly extending vertically spaced shoulders adapted to seat on the flanges to hold the body in place and the tubular member in the body.

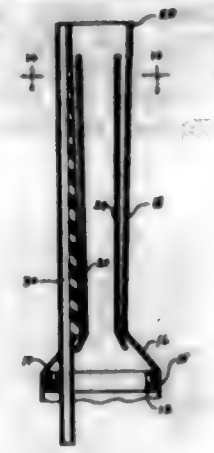
2,898,013
SOAP POWDER MEASURING DISPENSER
Gerard J. Hebert, Waterbury, Conn.
Application May 15, 1958, Serial No. 735,444
7 Claims. (Cl. 222—455)



1. In a measuring dispenser for powdered soap or other material, an attachment having a flat rectangular top section adapted to lie upon the top of a cardboard package, said attachment being open at the front and having vertical triangular sides, a rearwardly and upwardly inclined lower web extending part way toward said top section, a downwardly and rearwardly inclined upper web spaced from said lower web and joined to said top section, a central vertical top web secured to said top section to engage the corner flap bent downwardly and rearwardly from the top corner of said box, the space between said top section and said upper web serving to determine the amount of powdered material which will be dispensed each time the box is tilted back and forth to cause the powder to enter and leave said dispenser when it is located within the square top opening in said package.

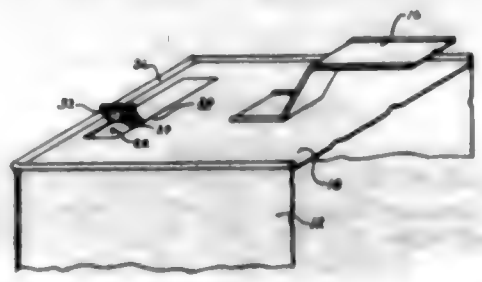
2,898,014
COMBINATION EXTENSIBLE AND FOLDABLE VENT AND SPOUT FOR CONTAINERS
John E. Borah, Mishawaka, Ind.
Application August 1, 1956, Serial No. 601,390
8 Claims. (Cl. 222—481.5)

1. A one piece foldable spout for a container having a pour opening with an internal annular projection comprising an annular base means of flexible material having an external annular groove therein for engaging the annular projection on said container, a hollow conical section of flexible material joined at its large end to said annular base means and having an opening at its small end, a neck with a longitudinal passage therethrough attached to said section around said opening and being longer than the diameter of said opening in said container, a plurality of longitudinal ribs on the external surface of said neck, corresponding longitudinal grooves on the internal surface of said neck, said ribs and grooves extending onto the respective surfaces of said conical section, a means integral with said neck forming a pas-



sage generally parallel to and external of said first mentioned passage and extending beyond the free end of said neck and below said base, and a cap for closing said first mentioned passage.

2,898,015
POURING STREAM CONTROL FOR CONTAINER
John E. Borah, Mishawaka, Ind.
Application April 28, 1956, Serial No. 579,496
1 Claim. (Cl. 222—484)



In a container having a top member and an opening near one edge of said member from which liquid is poured, a recessed portion in said top member near the edge of said member opposite said opening, said recessed portion having at least three holes arranged in a straight line and being graduated from small to large from one end of said line of holes to the other end for bleeding air into the container when liquid is being poured from the container, and a strip of tape having a tacky side removably seated in said recess and being substantially the same size as said recessed portion for closing and controlling the effective size and number of holes exposed, whereby the stream of liquid flowing from the container can be controlled by controlling the number and effective size of said holes open to the air.

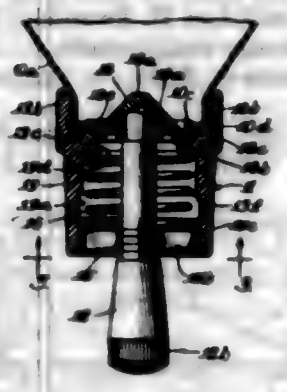
2,898,016
SOAP DISPENSER
George E. Franck, Riverside, and Howard L. Philippe, Chicago, Ill., assignors to The Imperial Brass Manufacturing Company, a corporation of Illinois
Application March 20, 1957, Serial No. 647,444
3 Claims. (Cl. 222—501)

1. A discharge control device for successive use with a plurality of soap containers, comprising: a body member having an end arranged for gripping connection with a container and having a bore extending completely through said member for conduction of soap from the container; an annular valve seat on the body member in said bore intermediate the ends thereof; a valve arranged for coaction with said seat; an operating handle connected at its inner end to said valve and having an outer end

2,898,020

2,898,022

projecting from the bore for manually alternatively opening and closing said bore; and a centering device freely



longitudinally slidable in the bore outwardly of the valve and fixed to the handle to maintain the handle in axial alignment with the bore.

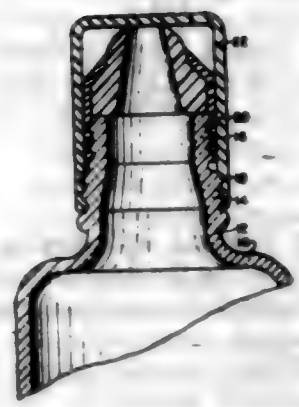
2,898,017
DISPENSING DEVICE FOR A TOOTHPASTE TUBE OR THE LIKE
John G. Redmond, Newton, Mass.
Application July 16, 1957, Serial No. 672,281
3 Claims. (Cl. 222—519)

1. A dispensing device comprising a cylindrical dispensing member having an outer cam surface on its side wall extending longitudinally throughout its length and a hollow cylindrical cover having a corresponding inner cam surface on its side wall extending longitudinally throughout its length, said cover being rotatable and longitudinally slidable on said dispensing member, said outer and inner cam surfaces being so positioned relative to each other that upon rotation of said cover they may be moved into frictional engagement with each other to maintain said cover in a predetermined position on said dispensing member, said dispensing member having an open chamber at one end and having an opening through its side wall in communication with said chamber and a cap at the end remote from said chamber of greater diameter than the interior of said cover, said cover being of such length relative to said dispensing member that it is slidable on said dispensing member to open or close the opening.

2,898,018
CONTAINER SPOUT
John E. Borah, Mishawaka, Ind.
Application October 26, 1955, Serial No. 542,867
7 Claims. (Cl. 222—529)

1. A spout for a container having an outlet portion, comprising an annular base of resilient material for engaging said outlet portion, a hollow frusto-conical section of resilient material joined at its large end to said base, a hollow neck joined at one end to the small end of said section and increasing in external diameter toward the other end throughout a part of its length, and an annular rib on the internal side of said section in the proximity of the small end thereof and in spaced relation thereof, said frusto-conical section being adapted to fold upon itself starting in the space between said rib and said neck.

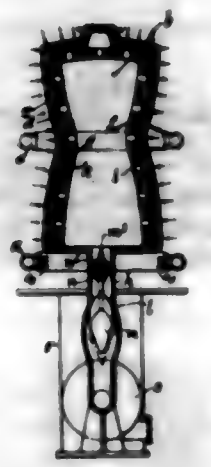
2,898,019
OPEN-MOUTH AIR-BOUND APPLICATOR FOR LIQUID MATERIALS SUCH AS INKS, COSMETICS AND OTHER LIQUID PREPARATIONS
Arthur J. Williams, Great Neck, N.Y.
Application September 6, 1956, Serial No. 608,349
1 Claim. (Cl. 222—551)



An applicator type bottle of the character described having a reduced neck portion provided with a relatively large base portion, and a relatively small upper end portion, external screw threads formed on said upper end portion, additional external screw threads formed on said base portion, a bead surrounding said base portion at its lower extremity, said relatively smaller upper end portion having a flat top and a relatively large opening therethrough, a plastic nozzle having a flat base seating on said flat top, said nozzle having a cylindrical outer lower portion, a tapered intermediate outer portion and a hemispherical outer top portion, said nozzle having a conical opening extending throughout the same, the larger end of said conical opening being positioned adjacent said relatively large opening in the relatively small upper end portion of said neck portion, and being of a slightly lesser diameter than the opening in the neck portion, the smaller end of said conical opening comprising a discharge opening centrally located in said hemispherical top portion, a plastic retaining collar detachably securing said nozzle to said neck portion, the lower end portion of said collar being internally threaded for engagement with the external screw threads on the upper end of said neck portion and the upper end of said collar having a conical flange extending radially inwardly thereof and overlying said tapered intermediate outer portion of the nozzle, the inner rim of said flange having an arcuate face closely engaging the lower periphery of said hemispherical outer top portion, thereby holding said nozzle tightly against the neck portion and providing a liquid-tight seal therebetween, and a cylindrical cap enclosing the nozzle and retaining the collar, said cap being provided with internal threads at its lower end for engagement with the external threads on the base portion of said neck portion adjacent said bead, the top of said cap seating on the top of said hemispherical outer top portion of said nozzle to tightly close and seal the discharge end of said conical opening.

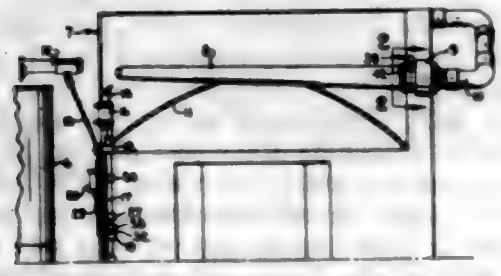
face of said neck, corresponding longitudinal grooves on at its inner end to said valve and having an outer end

2,898,020
METHOD AND MEANS FOR SHAPING DRESSES
Karl Herbert Kannegiesser and Johann Richard Jurschak, Vlotho, Germany, assignors to Kannegiesser & Co., Maschinenfabrik G.m.b.H., Vlotho, Germany, a corporation of Germany
Application September 26, 1955, Serial No. 536,679
Claims priority, application Germany September 29, 1954
2 Claims. (Cl. 223—70)



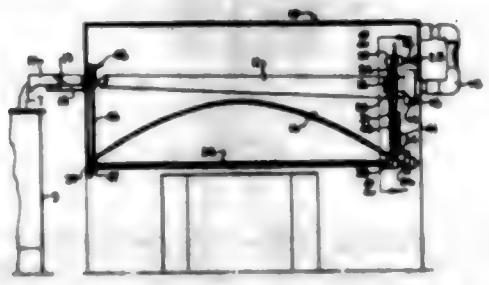
1. A method for pressing and shaping garments comprising the steps of placing the garment on a porous mold, applying a heat-transmitting gaseous medium upon the outside of the garment, evacuating the interior of the mold so as to establish a partial vacuum therein to cause pressure to be exercised exclusively by the atmosphere on the garment from the outside thereof so that a current of atmospheric air and the heat-transmitting gaseous medium will pass concurrently through the garment from the outside thereof toward the interior of the mold.

2,898,021
APPARATUS FOR HANDLING HOSIERY
Charlie A. Miles and Lex B. Swanner, Burlington, N.C., assignors, by mesne assignments, to Alamance Industries, Inc., Concord, N.C., a corporation of North Carolina
Application June 6, 1956, Serial No. 589,772
11 Claims. (Cl. 223—75)



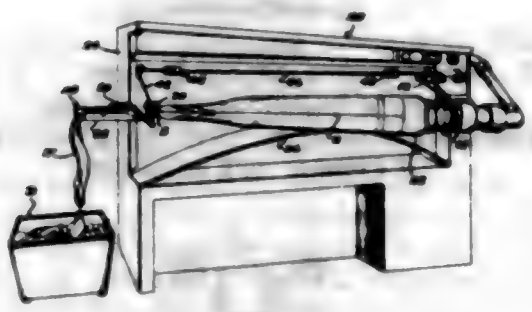
1. An apparatus for inspecting successive hose stitched together toe to welt in a chain and for severing the stitching between successive hose, comprising an inspection form onto which successive hose in said chain of hose are drawn for inspection, supporting guide means spaced from said inspection form to define a fixed path for successive hose and their connecting stitching to the inspection form, stitch severing means, and means for moving the stitch severing means in a fixed path between the supporting guide means and the inspection form to sever the stitching connecting the toe of a hose on said inspection form to the welt of the next successive hose in said chain of hose at a fixed distance from the inspection form.

2,898,022
ACTUATING MECHANISM FOR STITCH SEVERING DEVICES
Charlie A. Miles and Lex B. Swanner, Burlington, N.C., assignors, by mesne assignments, to Alamance Industries, Inc., Concord, N.C., a corporation of North Carolina
Application July 19, 1956, Serial No. 598,798
1 Claim. (Cl. 223—75)



Apparatus for inspecting successive hose stitched together toe to welt in a chain and for severing the stitching between successive hose, said apparatus comprising a frame, a first rotatable shaft, an inspection form fixed to said shaft and having a free end over which successive hose in said chain of hose are drawn for inspection, means for extending the stitching connecting the hose on the inspection form to the next successive hose in a predetermined direction from the free end of the inspection form, an eccentric surface fixed on said first shaft, a lever having a free end extending over and in engagement with the eccentric surface, means pivotally connecting the lever intermediate its ends to the frame, a connecting rod oscillatably connected adjacent one of its ends to the end portion of the lever remote from the eccentric surface, a crank arm pivotally connected to the other end of the connecting rod, a second rotatable shaft journaled on the frame and fixed to the crank arm, a rigid operating rod fixed to the second shaft and extending therefrom to a point adjacent the free end of the inspection form, stitch severing means connected to the end portion of the operating rod remote from the second shaft, said operating rod being pivotal about the second shaft upon rotation of the inspection form to sever the stitching between the hose on the inspection form and the next adjacent hose, and resilient means normally urging the stitch severing means out of stitch severing position.

2,898,023
METHOD AND MEANS FOR INSPECTING FULL-FASHIONED HOSIERY
Garland E. Bennett and Robert M. Matthews, Charlotte, N.C., and Ray Bailey, Gainesville, Ga., assignors, by mesne assignments, to Alamance Industries, Inc., Concord, N.C., a corporation of North Carolina
Application January 3, 1957, Serial No. 632,317
7 Claims. (Cl. 223—75)

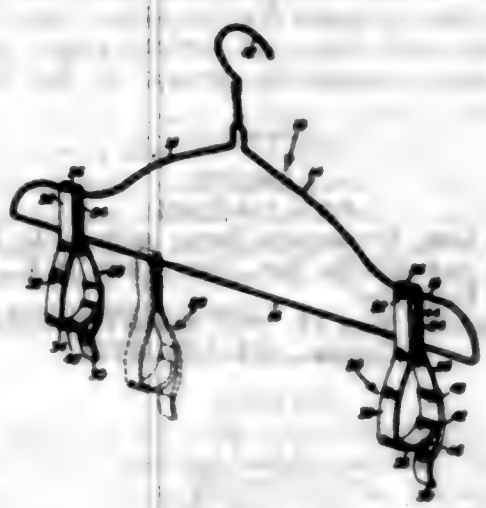


2. Means for inspecting full-fashioned hosiery that has been seamed without severing the seaming stitch chain

bags being disposed within and substantially filling said

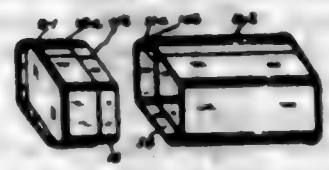
between successive units of said hosiery, so as to form a series of hose units connected by intervening stitch portions running from the toe of a leading unit to the welt of a following unit, said means comprising a hosiery supporting and frictionally confining member arranged to have the leading hose unit of said series drawn longitudinally drawn therethrough under a dragging resistance, an inspection form aligned longitudinally with said supporting member and having the toe end thereof spaced longitudinally from said member, whereby the disposition of a leading hose unit of said series on said inspection form, after being drawn through said supporting member, results in drawing a portion of the following hose unit of said series through said supporting member with the intervening stitch chain portion extended from the toe of the leading hose unit on said inspection form, and means for severing said extended stitch chain portion during the inspection operation to separate said leading hose unit from said series so that it may be removed separately from said form after inspection and to leave the following hose unit supported by said supporting member so that it may be subsequently grasped and drawn completely therethrough to repeat the inspection operation thereon.

2,898,024
SKIRT HANGER
Jens B. Jensen, Fargo, N. Dak.
Application August 26, 1957, Serial No. 680,274
3 Claims. (Cl. 223—91)



1. A hanger for skirts comprising a wire coat hanger having at least one horizontal wire, a pair of U-shaped members detachably mounted in inverted position on said wire, means on said members for grippingly engaging said wire, the lower ends of the legs of the U-shaped members being arcuately bowed and disposed in spaced relation for receiving a portion of a skirt, and a pivotal clamp member mounted on one of said legs and extending upwardly and towards the other leg whereby the skirt disposed between the other leg and the free end of the clamp member will be frictionally retained in position with the weight of the skirt increasing the clamping action of the clamp member, said clamp member being longer than the distance between the lower ends of the legs thereby maintaining the clamp member in inclined position, said means for engaging said wire including a pair of hook-shaped members on one leg of each U-shaped member, said hook-shaped members extending beyond the other leg and adapted to engage over the wire with the other leg adapted to resiliently urge the wire into gripping engagement with the hook-shaped members.

2,898,025
CONVOLUTELY WOUND CONTAINER AND METHOD OF MANUFACTURE
Willard F. Walker, Cleveland, Ohio, assignor to The Cleveland Container Company, Cleveland, Ohio, a corporation of Ohio
Application January 9, 1958, Serial No. 708,628
5 Claims. (Cl. 229—4.5)



1. In a tubular container, a tubular body of convolutely unitarily wound paper stock having an inner tubular portion of at least one ply, said portion having a circumferential separation line formed therein spaced from one end of the container, a second external tubular portion of at least one ply of stock continuous with that of the inner portion, said second portion having a circumferential separation line offset lengthwise of the container from the first said separation line, the successive plies of the body being adhesively bonded to each other, one of the stock surfaces having a circumferentially extended anti-bonding coating thereon in the laminating region bounded by one of said lines in one ply and the other of said lines in the next ply, whereby a latent telescoped readily opened joint is provided between the two portions in the region between said lines permitting telescoping reassembly of the body after opening a finished container.

2,898,026
CORROSION INHIBITING CONTAINER FOR METAL ARTICLES
Joseph J. Aid, Quaker Hill, Conn., assignor to Continental Can Company, Inc., a corporation of New York
Application February 1, 1954, Serial No. 407,269
4 Claims. (Cl. 229—14)

1. A container for packaging metal articles and protecting the same from rust and corrosion comprising at least one wall, the inner surface at least of said wall being composed of paper, a sheet of neutral paper having a vapor-phase corrosion inhibitor associated therewith, and a layer of non-polar wax-like adhesive disposed between inner surface portions of at least one wall of said container and said sheet of neutral paper to secure the latter to said container wall and to substantially prevent chemical reaction between said vapor-phase corrosion inhibitor and any substance incorporated in said container wall.

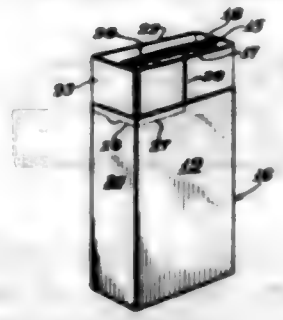
2,898,027
CONTAINER FOR FLUENT MATERIALS
William R. Schelle, Skokie, Ill., assignor to Schelle Chemical Corporation, Northlake, Ill., a corporation of Illinois
Application December 4, 1956, Serial No. 626,283
2 Claims. (Cl. 229—14)

1. A package of fluent materials comprising a relatively rigid flat-bottomed normally sealed outer container body and a liner bag of flexible plastic material containing liquid enclosed within a second otherwise empty slightly larger bag of like flexible material, said flexible

form.

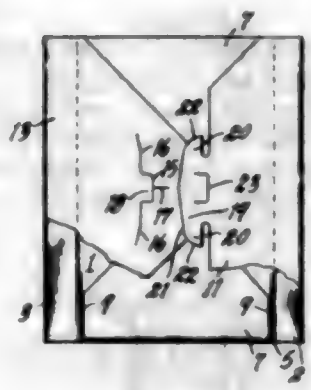
been seamed without severing the seaming stitch chain

bags being disposed within and substantially filling said relatively rigid outer body, said flexible bags being jointly sealed in a unitary transverse line of fusion adjacent their upper marginal edges only to form completely sealed enclosures and remaining free from each other throughout the remainder of their surface areas, a top corner



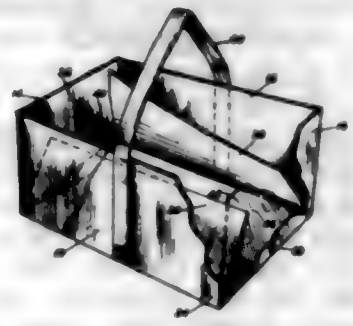
portion of said outer container body being perforated and scored for severance and hinged elevation respectively whereby to expose and provide access to an upper corner portion of said liner bags while retaining them bodily therein upon inversion of the assembly.

2,898,028
CARTON
Merrill J. Coe, Kalamazoo, Mich., assignor to Sutherland Paper Company, Kalamazoo, Mich., a corporation of Michigan
Application August 27, 1957, Serial No. 680,512
5 Claims. (Cl. 229—36)



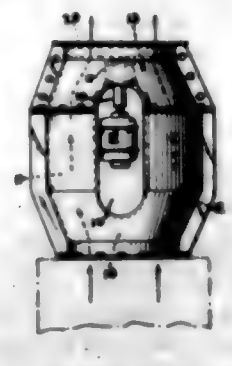
1. A carton comprising a pair of opposed relatively swingable and bendable members having outer end portions which overlap when the members are in closed position, the inner of said members having a main slit extending transversely thereof in spaced relation to its swinging edge and comprising a rearwardly facing U-shaped central portion defining a forwardly projecting tab and aligned angled portions extending laterally from the inner ends of the arms of the U-shaped portion of the slit, said inner member also having an auxiliary slit extending from the bight portion of said U-shaped portion of said main slit toward the swinging edge of said inner member to facilitate the flexing of the inner member at the front of said main slit therein, the outer member having a tongue on its swinging edge insertable through said slit in said inner member and having oppositely and laterally projecting locking tabs engageable with the edges of said laterally projecting portions of said main slit in said inner member, the front edge of said tongue being forwardly bowed providing a central tip and forwardly curved ends for said tab members thereof, said tongue having a forwardly facing U-shaped slit disposed centrally thereof defining a deflectable portion aligned with and adapted to receive said tab portion of said inner member when the said tongue of said outer member is inserted in said main slit in said inner member.

2,898,029
HANDLED CARTON
Clark W. Sherman, Scappoose, Oreg.
Application July 19, 1956, Serial No. 598,799
6 Claims. (Cl. 229—41)



1. A collapsed, foldably erectable carton comprising a pair of opposite side walls and a pair of opposite end walls connected along parallel fold lines, said end walls each having a fold line medially between and parallel to the opposite edges thereof and being infolded between said side walls, and said side walls being coextensive with one another, a bottom comprising two panels formed as extensions one to each of said side walls, and two flaps formed as extensions one to each of said end walls, said flaps being infolded upwardly against the respective end wall and between said bottom panels, and means fixedly attaching said flaps one to each of said panels so as to cause a panel and corresponding flap to fold downwardly together, whereby drawing of said end walls outwardly causes said flaps and bottom panels simultaneously to fold downwardly toward a flat horizontal position.

2,898,030
FAN CASING
Richard L. Hull, Davenport, Iowa, assignor to American Machine and Metals, Inc., New York, N.Y., a corporation of Delaware
Application May 13, 1957, Serial No. 658,681
3 Claims. (Cl. 230—117)

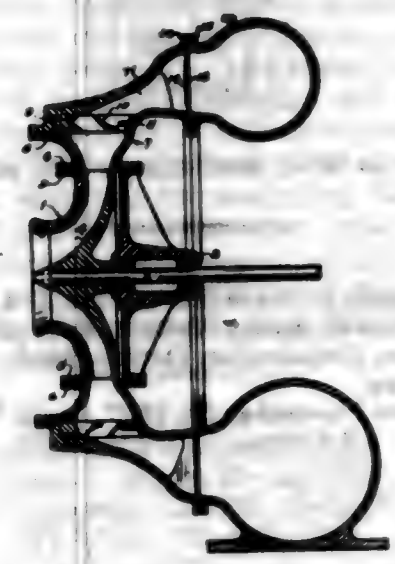


1. In a fan unit having a hollow tubular casing with a walled aperture therethrough for receiving a fan motor therein, a slot in one end of said aperture communicating with the interior of said casing and extending to the side of said casing, a shaft connected at one end to said motor and rotatable thereby, said shaft extending through said slot and into the interior of said casing, a fan wheel connected to the other end of said shaft and rotatable therewith, and a removable wall portion for said casing having means thereon closing at least a portion of said slot when said wall portion is connected to said casing, said shaft and said fan blades being removable from said casing by radial movement of said shaft in said slot when said wall portion is removed.

walls, a central partition carried by the side walls and

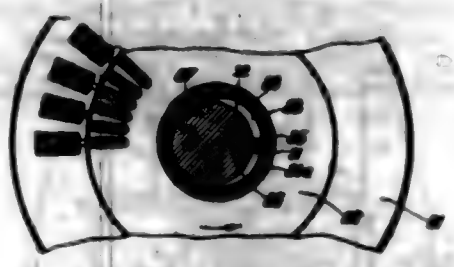
overhangs the next lower louver when the louvers are

2,898,031
VANELESS DIFFUSER FOR RADIAL FLOW MACHINES
Waldemar Voigt, Baltimore, Md.
Application September 24, 1954, Serial No. 458,294
4 Claims. (Cl. 230—127)
(Granted under Title 35, U.S. Code (1952), sec. 266)



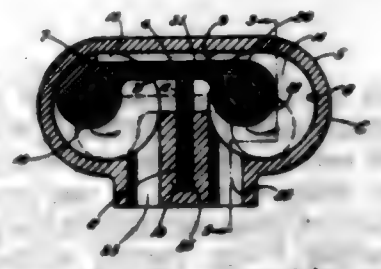
1. In combination, a first vaneless diffuser, a radial flow compressor having a main housing and a rotary impeller positioned in said housing, said vaneless diffuser comprising a front wall section having opposed surfaces of revolution connected at their inner ends to said main housing to define the annular outlet thereof therebetween, the said surfaces of revolution diverging outwardly from the periphery of said rotary impeller at a gradually increasing angle not less than 10° whereby the radial component of flow velocity will remain subsonic regardless of the absolute velocity of flow, a second vaneless diffuser in communication with said first vaneless diffuser and incorporating an inwardly converging section and an outwardly diverging section downstream thereof connected and in communication with a collecting spiral, and an intermediate diffuser stage positioned at the juncture of said first and second vaneless diffusers.

2,898,032
SEALED MOTOR-COMPRESSOR UNIT
Bernhard Katzenberger, Neckargemund, Germany, assignor to Brown, Boveri & Cie, Aktiengesellschaft, Mannheim, Germany, a corporation of Germany
Application May 18, 1956, Serial No. 585,697
Claims priority, application Germany
September 29, 1955
4 Claims. (Cl. 230—139)



1. A sealed motor-compressor unit, comprising an electric motor having a totally enclosed stator structure and a rotor mounted within and journaled on said structure in concentric relation thereto, said rotor having an annular stack of laminations, a cylinder sleeve extending through said stack parallel to the axis thereof and eccentrically positioned with respect to the said rotor, said cylinder sleeve being firmly seated within and joined with said stack along substantially the entire length and periphery of said cylinder sleeve so as to form a rigid unit with said stack, an inner sleeve loosely positioned within said cylinder sleeve and forming a tumbling ring slidingly engageable with said cylinder sleeve so as to rotate at a speed of rotation less than that of said rotor, a stationary shaft concentric with respect to the periphery of said rotor extending through said inner sleeve and forming with the inner surface of said inner sleeve a rotatable crescent-shaped compressor space around said shaft, said shaft being rigidly joined with said stator structure and having slot means formed radially therein, compressor blade means slideably positioned within said slot means and extending radially from said shaft into said compressor space and against the inner surface of said inner sleeve to partition said compressor space, means fixedly attached to said shaft for closing in the ends of said compressor space, inlet and outlet duct means extending through and fixedly located within said stator structure and forming respective openings at stationary and angularly mutually spaced locations within said crescent-shaped compressor space, said outlet duct means being provided with check valve means, whereby as said rotor rotates with respect to said shaft the volume of said crescent-shaped space changes to pass fluid through said compressor space and through said duct means.

2,898,033
COMPRESSOR
Bertram J. Rochlus, Milwaukee, Wis.
Application April 1, 1957, Serial No. 649,671
1 Claim. (Cl. 230—147)



A compressor or the like comprising a housing having an interior chamber provided with substantially semi-circular end walls, a top flat connecting wall and side walls, said chamber being divided at its lower portion by a transversely extending partition wall, said chamber at its lower portion and opposite to the top flat wall having an inlet at one side of the partition wall and an outlet on the other side of the partition wall, crank discs rotatably mounted in the chamber adjacent to the opposite ends of the chamber having crank pins, means driving said crank discs in the same direction, a one-piece compressor plate including round piston terminals and a connecting flat bridge portion, said round piston terminals being rotatably mounted on said crank pins with the entire plate moving in the chamber in a planetary direction toward and away from the top flat wall and toward and away from the inlet and outlet ports, the outer faces of said piston terminals having rubbing contact with the semicircular end walls, a vertically moving sliding gate valve carried by the partition wall and disposed between said ports, and dividing said ports one from the other, and means normally urging the gate valve into sliding intimate contact with the lower face of the compressor plate between the piston terminals.

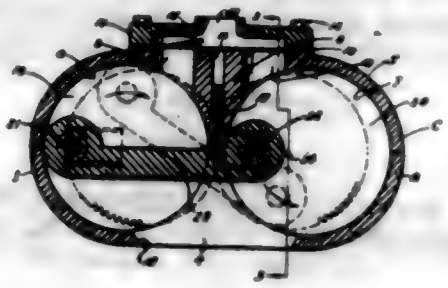
2,898,034
COMPRESSOR WITH DUAL COMPRESSION CHAMBERS
Bertram J. Rochlus, Milwaukee, Wis.
Application April 1, 1957, Serial No. 649,672
1 Claim. (Cl. 230—147)

A compressor or the like comprising a housing having circular end walls and connecting inner and outer side

in said inner member.

portion is removed.

walls, a central partition carried by the side walls and extending partially into the housing, intermeshing drive gears rotatably mounted at their axes in the housing, crank discs eccentrically mounted relative to the drive gears and located in front of the gears, said crank discs being rotatably supported in the housing at their peripheries, said circular end walls, the partition, the outer side wall and said discs defining a pair of substantially cylindrical compression chambers one on each side of the partition, said chambers having inlet ports at one side below the partition and outlet ports at the opposite side on each side of the partition, said chambers having communication at their lower ends below said partition, means for rotating one of said gears, crank pins extending through the discs toward the gears, channel shaped guide tracks rigidly secured to one face of the gears and eccentrically mounted thereon relative to the axes of the gears, rollers on the inner ends of the crank pins received in said channel guide tracks whereby upon rotation of the gears the crank pins and crank discs will be rotated in opposite



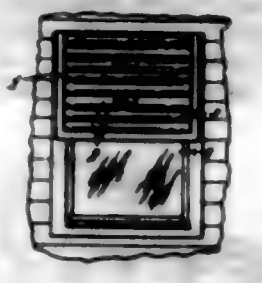
directions with the crank pins moving in a circular path, a one-piece compressor plate including round piston terminal portions and a connecting flat bridge portion, one piston portion being mounted in one chamber and the other piston portion being mounted in the other chamber, the flat connecting bridge portion extending from one chamber to the other below the partition wall, the piston portions being rotatably mounted upon the crank pins, whereby upon rotation of said discs from the gears the movement of the piston terminal portions will be planetary in respect to the circular compression chambers and whereby the compressor plate will have a figure eight oscillating motion, said piston portions having rubbing contact with the circular wall of said chambers, a sliding vane carried by the partition, and means normally urging the sliding vane into intimate contact with the flat bridge portion of the compressor plate, said compressor plate having sliding and rubbing contact with the vane, the outer side wall, the discs and the circular end walls during movement of said plate.

ERRATUM

For Class 230—206 see:
Patent No. 2,898,072

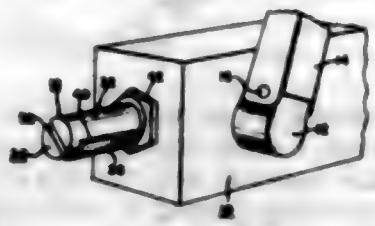
2,898,035
VENTILATOR FOR DOORS, WINDOWS AND OTHER OPENINGS
Everett T. Wheeler, Cambridge, Mass.
Application July 25, 1956, Serial No. 599,979
1 Claim. (Cl. 239—241)

An awning comprising a frame having sloping side arms, louvers extending horizontally from arm to arm, means rotatably supporting the ends of the louvers on the arms, and means for continuously rotating the louvers in unison to circulate air, the louvers being spaced apart sufficiently to permit simultaneous rotation without interference but close enough together so that each louver overhangs the next lower louver when the louvers are stopped in the position where they incline outwardly and



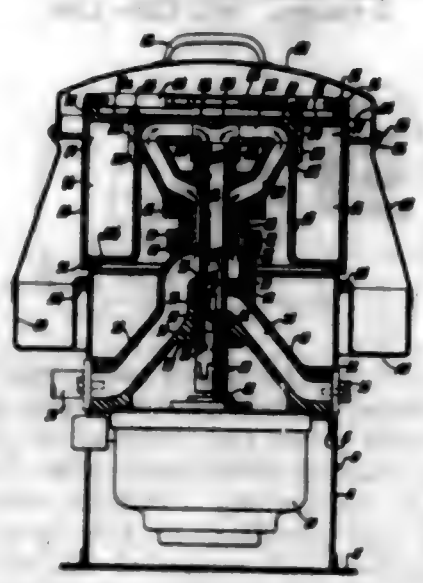
downwardly so as to shed rain as well as obstruct sunlight.

2,898,036
WINDSHIELD WASHER NOZZLE ASSEMBLY
William J. Newill, Spring Valley, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 20, 1957, Serial No. 697,573
4 Claims. (Cl. 239—110)



1. A flushable nozzle assembly for windshield washers including, a housing having a fluid passageway therein, a nozzle element mounted in the housing and having a passage communicating with the passageway therein, said nozzle element having a spray orifice and a flushing orifice, and an annular member rotatably supporting said nozzle element in said housing and having an arcuate portion partially circumscribing said nozzle element, said arcuate portion coacting with said nozzle element to close said flushing orifice and open said spray orifice in one angular position of said nozzle element and to close said spray orifice and open said flushing orifice in another angular position of said nozzle element.

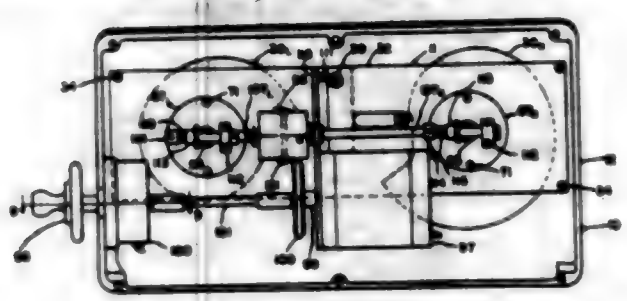
2,898,037
CENTRIFUGE FOR CLARIFYING FLUID
Robert L. Degn, Downers Grove, Ill., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application March 9, 1955, Serial No. 493,890
3 Claims. (Cl. 233—21)



1. A centrifuge for clarifying fluid comprising a support having a fluid inlet passage and a fluid outlet passage

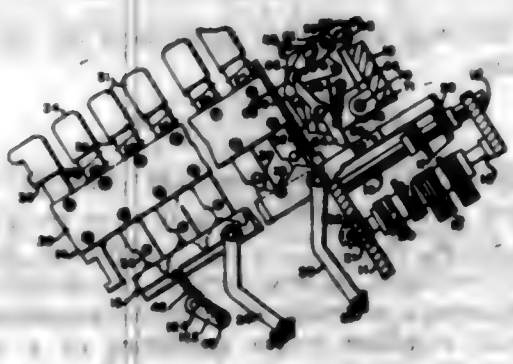
therein, concentric hollow shafts journaled on said support for rotation about a vertical axis and forming ducts communicating separately with said inlet and outlet passages, a centrifuge body connected to said shafts for rotation therewith, passages within said body connecting said ducts, structure around said body forming at least one pocket for the reception of impurities, said structure including a sleeve detachably joined to said body partially to define said one pocket, an opening leading from one of said body passages to said pocket, a receptacle surrounding said body and structure and arranged to form a stationary trough for reception of impurities from said pocket upon removal of said sleeve, a removable cover on said receptacle for concealing said centrifuge body, structure and detachable sleeve, means attached to said body for rotating the same and associated with said support at one end of the body, and said sleeve and cover being removable from said body at the other end thereof.

2,898,038
FUNCTION COMPUTERS
Andre J. Meyer, Elyria, Ohio
Application September 12, 1956, Serial No. 609,408
6 Claims. (Cl. 235—61)



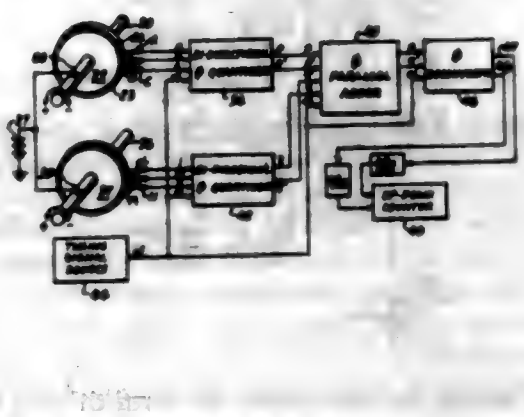
1. A function computer comprising a pair of rotatable shafts, driving means for rotating said shafts, control means operatively connecting said shafts and comprising a cam mounted on each shaft and actuating means operatively connecting each cam with the shaft on which the other cam is mounted whereby said shafts will mutually actuate each other, said cams being dissimilarly contoured so as to obtain a predetermined relative rotation of said shafts, and means for indicating the rotations of said shafts, said actuating means comprising a pinion gear mounted on each shaft and a pair of racks, each rack being operatively engaged with one pinion gear and slidably contacting the cam mounted on the other gear shaft.

2,898,039
CONSTANT FACTOR STORAGE MECHANISM FOR A CALCULATING MACHINE
Emil Ungricht, Dietikon, Switzerland, assignor to Friden, Inc., a corporation of California
Application November 23, 1954, Serial No. 470,725
Claims priority, application Switzerland June 9, 1954
10 Claims. (Cl. 235—79)



1. In a calculating machine having actuating mechanism including ordinally arranged stepped actuating drums, and selection mechanism including ordinally arranged selection slides longitudinally movable to predetermined positions, selection gears movable by said selection slides along corresponding actuating drums and a keyboard including a frame disposed above said selection slides and keys slidably mounted in said frame and engageable with said selection slides to move the latter to said predetermined positions, constant factor storage mechanism comprising a frame extending across said selection slides, levers pivotally mounted in said frame one adjacent each selection slide, abutment means on the selection slides engageable with the corresponding levers to set the levers in accordance with a keyboard setting of the selection slides, means effective to lock said levers in set condition and thus render the levers effective to reset the selection slides to the same setting as that used to position the levers, resilient means connected to said selection slides for individually urging longitudinal movement of the slides, and means rendering said resilient means effective to urge said selection slides in a direction to bring the slide-carried abutment means against the corresponding levers.

2,898,040
COMPUTER AND INDICATOR SYSTEM
Floyd G. Steele, La Jolla, Calif., assignor to Digital Control Systems, Inc., a corporation of California
Application September 26, 1952, Serial No. 311,609
39 Claims. (Cl. 235—151)



9. In combination: first and second movable members, each of said members having positive and negative directions of movement; first means for producing a first output signal train representing the movement of said first member, said signal train including a plurality of first signals each representing an incremental movement in one of said directions and at least one second signal representing an incremental movement in the other of said directions, the direction and magnitude of movement of said first movable member being represented by the sign of the average and the average, respectively, of the increments represented by said first output signal train; second means for producing a second output signal train representing the movement of said second member, said signal train including a plurality of second signals each representing an incremental movement in one of said directions and at least one second signal representing an incremental movement in the other of said direction, the direction and magnitude of movement of said second movable member being represented by the sign of the average and the average, respectively, of the increments represented by said second output signal train; and means for combining said first and second signal trains to produce a third output signal train representing the difference in the movements represented by the first and second signal trains.

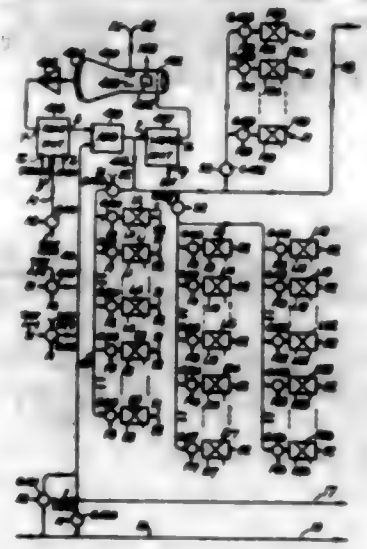
2,898,041

INSTRUCTION MODIFIER MEANS FOR ELECTRONIC DIGITAL COMPUTING MACHINES

Hubert John Crawley, Beckenham, and Christopher Strachey, London, England, assignors, by mesne assignments, to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application December 21, 1953, Serial No. 399,517
Claims priority, application Great Britain December 22, 1952
12 Claims. (Cl. 235—157)

1. An electronic digital computing machine comprising a data signal storage device having a plurality of separately identifiable storage addresses, address selecting means operable by an applied address selection control signal for rendering operative any required one of said addresses, a control system having storage means for recording an applied instruction signal and in accordance therewith controlling the operation of the machine during a single operation cycle to select in turn first and second data signal addresses in said data signal storage device necessary to carry out the desired computation step, said instruction signal including a first address selection control signal part for selecting said first data signal address, a second address selection control signal part for selecting said second data signal address and an instruction modification control signal part, instruction signal-



modifying means for modifying the form of said applied instruction signal in said control system storage means by combination of an applied external modification signal therewith, a source of such modification signals and modification selector means controlled by said instruction modification control signal part of said applied instruction signal for causing the combination of said external modification signal with neither, either or both of said first and second address selection control signal parts in accordance with the form of said instruction modification control signal part before application of said first and second address selection control signal parts to said address selecting means of said data signal storage device.

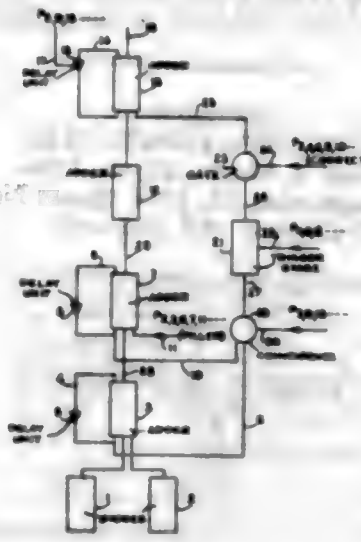
2,898,042

ELECTRONIC ADDING DEVICES

John Ronald Womersley and Ralph Townsend, Letchworth, England, assignors to International Computers and Tabulators Limited, a British company

Application May 11, 1951, Serial No. 225,726
Claims priority, application Great Britain March 9, 1951
6 Claims. (Cl. 235—170)

1. An electronic adding device adapted for adding together two numbers each represented by a serial train of pulses in coded group form, the successive pulse positions of each group representing the values of successive terms of the binary series, having a first serial adding means for adding together the serial pulse trains representing the two numbers to form a first serial sum pulse train, a second serial adding means separate from said first adding means for adding together said first sum pulse train and a pulse train representing in each group a "filler" digit, equal to the difference between the radix of notation of the two said numbers and the sum of all the binary values which may be represented in a single pulse group increased by one, to form a second serial sum pulse train, said first and second adding means operating substantially simultaneously, a third serial adding means separate from said first and second adding means for selectively adding to each pulse group of said second sum pulse train a correction pulse group such that the effect of the addition of the "filler" digit is annulled for any pulse group of said second sum which produced no carry out of the group during the additions in the



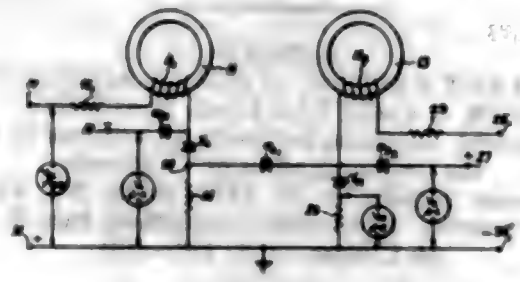
first and second adding means, and means for providing a relative time delay equal to the duration of one pulse group between the additions effected in the second and third adding means.

2,898,043

ELECTRIC CIRCUITS FOR PERFORMING ANALYTIC OPERATIONS

Robert A. Mathias, Pittsburgh, and Leo A. Finzi, Irwin, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application January 18, 1954, Serial No. 404,821
6 Claims. (Cl. 235—178)



1. An electrical circuit for performing the mathematical operation

$$X=\frac{a_1 \cdot a_2 \cdot a_3 \cdot \ldots a_n}{b_1 \cdot b_2 \cdot b_3 \cdot \ldots b_{(n-1)}}$$

wherein a_1, a_2, a_3 . . . a_n represent quantities directly proportional to any number of half-wave rectified voltages, and by b_1, b_2, b_3 . . . $b_{(n-1)}$ represent quantities directly proportional to any number of sinusoidal voltages, comprising a plurality of magnetic amplifier stages, each of said amplifier stages consisting of a magnetic core with a winding thereon, a series circuit including a first half-wave rectifier and a resistor, the rectifier side of such series circuit connected to one end of said wind-

ing said cam member and biasing said plunger into engagement with said power member, a knob for turning said enclosure during said different periods, and further timer operated means arranged to prevent said

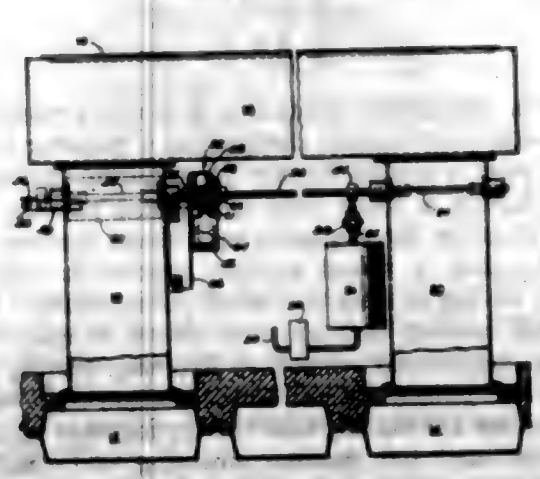
ing, connections for a rectified signal source, connections for a source of sinusoidal voltage, a second half-wave rectifier connected to the junction of said series circuit and the end of said winding, said connections for a rectified signal source connected across said second half-wave rectifier and the resistor end of said series circuit, said connections for a source of sinusoidal voltage connected across the other end of said winding and the resistor end of said series circuit; and at least one connecting halfwave rectifier connected between the junction of the resistor and the first half-wave rectifier of said series circuit and the junction of the winding and the series circuit of a succeeding amplifier stage, thereby connecting said amplifier stages in cascade.

2,898,044

DAMPER CONTROL APPARATUS FOR DUAL DUCT AIR CONDITIONING SYSTEM

Bernard E. Curran and Glenn E. Kautz, Sewickley, Pa., assignors to H. H. Robertson Company, a corporation of Pennsylvania

Application May 6, 1957, Serial No. 657,282
5 Claims. (Cl. 236—1)



1. In a dual duct air conditioning system, an air distributing outlet box having dual inlet ducts adapted for connection to dual air supply ducts, a damper in each inlet duct, said dampers being disposed at right angles to each other under one set of conditions, thermostatically controlled means for operating said dampers to effect closing of one damper while the other damper is opening under said one set of conditions, manually operated changeover means for rotating said one damper through 90° with relation to the other damper under a second set of conditions, said thermostatically controlled means thereafter controlling the operation of the dampers to effect movement of the dampers relative to one another while maintaining the openings substantially identical with each other at all times during the second set of conditions, said manually operated changeover means including a differential connection between said dampers and an operating arm connected thereto for rotating the differential to effect rotation of said one damper relative to the other, said operating arm being movable between two different positions, and means for detachably retaining the arm in its different positions.

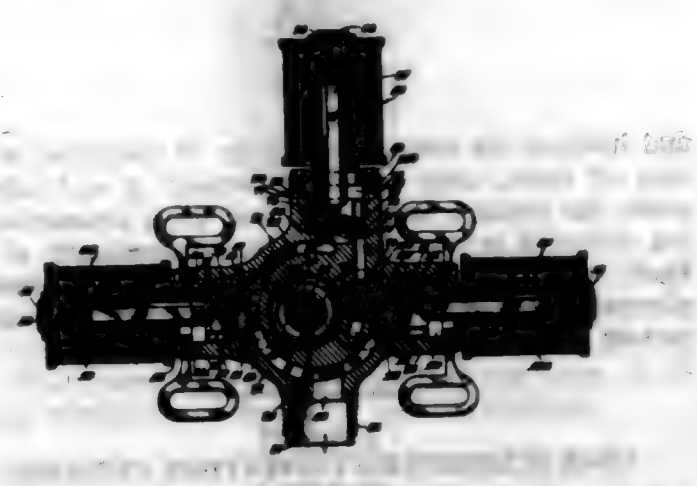
2,898,045

THERMOSTATICALLY RESPONSIVE MIXING VALVES

Wilbert E. Beller, Park Ridge, Ill., assignor, by mesne assignments, to Controls Company of America, Schiller Park, Ill., a corporation of Delaware

Application December 14, 1955, Serial No. 553,062
3 Claims. (Cl. 236—12)

1. A valve of the class described for intermixing hot and cold fluids, comprising, a main valve body, a cylindrical chamber disposed substantially centrally of said valve body, a substantially annular chamber within said valve body substantially surrounding said central chamber, a hot fluid inlet, a cold fluid inlet, first pilot valve means controlling the flow of fluid from said hot fluid inlet to said annular chamber, second pilot valve means controlling the flow of cold fluid from said cold fluid inlet to said annular chamber, a discharge outlet communicating with said annular chamber, a mixing valve means in said central chamber, thermostatic means motivating said mixing valve means in a first direction, spring means opposing said thermostatic means and biasing said mixing valve means in a second direction, first passageway means communicating between said hot fluid inlet and one end of said central chamber, second passageway means communicating between said cold fluid inlet and the opposite end of said central chamber, axial movement of said mixing valve means in said first and second directions serving to control and proportion the flow of said hot and cold fluids into the opposite ends of said central chamber for their intermixture adjacent and surrounding said thermo-



static means, a third pilot valve means communicating with said annular chamber, an outlet means leading from said central chamber to said third pilot valve means whereby the flow of intermixed fluids into said annular chamber is controlled by the operation of said third pilot valve means, and means for selectively operating said first, second and third pilot valve means individually or simultaneously to achieve a plurality of intermixtures of said hot, cold and intermixed fluids in said annular chamber.

2,898,046

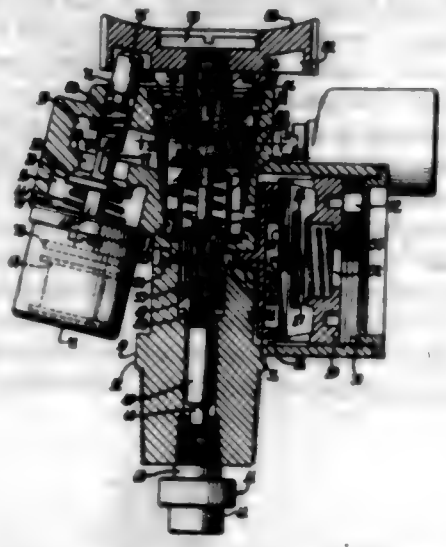
GAS WATER HEATER COMBINATION CONTROL VALVE

Samuel G. Eskin and Joseph M. Algine, Chicago, and Thomas B. Legeza, Westchester, Ill., assignors to The Dole Valve Company, Chicago, Ill., a corporation of Illinois

Application December 31, 1954, Serial No. 479,020
3 Claims. (Cl. 236—21)

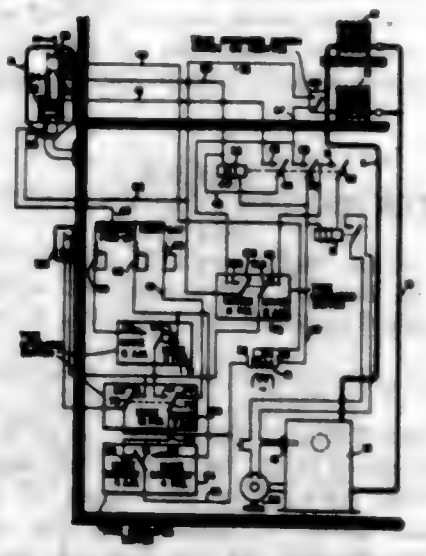
1. In a safety gas control valve, a valve body, an inlet into said valve body, an outlet from said valve body, a rotary valve controlling the supply of gas from said inlet to said outlet, a thermostatically operated shut-off valve for shutting off the flow of gas through said outlet upon predetermined temperature conditions, a thermostatic element for operating said shut-off valve comprising a cylinder threaded within said valve body, a casing on the outside of said valve body having communication with said cylinder and containing a fusible thermally expansible material, and a power member extensibly movable with respect to said cylinder upon fusion of the fusible material within said casing, a plunger in axial alignment with said power member, a cam member held from rotatable movement and threaded on said plunger and having operative connection with said valve for shutting off the same upon extension of said power member from said cylinder, a spring engag-

ing said cam member and biasing said plunger into engagement with said power member, a knob for turning said rotary valve, and a releasable drive connection between said knob and said plunger for rotating said plunger upon turning movement of said knob and rotary valve to move said cam member toward said power member



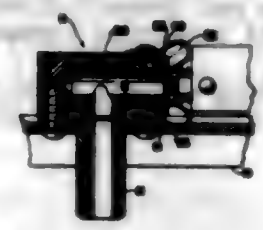
and increase the temperature range of operation of said shut off valve, upon turning movement of said valve to admit gas through said outlet, said drive connection being operative to turn said plunger independently of said knob and rotary valve, to calibrate said thermostatic element by varying the position of said cam with respect to said power member.

2,898,047
TIME SCHEDULED CONDITION CONTROL SYSTEM
Gene T. Gaddis, Edina, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application June 7, 1954, Serial No. 434,935
5 Claims. (Cl. 236—46)



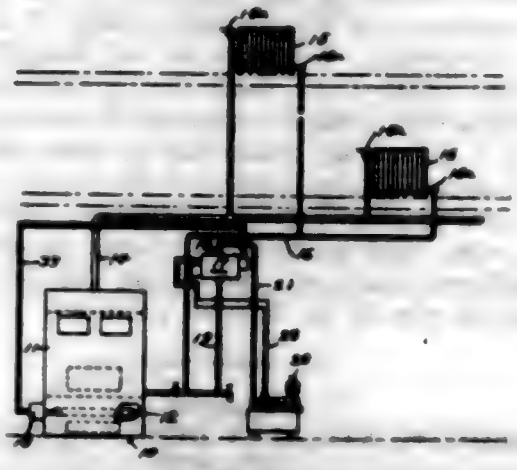
4. In a temperature control system, heat furnishing means for furnishing a supply of heated medium to an enclosure, cyclically operative means including temperature responsive means responsive to outdoor temperature for cyclically causing operation of said heat furnishing means for periods of time dependent upon the value of the outdoor temperature and independent of the attainment of any predetermined temperature within said enclosure, timer operated schedule means connected to said cyclically operative means and operative during different periods for reducing the periods of time for a given outdoor temperature during which the heat furnishing means is operated so as to maintain a lower temperature in said enclosure during said different periods, and further timer operated means arranged to prevent said cyclically operated means from causing any operation of said heat furnishing means for a selected period at the beginning of one of said different periods at which a lower temperature is to be maintained so as to cause said lower temperature to be attained more rapidly than if cyclic operation of said heat furnishing means were permitted during said selected period.

2,898,048
CONTROL APPARATUS
Edward P. Stucka, Deerfield, Ill., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application June 6, 1956, Serial No. 589,771
3 Claims. (Cl. 236—87)



1. In a controller, condition responsive means, valve means, said valve means comprising a member having an exhaust port, a seating surface surrounding said port, said surface having a knife edge-like raised portion, a valve seating member for engaging said raised portion to close off said valve, a raised portion concentric said seating member having at least two pivot points slightly removed from said seating surface, said points having the same height as said raised portion so that said seating member engages said points and said raised portion simultaneously, spring means for biasing said seating member against said seating surface, and means connecting said condition responsive means to an extremity of said seating member so that upon a need of operation of said valve means said seating member is pivoted about said points to provide an opening between said member and said raised portion.

2,898,049
CONTROL FOR VACUUM HEATING SYSTEMS
James Edward Parkins, Clarks Summit, Pa., assignor to Parkins Compound Boiler Co., Inc., Clarks Summit, Pa., a corporation of Pennsylvania
Application July 23, 1957, Serial No. 673,732
2 Claims. (Cl. 237—9)



1. In a vacuum heating system of the type including a furnace, a burner in said furnace, radiators, a steam line connecting said furnace to said radiators, a return line connecting said radiators to said furnace and a control reservoir connected in said return line in constant communication with said return line, an upper float positioned in said control reservoir, a lower float positioned in said

2,898,053
IMPACT CRUSHING MACHINE

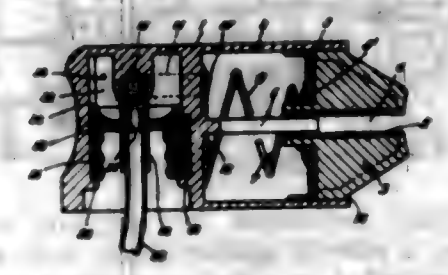
ting the circumferential turns other than the reversely

control reservoir spaced below said upper float, switch control means secured to said upper float and electrically connected to said burner to effect operation of said burner with said upper float in its lowermost position, a vacuum pump connected to said return line and switch control means secured to said lower float and electrically connected to said vacuum pump to interrupt operation of said vacuum pump with said lower float in its uppermost position.

ERRATUM

For Class 239—110 see:
Patent No. 2,898,036

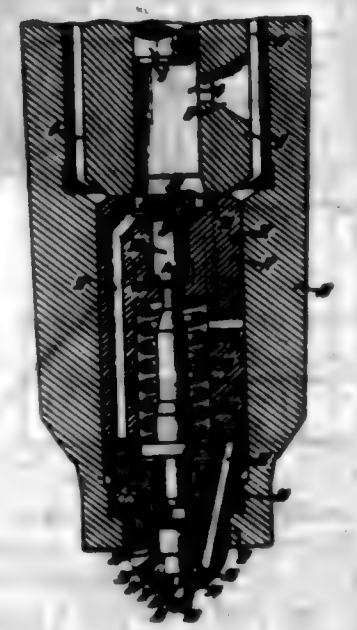
2,898,050
ATOMIZERS
Félix René Lefranc, Vitry-sur-Seine, France, assignor to Fernand Aubry, Paris, France, a French company
Application January 17, 1956, Serial No. 559,728
Claims priority, application France January 21, 1955
8 Claims. (Cl. 239—361)



1. An atomizer of non-rigid and unbreakable material adapted to be mounted on a screw threaded bottle, comprising a hollow head open at one end and closed at the other end thereof, a pump cylinder rigid with said head, a piston reciprocably mounted within said pump cylinder and provided with a bore open to the atmosphere and adapted to be obturated when said piston is pushed into said cylinder, guiding means for said piston, resilient restoring means for said piston, a passage in said head communicating with said pump cylinder, a spraying unit positioned in said passage and open to the atmosphere, a screw threaded cap located within said head and fixedly attached thereto, said cap being adapted to be mounted on the bottle and having a top wall extending transversely through the interior of said head and dividing the interior into an open chamber and a reserve chamber comprising the closed end of said head, a sucking hose communicating with the spraying unit and extending through the top wall of said cap, a small orifice provided through said top wall and communicating with said closed chamber, said reservoir chamber being formed at a predetermined distance from said closed end of said head with a hole opening to the atmosphere.

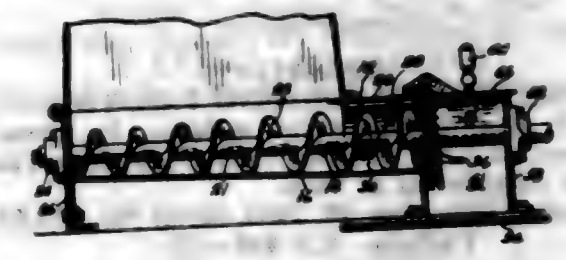
2,898,051
FLUID INJECTION DEVICE
Conrad A. Teichert, Grand Rapids, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application August 15, 1957, Serial No. 678,370
7 Claims. (Cl. 239—533)

1. In a pressure fluid injector, a valve body having a bore and an injection fluid inlet to said bore, a valve in said bore and movable in one direction in said bore in response to inlet fluid pressure in the bore, said bore having a plurality of injection fluid outlets so located as to be normally blocked by the valve and to be sequentially uncovered by the valve during its movement in said direction, resilient means opposing movement of the valve in said direction, a passage connected to said inlet and a member positioned in said valve body and in the path of travel of said valve during its movement in said direction, said member being normally spaced from said valve by a gap of predetermined extent and operatively engageable and movable by the valve only after an initial movement of said predetermined extent of the valve in said direction, said member having an effective area



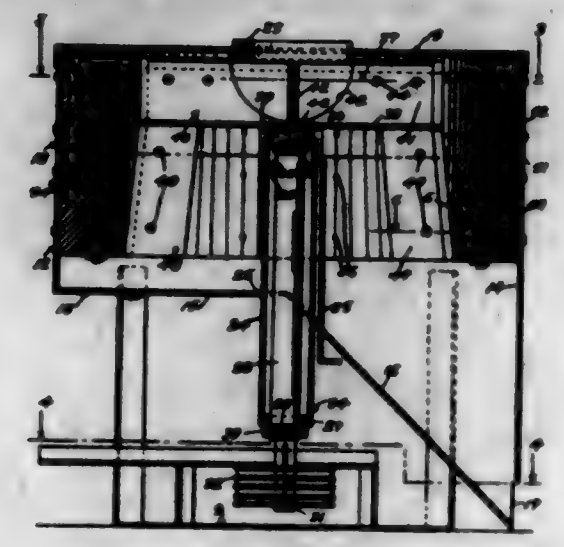
reacted upon by inlet fluid pressure in said passage in opposition to movement of the member by the valve, said effective area being smaller than that over which said inlet fluid pressure in said bore acts on the valve in effecting movement of the valve in said direction.

2,898,052
FEEDER CONSTRUCTION
George M. Kautz, Danville, Ill., assignor to Louhoff Grain Company, Danville, Ill., a corporation of Illinois
Application August 31, 1955, Serial No. 531,765
2 Claims. (Cl. 241—84)



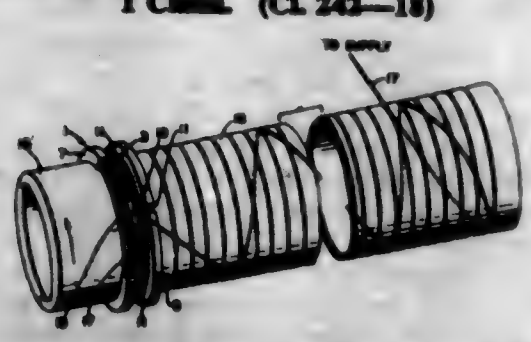
1. In an apparatus for feeding comminuted material and the like at uniform rates through an outlet orifice, the combination comprising a bin for holding such material to be fed, said bin having a plurality of outwardly sloping sides forming a frustrum of a pyramid, at least one screw conveyor means disposed along the length of and beneath the bottom of said bin, said screw conveyor means comprising a tapered helical blade disposed about and affixed to a shaft, the length of said shaft exceeding the length of said bin whereby an end portion thereof is located exteriorly of the bin, motive means in communication with the exteriorly positioned end portion of said shaft for rotatably driving the same, a shroud member surrounding the end portion of said shaft blade, said shroud defining in part an orifice through which said comminuted materials are forced, barrier means disposed across said orifice whereby masses of said comminuted materials are broken down upon emerging from said orifice, and cover means disposed over said exteriorly positioned shaft portion for preventing build-up of comminuted materials emerging from said orifice thereon.

2,898,053
IMPACT CRUSHING MACHINE
Harry J. Rogers, Pleasanton, Tex.
Application January 3, 1958, Serial No. 706,948
4 Claims. (Cl. 241—275)



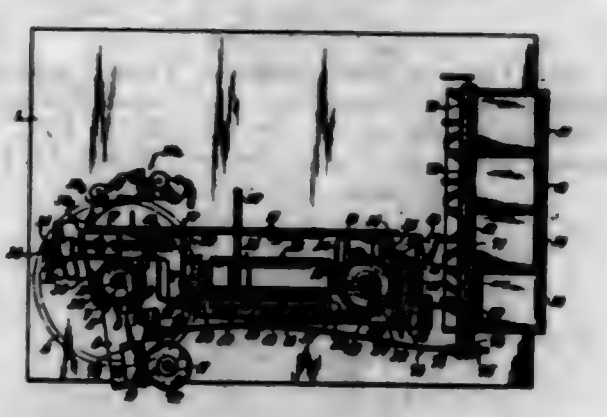
1. An impact crushing machine for rock, stone, gravel and other materials to be crushed, comprising a fixed shell, a rotatably driven rotor mounted centrally within a portion of said shell and including a substantially flat disc, said shell having a corrugated inner face disposed substantially concentrically around and spaced outwardly from said rotor, said shell having a top portion provided with substantially centrally disposed inlet opening through which material to be crushed is adapted to be fed by gravity onto said disc, rigid vane members fixed to and rising from said disc and extending inwardly from adjacent the periphery of the disc, said vane members being rotatable with the disc, beneath said top portion, for hurling the material by centrifugal force from the disc against said corrugated shell face, and arms fixed to and extending downwardly from the underside of the outer portion of said disc, said arms being of substantial radial width and having downwardly and outwardly inclined outer edges disposed in downwardly converging relation to the corrugated inner shell face.

2,898,054
METHOD OF FORMING TAIL-TIE
William F. Rea, Toledo, Ohio, assignor, by mesne assignments, to L. O. F Glass Fibers Company, Toledo, Ohio, a corporation of Ohio
Application December 30, 1954, Serial No. 478,622
1 Claim. (Cl. 242—18)



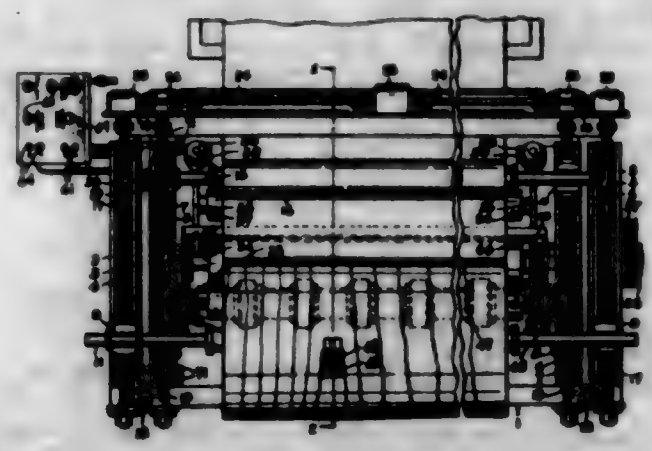
A process of winding a package from a continuous strand of fibrous material which comprises, initially winding a strand as a plurality of circumferential turns about a removable element of a mechanical support, drawing the inner end of the strand from the circumferential turns in a reverse direction while retaining the circumferential turns of the strand in position and while supporting the reversely drawn portion, continuing the passage of the strand from the reversely drawn portion about the support to lock the said inner end on the support, then winding a main body of the strands on said support, cutting the circumferential turns other than the reversely drawn end to remove the same from the removable support and thus leave the inner end as a tail, and then removing said support to provide a package with an access tail.

2,898,055
REVERSING MECHANISM FOR MAGNETIC SOUND RECORDERS
Ernst Gemming, Franberg uber Unterlaus, and Gunther Herrmann, Rommenberg im Diester, Germany, assignors to Protona Produktionsgesellschaft fuer Electronkustische Gerate G.m.b.H., Hamburg, Germany
Application October 22, 1956, Serial No. 617,607
Claims priority, application Germany October 24, 1955
9 Claims. (Cl. 242—55.12)



1. A reversing mechanism for magnetic sound recorders having a pair of spaced spools with associated friction discs mounted on a base comprising a first slide reciprocable along a line parallel to a line connecting the axes of said spools, a driven clutch roller also mounted on said slide parallel to said line connecting said axes of said spools and movable to engage one or the other of said friction discs for drivingly engaging said spools, running brakes also mounted on said first slide for engaging the respective spools, a second reciprocable slide parallel to said first slide, locking brakes for said spools mounted on said second slide and means for operating said slides mechanically.

2,898,056
MACHINE FOR SPLICING PAPER
Russell Q. Triquet, Kalamazoo, Mich., assignor to Kalamazoo Vegetable Parchment Co., Parchment, Mich.
Application December 6, 1954, Serial No. 473,167
18 Claims. (Cl. 242—58.2)



11. A paper splicing machine comprising, a frame having spaced side members, a first pair of slide ways on said side members, bearing blocks slidable in said ways and adapted to removably support the core shaft of a roll of paper with the roll disposed between said side members, a second set of slide ways on said side members parallel to said first set, other bearing blocks slidable in said second ways and adapted to support a sec-

spinner assembly for guiding the nozzle of the object to be refueled into connection with said flexible fuel

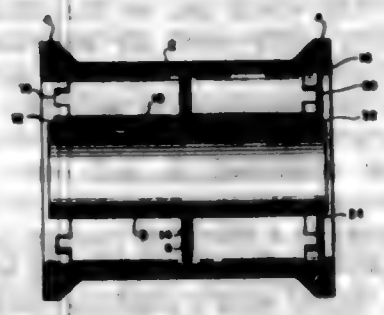
posed between each stock rail and switch point on each

ond core shaft of a second roll of paper disposed between said side members, means connected to move said bearing members along said ways, the bearing blocks on each set of ways being disposed in clearing relation to the blocks on the other set of ways and a shaft carried thereby, and a roll disposed between said side members at a point between the ends of said slideways to deliver the outgoing web from a roll of paper supported on either of said slideways and adapted to be engaged by the surface of a thick roll of paper stock supported and advanced by the blocks on either pair of slide ways but in clearing relation to a thick roll of paper stock advanced by the blocks on the other pair of slideways.

2,898,057
SPOOLS

Malcolm Curry, Roxbury Township, Morris County, N.J., assignor to The American Thread Company, New York, N.Y., a corporation of New Jersey

Application November 18, 1955, Serial No. 547,762
2 Claims. (Cl. 242—118.4)



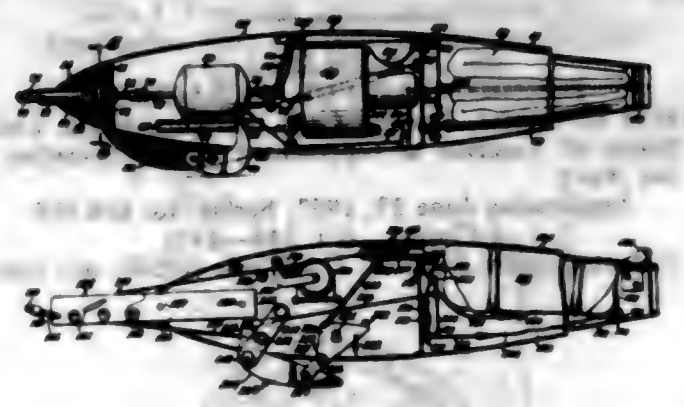
1. A plastic thread spool provided with labeled ends attached thereto without the use of adhesive comprising an open ended barrel having flanges projecting from the ends thereof to provide label bearing surfaces, a central core coaxially supported within said barrel, a web integrally connecting said barrel and core and positioned midway of the ends of the core whereby said core is supported in said barrel solely by said web, said core being provided with shoulders spaced from the ends thereof, said label bearing surfaces on said barrel being spaced outwardly a slight distance from the plane of the shoulders on said core, and annular disc shaped labels centrally supported on the ends of the core and marginally abutting said shoulders and label bearing surfaces whereby the ends of said barrel are enclosed and the labels are retained in place on the ends of the spool, said labels being press-fitted on the ends of the core.

2,898,058
TOW TARGET

Bruce E. Del Mar, Los Angeles, Calif., assignor to Del Mar Engineering Laboratories, Inc., Los Angeles, Calif., a corporation

Application January 20, 1954, Serial No. 405,090
27 Claims. (Cl. 244—3)

1. An aerial tow target adapted for connection with a cable for towing by an aircraft, said target having: spring means to resist tension in said cable; movably mounted means to releasably connect said spring means with the cable whereby said connecting means moves in response to changes in the cable tension; a first brake means on the tow target to increase the drag thereof, said brake means being responsive to movements of said connecting means to operate when slack develops in the cable; a second brake means on the tow target to increase the drag thereof; motor means on said tow target to release said cable means and to cause operation of said second brake means; signal-responsive means for energizing said motor means by remote control; and a normally folded parachute adapted to open in response



to said signal responsive means to lower the tow target to the ground.

2,898,059
FUSELAGE SHAPING TO REDUCE THE STRENGTH OF THE INITIAL SHOCK WAVE ON LIFTING AIRPLANE WINGS

Richard T. Whitcomb, Hampton, Va.

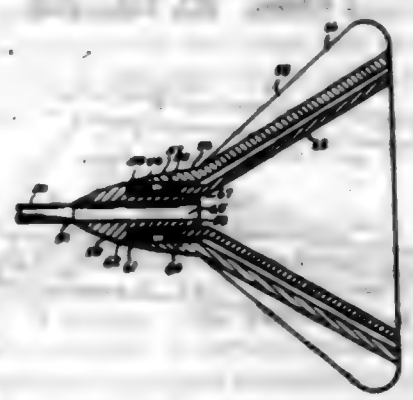
Application September 11, 1957, Serial No. 683,431
4 Claims. (Cl. 244—130)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In an airplane, a fuselage, a wing extending from said fuselage, said fuselage having the top thereof indented from normal streamline configuration in the longitudinal vicinity of said wing, the volume of said indentation being approximately equal to the volume of said wing above the chord plane of the wing.

2,898,060
TRAILING MEMBER SPINNING ASSEMBLY

Donald G. Everhart, Dayton, Ohio

Application January 20, 1955, Serial No. 483,183
5 Claims. (Cl. 244—135)
(Granted under Title 35, U.S. Code (1952), sec. 266)

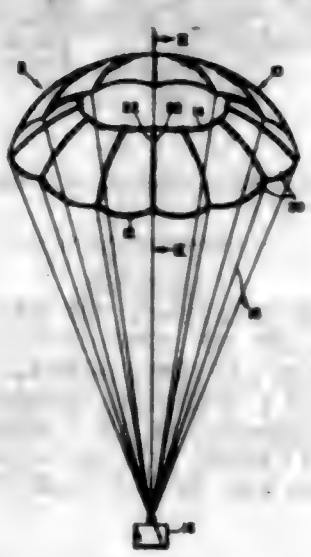


1. In a refueling device, a flexible fuel line including a trailing free end adapted to trail behind a vehicle moving through a fluid, a spinner assembly including first and second members, said trailing free end connected to said first member to provide a connecting extension for the fuel line, said second member rotatably connected to said first member, means on said second member for producing a rapid rotation of said second member, said rotating second member having a mass sufficiently large and so distributed with respect to its axis of rotation that the gyroscopic forces produced are large enough to effectively damp erratic movements of the fuel line produced by turbulent fluid pressures acting on it, and means on said

able in said second ways and adapted to support a sec-

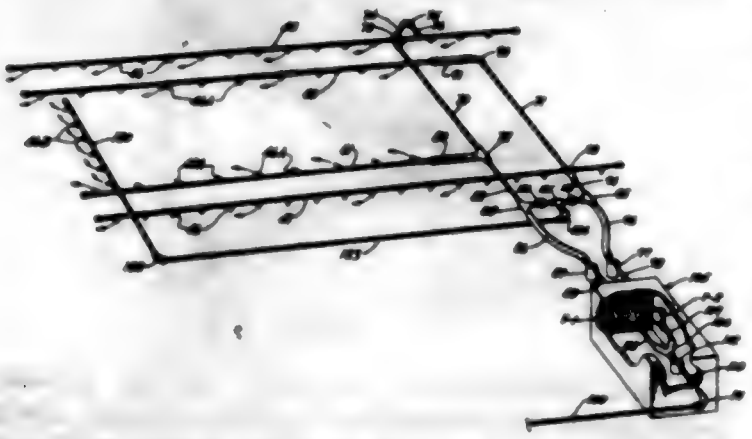
spinner assembly for guiding the nozzle of the object to be refueled into connection with said flexible fuel line.

2,898,061
TOROIDAL AIRFOIL PARACHUTE
Walter C. Bubier, Reseda, Calif., assignor to the United States of America as represented by the Secretary of the Navy
Application June 27, 1957, Serial No. 668,585
4 Claims. (Cl. 244—145)
(Granted under Title 35, U.S. Code (1952), sec. 266)



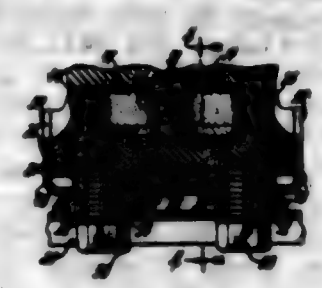
1. A parachute comprising a canopy having depending shroud lines, said canopy constructed to form the zone of a torus and having a skirt portion having inner and outer peripheral edges, said inner edge defining a substantially circular vent opening in the apex thereof, the diameter of said vent opening being within the limits of from forty to sixty-five percent of the normal diameter of the skirt, said canopy being connected to the shroud lines only at the outer edge of the skirt.

2,898,062
BLOWERS FOR RAILWAY SWITCHES
Oscar F. Magnus, Tinley Park, Ill., assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Application November 6, 1956, Serial No. 620,688
1 Claim. (Cl. 246—428)



In a railroad switch installation having elongated laterally spaced stationary stock rails and laterally spaced movable switch points located between the stock rails and each positioned adjacent a stock rail, and wherein the switch points are joined by a head rod for shifting the switch points in unison, and wherein the switch points slide on slide plates fastened to the ties: a first pair of elongated compressed air-conducting manifolds extended generally parallel to said rails and respectively disposed between each stock rail and switch point on each side of the railroad switch, each of said manifolds in the first pair of manifolds having spaced discharge ports along the length thereof in position to discharge compressed air from the manifolds into the space between the stock rail and the adjacent switch point, a second pair of elongated compressed air-conducting manifolds extended generally parallel to said rails and respectively disposed at the sides of the switch points which face away from the first-named manifolds on each side of the railroad switch, each of said manifolds in the second pair of manifolds having discharge ports along the length thereof in position to discharge compressed air from such manifolds on to the slide plates, another manifold extending between the second pair of manifolds generally transverse of the first and second pair of manifolds and parallel to the ties and head rod and located adjacent the head rod, said other manifold having discharge ports in position to discharge compressed air from said other manifold along the length of said head rod, a first supply conduit for compressed air connected to that manifold in the first pair of manifolds which lies on one side of the switch and connected to that manifold in the second pair of manifolds which lies on the other side of the switch to supply compressed air commonly thereto, a second supply conduit for compressed air connected to the remaining two manifolds in said pairs of manifolds to supply compressed air commonly thereto, a third supply conduit connected to said other manifold to supply compressed air independently thereto, a main conduit connected to a source of compressed air, settable two-position valve means connecting said main conduit to said first and second supply conduits, said valve means having one set position whereat the first supply conduit receives compressed air from said main conduit while the second supply conduit receives none and said valve means having a second set position whereat the second supply conduit receives compressed air from said main conduit while the first supply conduit receives none, means movable with the switch points to set said valve means in one of the two positions therefor, and means for supplying compressed air from said main conduit to said third supply conduit at all times irrespective of the setting of said valve means, the last-named means including a header conduit connected to and between said first and second supply conduits, oppositely working check valves in the header conduit positioned to admit air from the first and second supply conduits to the header conduit, and said third supply conduit being connected to the header conduit between said check valves.

2,898,063
RESILIENT SUPPORT
Robert T. Doughty, Detroit, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 25, 1954, Serial No. 464,439
1 Claim. (Cl. 248—9)

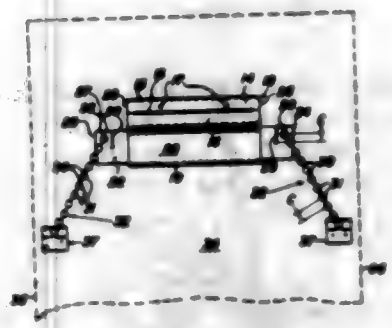


In a resilient mounting adapted to be interposed between two relatively movable members, said mounting comprising a core element attachable to one of said relatively movable members, a casing attachable to the other

on the links, the relation between the pivotal point of

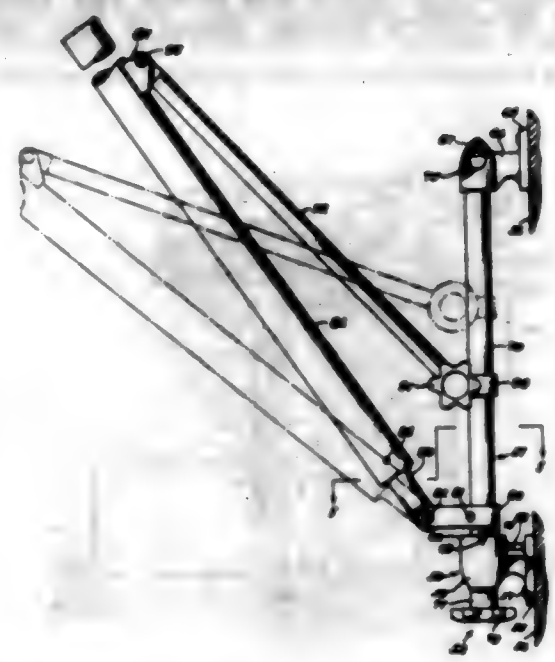
of said relatively movable members and disposed about said core in spaced relation thereto, and a resilient body member enveloping said core and having portions thereof compressively interposed and extending between opposed surfaces of said core and said casing for resiliently opposing relative vibratory movement therebetween, the outer faces of said resilient portions being maintained in compressive frictional engagement with the surfaces of said casing, the improvement comprising: two opposite portions of said body member extending laterally from opposite sides of said core having a plurality of substantially parallel grooves formed therein, said grooves opening on the casing-engaging faces of each of said opposite portions and dividing said opposite portions into a plurality of parallel bosses, a further portion of said body between said two opposite portions having substantially parallel passages therein extending transversely of the body and interconnecting the respective ends of said grooves in said two opposite portions at one end thereof, and recessed portions in said body intercepting the opposite ends of said grooves, said casing having a part thereof cut away to provide communication between said recessed portions and the atmosphere without said casing whereby vibratory movement of said members flexing and compressing said opposite portions causes alternate expansion and contraction of said grooves thereby inducing and circulating cooling air through said grooves and said parallel passages.

2,898,064
PICTURE HANGER DEVICE
Ralph C. Scott, Rochester, N.Y.
Application November 23, 1956, Serial No. 623,996
2 Claims. (Cl. 248—31)



1. A picture hanger device, comprising in combination, a base plate attachable in a fixed relation on a support, a picture supporting member of a length greater than said plate, means on said plate supporting said member slidably on said plate so that said member may be adjusted laterally relative to said plate to adjust a picture laterally relative to said plate, said supporting member being formed with at least a pair of open end slots extending downwardly from the top edge thereof adjacent the ends thereof and laterally of said plate, a picture, brackets secured to the rear side of said picture adjacent the opposite edges thereof, each of said brackets being formed with at least a pair of vertically spaced open end slots, and separate chain members connecting the slots of said supporting member to the slots of said brackets to support said picture from said supporting member, the vertical distance between the bottoms of the slots on each end of said supporting member and the vertical distance between the slots of said bracket being substantially equal to the length of a link of said chain, the arrangement of the slots being such that by the proper selection of the slots a very accurate adjustment of the opposite edges of the picture can be obtained to level the picture.

2,898,065
OUTRIGGER FISHING POLE SUPPORTS
Thomas Ackley, Philadelphia, Pa., assignor to John J. Donovan, Newtown Square, Pa.
Application May 28, 1956, Serial No. 587,587
4 Claims. (Cl. 248—40)

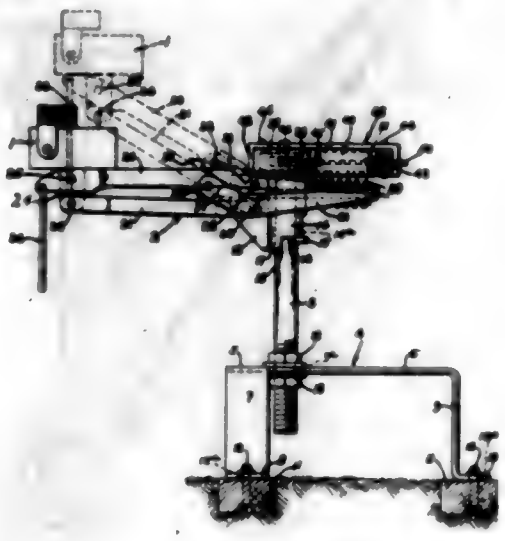


1. An outrigger fishing pole mount comprising a base adapted to be fixed to a generally upright supporting surface, an upwardly opening socket member fixed to said base, a plurality of circumferentially spaced lugs projecting upwards from said socket member and defining in the inter-lug spaces a plurality of circumferentially arranged notches, an upstanding rod having its lower end portion received in said socket member for rotative and up and down movement therein, a second socket member adapted to be fixed to said supporting surface directly over and opening downward toward said first-named socket member, said second socket member slidably receiving the upper end of said rod for accommodating said rotative and up-and-down movement of the latter, a cross-piece on said rod and movable therewith for selective engagement in said notches to lock said rod against rotation when in its downward position, a pole holder extending from said rod for rotation therewith and swingable up and down relative thereto, and fastener means arranged below said socket member and in threaded engagement with the lower end portion of said rod for releasably holding the latter in its selected position of rotation.

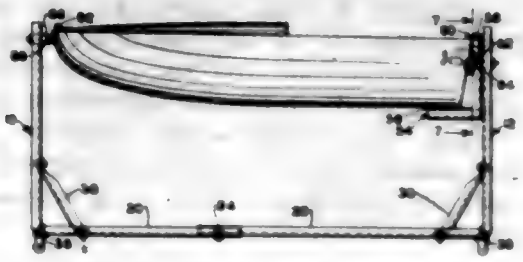
2,898,066
RURAL MAIL BOX
Maxime E. Ouellette, North Brewer, Maine
Application June 6, 1957, Serial No. 664,814
3 Claims. (Cl. 248—145)

1. In a rural mail box, a vertical stationary supporting post, a hub member mounted thereon for turning movement about a vertical axis, means supporting said hub member in its operative position on the post, a mail box supporting arm extending laterally from the hub member and pivotally mounted thereon to swing in a vertical direction between a normal lower position and an elevated position, a pair of links pivoted coaxially to said arm on one side of the hub member and extending to a position on the opposite side thereof and terminating in free ends, a projection extending laterally from the hub portion in the opposite direction from that of the arm, a coiled spring carried by the projection and having one end bearing against the hub portion and the other against the free ends of the links, said spring being under compression and exerting a pulling force

on the links, the relation between the pivotal point of the links with the arm and the pivotal point of the arm with the hub member being such that the pulling force of the spring is applied to the arm at a point below the pivotal axis of the arm when the latter is in its lowered normal position and above said pivotal axis when the arm is in its elevated position, means to limit the upward swinging movement of the arm when it reaches its elevated position, and means to limit the downward swinging movement of said arm when it reaches its normal position whereby said spring yieldingly holds the arm in either its normal or elevated position, the turning movement of the hub member about its vertical axis providing for a horizontal swinging movement of the mail-box supporting arm.

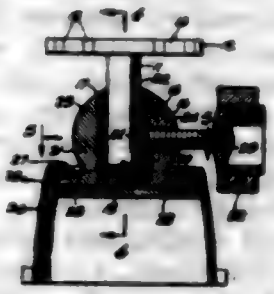


2,898,067
DISPLAY STAND FOR BOATS
William H. Hiser, Decatur, Ill.
Application October 2, 1957, Serial No. 687,715
8 Claims. (Cl. 248—176)



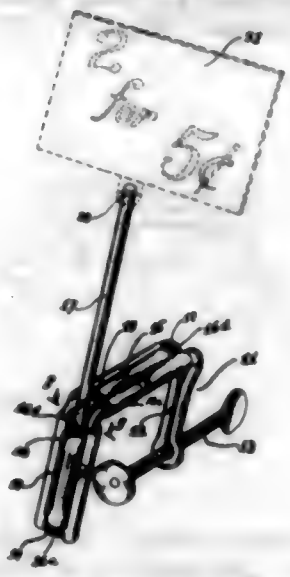
3. A boat display stand consisting of two detachable sections, each section comprising a standard having an elongated, horizontal base member supported on a pair of casters, one near each end of said base member, and a horizontal connecting member extending perpendicular from said base member, means for detachably connecting said horizontal connecting members in various overlapping relationships thereby to vary the length of the stand between said standards, a trunnion on each of said standards near its upper end, means including a clevis for pivotally supporting the bow end of a boat on one of said trunnions adjacent one of said standards, a vertical stern supporting member pivotally supported on the other of said trunnions adjacent the other of said standards, said pivoted stern supporting member including a horizontal projection extending therefrom toward said first-mentioned standard for supporting the stern end of a boat, and clamping means pivotally mounted on said pivoted stern supporting member for clamping the stern end of a boat thereto.

2,898,068
SUPPORT HAVING THREE AXES OF ADJUSTMENT AND SINGLE LOCKING HANDLE
Robert L. Warren, Southgate, Calif.
Application February 26, 1957, Serial No. 642,544
7 Claims. (Cl. 248—183)



1. In a work support device, the combination of a post, a split bushing having a bore receiving the post, a split carrier having a cavity for reception of the bushing, and permitting turning movement of the bushing about a certain axis, a stationary base supporting the carrier for rotary movement about an axis normal to the first said axis, and a clamp means engaging the carrier and the split bushing, the clamp means being adapted to contract the bushing on the post and to expand the carrier into engagement with the base, whereby movement of the carrier and bushing is prevented.

2,898,069
CLAMPS
Eugene Kramer, Long Island City, N.Y.
Application February 16, 1956, Serial No. 565,966
4 Claims. (Cl. 248—226)



1. A clamp for the display of signs comprising a double wire loop C-clamp comprising a single strand of wire folded back upon itself, sheet metal sheaths connecting the side-by-side wire strands of the back and one end of said double wire loop C-clamp, said sheaths forming openings, a rod received in one of said openings, and an adjustable holding clamp screw threadly received in another end of said double wire loop C-clamp for adjusting the axial distance between said holding clamp screw and said one end of said double wire loop C-clamp.

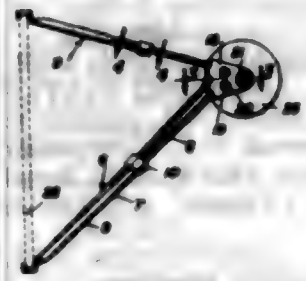
2,898,070
REAR VIEW MIRROR ATTACHING BRACKET
Walter H. De Vaan, Yankton, S. Dak.
Application August 29, 1956, Serial No. 606,853
1 Claim. (Cl. 248—226)

A mirror attaching bracket comprising a plurality of arms arranged in diverging relation to each other, channel-shaped clamping members at the diverging ends of the arms disposed in triangular arrangement for gripping edges of a supporting structure, ball members on the converging ends of the arms, a pair of triangular plates dis-

2,898,074

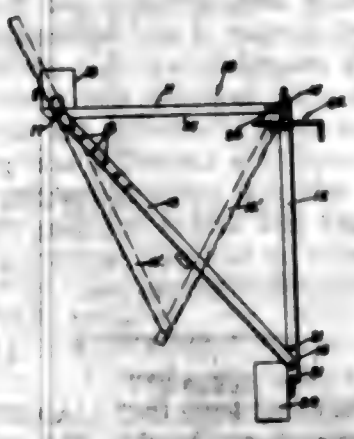
openings into said box to clear the margins of said

posed side by side and having corresponding straight edges provided conjointly with sockets spaced along the same in alignment and receiving said ball members, means connecting the plates together with the sockets clamp-



ingly engaging the ball members, a mirror, and means including a ball and socket pivotally connecting the mirror to said plates at one corner of the plates remote from said straight edges.

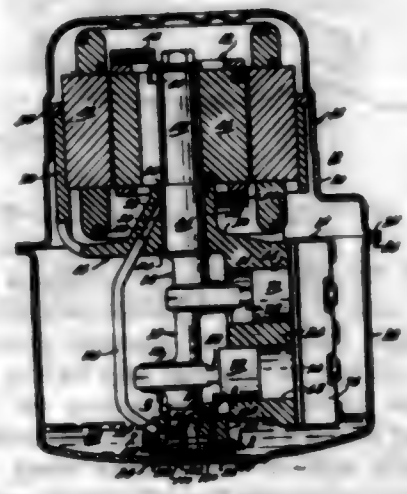
2,896,071
PIVOTED ANCHOR BRACKET FOR ADJUSTABLE KNEE BRACE
Ernest C. Williams, Grand Rapids, Mich.
Application July 5, 1955, Serial No. 519,686
10 Claims. (Cl. 248—242)



10. In an adjustable knee brace for supporting a catwalk along a supporting structure, said knee brace having a horizontal leg, a vertical leg, a diagonal leg, and means for pivotally securing said horizontal and vertical legs together with said vertical leg adapted to bear against said supporting structures; said diagonal leg being secured to said horizontal and vertical legs to form a triangle; means for varying the relative angle between said horizontal leg and vertical leg whereby when said horizontal leg is maintained level said vertical leg is adapted to bear against supporting structures having different batters; an anchor bracket comprising a member pivotally secured to said knee brace relative to said horizontal and vertical legs; first and second openings in said bracket; an opening in said horizontal leg adapted to be aligned with said first opening in said bracket and an opening in said vertical leg adapted to be aligned with said second opening in said bracket; and a pin for detachably securing said bracket to said horizontal leg when said opening in said horizontal leg and said first opening are aligned and for detachably securing said bracket to said vertical leg when said opening in said vertical leg and said second opening are aligned, whereby the position of the bracket can be selectively determined by the position of the leg to which it is attached.

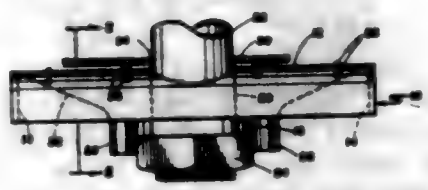
2,896,072
LUBRICATING SYSTEM FOR REFRIGERANT COMPRESSORS
Oskar H. Buschmann, Sidney, Ohio, assignor to Copeland Refrigeration Corporation, Sidney, Ohio, a corporation of Michigan
Application February 23, 1954, Serial No. 411,683
6 Claims. (Cl. 230—206)

1. In a lubricant pumping and refrigerant separating mechanism for a refrigerant compressor of the type having a substantially sealed case wherein liquid normally stands at a level and wherein a gaseous atmosphere occupies the space above such level, a pump rotor rotatable in said case upon a substantially vertical axis and having a vertically extending inlet portion having a submerged mouth located substantially on said axis, and having centrifugal impeller portions communicating with and extending radially outwardly from said inlet portion, a pump housing portion surrounding said impeller portions and having



an outlet through which liquid may be delivered to a desired destination, means for separating lighter constituents from the liquid, comprising a vent-defining passage portion extending both upwardly and radially and rotatable coaxially of said rotor and communicating at its lower end directly with said inlet portion at a position above the inner end of said impeller portions and at the other end having a substantially unobstructed discharge opening above said level.

2,896,073
MOUNTING FOR A LIGHTING FIXTURE
Louis D. Black, Jr., Lomita, and Samuel A. Brown, Los Angeles, Calif.
Application February 27, 1956, Serial No. 568,038
9 Claims. (Cl. 248—317)

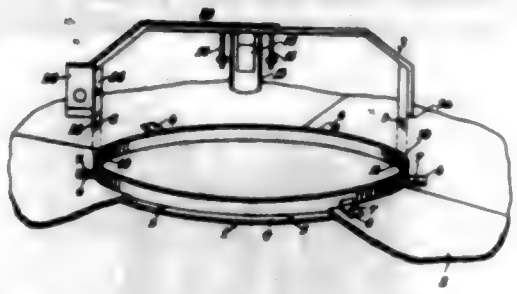


2. Hanger means for use in a horizontally elongated lighting fixture, said hanger means comprising: horizontal suspension plate means; a plurality of substantially inflexible hanger stem; an elongated support member centrally secured to the lower end of each stem; each of said members comprising opposed, rigid elongated portions extending horizontally and having upwardly convex upper surfaces engaging the underside of said horizontal suspension plate means at opposite sides of the corresponding stem; said upper surfaces being convexly arcuate about an axis extending longitudinally of the member and transversely of the lighting fixture; and the entire weight of the fixture being supported on said convex upper surfaces; whereby the fixture supported by said hanger means is permitted to sway in a plane extending longitudinally of the fixture, as in the event of an earthquake; and retaining means for restraining said member from turning about the stem as an axis, whereby said member can be retained disposed transversely of the fixture.

2,898,674
CEILING MOUNTING FOR RECESSED LIGHTING FIXTURES

Kurt Versen, Tenafly, N.J., assignor to Kurt Versen Company, Englewood, N.J., a corporation of New Jersey

Application January 21, 1954, Serial No. 405,443
1 Claim. (Cl. 248—343)

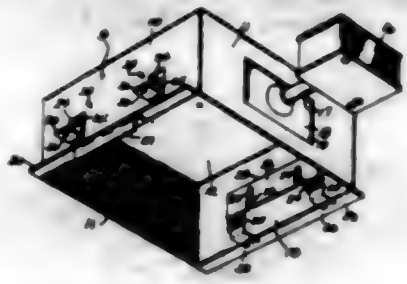


A ceiling mounting for recessed fixtures comprising a support for the fixture, said support being disposed in the plane of the ceiling and comprising a frame having a side wall and a terminal flange extending outwardly therefrom, said flange being disposed against outer surface of the ceiling, an angular clip having a base and a leg, said base being disposed against the inner surface of the ceiling said leg being bent upon itself in U-shaped form, the side wall of said frame being embraced by said U-shaped leg; means for adjustably securing the clip leg to the frame side wall, a substantially U-shaped yoke bridging said frame, the ends of said yoke having terminal slots, apertures through the side wall of said frame, and a securing member engaging said apertures and said slots for securing said yoke to said frame, said yoke comprising a housing as one leg thereof.

2,898,675
MOUNTING BRACKET FOR A RECESSED CEILING FIXTURE

William K. McGinty, Fort Atkinson, Wis., assignor to Thomas Industries Inc., Fort Atkinson, Wis., a corporation of Delaware

Application August 19, 1954, Serial No. 450,951
12 Claims. (Cl. 248—343)

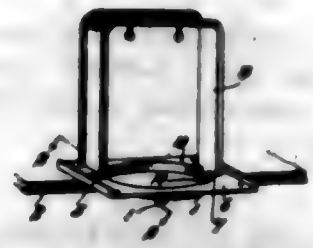


8. A recessed fixture box having mounting bracket means for application to a ceiling opening bordered by ceiling material, said box comprising opposite side walls, flanges extending outwardly from the lower margins of said walls, and openings in said walls spaced upwardly from said flanges, and mounting brackets comprising plates mounted within said box and in face relation to and slidable with respect to the inner surfaces of said walls, said brackets having legs extending into said openings and being provided with foot portions outside said box and extending substantially parallel to said flanges, said openings being upwardly elongated to permit movement of said legs in said openings toward and away from said flanges, and means for releasably fastening the mounting bracket plates to said walls to adjustably position said foot portions with respect to said flanges, said foot portions and flanges comprising means for engaging ceiling material therebetween to support the box, said mounting bracket plate constituting means by which the legs and feet outside the box may be withdrawn through said openings into said box to clear the margins of said ceiling material in the course of inserting the box into said ceiling opening.

2,898,676
CEILING MOUNTING FOR RECESSED LIGHTING FIXTURES

Kurt Versen, Tenafly, N.J., assignor to Kurt Versen Company, Englewood, N.J., a corporation of New Jersey

Application May 9, 1955, Serial No. 506,865
7 Claims. (Cl. 248—343)

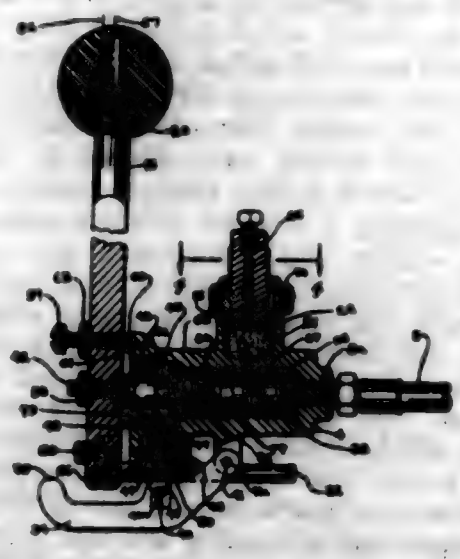


1. A ceiling mounting for recessed fixtures comprising in combination a frame having side walls and a terminal flange extending outwardly therefrom, a ceiling member having an opening therethrough, said flange being disposed against one surface of said ceiling member and said side walls being insertable into said opening, a substantially U-shaped yoke bridging said frame, at least the legs of said yoke being channelled and terminating at an end portion thereof in a tongue, a seat portion on said channelled leg, said seat portion engaging an upper rim of said frame and said tongue engaging the wall of said frame, guide means on said wall embracing and maintaining said tongue against displacement.

2,898,677
AUTOMATIC FILLING MANIFOLD

Woodrow S. Boedecker, Chicago, Ill., assignor to The Bastian-Blessing Company, Chicago, Ill., a corporation of Illinois

Application February 25, 1954, Serial No. 412,605
5 Claims. (Cl. 249—63)



1. A filling device of the character described comprising a scale having a movable indicator beam thereon, means for supporting an empty container on the scale in weight measuring position, means for connecting the container so supported with a source of fluid material including a flow control device automatically actuated by hydraulic pressure, a master hydraulic cylinder in communication with the control device and having a piston therein, a predetermined quantity of hydraulic liquid affording said communication between said master cylinder and said control device, a gravity responsive lever adapted to be moved against the force

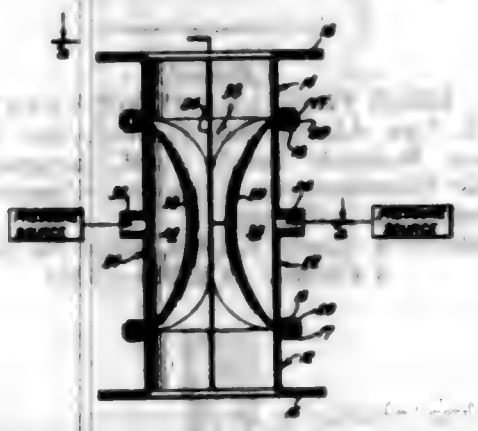
of gravity for advancing the piston to develop hydraulic pressure in said cylinder when the lever is moved from a lower to an upper position, a latch element held out of latching position by the lever in its lower position for engaging the piston to hold it in its advanced position when free to do so, and means actuated by said beam for displacing said lever from its raised position by movement of said beam through a predetermined arc below a predetermined balanced position.

2,896,678

VALVE STRUCTURE

Revis L. Stephenson, Elmhurst, and Wilfred J. Lee, East Syracuse, N.Y., assignors to United States Hoffman Machinery Corporation, New York, N.Y., a corporation of New York

Application August 29, 1957, Serial No. 680,946
3 Claims. (Cl. 251—5)



1. An improved flexible wall valve having high efficiency and quick response, said valve comprising a housing defining an axial opening therethrough, two thin elastic membranes stretched along their respective edges and supported face-to-face longitudinally along straight lines on opposite sides of said opening within said housing and defining a flow passage through said housing, each membrane defining a closed chamber between itself and the inner side of said housing, and means including two pressure lines each opening into respective ones of said chambers to control the pressure independently behind each of said membranes to force them together and close the valve or to allow them to move apart and open said valve, each of said membranes being sufficiently elastic to expand against the opposite inner side of said housing to close said valve when the other membrane fails, the pressure acting on each membrane being sufficient to expand it against the opposite inner side of said housing in the event the other of said membranes fails.

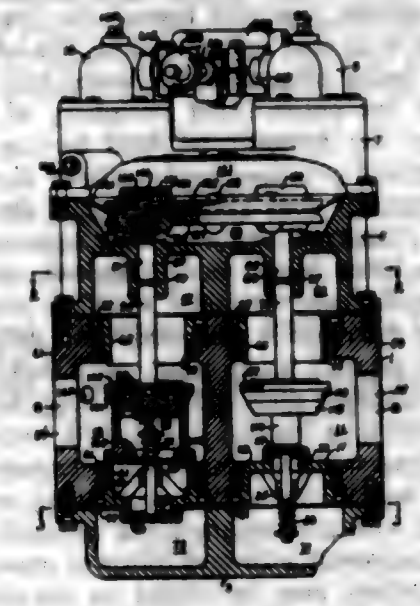
2,896,679

FOUR-WAY VALVE

Howard E. Rittenhouse, Fort Wayne, Ind., assignor to Bowser, Inc., Fort Wayne, Ind., a corporation of Indiana

Application August 5, 1953, Serial No. 372,479
9 Claims. (Cl. 251—30)

1. In a valve mechanism, a body defining first and second chambers, each having first and second axially aligned ports and each having a lateral port communicating with the exterior of the body, said body also defining third and fourth chambers, each having a lateral port communicating with the exterior of the body, means defining conduits connecting the first ports of said first and second chambers with said third and fourth chambers respectively and additional means defining conduits connecting the second ports of said first and second chambers with said fourth and third chambers respectively, valve means mounted in each of said first and second chambers for movement to open and close said first and second ports, and power means connected to move said valves comprising a double-ended fluid motor, pilot valve means for controlling the admission and exhaust of fluid to and from each end of said motor, conduits, one communicating with each of said lateral ports and means for selectively connecting said conduits with said pilot valve means to provide fluid under high pressure to one and fluid under a lower pressure to the other.

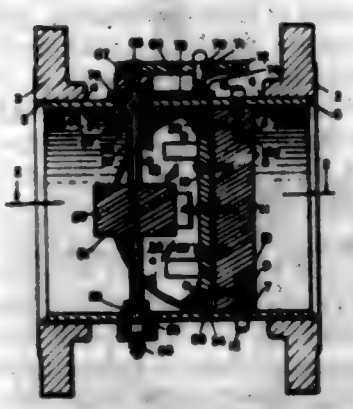


2,896,680

CHECK VALVE WITH OPERATOR THEREFOR

Edward M. Smith, Mansfield, Ohio, assignor to Techno Corporation, Erie, Pa., a corporation of Pennsylvania

Application July 28, 1954, Serial No. 446,251
3 Claims. (Cl. 251—82)



1. A check valve comprising a hollow cylindrical body, a hinge post extending diametrically of said body and attached thereto at the ends of said hinge post, a wing member on each side of said hinge post, said wing members comprising a sheet of resilient material attached at an intermediate point to said hinge post, said resilient material being generally elliptical in shape, the edges thereof being adapted to lie against the inside edge of said cylindrical body continuously around the inner periphery thereof, a hinge clamp, two opposite ends of said hinge clamp terminating in spaced relation to the inside periphery of said cylindrical body, means extending through said hinge clamp securing said resilient material to said hinge post, said wing members further comprising a backing plate and a clamp plate on each end of said resilient sheet with said resilient sheet sandwiched therebetween, said resilient material having a marginal edge protruding beyond the edges of said plate entirely around the edges thereof which are adapted to engage the inner periphery of said cylindrical body, one edge of each said wing member adapted to abut against an edge of said hinge post, said wing members being generally semi-elliptical in shape, said wing members swinging into generally parallel proximate relation when the flow

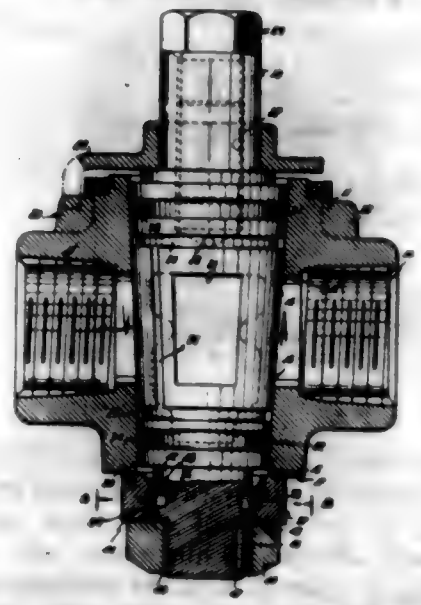
of fluid through said cylindrical body is in one direction, said wing members swinging outwardly into engagement with the inner periphery of said cylindrical body and with said hinge post when the flow of fluid is in the opposite direction, said backing plates being disposed on the side of said resilient material toward the incoming fluid when the flow is in said one direction, the edges of said resilient sheet being adapted to be forced into sealing engagement with the entire inner periphery of said cylindrical body by the pressure of fluid forcing said wing members to closed position, said resilient sheet overlapping the juncture of said hinge post and the inner surface of said cylindrical body on the upstream side of said hinge post when flow is in said opposite direction, an operator member, said operator member comprising a shaft rotatably mounted in said body and extending generally parallel to said hinge post, cam means attached to said shaft, follower means on said wing members engageable by said cam means, and handle means on said shaft for rotating said cam means into engagement with said follower means for urging said wing members to closed position, said cam means being movable to a position out of engagement with said follower means whereby said wing members may be urged to parallel relation when fluid in said body flows in said one direction.

2,898,681

PLUG VALVE WITH DISASSEMBLY PREVENTION MEANS

Charles E. Johnson, Pittsburgh, Pa., assignor to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

Application March 23, 1955, Serial No. 496,158
4 Claims. (Cl. 251—309)



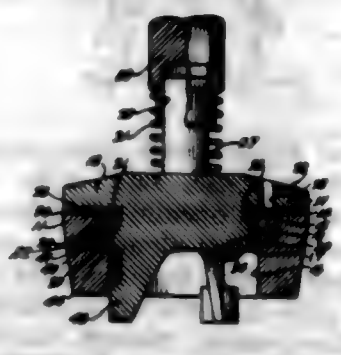
1. In a plug valve assembly, a body having a fluid flow passage intersected by a tapered bore that is open at opposite ends, a tapered valve plug rotatably mounted in said bore and having a transverse port adapted to be aligned with said passage when the valve is open, said plug having an extension projecting through the smaller end of said bore and a stem projecting through the other end of said bore externally of said body; means forming a lock completely and permanently inaccessible for unlocking manipulation and preventing removal of said plug from said bore while providing for limited adjustment of the position of said plug relative to said bore comprising a retainer collar closely surrounding said plug extension adjacent said body at said one end of said bore, aligned cooperating circumferential external and internal recesses in the adjacent external and internal surfaces of said plug extension and collar respectively concealed by said collar, a wholly concealed radially expansible and contractible spring retainer ring of slightly smaller cross-section than the cross-sectional dimension of at least one of said recesses axially of said collar and radially bridging said recesses in said assembly effectively limiting relative axial displacement of said plug and collar to a predetermined small range, the position of said recesses axially of said collar and said plug extension being such that the axial spacing of said extension recess from the body bore one end against which the said plug is seated in said bore is substantially equal to the axial spacing of said collar recess from the end of said collar adjacent said body bore one end; means on said extension engaging said collar for shifting the position of said collar axially of said extension within said range with said ring in position in said recesses to adjust the seating of said plug in said bore and normally frictionally retaining said collar for rotation with said plug extension and means for locking the adjusted position of said adjusting means.

2,898,682

HIGH PRESSURE PUMP VALVE

Russell S. Von Almen, San Gabriel, and Clarence H. Leathers, Redondo Beach, Calif., assignors to MacClatchie Manufacturing Company, Compton, Calif., a corporation of California

Application August 9, 1956, Serial No. 603,100
4 Claims. (Cl. 251—333)



1. A valve structure comprising: a valve seat section, said seat section defining an annular tapered upwardly facing seating surface, a valve body section relatively movable into and out of said seat section, a deformable sealing element carried by said body section, said sealing element having an annular tapered downwardly facing sealing surface mateable with said seating surface, a supporting member carried on said valve body supporting the lower surface of said deformable sealing element, a deformable seating element positioned in said seat section, an inner wall of said deformable seating element forming a part of said seating surface, said deformable seating surface being axially positioned relative to said body section such that thhe upper edge of said supporting member and the lower edge formed by the intersection of the lower surface and the downwardly facing sealing surface of said sealing member, are in contact with said inner wall in the closed position of said valve, whereby the lower edge of said deformable sealing element is supported by said deformable seating element.

2,898,683

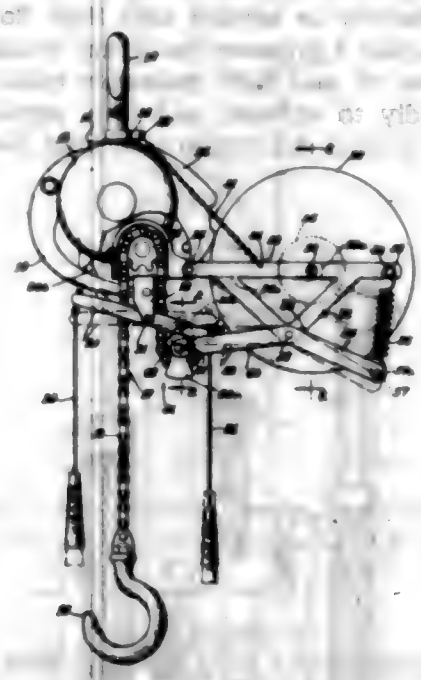
HOIST WITH CHAIN TAKEUP

Elmer R. Kreal, Warrenville, Ill.

Application October 31, 1956, Serial No. 619,461
4 Claims. (Cl. 254—173)

1. A hoist with chain takeup, comprising, an electric current operated motor mounted in the hoist, a frame carried by the hoist, a chain winding drum supported by said frame, said drum including retractable spring barrel mechanism urging the drum in rotation, a chain windable on said drum, the walls of said drum being spaced apart to guide the chain in a single spiral there-

onto, means for anchoring one end of the chain on the spring barrel, the other end of the chain being trained over a hoisting sprocket on the hoist, said sprocket being drivingly connected to said motor, a spring urged idler takeup roller interposed between the hoist sprocket and said drum under which the chain is trained in a reverse bight, said roller being movable upwardly by action of the chain when the tension in the portion thereof between the sprocket and the anchored end



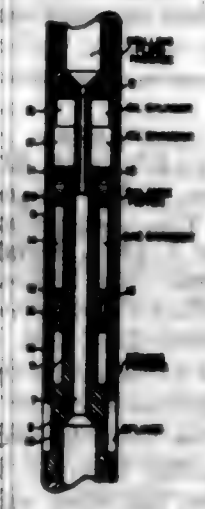
thereof exceeds a predetermined magnitude, and means actuated by said upward movement of the roller to shut off the electric current to the motor, the arrangement being such that when said other end of the chain moves upwardly the tail end of the chain is wound on said drum by the action of said spring barrel mechanism, said spring barrel mechanism being wound up when said other end of the chain is moved downwardly rotating the drum in a direction counter to that in which the drum is urged by the spring barrel mechanism.

2,898,984

SEISMIC SHOCK SOURCE

John E. Eckel and John M. Camp, Tulsa, Okla., assignors, by mesne assignments, to Jersey Production Research Company

Application December 16, 1954, Serial No. 475,632
4 Claims. (Cl. 255—1)



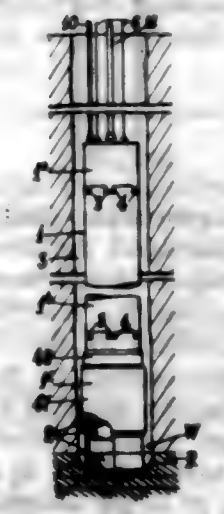
4. A combination rotary-type drilling and seismic impulse apparatus comprising a string of drill pipe and a drill bit attached to the lower end thereof, a telescoping section interposed within said drill string, said section comprising two telescoping members co-rotatably attached at their outer ends to said drill string, a passageway for the flow of fluids extending through said section, a compressible elastic body within said section and interposed between said telescoping members, means to retain said compressible elastic body under compression upon telescoping of said members into a collapsed condition and means to release said elastic body from compression whereby said members are urged from a collapsed condition to an extended condition in response thereto whereby a severe downward jar is imparted to the drill bit.

2,898,985

APPARATUS FOR SINKING WELLS BY MEANS OF EXPLOSIVE CHARGES

Louis Borins, Buffalo, Maurice H. Shad, Depew, and Maurice J. Zabkoff, Tonawanda, N.Y., assignors to Randel Tool Company, Inc., Buffalo, N.Y., a corporation of New York

Application February 21, 1957, Serial No. 638,749
43 Claims. (Cl. 255—1)



36. Apparatus for sinking wells by means of explosive charges comprising, in combination: a vertical shell open at its lower end and which provides a magazine, a series of charge carriers arranged in vertical adjacent relation in the magazine for step-by-step downward movement and each having a vertical wall provided on its outer face with a circumscribing groove, movable detents carried by the shell and having operative positions in which they engage in the groove of the lowermost carrier to support the series and retracted positions in which they are withdrawn from engagement with such groove, thereby to release the lowermost carrier and to provide for a step of movement of the remaining carriers, and means operating periodically and sequentially to provide for the movement of the detents to their retracted positions and to their operative positions in which they engage in the groove of the succeeding carrier.

2,898,986

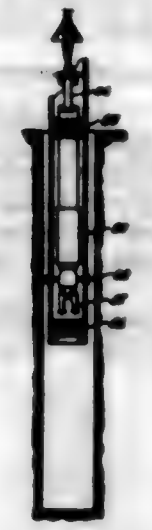
METHOD OF DRILLING

William A. Freeman, Jr., Tulsa, and Morris Roth, Duncan, Okla., assignors, by mesne assignments, to Jersey Production Research Company

Application December 2, 1954, Serial No. 472,628
3 Claims. (Cl. 255—1.8)

1. In a process for drilling a borehole wherein a drilling tool having a longitudinal passageway therein is actuated at the lower end of a string of drill pipe and a stream of gasiform drilling fluid is circulated down through the drill string and up through the annulus between the drill string and the wall of the borehole, the improvement which comprises filling the bottom of the borehole with a drilling mud to a height such that the hydrostatic head of the mud is slightly greater than the pressures of the surrounding formations, and jetting the downflowing stream of gasiform fluid into the mud which educts mud into the longitudinal passage of the drilling tool so as to circulate and aerate the mud within the drilling tool and the bottom of the borehole.

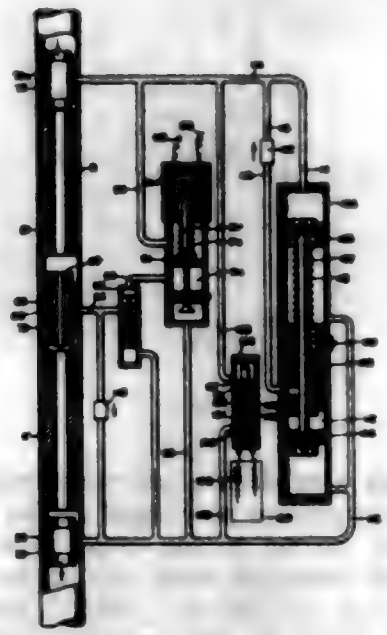
2,898,067
WELL DRILLING APPARATUS AND METHOD
Wallace Clark, Indianapolis, Ind.
Application May 1, 1956, Serial No. 582,016
1 Claim. (Cl. 255—6)



A well drilling organization, comprising a length of drill pipe, a radial bearing in the lower end of said pipe, a shaft rotatably mounted in said bearing, flanges on said shaft and thrust bearings for said flanges, said shaft at its lower end having means for the attachment of a drill bit, a hydraulic motor secured to the upper end of the pipe, a driving connection between said motor and said shaft, and a passage through which liquid from said motor may pass to said drill bit, in combination with a length of well casing of larger diameter than said organization, said casing being provided with an annular latching element, outwardly urged latches associated with said organization to latch said organization with respect to said casing against longitudinal movement therein, a crossed linkage secured in said latches and arranged upon lifting by said linkage to withdraw said latches from said annular latching element, and hook-engageable means connected to said linkage for raising and lowering said organization through said casing and a lifting cable having a hook for engagement with said hook-engageable means and having a centering cone secured to said cable immediately above said hook.

2,898,068
EARTH BOREHOLE LOGGING SYSTEM
Robert L. Alder, La Canada, Calif., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Continuation of application Serial No. 413,405, March 1, 1954. This application February 10, 1958, Serial No. 714,433
12 Claims. (Cl. 255—24)

1. In a system for simultaneously logging and drilling earth boreholes employing a drill string having a drilling fluid flow passage therethrough, down through which passage circulating drilling fluid is forced to flow under pressure, the combination comprising: a drill string; signaling means therein including variable fluid flow resistance means fixed in said drill string in the vicinity of the lower end thereof, actuatable by transfer thereto of a quantity of control fluid under pressure to effect a variation in resistance to flow therethrough of said circulating fluid to produce a pressure rise signal therein; a first separate body of control fluid contained in said drill string; a first sensing means to pick up and transfer to said first body of control fluid, pressure of said circulating fluid in said passage at a point spaced upstream from said flow resistance means; a second separate body of control fluid contained in said drill string; a second sensing means to pick up and transfer to said second body of control fluid, pressure of said circulating fluid in said passage at a point downstream from said flow resistance means; the pressure thereby picked up and transferred to said first body of control fluid being greater than the pressure picked up and transferred to said second body of control fluid; signal control means in said drill string actuatable firstly to supply a quantity of control fluid under pressure from said first body of control fluid to said flow resistance means while removing the pressure of said second body of control fluid therefrom, thereby to actuate said fluid flow resistance means to produce a pressure rise signal in said circulating fluid upstream of said flow resistance means, and actuatable secondly to exhaust said thus supplied quantity of said first control fluid from said fluid flow resistance



means into said second body of control fluid of lower pressure while removing the pressure of said first body of control fluid therefrom; whereby a quantity of said first body of control fluid of higher pressure is transferred into said second body of control fluid of lower pressure, thereby to actuate said fluid flow resistance means to terminate said pressure rise signal in said circulating fluid; and transfer means energized by the said pressure rise in said first body of control fluid resulting from said pressure rise signal in said circulating fluid to return a quantity of the second body of control fluid to the first body of control fluid sufficient to compensate for the said quantity of control fluid exhausted into said second body of control fluid.

2,898,069
ROTARY DISC BIT
Otto Hammer, Whittier, Calif., assignor to Dresser Operations, Inc., Dallas, Tex., a corporation of California
Application May 2, 1955, Serial No. 505,150
3 Claims. (Cl. 255—323)

2. A rotary well drilling bit comprising a body rotatable about its vertical central axis, said body having downwardly extending arms arranged on opposite sides of said axis, substantially horizontal cutter journals extending inwardly from said arms towards said axis, disc-type cutters rotatable on the cutter journals, said cutters being in mutual contact adjacent said axis, each cutter presenting an inner cutting edge adjacent the plane of mutual contact between the cutters and an outer cutting edge rigid therewith but more remote therefrom, the mutually contacting faces of the cutters having rings of hard facing recessed therein, the outer cutting edge being of greater diameter than the inner cutting edge whereby as the body of the bit is rotated the outer cutting edges because of

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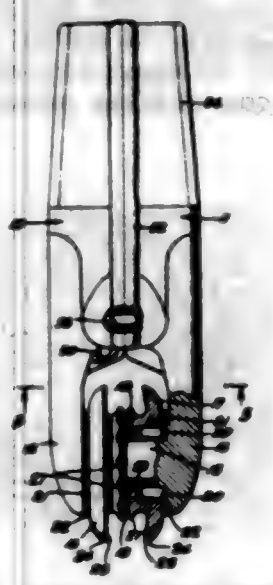
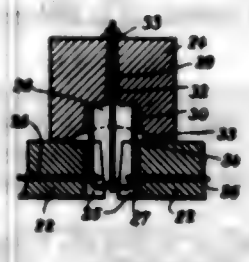
2,898,067
and transfer to said second body of control fluid, pressure

their engagement with the formation and because of their diameters will tend to forcibly rotate the cutters thus causing the inner cutting edges to rotate and remove the core left between the outer cutting edges.

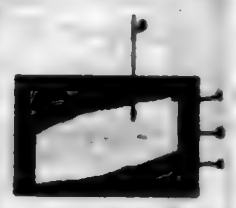


2,898,090
SAFETY FENCE FOR MOTORWAYS
Svend Aage Rasmussen, Silkeborg, Denmark
Application January 13, 1958, Serial No. 708,570
Claims priority, application Denmark October 21, 1957
8 Claims. (Cl. 256—13.1)



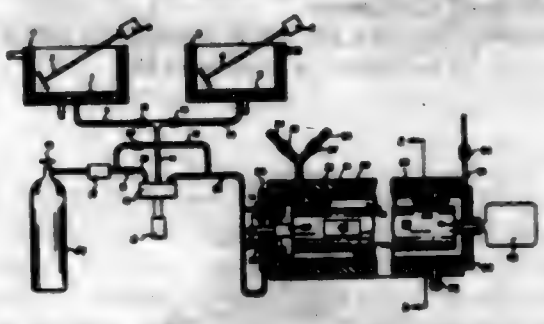
1. A safety fence for highways comprising, a plurality of spaced pillars for mounting at the edge of said highway, said pillars having a highway facing side, a plate receiving seat on said highway facing side, a plurality of longitudinally extending concrete plate members bridging the space between said pillars, said plate members being joined in end-to-end relation to form joints at said plate receiving seats of said pillars, each of said plate members having a transverse horizontal groove across each of its ends, a longitudinally extending reinforcing bar imbedded in each of said plate members having ends extending into said grooves respectively, a stress relieving link member for each of said joints and having a pair of ends, means for connecting said ends of said stress relieving link members to said ends of said reinforcement bars of adjacent plate members respectively to connect said plate members, said pillars having a passageway extending transversely through said pillar from said seat on said highway facing side, a bolt member having one end threaded, the other end of said bolt member being operatively coupled with said stress relieving link to form a holding means for said plate members, said threaded end of said bolt extending through said passageway of said pillar, and a nut engaging said threaded end of said bolt member to hold said plate members on said plate receiving seats of said pillar.

2,898,091
THERMAL REGENERATOR
Hendrik Josef Verbeek, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application September 19, 1957, Serial No. 684,945
Claims priority, application Netherlands September 27, 1956
4 Claims. (Cl. 257—262.1)



1. A thermal regenerator, more especially but not exclusively for use in thermo-dynamic apparatus, and comprising a housing which contains filling material, characterized in that the wall of the regenerator housing is made from elastic material and surrounds the filling material with a certain tension.

2,898,092
APPARATUS FOR PROCESSING VIOLENTLY MIXED FLOWABLE MATERIALS
Bruce De Haven Miller, Louisville, Ky., George W. Reigel, Clarksville, and John P. Bolanowski, Jeffersonville, Ind., and Henry W. Bevarly, Louisville, Ky., assignors to Chemotron Corporation, a corporation of Delaware
Application September 13, 1957, Serial No. 683,728
11 Claims. (Cl. 259—10)



1. In an apparatus for processing flowable materials, an elongated chamber having a substantially cylindrical peripheral wall, an inlet at one end and an outlet at the other end to permit flow of material generally lengthwise through said chamber, an elongated substantially cylindrical rotatable shaft in said chamber defining an annular space between said shaft and said peripheral wall and having a reduced diameter adjacent one end of said chamber, means for driving said shaft, a cover for said chamber mounted thereon at said one end and spaced from the confronting face of said reduced diameter shaft to provide an enlarged mixing space communicating with said annular space, a pump impeller mounted on said shaft adjacent said mixing space, said pump impeller having an inlet receiving material from said mixing space adjacent the axis of said shaft and an outlet directing material toward said peripheral wall, vane means mounted adjacent said pump impeller outlet for redirecting a portion of the pumped material into the pump impeller inlet thereby to provide a recirculation of said material through said mixing space prior to discharge from said apparatus, and means in said mixing space for violently mixing said recirculated material.

2,898,093
SPRAYING AND CLEANING APPARATUS
Helmer E. Severson, Chetek, Wis.
Application October 1, 1957, Serial No. 687,545
2 Claims. (Cl. 259—39)

1. In apparatus for applying fluid spray to objects, an open top fluid containing tank having a fluid discharge

in said drill string; a second sensing means to pick up of the bit is rotated the outer cutting edges because of

2,898,967
WELL DRILLING APPARATUS AND METHOD
Wallace Clark, Indianapolis, Ind.
Application May 1, 1956, Serial No. 582,816
1 Claim. (Cl. 255—4)

A well drilling organization, comprising a length of drill pipe, a radial bearing in the lower end of said pipe, a shaft rotatably mounted in said bearing, flanges on said shaft and thrust bearings for said flanges, said shaft at its lower end having means for the attachment of a drill bit, a hydraulic motor secured to the upper end of the pipe, a driving connection between said motor and said shaft, and a passage through which liquid from said motor may pass to said drill bit, in combination with a length of well casing of larger diameter than said organization, said casing being provided with an annular latching element, outwardly urged latches associated with said organization to latch said organization with respect to said casing against longitudinal movement therein, a crossed linkage secured in said latches and arranged upon lifting by said linkage to withdraw said latches from said annular latching element, and hook-engageable means connected to said linkage for raising and lowering said organization through said casing and a lifting cable having a hook for engagement with said hook-engageable means and having a centering cone secured to said cable immediately above said hook.

2,898,988
EARTH BOREHOLE LOGGING SYSTEM
Robert L. Alder, La Canada, Calif., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Continuation of application Serial No. 413,405, March 1, 1954. This application February 10, 1958, Serial No. 714,433
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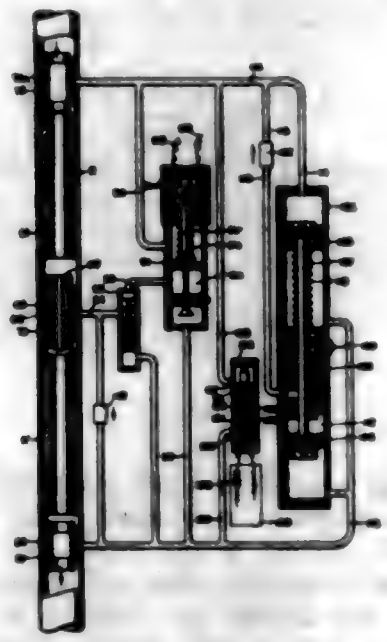
1. In a system for simultaneously logging and drilling earth boreholes employing a drill string having a drilling fluid flow passage therethrough, down through which passage circulating drilling fluid is forced to flow under pressure, the combination comprising: a drill string; signaling means therein including variable fluid flow resistance means fixed in said drill string in the vicinity of the lower end thereof, actuatable by transfer thereto of a quantity of control fluid under pressure to effect a variation in resistance to flow therethrough of said circulating fluid to produce a pressure rise signal therein; a first separate body of control fluid contained in said drill string; a first sensing means to pick up and transfer to said first body of control fluid, pressure of said circulating fluid in said passage at a point spaced upstream from said flow resistance means; a second separate body of control fluid contained in said drill string; a second sensing means to pick up and transfer to said second body of control fluid, pressure of said circulating fluid in said passage at a point downstream from said flow resistance means; the pressure thereby picked up and transferred to said first body of control fluid being greater than the pressure picked up and transferred to said second body of control fluid; signal control means in said drill string actuatable firstly to supply a quantity of control fluid under pressure from said first body of control fluid to said flow resistance means while removing the pressure of said second body of control fluid therefrom, thereby to actuate said fluid flow resistance means to produce a pressure rise signal in said circulating fluid upstream of said flow resistance means, and actuatable secondly to exhaust said thus supplied quantity of said first control fluid from said fluid flow resistance



means into said second body of control fluid of lower pressure while removing the pressure of said first body of control fluid therefrom; whereby a quantity of said first body of control fluid of higher pressure is transferred into said second body of control fluid of lower pressure, thereby to actuate said fluid flow resistance means to terminate said pressure rise signal in said circulating fluid; and transfer means energized by the said pressure rise in said first body of control fluid resulting from said pressure rise signal in said circulating fluid to return a quantity of the second body of control fluid to the first body of control fluid sufficient to compensate for the said quantity of control fluid exhausted into said second body of control fluid.

2,898,989
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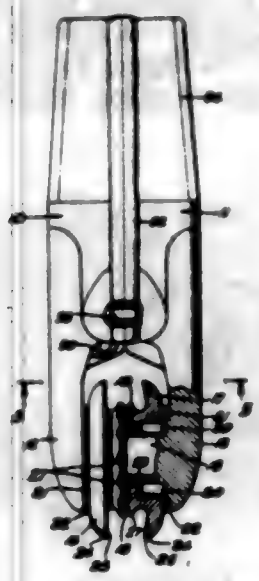
Application May 2, 1955, Serial No. 505,150
3 Claims. (Cl. 255—323)

2. A rotary well drilling bit comprising a body rotatable about its vertical central axis, said body having downwardly extending arms arranged on opposite sides of said axis, substantially horizontal cutter journals extending inwardly from said arms towards said axis, disc-type cutters rotatable on the cutter journals, said cutters being in mutual contact adjacent said axis, each cutter presenting an inner cutting edge adjacent the plane of mutual contact between the cutters and an outer cutting edge rigid therewith but more remote therefrom, the mutually contacting faces of the cutters having rings of hard facing recessed therein, the outer cutting edge being of greater diameter than the inner cutting edge whereby as the body of the bit is rotated the outer cutting edges because of

suction pipe at its bottom and one side thereof, a foraminous hollow fluid strainer and mixer member in the bot-

ing primary air to a carburetor conduit, a venturi throat

their engagement with the formation and because of their diameters will tend to forcibly rotate the cutters thus causing the inner cutting edges to rotate and remove the core left between the outer cutting edges.



2,898,090
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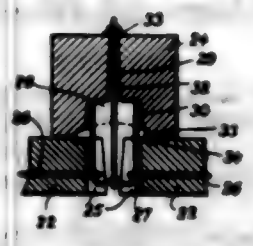

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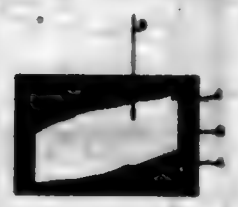
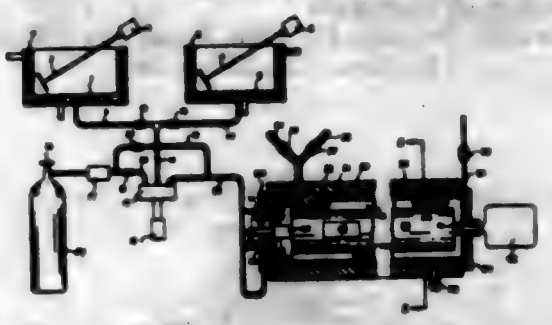
2,898,091
THERMAL REGENERATOR
Hendrik Josef Verbeek, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application September 19, 1957, Serial No. 684,945
Claims priority, application Netherlands September 27, 1956
4 Claims. (Cl. 257—262.1)



1. A thermal regenerator, more especially but not exclusively for use in thermo-dynamic apparatus, and comprising a housing which contains filling material, characterized in that the wall of the regenerator housing is made from elastic material and surrounds the filling material with a certain tension.

2,898,092
APPARATUS FOR PROCESSING VIOLENTLY MIXED FLOWABLE MATERIALS
Bruce De Haven Miller, Louisville, Ky., George W. Reigel, Clarksville, and John P. Bolanowski, Jeffersonville, Ind., and Henry W. Bevarly, Louisville, Ky., assignors to Chemetron Corporation, a corporation of Delaware
Application September 13, 1957, Serial No. 683,728
11 Claims. (Cl. 259—10)



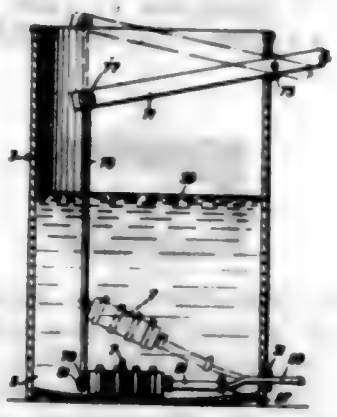
1. In an apparatus for processing flowable materials, an elongated chamber having a substantially cylindrical peripheral wall, an inlet at one end and an outlet at the other end to permit flow of material generally lengthwise through said chamber, an elongated substantially cylindrical rotatable shaft in said chamber defining an annular space between said shaft and said peripheral wall and having a reduced diameter adjacent one end of said chamber, means for driving said shaft, a cover for said chamber mounted thereon at said one end and spaced from the confronting face of said reduced diameter shaft to provide an enlarged mixing space communicating with said annular space, a pump impeller mounted on said shaft adjacent said mixing space, said pump impeller having an inlet receiving material from said mixing space adjacent the axis of said shaft and an outlet directing material toward said peripheral wall, vane means mounted adjacent said pump impeller outlet for redirecting a portion of the pumped material into the pump impeller inlet thereby to provide a recirculation of said material through said mixing space prior to discharge from said apparatus, and means in said mixing space for violently mixing said recirculated material.

2,898,093
SPRAYING AND CLEANING APPARATUS
Helmer E. Severson, Chetek, Wis.
Application October 1, 1957, Serial No. 687,545
2 Claims. (Cl. 259—39)

1. In apparatus for applying fluid spray to objects, an open top fluid containing tank having a fluid discharge

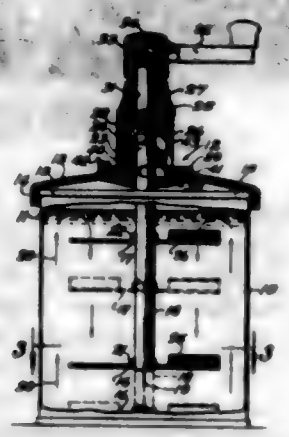
in said drill string; a second sensing means to pick up of the bit is rotated the outer cutting edges because of

suction pipe at its bottom and one side thereof, a foraminous hollow fluid strainer and mixer member in the bottom of said tank, a fluid suction hose communicating with the interior of said member and connecting said member to said discharge pipe in communication there-



with, said suction hose providing for vertical oscillation of the member bodily in said tank, a rocker lever pivoted on the upper portion of the tank, operating connections between said lever and member for oscillating the member in response to rocking of the lever, and power means for rocking said lever.

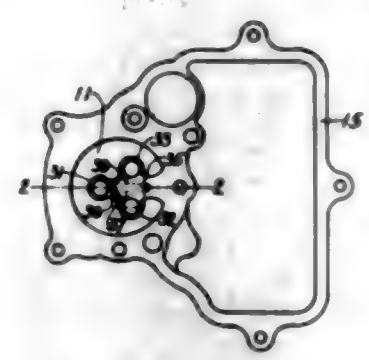
2,898,094
PAINT MIXER
Paul J. O'Neill, Jr., San Francisco, Calif., assignor to Union Machine Company, San Francisco, Calif., a corporation of California
Application January 16, 1956, Serial No. 559,487
6 Claims. (Cl. 259—116)



3. In a mixer structure: a base forming a container cover and having a boss, the end surface of which extends helically about the axis of the boss, there being a shoulder forming the crest and trough of the surface; a shaft guided in the boss; a pin carried by the shaft and engaging the surface; rotary driving means positively coupled to the shaft so that the angular movement of the shaft bears a fixed ratio to the angular movement of said rotary driving means; energy storing means urging the shaft in a direction corresponding to engagement of the pin and the surface; said shaft being mounted for axial movement in response to the movement of said pin over said surface; and an impeller carried by the shaft.

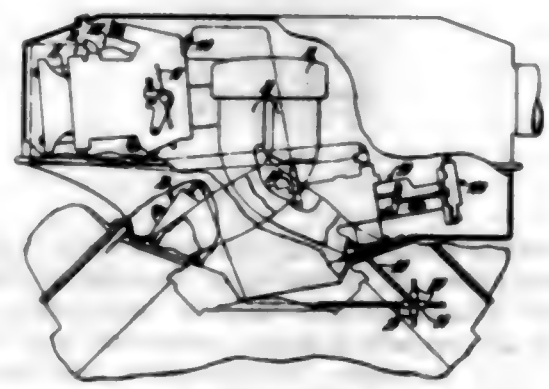
2,898,095
CARBURETOR DEVICE
Seung Yul An, Seoul, Korea
Application November 19, 1956, Serial No. 623,865
1 Claim. (Cl. 261—23)

A device for liquid fuel feed for internal combustion engines comprising, a main conduit for air flow supplying primary air to a carburetor conduit, a venturi throat in said carburetor conduit, said throat comprising symmetrical constriction in the circumference of said conduit, a plurality of venturi type conduits within said carburetor conduit supported longitudinally thereof symmetrically around a central axis, inlets for said plurality of conduits being in a plane close to the primary air intake for said carburetor conduit, discharges for said plurality of conduits being in a second plane substantially at the nar-



rowest point of said venturi throat of said carburetor conduit, means for introducing a spray of liquid fuel individually into each of said plurality of conduits, said spray being introduced substantially at the constriction in each of said individual venturi throats thereby to induce an efficient turbulent mixing and subdivision of fuel and air in said conduit.

2,898,096
FUEL INJECTION SYSTEM
Lawrence C. Desmond and Elmer Olson, Rochester, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application March 25, 1957, Serial No. 648,100
3 Claims. (Cl. 261—37)

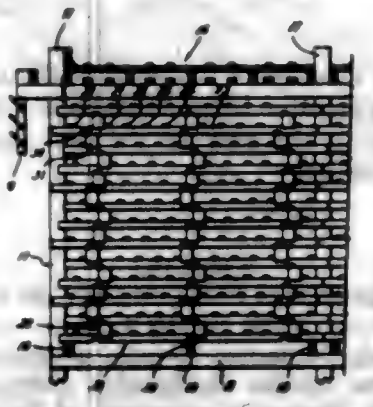


1. A fuel injection system for an internal combustion engine comprising an air intake passage, a throttle valve for controlling flow through said passage, a fuel reservoir, conduit means communicating the reservoir with the individual cylinders of the engine, valve means disposed in said reservoir for controlling fuel flow to the conduit means, at least one end of said valve being exposed to the pressure in said reservoir above the fuel level, a pump for supplying fuel under pressure to said valve means, a pressure responsive member connected to said valve, a conduit connecting said member to the intake passage anteriorly of said throttle valve for controlling said valve in response to the quantity of air flowing through said passage, said pressure responsive member being exposed to the pressure in said reservoir above the fuel level, and means for transmitting manifold vacuum to said reservoir to maintain a substantially constant pressure above the fuel level in the reservoir despite changes in atmospheric conditions.

2,898,097
COOLING TOWER

John L. Goldsmith and Glynne Y. James, Houston, Tex., assignors to Hudson Engineering Corporation, Houston, Tex., a corporation of Texas

Continuation of abandoned application Serial No. 540,316, October 13, 1955. This application December 9, 1957, Serial No. 701,675
8 Claims. (Cl. 261—108)

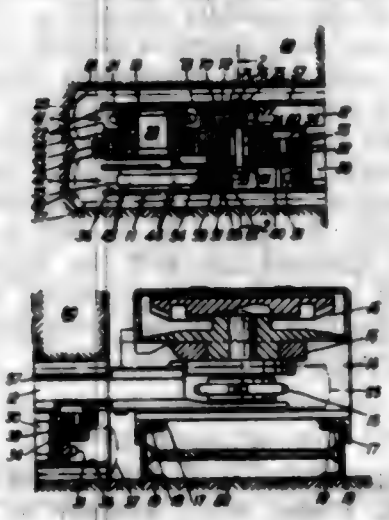


1. A packing for an atmospheric cooling tower comprising, a plurality of breaker panels, each of said panels comprising a complete preassembled unit separately movable and placeable as such having a plurality of parallel spaced runners and a plurality of parallel spaced slats secured together in crossed relationship, spacer means comprising separate spacers between adjacent panels to hold them in vertically spaced relationship, each such spacer resting upon the next lower panel and engaging the panel above to support the same, means for indexing the panels relative to each other including mutually cooperative interlocking parts carried by each of the spacers and panels for indexing the panels with the slats of the several panels in generally diagonal planes.

2,898,098
COAL-CUTTERS HAVING CUTTER CHAINS DRIVEN IN TENSION

William Gillespie, Bridgeton, Glasgow, Scotland, assignor to Mavor & Coulson Limited, Bridgeton, Glasgow, Scotland

Application January 28, 1957, Serial No. 636,743
Claims priority, application Great Britain February 1, 1956
5 Claims. (Cl. 262—30)

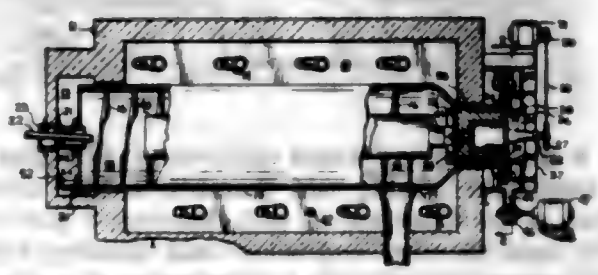


1. A coal-cutter comprising a body, a swivel-head mounted in the body, a power-driven rotatable sprocket-wheel journalled in the body co-axially with the swivel-head, a main jib for a cutter chain, said jib extending laterally from its inner end on the swivel head, an auxiliary jib carried by the main jib, the jibs being arranged one above the other and the auxiliary jib extending from its inner end at a place laterally clear of the body to practically the full stretch of the main jib, so that the auxiliary jib is substantially shorter than the main jib which carries it and the outer ends of both jibs are directly above and below one another, a cutter-chain-driven sprocket-wheel at the outer end of the main jib, a main cutter-chain trained round the main jib and both of said sprocket wheels, a cutter-chain-driving sprocket wheel at the inner end of the auxiliary jib, a cutter-chain guide at the outer end of the auxiliary jib, an auxiliary cutter-chain trained round the auxiliary jib and the last-mentioned sprocket-wheel and guide, and drive-gearing which is connected between the cutter-chain-driven sprocket-wheel of the main jib and the cutter-chain-driving sprocket-wheel of the auxiliary jib and which rotates the latter sprocket-wheel in the same direction as said power-driven sprocket-wheel so that the cutting stretches of both cutter-chains are driven in tension.

2,898,099
ROTATING DRUM HEAT-TREATING FURNACE WITH INTERNAL FAN

Ernest G. de Coriolis, Toledo, Ohio, assignor to Surface Combustion Corporation, Toledo, Ohio, a corporation of Ohio

Application November 7, 1956, Serial No. 620,917
15 Claims. (Cl. 263—34)

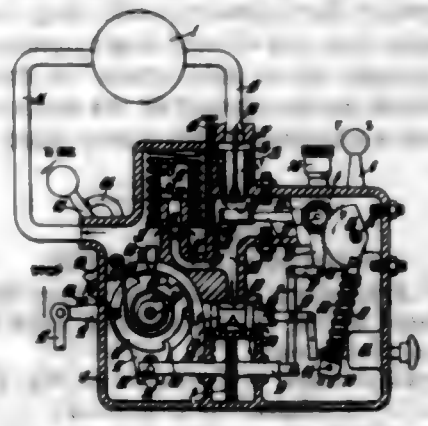


7. In a heat-treating furnace having a heating chamber and a rotatable drum located therein, said drum containing a helical wall in contact with the inner surface thereof and whose height is less than the radius of said drum, the improvement which comprises: a tube adapted to be axially located in said drum within the space defined by the inner edge of the helical wall, and a fan within said drum and located at one end of said tube and aligned with said tube to recirculate gas through said tube and drum.

2,898,100
GOVERNORS FOR PRIME MOVERS

Reginald Stanley Emerson, Staines, England, assignor to Bryce Berger Limited, Staines, England

Application June 7, 1956, Serial No. 589,926
13 Claims. (Cl. 264—12)



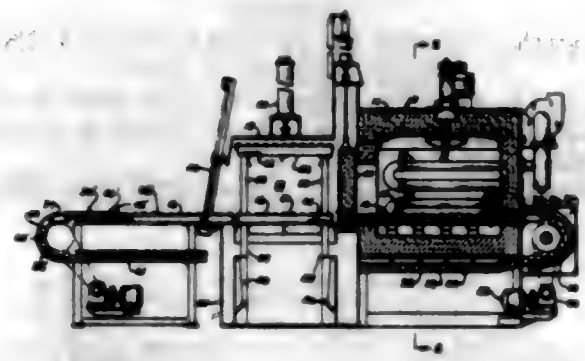
1. A governor for a prime mover comprising a nozzle, a pump driven from the prime mover delivering fluid to the nozzle to discharge such fluid as a jet having a mass flow that varies as a function of the speed of the prime

mover, a single displaceable deflector member disposed in the path of said jet, biasing spring means opposing displacement of the deflector member by the jet so that said member stays inthe path of said jet, means for actuating a controlling member of the prime mover and a servo device through which the deflector member is operatively connected to the controlling member, said nozzle and servo device being connected in series and supplied with fluid from the same pump.

2,898,101
HEAT TREATING FURNACE HAVING DOUBLE-ENDED CHAIN CONVEYOR

Clair T. Hemmen and Henry W. Schramm, Toledo, Ohio, assignors to Surface Combustion Corporation, Toledo, Ohio, a corporation of Ohio

Application December 5, 1956, Serial No. 626,488
6 Claims. (Cl. 266—4)



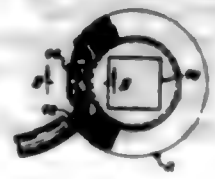
1. A heat-treating furnace comprising: a heating chamber; means for heating said chamber; a door controlled opening at the front end of said chamber; a quench tank outside said chamber and below said opening; first conveying means for slidably supporting work in chamber; a trough in said chamber parallel to the direction of travel of the work to be heat treated; a quench elevator having an upper position and a lower position, the latter being in said quench tank; second conveying means for slidably supporting work on said elevator, said second means being aligned with said first conveying means when said elevator is in its upper position; a conveying chain extending through an opening in the back of said chamber, with a first end in said chamber and a second end outside said chamber, said first end being located in said trough; a sprocket located outside the back end of said chamber and enmeshing said chain between its ends; a projection on said first end and extending above the level of the conveying means; a releasable dog associated with said first end and spaced from said projection in a direction toward the front end of said chamber, one end of said dog extending above the level of said conveying means when in its normal position; and a cam on said elevator for releasing said dog, whereby said cam will lower that end of said dog extending above said conveying means when said chain is driven by said sprocket toward the charge end of the furnace and release said dog from engagement with a tray when said chain is withdrawn.

2,898,102
CONNECTOR SPRING

Edward M. Armstrong, West Carrollton, Ohio, assignor to Associated Spring Corporation, Bristol, Conn., a corporation of Delaware

Application April 7, 1958, Serial No. 726,962
1 Claim. (Cl. 267—1)

As a new article of manufacture, a spring device comprising a helical coil extension spring the convolutions of which have uniform pitch throughout the greater part of the length of the coil, and at its one end having at least one convolution spaced axially outwardly from the main body of the coil, the end convolution at the other end of the coil being extended tangentially outwardly from the coil and formed into a U-shaped hook hooked through the outwardly spaced convolutions at the other

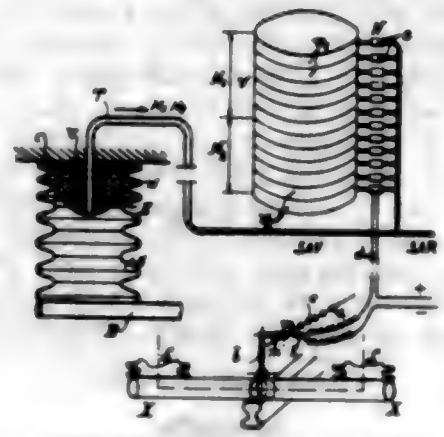


end of the coil to connect the ends of the coil and maintain the coil in annular shape, said hook lying in a plane at right angles to the axis of the coil and outside the periphery of the coil.

2,898,103
MONOCHRONOUS PNEUMATIC SUSPENSION FOR VEHICLES

Georges Boulet, Toulouse, France, assignor to Societe a Responsabilite limitee Recherches Etudes Production, R.E.P., Paris, France, a company of France

Application July 24, 1957, Serial No. 673,837
Claims priority, application France July 31, 1956
4 Claims. (Cl. 267—65)



1. A pneumatic suspension for a wheeled suspended vehicle having at least one axle supporting the wheels, the suspension comprising at least one extendible and compressible pneumatic bellows for each wheel, the bellows including a base connected with the axle and a top coupled to the vehicle, means defining at least one set of auxiliary chambers, a conduit system coupling said bellows to each of the auxiliary chambers, valves between each chamber and said system to control communication therebetween, said valves constituting first and second series, the first series being open and the second series closed with the vehicle being under normal static load only, and means responsive to relative movement between said vehicle and axle due to dynamic forces to close successively the valves of the first series with the bellows being extended and with the second series remaining closed and to open successively the valves of the second series with the bellows being compressed and with the first series remaining open.

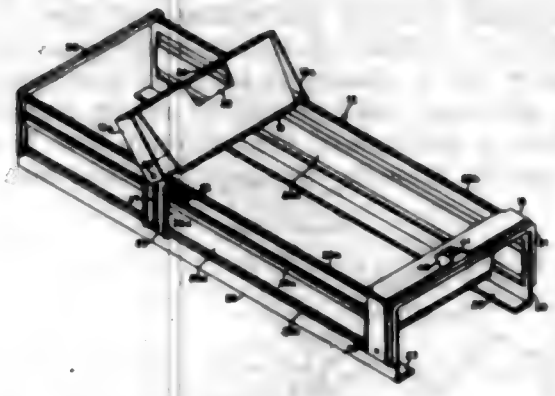
2,898,104
RECORD CARD HANDLING DEVICE

Michael Fiehl, Vestal, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application November 30, 1956, Serial No. 625,264
9 Claims. (Cl. 271—61)

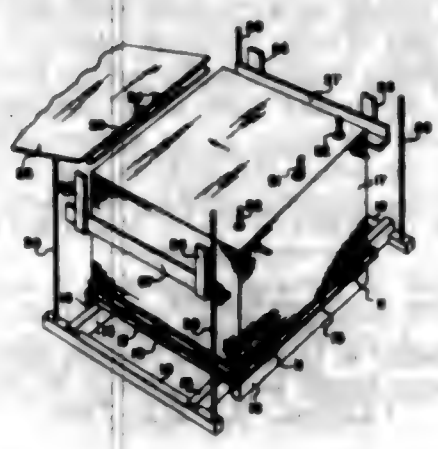
1. A record card storage apparatus comprising a pair of spaced L-shaped members including side walls and step portions adapted to support a plurality of record cards on the horizontal steps of said members, holding means fixed to corresponding ends of said L-shaped members to hold said members in fixed position relative to

define a rectangular structure, gate means, and means for positioning said gate means at fixed longitudinal positions



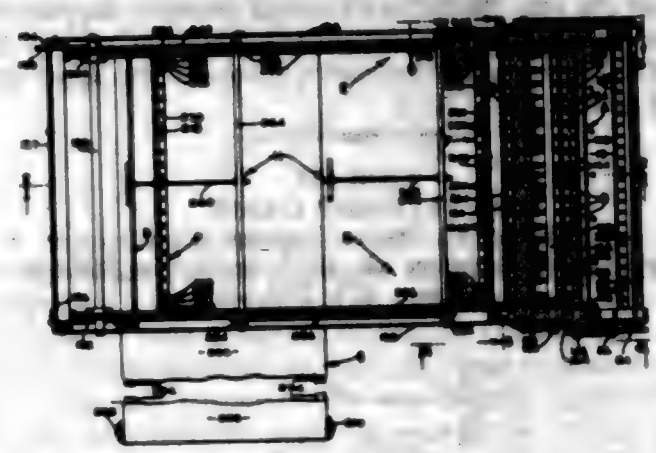
on said L-shaped members, said positioning means including means mounting said gate for perpendicular movement with respect to said steps.

2,898,105
PALLET FOR SHEET FEEDING MACHINE
Morton Schmidt, Redwood City, Calif., assignor to Schmidt Lithograph Company, San Francisco, Calif., a corporation of California
Application November 16, 1955, Serial No. 547,281
2 Claims. (Cl. 271—62)



1. A continuously operating sheet feeding machine comprising main and auxiliary pile supports, main and auxiliary control means for raising and lowering each support independently of the other, a pallet for temporarily supporting a remnant pile of sheets on said auxiliary pile support to enable the main pile support to be lowered to receive a new pile and then raised until the top of the new pile is in juxtaposition with the underside of the pallet, pile height gauging means engageable with the top of the remnant pile along its rear edge for controlling the auxiliary control means, said auxiliary control means maintaining the top of the remnant pile at a normal operating level while sheets are being fed therefrom, sheet separating means mounted on said sheet feeding machine for operating upon the rear top edge of the pile within limits defined by the normal operating level and a predetermined lower limit and being adapted to lift the top sheet vertically from the pile for subsequent forwarding to a sheet handling machine, said pallet having a main body portion of a thickness greater than the distance between the normal operating level and the lower limit of operation of the separating means and also having a wedge-shaped forward end extending transversely at least the width of the auxiliary pile support, said auxiliary pile support comprising arm means for supporting the pallet at its sides in a fashion such that the pallet may be withdrawn rearwardly from between the piles by first moving the pallet to remove the main body portion rapidly to deposit all of the remnant pile but that portion below the gauging means and separating means onto the new pile and by next moving the pallet to remove the wedge-shaped forward end slowly to combine the remainder of the piles, and additional means for raising the main pile support as the wedge-shaped end gradually lowers the supported portion of the remnant pile to maintain that portion of the pile between the normal operating level and the lower limit of operation of the sheet separating means during withdrawal of the wedge-shaped end.

2,898,106
BAG STACKING ASSEMBLY FOR A BAG MAKING MACHINE
Frank P. Winsett, San Leandro, Calif.
Application May 25, 1956, Serial No. 587,426
16 Claims. (Cl. 271—79)



1. A bag stacking mechanism for use with a bag handling machine comprising a first conveying mechanism adapted to receive bags as they are successively discharged by said bag handling machine, a second conveying mechanism mounted with its forward end above said first conveying mechanism and its rearmost end spaced rearwardly from the rearmost end of said first conveying mechanism, a gripping assembly carried by said second conveying mechanism adapted to grip the trailing edge of a bag on said first conveying mechanism, and means driving said bag handling machine said first conveying mechanism and said second conveying mechanism in timed relation with each other, whereby said gripping assembly will grip the trailing edge of a bag and carry said bag in suspended relation beyond the rearmost end of said first conveying mechanism, a discharge conveyor extending transversely beneath the rearmost end of said second conveyor, and means for releasing said gripping assembly adjacent the rearmost end of said second conveying mechanism to release the bags successively carried thereby and permit the bags to be deposited on said discharge conveyor in superposed relation, and means for periodically driving said discharge conveyor to separate the bags deposited thereon into groups each containing a predetermined number of bags.

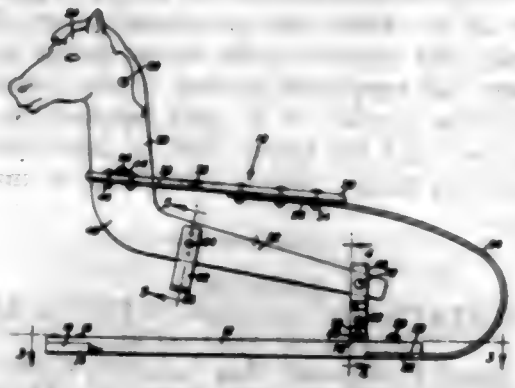
2,898,107
TOY RIDING DEVICE
Richard O. Varnum, Fort Klamath, Oreg.
Application August 22, 1957, Serial No. 679,633
3 Claims. (Cl. 272—53.2)

3. A riding device comprising an elongated supporting base, a generally U-shaped leaf spring arranged vertically and including a short lower leg attached to the rear end of the base, and an elongated upper leg extending forwardly in overlying spaced relationship to the major portion of said base, a generally L-shaped lever disposed vertically and including an upwardly extending forward leg portion extending above the forward portion of the

ing a turntable, a multispeed motor drive connected thereto, a control plate for controlling the operation of said drive, and a pickup arm, said mechanism having a

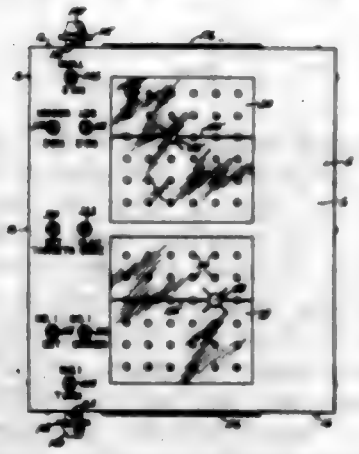
and with the long dimension of said pad substantially parallel to the path of travel of said stylus, each slip of said pad having a base comprising two differently colored

upper leg of said spring and a rearwardly extending generally horizontally disposed leg portion, said upwardly extending leg portion having a shape simulating an animal's head, means pivotally and movably connecting the



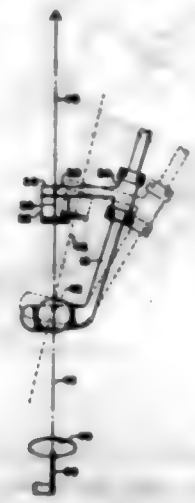
rear end of the rearwardly extending portion to the base adjacent the rear thereof, and means pivotally supporting the upwardly extending forward leg portion of the L-shaped lever from the forward portion of the upper leg of said spring.

2,898,108
BATTLESHIP GAME
Richard C. Meyer, Topeka, Kans.
Application September 12, 1958, Serial No. 760,691
15 Claims. (Cl. 273—130)



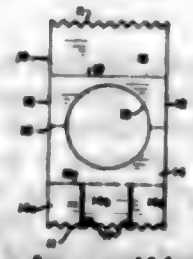
1. A game apparatus comprising a housing, two series of indicator members carried in said housing, a first electrically operable play device carried movably in said housing whereby to be selectively positionable adjacent any one of the first of said series of indicator members, a second electrically operable play device carried movably in said housing whereby to be selectively positionable adjacent any one of the second of said series of indicator members, said play devices being operable when energized to actuate the indicator member adjacent thereto, an operating means for each of said play devices including a manually operable switch, said operating means being effective when said switch is closed to energize the associated play device, a pair of selector panels carried by said housing and each having a series of selector switches carried thereby, the selector switches of each panel corresponding with the indicator members of one of said series of indicator members, an electrically operable signal means associated with each of said indicator members, and a plurality of registering circuits each including a source of electric power, one of said selector switches, the signal means associated with the corresponding indicator member, and an electric switch associated with said last named indicator member, said last named switch being operable to be closed responsively to the actuation of said indicator member by the associated play device.

2,898,109
GOLF PUTTER APPARATUS
John S. Williams, Cumberland, British Columbia, Canada
Application December 7, 1956, Serial No. 627,816
4 Claims. (Cl. 273—163)



1. Golf putter apparatus comprising, in combination with a golf putter including a shaft with a blade extending laterally from an end thereof, said blade having a face lying in a substantially vertical plane when the putter is normally held in sighting position by a player, a support, clamping means on the support for securing it to the putter shaft above the blade thereof, an inclined mirror carried by the support and extending longitudinally downwardly at an angle to the vertical plane and transversely parallel to the blade face, said mirror and the putter blade having marks thereon positioned where they can be seen and to align vertically when the putter is in its correct sighting position, and when the putter is moved to make the mirror and blade marks coincide with each other and with the image in the mirror of a golf hole spaced from the putter, the blade face is at right angles to a straight line extending through said hole.

2,898,110
GOLF BALL TEE
Charles B. Overbaugh, Denver, Colo.
Application March 15, 1956, Serial No. 571,853
2 Claims. (Cl. 273—210)

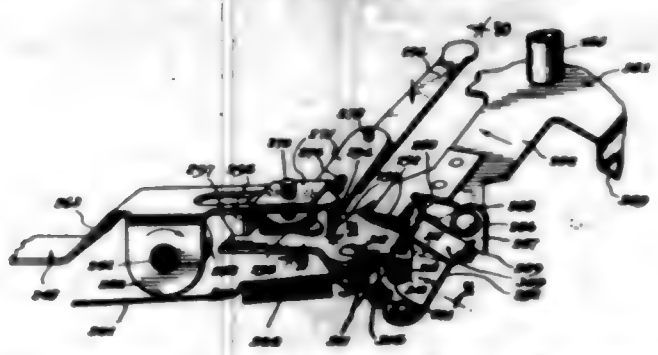


1. A supporting tee for a golf ball or like sphere of selected diameter, comprising a substantially rectangular member of sheet material transversely folded into two flat, substantially-rectangular panels with the fold edge forming a lineal ridge along the top edge thereof and with the edges of each panel opposite to the fold edge forming base edges, and a semi-circular saddle of said selected diameter in the panels at the ridge.

2,898,111
PHONOGRAPH RECORD PLAYER TRIP MECHANISM
James E. Vistain, Jr., Skokie, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware
Original application June 15, 1949, Serial No. 99,191. Divided and this application May 25, 1953, Serial No. 357,247
4 Claims. (Cl. 274—1)

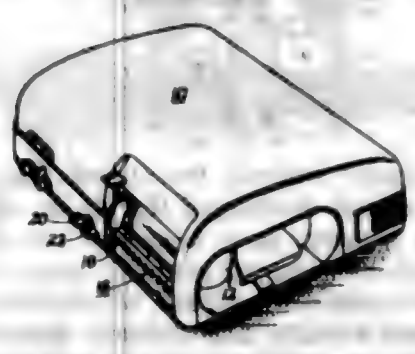
1. In an operating mechanism for an automatic record changer for playing a plurality of classes of records hav-

thereto, a control plate for controlling the operation of said drive, and a pickup arm, said mechanism having a trigger means including a lever adapted to be tripped when said pickup arm reaches the runout groove of one of said records, trip mechanism for said trigger means adapted to be operated alternately either by the eccentric runout grooves of one class of records or the spiral concentric runout groove of another class dependent on the position of said control plate, comprising a pawl arm fixed to said pickup arm, a pawl pivotally carried at the



end of said arm and positioned for engagement with said trigger means to trip it when said pickup arm engages an eccentric runout groove, a cam surface on said pawl arm, an arm pivotally mounted on said trigger lever near an end thereof, a pin carried by said pivoted arm, said pivoted arm connected to and arranged to be swung about its pivot by said control plate, said pin arranged to be in position disposed in the path of travel of and to be engaged by said cam surface at one position of said pivoted arm and not to be engaged at another position of said arm, said engagement being such to trip said trigger means.

2,898,112
INDICATOR SLIPS WITH BLUSHED LACQUER COATING
Gulles Flower, Jr., Darien, Frederick W. Roberts, Fairfield, and Richard G. Rowe, Redding Ridge, Conn., assignors to Dictaphone Corporation, Bridgeport, Conn., a corporation of New York
Application September 1, 1954, Serial No. 453,666
2 Claims. (Cl. 274—1)



1. An indicating medium for use in a dictating machine of the type that includes a rotatable record support adapted to support a sound record, and a manually operable marking device having a marking stylus adapted to be mounted for movement with a sound recording head movable transversely of said record to form a continuously curved sound track thereon, said marking device having stylus actuating means connected to said stylus and adapted to be selectively operated to force said stylus against selected side-by-side spaced areas of said indicating medium to indicate on one of said areas the termination of a body of dictated matter and on the other said area the existence of a correction in the dictated matter, said indicating medium being a pad of elongated slips of paper adapted to be mounted in said machine with the surface of the top slip of said pad confronting said stylus

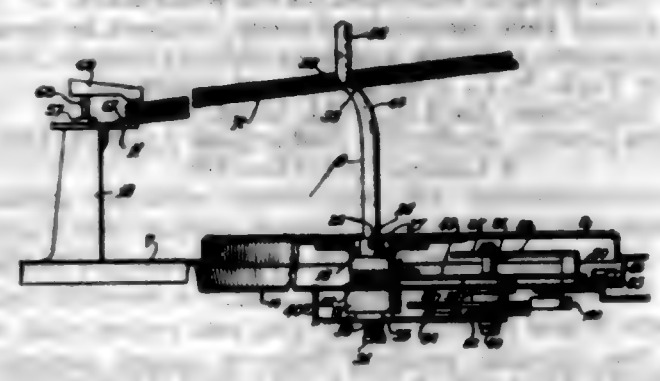
said flat surfaces, said separators each having an inner end disposed in abutting engagement with one of said opposed flat surfaces on said shaft, and second spring means biasing said separators towards each other and into contact with said flat surfaces, said shaft rotatably operable to radially retract said pair of supports and simultaneously extend said pair of separators for the release of records singly to the turntable.

2,898,118
ADJUSTABLE DRILL HOLDER
Frederick H. Smith, Dayton, Ohio
Application September 15, 1955, Serial No. 534,469
4 Claims. (Cl. 279—16)

1. An adjustable drill holder comprising a tool head adapted to receive a drill bushing, the rear surface of the tool head having radially disposed slots, the rear end of the tool head having radially disposed finely ground and polished surfaces, a shank member, a head portion formed on one end of the shank member, said head portion having radially disposed lugs positioned in the slots of the tool head, said lugs having less width and depth than the slots, the forward radially disposed surfaces of the head portion being ground and polished and abutting the rear end radially disposed polished surfaces of the tool head member, and an adjustable collar securing the tool head with relation to the head portion of the shank,

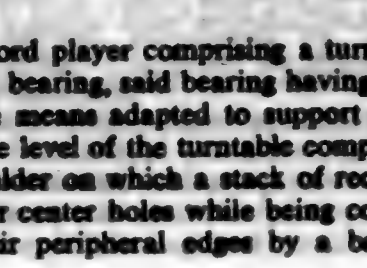
A supporting arrangement for a recording or reproducing head for a multi-track magnetic tape recorder, comprising a rotatable shaft, carrier means for said head mounted to slide freely on said shaft, a spiral cam and a cam follower mounted on said shaft and cooperating for displacing said carrier means step by step longitudinally of the shaft and for restoring said carrier means to its original position as said shaft is rotated in one direction, contact means for reversing the direction of drive of the tape, and reciprocable spring loaded means operated by the rotation of said shaft for switching said contact means, said reciprocable spring loaded means including a notched disc fixedly carried by the shaft, a spring loaded lever mounted for reciprocal movement in relation to the shaft and in a diametral position in relation to said disc, and a roller carried by said lever and cooperating with the notched disc to reciprocate said lever as said roller is moved into and out of the notches of the disc when the shaft is rotated.

2,898,114
PIVOTED POST CHANGER
James E. Vietain, Jr., Chicago, Ill., assignor to Admiral Corporation, Chicago, Ill.
Application January 11, 1951, Serial No. 205,458
11 Claims. (Cl. 274—10)



1. In a record player comprising a turntable rotatably mounted on a bearing, said bearing having a bore therein, and magazine means adapted to support a stack of records above the level of the turntable comprising a spindle having a shoulder on which a stack of records is adapted to rest at their center holes while being concurrently supported at their peripheral edges by a bracket member;

2,898,120
JAW CENTERING DEVICE FOR CHUCKS
George A. Geopfrich, New Britain, Conn., assignor to The Skinner Chuck Company, New Britain, Conn., a corporation of Connecticut
Application February 3, 1958, Serial No. 712,799
8 Claims. (Cl. 279—116)

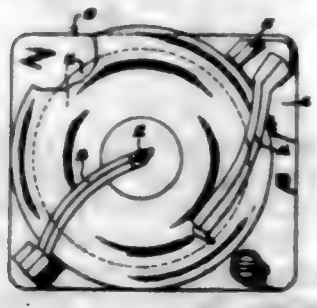


1. In a chuck, a rotatable chuck body member adapted to carry a plurality of jaws, a back plate member disposed generally coaxially of the body member and adjustable radially thereof, an axially extending projection on one member extending into a central aperture in the other member and leaving a plurality of circumferentially spaced flat bearing surfaces facing in a generally radial direction, radially adjustable slides carried by the other member for wedging engagement with said flat bearing surfaces, and means to adjust the radial position of the slides to center the chuck body member relative to the back plate.

2,898,121
HORSE CYCLE
Thomas D. Kelly, Ansonia, Conn.
Application April 2, 1957, Serial No. 650,120
3 Claims. (Cl. 280—1.203)

means to release the bottom record of the stack to the turntable including abutment means on the bracket adapted to be engaged by the periphery of only the bottom record of the stack, a conical base on the spindle, pivotal means in connection with the upper end of the bearing and the spindle by which the spindle is adapted to be pivotally supported, said conical base extending into said bore, the shoulder of said spindle being thereby adapted to be moved toward and away from the abutment means, and operating means coupled to the conical base by which said spindle is adapted to be swung about the pivotal means sufficiently for the bottommost record of the stack to be displaced from the support of the shoulder by said abutment means.

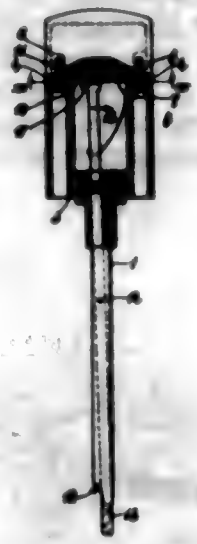
2,898,115
AUTOMATIC INTER-MIX RECORD PLAYER
Raymond C. Siebert, Park Ridge, Ill., assignor, by mesne assignments, to Warwick Manufacturing Corporation, Chicago, Ill., a corporation of Delaware
Application August 4, 1952, Serial No. 302,507
10 Claims. (Cl. 274—10)



1. In an automatic record changer for different sizes of records, record playing means, means for feeding records seriatim to said record playing means, a feeler mounted for movement between an inoperative position out of the path of records fed to said playing means and an operative position in the path of records fed to said playing means and movable to an intermediate position by a certain size record, means for normally maintaining said feeler in the inoperative position, means for moving the feeler to the operative position prior to feeding a record to said record playing means, selectively operable means frictionally resisting movement of said feeler to retain the same in an intermediate position to which moved, and means for actuating said feeler from the intermediate position to which moved into said inoperative position in timed relation to the feeding of records seriatim to said playing means.

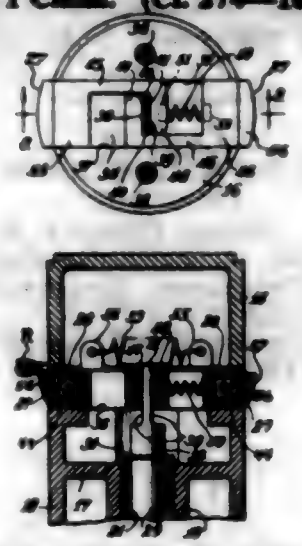
2,898,116
MECHANISM FOR SUCCESSIVELY RELEASING STACKED PHONOGRAPH RECORDS
Sven Gustaf Falk, Stockholm, Sweden, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application April 13, 1954, Serial No. 422,874
Claims priority, application Netherlands April 17, 1953
4 Claims. (Cl. 274—10)

1. A mechanism for successively releasing stacked phonograph records having a central opening onto a turntable comprising a spindle including a housing, a hollow shaft secured to said housing, at least two movable main supports in said housing for carrying said record stack, at least two movable auxiliary supports spaced vertically from opposite main supports by a distance substantially equal to the thickness of each of the records to be played, an elongated pin operatively coupled to said main and auxiliary supports for moving the same, means mounting said pin for pivotal movement in said shaft with the free end of said pin extending outside said shaft, said main and auxiliary supports being relatively thin plates of identical configuration and each having a slot surrounded on all sides by surfaces of said plate and positioned obliquely to the direction of movement of said supports whereby when said pin is moved in a predetermined direction substantially transverse to the direction of movement of said supports, said pin operatively engages said slots of the main



supports thereby moving the latter to cause retraction thereof and thereby releasing the lowermost record of the stack, the auxiliary supports being moved simultaneously between the lowermost record and the adjacent superposed record.

2,898,117
PHONOGRAPH RECORD PLAYER MECHANISM
James E. Vistain, Jr., Skokie, Ill.
Application August 10, 1953, Serial No. 373,225
1 Claim. (Cl. 274—10)



A record changer wherein the records are supported on a center post and discharged therefrom onto a turntable including a center post, a pair of record supports radially and slidably disposed near the upper end of said center post for supporting a stack of records, a pair of record separators radially and slidably disposed on top of said supports, operating means for said supports and separators including a shaft extending into the center post and independently rotatable relative to the center post, said shaft formed with opposed flat surfaces at the upper end thereof, said flat surfaces of said shaft disposed medially between each of said supports and similarly disposed medially between each of said separators for operative association therewith, each of said record supports formed with a head portion extending to an arm portion and terminating in a hook, said hook of each support extending beyond the shaft and into engagement with one of the flat surfaces on the shaft on the opposite side from its respective head portion, first spring means interposed between the head of one support and the hook of the other support biasing the supports outwardly from said flat surfaces of said shaft, said first spring means biasing the hooks of said supports into engagement with

a vertical wall, the bars being secured together at the corners of the deck, feet extending downwardly from each

respect to said basket and positioned above said U-shaped

1. An adjustable drill holder comprising a tool head adapted to receive a drill bushing, the rear surface of the tool head having radially disposed slots, the rear end of the tool head having radially disposed finely ground and polished surfaces, a shank member, a head portion formed on one end of the shank member, said head portion having radially disposed lugs positioned in the slots of the tool head, said lugs having less width and depth than the slots, the forward radially disposed surfaces of the head portion being ground and polished and abutting the rear end radially disposed polished surfaces of the tool head member, and an adjustable collar securing the tool head with relation to the head portion of the shank, said lugs preventing rotation of the tool head with respect to the shank.

2,896,119
COLLET FOR DENTAL PURPOSES
Erich Hoffmeister, Biberach-Riss, Germany
Application April 23, 1956, Serial No. 580,105
Claims priority, application Germany May 4, 1955
4 Claims. (Cl. 279—51)

1. A handpiece for dental purposes comprising a removable bearing sleeve including a bearing, a drive shaft rotatably mounted in said handpiece, a spindle sleeve rotatable with said drive shaft and having an internal generally conical opening, a removable collet arranged in said spindle sleeve, a generally conical head on said collet located in the opening of said spindle sleeve, a hollow shaft rotatably mounted in the bearing of said bearing sleeve in front of the collet for accommodating the shank of a tool to be engaged by said collet, a generally conical sleeve embracing the head of said collet and connected to said hollow shaft, said generally conical sleeve extending into the opening of the spindle sleeve to support said spindle sleeve, and a clamping rod arranged within the spindle sleeve and operatively connected to said collet, said clamping rod having a portion projecting from said handpiece and including handle means for operation of the clamping rod to move the collet into and from clamping engagement with a tool.

in the other member and leaving a plurality of circumferentially spaced flat bearing surfaces facing in a generally radial direction, radially adjustable slides carried by the other member for wedging engagement with said flat bearing surfaces, and means to adjust the radial position of the slides to center the chuck body member relative to the back plate.

2,896,121
HORSE CYCLE
Thomas D. Kelly, Ansonia, Conn.
Application April 2, 1957, Serial No. 650,120
3 Claims. (Cl. 280—1.203)

1. In a cycle of the character described, a body in the form of an animal comprising front and rear sections, said front section comprising the head, neck and shoulders with forelegs pivotally connected thereto, means pivotally connecting the sections to permit the front section to swing laterally in opposite directions, front and rear wheels supporting the sections, a steering bar extending upwardly from the front wheel through the forward portion of the rear section to the top thereof, handle bar means connected to said bar for steering the front wheel, connecting bars secured to the front section and having a sliding connection to the rear section at opposite sides thereof, crank means secured on the steering bar, and link connections from said crank means to the connecting bars to swing the front section laterally with steering movements of the front wheel.

2,896,122
CONTAINER FOR USE WITH FORK LIFT TRUCKS
Marshall H. Beckner, Washington, Pa., assignor to Tri-State Engineering Company, Washington, Pa., a corporation of Maryland
Application February 24, 1958, Serial No. 717,040
5 Claims. (Cl. 280—12)

3. A container that comprises vertical side walls, a deck sheet, an underframe for the deck sheets, of rectangularly arranged bars each disposed directly beneath

agricultural tool, an arch carried by the rear end of said tractor, said arch slidably supporting the other end of said draw bar, a lever carried by said draw bar, means on said arch and on said draw bar for swinging said lever in relation to said bar whenever said draw bar swings in relation to said arch, said lever being operatively connected with the said mechanism.

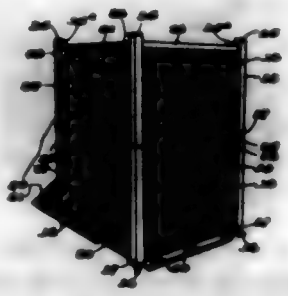
2,896,126
DRAFT HITCHES
Roy A. Loukonen, Parlier, Calif.
Application January 30, 1956, Serial No. 562,129
11 Claims. (Cl. 280—467)

bar on which the pair of bars is pivotally mounted, a pin extended from one side of the cam and positioned to engage one of said arms for limiting rotary movement of the cam in one direction, and a pin extended from said shaft and positioned to be engaged by the pin of the cam for limiting rotary movement of the cam in the opposite direction.

2,896,128
VALVE
Elliot Skohan, San Bernardino, Calif.
Application November 26, 1954, Serial No. 471,397
9 Claims. (Cl. 284—17)

configuration and each having a slot surrounded on all biasing the hooks of said supports into engagement with

a vertical wall, the bars being secured together at the corners of the deck, feet extending downardly from each corner of the underframe, corner posts secured to the underframe and projecting upwardly therefrom to a plane above two oppositely disposed vertical walls and being arranged at their upper ends to support the feet of a like superposed container when stacked thereon, and

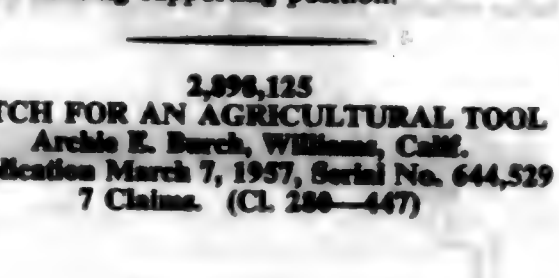


floor-engaging runners disposed directly beneath two oppositely disposed underframe bars and beneath the said two vertical walls, the runners being positioned mainly at a plane substantially lower than the lower ends of the feet, and spaced below the underframe, but being of such depth that they will not engage the upper edges of said two vertical walls of a like container when their container is in stacked relation thereon.

2,898,123
FRAME CONSTRUCTION FOR A NESTING SHOPPING CART
Lynn N. Davis, Calhoun County, and Walter H. Schray, Battle Creek, Mich., assignors to United Steel & Wire Company, Battle Creek, Mich., a corporation of Michigan
Application October 25, 1957, Serial No. 692,445
9 Claims. (Cl. 280—33.99)

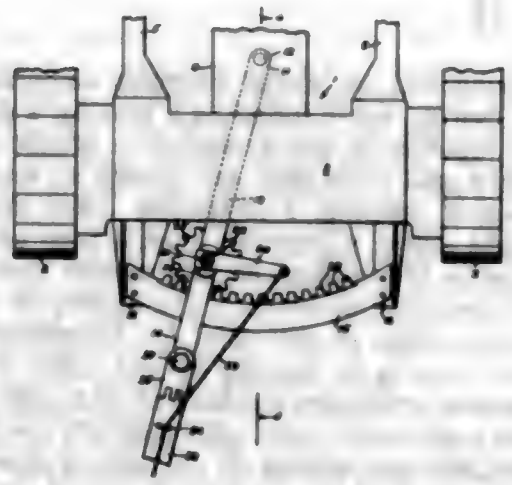
3. In a shopping carrier construction, the combination comprising: a generally horizontal base platform; ground-engaging wheels supporting said base platform adjacent the forward and rearward ends thereof; a substantially U-shaped basket supporting member, said U-shaped member being secured adjacent the free ends of the legs thereof to said base platform adjacent the rearward end thereof, the legs of said U-shaped member extending upwardly and forwardly from the rearward end of said base platform, the bight of said U-shaped member and the portions of the legs adjacent thereto being substantially parallel with and positioned directly above said base platform; reinforcing elements secured to and extending downwardly from said U-shaped member near the bight thereof, said reinforcing elements being secured at their lower ends to said base platform; a substantially horizontal basket positioned adjacent to and above said bight and the portions of the legs of said U-shaped member adjacent thereto; means affixing said basket to said U-shaped member; and handle means affixed rigidly with respect to said basket and positioned above said U-shaped member and said base platform adjacent the rearward end thereof.

2,898,124
TRAILER HITCH
Herbert J. Bernard and Joseph A. Morgan, Sun Valley, Calif.
Application May 13, 1957, Serial No. 658,878
1 Claim. (Cl. 280—406)



A hitch for trailers, which trailers include a forwardly extending tongue having a socket therein, including a housing adapted to be fastened to and supported by the rear end of a tow car, a pair of springs, pins for pivotally and removably connecting one end of each spring to the housing, means for removably connecting the other end of each spring to the trailer tongue, a ball on the housing for operative association with the socket of the trailer tongue, the removable connections between the springs and the housing including aligned openings and sockets in the housing for the pins, the removable connections between the ends of the springs and the trailer tongue comprising hooks, said hooks comprising S-shaped brackets, said brackets including integral protuberances to space the spring ends from the juxtaposed portion of the trailer tongue, a telescopic tubular element forming part of the fastening and support means of the housing, said tubular element being square in cross section, brackets and welds comprising fixed supports and connections between the car chassis and the telescopic housing support, the two portions of the telescopic support being welded together when finally fixed in adjusted housing supporting position.

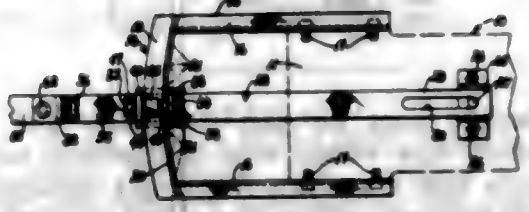
2,898,125
HITCH FOR AN AGRICULTURAL TOOL
Archie E. Burch, Williams, Calif.
Application March 7, 1957, Serial No. 644,529
7 Claims. (Cl. 280—447)



1. A hitch for drawing an agricultural tool by a tractor carrying a mechanism to be automatically operated whenever the latter changes the direction of its travel, said hitch comprising a draw bar, one end of which is pivotally connected to the tractor, and the other end to the

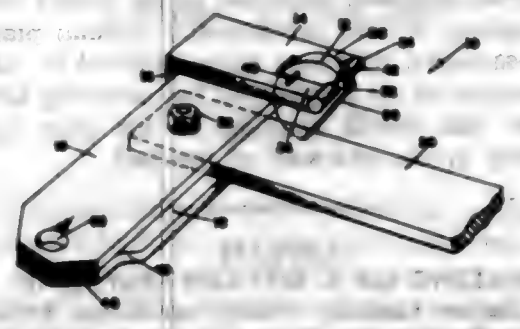
outlet, an external integrally formed flange extending cir-

2,898,131

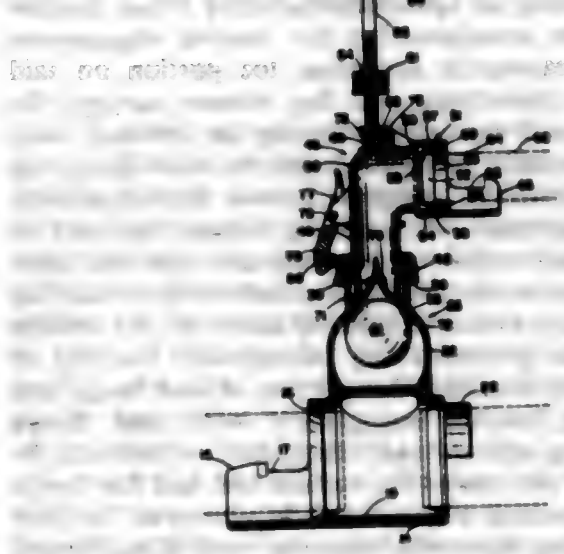


4. In association with a draft appliance having a rearward end portion, a draft hitch comprising a draft frame mounted on the rearward end portion of the draft appliance, a substantially erect pin mounted on the draft appliance, an elongated drawbar providing an elongated longitudinal slot slidably fitted on the pin for longitudinal slidable movement of the drawbar between predetermined forward and rearward positions relative to the draft appliance and a rearward coupling end extended rearwardly of the draft frame, first latching means mounted on the draft frame and slidably fitted on the drawbar, and second latching means mounted on the drawbar, one of said latching means being pivotally mounted for movement between a latching position engaging the other latching means in the rearward position of the drawbar for preventing said longitudinal slidable movement of the drawbar and a retracted position permitting said slidable movement of the drawbar, said first and second latching means providing flat opposed substantially parallel thrust bearing surfaces extended transversely substantially the full width of the drawbar and engageably mating in said latching position.

2,898,127
CAM LOCK TRACTOR HITCH
Harold B. Plumb, Harlan, Iowa
Application July 22, 1957, Serial No. 673,388
2 Claims. (Cl. 280—478)

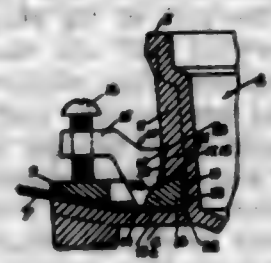


1. In a connector for a hitch, the combination which comprises a pair of bars, one of said bars being offset downwardly providing space for a draw-bar of a tractor between the bars, means for pivotally mounting the bars on the draw-bar of the tractor, a plate having a bifurcated end providing spaced arms mounted on the uppermost of said bars, a shaft mounted on the ends of the arms, a cam rotatably mounted in an eccentric position on said shaft, said cam being positioned to drop over a draw-



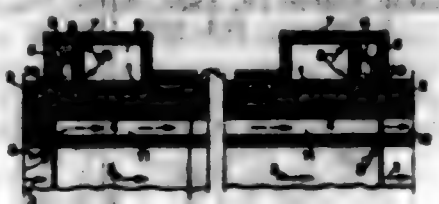
1. Apparatus of the character described, comprising a housing having longitudinally spaced inlet and outlet ports and a passage through which water is adapted to flow between irrigation pipe ends inserted into said ports, said housing including a side chamber communicating with a side of said passage and having an outlet opening spaced from said passage, an annular valve seat in said chamber, a ball check valve in said chamber between said passage and seat and engageable therewith to interrupt water outflow therethrough in response to upstream water pressure application to the valve, means including a discharge conduit communicating with said chamber outlet for receiving said outflow and an actuator projecting through said outlet toward the valve for engagement therewith holding the valve displaced off said seat thereby permitting said outflow, said means being adjustable to displace said actuator toward and away from the valve and against said upstream water pressure, and latch means detachably interconnecting said means and chamber.

2,898,129
CLAMPING DEVICE FOR FLOOR DRAINS WITH REMOVABLE CLAMPS
Martin A. Sisk, San Diego, Calif.; Lois E. Sisk, executrix of said Martin A. Sisk, deceased
Application May 23, 1956, Serial No. 586,798
1 Claim. (Cl. 285—42)



In a surface drain comprising a body formed with a peripheral side wall extending from an inlet rim to an

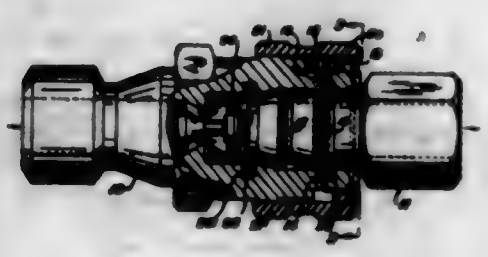
fluid passages in said members communicating with said fluid receiving chamber for a fluid passing therethrough, said fluid seating said diaphragm on said seat when said members are at rest and aspirating fluid from said fluid



2,898,135
MEANS FOR LOCKING INTERNAL RETAINING RINGS
Hugo Wurzel, Bronx, N.Y., assignor to Waldes Kohinoor, Inc., Long Island City, N.Y., a corporation of New York
Application May 25, 1954, Serial No. 432,164
6 Claims. (Cl. 287—52)

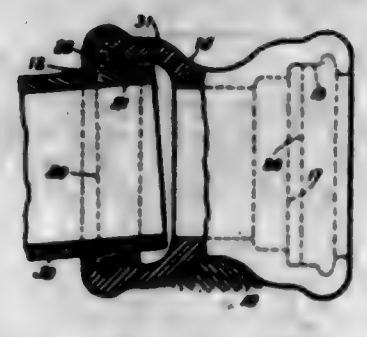
outlet, an external integrally formed flange extending circumferentially of said side wall at a substantial interval below said rim and having a flat annular portion extending a substantial radial distance from said side wall and a radially outward and upwardly sloping top clamping surface outward from said flat portion, a plurality of circumferentially spaced lugs integrally formed on said side wall and extending outwardly therefrom, each lug having a lower end surface overhanging said flange and disposed an interval above said flange, said lug lower end surface sloping downwardly from one side of said lug to the other and having an inwardly upwardly inclined bottom face, a ring for marginally clamping a flashing membrane upon said top clamping surface of said flange, a clamp cooperating with each said lug and the clamping ring, each clamp having an upwardly extending breast portion overlapping the associated lug for bearing engagement therewith, a rearwardly extending toe portion on said breast portion underlying said lug bottom portion, the upper face of said toe portion having an inclined hook portion substantially complementary to said lower lug surface and adapted to engage said lower lug for slidable clamping engagement with said lug bottom face and of less width than the spacing between said lugs, the inner face of said toe portion being disposed beneath said lug in spaced relation to said peripheral side wall, the bottom face of said toe portion being substantially flat and of less radial width than said flat portion of said flange and having sliding bearing engagement with said flange beneath said lug whereby said clamp may be laterally inserted between said lower lug surface and said flat flange face for interlocking engagement therebetween, an arm portion extending outwardly from the front of said breast portion and an adjustable member extending downwardly from adjacent the outer end of said arm portion in clamping engagement with said ring.

2,898,130
SAFETY SEAL
Howard J. Hansen, Bay Village, Ohio, assignor to The Hansen Manufacturing Company, Cuyahoga County, Ohio, a corporation of Ohio
Application January 20, 1953, Serial No. 718,037
2 Claims. (Cl. 285—96)



1. A coupling for conductors of acrid fluids particularly, comprising a socket member and a plug member, a ring lock for said coupling comprising a split ring mounted in said socket member, said ring projecting normally inward into the path of the plug member as the latter is pushed forward into said socket member for making the coupling, said plug member having two annular grooves spaced apart axially, each of said annular grooves being adapted to be brought into register with said split ring, said plug member comprising a nose portion of constant diameter in advance of said grooves, said socket member having an internal annular groove, a rubber gasket mounted in said last-named groove in sealing relation with said nose portion when said split ring is in register with either one of said plug grooves or moving between these positions.

2,898,131
FLEXIBLE PIPE-JOINT
Ralph W. Kurtz, Coshocton, Ohio, assignor to James B. Clow & Sons, Inc., Chicago, Ill., a corporation of Delaware
Application February 4, 1958, Serial No. 713,139
4 Claims. (Cl. 285—231)



1. A flexible joint for cast iron pipes and similar articles which vary within wide dimensional tolerances comprising a bell, a resilient rubber-like annular gasket mounted in said bell, and a pipe spigot inserted in said gasket; said bell having integrally formed therewith a substantially constant-diameter cylindrical bearing surface which supports said gasket radially and extends axially inwardly therebeyond, an annular groove which adjoins and forms the outer boundary of said cylindrical bearing surface said groove having a bottom face that curves smoothly into the sides thereof, an outer end-wall having an inner surface which slants axially outwardly and radially inwardly from said groove, and an opening in said outer end-wall with a diameter that is substantially less than the diameter of said cylindrical bearing surface and somewhat greater than the outside diameter of said pipe spigot; said gasket having a cylindrical sealing face that abuts said cylindrical bearing surface of the bell, a ridge at the axially outer end thereof substantially complementary to said groove, a conical end-face that normally fits loosely against said inner surface of the outer end-wall of the bell, an internal sealing face that joins said conical end-face and normally converges axially and radially inwardly for a distance substantially beyond said ridge to lie axially intermediate the ends of said cylindrical bearing surface, said internal sealing face having at the axially outer end thereof a diameter slightly larger than said opening in the outer end-wall of the bell whereby the pipe spigot can be freely accommodated, and a rounded end-face that joins the axially inner ends of said cylindrical sealing face and said internal sealing face in a plane substantially normal to the cylindrical sealing face; the axial length of said cylindrical sealing face being less than the cross-sectional thickness of the gasket measured before coupling at said substantially normal plane, and said cross-sectional thickness being reduced in the range from 5 percent to 40 percent by the coupling action regardless of the lateral position of the pipe spigot in said opening in the end-wall of the bell.

2,898,132
SEALING OF A ROTARY MACHINE
Jacques Charles Guérin, Neuilly-sur-Seine, France, assignor to Societe des Forges et Ateliers du Creusot, Paris, France
Application March 12, 1956, Serial No. 570,899
Claims priority, application France March 17, 1955
3 Claims. (Cl. 286—7)

1. In a seal as described, a first member, a second member mounted for rotational movement relative to said first member, a resilient diaphragm mounted on one of said members, a seat on the other of said members for said diaphragm, a fluid receiving chamber on one side of said diaphragm when said members are at rest, and

2,898,137
RETRACTING FLANGE DEVICE

2,898,139
LATCH CONTROL APPARATUS

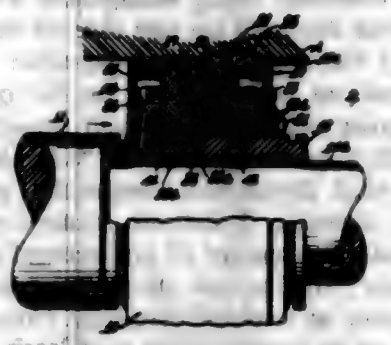
receiving chamber when said members are in relative rotational movement, said resilient diaphragm being mounted on the rotary one of said members and moved by centrifugal force away from said seat.

2,898,133

SEAL FOR A ROTATING SHAFT

Rio N. Mirza, Northport, N.Y., assignor to Fairchild Engine and Airplane Corporation, Bay Shore, N.Y., a corporation of Maryland

Application May 17, 1957, Serial No. 659,788
19 Claims. (Cl. 286—7)



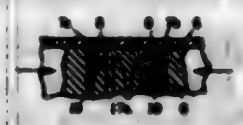
1. A sealing device for preventing leakage of a fluid into or out of a housing through which a rotating shaft extends comprising means for establishing an effective seal between the housing and the shaft when the shaft is at rest, said seal establishing means offering resistance to the rotation of the shaft, and temperature sensitive means controlled by the heat generated by friction caused by said resistance to decrease the resistance to the rotation of the shaft when the shaft is rotating.

2,898,134

INTERIOR DIAMETER MAINTAINING SUPPORT FOR SEAL RINGS

Eugene D. Meskew, Los Angeles, Calif., assignor to Bonbow Mfg. Co., Inc., Culver City, Calif., a corporation of California

Application July 16, 1956, Serial No. 597,958
2 Claims. (Cl. 286—26)



1. The combination with a mechanical assembly having a pair of interfitting members the inner one of which presents an annular peripheral fluid pressure seal-receiving groove, of a fluid pressure seal means in said groove and comprising a pair of nested, coaxial rings the outer one of which is deformable, compressible and contractible and the inner one of which is relatively non-contractible whereby to resist contraction of said outer ring, one side wall of said fluid pressure receiving groove presenting an annular projecting portion of conoidal cross section, said outer ring having an annular side groove for receiving said projecting portion, and said inner ring having a radially disposed annular flange engaging the side of said outer ring opposite from the side having said last-named groove therein.

1. A retaining ring assembly comprising, in combination, a housing having a bore provided with a circular groove opening through the bore wall, an internal open-ended retaining ring seated in said groove with its ends spaced apart, the outer edge of the ring bearing with spring pressure against the groove bottom, the inner edge portion of the ring extending into said bore and forming an artificial shoulder therein, and means locking said ring against accidental or unintentional removal from said groove comprising a U-clip made of spring material and having spaced parallel arms, said clip being clipped to and extending inwardly of the edge of the housing in position such that one arm thereof extends axially through the bore and into the space between the open ends of the ring, the width of said clip arm corresponding substantially to said space whereby said clip is effective to prevent movement of the ring ends towards one another, and said one clip arm having a detent seating with snap action in the groove portion extending between the ring ends thereby to hold said clip to the housing.

2,898,136

CASING STOP COLLAR TO MOUNT A WELL TOOL

Jesse E. Hall, Sr., and John A. Hall, Weatherford, Tex.

Application June 22, 1954, Serial No. 438,504
12 Claims. (Cl. 287—52)

1. Apparatus of the character described, comprising a well casing or pipe, a collar loosely encircling said casing, the bore of said collar tapering toward both ends thereof from a region of maximum diameter located intermediate said ends whereby said bore forms around the casing an annular chamber which is arched in radial cross section, a pair of axially spaced wedge rings snugly embracing the casing within said chamber, a screw member threaded in said collar and having a tapered portion projecting into said chamber between said rings, thrust transmitting means between the tapered portion of said screw member and each ring for urging that ring outwardly from said member and toward the end of the bore upon rotation of said member, and the outside diameter of each ring being greater than the diameter of the bore at the end toward which that ring is urged whereby each ring is forcibly wedged between the exterior of said casing and the tapered portion of said bore.

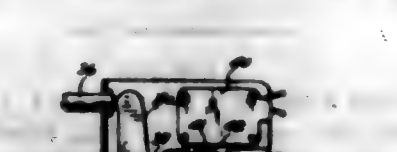
der a door, said linkage automatically lifts up said wedge member and disposes it in retracted position along the side of the door with the narrow forward edge portion of the wedge member disposed downwardly and the upper wedge surface disposed along the side of the door, whereby said wedge member is maintained in its re-

together form a V-shape in cross section and each having an internal thread meshing with the thread on the web portion, a pair of inclined inserts of resilient plastic material, and a V-shaped wheel rim in contact with the inserts

between these positions.

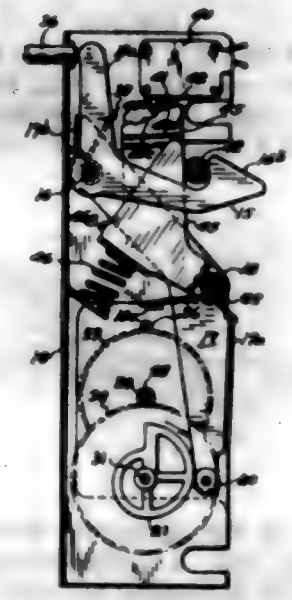
of said diaphragm when said members are at rest, and

2,898,137
RETRACTING FLANGE DEVICE
Walter J. Kreske, Newton Center, Mass.
Application July 16, 1953, Serial No. 368,465
8 Claims. (Cl. 287—52.07)



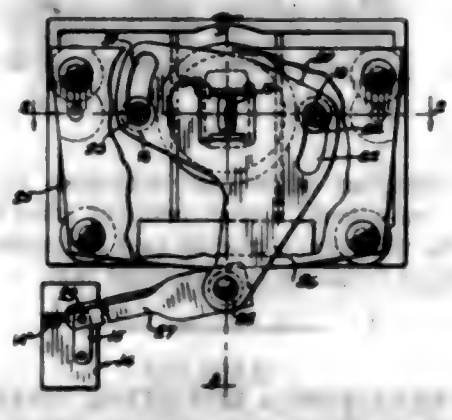
1. The combination of means for mounting a sleeve type body, said mounting means having a hollow tubular portion open at one end, transversely disposed guides fixed to said tubular portion, oppositely disposed elements in the hollow of said tubular portion, a shoulder on each of said elements slidably engaging said guides to move in said transverse direction, means in the hollow of said tubular portion pivotally mounting said elements, means for moving said elements about said pivot means oppositely to each other in said transverse direction, whereby to selectably cause said shoulders to project above said mounting means in retaining relation with said body or retract into releasing relation with said body, and support means fixed to said last mentioned means for clamping said shoulders between said tubular portion and support means when said shoulder elements are in retaining relation with said body.

2,898,138
POWER OPERATED LATCH MECHANISM
Andrew J. Van Noord, Grand Rapids, Mich., assignor to Jervis Corporation, Grandville, Mich., a corporation of Michigan
Application November 19, 1956, Serial No. 623,078
10 Claims. (Cl. 292—122)



3. In a power operated latch mechanism for cooperating with a keeper element to draw a hinged closure member tightly shut with respect to a door frame member, a lever mounted on one of said members and pivotally movable between an extended and a retracted position, a bolt element pivotally mounted on said lever and movable with respect to said lever between a keeper engaging and a keeper releasing position, a cam element and power actuated means for rotating said cam element, said cam element being in contact with a portion of said lever and effective to move said lever and the bolt mounted thereon between an extended and a retracted position.

2,898,139
LATCH CONTROL APPARATUS
Harry Edwin Goodfellow, Grand Rapids, Mich., assignor to Jervis Corporation, Grandville, Mich., a corporation of Michigan
Application March 16, 1956, Serial No. 572,135
7 Claims. (Cl. 292—336.3)



6. Apparatus for controlling a latch mechanism comprising a first member having two spaced formations defining an axis, a second member pivotally movable relative to said first member and having two spaced elements, one of said elements being engageable with one of said formations and disposed on one side of said axis and the other of said elements being engageable with the other of said formations and disposed on the opposite side of said axis, spring means urging said member towards its normal position in which both of said elements are engaged with said formations, manually operable means movable in opposite directions transverse to said axis to effect pivotal movement of said second member in one direction only, and a link pivotally connected to said second member at a point removed from said elements and adapted to be connected to said latch mechanism.

2,898,140
DOOR STOP
Wilbur W. Gilmore, Cleveland, Ohio
Application August 15, 1955, Serial No. 528,422
2 Claims. (Cl. 292—342)

1. An automatically retracted doorstop comprising, an elongated resilient tapered wedge member including a lower surface adapted to lie on a floor and a sloping upper surface adapted to engage the bottom edge of a door, a bracket securing said doorstop to the side of a door, a first link member pivotally secured at its outer end to the rearward portion of said wedge member near the margin of said upper surface, a second link member pivotally mounted on the opposite end of said first member and having its inner end pivotally mounted in said bracket, and spring means cooperating with said bracket and said second link member and normally biasing said second link member in its retracted position against the side of the door, said wedge member being adapted to be disposed under the edge of a door for preventing the closing of the door, said linkage and wedge member being positioned and arranged in such manner that upon removing said wedge means from its wedging position un-

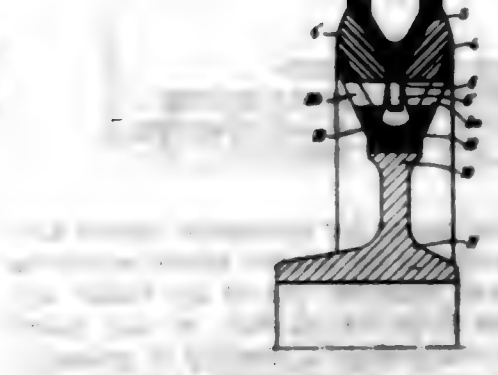
tracted position in an advantageous location along the side of the door from which it can be readily moved to a door-stopping position under the edge of the door.

2,898,141
SEPARABLE FASTENER CLOSER
Jennie E. Perryn, Tampa, Fla.
Application March 20, 1958, Serial No. 722,799
1 Claim. (Cl. 294—1)

A closer for the slider of a separable slide fastener comprising an elongated tubular shank, a rod slidably mounted in said shank and projecting from the lower end of said shank, a metallic jaw secured to the lower end of said shank and having a transverse serrated face thereon on the side thereof opposite said shank, a second metallic jaw secured to the lower end of said rod and having a transverse serrated face thereon on the side thereof secured to said rod, said jaws being arranged in vertically disposed relation with the faces thereof arranged in opposed relation, a wedge shaped extension formed on said first jaw at the end thereof opposite said shank and on the side thereof opposite said first named transverse face, said extension providing means for engaging and moving a zipper slider handle to horizontal position, and a hollow handle member fixedly secured to the upper end of said shank, said handle having a longitudinally extending slot therein, said rod being perpendicularly offset at its upper end, said laterally offset portion of said rod being disposed through said slot in said handle, said slot being laterally offset at its upper end whereby said offset portion of said rod can be moved into locking position.

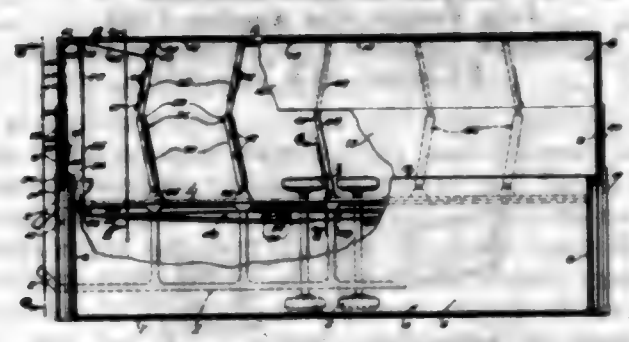
2,898,142
DISC WHEELS
Heinrich Kordes, Osnabruck, Germany, assignor to Klockner-Georgsmarienwerke, Aktiengesellschaft, Osnabruck, Germany
Application July 16, 1957, Serial No. 672,178
Claims priority, application Germany May 22, 1957
4 Claims. (Cl. 295—11)

1. A disc wheel for use in railway rolling stock and the like, comprising a hub and web portion associated therewith, said web portion having a peripheral annular surface with a thread thereon, a pair of annular flanges which



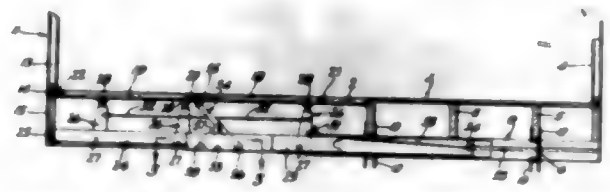
and having internally extending lugs in spaced relation at the apex of the V-shaped rim, said flanges, inserts and the lug having concentric holes therein to receive bolts to secure the parts together.

2,898,143
EXTENSIBLE TRAILER
John Ferrara, Los Angeles, Calif.
Application June 8, 1956, Serial No. 590,292
9 Claims. (Cl. 296—23)



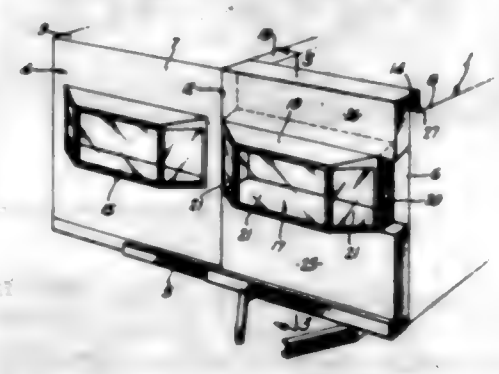
2. In an extensible trailer including a fixed trailer section and an extensible trailer section movable relative to the fixed trailer section between a telescoped position and an extended position, the extensible trailer section having foldable floor units hinged for movement between a horizontal coplanar position locking said extensible trailer in its extended position and an upright folded position assumed when said trailer sections are telescoped, the combination of a trailer extending and telescoping means comprising: a track means for guiding said extensible trailer section; ground wheels carried by said extensible trailer section and movable downwardly therefrom to engage the ground and support said extensible trailer section, said ground wheels being movable from said fixed trailer section approximately half the travel of said extensible trailer section, whereby the main weight of said extensible trailer section is carried on said ground wheels, and, when extended said extensible trailer section is substantially balanced on said ground wheels; a mechanical actuating means for relatively extending and telescoping said trailer sections, said actuating means including a portion freely movable relative to said extensible trailer section through a limited range to provide a lost motion connection permitting a predetermined initial movement of said actuating means before telescoping of said trailer sections; a thrust means located under said foldable floor units to initiate folding of said floor units; and means operatively connecting said thrust means to said actuating means for operation during initial movement of said actuating means within the limits of said lost motion linkage.

2,898,144
FLOOR SUPPORTING MEANS FOR EXPANSIBLE TRAILERS
John Ferrera, Los Angeles, Calif.
Application July 22, 1957, Serial No. 673,461
15 Claims. (Cl. 296—23)



1. Floor supporting means for expansible trailers having trailer sections arranged for relative lateral expansion and retraction, a fixed floor for one of the trailer sections and a foldable floor for another of said trailer sections, said means comprising: a plurality of extensible floor joists disposed under said floors for lateral extension and retraction with said trailer sections; and a plurality of floor supporting pillars movably mounted on said floor joists, each of said pillars being movable on its joist between an upwardly extending position between said floor joists and floor when said floor joists are extended and a storage position on said joist when said floor joists are retracted.

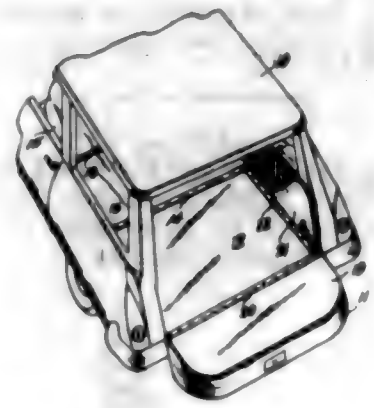
2,898,145
BAY WINDOW CONSTRUCTION FOR EXPANSIBLE TRAILERS
John Ferrera, Los Angeles, Calif.
Application August 2, 1957, Serial No. 675,960
6 Claims. (Cl. 296—23)



1. An expansible trailer construction, comprising: a first and a second trailer section, said trailer sections being relatively movable between relatively telescoped and laterally extended positions, and having, respectively, an inner wall and an outer wall movable between an overlapping position when the trailer sections are telescoped, and a laterally displaced position when said trailer sections are extended; said inner wall of the first trailer section defining a window opening therein; a bay window unit hinged to a margin of said window opening and movable between a retracted position within said inner trailer section, to permit telescoping and extension of said trailer sections, and an outwardly projecting position when said trailer sections are extended, and a fixed bay window projecting from said outer wall in lateral alignment with said bay window unit and arranged to cover said window opening of the inner wall when said walls are telescoped.

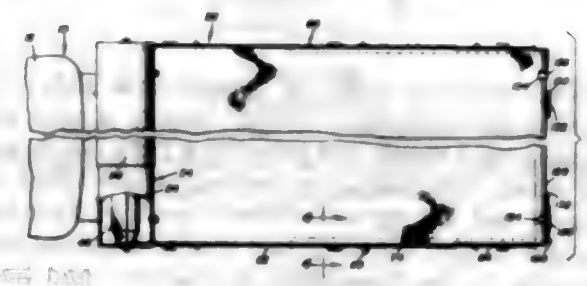
2,898,146
FOLDABLE INSERT AND LINER FOR THE REAR OF STATION WAGONS
Hyman Yudenfreund, Middletown, N.Y.
Application March 26, 1958, Serial No. 724,031
1 Claim. (Cl. 296—39)

A device of the class described comprising a plurality of panels having transverse hinge connections and adapted to fit into the rear end of a station wagon upon the cargo deck thereof, a plurality of side panels having longitudinal hinge connections along the side edges of certain of said first mentioned panels, for shielding and protecting the interior of a station wagon, said first mentioned panels including a primary panel having a tailgate panel transversely hinged to the primary panel, an intermediate panel



transversely hinged to said primary panel, an inner panel transversely hinged to said intermediate panel, an end panel transversely hinged to said inner panel, and said side panels being hinged longitudinally to the opposite side edges of said primary panel and to the side edges of said intermediate panel.

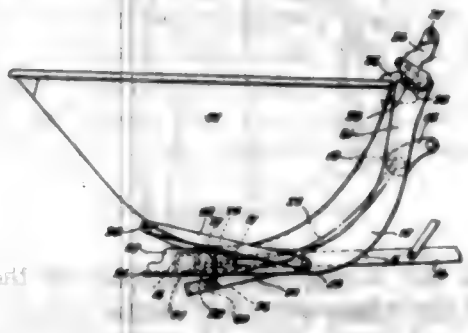
2,898,147
ROLL UP TRUCK BODY COVER WITH TELESCOPING GUIDES HAVING ADJUSTABLE MOUNTINGS
George J. Horner, Linton, N. Dak.
Application August 2, 1956, Serial No. 601,800
6 Claims. (Cl. 296—98)



6. A truck bed cover comprising a reel, reel mounting means for detachably mounting said reel on a truck body, a cover member wound on said reel, longitudinal guides including telescoped sections for guide length adjustment so that said guides are adapted to be used on trucks of various length, guide mounting means for mounting said guides on sides of a truck body, said cover member having edges entirely disposed in and held by said guides for retaining said cover member in place, said guide mounting means including adjustable hold-down members so that the guides may be shifted to tension said cover member and adapt it for mounting on trucks of various widths, said reel mounting means including a housing, resilient fasteners on said housing for removably securing said housing in place, said housing being generally cylindrical in configuration, a forward flange and a pair of side flanges depending from said housing for engagement with the upper forward wall and upper forward sides respectively of a truck bed so that said housing may engage the upper forward portion of a truck bed, said resilient fasteners being attached between said forward flange and the forward wall of the truck bed, said hold-down members including spring connectors, levers connected to said spring connectors for selectively tensioning the latter, adjustable stop members for supporting said guides in inoperative positions, said guides being circular in cross-section and having longitudinal slots formed

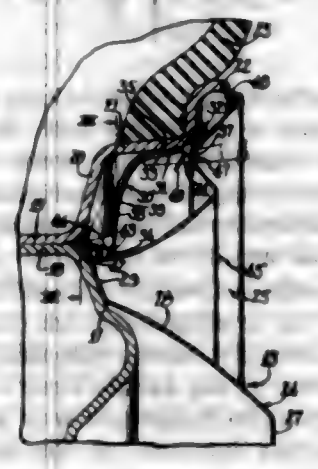
therein, a pair of lips defining channels communicating with said guides, said cover edges being reinforced to form a bead disposed within said guides.

2,898,148
TIPPING CARRIER FOR ATTACHMENT TO A TRACTOR OR SIMILAR VEHICLE
James Fewster, Hexham, Northumberland, England, assignor to Fewsters (Stocksfield) Limited, Hexham, Northumberland, England, a company of Great Britain and Northern Ireland
Application July 16, 1954, Serial No. 443,933
Claims priority, application Great Britain July 16, 1953
7 Claims. (Cl. 298—17)



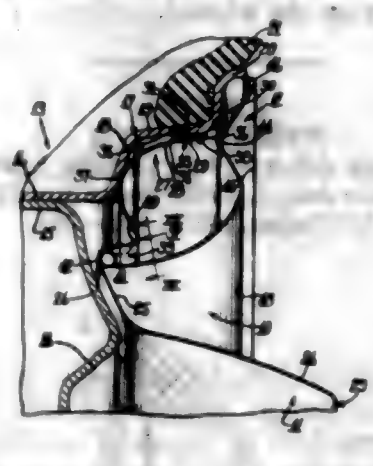
1. A tipping carrier comprising a frame constituting a support for a receptacle, a receptacle supported thereby, means for mounting said receptacle on the frame for rolling action of the receptacle on the frame and for tipping movement of the receptacle with respect to one end of said frame, at least one lug mounted on said frame near one end thereof and projecting in a direction away from said receptacle, and pins mounted in said frame near the other end thereof and projecting transversely inwardly with respect to the frame, said tipping carrier being adapted to be attached to and detached from a tractor or similar vehicle provided with members for connection and disconnection with the lug and pins aforesaid, whereby the carrier can be moved from a detached position at rest on the support to a transportable position in which it is wholly supported by the tractor.

2,898,149
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application February 10, 1955, Serial No. 487,365
14 Claims. (Cl. 301—37)



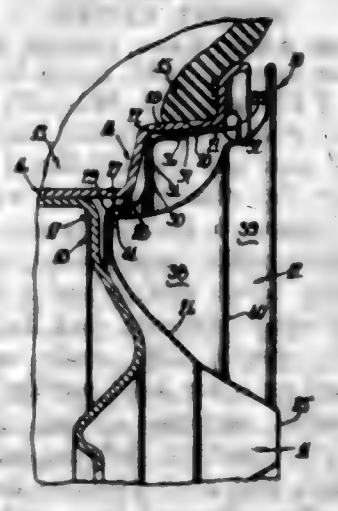
1. In a wheel structure including a wheel body and a tire rim with cover retaining bumps on a flange of the tire rim, a cover for disposition at the outer side of the wheel including a cover portion for adjacently overlying the juncture area of the wheel body and tire rim and having generally radially and axially outwardly extending finger extensions having terminal portions for engagement in face to face relation with said rim flange and provided with edges threstingly engaging interlockingly behind the retaining bumps, said retaining fingers being of substantial width and having longitudinal reinforcing rib means thereon extending from the inner ends of the fingers to said terminal portions and functioning to maintain a strong resilient tensioned engagement of the terminal portions with the rim flange.

2,898,150
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application June 3, 1955, Serial No. 513,049
6 Claims. (Cl. 301—37)



1. In a wheel structure including body and flanged rim parts with circumferentially spaced cover retaining bumps on an axial rim flange of said rim part, a wheel cover member overlyingly disposed at the outer side of the wheel and having generally radially and then generally axially extending resiliently deflectable cover retaining extensions extending from said cover and said extensions being provided with radially angled fingers having edges for retaining engagement behind said bumps to interlock said cover on the wheel, said extensions each including radial and axial portions which are freely flexible relative to one another with the radial portion connected at its radially inner end to the outer margin of the cover and with the axial portion confronting the axial rim flange and being notched at its axially outer end with portions of the material cut from the notches turned radially outwardly and forming said radially angled fingers, said radial extension portions being stressed rearwardly against a flange of said rim part to wedge said angled fingers against the rear surfaces of said bumps.

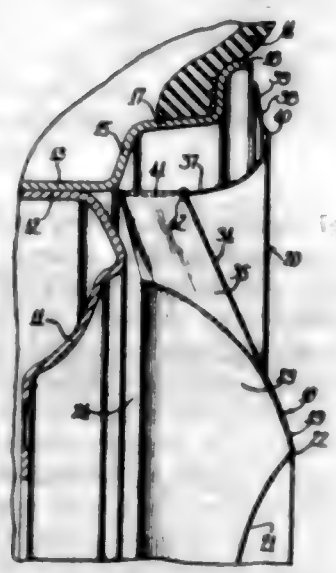
2,898,151
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application June 6, 1955, Serial No. 513,270
14 Claims. (Cl. 301—37)



1. In a wheel structure including body and rim parts with the rim part having a generally axially extending

intermediate flange provided with shouldered cover retaining means and connected at its axially outer side to a generally radially outwardly projecting flange, a cover for disposition at the outer side of the wheel including at least one resilient biasable spring clip provided on the cover margin on its radially outer side and with the clip extending in generally opposed relation to the intermediate flange, said clip having an outer terminal bead biasable with said clip for bottomed engagement with said radial flange and having shoulder gripping retaining means provided axially inwardly of said bead capable of cooperating with said bottoming bead in retaining the cover on the wheel.

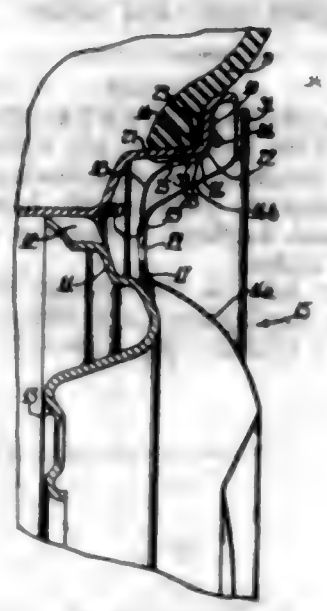
2,898,153
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application July 1, 1955, Serial No. 519,342
13 Claims. (Cl. 301—37)



1. In a wheel structure including a wheel body and a tire rim, a cover for disposition at the outer side of the wheel including a central circular member and a radially outer circular member, one of said members having means for attaching the cover to the wheel, the central member having a plurality of generally radially extending spoke portions thereon, and the outer of said members being attached at its radially inner side to the radially outer portion of said central member adjacent the radially outer ends of the spoke portions.

2,898,153
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application July 22, 1955, Serial No. 523,758
7 Claims. (Cl. 301—37)

1. In a wheel structure, a wheel including a central supporting body part and a multi-flange tire rim and a flange portion on the wheel provided with radially projecting spaced bumps, a circular wheel cover member for overlying detachable engagement upon the wheel including an outer cover margin and a dished area disposed radially inwardly thereof, said dished area having circumferentially spaced clips each having an inner radial portion and an outer axial portion confronting the bumps, said axial portions having circumferentially spaced radially erect portions defining seats in which the bumps are lodged, said erect portions including radially facing gripping edges disposed in a circle of a diameter slightly at variance with the diameter of a circle common to said bumps and upon engagement of said edges against said bumps in the application of the cover to the wheel, the edges are resiliently cammed radially over the



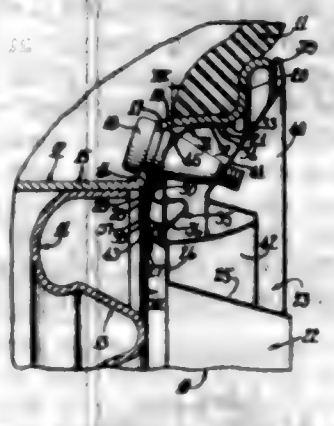
bumps until the bumps enter the seats by the resilient snapping of the edges over the bumps.

2,898,154
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application September 15, 1955, Serial No. 534,537
2 Claims. (Cl. 301—37)

1. In a wheel structure, a wheel having a stepped multi-flanged tire rim and a body part with the rim having a generally radially extending axially inner rim flange connected to an axially extending intermediate rim flange merging into a generally radially extending axially outer rim flange with the axially outer radial rim flange terminating in an axially outwardly extending terminal rim flange and with the intermediate rim flange having an annular axially inwardly facing shoulder disposed generally at the juncture of the axially inner radial rim flange and the intermediate rim flange and with an annular abutment disposed at the juncture of the intermediate rim flange and the axially outer radially extending rim flange, a metallic circular cover member having an outer cover margin disposed radially inwardly of the intermediate rim flange, said cover margin having circumferentially spaced cover retaining extensions extending radially outwardly of the cover margin, said extensions having radial and axial extension portions with the axial extension portions having rim engaging areas arranged in a common circle having a diameter slightly in excess of the inside diameter of the intermediate rim flange for snap-on cover retained engagement with the intermediate rim flange

behind the annular rim shoulder and with the radial portion adapted for bottomed engagement against the axially inner radially extending rim flange, said axial extension portions each terminating in an offset extremity which extremity confronts and is disposed on the axially outer side of the annular rim abutment providing a pry-off edge by which the cover retaining portions may be pried from the wheel, and a rigid outer ring member having its inner ring margin connected to said cover generally at the junction of the cover margin and said extensions and with said outer ring member extending radially outwardly from the inner ring margin into axially spaced confronting disposition relative to the axially outer radial rim flange and the terminal rim flange as well as the wheel and thereby at all times permitting a pry-off tool to be inserted into the space between the ring and the tire rim and be applied to the pry-off edge to release the tension between the extensions and the tire rim and allow the ring as well as the cover member to be removed from the wheel.

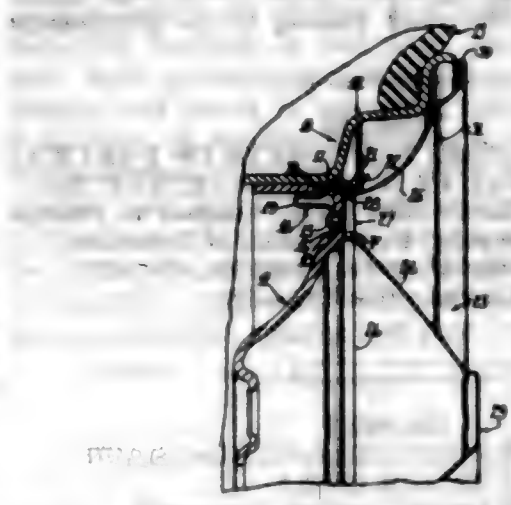
2,898,155
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application September 23, 1955, Serial No. 536,067
6 Claims. (Cl. 301—37)



1. In a wheel structure including body and tire rim parts, a cover assembly for disposition over the body and tire rim parts including a radially inner cover member having a radially outer portion of a diameter to extend adjacent to the rim part, a circumferentially spaced series of separate clips permanently attached to said radially outer portion, said clips having generally radially outwardly projecting portions extending beyond the edge of said radially outer portion of the inner cover member and retainingly engageable in press-on, pry-off relation with the rim part, and a radially outer cover member of ring form of a diameter to overlie the rim part and having an inner marginal portion for overlying said radially outer portion of the inner cover member, said clips having radially inner resilient shoulders overlying said radially outer portion of the inner cover member, said radially outer cover member having on its inner margin shoulder structure engageable in press-on, pry-off relation with said clip shoulders, said radially outer portion of the inner cover member defining a seat for said radially inner margin of the outer cover member against which said inner margin is thrust by said resilient shoulders of the clips.

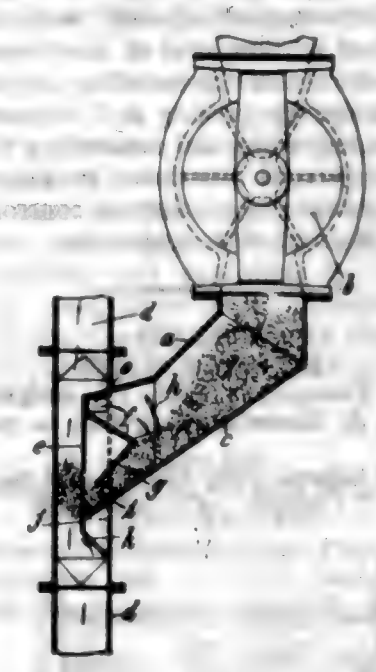
2,898,156
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application January 3, 1956, Serial No. 556,864
13 Claims. (Cl. 301—37)

1. In a wheel structure including rim and body members with one of the members having a plurality of circumferentially spaced retaining clips secured on the axially inner side thereof and each having cover retaining portions extending generally axially outwardly through wheel openings in the wheel, a dished deeply drawn cover closely overlying the junction of said members including converging annular cover portions defining together an axially inwardly disposed annular groove terminal generally opposite said clips, and having circumferentially spaced ports in communication with said wheel open-



ings to direct air when the wheel is rotated through the cover to cool the wheel, and circumferentially spaced shoulders struck out generally at said openings disposed generally in a common circle and cooperable in snap-on, pry-off cooperation with said clip retaining portions to retain the cover on the wheel.

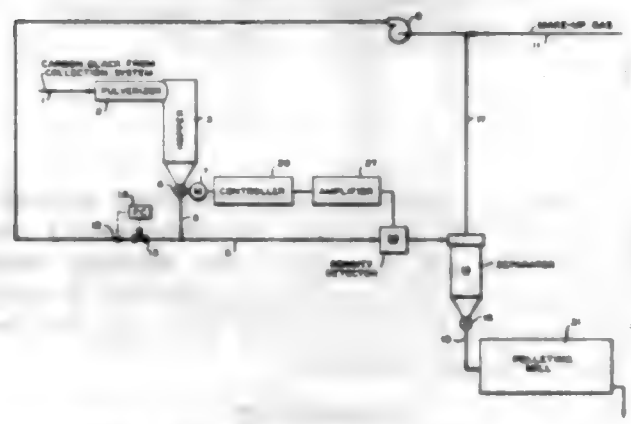
2,898,157
PNEUMATIC ELEVATORS FOR GRANULAR MATERIALS
Robert Hallworth, Cheadle, England, assignor to Henry Simon Limited, Stockport, England, a British company
Application August 26, 1957, Serial No. 680,320
Claims priority, application Great Britain September 18, 1956
2 Claims. (Cl. 302—17)



1. A pneumatic elevator for granular materials in which stock received through a rotary seal is fed by a downwardly sloping stock duct to an entrainment position in a vertical elevating pipe, said duct projecting into the elevating pipe which has a set-in part to which the said stock duct is secured, air passing up the elevating pipe beneath the entrainment position in part passing into the entrainment position and in part passing on opposite sides of the stock duct where it (the stock duct) projects into the elevating pipe, such latter part of the elevating air having access to the interior of the stock duct at its upper part where it comes inside the normal

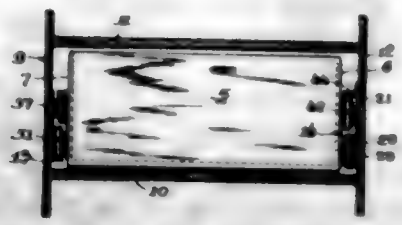
dimensions of the elevating pipe in order to establish in the stock duct an air pressure equal to or slightly greater than that obtaining in the elevating pipe at the entrainment position, and means being provided in said stock duct for preventing stock-laden air from travelling backwards from the elevating pipe along the stock duct, which means includes a spring loaded plate which rides lightly on the surface of the stock passing to the entrainment position.

2,898,158
CONTROLLING MASS FLOW RATE OF PARTICULATE MATERIAL IN A PNEUMATIC SYSTEM
Lyle W. Pollock, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application July 27, 1956, Serial No. 600,609
4 Claims. (Cl. 302—53)



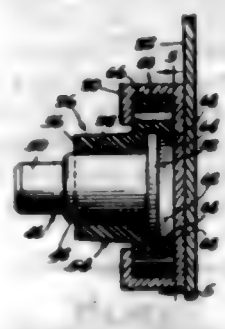
1. A method for controlling the mass flow rate of a suspension of particulate material in a gaseous medium, which comprises maintaining the flow rate of said medium at a constant value, introducing said particulate material into a single stream of said medium that comprises the total quantity of said medium that is flowing by allowing said particulate material to fall into said gaseous medium solely under the influence of gravity, the rate of said introduction of said particulate material being independent of flow rate of said gaseous medium, measuring the density of the resulting suspension of said particulate material by passing said suspension through a density measuring zone, and controlling the amount of said particulate material introduced in response to the resulting density measurement, thereby controlling the mass flow rate of said particulate suspension.

2,898,159
DRAWER SLIDE
Fred H. Arndt, Prospect Heights, Ill., assignor to Garden City Plating & Manufacturing Co., a corporation of Illinois
Application February 16, 1955, Serial No. 488,677
7 Claims. (Cl. 308—3.8)



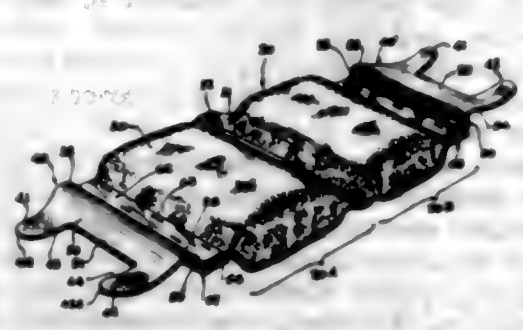
1. In a drawer slide, a stationary channel, a roller rotatably mounted on said stationary channel, a movable channel, and a roller rotatably mounted on said movable channel, said stationary channel having its upper and lower edges bent transversely to provide a rolling contact with the peripheral surface of said second roller across the area of maximum diameter of said second roller and also across adjacent areas of less diameter, said movable channel having an upper edge bent transversely to provide a rolling contact with the peripheral surface of said first roller across its area of maximum diameter and also across adjacent areas of less diameter.

2,898,160
ROLLER ASSEMBLY
Denver C. Hammon, Palatine, Ill., assignor to Illinois Tool Works, Chicago, Ill., a corporation of Illinois
Application August 13, 1957, Serial No. 677,863
9 Claims. (Cl. 308—18)



1. An assembly comprising a stud having a head thereon, and a roller of resilient material, said roller having a recess rotatably receiving said head with said stud projecting axially therefrom in one direction, said recess opening outwardly of said roller axially in the opposite direction and having an opening diameter at least as great as the diameter of said stud head, said roller having means projecting into said recess and inhibiting withdrawal of said stud, said roller having opening means therein adjacent said projecting means projecting uniformly through the adjacent part of the roller in an axial direction and imparting enhanced deformability to said roller in the vicinity of said projecting means, whereby to facilitate snapping of said head past said projecting means into said recess.

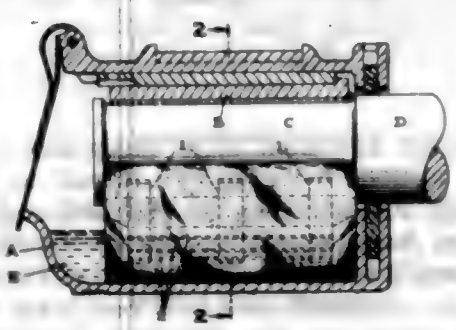
2,898,161
LUBRICATORS
Thomas A. Eddy, Ramsey, and Llewellyn E. Hoyer, Wyckoff, N.J., assignors to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Application October 31, 1956, Serial No. 619,512
3 Claims. (Cl. 308—88)



1. In a railway journal box wherein a car axle is supported for rotation by a segmental journal bearing having end lugs spaced inward of the side walls of the journal box and wherein the journal box is provided with stop columns engageable with said lugs of the bearing: a railway journal lubricator of the kind described disposed in the journal box in the space between the lower part of the journal and the bottom of the journal box, said lubricator including at least one absorbent pad having a wicking cover, and a lubricator retainer affixed to the cover at each end of the lubricator and each such lubricator retainer comprising: rigid means affording an ear engageable with one of the front and rear faces of a related one of the stop columns, said ear having an upper end disposed in a generally vertical plane and located in the space between the related bearing lug and the related side wall of the journal box, said ear below the

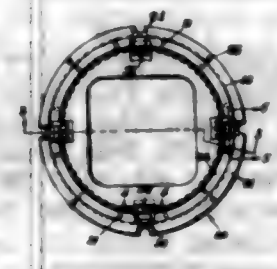
upper end thereof terminating at a horizontal base member having an elongated edge facing toward said upper end of said ear and disposed immediately below the related stop column to be engageable with the bottom of such related stop column, said rigid means having an extension below said base member extending downward beyond such a stop column and bending inward toward said journal and away from the related side wall of the journal box, said extension then being bent in the opposite direction away from the journal and toward said related side of the journal box to afford a leg portion spaced well below said stop column, and said extension below said leg portion including a terminal member affixed to an end of said lubricator cover.

2,898,162
LUBRICATING MEANS FOR JOURNAL BOX
Norman T. Olsen, Palatine, Ill., assignor to Poor & Company, Chicago, Ill., a corporation of Delaware
Application February 27, 1958, Serial No. 717,940
1 Claim. (Cl. 308—88)



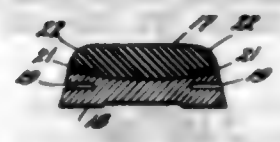
A lubricating unit for the portion of a car wheel axle disposed in a journal box, comprising, an interior frame including a plurality of substantially C-shaped flat springs disposed in spaced, longitudinally aligned relation, yieldable longitudinal strips connecting at least a pair of said springs, one of said springs having no connection with said strip, a pad of shredded capillary material encasing said springs, and a tufted, non-glazing fabric covering for said pad and creased on a line oblique to the body to provide a hinge to permit one end of the body to flex to a greater degree than when all of the springs are connected by a strip, whereby, the unit may be inserted with facility between the end of the axle and the front of the box when the space therebetween is too small to admit a unit where all of the applicator springs are connected in a single frame, and also to insure the fabric spreading a wide band of oil film on the axle.

2,898,163
SWIVEL
Roy F. McMahan, Sr., Louisville, Ky.
Application January 16, 1957, Serial No. 634,446
3 Claims. (Cl. 308—227)



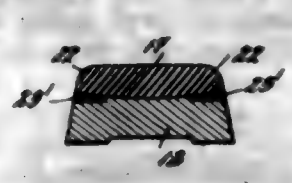
1. A swivel comprising a centrally apertured first member for attachment to a support and having a stepped configuration including a flat lower peripheral flange section, a flat upper section, a flat floor section intermediate said flat lower and upper sections and joined thereto by lower and upper circular back wall sections; a centrally apertured second member for attachment to an article to be rotatably supported and having a stepped configuration including a flat upper peripheral section, a flat lower inwardly extending floor section, and a circular back wall section joining said flat sections of said second member, an annular cage having a plurality of rolling contact bearings mounted therein, said cage having its inner periphery mounted in surrounding relation to said upper circular back wall of said first member and with the respective bearings in said cage being in contact with both floor sections of said members, and means for holding said swivel in assembled relation and including a plurality of brackets attached to and projecting radially outward from said flat upper section of said first member and in overlying relation to said inwardly projecting floor section of said second member, thereby to permit relative rotatable movement of said members and to maintain a predetermined spacing between said members and in which spacing said cage is disposed.

2,898,164
BEARING CONSTRUCTION WITH EDGE LOAD RELIEF
Stewart U. Patton, Severna Park, Md.
Application July 2, 1952, Serial No. 296,977
2 Claims. (Cl. 308—238)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A bearing for supporting a rotatable shaft comprising a journal bearing housing, a plurality of spaced longitudinally extending staves attached to the inner peripheral portion of said housing for supporting a shaft adapted to rotate therein, each of said staves comprising a metal backing plate having sides and a face secured to said journal bearing housing, a plastic member attached to said plate having sides and a face adapted for contact by said shaft, a beveled edge joining said sides and said face of said plastic member, and pressure relieving means in the side portions of said plastic member for relieving the pressure on said edges caused by said shaft when the latter is rotated, thereby providing access for flow of a lubricant across said staves, said pressure relieving means comprising a slot formed in each side of said plastic member and extending the length thereof, and a strip of material of greater compressibility than said plastic member positioned in said slots for relieving the pressure caused by said shaft on said edges.

2,898,165
BEARING CONSTRUCTION WITH EDGE LOAD RELIEF
Stewart U. Patton, Severna Park, Md.
Original application July 2, 1952, Serial No. 296,977. Divided and this application June 28, 1956, Serial No. 594,670
2 Claims. (Cl. 308—239)
(Granted under Title 35, U.S. Code (1952), sec. 266)

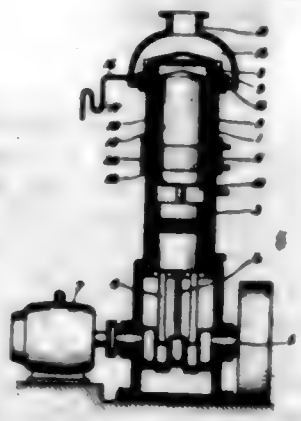


1. A bearing for supporting a rotatable shaft comprising a journal bearing housing, a plurality of spaced staves attached to and extending the length of said housing for supporting a shaft adapted to rotate therein, each of said staves comprising a metal backing plate

lower end pivotally secured to the outer end of the trans- zontally disposed relatively narrow top wall and opposed

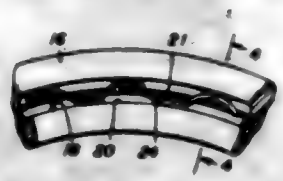
for attachment to said housing and a rubber member attached to said plate, said rubber member having sides and a face adapted for contact by said shaft, a tapered edge joining each of said sides with said face and means for relieving the pressure of said shaft on the tapered edges, said means comprising a rubber backing extending along said sides but beneath the stave bearing surface of the intersection with the tapered edges of said stave, whereby said bearing surface at the tapered edges are flexed downwardly by said shaft for preventing the wiping of a lubricant from said shaft when the latter is placed in rotation, while maintaining a curvature in the face of the rubber member substantially that of the shaft rotatably supported thereby, said metal backing plate being formed with a cutout at each side thereof and said rubber backing including a strip of relatively soft rubber placed in each of said cutouts, said strip of relatively soft rubber having greater elasticity than that of the rubber member.

2,898,166
METAL PISTON
Jacob Willem Laurens Köhler and José Jan Willem Den Haan, Emmasingel, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application July 20, 1955, Serial No. 523,259
Claims priority, application Netherlands August 18, 1954
1 Claim. (Cl. 309—23)



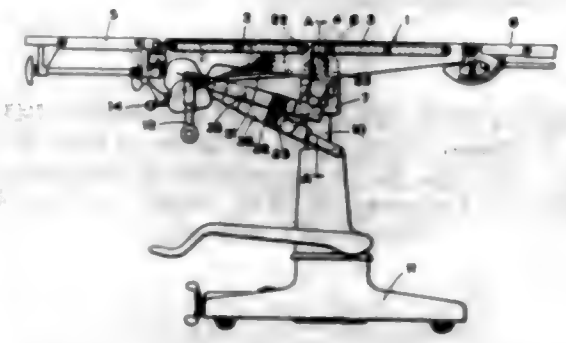
A metal piston for use in a hot-gas reciprocating machine comprising a continuous layer of porous organic material of a thickness at most of 2 mms. affixed to the circumference of said piston and constituting substantially the entire outer circumferential surface thereof, said hot-gas reciprocating machine comprising a cylinder, two pistons operating in said cylinder with a constant phase difference which together with said cylinder define two chambers in which a closed thermodynamic cycle is performed by a gaseous medium, the volume of gaseous medium in said chambers varying continuously while one of said chambers has a low temperature and the other chamber has a higher temperature, a cooler, a regenerator and a freezer connecting the chambers with one another.

2,898,167
REINFORCED SEAL RING
Charles L. Tanner, Los Angeles, Calif.
Application March 18, 1957, Serial No. 646,735
12 Claims. (Cl. 309—23)



1. A seal ring comprising a flexible continuous annular body of circular cross section having an annular groove opening through a surface thereof, and resilient means in said groove adapted to resist compression of said body in a manner to close said groove.

2,898,168
SURGICAL OPERATION TABLE WITH SINGLE CONTROL MEANS
Ronald James Thorpe, Thornton Heath, England, assignor to Allen & Hanburys Limited, London, England, a company of Great Britain
Application April 9, 1957, Serial No. 651,790
Claims priority, application Great Britain April 13, 1956
4 Claims. (Cl. 311—7)



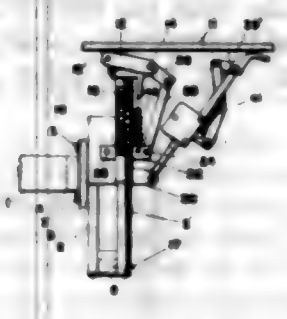
1. A surgical operation table comprising a platform having two sections movable with respect to each other about an axis transverse to the platform and on which a patient can be supported, a yoke on which said platform is mounted for rotation about an axis transverse to said platform, a support on which said yoke is mounted for rotation about an axis extending longitudinally of said platform, a main drive supported beneath said platform, a handle rotatable to operate said main drive, a leg extension section mounted at one end of said platform so that it can be moved with respect to said platform about an axis transverse thereto, a drive shaft, a first drive gear operable from said shaft to tilt said platform about an axis extending longitudinally thereof, a second drive gear operable from said shaft for tilting said leg extension section with respect to said platform, a hollow shaft surrounding said drive shaft, two drive pinions carried by said hollow shaft, one of which pinions can be engaged with a third drive gear for tilting said platform about an axis transverse thereto and the other of which can be engaged with a fourth drive gear for adjusting the relative positions of said two platform sections, a gear selector for selecting one of said drive gears for operation, a handle rotatable to operate the selected drive gear, two selector shafts arranged one within another and engageable with said drive shaft, a first clutch engageable by said gear selector to connect one of said selector shafts with said first drive gear, and a second clutch engageable by said selector lever to connect the other of said selector shafts with said second drive gear.

2,898,169
HEADRESTS FOR CHIROPRACTIC TABLES
Joseph Clay Thompson, Davenport, Iowa, and Kenneth William Nipp, Moline, Ill.
Application September 19, 1958, Serial No. 762,080
8 Claims. (Cl. 311—10)

1. In a separable head-end section for a chiropractic table having a horizontal frame, the combination with a flat top plate, of means to unite it to an end member of the horizontal frame, a pair of spaced vertical leg bars with a cam housing slidably mounted thereon, a slidable vertical bar with its lower end united to the housing and with its upper end united to the top plate, a transverse bar pivotally mounted on the housing, a cam shaft and cam rotatably mounted in the housing and keyed upon the inner end of the transverse bar, a link bar with its

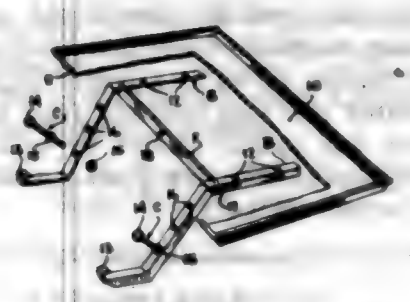
ing above the casing to constitute a carrying handle there-

lower end pivotally secured to the outer end of the transverse bar and its upper end linked to the manually operable lever, a transverse shaft rotationally mounted in a casting integral with and extending downward from the top plate, a manually operable lever keyed upon the transverse shaft, manually operable knobs keyed upon the



outer ends of the transverse shaft whereby the shaft may be turned in either direction and the cam be thereby caused to engage one of the leg bars and to lock the housing thereto, or to release it from engagement therewith so as to free the slidable bar and permit the top plate to be raised or lowered therewith.

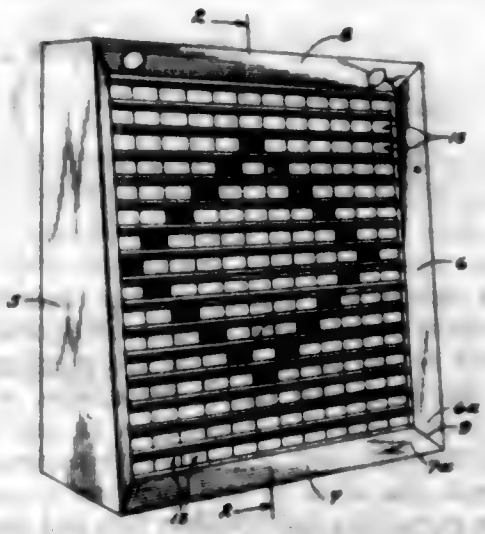
2,898,170
COLLAPSIBLE AUTOMOBILE TABLES
John I. Antonius, Palisades Park, N.J.
Application September 18, 1958, Serial No. 761,894
1 Claim. (Cl. 311—21)



An automobile table composed of a tray, a pair of supporting beams upon which said tray is mounted, said supporting beams being provided with a hook on one end, said hook being substantially U shaped in cross section and designed to attach to the instrument panel of an automobile, a plurality of threaded bolts covered on one end by rubber knobs or suction cups, said bolts being designed to be interchangeably installed in a plurality of aligned perforations in said supporting beams, a plurality of threaded nuts designed to retain said bolts in a predetermined position, a horizontal supporting bar provided with a pivot on each end, said pivots being designed to be installed in a pair of aligned perforations in said supporting beams, a leg member provided with a recess in one end, said recess being designed to coact with a similar recess in the mid-portion of said supporting bar providing a mechanism whereby said leg member may be detachably mounted on said supporting bar, a leg member provided with a box structure designed to slidably enclose previously said leg member, said box structure being provided with a set screw by means of which said leg members may be locked in a predetermined position.

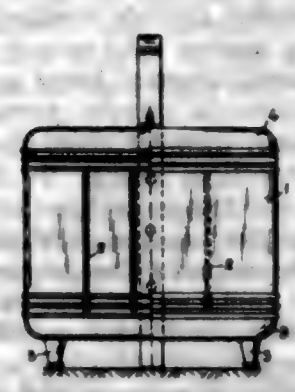
2,898,171
DISPLAY CABINET
Clayton J. Ehlert and Edmund T. Duffy, Fort Wayne, Ind., assignors to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Application September 24, 1956, Serial No. 611,636
3 Claims. (Cl. 312—122)

1. A display cabinet comprising a rectangular frame having a horizontally disposed wide bottom wall, a horizontally disposed relatively narrow top wall and opposed vertical side walls connecting the top and bottom walls, each of the walls of said rectangular frame having an inturned inwardly inclinded flange at the forward edge thereof, said flanges secured to each other at the corners of the frame, a series of vertically disposed spaced metal strips secured at their lower edges to the bottom wall of said frame inwardly of said flange and to the upper edges of the top wall of said frame inwardly of said frame, the forward edge of each of said vertical strips being in-



clined from the bottom inwardly toward the top, said forward edges having notches therein normal to the forward edge, a series of drawer supporting plates having notches therein to interlock with the notches in said vertically disposed strips whereby rectangular drawer compartments are formed by the plates and strips and a transparent plastic drawer mounted in each of said compartments, a flat wall along the rear edge of said plates closing one end of said compartments along the rear edge of said plates.

2,898,172
CLEANING APPLIANCE STORAGE DEVICE
Botho von Grumbkow, Koln-Thielenbruch, Germany
Application May 4, 1955, Serial No. 506,979
Claims priority, application Germany May 4, 1954
1 Claim. (Cl. 312—286)



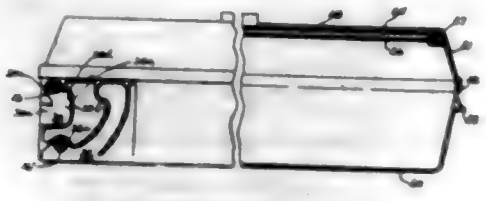
A portable container for a cleaning appliance having cleaning tools and a cleaning tool extension comprising a compartmented casing having an open top and providing for the storage of the cleaning tools, said casing including sides and a bottom defining a chamber for said tools, feet fixed on said bottom along one of said sides and externally of said casing, a cover pivoted to said one side at said open top, a carrying member connected to the casing on a side of the latter opposite to said one side, said carrying member being a substantially vertical member located substantially centrally of the opposite side, said carrying member having a lowermost portion extending away from the casing at the level of the feet to constitute with the latter a stand for the casing, said carrying member further including an uppermost portion extend-

2,898,176

positioning of said characters on said screen in response

ing above the casing to constitute a carrying handle therefor, and a clamp on the carrying member for accommodating said extension, said lowermost portion constituting a brace for the extension.

2,898,173
REFRIGERATOR DOOR CONTAINER
Herbert D. Squire, Galesburg, Ill.
Application February 7, 1957, Serial No. 638,872
10 Claims. (Cl. 312—248)



7. In a refrigerator having a door member formed with a recess at its inner side, a comestible container member received in said recess, one of said members carrying first and second spaced lateral projections at each side of said recess, with the projections at one side being aligned horizontally with the respective projections at the opposite side, the other of said members at each side of said recess presenting spaced apart first and second channels which slidably receive the respective projections at that side, each first channel presenting a first seat for the corresponding first projection and a second seat for said first projection which is spaced apart from said first seat in a direction away from the corresponding second channel, each second channel having spaced apart first and second offset portions which are offset laterally towards the corresponding first channel and each of which presents a seat which is spaced from the second seat in said first channel a distance equal to the spacing between the respective first and second projections, the first projections seating against said second seats in the first channels and the second projections seating in the first offset portions of the second channels when the container member extends vertically in said recess in the door member, said first offset portions of the second channels retaining the second projections and preventing pivotal movement of the container member about said first projections when the container member extends vertically with the first projections seating against said second seats in the first channels, said second channel being positioned to pass the second projections to thereby permit pivotal movement of the container member about the first projections when the first projections engage the first seats in the first channel, and said first projections seating against said second seats in the first channels and the second projections seating in the second offset portions of the second channels when the container member extends horizontally out from the door, and said second offset portions of the second channels retaining the second projections and preventing pivotal movement of the container member about said first projections when the container member extends horizontally with the first projections seating against said second seats in the first channels.

2,898,174
REFRIGERATOR DOOR STRUCTURE
Kenneth P. Schory, Bensenville, Michael Turko, Waukegan, and Joseph H. Konefes, Libertyville, Ill., assignors, by mesne assignments, to Amana Refrigeration, Inc., Amana, Iowa, a corporation of Iowa
Application August 29, 1955, Serial No. 530,992
9 Claims. (Cl. 312—295)

6. In combination, a door having a series of vertically spaced horizontally disposed inwardly opening compartments, a pair of opposed vertically extending tracks secured to said door at opposite upright sides of said compartments, a single upright rigid panel of less height than the over-all height of said compartments movable vertically in front of all of the compartments of said series, the height of said panel being such that the upper end portion of said panel extends above and serves as a guard rail for articles upon the bottom of the uppermost compartment of said series when said panel is in fully lowered position in front of the other of said compartments of the series, the interior of said uppermost compartment being accessible above said panel when the upper end portion thereof serves as a guard rail so that articles may be inserted into and removed from said uppermost compartment, and means carried by said upright panel and engaging said tracks for guiding said panel during vertical movement thereof.

2,898,175
DIGITAL PLOTTER
Rex Rice, Jr. Palos Verdes Estates, Calif., Marion Ray Dilling, Seattle, Wash., and Graham Tyson, Los Angeles, Calif., assignors to Northrop Corporation, Beverly Hills, Calif., a corporation of California
Application April 11, 1955, Serial No. 500,543
9 Claims. (Cl. 346—23)

1. In a digital plotter, means for moving and stopping printing paper over a plotting surface, a printing head carrying a plurality of symbol elements and extending across the paper width at a right angle to the direction of paper feed, plot cycling means for selecting one of said elements in accordance with digital input information, and for printing the corresponding symbol each plot cycle, on the paper along said printing head, and control means connected to said paper moving means for suppressing paper feed a predetermined number of plot cycles for permitting multiple curve plots, said control means comprising digital counter means adapted to receive the nines complement of said predetermined number, and means for adding one to the input of said counter means for each plot cycle, whereby an output control signal is derived from said counter means for a number of counter inputs equal to the unfilled content thereof.

2,898,176

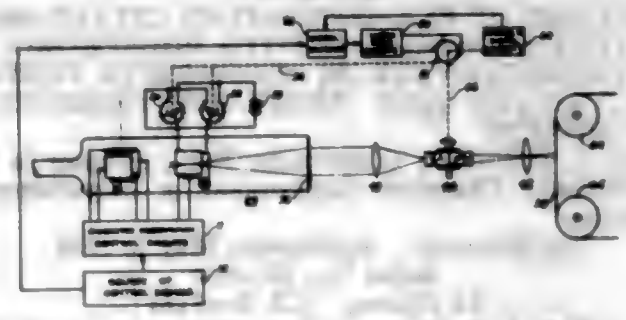
SYSTEM FOR EFFECTING TRANSFER OF CATHODE RAY TUBE DISPLAYS ONTO A RECORD MEDIUM

Joseph T. McNaney, La Mesa, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Application August 26, 1957, Serial No. 680,116

8 Claims. (Cl. 346—110)

1. A system capable of registering characters upon a medium from a screen of a cathode ray tube, said system including said tube having said screen, said tube being capable of presenting characters upon said screen, a rotatable optical member capable of receiving said characters from said screen for redirection therefrom, a deflection system capable of incrementally repositioning said characters upon said screen for compensation of the rotation of said optical member, means operating said deflection system for controlling the application of incremental positioning of said characters on said screen in response to rotation of said optical member, said medium capable



of receiving said characters for registration of said character thereupon, said optical member being adapted to cause lineal positioning of said characters as successively displayed upon the screen recording them upon said medium.

CHEMICAL

2,898,177

PROCESS FOR THE PRODUCTION OF DYESTUFFS ON THE FIBER

Georg Röech, Leverkusen, Helmut Klappert, Koln-Stammheim, Walther Wolf, Leverkusen, and Johannes Eibl, Koln-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application October 25, 1955
Serial No. 542,758

Claims priority, application Germany October 28, 1954

6 Claims. (Cl. 8—34)

1. A process for the manufacture of a dyestuff of the naphthoylene-aryl-imidazole series, naphthalo-perinone series and of the naphthal-arylimide on cellulosic and regenerated cellulosic textile fibers, which comprises (*a*) treating said textile fibers with a mixture consisting of (1) a peri-dicarboxylic acid selected from the group consisting of naphthalene-1,8-dicarboxylic acid, perylene-peridicarboxylic acids, chloro-substituted-naphthalene-1,8-dicarboxylic acid, bromo-substituted-naphthalene-1,8-dicarboxylic acid, nitro-substituted-naphthalene-1,8-dicarboxylic acid, naphthalene-1,4,5,8-tetracarboxylic acid, benzoyl-naphthalene-1,8-dicarboxylic acid, chloro-benzoyl-naphthalene-1,8-dicarboxylic acid, phenylsulfonyl-naphthalene-1,8-dicarboxylic acid, phenoxynaphthalene-1,8-dicarboxylic acid, phenoxazol-naphthalene-1,8-dicarboxylic acid, naphthalene-1,8-dicarboxylic acid-benzimidazole, dinaphthyl-keto-1,8,1',8'-tetracarboxylic acid, dinaphthyl-ether-1,8,1',8'-tetracarboxylic acid, dinaphthylphthaloyl-1,8,1',8'-dicarboxylic acid, 4-pyrazol-anthronyl-naphthalene-1,8-dicarboxylic acid, benzanthraquinone-peri-dicarboxylic acid, benzanthrone-peri-dicarboxylic acid, azo-dinaphthalene-1,8,1',8'-tetracarboxylic acid, dinaphthazine-1,8,1',8'-tetracarboxylic acid, arylazohydroxynaphthalene-1,8-dicarboxylic acid, 3'-arylamido-2'-hydroxynaphthalene-azonaphthalene-1,8-dicarboxylic acid, aryl acetoacetamido-azo-naphthalene-1,8-dicarboxylic acid, as an alkali salt thereof; (2) a member selected from the group consisting of o-phenylene diamine, lower alkyl-substituted o-phenylene diamines, lower alkoxy-substituted o-phenylene diamines and 1,8-naphthalene diamine; and (3) a condensing agent; and (*b*) subjecting said textile fibers thus treated to a heat treatment.

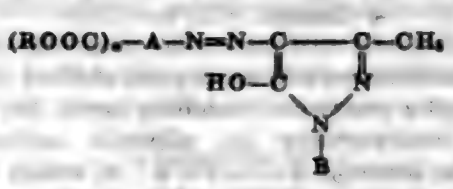
2,898,178

PROCESS OF DYEING POLYESTER MATERIALS

Winfried Kruckenberg, Leverkusen-Bayerwerk, Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application September 11, 1956
Serial No. 609,678
Claims priority, application Germany September 27, 1955
5 Claims. (Cl. 8—41)

1. Process for dyeing polyethylene terephthalate materials which comprises contacting at an elevated temperature said polyester with a monoazo dyestuff of the formula



wherein A and B stand for radicals of the benzene series, being free of sulfonic and carboxylic acid groups, R means a lower alkyl radical, having at most 4 carbon atoms, and *n* stands for an integer from 1 to 2.

2,898,179

BLEACHING

Charles J. Rogers, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application June 1, 1955
Serial No. 512,587
1 Claim. (Cl. 8—108)

In the process of bleaching textile material comprising nylon in a container composed substantially of a metal from the group consisting of stainless steel, aluminum, and Monel metal, in an acidic aqueous solution containing from about 0.03% to about 0.2% by weight of an alkali-metal chlorite, said process being characterized by the evolution of chlorine dioxide, the improvement comprising suppressing the evolution of the chlorine dioxide by dissolving in said alkali-metal chlorite solution from about 3 to about 6 parts of citric acid and from about 4 to about 8 parts of alkali-metal nitrate for every one part of alkali-metal chlorite, and buffering the solution at a pH in the range of from about 4.5 to about 5.5 with disodium hydrogen phosphate while maintaining said solution at a temperature above ordinary

atmosphere in a normally closed reaction zone at 200°– is released in a reaction zone where the recombination

room temperature and below the normal boiling point of water.

2,896,180

METHOD OF FLAMEPROOFING CELLULOSIC TEXTILE MATERIAL WITH PHOSPHOROUS TRIISOCYANATE OR PHOSPHORYL TRIISOCYANATE AND PRODUCTS PRODUCED THEREBY

Robert L. Holbrook, Tonawanda, N.Y., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Application May 9, 1956
Serial No. 583,616
12 Claims. (Cl. 8—116)

1. Cellulosic textile material resistant to combustion which has been rendered resistant to combustion by impregnating cellulosic textile material containing active hydroxyl groups with a solution, in an inert organic solvent boiling below about 150° C., of a compound selected from the group consisting of phosphorous triisocyanate and phosphoryl triisocyanate in amount such that the textile material impregnated upon removal of the solvent contains from 5 to 25 weight percent of said compound, based on the weight of the textile material impregnated, and thereafter heating the impregnated textile material at a temperature within the range from about 200° F. to 300° F. until the solvent is removed and the textile material impregnated chemically combines with said compound.

2,896,181

PROCESS FOR WASHING AND BLEACHING COMPOSITIONS THEREFOR

Karl Dithmar, Frankfurt am Main, and Ulrich Hoffmann, Bad Homburg (Taunus), Germany, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany

No Drawing. Application October 23, 1957
Serial No. 691,802
Claims priority, application Germany May 28, 1953
4 Claims. (Cl. 8—137)

1. In a process of washing textile materials with aqueous washing liquids containing an organic surface active washing agent and a perborate bleaching agent, the step which comprises incorporating an aliphatic carboxylic acid amide of the formula R.CO.NR'R'' in which R is selected from the group consisting of hydrogen and aliphatic hydrocarbon radicals containing 1 to 3 carbon atoms and R' and R'' are selected from the group consisting of hydrogen and $-C_2H_4OH$ in the washing liquid employed to wash the textile, the quantity of such amide incorporated being between 0.1 and 1 gram per liter of washing liquid, the quantity of perborate in said washing liquid providing 0.2 to 5 grams of active oxygen per liter of washing liquid and the quantity of the organic surface active agent in said washing liquid being between about 1 and 10 grams per liter.

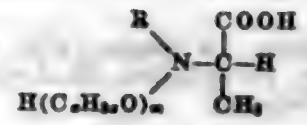
2,896,182

METHOD OF PREPARING VISCOSE RAYON

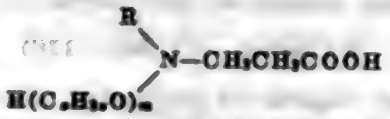
Marion R. Lytton, West Chester, Pa., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application December 30, 1954
Serial No. 478,940
6 Claims. (Cl. 18—54)

1. In a method of producing shaped bodies of regenerated cellulose consisting substantially entirely of skin, the step which comprises extruding viscose containing from about 0.5% to about 4%, based on the weight of the cellulose in the viscose, of a modifying agent into an aqueous spinning bath containing from about 10% to 25% sodium sulfate, from about 3% to 15% zinc sulfate and sulfuric acid, the sulfuric acid content of the spinning bath exceeding the slubbing point but not exceeding about 8.5%, the modifying agent being a substance selected from alkali-soluble compounds corresponding to the formulas



and



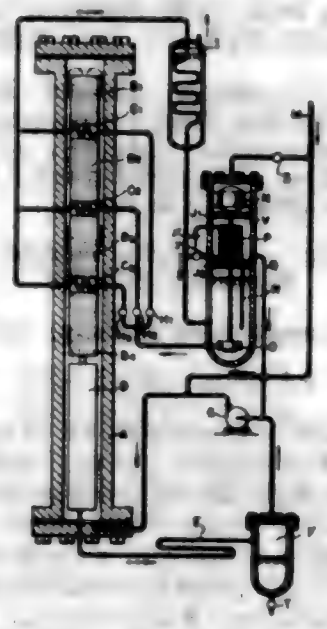
and mixtures of such compounds, wherein R is an aliphatic radical having from 6 to 24 carbon atoms, x is a whole number at least 2 but not more than 3 and m is from about 8 to about 30.

2,896,183

PROCESS AND APPARATUS FOR PERFORMING EXOTHERMIC REACTIONS UNDER HIGH PRESSURE AND AT ELEVATED TEMPERATURE

Giacomo Fauser, Novara, Italy, assignor to Montecatini, Societa Generale per l'Industria Mineraria e Chimica, a corporation of Italy

Application March 9, 1955, Serial No. 493,190
Claims priority, application Italy August 27, 1951
17 Claims. (Cl. 23—1)



6. The process of performing exothermic catalytic reactions under pressure in a reaction zone having catalyst containing regions and, intermediate said catalyst regions, heat exchange regions traversed by coolant, which comprises the steps of passing a flow of reaction gases serially through the catalyst containing regions and heat exchange regions whereby the evolving heat of reaction evaporates the coolant, cooling the vaporous coolant outside the reaction zone to condense it to the liquid state, returning the condensed coolant in a closed cycle to the heat exchange zones, and applying substantially the pressure of said reaction zone to the condensed coolant to maintain equalized pressures in the coolant cycle and in the reaction zone.

2,896,184

PREPARATION OF BOROHYDRIDES

Willard D. Peterson, San Marino, Calif., assignor to American Potash & Chemical Corporation, a corporation of Delaware

Application August 20, 1957, Serial No. 679,798
4 Claims. (Cl. 23—14)

1. The process comprising maintaining a mass of finely divided dry sodium methylate dispersed in a hydrogen

2,896,190

METHOD OF PRODUCING AMMONIUM SULFATE

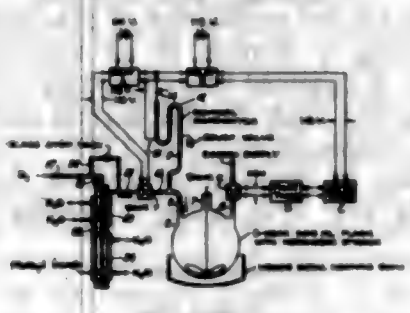
2,896,193

METHOD FOR MAKING TETANUS ANTITOXIN

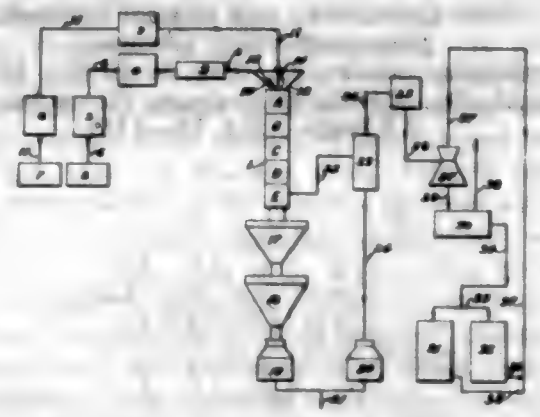
said textile fibers thus treated to a heat treatment.

taining said solution at a temperature above ordinary

atmosphere in a normally closed reaction zone at 200°–400° C., introducing and dispersing an increment of molten sodium into said zone to react with the hydrogen to form sodium hydride whereby the pressure in said zone is lowered below a predetermined value for a predetermined time interval, introducing an additional increment of hydrogen until the pressure in said zone is raised to a predetermined value for a predetermined time interval, continuing the alternate additions of increments of hydrogen and sodium into said zone until the pressure in said zone remains constant for a predetermined time interval and the dispersion of sodium methylate is coated with sodium hydride.



is released in a reaction zone where the recombination takes place, and feeding uranium hexafluoride gas into said reaction zone whereby the uranium hexafluoride is reduced and powdered uranium tetrafluoride is formed.



2,898,185

ADSORPTION METHOD FOR SEPARATING THORIUM VALUES FROM URANIUM VALUES

George E. Boyd, Oak Ridge, Tenn., and Edwin R. Russell and Jack Schubert, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application September 14, 1949
Serial No. 115,778
9 Claims. (Cl. 23—14.5)

1. A method of separating thorium ions from uranium ions in an aqueous solution containing ions of uranyl uranium and ions of thorium, which comprises contacting said solution with a cation exchange resin in an amount sufficient to adsorb substantially all of the thorium ions but insufficient to adsorb all of the uranium ions and separating the solution containing unadsorbed uranium ions from the cation exchange resin containing thorium values.

2,898,186

SOLUBILIZATION OF ACTINIDE METAL-CONTAINING SLAG

Horace H. Hopkins, Jr., Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application July 16, 1953
Serial No. 368,535
5 Claims. (Cl. 23—14.5)

1. The method of solubilizing values of an actinide rare earth element having a normal tetravalent state and contained in a calcium slag material, which comprises treating said material with gaseous hydrogen chloride at an elevated temperature, and then dissolving the resultant mixture in very dilute nitric acid.

2,898,187

PRODUCTION OF URANIUM TETRAFLUORIDE

William E. Shaw, Robert M. Spencoley, and Frederick M. Testral, Hamilton, Ohio, assignors to the United States of America as represented by the United States Atomic Energy Commission

Application December 23, 1953, Serial No. 400,149
4 Claims. (Cl. 23—14.5)

1. A method of producing uranium tetrafluoride from uranium hexafluoride by reduction with hydrogen, comprising dissociating molecular hydrogen, allowing the hydrogen atoms to recombine into molecules whereby heat

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2,898,188

GERMANIUM COMPOUND RECOVERY PROCESS

Cortes F. Reed, Anoka, Minn., assignor to Charles L. Horn, Minneapolis, Minn.

No Drawing. Application December 29, 1954
Serial No. 478,525
1 Claim. (Cl. 23—19)

A process for the recovery of germanium compounds from alkaline coal combustion residues which consists essentially of the steps of washing the coal residues with from about ½ to 5 times their weight of water, said water containing a water soluble polysulfide of a metal selected from the group consisting of alkali and alkaline earth metals, said polysulfide being present in an amount sufficient to add sulfur in an amount from about 0.02 to 0.2 percent by weight of the coal residue starting material, said amount of sulfur being at least the stoichiometric equivalent of the germanium compounds contained therein, separating the solution of extracted germanium compounds from the washed coal residues, acidifying the solution with hydrochloric acid to between about pH 2 and pH 4, heating the acidified solution to about 180° F. to boiling to hasten precipitation and then separating the precipitated germanium compounds.

2,898,189

PROCESS FOR PREPARING ALKALI METAL TRIPHOSPHATES, ALKALI METAL PYROPHOSPHATES AND MIXTURES THEREOF

Franz Reelle and Gerhard Hartlapp, Knapsack, near Koln, and Klaus Boltz, Hurth, near Koln, Germany, assignors to Knapsack-Griesheim Aktiengesellschaft, Knapsack, near Koln, Germany, a corporation of Germany

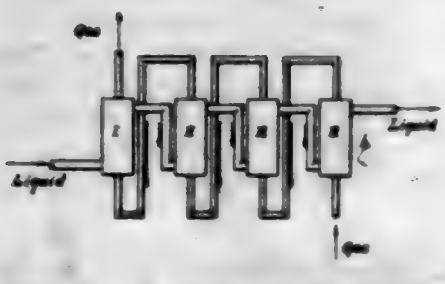
No Drawing. Application March 7, 1955
Serial No. 492,765
Claims priority, application Germany March 8, 1954
4 Claims. (Cl. 23—107)

1. A process for preparing alkali metal triphosphates, alkali metal pyrophosphates and mixtures thereof, said process being characterized by the steps of providing an aqueous solution of phosphoric acid that has been neutralized to form alkali metal salts, the molar proportion of orthophosphoric acid relative to the alkali metal in the solution being between 1:2 and 3:5, and converting the solution to the desired product by spraying said solution into a reaction zone while simultaneously heating said solution to a temperature sufficient to form waste gases having a temperature of between about 200° C. and 500° C., there being a sufficient amount of water present in said aqueous solution to provide a water content in said waste gases of about 60–400 grams of water for each kilo of waste gases, and the conversion taking place within a period of about 2–15 seconds.

the liquor in each reactor at a temperature at which hydrogen reacts with sodium metal to form sodium hydride,

pyrrhotitic mineral sulphide particles which contain nonferrous metal values in an aqueous medium selected

2,898,190
METHOD OF PRODUCING AMMONIUM SULFATE AND AMMONIUM THIOSULFATE
Otto Grosskinsky and Helmut Umbach, Dortmund-Eving, Germany
Application October 22, 1952, Serial No. 316,162
Claims priority, application Germany November 22, 1951
2 Claims. (Cl. 23—115)



1. A method of producing an ammonium salt from hydrogen sulfide contained in an aqueous ammonia liquid, comprising the steps of continuously passing at elevated temperature a gaseous oxidizing agent in finely divided condition upwardly through coherent columns of an ammonia liquid being under pressure and containing hydrogen sulfide in a series of stages in a manner such that in each individual stage said gaseous oxidizing agent and said aqueous ammonia liquid are conducted in cocurrent, while with reference to the entire system of stages said gaseous oxidizing agent and said aqueous ammonia liquid move in counter-current to each other, thereby forming an aqueous liquid containing substantially only one of the ammonium salts selected from the group consisting of ammonium sulfate and ammonium thiosulfate; continuously withdrawing said aqueous liquid; and recovering said ammonium salt.

2,898,191
PROCESS FOR PREPARING ZINC OXIDE
John B. Conn and William Karl Humphreys, Westfield, N.J., assignors to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Application January 2, 1953
Serial No. 329,473
1 Claim. (Cl. 23—147)

The process of making a special form of zinc oxide comprising mixing white zinc oxide with ammonia water containing ammonium carbonate dissolved therein until the zinc oxide is dissolved, introducing carbon dioxide gas to the reaction mixture to remove ammonia and precipitate a reaction product, removing the precipitate from the mixture, heating the precipitate within the range of 100–400° C. to release ammonia and carbon dioxide therefrom until the weight loss reaches about 43%, and thereupon discontinuing the heating and recovering the resulting product, which is a hygroscopic, mobile and bulky buff-read powder having a particle size below 300 A.

2,898,192
PRODUCTION OF BORIC ACID
Cameron G. Harman, Cleveland, Ohio, assignor to Horizons Incorporated, a corporation of New Jersey
No Drawing. Application May 1, 1957
Serial No. 656,190
7 Claims. (Cl. 23—149)

1. A process for producing boric acid and boric acid anhydride which consists of: moistening an alkaline earth borate material with water, subjecting the moistened alkaline earth borate material to temperature within the range of 300° F. to 2000° F. while in contact with water vapor and in the absence of any extraneous added free acid and collecting the boron oxide and the boric acid evolved from the heated, moistened alkaline earth borate.

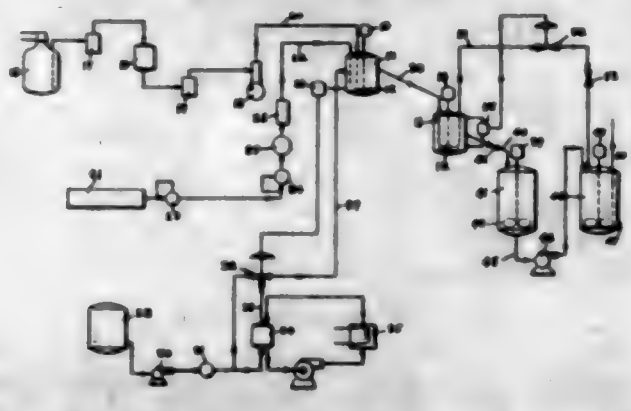
2,898,193
METHOD FOR MAKING TITANIUM NITRIDE
Helmut Espenschied, Metuchen, N.J., assignor to National Lead Company, New York, N.Y., a corporation of New Jersey
No Drawing. Application September 16, 1952
Serial No. 309,543
3 Claims. (Cl. 23—191

1. Method for the production of titanium nitride comprising slurrying a mixture of an uncalcined titanium hydrate pulp, as obtained by hydrolyzing an acid titanium salt solution, and finely divided carbon and heating said mixture at a temperature of from 1350° C. to 1500° C. in an atmosphere of nitrogen to produce titanium nitride of a particle size from about 1 micron to about 15 microns.

2,898,194
BENEFICIATION OF MAGNESITE ORES
Howard P. Eells, Jr., Cleveland Heights, and Edward P. Pearson and Harley C. Lee, Cleveland, Ohio, assignors, by mesne assignments, to Basic Incorporated, Cleveland, Ohio, a corporation of Ohio
No Drawing. Application December 23, 1955
Serial No. 554,947
9 Claims. (Cl. 23—201)

1. In a method for obtaining magnesia in hydrated form from magnesite or containing as impurities varying amounts of dolomite, calcite and silicates of magnesium and calcium, the steps which comprise heating such ore crushed to a top size not exceeding 2 inches at a temperature from about 1300° F. to about 1650° F., whereby the magnesite and the magnesium carbonate component of any dolomite present are calcined but any calcite present is left substantially uncalcined, adding sufficient water to the entire calcined material preferentially to hydrate only magnesium oxide and convert it to a substantially dry pulverulent hydrate, and then separating the resulting fine, substantially dry, hydrated magnesia, together with any accompanying unhydrated magnesia, from the remainder of the material.

2,898,195
METHOD FOR PREPARING SODIUM HYDRIDE
Mario D. Banus, Topsfield, Edward R. Winiarczyk, Lynn, and Harry W. Lambe, West Concord, Mass., assignors, by direct and mesne assignments, to Metal Hydrides Incorporated, Beverly, Mass., a corporation of Massachusetts
Application May 31, 1956, Serial No. 588,445
1 Claim. (Cl. 23—204)



The method for preparing sodium hydride which comprises moving a liquor comprising molten sodium metal and an inert liquid together with solid sodium hydride at a controlled rate in a confined path upwardly in each of two vertical reactors and from near the top of the first reactor to near the bottom of the second reactor introducing hydrogen into said first reactor near the bottom thereof to maintain an atmosphere of hydrogen above the liquor in each reactor at a desired pressure, maintaining

the liquor in each reactor at a temperature at which hydrogen reacts with sodium metal to form sodium hydride, subjecting the liquor in each reactor to agitation to form a dispersion of finely divided molten sodium metal and finely divided sodium hydride in the inert liquid, introducing molten sodium metal and said inert liquid into the first of said reactors in relative amounts and each at said controlled rate to provide a liquor having a sodium concentration between about 10 to 40 percent by weight, said molten sodium metal being introduced into said first reactor near the bottom thereof, and recovering at said controlled rate from near the top of the second of said reactors a liquor consisting essentially of finely divided sodium hydride dispersed in said inert liquid, each of said reactors being provided with at least one rotatable agitator having a predetermined outside diameter and in which (1) the ratio of the internal diameter of the reactor to the outside agitator diameter is greater than 1 but less than 20, (2) the ratio of the working volume in each reactor in gallons to the cube of the outside agitator diameter in inches times the number of agitators is greater than zero but not greater than 1.5, and (3) the agitator peripheral speed in feet per minute times the number of agitators is greater than 500 and less than 20,000.

2,898,196

METHOD OF TREATING PYRRHOTITIC MINERAL SULPHIDES CONTAINING NON-FERROUS METAL VALUES FOR THE RECOVERY OF SAID METAL VALUES AND SULFUR

Frank A. Forward and Anna M. Armstrong, Vancouver, British Columbia, Canada, assignors to Sherritt Gordon Mines Limited, Toronto, Ontario, Canada, a corporation of Ontario

No Drawing. Application October 22, 1953
Serial No. 387,781
3 Claims. (Cl. 23—224)

1. The method of producing elemental sulphur and of separating non-ferrous metal sulphides from pyrrhotitic mineral sulphides containing non-ferrous metal values which comprises the steps of dispersing pyrrhotitic mineral values containing non-ferrous metal sulphides in an aqueous acid sulphate leach solution to form a slurry, reacting the slurry in a reaction zone at a temperature of from about 245° to about 290° F. under a partial pressure of oxygen from 25 to 100 pounds per square inch, feeding a free oxygen bearing oxidizing gas into the reaction vessel, actively agitating the slurry and continuing the treatment to oxidize sulphide sulphur in the pyrrhotitic material to elemental sulphur whereby non-ferrous metal values are simultaneously attached to globules of molten elemental sulphur, cooling the slurry below the melting temperature of sulphur to solidify said globules and thus form elemental sulphur pellets, separating solid residue from the slurry, recovering elemental sulphur pellets and entrained non-ferrous metal values from said solid residue, and separating and recovering the elemental sulphur from the non-ferrous metal values which are present in the sulphur pellets.

2,898,197

METHOD OF TREATING PYRRHOTITIC MINERAL SULPHIDES CONTAINING NON-FERROUS METAL VALUES

Frank A. Forward and Anna M. Armstrong, Vancouver, British Columbia, Canada, assignors to Sherritt Gordon Mines Limited, Toronto, Ontario, Canada

No Drawing. Application November 5, 1958
Serial No. 771,955
6 Claims. (Cl. 23—224)

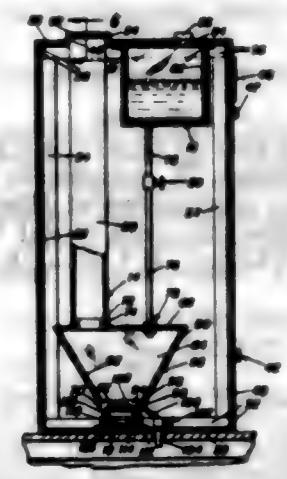
1. The method of producing elemental sulphur and of recovering non-ferrous metal values from pyrrhotitic mineral sulphides which contain non-ferrous metal values which comprises the steps of dispersing finely divided pyrrhotitic mineral sulphide particles which contain non-ferrous metal values in an aqueous medium selected from the group consisting of water and aqueous sulphuric acid solution to form a slurry, reacting the slurry in a reaction zone at a temperature within the range of from about 200° F. to the melting temperature of sulphur and under a partial pressure of oxygen above 5 pounds per square inch, feeding a free oxygen bearing, oxidizing gas into the reaction zone, actively agitating the slurry and continuing the reaction to oxidize sulphide sulphur in the pyrrhotitic material to elemental sulphur, increasing the temperature to a temperature above the melting temperature of sulphur whereby elemental sulphur is agglomerated into liquid sulphur globules and non-ferrous metal values are simultaneously attached to liquid sulphur globules, cooling the slurry to a temperature below the melting temperature of sulphur and thereby solidifying the liquid sulphur globules to form solid sulphur pellets with cohering non-ferrous metal values, separating sulphur pellets from the slurry, and separating and recovering non-ferrous metal values from the sulphur pellets.

2,898,198

WASTE DISPOSAL DEVICE

Lee C. Robedee, Meriden, Conn., assignor of one-fourth to Helen M. Robedee, one-fourth to Virginia L. Rioux and Antoine F. Rioux, jointly, one-fourth to Faith C. Morin and Wilfred F. Morin, jointly, and one-fourth to Derwood E. Zieminski and John E. Zieminski, jointly, all of Meriden, Conn.

Application June 30, 1955, Serial No. 519,138
1 Claim. (Cl. 23—252)



A waste treating and disposal unit comprising a disposal chute, a disposal hopper at the bottom of said chute, a gravity feed disintegrating chemical supply reservoir elevated above and in communication with said hopper, control means between said reservoir and hopper controlling the amount of disintegrating chemical contained therein, said hopper including a downwardly inclined bottom sump portion therein, a controlled outlet to which said sump portion inclines in communication therewith for directing dissolved refuse therefrom to a sewage outlet, and a controlled heat source in communication with said hopper for increasing the chemical reaction between a disintegrating chemical and the refuse contained in said hopper, including a recessed member below said bottom closed thereby and having a heating element enclosed therein.

2,898,199

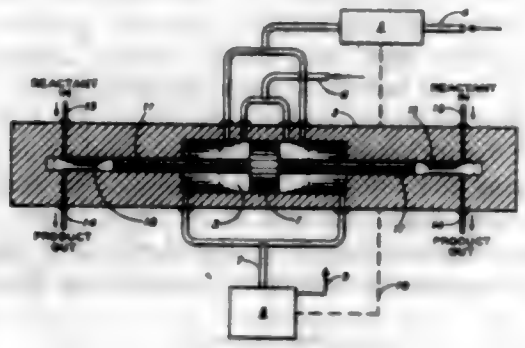
FREE FLOATING PISTON REACTOR

John W. Scott, Jr., Ross, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Application December 26, 1956, Serial No. 630,633
2 Claims. (Cl. 23—252)

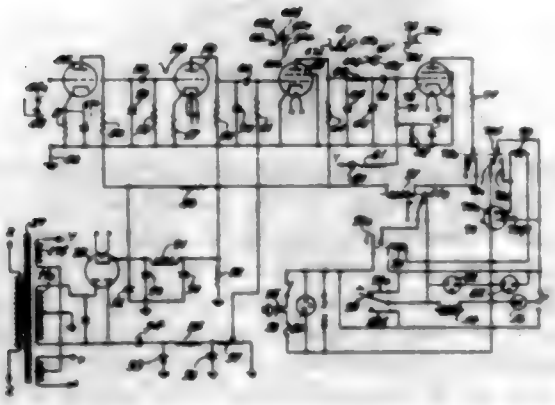
1. Apparatus for accomplishing chemical reactions which require high temperatures for brief periods of

time, which comprises a free piston engine having a main cylinder and a main free piston therein, at least one secondary piston mounted on said main piston as an extension thereof, a secondary cylinder in which said secondary piston reciprocates during reciprocation of said main piston in said main cylinder, inlet means for introducing chemical reactants into said secondary cylinder, outlet means for withdrawing reaction products from said secondary cylinder, said inlet and outlet means being so located that they are closed by said secondary piston during



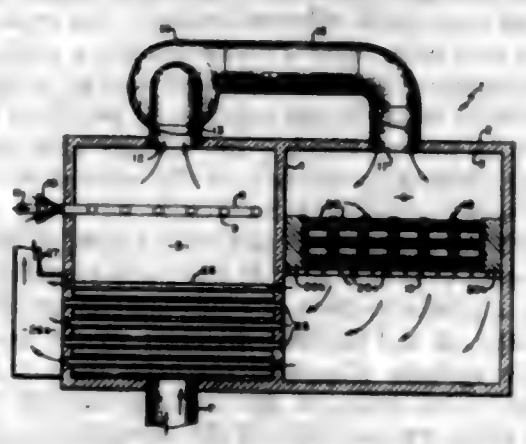
a portion of the compression stroke and exposed by said secondary piston on the expansion stroke, means for reciprocating said main piston whereby said reciprocating secondary piston alternately closes said inlet and outlet means and compresses the reactants thereby trapped in said secondary cylinder, and opens said inlet and outlet means to permit introduction of additional reactants and withdrawal of reaction products at substantially lower pressures than the peak pressures in said secondary cylinder.

2,898,200
AUTOMATIC TITRATOR CIRCUIT
Ralph J. Karr, Chicago, Ill., assignor to E. H. Sargent & Co., a corporation of Illinois
Application June 28, 1955, Serial No 518,598
12 Claims. (Cl. 23—253)



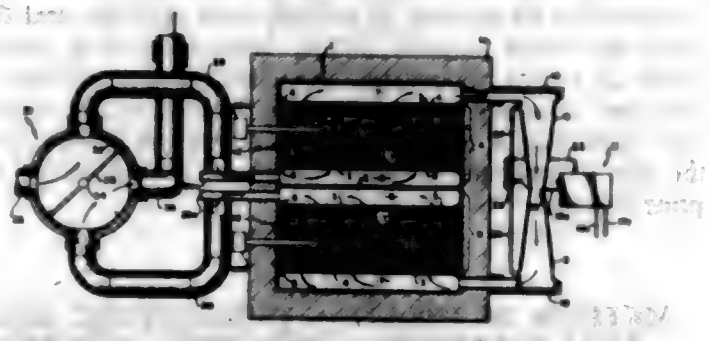
1. Apparatus for titrating a solution, comprising: means, including electrodes in said solution, for producing a signal which is a function of the potentiometric curve for the titration; an oscillator having a control element to which said signal is connected for causing oscillation during a portion of said curve and terminating substantially at the equivalence pioat of said titration, providing a square wave pulse of oscillations; means for differentiating said square wave pulse, providing a sharp positive pulse at the end thereof; a grid controlled gas tube having a control element to which said differentiated pulse is applied; and means in the anode circuit of said gas tube for indicating the end point of said titration when the tube conducts.

2,898,201
GAS TREATING APPARATUS
Cletus T. Hayes, Philadelphia, Pa., assignor to Oxy-Catalyst, Inc., a corporation of Pennsylvania
Application May 10, 1955, Serial No. 507,433
6 Claims. (Cl. 23—288)



1. Apparatus for catalytically oxidizing the combustible constituents of a gas stream comprising a first chamber containing a burner for producing hot combustion gases, an inlet into said chamber for admitting said gas stream thereto, an outlet from said chamber for withdrawing therefrom said gas stream mixed with hot combustion gases, a second chamber containing a bed of oxidation catalyst and having a gas inlet thereto, means forming a passage for said gas stream and connecting the outlet from said first chamber and the gas inlet to said second chamber, fluid impeller means in said passage and having its suction side arranged to draw upon the outlet from said first chamber and having its discharge side arranged to discharge said gas stream mixed with said hot combustion products into the inlet to said second chamber and through said bed of oxidation catalyst, said impeller means being adapted at the same time to mix mechanically said gas stream and said combustion products to provide a homogeneous mixture thereof, so as to thus provide a mixture of uniform temperature before introduction into said second chamber.

2,898,202
GAS TREATING APPARATUS
Eugene J. Houdry, Ardmore, and Myriam R. Erikson, Havertown, Pa., and Michel A. Coudray, Tours, France, assignors to Oxy-Catalyst, Inc., a corporation of Pennsylvania
Application October 24, 1955, Serial No. 542,218
7 Claims. (Cl. 23—288)



1. Gas treating apparatus adapted to accommodate gas flow in each of two directions in reversing cycles comprising: a pair of catalyst containing beds, each having a back portion and a frontal portion for admitting and discharging reactant gases to and from the beds, the back portion of said beds being disposed in spaced-apart face-to-face relationship with the frontal portions thereof facing in opposite directions, a common wall between said face-to-face back portions for separating said beds with respect to gas flow, means for introducing reactant

2,898,208
PHOTOGRAPHIC PRODUCT INCLUDING MEANS

vine-fresh hops, which consists in extracting said material

gases into and exhausting reactant gases from either of said beds adjacent the back portion thereof, conduit means connecting the frontal portions of said beds to one another to permit the flow of reactant gases from the frontal portions of either of said beds to the frontal portions of the other of said beds and means for introducing fuel into said conduit and admixing said fuel with said reactant gases during flow thereof from the frontal portions of either of said beds to the frontal portions of the other of said beds.

2,898,203

REMOVAL OF CHLORIDE FROM AQUEOUS SOLUTIONS

Wallace W. Schulz, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application October 4, 1954
Serial No. 460,287
3 Claims. (Cl. 23—312)

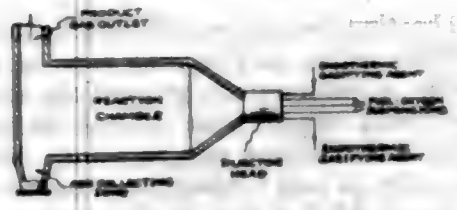
1. A process of removing chloride anions from an aqueous solution, comprising contacting said solution with a benzene solution of phenyl mercuric acetate whereby said chloride anions are taken up by a solvent extract phase, and separating said solvent extract phase from said aqueous solution.

2,898,204

PROCESS FOR PRODUCTION OF COMBUSTIBLE GASES

Friedrich Totzek, Essen, Germany, assignor, by mesne assignments, to Koppers Company, Inc., Pittsburgh, Pa., a corporation of Delaware

Application December 20, 1954, Serial No. 476,453
Claims priority, application Germany, December 24, 1953
13 Claims. (Cl. 48—203)



1. A process for the production of a gas containing carbon monoxide comprising: injecting axially into a reaction chamber while at ignition temperature a first mixture of a carbonaceous fuel and a free oxygen-containing gas selected from the group consisting of substantially pure oxygen and oxygen-enriched air, the oxygen of said gas in said first mixture being in excess of the amount necessary to convert all of the carbon of the fuel in said first mixture to carbon dioxide, whereby said first mixture ignites substantially immediately upon its entry into the reaction chamber to form a combustion zone adjacent its point of entry, axially injecting an annular stream of an endothermic gasifying agent of the group consisting of carbon monoxide and steam into the reaction chamber in surrounding relation to said first mixture to flow between said combustion zone and the walls of the reaction chamber, axially injecting into the reaction chamber between said first mixture and said annular stream of endothermic gasifying agent, a second mixture of a carbonaceous fuel and a free oxygen-containing gas selected from the group consisting of substantially pure oxygen and oxygen-enriched air, the oxygen of said gas of said second mixture being present in an amount insufficient to convert all of the carbon of the fuel in said second mixture to carbon dioxide, the total oxygen content of both mixtures being insufficient to convert the total carbon content of both mixtures to carbon dioxide and said second mixture being directed at said combustion zone thereby promoting its ignition by the heat of the first mixture with partial combustion of said second mixture closer to its point of entry, to promote more rapid partial combustion favoring the formation of carbon monoxide; thereafter interdiffusing said endothermic gasifying agent and the hot combustion products of said first and second mixtures for reaction to form the final gas containing carbon monoxide.

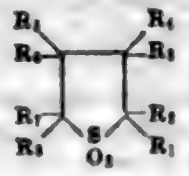
2,898,205

METHOD OF KILLING PLANTS

William J. Pyne, Painesville, and Henry Binestone, Cleveland Heights, Ohio, assignors to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Application February 27, 1956
Serial No. 567,724
10 Claims. (Cl. 71—2.5)

1. The method of regulating plant growth which includes the step of contacting a plant with a composition containing a phytotoxic amount of a substance of the formula:



wherein R_1, R_2, R_3, R_4, R_5, R_6, R_7 and R_8 are selected from the group consisting of hydrogen, hydroxy, lower alkyl, aryl, lower alkoxy and halogen radicals.

2,898,206

HERBICIDE FOR DICHONDRA LAWNS

Charles A. Monoogian, Whittier, Calif., assignor to Benjamin Mooschekian, Samuel Mooschekian, Arnold Babajian, Ardy J. Babajian, Charles A. Monoogian, Frederick Nemoede, Rueben Mooschekian, Theodore Mooschekian, and Florence Greenbeck, trading as Downey Fertilizer Co., Downey, Calif.

No Drawing. Application June 13, 1958
Serial No. 741,745
5 Claims. (Cl. 71—2.6)

1. A method for killing plant growth of the Oxalis family in a Dichondra lawn which comprises evenly distributing 3-(p-chlorophenyl)-1,1-dimethylurea over the lawn in an amount of from about 4.4 grams to 17.6 grams of the compound per one hundred square foot area of the lawn.

2,898,207

ACIDULATION OF PHOSPHATE

Karl F. Schilling, Manly J. Powell, and Emory A. Brice, Lakeland, Fla., assignors to Minerals & Chemicals Corporation of America, a corporation of Maryland

No Drawing. Application March 2, 1954
Serial No. 413,712
11 Claims. (Cl. 71—37)

3. A process for the production from phosphate rock of a calcium phosphate product in which the phosphate is substantially available to plants, comprising the steps of reacting a suitably-sized phosphate rock material with chlorosulfonic acid, removing the gases evolved during the reaction, heating the reaction product but not to the extent of significant P_2O_5 reversion to ammonium citrate insolubility, removing the gases evolved during the heating, and recovering the residue as the final product.

prising first heating the groats in the presence of steam

2,898,212

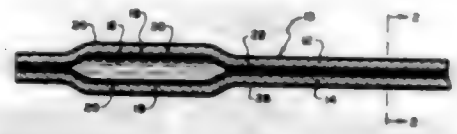
2,898,208

PHOTOGRAPHIC PRODUCT INCLUDING MEANS CONTAINING A PROCESSING LIQUID

Edwin H. Land, Cambridge, and William J. McCune, Jr., Lincoln, Mass., assignors to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

Application May 12, 1954, Serial No. 429,185
8 Claims. (Cl. 96—76)

1. A photographic product comprising a layer of photosensitive material and containing a fluid in sufficient quantity to effect the formation of an image in said product when spread in a layer of predetermined thickness so as to permeate said layer of photosensitive material, said product comprising, in combination, a photosensitive sheet including a layer of said photosensitive material selected from the class consisting of the heavy metal salts capable of having a developable image formed therein by exposure and capable of development to produce a visible image comprising the metal of said salt, ferric salts, diazonium compounds and bichromate sensitized colloids, said layer of photosensitive material being located adjacent one surface of said sheet so as to be permeated by an aqueous processing fluid spread on said surface and comprising a first area of said sheet, and a layer of a water-impervious material coated onto a second area of said surface located adjacent said first area, extending from side to side of said first area and being substantially smaller than said first area; and a second sheet having a first area of a surface of said second sheet which is at least coextensive with said first area of said photosensitive sheet for confining said fluid during spreading between said sheets, and a layer of water-impervious material coated on a second area of



said surface of said second sheet, said second area of said second sheet being substantially coextensive with said second area of said photosensitive sheet; said layers of said water-impervious material being sealed to one another completely around their margins to provide a sealed cavity between said layers of said water-impervious material; said sheets being disposed relative to one another with said first areas of said sheets located for superposition with one another; and a quantity of an aqueous fluid capable of effecting image formation following exposure of said photosensitive material, contained in said cavity, said fluid being provided in a quantity sufficient to form a layer of predetermined thickness coextensive with and between said first areas of said sheets, the combined thickness of said layers of water-impervious material not exceeding the predetermined thickness of said layer of fluid when spread between said sheets whereby said sheets can be moved relative to and between a pair of juxtaposed members located a fixed maximum distance apart for ejecting said fluid from said cavity between said sheets and spreading said fluid in a layer between said first areas of said sheets.

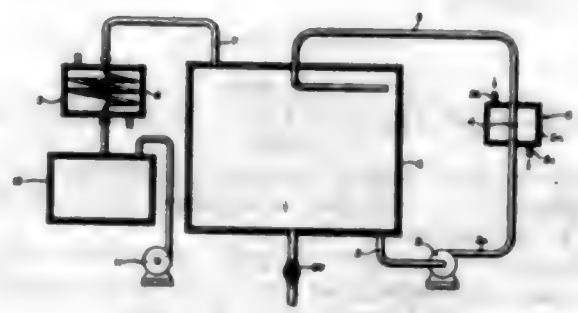
2,898,209

METHOD OF EXTRACTING HOPS

Justin J. Murtaugh, Guilford, and Milton E. Lavrich, Lawrenceburg, Ind., and Donald G. Ruff, Wauwatosa, and Charles J. Krueck and James E. Grant, Milwaukee, Wis., assignors, by mesne assignments, to Blatz Brewing Company, Chicago, Ill., a corporation of Delaware

Application July 17, 1956, Serial No. 598,481
5 Claims. (Cl. 99—50.5)

1. A method of extracting solid starting material, said starting material having substantially the composition of vine-fresh hops, which consists in extracting said material with 95% methanol at a maximum temperature of 65° C. to produce an original liquid extract of said starting material, said original liquid extract including water which is extracted from said starting material, said water being mixed with said methanol in said original liquid extract, said original liquid extract including water-insoluble and methanol-soluble material which is extracted from said solid starting material and which is dissolved in the methanol of said original liquid extract, said original liquid extract including water-soluble and methanol-insoluble material which is extracted from said solid starting material and which is dissolved in the water of said original liquid extract, said methanol-soluble and water-insoluble extracted material including alpha-resin and beta-resin, the weight of said alpha resin being at least 40% of the weight of the total soft resin; separating said original liquid extract from the undissolved, residual part of said starting material; flowing the separated, original liquid extract forwardly through an externally heated zone in the form of a thin, rapidly forwardly-flowing stream to heat said forwardly-flowing stream substantially uniformly within said heating zone without substantially evaporating methanol or water from said forwardly-flowing stream



within said heating zone, forwardly flowing said forwardly-flowing stream within said heating zone at a sufficiently high velocity to substantially prevent the solutes of said forwardly-flowing stream from coating the inner face of said heating zone; flowing said forwardly-flowing stream out of the outlet of said heating zone into an evaporation chamber; evaporating a part of the methanol and water in said evaporation chamber from the stream which is flowed into said evaporation chamber and thus providing a residue of said stream within said evaporation chamber, flowing the evaporated methanol and water out of said evaporation chamber; flowing the residue of said stream out of said evaporation chamber forwardly through said heating zone and back into said evaporation chamber in cyclic succession while evaporating a part of the methanol and water from the stream which is flowed into said evaporation chamber during each cycle and flowing the part of the methanol and water which is thus evaporated during each cycle out of said evaporating chamber, maintaining said evaporation chamber at a maximum temperature of substantially 65° C. and at a maximum pressure of substantially 175 millimeters of mercury, and continuing said cyclic succession to produce a concentrate of said original extract in which the weight of said alpha-resin is at least 40% of the weight of the total soft resin.

2,898,210

PROCESS FOR PRODUCING ROLLED OATS

Walter G. Dale, Wauconda, and Edward F. Lilly, East Dundee, Ill., assignors to The Quaker Oats Company, Chicago, Ill., a corporation of New Jersey

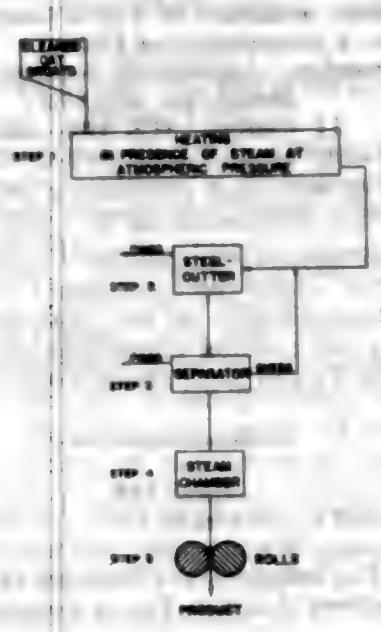
Application April 1, 1957, Serial No. 649,763
5 Claims. (Cl. 99—80)

1. In a process for producing rolled oats in which oat groats are steamed and then flaked, the improvement com-

2,898,215

2,898,218

prising first heating the groats in the presence of steam at about atmospheric pressure at a temperature of about



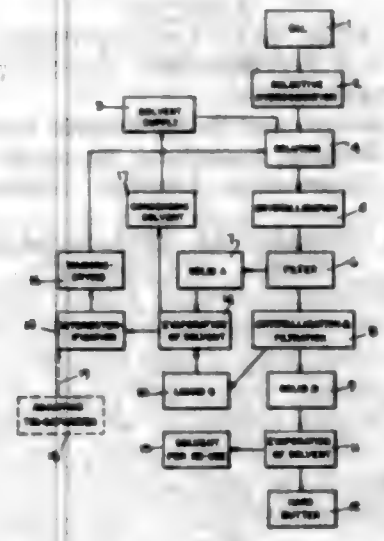
260° F. to about 390° F. to attain a final measurable bulk temperature of about 205° F. to about 260° F. in about 4 to about 40 minutes.

2,898,211

METHOD OF MAKING HARD BUTTER

George Barsky, New York, N.Y., and Vigen K. Babayan, Livingston, and Bernard J. Babosky, Parsippany-Troy Hills, N.J., assignors to E. F. Drew & Co., Inc., New York, N.Y., a corporation of Delaware

Application August 18, 1955, Serial No. 529,096
11 Claims. (Cl. 99—118)



1. A method of making a hard butter consisting of the steps of providing a glyceride oil containing glycerides of fatty acids having 16–22 carbon atoms, the glycerides including constituents melting above about 105° F., below about 80° F. and intermediate said temperatures, hydrogenating said oil to an iodine value of about 40 to 60 to transform linoleic acid therein to oleic acid and forming some isooleates, dissolving said oil in a volatile solvent at a predetermined temperature, cooling said solution to a sufficiently lower temperature to precipitate said highest melting constituent, separating the liquid portion, further cooling said liquid portion to precipitate a hard butter, and separating said hard butter from the mother liquor, mixing said highest melting constituent and the glyceride oil from said mother liquor, interesterifying said mixture, mixing said interesterified mixture with said glyceride oil and repeating the aforesaid cycle.

2,898,212

PRESERVATION OF CURED MEAT COLOR

Floyd C. Olson, Madison, Wis., and Earl W. Turner, Park Forest, Ill., assignors to Oscar Mayer & Co., Inc., Chicago, Ill., a corporation of Illinois

No Drawing. Application October 14, 1955
Serial No. 540,638
5 Claims. (Cl. 99—174)

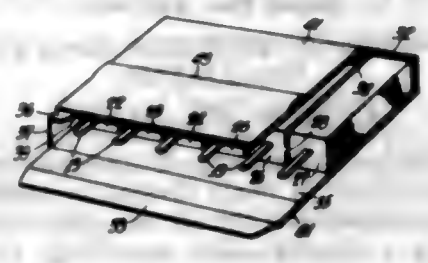
1. A method of retaining the cure color of cured meats packaged in flexible transparent film having an oxygen transmission rate not exceeding approximately 35 cc. air/mil. thickness/100 sq. in./24 hours at 75° F. and 50% relative humidity, said method comprising incorporating in the cured meat package ascorbic acid and catalase enzyme at a level sufficient to retard subetantial cure color fading.

2,898,213

MULTIPLE UNITARY FROZEN CONFECTION

Arthur S. Ensler, Scarsdale, and Aaron Friedmann, New York, N.Y., assignors to Joe Lowe Corporation, New York, N.Y., a corporation of Delaware

Application October 23, 1956, Serial No. 617,751
2 Claims. (Cl. 99—180)



1. A package including a frozen confection of a substantial length as compared to its height having a plurality of distinctively shaped portions of a substantial height as compared to their thickness connected by a plurality of spaced web formations which are relatively thin and flat as compared to the thickness of the distinctively shaped portions, each distinctively shaped portion having a handle stick projecting outwardly therefrom, whereby an individual by flexing said package can break said web formations and remove said separated distinctively shaped portions each by its own handle stick as a complete frozen confection on a stick.

2,898,214

PROCEDURE FOR PREPARING CANNED RICE

Robert E. Ferrel, Richmond, Calif., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application October 30, 1958
Serial No. 770,892
5 Claims. (Cl. 99—186)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In the process of canning rice wherein white rice is partially cooked until its moisture content is about from 45 to 60%, the partially cooked rice is filled into containers, the containers are sealed and subjected to a heat processing operation to sterilize the contents and the insides of the containers, the improvement which comprises coating the rice prior to filling it into containers, with a stable aqueous dispersion containing at least about 0.1% by weight of a partial ester of a polyhydric alcohol and a higher fatty acid, whereby the canned product exhibits minimized stickiness.

2,898,215

METHOD OF CANNING RICE

Robert E. Ferrel, Richmond, Calif., assignor to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application October 30, 1958
Serial No. 770,893
2 Claims. (Cl. 99—186)

(Granted under Title 35, U.S. Code (1952), sec. 266)

1. In the process of canning rice wherein white rice is partially cooked until its moisture content is about from 45 to 60%, the partially cooked rice is filled into containers, the containers are sealed and subjected to a heat-processing operation to sterilize the contents and the insides of the containers, the improvement which comprises coating the rice, prior to filling it into the containers, with a stable aqueous emulsion containing at least about 1% by weight of an edible oil and an emulsifying agent whereby the canned product exhibits minimum stickiness.

2,898,216

FRICTION MATERIAL

Horace Arthur Bray and Eric William Peppitt, Coventry, England, assignors to Dunlop Rubber Company Limited, London, England, a British company

No Drawing. Application April 30, 1957
Serial No. 655,940
Claims priority, application Great Britain
May 23, 1956
8 Claims. (Cl. 106—36)

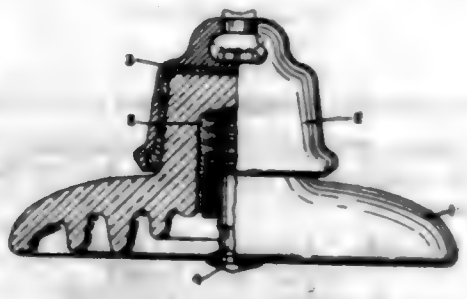
1. A molded friction pad for brakes and clutches consisting essentially of finely divided particles of mullite dispersed and embedded in an inorganic, non-metallic, binder having a melting point of at least 1100° C. and consisting essentially of manganese pyro-phosphate ($Mn_2P_2O_7$).

2,898,217

CERAMIC PRODUCTS

Jorgen Selsing, Barberton, Ohio, assignor to The Ohio Brass Company, Mansfield, Ohio, a corporation of New Jersey

Application August 6, 1956, Serial No. 602,151
11 Claims. (Cl. 106—46)



1. The process of producing a ceramic product having a quartz content of no more than 1 percent of the weight of the product, which comprises firing at a temperature between 1250 and 1400° C. a ceramic mix composed essentially of 15 to 45 percent of an aluminum compound of the class consisting of Al_2O_3 and hydrates thereof, 25 to 60 percent of clay and 20 to 40 percent of flux, the mix containing in excess of 1 percent of quartz present as impurity in the raw materials, and the flux containing sufficient sodium silicate in which the ratio of the soda to the silica is at least 1 to 10, to reduce the quartz content, on firing, to no more than 1 percent.

2,898,218

PORCELAIN ENAMELS

Wendell G. Voss, Bay Village, and Francis C. Ellinger, Parma, Ohio, assignors to Ferro Corporation, Cleveland, Ohio, a corporation of Ohio

No Drawing. Application February 6, 1957
Serial No. 638,436
11 Claims. (Cl. 106—48)

4. A porcelain enamel composition consisting essentially of a non-opacified borosilicate porcelain enamel, said composition containing up to 5.0% P_2O_5, the total alkali metal content of said composition being from about 8.5% to about 21.5% and the Na_2O comprising from 60.5% to about 88.25% of the total alkali metal content and said composition containing from about 0.8% to about 3.5% F_2 and from about 9.0% to about 19.0% MnO_2.

2,898,219

IVORY, OPALESCENT GLASSES

James E. Duncan, Brackenridge, and Samuel L. Seymour, Oakmont, Pa., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

No Drawing. Application June 27, 1957
Serial No. 668,290
7 Claims. (Cl. 106—52)

1. An ivory, opaque glass consisting essentially of the following ingredients in percent by weight: 60 to 75 percent SiO_2, 13 to 21 percent alkali metal oxides selected from the group consisting of 5 to 18 percent Na_2O and 0 to 10 percent K_2O, 2 to 12 percent Al_2O_3, 0 to 10 percent CaO, 0 to 12 percent ZnO, and 0 to 12 percent BaO, the sum of the bivalent metal oxides being not greater than 12 percent when present, 0 to 2 percent As_2O_3, 0 to 5 percent TiO_2, 1 to 7 percent F, 0.005 to 0.1 percent chromium oxide and 0.01 to 0.2 percent selenium.

2,898,220

PROCESS FOR MANUFACTURING STEAM-CURED LIGHT-WEIGHT CONCRETE WITH LOW SHRINKAGE

Leo Torsten Ulfstedt and Bengt Fredrik Jonny Bengtsson, Sodertalje, Sweden, assignors, by mesne assignments, to Casius Corporation Limited, Montreal, Quebec, Canada

Application November 25, 1952, Serial No. 322,457
1 Claim. (Cl. 106—87)

A process for manufacturing porous light-weight concrete from a raw material mixture comprising mixing a mineral binder containing a large amount of lime, quartz-containing aggregate, water, and a gas producing agent, said mineral binder consisting of Portland cement of approximately 25%, and the quartz-containing aggregate being ground granite of approximately 75% and containing approximately 44.5% quartz, said ground granite having a surface area to unit weight ratio between 1800 to 2700 $cm.^2/g.$ and producing a quartz surface area of about 800 to about 1200 $cm.^2/g.$ for each gram of ground granite.

2,898,221

CONCRETE OF IMPROVED STRENGTH

Barber C. Carlson, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Application May 6, 1957
Serial No. 657,048
4 Claims. (Cl. 106—90)

1. A method which comprises incorporating in a concrete mix from .05 to 0.7% by weight based on the weight of the Portland cement in the concrete of an alkali metal salt of a monoorgano siliconate in which the organic group is a lower aliphatic hydrocarbon radi-

2,898,229

PROCESS FOR COATING FLUORINATED POLY-

2,898,232

ROOFING GRANULES AND METHOD FOR

cal of less than 4 carbon atoms whereby a structural concrete of improved compressive strength is produced.

2,898,222

MANUFACTURE OF REGENERATED CELLULOSE

William R. Sexton and Bharat B. Mithel, Hawkesbury, Ontario, Canada, assignors to Canadian International Paper Company, Montreal, Quebec, Canada, a corporation of Quebec

No Drawing. Application January 30, 1956
Serial No. 562,352
10 Claims. (Cl. 106—165)

1. In the manufacture of regenerated cellulose by the viscose process, the step of incorporating in the viscose from about 1% to about 4%, based on the weight of cellulose in the viscose, of derivatives of ethylene oxide and aliphatic tertiary-alkyl primary amines having the generic formula

$$C_{12-24}H_{27-49}NH(CH_2CH_2O)_nH$$

where n is an integer between 4 and 50.

2,898,223

PROCESS FOR PREPARING COATED MINERAL AGGREGATE

Robert S. Detrick, Pittsburgh, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

No Drawing. Application April 5, 1956
Serial No. 576,251
2 Claims. (Cl. 106—219)

1. A process for the preparation of a coated mineral aggregate for surfacing roads and the like, which comprises: mixing a mineral aggregate having an acid character, without heating, with a first binder consisting of a water-in-oil emulsion of from about 65% to about 75% by weight of a tar of the group consisting of coke oven tar, gas tar, water gas tar and wood tar, from about 15% to about 25% by weight of alkaline lye of a concentration of from about 23% to about 33% based on anhydrous sodium hydroxide, and from about 0.9% to about 2% by weight of a water soluble salt of a metal of the group consisting of strontium and barium, and thereafter further mixing, without heating, the thus-coated aggregate with a second binder consisting of an oil-in water emulsion of from about 50% to about 60% by weight of asphalt of the group consisting of oil asphalt and natural asphalt, from about 0.5% to about 1% by weight of a mixture of oleic acid, stearic acid and rosin soaps, from about 0.1 to about 0.5% by weight of sodium carbonate, and the balance to make up 100% of water.

2,898,224

ADHESIVE COMPOSITION

Keith E. Polmanteer, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Application January 31, 1955
Serial No. 485,309
3 Claims. (Cl. 106—287)

1. An adhesive composition consisting essentially of ethylpolysilicate and from .1 to 5% by weight based on the weight of the silicate of a compound of the formula $R_nSn(OOCR')_{4-n}$ in which R and R' are aliphatic hydrocarbon radicals and n has a value from 1 to 3 inclusive.

2,898,225

IMAGE DISPLAY DEVICE

Thaddeus V. Rychlewski and Robert F. Wilson, Seneca Falls, N.Y., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

No Drawing. Application December 31, 1957
Serial No. 706,250
5 Claims. (Cl. 117—33.5)

1. A process of forming a luminescent screen upon a glass substrate comprising the steps of heating a phosphor selected from the group consisting of cadmium and zinc cadmium sulfide and selenide together with a salt to vapor deposit the phosphor on said substrate, and subsequently firing the phosphor to promote the luminescent properties thereof.

2,898,226

IMAGE DISPLAY

Lyle W. Evans, Thaddeus V. Rychlewski, and Robert F. Wilson, Seneca Falls, N.Y., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

No Drawing. Application December 31, 1957
Serial No. 706,278
15 Claims. (Cl. 117—33.5)

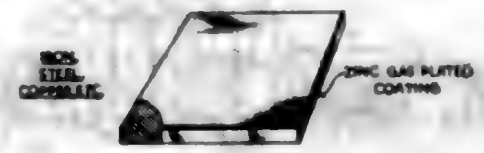
1. A process of forming a luminescent screen upon a substrate comprising the steps of vapor depositing a film of phosphor upon said substrate, vapor depositing a coating of a phosphor activator over the phosphor film, and firing said screen to promote activation of the phosphor.

2,898,227

ZINC GAS PLATING

Folsom E. Drummond, Washington, D.C., assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio

Application February 1, 1957, Serial No. 637,643
2 Claims. (Cl. 117—47)



1. A method of gas plating objects with zinc metal which consists in heating the object to be zinc plated to the decomposition temperature of a heat-decomposable gaseous zinc metal compound, and contacting said heated object with said gaseous zinc compound contained in carbon dioxide carrier gas to cause thermal decomposition of said zinc metal compound and deposition of zinc onto the surface of said object, said zinc metal compound being zinc acetylacetonate.

2,898,228

METHOD FOR COATING POLYFLUOROETHYLENES

Frank M. Kelley, Simsbury, Conn., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application February 18, 1957
Serial No. 640,582
6 Claims. (Cl. 117—47)

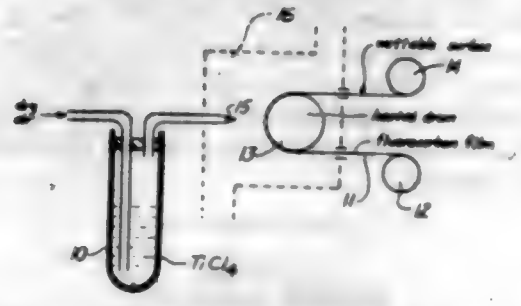
1. A method of coating polyfluoroethylene surfaces, said polyfluorethylene being a member of the class consisting of polymers of tetrafluoroethylene and chlorotrifluoroethylene and copolymers of tetrafluoroethylene and hexafluoropropylene, which comprises contacting the polyfluoroethylene surface to be coated with a solution of an alkali metal in a non-metallic inert solvent capable of wetting the polyfluoroethylene, recovering a non-metallic treated surface, and thereafter depositing on said treated surface a metal selected from the class consisting of aluminum, copper, silver, tin, chromium and germanium, said metal being deposited in colloidal form.

2,898,229

PROCESS FOR COATING FLUORINATED POLYMER SURFACES AND RESULTANT PRODUCT

Robert Herr, St. Paul, and Warren R. Bock, Mahtomedi, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Application March 31, 1958, Serial No. 725,310
7 Claims. (Cl. 117—47)



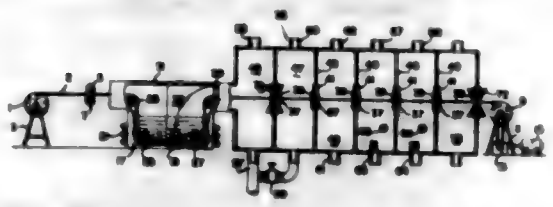
1. Process for activating an initially slippery fluorocarbon polymer surface to render the same wettable by inks, resins and adhesives, comprising heating said surface without significant deterioration of said polymer to at least about 150° C., and contacting the heated surface with the vapor of a volatile and readily hydrolyzable compound of an element of the class consisting of silicon, titanium and germanium, in the presence of moisture.

2,898,230

PROCESS OF CLEANING AND COATING ALUMINUM

Jack J. Balloff, Dayton, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio

Application April 8, 1954, Serial No. 421,749
4 Claims. (Cl. 117—50)



1. The process of providing a metal coated, oxide-free aluminum body which comprises subjecting a body of aluminum having an oxide coating thereon to fused cryolite to remove the said oxide coating and to leave a body of substantially pure aluminum, contacting said oxide-free aluminum body with vapors of an oxygen-free metal bearing compound while providing the aluminum at a temperature to react with the metal bearing compound to produce a volatile aluminum compound and a metal deposit of the metal of the compound on the aluminum body, removing the volatile aluminum compound as it is formed to provide an aluminum body having an adherent coating of metal thereon which is resistant to oxidation and which inhibits oxidation of the aluminum body.

2,898,231

METHOD OF REMOVING RESIDUAL PEROXIDE CATALYST FROM RESIN COATINGS

Howard C. Haas, Arlington, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware

No Drawing. Application November 18, 1957
Serial No. 696,899
18 Claims. (Cl. 117—62)

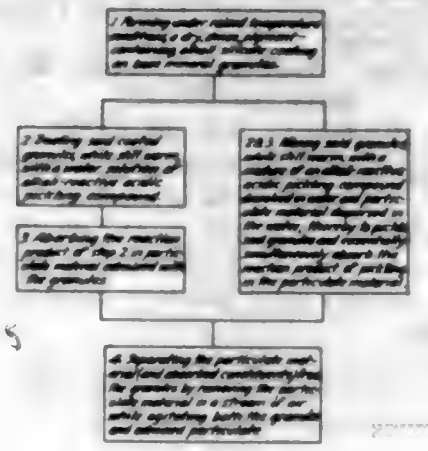
1. A process for decomposing residual peroxide catalysts in plastic coatings, films and laminates, said process comprising exposing the polymer to the hydrogen iodide vapor of an aqueous solution of hydrogen iodide.

2,898,232

ROOFING GRANULES AND METHOD FOR MAKING

Robert M. Miller, Houston, Tex., and James R. Lodge and Merle C. Merwin, St. Paul, Minn., assignors to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

Application June 14, 1956, Serial No. 591,282
5 Claims. (Cl. 117—100)



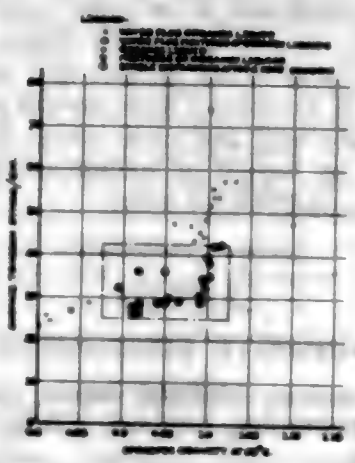
1. In a process for making color coated granules of high color intensity, resistance to blooming and weathering, and adhesion to asphalt, the steps of absorbing in a particulate, absorptive, cellulosic organic material of low-density a major proportion of water-dissolved water-soluble products formed as a result of treating a dry, dense, pigment-containing, alkali-silicate coating on mineral granules with a water-solution of an alkali-reactive, acidic pickling compound, said particulate material being admixed with said granules, and directing a stream of air through said granules and admixed particulate material while agitating both said granules and said admixed particulate material so as to remove said particulate material and absorbed constituents from said granules.

2,898,233

STABLE POLYETHYLENE DISPERSION CONTAINING NO EMULSIFYING AGENT AND METHOD OF COATING THEREWITH

Stanley Edward Hasiel, Beaver, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

Application July 31, 1958, Serial No. 752,220
20 Claims. (Cl. 117—103)



15. Method of preparing substrates having a continuous, impermeable, flexible, adherent linear polyethylene coating comprising forming a stable polyethylene dispersion comprising up to 60% by weight of a linear polyethylene dispersed in the absence of an emulsifying agent essentially by the action of a liquid medium having a surface tension of about 25–42.5 dynes/cm. at 25° C. and a specific gravity of about 0.875–1.025 at 25° C., applying said dispersion to a substrate to obtain a sub-

aqueous composition of matter which contains a pig- past means for effecting said deposit upon portions of

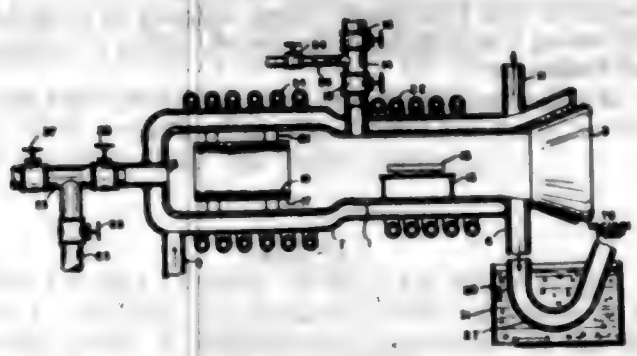
stantially uniform coating of wetted polyethylene thereon, heating the coated substrate at a temperature of about 175–230° C. to form on the substrate a continuous, impermeable, flexible linear polyethylene coating, and cooling the heated substrate.

2,898,234

METHOD OF PRODUCING COMPOSITE METALLIC BODIES

Herman R. Nack, Troy, and John R. Whitacre, Dayton, Ohio, assignors to The Commonwealth Engineering Company of Ohio, Dayton, Ohio, a corporation of Ohio

Application August 14, 1953, Serial No. 374,398
2 Claims. (Cl. 117—107)



1. A gas plating process for a ferrous base metal which comprises heating the base metal under vacuum conditions to a temperature of about 250–400° F., contacting the base with gaseous nickel carbonyl to effect deposition of nickel on the base metal, contacting this freshly deposited nickel under substantially the same temperature and vacuum conditions and without interruption of the conditions with a gaseous mixture of chromium hexacarbonyl and nickel carbonyl to deposit on the nickel a combination layer of chromium and nickel, cutting off the flow of nickel carbonyl, and increasing the flow rate of the chromium carbonyl to deposit a layer of chromium on the combination layer.

2,898,235

METAL DIENYL GAS PLATING

Jack J. Bulloff, Columbus, Ohio, assignor to The Commonwealth Engineering Company of Ohio, Dayton, Ohio

No Drawing. Application January 16, 1957
Serial No. 634,410
12 Claims. (Cl. 117—107)

1. In a process of gas plating wherein the substrate to be plated is heated to a temperature sufficient to cause decomposition of a volatile metal compound brought in contact therewith, the step of bringing a gaseous metal bearing poly-enyl compound in contact with said substrate while the latter is heated above the decomposition temperature of said compound and under a non-oxidizing atmosphere to cause decomposition of the gaseous metal compound and deposition of metal onto the surface of the substrate.

2,898,236

PROTECTIVE CERMET COATING METHOD AND MATERIALS

John V. Long, San Diego, and John V. Furth, La Jolla, Calif., assignor to Solar Aircraft Company, San Diego, Calif., a corporation of California

No Drawing. Application December 21, 1956
Serial No. 629,805
21 Claims. (Cl. 117—124)

1. The method of providing the surface of an article selected from the class consisting of metal, glass and ceramic with a cermet coating having both ceramic and metallic phases, which includes the steps of: applying to the surface to be coated a slip comprising a liquid vehicle, a cermet composition including from about 60 to 70 parts by weight of a metal selected from the group consisting of aluminum and aluminum base alloys, in particle form, and from about 30 to 40 parts by weight of the smelted and fritted product of a composition consisting essentially of Gerstley borate and lithia, and a suspension agent; and firing the surface at a temperature of at least about 1230° F. to form a cermet coating.

2,898,237

HEAT-SEALABLE POLYETHYLENE TEREPHTHALATE FILM AND PROCESS

David Ivan Sapper, Buffalo, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application September 16, 1957
Serial No. 683,926
16 Claims. (Cl. 117—138.8)

1. A process for improving the heat-sealability of oriented, heat-set polyethylene terephthalate film which comprises coating at least one surface of said film with an aqueous dispersion coating composition comprising (1) from 65% to 99% by weight, based on the total weight of solids in the composition, of particles of an interpolymer prepared by polymerizing a mixture of monomers comprising essentially from about 34% to about 38% by weight of butadiene-1,3, from about 29% to about 39% of a monomer selected from the group consisting of styrene and alpha- and nuclear-substituted alkyl and chlorostyrenes, and from about 27% to about 33% of acrylonitrile, (2) from 0% to 35% of polyvinyl chloride particles, (3) from 0% to 35% of ammonium rosinate particles and (4) from 0% to 35% of a wax selected from the group consisting of paraffin and microcrystalline waxes, the sum of constituents (1), (2), (3) and (4) being 100%, and thereafter drying the coated film.

2,898,238

PROCESS FOR TREATING TEXTILES WITH ETHYLENE UREA-FORMALDEHYDE REACTION PRODUCTS

William Julius van Loo, Jr., Middlesex, and Jason Melvin Salsbury, Watchung, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application August 20, 1956
Serial No. 605,190
7 Claims. (Cl. 117—139.4)

1. A process comprising treating a textile material containing at least 50% of cellulosic material with a stable, aqueous solution having a pH of between 1.0 and about 3.5, consisting essentially of an ethylene urea-formaldehyde reaction product and an acid-acting curing catalyst, having an ionization constant of at least 10^{-6}, so as to apply thereto between about 5% and about 25% resin solids, based on the weight of the textile material, and thereafter curing said ethylene urea-formaldehyde reaction product to a water-insoluble state on said material by the application of heat.

2,898,239

PROCESS FOR DYEING FIBROUS MATERIALS WITH AQUEOUS CATION ACTIVE LATICES CONTAINING PIGMENT

Georg Sulzer and Peter Geertler, Basel, Willy Fatzer, Bottmingen, and Arthur Maeder, Basel, Switzerland

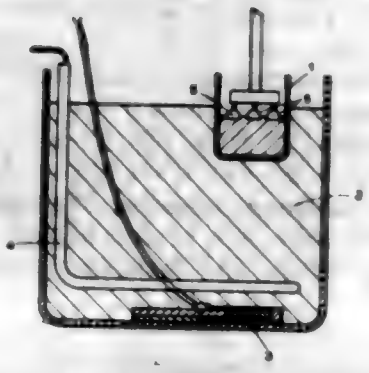
No Drawing. Application November 13, 1956
Serial No. 621,514
Claims priority, application Switzerland
November 30, 1955
8 Claims. (Cl. 117—161)

1. A process for dyeing fibrous material with pigments, which comprises contacting the material with an

tact with a compound selected from the group consisting of the inorganic salts and oxides of beryllium, mag- to 4 percent by weight of a wetting agent selected from the group consisting of fatty acid soaps, rosin soaps, alkyl-

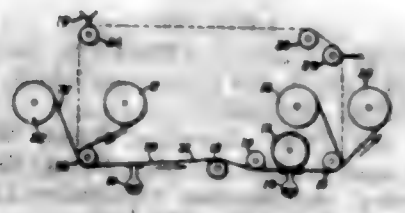
aqueous composition of matter which contains a pigment dispersed with a cation-active dispersing agent and, as a pigment binder, only one member selected from the group consisting of (*a*) a cation-active latex of a flexible elastic polymerization plastic which has been obtained by polymerization of ethylenically unsaturated compounds and which plastic is the sole water-insoluble constituent in said latex, and of (*b*) an aqueous dispersion, produced with a cation-active dispersing agent, of a water-insoluble derivative which is soluble in organic solvents of a condensation product of formaldehyde with an aminotriazine; drying the material and heating to harden the composition applied, when a hardenable compound is used; the amount of binder used being about 3.5 to about 16 parts by weight per 1000 parts of the aqueous composition, said parts by weight being calculated on the dry content of the binder.

2,898,240
PHOTO-CONDUCTIVE CELL
Alan Ernest Owen, West Bridgeford, Nottingham, England, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application September 23, 1957, Serial No. 685,727
Claims priority, application Great Britain September 27, 1956
4 Claims. (Cl. 117—211)



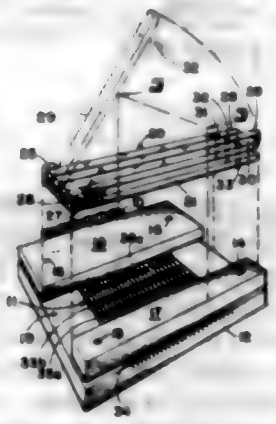
1. The method of depositing photoconductive material onto a support comprising the steps of immersing said support in a solution containing photoconductive material, adding a precipitating agent for the photoconductive material to thereby cause the photoconductive material to deposit on said support and setting up ultrasonic vibrations in said solution to agitate said solution at ultrasonic frequencies during the course of said deposition.

2,898,241
MANUFACTURING PROCESSES
Cyril Bradbury Charlton, Bromley, Charles Kasper Burchell, Croydon, and Martin Ludwig Lochr, Bayswater, London, England, assignors to Telephone Manufacturing Company Limited, London, England, a British company
Application December 4, 1956, Serial No. 626,143
Claims priority, application Great Britain December 5, 1955
6 Claims. (Cl. 117—212)



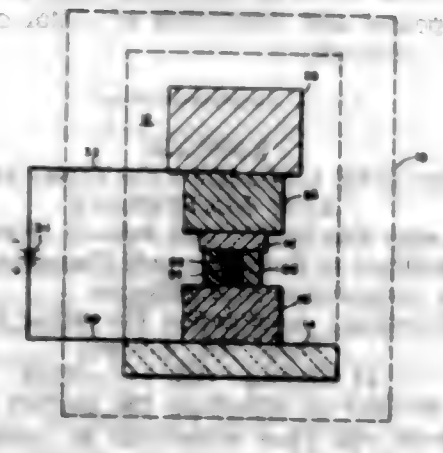
1. The method of producing a coating deposit upon a limited area of a web-like support which comprises holding a first length of said support in contacting overlapping relation with a second length of said support and moving said lengths together and in contact as a unit past means for effecting said deposit upon portions of both said lengths whereby said second support serves as a mask to prevent deposit upon an overlapped area of said first length and itself receives a deposit over only an edge region thereof, and simultaneously a non-overlapped area of said first length receives a deposit thereover, and subsequently moving said second support past means for effecting a further deposit thereon whereby said second support receives a further deposit which at least partly overlies and is reinforced by the deposit previously received over said edge region.

2,898,242
METHOD AND FIXTURE FOR IDENTIFYING CONDUCTORS
Edward E. Ott, Cincinnati, Ohio, assignor to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Application March 27, 1958, Serial No. 724,363
3 Claims. (Cl. 117—212)



3. A device for defining areas to be spray-coated on a plurality of juxtaposed wires and masking otherwise exposed areas on the wires, comprising a template formed with a plurality of parallel slots extending transversely across said wires, each of said slots being proportioned to define the area to be spray-coated on the wire areas immediately beneath it, and masking means comprising slot covers hinged to said template, each of said covers being swingable to one position in which its associated template slot is open, and to another position in which said slot is closed.

2,898,243
METHOD OF CHANGING THE RESONANT FREQUENCY OF A QUARTZ CRYSTAL
Henry E. Wenden, Columbus, Ohio, assignor to the United States of America as represented by the Secretary of the Army
Application March 14, 1958, Serial No. 721,612
8 Claims. (Cl. 117—223)



1. The method of adjusting the resonant frequency of a quartz crystal comprising placing said crystal in con-

temperature below the temperature of said quantity of germanium material, said gradient being such that the

2,898,251
ALUMINUM COATED STEEL ARTICLE AND

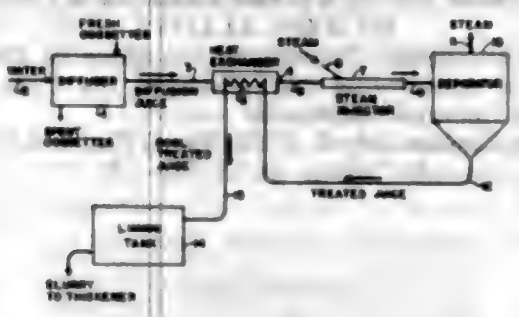
metallic phases, which includes the steps of: applying ments, which comprises contacting the material with an

tact with a compound selected from the group consisting of the inorganic salts and oxides of beryllium, magnesium, calcium, strontium, barium, lithium, sodium and cesium, maintaining said crystal and said compound at a predetermined temperature, and applying a direct current potential across said crystal and said compound for a predetermined period of time.

2,898,244
VINYL CHLORIDE INTERPOLYMERS
Richard H. Martin, Jr., Springfield, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application August 30, 1956
Serial No. 606,949
6 Claims. (Cl. 117—232)

6. An insulated electric wire comprising an electrical conductor carrying an insulating coating of a resinous interpolymer consisting of 99.90–99.995 weight percent of the monomers vinyl chloride and, correspondingly, 0.10–0.005 weight percent of a monomer of the group consisting of diallyl maleate and diallyl fumarate.

2,898,245
HEAT TREATMENT OF SUGAR BEET JUICE
Arthur L. Morgan, Jr., Berkeley, Calif., assignor to the United States of America as represented by the Secretary of Agriculture
Application June 16, 1958, Serial No. 742,444
5 Claims. (Cl. 127—50)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In the process of recovering sugar from sugar beets wherein beet material is extracted with water to produce a diffusion juice and the diffusion juice is treated with lime and carbon dioxide to purify it, the improvement which comprises treating the diffusion juice prior to liming and carbonation by heating it to a temperature of about from 150 to 250° C., holding it under pressure at this temperature for about from ¼ to 3 minutes and rapidly cooling it to reduce the foaming properties of the juice and to reduce its content of dissolved colloidal substances.

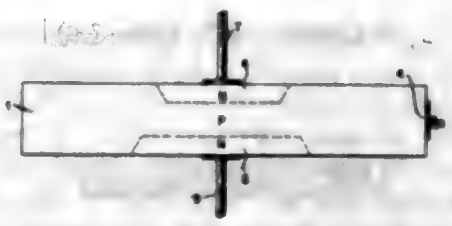
2,898,246
STRIPPING RESIN PAINTS
Alexander Hannah, Dearborn, Mich., assignor to Wyandotte Chemicals Corporation, Wyandotte, Mich.
No Drawing. Application May 25, 1953
Serial No. 357,359
6 Claims. (Cl. 134—38)

1. A process for removing oleoresinous, ester gum and alkyd resin based paints from articles coated therewith which comprises contacting said coated articles with a hot, aqueous paint stripping solution maintained at a temperature of about 200° F. and consisting of about 85 to 98 percent by weight of water and about 2 to 15 percent by weight of a stripping composition consisting essentially of at least about 70% by weight of sodium hydroxide, about 2 to 10 percent by weight of a polyhydric alcohol conforming to the formula

$$CH_2OH(CHOH)_nCH_2OH$$

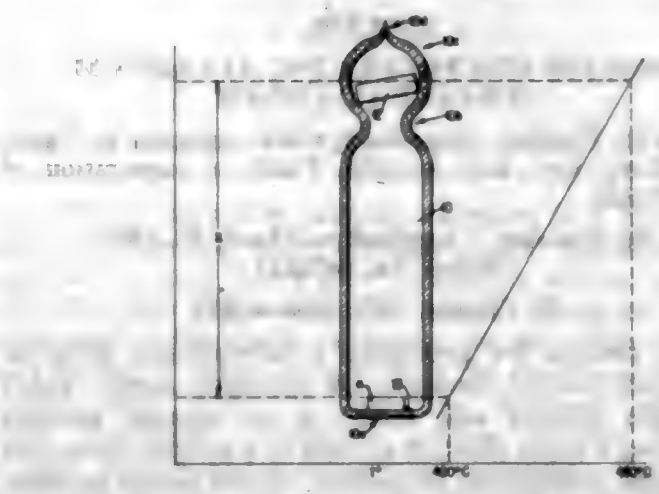
wherein n has a value from 3 to 5, inclusive, about 2 to 4 percent by weight of a wetting agent selected from the group consisting of fatty acid soaps, rosin soaps, alkylarylsulfonates, petroleum sulfonates, sulfonated castor oil and mixtures thereof, and wherein up to about 25% by weight of said stripping composition is sodium carbonate.

2,898,247
FABRICATION OF DIFFUSED JUNCTION SEMI-CONDUCTOR DEVICES
Lloyd P. Hunter, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application October 24, 1955, Serial No. 542,131
9 Claims. (Cl. 148—1.5)



4. A process for forming a junction in a germanium semiconductor device comprising coating a surface of a semiconductor body of a first conductivity type with a conductivity type directing impurity material of said first conductivity type, exposing said semiconductor body to the vapor of an impurity material of a type opposite to said first conductivity type at an elevated temperature in a concentration proper for vapor diffusion, and removing the exposed surfaces of said semiconductor body to a uniform depth greater than the depth of penetration of said opposite conductivity type directing impurity material from said vapor into surfaces that are not coated but not as great as the depth of penetration under said coated area.

2,898,248
METHOD OF FABRICATING GERMANIUM BODIES
Gene A. Silvey, Elmsville, and Vincent J. Lyons, Wappingers Falls, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application May 15, 1957, Serial No. 659,391
12 Claims. (Cl. 148—1.5)



6. The method of forming a layer of N conductivity type germanium upon a body of P conductivity type germanium which comprises the steps of mounting said germanium body and a quantity of intrinsic or near intrinsic germanium in a spaced relationship within a closable container, placing a quantity of any one of the elements of the group consisting of tellurium, selenium, and sulfur in said container, establishing an inert atmosphere at a pressure below atmospheric within said container, and applying a temperature gradient to said container so that germanium body is maintained at a

by weight of a bentonite clay composition and an amount of diluent sufficient to give the composition a grand-

2,898,257
COMBINED CARD MOUNT AND POCKET AND

moving said lengths together and in contact as a unit a quartz crystal comprising placing said crystal in con-

temperature below the temperature of said quantity of germanium material, said gradient being such that the element of said group is vaporized any place within said container, said gradient being maintained until a layer of desired thickness is formed.

2,898,249

METHOD OF PREPARING SEMI-CONDUCTOR ALLOYS

Robert V. Jensen, Fairless Hills, Pa., assignor to Radio Corporation of America, a corporation of Delaware

Continuation of application Serial No. 435,783, June 10, 1954. This application January 31, 1958, Serial No. 712,431

5 Claims. (Cl. 148—1.6)

1. The method of manufacturing single crystal alloy material which comprises in combination the steps of providing a mass consisting essentially of one constituent of said alloy material, contacting a portion of said mass with a seed crystal made of the same substance as said one constituent, melting said portion of said mass which is in contact with said seed crystal and also melting the remainder of said mass, solidifying said portion to start a single crystal growing, applying to said mass in its molten form successively increasing predetermined quantities of another constituent of said alloy material in the solid state thereof, said quantities being successively increased until sufficient to establish a predetermined constant concentration ratio of said alloy constituents ultimately desired, and melting successive quantities of said other constituent of said alloy material to cause both of said constituents to alloy and also successively solidifying said mass and said other constituent to form a single crystal of said alloy, said crystal being non-homogeneous along its length until said predetermined constant concentration ratio is established therein.

2,898,250

PROCESS FOR PRODUCING ALUMINUM SURFACE COATINGS

George H. Pimbley, Inglewood, Calif., assignor to Turco Products, Inc., Los Angeles, Calif., a corporation of California

No Drawing. Application March 25, 1957 Serial No. 647,933

33 Claims. (Cl. 148—6.21)

1. A process for producing a substantially colorless chemically bonded coating on an aluminum article, which comprises treating said article in an aqueous solution containing a small effective amount of a soluble compound containing unsaturated tetravalent carbon linked to nitrogen and to an element of the group consisting of oxygen and sulfur.

26. A process for producing a substantially colorless chemically bonded coating on an aluminum article, which comprises treating said article in an aqueous solution containing a small effective amount of a soluble compound having the linkages represented by the formula

$$-X-C\equiv N$$

where X is an element of the group consisting of oxygen and sulfur.

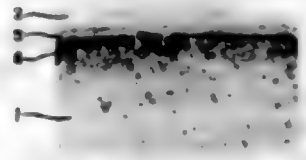
2,898,251

ALUMINUM COATED STEEL ARTICLE AND METHOD OF PRODUCING IT

Richard W. Treder, Pleasant Hills, and Walter Batz, Hopewell Township, Beaver County, Pa., assignors to Jones & Laughlin Steel Corporation, Pittsburgh, Pa., a corporation of Pennsylvania

Application November 19, 1956, Serial No. 623,222

14 Claims. (Cl. 148—6.35)



1. A bimetallic article comprising a low carbon steel base, a thin carburized surface layer on said base of a depth microscopically identifiable at a magnification of 500 diameters, and a coating of aluminum tightly bonded to the carburized surface layer.

6. The method of producing a ductile bimetallic article having a low carbon steel base and an aluminum coating comprising carburizing the surface of the low carbon steel base to a depth microscopically identifiable at a magnification of 500 diameters and then applying thereto an aluminum coating, the bimetallic article being heated as an incident to the coating thereof to a temperature at which iron and aluminum form a brittle alloy.

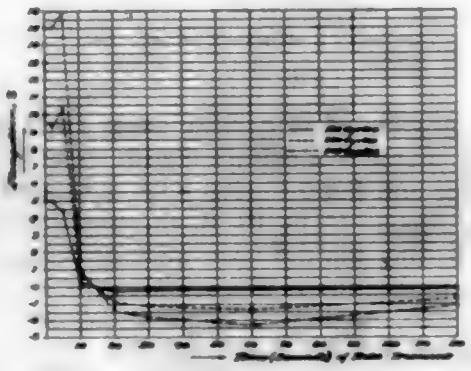
2,898,252

METHOD OF HEAT-TREATING URANIUM-SILICON ALLOYS

Sylvester T. Zegler, Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application July 3, 1951, Serial No. 234,919

8 Claims. (Cl. 148—13)



1. A process for manufacturing uranium-base material of a high degree of dimensional stability, and in particular free from thermal expansion, comprising incorporating into the uranium silicon in an amount such as to obtain a content of from 0.01 to 0.1% by weight, rolling the alloy obtained at a temperature of below 660° C., beta-heating said alloy to a temperature of between 660° and 770° C., and quenching the alloy.

2,898,253

HIGH TEMPERATURE PROTECTIVE COATING FOR METALS

Edward B. Schneider, Canoga Park, and Everett G. Stevens, El Segundo, Calif., assignors to North American Aviation, Inc.

No Drawing. Application March 25, 1958 Serial No. 723,634

16 Claims. (Cl. 148—13.1)

1. A high temperature protective coating composition for metal consisting essentially of 100 parts by weight of a ceramic material, from about 10 to about 200 parts by weight aluminum, from about 1 to about 100 parts

both said core and said facing sheet so that said web portion is in direct contact with said facing sheet

active agent being a sulfonate compound having the for-

by weight of a bentonite clay composition and an amount of diluent sufficient to give the composition a spreadable consistency.

2,898,254
METHOD OF INDUCING PERMANENT SET IN RAZOR BLADE STRIP

Frank Forsberg, Worcester, Mass., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware

No Drawing. Application May 28, 1954
Serial No. 431,285
3 Claims. (Cl. 148—21.5)

1. The method of making a hardened steel strip razor blade capable of being coiled upon a small radius and maintained in coiled form for an extended period of time without breakage which comprises providing a hardened steel razor blade strip having a Vickers hardness (2 kg. load) from 785 to 850 and a thickness from 0.002 to 0.004 inch, coiling said strip upon itself on a radius sufficiently large so that breaking of the strip is avoided, heating said coiled strip at an elevated temperature up to 350° F. to set the strip permanently in a coiled configuration, the maximum temperature and time of said heating being controlled to prevent substantial reduction of the hardness of the strip.

2,898,255
SOLDERING FLUX COMPOSITION

John J. Thompson, Kingston, and Arthur P. Knight, West Hurley, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

No Drawing. Application June 30, 1958
Serial No. 745,260
4 Claims. (Cl. 148—23)

1. A soldering flux consisting essentially of a mixture of rosin, 3–5% by weight of a low molecular weight saturated monocarboxylic aliphatic acid, and 1–13.5% by weight of a saturated aliphatic dicarboxylic acid.

2,898,256
COMPOSITION COMPRISING A VINYLIDENE MONOMER AND AN UNSATURATED POLYESTER CONTAINING AN ADDUCT OF HEXAHALOCYCLOPENTADIENE AND ARTICLE INCORPORATED THEREWITH

Paul Robitschek, Wilson, and Claude Thomas Bean, Niagara Falls, N.Y., assignors to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Original application January 24, 1957, Serial No. 635,951. Divided and this application September 5, 1958, Serial No. 764,473
10 Claims. (Cl. 154—43)

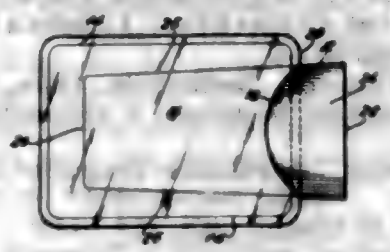
1. A polymerizable mixture comprising (A) a copolymerizable linear polyester comprised of (1) a polyhydric alcohol, (2) an adduct of hexahalocyclopentadiene and a polyhydric alcohol containing aliphatic carbon-to-carbon unsaturation wherein the halogen is selected from the group consisting of chlorine, bromine, fluorine and mixtures thereof, (3) a polycarboxylic compound selected from the group consisting of polycarboxylic acids, acid anhydrides, acid halides and acid esters containing aliphatic carbon-to-carbon unsaturation, (4) a polycarboxylic compound selected from the group consisting of (*a*) saturated aliphatic polycarboxylic acids and saturated aliphatic polycarboxylic acid anhydrides; and (*b*) aromatic polycarboxylic acids and aromatic polycarboxylic acid anhydrides; and (B) a polymerizable monomer containing a $CH_2{=}C{=}$ group.

8. A laminated article comprising a plurality of sheets of glass fibrous material and as a binder therefor, an insoluble, infusible, resinous composition resulting from the polymerization of a composition defined in claim 1.

2,898,257
COMBINED CARD MOUNT AND POCKET AND METHOD OF MAKING SAME

Robert W. Carver, Chatham, N.J.

Application December 15, 1953, Serial No. 398,339
1 Claim. (Cl. 154—116)

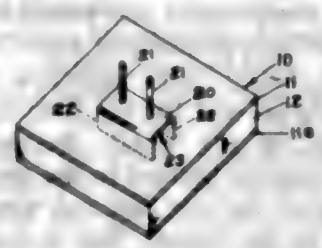


The method of making a combination card mount and pocket comprising the steps of placing a pair of heat sealable thermoplastic panels in overlying relationship, interposing a sheet of indicia carrying material between said panels with the panels extending beyond the edges of said sheet, positioning a third panel of heat sealable material in overlying relationship with one of the first said panels, interposing a separator plate of trapezoidal shape between the last said panel and said one panel, said plate being shaped to extend at its wider end beyond one edge of said panels and permit border contact between the other edges of the panels, applying heat and pressure to said panels to effect integral fusion about the confronting edges of the panels, cooling said fused panels and then removing said separate plate to provide a tapered pocket between the third panel and said one panel with said sheet being permanently sealed between said pair of panels.

2,898,258
PANEL AND FASTENER ASSEMBLY AND METHOD OF MAKING SAME

George D. Meier and George E. Kloote, Grand Rapids, and Joseph A. Potchen, Marne, Mich., assignors, by mesne assignments, to Haskelite Manufacturing Corporation, a corporation of Delaware

Application January 31, 1955, Serial No. 485,228
12 Claims. (Cl. 154—118)



1. In the method of securing fasteners to a laminated rigid panel having a low density, cellular, synthetic resin core and a solid facing sheet adhesively secured to said core, the steps which include forming an elongated slot in said panel substantially normal to the face thereof, said slot having a depth greater than the thickness of said facing sheet and less than the thickness of said core, providing a fastener anchor member having a web portion and a leg portion depending from said web portion and said leg being adapted to be received into said slot, inserting said leg in said slot and simultaneously securing said leg to said panel and said facing sheet by a cold setting adhesive bondable upon curing to both said leg and said core, and curing said adhesive.

9. A panel and fastener assembly comprising a laminated panel having a rigid, low density, cellular synthetic resin core and at least one solid facing sheet adhered to at least one surface thereof, an elongated slot extending through said facing sheet and partially through said core, and an anchor member having a web portion and at least one leg portion depending from said portion, said leg portion being mounted in said slot and adhesively bonded to

nated 2-hydroxy phenyl compound selected from the group consisting of (*a*) 2,2'-dihydoxy-3,3',5,5',6,6'-hexachloro-

2,898,268
ACID PURIFICATION OF FUMAGILLIN

both said core and said facing sheet so that said web portion is in direct contact with said facing sheet.

2,898,259

UNSATURATED POLYESTER VINYLMONOMER, HETEROCYCLIC NITROGEN MONOMER AND METHOD OF PREPARING LAMINATED ARTICLE THEREFROM

Charles E. Wheelock, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application December 3, 1954
Serial No. 473,040
17 Claims. (Cl. 154—140)

13. A method of preparing a thermoset laminate of high flexural strength which comprises blending 10 to 90 weight parts per 100 parts coreactive materials of a polyester resin of a polyhydric alcohol and an ethylenic unsaturated aliphatic polycarboxylic acid, 2 to 90 weight percent of the remaining material being a heterocyclic nitrogen base monomer selected from the group consisting of vinyl substituted pyridines, isopropenyl substituted pyridines, vinyl substituted quinolines and isopropenyl substituted quinolines, and a third polymerizable material selected from the group consisting of ethylenic unsaturated aromatic and nonconjugated aliphatic copolymerizable monomers coating a plurality of fabric sheets with the blend containing the compounding ingredients; superimposing the resulting coated sheets one on the other to form a plurality of plies; and subjecting the plies to a temperature in the range of 25 to 200° C. for a time sufficient to cause the said blend to set.

2,898,260

FIBER BOARD AND PROCESS OF MAKING SAME FROM DESERT SHRUBS

Julius F. T. Berliner, Chicago, Ill.

Application July 12, 1954, Serial No. 442,637
9 Claims. (Cl. 162—11)

1. The process of making a hardboard product from the wood fibers of a desert shrub which naturally contain resin constituents and pentosans and which process comprises the steps of subjecting chips of wood which naturally contains resin constituents and pentosans to the digesting action of steam at a pressure of from 50 to 200 pounds per square inch for a time sufficient to convert the pentosans to furfurals and for the furfurals to react with other constituents of the wood, thereby to form precursors of thermosetting binders in the wood fibers, forming a felted sheet of the wet digested wood fibers, drying the felted sheet to the extent that it contains less than 10% moisture by weight, heating and further drying the sheet to a substantially bone dry state, and subjecting the hot and dried sheet to mechanical pressure of 700 to 1400 pounds per square inch between platens and a temperature between 400° and 500° F. to consolidate and bond the wood fibers into a hard thermoset sheet.

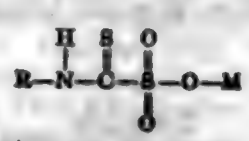
2,898,261

METHOD AND COMPOSITION FOR DESTROYING NEMATODES

Charles R. Youngson, Long Beach, Calif., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application April 5, 1957
Serial No. 650,871
7 Claims. (Cl. 167—22)

1. A method of treating nematode infested soil to improve its plant growing properties which comprises impregnating said soil with a nematocidal concentration of an active agent effective to improve said properties, the active agent being a sulfonate compound having the formula



wherein R represents a member of the group consisting of lower alkyl, allyl and propargyl, and M represents a member of the group consisting of sodium and potassium.

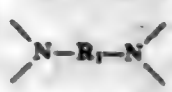
2,898,262

COMPOSITIONS AND METHODS

Harry F. Dietz, deceased, late of Chadds Ford, Pa., by Dorothy H. Dietz, executrix, Chadds Ford, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application May 31, 1957
Serial No. 662,950
4 Claims. (Cl. 167—22)

2. A fungicidal composition comprising a fungicidal adjuvant, and an alkyl mercury salt of polyamine acetic acid wherein the polyamine group is represented by the structure



in which R_1 is selected from the group consisting of divalent saturated hydrocarbon groups of from 2 through 12 carbon atoms and divalent saturated aliphatic chains consisting of from 4 through 12 carbon atoms and from one through 5 nitrogen atoms with each nitrogen atom dividing the chain into alkylene groups of not less than 2 carbon atoms each; from 1 through 4 valences of the polyamine nitrogens being satisfied by an alkyl mercury acetate group of the type $—CR_2R_3COOHgR_4$ in which R_2 and R_3 are selected from the group consisting of hydrogen and alkyl groups of less than 7 carbon atoms, and R_4 is an alkyl group of less than 7 carbon atoms; and the remainder of the valences of the polyamine nitrogens being satisfied by radicals selected from the group consisting of hydrogen, alkyl groups of less than 7 carbon atoms, hydroxyalkyl groups of less than 7 carbon atoms and $—CR_2R_3COOY$ in which R_2 and R_3 have the significance set forth above and Y is selected from the group consisting of hydrogen, alkali metal cations, ammonium or substituted amine.

2,898,263

PESTICIDAL PETROLEUM COMPOSITION AND USE THEREOF

Franklin C. Nelson, Roselle, N.J., and George W. Flero, Port Chester, N.Y., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application January 18, 1955
Serial No. 482,672
19 Claims. (Cl. 167—28)

16. A process of killing insects which comprises applying to such insects an insecticide consisting of an aromatic sulfur dioxide extract of a virgin distillate of a Tomball crude oil, said extract having a boiling range of about 460 to 535° F., and a total aromatics content of 85 to 95 volume percent.

2,898,264

BACTERICIDAL COMPOSITIONS TO BE USED SPECIALLY FOR FOOD-INDUSTRIES EQUIPMENT

Francis Jacques Charles Weber, Nancy, France, assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

Application August 28, 1956, Serial No. 606,646
Claims priority, application France September 15, 1955
4 Claims. (Cl. 167—30)

1. A bactericidal cleaning composition comprising N-sodium N-chloroparatoluene sulfonamide and a chlori-

the polymerization of a composition defined in claim 1.

tion being mounted in said slot and adhesively bonded to

nated 2-hydroxy phenyl compound selected from the group consisting of (*a*) 2,2'-dihydoxy-3,3',5,5',6,6'-hexachlorodiphenylmethane, (*b*) 2,2'-dihydroxy-5,5'-dichlorodiphenylmethane, and (*c*) 2,2'-thiobis (4,6-dichlorophenol), the proportions being from about 95 to 99 parts of said sulfonamide and 1 to 5 parts of said chlorinated 2-hydroxy phenyl compound.

2,898,265

METHOD OF COMBATING PESTS

Richard Wegler, Leverkusen, and Günther Unterstenhöfer, Opladen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application April 14, 1958
Serial No. 728,030
Claims priority, application Germany April 17, 1957
6 Claims. (Cl. 167—30)

1. A method of combating insects which comprises applying to the insect an effective amount of an N-thionyl-N'-arylhydrazine of the general formula

$$\text{Aryl}-\underset{\displaystyle R}{\underset{|}{N}}-N=S=O$$

wherein the aryl radical is a member selected from the group consisting of a phenyl radical, a naphthyl radical, phenylthiazolyl radical and phenyl-imidazolyl radical, and R stands for a member selected from the group consisting of hydrogen, lower alkyl and phenyl.

2,898,266

CONTROL OF PLANT DISEASES OF ASCOMYCETES ORIGIN EMPLOYING N-PHENYL-DICHLORO-MALEIMIDE

Robert L. Gates, Medina, N.Y., assignor to Food Machinery and Chemical Corporation, San Jose, Calif.

No Drawing. Application November 28, 1956
Serial No. 624,741
2 Claims. (Cl. 167—33)

1. The method of controlling the spread of diseases of Ascomycetes origin in plants which comprises applying N-phenyldichloromaleimide in toxic concentration to the area of the plant subject to the disease.

2,898,267

EMULSIFIABLE TOXICANT COMPOSITIONS AND EMULSIFYING AGENTS THEREFOR

Paul L. Lindner, Chicago, Ill., assignor, by mesne assignments, to Witco Chemical Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Application September 7, 1955
Serial No. 533,627
19 Claims. (Cl. 167—42)

1. In an emulsifying agent for use with solutions of toxicants in organic solvents to secure concentrates readily dispersible in water of varying degrees of hardness, which emulsifying agent comprises (*a*) a nonionic component comprising a compound having a lipophilic group containing at least 6 carbon atoms and a polyoxyalkylene radical in which there is present a polyoxyethylene chain containing from 5 to 45 oxyethylene groups to render said nonionic component water-soluble to water-dispersible, and (*b*) an anionic component which includes at least one salt of an alkyl aromatic sulfonic acid in which an alkyl group contains at least 5 carbon atoms, the improvement wherein at least 15% of the salts of the said aromatic sulfonic acids constituting the anionic component are salts of polyamines having 2 to 4 carbon atoms between amine groups.

2,898,268

ACID PURIFICATION OF FUMAGILLIN

Harrison A. Nelson, Kalamazoo Township, Kalamazoo County, and Charles M. Large, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application March 16, 1953
Serial No. 342,714
9 Claims. (Cl. 167—65)

1. In a process for the recovery of fumagillin from fermented beer containing the same, the improvement which comprises precipitating fumagillin by acidifying the fermented beer to a pH between about one and about four, and filtering off the precipitate.

2,898,269

COSMETIC LOTION

Günter Felletschin, Duesseldorf-Wersten, Germany, assignor to Dehyding, Deutsche Hydrierwerke G.m.b.H., Duesseldorf, Germany

No Drawing. Application January 14, 1954
Serial No. 404,121
Claims priority, application Germany January 22, 1953
3 Claims. (Cl. 167—90)

1. An aqueous liquid cosmetic lotion comprising (1) a cosmetic softening liquid selected from the group consisting of paraffin oil, almond oil and glycerol; (2) a detergent material selected from the group consisting of triethanolamine stearate and a sodium alkyl sulfate having from 14 to 18 carbon atoms in the alkyl group of said sulfate; (3) water; (4) a fixative providing a storage stable lotion resistant to alkali and to change of odor or rancidity on standing, said fixative consisting of a 2 alkyl substituted primary aliphatic alcohol having from 6 to 18 carbon atoms in the aliphatic hydrocarbon chain of said primary alcohol, said alkyl group in the 2 position having from 2 to 10 carbon atoms.

2,898,270

TREATMENT OF GRAINS

Paul R. Witt, Jr., Chicago, Ill., and Richard G. Shaler, San Francisco, Calif., assignors of one-half to The Merto Company, San Francisco, Calif., and one-half to Northwestern Malt & Grain Co., Chicago, Ill., a corporation of Illinois

No Drawing. Application June 26, 1958
Serial No. 744,664
13 Claims. (Cl. 195—78)

1. A method of treatment of grain during malting, comprising steeping the grain, germinating the grain, and kilning the germinated grain and which is characterized by the addition to the grain prior to kilning and subsequent to steeping of an aqueous suspension of a clay of the montmorillonite family.

2,898,271

CRYSTAL PURIFICATION APPARATUS

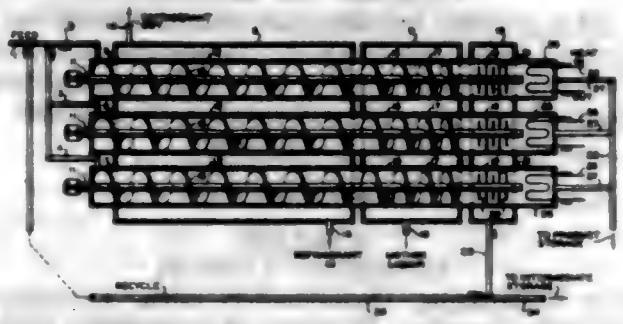
Robert A. Findlay, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application July 6, 1954, Serial No. 441,571
6 Claims. (Cl. 196—14.5)

1. An apparatus for separating and purifying liquid mixtures by crystallization wherein the crystallizing material forms wax-like crystals said apparatus comprising in combination at least one crystallization chamber, each said chamber having an inlet, means for scraping the internal walls of each said chamber and means for cooling each said chamber; a plurality of cylindrical filter chambers having filter means in said chamber walls for withdrawing liquid to a common collection zone, each of last said chambers having a rotatable screw journaled therein, said screw having a smoothly decreasing pitch from inlet to outlet; means for passing material from said crystallization chamber to said plurality of filtering cham-

complex all of the zinc as cyanozincate ion, the total force between the refractory-surfaced wall and the

bers; a common housing around said plurality of filtering chambers; means for withdrawing liquid from said common housing; a plurality of purification chambers each being in free communication with the outlet of and associated with a filtering chamber, the walls of said purification chambers having filtering means for withdrawing liquid and each said purification chamber having stirring



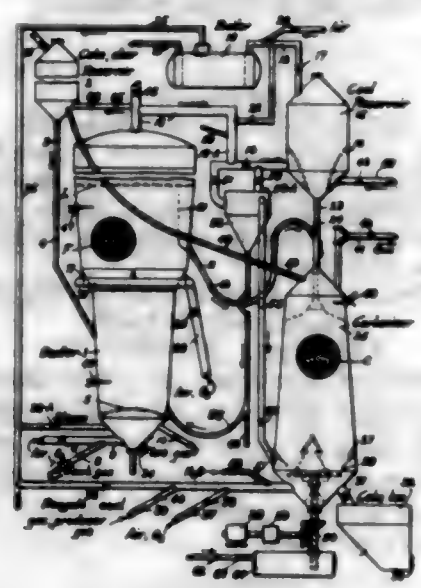
means; a common housing around said plurality of purification chambers; means for withdrawing liquid from last said common housing; a plurality of melt chambers in association with and in free communication with the plurality of purification chambers; heat exchange means in each said melting chamber; and means for withdrawing liquid from each of said melt chambers.

2,898,272

TREATMENT AT ELEVATED TEMPERATURES AND/OR CARBONIZATION OF CARBONACEOUS MATERIALS

William W. Odell, Amherst, Va.

Application September 14, 1954, Serial No. 456,031
7 Claims. (Cl. 202—6)



1. The process of carbonizing carbonizable solid fuels by contacting hot, small-size coke with said fuels in a subdivided state and initially at a relative lower temperature producing additional coke and vaporous products of carbonization, comprising, heating previously prepared, sized coke, sized smaller than about ½-inch diameter, to a carbonizing temperature above about 1250° F. while it is confined in a heating zone by promoting combustion reactions in said zone in contact with said prepared coke, separating the thus heated coke from gaseous products of combustion and feeding it as a substantially continuous stream to the top of a deep, enclosed carbonization zone, simultaneously introducing also subdivided solid fuel to be treated which is substantially in the size range 0.5 to 1.5 inches diameter into the top of the latter zone at a particular rate contacting the heated coke and said solid fuel in said carbonization zone, passing the whole mass slowly downwardly through said carbonization zone substantially as a continuous fixed bed column, introducing adjacent the bottom of the columnar mass a gasiform stream initially comprising oxygen and water vapor at a temperature much lower than that of said heated coke, and passing it up through said mass substantially continuously thereby cooling said mass in the bottom portion of the carbonization zone and simultaneously heating said gasiform stream, causing the thus heated stream to facilitate the transfer of heat from said heated char to said subdivided fuel as it passes up through the upper portion of said mass, promoting combustion reactions in the latter stream in a portion of said columnar mass only above the bottom zone thereof with consumption of said oxygen generating heat therein to further aid carbonization of said fuel, thereby carbonizing said subdivided fuel in transit through said carbonization zone, discharging said gasiform stream along with volatile products of carbonization and products of combustion from above said mass, and discharging the coke and solid product of carbonization from adjacent the bottom of said carbonization zone substantially continuously; said particular rate being such that alternate layers (strata) are formed in said column initially comprising chiefly hot coke in one layer and chiefly said subdivided fuel in an alternate layer thereby making from said fuel coke of larger size than ½-inch diameter, meanwhile separating the large size product coke from the fines in a known manner and circulating some of the latter fines back to the heating zone as said prepared coke.

2,898,273

METHOD FOR MAKING DISC-LOADED WAVEGUIDES

Louis H. La Forge, Jr., and Richard B. Neal, Palo Alto, Calif., and Robert N. Whitehurst, University, Ala., assignors to The Board of Trustees of The Leland Stanford Jr. University, Stanford University, Stanford, Calif.

Application May 24, 1956, Serial No. 587,008
3 Claims. (Cl. 204—9)

1. The method for making disc-loaded waveguides, comprising the steps of positioning threads to extend into discoid grooves of a circumferentially grooved cylindrical plating core, electroplating metal onto said plating core, said metal substantially filling said grooves and covering said core to form a plurality of annular discs of said metal transversely disposed within and unitary with a cylinder of said metal, said discs containing internal cavities and said threads extending from said cavities through said metal plated on the said core, dissolving said plating core, and removing said threads.

2,898,274

ELECTROPLATING OF ZINC-TIN ALLOYS

Edward B. Saubestre, Elmhurst, and Arnold D. Arnaut, Syosset, N.Y., assignors, by mesne assignments, to Sylvania Electric Products Inc., a corporation of Delaware

Application August 8, 1955, Serial No. 526,860
22 Claims. (Cl. 204—43)

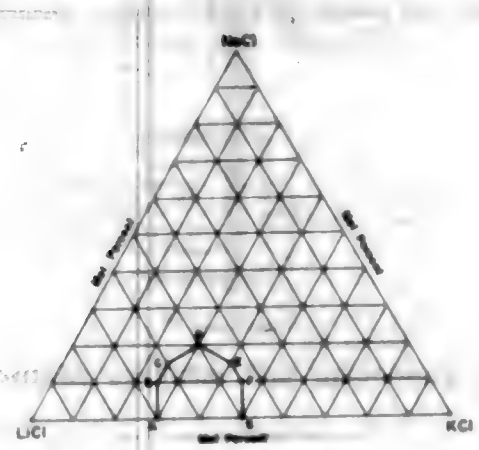
1. A cyanide-type of plating bath for depositing a zinc-tin alloy comprising in solution zinc, tin, a cyanide ion source and a hydroxide ion source, the cyanide ion being present in an amount less than that required to

complex all of the zinc as cyanozincate ion, the total amount of cyanide ion and hydroxide ion being sufficient to complex all of the zinc.

2,898,275
PRODUCTION OF TITANIUM

Earl W. Andrews, Shellington, Pa., assignor to The New Jersey Zinc Company, New York, N.Y., a corporation of New Jersey

Application December 17, 1957, Serial No. 703,366
4 Claims. (Cl. 204—64)



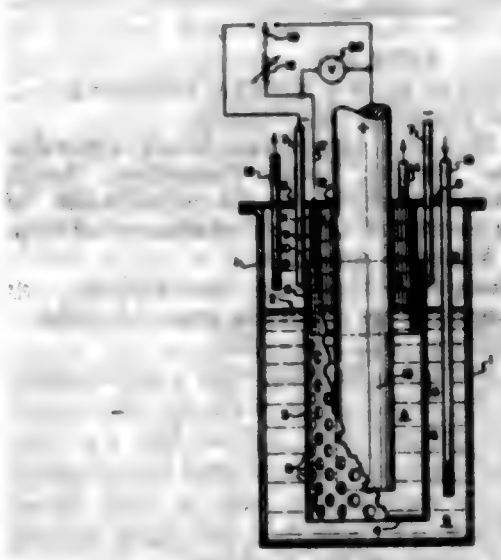
1. In the electrolytic deposition of metallic titanium on a cathode immersed in a molten mass of chloride salts composed essentially of (*a*) at least one titanium chloride in which the titanium has a valence less than four and (*b*) a diluent salt mixture having a melting point not substantially higher than 450° C. and comprising at least two salts of the group consisting of sodium chloride, potassium chloride and lithium chloride, the improvement which comprises hot harvesting the cathode-deposited metallic titanium in the absence of a protective atmosphere by (1) using a diluent salt mixture having a composition within the range of compositions in the area defined by the lines AB, BC, CD, DE, EF, FG and GA in the accompanying drawing, (2) removing the cathode with its adhering deposit of metallic titanium and entrained molten salt substantially directly from the molten salt mass into the ambient atmosphere while the molten salt mass is maintained at a temperature not more than about 100° C. above its melting point, and (3) thereafter separating the cathode deposit from the cathode.

2,898,276
PRODUCTION OF TITANIUM

George E. Snow, Palmerton, Pa., assignor to The New Jersey Zinc Company, New York, N.Y., a corporation of New Jersey

Application July 1, 1958, Serial No. 745,862
2 Claims. (Cl. 204—64)

1. In the electrolysis between an anode and a cathode of a fused halide salt bath containing a titanium lower chloride wherein titanium tetrachloride is substantially continuously introduced into and assimilated by the bath and metallic titanium is deposited on the cathode, the anode and cathode being in direct communication with one another through the bath uninterrupted by any physical barrier, the titanium metal being deposited predominantly on the surface of the cathode distal with respect to the anode, the chlorine evolved at the anode being collected in and discharged from a confined space defined by a refractory-surfaced metallic conductor-containing wall extending below the surface of the bath and normally electrically isolated from both the anode and cathode, and the titanium tetrachloride being delivered to the portion of the bath in contact with the distal surface of the cathode, the improvement which comprises maintaining the open-circuit back electromotive force between the refractory-surfaced wall and the anode within the range of 2 to 2.4 volts by electrically connecting the wall to the cathode when the back electromotive force falls below said range and by electrically connecting the wall to the anode when the back electro-

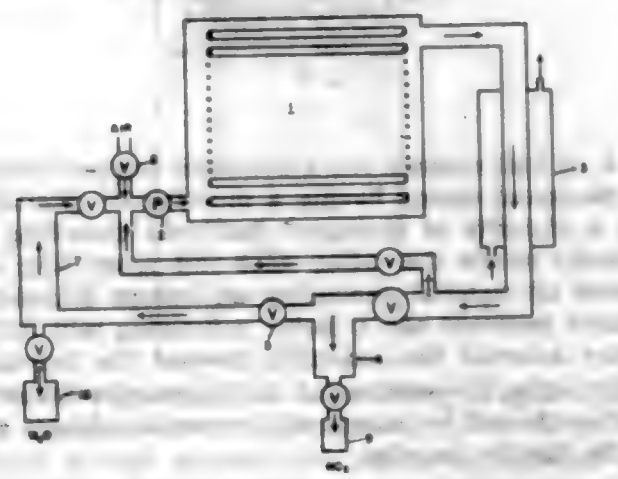


motive force rises above said range, the electrical connection being made in each instance to deliver a sufficient current to the wall for a sufficient period of time to restore the open-circuit back electromotive force to and maintain it within said range.

2,898,277
METHOD OF FIXING NITROGEN FOR PRODUCING OXIDES OF NITROGEN

Paul Harteck and Seymour Dondes, Troy, N.Y., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Application March 6, 1956, Serial No. 570,651
4 Claims. (Cl. 204—154)



1. In the method of producing oxides of nitrogen the steps in combination comprising irradiating air at high pressure in a nuclear reactor, cooling to remove NO_2, compressing the cooled gas, further cooling to remove N_2O and recirculating the cooled compressed air to the reactor and further irradiating it therein.

2,898,278
PROCESS FOR THE PRODUCTION OF HIGH-PURITY GALLIUM

Heinz Gunther Plust, Wettingen, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie., Baden, Switzerland, a joint-stock company

Application November 21, 1957, Serial No. 698,007
Claims priority, application Switzerland
November 21, 1956
5 Claims. (Cl. 204—157)

1. Process for the production of gallium of high purity, characterized in that an organic compound of gallium of

the formula $GaH_xR_{(3-x)}$ (wherein R represents a lower alkyl radical, and x is a whole number less than three) is prepared from technically pure gallium, and that this compound is decomposed by ultraviolet radiation yielding gallium of high purity as a decomposition product.

2,898,279

COATING SURFACES BY EMPLOYING AN ELECTROSTATIC FIELD

Kenneth Archibald Metcalfe, Graysmore, South Australia, and Robert John Wright, South Payneham, South Australia, Australia, assignors to Commonwealth of Australia (care of Secretary of the Department of Supply), Melbourne, Victoria, Australia

Application June 5, 1957, Serial No. 663,742
Claims priority, application Australia June 14, 1956
3 Claims. (Cl. 204—181)

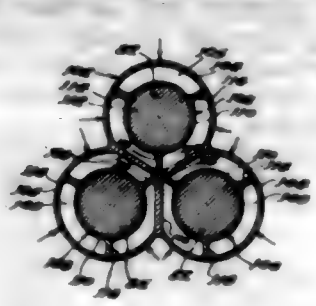
1. A process for coating a backing with a metal oxide comprising coating the metal oxide with an alkyd resin and forming a paste thereof with a drier and a carrier liquid, dispersing the paste in a halogenated hydrocarbon liquid, establishing an electrostatic field in said liquid, and placing the backing in said field in the liquid thereby depositing the metal oxide on the backing.

2,898,280

FUEL ROD CLUSTERS

Arthur R. Schultz, Western Springs, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application July 29, 1953, Serial No. 376,277
14 Claims. (Cl. 204—193.2)



13. A fuel element for a neutronic reactor comprising an elongated casing having a plurality of internal ribs, and a plurality of elongated fuel rods extending longitudinally within the casing, each rod comprising a body formed of material containing an isotope fissionable by thermal neutrons and a jacket containing said body and having external fins extending toward the internal ribs of the casing for holding the rod in spaced relation to the interior thereof by means of compressive forces exerted on the fins by the ribs.

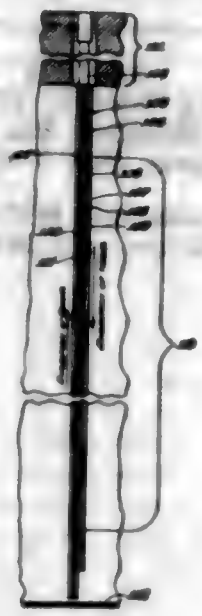
2,898,281

NEUTRONIC REACTOR CONTROL

Samuel Untermyer, Scotia, N.Y., and Ernest Hutter, Chicago, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

Application September 29, 1954, Serial No. 459,219
7 Claims. (Cl. 204—193.2)

1. In a neutronic reactor having an active portion comprising a mass of thermal neutron fissionable material of sufficient quantity to provide a neutron reproduction ratio at least equal to unity, and means containing neutron absorbing material for controlling the reaction, the improved construction wherein the control means comprises a plurality of elongated members translatably disposed adjacent and parallel to each other, each of said members consisting of a plurality of equal length sections of neutron absorbing materials extending transversely through said members, said sections being separated by equal length sections of neutron permeable materials extending transversely through each of said members, and means for longitudinally positioning said members relative to each other.

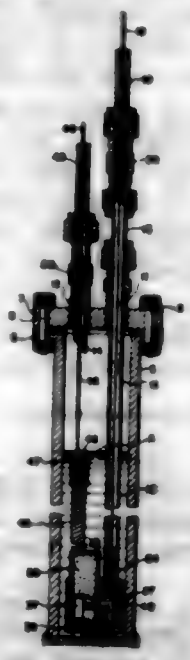


2,898,282

ELECTROLYTIC OXYGEN ANALYSIS

William M. Flook, Jr., Greenville, and Frederick A. Keidel, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application June 28, 1956, Serial No. 592,674
4 Claims. (Cl. 204—195)



1. An apparatus for the coulometric analysis of oxygen in a flowing gas stream consisting in combination of an electrolytic cell provided with a porous cathode element selected from the group consisting of silver and copper and an anode element in contact with an aqueous electrolyte solution non-reducible at the analysis potential, said anode element being substantially inert chemically with respect to said electrolyte solution, means maintaining said cathode element at a potential of between about —0.1 v. and —1.7 v. with respect to said electrolyte solution, a gas sample supplying conduit opening adjacent said cathode element to direct said flowing gas stream through said porous cathode element into intimate contact therewith and with said electrolyte solution to thereby effect complete electrolytic reduction of the oxygen in said flowing gas stream, means imposing a D.-C. electrical bias between said cathode and anode elements in opposition to the voltage generated by said

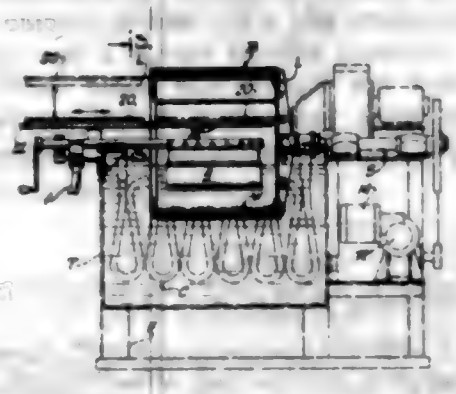
electrolytic cell and in an amount reducing electrical background interference existing in said cell during said analysis, and means for determining the content of oxygen in said flowing gas stream as a function of the electric current flow between said cathode element and said anode element.

2,898,283

UNLOADING DEVICE

Lee F. Howard, Birmingham, Mich., assignor to Metal & Thermit Corporation, New York, N.Y., a corporation of New Jersey

Application August 26, 1957, Serial No. 680,070
5 Claims. (Cl. 294—213)



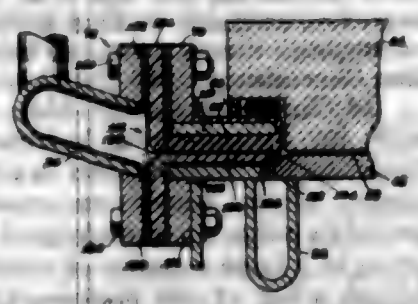
1. In barrel plating device, especially applicable for chromium plating from the chromic acid type solution, comprising a tank adapted to hold the plating solution at a predetermined solution level therein, a rotatable metallic barrel adapted to be partly immersed in said solution and with which work articles therein may make electrical contact having at least one end wall with a large central opening through which objects may extend and be introduced into or removed from the barrel without meeting obstruction when the barrel is rotated, the combination of a work-removing apparatus comprising a work-removing blade extending longitudinally of said barrel with its longitudinal axis parallel to the axis of said barrel, pivot bearings for said blade in the end walls of said barrel located nearer the peripheral wall of the barrel than the axis thereof and adapted to permit said blade to be pivoted around the axis of said pivotal bearings so as to bring the free edge of said blade into contact with the inner peripheral wall of said barrel to entrap work articles between said blade and rotating barrel wall or alternatively permit said free edge of said blade to be moved away from said inner peripheral surface of said barrel to permit work articles to move freely along the inner wall of said barrel and a removable work-receiving tray in said barrel.

2,898,284

MERCURY CATHODE CHLORINE CELL

Marshall P. Neipert, Robert D. Bliss, and Howard E. Hosmer, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

Application June 2, 1958, Serial No. 739,652
12 Claims. (Cl. 204—219)



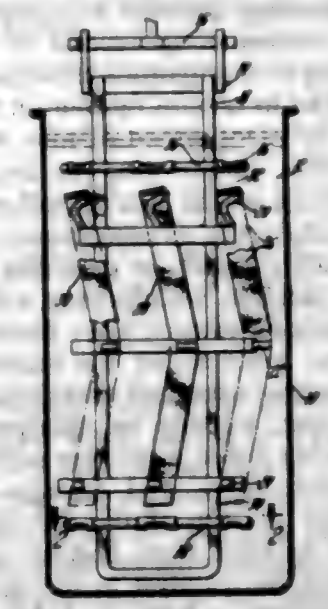
1. In a slot type liquid cathode electrolytic cell having a flat cathode base plate, a monolithic graphite anode having a flat surface facing the upper surface of said base plate, and electrode separator means having a polygonal opening through which said anode extends, means for applying brine and mercury to said cell comprising an elongated mercury inlet slot adjacent to the feed end of said base plate, said inlet slot being disposed substantially perpendicularly with respect to the direction of mercury flow through said cell and extending substantially completely across the opening of said separator frame, said base plate having a recess in the top surface thereof and extending from said slot to the feed end thereof, the mercury inlet slot having a curved surface on the downstream side thereof, and a replaceable brine nozzle having an elongated slot-like orifice which is coextensive in length with the length of the mercury slot, the upper surface of said orifice being substantially aligned with the flat lower surface of said anode, the lower surface of said orifice being disposed slightly above the surface of that part of said base plate which is disposed downstream from said mercury inlet slot, the lower part of said nozzle extending into the recess in the feed end of said base plate, the inner end of the lower part of said nozzle being curved in the direction of mercury flow through said cell.

2,898,285

ELECTROPLATING RACK

Roy O. Hosson, Flint, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application February 3, 1958, Serial No. 712,910
4 Claims. (Cl. 204—297)



1. An electroplating bath fixture comprising a support for the workpiece to be electroplated and a robber bar connected to said support and positioned adjacent the normal position for the workpiece, said robber bar including a metal member having a coating of organic polymeric nonconducting material thereon, a layer of conducting material on said nonconducting coating, said layer comprising a mixture of metal powder and a binder of organic polymeric material, and means extending through said nonconducting coating establishing electrical contact between said metal member and said conducting layer.

2,898,286

METHOD OF REDUCING CORROSIVENESS OF LUBRICATING OILS BY HYDROGENATION

Milton P. Kleinholz, Homewood, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Application August 4, 1955
Serial No. 526,846
1 Claim. (Cl. 208—264)

A method for the manufacture of non-additive aircraft piston engine lubricating oil of low corrosiveness when

the circulation of the solution for a period of at least

4. In a shot-catalyst reforming system comprising a

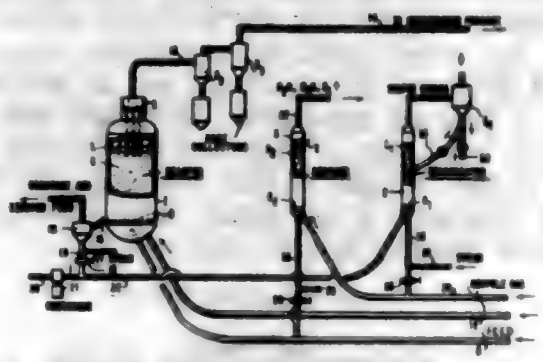
tested by the MacCoull-Ryder oxidation corrosion test which comprises reacting a mineral lubricating oil and hydrogen while in contact with a cobalt molybdate supported on alumina catalyst at a temperature of about 500 to 550° F., a pressure of about 400 to 600 p.s.i.g. and a weight hourly space velocity of about 3 to 7.

2,898,287

HYDROFORMING WITH PRELIMINARY DESULFURIZING OF THE NAPHTHA FEED

Albert B. Welty, Jr., Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application October 20, 1953, Serial No. 387,097
3 Claims. (Cl. 208—89)



1. A method of hydroforming naphtha containing sulfur which comprises contacting the naphtha at elevated temperatures and pressures in a hydrodesulfurization zone with a fluidized bed of desulfurizing catalyst selected from the group consisting of molybdenum oxide and cobalt molybdate on alumina adapted to combine chemically with at least a portion of the sulfur in the feed stock, charging hydrogen to the hydrodesulfurization zone, permitting the naphtha to remain resident in the desulfurization zone for a sufficient period of time to effect the desired sulfur removal, withdrawing the desulfurizing catalyst from the bottom of the hydrodesulfurizing zone and transferring the catalyst to a regeneration zone and therein treating the catalyst with an oxidizing gas to remove sulfur from the catalyst, withdrawing sulfur oxides and entrained desulfurizing catalyst fines from the top of the regeneration zone, withdrawing the regenerated catalyst from the regeneration zone and transferring the catalyst to the reducing zone, treating the catalyst with a reducing gas, withdrawing water, hydrogen sulfide, low molecular weight hydrocarbons, and entrained desulfurizing catalyst fines from the top of the reducing zone, withdrawing reduced catalyst from bottom of the reducing zone and returning the catalyst to the hydrodesulfurization zone, withdrawing a treated naphtha stream from the hydrodesulfurization zone substantially free of volatile sulfur compounds, causing said stream to pass through a plurality of solid-gas separating zones whereby entrained catalyst is substantially removed from the stream, charging the treated naphtha stream uncooled to a hydroforming zone containing a hydroforming catalyst comprising a fixed bed of supported platinum group metal, maintaining the hydroforming zone at hydroforming conditions of temperature and pressure and contact time until the desired hydroforming reaction takes place, and recovering a product of improved octane rating from the hydroforming zone.

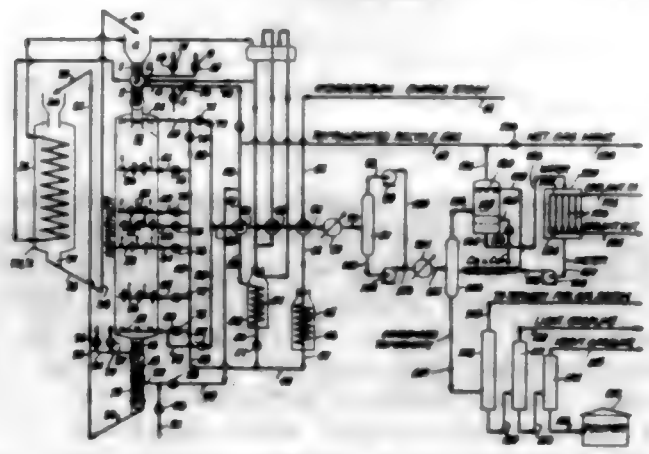
2,898,288

REFORMING EMPLOYING REFRIGERATED RECYCLE GAS

Kenneth M. Elliott, Woodbury, and Winton W. Hamilton, Pitman, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

Application May 7, 1954, Serial No. 428,284
16 Claims. (Cl. 208—134)

15. In the method of reforming hydrocarbons wherein a mixture of hydrocarbons and hydrogen-containing gas is contacted in a reformer with particle-form solid reforming catalyst, wherein a reformer effluent comprising hydrogen, C_1 and heavier hydrocarbons, and water is obtained, wherein said reformer effluent is cooled at elevated pressure to a temperature at which C_4 and heavier hydrocarbons condense, wherein uncondensed reformer effluent comprising hydrogen, C_1 and heavier hydrocarbons, and water is separated from condensed C_4 and heavier hydrocarbons, and wherein said separated uncondensed reformer effluent is heated to reforming temperature and recycled to said reformer, the improvement which comprises mixing said uncondensed reformer effluent with an amount of self-cooled second condensate (obtained as hereinafter described) to condensed C_4 and heavier hydrocarbons and water and to provide a second uncondensed reformer effluent having a dew point with respect to water not higher than about +60° F. and containing not more than about 4 mol percent of C_4, C_5 and C_6 hydrocarbons and a second condensate com-



prising said self-cooled second condensate and said condensed C_4 and heavier hydrocarbons, separating said second uncondensed reformer effluent having a dew point with respect to water not higher than about +60° F. and containing not more than about 4 mol percent C_4, C_5 and C_6 hydrocarbons from said self-cooled second condensate and said condensed C_4 and heavier hydrocarbons, heating said second uncondensed reformer effluent to at least reforming temperature, recycling said heated second uncondensed reformer effluent to said reformer, separating water from said second condensate, reducing the pressure on said second condensate to vaporize a portion thereof and to cool the balance of said second condensate, and cooling at least a portion of said second condensate by indirect heat exchange with a coolant to a temperature at which said cooled second condensate when mixed with said uncondensed reformer effluent the temperature of the mixture is that at which the second uncondensed effluent has a dew point with respect to water not higher than about +60° F.

2,898,289

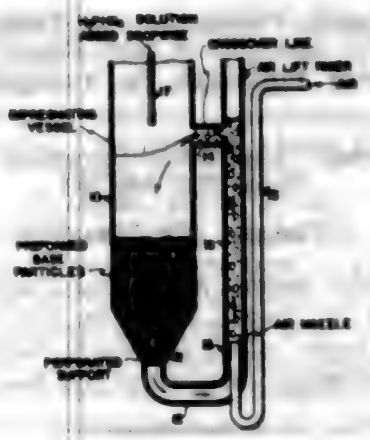
PREPARATION OF CATALYST PARTICLES

Charles Newton Kimberlin, Jr., and Fred J. Buchmann, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application December 1, 1954, Serial No. 472,342
16 Claims. (Cl. 208—134)

9. A process for hydroforming hydrocarbons which comprises contacting the hydrocarbons in admixture with hydrogen under active conversion conditions with catalysts obtained by submerging preformed bodies of adsorptive alumina in a large quantity of water, circulating the water through a bed of said preformed bodies, slowly adding a solution of a platinum group metal compound to said water in sufficient amount to incorporate the desired amount of platinum metal in the support, continuing

the circulation of the solution for a period of at least about one-half hour after addition of the solution of the



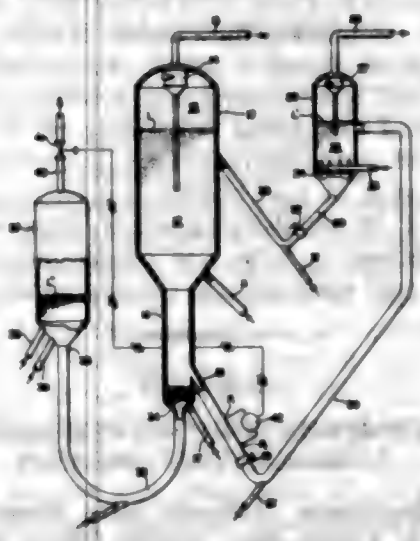
platinum compound is completed, separating the impregnated, preformed bodies from the liquid, drying and calcining the impregnated bodies.

2,898,290

HYDROCARBON CONVERSION PROCESS AND APPARATUS

Lawrence E. Swabb, Jr., Baton Rouge, La., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application January 4, 1954, Serial No. 402,018
4 Claims. (Cl. 208—136)



1. In a method of reforming hydrocarbon fractions boiling within the naphtha range in contact with a mixture of a major proportion of finely divided hydroforming catalyst particles and a minor proportion of inert heat transfer solid particles or shot in a dense, fluidized bed, the improvement which comprises controlling gas velocities through the bed so that the shot passes downwardly through the dense, fluidized bed, collecting the shot in a settling zone beneath the dense fluidized bed, passing recycle gas through the settling zone to control the composition of a stream of solids withdrawn from the settling zone for circulation to the regeneration zone so that the withdrawn stream will contain a major proportion of shot and a minor proportion of catalyst, circulating said stream to a regeneration zone, burning carbonaceous deposits from the circulating solids and returning the freshly regenerated catalyst and hot shot to the reaction zone, maintaining a separate reservoir of shot in communication with the settling zone, measuring the ratio of shot to catalyst in the circulation stream passing from the settling zone to the regenerating zone, adjusting the pressure in the reservoir in accordance with the measured ratio of shot and catalyst, and thereby maintaining a constant ratio of shot to catalyst by forcing shot from the reservoir to the settling zone by an increase in pressure and withdrawing shot from the settling zone to the reservoir by a decrease in pressure.

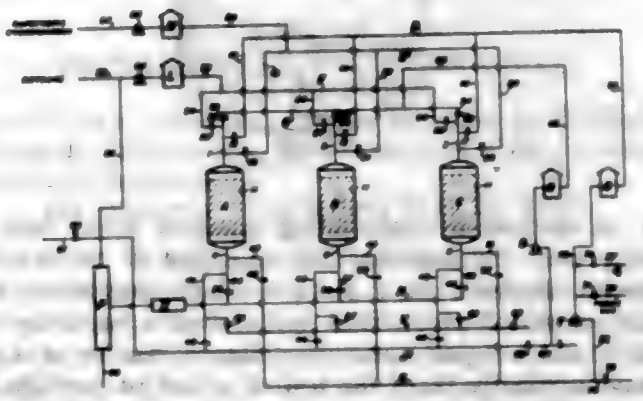
4. In a shot-catalyst reforming system comprising a reactor vessel, a regenerator vessel and a shot reservoir, the improvement comprising a settling zone of smaller cross-sectional area than the reactor vessel arranged below and in open communication with the bottom of the reactor vessel, an inlet for gas at the bottom of said settling vessel, an outlet line for the withdrawal of shot and catalyst from the settling zone connected to the regenerator vessel, a transfer line connecting the bottom of the settling zone with the shot reservoir, a measuring means for determining the shot-catalyst ratio of the shot-catalyst stream passing from the settling zone to the regenerator vessel, and a pressure control means in the shot reservoir actuated by the measuring means whereby a constant shot-catalyst ratio is maintained by forcing shot from the shot reservoir to the settling zone by increasing the pressure and withdrawing shot from the settling zone to the shot reservoir by decreasing the pressure.

2,898,291

STARTING UP OF REFORMING UNIT USING PLATINUM CATALYST WITHOUT EXTRANEOUS HYDROGEN

Henry A. Holcomb and Robert M. Love, Baytown, Tex., assignors, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Application May 12, 1954, Serial No. 429,206
4 Claims. (Cl. 208—138)



1. In a reforming system for reforming a naphthenic hydrocarbon feed stock having a boiling point in the range of 150° to 500° F. in which a plurality of separate reaction zones are provided, each of said reaction zones containing a bed of platinum catalyst, the procedure for bringing the system onstream from an initially inactive state which comprises the steps of selecting one of said separate reaction zones as a first selected reaction zone, passing a stream of hot gas consisting essentially of methane at a temperature of about 850° to 1000° F. through said first selected reaction zone until it is at a temperature of about 850° to 1000° F., next charging a mixture of vaporized feed stock and said hot gas to said first selected reaction zone in the ratio of about 1000 to 10,000 cubic feet of said hot gas per barrel of feed under reaction conditions including a temperature within the range of 850° to 1000° F., a space velocity of about 1 to 4 liquid volumes of feed stock per volume of catalyst per hour, and a pressure of about 200 to 400 pounds per square inch, removing the resultant effluent from the said first reaction zone, heating at least a major portion of the gaseous fraction of the effluent and returning it as recycle gas to the said first selected reaction zone and continuing until the hydrogen content of the recycle gas is in excess of 50%, continuing to charge said recycle gas and vaporized feed stock to said first selected reaction zone while withdrawing at least a portion of the gaseous fraction of the effluent from said first selected reaction zone, passing said with-

2,898,296

PROCESS FOR FORMING A GREASE CONTAINING

2,898,298

PROCESS FOR LITHIUM BASE GREASE

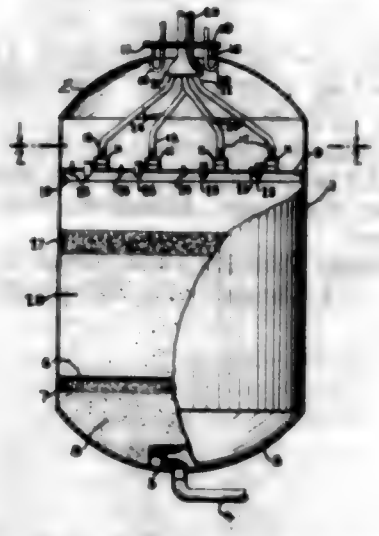
drawn portion of said gaseous fraction through at least a second selected reaction zone of said system to heat it until said second selected reaction zone is heated to a temperature of about 850° to 1000° F., and thereafter charging vaporized feed stock to the said second selected reaction zone under said reaction conditions in the presence of said withdrawn portion of said gaseous fraction to initiate hydroforming of said feed stock in said second selected reaction zone.

2,898,292

METHOD FOR DISTRIBUTING A VAPOR-LIQUID FEED AND APPARATUS THEREFOR

Raymond R. Haik, Pitman, and Donald F. Hill, West Deptford Township, Gloucester County, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York

Application November 5, 1957, Serial No. 694,621
12 Claims. (Cl. 208—250)



1. A method of distributing a mixed phase feed uniformly over the cross-section of a bed of particle-form material confined in a reactor which comprises introducing a mixed phase feed comprising a vaporous component and a liquid component into a reactor at a point spaced vertically from the top of a bed of particle-form material, disengaging at least a portion of said vaporous component whilst subjecting said liquid component to non-turbulent flow through a distributing zone spaced above, concentric with, and having substantially the same cross-sectional area as said bed of particle-form material, flowing said liquid component from said distributing zone as a plurality of streams downwardly onto the upper surface of said bed of particle-form material, each of said plurality of streams having a superficial velocity not exceeding 30 feet per second and flowing said disengaged vaporous component through the aforesaid bed of particle-form material in intimate association with said liquid component.

4. An apparatus for distributing a mixed phase feed comprising a vaporous component and a liquid component uniformly over a bed of particle-form solid material which comprises a closed container, a mixed feed inlet, an outlet, a bed of particle-form solid material in the lower region of said container, a secondary distributor vertically spaced upwardly from said bed of particle-form material constructed and arranged to provide a plurality of downwardly extending conduits in the ratio of one conduit for each 0.1 to not more than about 1.0 square foot of horizontal cross-sectional area of said bed of particle-form solid material, a primary distributor constructed and arranged to deliver in substantially non-turbulent flow to said secondary distributor said liquid component whilst disengaging at least a portion of said vaporous component of said mixed phase feed, and means for introducing said mixed phase feed to said primary distributor.

2,898,293

WAX SIZED PAPER

Robert G. Capell, Pittsburgh, and Philip R. Templin, Oakmont, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Application December 28, 1953
Serial No. 400,761
6 Claims. (Cl. 210—502)

1. A wax-sized porous paper that contains from 0.25 to 5.0 percent by weight, based on the total weight of the wax-sized paper, of an adsorbent magnesium-silicate gel that is distributed throughout the wax.

2,898,294

WELL COMPLETION FLUIDS

Gerald G. Priest, Bryan E. Morgan, Melba L. Lytle, and Joseph A. Caldwell, Houston, and Bertie F. Birdwell, Austin, Tex., assignors, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware

No Drawing. Application December 24, 1956
Serial No. 630,826
18 Claims. (Cl. 252—8.55)

1. A well completion fluid stable at well temperatures consisting of an aqueous phase and an oily phase, the aqueous of said phases containing a water soluble weighting agent, said oily phase containing no less than 10% by volume of tetrachloroethylene, a corrosion inhibitor dissolved in one of said phases in a corrosion inhibiting amount, and an emulsifying agent suitable and in an amount sufficient to form said phases into a heat stable emulsion at well temperatures ranging up to 250° F.

2,898,295

HIGH TEMPERATURE WATER RESISTANT LUBRICATING GREASES

James C. MacKenzie, Wellesley Hills, Mass., assignor to Godfrey L. Cabot, Inc., Boston, Mass., a corporation of Massachusetts

No Drawing. Application May 4, 1956
Serial No. 582,668
6 Claims. (Cl. 252—28)

1. A grease composition stable at high temperatures even in the presence of water consisting essentially of a lubricating oil, a finely-divided inorganic thickening agent chosen from the group consisting of metal oxides, metalloid oxides, bentonitic clays and attapulgite clays, the amount of said thickening agent being sufficient to impart a grease-like consistency to the composition, and about 5% to 40% by weight of said thickening agent of a polyamine having the formula

$$R-N(R^1)-(C_nH_{2n}-NH-)_xH$$

where R is a monovalent hydrocarbon radical containing a total of from about 8 to about 24 carbon atoms at least 5 of which are consecutively linked to one another in an open chain, R^1 is selected from the group consisting of hydrogen and monovalent hydrocarbon radicals containing from about 1 to about 24 carbon atoms, n is an integer from 2 to 4 and x is an integer from 1 to 3 the exact values of n and x being selected so that the product of $n \cdot x$ is not greater than 6.

able per hydroxy group, at a temperature of about 150° to 400° F. for about ¼ to 24 hours in situ in said hydro- tion of sulfuric acid having a concentration of at least

2,898,296
PROCESS FOR FORMING A GREASE CONTAINING METAL SALT OF MONO AND DICARBOXYLIC ACIDS

Warren C. Pattenden, Courtright, Ontario, Lorne W. Sproule, Sarnia, Ontario, and James H. Norton, Corunna, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application August 23, 1956
Serial No. 605,726
5 Claims. (Cl. 252—32)

1. A method of preparing a lubricating grease composition comprising a major proportion of a lubricating oil and a thickening amount of a thickener comprising about 20 to 80 wt. percent of a metal soap of a fatty acid and about 80 to 20 wt. percent of a metal salt of a dicarboxylic acid, which comprises heating a mixture of (1) a fatty acid having about 6 to 30 carbon atoms per molecule, (2) a diester of an aliphatic dicarboxylic acid and a monohydric aliphatic alcohol, said diester containing about 4 to 64 carbon atoms per molecule, and (3) a metal base in a lubricating oil menstruum, for a time and temperature sufficient to form a metal salt of said dicarboxylic acid and metal soap of said fatty acid, and to drive off substantially all the alcohol which forms during said reaction, then cooling said mixture to obtain said grease composition.

2,898,297
GREASE COMPOSITION AND METHOD OF PREPARATION THEREOF

John E. Schott, New York, N.Y., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Application December 29, 1958
Serial No. 783,158
19 Claims. (Cl. 252—36)

1. A grease composition, comprising: an oil of lubricating viscosity and a mixture (A) of alkaline earth metal soaps and salts therewith, the alkaline earth metals being selected from the group consisting of calcium and a mixture (B) of calcium and barium, not more than about fifteen percent of barium on a chemical equivalent basis being associated in said mixture (B) with calcium in said soaps and salts, the mixture (A) of said soaps and salts being present in a grease forming quantity, and the metal salts of said mixture (A) being salts of a low molecular weight unsubstituted saturated monocarboxylic acid (I) having from one to six carbon atoms per molecule, and the metal soaps of said mixture (A) being soaps of different acids with said acid (I) as shown in the following tabulation:

Acid	No. of Carbon Atoms	Weight Percent of Total Acids
(I) Low Molecular Weight	1–6	10–80
(II) Intermediate Molecular Weight	7–12	5–80
(III) High Molecular Weight	at least 13	5–40
(IV) Oil Acids	8–18	25–60

said acid (II) being selected from unsubstituted, monohydroxy-substituted and methyl-substituted saturated aliphatic monocarboxylic acids, said acids (III) being selected from unsubstituted and monohydroxy-substituted saturated aliphatic monocarboxylic acids and monounsaturated aliphatic monocarboxylic acids; and said oil acids being nut oil acids comprising mixtures of acids containing from about 8 to 18 carbon atoms per molecule and predominating in C_{12}–C_{14} acids; from about 0.5 to about 5 percent by weight (expressed as PbO) of at least one lead compound of at least one of said acids (I) through (IV); and from about 1 to about 10 percent by weight of an extreme pressure agent containing at least one of the elements selected from the group consisting of chlorine, sulfur and phosphorus.

2,898,298
PROCESS FOR LITHIUM BASE GREASE

Henry C. Zweifel, Inglewood, Calif., Henry I. Voss, Homewood, Ill., and Howard D. Gower, Hammond, Ind., assignors of one-half to Sinclair Refining Company, New York, N.Y., a corporation of Maine, and one-half to Richfield Oil Corporation, Los Angeles, Calif., a corporation of Delaware

Continuation of application Serial No. 262,852, December 21, 1951. This application March 16, 1954, Serial No. 416,654
2 Claims. (Cl. 252—41)

1. In the manufacture of a lithium grease of a mineral oil base and about 5 to 25 weight percent on the grease of a lithium soap of which at least 80% by weight is a lithium soap of hydrogenated castor oil, which grease is characterized by uniform homogeneity and dispersion of gel structure and by the presence of the soap in the form of fibers of about 1 micron length, which comprises saponifying the fatty component with an aqueous lithium base in the presence of at least a portion of the total oil base to be used in the grease composition, dehydrating the mixture at a maximum temperature of about 330° F., adding any additional amount of oil base needed to formulate the grease, and colloidally milling the unhomogenized grease to provide gel strength in terms of ASTM penetration for the homogenized grease equivalent to about 25 to 125 penetration points increase in hardness relative to that of the grease in the unhomogenized state.

2,898,299
ESTER-CONTAINING LUBRICANT COMPOSITIONS

Warren Lowe, Berkeley, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Application May 31, 1957
Serial No. 662,580
6 Claims. (Cl. 252—46.6)

5. A lubricating oil composition of relatively low corrosivity to sensitive bearing metals, comprising a major proportion of a lubricating oil containing from 5 to 10% by weight of a monoester of a polyhydroxy aliphatic alcohol having four to six hydroxyl groups, the acid radical in said monoester being that of an aliphatic carboxylic acid with an oil-solubilizing chain of at least 8 carbon atoms which contains a single olefinic carbon-to-carbon double bond, together with about 1½% to about 3% of an oil-soluble terpene-P_2S_5 reaction product and a small amount, greater than 0.03% and up to 1.5% within the limits of solubility, of an unsubstituted vicinal dihydroxy aryl compound selected from the group consisting of dihydroxy benzenes and dihydroxy anthraquinones.

2,898,300
HIGH TEMPERATURE LUBRICATING GREASES

James H. Norton, Corunna, Ontario, and Samuel B. Baker, Sarnia, Ontario, Canada, assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application April 25, 1957
Serial No. 655,022
6 Claims. (Cl. 252—49.9)

1. A lubricant comprising a lubricating oil and a grease-thickening amount of the reaction product of a diisocyanate having the general formula:

$$R(NCO)_2$$

wherein R is an arylene radical and an alkyl substituted oxygen-containing acid of phosphorus having at least one hydroxy group attached to the phosphorus atom, and wherein said reaction product is prepared by reacting said diisocyanate and said acid of phosphorus in a molar ratio such that there is about one isocyanate group avail-

selected from the group consisting of amorphous hydrous alumina, alumina monohydrate and their mixture, the

2,898,311
SULFONIC ACID TYPE CATION EXCHANGE RESIN

cating oil.

2,898,301
RUST PREVENTIVE COMPOSITIONS
Raymond L. Mayhew, Phillipsburg, N.J., Joseph P. Copes, Easton, and Earl P. Williams, Pen Argyl, Pa., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Application November 30, 1956
Serial No. 625,228
6 Claims. (Cl. 252—51.5)

1. An anti-rust composition comprising a fluid petroleum hydrocarbon containing in a rust inhibiting amount of at least one N-substituted-γ-hydrocarboxylic acid amide having the following formula:

wherein R represents a member selected from the class consisting of hydrogen and methyl group, R_I represents a hydrocarbon radical containing from 10 to 30 carbon atoms, and R_{II} represents a member selected from the class consisting of hydrogen and an alkyl group of from 1 to 18 carbon atoms, the total number of carbon atoms constituting the groups in both R_I and R_{II} being at least 10 and not more than 48 carbon atoms.

2,898,302
INDIUM-ACTIVATED PHOSPHOR
Keith H. Butler, Marblehead, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
No Drawing. Application March 31, 1954
Serial No. 420,198
9 Claims. (Cl. 252—301.4)

1. A phosphor consisting essentially of an alkaline earth metal phosphate activated by indium in a state of lower valence than three.

2,898,303
METHOD OF EXPANDING PERLITE
Harry H. Houston, Elmhurst, Ill., assignor to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Application August 9, 1956
Serial No. 603,188
12 Claims. (Cl. 252—378)

1. In the process of expanding ground perlite ore at temperatures between about 1500 and 2100° F., the improvement which comprises admixing ground perlite ore, prior to expansion, with an aqueous mineral acid solution to form a slurry, said mineral acid solution having a concentration between about 0.05 and about 0.6 mole of acid in 100 grams of solution, whereby the perlite ore is activated for the expansion step, separating the activated perlite ore from the acid solution, and drying the activated perlite ore.

2,898,304
PREPARATION OF SPHERICAL CONTACT MASSES
Manly J. Powell, South Plainfield, and Tom A. Cecil, Highland Park, N.J., assignors to Minerals & Chemicals Corporation of America, Menlo Park, N.J., a corporation of Maryland
No Drawing. Application February 21, 1956
Serial No. 566,768
5 Claims. (Cl. 252—450)

1. A process for the preparation of adsorptive contact masses in the form of hard spherical particles from kaolin clay comprising mixing kaolin clay with an aqueous solution of sulfuric acid containing from 50% to 60% H_2SO_4 in an amount to provide from 60% to 150% by weight of H_2SO_4 based on the volatile free weight of said kaolin clay, reacting the kaolin clay with the sulfuric acid, dispersing the resulting reacted mixture in a hot white mineral oil to form discrete spherical particles thereof and to vaporize water therefrom, separating said spherical particles from said white mineral oil, and finally substantially eliminating sulfate from said spherical particles by calcining said spherical particles at a temperature of from 900° F. to 1600° F.

2,898,305
PREPARATION OF SILICA-BASED CATALYSTS
John W. Teter, Chicago, John L. Gring, Homewood, and Henry Erickson, Park Forest, Ill., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine
No Drawing. Application January 17, 1956
Serial No. 559,527
8 Claims. (Cl. 252—455)

1. In a method of catalyst manufacturing, the steps which comprise agitating a material selected from the group consisting of silica and silica containing minor amounts of acidic components in an essentially aqueous slurry medium with at least one substantially water-insoluble inorganic compound selected from the group consisting of the carbonates, oxides and hydroxides of the iron transition group metals, molybdenum, tungsten, and vanadium to deposit said metals on the silica, separating solids from the aqueous medium, drying the separated solids, and calcining the dried material.

2,898,306
PREPARATION OF ALUMINA GELS
Robert H. Cramer, Woodbury, and Edwin E. Jenkins, Elmer, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
No Drawing. Application May 8, 1956
Serial No. 583,356
7 Claims. (Cl. 252—463)

1. A process for formation of alumina-containing gels comprising reacting in aqueous solution a water-soluble basic aluminum salt selected from the group consisting of basic aluminum chloride and basic aluminum nitrate, urea, and a water-soluble salt selected from the group consisting of ammonium and alkali metal salts of acetic and glycolic acids to effect formation of a homogeneous hydrosol in which alumina is the major water-insoluble inorganic oxide component and which has a pH between about 3.5 and about 7, permitting said hydrosol to set to an all-embracing alumina-containing hydrogel, aging the resulting hydrogel in a water-immiscible liquid at a temperature between about 125° F. and about 212° F. for at least 10 hours to slowly decompose the urea contained therein and to raise the pH of the hydrogel to a value above about 8, whereby the hydrogel is rendered resistant to disintegration upon contacting with aqueous media, washing the aged hydrogel free of water-soluble matter, and drying.

2,898,307
A METHOD FOR PREPARING ALUMINUM HYDRATE COMPOSITIONS
Carl D. Keith, Munster, Ind., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine
No Drawing. Application September 10, 1956
Serial No. 608,686
9 Claims. (Cl. 252—463)

1. In a method for preparing an alumina hydrate composition consisting essentially of about 10 to 90 weight percent of aluminum trihydrate and a member

salt of a polyamine free of hydroxyl groups and an organic compound having a plurality of hydroxyl groups two hydrogen atoms with OH groups, and an epoxy compound selected from the group consisting of mono-

sisting of chlorine, sulfur and phosphorus.

ratio such that there is about one isocyanate group avail-

selected from the group consisting of amorphous hydrous alumina, alumina monohydrate and their mixture, the steps comprising mixing an aqueous solution of sodium aluminate with a water-soluble compound which is acid-acting towards the sodium aluminate, while maintaining the pH of the mixture at least about 10.5 for at least about 5 minutes and no longer than a time sufficient to precipitate about 10 to 90 percent of alumina trihydrate based upon the final hydrate composition and forming an aqueous slurry of the alumina trihydrate precipitate, and mixing the slurry with a water-soluble compound which is acid-acting towards the sodium aluminate to lower the pH of the mixture to less than about 10 to precipitate a member selected from the group consisting of alumina monohydrate, amorphous hydrous alumina and their mixture to obtain an alumina hydrate composition essentially of a member selected from the group consisting of amorphous hydrous alumina, alumina monohydrate and their mixture and about 10 to 90 weight percent of aluminum trihydrate.

2,898,308
METHOD OF MANUFACTURING CATALYSTS
John W. Teter, Chicago, John L. Gring, Homewood, and Henry Erickson, Park Forest, Ill., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine
No Drawing. Application June 10, 1955
Serial No. 514,693
8 Claims. (Cl. 252—465)

1. In a method of catalyst manufacturing, the steps which comprise agitating alumina in an essentially aqueous slurry medium with a substantially water-insoluble compound selected from the group consisting of the carbonates, oxides and hydroxides of the iron transition group metals, molybdenum, tungsten and vanadium to deposit said metal on the alumina, separating solids from the aqueous medium, drying the separated solids, and calcining the dried material.

2,898,309
ANION EXCHANGE RESINS FROM EPIHALOHYDRIN AND POLYALKYLENEPOLYAMINES
Albert H. Greer, Haddonfield, N.J., assignor to Pfaudler Permutit Inc., New York, N.Y., a corporation of Delaware
No Drawing. Application November 8, 1955
Serial No. 545,787
20 Claims. (Cl. 260—2.1)

1. A water-insoluble, highly basic anion exchange resin which is prepared by a process comprising quaternizing spheroidally-shaped, solid beads of a condensate of an epihalohydrin and a lower polyalkylenepolyamine with a methyl halide, said resin beads having a particle size of between about 10 and 60 mesh on the U.S. Standard Sieve Series.

2,898,310
HIGHLY-BASIC ANION EXCHANGE RESINS FROM EPIHALOHYDRINS AND TERTIARY-AMINO CONTAINING ALKYLENEPOLYAMINES
Albert H. Greer, Haddonfield, N.J., assignor to Pfaudler Permutit Inc., New York, N.Y., a corporation of Delaware
No Drawing. Application August 8, 1956
Serial No. 602,929
18 Claims. (Cl. 260—2.1)

1. A water-insoluble, highly-basic anion exchange resin comprising a condensate of an epihalohydrin and an alkylenepolyamine, the latter having at least one tertiary amino group the molecular ratio of epihalohydrin to alkylenepolyamine being at least about 1:1, respectively.

2,898,311
SULFONIC ACID TYPE CATION EXCHANGE RESIN
Yoshio Tsuzuki, Shibuya-ku, Tokyo, Masaui Seba, Okatomi, Nobeoka-shi, and Masaki Watanabe, Ryo Ehara, and Teruyuki Mizumi, Tsunotomi, Nobeoka-shi, Japan, assignors to Asahi Kasei Kogyo Kabushiki Kaisha, Osaka, Japan
No Drawing. Application April 16, 1956
Serial No. 578,203
Claims priority, application Japan June 8, 1955
10 Claims. (Cl. 260—2.2)

1. A solid unfractured synthetic cation exchange resin composition having at least two dimensions each in excess of one cm. and comprising a three dimensionally crosslinked polymer matrix bonded to sulfonic cation exchange groups; said matrix being formed as a polymerization product of a solution mixture of, (I) from 15% to 80% by weight of vinyl compound having the structure of $CH_2=CH.SO_2R$ wherein R is a member selected from the group consisting of a halogen, methoxy, ethoxy, butyloxy, propoxy, amyloxy, and dimethylamine, (II) from 0% to 40% by weight styrene, (III) from 0.5% to 20% by weight of copolymer of (I) and (II), (IV) from 3% to 10% by weight divinylbenzene, and (V) from 15% to 40% by weight dialkyl phthalate as a plasticizer, said cation exchange groups being bonded to said matrix after hydrolysis of said acid derivative groups.

2,898,312
PRODUCTION OF A CELLULAR POLYVINYL POLYESTER PLASTIC COMPOSITION
Waclaw Szukiewicz, Forest Hills, N.Y., and Anthony R. Steimle and Philip H. Rhodes, Cincinnati, Ohio, assignors, by mesne assignments, to Philip H. Rhodes, Cincinnati, Ohio
No Drawing. Application October 6, 1954
Serial No. 460,766
10 Claims. (Cl. 260—2.5)

7. The method of making a cellular plastic composition comprising mixing (*a*) a polyvinyl chloride plastisol containing polyvinyl chloride and a plasticizer for polyvinyl chloride, said plasticizer being present in the plastisol in the proportion of between about 40 and about 150 parts by weight for each 100 parts by weight of the polyvinyl resin, (*b*) an isocyanate reactive polyhydric alcohol-polycarboxylic acid polyester resin having an acid number between about 15 and about 60 and an hydroxyl number between about 30 and 500, (*c*) a reactive monomeric organic diisocyanate and (*d*) water in an amount between the limits of 0.1% and 10% based on the weight of said polyester resin, said polyester resin being present in the composition in the proportion of about 2½ to about 50 parts by weight per 100 parts by weight of said plastisol, said diisocyanate being present in the composition in the proportion of between 25% and 500% by weight taken on the weight of said reactive polyester and between about 7.5 and about 60 parts by weight for each 100 parts by weight of said plastisol, and heat-reacting the resulting mixture at a temperature not exceeding 350° F. to form a set cellular mass.

2,898,313
PROCESS OF DIMENSIONALLY STABILIZING CELLULOSE, COMPOSITION USED THEREFOR, AND ARTICLE PRODUCED
Walter P. Ericks, Lockport, N.Y., assignor to The Upson Company, Lockport, N.Y.
No Drawing. Application August 10, 1956
Serial No. 603,243
27 Claims. (Cl. 260—17.2)

1. The process of dimensionally stabilizing cellulose subject to varying humidity conditions comprising impregnating said cellulose with an aqueous solution of the

chloride and vinyl acetate, and polyvinyl chloride and

salt of a polyamine free of hydroxyl groups and an organic compound having a plurality of hydroxyl groups attached to different carbon atoms in the molecule, at least one of the hydroxyl groups being part of a carboxyl group, said organic compound being selected from the group consisting of a polycarboxylic acid, a hydroxy monocarboxylic acid, a partial ester of a polyhydric alcohol and a polycarboxylic acid, said ester containing only one polyhydric alcohol residue and only one polycarboxylic acid residue, said ester containing at least one free hydroxyl group and at least one hydroxyl group which is part of a carboxyl group, said ester having been formed by reacting said polyhydric alcohol and said polycarboxylic acid in substantially equimolecular proportion at an elevated temperature and stopping said reaction after the acidity has been reduced by a fraction of $1/n$ where n is the number of carboxyl groups in the said polycarboxylic acid, and a partial ester of a polyhydric alcohol and a polycarboxylic acid, said last-mentioned ester containing only one polyhydric alcohol residue and at least two polycarboxylic acid residues and said ester containing at least two hydroxyl groups which are part of a carboxyl group, said ester having been formed by reacting said polycarboxylic acid with said polyhydric alcohol at an elevated temperature in a proportion of at least about two mols of said acid for each mol of said alcohol and stopping said reaction after the acidity has been reduced by a fraction of $1/n$ where n is the number of carboxyl groups in the said polycarboxylic acid; and drying said impregnated cellulose, said cellulose being impregnated with a sufficient amount of said solution that the dried impregnated cellulose contains from about 2–50% by weight of said salt.

2,896,314

COMPOSITION CONTAINING BAMBOO PARTICLES AND THERMOSETTING RESIN

Roger M. Shepardson, Richmond, Va.

No Drawing. Application January 7, 1958

Serial No. 707,469

1 Claim. (Cl. 260—17.2)

A composition of matter comprising: a heat and pressure cured and molded mixture of comminuted, at least partially dehydrated particles of bamboo sized to pass screens of from about 14 mesh to about 20 mesh and a thermosetting resin selected from a group consisting of urea-formaldehyde, phenol-formaldehyde and melamine-formaldehyde, said resin being present in proportion of from about 8% to about 15% of the weight of dehydrated bamboo particles, said composition being characterized by extreme dimensional stability, high physical strength, excellent machinability and high impact resistance, all at least equal to those qualities in natural cherry lumber.

2,896,315

ADHESIVE COMPOSITION

David R. Smith and Robert L. Hall, McGregor, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application May 6, 1955

Serial No. 506,658

13 Claims. (Cl. 260—27)

1. An adhesive composition comprising a copolymer of at least 50 weight parts of a conjugated diene and of at least 5 weight parts of a heterocyclic nitrogen containing monomer containing solely carbon and nitrogen in the heterocyclic ring, said weight parts being based on 100 parts total monomeric material, an esterification product of a carboxylic acid selected from the group consisting of saturated and unsaturated carboxylic acids derived from aliphatic hydrocarbons by replacing at least one of the hydrogen atoms with a COOH group and a polyhydric alcohol selected from the group consisting of alcohols derived from hydrocarbons by replacing at least two hydrogen atoms with OH groups, and an epoxy compound selected from the group consisting of monoepoxides of hydrocarbons and halogen substituted hydrocarbons.

2,896,316

COMPOSITION COMPRISING AN OXYGEN-CONTAINING POLYMER OF CYCLOPENTADIENE AND WAX

Otto Roelen, Oberhausen-Holten, Germany, assignor to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany, a corporation of Germany

No Drawing. Application November 24, 1953

Serial No. 394,193

Claims priority, application Germany December 1, 1952

4 Claims. (Cl. 260—28.5)

4. A wax composition comprising a mixture of a member selected from the group consisting of polymers of cyclopentadiene containing 1–2 oxygen-containing radicals per molecule selected from the group consisting of methylol and methylal radicals, and a wax other than said polymer selected from the group consisting of hydrocarbons, acids, alcohols, and esters.

2,896,317

FILM FORMING AQUEOUS COLLOIDAL DISPERSIONS CONTAINING AROMATIC NITROALKANOLS AND METHOD FOR PREPARING SAME

Robert L. Johnson and Dale N. Robertson, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application July 1, 1957

Serial No. 668,901

17 Claims. (Cl. 260—29.6)

1. An aqueous colloidal dispersion comprising (1) a synthetic latex containing in the disperse phase a polymer of at least one olefinically unsaturated monomer and (2) from about 0.005 to 1 percent by weight of an aromatic nitroalkanol wherein the aliphatic portion of said nitroalkanol contains no more than 7 carbon atoms and has the nitro and hydroxyl groups on adjacent carbon atoms and wherein the amount is based on the total weight of aqueous colloidal dispersion.

2,896,318

METHYL METHACRYLATE POLYMER COMPOSITION CONTAINING A LIQUID MIXED POLYESTER PLASTICIZER

David Hay Coffey and Dorothy Joyce Guest, Blackley, Manchester, England, assignors to Imperial Chemical Industries Limited, a corporation of Great Britain

No Drawing. Application December 6, 1954

Serial No. 473,466

Claims priority, application Great Britain December 18, 1953

2 Claims. (Cl. 260—31.6)

1. A plasticized composition comprising methylmethacrylate polymer plasticized with a liquid mixed polyester formed by the condensation of at least one aliphatic glycol, an aliphatic dicarboxylic acid containing up to eight carbon atoms and wherein the carboxylic acid groups are the sole reactive groups, and a monocyclic aromatic monocarboxylic acid.

2,896,319

POLYMERIC VINYL ESTERS PLASTICIZED WITH DIALIPHATIC ESTERS OF CERTAIN ALKYLIDENE DIBENZOIC ACIDS

John C. Petropoulos, South Norwalk, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application January 8, 1957

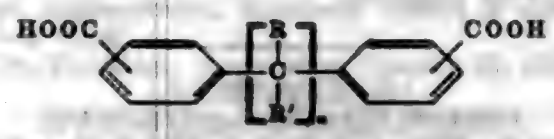
Serial No. 632,971

10 Claims. (Cl. 260—31.8)

1. A composition of matter comprising a member selected from the group consisting of a copolymer of vinyl

each mol of urea, adjusting the pH of the reaction mix- merization conditions, including a suitable

chloride and vinyl acetate, and polyvinyl chloride and a dialiphatic ester of an acid having the following general formula:



wherein R and R' are alkyl groups containing from 1 to 4 carbon atoms and *n* is a whole number between 1 and 2, inclusive and wherein the alcohol from which said ester is derived is an aliphatic monohydric alcohol containing from 4 to 18 carbon atoms.

2,898,320

PROCESS FOR CONDITIONING SOIL WITH A POLYMER CONTAINING N-METHYLOL SUBSTITUENTS

George Sidney Sprague, Stamford, Conn., and Henry Z. Friedlander, Scarsdale, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application May 21, 1953
Serial No. 356,581
7 Claims. (Cl. 260—41)

1. A process for conditioning soil comprising admixing said soil with a non-electrolyte, water-soluble, polymerized material having a weight average molecular weight of at least 2,500, said polymerized material being selected from the group consisting of the polymerization product of a polymerizable monomer containing a $CH_2=C<$ group, maleic dimethylol amide, maleic diamide and maleic anhydride, said polymerized material containing methylol amide radicals attached to at least 5% of the carbon atoms in the polymer chain composed of linked carbon atoms, thereby forming a porous soil structure of non-caking, discrete particles which are readily penetrable by water but resistant to erosion.

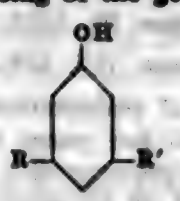
2,898,321

VULCANIZATION OF BUTADIENE RUBBERS WITH PHENOL-ALDEHYDE REACTION PRODUCTS AND PRODUCT OBTAINED THEREBY

Alvin F. Shepard, Le Roy, N.Y., assignor to Hooker Chemical Corporation, a corporation of New York

No Drawing. Application January 26, 1955
Serial No. 484,303
10 Claims. (Cl. 260—43)

1. A method of vulcanizing a vulcanizable rubbery 1,3-butadiene polymer which comprises the steps of intimately admixing in the polymer a fusible vulcanizing agent which is the reaction product of at least 1.2 mols of formaldehyde per mol of a phenol which when reacted under mild conditions with an excess of formaldehyde and in the presence of an alkaline catalyst forms a fusible condensation product which remains fusible upon heating, the phenol being of the general formula:



wherein R and R' are lower alkyl groups containing individually at least two carbon atoms and collectively a total of at least five carbon atoms, the carbon atom attached to the benzene ring in at least one of the alkyl groups being attached to a total of at least three carbon atoms including the carbon atom on the benzene ring, and vulcanizing the resulting admixture by heating to a vulcanizing temperature.

6. The vulcanized material produced by the method of claim 1.

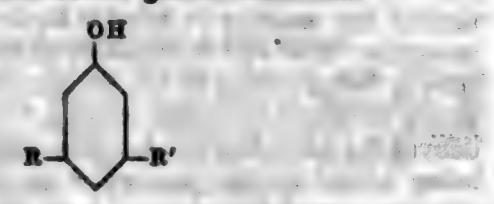
2,898,322

VULCANIZATION OF BUTADIENE RUBBERS WITH PHENOL-ALDEHYDE REACTION PRODUCTS AND PRODUCT OBTAINED THEREBY

Alvin F. Shepard, Le Roy, N.Y., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Application January 26, 1955
Serial No. 484,304
10 Claims. (Cl. 260—43)

1. A method of vulcanizing a vulcanizable rubbery 1,3-butadiene polymer which comprises the steps of intimately admixing into the polymer a vulcanizing agent which is a resol and is a reaction product in the presence of an alkaline catalyst of at least 1.2 mols of formaldehyde per mol of phenol of the general formula:



wherein R and R' are alkyl groups containing collectively a total of at least four carbon atoms and one of the alkyl groups is a methyl group when the remaining alkyl group contains at least three carbon atoms and is attached to the benzene ring by a carbon atom which is attached to a total of at least three carbon atoms including the carbon atom on the benzene ring, the resulting admixture containing a minor amount and not less than about 2% by weight of vulcanizing agent and subjecting the resulting mixture to an elevated vulcanizing temperature.

6. The vulcanized material produced by the method of claim 1.

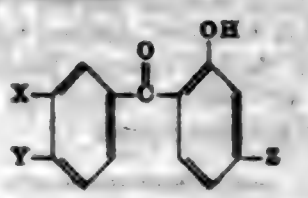
2,898,323

CHLOROETHYLENE POLYMERS AND SALICYLOXY HYDROXY-BENZOPHENONES

Gerald A. Clark, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application April 23, 1956
Serial No. 579,752
3 Claims. (Cl. 260—45.85)

1. A thermoplastic composition comprising a chloroethylene polymer and from 1 to 4 percent of a compound having the general formula:



wherein X and Y are selected from the group consisting of hydrogen, chlorine, and bromine, and Z is selected from the group consisting of salicyloxy and aliphatic alkyl substituted salicyloxy.

2,898,324

INDUSTRIAL ADHESIVE BONDING AGENT COMPRISING LIQUID MELAMINE MODIFIED UREA FORMALDEHYDE RESIN

Harold A. Mackay, New Brunswick, N.J., assignor to Catalin Corporation of America, a corporation of Delaware

No Drawing. Application April 2, 1956
Serial No. 575,373
7 Claims. (Cl. 260—67.6)

1. The method of making a liquid melamine urea formaldehyde resinous product which comprises the steps of forming an aqueous condensation reaction mixture consisting essentially of formaldehyde and urea in the proportion of about 1.5 to 3.0 mols of formaldehyde for

2,898,330

2,898,333

each mol of urea, adjusting the pH of the reaction mixture with a base to a value between about 6.0 to 10.0, heating the reaction mixture to a temperature between about 80° C. to 102° C. to initiate a condensation reaction between the formaldehyde and urea, continuing such reaction at least to the stage where a sample of the reaction liquid forms a cloud in ice water at infinite dilution but short of the stage where one part of reaction liquid shows a definite cloud in five parts of water at 10° C. and then discontinuing the condensation reaction, adding melamine and additional formaldehyde to the reaction mixture, adjusting the pH of the reaction mixture with a base to a value between about 6.0 to 10.0, heating the reaction mixture to a temperature between about 80° C. to 102° C. to continue the condensation reaction and continuing the reaction to form a liquid resinous product of melamine urea and formaldehyde the additional formaldehyde being added in the proportion to give a final reaction mixture containing about 1.5 to 3.0 mols of formaldehyde for each mol of urea plus melamine and melamine being added in the proportion to give a final reaction mixture containing about 1.5 to 40.0 mols of urea for each mol of melamine.

2,898,325

RESINS FROM STEAM-CRACKED STREAMS COPOLYMERIZED WITH FULVENE-TYPE COMPOUNDS

James V. Fusco, Fanwood, and Stanley B. Mirviss, Roselle, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application August 2, 1954
Serial No. 447,422
9 Claims. (Cl. 260—82)

1. In the process for preparing solid petroleum resins comprising contacting, in a polymerization zone, a steam-cracked petroleum stream boiling in the range from about 20° to 170° C. and having the following composition:

	Weight percent
Aromatics	20–50
Diolefins	10–25
Olefins	66–24
Paraffins	4–1

with an aluminum halide catalyst at a temperature between −30° and +85° C. for a period sufficient to form said petroleum resins; the improvement which comprises adding to said steam-cracked stream 2 to 25 weight percent of monomeric fulvenes, selected from the group consisting of fulvene, dialkyl fulvene, fulvene of indene, and dialkyl fulvene of indene, based on the total mixed streams, prior to polymerization.

2,898,326

POLYMERIZATION OF OLEFINS WITH A CATALYST COMPRISING A HYDRIDE OF BORON AND AN OXIDE OF A METAL OF GROUP 6A

Edwin F. Peters, Lansing, and Bernard L. Evering, Chicago, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application May 2, 1955
Serial No. 505,517
23 Claims. (Cl. 260—88.1)

1. In a process for the production of a normally solid hydrocarbon material, the steps which comprise effecting initial contacting of a normally gaseous olefin with a hydride of boron, consisting of hydrogen and boron in chemical combination, and with an oxide of a metal of Group 6a of the Mendeleef Periodic Table, the concentrations of said hydride and oxide being each at least 0.001% by weight based on said olefin, effecting initial contacting at a low temperature at which substantial polymerization of said normally gaseous olefin does not occur, thereafter subjecting the resultant mixture to polymerization conditions including a suitable temperature between about 0° C. and about 200° C. and a suitable pressure, and separating a normally solid hydrocarbon material thus produced.

2,898,327

POLYMERIZATION OF OLEFINS

William John Gilbert McCulloch, Plainfield, and Arthur W. Langer, Jr., Nixon, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application April 18, 1956
Serial No. 578,891
5 Claims. (Cl. 260—88.1)

1. The process of copolymerizing ethylene with acetylene to obtain a copolymer of improved flexibility and tensile strength and having a molecular weight of 10,000 to 100,000 which comprises contacting the ethylene and acetylene at polymerization conditions with a catalyst system of a reducible titanium halide compound and an alkyl aluminum compound having at least 2 alkyl groups, the acetylene being utilized in an amount of from 1000 to 10,000 parts per million of ethylene feed.

2,898,328

POLYMERISATION OF OLEFINS

Hugh Wilmn Boulton Reed and William Edward Alexander Mitchell, Norton-on-Tees, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application July 8, 1957
Serial No. 670,395
Claims priority, application Great Britain
July 10, 1956
8 Claims. (Cl. 260—93.7)

1. A process for the polymerization of an olefin selected from the group consisting of ethylene, propylene, butene-1, styrene and butadiene, which comprises contacting said olefin at a temperature between −80° C. and 300° C. with a reaction medium comprising the reaction product of a partially oxidized aluminum alkyl and a halide of a metal selected from the group consisting of titanium, vanadium, molybdenum and tungsten, the molecular ratio of aluminum alkyl and halide being in the range of 20:1 to 1:20 and the degree of oxidation of the aluminum alkyl being between 15 and 35 molar percent of that represented by conversion of one of the alkyl groups therein to an alkoxy group, said polymerization being carried out in the presence of a liquid hydrocarbon solvent selected from the group consisting of inert hydrocarbon solvents and unpolymerized olefin.

2,898,329

POLYMERIZATION PROCESS

Allen R. Kittleson, Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application September 29, 1955, Serial No. 537,454
9 Claims. (Cl. 260—94.9)

1. In the process of polymerizing unsaturated hydrocarbons selected from the group consisting of ethylene and propylene in the presence of a polymerizing amount of a catalyst complex of an alkyl aluminum compound containing at least 2 alkyl groups and a titanium halide compound using a molar ratio of alkyl aluminum compound to the titanium compound of about 0.5/1 to 10/1, at a temperature of about 0 to 100° C., and pressure of about 1 to 10 atmospheres, and in the presence of a liquid diluent, the improvement comprising using as diluent an organic liquid comprising at least 50 vol. percent of monochlorobenzene, whereby a catalyst efficiency above 150 grams of polymer per gram of catalyst is obtained.

and its acid addition salts having pharmaceutically ac-

(6)

COH(C6H5)2

claim 1.

proportion of about 1.5 to 3.0 mols of formaldehyde for

2,898,330

NOVEL CATALYST FOR THE POLYMERIZATION OF ETHYLENE

Hrant Iskenjian, Brooklyn, N.Y., assignor to Aries Associates, Incorporated, Stamford, Conn., a corporation of New York

No Drawing. Application January 18, 1957
Serial No. 633,383
11 Claims. (Cl. 260—94.9)

1. The process which comprises polymerizing ethylene in a suspension in an inert organic solvent of a complex of a commercial aluminum halide selected from the group consisting of aluminum chloride and aluminum bromide with from about one-fifth to one-fifteenth the molar amount of a metal compound selected from the group consisting of tetrahydrocarbon tin, tetrahydrocarbon lead, trihydrocarbon tin halide and trihydrocarbon lead halide, said hydrocarbon being selected from the group consisting of alkyl, aryl, aralkyl, and alkaryl hydrocarbons.

2. A catalyst for polymerizing olefins comprising the complex of a commercal aluminum halide selected from the group consisting of aluminum chloride and aluminum bromide with a metal compound selected from the group consisting of tetrahydrocarbon tin, tetrahydrocarbon lead, trihydrocarbon tin halide and trihydrocarbon lead halide, said hydrocarbon being selected from the group consisting of alkyl, aryl, aralkyl, and alkaryl hydrocarbons.

2,898,331

LUBRICANTS

Amos Dorinson, Homewood, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Original application August 3, 1956, Serial No. 602,061. Divided and this application February 27, 1958, Serial No. 721,327
2 Claims. (Cl. 260—125)

1. A sulfur-chlorinated oil-soluble ester of chlorendic acid produced by reacting a sulfur chloride and an oil-soluble chlorendic acid ester in a ratio of about .5 to 2 moles of sulfur chloride to 1 mole of a chlorendic acid ester wherein said ester group is an unsaturated aliphatic hydrocarbon radical containing from 3 to 20 carbon atoms.

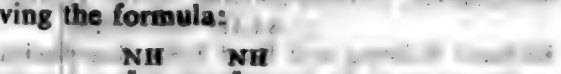
2,898,332

BIGUANIDE AZO DYES

Robert S. Long, Bound Brook, and Sien Moo Tsang, Middlesex, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application November 21, 1957
Serial No. 697,765
9 Claims. (Cl. 260—148)

1. Compounds selected from the group consisting of (*a*) azo dyes obtained by coupling diazonium salts with compounds having the formula:



in which Y and Y' are aromatic carbocyclic radicals of less than three six-membered rings, at least one of Y and Y' being substituted by a hydroxyl group, there being in the said hydroxy substituted radical on the same ring as the hydroxyl group an unsubstituted position capable of coupling and (*b*) metal complexes of the azo dyes of (*a*) derived from a polyvalent metal selected from the group consisting of metals of atomic number 24–30 inclusive, 42–47 inclusive, 58–71 inclusive, 74–80 inclusive, aluminum, lead and zirconium.

2,898,333

METHODS OF TREATING CELLULOSE

Elof Ingvar Jullander, Ornskoldsvik, Sweden, assignor to Mo Och Domsjo Aktiebolag, Ornskoldsvik, Sweden, a corporation of Sweden

No Drawing. Application October 21, 1957
Serial No. 691,165
Claims priority, application Sweden November 14, 1956
6 Claims. (Cl. 260—212)

1. A method of improving cellulose, which comprises reacting cellulose suspended in an aqueous medium with an alkali metal borohydride in the presence of a water-soluble salt of a metal in the group consisting of lithium, magnesium, calcium, strontium and barium.

2,898,334

CELLULOSE SLURRY-STEEPING

Reid Logan Mitchell, James Wesley Berry, and Moody Bacon, Jr., Shelton, Wash., assignors to Rayonier Incorporated, Shelton, Wash., a corporation of Delaware

Application July 26, 1955, Serial No. 524,324
7 Claims. (Cl. 260—233)

1. The process of slurry-steeping chemical cellulose pulp containing up to 0.35% based on the weight of the pulp of natural ether extractable matter in aqueous sodium hydroxide solution to form alkali cellulose, comprising carrying out the slurry-steeping with from about 0.02% to about 0.25% based on the weight of the dry pulp of an added surfactant in the steeping solution and substantially eliminating foaming, floating, flocculation and clumping of the pulp during the slurry-steeping, said surfactant being a water soluble substantially non-ionic compound which consists of the product of a polypropylene oxide containing hydrophobic compound of low water solubility containing at least 2 active hydrogens substituted by at least 2 terminal polyethylene oxide groups each containing from 1.6 to 700 ethylene oxide units.

2,898,335

NITRATING AN N-(2-FURYL) ALKYLIDENE HYDRAZINE COMPOUND

Julian G. Michels, Norwich, N.Y., assignor to The Norwich Pharmacal Company, Norwich, N.Y., a corporation of New York

No Drawing. Application February 28, 1958
Serial No. 718,154
7 Claims. (Cl. 260—240)

1. The process of nitrating a hydrazine derivative of furan to produce an N-(5-nitro-2-furyl) alkylidene hydrazine compound, which comprises adding to a substantially anhydrous menstruum containing an N-(2-furyl) alkylidene hydrazine compound a mixture of concentrated nitric and sulfuric acids, and then precipitating said N-(5-nitro-2-furyl) alkylidene hydrazine compound out of the reaction mixture.

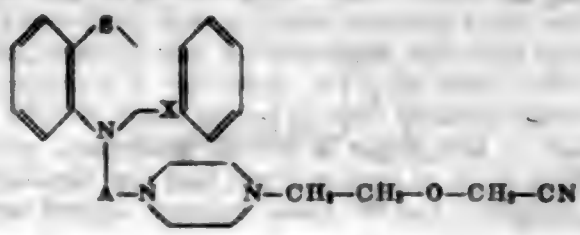
2,898,336

PHENTHIAZINE DERIVATIVES

Paul Galliot, Paris, and Francois Deberre, Esbonne, France, assignors to Societe des Usines Chimiques Rhone-Poulenc, Paris, France, a corporation of France

No Drawing. Application March 24, 1958
Serial No. 723,089
Claims priority, application France April 11, 1957
4 Claims. (Cl. 260—243)

1. A member of the class consisting of a phenthiazine derivative of the general formula:

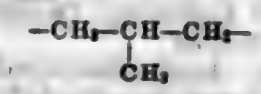


alkyl, phenyl, halogen-substituted phenyl, nitro-substituted phenyl and pyridyl; R_2 is alkyl with 1 to 4 carbon atoms;

and carboxy, in an atmosphere of carbon dioxide under substantially anhydrous conditions to a temperature be-

occur, thereafter subjecting the resultant mixture to polymerization with a catalyst of the group consisting of titanium halides and organometallic compounds of the group consisting of aluminum, zinc, cadmium and tin, the improvement which comprises carrying out said polymerization in the presence of a small amount of a polymerization promoter selected from the group consisting of water, alcohols, ethers, esters, ketones, aldehydes, amines, amides, nitriles, sulfides, sulfoxides, sulfones, sulfonamides, sulfonic acids, sulfonic esters, sulfonic halides, sulfinic acids, sulfinic esters, sulfinic halides, sulfenic acids, sulfenic esters, sulfenic halides, sulfuric acid, sulfurous acid, sulfurous esters, sulfurous halides, phosphines, phosphine oxides, phosphonic acids, phosphonic esters, phosphonic halides, phosphinic acids, phosphinic esters, phosphinic halides, phosphenic acids, phosphenic esters, phosphenic halides, phosphoric acid, phosphorous acid, phosphorous esters, phosphorous halides, arsines, arsine oxides, arsonic acids, arsonic esters, arsonic halides, arsinic acids, arsinic esters, arsinic halides, arsenic acid, arsenious acid, arsenious esters, arsenious halides, stibines, stibine oxides, stibonic acids, stibonic esters, stibonic halides, stibinic acids, stibinic esters, stibinic halides, antimonic acid, antimonious acid, antimonious esters, antimonious halides, bismuthines, bismuthine oxides, bismuthonic acids, bismuthonic esters, bismuthonic halides, bismuthinic acids, bismuthinic esters, bismuthinic halides, bismuthenic acids, bismuthenic esters, bismuthenic halides, bismuthic acid, bismuthious acid, bismuthious esters, bismuthious halides, boranes, borane oxides, boronic acids, boronic esters, boronic halides, borinic acids, borinic esters, borinic halides, boric acid, boric esters, boric halides, metaboric acid, metaboric esters, metaboric halides, silanes, silane oxides, silanols, silicic acid, silicic esters, silicic halides, germanes, germane oxides, germanols, germanic acid, germanic esters, germanic halides, stannanes, stannane oxides, stannanols, stannic acid, stannic esters, stannic halides, plumbanes, plumbane oxides, plumbanols, plumbic acid, plumbic esters, plumbic halides, hydrogen halides, halogens, and oxygen, said promoter being present in an amount sufficient to increase the activity of said catalyst above that obtained in the absence of said promoter but insufficient to destroy the activity of said catalyst, whereby a catalyst efficiency above 150 grams of polymer per gram of catalyst is obtained.

and its acid addition salts having pharmaceutically acceptable anions, wherein A represents the chain selected from $-(CH_2)_3-$ and



and X represents a member of the class consisting of hydrogen and halogen atoms and lower alkyl, lower alkoxy, acetyl, lower alkoxycarbonyl, cyano, methylthio, methanesulphonyl and dimethylsulphamoyl groups.

2,898,337

PROCESS IMPROVEMENT FOR VAT DYES

Justin A. McSheehy, Somerville, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application May 21, 1956
Serial No. 585,941
17 Claims. (Cl. 260—263)

1. In a process of manufacturing vat dyes selected from the group consisting of indanthrone, isodibenzanthrone, pyranthrone and 5,5' - dichloro-7,7'-dimethylthioindigo which comprises as a last manipulation in such manufacture the oxidation of the leuco vat dye to the oxo form, the improvement which comprises bringing about such oxidation by forming a mixture of a solid salt of the leuco vat dye with water, insufficient in amount to dissolve said salt, and a pH lowering agent, such that said mixture has a pH less than 10 but not below 6.5 and is free of reducing agents.

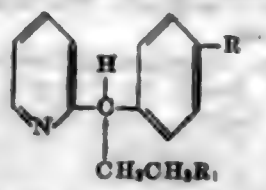
2,898,338

PHENYL, (2-PYRIDYL)PROPANE DERIVATIVES

Frank J. Villani, Cedar Grove, N.J., assignor to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Application June 22, 1954
Serial No. 438,636
5 Claims. (Cl. 260—290)

5. Compounds of the general formula



wherein R is a member of the group consisting of hydrogen, chlorine, bromine, lower alkyl and lower alkoxy and R_1 is a member of the group consisting of chlorine, bromine and hydroxyl.

2,898,339

N-SUBSTITUTED BENZHYDROL, BENZHYDRYL, AND BENZHYDRYLIDENE PIPERIDINE

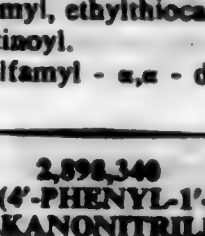
Keith W. Wheeler, Wyoming, and Jay K. Seyler and Frank P. Palopoli, Cincinnati, Ohio, and Frederick J. McCarty, Ann Arbor, Mich., assignors to The Wm. S. Merrell Company

No Drawing. Application July 29, 1957
Serial No. 674,601
6 Claims. (Cl. 260—293.4)

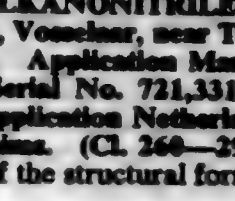
1. Compounds of the formulae selected from the group consisting of

(a)

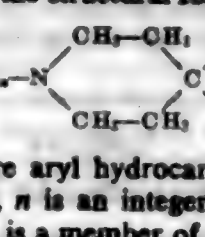
(b)



(c)

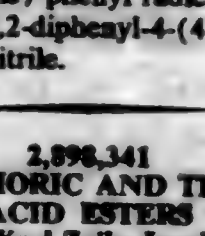


(d)



and

(e)



wherein S indicates that the ring is saturated and R is selected from the group consisting of acetyl, trifluoroacetyl, chloroacetyl, carbethoxy, carboxypropionyl, ethoxalyl, carbamyl, ethylcarbamyl, ethylthiocarbamyl, dimethylsulfamyl and N-isonicotinoyl.

2. N - dimethylsulfamyl - α,α - diphenyl - 4 - piperidine carbinol.

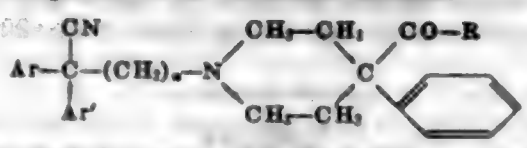
2,898,340

2,2-DIARYL-ω-(4'-PHENYL-1'-PIPERIDINO) ALKANONITRILES

Paul A. J. Janssen, Vosselaar, near Turnhout, Belgium

No Drawing. Application March 14, 1958
Serial No. 721,331
Claims priority, application Netherlands July 5, 1957
8 Claims. (Cl. 260—294.3)

1. A compound of the structural formula



where Ar and Ar' are aryl hydrocarbon radicals of less than 9 carbon atoms, *n* is an integer greater than 1 and smaller than 4 and R is a member of the group consisting of lower alkyl, O-alkyl radicals of less than 8 carbon atoms, -O-(lower alkenyl), -O-cyclopentyl, -O-cyclohexyl, and -O-(lower alkylene)-phenyl radicals.

3. Ethyl ester of 2,2-diphenyl-4-(4'-carboxy-4'-phenyl-1'-piperidino) butyronitrile.

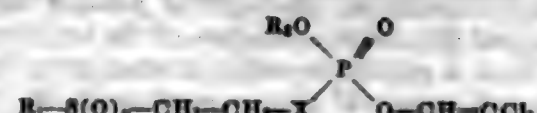
2,898,341

ORGANIC PHOSPHORIC AND THIOPHOSPHORIC ACID ESTERS

Richard Schring and Karl Zeile, Ingelheim, Germany, assignors to C. H. Boehringer Sohn, Ingelheim, Germany, a partnership

No Drawing. Application November 22, 1957
Serial No. 698,067
Claims priority, application Germany November 22, 1956
10 Claims. (Cl. 260—294.8)

1. Compounds having the general structural formula



wherein R_1 is selected from the group consisting of lower

recovering from said reaction zone reaction products comprising 2,3,4,5-bis (Δ² - butenylene) - tetrahydrofu- 11,20-diketopregnane with an amount of acetic anhydride of at least 10 mol per 1 mol of steroid at a temperature

alkyl, phenyl, halogen-substituted phenyl, nitro-substituted phenyl and pyridyl; R_3 is alkyl with 1 to 4 carbon atoms; X is selected from the group consisting of oxygen and sulfur; and *n* is an integer from 1 to 2, inclusive.

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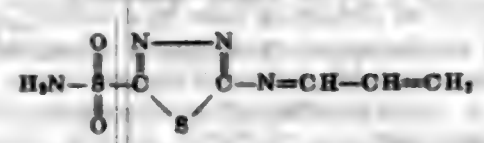
2(2'-PROPENYLIDENE-AMINO)-1,3,4-THIADIAZOLE-5-SULFONAMIDE

Souren Avakian, Oreland, and Gustav J. Martin, Philadelphia, Pa., assignors to The National Drug Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application May 7, 1958
Serial No. 733,490
4 Claims. (Cl. 260—306.8)

1.



2-(2'-propenylideneamino)-1,3,4-thiadiazole - 5 - sulfonamide.

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ANTHRAQUINONE TRIAZOLES

Erwin Klingsberg, Mountainside, N.J., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application November 18, 1957
Serial No. 696,906
6 Claims. (Cl. 260—308)

1. 1,2,4-triazoles substituted in the 3-, 4- and 5-positions, the 3 substituents being a 2-anthraquinonyl radical having in its 1-, 4- and 5-positions substituents selected from the group consisting of hydrogen, nitro, chloro, amino, benzoylamino, thenoylamino and m-trifluoro methyl benzoylamino; the said 2-anthraquinonyl radical having no more than two such substituents, the 4 and 5 substituents in said triazole being aromatic radicals of less than 3 rings, the substituents on which are selected from the group consisting of hydrogen, methyl, methoxy, chloro, bromo, trifluoromethyl, nitro, amino, hydroxy and benzoyl amino, there being no more than two such substituents on said aromatic radicals.

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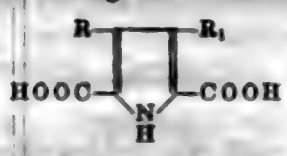
PRODUCTION OF α,α'-DICARBOXY-SUBSTITUTED PYRROLE DERIVATIVES

Hartwig Schütt, Hagen, Westphalia, Germany, assignor to Henkel & Cie, G.m.b.H., Duesseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Application February 4, 1957
Serial No. 637,899
Claims priority, application Germany February 7, 1956
6 Claims. (Cl. 260—326.3)

1. The process of producing α,α'-dicarboxy-substituted pyrrole compounds having the structural formula



wherein R and R_1 are selected from the group consisting of hydrogen, lower alkyl, carboxy and —COO-lower alkyl, which comprises heating a compound having the structural formula

wherein R and R_1 have the meaning indicated above and R_2 is selected from the group consisting of hydrogen and carboxy, in an atmosphere of carbon dioxide under substantially anhydrous conditions to a temperature between about 200° C. and the decomposition temperature of said starting compound in the presence of an alkaline compound selected from the group consisting of the carbonates, bicarbonates, oxides, hydroxides, formates and oxalates of the alkali metals, dissolving the salt of the α,α'-dicarboxy-substituted pyrrole compound formed thereby in water, precipitating the corresponding α,α'-dicarboxy-substituted pyrrole compound by acidifying the aqueous solutions and separating the precipitate from the acidified solution.

2,898,345

SYNTHESIS OF SUBSTITUTED SUCCINYL COMPOUNDS

Robert Y. Heisler and Alfred J. Millendorf, Fishkill, N.Y., assignors to Texaco Inc., a corporation of Delaware

No Drawing. Application February 17, 1956
Serial No. 566,087
4 Claims. (Cl. 260—326.5)

1. In a process for producing a substituted succinyl compound from a monocarboxylic acid of the acrylic acid series wherein the olefinic carbon-to-carbon bond is displaced by at least two methylene radicals from the carboxyl group, the improvement for increasing yield of said succinyl compound which comprises: preforming an amide of said acid by reacting it with an amide of 5–12 carbon atoms, said amine having at least one hydrogen atom attached to the amino nitrogen atom, and thereafter carbonylating the resulting amide with carbon monoxide at temperature of 250–600° F. and pressure above 1000 p.s.i.g. in the presence of an additional quantity of said amine and a cobalt carbonylation catalyst.

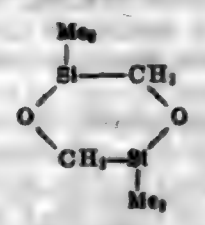
2,898,346

1,1,4,4-TETRAMETHYL-1,4-DISILA-3,6-DIOXACYCLOHEXANE

Benjamin A. Eynon, Midland, Mich., assignor to Dow Corning Corporation, Midland, Mich., a corporation of Michigan

No Drawing. Application February 11, 1957
Serial No. 639,180
1 Claim. (Cl. 260—338)

A composition of the formula



2,898,347

PROCESS FOR REACTING A DIOLEFIN AND A FURFURAL

John C. Hillyer and James T. Edmonds, Jr., Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Application July 5, 1955, Serial No. 519,882
8 Claims. (Cl. 260—346.2)

3. A process for the production of 2,3,4,5-bis (Δ³-butenylene)-tetrahydrofurfural which comprises introducing 1,3-butadiene into a closed reaction zone containing furfural; reacting said 1,3-butadiene with said furfural at a temperature in the range of from about 200° F. to about 600° F. for a period of time between about 1 and 50 hours; controlling the rate at which said 1,3-butadiene is introduced into said reaction zone so as to maintain a pressure therein between about 50 and 150 p.s.i.g.; and

with an amine having an ionization constant, measured in water, of at least 10^{-4}, and subsequently forming a mix- therewith, the improvement which comprises effecting said seeding with crystals of a size greater than about 150

recovering from said reaction zone reaction products comprising 2,3,4,5-bis (Δ^2 - butenylene) - tetrahydrofurfural.

2,898,348
EPOXIDIZED DIACETOGLYCERIDES
Daniel Swern, Philadelphia, and Hogan B. Knight, Spring House, Pa., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Application April 12, 1954
Serial No. 422,706
4 Claims. (Cl. 260—348)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A member of the group consisting of epoxidized diacetoglyceride of lard fatty acids and epoxidized diacetoglyceride of tallow fatty acids.

4. Epoxidized diacetoglyceride of a mixture of lard fatty acids and tallow fatty acids.

2,898,349
PROCESS FOR THE MANUFACTURE OF REACTION PRODUCTS OF EPICHLORHYDRIN AND POLYHYDRIC ALCOHOLS
Paul Zoppinger, Binningen, Walter Hofmann, Basel, and Willi Fisch, Binningen, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss firm
No Drawing. Application March 17, 1954
Serial No. 416,954
Claims priority, application Switzerland March 25, 1953
2 Claims. (Cl. 260—348.6)

1. A single-stage process for the manufacture of a product consisting substantially of polyethers containing at least one glycidyl group, which process comprises reacting ethylene glycol with 1 to 5 mols of epichlorhydrin and about 1 mol of a strong alkali per hydroxyl-equivalent of the ethylene glycol, continuously distilling off water and epichlorhydrin from the reaction mixture, separating the distilled products from each other and returning only the epichlorhydrin to the reaction mixture.

2,898,350
OZONOLYSIS OF COAL-TAR PRODUCTS
Murray G. Sturrock and Edwin L. Cline, Pittsburgh, and Kenneth R. Robinson, Pitcairn, Pa., assignors to Koppers Company, Inc., a corporation of Delaware
No Drawing. Application December 11, 1958
Serial No. 779,529
10 Claims. (Cl. 260—385)

1. Method of making oxidation products of anthracene and phenanthrene and recovering, as separate products, anthraquinone and at least one ortho, ortho' diphenyl derivative from phenanthrene selected from the group consisting of diphenaldehyde, o-hydroxymethyl-o'-carboxydiphenyl, diphenaldehydic acid and diphenic acid comprising passing an azone containing gas stream into a mixture of anthracene and phenanthrene dispersed in a medium consisting of from about 12 to 80% by weight water and about 20 to 88% by weight of an aliphatic alcohol having up to eight carbon atoms to form ozonation products, subjecting said ozonation products to hydrolysis by heating the reaction mixture, and recovering therefrom anthraquinone and at least one of said ortho, ortho' diphenyl derivatives from phenanthrene.

2,898,351
PROCESS FOR THE PREPARATION OF ENOL ESTERS
Almer Middelbeek, Eduard Marie de Graaf, and Pieter Modderman, Oss, Netherlands, assignors to Organon Inc., Orange, N.J., a corporation of New Jersey
No Drawing. Application October 12, 1956
Serial No. 615,450
Claims priority, application Netherlands October 20, 1955
2 Claims. (Cl. 260—397.5)

2. Process for the preparation of $\Delta^{9(11),17}$-3α,11,20-triacetoxypregnadiene which comprises reacting 3α-acetoxy-11,20-diketopregnane with an amount of acetic anhydride of at least 10 mol per 1 mol of steroid, at a temperature between about 20° C. and the boiling point of the reaction mixture, in the presence of ketene and an acetylation catalyst comprising a strong acid, and recovering the pregnadiene ester.

2,898,352
ESTER TYPE SURFACE ACTIVE AGENTS
Leslie Millard Schenck, Westfield, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Application July 29, 1957
Serial No. 674,576
5 Claims. (Cl. 260—400)

1. A process of preparing ester type anionic surface active agents which comprises reacting a mixed anhydride of a fatty acid containing at least 8 carbon atoms and boric acid with a water-soluble salt of a monohydroxyalkane monosulfonic acid.

2,898,353
PREPARATION OF AMIDES
Heinz Schulze, Cincinnati, Ohio, assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Application July 29, 1957
Serial No. 674,575
10 Claims. (Cl. 260—404)

1. The method of producing carboxylic acid amides which comprises reacting a mixed anhydride of boric acid and of an organic carboxylic acid with an amine selected from the group consisting of primary and secondary amines.

2,898,354
PROCESS FOR THE PREPARATION OF CYCLOMATIC MANGANESE TRICARBONYLS
Hymin Shapiro, East Baton Rouge Parish, La., and Earl G. De Witt, Royal Oak, and Jerome E. Brown, Detroit, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Original application July 11, 1955, Serial No. 521,364, now Patent No. 2,818,417, dated December 31, 1957. Divided and this application June 19, 1957, Serial No. 666,743
6 Claims. (Cl. 260—429)

1. A process for the preparation of a cyclopentadienyl manganese tricarbonyl having the general formula

$$AMn(CO)_3$$

wherein A is a cyclopentadienyl hydrocarbon group having from 5 to 17 carbon atoms and wherein the cyclopentadienyl group is bonded to the manganese through the carbons of the cyclopentadienyl ring, comprising reacting carbon monoxide with a di-cyclopentadienyl manganese in which there are two cyclopentadienyl groups each containing from 5 to about 17 carbon atoms and each having a cyclopentadienyl ring bonded directly to the manganese.

2,898,355
PROCESS FOR THE PREPARATION OF CYCLOPENTADIENYL GROUP IV-A METAL DIALKOXY MONOHALIDES
Daniel F. Herman, Orange, N.J., and Roger M. Weil, Brooklyn, N.Y., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey
No Drawing. Application August 25, 1955
Serial No. 530,607
9 Claims. (Cl. 260—429.5)

1. A method for the preparation of organometallic compounds of metals of group IVa of the periodic table which comprises forming a mixture of cyclopentadiene

extraction of said solution with an aqueous solution of

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R_2 is selected from the group consisting of hydrogen pressure therein between about 50 and 150 p.s.i.g.; and

with an amine having an ionization constant, measured in water, of at least 10^{-4}, and subsequently forming a mixture of said first mixture with a group IVa metal compound representable by the formula $(RO)_3MeX_3$, wherein R is an alkyl hydrocarbon radical containing no more than 18 carbon atoms, Me is a metal of group IVa of the periodic table, and X is a halogen atom having an atomic number no higher than 43, thereby forming cyclopentadienyl metal dialkoxy monohalide.

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ORGANOTITANIUM COMPOUNDS AND PROCESS OF PREPARATION

Charles A. Russell, Fair Haven, N.J., assignor to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Application September 6, 1955
Serial No. 532,779
8 Claims. (Cl. 260—429.5)

1. A stable solution consisting essentially of a polyol and a chelated titanium salt of an alpha hydroxy acid, said alpha hydroxy acid being selected from the group consisting of glycolic, lactic, alpha hydroxybutyric, mandelic, malic, citric and tartaric acid, said polyol having from 3 to 8 hydroxy groups and from 3 to 8 carbon atoms, said hydroxy groups in said polyol being present on adjacent carbon atoms, said polyol being selected from the group consisting of saturated and unsubstituted polyhydroxy aliphatic alcohols, inositol, glucose, mannose, N-methylglucamine, methylglucoside and gluconic acid, said solution being stable under alkaline conditions.

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METHOD FOR MAKING TITANIUM DICHLORIDE DIACETATE

Donald Duane, Metuchen, and James M. O'Shaughnessy, Westfield, N.J., assignors to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Application October 15, 1957
Serial No. 690,189
7 Claims. (Cl. 260—429.5)

1. In a process for producing titanium dichloride diacetate powdered material wherein vaporous titanium tetrachloride and vaporous acetic acid are reacted in the vapor state, the improvement comprising: reacting said vaporous titanium tetrachloride and acetic acid at a temperature in the range of from 25° C. to 150° C. and in the presence of a vaporous non-reactive diluent to form titanium dichloride diacetate powdered material and by-product gaseous hydrochloric acid said diluent being added in an amount not less than 1.5 cu. ft./min. per 0.1 lb. tetrachloride, collecting the so-formed titanium dichloride diacetate powdered material, and separating said by-product gaseous hydrochloric acid therefrom said powdered material being substantially free of by-product hydrochloric acid.

2,898,358

RESOLUTION OF ENANTIOMORPHIC MIXTURES

Basil B. Dowling, Skokie, Ill., assignor to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Application July 29, 1957
Serial No. 674,585
11 Claims. (Cl. 260—429.9)

1. In a process for resolving a mixture of the enantiomorphic forms of a normally crystalline, optically active compound selected from the group consisting of glutamic acid, the glutamic acid hydrohalides, and the glutamate salts, wherein an aqueous solution supersaturated with said mixture is seeded with crystals of one such enantiomorph and said enantiomorph is selectively crystallized therefrom, and wherein the unseeded enantiomorph eventually begins to crystallize spontaneously therewith, the improvement which comprises effecting said seeding with crystals of a size greater than about 150 mesh, and separating the resulting solids into at least two fractions according to crystal size, at least one of said fractions having a mesh size at least as great as the minimum mesh size of the seed crystals, and said fraction containing predominantly the seeded enantiomorph.

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IRON CARBONYL-CYCLOPENTADIENE COMPLEXES

Kenneth Leedham, Ashton Hayes, Chester, and Philip James Garner, Hooton, Wirral, England, assignors to Shell Development Company, Emeryville, Calif., a corporation of Delaware

No Drawing. Application January 4, 1954
Serial No. 402,176
Claims priority, application Great Britain January 9, 1953
7 Claims. (Cl. 260—439)

2. A process for preparing an organo-iron compound composed only of the elements iron, carbon, hydrogen and oxygen, said process comprising heating together at a temperature of from about 100° C. to about 200° C. a mixture of iron pentacarbonyl and a cyclodiene of the group consisting of cyclopentadiene and hydrocarbon-substituted cyclopentadienes and recovering from the resulting reaction mixture an organo-iron compound composed only of the elements iron, carbon, hydrogen and oxygen.

2,898,360

PRODUCTION OF DICYCLOPENTADIENYL IRON

John Paul Hogan and Lloyd E. Gardner, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application May 17, 1954
Serial No. 430,423
5 Claims. (Cl. 260—439)

1. A process for the production of dicyclopentadienyl iron which comprises passing cyclopentadiene into a reaction zone in a gaseous stream comprising about 13.2 mol percent hydrogen and having a partial pressure of cyclopentadiene in the range 2 to 50 p.s.i.a.; containing said cyclopentadiene with a reduced alkalized iron oxide-chromium oxide reactant material at a temperature between about 550° F. and 700° F.; and removing from said reaction zone solid material containing dicyclopentadienyl iron.

2,898,361

PREPARATION OF ORGANODISILOXANE ESTERS

Garrett H. Barnes, Jr., Pittsburgh, Pa., assignor to Dow Corning Corporation, Midland, Mich, a corporation of Michigan

No Drawing. Application June 26, 1958
Serial No. 744,686
7 Claims. (Cl. 260—448.2)

1. A process for the preparation of organodisiloxane esters which comprises reacting (I) a compound of the formula $[R_2R'SiOCH_2CHZ(CH_2)_nR_2Si]_2O$, where R is selected from the group consisting of methyl, ethyl, and phenyl radicals, R′ is selected from the group consisting of methyl and ethyl radicals, Z is selected from the group consisting of H and a methyl radical, and n is an integer of from 1 to 2 inclusive, with (II) a monocarboxylic acid; by contacting (I) and (II) in a liquid phase.

2,898,362

RECOVERY OF CHEMICALS FROM HYDROCARBON SOLUTIONS

Clifton S. Goddin, Jr., and James F. Magness, Tulsa, Okla., assignors to Pan American Petroleum Corporation, Tulsa, Okla., a corporation of Delaware

Application May 13, 1957, Serial No. 658,770
12 Claims. (Cl. 260—450)

1. In a process for the removal of nonacid oxygenated organic chemicals from a hydrocarbon solution thereof by

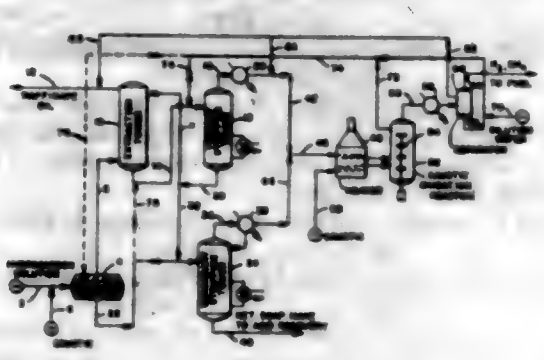
2,898,368

PRODUCTION OF VITAMIN A AND

2,898,373

STABILIZATION OF PANTHENOL

extraction of said solution with an aqueous solution of relatively nonsurface-active salts of carboxylic acids, the improvement which comprises subjecting said hydrocarbon solution to an extraction step with an aqueous solution of relatively nonsurface-active salts of carboxylic acids, said salts being prepared in a manner hereinafter described, subjecting the resulting chemical-rich aqueous



salt extract to a stripping step to take overhead dissolved chemicals, subjecting the latter to caustic oxidation to produce carboxylic acid salts, forming an aqueous solution (1) of the last mentioned salts, combining solution (1) with the feed to said stripping step, withdrawing a lean aqueous salt solution from said stripping step, and employing a major portion thereof as the extractant in said extraction step.

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ISOCYANATO-MUSTARD OILS

Günther Nischk, Leverkusen, Germany, assignor, by direct and mesne assignments, of one-half to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany, and one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Application November 17, 1955
Serial No. 547,553
Claims priority, application Germany November 19, 1954
4 Claims. (Cl. 260—454)

1. Process for producing isocyanato-mustard oils which comprises reacting phosgene with an intramolecular ammonium salt of a dithiocarbamic acid of the general formula $NH_3^+—R—NHCSS^-$ in which R is a member selected from the group consisting of alkylene and cycloalkylene radicals.

2,898,364

METHOD OF MAKING PERFLUORINATED PHOSPHATE ESTERS AND RESULTING NEW CHEMICAL COMPOUNDS

James Carroll Cosly, East Paterson, N.J., assignor to Douglas Aircraft Company, Inc., Santa Monica, Calif.

No Drawing. Application October 25, 1954
Serial No. 464,622

5 Claims. (Cl. 260—461)

1. The method of making a perfluorinated trialkyl phosphate ester represented by the formula

$$(C_nF_{2n+1})_3PO_4$$

in which n is an integer from 3 to 8 which comprises reacting the corresponding fluorinated and chlorinated phosphate ester represented by the formula

$$(C_{n-1}F_{2n-1}CCl_2)_3PO_4$$

in which n is an integer from 3 to 8 with a member selected from the group consisting of CoF_3, AgF_2, CuF_2, SbF_5 and SbF_3Cl_2 until all the chlorine atoms in said ester are replaced with fluorine atoms.

2,898,365

PROCESS FOR MANUFACTURE OF ARENEBORONIC ACIDS

Robert M. Washburn, Whittier, and Charles F. Albright, West Covina, Calif., assignors to American Potash & Chemical Corporation, a corporation of Delaware

No Drawing. Application December 5, 1956
Serial No. 626,276

7 Claims. (Cl. 260—462)

1. A process comprising: forming a body of ether; rapidly agitating said body of ether whereby to form a reaction zone; forming separate bodies of trimethyl borate and an ethereal solution of an aryl Grignard reagent wherein said aryl radical is selected from the class consisting of naphthyl, phenyl and lower alkyl and chloro-substituted phenyl; simultaneously adding a stream of said trimethyl borate and a stream of said ethereal solution of said Grignard reagent to said zone, the addition of said reactants being carried out at such a rate that stoichiometric quantities of said reactants are provided at all times to substantially completely react each of said reagents one with the other, whereby to form a dimethyl ester of an areneboronic acid; and throughout the period of reaction maintaining the temperature of the reaction zone at between about −60° C. and about +15° C.

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SYNTHESIS OF ESTERS OF LOWER ALIPHATIC ALCOHOLS

Lawrence G. Hess and Helmut W. Schulz, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application August 5, 1957
Serial No. 676,443

9 Claims. (Cl. 260—488)

1. In a process for the production of esters of lower alkanols wherein the ester formed contains one more carbon atom than the sum of the carbon atoms of two alkanol molecules in which a lower alkanol is reacted with carbon monoxide, the improvement which comprises carrying out the reaction in the presence of a catalytic amount of a nickel salt of a lower alkanoic acid promoted with a minor amount of a compound selected from the group consisting of iodine and hydrogen iodide at a temperature in the range of from 325° C. to 400° C. under superatmospheric pressures in the range of from 3000 to 6000 pounds per square inch absolute.

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SYNTHESIS OF ESTERS OF LOWER ALIPHATIC ALCOHOLS

Lawrence G. Hess and Helmut W. Schulz, Charleston, W. Va., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application August 5, 1957
Serial No. 676,444

8 Claims. (Cl. 260—488)

1. A process for the production of esters of lower alkanols wherein the ester formed contains one more carbon atom than the sum of the carbon atoms of two alkanol molecules which comprises reacting a lower alkanol with carbon monoxide in the presence of a catalyst selected from the group consisting of nickel and nickel carbonyl and promoted with a minor amount of hydrogen iodide, at a temperature in the range of from 325° C. to 400° C. and under superatmospheric pressures in the range of from 3000 to 6000 pounds per square inch absolute, and separating from the resultant reaction mixture the esters of the lower aliphatic alcohols.

acid at 175–190° C., thereby effecting liberation of CO_2 and acid chloride functional groups which comprises con-

2,898,368
PRODUCTION OF VITAMIN A AND VITAMIN A ESTERS

Horst Pommer, Ludwigshafen (Rhine), Germany, assignor to Badische Anilin- & Soda-Fabrik Aktiengesellschaft, Ludwigshafen (Rhine), Germany

No Drawing. Application December 23, 1957
Serial No. 704,256
Claims priority, application Germany December 24, 1956
6 Claims. (Cl. 260—488)

1. A process for the oxidation of axerophten to the vitamin A alcohol stage which comprises allowing selenium dioxide in at least about an equivalent amount to act on axerophten at a temperature not lower than −20° C. and below that at which preponderating amounts of by-products are formed

2,898,369
N,N,N',N'' TETRAETHYL GUANIDINE AND ITS ACID ADDITION SALTS

Cornelius K. Cain, Flemtown, Pa., assignor to McNeil Laboratories, Incorporated, Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Application February 23, 1956
Serial No. 567,085
7 Claims. (Cl. 260—501)

1. Guanidine derivatives selected from the group consisting of N,N,N',N''-tetraethylguanidine and its pharmaceutically acceptable acid addition salts.

2,898,370
SURFACE-ACTIVE SULFONATED PRODUCT

Albert I. Rachlin, Hackensack, N.J., assignor to Allied Chemical Corporation, a corporation of New York

No Drawing. Application December 4, 1957
Serial No. 700,539
9 Claims. (Cl. 260—505)

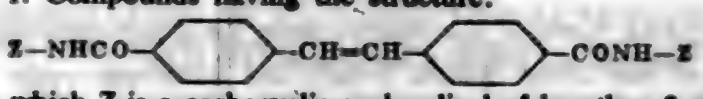
1. In the process of producing a surface-active sulfonated product of the higher alkylbenzene sulfonate type by sulfonating a higher alkylbenzene with an excess of a sulfuric acid sulfonating agent, thereby forming a reacted sulfonation mixture containing a sulfonated higher alkylbenzene and sulfuric acid, the improvement which comprises reacting a sulfonatable organic compound boiling below 150° C. at atmospheric pressure and selected from the group consisting of alkylbenzenes and monohalogenated benzenes with sulfuric acid contained in a mixture of said type, while removing water from said mixture by joint vaporization with said compound, whereby a higher alkylbenzene sulfonic acid product is obtained which, in the sodium salt form, contains less than 1% by weight of salts insoluble in 90% ethyl alcohol.

2,898,371
STILBENE DICARBOXYLIC ACID AMIDES

Robert S. Long, Round Brook, and Sien Moo Tsang, Middlesex, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application December 16, 1957
Serial No. 702,798
6 Claims. (Cl. 260—507)

1. Compounds having the structure:



in which Z is a carbocyclic aryl radical of less than 3 six membered rings further substituted by at least one group selected from hydroxy, amino, acetoacetamido, and pyrazonyl.

2,898,372
MOLD INHIBITING PROCESS AND PRODUCT

Arnold T. Andersen, Lewiston, N.Y.

No Drawing. Application March 14, 1958
Serial No. 721,343
1 Claim. (Cl. 260—548)

Calcium acetate propionate.

2,898,373
STABILIZATION OF PANTHENOL

Heinrich Kiliani, Riehen, near Basel, Switzerland, assignor to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Application August 29, 1957
Serial No. 680,969
Claims priority, application Switzerland September 24, 1956
10 Claims. (Cl. 260—561)

1. A stabilized aqueous solution comprising panthenol wherein the stabilizer for panthenol is a member of the group consisting of a lactone of a hydroxycarboxylic acid, said lactone containing 4 to 6 carbon atoms in the lactone ring, and polylactic acid.

6. A stabilized aqueous panthenol solution wherein the panthenol is stabilized by the presence of about 2 to about 25% by weight of γ-butyrolactone.

2,898,374
NUCLEUS ALKYLATED PHLORACYLOPHENONES AND PROCEDURE FOR THE PRODUCTION OF SUCH COMPOUNDS

Wolfgang Riedl, Munich, Germany, assignor to Schwarz Laboratories, Inc., a corporation of New York

No Drawing. Application January 27, 1958
Serial No. 484,585
Claims priority, application Germany March 1, 1954
11 Claims. (Cl. 260—586)

1. Process for the production of nucleus substituted phloracylophenones which comprises exchange of the alkali metal salts of phloracylophenones with a halide selected from the group consisting of primary and secondary alkyl, alkenyl and aralkyl halides having less than twenty carbon atoms in a liquid having a dielectric constant between 10 and 88, such liquid being selected from the group which consists of lower alkanols, lower ketones, water and mixtures thereof.

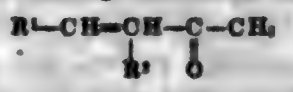
11. 1-acetyl, 3,3,5,5-tetra alkyl, cyclohexa-1-ene-2-ol-4,6,dione in which the alkyl is a lower alkyl.

2,898,375
CYCLIC KETONES AND PROCESS FOR PREPARING INTERMEDIATES THEREFOR

Waldemar Gaex and Otto Isler, Basel, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

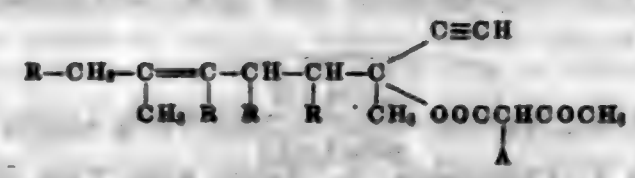
No Drawing. Application September 29, 1955
Serial No. 537,561
Claims priority, application Switzerland October 5, 1954
5 Claims. (Cl. 260—586)

1. A compound having the formula



wherein R^1 represents a radical selected from the group consisting of 2',6',6'-trimethylcyclohexen-(2')-yl and 2',5',6',6'-tetramethyl-cyclohexen-(2')-yl, and R^2 represents an unsaturated acyclic hydrocarbon radical of three carbon atoms.

5. A process which comprises heating an α-substituted acetoacetate having the general formula

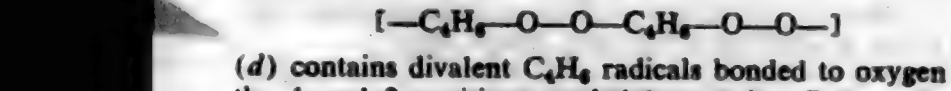


wherein R represents a member selected from the group consisting of hydrogen and a methyl group and at least 3 of the groups represented by R denote hydrogen, and A represents a radical having not more than three carbon atoms selected from the group consisting of alkyl radicals and alkenyl radicals,

in an inert solvent in the presence of a weak carboxylic

which comprises passing vaporized symmetrical tetra- diesters thereof and 1,18-di-(2,6,6-trimethyl-1-cyclohex-

acid at 175–190° C., thereby effecting liberation of CO_2 and rearrangement and producing a ketone having the formula



wherein the R's and A have the same meaning as above.

2,898,376

PRODUCTION OF BENZONITROCYCLIC KETONES

Henry Feuer, West Lafayette, Ind., and James W. Shepherd, Mars, Pa., assignors to Purdue Research Foundation, Lafayette, Ind., a corporation

No Drawing. Application March 1, 1957
Serial No. 643,238
2 Claims. (Cl. 260—590)

1. A process for the production of 2-nitro-1-tetralone which comprises adding amyl nitrate to a mixture of α-tetralone and an excess of potassium t-butoxide in solution in tetrahydrofuran at a temperature of about —30° C. to obtain potassium 2-nitro-1-tetralone, acidifying the potassium salt to obtain 2-nitro-1-tetralone.

2,898,377

POLYMERIC BUTADIENE PEROXIDE

Carleton T. Handy and Henry S. Rothrock, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application February 27, 1953
Serial No. 339,446
5 Claims. (Cl. 260—610)

1. Normally liquid polymeric butadiene peroxide which can be heated to about 150° C. without complete decomposition, said polymeric butadiene peroxide being one which (*a*) has an average composition corresponding to the formula $(C_4H_6O_2)_x$, where x is 4 to 10, (*b*) contains substantially all its oxygen as titratable peroxide, (*c*) contains units of the formula

$$[—C_4H_6—O—O—C_4H_6—O—O—]$$

(*d*) contains divalent C_4H_6 radicals bonded to oxygen in the 1 and 2 positions, and (*e*) contains C_4H_6 radicals bonded to oxygen in the 1 and 4 positions.

2,898,378

UNSATURATED ETHERS

Frank G. Young, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Application May 31, 1956
Serial No. 588,215
14 Claims. (Cl. 260—611)

1. A method of producing ethers which comprises forming a mixture of alcohols, other than tertiary alcohols possessing hydrogen on the carbon atoms adjacent to the hydroxy containing carbon, and containing a carbon-to-carbon double bond between the carbon atoms adjacent to the hydroxy containing carbon and a catalyst composed of a mercury salt and an acidic compound containing boron and fluorine and heating to a temperature from 25° C. to the boiling point of said mixture.

12. A member selected from the group consisting of bis(2-ethyl-2-hexenyl)ether and allyl 2-cyclopentenyl ether.

2,898,379

REDUCTION OF COMPOUNDS WITH AMINE BORANES

David L. Chamberlain, Jr., Menlo Park, Calif., and William H. Schechter, Zelienople, Pa., assignors to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Application June 18, 1957
Serial No. 666,464
9 Claims. (Cl. 260—618)

1. That method of reducing organic functional groups selected from the class consisting of aldehyde, ketone and acid chloride functional groups which comprises contacting a compound containing at least one organic functional group selected from the said class with an amine-borane in which at least one hydrogen atom is attached to a boron atom, at a temperature sufficient to effect reduction of said functional group but insufficient to cause decomposition of said compound and its reduction product whereby said functional group is reduced, and recovering the reduction product from the mixture.

2,898,380

PRODUCTION OF ALPHA-TERPINEOL

Richard Herrlinger, Panama City, Fla., and Murray Garber, Norwalk, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application March 27, 1958
Serial No. 724,275
6 Claims. (Cl. 260—631.5)

1. In a method of producing alpha-terpineol from a pinene-containing material which includes reacting the pinene-containing material with sulfuric acid to form a crude agglomerated reaction mixture containing terpin hydrate, occluded sulfuric acid, unreacted pinene-containing materials and oily by-products, removing a substantial portion of the sulfuric acid, and then dehydrating the terpin hydrate to form alpha-terpineol, the improvement which comprises treating the crude agglomerated reaction mixture with a small amount of a hydrocarbon solvent, sufficient to reduce the viscosity of the crude reaction mixture and to break up the agglomerates therein, and then washing with aqueous media to effectively reduce the occluded sulfuric acid content to a predetermined maximum concentration for the subsequent dehydration of the terpin hydrate to alpha-terpineol, whereby the necessity of isolating and purifying the terpin hydrate is obviated.

2,898,381

STYRENE DERIVATIVES AND PROCESS FOR PREPARING SAME

Samuel W. Tinsley, South Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Application December 5, 1955
Serial No. 550,853
11 Claims. (Cl. 260—646)

1. The process of preparing p-nitrostyrene dichloride which comprises nitrating styrene dichloride at a temperature below about 0° C.

2,898,382

HALOGENATED COTELOMERS

William S. Barnhart, Cranford, N.J., assignor, by mesne assignments, to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Application July 1, 1954
Serial No. 440,870
3 Claims. (Cl. 260—653)

3. A compound having the structural formula

$$ClCF_2CH_2CFXCFYCl$$

in which X and Y are selected from the group consisting of fluorine and chlorine and are not the same.

2,898,383

DEHYDROCHLORINATION OF TETRACHLOROETHANE

Douglas H. Eisenlohr, Barberton, and Robert D. Shelton, Cincinnati, Ohio, assignors to Columbia-Southern Chemical Corporation, Allegheny County, Pa., a corporation of Delaware

No Drawing. Application August 27, 1958
Serial No. 757,447
9 Claims. (Cl. 260—654)

1. In the method of catalytically dehydrochlorinating symmetrical tetrachloroethane to trichloroethylene

2,898,384

PRODUCTION OF AROMATIC HYDROCARBONS

benzene in the next succeeding lower stage by the addi-

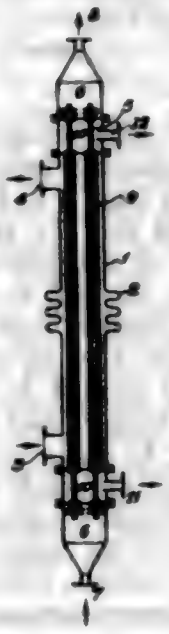
which comprises passing vaporized symmetrical tetrachloroethane through a dehydrochlorination catalyst-containing zone, said catalyst being capable of catalytically dehydrochlorinating tetrachloroethane, the improvement which comprises establishing a temperature of between 350° F. and 700° F. in said zone, correlating the rate at which tetrachloroethane is fed into the zone and the temperature therein to convert from between 50 to 85 percent tetrachloroethane to trichloroethylene, analyzing the product composition to determine the degree of conversion and in response to such analysis raising the zone temperature to maintain a 50 to 85 percent conversion throughout the reaction, separating unconverted tetrachloroethane from the product composition and recycling thusly separated tetrachloroethane to the catalyst-containing zone.

2,898,384

PROCESS FOR THE THERMAL CHLORINATION OF HYDROCARBONS

Jacques Viriot, Tavaux-Cites, France, assignor to Solvay & Cie, Brussels, Belgium, a Belgian company

Application August 9, 1955, Serial No. 527,326
Claims priority, application Netherlands August 10, 1954
4 Claims. (Cl. 260—658)



1. Process of manufacturing chloromethanes solely by thermal chlorination of at least one compound selected from the group consisting of methane and partially chlorinated methane, which comprises the steps of preheating a mixture consisting essentially of chlorine and said compound to a temperature between 150 and 250° C., introducing said mixture into at least one annular reaction zone, introducing gases at a temperature of about 400–600° C. to heat the inner surface of said zone, and introducing a fluid at a temperature of about 50° C. to cool the outer side of said zone, said zone being free from filling material.

2,898,385

PREPARATION OF 15,15'-DEHYDRO-β-CAROTENE

Otto Isler, Basel, Herbert Lindlar, Reinach, Basel-Land, Marc Montavon and Rudolf Rüegg, Basel, and Paul Zeller, Neuallschwil, Switzerland, assignors to Hoffmann-La Roche Inc., Nutley, N.J., a corporation of New Jersey

No Drawing. Application December 9, 1955
Serial No. 551,984
Claims priority, application Switzerland
December 17, 1954
6 Claims. (Cl. 260—666)

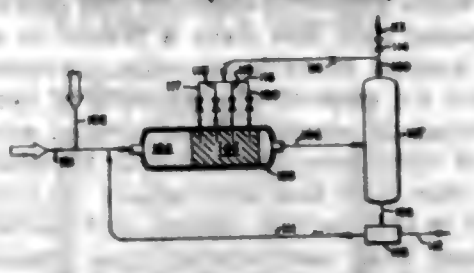
1. A process for the preparation of 15,15'-dehydro-β-carotene which comprises subjecting a compound selected from the group consisting of 1,18-di-(2,6,6-trimethyl-1-cyclohexen-1-yl)-3,7,12,16 - tetramethyl - 2,4,6,12,14,16-octadecahexaen-9-yne-8,11-diol and lower alkanoic acid diesters thereof and 1,18-di-(2,6,6-trimethyl-1-cyclohexylidene)-3,7,12,16-tetramethyl - 2,4,6,12,14,16 - octadecahexaen-9-yne-8,11-diol and lower alkanoic acid diesters thereof to allyl rearrangement-dehydration by the action of a hydrohalic acid.

2,898,386

CATALYTIC PROCESS FOR CONVERSION OF HYDROCARBONS IN THE PRESENCE OF IODINE

John H. Raley, Walnut Creek, Richard D. Mullineaux, Oakland, and Seaver A. Ballard, Orinda, Calif., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

Application February 6, 1956, Serial No. 563,660
17 Claims. (Cl. 260—666)



1. A process for converting a first hydrocarbon containing at least two carbon atoms and containing non-aromatic carbon-to-hydrogen bonds into at least a second different hydrocarbon containing a new carbon-to-carbon linkage and having a higher carbon-to-hydrogen ratio which comprises contacting in a reaction zone a mixture comprising said first hydrocarbon and hydrogen iodide in vapor phase at a temperature in the range from 300° to 800° C. with a catalyst capable of converting hydrogen iodide to elemental iodine and hydrogen, said catalyst being selected from the group consisting of platinum, palladium, rhodium and nickel-molybdenum-iron-chromium alloy to produce a mixture comprising said first hydrocarbon and iodine and subjecting the later mixture in at least one reaction zone which may comprise the aforementioned reaction zone to conditions including a temperature in the range from 300° to 800° C. suitable for conversion of said first hydrocarbon and iodine to at least said second hydrocarbon and hydrogen iodide whereby the ultimate yield of said second hydrocarbon is at least about 140% of the stoichiometric amount based on the amount of originally charged iodine reacted.

2,898,387

PROCESS FOR THE HYDROGENATION OF HYDROCARBONS

John W. Teter, Chicago, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Application July 29, 1955
Serial No. 525,373
11 Claims. (Cl. 260—667)

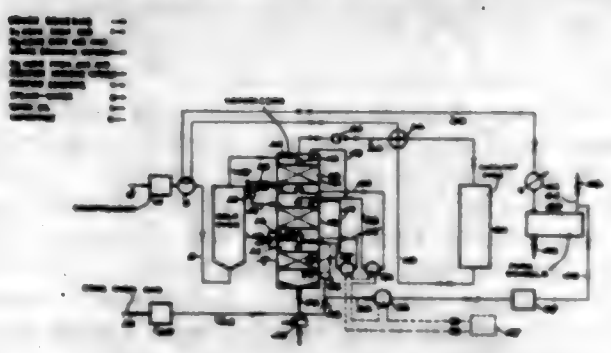
3. A method for producing cyclohexane by the vapor phase hydrogenation of benzene which comprises subjecting benzene to contact at hydrogenating conditions with hydrogen and a platinum-alumina catalyst, comprising calcined alumina and a platinum group metal which catalyst is characterized by large pore, high area base structure essentially composed of gamma alumina modifications resulting from the drying and calcination of a mixture of precursor hydrous alumina phases containing from about 65% to about 95% of trihydrate, said catalyst containing from about 0.1% to about 1% by weight of a platinum metal, said platinum metal being present in sufficiently finely divided form as to exhibit, by X-ray diffraction studies, the substantial absence of crystallites and crystals of size larger than 50 angstrom units, said catalyst after calcining and before use having an area (BET method) of from about 350 to about 550 square meters per gram and having about 0.1 to about 0.5 cubic centimeter per gram of pore volume in the pore size range of about 100 to 1000 angstrom units.

selected from the glass consisting of aldehyde, ketone symmetrical tetrachloroethane to trichloroethylene

2,898,388
PRODUCTION OF AROMATIC HYDROCARBONS
James O. Maloney and Morris Teplitz, Lawrence, Kans., assignors to The Kansas University Endowment Association, Lawrence, Kans., a nonprofit corporation of Kansas
No Drawing. Application October 12, 1953
Serial No. 385,712
9 Claims. (Cl. 260—673.5)

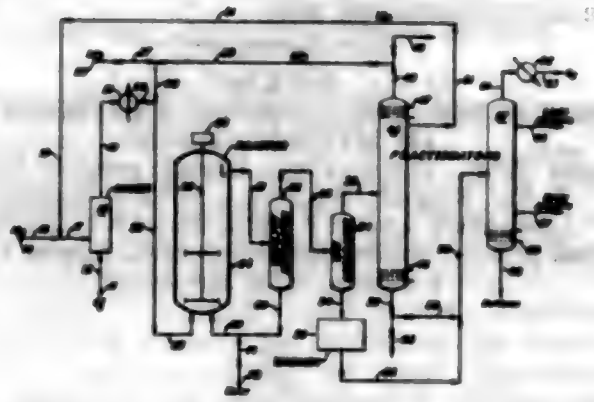
1. A process for producing aromatic hydrocarbons comprising passing a feed stream containing aliphatic hydrocarbons having at least 6 carbon atoms connected together in a linear chain into a reaction zone having a dehydrogenation catalyst therein capable of catalyzing the reaction to produce aromatic hydrocarbons, passing oxide of sulfur providing materials into said reaction zone in an amount such that there is present in said reaction zone an amount of oxide of sulfur corresponding to at least about 0.4 mole of SO_2 per mole of hydrocarbon to be converted to aromatic hydrocarbon, controlling the amount of sulfur providing materials introduced into said reaction zone such that substantially no oxide of sulfur is present in the reaction effluent, and recovering a reaction effluent from said reaction zone containing a substantially increased amount of aromatic hydrocarbons resulting from the conversion of said aliphatic hydrocarbons.

2,898,389
PROCESS FOR PURIFICATION OF BENZENE
Adolf Schmalenbach, Essen-Stadtwald, Germany, assignor, by mesne assignments, to Koppers Company, Inc., Pittsburgh, Pa., a corporation of Delaware
Application January 27, 1955, Serial No. 484,522
4 Claims. (Cl. 260—674)



1. In a process of purification of crude benzene compounds which comprises, heating the benzene first in liquid state under pressure to form polymers from impurities, then subjecting it to a holding treatment for formation of polymer from the impurities, vaporizing the benzene leaving a residue of the polymers of the impurities, and finally pressure refining the crude benzene compounds in the vapor phase with hydrogen containing coke oven gas under pressure at increased temperature above 320° C. in the presence of a catalyst; the improvement comprising effecting the aforesaid vaporization of the benzene in several successive stages in the absence of indirect heat but in the presence of, and under saturation by, an upflow of the hydrogen containing coke oven gas and downflow of the liquid benzene to be purified in each stage at a temperature not higher than 210° C. in such manner that in each stage a part of the liquid is vaporized at a temperature below the vaporization point of the polymerized impurities with a temperature decrease of the liquid residue of that stage, and the vapors and gases from each lower stage pass on into and through the next upper stage, supplying all the heat for effecting said vaporization in said stages at a temperature not higher than 210° C. at a region outside said stages by withdrawing liquid residue separately from each upper stage and heating the liquid withdrawn from each upper stage again, without noteworthy formation of vapors, up to the same temperature again for further vaporization of benzene in the next succeeding lower stage by the addition of all heat by indirect heating outside the stages, returning the so heated liquid from each upper stage to the next lower stage and effecting vaporization of additional benzene therein, and withdrawing from the lowest stage a liquid residue containing the polymer.

2,898,390
ALKYLATION PROCESS
Joe T. Kelly, Dickinson, and Harmon M. Knight, La Marque, Tex., assignors to The American Oil Company, Texas City, Tex., a corporation of Texas
Application January 8, 1958, Serial No. 707,735
11 Claims. (Cl. 260—683.44)



1. An alkylation process comprising contacting (*a*) an alkylatable feed hydrocarbon from the class consisting of (1) isoparaffin having from 4 to 8 carbon atoms and (2) aromatic hydrocarbon and (*b*) an olefin having from 2 to 12 carbon atoms, in the presence of a catalyst comprising essentially (*i*) an alkyl hydrogen phosphate ester having at least one hydrogen atom and at least one alkyl group containing from 1 to 13 carbon atoms, and (*ii*) BF_3, said BF_3 being present in an amount in excess of about 1 mole per mole of said ester, at a temperature between about −30° C. and a temperature substantially below the temperature at which said ester decomposes, and at a pressure sufficient to maintain a substantial portion of said reactants in the liquid state, and separating a hydrocarbon product mixture containing alkylate product of said feed hydrocarbon and said olefin.

2,898,391
NATURAL RUBBER COMPOSITION CONTAINING A PYROGENICALLY FORMED MIXTURE OF SILICA AND ANOTHER METAL OXIDE AND PROCESS OF PREPARATION
Ernst Wagner, Rheinfelden, Baden, and Hermann Westlinning, Stolzheim, Post Hermulheim, near Koln (Rhine), Germany, assignors to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt am Main, Germany, a corporation of Germany
No Drawing. Application December 10, 1954
Serial No. 474,606
Claims priority, application Germany December 15, 1953
3 Claims. (Cl. 260—762)

1. A new composition comprising a vulcanizable natural rubber compound containing as reinforcing filler a mixture of silica and another metal oxide selected from the group consisting of alumina, titania, and mixtures thereof the proportion of other metal oxide to silica being in the range 1:20 to 8:20 parts by weight, said mixture of metal oxides being the product of hydrolysis of a mixture of the corresponding metal halides at elevated temperatures and consisting of particles no larger than about 50 millimicrons in equivalent spherical diameter.

ERRATUM

For Class 13—16 see:
Patent No. 2,897,599

the insulator bore, the improvement comprising a sub- subcarrier single side-band components representative

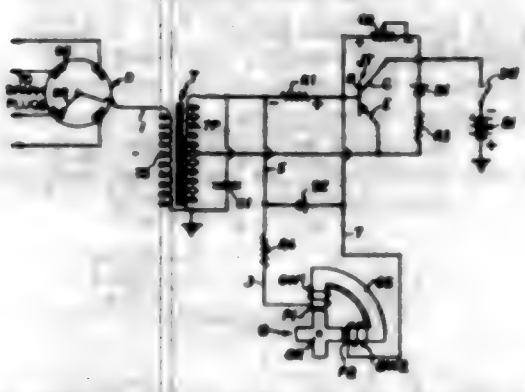
cyclohexen-1-yl)-3,7,12,16 - tetramethyl - 2,4,6,12,14,16-octadecahexaen-9-yne-8,11-diol and lower alkanoic acid units.

ELECTRICAL

2,898,392
IGNITION SYSTEMS

Ralph L. Jaeschke, Kenosha, Wis., assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio

Application August 19, 1957, Serial No. 678,952
8 Claims. (Cl. 123—149)

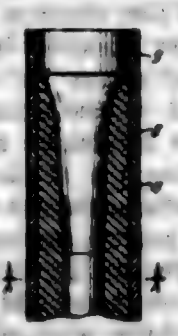


1. In an ignition system for an internal-combustion engine having a plurality of spark plugs and a distributor having a rotor driven by the engine, said distributor being electrically interconnected to said plugs to supply sequentially thereto a series of timed high-voltage high-frequency electrical pulses; means for generating said series of timed high-voltage pulses comprising an oscillator having an LC resonant tank circuit, a step-up transformer including at least a portion of the inductance of said tank circuit in the primary winding thereof and having a secondary winding electrically connected to said distributor rotor, said oscillator including a transistor and a biasing resistor responsive to a voltage of predetermined amplitude to actuate said oscillator, and a generator driven by said engine in timed relation therewith, said generator being connected to vary the voltage across said biasing resistor and adapted to provide a series of shaped electrical pulses having a wave form the amplitude and slope of the leading edge of which are functions of engine speed, whereby the time of actuation of said oscillator is increasingly advanced as the engine speed increases.

2,898,393
ELECTRODE ARRANGEMENT

Franz Bronstert, Frankfurt am Main, Germany, assignor to Accumulatoren-Fabrik Aktiengesellschaft, Werk Hagen, Hagen, Westphalia, Germany

Application August 17, 1956, Serial No. 604,755
Claims priority, application Germany August 18, 1955
6 Claims. (Cl. 136—43)

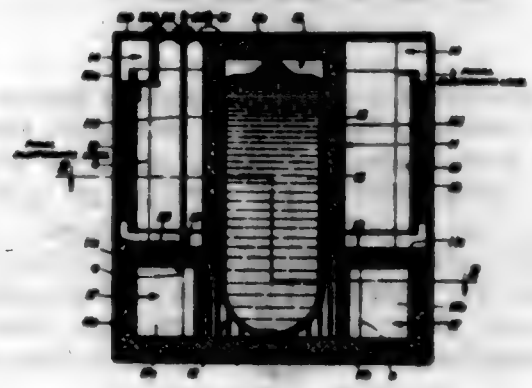


5. In an electrode arrangement, in combination, a plurality of substantially vertical electrode rods spaced from each other; a plurality of substantially horizontal electrically conductive members interconnecting said spaced electrode rods; a body of active mass at least partially surrounding each of said electrode rods, respectively; and a tubular, electrolyte-permeable covering about each of said bodies of active mass, respectively, said covering consisting essentially of glass fibers having a diameter of less than 10 μ and having a chemical composition of between 68 and 72% SiO_2, between 5 and 3% of at least one substance selected from the group consisting of Al_2O_3 and Fe_2O_3, between 9 and 11% CaO, between 7 and 5% Na_2O, and between 11 and 9% K_2O.

2,898,394
DEFERRED ACTION BATTERIES

Philip S. Williams, Tulsa, Okla., assignor to the United States of America as represented by the Secretary of the Navy

Application April 29, 1944, Serial No. 533,372
10 Claims. (Cl. 136—90)

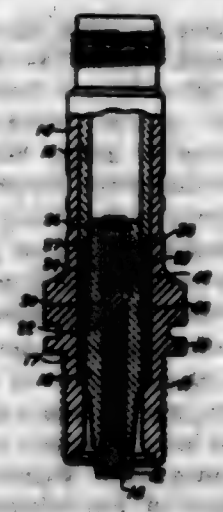


1. A battery subject to setback and centrifugal forces, comprising a casing, an insulating form defining a small diameter chamber and a communicating large diameter chamber, the form being fitted in said casing to define a secondary chamber between the wall of the small diameter chamber and the wall of the casing, an electrode in said secondary chamber, electrodes mounted radially in the large diameter chamber of said form, each electrode comprising an anode and a cathode plate, a frangible ampoule mounted in the small diameter chamber and extending into the large diameter chamber, an electrolyte in said ampoule, and means for conducting said electrolyte under the influence of centrifugal force from the large diameter chamber into said secondary chamber when liberated into the large diameter chamber from the ampoule.

2,898,395
SPARK PLUG SEAL

Harry G. Schaurecht, Detroit, Mich., assignor to Champion Spark Plug Company, Toledo, Ohio, a corporation of Delaware

Application August 4, 1954, Serial No. 447,791
8 Claims. (Cl. 174—152)



1. In a spark plug assembly comprising an insulator having a central bore and an electrode part supported in

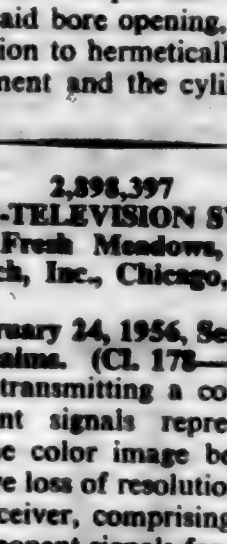
control electrode and cathode of said second amplifying frequency of the video carrier wave in the intermediate

the same temperature again for further vaporization of

Patent No. 2,897,599

the insulator bore, the improvement comprising a substantially gas-impervious, vitreous sealing means disposed in at least a part of the insulator bore, and in contact with the electrode part, and restraining means at least partially confining said vitreous sealing means within the bore, said vitreous sealing means being expanded into a vesicular structure against said restraining means and pressed by its expansion into sealing relationship within the insulator bore, and acting to prevent the flow of a gas therethrough.

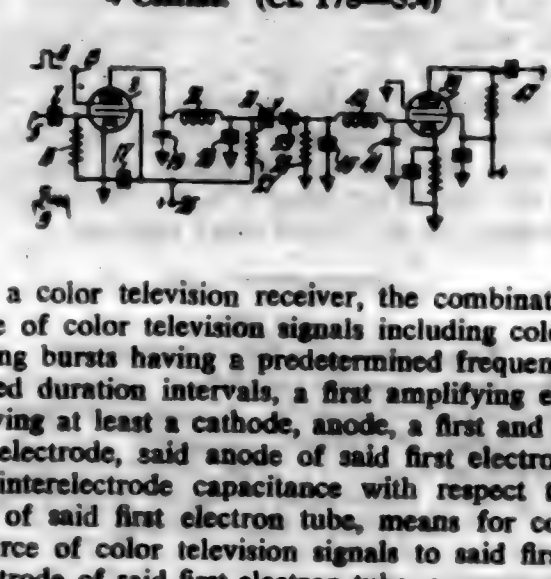
2,898,396
WIRE SEAL
James P. Watson, Whittier, Calif.
Application March 25, 1957, Serial No. 648,219
2 Claims. (Cl. 174—152)



1. Means for sealing wires passing through a wall having a bore opening therethrough, a portion of said bore opening being enlarged by a cylindrical counterbore, a stranded wire passing through said bore, an enlargement circling said wire and bonded thereto, the bonding material also filling the interstices between the strands of said wire to block passage of fluids longitudinally between said strands, the diameter of said enlargement being at least almost as large as the diameter of said counterbore, said enlargement being disposed with its portion of largest diameter within said cylindrical counterbore, and an unbroken continuous tube of pliant insulation around said wire and extending on each side of said wall and covering said enlargement, said enlargement and tube having a diameter adapted to frictionally engage the cylindrical wall of the counterbore to prevent removal of the wire in the direction of said bore opening, said tube being under radial compression to hermetically seal the space between said enlargement and the cylindrical wall of said counterbore.

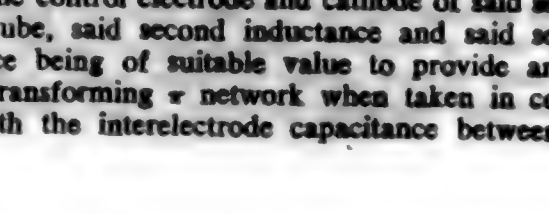
2,898,397
COLOR-TELEVISION SYSTEM
Donald Richman, Fresh Meadows, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Application February 24, 1956, Serial No. 567,503
6 Claims. (Cl. 178—5.2)

6. A system for transmitting a color-television signal including component signals representative of three characteristics of the color image being televised while minimizing subjective loss of resolution in the reproduced color image at a receiver, comprising: circuit means responsive to the component signals for generating a monochrome signal which conveys brightness and resolution information; circuit means responsive to the low-frequency components of the component signals for generating a double side-band portion of a subcarrier signal for determining large area image color; circuit means responsive to both the low-frequency and high-frequency components of the component signals for generating a single side-band portion of the subcarrier signal; circuit means for deriving from said low-frequency components a control signal representative of local large area color of the image; circuit means for developing additional subcarrier single side-band components representative of the high-frequency components of said characteristic signals; circuit means responsive to said control signal for varying the amplitude of said additional single side-band components in accordance with the large area color;



and circuit means for combining said double side-band and said single side-band subcarrier signals and said additional single side-band components for transmission, whereby the luminance components of said modulated subcarrier signals contribute usefully to the resolution of the reproduced image.

2,898,398
FREQUENCY SELECTIVE CIRCUITS
Jack Avins, Staten Island, and Marvin H. Kronenberg, Queens Village, N.Y., assignors to Radio Corporation of America, a corporation of Delaware
Application August 28, 1953, Serial No. 377,208
4 Claims. (Cl. 178—5.4)



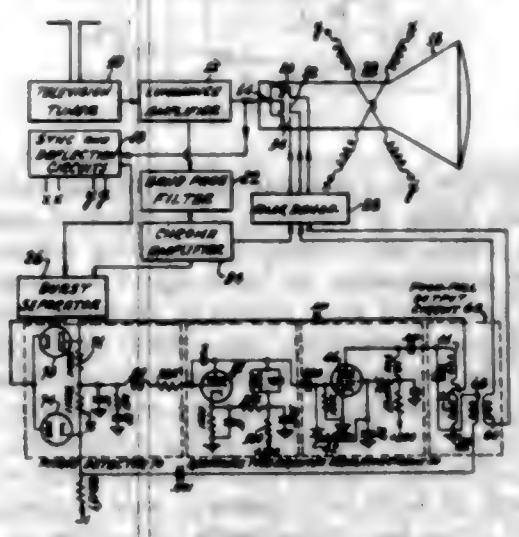
1. In a color television receiver, the combination of, a source of color television signals including color synchronizing bursts having a predetermined frequency and prescribed duration intervals, a first amplifying electron tube having at least a cathode, anode, a first and second control electrode, said anode of said first electron tube having interelectrode capacitance with respect to said cathode of said first electron tube, means for coupling said source of color television signals to said first control electrode of said first electron tube, a source of keying pulses having the duration intervals of said color synchronizing bursts, means for coupling said keying pulses source to said second control electrode of said first electron tube, an inductance and a capacitance connected serially between the anode and cathode of said electron tube, said inductance and said capacitance being of suitable value to provide an impedance transforming π network when taken in combination with the interelectrode capacitance between said anode and said cathode of said electron tube, a second amplifying electron tube having at least an anode, cathode and control electrode, said control electrode of said second electron amplifying tube having interelectrode capacitance with respect to the cathode of said second electron tube, a second inductance and a second capacitance coupled serially between the control electrode and cathode of said second electron tube, said second inductance and said second capacitance being of suitable value to provide an impedance transforming π network when taken in combination with the interelectrode capacitance between the

signal which may be either applied directly to the trans-

2,898,404

control electrode and cathode of said second amplifying electron tube, and a piezoelectric quartz crystal having a series resonant frequency equal to said predetermined frequency coupled between said first impedance transforming π network and said second impedance transforming π network to develop a substantially continuous wave of said predetermined frequency at the anode of said second amplifying electron tube.

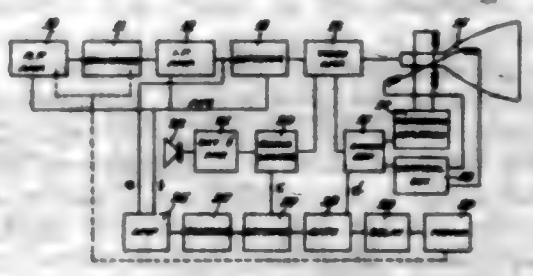
2,898,399
COLOR TELEVISION RECEIVERS
Edwin M. Hinsdale, Jr., Baldwin, and Frederick B. Smith, Jr., Oceanside, N.Y., assignors to Radio Corporation of America, a corporation of Delaware
Application September 14, 1954, Serial No. 455,947
6 Claims. (Cl. 178—5.4)



1. In a color television receiver adapted to receive a color television signal including color synchronizing bursts having a prescribed frequency and phase, the combination of: an oscillator circuit to generate sinusoidal oscillations of substantially color burst frequency and having a plurality of windings which are bifilar wound and operatively connected to derive from said electrical oscillations a pair of oscillations which are 180° out of phase with respect to each other, a phase detector circuit operatively connected to develop a control voltage representative of the phase relationship between one signal and also opposite phases of a second signal as a result of said signals applied thereto, means to separate said color synchronizing bursts from said color television signal, means for applying said color synchronizing bursts and said pair of oscillations to said phase detector to develop a control voltage which is indicative of the relative phase between said burst and said electrical oscillations, a phase control means coupled to said oscillator circuit and operative to control the phase of said oscillations responsive to a control voltage applied to said phase control means, and means for applying said control signal to said phase control means for controlling the phase of the oscillations of said oscillator circuit.

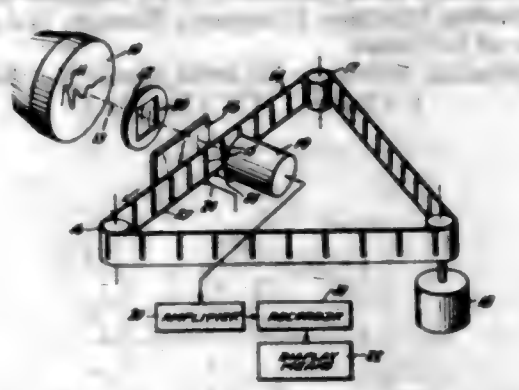
2,898,400
TUNING SYSTEM
Bernard S. Parmet, Elmwood Park, and Frank L. Di Nardo, Chicago, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Application June 16, 1955, Serial No. 515,917
8 Claims. (Cl. 178—5.8)

8. An automatic tuning system for a television receiver for tuning the same to a received television signal including video and audio carrier waves at different frequencies, and which receiver includes variable tuning means for converting the received waves to intermediate frequency carrier waves of fixed frequencies; said system including in combination, circuit means including a high Q resonant circuit portion tuned to the predetermined frequency of the video carrier wave in the intermediate frequency amplifier when the receiver is tuned to a television signal, means for applying intermediate frequency carrier waves to said resonant circuit portion, said resonant circuit portion selecting waves of said predetermined frequency, said circuit means including rectifier means connected to said resonant circuit portion for producing a voltage pulse from the selected waves, gate



means having a portion providing a conductive path and a portion responsive to a received television signal for rendering such path conductive, tuning control means for controlling the operation of the tuning means, said gate means connecting said circuit means to said tuning control means and applying said voltage pulse through said conductive path to said control means, said tuning control means operating to stop the tuning means at the received television signal in response to said voltage pulse.

2,898,401
OSCILLOGRAPH RECORDER
John L. McLucas, State College, Pa., assignor to Haller, Raymond and Brown, Inc., State College, Pa., a corporation of Pennsylvania
Application May 19, 1955, Serial No. 509,563
12 Claims. (Cl. 178—6.6)



1. As an article of manufacture, a cathode-ray-oscilloscope transcriber comprising scanning optics including an elongated slit, projecting means for imaging said slit in the display plane of the oscillographic display to be transcribed, drive means for causing the image of said slit in said plane to traverse the sweep base of the oscillographic display, the image of said slit in said plane being substantially transverse to said sweep base, an optical mask having a cut-off edge on the axis of said projecting means and masking said optics on one side of said edge to the exclusion of the other side, said edge being substantially parallel to said sweep base and being located substantially at a point of limiting-ray crossover on said axis, and video-signal-recording means including photoelectric means responsive to light energy passing through said slit and scanned by said scanning optics.

2,898,402
MONITOR FOR A TELETYPEWRITER
William E. Cory, Sherman Oaks, Calif., and Louis E. Catlett, Albuquerque, N. Mex.
Application December 6, 1957, Serial No. 701,278
16 Claims. (Cl. 178—22)
(Granted under Title 35, U.S. Code (1952), sec. 266)

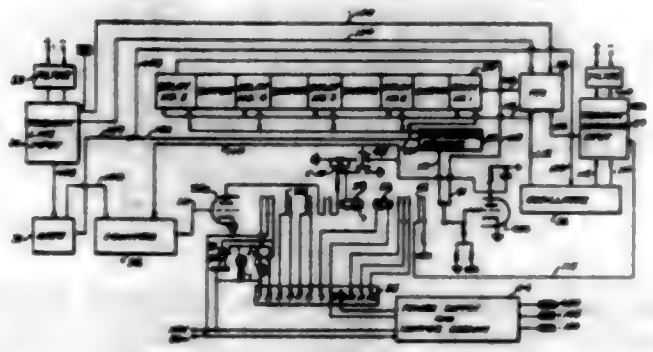
1. A device for monitoring the output of a teletypewriter wherein there is provided a transmitter distributor

2,898,405
LISTENING DEVICE
George H. Eck, Des Plaines, Ill.

scriber's line circuit through which sets of static switching devices conversational and control paths are extended

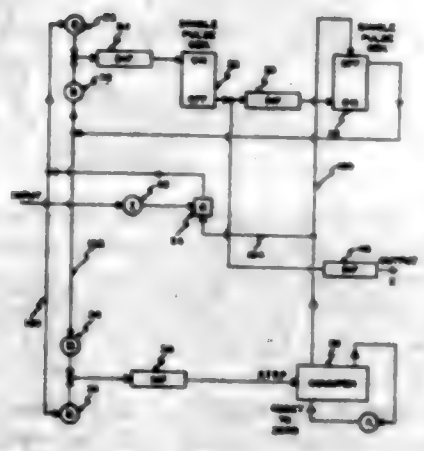
of the image; circuit means for developing additional

signal which may be either applied directly to the transmit line or may be mixed with a cipher key signal in a Teletype mixer before it is applied to the transmit line to provide a transmit line signal comprising means for comparing the transmitter distributer signal of the teletypewriter with the transmit line signal during cipher operation to recover the cipher key signal, an indicating means,



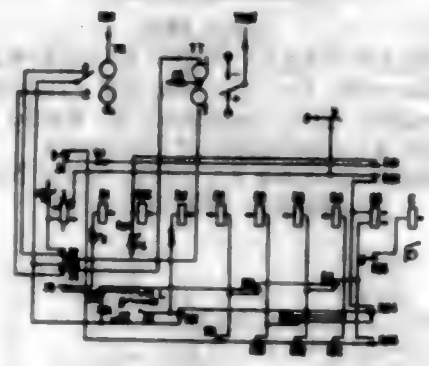
means for checking said key signal and for operating said indicating means when said key signal remains unchanged for seven consecutive characters, means for checking the character space sequence during text operation and for operating said indicating means when four consecutive character space sequences have been transmitted and means for switching the monitor between cipher and text operation as the teletypewriter is switched.

2,898,403
DISTRIBUTOR
John F. Scully, Glen Gardner, N.J., assignor to Monroe Calculating Machine Company, Orange, N.J., a corporation of Delaware
Application February 21, 1956, Serial No. 566,939
6 Claims. (Cl. 178—53.1)



1. A distributor for producing a predetermined number of uniformly spaced pulses in response to a start signal, comprising a first and a second single timed pulse generator, an output from said first pulse generator triggering on said second pulse generator and an output from said second pulse generator triggering on said first pulse generator, a gating means responsive to a start signal to trigger on said first pulse generator and a timing means connected to said gating means and to one of said pulse generators, said timing means in one state rendering said one of said pulse generators inoperative and in a state other than said one state rendering said input means non-responsive to start signals applied thereto, and an output connection from one of said pulse generators.

2,898,404
DEVICE FOR THE REGENERATION OF TELEGRAPH SIGNALS
Etienne Alizon, La Celle Saint-Cloud, France, assignor to Compagnie Industrielle des Telephones, Paris, France, a corporation of France
Application July 21, 1955, Serial No. 523,555
Claims priority, application France July 26, 1954
5 Claims. (Cl. 178—70)



1. Apparatus for regenerating telegraphic code signals, said signals being in the form of a series of signal units and each signal unit having a prevailing polarity, comprising, in combination, an input signal conductor adapted to be connected to a source of distorted telegraphic signals to ge regenerated; an output signal conductor on which the regenerated undistorted telegraphic signals are to be retransmitted; a receiving relay having a winding connected to said input signal conductor, said receiving relay being responsive to said distorted telegraphic signals, and at least two contacts, said armature being adapted to move into engagement with either of the said contacts in response to said winding and in accordance wtih the polarity prevailing throughout the half duration of any of said signal units in the said distorted telegraphic signals; one direct current source; a retransmitting relay having at least two contacts, the last-mentioned contacts being connected to voltages of one and the other polarity, respectively, two oppositely wound windings each winding being associated with one of said last-mentioned contacts, and an armature movable into engagement with one or the other of said last-mentioned contacts in accordance with which winding is under operation; a common end of said oppositely wound windings being connected to one pole of said direct current source, the two other ends of said oppositely wound windings being connected to corresponding ones of said first-mentioned contacts of said receiving relay, respectively; the armature of said receiving relay being connected to the other pole of said direct current source; periodical means being provided for closing and interrupting successively the connection between said oppositely wound windings and said other pole of the direct current source, thereby to establish closing and interrupting time intervals, said closing time intervals being short relative to said interrupting time intervals, said periodical means including freely oscillating inertia means, said freely oscillating inertia means having a period of oscillation equal to the period of occurrence of said signal units; and means for synchronizing said freely oscillating inertia means with said input signals adapted to establish said closing time intervals at times corresponding to the middle of occurring signal units, whereby at said corresponding times one or the other of said oppositely wound windings of said retransmitting relay is connected for a very short time to said other pole of said direct current source in accordance with the position taken by the armature of the said receiving relay, thereby bringing the armature of said retransmitting relay into engagement with a contact of the polarity prevailing in the occurring signal unit of the received distorted telegraphic signal to be regenerated.

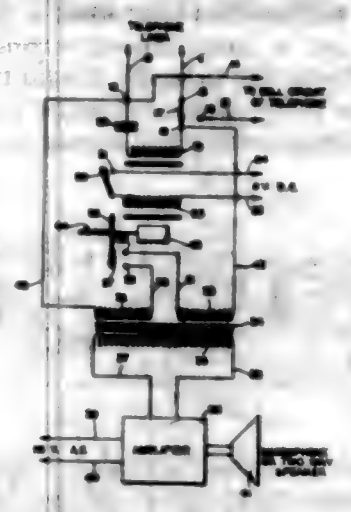
proximity to said rotatable member and forming part of a circuit operative in response to said power source

incoming signal to be limited and an output adapted to

Including in combination, circuit means including a high Q resonant circuit portion tuned to the predetermined

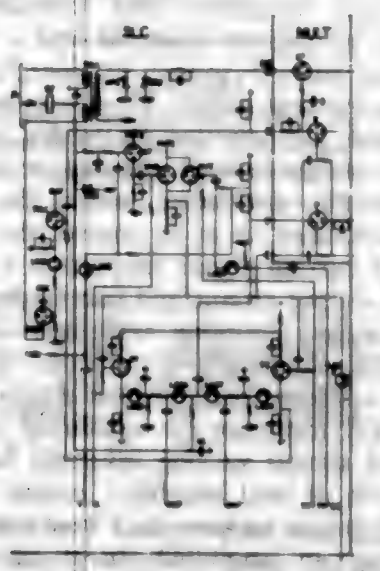
1. A device for monitoring the output of a teletype-writer wherein there is provided a transmitter distributor

2,898,405
LISTENING DEVICE
George H. Eck, Des Plaines, Ill.
Application July 13, 1955, Serial No. 521,727
3 Claims. (Cl. 179—1)



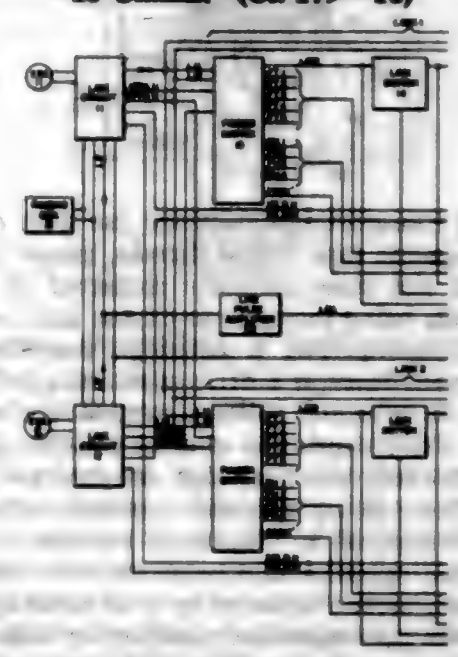
1. In a listening device for use with a telephone instrument connected to telephone transmission lines over which current signals are transmitted to energize the bell-ringing circuit of the telephone instrument when the number thereof is dialed from a calling station, a normally deenergized solenoid for connection to such transmission lines and being characterized by its response to such current signals so as to be energized thereby, a coupling transformer having primary and secondary windings, audio signal means for location at the premises of such telephone instrument and being connected with one of said windings to effect a transfer of audio signals therebetween, normally open circuit means for connecting the other of said windings across such transmission lines, means comprising said solenoid for closing said circuit means upon energization of the solenoid to couple said audio signal means with such transmission lines and to also effect a termination of such current signals, and a normally open time delay switch closed when said solenoid is energized and independently returned to open position subsequent to deenergization of the solenoid.

2,898,406
TELEPHONE SYSTEMS
Alan Davison and Leslie John Allen, Liverpool, England, assignors to Automatic Telephone & Electric Company Limited, Liverpool, England, a British company
Application April 19, 1957, Serial No. 653,938
Claims priority, application Great Britain April 28, 1956
12 Claims. (Cl. 179—18)



1. In a telephone system, subscribers' line circuits, a plurality of sets of static switching devices for each subscriber's line circuit through which sets of static switching devices conversational and control paths are extended on the conduction of one set of static switching devices, first and second sources of pulses having different characteristics, means in each subscriber's line circuit responsive to a call origination for causing the conduction of one set of static switching devices to originate a connection from a subscriber's line circuit and for completing a path for the pulses from said first source through said subscriber's line circuit to the completed control path to enable controls appropriate to the originating condition of said subscriber's line circuit to be exerted over said completed control path and means in each subscriber's line circuit responsive to a call termination for causing the conduction of a set of static switching devices to terminate a connection on a subscriber's line circuit and for completing a path for the pulses from said second source through said subscriber's line circuit to the completed control path to enable controls appropriate to the terminating condition of said subscriber's line circuit to be exerted over said completed control path.

2,898,407
ELECTRONIC TELEPHONE SYSTEM
Gilbert C. Foster, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Application June 5, 1957, Serial No. 663,802
15 Claims. (Cl. 179—18)



1. In a telephone system, a plurality of line circuits, a line finder, means for controlling said line finder to search for a calling line circuit, said line finder being controlled to select each of said line circuits in turn, means in each line circuit operative only when that line circuit is in a calling condition and responsive to the selection of that line circuit by said line finder for transmitting a control signal to said line finder, switch-through means in said line finder operative in response to the receipt of said control signal, and means responsive to the operation of said switch-through means for terminating the searching operation of said line finder.

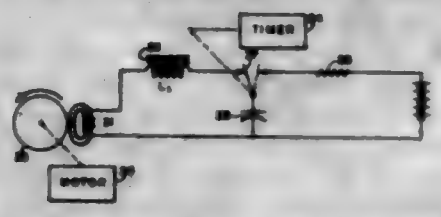
2,898,408
MAGNETIC DRUM ERASER
Kenneth H. Foice, Washington, D.C.
Application May 9, 1955, Serial No. 507,189
3 Claims. (Cl. 179—100.2)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A magnetic record eraser comprising in combination, a rotatable support having a magnetic record of extended surface thereon and means for erasing said magnetic record on said rotatable member, said means comprising a power source, a magnetic head located in

2,898,412

a movable member having a contact area adapted to

proximity to said rotatable member and forming part of a circuit operative in response to said power source to produce at the magnetic head a damped oscillating



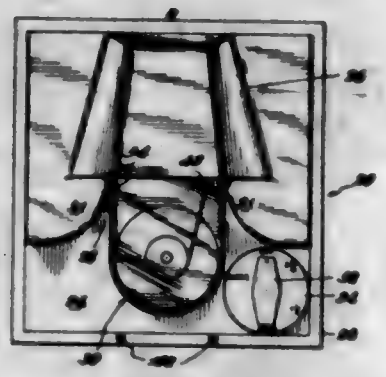
magnetic field of progressively diminishing amplitude in which the period of the half cycles is equal to the time required for at least two revolutions of said rotatable member.

2,898,409

TAPE TRANSPORTING DEVICE FOR USE WITH CARTRIDGES

Emil Tiger, Skokie, Ill., assignor to Sound, Inc., Chicago, Ill., a corporation of Illinois

Application March 6, 1956, Serial No. 569,817
27 Claims. (Cl. 179—100.2)



1. A tape transporting device for use with a cartridge having a magnetic tape coiled therein, means supporting a section of the tape normally protected at one level but said means being movable to expose said section at a second level; comprising a cartridge receiving surface having mounted thereon a drive capstan, an electromagnetic head, a pressure roller arranged for movement against said drive capstan, a manual control normally at a neutral position, the cartridge adapted to be moved on said surface to an operative position with the section of tape disposed in alignment between the capstan and roller and opposite said head but with said tape at said one level, means actuated by said cartridge as same is moved into said operative position to lock said cartridge in said operative position and move said support means to expose said section of tape at said second level, the positions of capstan, roller and head relative to said surface being such that when the cartridge is in said operative position and the tape at said second level, the pressure roller, capstan and head are at the same level, a motor and transmission means connecting the motor to drive the capstan, said control movable from said neutral to a first position, means actuated by the control during said movement from neutral to said first position to energize said motor and move said capstan and roller together with a part of said tape section engaged therebetween, while another part of said section is against the active pole of said head.

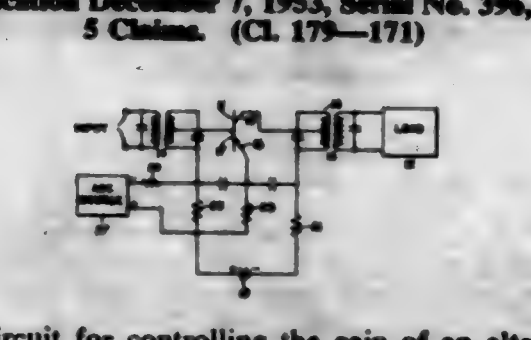
2,898,410

LIMITER AMPLIFIER SYSTEM

William O. Brooks, Hawthorne, Calif., assignor to Northrop Corporation, Hawthorne, Calif., a corporation of California

Application June 22, 1953, Serial No. 363,185
6 Claims. (Cl. 179—171)

2. Limiter amplifier control means comprising signal coupling means having an input adapted to receive an incoming signal to be limited and an output adapted to be connected across the input grid resistance of a limiter amplifier to be controlled, to apply said incoming signal thereto, a control tube, means connecting said input to a grid of said control tube to apply said incoming signal, unchanged, to said control tube also, a transformer having a primary and a center-tapped secondary, and a full wave rectifier diode, the primary of said transformer connected across the plate circuit output of said control tube, and said secondary connected across the plates of said



diode, said transformer secondary center tap connected to a load to produce a negative D.C. bias potential across said load increasing with incoming signal strength, the other end of said load connected to a zero-potential point, means connecting the cathode of said rectifier diode to the same zero-potential point, and said center tap also directly connected to said output of said signal coupling means to apply said bias potential to the limiter amplifier to regulate the gain thereof inversely with incoming signal strength.

2,898,411

GAIN CONTROL CIRCUIT FOR SEMICONDUCTOR AMPLIFIERS

Woo Foung Chow, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York

Application December 7, 1953, Serial No. 396,676
5 Claims. (Cl. 179—171)

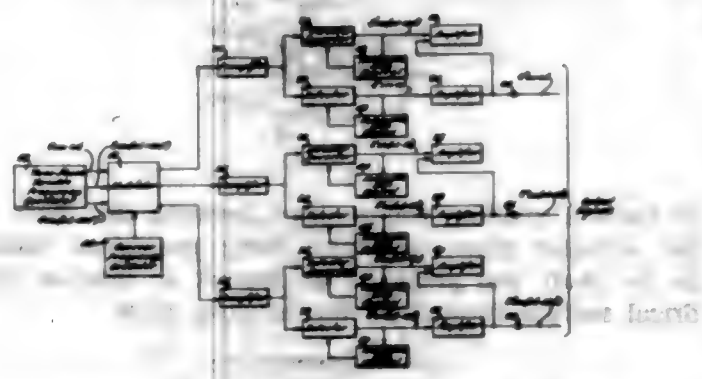
1. A circuit for controlling the gain of an alternating current transistor amplifier, said transistor having a base electrode, an emitter electrode and a collector electrode, a direct current source of energizing potential, an alternating current signal input circuit coupled between said base and emitter electrodes, an alternating current signal output circuit coupled between said collector and emitter electrodes, means for varying the gain of said amplifier so as to control the amplitude of the alternating current signal coupled to said alternating current signal output circuit and comprising, a gain control resistor, means coupling said gain control resistor and said source of energizing potential in series circuit between said collector and emitter electrodes for energization of said transistor, a source of variable direct current control signals varying inversely in amplitude to the desired gain of said amplifier, means coupling said control signal source between said base and emitter electrodes whereby an amplified direct current potential of said control signal is developed across said gain control resistor so as to provide alternating current amplification modifying changes in collector potential.

free end adjustably spaceable from element by rotation of said plug in said bore to provide a magnetic field of

plate, contacts controlled by the actuator plate, a con-

trifugal actuator on the shaft and arranged in such the

2,898,412
THREE PHASE POWER SUPPLY SYSTEM
Jerome S. Linn, Los Angeles, Calif., assignor to Genisco, Incorporated, Los Angeles, Calif., a corporation
Application April 22, 1957, Serial No. 654,329
17 Claims. (Cl. 179—171)



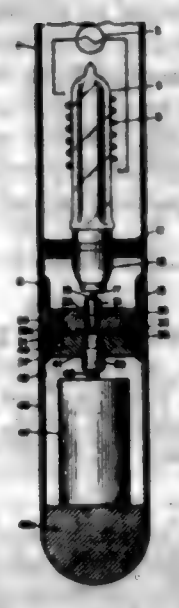
1. A system for developing balanced multi-phase alternating current output energy, said system including, means for producing a first pair of alternating current signals of mutually opposite phase, means for producing a second pair of alternating current signals of mutually opposite phase and phase displaced from corresponding ones of the signals of said first pair, a first pair of electron discharge tubes connected in series across a source of direct current exciting potential, means for introducing said first pair of alternating current signals to respective ones of the tubes of said first pair, a second pair of electron discharge tubes connected in series across said source of direct current exciting potential, means for introducing said second pair of alternating current signals to respective ones of the tubes of said second pair, and means connected to the common junction of the tubes of said first pair and to the common junction of the tubes of said second pair for receiving a utilization network for defining a current path between such common junctions.

15. In a system for producing balanced multi-phase output energy, the combination of: an oscillator for producing three output signals of like frequency and amplitude, the output signals being phase displaced from one another by 120 degrees; first, second and third diodes each having an anode and a cathode; common impedance means connected to the cathodes of the first, second and third diodes and to a positive potential point; means for introducing the three output signals from the oscillator to respective ones of the anodes of said diodes; a carrier signal source; means for introducing a carrier signal from said source across said common impedance means, and means for deriving a modulated output signal from the anode of each of said diodes.

2,898,413
SAFETY ELECTRICAL OUTLET APPARATUS
William J. Gallagher, Malverne, N.Y.
Application August 20, 1956, Serial No. 605,005
15 Claims. (Cl. 200—42)

1. Safety electrical outlet apparatus from which to withdraw electrical power including means defining an abutment surface arranged to be connected to one side of an electrical line, a fixed electrical contact arranged to be connected to the other side of the electrical line, a movable member having a contact area adapted to engage said fixed contact and having a conductive cam surface thereon in conductive relationship with said contact area, spring means normally urging said contact member in a direction away from said abutment surface to hold said contact area thereof in spaced insulated relationship from said fixed contact, said outlet apparatus providing access past said abutment surface to said cam surface.

2,898,414
APPARATUS FOR INSULATING HIGH VOLTAGE LEADS THROUGH ENDS OF CONNECTED COMPONENTS
Beldon A. Peters, Houston, Tex., assignor, by mesne assignments, to Jersey Production Research Company, Tulsa, Okla., a corporation of Delaware
Application July 3, 1958, Serial No. 746,368
4 Claims. (Cl. 200—51.14)



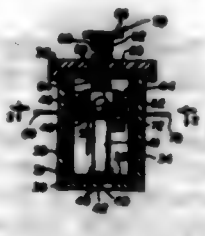
1. Apparatus for making a high voltage connection between first and second interconnectable equipment housings, at least one of said housings containing a pressurized insulating gas: an electrically conducting, normally closed spring loaded check valve means in said first housing including a valve stem and a valve housing, adapted to abut against an end of said second housing and normally sealing said gas in said first housing; said valve being adapted to open upon engaging said electrical contact in the end of said second housing when said first and second housings are brought together for interconnection, to allow gas flow from said first enclosure into the space between said first and second enclosures to flush air from between said enclosures; and sealing means on one of said first and second enclosures adapted to abut against the other of said enclosures when said enclosures are completely interconnected to seal the space between said first and second enclosures and stop escape of gas from between said first and second enclosures, said valve housing being adapted for electrical connection to electrical apparatus within said first housing.

2,898,415
INERTIA SWITCH WITH HOLDING POLE AND RESET
Stanley P. Clurman, New Brunswick, N.J., assignor to Gordon W. Wheley, New York, N.Y.
Application December 17, 1958, Serial No. 781,099
15 Claims. (Cl. 200—61.45)

1. An inertia switch, comprising a cylindrical body, a threaded plug axially positionable in said body, a cylindrical permanent bar magnet mounted on said plug and movable axially thereby in said body, said body having a fixed element formed with a recess, said magnet having a

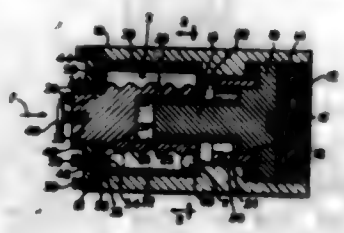
of its oscillations in response to motion of said link, a wiping contact element mounted on said plate con- electromagnetic coil with respect to said non-magnetic

free end adjustably spaceable from element by rotation of said plug in said bore to provide a magnetic field of variable intensity beyond said element within said body and without moving said element in said body, said body having a pole portion formed of magnetizable material, said magnet further providing a magnetic field to magnetize said portion, the magnetization of said portion depending on the axial position of said magnet in said body, a spherical ball of magnetic material retained



in said recess by said magnetic field, said ball being displaceable from said recess by rolling therein to approach said portion in response to a force of predetermined magnitude applied transversely to the axis of the magnet, the magnitude of the force required to displace said ball being determined by the variable space between the free end of the magnet and said element, said ball being held by the magnetized portion when displaced from said recess.

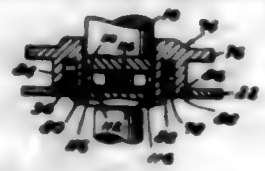
2,898,416
INERTIA SWITCH WITH TIME DELAY OPERATION
Stanley P. Clurman, New Brunswick, N.J., assignor to Gordon W. Wholey, New York, N.Y.
Application December 17, 1958, Serial No. 781,100
10 Claims. (Cl. 200—61.45)



1. An inertia switch, comprising a hollow body having an internally threaded cylindrical bore, a threaded plug axially positionable in said bore, a cylindrical permanent bar magnet mounted on said plug and movable axially thereby in said bore, said body having another cylindrical bore, a generally cylindrical member disposed in said other bore in axial alignment with said magnet, said member having an outer wall spaced from a wall of said other bore, said outer wall being formed with a helical groove defining with the wall of said other bore a helical path therethrough, a ball of magnetic material retained at one end of said helical path by said magnet, said ball being displaceable from said one end of the helical path by rolling therethrough during a predetermined time interval to the other end thereof in response to a force of predetermined magnitude applied parallel to the axis of said magnet, the magnitude of said force being determined by the variable space between the free end of said magnet and said one end of the helical path.

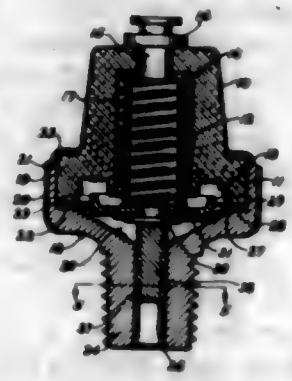
2,898,417
AUTOMATIC STARTING AND REVERSING SWITCH
Eugene E. Wieczorek, Racine, Wis., assignor to In-Sink-Erator Manufacturing Company, Racine, Wis., a corporation of Wisconsin
Application August 13, 1957, Serial No. 677,962
12 Claims. (Cl. 200—80)

12. A combined centrifugal and directional switch mechanism comprising a shaft, a base plate, an actuator plate, contacts controlled by the actuator plate, a centrifugal actuator on the shaft and arranged to push the actuator plate axially in response to changes in shaft speed, and a friction pad of leather resiliently positioned



to form a yielding rotary drive between the shaft and the actuator plate, said pad being positioned radially in the shaft and arranged to contact an interior cylindrical surface formed on the actuator plate.

2,898,418
FLUID OPERATED ELECTRIC SWITCH
Peter M. Byam, Rochester, N.Y., assignor to Fasco Industries, Inc., Rochester, N.Y., a corporation of New York
Application December 3, 1956, Serial No. 625,748
3 Claims. (Cl. 200—83)



1. A fluid operated switch comprising a housing providing a fluid chamber and provided with a bore leading into said chamber, a contact member within said bore and extending into said chamber, and a diaphragm means having its periphery compressed within said housing to form a fluid tight seal for said chamber and carrying a second contact member which is biased to engage the first mentioned contact member, characterized by the first mentioned contact member being provided with longitudinal serrations to form teeth having a driving fit with the surface of said bore, and said diaphragm means being composed of a thin, pressure-responsive plastic sheet of high tensile strength extending over said chamber, and a sheet of compressible material provided with openings to form an outer sealing portion providing said fluid tight seal for said chamber and to form an inner central portion providing a fluid tight seal between said second contact member and said thin plastic sheet of high tensile strength.

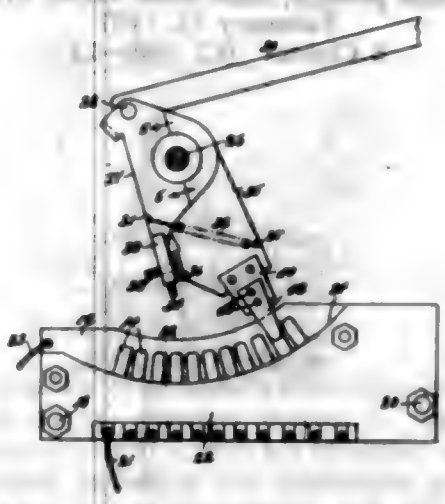
2,898,419
PRINTED CIRCUIT DIGITAL READ-OUT MECHANISM FOR WEIGHING SCALES
Charles E. Roessler, Jr., Rutland, Vt., assignor to The Howe Scale Company, Rutland, Vt., a corporation of Delaware
Application December 6, 1957, Serial No. 701,091
4 Claims. (Cl. 200—85)

1. In weighing scales, a shaft, a main lever journalled for oscillation relative to said shaft, a link pivoted to the main lever and having generally axial motion functional with weight attained on an associated scale, a plate journalled for oscillation relative to said shaft adjacent to said main lever, a spring extending between the lever and the plate urging the latter angularly toward said lever to yieldably follow the main lever in one direction

ond leaf springs normally converging at one end thereof,

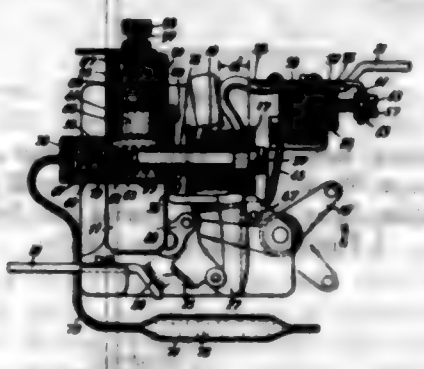
2,898,425

of its oscillations in response to motion of said link, a wiping contact element mounted on said plate comprising resilient opposing contact fingers, a sheet of insulating material mounted to be straddled by the fingers of said element, a plurality of metallic contacts on one



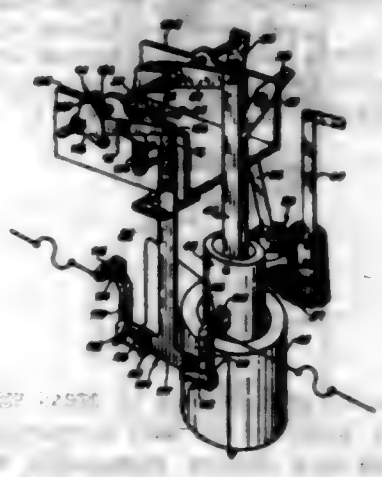
face of said sheet, a common metallic contact on the other face of said sheet, whereby under the yielding urge of said spring movement of said main lever to a given position pursuant to link motion closes a circuit between a selected contact of said plurality and said common contact between said fingers.

2,898,420
CIRCUIT BREAKING PROTECTORS
Yoshikuni Kuze, Tokyo, Japan
Application February 12, 1958, Serial No. 714,915
Claims priority, application Japan February 19, 1957
4 Claims. (Cl. 200—87)



1. A circuit breaking protector comprising an electromagnetic coil which is adapted to be energized by a load current, a non-magnetic cylinder placed inside said electromagnetic coil, said electromagnetic coil being adapted to be slidable axially with respect to said non-magnetic cylinder, an axially movable iron core placed inside said non-magnetic cylinder and adapted to be attracted by said electromagnetic coil starting from a starting position, an armature adapted to be attracted towards said movable iron core so as to break the circuit of said current when said electromagnetic coil has displaced said movable iron core to a critical position, a thermobulb placed within an electric appliance to be protected and energized by said load current, a temperature-sensitive member placed inside said non-magnetic cylinder and adapted to be displaced inside said non-magnetic cylinder displacing said starting position of said movable iron core in accordance with a change in temperature at said thermobulb by means of communicating the inside space thereof with a space behind the temperature-sensitive member through a capillary tube, these spaces being filled with a liquid, and both ends of a close-coiled, a weak tension spring fixed to said movable iron core and said temperature-sensitive member, respectively, and an adjusting assembly for adjusting the position of said electromagnetic coil with respect to said non-magnetic cylinder, comprising a rigid lead wire, a terminal supporter, a stationary covering plate, and an adjusting screw, said screw being adapted to be carried by said stationary covering plate and screwed into and out of said terminal supporter which is fixed with said electromagnetic coil through said rigid lead wire.

2,898,421
REPEATING CIRCUIT INTERRUPTER
Kazuo Henry Date, South Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware
Application July 30, 1958, Serial No. 752,119
9 Claims. (Cl. 200—89)



1. A repeating circuit interrupter comprising primary switch means, means for opening said primary switch means on overload, electro-responsive means for closing said primary switch means, control means for completing an energizing circuit to said electromotive means upon the opening of said primary switch means and for opening said energizing circuit upon the closing of the primary switch means, said control means including means for de-energizing said electromotive means when the voltage of said circuit is insufficient to result in normal operation thereof to close said primary switch means.

2,898,422
CIRCUIT CONTROLLING DEVICE
Robert L. Peek, Jr., New York, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application September 26, 1957, Serial No. 686,509
9 Claims. (Cl. 200—93)

1. A circuit controlling device comprising a rigid magnet, a magnetic member fixed at one end and having a portion normally mating with said magnet, the return field path of said magnet passing through the member, a magnetic contact member in cooperative relation with said member, and means for substantially nullifying the return field through said member whereby the member moves relative to said contact.

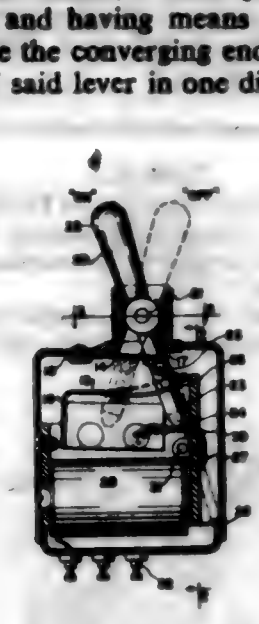
2,898,423
SWITCH ACTUATOR
Donald G. Collins, Fort Wayne, Ind., assignor to Lear, Incorporated
Application August 6, 1957, Serial No. 676,650
7 Claims. (Cl. 200—159)

1. A switch actuating mechanism for a switch having a push button, said mechanism comprising first and sec-

2,898,427
ARC EXTINGUISHING MEANS

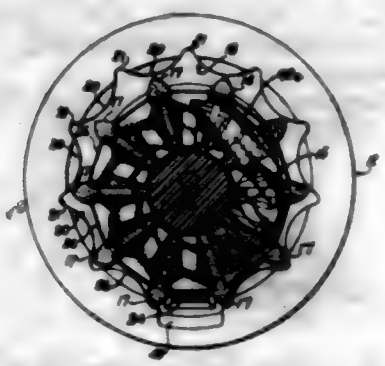
of the push-button, and a laminar second order lever,

ond leaf springs normally converging at one end thereof, supporting structure supporting the other ends of said springs and said switch with one of said springs engageable with the push button, a lever pivoted on said supporting structure and having means engaging with said springs to separate the converging ends thereof upon pivotal movement of said lever in one direction and thereby



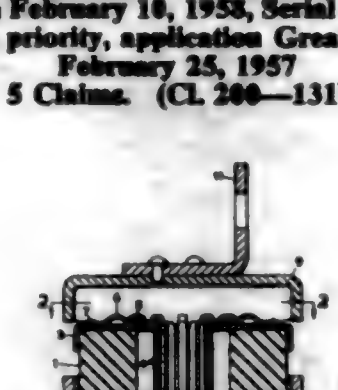
causing said one of said springs to press said button, a clapper pivotally mounted on said supporting structure, a latch spring on said clapper engageable with the end of said lever, and electrically energizable means capable of pivoting said clapper upon energization thereof and causing said latch spring to latch and hold said lever to hold the said one of said springs against the push button.

2,898,424
MULTIPLE FUSE AND METHOD OF MANUFACTURE
Alfred Vischer, Jr., Park Ridge, Ill.
Application September 13, 1956, Serial No. 609,752
24 Claims. (Cl. 200—125)



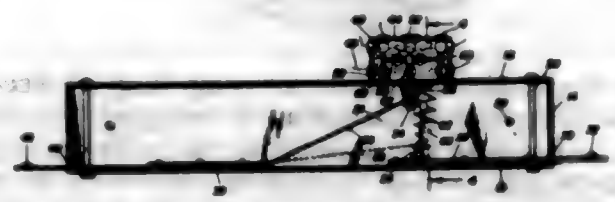
3. In a multiple fuse plug, the combination of a housing including an internal gear, a fuse link carrier including an external gear operatively disposed within said internal gear, said external gear having one less tooth than said internal gear, a plurality of fuse links each respectively mounted on said carrier between the teeth thereof, contact means mounted on said housing at a position corresponding to a tooth of said external gear and resiliently biased toward said carrier, and rotatable eccentric means including structure disposed within said housing for manually actuating said carrier to drive said external gear in said internal gear, whereby for each complete revolution of said eccentric means a new fuse link is operatively connected to said contact means.

2,898,425
CARTRIDGE FUSE LINKS
Henry Simmonds, Liverpool, England, assignor to The English Electric Company Limited, London, England, a British company
Application February 10, 1958, Serial No. 714,186
Claims priority, application Great Britain February 25, 1957
5 Claims. (Cl. 200—131)



1. A cartridge fuse link comprising a hollow insulating body, inner end caps secured to said body, a fuse element of sheet material extending between the inner end caps through the body, each end of the element being bent over and secured in two radially spaced positions to the outer surface of an inner end cap and formed between these positions with a bight projecting above the general level of the bent-over portion, and an outer end cap forming an electrical terminal for said fuse element and secured to the inner end cap with its inner surface deforming the bight so as to make intimate thermal and electrical contact therewith.

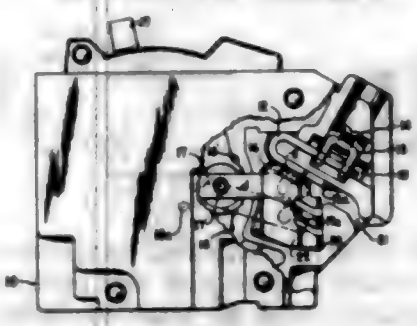
2,898,426
FIRE ALARM
Astifino Robbins, Bellbrook, Ohio, assignor of fifty percent to W. J. Amburgey, Mesna, Ky.
Application June 27, 1958, Serial No. 745,098
1 Claim. (Cl. 200—142)



In a fire protective device, a control comprising a casing, a normally open switch in said casing and including a fixed contact and a movable contact, a spring reacting on said movable contact and holding said movable contact spaced from said fixed contact, means including a heat sensitive member for holding said spring under a spring load, a box connected with said casing and in which said member is at least partially disposed, a quantity of flammable substance in said box and in the presence of said member, at least one flammable fuse connected with said box and adapted to be located in the area that is fire protected whereby upon ignition of said fuse said substance becomes ignited in order to subject said member to heat and thereby release said spring so that said switch is moved to the closed position, at least one pressure sensitive member in said box adapted to be ruptured by pressure in order to admit air to said subetance to support said combustion.

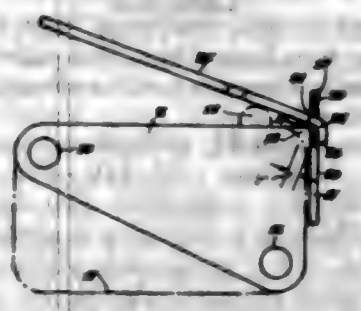
adjusting assembly for adjusting the position of said a push button, said mechanism comprising first and sec-

2,898,427
ARC EXTINGUISHING MEANS
Herman A. Nadeau, Forestville, Conn., assignor to General Electric Company, a corporation of New York
Application October 10, 1957, Serial No. 689,423
2 Claims. (Cl. 200—144)



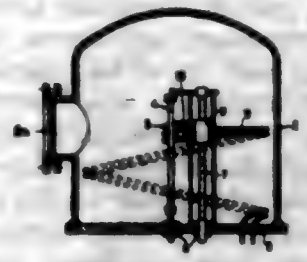
1. An electric circuit breaker comprising an insulating casing having an arc chamber therein, a relatively stationary contact mounted in said arc chamber, a relatively movable contact supported for movement in said arc chamber into and out of engagement with said stationary contact along a predetermined path, an electrical conductor connected to each of said stationary and movable contacts respectively and extending generally parallel to each other in a first direction immediately adjacent said contact when in closed position, a venting passage extending from said arc chamber to the exterior of said casing in a direction generally opposite to said first direction, arc cooling and extinguishing means in said arc chamber comprising a one-piece generally U-shaped metallic member having its bight portion extending generally parallel to said path of movement of said movable contact and its side portions disposed on opposite sides of said path of movement and extending at least the entire length of said path of movement, a plurality of elongated generally parallel slots in said bight portion of said U-shaped member extending generally perpendicular to said path of movement, said slots each extending at least partially into both of said side portions to provide a plurality of generally U-shaped parallel portions spaced away from each other throughout their intermediate portions but joined together at the ends thereof opposite said bight portions, said U-shaped member having a portion of the bight thereof cut away adjacent said stationary contact and adjacent said venting passage to permit substantially unobstructed flow of arc gases into said venting passage from the portion of said arc chamber adjacent said stationary contact.

2,898,428
ACTUATORS FOR ELECTRICAL SWITCHES
Brian Astbury Holden, Newcastle-upon-Tyne, England, assignor to Burgess Products Company Limited, Hinckley, Leicestershire, England, a company of Great Britain
Application April 8, 1958, Serial No. 727,145
Claims priority, application Great Britain December 30, 1957
15 Claims. (Cl. 200—172)



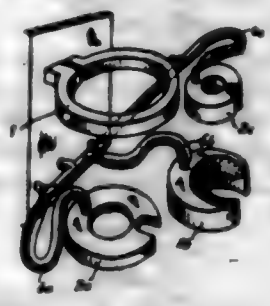
1. A switch actuator comprising a bracket attachable to the switch and having in a laminar plane portion a slot extending transversely to the direction of movement of the push-button, and a laminar second order lever, having a tongue, and at least one shoulder or like abutment at the base of the tongue, which penetrates the slot up to said shoulder, the lever bearing upon the push-button while being oblique to the plane of said portion of the bracket and the tongue being so bent that in co-operation with the shoulder it serves to limit outward displacement of the lever under the outward resilient force of the push-button.

2,898,429
CRUCIBLE-FREE ZONE-MELTING APPARATUS
Reimer Emeis and Wolfgang Keller, Pretzfeld, Oberfranken, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany
Application November 14, 1958, Serial No. 773,903
Claims priority, application Germany November 15, 1957
7 Claims. (Cl. 219—10.43)



1. A crucible-free zone-melting apparatus for processing rod-shaped material, comprising an evacuatable processing vessel, holder means in said vessel for holding the rod material to be processed, said holder means defining a longitudinal rod axis, a heater member of short axial length movable along said axis for zone-melting the rod material, two conductors each having one end stationarily mounted and having the other end connected with said heater member for supplying electric current thereto, said two conductors extending between said two ends along a helical path in parallel and slightly spaced relation to each other, said helical path surrounding said holder means and said heater member.

2,898,430
INDUCTION HEATING DEVICES
Antoine Brueder, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France, a corporation of France
Application March 7, 1958, Serial No. 719,971
8 Claims. (Cl. 219—10.49)



1. An induction heating apparatus for heating workpieces, which comprises an induction ring having associated therewith a plurality of complementary compensating elements fitting successively between the inner periphery of said ring and the portions of the workpiece to be treated, and means mounting said elements for displacement simultaneously for following the displacement of the workpiece through the induction ring.

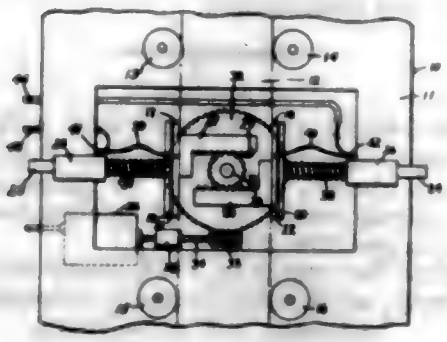
circuit, one of said coils being immersed in said material

circuit means, a second switch means associated with

2,898,431
APPARATUS FOR MOISTURE REMOVAL

Lawrence H. Connell, Haines City, Fla., and Lowell A. Moe, Eau Claire, Wis., assignors, by mesne assignments, to F. H. Peavey & Company, Minneapolis, Minn., a corporation of Minnesota

Application February 16, 1955, Serial No. 488,687
2 Claims. (Cl. 219—10.77)

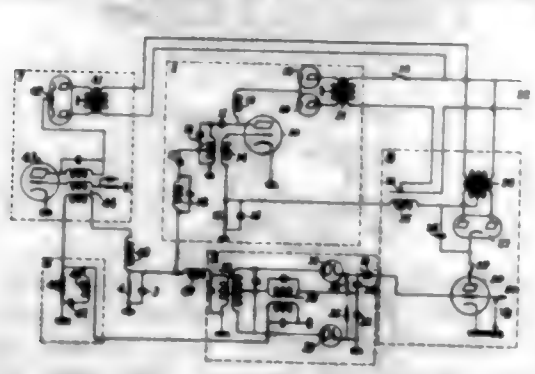


1. In a machine for treating material to remove moisture therefrom, a pair of electrodes arranged to receive the material therebetween, adjustment means mechanically coupled to at least one of said electrodes for adjusting the spacing therebetween, reversible electro-mechanical means coupled to said adjustment means, a source of high frequency voltage including a class-C output stage coupled to said electrodes, power supply means for applying voltage to said stage, a relay responsive to current drawn by said stage from said power supply means and including contact means operated in one direction when said current is less than a certain value and operated in the reverse direction when said current is greater than a certain value, means controlled by operation of said contact means in said one direction for energizing said electro-mechanical means in a direction to decrease the spacing between said electrodes, and means controlled by operation of said contact means in said reverse direction for energizing said electro-mechanical means in a direction to increase the spacing between said electrodes, whereby the high frequency power applied to the material is maintained substantially constant within limits.

2,898,432
HIGH FREQUENCY HEATING SYSTEM

Paul Lavaysiere, Vincennes, France, assignor to Etablissements T.R.M.-Technique, Radio, Mecanique, Neuilly-sur-Seine, France, a company of France

Application April 3, 1957, Serial No. 650,416
Claims priority, application France April 4, 1956
9 Claims. (Cl. 219—10.77)

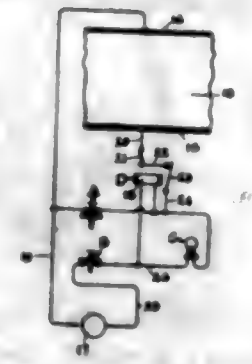


3. In a heating system for dielectric material, a pair of electrodes receiving said material therebetween, a generator applying an A.-C. voltage across the electrodes to heat the material, the phase angle between said voltage and the current through the material being a function of the temperature in the material, means sensing said phase angle, and means connected to the generator and the sensing means to cut off the generator output with said phase angle at a value corresponding to a preselected temperature in the material.

2,898,433
DE-ICING WINDOWS

Robert M. Felt, Toledo, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Application August 29, 1956, Serial No. 606,899
5 Claims. (Cl. 219—20)

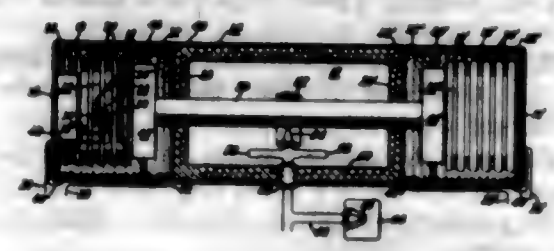


1. The combination, in a window or windshield, of a sheet of glass, a transparent electrically conducting film on a surface of said sheet, an electrical circuit for supplying current in excess of a threshold value to said film, electrode means for connecting said electrical circuit to said film, and means including a relay comprised of a coil and a pair of normally open switch contacts all electrically connected in series in said circuit, to close said switch contacts only when said current flow is in excess of said threshold value and to interrupt said circuit when said current flow is reduced below said threshold value by fracture of said glass sheet.

2,898,434
ADJUSTABLE REFERENCE DEVICE

Harold H. P. Lemmermann, Schenectady, and Weyman S. Crocker, Scotia, N.Y., assignors to General Electric Company, a corporation of New York

Application December 26, 1956, Serial No. 630,569
10 Claims. (Cl. 219—20)



1. An adjustable reference device comprising a first unit containing a substance in a solid-liquid state at one temperature, a second unit containing a substance in a solid-liquid state at a second temperature, means for maintaining the temperatures of said substances substantially constant and heat responsive means connected between said first and second units and having its opposite ends in thermal relation with said substances.

2,898,435
HEATING CONTROL DEVICE

Cecil A. Crafts, Pasadena, Calif., assignor to Robertshaw-Fulton Controls Company, Greensburg, Pa., a corporation of Delaware

Application April 29, 1957, Serial No. 655,663
7 Claims. (Cl. 219—20)

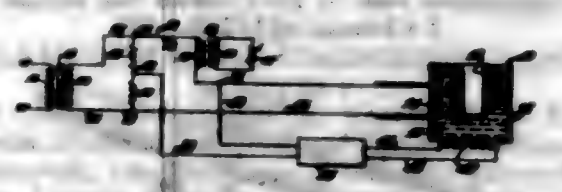
1. In a system for controlling the temperature of a space, the combination comprising a container, a heating medium for the space positioned within said container comprising a fusible material, electrically operated means for heating said material to the fusion temperature thereof to form a slurry of said material, an impedance bridge circuit comprising a pair of resistances and a pair of inductance coils connected as the arms of said bridge

support the food to be cooked, and means for producing an electrostatic field between said collecting and

2,898,440
FORMING AND WELDING METAL TUBES

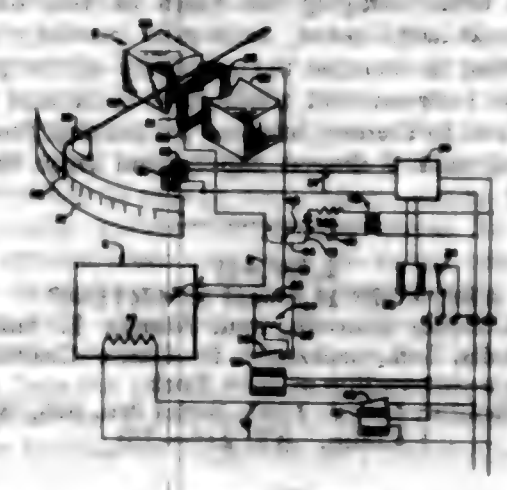
not extending transversely to the direction of movement of the workpiece through the induction ring.

circuit, one of said coils being immersed in said material whereby said one coil acts as a primary coil of a transformer and said material acts as a secondary coil of the transformer having a resistance proportional to the liquid-solid ratio of said slurry, a third inductance coil coupled to the other of said inductance coils of said pair and



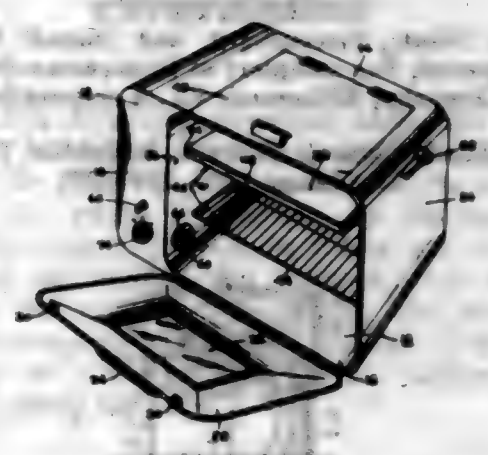
defining a transformer therewith, a third resistance connected to said third coil, said bridge circuit being balanced when the resistance value of said material equals the value of said third resistance but operative to become unbalanced in response to a change in the resistance value of said material, and means for energizing said heating means upon unbalance of said bridge circuit.

2,898,436
CONTROL APPARATUS
Joseph A. Lawlor, Chicago Heights, Ill., assignor to Blue M Electric Company, Blue Island, Ill., a corporation of Illinois
Application May 10, 1957, Serial No. 658,274
2 Claims. (Cl. 219—39)



2. In a controlling arrangement to be used with a controlled member having associated therewith a power element to effectuate said control, the combination of sensing means operatively connectable to the member and arranged to put out a variable voltage in response to variations of the member from a determined condition, control means having a graduated control scale thereon, circuit means operatively interconnecting the sensing means and the control means to transmit said voltage to the control means, settable means in the control means to delineate a control point reflecting said determined condition, first and second actuating points spaced upscale and downscale from said control point whereby said actuating points define a control span bracketing said control point, said control means including changeable means arranged to receive said voltage and in response to an increase thereof to move through said control span in one direction to one of said actuating points and in a response to a decrease thereof to move through said control span in another direction to the other of said actuating points, means operatively associated with said actuating points to offer an output signal variably responsive to the movement of said changeable means to the respective actuating points, a power circuit connected to said power element, a first switch means in said power circuit to control power application to said element, resistance means in said circuit means, a second switch means associated with said circuit means and in parallel with said resistance means and operable to shunt said resistance means out of said circuit means, and means operatively responsive to said output signal to open and close said first and second switch means to selectively energize said power circuit and shunt said resistance means out of said circuit means, whereby upon movement of said changeable means to said first actuating point said changeable means is artificially moved toward said second actuating point and upon movement of said changeable means to said second actuating point said changeable means is artificially moved toward said first actuating point.

2,898,437
COMBINATION ELECTRIC COOKING APPLIANCE
Donald L. McFarland, Nichols, Conn., assignor to General Electric Company, a corporation of New York
Application June 6, 1956, Serial No. 589,683
11 Claims. (Cl. 219—35)



4. A cooking appliance comprising a plurality of walls defining an oven and a chamber, one of said walls separating said oven and said chamber, planar heating means mounted in said oven and adapted to assume either a substantially horizontal position or a substantially vertical position, said heating means adapted to cooperate with one of said walls when it is in its substantially vertical position to define a passageway, two openings in said separating wall, one of said openings being disposed adjacent to said passageway and placing the latter into communication with said chamber, the other of said openings disposed at a point remote from said one of said openings and placing the portion of said oven other than said passageway into communication with said chamber, and means for causing a flow of air through said oven portion, said other of said openings, said chamber, said one of said openings, and said passageway when said heating means is in its substantially vertical position, whereby said appliance is adapted to function as a broiler or grill when said heating means is mounted in its substantially horizontal position, and said appliance is adapted to function as a roaster or baker when said heating means is mounted in its substantially vertical position and said air flow causing means is actuated.

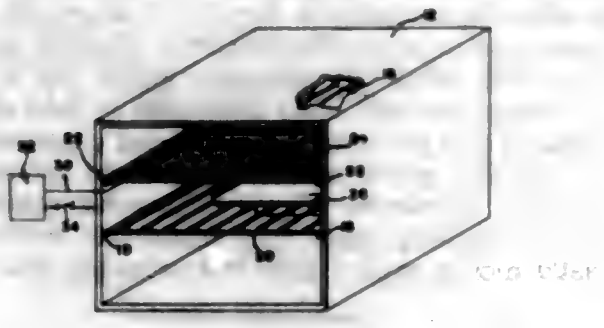
2,898,438
DOMESTIC APPLIANCE
J. Lowell Gibson, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 30, 1956, Serial No. 619,179
4 Claims. (Cl. 219—37)

4. Apparatus for collecting grease and the like from food cooking in an oven comprising, a collecting electrode and a substantially horizontal pan supporting electrode located in spaced relationship, said supporting electrode insulated from said collecting electrode and adapted to

relationship with said arc wall-stabilizing nozzle, a coil

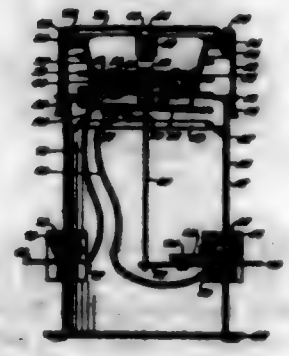
2,898,444

support the food to be cooked, and means for producing an electrostatic field between said collecting and



supporting electrodes whereby grease and the like are drawn from said food to said collecting electrode.

2,898,439
CONTROL DEVICE
Clarence Wantz, Greensburg, and Russell F. Garner, Youngwood, Pa., assignors to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Application March 20, 1958, Serial No. 722,676
16 Claims. (Cl. 219—37)

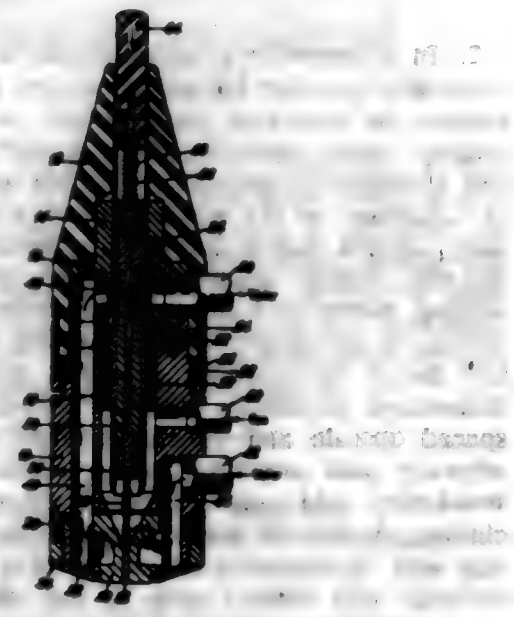


1. In a device for controlling the temperature of a cooking vessel supported on a surface heating element of a cooking range having a circuit connecting the heating element to a source of electrical energy, the combination comprising a pair of oppositely disposed contacts, means adapted for serially connecting said contacts in the circuit to the surface heating element, support means for said contacts adapted to be positioned in proximity to the cooking vessel to be controlled, means for fixedly mounting one of said contacts on said support means, means for mounting the other of said contacts on said support means for movement into and out of engagement with said fixed contact and being adapted to open and close the circuit to the surface heating element, and means for controlling said movement of said movable contact including thermally responsive means mounted on said support means and adapted for contact with the cooking vessel to be controlled and being movable in response to temperature changes of said cooking vessel, and abutment means operatively connected to said thermally responsive means and engageable with said means for mounting said movable contact, said abutment means being operatively adapted to open and close said pair of contacts at a predetermined temperature of said cooking vessel whereby said cooking vessel is maintained at said predetermined temperature, said thermally responsive means comprising a bimetallic disc element and said abutment means comprising means for adjusting the temperature at which said abutment means is operable to open said pair of contacts.

2,898,440
FORMING AND WELDING METAL TUBES AND SHEATHS
Wallace C. Rudd, Larchmont, Hugh J. Cameron, New Rochelle, and David G. Osterer, Harrison, N.Y., assignors to Magnetic Heating Corp., New Rochelle, N.Y., a corporation of New York
Application June 7, 1957, Serial No. 664,287
8 Claims. (Cl. 219—59)

1. In apparatus for making metal tubing from a metal blank having been previously formed into a generally tubular configuration but having a longitudinal V-shaped gap between the edges of said blank, the combination comprising: a pair of contacts mounted respectively to be engaged by the surfaces of the metal of said blank along opposite sides of said gap at a position shortly in advance of a weld point; a source of current of a frequency of the order of about 100,000 cycles per second or higher connected to said contacts; means embodying a continuing element of magnetic material positioned inside said blank and extending longitudinally thereof; and means for concurrently advancing said blank and said element with relation to said contacts and past said weld point while bringing the edges of said blank together at said weld point, successive portions of said element acting to increase the reactance of the paths of current flow between said contacts in directions around said blank and to thereby increase the current flow along the edges of said V-shaped gap to and from the weld point.

2,898,441
ARC TORCH PUSH STARTING
Thomas B. Reed, Danville, and Martin T. Smith, Jr., Indianapolis, Ind., assignors to Union Carbide Corporation, a corporation of New York
Application July 3, 1957, Serial No. 669,785
1 Claim. (Cl. 219—75)



Apparatus for starting an arc torch having a barrel, an electrode holder in said barrel and connected to a source of current, and an arc wall-stabilizing nozzle insulated from said electrode holder and connected to said source, which comprises a plunger slidably mounted in said barrel and from which said electrode holder depends, a push button slidable in top of said barrel for pushing said plunger and rod to bring the electrode tip into starting

2,898,446
WELDING-ROD HOLDER

horizontal picture taking, said adapter device comprising a unitary, rigid, angularly-shaped support arm, a mount-

relationship with said arc wall-stabilizing nozzle, a coil compression spring engaging said button for retracting said electrode tip from starting relationship, and a set back plug for adjusting retract distance of said electrode tip from said arc wall-stabilizing nozzle.

2,898,442
MANUFACTURE OF COMPRESSOR VANE ASSEMBLY

Charles C. Anderson, Virgil K. Eder, William P. Zimmermann, Thomas A. Heath, and James F. McLaughlin, Indianapolis, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

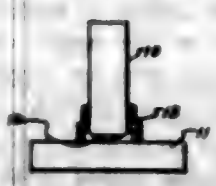
Continuation of application Serial No. 198,687, December 1, 1950. This application November 13, 1956, Serial No. 621,945
4 Claims. (Cl. 219—99)

1. An apparatus for assembling structures comprising two strips formed with holes and comprising cross members extending between the strips and provided with tongues extending through the holes in the strips, the apparatus comprising, in combination, a fixture for holding a said structure against distortion, two electrodes relatively movable to engage the tongues, means for forcing the electrodes against the tongues, means for passing a heating current from one electrode to the other through a cross member, and means for indexing the fixture to align the cross members with the electrodes comprising a clamp for the cross member to engage and brace the cross member between the electrodes against lateral distortion and disposed in alignment with the electrodes to locate the cross member in alignment with the electrodes.

2,898,443
TRACING WELD METAL

George E. Havemeyer, Guilford, Conn., assignor to Gregory Industries, Inc., Detroit, Mich., a corporation of Michigan

Application July 1, 1955, Serial No. 519,393
1 Claim. (Cl. 219—99)

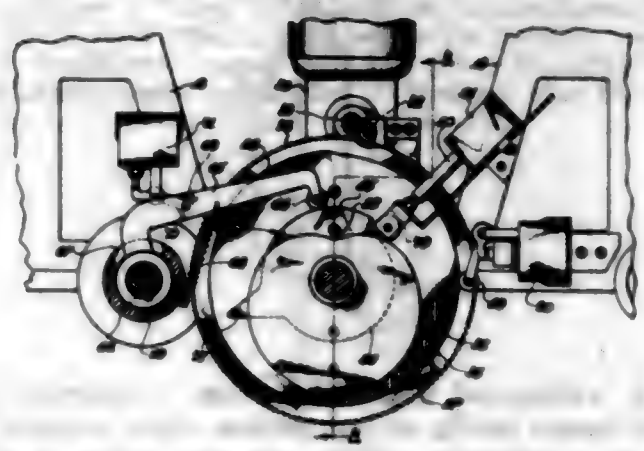


The method of forging with a minimum of forging stock, comprising the steps of selecting a billet of forging stock, selecting a grip stud, welding said grip stud to said billet, and simultaneously with the welding of said grip stud introducing an alloying material having a contrasting chemical etch reaction when alloyed in said billet as compared to the billet stock, thereafter forging said billet to produce a forged member and excess flash, trimming said flash, and finally etching the forged material to determine the extent and location of contrasting etch and thereby determining whether the said alloying material has been fully removed.

2,898,444
APPARATUS AND METHOD FOR WELDING END CLOSURE TO CONTAINER

Charles E. Frantz and Thomas R. Cerrey, Richland, Wash., assignors to the United States of America as represented by the United States Atomic Energy Commission

Application January 30, 1956, Serial No. 562,355
3 Claims. (Cl. 219—124)

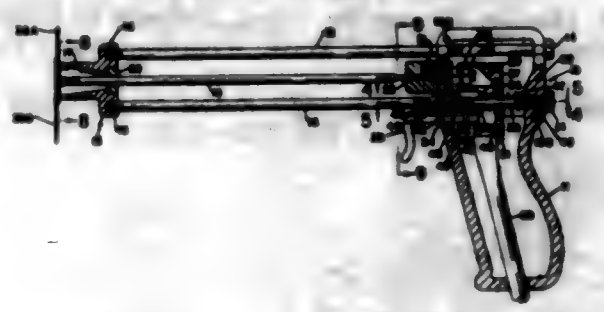


1. A welding apparatus comprising means for rotating an object to be welded, a welding electrode, means for positioning the electrode at the center of the object to initiate an arc, means for moving the electrode to a region of the object between the center and the outer edge thereof and holding the electrode there for one rotation of the object for preheating the same, and means for moving the electrode to the edge of the object and holding the electrode there for one rotation of the object for welding the same.

2,898,445
PORTABLE WELDING GUN

Raymond J. Siezak, Barberton, Ohio, assignor of one-half to Schott Metal Products Company, and one-half to RJS Products Company, Inc., both of Akron, Ohio, and both corporations of Ohio

Application April 3, 1958, Serial No. 726,090
11 Claims. (Cl. 219—127)



1. A portable welding gun having a housing, a pair of laterally spaced guide rods extending slidably through and beyond said housing, a hollow nose secured to the rods at one end thereof, means on said housing for insulatively securing one end of a weld rod extending between said guide rods into said hollow nose, a friction latch plate in said housing apertured at one end for slidably receiving one of said guide rods when the plate is at a predetermined angle thereto and for frictionally engaging said rod when the angle of said plate is changed, spring means abutting the apertured end of said plate normally to maintain it in unlatched position, spring means abutting the other end of said plate to angle it to latching engagement with said one rod, trigger means to release said first spring means, and a stop to limit bodily movement of said latch plate in latched engagement with said one guide rod.

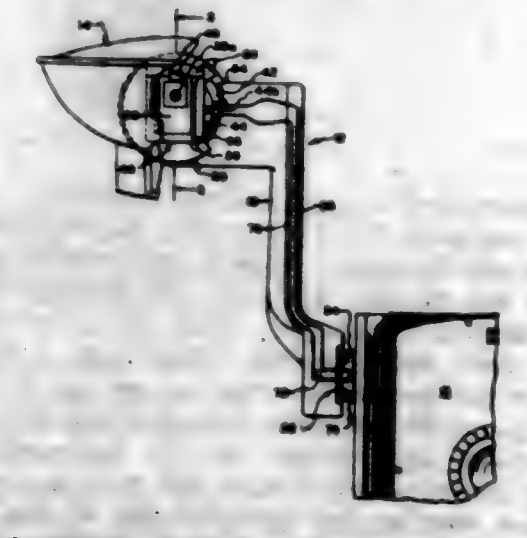
2,898,449

the housing and the clutch member to urge the latter

2,898,446
WELDING-ROD HOLDER
Howard P. Minnick, Norristown, Pa.
Application March 6, 1958, Serial No. 719,533
2 Claims. (Cl. 219—138)

1. A welding-rod holder comprising a generally C-shaped handle having its intermediate region adapted to serve as a hand-grip portion, one end region of said handle being formed with a through hole extending generally coplanar with said handle for receiving an electrical-supply conductor, an outward extension on the other end of said handle in general alignment with said hole, a connector block positioned longitudinally of and within said extension, said connector block being adapted at its inner end for connection to the inner end of a conductor extending through said hole, the other end of said connector block being provided with a transverse through bore for slidably receiving a welding rod, and a clamping member mounted in said extension for movement transversely into and out of said bore to releasably clamp a rod in said bore, said handle being formed with an internal passageway in fluid communication with and extending from said connector block entirely through and opening from said hand-grip portion remote from said other end of said handle to provide a passageway for cooling air.

2,898,447
BOUNCE FLASH ADAPTER
Albert J. Hanlon, Somerville, Mass., assignor to Polaroid Corporation, Cambridge, Mass., a corporation of Delaware
Application August 15, 1957, Serial No. 678,456
11 Claims. (Cl. 240—1.3)



1. A bounce flash adapter device incorporating rapidly adjustable means for mounting a flash gun on a camera so that the flash gun is positively aimed upwardly at a correct angle for providing reflection of light rays from an overhead surface to the subject of a photographic exposure when the camera is held either for vertical or horizontal picture taking, said adapter device comprising a unitary, rigid, angularly-shaped support arm, a mounting foot fixedly attached to one end of said support arm for releasably mounting said arm firmly on the accessory clip of a camera, said foot comprising a pair of electrical contacts for establishing connection with the electrical contacts of said accessory clip, a rotatable head mounted on the opposite end of said arm in annular concentric bearing means thereof and including a pair of annular, metallic, electrical contact maker means fastened to said head and rotatable together therewith, a receptacle clip fastened to an external surface of said rotatable head for rotation therewith, said clip comprising a pair of electrical contacts and serving to releasably mount and to establish electrical contact with the mounting element of a flash gun, electrical contact and connector means in contact with and providing electrical connections between said receptacle clip and said pair of annular contact maker means and between the latter and said mounting foot, and mutually-engageable detent means in part carried by said rotatable head and in part formed on a surface of said arm adjacent said rotatable head for rapidly establishing and releasably holding both said rotatable head and a flash gun mounted thereon at a plurality of rotational positions.

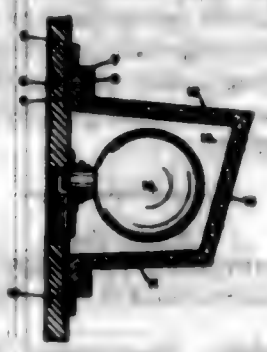
2,898,448
FLASH GUN
Hinsdale Smith, Jr., Suffield, Conn.
Application April 10, 1958, Serial No. 727,630
2 Claims. (Cl. 240—1.3)

2. In flash gun apparatus having a reflector and means for attachment to a camera provided with an elongated support in the form of a tube having an upper end in said reflector and secured thereto and an inwardly turned lip on the lower end thereof, the improvement in means for electrically connecting a battery in said tube to the base of a flash bulb and to the metallic core and relatively insulated sheath of a cable, a socket in said reflector electrically connected to the upper end of said tube, a metallic washer in said tube in electrical contact with said lip provided with an insulating grommet, said cable extending through said grommet and said sheath being electrically secured to the upper side of said washer, a lower insulating washer in said tube above said metallic washer and sheath and the core of said cable extending upwardly therethrough, an upper insulating washer in said tube above said lower washer having a contact for contact with the lower end of a battery in said tube above said washer, said core being connected to said contact, integral unit including an insulating washer in said tube for disposition above the upper end of a battery having a metallic member for contact with the upper end of said battery and a metallic compression spring above said uppermost washer having a lower end secured to the metallic member thereof with a metallic contact member fixed to the upper end of said spring for engaging the contact of a bulb base in said socket.

has been fully removed.

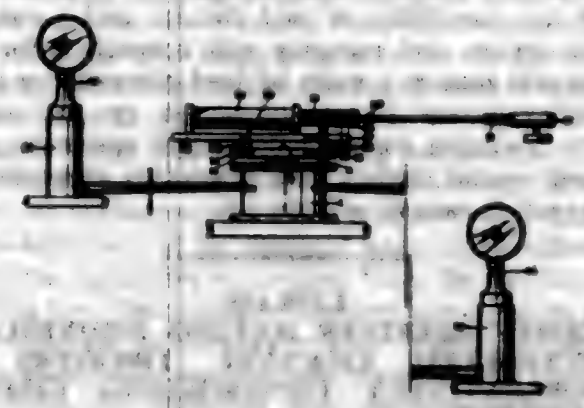
said one guide rod.

2,896,449
SIGNAL LAMP
Adrianus Vroegindeweij, Velsen, Netherlands
Application April 2, 1957, Serial No. 650,228
Claims priority, application Belgium December 8, 1956
1 Claim. (Cl. 240—7.5)



A signal lamp adapted to be mounted on a vessel, comprising a base having a recess therein, a transparent housing in the form of a hexahedron open at the rear and attached to said base, said housing having a flange portion at the rear thereof disposed adjacent said recess of the base, a gasket disposed in said recess between said flange portion and said base and having an opening at the bottom thereof, said housing including a flat top wall having a slight outward and downward incline, so that no rain water can accumulate thereon, a front wall attached to said top wall having a substantially inward and downward incline, and side walls converging it downward direction, a flat bottom wall connected to said front wall and side walls, said flange portion of said housing adjacent said bottom wall defining with said recess in said base a water drain opening, said housing having a spherical lamp bulb therein.

2,896,450
ROTATABLE VEHICLE HEADLIGHT ASSEMBLY
René Techen, Gard, France
Application January 4, 1956, Serial No. 557,403
3 Claims. (Cl. 240—61.4)

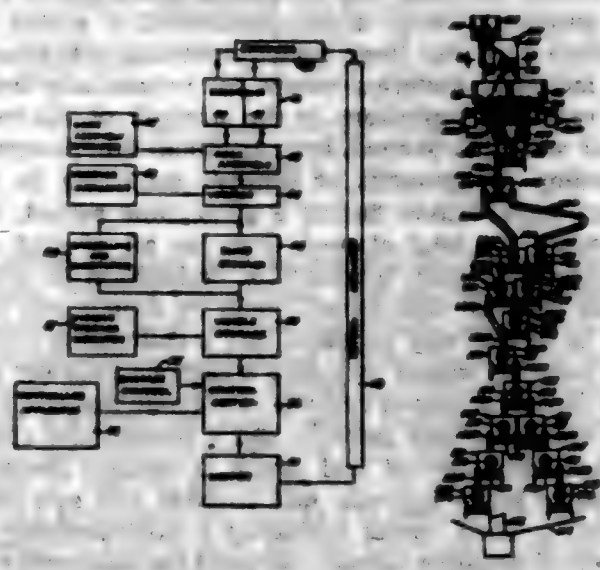


1. A pivotable head-lamp assembly, for automobiles of the kind having steerable wheels controlled by a steering linkage, comprising rotatable lamp mountings carried on the vehicle, a cable pulley coupled to each rotatable mounting, a control pulley rotatably mounted on the vehicle, cable means coupling said control pulley with each of the mounting pulleys, a disk secured to the control pulley and having a radial slot opening at its circumference and an aperture at a diametrically opposite position, a housing seated on the disk, a clutch spindle mounted on the housing and engaged rotatably in the disk aperture, a clutch member slidably mounted in the housing and having a finger which in one end position of the clutch member engages in the radial slot of the disk and in the other end position of the clutch member is positioned externally of the circumference of the disk, a solenoid in the housing having its core coupled to the clutch member, a return spring in the housing acting between the housing and the clutch member to urge the latter into the position in which the finger is externally of the disk circumference, and a coupling between the clutch member and steering linkage of the vehicle.

2,896,451
LAMP SHADE
Hermann Th. J. A. Busquet, Huis ter Heide, Netherlands, assignor to "Heiz" Nederlandsche Lampenfabriek N.V., Zeist, Netherlands, a Dutch limited-liability company
Application August 14, 1957, Serial No. 678,076
Claims priority, application Netherlands May 24, 1957
3 Claims. (Cl. 240—106)

1. A shade for a source of light comprising first and second shade members each having an open end and a substantially closed end and a perforated wall intermediate said ends, said first shade member being smaller than said second shade member which is thus adapted to envelope said first shade member and define an intermediate space therewith, locking means at the closed ends for locking said members together with the perforations of the respective walls displaced so that said source of light is enabled to transmit light directly through said open ends and indirectly via said apertures, and a flange on one of the walls adjacent the associated open end bridging the space intermediate said members in light tight manner.

2,896,452
SWITCHING SYSTEMS AND APPARATUS THEREFOR
Roland J. Berti and David C. Bottiger, Omaha, Nebr.
Original application December 13, 1954, Serial No. 474,668. Divided and this application October 5, 1955, Serial No. 538,707
15 Claims. (Cl. 246—134)



5. In a car classification system, the combination with car classification apparatus that provides a track layout including an entrance track switch, a power switch machine for selectively positioning the switch, control means for selectively actuating the power switch machine, first trackway means forwardly of said switch for sensing the approach of a car thereto and second trackway means at the switch and responsive to the presence of a car to main-

mined amplitude level in the direction of increasing amplitude; and means receptive of the pulses developed by

the characteristics of the components of said first amplifier change, first means including a cathode follower

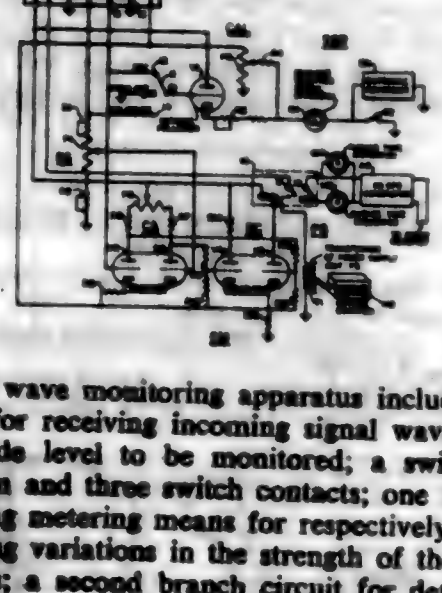
tain the position of the switch until the car clears the switch; of a plurality of independent, discrete, flowable mechanical bodies each having one of two distinctive physical characteristics representative of the car routing position of the switch, a mechanical storage station for receiving and storing a plurality of code bodies in predetermined alignment, a mechanical control station for receiving code bodies individually, and code body conveying means responsive to said first trackway means for individually transferring code bodies from said storage station to said control station, said control station including code body removing means normally blocking movement of a code body through said control station and actuatable for individually advancing a code body through said control station, slave control means for actuating said removing means, and sensing means selectively responsive to the physical characteristic of a code body at the control station for jointly actuating the control means and the slave control means, with said slave control means having means responsive to second trackway means for rendering the slave control means inoperative until the second trackway means senses the arrival of a car at the switch.

2,898,453

INDICATOR UNIT FOR SITE SURVEY

Sanford W. Soldier, New York, N.Y., assignor to the United States of America as represented by the Secretary of the Army

Application December 29, 1955, Serial No. 556,373
2 Claims. (Cl. 250—1)



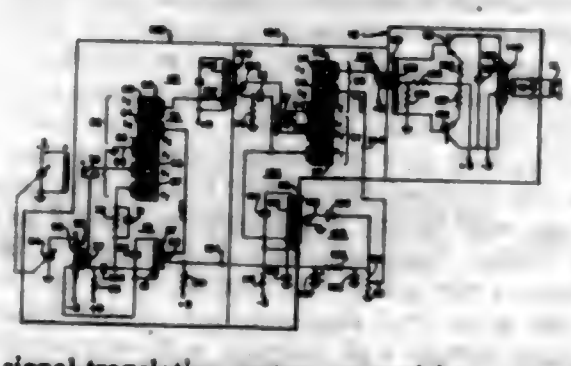
2. Signal wave monitoring apparatus including an input circuit for receiving incoming signal waves of varying amplitude level to be monitored; a switch having a switch arm and three switch contacts; one branch circuit including metering means for respectively indicating and recording variations in the strength of the incoming signal waves; a second branch circuit for detecting and recording the number of outages occurring in the received signal waves during a given time period, and for recording the total elapsed time for all of said outages during said period, adapted for connection to said input circuit through said switch when its switch arm is operated to one of said contacts, and a calibration circuit for said metering means including a cathode follower vacuum tube having a heated cathode, an anode positively biased with respect to said cathode, and a control grid connected to the switch arm of said switch, a variable resistor connected in series between said cathode and said metering means; a third circuit including a potentiometer and a source of negative voltage, adapted for connection across the portion of said calibration circuit including the control grid-cathode space path of said tube and said variable resistor in series through said switch when its switch arm is operated to a second one of said switch contacts; and a fourth circuit including a source of positive voltage, the control grid-cathode space path of said tube and said variable resistor in series adapted for connection across said metering means through said switch when its switch arm is operated to the third of said switch contacts; said third circuit when said switch is operated to said second switch contact and said potentiometer is properly adjusted providing an opposing current for balancing out the anode current through said tube and thus adjusting the indication of the metering means to zero; and said fourth circuit when said switch arm is operated to said third contact and said potentiometer and said variable resistor are properly adjusted providing means for calibrating said metering means so that it will indicate and record the extreme variations of amplitude level of the incoming signal waves.

2,898,454

FIVE ZONE COMPOSITE TRANSISTOR WITH COMMON ZONE GROUNDED TO PREVENT INTERACTION

Bernard D. Loughlin, Huntington, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois

Application January 22, 1957, Serial No. 635,331
18 Claims. (Cl. 250—20)



1. A signal-translating system comprising: a multiple-unit transistor device including a pair of junction transistors which have a common zone of semi-conductive material serving as the collector of one transistor and as the emitter of the other transistor; an electrical connection to said common zone; a first signal-translating circuit including one of said transistors and a second signal-translating circuit including the other thereof, said circuits being of the common emitter type to promote full use of the capabilities of said circuits; and a condenser in said circuits and engaging said connection for maintaining said zone at a point of fixed potential for at least alternating-current signals translated by said circuits, thereby providing desired independent operation of said first and second circuits with respect to alternating-current signals in each of said circuits.

2,898,455

DIVERSITY RECEIVER HAVING INDIVIDUALLY CONTROLLED CHANNEL TRIGGERS FOR COOPERATIVELY CONTROLLING CHANNEL SWITCHING

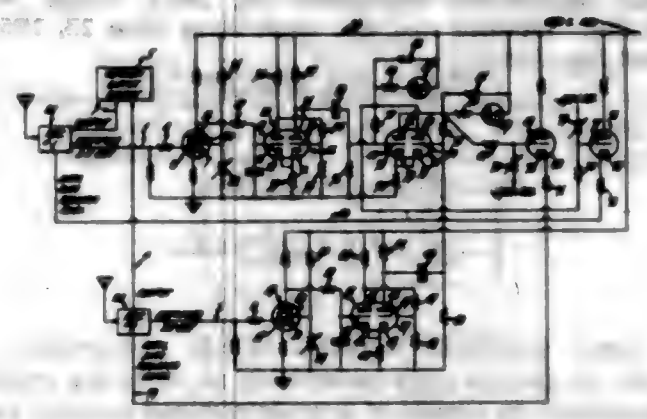
Donald G. Hyman, Haddonfield, N.J., and Ronald A. McDermedy, Philadelphia, Pa., assignors to Radio Corporation of America, a corporation of Delaware

Application October 30, 1957, Serial No. 693,445
14 Claims. (Cl. 250—20)

1. In a system for selectively switching either one of a pair of receivers to a common output channel, said receivers being arranged in diversity relation relative to a remotely located transmitter, first means receptive of solely a signal proportional to the signal strength in the first receiver for developing a voltage pulse of one polarity in response to each passage of said signal through a predetermined amplitude level in the direction of increasing amplitude; second means independent of said first means and receptive of solely a signal proportional to the signal strength in the second receiver for developing a voltage pulse of said one polarity in response to each passage of said last-mentioned signal through a predeter-

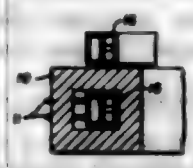
member, a return spring in the housing acting between the switch and responsive to the presence of a car to main-

mined amplitude level in the direction of increasing amplitude; and means receptive of the pulses developed by said first and said second means for switching said first receiver to said output channel in response to a pulse



of said one polarity developed by said first means and for switching said second receiver to said output channel in response to a pulse of said one polarity developed by said second means.

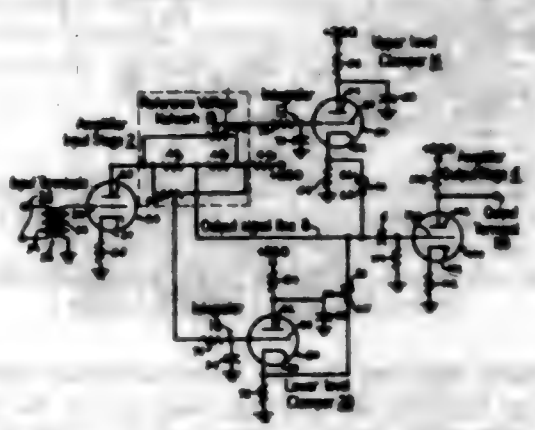
2,898,456
UNIVERSAL, CONSTANT FREQUENCY, PARTICLE ACCELERATOR
Nicholas Christofilos, also known as Nicholas Philos, Washington, D. C.
Application June 9, 1953, Serial No. 360,576
6 Claims. (Cl. 250—27)



1. A universal constant frequency particle accelerator which comprises in combination at least a first and a second evacuated annular chamber, each of said chambers at least partially overlapping one another, means for establishing a strong focusing magnetic field in each of said chambers over the entire length thereof, the lines of flux of said magnetic field being perpendicular to the axis of said chambers, a transformer for establishing a constant frequency electric accelerating field in at least the first said chamber, said electric field being parallel to the axis of said chamber, whereby particles injected into said first chamber are accelerated for a first acceleration period less than one-half cycle of the constant frequency accelerating field, means responsive to a signal from the particles for controlling the orbit radius of said particles constant independent of either the velocity or kind of particles, deflecting coils surrounding each of said chambers for a portion of its length, the deflecting coils surrounding said first chamber being energized to deflect said particles into said second chamber at the end of said first acceleration period, the deflection coils of said second chamber being energized to deflect said particles back into said first chamber at the start of the second acceleration period and means for synchronizing the energization of said deflecting coils with the start and end of the acceleration periods.

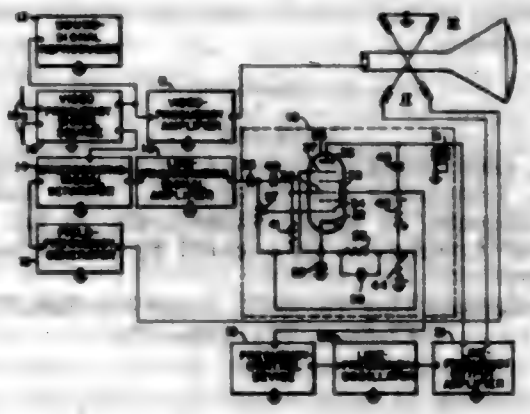
2,898,457
AMPLIFIER CIRCUIT
Albert A. Auerbach, Hollis, N.Y., assignor to Underwood Corporation, New York, N.Y., a corporation of Delaware
Application November 30, 1954, Serial No. 427,861
4 Claims. (Cl. 250—27)

1. A nonblocking amplifier circuit comprising a first amplifier having an output signal terminal, the average level of the voltage of said output terminal varying as the characteristics of the components of said first amplifier change, first means including a cathode follower and a voltage integrator to generate a first voltage which is greater than said average voltage level by one-half of a predetermined maximum signal voltage variation, a second means including a cathode follower and a voltage integrator to generate a second voltage which is less than said average signal level by one-half of said



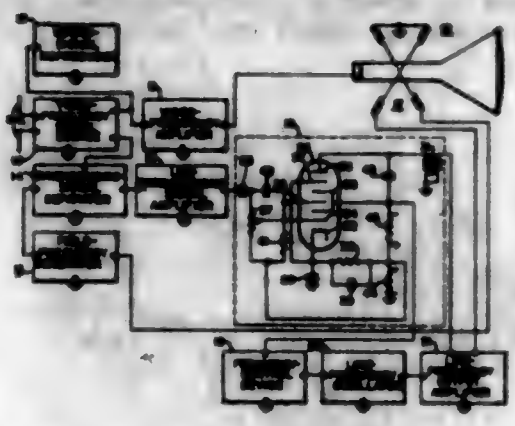
predetermined maximum signal voltage variation, a diode connecting said output terminal to said first means to limit the maximum instantaneous voltage of said output terminal to said first voltage, a second diode connecting said output terminal to said second means to limit the minimum instantaneous voltage of said output terminal to said second voltage, and a second amplifier coupled to said output terminal.

2,898,458
PHASE DETECTOR
Donald Richman, Fresh Meadows, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Application April 12, 1955, Serial No. 500,792
8 Claims. (Cl. 250—27)



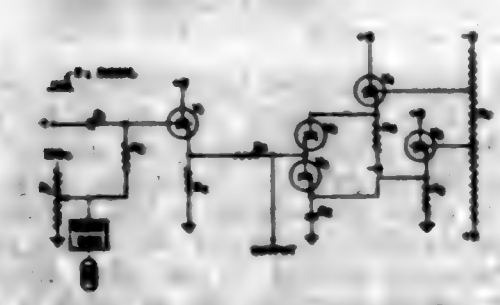
1. A phase detector for the beam-deflection system of a television receiver comprising: one circuit for supplying beam-deflection synchronizing pulses; another circuit for supplying locally generated deflection signals tending to vary in phase with respect to said synchronizing pulses; an electron-discharge device including a plurality of output electrodes coupled to said other circuit and a plurality of control electrodes one of which is responsive to said synchronizing pulses for controlling the current flowing to one of said output electrodes; means including a signal-shaping circuit coupled between said one supply circuit and another of said control electrodes for modifying the shape of said synchronizing pulses and for applying said modified pulses to said other control electrode for controlling the current flowing to another of said output electrodes; and means including a load circuit coupled to said output electrodes for developing a phase-control potential in accordance with the ratio of average currents flowing therethrough.

2,898,459
PHASE DETECTOR
Donald Richman, Fresh Meadows, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Application April 12, 1955, Serial No. 500,904
12 Claims. (Cl. 250—27)



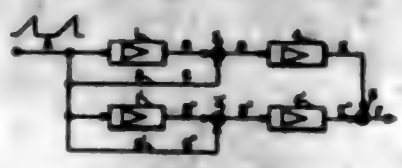
1. A phase detector for the beam-deflection system of a television receiver comprising: one circuit for supplying beam-deflection synchronizing pulses; another circuit for supplying locally generated deflection signals tending to vary in phase with respect to said synchronizing pulses; an electron-discharge device including a cathode, a plurality of output electrodes coupled to said other circuit and a plurality of control electrodes coupled to said one circuit and responsive to said synchronizing pulses for controlling the current flowing to said output electrodes; and a load circuit including an impedance coupled between one of said output electrodes and said cathode and another impedance coupled between said cathode and another of said output electrodes for developing a phase-control potential in accordance with the ratio of the average currents flowing therethrough; said load circuit including a common impedance which is coupled between said cathode and said control electrodes for developing a gain-control potential in accordance with the magnitudes of the average currents flowing therethrough to vary the gain of said device in accordance with the phase relation of said locally generated signals and synchronizing pulses.

2,898,460
D.C. DISCRIMINATOR GATING CIRCUIT
Morris J. Tanbenring and Edward G. May, Baltimore, Md., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application May 13, 1955, Serial No. 508,331
6 Claims. (Cl. 250—27)



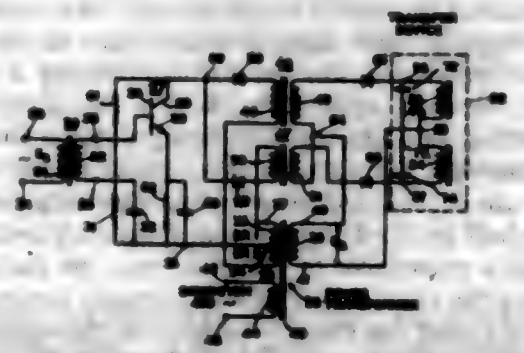
1. A signal gating circuit for long pulse duration comprising a cathode follower circuit having signal input means, mechanical means to apply to said cathode follower circuit direct bias voltage the magnitude of which varies linearly as a function of time, and means including fixed bias means to selectively render said cathode follower circuit conductive and non-conductive for the interval during which said variable bias varies between a lower limit and an upper limit of different amplitude determined by said fixed bias means.

2,898,461
AMPLITUDE BAND SELECTION CIRCUIT
Paul Kerman, Baltimore, Md., assignor to Bendix Aviation Corporation, Towson, Md., a corporation of Delaware
Original application September 30, 1954, Serial No. 459,325. Divided and this application June 23, 1958, Serial No. 743,877
1 Claim. (Cl. 250—27)



A signal amplitude sensitive system comprising: a plurality of circuits each comprising an inverting amplifier responsive to signals of a predetermined polarity and adjustably responsive to amplify only the parts thereof that exceed a predetermined level, an adding means having two inputs, means applying the output of the said amplifier to one of the inputs of the said adding means, means sensitive only to signals of the said predetermined polarity and adjustably responsive to the parts thereof that exceed a predetermined level, and means applying the output of the said adding means to the input of the said polarity sensitive means; means applying an input signal to the said amplifier of each of the said circuits; means applying the said input signal to the remaining input of the said adding means of each of the said circuits; a second adding means; means applying the output of the said sensitive means of each of the said circuits to the said second adding means; and means rendering available the output from the said second adding means.

2,898,462
DEMODULATOR
John C. Karlson, Brooklyn, N.Y., assignor to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Application January 3, 1955, Serial No. 479,326
11 Claims. (Cl. 250—31)



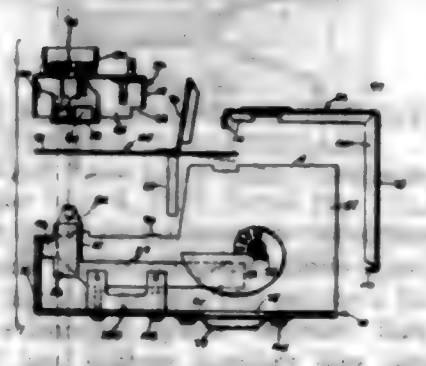
1. A demodulator having a pair of saturable reactor core elements each with a reset and a gate winding thereon, a transistor having a base, collector and emitter, an output winding having a mid-tap, an excitation source of predetermined frequency having a first winding with a mid-tap and a second winding, said first winding having its outer legs connected respectively to one side of each reset winding, the other side of said reset winding each having a diode serially connected therewith and with the opposite sides of both of said diodes being connected to the collector to provide greatest conductivity of both diodes in the same direction, an impedance network connected between said collector and said emitter and the mid-tap of said first winding, a pair of signal input terminals provided at a selected point in said impedance network intermediate said collector and said emitter and the base, and a diode connected between the outer leg of each gate winding and the outer leg of said output winding, said diodes being poled for de-

adjacent to said radiation source, a radiation absorbing shield of selectively variable radiation absorbing value

2,898,468
RECORDING APPARATUS

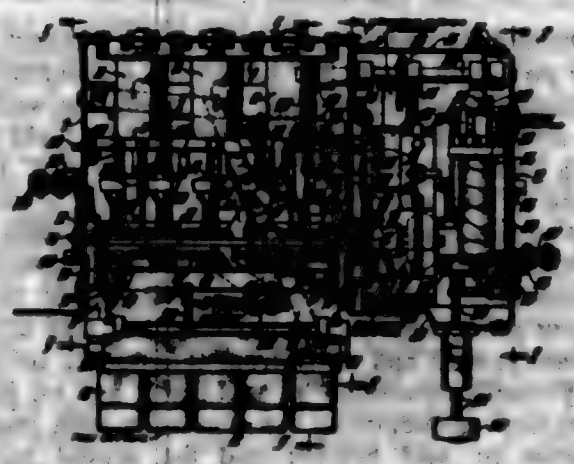
modulating said amplified signal input when said gate windings and said output windings are connected to said excitation source.

2,898,463
ULTRA HIGH FREQUENCY TUNER
Charles E. Honeywell, Park Ridge, Reuben C. Carlson, River Grove, and Martin Wolf, Chicago, Ill.
Application April 26, 1954, Serial No. 425,612
3 Claims. (Cl. 250—40)



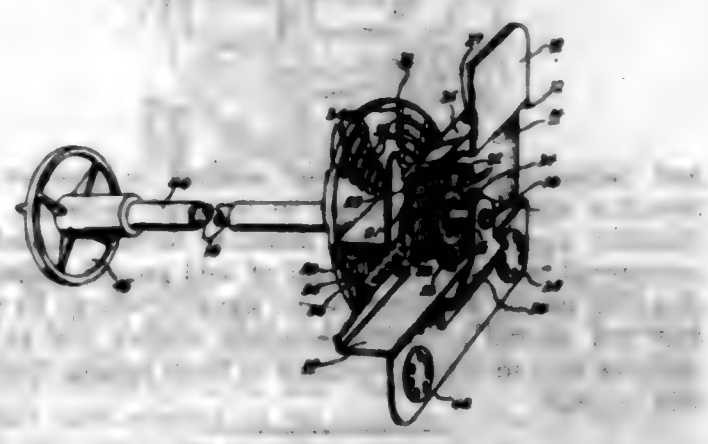
1. An ultra high frequency tuner structure comprising a metal chassis assembly which defines three individual adjacent channels therein, inner conductors enclosed within said channels and extending lengthwise therein and defining therewith separate transmission lines for the first and second R.F. amplifiers and the oscillator, respectively, the inner conductor of the oscillator transmission line terminating in an offset end having a threaded opening therein, an oscillator tube socket mounted on said chassis assembly adjacent said end of the transmission line and having a central opening which registers with said opening in the inner conductor of the oscillator transmission line, said socket carrying a plurality of terminals, a flexible metal member connected to one of said terminals and extending between said openings, a screw received in said central opening in the socket and engaging said metal member and threadedly received in said opening in the inner conductor of the oscillator transmission line, and a conductive loop connected at one end to another of the socket terminals and extending therefrom adjacent the inner conductor of the second R.F. transmission line in inductive relationship therewith and connected at its opposite end to the chassis assembly.

2,898,464
COMBINED SIGNAL SEEKING PUSH BUTTON AND MANUAL TUNER WITH DUAL PURPOSE SOLENOID
George M. Gaskill and Manfred G. Wright, Kokomo, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application August 15, 1956, Serial No. 604,238
12 Claims. (Cl. 250—40)



1. In means for tuning radio apparatus, movable means to tune the apparatus over a predetermined frequency band moving between defined limits, operable means connected to said movable means to move the latter, power storage drive means connected to said operable means to move it and the movable means to tune over the complete band, clutch means between the power storage driving means and the operable means so that the two may move independently, and a single energizable means operably connected to both the operable means and to the power storage driving means to move either the operable means or the power storage means independently over the full path of travel.

2,898,465
TUNER HAVING WAFER SWITCH DISCS SHIELDED FROM TURRET SWITCH DISCS BY CHASSIS
Reuben C. Carlson, River Grove, Ill.
Application September 11, 1957, Serial No. 683,388
1 Claim. (Cl. 250—40)



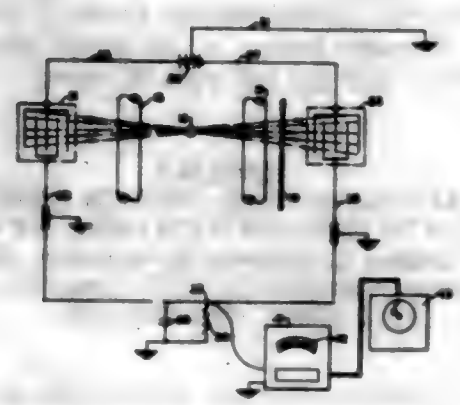
A television tuner including a chassis for supporting a plurality of tuning devices, said chassis formed with a recess having a U-shaped cross section and terminating in outwardly extending flanges, said flanges forming with the sides of said recess a pair of compartments, a shaft rotatably supported on said chassis substantially intermediate the sides of said recess and having an axis perpendicular to the base of said recess, a first plurality of tuning inductors fixedly mounted within said recess, a rotatable contact means mounted on said shaft within said recess for selecting some of said first plurality of tuning inductors, a second plurality of tuning inductors mounted on said shaft on the opposite side of the base of said recess, stationary contact means on the opposite side of the base of said recess for selecting some of said second plurality of tuning inductors, said compartments having mounted therein circuitry and components associated with said second plurality of inductors and said stationary contact means, whereby said recess and said compartments provide electrical isolation and shielding between the input and output stages of the tuner.

2,898,466
DENSITY DETERMINING DEVICE
Mark Lintz, San Francisco, and Andreas J. Anderson, Palo Alto, Calif., assignors to Halliburton Oil Well Cementing Company, a corporation of Delaware
Application March 15, 1954, Serial No. 416,102
8 Claims. (Cl. 250—43.5)

2. An apparatus suitable for continuous fluid density determination, comprising, a pressurable conduit adapted for connection into a process flow system, a source of penetrative radiation mounted adjacent to the periphery of said conduit, a first electrically actuated radiation detection device mounted adjacent to said conduit and opposite said source in such position as to receive only that radiation from said source which has passed through said conduit, said first detection device adapted to produce an electrical signal proportional to said detected radiation, a second electrically actuated radiation detection device mounted adjacent to the periphery of said conduit and

mator forming a slit adjacent the detector, a mounting mined multiple of the interplanar distance can be read

adjacent to said radiation source, a radiation absorbing shield of selectively variable radiation absorbing value corresponding to the desired density of a fluid in said conduit mounted intermediate said radiation source and said second radiation detection device, said second radiation detection device adapted to detect only that radiation passing through said radiation absorbing shield, said second radiation detection device adapted to produce an electrical signal proportional to detected radiation, the electrical signal of said first detection device adapted to countervail the electrical signal of said second radiation detection device whereby the net signal produced by said first and second radiation detection devices will be responsive only to density variation of fluids passing through said conduit.

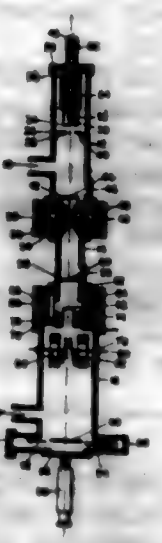


2,898,467

ELECTRON OSCILLOGRAPH

Manfred Von Ardenne, Dresden-Weisser Hirsch, Germany, assignor to VEB Vakutronik Dresden, Dresden, Germany

Application March 28, 1956, Serial No. 574,524
Claims priority, application Germany May 20, 1955
14 Claims. (Cl. 250—49.5)



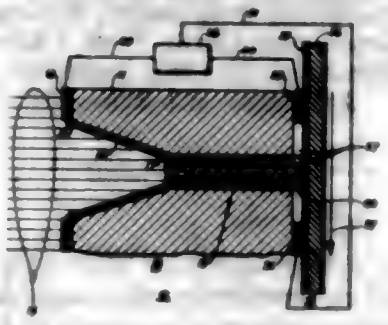
1. In an electron precision oscillograph, in combination, a member having a surface, means for causing a writing spot to be inscribed over a given area of said surface by a beam of electrons, means for controlling the electron beam so as to make the ratio between said area and said writing spot larger than 5.10^6:1, a diaphragm having an aperture in the path of said beam of electrons before said writing spot, said electron beam controlling means including means for keeping said diaphragm free from polarizing charges near the aperture thereof.

2,898,468

RECORDING APPARATUS

Joseph T. McNaney, La Mesa, Calif., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Application June 29, 1956, Serial No. 594,969
9 Claims. (Cl. 250—49.5)



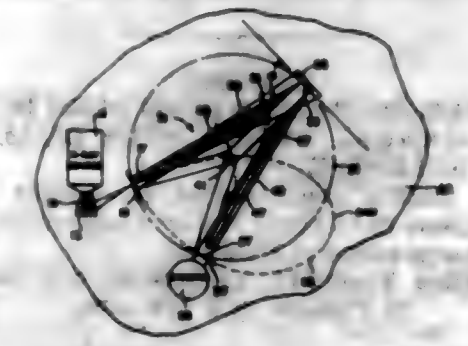
1. Apparatus for recordation of light radiation comprising a longitudinal photoconductive member having a first end and a second end and an external surface therebetween, said member being responsive to radiation directed onto said external surface and having a predetermined resistivity intermediate said first and second ends in the absence of said radiation and a resistivity intermediate said first and second ends less than said predetermined resistivity in the presence of said radiation, at least one voltage source for selectively effecting current and corona discharge, said voltage source being substantially impressed across said member between said ends and subject to said predetermined resistivity of said member in the absence of said radiation, said voltage source being adapted to cause, selectively, current and corona discharge in the presence of said radiation changing said predetermined resistivity to said resistivity, and means capable of responding selectively to current and corona discharge for selectively permanent and transitory recordation of said radiation.

2,898,469

X-RAY DIFFRACTION APPARATUS

Lloyd R. Rose, Milwaukee, Wis., assignor to General Electric Company, a corporation of New York

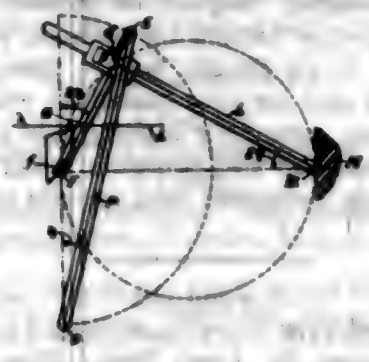
Application September 11, 1956, Serial No. 609,175
5 Claims. (Cl. 250—53)



1. Diffraction apparatus comprising a support frame or base providing means for supporting a specimen at an examination station in position for irradiation with penetrating rays, a source collimator formed with a slit for defining a beam of secondary radiation emitted from a specimen at said station, a diffraction crystal, a mounting bracket comprising an arm carrying said crystal at an end thereof and forming a pivot pin in alinement with the medial axis of said crystal, a guideway for receiving said pivot pin to control the movement of said crystal in said beam toward and away from said source collimator, a link pivotally connected on said frame and on said arm for progressively adjusting the angularity with respect to said beam of said bracket and the crystal supported thereby as the same is adjusted toward and away from said source collimator, a detector and an associated colli-

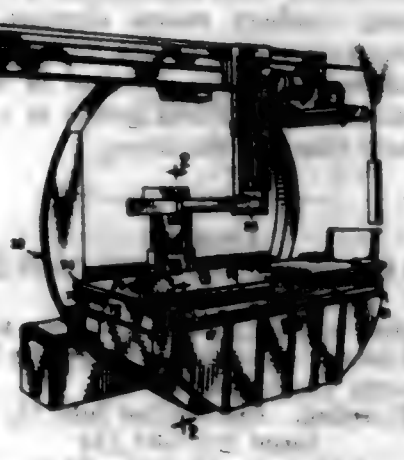
mator forming a slit adjacent the detector, a mounting arm carrying said detector and associated collimator and formed for sliding and pivotal movement on said pivot pin to permit adjustment of said detector and associated collimator toward and away from said crystal, and a link pivotally connected between said mounting arm and the arm of said crystal carrying bracket for maintaining the angularity of the detector and associated collimator with respect to the crystal at all times equal to the relative angular position of the crystal with respect to the said defined beam of secondary radiation.

2,898,470
APPARATUS FOR MEASURING THE INTERNAL STRESSES IN MATERIALS
František Kheil, Lysa upon Labe, Czechoslovakia
Application May 9, 1958, Serial No. 734,372
Claims priority, application Czechoslovakia May 11, 1957
1 Claim. (Cl. 250—53)



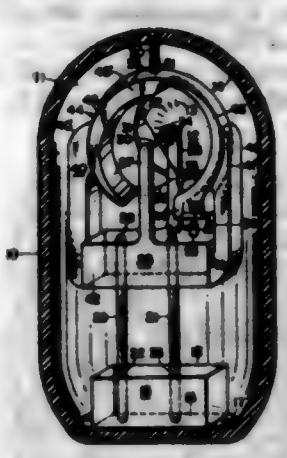
Apparatus for measuring the internal stresses in materials by X-ray diffraction, comprising an X-ray tube, a housing enclosing said X-ray tube and having a slit disposed at the focus of said tube to emit a primary divergent radiation, a first arm, a first pivot on said housing of the X-ray tube with the axis of said first pivot extending through said focus perpendicular to the axis of said primary radiation, said first arm being pivotally mounted, at one end, on said first pivot, a detector in a housing adapted to receive a reflected beam of X-radiation, said housing of the detector being fixed on said first arm with the axis of the latter being perpendicular to the axis of the detector, a second arm, means slidably connecting said second arm to said housing of the detector with the axis of said second arm being parallel to said axis of the detector and with said housing of the detector being movable longitudinally along said second arm, a second pivot having its axis parallel to the axis of said first pivot and being movable toward and away from the latter along the axis of the primary radiation, said axis of the second pivot being maintained tangent to the irradiated surface of the material under test, said second arm being pivotally mounted, at one end, on said second pivot, a graduated ruler having a slot extending longitudinally therealong, a pin on said first arm slidable in said slot to connect said ruler to said first arm and to move along a circular path centered at said axis of the first pivot, a third pivot having its axis parallel to said axis of the first pivot and intersecting said circular path at a point on the latter which is at the end of a radius extending from said axis of the first pivot perpendicular to said axis of the primary radiation, one end of said ruler being pivotally mounted on said third pivot and a measuring plate lying in a plane parallel and adjacent to the plane of movement of said ruler about said third pivot and having a line thereon extending parallel to said axis of the primary radiation and spaced from said axis of the third pivot by a distance equal to a predetermined multiple of the half wave length of said primary radiation so that, when said second pivot is adjusted to a position where said detector indicates a maximum intensity of the diffraction beam, said predetermined multiple of the interplanar distance can be read directly on said ruler as the distance along the latter from said axis of the third pivot to the intersection of said line with said ruler.

2,898,471
TABLE STRUCTURE
Arthur J. Kinzer, Pewaukee, Wis., assignor to General Electric Company, a corporation of New York
Application December 15, 1952, Serial No. 326,033
1 Claim. (Cl. 250—54)



In table structure comprising a marginal frame, a table top panel and means to secure the panel at its edges on said frame, the combination of resilient metal strips forming mounting clips, said panel being formed with inclined slots opening on the under side thereof inwardly of and along the marginal edges of the panel, said clips each having an inclined end adapted for engagement in a said slot and a shank adapted to extend beneath the panel adjacent said frame, and means to fasten said shank on said frame.

2,898,472
RADIATION METER DEVICE
Hans E. Hollmann, Oxnard, Calif.
Application November 12, 1953, Serial No. 391,777
4 Claims. (Cl. 250—83.6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A radiation meter device which comprises a hollow housing having an enclosed chamber formed therein, a thin layer of metallic material disposed on the inner periphery of said housing, a first knife-edged electrode supported within said chamber and electrically connected to said layer, a second electrode comprising an elongated flexible metallic member supported by a charging container disposed within said chamber, said second electrode being so mounted as to be normally spaced from said first electrode, said second electrode and said charging container being normally electrically insulated from said first electrode, piezoelectric crystal means normally positioned within said chamber and adapted to be selec-

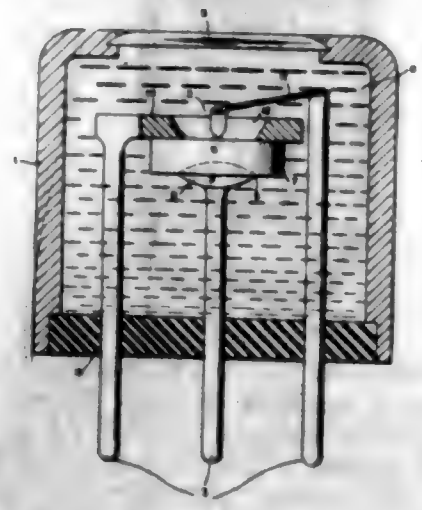
whereby a surface charge appears on said member in connecting the emitters of said first and second transistors

tively positioned within said charging container, means for selectively electrically connecting said charging container to said first electrode, said last-mentioned means comprising a movable contact supported by a lateral portion of said charging container and normally biased away from said layer, said crystal means being adapted to urge said movable contact into engagement with said layer when said crystal means is moved into said charging container, a metallic member secured to said crystal means, magnetic means slidably fitted about the outer periphery of said housing and adapted to move said metallic member and said crystal means when said magnet is moved relative to said housing, resilient means disposed within said chamber urging said crystal means toward said charging container, and detent means mounted in said magnetic means for retaining said crystal means at a position displaced from said charging container.

2,898,473
METHOD OF PREPARING POLONIUM-BORON SOURCES
John H. Birden, Dayton, Ohio, assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application July 31, 1956
Serial No. 601,324
1 Claim. (Cl. 250—84.5)

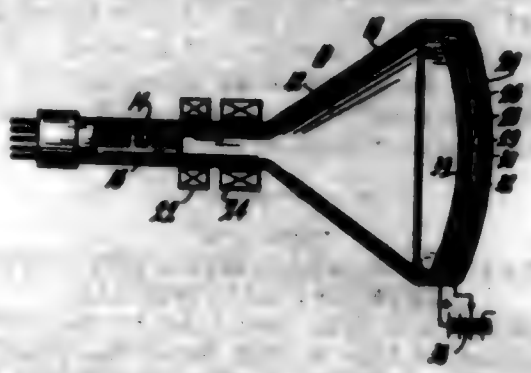
The method for preparing a source of neutrons comprising the steps of volatilizing into a thin metal container a selected quantity of polonium-210, adding to said container a selected quantity of boron powder, applying a nickel coating to said container to seal said polonium therein, measuring and recording a curve of the neutron flux emitted by said source, preferentially heating by induction said container to a temperature greater than the volatilization temperature of said polonium, terminating said heating step when said neutron flux curve begins to level off, and immediately quenching said source so that the temperature of said boron powder remains below said melting point of polonium to prevent retransfer of the polonium from said boron to said container.

2,898,474
SEMICONDUCTOR DEVICE ENCAPSULATION
Richard F. Rutz, Fishkill, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application September 4, 1956, Serial No. 607,782
4 Claims. (Cl. 250—211)



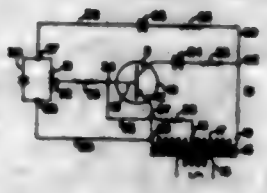
1. A semiconductor circuit element comprising a thermally conductive container, a monocrystalline semiconductor device within said container and a quantity of mesitylene surrounding said semiconductor device and substantially filling said container.

2,898,475
LIGHT INTENSIFIER
Simon Larach, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application October 6, 1955, Serial No. 538,918
8 Claims. (Cl. 250—213)



1. An image producing means comprising an electroluminescent phosphor adapted to produce visible light when simultaneously excited by invisible radiations and when subjected to an electric field, a phosphor material adapted to emit said invisible radiations when excited by an electron beam, means for exciting said phosphor with an electron beam, and said phosphor being positioned so that said invisible radiations land on said electroluminescent phosphor.

2,898,476
TRANSISTOR CONTROL APPARATUS
James Lee Jensen, St. Louis Park, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application July 5, 1955, Serial No. 519,924
14 Claims. (Cl. 307—88.5)



1. Transistor control apparatus comprising; transformer means having a primary and a secondary winding, said secondary winding having a plurality of terminals; means connecting said primary winding to a suitable source of alternating current; transistor amplifying means having base, collector and emitter electrodes; symmetrical conducting means connecting said emitter electrode to one of said plurality of terminals; an asymmetrical current conducting device; impedance means; means connecting said asymmetrical current conducting device and said impedance means intermediate said collector electrode and another of said plurality of terminals; and potential responsive means, connecting said base electrode to one of said plurality of terminals so as to control the conduction of said amplifying means whereby said amplifying means is conductive when the magnitude of the alternating potential across said secondary winding exceeds a predetermined value.

2,898,477
PIEZOELECTRIC FIELD EFFECT SEMICONDUCTOR DEVICE
Donald C. Hoesterey, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application October 31, 1955, Serial No. 543,853
11 Claims. (Cl. 307—88.5)

1. An electrical translating device which comprises an elastic member of piezoelectric material, signal-operated means for mechanically inducing a strain in said member

applying said nonsinusoidal wave and thereby controlling the time and phase shift position of said sharp edged

2,898,482

imum intensity of the diffraction beam, said predeter-

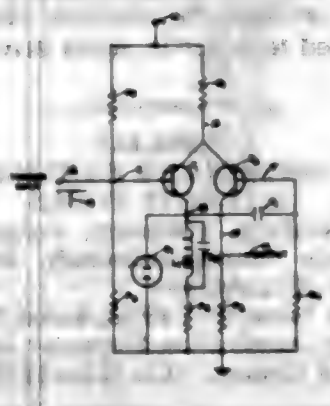
whereby a surface charge appears on said member in proportion to its piezoelectric properties and to strains induced by said means, a semiconductive body disposed to form an interface with said member and having a conductance responsive to an electrostatic field, circuit means for interconnecting a surface of said member with a sur-

face of said body, said surfaces being disposed on opposite sides of said interface, electrodes oppositely connected to said semi-conductive body for carrying an electrical current through said body, and means for applying a current to said electrodes whereby said current is modulated in accordance with strains induced in said member by said signal-operated means.

2,898,478
REDUCTION OF MULTIVIBRATOR RECOVERY TIME

Glenn L. Haugen, Glenarm, Md., assignor to Bendix Aviation Corporation, Towson, Md., a corporation of Delaware

Application March 21, 1957, Serial No. 647,557
3 Claims. (Cl. 307—88.5)



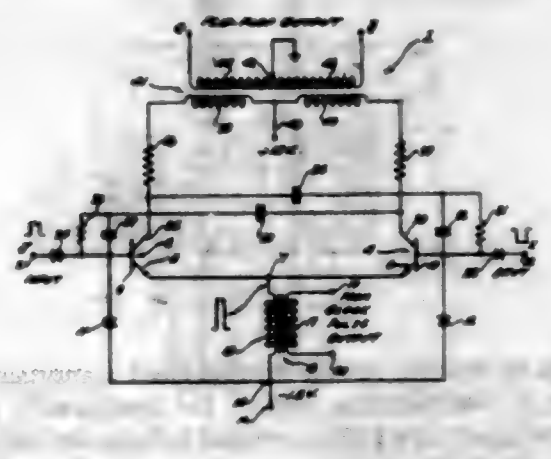
1. A monostable multivibrator comprising means forming a pair of amplifying stages having a regenerative feedback coupling therebetween, means biasing a first of said stages to cut-off, a capacitor coupling the output of said first stage to the input of the second of said stages, means applying to said multivibrator triggering impulses of sufficient amplitude to initiate a transition therein from the stable to the unstable state thereof, a source of charging potential, a charging network connecting the terminals of said capacitor, said network comprising an inductor connected between the junction of said first stage with said capacitor and said source, a diode shunting said inductor, said diode being poled to present a high impedance to said first stage when said first stage is conducting and being directly connected between said junction and said source.

2,898,479
CLOCK PULSE CIRCUIT FOR TRANSISTOR FLIP-FLOP

Melvin R. McElroy, Redondo Beach, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Application June 28, 1957, Serial No. 668,684
3 Claims. (Cl. 307—88.5)

1. In a transistor flip-flop circuit comprising: first and second transistors each having a base, a collector, and an emitter; means having a first diode for applying a J input signal to the base of the first of said transistors; means having a second diode for applying a K input signal to the base of the second said transistors; means for connecting the emitters of said first and second transistors back-to-back to define a common emitter point; means comprising back-to-back diodes for connecting the bases of said first and second transistors together to define a common base point; means for applying a negative bias to said common base point; a clock pulse transformer having a primary winding and a secondary winding, said primary winding being arranged to receive clock pulse inputs, and said secondary winding being connected between said common base and emitter points; network means including parallel resistance and capacitance ele-

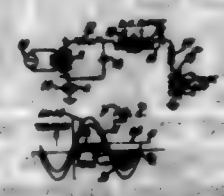


ments in series with a coupling capacitance, for connecting the base of each of said transistors to the collector means of the other of said transistors; an output resistor connected between each of said collectors and the split primaries of a flip-flop output transformer having Q and $\bar{Q}$ output secondary terminals; means for feeding base current to each of said transistors from a power supply associated with the flip-flop output circuit; and means for energizing said flip-flop output transformer from said power supply associated therewith under the selective control of one or both of said J or K input signals.

2,898,480
IMPULSE TIME PHASE SHIFTING CIRCUITS

John R. Loofbir, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Continuation of application Serial No. 536,344, September 26, 1955. This application December 18, 1956, Serial No. 629,188
20 Claims. (Cl. 307—106)

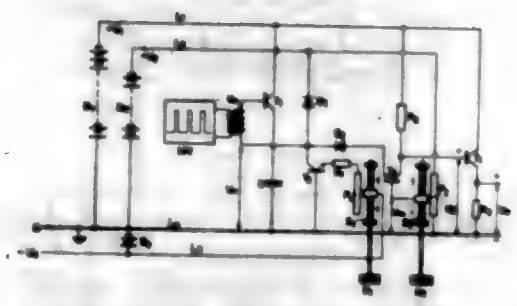


1. In an impulse time phase shifter, generating means responsive to a cyclically recurring sinusoidal wave for producing a cyclically recurring nonsinusoidal wave having the same time period and comprised of a positive going portion of substantially constant amplitude extending for at least one full half cycle of said sinusoidal wave and a negative going portion extending over the remainder of said sinusoidal wave and wherein the integral of the magnitude-time product of the positive going portion is substantially equal to the integral of the magnitude-time product of the negative going portion, impulse forming means responsive to energization by the positive portion of said nonsinusoidal wave for generating identical sharp edged impulses of short duration substantially coincident with each application of such wave, and a controllable on-off switching means interposed between said generating means and said impulse forming means for controlling the time instant of

means for mechanically inducing a strain in said member

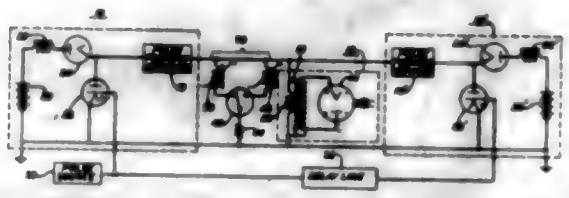
applying said nonsinusoidal wave and thereby controlling the time and phase shift position of said sharp edged impulses.

2,898,481
ELECTRIC CIRCUIT ARRANGEMENT
Hermann August Gilhwiler, Zurich, Switzerland, assignor to Contraves A.G., Zurich, Switzerland
Application February 27, 1958, Serial No. 718,001
Claims priority, application Switzerland March 1, 1957
9 Claims. (Cl. 307—106)



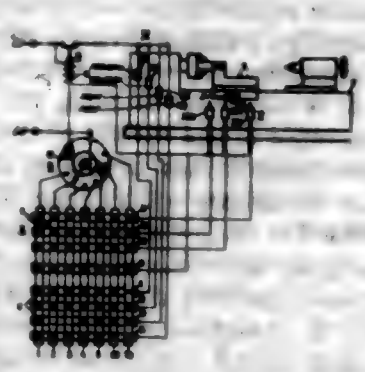
5. In an electric circuit arrangement comprising a condenser, in combination, means for temporarily charging said condenser to a predetermined voltage, including a first source of substantially constant potential connected to said condenser, a first transistor connected with its collector-emitter circuit in series between said first source of potential and said condenser, and means for applying periodical unblocking impulses to the base-emitter circuit of said first transistor; discharge means connected to said condenser, said discharge means including a second transistor connected with its collector electrode to said condenser, an auxiliary discharge circuit connected to a junction point between said condenser and said collector electrode of said first transistor, said auxiliary discharge circuit including a second source of a substantially constant potential lower than said first potential and rectifier means between said second source of potential and said junction point; voltage comparator means connected in parallel with said condenser, said comparator means including a third transistor connected with its emitter electrode to a junction point between said condenser and said second transistor, a source of modulating voltage connected in the collector-base circuit of said third transitor, and first regulator means connected in said collector-base circuit for adjusting said modulating voltage steplessly between zero and the voltage of said second source of potential so that the collector current of said third transistor rises abruptly when during the discharge of said condenser the decreasing voltage of the latter has dropped to a value equal to the adjusted modulating voltage; impulse delivering means comprising a fourth transistor connected with its base to the collector electrode of said third transistor, while said first source of potential is connected in circuit with the emitter and collector electrodes of said fourth transistor, a fixed resistance connected in the collector circuit thereof; and control means including a third source of potential, circuit means for applying said last mentioned potential to the emitter-base circuit of said second transistor for causing a control current to flow through said emitter-base circuit, and second regulator means connected in said circuit for adjusting said control current and thereby adjusting the discharge current of said condenser to a predetermined fixed value, whereby whenever said condenser is charged to a voltage equal to the potential of said second source the redundant charging current is dispensed with through said auxililary discharge circuit, while the whole arrangement operates as a saw tooth voltage generator, voltage impulses appearing across said fixed resistance and having a width depending upon the said adjusted modulating voltage.

2,898,482
MAGNETIC RADAR PULSE DURATION-CLIPPER AND DAMPER
Kenneth J. Busch, Chatham Township, Morris County, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application June 13, 1955, Serial No. 514,866
11 Claims. (Cl. 307—108)



11. A series-type pulse generator comprising a storage capacitor; means for periodically charging the capacitor; a transfer chain including a second storage capacitor, said second capacitor having a substantially smaller value of capacitance than said first-mentioned capacitor; a saturable core inductor responsive to each charging of the first-mentioned capacitor to discharge it into said second capacitor and a second saturable core inductor responsive to each charging of said second capacitor to discharge it toward the output of the generator, said second inductor having such a number of saturation flux linkages that it provides a long enough guard interval before discharging the second capacitor for the charge thereon to have time to reset said first inductor, and that the transfer chain does not afford maximum pulse shortening; and a pulse-duration clipper circuit including a saturable core inductor and resistor connected together in series across the output of the generator.

2,898,483
PROGRAM CONTROLLER PARTICULARLY FOR MACHINE TOOLS
Otto Müller, Amberg, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin, Germany, a corporation of Germany
Application January 8, 1958, Serial No. 707,741
Claims priority, application Germany January 9, 1957
9 Claims. (Cl. 307—115)

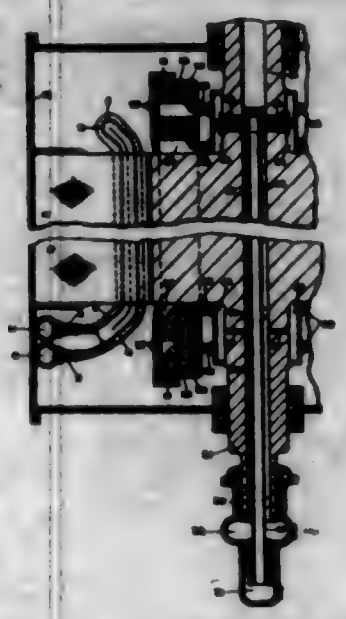


7. With a machine tool having a travelling member and selectively actuable control means for varying the speed and direction of travel as well as limit switch means for sensing the length of travel of said travelling member, the combination of a program control system comprising a cross-bar distributor having parallel bus bars and at least two sets of cross-bars extending transversely to said bus bars, one set being electrically connected with said control means to selectively actuate same, a second set of said cross-bars being electrically connected to said limit switch means, and selectively insertable rectifier plugs electrically interconnecting said bus bars and said cross-bars at chosen points of intersection so as to permit current flow in only one direction between said interconnected bus bars and cross-bars, current supply means, a stepping switch sequentially connecting said supply means with said bus bars, electric circuit means connecting said

ing, circumferentially spaced poles; primary winding means, adapted to be energized by alternating current, said commutator segment having a dove tailed edge on

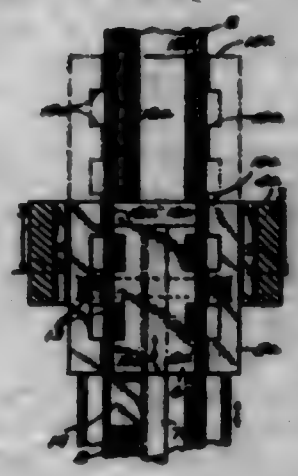
machine-tool speed and direction control means to respective cross-bars of one of said sets so as to selectively actuate said control means under control by said stepping switch, and electric circuit means connecting said limit switch means to said stepping switch and to respective cross-bars of said other set for controlling said switch to advance one step upon response of a respective limit switch means.

2,898,484
REFRIGERATION COOLING OF ELECTRICAL MACHINES
Christoslaw Krastchew, Sao Paulo, Brazil
Application August 23, 1954, Serial No. 451,625
Claims priority, application Brazil January 19, 1952
7 Claims. (Cl. 310—52)



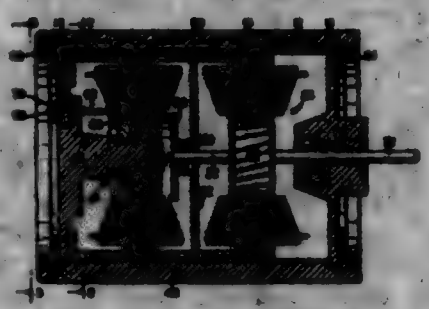
1. In a dynamoelectric machine, in combination, a rotor formed with a substantially axial channel therein extending throughout a major portion of the axis of said rotor; a plurality of electrical windings mounted on said rotor, each of said windings being respectively formed with a conduit therein extending from one end of its respective winding to the other end thereof for the passage of a coolant therethrough; a plurality of first electrical insulating means, each of said first electrical insulating means being mounted respectively at said one end of one of said plurality of windings and being formed with a passage therein communicating with its respective conduit; a plurality of second electrical insulating means, each of said second electrical insulating means being mounted respectively at said other end of one of said plurality of windings and being formed with a passage therein communicating with its respective conduit; tubular inlet means disposed in said axial channel of said rotor and having an outer diameter smaller than the diameter of said channel to form an annular space therebetween; means communicating with said tubular inlet means and said plurality of first electrical insulating means and adapted to be connected through said inlet means to a source of refrigerant coolant under pressure having a high latent heat of evaporization whereby the flow of coolant through said inlet means, communicating means and each of said conduits in said windings causes vaporization of the coolant from any heat in said windings; and means communicating with said plurality of second electrical insulating means and said annular space between said tubular inlet means and said channel of said rotor for emitting the vaporized coolant, whereby the coolant flows only through said conduit and the means

2,898,485
MAGNETIC CLUTCH
Albert Richter, Lynbrook, and Vincent Orderico, Brooklyn, N.Y., and Donald Gertz, Oak Ridge, Tenn., assignors to Sperry Rand Corporation, Ford Instrument Company Division, Long Island City, N.Y., a corporation of Delaware
Application September 17, 1957, Serial No. 684,490
9 Claims. (Cl. 310—104)



1. A motion transmitting mechanism comprising an elongated non-magnetic tubular wall defining a container, a control element mounted in said container for longitudinal movement therein, a magnet mounted in fixed spaced relation to said container concentric with the outer surface thereof, a first magnetizable element secured to said control element within said container for movement in unison therewith, means preventing rotation of said control element and said first magnetizable element during longitudinal movement thereof, a second magnetizable element disposed between said magnet and the outer surface of said tubular wall for longitudinal movement with respect thereto, said magnet being provided with diametrically opposed positive and negative pole pieces projecting radially inwardly from an annulus, said first magnetizable element being provided with diametrically opposed positive and negative pole pieces, and said second magnetizable element comprising diametrically opposed pole pieces connected together by a ring member, the said pole pieces of said first magnetizable element and the pole pieces of said second magnetizable element being adapted to be magnetized by said magnet and when magnetized to radially align whereby longitudinal movement of one of said magnetizable elements will be imparted to the other of said magnetizable elements.

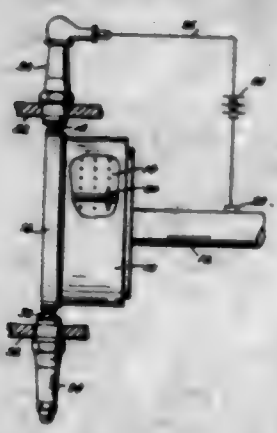
2,898,486
SPEED RESPONSIVE GENERATORS
Donald F. Sheldon, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application August 27, 1954, Serial No. 452,552
1 Claim. (Cl. 310—171)



A velocity signal generator of the class described com-

ing, circumferentially spaced poles; primary winding means, adapted to be energized by alternating current, positioned on alternate ones of said poles, secondary winding means positioned on the others of said poles; a magnetic innerpole concentrically positioned with respect to said stator member, said poles having pole faces which, together with said innerpole, define an annular air gap; a cup type rotor member of conductive material; means mounting said rotor member for rotation in the air gap, so that the magnetic coupling between said primary and secondary winding means varies according to the rotational velocity of said rotor member; a member of magnetic material having a portion extending axially adjacent said air gap and between a pair of said poles, and means mounting said member of magnetic material for continuous axial adjustment relative to said pair of poles, so as to vary the coupling between said winding means and thereby provide means for adjusting the output of said secondary winding means to zero when said rotor member has zero rotational velocity.

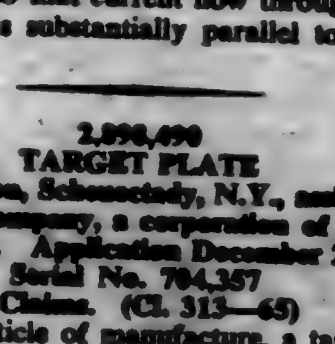
2,898,487
DUMMY BRUSH FOR SLIP RINGS
Friedrich W. Ulrich, Hamburg, Germany, assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Application April 25, 1957, Serial No. 655,058
1 Claim. (Cl. 310—228)



In a rotating body having a slip ring thereon engageable by a relatively stationary energizable brush, said relatively stationary energizable brush having a power source connected thereto; a dummy brush being positioned to engage at least the same surface of said slip ring as engaged by said energizable brush during rotation of said rotating body and said slip ring; said dummy brush being isolated from the potential of said energizable brush; said dummy brush and said energizable brush being positioned in a common plane perpendicular to the axis of rotation of said slip ring; said dummy brush being identical to said energizable brush, said dummy brush being interchangeable with said energizable brush.

2,898,488
COMMUTATOR FOR ELECTRIC MACHINES
Robert H. Boyer, Cleveland, Ohio, assignor to The Kirkwood Commutator Company, Cleveland, Ohio, a corporation of Ohio
Application December 5, 1956, Serial No. 626,502
7 Claims. (Cl. 310—236)

1. A commutator comprising a center sleeve having an annular projecting shoulder on the periphery thereof, an internal tang securing ring having a laterally overhanging side portion thereon, said tang securing ring being carried by said center sleeve and having a side abutting said shoulder, a plurality of commutator segments, said commutator segment having a dove tailed edge on a laterally inner end thereof and with said edge engaging said overhanging side portion of said tang securing ring, end rings engaging said tangs on said commutator segments and being secured to said center sleeve to position



said commutator segments around the periphery of and to secure said commutator segments to said center sleeve; and insulation means intermediate adjacent ones of said commutator segments, and between said commutator segments and said center sleeve and said tang securing ring.

2,898,489
TARGETS FOR TELEVISION PICKUP TUBES
Paul K. Weimer, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application October 4, 1954, Serial No. 459,978
22 Claims. (Cl. 313—65)

22. A target electrode structure comprising a support member, electrode means supported by means including said support member, photosensitive means in electrical contact with said electrode means, and means for shielding said contact so that current flow through said photosensitive means is substantially parallel to said support member.

2,898,490
TARGET PLATE
Richard W. Damon, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
No Drawing. Application December 23, 1957
Serial No. 704,357
7 Claims. (Cl. 313—65)

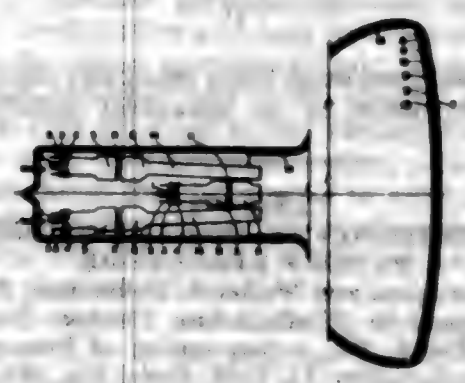
1. As a new article of manufacture, a target plate for use in an X-ray sensitive vidicon tube and the like, said plate comprising an aluminum substrate sheet having an anodized porous oxide facial surface, a metallic film bonded to said porous surface and comprising a metal whose lead salts and oxides are electrically conductive with not to exceed 10^{10} ohm/cm. resistivity, and a lead oxide coating on the surface of said film, said film having an oxide of the metal of said film uniformly distributed at the interface between the metallic film and the lead oxide.

2,898,491
CATHODE RAY TUBES
Ralph Reginald Pearce, Hampton, England, assignor to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Application January 27, 1956, Serial No. 561,827

other parts of the machine.

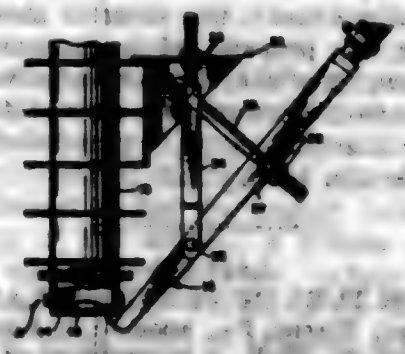
housing and having an even number of inwardly extend-

neck and a plurality of electron guns within said neck facing said target, said guns each having means for producing an independent electron beam and electrodes providing an electrostatic lens for focussing its electron beam at said target so that the focused beams of said plurality of guns arrive at said target as a group of spots which are spaced from each other, the electrodes forming the electrostatic lens of each of said guns being of substantially the same cross-sectional dimensions for each gun at said lens position, one of said guns being provided with an electrode portion which is of a smaller cross-sectional



dimension than the electrodes at said lens position and another of said guns arranged with its electrode at its lens position disposed adjacent the electrode of smaller cross-sectional dimension of said first mentioned gun with said electrostatic lenses of said first and second guns displaced so as to occupy different axial positions along the length of said neck and such that said guns are positioned closer to each other than would otherwise be possible with a similar plurality of guns having electrodes providing the same lens diameter arranged with said electrostatic lenses at the same axial position in said neck.

2,896,492
APPARATUS FOR AND METHOD OF COOLING BEAM TRANSMITTING WINDOWS
David B. Miller, Greendale, Wis., assignor to General Electric Company, a corporation of New York
Application December 13, 1955, Serial No. 552,814
6 Claims. (Cl. 313—74)

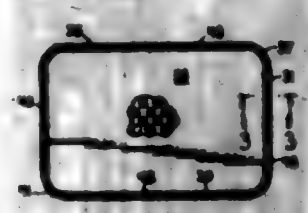


1. In apparatus of the character described having a beam emitting window comprising an elongated, relatively narrow pane element, the combination, with said apparatus, of nozzle means for delivering a stream of cooling fluid upon and across the pane element, said nozzle means comprising a housing providing a chamber of substantial capacity and formed with an elongated, relatively narrow, slit-like fluid delivery orifice along a side of said chamber, and means for supplying cooling fluid under pressure in said housing to thereby maintain a substantial quantity of fluid therein, immediately behind said orifice, and thus obtain turbulence-free emission of fluid, at a substantially uniform delivery rate, throughout the length of the orifice.

2,896,493
METHOD AND APPARATUS FOR CONTROLLING ELECTRON BEAMS
Glen A. Burdick, Waterloo, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application May 31, 1956, Serial No. 588,443
4 Claims. (Cl. 313—77)

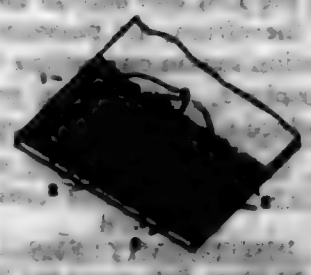
1. In a television receiving apparatus, the combination comprising a cathode ray tube having an envelope with a face panel and a neck portion, an image reproduction screen formed on the internal surface of said face panel, and three electron gun structures disposed in said neck portion with intersecting longitudinal axes each providing an electron beam directed to impinge upon said screen; and an electron beam positioning assembly formed to exert tangential forces on each of said beams, a color purity controlling magnetic structure formed to exert transverse forces on said beams, and a beam convergence device formed to exert radial forces on said beams, said assembly, structure and device being disposed on the external periphery of said neck portion in spaced relationship and arranged sequentially in the direction of electron travel.

2,896,494
IMAGE DISPLAY DEVICE
Paul Haas, Seneca Falls, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application May 15, 1957, Serial No. 659,333
6 Claims. (Cl. 313—84)



1. An electrode for a cathode ray tube comprising a frame with an associated grid structure, said frame being formed to provide a loop having at least two sections, one of said sections having a higher reluctance than the other of said sections.

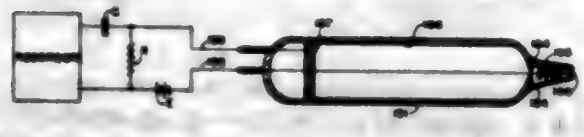
2,896,495
COLOR DISPLAY PHOSPHOR SCREENS
Hyman A. Michlin, New York, N.Y.
Application June 24, 1958, Serial No. 744,258
17 Claims. (Cl. 313—92)



16. The means for producing an improved color image comprising means for exciting the separate component color elements of a half-tone color screen having spaces therein to form a first color image; and means for forma-

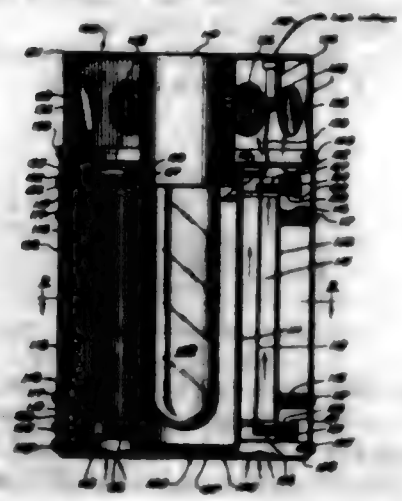
ing another color image in said spaces, said another color image representative of the first color image; both color images in interwoven relation to effect a combined color image.

2,898,496
ELECTRICALLY CONDUCTIVE FILMS AND METHOD FOR PRODUCING SAME
Leland B. Clark, Sr., Washington, D.C.
Application November 20, 1953, Serial No. 393,526
14 Claims. (Cl. 313—93)
(Granted under Title 35, U.S. Code (1952), sec. 266)



10. An ionization device comprising a rigid tubular envelope having an impervious inner surface coated with a clear, transparent, moisture-free, halogen-resistant, electrically conductive film of a finely crystalline metal oxide, said film being a cathode and of uniform thickness as shown by its single reflectance interference color in white light, an anode of small diameter and an ionizable, halogen-containing gas filling in said envelope.

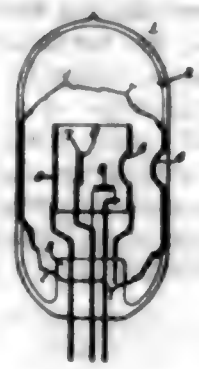
2,898,497
AIRBORNE RADIATION DETECTOR
Thomas R. Cuttsell, Richland, and John F. Gifford, Seattle, Wash., assignors to the United States of America as represented by the United States Atomic Energy Commission
Application February 8, 1955, Serial No. 487,005
5 Claims. (Cl. 313—93)



1. A radiation detector for measuring the radioactivity of atmospheric air comprising a first cylindrical electrically conducting element, a second cylindrical electrically conducting element surrounding the first element and spaced radially outwardly therefrom to form an annular ionization region therebetween, said first element being electrically connected to the second element, an electrode mounted between the first and second elements and electrically insulated therefrom, air passages at the ends of the annular ionization region connecting the region to the surrounding atmosphere, and heating means within the first element to induce a flow of air by convection.

2,898,498
PHOTOEMITTERS
Herbert Reynold Philipp, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Application July 19, 1956, Serial No. 598,839
11 Claims. (Cl. 313—101)

1. An ultra-violet photoelectric cathode consisting essentially of a high purity stoichiometric alkali halide

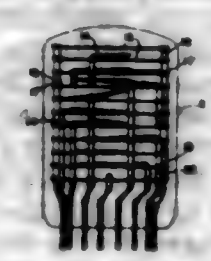


compound said compound being selectively electron emissive when irradiated by far ultraviolet radiation.

2,898,499
TRANSMISSION SECONDARY EMISSION DYNODE STRUCTURE
Ernest J. Sternglass and Walter A. Felbelman, Pittsburgh, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application May 23, 1956, Serial No. 586,826
6 Claims. (Cl. 313—103)

1. In a transmissive type secondary electron emissive dynode structure in which electrons bombarded one surface of said dynode and secondary electrons are emitted from the opposite surface of said dynode, said dynode comprising a continuous support layer of a coherent oxide prepared by anodization transmissive to electrons, a thin continuous film of electrical conductive material of low atomic number disposed on the surface of said support member opposite from that surface on which the bombarding electrons strike said dynode and transmissive to electrons and a thin layer of insulating material exhibiting the property of transmissive type secondary emission in which electrons bombard one surface and secondary electrons are emitted from the opposite surface disposed on the exposed surface of said electrical conductive layer.

2,898,500
INDICATOR TUBE OF THE GLOW LAMP TYPE
Leo R. Landrey, Wayne, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Application August 29, 1955, Serial No. 530,945
2 Claims. (Cl. 313—109.5)



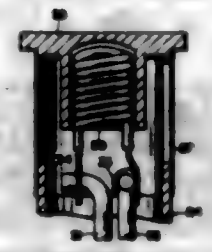
1. An indicating tube of the glow lamp type comprising a gas-filled transparent envelope having a viewing window and a base, a plurality of tube pins in said base,

flector elements aligned with selected spaced grid mem-

2,898,596

a plurality of annular anodes each having a major central aperture and a series of minor apertures spaced apart along the surface of the anode, said anodes being oriented parallel to each other with corresponding apertures in alignment with each other, a metallic eyelet secured to each anode with each eyelet being mounted in the same corresponding aperture in each anode so that said eyelets are axially aligned, a conductive support rod secured to one of said tube pins and carrying said plurality of eyelets whereby said anodes are supported in a stack spaced apart parallel to each other and substantially parallel to said viewing window of the tube envelope, a plurality of indicator glow cathodes each having a characteristic configuration and each having a smaller diameter than the major apertures of said anodes, said cathodes being insulated one from another and oriented parallel to each other and to said viewing window of said envelope, each cathode being in close proximity to one of said anodes to thereby respond to a difference of potential between the cathode and anode to ionize the gas surrounding the cathode, a plurality of hollow tubes of insulating material oriented parallel to the longitudinal axis of the envelope and extending through the minor apertures of said anodes, each of said insulating tubes carrying a metallic conductor with each conductor being secured to one of said cathodes, and an auxiliary insulating tube coupled between each cathode and a minor aperture in an adjacent anode.

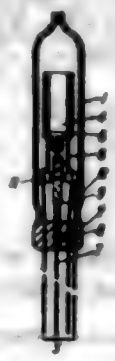
2,898,501
GETTERS FOR ELECTRON TUBES
Behrum H. Wadin, Darien, and Eugene J. Naill, New Canaan, Conn., assignors to Machlett Laboratories, Incorporated, Springdale, Conn., a corporation of Connecticut
Application August 13, 1956, Serial No. 603,659
3 Claims. (Cl. 313—174)



1. A cathode structure for electron tubes, said structure comprising an annular terminal member, a substantially tubular support having its inner surface at one end encircling and mounted upon the outer surface of one end of the terminal member, a disclike emitter secured to and closing the opposite end of the support, a heating element within the support and adjacent the inner surface of the emitter, a tubular getter within the support and having its outer surface adjacent one end secured to the inner surface of the terminal member, the getter being a foil of gettering material extending toward the emitter between the support and heater and terminating relatively close to the emitter.

2,898,502
COLD CATHODE ELECTRIC DISCHARGE TUBES
Arnold Hugh William Beck, Thomas Meirion Jackson, and John Lytollis, London, England, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware
Application May 3, 1956, Serial No. 582,596
Claims priority, application Great Britain May 13, 1955
6 Claims. (Cl. 313—192)

1. A cold cathode electric discharge tube comprising an envelope of insulating material filled with an ionizable gas, a plurality of electrodes within said envelope defining a main discharge gap therebetween, conductive current carrying means for carrying space discharge current to given of said main gap electrodes, a conductive coating on the inside of said envelope and defining a priming discharge gap with said conductive carrying means, and additional current carrying means coupled



to said coating for carrying space discharge current to said coating, said primary discharge gap adapted to provide an ionization coupling with said main discharge gap thereby to eliminate statistical delay in firing of said main gap upon application of current to said first current carrying means.

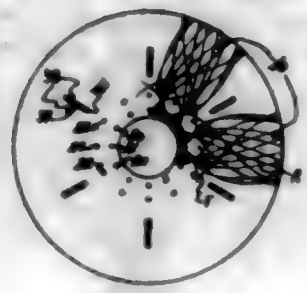
2,898,503
FILAMENTARY STACKED TRIODE
Lester Feinstein, Freeport, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application September 15, 1954, Serial No. 456,122
18 Claims. (Cl. 313—238)

1. An electron tube comprising an envelope with opposing ends, an integral electrode assembly comprising electrodes and spacers therebetween with the electrodes and spacers held in fixed relationship to each other, rods secured within the ends of the envelope and bridging the space therebetween, and said integral electrode assembly being mounted as a unit upon the rods and fastened thereto.

2,898,504
ELECTRON DISCHARGE DEVICE
Robert L. Norton, Santa Barbara, Calif., assignor to Penta Laboratories, Inc., Santa Barbara, Calif., a corporation of California
Application January 17, 1957, Serial No. 634,667
12 Claims. (Cl. 313—299)

1. An electron discharge device having a cathode and an anode and a control grid comprising means to channel electron discharge flow through a selected path from cathode to anode, said means comprising electron de-

flector elements aligned with selected spaced grid members but not with others and immersed in the flow path

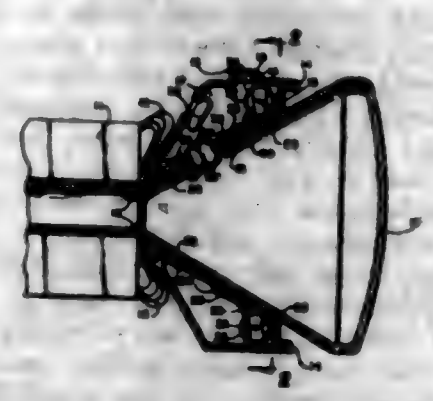


of electrons from cathode to anode, said elements being elongate in the direction of electron flow.

2,898,505
ELECTRON DISCHARGE STRUCTURE
Robert Joseph Meagher, Peabody, Mass., assignor to Columbia Broadcasting System, Inc., Danvers, Mass., a corporation of New York
Application September 28, 1956, Serial No. 612,605
1 Claim. (Cl. 313—307)

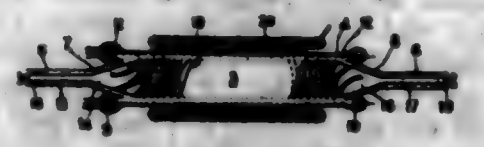
A space charge controlled electron tube comprising the combination of an evacuated envelope, a plurality of electrodes being disposed within said envelope, an electrostatic shield and means projecting through said envelope separately energizing each said electrode and said electrostatic shield, said plurality of electrodes consisting of a source of electrons centrally disposed within said envelope, a first control electrode disposed around said source of electrons and coaxial therewith, a screen grid disposed around said first control electrode and coaxial therewith, a second and a third control electrode disposed outwardly of said screen grid and equally spaced therefrom, said second control grid corresponding to a first predetermined portion of the area of said screen grid, said third control electrode corresponding to a second predetermined portion of the area of said screen grid oppositely of said first predetermined portion and similar thereto, a first and a second anode, said first anode disposed outwardly of said second control electrode and equally spaced therefrom and corresponding to a predetermined portion of the area thereof, said second anode disposed outwardly of said third control electrode and equally spaced therefrom oppositely of said first anode and being similar in area thereto, said electrostatic shield having a first and second fin and a curved portion, said curved portion being disposed around said plurality of electrodes and coaxial therewith, said first fin being integrally attached to the inner wall of said curved portion and extending radially inwardly thereof between said second and said third control electrode to coincidence with said screen grid, said second fin being integrally attached to the inner wall of said curved portion oppositely of said first fin and extending radially inwardly thereof between said second and said third control electrode to coincidence with said screen grid oppositely of said first fin.

2,898,506
HIGH VOLTAGE GENERATOR FOR CATHODE RAY TUBES
Louis W. Parker, Great Neck, N.Y.
Application February 21, 1956, Serial No. 566,916
12 Claims. (Cl. 315—1)



1. In a cathode ray tube system, a cathode ray tube having an envelope, a high voltage generator comprising a unitary sealed substantially toroidal envelope, a plurality of electrical components in said toroidal envelope, said components comprising rectifier means and a plurality of individual impedance elements physically supported within said generator envelope, conductor means within said envelope electrically interconnecting said rectifier means and impedance elements in a voltage multiplier circuit arrangement, said toroidal generator envelope being separably disposed in surrounding relation to said cathode ray tube envelope with an external surface of said generator envelope being in closely conforming substantially air-free proximity to the external surface of said cathode ray tube envelope, complementary terminals in the said closely conforming external surfaces of said generator and cathode ray tube envelopes for effecting electrical connections between a portion of said voltage multiplier circuit arrangement and said cathode ray tube, a further terminal in said generator envelope for providing electrical connection between said voltage multiplier circuit arrangement and circuits external of said generator and cathode ray tube envelopes, and conductor means connecting a portion of said voltage multiplier circuit arrangement to said further terminal on the interior of said generator envelope.

2,898,507
ELECTRIC TRAVELLING WAVE AMPLIFIERS
Graham Morley Clarke, London, England, assignor to The M. O. Valve Company Limited, London, England
Application August 13, 1954, Serial No. 449,560
Claims priority, application Great Britain August 14, 1953
10 Claims. (Cl. 315—3.6)



1. An electric travelling wave amplifier including a helix of conducting material, input means for exciting an electric wave at one end of the helix, output means for extracting the wave from the helix after it has travelled along the helix, and means for causing an electron stream to flow adjacent to the helix for interaction with an axially progressing component of the electric wave for amplification of the wave, wherein the helix is formed as a multi-start helix comprising several similarly wound coaxial helices of the same radius and pitch arranged with interleaved discrete turns, which helices are all electrically symmetrically associated with the input and output means so that the phase of the wave at any

transducer under control of a fixed low frequency coupled to said high frequency oscillation means for ap-

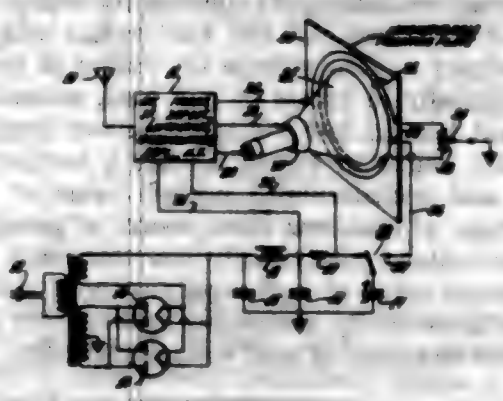
on said first cathode, to produce an output pulse, means

point on any one helix is intermediate between the phase of the wave at those points on the adjacent helices which lie on a straight line through the said point and parallel to the common axis of said helices.

2,896,506
CHARGED-PARTICLE ACCELERATOR
George E. Mallinckrodt, St. Louis, Mo.
Application June 13, 1957, Serial No. 665,527
6 Claims. (Cl. 315—5.42)

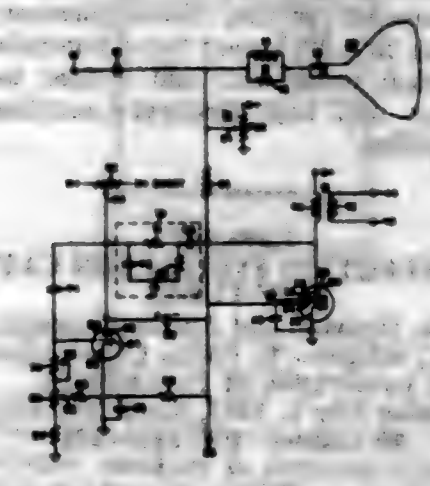
1. A charged-particle accelerator comprising a plurality of coils, each coil having a plurality of C-shaped uniplanar loops of conductive material and a pair of parallel spaced apart ring-shaped electrical buses of conductive material, the opposing ends of each of said C-shaped loops being respectively electrically connected to said buses thereby defining a torus, the planes of each of said loops being normal to the planes of said parallel buses, means for supplying charged particles to the interior of one of said tori, said coils being positioned relative to each other to establish a substantially predetermined path of acceleration for said charged particles, a plurality of sources of electrical energy, and means adapted to electrically connect said energy sources respectively to said coils in timed sequence whereby a generally tubular shaped magnetic field is produced which generates an electric field to accelerate the particles along said path.

2,896,509
STATIC MAGNETIC FIELD MEANS FOR COLOR TELEVISION RECEIVERS
Burton R. Clay, Woodbury, and Lloyd H. Carnes, Moorestown, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Application June 26, 1958, Serial No. 744,847
7 Claims. (Cl. 315—8)



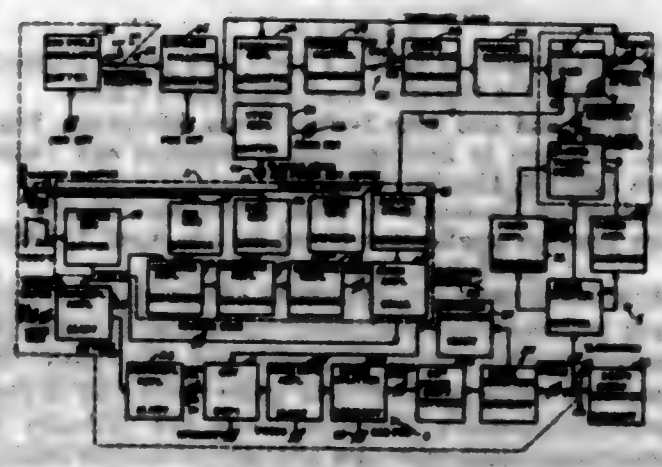
1. A color television receiver arrangement comprising the combination of: a cathode ray color image reproducing device, a permanently magnetizable element mounted to affect the path of the electron beam of said image reproducing device, a current path intimately associated with said magnetizable element to magnetize or demagnetize said element in response to current passed through said current path, a storage capacitor, means to charge said storage capacitor to a predetermined potential, and potentiometer and momentary switch means coupled from said capacitor to said current path to momentarily discharge said capacitor through said current path with a current magnitude determined by the position of said potentiometer, whereby a static permanent magnetic field of desired magnitude may be established in said magnetizable element.

2,896,510
HEIGHT COMPENSATION IN VERTICAL OUTPUT STAGE
Donald E. Garrett and Harry T. Freestone, North Syracuse, N.Y., assignors to General Electric Company, a corporation of New York
Application March 6, 1958, Serial No. 719,542
3 Claims. (Cl. 315—22)



1. A circuit for maintaining the height of the scanning raster on a cathode ray tube screen substantially constant as the beam current of the cathode ray tube is varied by a brightness control voltage comprising, in combination, a cathode ray tube having a screen on which the scanning raster appears and a control electrode, brightness control means coupled to said control electrode for varying the beam current of said cathode ray tube, a vertical ouput stage for providing the output required for the vertical scanning of the cathode ray tube beam, said vertical output stage having a control electrode, means for applying a bias on said control electrode, means for coupling said brightness control means to said control electrode whereby the bias on said control grid is varied as beam current of said cathode ray tube is varied by said brightness control means to maintain the vertical height of said scanning raster substantially constant.

2,896,511
SWEEP GENERATORS
Albert Axelrod, Bronx, and Ralph H. Baer, New York, N.Y., assignors to Transitron, Inc., a corporation of New Jersey
Application March 15, 1956, Serial No. 571,746
4 Claims. (Cl. 315—23)



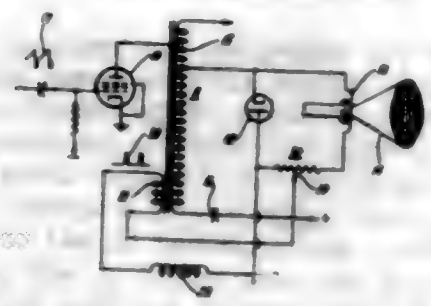
1. In a sweep generating system for cathode ray tubes, means under control of a fixed low frequency for producing high frequency oscillations, an electromechanical

transducer under control of a fixed low frequency coupled to said high frequency oscillation means for producing a predetermined frequency sweep, deflection means under control of said latter fixed low frequency for deflecting the cathode ray in one predetermined direction, and further deflection means under control of said high frequency oscillations for deflecting said cathode ray into another predetermined direction, said high frequency oscillation means including a source of fixed low frequency, a cathode follower controlled by said low frequency source and controlling a feed back amplifier, a series regulator stage controlled by said feed back amplifier and controlling a high frequency oscillator including a frequency varying circuit element; said frequency varying circuit element being controlled by said electromechanical transducer; and a feed back circuit extending from said high frequency oscillator to said feed back amplifier.

2,898,512
LINE DEFLECTION SYSTEM FOR CATHODE RAY TUBES

Paul G. Wolfe, Oreland, and Abram Hopengarten, Philadelphia, Pa., assignors to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Application July 1, 1957, Serial No. 669,268
10 Claims. (Cl. 315—27)



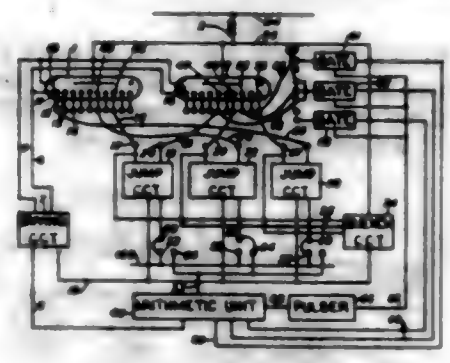
1. In a deflection system for effecting line scanning in a cathode ray tube, a deflection circuit including line deflection coils arranged to effect line deflection of the electron beam within said tube and also including a damper tube in shunt with said coils, said circuit having inductance and resistance, the relative values of which affect the deflection current waveform, means for introducing a first resistance in series with said deflection coils and for introducing a second resistance in series with said damper tube, there being present across said first resistance a sawtooth voltage in phase with the deflection current in said coils, means for producing across said second resistance a sawtooth voltage opposite in phase to the first sawtooth voltage, and means for relatively varying said resistances to effect desired modification of the deflection current waveform.

2,898,513
ELECTRONIC SWITCHING CIRCUITS EMPLOYING MULTI-CATHODE GAS-FILLED TUBES

Ralph Townsend and John Joshua Sharp, Stevenage, England, assignors to International Computers and Tabulators Limited, London, England

Application December 7, 1955, Serial No. 551,655
Claims priority, application Great Britain April 7, 1955
8 Claims. (Cl. 315—84.6)

1. Electronic switching apparatus comprising a source of input pulses, a multi-cathode gas-discharge tube including guide electrodes within said tube and means for applying said input pulses to said guide electrodes to step the anode to cathode discharge along the cathodes in a predetermined sequence, first and second control means, each control means being connected to a first cathode of said tube and to said source of input pulses and being responsive to an input pulse, when the discharge is located on said first cathode, to produce an output pulse, means for applying the output pulse of said first control means to the anode of the tube to extinguish the discharge to the first cathode, means for applying the output pulse of the second control means to a second cathode of said

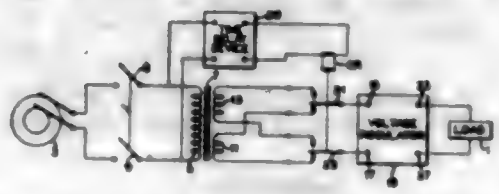


tube, said second cathode being a cathode other than a cathode following said first cathode in said predetermined sequence, to initiate a discharge to the second cathode, and switching means connected to the cathodes of the tube and responsive individually to the location of the discharge on the different cathodes.

2,898,514
VOLTAGE CONTROL SYSTEM

John F. O'Donnell, Apalachin, and Donald Segall, Vestal, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application March 13, 1956, Serial No. 571,183
8 Claims. (Cl. 315—106)



1. A voltage control system for governing the power supplied to a load having an impedance which increases from a first to a second value following energization, comprising voltage regulating means having input and output terminals and characterized by an output voltage-versus-output current relation in which, for a predetermined normal value of regulator input voltage, the regulator output voltage remains substantially constant for values of output current between zero and full load values and then decreases sharply to zero voltage for values of output current substantially in excess of full load, means for connecting said load to said voltage regulator output terminals, a first source of energy having a nominal voltage equal to said predetermined normal value of regulator input voltage, at least one other source of energy having a nominal voltage substantially less than said predetermined normal value of said regulator input voltage, and means for sequentially connecting said sources of energy to the input terminals of said voltage regulator.

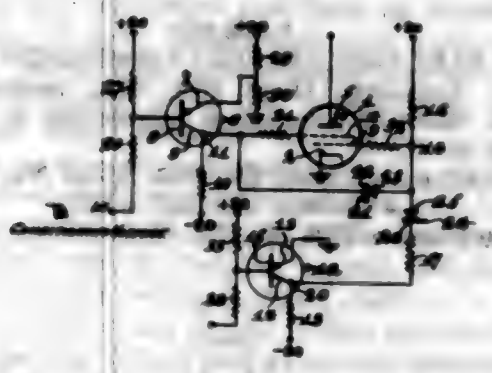
2,898,515
THYRATRON CONTROL CIRCUIT

John Rywak, Belleville, Ontario, Canada, assignor to Northern Electric Company, Limited, Montreal, Quebec, Canada, a corporation of Canada

Application March 9, 1959, Serial No. 798,112
4 Claims. (Cl. 315—168)

1. An electron circuit arrangement employing a gas filled electronic discharge tube having a cathode, a conditioning grid, a control grid, and an anode having in combination with the discharge tube: a first p-n-p transistor having an emitter, a collector and a base electrode,

a first collector resistor, means for connecting the collector resistor and the conditioning grid to a first predetermined point on the collector electrode; a first source of direct current having its negative terminal connected, through the collector resistor, to the first predetermined point and its positive terminal to the emitter electrode; a second p-n-p transistor having an emitter, a collector and a base electrode, a pair of resistors connected in series relation, the control grid being connected to a second predetermined point; a second collector resistor, means for connecting the second collector resistor and a free terminal of the pair of resistors to a third



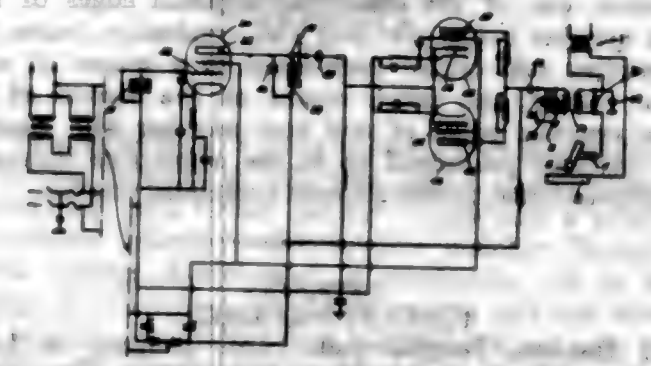
predetermined point on the collector electrode of the second transistor; a second source of direct current having its negative terminal, through the second collector resistor, connected to the third predetermined point and its positive terminal connected to other free terminal of the pair of resistors; an unilateral element individually disposed between the first and second predetermined points, with its cathode and anode connected to these points respectively, and between the pair of resistors with its anode and its cathode, through the resistor of the pair thereat, connected to the second and third predetermined points respectively; means for rendering the transistors conductive.

2,898,516

ELECTRIC ARC INITIATING AND STABILIZING APPARATUS

Charles Volff, Montreal, Quebec, Canada

Application May 2, 1955, Serial No. 505,235
5 Claims. (Cl. 315—170)



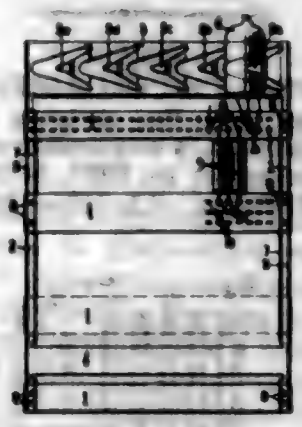
1. In an electric arc welding system comprising a welding torch, a source of welding current, a generator of high frequency oscillations comprised within a narrow frequency band upwards of about 10 megacycles per second, and means for connecting said generator to said welding torch, the combination of a step-down tuned transformer permanently connected across the output of said generator with a quarter-wave resonant line extending from one terminal of the secondary of said transformer to said torch, the other terminal of said secondary being connected to one pole of said welding current source, and the other pole of said source being connected to a workpiece which is to be welded, whereby optimum transfer of high-frequency energy is obtainable from said generator to said torch irrespective of the load condition prevailing at said torch.

2,898,517

STRUCTURES FOR MOUNTING ELECTRICAL COMPONENTS

Walter Cornell and Sydney Anthony Shepherd, Coventry, England, assignors to The General Electric Company Limited, London, England

Application May 10, 1955, Serial No. 507,357
Claims priority, application Great Britain May 12, 1954
4 Claims. (Cl. 317—101)



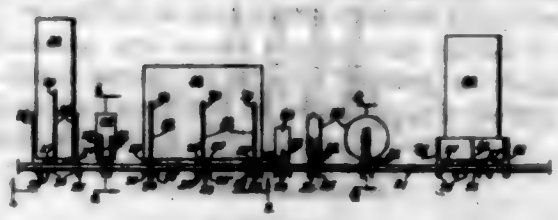
1. A structure for mounting electrical components comprising a rectangular frame which comprises side members constituting the sides of the frame and cross members lying between the side members and in which one of the cross members is provided with a plurality of metal clips for the attachment to that cross member of electronic valves and the side members have strip portions that lie generally parallel to one another with edge surfaces thereof lying substantially in the same plane, at least one insulating member which lies across the frame and which is provided with a plurality of small holes, the said edge surfaces supporting the insulating member near its ends, a plurality of fixing means which are attached to the strip portions and which project from the side members through holes in the insulating member, a portion of each fixing means that lies on the side of the insulating member remote from the side members being turned through about a right angle so as to engage the adjacent surface of the insulating member and hold that member in position on the side members, and a plurality of electric terminals fixed in the said holes to facilitate the mounting of electrical wire-ended components and to enable electrical connections to be made to those components.

2,898,518

ELECTRICAL APPARATUS AND METHOD OF MANUFACTURING THE SAME

Raoul R. Lynn, Willow Grove, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

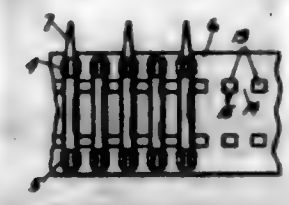
Application October 17, 1955, Serial No. 540,902
3 Claims. (Cl. 317—101)



1. In an electrical apparatus, the combination comprising a wiring panel having circuit connections on one face thereof; at least one component disposed adjacent the opposite face of said panel; and at least two metal lugs for securing said component to said panel, said lugs being disposed on peripherally spaced portions of the component, each lug having a generally flat body portion upstanding from said opposite face of the panel and secured along at least one edge of the flat body portion to one of said portions of the component, said

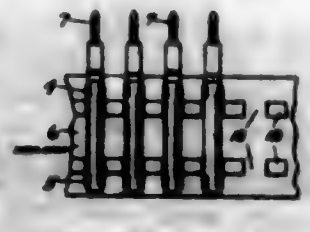
flat body portion having an upper shoulder extending outwardly from the component and a similarly extending lower shoulder, the latter shoulder in contact with said opposite face of said panel, and each lug having additionally a leg extending downwardly beyond said lower shoulder and projecting through a hole in said panel to said one face thereof and engaging said panel at said one face.

2,898,519
PRINTED CIRCUIT ASSEMBLY
James H. Foster, Erie, Pa., assignor to Erie Resistor Corporation, Erie, Pa., a corporation of Pennsylvania
Application November 14, 1955, Serial No. 546,483
3 Claims. (Cl. 317—101)



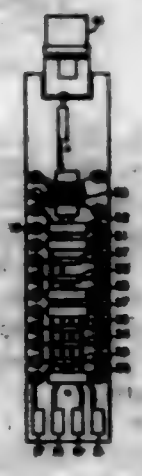
1. An electric circuit sub-assembly comprising a plurality of leadless circuit impedance components to be interconnected to form a network, said components having pin-like bodies arranged side by side in spaced relation with terminal surfaces at opposite ends of the bodies, a strip of insulating material, two rows of metal clips on one surface of the strip with the clips in each row spaced from each other and with the clips in one row spaced from and opposite the clips in the other to provide aligned pairs of clips so each pair receives the terminal surfaces of one of the components, two rows of spaced openings in the strip with each opening between adjacent clips in a row and of width determining the spacing between the clips, a pair of fastening prongs extending from each of the clips straddling and projecting through two adjacent openings to the opposite surface of the strip and clinched to the strip to clamp the clip to the strip, adjacent clips having prongs extending through the same opening, and conductors printed on the strip for making circuit interconnections between circuit components and electrically connected to the clips by being clamped between the strip and the clips.

2,898,520
ELECTRIC CIRCUIT ASSEMBLY
Phillip E. Stevens, Erie, Pa., assignor to Erie Resistor Corporation, Erie, Pa., a corporation of Pennsylvania
Application February 17, 1956, Serial No. 566,254
5 Claims. (Cl. 317—101)



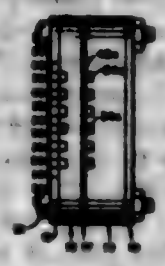
1. An electric circuit assembly comprising a strip of insulating material, a row of electric circuit components extending crosswise of the strip and arranged side by side along the length of the strip, said components having terminal surfaces at opposite ends, aligned pairs of sheet metal clips attached to the strip for receiving the respective components, the clips along one edge of the strip having a base overlying one surface of the strip and an extended portion projecting beyond said one edge of the strip in line with the associated component, said extended portion having an angular section offset from the base at said one edge of the strip and extending transverse to said one surface of the strip opposite the end of the associated component, a prong section extending in continuation of the offset end of the angular section and transverse thereto and generally parallel to said one surface of the strip, the outer end of the prong section having sides formed to a half-round section of diameter substantially smaller than the width of the inner end of the prong section to provide a shoulder limiting the penetration of the prongs.

2,898,521
ELECTRIC CIRCUIT COMPONENT
Cyrus J. Creveling, Ocean Hill, Md., assignor to the United States of America as represented by the Secretary of the Navy
Application September 28, 1956, Serial No. 612,901
4 Claims. (Cl. 317—101)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An electric circuit component comprising a base member of insulating material having flat parallel surfaces, a plurality of slots formed in each of two opposed edges of said base member, separate conductive means positioned to be contiguous with each of said slot means, each of said slot means, together with its respective conductive means, being formed to provide an opening with parallel sides terminating at said edges of said base member, one of the other two opposed edges of said base member being provided with conductive means for connecting said circuit component to a source of electrical energy, and notch means on the second of the other opposed edges of said base member with conductive material positioned to be the connection means of a multi-terminal circuit element positioned therein.

2,898,522
CIRCUIT PACKAGE
Carl Hasden, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application December 17, 1956, Serial No. 628,818
13 Claims. (Cl. 317—101)



1. A circuit package comprising, in combination, a plurality of stacked circuit modules, each module comprising a frame structure of insulating material support-

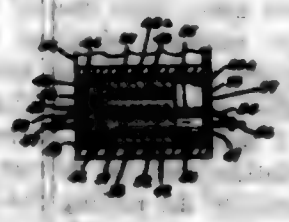
ing circuitry and associated circuit elements, input signal points of said circuitry terminating in exposed input signal terminals along a forward face of said module, and output signal points of said circuitry terminating in exposed output signal terminals along a rearward face of said module, a matrix switch plate arranged between each module and its succeeding module in said stack, said plate containing a grid conductor pattern with vertical lines on a rearward side and horizontal lines on a forward side, said horizontal grid lines being arranged in groups each having a number of conductors equal to the number of input terminals of a module, permanent connections being made in said plate between the vertical and horizontal grid lines on opposite sides of said plate in such fashion that each vertical line is electrically common to corresponding ones of each said groups of horizontal lines, said vertical lines terminating in input signal terminals located on one edge of the plate so as to each electrically engage a related input signal terminal of the succeeding module, said horizontal grid lines on each end thereof having removable terminal portions thereof extending beyond said plate, each group of extending terminals being aligned for engagement with a related one of said output terminals on the preceding module all of said extending terminals of a group associated with any particular one output terminal but a desired one or ones being removed prior to the actual arrangement of switch plate, between adjacent modules, to accordingly effect a connection through said plate between any module output and a desired input or inputs of the succeeding module of the circuit package.

2,896,523

ELECTRICAL CIRCUIT UNIT AND MOUNTING MEANS THEREFOR

Malcolm Jean Charles, Granada Hills, Calif., assignor to Carol Campbell Enterprises, Inc., North Hollywood, Calif., a corporation of California

Application October 8, 1958, Serial No. 766,883
8 Claims. (Cl. 317—101)



1. In combination: a plate having a bore therethrough, an interior shoulder in said bore; and a circuit element in said bore, said circuit element comprising a conductive tubular member, said tubular member having a central passage therethrough, a conductive coil in said passage, an insulating sleeve surrounding said coil within said passage, a terminal lead extending from each end of said coil, a pair of capacitors within said passage, each capacitor having a conductive case in contact with said tubular member, and having an opening therethrough, one of said capacitors being disposed on each side of said coil, one of said terminal leads passing through each of said openings, said capacitors each having a tab as one of its terminals and its case as the other of its terminals, each tab, and the terminal lead passing through its respective capacitor being conductively joined together, said tubular member being frictionally engaged in said bore, whereby one terminal of each of the capacitors is connected to the plate through the tubular member, and the plate thereby provides a common junction for said capacitors, and the projecting tabs provide another pair of terminals, one for each capacitor and one for each end of the coil.

2,896,524

WINDINGS FOR ELECTROMAGNETS

Andrew Stansberger, Brockley, London, England, assignor to J. Stone & Company (Deptford) Limited, London, England

Application March 25, 1955, Serial No. 496,983
Claims priority, application Great Britain March 31, 1954
4 Claims. (Cl. 317—123)

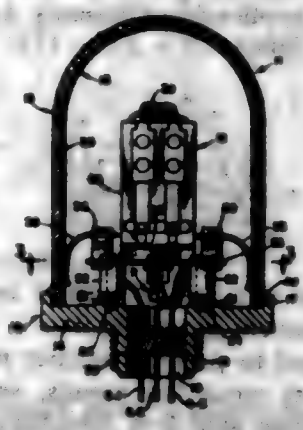
1. An electromagnet comprising, a ballast resistor substantially insensitive to temperature variation, a main winding having a substantial temperature coefficient of resistance and connected in series with said ballast resistor, an auxiliary winding having a substantial temperature coefficient of resistance, connected in parallel with a part only of the said ballast resistor and which is arranged so that its magneto-motive force opposes that of said main winding, variations of winding temperature within the working range producing substantially equal, but effectively opposite, variations of the magneto-motive force of the respective windings.

2,896,525

LIGHT RESPONSIVE SYSTEM

John E. Jacobs, Hales Corners, Wis., assignor to General Electric Company, a corporation of New York

Application March 15, 1955, Serial No. 494,400
20 Claims. (Cl. 317—124)



3. A light sensitive control system comprising electrical semi-conductor material forming detector means responsive to variation in the intensity of impinging light rays, an electrical power operable device and a solenoid for actuating the same, means forming a housing enclosing said device and solenoid and said detector means and including a ray pervious portion through which light rays may be applied to said detector means from outwardly of said housing, and means for applying electrical power, from a source outwardly of said housing, to energize the solenoid for the actuation of said operable device, under the control of said detector means.

2,896,526

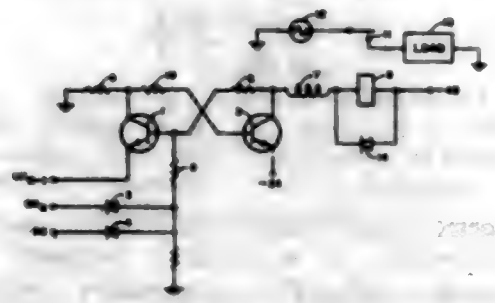
TRIGGER CIRCUIT FOR USE IN TIME DIVISION MULTIPLEX SYSTEMS

Robert B. Tremblay, Webster, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware

Application May 16, 1956, Serial No. 585,232
10 Claims. (Cl. 317—147)

2. In a time division multiplex system, a trigger circuit having first and second stable operated conditions, means for applying trigger pulses which occur in a

first time position in recurring cycles of time positions to said trigger circuit, means for applying trigger pulses which occur in a second time position in said recurring cycles of time positions to said trigger circuit, means whereby said trigger circuit is responsive to the receipt of each pulse in said second time position to operate to its second operated condition and responsive to the receipt of each pulse in said first time position when in its

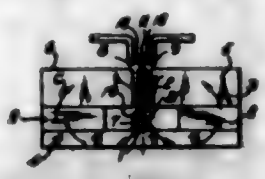


second operated condition to operate to its first operated condition, a relay having a predetermined release time period, means for energizing said relay when said trigger circuit is in its second operated condition, means whereby the time displacement of said first and second time positions is of less duration than said predetermined time period so that said relay remains operated so long as pulses in said second time position are applied to said trigger circuit.

2,898,527
POLARIZED RELAY

Karl Kummann, Berlin, Germany, assignor, by mesne assignments, to VEB Fernmeldewerk Arnstadt, Arnstadt, Germany

Application December 5, 1955, Serial No. 551,136
Claims priority, application Germany April 25, 1955
6 Claims. (Cl. 317—172)

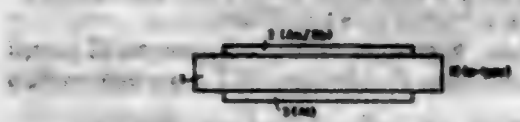


1. In a polarized relay; a permanent magnet arranged to produce a permanent magnetic flux in a first path, an exciter coil arranged to produce exciter magnetic flux in a second path, first mounting means, second mounting means separated from said first mounting means, a first armature swingably mounted on said first mounting means, and a second armature separated from said first armature and swingably mounted on said second mounting means, said first and second armatures being drawn onto said first and second mounting means, respectively, by said permanent magnetic flux.

2,898,528
SILICON SEMICONDUCTOR DEVICE

Hubert Patalong, Pretzfeld, Oberfranken, Germany, assignor to Siemens-Schuckertwerke Aktiengesellschaft, Berlin-Siemensstadt, Germany, a German corporation

Application May 7, 1957, Serial No. 657,631
Claims priority, application Germany May 15, 1956
3 Claims. (Cl. 317—241)

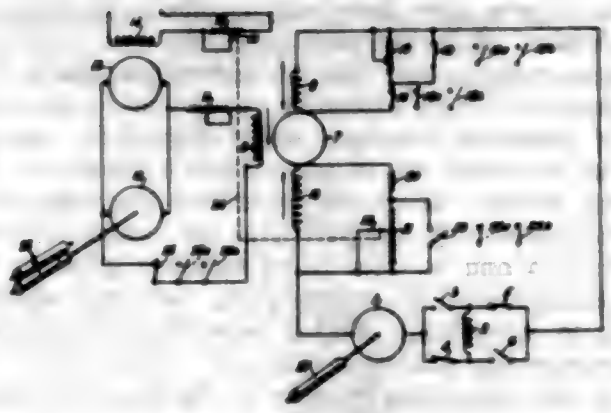


1. A semiconductor device, comprising a semiconductor body of substantially monocrystalline silicon, and at least one metallic contact member of foil thickness mounted on, and fusion-joined with, said body to form a junction zone of uniform depth of penetration and free from mechanical stresses, said zone being larger than 1 mm.^{2} in area, said metallic contact member having an area equal to that of said junction zone and consisting of a gold-antimony alloy having an antimony content between 0.2 and 5% by weight.

2,898,529
INSTALLATIONS PARTICULARLY FOR THE WINDING UP OF A SHEET OF TEXTILE THREADS

Albert Louis Gabriel Pelletier, Epinal, France, assignor to Comptoir de Filaturie Cotonniere, Etablissements Bonnac, Paris, France, a French company

Application June 25, 1956, Serial No. 593,439
Claims priority, application France February 7, 1956
6 Claims. (Cl. 318—7)



1. In a control system for maintaining a constant tension on flexible material delivered from a delivery apparatus and wound on a reeling device, in combination, a reversible direct current series first motor connected in driving relation with a reeling device, a first generator connected to supply electrical energy to said first motor and having a plurality of separate and independent field windings comprising two windings separately connected to respond to armature current of the first motor and operatively connected to generate flux in opposition to each other with one of said two windings having a larger number of turns than the other and a separately excited third winding connected to generate flux in opposition to the winding having the larger number of turns, a second direct current motor connected in driving relation with the delivery apparatus for delivering said material to the reeling device, a separately excited second generator connected to supply electrical energy to the second motor and an excitation voltage to said third winding in proportion to the voltage supplied to the second motor, whereby the output voltage of the first generator is substantially proportional to the speed of the second motor and said output voltage is automatically reduced as a function of the torque output of the first motor thereby maintaining the tension substantially constant on said flexible material.

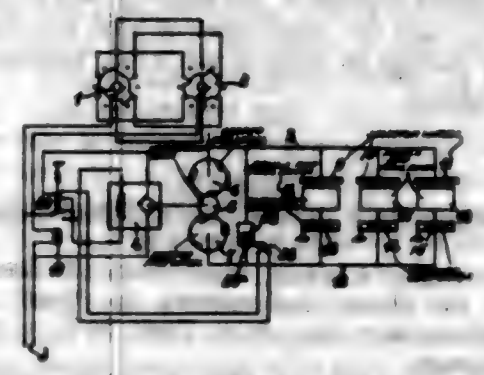
2,898,530
SHAFT POSITIONING MECHANISM

Wilhelmus Lambertus Vervest and Gosewijn Van Gelder, Hilversum, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Application July 8, 1955, Serial No. 520,811
Claims priority, application Netherlands July 9, 1954
9 Claims. (Cl. 318—11)

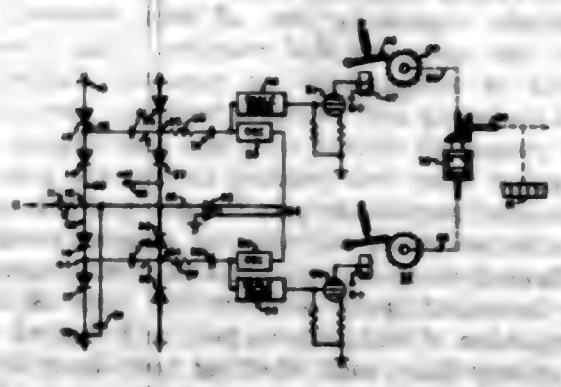
9. A shaft positioning mechanism comprising a reversible electric motor, a selector shaft, a tuning shaft, a first coupling connecting said selector shaft to said electric motor and rotatable in one direction, a second coupling connecting said tuning shaft to said electric motor and rotatable in another direction, a plurality of selector gears

operatively connected to said selector shaft, an overload coupling connecting said tuning shaft with said shafts to be positioned, an electro-magnetic relay controlling the direction of rotation of said motor, a selector switch, a collector switch secured to said selector shaft and electrically connected to said selector switch, a mechanism connected to the selector shaft at one end thereof and to



the tuning shaft at the other end thereof, said mechanism having a threaded spindle and a mating nut, said spindle being provided with an external conical portion which extends co-axially with said nut and which co-acts with said switch, a signalling device, said conical portion further being provided with a central pin which is adapted to operate said signalling device.

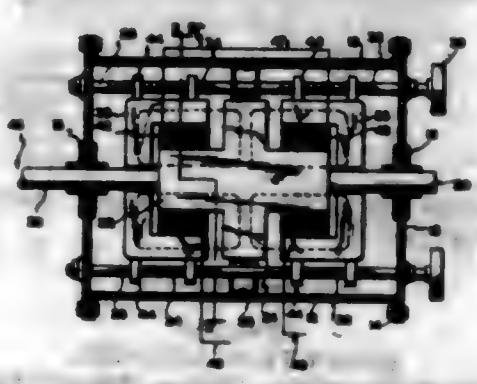
2,898,531
MOTOR DIFFERENTIAL FREQUENCY INTEGRATOR
John W. Gray, Pleasantville, N.Y., assignor to General Precision Laboratory Incorporated, a corporation of New York
Application December 31, 1956, Serial No. 631,928
14 Claims. (Cl. 318—70)



1. A rate servomechanism comprising, a pair of similar capacity and diode frequency counters, each having a feedback loop containing an alternating current generator, portions of the feedback loops being in common, said common portion including an amplifier, means applying a direct-current input signal to said common portion, means deriving from the signals in the non-common portions of said two feedback loops two mechanical shaft speeds representative of the respective signals thereof, and means subtracting said two mechanical shaft speeds to form a difference shaft speed representative of the amount and sense of the difference thereof and proportional to said direct-current input signal.

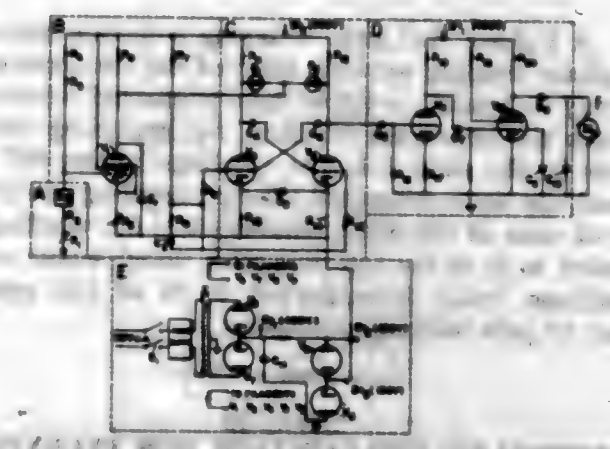
2,898,532
ELECTROMAGNETIC RAPPING DEVICE
Harry A. Winterstein, Plainfield, N.J., assignor to Research Corporation, New York, N.Y., a corporation of New York
Application February 16, 1955, Serial No. 488,678
3 Claims. (Cl. 318—125)

1. A vibratory motor including a frame, field members located in spaced apart relationship within said frame, an armature reciprocally mounted in said frame intermediate said field members, resilient means interconnecting said armature and said frame normally biasing said armature to a balanced position intermediate said field members, means associated with said frame and having operable connection with said field members



for simultaneously moving said field members toward or away from said armature, conductor means connecting said field members to a source of electric current, and control means associated with said current source for alternately supplying said field members with half-wave energization.

2,898,533
COMPENSATING TIMER
John S. Beckett, Los Angeles, Calif., assignor to Aseptic Thermo Indicator Company, North Hollywood, Calif., a corporation of California
Application December 12, 1955, Serial No. 552,521
4 Claims. (Cl. 318—171)

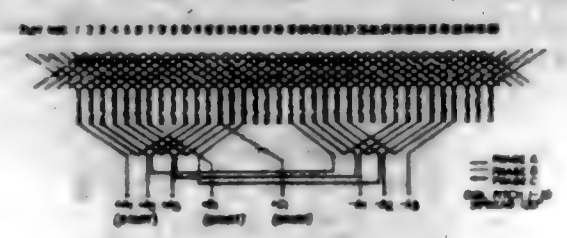


1. A compensating timer comprising a variable resistance temperature sensing element whose conductivity varies exponentially with the temperature; amplifier means for producing a direct current voltage proportional to said conductivity; an astable multivibrator circuit generating a current whose frequency at the output is varied by said signal; and synchronous motor means connected to said output, the speed of said motor means varying with the change of frequency of said output current.

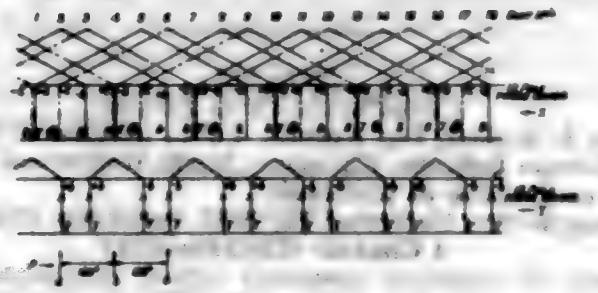
2,898,534
INDUCTION MOTOR
Gordon Hindle Rawcliffe, Clifton, Bristol, England, assignor to National Research Development Corporation, London, England, a corporation of Great Britain
Application June 25, 1956, Serial No. 593,674
Claims priority, application Great Britain June 30, 1955
4 Claims. (Cl. 318—224)

1. A three-phase pole-changing induction motor having three phase windings each of 120° spread and each divisible into three 40° sections and adapted to be connected alternatively as a three-phase delta winding or as a three-phase star-winding of 120° phase spread, said delta winding being distributed to provide n poles and said star winding distributed to provide $3n$ poles, said delta widing omitting one 40° section of each of said

phase windings, the arrangement being such that when connected in delta the machine is adapted to run at substantially three times the speed of said machine when connected in star.

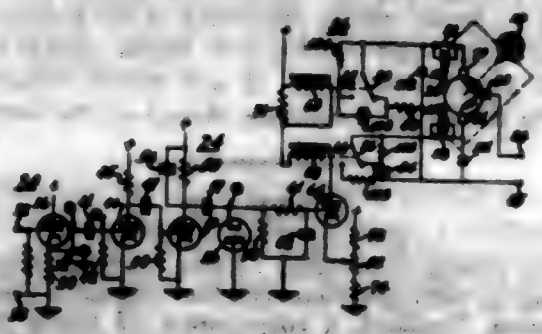


2,898,535
INDUCTION MOTORS
Gordon Hindle Rawcliffe, Clifton, Bristol, England, assignor to National Research Development Corporation, London, England
Application July 10, 1958, Serial No. 747,722
Claims priority, application Great Britain July 15, 1957
5 Claims. (Cl. 318—224)



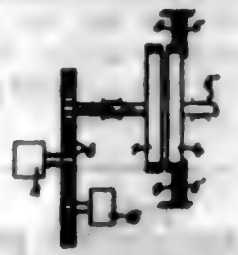
1. A 3-phase A.C. pole changing induction motor having phase winding sections adapted for connection alternatively to provide a 4-pole delta-connected winding of a 12-pole star-connected winding, for providing operating speeds in the ratio 3:1, the windings having 60° phase spread, the delta-connected winding omitting one 20° section of each of the phase windings and the winding being chorded to ⅚ of the full pole-pitch under 4-pole working conditions, which is equivalent to ⅔ of full pole-pitch under 12-pole working conditions.

2,898,536
AUTOMATIC IRIS CONTROL FOR TELEVISION CAMERAS
Gunter Franz Mussolf, Pitman, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application March 31, 1955, Serial No. 498,153
7 Claims. (Cl. 318—290)



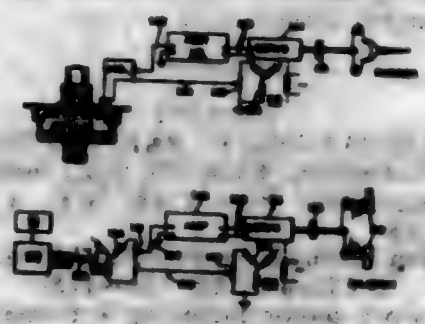
1. A circuit for controlling a reversible electric motor having two windings in response to a control potential, including an electron discharge device having cathode, control and anode electrodes, means to apply said control potential between said control and said cathode electrodes, means to apply energizing potential between said cathode and anode electrodes, a pair of relays of different pull in current characteristics, having windings connected in series between said anode electrode and said energizing potential means, each of said relays having an armature structure associated therewith and double throw contacts associated with each armature, individual means coupling given terminals of said motor windings and said armatures, capacitors individually connected between the contacts associated with each of said armatures, a lead from one pole of a source of motor energizing voltage to a normally idle contact of one of said relays and to a normally active contact of the other of one of said relays, and a lead from the other pole of said source of motor energizing voltage to both of the other terminals of said motor windings.

2,898,537
ARRANGEMENT FOR STABILIZING THE SPEED OF A MOTOR
Johannes Meijer Clerwen, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application July 12, 1954, Serial No. 442,677
Claims priority, application Netherlands July 21, 1953
5 Claims. (Cl. 318—302)



1. A mechanism for stabilizing the speed of a motor comprising a mechanical resonant system having at least two co-axial spaced but magnetically coupled members therein, said members having a plurality of north and south poles in an alternate substantially circular arrangement and being magnetized in their axial direction, means operatively connecting one of said members to said motor, the other coupled member being consequently vibrated at substantially its resonant frequency, and means mounting said vibrating body for preventing rotational movement thereof with said one coupled member, said motor when overspeeding causing the poles of said one coupled member to pass the poles of the other coupled member above the resonant frequency resulting in the vibrating member applying torque in a manner to reduce the motor speed whereby the force of attraction and repulsion of said poles on both said coupled members draw power from said vibrating body in order to produce a physical counter force which reduces the overspeed of the motor and causes said other coupled member to vibrate again at substantially its resonant frequency.

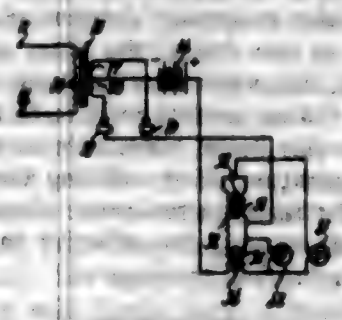
2,898,538
AUTOMATIC STEERING SYSTEM
Christopher A. Rafferty, Brooklyn, N.Y., assignor to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Application February 2, 1954, Serial No. 407,775
6 Claims. (Cl. 318—489)



4. In an automatic steering system for a craft having a movable control surface, a servomotor for moving said

surface, and control means for developing a signal for operating said servomotor, said control means comprising support means, inertia means pivotally mounted on said support means, a two part electrical signal developing means for developing a signal upon relative movement of said parts, means for fixing one of said parts to said support means, and means for moving the other of said parts by said inertia means including a pivot rotatably mounted on said support means, a first bar having a jaw at each end and a portion intermediate said jaws fixed to said pivot, a second bar rotatably mounted on said pivot and having a jaw adapted to coact with one of said jaws of said first bar to form a first pair of cooperating jaws, a third bar rotatably mounted on said pivot and having a jaw adapted to coact with the other of said jaws of said first bar to form a second pair of cooperating jaws, means on said inertia means engageable by said first pair of coacting jaws, means on said second part of said signal device engageable by said second pair of coacting jaws, and resilient means associated with each pair of coacting jaws so that the jaws yieldingly engage said engageable means, whereby relative movement of said support and inertia means causes relative movement of the two parts of said signal developing means.

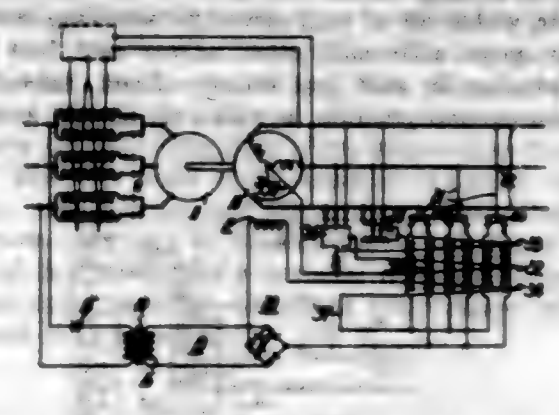
2,898,539
BATTERY CHARGING APPARATUS
Homer A. Lessen, Worcester, Mass., assignor to Koehler Manufacturing Company, Marlboro, Mass., a corporation of Massachusetts
Application July 3, 1956, Serial No. 595,671
1 Claim. (Cl. 320—32)



Battery charging apparatus comprising a source of pulsating direct voltage for charging a battery, first and second magnetic cores, first and second windings on said cores, respectively, a third winding linking said cores, said first and third windings being serially connected between said source and the battery to be charged to magnetize said cores and to substantially saturate said first core when the charging current caused to flow through said windings exceeds a predetermined minimum value signifying that the battery is substantially discharged, a first indicating device responsive to the voltage induced across said second winding by an amount of charging current exceeding said predetermined minimum value, and a second indicating device responsive to the voltage difference between the voltages induced across said first and second windings by an amount of charging current substantially equal to said predetermined value signifying that the battery is substantially fully charged.

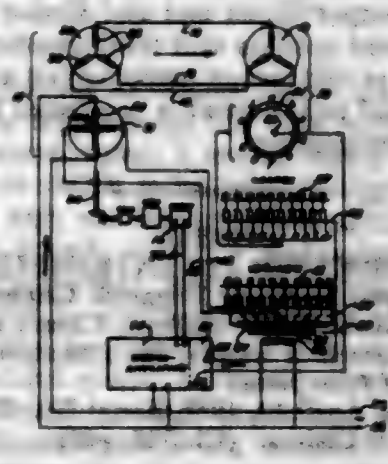
2,898,540
GENERATOR EXCITATION SYSTEM
Harold A. Gallistel, Wauwatosa, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application December 22, 1955, Serial No. 554,784
7 Claims. (Cl. 322—36)

7. In an alternating current system, an alternating current generator having a field winding, minimum excitation initiating means comprising a source of alternating current, a bridge rectifier having input terminals and output terminals, first circuit means connecting said input terminals to said alternating current source, fixed impedance means in series with said first circuit means, second circuit means connecting said output terminals to said field winding, a load circuit connected to said



generator, self-excitation means comprising third circuit means connecting said load circuit to said field winding with said rectifier output terminals in series between said load circuit and said field winding to excite said field winding.

2,898,541
PRESET SERVO SYSTEM
Marcel L. Fenneau, Liege, Belgium, assignor to Ateliers de Constructions Electriques de Charleroi, Brussels, Belgium, a company of Belgium
Original application May 1, 1953, Serial No. 352,472, now Patent No. 2,783,422, dated February 26, 1957. Divided and this application December 4, 1956, Serial No. 628,668
4 Claims. (Cl. 323—73)

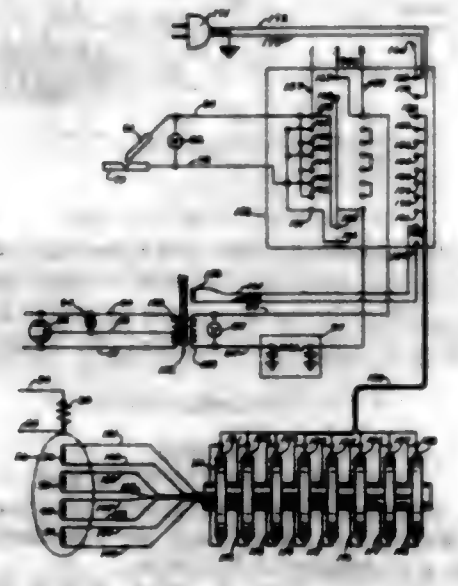


1. A discriminator for a servoamplifier of a remote positioning system of the synchroreposter type comprising a pair of push pull connected electric discharge devices with input signal means for applying signals of opposite polarity to the electric discharge devices, a second stage pair of electric discharge devices also push-pull connected, cathode coupled to the first stage electric discharge devices and having output coupling means with rectifying means in the output circuits, at least one stage being biased to cut off, and at least one operating substantially up to zero grid bias whereby a signal in one rectifier or the other is produced according to the polarity of input signal and rising in amplitude to a flat response value independent of the amplitude of the input signal.

2,898,542
PORTABLE GENERATOR UNIT
George J. Wasko and Joe J. Chelich, Lakefield, Minn.
Application February 18, 1957, Serial No. 640,905
6 Claims. (Cl. 322—90)

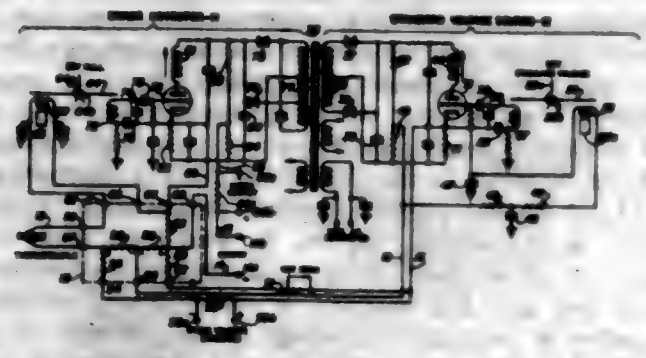
6. A generator assembly including an alternating current generator having a plurality of armature windings, a first alternating current output circuit including an output transformer having first, second and third transformer windings, a pair of alternating current output terminals

connected to said second transformer winding, a second alternating current output circuit, an input circuit adapted to be connected to a source of alternating electrical energy, armature switching means movable to and from a first position in which all of said armature windings are connected in series with each other across said first transformer winding in said first output circuit, movable to and from a second position in which all of said armature



windings are connected in parallel with each other across said second output circuit, and movable to and from a third position in which each of said armature windings is disconnected from every other armature winding and from said first output circuit and said second output circuit, in which third position said third transformer winding is connected to said second output circuit and in which third position said input circuit is connected to said first winding of said transformer.

2,898,543
TRANSMITTER POTENTIOMETER
Charles G. Roper, Fairfield, Edgar S. Gilchrist, Easton, and Arthur Justin Sable, Milford, Conn., assignors to Manning, Maxwell & Moore, Inc., Stratford, Conn., a corporation of New Jersey
Application April 19, 1956, Serial No. 579,194
9 Claims. (Cl. 323—64)

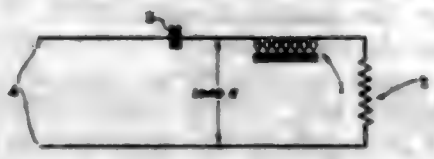


1. A transmitting potentiometer, comprising a first electromechanical force balance unit having an input circuit and an output circuit, a primary measuring element for developing a direct current input signal proportional to a measured variable, a span resistor in series with the output circuit of said first force balance unit, a zero suppression resistor, means connecting said primary measuring element, the input circuit of said first force balance unit, said span resistor and said suppression resistor in series circuit relation, current flow through said span resistor as a result of said input signal being in the opposite direction from said output circuit current, means including a second electromechanical force balance unit for developing a stabilized unidirectional voltage, and means for connecting said stabilized voltage to said zero suppression resistor in opposition to said input signal.

2,898,544
TEMPERATURE CONTROL DEVICE
Theodore N. Flight and George R. Shepherd, Farnham Common, England, assignors to The Rheostatic Company Limited, Slough, England, a British company
Application January 20, 1956, Serial No. 560,450
Claims priority, application Great Britain January 20, 1955
1 Claim. (Cl. 323—69)

A temperature control device comprising a base, a temperature sensitive resistance element, two non-temperature sensitive resistance elements, all of said resistance elements being mounted on the base, a contact slidable on one of said two resistance elements and movable around a pivot point, one end of said one resistance element having the sliding contact being connected to one end of the temperature sensitive resistance element and its other end being connected to one end of the other of said two resistance elements, the position of said one resistance element having the sliding contact relative to the pivot point of the sliding contact being adjustable to vary the effective radius of operation of the sliding contact, and adjustment means for said one resistance element having the sliding contact for varying the effective radius of operation of the sliding contact thereon.

2,898,545
AUTOMATIC WATTAGE REGULATOR FOR ELECTRICAL DEVICES
Lester F. Bird, Newark, N.J., assignor to Engelhard Industries, Inc., a corporation of New Jersey
Continuation of abandoned application Serial No. 161,563, May 12, 1950. This application December 24, 1954, Serial No. 477,565
2 Claims. (Cl. 323—77)

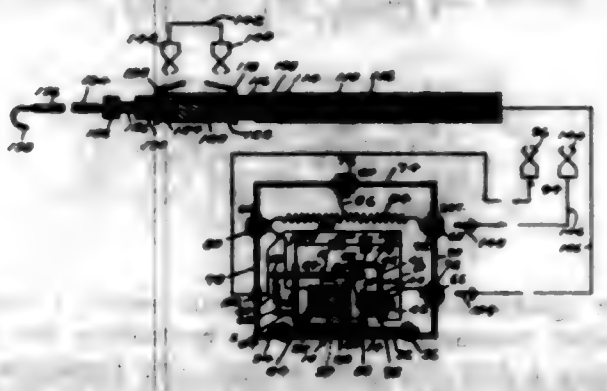


2. An automatic load wattage regulating circuit for alternating currents, comprising a non-resonant combination of a reactive power consuming load circuit and inserted in at least one supply line leading thereto a voltage sensitive shunt combination of a fixed capacitor and a reactor, said reactor being a current limited reactor characterized by the passage of current therethrough which is always less than the current through said capacitor, the reactor branch of the shunt combination having an adjustable resistance in series with said reactor and of operably established value according to the load wattage and such that with increasing line voltage the load wattage remains substantially constant, said shunt combination having capacitative reactance operable in linear relationship to the applied line voltage.

2,898,549
MEANS AND TECHNIQUES FOR DETERMINING

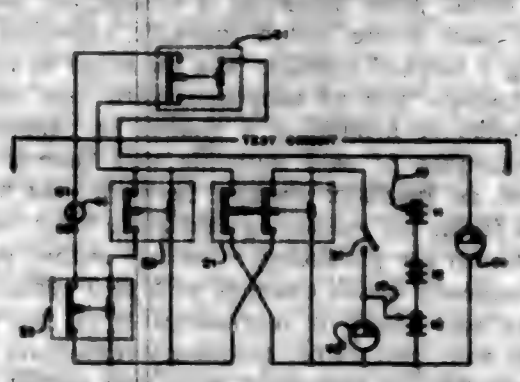
2,898,551
RATIO METER BLADE FIELD INDICATORS

2,898,546
IGNITION TESTER
Carl G. Steffensen, Philadelphia, Pa.
Application October 25, 1955, Serial No. 542,637
1 Claim. (Cl. 324—17)



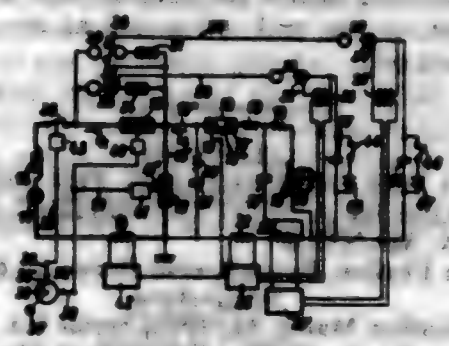
As an article of manufacture, a circuit testing device comprising a housing, a plurality of jacks mounted on said housing, an electro-magnetic vibrator fixedly secured within said housing, said vibrator including an electro-magnetic coil and a vibrating arm having a switch contact on one end thereof disposed in confronting relation relative to a second switch contact mounted on a fixed arm, a condenser electrically connected between said vibrating arm and said fixed arm, a fixed resistance connected between two of said jacks, said resistance being tapped intermediate its ends and connected with a third jack, a fourth jack electrically connected with said vibrating arm, said electro-magnetic coil having one of its ends electrically connected with one of said first jacks and the other end thereof electrically connected with said fourth jack, a conductor having one of its ends electrically connected with said fixed arm and having a clip at the other end thereof, a second conductor having a plug connected at one end thereof for selective reception within any one of said first three jacks, a clip mounted on the other end of said second conductor, either of said clips being connectable to the distributor side of the ignition coil, and the other clip being connectable to ground, a third conductor having a plug fixedly secured thereto for reception in said fourth jack, a handle member surrounding a portion of said third conductor, said third conductor having a fixed spark gap means disposed therein, and removable means for closing said gap.

2,898,547
MEANS FOR DYNAMIC TEST OF OVERVOLTAGE RELAYS
Oscar Machowitz, Philadelphia, Pa., assignor to the United States of America as represented by the Secretary of the Navy
Application February 8, 1955, Serial No. 487,904
3 Claims. (Cl. 324—28)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Overvoltage relay test apparatus comprising a D.C. power supply, a first manually adjustable means for obtaining a predetermined operating voltage from said power supply, a second fixed means for obtaining a constant voltage from said power supply, a timing means including a circuit which opens a fixed time interval after it is energized to establish a fixed time standard, means for simultaneously applying said predetermined operating voltage to an overvoltage relay to be tested and said constant voltage to said timing means, indicating means interposed between an overvoltage relay being tested and the circuit included in said timing means operable when said overvoltage relay closes before the circuit is opened to indicate this sequence and thereby compare the operating time of an overvoltage relay being tested with the fixed time standard, whereby the exact voltage required to operate a given overvoltage relay in a given time may be determined by alternately regulating said first manually adjustable means and comparing the operating time of the given overvoltage relay with the fixed time standard.

2,898,548
TESTING APPARATUS
Ernst Slamecka and August Hochrainer, Kassel, Germany, assignors to Licentia Patent-Verwaltungs G.m.b.H., Hamburg, Germany
Application May 23, 1955, Serial No. 510,226
4 Claims. (Cl. 324—28)

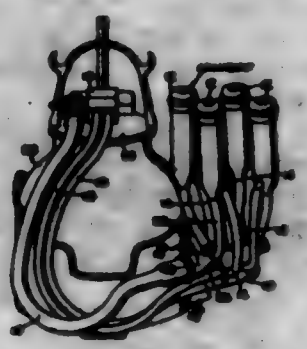


1. An apparatus for testing circuit breakers by means of a separate high voltage and high current source comprising, in combination, a testing branch circuit adapted to contain the switch to be tested; a high current circuit including a high alternating-current source connected to said testing branch circuit; a high voltage circuit containing a high voltage source connected to said testing branch circuit; an auxiliary switch in said high current circuit intended to prevent application of high voltage to said high current source; a plurality of controllable spark gaps connected in parallel across said auxiliary switch, each of said spark gaps being normally in undischarged condition; means for closing said auxiliary switch and the circuit breaker under test so that high alternating-current flows from said high current source through said closed auxiliary switch and circuit breaker; means for substantially simultaneously opening the contacts of said auxiliary switch and the contacts of the circuit breaker under test while alternating current is flowing therethrough; means for applying high voltage from said high voltage source across the open contacts of the circuit breaker under test shortly before the high alternating current passes through zero; means, including a source of energy independent of said high current and high voltage sources, for initiating a discharge in one of said controllable spark gaps, while said contacts of said auxiliary switch remain open, in the event the high voltage applied across the open contacts of the circuit breaker under test causes a voltage breakdown therebetween so that current from said high current source will be reapplied through the circuit breaker under test; and means, including a source of energy independent of said high current and high voltage sources, for successively initiating a discharge in each of said remaining spark gaps, while said contacts of said auxiliary switch remain open, in the even the open contacts of the circuit breaker under test continue to break down after the continued re-applications of the high alternating current.

2,898,553
BRIDGE-STABILIZED OSCILLATOR

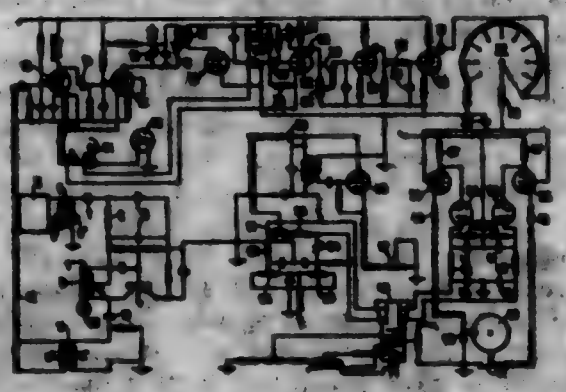
2,898,555
RESONANT CAVITY EXCITATION SYSTEM

2,898,549
MEANS AND TECHNIQUES FOR DETERMINING QUALITY OF MILK
Wendell S. Miller, Los Angeles, Calif.
Application December 10, 1954, Serial No. 474,570
12 Claims. (Cl. 324—30)



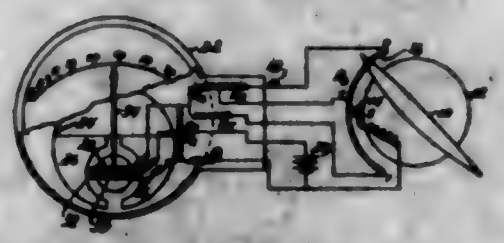
1. In an arrangement of the character described, an automatic milking device having a milk line, and a conductivity measuring cell at the beginning of said line such that the milk in said cell is substantially at its original temperature, and means for continuously measuring the conductivity of the milk when and as the same passes through said cell.

2,898,550
METHOD FOR DETERMINING THE POSITION OF THE CORE OF A BODY CONSISTING OF A CORE AND A MANTLE
Eugen Fischer, Busswil, near Buren an der Aare, Switzerland
Application March 21, 1956, Serial No. 572,971
Claims priority, application Switzerland March 26, 1955
8 Claims. (Cl. 324—61)



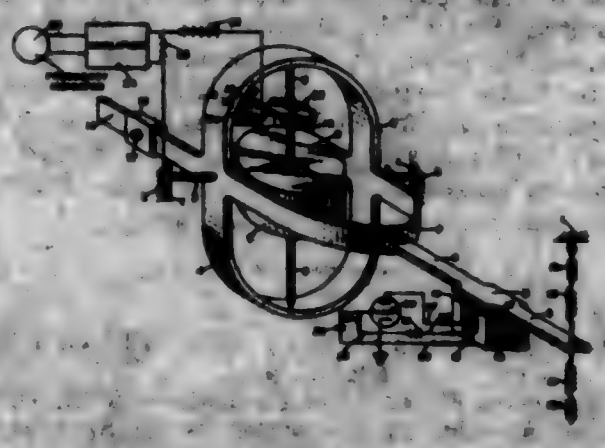
8. A method for determining the position of the core of a body consisting of a core and a mantle covering the core, the core and the mantle being made of materials having different properties, by feeler means adapted to detect the mantle thickness of the body, comprising providing a cyclic relative movement between one single feeler and the body, thereby displacing the feeler along the surface of the body, continuously detecting the mantle thickness during the cyclic relative movement between the said single feeler and the body, producing an electric measuring quantity in accordance with the measured mantle thickness, variations of the said measuring quantity being obtained during the said relative cyclic movement between the feeler and the body when there are variations of the mantle thickness, periodically detecting the momentary value of the said measuring quantity at distinct points of the said cyclic relative movement, producing and maintaining constant electrical potentials in accordance with each of the said detected momentary values of the measuring quantity, and producing a steady and continuous indication of the position of the core of the body by means of the said constant electrical potentials.

2,898,551
RATIO METER BLADE PITCH INDICATORS
William Jordan 3d, Glen Ridge, N.J., assignor to Curtiss-Wright Corporation, a corporation of Delaware
Application July 22, 1954, Serial No. 445,144
1 Claim. (Cl. 324—62)



In combination, a coil of a ratio meter, a non-linear variable resistance network for controlling the coil including a first circuit of at least one resistance and a second circuit of a plurality of resistances in series, said circuits having their one ends connected to one end of the coil, the second circuit having one resistance disposed between other resistances, a slider movable over the said one resistance of the second circuit, circuit means separate from the first and second circuits connecting the slider to the other end of said coil, the first and second circuits being connected at their other ends to each other and being directly connected at such other ends to a tap intermediate the said one resistance of the said second circuit.

2,898,552
SPEED INDICATOR FOR A GYROSCOPE
Eugene M. McNatt, Tulsa, Okla., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Original application December 2, 1949, Serial No. 130,694. Divided and this application February 8, 1955, Serial No. 492,807
1 Claim. (Cl. 324—70)

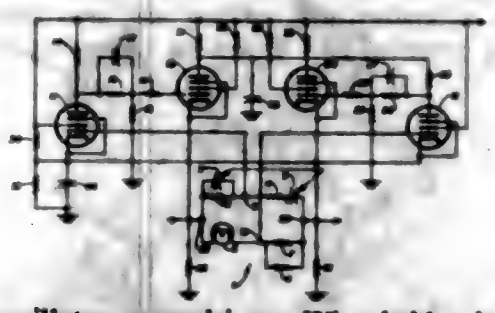


An indicator for determining the rotational speed of a gyroscope mounted for rotation in a frame, the combination with said gyroscope of a variable capacitor having a fixed metal plate including a conductive element secured to said frame and a movable capacitor member including a toothed metallic disk mounted to rotate with said gyroscope and to cooperate with said metal plate for periodically producing a change in capacitance for each revolution of said movable disk member of said capacitor, an insulator located between said fixed plate and said frame for insulating said plate from said frame, circuit means for producing a voltage output signal having a frequency which changes with said variation of capacitance and which is representative of the rotational speed of said gyroscope, frequency-responsive indicator means electrically associated with said circuit means to indicate the corresponding rotational speed of said gyroscope, and an amplifier electrically associated with said circuit means to receive its input signal from the source of variable voltage and to deliver its output signal to said frequency-responsive indicator means, whereby the rotational speed of said gyroscope can be determined.

including a circuit which opens a fixed time interval

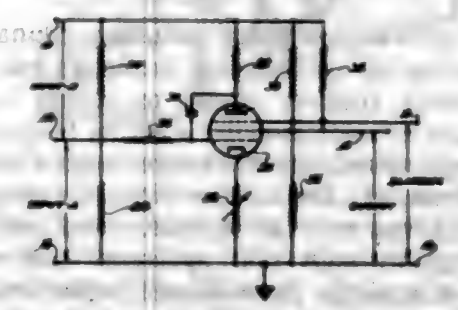
high alternating current.

2,898,553
BRIDGE-STABILIZED OSCILLATOR
Louis W. Erath, Houston, Tex., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Application August 27, 1957, Serial No. 680,465
5 Claims. (Cl. 331—46)



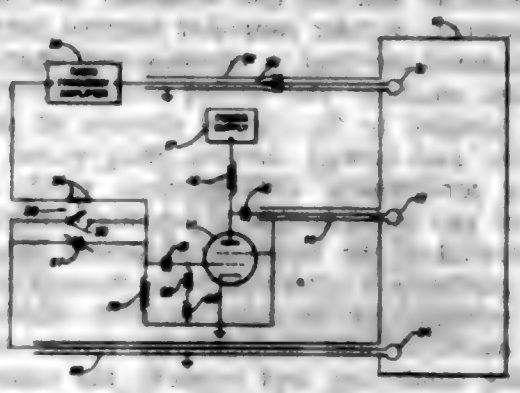
4. An oscillator comprising a Wien bridge including a pair of frequency-sensitive legs and a pair of resistance legs having four terminals, with the frequency-sensitive legs connected between the first and second and second and third terminals, respectively, and with the resistance legs connected between the third and fourth and fourth and first terminals, respectively, a first and a second 180° phase shift vacuum tube amplifier, the first amplifier having its input connected to the fourth terminal and its output connected to the third terminal, the second amplifier having its input connected to the second terminal and its output connected to the first terminal, the input of the first amplifier being subjected to a larger dynamic voltage change than the input of the second amplifier, and means connected to said first amplifier operable to reduce the dynamic current change in said first amplifier to the order of the dynamic current change in said second amplifier, in order to equalize the dynamic characteristics of said amplifiers.

2,898,554
DEVIATION OSCILLATOR
Gale W. Crampton, Chicago, Ill., assignor to Victor Adding Machine Company, Chicago, Ill., a corporation of Illinois
Application December 22, 1955, Serial No. 554,672
2 Claims. (Cl. 331—72)



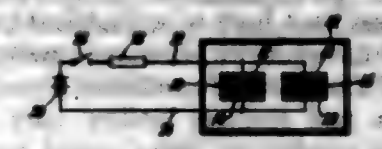
1. A deviation oscillator for providing oscillations having a frequency which is a function of the instantaneous values of two variable input direct current voltages comprising: an electron discharge tube of pentode type having a cathode, an anode, a control grid, a screen and a suppressor, circuit means connecting said pentode elements to provide a phantastron oscillator having a linear anode potential run-down characteristic as a portion of each cycle when said suppressor is more positive than said cathode by a certain amount, a first input circuit including a series resistor connected for directly introducing a variable direct current potential at said control grid, a second input circuit including a series resistor directly connected for introducing a second direct current potential at said anode, adjustable means for lowering the potential of said cathode relative to said suppressor to less than said certain amount, circuit means adapted for external connection for applying a positive potential to said suppressor, and an output circuit connected to said screen.

2,898,555
RESONANT CAVITY EXCITATION SYSTEM
William R. Baker, Berkeley, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application December 31, 1953, Serial No. 401,739
6 Claims. (Cl. 331—96)



1. An improved resonant cavity excitation system comprising an oscillator tube adapted for connection to a resonant cavity for exciting same and having an input circuit, a first pickup loop adapted for disposition within a cavity for accepting oscillatory signals therefrom, an amplifier connected between said first pickup loop and the input circuit of said oscillator tube for driving said tube, a second pickup loop adapted for disposition within a resonant cavity for accepting oscillatory signals therein, and switching means connecting said second pickup loop and the input circuit of said oscillator tube for applying direct drive signals to said tube after oscillation build-up.

2,898,556
OSCILLATOR
John Meteresse, Bronx, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application May 1, 1957, Serial No. 656,338
4 Claims. (Cl. 331—107)



1. An electroluminescent device comprising first, second and third electrically conductive films, said second film being transparent; an electroluminescent layer electrically connected between said first and second films and physically interposed therebetween; a photoconductive layer electrically connected between said second and third films and physically interposed therebetween; a first terminal coupled to said first and third films; and a second terminal coupled to said second film.

2,898,557
TRANSISTORIZED VOLTAGE CONTROLLED OSCILLATOR
Robert K. Dahlin, Lakewood, Calif., assignor to North American Aviation, Inc.
Application August 8, 1956, Serial No. 602,756
13 Claims. (Cl. 331—109)

1. A voltage-responsive time base generator comprising the combination of a resistor and a condenser con-

stant electrical potentials.

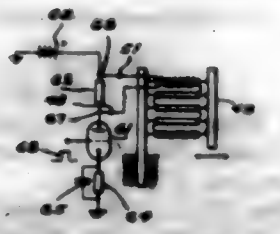
tional speed of said gyroscope can be determined.

nected in series, having a junction terminal and adapted to be connected to a source of charging current, first and second control signal input terminals, a diode connected through a resistor between the first of said signal terminals and the junction of said resistor and condenser, an electronic valve having current-carrying terminals connected on either side of the condenser and having a control element, a pulse amplifier coupled to the said first input signal terminal, a blocking oscillator coupled to the pulse amplifier and having output terminals capacitively coupled to the control element of said electronic valve, said control element being biased to non-conducting condition of the electronic valve, whereby charging of said condenser to a potential corresponding to the potential of the input signal at said input signal terminals results in a current impulse through the diode which is amplified by the pulse amplifier to trigger the blocking oscillator and momentarily render the electronic valve conducting and whereby the condenser is periodically discharged at the end of successive intervals determined by the ratio of the input signal to charging voltage and the constants of the said resistor-condenser circuit.

2,898,558
LINE SECTION

Helmut Oberbeck, Ulm (Danube), Germany, assignor to Firma Telefunken Gesellschaft für Drahtlose Telegraphie m.b.H., Hannover, Germany

Application March 11, 1955, Serial No. 493,748
12 Claims. (Cl. 332—2)



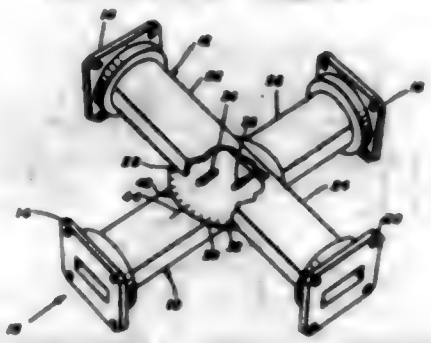
1. A variable time delay network, comprising, in combination, a resilient hollow, cylindrical core element; an outer forward conductor element mounted on said core element; an inner return conductor element arranged coaxially within said resilient hollow core element, at least one of said conductors being coiled and adjustable in its length, one of said conductors also being flexible so as to vary the pitch of said coiled conductor, said resilient core element being constructed and arranged so that contractions and expansions thereof change the inductance and capacitance of said time delay network in the same direction by equivalent amounts so that the time delay of said network is changed while the ratio between said inductance and capacitance remains constant; and means for contracting and expanding said resilient core element by predetermined amounts, whenever desired.

2,898,559
VARIABLE WAVEGUIDE COUPLER

Whilden G. Heinard, Kensington, Md., and Howard S. Jones, Jr., Washington, D.C., assignors to the United States of America as represented by the Secretary of the Army

Application June 26, 1957, Serial No. 668,264
2 Claims. (Cl. 333—10)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A microwave energy coupler comprising in combination: first and second intersecting lengths of rectangular waveguide having their wider walls adjacent and substantially coplanar, and a displaceable disc interposed at the intersection of said wider walls parallel thereto and rotatably fitted in correspondingly shaped recesses in said wider walls so that said disc functions as a common wall capable of being rotatably displaced about an axis perpendicular to said disc, said disc having two spaced elongated apertures adapted to be symmetrically disposed on either side of the longitudinal axis of said first and second lengths of waveguide upon predetermined rotations of said plate, said first and second lengths of

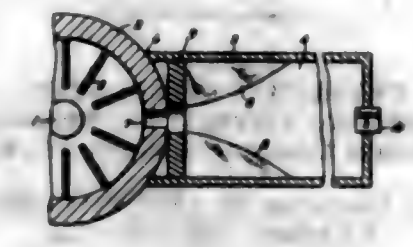


waveguide being adapted to be rotatably displaceable with respect to one another about said axis independently of the rotation of said disc, the rotation of said disc and said lengths of waveguide permitting the direction and amount of the energy coupled between said first and second waveguides to be varied.

2,898,560
OUTPUT COUPLING CIRCUIT FOR CAVITY RESONATORS

Paul Wythe Crapuchettes, Atherton, Calif., assignor to Litton Industries, Inc., San Carlos, Calif., a corporation of California

Continuation of application Serial No. 323,268, November 29, 1952. This application December 20, 1957, Serial No. 704,203
5 Claims. (Cl. 333—33)



4. In a microwave oscillator including a tunable cavity resonator having an aperture for extracting energy therefrom, an energy transfer circuit to permit highly efficient operation of said resonator over its frequency range by presenting a frequency dependent output impedance, said energy transfer circuit comprising: a waveguide connected at one end to said resonator and positioned to receive energy through said aperture, said waveguide being cross-sectionally dimensioned below cut-off over the frequency range of said resonator; a conducting output waveguide connected to the other end of said cut-off waveguide; and means forming a non-dissipative reflecting transition between said cut-off waveguide and said output waveguide, the length and cross-sectional dimensions of said cut-off waveguide being selected to provide an output impedance to the cavity resonator of the desired magnitude and frequency dependence.

2,898,561
ELECTRICAL ATTENUATORS

Alfred George Hayes, Wembley, England, assignor to The General Electric Company Limited, London, England

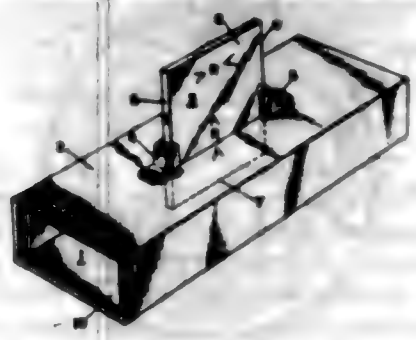
Application December 14, 1954, Serial No. 475,084
Claims priority, application Great Britain December 17, 1953
3 Claims. (Cl. 333—81)

1. An electric attenuator comprising a waveguide having a longitudinal slot in a wall thereof, a member of insulating material which has a planar surface and which

said wedge member disposed between the bottom of said channel and said band to simultaneously clamp said wind-

2,898,567

projects into the said waveguide through the slot, means to mount said member for movement into and out of said waveguide in a direction such as to enable the said surface to move in the plane of that surface thereby varying the portion of the surface that lies within the waveguide, and a resistive layer which is carried by the said member on the said planar surface thereof and which is non-uniform over the surface, the resistance of the resistive layer varying gradually and without any abrupt



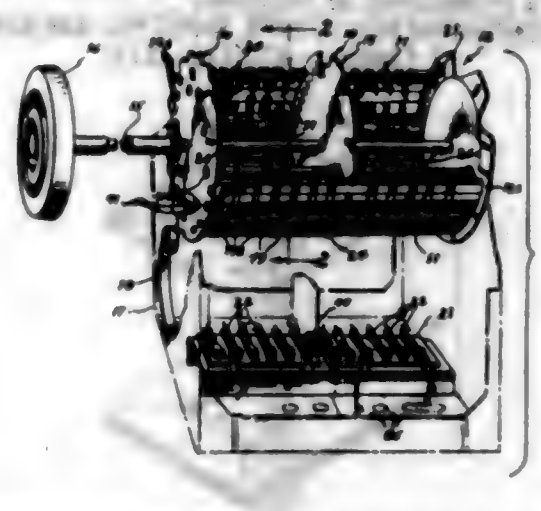
change in value, in a first direction which is parallel to the longitudinal axis of the waveguide, so that it has a relatively high value in the region of each edge of the layer and a relatively low value between the edge regions and, in a dierction which is perpendicular to the first direction, from a relatively low value to a relatively high value whereby, in any position of the member, the resistive layer presents little impedance discontinuity within the waveguide.

2,898,562
SWITCHING DEVICE FOR HIGH FREQUENCY ELECTRICAL ENERGY
John B. Trevor, Jr., Brighton, N.Y.
Application November 26, 1946, Serial No. 712,331
2 Claims. (Cl. 333—98)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A high frequency switching device operable to instantaneously transmit or cut off the electrical energy flowing through a waveguide by varying the effective width of said waveguide, comprising a rectangular waveguide, a movable plate located within and substantially parallel to one of the walls of said waveguide, and rapid acting means connected to said plate for alternately varying the plate between two positions, in one position the effective width of said waveguide is reduced to a point where the cut off frequency of said waveguide is greater than the frequency of said electrical energy and in the other position the effective width of said waveguide is increased to a point where the cut off frequency is equal to or less than the frequency of said electrical energy.

2,898,563
TURRET TUNER WITH PERIPHERALLY EXTENDING CONTACT CARRYING STRAPS FORMING PART OF TUNED CIRCUIT
Rinaldo E. De Coln, Park Ridge, Reuben C. Carlson, River Grove, and Ernest H. Schrot, Chicago, Ill.
Application January 24, 1955, Serial No. 483,576
6 Claims. (Cl. 336—142)

1. In a turret-type tuner a drum-like structure comprised of a plurality of retainer discs arranged substantially parallel with respect to each other and spaced apart along a common axis, a plurality of coil strips mounted upon said retainer discs near the periphery thereof and spanning the distance between said retainer discs, a plurality of tuning circuits mounted on each of said coil strips, each of said tuning circuits comprising a plurality of contacts, said plurality of contacts being arranged in at least two rows and at least two columns substantially perpendicular to said rows, inductive means



for connecting together adjacent contacts in a given column of contacts, a tuning coil connected across a selected pair of the contacts in a given row of contacts, a bank of second contacts, and means for engaging individual contacts of said bank of second contacts substantially simultaneously with individual contacts in any given row of contacts, said rows of contacts and said bank of second contacts being arranged so that each individual contact of said bank of contacts will engage only the contacts in an individual column of contacts.

2,898,564
CORE CLAMP AND COIL BINDING DEVICE
William M. Terry, Jr., Pittsburgh, Pa., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application March 25, 1955, Serial No. 496,695
5 Claims. (Cl. 336—197)

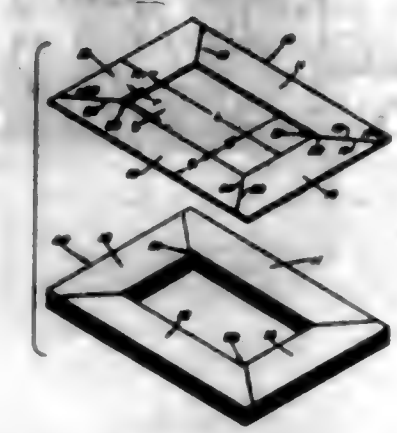
1. A stationary induction apparatus comprising in combination a magnetic core having at least one winding leg comprising a plurality of stacked laminations, an electrical winding surrounding said winding leg in coaxial relation thereto to define an axially extending opening between a side of said leg and a circumferential portion of said winding adjacent said side, and means for applying a uniform pressure to said stacked laminations and said winding comprising a core brace and wedge member disposed in said opening, said brace extending substantially the length of said opening and having a W-shaped cross section, said cross section being modified at its radially inward portion to provide three spaced coplanar surfaces adapted to abut said side in force distributing relationship thereto and modified at its center section to provide a U-shaped channel opening radially outward from the axis of said cylinder, means for maintaining said brace in a fixed position longitudinally with respect to said leg comprising a core band of an electrical insulating material wrapped transversely around said leg and brace,

rotatably mounted so as to extend through said housing parallel to said resistance element, the improvement which

plug body, an electrical conductive seal closing off the inwardly projecting end of said sheathing, a terminal

said wedge member disposed between the bottom of said channel and said band to simultaneously clamp said winding with respect to said leg and apply a uniform pressure normal to the plane of said laminations.

2,898,565
MAGNETIC CORE
Arnold M. Fox, Pittsburgh, and Arnold L. Horelick, Bridgeville, Pa., assignors to McGraw-Edison Company, a corporation of Delaware
Application July 2, 1954, Serial No. 440,883
3 Claims. (Cl. 336—217)



1. A closed magnetic core having leg portions and yoke portions meeting at right angles and forming corners and including a plurality of layers of laminations, each layer including yoke laminations and leg laminations forming generally mitered straight line butt joints at said corners, the width of said yoke laminations being greater than that of said leg laminations, in each corner the joint in one layer extending from the vicinity of the inner corner at an angle greater than 45 degrees to the longitudinal axis of said leg portion, the joint in an adjacent layer at the same corner running at an angle of greater than 45 degrees to the longitudinal axis of said yoke portion from a point along the inner edge of said yoke offset from said inner corner, whereby a void is provided in said adjacent layer at said inner corner, the lamination of one layer overlapping the joint of an adjacent layer and the overlap between said joints so increasing in width in a radially outward direction and the reluctance of the inner perimeter flux paths being so increased by said voids that the magnetic flux density is substantially uniform throughout said core and hot spots caused by undue concentration of magnetic flux at the inner corners of the core are avoided.

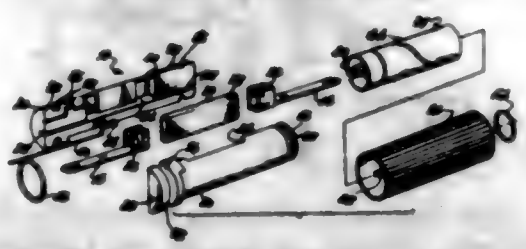
2,898,566
ELECTRICAL CONTROL DEVICE FOR TRAILER BRAKES
Charles R. Bacca, Milford, Ohio
Application July 22, 1955, Serial No. 523,644
23 Claims. (Cl. 338—39)

1. In an electrical control device for electric brakes for trailers for motor vehicles, a casing in which said control is contained, a bracket secured to the casing having a contact member mounted thereon providing an elongated edge, a member movably mounted in the casing carrying a resistor disposed lengthwise of the contact member, and means for actuating the movable member to move the resistor in rubbing relation with the other member.

2,898,567
VARIABLE RESISTOR WITH SHORTED SECTION
Edwin W. Drewitz and Victor Stein, Flushing, N.Y., assignors to De Jur-Amsco Corporation, Long Island City, N.Y., a corporation of New York
Application December 31, 1957, Serial No. 706,334
16 Claims. (Cl. 338—92)

1. In a variable resistor comprising a casing containing an elongated resistance member having an inner surface and a contact movable along said surface; the improvement which comprises a thin element of high conductivity and of predetermined width engageable with and covering a predetermined portion of said resistance member surface and conforming thereto, said contact engaging and moving along said element, and a pair of electrically connected taps mounted on said casing and engaging said resistance member at spaced points therealong, said element being positioned between said taps and having a width closely similar to the spacing between said points, said taps thereby constituting a locating means for said element.

2,898,568
ADJUSTABLE RESISTORS
Marlan E. Bourns, Riverside, Calif., and Richard E. Caddock, Ames, Iowa; said Caddock assignor to Bourns Laboratories, Inc., a corporation of California
Application July 17, 1956, Serial No. 598,284
4 Claims. (Cl. 338—117)



1. A potentiometer which includes: a non-conductive element support having an internal cavity therein; a resistance element positioned within said cavity so as to have an edge extending therefrom; a pair of terminals engaging opposite ends of said resistance element in said cavity; an electrically conductive tubular contact member rotatably mounted around said element support and said resistance element, said contact member including inwardly projecting spiral means located so as to resiliently engage said edge of said resistance element as said contact member is rotated; a third terminal engaging said contact member so as to establish electrical communication therewith; and means extending from each end of said element support for mounting said element support against rotation.

2,898,569
POTENTIOMETERS
Donald F. Royce, Riverside, Calif., assignor to Bourns Laboratories, Inc., a corporation of California
Application January 27, 1958, Serial No. 711,496
5 Claims. (Cl. 338—130)

1. In a potentiometer having a housing, a resistance element mounted within said housing, and a leadscrew

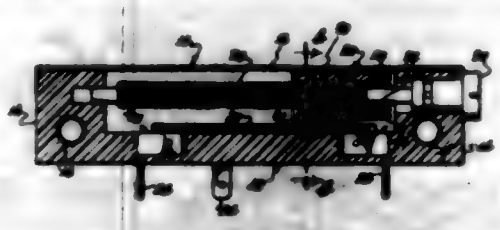
the respective said members being connected in parallelism through said slip contact means, each said mem-

source and to said play-back head repeatedly synchronously moving said light source and said play-back head

prised of a plurality of retainer discs arranged substan-

material wrapped transversely around said leg and brace,

rotatably mounted so as to extend through said housing parallel to said resistance element, the improvement which comprises: a movable member positioned within said housing, said movable member being provided with an open-sided groove to receive said leadscrew, at least a portion of the surface of said open-sided groove being formed of an elastically deformable material, said lead-



screw bearing against said portion of elastically deformable material with sufficient pressure to cause said material to take a transient impression of the leadscrew thread, whereby rotation of said leadscrew causes said member to be moved lengthwise thereof, and contact means carried by said movable member and resiliently engaging said resistance element.

2,898,570
ELECTRICAL RESISTORS

Mihai D. Patrichi, Chatsworth, Calif., assignor to Networks Electronic Corporation, Van Nuys, Calif., a corporation of California

Continuation of abandoned application Serial No. 615,981, October 15, 1956. This application October 16, 1958, Serial No. 767,683
10 Claims. (Cl. 338—237)

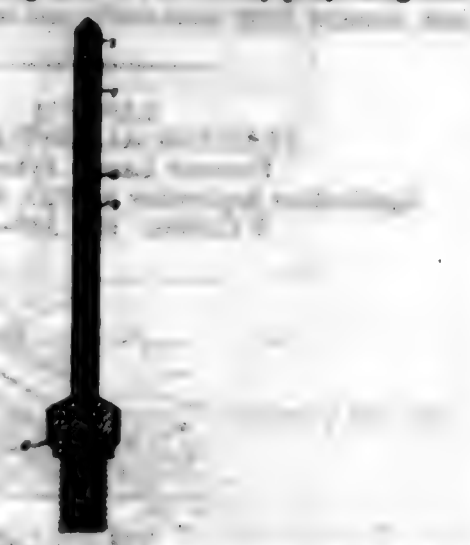
1. In a resistor: a casing comprising a tube and end caps each including a ferrule part attached to a respective end of said tube and a grommet mounted in said ferrule part; a core body of latex potting material substantially filling said casing; a mandrel and a winding of resistance wire thereon, encased within said casing, said core body enveloping said winding and cushioning the same against the transmission of shocks thereto from said casing; and terminal rods extending through said grommets and connected to the respective ends of said winding; said casing tube and mandrel and grommets being of high temperature glass, and said ferrule parts and terminal rods being of metal; and fused metal joints hermetically connecting said glass parts to said metal parts.

2,898,571
METHODS OF MANUFACTURING TUBULAR SHEATHED HEATING ELEMENTS

Gordon Henry Meeks, Old Trafford, Manchester, and John Thomas Urry, Sale, England, assignors to Metropolitan-Vickers Electrical Company Limited, London, England, a British company

Application December 16, 1955, Serial No. 553,607
Claims priority, application Great Britain December 28, 1954
2 Claims. (Cl. 338—238)

1. In a glow plug assembly for starting a compression ignition engine having an engine precombustion chamber, a cylindrical plug body adapted to be secured to said engine to project into said precombustion chamber, said plug body having a through axial bore adapted to communicate with said precombustion chamber, a tubular sheathed heater of small diameter for providing a starting ignition for said engine and comprising a metallic tubular sheathing closely fitted in said bore and secured to said plug body, an electrical conductive seal closing off the inwardly projecting end of said sheathing, a terminal plug attachment having an electrical terminal and electrical insulation means securing said terminal to the outwardly projecting end of said sheathing so that said terminal is electrically insulated from said sheathing, a spacing tube having one end secured in said terminal to establish electrical contact therewith and projecting into said sheathing in concentric spaced apart relation thereto, a heater coil concentrically disposed in spaced relation in said sheathing near the inwardly projecting end

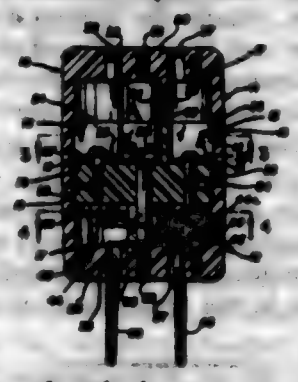


of said sheathing facing said precombustion chamber and having substantially straight inner and outer tails projecting beyond respective ends of said sheathing; said inner tail being surrounded by said seal in contacting relation thereto for establishing electrical continuity between said coil and said sheathing, said outer tail projecting into said spacing tube to make electrical contact therewith, and a packing of magnesium oxide forming a tube within said sheathing and completely surrounding said coil and said spacing tube, said packing extending substantially the length of said sheathing.

2,898,572
SWIVELING ELECTRICAL CONNECTOR

Henry L. Shinn, Akron, Ohio

Application August 30, 1954, Serial No. 453,835
2 Claims. (Cl. 339—3)



2. A swiveling electrical connector, comprising oppositely disposed, axially aligned dielectric members having sockets opening axially inwardly from axially oppositely disposed faces thereof, at least portions of said sockets adjacent said faces of the members being substantially identical in size and shape, a dielectric element having a portion complementally and non-rotatably secured in said socket portion of one said member and part rotatably received in said socket portion of the other said member, to be relatively rotatable about the axis of the members, pivot means rotatably connecting said element to said other member, slip contact means mounted between said element and said other member, to be in electrical connection in all positions of relative rotation of said members, conductor means mounted in each said member as for electrical connection in a conventional wiring circuit, said conductor means of

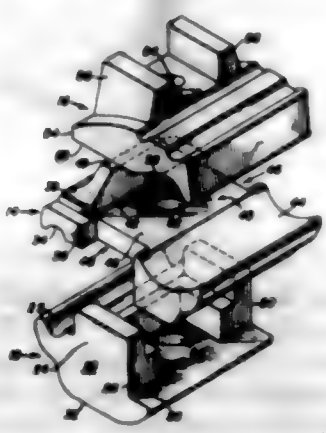
2,898,576
CHARACTER RECOGNITION APPARATUS

John W. Bowman, Baldwin, N.Y., assignor to Burroughs

wave information signal whose phase relation to said square wave reference signal varies according to said data,

the respective said members being connected in parallelism through said slip contact means, each said member having inherently identical chambers, inwardly of said socket thereof and defining outer end walls of substantial thickness, the portion of said element secured in the corresponding said member socket portion having recessed portions communicating with said chamber of the member in which it is secured, said end walls of the members having therein a plurality of inherently identical apertures selectively receiving said conductor means of the respective members, and means for spacing said element from said outer end walls of said member.

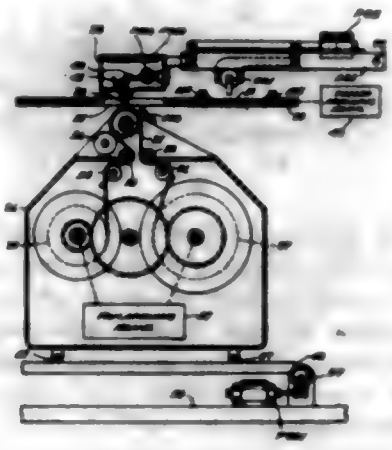
2,898,573
ELECTRICAL LINE CLAMP
Everette Lamb, Tyler, Tex.
Application September 6, 1955, Serial No. 532,684
5 Claims. (Cl. 339—246)



4. An electrical clamp particularly adapted for hot line work, said clamp comprising an upper cap, a center spacer member, a bottom plate member, cooperating conductor seats formed on one end portion of the lower face of the cap and on the corresponding end portion of the upper face of the spacer member, cooperating conductor seats formed on the other end of the lower face of the spacer member and the corresponding end portion of the upper face of the plate member, a single vertical axis mounting means for retaining the cap, spacer member, and plate member in assembled and vertically adjustable position, means for maintaining alignment of the spacer member and the plate member throughout the range of relative vertical movement thereof, and a projection extending upwardly on the end portion of the center spacer member above the conductor seat on the lower face thereof, the cap lower face being adapted to bear on the top of the spacer projection when the cap is rotated thereby maintaining the upper cap in raised position so that a conductor may be readily positioned in the conductor seat in the upper face of the spacer member.

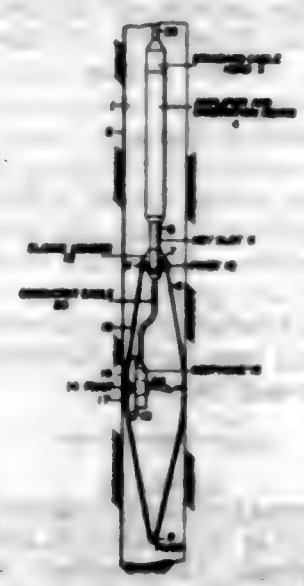
2,898,574
APPARATUS FOR PROFILE PRESENTATION OF SEISMIC INFORMATION
Elton M. Palmer, Oakmont, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Application June 20, 1956, Serial No. 592,563
4 Claims. (Cl. 340—15)

1. Apparatus for making a seismic profile from selected tracks of a multi-channel seismographic magnetic record which comprises a carriage for holding the magnetic record, a magnetic play-back head adapted to magnetically engage the magnetic record, means for supporting a photographic medium on which the profile is to be made, a restricted light source adapted to photographically expose successive longitudinal strips of said photographic medium, automatic means connected to said light source and to said play-back head repeatedly synchronously moving said light source and said play-back head back and forth with respect to said medium and said record respectively, amplifier means having input terminals connected to said play-back head and having output terminals connected to said light source to vary the illumination of said light source in response to signals



from said play-back head whenever said play-back head moves from the long-time end of said magnetic record toward the shot-moment end of said magnetic record, and electrical circuit means short circuiting the input terminals of said amplifier means whenever said play-back head moves from the shot-moment end of said magnetic record to the long-time end of said magnetic record.

2,898,575
GEOPHONE ASSEMBLY
Alexander B. Hildebrandt, Tulsa, Okla., assignor, by mesne assignments, to Jersey Production Research Company
Application March 21, 1956, Serial No. 572,914
4 Claims. (Cl. 340—17)



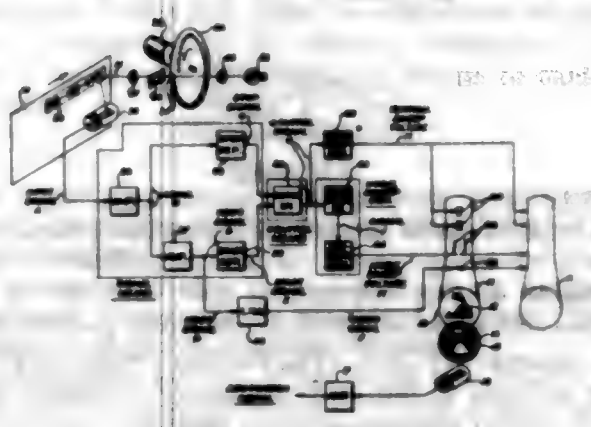
1. Improved geophone assembly adapted for picking up down-hole seismic signals which comprises a pair of expandable bow springs attached to each other at one end by a pivot member and at the other end by a head element, said head element being adapted to be attached to a support member, a movable shoe member pivotally attached to one of said bow springs at about the center thereof, said shoe element being characterized by having two points extending outwardly beyond said bow spring, one of said points being above the pivot and the other of said points being below the pivot, a geophone attached to a back surface of said shoe element, and suitable means for transmitting the seismic signals back up by said geophone to the surface.

2,898,579
MAGNETIC SYSTEMS

2,898,581
MULTIPATH MAGNETIC CORE MEMORY

sheathing closely fitted in said bore and secured to said conventional wiring circuit, said conductor means of

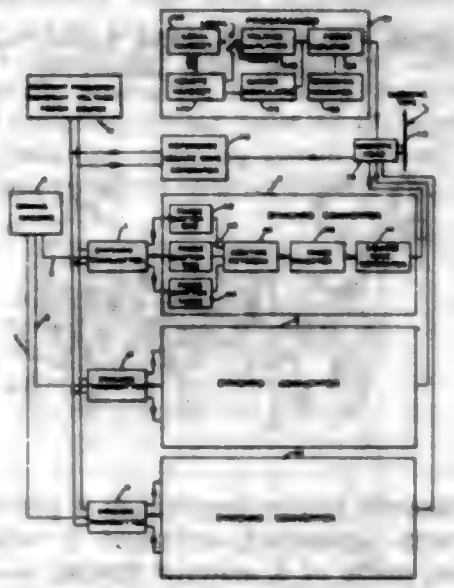
2,898,576
CHARACTER RECOGNITION APPARATUS
John W. Bozeman, Baldwin, N.Y., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Application December 4, 1953, Serial No. 396,247
7 Claims. (Cl. 340—149)



1. Apparatus for recognizing one or more characters recorded upon a medium, said apparatus comprising the combination of scanning means for scanning said medium successively along a plurality of lines thereon in the neighborhood of each character to detect those portions of the respective lines which are occupied by said character, signal means controlled by said scanning means for producing a signal the intensity of which varies according to the information picked up by said scanning means, a cathode ray tube, a vertical sweep generator for said cathode ray tube, a horizontal sweep generator for said cathode ray tube, control means responsive to the signal produced by said signal means for initiating a cycle of said horizontal sweep generator whenever the intensity of said signal exceeds a predetermined value for the first time during the scanning of said character as a whole and for initiating a cycle of said vertical sweep generator whenever the intensity of said signal exceeds said predetermined value for the first time during each individual line scan, said cathode ray tube being operable under the control of said signal means and of said sweep generators to produce a transformed image of said character in which the points on said character that effectively initiated the vertical sweep cycles appear to lie on a predetermined fixed line in the image, with the point that effectively initiated the horizontal sweep cycle occupying one extremity of said fixed line, and character identifying means associated with said cathode ray tube for identifying said character from its transformed image.

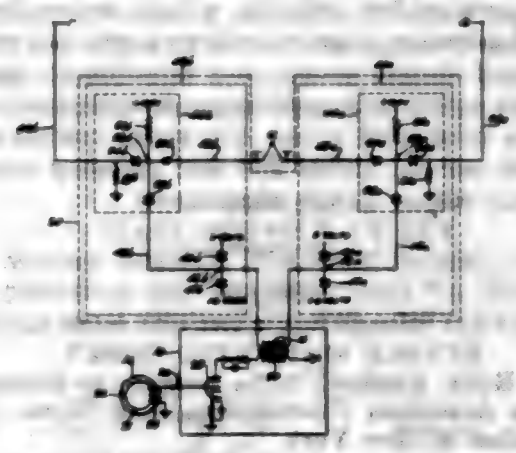
2,898,577
METHOD AND APPARATUS FOR RECORDING AND REPRODUCING DATA
Iredell Eachus, Jr., Cynwyd, Pa.
Application January 30, 1952, Serial No. 268,994
21 Claims. (Cl. 340—174)

1. Apparatus for recording data which may be represented as a function of an angle, comprising means for generating a square wave reference signal of constant phase, means for producing a plurality of sinusoidal voltages of like phase corresponding to the phase of said reference signal but whose respective amplitudes very according to the cosine of said angle plus a constant, which constant is different for each of the said sinusoidal voltages related to a given angle, means for shifting relatively the phases of said voltages to effect phase displacement thereof with respect to one another by amounts related to the constants added to said angle, means for adding the phase-displaced voltages to produce a resultant sinusoidal voltage of varying phase according to said data, means for converting said resultant voltage to a square wave information signal whose phase relation to said square wave reference signal varies according to said data,



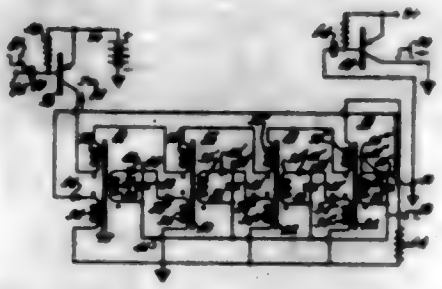
and means for recording intelligence concerning the varying phase relationship of said signals.

2,898,578
MAGNETIC READING APPARATUS
Floyd G. Steele, La Jolla, Calif., assignor to Digital Control Systems, Inc., La Jolla, Calif.
Application March 7, 1955, Serial No. 492,657
9 Claims. (Cl. 340—174)



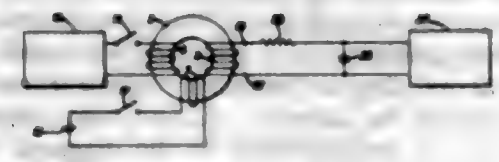
1. In a magnetic reading device for selectively passing an applied timing signal to either a first or second output terminal respectively, in accordance with each reversal of magnetization in a magnetic flux pattern recorded on a movable magnetic memory channel, a magnetic reading apparatus comprising: a magnetic reading transducer positioned adjacent the memory channel and responsive to each reversal of magnetization in the magnetic flux pattern for producing a voltage signal corresponding in polarity to the direction of reversal; an amplifier, having an output winding and responsive to each voltage signal for inducing in said winding a current flow corresponding in direction to the polarity of the voltage signal; and a passive element gating network connected to said winding and responsive to each current flow for passing the applied timing signal to the first or second output terminal selectively in accordance with the direction of the current flow, said gating network passing the timing signal to the first output terminal only when the current flow is in one direction and exceeds a first predetermined magnitude and passing the timing signal to the second output terminal only when the current flow is in the opposite direction and exceeds a second predetermined magnitude.

2,898,579
MAGNETIC SYSTEMS
Thomas H. Moore, New Brunswick, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application February 28, 1956, Serial No. 568,408
7 Claims. (Cl. 340—174)



1. A magnetic system comprising a plurality of magnetic elements operatively arranged in order, said elements being made of a material having two stable remanent states, input, output, and advance windings linked to each of said elements, a common impedance, means for simultaneously applying current pulses to said advance windings and to said common impedance, separate means coupling said output winding of each of said elements to said input winding of the succeeding order element, each of said coupling means including separate electrical means for storing during said current pulses signals induced in the associated one of said output windings, and a unidirectional impedance means to control the flow of signals from said storage means to the associated one of said input windings, said magnetic system further comprising means for applying voltage pulses developed across said common impedance during said current pulses to said signal storage means in a direction to produce a reverse bias across said unidirectional impedance means, and means connected across the series combination of one of said storage means and said common impedance for deriving output signals thereacross.

2,898,580
IMPROVED READOUT CIRCUIT FOR MULTISTABLE MAGNETIC CORES
Martin J. Kelly, Endwell, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application October 23, 1956, Serial No. 617,754
10 Claims. (Cl. 340—174)

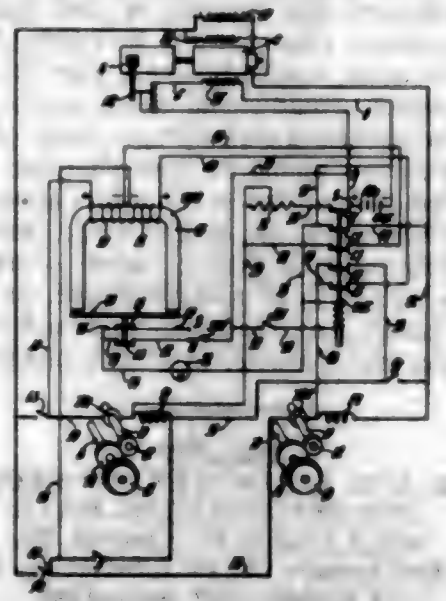


1. In a multistable magnetic core storage device including a magnetizable element capable of assuming a plurality of intermediate remanent flux states between two limiting remanent flux states, means for initially magnetizing said element to one of said two limiting states, means for magnetizing said element in a plurality of equal and discrete steps from said one limiting state to the other of said two limiting states, the combination comprising output winding means inductively associated with said magnetizable element, and electrical damping means coupled to said output winding means having parameters selected to critically damp output voltage pulses induced in the output winding by each of said equal and discrete steps of magnetization.

2,898,581
MULTIPATH MAGNETIC CORE MEMORY DEVICES
Frederick L. Post, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application November 19, 1956, Serial No. 623,174
20 Claims. (Cl. 340—174)

1. In a magnetic circuit, a core of magnetic material capable of being caused to assume different remanent conditions of flux orientation, said core having a first portion and a second portion, the cross portion of magnetic material in said first portion being greater than twice as large as the cross section of magnetic material in said second portion, said first portion of said core having first, second and third openings positioned therethrough dividing said core into four parallel flux paths, a first winding positioned through said first and second openings only, a second winding positioned through said second and third openings only; first and second signal means coupled to said first and second windings, respectively, for applying energizing signals thereto; and an output winding inductively associated with at least a portion of the magnetic material in said second portion of said core.

2,898,582
WHEEL LOCK AND WHEEL SLIDE DETECTION SYSTEM
Torsten O. Lilquist, La Grange Park, Ill., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 17, 1954, Serial No. 476,848
3 Claims. (Cl. 340—268)



1. In a self-propelled railway vehicle having a generating electrical power source and a pair of electrical traction motors each including excitation means therefor, an armature to which driving wheels are attached and switching means for connecting said motors to receive power from said source, means to detect slippage of said wheels when said motors are disconnected from said power source by said switching means and said vehicle is propelled by means other than said power source comprising a voltage source in said vehicle other than said power source, relay means including an energizing winding therefor, switching means in series electrical circuit with said winding and said voltage source operable to operate said relay means, said relay means including contacts in series with the excitation

base, a picture tube carrying tray slidably mounted in vibrator, a modulator connected to said multivibrator

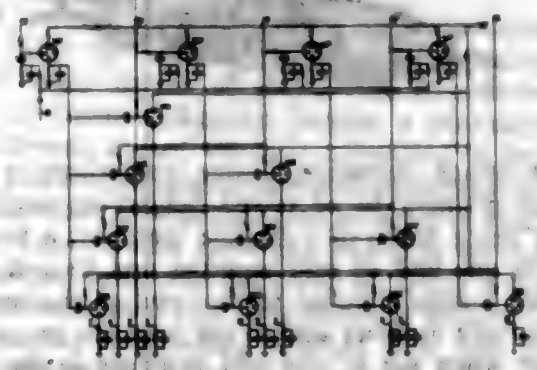
means of said motors and said voltage source operable on operation of said relay means to connect said excitation means across said voltage source so that said motors when said vehicle is so propelled act as separately excited generators, electrical indicator means, a second relay means including a pair of windings of opposite polarity connected across respective armatures of said traction motor operable upon an unbalance of current caused by slippage of the wheels connected to said armatures to connect said indicator means to said voltage source.

2,898,583

CIRCUIT ARRANGEMENTS FOR CONVERTING INFORMATION FROM ONE FORM TO ANOTHER

James Frederick Denby, Liverpool, England, assignor to Automatic Telephone & Electric Company Limited, Liverpool, England, a British company

Application July 17, 1956, Serial No. 598,382
Claims priority, application Great Britain August 6, 1955
1 Claim. (Cl. 340—347)



Circuit arrangements for converting digits from a first form in which the digits are represented by markings on two of a first plurality of leads to a second form in which the digits are represented by a marking on one of a second plurality of leads comprising a first plurality of cold cathode gas discharge tubes each having an anode, a cathode and a trigger electrode and each connected to one of said second plurality of leads, means connecting the trigger electrode of each tube of said first plurality of tubes to one of said first plurality of leads whereby a priming potential is applied to the trigger electrode of at least one tube of said first plurality in response to the application of a marking to one of the leads of said first plurality, a second plurality of cold cathode gas discharge tubes each having an anode, a cathode and a trigger electrode, means connecting the trigger electrode of each of said second plurality of tubes to one of said first plurality of leads whereby a priming potential is applied to the trigger electrode of one tube of said second plurality in response to the application of a marking to the connected one of said first plurality of leads, means for applying a striking potential simultaneously to all the tubes of said second plurality, means responsive to the striking of a tube of said second plurality for applying a striking potential to at least one tube of said first plurality whereby one only of the primed tubes of said first plurality strikes and means responsive to the striking of one tube of said first plurality for applying a marking to the lead of the second plurality connected thereto.

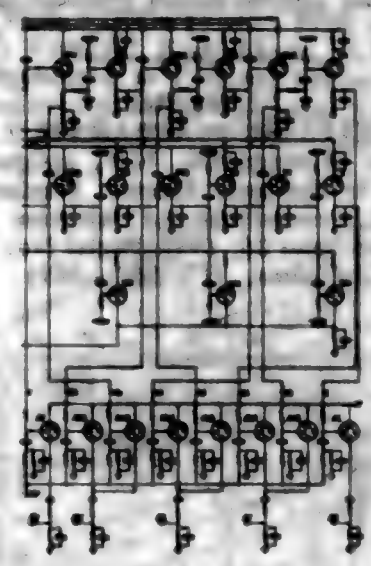
2,898,584

CIRCUIT ARRANGEMENTS FOR COUNTING IMPULSES

James Frederick Denby, Liverpool, England, assignor to Automatic Telephone & Electric Company Limited, Liverpool, England, a British company

Application July 17, 1956, Serial No. 598,383
Claims priority, application Great Britain August 4, 1955
1 Claim. (Cl. 340—347)

Circuit arrangements for converting digits from decimal form to coded form comprising an input lead to which a train of impulses representing a digit in decimal form is applied, a first counting circuit having a plurality of stages to which said input lead is connected and which is responsive to all the impulses, a second counting circuit having a plurality of stages controlled from said first counting circuit, means for operating the first stage of said second counting circuit prior to the application of impulses to said first counting circuit, means responsive to an impulse applied to said input lead at a time when



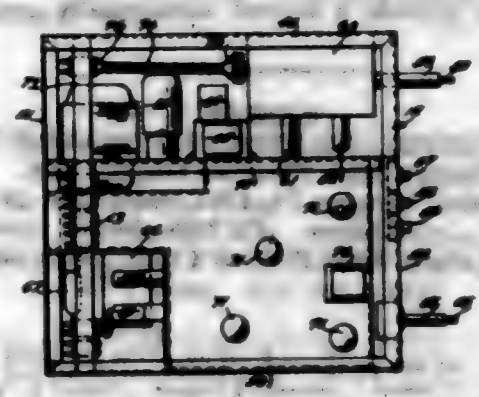
corresponding stages in both counting circuits have been operated for operating the succeeding stage in each counting circuit, means responsive to the operation of said succeeding stage of said second counting circuit for resetting said first counting circuit to a condition where the first stage is operative and a plurality of output leads each of which is individual to one of the stages of either of said counting circuits and to each of which a potential is applied when the corresponding stage is operated.

2,898,585

EASY SERVICE TV SET

Stephen Bauman, Hasbrouck Heights, N.J.

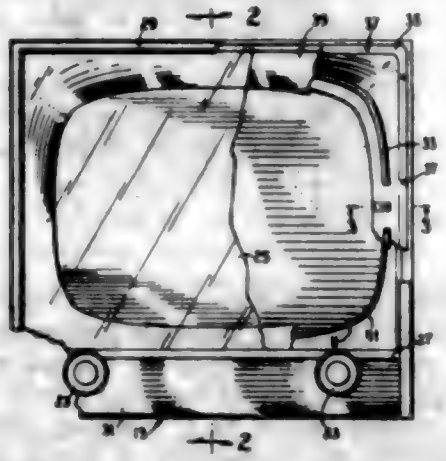
Application July 28, 1956, Serial No. 599,220
1 Claim. (Cl. 340—367)



A television receiver comprising a cabinet, a horizontally disposed mounting frame permanently mounted in the cabinet, said frame including a base, transversely disposed bars mounted on said base adjacent the ends thereof, channel-shaped side walls secured to said base longitudinally thereof, a channel-shaped end wall extending transversely of said base adjacent one end thereof, a plurality of upper and lower jacks mounted on said transversely disposed bars, a tray including the component parts of a television receiver slidably mounted in the channel-shaped side walls of the frame, said tray including a vertically disposed intermediate partition and a horizontally disposed bar at right angles to said partition having plugs thereon positioned to coact with the lower jacks on the transversely disposed bars, parallel channel-shaped rails mounted in the frame above said

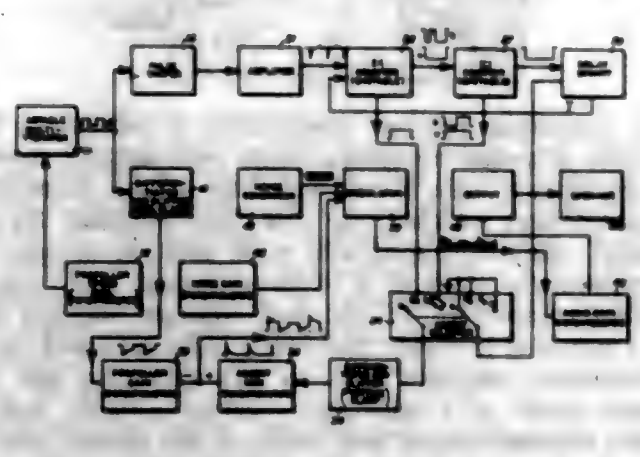
base, a picture tube carrying tray slidably mounted in the rails in the frame, a mounting partition for the picture tube mounted on the tube carrying tray in vertical relation thereto, an opening in said tube carrying tray, plugs carried by the picture tube carrying tray and positioned adjacent the opening in said tube carrying tray to permit the plugs to coact with the upper jacks on the transversely disposed bars of the frame for completing circuits to the tube, and means for connecting circuits of the parts of the receiver and picture tube to power supplying means and also to sound reproducing and amplifying means.

2,898,586
TELEVISION APPARATUS
Marion J. Pifer, Williamsville, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application June 25, 1956, Serial No. 593,497
2 Claims. (Cl. 340—369)



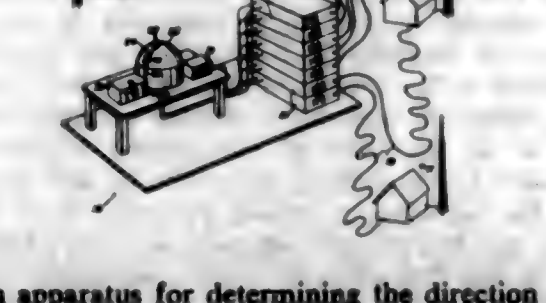
1. In a television receiving apparatus, the combination comprising an image display tube having a substantially spherical viewing surface, a substantially spherical plastic lens having a smaller radius of curvature than said viewing surface, means for holding the peripheral portions of said lens in abutment with said surface to provide a first substantially confined air chamber, a glass face plate, and means connected to said peripheral portion holding means for holding said face plate in spaced relationship with said lens to provide a second substantially confined air chamber.

2,898,587
PROPELLER NOISE SIMULATOR
Robert Glen Nye, San Diego, Calif.
Application October 11, 1954, Serial No. 461,693
7 Claims. (Cl. 340—384)
(Granted under Title 35, U.S. Code (1952), sec. 266)



7. An apparatus for electronically simulating a two, three or four multi-bladed propeller noise including simulated selected accented blade beats, comprising a free running multivibrator, a simulated propeller speed control for adjusting the repetition frequency of said multivibrator, a modulator connected to said multivibrator through parallel circuits including a simulated propeller sound circuit and a simulated accented blade beat circuit, said blade beat circuit comprising a multi-contact selector switch connected to two bistable multivibrators and a delay multivibrator for simulating a selected accented blade beat, and audible means connected to said modulator for simulating the sound of a two, three, or four bladed ship propeller revolving at various speeds and at varying distances from a listening device.

2,898,588
ATTACK DEVIATION DEVICE
Connelly L. Graham, Covina, Calif., assignor to Northrop Corporation, Hawthorne, Calif., a corporation of California
Application February 23, 1955, Serial No. 489,843
5 Claims. (Cl. 343—18)



1. An attack deviation device comprising a hollow, elongated member to be towed behind an aircraft; said member being made of a flexible material; a towline attached to one end of said member and to said aircraft; a resilient means attached to that end of the towline attached to said member and to the member for collapsing the latter when not in use; and structure in the member for reflecting radar signals impinging thereon.

2,898,589
HEMISPHERICAL ACOUSTIC PHASE COMPENSATOR
Frank Riley Abbott, San Diego, Calif.
Application April 20, 1954, Serial No. 424,529
19 Claims. (Cl. 343—113)
(Granted under Title 35, U.S. Code (1952), sec. 266)

15. An apparatus for determining the direction of the source of energy within a predetermined frequency range comprising a plurality of spaced antennas for detecting said energy, an array of receiving points positioned in a spherical shell in miniature replica of the spaced antennas, means for transposing the energy into a plurality of electrical impulses and transmitting said impulses to said miniature array of receiving points, means for transposing said electrical impulses into acoustic waves within the spherical shell at said receiving points and in the same phase relationship, and means for determining the point at which the acoustic waves are in focus whereby said point is indicative of the direction of said energy source.

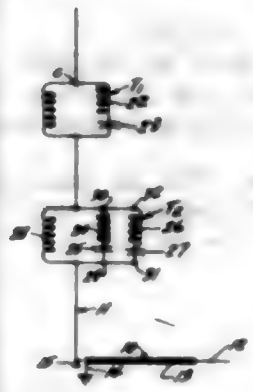
antennae with substantially the same phase, the said one antenna being that one of the array that of itself would

or received by the array at the said angle $\pm n\pi$, where n is any integer including zero and π is 180 degrees of

2,898,590
MULTI-FREQUENCY ANTENNA

Albert M. Pichitino, Waseca, Minn., assignor to E. F. Johnson Company, Waseca, Minn., a partnership

Application March 25, 1953, Serial No. 344,571
2 Claims. (Cl. 343—722)

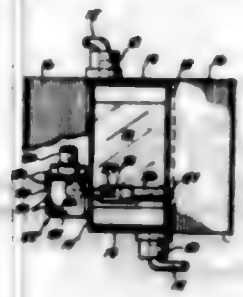


1. An antenna system adapted for connection with a coaxial cable for antomatically accommodating a plurality of radio signals of preselected frequencies, comprising an antenna segment having a plurality of adjacent sections, one of which is connected to the coaxial cable, a plurality of tuning networks each providing series interconnection between adjacent sections of said antenna segment, each of said networks including an inductance of preselected value and each also including a first series-connected inductance and capacitance of preselected value and connected in shunting relation with said first-mentioned inductance, one of said networks being connected into the antenna segment between the coaxial cable and another of the networks and also including a second series-connected inductance and capacitance of preselected values connected in shunting relation with said first mentioned series-connected inductance and capacitance, said preselected values of inductance and capacitance creating a resonant condition at each of said preselected frequencies without requiring mechanical switching or change in physical dimension of said antenna system, whereby a plurality of signals of different frequencies may be supplied to and transmitted by said antenna segment.

2,898,591
COMBINATION FEED FOR REFLECTOR DISH-TYPE ANTENNA

Lawrence R. Krahe, Homewood, Ill., assignor to Andrew Corporation, Chicago, Ill.

Application May 31, 1955, Serial No. 512,033
3 Claims. (Cl. 343—782)



1. In combination with a dish-type reflector, a broad band antenna feed comprising a short rectangular wave guide section having an open end and a closed end, support rods connecting the wave guide section to the reflector to support the wave guide section, a coaxial feed for said wave guide section having inner and outer conductors an insulating mount in said guide, said outer coaxial conductor being connected to said wave guide section, said inner coaxial conductor extending to said insulating mount, two flaps extending at 30° to the normal from the long sides of said open wave guide section end, said flaps having a width not greater than the lesser dimension of the wave guide section, said open wave guide section end being directed to propagate the high frequency waves supplied by said coaxial feed towards said dish-type reflector.

2,898,592
REFLECTOR STRUCTURES FOR ANTENNAS

Alexander F. Carthay, Kerhonkson, N.Y., assignor, by mesne assignments, to Channel Master Corporation

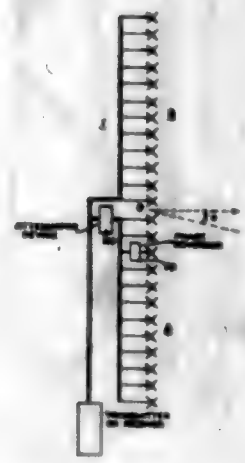
Application April 9, 1954, Serial No. 422,173
7 Claims. (Cl. 343—817)

1. A collapsible screen type reflector for antennas comprising a plurality of parallel horizontally disposed conductive rods, a pair of vertical conductive rods pivotally secured to each of said horizontal rods, said vertical rods being generally parallel to each other and cooperating with said horizontal rods to form a collapsible grid, and clamping means at the juncture of each of said vertical rods with the center one of said horizontal rods for clamping said vertical rods in perpendicular relation to said horizontal rods.

2,898,593
ANTENNA ARRAY FOR COUNTERACTING THE EFFECT OF NULL REGIONS

John Ruze, Cambridge, Mass., assignor to The Gabriel Company, Cleveland, Ohio, a corporation of Ohio

Application April 12, 1954, Serial No. 422,524
17 Claims. (Cl. 343—853)



1. An antenna system comprising an array of at least three separate antennae provided with means for feeding radio-frequency energy to or from all but one of said

trol for adjusting the repetition frequency of said multi-source.

antennae with substantially the same phase, the said one antenna being that one of the array that of itself would transmit or receive radiation at a predetermined angle off the radiation axis of the array in a phase substantially equal to the phase of the resultant radiation transmitted or received by the array at the said angle $\pm n\pi$, where n is any integer including zero and π is 180 degrees of phase, and means for feeding radio-frequency energy to or from the said one antenna in anti-phase with the other antennae of the array.

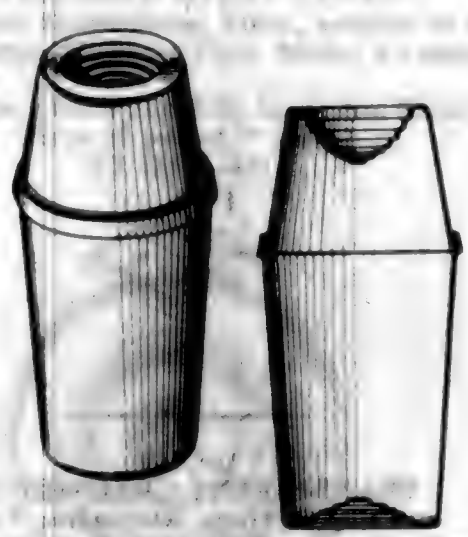
185,785
TOOTHPASTE TUBE SQUEEZER
George B. Maynard and Otto A. Seeds, Dayton, Ohio

185,788
VACUUM CLEANER OR SIMILAR ARTICLE

DESIGNS

AUGUST 4, 1959

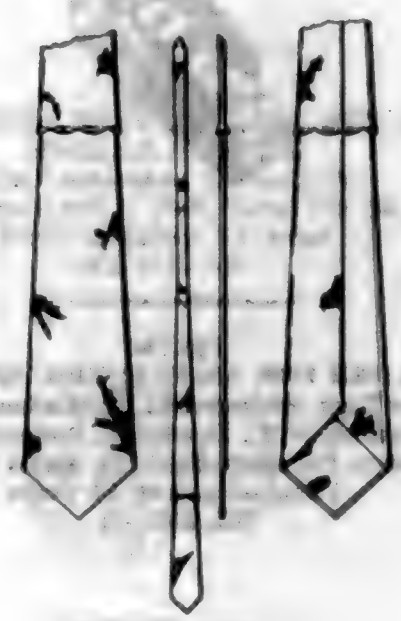
185,780
MIXER OR THE LIKE
Earl S. Tupper, Smithfield, R.I., assignor to Tupper Corporation, North Smithfield, R.I., a corporation of Delaware
Application June 10, 1957, Serial No. 46,534
Term of patent 14 years
(Cl. D2—3)



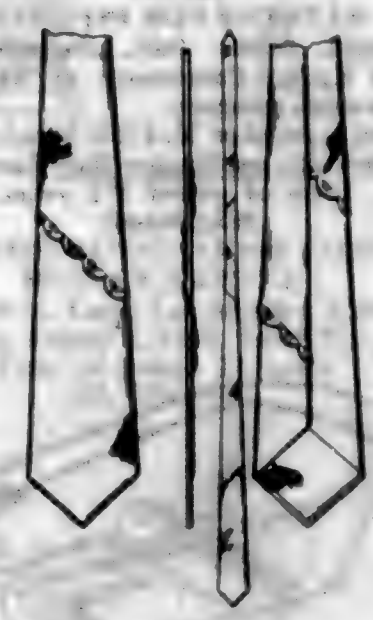
185,781
COLLAR
Erwin B. Jackman, New York, N.Y.
Application February 4, 1957, Serial No. 44,751
Term of patent 14 years
(Cl. D3—8)

185,782
ARM BAND
Hyman B. Lasting, Portsmouth, Va.
Application August 8, 1958, Serial No. 52,142
Term of patent 7 years
(Cl. D3—10)

185,783
NECKTIE
Samuel Klaus, Brooklyn, N.Y.
Application January 22, 1957, Serial No. 44,534
Term of patent 7 years
(Cl. D3—16)



185,784
NECKTIE
Samuel Klaus, Brooklyn, N.Y.
Application January 22, 1957, Serial No. 44,535
Term of patent 7 years
(Cl. D3—16)

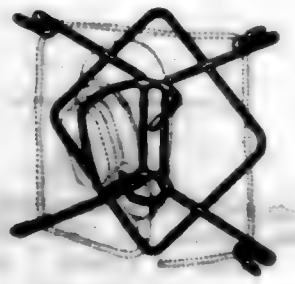


185,791
AUTOMOBILE RADIATOR GRILLE AND HOUSING

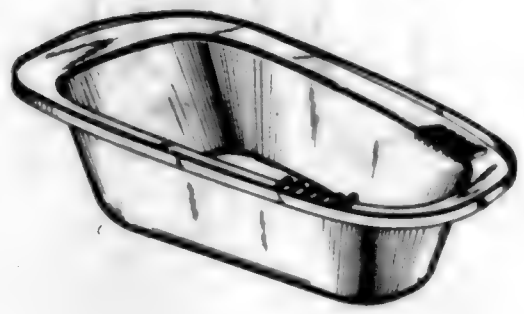
185,795
CLIP FOR CONNECTING ENDS OF PLASTIC STRIP

185,785
TOOTHPASTE TUBE SQUEEZER
George B. Maynard and Orin A. Sealy, Denver, Colo.
Application March 17, 1958, Serial No. 50,059
Term of patent 14 years
(Cl. D4—3)

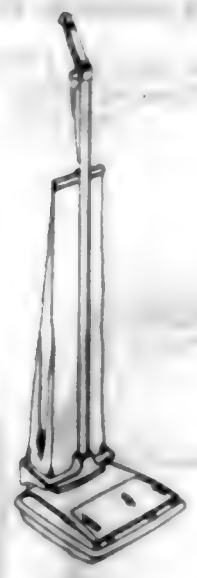
185,786
HOLDER FOR AN ELECTRIC SHAVER
Jan van der Togt, Zwijndrecht, Netherlands, assignor to Tomado N.V., Dordrecht, Netherlands
Application February 28, 1958, Serial No. 49,839
Term of patent 14 years
(Cl. D4—3)



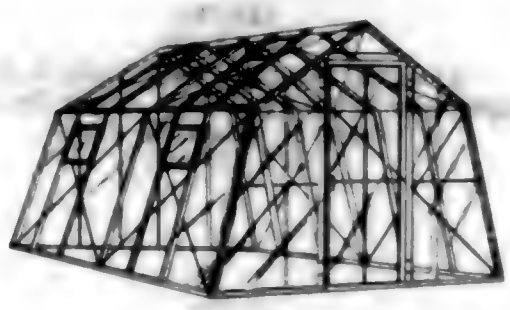
185,787
BATHTUB FOR INFANTS
Roberto Menghi, Milan, Italy, assignor to Smalterie Meridionali S.p.A., Casalnuovo di Napoli, Italy, an Italian joint-stock company
Application September 30, 1955, Serial No. 38,186
Claims priority, application Italy June 1, 1955
Term of patent 3½ years
(Cl. D4—4)



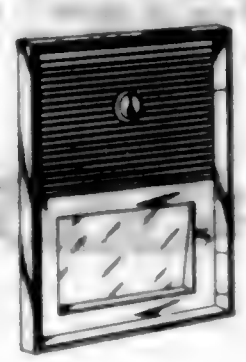
185,788
VACUUM CLEANER OR SIMILAR ARTICLE
John C. Shalvoy, Fairfield, Conn., and Robert M. Smith, Lorain, Ohio, assignors to General Electric Company, a corporation of New York
Application March 17, 1959, Serial No. 55,034
Term of patent 14 years
(Cl. D9—5)



185,789
TRANSPARENT GREENHOUSE
Philip B. Mims, Alexandria, Va.
Application March 11, 1958, Serial No. 49,991
Term of patent 14 years
(Cl. D13—1)



185,790
FRONT PANEL FOR A MAILBOX
Tsugio Kubota, Mill Valley, Calif., assignor to Schlage Lock Company, a corporation
Application April 7, 1958, Serial No. 50,350
Term of patent 14 years
(Cl. D13—2)

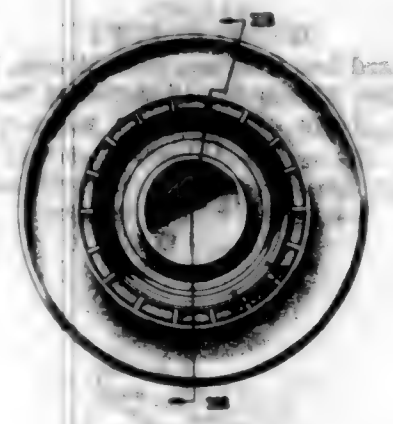


185,799
COIN TELEPHONE SET

185,802

185,791
AUTOMOBILE RADIATOR GRILLE AND HOUSING
Richard C. Le Bron, Omaha, Nebr.
Application August 25, 1958, Serial No. 52,351
Term of patent 3½ years
(Cl. D14—18)

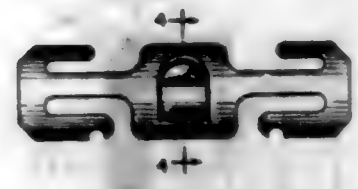
185,792
AUTOMOBILE WHEEL COVER
William B. Pratt, Birmingham, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application March 31, 1959, Serial No. 55,282
Term of patent 7 years
(Cl. D14—30)



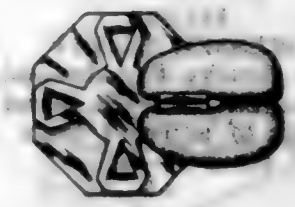
185,793
ADJUSTABLE BLEACHER SEAT
Alfred J. Conn, Chicago, Ill., assignor, by mesne assignments, to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Application June 5, 1957, Serial No. 46,484
Term of patent 14 years
(Cl. D15—5)

185,794
RESILIENT CLIP
John P. Walsh, Norwood, R.I.
Application January 16, 1958, Serial No. 49,268
Term of patent 14 years
(Cl. D17—3)

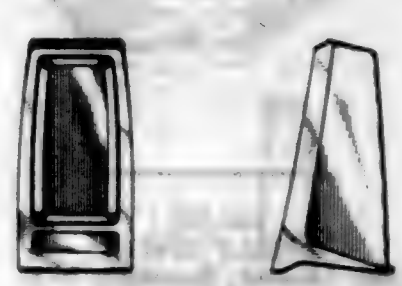
185,795
CLIP FOR CONNECTING ENDS OF PLASTIC STRIP ACROSS FURNITURE FRAMES
James John Mirrione, Brooklyn, N.Y., assignor to J.F.D. Manufacturing Co., Inc., Brooklyn, N.Y., a corporation of New York
Application February 16, 1959, Serial No. 54,631
Term of patent 14 years
(Cl. D17—3)



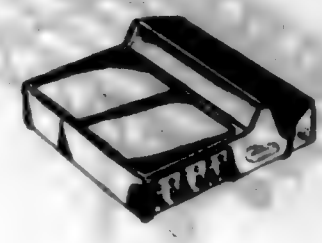
185,796
RELIGIOUS VESTMENT HOLDER OR SIMILAR ARTICLE
Boles Linbeuskas, Du Bois, Pa.
Application April 1, 1958, Serial No. 50,277
Term of patent 14 years
(Cl. D17—8)



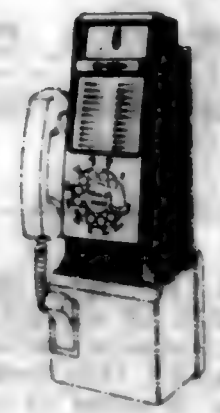
185,797
MICROPHONE
Howard M. Durbin, South Bend, Ind., assignor to Electro-Voice, Incorporated, Buchanan, Mich., a corporation of Indiana
Application May 28, 1958, Serial No. 51,112
Term of patent 14 years
(Cl. D26—14)



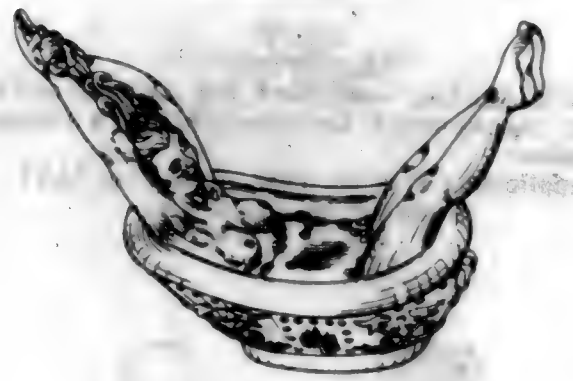
185,798
INTERCOMMUNICATIONS UNIT OR SIMILAR ARTICLE
Joseph M. Loge, Los Angeles, Calif.
Application August 8, 1958, Serial No. 52,143
Term of patent 14 years
(Cl. D26—14)



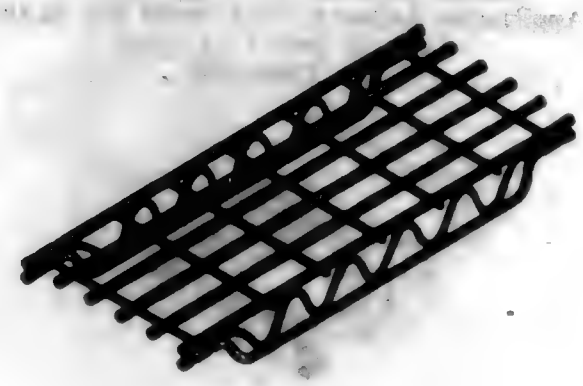
185,799
COIN TELEPHONE SET
Henry Dreyfuss, South Pasadena, Calif., and William Pferd, Watchung, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application March 20, 1959, Serial No. 55,893
Term of patent 14 years
(Cl. D26—14)



185,800
DRESSER CADDY
Albert N. Brooks, Lincolnwood, Ill.
Application November 28, 1958, Serial No. 53,552
Term of patent 7 years
(Cl. D29—23)



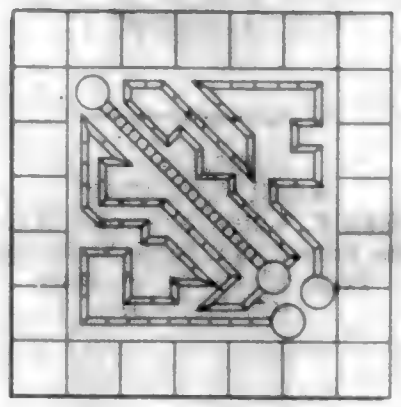
185,801
SHELF UNIT
Louis Maslow, Brooklyn, N.Y.
Application July 17, 1957, Serial No. 46,975
Term of patent 14 years
(Cl. D33—3)



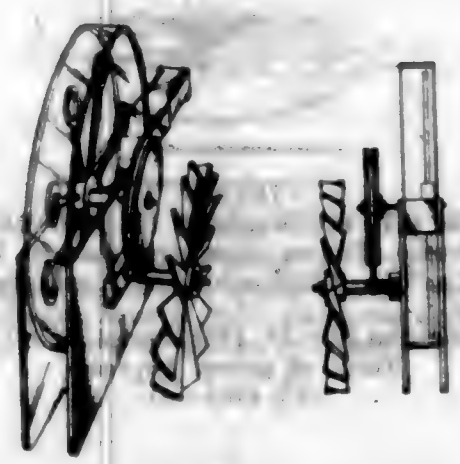
185,802
HAND PUPPET
Hilda Lou Cohen, Fort Worth, Tex.
Application March 19, 1958, Serial No. 50,095
Term of patent 14 years
(Cl. D34—2)

185,803
HAND PUPPET
Richard Lee Clayton, Fort Worth, Tex.
Application March 19, 1958, Serial No. 50,097
Term of patent 14 years
(Cl. D34—2)

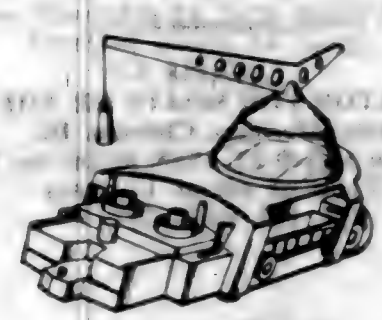
185,804
GAME BOARD
Jesse L. Goodspeed, White Plains, N.Y.
Application May 15, 1958, Serial No. 50,906
Term of patent 3½ years
(Cl. D34—5)



185,805
WIND-DRIVEN ROTARY BUBBLE BLOWER
Alexander Clark, Hendersonville, N.C.
Application December 24, 1956, Serial No. 44,315
Term of patent 14 years
(Cl. D34—15)

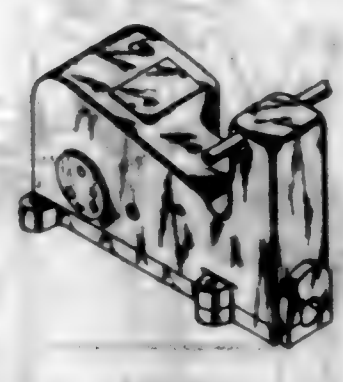


185,806
TOY PRIME MOVER
Charles Pearson, Jr., Elmhurst, Ill., assignor to Marvin I. Glass, Chicago, Ill.
Application February 18, 1959, Serial No. 54,661
Term of patent 14 years
(Cl. D34—15)

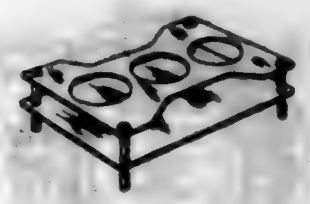


185,807
ARROW-SUPPORTING STAND OR SIMILAR ARTICLE
Howard J. Antle, Columbus, Ohio
Application December 19, 1958, Serial No. 53,848
Term of patent 3½ years
(Cl. D34—15)

185,808
WINDLASS HOUSING
Fred C. Good, Philadelphia, Pa., assignor to Fred C. Good & Sons, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Application January 2, 1959, Serial No. 54,028
Term of patent 7 years
(Cl. D41—1)



185,809
RACK FOR BOTTLED BEVERAGES
Aaron G. Myers and Russ N. Lamb, Fort Worth, Tex.
Application July 28, 1958, Serial No. 51,949
Term of patent 14 years
(Cl. D44—10)

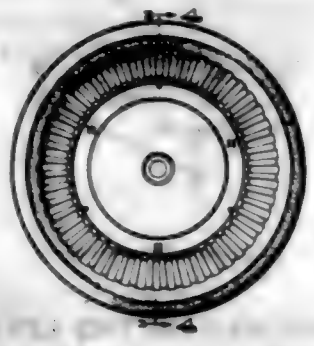


185,810
PITCHER OR THE LIKE
Jack Bloch, Leominster, Mass., assignor, by mesne assignments, to Foster Grant Co., Inc., Leominster, Mass., a corporation of Delaware
Application May 3, 1957, Serial No. 45,998
Term of patent 14 years
(Cl. D44—21)

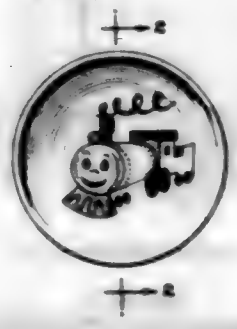
185,811
CONDIMENT DISPENSER
Donald M. Kitterman, Kansas City, Kans., assignor to National Products Company, Jackson County, Mo.
Application January 6, 1958, Serial No. 49,144
Term of patent 7 years
(Cl. D44—22)

185,812
CANDLEHOLDER
Alfred A. Campana, Pennsauken, N.J.
Application September 5, 1958, Serial No. 52,514
Term of patent 3½ years
(Cl. D48—2)

185,813
LAMP BEZEL FOR AUTOMOBILES OR THE LIKE
George W. Walker, Bloomfield Hills, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application June 13, 1958, Serial No. 51,342
Term of patent 7 years
(Cl. D48—32)

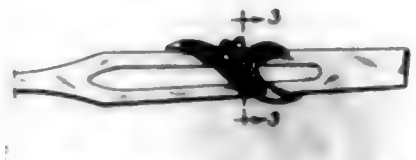


185,814
PULL
Wallace T. Johnson, Burbank, Calif., assignor to Amerock Corporation, Rockford, Ill., a corporation of Illinois
Application May 22, 1956, Serial No. 41,593
Term of patent 3½ years
(Cl. D50—3)



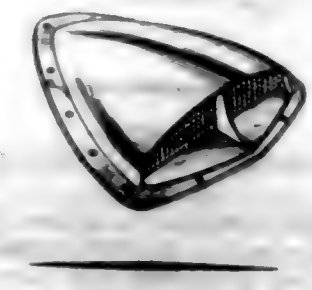
185,815
COMBINED MIRROR AND MAGNET
Arthur H. Starrett, Athol, Mass.
Application May 7, 1957, Serial No. 46,047
Term of patent 14 years
(Cl. D54—13)

185,816
SPECTACLE TEMPLE
Palma S. Bartolotta, Short Hills, N.J.
Application November 12, 1958, Serial No. 53,350
Term of patent 14 years
(Cl. D57—1)

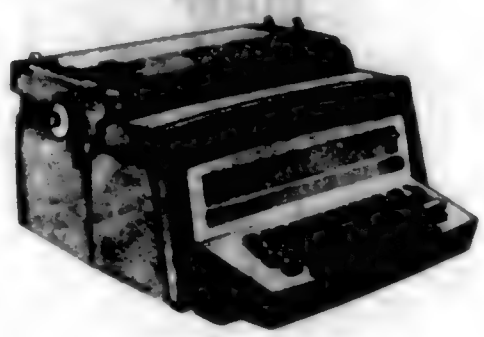


185,817
CASE FOR PHOTOGRAPHIC EXPOSURE METER
Yukihiro Asano, Tokyo, Japan, assignor to U.S. Photo Supply Co. Inc., Washington, D.C., a corporation of Delaware
Application July 15, 1958, Serial No. 51,793
Term of patent 14 years
(Cl. D61—1)

185,818
VENTILATOR FOR BOATS OR THE LIKE
John Herman, Chicago, Ill.
Application March 27, 1958, Serial No. 50,202
Term of patent 14 years
(Cl. D62—3)



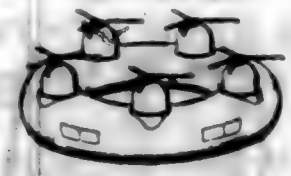
185,819
TYPEWRITER
Charles J. Jaworski, West Hartford, Conn., assignor to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Application September 18, 1958, Serial No. 52,683
Term of patent 14 years
(Cl. D64—11)



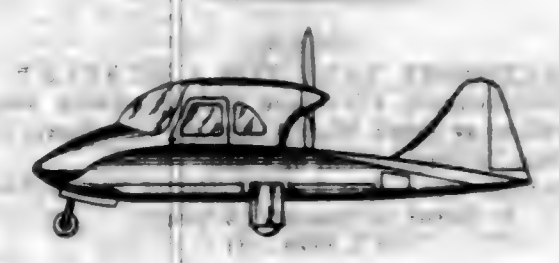
185,827
ILLUMINABLE SHOWCASE FOR FOODSTUFFS

185,829
LADY'S POUCH

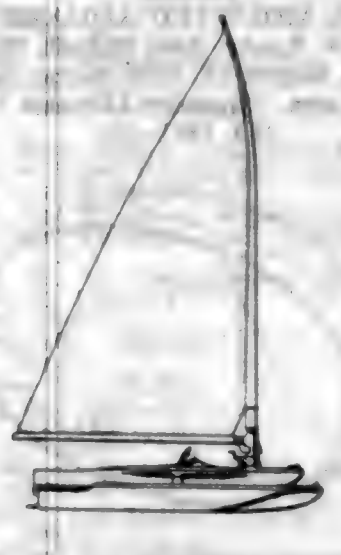
185,820
AIRCRAFT
Edward Machinski, Baldwin Park, Calif.
Application March 22, 1957, Serial No. 45,490
Term of patent 14 years
(Cl. D71—1)



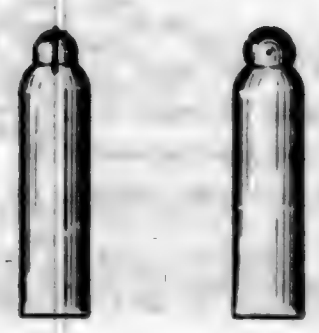
185,821
AIRPLANE
William A. Wolleat, Cedar Rapids, Iowa
Application June 3, 1957, Serial No. 46,462
Term of patent 14 years
(Cl. D71—1)



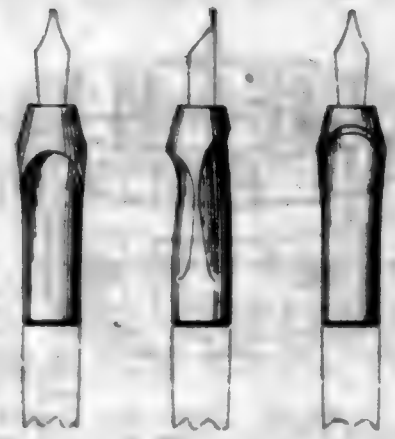
185,822
SAILBOAT
George E. Hall, El Monte, and Sterling Osmon, Santa Ana, Calif.
Application November 21, 1958, Serial No. 53,470
Term of patent 14 years
(Cl. D71—1)



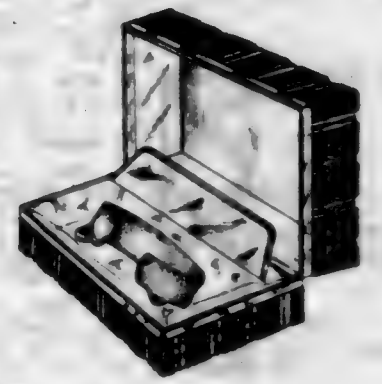
185,823
PAPER CUTTER
Wilhelm Auer and Harry B. Kipp, Irondequoit, N.Y.
Application March 26, 1957, Serial No. 45,440
Term of patent 3½ years
(Cl. D74—1)



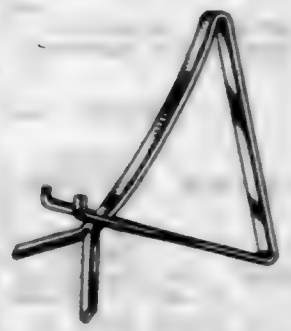
185,824
FINGER GRIP FOR A WRITING INSTRUMENT OR THE LIKE
Warren Benjamin Armstrong, Milton Junction, and Donald Duane Furman, Beloit, Wis., assignors to The Parker Pen Company, Janesville, Wis., a corporation of Wisconsin
Application August 23, 1957, Serial No. 47,494
Term of patent 14 years
(Cl. D74—17)



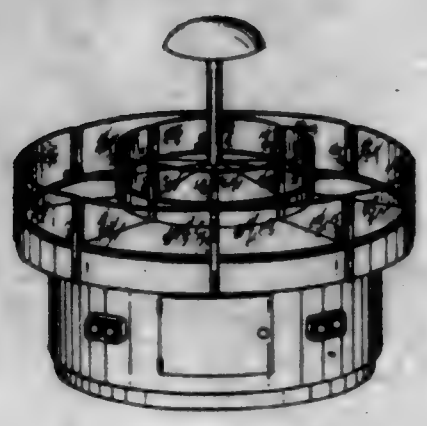
185,825
COMPOSITE DISPLAY AND PACKAGING BOX FOR WATCHES OR THE LIKE
Samuel Braun, Middle Village, N.Y.
Application January 2, 1958, Serial No. 49,091
Term of patent 7 years
(Cl. D80—5)



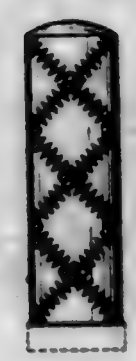
185,826
DISPLAY HOLDER FOR PLATES OR THE LIKE
Albert Kizler, Houston, Tex.
Application December 13, 1957, Serial No. 48,897
Term of patent 14 years
(Cl. D80—9)



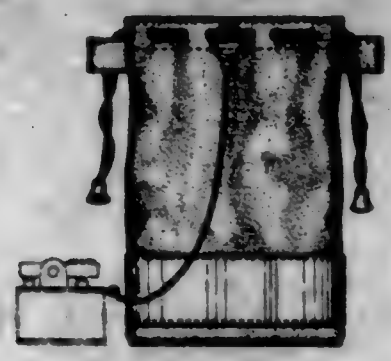
185,827
ILLUMINABLE SHOWCASE FOR FOODSTUFFS OR THE LIKE
William R. A. Hopper, Southport, England
Application September 4, 1958, Serial No. 52,510
Claims priority, application Great Britain March 19, 1958
Term of patent 14 years
(Cl. D86—11)



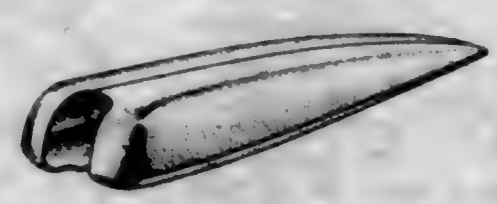
185,828
LIPSTICK CONTAINER
Elizabeth S. Kent, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Application April 21, 1958, Serial No. 50,533
Term of patent 7 years
(Cl. D86—10)



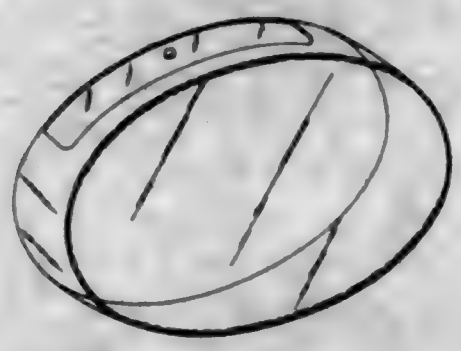
185,829
LADY'S POUCH
Le Roy Paul Lemler, West Bend, Wis., assignor to Amity Leather Products Co., West Bend, Wis., a corporation of Wisconsin
Application April 24, 1958, Serial No. 50,683
Term of patent 14 years
(Cl. D67—3)



185,830
ACCESSORY TANK FOR A BICYCLE
Viktor Schreckengost, Cleveland Heights, Ohio, assignor to The Murray Ohio Manufacturing Company, Nashville, Tenn., a corporation of Ohio
Application December 2, 1957, Serial No. 48,746
Term of patent 14 years
(Cl. D90—1)



185,831
WALL MOUNTED AQUARIUM
Irvin N. Knako, East Detroit, Mich.
Application August 21, 1958, Serial No. 52,330
Term of patent 14 years
(Cl. D91—3)



LIST OF PLANT PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 4TH DAY OF AUGUST, 1959

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Combe, Maurice, to Ilgenfritz Nurseries, Inc. Rose plant. 1,856, 8-4-59, Cl. 47—61.

Ilgenfritz Nurseries, Inc.: *See*—
Combe, Maurice. 1,856.
Robichon, Marcel. 1,857.

Robichon, Marcel, to Ilgenfritz Nurseries, Inc. Rose plant. 1,857, 8-4-59, Cl. 47—61.

LIST OF DESIGN PATENTEES

Amerock Corp.: *See*—
Johnson, Wallace T. 185,814.

Amity Leather Products Co.: *See*—
Lemler, Le Roy P. 185,820.

Antle, Howard J. Arrow-supporting stand or similar article. 185,807, 8-4-59, Cl. D34—15.

Armstrong, Warren B., and D. D. Furman, to The Parker Pen Co. Finger grip for a writing instrument or the like. 185,824, 8-4-59, Cl. D74—17.

Asano, Yukihisa, to U.S. Photo Supply Co. Inc. Case for photographic exposure meter. 185,817, 8-4-59, Cl. D61—1.

Auer, Wilhelm, and H. B. Kipp. Paper cutter. 185,823, 8-4-59, Cl. D74—1.

Barber-Colman Co.: *See*—
Conn, Alfred J. 185,793.

Bartolotta, Palma S. Spectacle temple. 185,816, 8-4-59, Cl. D57—1.

Bell Telephone Laboratories, Inc.: *See*—
Dreyfuss, Henry, and Pferd. 185,799.

Bloch, Jack, to Foster Grant Co., Inc. Pitcher. 185,810, 8-4-59, Cl. D44—21.

Braun, Samuel. Composite display and packaging box for watches or the like. 185,826, 8-4-59, Cl. D90—5.

Brooks, Albert N. Dresser caddy. 185,800, 8-4-59, Cl. D29—23.

Campana, Alfred A. Candleholder. 185,812, 8-4-59, Cl. D48—2.

Chrysler Corp.: *See*—
Pratt, William B. 185,792.

Clark, Alexander. Wind-driven rotary bubble blower. 185,805, 8-4-59, Cl. D34—15.

Clayton, Richard L. Hand puppet. 185,803, 8-4-59, Cl. D34—2.

Cohen, Hilda L. Hand puppet. 185,802, 8-4-59, Cl. D34—2.

Conn, Alfred J., to Barber-Colman Co. Adjustable bleacher seat. 185,793, 8-4-59, Cl. D15—8.

Dreyfuss, Henry, and W. Pferd, to Bell Telephone Laboratories, Inc. Coin telephone set. 185,799, 8-4-59, Cl. D26—14.

Durbin, Howard M., to Electro-Voice, Inc. Microphone. 185,797, 8-4-59, Cl. D26—14.

Electro-Voice, Inc.: *See*—
Durbin, Howard M. 185,797.

Ford Motor Co.: *See*—
Walker, George W. 185,813.

Foster Grant Co., Inc.: *See*—
Bloch, Jack. 185,810.

Furman, Donald D.: *See*—
Armstrong, Warren B., and Furman. 185,824.

General Electric Co.: *See*—
Shalvoy, John C., and Smith. 185,788.

Glass, Marvin I.: *See*—
Pearson, Charles, Jr. 185,806.

Good, Fred C., to Fred C. Good & Sons, Inc. Windlass housing. 185,808, 8-4-59, Cl. D41—1.

Good, Fred C., & Sons, Inc.: *See*—
Good, Fred C. 185,808.

Goodspeed, Jesse L. Game board. 185,804, 8-4-59, Cl. D34—5.

Hall, George E., and S. Osmon. Sailboat. 185,822, 8-4-59, Cl. D71—1.

Happer, William R. A. Illuminable showcase for foodstuffs or the like. 185,827, 8-4-59, Cl. D60—11.

Herman, John. Ventilator for boats or the like. 185,818, 8-4-59, Cl. D62—3.

J. F. D. Mfg. Co., Inc.: *See*—
Mirrione, James J. 185,795.

Jackman, Erwin B. Collar. 185,781, 8-4-59, Cl. D2—8.

Jaworski, Charles J., to Royal McBee Corp. Typewriter. 185,819, 8-4-59, Cl. D64—11.

Johnson, Wallace T., to Amerock Corp. Pull. 185,814, 8-4-59, Cl. D60—3.

Kaake, Irvin M. Wall mounted aquarium. 185,821, 8-4-59, Cl. D61—2.

Kent, Elizabeth S., to Scovill Mfg. Co. Lipstick container. 185,828, 8-4-59, Cl. D66—10.

Kipp, Harry B.: *See*—
Auer, Wilhelm, and Kipp. 185,823.

Kitterman, Donald M., to National Products Co. Condiment dispenser. 185,811, 8-4-59, Cl. D44—22.

Kisler, Albert. Display holder for plates or the like. 185,826, 8-4-59, Cl. D60—9.

Klaus, Samuel. Necktie. 185,783, 8-4-59, Cl. D8—16.

Klaus, Samuel. Necktie. 185,784, 8-4-59, Cl. D8—16.

Kubota, Tsugio, to Schlage Lock Co. Front panel for a mailbox. 185,790, 8-4-59, Cl. D13—2.

Lamb, Russ N.: *See*—
Myers, Aaron G., and Lamb. 185,809.

Lasting, Hyman B. Arm band. 185,782, 8-4-59, Cl. D8—10.

Le Bron, Richard C. Automobile radiator grille and housing. 185,791, 8-4-59, Cl. D14—18.

Lemler, Le Roy P., to Amity Leather Products Co. Ladies' pouch. 185,820, 8-4-59, Cl. D67—3.

Liubauskas, Bolos. Religious vestment holder or similar article. 185,796, 8-4-59, Cl. D17—3.

Loge, Joseph M. Intercommunications unit or similar article. 185,798, 8-4-59, Cl. D26—14.

Machinski, Edward. Aircraft. 185,820, 8-4-59, Cl. D71—1.

Maslow, Louis. Shelf unit. 185,801, 8-4-59, Cl. D32—3.

Maynard, George B., and O. A. Sealy. Toothpaste tube squeezer. 185,785, 8-4-59, Cl. D4—3.

Menghi, Roberto, to Smalterie Meridionali S.p.A. Bathtub for infants. 185,787, 8-4-59, Cl. D4—4.

Mims, Philip B. Transparent greenhouse. 185,789, 8-4-59, Cl. D13—1.

Mirrione, James J., to J. F. D. Mfg. Co., Inc. Clip for connecting ends of plastic strip across furniture frames. 185,795, 8-4-59, Cl. D17—3.

Murray Ohio Mfg. Co., The: *See*—
Schreckengost, Viktor. 185,830.

Myers, Aaron G., and R. N. Lamb. Rack for bottled beverages. 185,809, 8-4-59, Cl. D44—10.

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Kitterman, Donald M. 185,811.

Osmon, Sterling: *See*—
Hall, George E., and Osmon. 185,822.

Parker Pen Co., The: *See*—
Armstrong, Warren B., and Furman. 185,824.

Pearson, Charles, Jr., to M. I. Glass. Toy prime mover. 185,806, 8-4-59, Cl. D34—15.

Pferd, William: *See*—
Dreyfuss, Henry, and Pferd. 185,799.

Pratt, William B., to Chrysler Corp. Automobile wheel cover. 185,792, 8-4-59, Cl. D14—20.

Royal McBee Corp.: *See*—
Jaworski, Charles J. 185,819.

Schlage Lock Co.: *See*—
Kubota, Tsugio. 185,790.

Schreckengost, Viktor, to The Murray Ohio Mfg. Co. Accessory tank for a bicycle. 185,830, 8-4-59, Cl. D90—1.

Scovill Mfg. Co.: *See*—
Kent, Elizabeth S. 185,828.

Sealy, Orin A.: *See*—
Maynard, George B., and Sealy. 185,785.

Shalvoy, John C., and R. M. Smith, to General Electric Co. Vacuum cleaner or similar article. 185,788, 8-4-59, Cl. D6—5.

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Menghi, Roberto. 185,787.

Smith, Robert M.: *See*—
Shalvoy, John C., and Smith. 185,788.

Starrett, Arthur R. Combined mirror and magnet. 185,815, 8-4-59, Cl. D54—12.

Tornado N.V.: *See*—
Van Der Togt, Jan. 185,786.

Tupper Corp.: *See*—
Tupper, Earl S. 185,780.

Tupper, Earl S., to Tupper Corp. Mixer or the like. 185,780, 8-4-59, Cl. D2—3.

U.S. Photo Supply Co. Inc.: *See*—
Asano, Yukihiro. 185,817.

Van Der Togt, Jan, to Tornado N.V. Holder for an electric shaver. 185,786, 8-4-59, Cl. D6—3.

Walker, George W., to Ford Motor Co. Lamp bezel for automobiles or the like. 185,813, 8-4-59, Cl. D48—32.

Walsh, John P. Resilient clip. 185,794, 8-4-59, Cl. D17—4.

Wellent, William A. Airplane. 185,821, 8-4-59, Cl. D71—1.

Axelrod, Albert, and R. H. Baer, to Transitron, Inc. Sweep generators. 2,898,511, 8-4-59, Cl. 315—23.

Ayres, Richard E. Animal attachment providing artificial

Beltz, Klaus: *See*—
Rodis, Franz, Hartlapp, and Beltz. 2,898,189.

Bemis Bro. Bag Co.: *See*—

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 4TH DAY OF AUGUST, 1959

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Abarth, Carlo, to Abarth & Co. Silencer for motor vehicles. 2,897,909, 8–4–59, Cl. 181—50.
Abarth & Co.: *See*—
Abarth, Carlo. 2,897,909.
Abbott, Frank R. Hemispherical acoustic phase compensator. 2,898,589, 8–4–59, Cl. 343—113.
Abraham, Herbert, to The Ruberoid Co. Shingle. 2,897,773, 8–4–59, Cl. 107—7.
Accumulatoren-Fabrik Akt.: *See*—
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Ackley, Thomas, to J. J. Donovan. Outrigger fishing pole supports. 2,898,065, 8–4–59, Cl. 248—40.
Admiral Corp.: *See*—
Vistain, James E., Jr. 2,898,111.
Vistain, James E., Jr. 2,898,114.
Agar, John M., to Chrysler Corp. Shock absorber. 2,897,923, 8–4–59, Cl. 188—88.
Aid, Joseph J., to Continental Can Co., Inc. Corrosion inhibiting container for metal articles. 2,898,026, 8–4–59, Cl. 229—14.
Ainslie, Thomas D., to Phillips-Van Heusen Corp. Collar and method of making collars. 2,897,509, 8–4–59, Cl. 2—132.
Aircraft Precision Products, Inc.: *See*—
Nungester, Walter J. 2,897,992.
Akron Products, Inc.: *See*—
Spitali, Donald H., and Dolida. 2,897,625.
Aktiebolaget Valida Maskiner: *See*—
Jonson, Henry C. 2,897,951.
Aktiengesellschaft Brown, Boveri & Cie: *See*—
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Alamance Industries, Inc.: *See*—
Bennett, Garland E., Matthews, and Bailey. 2,898,023.
Miles, Charlie A., and Swanner. 2,898,021.
Miles, Charlie A., and Swanner. 2,898,022.
Albiniano, Larry, to F. Ronci Co., Inc. Swivel shoe buckle. 2,897,566, 8–4–59, Cl. 24—188.
Albrecht, Leonard N., to General Motors Corp. Domestic appliance. 2,897,812, 8–4–59, Cl. 126—19.
Albright, Charles F.: *See*—
Washburn, Robert M., and Albright. 2,898,365.
Alder, Robert L., to Dresser Industries, Inc. Earth borehole logging system. 2,898,088, 8–4–59, Cl. 255—24.
Alessio, Ernesto D. Combination of screed with handles and manipulating means therefor. 2,897,735, 8–4–59, Cl. 94—45.
Alexander, William W., to The Distributor's Group, Inc. Method and article for lubricating sewing machines and the like. 2,897,774, 8–4–59, Cl. 112—256.
Algino, Joseph M.: *See*—
Eskin, Samuel G., Algino, and Legesa. 2,898,046.
Alison, Etienne, to Compagnie Industrielle des Telephones. Device for the regeneration of telegraph signals. 2,898,404, 8–4–59, Cl. 178—70.
Allegretti, Anthony J., and R. P. Fischer, to The Cuneo Press, Inc. Method and apparatus for preparing and binding books. 2,897,523, 8–4–59, Cl. 11—1.
Allen & Hanburys Ltd.: *See*—
Thorpe, Ronald J. 2,898,168.
Allen, Leslie J.: *See*—
Davison, Alan, and Allen. 2,898,406.
Allied Chemical Corp.: *See*—
Rachlin, Albert I. 2,898,370.
Allis-Chalmers Mfg. Co.: *See*—
Gallatin, Harold A. 2,898,540.
Terry, William M., Jr. 2,898,564.
Amana Refrigeration, Inc.: *See*—
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Amburgey, W. J.: *See*—
Robbins, Astifino. 2,898,426.
American Air Filter Co., Inc.: *See*—
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American Brake Shoe Co.: *See*—
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American Cyanamid Co.: *See*—
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Long, Robert S., and Tsang. 2,898,371.
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Petropoulos, John C. 2,898,319.
Sprague, George S., and Friedlander. 2,898,320.
Van Loo, William J., Jr., and Salsbury. 2,898,238.
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American Oil Co., The: *See*—
Kelly, Joe T., and Knight. 2,898,390.
American Optical Co.: *See*—
Gunter, Roy C., Jr., Whitney, and Haynes. 2,897,722.
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American Thread Co., The: *See*—
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American Viscose Corp.: *See*—
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Amyot, Pierre, to Sarong, Inc. Brassiere. 2,897,822, 8–4–59, Cl. 128—483.
An, Sang Y. Carburetor device. 2,898,095, 8–4–59, Cl. 261—23.
Andersen, Ralph A., to American Air Filter Co., Inc. High efficiency portable heater. 2,897,814, 8–4–59, Cl. 126—110.
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Anderson, Arnold T. Mold inhibiting process and product. 2,898,372, 8–4–59, Cl. 260—540.
Anderson, Charles C., V. K. Eder, W. P. Zimmerman, T. A. Heath, and J. F. McLaughlin, to General Motors Corp. Manufacture of compressor vane assembly. 2,898,442, 8–4–59, Cl. 219—80.
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Anderson, Edmund B., ½ to W. H. Stark. Constant velocity universal joint. 2,897,663, 8–4–59, Cl. 64—21.
Anderson, John W. Windshield wiper blade and pressure device therefor. 2,897,530, 8–4–59, Cl. 15—245.
Anderson, Oscar D., Jr. Device for removing jar screw caps. 2,897,699, 8–4–59, Cl. 81—3.32.
Andrew Corp.: *See*—
Krahe, Lawrence R. 2,898,591.
Andrews, Earl W., to The New Jersey Zinc Co. Production of titanium. 2,898,275, 8–4–59, Cl. 204—64.
Annis, Rupert E., Jr., to Improved Machinery, Inc. Log-centering barker feeding mechanism. 2,897,859, 8–4–59, Cl. 144—247.
Anstine, Roland W. Filling indicator for underground tanks. 2,897,853, 8–4–59, Cl. 141—95.
Antonius, John I. Collapsible automobile tables. 2,898,170, 8–4–59, Cl. 311—21.
Aries Associates, Inc.: *See*—
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Forward, Frank A., and Armstrong. 2,898,197.
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Arnit, Fred H., to Garden City Plating & Mfg. Co. Drawer slide. 2,898,159, 8–4–59, Cl. 308—3.8.
Arrington, Bradford L., and A. M. Bullard, to Holm Tractor & Equipment Co. Means for cleaning in-place pipe lines. 2,897,829, 8–4–59, Cl. 134—99.
Arthur, Robert M., to Chicago Pump Co. Double rake comminuting device. 2,897,967, 8–4–59, Cl. 210—173.
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Ashton, George H., and R. C. Mueller, to Bemis Bro. Bag Co. Apparatus for the manufacture of draw cord bags. 2,897,729, 8–4–59, Cl. 93—8.
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Aubry, Fernand: *See*—
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Auerbach, Albert A., to Underwood Corp. Amplifier circuit. 2,898,457, 8–4–59, Cl. 250—27.
Augeard, Jean M. M. Charging apparatus for blast furnace. 2,897,984, 8–4–59, Cl. 214—35.
Aurora Equipment Co.: *See*—
Sitler, Richard W. 2,897,997.
Austin, Abraham L. Collapsible combination bench and table. 2,897,876, 8–4–59, Cl. 155—43.
Authier, Roger A. Outdoor fireplace. 2,897,811, 8–4–59, Cl. 126—9.
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Denby, James F. 2,898,583.
Denby, James F. 2,898,584.
Avakian, Souren, and G. J. Martin, to The National Drug Co. 2(2' - propenylidene - amino) - 1,3,4 - thiadiazole - 5 - sulfonamide. 2,898,342, 8–4–59, Cl. 260—306.8.
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Lawler, Joseph A. 2,898,486.
Blue, Robert D.: *See*—
Brown, Warren D., and D. L. Sprinkle, to Chrysler Corp. Cushion spring unit. 2,897,879, 8–4–59, Cl. 155—179.
Browning, Randolph M., to St. Regis Paper Co. Apparatus

Axelrod, Albert, and R. H. Baer, to Transitron, Inc. Sweep generators. 2,898,511, 8–4–59, Cl. 315—23.

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Bacca, Charles R. Electrical control device for trailer brakes. 2,898,566, 8–4–59, Cl. 338—39.

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Baker, William R., to United States of America, Atomic Energy Commission. Resonant cavity excitation system. 2,898,555, 8–4–59, Cl. 331—96.

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Baltus, George T., M. P. Wolpin, B. Smith, Jr., and J. S. Lachcik, to Hydraulic Research & Mfg. Co. Servo valves. 2,897,792, 8–4–59, Cl. 121—46.5.

Banus, Mario D., E. R. Winfarcyk, and H. W. Lambe, to Metal Hydrides Inc. Method for preparing sodium hydride. 2,898,195, 8–4–59, Cl. 23—204.

Barnes, Garrett H., Jr., to Dow Corning Corp. Preparation of organodisiloxane esters. 2,898,361, 8–4–59, Cl. 260—448.2.

Barnett, Irvin, to Johns-Manville Corp. Method and apparatus for opening and cleaning fibers. 2,897,548, 8–4–59, Cl. 19—72.

Barnhart, William S., to Minnesota Mining and Mfg. Co. Halogenated cotelomers. 2,898,382, 8–4–59, Cl. 260—653.

Barns, Fred K.: *See*—
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Barrett, Harry B. Tire tread surfacing machine. 2,897,882, 8–4–59, Cl. 157—13.

Barshefsky, Gustave, to The Celotex Corp. Sound absorbing unit and bundle thereof. 2,897,906, 8–4–59, Cl. 181—33.

Barsky, George, V. K. Babayan, and B. J. Bahoshy, to E. F. Drew & Co., Inc. Method of making hard butter. 2,898,211, 8–4–59, Cl. 99—118.

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Beck, Arnold H. W., T. M. Jackson, and J. Lytollis, to International Standard Electric Corp. Cold cathode electric discharge tubes. 2,898,502, 8–4–59, Cl. 313—192.

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Beckner, Marshall H., to Wire-Tex Corp. Storage racks. 2,897,976, 8–4–59, Cl. 211—148.

Beckner, Marshall H., to Tri-State Engineering Co. Container for use with fork lift trucks. 2,898,122, 8–4–59, Cl. 280—12.

Beckwith, Sterling, to Comstock Liquid Methane Corp. Method and apparatus for unloading cold low temperature boiling liquids from storage reservoir. 2,897,658, 8–4–59, Cl. 62—55.

Behrman, Elsa. Flexible, extensible, and collapsible textile fabric tube. 2,897,603, 8–4–59, Cl. 34—99.

Belke, Ralph T. Fishing rigs. 2,897,622, 8–4–59, Cl. 43—7.

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Bentley, Robert F., to General Motors Corp. Single indicator air gage circuit. 2,897,670, 8–4–59, Cl. 73—37.8.

Benton, Herbert O. Measuring and dispensing device. 2,898,011, 8–4–59, Cl. 222—368.

Berg, Quentin. Apparatus for applying terminals by crimping and severing lead terminal from connecting strip without severing said strip. 2,897,870, 8–4–59, Cl. 153—1.

Berger, Johannes, and G. Lange, to C. Zeiss. Photographic objective for taking or projection. 2,897,723, 8–4–59, Cl. 88—57.

Bergstrom, Ralph W., and H. D. Lindeman, to Campbell Soup Co. Poultry boning machine. 2,897,536, 8–4–59, Cl. 17—1.

Berliner, Julius F. T. Fiber board and process of making same from desert shrubs. 2,898,260, 8–4–59, Cl. 162—11.

Bernard, Herbert J., and J. A. Morgan. Trailer hitch. 2,898,124, 8–4–59, Cl. 280—406.

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Birden, John H., to United States of America, Atomic Energy Commission. Method of preparing polonium-boron sources. 2,898,473, 8–4–59, Cl. 250—84.5.

Birdwell, Bertie F.: *See*—
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Bishman, Walter A., to Bishman Mfg. Co. Bead seating tool for tubeless tires. 2,897,881, 8–4–59, Cl. 157—1.21.

Bishop, Leonard J., and R. Haase, to Mechanical Handling Systems, Inc. Multiple choke switch mechanism. 2,897,769, 8–4–59, Cl. 104—88.

Bishop, Ray H. Container with tray lids. 2,897,999, 8–4–59, Cl. 220—29.

Black, Emerson W., and Z. A. Ferrel. Duster. 2,897,776, 8–4–59, Cl. 118—13.

Black, Louis D., Jr., and S. A. Brown. Mounting for a lighting fixture. 2,898,078, 8–4–59, Cl. 248—317.

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Blair, Madeline E. Attachment for a hat. 2,897,511, 8–4–59, Cl. 2—185.

Blanchet, Andre F. M., and J. G. A. M. J. Meyer, to SATAM-Societe Anonyme Pour Tous Appareillages Mecaniques. Apparatus for metering and dispensing liquid mixtures. 2,898,002, 8–4–59, Cl. 222—28.

Blattner, Emil H., to Symington Wayne Corp. Draft mechanism. 2,897,980, 8–4–59, Cl. 213—22.

Blattner, Emil H., to Symington Wayne Corp. Draft gears. 2,897,981, 8–4–59, Cl. 213—45.

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Blasek, William J., and J. J. Strnad, to Lempco Products, Inc. Method of producing a ball-bearing assembly. 2,897,582, 8–4–59, Cl. 29—148.4.

Bloch, Monroe P.: *See*—
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Blount, Alvie E., T. Fiatow, and F. L. Chalmers, to Jersey Production Research Co. Weight handling mechanism. 2,897,997, 8–4–59, Cl. 181—.5.

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ice. Frequency selective circuits. 2,898,396, 8-4-59, Cl. 179—5.4.

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Blue, Robert D.: *See*—
Neipert, Marshall P., Blue, and Houser. 2,898,284.

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Bodewein, Gerhard, to Vereinigte Aluminium-Werke A.-G. Method for removal of the current supply bolts from aluminum electrolysis furnaces. 2,897,535, 8-4-59, Cl. 29—401.

Bodine, Albert G., Jr. Sonic beam earth compacting system. 2,897,734, 8-4-59, Cl. 94—.022.

Bodkin, Lawrence E. Storage shoe heel. 2,897,606, 8-4-59, Cl. 36—1.

Bodle, Walter H., to Union Die Casting Co. Can opening and knife sharpening device. 2,897,589, 8-4-59, Cl. 30—4.

Bodle, Walter H., to Union Die Casting Co. Electric knife sharpener. 2,897,637, 8-4-59, Cl. 51—128.

Boedecker, Woodrow S., to The Bastian Blessing Co. Automatic filling manifold. 2,898,077, 8-4-59, Cl. 249—63.

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Borah, John E. Combination extensible and foldable vent and spout for containers. 2,898,014, 8-4-59, Cl. 222—481.5.

Borah, John E. Pouring stream control for container. 2,898,015, 8-4-59, Cl. 222—484.

Borah, John E. Container spout. 2,898,016, 8-4-59, Cl. 222—529.

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Borins, Louis, M. H. Slud, and M. J. Zubkoff, to Randel Tool Co., Inc. Method of sinking wells by means of explosive charges. 2,897,756, 8-4-59, Cl. 102—21.

Borins, Louis, M. H. Slud, and M. J. Zubkoff, to Randel Tool Co., Inc. Apparatus for sinking wells by means of explosive charges. 2,898,085, 8-4-59, Cl. 255—1.

Boulet, Georges, to Societe d Responsabilite Limitee Recherches Etudes Production, R.E.P. Monochronous pneumatic suspension for vehicles. 2,898,103, 8-4-59, Cl. 267—65.

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Boyd, George E., E. R. Russell, and J. Schubert, to United States of America, Atomic Energy Commission. Adsorption method for separating thorium values from uranium values. 2,898,185, 8-4-59, Cl. 23—14.5.

Boyer, Robert H., to The Kirkwood Commutator Co. Commutator for electric machines. 2,898,448, 8-4-59, Cl. 310—236.

Boseman, John W., to Burroughs Corp. Character recognition apparatus. 2,898,576, 8-4-59, Cl. 340—149.

Bradford, Wylie B. Resilient support assembly. 2,897,520, 8-4-59, Cl. 5—348.

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Bregenzer, Kurt, to F. Kopp. Hydraulic feed control for profiling machines and the like. 2,897,651, 8-4-59, Cl. 60—97.

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Bronstert, Franz, to Accumulatoren-Fabrik Akt. Electrode arrangement. 2,898,392, 8-4-59, Cl. 136—43.

Brooks, William O., to Northrop Corp. Limiter amplifier system. 2,898,410, 8-4-59, Cl. 179—171.

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Graham, Robert P., Brown, and Ramage. 2,897,660.

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Bashore, Dean M., and Brown. 2,897,508.

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Brown, Warren D., and D. L. Sprinkle, to Chrysler Corp. Cushion spring unit. 2,897,879, 8-4-59, Cl. 155—178.

Browning, Randolph M., to St. Regis Paper Co. Apparatus for manufacturing bag tubes. 2,897,720, 8-4-59, Cl. 93—20.

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Brueder, Antoine, to Societe Anonyme Andre Citroen. Induction heating devices. 2,898,430, 8-4-59, Cl. 219—10.49.

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Buhler, Walter C., to United States of America, Navy. Toroidal airfoil parachute. 2,898,061, 8-4-59, Cl. 244—148.

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Bull, Douglas T., and A. A. Lebanoff, to General Motors Corp. Grommets, bushings and the like. 2,897,533, 8-4-59, Cl. 16—2.

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Bulloff, Jack J., to The Commonwealth Engineering Co. of Ohio. Metal dienyl gas plating. 2,898,235, 8-4-59, Cl. 117—107.

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Burch, Archie E. Hitch for an agricultural tool. 2,898,125, 8-4-59, Cl. 280—447.

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Bush, Frederick J., to Johnson & Johnson. Adhesive bandage. 2,897,961, 8-4-59, Cl. 206—63.2.

Bushmeyer, Richard W., to J. I. Case Co. Draft-propelled implement. 2,897,903, 8-4-59, Cl. 172—263.

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Carter, Leon S., 20% to D. S. Polk. Rib type ventilated garment construction. 2,897,506, 8–4–59, Cl. 2—87.
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Cartmell, Thomas R., and J. F. Gifford, to United States of America, Atomic Energy Commission. Airborne radiation detector. 2,898,497, 8–4–59, Cl. 313—93.
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Clurman, Stanley P., to G. W. Wholey. Inertia switch with time delay operation. 2,898,416, 8–4–59, Cl. 200—61.45.
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Coffman, Myron T. Loader-bar, control tube and coal loading machine. 2,897,946, 8–4–59, Cl. 198—10.
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Collins, Solomon M., to Kinkead Industries Inc. Folding shower door. 2,897,515, 8–4–59, Cl. 4—154.
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Cook, Maurice E. Service tray adapted for use in automobiles and in other relations. 2,897,974, 8-4-59, Cl. 211—74.

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Cordis, Nat. Tube flexing pump. 2,897,767, 8-4-59, Cl. 103—149.

Cordis, Nat. Straight line tape-type poultry feeder. 2,897,954, 8-4-59, Cl. 198—181.

Cornell, Walter, and S. A. Shepherd, to The General Electric Co. Ltd. Structures for mounting electrical components. 2,898,517, 8-4-59, Cl. 317—101.

Correy, Thomas B.: *See*—
Frantz, Charles E., and Correy. 2,898,444.

Cory, William E., and L. E. Catlett. Monitor for a teletypewriter. 2,898,402, 8-4-59, Cl. 178—22.

Cotton, William, Ltd.: *See*—
Winfield, Denis, and Start. 2,897,664.

Coudray, Michael A.: *See*—
Houdry, Eugene J., Eriksson, and Coudray. 2,898,202.

Courtney, John S. Diaper pin. 2,897,565, 8-4-59, Cl. 24—157.

Cowles, John H., R. H. White, and S. F. Clark, to The Torrington Co. Method of making roller bearings. 2,897,581, 8-4-59, Cl. 29—148.4.

Crafts, Cecil A., to Robertshaw-Fulton Controls Co. Heating control device. 2,898,435, 8-4-59, Cl. 219—20.

Cramer, Robert H., and E. E. Jenkins, to Socony Mobil Oil Co., Inc. Preparation of alumina gels. 2,898,306, 8-4-59, Cl. 252—463.

Crampton, Gale W., to Victor Adding Machine Co. Deviation oscillator. 2,896,554, 8-4-59, Cl. 331—72.

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Cranston, Albert E., Jr. Elevating turntable for conveyors. 2,897,948, 8-4-59, Cl. 198—33.

Crapuchettes, Paul W., to Litton Industries, Inc. Output coupling circuit for cavity resonators. 2,898,560, 8-4-59, Cl. 333—33.

Crawley, Hubert J., and C. Strachey, to International Business Machines Corp. Instruction modifier means for electronics digital computing machines. 2,898,041, 8-4-59, Cl. 235—61.

Creveling, Cyrus J., to United States of America, Navy. Electric circuit component. 2,898,521, 8-4-59, Cl. 317—101.

Crocker, Weyman S.: *See*—
Lemmerman, Harold H. P., and Crocker. 2,898,434.

Croft, Arthur, to Crofts (Engineers) Ltd. Friction clutches. 2,897,935, 8-4-59 Cl. 192—93.

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Croft, Arthur. 2,897,935.

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Cederlund, Albert, Kimmel, and Le Blanc. 2,897,848.
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Crooks, William R., to The Cooper-Bessemer Corp. Means to vary the compression ratio of an internal combustion engine during operation. 2,897,804, 8-4-59, Cl. 123—48.

Croset, Louis P. Transmission couplings for shafts and the like. 2,897,660, 8-4-59, Cl. 64—6.

Cross, Donald J., and W. F. Scanlon, to Sylvania Electric Products Inc. Tuning mechanism. 2,897,681, 8-4-59, Cl. 74—157.

Crowley, Francis B. Marginal container for household roaster. 2,897,744, 8-4-59, Cl. 99—339.

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Curran, Bernard E., and G. E. Kauta, to H. H. Robertson Co. Damper control apparatus for dual duct air conditioning system. 2,898,044, 8-4-59, Cl. 236—1.

Curry, Malcolm, to The American Thread Co. Spools. 2,898,037, 8-4-59 Cl. 242—118.4.

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Curts, Joseph M., Jr., and D. E. Nestor, to Reiff & Nestor Co. Apparatus for sizing and finishing bar stock. 2,897,707, 8-4-59, Cl. 82—2.5.

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Hunter, Herbert T. 2,897,772.

Dahlin, Robert K., to North American Aviation, Inc. Transistorized voltage controlled oscillator. 2,898,557, 8-4-59, Cl. 331—109.

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Dale, Walter G., and E. F. Lilly, to The Quaker Oats Co. Process for producing rolled oats. 2,898,210, 8-4-59, Cl. 99—80.

Dallas Iron and Wire Works, Inc.: *See*—
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D'Amato, Flory M. Wheel dressing tool. 2,897,810, 8-4-59, Cl. 125—11.

Damon, Richard W., to General Electric Co. Target plate. 2,898,490, 8-4-59, Cl. 313—65.

Damond, Emilo. Vibrating chutes. 2,897,956, 8-4-59, Cl. 198—220.

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Date, Kazuo H., to McGraw-Edison Co. Repeating circuit interrupter. 2,898,421, 8-4-59, Cl. 200—89.

Davidson, Trevor O., and G. J. Storata, to International Harvester Co. Hydraulic carrying-lock for earth-working scrapers. 2,897,613, 8-4-59, Cl. 37—126.

Davis, Charles J., to Massey-Ferguson Inc. Mechanical shovel apparatus for transport vehicles. 2,897,986, 8-4-59, Cl. 214—131.

Davis, Lynn N., and W. H. Schray, to United Steel & Wire Co. Frame construction for a nesting shopping cart. 2,898,123, 8-4-59, Cl. 280—33.99.

Davison, Alan, and L. J. Allen, to Automatic Telephone & Electric Co., Ltd. Telephone systems. 2,898,406, 8-4-59, Cl. 179—18.

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Gebele, Kurt. 2,897,739.

Deckel, Hans: *See*—
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Gebele, Kurt. 2,897,739.

De Cola, Rinaldo E., R. C. Carlson, and E. H. Schrot. Turret tuner with peripherally extending contact carrying straps forming part of tuned circuit. 2,898,568, 8-4-59, Cl. 336—142.

De Coriolis, Ernest G., to Surface Combustion Corp. Rotating drum heat-treating furnace with internal fan. 2,898,099, 8-4-59. Cl. 263—34.

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Dellner, Raymond P., to Westinghouse Air Brake Co. Airline oiler. 2,897,919 8-4-59, Cl. 184—55.

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De Luxe Girdlecraft Co., Inc.: *See*—
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Demi, Roy C., to Robertshaw-Fulton Controls Co. Time and timed delay control. 2,897,890 8-4-59, Cl. 161—1.

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Denby, James F., to Automatic Telephone & Electric Co. Ltd. Circuit arrangements for counting impulses. 2,898,584, 8-4-59, Cl. 340—347.

Den Haan, Jose J. W.: *See*—
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Lee, Pyungtoo W. 2,897,595.

Dermond, Lawrence C., and E. Olson, to General Motors Corp. Fuel injection system. 2,898,096, 8-4-59, Cl. 261—37.

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Dietz, Harry F., deceased, by D. H. Dietz, executrix, to E. I. du Pont de Nemours and Co. Compositions and methods. 2,898,262, 8-4-59, Cl. 167—22.

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Steele, Floyd G. 2,898,578.

Dilling, Marion R.: *See*—
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Di Noble, Dominic. Key holder. 2,897,806, 8-4-59, Cl. 150—40.
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Dithmar, Karl, and U. Hoffmann, to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler. Process for washing and bleaching compositions therefor. 2,898,181, 8-4-59, Cl. 8—137.
Di Vito, Salvatore S. Fountain comb and formula measuring and mixing device. 2,897,826, 8-4-59, Cl. 132—114.
Dodge, Ronald D., to International Business Machines Corp. Type bar trip mechanism. 2,897,941, 8-4-59, Cl. 197—17.
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Spitsli, Donald H., and Dolida. 2,897,625.
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Hartock, Paul, and Dondes. 2,898,277.
Donovan, John J.: *See*—
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Doetson, Norman L., ½ to W. M. Colombo. Nozzle-applicator for shaving lather. 2,897,528, 8-4-59, Cl. 15—129.
Dorinson, Amos, to Sinclair Refining Co. Lubricants. 2,896,331, 8-4-59, Cl. 260—125.
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Douchet, Florimond A. J., to Societe Alsacienne de Constructions Mecaniques. Filling cylindrical tubes with a powdered material. 2,897,852, 8-4-59, Cl. 141—75.
Doughty, Robert T., to General Motors Corp. Resilient support. 2,898,063, 8-4-59, Cl. 248—9.
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Eynon, Benjamin A. 2,898,346.
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Dragonuk, Leo, to United States of America, Navy. Movable closure for a slot. 2,897,888, 8-4-59, Cl. 160—90.
Draper, Arthur L., and E. F. Johnson, to Jersey Production Research Co. Recovery of oil from subterranean reservoirs. 2,897,894, 8-4-59, Cl. 166—9.
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Drew, R. F., & Co., Inc.: *See*—
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Dromgold, Clarence W. Pipeline washing apparatus. 2,897,827, 8-4-59, Cl. 134—56.
Drummond, Folsom E., to The Commonwealth Engineering Co. of Ohio. Zinc gas plating. 2,898,227, 8-4-59, Cl. 117—47.
Duane, Donald, and J. M. O'Shaughnessy, to National Lead Co. Method for making titanium dichloride diacetate. 2,898,357, 8-4-59, Cl. 260—429.5.
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Kelley, Frank M. 2,898,228.
Rogers, Charles J. 2,898,179.
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Eck, George H. Listening device. 2,898,405, 8-4-59, Cl. 179—1.
Eckel, John E., and J. M. Camp, to Jersey Production Research Co. Seismic shock source. 2,898,084, 8-4-59, Cl. 255—1.
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Eisenlohr, Douglas H., and R. D. Shelton, to Columbia-Southern Chemical Corp. Dehydrochlorination of tetrachloroethane. 2,898,383, 8-4-59, Cl. 260—654.
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Elliott, Kenneth M., and W. W. Hamilton, to Socony Mobil Oil Co., Inc. Reforming employing refrigerated recycle gas. 2,898,288, 8-4-59, Cl. 208—134.
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Enoch, Tom B., ½ to J. F. Church. Mounting clamp and frame for sinks and lavatories. 2,897,516, 8-4-59, Cl. 4—187.
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Erzinger, Leonard G. Dampening apparatus for offset process printing presses. 2,897,753, 8-4-59, Cl. 101—148.
Eskin, Samuel G., J. M. Algino, and T. B. Legesa, to The Dole Valve Co. Gas water heater combination control valve. 2,898,046, 8-4-59, Cl. 236—21.
Espenschied, Helmut, to National Lead Co. Method for making titanium nitride. 2,898,192, 8-4-59, Cl. 23—191.
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Phelan, James M., and Wilson. 2,897,671.
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Etzler, Elmer E., to Bundy Tubing Co. Tubular push rod and method of making same. 2,897,805, 8–4–59, Cl. 123—90.
Evans, Lyle W., T. V. Rychlewski, and R. F. Wilson, to Sylvania Electric Products Inc. Image display. 2,898,228, 8–4–59, Cl. 117—33.5.
Everhart, Donald G. Trailing member spinning assembly. 2,898,060, 8–4–59, Cl. 244—136.
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Farrar, Alvin J., to Republic Steel Corp. Collapsible container and pallet assembly. 2,897,995, 8–4–59, Cl. 220—4.
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Sulzer, Georg, Guertler, Fatzer, and Maeder. 2,898,289.
Fauser, Giacomo, to Montecatini, Societa Generale per l'Industria Mineraria e Chimica. Process and apparatus for performing exothermic reactions under high pressure and at elevated temperature. 2,898,183, 8–4–59, Cl. 23—1.
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Fawick, Thomas L., to Fawick Corp. Actuating diaphragm and wear-shoe assembly for fluid-actuated clutches and brakes. 2,897,924, 8–4–59, Cl. 188—152.
Fee, Melvin E. Cutting torch tip construction. 2,897,884, 8–4–59, Cl. 158—27.4.
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Felletschin, Günter, to Dehydag, Deutsche Hydrierwerke G.m.b.H. Cosmetic lotion. 2,898,269, 8–4–59, Cl. 167—90.
Felt, Robert M., to Libbey-Owens-Ford Glass Co. De-icing windows. 2,898,432, 8–4–59, Cl. 219—20.
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Ferrel, Robert E., to United States of America, Agriculture. Method of canning rice. 2,898,215, 8–4–59, Cl. 99—186.
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Ferrera, John. Extensible trailer. 2,898,142, 8–4–59, Cl. 296—23.
Ferrera, John. Floor supporting means for expansible trailers. 2,898,144, 8–4–59, Cl. 296—23.
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Loughlin, Bernard D. 2,898,454.
Richman, Donald. 2,898,397.
Richman, Donald. 2,898,458.
Richman, Donald. 2,898,459.
Heath, Thomas A.: *See*—
Anderson, Charles C., Eder, Zimmerman, Heath, and McLaughlin. 2,898,442.
Hebert, Gerard J. Soap powder measuring dispenser. 2,898,013, 8-4-59, Cl. 222—455.
Heinard, Whilden G., and H. S. Jones, Jr., to United States of America, Army. Variable waveguide coupler. 2,898,559, 8-4-59, Cl. 333—10.
Heisler, Robert Y., and A. J. Millendorf, to Texaco Inc. Synthesis of substituted succinyl compounds. 2,898,345, 8-4-59, Cl. 260—326.5.
Held, Fritz, R. Petermann, and W. Maag. Apparatus for epilamising surfaces. 2,897,778, 8-4-59, Cl. 118—48.
Henkel & Cie, G.m.b.H.: *See*—
Schutt, Hartwig. 2,898,344.
Henry, Beulah L. Copying attachment for typewriters. 2,897,944, 8-4-59, Cl. 197—153.
Henry Valve Co., Inc.: *See*—
Jones, Evan, and Palcer. 2,897,642.
Henson, Roy O., to General Motors Corp. Electroplating rack. 2,898,285, 8-4-59, Cl. 204—297.
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Kendall, Edgar H. 2,897,990.
Herman, Daniel F., and R. M. Weil, to National Lead Co. Process for the preparation of cyclopentadienyl group IVa metal dialkoxy monohalides. 2,898,355, 8-4-59, Cl. 260—429.5.
Hermann, Joseph A., and R. W. Lorence, Sr. Portable knife sharpener. 2,897,640, 8-4-59, Cl. 51—173.
Herr, Robert, and W. R. Beck, to Minnesota Mining and Mfg. Co. Process for coating fluorinated polymer surfaces and resultant product. 2,898,229, 8-4-59, Cl. 117—47.
Herrlinger, Richard, and M. Garber, to American Cyanamid Co. Production of alpha-terpineol. 2,898,380, 8-4-59, Cl. 260—631.5.
Herrmann, Gunther: *See*—
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Hess, Lawrence G., and H. W. Schulz, to Union Carbide Corp. Synthesis of esters of lower aliphatic alcohols. 2,898,366, 8-4-59, Cl. 260—488.
Hess, Lawrence G., and H. W. Schulz, to Union Carbide Corp. Synthesis of esters of lower aliphatic alcohols. 2,898,367, 8-4-59, Cl. 260—488.
Hessinger, Philip S., to Mycalex Corp. of America. Ceramoplastic and method of manufacturing same. 2,897,573, 8-4-59, Cl. 25—156.
Higonnet, Rene, and L. Moyroud, to Graphic Arts Research Foundation, Inc. Carriage shifting device. 2,897,940, 8-4-59, Cl. 197—12.
Hildebrandt, Alexander B., to Jersey Production Research Co. Geophone assembly. 2,898,575, 8-4-59, Cl. 340—17.
Hilgers, Clair E. Combination cooker and warmer. 2,897,746, 8-4-59, Cl. 99—443.
Hill, Donald F.: *See*—
Halik, Raymond R., and Hill. 2,898,292.
Hill, Oiva E., to Norton Co. Grinding machine. 2,897,639, 8-4-59, Cl. 51—165.
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Rusch, Kenneth A., and Hillman. 2,897,875.
Hills, Donald W., and O. K. Grimm, to Hipp Welding Works. Attachment for scraper. 2,897,615, 8-4-59, Cl. 37—145.
Hillwick, Stanley L., and W. M. Cooper, to Economy Pest Control. Airborne seeder. 2,898,008, 8-4-59, Cl. 222—303.
Hillyer, John C., and J. T. Edmonds, Jr., to Phillips Petroleum Co. Process for reacting a diolefin and a furfural. 2,898,347, 8-4-59, Cl. 260—346.2.
Hines, John E., Jr.: *See*—
Hines, John K. and J. E., Jr. 2,897,602.
Hines, John K. and J. E., Jr. Portable grain dryer. 2,897,602, 8-4-59, Cl. 34—63.

Jackman, Sidney. Combined child's handbag and carrying package. 2,897,865, 8-4-59, Cl. 150—34.
Katzenberger, Bernhard, to Brown, Boveri & Cie, Aktiengesellschaft. Sealed motor-compressor unit. 2,898,032, 8-4-59,

Hinman, Wilbur S., Jr., to United States of America, Navy. Electrical arming circuit. 2,897,750, 8-4-59, Cl. 102—70.2.

Hinsdale, Edwin M., Jr., and F. B. Smith, Jr., to Radio Corp. of America. Color television receivers. 2,896,399, 8-4-59, Cl. 178—5.4.

Hinsey, Robert S., to The Bingham-Herbrand Corp. Mechanism control. 2,897,686, 8-4-59, Cl. 74—540.

Hipp Welding Works: *See*—
Hills, Donald W., and Grimm. 2,897,615.

Hiser, William H. Display stand for boats. 2,898,067, 8-4-59, Cl. 248—176.

Hmiel, Stanley E., to Koppers Co., Inc. Stable polyethylene dispersion containing no emulsifying agent and method of coating therewith. 2,898,233, 8-4-59, Cl. 117—103.

Hochrainer, August: *See*—
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Klaui, Heinrich. 2,898,372.

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Hoffmeister, Erich. Collet for dental purposes. 2,898,119, 8-4-59, Cl. 279—51.

Hofmann, Walter: *See*—
Zuppinger, Paul, Hofmann, and Fisch. 2,898,349.

Hogan, John P., and L. E. Gardner, to Phillips Petroleum Co. Production of dicyclopentadienyl iron. 2,898,360, 8-4-59, Cl. 260—439.

Hoke, Howard L., to Dresser Industries, Inc. Conduit clamp. 2,897,568, 8-4-59, Cl. 24—279.

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Holan, James H., and H. J. Troche, to J. H. Holan Corp. Portable boom. 2,897,979, 8-4-59, Cl. 212—6.

Holbrook, Robert L., to Olin Mathieson Chemical Corp. Method of flame proofing cellulosic textile material with phosphorous triisocyanate or phosphoryl triisocyanate and products produced thereby. 2,896,180, 8-4-59, Cl. 8—116.

Holcomb, Henry A., and R. M. Love, to Esso Research and Engineering Co. Starting up of reforming unit using platinum catalyst without extraneous hydrogen. 2,898,291, 8-4-59, Cl. 208—138.

Holden, Brian A., to Burgess Products Co. Ltd. Actuators for electrical switches. 2,898,428, 8-4-59, Cl. 200—172.

Hollander, Julius, and B. S. Sabreen. Cushion for artificial dentures and wax-gum composition therefor. 2,897,592, 8-4-59, Cl. 32—2.

Hollander, Julius, and B. S. Sabreen. Cushion for artificial dentures and wax-plasticizer composition therefor. 2,897,593, 8-4-59, Cl. 32—2.

Hollmann, Hans E. Radiation meter device. 2,898,472, 8-4-59, Cl. 250—83.6.

Holm Tractor & Equipment Co.: *See*—
Arrington, Bradford L., and Bullard. 2,897,929.

Honeywell, Charles E., R. C. Carlson, and M. Wolf. Ultra high frequency tuner. 2,898,463, 8-4-59, Cl. 250—40.

Hooker Chemical Corp.: *See*—
Robitschek, Paul, and Bean. 2,898,256.
Shepard, Alvin F. 2,898,321.
Shepard, Alvin F. 2,898,322.

Hopengarten, Abram: *See*—
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Hopkins, Horace H., Jr., to United States of America, Atomic Energy Commission. Solubilization of actinide metal-containing slag. 2,898,186, 8-4-59, Cl. 23—14.5.

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Fox, Arnold M., and Horelick. 2,898,565.

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Horn, Charles L.: *See*—
Reed, Cortes F. 2,898,168.

Horner, George J. Roll up truck body cover with telescoping guides having adjustable mountings. 2,898,147, 8-4-59, Cl. 296—98.

Horowitz, Harry, and A. Schneiderman. Toy hand grenade. 2,897,630, 8-4-59, Cl. 46—196.

Houdry, Eugene J., M. R. Eriksson, and M. A. Coudray, to Oxy-Catalyst, Inc. Gas treating apparatus. 2,898,202, 8-4-59, Cl. 23—288.

Hough, Frank G., Co., The: *See*—
Johansson, K Gustaf A. 2,897,957.

Hounsell, John P. Crate cart. 2,897,999, 8-4-59, Cl. 214—390.

Houser, Howard E.: *See*—
Neipert, Marshall P., Blue, and Houser. 2,898,284.

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Houvener, Irving S., to The Dow Chemical Co. Pressure intensifier. 2,897,762, 8-4-59, Cl. 103—52.

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Howe Scale Co., The: *See*—
Roessler, Charles E., Jr. 2,898,419.

Howsley, Louis A., Jr., and R. L. Malone, to First State Bank of Denton. Apparatus for soilless plant cultivation. 2,897,631, 8-4-59, Cl. 47—1.2.

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Eddy, Thomas A., and Hoyer. 2,898,161.

Huber, William W., to United States Ceramic Tile Co. Insert tool holder. 2,897,580, 8-4-59, Cl. 29—96.

Hubner, Franz K. Butt seam joints for sheet material and the like. 2,897,567, 8-4-59, Cl. 24—205.12.

Huddle, Edwin F., to International Harvester Co. Potato digger. 2,897,900, 8-4-59, Cl. 171—126.

Hudson Engineering Corp.: *See*—
Goldsmith, John L., and James. 2,898,097.

Hudson, William L., to Tolhelm Corp. Gas separator and eliminator. 2,897,913, 8-4-59, Cl. 183—2.5.

Huet, André. Methods and apparatus for bending tubes. 2,897,872, 8-4-59, Cl. 153—48.

Hughes Aircraft Co.: *See*—
McElroy, Melvin R. 2,898,479.

Hui, In W., and S. Kruty, to Dearborn Chemical Co. Insulated pipe, reinforced laminated sheet material and method of making the sheet material. 2,897,841, 8-4-59, Cl. 138—64.

Huisking, Joseph C., to Pomona Foundry, Inc. Box-stacking mechanism. 2,897,949, 8-4-59, Cl. 198—35.

Hull, Richard L., to American Machine and Metals, Inc. Fan casing. 2,896,030, 8-4-59, Cl. 220—117.

Hulton, Charles S., C. W. Mullenhagen, and R. G. Wiedenbein, to The Kirk & Blum Mfg. Co. Method and means for obtaining high moisture removal. 2,897,601, 8-4-59, Cl. 34—21.

Humbert, Kingsley E., Jr., to Wix Corp. Filter unit. 2,897,966, 8-4-59, Cl. 210—168.

Humphrey, William K.: *See*—
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Hunter, David U., to Fairchild Engine and Airplane Corp. Apparatus for separating moisture and condensable vapors from a gas. 2,897,917, 8-4-59, Cl. 183—77.

Hunter, Herbert T., to DCA Food Industries, Inc. Method and apparatus for the production of comestibles. 2,897,772, 8-4-59, Cl. 107—54.

Hunter, Lloyd P., to International Business Machines Corp. Fabrication of diffused junction semi-conductor devices. 2,896,247, 8-4-59, Cl. 148—1.5.

Hutter, Ernest: *See*—
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Hydraulic Research & Mfg. Co.: *See*—
Baltus, George T., Welpin, Smith, and Lachcik. 2,897,792.

Hymas, Donald G., and R. A. McDermody, to Radio Corp. of America. Diversity receiver having individually controlled channel triggers for cooperatively controlling channel switching. 2,898,455, 8-4-59, Cl. 250—20.

I-T-E Circuit Breaker Co.: *See*—
Decker, Walter W., and Sori. 2,897,963.
Uhink, Friedrich W. 2,896,487.

Illinois Railway Equipment Co.: *See*—
Johnson, Malcolm S. 2,897,771.

Illinois Tool Works: *See*—
Hamman, Denver C. 2,896,160.

Imperial Brass Mfg. Co., The: *See*—
Franck, George E., and Philippe. 2,898,016.
Philippe, Howard L. 2,897,535.

Imperial Chemical Industries Ltd.: *See*—
Coffey, David H., and Guest. 2,898,318.
Reed, Hugh W. B., and Mitchell. 2,898,328.

Improved Machinery, Inc.: *See*—
Annis, Rupert E., Jr. 2,897,859.

Industrial Brush Co., Inc.: *See*—
Jones, Lloyd E. 2,897,527.

Ingersoll-Rand Co.: *See*—
Jimerson, Francis A. 2,897,882.

In-Sink-Erator Mfg. Co.: *See*—
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International Business Machines Corp.: *See*—
Cargill, Allan C. 2,897,648.
Crawley, Hubert J. and Strachey. 2,898,041.
Dodge, Ronald D. 2,897,941.
Fiehl, Michael. 2,898,104.
Fitch, Clyde J. 2,897,934.
Gilmore, Vincent J. 2,897,945.
Hamden, Carl. 2,898,522.
Hunter, Lloyd P. 2,898,247.
Kelly, Martin J. 2,898,580.
Malmros, Gustav V. A., and Harrington. 2,897,752.
O'Donnell, John F. and Segall. 2,898,514.
Post, Frederick L. 2,898,581.
Ruta, Richard. 2,898,474.
Silvey, Gene A., and Lyons. 2,898,248.
Thompson, John J. and Knight. 2,898,255.

International Computers and Tabulators Ltd.: *See*—
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Womersley, John R., and Townsend. 2,898,042.

International Harvester Co.: *See*—
Davidson, Trever O., and Storats. 2,897,618.
Hausmann, Joseph A. 2,897,961.
Huddle, Edwin F. 2,897,900.
Kivisto, Lauri J., and Seddon. 2,897,787.
Koltheff, C. Paul, Jr. 2,897,908.
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International Minerals & Chemical Corp.: *See*—
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Houston, Harry H. 2,898,303.

International Standard Electric Corp.: *See*—
Beck, Arnold H. W., Jackson, and Lytollis. 2,898,502.

Isbenjian, Hrant, to Aries Associates, Inc. Novel catalyst for the polymerization of ethylene. 2,898,330, 8-4-59, Cl. 260—94.9.

Isenberg, Hans D. Apparatus for forming coaxial cables. 2,897,542, 8-4-59 Cl. 18—13.

Isler, Otto: *See*—
Guex, Waldemar, and Isler. 2,898,375.

Isler, Otto, H. Lindlar, M. Montavon, R. Ruegg, and P. Zeller, to Hoffmann-La Roche Inc. Preparation of 15,15'-dehydro-β-carotene. 2,898,385, 8-4-59, Cl. 260—666.

Ivory, Chester S. Dental cotton roll holder. 2,897,597, 8-4-59, Cl. 32—35.

Knight, Harmon M.: *See*—
Kelly, Joe T., and Knight. 2,898,390.

Knight, Hogan B.: *See*—

Jackman, Sidney. Combined child's handbag and carrying package. 2,897,865, 8–4–59, Cl. 150—34.
Jackson, Thomas M.: *See*—
Beck, Arnold H. W., Jackson, and Lytollis. 2,898,502.
Jacobs, John E., to General Electric Co. Light responsive system. 2,898,525, 8–4–59, Cl. 317—124.
Jacobs, Ralph L., to Eaton Mfg. Co. Ignition systems. 2,898,892, 8–4–59, Cl. 123—149.
James, Glyane Y.: *See*—
Goldsmith, John L., and James. 2,898,097.
Janssen, Paul A. J. 2,2-diaryl-ε-(4'-phenyl-1'-piperidino) alkanenitriles. 2,898,340, 8–4–59, Cl. 260—294.8.
Jenkins, Edwin E.: *See*—
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Jensen, James L., to Minneapolis-Honeywell Regulator Co. Transistor control apparatus. 2,898,476, 8–4–59, Cl. 307—88.5.
Jensen, Robert V., to Radio Corp. of America. Method of preparing semi-conductor alloys. 2,898,299, 8–4–59, Cl. 148—1.6.
Jenson, Jens B. Skirt hanger. 2,898,024, 8–4–59, Cl. 223—91.
Jersey Production Research Co.: *See*—
Blount, Alvie E., Flatow, and Chalmers. 2,897,907.
Draper, Arthur L., and Johnson. 2,897,894.
Eckel, John E., and Camp. 2,898,084.
Farrington, William B. 2,897,717.
Freeman, William A., Jr., and Roth. 2,898,086.
Hildebrandt, Alexander E. 2,898,575.
Kenneday, John W., and Dublin. 2,897,896.
Ortloff, John E. 2,897,895.
Peters, Beldon A. 2,898,414.
Priest, Gerald G., Morgan, Lytle, Caldwell, and Birdwell. 2,898,294.
Jervis Corp.: *See*—
Goodfellow, Harry E. 2,898,139.
Van Noord. 2,898,138.
Jesman, Walter R. Apparatus for electrically destroying insects and the like. 2,897,629, 8–4–59, Cl. 43—112.
Jimerson, Francis A., to Ingersoll-Rand Co. Overspeed safety device. 2,897,832, 8–4–59, Cl. 137—27.
Johansson, K. Gustaf A., to The Frank G. Hough Co. Tractor loaders. 2,897,987, 8–4–59, Cl. 214—140.
Johns-Manville Corp.: *See*—
Barnett, Irvin. 2,897,548.
Johnson, Charles B., to Rockwell Mfg. Co. Plug valve with disassembly prevention means. 2,898,081, 8–4–59, Cl. 251—309.
Johnson, E. F., Co.: *See*—
Pichitino, Albert M. 2,898,590.
Johnson, Edmund C. Variable speed drive. 2,897,682, 8–4–59, Cl. 74—230.17.
Johnson, Edward F.: *See*—
Draper, Arthur L., and Johnson. 2,897,894.
Johnson, Elmer C., to The Vendo Co. Multi-drink locking gate protection device. 2,898,001, 8–4–59, Cl. 221—125.
Johnson & Johnson: *See*—
Bush, Frederick J. 2,897,961.
Zackheim, Eli A. 2,897,962.
Johnson, Malcolm S., to Illinois Railway Equipment Co. Lading tie anchors. 2,897,771, 8–4–59, Cl. 105—369.
Johnson, Robert L., and D. N. Robertson, to The Dow Chemical Co. Film forming aqueous colloidal dispersions containing aromatic nitroalkanols and method for preparing same. 2,898,317, 8–4–59, Cl. 260—39.6.
Johnson, Thomas H.: *See*—
Spiller, William R., and Johnson. 2,897,754.
Jones, Evan, and J. A. Palcer, to Henry Valve Co., Inc. Method and apparatus for pressurizing driers. 2,897,642, 8–4–59, Cl. 55—7.
Jones, Howard S., Jr.: *See*—
Heinard, Whilden G., and Jones. 2,898,559.
Jones & Laughlin Steel Corp.: *See*—
Treder, Richard W., and Batz. 2,898,251.
Van Ormer, Lawson. 2,897,698.
Jones, Lloyd E., to Industrial Brush Co., Inc. Brush holder. 2,897,527, 8–4–59, Cl. 15—183.
Jonkers, Cornelius O., and J. W. L. Köhler, to North American Philips Co., Inc. System comprising a cold-gas refrigerator and a heat exchanger. 2,897,655, 8–4–59, Cl. 62—6.
Jonovich, George J. Aircraft cable clamps. 2,897,563, 8–4–59, Cl. 24—126.
Jonsson, Henry C., to Aktiebolaget Valida Maskiner. Conveyors. 2,897,951, 8–4–59, Cl. 198—38.
Jordan, William, 3d, to Curtiss-Wright Corp. Ratio meter blade pitch indicators. 2,898,551, 8–4–59, Cl. 324—62.
Jullander, Elof I., to Mo Och Domsjo Aktiebolag. Methods of treating cellulose. 2,898,333, 8–4–59, Cl. 260—212.
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Kannegiesser, Karl H., and Juraschek. 2,898,020.
Kalamazoo Vegetable Parchment Co.: *See*—
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Kamatani, Yuji. Electrode clamp for electric furnace. 2,897,560, 8–4–59, Cl. 13—16.
Kannegiesser & Co., Maschinenfabrik G.m.b.H.: *See*—
Kannegiesser, Karl H., and Juraschek. 2,898,020.
Kannegiesser, Karl H., and J. R. Juraschek, to Kannegiesser & Co., Maschinenfabrik G.m.b.H. Method and means for shaping dresses. 2,898,020, 8–4–59, Cl. 223—70.
Kansas University Endowment Assn., The: *See*—
Maloney, James O., and Tepitz. 2,898,388.
Kaplan, Joseph. Raincoat. 2,897,507, 8–4–59, Cl. 2—87.
Karlson, John C., to Bendix Aviation Corp. Gyroscope. 2,897,676, 8–4–59, Cl. 74—5.41.
Karlson, John C., to Bendix Aviation Corp. Demodulator. 2,898,462, 8–4–59, Cl. 250—31.
Karr, Ralph J., to H. H. Sargent & Co. Automatic titrator circuit. 2,898,200, 8–4–59, Cl. 23—253.
Kastner, Donald R., to L. C. Thomsen & Sons, Inc. Clamps. 2,897,569, 8–4–59, Cl. 24—279.
Katzenberger, Bernhard, to Brown, Boveri & Cie. Aktiengesellschaft. Sealed motor-compressor unit. 2,898,032, 8–4–59, Cl. 230—139.
Kautz, George M., to Louhoff Grain Co. Feeder construction. 2,898,052, 8–4–59, Cl. 241—84.
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Curran, Bernard E., and Kautz. 2,898,044.
Keene, Lester E., by T. Keene, executrix, to Underwood Corp. Carriage overbanking elimination. 2,897,942, 8–4–59, Cl. 197—63.
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Keene, Lester E. 2,897,942.
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Keith, Carl D., to Sinclair Refining Co. Method for preparing aluminum hydrate compositions. 2,898,307, 8–4–59, Cl. 252—463.
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Emeis, Reimer, and Keller. 2,898,429.
Kelley, Frank M., to E. I. du Pont de Nemours and Co. Method for coating polyfluoroethylenes. 2,898,228, 8–4–59, Cl. 117—47.
Kelly, Joe T., and H. M. Knight, to The American Oil Co. Alkylation process. 2,898,390, 8–4–59, Cl. 260—683.44.
Kelly, Martin J., to International Business Machines Corp. Improved readout circuit for multistable magnetic cores. 2,898,580, 8–4–59, Cl. 340—174.
Kelly, Thomas D. Horse cycle. 2,898,121, 8–4–59, Cl. 280—1.203.
Kendall, Edgar H., to Heppenstall Co. Tongs. 2,897,990, 8–4–59, Cl. 214—658.
Kenneday, John W., and J. R. Dublin, III, to Jersey Production Research Co. Seating member for well tools. 2,897,896, 8–4–59, Cl. 166—134.
Kennedy, Harold T. Impact tools operated by compressible pressure fluid. 2,897,782, 8–4–59, Cl. 121—30.
Kernan, Paul, to Bendix Aviation Corp. Amplitude band selection circuit. 2,898,461, 8–4–59, Cl. 250—27.
Kerns, Quentin A., to United States of America, Atomic Energy Commission. Method and apparatus for determining charged particle motion. 2,897,605, 8–4–59, Cl. 35—19.
Kerr, Gerrald E., to United States of America, Atomic Energy Commission. Dimension measuring optical sighting device. 2,897,718, 8–4–59, Cl. 88—14.
Kesling, Harold D. Dental appliance. 2,897,596, 8–4–59, Cl. 32—64.
Kessler, Gerald. Screen spline with direct frictional engagement means. 2,897,889, 8–4–59, Cl. 160—392.
Khol, Frantisek. Apparatus for measuring the internal stresses in materials. 2,898,470, 8–4–59, Cl. 250—53.
Kiefer, Augustine J. Sliding multiple sash window or door. 2,897,552, 8–4–59, Cl. 20—19.
Kienzle Apparate G.m.b.H.: *See*—
Haupt, Wilhelm. 2,897,617.
Kilgore, Inc.: *See*—
Long, Robert S. 2,897,321.
Kimberlin, Charles N., Jr., and F. J. Buchmann, to Esso Research and Engineering Co. Preparation of catalyst particles. 2,898,289, 8–4–59, Cl. 208—134.
Kimmel, William E.: *See*—
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King, Harold W.: *See*—
True, Charles H., Jr., and King. 2,897,501.
Kinkead Industries Inc.: *See*—
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Collins, Solomon M. 2,897,515.
Kirk & Blum Mfg. Co., The: *See*—
Hulton, Charles S., Mullenhagen, and Wiedenbein. 2,897,801.
Kirkpatrick, William D., and A. L. Newman, to Red Devil Tools. Tool for removing end of collapsible walled tube. 2,897,700, 8–4–59, Cl. 81—3.34.
Kirkwood Commutator Co., The: *See*—
Boyer, Robert H. 2,898,488.
Kitano, Akitoshi. Driving apparatus comprising modified elliptic gear wheels. 2,897,765, 8–4–59, Cl. 103—126.
Kittleson, Allen R., to Esso Research and Engineering Co. Polymerization process. 2,898,329, 8–4–59, Cl. 260—94.9.
Kivisto, Lauri J., and T. R. Seddon, to International Harvester Co. Servo-motor. 2,897,787, 8–4–59, Cl. 121—41.
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Klausmann, Milton H., to Seal-Spout Corp. Combined multiple compartment container and pouring spout. 2,898,004, 8–4–59, Cl. 222—129.
Kleinholz, Milton P., to Sinclair Refining Co. Method of reducing corrosiveness of lubricating oils by hydrogenation. 2,898,286, 8–4–59, Cl. 208—264.
Klemt, Günter, and K. H. Macher, to Jos. Schneider & Co. Optical system with large effective image angle. 2,897,725, 8–4–59, Cl. 88—57.
Klingsberg, Erwin, to American Cyanamid Co. Anthraquinone triazoles. 2,898,343, 8–4–59, Cl. 260—308.
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Kloots, George R.: *See*—
Meier, George D., Kloots, and Potchen. 2,898,258.
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Lorenz Co.: *See*—
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Lorenz Co.: *See*—
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Koch, Paul H., to The Babcock & Wilcox Co. Steam generating, superheating, and reheating unit, and method effected thereby. 2,897,797, 8-4-59, Cl. 122—478.

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Kramer, Eugene. Clamps. 2,898,069, 8-4-59, Cl. 248—226.

Krastchew, Christoslaw. Refrigeration cooling of electrical machines. 2,898,484, 8-4-59, Cl. 310—52.

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Lamb, Everette. Electrical line clamp. 2,898,573, 8-4-59, Cl. 339—246.

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Landrey, Leo R., to Burroughs Corp. Indicator tube of the glow lamp type. 2,898,500, 8-4-59, Cl. 313—109.5.

Landrum, Porter. Vacuum responsive throttle control for internal combustion engines. 2,897,806, 8-4-59, Cl. 123—103.

Landrum, Porter. Throttle control for internal combustion engines. 2,897,807, 8-4-59, Cl. 123—103.

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La Torre, Joseph. Lock nut having pivoting concave bearing end and inwardly deformed tip to effectuate uniformly stressed threads. 2,897,867, 8-4-59, Cl. 151—31.

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Long, Robert S., and S. M. Tsang, to American Cyanamid Co. Stilbene dicarboxylic acid amides. 2,898,371, 8-4-59, Cl. 260—507.
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Malmros, Gustav V. A., and R. H. Harrington, to International Business Machines Corp. High speed printing apparatus. 2,897,752, 8-4-59, Cl. 101—93.
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Marien, Clement S., to Swank, Inc. Cuff link. 2,897,562, 8-4-59, Cl. 24—97.
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McCarty, Theodore M., and S. E. Lover, to Gibson, Inc. Electrical pickup for stringed musical instruments. 2,897,709, 8-4-59, Cl. 84—1.15.
McCleskey, Henry F. Tandem disc harrow. 2,897,905, 8-4-59, Cl. 172—581.
McCulloch, William J. G., and A. W. Langer, Jr., to Esso Research and Engineering Co. Polymerization of olefins. 2,896,327, 8-4-59, Cl. 260—88.1.
McCune, William J., Jr.: *See*—
Land, Edwin H., and McCune. 2,896,208.
McDermody, Ronald A.: *See*—
Hyman, Donald G., and McDermody. 2,896,455.
McElroy, Melvin R., to Hughes Aircraft Co. Clock pulse circuit for transistor flip-flop. 2,896,479, 8-4-59, Cl. 307—88.5.
McFarland, Donald L., to General Electric Co. Combination electric cooking appliance. 2,896,437, 8-4-59, Cl. 219—35.
McGinty, William K., to Thomas Industries Inc. Mounting bracket for a recessed ceiling fixture. 2,896,075, 8-4-59, Cl. 248—343.
McGraw-Edison Co.: *See*—
Date, Kazuo H. 2,896,421.
Fox, Arnold M., and Merelick. 2,896,565.

Moskow, Eugene D., to Benbow Mfg. Co., Inc. Interior diameter maintaining support for seal rings. 2,896,134, 8-4-59, Cl. 286—36.
Nischk, Gunther, ½ to Farbenfabriken Bayer Aktiengesellschaft, and ½ to Mobay Chemical Co. Isocyanate-mustard

Crapochettes, Paul W. 2,898,560.

McLaughlin, James F.: See—
Andersen, Charles C., Eder, Zimmerman, Heath, and McLaughlin. 2,898,442.
McLucas, John L., to Haller, Raymond and Brown, Inc. Oscillograph recorder. 2,896,401, 8-4-59, Cl. 178—6.6.
McMahan, Roy F., Sr. Swivel. 2,898,163, 8-4-59, Cl. 308—227.
McMillian, John E., to Titanium Metals Corp. of America. Disintegrating refractory metals. 2,897,576, 8-4-59, Cl. 18—2.6.
McNaney, Joseph T., to General Dynamics Corp. System for effecting transfer of cathode ray tube displays onto a record medium. 2,896,176, 8-4-59, Cl. 346—110.
McNaney, Joseph T., to General Dynamics Corp. Recording apparatus. 2,896,468, 8-4-59, Cl. 250—49.5.
McNatt, Eugene M., to United States of America, Navy. Speed indicator for a gyroscope. 2,898,552, 8-4-59, Cl. 324—70.
McNeil Laboratories, Inc.: See—
Cain, Cornelius K. 2,896,909.
McNeil Machine & Engineering Co., The: See—
Retter, Lutwin C. 2,898,005.
McNeill, Alvin L., to Victor Development Co. Impact devices for electronic golf drive interpreters. 2,897,674, 8-4-59, Cl. 73—379.
McSheehy, Justin A., to American Cyanamid Co. Process improvement for vat dyes. 2,896,257, 8-4-59, Cl. 260—263.
Meadows, Charles L., 25% to J. D. Basinger, and 24% to D. R. Moore. Automatic beer can opener. 2,897,590, 8-4-59, Cl. 30—4.
Meagher, Robert J., to Columbia Broadcasting System, Inc. Electron discharge structure. 2,896,505, 8-4-59, Cl. 313—307.
Mechanical Handling Systems, Inc.: See—
Bishop, Leonard J., and Haase. 2,897,789.
Meek, James S.: See—
Carmichael, Robert D., and Meek. 2,897,550.
Meighew, Isaiah C. Fastener. 2,897,561, 8-4-59, Cl. 24—96.
Meier, George D., G. E. Kleets, and J. A. Patchen, to Haskelite Mfg. Corp. Panel and fastener assembly and method of making same. 2,896,258, 8-4-59, Cl. 154—116.
Meissner, William E. Method of and apparatus for shaping tubing members. 2,897,545, 8-4-59, Cl. 18—19.
Meldrum, Donald N., to National Foam System, Inc. Apparatus for de-airing filled containers. 2,897,851, 8-4-59, Cl. 141—70.
Meltzer, Jack. Sock fining unit having a built-in bridging element. 2,897,612, 8-4-59, Cl. 36—58.5.
Mentz, Charles N., to Bendix Aviation Corp. Drilling apparatus. 2,897,692, 8-4-59, Cl. 77—22.
Merchant, Charles J., 15% to W. J. Brauer. Educational keyboard musical instrument. 2,897,712, 8-4-59, Cl. 84—477.
Mercier, Thomas R.: See—
Beckner, Donald O., and Mercier. 2,897,692.
Merck & Co., Inc.: See—
Cosa, John B., and Humphrey. 2,898,191.
Merrell, Wm. S., Co., The: See—
Wheeler, Keith W., Seyler, Palopoli, and McCarty. 2,896,339.
Merto Co., The: See—
Witt, Paul E., Jr., and Shaler. 2,896,279.
Metal Hydrides Inc.: See—
Banus, Mario D., Winiarczyk, and Lambe. 2,896,185.
Metal & Thermit Corp.: See—
Howard, Lee F. 2,896,282.
Metcalfe, Kenneth A., and R. J. Wright, to Commonwealth of Australia (% Secretary of the Department of Supply). Coating surfaces by employing an electrostatic field. 2,896,279, 8-4-59, Cl. 204—181.
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Meule, Gordon H., and Urry. 2,896,571.
Meyer, Andre J. Function computers. 2,896,038, 8-4-59, Cl. 235—61.
Meyer, Jean G. A. M. J.: See—
Blanchet, Andre F. M., and Meyer. 2,896,002.
Meyer, Richard C. Battleship game. 2,896,106, 8-4-59, Cl. 273—120.
Michels, Julian G., to The Norwich Pharmacal Co. Nitrating an N-(2-furyl) alkylidene hydrazine compound. 2,896,325, 8-4-59, Cl. 260—240.
Michlin, Hyman A. Color display phosphor screens. 2,896,496, 8-4-59, Cl. 313—92.
Middelbeek, Almer, E. M. De Graaf, and P. Modderman, to Organon Inc. Process for the preparation of enol esters. 2,896,351, 8-4-59, Cl. 260—397.5.
Miles, Charlie A., and L. B. Swanner, to Alamance Industries, Inc. Apparatus for handling hosiery. 2,896,021, 8-4-59, Cl. 223—75.
Miles, Charlie A., and L. B. Swanner, to Alamance Industries, Inc. Actuating mechanism for stitch severing devices. 2,896,822, 8-4-59, Cl. 223—75.
Millendorf, Alfred J.: See—
Heisler, Robert Y., and Millendorf. 2,896,245.
Miller, Alfred J., to Union Carbide Corp. Thermochemical desurfacing head. 2,897,362, 8-4-59, Cl. 158—27.4.
Miller, Bruce D., G. W. Reigel, J. P. Solanowski, and H. W. Beverly, to Chemetron Corp. Apparatus for processing violently mixed flowable materials. 2,896,662, 8-4-59, Cl. 259—10.
Miller, Charles E., M. L. Robinson, and W. B. Woodring, to Olin Mathieson Chemical Corp. Metallic sheetshell. 2,897,758, 8-4-59, Cl. 102—42.
Miller, David B., to General Electric Co. Apparatus for and method of cooling beam transmitting windows. 2,896,492, 8-4-59, Cl. 313—74.
Miller, Edward E., and F. Stewell. Manually operated folding panel. 2,897,287, 8-4-59, Cl. 160—97.
Miller, James I. Book rack attachment for chairs. 2,897,976, 8-4-59, Cl. 211—113.
Miller, Lester M., to General Motors Corp. Washing machine. 2,897,665, 8-4-59 Cl. 68—22.
Miller, Robert M., J. E. Lodge, and M. C. Merwin, to Minnesota Mining and Mfg. Co. Roofing granules and method for making. 2,896,280, 8-4-59, Cl. 117—100.
Miller, Wendell S. Means and techniques for determining quality of milk. 2,896,540, 8-4-59, Cl. 324—30.
Milprint, Inc.: See—
Rauch, Kenneth A., and Hillman. 2,897,675.
Minerals & Chemicals Corp. of America: See—
Powell, Manly J., and Cecil. 2,896,304.
Schilling, Karl F., Powell, and Brice. 2,896,297.
Minneapolis-Honeywell Regulator Co.: See—
Carlson, William L., Jr., and Erickson. 2,897,650.
Gaddis, Gene T. 2,896,047.
Jensen, James L. 2,896,479.
Sheldon, Donald F. 2,896,466.
Stucka, Edward P. 2,896,048.
Wagner, Robert J. 2,897,678.
Minnesota Mining and Mfg. Co.: See—
Barnhart, William S. 2,896,332.
Herr, Robert, and Beck. 2,896,329.
Miller, Robert M., Lodge, and Merwin. 2,896,223.
Revoir, Harold J. 2,897,560.
Minnick, Howard P. Welding-rod holder. 2,898,446, 8-4-59, Cl. 219—138.
Mirvish, Stanley S.: See—
Pierce, James V., and Mirvish. 2,896,926.
Mirza, Ric N. to Fairchild Engine and Airplane Corp. Seal for a rotating shaft. 2,896,132, 8-4-59, Cl. 286—7.
Misumi, Teruyuki: See—
Tsunoda, Yoshio, Seko, Watanabe, Ehara, and Misumi. 2,896,311.
Mitchell, Reid L., J. W. Berry, and M. Bacon, Jr., to Rayonier Inc. Cellulose slurry-steeping. 2,896,834, 8-4-59, Cl. 260—232.
Mitchell, William R. A.: See—
Reed, Hugh W. B., and Mitchell. 2,896,328.
Mithal, Bharat B.: See—
Sarton, William R., and Mithal. 2,896,229.
Mittenberger, Alexander A.: See—
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Mobay Chemical Co.: See—
Nischk, Gunther. 2,896,363.
Modderman, Pieter: See—
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Moe, Lowell A.: See—
Connell, Lawrence H., and Moe. 2,896,451.
Mogk, August: See—
Otto, Heinrich, and Mogk. 2,897,794.
Moloney Electric Co.: See—
Dennis, Clarence G. 2,897,362.
Monarch Engineering Corp.: See—
Hatch, James W. 2,897,596.
Monoogian, Charles A., to B. and S. Mooschekian, A. and A. J. Babajian, C. A. Monoogian, F. Nomoodo, R. and T. Mooschekian, and F. Grossbach, d.b.a. Downey Fertilizer Co. Herbicide for dichondra lawns. 2,896,366, 8-4-59, Cl. 71—2.6.
Monroe Calculating Machine Co.: See—
Scully, John F. 2,896,406.
Monsanto Chemical Co.: See—
Martin, Richard H., Jr. 2,896,244.
Montaven, Marc: See—
Isler, Otto, Lindlar, Montaven, Ruegg, and Zeller. 2,896,385.
Montecatini, Societa Generale per l'Industria Mineraria e Chimica: See—
Fauser, Giacomo. 2,896,188.
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Jullander, Olof I. 2,896,333.
Moore, Danny R.: See—
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Moore, Thomas H., to Radio Corp. of America. Magnetic systems. 2,896,579, 8-4-59, Cl. 340—174.
Mooschekian, Benjamin: See—
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Monoogian, Charles A. 2,896,206.
Mooschekian, Samuel: See—
Monoogian, Charles A. 2,896,206.
Mooschekian, Theodore: See—
Monoogian, Charles A. 2,896,206.
Moreland, Stephen T. Method and apparatus for forming seamless capsules. 2,897,554, 8-4-59, Cl. 141—242.
Morgan, Arthur L., Jr., to United States of America, Agriculture. Heat treatment of sugar beet juice. 2,896,245, 8-4-59, Cl. 127—50.
Morgan, Bryan E: See—
Priest, Gerald G., Morgan, Lytle, Caldwell, and Birdwell. 2,896,294.
Morgan Development Laboratories, Inc.: See—
Morgan, Porter S. 2,897,962.
Morgan, Joseph A.: See—
Bernard, Herbert J., and Morgan. 2,896,124.
Morgan, Porter S., to Morgan Development Laboratories, Inc. Ratchet-type tools and clutches therefor. 2,897,932, 8-4-59, Cl. 192—44.
Morin, Faith C.: See—
Rebsdat, Lee C. 2,896,196.
Morin, Wilfred F.: See—
Rebsdat, Lee C. 2,896,196.
Morrow, Harry C., to United States Steel Corp. Troughed belt conveyor. 2,897,955, 8-4-59, Cl. 198—202.

Otto, Heinrich, and A. Mogk, to The Babcock & Wilcox Co. Steam generating unit with plural combustion chambers

Peters, Edwin F., and E. L. Evering, to Standard Oil Co. Polymerization of olefins with a catalyst comprising a

Meskow, Eugene D., to Benbow Mfg. Co., Inc. Interior diameter maintaining support for seal rings. 2,896,134, 8-4-59, Cl. 286—36.

Motorola, Inc.: *See*—
Parmet, Bernard S., and Di Nardo. 2,896,400.

Mott-Smith, Lewis M., to United States of America, Navy. Safety device. 2,897,780, 8-4-59, Cl. 102—84.

Meule, Gordon H., and J. T. Urry, to Metropolitan-Vickers Electrical Co. Ltd. Methods of manufacturing tubular sheathed heating elements. 2,896,571, 8-4-59, Cl. 338—238.

Moyroud, Louis: *See*—
Higonnet, Rene, and Moyroud. 2,897,940.

Mueller Co.: *See*—
Smith, John J. 2,897,842.

Mueller, Robert C.: *See*—
Ashton, George H., and Mueller. 2,897,729.

Mullenhagen, Carl W.: *See*—
Hulton, Charles S., Mullenhagen, and Wiedenbein. 2,897,601.

Muller, Otto, to Siemens-Schuckertwerke Aktiengesellschaft. Program controller particularly for machine tools. 2,896,483, 8-4-59, Cl. 307—115.

Mullineaux, Richard D.: *See*—
Raley, John H., Mullineaux, and Ballard. 2,896,886.

Mungovan, Francis P. Removable head rest for vehicles. 2,897,578, 8-4-59, Cl. 155—174.

Murray Ohio Mfg. Co., The: *See*—
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Murtaugh, Justin J., M. E. Lavrich, D. G. Ruff, C. J. Krueck, and J. E. Grant, to Blatz Brewing Co. Method of extracting hops. 2,896,209, 8-4-59, Cl. 99—50.5.

Musolf, Gunter F., to Radio Corp. of America. Automatic iris control for television cameras. 2,896,536, 8-4-59, Cl. 318—280.

Mycalex Corp. of America: *See*—
Hessinger, Philip S. 2,897,573.

Myrick, George H. Inhalator. 2,897,554, 8-4-59, Cl. 21—119.

Nack, Herman R., and J. R. Whitacre, to The Commonwealth Engineering Co. of Ohio. Method of producing composite metallic bodies. 2,896,284, 8-4-59, Cl. 117—107.

Nadeau, Herman A., to General Electric Co. Arc extinguishing means. 2,896,427, 8-4-59, Cl. 200—144.

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Namenyi-Katz, Laszlo, to Epsylon Research and Development Co. Ltd. Conveyors. 2,897,953, 8-4-59, Cl. 198—127.

Namenyi-Katz, Laszlo, to Epsylon Research and Development Co. Ltd. Multi-track tape recorders. 2,896,118, 8-4-59, Cl. 274—4.

Nastasi, Salvatore J., and D. A. Quattrociocchi. Cutting shears of the pull type. 2,897,591, 8-4-59, Cl. 30—253.

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National Foam System, Inc.: *See*—
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National Lead Co.: *See*—
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Espenschied, Helmut. 2,896,193.
Herman, Daniel F., and Weil. 2,896,355.
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Rawcliffe, Gordon H. 2,896,535.

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La Forge, Louis H., Jr., Neal, and Whitehurst. 2,896,273.

Neid, Louis J., deceased; by P. E. Neid, executrix. Bird trap. 2,897,627, 8-4-59, Cl. 43—65.

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Neidhardt, Rudolf, to Triumph Werke Nurnberg Aktiengesellschaft. Carriage return control arrangement. 2,897,942, 8-4-59, Cl. 197—66.

Neipert, Marshall P., R. D. Blue, and H. E. Houser, to The Dow Chemical Co. Mercury cathode chlorine cell. 2,896,284, 8-4-59, Cl. 204—219.

Nelson, Franklin C., and G. W. Piero, to Esso Research and Engineering Co. Pesticidal petroleum composition and use thereof. 2,896,263, 8-4-59, Cl. 167—28.

Nelson, Harrison A., and C. M. Large, to The Upjohn Co. Acid purification of fumagillin. 2,896,268, 8-4-59, Cl. 167—65.

Nemoede, Frederick: *See*—
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Nergaard, Arnold, to Clayton Mark & Co. Valve for water softening. 2,897,891, 8-4-59, Cl. 161—7.

Nergaard, Arnold, to Clayton Mark & Co. Valve for water softeners. 2,897,968, 8-4-59, Cl. 210—278.

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Patrichi, Mihai D. 2,897,583.
Patrichi, Mihai D. 2,896,570.

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New Jersey Zinc Co., The: *See*—
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Snow, George E. 2,896,276.

Newman, Arthur L.: *See*—
Kirkpatrick, William D., and Newman. 2,897,700.

Newton, Chambers & Co. Ltd.: *See*—
Green, Edward E. 2,896,009.

Nichols, Bill, and R. W. Rath, to Rath Packing Co. Rotary mold for massage. 2,897,745, 8-4-59, Cl. 99—427.

Nipp, Kenneth W.: *See*—
Thompson, Joseph C., and Nipp. 2,896,169.

Nischk, Gunther, ½ to Farbenfabriken Bayer Aktiengesellschaft, and ½ to Mobay Chemical Co. Isocyanato-mustard oils. 2,896,363, 8-4-59, Cl. 260—454.

Nishikiori, Seiji. Steel ingot making composition, method and apparatus. 2,897,555, 8-4-59, Cl. 22—64.

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Noack, Rolf: *See*—
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Schneider, Edward B., and Stevens. 2,896,253.

North American Philips Co., Inc.: *See*—
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Falk, Sven G. 2,896,116.
Jonkers, Cornelius O., and Köhler. 2,897,655.
Köhler, Jacob W. L., and Den Haan. 2,896,166.
Owen, Alan R. 2,896,240.
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Northern Electric Co., Ltd.: *See*—
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Northrop Aircraft, Inc.: *See*—
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Northrop Corp.: *See*—
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Rice, Rex, Jr., Dilling, and Tyson. 2,896,175.

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Norton, James H.: *See*—
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Norton, James H., and S. B. Baker, to Esso Research and Engineering Co. High temperature lubricating greases. 2,896,300, 8-4-59, Cl. 252—49.9.

Norton, Robert L., to Penta Laboratories, Inc. Electron discharge device. 2,896,504, 8-4-59, Cl. 313—299.

Norwich Pharmacal Co., The: *See*—
Michels, Julian G. 2,896,335.

Novkov, Raymond E., to Manchester Machine & Tool Co. Cut-off tool. 2,897,579, 8-4-59, Cl. 29—96.

Nungester, Walter J., to Aircraft Precision Products, Inc. Closure and spring clip assembly adapted for use with a test tube and the like. 2,897,992, 8-4-59, Cl. 215—38.

Nye, Robert G. Propeller noise simulator. 2,896,587, 8-4-59, Cl. 340—384.

Oberbeck, Helmut, to Firma Telefunken Gesellschaft Fur Drahtlose. Line section. 2,896,558, 8-4-59, Cl. 332—2.

Odell, William W. Treatment at elevated temperatures and/or carbonisation of carbonaceous materials. 2,896,272, 8-4-59, Cl. 202—4.

O'Donnell, John F., and D. Segall, to International Business Machines Corp. Voltage control system. 2,896,514, 8-4-59, Cl. 315—106.

Ofner, Franklin F. Light meter. 2,897,720, 8-4-59, Cl. 88—23.

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Selsing, Jorgen. 2,896,217.

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Holbrook, Robert L. 2,896,180.
Miller, Charles E., Robinson, and Woodring. 2,897,758.
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Olson, Floyd C., and E. W. Turner, to Oscar Mayer & Co., Inc. Preservation of cured meat color. 2,896,212, 8-4-59, Cl. 99—174.

Olson, James M. Animal carrier for vehicles. 2,897,781, 8-4-59, Cl. 119—19.

Olson, Robert V., to Wanskuck Co. Braider carrier. 2,897,715, 8-4-59, Cl. 87—56.

Olson, Robert V., to Wanskuck Co. Braider carrier. 2,897,716, 8-4-59, Cl. 87—57.

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Carlton, Raymond R. 2,897,857.

O'Neill, Paul J., Jr., to Union Machine Company. Paint mixer. 2,896,094, 8-4-59, Cl. 259—118.

Ordnance Specialties, Inc.: *See*—
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Orderica, Vincent: *See*—
Richter, Albert, Orderica, and Gerta. 2,896,485.

Organon Inc.: *See*—
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Ortloff, John E., to Jersey Production Research Co. Blow-out closure device pressure head. 2,897,895, 8-4-59, Cl. 166—96.

Ortman, Alva H. Cylinder cushioning structure. 2,897,785, 8-4-59, Cl. 121—38.

Orwitz, Nathaniel B., to Blaw-Knox Co. Metal casting. 2,897,557, 8-4-59, Cl. 22—216.

Orsini, Camillo D., to Nixon Nitration Works. Apparatus for extruding sheets with striped pattern. 2,897,541, 8-4-59, Cl. 18—12.

O'Shaughnessy, James M.: *See*—
Duane, Donald, and O'Shaughnessy. 2,896,357.

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Rudd, Wallace C., Cameron, and Osterer. 2,896,440.

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Richman, Donald, to Hazeltine Research, Inc. Phase detec-

Otto, Heinrich, and A. Mogk, to The Babcock & Wilcox Co. Steam generating unit with plural combustion chambers separated by a partition wall of steam generating tubes. 2,897,794, 8–4–59, Cl. 122—240.
Ouellette, Maxime E. Rural mail box. 2,898,066, 8–4–59, Cl. 248—145.
Overbaugh, Charles H. Golf ball tee. 2,898,110, 8–4–59, Cl. 273—210.
Owen, Alan E., to North American Philips Co., Inc. Photoconductive cell. 2,898,240, 8–4–59, Cl. 117—211.
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Stalego, Charles J., and Snow. 2,897,874.
Oxy-Catalyst, Inc.: *See*—
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Houdry, Eugene J., Eriksson, and Coudray. 2,898,202.
Palcer, Joseph A.: *See*—
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Palmer, Ben. Cleaning tool and parts washer. 2,897,830, 8–4–59, Cl. 134—99.
Palmer, Elton M., to Gulf Research & Development Co. Apparatus for profile presentation of seismic information. 2,898,574, 8–4–59, Cl. 340—15.
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Panicci, Richard L., to Hampden Specialty Products, Inc. Chair construction. 2,897,880, 8–4–59, Cl. 155—191.
Paramore, Grady B. Infant care apparatus. 2,897,518, 8–4–59, Cl. 5—109.
Park, Alexander C. Simulated orbiting artificial satellite. 2,897,607, 8–4–59, Cl. 35—46.
Parker, Louis W. High voltage generator for cathode ray tubes. 2,898,506, 8–4–59, Cl. 315—1.
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Parkton, James E. 2,898,049.
Parkton, James E., to Parkton Compound Boiler Co., Inc. Control for vacuum heating systems. 2,898,049, 8–4–59, Cl. 237—9.
Parmet, Bernard S., and F. L. Di Nardo, to Motorola, Inc. Tuning system. 2,898,400, 8–4–59, Cl. 178—5.4.
Patalong, Hubert, to Siemens-Schuckertwerke Aktiengesellschaft. Silicon semiconductor device. 2,898,528, 8–4–59, Cl. 317—241.
Paterson, Peter S., to Saco-Lowell Shops. Web condensing apparatus for a carding machine. 2,897,549, 8–4–59, Cl. 19—150.
Patrichi, Mihai D., to Networks Electronic Corp. Electrical resistors. 2,898,570, 8–4–59, Cl. 338—287.
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Patton, Stewart U. Bearing construction with edge load relief. 2,898,164, 8–4–59, Cl. 308—238.
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Pavey, George M., Jr., to Marine Research Co. Ring actuated locking electrode for a towed firing line. 2,897,755, 8–4–59, Cl. 102—16.
Pearce, Ralph R., to Electric & Musical Industries Ltd. Cathode ray tubes. 2,898,491, 8–4–59, Cl. 313—70.
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Perry, Howard A., Jr., G. E., and H. G. 2,897,818.
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Perry, Howard A., Jr., G. E., and H. G. 2,897,818.
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Perry, James A. Deep well pump. 2,897,766, 8–4–59, Cl. 103—179.
Perryn, Jennie E. Separable fastener closer. 2,898,141, 8–4–59, Cl. 294—1.
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Peters, Clifford M., and R. W. Dinning, to U.S. Industries, Inc. Balanced valve. 2,897,836, 8–4–59, Cl. 137—454.5.
Peters, Edwin F., and B. L. Evering, to Standard Oil Co. Polymerization of olefins with a catalyst comprising a hydride of boron and an oxide of a metal of group 6a. 2,898,326, 8–4–59, Cl. 260—88.1.
Peterson, Willard D., to American Potash & Chemical Corp. Preparation of borohydrides. 2,898,184, 8–4–59, Cl. 23—14.
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Phelan, James M., and J. A. Wilson, to Esso Research and Engineering Co. Apparatus for determining the evaporation end point of volatile liquids. 2,897,671, 8–4–59, Cl. 73—53.
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Hillyer, John C., and Edmonds. 2,898,347.
Hogan, John P., and Gardner. 2,898,360.
Pollock, Lyle W. 2,898,158.
Smith, David R., and Hall. 2,898,315.
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Pifer, Marion J., to Sylvania Electric Products Inc. Television apparatus. 2,898,586, 8–4–59, Cl. 340—369.
Pimbley, George H., to Turco Products, Inc. Process for producing aluminum surface coatings. 2,898,250, 8–4–59, Cl. 148—6.21.
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Haas, Howard C. 2,898,231.
Hanlon, Albert J. 2,898,447.
Land, Edwin H., and McCune. 2,898,208.
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Pollock, Lyle W., to Phillips Petroleum Co. Controlling mass flow rate of particulate material in a pneumatic system. 2,898,158, 8–4–59, Cl. 302—58.
Polmanteer, Keith E., to Dow Corning Corp. Siloxane rubber tire. 2,897,869, 8–4–59, Cl. 152—330.
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Pommer, Horst, to Badische Anilin- & Soda-Fabrik Aktiengesellschaft. Production of vitamin A and vitamin A esters. 2,898,368, 8–4–59, Cl. 260—488.
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Porter-Cable Machine Co., The: *See*—
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Powell, Manly, J., and T. A. Cecil, to Minerals & Chemicals Corp. of America. Preparation of spherical contact masses. 2,898,304, 8–4–59, Cl. 252—450.
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Presto Lock Co.: *See*—
Gumport Alfred G. 2,897,666.
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Priest, Gerald G., B. E. Morgan, M. L. Lytle, J. A. Caldwell, and B. F. Birdwell, to Jersey Production Research Co. Well completion fluids. 2,898,294, 8–4–59, Cl. 252—8.55.
Primich, Theodore. Metal builder's construction material. 2,897,930, 8–4–59, Cl. 189—36.
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Rudolph, Paul S., to Bausch & Lomb Optical Co. Anastigmatic objective. 2,898,819, 8–4–59, Cl. 350—214.
Ruhl, Robert C., to Ruhl Corp. Method of and apparatus for producing a fibrous web. 2,897,547, 8–4–59, Cl. 19—65.
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Rupp, Adolph F., to Rupp Industries, Inc. Vehicle. 2,898,134, 8–4–59, Cl. 280—124.
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Russell, Thomas A., to Bell Telephone Laboratories, Inc. Electrical circuit. 2,898,553, 8–4–59, Cl. 333—70.
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Sakmann, Hans, to Siemens-Schuckertwerke Aktiengesellschaft. Semiconductor device. 2,898,527, 8–4–59, Cl. 317—235.
Salisbury, Lewis L., to Bell Telephone Laboratories, Inc. Electrical circuit. 2,898,553, 8–4–59, Cl. 333—70.
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Hymas, Donald G., and McDermody. 2,898,455.
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Larach, Simon. 2,898,475.
Moore, Thomas H. 2,898,579.
Musolf, Gunter F. 2,898,536.
Weimer, Paul K. 2,898,489.
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Borins, Louis, Slud, and Zubkoff. 2,898,085.
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Nichols, Bill, and Rath. 2,897,745.
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Richter, Albert, V. Ordorica, and D. Gertz, to Sperry Rand Corp., Ford Instrument Co. Division. Magnetic clutch. 2,898,485, 8–4–59, Cl. 310—104.
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Rochlus, Bertram J. Compressor with dual compression chambers. 2,898,034, 8–4–59, Cl. 230—147.
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	16: 185,783		20: 185,792	D33—	3: 185,801		21: 185,810	D64—	11: 185,819	D66—	10: 185,828
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Reg. No. 543,740. (See Reg. No. 196,182.)

Tenda Corp. et al. v. Babes-Tenda Distributors Corp. et al. Judgment by consent, injunction granted May 13, 1959.

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

August 4, 1959 Volume 745 Number 1

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 75,365 (ALLIGATOR BRAND), The Alligator Co., Oiled clothing; **Reg. No. 251,201** (ALLIGATOR), same, Coats, jackets, pants, hats and caps for men, women and children, etc., filed Feb. 27, 1959, D.C., S.D.N.Y., Doc. 143/250, *The Alligator Co. and David Crystal, Inc.* v. *Henry J. Tully & Co., Inc. and Akom Knitwear, Inc.* Judgment by consent, injunction granted May 7, 1959.

Reg. No. 88,681. (See Reg. No. 355,922.)

Reg. No. 95,516 (ROCK OF AGES), Rock of Ages Corp., Granite blocks and monumental stones; **Reg. No. 294,296**, same, Granite monuments and memorials; **Reg. No. 296,033**, same, Polished blocks or slabs of granite, etc., filed May 29, 1959, D.C. Vt. (Burlington), Doc. 2760, *Rock of Ages Corp.* v. *Hebert and Lallemand.*

Reg. No. 148,909 (TOMMY TUCKER), Shrage and Pines, Boys' shirts and blouses; **Reg. No. 423,426** (TOMMY TUCKER WITH DESIGN), same, Polo shirts, boys' shirts and blouses, filed July 14, 1952, D.C., S.D.N.Y., Doc. 77/159, *Max Shrage Co., Inc.* v. *Keylon, Inc.* Order of dismissal May 22, 1959. Same, filed same, Doc. 77/160, same, decree as above. Same, filed same, Doc. 77/161, same, decree as above. Same, filed same, Doc. 77/162, same, decree as above.

Reg. No. 196,122 (MILKY WAY AND DESIGN), Mars, Inc., Candy; **Reg. No. 291,209**, same; **Reg. No. 342,740**, same; Ice cream; **Reg. No. 296,127**, same, Egg whites; **Reg. No. 296,128** (MILKY WAY EGG WHITES), same, Egg whites; **Reg. No. 296,129** (MILKY WAY EGG YOLKS), same, Egg yolks, filed May 20, 1959, D.C., M.D. Tenn. (Nashville), Doc. 2727, *Mars, Inc.* v. *H. T. Stiff, Jr.*

Reg. No. 217,620 (A.M.C.), Associated Merchandising Corporation, Men's negligee shirts; **Reg. No. 226,207**, (A.M.C. AND DIAMOND DESIGN), same, Pajamas, filed May 29, 1959, D.C., S.D.N.Y., Doc. 146/324, *Associated Merchandising Corp.* v. *Mersley Handkerchief Co., Inc. et al.*

Reg. No. 251,201. (See Reg. No. 75,365.)

Reg. No. 294,296. (See Reg. No. 95,516.)

Reg. No. 296,033. (See Reg. No. 95,516.)

Reg. No. 296,127. (See Reg. No. 196,122.)

Reg. No. 296,128. (See Reg. No. 196,122.)

Reg. No. 296,129. (See Reg. No. 196,122.)

Reg. No. 296,207. (See Reg. No. 217,620.)

Reg. No. 227,207 (RONLEY AND DESIGN), Goldring Merchandising Corp., Men's and women's coats, suits and dresses, filed Oct. 7, 1955, D.C., S.D.N.Y., Doc. 104/89, *Goldring, Inc.* v. *Ronley Furs, Inc.* Order of discontinuance June 1, 1959.

Reg. No. 277,048 (COTILLION), W. Steinman, Inc., Ladies', misses' and junior dresses, filed July 23, 1955, D.C., S.D.N.Y., Doc. 102/176, *Cotillion Formals, Inc.* v. *Murray Hamburger and Co., Inc.* Filed order of dismissal for lack of prosecution May 27, 1959.

Reg. No. 422,426. (See Reg. No. 148,909.)

Reg. No. 566,224. (See Reg. No. 612,540.)

CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1959

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	10,792
Date of oldest new application	Jan. 2, 1959
Date of oldest amended application	Feb. 3, 1959

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 16, 19, 21, 23, 24, 25, 26, 30, 31, 32, 33, 34, 35, 36, 44, 50	2-13-59	2-11-59
(II) R. F. SHROCK, Classes 6, 18, 27, 28, 46, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks Class 200	1-20-59	2-9-59
(III) K. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 20, 22, 29, 37, 38, 39, 40, 41, 42, 43, 45, 47, 48, 49, 52; and Certification Marks	1-2-59	3-9-59
Renewals (All Classes)	3-20-59	6-25-59
Sec. 12 (c) Publications (All Classes)	6-5-59	6-5-59

Applications filed during the month of June 1959—2,029

Registrations Issued	350—No 682,713 to No. 683,062
Renewals Issued	55

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

	185, 786		185, 795	5: 185, 804		22: 185, 813	185, 822
	4: 185, 787		8: 185, 796	15: 185, 805	D50—	3: 185, 814	D74— 1: 185, 823
D 9—	2: 185, 788	D26—	14: 185, 797	185, 806	D54—	13: 185, 815	17: 185, 824	D91— 2: 185, 831

Reg. No. 543,749. (See Reg. No. 196,182.)

Reg. No. 591,999. (See Reg. No. 196,182.)

Reg. No. 612,548 (BABEE TENDA), Babee-Tenda License Corp., Combined tables and chairs for infants and juveniles; **Reg. No. 666,986** (TENDA), The Babee-Tenda Corp., same, filed Aug. 27, 1958, D. C., S.D.N.Y., Doc. 137/132, *The Babee-Tenda Corp. et al. v. Babee-Tenda Distributors Corp. et al.* Judgment by consent, injunction granted May 13, 1959.

Reg. No. 664,557 (WHITE EAGLE), National Cordial Co., Inc., Vodka, filed May 29, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c867, *National Cordial Co. v. Schenley Industries, Inc. et al.*

Class 2 — Receptacles

Class 7 — Cordage

TM 745 O.G.—1

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 37,348. Forms Incorporated, Los Angeles, Calif. Filed Sept. 17, 1957.

AQUATITE

For Flexible Unicellular Plastic Material.
First use June 10, 1957.

SN 45,312. Crystal-X Corporation, Lenni Mills, Pa. Filed Feb. 5, 1958.

CRYSTALENE

For Polyethylene Sheeting for General Use.
First use May 1, 1957.

SN 49,880. Stern's Nurseries, Inc., Geneva, N.Y. Filed Apr. 17, 1958.

JEWEL-TONE

For Flower Plants.
First use Apr. 14, 1957.

SN 52,562. John R. Evans & Co., Camden, N.J. Filed May 29, 1958.

PEERLESS

For Leather.
First use during 1913.

SN 52,563. John R. Evans & Co., Camden, N.J. Filed May 29, 1958.

JIMMY PIG

For Pigskin Leather.
First use during 1939.

SN 54,583. Wells & Wade Fruit Company, Wenatchee, Wash. Filed June 30, 1958.

WELLSPUR

For Delicious Apple Trees and Scions Thereof.
First use June 23, 1958.

SN 60,593. Adams Corporation, Korn Kurls Division, Beloit, Wis. Filed Oct. 14, 1958.

HICKORY FLAK

Owner of Reg. No. 628,769.
For Pulverized Wood for Producing a Smoked Flavor Barbecue.
First use Feb. 14, 1955.

SN 61,257. Cadillac Plastic and Chemical Company, Detroit, Mich. Filed Oct. 24, 1958.

CADCO

Owner of Reg. Nos. 599,219 and 602,585.
For Plastic Rods, Sheets, Tubing, Film, Blocks, Strips, Discs, Tape, Resin, Glass Fibres, Glass Strands, for Further Manufacture in the Industrial Arts.
First use Aug. 12, 1950, on plastic rods, sheets, and tubing.

SN 64,115. Tennessee Absorbent Clay Co., Paris, Tenn. Filed Dec. 11, 1958.

CAT-COMFORT

For Ground Absorbent Clay Containing a Deodorizer for Cats' Litter Boxes.
First use Dec. 7, 1953.

SN 65,686. Mundet Cork Corporation, North Bergen, N.J. Filed Jan. 12, 1959.

The words "For Safety's Sake," "Equipped With Expanded Polystyrene Flotation Material," and "Feather-Lite" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 417,415 and 667,590.

For Expanded Polystyrene in Various Shapes and Sizes for Use as Flotation Material in Boats, Floats, Rafts, Buoys, and Platforms.
First use July 15, 1958.

SN 65,960. Judson Nurseries, Inc., Bristol, Ind. Filed Jan. 16, 1959.

For Packaged, Potted, Growing Fruit and Flower Bearing Plants.
First use Mar. 15, 1958.

SN 66,412. Charco, Inc., Denver, Colo. Filed Jan. 26, 1959.

MINIT GLO

For Charcoal Briquets.
First use on or about Dec. 5, 1958.

SN 67,064. International Minerals & Chemical Corporation, Skokie, Ill. Filed Feb. 4, 1959.

Z-FLO

For Foundry Core Compound.
First use Oct. 30, 1958.

Contained Salad Cases, Sandwich Units, Self-Contained

SN 67,206. Monsanto Chemical Company, St. Louis, Mo.

Class 2 — Receptacles

SN 38,436. Dempster Brothers, Inc., Knoxville, Tenn. Filed Oct. 7, 1957.

DEMPSTER DUMPSTER DOOR-TO-DOOR

Owner of Reg. Nos. 353,436 and 583,794.

For Storage and Transporting Dumping Containers for Use in Carrying and Dumping Materials—Namely, Refuse, Trash, Garbage, Scrap, Dirt, and Rock.

First use Aug. 29, 1957.

SN 46,167. Signode Steel Strapping Company, Chicago, Ill. Filed Feb. 19, 1958.

UNI-DRUM

For Shipping and Storage Containers of the Drum Type.

First use Jan. 16, 1958.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 36,549. Aetna Leather Novelty Co., Inc., d.b.a. Aetna, Union City, N.J. Filed Sept. 3, 1957.

Royaltone

For Processed Plastic Sold Only in Finished Ladies' Handbags.

First use May 15, 1957.

SN 67,475. Reliance International Mfg. Ltd., Hempstead, N.Y. Filed Feb. 10, 1959.

"THUNDERBIRD"

For Bird Cages.

First use Feb. 15, 1958.

Class 4 — Abrasives and Polishing Materials

SN 65,174. Zep Manufacturing Corporation, Atlanta, Ga. Filed Dec. 31, 1958.

ZEP

For Polishes for Metal, Wood, and Painted Surfaces, Self-Polishing Liquid Floor Waxes, and Waxless Floor Finishing and Polishing Preparations.

First use Jan. 1, 1937.

SN 65,283. Zep Manufacturing Corporation, Atlanta, Ga. Filed Jan. 2, 1959.

ZEP

For Polishes for Wood, Metal, and Painted Surfaces, Self-Polishing Liquid Floor Waxes, and Waxless Floor Finishing and Polishing Preparations.

First use Jan. 1, 1937.

Class 7 — Cordage

SN 66,369. D. Morgan Rees & Sons Limited, Whitchurch, Cardiff, Wales. Filed Jan. 22, 1959.

SEAMASTER

Owner of British Reg. No. 765,802, dated May 22, 1957.

For Wire Ropes.

SN 66,370. D. Morgan Rees & Sons Limited, Whitchurch, Cardiff, Wales. Filed Jan. 23, 1959.

EARTHMASTER

Owner of British Reg. No. 772,623, dated Dec. 31, 1957.

For Wire Ropes.

Class 10 — Fertilizers

SN 66,647. L. C. Schuler Company, Incorporated, Marshall, Minn. Filed Jan. 28, 1959.

PeP leafeate

For Fertilizer.

First use Nov. 1, 1956.

Class 11 — Inks and Inking Materials

SN 60,957. Pioneer Printing Ink Corporation, Monroe, Mich. Filed Oct. 20, 1958.

VAPENE

For Printing Ink.

First use May 1, 1956.

SN 60,958. Pioneer Printing Ink Corporation, Monroe, Mich. Filed Oct. 20, 1958.

CORAGLO

For Printing Ink.

First use May 1, 1956.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

SN 67,709. Progressive Metal Equipment, Inc., d.b.a. Progressive Metal Equipment Inc., Philadelphia, Pa. Filed Feb. 13, 1959.

The lining on the drawing is an integral portion of the mark and is not for the purpose of designating color. Owner of Reg. Nos. 617,073 and 617,068.

For Luncheonette and Fast Food Service Equipment—Namely, Salad Cases, Salad Cases With Water Station, Self-

First use Aug. 12, 1950, on plastic rods, sheets, and tubing.

First use Oct. 30, 1958.

Contained Salad Cases, Sandwich Units, Self-Contained Sandwich Units, Equipment Stands With Up-Draft System, Equipment Stands With Up-Draft System With Built In Electrical Griddle and Fryer, Food Warming Tables, Refrigerated Back Bars, Urn Stands, Service Stands, Griddle Stands, Breadboxes, Waitress Stations, Toaster Stands, Lowerator Stands, Wall Panels, Canopies, Cornices, Capping, Shelving, Lighting Soffits, Non-Refrigerated and Refrigerated Wall Display Cases.

First use on or about Apr. 16, 1958.

Class 14 — Metals and Metal Castings and Forgings

SN 67,283. American Metallurgical Products Company, Pittsburgh, Pa. Filed Feb. 9, 1959.

SATELLITE

For Rare Earth Containing Additive Alloys.
First use in July 1957.

Class 15 — Oils and Greases

SN 49,474. Clarence M. Wynn, d.b.a. Dri-Powr Co., Azusa, Calif. Filed Apr. 10, 1958.

RUST-NO-MOR

For Additives for Use in Internal Combustion Engine Radiators for Inhibiting Rust Formation Therein, and for Lubricating Water Pumps.
First use Jan. 4, 1954.

SN 66,810. Penola Oil Company, New York, N.Y. Filed Jan. 30, 1959.

Jersey

For Refined, Semirefined, and Unrefined Oils Made From Petroleum, Both With and Without Admixture of Animal, Vegetable or Mineral Substances for Illuminating, Burning, Power, Fuel, and Lubricating Purposes, and Lubricating Greases and Paraffin Waxes.
First use July 16, 1958.

SN 67,693. Magnet Cove Barium Corporation, Houston, Tex. Filed Feb. 12, 1959.

BLOK BUSTER

For Oil-Wash Concentrate for Adding to Clean Oil, the Product so Formed Being for the Purpose of Cleaning Formation and Restoring Formation Permeability in Wells.
First use June 18, 1958.

SN 67,806. Monsanto Chemical Company, St. Louis, Mo. Filed Feb. 16, 1959.

PYDRO-LUBE

For Lubricant, Lubricating Oil, and Fuel Oil Additive.
First use Feb. 3, 1959.

SN 67,809. Monsanto Chemical Company, St. Louis, Mo. Filed Feb. 16, 1958.

TURBINOL

For Lubricant, Lubricating Oil, and Fuel Oil Additive.
First use Feb. 3, 1959.

SN 67,822. Pro-Chem, Inc., Cleveland, Ohio. Filed Feb. 16, 1959.

PRO-CHEM

For Cutting and Grinding Coolants, Including Both Synthetic and Oil Base Materials.
First use Jan. 2, 1956.

SN 68,410. Lubrication Engineers, Inc., Fort Worth, Tex. Filed Feb. 25, 1959.

ALMASOL

For Bearing, Chassis, and Gear Lubricants.
First use Feb. 17, 1959.

SN 68,913. Farris C. Lind, Boise, Idaho. Filed Mar. 4, 1959. Owner of Reg. No. 580,094.

STINKER

For Gasoline.
First use 1947.

SN 68,915. Farris C. Lind, Boise, Idaho. Filed Mar. 4, 1959. Owner of Reg. No. 582,983.

SKUNK

For Motor Oil.
First use 1953.

SN 68,916. Farris C. Lind, Boise, Idaho. Filed Mar. 4, 1959. Owner of Reg. No. 582,983.

For Motor Oil and Gasoline.
First use 1947.

SN 68,917. Farris C. Lind, Boise, Idaho. Filed Mar. 4, 1959. Owner of Reg. No. 577,758.

FEARLESS FARRIS

For Gasoline.
First use 1941.

SN 67,277. Amco Laboratorios, S.A., Mexico City, Mexico. Filed Feb. 9, 1959.

SN 68,461. Ashe-Wood, Inc., Detroit, Mich. Filed Feb. 26, 1959.

Class 16—Protective and Decorative Coatings

SN 66,812. Penola Oil Company, New York, N.Y. Filed Jan. 30, 1959.

Jersey

For Pigmented, Unpigmented, Transparent, Plastic and Semi-Plastic, Ready Mixed, Paste and Dry Metallic, Bituminous, Asphaltic, Heat Resisting, Rust and Corrosion Inhibiting and Gas Proofing Coatings of the Nature of Paints and Primers, and Thinners, Reducers and Oils for Use Therewith.
First use Oct. 3, 1958.

Class 18—Medicines and Pharmaceutical Preparations

SN 61,475. Benger Laboratories Limited, Cheshire, England. Filed Oct. 29, 1958.

LOMU

Priority claimed under Sec. 44(d) on British Reg. No. 781,443, dated Sept. 3, 1958.
For Pharmaceutical Preparations for Human and Veterinary Use.

SN 62,386. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Nov. 13, 1958.

GONULIN

Owner of German Reg. No. 213,378, dated Oct. 25, 1910.
For Pharmaceutical Preparations.

SN 62,387. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Nov. 13, 1958.

PRESINOL

Owner of German Reg. No. 167,813, dated Dec. 5, 1912.
For Pharmaceutical Preparations.

SN 63,796. Bristol Laboratories Inc., Syracuse, N.Y. Filed June 8, 1959.

KAMYNA

For Antibiotic Pharmaceutical Preparation.
First use Dec. 2, 1958.

SN 64,639. Merck & Co., Inc., Rahway, N.J. Filed Dec. 19, 1958.

DIUPRES

Owner of Reg. Nos. 663,697, 518,753, and others.
For Medicinal Preparation for Use in the Treatment of Hypertension.
First use Nov. 25, 1958.

SN 66,737. The Purdue Frederick Company, New York, N.Y. Filed Jan. 29, 1959.

SENOTAB

For Preparation for the Treatment of Constipation.
First use Jan. 26, 1959.

SN 66,802. N.V. Philips-Roxane Pharmaceutisch-Chemische Industrie "Duphar," Amsterdam, Netherlands. Filed Jan. 30, 1959.

DUPHASMA

Owner of Dutch Reg. No. 125,581, dated July 30, 1956.
For Medicines, Particularly a Remedy Against Asthma and Other Allergic Affections.

SN 67,012. Laboratories for Pharmaceutical Development, Inc., Yonkers, N.Y. Filed Feb. 3, 1959.

ACTASAL

For Analgesic and Antipyretic Preparation.
First use Jan. 29, 1959.

SN 67,022. Chas. Pfizer & Co., Inc., Brooklyn, N.Y. Filed Feb. 3, 1959.

LIQUAMAST

For Veterinary Mastitis Preparation.
First use Dec. 11, 1958.

SN 67,113. Baxter Laboratories, Inc., Morton Grove, Ill. Filed Feb. 5, 1959.

TIS-U-SOL

For Physiological Irrigation Solution.
First use Jan. 22, 1959.

SN 67,114. Baxter Laboratories, Inc., Morton Grove, Ill. Filed Feb. 5, 1959.

PLASMA-LYTE

For Fluid for Parenteral Use Containing Metallic Salts in Water.
First use Jan. 22, 1959.

SN 67,139. Walter J. Miller, d.b.a. Jim-E-Rub Company, Reading, Pa. Filed Feb. 5, 1959.

JIM-E-RUB

For Liquid Rub Solution for Muscular Aches and Pains.
First use Oct. 21, 1952.

SN 67,186. The Archer Corporation, Fargo, N. Dak. Filed Feb. 6, 1959.

VITA-PHAIM

For Vitamin and Mineral Food Supplement.
First use Dec. 10, 1958.

SN 67,200. Canright Corporation, Glendale, Calif. Filed Feb. 6, 1959.

HYSSEN-AC

For Preparation for Mood Elevation and Appetite Control.
First use Jan. 2, 1959.

SN 52,750. Jerome H. Newman, executor of the estate of Louis Newman, deceased, d.b.a. L. Newman Tool Die &

Class 26—Measuring and Scientific

First use June 16, 1958.

First use 1941.

SN 67,277. Amco Laboratories, S.A., Mexico City, Mexico. Filed Feb. 9, 1959.

AMCO

Owner of Mexican Reg. No. 85,287, dated Mar. 10, 1956.
For Preparation for the Treatment of Hydrocholeresis, Lipotropic Preparations, Antibiotics, Chemo-Therapeutic Agents, Anti-Rheumatic Preparations, Antiseptic Preparations, Antiasthmatic Preparations, Vitamin Preparations, Antispasmodic Preparations, Sedatives, Hematopoietic Preparations.

SN 67,295. Brayton Pharmaceutical Company, Chattanooga, Tenn. Filed Feb. 9, 1959.

ROENTEN

For Laxatives, and Evacuants To Clear Gas From the Intestines.
First use Oct. 16, 1958.

SN 68,660. Chicago Pharmacal Company, Chicago, Ill. Filed Mar. 2, 1959.

ANAMEBA

For Medicament Adapted for Treatment of Amoebic Dysentery.
First use Sept. 8, 1958.

Class 19—Vehicles

SN 65,616. The Bada Company, Pasadena, Calif. Filed Jan. 12, 1959.

MICRO-PRECISION

Owner of Reg. Nos. 615,732 and 674,516.
For Vehicle Wheel Weights.
First use Nov. 8, 1956.

SN 65,618. The Bada Company, Pasadena, Calif. Filed Jan. 12, 1959.

MICRO

Owner of Reg. Nos. 615,732 and 674,516.
For Vehicle Wheel Weights.
First use Apr. 17, 1957.

SN 68,436. Rockwell-Standard Corporation, Coraopolis, Pa. Filed Feb. 25, 1959.

HOLDMASTER

For Brakes for Vehicles.
First use in October 1957.

SN 66,661. Auke-Wood, Inc., Detroit, Mich. Filed Feb. 26, 1959.

SPATS

For Wheel Trim and Tire Trim for Vehicle Wheels.
First use Feb. 5, 1959.

Class 22—Games, Toys, and Sporting Goods

SN 42,025. Ideal Products, Inc., Sykesville, Pa. Filed Dec. 9, 1957.

The mark comprises the wording "Punkin Pocket" and an orange colored oval which is applied to the pocket of the glove.
For Baseball Glove.
First use Nov. 26, 1957.

SN 65,914. Mantua Metal Products Co., Inc., Woodbury Heights, N.J. Filed Jan. 14, 1959.

TYCO

For Toy Scale Model Trains and Street and Railway Car Sets.
First use in or about August 1958.

SN 66,352. Gentex Corporation, New York, N.Y. Filed Jan. 23, 1959.

COMPETITION

For Life Jackets.
First use Dec. 2, 1958.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 49,122. Carter Controls, Inc., Lansing, Ill. Filed Apr. 7, 1958.

CARTER CONTROLS

No claim is made to the word "Controls" apart from the mark as shown.
For Fluid Power Controls—Namely, Air and Hydraulic Cylinders and Parts Thereof.
First use in January 1953.

SN 52,158. Ritoloy, Incorporated, Hazel Park, Mich. Filed May 22, 1958.

SN 63,727. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Dec. 5, 1958.

First use Jan. 26, 1959.

First use Jan. 2, 1959.

SN 52,756. Jerome H. Newman, executor of the estate of Louis Newman, deceased, d.b.a. L. Newman Tool Die & Machine Work, Oakland, Calif. Filed June 2, 1958.

L. NEWMAN

For Grinding Wheel Dressers.
First use in or about August 1952.

SN 56,918. Burgess-Norton Mfg. Co., Geneva, Ill. Filed Aug. 11, 1958.

EXTRUSIONEERED

For Extruded Metal Parts Comprising Parts for Assembly Into Mechanisms Such as Engines and Including Piston Pins, Bushings, and Valve Lifters.
First use May 1958.

SN 61,785. Consolidated Electronics Industries Corporation, Alliance, Ohio. Filed Nov. 3, 1958.

alliance

Owner of Reg. Nos. 509,394, 653,008, and others.
For Can Openers.
First use on or about Oct. 20, 1958.

SN 69,330. Fab-Fibre, Inc., Center Line, Mich. Filed Mar. 11, 1959.

IN-CERTO

For Power-Driven Street Cleaning Brooms.
First use Sept. 22, 1958.

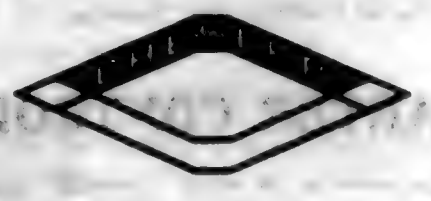
SN 69,453. United States Steel Corporation, Pittsburgh, Pa. Filed Mar. 12, 1959.

COHARD

For Sucker Rod Couplings.
First use Dec. 19, 1958.

Class 25—Locks and Safes

SN 37,718. J. Chesler & Sons, Inc., Brooklyn, N.Y. Filed Sept. 24, 1957.



Owner of Reg. No. 574,425.
For Locks.
First use on Jan. 23, 1950.

Class 26—Measuring and Scientific Appliances

SN 28,845. Educational Developmental Laboratories, Huntington, N.Y. Filed Apr. 25, 1957.

Controlled Reader

For Filmstrip Projector With Variable Speeds for Increasing the Speed and Accuracy of Reading.
First use February 1954.

SN 30,957. The Standard Motor Company Limited, Coventry, Warwickshire, England. Filed May 28, 1957.

STANPART

Owner of British Reg. No. 751,303, dated Feb. 25, 1956.
For Ammeters, Clinometers, Petrol Gauges, Temperature Indicators, Goggles, All for Use in Motor Vehicles.

SN 32,549. Shand and Jurs Co., Berkeley, Calif. Filed June 24, 1957.

S & J

Owner of Reg. Nos. 288,675 and 664,622.
For Electrical and Electronic Remote Reading Apparatus and Remote Control Apparatus—Namely, Remote Reading Gauging Systems, Remote Reading Temperature Systems, Remote Function Controls and Valve Monitors and Pump Monitors for Remote Supervisory Control.
First use Jan. 21, 1955.

SN 33,055. Tric-Kee Tool Company, Ballston Spa, N.Y. Filed July 12, 1957.

TRI ang-u-liner

The drawing is lined for shading purposes only.
For Wheel Alignment Measuring Instruments.
First use Apr. 10, 1957.

SN 35,821. Stewart-Warner Corporation, Chicago, Ill. Filed Aug. 19, 1957.

Hobbs

For Electrically Operated Clock Type Meters for Indicating the Number of Hours of Operation of an Engine.
First use July 16, 1957.

SN 46,204. Burling Instrument Company, Chatham, N.J. Filed Feb. 20, 1958.

COUPLE-SWITCH

For Thermocouple Temperature Sensing and Switching Equipment.
First use Jan. 30, 1958.

SN 68,795. Jacob Anthes, d.b.a. American Research Labora-

SN 69,088. Scientific Glass Apparatus Co., Inc., Bloomfield,

First use in October 1957.

First use in January 1958.

SN 52,158. Ritoloy, Incorporated, Hazel Park, Mich. Filed May 22, 1958.

RITOLOY

For Inspection Gages for Measuring Tools, Production Parts, and the Like.
First use in 1949.

SN 53,231. B-I-F Industries, Inc., Providence, R.I. Filed June 10, 1958.

KENNISON

For Fluid Flow Metering Nozzles.
First use May 20, 1958.

SN 54,127. Ateliers de Constructions Electriques de Charleroi, Brussels, Belgium. Filed May 7, 1958.

ACEC CHARLEROI

Owner of Belgian Reg. No. 3,862, dated Sept. 7, 1956.
For Oscillographs, Electric Counters, Impulse Generators, Spectographs, Isotopic Tracers, Radiation Detectors, Telemeters, and Wilson Chambers.

SN 54,906. Unigage Corporation, Downers Grove, Ill. Filed July 7, 1958.

UNIGAGE

For Dimensional Measuring Instruments Used on Metals.
First use Apr. 24, 1958.

SN 57,021. Sperry Rand Corporation, Great Neck, N.Y. Filed Aug. 11, 1958.

ROTORACE

For Gyroscopes, Directional Gyroscopes, Gyroscopic Platforms, Reference Systems Utilizing Gyroscopes, and Compass Systems Utilizing Gyroscopes.
First use Apr. 3, 1958.

SN 58,187. General Dynamics Corporation, Rochester, N.Y. Filed Sept. 2, 1958.

EUCLID

For Data Processing Equipment and Components Therefor.
First use in 1956.

SN 62,791. Rosemount Engineering Company, Minneapolis, Minn. Filed Nov. 19, 1958.

REC

For Temperature Probes, Pressure Transducers, and Pitot-Static Tubes.
First use Nov. 1, 1957.

SN 63,727. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Dec. 5, 1958.

THERMO-FAX

Owner of Reg. Nos. 560,068, 577,845, and 601,804.
For Electrically Operated Machine for Reading Microfilm and Producing Copies of the Information Contained on Microfilm.
First use Sept. 11, 1958.

SN 64,137. Bytrex Corporation, Newton, Mass. Filed Dec. 12, 1958.

BYTREX

For Electronic Force and Weight Measuring Equipment, Utilizing One or More Mechanical to Electrical Transducers and One or More Indicating, Recording, and/or Controlling Instruments. The Instrumentation Consists of the Necessary Power Supplies, Amplifiers, Electrical Calibration Circuits, and Other Associated Equipment for Converting the Output Signal From the Transducers to a Visible Indication, a Permanent Record, or an Appropriate Control Form. The Trademark Is Also Used on Laboratory Standards Including Precision Test Bridges as Well as Upon Test Instrumentation Comprising a Variety of Devices for Measuring Voltage, Voltage Ratios, and Resistance Ratios.
First use July 14, 1958.

SN 64,919. U.S. Photo Supply Co., Inc., Washington, D.C. Filed Dec. 24, 1958.

ENVOY

For Photographic Cameras.
First use on or about Dec. 16, 1958.

SN 66,123. Toledo Scale Corporation, Toledo, Ohio. Filed Jan. 19, 1959.

REMOSET

Owner of Reg. No. 677,307.
For Equipment for Controlling the Quantities of the Ingredients To Be Measured by Automatic Weighing and Batching Apparatus.
First use Dec. 23, 1958.

SN 66,133. Lynden V. Grover, d.b.a. Grover Photo Products, Glendale, Calif. Filed Feb. 20, 1959.

PERMAFOIL

For Photo-Sensitive Aluminum Foil.
First use Mar. 17, 1958.

SN 66,723. North American Aviation, Inc., Los Angeles, Calif. Filed Mar. 2, 1959.

Rocomp

Owner of Reg. No. 667,714.
For Electronic Computers.
First use Oct. 16, 1958.

SN 60,268. Marvella Pearls, Inc., New York, N.Y. Filed Mar. 10, 1959.

SN 67,453. Glamur Products Incorporated, Syracuse, N.Y. Filed Feb. 10, 1959.

SN 68,795. Jacob Anthes, d.b.a. American Research Laboratories, Fort Atkinson, Wis. Filed Mar. 3, 1959.

PHOTO-TRONIC

Owner of Reg. No. 648,909.
For Motion Picture Projectors.
First use Feb. 10, 1959.

SN 68,865. American Photocopy Equipment Company, Evanston, Ill. Filed Mar. 4, 1959.

UNIMATIC

For Printing and Developing Apparatus.
First use May 22, 1958.

SN 68,969. Societe Industrielle de Lunetterie, Paris, France. Filed Feb. 26, 1959.

Sol-amor

Owner of U.S. Reg. Nos. 549,052 and 577,601.
For Spectacles—Namely, Eye Glasses, Sun Glasses, Frames for Spectacles Made of Metal, Plastic and Other Suitable Substances, and Combined Frames for Spectacles, Lenses for Spectacles.
First use May 18, 1953; in commerce Aug. 31, 1953.

SN 68,976. Baltimore Biological Laboratory, Inc., Baltimore, Md. Filed Mar. 5, 1959.

B·B·L

For Equipment and Apparatus for Use in Microbiological and Bacteriological Procedures, Including: Ampoule Washers, Ampoule Sealing Devices and Associated Components, Stainless Steel Ampoule Washing Boxes and Racks, Pressure Vessels for Bacteriological Filtration, Bacteriological Culture Tube Cabinets, Petri Dishes, Petri Dish Covers of Stainless Steel, Petri Dish Racks, Specimen Tube Rotators, Testing Disc Dispensers, Pipetting and Filling Machines, Microscopic Slide Staining Racks, Laboratory Bottle Caps.
First use on or about January 1955; June 1935 as to "B.B.L."

SN 69,047. John L. Chaney, d.b.a. John L. Chaney Instrument Co., Lake Geneva, Wis. Filed Mar. 6, 1959.

ACU-RITE

For Calibrated Basters, Rain Gauges, and Thermometers Other Than Clinical.
First use in 1949.

SN 69,075. Lerma Engineering Corporation, Northampton, Mass. Filed Mar. 6, 1959.

OMNISCOPE

For Wide-Angle Telescopes and Periscopes.
First use Aug. 20, 1958.

SN 69,076. Marginator Company, Burbank, Calif. Filed Mar. 6, 1959.

Power Pilot

For Testing Units for Hydraulic Systems.
First use on or about Sept. 1, 1958.

SN 69,088. Scientific Glass Apparatus Co., Inc., Bloomfield, N.J. Filed Mar. 6, 1959.

MICROCAB

For Miniature Scientific Glassware in Cabinets.
First use Feb. 11, 1959.

SN 69,351. The Nuarc Company, Chicago, Ill. Filed Mar. 11, 1959.

FLIP-TOP

For Photographic Equipment—Namely, Apparatus for Making Photographic Plates.
First use Nov. 26, 1958.

SN 69,364. Thomas N. Scoville, d.b.a. Standard Foundry Products, Reading, Pa. Filed Mar. 11, 1959.

SEAT-O-METER

For Measuring Instrument for Determining the Contour Definitions of the Human Form in a Seated Position.
First use during the year 1956.

SN 69,576. Texas Instruments Incorporated, Dallas, Tex. Filed Mar. 13, 1959.

ViP

For Device for the Visual Display and Recordation of Seismic Data.
First use on or about Oct. 29, 1958.

Class 28—Jewelry and Precious-Metal Ware

SN 68,353. The Alvin Corporation, Providence, R.I. Filed Feb. 25, 1959.

STAR BLOSSOM

For Sterling Silver Flatware and Table Cutlery.
First use Jan. 29, 1959.

SN 69,260. Georg Jensen, Inc., New York, N.Y. Filed Mar. 10, 1959.

ACORN

For Sterling Silver Flatware for Table Use.
First use at least as early as Feb. 1, 1934.

SN 69,261. Georg Jensen, Inc., New York, N.Y. Filed Mar. 10, 1959.

CACTUS

For Sterling Silver Flatware for Table Use.
First use at least as early as Feb. 1, 1934.

SN 69,267. Marvella Pearls, Inc., New York, N.Y. Filed Mar. 10, 1959.

HI-RISE

For Necklaces.
First use Oct. 15, 1958.

Class 35—Belting, Hose, Machinery Pack-

SN 35,653. Ideax Corporation, New York, N.Y., by merger from Ideax Illuminator Company, Inc., New York, N.Y.

First use Nov. 1, 1957.

SN 69,268. Marvella Pearls, Inc., New York, N.Y. Filed Mar. 10, 1959.

FRESHURA

For Costume Jewelry—Namely, Necklaces, Bracelets, Pins, Earrings, Charms and Pearl Jewelry and Bead Jewelry.
First use Dec. 9, 1958.

SN 69,300. Tara Deb Inc., New York, N.Y. Filed Mar. 10, 1959.

TARA DEB

For Necklaces, Bracelets, Earrings, Pins, Rings, Hair Ornaments, Imitation and Cultured Pearls, and Rhinestones.
First use Feb. 1, 1959.

SN 70,145. Gorham Manufacturing Company, Providence, R.I. Filed Mar. 24, 1959.

NEWPORT

For Sterling Silver Hollow-Ware.
First use September 1851.

Class 29—Brooms, Brushes, and Dusters

SN 63,590. Magla, Inc., Newark, N.J. Filed Dec. 3, 1958.

WISK N' WIPE

For Sponge Cloth and Sponges.
First use Nov. 19, 1958.

SN 65,812. Bacon Felt Company, Taunton, Mass. Filed Jan. 14, 1959.

RHINO BAC

For Polishing Pads of Felt.
First use Nov. 19, 1958.

SN 66,068. Milwaukee Dustless Brush Co., Milwaukee, Wis. Filed Jan. 19, 1959.

SPEED SWEEP

For Cleaning Materials, Particularly Brushes and Brooms.
First use June 15, 1915.

SN 66,367. Pro-phy-lac-tic Brush Company, Florence, Mass. Filed Jan. 23, 1959.

WATER LILY

For Hand Brushes.
First use Dec. 31, 1958.

SN 66,801. Milwaukee Dustless Brush Co., Milwaukee, Wis. Filed Jan. 30, 1959.

SPEED WASH

For Cleaning Materials, Particularly Brushes and Brooms.
First use Sept. 8, 1936.

SN 67,453. Glamur Products Incorporated, Syracuse, N.Y. Filed Feb. 10, 1959.

TWO IN ONE BRUSH-MASTER

For Brushes for Cleaning Rugs and Upholstery.
First use Aug. 25, 1958.

SN 68,277. Henry Kayser & Fils, Inc., New York, N.Y. Filed Feb. 24, 1959.

KAYSER

Owner of Reg. No. 368,959.
For Hair Brushes, Nail Brushes, Nail Scrubs, Make-Up Brushes, Eyebrow Brushes, Eyelash Brushes, and Nail Buffers.
First use in January 1937.

SN 68,930. The Norman Company, Los Angeles, Calif. Filed Mar. 4, 1959.

PAT-OFF

For Lint Remover Mitt Containing an Exposable Adhesive Surface.
First use Dec. 15, 1958.

Class 32—Furniture and Upholstery

SN 55,986. Displaymasters, Inc., Minneapolis, Minn. Filed July 25, 1958.

UNI-FLEX

For Modular Display Units Capable of Being Assembled in a Variety of Differently Shaped Display Assemblies for Use at Conventions and the Like.
First use Apr. 23, 1958.

SN 71,527. White Stores, Inc., Wichita Falls, Tex. Filed Apr. 14, 1959.

WHITE HOUSE

For Mattresses.
First use May 14, 1958.

Class 33—Glassware

SN 60,274. Distinguished Gift Manufacturers, Inc., Waterloo, Iowa. Filed Oct. 8, 1958.

The words "Sterling Silver" are disclaimed apart from the mark as shown.
For Specialized Gift Articles of High Quality Crystal Trimmed in Sterling Silver—Namely, Serving Dishes, Plates, and Bowls.
First use in March 1955.

SN 64,823. The Narrow Fabric Company, d.b.a. Wyomissing Paper Products, West Reading, Pa. Filed Dec. 15, 1958.

SN 58,751. Stanley Greetings, Inc., Dayton, Ohio. Filed Sept. 10, 1958.

For Testing Units for Hydraulic Systems.
First use on or about Sept. 1, 1958.

For Necklaces.
First use Oct. 15, 1958.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 68,434. Rockwell-Standard Corporation, Coraopolis, Pa. Filed Feb. 25, 1959.

ECONO-LINER

For Brake Linings.
First use about Sept. 24, 1957.

Class 36—Musical Instruments and Supplies

SN 38,314. Vogue Productions Internationales Phonographiques, Paris, France. Filed Oct. 3, 1957.

VOGUE

For Grooved Phonograph Recordings.
First use July 1949; in commerce November 1949.

SN 68,594. National Telefilm Associates, Inc., New York, N.Y. Filed Feb. 27, 1959.

LIVING TAPE

For Tape-Recorded Television Programs.
First use Feb. 12, 1959.

SN 69,190. Rototone, Inc., Houston, Tex. Filed Mar. 9, 1959.

ROTOTONE

For Electrical Vibrato Producing Mechanisms for Organs.
First use Dec. 31, 1958.

SN 69,191. Rototone, Inc., Houston, Tex. Filed Mar. 9, 1959.

Rototone

For Electrical Vibrato Producing Mechanisms for Organs.
First use Feb. 17, 1959.

Class 37—Paper and Stationery

SN 11,572. Graham Paper Company, St. Louis, Mo. Filed July 5, 1956. CONCURRENT USE to be restricted to Alabama, Arizona, Arkansas, Colorado, Georgia, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Michigan, Minnesota, Mississippi, Missouri, New Mexico, Oklahoma, Tennessee, Texas, Wisconsin, and Wyoming. Concurrent use with The Sterlek Company, Inc., User, for the States of Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania.

CHINTZ

For Toilet Tissue and Paper Napkins.
First use at least by about October 1936.

SN 34,011. Riegel Paper Corporation, New York, N.Y. Filed July 18, 1957.

SYNTHACEL

For Paper or Paper Board Made of Synthetic Fibers.
First use June 27, 1957.

SN 35,653. Ideax Corporation, New York, N.Y., by merger from Ideax Illuminator Company, Inc., New York, N.Y. Filed Aug. 16, 1957.

MULTIMAT

For Paper Mats for Mounting and Displaying Photographic Transparencies.
First use July 30, 1957.

SN 39,207. Ekonomik, Incorporated, d.b.a. Pioneer, Incorporated, Tacoma, Wash. Filed Oct. 21, 1957.

EKONOMIK

For Printed Forms Comprising Bookkeeping Sheets and Blank Checks Commonly Referred to as a Check Register.
First use Mar. 25, 1904.

SN 48,586. Scott Paper Company, Chester, Pa. Filed Mar. 27, 1958.

WONDER BOARD

Applicant claims no exclusive rights in the term "Board" as the name of the goods identified herein. Owner of Reg. No. 346,969.
For Plastic Coated Carton Stock.
First use Mar. 7, 1958.

SN 51,192. International Formprint Co., New York, N.Y. Filed May 7, 1958.

COPI-MEMO

Owner of Reg. No. 644,746.
For Printed Business Form Sets With Detachable Interleaved Carbon Sheets.
First use Apr. 1, 1957.

SN 55,952. J. S. Staedtler, Nurnberg, Germany. Filed July 24, 1958.

OMNICHROM

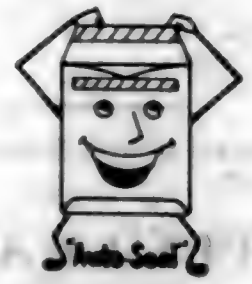
For Pencils, Fountain Pens, Erasers, Pen Holders, and Crayons.
First use in May 1940; in commerce in May 1940.

SN 61,406. Kimberly-Clark Corporation, Neenah, Wis. Filed Oct. 27, 1958.

HI-COUNT

For All-Purpose Absorbent Paper Tissues.
First use Sept. 8, 1958.

SN 63,693. Champion Envelope Mfg. Co., Inc., New York, N.Y. Filed Dec. 5, 1958.



For Envelopes.
First use Oct. 29, 1958.

Class 39—Clothing

SN 53,641. Joseph H. Cohen & Sons, Inc., New York, N.Y. Filed July 21, 1958.

SN 64,323. The Narrow Fabric Company, d.b.a. Wyomissing Paper Products, West Reading, Pa. Filed Dec. 15, 1958.

INOCAUT

For High Gloss Coated Paper.
First use Nov. 28, 1958.

SN 64,324. The Narrow Fabric Company, d.b.a. Wyomissing Paper Products, West Reading, Pa. Filed Dec. 15, 1958.

CATTELL

For High Gloss Coated Paper.
First use Nov. 28, 1958.

Class 38—Prints and Publications

SN 23,714. Sam H. Kaufman, d.b.a. Constance Flame, Minneapolis, Minn. Filed Feb. 4, 1957.

Connie's Column

Owner of Reg. No. 671,566.
For Periodically Published Newspaper Column.
First use on or about Jan. 13, 1957.

SN 53,173. Master Publications, Inc., Los Angeles, Calif. Filed June 9, 1958.

RATE-MASTER

For Periodically Published Appliance Service Rate Guides.
First use Apr. 16, 1958.

SN 58,280. Alex Winderman, Miami Beach, Fla. Filed Sept. 2, 1958.

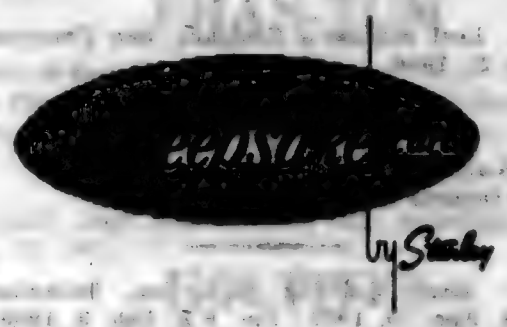
THE BRAIN

For Sports Forecasting and Handicapping Sheet.
First use on or about Apr. 15, 1950.

SN 58,750. Stanley Greetings, Inc., Dayton, Ohio. Filed Sept. 10, 1958.

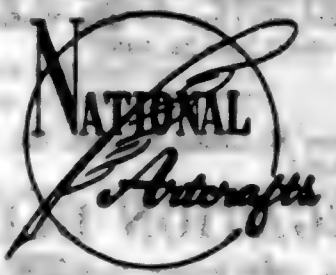
The drawing is lined for yellow but no claim is made to any particular color. Owner of Reg. No. 643,616.
For Greeting Cards.
First use Sept. 2, 1958.

SN 58,751. Stanley Greetings, Inc., Dayton, Ohio. Filed Sept. 10, 1958.



The word "Card" being the name of the goods, is disclaimed. The drawing is lined for blue, but no claim is made to any particular color. Owner of Reg. No. 643,616.
For Greeting Cards.
First use Sept. 2, 1958.

SN 59,979. National Arterafts, Incorporated, Detroit, Mich. Filed Oct. 2, 1958.



For Greeting Cards.
First use Mar. 3, 1958.

SN 59,982. National Arterafts, Incorporated, Detroit, Mich. Filed Oct. 2, 1958.

For Greeting Cards.
First use Sept. 15, 1957.

SN 62,154. Edward Allen Butler, Summit, N.J. Filed Nov. 10, 1958.

CHIRPS

For Periodical in the Form of a Newsletter.
First use June 1958.

SN 66,868. Endeveo Corporation, Pasadena, Calif. Filed Feb. 2, 1959.

DIGITRENDS

For Technical Publications Issued at Irregular Intervals.
First use in April 1958.

SN 67,306. Cape May County Leader Company, Wildwood, N.J. Filed Feb. 9, 1959.

THE WILDWOOD LEADER

For Newspaper.
First use Jan. 10, 1920.

SN 62,797. Sears, Roebuck and Co., Chicago, Ill. Filed Nov. 19, 1958.

SN 63,904. U.S. Knitwear Co., New York, N.Y. Filed Dec. 8, 1958.

Class 39—Clothing

SN 18,198. Levi Strauss & Company, San Francisco, Calif. Filed Oct. 25, 1956.

CINCHBACKS

For Men's and Women's Slacks.
First use October 1955.

SN 28,128. Eagle Knitting Mills, Inc., Milwaukee, Wis. Filed S.R. Apr. 15, 1957; Am. P.R. Feb. 9, 1959.

Eagleknit
The Name Brand
In knitted HEADWEAR

Owner of Reg. No. 504,198.
For Knitted Hats and Caps for Men, Women, and Children.
First use on or about July 22, 1955.

SN 38,804. Joseph H. Cohen & Sons, Inc., New York, N.Y. Filed Oct. 14, 1957.

LEGATION BLUE

For Men's and Boys' Outer Garments—Namely, Coats, Suits, Sport Coats, Jackets, Top Coats, Overcoats, Slacks, Trousers, and Vests.
First use June 1, 1956.

SN 39,939. Atlas Underwear Corporation, Dover, Del. Filed Nov. 1, 1957.

JETS BY ALLEN-A

Owner of Reg. Nos. 388,508, 606,282, and others.
For Men's and Boys' Knit Underwear.
First use Oct. 12, 1957.

SN 42,679. Weyenberg Shoe Manufacturing Company, Milwaukee, Wis. Filed Dec. 18, 1957.

Owner of Reg. No. 377,661.
For Shoes Constructed Principally of Leather.
First use Aug. 9, 1934.

SN 46,350. Henry Pollak, Inc., New York, N.Y. Filed Feb. 21, 1958.

GLENOVER

For Men's, Women's, and Children's Sweaters.
First use Jan. 20, 1958.

SN 46,351. Henry Pollak, Inc., New York, N.Y. Filed Feb. 21, 1958.

SOLÉ ETOILE

The English translation of "Solé Etoile" is "sun star."
For Women's hat bodies.
First use Jan. 15, 1958.

SN 55,641. Joseph H. Cohen & Sons, Inc., New York, N.Y. Filed July 21, 1958.

COOLTEMP

For Men's and Boys' Outer Garments—Namely, Coats, Suits, Sport Coats, Jackets, Top Coats, Overcoats, Slacks, Trousers, and Vests.
First use July 15, 1958.

SN 55,643. Joseph H. Cohen & Sons, Inc., New York, N.Y. Filed July 21, 1958.

GYROWATE

For Men's and Boys' Outer Garments—Namely, Coats, Suits, Sport Coats, Jackets, Top Coats, Overcoats, Slacks, Trousers, and Vests.
First use July 15, 1958.

SN 56,883. D. J. Schwartz & Co., Inc., New York, N.Y. Filed Aug. 8, 1958.

MADIERA

For Ladies' and Misses' Outerwear—Namely, Coats, Suits, Jackets, Skirts, and Coat and Suit Ensembles.
First use May 1, 1957.

SN 57,172. E. E. Taylor Corporation, Freeport, Maine. Filed Aug. 13, 1958.

BURNT IVORY

For Men's Shoes.
First use July 15, 1958.

SN 59,273. Colin Hall Clothes, Ltd., Manhattan, N.Y. Filed Sept. 22, 1958.

Mr. Martino

For Men's Coats, Suits, and Trousers.
First use July 7, 1958.

SN 60,688. Shelburne Shirt Co., Inc., New York, N.Y. Filed Oct. 15, 1958.

SMOOTH-SPUN

Owner of Reg. Nos. 662,619 and 668,807.
For Fabric Sold Only in Finished Apparel—Namely, Men's Outer Shirts.
First use Oct. 30, 1957.

SN 61,968. Rosedale Knitting Company, Reading, Pa. Filed Nov. 5, 1958.

TORERO

The English equivalent of "Torero" is "bullfighter."
For Ladies' Hosiery.
First use Oct. 16, 1958.

SN 62,169. Federated Department Stores, Inc., Cincinnati, Ohio. Filed Nov. 10, 1958.

FED-STAR

Owner of Reg. Nos. 591,241 and 591,242.
For Women's Hosiery.
First use July 31, 1958.

SN 62,832. The Mayer Company, Inc., New York, N.Y. Filed

SN 63,366. C. G. Trading Corp., New York, N.Y. Filed Feb.

First use Sept. 2, 1958.

First use Jan. 10, 1920.

SN 62,797. Sears, Roebuck and Co., Chicago, Ill. Filed Nov. 19, 1958.

TERRY-GO-ROUND

For Wrap-Around Body Garments for Men and Boys Made of Terry Cloth.
First use on or about Aug. 20, 1957.

SN 62,897. All State Garment Corporation, New York, N.Y. Filed Nov. 21, 1958.

VARUNA

For Raincoats.
First use Nov. 17, 1958.

SN 63,147. Franconia Ski Wear, Inc., Boston, Mass., assignee of Banner Bros. of Boston, Inc., Boston, Mass. Filed Aug. 26, 1958.

For Men's and Women's Ski Pants, Jackets, Sweaters, Caps, and Boots.
First use Apr. 5, 1956.

SN 63,460. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Dec. 1, 1958.

ENTREE

For Brassieres.
First use Oct. 24, 1958.

SN 63,585. La Paz Shirts Inc., Los Angeles, Calif. Filed Dec. 3, 1958.

LA PAZ

For Boys', Girls', Men's, and Women's Shirts, Pants, Slacks, Skirts, Jackets, and Coats.
First use June 1, 1958.

SN 63,842. La Gaine Scandale, Lyon, France. Filed Dec. 8, 1958.

SCANDALE

Owner of French Reg. No. 37,468, dated Sept. 20, 1951 (Lyon); Natl. Inst. No. 500,637; and U.S. Reg. No. 340,922.
For Corsets, Corselets, Brassieres, Belts, Girdles in the Nature of Corsets, Corset Bodices, Bust Bodices and Braces, Suspenders and Garters and Stockings, All Being for Female Wear.

SN 63,857. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Dec. 8, 1958.

PARTITA

For Brassieres.
First use Nov. 20, 1958.

SN 63,904. U.S. Knitwear Co., New York, N.Y. Filed Dec. 8, 1958.

PHAN-TUM

Owner of Reg. No. 589,898.
For Panties, Girdles, and Panties With Built-In Girdles.
First use Nov. 17, 1958.

SN 63,997. Holt Hosiery Mills, Inc., Burlington, N.C. Filed Dec. 10, 1958.

HOLTITES

For Knitted Tights.
First use Nov. 25, 1958.

SN 64,218. Super-Form Brassiere, Inc., New York, N.Y. Filed Dec. 12, 1958.

Magic Moment

For Brassieres and Girdles.
First use June 18, 1958.

SN 64,346. Henry I. Siegel Co., Inc., New York, N.Y. Filed Dec. 15, 1958.

The Quad by H. I. S.

For Boys' and Men's Slacks, Pants, and Trousers.
First use July 1, 1958.

SN 65,950. Fellman Tri-Vac Footwear, Inc., Livingston, N.J. Filed Jan. 16, 1959.

NAUTICS

For Rubber, Fabric, and Leather Footwear.
First use in October 1958.

SN 66,284. The B.V.D. Company, Inc., New York, N.Y. Filed Jan. 22, 1959.

COLD SNAP

For Men's and Boys' Underpants and Undershirts.
First use June 27, 1958.

SN 66,838. Baronol Garment Company, Berwick, Pa. Filed Feb. 2, 1959.

ALBEN

For Infants' and Toddlers' Overalls and Jacket Sets.
First use Apr. 9, 1954.

SN 67,371. The Mayer Company, Inc., New York, N.Y. Filed Feb. 9, 1959.

Footnote

Owner of Reg. No. 516,459.
For Women's and Misses' Hosiery.
First use in December 1945.

SN 48,546. Robert L. Craig, Jr., d.b.a. Craig Sales Co., Carmel, Ind. Filed May 27, 1952.

SN 55,113. Veego Foods, Inc., Warrenville, N.J., assignee of A/S Roal Brothers Ltd., Copenhagen, Denmark. Filed

SN 66,832. The Mayer Company, Inc., New York, N.Y. Filed Mar. 3, 1959.

footnotes

Owner of Reg. No. 516,459.
For Women's and Misses' Hosiery.
First use in December 1945.

SN 71,496. The Lovable Brassiere Company, Atlanta, Ga. Filed Apr. 14, 1959.

Lovable "SWEET ADD-A-LINE"

Owner of Reg. Nos. 610,454 and 500,290.
For Brassieres.
First use Feb. 8, 1950.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 47,679. Premier Textile Co., New York, N.Y. Filed Mar. 13, 1958.

TERRY-DRY

For Towels.
First use Jan. 20, 1958.

SN 54,370. Bonnit Mills, Inc., New York, N.Y. Filed June 27, 1958.

CUPRASHEER

For Sheer Woven Fabrics Containing Substantial Amounts of Rayon.
First use on or about Nov. 2, 1956.

SN 61,945. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Nov. 5, 1958.

TONTINE

Owner of Reg. Nos. 124,187, 432,980, and 216,046.
For Plastic Coated Fabrics for Stage and Cyclorama Curtains.
First use Sept. 23, 1958.

SN 62,042. Double Woven Corporation of America, Dunmore, Pa. Filed Feb. 19, 1959.

VELATTO

For Textile Fabrics in the Piece of Cotton, Rayon, Synthetic Fibers, and Mixtures Thereof.
First use Jan. 2, 1959.

SN 66,266. C. G. Trading Corp., New York, N.Y. Filed Feb. 26, 1959.

DUO-WRAP

For Bagging Cloth Made of Woven Jute.
First use Oct. 14, 1958.

Class 43—Thread and Yarn

SN 67,251. Sellers Manufacturing Company, Inc., Saxapahaw, N.C. Filed Feb. 6, 1959.

PIMA PRINCE

The word "Pima" is disclaimed apart from the mark as shown.
For Cotton Yarn.
First use on or about Oct. 29, 1958.

Class 45—Soft Drinks and Carbonated Waters

SN 50,037. Dolly Fruit Products Corp., Brooklyn, N.Y. Filed Apr. 21, 1958.

VI-C

For Cream Soda Syrup.
First use Mar. 14, 1956.

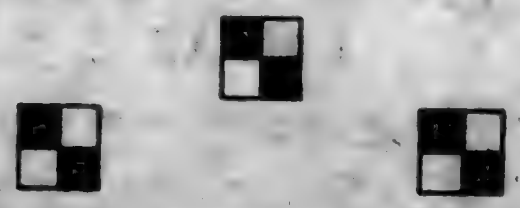
SN 54,996. Farm Maid Beverage Company, Detroit, Mich. Filed July 9, 1958.

FARM MAID

For Carbonated Soft Drinks.
First use on or about May 1, 1957.

Class 46—Feeds and Ingredients of Feeds

SN 24,630. Ralston Purina Company, St. Louis, Mo. Filed Feb. 18, 1957.



Although the drawing is lined for red, the mark is not restricted to a particular combination of colors. Owner of Reg. Nos. 36,569, 582,371, and others.
For Scandinavian Style Bread.
First use July 1953.

SN 44,531. Federal Sweets & Biscuit Co. Inc., Clifton, N.J. Filed Jan. 23, 1958.

Dutch Maid Tontine

Owner of Reg. Nos. 205,067 and 319,430.
For Candy.
First use Sept. 12, 1925.

SN 62,807. Swift & Company, Chicago, Ill. Filed Nov. 19, 1958.

SN 66,824. Wardley Products Company, Inc., Long Island City, N.Y. Filed Jan. 30, 1959.

SN 48,546. Robert L. Craig, Jr., d.b.a. Craig Sales Co., Carmel, Ind. Filed Mar. 27, 1958.

SMART SHOPPER

For Canned Vegetables.
First use Feb. 17, 1956.

SN 48,593. Superior Tea and Coffee Company, d.b.a. Superior Tea & Coffee Co., Chicago, Ill. Filed Mar. 27, 1958.

SUPERIOR CUSTOM BLEND

The words "Custom Blend" are disclaimed separate and apart from the mark as shown.
For Roasted Coffee.
First use January 1956.

SN 50,910. Morinaga Confectionery Company Limited, Minato-ku, Tokyo, Japan. Filed May 2, 1958.

Owner of Japanese Reg. No. 434,281, dated Oct. 31, 1958.
For Fruit Juices and Vegetable Juices.

SN 50,911. Morinaga Confectionery Company Limited, Minato-ku, Tokyo, Japan. Filed May 2, 1958.

Morinaga

Owner of Japanese Reg. No. 460,135, dated Feb. 10, 1955.
For Fruit Juices and Vegetable Juices.

SN 54,394. Famous Foods, Inc., Detroit, Mich. Filed June 27, 1958.

The drawing is lined for red and yellow or gold. Owner of Reg. No. 397,398.
For Potato Chips.
First use May 26, 1958.

SN 55,113. Veego Foods, Inc., Warrenville, N.J., assignee of A/S Boel Brothers Ltd., Copenhagen, Denmark. Filed July 11, 1958.

The English equivalent of the words "Flora Danica" is "flower of Denmark." No claim of exclusive right is made to "Danica," it being the place of geographic origin of the product.
For Danish Blue Cheese.
First use 1924.

SN 61,460. Western Growers Association, Los Angeles, Calif. Filed Oct. 27, 1958. COLLECTIVE MARK.

Applicant disclaims the words "Arizona," "California," "Fresh Vegetables," "Melons" and "Regular Member."
For Fresh Lettuce and Melons.
First use July 29, 1958, on fresh lettuce.

SN 61,875. Tolko Compagniet A/S, Copenhagen, Denmark. Filed Nov. 3, 1958.

TOLKO

Owner of Danish Reg. No. 15/1950, dated Jan. 7, 1950.
For Baking Powders, Bakers' and Confectioners' Products, Chocolate, Dietetic Foods, Vinegar, Fishery Products, Fodder, Fruits, Vegetable Juices, Jellies, Vegetables, Yeast, Honey, Coffee and Substitutes Therefor, Cocoa, Cooking and Table Salt, Food Preservatives, Conserves, Spices, Meat Extract, Meat Products, Flour, Milk, Edible and Cooking Oils, Cheese, Sauces, Mustard, Molasses, Butter, Cooking Starch, Sugar and Sugar Products, Tea, Eggs, and Food-Flavoring Essential Oils.

SN 62,261. Baders' Dutch Bakeries, Inc., Seattle, Wash. Filed Nov. 12, 1958.

For Cookies, Also Known as Crackers.
First use January 1933.

Class 51 — Cosmetics and Toilet Preparations Class 52 — Detergents and Soaps

SN 62,807. Swift & Company, Chicago, Ill. Filed Nov. 19, 1958.

GOLDEN DEW

For Margarine.
First use Oct. 22, 1958.

SN 62,873. Pepperidge Farm Incorporated, Norwalk, Conn. Filed Nov. 20, 1958.

PEPPERIDGE FARM

Owner of Reg. Nos. 360,512, 655,071, and 660,615.
For Biscuits, Bread, Bread Crumbs, Cake, Coffee Cake, Cookies, Melba Toast, Muffins, Pastries, Pie, Rolls, and Stuffing (Dried Bread and Seasoning Mixture).
First use Sept. 1, 1937, on bread.

SN 64,243. Anderson, Clayton & Co., Dallas, Tex. Filed Dec. 15, 1958.

DAZZLE

For Vegetable Shortening, Salad Oil, and Oleomargarine.
First use Nov. 25, 1958.

SN 64,600. Anderson, Clayton & Co., Dallas Tex. Filed Dec. 19, 1958.

PRELUDE

For Vegetable Shortening, Salad Oil, and Oleomargarine.
First use Nov. 25, 1958.

SN 64,601. Anderson, Clayton & Co., Dallas, Tex. Filed Dec. 19, 1958.

VISION

For Vegetable Shortening, Salad Oil, and Oleomargarine.
First use Nov. 25, 1958.

SN 65,485. El-Ge Potato Chip Co., Inc., York, Pa. Filed Jan. 8, 1959.

LG

Owner of Reg. No. 398,204.
For Potato Chips of Various Kinds and Cheese Flavored Corn Twists.
First use May 21, 1942.

SN 65,532. Anderson, Clayton & Co., Dallas, Tex. Filed Jan. 9, 1959.

For Peanut Butter, Vegetable Oil, Vegetable Shortening, Salad Oil, Oleomargarine, Margarine.
First use Mar. 26, 1957.

SN 66,824. Wardley Products Company, Inc., Long Island City, N.Y. Filed Jan. 30, 1959.

VITAFARE

For Tropical Fishfood.
First use December 1952.

SN 66,825. Wardley Products Company, Inc., Long Island City, N.Y. Filed Jan. 30, 1959.

FRYFARE

For Tropical Fishfood.
First use August 1952.

SN 66,826. Wardley Products Company, Inc., Long Island City, N.Y. Filed Jan. 30, 1959.

HI GLOW #30

For Tropical Fishfood.
First use April 1958.

SN 66,827. Wardley Products Company, Inc., Long Island City, N.Y. Filed Jan. 30, 1959.

SUPREMIX

For Tropical Fishfood.
First use November 1951.

SN 66,914. Megowen-Educator Food Company, Lowell, Mass. Filed Feb. 2, 1959.

ALLPACKT

For Bakery Products—Namely, Cookies, Crackers, Cakes, and Biscuits.
First use Nov. 26, 1958.

SN 67,080. Penick & Ford, Ltd., Incorporated, New York, N.Y. Filed Feb. 4, 1959.

PRE-GEL

For Starches Used in Processing Food Products.
First use Apr. 15, 1958.

SN 67,095. A. E. Staley Manufacturing Company, Decatur, Ill. Filed Feb. 4, 1959.

STA-MATIC

For Edible Starch.
First use Jan. 29, 1959.

Class 48 — Malt Beverages and Liquors

SN 68,211. Asahi Breweries, Ltd., Chuo-ku, Tokyo, Japan. Filed Feb. 24, 1959.

ASAHI

Owner of Japanese Reg. Nos. 517,145 and 60,343, dated Mar. 25, 1958, and Aug. 21, 1913, respectively.
For Beer.
First use May 19, 1910; in commerce May 19, 1910.

SN 46,937. Greater North Dakota Association, Fargo, N. Dak.

SN 51,103. Million Dollar Round Table of The National

Class 51 — Cosmetics and Toilet Preparations

SN 65,900. The Andrew Jergens Company, Cincinnati, Ohio. Filed Jan. 15, 1959.

BEAUTY THREE

For Skin Cream.
First use Nov. 11, 1958.

SN 66,441. The House for Men, Incorporated, Chicago, Ill. Filed Jan. 26, 1959.

BLUE SPARK

For After-Shave Lotion.
First use Dec. 10, 1958.

SN 70,479. The House for Men, Incorporated, Chicago, Ill. Filed Mar. 30, 1959.

BLUE SPARK

For Shaving Cream.
First use Mar. 2, 1959.

Class 52 — Detergents and Soaps

SN 43,033. L & R Manufacturing Company, Arlington, N.J. Filed Dec. 26, 1957.

L & R

For Watch and Instrument Rinsing Solutions, Watch and Instrument Cleaning Solutions, Watch Cleaning and Rinsing Fluids, Hair Spring Cleaner, Silver Contact Cleaner, and Rust Remover.
First use May 1930 on watch rinsing solution No. 3 and watch cleaning solution No. 1 foam.

SN 46,801. John H. Breck, Inc., Springfield, Mass. Filed Mar. 7, 1958.

FLAMINGO

For Hair Shampoos.
First use Feb. 18, 1958.

SN 50,181. Opotow Dental Manufacturing Corp., Brooklyn, N.Y. Filed Apr. 22, 1958.

DICLENE

For Solution Used by Dentists for Cleaning Dental Burrs.
First use Mar. 26, 1958.

SERVICE MARKS

Class 100 — Miscellaneous

SN 48,823. Ulysses G. Auger, d.b.a. Blackie's House of Beef, Washington, D.C. Filed Apr. 1, 1958.

HOUSE OF BEEF

Owner of Reg. No. 655,350.
For Restaurant Service.
First use Dec. 23, 1952.

SN 48,919. Industrial Processes, Inc., Portland, Oreg. Filed Apr. 2, 1958.

IPI
INDUSTRIAL PROCESSES, INC.

The phrase "Industrial Processes, Inc." is disclaimed as part of the subject mark.
For Designing and Developing Material Handling and Processing Systems, Especially Systems for Recovering Flour Mill Waste Solids and Wash Water.
First use Sept. 27, 1957.

SN 66,472. Music Corporation of America, Beverly Hills, Calif. Filed Jan. 26, 1959.

MCA

The drawing is lined for shading.
For Representing Performing Artists, Commonly Known as Agency Services.
First use 1924.

Class 101 — Advertising and Business

SN 5,651. Nash-Finch Company, Minneapolis, Minn., assignee of M & M Company, Inc., Minneapolis, Minn. Filed Apr. 2, 1956.

BIG DOLLAR

The lining constitutes part of the mark and does not represent color.
For Promoting the Sale of the Goods and Services of Others by Means of Trading Stamps Which Are Redeemable in Premiums.
First use Mar. 20, 1956.

SN 43,897. United States Wholesale Grocers Association, Inc., Washington, D.C. Filed Jan. 13, 1958.

MARKRITE

For Retail Grocery Services.
First use July 23, 1956.

SN 43,898. United States Wholesale Grocers Association, Inc., Washington, D.C. Filed Jan. 13, 1958.

VALU-MART

For Retail Grocery Services.
First use Feb. 1, 1957.

SN 50,884. Fluff 'n Puff Pillow Service of America, Inc., Minneapolis, Minn. Filed May 2, 1958.

SN 35,170. Dampskibsselskabet af 1912 A/S and A/S Dampskibsselskabet Svendborg, Copenhagen, Denmark. Filed

SN 46,937. Greater North Dakota Association, Fargo, N. Dak. Filed Mar. 3, 1958.

For Promotional and Informational Services to Business and Industry in Connection With Establishment of Business and Industrial Developments in the State of North Dakota.
First use Apr. 12, 1957.

SN 51,890. The Golden Hamburger Drive-In Corporation, Chicago, Ill. Filed May 19, 1958.

THE GOLDEN POINT

For Restaurant Services.
First use Apr. 29, 1958.

SN 54,816. Book Craftsmen Associates, Inc., New York, N.Y. Filed July 7, 1958.

SAS

For Printing Service.
First use Aug. 15, 1957.

Class 102—Insurance and Financial

SN 17,033. National Professional Men's Association, Inc., Dallas, Tex., assignee of Professional Men's Association of America, Inc., Chicago, Ill. Filed Oct. 5, 1956. COLLECTIVE MARK.

The drawing is lined for the colors blue, gray, and red.
For Credit and Collection Service.
First use Feb. 28, 1954.

SN 51,103. Million Dollar Round Table of The National Association of Life Underwriters, Chicago, Ill. Filed Apr. 28, 1958.

Million Dollar Round Table

For Educational, Professional, and Informational Services to the Public, Legal Reserve Life Insurance Companies and Life Underwriters, Rendered by Means of Cooperative Studies of Problems Affecting Life Insurance and Techniques of Successful Underwriting, and Regular Distribution.
First use about Oct. 14, 1927.

SN 51,619. Continental Casualty Company, Chicago, Ill. Filed May 14, 1958.

65-PLUS

For Underwriting of Hospital and Medical Care Insurance Services for Elderly People.
First use Sept. 5, 1957.

SN 52,570. General Securities, Incorporated, Minneapolis, Minn. Filed May 29, 1958.

GENERAL SECURITIES

For Financial Services—Namely, the Operation of a So-Called "Mutual Fund" or "Investment Company," Consisting Principally of Investing the Funds of Others and Collecting and Distributing the Income and Receipts From Such Activities.
First use Feb. 27, 1951.

SN 65,972. National Creditors Service, Inc., Tyler, Tex. Filed Jan. 16, 1959.

NCSI

For Collection Service for Professional and Business People.
First use Dec. 17, 1958.

Class 103—Construction and Repair

SN 46,013. Radio Corporation of America, New York, N.Y. Filed Feb. 17, 1958.

RCA

Owner of Reg. Nos. 515,818, 650,272, and 542,476.
For Installation, Inspection and Repair of Electric and Electronic Apparatus and Equipment, Their Component Parts and Accessories in the Fields of Radio, Television, Sound Recording and Reproducing, Maritime Apparatus and Equipment, Home Appliances, Heating Apparatus, Electric and Electronic Apparatus for the Home and Industrial Electric and Electronic Apparatus.
First use 1936.

as Agency Services.
First use 1924.

For Retail Grocery Services.
First use Feb. 1, 1957.

SN 50,884. Fluff 'n Puff Pillow Service of America, Inc., Minneapolis, Minn. Filed May 2, 1958.

Fluff 'n Puff

For Pillow Cleaning Service.
First use Dec. 11, 1957.

SN 51,296. Skrainka Construction Company, St. Louis, Mo. Filed May 8, 1958.

TRU-BOUNCE

For Construction and Repair of Play Areas and Tennis Courts.
First use Nov. 6, 1957.

SN 52,082. Weatherford Oil Tool Company, Inc., Houston, Tex. Filed May 21, 1958.

POST PLUG

For Oil Well Conditioning, Completing, and Cementing.
First use Sept. 25, 1955.

SN 56,232. Globe Auto Paint Shops, Inc., Cleveland, Ohio. Filed July 15, 1958.

For Auto Painting and Body and Fender Repair Services.
First use in or about August 1955.

Class 105—Transportation and Storage

SN 35,169. Dampskibsselskabet af 1912 A/S and A/S Dampskibsselskabet Svendborg, Copenhagen, Denmark. Filed Aug. 8, 1957.

THE BLUE TANKERS—
MAERSK TANKERS

The word "Tankers" is disclaimed apart from the mark as shown. Owner of Danish Reg. No. 4–1957, dated Jan. 5, 1957.
For Transportation of Passengers and Freight by Surface Ships.

SN 35,170. Dampskibsselskabet af 1912 A/S and A/S Dampskibsselskabet Svendborg, Copenhagen, Denmark. Filed Aug. 8, 1957.

THE BLUE LINERS—
MAERSK LINERS

The word "Liners" is disclaimed apart from the mark as shown. Owner of Danish Reg. No. 5–1957, dated Jan. 5, 1957.
For Transportation of Passengers and Freight by Surface Ships.

SN 35,171. Dampskibsselskabet af 1912 A/S and A/S Dampskibsselskabet Svendborg, Copenhagen, Denmark. Filed Aug. 8, 1957.

THE BLUE TRAMPS—
MAERSK TRAMPS

The word "Tramps" is disclaimed apart from the mark as shown. Owner of Danish Reg. No. 6–1957, dated Jan. 5, 1957.
For Transportation of Passengers and Freight by Surface Ships.

Class 107—Education and Entertainment

SN 31,584. Personal Products Corporation, Milltown, N.J. Filed June 7, 1957.

MODESS

Owner of Reg. Nos. 215,220, 525,046, and 645,165.
For Educational Services Concerned With Family Life Rendered Through the Medium of Radio Broadcasting.
First use July 19, 1956.

SN 53,240. The Dispatch Printing Company, d.b.a. WBNS-TV, Columbus, Ohio. Filed June 10, 1958.

SLIMNASTICS

For Title of a Television Broadcast Program Dealing With Physical Education and Exercise and Diet Hints.
First use Dec. 5, 1955.

Class 15—Oils and Greases

682,782. OSTENSIN. American Home Products Corpora-

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

682,713. DESIGN OF HILLBILLY. Ozark Nursery Company, d.b.a. Ozark Nursery. SN 37,899. Pub. 5–19–59. Filed 9–26–57.

682,714. PALSTAK AND DESIGN. Fab-Fibre, Inc. SN 52,875. Pub. 5–19–59. Filed 6–4–58.

682,715. AMCEL. Celanese Corporation of America. SN 57,128. Pub. 5–19–59. Filed 8–13–58.

682,716. IONAGAR. The British Dyewood Company Limited. SN 58,492. Pub. 5–19–59. Filed 9–8–58.

682,717. PUNCHED CAMBI-CLOVER. Gellich Tanning Company. SN 62,009. Pub. 5–19–59. Filed 11–6–58.

682,718. THE KEY BRAND-SCB AND DESIGN. Skogsägarnas Cellulosa Aktiebolag. SN 63,492. Pub. 5–19–59. Filed 12–1–58.

682,719. BAR-B-CUBES. St. Regis Paper Company. SN 63,601. Pub. 5–19–59. Filed 12–3–58.

Class 2—Receptacles

682,720. DRUMPAKET DESIGN. Crown Zellerbach Corporation. SN 48,714. Pub. 5–19–59. Filed 3–31–58.

682,721. PULLMAN. Arthur H. Wheatley. SN 53,682. Pub. 5–19–59. Filed 6–16–58.

682,722. CITRA. Charles P. Schiller, d.b.a. Citra Products. SN 61,860. Pub. 5–19–59. Filed 11–3–58.

682,723. ONEIDA IN CIRCLE. Oneida Ltd. SN 64,015. Pub. 5–19–59. Filed 12–10–58.

682,724. ONEIDA PREMIER AND DESIGN. Oneida Ltd. SN 64,016. Pub. 5–19–59. Filed 12–10–58.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

682,725. "WONDER GLO." Dubette Bags, Inc. SN 36,575. Pub. 5–12–59. Filed 9–3–57.

Class 6—Chemicals and Chemical Compositions

682,726. BIOTROL. Lamar Chemicals, Limited. SN 36,380. Pub. 5–19–59. Filed 8–28–57.

682,727. FOOLPROOF. William M. Connelly, d.b.a. Connelly Products. SN 42,272. Pub. 5–19–59. Filed 12–12–57.

682,728. EMBOPLAST. Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning, assignee of Hoechst Chemical Corp. SN 48,028. Pub. 5–19–59. Filed 3–19–58.

682,729. LOUSE-CHASE. Dairy Association Company, Inc., assignee of Graylawn Farms, Inc. SN 48,171. Pub. 5–19–59. Filed 3–21–58.

682,730. CONOCO H-300. Continental Oil Company. SN 50,286. Pub. 5–19–59. Filed 4–24–58.

682,731. DEXTROSTIX. Ames Company, Inc. SN 51,311. Pub. 5–19–59. Filed 5–9–58.

682,732. AZOANTHRENE. Crompton & Knowles Corporation. SN 51,777. Pub. 5–19–59. Filed 5–16–58.

682,733. "KOOL-IT." Supersite Corporation. SN 52,528. Pub. 5–19–59. Filed 5–28–58.

682,734. COLONIAL-42 AND REPRESENTATION OF RAT. Colonial Products Incorporated. SN 54,144. Pub. 5–19–59. Filed 6–24–58.

682,735. DEDORAIR. Antoine François Régis Peyron. SN 55,707. Pub. 5–19–59. Filed 7–21–58.

682,736. FUNGA-LAWN. Mock Seed Company. SN 56,159. Pub. 5–19–59. Filed 7–28–58.

682,737. FUNGA-LAWN ETC. AND DESIGN. Mock Seed Company. SN 56,161. Pub. 5–19–59. Filed 7–28–58.

682,738. ATRAZINE. Geigy Chemical Corporation. SN 59,059. Pub. 5–19–59. Filed 10–2–58.

682,739. PERGUT. Farbenfabriken Bayer Aktiengesellschaft. SN 60,216. Pub. 5–19–59. Filed 10–7–58.

682,740. ACRAFLOC. Farbenfabriken Bayer Aktiengesellschaft. SN 60,609. Pub. 5–19–59. Filed 10–14–58.

682,741. CITIES SERVICE AND DESIGN. Cities Service Oil Company. SN 64,532. Pub. 5–19–59. Filed 12–18–58.

Class 7—Cordage

682,742. TIP TOP AND DESIGN. N.V. Lankhorst Touwfabrieken. SN 36,096. Pub. 12–30–58. Filed 8–23–57.

Class 12—Construction Materials

682,743. HOMEPONENTS. Slagle Lumber Co. SN 45,417. Pub. 5–19–59. Filed 2–6–58.

682,744. AQUA-SHIELD. The Camp Company, Inc. SN 47,044. Pub. 5–19–59. Filed 3–4–58.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

682,745. METALCLAD AND DESIGN. Metalclad, Inc. SN 49,767. Pub. 5–19–59. Filed 4–16–58.

682,746. VARI-TROL. Eclipse Fuel Engineering Co. SN 59,178. Pub. 5–19–59. Filed 9–19–58.

682,747. POLY GLIDE DOT AND DESIGN. United-Carr Fastener Corporation. SN 64,119. Pub. 5–19–59. Filed 12–11–58.

682,748. SCULLY. Scully Signal Company. SN 64,201. Pub. 5–19–59. Filed 12–12–58.

682,749. SEA-CHROME. Sea Chrome, Inc. SN 64,202. Pub. 5–19–59. Filed 12–12–58.

682,750. SLICK-ZIP. Isidor Stern, d.b.a. Rapid Products Company. SN 64,352. Pub. 5–19–59. Filed 12–15–58.

682,751. FEDERAL. Federal Enameling & Stamping Company. SN 64,460. Pub. 5–19–59. Filed 12–17–58.

682,752. MIDLAND MULTI-PAK. Midland Screw Corporation. SN 64,553. Pub. 5–19–59. Filed 12–18–58.

682,753. ELEGANCE. Regal Ware, Inc. SN 64,753. Pub. 5–19–59. Filed 12–22–58.

Class 14—Metals and Metal Castings and Forgings

682,754. LONE STAR AND DESIGN. Consolidated Smelting Corporation. SN 2,858. Pub. 7–31–56. Filed 2–17–56.

682,755. CHM. Heavy Minerals Co. SN 58,093. Pub. 5–19–59. Filed 8–29–58.

682,809. FSP. Square D Company. SN 54,333. Pub. 1–20–59. Filed 6–26–58.

682,839. FARM TWIN. Young Spring & Wire Corporation. SN 65,281. Pub. 5–19–59. Filed 1–2–59.

Class 15—Oils and Greases

682,756. AQUAGLIDE. Pate Oil Co. SN 55,805. Pub. 5–19–59. Filed 7–22–58.

Class 16—Protective and Decorative Coatings

682,757. HYPERLOID. The Kansas Paint & Color Company. SN 49,160. Pub. 5–19–59. Filed 4–7–58.

682,758. "THE VINYL TOUCH OF BEAUTY" AND DESIGN. W. R. Grace & Co. SN 49,928. Pub. 5–19–59. Filed 4–18–58.

682,759. TERRA CEE. Columbia Wax Company. SN 66,855. Pub. 5–19–59. Filed 2–2–59.

682,760. TRI-NAMIC. Universal Paint & Varnish, Inc., d.b.a. Universal Paint & Varnish Co. SN 67,102. Pub. 5–19–59. Filed 2–4–59.

682,761. TEMP-TROL. Sapolin Paints Inc. SN 67,570. Pub. 5–19–59. Filed 2–11–59.

682,762. GILSO-MASTIC. American-Marietta Company. SN 67,659. Pub. 5–19–59. Filed 2–13–59.

682,763. TEM-PRA-TONE. Binney & Smith Inc. SN 67,744. Pub. 5–19–59. Filed 2–16–59.

682,764. PLATEOSOL. Finishine Laboratories, Inc. SN 67,776. Pub. 5–19–59. Filed 2–16–59.

Class 17—Tobacco Products

682,765. FLAVAROMA. Meat Industry Suppliers Inc. SN 62,863. Pub. 5–19–59. Filed 11–20–58.

682,766. WM PENN. General Cigar Co., Inc. SN 63,220. Pub. 5–19–59. Filed 11–26–58.

682,767. WHITE OWL AND DESIGN. General Cigar Co., Inc. SN 63,221. Pub. 5–19–59. Filed 11–26–58.

682,768. ROBT. BURNS. General Cigar Co., Inc. SN 63,224. Pub. 5–19–59. Filed 11–26–58.

682,769. ROBT. BURNS. General Cigar Co., Inc. SN 63,225. Pub. 5–19–59. Filed 11–26–58.

682,770. ROBT. BURNS AND PORTRAIT. General Cigar Co., Inc. SN 63,226. Pub. 5–19–59. Filed 11–26–58.

682,771. VAN DYCK. General Cigar Co., Inc. SN 63,229. Pub. 5–19–59. Filed 11–26–58.

Class 18—Medicines and Pharmaceutical Preparations

682,772. M.S. 222—SANDOZ. Sandoz, Inc. SN 44,416. Pub. 5–19–59. Filed 1–21–58.

682,773. SURGICEL. Johnson & Johnson. SN 46,950. Pub. 5–19–59. Filed 3–3–58.

682,774. HALOMID. Melville Sahyun, d.b.a. Sahyun Laboratories. SN 50,318. Pub. 5–19–59. Filed 4–24–58.

682,775. PL AND DESIGN. Frank S. Bronson, d.b.a. Pharmaceutical Laboratories. SN 50,964. Pub. 5–19–59. Filed 5–5–58.

682,776. AZULON. Chemiewerk Homburg Aktiengesellschaft. SN 52,607. Pub. 5–19–59. Filed 6–27–58.

682,777. TAMA. Tama, Inc. SN 53,063. Pub. 5–19–59. Filed 6–6–58.

682,778. PERGANTENE. Michael Pergant, d.b.a. The Pergantene Pharmacal Co. SN 57,972. Pub. 5–19–59. Filed 8–27–58.

682,779. VITALYSIN. American Medicinal Corporation. SN 59,590. Pub. 5–19–59. Filed 9–26–58.

682,780. CERULYT. The G. F. Harvey Company, Inc. SN 60,822. Pub. 5–19–59. Filed 10–17–58.

682,781. AGROZYME. Merck & Co., Inc. SN 61,198. Pub. 5–19–59. Filed 10–23–58.

682,782. OSTENSIN. American Home Products Corporation, d.b.a. Wyeth Laboratories. SN 61,241. Pub. 5–19–59. Filed 10–24–58.

682,783. EQUAGESIC. American Home Products Corporation, d.b.a. Wyeth Laboratories. SN 61,242. Pub. 5–19–59. Filed 10–24–58.

682,784. G.B.S. The G. F. Harvey Company Inc. SN 61,288. Pub. 5–19–59. Filed 10–24–58.

682,785. MUGASTRAL. The G. F. Harvey Company, Inc. SN 61,291. Pub. 5–19–59. Filed 10–24–58.

682,786. DRISTAN. American Home Products Corporation, d.b.a. Whitehall Laboratories. SN 61,349. Pub. 5–19–59. Filed 10–27–58.

682,787. BRADOFORM. Ciba Limited. SN 61,363. Pub. 5–19–59. Filed 10–27–58.

682,788. NENEPRIN. The Denver Chemical Manufacturing Company. SN 61,549. Pub. 5–19–59. Filed 10–29–58.

682,789. AMUNO. Merck & Co., Inc. SN 61,645. Pub. 5–19–59. Filed 10–30–58.

682,790. DEPTAVAC. Merck & Co., Inc. SN 61,646. Pub. 5–19–59. Filed 10–30–58.

682,791. DELUTEVAL. Olin Mathieson Chemical Corporation. SN 61,731. Pub. 5–19–59. Filed 10–31–58.

682,792. ECOVITE. Chas. Pfizer & Co., Inc. SN 61,734. Pub. 5–19–59. Filed 10–31–58.

682,793. AKRINOL. Schering Corporation. SN 61,739. Pub. 5–19–59. Filed 10–31–58.

682,794. CORILIN. Schering Corporation. SN 61,740. Pub. 5–19–59. Filed 10–31–58.

682,795. ESIDREX. Ciba Pharmaceutical Products Inc. SN 61,783. Pub. 5–19–59. Filed 11–3–58.

682,796. NEOTHYN. Bentex Pharmaceutical Co., Inc. SN 62,263. Pub. 5–19–59. Filed 11–12–58.

682,797. PANTRIN. Pan American Laboratories, Inc. SN 62,411. Pub. 5–19–59. Filed 11–13–58.

Class 19—Vehicles

682,798. CUSTOM BUILT AND DESIGN. Easton Car & Construction Company. SN 59,605. Pub. 5–19–59. Filed 9–26–58.

682,799. MARTIN. Hyster Company. SN 60,411. Pub. 5–19–59. Filed 10–10–58.

682,800. DIAMOND DOLLY. Diamond Wire & Cable Company. SN 60,785. Pub. 5–19–59. Filed 10–16–58.

682,801. RED-D-DOLLY. Diamond Wire & Cable Company. SN 60,786. Pub. 5–19–59. Filed 10–16–58.

682,802. C & C AND DESIGN. Coach & Car Equipment Corporation. SN 60,894. Pub. 5–19–59. Filed 10–20–58.

Class 20—Linoleum and Oiled Cloth

682,803. WONDERFLOR. Congoleum-Nairn Inc. SN 62,159. Pub. 5–19–59. Filed 11–10–58.

Class 21—Electrical Apparatus, Machines, and Supplies

682,804. MULTI-COMP. Sprague Electric Company. SN 46,573. Pub. 5–19–59. Filed 2–25–58.

682,805. SILHOUETTE OF THOMAS JEFFERSON. Jefferson Electric Company. SN 47,953. Pub. 5–19–59. Filed 3–18–58.

682,806. CORY. Cory Corporation. SN 48,146. Pub. 5–19–59. Filed 3–21–58.

682,807. DESIGN OF LIGHTNING BOLT. Fansteel Metallurgical Corporation. SN 48,265. Pub. 5–19–59. Filed 3–24–58.

682,808. SLIM-TRAN. Era Electric Corporation. SN 51,624. Pub. 5–19–59. Filed 5–14–58.

Class 29—Brooms, Brushes, and Dusters

Class 35—Belting, Hose, Machinery Pack-

Pub. 5-19-59. Filed 8-28-58.

682,809. F8P. Square D Company. SN 54,333. Pub. 1-20-59. Filed 6-26-58.

682,810. CAR-B-CUE. Don E. Bailey & Associates. SN 60,087. Pub. 5-19-59. Filed 10-6-58.

682,811. SELECT-O-MATIC. Sel-Set Machinery Corporation. SN 60,961. Pub. 5-19-59. Filed 10-20-58.

682,812. EXECUTONE. Executone, Inc. SN 61,175. Pub. 5-19-59. Filed 10-23-58.

682,813. SICKLES. General Instrument Corporation (F. W. Sickles Division). SN 62,176. Pub. 5-19-59. Filed 11-10-58.

682,814. INFRA-SAFE. Engelhard Industries, Inc. SN 62,279. Pub. 5-19-59. Filed 11-12-58.

682,815. E-PAK. Joseph Waldman & Sons. SN 62,340. Pub. 5-19-59. Filed 11-12-58.

682,816. TWIST-LOK. Sprague Products Company. SN 64,311. Pub. 5-19-59. Filed 12-12-58.

Class 22—Games, Toys, and Sporting Goods

682,817. JOUET. Jouet, Inc. SN 41,023. Pub. 5-19-59. Filed 11-20-57.

682,818. CONOLOY. Narmco Conolon Co. SN 48,193. Pub. 5-19-59. Filed 3-21-58.

682,819. PUTTNIK. Federated Industries, Inc. SN 49,755. Pub. 5-19-59. Filed 4-16-58.

682,820. ARENA. Canada Cycle and Motor Company Limited. SN 55,978. Pub. 5-19-59. Filed 7-25-58.

682,821. DESIGN OF AN URN. R. K. Mizuno Sporting Goods Company Limited. SN 57,392. Pub. 5-19-59. Filed 8-18-58.

682,822. WINCHESTER. Olin Mathieson Chemical Corporation. SN 59,327. Pub. 5-19-59. Filed 9-22-58.

682,823. STAR AND DESIGN. Star Manufacturing Company. SN 60,991. Pub. 5-19-59. Filed 10-20-58.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

682,824. LOADMASTER. Lewis-Shepard Products, Inc. SN 45,434. Pub. 5-19-59. Filed 2-5-58.

682,825. E-Z-LIFT. Machinery Development, Inc. SN 46,742. Pub. 5-19-59. Filed 2-27-58.

682,826. ROPEBELT. Goodman Manufacturing Company. SN 49,304. Pub. 5-19-59. Filed 4-9-58.

682,827. MODU-BORE. Textron Inc. SN 53,667. Pub. 5-19-59. Filed 6-16-58.

682,828. MODU-LATHE. Textron Inc. SN 53,668. Pub. 5-19-59. Filed 6-16-58.

682,829. ROTA-CRIMP. AMP Incorporated. SN 55,357. Pub. 5-19-59. Filed 7-16-58.

682,830. BLACKHAWK. Blackhawk Mfg. Co. SN 56,086. Pub. 5-19-59. Filed 7-28-58.

682,831. QUICKWORK. Whiting Corporation. SN 62,250. Pub. 5-19-59. Filed 11-10-58.

682,832. SOFTONE. Standard Automotive Manufacturing Company. SN 62,627. Pub. 5-19-59. Filed 11-17-58.

682,833. KEE-LINE AND KEY DESIGN. Sears, Roebuck and Co., d.b.a. David Bradley Manufacturing Works. SN 62,798. Pub. 5-19-59. Filed 11-19-58.

682,834. TRAV-O-LATOR. Otis Elevator Company. SN 63,345. Pub. 5-19-59. Filed 11-26-58.

682,835. CONCENTRO. Bunke-Musser, Inc. SN 63,569. Pub. 5-19-59. Filed 12-3-58.

682,836. JET. Halm Industries Co., Inc. SN 63,713. Pub. 5-19-59. Filed 12-5-58.

682,837. NORTH AMERICAN AND TREE DESIGN. North American Products Corp. SN 63,873. Pub. 5-19-59. Filed 12-8-58.

682,838. IMPERIAL. International Stitch-O-Matic Corp. SN 64,180. Pub. 3-24-59. Filed 12-12-58.

682,839. FARM TWIN. Young Spring & Wire Corporation. SN 65,281. Pub. 5-19-59. Filed 1-2-59.

682,840. RACOR AND DESIGN. American Brake Shoe Company. SN 66,005. Pub. 5-19-59. Filed 1-19-59.

682,841. MULTIMATIC. Seidlitz Paint & Varnish Co. SN 66,942. Pub. 5-19-59. Filed 2-2-59.

682,842. WICKET AIRE. Printing Aids Corporation. SN 67,065. Pub. 5-19-59. Filed 2-4-59.

682,843. "LITTLE GIANT." Taylor, Stiles & Company. SN 67,098. Pub. 5-19-59. Filed 2-4-59.

682,844. AIRTROL. The Reliance Electric and Engineering Company. SN 67,247. Pub. 5-19-59. Filed 2-6-59.

682,845. THORO-SIZE. The Dayton Rubber Company. SN 67,669. Pub. 5-19-59. Filed 2-13-59.

682,846. KLIPETTE. Anton Bauml. SN 67,741. Pub. 5-19-59. Filed 2-16-59.

682,847. TRU-MATIC. Andrew O. Wisti, d.b.a. Star Machine & Tool Co. SN 67,904. Pub. 5-19-59. Filed 2-17-59.

682,848. EDCO AND DESIGN. John T. Doran, d.b.a. Equipment Development Company. SN 67,928. Pub. 5-19-59. Filed 2-18-59.

Class 25—Locks and Safes

682,849. 4CW XX AND DESIGN. Williamsburg Restoration, Incorporated. SN 56,612. Pub. 5-19-59. Filed 8-4-58.

682,850. WILLIAMSBURG. Williamsburg Restoration, Incorporated. SN 56,613. Pub. 5-19-59. Filed 8-4-58.

682,851. BACK-TO-BACK K DESIGN. The American Hardware Corporation. SN 58,141. Pub. 5-19-59. Filed 9-2-58.

Class 26—Measuring and Scientific Appliances

682,852. DESIGN OF THREE DOTS. Robert C. Graham, d.b.a. The Safelite Company. SN 28,594. Pub. 8-26-58. Filed 4-22-57.

682,853. RHEWUM. "Rhewum," Rheinische Werkzeug- und Metallwarenfabrik G.m.b.H. SN 47,435. Pub. 5-19-59. Filed 3-10-58.

682,854. CONNECT-O-MATIC. Cinch Manufacturing Corporation. SN 47,730. Pub. 5-19-59. Filed 3-14-58.

682,855. KAL-DWELL. Kal-Equip Company. SN 62,397. Pub. 5-19-59. Filed 11-13-58.

682,856. DADIT. Daystrom, Inc. SN 62,435. Pub. 5-19-59. Filed 11-12-58.

682,857. KAL-REG. Kal-Equip Company. SN 62,693. Pub. 5-19-59. Filed 11-18-58.

682,858. SIL-GLAS. American-Marietta Company. SN 62,820. Pub. 5-19-59. Filed 11-20-58.

Class 27—Horological Instruments

682,859. ROBIN HOOD AND DESIGN. Viking Mercantile Corp. SN 2,209. Pub. 5-29-56. Filed 2-6-56.

682,860. BENFRE. Inter-Ocean Commerce Corporation. SN 36,192. Pub. 5-19-59. Filed 6-26-57.

Class 28—Jewelry and Precious-Metal Ware

682,861. DEFENDER. Speidel Corporation. SN 51,597. Pub. 5-19-59. Filed 5-13-58.

Class 38—Prints and Publications

682,945. FLAMBE BY TEPEE CHIEF. Ben Bushenbaum. SN 56,494. Pub. 5-19-59. Filed 9-8-58.

Class 29—Brooms, Brushes, and Dusters

682,862. BROOMAIDE. Deep River Hosiery Company, Inc. SN 62,162. Pub. 5-19-59. Filed 11-10-58.

Class 31—Filters and Refrigerators

682,863. SUPER FLO. Kinco Boiler & Engineering Company. SN 48,031. Pub. 5-19-59. Filed 3-19-58.

682,864. "DISCARDIT." Lee Filter Corp. SN 49,446. Pub. 5-19-59. Filed 4-10-58.

682,865. HYGRADE AND DESIGN. Standard Motor Products, Inc. SN 67,027. Pub. 5-19-59. Filed 2-3-59.

682,866. KLEEN KING. National Sales, Inc. SN 67,381. Pub. 5-19-59. Filed 2-9-59.

Class 32—Furniture and Upholstery

682,867. DUTCHESS COUNTY. Drexel Furniture Company. SN 58,626. Pub. 3-10-59. Filed 9-9-58.

682,868. THE BLACKSMITH SHOP AND DESIGN. The Blacksmith Shop, Inc. SN 64,455. Pub. 5-19-59. Filed 12-17-58.

682,869. PIAZZA ORIGINALS. House of Italian Handicrafts, Inc. SN 65,840. Pub. 5-19-59. Filed 1-14-59.

682,870. POK-A-DOT. American Fixture, Inc. SN 66,004. Pub. 5-19-59. Filed 1-19-59.

682,871. LENOIR HOUSE. Broyhill Furniture Factories. SN 66,531. Pub. 5-19-59. Filed 1-27-59.

682,872. DIEBOLD. Diebold, Incorporated. SN 67,528. Pub. 5-19-59. Filed 2-11-59.

682,873. SHELFMASTER. Bonny Products Co. SN 67,585. Pub. 5-19-59. Filed 2-12-59.

682,874. MEDI-PREP. Market Forge Company. SN 67,947. Pub. 5-19-59. Filed 2-18-59.

682,875. SLUMBER ROYAL. Slumberland Products Co. SN 67,998. Pub. 5-19-59. Filed 2-18-59.

682,876. LANE. The Lane Company, Inc. SN 68,578. Pub. 5-19-59. Filed 2-27-59.

682,877. "SPACE-SAVER." Rolee Hospital Television, Inc., d.b.a. Rolee, Inc. SN 68,845. Pub. 5-19-59. Filed 3-3-59.

682,878. CEDA-RAMIC. Livingston and Company Incorporated. SN 69,002. Pub. 5-19-59. Filed 3-5-59.

682,879. CEDA-ROMA. Livingston and Company Incorporated. SN 69,003. Pub. 5-19-59. Filed 3-5-59.

682,880. CEDA-ROBE. Livingston and Company Incorporated. SN 69,004. Pub. 5-19-59. Filed 3-5-59.

Class 33—Glassware

682,881. HOYA CRYSTAL. Hoya Glass Works. SN 38,541. Pub. 5-19-59. Filed 10-8-57.

Class 34—Heating, Lighting, and Ventilating Apparatus

682,882. RO-AN AND DESIGN. Ro-An Heat Reclaimer Corp. SN 54,097. Pub. 5-19-59. Filed 6-23-58.

682,883. STAMPAIRE. United States Register Company. SN 64,366. Pub. 5-19-59. Filed 12-15-58.

682,884. TORCHMASTER. Torchmaster, Inc. SN 64,574. Pub. 5-19-59. Filed 12-18-58.

682,885. PERFECTAIRE. Perfect-Line Manufacturing Corporation. SN 64,840. Pub. 5-19-59. Filed 12-23-58.

682,886. FLAME-TAMER. Tricolator Manufacturing Company. SN 64,933. Pub. 5-19-59. Filed 12-26-58.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

682,887. MINNESOTA RUBBER MR AND DESIGN. Minnesota Rubber Company. SN 49,378. Pub. 5-19-59. Filed 4-9-58.

682,888. MR AND DESIGN. Minnesota Rubber Company. SN 50,092. Pub. 5-19-59. Filed 4-21-58.

Class 36—Musical Instruments and Supplies

682,889. AD RECORDS AND DESIGN. Gold Medal Music Publishers, d.b.a. Ad Records. SN 57,368. Pub. 5-19-59. Filed 8-18-58.

Class 37—Paper and Stationery

682,890. RAPIDOSPECIAL. Koh-I-Noor Pencil Company, Inc. SN 24,437. Pub. 5-19-59. Filed 7-26-57.

682,891. ATLAS. J. S. Staedtler. SN 35,069. Pub. 5-19-59. Filed 12-1-58.

682,892. "TWIN-BAND." Rossotti Lithograph Corporation. SN 41,116. Pub. 5-19-59. Filed 11-21-57.

682,893. FEED-MATIC. The Esterbrook Pen Company. SN 45,962. Pub. 5-19-59. Filed 2-17-58.

682,894. ASTRA-GLO. Brown Company. SN 47,229. Pub. 5-19-59. Filed 3-7-58.

682,895. REPRESENTATION OF SEAL BALANCING BALL. Lindy Pen Co., Inc. SN 49,506. Pub. 5-19-59. Filed 4-11-58.

682,896. KREOCOAT. International Paper Company. SN 49,863. Pub. 5-19-59. Filed 4-17-58.

682,897. BOURGES AND DESIGN. Bourges Color Corporation. SN 52,194. Pub. 5-19-59. Filed 5-23-58.

682,898. ISO AND DESIGN. Kenneth M. Siemen, d.b.a. Iso Pad Co. SN 53,199. Pub. 5-19-59. Filed 6-9-58.

682,899. LONGLINE. Scripto, Inc. SN 55,278. Pub. 5-19-59. Filed 7-14-58.

682,900. PICTO-MEMO. Paper Service Company, Inc. SN 56,876. Pub. 5-19-59. Filed 8-8-58.

682,901. HOLIDAY. Paper Mate Manufacturing Company. SN 58,569. Pub. 5-19-59. Filed 9-8-58.

682,902. TOTE NOTE. Western Tablet & Stationery Corporation. SN 58,817. Pub. 5-19-59. Filed 9-11-58.

682,903. 4 CW XX AND DESIGN. Williamsburg Restoration, Incorporated. SN 59,664. Pub. 5-19-59. Filed 9-26-58.

682,904. WILLIAMSBURG. Williamsburg Restoration, Incorporated. SN 59,665. Pub. 5-19-59. Filed 9-26-58.

682,905. FILMAR. A. W. Faber-Castell Pencil Co., Inc. SN 60,283. Pub. 5-19-59. Filed 10-7-58.

682,906. OMNIKOTE. Olin Mathieson Chemical Corporation. SN 61,073. Pub. 5-19-59. Filed 10-21-58.

682,907. WISCO FOLD. Wisconsin Tissue Mills. SN 61,141. Pub. 5-19-59. Filed 10-22-58.

682,908. SKID MASTER. Olin Mathieson Chemical Corporation. SN 61,316. Pub. 5-19-59. Filed 10-24-58.

682,909. SCRIPTETTE. Scripto, Inc. SN 61,446. Pub. 5-19-59. Filed 10-27-58.

682,910. FIBERFORM. Fiberform, Inc. SN 61,555. Pub. 5-19-59. Filed 10-29-58.

682,911. MONTH-O-RAMA. Charles S. Coyle, d.b.a. Month-O-Rama & Armor Flex Traffic Products. SN 61,786. Pub. 5-19-59. Filed 11-3-58.

682,912. SURFAGLOSS. Crown Zellerbach Corporation. SN 63,425. Pub. 5-19-59. Filed 12-1-58.

682,913. SURFALITH. Crown Zellerbach Corporation. SN 63,426. Pub. 5-19-59. Filed 12-1-58.

682,914. SURFAMAT. Crown Zellerbach Corporation. SN 63,425. Pub. 5-19-59. Filed 12-1-58.

Class 45—Soft Drinks and Carbonated

683,000. MIAMI MAID. The Dayton Bread Co. SN 63,298. Pub. 5-19-59. Filed 11-28-58.

Class 38—Prints and Publications

682,915. JOURNAL OF LIFETIME LIVING. Pharmaceuticals, Incorporated, by change of name from Lifetime Living, Inc. SN 25,547. Pub. 5–19–59. Filed 3–5–57.

682,916. THE DUREX MOLDER AND DESIGN. Hooker Chemical Corporation. SN 58,994. Pub. 5–19–59. Filed 9–16–58.

682,917. ELECTRONIC DESIGN AND DESIGN. Hayden Publishing Company, Inc. SN 59,539. Pub. 5–19–59. Filed 9–25–58.

682,918. THE ROBERT HALL PIPE-LINE. Robert Hall Clothes, Inc. SN 60,221. Pub. 5–19–59. Filed 10–7–58.

682,919. GOVERNMENT CONTRACTS CITATOR, ETC. AND DESIGN. Federal Publications, Inc. SN 60,495. Pub. 5–19–59. Filed 10–13–58.

682,920. FEDERAL PUBLICATIONS AND DESIGN. Federal Publications, Inc. SN 60,496. Pub. 5–19–59. Filed 10–13–58.

682,921. THE GOVERNMENT CONTRACTOR AND DESIGN OF A SPREAD EAGLE. Federal Publications, Inc. SN 60,497. Pub. 5–19–59. Filed 10–13–58.

682,922. COW COUNTRY CREATIONS. The Lazy RL. SN 62,018. Pub. 5–19–59. Filed 11–6–58.

682,923. MUSICARD AND DESIGN. Fairfield Publishing Company. SN 62,074. Pub. 5–19–59. Filed 11–7–58.

682,924. AMERICAN STORY AND DESIGN. United Newspapers Magazine Corporation. SN 62,117. Pub. 5–19–59. Filed 11–7–58.

682,925. THE ABBOTT PHARMAGRAPH. Abbott Laboratories. SN 62,140. Pub. 5–19–59. Filed 11–10–58.

682,926. WEEKEND. Montreal Standard Publishing Co. (Limited). SN 62,211. Pub. 5–19–59. Filed 11–10–58.

682,927. THE STRANGE WORLD OF MR. MUM. The Hall Syndicate, Inc. SN 62,291. Pub. 5–19–59. Filed 11–12–58.

682,928. DUKE HANDY. Philip Morris Incorporated. SN 62,409. Pub. 5–19–59. Filed 11–13–58.

682,929. AMERICAN HERITAGE. American Heritage Publishing Co., Inc. SN 62,439. Pub. 5–19–59. Filed 11–14–58.

Class 39—Clothing

682,930. SPECTRA-SPORTS. The Joseph & Feiss Company. SN 36,447. Pub. 5–19–59. Filed 8–29–57.

682,931. MIRACLE MILER. Phoenix Inc. SN 41,113. Pub. 10–7–58. Filed 11–21–57.

682,932. TRU-VELOUR. The Joseph & Feiss Company. SN 41,911. Pub. 5–19–59. Filed 12–6–57.

682,933. MOR-SHAG. M.K.M. Knitting Mills, Inc. SN 48,178. Pub. 5–19–59. Filed 3–21–58.

682,934. MIRAGORA. M.K.M. Knitting Mills, Inc. SN 48,182. Pub. 5–19–59. Filed 3–21–58.

682,935. MIRASOFT. M.K.M. Knitting Mills, Inc. SN 48,184. Pub. 5–19–59. Filed 3–21–58.

682,936. MIRASPUN. M.K.M. Knitting Mills, Inc. SN 48,185. Pub. 5–19–59. Filed 3–21–58.

682,937. MIRAFUR. M.K.M. Knitting Mills, Inc. SN 48,186. Pub. 5–19–59. Filed 3–21–58.

682,938. INDIVIDUALITY FROCKS. Individuality Frocks, Inc. SN 50,300. Pub. 5–19–59. Filed 4–24–58.

682,939. GASSMAN. Gassman, Inc. SN 51,891. Pub. 5–19–59. Filed 5–19–58.

682,940. CANTERBURY GIRL. Canterbury Knitters, Ltd. SN 55,571. Pub. 5–19–59. Filed 7–18–58.

682,941. CANTERBURY. Canterbury Knitters, Ltd. SN 56,622. Pub. 5–19–59. Filed 8–5–58.

682,942. YODELER. Valmeline Imports Ltd. SN 56,817. Pub. 5–19–59. Filed 8–7–58.

682,943. PEETRON. Rogers Peet Company. SN 56,880. Pub. 5–19–59. Filed 8–8–58.

682,944. ARCTEX INSULITE. J. E. Morgan Knitting Mills, Inc. SN 58,362. Pub. 5–19–59. Filed 9–4–58.

682,945. FLAMBE BY TEPEE CHIEF. Ben Buchenbaum. SN 58,494. Pub. 5–19–59. Filed 9–8–58.

682,946. DUCKSTER AND DESIGN. Brand and Puritz. SN 60,017. Pub. 5–19–59. Filed 10–3–58.

682,947. SHEERLY YOURS. Morganton Full Fashioned Hosiery Company. SN 60,759. Pub. 5–19–59. Filed 10–16–58.

682,948. HUG STRIPETTE. Delightform Foundations, Inc. SN 60,806. Pub. 5–19–59. Filed 10–17–58.

682,949. HUG STRIPE. Delightform Foundations, Inc. SN 60,807. Pub. 5–19–59. Filed 10–17–58.

682,950. CURL-A-WIG. Eye-Ful Lingerie Inc. SN 60,910. Pub. 5–19–59. Filed 10–20–58.

682,951. VASANO. Bally's Shoe Factories, Ltd. SN 61,159. Pub. 5–19–59. Filed 10–23–58.

682,952. MARY LEE. Lambert Hosiery Mills, Inc. SN 61,303. Pub. 5–19–59. Filed 10–24–58.

682,953. COMFITOP. Gould & Scammon, Inc. SN 61,565. Pub. 5–19–59. Filed 10–29–58.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

682,954. SCULPT-O-FAB. Walters Industries, Inc. SN 32,562. Pub. 5–19–59. Filed 6–24–57.

682,955. LONTRA IMPERIALE. La France Industries, Inc. SN 32,827. Pub. 5–19–59. Filed 6–28–57.

682,956. ROL-LAWN. Great Western Bag Co., d.b.a. Rol-Lawn. SN 46,142. Pub. 5–19–59. Filed 2–19–58.

682,957. HIDE-AWAY. Rand Pillo Case Corporation. SN 62,485. Pub. 5–19–59. Filed 11–14–58.

682,958. CHARTERED. Pepperell Manufacturing Company. SN 62,954. Pub. 5–19–59. Filed 11–21–58.

682,959. MARVELAIRE. United States Rubber Company. SN 62,975. Pub. 5–19–59. Filed 11–21–58.

682,960. BATES DISCIPLINED BEDSPREAD. Bates Manufacturing Company. SN 63,406. Pub. 5–19–59. Filed 12–1–58.

Class 43—Thread and Yarn

682,961. TOUCHE. Pacific Mills. SN 54,086. Pub. 5–19–59. Filed 6–23–58.

Class 44—Dental, Medical, and Surgical Appliances

682,962. GAUZTAPE. Jacob J. Borkan, d.b.a. Modern First Aid Necessities Co. SN 46,411. Pub. 5–19–59. Filed 2–24–58.

682,963. VET-PAK. Arthur E. Look, Inc. SN 59,116. Pub. 5–19–59. Filed 9–18–58.

682,964. SURG-ADE. Charles J. Slicklen Company. SN 64,593. Pub. 5–19–59. Filed 12–18–58.

682,965. ACHROSURGIC. American Cyanamid Company. SN 65,395. Pub. 5–19–59. Filed 1–7–59.

682,966. KLISTA. Rigo Manufacturing Company. SN 65,514. Pub. 5–19–59. Filed 1–8–59.

682,967. MAM' ZELLE. Century Enterprises, Inc. SN 65,819. Pub. 5–19–59. Filed 1–14–59.

682,968. LADY CENTURY. Century Enterprises, Inc. SN 65,820. Pub. 5–19–59. Filed 1–14–59.

682,969. HI-DI. Diamond Precision Tools Limited. SN 66,029. Pub. 5–19–59. Filed 1–19–59.

682,970. EUROSPITAL. Importex Chimici Farmaceutici S.p.A. SN 66,583. Pub. 5–19–59. Filed 1–12–59.

682,971. GIKRO'S. Importex Chimici Farmaceutici S.p.A. SN 66,585. Pub. 5–19–59. Filed 1–12–59.

Class 45—Soft Drinks and Carbonated Waters

682,972. JET. Cherry Smash Corporation. SN 62,832. Pub. 5–19–59. Filed 11–20–58.

Class 46—Foods and Ingredients of Foods

682,973. CULTURED. De-Raef Corporation. SN 4,619. Pub. 5–19–59. Filed 3–13–56.

682,974. THERMAL BELT VINEYARDS. H. L. Moser, d.b.a. Thermal Belt Vineyards. SN 24,397. Pub. 5–19–59. Filed 2–13–57.

682,975. RICH ROAST. The Borden Company. SN 42,425. Pub. 5–19–59. Filed 12–16–57.

682,976. KING SUN. Osceola Fruit Distributors. SN 42,526. Pub. 5–19–59. Filed 12–16–57.

682,977. TENDERAID. Ray Whitaker, d.b.a. Whitaker Seasonings. SN 44,670. Pub. 5–19–59. Filed 1–24–58.

682,978. GOOD CUP. J.F.G. Coffee Company. SN 46,145. Pub. 5–19–59. Filed 2–19–58.

682,979. SUN-BOY AND DESIGN. Iwao Nagasawa, d.b.a. New Sunrise Company. SN 46,455. Pub. 5–19–59. Filed 2–24–58.

682,980. TEASER. Anthony A. Bianco, Inc. SN 46,880. Pub. 5–19–59. Filed 3–3–58.

682,981. BARBARA LEE. James Macchiaroli Fruit Co. SN 47,399. Pub. 5–19–59. Filed 3–10–58.

682,982. GRACIV. Gracious Giving Inc. SN 47,579. Pub. 5–19–59. Filed 3–12–58.

682,983. STEPHANSON'S ETC. AND DESIGN. Stephanson's, d.b.a. Stephanson's Butter Crust Pies. SN 47,610. Pub. 5–19–59. Filed 3–12–58.

682,984. TENDER FLAKE. General Foods Corporation. SN 47,639. Pub. 5–19–59. Filed 3–13–58.

682,985. TENDER FRESH. General Foods Corporation. SN 47,640. Pub. 5–19–59. Filed 3–13–58.

682,986. BONNIE BAKER. Piggly Wiggly Operators' Warehouse, Inc. SN 50,312. Pub. 5–19–59. Filed 4–24–58.

682,987. CEROLAX. The Acerola Corporation, by change of name from Acerola Processing Corporation. SN 53,753. Pub. 5–19–59. Filed 6–18–58.

682,988. CROWN JEWELS. National Licorice Company. SN 56,229. Pub. 5–19–59. Filed 9–2–58.

682,989. HONEY-ROLL. The Maryland Baking Company, d.b.a. Maryland Baking Company. SN 56,307. Pub. 5–19–59. Filed 9–3–58.

682,990. BIG TOP. Weis Markets, Inc. SN 60,325. Pub. 5–19–59. Filed 10–8–58.

682,991. SKY KISSED. Western North Carolina Apple Growers Co-Operative, Inc. SN 60,379. Pub. 5–19–59. Filed 10–9–58.

682,992. LADY CALVERT. The Levering Coffee Company. SN 60,826. Pub. 5–19–59. Filed 10–17–58.

682,993. BACA'S. Dan B. Baca, d.b.a. Best Mexican Foods. SN 60,876. Pub. 5–19–59. Filed 10–20–58.

682,994. MISS DAIRYLEA AND REPRESENTATION OF GIRL WITH GLASS. Dairymen's League Co-Operative Association, Inc. SN 61,035. Pub. 5–19–59. Filed 10–21–58.

682,995. SHIP DESIGN WITH WORDING. John Wagner & Sons Inc. SN 61,224. Pub. 5–19–59. Filed 10–23–58.

682,996. JUNGLE. Filler Products, Inc. SN 62,545. Pub. 5–19–59. Filed 11–17–58.

682,997. LOVIT. Palm Fruit and Vegetable Company. SN 62,870. Pub. 5–19–59. Filed 11–20–58.

682,998. TOWN CLUB. Armour and Company. SN 62,985. Pub. 5–19–59. Filed 11–24–58.

682,999. SATIS-FRY. Safeway Stores, Incorporated, d.b.a. Conway Oil Co. SN 63,251. Pub. 5–19–59. Filed 11–26–58.

683,000. MIAMI MAID. The Dayton Bread Co. SN 63,298. Pub. 5–19–59. Filed 11–28–58.

683,001. CHIP-SNACKS. Melarone Food Products, Inc. SN 63,334. Pub. 5–19–59. Filed 11–28–58.

683,002. SUMMIT. Summit Tea Co. SN 63,364. Pub. 5–19–59. Filed 11–28–58.

683,003. BD. D. E. Winebrenner Co., Inc. SN 63,501. Pub. 5–19–59. Filed 12–1–58.

Class 47—Wines

683,004. THREE MONKS AND DESIGN. House of Old Molineaux, Inc. SN 690,556. CONCURRENT USE. Pub. 8–12–58. Filed 6–30–55.

Class 49—Distilled Alcoholic Liquors

683,005. 3-MONKS. The American Distilling Company. SN 648,522. CONCURRENT USE. Pub. 8–12–58. Filed 6–10–53.

683,006. THREE MONKS AND DESIGN. House of Old Molineaux, Inc. SN 690,557. CONCURRENT USE. Pub. 8–12–58. Filed 6–30–55.

683,007. CANADIAN WOODS AND DESIGN. James Robertson Company. SN 39,276. Pub. 10–28–58. Filed 10–21–57.

683,008. COUNTRY AGED. Heaven Hill Distilleries, Inc. SN 63,233. Pub. 5–19–59. Filed 11–26–58.

Class 50—Merchandise Not Otherwise Classified

683,009. WEE ESSENTIAL. Eastern Infants Wear, Inc. SN 42,693. Pub. 5–19–59. Filed 12–19–57.

683,010. VARI LINK. Inco Industries Manufacturing Corp. SN 44,710. Pub. 5–19–59. Filed 1–27–58.

683,011. "HANGEMS." Bond Manufacturing Co. SN 47,332. Pub. 5–19–59. Filed 3–10–58.

683,012. DURA-BLOCK. Carroll Box and Pallet Co. SN 59,266. Pub. 5–19–59. Filed 9–22–58.

683,013. ESKAY-LITE. American Sisalkraft Corporation. SN 63,917. Pub. 5–19–59. Filed 12–9–58.

Class 51—Cosmetics and Toilet Preparations

683,014. TOP STYLE. Avon Products, Inc. SN 44,058. Pub. 5–19–59. Filed 1–16–58.

683,015. ULTRA FEMININE. Helena Rubinstein, Inc. SN 45,655. Pub. 5–19–59. Filed 2–10–58.

683,016. KERATINT. Eugene-Gallia S.A. SN 46,305. Pub. 5–19–59. Filed 2–21–58.

683,017. LUZIER. Luzier's, Incorporated. SN 46,557. Pub. 5–19–59. Filed 2–25–58.

683,018. BLUE LIGHTENING. Clairol Incorporated (Delaware corporation), assignee of Clairol Incorporated (Connecticut corporation). SN 47,345. Pub. 5–19–59. Filed 3–10–58.

683,019. COLORCADE. The Gillette Company, d.b.a. The Toni Company. SN 57,265. Pub. 5–19–59. Filed 8–15–58.

683,020. FLEURINDA. Maquesa. SN 57,498. Pub. 5–19–59. Filed 8–19–58.

683,021. LASH-O-MATIC. New York Pencil Co., Inc. SN 58,110. Pub. 5–19–59. Filed 8–29–58.

683,022. DYNADERM. Carter Products, Inc. SN 58,401. Pub. 5–19–59. Filed 9–5–58.

Class 52—Detergents and Soaps

683,023. SHINE AND DESIGN. The Rapp-Ramsey Company. SN 661,036. Pub. 11-15-55. Filed 2-3-55.

683,024. "SURFACE TENSION 21." U.S. Polychemical Corporation. SN 41,733. Pub. 5-19-59. Filed 12-3-57.

683,025. NU-HORIZON AND DESIGN. Nu-Horizon System, Inc., assignee of J. S. Honigblum, d.b.a. Nu-Horizon System. SN 59,962. Pub. 5-19-59. Filed 10-2-58.

683,026. ERA. The Procter & Gamble Company. SN 62,787. Pub. 5-19-59. Filed 11-19-58.

683,027. ENTH-ACID. Enthone, Incorporated. SN 62,844. Pub. 5-19-59. Filed 11-20-58.

683,028. SOLO. Nelson Chemicals Co. SN 62,868. Pub. 5-19-59. Filed 11-20-58.

683,029. "COUNTDOWN." Anderson Chemical Company. SN 62,903. Pub. 5-19-59. Filed 11-21-58.

683,030. 101. Gardiner Manufacturing Company, Inc. SN 62,923. Pub. 5-19-59. Filed 11-21-58.

Service Marks

Class 100—Miscellaneous

683,031. FLUOROGRAPHIC. Printing Arts Research Laboratories, Inc. SN 11,874. Pub. 5-19-59. Filed 7-10-56.

683,032. AUDIONICS AND DESIGN. Leo Miller, d.b.a. Audionics Company. SN 45,590. Pub. 5-19-59. Filed 2-10-58.

Class 101—Advertising and Business

683,033. SLIDE-O-MATIC. Leo G. Lausen & Company. SN 48,758. Pub. 5-19-59. Filed 3-31-58.

683,034. GOLD CROWN. Gold Crown Stamp Co., Inc. SN 60,815. Pub. 5-19-59. Filed 10-17-58.

Class 102—Insurance and Financial

683,035. MONTH-O-MATIC. Northwestern National Life Insurance Company. SN 47,923. Pub. 5-19-59. Filed 3-6-58.

683,036. WINDMILL DESIGN. Farm and Home Life Insurance Company. SN 54,505. Pub. 5-19-59. Filed 6-30-58.

683,037. GVA AND DESIGN. Morgan Guaranty Trust Company of New York, by change of name from Guaranty Trust Company of New York. SN 55,473. Pub. 5-19-59. Filed 7-17-58.

683,038. GUARANTY TRUST COMPANY AND DESIGN. Morgan Guaranty Trust Company of New York, by change of name from Guaranty Trust Company of New York. SN 55,474. Pub. 5-19-59. Filed 7-17-58.

683,039. G AND DESIGN. Morgan Guaranty Trust Company of New York, by change of name from Guaranty Trust Company of New York. SN 55,475. Pub. 5-19-59. Filed 7-17-58.

683,040. GUARANTY TRUST COMPANY OF NEW YORK AND DESIGN. Morgan Guaranty Trust Company of New York, by change of name from Guaranty Trust Company of New York. SN 55,476. Pub. 5-19-59. Filed 7-17-58.

683,041. HOME PROVIDER. Provident Indemnity Life Insurance Company. SN 55,518. Pub. 5-19-59. Filed 7-17-58.

Class 103—Construction and Repair

683,042. NEW YORK SHIPBUILDING CORP. ETC. AND DESIGN. New York Shipbuilding Corporation. SN 45,698. Pub. 5-19-59. Filed 2-11-58.

Class 104—Communication

683,043. REPRESENTATION OF A LITTLE GIRL. Westinghouse Broadcasting Company, Inc. SN 27,476. Pub. 5-19-59. Filed 4-3-57.

Class 106—Material Treatment

683,044. GREAT WESTERN AND DESIGN. Great Western Precision Grinding, Inc. SN 43,310. Pub. 5-19-59. Filed 1-2-58.

Class 107—Education and Entertainment

683,045. TWO-BIT-BALL. The Midwestern Broadcasting Company. SN 20,844. Pub. 5-19-59. Filed 12-11-56.

683,046. RED WINGS. Rochester Community Baseball, Inc. SN 29,751. Pub. 5-19-59. Filed 5-9-57.

683,047. JESSI. Scientists of Tomorrow. SN 58,258. Pub. 5-19-59. Filed 9-2-58.

Collective Membership Marks

Class 200

683,048. CERTIFIED GEMOLOGIST ETC. AND DESIGN. American Gem Society. SN 18,797. Pub. 5-19-59. Filed 8-13-56.

683,049. CERTIFIED GEMOLOGIST ETC. AND LETTER DESIGN. American Gem Society. SN 16,929. Pub. 5-19-59. Filed 10-4-56.

Certification Mark

Class A—Goods

683,050. GENUINE HI-FI APPROVED ETC. AND DESIGN. William James Gettens, d.b.a. High Fidelity Consumer's Bureau of Standards. SN 38,605. Pub. 5-19-59. Filed 10-9-57.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1—Raw or Partly Prepared Materials

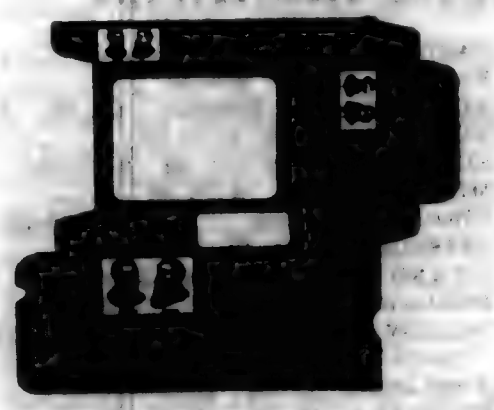
683,051. Lee Patten Seed Company, d.b.a. "Patco's," Jersey City, N.J. SN 56,041. Filed P.R. 7-25-58; Am. S.R. 4-30-59.

FOR THE BEST LAWN IN TOWN

For Lawn Seed Mixture.
First use Apr. 22, 1958.

Class 18—Medicines and Pharmaceutical Preparations

683,052. Smith Brothers, Inc., Poughkeepsie, N.Y. SN 59,492. Filed P.R. 9-24-58; Am. S.R. 6-10-59.



The drawing is lined for orange, yellow, and green.
For Cough Drops.
First use June 5, 1958.

683,053. Smith Brothers, Inc., Poughkeepsie, N.Y. SN 59,494. Filed P.R. 9-24-58; Am. S.R. 6-10-59.

The drawing is lined for green and orange.
For Medicated Mouth and Throat Freshener.
First use June 2, 1958.

Class 38—Prints and Publications

683,054. Meredith Publishing Company, Des Moines, Iowa. SN 55,250. Filed P.R. 7-14-58; Am. S.R. 6-1-59.

ACROSS THE EDITOR'S DESK

For Article in a Periodic Publication.
First use Jan. 1, 1958.

683,055. Commodity Research Bureau, Inc., New York, N.Y. SN 55,987. Filed 12-30-58.

COMMODITY CHART SERVICE

For Newsletter or Bulletin.
First use Mar. 2, 1956.

Class 39—Clothing

683,056. Model Brassiere Corp., Cortland, N.Y. SN 43,184. Filed P.R. 12-30-57; Am. S.R. 2-27-59.

HY-LO

For Foundation Garment.
First use June 15, 1927.

683,057. Joseph M. Klein, Inc., New York, N.Y. SN 54,168. Filed P.R. 6-24-58; Am. S.R. 6-3-59.

TALL MEN'S SHOP

For Men's Suits, Topcoats, Overcoats, Surcoats, Shorts, Bathrobes, Underwear, Pajamas, Formal Wear, Cabana Sets, Sweaters, Hosiery, Gloves, Shoes, and Ties.
First use in 1942.

683,058. Joseph M. Klein, Inc., New York, N.Y. SN 54,168. Filed P.R. 6-24-58; Am. S.R. 6-3-59.

TALL MEN'S APPAREL

For Men's Suits, Topcoats, Overcoats, Surcoats, Shorts, Bathrobes, Underwear, Pajamas, Formal Wear, Cabana Sets, Sweaters, Hosiery, Gloves, Shoes, and Ties.
First use in 1942.

Class 46—Foods and Ingredients of Foods

683,059. David H. Kirkeby, d.b.a. Mid-Central Equipment Co., Mount Prospect, Ill. SN 31,933. Filed P.R. 6-13-57; Am. S.R. 6-15-59.

BURGER-BASE

For Hamburger Improver Consisting of Wheat Flour, Hydrolyzed Vegetable Protein, Vegetable Shortening, Monosodium Glutamate, Dehydrated Egg Albumen, Salt, and U.S. Certified Color.
First use Apr. 12, 1957.

683,060. National Starch Products Inc., New York, N.Y. SN 48,571. Filed P.R. 3-27-58; Am. S.R. 6-3-59.

INSTANT CLEARJEL

For Dry Starch for Use in Foods.
First use Oct. 22, 1957.

Class 47 — Wines

683,061. Gonsalez, Byass & Co. Limited, d.b.a. Gonsalez, Byass y Ca., and Gonsalez, Byass & Co., London, England. SN 45,559. Filed P.R. 2-10-58; Am. S.R. 5-18-59.

Owner of U.S. Reg. Nos. 311,106, 314,806, and 632,818.
For Sherry Wine.
First use in about the year 1835; in commerce in the year 1900.

Service Mark

Class 102 — Insurance and Financial

683,062. The Western Saving Fund Society of Philadelphia, Philadelphia, Pa. SN 52,083. Filed P.R. 5-21-58; Am. S.R. 5-25-59.

Wishing won't do it . . . Saving will

For Banking Service.
First use Jan. 13, 1947.

TRADEMARK REGISTRATIONS RENEWED

125,531. SAFARI MILLS. Cl. 42. 5-20-19.
125,627. LEVOLIER. Cl. 21. 6-3-19.
126,161. LADDIES. Cl. 17. 7-29-19.
126,636. INSTANTINE. Cl. 18. 9-30-19.
126,966. KEEN KUTTER. Cl. 2. 10-14-19.
127,127. FIDELITY. Cl. 18. 10-21-19.
127,382. ELDER. Cl. 39. 11-11-19.
359,614. PERMASOIE. Cl. 42. 8-23-38.
362,534. FORCE-FLO. Cl. 13. 11-22-38.
364,061. LIFE GUARD. Cl. 46. 1-17-39.
365,309. ETHORAON. Cl. 43. 3-7-39.
366,051. SWISSLI. Cl. 39. 3-28-39.
366,179. ZAS. Cl. 23. 4-4-39.
366,194. COLORED LABEL DESIGN. Cl. 51. 4-4-39.
366,813. AUXILIATOR. Cl. 51. 5-2-39.
367,558. BOCO. Cl. 6. 5-23-39.
367,608. HYPERVITAM. Cl. 18. 5-23-39.
367,767. INDIAN HEAD AND DESIGN. Cl. 48. 5-30-39.
367,768. IROQUOIS INDIAN HEAD AND DESIGN. Cl. 48. 5-30-39.
368,019. BREATHLESS. Cl. 51. 6-6-39.
368,599. SWINGLINE. Cl. 13. 6-27-39.
369,046. TIMES HERALD. Cl. 38. 7-11-39.
369,391. FAITH. Cl. 27. 7-25-39.
369,623. ETA AND DESIGN. Cl. 27. 8-1-39.
369,626. AS AND DESIGN. Cl. 27. 8-1-39.
369,850. STA-UP-TOP. Cl. 39. 8-1-39.
370,398. STETSON. Cl. 30. 8-29-39.
370,471. BELAP. Cl. 18. 8-29-39.
370,509. DEPILIN. Cl. 6. 8-29-39.
370,615. CAROID. Cl. 51. 8-29-39.
370,705. PAYDAY. Cl. 46. 9-5-39.
371,424. GILLETTE AND DESIGN. Cl. 28. 9-26-39.
371,476. AIR FILM. Cl. 39. 9-26-39.
371,522. SUBURBANETTE. Cl. 39. 9-26-39.
371,539. MIMOSA. Cl. 39. 9-26-39.
371,541. LINGER LONGER. Cl. 46. 9-26-39.
371,542. CRISPOLINE. Cl. 42. 9-26-39.
371,548. UC AND DESIGN. Cl. 48. 9-26-39.
371,578. BEGGARS BUSH. Cl. 39. 9-26-39.
371,794. TRANSVERSE BAND ON RECTANGLE. Cl. 46. 10-10-39.
371,829. AMPLIVOX. Cl. 44. 10-10-39.
371,940. CILOBANA. Cl. 46. 10-17-39.
371,966. REPRESENTATION OF FOUR FAUCETS, ETC. Cl. 52. 10-17-39.
371,967. KYRO. Cl. 39. 10-17-39.
371,968. TOURCOTE. Cl. 39. 10-17-39.
372,351. GRABS. Cl. 46. 10-31-39.
372,376. PLEZURE. Cl. 51. 10-31-39.
372,433. ONCO METAFLEX. Cl. 39. 10-31-39.
372,484. YOUNG AMERICA PRINTS. Cl. 42. 10-31-39.
372,537. ROBLEE. Cl. 39. 10-31-39.
372,689. MEADOW BROOK. Cl. 49. 11-7-39.
372,770. SHIP FRIENDSHIP SALEM-1797 AND DESIGN. Cl. 52. 11-14-39.
372,771. SHIP RECOVERY-SALEM 1794 AND DESIGN. Cl. 52. 11-14-39.
372,827. HITANA. Cl. 46. 11-14-39.
372,829. RIGHT-O. Cl. 46. 11-14-39.

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

674,903. TOASTMASTER. Cl. 21. 3-3-59.

Section 8

The following registrations issued June 16, 1953

575,758. CIRCULAR EMBLEM DESIGN WITH BAR. Cl. 46.
575,759. BEST BY TASTE TEST. Cl. 45.
575,760. PAK-FELT. Cl. 12.
575,761. F AND W DESIGN. Cl. 46.
575,774. MORE MIX. Cl. 23.
575,778. LUMBERJACK. Cl. 39.
575,783. NO-SEW. Cl. 40.
575,784. BREVI-TWEEN. Cl. 39.
575,787. ABOVE ALL. Cl. 42.
575,792. BERNARD. Cl. 19.
575,794. DARLAB. Cl. 44.
575,797. WILLSON DOUBLE. Cl. 39.
575,807. MARWICK. Cl. 39.
575,808. A KEY TO SAVINGS AND DESIGN. Cl. 37.
575,811. SIMPLO-GRAPH. Cl. 37.
575,816. STRIDEAWAY. Cl. 39.
575,820. MILLENDS OF FINE FABRICS CALICO CAT CALICO CENTER AND DESIGN. Cl. 42.
575,827. YOGURTA. Cl. 51.
575,836. HETTRICK. Cl. 39.
575,839. ICAROS. Cl. 46.
575,855. ALTO-RET. Cl. 46.
575,860. MUESLI. Cl. 46.
575,866. EVERFRESH. Cl. 46.
575,867. SKEE RIEGEL. Cl. 39.
575,868. DOTS AND DESIGN. Cl. 46.
575,870. ALPINELLA AND DESIGN. Cl. 39.

367,860. CIRCULAR DESIGN. Cl. 52. 5-30-39. Economics Laboratory, Inc., St. Paul, Minn. Corrected: In

588,758. ZIPPER DESIGN. Cl. 13. 4-20-54. Leonard Lichtenstein, doing business as Leonard Distributing Co.,

575,875. GOSSAMINE. Cl. 39.
575,881. GENUINE G.P. BRAND AND DESIGN. Cl. 46.
575,883. NOEL BLINKER LITES AND DESIGN. Cl. 21.
575,886. INGERSOLL 3 WAY. Cl. 12.
575,891. MD LEG O MUTTON AND DESIGN. Cl. 32.
575,894. TOSCO RAMIE ETC. AND DESIGN. Cl. 42.
575,896. ANNIE OAKLEY. Cl. 51.
575,897. HEYDICILLIN. Cl. 18.
575,898. FRENCH FRIED PEANUTS AND DESIGN. Cl. 46.
575,901. CASTLE GUARDS AND DESIGN. Cl. 39.
575,902. ALWAYS IN SEASON AND DESIGN. Cl. 48.
575,906. PERMA TAG AND DESIGN. Cl. 37.
575,916. STEPHANIE FOSTER. Cl. 39.
575,917. OMSCO. Cl. 21.
575,922. WINDMILL DESIGN. Cl. 26.
575,925. CHEF'S SHELF AND DESIGN. Cl. 32.
575,931. EVERY-WHEREABLES. Cl. 39.
575,932. NORCLIFF. Cl. 39.
575,933. VIXEN. Cl. 39.
575,934. DETANOL. Cl. 52.
575,938. ADVIGA. Cl. 26.
575,942. MONOTRIM. Cl. 12.
575,944. DAYSTROM. Cl. 36.
575,946. WILL McGILL'S SELECT CHOICE. Cl. 49.
575,953. TOP. Cl. 23.
575,954. MONEY BUNNY. Cl. 39.
575,957. THE PICKLE BARREL. Cl. 46.
575,958. INDIAN PRINCE MOCCASINS AND DESIGN. Cl. 39.
575,960. KING COTTON. Cl. 42.
575,961. JERDANGE. Cl. 42.
575,962. A BOMBARA ORIGINAL AND DESIGN. Cl. 32.
575,965. STEFANIE BRITTON. Cl. 39.
575,966. PIERRE DANFLOU. Cl. 47.
575,970. ANYTIME. Cl. 42.
575,971. EN-E-TIME. Cl. 42.
575,979. STORM-WIN. Cl. 12.
575,981. SUNNYWOOD. Cl. 32.
575,988. BISMA-GREEN. Cl. 18.
576,008. BRITISH-TRAVELERS. Cl. 39.
576,009. OAKAP AND DESIGN. Cl. 39.
576,012. VALBORG-LIND AND DESIGN. Cl. 46.
576,015. SUN SUEDES. Cl. 39.
576,026. ANDU-RO. Cl. 39.
576,028. LIGHTHOUSE CONTROL AND DESIGN. Cl. 21.
576,036. FLAMINGO. Cl. 21.
576,037. BALLERINA. Cl. 23.
576,038. A SCHEUCHZER. Cl. 23.
576,043. POLLY-DELL. Cl. 37.
576,046. SANO-GRIP. Cl. 39.
576,049. NO-BO. Cl. 45.
576,050. NO-BO. Cl. 48.
576,051. BELTMASTER. Cl. 39.
576,056. IMPERPOP. Cl. 42.
576,063. RAMBLER. Cl. 46.
576,065. EEE BEE EACH SHRIMP A PEARL. Cl. 46.
576,070. AUSTIN'S VERYBEST. Cl. 10.
576,071. QUADROFLEX. Cl. 37.
576,073. WENRAY. Cl. 42.
576,076. JACK-IN-PAK. Cl. 22.
576,079. COLORGENIC. Cl. 39.
576,080. FERRO-SENE. Cl. 10.
576,085. PALOMINO. Cl. 1.
576,087. CONDITION-ALL. Cl. 10.
576,089. A DOGHOUSE EXCUSE! Cl. 39.
576,090. A DOGHOUSE EXCUSE! AND DESIGN. Cl. 39.
576,092. LEEKO AND DESIGN. Cl. 32.
576,096. POGOTEX AND DESIGN. Cl. 42.
576,104. CLEVITE. Cl. 23.
576,106. BLACK CAT AND DESIGN. Cl. 9.
576,109. ANDROTEX. Cl. 18.
576,110. GROMONE. Cl. 18.
576,112. GROTESQUE OF A MAN. Cl. 46.
576,117. KAN DO. Cl. 46.
576,120. PETER PAN. Cl. 6.
576,123. ROSEMARSHI. Cl. 46.
576,136. LAMSON IN MAP DESIGN. Cl. 23.
576,138. GREGOR AND CROWN DESIGN. Cl. 46.
576,141. "MOISTURE SEAL." Cl. 13.
576,143. SIPHON. Cl. 23.
576,146. SAFETY-SUDS. Cl. 52.
576,147. MORRISON CARRY-ALL. Cl. 19.
576,149. COLORVUE. Cl. 26.
576,150. SEE-TEETH. Cl. 29.
576,151. ARNOLD HANDICAP CONTROL. Cl. 19.
576,152. SUPER. Cl. 23.
576,153. WEAVE-O-GRAM. Cl. 22.
576,154. DIALS BY SCHWALM AND DESIGN. Cl. 27.
576,155. NOX-STATIC. Cl. 6.
576,157. SHRIMP BOAT. Cl. 33.
576,158. HOWARD. Cl. 23.
576,161. PROVIDENCE. Cl. 23.
576,164. LATIL. Cl. 100.
576,167. OLEY VALLEY HOE-DOWNERS. Cl. 107.
576,168. HULL FAST. Cl. 106.

Section 18

290,285. JOE PEYTON. Cl. 49. 9–16–41.
393,139. HANDY-DAN WACKET. Cl. 39. 1–27–42.
403,686. A-LUM-GLOW. Cl. 4. 10–12–43.
409,427. A DANDY ORIGINAL. Cl. 39. 10–3–44.
432,736. SHEFFIELD. Cl. 27. 9–9–47.
439,456. VOLACREPE. Cl. 39. 6–29–48.
526,931. LOBMEYR. Cl. 23. 6–27–50.
623,361. TROPIC RAY. Cl. 21. 3–20–56.
672,161. WEATHERMAN. Cl. 21. 1–6–59.

TRADEMARK REGISTRATIONS AMENDED, DISCLAIMED, CORRECTED, ETC.

108,390. KENO. Cl. 46. 2–8–16. The Commercial Milling Co. International Milling Company, Minneapolis, Minn. Amended: In the statement, column 1, lines 11 through 14 are deleted, and the drawing is amended to appear:

KENO

205,173. SAVOGRAN. Cl. 4. 11–8–25. India Alkali Works. The Savogran Company, Norwood, Mass. Amended to appear:

SAVOGRAN

256,164. REGAL. Cl. 26. 5–7–28. Regal Musical Instrument Co. The Harmony Company, Chicago, Ill. Amended to appear:

REGAL

340,115. THE BRIDE'S MAGAZINE. Cl. 38. 11–3–36. Brides House, Inc. The Conde Nast Publications Inc., New York, N.Y. Amended to appear:

the BRIDE'S magazine

367,491. EL AND DESIGN. Cl. 52. 5–16–39. Economics Laboratory, Inc., St. Paul, Minn. Corrected: In the certificate, line 4, and in the statement, column 1, line 3, "Minnesota" should be deleted and *Delaware* should be inserted.

367,492. SUPER SOILAX. Cl. 52. 5–16–39. Economics Laboratory, Inc., St. Paul, Minn. Corrected: In the certificate, line 4, and in the statement, column 1, line 3, "Minnesota" should be deleted and *Delaware* should be inserted.

382,837. Nov. 12, 1940. Jacob F. Buckman, d.b.a. Enthone Company, New Haven, Conn. Pub. by Enthone, Incorpo-

441,015. Oct. 19, 1945. Basic Refractories, Inc., Cleveland, Ohio. Pub. by Basic Incorporated, Cleveland, Ohio.

367,860. CIRCULAR DESIGN. Cl. 52. 5-30-39. Economics Laboratory, Inc., St. Paul, Minn. Corrected: In the certificate, line 4, and in the statement, column 1, line 3, "Minnesota" should be deleted and *Delaware* should be inserted.

367,861. TETROX. Cl. 4. 5-30-39. Economics Laboratory, Inc., St. Paul, Minn. Corrected: In the certificate, line 4, and in the statement, column 1, line 3, "Minnesota" should be deleted and *Delaware* should be inserted.

518,074. KENDALL. Cl. 42. 11-29-49. The Kendall Company, Walpole, Mass. Amended to appear:

KENDALL

574,374. BLU-BELL. Cl. 28. 5-12-53. Harry Rotter, Chicago, Ill. Amended: In the statement, the last paragraph in column 2 is deleted, and the drawing is amended to appear:

BLU-BELL

578,878. ORLANDO SENTINEL. Cl. 38. 8-18-53. Orlando Daily Newspapers, Inc., Orlando, Fla. Amended: In the statement, column 2, lines 7 and 8 are deleted and *The word "Orlando" is disclaimed apart from the mark as shown.* is inserted, and the drawing is amended to appear:

Orlando Sentinel

588,758. ZIPPER DESIGN. Cl. 13. 4-20-54. Leonard Lichtenstein, doing business as Leonard Distributing Co., Chicago, Ill. Amended: In the statement, column 2, lines 5 and 6 are deleted, and the drawing is amended to appear:

675,121. DESIGN OF CARTON. Cl. 52. 3-3-59. Church & Dwight Co., Inc., New York, N.Y. Corrected: In the certificate, column 2, line 2, "hydrated" should be deleted and *dehydrated* should be inserted.

679,275. BUNNY WALKER. Cl. 32. 5-26-59. Bunny Bear Inc., Everett, Mass. Corrected: In the heading of the certificate "Ser. No. 63,829" should be deleted and *Ser. No. 61,889* should be inserted.

679,569. GLASPAK. Cl. 23. 6-2-59. Diamond Gardner Corporation, New York, N.Y. Corrected: In the certificate, column 2, line 1, "class" should be deleted and *glass* should be inserted.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

196,896. BAKER. Cl. 23. Baker Brothers, Inc. 3-31-25. New Cert. Sec. 7(c) to Baker Brothers, Inc., Toledo, Ohio.

206,420. THE "AM BOY" AND DESIGN. Cl. 46. Amboy Milk Products Co. 2-2-26. New Cert. Sec. 7(c) to Diehl, Inc., Defiance, Ohio.

276,838. KARADIO. Cl. 21. Karadio Corporation. 10-28-30. New Cert. Sec. 7(c) to American Television & Radio Co., St. Paul, Minn.

299,510. DANNON REAL YOGURT AND DESIGN. Cl. 46. Dannon Milk Products Inc. 1-12-43. New Cert. Sec. 7(c) to Beatrice Foods Co., Chicago, Ill.

524,508. EVER-DRY. Cl. 51. Ever-Dry Corporation. 4-25-50. New Cert. Sec. 7(c) to Ever-Dry Corporation, Memphis, Tenn.

608,980. GORDON'S EVER FAST AND DESIGN. Cl. 5. Eldo Leo Reed. 7-19-55. New Cert. Sec. 7(c) to Norton H. Kjome, doing business as Gordon Glue Co., Decorah, Iowa.

614,642. TORI-TANK. Cl. 2. Pioneer Iron Works. 10-25-55. New Cert. Sec. 7(c) to Pioneer Industries, Inc., Sioux City, Iowa.

635,438. CYSCOL. Cl. 18. Martin A. Coopersmith. 10-9-56. New Cert. Sec. 7(c) to Mathan Laboratories, Inc., Cortlandt, N.Y.

648,653. BUIMASSOR. Cl. 44. Joseph Despature. 7-16-57. New Cert. Sec. 7(c) to Societe Bolfra, S.A., Chur, Switzerland.

658,073. BAKER AND DESIGN. Cl. 23. Baker Brothers, Inc. 12-24-57. New Cert. Sec. 7(c) to Baker Brothers, Inc., Toledo, Ohio.

662,171. VOLTA FURNACES AND DESIGN. Cl. 21. Volta Manufacturing Company, Limited. 5-27-58. New Cert. Sec. 7(c) to Whiting Corporation (Canada), Limited, Welland, Ontario, Canada.

665,613. TUBALITE. Cl. 13. Pioneer Iron Works. 8-12-58. New Cert. Sec. 7(c) to Pioneer Industries, Inc., Sioux City, Iowa.

REGISTRATIONS PUBLISHED UNDER SEC. 12(c)

The following marks registered under the act of 1905, or the act of 1881, are published under the provisions of section 12(c) of the Trademark Act of 1946. These registrations are not subject to opposition but are subject to cancellation under section 14 of the act of 1946.

Class 1—Raw or Partly Prepared Materials

369,415. July 25, 1939. Austenal Laboratories, Inc., New York, N.Y. Pub. by Austenal, Inc., New York, N.Y.

VITALON

For Thermoplastic Synthetic Resin Material in the Form of Slabs, Granules, or Powder.

Class 6—Chemicals and Chemical Compositions

369,629. Aug. 1, 1939. Nuodex Products Co., Inc., Elizabeth, N.J. Pub. by Heyden Newport Chemical Corporation, New York, N.Y.

NUADE

For Chemical Grinding Agents Adapted To Be Added to Pigments for Use in Coating and Film Forming Materials, Such as Paints, Enamels, Lacquers, and Printing and Lithographic Inks.

382,837. Nov. 12, 1940. Jacob F. Buckman, d.b.a. Enthone Company, New Haven, Conn. Pub. by Enthone, Incorporated, New Haven, Conn.

EBONOL

For Chemical Compound for Oxidizing Ferrous Metal Articles.

Class 11—Inks and Inking Materials

409,579. Oct. 10, 1944. Quest Manufacturing Company, Chicago, Ill. Pub. by registrant.

Quesco

For Typewriter Ribbons.

Class 12—Construction Materials

373,809. Dec. 26, 1939. Basic Dolomite, Inc., Cleveland, Ohio. Pub. by Basic Incorporated, Cleveland, Ohio.

6 PLASTIC 5

For Refractory Clinker Preparations and Furnace Linings.

396,314. July 7, 1942. Basic Refractories, Inc., Cleveland, Ohio. Pub. by Basic Incorporated, Cleveland, Ohio.

RAMIX

For Refractory Preparations Suitable for Furnace Lining and Repairing.

437,253. Mar. 9, 1948. Basic Refractories, Inc., Cleveland, Ohio. Pub. by Basic Incorporated, Cleveland, Ohio.

FETMAG

For Refractory Materials Suitable for Protective Coatings in Furnace Lining and Repairing.

440,074. Aug. 10, 1948. Basic Refractories, Inc., Cleveland, Ohio. Pub. by Basic Incorporated, Cleveland, Ohio.

GUNCHROME

For Granular Refractory Compositions Suitable for Furnace Lining and Repairing.

441,015. Oct. 19, 1948. Basic Refractories, Inc., Cleveland, Ohio. Pub. by Basic Incorporated, Cleveland, Ohio.

BASIMIX

For Refractory Magnesian Clinker, Ramming and Patching Materials Suitable for Cementitious and Molding Uses in Furnace Lining and Repairing.

Class 16—Protective and Decorative Coatings

126,670. Sept. 30, 1919. E. I. du Pont de Nemours and Company, Wilmington, Del. Pub. by registrant.

FLOW KOTE

For Ready-Mixed Paints.

Class 18—Medicines and Pharmaceutical Preparations

368,044. June 6, 1939. The Burton-Levin Foundation, Inc., Baltimore, Md. Pub. by Christine O. Burton, d.b.a. Ca-Ma-Sil Company, Baltimore, Md.

CA-MA-SIL

For Antidigestant Preparation.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

367,785. May 30, 1939. Fisher Scientific Company, Pittsburgh, Pa. Pub. by registrant.

SCOOPULA

For Stainless Steel Hand Tool Used in Picking Up, Transferring, and Dispensing Materials Such as Chemical Salts.

370,173. Aug. 22, 1939. Arthur J. Stock, d.b.a. Stock Engineering Company, Cleveland, Ohio. Pub. by Stock Equipment Company, Cleveland, Ohio.

SECO

For Coal Handling Equipment—Namely, Coal Chutes, Non-Segregating Coal Distributors, Coal Valves, and Parts Therefor.

414,107. May 29, 1945. Vapor Blast Mfg. Co., Milwaukee, Wis. Pub. by registrant.

V-B

For Sand Blasting Machines and Parts Thereof.

368,291. June 13, 1939. Sel-Mor Garment Co. Inc., St. Louis, Mo. Pub. by registrant.

191,551. Nov. 11, 1924. Citrus Products Company, Chicago, Ill. Pub. by registrant.

432,975. Sept. 23, 1947. Peter Schlumbohm, New York, N.Y. Pub. by Chemex Corporation, New York, N. Y.

Minnehaha

For Drink Mixer.

439,389. June 22, 1948. Spray-O-Dor Company, to Spray-O-Dor Company, Chicago, Ill., a firm composed of Mike Guryn and Emily K. Guryn, Chicago, Ill. Pub. by Spray-O-Dor Company, Chicago, Ill.

SPRAY-O-DOR

For Door Check Deodorizing Sprayers.

Class 25—Locks and Safes

157,066. July 25, 1922. The E. T. Fraim Lock Company, Lancaster, Pa. Pub. by The Safe Padlock and Hardware Company, Lancaster, Pa.

For Locks, Latches, and Padlocks.

Class 27—Horological Instruments

369,392. July 25, 1939. General Time Instruments Corporation, La Salle, Ill. Pub. by General Time Corporation, New York, N.Y.

SPUR

For Clocks.

Class 32—Furniture and Upholstery

366,258. Apr. 4, 1939. The Aeroshade Co., Waukesha, Wis. Pub. by Consolidated General Products, Inc., Houston, Tex.

AEROLUX

For Shades for Porches and Windows.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

16,426. Mar. 26, 1880. Revere Rubber Company, Boston, Mass. Pub. by United States Rubber Company, New York, N.Y.

"Neptune" Linen Fire Hose.
REVERE RUBBER CO.
BOSTON.

For Rubber Belting, Hose, and Packing.

365,896. Mar. 21, 1939. Hewitt Rubber Corporation, Buffalo, N.Y. Pub. by Hewitt-Robins Incorporated, New York, N.Y.

LIGHTNING SPEED

For Belting Made of Rubber and Canvas.

Class 38—Prints and Publications

332,649. Feb. 18, 1936. Advertising Publications, Inc., Chicago, Ill. Pub. by registrant.

INDUSTRIAL MARKETING

For Periodical.

408,853. Aug. 29, 1944. Cemetery Legal Compass, Los Angeles, Calif. Pub. by registrant.

COMPASS

BEAM

For Periodical Publications Devoted to the Interests of Cemetery Owners and Operators.

Class 39—Clothing

364,069. Jan. 17, 1939. The May Department Stores Company, St. Louis, Mo. Pub. by registrant.

BARRCREST

For Men's, Boys', Youths' Clothing—Namely, Suits, Overcoats, and Topcoats.

365,363. Mar. 7, 1939. The May Department Stores Company, St. Louis, Mo. Pub. by registrant.

BartonHall

For Men's Suits, Hats, and Caps.

367,771. May 30, 1939. The May Department Stores Company, St. Louis, Mo. Pub. by registrant.

Rock-Weave

For Young Men's, Youths', and Boys' Clothing—Namely, Suits, Overcoats, Jackets, and Trousers.

367,588. May 23, 1939. A. E. and M. H. Stewart, d.b.a. Grainc Feed Mills, Greensboro, N.C. Pub. by registrant.

369,334. Apr. 1, 1930. Pycope, Incorporated, Jersey City,

368,291. June 13, 1939. Sel-Mor Garment Co. Inc., St. Louis, Mo. Pub. by registrant.

Miss ELAINE

For Lingerie, Specifically for Women's and Girls' Pajamas, Nightgowns, Slips, Panties, and Housecoats.

Class 40—Fancy Goods, Furnishings, and Notions

379,015. June 25, 1940. Shoe Lace Company, Lawrence, Mass. Pub. by Lincoln Lace & Braid Co., Providence, R.I.

SPEEDLINE

For Shoe Lacings.

379,016. June 25, 1940. Shoe Lace Company, Lawrence, Mass. Pub. by Lincoln Lace & Braid Co., Providence, R.I.

UNICORN

For Shoe Lacings.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

364,456. Jan. 31, 1939. The May Department Stores Company, St. Louis, Mo. Pub. by registrant.

RUSS-LING

For Taffeta Piece Goods Made of Silk and Rayon and Combinations Thereof.

Class 44—Dental, Medical, and Surgical Appliances

366,880. May 2, 1939. Austenal Laboratories, Inc., New York, N.Y. Pub. by Austenal, Inc., New York, N.Y.

MICRO-MOLD

For Porcelain Teeth, Dentures, Comprising Base and Teeth, Denture Parts, and Molds for Forming Same.

Class 45—Soft Drinks and Carbonated Waters

158,917. Sept. 19, 1922. Citrus Products Company, Chicago, Ill. Pub. by registrant.

Kist

For Non-Alcoholic, Noncereal, Maltless Beverages Sold as Soft Drinks and Sirups and Concentrates From Which Such Soft Drinks Are Made.

191,551. Nov. 11, 1924. Citrus Products Company, Chicago, Ill. Pub. by registrant.

BlueBird

For Maltless-Beverage Flavors and Beverages Made Therefrom.

311,830. Apr. 10, 1934. The Miller Becker Company, Cleveland, Ohio. Pub. by registrant.

Cotton Club

For Nonalcoholic, Noncereal, Maltless Beverages Sold as Soft Drinks.

314,417. June 26, 1934. Century Flavor Company, Chicago, Ill. Pub. by Citrus Products Company, Chicago, Ill.

CENTURY

For Nonalcoholic Maltless Beverages and Syrups, Concentrates, and Compounds for Making Such Beverages.

Class 46—Foods and Ingredients of Foods

91,099. Apr. 15, 1913. Loose-Wiles Biscuit Company, Boston, Mass. Pub. by Sunshine Biscuits, Inc., Long Island City, N.Y.

Hydrox

For Cookies.

298,721. Nov. 1, 1932. Borden Quality, Inc., New York, N.Y. Pub. by City Products Corporation, Chicago, Ill.

FARM FIELD

For Butter.

300,493. Jan. 24, 1933. Borden's Produce Company, Inc., Omaha, Nebr. Pub. by City Products Corporation, Chicago, Ill.

Farmland

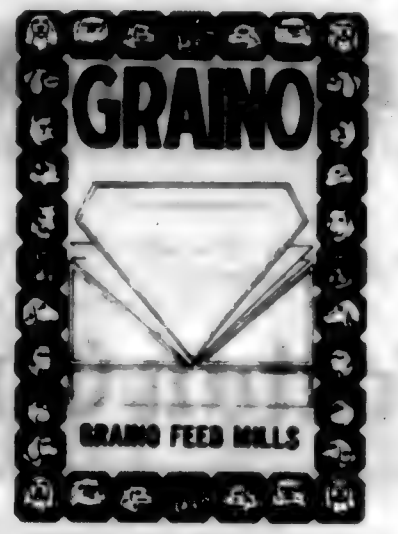
For Condensed Buttermilk.

366,550. Apr. 18, 1939. George W. Horner & Company, Limited, Chester-le-Street, England. Pub. by registrant.

BOY BLUE

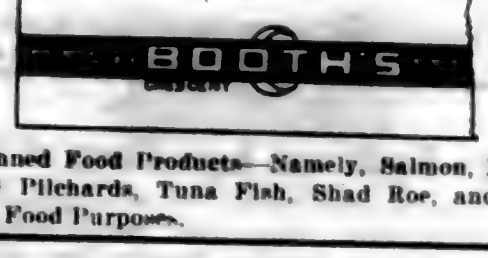
For Toffee, Chocolate Covered Toffee, and Boiled Sweets—Namely, Candy.

367,588. May 23, 1939. A. E. and M. H. Stewart, d.b.a. Graino Feed Mills, Greensboro, N.C. Pub. by registrant.



For Dog Food, a Completely Balanced Ration for All Breeds of Dogs and Puppies, Which Supplies All Vitamins and Requires No Cooking.

373,482. Dec. 12, 1939. F. E. Booth Company, Inc., San Francisco, Calif. Pub. by registrant.



For Canned Food Products—Namely, Salmon, Pacific Sardines and Pilchards, Tuna Fish, Shad Roe, and Vegetable Juices for Food Purposes.

Class 48—Malt Beverages and Liquors

16,851. July 23, 1880. Bass, Ratcliff & Gretton, Limited, Staffordshire, England. Pub. by registrant.

For Beer of all Descriptions.

Class 51—Cosmetics and Toilet Preparations

203,276. Sept. 15, 1925. Eureka Pyorrhea Products Co., Tulsa, Okla. Pub. by Pycope, Incorporated, Jersey City, N.J.

Py·co·pay

For Dentifrice.

260,334. Apr. 1, 1930. Pycope, Incorporated, Jersey City, N.J. Pub. by registrant.

BEGIN THE DAY WITH

Py·co·pay

For Tooth Powder.

368,709. June 27, 1939. Felton Chemical Co. Inc., Brooklyn, N.Y. Pub. by registrant.

SUNAROME

For Natural and Synthetic Essential Oils and Aromatic Chemicals Used in the Manufacture of Toilet Preparations.

370,522. Aug. 29, 1939. Mme. Martha Lewis, Donora, Pa. Pub. by Robert Lewis, Donora, Pa.

Mme. Lewis' Special

For Preparation for the Hair and Treatment of the Scalp.

Class 52—Detergents and Soaps

366,866. May 2, 1939. The J. B. Ford Company, Wyandotte, Mich. Pub. by Wyandotte Chemicals Corporation, Wyandotte, Mich.

Poma Cleaner

For Cleaning, Cleansing, and Detergent Preparation Characterized by the Possession of Water Softening and De-Odorizing Properties, and Particularly Useful for Dairy, Farm, Household, and General Washing and Cleansing Purposes.

British Dyewood Co. Ltd., The, Glasgow, Scotland. 682,716, pub. 5–19–59. Cl. 1.
Bronson, Frank S., d.b.a. Pharmaceutical Laboratories, Pasa-
Continental Oil Co., Ponca City, Okla. 682,780, pub. 5–19–59. Cl. 6.
Conway Oil Co.: *See*—

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AMP Inc., Harrisburg, Pa. 682,829, pub. 5–19–59. Cl. 23.
Abbott Laboratories, North Chicago, Ill. 682,925, pub. 5–19–59. Cl. 38.
Abercrombie & Fitch Co.: *See*—
Suffern, Robert A.
Acerola Corp., The, by change of name from Acerola Processing Corp., Toa Baja, Puerto Rico. 682,987, pub. 5–19–59. Cl. 46.
Acerola Processing Corp.: *See*—
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Gold Medal Music Publishers.
Advertising Publications, Inc., Chicago, Ill. 332,649, 12(c) pub. 8–4–59. Cl. 38.
Aeroshade Co., The, Waukesha, Wis., by Consolidated General Products, Inc., Houston, Tex. 366,258, 12(c) pub. 8–4–59. Cl. 32.
Alexander Packing Corp., New York, N.Y. 575,855, canc. Cl. 46.
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Altman, B., & Co., New York, N.Y. 371,966, ren. 8–4–59. Cl. 52.
Altschuler-Picard, Fred, also known as F. A. Picard, Sun Valley, Idaho. 366,051, ren. 8–4–59. Cl. 39.
Alumglow Cleansing Co.: *See*—
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Amboy Milk Products Co., to Diehl, Inc., Defiance, Ohio. 208,420, new cert. Cl. 46.
American Brake Shoe Co., New York, N.Y. 682,840, pub. 5–19–59. Cl. 23.
American Cyanamid & Chemical Corp., to American Cyanamid Co., New York, N.Y. 370,509, ren. 8–4–59. Cl. 6.
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American Distilling Co., The, Pekin, Ill. 683,005, pub. 8–12–58. Cl. 49.
American Perment Co., Inc., New York, N.Y. 370,615, ren. 8–4–59. Cl. 51.
American Fixture, Inc., St. Louis, Mo. 682,870, pub. 5–19–59. Cl. 32.
American Gem Society, Los Angeles, Calif. 683,048–9, pub. 5–19–59. Cl. 200.
American Hardware Corp., The, New Britain, Conn. 682,851, pub. 5–19–59. Cl. 25.
American Heritage Publishing Co., Inc., New York, N.Y. 682,929, pub. 5–19–59. Cl. 38.
American Home Products Corp., d.b.a. Wyeth Laboratories, New York, N.Y. 682,782–3, pub. 5–19–59. Cl. 18.
American Home Products Corp., d.b.a. Whitehall Laboratories, New York, N.Y. 682,786, pub. 5–19–59. Cl. 18.
American-Marietta Co., Chicago, Ill. 682,762, pub. 5–19–59. Cl. 16.
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American Medicinal Corp., Forest Hills, N.Y. 682,779, pub. 5–19–59. Cl. 18.
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Ames Co., Inc., Elkhart, Ind. 682,731, pub. 5–19–59. Cl. 6.
Amplivox Ltd., Wembley, England. 371,829, ren. 8–4–59. Cl. 44.
Anabolic Food Products, Inc., Glendale, Calif. 371,940, ren. 8–4–59. Cl. 46.
Anderson Chemical Co., Litchfield, Minn. 683,029, pub. 5–19–59. Cl. 52.
Armour and Co., Chicago, Ill. 682,998, pub. 5–19–59. Cl. 46.
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Austin, Guy D., Miami, Fla. 576,070, canc. Cl. 10.
Avon Products, Inc., New York, N.Y. 683,014, pub. 5–19–59. Cl. 51.
Babson Bros. Co., Chicago, Ill. 576,143, canc. Cl. 23.
Baca, Dan B., d.b.a. Best Mexican Foods, Albuquerque, N. Mex. 682,993, pub. 5–19–59. Cl. 46.
Bailey, Don E., & Associates, Los Angeles, Calif. 682,810, pub. 5–19–59. Cl. 21.
Baker Brothers, Inc., to Baker Brothers, Inc., Toledo, Ohio. 196,896, new cert. Cl. 23.
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Balderacchi, John J., d.b.a. G. P. Food Distributors, Greensboro, N.C. 575,881, canc. Cl. 46.
Bally, Inc., New York, N.Y. 575,778, canc. Cl. 39.
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Basic Refractories, Inc., by Basic Inc., Cleveland, Ohio. 440,074, 12(c) pub. 8–4–59. Cl. 12.
Basic Refractories, Inc., by Basic Inc., Cleveland, Ohio. 441,015, 12(c) pub. 8–4–59. Cl. 12.
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Bauml, Anton, New York, N.Y. 682,846, pub. 5–19–59. Cl. 23.
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Bernard-Moteurs, S.A., Paris, France. 575,792, canc. Cl. 19.
Bersworth Chemical Co., Framingham, Mass. 576,080, canc. Cl. 10.
Best Mexican Foods: *See*—
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Bestov Products, Inc., New York, N.Y. 366,179, ren. 8–4–59. Cl. 23.
Bianco, Anthony A., Inc., Fresno, Calif. 682,980, pub. 5–19–59. Cl. 46.
Binney & Smith Inc., New York, N.Y. 682,763, pub. 5–19–59. Cl. 16.
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Bonus Savings Stamp Co., Kansas City, Mo. 575,808, canc. Cl. 37.
Booth, F. E., Co., Inc., San Francisco, Calif. 373,482, 12(c) pub. 8–4–59. Cl. 46.
Borden Co., The, New York, N.Y. 682,975, pub. 5–19–59. Cl. 46.
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Borg-Warner Corp., Chicago, Ill. 575,886, canc. Cl. 12.
Borkan, Jacob J., d.b.a. Modern First Aid Necessities Co., Chicago, Ill. 682,962, pub. 5–19–59. Cl. 44.
Borst, Orival E., d.b.a. L. T. Labs, Waukegan, Ill. 672,161, canc. Cl. 21.
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Bourges Color Corp., New York, N.Y. 682,897, pub. 5–19–59. Cl. 37.
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Bronson, Frank S., d.b.a. Pharmaceutical Laboratories, Pasadena, Calif. 682,775, pub. 5–19–59. Cl. 18.
Brown Co., Berlin, N.H. 372,433, ren. 8–4–59. Cl. 39.
Brown Co., Boston, Mass. 682,895, pub. 5–19–59. Cl. 37.
Brown Shoe Co., Inc., St. Louis, Mo. 372,537, ren. 8–4–59. Cl. 39.
Broyhill Furniture Factories, Lenoir, N.C. 682,871, pub. 5–19–59. Cl. 32.
Brunsviga Maschinenwerke, A.G., Braunschweig, Germany. 575,938, canc. Cl. 26.
Buckman, Jacob F., d.b.a. Enthone Co., by Enthone, Inc., New Haven, Conn. 382,837, 12(c) pub. 8–4–59. Cl. 6.
Bunke-Musser, Inc., Jackson Center, Ohio. 682,835, pub. 5–19–59. Cl. 23.
Bunny Bear Inc., Everett, Mass. 679,275, cor. Cl. 32.
Burton, Christine O.: *See*—
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Iwao Nagasawa, d.b.a. New Sunrise Co., Salt Lake City, Utah. 682,979, pub. 5–19–59. Cl. 46.
J.F.G. Coffee Co., Knoxville, Tenn. 682,978, pub. 5–19–59. Cl. 46.
Jefferson Electric Co., Bellwood, Ill. 682,805, pub. 5–19–59. Cl. 21.
Jensen-McLean Co., Inc., Seattle, Wash. 575,894, canc. Cl. 42.
Johansen, Howard A., d.b.a. Howard's Automotive and Racing Cams, Los Angeles, Calif. 576,158, canc. Cl. 23.
Johnson & Johnson, New Brunswick, N.J. 682,773, pub. 5–19–59. Cl. 18.
Johnson, Lorenzo, d.b.a. Johnson's Nox-Static Labs, Dallas, Tex. 576,155, canc. Cl. 6.
Johnson's Nox-Static Labs: *See*—
Johnson, Lorenzo.
Joseph & Feiss Co., The, Cleveland, Ohio. 682,930, pub. 5–19–59. Cl. 39.
Joseph & Feiss Co., The, Cleveland, Ohio. 682,932, pub. 5–19–59. Cl. 39.
Jouet, Inc., Brooklyn, N.Y. 682,817, pub. 5–19–59. Cl. 22.
Kal-Equip Co., Otsego, Mich. 682,855, pub. 5–19–59. Cl. 26.
Kal-Equip Co., Otsego, Mich. 682,857, pub. 5–19–59. Cl. 26.
Kansas Paint & Color Co., The, Wichita, Kans. 682,757, pub. 5–19–59. Cl. 16.
Karadio Corp., to American Television & Radio Co., St. Paul, Minn. 276,838, new cert. Cl. 21.
Kehm Corp., The: *See*—
Stevens-Root Co.
Kendall Co., The, Walpole, Mass. 518,074. Am. 7(d). Cl. 42.
King Cotton, Inc., Dalton, Ga. 575,960, canc. Cl. 42.
Kirkeby, David H., d.b.a. Mid-Central Equipment Co., Mount Prospect, Ill. 683,059. Cl. 46.
Kisco Boiler & Engineering Co., St. Louis, Mo. 682,863, pub. 5–19–59. Cl. 31.
Kjome, Norton H.: *See*—
Reed, Eldo L.
Klein, Joseph M., Inc., New York, N.Y. 683,057–8. Cl. 39.
Koh-I-Noor Pencil Co., Inc., Bloomsbury, N.J. 682,890, pub. 5–19–59. Cl. 37.
Kovacs, Louis, d.b.a. Kovax Products, New York, N.Y. 576,051, canc. Cl. 39.
Kovax Products: *See*—
Kovacs, Louis.
Labs, L. T.: *See*—
Borst, Orival E.
La France Industries, Inc., New York, N.Y. 682,955, pub. 5–19–59. Cl. 42.
Lamar Chemicals, Ltd., New York, N.Y. 682,726, pub. 5–19–59. Cl. 6.
Lambert Hosiery Mills, Inc., New York, N.Y. 682,952, pub. 5–19–59. Cl. 39.
Lamson and Goodnow Mfg. Co., Shelburne Falls, Mass. 576,136, canc. Cl. 23.
Lane Co., Inc., The, Altavista, Va. 682,876, pub. 5–19–59. Cl. 32.
Latil Corp., New York, N.Y. 576,164, canc. Cl. 100.
Lauzen, Leo G., & Co., Aurora, Ill. 683,033, pub. 5–19–59. Cl. 101.
Lazy RL, The, Boulder, Colo. 682,922, pub. 5–19–59. Cl. 38.
Lee Filter Corp., North Arlington, N.J. 682,864, pub. 5–19–59. Cl. 31.
Lee Patten Seed Co., d.b.a. "Patco's," Jersey City, N.J. 683,051. Cl. 1.
Leeko Mfg. Co., Inc., New York, N.Y. 576,092, canc. Cl. 32.
Leonard Distributing Co.: *See*—
Lichtenstein, Leonard.
Lerman, Monroe A., Long Island City, N.Y. 576,151, canc. Cl. 19.
Levering Coffee Co., The, Baltimoore, Md. 682,992, pub. 5–19–59. Cl. 46.
Lewis, Mme. Martha, by R. Lewis, Donora, Pa. 870,522, 12(c) pub. 8–4–59. Cl. 51.
Lewis, Robert: *See*—
Lewis, Mme. Martha.
Lewis-Shepard Products, Inc., Watertown, Mass. 682,824, pub. 5–19–59. Cl. 23.
Lichtenstein, Leonard, d.b.a. Leonard Distributing Co., Chicago, Ill. 588,758. Am. 7(d). Cl. 13.
Life Guard Citrus Corp.: *See*—
Griffin Canning Co.
Lifetime Living, Inc.: *See*—
Pharmaceuticals, Inc.
Li & Fung, Ltd., Hong Kong, China. 576,106, canc. Cl. 9.
Lincoln Lace & Braid Co.: *See*—
Shoe Lace Co.
Lindy Pen Co., Inc., Culver City, Calif. 682,895, pub. 5–19–59. Cl. 37.
Linquist, Alexander O., New Britain, Conn. 576,012, canc. Cl. 46.
Livingston and Co. Inc., Philadelphia, Pa. 682,878–80, pub. 5–19–59. Cl. 32.
Long, Dorothy A., d.b.a. Dawnwood Farms, Amenia, N.Y. 575,868, canc. Cl. 46.
Look, Arthur E., Inc., Boston, Mass. 682,963, pub. 5–19–59. Cl. 44.
Loose-Wiles Biscuit Co., Boston, Mass., by Sunshine Biscuits, Inc., Long Island City, N.Y. 91,099, 12(c) pub. 8–4–59. Cl. 46.
Los Angeles Sportogs Co.: *See*—
Harvits, Abe M.
Lozier's, Inc., Kansas City, Mo. 683,017, pub. 5–19–59. Cl. 51.
M. K. M. Knitting Mills, Inc., Manchester, N.H. 682,933–87, pub. 5–19–59. Cl. 39.
Macchiaroli, James, Fruit Co., Phoenix, Ariz. 682,981, pub. 5–19–59. Cl. 46.
Machinery Development, Inc., Denver, Colo. 682,825, pub. 5–19–59. Cl. 23.
Maquesa, Chatham, N.J. 683,020, pub. 5–19–59. Cl. 51.
Market Forge Co., Everett, Mass. 682,874, pub. 5–19–59. Cl. 32.
Markwell Mfg. Co., Inc., New York, N.Y. 576,152, canc. Cl. 23.
Maryland Baking Co.: *See*—
Maryland Baking Co., The.
Maryland Baking Co., The, d.b.a. Maryland Baking Co., Baltimore, Md. 682,989, pub. 5–19–59. Cl. 46.
Mathan Laboratories, Inc.: *See*—
Coopersmith, Martin A.
May Department Stores Co., The, St. Louis, Mo. 364,069, 12(c) pub. 8–4–59. Cl. 39.
May Department Stores Co., The, St. Louis, Mo. 364,456, 12(c) pub. 8–4–59. Cl. 42.
May Departments Stores Co., The, St. Louis, Mo. 365,363, 12(c) pub. 8–4–59. Cl. 39.
May Department Stores Co., The, St. Louis, Mo. 367,771, 12(c) pub. 8–4–59. Cl. 39.
McGill Mfg.: *See*—
Despard & Gordon Co.
McGraw-Edison Co., Elgin, Ill. 674,903, canc. Cl. 21.
Meat Industry Suppliers Inc., Northfield, Ill. 682,765, ren. 8–4–59. Cl. 17.
Melarone Food Products, Inc., Addison, Ill. 683,001, pub. 5–19–59. Cl. 46.
Merck & Co., Inc., Rahway, N.J. 682,781, pub. 5–19–59. Cl. 18.
Merck & Co., Inc., Rahway, N.J. 682,789–90, pub. 5–19–59. Cl. 18.
Mercury Chemical Corp., Chicago, Ill. 576,120, canc. Cl. 6.
Meredith Publishing Co., Des Moines, Iowa. 683,054. Cl. 38.
Metalclad, Inc., Sausalito, Calif. 682,745, pub. 5–19–59. Cl. 13.
Michaels, Stern & Co., Inc., Rochester, N.Y. 371,578, ren. 8–4–59. Cl. 30.
Michaels, Stern & Co., Inc., Rochester, N.Y. 371,967, ren. 8–4–59. Cl. 39.
Michaels, Stern & Co., Inc., Rochester, N.Y. 371,968, ren. 8–4–59. Cl. 39.
Mid-Central Equipment Co.: *See*—
Kirkeby, David H.
Midland Screw Corp., Chicago, Ill. 682,752, pub. 5–19–59. Cl. 13.
Midtown Mfg. Corp., New York, N.Y. 575,906, canc. Cl. 37.
Midwestern Broadcasting Co., The, Toledo, Ohio. 683,045, pub. 5–19–59. Cl. 107.
Miller Becker Co., The, Cleveland, Ohio. 311,830, 12(c) pub. 8–4–59. Cl. 43.
Miller, Leo, d.b.a. Audionils Co., Boston, Mass. 683,032, pub. 5–19–59. Cl. 100.
Minnesota Rubber Co., Minneapolis, Minn. 682,887–8, pub. 5–19–59. Cl. 35.
Missouri Pickle Co., d.b.a. The Pickle Barrel, Los Angeles, Calif. 575,957, canc. Cl. 46.
Mizuno, R. K., Sporting Goods Co. Ltd., Osaka, Japan. 682,821, pub. 5–19–59. Cl. 22.
Mock Seed Co., Pittsburgh, Pa. 682,736–7, pub. 5–19–59. Cl. 6.
Model Brassiere Corp., Cortland, N.Y. 683,056. Cl. 39.
Modern First Aid Necessities Co.: *See*—
Borkan, Jacob J.
Modes, Anita, Inc., New York, N.Y. 575,933, canc. Cl. 39.
Month-O-Rama & Armor Flex Traffic Products: *See*—
Coyle, Charles S.
Montreal Standard Publishing Co. (Ltd.), Montreal, Quebec, Canada. 682,926, pub. 5–19–59. Cl. 38.
Mooar, H. L., d.b.a. Thermal Belt Vineyards, Tryon, N.C. 682,974, pub. 5–19–59. Cl. 46.
Moorman Mfg. Co., Quincy, Ill. 575,774, canc. Cl. 23.
Morgan Guaranty Trust Co., by change of name from Guaranty Trust Co. of New York, New York, N.Y. 683,037–40, pub. 5–19–59. Cl. 102.
Morgan, J. E., Knitting Mills, Inc., Tamaqua, Pa. 682,944, pub. 5–19–59. Cl. 39.
Morganton Full Fashioned Hosiery Co., Morganton, N.C. 682,947, pub. 5–19–59. Cl. 39.
Morris, Philip, Inc., New York, N.Y. 682,928, pub. 5–19–59. Cl. 38.
Morrison Steel Products Inc., Buffalo, N.Y. 576,147, canc. Cl. 19.
Mountain Laboratories, Inc., Warrenton, Va. 575,988, canc. Cl. 18.
Muller-Barringer, New York, N.Y. 575,891, canc. Cl. 32.
Murray, Kay, Sportswear, Inc., Boston, Mass. 575,784, canc. Cl. 39.

Schild, A., S.A., Grenchen, Switzerland. 369,626, ren. 8–4–59. Cl. 27.
Stock Engineering Co.: *See*—

Mutual Stationers Supply Corp., New York, N.Y. 575,953, canc. Cl. 23.
N.V. Lankhorst Touwfabrieken, Sneek, Netherlands. 682,742, pub. 12–30–59. Cl. 7.
Narmco Conolon Co., Costa Mesa, Calif. 682,818, pub. 5–19–59. Cl. 22.
National Hosiery Mills, Inc.: *See*—
National Silk Hosiery Mills, Inc.
National Licorice Co., Brooklyn, N.Y. 682,988, pub. 5–19–59. Cl. 46.
National Sales, Inc., Indianapolis, Ind. 682,866, pub. 5–19–59. Cl. 31.
National Silk Hosiery Mills, Inc., to National Hosiery Mills, Inc., Indianapolis, Ind. 371,476, ren. 8–4–59. Cl. 39.
National Silver Co., New York, N.Y. 576,037, canc. Cl. 23.
National Starch Products Inc., New York, N.Y. 683,060. Cl. 46.
Nehi Corp., Columbus, Ga. 575,759, canc. Cl. 45.
Neiman-Marcus Co., Dallas, Tex. 576,085, canc. Cl. 1.
Nelson Chemicals Co., Detroit, Mich. 683,028, pub. 5–19–59. Cl. 52.
New Art Shop: *See*—
Bombara, Carlo.
New Sunrise Co.: *See*—
Iwao Nagamwa.
New York Pencil Co., Inc., New York, N.Y. 683,021, pub. 5–19–59. Cl. 51.
New York Shipbuilding Corp., Camden, N.J. 683,042, pub. 5–19–59. Cl. 103.
Noel Mfg. Co., Inc., New York, N.Y. 575,883, canc. Cl. 21.
North American Products Corp., Edwardsville, Ill. 682,837, pub. 5–19–59. Cl. 23.
Northwestern National Life Insurance Co., Minneapolis, Minn. 683,035, pub. 5–19–59. Cl. 102.
Nuccio, Salvatore, d.b.a. Alumglow Cleansing Co., Long Island City, N.Y., to C. Catanzaro, Jackson Heights, N.Y. 403,686, canc. Cl. 4.
Nu-Horizon System: *See*—
Nu-Horizon System, Inc.
Nu-Horizon System, Inc., from J. S. Honigblum, d.b.a. Nu-Horizon System, San Antonio, Tex. 683,025, pub. 5–19–59. Cl. 52.
Nuodex Products Co., Inc., Elizabeth, N.J., by Heyden Newport Chemical Corp., New York, N.Y. 369,629, 12(c) pub. 8–4–59. Cl. 6.
Oakley, Annie, Enterprises, to Annie Oakley Enterprises, Inc., Los Angeles, Calif. 575,896, canc. Cl. 51.
Oakley, Annie, Enterprises, Inc.: *See*—
Oakley, Annie, Enterprises.
Old Joe Distilling Co., Lawrenceburg, Ky. 390,285, canc. Cl. 49.
Olin Mathieson Chemical Corp., New York, N.Y. 682,791, pub. 5–19–59. Cl. 18.
Olin Mathieson Chemical Corp., New Haven, Conn. 682,822, pub. 5–19–59. Cl. 22.
Olin Mathieson Chemical Corp., East Alton, Ill. 682,906, pub. 5–19–59. Cl. 37.
Olin Mathieson Chemical Corp., East Alton, Ill. 682,908, pub. 5–19–59. Cl. 37.
Oneida Ltd., Oneida, N.Y. 682,723–4, pub. 5–19–59. Cl. 2.
Orlando Daily Newspapers, Inc., Orlando, Fla. 578,878. Am. 7(d). Cl. 38.
Osceola Fruit Distributors, Kissimmee, Fla. 682,976, pub. 5–19–59. Cl. 46.
Otis Elevator Co., New York, N.Y. 682,834, pub. 5–19–59. Cl. 23.
Oxford Metal Spinning Co., Inc., also known as Oxford Metal Spinning Co., Inc., Philadelphia, Pa. 575,917, canc. Cl. 21.
Ozark Nursery: *See*—
Ozark Nursery Co.
Ozark Nursery Co., d.b.a. Ozark Nursery, Tahlequah, Okla. 682,713, pub. 5–19–59. Cl. 1.
Pacific Mills, New York, N.Y. 682,961, pub. 5–19–59. Cl. 43.
Palm Beach Fabrics, Inc., Boynton Beach, Fla. 575,823, canc. Cl. 42.
Palm Fruit and Vegetable Co., San Benito, Tex. 682,997, pub. 5–19–59. Cl. 46.
Palms Peanut Co., The, Albuquerque, N. Mex. 575,898, canc. Cl. 46.
Pan American Laboratories, Inc., New Orleans, La. 682,797, pub. 5–19–59. Cl. 18.
Paper Mate Mfg. Co., Santa Monica, Calif. 682,901, pub. 5–19–59. Cl. 37.
Paper Service Co., Inc., Holyoke, Mass. 682,900, pub. 5–19–59. Cl. 37.
Parfums Charbert, Inc., New York, to Associated Brands, Inc., Brooklyn, N.Y. 368,019, ren. 8–4–59. Cl. 51.
Parrot Speed Fastener Corp., New York, and Long Island City, to Swingline Inc., Long Island City, N.Y. 368,599, ren. 8–4–59. Cl. 18.
"Patco's": *See*—
Lee Patten Seed Co.
Pate Oil Co., Milwaukee, Wis. 682,756, pub. 5–19–59. Cl. 15.
Patterson, Eleanor M., d.b.a. Times-Herald, to The Washington Post Co., Washington, D.C. 369,046, ren. 8–4–59. Cl. 38.
Paul, Peter, Inc., Naugatuck, Conn. 576,112, canc. Cl. 46.
Pearson, Evelyn, Inc., New York, N.Y. 575,931, canc. Cl. 39.
Pepperell Mfg. Co., Boston, Mass. 682,958, pub. 5–19–59. Cl. 42.
Perfect-Line Mfg. Corp., Hicksville, N.Y. 682,885, pub. 5–19–59. Cl. 34.
Pergant, Michael, d.b.a. The Pergantene Pharmacal Co., Florence, Northampton, Mass. 682,778, pub. 5–19–59. Cl. 18.
Pergantene Pharmacal Co.: *See*—
Pergant, Michael.
Peyron, Antoine F. R., Paris, France. 682,735, pub. 5–19–59. Cl. 6.
Pfizer, Chas., & Co., Inc., Brooklyn, N.Y. 682,792, pub. 5–19–59. Cl. 18.
Pharmaceutical Laboratories: *See*—
Bronson, Frank S.
Pharmaceuticals, Inc., by change of name from Lifetime Living, Inc., New York, N.Y. 682,915, pub. 5–19–59. Cl. 38.
Phoenix Inc., New York, N.Y. 682,931, pub. 10–7–58. Cl. 39.
Picard, Fred A.: *See*—
Altschuler-Picard, Fred.
Pickle Barrel, The: *See*—
Missouri Pickle Co.
Piggly Wiggly Operators' Warehouse, Inc., Shreveport, La. 682,986, pub. 5–19–59. Cl. 46.
Pioneer Industries, Inc.: *See*—
Pioneer Iron Works.
Pioneer Iron Works, to Pioneer Industries, Inc., Sioux City, Iowa. 665,613, new cert. Cl. 18.
Pioneer Iron Works, to Pioneer Industries, Inc., Sioux City, Iowa. 614,642, new cert. Cl. 2.
Polly-Dell Textile Stencils: *See*—
Dougherty, Videll.
Price Cravat Co., Inc., New York, N.Y. 576,026, canc. Cl. 39.
Prim Hosiery, Inc., Chester, Ill. 576,079, canc. Cl. 39.
Printing Aids Corp., Franklin Park, Ill. 682,842, pub. 5–19–59. Cl. 23.
Printing Arts Research Laboratories, Inc., Santa Barbara, Calif. 682,031, pub. 5–19–59. Cl. 100.
Procter & Gamble Co., The, Cincinnati, Ohio. 683,026, pub. 5–19–59. Cl. 52.
Provident Indemnity Life Insurance Co., Norristown, Pa. 683,041, pub. 5–19–59. Cl. 102.
Pycope, Inc.: *See*—
Eureka Pyorrhea Products Co.
Pycope, Inc., Jersey City, N.J. 269,334, 12(c) pub. 8–4–59. Cl. 51.
Quest Mfg. Co., Chicago, Ill. 409,579, 12(c) pub. 8–4–59. Cl. 11.
Rand Pillo Case Corp., New York, N.Y. 682,957, pub. 5–19–59. Cl. 42.
Rapid Products: *See*—
Stern, Isidor.
Rapp-Ramsey Co., The, Shenandoah, Iowa. 683,023, pub. 11–15–55. Cl. 52.
Reed, Eldo L., to N. H. Kjome, d.b.a. Gordon Glue Co., Decorah, Iowa. 608,930, new cert. Cl. 5.
Regal Musical Instrument Co. The Harmony Co., Chicago, Ill. 256,164. Am. 7(d). Cl. 36.
Regal Ware, Inc., Kewaskum, Wis. 682,758, pub. 5–19–59. Cl. 13.
Reiff, Samuel S., d.b.a. Reiff Shoe Co., Denver, Colo. 575,958, canc. Cl. 39.
Reiff Shoe Co.: *See*—
Reiff, Samuel S.
Reliance Electric and Engineering Co., The, Euclid, Ohio. 682,844, pub. 5–19–59. Cl. 23.
Revere Rubber Co., Boston Mass., by United States Rubber Co., New York, N.Y. 16,426, 12(c) pub. 8–4–59. Cl. 35.
"Rhewum," Rheinische Werkzeug- und Metall-Warenfabrik G.m.b.H., Remscheid-Luettringhausen, Germany. 682,853, pub. 5–19–59. Cl. 26.
Rigo Mfg. Co., Nashville, Tenn. 682,966, pub. 5–19–59. Cl. 44.
Re-An Heat Reclaimer Corp., Amityville, N.Y. 682,882, pub. 5–19–59. Cl. 34.
Robertson, James, Co., Los Angeles, Calif. 683,007, pub. 10–28–58. Cl. 49.
Rochester Community Baseball, Inc., Rochester, N.Y. 683,046, pub. 5–19–59. Cl. 107.
Rogers Pest Co., New York, N.Y. 682,943, pub. 5–19–59. Cl. 39.
Rolee Hospital Television, Inc., d.b.a. Rolee, Inc., Dallas, Tex. 682,877, pub. 5–19–59. Cl. 32.
Rolee, Inc.: *See*—
Rolee Hospital Television, Inc.
Rol-Lawn: *See*—
Great Western Bag Co.
Rossotti Lithograph Corp., North Bergen, N.J. 682,892, pub. 5–19–59. Cl. 37.
Rotter, Harry, Chicago, Ill. 574,374. Am. 7(d). Cl. 28.
Rubinstein, Helena, Inc., New York, N.Y. 683,015, pub. 5–19–59. Cl. 51.
Russell-Miller Milling Co., Wilmington, Del. 372,627, ren. 8–4–59. Cl. 46.
Ryder, W., & Co.: *See*—
Shields, Frank N.
Safe Padlock and Hardware Co., The: *See*—
Fraim, E. T., Lock Co., The.
Safelite Co., The: *See*—
Graham, Robert C.
Safeway Stores, Inc., d.b.a. Conway Oil Co., Oakland, Calif. 682,999, pub. 5–19–59. Cl. 46.
Sahyun Laboratories: *See*—
Sahyun, Melville.
Sahyun, Melville, d.b.a. Sahyun Laboratories, Santa Barbara, Calif. 682,774, pub. 5–19–59. Cl. 18.
St. Regis Paper Co., New York, N.Y. 682,719, pub. 5–19–59. Cl. 1.
San Antonio Drug Co., San Antonio, Tex. 127,127, ren. 8–4–59. Cl. 18.
Sandox, Inc., Hanover, N.J. 682,772, pub. 5–19–59. Cl. 18.
Sapolin Paints Inc., New York, N.Y. 682,761, pub. 5–19–59. Cl. 16.
Savogran Co., The: *See*—
India Alkali Works.
Schalet-Pollack Corp., New York, N.Y. 575,783, canc. Cl. 40.
Schering Corp., Bloomfield, N.J. 682,793–4, pub. 5–19–59. Cl. 18.
Scheuchzer, Auguste, Lausanne, Switzerland. 676,038, canc. Cl. 23.

Wheatley, Arthur H., Hollywood, Calif. 682,721, pub. 5–19–59. Cl. 2.
Williamson Candy Co., Chicago, Ill. 372,251, ren. 8–4–59. Cl. 46.

Schild, A., S.A., Grenchen, Switzerland. 369,626, ren. 8–4–59. Cl. 27.
Schiller, Charles P., d.b.a. Citra Products, Winter Haven, Fla. 682,722, pub. 5–19–59. Cl. 2.
Schlumbohm, Peter, by Chemex Corp., New York, N.Y. 432,975, 12(c) pub. 8–4–59. Cl. 23.
Schmikler, Henry, d.b.a. White Holland Farm, Whitman, Mass. 576,123, canc. Cl. 46.
Scientists of Tomorrow, Portland, Oreg. 683,047, pub. 5–19–59. Cl. 107.
Scully Signal Co., Melrose, Mass. 682,748, pub. 5–19–59. Cl. 13.
Schwab, A. G., & Sons, Inc., Cincinnati, Ohio. 369,391, ren. 8–4–59. Cl. 27.
Schwalm, Theo. R., Lancaster, Pa. 576,154, canc. Cl. 27.
Scripto, Inc., Atlanta, Ga. 682,899, pub. 5–19–59. Cl. 37.
Scripto, Inc., Atlanta, Ga. 682,909, pub. 5–19–59. Cl. 37.
Sea Chrome, Inc., Los Angeles, Calif. 682,749, pub. 5–19–59. Cl. 13.
Sears, Roebuck and Co., d.b.a. David Bradley Mfg. Works, Chicago, Ill. 682,833, pub. 5–19–59. Cl. 23.
See-Teeth Products, Inc., San Diego, Calif. 576,150, canc. Cl. 29.
Segimont Corp., The, Detroit, Mich. 623,361, canc. Cl. 21.
Seidlits Paint & Varnish Co., Kansas City, Mo. 682,841, pub. 5–19–59. Cl. 23.
Sel-Mor Garment Co. Inc., St. Louis, Mo. 368,291, 12(c) pub. 8–4–59. Cl. 39.
Sel-Set Machinery Corp., Salem, Oreg. 682,811, pub. 5–19–59. Cl. 21.
Shapleigh Hardware Co.: *See*—
Simmons Hardware Co.
Sheffield Instrument Corp., Glendale, Calif. 432,736, canc. Cl. 27.
Sherman Paper Products Corp., Newton, Mass. 576,071, canc. Cl. 37.
Shields, Frank N., d.b.a. W. Ryder & Co., Bradford, England. 576,049, canc. Cl. 45.
Shields, Frank N., d.b.a. W. Ryder & Co., Bradford, England. 576,050, canc. Cl. 48.
Shoe Lace Co., Lawrence, Mass., by Lincoln Lace & Braid Co., Providence, R.I. 379,015, 12(c) pub. 8–4–59. Cl. 40.
Shoe Lace Co., Lawrence, Mass., by Lincoln Lace & Braid Co., Providence, R.I. 379,016, 12(c) pub. 8–4–59. Cl. 40.
Shulton, Inc., Clifton, N.J. 372,770, ren. 8–4–59. Cl. 52.
Shulton, Inc., Clifton, N.J. 372,771, ren. 8–4–59. Cl. 52.
Siemen, Kenneth M., d.b.a. Iso Pad Co., Lynwood, Calif. 682,898, pub. 5–19–59. Cl. 37.
Simmons Hardware Co., to Shapleigh Hardware Co., St. Louis, Mo. 126,966, ren. 8–4–59. Cl. 2.
Sjostrom, John E., Co., Philadelphia, Pa. 575,922, canc. Cl. 26.
Skogsagarnas Cellulosa Aktiebolag, Monsteras, Sweden. 682,718, pub. 5–19–59. Cl. 1.
Slagle Lumber Co., Alton, Iowa. 682,743, pub. 5–19–59. Cl. 12.
Slicklen, Charles J., Co., Long Island City, N.Y. 682,964, pub. 5–19–59. Cl. 44.
Slumberland Products Co., Waltham, Mass. 682,875, pub. 5–19–59. Cl. 32.
Smith Brothers, Inc., Poughkeepsie, N.Y. 683,052–3. Cl. 18.
Société à Responsabilité Limitée Dite Comptoire de L'Industrie Cotonniere, Etablissements Boussac, Paris, France. 576,056, canc. Cl. 42.
Societe Bolfra, S.A.: *See*—
Despature, Joseph.
Sprague Electric Co., North Adams, Mass. 682,804, pub. 5–19–59. Cl. 21.
Sprague Products Co., North Adams, Mass. 682,816, pub. 5–19–59. Cl. 21.
Speidel Corp., Providence, R.I. 682,861, pub. 5–19–59. Cl. 28.
Spray-O-Dor Co., to Spray-O-Dor Co., a firm composed of Mike Guryn and Emily K. Guryn, by Spray-O-Dor Co., Chicago, Ill. 439,389, 12(c) pub. 8–4–59. Cl. 23.
Square D Co., Detroit, Mich. 682,809, pub. 1–20–59. Cl. 21.
Staedtler, J. S., Nurnberg, Bavaria, Germany. 682,891, pub. 5–19–59. Cl. 37.
Standard Automotive Mfg. Co., Los Angeles, Calif. 682,832, pub. 5–19–59. Cl. 23.
Standard Motor Products, Inc., Long Island City, N.Y 682,865, pub. 5–19–59. Cl. 31.
Star Machine & Tool Co.: *See*—
Wisti, Andrew O.
Star Mfg. Co., Leominster, Mass. 682,823, pub. 5–19–59 Cl. 22.
Stephanson's, d.b.a. Stephanson's Butter Crust Pies, Washington, D.C. 682,983, pub. 5–19–59. Cl. 46.
Stephanson's Butter Crust Pies: *See*—
Stephanson's.
Sterling Drug Inc.: *See*—
Bayer Co., Inc., The.
Stern, Isidor, d.b.a. Rapid Products, Brooklyn, N.Y. 682,750, pub. 5–19–59. Cl. 13.
Stern & Stern Textile Importers, Inc., to Stern & Stern Textiles, Inc., New York, N.Y. 359,614, ren. 8–4–59. Cl. 42.
Stern & Stern Textiles, Inc.: *See*—
Stern & Stern Textile Importers, Inc.
Stetson China Co., Inc., Lincoln, Ill. 370,398, ren. 8–4–59. Cl. 30.
Stevens, J. P., & Co., Inc.: *See*—
Vandam, Albert H., Inc.
Stevens-Root Co., to The Kohm Corp., Chicago, Ill. 362,534, ren. 8–4–59. Cl. 13.
Stewart, A. B. and M. H., d.b.a. Grainо Feed Mills, Greensboro, N.C. 367,588, 12(c) pub. 8–4–59. Cl. 46.
Stitzel-Weller Distillery, Shively, Ky. 575,946, canc. Cl. 49.
Stock, Arthur J., d.b.a. Stock Engineering Co., by Stock Equipment Co., Cleveland, Ohio. 370,173, 12(c) pub. 8–4–59. Cl. 23.
Stock Engineering Co.: *See*—
Stock, Arthur J.
Stock Equipment Co.: *See*—
Stock, Arthur J.
Suds-All Co., Inc., Evanston, Ill. 576,146, canc. Cl. 52.
Suffern, Robert A., to Abercrombie & Fitch Co., New York, N.Y. 125,531, ren. 8–4–59. Cl. 42.
Summit Tea Co., Philadelphia, Pa. 683,002, pub. 5–19–59. Cl. 46.
Sunshine Biscuits, Inc.: *See*—
Loose-Wiles Biscuit Co.
Supersite Corp., Derby, Conn. 682,733, pub. 5–19–59. Cl. 6.
Swingline Inc.: *See*—
Parrot Speed Fastener Corp.
Syntex Veterinary Products Co., Inc., now by change of name Foundation Laboratories, Inc., New York, N.Y. 576,109, canc. Cl. 18.
Syntex Veterinary Products Co., Inc., now by change of name Foundation Laboratories, Inc., New York, N.Y. 576,110, canc. Cl. 18.
Tama, Inc., Chicago, Ill. 682,777, pub. 5–19–59. Cl. 18.
Taylor, Stiles & Co., Riegelsville, N.J. 682,843, pub. 5–19–59. Cl. 23.
Textron Inc., Cleveland, Ohio. 682,827–8, pub. 5–19–59. Cl. 23.
Thermal Belt Vineyards: *See*—
Mooar, H. L.
Times-Herald: *See*—
Patterson, Eleanor M.
Timely Sportswear Co., New York, N.Y. 393,139, canc. Cl. 39.
Toni Co., The: *See*—
Gillette Co., The.
Torchmaster, Inc., Los Angeles, Calif. 682,884, pub. 5–19–59. Cl. 34.
Tricolator Mfg. Co., Newark, N.J. 682,886, pub. 5–19–59. Cl. 34.
United-Carr Fastener Corp., Cambridge, Mass. 682,747, pub. 5–19–59. Cl. 13.
United Newspapers Magazine Corp., New York, N.Y. 682,924, pub. 5–19–59. Cl. 38.
U.S. Polychemical Corp., Newburgh, N.Y. 683,024, pub. 5–19–59. Cl. 52.
United States Register Co., Battle Creek, Mich. 682,883, pub. 5–19–59. Cl. 34.
United States Rubber Co.: *See*—
Revere Rubber Co.
United States Rubber Co., New York, N.Y. 682,959, pub. 5–19–59. Cl. 42.
U.S. Vitamin & Pharmaceutical Corp.: *See*—
Dietetic Research Laboratories, Inc.
Universal Paint & Varnish Co.: *See*—
Universal Paint & Varnish, Inc.
Universal Paint & Varnish, Inc., d.b.a. Universal Paint & Varnish Co., Bedford, Ohio. 682,760, pub. 5–19–59. Cl. 16.
Valmeline Imports Ltd., New York, N.Y. 682,942, pub. 5–19–59. Cl. 39.
Van Dugteren, A. J., & Sons, Inc., New York, N.Y. 526,931, canc. Cl. 33.
Vandam, Albert H., Co., Inc., to J. P. Stevens & Co. Inc., New York, N.Y. 372,484, ren. 8–4–59. Cl. 42.
Vapor Blast Mfg. Co., Milwaukee, Wis. 414,107, 12(c) pub. 8–4–59. Cl. 23.
Veland Products, Inc., Cleveland, Ohio. 575,827, canc. Cl. 51.
Viking Mercantile Corp., New York, N.Y. 682,859, pub. 5–20–56. Cl. 27.
Vintex Corp. of America, New York, N.Y. 576,096, canc. Cl. 42.
Voi Crepe Ltd., Glossop, England. 439,456, canc. Cl. 39.
Volta Mfg. Co., Ltd., to Whiting Corp. (Canada), Ltd., Welland, Ontario, Canada. 662,171, new cert. Cl. 21.
Wagner, John, & Sons, Inc., Hatboro, Pa. 682,995, pub. 5–19–59. Cl. 46.
Waldman, Joseph, & Sons, Irvington, N.J. 682,815, pub. 5–19–59. Cl. 21.
Walker, Hiram, & Sons, Inc., Detroit, Mich. 372,689, ren. 8–4–59. Cl. 49.
Walters Industries, Inc., New York, N.Y. 682,954, pub. 5–19–59. Cl. 42.
Warner Brothers Co., The, Bridgeport, Conn. 369,850, ren. 8–4–59. Cl. 39.
Warshauer, Benjamin, Stockton, Calif. 576,003, canc. Cl. 39.
Washington Co-Operative Farmers Association, Seattle, Wash. 575,758, canc. Cl. 46.
Washington Post Co., The: *See*—
Patterson, Eleanor M.
Weiner, M. A., Co., Sioux City, Iowa. 575,807, canc. Cl. 39.
Weis Markets, Inc., Sunbury, Pa. 682,990, pub. 5–19–59. Cl. 46.
Wennonah Cotton Mills Co., Lexington, N.C. 576,073, canc. Cl. 42.
West End Brewing Co., The, Utica, N.Y. 371,548, ren. 8–4–59. Cl. 48.
West Virginia Packing Corp., Huntington, W. Va. 575,761, canc. Cl. 46.
Western North Carolina Apple Growers Co-Operative, Inc., Hendersonville, N.C. 682,991, pub. 5–19–59. Cl. 46.
Western Savings Fund Society of Philadelphia, The, Philadelphia, Pa. 683,062. Cl. 102.
Western Tablet & Stationery Corp., Dayton, Ohio. 682,902, pub. 5–19–59. Cl. 37.
Westinghouse Broadcasting Co., Inc., Pittsburgh, Pa. 683,043, pub. 5–19–59. Cl. 104.
Westphal, Paul, Inc., New York, N.Y. 366,194, ren. 8–4–59. Cl. 51.
Westphal, Paul, Inc., New York, N.Y. 366,813, ren. 8–4–59. Cl. 51.

Wheatley, Arthur H., Hollywood, Calif. 682,721, pub. 5–19–59. Cl. 2.
Whitaker, Ray, d.b.a. Whitaker Seasonings, Tulsa, Okla. 682,977, pub. 5–19–59. Cl. 46.
Whitaker Seasonings: *See*—
Whitaker, Ray.
White Holland Farm: *See*—
Schmikler, Henry.
Whitehall Laboratories: *See*—
American Home Products Corp.
Whiting Corp., Harvey, Ill. 682,831, pub. 5–19–59. Cl. 23.
Whiting Corp. (Canada), Ltd.: *See*—
Volta Mfg. Co., Ltd.
Williamsburg Restoration, Inc., Williamsburg, Va. 682,849–50, pub. 5–19–59. Cl. 25.
Williamsburg Restoration, Inc., Williamsburg, Va. 682,903–4, pub. 5–19–59. Cl. 37.
Williamson Candy Co., Chicago, Ill. 371,541, ren. 8–4–59. Cl. 46.
Williamson Candy Co., Chicago, Ill. 372,351, ren. 8–4–59. Cl. 46.
Williamson Candy Co., Chicago, Ill. 372,829, ren. 8–4–59. Cl. 46.
Wilson Products, Inc., Reading, Pa. 575,797, canc. Cl. 39.
Winebrenner, D. E., Co., Inc., Hanover, Pa. 683,003, pub. 5–19–59. Cl. 46.
Wisconsin Tissue Mills, Menasha, Wis. 682,907, pub. 5–19–59. Cl. 37.
Wisti, Andrew O., d.b.a. Star Machine & Tool Co., Minneapolis, Minn. 682,847, pub. 5–19–59. Cl. 23.
Wolfram, R. Sutter, d.b.a. Dental Applied Research Laboratory, Queens Village, N.Y. 575,794, canc. Cl. 44.
Wyandotte Chemicals Corp.: *See*—
Ford, J. B., Co., The.
Wyeth Laboratories: *See*—
American Home Products Corp.
Young Spring & Wire Corp., Detroit, Mich. 682,839, pub. 5–19–59. Cl. 23.

U. S. GOVERNMENT PRINTING OFFICE: 0——1960

General Electric Company is prepared to grant non-exclusive licenses under the following 6 patents on reasonable terms to domestic manufacturers.

Applications for license under the following 2 patents may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, 1 River Road, Schenec-

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PATENTS

NOTICES

Transfer of Drawings—Abandonment of Application

When an application is filed with a request for transfer of drawings thereto from an earlier application which is about to be abandoned under Rule 88, the transfer is immediately effected by the Application Branch. The transfer of drawings together with applicant's stated intention to abandon operates as an abandonment of the earlier application. The filing of a written declaration of abandonment under Rule 138 is unnecessary. This practice does not apply to applications in which the final fee has been paid.

In any such application, from which the drawings have been transferred, a letter including the following statement should be written:

> In view of the transfer on ____(date)____ of the drawings from this application to application Serial No. _____ pursuant to applicant's request and his stated intention therein to abandon the instant application, this application is considered abandoned as of said date and is being forwarded to the Abandoned Files Unit.

The notice of May 16, 1955 (694 O.G. 417) is hereby superseded.

M. C. ROSA,
Director, Patent Examining Operation.

July 28, 1959.

Adjudicated Patents

(C.A. Mich.) Geraldi Patent No. 2,374,705 (220—97), for basket structure, *Held* valid but not infringed. *Mid-West Wire Products Co.* v. *Wall Tube & Metal Products Co.*, 266 F.2d 345; — USPQ —.

(C.A. Calif.) Rohr Aircraft Corporation Patent No. 2,396,005 (85—1), for sealing device. Claim 1 *Held* invalid. *Rohr Aircraft Corp.* v. *Rubber Tech. Inc.*, 266 F.2d 613; 121 USPQ 241.

(C.A. Ohio) Larson Patent No. 2,412,587 (309—3), for lined hydraulic brake cylinder, *Held* invalid. *United Parts Mfg. Co.* v. *Lee Motor Products, Inc.*, 266 F.2d 20; 121 USPQ 206.

(C.A.N.J.) Kleist Patent No. 2,436,389 (62—439), for refrigerating plate and internal reinforcement therefore. Claim 1 *Held* invalid. *Dole Refrigerating Co.* v. *America Contact Plate Freezers, Inc.*, 265 F.2d 627; 121 USPQ 159.

(C.A. Calif.) Silberman Patent 2,437,793 (29—34), for zipper manufacturing machine. Claims 1 through 4, 13, and 32 through 40 *Held* invalid. *Talon Inc.* v. *Union Slide Fastener Inc.*, 266 F.2d 731; 121 USPQ 249.

(C.A. Ill.) Anderson Patent 2,596,063 (15—245), for windshield wiper blade linkage assembly. Claims 6, 8, and 12 *Held* valid and infringed. *Anderson Co.* v. *Sears Roebuck & Co.*, 265 F.2d 755; 121 USPQ 161.

(C. A. Calif.) Hall Patent No. 2,703,768 (148—6415), for dry lubrication process and product. Claims 1 to 7 *Held* invalid but not infringed. *Electrofilm, Inc.* v. *Everlube Corp. of America*, 265 F.2d 495; 121 USPQ 167.

(D.C. Wis.) Oestreicher Patent No. 2,535,154 (323—60), for relating to alternating current arc welders. Claims 1 to 4 *Held* not infringed. *Harnischfeger Corp.* v. *Miller Electric Mfg. Co.*, 173 F. Supp. 45; 121 USPQ 304.

(D.C. Md.) Senior, Hensman and Wood Patent No. 2,675,644 (46—135), for weeping doll. Claims 1 and 8 *Held* infringed. *Toy Ideas, Inc.* v. *Montgomery Ward and Co.*, 172 F. Supp. 878; 121 USPQ 296.

(D.C.N.C.) Purcell Patent No. 2,702,998 (66—178), for surgical stockings, *Held* infringed. *Johnson and Johnson* v. *Carolina Lee Knitting Co.*, 173 F. Supp. 73; — USPQ —.

Dedication

2,765,593.—*Oliver S. Jr 44*, Louisville, Ky. METHOD OF FINISHING WOOD SURFACES. Patent dated Oct. 9, 1956. Dedication filed June 29, 1959, by the assignee, *Minnesota Mining and Manufacturing Company.*

Hereby dedicates to the public the entire terminal portion of the term of said patent.

Patents Available for Licensing or Sale

2,757,699. Clothespin Holder. Lee B. Fancher and Ray C. Fancher, 11440 Whithern Ave., Detroit 5, Mich.

2,791,514. Ladle Nozzle and Stopper Construction. Oscar Villela, 2036 South Indiana Ave., Chicago, Ill.

2,880,488. Dust Mop and Brush Cleaner. Arthur G. Lensing, 800 N. Country Club Road, Tucson, Ariz.

Design Pat. 181,561. Draftsman's Template. Harold Sellman, 1550 9th Ave., San Francisco 22, Calif.

New Applications Received During June 1959

Patents	7,109
Designs	466
Plant Patents	14
Reissues	21
Total	7,610

Issue

Patents	1,085	No. 2,898,594 to No.	2,899,678, incl.
Designs	66	No. 185,832 to No.	185,897, incl.
Plant Patents	1	No. 1,858	
Reissues	3	No. 24,678 to No.	24,680, incl.
Total	1,155		

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1959

Total number of pending applications (excluding Designs)	198, 248
Total number of pending Design applications	7, 004
Total number of applications awaiting action (excluding Designs)	87, 060

General Electric Company is prepared to grant non-exclusive licenses under the following 6 patents on reasonable terms to domestic manufacturers.

Applications for license under the following 3 patents may be addressed to: Patent Counsel, Heavy Military Electronics Department, General Electric Company, Legal Section, Bldg. 1, Room 35, Court Street Plant, Syracuse, N.Y.

2,871,459. Submerged Object Locator.

2,871,471. Gain Control.

2,877,410. Waveguide System and Method.

Applications for license under the following 2 patents may be addressed to: General Electric Company, Patent Counsel, Chemical and Metallurgical Division, 1 River Road, Schenectady 5, N.Y.

2,887,467. Reacting Ethylene Glycol With Methylsilsesquioxane To Form Water-Soluble Product.

2,888,478. Preparation of Phenyl Alkylchlorosilanes.

Applications for license under the following patent may be addressed to: Research Services, Legal Department, General Electric Company, Post Office Box 1088, Schenectady, N.Y.

2,890,621. Photographic Printing Method and Apparatus.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1959

Total number of pending applications (excluding Designs)	198, 248
Total number of pending Design applications	7, 004
Total number of applications awaiting action (excluding Designs)	87, 060
Total number of Design applications awaiting action	1, 931
Date of oldest new application	July 7, 1958
Date of oldest amended application	June 16, 1958

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 81, 86, 42, 46, 50, 56, 59, 60, 62, 64.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 60.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 27, 35, 61, 81, 82.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 58, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 30, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 28, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
1. (VI) GOLDBERG, A. J., Brakes; Excavating; Planting; Plant Husbandry; Scattering Unloaders; Harrows and Diggers; Plows	12-2-58	12-1-58
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	12-5-58	12-2-58
3. (VII) MARMELSTEIN, N. (WINDHAM, R. K., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Electrical Resistors	1-5-59	12-30-58
4. (VI) FALLER, E. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	12-2-58	12-3-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	10-6-58	10-1-58
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	12-3-58	12-1-58
7. (IV) GONSALVES, J. E. (ANDERSON, E. G., acting), Optics	11-3-58	11-3-58
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	1-2-59	1-2-59
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	12-15-58	12-15-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	12-11-58	12-3-58
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	12-2-58	12-3-58
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	11-20-58	12-1-58
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	12-1-58	12-1-58
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	8-22-58	8-19-58
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	12-8-58	12-1-58
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	11-10-58	11-10-58
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	12-30-58	12-29-58
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	12-10-58	11-19-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	12-3-58	12-3-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	12-1-58	12-1-58
21. (III) MADER, R. C., Textiles	12-30-58	12-17-58
22. (VI) PAUL, E. (acting), Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	12-3-58	11-26-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	7-7-58	7-7-58
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	12-19-58	12-19-58
26. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	1-2-59	1-2-59
28. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	12-1-58	11-3-58
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	1-2-59	1-2-59
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Pressure Modulating Relays; Wheel Substitutes	12-1-58	12-5-58
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	12-15-58	12-10-58

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	12-1-58	12-1-58
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Polypropylenes, Polyisobutylenes); Mineral Oils	3-2-59	2-24-59
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Agitation; Fire Extinguishers	12-15-58	12-12-58
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs; Building Structures	12-1-58	11-12-58
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Separating and Assorting Solids (part)	8-18-58	6-16-58
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	2-2-59	2-2-59
36. (V) EVANS, R. L., Measuring and Testing (part)	8-12-58	8-14-58
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	12-3-58	12-1-58
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	12-8-58	12-16-58
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	1-16-59	1-16-59
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	12-10-58	12-15-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	1-5-59	1-2-59
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	10-15-58	10-15-58
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	12-4-58	12-2-58
44. (II) EVANS, N. H., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	9-2-58	9-2-58
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	1-19-59	1-7-59
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., Thorium) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	12-1-58	12-3-58
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	12-10-58	12-8-58
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	11-13-58	11-10-58
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass; Earth Boring	12-3-58	12-1-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	10-6-58	10-1-58
51. (II) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas; Oscillators	11-3-58	11-3-58
52. (V) LE ROY, C. A., Supports and Racks	1-12-59	1-12-59
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	12-3-58	12-1-58
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices: Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	1-15-59	1-15-59
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	11-3-58	11-4-58
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-12-58	12-1-58
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting and Punching	9-10-58	9-10-58
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufacture; Selective Punching	12-2-58	12-9-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	9-26-58	11-10-58
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	11-3-58	11-3-58
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	11-18-58	11-21-58
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	12-15-58	12-15-58
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	12-5-58	12-1-58
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	10-7-58	10-1-58
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	1-2-59	1-2-59
66. (V) LISANN, L., Geometric Instruments; Measuring and Testing (part)	9-4-58	9-2-58
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators	12-1-58	12-1-58
81. (III) MONCURE, J. A., Industrial Arts	3-16-59	4-13-59
82. (III) GRAY, M. A., Household, Personal and Fine Arts	3-23-59	3-23-59
91. BAILEY, J. S., Laminated Fabrics	11-4-58	11-3-58
92. GAUSS, H., Detectors, Miscellaneous Electron Tube Circuits	10-24-58	10-8-58
93. WAHL, R. A., Metal Bending; Web Feeding	10-1-58	10-3-58
94. BERLOWITZ, W., Gas Separation	11-21-58	10-15-58
95. ANGEL, C. D., Masonry and Concrete Structures; Time-Controlling Apparatus; Packed Rod Joints; Joint Packings	11-3-58	10-21-58
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part), i. e., Polyethylenes	2-19-59	10-17-58

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during August 1959, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 690. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1958*.

Patents ..... Numbers 2,901,887 to 2,904,257, inclusive
Plant Patents ..... Numbers 537 to 543, inclusive

2. SAME—MATTER BEFORE COURT—CLAIMS CONSIDERED.

The Muller patent shows a piano having three strings

DECISIONS IN PATENT AND TRADEMARK CASES

United States Court of Appeals
District of Columbia Circuit

EDDY W. ECKEY *v.* ROBERT C. WATSON, COMMISSIONER OF PATENTS

No. 14,964. Decided June 25, 1959

[— U.S. App. D.C. —; — F.2d —; — USPQ —]

1. CIVIL ACTION UNDER 35 U.S.C. 145—SIXTY-DAY LIMIT OF RULE 304—NOT STATUTORY REQUIREMENT WITHIN RULE 183—COMMISSIONER HAS AUTHORITY TO SUSPEND OR WAIVE.

Upon review by the United States Court of Appeals for the District of Columbia Circuit of the question whether the Commissioner of Patents has the authority to extend the sixty-day period, fixed by Rule 304 of the Rules of Practice of the Patent Office, for the filing of suits in the District Court under section 145 of Title 35 U.S. Code, *Held* that "the sixty-day provision in section 304 of the rules, made pursuant to the authority given the Commissioner by section 145 to 'appoint' the time for bringing suit, is not a 'requirement of the statutes' within the meaning of Rule 183," and *Held* that "Accordingly, under the rules as presently drawn, the Commissioner may suspend or waive the sixty-day limit of Rule 304."

2. SAME—SAME—COMMISSIONER HAS POWER TO PERMIT LATE FILING OF COMPLAINT UNDER RULES 183 AND 304—PETITION FOR EXTENSION OF TIME.

"* * *, the District Court shall render a declaratory judgment decreeing (1) that the Commissioner has power in his discretion to permit a late filing of the complaint under Rules 183 and 304 of the Patent Office Rules of Practice, and (2) that he should reconsider appellant's petition for an extension of time and render decision with respect thereto on its merits. Pending the Commissioner's action, the original complaint shall be held in abeyance."

APPEAL from the United States District Court for the District of Columbia.

REVERSED AND REMANDED.

Mr. Edward F. McKie, Jr. (*Edward S. Irons* and *Harold J. Birch* of counsel) for Eckey.

Clarence W. Moore (*Arthur H. Behrens* of counsel) for the Commissioner of Patents.

Before WILBUR K. MILLER, FAHY, and WASHINGTON, *Circuit Judges*

PER CURIAM:

The question here is whether the Commissioner of Patents has the authority to extend the sixty-day period, fixed by Rule 304 of the Rules of Practice of the Patent Office, 37 C.F.R. § 1.304 (Supp. 1959),[1] for the filing of suits in the District Court under section 145 of Title 35, U.S. Code. Rule 304 was adopted pursuant to section 145, which authorizes the Commissioner to "appoint" the time within which suits under that section may be brought.[2]

Plaintiff-appellant's complaint under section 145 was filed in the District Court one day late, i.e., on the sixty-first day after the decision of the Board of Appeals. When the Commissioner filed an answer raising the point, plaintiff petitioned the Commissioner for an extension of time within which to file suit. The Commissioner ruled that he was without authority to grant any such extension. Plaintiff then filed a supplemental complaint asking the District Court to declare that the Commissioner has such authority, which he may exercise in his discretion. This was denied by the District Court, which granted the Commissioner's motion for summary judgment, and dismissed the complaint. This appeal followed.

Rule 183 of the Patent Office Rules provides:

"In any extraordinary situation, when justice requires, any requirement of these rules which is not a requirement of the statutes may be suspended or waived by the Commissioner in person on petition of the interested party, subject to such other requirements as may be imposed." 37 CFR. § 1.183 (1949).

[1] We think the sixty-day provision in section 304 of the rules, made pursuant to the authority given the Commissioner by section 145 to "appoint" the time for bringing suit, is not a "requirement of the statutes" within the meaning of Rule 183. Accordingly, under the rules as presently drawn, the Commissioner may suspend or waive the sixty-day limit of Rule 304.

[2] The judgment of the District Court will be reversed and the cause remanded. On remand, the District Court shall render a declaratory judgment decreeing (1) that the Commissioner has power in his discretion to permit a late filing of the complaint under Rules 183 and 304 of the Patent Office Rules of Practice, and (2) that he should reconsider appellant's petition for an extension of time and render decision with respect thereto on its merits. Pending the Commissioner's action, the original complaint shall be held in abeyance. We express no opinion on other matters argued to us.

So ordered.

REVERSED AND REMANDED.

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[1] Rule 304 provides in pertinent part as follows:
"The time for . . . commencing a civil action . . . is sixty days from the date of the decision of the Board of Appeals or the Board of Patent Interferences."

[2] 35 U.S.C. § 145 provides as follows:
"An applicant dissatisfied with the decision of the Board of Appeals may unless appeal has been taken to the United States Court of Customs and Patent Appeals, have remedy by civil action against the Commissioner in the United States District Court for the District of Columbia if commenced within such time after such decision, not less than sixty days, as the Commissioner appoints. The court may adjudge that such applicant is entitled to receive a patent for his invention, as specified in any of his claims involved in the decision of the Board of Appeals, as the facts in the case may appear and such adjudication shall authorize the Commissioner to issue such patent on compliance with the requirements of law. All the expenses of the proceedings shall be paid by the applicant."

U.S. Court of Customs and Patent Appeals

IN RE O'BRIEN

No. 6485. Decided April 28, 1959

[— CCPA —; 265 F.2d 940; 121 USPQ 461]

1. APPEAL TO THE U.S. COURT OF CUSTOMS AND PATENT APPEALS—REASONS OF APPEAL.

With respect to reasons of appeal which did not mention two (cumulative) cited subsidiary references, but which did advance a contention that was applicable to those two subsidiary references as well as to a third cited subsidiary reference, expressly mentioned, *Held* that "Since the reasons of appeal fairly question the single essential proposition on which the rejections by both the Board and the Examiner were based, we feel that appellant should not be deprived of his day in court on the purely technical ground that he failed to mention each of the references by name," and *Held* that "No doubt it would have been better of he had done so, but we do not consider the omission necessarily fatal"; and appellant's reasons of appeal *Held* sufficient.

reversed without considering the Examiner's rejection based on the other two patents in view of Glocker, and to claims 4 and 6. Claims 5, 7, and 9, although referred to in the notice of appeal, are not included in the record

2. SAME—MATTER BEFORE COURT—CLAIMS CONSIDERED.

[2] There is some uncertainty as to exactly what claims are before the court on this appeal. The Board considered and affirmed the Examiner's rejection of claims 1 to 9, inclusive, which were the only claims in the application. Thereafter, by amendment approved by the Board, appellant cancelled claims 2, 5, 7, 8, and 9. In appellant's reasons of appeal to this court, no claims are specifically mentioned in the assignment of errors, but at the conclusion of such assignment it is stated that "Applicant herewith proposes that the record on appeal shall contain the specification as filed, the final rejection of August 10, 1955, the decision of the Board of Appeals, and a copy of claims 4, 5, 6, 7, and 9." For some reason not appearing in the record, claims 1 and 3 have been included therein in addition to claims 4 and 6. Claims 5, 7, and 9, although referred to in the notice of appeal, are not included in the record here, presumably because appellant had directed that they be cancelled. Claims 1 and 3 are not mentioned in appellant's brief and were not specifically discussed at the hearing. Under such circumstances we are of the opinion that this appeal is limited to claims 4 and 6, and only those claims will be considered.

3. PATENTABILITY—PARTICULAR SUBJECT MATTER—MUSICAL INSTRUMENT.

A certain claim to a musical instrument *Held* unpatentable as failing to define invention over a combination of references, but another claim *Held* patentable over the cited references.

APPEAL from the Patent Office. Serial No. 297,089.

MODIFIED.

Willis B. Rice (*Robert I. Dennison* of counsel) for O'Brien.

Clarence W. Moore (*George C. Roeming* of counsel) for the Commissioner of Patents.

Before WORLEY, *Acting Chief Judge*, and RICH, MARTIN, and JOHNSON (retired), *Associate Judges*

WORLEY, *Acting Chief Judge*, delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals of the United States Patent Office affirming the Primary Examiner's rejection of certain claims of appellant's application for a patent on a musical instrument, on the ground of lack of invention over the prior art.

Appealed claims 4 and 6 read:

4. A musical instrument comprising a keyboard having a key for each note of the scale, three series of strings, each containing a string for each note of the scale, one of said series having its strings tuned at standard intervals according to the notes which each string represents at standard pitch, another of said series having its strings tuned at identical intervals to the first series but each string being a definite fraction of a semitone lower than its corresponding string of the first mentioned series, and the third series having its strings tuned at identical intervals of the first series, but each string being a definite fraction of a semitone higher than its corresponding string of the first mentioned series, and mechanism operated by each key for striking the related string of each series simultaneously.

6. A device according to claim 4 in which the fractional differences in pitch are both substantially ⅙ of a semitone.

The references relied on are:

Muller, 512,048, January 2, 1894.
Hammond, 2,159,505, May 23, 1939.
Kannenberg, 2,287,105, June 23, 1942.
Hanert, 2,509,923, May 30, 1950.

Appellant's application discloses a piano in which the hammer actuated by each key strikes three strings simultaneously. One string of each group is tuned to a note of the scale, another is tuned a fraction of a semitone, preferably about one-third, below that note, and the third string is tuned the same degree above the note. This arrangement is said to produce a richness of tone which cannot be obtained with a conventionally tuned piano.

The Muller patent shows a piano having three strings for each key, the strings being struck simultaneously by the hammer, but the strings of each group are tuned to the same pitch.

The patents to Hammond, Kannenberg, and Hanert all relate to electric organs, and each discloses an arrangement in which each key produces not only a note of the scale, but also a vibration of a slightly higher frequency and one of slightly lower frequency. Only the Hammond patent discloses exact values for such frequencies, and there the basic note is approximately, though not exactly, midway between the higher and lower frequencies, but is not spaced from them by as much as one-third of a semitone as in appellant's preferred instrument.

The Examiner's first rejection was on the Muller patent alone. That was reversed by the Board. The second rejection, affirmed by the Board and involved in the instant appeal, was based on Muller in view of Hammond, Kannenberg, or Hanert on the ground that it would not require invention, in view of any of the last three patents, to tune the strings of Muller's piano in the manner set forth in the appealed claims.

In this decision the Board made the following statement:

We have studied the subsidiary art and find that Kannenberg and Hanert are cumulative only relative to Hammond. We will, therefore, confine our further attention to Hammond and Muller.

No mention of the Kannenberg and Hanert patents is made in appellant's reasons of appeal, and in view of that fact the Solicitor of the Patent Office, relying on *In re Wesselman*, 29 CCPA 988, 127 F.2d 311, 53 USPQ 365; *In re Boyce*, 32 CCPA 718, 144 F.2d 896, 63 USPQ 80; and *In re Glocker*, 33 CCPA 789, 153 F.2d 119, 68 USPQ 194, contends that the Board's decision should be affirmed without consideration of its merits.

The Wesselman decision does not appear to be pertinent here since it merely holds that a reason of appeal containing nothing but a general assignment of error does not satisfy the statutory requirement that appellant must specifically set forth his reasons of appeal.

In the Boyce case the Examiner based his rejection on six references, only one of which was mentioned by the Board in entering a general affirmance. Appellant, in his reasons of appeal, referred only to the reference mentioned by the Board. It was held that the Board's action was, in effect, an affirmance of all grounds of rejection employed by the Examiner, and, that since appellant had not alleged error in the rejection on those references not mentioned by the Board, the decision must be affirmed, and it was not necessary to consider the merits of the case. It is to be noted, however, that one of the references not mentioned by the Board was relied on by the Examiner as the principal reference, and that the Board did not state that any of the references were merely cumulative. Apparently the Board merely affirmed one of several independent grounds of rejection without specifically considering the others.

In the Glocker case the Examiner rejected the claims on "either the patent to Keefer or the patent to Brelle in view of the patent to Glocker." The Board, in affirming, relied on Glocker only, stating that it was unnecessary to discuss the other patents "as they are cumulative only." It was held that if this court should disagree with the Board as to the rejection on the Glocker patent, the Board's decision could not be

differences in tone which are perceptible to the ear of

5. SAME—SAME—ANALYSIS OF MARKS.

reversed without considering the Examiner's rejection based on the other two patents in view of Glocker, and since those other patents were not in the record and were not referred to in the reasons of appeal, the Board's decision was affirmed without consideration on the merits.

It is to be noted that in both the Boyce and Glocker cases the ground of rejection discussed by the Board was distinct from those which it did not discuss, since a different basic reference was used in each case. Clearly, therefore, a reversal of one ground would not necessarily involve a holding that the other grounds also should be reversed.

In the instant case, on the other hand, the Muller patent is the only basic reference involved and the secondary references Hammond, Hanert, and Kannenberg, all of which are included in the record, were cited to show the same feature, namely, the producing, in an electric organ, of a note made up of a plurality of frequencies sounded simultaneously. Accordingly, only a single issue is presented, whichever secondary reference is considered; and, if it should be necessary to reverse the rejection on Muller in view of Hammond, as to which appellant expressly assigns error in his reasons of appeal, it would follow that the rejections on Muller in view of Hanert and Kannenberg were also in error.

[1] We are of the opinion that appellant's reasons of appeal are sufficient. Those reasons, while they expressly mention only the Muller and Hammond patents, definitely advance the contention that it is not proper to combine disclosures of a piano and an electric organ as a basis for rejecting appellant's claims. Obviously that contention is applicable to the Hanert and Kannenberg patents as well as to the Hammond patent. Accordingly, if appellant can successfully establish the validity of the contentions advanced in his reasons of appeal, a reversal of the Board's decision would be in order.

Since the reasons of appeal fairly question the single essential proposition on which the rejections by both the Board and the Examiner were based, we feel that appellant should not be deprived of his day in court on the purely technical ground that he failed to mention each of the references by name. No doubt it would have been better if he had done so, but we do not consider the omission necessarily fatal.

Since the original reasons of appeal are held to be sufficient it is unnecessary to consider appellant's motion to amend by adding further reasons.

[2] There is some uncertainty as to exactly what claims are before the court on this appeal. The Board considered and affirmed the Examiner's rejection of claims 1 to 9, inclusive, which were the only claims in the application. Thereafter, by amendment approved by the Board, appellant cancelled claims 2, 5, 7, 8, and 9. In appellant's reasons of appeal to this court, no claims are specifically mentioned in the assignment of errors, but at the conclusion of such assignment it is stated that "Applicant herewith proposes that the record on appeal shall contain the specification as filed, the final rejection of August 10, 1955, the decision of the Board of Appeals, and a copy of claims 4, 5, 6, 7 and 9." For some reason not appearing in the record, claims 1 and 3 have been included therein in addition to claims 4 and 6. Claims 5, 7, and 9, although referred to in the notice of appeal, are not included in the record here, presumably because appellant had directed that they be cancelled. Claims 1 and 3 are not mentioned in appellant's brief and were not specifically discussed at the hearing. Under such circumstances we are of the opinion that this appeal is limited to claims 4 and 6, and only those claims will be considered.

We agree with the Board that the Kannenberg and Hanert patents add nothing material to what is disclosed by the Hammond patent, so far as this appeal is concerned, and, accordingly, like the Board, we shall confine our consideration to the Muller and Hammond patents.

The Muller patent is pertinent only to the extent that it shows a piano having three strings for each key, which it would be possible to tune in the manner claimed by appellant. It is not contended that Muller discloses or suggests tuning the strings corresponding to one key to different pitches. It was the opinion of the Examiner and the Board, however, that since Hammond discloses the idea of providing three pitches for each key, one being standard, one slightly higher, and the other slightly lower, there would be no invention in tuning the strings of Muller's piano to produce the three frequencies called for by the appealed claims.

We agree with that position so far as appealed claim 4 is concerned. That claim merely defines the difference in tuning between the three strings of each note as being "a definite fraction of a semitone," which is true of the tuning described in the Hammond patent. Claim 4, therefore, calls for nothing more than applying Hammond's teaching to a piano of the type shown by Muller, by tuning the strings to frequencies such as are disclosed by Hammond. There is nothing to indicate that such a procedure would lead to any new or unexpected result and we are of the opinion that it would be obvious to a person skilled in the art. Appealed claim 6 is limited to a difference of one-third of a semitone between the strings of each key. It is alleged by appellant that such arrangement produces three tones when each key is struck, makes a considerable difference in the effect produced, and results in a richness which an ordinary piano cannot give. A demonstration comparing appellant's instrument with a conventionally tuned piano was made before the Board and also before the court and we agree with the Board that "The difference in result or effect was marked." Whether it was an improvement or otherwise is largely a matter of opinion and musical taste, but it is not unreasonable to suppose that it might be preferred by many listeners.

In the Hammond patent, on the other hand, the differences in pitch are not designed to produce distinct tones, but to give a so-called "chorus effect" such as results from the simultaneous playing of a number of instruments which are supposedly tuned to the same pitch. The differences in tuning in the Hammond instrument are therefore substantially smaller than in appellant's.

It was held by the Patent Office tribunals that the difference in tuning between appellant's instrument and that of Hammond involved nothing more than a matter of degree. It appears, however, that whereas appellant's frequencies are so selected as to produce

differences in tone which are perceptible to the ear of the ordinary listener, Hammond is seeking to avoid that result, since he states that "the chorus effect is produced with such fidelity that the listener can ordinarily distinguish but a single tone even though, as a matter of fact, the tone is a composite tone of three sound waves of substantially the same frequency."

In our opinion Hammond not only fails to suggest the use of pitches of the order of difference recited in appealed claim 6, but clearly indicates that the differences should be kept substantially below such values and within such a range that the impression given by each key will be that of a single tone. Appellant, by a very simple expedient, has produced a markedly different tone effect, which is not fairly suggested by the cited references. Claim 6 properly defines appellant's advance over the prior art and, in our opinion, should have been allowed.

[3] The decision of the Board of Appeals is modified, being affirmed as to claim 4 and reversed as to claim 6.

MODIFIED.

JOHNSON, *J.*, retired, dissents as to the allowance of claim 6.

U.S. Court of Customs and Patent Appeals

SEALY, INC. *v.* SIMMONS CO.

No. 6420. Decided April 22, 1959

[— CCPA —; 265 F.2d 934; 121 USPQ 456]

1. TRADEMARKS—OPPOSITION—RIGHT TO MAINTAIN.

"There is no doubt that the use of 'BABY POSTUREPEDIC' by opposer's licensees inures to the benefit of opposer and can be used to support these opposition proceedings. For although the exact terms of the license agreement are not shown by the record, it is clear from the testimony of Sealy's Ohio licensee that manufacture of 'BABY POSTUREPEDIC' mattresses was under the control of, and in behalf of Sealy, Incorporated. In view of the above, it is clear that opposer has established the right to maintain this action."

2. SAME—SAME—BURDEN OF PROOF AS TO PRIOR USE.

"* * *, we are of the opinion that appellant, by the introduction of testimony of its president, a licensee representative, and the documentary evidence, has proven with 'conviction of its accuracy and applicability * * *' that it and its licensee used 'BABY POSTUREPEDIC' prior to May, 1954, the admitted date of first use of 'BABY POSTURE' by appellee. This court has in similar situations stated that, although prior use must be established by a preponderance of the evidence, * * *, such use can be proven by the testimony of only one witness. In *Nettie Rosenstein, Inc. v. Princess Pat, Ltd.*, 42 CCPA 806, 220 F.2d 444, 105 USPQ 226, which involved the question of the prior use of a mark by the opposer, this court stated that 'there is no requirement of law that corroboration of the testimony of a witness in a trademark opposition case is essential to its probativeness * * *.'"

3. SAME—CONFUSING SIMILARITY—MARKS CONSIDERED IN THEIR ENTIRETIES.

On the issue whether "BABY POSTUREPEDIC" is confusingly similar to "BABY POSTURE," *Held* that in "resolving this question, as in all similar trademark cases, we must examine the marks in their entireties."

4. SAME—SAME—MANNER IN WHICH MARKS MIGHT ACTUALLY BE USED—HOUSE-MARKS.

"Though appellant's labels include the house-mark 'SEALY' in much the same manner that appellee's label includes 'SIMMONS,' this factor is not germane to the question of likelihood of confusion between the secondary trademarks. It is to be presumed that either 'BABY POSTUREPEDIC' or 'BABY POSTURE' may be used at any time without the respective house-marks."

5. SAME—SAME—ANALYSIS OF MARKS.

"While dissection of marks should not be indulged in, it is of course proper to consider separate portions thereof in order to determine the importance to be attached thereto."

6. SAME—SAME—SUGGESTIVENESS—"POSTURE."

"The Assistant Commissioner is correct in stating that the word 'POSTURE' is suggestive when applied to mattresses, many third party registrations using this word and phonetic variations thereof in connection with mattresses having been introduced as further evidence of such connotation."

7. SAME—SAME—ARBITRARINESS—"POSTUREPEDIC."

In an opposition involving applicant's mark "BABY POSTURE" for mattresses and opposer's mark "BABY POSTUREPEDIC" for mattresses, *Held* that "Although it is true that the suggestiveness of the word 'POSTURE' precludes this court from giving the opposer's mark the protection that a purely arbitrary mark could command, nevertheless, in this instance, the opposer, by appending the syllables 'PEDIC' to 'POSTURE,' has changed it into a different word and has given it a certain arbitrariness which deserves a greater degree of protection than the word 'POSTURE' alone, or as used in the third party registrations of record."

8. SAME—SAME—MARKS AND GOODS—"BABY POSTURE" AND "BABY POSTUREPEDIC" FOR MATTRESSES.

Upon consideration in their entireties of applicant's mark, "BABY POSTURE," and opposer's mark, "BABY POSTUREPEDIC," each for mattresses, and noting that the first four syllables are identical and that the only difference lies in the ultimate syllables "pedic" found in opposer's mark, *Held* that "Since both designations are applied to exactly the same merchandise, which merchandise is offered to the public through the same marketing channels, and since the mental reaction to the composite word marks is liable to be similar, a substantial doubt as to the likelihood of confusion of purchasers arises."

9. SAME—SAME—SUBSTANTIAL DOUBT RESOLVED AGAINST NEWCOMER.

Held that a substantial doubt as to likelihood of confusion of purchasers must be resolved against the newcomer to the field and in favor of the prior user.

APPEAL from the Patent Office. Opposition No. 34,195.

REVERSED.

Gerrit P. Groen, Wm. Marshall Lee, and *Byron, Hume, Groen & Clement* for Sealy, Inc.

Cyril A. Soans, William E. Anderson, and *Soans, Anderson, Luedeka & Fitch* for Simmons Co.

Before WORLEY, *Acting Chief Judge*, and RICH, MARTIN, and JOHNSON (retired), *Associate Judges*

MARTIN, *J.*, delivered the opinion of the court.

This is an appeal from a decision of the Commissioner of Patents, acting through the Assistant Commissioner, reversing the Examiner of Interferences and dismissing an opposition to the application [1] for registration by the Simmons Company, appellee here, of the mark "BABY POSTURE," for mattresses. The appellant, Sealy, Incorporated, opposed the application on the ground of likelihood of confusion of prospective purchasers between "BABY POSTURE" and appellant's prior registered "POSTUREPEDIC" [2] and "POSTURE PILLOW" [3] and the unregistered mark "BABY POSTUREPEDIC," each mark being used on mattresses. Opposer, on appeal to this court, solely urges that "BABY POSTURE" so resembles "BABY POSTUREPEDIC," when applied to applicant's goods, as to be likely to deceive purchasers.

The Assistant Commissioner in dismissing the oppo-

[1] Application Serial No. 666,603.
[2] Reg. No. 569,105, issued Jan. 13, 1953.
[3] Reg. No. 370,139, issued Aug. 15, 1939.

by contradictions, inconsistencies, and indefiniteness but should carry with it conviction of its accuracy and applica-

mark shown in appellee's application does not include the word "SIMMONS."

sition on the ground of absence of probability of deception of purchasers, found as follows:

Considering the circumstances surrounding the purchase of mattresses in the usual retail outlets, and considering the highly suggestive nature of the word 'Posture' when applied to mattresses, and considering the manner of opposer's use and advertising of its 'Posturepedic' mark conjointly with 'Sealy,' and considering opposer's use of 'Baby Posturepedic' merely to differentiate its 'Posturepedic' crib mattresses from its other sizes of 'posturepedic' mattresses, it is concluded that applicant's mark 'Baby Posture,' when applied to mattresses, is not likely to create confusion, mistake or deception of purchasers.

On appeal, appellee urges that the decision below should be affirmed for the above mentioned reasons, and for the additional ground that Sealy, Incorporated, has failed to prove use of "BABY POSTUREPEDIC," by it or any affiliate, prior to the first use of "BABY POSTURE" by the Simmons Company.

The president of the opposer testified that his firm is primarily an executive office which licenses bedding manufacturers to use various trademarks and patents in association with the mattresses and other merchandise manufactured as "SEALY" products. He further testified that Sealy, Incorporated, exercises absolute control over both the engineering quality standards and the advertising practices of its licensees. A document, portions of which had been deleted, purporting to be a license agreement, was introduced in evidence and identified by this witness as showing the contractual relationship between Sealy, Incorporated, and its manufacturing affiliates. The same witness further averred, though Sealy, Incorporated was not a sales organization, that in isolated cases it had acted as a transfer agent for its licensees to negotiate sales to national catalog houses, and that periodically floor samples were sold directly from opposer's markets in various cities to dealers, in order to eliminate old merchandise and prepare for new showings.

The aforesaid testimony was corroborated by the vice-president of Sealy's Ohio licensee, who stated that his organization manufactured and sold "SEALY" products, including "SEALY BABY POSTUREPEDIC" mattresses, in compliance with production specifications set by Sealy, Incorporated, and in accordance with a license of "the type" of that introduced in evidence.

[1] There is no doubt that the use of "BABY POSTUREPEDIC" by opposer's licensees inures to the benefit of opposer and can be used to support these opposition proceedings. For although the exact terms of the license agreement are not shown by the record, it is clear from the testimony of Sealy's Ohio licensee that manufacture of "BABY POSTUREPEDIC" mattresses was under the control of, and in behalf of Sealy, Incorporated. In view of the above, it is clear that opposer has established the right to maintain this action. *Wilson* v. *Delaunay*, 44 CCPA 1019, 245 F.2d 877, 114 USPQ 339.

With regard to priority of use of the respective marks, the record shows use by the applicant of "BABY POSTURE" as a trademark for crib mattresses since May of 1954. Opposer's president, when asked when the mark "BABY POSTUREPEDIC" was first used, answered as follows:

"Well, as I told you, the "POSTUREPEDIC" mark was used in June, 1950. I think it was probably about two or three years later when we started to use "BABY POSTUREPEDIC."

Q64. Are you sure of that? A. I am not positive, no.

* * * * * * *

Q67. Can you recall anything, Mr. Bergmann, [opposer's president] which would help you remember when "BABY POSTUREPEDIC" was first used? A. No, honestly, I would have to consult the records, because my memory does not tie me back to those dates.

Q68. You don't have any recollection as to an approximate date on which you used "BABY POSTUREPEDIC"? A. As I previously told you, I know from my own memory of sales back as early as 1953, and it could be the latter part of 1952.

The witness for Sealy's Ohio licensee, when queried as to his company's first use of "BABY POSTUREPEDIC" on mattresses, replied, "I can remember that we definitely started using it in 1952, possibly as early as 1951."

One cloth label and one photostatic copy of a label, each showing "SEALY" preceding the words "BABY POSTUREPEDIC," in different styles of type, are in evidence. Opposer's president, in testimony taken in June 1955, stated that he didn't know how long the cloth label had been used, but estimated that "it has been some little time, though. * * * My guess would be maybe a year." The representative of the licensee, when asked about the same label stated:

That is the label we use on the "BABY POSTUREPEDIC" crib mattress.

Q46. And do you have any idea off hand how long you have used this label? A. About three years.

Although the licensee was not questioned about the copy of the other label, the president of Sealy, Incorporated testified that it had been used "from the very beginning. I don't know what the exact date was." He further made a "guess" that it had been used "for three or four years."

The licensee further produced copies of invoices of sales of mattress products described as "BABY POSTUREPEDIC CRIB(S)," several of which were dated in 1952 and 1953.

[2] In view of the foregoing, we are of the opinion that appellant, by the introduction of testimony of its president, a licensee representative, and the documentary evidence, has proven with "conviction of its accuracy and applicability * * *" that it and its licensee used "BABY POSTUREPEDIC" prior to May, 1954, the admitted date of first use of "BABY POSTURE" by appellee. This court has in similar situations stated that, although prior use must be established by a preponderance of the evidence, *Etablissements Renc Beziers, Societe Anonyme* v. *Reid, Murdoch & Co.*, 18 CCPA 1340, 48 F.2d 946, 9 USPQ 231, such use can be proven by the testimony of only one witness. In *Nettie Rosenstein, Inc.* v. *Princess Pat, Ltd.*, 42 CCPA 806, 220 F.2d 444, 105 USPQ 226, which involved the question of the prior use of a mark by the opposer, this court stated that "there is no requirement of law that corroboration of the testimony of a witness in a trademark opposition case is essential to its probativeness * * *." *The B. R. Baker Company* v. *Lebow Brothers*, 32 CCPA 1206, 150 F.2d 580, 66 USPQ 232, cited by appellee, is distinguishable from the case at bar since in that case applicant's witness was endeavoring to establish an earlier date than that alleged in the application, by recalling from memory events which occurred some fourteen year prior to the time that the witness testified. However, even under those circumstances this court stated:

It is not contended by either party here that oral proof alone, even by one witness, if sufficiently probative, will not suffice in proving priority of ownership and use in a trademark interference proceeding. While the oral testimony of a single interested witness must necessarily have its weaknesses, we know of nothing in trademark law which justifies the rejection of such proof if it is sufficiently probative. However, such testimony is obviously strengthened by corroborative documentary evidence, and it should not be characterized

time without the respective house-marks."

[3] Reg. No. 365,765, issued Jan. 10, 1939.
[4] Reg. No. 370,139, issued Aug. 15, 1939.

by contradictions, inconsistencies, and indefiniteness but should carry with it conviction of its accuracy and applicability. *William S. Merrell Co.* v. *The Anacin Co.*, 27 CCPA (Patents) 847, 109 F.2d 339, 44 USPQ 366. * * *.

Insofar as the use of the word "BABY" in conjunction with "POSTUREPEDIC" is concerned, the invoices of the Ohio licensee definitely place the date of such usage prior to appellee's first use of "BABY POSTURE." Furthermore, there is no reason for this court to deny probative value to these invoices, the label on which "BABY POSTUREPEDIC" is imprinted and the testimony of both opposer's president and the licensee representative to establish trademark usage of "BABY POSTUREPEDIC" by Sealy, Incorporated on crib mattresses prior to May, 1954. Moreover, this same evidence proves that the word "BABY" was not used by appellant and its licensee solely to distinguish between the various mattress sizes.

[3] So we come now to the final issue in this case, i.e., whether "BABY POSTUREPEDIC" is confusingly similar to "BABY POSTURE." In resolving this question, as in all similar trademark cases, we must examine the marks in their entireties. *Kitchen-Quip, Inc.* v. *Sunbeam Corp.*, 42 CCPA 869, 222 F.2d 265, 105 USPQ 430; *Lauritzen & Co., Inc.* v. *The Borden Co.*, 44 CCPA 720, 239 F.2d 405, 112 USPQ 60; *Medicated Products* v. *Alice Jewelry Co.*, 45 CCPA 966, 255 F.2d 408, 118 USPQ 90. [4] Though appellant's labels include the house-mark "SEALY" in much the same manner that appellee's label includes "SIMMONS," this factor is not germane to the question of likelihood of confusion between the secondary trademarks. It is to be presumed that either "BABY POSTUREPEDIC" or "BABY POSTURE" may be used at any time without the respective house-marks. *Hat Corp. of America* v. *John B. Stetson Co.*, 42 CCPA 1001, 223 F.2d 485, 106 USPQ 200; *Bellbrook Dairies, Inc.* v. *Hawthorn-Mellody Farms Dairy, Inc.*, 45 CCPA 842, 253 F.2d 431, 117 USPQ 213; *Frances Denney* v. *Elizabeth Arden Sales Corporation*, 46 CCPA—, 263 F.2d 347, 120 USPQ 480. This proposition is supported by the fact that the mark shown in appellee's application does not include the word "SIMMONS."

[5] While dissection of marks should not be indulged in, it is of course proper to consider separate portions thereof in order to determine the importance to be attached thereto. *Sleepmaster Products Co., Inc.* v. *American Auto-Felt Corp.*, 44 CCPA 784, 241 F.2d 738, 113 USPQ 63, and cases cited therein. [6] The Assistant Commissioner is correct in stating that the word "POSTURE" is suggestive when applied to mattresses, many third party registrations using this word and phonetic variations thereof in connection with mattresses having been introduced as further evidence of such connotation. [7] Although it is true that the suggestiveness of the word "POSTURE" precludes this court from giving the opposer's mark the protection that a purely arbitrary mark could command, nevertheless, in this instance, the opposer, by appending the syllables "PEDIC" to "POSTURE," has changed it into a different word and has given it a certain arbitrariness which deserves a greater degree of protection than the word "POSTURE" alone, or as used in the third party registrations of record.

[8] Considering the marks in issue in their entireties, we note that the first four syllables are identical and that the only difference lies in the ultimate syllables "PEDIC" found in opposer's trademark. Since both designations are applied to exactly the same merchandise, which merchandise is offered to the public through the same marketing channels, and since the mental reaction to the composite word marks is liable to be similar, a substantial doubt as to the likelihood of confusion of purchasers arises. In accord with the well established rule, [9] such doubt must be resolved against the newcomer to the field, the Simmons Company, and in favor of the prior user, Sealy, Incorporated.

For these reasons, the Commissioner's decision is reversed.

REVERSED.

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,275,345, T. E. Bryan, Removable gas light apparatus in oil wells, **filed** Jan. 22, 1958, D.C., N.D. Tex. (Fort Worth), Doc. 7655, *Otis Engineering Corp.* v. *Guiberson Corp.* Dismissed with prejudice June 13, 1959.

2,278,588, H. F. Waters, Container and package, **filed** Sept. 26, 1956, D.C., S.D.N.Y., Doc. 113/184, *George P. Converse and Co. et al.* v. *Pacquettes, Inc.* Order of dismissal for lack of prosecution June 17, 1959.

2,398,657, N. Straussler, Propulsion devices for amphibious vehicles, **filed** Jan. 8, 1959, D.C., District of Columbia, Doc. 59/59, *Nicholas Straussler* v. *General Motors Corp.* Order of dismissal June 11, 1959.

2,409,236, O. H. Banker, Method of making a roller cage, **filed** Mar. 29, 1956, D. C., N.D. Ill. (Chicago), Doc. 56c583, *New Products Corp.* v. *Outboard, Marine and Manufacturing Co.* Order declaring claims 1, 3, and 5 infringed by defendant; injunction granted Feb. 28, 1958. Appeal filed Mar. 28, 1959. Mandate of U.S.C.A. filed June 10, 1959, reversing decree.

2,419,964, J. R. Newkirk, Spring return push door with door lock, **filed** June 11, 1959, D.C., S.D.N.Y., Doc. 147/94, *National Pneumatic Co., Inc.* v. *Midland-Ross Corp.*

2,454,621, F. B. Allen, Squeeze grip for portable fire extinguisher, **filed** Aug. 11, 1958, D.C., E.D. Mich. (Detroit), Doc. 18283, *Fyr-Fyter Co.* v. *Fire Master Corp. et al.* Consent judgment for plaintiff June 9, 1959.

2,461,652, R. W. Fort, Seed harvester, **filed** June 8, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c905, *Robert W. Fort* v. *Mathews Co. et al.*

2,465,511, W. A. Riggs, Slip-over style of outer garment, **filed** July 16, 1959, D.C., S.D.N.Y., Doc. 111/185, *Barney Beller Sales, Inc.* v. *Arnold Livingston etc. et al.* Stipulation and order of discontinuance with prejudice June 16, 1959.

2,486,560, R. B. Gray, Transducer and method of making same, **filed** June 11, 1959, D.C. Minn. (St. Paul), Doc. 4/59/95, *Clevite Corp. et al.* v. *Musicland Record Shop, Inc.*

2,557,627, S. J. Bartl, Plural garment hanger, **filed** July 17, 1956, D.C., S.D.N.Y., Doc. 111/189, *Hobar, Inc.* v. *Berkeley Industries.* Stipulation and order of discontinuance filed June 17, 1959.

2,610,557, C. W. Bros et al., Pneumatic roller compactor, **filed** June 8, 1959, D.C. Minn. (St. Paul), Doc. 4/59/92, *Browning Manufacturing Co. et al.* v. *Bros, Inc.*

2,628,605, W. T. Keeshan, Fountain applicator with magnetic valve, **filed** Jan. 31, 1958, D.C., N.D. Ill. (Chicago), Doc.

58c167, *Dupli-color Products Co., Inc.* v. *Tipon Corp. et al.* Amended complaint dismissed by stipulation May 22, 1959.

2,889,875, Jewett and Jewett, Closure lock, filed June 17, 1959, D.C., E.D. Pa. (Philadelphia), Doc. 26509, *Transcontinental Industries, Inc.* v. *George B. Henne Co.*

2,884,656, M. Camras, Magnetic impulse record member, magnetic material and method of making magnetic material, filed Apr. 13, 1956, D.C., M.D. Ala. (Montgomery), Doc. 381–E, *Armour Research Foundation of Illinois Institute of Technology, a non-profit organization* v. *Orradio Industries, Inc.* Order of dismissal June 4, 1959.

2,886,757, B. E. Berlenbach, Safety binding for a ski runner, filed Nov. 1, 1957, D.C., W.D. Wash. (Seattle), Doc. 4469, *Bernard E. Berlenbach, doing business as Ski-Free Co.* v. *Anderson and Thompson Ski Co., Inc. et al.* Consent decree, defendants enjoined June 12, 1959.

2,737,491, R. E. Reeve, Milk transfer unit for automatic milking machine, filed June 15, 1959, D.C., S.D. Calif. (Los Angeles), Doc. 605/59–Y, *Robert E. Reeve* v. *Bou-Matic Milkers, Inc. et al.*

2,733,652, W. P. Luther, Closure for mixing vessel, filed June 16, 1959, D.C., E.D. Wis. (Milwaukee), Doc. 59–C–114, *John Oster Manufacturing Co.* v. *Dormeyer Corp.*

2,749,267, Gill and Southwick, Method of covering the joint between wallboard and the resultant product, filed June 4, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c896, *United States Gypsum Co.* v. *National Gypsum Co. et al.*

2,750,316, P. E. Thies, Bowl sleeve gasket, filed Apr. 23, 1959, D.C., N.D. Ohio (Cleveland), Doc. 35255, *William H. Harvey et al.* v. *Roy Lavine.*

2,760,231, Z. Lorenian, Screw extrusion apparatus for manufacturing articles of thermoplastic and thermosetting materials, filed June 16, 1959, D.C. Md. (Baltimore), Doc. 11447, *Zareh Lorenian* v. *Hedwin Corp.*

2,770,130, Romanowski and Weinecke, Magnetic flow meter, filed Apr. 16, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c609, *Bowser, Inc.* v. *The Foxboro Co.*

2,780,614, D. J. Broughton, Flap fastener, filed June 5, 1959, D.C., S.D.N.Y., Doc. 147/19, *Buxton, Inc. et al.* v. *Julen, Inc.*

2,783,784, A. Stork (assigned to Davilo Realty Corp.), Folding rack, filed July 23, 1957, D.C., E.D.N.Y. (Brooklyn), Doc. 17844, *Berkeley Industries* v. *Davilo Realty Corp.* Action for declaratory judgment sustained (notice June 18, 1959).

2,880,880, W. G. Persinger, Barbeque grill attachment, filed July 22, 1958, D.C., S.D. Calif. (Los Angeles), Doc. 711/58–WM, *Seidelhuber Steel Rolling Mills Corp.* v. *Mitchell Rothberg, doing business as D and M Metal Products.* Patent valid and infringed; order holding claims 8, 9, 10, 19, 21, 22, 23, and 24 invalid; complaint dismissed on merits (notice June 9, 1959).

2,857,646, B. J. McLoughlin, Form for concrete stoop, filed June 15, 1959, D.C., N.D.N.Y. (Utica), Doc. 7642, *Ollie E. S. Hedbring, doing business as The Fort Miller Co.* v. *Bernard J. McLoughlin et al.*

2,870,849, E. M. Kwitek, Web cutting apparatus, filed May 22, 1959, D.C., E.D. Wis. (Milwaukee), Doc. 49–C–99, *Paper Converting Machine Co., Inc.* v. *Food Machinery and Chemical Corp.*

2,880,818, W. M. Dow, Processes and apparatus for recovering hydrocarbons from gas streams, filed June 4, 1959, D.C., S.D. Tex. (Houston), Doc. 12/672, *Delta Tank Manufacturing Co., Inc.* v. *National Tank Co.*

2,884,197, A. Whittell, Thermostatic flow governor, filed June 5, 1959, D.C., S.D. Calif. (Los Angeles), Doc. 553/59–T, *Raypak Co., Inc.* v. *Fleetwood Manufacturing Co., Inc.*

Re. 24,166 (of 2,667,906), B. Stiller, Self-closing container, filed Oct. 31, 1956, D.C., N.D. Ohio (Cleveland), Doc. 33,204, *Squeez-A-Purse Corp.* v. *Benjamin Stiller et al.* Order dismissing complaint; defendants awarded judgment of validity and infringement on their counterclaim and injunction granted May 27, 1959.

Des. 174,865, C. Le Sac, Lady's handbag, filed Apr. 28, 1955, D.C., E.D. Wis. (Milwaukee), Doc. 55–C–99, *Enger Kress Co.* v. *Amity Leather Products Co. et al.* Consent decree, defendants enjoined June 15, 1959.

Des. 178,669, W. D. Warren, Towered susan server, Amended complaint, filed July 26, 1956, D.C., S.D.N.Y., Doc. 111/308, *Rainbow Wood Products, Inc.* v. *Hamilton Cornwall, Inc.* Order of dismissal for lack of prosecution June 16, 1959.

REISSUES

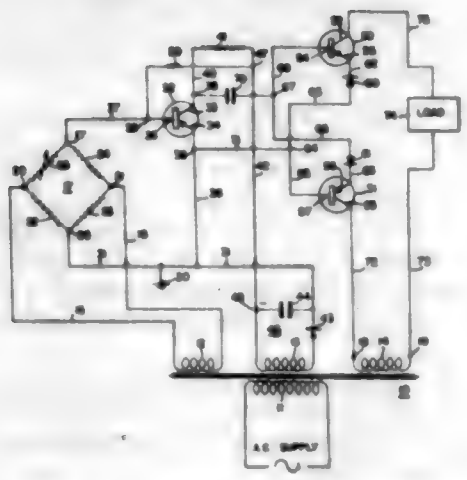
AUGUST 11, 1959

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,678
TRANSISTOR CONTROL APPARATUS

Balthasar H. Pinckaers, Edina, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Original No. 2,872,595, dated February 3, 1959, Serial No. 478,469, December 29, 1954. Application for reissue February 4, 1959, Serial No. 791,241
12 Claims. (Cl. 307—88.5)

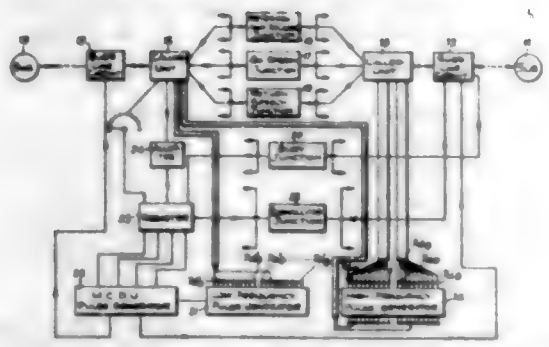


12. A circuit arrangement comprising a pair of transistors each having emitter, collector and base electrodes, an emitter-collector path, an emitter-base path and a collector-base path, means connecting the emitter-collector path of each of said transistors in series with the collector base path of the other of said transistors, a first electrical signal source, means connecting said first signal source in series with the emitter-base path of each of said transistors, a second electrical source, means for deriving an output signal from said circuit arrangement and means connecting said last-mentioned means in series circuit arrangement with said second source between the collector electrodes of said transistors.

24,679
AUTOMATIC TELEPHONE SYSTEMS

Alexander Albert Chubb, Macclesfield, England, and Maurice Moise Levy, Ottawa, Ontario, Canada, assignors to The General Electric Company Limited, London, England

Original No. 2,747,019, dated May 22, 1956, Serial No. 269,158, January 31, 1952. Application for reissue October 29, 1958, Serial No. 770,888
Claims priority, application Great Britain
February 2, 1951
2 Claims. (Cl. 179—18)

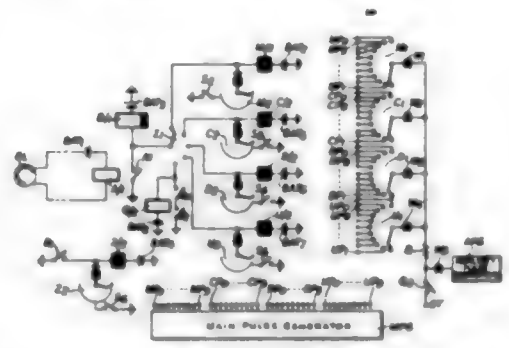


6. In combination, a selector device having a plurality of input terminals, an output terminal and selector means for selectively connecting the input terminals to said output terminal, means to apply pulse trains having different channel identifying signals to said input terminals respectively, a control circuit to actuate said selector means, a source of control voltage connected to said control circuit to cause said selector means to select one of said input terminals for connection to said output terminal, a pulse demodulator, a pulse modulator and means to connect said output terminal to said demodulator and modulator, each channel identifying signal including a pulse whose instant of occurrence identifies a different pulse train, the selector means comprising a group of gas filled electron discharge tubes each of which has an anode, a cathode and a control electrode, a plurality of gate devices in the control electrode circuits of the several discharge tubes respectively, means for causing said gate devices to open in turn, and circuit means for applying a selected one of said channel identifying signals to the control electrodes of all said discharge tubes through said gate devices whereby the pulse of the said selected channel identifying signal passes to the control electrode of only one of said discharge tubes to strike said tube and identify a selected pulse train.

24,680
AUTOMATIC TELEPHONE EXCHANGES

Alexander Albert Chubb, Macclesfield, and Ronald Mawson, Farnborough, England, and Maurice Moise Levy, Ottawa, Ontario, Canada, assignors to The General Electric Company Limited, London, England

Original No. 2,732,433, dated January 24, 1956, Serial No. 247,073, September 18, 1951. Application for reissue October 29, 1958, Serial No. 770,889
Claims priority, application Great Britain
September 22, 1950
4 Claims. (Cl. 179—18)



3. Coding apparatus for automatic exchanges, comprising a main input terminal to receive dialling impulses, a plurality of selector switching devices each having a plurality of input terminals and an output terminal, control apparatus to actuate said selector switching devices in response to dialling impulses, means to apply dialling impulses from said main input terminal to said control apparatus to select different ones of the said input terminals of said selector switching devices for connection to said output terminals thereof respectively, means to generate a plurality of interlaced recurring pulses, means to apply different ones of said recurring pulses to different ones of the input terminals of said selector switching devices, a combining circuit connected to the output terminals of said selector switching devices to combine the outputs of said selector switching

devices into a recurring group of pulses characteristic of said dialling impulses, a main output terminal, a gate device, means connecting said gate device between said combining circuit and said main output terminal, a source of signalling pulses, and means to connect said source of signalling pulses to said gate device to open and close said gate device, whereby the voltage appearing at said main output terminal is in the form of a group of pulses characteristic of said dialling impulses and recurring at instants determined by the signalling pulses applied to said gate device from said source of signalling pulses.

PLANT PATENTS

GRANTED AUGUST 11, 1959

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

1,858

ROSE PLANT

Lincoln Peters and Norman Peters, Hempstead, N.Y., assignors to Geo. Peters & Sons, Inc., Hempstead, N.Y., a corporation of New York

Application December 4, 1958, Serial No. 778,272

1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of greater average flower petalage than that of its parent "Better Times" (Plant Patent No. 23), irregular length of the sepals, greater depth of color which is apparent on both sides of the flower petals, persistence of flower color without appreciable change from the bud stage to the fully open flower, a distinctive Rose Red, lightly overcast with Amaranth Purple, and velvety general color tonality of the blooms, and the relatively heavy fragrance of the flowers.

proportioned to overlie a portion of the back of said the opposite end portions thereof depending from said

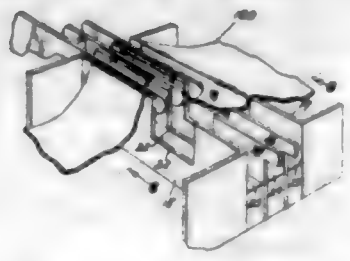
of input terminals, an output terminal and selector means devices to combine the outputs of said selector switching

PATENTS

GRANTED AUGUST 11, 1959

GENERAL AND MECHANICAL

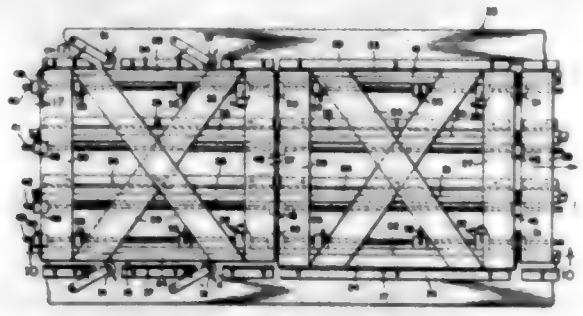
2,898,594
PLEATING AND FASTENING DEVICE
Stanley Levinstein, Far Rockaway, N.Y., assignor to Home Curtain Corporation, Far Rockaway, N.Y., a corporation of New York
Application December 14, 1956, Serial No. 628,451
3 Claims. (Cl. 1—118)



2. A device for forming pleats in curtains and similar articles comprising: a base member having a plurality of elongated channels therein; a pleat-forming element including first and second reciprocating frames mounted for movement in parallel planes; first and second rack means mounted upon said first and second frames, respectively, and interconnected through a gear having a fixed axis of rotation; said first frame having camming means thereon; said second frame having elongated pleat forming members insertable within said channels in said base element, said pleat forming members having cam follower means thereon engageable with said camming means; and a fastener inserting device adapted to secure formed pleats in pleated condition, said fastener inserting device being activated by movement of said pleat-forming members.

2,898,595
MECHANICAL MEANS FOR THE MAKING OF WIREBOUND BOX AND CRATE MATS
Walter F. Newhouse, Benton Harbor, Mich.
Application December 5, 1956, Serial No. 626,473
15 Claims. (Cl. 1—146)

1. In a crate-making machine having stapling mechanism for driving staples into crate parts, an endless constantly moving conveyor adapted to feed continuously a plurality of crate parts arranged to form spaced crate panels, said conveyor including a conveyor bed having spaced parallel guideways for certain crate parts, a plurality of endless chains in parallel spaced relation and

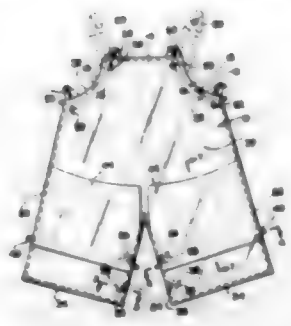


extending longitudinally of said machine, spacing and pushing members on said chains for advancing the crate parts in said guideways and for arranging other crate parts, the upper runs of said chains movable along said conveyor bed, and means for accurately arranging said crate parts with respect to each other for stapling thereof.

2,898,596
WRESTLING HELMET
Clifford P. Keen, Ann Arbor, Mich.
Application February 27, 1958, Serial No. 718,077
7 Claims. (Cl. 2—3)

1. An ear-protecting headgear of the character described comprising a pair of ear guards each including a substantially rigid inner shell having an outwardly protuberant central portion adapted to cover one of the wearer's ears and a substantially planar peripheral flange and a jacket of shock-absorbing material covering the entire outer surface of the protuberant portion of said shell and both the inner and outer surfaces of said flange, a plurality of substantially non-elastic head straps connected to the flanges of said ear guard shells and adapted to extend transversely across the head of the wearer, means enabling individual adjustment of the length of each of said head straps, and a substantially non-elastic chin strap of adjustable length adapted to be connected to the flanges of said ear guard shells and to extend across and to receive the point of the chin of the wearer, said jackets having openings therein through which said head and chin straps may pass freely for connection with said flanges, and the portions of said jackets covering the inner surfaces of said flanges being circumferentially continuous so as to shield the wearer against contact with said flanges and those portions of the straps which are connected thereto.

2,898,597
PROTECTIVE COVERING FOR CRAWLERS AND OTHER GARMENTS
Minnie Patterson, New York, N.Y.
Application May 7, 1958, Serial No. 733,724
1 Claim. (Cl. 2—46)

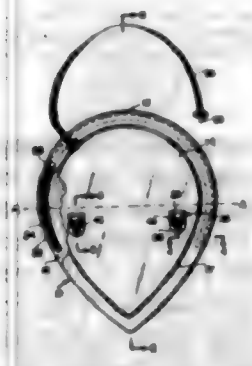


A protector for a child's garment of the type having trousers legs, fastener elements along the inner edges of said legs, and other fastener elements at the top of the garment, said protector comprising a front panel proportioned to overlie the front of said garment, a back panel

skirt having a hem at its lower edge, the hem, when spices plus an additional apex on its opposite edge, the

proportioned to overlie a portion of the back of said garment, connector means connecting said panels at the sides thereof, means on the front panel adapted for connecting the same to the several fastener elements of the garment, and means on the front panel for engaging the same against the respective trousers legs of the garment, said front panel completely covering the front of said garment, the back panel covering at least the seat portion of the back of the garment, the front panel being formed at its lower end with downwardly divergent leg panel members adapted to be disposed in overlying relation to the respective trousers legs, the back panel terminating at its lower end at the upper ends of the leg panel members, said means for engaging the front panel against the trousers legs comprising bands extending transversely of and in back of the respective leg panel members and cooperating with the leg panel members in encircling the respective trousers legs, said means connectable to the fastener elements of the garment including bottom loops on the inner edges of the respective panel members, and further including upper loops spaced about the periphery of the front panel at the top thereof, and cover panels on the front panel in overlying relation to the respective leg panel members.

2,898,598
DRESS SHIELDS
Evelyn C. Morris and Beulah Bell Morris, New York, N.Y.
Application June 10, 1958, Serial No. 741,109
2 Claims. (Cl. 2—56)



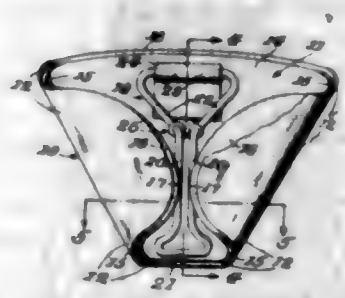
1. A dress shield comprising a generally oval body, said body having a multi-layered structure, a pair of spring clips provided with push button operated pivotable jaws and secured to an outer layer of the body for engaging on portions of underclothing and retaining said body thereon in a folded condition, a pliable shape retaining means disposed between layers of the body said shape retaining means being an untempered metal core covered with a plastic sheath, and a strap removably secured to said body for engaging over the upper arm of the wearer thereof.

2,898,599
RAIN CAPE FOR POSTMEN
Hugo Seckendorf, Albany, N.Y.
Application August 22, 1958, Serial No. 756,550
1 Claim. (Cl. 2—88)

A rain cape for postmen comprising a transparent flexible plastic body-encompassing cape, an integral neck band extending upwardly from said cape and having means for securing the neck band in neck encompassing position on a wearer, said cape having a pair of front edges arranged in overlapping position, a plurality of closely spaced separable fasteners securing said overlapped front edges together, a pair of shoulder straps each of which includes an elongated strap member with the mid-portion thereof secured respectively to the opposite shoulder portions of said cape, each of said straps having the opposite end portions thereof depending from said respective shoulder portion for engaging between the arms and body adjacent the shoulder of the wearer to prevent

twisting of the cape and loss thereof, and means on the opposite ends of each of said straps for adjustably securing said strap ends together in arm encompassing position.

2,898,600
SIMULATED TIE KNOT AND LOCKING MEANS THEREFOR
Alvin Walter Lipes and Herbert H. Williams, Jr., Roanoke, Va.
Application January 22, 1958, Serial No. 710,534
3 Claims. (Cl. 2—150)



1. In a knot simulation for a necktie, a downwardly tapered sleeve of resilient material presenting an exposed finished surface on its outer face, said sleeve comprising a front wall, edge walls curved rearwardly from said front wall, and back wings extending toward each other from said edge walls to define a relatively narrow throat, a vertically elongated knot holding member having an upper and lower end which occupy an operative position within said sleeve when the simulation is in use, said knot holding member being pivotally attached at its upper end to the upper end of the inner face of said front wall to permit rearward swinging of said knot holding member through the throat defined by said back wings, said knot holding member being wider than said throat, whereby when said knot holding member is moved from released position to said operative position said resilient wings will move outwardly to pass said knot holding member and then spring back to hold said knot holding member in operative position.

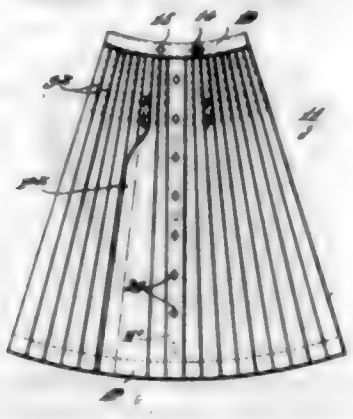
2,898,601
REVERSIBLE, KNIFE-PLEATED SKIRT OF THE WRAP-AROUND TYPE
David Presser, Newton, Mass., assignor to Century Sportswear Co., Inc., Boston, Mass., a corporation of Massachusetts
Application May 16, 1957, Serial No. 658,351
2 Claims. (Cl. 2—211)

1. A reversible, wrap-around, knife-pleated skirt of the kind wherein the pleating of the skirt appears differently at its opposite sides, the skirt being so finished that it may be worn with either side exposed, and having a waistband provided with fastener elements and an opening extending from its upper to its lower edge so that the skirt may be opened out to lie substantially flat, the

seat, a bracket adjustably and frictionally mounted on the

2,898,606
PORTABLE LAVATORY

skirt having a hem at its lower edge, the hem, when the skirt is so opened out, being of a length substantially exceeding the length of the waistband so that the skirt, when worn, flares downwardly from the waistband to the hem, the waistband being permanently united, throughout its length, to the pleated material of the body of the skirt by sewed seams, both waistband and hem extending, without interruption, from one edge to the other of said opening, the material of the skirt, from the waistband to the hem, being arranged to form knife-pleats throughout the major portion of its circumference, the edge folds of the pleats at the outer or front side of the skirt facing in the same direction circumferentially of the skirt and the edge folds of all of the pleats at the inner or rear side of the skirt facing in the opposite direction circumferentially of the skirt, each pleat comprising an exposed ply and a concealed ply, the exposed ply of a front pleat merging with the exposed ply of a rear pleat to form a single-ply web portion, the edge fold of each front pleat being united to that web portion which lies directly behind it by a seam extending downwardly from the waistband but terminating in the lower part of the hip region of the skirt, said seam being located closely adjacent to said edge fold of the front pleat and having its stitches passing through three plies only of the material, that is to say, through both plies

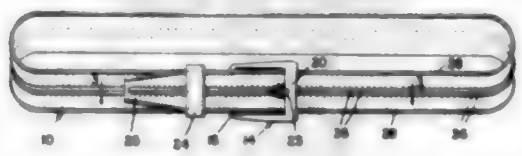


of the front pleat and said web portion, each such seam normally being concealed at the rear side of the skirt by an overlapping edge fold of a rear pleat, the opening which extends from the top to the bottom of the skirt normally being closed by overlapping panels, the panel at the inside of the skirt being substantially identical in appearance with that of the normal pleat at that side of the skirt but having the margin of its concealed ply infolded rearwardly and united to its exposed ply by a sewed seam extending from the waistband to the lower edge of the skirt, and the panel at the front or outside of the skirt compriaing a pleat generally similar to a normal front pleat, except that the margin of the material which would normally form its concealed ply is infolded forwardly and united to the ply which would normally be exposed by a sewed seam extending from the waistband to the lower edge of the skirt, said front panel also comprising an outer, finish ply disposed forwardly of that ply of said front pleat which would normally be exposed, said finish ply being separate from the material forming the pleats and having its margins infolded rearwardly and united by seams to that ply of said front pleat which would normally be the exposed ply, said seams extending from the waistband to the lower edge of the skirt.

2,898,602
BELT
Ronald Moss, New York, N.Y.
Application September 30, 1957, Serial No. 687,322
3 Claims. (Cl. 2—301)

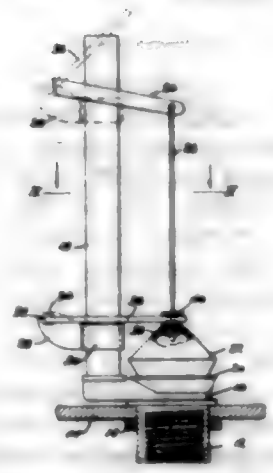
1. A belt comprising two separable elongate sinusoidal members, each of said members having a number of apices on one edge thereof and said number of apices plus an additional apex on its opposite edge, the apices on said one edge of one member being disposed in transverse alignment with the apices on said one edge of said other member and the apices on said opposite edge of one member being in transverse alignment with the apices on said opposite edge of said other member when the members are interlaced, and a buckle connected to said members, said members having coextensive continuations at one of their ends and coextensive continuations at the other of their ends with registering perforations in said continuations, said buckle having a stud projecting through a pair of registering perforations in continuations at one of said ends and adapted to project through a pair of registering perforations in continuations at the other of said ends when the belt is secured on the wearer.

2,898,603
CONCEALED HOLE WAIST BELT
Max Epstein, Rochester, N.Y., assignor to Hickok Manufacturing Co., Inc., Rochester, N.Y., a corporation of New York
Application August 2, 1956, Serial No. 601,801
9 Claims. (Cl. 2—322)



1. A waist belt comprising an elongate backing band, a facing overlying one side of the backing band, said backing band having in one end portion a longitudinal row of spaced belt buckle tongue apertures substantially along the longitudinal center of the belt, said facing embodying two strips of material lying in edge opposed relation and having their outer longitudinal edges secured to the adjacent longitudinal edges of the backing band, and said opposed edges of the facing strips being separably joined along a line extending substantially continuously along the longitudinal center of the belt and concealing said apertures.

2,898,604
TOILET FLUSH TANK ASSEMBLY
Charley L. Goldtrap, Denver, Colo.
Application June 28, 1957, Serial No. 668,816
1 Claim. (Cl. 4—57)



In combination with a flush tank unitary outlet fitting having an upstanding overflow pipe and an offset valve

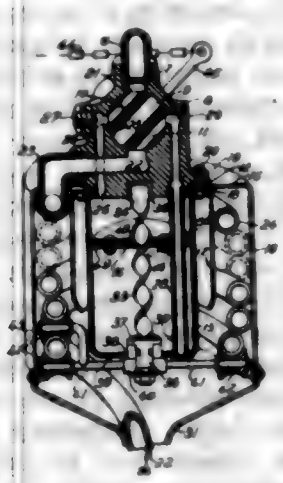
2,898,608
INFANT'S BATHING AND DRESSING STAND

handle having formed therein a plurality of cylindrical

shoulder portions of said cape, each of said straps having

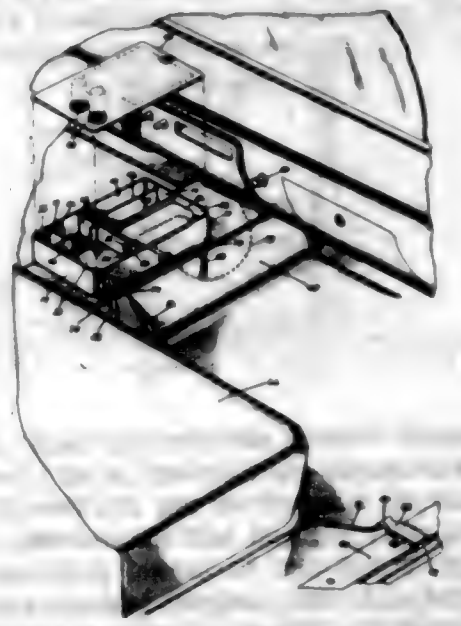
seat, a bracket adjustably and frictionally mounted on the overflow pipe carrying a laterally extending projection located at the opposite side of the overflow pipe from said valve seat, said projection being formed with an upwardly opening transverse slot which extends downwardly into an enlarged key-hole shaped bearing, and a unitary lever carrying at one end a dump valve adapted to cooperate with said valve seat and having a transverse journal formed on its other end and inserted in said key-hole bearing, said journal being of a rectangular cross-section the horizontal dimension of which is larger than the width of said transverse slot whereby said journal is removable from said bearing when the lever is moved to a vertical position, the ends of said lever being connected by a pair of elongated parallel arms defining therebetween a center cut-out portion through which the overflow pipe projects, said cut-out portion having substantially the same width as the overflow pipe so that the overflow pipe can guide the lever in its operative movements, said journal and bearing being formed with a slightly loose fit to permit slight lateral movements of the dump valve as it descends towards its seat, said bracket and lever being formed of non-corrosive plastic material.

2,898,605
WATER POWERED RETRACTABLE SHOWERHEAD
Raymond C. Pearson, Mount Vernon, N.Y.
Application July 13, 1955, Serial No. 521,935
2 Claims. (Cl. 4—145)



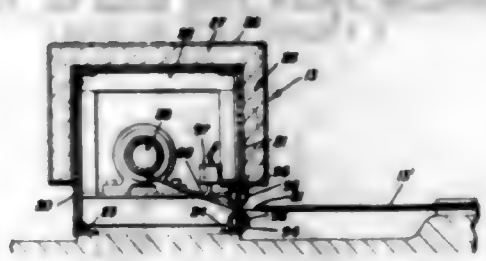
1. A water powered retractable showerhead comprising, in combination, a cylinder open at one end thereof and terminating in a bearing at the opposite end thereof, a piston slidably fitting in said cylinder and having an axially located threaded opening and an off-centered opening, a feed screw tube engaging said axial opening in said piston and extending through said bearing, a drum concentric with and surrounding said cylinder secured to said extension, a shower hose secured to and communicating with said extension and wound about said drum, a shower head mounted at the end of said hose, a valve casing adapted to be attached to a water supply pipe sealing the open end of said cylinder and having a plurality of passages and means for directing water under pressure to and from each side of said piston and to said showerhead, a fixed water delivery tube secured to said valve casing through said off-center opening in said piston to the bearing end of said cylinder, a valve plug in said valve casing with a plurality of channels for selective communication with said passages to control water supply to said piston and said showerhead, said feed screw tube being secured to and communicating with said passage for said showerhead.

2,898,606
PORTABLE LAVATORY
Arthur G. Feller, Fort Wayne, Ind., assignor of one-half to Norman Ostermeyer, Fort Wayne, Ind.
Application March 3, 1958, Serial No. 718,534
7 Claims. (Cl. 4—166)



7. A portable lavatory comprising a receptacle having an open top and closed sides and bottom, said top and bottom being substantially flat and parallel, at least two gripping legs spaced apart on said bottom for engaging the opposite sides of an automobile transmission housing; said gripping legs each comprising a depending elongated member hingedly mounted on said bottom, a device yieldably urging said elongated member toward the center of said receptacle; said receptacle having at least one partition providing two compartments, a drain opening in the bottom of one compartment, a drain conduit connected to said drain opening, a draining element of rigid material and having a passage therethrough, said draining element being connected to said drain conduit and being adapted to be mounted on the door sill of an automobile door, said element further being flat so as to fit between the sill and door when the latter is closed.

2,898,607
SAFETY SWIMMING POOL COVER
George McGuire, Lynwood, Calif.
Application May 7, 1958, Serial No. 733,662
2 Claims. (Cl. 4—172)

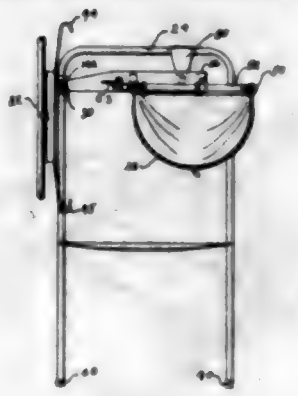


1. A safety swimming pool cover assembly comprising a pair of winding elements adapted to be disposed at opposite ends of a swimming pool and having a cover assemblage operatively connected therebetween, drive means for paying the cover assemblage back and forth between said winding elements between operative and inoperative positions with respect to the swimming pool comprising a pair of pivotally mounted electric motors related to said winding elements respectively, and each swingable in opposite directions respectively, a friction drive between each motor and its related winding element rendered effective and ineffective in response to swinging of the motor in opposite directions, spring means for swinging each motor in one direction, and electromagnetic means for swinging each motor in the opposite direction.

ber of apices on one edge thereof and said number of

having an upstanding overflow pipe and an offset valve

2,898,608
INFANT'S BATHING AND DRESSING STAND
Clifton E. Packard and Wayne J. Divine, South Bend, Ind.
Application August 27, 1956, Serial No. 606,491
10 Claims. (Cl. 4—177)



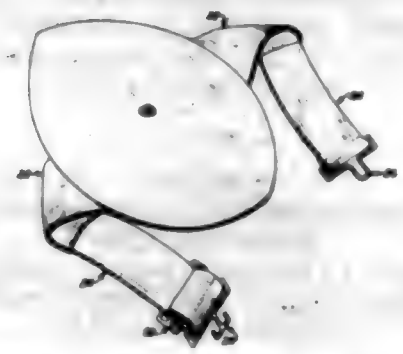
1. An infant's bathing and dressing stand, comprising two inverted U-shaped end members, a bar pivotally connected to said end members on one side thereof, brackets pivoted on said bar adjacent said end members and movable between vertical and horizontal positions, a frame having parallel horizontal members supported at each end by said brackets and slidable therein, a rod connecting said brackets at a point between said bar and the remote portion of said frame opposite said one side, a flexible impervious member supported by said frame and rod forming a tub, releasable means on said end members for holding said brackets in their horizontal position, a table supported by said bar and movable from a vertical position on said bar to a horizontal position above said tub and having two spaced parallel members for engaging said frame and bar, a platform mounted on and connecting said parallel members, a pivot means on said platform, a rotatable top mounted on said pivot means, and bearing means between said platform and said top.

10. A bathing and dressing stand, comprising two end members, a frame supported by said end members, a tub supported by said frame, support means extending across said tub, means on said support means for engaging said frame, and a rotatable table pivoted on said support means for horizontal rotation.

2,898,609
BEACH PACK
Reginald J. Storie, Coopersburg, Pa.
Application April 4, 1958, Serial No. 726,481
2 Claims. (Cl. 5—344)

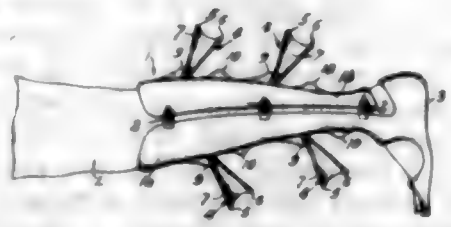
1. A combination beach pack comprising a flexible body portion having a plurality of holes spaced along the perimeter thereof; a flexible pocket portion having an inner surface area sufficient to enclose the body portion in a compacted state comprising a pair of coextensive walls, the walls being so joined along their respective perimeters as to form an open end, the pocket portion being affixed to an edge of the body portion along the non-joined edge of one wall, the other wall having a slot formed adjacent the non-joined edge thereof; and an elongated flexible handle having formed therein a plurality of cylindrical stiffening channels, wherein rigid stiffening members are provided whereby each stiffening member is formed so as to be removable from a respective stiffening channel and insertable through a perimetric hole of the body portion, thus forming means for pegging said body portion securely to the beach, the handle being secured to the common edge of the body and pocket portions in such manner as to be insertable through the slot only when the body portion has been substantially disposed within the pocket portion, thereby closing said pocket opening and retaining said body portion from being dislodged.

2,898,610
SWIMMING BUOY OR APPARATUS
Edward G. Chamberlain, North Miami, Fla.
Application November 9, 1955, Serial No. 545,939
2 Claims. (Cl. 9—17)



1. A swimming apparatus, adapted to be worn around the waist of a child, consisting of a single inflatable bladder, said bladder, in its normally inflated condition, being circular in transverse cross section and elliptical in longitudinal section, a valve for inflating said bladder, said valve being located on a projection from the major axis of said ellipse and protruding a short distance out from the surface of said bladder, a fabric cover surrounding said bladder and completely confining the same in an enclosed space, an eyelet in said fabric located adjacent said valve, and said valve protruding above the surface of said bladder through said eyelet to be accessible for inflating said bladder, two rubberized elastic straps, each having a buckle part attached to one end thereof, two trapezoidal shaped fabric connecting members, each fastened along the longer base to said cover at diametrically opposite locations, means fastening the shorter base of said member to the other end of said strap, whereby said bladder will be stabilized in position on the body of the wearer and the stress from the straps will be spread out over a large portion of said cover.

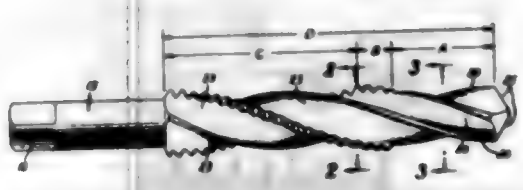
2,898,611
SWIMMING AID
John F. Mooney, Sonora, Calif.
Application February 18, 1958, Serial No. 715,986
1 Claim. (Cl. 9—21)



A swimming device comprising a first member having a front leg portion and a foot portion, a second member, said members shaped in conformity with the shape of the leg and foot of a wearer, means detachably securing together said members whereby said front leg portion and

said second member are adapted to encase the leg of a wearer and the foot portion is adapted to encase the foot of said wearer, and flippers pivotally attached to said front leg portion and to said second member for swinging between extended and retracted positions, said front leg portion and said second member having stop means thereon for limiting the pivotal displacement of said flippers.

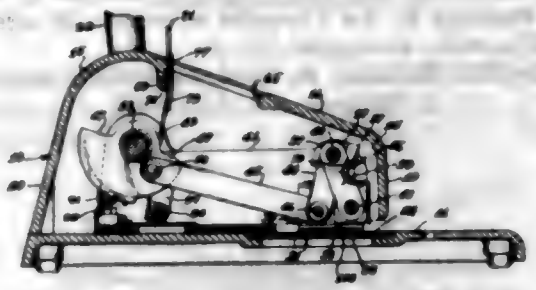
2,898,612
COMBINED DRILL AND TAP HAVING DRILL LANDS EXTENDING THROUGHOUT THE LENGTH OF THE TAPPING PORTION
Frank Hofbauer, Montpelier, Ohio
Application May 10, 1954, Serial No. 428,436
3 Claims. (Cl. 10—140)



1. A rotary axially fed cutting tool comprising a body and a shank, said body having a plurality of flutes forming between them an equal plurality of non-cutting drill lands extending throughout the entire length of said body and having their outer surfaces constitute portions of a cylindrical surface of a predetermined diameter determining the diameter of the hole to be drilled, a drill end on said body, said drill lands being of sufficient area to provide bearing surface to bear any practicably encountered side thrust on the tool and thus to prevent their cutting the sides of the drill hole as the result of such side thrust, an equal plurality of ridges provided in said flutes between said drill lands and extending outwardly for a predetermined distance beyond the cylindrical surfaces of said drill lands, thread cutting edges formed on said ridges to cut a cylindrical thread, the root diameter of said thread cutting edges being smaller than the diameter of the cylindrical surfaces of said drill lands by the amount to form flat crests of a predetermined magnitude on the internal threads of the workpiece and in order to provide sufficient bearing surface for the cylindrical portions of said drill lands and thus ensure the guiding function of said lands in the process of cutting the thread by said threading edges, and deburring of the flats of the threads by the action of said drill lands on said crests of the thread cut in the work, with said drill lands being thus adapted to be in constant and continuous contact with the walls of the hole through its entire length as well as with the flat crests of the thread through the entire threading operation and during the entire time of withdrawing the tool from the work.

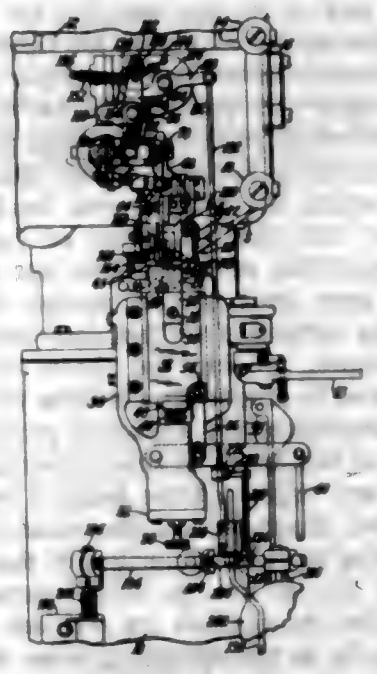
2,898,613
UNITARY PUNCH AND BINDER
Henry E. Frederick, Park Ridge, Ill., assignor to General Binding Corporation, Chicago, Ill., a corporation of Illinois
Application January 7, 1953, Serial No. 330,001
4 Claims. (Cl. 11—1)

1. In a binding machine, a frame, a casing mounted on said frame and having front and rear walls and a top wall extending along said frame, an upright comb mounted on said casing and having teeth extending upwardly from said top wall, a plurality of slots in said top wall extending laterally along the teeth of said comb and longitudinally thereof, a plurality of spreading fingers having hooked ends extending laterally of said teeth and movable therealong and longitudinally thereof, a binding arm for laterally and longitudinally moving said spreading fingers, a shaft on said casing extending transversely thereof having said binding arm mounted thereon for movement therealong and for pivotal movement with respect thereto, and means for moving said binding arm and spreading fingers laterally of said casing and then longitudinally away from said comb along said slots comprising a cam shaft, a lever for operating said cam shaft, spring means engaging said binding arm and biasing said binding arm against said comb, a cam on said



cam shaft engaging one side of said binding arm for moving said binding arm laterally upon rotation of said cam in one direction and another cam on said cam shaft having a camming surface engaging the back of said binding arm when moved to its laterally extended position for moving said binding arm and spreader fingers longitudinally of said casing upon continued movement of said cam shaft in the same direction.

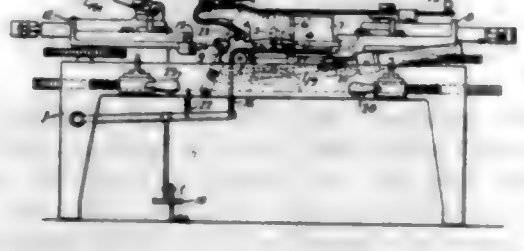
2,898,614
INSOLE RIB ATTACHING MACHINES
Stephen P. Lotarski, Beverly, and Francis R. Speight, Dedham, Mass., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Application August 9, 1957, Serial No. 677,331
5 Claims. (Cl. 12—20)



1. A machine for attaching ribbed strips to insoles to provide sewing ribs thereon having, in combination with means for guiding a length of strip from a source of supply toward an insole and a presser and feed member for progressively feeding the strip into engagement with the insole, pressing it against the margin of the insole and feeding the insole and attached strip, a table for supporting the insole, a freely rotatable roll mounted in said table and cooperating with said presser and feed member to feed the work, an insole supporting surface on said table extending beyond said roll and sloping downwardly in the direction of work feed, and a hold-down located above said sloping surface and acting to bend the insole during its advance downwardly out of

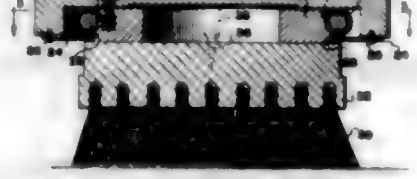
its normal plane, thereby to prevent the insole from curving upwardly and insure uniform attachment of the strip at every point along the periphery of the insole.

2,898,615
METHOD OF DRAFTING UPPERS ON LASTS
Euclid I. La Chapelle, Brockton, Mass., assignor of one-fourth to Albert L. La Chapelle, one-fourth to Beatrice H. La Chapelle, and one-fourth to Rachel E. La Chapelle; Beatrice H. La Chapelle executrix of said Euclid I. La Chapelle, deceased
Application October 8, 1954, Serial No. 461,101
1 Claim. (Cl. 12—145)



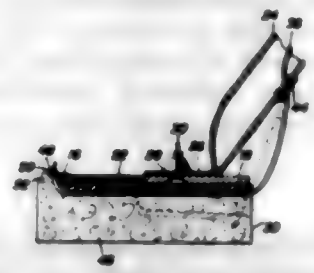
That method of working an upper on a last in the performance of the pulling over operation upon the forepart of the upper, by a novel cooperative combination of steps, each cooperating with the other and by such cooperation giving new beneficial results, which consists in providing a conventional last and an innersole assembled thereon and a conventional shoe upper having a vamp portion and a throat of vamp portion, a toe tip portion, and including its conventional components, such as a counter and a toe box, assembled on the said last, in engaging the toe end of the upper with pulling means and pulling the upper toewardly of the last to overstretch the upper from its heel end to its toe end to firmly set the counter on the heel end of the last and the toe box on the toe end of the last and to carry the toe tip line of the upper toewardly beyond the toe tip line of the shoe when completed and cause the back of the toe vamp portion of the upper, including its throat of vamp portion, to bridge over the underlying surface of the last, thereafter engaging and urging the bridged over back of toe portion of the upper, including its throat of vamp portion, toward the underlying surface of the last to press and set the bridged over back of toe portion of the upper to the underlying surface of the last and, under the influence of such pressure, moving the throat of vamp of the upper down and in proper set condition on the cone of the last, while simultaneously releasing partially the pull at the toe end of the upper in timed coordination with the engagement and urging of the bridged over back of toe portion of the upper toward the underlying surface of the last, causing the toe tip portion of the upper, situated forwardly of the tip line, to move rearwardly until the tip line reaches its position on the last for the proper length of the tip in the completed shoe, without appreciably releasing the already imparted overstretching between the heel end and the toe end of the upper, thereafter, while the toe end of the drafted upper is being held from rearward movement on the toe end of the last, pulling over the sides of the toe part of the upper and of the toe box with an extra strong pulling over movement to stretch the upper and the toe box, heightwise and then over the innersole assembled on the last to thereby solidly set the upper and the toe box on the sides of the toe part of the last, and then in fastening the pulled over upper and the toe box on the innersole assembled on the last to hold the upper and the toe box at the sides of the toe of the last solidly set on the last, and thereafter in performing the last step of the pulling over operation of the forepart of the upper, in engaging and pulling over the marginal portion of the already set back of toe portion of the upper on the underlying surface of the last, heightwise of the last and over the innersole assembled on the last and in then fastening the pulled over upper on the innersole assembled on the last and thus the fastened upper incidentally serving in holding the back of toe portion of the upper as set on the underlying surface of the last.

2,898,616
BRUSH HOLDER FOR WAXING AND POLISHING MACHINES
Richard E. Coover, York, Pa., assignor to Kay Busser, York, Pa.
Application January 28, 1955, Serial No. 484,779
1 Claim. (Cl. 15—49)



A waxing and polishing machine including a substantially circular brush holder suspended by a housing depending from a motor casing and adapted to be driven by a rotary motor, a downwardly extending peripheral portion on the surface of said holder remote from its point of suspension, a flat ring secured to said downwardly extending portion and having an upstanding retaining lip substantially at its internal periphery, an endless helical spring positioned between said ring and the downwardly extending portion of the holder, a brush having a circular head adapted to fit within the internal periphery of said ring, a circumferential groove in the periphery of said circular head adapted to provide a recess for the said helical spring, and a spring-urged pin securing the holder and brush for rotation together.

2,898,617
FOLDING MOP AND COMPRESSION WRINGING MEANS THEREFOR
Spurgeon P. Dunbar, Breinigsville, Pa., assignor to Hofmann Industries, Inc., Sinking Spring, Pa., a corporation
Application January 6, 1958, Serial No. 707,226
1 Claim. (Cl. 15—119)

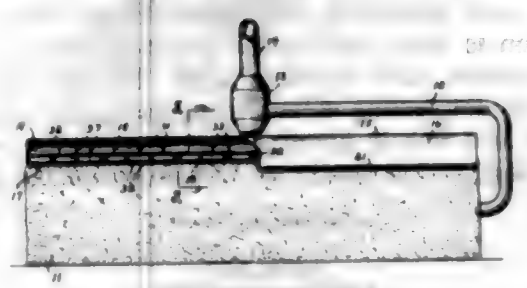


In a mop, a head comprising front and rear plate sections, respectively, hinged together for swinging of the front plate section downwardly and rearwardly under the rear plate section, a flexible resilient, liquid-absorbing member bonded to and beneath said plate sections for folding upon itself to wring the same in response to swinging of said front plate section under the rear plate section, an elongated tubular handle terminally fixed to and inclining upwardly and rearwardly from said rear plate section, and means for swinging said front plate section comprising an apertured bottom guide in said handle in the rear of and adjacent said rear plate section, a front edge, open bottom socket in said front plate section, a bottom, open ended groove in said member opening upwardly

for contact with the surface to be cleaned, a suction pas- nozzle, a motor-fan-filter unit having a suction inlet,

and communicating with said socket, and a pull cord extending forwardly through said handle and downwardly out of said guide and through said groove into said socket with an enlarged end seating in said socket.

2,898,618
PAINT APPLYING MEANS
William Allen Whitfield, Des Moines, and John Weber, Jr., Ames, Iowa
Application May 2, 1957, Serial No. 656,670
5 Claims. (Cl. 15—128)

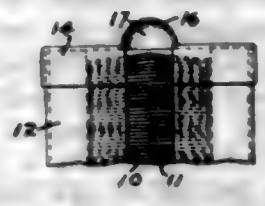


4. A paint applicator or the like comprising an applicator roll, a supply reservoir, a common supporting means for said reservoir and roll, said supply reservoir having a fluid inlet and providing a bottom wall disposed in close adjacency to the roll surface, upstanding imperforate means rising from said bottom wall a distance less than the depth of said reservoir and sealingly engaging opposite reservoir walls to divide the entire lower portion of said reservoir into a plurality of adjoining paint holding pockets having top openings, each of said pockets having side walls substantially normal to the axis of said roll, and said bottom wall having an outlet aperture means adjacent each pocket side wall, and said outlet aperture means being of minor size as compared to said top pocket openings, whereby said pockets will supply paint to the roll for a considerable period of roll operation and regardless of the inclination of the roll with respect to the horizontal.

2,898,619
HANDLE CONNECTION FOR A MOP
Raymond C. Beck, East Windsor, Conn., assignor to The Fuller Brush Company, Hartford, Conn., a corporation of Connecticut
Application December 17, 1956, Serial No. 628,729
2 Claims. (Cl. 15—144)

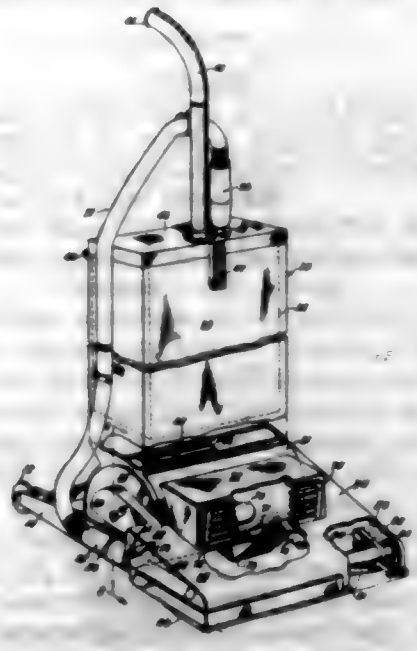
1. The combination in a mop, of a mop unit including a frame having a pivotal portion, a tubular handle open at its lower end and having a hole therein near its lower end, a one-piece U-shaped connector having two similar transversely spaced prongs with a unitary bearing socket between them at the bottom, said prongs of the connector being resilient and being outwardly biased for movement of their upper ends to relative positions so spaced as to prevent entry of said prongs in said handle but said prongs having been relatively moved in opposition to the bias so that they enter and fit the lower portion of the tubular handle and said socket between the prongs receiving and approximately fitting said pivotal portion of the mop frame to provide a bearing for the relative pivotal movement of said mop unit about a transverse axis, a button on the exterior of one of said prongs entered in the hole in said handle as a result of said bias and positively preventing relative movement of said connector either longitudinally of said handle or rotatively about the axis thereof.

2,898,620
DEVICE FOR CLEANING SOLDERING TIPS
Edward D. Dickinson, North Sacramento, Calif.
Application December 31, 1957, Serial No. 706,353
1 Claim. (Cl. 15—160)



A device for cleaning soldering tips which comprises two brushes, a container for holding the brushes with their bristle end faces in substantial contact, and a cover for the top of said container, said cover and container having front walls with registering slots in a position to admit a tip to be drawn between the brushes and the bottom of the container having a contiguous slot through which the tip will leave the container, the top of the cover being imperforate and having an upwardly arched portion registering with the slot in its front wall to provide a space above the brushes to accommodate a tip to be cleaned and to confine spattering material when the tip is moved downwardly between the brushes.

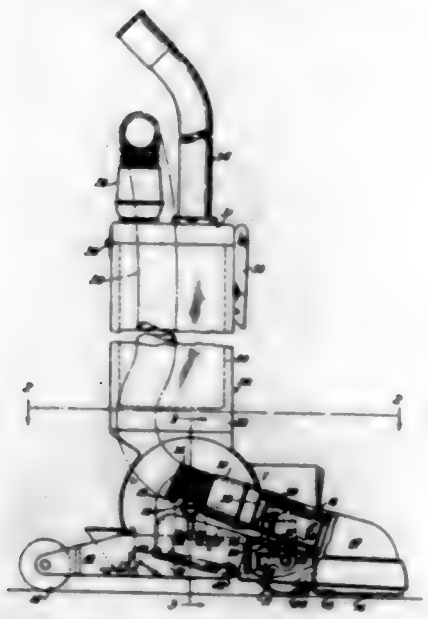
2,898,621
COMBINATION SUCTION CLEANERS
John E. Vance, Canton, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Application November 30, 1955, Serial No. 550,891
4 Claims. (Cl. 15—324)



1. A combination canister type and upright on-the-floor type suction cleaner comprising; a chassis mounted for ambulatory movement, a nozzle casing pivoted to said chassis at one end thereof with its opposite end free to rest on a surface to be cleaned; a counterbalance spring connected between said chassis and nozzle casing and of sufficient strength to support a portion only of the weight thereof; said nozzle casing forming a downwardly facing suction mouth extending across its forward end

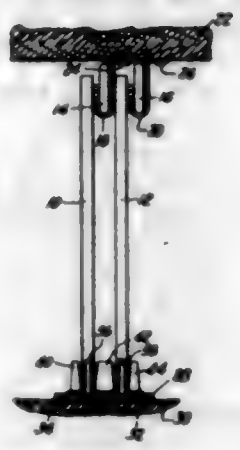
for contact with the surface to be cleaned, a suction passage extending rearwardly along one side of the casing and including an outlet fitting, and a belt passage extending upwardly and rearwardly along the other side of said casing and out of direct communication with said suction mouth; an agitator rotatably mounted within said suction mouth and having an agitator pulley positioned in the forward lower end of said belt passage; a filter casing pivoted to said chassis on the same axis as said nozzle casing and forming a portion of the propelling handle for the cleaner and extending in a generally vertical direction when in storage position; a releasable latch for holding said filter casing in its storage position; a motor-fan assembly in the lower end of said filter casing with its axis in alignment with the pivotal axis of said casing; a motor pulley formed on one end of the motor shaft and positioned in the upper rear end of said belt passage; a driving belt drivingly connected to said motor and agitator pulleys and positioned within said belt passage; said fan being connected to the opposite end of the motor shaft and having a suction eye communicating with the interior of said casing; a dirt storing filter in the upper part of said filter casing and having an open upper end secured to said filter casing adjacent its upper end; a hand grip secured to the upper end wall of said filter casing; the upper end wall of said filter casing being formed with a suction inlet opening; an extensible hose having one end secured to the suction inlet opening; and a detachable connection between the other end of said hose and the outlet fitting of said suction passage whereby the cleaner may be propelled about for on-the-floor cleaning when said detachable connection is attached and said detachable connection released and suitable suction cleaning tools attached to the free end of said hose for general purpose cleaning.

2,898,622
COMBINATION SUCTION CLEANERS
Claud C. Hurd, North Canton, Ohio, assignor to The Hoover Company, North Canton, Ohio, a corporation of Ohio
Application November 30, 1955, Serial No. 550,138
1 Claim. (Cl. 15—333)



In combination, a suction cleaner of the upright type which may be moved about over the surface being cleaned for on-the-floor cleaning including, a body, a downwardly facing suction nozzle pivoted at its rear end to said body with its front end free to rest on the surface being cleaned, an agitator rotatably mounted in said nozzle, a motor-fan-filter unit having a suction inlet, means for rotatably driving said agitator from said motor-fan-filter unit, an outlet connection leading from said nozzle, an extensible flexible hose connected to the suction inlet of said motor-fan-filter unit, means for detachably connecting the free end of said hose to said outlet connection, means for pivoting the front end of said nozzle upwardly free of the surface being cleaned, spring means for biasing said nozzle pivoting means to its nozzle raising position, means on said detachable connecting means engageable with and disengageable from means on said nozzle pivoting means and operable upon attachment of said detachable connecting means to said outlet connection to move said nozzle pivoting means to its inactive position and operable upon detachment of said detachable connecting means from said outlet connection to cause said nozzle pivoting means to move under the bias of said spring means to its nozzle raising position.

2,898,623
DOOR GUIDES
Leonard Emanuel Johnson, Jr., Elkhart, Ind.
Application May 23, 1957, Serial No. 661,054
2 Claims. (Cl. 16—90)



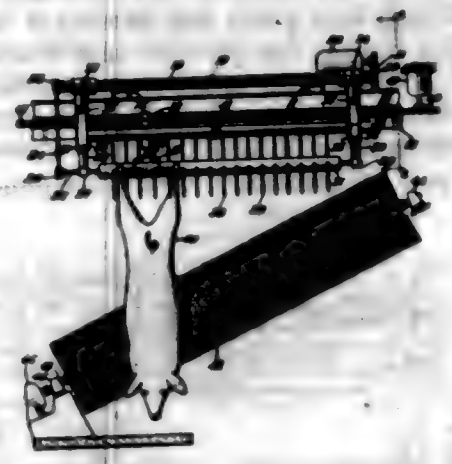
1. A door guide for a sliding door comprising a base plate having a pair of spaced openings and connecting slots formed therein, first and second guide members substantially rectangular in cross section adapted to engage opposite sides of said door, first and second stems having major and minor diameters respectively connected to the bottom of said first and second members, the minor diameters of said stems being insertable through said slots into said openings wherein said stems are rotatable to first and second positions to bring the major diameters transverse the ends of said slots, the major diameter of said first stem being transverse to and unsymmetrically intersected by a vertical longitudinal plane through the center of said first member whereby rotation of said first stem to said first position spaces said first member a predetermined distance from said second member and rotation of said first stem to said second position spaces said first member a distance greater than said predetermined distance from said second member.

2,898,624
HOG POLISHER
Carl Theodore Fredrickson, Sioux City, Iowa, assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
Application January 17, 1956, Serial No. 559,590
3 Claims. (Cl. 17—17)

1. Apparatus for polishing a carcass comprising: carcass conveying means; rotatably mounted carcass suspending means depending from said conveying means; a first rotatable polishing means mounted adjacent and parallel to said conveying means; and a second rotat-

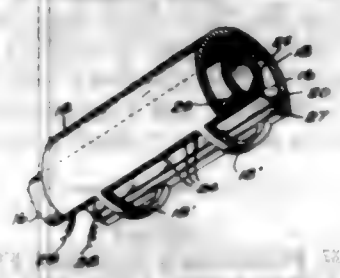
transverse spacing between said members and adjacent said support being sufficiently close to permit the pas- mounted rotatably on said pivotable unit and positioned adjacent to said guide, means for rotating said mandrel

able polishing means mounted below said conveying means and in a vertical plane substantially parallel to



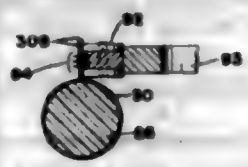
the vertical plane of said conveying means, said second polishing means being inclined to the horizontal plane of said conveying means.

2,898,625
PELLET FORMING APPARATUS
Tsei Yu Chao, New York, N.Y., assignor to Foster Wheeler Corporation, New York, N.Y., a corporation of New York
Application June 10, 1953, Serial No. 360,700
5 Claims. (Cl. 18—2.7)



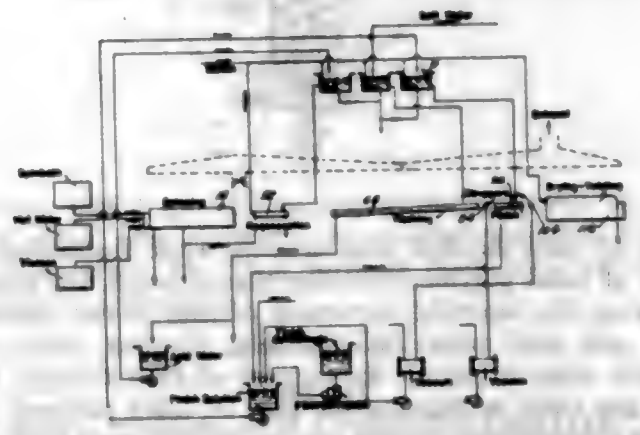
1. A header for apparatus for forming substantially spherical droplets from a mass of molten material comprising a generally horizontal conduit having a droplet-forming orifice in its bottom; a condensible vapor-receiving jacket on said conduit having its bottom spaced from the bottom of the conduit, the bottom of the jacket having an opening therein aligned with said orifice, said opening being larger than said orifice and larger than the droplet formed thereby; and an imperforate partitioning means connected in fluid-tight relationship with said conduit and said jacket and enclosing a space through which the droplets fall freely from said orifice through said opening.

2,898,626
METHOD AND APPARATUS FOR FORMING FOAMED MATERIAL
Sterling W. Alderfer and Harry D. Bodley, Akron, Ohio, assignors, by direct and mesne assignments, to Sterling Alderfer Company, Akron, Ohio, a corporation of Ohio
Application October 10, 1955, Serial No. 539,421
11 Claims. (Cl. 18—4)



1. A process for producing a foam within a flexible casing, comprising the steps of, depositing a charge of reactants capable of forming said foam on a web of casing, folding said web with the reactants therein, joining the web edges to provide a foam tight seal, suspending said web by its joined edges, and continuing to suspend said web from said edges while the foam forming reaction runs subetantially to completion.

2,898,627
PROCESS AND APPARATUS FOR THE CONTINUOUS PRODUCTION OF SYNTHETIC THREAD
Rudolph S. Bley, Milligan College, Ralph H. Carter, Johnson City, and Donald J. Edgar, Elizabethton, Tenn., La Verne R. Graybeal, Asheville, N.C., and Kaute M. Schmidt, Elizabethton, Tenn., assignors to North American Rayon Corporation, New York, N.Y., a corporation of Delaware
Application October 30, 1953, Serial No. 389,421
7 Claims. (Cl. 18—8)

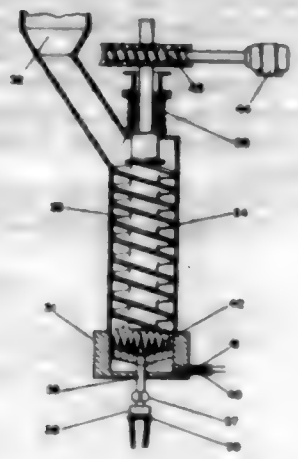


1. In apparatus for the continuous production of high tenacity viscose rayon thread which comprises means for producing a plurality of freshly extruded viscose threads in side by side relation, means for joining said threads in a spaced relationship in the form of a coplanar band of moving threads, a series of inclined treating troughs disposed with their long axis in the path of travel of said moving band of threads, and means for introducing treating liquid at the elevated end of each of said troughs; the improvement comprising a series of pairs of dams spaced from each other extending across one of said troughs, said pair of dams each comprising a low dam positioned at the bed of the trough and an elevated dam spaced from the trough bed and extending upwardly to a plane above the low dam whereby, as the treating liquid flows downwardly in said trough and engages the dams of each pair it is thrown upwardly against said moving thread band and the treating liquid has a degree of turbulence imparted thereto between said pairs of dams.

2,898,628
MELT-SPINNING APPARATUS
John Wildey Phipps, St. Albans, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Application June 23, 1954, Serial No. 438,695
Claims priority, application Great Britain July 3, 1953
9 Claims. (Cl. 18—8)

1. Melt spinning apparatus including means for melting solid polymer comprising a feed passage for the solid polymer, a melt unit below said passage and including an inlet communicating with the bottom of said feed passage, pressure feed means for feeding solid polymer particles through said feed passage and said inlet to said melting unit, said melting unit comprising an inclined support and a plurality of hollow individual heater members arranged on said support and projecting upwardly therefrom substantially vertically, said inlet being defined by a wall means circumscribing and enclosing at least the upper end of said heater members in laterally outwardly spaced relation thereto, each of said heater members terminating in an upper free end defining a generally upwardly and inwardly tapering tip, means for internally heating each of said hollow members, said heater members projecting above said support a distance greater than their width with their longitudinal axes substantially in parallelism, said heater members being positioned closely together on said support with the

transverse spacing between said members and adjacent said support being sufficiently close to permit the pas-



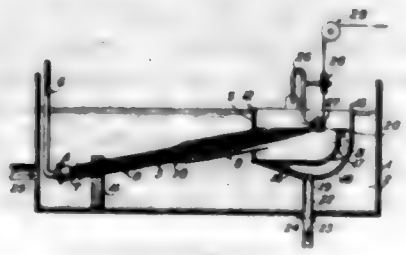
sage of melt through such spacing while restraining the flow of solid polymer particles therethrough, the spacing between the laterally outermost of said heater members and said wall means of said inlet likewise being sufficiently close to permit the passage of melt through such spacing while restraining the flow of solid polymer particles therethrough, means for discharging melt from said melting unit, and means for forming said discharging melt into filaments.

2,898,629

APPARATUS FOR THE PRODUCTION OF HIGH TENACITY VISCOSE RAYON YARN

Bob De Gee, Arnhem, Netherlands, assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware

Application March 21, 1957, Serial No. 647,560
Claims priority, application Netherlands April 11, 1956
6 Claims. (Cl. 18—8)



1. Apparatus for producing viscose rayon yarn comprising a spinning trough containing a spinbath, a spinneret mounted within said trough, a tray positioned within said trough, said tray having walls and a bottom separating the interior thereof from the spinbath in said trough, a curved false bottom mounted in said tray, said false bottom dividing the interior of said tray into upper and lower compartments and providing an overflow edge for draining said upper compartment into said lower compartment, and a treating tube having one end positioned adjacent to and in coaxial alignment with the face of said spinneret and having the opposite end extending into the upper compartment of said tray, said treating tube providing the sole communication for the flow of spinbath from said trough to said tray.

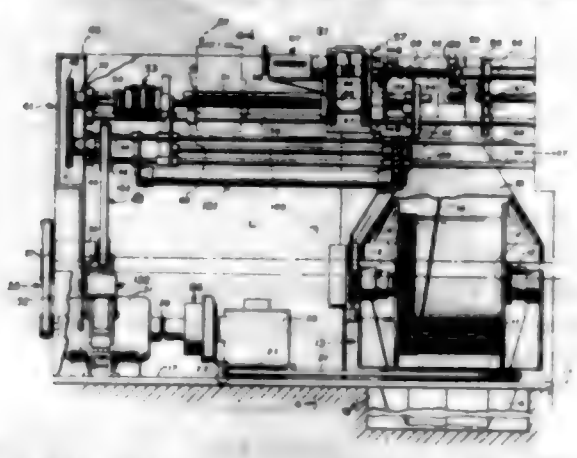
2,898,630

APPARATUS FOR FORMING SPRING CORDS

George P. Adams, Baltimore, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Application May 28, 1957, Serial No. 662,127
4 Claims. (Cl. 18—19)

1. Apparatus for forming spring cords, which comprises a frame, a cordage guide secured to said frame, a unit mounted pivotally on said frame, a mandrel mounted rotatably on said pivotable unit and positioned adjacent to said guide, means for rotating said mandrel and for moving said mandrel longitudinally for drawing cordage through said guide and forming it in a helix on said mandrel, means for pivoting said pivotable unit to a position in which said mandrel is removed from said guide for causing a span of cordage to extend between said cordage guide and said mandrel, a cordage clamp having a pair of normally open clamping jaws, said



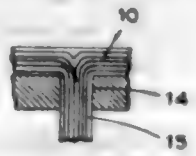
cordage clamp mounted on said frame in such a position that the span of cordage extends between said open jaws when said pivotable unit has been pivoted, means for securing the last-formed end of the helix to said mandrel, means for closing said jaws on the span of cordage, and means for cutting the span of cordage between said mandrel and said cordage clamp, whereby a pair of uncoiled ends of cordage are provided, one on the helix of cordage formed on said mandrel and one for a helix of cordage to be formed on a mandrel replacing said mandrel.

2,898,631

METHOD OF FORMING ARTICLES FROM SILICONE ELASTOMERS AND POLYTETRA FLUOROETHYLENE

Norman Howard Jeffery, Mickleover, England, assignor to Rolls-Royce Limited, Derby, England, a British company

Application December 18, 1956, Serial No. 629,111
Claims priority, application Great Britain December 21, 1955
5 Claims. (Cl. 18—47.5)



1. The method of forming an article from a silicone elastomer with which is incorporated polytetrafluoroethylene which comprises laminating thin layers consisting substantially entirely of a silicone elastomer with alternate layers consisting substantially entirely of polytetrafluoroethylene into a thick sheet, extruding said sheet through a hole of small diameter in such a manner that a solid thread is produced comprising roughly concentric sheaths alternately having the compositions of said layers, forming at least a four turn coil of said thread and moulding the article from the coil so produced.

2,898,632

MOLDING PLASTIC FOAM

Harry Basil Irwin and Eugene R. Waterhouse, Dayton, Ohio, assignors to Dayton Formold, Inc., Dayton, Ohio, a corporation of Ohio

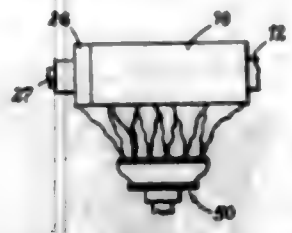
Application October 19, 1955, Serial No. 541,376
8 Claims. (Cl. 18—48)

1. In a process for producing molded plastic foam articles having a glazed surface and a predetermined melt-

sociated reclaiming rollers for final treatment, and means

2,898,637

ing temperature, the steps which comprise introducing expandable plastic beads into a mold having a heat conducting surface of predetermined surface smoothness characteristics on the inner walls thereof, injecting steam into said mold effecting expansion of said expendable beads to fill said mold with expanded plastic foam, concurrently heating said inner walls of said mold to a temperature at



least as high as said melting temperature of said plastic foam for a limited time sufficient to cause melting of the surface only of said expanded foam against said inner mold walls, and cooling said mold walls rapidly before more than only the surface of said expanded foam is melted by said heating step to form a glazed outer skin on said article corresponding to said surface smoothness characteristics of said mold walls.

2,898,633

METHOD OF FORMING HOLLOW PLASTIC ARTICLES

Oscar G. Burch, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio

Application July 21, 1953, Serial No. 369,275
16 Claims. (Cl. 18—55)

1. The method of forming hollow plastic articles which comprises introducing a substantially continuous extrusion of tubing of plastic material outwardly from an extrusion orifice into the open sections of a partible mold, said tubing being in a condition of plasticity to permit expansion and setting in predetermined form, moving said mold in the direction of the extrusion and sealing said tubing at one portion thereof by closing the sections of the mold, severing simultaneously with said mold movement the tubing in the mold from the remaining tubing in such a manner as to leave the severed ends open, the resultant tubing in the mold having one end open and the other end closed, and expanding the tubing in the mold to the walls of the mold by applying fluid under pressure through the open end of the portion of the tubing in the mold.

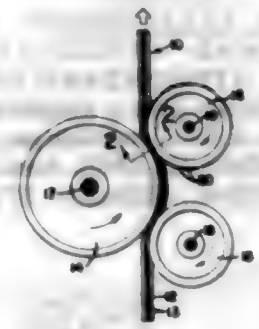
2,898,634

METHOD FOR PRODUCING FOAMED PLASTIC MATERIAL

Sterling W. Alderfer, Akron, Ohio, assignor to Sterling Alderfer Company, Akron, Ohio, a corporation of Ohio

Application January 29, 1957, Serial No. 636,993
3 Claims. (Cl. 18—59)

1. A process for producing a foam within a flexible casing, comprising the steps of, depositing a charge of reactants capable of forming said foam on a web of casing, folding said web with said reactants therein before there has been any significant foam forming reaction, joining the web edges immediately after folding to provide a jacket in the form of an elongated free hanging loop, providing a series of passages in said jacket of a size sufficient to afford communication between the interior of the jacket and the atmosphere while retaining



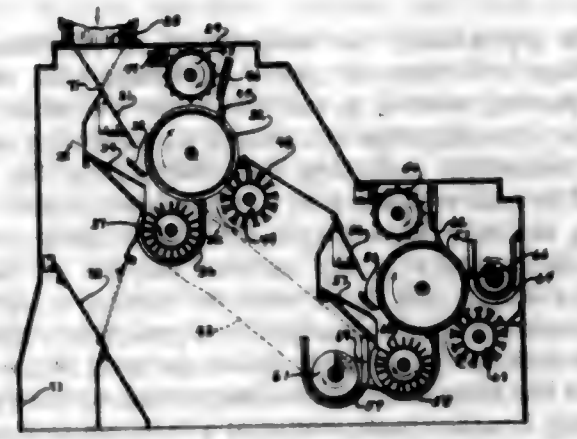
the foam within the jacket, suspending said web by its joined edges, and continuing to suspend said web from said edges while the foam forming reactions runs substantially to completion.

2,898,635

HULL EXTRACTOR FOR SEED COTTON

Arvel L. Vandergriff, Columbus, Ga., assignor to Lummus Cotton Gin Company, a corporation of Georgia

Application September 10, 1953, Serial No. 379,416
2 Claims. (Cl. 19—37)



1. In a seed cotton hull extractor including a cleaning saw cylinder disposed to rotate about a horizontal axis, means to feed seed cotton containing coarse and fine foreign particles to the up-going side of the saw cylinder to be carried around thereby, a stripper roller mounted over the saw cylinder and rotating in a direction to knock large particles of foreign material back from the saw cylinder, means to press the cotton passing the stripper roll down onto the saw cylinder and permitting the passage of foreign material clinging to the cotton, a downwardly sloping slide mounted along the down going side of the saw cylinder to receive large particles of material thrown off by centrifugal force from the saw cylinder, means mounted alongside the saw cylinder below the slide to doff the cotton from the saw cylinder, a second rotary cleaning saw cylinder disposed to receive on its upgoing side the material moving down the slide, a second stripper roller mounted over the second saw cylinder, means to press the cotton passing the second stripper roller down on the second saw cylinder and permitting the passage of foreign material clinging to the cotton, a conveyor disposed to receive foreign material thrown off by centrifugal force from the second saw cylinder, a spiked reclaiming roller associated with each of the saw cylinders and disposed to bring foreign material into final engagement with the saw cylinders, means to convey foreign material thrown off by by the saw cylinders to their respective as-

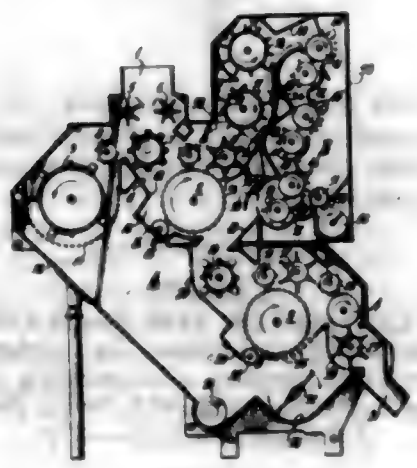
2,898,639

POWER ACTUATED MOVERS FOR TELESCOPING GYMNASIUM SEAT-STRUCTURES

embrace the sides of the tenon, the mortise being greater in depth than the width of the tenon, whereby to provide a space between the end of the tenon and the rear wall

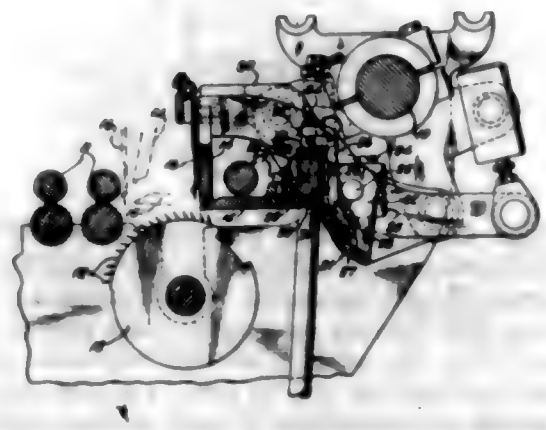
sociated reclaiming rollers for final treatment, and means to discharge foreign material from the reclaiming rollers.

2,898,636
STICK REMOVER ATTACHMENT FOR COTTON EXTRACTORS AND COMBINATION OF EXTRACTOR AND STICK REMOVER
Jeffrey J. Wallace, Amite, La., assignor to Gullett Gin Company, Amite, La., a corporation of Louisiana
Application December 31, 1956, Serial No. 631,845
6 Claims. (Cl. 19—37)



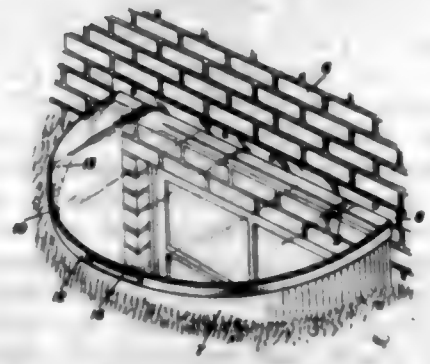
1. In a precleaner for seed cotton, in combination, a multistage hull extractor and a multistage stick remover in by passing relation to said extractor, the latter having an upper cleaning stage comprising an extracting saw cylinder, means for detaching hull debris from the cotton carried by said cylinder, and a rotary brush doffer for removing cotton from said cylinder and normally discharging it downwardly to the anterior element of the next cleaning stage, said stick remover having a series of stick removing stages arranged in a generally vertical direction with the upper stage above the level of the upper stage of the extractor, the lowermost stick removing stage including a rotary brush doffer at a level which intersects the cotton path from the doffer of the upper extractor stage to the next lower extractor stage, casing structure enclosing said extractor and stick remover shaped to define an opening between said extractor and stick remover which extends from a level above the doffer of the upper extractor stage to a level below at least part of the doffer of the lowermost stick removing stage, a fixed partition in said stick remover having its lower end adjacent the doffer of the upper extractor stage and dividing said opening into upper and lower parts, said partition extending upwardly at the side of said series of stick removing stages adjacent said extractor, its upper end terminating adjacent the uppermost stick removing stage, a diverting baffle hinged at its upper end adjacent the lower end of said fixed partition swingable to a position underlying the doffer of the upper extractor stage for diverting the cotton stream discharged by said doffer in an upward direction along said fixed partition, said stick remover including means for elevating the cotton on said fixed partition and delivering it to the uppermost stick removing stage, a deflector baffle hinged at its upper end on an axis intersecting the lower part of said opening intermediately and swingable away from the doffer of the lowermost stick removing stage to deflect cotton from said last named doffer downwardly toward the lower extractor stage, connecting means coordinating the movement of said baffles whereby they swing together outwardly to their respective diverting and deflecting positions or inwardly into lapping relation, closing the part of said opening below said fixed partition.

2,898,637
COMBING MACHINE CUSHION PLATE MOUNTING
John S. Dudley, Douglas, Mass., assignor to Whitin Machine Works, Whitinsville, Mass., a corporation of Massachusetts
Application May 12, 1958, Serial No. 734,736
6 Claims. (Cl. 19—120)



1. In a comber of the kind having a nipper frame including side portions connected by a transversely disposed body portion and having transversely extending pivot means mounted in said nipper frame, the improvement which comprises: a cushion plate support mounted on said pivot means for rocking movement about the axis thereof and incorporating upper and lower stop faces, the said nipper frame body portion incorporating upper and lower stops respectively disposed above and below the said stop faces of the cushion plate support for engagement thereby to limit the said rocking movement and a cushion plate secured to the cushion plate support.

2,898,638
BASEMENT WINDOW WELL COVER
Arthur Druckhamer, Elmhurst, Ill.
Application August 30, 1955, Serial No. 531,397
1 Claim. (Cl. 20—1)



A cover for a substantially semi-circular basement window well of a building, said cover comprising a substantially semi-circular light transmitting panel hingedly mounted for vertical swinging movement on the building above the window and adapted to rest by gravity on the top of the well when in closed position, said panel conforming to the contour of the well and including a depending peripheral flange, an arcuate screen depending from the panel in spaced, concentric relation to the flange for the reception of the top portion of the well wall therebetween when said panel is resting in closed position on the top of the well, and a leg pivotally mounted on the flange for supporting the panel in partially open position, said screen extending below said flange for bridging the space between the panel and the top of the well when said panel is in said partially open position on said well and said flange is spaced from said well.

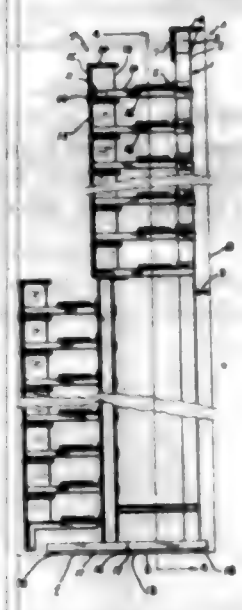
tical rabbet face for abutting a vertical margin of the sub-structure, and wedge means secured to said jamb face, including, a pump having a liquid displacing member with an intake stroke and a delivery stroke, a line con-

2,898,639

WER ACTUATED MOVERS FOR TELESCOPING GYMNASIUM SEAT-STRUCTURES

ymond J. Murphy, Bonne Terre, Mo., assignor to Fred Medart Manufacturing Co., St. Louis, Mo., a corporation of Missouri

Application July 1, 1957, Serial No. 669,301
17 Claims. (Cl. 20—1.126)



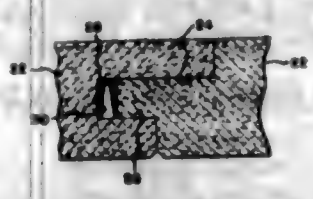
1. In an extensible seating-structure adapted to shift ross a floor or similar support, a stationary main frame, plurality of second frames relatively movable with reect to the main frame and to one another each includg uprights spaced transversely of the structure, said upghts being normally elevated from the support and being rtically yieldable under load for endwise resting upon e support, said frames each including a seat-member ttending transversely of the structure, said main and cond frames being shiftably interconnected for relative ovement from a retracted position to an extended posion, said seat-members being disposed in a stepped series hen the structure is horizontally extended and substanally in vertical registration when the structure is reacted, an extensor having a stationary chassis immovbly associated with the main frame, said extensor also aving a moving end attached to the outermost second rame, and power driven means operatively associated ith the extensor and optionally shifting the moving end hereof relatively toward and away from the stationary hassis thereof whereby to shift the seating structure opionally to extended and retracted positions depending pon the direction of movement of the extensor.

2,898,640

CEILING CONSTRUCTION

Paul D. Dall, La Mesa, Calif.

Application November 29, 1957, Serial No. 699,787
2 Claims. (Cl. 20—4)



1. The combination in ceiling construction with a plurality of parallelly arranged and horizontally spaced furrings, of panels, each having the ends attached to furrings and the confronting side edges of two panels connected with one another by mortise and tenon joint, one of said confronting edges having a tenon, and the other confronting edge having a mortise, the width of the mortise being equal to the thickness of the tenon so as to closely embrace the sides of the tenon, the mortise being greater in depth than the width of the tenon, whereby to provide a space between the end of the tenon and the rear wall of the mortise; and a reinforcing strip confined entirely in the space in said mortise.

2,898,641

LUBRICATING RACK CONSTRUCTION

Anthony V. Battista, Canton, Ohio

Application December 6, 1954, Serial No. 473,096
10 Claims. (Cl. 20—.8)

1. Lubricating rack construction including an oil changing and lubricating rack for supporting vehicles provided with space so that operators may be positioned beneath vehicles supported thereon, said rack having a length and ends, the length of the rack being equal to at least the combined length of a series of vehicles, conveyor belt means including a first and second section of continuous conveyor belt engaging and supporting at least two wheels of each of a series of vehicles simultaneously and thereby simultaneously moving the vehicles along the length of the rack, the first section of conveyor belt extending from one end of the rack to a point intermediate the ends of the rack and having a length equal to the length of at least one of said vehicles, the second section of conveyor belt extending from a point adjacent said intermediate point to the end of the rack opposite from said one end and having a length equal to at least the combined length of the remainder of said series of vehicles, support means positioned spanning the distance between the first and second sections of conveyor belt at said intermediate point of the rack, and means operatively connected to said first and second sections of conveyor belt for selectively driving said second section alone and both said sections simultaneously; whereby the vehicles may be placed at one end of the rack and will be moved to the opposite end of the rack during which movement the various operations of oil changing and lubricating may be performed by operators positioned beneath the vehicles, and the movement of each vehicle may be stopped on the first section of conveyor belt for oil changing.

2,898,642

DOOR FRAME AND SILL THEREFOR

Harold A. Etling, Marshallville, Ohio, assignor to Weather-Seal, Inc., Summit County, Ohio, a corporation of Ohio

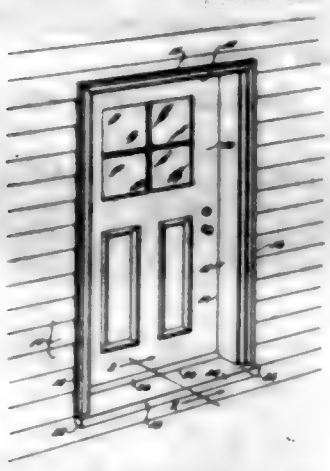
Application April 19, 1956, Serial No. 579,380
4 Claims. (Cl. 20—11)

1. In a door frame construction, a door sill, jamb members having their inwardly exposed faces ploughed on an incline to receive the ends of said sill, said sill having upper and lower faces similarly inclined downwardly and outwardly of the frame, the lower surface of said sill having a rabbet formed therein throughout its length and defined by a level horizontal rabbet face for supporting the sill from a sub-structure, and a ver-

low said fixed partition.

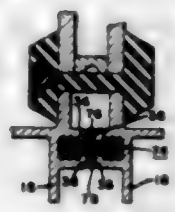
and said flange is spaced from said wall.

tical rabbet face for abutting a vertical margin of the sub-structure, and wedge means secured to said jamb



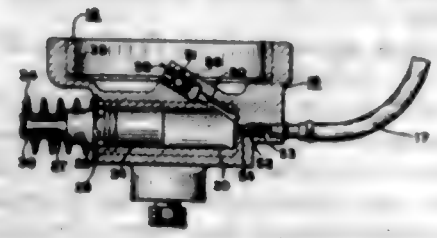
members on the lower surfaces of said ploughed incline to provide horizontal and vertical support surfaces for engaging the rabbetted surfaces of said sill.

2,898,643
WINDOW FRAME
Russell J. Bush and Robert E. Sayre, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 26, 1957, Serial No. 655,393
1 Claim. (Cl. 20—11)



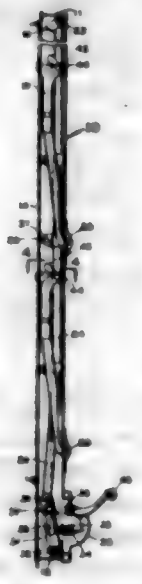
A panel supporting frame assembly comprising in combination, first and second frame members in spaced relation adapted to support a panel, said frame members having partially closed channel portions longitudinally thereof facing each other, said facing channel portions including planar surfaces facing each other and an elongated elastomeric strip comprising enlarged portions integrally connected by a web, each of said enlarged portions being disposed interlockingly within a channel portion whereby the frame members are joined and supported in spaced relation solely by said elastomeric strip, said web having a rib integrally attached thereto snugly interposed between said planar surfaces cooperating with said enlarged portions for firmly supporting said frame members and for positively holding said members in spaced relation.

2,898,644
WINDSHIELD CLEANING MECHANISM
Oliver K. Kelley, Birmingham, Gilbert K. Hause, Franklin, and Clifford C. Wrigley, Grosse Pointe Woods, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application February 9, 1955, Serial No. 487,197
4 Claims. (Cl. 20—40.5)



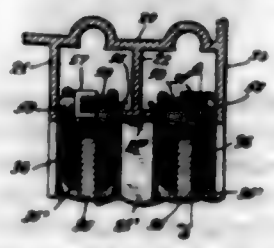
1. Windshield washer mechanism for displacing liquid from a reservoir and discharging it onto a windshield surface, including, a pump having a liquid displacing member with an intake stroke and a delivery stroke, a line connected with said pump through which said liquid is discharged onto said windshield surface, and means whereby any liquid remaining in said line after the delivery stroke of said pump will be withdrawn from said line during the intake stroke of said pump before said pump communicates with said reservoir.

2,898,645
AWNING WINDOW LOCKING MECHANISM
Al Brenner, Miami Beach, Fla.
Application February 11, 1959, Serial No. 792,641
5 Claims. (Cl. 20—42)



1. An awning window comprising a window frame having a pair of vertically disposed jamb portions, a slide bar slidably mounted along each of said jamb portions, a plurality of vents positioned one above the other on said window frame for vertical swinging movement from said window frame, pivot means mounting the upper end of each of said vents to said slide bar, a vent link pivotally mounted at one end to each of said vents and the lower end to said window frame, latch means pivotally mounted on said pivot means, locking means mounted on said vents, and latch abutting means mounted adjacent said slide bars whereby upon the closing of said vents and the sliding of said slide bar, said latch abutting means engage said latch means to effect the pivotal movement of said latch means and engagement of said locking means by said latch means.

2,898,646
METAL WINDOW
Russell A. Gillespie, Indianapolis, Ind., assignor, by direct and mesne assignments, of thirty-three and one-third percent each to Carl F. Spickelmier, Edith S. Greer, and Betty S. Spickelmier, all of Indianapolis, Ind.
Original application July 15, 1954, Serial No. 443,675, now Patent No. 2,804,954, dated September 3, 1957. Divided and this application July 25, 1955, Serial No. 523,955
4 Claims. (Cl. 20—52.2)



1. A window structure, comprising a rectangular frame having sides surrounding a central opening and provided

including pairs of positively operated feed rolls located below the mold and arranged to feed the ingot in course

each such clip member being inwardly adjacent to one

h three longitudinal flanges projecting into said open- in parallel spaced relation to define two sash-receiving oves, the intermediate one of said flanges having a d extending along its free edge, a metal bearing strip bracing said head and having edge portions bent hind said head to hold it in place thereon, sash respec- ly slidable in said grooves, and yielding means car- d by each of said sash for resiliently urging the sash o contact with said bearing strip.

2,898,647
WINDOW FRAME

ssell J. Bash and Robert E. Sayre, Dayton, Ohio, as- signors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application November 14, 1955, Serial No. 546,585
1 Claim. (Cl. 20—56.4)

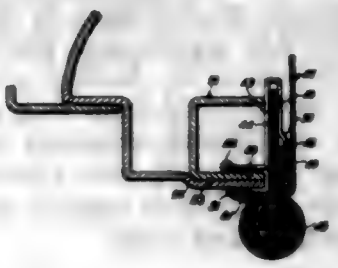
A window construction, comprising first and second ame members, two spaced substantially parallel window nes supported by said frame members, each of said ame members having portions providing partially closed annel grooves, said channels being positioned with the pen grooves facing each other so that a plane extending erebetween is substantially perpendicular to the plane the window panes, a single elastomeric insulator be- ween said frame members securing them in a substantial- fixed spaced relationship to provide an insulating air- pace therebetween, said elastomeric insulator having a ross section of substantially I shape with enlarged end ortions and a central web portion, said end portions eing respectively adapted to be securely retained within he channel grooves of each of said frame members and aid web portion being integral with said end portions nd maintaining said frame members in fixed spaced rela- onship, a projection on one of said frame members, nd an elastomeric insulator means between the said rame members and the said parallel window panes re- novably securing the panes in spaced relationship to the aid projection, so that the panes are removable without ismantling the frame members and the I-shaped insu- ator, said elastomeric insulator means having portions n at least two sides of said projection for securely clamp- ng the insulator means to the projection and having a ortion extending between and engaging the said frame nembers to aid the I-shaped insulator in maintaining he frame members in spaced relationship.

2,898,648
DRAUGHT EXCLUDING STRIPS AND MOUNTING MEANS THEREFOR

Thomas John Robert Bright, Leek Wootton, Warwick, England

Application February 7, 1955, Serial No. 486,657
3 Claims. (Cl. 20—69)

1. An assembly consisting of a sealing strip, a head lining and a plurality of attachment clips which perform the dual function of securing said sealing strip in posi- tion upon a supporting flange and holding said head lining in position, said sealing strip including a soft and resilient effective sealing portion and a laterally project- ing flange like attachment portion, each clip including two open mouthed channel portions adapted respectively to receive said attachment portion and to engage the supporting flange respectively, the defining limbs of said channel portions having pointed tangs for frictionally engaging said attachment portion and flange, a defining limb of the channel portion which receives the attach-

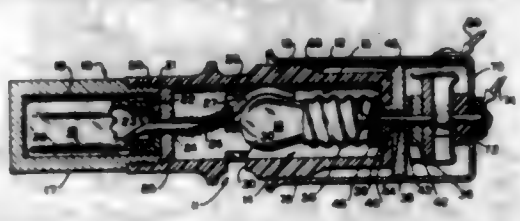


ment portion being kinked to accommodate the edge of the head lining and having pointed tangs for perforating the head lining to hold the latter firmly in position.

2,898,649
PERFUME DIFFUSER

Arthur E. Murray, San Jose, Calif., assignor, by direct and mesne assignments, of forty percent to Elaine T. Cassidy, Stockton, and twenty percent to Jim Flores Rodriquez, Santa Clara, Calif.

Application November 19, 1956, Serial No. 622,858
6 Claims. (Cl. 21—120)

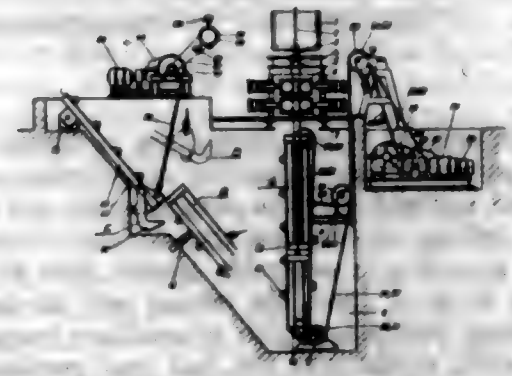


1. A perfume diffuser comprising a housing receivable in a vehicle cigarette lighter socket, an electrical contact at one end of said housing, a light globe within said hous- ing electrically connected to said contact and said housing for receiving electrical energy from a cigarette lighter socket, a perfume tank within said housing remote from said light globe, a wick holder carried by said housing and communicating with said tank, a wick carried by said wick holder having one end disposed within said tank and an opposite end disposed closely adjacent said light globe, light and perfume passages in said housing adjacent said bulb.

2,898,650
APPARATUS FOR REMOVING THE CASTING IN CONTINUOUS CASTING PROCESSES

Per S. E. Fredriksson, Anders L. Arnelo, Karl B. Lofgren, and Lars G. W. Lotvik, Vasteras, Sweden, assignors to Aktiebolaget Svenska Metallverken, Vasteras, Sweden, a Swedish company

Application June 24, 1955, Serial No. 517,878
Claims priority, application Sweden June 24, 1954
5 Claims. (Cl. 22—57.2)



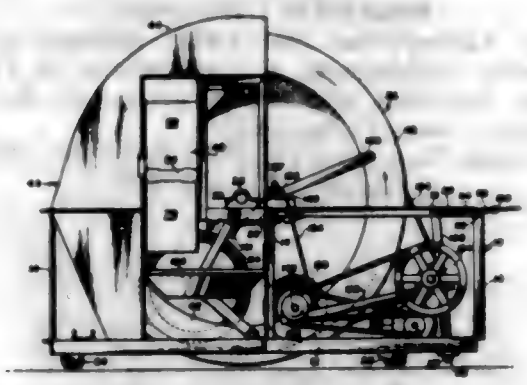
1. An arrangement in machines for the substantially continuous production of elongated metal ingots by con- tinuous casting during movement substantially in a verti- cal direction through a bottomless mold, said machine

said containers uniformly spaced about a point, said vice comprising a substantially flat body portion having

2,898,656
FASTENING DEVICE

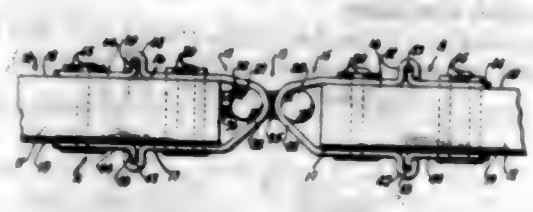
including pairs of positively operated feed rolls located below the mold and arranged to feed the ingot in course of casting downwardly into an ingot receiver including a platform which is movable downwardly in response to the feeding movement of the ingot by said feed rolls and control means for causing said platform to move downwardly in relation to the feeding of said ingot by said feed rolls to support said ingot with a substantially constant pressure and prevent distortion thereof during downward feeding movement, said platform having a range of movement sufficient to support said ingot after discharge from said feeding rolls.

2,898,651
SAND CONDITIONING APPARATUS
George M. Butrow, Fort Wayne, Ind.
Application March 14, 1957, Serial No. 646,060
6 Claims. (Cl. 22—89)



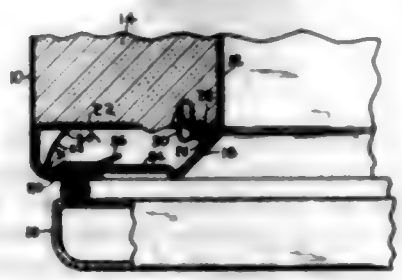
1. Apparatus of the character described comprising a supporting frame, an upright annular conveyor substantially open on one side and rotatably mounted on an axle carried by said frame for rotation in a given direction, a mulling wheel swingably mounted on said frame and being engageable with said conveyor, a fluffing wheel swingably mounted on said frame and disposed inside said conveyor, a plow type deflector mounted on said frame and disposed within said conveyor adjacent the top thereof, a chute hingedly mounted on said frame adjacent said deflector for delivering selectively sand from said conveyor, and a loading hopper on said frame adjacent the bottom of said conveyor.

2,898,652
V-BELT FASTENER
Glen V. Ireland, Wauwatosa, Wis.
Application May 31, 1957, Serial No. 662,697
2 Claims. (Cl. 24—33)



2. An endless V-belt comprising: a length of V belting; a pair of U-shaped saddles each having opposite leg members engaged over the parallel inner and outer faces of the belting at one end thereof and riveted thereto; means providing a separable hinged joint between said saddles so as to form the belting into an endless belt; and means providing a pair of auxiliary connections between each saddle and the belt end portion to which it is secured so as to assure against accidental detachment of the saddle therefrom, said last named means comprising a pair of clip members near each end of the belt secured in positions overlying the inner and outer faces of the belt by fastening means extending through the belt, each such clip member being inwardly adjacent to one of the leg members of a saddle, and means providing a hinge connection between each clip member and its adjacent saddle leg member, at the adjacent ends of said members, said last named means comprising a transverse channel on one of said members opening toward the adjacent face of the belt, and a transverse flange on the other of said members projecting away from the adjacent face of the belt and loosely engaged in said channel so as to provide for a degree of flexure of those portions of the belt embraced by the clip members relative to those portions of the belt ends embraced by the leg members of the adjacent saddle.

2,898,653
FASTENING DEVICE
William A. Bedford, Jr., North Scituate, Mass., assignor to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Application December 19, 1955, Serial No. 553,862
5 Claims. (Cl. 24—73)



1. A spring clip for securing a member against the inside face of an outer margin wall of a U-shaped channel member of a predetermined width, said channel member having an inner wall and a web portion connecting said inner wall to said outer margin wall, comprising a strip of spring metal having an arcuate middle portion for engagement with substantially the juncture of said web and said outer margin wall, a first arm member of a normal length greater than the height of the web of the channel member integrally secured at one end to one end of the arcuate portion, the free end of the first arm member being provided with teeth to engage the inner wall whereby the first arm member will be in pressing inclined relationship with respect to the inner wall when the clip is inserted in the channel member, and a second arm member normally biased away from the first arm member and secured at one end to the opposite end of said arcuate portion at a point offset above the plane of the margin wall when the clip in inserted in the channel member, said second arm member extending in outwardly declined relationship with respect to the point of jointure of said arcuate portion to engage the outer margin wall when the clip is inserted in the channel member, whereby the second arm portion will form a gripping jaw in conjunction with the inner surface of the margin wall to tightly hold a member inserted therebetween with a major portion of said second arm in substantially surface contact with the inserted member.

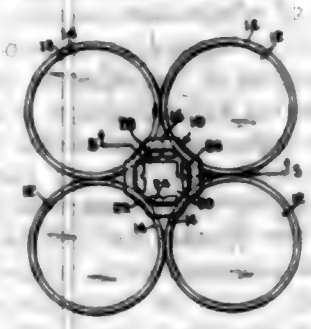
2,898,654
FASTENING DEVICE
Philip D. Becker, Hingham, Mass., assignor, by mesne assignments, to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware
Application November 26, 1954, Serial No. 471,285
2 Claims. (Cl. 24—81)

1. A fastening device for securing together a group of cylindrical containers each having a peripheral bead at its end, said device being adapted for assembly into the multi-cusped shaped space at the end of a group

respect to said tang and adapted wedgingly to grip said elongated part and thereby support the implement sus-

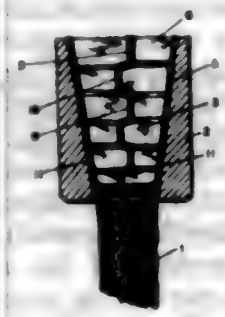
and adapted to be secured together detachably to define a joint between the abutting sections, a spacer pin dis-

of said containers uniformly spaced about a point, said device comprising a substantially flat body portion having a central opening, a series of downwardly extending arcuate portions disposed about the periphery of the body for bearing against the inside of the can beads, and a series of bead-engaging tongues extending downwardly



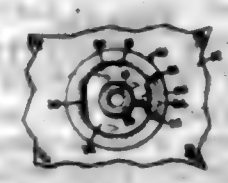
from the body about the central opening, each tongue being disposed circumferentially of the central opening between a pair of arcuate portions and having a deformable neck portion and laterally extending portions on the end thereof for seating under the beads of a pair of adjacent cans.

2,898,655
CABLE FERRULE
Paul Van Benkirk, Woodburn, Oreg., assignor to V. B. Grip Sales, Portland, Oreg.
Application June 15, 1955, Serial No. 515,631
4 Claims. (Cl. 24—114.5)



1. A cable ferrule for attachment to an end of a stranded wire cable, comprising a generally cylindrical body having an axial bore extending therethrough with said bore converging from a relatively large diameter at one end of said body to a substantially smaller diameter at the other end of said body, said stranded cable being adapted to extend axially through said bore, a plurality of segmental tapered wedge members positioned in said bore in said body, a first radial clamping face formed on each of said wedge members, a second radial clamping face formed on each of said wedge members at an angle to said first radial clamping face, said first and second radial clamping faces having their inner edges joined, an outer arcuate clamping face on each of said wedge members extending between the outer terminal edges of said first and second named radial clamping faces, said outer clamping faces each being adapted to cooperate with a portion of the wall of said bore in said body for clamping a portion of the strands of said cable between said outer face and said body, said first and second named radial clamping faces each being provided with a plurality of tongues separated by grooves with the tongues of each radial clamping face extending into the grooves of an opposed radial clamping face of an adjacent wedge member to alternately offset the strands of cable adapted to be engaged therebetween to lock the cable in said body.

2,898,656
FASTENING DEVICE
Winthrop Foster Ashworth, Wenham, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Application October 31, 1957, Serial No. 693,654
1 Claim. (Cl. 24—217)



A one piece three side lock snap fastener socket comprising a cup-shaped body having a base and an upstanding rigid peripheral wall disposed on the base, forming a stud-receiving cavity, an outwardly turned flange on said wall spaced from the base, said wall having a rigid inwardly rounded stud-locking shoulder adjacent the flange and projecting into the cavity on one side of the socket and a pair of slots in the wall normal to the plane of said base and located on the opposite side of the said wall from the locking shoulder thereof forming a resilient tongue between the slots, said tongue having an inwardly extending stud engaging shoulder and being moveable in and out of the stud receiving socket.

2,898,657
IMPLEMENT HOLDING DEVICE
Harold W. Longfellow, Akron, Ohio, assignor to Han-D-Hook, Inc., Akron, Ohio, a corporation of Ohio
Application January 24, 1955, Serial No. 483,724
5 Claims. (Cl. 24—249)

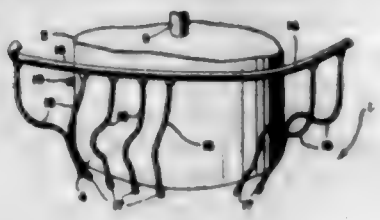
1. An implement holding device, comprising a supporting member for attachment to a vertical supporting structure, and having a generally vertical outer face, said member having thereon a relatively thin tang including a bottom portion extending outwardly of said outer face and a front portion upturned from said bottom portion, a gripping element including a gripping portion having a thin extension generally at an angle to the plane thereof and terminating in an exposed edge, said extension having therein a laterally elongated aperture through which said tang is loosely but substantially non-rotatably received, the portion of said extension between said exposed edge thereof and the inner edge defined by said aperture being narrower than the space between said front portion of the tang and said vertical outer face of the member at least adjacent said bottom portion, whereby said gripping element is adapted to be supported on said member by downward pivotal engagement of said exposed edge with said bottom portion of the tang, said gripping portion having an opening therein for receiving an elongated part of a said implement, said opening presenting oppositely disposed gripping edges in outwardly spaced alignment with

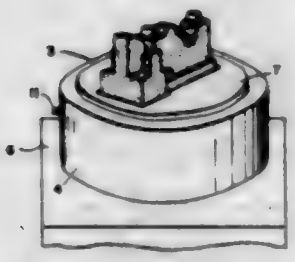
microns, mixing powdered carbon with said molybdenum

2,898,663
METHOD OF PRODUCING NARROW FABRICS BY

respect to said tang and adapted wedgingly to grip said elongated part and thereby support the implement suspended in balanced equilibrium of the same and said gripping element from the point of said pivotal engagement with said bottom portion of the tang.

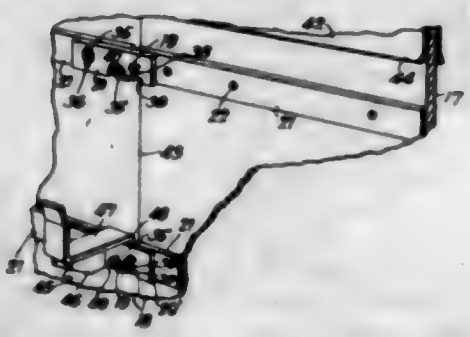
2,898,658
METHOD AND APPARATUS FOR THE MANUFACTURE OF CERAMIC WARE
William R. Harry, Hartland, Wis., assignor to McGraw-Edison Company, a corporation of Delaware
Application May 23, 1955, Serial No. 510,266
5 Claims. (Cl. 25—22)





1. In the method of pressure-forming ceramic ware comprising the steps of positioning a batt of plastic moist clay between permeable cooperable molds, moving said molds toward one another to form said ware, introducing fluid pressure through one of said molds and against the formed ware while the molds are in final forming position relative to one another, said fluid pressure exerting a force between said mold and said ware to render the ware non-adhering to the mold, separating said molds with the ware adhering to the other of said molds, introducing fluid pressure through said other mold to separate the pressed ware therefrom, and maintaining said molds in their relative separated operating position for subsequent repeated forming operation; the improved step of removing accumulated moisture from at least one of said permeable molds by means of directing non-interfering streams of a fluid drying medium towards moisture accumulating surface of said mold and in a general direction towards one end of said mold for removal of said moisture.

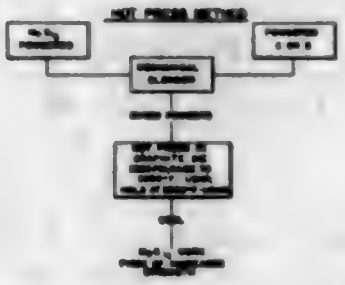
2,898,659
CONCRETE FORM LOCKING MEANS
James C. Shoemaker, Loves Park, Ill., assignor to Simplex Forms System, Inc., Rockford, Ill., a corporation of Illinois
Application September 9, 1955, Serial No. 533,329
8 Claims. (Cl. 25—131)



1. In a concrete form structure the combination of a pair of vertical form sections of rectangular form disposed in coplanar relation with their edges in abutment and adapted to be secured together detachably to define a joint between the abutting sections, a spacer pin disposed at right angles to said form sections at the joint and protruding from said joint and having a head on its outer extremity, an elongated lever pivoted at one end with respect to one of said form sections and having two slots provided therein in different longitudinally spaced relation to the pivot extending from one longitudinal edge, one of which slots receives the headed end of said pin therein, a headed projection on one of said form sections engaging in the other of said slots in said lever, said lever having tight abutment with the outer side of both form sections an appreciable fraction of the length thereof on both sides of the joint between said sections and serving to interconnect said form sections detachably when the spacer pin and headed projection are engaged in the aforesaid slots, whereby to hold said sections with their edges in tight abutment and with their inner sides in alignment and coplanar relationship, an outwardly reaching bracket integrally attached to said lever and adapted for detachably supporting thereon an elongated scaffold board of much greater length than said lever in parallel relationship to said lever adjacent the outer side of both form sections on both sides of the joint between said sections, and an elongated substantially horizontal scaffold board resting on said bracket and arranged to engage the form sections in widely spaced relationship to the joint between said sections for better holding of the abutting sections in alignment and coplanar relationship.

8. Means for connecting the edge of a panel to a filler member disposed in abutting relationship to the edge of the panel, said filler member having an edge portion and a slot provided therein in spaced parallel relationship to said edge portion, said means comprising an attaching plate secured to one side of an edge portion of the panel and having a portion projecting therefrom, said projecting portion having a slot provided therein opening from one longitudinal edge portion thereof substantially parallel to the adjacent edge of said panel, and adapted to be hooked by the slotted portion in the slot in said member, and a J-shaped fastening clip the hooked end of which straddles the aforesaid edge of said slotted member with one portion of the J extending into the slot in said plate to prevent its becoming unhooked and withdrawn from the slot in said slotted member.

2,898,660
METHOD FOR IMPROVING THE HIGH-TEMPERATURE STRENGTH AND OTHER PROPERTIES OF MOLYBDENUM DISILICIDE AND OTHER INTERMETALLIC COMPOUNDS
William A. Maxwell, Bay Village, Ohio
Application April 24, 1953, Serial No. 351,060
9 Claims. (Cl. 25—156)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A process of making a workpiece of refractory composition which comprises granulating molybdenum disilicide to a particle size averaging not over about nine

weft threads of polyvinyl alcohol interwoven with said

to-surface contact therewith, carbon-steel bars of a width

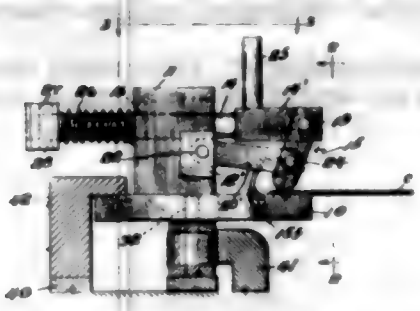
microns, mixing powdered carbon with said molybdenum disilicide, said carbon being in a non-volatile form and being in an amount up to about one-half of one percent of the total weight of the mixture to form about 0.15 to about 0.29 percent carbon in the final sintered material, placing the mix in a die to form a workpiece, under the application of high temperature and high pressure.

2,898,661

TENTER CLIP

John E. Waterman, Chepatchet, R.I., assignor to Winsor & Jerauld Manufacturing Company, a corporation of Maine

Application July 24, 1956, Serial No. 599,873
7 Claims. (Cl. 26—62)



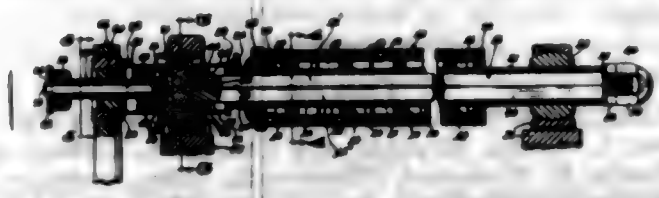
1. A tenter clip having a base plate, an upright member mounted on said plate, a jaw, a shaft mounted for reciprocation by said member, one end of said shaft pivotally related to an upper end of said jaw, a link, said link pivotally related to said member and to said jaw at a point remote from the shaft attachment point, whereby upon moving said shaft in one or the other directions said jaw will be moved about said link.

2,898,662

EXPANDING AND CONTRACTING ROLLS

John D. Robertson, Taunton, Mass., assignor to Mount Hope Machinery Company, Taunton, Mass., a corporation of Massachusetts

Application May 17, 1957, Serial No. 659,957
6 Claims. (Cl. 26—63)



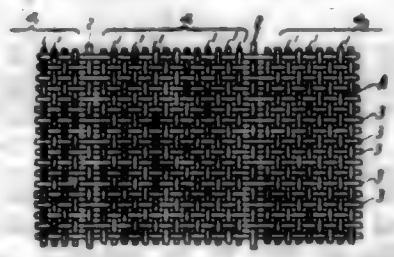
1. An adjustable-curvature roll axle, comprising a relatively long initially rigid axle provided with a slit extending from one end of said axle inward throughout a substantial portion of the length of said axle and terminating a substantial distance from the other end of said axle thereby to provide a plurality of longitudinally relatively movable axle portions integral on a solid non-slit axle portion, said plurality of relatively movable axle portions extending all in the same general direction from said solid axle portion, and means at the slit end of the axle operable to effect longitudinal movement of one of said plurality of relatively movable axle portions relative to another thereby to forcibly introduce longitudinal curvature into at least one of said axle portions, longitudinally spaced means closely engaging around said plurality of relatively movable axle portions at spaced locations along the slit region of the axle whereby all of said plurality of relatively movable axle portions become longitudinally flexed in response to said introduction of curvature into said one of the axle portions, and locking means associated with said curvature-introducing means for securing the said longitudinally flexed axle portions rigidly in any selected longitudinally flexed condition.

2,898,663

METHOD OF PRODUCING NARROW FABRICS BY CUTTING A SPECIALLY WOVEN WIDE FABRIC CONTAINING SYNTHETIC FIBRE WEFTS, BY THE AID OF ELECTRICAL HEATING OF INTERWOVEN METAL WIRES

Kiyoshi Kitahara, Tokyo, Japan

Application December 26, 1956, Serial No. 630,659
Claims priority, application Japan June 4, 1956
5 Claims. (Cl. 28—72)



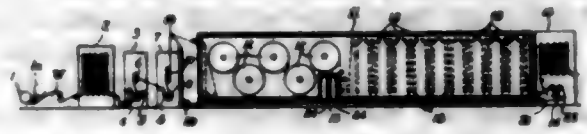
1. A method of producing narrow fabrics from a specially woven wide fabric wherein the wide fabric is so woven as to be composed of a number of warp thread groups, each containing the required number of threads, of metal wires parallel to the warp threads, each intervening between the warp thread groups, and of synthetic fibre yarns as weft threads, and whenever necessary the fabric has a few synthetic fibre warp threads on both sides of each ordinary warp thread group, comprising cutting the primary wide fabric so that weft threads of synthetic fibre are fused and cut by the interwoven metal wires heated by an electric current, and cut end parts of the weft threads are fused together to form firm neat selvages.

2,898,664

METHOD FOR TREATING FIBER CORDS

Samuel Salem, Akron, Ohio, assignor to The General Tire and Rubber Company, Akron, Ohio, a corporation of Ohio

Application May 13, 1955, Serial No. 508,065
1 Claim. (Cl. 28—76)



A method of treating a fiber cord fabric having water soluble nylon warp cords and pick threads of polyvinyl alcohol comprising applying to the fabric for a period of about ½ to 20 seconds substantially pure water to dissolve said threads and to free said cords from said threads, said threads being treated with glycerine so as to be soluble in pure water at a temperature of about 60° to 110° F. in a period of time not in excess of about 10 seconds, applying a rubber-compatible latex adhesive to the cords while they are wet with said water, and drying said cords.

2,898,665

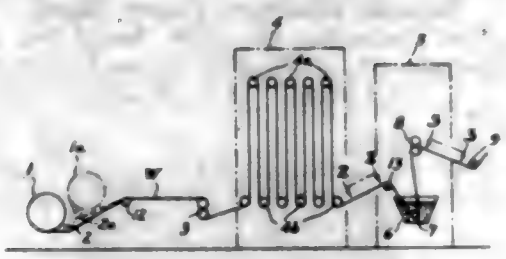
CORD FABRIC WITH REMOVABLE WEFT THREAD

Samuel Salem, Robert E. Bingham, and Donald Anderson, Akron, Ohio, assignors to The General Tire and Rubber Company, Akron, Ohio, a corporation of Ohio

Application May 13, 1955, Serial No. 508,032
1 Claim. (Cl. 28—78)

A woven tire cord fabric for use in making weftless pneumatic rubber tires comprising a multiplicity of parallel longitudinal water-insoluble warp cords having a tensile strength of at least about ten pounds per cord, each cord being spaced laterally from the next adjacent cord a distance not in excess of about one-twentieth of an inch, and a multiplicity of parallel transverse water-soluble

weft threads of polyvinyl alcohol interwoven with said warp cords to hold the same in parallel relation, each weft thread having a tensile strength not in excess of about one pound and being spaced longitudinally from the next adjacent thread a distance greater than about



one-fourth of an inch, said weft threads being treated with sufficient glycerin so as to be soluble in water at a temperature of 70° F. in one-half to ten seconds, whereby the warp cords may readily be freed to form a weftless tire fabric by dissolving the weft threads in water.

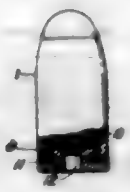
2,898,666

METHOD OF MAKING BULLETS

George E. Frost, Hamden, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

Original application March 5, 1952, Serial No. 274,870, now Patent No. 2,751,845, dated June 26, 1956. Divided and this application November 1, 1955, Serial No. 547,880

8 Claims. (Cl. 29—1.22)



1. In the manufacture of jacketed projectiles, the process for securing the jacket to the core thereof which comprises indenting the jacket wall until an internal protuberance thereof is formed therein, compressing the end of said protuberance until a knob-like portion is formed thereon, inserting the core material in said jacket, and compressing the assembly until the core material has filled the space about said knob-like portion and the projectile has the desired shape.

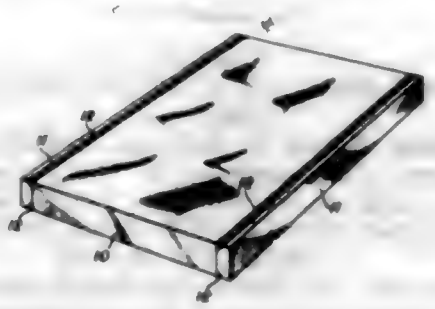
2,898,667

METHOD OF PREVENTING EDGE CRACKING IN THE ROLLING OF STAINLESS STEEL

Michael A. Orehoski, Duquesne, and Robert L. Stephenson, Pittsburgh, Pa., assignors to United States Steel Corporation, a corporation of New Jersey

Application April 2, 1954, Serial No. 420,686

1 Claim. (Cl. 29—18)



In the rolling of a stainless steel slab into flat plates, the method of preventing edge cracking of the slab by welding to opposite edges of such slab, in direct surface-to-surface contact therewith, carbon-steel bars of a width about equal to the thickness of the slab and a length substantially equal to the length of the slab, leaving the top and bottom of the slab exposed, heating the slab to rolling temperature, passing it between plain rolls in a direction parallel to said edges, thereby converting said slab into an elongated plate and said bars into marginal strips united to the edges of the plate, then shearing said marginal strips from the plate, producing a stainless-steel plate with smooth edges free from cracks.

2,898,668

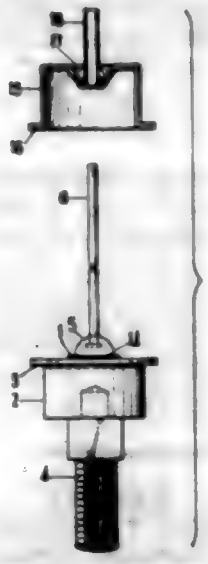
MANUFACTURE OF SEMICONDUCTOR DEVICES

Ralph David Knott, North Greenford, and Michael Rupert Platten Young, Wembley, England, assignors to The General Electric Company Limited, London, England

Application August 17, 1955, Serial No. 528,963

Claims priority, application Great Britain August 23, 1954

6 Claims. (Cl. 29—25.3)



1. A method of manufacturing a semiconductor device comprising a bead electrode, in which the material which is to form the bead is moulded around the end of a lead wire before being brought into contact with the semiconductor.

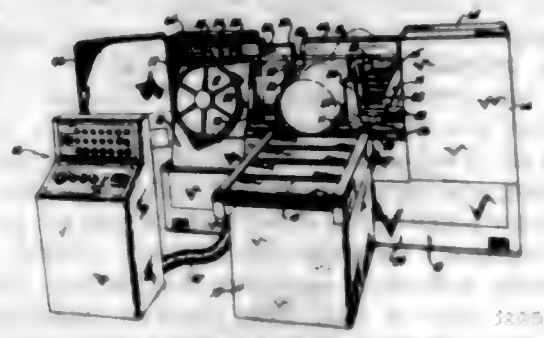
2,898,669

MACHINE FOR CUTTING OFF BAR STOCK

Robert L. Crane, Hopkins, and Charles E. Cleland and Charles H. Whitmore, Minneapolis, Minn., assignors to Continental Machines, Inc., Savage, Minn., a corporation of Minnesota

Application November 14, 1957, Serial No. 696,582

7 Claims. (Cl. 29—68)



1. A metal cutting power saw comprising a base; a horizontal work support on the base; a movable saw carrying head; horizontally spaced pulleys mounted on the head with their axes parallel and their rims in line; an endless saw band trained about the pulleys; power means to drive one of the pulleys; cooperating means on the base and the head mounting the head for vertical translation with the two stretches of the band vertically

to said spool passing around the periphery of said spool

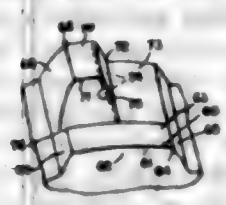
2,898,676

spaced apart and the lower stretch beneath the work support; band guiding means carried by the movable head and engaging the upper stretch of the band at points spaced lengthwise thereof to hold the portion of the band therebetween in a vertical plane with its cutting edge facing downwardly to operatively engage and cut through work positioned on the work support as the head descends; and means to effect upward translation of the movable head to bring the upper stretch of the band into position to permit the work to be placed thereunder and downward translation to produce a cut.

2,898,670
HELICAL BROACH

Frank Pernack, Birmingham, Mich., assignor to National Broach & Machine Company, Detroit, Mich., a corporation of Michigan

Application December 5, 1955, Serial No. 551,042
2 Claims. (Cl. 29—95.1)

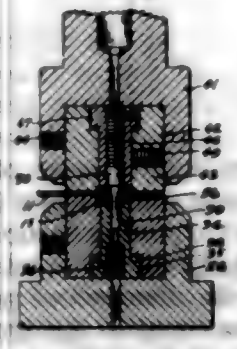


1. In a broach for broaching helical grooves in an opening in a work piece, a generally cylindrical recutting section having a plurality of series of recutting teeth, the teeth of each series being disposed in helical alignment, corresponding teeth of the several series being disposed in circumferential alignment, each tooth having a leading cutting portion having side and top surfaces intersecting the front surface thereof to form cutting edges, said cutting portions being of full groove width, the cutting portions of the successive teeth in each series being of progressively increasing height to cut the grooves in the work piece to increasing depth, the said top surfaces of said cutting portions being surfaces of revolution coaxial with said recutting section, each of said teeth having trailing guide portions integral with said cutting portions and spaced rearwardly therefrom, said guide portions being of uniform height and each having one side portion shaped to conform to and follow the side of the groove in the work piece.

2,898,671
METHOD OF MOUNTING A SELF-ALIGNED BEARING IN A LEVER OR OTHER MACHINE ELEMENT

Lewis R. Heim, Fairfield, Conn., assignor to The Heim Company, Fairfield, Conn., a corporation of Connecticut

Application February 16, 1955, Serial No. 488,652
3 Claims. (Cl. 29—149.5)

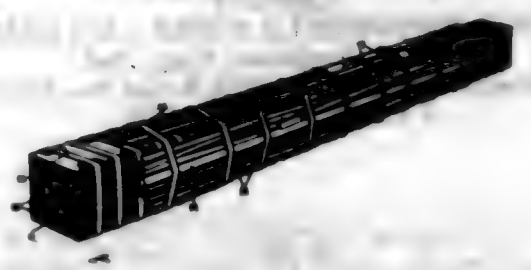


1. A method of mounting a self-aligned bearing in a machine element comprising forming an opening in the element, placing a bushing of ductile material in the opening, placing a bearing member having a spherical outer surface in the bushing, forming the bushing to a close fit about the bearing member to form a spherical bearing seat for this member and mount it against longitudinal movement in the bushing and plastically deforming the bushing about the edges of the opening by pressure on opposite ends of the bushing, whereby the bearing member and the bushing are interlocked and the bushing and the edges of the opening are interlocked.

2,898,672
TITANIUM PRESS SCRAP RECOVERY AND ELECTRODE MANUFACTURE

William Howell, Warren, Ohio, assignor to Mallory-Sharon Metals Corporation, a corporation of Delaware

Application August 19, 1955, Serial No. 529,494
5 Claims. (Cl. 29—184)

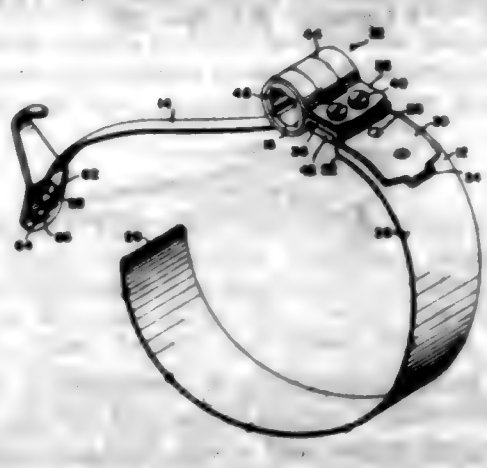


3. A consumable titanium electrode formed from titanium scrap material, comprising a plurality of compact bales of titanium press scrap located in end-to-end and metal-to-metal contact, solid titanium end members at the outer ends of said bales, each of said end members comprising a stack of longitudinally disposed elongated rectangular pieces of titanium sheet material of uniform size and shape circumferentially bound together with titanium straps, a titanium rod substantially coextensive with said bales and both solid end members and attached thereto with circumferential titanium straps forming a rigid core, a plurality of elongated pieces of titanium sheet scrap of various lengths and widths disposed longitudinally about the bales and partially overlapping the solid end members, and titanium binding straps circumferentially binding the elongated pieces of sheet scrap to the core.

2,898,673
PISTON RING COMPRESSOR

Alf Ernferd Ericson, Lapeer, Mich., assignor to Aircraft Specialties, Inc., Lapeer, Mich., a corporation of Delaware

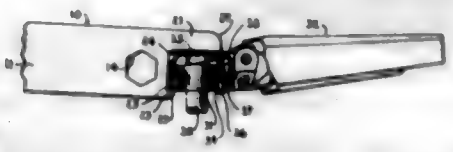
Application June 11, 1954, Serial No. 435,979
3 Claims. (Cl. 29—224)



3. A piston ring compressor comprising a spring compression band having inner and outer overlapping ends, a bearing secured to the outer end of said compression band, a windable spool rotatably mounted in said bearing so as to allow said spool to remain wound at a desired adjusted position without a constant torque being applied thereto, a flexible tension band secured at one of its ends

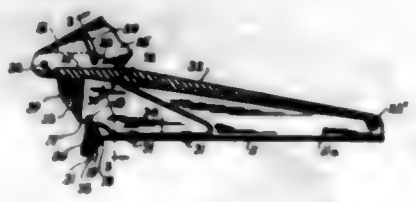
to said spool passing around the periphery of said spool and then encircling said compression band and means releasably attaching the free end of said tension band to said outer end of said compression band, whereby the diameter of said compression band can be varied by the adjustable winding of said spool, said releasable means including an upstanding finger carried by said compression band adjacent said outer end thereof, and a catch comprising a flat plate and an upstanding lug, means securing said flat plate to said free end of said tension band adjacent the juncture of said flat plate and said upstanding lug, and a slot adjacent the free end of said plate engaging said finger and adapted to be released therefrom by exerting pressure on said lug towards said tension band.

2,898,674
UNIVERSAL WINDSHIELD WIPER ARM REMOVER
John W. Anderson, Gary, Ind.
Application January 25, 1957, Serial No. 636,376
1 Claim. (Cl. 29—278)



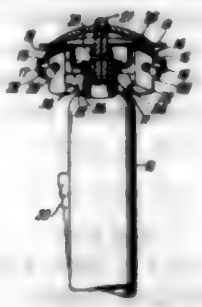
A tool for withdrawing the socketed head of a wiper arm from its mounting upon the end of an oscillatory shaft comprising an elongated, thin, flat handle member; one end of said member including means for withdrawing said head axially from said shaft; said means consisting of a finger extending from said one end parallel with the axis of said member and adapted to extend substantially across the upper surface of said head, and a dog extending a shorter distance from said end in spaced relationship to said finger, said finger and dog lying in the plane of said member; the opposed edges of said finger and dog being parallel and the space therebetween being substantially equal to the thickness of said head so that the finger may engage the upper surface of said head with the dog fitting beneath the lower edge of said head.

2,898,675
CAN PUNCHES
Edward M. Sheehy, Oakland, Calif., assignor to Gadget-Of-The-Month Club, Inc., Los Angeles, Calif., a corporation of California
Application March 4, 1958, Serial No. 719,107
8 Claims. (Cl. 30—16)



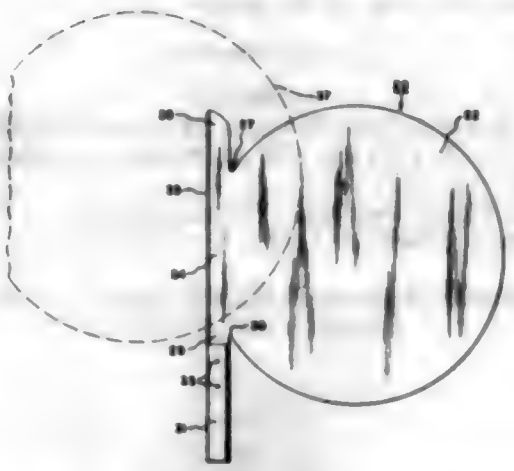
1. A can punch comprising in combination, an elongated body affording a handle at one end portion thereof, can lip engaging means and a can engaging guide provided on said body remote from said handle, a depressible arm extending along said body and pivoted at one end thereof to said handle, a can punch member provided at the other end of said arm in adjacent relation to said lip engaging means and said guide, and an actuating lever pivoted at one end thereof to said body adjacent said punch member, said lever having a cam edge in engagement with said arm for depressing the same.

2,898,676
BLADE EJECTING MECHANISM FOR SAFETY RAZORS
John Guardino, New York, N.Y.
Application February 6, 1958, Serial No. 713,731
3 Claims. (Cl. 30—60.5)



1. In a blade ejecting safety razor, the combination comprising an elongated handle, a frame base member secured at one end of said handle and having an outer surface for seating one side of a double-edge razor blade, a push-rod axially arranged in said handle and extending through a central opening in said frame base member, a blade-centering bar secured to the projecting end of said push-rod, a link member fixed cross-wise at each end of said blade-centering bar, a blade clamp plate arranged at each side of said blade centering bar in spaced parallel relation to the outer surface of said frame base member, the ends of said clamp plates each having right-angularly projecting lever portions, means pivoting intermediate portions of said lever portions with the ends of said link members, means for rotating said lever portions about their pivot points upon upward movement of said push-rod to swing said clamp plates into open position away from said frame base member, and abutment means at the outer extremities of said lever portions operative to contact a razor blade when said clamp plates are moved into open position and lift the blade away from said frame base member.

2,898,677
CAKE SEPARATOR
Mary Czay, San Diego, Calif.
Application June 3, 1957, Serial No. 663,080
1 Claim. (Cl. 30—124)



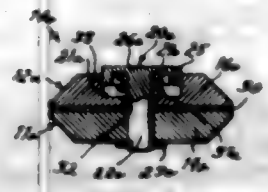
A device for separating a layer of cake into two or more layers, said device comprising a flat substantially circularly shaped cake supporting section and an elongated flat slicing section lying in the same plane as said cake supporting section, the diameter of said cake supporting section being at least equal to the longitudinal length of said slicing section, said flat slicing section being integrally joined at one edge to said cake supporting section to form a planar continuation of said cake supporting section, the opposite edge of said flat slicing section located remote from said cake supporting section being formed

second mechanism simultaneously actuated by the movements of said joining disc to undergo linear motion equal

air pressure source and a gaging device, a plunger movable in said body relative to said orifice within a

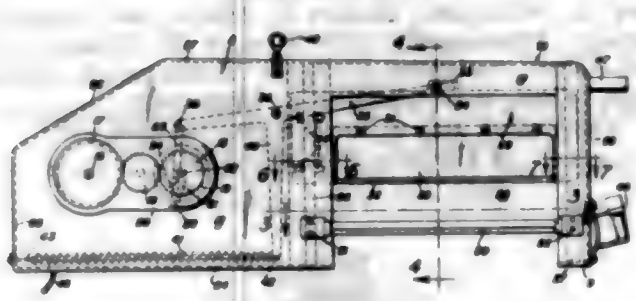
into a sharp cutting edge, said flat slicing section having an end portion extending forwardly and an end portion extending rearwardly of the points of junction of said flat slicing section with said cake supporting section, said rearwardly extending end portion forming a support for a handle.

2,898,678
SPRING-BIASED SHEAR JOINT
Harry Karabin, Philadelphia, Pa.
Application October 15, 1957, Serial No. 690,337
1 Claim. (Cl. 30—269)



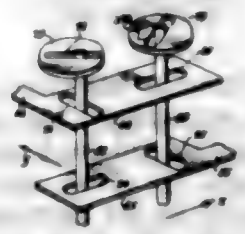
A barber's scissors comprising a pair of crossed shearing elements, one of said elements being formed at its crossing region with an outwardly facing recess having a cylindrical internal wall, a pivot pin passing through the crossing regions of said elements and having one end extending into said recess, said pivot pin passing snugly and rotatably through the other of said elements and loosely through said first of said elements, an enlarged head on said one end of said pin located at least partially within said recess and having a cylindrical peripheral wall for snug rotatable reception in said recess, said head being provided with an annular groove extending about said pin facing toward said recess, a retainer on the other end of said pin to prevent withdrawal of the latter from said shearing elements, and a coil spring in said recess surrounding said pin having one end engaging said first shearing element and having its other end engaging in said annular groove to urge said shearing elements toward each other under a constant pressure.

2,898,679
CLEAVER
Arthur Sons, McCook, Nebr.
Application February 12, 1958, Serial No. 714,841
1 Claim. (Cl. 30—272)



In a cleaver, a support member including a first portion, a U-shaped channel section on an end of said support member, a second portion extending from said first portion, a motor arranged contiguous to said first portion, a shaft driven by said motor, a disk rotatably connected to said first portion, means connecting said disk to said shaft, a link pivotally connected to said disk, a pin extending from said disk for selective engagement with said link, an arm pivotally connected to the outer end of said link, said support member being provided with an open space, first and second pairs of spaced parallel bars arranged on opposite sides of the open space, a carriage slidably mounted between said bars, a blade connected to said carriage, a pair of spaced apart crosspieces extending between said first bars and said channel section and connected thereto, rollers connected to said carriage and engaging said bars, a yoke extending from said carriage, a pivotally mounted body member having a pin on one end engaging said yoke, the other end of said body member being pivotally connected to said arm, a lever extending from said body member, and a coil spring having one end connected to said lever and the other end of said coil spring being anchored adjacent an end of said support member.

2,898,680
DUPLICATING DEVICE
Wilbur H. Dexter, Inglewood, Calif.
Application July 26, 1954, Serial No. 445,721
11 Claims. (Cl. 33—23)

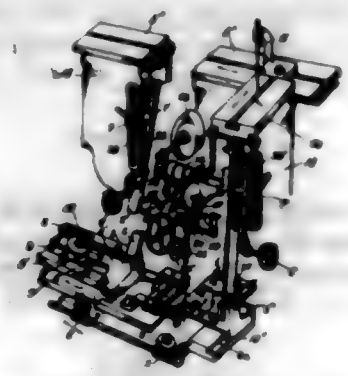


1. A motion reproducing device, comprising input and output members universally movable in parallel planes, each of said members having ways extending in mutually perpendicular linear directions parallel to said planes with ways in each member being parallel to ways in the other member, first and second follower means for transmitting motion from the input member to the output member, said members being coupled through said follower means and ways, said first follower means being movable with the input member in one of said perpendicular directions and with the output member in the other of said directions perpendicular to said one direction, said first follower means and input member being relatively movable along a way extending in the other of said directions and said first follower means and output member being relatively movable along a way extending in said one direction, said second follower means being movable with said input member in the other of said perpendicular directions and with the output member in said one perpendicular direction, said second follower means and input member being relatively movable along a way extending in said one direction and said second follower means and output member being relatively movable along a way extending in said other direction, and guide means constraining said first follower means to move said output member in said other perpendicular direction in response to first follower means movement with said input member in said one direction and constraining said second follower means to move said output member in said one direction in response to second follower means movement with said input member in said other direction.

2,898,681
MACHINE FOR CUTTING CYCLOID GEARS
Eijiro Toyoda, Shinjuku-ku, Tokyo-to, Japan; Hideko Toyoda, Hiroshige Toyoda, Michiko Niikura (Toyoda), Yoshiko Kawabe (Toyoda), Yoko Toyoda, Haruni Toyoda, Eiko Toyoda and Mieko Toyoda, minor, by mother Hideko Toyoda, heirs of Eijiro Toyoda, deceased, assignors to Kabushiki Kaisha Hakko Denki Seisakusho, Nagano-ken, Japan
Application November 27, 1951, Serial No. 258,464
Claims priority, application Japan December 5, 1950
3 Claims. (Cl. 33—27)

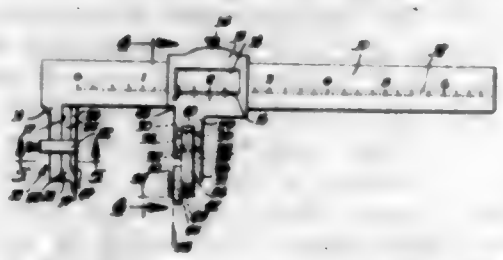
1. In a machine for cutting with a cutting tool the cutter model having a joined cycloidal profile for a circular bit. a first mechanism comprising a rotatable joining disc, a standard plate actuated upon rotation of said joining disc to undergo linear motion equal to a first component of the rotational motion of the joining disc, a

second mechanism simultaneously actuated by the movements of said joining disc to undergo linear motion equal to a second component of the rotational motion of the joining disc, an abecissa slide and an ordinate slide for



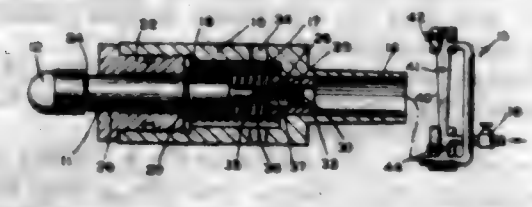
receiving the movements of said second mechanism and said standard plate, respectively, and levers for transmitting the motion of said second mechanism and said standard plate to said respective slides, the cutting tool being positioned to be moved by the movements of one of said slides and the other of said slides being adapted to receive the workpiece.

2,898,682
VERNIER SCRIBING TOOL
Robert E. Lynch, Chicago, Ill.
Application April 2, 1958, Serial No. 726,000
15 Claims. (Cl. 33—42)



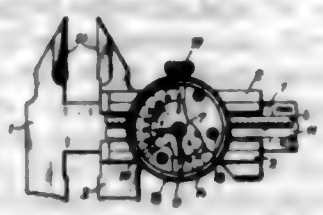
1. A vernier scribing tool for scribing a line on a surface of a work piece parallel to a second surface perpendicular to the surface to be scribed, comprising a pair of relatively movable jaws adapted to be adjusted with respect to each other to vary the spacing therebetween; a scribe element point; means for releasably securing said scribe element point to one of said jaws; support means for engaging the surface of said work piece to be scribed; guide means for engaging said second surface of said work piece; and means for operatively connecting said support means and guide means to said jaw not having the scribe element point secured thereto for pivotal movement with respect to said scribe element point about an axis lying in the plane containing said jaws.

2,898,683
PNEUMATIC GAGE HEAD
Harry D. Kiefaber, Dayton, Ohio, assignor, by mesne assignments, to The Sheffield Corporation, a corporation of Delaware
Application April 17, 1956, Serial No. 578,760
12 Claims. (Cl. 33—147)



2. A gage head for connection to an air leakage gaging system, comprising a body having an orifice for communication at one side thereof with the atmosphere and adapted for communication at the other side with an air pressure source and a gaging device, a plunger movable in said body relative to said orifice within a predetermined range, a first orifice controlling surface on said plunger for progressively decreasing flow through said orifice during plunger movement in one direction through a portion of the gaging movement range and with a predetermined flow change for each increment of plunger movement, and a second orifice controlling surface on said plunger for progressively increasing flow during movement in the same direction through another portion of the gaging movement range and with the same amount of flow change for each increment of plunger movement as during the decrease flow inward movement.

2,898,684
DIAL-INDICATING SLIDE GAUGE FOR MILLIMETERS AND INCHES
Wilhelm Schneider, Niederuhall, Germany
Application August 5, 1957, Serial No. 676,312
3 Claims. (Cl. 33—147)



1. A dial-indicating slide gauge for both millimeters and inches comprising a slide bar, a slide member slidably mounted on said slide bar, said slide bar and slide member having associated measuring surfaces at one end thereof and extending transversely thereto, a single dial casing mounted on said slide member and having a dial face with separate indications in inches and in millimeters, said slide bar having a recess extending longitudinally thereof, a pair of superimposed racks mounted within said recess, a shaft rotatably mounted within said recess and having a pinion secured to one end, a sleeve rotatably mounted on said shaft and having a pinion secured to one end, and pointers secured to the other end of said shaft and said sleeve respectively, above said dial face, each of said pinions being in meshing engagement with one of said racks.

2,898,685
SET UP GAUGE
Richard A. Nordquist, Robert C. Miller, and James R. Bukosky, Minneapolis, and Howard W. Lindgren, St. Paul, Minn., assignors to Penta Incorporated, Minneapolis, Minn., a corporation of Minnesota
Application July 2, 1956, Serial No. 595,337
8 Claims. (Cl. 33—170)

1. A gauge of the type described having in combination, a member having an internally threaded barrel up-

between said surface and the chain cutters, said shim means further comprising a clip-on device carried by one

toward said floor, means for directing air into said cabinet at the upper portion thereof and means within said cabinet

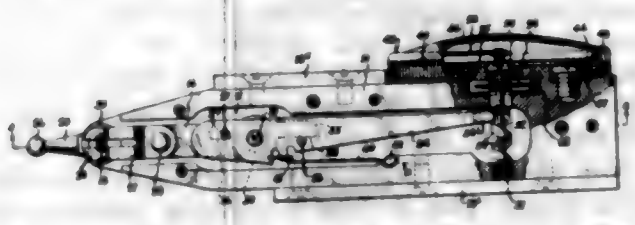
standing therefrom, a second member having at one end portion an axial bore adapted to receive therein a portion of said barrel, a screw integral with said second member and adapted to be threaded into said barrel for movably connecting said second member and said barrel, said second member having at its other end portion a conical recess, and a scale on said barrel having graduations which are in proportion to the width of said recess at different points whereby said second member can be moved axially to position any given point of the width of said recess as desired.

2,898,686

DIAL INDICATOR GAGE

Walter J. Crosbier, Hyde Park, and John Klink, Pine Plains, N.Y., assignors to Standard Gage Company, Inc., Poughkeepsie, N.Y., a corporation of New York

Application February 10, 1956, Serial No. 564,823
2 Claims. (Cl. 33—172)



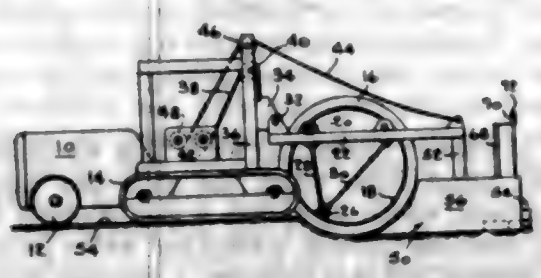
1. In a dial indicator gage, in combination, a casing, a first lever pivotally mounted in said casing, a work contact member forming one arm of said lever and extending outside said casing, a pair of camming surfaces on said lever at the end opposite said member, said surfaces being spaced apart longitudinally and lying on the longitudinal center line of said lever, a second lever pivotally mounted in said casing, said pivotal mounting being on the longitudinal center line of said first lever and between said camming surfaces, a pair of pins on said second lever engaging said camming surfaces, a helicoid shaft journaled in said casing, the end of said second lever bearing against the helicoid surface of said shaft to thereby rotate said shaft as said second lever moves under drive of said first lever and a spring fixed to said casing and bearing against said second lever at a point between the pivotal mounting thereof and the driving pin most remote from the pivotal mounting of said first lever, said spring holding said lever in a rest position.

2,898,687

DEPTH INDICATOR FOR TRENCHING MACHINES

Carl J. Broecker, Two Rivers, Wis.

Application August 9, 1956, Serial No. 602,957
5 Claims. (Cl. 33—185)



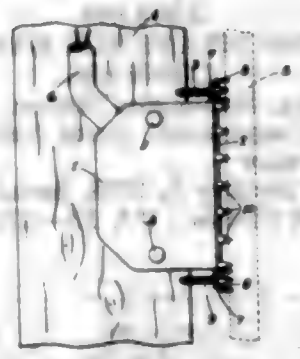
1. An indicator for a trenching machine of the type having a digging wheel followed by a shoe having vertical side walls for preventing earth falling into the trench before tile can be laid therein, comprising, a feeler adapted to ride on top of tile laid in the trench, means for mounting the feeler in said shoe while permitting vertical movement of the feeler with respect to the shoe, and indicator means responsive to said movement to indicate the movement at a point remote from the feeler.

2,898,688

MARKING DEVICE

Robert Cotter, Red Bluff, Calif., assignor to Allen B. Cotter, Yreka, Calif.

Application July 25, 1955, Serial No. 524,218
1 Claim. (Cl. 33—189)



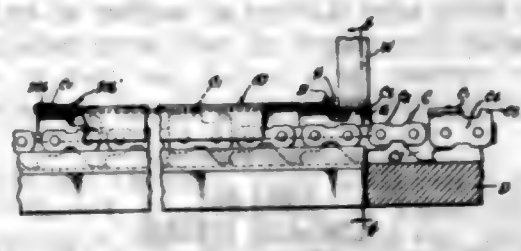
A cutting-pattern template for the open outer end of an electrical outlet box having opposed outwardly projecting relatively thin ears in the plane of said outer end and provided with holes therethrough; said template comprising an outwardly facing backing plate shaped to engage the outer end of the outlet box including the ears, a face plate substantially the same size and shape as the backing plate disposed adjacent but outwardly from said backing plate, cutting pattern marking elements on and projecting outwardly from the face plate and extending in a row around the periphery of the face plate, a cushion pad between the plates, and prongs secured in the face plate and slidably projecting through the ear holes in frictionally holding and removable relation.

2,898,689

ADJUSTABLE GAUGE FOR DRESSING SAW CHAIN DEPTH GAUGES

Wade H. Mills, Kosmos, Wash.

Application July 21, 1958, Serial No. 749,789
5 Claims. (Cl. 33—202)



1. An adjustable gauge for dressing the depth gauges of a saw chain to predetermined depth relative to the adjacent chain cutters, said adjustable gauge comprising an elongated platen having a substantially flat lower reference face adapted to rest, extending lengthwise of a straight stretch of the chain, on top of a plurality of successively located saw chain cutters, retaining side members projecting substantially at right angles to and in generally parallel relation from opposite edges of said platen to define a chain-retaining channel therebetween, dressing tool datum means forming a longitudinally extending slot located in transversely substantially centered position relative to said platen and opening endwise from one end thereof to accommodate the tip of a saw chain depth gauge projecting upwardly between the sides of said slot, matrix members carried on the upper side of said datum means adjoining respectively opposite sides of said slot, said matrix members having hardened top surfaces lying substantially in a common reference plane to which the depth gauge is to be dressed, having predetermined offset in relation to the platen reference surface, and at least one detachable adjustment shim means comprising an elongated shim strip of predetermined thickness adapted to be superimposed on said platen reference surface extending along the length thereof to be directly

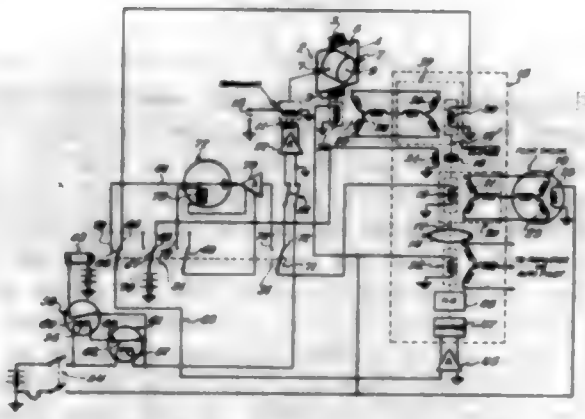
between said surface and the chain cutters, said shim means further comprising a clip-on device carried by one end of the shim strip, resiliently and detachably engageable with the adjustable gauge to maintain said strip positionally in the adjustable gauge.

2,898,690

QUICK SETTING MEANS FOR GYRO MAGNETIC COMPASS

Walter P. Colistra, Huntington Station, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware

Application January 5, 1956, Serial No. 557,530
4 Claims. (Cl. 33—222)



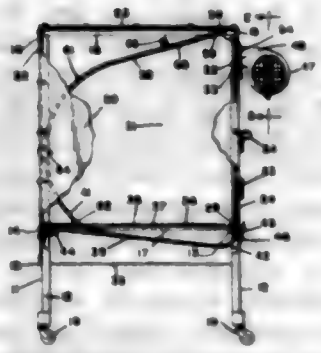
1. A gyro magnetic compass system comprising a magnetic compass, a gyroscope of the directional type, means for normally slaving said gyroscope so as to slowly follow the demands of the magnetic compass, a heading indicating element, servo means positioning said element and normally controlled by the error between said gyroscope and element, a starting switch, thermal delay switches successively brought into action by the starting current, and a transfer relay normally in a particular one of its positions controlled by said thermal switches so as to move after a delay to another of its positions and transfer the control of said servo means to said magnetic compass for a period, and then to return to its normal position establishing normal operation.

2,898,691

ANIMAL DRIER

Amos K. Moseman, Minneapolis, and Albert B. Cummings, Navarre, Minn.; said Cummings assignor to said Moseman

Application July 31, 1957, Serial No. 675,453
9 Claims. (Cl. 34—231)



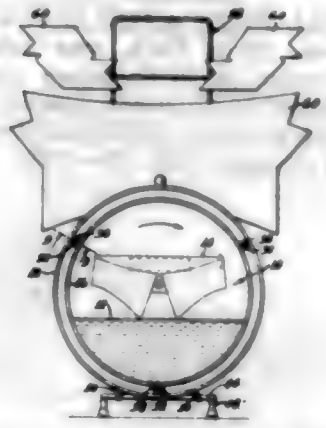
1. An animal drier comprising a cabinet having a top, a back, and sides, and open at the front, a reticulate closure for the front, movable from an open to a closed position, a reticulate floor in said cabinet, a pan disposed below and spaced from said floor, said pan having a portion inclining downwardly from the rear end of said pan and toward the front of the cabinet, a curved baffle at the front of said inclining portion leading upwardly toward said floor, means for directing air into said cabinet at the upper portion thereof and means within said cabinet directing the air downwardly and through said floor and along said pan, the air on reaching said baffle being directed upwardly and back into the interior of the cabinet proper and leaving said cabinet through said closure.

2,898,692

DISPLAY AND DEMONSTRATION DEVICE

James J. Jacobson, New York, N.Y.

Application September 3, 1957, Serial No. 681,639
9 Claims. (Cl. 35—49)



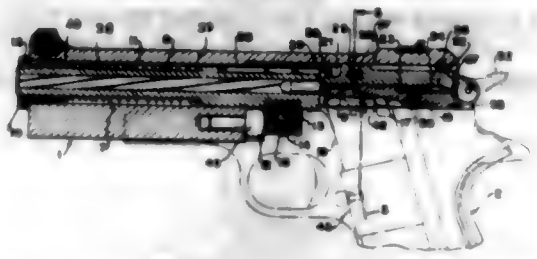
1. A demonstration and display device, comprising, means defining a compartment, an article mounted within said compartment, said compartment also having a liquid therein for contact with said article in at least one position of the compartment, said liquid being out of contact with said article in at least another position of the compartment, said compartment having a part which is sufficiently transparent to enable observation of said article and the liquid therein, and means for mounting said compartment defining means for movement to different positions for bringing said liquid into and out of contact with said article.

2,898,693

22 CALIBER CONVERSION FOR A COLT 45 CALIBER SEMI-AUTOMATIC PISTOL

William B. Ruger, Westport, Conn., assignor to Sturm, Ruger and Company, Inc., Southport, Conn., a corporation of Connecticut

Application April 17, 1956, Serial No. 578,727
1 Claim. (Cl. 42—77)



1. A 22 caliber conversion for a Colt 45 caliber semi-automatic pistol from which the slide and barrel have been removed, which comprises a grip member having a hammer mounted thereon, a cross-pin which passes transversely through the grip member, a receiver which is interchangeable with the slide attached in a fixed operative position on the grip member, a 22 caliber barrel mounted in the receiver and removably secured to the grip member by the cross-pin, a blow-back breech block in the receiver which travels rearward on firing and cocks the hammer, a return spring in the receiver, means connecting the return spring to the breech block, and means securely connecting the receiver and barrel together, whereby said 22 caliber barrel and receiver are held in fixed position with respect to the grip member.

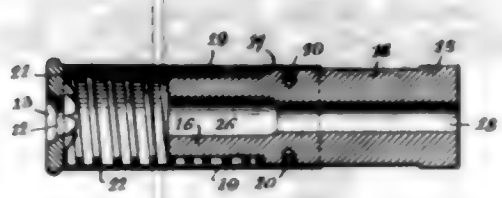
said side sections in spaced parallel relation to each other, a hollow open ended tubular support member pivotally

tion of said cradle, so that said cradle securely locks said lug in said recess when said cradle is fastened to said

2,898,694
BORE REDUCING DEVICE FOR FIRE-ARMS

Georges Senutovitch, Montreal, Quebec, Canada

Application March 8, 1957, Serial No. 644,840
3 Claims. (Cl. 42—77)

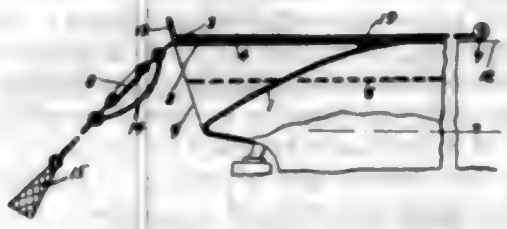


1. In a bore reducing device for fire-arms, a casing adapted to fit in the rear end of a fire-arm barrel of standard bore, said casing having a base with a central opening for the insertion of a small bore cartridge, a barrel slidably mounted within said casing to move between retracted and protracted positions, said barrel having a rear end provided with a small bore cartridge chamber alined with said central opening in said base, protraction means urging the slidable barrel into protracted position, limit means connecting the casing and slidable barrel and restricting the extent of the barrel movement, and cartridge gripping means in said casing consisting of a washer fitting the casing and engaging the inner face of said base, said washer having a central opening registering with the central opening of said base and having spring segments which extend outwardly from the plane containing the peripheral portion of said washer when in normal released position and adapted to be flattened by the barrel into cartridge gripping position when said barrel is in retracted position.

2,898,695
FISHING VESSEL

Hans Behring, Schonberg, near Kiel, Germany, assignor to Kieler Howaldtswerke A.G., Kiel-Dietrichsdorf, Germany, a firm

Application December 4, 1956, Serial No. 626,104
2 Claims. (Cl. 43—8)

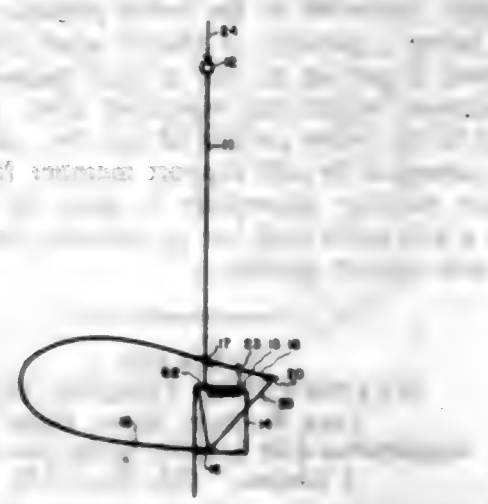


1. In a fishing vessel of the type described and provided with a slipway disposed at the stern of the vessel and extending in the longitudinal direction of the vessel, with said slipway being adapted to receive a fishnet having draglines and wing members affixed thereto, the combination of deck means disposed adjacent each side of the slipway, each of said deck means also being provided with a guideway extending longitudinally of said vessel, roller means for accommodating the draglines of the said fishnet, said roller means also being slidably disposed within at least one of the said guideways and means for removably locking said roller means in the guideways therefor and at a point adjacent the rearmost portion of said slipway, whereby when the draglines and wing members for the fishnet are drawn up onto the slipway through the medium of said roller means, said roller means may be unlocked from its rearmost position and shifted to the front end of the guideway therefor, to further assist in drawing the fishnet up the slipway and onto the vessel.

2,898,696
AUTOMATIC FISHING DEVICES

Oscar J. Bolland, Norwood, Ohio

Application May 5, 1958, Serial No. 732,939
1 Claim. (Cl. 43—15)

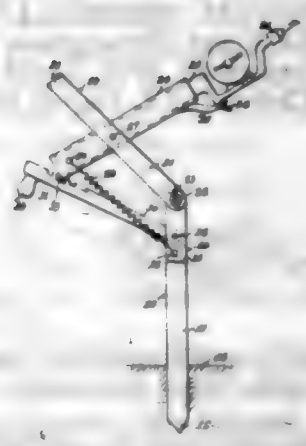


An automatic fishing device comprising a spring wire member formed with a straight portion, a U shaped offset having a first eye below said straight portion, an enlarged resilient loop extending outwardly from said first eye and turning back and a second eye encircling said straight portion and then extending past the straight portion and terminating in a third eye at the free end of said enlarged loop, a separate trigger member encircling the upper portion of said U shaped offset having a hook at one end and an extending portion terminating in a fourth eye, said hook arranged to engage with the free end of said loop when biased downward in tension, a line attached to the upper end of said straight portion, and a second line attached to said third eye on the end of said enlarged loop and said second line threaded through said first eye below said straight portion and through said fourth eye on said trigger member whereby a pull on said second line will release said trigger hook from engagement with the free end of said enlarged loop permitting said enlarged loop to spring open and jerk said second line.

2,898,697
AUTOMATIC FISHING ROD AND POLE HOLDER

William L. Housman, Bay St. Louis, Miss.

Application July 11, 1958, Serial No. 747,941
3 Claims. (Cl. 43—15)



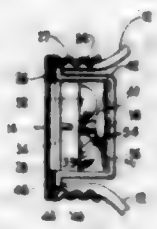
1. In a device of the character described, a vertically disposed post, a pair of arms having lower portions secured to the upper end of said post, said arms further including intermediate outwardly inclined portions and upper spaced parallel portions, a U-shaped bracket including a pair of spaced parallel side sections having their lower ends adjustably connected to the upper portions of said arms, said bracket further including a top piece connecting the upper ends of said side sections to retain

at the front of said melting portion leading upwardly

fixed position with respect to the grip member.

said side sections in spaced parallel relation to each other, a hollow open ended tubular support member pivotally connected to the side sections of said support member, said support member serving to receive and hold a portion of a fishing rod therein, a bar having its lower end pivotally connected to the lower portions of said arms, there being a plurality of spaced apart slots in said bar, a curved finger on an end of said support member for engagement selectively with said slots, a weight connected to the upper portion of said bar, and spring members connected to said support member for bracing said support member rearwardly to snap the fishing rod to catch a fish when said bar is released from engagement with said support member.

2,898,698
ILLUMINATED FISHING LURE
Lara K. Bair, Tulsa, Okla.
Application July 8, 1954, Serial No. 442,063
3 Claims. (Cl. 43—17.5)



3. An illuminated fishing lure adapted to be submerged in a body of water while illuminated and comprising an elongated body of transparent material, an aperture at one end of the body, a funnel member cooperating with the aperture and extending into the body, a reduced neck portion at the opposite end of the body providing a portion having exterior threads thereon, a cap member for the neck portion of the body, a battery powered illuminating unit disposed in the cap member, said cap member having threads engageable with the threaded neck portion for maintaining the illuminating unit in the compartment, transparent sealing means comprising a circular lid member having a peripheral flange portion and covering the illuminating unit, said flange interposed between the end of the neck and the cap member, and gasket means disposed between the flange and the cap member to provide a water tight seal for the illuminating unit.

2,898,699
ARTIFICIAL FISHING LURE
Ernest M. Kushl, Birmingham, Mich.
Application October 10, 1957, Serial No. 689,344
4 Claims. (Cl. 43—42.09)

1. In an artificial fishing lure of the plug type, an elongated body, a wobble plate detachably secured to said body adjacent its forward end comprising a downwardly and forwardly inclined face portion integrally formed with a cradle portion for said body forward end, a fish hook supporting loop conjoined to said cradle portion and having a first element thereof spaced from said plug body and a second element reversely bent to said first element to form a loop, said second element terminating in a lug adapted to seat in a recess in said body adjacent said cradle portion, and fastening means to secure said wobble plate to said body at said cradle portion, said lug and recess being disposed immediately above a portion of said cradle, so that said cradle securely locks said lug in said recess when said cradle is fastened to said plug body.

2,898,700
FISH LURE
Rudolph Shillin, Washington, D.C.
Application April 1, 1954, Serial No. 420,290
2 Claims. (Cl. 43—42.29)

1. A fish lure comprising an elongated spoon and a hook having an elongated shank supported on the spoon so that said shank is biased toward one surface of the spoon, said spoon having a longitudinal slot adjacent the rear end thereof, a portion of the shank passing through said slot whereby a trailing bait may be placed partially within the slot and be clamped therein by said biased shank.

2,898,701
ATTACHMENT FOR FISHHOOKS
Harold S. Stinson, Town and Country, Mo.
Application March 12, 1957, Serial No. 645,619
9 Claims. (Cl. 43—44.6)

1. In combination, a fish-hook having a pair of similar shanks, a curved spring adapted to space apart and connect the upper extremities of said shanks, both shanks being tangent to the curved spring so that the lower portions of the shanks are aligned and normally in abutting engagement and forming a tapered opening, the bend and burr of a fish-hook attached to the lower extremity of one of the shanks, and a portion of the other shank formed to engage the body of a minnow.

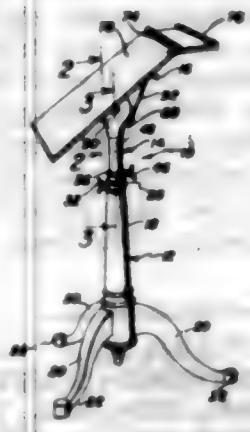
2,898,702
ADJUSTABLE DRAFTING BOARD ASSEMBLY
Edward H. Pignone, Nixon, N.J.
Application February 25, 1958, Serial No. 717,425
1 Claim. (Cl. 45—131)

In an adjustable drawing board assembly comprising a support stand including a vertical extending tubular support sleeve, lock means on said sleeve for engaging a support shaft in said sleeve, an independent collar coaxial with said sleeve including second lock means for engaging the support shaft in said sleeve; a spindle assembly comprising a machined casting for supporting a vertically pivotal drawing board thereon, said casting comprising a body member including a downwardly opening hub, a mounting portion extending vertically from said hub for engagement with a cooperating portion on the drawing board, said mounting portion being normal to said hub including a transverse aperture therethrough for receiving a support shaft upon which the cooperating portion of the board is journalled, one side of said mounting portion

2,898,707
MACHINE FOR THE GRINDING OF SPUR GEARS

a supply of saw chain teeth in end-to-end relation thereon, said trackway having a flat upwardly facing surface por-

including a laterally extending circular serrated portion concentric to the transverse aperture, said serrated portion including radially spaced teeth for engaging similar teeth on the cooperating portion of the drafting board, an abutment lug extending from said hub spaced from and in the plane of the teeth of the serrated portion for engaging an abutment portion disposed in a similar relationship on the cooperating portion of the drafting board



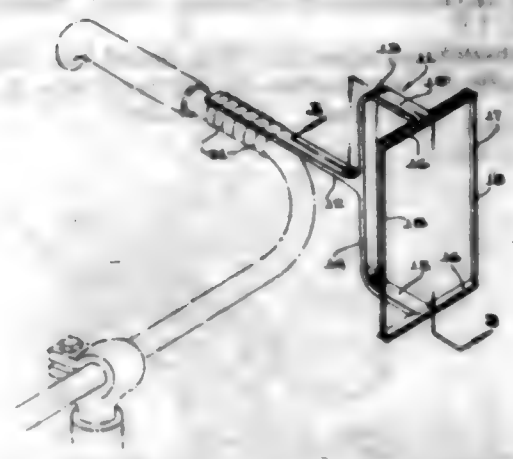
and for orienting said board in a substantially vertical position, and a support shaft secured at its upper end in said hub and depending therefrom for receipt in the sleeve and engageable with the first and second lock means for affording vertical adjustment and horizontal rotation of the drawing board, said support shaft comprising a cylindrical hollow seamless member press fitted and pinned at its upper end in said hub.

2,898,703
CHILD'S GUN GAME
Hervey Warren Small, Dubois, Idaho
Application June 4, 1958, Serial No. 739,767
4 Claims. (Cl. 46—116)

3. A toy comprising a base, a housing mounted on said base, a bar having an opening, slidably mounted on said base, a figured game piece secured to said bar, a coiled spring connected between said base and bar adapted to bias said bar towards the rear end of said base, a pistol pivotally mounted on said base, a pin depending from said pistol movable into said opening of said bar normally holding said bar against the action of said spring, and said pin adapted to move from its position within said opening releasing said bar for rearward movement under the action of said spring, moving said figured game piece wholly within said housing.

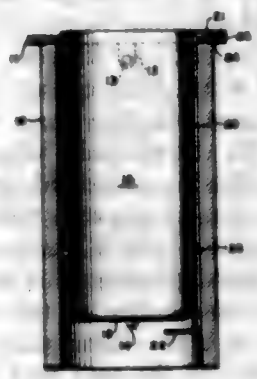
2,898,704
SOUNDING TOY
Karl C. Sattler, Anaheim, Calif.
Application January 17, 1958, Serial No. 709,497
3 Claims. (Cl. 46—178)

1. A sounding toy of the character described comprising a bar-like support member, a yoke rigidly secured to an end of said support member and having opposed arms extending parallel to said bar-like support member, cross bars rigidly secured to the ends of said opposed arms, said cross bars being substantially paral-



lel and co-extensive in length, and respective elastic vibratory band elements connecting the opposed end portions of the cross bars being parallel to each other.

2,898,705
CEMETERY VASE
Axel S. Carlson, Brooklyn, N.N.Y.
Application May 20, 1955, Serial No. 509,873
3 Claims. (Cl. 47—41)



1. A cemetery vase including an annular well of noncorrosive composition material, a rim on said well and an open mouth vase supported in said well flush with the top thereof, means slidably mounted in said well to engage the bottom of said vase to raise it from the well, said means comprising an arm bent inwardly at the bottom thereof and outwardly at the top thereof and normally resting on said rim and means to limit the movement of said arm to prevent its removal from the well.

2,898,706
IMPROVING THE PHYSICAL PROPERTIES OF CLAY SOILS BY TREATING WITH ALKENYL POLYAMINES
John W. Lyons, Reading, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application April 8, 1957
Serial No. 651,187
19 Claims. (Cl. 47—58)

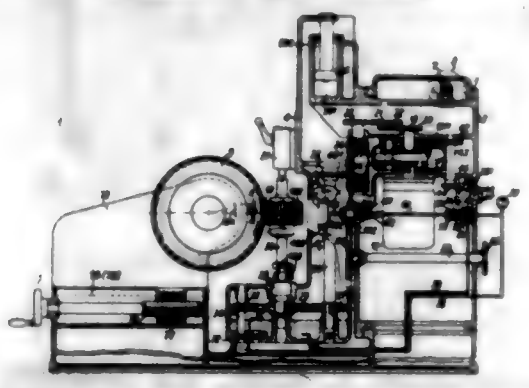
1. A method for the improvement of the soil structure of clay-containing soils comprising the distribution in a clay soil in intimate admixture therewith of from about 0.1 to about 2 weight percent, based on the dry weight of the soil of an alkenyl polyamine, defined by the formula $R—NH(C_2H_4NH)_nH$, wherein R is a higher alkenyl radical containing from 8 to 16 carbon atoms and n is an integer from 1 to 4.

2,898,707

MACHINE FOR THE GRINDING OF SPUR GEARS AND HELICAL GEARS BY THE GENERATING PRINCIPLE

Alfred Rickenmann, Kunnacht, near Zurich, Switzerland, assignor to Reishauer-Werkzeuge A.G., Zurich, Switzerland

Application September 17, 1956, Serial No. 610,133
Claims priority, application Switzerland May 2, 1956
4 Claims. (Cl. 51—95)



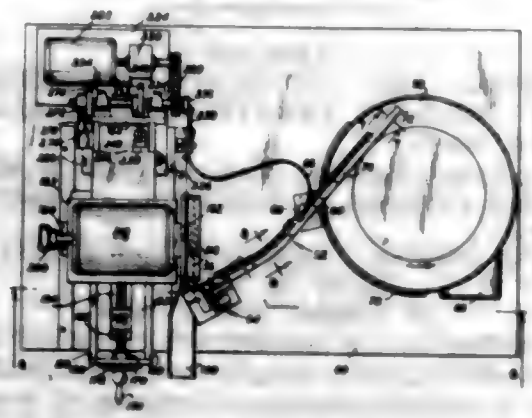
1. A machine for the grinding of spur gears and helical gears by the generating principle, comprising in combination: a base, a grinding slide mounted slidably on the said base, a grinding worm rotatably journalled in the said grinding slide about an axis perpendicular to the direction in which the said grinding slide is slidable, a first synchronous motor mounted on the said grinding slide and having a rotor in driving connection with the said grinding worm, a work piece carrier slide mounted on the said base slidably in a direction perpendicular both to the axis of the said grinding worm and to the direction in which said grinding slide is slidable, centering means mounted on the said work piece carrier slide and adapted to center, and to impart rotation to, a work piece about an axis parallel to the direction in which the said work piece carrier slide is slidable, a second synchronous motor having a rotor in driving connection with the said centering means, and automatic control means operatively connected to the said second synchronous motor and imparting variations in the load angle to the said rotor of the latter corresponding to and compensating the load angle variations on the rotor of the said first synchronous motor so that the position of the work piece relative to the said grinding worm is kept unaffected by the load angle variations occurring on the rotor of the said first synchronous motor while grinding.

2,898,708

AUTOMATIC CUTTER GRINDER

Raymond R. Carlton, Portland, and Peter E. Mortensen, Milwaukie, Oreg., assignors to Omark Industries, Inc., a corporation of Oregon

Application December 3, 1956, Serial No. 625,670
14 Claims. (Cl. 51—98)



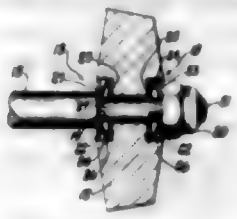
1. In a machine for grinding saw chain cutters formed on teeth having a flat body portion formed with a pair of circular, transverse pivot pin receiving openings, said machine comprising an elongate trackway for containing a supply of saw chain teeth in end-to-end relation thereon, said trackway having a flat upwardly facing surface portion for engaging and supporting said teeth by said body portion thereof, a grinding wheel, means for moving said grinding wheel into predetermined position adjacent an end of said trackway to engage and grind the cutter of a tooth positioned thereat, and a clamping member mounted adjacent said trackway end for clamping a tooth to be sharpened, said clamping member having a pair of hemispherical elements projecting therefrom of a predetermined diameter slightly greater than the diameter of said openings and having their centers spaced apart a predetermined distance equal to the spacing between the axes of said tooth openings, said hemispherical elements being in predetermined position relative to the operative position of said grinding wheel and acting to move the cutter into correct position for engagement by said grinding wheel from an approximately correct position.

2,898,709

ELECTRIC MOTOR DRIVEN KNIFE SHARPENER

Thaddeus E. Bednarski, Milwaukee, Wis., assignor to John Oster Manufacturing Co., Milwaukee, Wis., a corporation of Wisconsin

Application April 1, 1957, Serial No. 649,744
4 Claims. (Cl. 51—102)



3. In an electric motor driven knife sharpener, the combination of: an electric motor; a shaft driven by the motor; an abrasive wheel loosely fitted on the shaft; blade supporting and guiding means adjacent to the wheel to support and guide a blade to be sharpened into proper engagement with the wheel, said means being so disposed that a blade supported and guided thereby, upon being pressed against the wheel, imposes side thrust on the wheel to thereby tend to shift the wheel axially on its shaft; and common means for impositively transmitting torque from the shaft to the abrasive wheel and for yieldingly holding the abrasive wheel in a predetermined operative position with respect to the blade supporting and guiding means, said common means comprising a pair of axially spaced abutments on the shaft, one adjacent to each face of the abrasive wheel, and a spring loaded friction slip-clutch connected between each of said abutments and the adjacent face of the abrasive wheel, the springs of said clutches acting in opposition to one another and the friction forces of the clutches being such that together the two clutches deliver sufficient torque from the shaft to the wheel to overcome the braking effect on the wheel resulting from normal use of the sharpener, whereas said clutches are individually incapable of overcoming said braking effect so that axial shifting of the wheel resulting from abnormal side thrust on the wheel brought about by excessive pressure of the blade against the wheel, disables one of the clutches and thus disrupts the torque transmitting connection between the shaft and the wheel.

2,898,710

LAPPING MACHINE

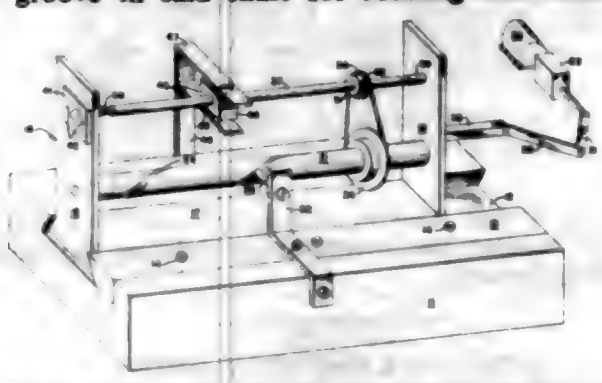
Paul C. Scibetta, Niagara Falls, N.Y., and Louis B. Higdon, Rockville, Md., assignors to the United States of America as represented by the Secretary of the Navy

Application May 27, 1958, Serial No. 738,246
2 Claims. (Cl. 51—157)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A machine for lapping the outside diameter of a

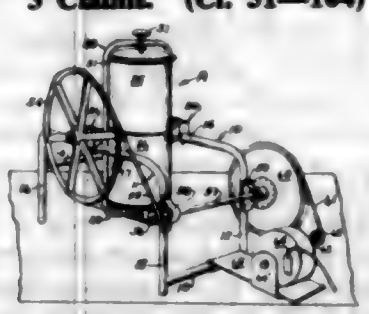
stantially horizontal position a flat sheet of crystalline synthetic resinous material having a truly liquid melt; series with the first part and responsive to the movement

crowned, generally cylindrical work piece which comprises: a bed having a guideway therein, a carriage rotatably supporting the work piece and disposed in the guideway, means connected to the carriage for reciprocating it along the guideway, a shaft having a spiral groove along a portion of its length and rotatably supported by said carriage, a finger fixed to said bed and cooperating with the groove in said shaft for rotating said shaft as the



carriage reciprocates in the guideway, means rotatably connecting the work piece to said shaft and aperiodically indexing the work piece with respect to said shaft, a lap support fixed to said bed, a lap disposed about the work piece and having two complementary segments each resiliently carried by the lap support to provide an internal working surface of about 360° continuously in contact with the work piece as it reciprocates and rotates through the lap.

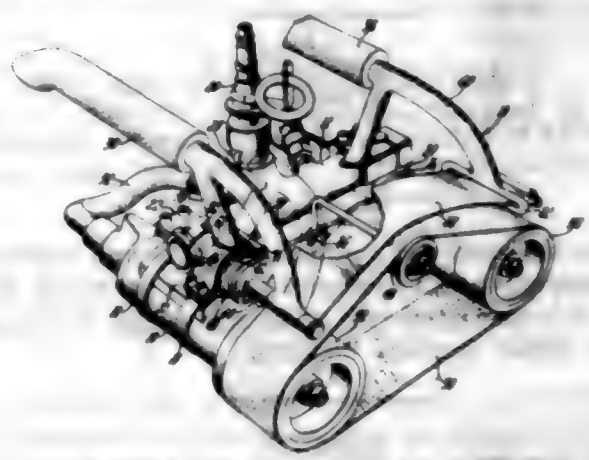
2,898,711
TUMBLER
James A. Kilbane, Jr., Hopkins, and Sydney H. Palmer, St. Paul, Minn.
Application August 14, 1957, Serial No. 678,075
3 Claims. (Cl. 51—164)



1. In a tumbling device, a pair of containers each having a removable top and a closed bottom, a shaft, a pair of U-shaped support members each having a cross member and a pair of spaced leg portions extending therefrom in opposite directions, the outer free ends of said leg portions connected to said shaft, the bottom of each container having a groove formed completely thereacross and adapted to receive a portion of said shaft, clamping means connected to said cross members adapted to bear against the tops of said containers and maintain said tops on said containers and said containers on said shaft and within said U-shaped supports and means for rotating said shaft to move said containers in a circular path end over end on their longitudinal axes about said shaft.

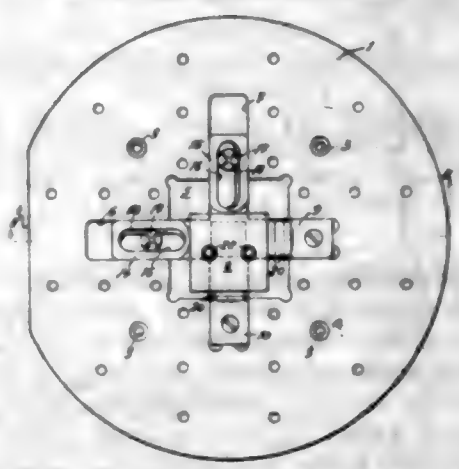
2,898,712
WORK TOOL
Neal E. O'Connor, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application October 10, 1957, Serial No. 689,368
7 Claims. (Cl. 51—170)

1. A belt sander device including a housing member having a pair of axially fixed and rotatable belt pulleys mounted thereon and extended in parallel spaced relation for receiving a belt member therebetween, at least one of said pulleys being power driven, handles provided near each end of said housing, one of said handles being pivotally mounted to said housing and having a lever arm engaged and pivotal therewith, and an idler belt pulley mounted on the end of said lever arm and disposed in parallel spaced relation between said first-



mentioned belt pulleys and in a position to receive said belt thereover, said idler pully being operable with said handle to relieve and tension the belt received about each of said pulleys.

2,898,713
ADJUSTABLE WORK PIECE HOLDER
Åke Bertil Jansson, Huskvarna, Sweden
Application June 28, 1957, Serial No. 668,688
Claims priority, application Sweden July 10, 1956
6 Claims. (Cl. 51—217)

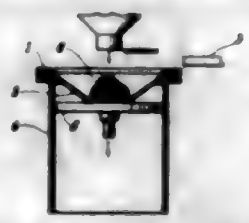


1. An assembly for the adjustable fixing of a work piece in a tool machine, particularly a grinding machine, said assembly including a table adapted to be mounted on the machine, block means slidable parallel to one surface of the table, securing means on the block means operable to fix a work piece thereto, gauge blocks cooperable with the block means, further gauge blocks cooperable with the block means perpendicular to the first named gauge blocks, honed heads positioned between the gauge blocks and further gauge blocks and the table, and adjustable means cooperable with the said table and the block means diametrically opposite the gauge blocks and further gauge blocks to tighten said block means against the gauge blocks and further gauge blocks whereby the block means is movable in two directions perpendicular to each other and the work piece being removable from the block means without changing the position of the block means on the table.

2,898,714
METHOD OF AND APPARATUS FOR PACKAGING FLOWABLE MATERIALS IN THERMOPLASTIC SHEET MATERIAL
Donald George Keith, Balwyn, Victoria, Australia
Application May 19, 1958, Serial No. 736,030
Claims priority, application Australia May 20, 1957
3 Claims. (Cl. 53—30)

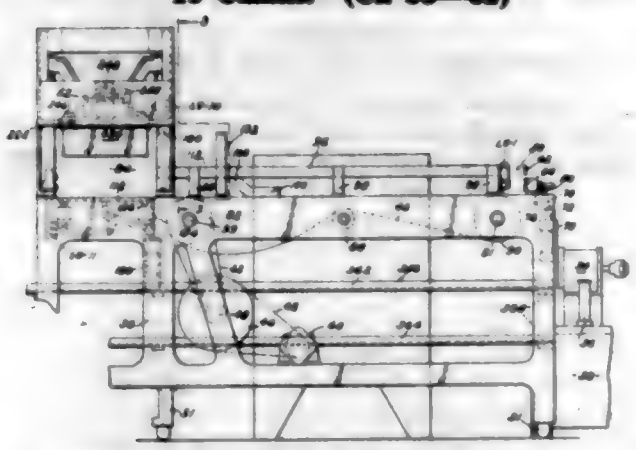
1. A method of packaging a quantity of flowable solid material comprising the steps of: supporting in a sub-

stantially horizontal position a flat sheet of crystalline synthetic resinous material having a truly liquid melt; heating said sheet to bring it to the consistency of a viscous liquid; and then pouring said flowable solid mate-



rial onto the synthetic resinous material and simultaneously allowing the said resinous material to stretch downwardly at a controlled rate under the weight of the solid material while laterally confined.

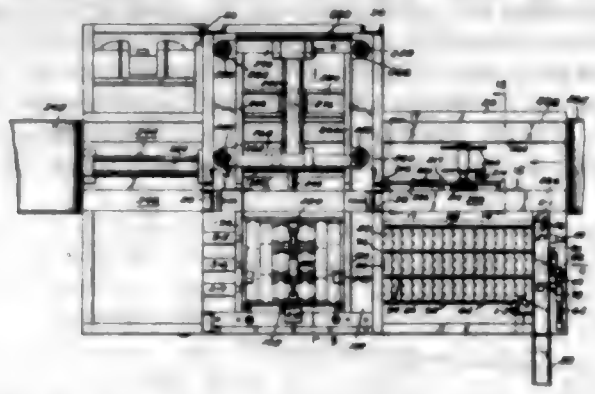
2,898,715
BOTTLE PACKAGING MACHINE
Joseph F. Cella, Bronxville, N.Y., assignor to Cella Machinery, Inc., New York, N.Y., a corporation of New York
Application January 2, 1957, Serial No. 632,887
15 Claims. (Cl. 53—62)



1. A bottle-handling machine comprising, in combination: a crate-supporting station, a bottle-supporting station, means operable between the stations to transfer bottles from the bottle-supporting station to a crate in the crate-supporting station, said means including a yieldably supported bottle carrier yieldable under resistance to movement of a bottle carried thereby improperly seating in a crate, mechanism coupled with said means and responsive to yielding movement of the carrier to cause said means to withdraw such improperly seated bottle from the crate.

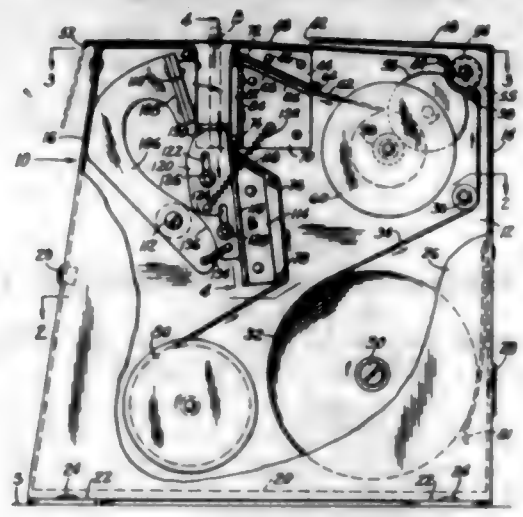
2,898,716
BOTTLE PACKAGING MACHINE
Joseph F. Cella, Bronxville, N.Y., and Paul Gascia, Royal Oak, Mich., assignors, by direct and mesne assignments, to Cella Machinery, Inc., New York, N.Y., a corporation of New York
Application May 14, 1958, Serial No. 737,991
50 Claims. (Cl. 53—62)

1. A bottle handling machine comprising, in combination, a bottle conveyor, a crate conveyor, a bottle carrier supported to reciprocate between the conveyors in timed relation with the movements of bottles and crates on the conveyors, said carrier provided with a pair of spaced bottle gripping members shiftable to engage opposite sides of a bottle on the conveyor, power means mounted on the carrier and including mechanism superposing the gripping members adapted upon actuation by the power means to reciprocate the members to grip or release a bottle disposed between the members, electric control mechanism coupled with said means and including one part responsive to movement of bottles on the bottle conveyor to cause said means to actuate the members to grip bottles on the conveyor and including another part connected in series with the first part and responsive to the movement of the carrier as it shifts toward a crate to cause said



means to actuate the members to release the bottles gripped therebetween.

2,898,717
BAG SEALING AND PRINTING DEVICE
Vincent J. Nicoll, Plymouth, Mass.
Application July 8, 1955, Serial No. 520,703
8 Claims. (Cl. 53—131)



1. A device for sealing a bag end and applying pricing or other indicia thereto, comprising a casing having a recess in which a bag end is insertible; means for supporting an adhesive tape with a portion thereof extending across said recess disposed for flexure by the inserted bag end into a bag embracing position; a plate mounted in fixed position within the casing at one side of the recess bearing selected indicia; means within the casing for inking the plate; and presser means pivotally mounted at the other side of the recess actuated by movement of the inserted bag end in a direction substantially parallel to the plane of the plate to press the bag embracing portion of the tape against the bag end and against the plate, for sealably engaging said tape portion about the bag end while simultaneously imprinting the same.

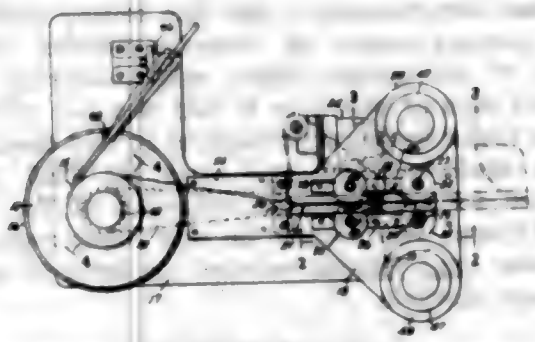
2,898,718
MACHINE FOR PACKAGING LUGS
Grant N. Willis, Bristol, Conn., assignor to Cinch Manufacturing Corporation, Chicago, Ill., a corporation of Illinois
Application February 11, 1957, Serial No. 639,542
8 Claims. (Cl. 53—196)

1. A machine for automatically packaging lugs and the like comprising means forming a guide channel for receiving a row of upright lugs in an aligned oriented row, drive means on opposite sides of the channel for advancing a row of juxtaposed lugs along the channel, means for feeding a pair of flexible pressure sensitive adhesive strips to opposite sides of a row of lugs in the channel, pressure members on opposite sides of the channel resiliently engageable with the adhesive strips on opposite sides of the lugs to press the strips into firm

gradually declining in a horizontal plane to form a V, outrigger portions one on either side of said rounded

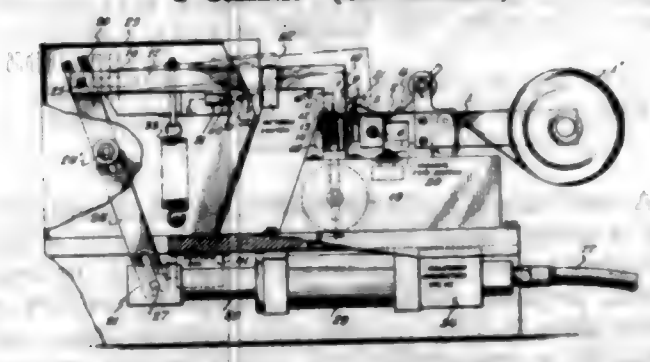
nected with said tines for elevating said tines and thereby pulling them partially through said groups of holes to

engagement with the lugs as the lugs are advanced between the pressure members by said driving means to



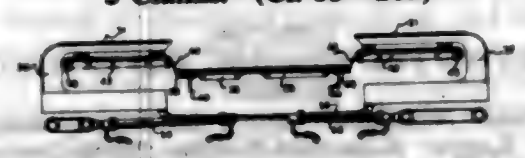
provide a self-supporting row of lugs, and take-up means for coiling said self-supporting row of lugs.

2,898,719
WIRE TAGGING MACHINE
Thomas A. Guleni, Springfield Gardens, N.Y., assignor to Sperry Rand Corporation, Great Neck, N.Y., a corporation of Delaware
Application January 3, 1957, Serial No. 632,324
5 Claims. (Cl. 53—198)



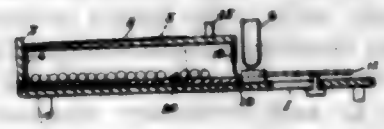
1. A wire tagging machine for use with a tape dispenser, comprising a platen over which the tape is intermittently drawn with its tacky side up, an operating foot movably mounted above the platen and adapted in one position to engage and adhere to the end of the tape, means for imparting to said foot limited upward and forward motion by which the end of the tape is lifted, peeled off and folded around a wire placed thereon, means for causing descent of said foot to press the tacky side of the folded tag end of the tape against the same side of the tape on the platen, means for returning said foot to move the tape with it to its first mentioned position, and means for severing the tag end from the body of the tape.

2,898,720
WRAPPING MACHINE
Edward A. Foley, Laurel, Miss., assignor to Masonite Corporation, Laurel, Miss., a corporation of Delaware
Application June 8, 1955, Serial No. 514,062
5 Claims. (Cl. 53—209)



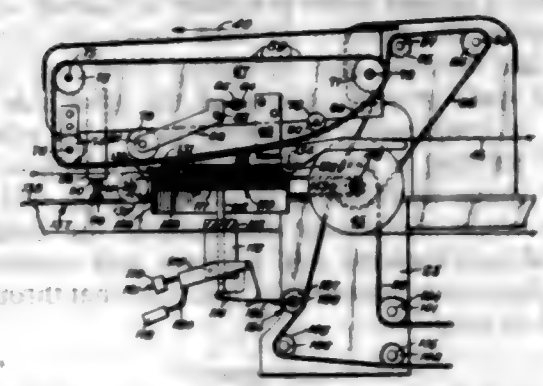
1. A wrapping machine for wrapping articles of the class described comprising in combination a pair of paper folding and pressing platen members for successively applying wrappers about the articles with the side portions of each wrapper in overlapped position, said platen members being suspended beneath a pair of spaced apart cantilever supported movable carriages, a wrapping table consisting of a plurality of pairs of opposed horizontally positioned parallel rolls, the members of each pair of rolls being supported in spaced-apart relationship on either side of an endless chain conveyor positioned in a channel running longitudinally through the machine, said conveyor having a plurality of lugs adapted to feed the articles onto the wrapping table one behind the other and spaced apart, and said lugs so pivoted as to permit those positioned beneath the articles to swing forwardly and downwardly out of engagement therewith.

2,898,721
BAG FILLING MECHANISM
Allen W. Merrell, Detroit, Mich., assignor to Sattley Company, Detroit, Mich., a corporation of Michigan
Application November 23, 1955, Serial No. 548,718
1 Claim. (Cl. 53—244)



In combination, a horizontal support on which a bag to be filled may be laid on its side, an abutment hinged to said support for engagement with the bottom of the bag, spring latch means releasably holding said abutment alternatively in a vertical operative position or in a horizontal position, and an independent open-ended chute extending into the bag to hold the bag distended, the open end of the chute within the bag pressing the bottom of the bag against said abutment, a bevelled lug mounted transversely within said chute near the other end thereof, said lug presenting an inclined face to objects entering the chute, and means for pushing successive objects into said chute and toward said lug.

2,898,722
MACHINE FOR USE IN THE PACKAGING OF PRODUCT
Bernard T. Hennges, Chicago, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
Application April 15, 1953, Serial No. 348,932
17 Claims. (Cl. 53—247)



1. A machine for use in placing product on a flat piece of material, said machine including a conveyor having a predetermined terminus, power means for moving said product along said conveyor in a given direction toward said terminus, and means for urging said piece upwardly toward said conveyor with only a portion of said piece extending beyond said terminus in said direction, said power means extending beyond the terminus of said conveyor in said direction whereby said product will frictionally engage said portion of said piece and draw it past said terminus to position said product on said piece.

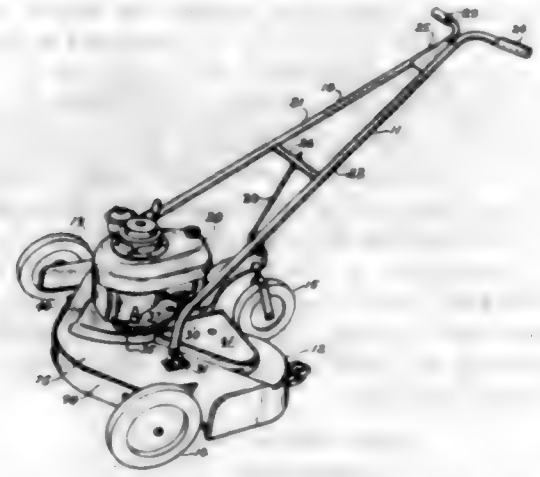
2,898,723
MULTIPLE BLADED MOWER
Leonard B. Goodall, Warrensburg, Mo., assignor to Goodall Equipment, Inc., Minneapolis, Minn., a corporation of Minnesota
Application June 15, 1956, Serial No. 591,703
1 Claim. (Cl. 56—25.4)

A multiple blade rotary mower comprising in combination a housing, said housing comprising a downwardly dished member providing a peripheral wall closed except for a discharge opening at one side of the housing, the front of the housing providing a rounded nose wall

moval of the bobbin drive mechanism and without interbination with a twisting machine having a rotatable hol-

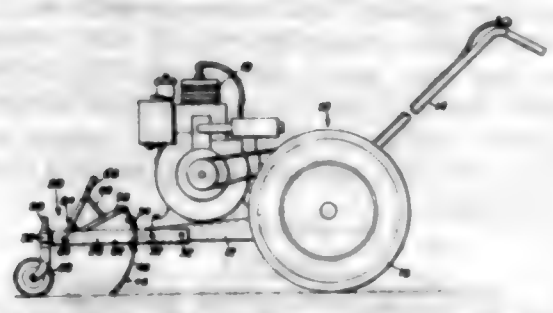
on the conveyor and including another part connected in opposite sides of the lugs to press the strips into firm

gradually declining in a horizontal plane to form a V, outrigger portions one on either side of said rounded nose and each having a supporting wheel journalled therein for rotation, each side of said housing providing a linear wall parallel to the direction of motion of the mower terminating in a lobate wall, the other side of each said lobate walls terminating in a common linear wall, one of said linear side walls having a discharge opening therein, a third supporting wheel secured to said housing and adjacent said common linear wall and between said lobate walls and pivoted for rotation about a vertical axis, smaller wheels positioned one on either one of said lobate walls, three blades positioned for rotation within said housing, one providing a leading blade and having a rotating periphery positioned in slightly spaced relation to said forwardly directed nose, two



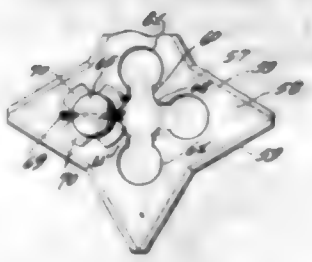
smaller blades, each having a rotating periphery positioned in slightly spaced relation from one of said lobate walls, a baffle portion providing a partial continuation of one of said lobate walls extending slightly inwardly to the juncture of said common linear wall and said lobate wall, a second baffle providing a channel adjacent and following the contour of said forwardly extending nose of said housing and extending from one of said side linear walls to said opening at the other side linear wall and in cooperation with said forwardly extending nose wall forming a downwardly dished elongated confine of V shape terminating in said opening, said baffle having a height dimension substantially the height dimension of said forward wall adjacent said opening and having a dimension substantially less than that throughout the rest of its extension.

2,898,724
POWER DRIVEN LAWN RAKE
Harry A. Robinson, Elkhart, Ind.
Application August 12, 1957, Serial No. 677,445
6 Claims. (Cl. 56—27)



1. An attachment for a small vehicle which has a chassis, said attachment comprising a rake that has a rigid frame provided with sides, a frame member extending across and secured to said sides, said frame member having upper and lower walls that are spaced from each other and that are provided with groups of holes, a group of tines, means holding said tines in predetermined spaced relationship to form a unit, said tines passed through said groups of holes, and means connected with said tines for elevating said tines and thereby pulling them partially through said groups of holes to dump the accumulation around the tines and to clean the tines simultaneously, said tine raising means including a second frame, an elongate member constituting a part of said second frame, means securing the upper parts of each of said tines to said elongate member, said second frame having arms secured to said elongate member, a shaft to which said arms are fixed, said shaft mounted for oscillation in said sides of the first mentioned frame, and a comb on said frame member along the lower edge thereof between the teeth of which said tines are movable.

2,898,725
ROTARY MOWER CUTTER BLADE STRUCTURE
John F. Roesel, Wildwood, Fla.
Application June 11, 1956, Serial No. 590,479
2 Claims. (Cl. 56—295)



1. A multi-edged knife for rotary mower blades comprising a mower blade having an opening therein a star-shaped plate having four equiangularly spaced acute angle triangular portions, each of said triangular portions on opposite sides having reverse face cutting edges, said plate having a cross-shaped slot having arcuate enlarged end portions and an enlarged central opening, bolt means mounted on the periphery of the blade on the upper surface thereof adapted to slide within said cross-shaped slot and having an enlarged head at the upper end thereof, said bolt means extending upwardly beyond the blade, a sleeve slidably mounted on said bolt means adapted to fit within the arcuate enlargements at the ends of said cross-shaped slot but of greater diameter than the body portion thereof, said sleeve at the upper end thereof having four equiangularly spaced flanges adapted to coincide with the X-shaped slot when positioned in the center thereof and to permit the removal of the multi-edged knife from said bolt means the head of said bolt means being adapted to pass through the opening at the center of said cross-shaped slot, a spacer member on said bolt means supporting said sleeve, and cotter pin means piercing the upper end of said bolt means and adapted to retain said sleeve within the arcuate enlargements at the end of said slot.

2,898,726
APPARATUS FOR WINDING SLIVER AROUND BOBBIN
Shozo Noda, Nishi-ku, Nagoya-shi, Japan, assignor to Howa Kogyo Kabushiki-Kaisha Nishi-Kasugai-gun, Aichi-ken, Japan
Application May 15, 1957, Serial No. 659,274
Claims priority, application Japan May 30, 1956
4 Claims. (Cl. 57—54)

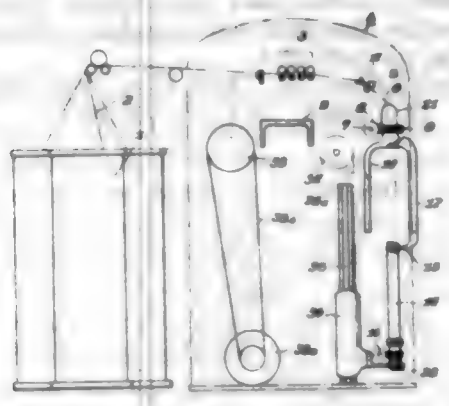
1. In a drawing flyer frame compriaing a draft assembly, a trumpet, calendar rollers, a flyer device having a driven top portion, a bobbin drive mechanism arranged under the flyer, inclinable means operably associated with said bobbin drive mechanism and inclinable independently thereof for releasably supporting a bobbin so that it may be inclined independently of said drive mechanism thereby making it possible to replace a filled bobbin with an empty bobbin without necessitating the shifting or re-

lubly carried on the latter, the combination of a barrel

2,898,732

veyor having a plurality of lugs adapted to feed the articles

moval of the bobbin drive mechanism and without interference with the flyer device, said inclinable means com-



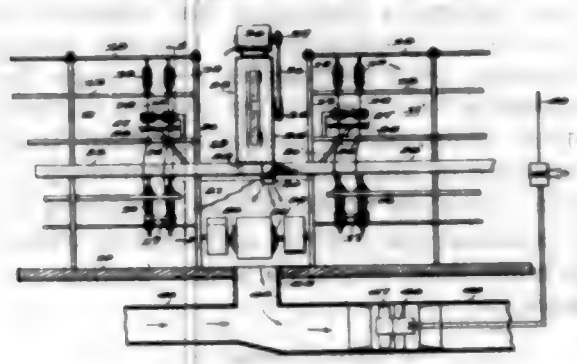
prising a bobbin supporting spindle movable between an upstanding position and a position inclined relative to the upstanding position, means to selectively position the spindle in both positions.

2,898,727

APPARATUS FOR CONTROLLING EXHAUST OF MOTOR ALLEY HEAT IN TEXTILE WORK ROOMS

Agnew H. Bahnson, Jr., Winston-Salem, N.C.

Application June 15, 1956, Serial No. 591,765
15 Claims. (Cl. 57—56)



1. In a textile room the combination comprising a machine such as a spinning frame on the floor of said room for simultaneously performing a textile operation upon a plurality of strands of textile material spaced along the length of said machine, said machine including a motor at one end thereof for driving the same, a suction collector system comprising a plurality of intake orifices disposed adjacent the strands respectively for collecting broken ends and loose particles, a central collection duct extending longitudinally of said machine and in communication with said orifices, a suction fan and filter unit to which said central duct is conected to establish a suction therein, said unit having a filtered air discharge outlet, an exhaust duct, said exhaust duct having an entrance opening thereto locnted in the vicinity of said drive motor and the filtered air discharge outlet from said filter unit, and means for establishing a suction in said exhaust duct thereby to draw off from the room the heated air in the vicinity of said drive motor and the filtered air discharged from said outlet of said filter unit.

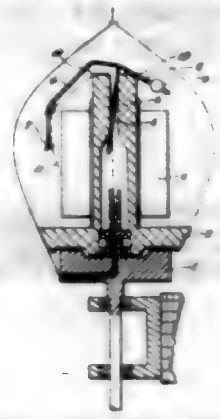
2,898,728

DEVICE FOR THROWING OR TWISTING THREADS, FIBRES AND SIMILAR PRODUCTS

Marcel Fleuret, Saint-Maurice l'Exil, France, assignor to Societe Rhodiaceta, Paris, France, a body corporate of France

Application January 28, 1958, Serial No. 711,616
Claims priority, application France March 21, 1957
5 Claims. (Cl. 57—58.83)

1. A device for throwing and twisting threads, fibres and like flexible elongated members comprising, in combination with a twisting machine having a rotatable hollow spindle, a channeled coaxial inlet element disposed thereon and provided at its upper end with a ring-shaped surface, and a thread supply bobbin disposed around said inlet element, a thread guide having a portion thereof



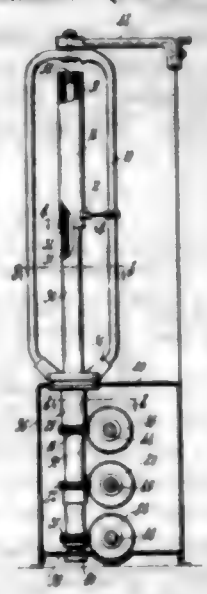
bearing on the ring-shaped surface of the inlet element and a portion provided with at least one eyelet situated below the level of the upper end of the inlet element, so that thread passing from the supply bobbin into the hollow spindle travels over the ring-shaped surface in contact therewith.

2,898,729

ROVING FRAME LIFTING SPINDLE

Gordon C. Anderson, Biddeford, and David B. Hopkinson, Kennebunk, Maine, assignors to Saco-Lowell Shops, Biddeford, Maine, a corporation of Maine

Application February 10, 1958, Serial No. 714,395
6 Claims. (Cl. 57—95)



1. In a textile frame or the like, a traversing spindle mechanism comprising a pair of spaced coaxial driving shafts having axially extending axial driving means, an axially movable bobbin driving member coaxial with said shafts in driving engagement with said axial driving means for reciprocating axial movement relatively to said driving shafts and for rotation relatively to at least one of said shafts and means for driving said shafts at alternating relative differential speeds, said bobbin driving member being reciprocated axially relatively to said shafts by rotation of said shafts at said alternating relative differential speeds.

2,898,730

WATCH MOVEMENT INCLUDING A SWEEP SECONDS HAND

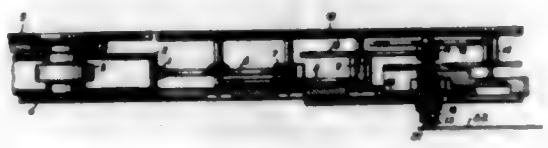
Joseph Bamat, Granges, Switzerland, assignor to Amida S.A., Granges, Switzerland, a Swiss firm

Application November 2, 1956, Serial No. 620,042
Claims priority, application Switzerland November 9, 1955
1 Claim. (Cl. 58—59)

In a movement for a watch including a frame, a socket rigidly secured to said frame and a cannon pinion revo-

passed through said groups of holes, and means con- empty bobbin without necessitating the shifting or re-

lubly carried on the latter, the combination of a barrel provided with an annular series of teeth, an intermediate wheel meshing with the barrel teeth, a large driving gear located eccentrically of the movement and controlled by the intermediate wheel, a second gear controlled by the large driving wheel, spindles for said wheel and gears, a train wheel bridge in which is revolubly journaled at least



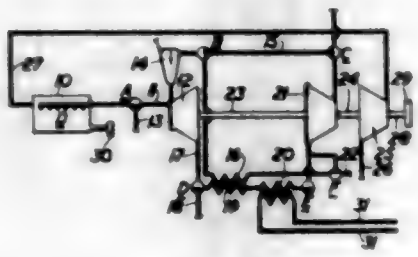
one of said spindles and extending partly over the barrel at a small distance from said barrel to form a gap between said train wheel bridge and the surface of the barrel facing same, a sweep seconds gear controlled by the second gear and including a wheel extending into the gap between the train wheel bridge and the surface of the barrel facing the latter and a seconds hand coaxially rigid with said seconds gear wheel.

2,898,731

POWER PRODUCING EQUIPMENT INCORPORATING GAS TURBINE PLANT

John Charles Barr, Ascot, England, assignor to Power Jets (Research & Development) Limited, London, England, a British company

Application September 8, 1954, Serial No. 454,659
Claims priority, application Great Britain September 11, 1953
1 Claim. (Cl. 60—13)



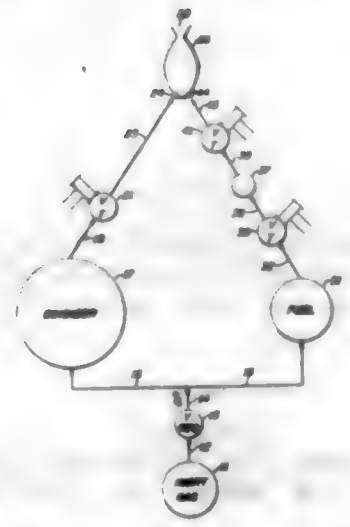
Power plant comprising in combination rotary compression means, a turbine, a driving connection between the compression means and the turbine, a combustion chamber, a heat exchanger, a first duct system connecting an outlet of the turbine through one side of the heat exchanger to the inlet of the compression means, a second duct system connecting an outlet of the compression means through the combustion chamber to the inlet of the turbine, a third duct system connecting an atmospheric air inlet through the other side of the heat exchanger to the second duct system upstream of the combustion chamber, an internal combustion engine, a duct connecting the exhaust of the engine to the inlet of the turbine, first valve means in said first duct operable in a first position to provide a free gas flow through said first system, and in a second position to provide an outlet to the atmosphere for gas from the turbine, second valve means in the second duct system operable in a first position to provide a free gas flow through said second system, and in a second position to provide an outlet to the atmosphere for gas from the compression means, and a third valve means in the third duct system operable in a first position to provide a free gas flow through said third system and in a second position to prevent said free gas flow.

2,898,732

ROCKET PROPULSION METHOD USING PHOSPHORUS TRIAMIDE ROCKET FUEL

Don R. Carmody, Crete, and Alex Zletz, Park Forest, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Application January 29, 1952, Serial No. 268,843
14 Claims. (Cl. 60—35.4)



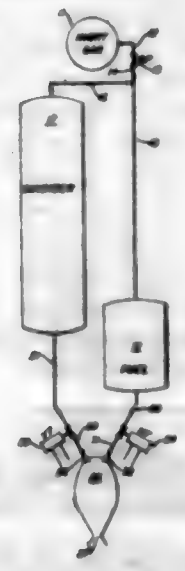
1. A reaction propulsion method, which method comprises injecting separately and simultaneously into a combustion chamber a hypergolic fuel consisting essentially of an N,N',N''-phosphorous triamide having the generic formula, $(R_2N)_3P$ wherein P represents the element phosphorus, N represents the element nitrogen and R represents hydrocarbon radicals selected from the group consisting of aliphatic radicals containing from 1 to 4 carbon atoms and cyclic radicals containing from 3 to 4 carbon atoms, and a nitric acid oxidizer which contains not more than about 10 weight percent of non-acidic materials.

2,898,733

ROCKET PROPULSION METHOD

Don R. Carmody, Crete, Evan A. Mayeris, Chicago, and Alex Zletz, Park Forest, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

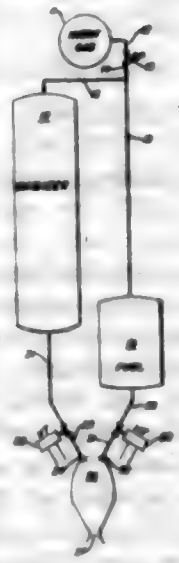
Application September 16, 1953, Serial No. 380,452
4 Claims. (Cl. 60—35.4)



1. A rocket propulsion method which comprises injecting separately and substantially simultaneously into the combustion chamber of a rocket motor a nitric acid oxidizer selected from the class consisting of red fuming nitric acid and nitric acid-oleum mixtures containing about 20% of oleum and a liquid rocket fuel consisting

of (*a*) at least about 50 volume percent of trimethyltrithiophosphite and the remainder essentially only a liquid hydrocarbon mixture which boils over the range of about 250° to 400° F. being derived from the liquid product of the pyrolysis of a member of the class consisting of ethane, propane, butane, propylene, butylene, naphthas and gas oils in the vapor phase at a temperature between about 1250° and 1800° F. at a cracking zone pressure of not more than 100 p.s.i.a. and for a cracking zone residence time between about 0.05 and 5 seconds, by separating a liquid product from other cracking products and distilling said liquid product to obtain said mixture, said mixture being characterized by a hypergolic reaction when contacted with red fuming nitric acid at about +75° F., said oxidizer and said fuel being injected in an amount and at a rate sufficient to initiate a hypergolic reaction and to support combustion of the fuel.

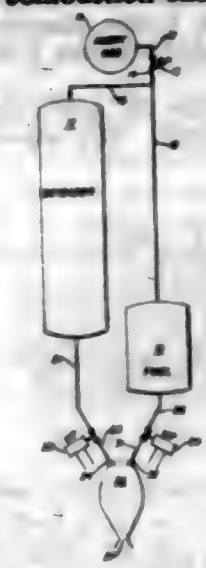
2,898,734
ROCKET PROPULSION METHOD
Don R. Carmody, Crete, Evan A. Mayerle, Chicago, and Alex Zletz, Park Forest, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application September 16, 1953, Serial No. 380,453
10 Claims. (Cl. 60—35.4)



1. A method of rocket propulsion, which method comprises bringing together separately and substantially simultaneously into the combustion chamber of a rocket motor a nitric acid oxidizer and a liquid fuel to effect a hypergolic reaction and discharging gaseous reaction products through an exit orifice wherein said liquid fuel consists essentially of between about 15 and about 85 volume percent of a dialkyl disulfide which disulfide alkyl groups contain not more than 2 carbon atoms and the remainder a trialkyl trithiophosphite, which trithiophosphate alkyl groups contain not more than two carbon atoms.

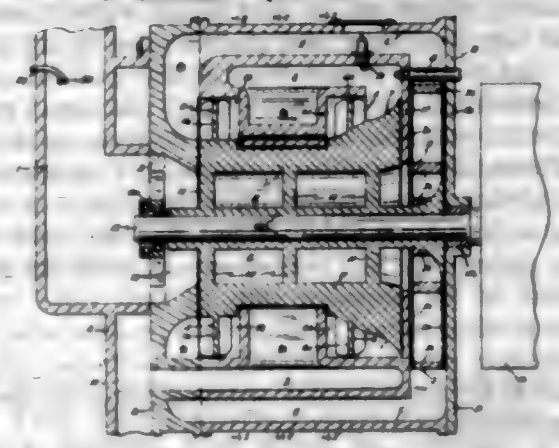
2,898,735
ROCKET PROPULSION METHOD
Don R. Carmody, Crete, and Evan A. Mayerle, Lansing, Ill., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application August 12, 1954, Serial No. 449,398
3 Claims. (Cl. 60—35.4)

1. A method of propelling a rocket, which method comprises bringing together separately and substantially simultaneously into the combustion chamber of a rocket motor, a nitric acid oxidizer and 2-chloro-1,3,2-oxathiaphospholane and discharging the gaseous decomposition products from said combustion chamber through an exit



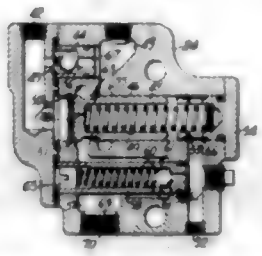
nozzle, under conditions of temperature and oxidizer/fuel ratio such that a hypergolic reaction occurs.

2,898,736
PLURAL COMBUSTION PRODUCTS GENERATORS IN RING COAXIAL WITH A TURBINE
Robert F. Ely, Spokane, Wash.
Application May 6, 1957, Serial No. 657,217
9 Claims. (Cl. 60—39.37)



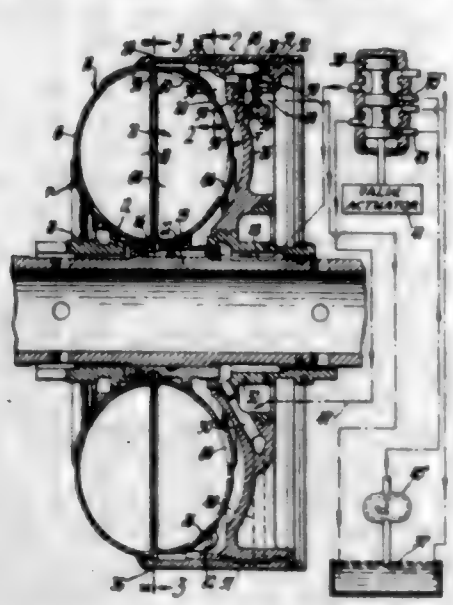
1. In a turbine utilizing combustion gas as the motive fluid, a central shaft, a tubular rotor mounted on said shaft, a shell surrounding the rotor with running clearance therebetween and having support bearings for said shaft, a blower fan connected to said shaft in the shell extending across one end of the rotor operable to draw air through the rotor and discharge it outwardly, combustion chambers in said shell around the rotor and having narrow discharge throats extending in a tangential direction toward the rotor periphery and having outlets adjacent the rotor surface, the rotor having faces against which gas discharged through said throats strike to impart a rotative force to the rotor, the shell having exhaust passages opening to said rotor adjacent to said throats and spaced in the direction of travel of said gases out of the throats from the outlets of the throats, said shell having air passages extending from the periphery of the blower fan lengthwise within said shell around said combustion chambers and exhaust passages to the opposite end of the shell and thence inwardly toward the rotor, and additional passages in said shell extending lengthwise of the rotor between the throats and the exhaust passages and thence outwardly into the combustion chambers, fuel nozzles extending into the chambers, fuel igniting means in the chambers, said rotor having compressor blades at one end receiving the air directed inward from said first air passages forcing the air into said additional passages and having compressor blades at its other end forcing the air from said additional passages continuously into the combustion chambers.

2,898,737
FLOW CONTROL VALVE
Harvey W. Rockwell, Cedar Rapids, Iowa, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application December 20, 1957, Serial No. 704,041
7 Claims. (Cl. 60—52)



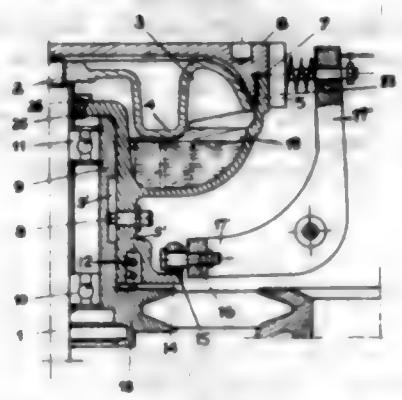
1. An automatic volumetrically and pressure operated relay valve comprising: a valve body with interior walls forming a bore and a pair of axially spaced annular recesses communicating with said bore; first and second pressure fluid input passages communicating, respectively, with said bore; a connecting passage between said input passages; a check valve in said connecting passage allowing hydraulic fluid to flow from said second input passage to said first input passage; a working fluid output passage; a fluid relief passage; a piston valve slidably disposed in said bore having an end in communication with said first input passage and its other end in communication with the said output passage; an orifice in said piston valve face; biasing means urging said piston valve toward said first fluid input passage; said piston valve being shiftable against said biasing means from a first position wherein fluid is prevented from flowing from said input passages to said relief passage, to a second position upon a pressure differential at its ends reaching a predetermined amount wherein said second input passage is in communication with the said fluid relief passage, and further shiftable against the said biasing means upon the pressure differential at the opposite ends of said valve reaching a second predetermined amount to a position where both input passages are in communication with the relief passage; said first predetermined amount being less than said second predetermined amount.

2,898,738
HYDRODYNAMIC DRIVE DEVICE
Darrel R. Sand, Plymouth, and Thomas R. Zimmer, Jr., Livonia, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 12, 1955, Serial No. 533,743
6 Claims. (Cl. 60—54)



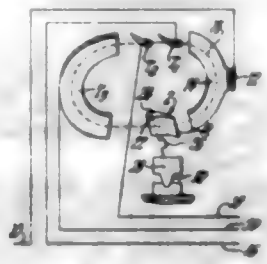
4. A hydrodynamic drive device capable of being filled and emptied of fluid comprising, rotatable pump and turbine members together cooperating to define a fluid flow path therebetween, means for filling said device with fluid, said device having a fluid discharge opening between the pump and turbine members at their outermost radial points, and means mounted on said turbine member in the path of the fluid discharged through said opening, said means comprising a ring having a plurality of blades thereon spaced circumferentially from each other, said ring being telescopically received by said turbine member and secured thereto adjacent said opening.

2,898,739
HYDRAULIC COUPLING
Charles Boegle, Claye-Souilly, France, assignor to Societe Anonyme Procedes Sauter, Paris, France, a corporation of France
Application May 1, 1956, Serial No. 581,937
Claims priority, application France May 6, 1955
14 Claims. (Cl. 60—54)



1. An hydraulic coupling with an hydraulic medium for connecting an input shaft with an output shaft comprising a first rotor member operatively connected with said input shaft, a second rotor member operatively connected with said output shaft, said first rotor member and said second rotor member having generally vertical axes, said first rotor member overlying said second rotor member, and said second rotor member when at rest containing said hydraulic medium, means enabling relative axial movement of one of said rotor members with respect to the corresponding shaft, spring means for axially biasing said second rotor member towards said first rotor member, a pluality of vanes in each of said rotor members disposed opposite one another, and means for selectively engaging and disengaging said hydraulic coupling by axially moving one of said rotor members relative to the other under the influence of said spring means including means connected with said first rotor member for raising the liquid level of said hydraulic medium to a level at which said medium contacts said vanes in both of said rotor members.

2,898,740
TRANSMISSION
Oliver K. Kelley, Bloomfield Hills, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 22, 1958, Serial No. 737,162
6 Claims. (Cl. 60—54)



1. In a hydrodynamic torque converter having an impeller rotatable about an axis for transmitting torque to

2,898,744

for adiabatic expansion therein, and means for conduct-

a coaxial turbine rotor through circulating fluid, the combination of a radially outer flow directing surface and a radially inner flow directing surface associated with each of said rotors defining a toroidal path for the liquid through said rotors and from each of said rotors to the other, and a reaction element between the outlet of the turbine and the inlet of the impeller and including angularly adjustable reaction blades disposed between radially inner and radially outer flow directing reaction surfaces which confine the circulating liquid to said toroidal path from the turbine to the impeller, said flow directing reaction surfaces being parts of surfaces of concentric cylinders coaxial with said impeller, each reaction blade being rotatable on an axis which lies in a plane containing the axis of rotation of the turbine and which is inclined to a plane tangent to one of the cylindrical surfaces at the point where the blade axis intersects said cylindrical surface.

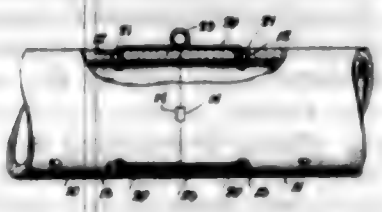
2,898,741

SPRING CLIP FOR PERFORATED PIPES AND THE COMBINATION

Frank H. Milliken, Bowerston, Ohio, assignor to The Bowerston Shale Company, Bowerston, Ohio, a corporation of Ohio

Continuation of application Serial No. 95,932, May 28, 1949. This application May 9, 1950, Serial No. 160,944

4 Claims. (Cl. 61—11)



1. A drain pipe combination comprising a pair of drain pipes having drainage holes through the wall thereof adjacent at least one pair of abutting ends of the pair of pipes, the pipe ends being in direct contact with each other, means to secure the abutting pipe ends together and in alignment including solely a plurality of spring clips spaced circumferentially around the pipe at adjacent ends thereof; one spring clip including a rod having retaining means at one end bent substantially at right angles thereto and of a size to be inserted in a hole in the pipe, a retaining means at the other end of the rod bent substantially at right angles thereto and of a size to be inserted in a hole in the abutting pipe, the two retaining means being spaced apart a distance less than the spacing between holes adjacent the end of abutting pipe ends, the retaining means having a length adapted to extend through the wall of the pipe, and spring means in the rod of at least one wave conformation in a plane at right angles to the retaining means and between the retaining means formed by at least one bend to give substantial longitudinal extensibility for the spacing between the retaining means.

2,898,742

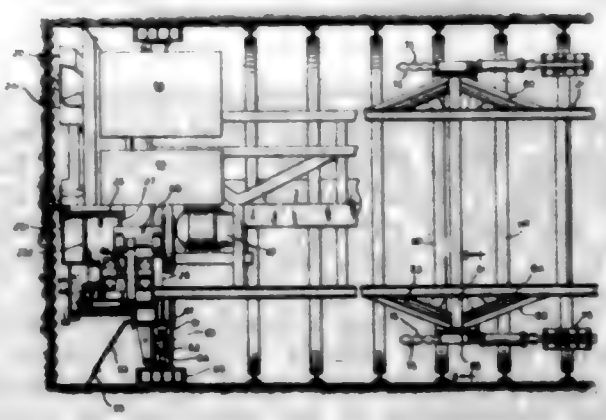
ROTARY TUNNELING MACHINE HAVING RATCHETING ADVANCING AND RETRACTING MEANS

James S. Robbins, St. Paul, Minn., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Application March 8, 1957, Serial No. 644,828

5 Claims. (Cl. 61—84)

1. In a tunneling machine, a main frame having a rotary boring head journalled thereon, and having means mounted thereon for driving said boring head, an elongated jumbo connected at its front end to said main frame and projecting rearwardly of the latter, a sliding shoe for slidably supporting said main frame on a tunnel floor, means for supporting a rearward portion of said jumbo on the tunnel floor and for advancing and retractably moving said main frame and rotary boring head with respect to the working place including a pair of parallel spaced elongated rails supported on the tunnel wall in laterally spaced relation with respect to said jumbo, supporting members extending angularly outwardly and downwardly from said jumbo and having sliding shoes mounted on the lower ends thereof, each being slidably



supported on one of said rails and retained from lateral movement with respect thereto, a separate ratchet device slidably supported on each of said rails for extensible and retractable movement therealong and having slidable engagement with opposite sides of said rails for retaining said ratcheting devices from lateral movement with respect thereto, and hydraulic cylinder and piston devices connected between said support members and said ratcheting devices for extensibly and retractably moving said jumbo along said rails and extensibly and retractably moving said boring head with respect to the working place.

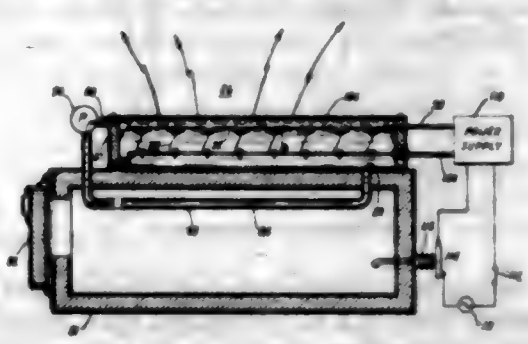
2,898,743

ELECTRONIC COOLING DEVICE AND METHOD FOR THE FABRICATION THEREOF

William E. Bradley, New Hope, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Application July 23, 1956, Serial No. 599,474

8 Claims. (Cl. 62—3)



1. In the art of refrigeration, the method which comprises cooling a heat load by maintaining said heat load in intimate heat-exchange relation with a semiconductive element containing a minority-carrier emissive potential barrier and also containing a region of radiative-recombination material adjacent said barrier, and passing a current across said barrier in the forward direction to inject minority-carriers into said region thereby to produce characteristic electromagnetic radiation from said body, said current having a value lying in a range between a lower limit greater than zero and an upper limit for which the heating effect of said current due to the resistance of said body becomes as great as the cooling effect exerted by said current.

manually operable outlet means affording access from

2,898,749

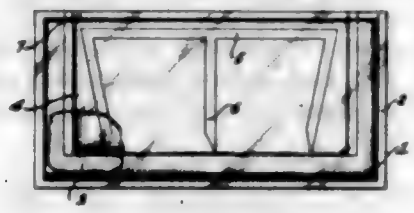
UNIVERSAL JOINT ADJUSTING MEANS

and emptied of fluid comprising, rotatable pump and peller rotatable about an axis for transmitting torque to

2,898,744
CHEMICAL FREEZING PACKAGE

Albert A. Robbins, West Covina, Calif., assignor, by mesne assignments, to Kwik-Kold of America, Inc., Las Vegas, Nev., a corporation of Nevada

Application June 15, 1956, Serial No. 591,758
3 Claims. (Cl. 62—4)



1. A chemical freezing package comprising an outer envelope hermetically sealed on all of the edges thereof, said envelope being formed of a thin, flexible, plastic sheet material, a second envelope within said outer envelope, said second envelope being also hermetically sealed at all of the edges thereof, said outer envelope containing a dry freezing chemical mixture therein, said second envelope containing a quantity of water therein, and means positioned entirely within said second envelope adapted to perforate a wall of the second envelope to permit intermingling of the water and the freezing chemical mixture.

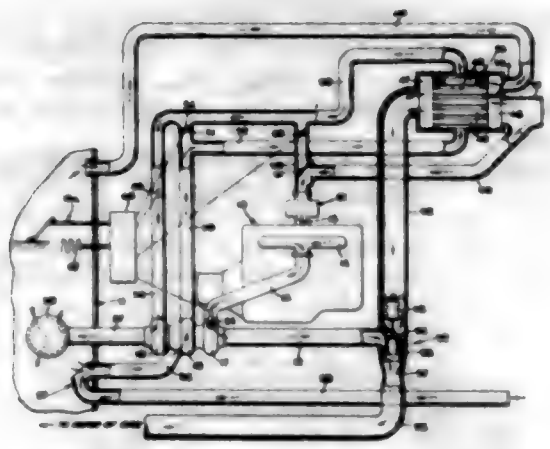
ERRATUM

For Class 62—6 see:
Patent No. 2,889,381

2,898,745
AUTOMOBILE AIR CONDITIONING AND SUPERCHARGING SYSTEM

Zenas V. Weisel, Los Angeles, Calif.

Application April 19, 1954, Serial No. 423,936
6 Claims. (Cl. 62—172)

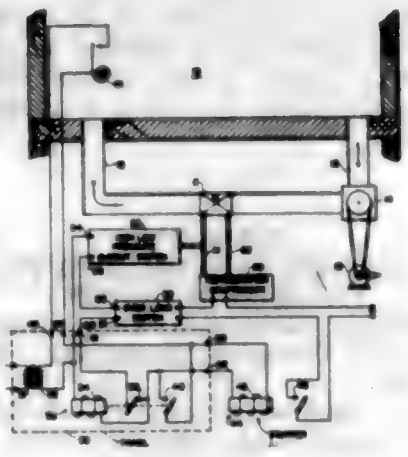


1. A system for temperature conditioning and ventilating a compartment in a self-propelled road vehicle having an internal combustion engine, said system comprising an exhaust gas turbine, a heat exchanger having independent passages, means to conduct exhaust gases from said engine to the inlet of said turbine, means responsive to the flow of exhaust gases from said engine to produce a flow of atmospheric cooling air through one passage of said heat exchanger, valve means to effect variation in the speed of said turbine, a rotary compressor driven by said turbine at a speed depending upon the speed of said engine and the setting of said valve means, conduit means to conduct hot compressed air from said compressor through a different passage of said heat exchanger to cool said compressed air, rotary air expansion means having a driving connection with said rotary compressor, and conduit means to conduct cooled compressed air from said heat exchanger to said rotary air expansion means for adiabatic expansion therein, and means for conducting the air so cooled to said vehicle compartment at substantially atmospheric pressure.

2,898,746
CONTROL MEANS FOR REFRIGERATION COMPRESSOR

John W. Moberry, Edina, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application October 19, 1956, Serial No. 617,171
5 Claims. (Cl. 62—209)



1. A control circuit for controlling the operation of an electric motor driving a refrigeration compressor in an air coniditoning installation, a source of power, first relay means having an energization winding and two associated switches controlled thereby, a first of said switches being closed when said winding is energized and a second of said switches being opened when said winding is energized, second relay means having an energization winding and a switch controlled thereby, said last mentioned switch being closed when said energization winding of said second relay means is energized, temperature responsive switch means responsive to the temperature in a space to be conditioned, first circuit means connecting said temperature responsive switch means, said energization winding of said second relay means, and said energization winding of said first relay means in a series circuit to said source of power, a plurality of safety switches responsive to abnormal operating conditions of said refrigeration compressor and its associated motor, said safety switches being opened when said abnormal conditions exist, second circuit means connecting said safety switches and said second switch of said first relay means in a series circuit shunting said energization winding of said first relay means, and third circuit means connecting said first switch of said first relay means in parallel with said energization winding of said second relay means so that upon the energization of said first relay means said energization circuit of said second relay means is taken out of the circuit formed by said first circuit means.

2,898,747
SELF-REFRIGERATING CONTAINER

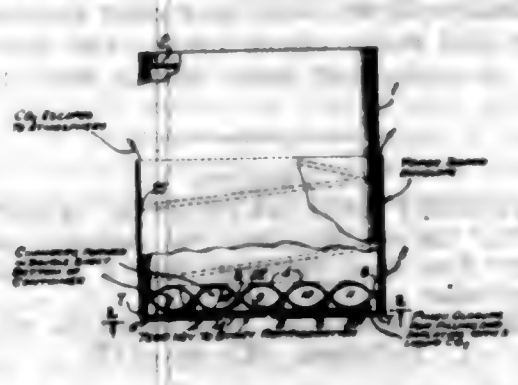
Nathaniel B. Wales, Southampton, N.Y., assignor, by mesne assignments, to Industrial Patent Corporation, New York, N.Y., a corporation of New York

Application January 7, 1958, Serial No. 707,558
4 Claims. (Cl. 62—294)

1. A self-refrigerating container of substantially conventional structure except for its bottom portion comprising a container shell, a bottom portion associated therewith, said bottom portion having a plurality of intercommunicating hermetically sealed chambers formed therein, means affording intercommunication between said chambers, said chambers containing liquid carbon dioxide (CO_2) at a pressure of at least 900 p.s.i., a

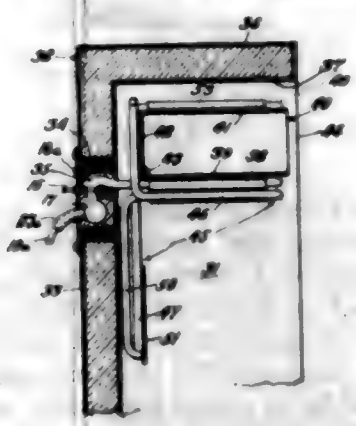
ber having opposed ends arranged in substantially parallel, spaced relationship to define a slot, means for keying including a welt bar and welt hooks for engagement with the blank, in combination with means for disen-

manually operable outlet means affording access from said chambers to the atmosphere when opened, said intercommunicating means between said chambers being formed with their effective areas such that a pressure drop will occur between respective chambers at some



point in their series of a sufficient degree to produce solid carbon dioxide (Dry Ice) in at least one of said chambers when said manually operable outlet means is opened, thereby effecting a prolonged refrigerating effect on the contents of the container.

2,898,748
REFRIGERATOR EMPLOYING SECONDARY REFRIGERATION SYSTEM
Hugo Malcolm Ullstrand, Stockholm, Sweden, assignor to Aktiebolaget Elektrolux, Stockholm, Sweden, a corporation of Sweden
Application March 8, 1956, Serial No. 570,241
Claims priority, application Sweden March 10, 1955
10 Claims. (Cl. 62—333)

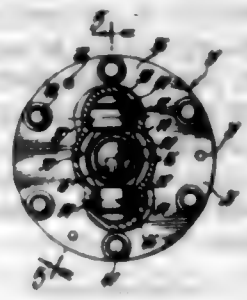


1. A refrigerator comprising a cabinet having thermally insulated walls defining a storage compartment having a front access opening, one of said walls having an opening and a thermally insulated closure therefor, refrigeration apparatus including a cooling element disposed in said storage compartment and removable therefrom through said wall opening, structure providing a freezing section in the upper part of said compartment, said cooling element being arranged to effect cooling of said freezing section, a secondary refrigeration system containing a volatile fluid and having a condensation portion in thermal exchange relation with said cooling element and evaporation portions above and below said cooling element, respectively, said secondary refrigeration system being removable from said compartment through the front access opening, said evaporation portion above said cooling element being arranged to abstract heat from the upper part of said freezing section and said evaporation portion below said cooling element being arranged to abstract heat from a region of the storage compartment below said freezing section, said evaporation portion below said cooling element being connected to receive volatile fluid by gravity from said condensation portion, and means for raising volatile fluid in liquid phase by vapor-lift action from said evaporation portion below said cooling element to said evaporation portion above said cooling element.

2,898,749
UNIVERSAL JOINT ADJUSTING MEANS
William C. Parkman, Lakeland, Fla.
Application October 18, 1957, Serial No. 691,021
6 Claims. (Cl. 64—8)

2. Adjusting means for universal joints at opposite ends of a drive shaft, said adjusting means comprising a pair of replacement shaft positioning springs, said springs being of the same types as the original universal joint springs with one of said springs being shorter than the original springs and the other of said springs being longer than the original springs whereby the position of the drive shaft relative to coupling housings at opposite ends thereof is shifted to present new bearing surfaces on the coupling housings, the combined lengths of said replacement springs being equal to the combined lengths of the original springs.

2,898,750
UNIVERSAL JOINT
John Z. De Lorean, Birmingham, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 24, 1958, Serial No. 763,084
10 Claims. (Cl. 64—5)



4. In a universal joint a housing having a shaft receiving opening axially and centrally disposed therein and a pair of bearing assembly openings on opposite sides of said shaft receiving opening, the centerlines of said bearing receiving openings being contained in spaced planes parallel to the transverse plane containing the centerline of said shaft receiving opening, the centerline of the first bearing assembly opening being diagonally disposed in one direction in said respective parallel plane with respect to the centerline of said shaft receiving opening, and the centerline of the second of said bearing assembly receiving openings being diagonally disposed in the opposite direction in said respective parallel plane with respect to the centerline of said shaft receiving opening.

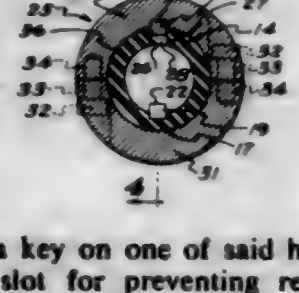
2,898,751
FLEXIBLE COUPLING
James E. Bromley, Pensacola, Fla., assignor to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware
Application December 16, 1957, Serial No. 702,888
2 Claims. (Cl. 64—11)

2. A flexible coupling comprising, in combination, a sheet of resilient material, said sheet material arranged to be positioned in encircling relationship with the end portion of an associated pair of shafts when said shaft end portions are in substantially coaxial endwise relationship, to form a resilient sleeve member said sleeve mem-

thereof and directly below the vertical walls of said slot

2,898,757
METHOD OF CONSTRUCTING REINFORCED

ber having opposed ends arranged in substantially parallel, spaced relationship to define a slot, means for keying each of said shaft end portions to said resilient sleeve member, a pair of complementary half-shells arranged to form a tubular clamp concentric with said resilient



sleeve member, a key on one of said half-shells engageable with said slot for preventing relative movement between said half-shells and said resilient member, and means for securing said assembled half-shells in said sleeve member clamping engagement.

2,898,752

PICK FOR KNITTING MACHINES

Eugene St. Pierre, Pawtucket, R.I., assignor to Hemphill Company, Pawtucket, R.I., a corporation of Massachusetts

Application April 5, 1957, Serial No. 650,925
2 Claims. (Cl. 66—48)

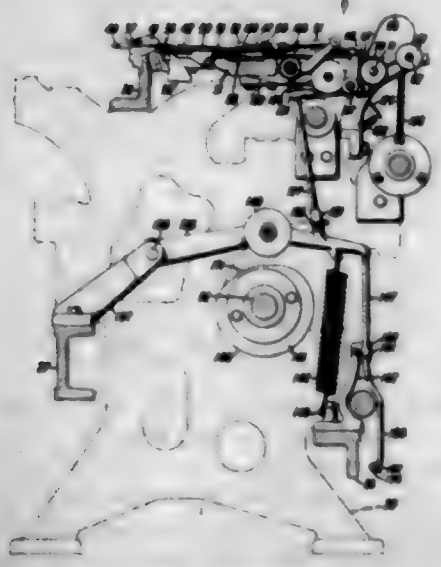
1. A pick for use in an independent needle knitting machine having a shank, a pivot at one end of said shank and a butt engaging head at the other, said head having lip and base portions defined by planar surfaces disposed at substantially a right angle, and means defining an undercut at the point at which said surfaces, if extended, would intersect, said undercut extending behind at least one of said surfaces.

2,898,753

WELT BAR OPERATING MEANS FOR STRAIGHT BAR KNITTING MACHINES

Kurt P. Bauer, Wyomissing, Gottlob Bitzer, Lincoln Park, and Herbert E. Haehnel, Reading, Pa., assignors to Textile Machine Works, Wyomissing, Pa., a corporation of Pennsylvania

Application August 16, 1956, Serial No. 604,391
15 Claims. (Cl. 66—96)



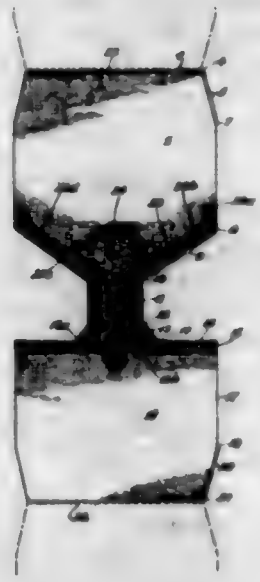
1. In a straight bar knitting machine for forming flat blanks having needles, and welt turning mechanism including a welt bar and welt hooks for engagement with the blank, in combination with means for disengaging said welt hooks from said blank following the welt turning operation comprising means for engaging and rolling said welt bar with the point of engagement of the hooks with the blank as a pivot from a position in which said hooks extend toward said needles to a position in which said hooks extend away from said needles.

2,898,754

GARMENT AND METHOD OF MAKING

Arthur M. Harms, Reading, Pa., assignor to Harms Hosiery Co., Inc., Reading, Pa., a corporation of Pennsylvania

Application January 14, 1957, Serial No. 633,961
7 Claims. (Cl. 66—177)



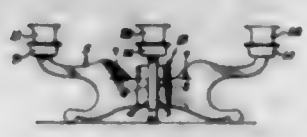
1. As a new article of manufacture, an undergarment having leg openings, said garment being formed from a single, full-fashioned, knitted piece having a front panel, a back panel and an intermediate crotch panel, the front and back panels being folded around on the crotch panel to oppose each other and the adjacent edges of the front and back panels being stitched together, said back panel being knitted first and being narrowed-in at its sides to meet the crotch panel and said front panel being formed with a straight-out picoted section at each side of the crotch panel, the said straight-out picoted sections extending to the sides of the front panel, the said straight-out sections and the said narrowed-in portions together with the crotch portion forming the leg openings, and a relatively narrow side panel around the edge of each leg opening formed of a stretchable type yarn, there being a slight overlap of the stretchable type yarn with the yarn of the adjacent front, back and crotch portions.

2,898,755

DECORATIVE ARTICLE

Gilbert Josephson, White Plains, N.Y.

Application October 1, 1956, Serial No. 613,107
2 Claims. (Cl. 67—25)



1. A knock-down decorative centerpiece comprising a first vertical member having in the upper edge thereof an upwardly opening vertical slot and on each side wall

and engaging the bottom wall and side walls of the mem- and having an impact-receiving face extending transverse-

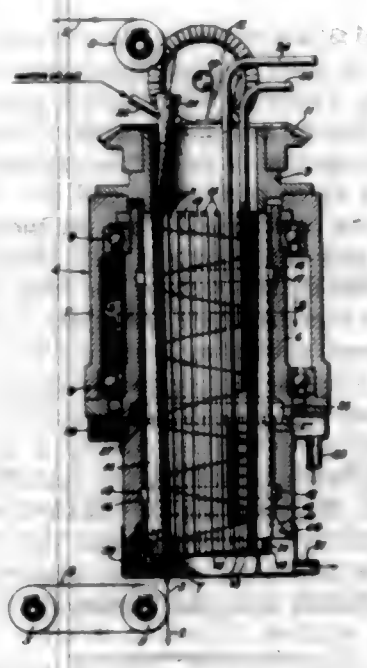
thereof and directly below the vertical walls of said slot a pair of vertical ridges, a second vertical member having in the lower edge thereof a downwardly opening vertical slot and on each sidewall thereof and directly above the vertical walls of said slot a pair of vertical ridges, said vertical members separably engaging each other at said slots, said pair of vertical ridges on said first and second vertical member cooperating with the side walls of said second and first vertical member, respectively, to lock the vertical members in assembled position and to eliminate play and twisting between the vertical members, a vertical tubular member having in the lower edge thereof downwardly opening vertical slots mounted at the intersection of said vertical members in such manner that the vertical walls of said slots are in engagement with the side walls of said vertical members, said tubular member having a plurality of shoulders provided internally thereof and being circumferentially spaced above the upper edge of said slots, and a base supported on said shoulders for the mounting thereon of a decorative article.

2,898,756

HIGH SPEED WASHING AND RELAXING THREAD ADVANCING STORAGE REEL

Chester H. Goodwin, Decatur, Ala., assignor to The Chemstrand Corporation, Decatur, Ala., a corporation of Delaware

Application September 6, 1957, Serial No. 682,364
12 Claims. (Cl. 68—205)



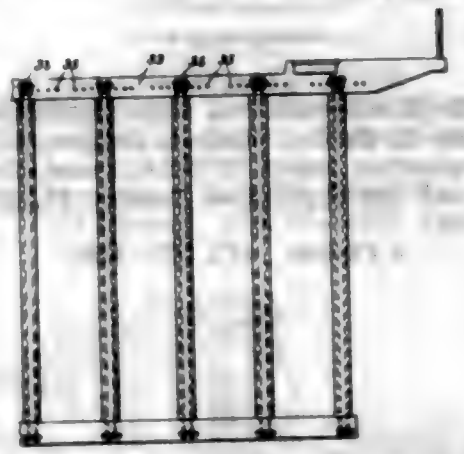
1. A high speed thread-advancing and thread-storage reel comprising a cylindrical cage formed by two sets of circumferential inter-digitating bars, the first set of said bars being stationarily mounted with respect to the second set of bars, said second set of bars being movably mounted vertically and horizontally toward and away from the center line of said cage, means for rotating said cage, means adjacent the entrance end of said cage for laying a filament up on the surface of said bars internally of the cage, means for introducing a liquid internally of said cage in contact with the filament, liquid removing means adjacent the cage, and means for moving the second set of bars vertically and horizontally as the cage is rotated whereby the filament is advanced through the cage in a series of substantially helical turns, said cage having a diameter at the exit end thereof smaller than at the entrance end whereby the filament advancing therethrough is treated in a relaxed condition.

2,898,757

METHOD OF CONSTRUCTING REINFORCED CONCRETE BRIDGE

Ulrich Finsterwalder, Munich, Germany

Original application April 11, 1949, Serial No. 86,668, now Patent No. 2,712,750, dated July 12, 1955. Divided and this application May 23, 1955, Serial No. 514,142
4 Claims. (Cl. 72—8)



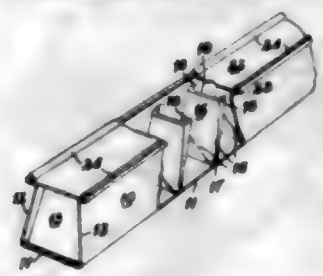
1. A method of constructing a reinforced concrete cantilever truss bridge comprising constructing a center pier, simultaneously constructing truss panels from opposite sides of said pier by placing first short upper chord reinforcing rods, said rods being anchored to the center pier and extending one panel length and second upper chord reinforcing rods extending over a plurality of panel lengths, and vertical post reinforcing rods, these being tension members, then pouring concrete and forming the lower compression chord and compression diagonal strut and encasing in concrete the upper chord and vertical strut rods with said first short upper chord rods left unbonded to the concrete, tensioning said first short upper chord rods after the concrete has set to compress the upper chord, and then progressively repeating in the same manner the erection of adjoining panels until mid-span is reached with the weight of each panel being constructed and the construction equipment being supported by the preceding completed panel and thereby tensioning said upper chord and vertical strut rods.

2,898,758

ANCHOR SLOT CHANNEL STRUCTURE

Henry G. Henrickson, Des Plaines, Ill., assignor to Gateway Engineering Company, Chicago, Ill., a corporation of Illinois

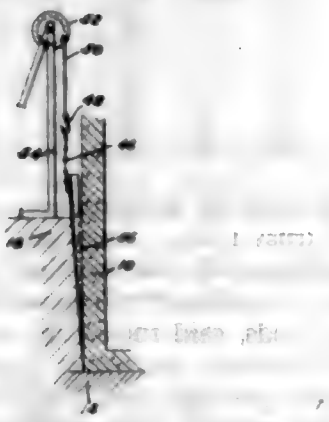
Application September 28, 1955, Serial No. 537,100
5 Claims. (Cl. 72—101)



4. An anchor slot channel structure comprising, in combination, an elongated sheet metal member of channel-shape cross-section provided with a bottom wall and forwardly extending side walls, a closure strip of readily frangible material extending across the open side of said member and along the length thereof with the longitudinal edges of the strip secured to the free longitudinal edges of said side walls, said strip being adapted to be pierced by anchor devices inserted into said member for cooperative locking engagement therewith, and a combined filler and reinforcing strip disposed within said member and extending longitudinally from end-to-end thereof

and engaging the bottom wall and side walls of the member, said reinforcing strip comprising a flat strip of paper material formed with reverse folds spaced apart to provide a series of inclined partitions which seal the opposite ends of the member and extend to the closure strip along the side walls, said reinforcing strip providing reinforcement for the member throughout its length, but is readily crushable at localized areas by the insertion of said anchor through said closure strip.

2,898,759
METHOD OF REPAIRING A BASEMENT WALL
Verner H. Pebley, Madison Heights, Mich.
Original application March 7, 1956, Serial No. 570,090. Divided and this application January 14, 1957, Serial No. 634,965
4 Claims. (Cl. 72—126)

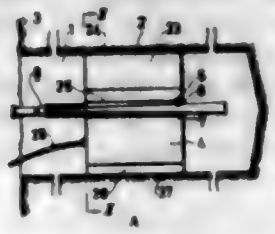


1. That process of sealing a leak within an underground portion of a wall which includes the steps of applying pressure to the earth adjacent the leak in the wall laterally outwarly away from the wall of sufficient force to compact and move the earth laterally outwardly away from the wall exposing the leak and forming a cavity in the earth extending from its surface to a point below the leak, continuing said pressure sufficient to maintain the cavity and simultaneously filling the cavity with dry bentonite from a point below the leak to a point thereabove, removing the pressure and allowing the earth to urge the bentonite toward the leak in the wall, and subjecting said bentonite to moisture to form a gel and swell in the cavity against the leak sealing the same.

2,898,760
APPARATUS FOR REPAIRING BASEMENT WALL
Verner H. Pebley, Royal Oak, Mich.
Application March 7, 1956, Serial No. 570,090
4 Claims. (Cl. 72—128)

1. Mechanism of the character described comprising: an elongate tool in the form of a plate which is channel-shaped in cross section having a bottom wall and opposed side walls and the side walls of which channel taper from one end of the plate toward the other, said plate having a length substantially greater than its width, said plate provided at the end of which the sides are of maximum width with an end portion overlying impact-transmitting relation such end of the sides and bottom wall and having an impact-receiving face extending transversely of the channel-shaped plate to receive impacts of a driving hammer, and provided at the opposite end with side walls tapering substantially flush with the bottom wall.

2,898,761
ASCERTAINING STRESSES AND DEFORMATIONS IN SOLID LOADED MATERIALS
Nils Bernhard Hast, Stockholm, Sweden
Application January 28, 1954, Serial No. 405,111
9 Claims. (Cl. 73—88)



1. A device for producing a selected fixed static force between fixed abutment surfaces comprising a force measuring cell adapted to bear against one of said abutment surfaces, means including a pair of relatively movable members adapted to be positioned between and bear against the other of said abutment surfaces and said cell, said relatively movable members having wedge-shaped engaging surfaces, and driving means supported by one of said movable members for displacing the other of said movable members to move said cell and said means relatively to each other and perpendicularly to said abutment surfaces.

6. A method of ascertaining fluctuations in stresses and deformations in solid loaded materials, comprising the steps of boring a hole in the material extending from an exposed face thereof past that location therein where the stress or deformation is to be ascertained, inserting at least one solid force measuring cell into said hole at a distance from the bottom and from the mouth of the hole, bringing said cell into contact with only diametrically opposite portions of the wall of the hole at the location and on the axis therein where the stress or deformation is to be ascertained, subjecting said cell to a biasing force directed on an axis connecting the contacted diametrically opposite portions of the wall of the hole to exert a force against the wall on said axis, making a first observation of said biasing force by noting the reading of the force measuring cell and making a subsequent observation thereof to ascertain any fluctuation in the stresses or deformations in said solid material occurred in the time interval between said two observations.

2,898,762
DRIP FREE DISTILLATION RECEIVER
Benjamin M. Harrison and Ellis E. Mulkey, Dickinson, Tex., assignors to The American Oil Company, Texas City, Tex., a corporation of Texas
Application June 24, 1957, Serial No. 667,589
8 Claims. (Cl. 73—426)

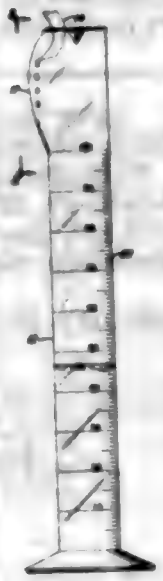
1. An improved laboratory receiver which includes a tubular body, a pouring lip at the upper end of said body, and a bay in the wall portion of said tubular body adjacent the upper end thereof, said bay being circumferentially remote from said pouring lip and providing a recessed spillway onto which fluids to be measured first impinge in flowing into the receiver.

8. An improved laboratory graduate for use in dropwise collection of condensate liquid from a duct and for determining dropping rate without moving the graduate and without disturbing the surface of the collected liquid comprising an adapter for a graduate-receiver which includes a generally cylindrical sleeve adapted to be inserted into the upper end of such graduate-receiver, a sym-

driving means, said rotor comprising a solid peripheral ring of magnetically responsive material, a hollow shaft

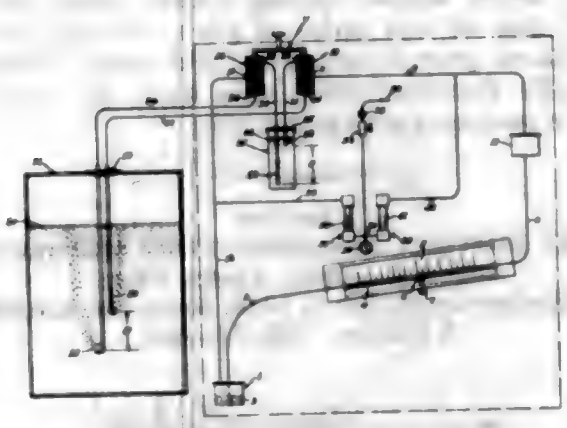
and to release said lever to release the first mentioned cam when said slide members are in another relationship to

metrical blister in a minor portion of the total wall surface of said sleeve, and a sealing diaphragm across the



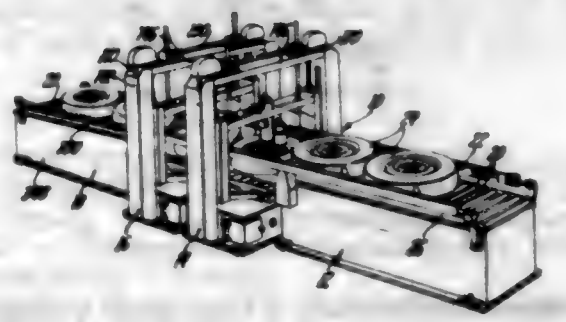
upper end of said adapter, said diaphragm being adapted to receive said duct which discharges into said blister.

2,898,763
SPECIFIC GRAVITY INDICATORS
Joseph A. Jawett, Flushing, N.Y., assignor to Petrometer Corporation, Long Island City, N.Y., a corporation of New York
Application September 14, 1956, Serial No. 609,856
5 Claims. (Cl. 73—439)



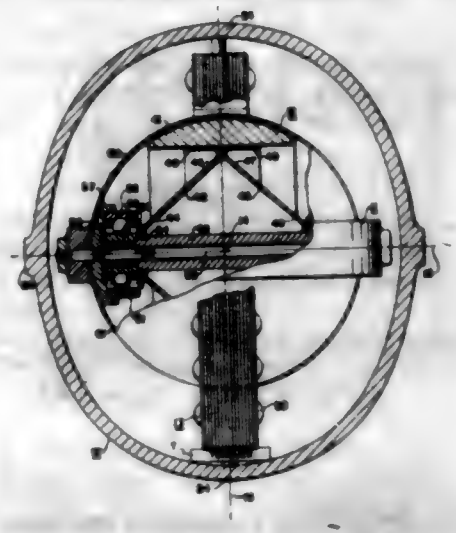
1. In apparatus for measuring the specific gravity of a liquid, the combination of a U-tube pressure gauge including a pressure leg connected to a lower transmission line and an indicating leg connected at its upper end to an upper transmission line, said indicating leg comprising a lower vertical columnar portion and an upper transparent portion inclined to said vertical portion and extending upwardly therefrom and in communication therewith, the vertical component of said inclined portion being substantially less than the height of said lower vertical portion, said indicating leg further being adapted to contain indicating liquid, a tank for holding a standard liquid and containing suspended therein in fixed relation a lower probe tube and an upper probe tube terminating at a fixed height above the lower end of the lower probe tube, said probes determining a first pressure difference representative of the specific gravity of said standard liquid, a measuring probe assembly for insertion into a liquid, the specific gravity of which is to be measured, including in fixed relation a lower probe tube and an upper probe tube terminating at the aforesaid fixed height above the lower end of the lower probe tube, said measuring probes determining a second pressure difference representative of the specific gravity of said liquid, means for simultaneously connecting said lower and upper transmission lines to, respectively, the lower and upper probe tubes in said tank and then, respectively, to the lower and upper probe tubes in said measuring probe assembly for selectively applying said first and second pressures to said gauge, the level of liquid within said indicating leg being responsive to said pressure for indicating the specific gravity of said standard liquid and said liquid whose specific gravity is to be measured, and means for supplying a compressed inert gas at a constant rate to said transmission lines.

2,898,764
BALANCING MACHINE
Claude J. Kinzy and John H. Vartorelas, Detroit, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 30, 1955, Serial No. 550,151
11 Claims. (Cl. 73—483)



1. Balancing means including a vertically disposed spindle, a work receiving member disposed upon said spindle, ball and socket means provided between said spindle and said work receiving member for the pivotal support of said work receiving member upon said spindle, means connected to said ball and socket means for providing a film of air separating said work receiving member in free-floating and frictionless tiltable relation apart from said spindle, and balance detecting means engaging said work supporting means for the detection of unbalance characteristics of work members received thereon.

2,898,765
GYROSCOPE
Donald L. Atkinson, Huntington, and Loren E. Curriston, Syosset, N.Y., assignors to Lear, Incorporated
Application July 29, 1957, Serial No. 674,796
13 Claims. (Cl. 74—5)



1. A gyro comprising a plurality of pivot mounts each having a pivot axis, supporting structure rigidly supporting all of said mounts with the pivot axis of one mount perpendicular to at least two other pivot axes of other mounts, driving means mounted in a first of said mounts for pivotal movement about the pivot axis thereof, a gimbal mounted in a second of said mounts for pivotal movement about the axis thereof, and a rotor mounted in said gimbal in rotationally driven relation with said

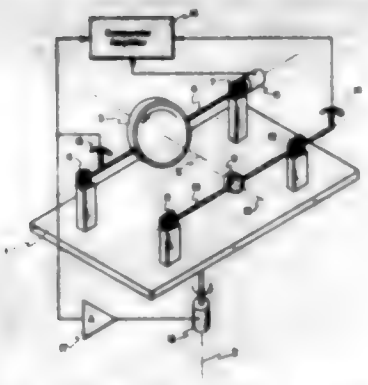
oscillation of the driving members of the clutches, a bevel gear associated with each of the said clutches and ar-

ing parallel inner and outer walls arranged at the same pitch as that of said cone pulleys and adapted to go

mitting relation such end of the sides and bottom wall into the upper end of such graduate-receiver, a sym-

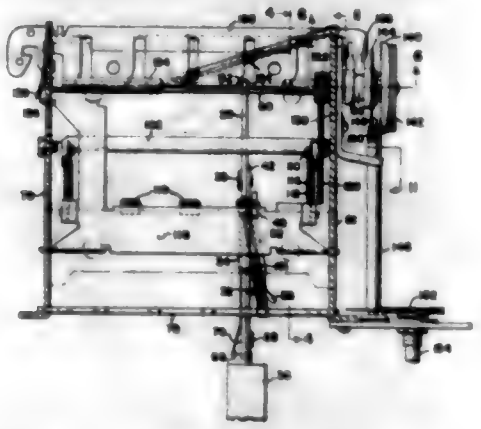
driving means, said rotor comprising a solid peripheral ring of magnetically responsive material, a hollow shaft, and a pair of modified cone-shaped end bells having their vertexes joined to said shaft and their bases joined to the inner central surface of said ring and to each other.

2,898,766
SINGLE AXIS TWO-GYRO STABILIZED PLATFORM
Roland Pittman, Grand Rapids, Mich., assignor to Lear, Incorporated
Application February 12, 1958, Serial No. 714,769
6 Claims. (Cl. 74—5.34)



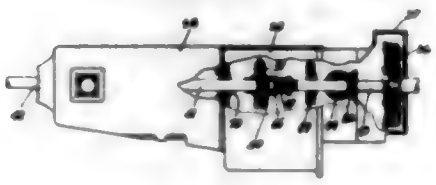
1. Means for stabilizing a body about a single input axis comprising a first gyroscope supported on said body and having a spin axis, an output axis, and an input axis oriented parallel to the input axis of said body, a second gyroscope supported on said body having axes disposed parallel to those of said first gyroscope, means torquing said body about its input axis in the direction to maintain at zero the angular displacement of said body about its input axis in response to output axis precession of said first gyroscope, and means torquing said first gyroscope about its output axis to maintain the difference between the output axis precessions of said two gyroscopes at zero.

2,898,767
TUNER
John H. Teaf, Merchantville, N.J., assignor to Radio Condenser Company, Camden, N.J., a corporation of New Jersey
Application November 8, 1956, Serial No. 621,136
9 Claims. (Cl. 74—10.33)



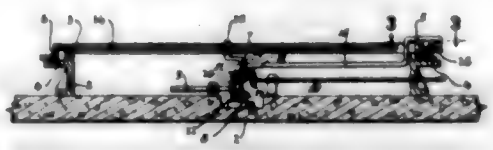
1. A tuner comprising a movable member, a pivoted element connected to said movable member, and a slide assembly, said slide assembly comprising first and second slide members, a cam carried by the first of said slide members and arranged to engage said pivoted element, a lever carried by the first of said slide members and arranged to engage and clamp said cam, a second cam carried by the second of said slide members and arranged to engage said lever to clamp the first mentioned cam when said slide members are in one relationship to each other and to release said lever to release the first mentioned cam when said slide members are in another relationship to each other and ball and socket means for releasably latching said slide members in the first mentioned relationship.

2,898,768
TRENCHER TRANSMISSION
Frank W. Wells, Pasadena, Calif.
Original application March 29, 1950, Serial No. 152,611, now Patent No. 2,762,137, dated September 11, 1956. Divided and this application September 10, 1956, Serial No. 608,951
3 Claims. (Cl. 74—15.84)



1. In a transmission for interposing multiple gear drive ratios between adjacent coaxial input and output portions of a divided shaft, the combination of: a drive gear mounted on the input portion of said divided shaft; a driven gear mounted on the output portion of said divided shaft; jack shaft means parallel with said divided shaft; a series of gears mounted on said jack shaft means, an endmost gear of said series meshing with said drive gear, said series forming a gear train; means for optionally bringing said driven gear into mesh with one or the other of different gears in said gear train; and releasable detent torque limiting means connecting said endmost gear of said series of gears coaxially with the next adjacent gear in said train, said means yielding to temporarily disconnect said gears when the torque between the same exceeds a given value.

2,898,769
ROTARY MOTION TRANSMITTING MECHANISM
August C. Ripke, Austin, Minn.
Application December 3, 1956, Serial No. 625,882
6 Claims. (Cl. 74—86)



1. A transmitting mechanism comprising in combination a crank shaft; a disk rotatably mounted on the crank thereof; a supporting frame concentric with said shaft of greater diameter than said disk; a loose ring supported by said frame and engageable by said disk to be oscillated in an eccentric orbit thereby; and a sweep arm, adapted to be impelled by said eccentric orbit oscillated ring, rotatably mounted at its inner end on said shaft and having its outer end in rolling engagement with the periphery of said ring at substantially the point thereof nearest the axis of said shaft.

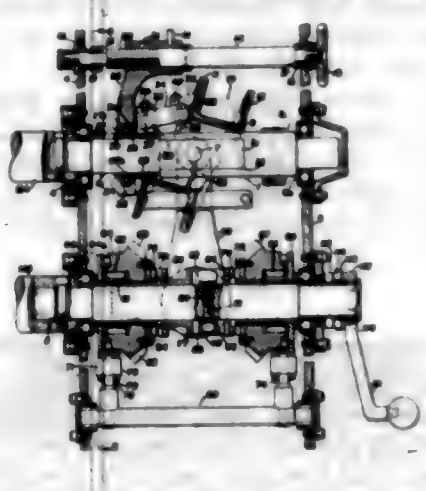
2,898,770
TRAVERSE DRIVE MECHANISM
Charles F. Van Hook, Fairlawn, N.J.
Application August 31, 1955, Serial No. 531,774
4 Claims. (Cl. 74—123)

1. A traverse mechanism of the kind described comprising in combination a drive shaft, a driven shaft, a pair of one-way infinite clutches arranged for clutching engagement in opposite directions of rotation, each of said clutches having a driving and driven member, means connecting said clutches and said drive shaft for effecting

mounted upon said driving shaft, an intermediate gear engaging one gear of said first pair of toothed gears, a

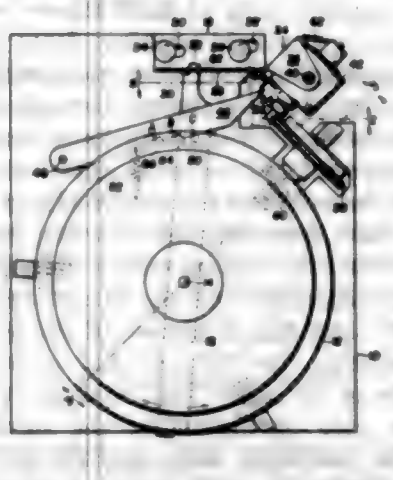
2,898,776
REPLACEABLE FAUCET HANDLE

oscillation of the driving members of the clutches, a bevel gear associated with each of the said clutches and arranged to be actuated through the clutch associated therewith, another bevel gear meshing with both bevel gears



actuated through said clutches, and means for connecting one of said bevel gears to said driven shaft whereby substantially continuous rotation of the driven shaft is effected.

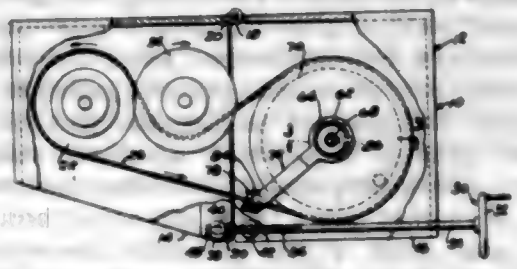
2,898,771
SPEED-CHANGING MECHANISM FOR PHONOGRAPHS
Willard J. Faulkner, Benton Harbor, Mich., assignor to V-M Corporation, Benton Harbor, Mich., a corporation of Michigan
Application June 25, 1956, Serial No. 593,670
5 Claims. (Cl. 74—200)



1. A mechanism of the character described comprising a supporting chassis, a turntable mounted for rotation on said chassis, a motor support movably mounted on said chassis, a motor pivotally mounted on said motor support, said motor having a spindle of at least two different diameter portions, a first lever pivoted on said chassis for pivoting selectively said motor, a second lever on said chassis operatively connected to said movable support, and a detent device interconnecting said first and second levers whereby operation of said second lever actuates both said first lever and said motor support for changing the operative relationship of said spindle portions with said turntable.

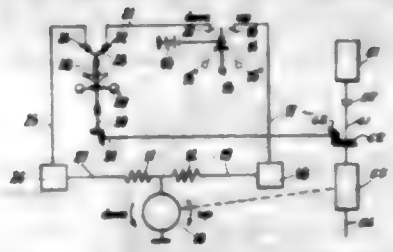
2,898,772
VARIABLE SPEED CONE PULLEY DRIVE
Rufus M. Campbell, Drayton Plains, Mich.
Application June 18, 1957, Serial No. 666,285
4 Claims. (Cl. 74—217)

1. In a variable speed cone pulley drive mechanism, the combination comprising a pair of cone shaped pulleys arranged parallel and adjacent to each other and in reversed fashion, an endless drive belt for said pulleys, a belt shifting idler wheel axially parallel to and outwards of said pulleys having a peripheral belt groove of the same pitch as that of said cone pulleys, said belt having parallel inner and outer walls arranged at the same pitch as that of said cone pulleys and adapted to go partially over and upon the periphery of one of said pulleys and partially under and in engagement with the



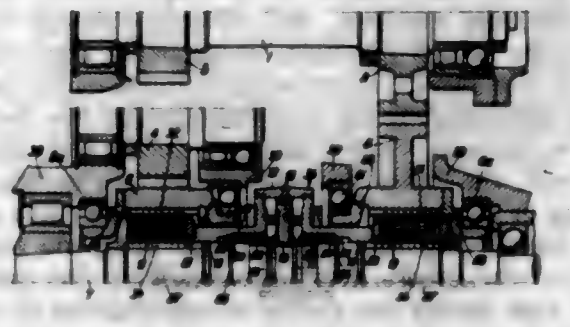
periphery of the second of said pulleys and partially over and upon the periphery of said idler wheel groove, the conical surfaces of the outermost pulley and the belt groove of said idler wheel being similarly directed.

2,898,773
ELECTRIC CONTROL DEVICE, PARTICULARLY FOR MOTOR VEHICLE TRANSMISSIONS
Eugen Stump, Stuttgart-Unterturkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Unterturkheim, Germany
Application December 19, 1952, Serial No. 326,969
Claims priority, application Germany December 20, 1951
13 Claims. (Cl. 74—336.5)



1. An electric control device for preventing the shifting operation from a higher to a lower speed of a change-speed transmission of a motor vehicle which is electrically shifted in steps comprising a manually adjustable control lever, electric circuit means under control of said lever for shifting said change-speed transmission to a lower speed gear including switch means, a transmission input shaft, a clutch for coupling said shaft to an engine of the motor vehicle and speed responsive means driven at a constant ratio from the transmission input shaft for opening said switch means and keeping said switch means opened with the rotational speed of said shaft of said motor vehicle exceeding a predetermined speed.

2,898,774
REVERSIBLE DRIVE SYSTEM
Ernst Lammerz, Essen, Germany, assignor to Aktiengesellschaft für Unternehmungen der Eisen- und Stahlindustrie, Essen, Germany
Application December 18, 1956, Serial No. 629,100
Claims priority, application Germany December 22, 1955
12 Claims. (Cl. 74—377)



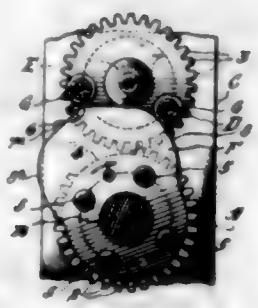
1. A reversing gear system comprising, in combination, a casing, a driving shaft, a first pair of toothed gears,

ly outwardly directed surface of a generally concave radial section; a pair of rigid annular inertia members disposed

to the drive shaft meshing with the bevel gear for rotating said cage in the housing, worms having oppositely directed

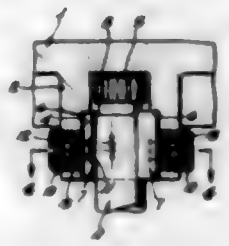
mounted upon said driving shaft, an intermediate gear engaging one gear of said first pair of toothed gears, a second pair of toothed gears, rolling contact bearing means freely rotatably supporting said second pair of toothed gears in the wall of said casing, one gear of said second pair of toothed gears engaging one of the toothed gears of said first pair of toothed gears, the other gear of said second pair of toothed gears engaging said intermediate gear, the gears of said second pair of toothed gears thus rotating in opposite directions relative to each other, a reversibly rotatable driven shaft, said second pair of toothed gears being journalled around said reversing gear shaft, a pair of clutch assemblies each associated with one gear of said second pair of toothed gears, respectively, a switch member effecting the engagement and disengagement, respectively, of each of said clutch assemblies with its associated toothed gears so as to couple said reversing gear shaft with said driving shaft for rotation in either direction or to uncouple said reversing gear shaft from said driving shaft.

2,898,775
VARIABLE GEAR DRIVE
Henry Reid, West Orange, N.J., assignor to E.R.D. Laboratories, Inc., a corporation of New Jersey
Application February 8, 1955, Serial No. 486,839
5 Claims. (Cl. 74—435)



1. A variable gear drive comprising a continuously rotatable driving gear and a rotatable driven gear, a portion of the periphery of each of said gears being toothed and engageable with the other gear, a portion of the periphery of the driving gear being toothless and disengageable from the driven gear to provide an interruption of the rotation of the driven gear by the teeth of the driving gear, a single plate cam movable with said first-mentioned or driving gear at one side thereof and having a lobe formed on its periphery with a series of cam surfaces on each of opposite sides of the high point of the lobe, and two followers on and spaced apart arcuately of one side of the other or driven gear and engageable simultaneously by said cam lobe, said cam surfaces and said follower rollers being related to said toothless portion of the driving gear to cooperate with each other, the cam surfaces of one of said series being engageable one after the other with one of said follower rollers and shaped to drivingly rotate, momentarily interrupt rotation, and resume rotation of said driven gear in one direction, respectively, the cam surfaces of the other series being complemental and arranged oppositely to the cam surfaces of the first-mentioned series and shaped and engageable one after the other with the other follower roller to prevent overthrowing or hunting of the driven gear, the pitch diameter of the driving gear being larger than the pitch diameter of the driven gear to compensate for operation of said cam during the period of interruption of the rotation of the driven gear by the teeth of the driving gear, thereby providing for a 1 to 1 drive ratio for each revolution.

2,898,776
REPLACEABLE FAUCET HANDLE
Jack O. Spencer, Big Bear Lake, Calif.
Application April 30, 1957, Serial No. 656,090
2 Claims. (Cl. 74—553)



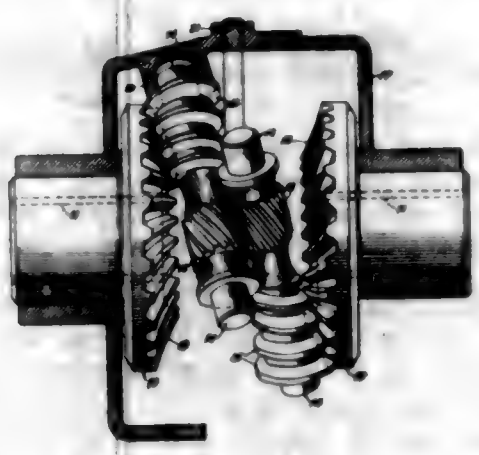
1. A replacement faucet handle for attachment to a valve stem, which stem has a longitudinal axis that is also its axis of rotation, said handle comprising: a handle body having a socket therein, said socket having an axis, said body also having a pair of screw-threaded openings passing through the body, each with an axis, the axes of the openings being coincident with each other and normal to the socket axis; a pair of preassemblies mountable in said socket, each of said preassemblies comprising a jaw and an externally threaded set screw projecting axially from the outer face of said jaw and connected thereto for rotation about the screw axis relative to said jaw but being restrained against axial movement relative to said jaw, each jaw having ridge-like teeth on its inner face which extend parallel to the socket axis, each jaw having a pair of side guide faces adapted to bear against the body for permitting the jaw to move laterally relative to the socket axis while maintaining the teeth parallel thereto, each of said screws being formed for insertion into one of said openings from the inner end thereof for threaded engagement therewith, the outer end of each of said screws being formed for rotatable actuation in its associated opening by a torsion tool inserted into the outer end of such opening to move the associated jaw nonrotatively transversely of said socket axis, each of said preassemblies having horizontal dimensions less than the corresponding dimensions of said socket to permit the insertion of one of said assemblies into said socket and the screwing of its set screw into one of said openings, the other of said assemblies having a length axially of its screw less than the width of said socket between said openings less the thickness of the jaw of said one assembly taken axially of its screw to permit the insertion of said other assembly into the socket and the screwing of its set screw into the other of said openings, whereby said jaws may be moved into and out of gripping engagement with a valve stem positioned in said socket between the inner faces of said jaws.

2,898,777
TORSIONAL VIBRATION DAMPER
Eric G. Beehm, Orchard Park, N.Y., assignor to Houdaille Industries, Inc., Buffalo, N.Y., a corporation of Michigan
Application November 29, 1957, Serial No. 699,834
8 Claims. (Cl. 74—574)

1. A vibration damper for a torsionally excited rotary element comprising, in combination: a supporting member adapted for concentric attachment about the rotational axis of the rotary element, said member having a radial-

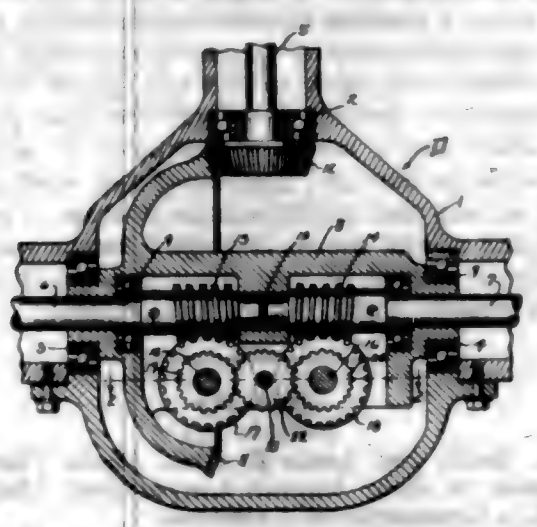
ly outwardly directed surface of a generally concave radial section; a pair of rigid annular inertia members disposed outwardly of and concentrically with said outwardly directed surface, said members being axially adjacent to each other and jointly having a radially inwardly directed camming surface of a generally concave radial section radially adjacent to said outwardly directed surface; and an annular rubber member disposed intermediate said surfaces for radial compression thereby; said pair of inertia members being axially adjustable with respect to each other to vary the angular deflection rate of said rubber member, thereby varying the natural frequency of the damper.

2,898,778
DIFFERENTIAL GEAR SET
Richard B. Ransom, South Bend, Ind.
Application July 2, 1957, Serial No. 669,527
4 Claims. (Cl. 74—711)



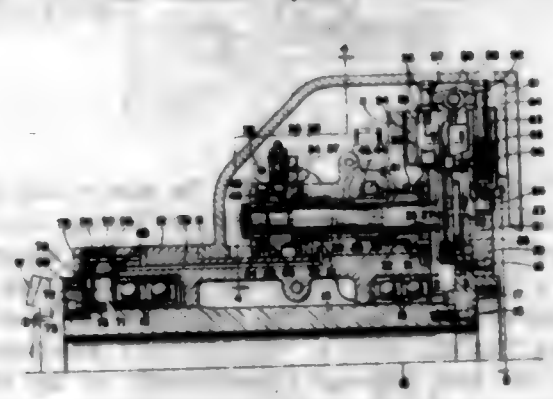
1. A differential gear set comprising a pair of side gears mounted in spaced parallel coaxial relation and having facing toothed surfaces, a pair of pinions lying between the side gears on spaced axes which lie in planes parallel to the gear axis, said planes crossing at an obtuse angle facing inwardly toward the gear axis, each of the pinions meshing with the toothed surfaces of one of the side gears only, and intermeshing gear elements carried by the pinions and drivably connecting them.

2,898,779
DIFFERENTIAL FOR MOTOR VEHICLES
Chester L. Michelson, Milwaukee, Wis.
Application May 8, 1958, Serial No. 733,939
1 Claim. (Cl. 74—711)



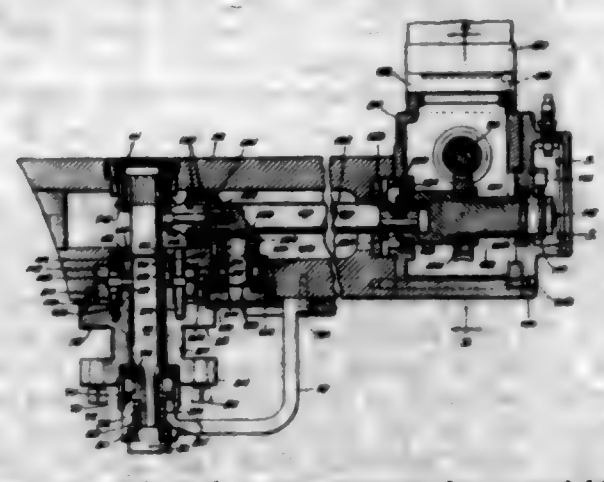
A differential for automobiles comprising a housing, a drive shaft extending into said housing and rotatably supported thereby, stub wheel axles extending into the housing and rotatably supported thereby, a cage rotatably mounted on the stub axles in said housing, a bevel gear rigidly connected with said cage, a bevel pinion secured to the drive shaft meshing with the bevel gear for rotating said cage in the housing, worms having oppositely directed threads secured to the inner ends of said stub axles, worm wheels rotatably mounted on the cage and movable with the cage in constant mesh with said worms for driving said stub axles during rotation of the cage, rotatable shafts carried by said cage supporting and carrying said worm wheels, an idle shaft carried by said cage, spur gears on the shafts for the worm wheels, and an idle pinion on the idle shaft meshing with the spur gears for transmitting movement from one worm wheel to the other.

2,898,780
INDEX MECHANISM FOR A GEAR MACHINE OR THE LIKE
Leonard O. Carlson, Rochester, and Adolph H. Krastel, Irondequoit, N.Y., assignors to The Gleason Works, Rochester, N.Y., a corporation of New York
Application July 2, 1956, Serial No. 595,254
22 Claims. (Cl. 74—816)



1. A machine comprising a frame, drive and driven members mounted on the frame respectively for angular oscillation and rotation about parallel axes and also for relative axial motion, the driven member having a plurality of open ended radial slots and the drive member having a pin adapted to enter said slots successively, the pin entering and departing through the open end of each slot and its path being substantially tangent to the slot at the moments of entry and departure, means for oscillating the drive member, and means for effecting the relative axial motion in such timed relationship to the oscillation that during one oscillation the pin may enter a slot and advance the driven member and then return free of the driven member.

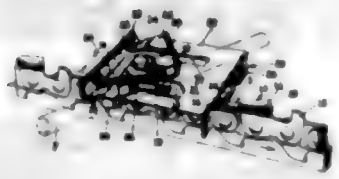
2,898,781
POWER INDEXING ARRANGEMENT FOR SIDE HEAD TOOL BLOCK
Walter T. Hake, Cincinnati, Ohio, assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey
Application October 22, 1957, Serial No. 691,685
8 Claims. (Cl. 74—820)



1. In a power indexing arrangement for a tool block, the combination of: a ram; a shaft rotatably carried by

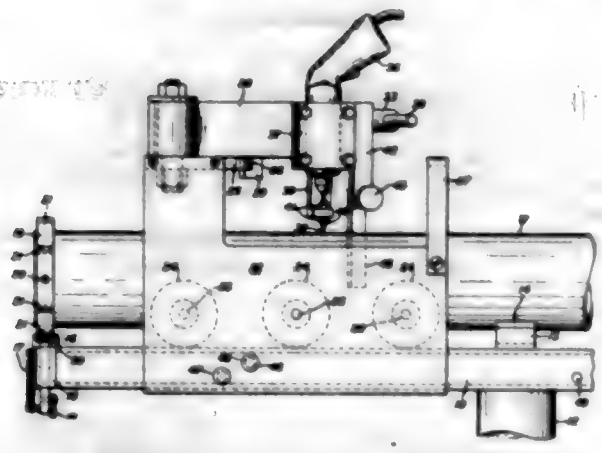
said ram; a tool block mounted on said shaft for rotation thereon and for axial movement therealong; means to locate and lock said block in sequential selectable indexed positions; cam means responsive to rotation of said shaft for moving said block axially of said shaft in one direction to unlocked position prior to indexing and subsequently moving said block axially of said shaft in the opposite direction to locked position after indexing; a drive shaft internally of said ram for rotating said first mentioned shaft; and power means for driving said drive shaft.

2,898,782
FILING GUIDE FOR SAW CHAIN TEETH
Paul C. Consoletti, Milford, Mass., assignor to Draper Corporation, Hopedale, Mass., a corporation of Maine
Application May 27, 1958, Serial No. 738,115
5 Claims. (Cl. 76—36)



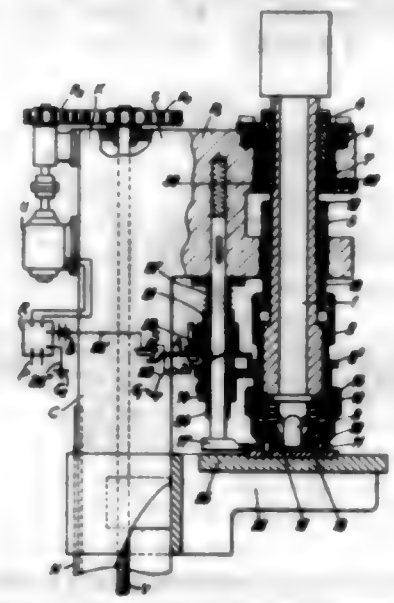
1. In a filing guide for use in the sharpening of saw chain router teeth, a base member having transverse downwardly extending end wall portions adapted to straddle a linear run of saw chain when such base member is mounted thereon, the top portion of said base member being formed with a longitudinally extending slot adapted for free passage therethrough of an inserted router cutter tooth when said base member is set in place over such tooth, and file guiding means movable on the top portion of said base member and to be adjustably positioned longitudinally thereof for limiting the amount of material to be removed from said cutter teeth, said file guiding means including transversely alined projections having predetermined angular disposition.

2,898,783
APPARATUS FOR DRILLING RADIAL HOLES
Harry E. Kiesling, Ellwood City, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Application September 25, 1956, Serial No. 611,994
10 Claims. (Cl. 77—27)



1. A drilling fixture comprising an elongated support adapted to mount a relatively long length substantially cylindrical workpiece in a fixed position with the long dimension of the workpiece extending in the same direction as the long dimension of the support, the workpiece being subject to having irregularities in its straightness, a carriage mounted on said support and adapted to move longitudinally of the support, an arm pivoted to said carriage, means extending from said arm at a location spaced from the point of pivoting and adapted to engage the exterior of the workpiece substantially opposite the point of drilling and 90° removed therefrom, a drill carried by said arm at a location spaced from the point of pivoting and lying over the center line of the workpiece for drilling a radial hole therein when said extending means engages the exterior regardless of irregularities in straightness of the workpiece, and means carried by said arm for feeding the drill into the workpiece.

2,898,784
AUTOMATICALLY CONTROLLED MACHINE TOOL
Hugo Allemann, Schaanwald, Liechtenstein, assignor to Hugo Allemann, A.G., Luterbach So. Switzerland
Application February 20, 1957, Serial No. 641,427
Claims priority, application Switzerland February 25, 1956
5 Claims. (Cl. 77—34.5)



1. In a machine tool, in combination, tool spindle means axially movable relative to a work piece supported in said machine tool; feed means for moving said spindle means and work piece towards each other; adjustable control means mounted on said machine tool for stopping said tool spindle means in its movement towards said work piece; and actuating means for said control means resiliently attached to said tool spindle means opposite said control means and movable between an inoperative position in which said actuating means are spaced from said control means and an operative position in which said actuating means engage said control means for actuating the same, said actuating means including sensing means adapted to engage said work piece before said tool spindle means reach a position in which machining of said work piece starts, said sensing means causing said actuating means to move relatively to said tool spindle means from said inoperative position into said operative position in which said control means are actuated if said sensing means sense an improper position of said work piece with respect to said tool spindle means whereby a movement of said tool spindle means is stopped before a machining operation is started, if said work piece is in improper position relative to said tool spindle means.

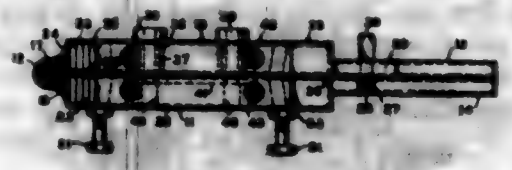
2,898,785
DRILL JIG
Carl F. Quick and Leslie B. Rice, Chula Vista, Calif., assignors to Rohr Aircraft Corporation, Chula Vista, Calif., a corporation of California
Application April 28, 1958, Serial No. 731,228
12 Claims. (Cl. 77—62)

1. In a drill jig, in combination: upper and lower insert-supporting frames; means at one end of said frames for pivotally connecting them together, each of said frames having near the center thereof an opening extending from face to face therethrough of large area; a pair of

2,898,789
HOSE CLAMP ASSEMBLY TOOL

said hammer means and capable of relative lost motion,

easily detachable inserts seated against the marginal walls of said openings; the insert in the lower frame having an opening therein adapted to receive and locate the



workpiece; the insert in the upper frame being provided with one or more hard metal bushings adapted to receive the lower end of a rotary drill and guide the drill against the workpiece.

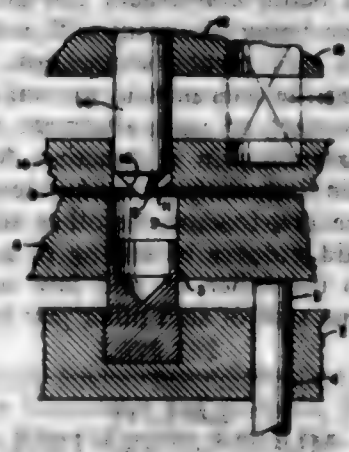
2,898,786
BLIND HOLE DRILL
John R. Willingham, Detroit, Mich.
Application December 14, 1955, Serial No. 553,874
2 Claims. (Cl. 77—68)

1. A drill for drilling holes in metal workpieces, said drill having a generally cylindrical tip portion and a shank portion, said tip and shank portions having communicating chip-carrying channels extending longitudinally of the outer surfaces thereof and formed so that each channel has a side wall extending longitudinally of the drill, the free end of said tip portion having a pair of cutting edges extending transversely of the drill in opposite directions, each of said cutting edges being continuous and having an inner end and an outer end spaced transversely of the drill, one of said edges intersecting the longitudinal axis of said drill and terminating at its inner end substantially at said axis and the other one of said edges terminating at its inner end in a spaced relation with said axis, said cutting edges having the outer ends thereof located equal distances from said axis, each of said cutting edges having a leading side and a trailing side and having its leading side located at the end of the wall of one of said channels so that chips cut by said leading side are disposed in said channel, and means providing a longitudinally extending fluid passage in said drill terminating at said free end of said tip portion in a position displaced transversely from the path of chips traveling from said leading sides along said channels.

2,898,787
ROTARY CUTTING TOOL
William J. Hoffmeier, Montpelier, Ohio
Application March 4, 1957, Serial No. 643,633
4 Claims. (Cl. 77—73.5)

1. A countersink tool for non-ferrous metals comprising a cylindrical body adapted to be rotated around its axis, a solid cylindrical pilot provided on the end of said body, a cone-shaped portion connecting said pilot and said body, a plurality of part-cylindrical recesses provided in said portion to form a corresponding plurality of cutting edges thereon extending within the conical surface and substantially tangent to the cylindrical surface of the pilot, the lip relief angle being equal to approximately 2 degrees, and the rake angle at said cutting edges formed by said cylindrical recess being approximately 50°.

2,898,788
APPARATUS FOR FORMING A BOILER HEAD OR THE LIKE
James F. Benn, St. Clairsville, Ohio, assignor to Wheeling Steel Corporation, Wheeling, W. Va., a corporation of Delaware
Original application July 15, 1955, Serial No. 522,276, now Patent No. 2,859,510, dated November 11, 1958. Divided and this application December 28, 1956, Serial No. 629,673
1 Claim. (Cl. 78—61)

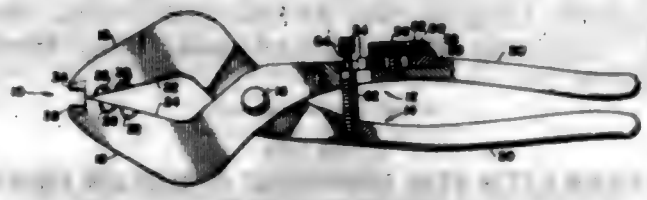


Apparatus for forming a boiler head or the like comprising a base member, a die member disposed adjacent the base member, first resilient means spacing the die member from the base member, the die member having a cavity of uniform cross section therein adapted to support a blank having an opening therethrough with the opening in alignment with the cavity with the material of the blank at the periphery of the opening projecting radially inwardly of the periphery of the cavity, the cavity being free from obstructions in the region immediately above the mouth thereof so that the blank may lie flat across the mouth of the cavity, holding means cooperating with the die member to clamp to the die member about the cavity therein a portion of the blank outwardly of the cavity to hold such portion of the blank in fixed position relatively to the die member, a punch having a tapered nose and a body of uniform cross section behind the nose, second resilient means interposed between the holding means and the punch so that as the punch moves into the cavity it compresses the second resilient means and presses the same against the blank, the first resilient means being stronger than the second resilient means so that compression of the second resilient means does not move the holding means, blank and die member toward the base member, the punch having a portion engaging the holding means after the punch has moved a predetermined distance into the cavity to move the holding means, the blank and the die member against the action of the first resilient means toward the base member and an annular upsetting die carried by the base member which as the punch, holding means, blank and die member move toward the base member enters the cavity in a direction opposite to the direction of movement of the punch into the cavity to surround the body of uniform cross section of the punch and completely fill the space between the body of uniform cross section of the punch and the cavity of uniform cross section and upset the material of the tubular projection between the punch and the wall of the cavity.

to provide an inwardly directed flange surrounding an

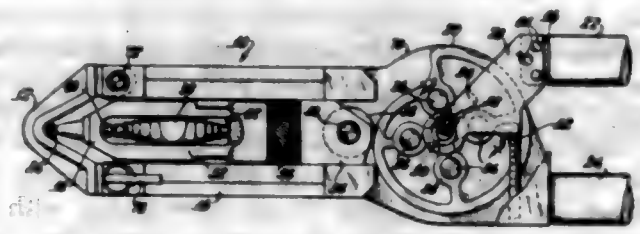
2,898,796

2,898,789
HOSE CLAMP ASSEMBLY TOOL
Clarence Moore, New Philadelphia, Ohio, assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Application July 29, 1955, Serial No. 525,151
7 Claims. (Cl. 81—9.3)



1. A hose clamp assembly tool comprising a pair of pivotally connected members including a pair of opposed jaws having a pair of cooperative, opposed grooves in adjacent, opposed surfaces said opposed surfaces having abutting end portions thereon remote from the pivotal connection between said members, said opposed surfaces being spaced intermediate said end portions and said pivotal connection and being convergent toward said end portion, each groove being divergent with respect to a plane passing through said pivotal connection and said abutment and having the axis of said pivotal connection and the point of contact of said abutment therein, one of said grooves extending in a direction from said plane into one of said jaw surfaces and extending from one side of said one jaw toward the other side thereof, and the other of said grooves extending in a direction from said plane into the other of said jaw surfaces and extending from one side of said other jaw toward the other side thereof.

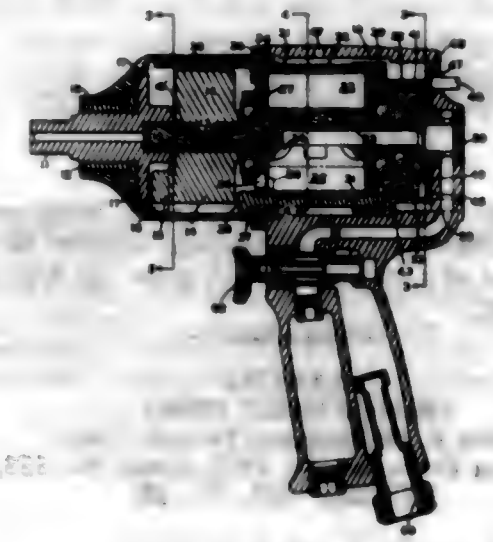
2,898,790
MULTI-STROKE TOOL
Michael Lazar, New York, N.Y., and Edwin T. Salz, Norwalk, Conn., assignors to Burndy Corporation, Norwalk, Conn., a corporation of New York
Application May 29, 1957, Serial No. 662,426
2 Claims. (Cl. 81—15)



1. A compressing tool comprising a frame, movable and fixed jaws in said frame, a cam follower operating said movable jaw, a cam rotatably secured to said frame and engaging the cam follower, said cam having a plurality of projections, a ratchet lever pivoted to said frame and successively engaging said projections to rotate said cam and thereby actuate said movable jaw toward said fixed jaw and means for sliding said ratchet over an end of each projection for engaging a side of said projection wherein the projections extending from said cam are outwardly spring biased and the ratchet lever is provided with a tapered surface for causing the projections to be inwardly moved against the action of the springs.

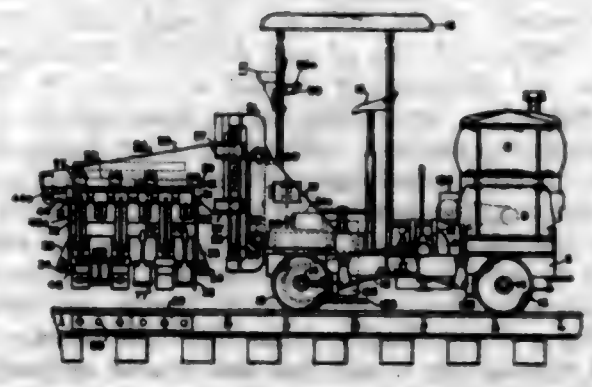
2,898,791
ROTARY IMPACT POWER TOOL
Spencer B. Maurer, Novelty, Ohio
Application June 14, 1957, Serial No. 665,854
23 Claims. (Cl. 81—52.3)

14. A rotary impact tool comprising, in combination, a housing, only a single motor mounted within said housing for rotation and including a rotor and reaction member means, hammer means coupled to said rotor, output shaft means having an anvil meabod with a portion of said hammer means and capable of relative lost motion, and automatic reversing means to cause said hammer



to oscillate with respect to said anvil and deliver a series of blows in one direction to the anvil.

2,898,792
POWER-OPERATED TRACK WRENCH
Robert L. Fox, Alexandria, Va., and John A. Smith, Charlotte, N.C., assignors to Railway Maintenance Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Application April 17, 1957, Serial No. 653,435
9 Claims. (Cl. 81—54)



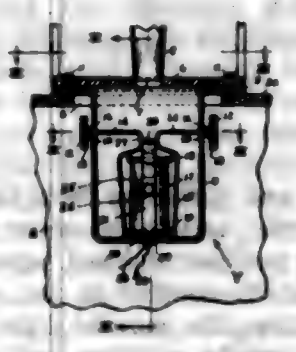
8. A machine for applying a torque to nuts on rail bolts extending through holes in a joint bar and rail, comprising a vehicle movable along the rail, a head frame mounted on the vehicle, wrenches attached to the frame capable of transverse movement relative to the rail, means to actuate the wrenches, at least two of the wrenches being located on each side of said rail with none of the wrenches being in opposing relationship to any other wrench, and said two wrenches on each side being pivotally connected together.

2,898,793
DISC SOCKET WRENCH
Benjamin Fedesna, North Tonawanda, N.Y.
Application August 28, 1957, Serial No. 680,859
3 Claims. (Cl. 81—121)

1. In a disc socket wrench, a disc-like member having a body formed of a plastic material with a recess entering from one face and terminating short of the opposite face

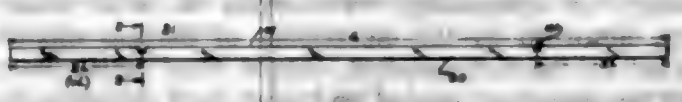
to provide an inwardly directed flange surrounding an axially arranged bore, and a metal insert in said recess and adapted to provide the peripheral surface of a nut-engageable socket, said flange overlying one end of the insert and extending inwardly thereof to provide the radial surface of said nut-engageable socket, said insert having serrations on its outer periphery in relative nonrotative engagement with said body.

2,898,794
PIPE ORGAN VALVE
Samuel G. Bowman, Mount Lebanon Township, Allegheny County, Pa., assignor of one-half each to Anna H. Bowman, Mount Lebanon Township, Allegheny County, and James M. Guthrie, Crafton, Pa.
Application March 18, 1955, Serial No. 495,177
5 Claims. (Cl. 84—337)



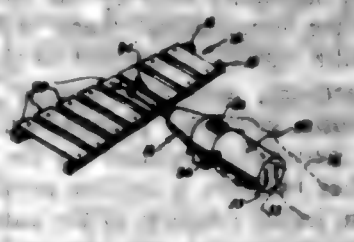
1. For use with a pipe organ having an air chest provided with a wall that includes an orifice and an organ pipe having an inlet end mounted to receive air under superatmospheric pressure from said chest by way of said orifice; a valve unit for assembly with said orifice for controlling the flow of air from said chest to the inlet of the organ pipe, said valve unit having a tubular body including a passage for the flow of air from the interior of the body to the inlet of said organ pipe and including two valve-orifices for the flow of air from said chest into the said interior of the body, a valve for each valve-orifice arranged to move inwardly of the tubular body into normally seated position upon its associate orifice, said tubular body including means for opening the valves of said two valve-orifices comprising two arms outwardly directed from the ends of two movable legs which are stressed to hold said valves seated upon their orifices, an electro-magnet mounted on the body of said valve unit, an armature mounted on the latter body for movement relatively to said electro-magnet, and a cam portion carried by said armature and movable therewith, when said electro-magnet is energized, into engagement with said legs for spreading the legs and shifting said arms to move said valves outwardly from seated positions upon said orifices.

2,898,795
FREE-FREE TYPE TONE GENERATING BAR
Jacob T. Kunz, Collegeville, Pa., assignor to Schulmerich Electronics, Incorporated, Sellersville, Pa., a corporation of Pennsylvania
Application August 19, 1955, Serial No. 529,548
5 Claims. (Cl. 84—403)



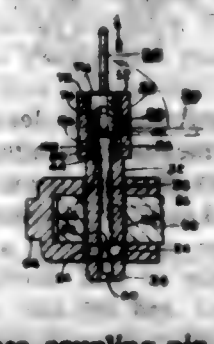
1. A free-free vibrating elongated bar for use in electric tone producing instruments having transverse grooves spaced from each end thereof between about .195 to .205 of the length of the bar.

2,898,796
VIBRATORY HAMMER FOR TOY MUSICAL INSTRUMENT
Raymond J. Lohr and Walter Hubbink, Erie, Pa., assignors to Louis Marx & Company, Inc., New York, N.Y., a corporation of New York
Application June 28, 1958, Serial No. 743,302
6 Claims. (Cl. 84—404)



1. A hammer for a toy xylophone or the like, said hammer comprising a handle, a head, a resilient flexible wire arm carrying the head and extending from one end of the handle in the direction of the long axis of the handle and carrying the head at its free end, means pivotally mounting an intermediate part of said wire, the other end of said wire being bent reversely to form spaced parallel elements which act as a crosshead, a miniature rotatable motor housed in said handle and having a drive shaft, and eccentric means secured to the motor shaft and received in the aforesaid crosshead, whereby rotation of the motor drive shaft when the motor is energized oscillates the crosshead and consequently oscillates the head about the aforesaid pivot means.

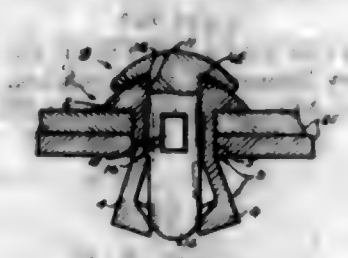
2,898,797
CAM OPERATED BALL DETENT COUPLING PIN
Harry Bronstein, Philadelphia, Pa.
Application May 28, 1956, Serial No. 587,734
3 Claims. (Cl. 85—5)



1. In a quick-release coupling pin, an elongated body having an axial aperture formed therein and having at least one radial opening adjacent its forward end and communicating with the axial aperture and having an opening extending transversely therethrough adjacent its rear end and intersecting the axial aperture, an elongated operating member axially movable within the aperture of the body, said member having a recess formed therein somewhat rearward of its forward end, a locking ball or the like contained within the radial opening of the body, said ball being free to retract fully within the body when the recess of the operating member is brought into alignment therewith, axial movement of the operating member from the last-mentioned position causing it to force the ball radially outwardly to locking position wherein it protrudes partially from the body, a spring disposed within the body and urging the operating member rearwardly relative to the body, said operating member having a transverse opening formed therein adjacent its rear end, said transverse opening being defined in part by a generally transversely disposed cam-follower surface, a cam member extending transversely through the intersecting axial aperture of the body and the transverse opening of the operating member, said cam member being rotatably mounted relative to the body and being substantially enclosed therewithin with only its ends exposed relative thereto, said cam member being

generally cylindrical with flat circular end walls and with a notch formed by two spaced parallel plane walls extending radially inward a distance greater than the radius and less than the diameter of said cam member and by a plane wall extending longitudinally intermediate the inner edges of the radial walls, the cam-follower surface of the operating member being disposed within the notch and being normally held by the spring in abutting relationship to the longitudinal plane wall of the notch, and a pull handle rigidly connected to the exposed ends of the cam member, said pull handle being movable between a position generally perpendicular to the body and a position generally coplanar to the body to rotate said cam member between a locking position and an unlocking position, initial rotation of the cam member from the locking position causing one longitudinal edge of the longitudinal notch wall to wipe across and displace the cam-follower surface against spring pressure, subsequent rotation of the cam member causing the convex outer cylindrical surface of the cam member to wipe across and further displace the cam-follower surface, opposite rotation of the cam member automatically permitting spring-actuated return movement of the operating member to locking position.

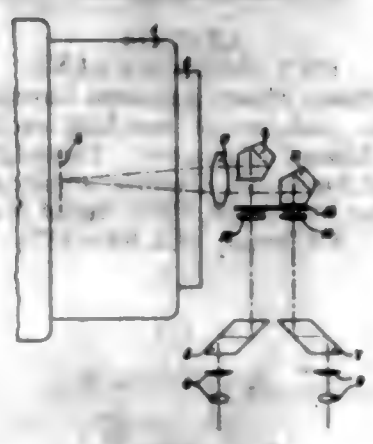
2,896,798
BLIND RIVET WITH SEALING MEANS
Samson Z. Carno, Reuna, N.Y.
Application April 5, 1956, Serial No. 576,585
2 Claims. (Cl. 85—40)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a waterproof rivet, at least two separate and structually different means for sealing said rivet, a sleeve member of a length sufficient to extend entirely through and beyond the thickness of the materials to be riveted, an annular flange on said sleeve, a smooth unthreaded surface on the interior of said sleeve, a plurality of legs formed at the distal end of said sleeve, an inwardly tapered camming portion on each leg, a pin member for insertion into said sleeve, a head on said pin, a curved annular portion on the underside of said head portion of less radius of curvature than that of the outer surface of the flange on the sleeve for providing a cavity, waterproofing and sealing compound in said cavity for forming a seal between said head portion and the annular flange on said sleeve, axially and circumferentially extending ridges forming enclosures on the cylindrical surface of said pin adapted to lie intermediate the flange and the leg portions of said sleeve when said pin is seated in said sleeve, a sealing and waterproofing compound in said enclosures for forming a seal between said pin and its enclosing sleeve, and a rounded end portion located on the distal end of said pin for camming the legs on said sleeve outwardly beyond the material being riveted for permanently securing said rivet.

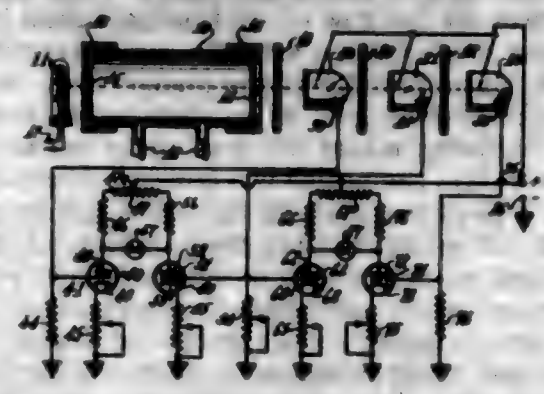
2,896,799
BINOCULAR OPTICAL SYSTEM
Hans Jensen, Hamburg, Germany, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application July 2, 1954, Serial No. 441,863
Claims priority, application Germany July 11, 1953
3 Claims. (Cl. 88—1)

1. In combination, an image intensifier having a viewing screen on which an inverted visible image is produced, and a binocular optical system for lateral viewing of said image in an upright position, said optical system comprising, in the order named, a first objective mounted in a position such that the said viewing screen extends in its focal plane whereby the light rays from the viewing screen are directly received by the first objective and after passing therethrough are maintained in parallel paths, a pair of pentagonal prisms mounted in the parallel paths



of the light rays and deflecting them laterally but maintaining them parallel and at the same time maintaining the image in the position received, second and third objectives each optically coupled to one of the pentagonal prisms for refocusing the parallel light paths to reform the image in an upright position, and a pair of oculars cooperating with the said second and third objectives for binocular viewing of the reformed image.

2,896,800
GAS ANALYZING SYSTEM OF THE RADIANT ENERGY ABSORPTION TYPE
Gustav Bergson, Philadelphia, Pa.
Application July 23, 1954, Serial No. 445,232
6 Claims. (Cl. 88—14)

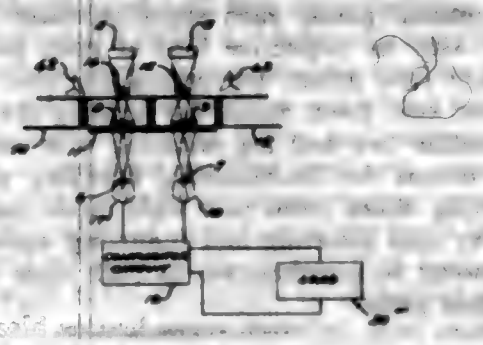


2. A gas analyzing system for detecting one or more components of a gas mixture comprising in combination, a source of radiant energy including wavelengths absorbed by said components, an absorption chamber for containing a sample of a gas mixture to be analyzed, a first, second and third detection means, said absorption chamber and said first, second and third detection means being positioned relative to said source such that radiant energy emanating from said source passes successively through said absorption chamber and said first and second detection means to said third detection means, first filter means between said first detector and said second detector for attenuating wavelengths of said radiant energy absorbed by the component of the gas mixture detected by the first detector, second filter means interposed between said second and said third detectors for attenuating wave lengths of said radiant energy absorbed by the components of the gas mixture detected by the second detector, and differential indicating means connected with said first, second and third detectors for indicating the presence of the respective components of the gas under test.

a focusing lens system carried forwardly thereof, whereby when projected the exposed innermost edges of the

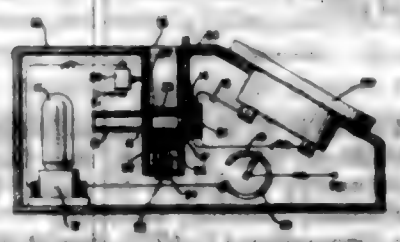
means for rotatably supporting the mount with an area of each polarizer respectively aligned with the lenses

2,898,801
INSPECTION DEVICE FOR DETECTING DIFFERENCES IN TWO OBJECTS
Stuart C. Rockefellow, Farmington, Mich., assignor to Robotron Corporation, Detroit, Mich., a corporation of Michigan
Application June 9, 1955, Serial No. 514,337
7 Claims. (Cl. 88—14)



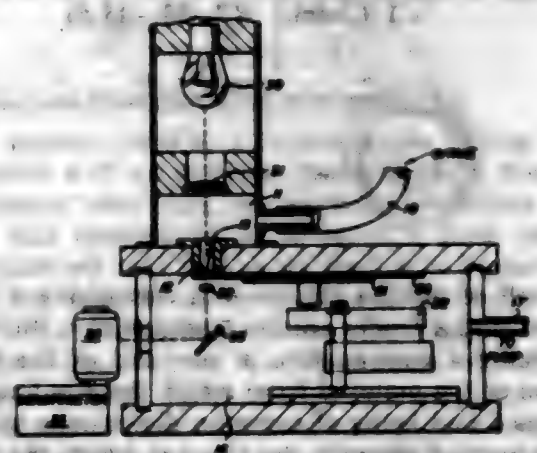
1. An apparatus for detecting differences between an article and a standard, the combination comprising: a pair of photocells, lenses directing reflected light rays in separate paths from said article to one of said photocells and from said standard to the other of said photocells, means connected to said photocells for comparing the intensity of light rays striking said photocells, a first plate mounted between said lenses and said photocells, said first plate being provided with a plurality of elongated slots, a second plate mounted in close proximity to and for movement relative to said first plate, said second plate having a plurality of openings therein, said second plate being so mounted that said openings intersect the path of said slots at two points and move along said slots during the movement of said second plate, the intersection of the slots and said openings forming a pair of passages which move during the movement of said second plate with respect to said first plate, one of said passages being aligned with the path between one of said lenses and one of said photocells, the other of said passages being aligned with the path between the other of said lenses and the other of said photocells.

2,898,802
PHOTOELECTRIC COLORIMETER
Lars Rune Ljungberg, Stockholm, and Lars Erik Öhlin, Solna, Sweden
Application January 24, 1956, Serial No. 561,069
5 Claims. (Cl. 88—14)



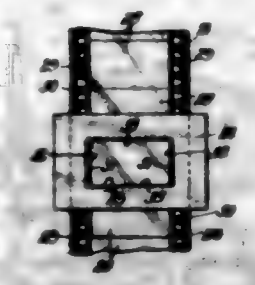
1. In an improved photoelectric colorimeter for measuring the light absorption characteristics of a specimen of liquid, a source of light rays, light-sensitive means for emitting electrical current as a function of the intensity of light rays falling thereon, means defining a light path for directing a given percentage of the total rays radiated by the source toward the light-sensitive means and for directing the rays substantially parallel, means defining an aperture selectively movable into and out of said light path and adapted to transmit less rays than those transmissible by the light path defining means, means for establishing a datum light intensity while the aperture means is in said light path, means for guiding the aperture means out of the path of light when a liquid specimen is introduced into the colorimeter and into said light path for measuring its light absorption characteristics and for automatically moving the aperture means into the path of the light rays when the specimen is removed, whereby any change in said light datum intensity level is instantaneously ascertainable immediately upon removal of the liquid specimen.

2,898,803
DUST METER
Charles A. Morrison, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Application October 17, 1956, Serial No. 616,536
2 Claims. (Cl. 88—14)



1. An instrument for measuring the dust content of an atmosphere comprising a plate with a fine orifice, means for establishing a difference in pressure between .53 and 1 atmosphere on the two sides of the orifice, means for introducing said atmosphere to the high pressure side to flow as a stream through the orifice to the low pressure side, a firm, but flexible sheet, means for supporting the sheet in the emerging stream freely enough to assume the Bernoulli distance from the orifice and for moving the sheet slowly and steadily past the orifice whereby a track of dust is deposited on the sheet, a light source positioned to send light through said orifice and a microdensitometer supported to receive the light through said orifice and track to measure the optical density of the track as it is made.

2,898,804
PROJECTING ARRANGEMENT
Harry E. Ragan, Chicago, Ill.
Application January 4, 1957, Serial No. 632,575
1 Claim. (Cl. 88—16.6)



In a multiple image projection arrangement wherein a plurality of film images are separately projected by projecting devices onto a single viewing screen in side-by-side edge-abutting relation on said screen, the improvement in each of said projecting devices of providing a film strip of successive light transmissive images having their vertical edges sharply defined by completely opaque stripes which are of substantial width, each film strip being advancedly mounted in close association with a projection aperture means which defines an aperture exposing each successive image in its entirety and the innermost edge margins of said stripes to

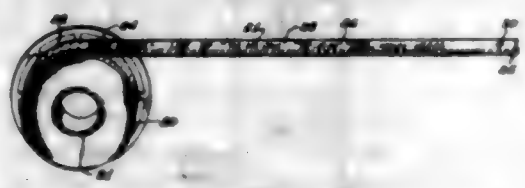
outer face adapted to face the object plane, said first outer

2,898,810
OVERHEAD PROTECTION HOOD ON COMBAT

ing screen on which an inverted visible image is produced, indicating the presence of the respective components of the gas under test.

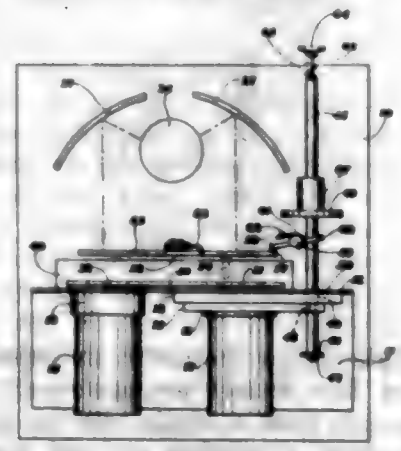
a focusing lens system carried forwardly thereof, whereby when projected the exposed innermost edges of the stripes of each of the film strips of each projecting device are in focus on said viewing screen and provide line contact with adjacent edges of the strips of adjacent projected images to produce a continuous uninterrupted sharply defined scene.

2,898,805
IDENTIFICATION LEADER FOR MOTION PICTURE FILM
Sidney P. Solow, Beverly Hills, and Robert H. Yamin, Encino, Calif.
Application August 17, 1956, Serial No. 604,846
1 Claim. (Cl. 88—19.5)



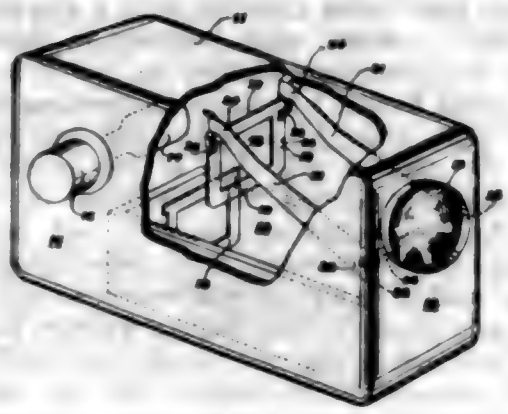
A roll of motion picture film comprising a film image portion and a leader section transparency, the leader section being a continuation at one end of the film image portion of the material from which the film image portion is formed and being of common dimensions with the film image portion whereby the place at which the film image portion continues as the leader section is of the same thickness and width as the film image portion and the leader section, said leader section transparency having visible photo image identification means of a first color thereon, sprocket holes continuous along an edge of said film, and a reinforcement backing means for said leader section and overlying substantially all of one face thereof except said sprocket holes closely adherent to said leader section and being of a second color contrasting with said first color to provide a background for said first color whereby said identification means is in visible contrast therewith for legibility, said backing means comprising a strip of opaque material adhesively secured to said leader.

2,898,806
POLARIZING FILTER FOR STEREO PROJECTOR
William P. Ewald, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Application April 9, 1957, Serial No. 651,669
2 Claims. (Cl. 88—26)



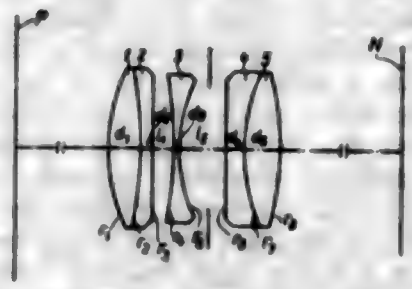
1. An optical system for projecting a stereo slide comprising a pair of juxtaposed lenses, means for holding a stereo slide in a slide plane with its transparent pictures aligned respectively with the lenses, means for illuminating the pictures so aligned, a polarizing filter consisting of a pair of sheet polarizers in a unitary mount with their planes of polarizaion mutually at right angles, means for rotatably supporting the mount with an area of each polarizer respectively aligned with the lenses and rotatable about a line between, and parallel to the axes of, the lenses, through approximately 45° from a position one in which the planes of polarization are both substantially at 45° to the mutual plane of the lens axes to a position two in which the planes of polarization are respectively substantially parallel and perpendicular to said mutual plane, each sheet polarizer being in alignment with its respective lens at both position one and position two, means for urging the filter mount toward position one, latch means for holding the mount cocked in position two and for releasing it to move to position one, means for successively inserting slides into and removing slides from said slide plane and means, operated by said inserting and removing means, for cocking the mount in position two as each slide is inserted into the slide plane.

2,898,807
SLIDE CHANGING MECHANISM
William P. Ewald, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Application September 13, 1955, Serial No. 534,013
11 Claims. (Cl. 88—28)



1. A slide changing mechanism for use with slides each of which has a notch on each side edge thereof, the combination with a projection gate, laterally flexible movable means engaging in said notches to move said slides into and out of said gate, of means on said slides contacting said engaging means to shift the latter laterally out of said notches to permit slides to be moved manually into and out of said gate.

2,898,808
OBJECTIVE FOR ENLARGEMENTS
Carl Beer, Baldham, near Munich, and Christina Otzen, Munich, Germany, assignors to Agfa Camera-Werk Aktiengesellschaft, Munich, Germany
Application December 13, 1956, Serial No. 628,861
Claims priority, application Germany December 17, 1955
7 Claims. (Cl. 88—57)

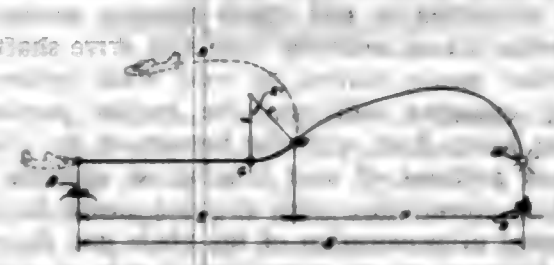


1. An objective for photographic enlargements comprising, in combination, a first outer member having an

2,898,812

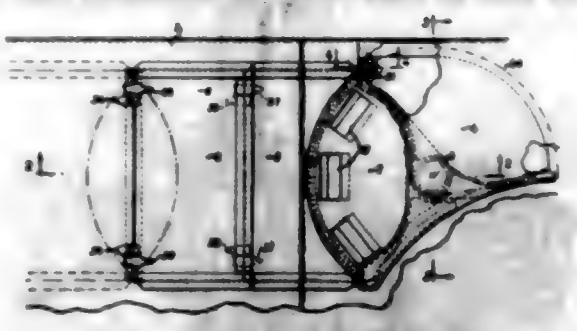
outer face adapted to face the object plane, said first outer member being a cemented positive meniscus consisting of a convergent element and a divergent element cemented to each other, the radius of curvature of the inner face of said first outer member being greater than eight times and less than sixteen times the radius of curvature of the outer face of said first outer member, said radius of curvature of said outer face of said first outer member being between 0.28162 f and 0.28203 f, f being the focal length of the objective as a whole; a second outer member axially spaced from said first outer member and having an outer face adapted to face the image plane, said second outer member being a cemented positive meniscus consisting of a convergent element and a divergent element cemented to each other, the radius of curvature of the inner face of said second outer member being greater than four times and less than eight times the radius of curvature of the outer face of said second outer member, said radius of curvature of said outer face of said second outer member being between 0.44342 f and 0.44860 f; and a middle member located intermediate said first and second outer members and being a biconcave singlet.

2,898,809
LOW ALTITUDE BOMBING SYSTEM AND APPARATUS
John A. Ryan, Jr., Arlington, Va.
Application September 15, 1955, Serial No. 534,630
10 Claims. (Cl. 89—1.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)



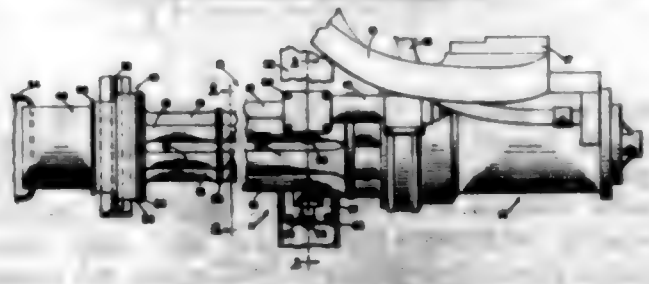
1. A low-altitude bombing system for a bombing aircraft comprising, a normally cageable vertical gyroscope having a supporting frame fixed in the aircraft, an outer gimbal journalled on said frame for tilt on an axis parallel to the pitch axis of the aircraft, an inner gimbal tiltable in the outer gimbal on an axis perpendicular to said outer gimbal tilt axis, a rotor journalled in the inner gimbal on an axis perpendicular to said inner gimbal axis, spring actuated caging means for normally caging said inner and outer gimbals normal to each other, a stepping relay uncaging device for disengaging said caging means, angularly adjustable contact means carried by said frame for angular adjustment about said outer gimbal tilt axis, climb angle indexing means carried by said frame for adjusting said contact means angularly about said axis from a fixed reference point to any selected predetermined climb angle, cooperating contact means fixed on said outer gimbal for establishing circuit closing contact with said first mentioned contact means when the aircraft pulls up, reaches said predetermined climb angle, relay means including an energizing circuit therefor connected to said contact means, bomb release means operatively connected to said relay means, pull up signal means in the aircraft for indicating the time instant for initiating the pull up, an intervalometer device carried by the aircraft for closing said pull up signal means at the end of its timing cycle to indicate the instant for pull up, relay means including an energizing circuit for initiating said intervalometer into operation, manually operable relay circuit closing means for closing said last relay means to start the intervalometer timing cycle, and means for deenergizing said last mentioned relay means when said manually operable relay circuit closing means is opened.

2,898,810
OVERHEAD PROTECTION HOOD ON COMBAT VEHICLES
Georges Even, Paris, France
Application October 3, 1955, Serial No. 538,221
Claims priority, application France October 12, 1954
3 Claims. (Cl. 89—36)



1. In a combat vehicle, a hollow body having a top wall provided with an opening through which the head of an occupant may pass, an overhead protection hood bordering said opening so as to leave a front portion thereof uncovered and having its roof at a higher level than said top wall so as to provide a forwardly open head room for said occupant, the said hood having a vertical inner side wall at least a portion of which is arcuate, a rotatable substantially sector-shaped shield member adapted to close said front portion of the opening and comprising an inner portion pivotally and resiliently secured to the inner wall of said roof at a point centrally of said arcuate side wall portion of the hood and a downwardly inclined outer portion having means resiliently engaging an upper surface area of said top wall bordering said front potrion of the opening to seal said opening, said downwardly inclined portion having an outer edge curved concentrically to said arcuate side wall portion of the hood so that said shield member may be rotated from an operative position in which it closes said opening to an inoperative position in which it lies entirely with said hood, and a viewing aperture in said shield member arranged so as to be approximately in line with the line of sight of said occupant when said shield member is in said operative position.

2,898,811
MOUNT FOR ROTATABLE MULTIPLE-BARREL-GUN
Dean R. Hobbs, Hawthorne, Calif., assignor to North American Aviation, Inc.
Application September 4, 1956, Serial No. 607,880
11 Claims. (Cl. 89—37)

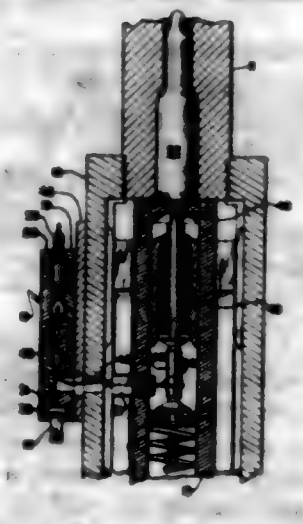


1. In combination, a gun comprising a rotating barrel means including a plurality of barrels spaced about the longitudinal axis of said barrel means and a non-rotatable breech mechanism having attaching lugs, means operatively contacting said spaced barrels forming a coaxial cylindrical surface thereabout, cylindrical support means for attachment to suitable fixed structure concentrically about said cylindrical surface, bearing means for rotatably mounting the forward portion of said barrel means within said support means, and detachable means for fixedly supporting said non-rotatable breech mechanism, said coaxial cylindrical surface and said cylindrical support means forming a housing for said bearing means.

width less than the width of the expanded cells of said cellular material and being oppositely disposed and in

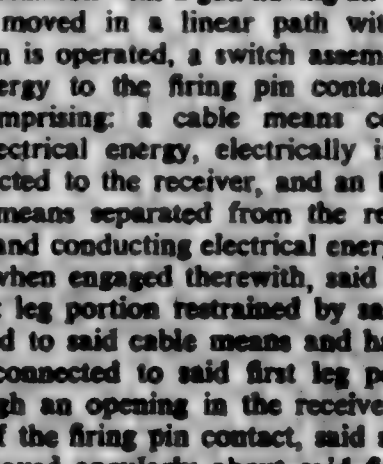
tioned adjacent predetermined path operable to engage and cut said continuous length of tubing into prede-

2,898,812
ELECTRICAL GUN-SWITCH ASSEMBLY
Edward J. Meyer, Normandy, Mo., assignor to North American Aviation, Inc.
Application July 10, 1957, Serial No. 670,929
3 Claims. (Cl. 89—136)



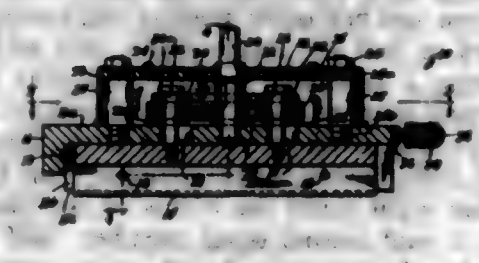
1. In combination with a gun having an electrical firing pin contact moved in a linear path within a receiver when the gun is operated, a switch assembly conducting electrical energy to the firing pin contact, said switch assembly comprising: a cable means connected to a source of electrical energy, electrically insulating body means connected to the receiver, and an L-shaped resilient contact means separated from the receiver by said body means and conducting electrical energy to the firing pin contact when engaged therewith, said contact means having a first leg portion restrained by said body means and connected to said cable means and having a second leg portion connected to said first leg portion and extended through an opening in the receiver and into the linear path of the firing pin contact, said second leg portion being moved angularly about said first leg portion when moved by the firing pin contact.

2,898,813
CHAMFERING MACHINE
Leonard O. Carlson, Rochester, and Herman A. Male, Brighton, N.Y., assignors to The Gleason Works, Rochester, N.Y., a corporation of New York
Original application October 18, 1954, Serial No. 462,668, now Patent No. 2,782,689, dated February 26, 1957. Divided and this application July 11, 1955, Serial No. 521,260
7 Claims. (Cl. 90—1.4)



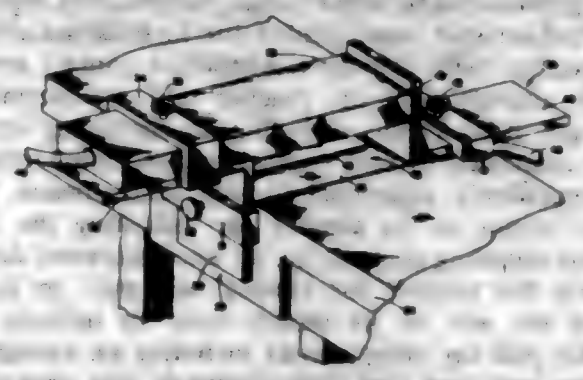
1. A chamfering machine or the like comprising a housing, a spindle journaled in said housing and adapted to support a toothed workpiece, an arm carrying a tool, said arm being mounted on the housing for angular oscillation and also for translation along the axis of oscillation, and a power driven mechanism for oscillating the arm and also for feeding the arm along said axis in predetermined relation to such oscillation to thereby cause the tool to take successive cuts of predetermined thickness on the workpiece.

2,898,814
COMMUTATOR UNDERCUTTING TOOLS
Chalmer Ross Klausman, Lafayette, Ind.
Application October 27, 1953, Serial No. 769,948
1 Claim. (Cl. 90—36)



In a commutator undercutting tool, the combination of an elongated housing including a plate-shaped upper portion and provided in its bottom portion with a longitudinally extending slot, an elongated blade holder disposed wholly within and reciprocable in said housing and formed in its bottom portion with a longitudinally extending groove aligned with said slot, an elongated cutting blade removably mounted in the groove of said holder and having a longitudinal cutting edge portion projecting outwardly through the slot of said housing, a top plate secured to said upper portion of the housing in upwardly spaced relation therefrom, a drive shaft rotatably journalled in said upper housing portion and said top plate, a cam rotatable with said drive shaft, and cam follower means carried by said blade holder and operatively engaging said cam, the bottom portion of said holder being flush with the bottom of the housing and bottom portions of said housing at opposite sides of said blade constituting work abutting means for limiting the extent of penetration of the blade into the work, said cam follower means comprising a pair of studs secured to said holder and projecting upwardly through slots formed in the upper portion of the housing at longitudinally opposite sides of said drive shaft, a reciprocable tie strap carried by said studs in upwardly spaced relation from said upper portion of the housing, said tie strap being formed with an opening movably receiving said drive shaft, and a pair of rollers rotatably mounted on the respective studs between the upper portion of the housing and said tie strap, said rollers engaging said cam.

2,898,815
METAL HONEYCOMB EXPANSION
Harold A. Simons, Redondo Beach, Calif., assignor to North American Aviation, Inc.
Application May 6, 1954, Serial No. 428,060
2 Claims. (Cl. 93—1)



1. A device for effecting expansion of unexpanded cellular material comprising two fluid discharge means, said fluid discharge means having oppositely disposed surfaces each having an elongated fluid outlet slot therein extending from one end thereof, said slots being of a

2,898,819
FOLDING AND GLUING MACHINE
Albert F. Shields, Forest Hills, N.Y., assignor to S. & S. Corrugated Paper Machinery Co., Inc., Long Island City, N.Y., a corporation of New York
Application March 31, 1954, Serial No. 420,107
11 Claims. (Cl. 93—36)

glue there-between, conveyor means actuated by the arrival of a form upon said transverse course for moving

width less than the width of the expanded cells of said cellular material and being oppositely disposed and in alignment; a source of pressurized fluid connected with said fluid discharge means for providing opposed aligned streams of fluid from said slots adapted to engage edge portions of cellular material received between said surfaces; oppositely disposed end members cooperating with said surfaces to define an opening, said end members and said fluid discharge means being adjustably interconnected whereby the dimensions of said opening is controllable, said end members having portions covering any portions of said discharge slots disposed outside of said opening whereby all fluid discharged from said slots is directed within said opening.

2,898,816

MACHINE FOR ADHESIVELY JOINING TWO SURFACES

Clifford D. Keely, West Englewood, N.J., assignor of one-half to Raymond J. Baisley, Hempstead, N.Y.

Application February 19, 1953, Serial No. 337,708
4 Claims. (Cl. 93—36)

1. In a machine for adhesively forming a manufacturer's joint in a folded carton blank, in combination, a conveying device having an upper and a lower run for continuously moving a folded carton blank through the machine with a panel component and a tabbed component, to be adhesively joined, disposed in predetermined, lapped relation, a liquid adhesive applying means located along the path of movement of said blank, means for engaging the lapped portion of the overlying component of said blank and retaining it and its adjacent panel portion in raised position as it approaches said adhesive applying means and positively retaining the same out of adhesive applying relation with said adhesive applying means as said blank passes said applying means, said adhesive applying means being disposed to enter generally in a lateral direction into the space between the plane of the engaging means and the plane of the lower run of the conveying means, said adhesive applying means including a downwardly directed nozzle for dispensing a flow of adhesive onto the upper surface of the lapped portion of the underlying component of said blank, means controlling the operation of said adhesive applying means to dispense adhesive over a predetermined portion of said underlying component, and means for thereafter pressing together the lapped components to join them adhesively.

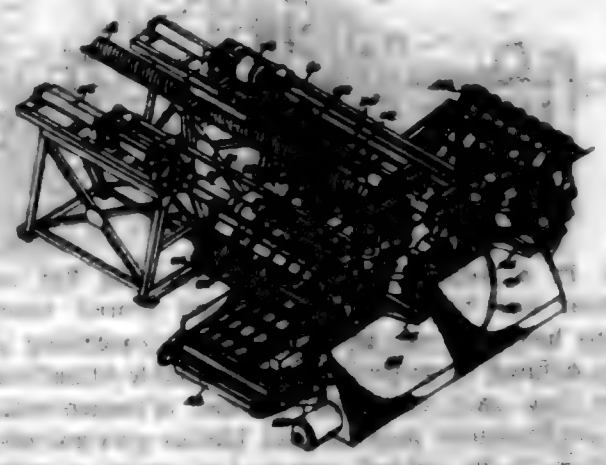
2,898,817

AUTOMATIC MACHINE FOR MAKING AND CLOSING DYNAMITE SHELL CARTRIDGES AND CASINGS AND SIMILAR APPARATUS

Earle R. Lutz, Glenside, Pa., and Wilbur L. Sheffield, Westwood, Mass., assignors to Atlas Powder Company, Wilmington, Del., a corporation of Delaware

Application June 15, 1956, Serial No. 591,575
26 Claims. (Cl. 93—39.1)

2. Apparatus for forming cylindrical shell casings and the like comprising; means to feed a continuous length of cylindrical tubing along a predetermined path longitudinally of said apparatus, cutting mechanism positioned adjacent predetermined path operable to engage and cut said continuous length of tubing into predetermined lengths, transfer mechanism positioned adjacent said cutting mechanism operable to receive said cut lengths of tubing and convey the same alternately to opposite sides of said apparatus laterally away from said predetermined path, one crimping mechanism at each side of said predetermined path, each of said crimping



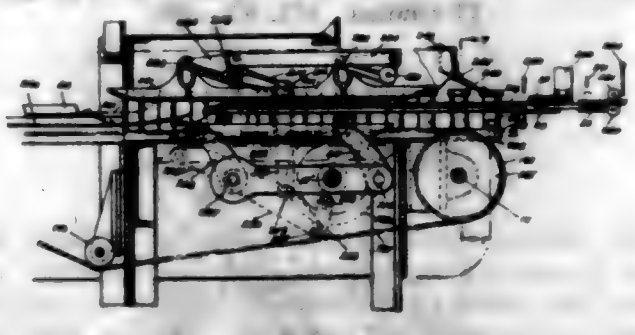
mechanisms operable to receive said cut lengths of tubing from said transfer mechanism and crimp one end of said tubing inwardly to form said shell casing, and wire forming and tieing mechanism associated with each crimping mechanism operable to position a piece of wire about the crimped end of said shell casings and twist the wire to maintain the wire in position around the end of said shell casing.

2,898,818

FOLDING MACHINE

Albert F. Shields, Forest Hills, N.Y., assignor to S & S Corrugated Paper Machinery Co., Inc., Brooklyn, N.Y., a corporation of New York

Application December 9, 1954, Serial No. 474,196
11 Claims. (Cl. 93—49)



1. In a folding machine for forming flat collapsed tubular box blanks from flat and scored sheets, said sheets having a pair of longitudinally extending side sections defined by score lines and foldable about said score lines into said collapsed tubular arrangement; means for continuously moving said blanks successively into a position to be folded; means for stopping said blanks when said blanks have reached such position; means for folding over each of said side sections while said blanks are halted so that said sections overlap; pressure means for completing the fold in said blanks; means for moving said blanks from said folding position after the same have been folded; oscillatory means for stripping the folded blank from the blank moving means and operatively connected thereto, means for maintaining the fold in the stripped blank, said last recited means and said oscillatory means being maintained in spaced apart relationship while in engagement with said folded blanks, and means for feeding the said blanks through a stitcher.

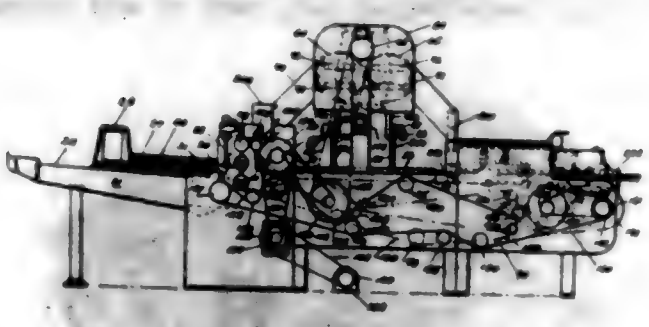
member, whereby the central portion of a cruciform blank of said foldable sheet material may be clamped

folding one longitudinal edge portion of the strip to form a channel, depositing cores in the channel in spaced rela-

the arm and also for feeding the arm along said axis in

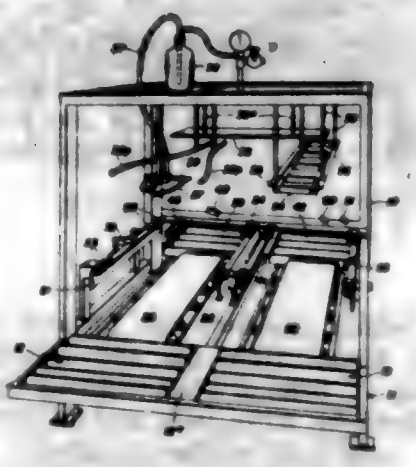
extending from one end thereof, said slots being of a

2,898,819
FOLDING AND GLUING MACHINE
Albert F. Shields, Forest Hills, N.Y., assignor to S & S Corrugated Paper Machinery Co., Inc., Brooklyn, N.Y., a corporation of New York
Application May 18, 1955, Serial No. 509,329
11 Claims. (Cl. 93—49)



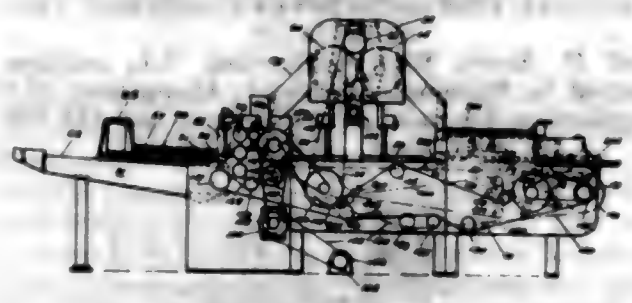
1. In a folding machine for forming flat collapsed tubular box blanks from flat and scored sheets, said sheets having a pair of longitudinally extending side sections defined by score lines and foldable about said score lines into said collapsed tubular arrangement; means for continuously moving said blanks successively into a position to be folded; means for applying adhesive to foldable side sections of the said moving blanks; means for stopping said blanks when said blanks have reached such position; means for folding over each of said side sections while said blanks are halted so that said sections overlap; pressure means for completing the fold in said blanks; means for moving said blanks from said folding position after the same have been folded; oscillatory upwardly moving means for stripping the folded blank from the blank moving means, means for maintaining the fold in the stripped blank; said last recited means and said oscillatory means being maintained in spaced apart relationship while in engagement with said blanks.

2,898,820
CARTON FLAP SEALING MACHINE
Clifford D. Keely, West Englewood, N.J., assignor of one-half to Raymond J. Baisley, Hempstead, N.Y.
Application December 30, 1955, Serial No. 557,227
11 Claims. (Cl. 93—49)



1. In a machine for sealing the flaps of cartons in which expanded carton blanks are first placed on carrier forms by means of which said blanks are propelled through the machine, said forms permitting said flaps to stand free thereof and to be folded down thereagainst, and in which a forward course of travel and a return course of travel are provided together with a communicating transverse course between said courses first mentioned, a conveyor for said forms disposed in said forward course, a conveyor disposed in said return course, gluing and fold down devices disposed in said forward course and operative to apply glue to a pair of said flaps, and to fold down one pair thereof upon the other pair with the applied glue there-between, conveyor means actuated by the arrival of a form upon said transverse course for moving same there-along to said return course, means actuated by the arrival of said form upon said return course conveyor for moving said return course conveyor an increment sufficient to make room for the arrival thereon of the succeeding form, and means for applying holddown pressure on said glued flaps during the travel of said forms in said return course.

2,898,821
FOLDING MACHINE
Albert F. Shields, Forest Hills, N.Y., assignor to S & S Corrugated Paper Machinery Co., Inc., Brooklyn, N.Y., a corporation of New York
Application March 21, 1956, Serial No. 572,933
9 Claims. (Cl. 93—49)



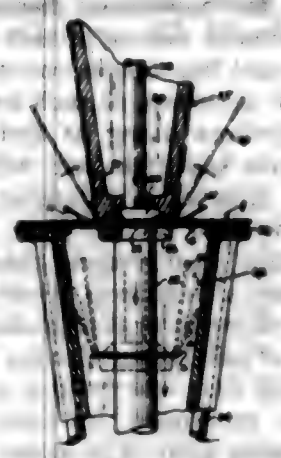
1. In a folding machine for forming flat collapsed tubular box blanks from flat and scored sheets, said sheets having a pair of longitudinally extending side sections defined by score lines and an intermediate section between said side sections; said side sections being foldable about said score lines into said collapsed tubular arrangement; means for continuously moving said blanks successively into a position to be folded; means for stopping said blanks when said blanks have reached such position; means for folding over each of said side sections over said intermediate section while said blanks are halted so that said sections overlap; said folding means comprising a pair of plates having an oscillatory folding motion; rack and pinion means for providing said folding motion; pressure means for completing the fold in said blanks; means for moving said blanks from said folding position after the same have been folded; cam-operated stripping means for removing the folded blank from the blank moving means, means for maintaining the fold in the stripped blank; said last recited means and said stripping means cooperating to maintain the overlapping portions of said sections spaced from said intermediate section, and means for feeding the said blanks through a stitcher.

2,898,822
METHOD AND APPARATUS FOR MAKING CONTAINER FOR LIQUID PRODUCTS
George Arlington Moore, New York, N.Y.
Application June 11, 1957, Serial No. 664,937
10 Claims. (Cl. 93—51)

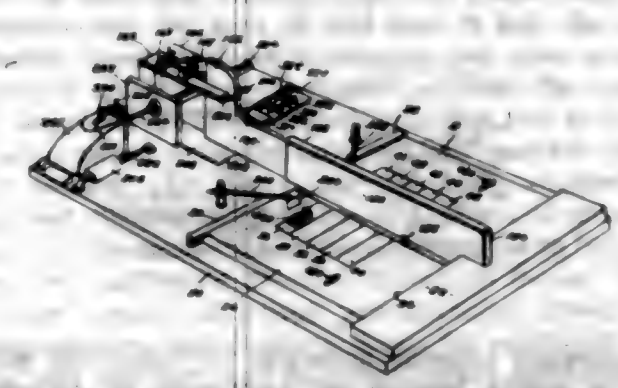
9. An apparatus for forming a container of foldable sheet material, comprising a hollow female die member having tapering side walls whose inner surfaces are shaped to conform with the shape to be assumed by the container, said member being substantially rectangular in cross section and provided with heating means adjacent its longitudinal corner ends, a complementary male die member adapted to register into and out of said female die member in telescopic relationship and having an end wall and tapering side walls, the exterior surfaces of said side walls conforming substantially to those of the female die member, a slider shaft extending centrally through the opening of said female die member and mounted for independent reciprocating movement, a platen head on the free end of said shaft and its face adapted to be encountered by the end wall portion of the male die

projecting axle and an inwardly projecting slotted shank, counter bar in a first direction; a line length counter bar

member, whereby the central portion of a cruciform blank of said foldable sheet material may be clamped and compressed between said end wall and platen head just prior to the movement of the male and female die members into telescopic registry with each other, whereby upon said movement the outwardly extended panel portions of said clamped blank are folded transversely and upon the exterior face of the side walls of the male die member thereby forming the tapering body side walls of the container extended from the corner side edges of the clamped area portion of said blank that constitutes the end wall closure of the longitudinal side walls of the constructed container.



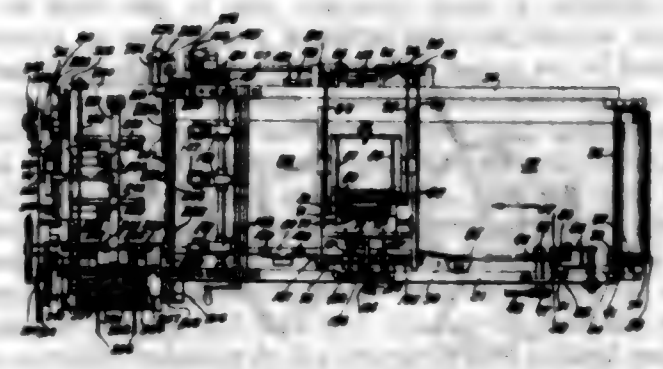
2,896,823
BOX ASSEMBLY APPARATUS
Stanley J. Drew and Charles L. Kanty, Rochester, N.Y.; said Kanty assignor to said Drew
Application June 25, 1956, Serial No. 593,402
19 Claims. (Cl. 93—55.1)



1. A box bottom and cover assembling machine comprising a work table, a central partition extending part way there along, means for moving a box bottom and box cover into engagement with said partition with their open faces toward the partition, means for moving a box bottom and cover along said partition and to positions in alignment for assembly and beyond the end of the partition, guide frame means adapted to receive and having portions complemental to a box cover and box bottom located beyond said partition and means for relatively moving a box bottom located beyond the end of the partition in said frame guide means into telescopic assembled relation with a box cover.

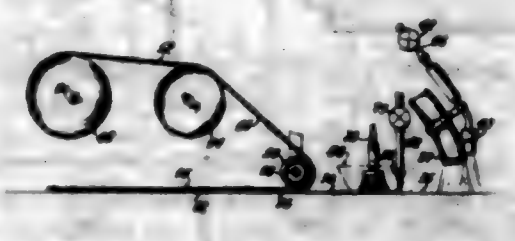
2,896,824
METHOD OF AND APPARATUS FOR WINDING A SHEATH AROUND A CORE
Melvin H. Sidebotham, Sr., Gordon L. Sidebotham, and Melvin H. Sidebotham, Jr., Winchester, Mass., assignors, by mesne assignments, to Joseph Dixon Crucible Company, Jersey City, N.J., a corporation of New Jersey
Application January 20, 1955, Serial No. 482,931
9 Claims. (Cl. 93—81)

1. The method of forming a sheath around a core which consists of feeding a strip of flexible material, folding one longitudinal edge portion of the strip to form a channel, depositing cores in the channel in spaced relation, fastening the said portion around the cores, severing the strip into sheets at the spaces between the cores, feeding the sheets, and winding and securing the sheets around the cores.



6. In a machine for forming a sheath around a core, means for feeding a strip of material, a table for supporting the strip, means at one edge of the table for applying adhesive to the edge of the strip, means for folding said edge to form a channel, means above the table for depositing cores, one at a time and in spaced relation, in said channel, means for sealing said cores in the channel, means for severing the strip between spaced cores to form sheets, a second table, sheet winding means on said second table, means for feeding the sheets with the cores sealed in the advance ends to said sheet winding means, and means for operating the winding means to wind the sheets around the cores.

2,896,825
MARKING STRIPE AND METHOD OF APPLYING SAME
James H. Walker, Los Angeles, Scott W. Carr, Whittier, and Charles H. Horn, Riverside, Calif., assignors to Limark Corporation, a corporation of California
Application June 20, 1955, Serial No. 516,728
5 Claims. (Cl. 94—1.5)



5. A marking stripe applied to a paved surface, comprising: an elongated, traffic-resistant opaque tape of uniform width; a settable adhesive stripe wider than said opaque tape securing the entire lower surface of said opaque tape to said paved surface; and a transparent tape wider than said opaque tape superimposed thereover and having its opposed edges secured by said adhesive to said paved surface outwardly of said opaque tape on both sides thereof, said transparent tape being destructible by traffic but adapted to temporarily protect said opaque tape from loosening and defacement until said adhesive is completely set.

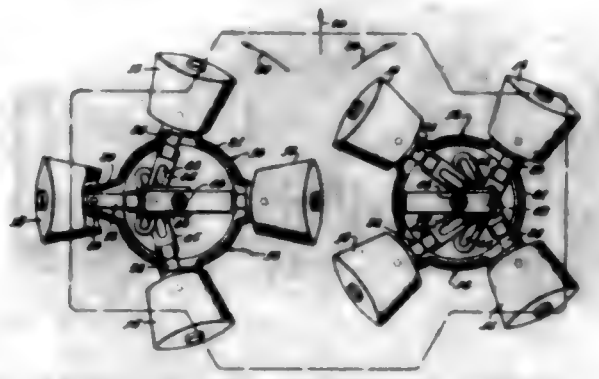
2,896,826
PAVING MACHINE
Frank W. Livermont, Monrovia, Calif.
Application April 23, 1956, Serial No. 579,801
20 Claims. (Cl. 94—45)

1. In a device of the class described, the combination of: a frame, a rotary member mounted to turn on the frame about a vertical axis, a pair of trunnions each pivotally mounted on the rotary member for movement about a vertical axis laterally offset with respect to the first said axis, the trunnions each having an outwardly

2,896,823

ranged to pass light through a part of said exposure shut-

projecting axle and an inwardly projecting slotted shank, a wheel mounted upon each axle and adapted to roll upon a flat surface, means adapted to be laterally spaced from said first axis and extending through said slotted shanks for cyclically pivoting the said trunnions relatively to the rotary member in timed relation with each

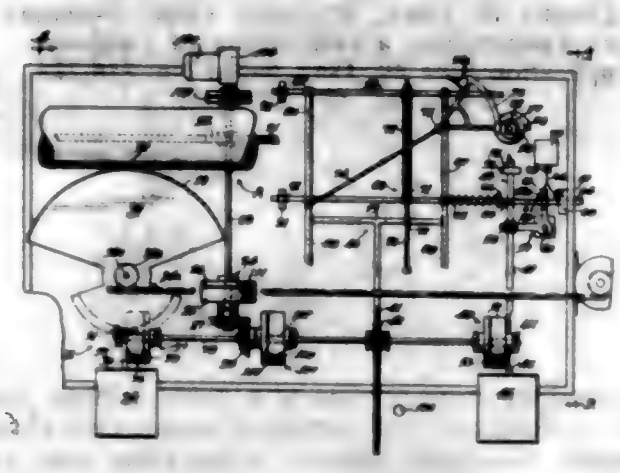


revolution of the rotary member, whereby said wheels are caused to travel in non-circular paths on said surface, control means mounted centrally of the axis of said rotary member to control the spacing of said spaced means from said first axis, and means for rotatably shifting said control means about said first axis.

2,898,827
PROPORTIONAL SPACING AND JUSTIFYING MECHANISM

Robert W. Wirtz, Plainfield, N.J., and Harold B. Ratcliff and John S. Turner, Jr., Peoria, Ill., assignors to Wirtz Company, Chicago, Ill., a copartnership

Application April 18, 1955, Serial No. 502,028
22 Claims. (Cl. 95—4.5)

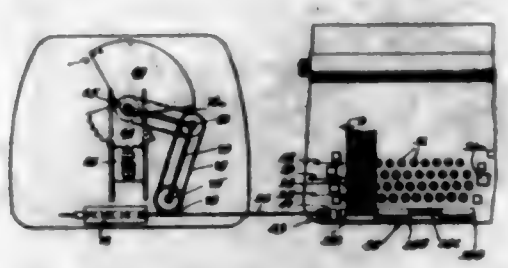


10. Automatic carriage advancement mechanism comprising in combination: a carriage; a rack on said carriage; a pinion engageable with said rack; a drive shaft; first driving means connected with said shaft and actuable after character selection; second driving means connected with said shaft and actuable upon word space selection; a first stop; a shuttle carried by said stop and having a set of characters thereon for light exposure to film in said carriage; a series of peripheral notches along the peripheral edge of said first stop, each of said notches having a depth proportional to the width of a corresponding exposure character, said notches and said corresponding exposure characters being in such order that positioning of a character for exposure further positions the notch corresponding thereto before said first driving means to limit the operation thereof; means for positioning said first stop; a second stop limiting operation of said second driving means during the printing of an unjustified line; a word space counter bar having a set of teeth thereon; linkage connected with said second driving means and engageable with said teeth for advancing said word space counter bar in a first direction; a line length counter bar connected with said shaft for movement in a direction perpendicular to said first direction; a slotted guide carried by said word space counter bar for movement in said first direction, the slot in said guide extending parallel to said perpendicular direction; a rigid arm slidably held within said guide for movement therewith in said first direction and movement therein in said perpendicular direction; a rod on said line length counter bar, extending parallel to said first direction, of such length as to engage said rigid arm anywhere along its first direction travel, and adapted to move said rigid arm within said guide in said perpendicular direction; a rotatable lever engageable by said rigid arm while a portion of an unjustified line is being printed; a cam shaft; means connecting said cam shaft with said lever; a third stop on said cam shaft, said third stop having a peripherally graduated surface for limiting operation of said second driving means during the printing of a justified line, that portion of the peripherally graduated surface positioned to limit second driving means operation being such as to allow only that second driving means operation necessary to effect justification of a line without affecting character spacing upon a second printing of a line; and means to alternatively position said third stop.

2,898,828
MECHANICAL INDEXING APPARATUS FOR PHOTOCOMPOSING MACHINE

Robert W. Wirtz, Watchung, N.J., Harold B. Ratcliff, Peoria, Ill., and John S. Turner, Jr., Fort Worth, Tex., assignors to Wirtz Company, Watchung, N.J., a copartnership

Application June 24, 1958, Serial No. 744,291
31 Claims. (Cl. 95—4.5)



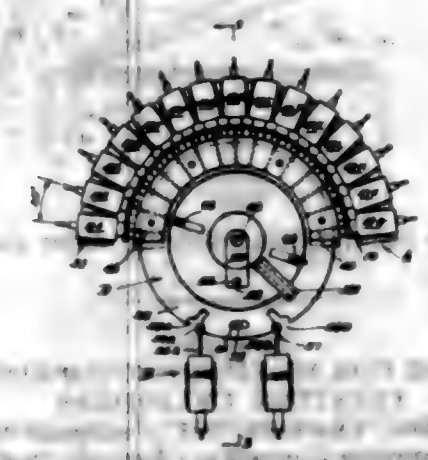
1. Automatic indexing apparatus for selectively positioning a matrix bearing an assortment of exposure characters thereon corresponding to the characters selectable by operation of the character keys on a typewriter, comprising a rotatable shaft, means to mount said matrix for rotation with said shaft, a set of stop pins, one extending from each typewriter character key and actuatable thereby, a reading shuttle disposed for linear movement below said stop pins, reversible drive means connected with said shuttle, a motion translating train connecting said shuttle and said shaft to convert linear shuttle movement into rotary shaft movement, means operatively connected with said drive means to determine the direction of shuttle movement and to actuate said drive means, upon operation of a character key, to move the shuttle in a direction toward the stop pin depending from said character key, means on said shuttle to engage said stop pin and arrest shuttle movement, a locking disc segment carried by said shaft for rotation therewith, said disc segment having a set of radial locking passages arranged about its peripheral edge, movable locking means engageable in any one of said passages to accurately position and lock said shaft and said matrix for photographing the character corresponding to said key, motor means to move said locking means, and means operatively connecting the motor means to the means on said shuttle, whereby said motor means is actuated as the means on said shuttle engages said stop pin.

2,898,832
LENS MOUNT HOLDER FOR OPTICAL ELEMENTS

latter in position in said folder, means to connect de-

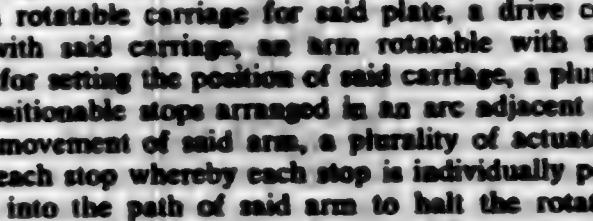
which consists of feeding a strip of flexible material, first said axis, the trunnions each having an outwardly

2,896,829
ELECTRICAL INDEXING APPARATUS FOR PHOTOCOMPOSING MACHINE
Robert W. Wirtz, Watchung, N.J., Harold B. Ratcliff, Peoria, Ill., and John S. Turner, Jr., Fort Worth, Tex., assignors to Wirtz Company, Watchung, N.J., a copartnership
Application June 24, 1958, Serial No. 744,292
36 Claims. (Cl. 95—4.5)



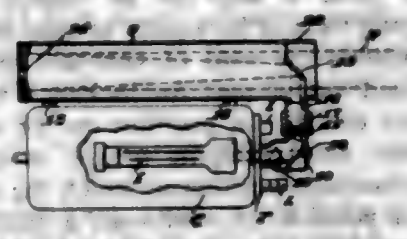
1. Keyboard controlled apparatus for selectively moving a character-bearing plate, characterized by the fact that a plurality of predetermined plate positions corresponding to the character keys of a keyboard are determined by a lesser number of positioning means, comprising a rotatable carriage for said plate, a drive connected with said carriage, an arm rotatable with said carriage for setting the position of said carriage, a plurality of positionable stops arranged in an arc adjacent the path of movement of said arm, a plurality of actuators, one for each stop whereby each stop is individually positionable into the path of said arm to halt the rotation thereof, means effective to energize said drive upon operation of any actuator, a member whereby the stops may be angularly positioned simultaneously and to the same extent, means normally retaining said member in a center position, shift means for selectively angularly moving said member in either one of opposed directions from said center position, means connected with said member for limiting the effective movement thereof in either of said opposed directions, and electrical control means, controlled by said character keys, for selectively operating said actuators and said shift means according to the predetermined position which said plate is to assume for each character key operation.

2,896,830
PHOTOCOMPOSING APPARATUS
Robert W. Wirtz, Watchung, N.J., Harold B. Ratcliff, Peoria, Ill., and John S. Turner, Jr., Fort Worth, Tex., assignors to Wirtz Company, a copartnership
Application June 24, 1958, Serial No. 745,795
24 Claims. (Cl. 95—4.5)



1. A keyboard actuated photocomposer, comprising a set of actuating character keys, an exposure shuttle having a set of characters thereon related to said character keys, a film holder, a light projection system arranged to pass light through a part of said exposure shuttle to film in said film holder, a shutter mechanism to prevent unwanted film exposure, a drive motor energizable by operation of said character keys, mechanism connecting said drive motor to said exposure shuttle for movement thereof, a set of actuatable indexing devices, actuating mechanism connecting each indexing device to at least one of said character keys, a movable bar adapted to engage any actuated indexing device, means connecting said drive motor to said bar, a set of locking means on said exposure shuttle corresponding to the characters thereon, a movable control and locking arm, and control means operatively associated with said arm and connected to said drive motor, said bar and said shutter, whereby actuation of an indexing device corresponding to an operated character key predetermines the operation of said drive motor and movement of said exposure shuttle and said bar, contact by said bar with the actuated indexing device energizes said control means, and energization of said control means inactivates said drive motor, moves said arm to engage the locking means corresponding to the exposure shuttle character related to said operated key, and operates said shutter mechanism to photographically expose said exposure shuttle character to said film.

2,896,831
LENS TURRET AND AUXILIARY LENS FOR CAMERAS
Alfred P. Smith, Jr., and Earl H. Thoms, Seattle, Wash.
Application February 2, 1955, Serial No. 485,754
3 Claims. (Cl. 95—11)

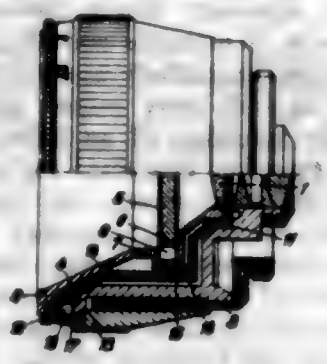


1. In combination with a camera including a casing having an aperture in the front wall thereof and a lens turret rotatably supported on said front wall and having a plurality of circumferentially spaced light transmitting openings selectively alignable with said aperture, an objective mounted on a side wall of said casing in substantially rigid balanced relation to said camera with its axis substantially parallel to the axis of said camera aperture and turret, said objective having a lateral image emitting opening adjacent said turret for emitting an image transversely across in front of said turret, a reflector device mounted on said turret in fixed relation therewith in communication with one of said openings and disposed to receive the image emitted by said objective when said turret is adjusted with said one opening in operative alignment with said camera aperture, a tube surrounding said image emitting opening and extending laterally of said objective toward said turret, and a laterally extending conduit on said reflector device and alignable with said tube when said reflector device is in operative relation to said camera aperture, the alignable ends of said tube and conduit having curved surfaces concentric to the axis of said turret to permit rotation of said turret and alignment of said ends, whereby adjustment of said turret to position said reflector device in alignment with said camera aperture places said aperture in image receiving relation to said image emitting opening of said objective and the balanced relation of said objective with said camera enables smooth swinging of the camera across a scene or from one scene to another.

2,896,836

linkage connected with said second driving means and engageable with said teeth for advancing said word space said shuttle, whereby said motor means is actuated as the means on said shuttle engages said stop pin.

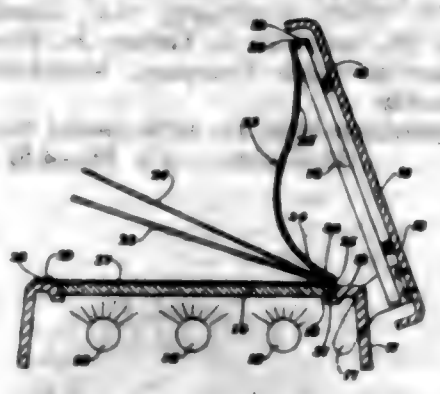
2,898,832
LENS MOUNT HOLDER FOR OPTICAL ELEMENTS
Peter Schmuck, Mauren, Liechtenstein, assignor to Firma Contina Bureaux- und Rechenmaschinenfabrik Aktiengesellschaft, Mauren, Liechtenstein
Application August 3, 1956, Serial No. 601,977
Claims priority, application Austria August 17, 1955
5 Claims. (Cl. 95—64)



1. In a lens mount arrangement for photographic cameras and adapted to be equipped with optical attachments, the combination of: a tubular lens mount carrier; a tubular lens mount arranged interiorly of said carrier, said lens mount and lens mount carrier being connected for axial movement relative to each other; a front component lens arranged in said lens mount; a mount part arranged within said lens mount and protruding beyond said front component lens and having an annular shoulder adapted to form a seat for an optical element, said shoulder being located forwardly of said front component lens intermediate the ends of said lens mount; clamping means on said mount part for locking a removable optical accessory element in position on the seat formed by said shoulder, said clamping means being continuously urged to a clamping position in which the optical element is locked in position on said seat; a rotatable adjusting ring arranged exteriorly of said lens mount; and connecting means interconnecting said adjusting ring and said clamping means in such a manner that rotation of said ring in one direction will cause said clamping means to release the optical element and rotation in the opposite direction will permit said clamping means to assume its clamping position so that the optical element will be locked in position on said seat, whereby the optical element may be locked and released from a point exteriorly of said lens mount irrespective of the axial position of said lens mount within said lens mount carrier without necessitating access to said clamping means through the wall of said tubular lens amount or the wall of said tubular lens mount carrier.

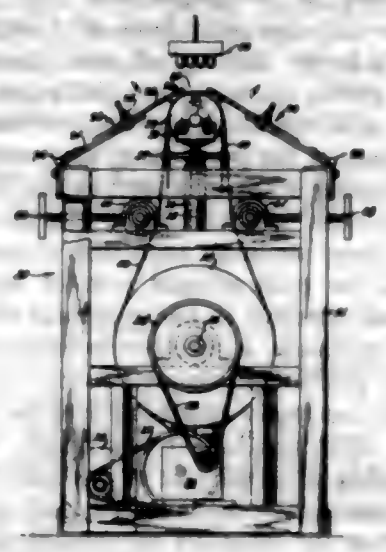
2,898,833
MATRIX REGISTRATION FOLDER
Guy D. Aydlett, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Application March 29, 1955, Serial No. 497,655
3 Claims. (Cl. 95—73)

1. A matrix registration folder in combination with a printer having a printing surface and a movable platen between which said folder is positioned, said folder comprising a strip of material folded upon itself to provide a pair of overlying sheets adapted to receive therebetween members to be printed, at least the sheet overlying said surface being light transmitting, a hinge between said sheets at said fold loosely positioned on said surface both to position said members relative to said folder and to pinch edges of said members to retain the latter in position in said folder, means to connect detachably to said surface the sheet overlying the latter,



and means to connect detachably the other sheet slidably to said platen.

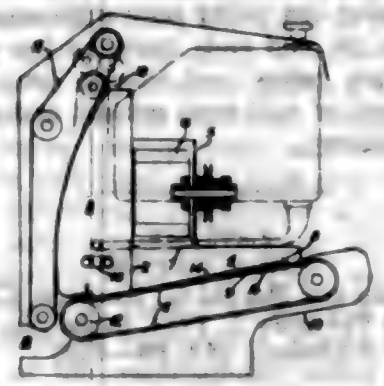
2,898,834
MACHINE FOR MAKING PHOTOPRINTS ON PRINTING CYLINDERS
Louis Schreiber, Charlotte, N.C., assignor to Carolina Textile Engraving Company, Charlotte, N.C., a corporation of North Carolina
Application May 23, 1956, Serial No. 586,729
6 Claims. (Cl. 95—77.5)



1. A machine for photoprinting a design on a printing cylinder, said design being on a film laid on said printing cylinder for photoprinting operation, comprising a drive roller mounted in said machine for rotation about a drive axis, means for rotating said drive roller, means for supporting a printing cylinder for free rotation about an axis parallel to said drive axis, a flexible apron adapted to cover said film laid on said printing cylinder, the portion of said apron over said design being light pervious, means detachably connecting the ends of said apron to form a belt loop tightly embracing said drive roller and said printing cylinder to press said film against said printing cylinder and to form a driving connection between said drive roller and said printing cylinder for rotating the latter, a pair of apron guide members between said drive roller and said printing cylinder outside said belt loop, one on each side and pressing inwardly against said belt loop to wrap it around larger arcs of said printing cylinder and said drive roller, and means for at least one of said guide members for adjusting its position toward and away from said belt loop to regulate the tension thereof; whereby said film may be placed on said printing cylinder under said apron, said apron guide members may be adjusted toward and away from said belt loop to regulate the tension thereof, and said drive roller may be rotated to rotate said printing cylinder with said film thereagainst for a photopriating operation.

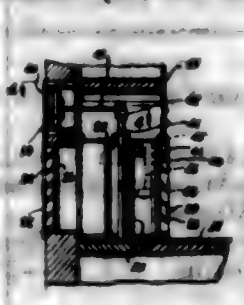
ing communicating with the atmosphere; an intermediate

2,898,835
APPARATUS FOR THE CONTINUOUS DEVELOPMENT OF LIGHT SENSITIVE PAPERS
Ridley Saul Jacobs, London, England, assignor to The Nig Manufacturing Company Limited, London, England, a company of Great Britain
Application October 8, 1956, Serial No. 614,595
6 Claims. (Cl. 95—94)



1. Apparatus for the continuous development of light sensitive materials such as diazo type papers, including an ammonia vapour storage chamber, a developing chamber, delivery duct means between said ammonia vapour storage chamber and said chamber, through which duct means heated vapour from said ammonia vapour storage chamber can pass to said developing chamber, a movable endless belt forming one wall of said developing chamber, said belt constituting a moving guide for the material to be developed, a baffle constituted by another wall of said developing chamber, which baffle guides the vapour delivered to said developing chamber through the duct means from said ammonia vapour storage chamber, said baffle and said endless belt converging in the direction of feed of the material and said duct means opening into said developing chamber remote from the end thereof toward which said baffle and said endless belt converge, and a series of orifices in said baffle through which vapour from the developing chamber can flow back into the ammonia vapour storage chamber, so that the flow of vapour occurs in a closed circuit.

2,898,836
BUILDING PRESSURIZATION SYSTEM
John A. Lockhood, Van Nuys, Calif.
Application December 13, 1956, Serial No. 628,196
6 Claims. (Cl. 98—1.5)



3. A pressurized air conditioning system for air in a building with a gas trap seal having a seal-breaking pressure, which system includes: a continuously operating blower for introducing air into said building at a pressure less than said seal-breaking pressure; a proportioning intake valve for said blower, having an inlet for new exterior air and an inlet for recirculated interior air; means for yieldably urging said intake valve to a 100% new air position; diaphragm means for sensing the difference between interior and exterior pressure; and means responsive to said diaphragm for moving said intake valve to a position in which the proportion of recirculated air corresponds to the drop below seal-breaking pressure of said difference between interior and exterior pressure.

2,898,837
VENTILATED BED ENCLOSURE
Thomas L. Scarnelli, Washington, D.C.
Application October 12, 1954, Serial No. 461,759
2 Claims. (Cl. 98—33)

1. In an enclosed crib and the like, the combination of a bottom member, end members affixed to said bottom member, and side members connected to said end members, one of said end members being provided with an opening therein, blower means dependingly and detachably affixed to the said bottom member, detachable duct means connecting said blower means to the opening in one of said end members, an access door in said duct means and a humidifier holder mounted on the inside of said access door, a canopy removably affixed to the end members of said crib for enclosing the said crib, said canopy having a flap for gaining access to the interior of said crit, zipper means for opening and closing the flap and a venturi tube means disposed in the said duct means intermediate said blower means and said opening in said end member, and a separate pipe means connecting said venturi tube means with the interior of the crib independently of said duct means whereby portions of previously treated air supplied to the enclosed crib may be removed from the crib and returned thereto in a continuous cycle.

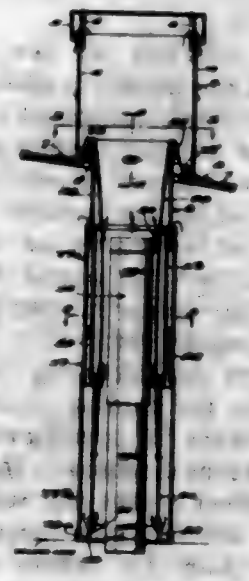
2,898,838
AIR INLET MEANS, ESPECIALLY IN CEILING PANELS OR WALL PANELS
Per Anders Palmér, Stockholm, Sweden
Application November 5, 1956, Serial No. 620,448
Claims priority, application Switzerland November 7, 1955
11 Claims. (Cl. 98—40)

1. A covering for the enclosing surface of a room comprising panel means formed with passageways extending through the same for supplying air to the room, each of said passageways having a surrounding wall portion forming a projecting lip extending at least to the room surface of said panel means and recesses formed in said roof surface side of said panel means and surrounding said projecting lips, whereby the velocity of room air induced by the flow of entrant air through said passageways and passing along the side of said panel facing said room is diminished about said passageways.

2,898,839
SHEET METAL CHIMNEYS
Henry S. McKeon, Fredericksburg, Va.
Application February 24, 1956, Serial No. 567,585
10 Claims. (Cl. 98—48)

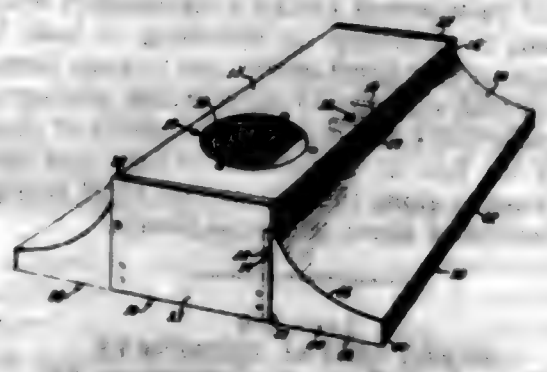
1. In a building construction, the combination of a roof having an opening; a hollow chimney casing mounted on said roof surrounding said opening and extending upwardly therefrom, said casing having an exhaust open-

ing communicating with the atmosphere; an intermediate air pipe comprising a plurality of telescopically engaged sections and being adjustable in length by relative axial movement of such sections, said intermediate air pipe being disposed in alignment with said opening in said roof and extending therethrough; first closure means extending between the walls of said casing and the uppermost section of said intermediate air pipe and closing the space therebetween against air flow; means fixed to said intermediate air pipe and engaged over said first closure means to suspend said intermediate air pipe from said first closure means; an outer air pipe surrounding said intermediate air pipe; a smoke pipe disposed within said intermediate air pipe; second closure means mounted



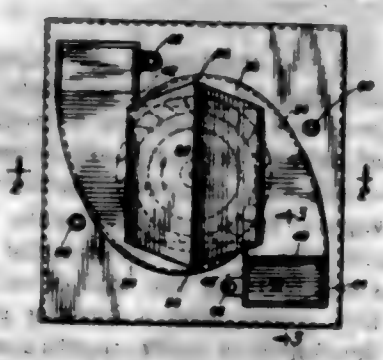
on said intermediate air pipe at the bottom thereof and extending between said outer air pipe and said smoke pipe to close the space therebetween against air flow, there being an opening communicating between the space between said outer and intermediate air pipes and the space between said intermediate air pipe and smoke pipe above said second closure means, whereby air may flow downwardly between said outer and intermediate air pipes to a point adjacent said second closure means and hence upwardly between said intermediate air pipe and smoke pipe into said casing, and said smoke pipe and outer air pipe each being provided with means engaging said second closure means for vertical support of said smoke pipe and outer air pipe.

2,896,840
TAKE-APART KITCHEN RANGE HOOD
Sidney Simon, Los Angeles, Calif.
Application November 5, 1956, Serial No. 620,497
2 Claims. (Cl. 98—115)



1. A fume hood comprising a body portion and a wing portion, said wing portion comprising a hood forming member extending from said body portion the body being of generally rectangular construction and having depending ends and an opening in a side thereof extending from approximately one end of the body portion to the other and from the bottom to a position below but adjacent the top thereof, the wing portion having an outwardly extending top and depending end walls pivotally mounted on the body portion on an axis between the top and bottom of said opening and constructed so that said top extends outwardly of the body portion at the top of the opening in the side thereof, pivot means providing said axis, said axis being near the top of said wing whereby said wing can swing outwardly about said axis, and stop means on said ends engaging the end walls of said wing portion below said axis to limit the inward pivotal movement of said wing portion and to determine its working position.

2,896,841
AIR SCUPPER
Harold Knutson and Harold G. Knutson, Chicago, Ill.
Application February 1, 1954, Serial No. 407,466
5 Claims. (Cl. 98—116)



1. An air scupper ventilator comprising a fan having peripheral blades and a central free opening, housing means for the fan comprising a supporting base with a central opening leading to the interior of the fan, a top plate for supporting the fan from its upper end, the housing means having side walls including curved plates extending gradually outward from opposite outer peripheral edges of the fan which with the base and top plate form outwardly flaring passages terminating in rectangular substantially vertical door openings inclined rearwardly at the tops and facing in substantially reverse direction at opposite sides of the ventilator, power means connected centrally to the upper supporting top plate of the fan housing for rotating the fan, and inclined doors hinged at the upper ends of the door openings of the passages and adapted to be closed by gravity against the said base, which are opened by pressure created by the fan within the housing.

2,896,842
AUTOMATIC COFFEE MAKER FOR INSTANT COFFEE
Alfred J. Huck and Charles D. Vines, St. Louis, Mo., assignors to Knapp-Monarch Company, St. Louis, Mo., a corporation of Missouri
Application November 8, 1955, Serial No. 546,342
6 Claims. (Cl. 99—275)

1. An automatic coffee maker for instant-type coffee comprising, in combination: a bowl having a bottom, up-

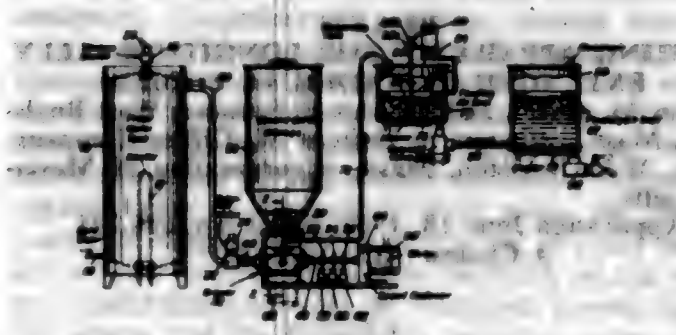
ping the skewer; temperature-indicating means secured power operated means for performing a cycle of opera-

terior pressure.

wardly therefrom, said casing having an exhaust open-

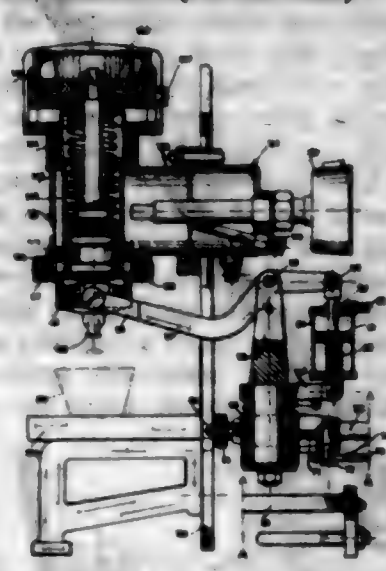
right sides, and an open top and being adapted to contain water therein to be heated; heater means operatively associated with the outside of said bowl for heating the liquid within the bowl; a coffee hopper, having a water-vapor-temperature actuatable door therefor, removably positioned in the open top of said bowl to be supported thereby during a coffee-brewing operation in spaced relation above the water contained in said bowl and exposed to heated water-vapor from the water in said bowl, said hopper being operative to carry a water-soluble coffee product therein at temperatures below a selected water-vapor-temperature and to discharge, through said door, said soluble coffee product from said hopper into the heated water in said bowl upon said door therefor being exposed to a water-vapor-temperature at least as high as said selected water-vapor-temperature; and water agitating means, separate from said heater means and powered by movement of the heated water in the bowl during the generation of water-vapor which is operative to effect release of the water-soluble coffee product from said water-vapor-temperature actuatable coffee hopper, positioned in the water in said bowl for agitating and mixing the heated water with the water-soluble coffee product that is discharged therein from said hopper.

2,898,843
COFFEE BREWER
Clyde R. Rockriver, Burbank, Calif., assignor to Huggins-Young Company, Inc., Los Angeles, Calif., a corporation of California
Application December 3, 1956, Serial No. 625,871
2 Claims. (Cl. 99—283)



1. A coffee brewer comprising a tank for hot water, a hopper for ground coffee adjacent the tank, a brewing device for the water and coffee; said brewing device including a rotatable cylinder beneath the hopper, a compartment in the cylinder for receiving ground coffee, a hollow shaft supporting the cylinder, means for rotating the shaft and cylinder to position the cylinder for reception of ground coffee from the hopper, a pipe connecting said shaft and the hot water tank, perforations in the shaft for allowing hot water to pass through the ground coffee in the brewing compartment of the cylinder, timing means for the brewing operation, said means including a motor for rotating the shaft and the brewing cylinder, control cams on the shaft, a measuring tank and a reservoir tank for the brewed beverage positioned adjacent the brewing device and pipes connecting the same, a source of current for the motor and switches, electrically controlled valves for the brewer and the measuring tank, switches for the valves, the motor and the brewing element, operated by the cams, a filter for the brewed beverage, means for flushing spent grounds from the brewing compartment of the cylinder at one point of its rotation, an antisiphon connection between the measuring tank and the brewer, and a float and associated switch control means positioned in the measuring tank, the float also comprising an anti-oxidation cover for the brewed beverage.

2,898,844
MACHINES FOR INFUSING COFFEE AND LIKE LIQUID EXTRACTS
Giovanni Achille Gaggia, Milan, Italy, assignor to Brevetti Gaggia S.r.l., Milan, Italy
Application March 9, 1956, Serial No. 570,609
Claims priority, application Italy March 23, 1955
9 Claims. (Cl. 99—289)



1. An automatic coffee dispensing machine comprising, in combination, a container adapted to contain a predetermined quantity of ground coffee; infusing and dispensing means cooperating with said container for making an infusion of the coffee therein and for dispensing the infusion from said container; securing means cooperating with said container and infusing and dispensing means for releasably securing said container to the latter means; discharge means for discharging from the container ground coffee from which an infusion has been made; compressing means for compressing a fresh charge of ground coffee in said container; charging means for charging the empty container with said predetermined quantity of a fresh supply of ground coffee, said discharge means, compressing means and charging means forming part of a unit spaced from said infusing and dispensing means; moving means operatively connected to said container for moving the same between said unit and said infusing and dispensing means; and at least one cam-controlled servomotor mechanism cooperating with each of said means, each mechanism including a cylinder, a piston slidable therein, an inlet valve communicating with said cylinder for supplying liquid under pressure thereto for moving the piston therein, an outlet valve communicating with said cylinder for discharging liquid therefrom after operation of said piston, and cam means cooperating with said valves for actuating the same for opening said inlet valve when said outlet valve is closed and for closing said inlet valve when said outlet valve is open.

2,898,845
COMBINED SKEWER AND THERMOMETER
Evelyn M. Dight, Seattle, Wash.
Application July 6, 1956, Serial No. 596,207
1 Claim. (Cl. 99—421)

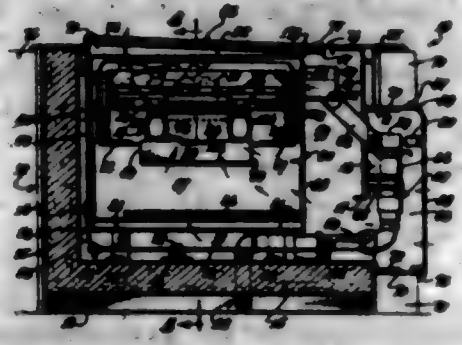
A combination skewer and thermometer, comprising: a tubular skewer adapted to revolvably support a meat roast; a point, secured in one end of said tubular skewer and providing torque transfer surfaces and an annular groove at the end of said tubular skewer adapted to accept thrust means; a power unit for revolving said skewer; means for coupling said skewer to said power means; thrust means adapted to seat in said annular groove and position said point in respect to said coupling means; said thrust means comprising two members, each having a thrust collar portion, forming tongs pivoted on a fixed pivot, spring means disposed to close the tongs and stop means limiting the amount of closure to prevent grip-

ing the ink pots in spaced relationship on the supports to for unwinding and winding the negative plate band at

ping the skewer; temperature-indicating means secured to the opposite end of said skewer; temperature-sensing means disposed in said tubular skewer intermediate its ends; means for operatively connecting said sensing means and said indicating means; bearings for revolvably sup-

porting said skewer adjacent its opposite ends; and insulation disposed in each end of said tubular skewer, substantially covering the interior of said skewer except for the portion occupied by the heat-sensing unit, and in contact with the inner wall thereof.

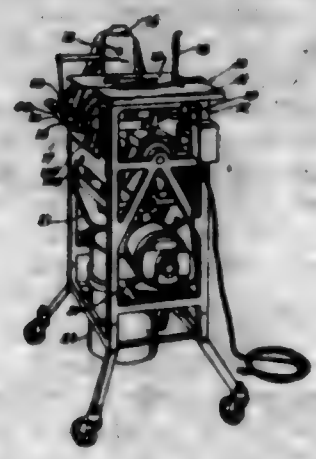
2,898,846
GAS FIRED BROILER
Joel Alfred Del Francia, Los Angeles, Calif.
Application April 7, 1958, Serial No. 726,965
14 Claims. (Cl. 99—443)



1. An improved gas fired broiler, comprising an upright housing, a firebox structure within the housing including a substantially horizontally extending gas burner, a bed of ceramic bodies overlying the burner for radiating upwardly heat received from combustion of the burner gas, substantially horizontally extending receptacle means directly overlying the burner gas ports and opening upwardly for intercepting droppings from said ceramic bodies, an openwork grill overlying the firebox structure, and upright panel means between the firebox and housing and forming therewith passages openly communicating between the lower interior of the housing and said overlying grill at the outside of the firebox for circulating streams of relatively cool air upwardly between the housing and firebox structure whereby the temperature of the housing is kept well below that of the firebox during continuous operation of the broiler.

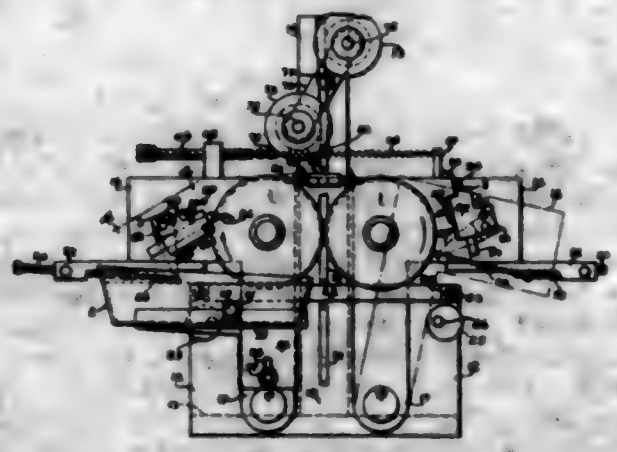
2,898,847
TYING MACHINE
Benjamin H. Bunn, Chicago, Ill., assignor to B. H. Bunn Company, Chicago, Ill., a corporation of Illinois
Application September 29, 1953, Serial No. 383,866
8 Claims. (Cl. 100—4)

1. A tying machine assembly comprising a table on which an article to be tied is placed, a source of twine, power operated means for performing a cycle of operations upon the twine and article to wrap the twine about the article and tie the wrapped twine in a knot, and a trip mechanism for initiating the cycle of operations, said mechanism including an oscillatable rod connected to the power operated means, a bell crank having one arm pivotally connected to the rod, a second oscillatable rod, a manually controlled lever, means for locating the second oscillatable rod to engage the manually controlled lever



and the second arm of the bell crank so that operation of the lever causes operation of the bell crank and the first-mentioned oscillatable rod to initiate the cycle of operation, as aforesaid, and means for automatically disengaging the second oscillatable rod from the bell crank after the cycle has been initiated and while said manually controlled lever is operated to prevent a repetition of the cycle until the manually controlled lever is released.

2,898,848
PRINTING APPARATUS FOR LONGITUDINALLY EXTENDED CYLINDRICAL BODIES
Duncan M. Gillies and Charles F. Spencer, West Boylston, Mass., assignors to Duncan M. Gillies Company, Inc., West Boylston, Mass., a corporation of Massachusetts
Application June 18, 1957, Serial No. 666,291
4 Claims. (Cl. 101—36)

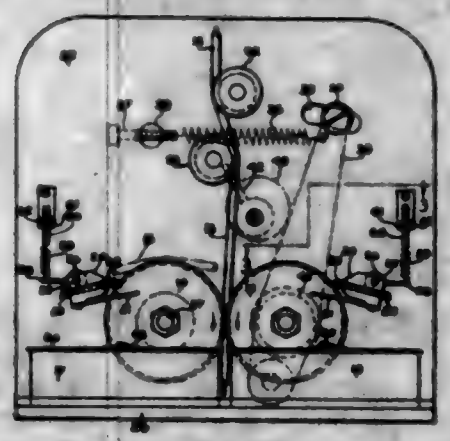


1. Apparatus for printing opposite sides of an extended longitudinally moved cylindrical workpiece comprising a pair of peripherally opposed wheels, each of which has a concave groove provided with an intaglio engraving thereon and shaped to interfit with the workpiece, a standard, a pair of wheel supports movably mounted on the standard for holding the wheels against the work, a bearing carried on each support, an axle fixed to and rotatable with each wheel, said bearing and axle provided for an axial removal of the axle from the bearing, locking means for holding the axle in place and removably positioning the wheel in correct relationship with the work, an ink pot removably secured on each support and arranged to supply ink to the under portion of the associated wheel, means for adjustably position-

ranged to print on one side of sheets fed thereto, the connected together at one end in a manner to permit

ing the ink pots in spaced relationship on the supports to provide clearance for a workpiece moving therebetween, means providing for movement of the pots to positions which permit axial removal of the wheel, means for moving the supports laterally and urging the wheels toward the work, and doctors for removing the excess ink from the sides and groove of each wheel and returning it to the pot beneath.

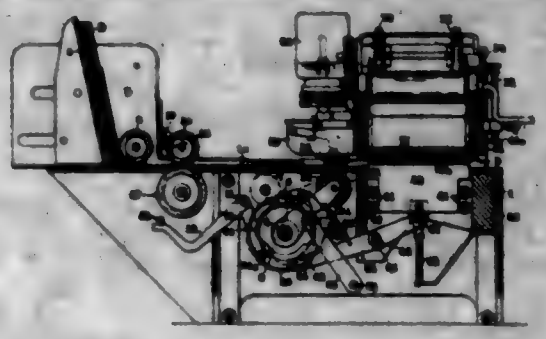
2,896,849
ENGRAVING APPARATUS
Duncan M. Gillies, West Boylston, Mass., assignor to Duncan M. Gillies Company, Inc., West Boylston, Mass., a corporation of Massachusetts
Application May 28, 1954, Serial No. 433,206
3 Claims. (Cl. 101—37)



1. Apparatus for printing opposite sides of an extended, longitudinally moved cylindrical work piece comprising two disc shaped wheels whose peripheries have continuous circumferential concave grooves interfitting with the work piece and provided with intaglio engravings thereon, each wheel having opposed side faces meeting the groove at a sharp edged ridge, axially parallel spindles supporting said wheels in opposition for free rotative movement by and in close peripheral contact with opposite sides of the moving work piece, ink reservoir means for supplying ink to each wheel disposed beneath said wheels whereby the wheels may pick up ink as they are rotated therepast with the workpiece passing between the wheels and their respective reservoir means, means for adjusting the wheel spindle positions for marking different work sizes, a doctor having a cylindrical face interfitting with each groove and serving to remove excess ink not carried by the engraving, a doctor having flexible blades engaging the wheel side faces which remove ink therefrom, and guides arranged to feed a work piece into contact with both wheel grooves, said doctor blades for each of said wheels being disposed above the respective reservoirs at a point on the respective wheels remote from the point of engagement of the wheel with the workpiece and between the reservoir and printing point and being so arranged that all excess ink at each side of the ridge and within the groove is returned to a point remote from the work and prevented from contact therewith.

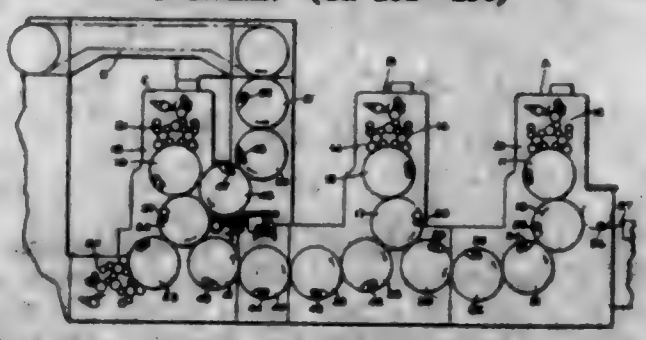
2,896,850
AUTOMATIC ADDRESSING-MACHINE
Jules Armand Braunstein, Paris, France
Application May 20, 1958, Serial No. 736,494
Claims priority, application France May 24, 1957
5 Claims. (Cl. 101—134.5)

1. An automatic addressing machine of the hectographic carbon paper reproducing type, wherein the addresses to be printed are carried by a negative plate band, comprising a magazine containing the documents on which the addresses are to be printed, a track for feeding these documents, a printing station and a device for unwinding and winding the negative plate band at right angles to the direction of feed of the documents so that each plate will travel past the printing station, a power shaft, an extractor roller driven intermittently from said power shaft, elastic means for pressing the documents from said magazine against said extractor roller, a pair of tangent feed rollers constituting a lower roller and an upper roller between which the documents are fed by the extractor roller, said lower feed roller being driven continuously from said power shaft, elastic means for urging said upper feed roller against said lower feed roller, an upper wetting roller adapted to wet the documents prior to the printing step, a lower feed roller driven for continuous rotation from said power shaft, a first movable harness on which said lower feed roller is mounted, means for moving the first movable harness from the power shaft so as to contact said upper wetting roller and thus carry along the moistened documents to their printing position, a lower printing platen, means for vertically moving the lower printing plate from said power shaft, an upper stationary printing platen under



which said negative plate band is adapted to slide, said lower printing platen being adapted to be pressed against said upper printing platen, means for adjusting the inoperative position of said movable platen and consequently the pressure exerted thereby on the document during the printing step, means driven from said power shaft for feeding said negative plate band through a predetermined distance subsequent to the printing of a document, means for adjusting said distance at will, an upper presser roller, elastic means carrying said upper presser roller at the level of said feed track on which said documents are fed, a lower ejector roller driven for continuous rotation from said power shaft, a second movable harness carrying said lower ejector roller, means for moving the second movable harness from the power shaft so that the lower ejector roller may contact said presser roller and thus eject the printed documents, and means for cyclically controlling the movements of said extractor roller, said first and second movable harnesses, said movable platen and said negative plate band in timed relation.

2,896,851
ROTARY PERFECTOR LETTERPRESS
Henri E. Peyrebrune, River Forest, Ill., assignor to Miehle-Goss-Dexter, Incorporated, a corporation of Delaware
Application March 1, 1956, Serial No. 568,935
8 Claims. (Cl. 101—136)



1. In a rotary sheet fed letterpress of the class having two or more adjacent identical color printing units ar-

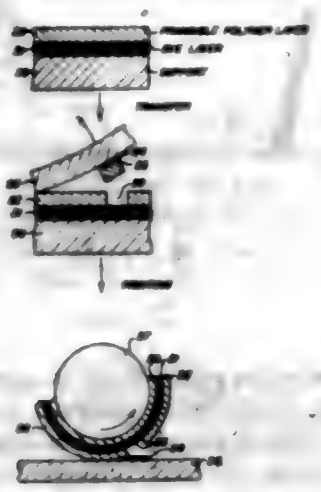
ranged to print on one side of sheets fed thereto, the provision of a perfecting unit organized to apply color impressions onto the other side of said sheets, all of said identical units including a plate cylinder and an impression cylinder, means comprising a series of successively cooperative transfer drums arranged between said adjacent units and in a plane substantially common to all drums for conveying sheets from the impression cylinder of one unit to that of an adjacent one, the plate cylinders of said adjacent units being located in the same horizontal plane, whereas the plate cylinder of said perfecting unit is located in the plane common to said transfer drums.

2,898,852

PHOTOMECHANICAL SPIRIT DUPLICATING PROCESS

Henry C. Stoehle and Carolyn K. Tapia, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Application June 10, 1957, Serial No. 664,701
4 Claims. (Cl. 101—149.4)



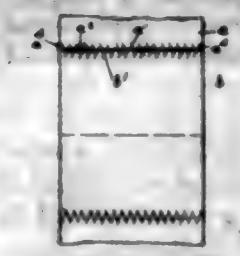
1. A method for preparing a spirit duplicating master which comprises pressing a sheet carrying a dye-containing layer and a frangible layer of hydrophilic, alcohol-impermeable organic colloid temporarily adhered to the outer surface of the dye-containing layer, against a moist adhesive photographic image until said image has adhered to said colloid layer, separating the adhesive image from the colloid layer to obtain portions of the colloid layer adhered thereto and leaving bare areas of the dye-containing layer underlying said portions of the colloid layer.

2,898,853

OFFSET LITHOGRAPHIC PRINTING MACHINES

Derek Norton Wadlow, Neasden, London, England, assignor to Rotaprint Limited, London, England, a British company

Application January 29, 1958, Serial No. 711,899
Claims priority, application Great Britain May 23, 1957
12 Claims. (Cl. 101—217)



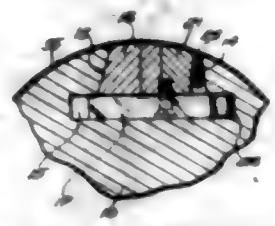
1. For use in an offset lithographic printing machine including plate and blanket cylinders each having a series of gripper means the gripper means on one cylinder being staggered with respect to and arranged to be in position at the bight of the cylinders simultaneously with the gripper means on the other cylinder, a pair of sheets connected together at one end in a manner to permit them to be separated by a relatively light pull, each sheet having integral attaching means at the connected end, the said attaching means on one sheet being staggered with respect to the attaching means on the other sheet to enable the attaching means on the respective sheets to be attached to the blanket and plate cylinder of the machine by the gripper means carried by said cylinders, one of said sheets being adapted to serve as a temporary blanket for the blanket cylinder and the other as a plate or master for the plate cylinder.

2,898,854

PRINTING PLATE AND CYLINDER

Earl A. Crawford, Warwick, R.I.

Application April 9, 1957, Serial No. 651,641
18 Claims. (Cl. 101—415.1)



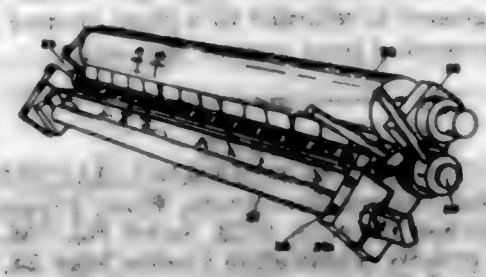
18. In combination a printing cylinder, a thin flexible printing plate wrapped around said cylinder, plate clamping mechanism in the cylinder comprising a gap in the surface of said cylinder, a movable jaw for closing said cylinder gap, said jaw being movable against a fixed wall of said gap, said wall and jaw being undercut to form an inverted V-shaped opening therebetween, the free ends of said plate being bent downwardly to extend into said gap, means for interlocking the free ends of said plate in said gap, said interlocking means comprising a U-bend at the bottom edge of said downwardly bent portions, said U-bends nesting one within the other, and means for moving said jaw into clamping position to clamp said interlocking plate portions in said cylinder, said moving means comprising a wedge member in said gap behind said jaw, said wedge member and jaw having complementary intermeshing wedge surfaces, and means for releasing said interlocked portions of said plate after the opening of said clamping jaw, said releasing means including a soft wire extending along the bottom of said nested U-bends, said wire being longer than the width of said plate and having a finger engageable portion for pulling said wire from said U-bends after the opening of said jaw.

2,898,855

ROLLER TRAIN DEVICE

Raymond R. Richter, Milwaukee, Wis., assignor to The Dayton Rubber Company, a corporation of Ohio

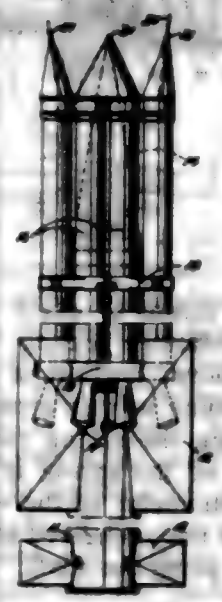
Application April 26, 1955, Serial No. 502,658
3 Claims. (Cl. 101—425)



1. A roller wash-up device for use on a train of rollers comprising a hard-surfaced drawing off cylinder in tangential contact with at least one of said rollers, a rotatably mounted blade bar in spaced, parallel relation to said cylinder, individual blades of relatively short length mounted in closely spaced relation axially of said bar and project-

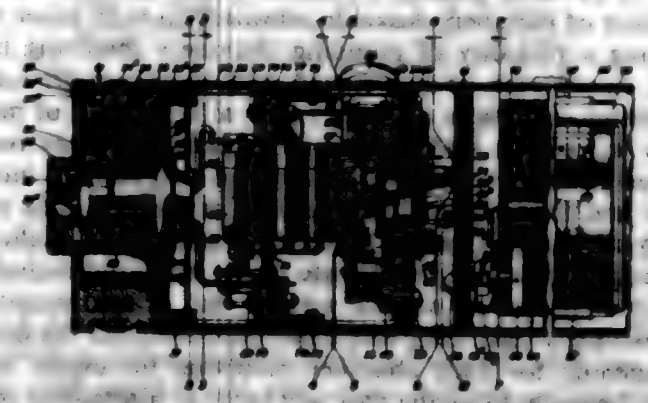
ing therefrom, means for controlling the rotative position of said bar to simultaneously influence the relation of all of said blades to said cylinder, and individual adjustable means on each blade comprising a member adjacent said blade and a fastening device passing through said member and said blade into said bar, said member being capable of movement toward and away from said bar to vary the angle of said blade relative to said bar.

2,898,856
SELF-PROJECTED MISSILES
Alexander Lightbody and James Morrison Johnston, Baginton, near Coventry, England, assignors to Sir W. G. Armstrong Whitworth Aircraft Limited, Baginton, near Coventry, England
Application June 5, 1952, Serial No. 291,931
Claims priority, application Great Britain July 6, 1951
3 Claims. (Cl. 102—49)



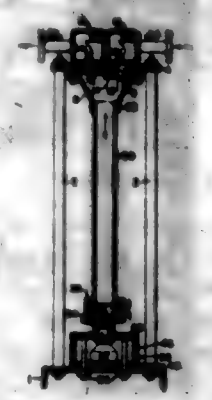
1. A self-projected missile of the kind having discardable, wrapped round boost motors, the forward ends of the boost motors being cones with axes which are symmetrically divergent forwardly from the axis of the missile at an angle which is greater than the maximum design angle of yaw of the missile during boosted flight.

2,898,857
FUZE
Lawrence R. Hafstad and Richard B. Roberts, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Navy
Application August 7, 1944, Serial No. 548,480
1 Claim. (Cl. 102—70.2)



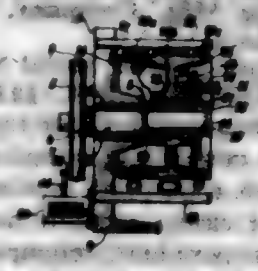
In a photoelectric proximity fuze, a casing, a photoelectric cell unit mounted at one end of the casing, a frame mounted in the casing adjacent the cell unit and removable from the casing, an amplifier and thyratron electrically coupled to said cell and mounted on the frame, a detonator, means for coupling the thyratron to the detonator for firing the detonator upon triggering of the thyratron by an amplified current pulse from the cell unit, a safety device on the frame for rendering said coupling means and said amplifier and thyratron inoperative, said amplifier, thyratron and safety device being removable from the casing on the frame as a unit, a battery assembly in the casing adjacent the frame, and releasable means for electrically connecting the battery to said amplifier and thyratron.

2,898,658
LIQUID PUMP
John C. Fisher, Cambridge, Mass.
Application March 28, 1957, Serial No. 647,298
17 Claims. (Cl. 103—1)



1. A liquid pump comprising an elongate piston-tube having a radially non-expansible wall capable of undergoing a slight elongation and contraction in response to alternating tensile and compressive forces applied to its opposite end portions, one end of said tube being open and its opposite end being closed, means supporting said piston tube at its open end, a valve chamber connected with the open end of said tube, said valve chamber having inlet and outlet ports provided with check means operative to permit liquid being pumped to pass into said chamber through the inlet port and out of said chamber through the outlet port, an intake duct connected with said inlet port, a discharge duct connected with said outlet port, and means acting on said closed end for alternately exerting compressive and tensile forces thereon at a frequency between 20 and 300 cycles per second so as to effect an alternating decrease and increase in the internal volume of said piston tube and thereby oscillate a propellant liquid therein.

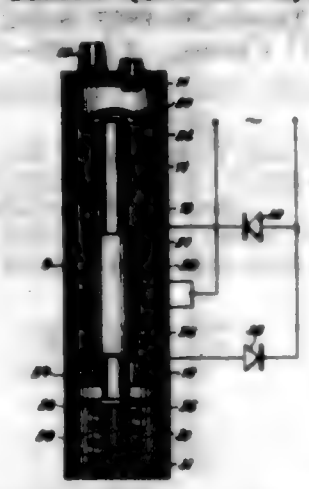
2,898,859
FLEXIBLE TUBE FLUID MEASURING AND CONTROLLING DEVICE
Ernest R. Cornell, Thorold, Ontario, Canada
Application July 15, 1957, Serial No. 671,807
4 Claims. (Cl. 103—37)



1. A fluid measuring device comprising a frame, a series of equidistantly spaced posts stationarily fixed to said frame in a circular path, a cylinder carried by said frame and having an external surface in radial inwardly spaced relation to said posts, a flexible tube, the space between said posts and external surface being arranged to receive at least one loop of said flexible tube for conduction of fluid therethrough, and means for imparting oscillatory movement to said cylinder to progressively vary the radial distance between each said post and said external surface

and thereby to progressively deform said tube loop said last mentioned means comprising a driven shaft mounted in said frame and having an eccentric extension, said cylinder being mounted on said eccentric extension.

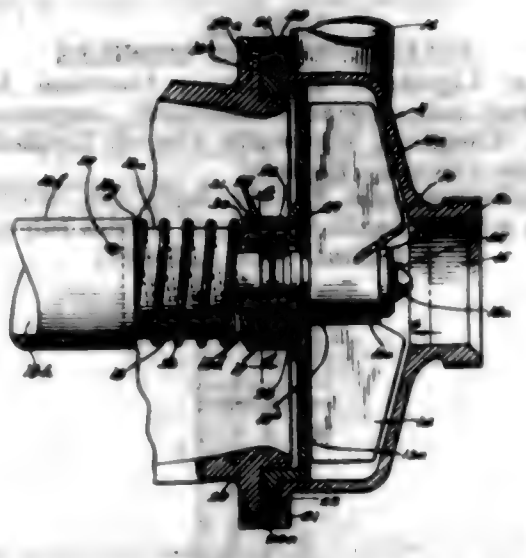
2,898,860
ELECTRO-MAGNETIC DEVICE FOR PUMPING LIQUIDS
Christian Gröber, Hamburg, Germany, assignor to Pleuger K.G., Hamburg, Germany, a firm
Application November 24, 1953, Serial No. 393,977
2 Claims. (Cl. 103—53)



1. An electro-magnetic device for pumping liquids, comprising an elongated tubular casing, two cylindrical conducting coils located one above the other within said casing, rings on opposite sides of said coils, an armature within said coils and coaxial therewith, an actuator coaxial and firmly connected with said armature and extending beyond the end of one of said coils, a cylindrical guide coaxial and firmly connected with said armature and extending beyond the end of the other one of said coils, a membrane located adjacent to and adapted to be actuated by said actuator, a cap-like cover plate enclosing an end of said casing and forming a pump chamber directly above said membrane, a pressure valve carried by said cover plate, a suction valve carried by said cover plate, a discharge pipe carried by said cover plate and directly communicating with said pressure valve, a base plate enclosing the other end of said casing and having an inner bore, a disc connected with the cylindrical guide, an end member connected with said disc and guided in said bore, means interconnecting said coils in push-pull arrangement, and current-supplying means connected with the first-mentioned means.

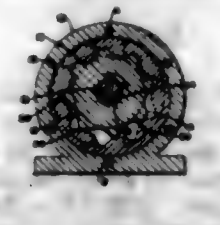
2,898,861
PUMP CONSTRUCTION
Alden H. Wakeman, Lakemills, Wis., assignor to The Creamery Package Mfg. Company, Chicago, Ill., a corporation of Illinois
Application April 6, 1954, Serial No. 421,216
1 Claim. (Cl. 103—103)

A pump construction designed for rapid assembly and disassembly of parts comprising a separable casing made up of a support frame, a partition section and an impeller housing, each of the casing sections having cooperating peripheral flanges, a peripheral clamping ring coacting with the flanges to hold them in tight abutting assembled relationship, a sealing gasket interposed between the flanges of the partition section and impeller housing to produce a fluid tight joint, an impeller shaft protruding through an opening in the partition section and extending into the housing section, the shaft having a shoulder and an annular groove spaced therefrom near the inboard end, an impeller mounted on the shaft against the shoulder, a safety-pin type of fastener fitted into the groove and holding the impeller in position, and a seal assembly for said shaft opening carried on and movable with the shaft portion exterior of the casing and movable therewith, said shaft portion having a plurality of grooves adjacent the shaft opening, compressible rings in said grooves, a collar unit encompassing the rings, the latter being in a state of compression when enclosed by the collar unit, an adjustable shoulder means mounted on said shaft and spaced from the collar unit, spring means around the shaft and cooperating with the collar unit and



adjustable shoulder means to effect urging of the collar unit into abutting rotatable sealing relation with respect to the exposed adjacent portion of the opening in the partition and a retaining washer around the shaft portion and disposed between the spring means and collar unit to limit movement of the spring in disassembly of the pump, the internal diameter of the washer being smaller than the rings in the uncompressed state to restrict movement of the washer along the shaft.

2,898,862
VARIABLE VOLUME INTERNAL CHAMBER TYPE HYDRAULIC PUMP
Robert W. Brundage, Cleveland, Ohio
Application March 29, 1955, Serial No. 497,779
10 Claims. (Cl. 103—120)

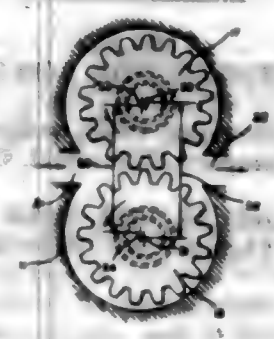


1. A variable volume hydraulic pump comprised of a plurality of members movable relatively to each other and defining a plurality of pumping chambers revolving in a fixed closed path of movement, said chambers gradually increasing in volume after they pass a fixed point of minimum volume on said path of movement until they reach a fixed point of maximum volume on said path of movement and then gradually decreasing in volume until they reach said fixed point of minimum volume, means defining an arcuate inlet and an arcuate outlet manifold including a pair of lands one at each arcuate end of said manifold and sealingly separating said manifolds one from the other, an opening for each chamber revolving therewith, each of said openings moving past said lands to alternately communicate its associated chamber with either said inlet or said outlet manifold, one of said lands being permanently fixed relative to said path of movement and located at the point of maximum volume so that as each chamber reaches and passes through maximum volume, its opening shifts from communication with the inlet manifold to the outlet manifold, said other land being adjustable

fold during the intake stroke and to be displaced into said being accessible from the end of said pump housing

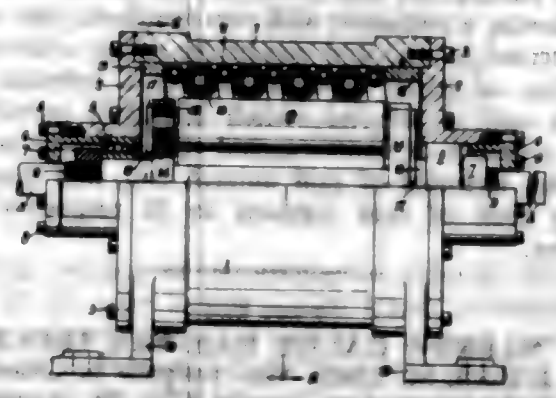
along the path of movement of said chambers so as to change the point in the path of movement in which each opening moves past said other land and shifts communication of its chamber from the outlet to the inlet manifold whereby the output volume of said pump may be varied.

2,898,863
GEAR PUMP HAVING MEANS TO MAINTAIN CENTER TO CENTER GEAR ALIGNMENT
John A. Wetring, Painesville, and John G. Mainland, Cleveland, Ohio, assignors to Thompson Ramo Woolridge Inc., a corporation of Ohio
Application February 6, 1956, Serial No. 563,478
6 Claims. (Cl. 103—126)



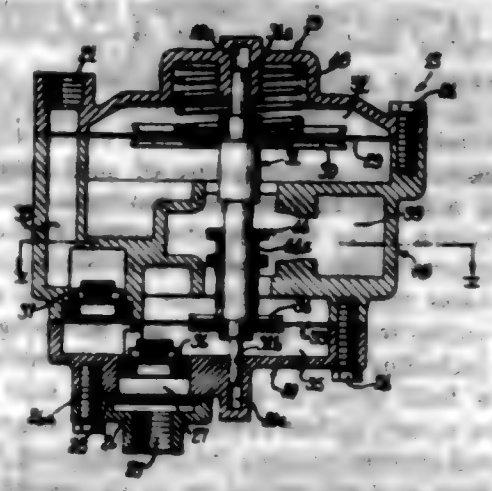
1. The method of operating a gear-type fluid pump which includes the steps of rotatably driving a pair of gears having intermeshing teeth about their respective centers of rotation at such a speed that the fluid pressure developed thereby acts from the discharge side of the pump in a converging direction towards the suction side of the pump and forces the gear journals against the loaded side of the bearing bores and the bearings against the housings to reduce appreciably the actual running center to center distance of the gears over the nominal center to center distance, and shifting the true centers of said gears outwardly opposite the loaded side of the bearing bores to offset the actual running center to center distance back to nominal center to center distance, thereby avoiding tooth interference during operation.

2,898,864
ROTARY PUMPS
Nicholas S. Japolsky, Highgate, London, England, assignor to Nicotron Developments Limited, London, England, a British company
Application December 27, 1956, Serial No. 630,802
10 Claims. (Cl. 103—149)



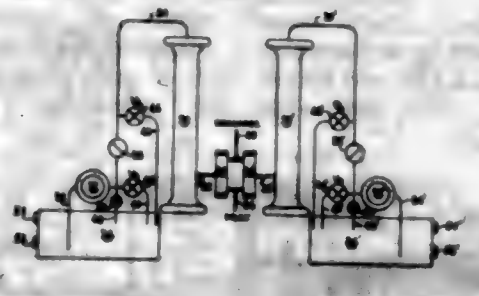
1. A rotary pump comprising a central driving shaft, two discs mounted on said shaft and spaced from one another, wall portions in said discs defining at least one radial slot in each of said discs, at least one roller mounted in said slots for movement in a direction outward from and radial to said shaft under centrifugal action when the shaft is rotated, a casing spaced from and surrounding said shaft, and a conduit of resilient material extending around the inner surface of the casing.

2,898,865
VACUUM DRIVEN AUTOMOTIVE FUEL PUMP
Richard L. Gates, Cleveland, Ohio, assignor to Thompson Ramo Wooldridge Inc., a corporation of Ohio
Application June 7, 1955, Serial No. 513,643
9 Claims. (Cl. 103—152)



1. A vacuum pump adapted to be powered from a supply of vacuum comprising a casing, a working diaphragm mounted at one end of said casing and coacting therewith to define a working chamber communicating with the supply of vacuum, a spring continually urging said diaphragm away from the adjacent end of the casing, a pumping diaphragm at the opposite end of said casing and coacting therewith to define a pumping chamber having an inlet and an outlet, said diaphragms coacting with said casing and together therewith forming an atmosphere vented chamber therebetween, a reciprocably guided shaft within said casing interconnecting said diaphragms to provide simultaneous operation thereof, and valve controlled passage means in said casing between venting and working chambers intermittently venting said working chamber with said atmosphere vented chamber thereby to reciprocatingly drive said pumping diaphragm to move liquid from said inlet to said outlet.

2,898,866
HYDRAULIC PRESSURE EXCHANGE PUMP
Leon P. Deschoff, Watertown, Mass., assignor to Manton-Gaulin Manufacturing Company, Inc., Everett, Mass., a corporation of Massachusetts
Application April 6, 1956, Serial No. 576,641
7 Claims. (Cl. 103—152)



1. An hydraulic pressure exchange pump for a product fluid to be pumped, comprising two pressure exchange cylinders having flexible diaphragms therein dividing each into product fluid and pumping fluid chambers, respectively; a separate pumping fluid system connected to each of the latter and a common product fluid system connected to the product fluid chambers of both cylinders; control means for operating said pumping fluid systems in tandem so that while one of said pressure cylinders is in its discharge stroke, the other is in its intake stroke; said product fluid system including inlet and discharge manifolds, and check valves operatively associated with each cylinder permitting product fluid under low pressure to enter the respective cylinders from said intake mani-

and holding the impeller in position, and a seal assembly fold to the outlet manifold, said other land being adjustable

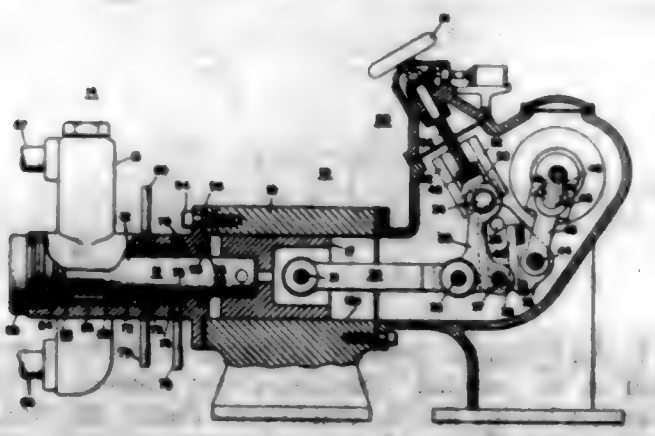
fold during the intake stroke and to be displaced into said discharge manifold during discharge stroke, respectively, of the cylinders but preventing reverse flow in said manifolds; each of said separate pumping fluid systems being identical and including a fluid reservoir, a positive displacement pump which delivers fluid therefrom continuously, a pump conduit connecting the pump output with the pumping fluid chamber of its respective cylinder, a check valve in said conduit limiting flow in a direction toward said chamber, return lines connected into said pump conduit at either side of said check valve and leading back to the reservoir, one of said return lines constituting a pump by-pass and having a normally closed pump return valve therein, the other line constituting a cylinder return line and having a normally closed cylinder return valve therein; fluid motor means for actuating said return valves to open position; said pumping fluid control means including means responsive to predetermined high and low fluid levels in each reservoir; said low level responsive means in one reservoir being adapted, when the fluid level therein reaches the predetermined low level, to cause both said return valves in its system to open and the pump return valve of the other pumping system to close; said high level responsive means in said reservoirs being adapted, when the fluid level therein reaches the predetermined high level, to cause the cylinder return valve of the respective system to close; and fluid metering means operatively associated with each of said fluid motor actuated return valves to regulate the speed of operation thereof, said metering means balancing the rate of opening of both return valves of a first system, as the latter approaches the end of its discharge stroke, with the rate of closing the pump return valve of the other system, as the latter starts its discharge stroke, so as to maintain a constant discharge pressure of the product fluid, said metering means likewise retarding the rate of opening of the pump return valve of said first system with respect to the rate of opening of its associated cylinder return valve during transition from discharge to intake stroke in each system.

2,898,867

PUMP WITH SEALING ARRANGEMENT

Royal Bardett Sandfrank, Gulfport, Fla., assignor to Milton Roy Company, Philadelphia, Pa., a corporation of Pennsylvania

Application November 29, 1954, Serial No. 471,623
17 Claims. (Cl. 103—153)



1. A pump of the reciprocating type comprising in combination a piston, a pump housing having a piston chamber and a flange at one end of said housing, said piston being disposed in said piston chamber, inlet and outlet means respectively connecting with said chamber at spaced sides thereof, sealing means within said housing forming circumferential seals of substantial length along said piston and along said piston chamber, pressure means acting on said sealing means to maintain effective said seals, said sealing means and said pressure means both being accessible from the end of said pump housing opposite said flange end a guide rod connected at one end to said piston and having a bearing member, a stationary support, means for connecting an end of said support to said housing flange in line with said piston chamber, said support having a bearing surface for supporting said bearing member over its entire length during its stroke from one maximum limit to the other, said bearing surface extending outwardly from said piston chamber from a point in close proximity to the adjacent one of the limits of the maximum stroke of said piston, and means connected to said guide rod for reciprocating said piston, the overall length from said last-named connection to said sealing means being thereby minimized.

2,898,868

STATION PRESELECTOR FOR TRAVELING CONVEYOR

Andrew Simon, Cleveland, Ohio, assignor to The American Monorail Company, Cleveland, Ohio, a corporation of Ohio

Application July 23, 1953, Serial No. 369,925
3 Claims. (Cl. 104—88)

1. A traveling conveyor system comprising a track, a traveler movable along said track and including a propelling motor, a source of power, at least two power lines along said track and connected to said source, a selector bar along the track and including first and second insulated sections at each of a plurality of stations, said sections being spaced apart different predetermined distances at each of the different stations, the first of said sections being connected directly to one of said power lines, the second of said sections being connected to the other power line, a first collector on the traveler engageable with said first section, a plurality of second collectors on the traveler spaced apart at distances conforming to said predetermined distances and engageable with said second section at each of the stations, and means on the traveler for controlling said motor at said stations, said means including all the following elements; a pulsing relay connected to the first said collector and to the other power line, an unlatch coil constituting the final control element for said motor in said means, said pulsing relay having a contactor with two terminals, one of which is connected to said first one of the power collectors and the other of which is connected to a terminal of the unlatch coil, a selector switch having a movable arm and a plurality of contacts, said arm being connected to the other terminal of said unlatch coil, and means connecting each of said contacts to its respective second collector.

2,898,869

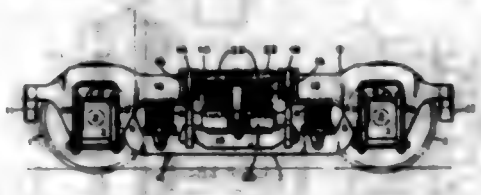
NARROW GAUGE RAILWAY TRUCK

Julius J. Zach, St. Louis, Mo., assignor to General Steel Castings Corporation, Granite City, Ill., a corporation of Delaware

Application November 6, 1956, Serial No. 620,700
8 Claims. (Cl. 105—190)

1. In a railway vehicle truck, a pair of wheels and axle assemblies, longitudinally extending equalizers having straight normally horizontal intermediate portions and upturned end portions supported on said assemblies, a plurality of upright springs carried by said intermediate portions immediately adjacent said upturned end portions, said springs being spaced from each other longi-

tudinally of said equalizers, said spring-supporting intermediate portions being disposed entirely below the level of the axles and at the lowest level permitted by railway clearances, a truck frame disposed entirely below the level of the tops of the wheels and including wheel pieces supported on said springs, the portion of each wheel piece between said spaced springs being at a lower level than the portions immediately above said springs whereby to provide adequate vertical space for said springs, spring-supporting structures supported from said wheel pieces outwardly thereof and spaced above said equalizers a distance at least as great as the maximum permissible deflection of said springs whereby to accommodate such vertical movements of said wheel pieces and said spring-supporting structures relative to said equalizers as are permitted by said springs, additional springs carried by said structures, and a laterally movable bolster disposed entirely below the level of the top of said frame and extending transversely of the truck over the lower-level portions of said wheel pieces and supported at its ends on said additional springs, said bolster having shallow box-section end portions upwardly recessed to receive the upper ends of said additional springs, the portion of said bolster laterally inwardly of said side members being at a substantially lower level than the bolster end portions and mounting a pivot bearing adapted to support a railway vehicle body.

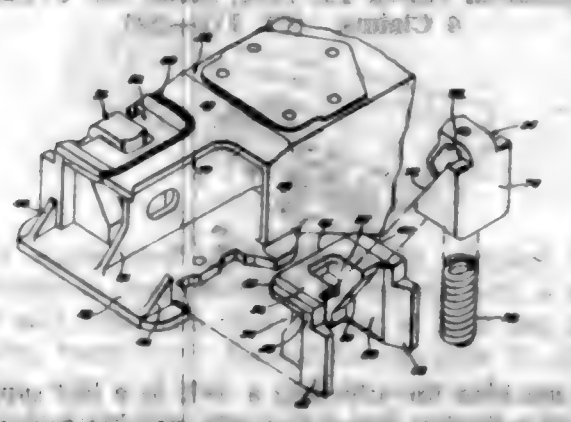


2,898,870

RAILWAY CAR TRUCK CONVERSION METHOD

Robert B. Cottrell, Deerfield, Ill., assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

Application June 17, 1955, Serial No. 516,238
4 Claims. (Cl. 105—197)



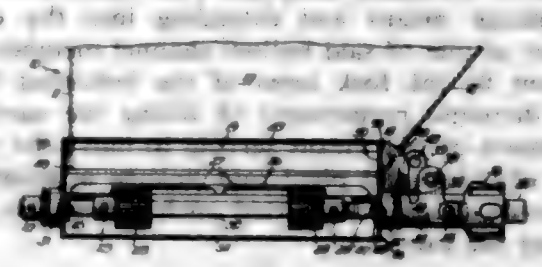
1. The method of converting an existing railway car truck of the type having a side frame provided with a bolster opening defined in part by a column member and having an undamped bolster therein comprising a top, a bottom, and a pair of side walls to one in which the bolster is frictionally damped in its vertical movement within said opening, said method comprising the steps of: cutting away a predetermined portion of the top wall disposed adjacent and inwardly of the column member, cutting away the entire side wall disposed adjacent and inwardly of the column member, cutting away a predetermined portion of the bottom wall disposed adjacent and inwardly of the column member, placing an insert within the cutaway top, bottom, and side walls and firmly securing said insert to said bolster, and assembling a friction shoe spring and a friction shoe within said insert, and firmly securing to the column member a friction plate having a friction surface engageable with the friction surface of the shoe.

2,898,871

HOPPER-CAR DISCHARGE OUTLET CONSTRUCTION

George E. Dath, Mokena, Ill., assignor to Enterprise Railway Equipment Company, Chicago, Ill., a corporation of Illinois

Original application November 23, 1953, Serial No. 393,753. Divided and this application May 24, 1956, Serial No. 587,118
8 Claims. (Cl. 105—253)



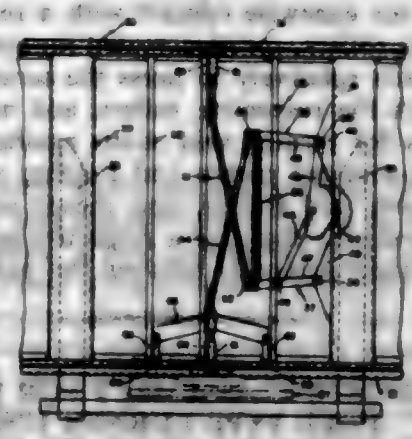
1. A hopper discharge opening closure structure for use in a railroad car having an opening providing for the downward discharge of lading comprising, in combination, a frame having side walls and end walls forming a discharge opening, runways parallel to and secured to said side walls and extending toward each other along opposite sides of said discharge opening, a gate slidable on the top surfaces of said runways and projecting at one end underneath one of said end walls for closing said discharge opening and having rack means on its underside, a shaft journaled on said frame outside of and parallel to said one end wall underneath said gate and having pinion means thereon engaging said rack means to move said gate along said runways, one end of said shaft extending outwardly of said frame, vertical latching ear means extending laterally from one of said side walls of said frame adjacent said one end of said shaft, and a latch pivoted on said one end of said shaft about an axis transverse to the axis of rotation of said shaft and swingable into or out of parallel juxtaposition with said vertical latching ear means to prevent rotation of said shaft and corresponding movement of said gate at least in one direction.

2,898,872

LATCH LINKAGE MEANS

Russell Hastings, Jr., Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan

Application May 7, 1956, Serial No. 583,232
4 Claims. (Cl. 105—366)



2. A latching mechanism for use in locking a portable freight carrier to anchor members projecting upwardly from the supporting surface of a vehicle for transporting the carrier, the carrier having a base structure including recessed pads extending inwardly of opposite sides of

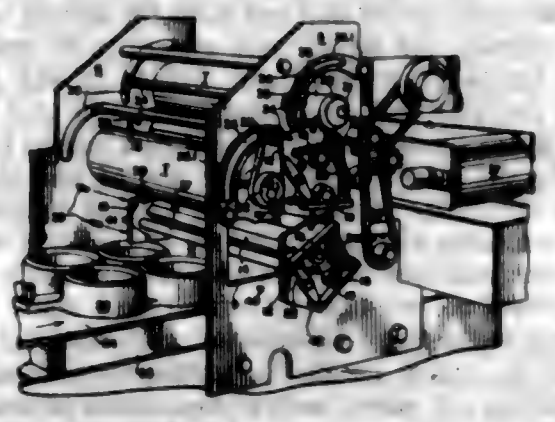
the carrier and receptive of the anchor members, comprising, hollow channel members mounted within the base structure of the carrier and defining generally elongated chambers, said channel members extending transversely between the sides of the freight carrier with the chambers thereof being accessible from opposite sides of the carrier for the reception of the fork arms of an industrial lift truck, anchor pins slidingly mounted on the base of the carrier for movement through openings in the recessed pads, said pins being adapted to enter registering openings formed in the anchor members to couple the carrier to the transporting device, bell crank linkage means pivotally mounted on the base of the carrier and having connection with said pins, and trip means connected to said linkage means and extending into the elongated chamber of one of said hollow channel members for engagement by the fork arms of the industrial lift truck thrust thereinto preparatory to lifting the carrier, such engagement of trip means serving to move the same out of the chamber and pivot said linkage appropriately to withdraw said pins from said anchor members, thereby releasing the carrier.

2,898,873

REMOVABLE SCRAPER ASSEMBLY FOR DOUGH SHEETING MACHINE

Stanley A. Cale, Chicago, Ill., assignor to Colborne Manufacturing Company, Chicago, Ill., a corporation of Illinois

Application October 28, 1958, Serial No. 768,450
7 Claims. (Cl. 107—12)



1. A dough-sheeting machine and removable scraper assembly, the machine comprising a pair of spaced support panels and a pair of parallel sheeting rollers extending between and journaled on the panels, and the scraper assembly comprising a pair of end plates connected together in fixed spaced relationship substantially equal to the spacing of the panels, a pair of shafts disposed parallel with said rollers and rotatively journaled on the plates, a scraper blade fixed lengthwise to each of the shafts and positioned for edgewise contact with a respective one of the sheeting rollers, spring-actuated means normally urging the shafts rotatively to press the scraper blades into contact with the respective rollers, and manually-actuatable means for turning said shafts against the action of said spring-actuated means and holding said blades disengaged from said rollers; and means on each of said support panels for engaging a respective end plate to support the scraper assembly between the panels.

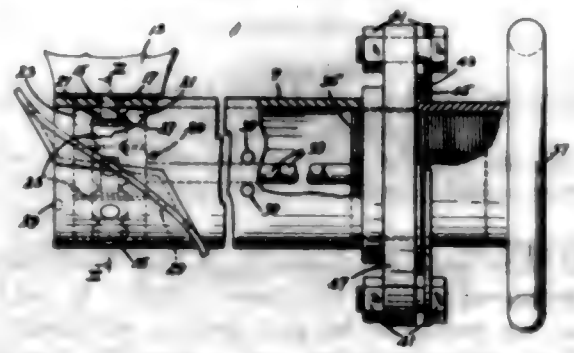
2,898,874

VANE ADJUSTING ASSEMBLY FOR PULVERIZED FUEL TYPE BURNER UNIT

Henry Crewdson, Jr., Front Royal, Va., assignor to American Viscose Corporation, Philadelphia, Pa., a corporation of Delaware

Application May 7, 1957, Serial No. 657,657
6 Claims. (Cl. 110—28)

1. A control assembly for a pulverized fuel type burner unit as used with a furnace or boiler comprising a sleeve which extends through an opening in the furnace wall, a main fuel feeding tube of somewhat smaller diameter than the sleeve supported within said sleeve, the outer periphery of said tube and inner surface of said sleeve forming a substantially annular passageway through which a fuel scattering medium may be passed, a hollow shaft supported in concentric manner within the main fuel feed tube, at least one pivotable means extending through the shaft periphery at the furnace end of the shaft, a deflecting vane mounted on said pivotable means and extending within the bore of said main fuel feed tube with the base of said vane lying substantially flush with the periphery



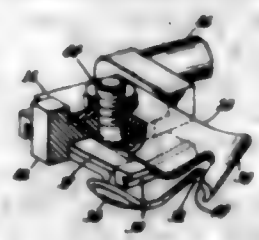
of said hollow shaft, an elongated arcuate shaped shoe fixed to said pivotable means so as to lie within said hollow shaft, a shoe positioning assembly formed of a pair of spaced apart, opposed and joined together ring members between which said shoe is positioned, shoe contact means mounted upon the opposed faces of each ring member which means lie directly opposite the shoe, and means secured to the shoe positioning assembly which is movable longitudinally of the shaft bore to urge the ring members axially of the shaft whereby the shoe contact means will pivot the shoe, the pivotable means and the vane.

2,898,875

WELT SHOE SEWING MACHINES

Lloyd G. Miller, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey

Application March 13, 1956, Serial No. 571,203
4 Claims. (Cl. 112—52)

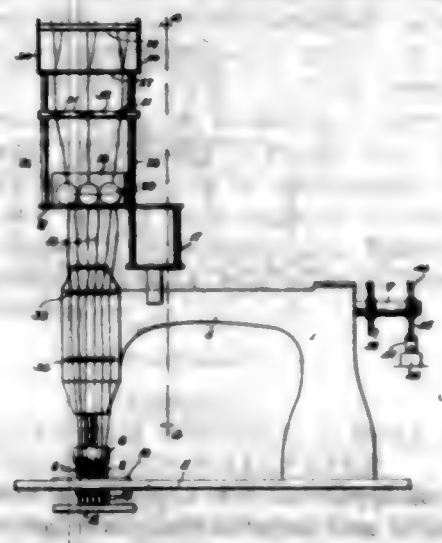


1. A machine for attaching a welt to a last supported Goodyear welt shoe upper and sole member presented in sole uppermost position, said machine having stitch-forming devices including a curved work feeding hook needle and a welt guide formed of a doubled-over strip of sheet metal, in combination with means to insure attachment of the welt with its inner edge compressed in a lengthwise direction, including an integral welt engaging and deflecting finger extending upwardly from the welt guide across its exit and beyond the sewing point between a welt running from the guide and the upper of a shoe to which the welt is attached to engage the underside of the welt and to raise its outer edge to a position at least level with the outer tread surface of the sole member on the shoe and a welt-engaging flange extending from the guide in the direction of feed and overlying the upper surface of the welt inside a path described by the needle.

move downwardly forming an extension of said base

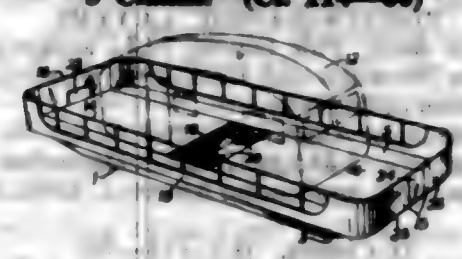
2,898,881

2,898,876
MULTIPLE NEEDLE TUFTING MACHINES
Montgomery B. Putnam, Bloomsburg, Pa., assignor to The Magee Carpet Company, Bloomsburg, Pa., a corporation of Pennsylvania
Application July 26, 1954, Serial No. 445,768
5 Claims. (Cl. 112—79)



1. In a multiple needle tufting machine comprising a plurality of reciprocating needles, means for directing yarn to said needles, means for reciprocating said needles to pass the yarns through a base fabric, loopers for releasably holding the yarns passed through the base fabric to form loops, a series of shafts fixedly mounted above said needles, each shaft having a transverse passage therethrough for passing a yarn leading to a needle, and a series of solenoids having reciprocating armatures slidably mounted on said shafts to extend over the ends of the passages to grip and hold the yarns in the passages against movement.

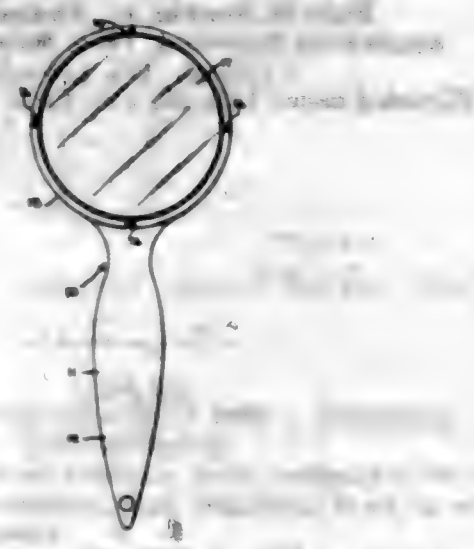
2,898,877
WATER CRAFT FOR THE TRANSPORT OF WHEELED VEHICLES
Richard Creighton King, Angmering, England
Application October 16, 1956, Serial No. 616,196
Claims priority, application Great Britain November 4, 1955
5 Claims. (Cl. 114—68)



1. A water craft for transporting wheeled vehicles comprising, in combination a flat bottom hull; a deck on top of said hull, said deck having at least one opening extending transversely thereof intermediate its ends and forming, with said hull, a well in said deck; water tight bulkheads extending across said hull at each edge of the opening between said bottom and said deck; a pair of transversely spaced wheel guides in said well extending longitudinally of the craft; and means in said well for adjusting said guides between an elevated position flush with said deck to receive the wheels of a vehicle and a lowered position wherein the wheels are in said well with the vehicle body supported from said deck.

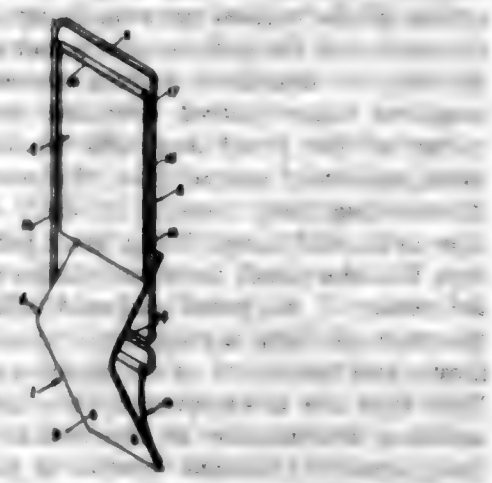
2,898,878
EMERGENCY SIGNAL DEVICE
Friedrich Reinhold, Queens, N.Y.
Application April 15, 1957, Serial No. 652,885
1 Claim. (Cl. 116—28)

A portable, luminous signalling device comprising a luminous handle one side of said handle having one luminous color and the other side having another luminous color, an extending portion in connection with said handle, said extension having an annularly arranged collar means on at least one side thereof, a reflector lens abutting said collar means, said lens corresponding in color



with the luminous color of its side of the handle, said extending portion having a removable threaded member on which the lens rests, and an annular internally threaded frame holding to hold said lens in position, said frame having a sloped internally extending annular portion resting against the periphery of the lens.

2,898,879
PORTABLE TRAFFIC MARKER
Hugh A. Murray, Sr., Pittsburgh, Pa., assignor to I.D.I. Inc., Pittsburgh, Pa., a corporation of Pennsylvania
Application March 27, 1957, Serial No. 648,832
5 Claims. (Cl. 116—63)



1. In a portable traffic marker adapted to be folded flat for storage and transportation and to be erected for use, in combination, a base portion provided with aligned apertures at opposite sides thereof, a U-shaped panel support having spaced elongated resilient side arms, one end of each said arms having an inwardly extending portion in each of said apertures, said base having grooves on opposite sides thereof extending radially of said inwardly extending arm portions for reception of a portion of the adjacent said panel support arms for releasably retaining said arms in erected position, and a traffic signal panel mounted on said U-shaped support with the lower marginal edge of said panel disposed in vertical spaced relation to the base permitting the panel support to freely

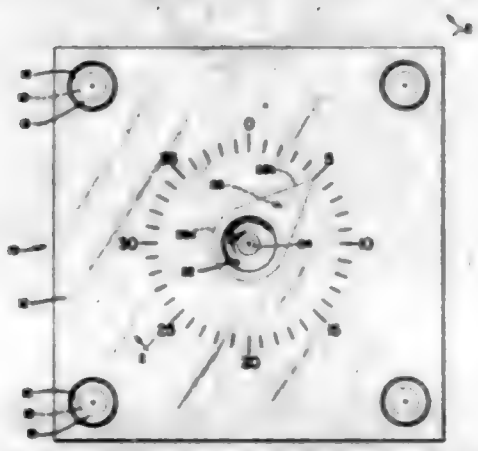
highly reduced pressure in said chamber, sealing rollers

cured to the front edge of said board, an openable hinged

unit as used with a furnace or boiler comprising a sleeve scribed by the needle.

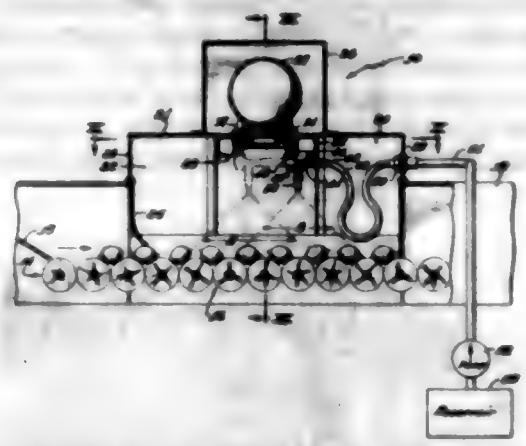
move downwardly forming an extension of said base when struck by a portion of a vehicle moving over said base in either direction.

2,898,680
SINGLE PANEL ILLUMINATED INSTRUMENT DIAL
Perry B. Newton, Jr., Annapolis, Md.
Application October 4, 1956, Serial No. 614,835
3 Claims. (Cl. 116—129)
(Granted under Title 35, U.S. Code (1952), sec. 266)



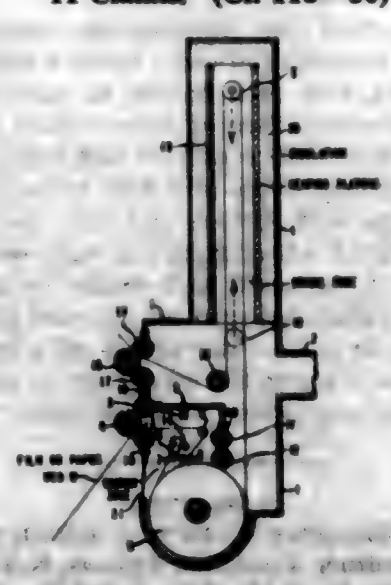
1. An illuminated instrument comprising a casing formed with a circular window opening in one wall thereof, a panel for closing said window opening, said panel being substantially square in plan and formed of transparent light-transmitting material having front and rear smooth substantially parallel surfaces with the front of such surfaces in intimate contact with the rear surface of the casing wall for closing the window and with the front surface of the panel parallel with and juxtaposed with the front of the said one wall of the casing, indicia formed on the rear surface of the panel, said indicia being formed in a circle with the center thereof coinciding with the center of the circular opening in the casing and with the radius of the central opening being slightly greater than the radius of the indicia, said panel being formed with a plurality of apertures therein spaced uniformly around marginal edges thereof with one such aperture at each corner of the panel and with the center of such apertures uniformly spaced from the center of the panel, an illuminating lamp located in each of said plurality of apertures, said lamps being arranged so as to emit light rays into the panel for transmission therethrough toward the center of the panel and said indicia being located in the path of light transmission between the plurality of lamps and the center of the panel whereby certain of the light rays are intercepted by the indicia for substantial uniform illumination of the indicia, and means on the panel centrally located relative to the plurality of apertures for intercepting light rays from each of the illuminating lamps and redirecting such rays out of the panel, said light intercepting and redirecting means including a circular beveled surface in the panel centrally located relative to the plurality of apertures and to the lamps contained therein, whereby light rays from the lamps pass through the panel and converge on the circular beveled surface and are thereby redirected out of the panel, an indicator mounted in juxtaposed relation to the rear surface of the panel and centered relative to the light intercepting means on said panel for receiving the redirected light rays therefrom, the relationship and relative location of the circular opening in the one wall of the casing, the panel, the indicia and the indicator being such as to render the indicia and indicator readily viewable from the front of the casing and from relatively large angles as measured to the normal to the front surface of the panel.

2,898,681
APPARATUS FOR SPRAYING WAXY SUBSTANCES ONTO FRUIT SURFACES
James B. Straley, Pomona, Calif., assignor to Brogdex Company, Pomona, Calif., a corporation of California
Application November 30, 1955, Serial No. 550,031
13 Claims. (Cl. 118—24)



1. In an apparatus for applying a virtually uniform deposition of concentrated liquid substance upon surfaces of fruit to virtually completely cover said surfaces, the combination of: a conveyor means including a plurality of brush rolls for advancing and agitating fruit along a given path through a treating zone; nozzle means movably supported above said path in the treating zone with the axis of the nozzle means lying normal to said path and adapted to be connected to a source of concentrated liquid substance to be applied to said fruit surfaces; and means to move said nozzle means in uniform spaced relation to said path in one direction across said given path to cover a preselected area of said path and to move said nozzle means in the opposite direction to cover another partially different preselected area of said path whereby fruit is directly bombarded by spray particles in a defined pattern in first one direction and then in the opposite direction at longitudinally spaced points in the path of movement of the fruit.

2,898,682
APPARATUS FOR COATING AND DRYING PHOTOGRAPHIC LAYERS
Robert Hann Beck, Fair Haven, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Original application August 20, 1953, Serial No. 375,404, now Patent No. 2,815,307, dated December 3, 1957. Divided and this application March 1, 1956, Serial No. 568,868
11 Claims. (Cl. 118—50)



1. A coating and drying apparatus comprising an enclosed chamber having a passage for the removal of vapors from said chamber and the maintenance of a

projecting beyond the rear barrel end, a writing unit

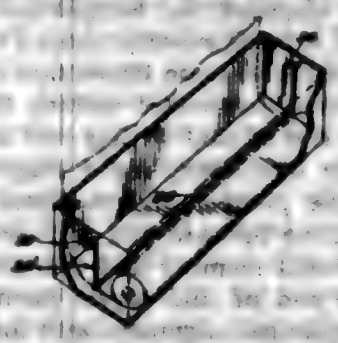
2,898,687

luminous handle one side of said handle having one

relation to the base permitting the panel support to freely

highly reduced pressure in said chamber, sealing rollers in a wall of such chamber for feeding into and withdrawing from said chamber a thin flexible web while preventing the ingress or egress of vapors, said chamber being partitioned into a coating zone and drying zone by the aid of a drum for transporting the coated web into the drying zone, a narrow confined passage surrounding said drum between said zones, an extrusion device mounted above a curved coating support member in said coating zone, for extruding a layer of coating material onto the web as it passes over the member, said curved member being of small radius and heating means in said drying zone adjacent to the path of the coated surface of said web, said heating means positioned to effect drying of said layer of coating material after extrusion.

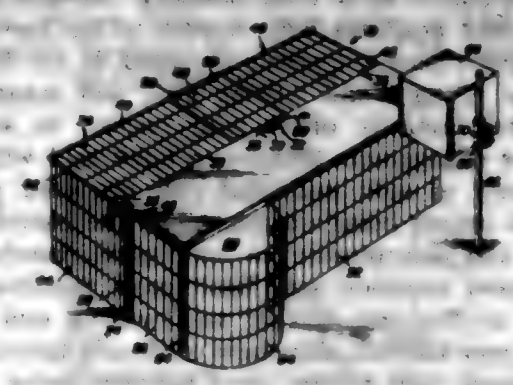
2,898,883
APPARATUS FOR WETTING A ROLL OF PRE-PASTED WALLPAPER
Harry A. Reid, Oak Park, and John C. Gall, Chicago, Ill., assignors to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Application July 7, 1954, Serial No. 441,894
4 Claims. (Cl. 118—419)



2. Apparatus for wetting a roll of pre-pasted wallpaper comprising a disposable open-top container of flexible waterproof sheet material having a bottom with front, rear and opposite end walls extending upwardly therefrom to delineate a receptacle of rectangular prismatic outline having a length slightly greater than the length of the roll of pre-pasted wallpaper, said container adapted to contain a liquid for moistening the pre-pasted wall paper as it is led from the open top of said container, and a U-shaped wire member conforming substantially to the longitudinal section of the container and provided with lateral projections in engagement with the end walls of said flexible container to stabilize the upright positioning of said end walls against the hydrostatic pressure of the liquid within the container, and the base of said wire member extending adjacent to the bottom of said flexible container with sufficient clearance therefrom to permit the web of wallpaper to be moistened as it is led from the roll of wallpaper along the bottom of the container and upwardly therefrom beyond said wire member.

2,898,884
POULTRY BLOOD TESTING EQUIPMENT
Benjamin K. Messersmith, Trenton, N.J.
Application January 13, 1958, Serial No. 708,488
3 Claims. (Cl. 119—17)

1. A poultry testing device comprising a flat rectangular board having a front edge and a rear edge, posts at the corners of said board supporting the same in spaced relation to a supporting surface, a horizontal wire grid panel hingedly secured to the rear edge of said board, a wire grid rear panel and wire grid side panels depending from said horizontal panel to form a swingable open bottomed enclosure, wire grid side panels extending from the ends of said board, a front end panel including an outwardly bowed end section having an open top secured to the front edge of said board, an openable hinged grid section in said horizontal panel and a swingable partition dependingly supported adjacent the rear edge of said board.



2,898,885
OPERATING MECHANISM FOR A WRITING INSTRUMENT
Lewis C. Hansen, Fort Madison, Iowa, assignor to W. A. Sheaffer Pen Company, Fort Madison, Iowa, a corporation of Delaware
Application October 17, 1955, Serial No. 540,988
9 Claims. (Cl. 120—42.03)

1. An actuating device comprising a housing, an elongate operating element shiftable in said housing between an extended latched position and a retracted unlatched position, said element having a rearward portion extending from said housing and a forward peripheral web portion defining an intermediate lateral shoulder portion, said rearward portion and said forward portion cooperating to define a longitudinal space inwardly of said shoulder portion and a transverse space forwardly of said shoulder portion, resilient means urging said element to said retracted position, and U-shaped spring means having a bight portion movable between a forward position and a rearward position in said transverse space and longitudinally rigid, laterally flexible leg portions extending rearwardly therefrom and normally urged outwardly, said housing having a shoulder therein to receive one of said leg portions and maintain said element in the extended position, said one leg portion being urged to an inward position away from said shoulder by engagement with said shoulder portion of said element when said bight portion is in the forward position in said transverse space, the second of said leg portions frictionally engaging said housing whereby said bight portion is retarded to position said resilient means at said rearward position in said transverse space when said element is shifted from said retracted position toward said extended position whereby said one leg portion is freed from said shoulder portion to permit outward movement for subsequent engagement with the shoulder.

2,898,886
ALTERNATE PUSH RETRACTABLE BALL PEN HAVING DOUBLE ROCKING LATCH MECHANISM
John C. Lockwood, Atlanta, Ga., assignor to Scripto, Inc., Atlanta, Ga., a corporation of Georgia
Application April 9, 1957, Serial No. 651,648
4 Claims. (Cl. 120—42.03)

2. A writing instrument comprising a barrel, a depressible plunger slidably disposed within said barrel and

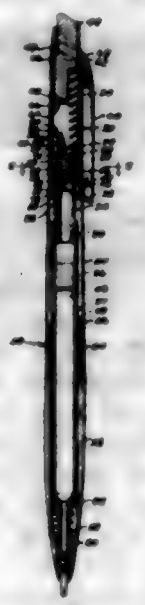
2,898,889
MECHANICALLY-LIMITED, ELECTRICALLY OP-

2,898,891
HYDRAULIC FLOW CONTROL

measured to the normal to the front surface of the panel.

vapors from said chamber and the maintenance of a

projecting beyond the rear barrel end, a writing unit biased rearwardly within the barrel and slidably disposed therein to shift longitudinally between projected and retracted positions with respect to the forward barrel end, latch means slidably disposed in the barrel between the plunger and writing unit, and means within said barrel laterally offset with respect to said latch means for engagement thereby to latch said writing unit alternatively at said projected and retracted positions, said latch means being unattached to the barrel or writing unit and incorporating a latch pawl member and a release pawl member, said latch pawl member bearing rockably at the rear end of said writing unit and extending rearwardly in alignment with said laterally offset barrel means, said release pawl member being pivotally associated with said latch pawl member and said latch pawl member having stop means limiting relative pivoting of said release pawl member thereon and said latch pawl and release pawl members being thereafter movable as a unit rearwardly with respect to said barrel means, said release pawl member extending rearwardly beyond said latch pawl member, the rear end of said latch pawl member engaging said barrel means to deter-



mine the projected position of said writing unit and said plunger being formed for bearing forwardly at the rear end of said release pawl member upon a first depression thereof to propel said writing unit and latch means to projected position and engage said latch pawl member with said barrel means thereat, and said plunger having biasing means arranged to bear therefrom on said release pawl member for pivoting said member away from said barrel means to the limit allowed on said latch pawl member upon engagement of said latch pawl member at projected position and being further formed for bearing laterally at the rear end of said pivoted release pawl member upon a succeeding depression thereof to rock said release pawl member with said latch pawl member away from said barrel means and thereby disengage said latch pawl member and permit retraction of said latch means and writing unit, said pivoted release pawl member being returned to its original position against the force of said plunger biasing means by engagement of said release pawl member at said barrel means upon retraction of said latch means and writing unit under the force of said rearwardly biased writing unit.

2,898,887

TOGGLE ACTUATED ALTERNATE PUSH ROCKING LATCH MECHANISM FOR RETRACTABLE BALL PEN

Frank Van Haltern, Jr., Atlanta, Ga., assignor to Scripto, Inc., a corporation of Georgia

Application June 5, 1958, Serial No. 740,091
8 Claims. (Cl. 120—42.03)

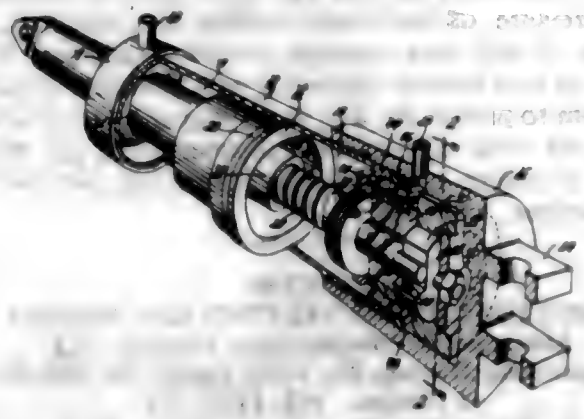
1. In a writing instrument having a barrel, a writing unit slidably housed therein, an operating mechanism for shifting said writing unit between projected and retracted positions, and means biasing said writing unit toward retracted position; said operating mechanism including a plunger slidably disposed for longitudinal displacement within the barrel, a latch member shaped for sliding longitudinally in said barrel upon depression of said plunger and for fulcrummed, transverse rocking therein with respect to the rear end of said writing unit and within said barrel in opposite directions, and a toggle member disposed between the plunger and the latch member and having the respective forward and rearward ends thereof pivoted on said latch member and plunger, respectively, and the forward end of said toggle member being displaced from longitudinal alignment with the rearward end thereof when the latch member is either in its retracted or projected position so that depression of the plunger causes fulcrummed, transverse rocking of the latch member as the latch member moves to and from its retracted or projected position.

2,898,888

PNEUMATIC ACTUATOR ASSEMBLY

Howard M. Geyer, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application December 12, 1955, Serial No. 552,482
9 Claims. (Cl. 121—38)



1. An actuator assembly including, a cylinder, a reciprocable piston therein, a member rotatably journaled in the cylinder and operatively connected to said piston such that piston movement is dependent upon and effects rotation of said member, and inertia weight means operatively connected to said rotatable member so as to rotate therewith continuously in one direction, the operative connection between said inertia weight means and said rotatable member comprising one-way driving means.

of a single row of serially interconnected heating tubes, each said tube in said bank being disposed vertically ex-

opened during said movement of said piston to said intermediate position to admit a current of air into said

from the side of said board, a front end panel including an outwardly bowed end section having an open top se-

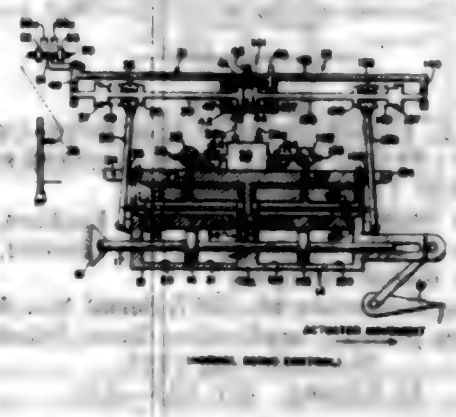
2. A writing instrument comprising a barrel, a depressible plunger slidably disposed within said barrel and

2,896,889

MECHANICALLY-LIMITED, ELECTRICALLY OPERATED HYDRAULIC VALVE SYSTEM FOR AIRCRAFT CONTROLS

John V. Foster, Los Altos, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Application October 3, 1958, Serial No. 765,264
8 Claims. (Cl. 121—38)
(Granted under Title 35, U.S. Code (1952), sec. 266)



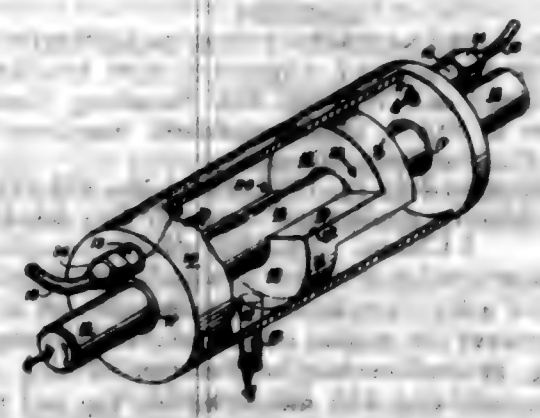
1. An aircraft control system for effecting movement of a control surface comprising a hydraulic actuator having a driven member articulated to said control surface; a source of pressurized fluid for driving said driven member; a pair of mechanically operated hydraulic valves for controlling the porting of said fluid to said driven member and for determining the direction of actuator movement; an electrically operated hydraulic servo valve hydraulically interposed between said source of pressurized fluid and said pair of control valves for alternatively porting said fluid to said control valves in response to electrical command signals; pilot stick linkage; flexible actuating mechanism carried by the driven member and connecting said linkage to said pair of control valves; said mechanism positioning both of said control valves in a servo position whereby actuator movement is normally controlled solely by the servo valve, and said mechanism allowing relative movement between the control valves by the pilot's linkage in emergency servo operation to override actuator movement independently of the servo valve.

2,896,890

MOTION TRANSMITTING DEVICE

John J. Lynott, Los Gatos, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application July 16, 1957, Serial No. 672,269
10 Claims. (Cl. 121—41)



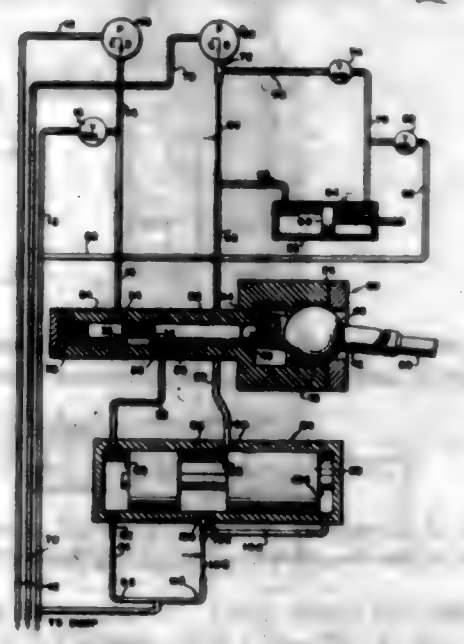
1. A motion transmitting device comprising a cylinder having a piston therein, and means for continuously supplying an uninterrupted inflow of pressure to each side of said piston, said piston being arranged so that when it is rotated the pressure is reduced on one side of the piston to cause the piston to be translated by pressure on the other side of the piston.

2,896,891

HYDRAULIC FLOW CONTROL

Nagle V. Gasching, Sidney, and Richard J. Flanigan, Kettering, Ohio, assignors to The Monarch Machine Tool Co., Sidney, Ohio, a corporation of Ohio

Application February 13, 1956, Serial No. 565,182
14 Claims. (Cl. 121—45)



1. In a hydraulic system, a source of fluid under pressure, a fluid motor connected with said source, balance valve means for controlling the movement of said fluid motor, fluid resistance means connected in series with said balance valve means, said series connected means being connected with said motor, said valve having a body and a spool movable therein, said body having a port connected in series with said resistance and with said motor, a land on said spool arranged to variably restrict said port, said spool defining a pressure area, and pilot means connected with said pressure area for applying variable fluid pressure thereto so as to effect movement of said spool and hence control the fluid flow through said motor by varying the restriction by said port by said land, said pilot means including a tracer valve and a second fluid resistance connected in series with said tracer valve, said pressure area being connected to the high pressure side of said second fluid resistance.

2,896,892

HEATER

Oliver Campbell, Whiting, Ind., and Norman E. Pennels, Lansing, Ill., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine

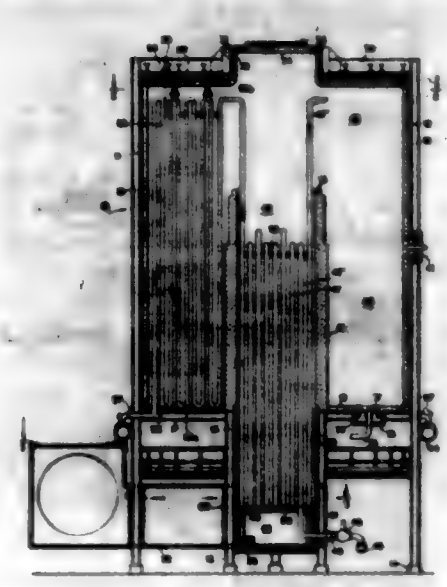
Application July 22, 1957, Serial No. 673,391
5 Claims. (Cl. 122—356)

1. In an oil refinery heater including a vertical, cylindrical furnace shell, a roof positioned across and closing the upper end of said shell, a vertical, cylindrical flue positioned centrally within said furnace shell, said flue terminating at the upper end thereof in said shell below said roof and terminating at the lower end thereof below the lower end of said furnace shell, an annular floor positioned across the lower end of said shell closing the lower end of said shell to said flue, whereby said heater includes an annular furnace space defined above said floor between said flue and said shell, an upper furnace space defined within said shell between said roof and the open upper end of said flue, and a flue gas well defined within said flue and having a lower portion beneath the level of said floor, a plurality of burners mounted in said annular floor spaced apart at arcuate intervals thereabout between said furnace shell and said flue for directing fuel and air upwardly into said annular furnace space and means for withdrawing flue gas from the lower portion of said flue gas well; the improvement which includes a bank

through said pair of valve means, respectively, when the latter are open, said holder being spaced from said side

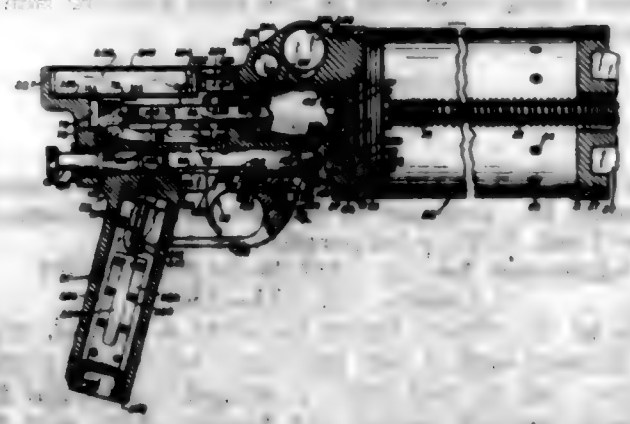
said piston top body and provided with supporting walls substantially aligned with said ribs and supporting the

of a single row of serially interconnected heating tubes, each said tube in said bank being disposed vertically extending through said annular furnace space into said upper furnace space, said bank of heating tubes being disposed approximately in a radial plane within said cylindrical shell passing medially between an adjacent pair of said burners, a heating tube disposed vertically



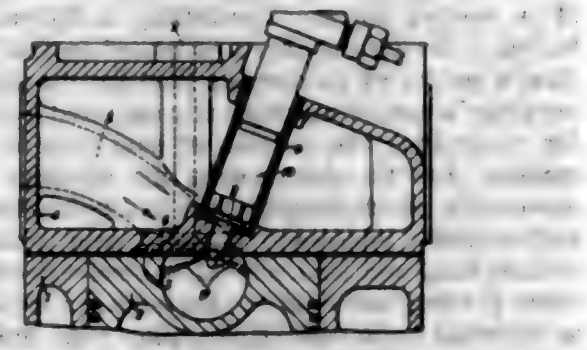
within said flue gas well interconnected at the upper end thereof in said upper furnace space to the upper end of the innermost tube of said radial bank, said heating tube within said flue gas well having a greater length than said innermost tube of said radial bank, and means for passing a fluid to be heated serially first through said heating tube disposed within said flue gas well and then outwardly through said radial bank of heating tubes.

2,898,893
IMPACT TOOL
Douglas P. Rohrer, Lexington, and Fred F. Chellis, Manchester, Mass., assignors to Arthur D. Little, Inc., Cambridge, Mass., a corporation of Massachusetts
Application April 11, 1958, Serial No. 727,856
11 Claims. (Cl. 123—7)



11. An impact tool for delivering impacts each of which is separately manually initiated comprising a cylinder, a piston reciprocable in said cylinder, first means urging said piston toward one end of said cylinder, second means for moving said piston against the action of said first means away from said end to an intermediate position in said cylinder to provide an explosion chamber, locking means for locking said second means in inactive position to enable said first means to move said piston to said end, manually controlled means for releasing said locking means to enable said second means to cause movement of said piston to said intermediate position, charge forming means for introducing a charge of air and fuel into said chamber during said movement of said piston, said charge forming means including an inlet valve and having an air passage leading to said inlet valve, said valve being opened during said movement of said piston to said intermediate position to admit a current of air into said chamber through said passage, said charge forming means also having means providing a surface in said passage wetted with liquid vaporizable fuel and positioned to be contacted by said current of air to form said charge, means for igniting said charge when said piston reaches said intermediate position to cause an explosion of said charge and further movement of said piston to provide an impact, and means operating as a result of said explosion to return said second means to said inactive position.

2,898,894
INTERNAL COMBUSTION ENGINES OF THE LIQUID FUEL INJECTION COMPRESSION IGNITION TYPE
George Allen Holt, Shoreham-by-Sea, England, assignor to Ricardo & Co., Engineers (1927) Limited, London, England, a British company
Application December 19, 1957, Serial No. 703,803
Claims priority, application Great Britain December 20, 1956
11 Claims. (Cl. 123—32)



1. An internal combustion engine of the liquid fuel injection compression ignition type comprising a piston and cylinder providing between the piston and cylinder head at the end of each compression stroke at least two approximately similar combustion pockets each of approximately circular cross-section in planes normal to the piston axis and having a circumferential part which lies adjacent to the periphery of the piston and a circumferential part which lies adjacent to the piston axis, air inlet means causing bodily rotation of the air charge in the cylinder during each inlet period and subsequent compression stroke and hence bodily rotation of the air charge compressed into each pocket about the axis of said pocket, and means for injecting fuel approximately similarly into the air charge in each pocket.

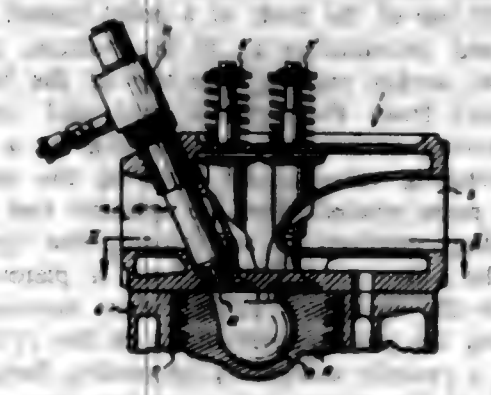
2,898,895
COOLING ARRANGEMENT FOR INJECTION NOZZLES OF INTERNAL COMBUSTION ENGINES
Walter Köppel and Wilhelm Ott, Nuremberg, Germany, assignors to MAN, Maschinenfabrik Augsburg-Nuremberg, A.G., Nuremberg, Germany
Application July 18, 1957, Serial No. 672,718
Claims priority, application Germany July 24, 1956
3 Claims. (Cl. 123—41.31)

1. In an internal combustion engine having at least one cylinder and a fuel injection nozzle therefor, an air cooling arrangement for cooling said nozzle, said arrangement comprising, in combination, wall means forming an air-intake chamber, said wall means having top and bottom walls, two side walls and a front wall; a pair of spaced valve means which when open place said cylinder in communication with said air-intake chamber through said bottom wall thereof; and a nozzle holder adapted to hold said fuel injection nozzle, said holder being arranged within said air-intake chamber and extending between said top and bottom walls in that plane in which air entering said air-intake chamber divides into two streams which flow

dependent upon engine speed, a chamber in open com-

controlled by the air intake manifold pressure of the

through said pair of valve means, respectively, when the latter are open, said holder being spaced from said side and front walls and being formed with substantially flat side surfaces which are substantially coextensive with the streams flowing through said pair of valve means, whereby air passing through said air-intake chamber contacts all outer surfaces of said holder, thereby uniformly cooling the same as well as a fuel injection nozzle held thereby, without the smooth flow of air through said air-intake chamber being impeded by said holder.

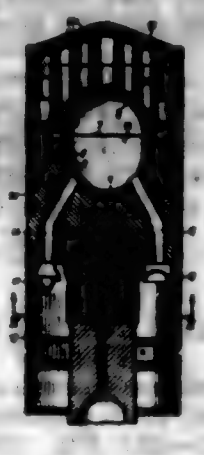


2,898,896
HEAT EXCHANGER MEANS
Cecil A. McKinney, Birch Run, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 21, 1955, Serial No. 548,025
3 Claims. (Cl. 123—41.33)

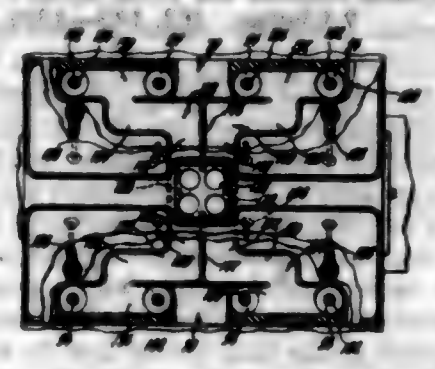
1. In heat exchanger means for use with an engine having a pair of longitudinally extending cylinder heads having coolant outlets and an engine cooling system circulating coolant from said cylinder heads to a radiator, a transversely extending manifold connected with said cylinder head coolant outlets and said radiator, said cylinder head coolant outlets being connected to either end of said manifold, said manifold radiator connection being positioned centrally of said manifold, and heat exchanging mechanism within said manifold for heating and cooling fluid in a second system.

2,898,897
PISTON FOR INTERNAL COMBUSTION ENGINES
Hermann Riesler, deceased, late of Neidlingen (Teck), Germany, by Helene Riesler, née Scherber, heir, Neidlingen (Teck), Germany
Application May 28, 1955, Serial No. 509,967
In Germany October 13, 1948
Public Law 619, August 23, 1954
Patent expires October 13, 1968
16 Claims. (Cl. 123—41.38)

1. A multiple part piston for internal combustion engines, which comprises in combination: a main piston body, a piston top body having at least its top portion made of highly heat resistant but a relatively poorly heat conducting material so that the piston top will glow during the operation of said piston, said piston top body comprising relatively long and narrow reinforcing ribs, a supporting body interposed between said main body and said piston top body and provided with supporting walls substantially aligned with said ribs and supporting the same, and means associated with at least two of said bodies for firmly securing all of said bodies together.



2,898,898
ENGINE
Lewis D. Burch, Dearborn, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 17, 1953, Serial No. 398,758
2 Claims. (Cl. 123—52)



1. In an intake manifold for an engine having a pair of angularly disposed banks of cylinders, a distributing chamber disposed in the center thereof to receive a combustible mixture of air and fuel from a plurality of charge forming passages, a plurality of branch passages extending longitudinally of said manifold along the opposite sides thereof to be substantially parallel to said banks, each of said branch passages having the opposite ends thereof formed for communicating with the intake means for said engine, a plurality of distribution passages, each of said distribution passages having a portion thereof disposed transversely of said manifold and a portion thereof disposed longitudinally of said manifold, the inner ends of said distribution passages communicating with said distribution chamber at substantially right angles to said charge forming passages and the outer ends communicating with the centers of said branch passages at substantially right angles thereto, the thickness of said manifold being substantially the same as the thickness of said passages.

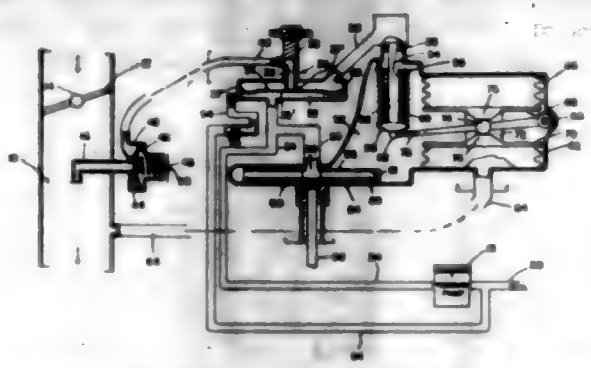
2,898,899
FUEL CONTROL FOR SPARK IGNITION INTERNAL COMBUSTION ENGINES
Chester Karpiel, Detroit, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Application December 5, 1955, Serial No. 551,064
9 Claims. (Cl. 123—139)

1. A fuel system for an internal combustion engine having an air valve therefor, said system comprising a metering valve, a fuel pump for supplying fuel at constant pressure, means for delivering fuel from said fuel pump to the inlet of said metering valve at a pressure

2,898,902
APPARATUS FOR SUPPLYING ADDITIVES TO

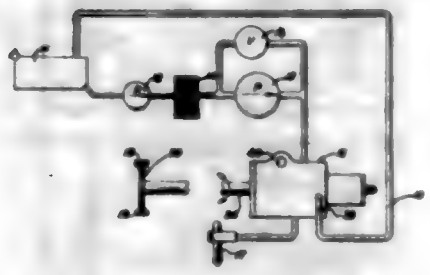
one position so that when the same is pulled, said hammer

dependent upon engine speed, a chamber in open communication with the outlet from said metering valve, an outlet valve from said chamber, said outlet valve having a valve element movable in response to differential



pressure and exposed at one side to pressure within said chamber and at the opposite side to the constant pressure of fuel from said fuel pump for maintaining the fuel at the outlet side of said metering valve at said constant pressure.

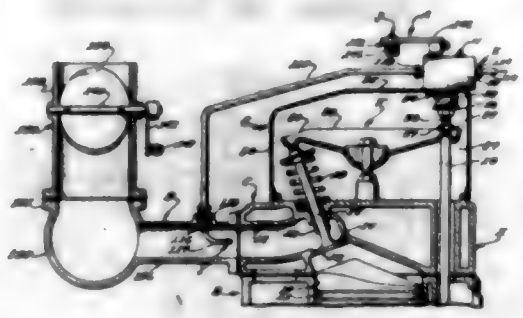
2,898,900
INJECTION SYSTEM
Paul A. Ribaux, Wayne, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application October 18, 1956, Serial No. 616,771
9 Claims. (Cl. 123—139)



1. A timing and metering device for a fuel injection system having a fuel pump which comprises; a body having an internal bore, a member rotatably disposed within said bore and having a hollow portion, and externally operable fuel quantity adjustment rod sealingly disposed within the hollow portion of said member and together with the hollow portion of the member defining a chamber, a fluid pressure operated piston freely slidable within said chamber and dividing it into a first cell and a second cell at opposite ends of said chamber, said body having a pair of inlet ports adapted to receive fuel from the fuel pump and a pair of discharge ports, each cell having a port sequentially connected with a selected inlet port and a selected discharge port in the body to admit fuel to each cell and to provide a discharge path from each cell, externally oscillated means, a gear train providing a connection between said last named means and said rotatable member, said gear train including, a gear cage, an idler gear rotatably carried by the gear cage, a driving gear operatively connected to said last named means and engaging said idler gear, a driven gear operatively connected to said rotatable member and engaging said idler gear for rotation in a direction contrary to the driving gear, means to rotate said cage to change the relative angular position of said driven gear with respect to said driving gear.

2,898,901
FUEL INJECTING APPARATUS
Edward R. Glenn, Pasadena, Calif.
Application January 13, 1958, Serial No. 708,492
14 Claims. (Cl. 123—139)

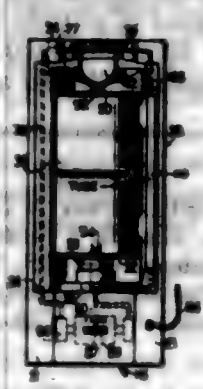
13. A fuel pumping and metering unit of the character referred to and adapted to be operated by the valve rocker arm of an internal combustion engine and controlled by the air intake manifold pressure of the engine including, a block-like body having flat, horizontally disposed top and bottom walls and vertically disposed side walls, a bore entering the bottom of the body and terminating at a flat bottom, a cylinder engaged in the bore, an inlet check valve receiving socket entering the top of the body at a point spaced from the cylinder and terminating at a flat bottom, an outlet check valve socket entering the top of the body at a point spaced from the cylinder and said inlet check valve receiving socket and terminating at a flat bottom, a metering valve socket entering the top of the body at a point spaced from the cylinder and the other sockets, plugs engaged in and closing the upper open ends of the valve receiving sockets, a piston slidably engaged in the cylinder, spring means normally yieldingly urging the piston downwardly in the cylinder and including, a radially outwardly projecting flange on the lower end of the piston and a compression spring between said flange and the bottom of the body, an operating stem fixed to and depending from the piston to be engaged by an inlet valve rocker arm, an inlet flow passage adapted to conduct fuel into the cylinder and including, a counterbore at the bottom of the inlet valve socket, an inlet port entering one side of the body and communicating with the counterbore and a secondary port extending between and establishing open communication between the cylinder and the said inlet valve socket, an outlet flow passage adapted to conduct fluid from the cylinder and including a port establishing open



communication between the cylinder and the outlet valve socket, a first counterbore at the bottom of said outlet valve socket, a second counterbore at the bottom of said metering valve socket, an inner port establishing open communication between said cylinder and the outlet valve socket, a middle port establishing open communication between the said first and second counterbores, and an outlet port entering one side of the body and communicating with said metering valve socket, a fuel pump check valve engaged in the inlet valve socket and checking the flow of fuel from the cylinder through the inlet flow passage, a fuel pump check valve engaged in the outlet flow passage and checking the flow of fuel from the outlet flow passage into the cylinder and a needle valve threadedly engaged in the metering valve socket to project into the second counterbore at the bottom of said metering valve socket and controlling the flow of fuel into said metering valve socket and nozzle means coupled with the outlet port and adapted to conduct fuel from the unit into the engine, said check valve including disc-shaped bodies adapted to seat on the bottoms of the socket to which they are related, and having central apertures, apertured cups fixed to the bodies, disc-shaped valve elements in the cups and springs in the cups and normally yieldingly urging the valve elements into flat bearing and seating engagement on the bodies and over the apertures therein, said valves being held in seated engagement on the bottoms of the sockets by compression springs between the bodies thereof and the plugs closing the sockets.

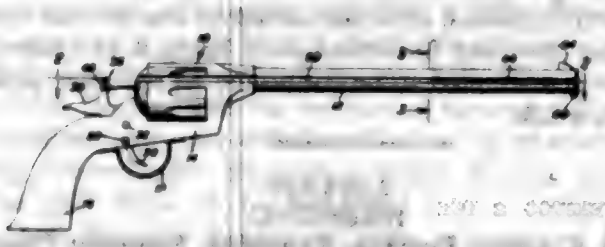
holding element secured to said base portion extending in spaced relationship with respect to said major axis and said facepiece, a filter comprising two sheets of filter material disposed substantially parallel to the outer surface

2,898,902
APPARATUS FOR SUPPLYING ADDITIVES TO LUBRICATING SYSTEM
Ralph A. Vogel, Columbus, Ohio
Application August 17, 1954, Serial No. 450,488
1 Claim. (Cl. 123—196)



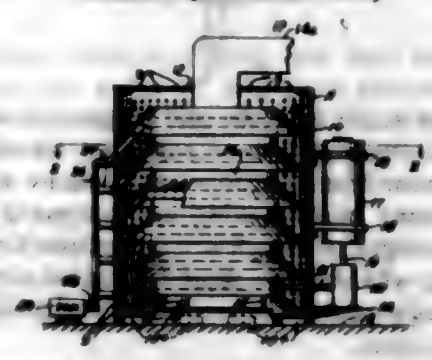
In combination, an engine having a lubricating system, an electric starter for the engine, a lubricating oil additive reservoir, means to support said reservoir, pump means positioned below said reservoir for pumping the additive therefrom, said pump means including an elongated casing having inlet and outlet means at opposite ends thereof, and spring loaded piston means positioned within said casing and axially movable therein, said piston means being slightly spaced from the internal wall of said casing to form a by-pass, first conduit means connecting said reservoir to said inlet opening of said pump means, metering means positioned above said reservoir for controlling the amount of additive to be dispensed, second conduit means connected at one end to the discharge opening of the pump means and at the other end to the inlet side of said metering means, third conduit means connecting the outlet side of said metering means to the lubricating system of the engine, overflow conduit means connected to said metering means at one end thereof and at the opposite end thereof to said first conduit means, and solenoid means connected to said casing of said pump means for actuation of pump piston, said solenoid means electrically coupled to said starter whereby upon actuation of said starter the solenoid will move the piston means of the pump means to pump the additive to the metering means and then to the lubricating system.

2,898,903
TOY GUN
Carroll O. Hovermale, Bakersfield, Calif., assignor of twenty-five percent to Elmer Lung, Bakersfield, Calif.
Application April 30, 1957, Serial No. 656,009
3 Claims. (Cl. 124—2)



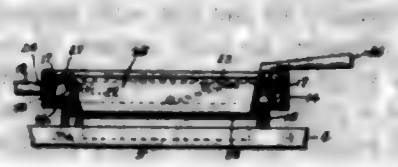
1. A toy gun comprising a barrel having a longitudinal slot extending from end to end thereof, an elastic band, an elastic band supporting pin at one end of said barrel, means mounting said elastic band supporting pin for pivotal movement in a direction to clear the barrel or to block the barrel when in the elastic band supporting position, a hammer mounted for pivotal movement on the gun, a trigger, means operatively connecting said trigger with said hammer to hold said hammer in a cocked position, an elastic band seat in said hammer and adapted to support said elastic band to hold the same in the stretched position, and means for resiliently biasing said trigger toward one position so that when the same is pulled, said hammer is released enabling the elastic band thereon to slip therefrom and be propelled through the said barrel and release said pivotal pin to enable the elastic band to slip thereover, a seat in the gun and located within the path of travel of the hammer, said hammer having an anvil thereon in order to fire a cap when said hammer is being propelled by the elastic band after release of the hammer by said means connecting said trigger to said hammer.

2,898,904
HEATING STOVE USING VARIOUS KINDS OF FUEL
Clyde D. Buck, Fremont, Ind.
Application December 30, 1953, Serial No. 401,247
1 Claim. (Cl. 126—110)



A stove comprising an outer cylindrical casing having a closed top and open bottom, an inner cylindrical fire pot in said casing, means for supplying fuel to said fire pot, a plurality of perforated pipes surrounding said fire pot in vertically spaced relation, a common air supply pipe for said perforated pipes, means for introducing air under pressure to said supply pipe, and a plurality of truncated conically shaped flanges each mounted on said fire pot immediately above one of said perforated pipes, whereby to direct air from said perforated pipes downwardly toward the bottom of said casing, said casing being spaced vertically from a supporting surface to permit entrance of air to the interior of said casing.

2,898,905
COOKING DEVICE
Albert G. Thomas, Charlottesville, Va.
Application April 17, 1957, Serial No. 653,319
2 Claims. (Cl. 126—374)



1. In a cooking device, a shell-like member, heat-responsive means associated therewith and adapted to support a cooking utensil, and heat-insulation means separating said heat-responsive means from said shell-like member and attached thereto, said heat responsive means being adapted to receive heat from said utensil and to lift said utensil in accordance with the degree of heat received.

2,898,906
BIOPSY INSTRUMENT
Harry Wright Seiger, Santa Monica, Calif.
Application March 21, 1957, Serial No. 647,666
3 Claims. (Cl. 128—2)

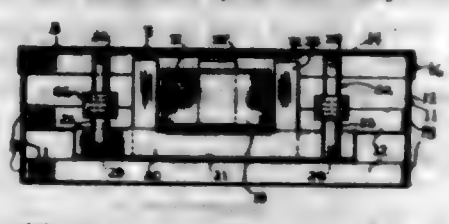
1. A surgical instrument comprising: a head substantially in the shape of a narrow, elongated semi-ellipsoid defined by dividing an ellipsoid by a plane including the minor axis and normal to the major axis of said ellipsoid; said head merging into a base portion at a point corresponding to the position of said plane; an elongated blade

valve rocker arm of an internal combustion engine and the plugs closing the sockets.

holding element secured to said base portion extending in spaced relationship with respect to said major axis and terminating short of the free end of said head for holding a cutting blade in predetermined relationship to said head, said elongated blade holding element being inclined at an acute angle with respect to said major axis when viewed in a first plane including said major axis and also

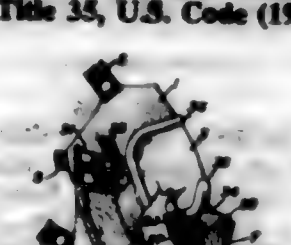
inclined at an acute angle to said major axis when viewed in a plane at right angles to said first plane, said blade holding element having grooves in opposite sides thereof; and said cutting blade having an elongated central slot the opposite edges of which are respectively receivable in said grooves, whereby the semi-ellipsoidal surface of said head provides a guide and support for said blade during a surgical operation.

2,898,907
VIBRATORY APPARATUS
Stanford M. Heide, Kenosha, Wis., assignor to Chicago Dynamic Industries, Inc., Chicago, Ill., a corporation of Illinois
Application April 16, 1956, Serial No. 579,702
4 Claims. (Cl. 128—33)



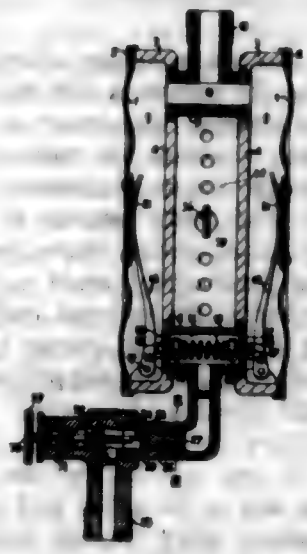
1. A kinesitherapy apparatus comprising a base having a top wall providing a platform, a vibrator within the base below the top wall, means for supporting said vibrator in spaced relation to the under side of said top wall within said base, said means comprising a suspension structure connected to the top wall adjacent each corner thereof and adjacent to each corner of the vibrator and each of said suspension structures including aligned rod elements and a resilient intermediate member molded to adjacent end portions of said rod elements.

2,898,908
FIELD PROTECTIVE MASK
Eugene Sovinsky, Edgewood, Md., assignor to the United States of America as represented by the Secretary of the Army
Application April 6, 1954, Serial No. 421,458
9 Claims. (Cl. 128—141)
(Granted under Title 35, U.S. Code (1952), sec. 266)



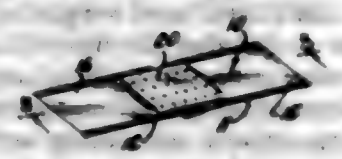
1. A gas mask comprising an impermeable facepiece, at least on air outlet in said facepiece, air inlet means in said facepiece, a filter comprising two sheets of filter material disposed substantially parallel to the outer surface of said facepiece and comprising portions substantially covering the cheek portions of the facepiece, spacing means holding said sheets apart to form an air space therebetween, sealing means sealing the edges of said sheets so as to prevent entrance of outside air into said air space except through said filter material, and conduit means connecting said air space with said air inlet means.

2,898,909
DEVICE FOR SUPPLYING A DIVER WITH AIR
David L. Jayet, Glion S. Yverdon, Switzerland
Application December 28, 1955, Serial No. 556,014
Claims priority, application Switzerland January 14, 1955
5 Claims. (Cl. 128—142)



1. A device for regulating the supplying of air to a diver comprising an inlet pipe adapted to be connected to a source of gas under pressure, first and second chambers, each of said chambers having a flexible wall portion thereof exposed to external water pressure and spaced from each other, first and second conduits connecting said inlet pipe with said first and second chambers, respectively, first and second admittance valves in said first and second conduits, respectively, first and second means respectively connecting said first and second admittance valves with the flexible wall portion of said first and second chambers for opening of said valves upon inward flexure of said wall portions, an exhaust valve adapted to be connected with an exhaust tube from a diver's mask, said exhaust valve positioned between said wall portions and exposed to water pressure, said exhaust valve being urged closed by said water pressure, third and fourth conduits, each connected to one of said chambers, said third and fourth conduits being fluid connected together and adapted to be connected to the inlet pipe of a diver's mask.

2,898,910
DRESSING
William J. Gross, Franklin Township, Somerset County, and Edwin A. Chudkowski, Sayreville, N.J.
Application April 22, 1959, Serial No. 808,055
10 Claims. (Cl. 128—156)



1. An adhesive bandage useful for surgical purposes and adapted to avoid undesirable maceration when in contact with the body under normal usage conditions, com-

rasp piece is pushed into said groove and provided with

and slightly beyond the tip thereof and upon said tubu-

prising a backing of extensible plastic, a commensurate layer of pressure-sensitive adhesive on said backing and an absorbent dressing pad secured to a portion of said layer of adhesive backing, said layer of adhesive and said pad being covered by at least one overlying facing strip adapted to be removed therefrom prior to use of the bandage, said pad having a weight at least equal to that of a compress of the same area composed of four layers of 44 x 36 gauze and having an area sufficient to cover at least 0.4 square inch of skin surface, the portion of said backing in contact with said pad having a plurality of substantially uniformly spaced openings, which openings are of a size large enough to permit passage of water and have open areas defined by the expression

$$P=227\frac{(A)^{3/2}}{(a)^{1/2}}$$

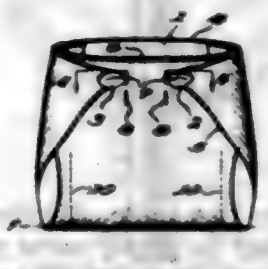
where the symbol "a" represents the average area per opening in sq. in. units for all of said openings and the symbol "A" represents the ratio of open area to area of the pad, the magnitude of "P" is at least 25, the magnitude of "A" is not greater than about 0.25, and said pad being adapted to transfer liquid water from the surface thereof (which in use is adjacent to said skin surface) to the openings in the backing at least as efficiently as said compress.

2,898,911
OPHTHALMIC DISPENSER
Seymour Taylor, Mount Vernon, N.Y., assignor to Chas. Pfizer & Co., Brooklyn, N.Y., a corporation of Delaware
Application March 31, 1958, Serial No. 725,330
1 Claim. (Cl. 128—249)

An ophthalmic dispenser comprising a medicament container having an outlet nozzle, said container being constructed and arranged for ejecting drops of the medicament through said nozzle, an eye cup having a base and an outer lip which is shaped to conform to the portion of the user's face about the periphery of his eye ball, said base of said eye cup being connected to said container with said nozzle extending a short distance into said eye cup to permit said nozzle to assume a position a short distance away from the eye ball when said cup is placed in contact with the portion of the user's face about the periphery of his eye ball, said outer lip of said eye cup being eccentrically disposed relative to said nozzle to cause said drops to be dispensed into a corner of the eye ball thereby preventing even momentary blinding of the user, said container being a plastic squeeze bottle, said base of said eye cup being made of an elastic material, and said base being snap fitted over a portion of said bottle adjacent said nozzle.

2,898,912
INFANT'S DIAPER
Jane Adams, Burbank, Calif.
Application February 9, 1956, Serial No. 564,391
8 Claims. (Cl. 128—284)

1. An infant's diaper comprising a sheet of textile fabric of greater length than width having the side edges inwardly curved toward each other with resultant configuration in plan substantially resembling an hourglass and comprising a back portion and a front portion; said back portion being of greater width than said front portion and having a pair of laterally extending tabs disposed one each at each side edge thereof, and said front portion being provided with a pair of slits extending parallel to the length of said diaper and disposed on opposite sides of the longitudinal center line of said diaper; the



distance between said slits being less than the lengths of said tabs, and the width of said back portion being sufficient to extend around the body of the infant from the back thereof to points outwardly adjacent to said slits whereby each of said tabs may be inserted from opposite sides through both of said slits and be crossed between said slits with resultant securing of the diaper on the infant the said interengagement of said tabs and slits constituting the sole means for securing the diaper in position of use.

2,898,913
SURGICAL DEVICE
Jay Sydney Ritter and Milton Feier, New York, and Myron Pantzer, Brooklyn, N.Y., assignors to The Pansay Corp., a corporation of New York
Application August 24, 1954, Serial No. 451,836
3 Claims. (Cl. 128—296)

2. A surgical device effective at least to enhance hemostasis in the prostatic fossal cavity after prostatectomy and composed essentially of starch sponge that swells and becomes resilient on absorbing an aqueous liquid, being generally frusto-conically shaped with a relatively circular bore extending longitudinally axially through it from base to narrow end to permit snug passage therethrough of a catheter shaft, and so proportioned relatively fully to occupy the fossal cavity with its base at the bladder neck after insertion in the fossa and swelling on absorbing liquid to exert resilient pressure on the wall of the fossa, and capable of yielding by itself to the normal contraction of the fossa as healing progresses, said device being digestible by the body liquids contacting it thereby to avoid the need to open any incision for its removal.

2,898,914
FOOT RASPERS FOR REMOVING CALLOSITIES
Per Waldemar Folke Sköld, Gothenburg, Sweden
Application March 10, 1958, Serial No. 720,297
6 Claims. (Cl. 128—304)

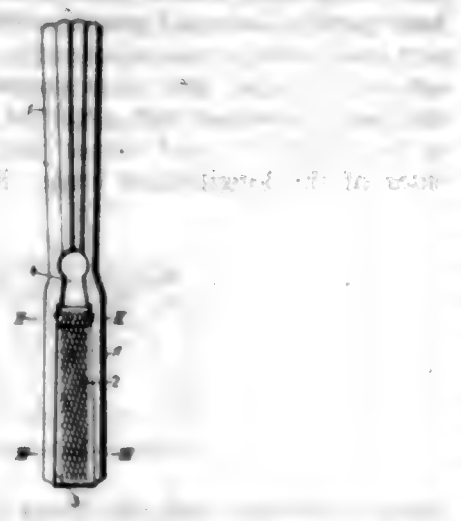
1. A foot rasper comprising a handle, a body portion in the shape of a bed having a dovetail-shaped groove, a rasp piece of thin springy-sheet material bow-shaped in cross section and adapted to be pushed into the groove from the free end thereof, the edges of said rasp piece engaging the sides of said dovetail-shaped groove, a flat spring carried by the handle, the outer end of said spring extending into the inner end of the rasp piece when said

beyond said front end of said casing and is adapted to vertical edges, two additional identical pieces of inelastic

at least on air outlet in said facepiece, air inlet means in

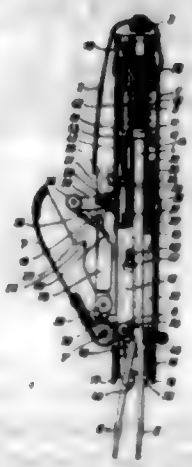
fact with the body under normal usage conditions, com-

rasp piece is pushed into said groove and provided with at least one laterally directed tooth, the wall of the rasp



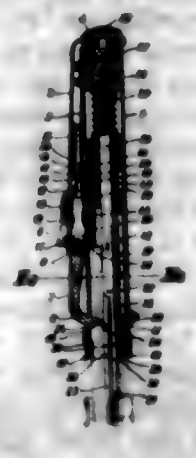
piece having a hole to receive said laterally directed tooth when the latter is pushed to final position on the bed to cover the outer end of the spring.

2,898,915
IMPLEMENT FOR TYING BLOOD VESSELS
Karl Kammer, Lahr, Germany
Application April 18, 1956, Serial No. 577,339
Claims priority, application Germany April 14, 1955
17 Claims. (Cl. 128—326)



12. An instrument for gripping and tying off the open ends of flexible tubular elements and particularly blood vessels comprising an elongated outer casing having a lateral opening and an opening at one end thereof, an operating handle pivotally mounted on said casing and partly extending into said casing through said lateral opening, a forcepslike clamp having a shaft mounted within said casing in axial direction thereof and a pair of prongs at one end of said shaft and projecting through said end opening, one of said prongs being stationary and the second prong being pivotable relative thereto, resilient means for normally holding said second prong in the open position, means on said handle for pivoting said second prong to the closed position, when said handle is first partly depressed, and for thus gripping said tubular element, a slide member within said casing and extending through said end opening and having a head portion around said prongs, means adapted to hold a thread with a prelooped open knot thereon, means for connecting said thread holding means to said head portion, a spring acting upon said slide member tending to move the same forwardly, control means mounted on said casing and adapted to be engaged by said handle for holding said slide member in a rear tensioned position against the action of said spring and for releasing said slide member when said handle is further depressed so as to move said thread holding means forward along said prongs and slightly beyond the tip thereof and upon said tubular element, a second slide member within said casing and movable relative to said first slide member, gripping hooks on the front end of said second slide member, a second spring acting upon said second slide member, means for releasably connecting said first and second slide members so that when said first slide member moves forward, it takes along said second slide member and gripping hooks, a third slide member within said casing and having a pair of prongs projecting through said end opening and adapted to slide relative to said first slide member and to hold a thread with a second prelooped open knot thereon, a third spring acting upon said third slide member and tending to retract the same relative to said first slide member, said control means further engaging said third slide member when said handle is further depressed so as to move said third slide member forwardly against the action of said third spring and then to hold the same in a tensioned condition, means for acting upon said connecting means to release said second slide member from said first slide member when said handle is still further depressed so that said second spring will then pull back said gripping hooks and the latter will first engage and tighten the thread on said thread holding means so as to tighten the first knot, and will thereafter also engage and tighten the thread on said projecting prongs of said third slide member so as to tighten the second knot above said first knot, and a fourth slide member having a pair of knife blades at the front end thereof, means for operatively connecting said third and fourth slide members so that, when said third slide member was previously moved forwardly, it also moved said knife blades toward and along said threads, said handle when subsequently released also releasing said control means and suddenly disengaging the same from said third slide member to permit the latter suddenly to retract from said tensioned condition and thereby to take along said fourth slide member, so that the knife blades thereon will then cut off the thread near said tightened knots by a sudden drawing stroke.

2,898,916
DEVICES FOR THE GRIPPING AND LIGATURING OF THE ENDS OF TUBULAR VESSELS
Karl Kammer, Lahr, Baden, Germany
Application January 5, 1954, Serial No. 402,359
Claims priority, application Germany April 12, 1952
16 Claims. (Cl. 128—328)



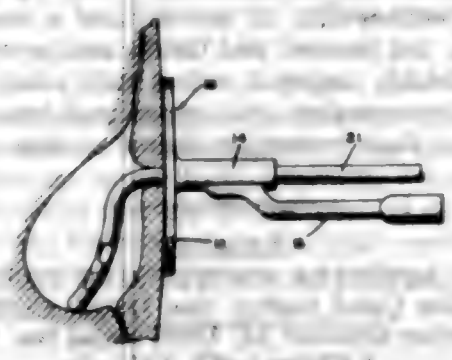
1. A surgical instrument for tieing ligatures comprising, in combination, an elongated casing having a front end; a blood vessel gripping member having a gripping portion and mounted on said casing, said gripping member having a relative projecting position wherein said gripping member projects with its gripping portion beyond said front end of said casing, at least one ligature holding member having a holding portion, mounted on said casing and movable between a projecting position wherein said holding member projects with its holding portion

confining said body therein and thereby maintaining said

discharge outlet at the lower end thereof through which

beyond said front end of said casing and is adapted to support the outer loop of a prospective knot of a ligature to be tied about a blood vessel, the inner loop of which knot is located about said gripping portion of said gripping member while said gripping member and said casing are in said relative projecting position thereof, and a retracted position wherein said holding member is located substantially within said casing, releasing said outer loop; tensioning means on said casing for tensioning a ligature while the outer loop of the prospective knot thereof is held by said holding member, while the inner loop thereof is located about said gripping portion of said gripping member, and while the ligature when tied is located about a blood vessel; and manually operable actuating means for engaging and shifting an inner ligature loop located about said gripping portion of said gripping member to slide off said gripping member about a blood vessel held thereby and then moving said holding member from its projecting position into its retracted position, resulting in freeing of the outer loop and formation of a knot by both loops about the blood vessel held by said gripping member under action of said tensioning means.

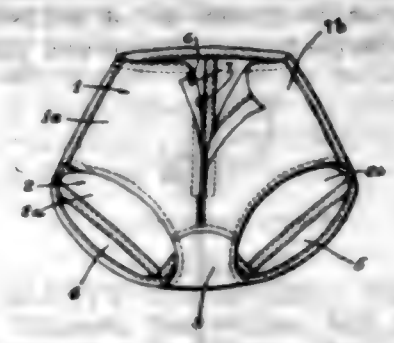
2,898,917
SURGICAL RETAINING DEVICE
Frederick J. Wallace, New York, N.Y., assignor to American Cystoscope Makers, Inc., Pelham Manor, N.Y., a corporation of New York
Application April 7, 1958, Serial No. 726,945
3 Claims. (Cl. 128—350)



1. A surgical retaining device, comprising a disk adapted to conform to and to be anchored to a portion of the body of a patient, a tube joined with and extending from one surface of said disk, said tube having a bore communicating through an opening formed in said disk with the opposite side thereof, a resilient member secured to a portion of the inner surface of said tube and having a free portion intermediate the ends thereof forming a chamber with said tube, and means for inflating said chamber to distend said free portion of said resilient member into the bore of said tube and thereby anchor a surgical device such as a catheter extending through said tube bore.

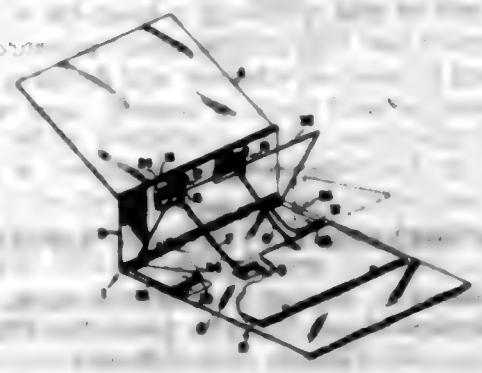
2,898,918
PAIR OF CORSET-PANTIES
Carmen Soteras Roura and Juan Izpizua Perez, Madrid, Spain
Application August 22, 1957, Serial No. 679,653
3 Claims. (Cl. 128—525)

1. An improved corset-panty comprising two identical pieces of inelastic material joined in a lower partial vertical seam to form the front of the corset-panty and leaving the front vertically open above such seam, two identical pieces of inelastic material joined in a vertical seam to form the back of the corset-panty, a lower piece of inelastic material joined by suitable seams to the two pieces forming the front and the two pieces forming the back of the corset-panty to extend between the thighs of a wearer, the front and back of the corset-panty being suitably fastened together by seams along their outer vertical edges, two additional identical pieces of inelastic material each joined by a seam to a lower edge of one of said pieces forming the back of the corset-panty and by another seam to said lower piece, and means for



fastening the vertically open part of said front of the corset-panty, the seven pieces of inelastic material each being cut to exact size whereby the corset-panty will fit closely about the lower part of a wearer's trunk.

2,898,919
CARD BINDERS
Irwin E. Kwartler and Richard L. Wade, St. Louis, Mo., assignors to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Application August 5, 1957, Serial No. 676,132
1 Claim. (Cl. 129—24)



A record card binder, comprising, a frame member having a horizontal portion and a vertical portion, a cover articulately mounted on said vertical portion, said cover having a length which is less than that of said horizontal portion, a pair of rectangular cross sectioned card retaining posts pivotally mounted on said horizontal portion, a card supporting plate operatively supported in overlying relation with respect to said horizontal portion and the pivotal support for said posts, a pair of latches mounted on said vertical portion and adapted to receive positively and releasably secure the upper ends of said posts, a pair of spring biased arms secured to said horizontal portion, and a pivotable card separator bail articulately connected to the free ends of said arms.

2,898,920
BOOK HANGER SUPPORTS
Roman S. Oehler, Atlanta, Ga.
Application January 22, 1957, Serial No. 635,465
4 Claims. (Cl. 129—36)

1. In a book supporting device of the class described adapted for attachment on the binding of said book and to be constructed from a single piece of elongated material entirely by bending same, a resilient elongated body portion adapted to be inserted into the inside of a book between the pages thereof adjacent the back binding, a resilient top support portion formed on said body by bending said body material on itself more than 180° around to a line transverse to said longitudinal axis of said body to form a loop offset at one side from the longitudinal line of said body, a terminal end portion of said loop being bent to form a member curved around said body movably

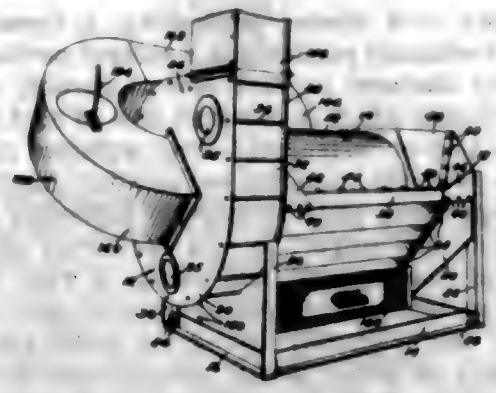
said thread holding means forward along said prongs

said holding member projects with its holding portion

confining said body therein and thereby maintaining said loop in movable, flexible engagement with said main body portion, said loop having a bottom portion thereof positioned to engage resiliently a portion of the book binding, a foot formed on the bottom end of said body portion for engagement with the bottom edge of said binding to fasten

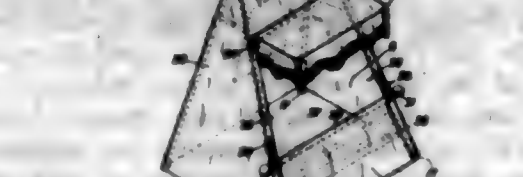
thereto at least in one direction of movement of said body member, said loop being of springy, distortionable material to yield so that said loop is bendable to force said bottom portion into engagement under pressure with said foot fastened in position, whereby said device is positioned under tension on said book to support same when hung thereby.

2,898,921
CORN SHELLER HAVING AN ASPIRATOR CONDUIT
James G. Bryant, Port Huron, Mich.
Application March 16, 1956, Serial No. 572,066
11 Claims. (Cl. 130—6)



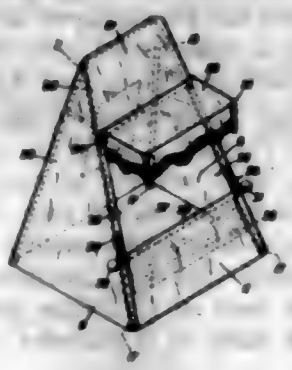
1. A corn sheller comprising means defining a corn sheller housing, means within said housing forming a generally cylindrical perforate chamber, a blower housing at one end of said corn sheller housing, said blower housing having a side wall disposed adjacent one end of said cylindrical chamber, said last mentioned wall having an opening therein communicating with said cylindrical chamber at said end thereof, a rotating shaft extending axially through said cylindrical chamber and projecting through said side wall into said blower housing, said side wall of said blower housing having a bearing thereon in which said shaft is journalled, the portion of said shaft within said blower housing having an impeller mounted thereon, said blower housing having an opposite side wall, said impeller being disposed between said side walls of the housing, said opposite side wall having an air inlet opening aligned concentrically with said shaft, the portion of said shaft within said cylindrical chamber having an agitating device thereon, said sheller housing having a discharge outlet at the lower end thereof through which kernels of corn passing through the wall of said cylindrical chamber are adapted to be discharged and an aspirator conduit extending substantially directly from the inlet opening of said blower housing to said discharge outlet of said corn sheller housing.

2,898,922
CLIP FOR PIN CURLS, OR THE LIKE
Raphael Lyman, Norwalk, Conn., assignor, by mesne assignments, to Robert Ullman, Norwalk, Conn.
Application May 9, 1957, Serial No. 658,859
3 Claims. (Cl. 132—48)



1. A clip for pin curls or the like, of the character described, comprising an upper member and a lower member, said lower member comprising a strip of resilient material having a clamp section at one end thereof and a handle section at the other end thereof, said handle section comprising an upwardly and rearwardly bent portion of said strip material terminating short of said clamp section and formed with a depending terminal portion, said terminal portion having a slot formed therein; said upper member comprising a strip of sheet material having a clamp section at one end and a handle section at the other end thereof, said handle section of said upper member slidably engaged within said slot; and means pivotally interengaging said upper and lower members intermediate their respective clamp sections and handle sections.

2,898,923
BABYSITTER PROTECTIVE TENTS
Jan Carol Smiley, San Diego, Calif.
Application October 24, 1955, Serial No. 542,296
1 Claim. (Cl. 135—1)

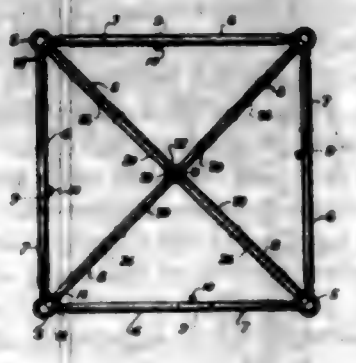


In a babysitter protective tent for the confinement of infant babies and young children, the combination of a triangular shaped frame comprising a pair of up-set U-shaped members hinged together at the bows thereof and having legs downwardly spreading therefrom, braces pivotally secured to legs and serving to hold said legs in angular spaced relation, a covering conforming to said frame and completely enclosing the same, said covering having a window at the front thereof with a sill constituting a barrier to the escape of the infant occupant from said tent; the lower portion of the covering below said window opening extending upwardly to a substantial extent and being inturned to form a fold through which extends a removable barrier rod forming an encased sill for said window; and means for securing the ends of said rod to sides of said window and for vertically adjusting the same.

liquid, said valve comprising a seat member and a movable member operatively connected to said seat member,

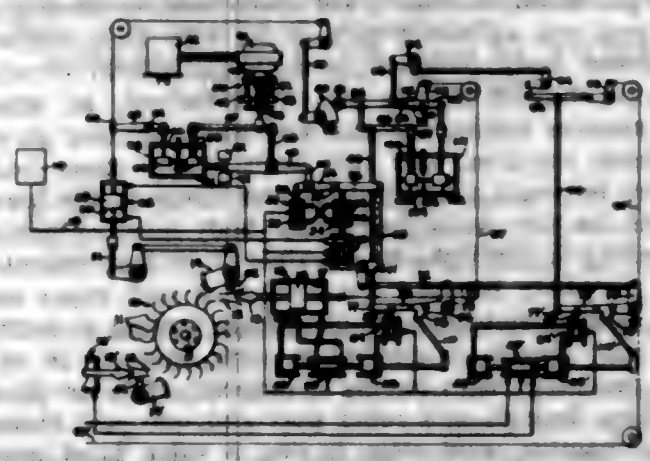
force of the input signal exceeds said constant force, and means responsive to said output pressure and exert-

2,898,924
PORTABLE CHAPEL TENT FRAME
Ross D. Gesser, Omaha, Nebr.
Application August 12, 1958, Serial No. 754,682
1 Claim. (Cl. 135—4)



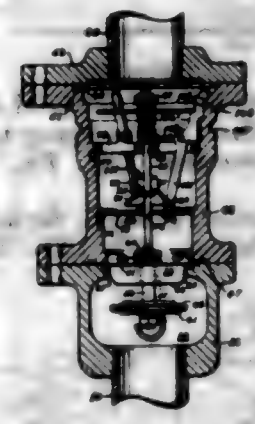
A foldable tent frame comprising detachable corner sections, each corner section including a vertical corner supporting post, a substantially long tubular member, a substantially short tubular member extending at right angles to said substantially long tubular member and a short roof tubular member extending laterally with respect to said first mentioned tubular members, means for pivotally connecting said tubular members with said vertical corner post of each corner section, a central roof section embodying a plurality of identical tubular members, each tubular member of said roof section having ears extending from one end thereof, a connecting member including cross arms having apertured enlargements at their ends, bolts extending through said spaced ears of said tubular members of the roof section and openings of said enlargements of said cross arms, pivotally connecting said tubular members of said cross roof sections, means for connecting a substantially short member of one corner section to the substantially long tubular member of the adjacent corner section forming a tent frame, and spikes extending into the corner post of said corner section, securing the frame in an upright position when the spikes are driven into the ground surface.

2,898,925
SPEED CONTROLLER FOR IMPULSE TURBINES
Clarence L. Avery, Rockford, Ill., assignor to Woodward Governor Company, Rockford, Ill., a corporation of Illinois
Application September 14, 1955, Serial No. 534,356
4 Claims. (Cl. 137—35)



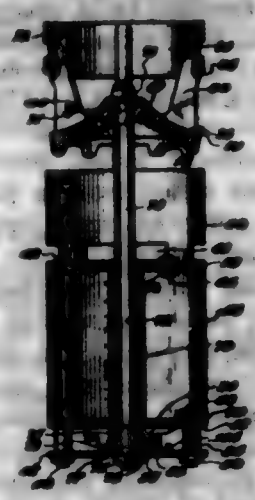
1. For regulating the power delivered by a prime mover, the combination of, first and second regulating members, a first servo for moving said first member, a second servo for adjusting said second member, a governor for detecting deviations in speed from a predetermined value, a device controlled by said governor and having a normal equilibrium position, a third servo variably energized in response to changes in the position of said device and governing the selective energization of said first servo, compensating mechanism operable in response to the detection of a speed deviation by said governor to return said device to said equilibrium position, a controller for said second servo, first and second motion transmitting connections extending to said controller from the movable parts of said first and third servos respectively and movable independently of each other to adjust said controller differentially, and means including a cam interposed in said first connection for modifying the action of the latter to maintain a predetermined positional relation between said first and second members.

2,898,926
SAFETY DISCONNECT VALVE
George N. Tsigaloff, Fort Wayne, Ind., assignor to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana
Application November 14, 1955, Serial No. 546,555
14 Claims. (Cl. 137—68)



4. A safety disconnect valve comprising a valve body defining a passage having an inlet and an outlet, a self closing valve mounted on the body, upstream of said outlet, to close the passage, a trip mechanism including a latch pawl which is mounted on the body and for movement to set and tripped conditions, said latch pawl in the set condition serving to hold the valve open and in the tripped condition serving to permit the valve to close, said body having a weak section located between the valve and said outlet to localize severance of the body under undue stress, said trip mechanism including means disposed for actuation by the relative movement of parts of said body at said weak section for moving said latch pawl relative to each of said parts of said body to the tripped condition of said latch pawl.

2,898,927
LIQUID VALVES
George B. Richards, Deerfield, Ill., assignor to Liquid Controls Corporation, North Chicago, Ill., a corporation of Illinois
Application May 3, 1956, Serial No. 582,580
13 Claims. (Cl. 137—79)

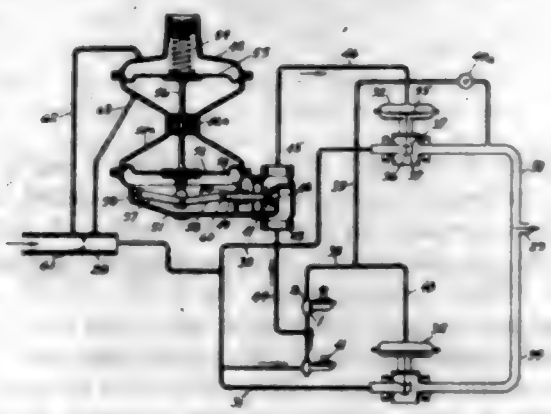


1. A float-controlled valve for controlling the flow of two immiscible fluids, at least the heavier of which is a

agitating device thereon, said sheller housing having a

liquid, said valve comprising a seat member and a movable member operatively connected to said seat member, said seat member having an inlet port and an outlet port in communication with the inlet port, said movable member including a valve member and a float ballasted to be buoyantly supported by said heavier fluid and to sink in said lighted fluid at normal ambient operating temperatures, said float being connected to said valve member for movement of the latter into and out of closing relationship with the inlet port in accordance with the level of a liquid by which the float is buoyantly supported, and temperature responsive means including mutually engageable elements on said seat member and said moval member respectively, said means being inactive within the normal ambient operating temperature range and active when the ambient temperature decreases to a predetermined value below the normal ambient temperature range for holding said movable member against movement into valve-closing position.

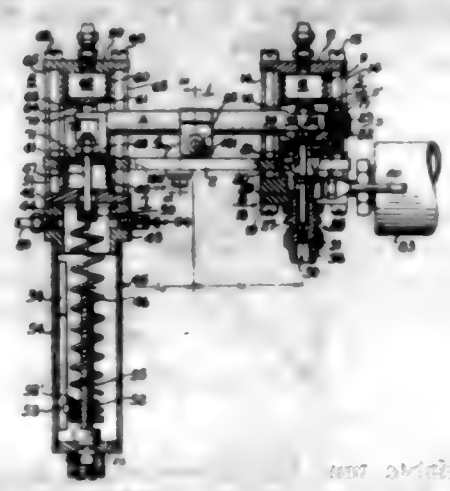
2,898,928
GAS PRESSURE REGULATOR
William R. Kehoe, Erie, Pa., assignor to American Meter Company, Incorporated, Erie, Pa., a corporation of Delaware
Application March 10, 1955, Serial No. 493,447
3 Claims. (Cl. 137—80)



1. In a gas distribution system, a pressure regulator loaded in response to the pressure drop due to the flow of gas in a line, another pressure regulator loaded in response to the drop in ambient temperature, a line pressure regulator valve having a diaphragm loaded in parallel from the output pressures of both pressure regulators whereby the resultant line pressure is increased in proportion to the increase in flow in the line or to the drop in ambient temperature whichever is the greater, and means for bleeding the pressure applied to said diaphragm.

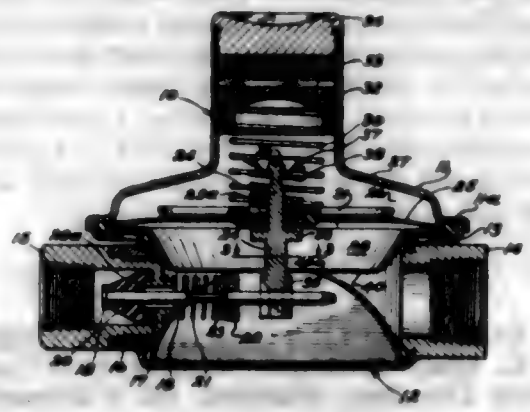
2,898,929
SEQUENTIAL RATIO TOTALIZERS
Ray S. Williams, Orrville, Ohio, assignor to Hagan Chemicals & Controls, Inc., a corporation of Pennsylvania
Application May 2, 1956, Serial No. 582,285
11 Claims. (Cl. 137—85)

9. A device for receiving a variable input signal and developing a pneumatic output pressure that is proportional to the input signal from a predetermined low to a relatively high value of input signal and which resets from said low value to substantially zero when the input signal is below said value, comprising a beam having a fulcrum, an input device responsive to a variable signal for exerting on the beam on one side of the fulcrum a force proportional to the signal, means exerting a constant force on the beam and developing a turning force thereon that opposes that of the input signal of the input device, a device actuated by the beam for developing a pressure and exerting a force on the beam that is equal and opposite to the force of the input device when the force of the input signal exceeds said constant force, and means responsive to said output pressure and exert-



ing a force on the beam in such direction when the output pressure and the input signal are below said predetermined value that the pressure developing device is reset to zero output pressure.

2,898,930
PRESSURE REGULATOR
Theodore A. St. Clair, South Euclid, and Richard C. Krall, Willowick, Ohio, assignors to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Application July 5, 1956, Serial No. 596,057
2 Claims. (Cl. 137—116.3)

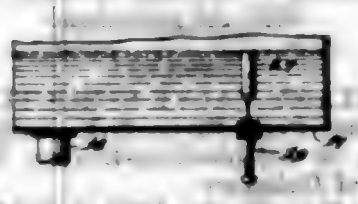


1. A regulator comprising a lower body member, said body member having a bottom wall and side walls forming a gas chamber, said lower body member having an inlet port and an outlet port in the side walls thereof, said lower body member having a peripheral circular flange at the top of the side walls thereof, an upper body member having top and side walls forming an atmospheric chamber, said side walls of the upper body member having a peripheral circular flange at the lower edge of the side walls, said upper body member having an opening to atmosphere, a flexible diaphragm mounted at its periphery between the flanges of said upper and lower body members, said diaphragm having a central relief port therein, a diaphragm stem mounted in said relief port, said stem having a reduced diameter shank extending through said relief port and into said atmospheric chamber, said stem having a valve head intermediate the ends of the stem, said valve head extending laterally over said relief port on the gas chamber side thereof and adapted to close the relief port, said stem having a spring around the shank portion thereof in said atmospheric chamber, said spring being operatively connected to the stem and diaphragm to normally bias the valve head on the stem to closed position effecting closure of said relief port in the diaphragm, a transverse plate in the lower body member spaced from the diaphragm and from the bottom wall of the lower body

sure of the flow in the outlet passages, the first piston the force of said pressure fluid against the opposing

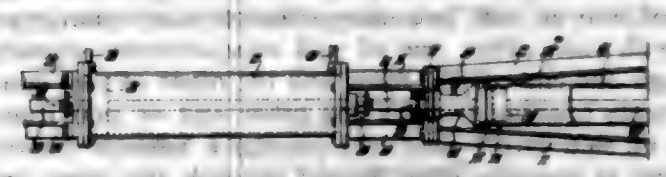
member, said plate having an elongated slot therein coaxial with the relief port in the diaphragm, said slot having its major axis aligned with said inlet port and having its minor axis tranverse of the inlet port, said stem having a rectangular cross-head at the end thereof remote from its shank, said cross-head having a length exceeding the distance across the minor axis of the slot in said plate, said cross-head having a valve pin slot at right angles to the direction of its length, an inlet valve in said inlet port, said inlet valve having an actuating pin thereon extending from the inlet port and into the valve pin slot in the cross-head to prevent rotation of the diaphragm stem and maintain the cross-head normal to the minor axis of the plate slot to effect opening of the relief port in the diaphragm in response to a predetermined movement of the diaphragm away from said plate.

2,898,931
VACUUM BREAKER
Gilbert F. Carlson, Skokie, Ill., assignor to Bell & Gossett Company, Morton Grove, Ill., a corporation of Illinois
Application September 7, 1956, Serial No. 608,547
5 Claims. (Cl. 137—207)



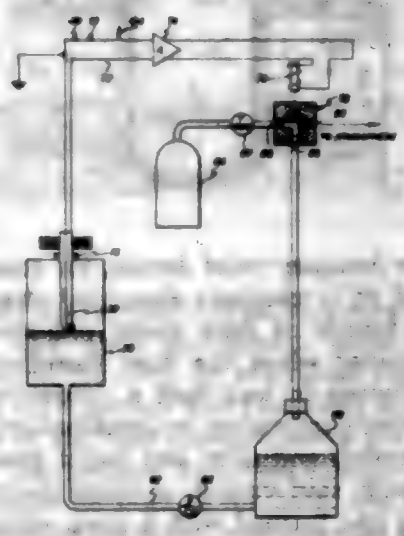
1. A vacuum breaker for facilitating drainage of a tank forming part of a closed, normally pressurized, liquid system having a normally closed drain opening below the tank comprising a member adapted for detachable mounting outside of and in closing relation to a bottom opening in the bottom of the tank and connected through such bottom opening to a float within the tank, the detachment of the member providing through the bottom opening communication between the atmosphere and the tank and the increasing distance of the member from the tank as the float drops when the drain is open providing a visual indicator of the drainage from the tank.

2,898,932
VALVE APPARATUS
Edwin O. Tefft, Springfield, Mass., assignor to The Chapman Valve Manufacturing Company, Indian Orchard, Mass., a corporation of Massachusetts
Application April 3, 1956, Serial No. 575,765
2 Claims. (Cl. 137—340)



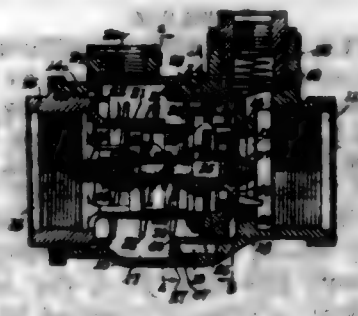
2. Valve actuating mechanism comprising in combination, a valve body, a stem extending from said valve body, an elongated tubular member for surrounding said stem having an outer end and an inner end secured to the side of said body around said stem, said tubular member having an internal diameter relatively larger than that of the diameter of said stem to be surrounded thereby to provide a space around said stem, a pair of elongated struts at opposite sides of said tubular member having outer ends and inner ends secured to the side of said body at opposite sides of said tubular member, a cross plate having an aperture therethrough connecting the outer ends of said struts together, a structure extending in said aperture adjacent the outer ends of said struts secured to and closing the outer end of the tubular member and including means for packing the rear end portion of a reciprocable rod extending therethrough into said tubular member and connected to the outer end of said stem whereby the outer end of said stem may be supported and guided thereby, said tubular member provided with inlet and outlet means for the circulation of cooling means through the space around said stem.

2,898,933
LIQUID LEVEL CONTROL APPARATUS
George H. Bancroft, Rochester, N.Y., assignor to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Application October 11, 1956, Serial No. 615,373
5 Claims. (Cl. 137—392)



1. A system for automatically maintaining a substance in a container at a substantially constant level, the system comprising a thermocouple having a first junction disposed in the container at the level at which the substance is to be maintained and having a second junction at another location, a supply vessel for the substance, a conduit connecting the vessel to the container, and means responsive to the thermocouple output for moving the substance from the supply vessel to the container when the level of the substance is below the first thermocouple junction.

2,898,934
DUMP VALVE
Herbert E. Britt, Los Angeles, Calif., assignor to Air Products Co., Los Angeles, Calif., a partnership
Application November 5, 1956, Serial No. 620,248
5 Claims. (Cl. 137—512.1)

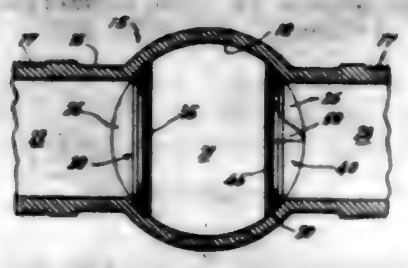


1. A dump valve comprising a spring-biased piston responsive to inlet pressure, a disc-controlled valve seat open to inlet flow upon movement of the piston in response to such pressure, an auxiliary spring-biased piston concentric with the first piston and on the outlet side of the valve seat and responsive to inlet pressure when said seat is open, the first piston having a flow-passing cage, the auxiliary piston substantially closing said cage to flow when responding to inlet pressure, a cylinder in which the first piston is movable, an enlarged pressure-receiving annulus on the first piston and receptive of the pres-

and being arranged to register directly with one of said upper surface of said bottom wall, means for fastening

sure of the flow in the outlet passages, the first piston being provided with outlet ports in communication with said outlet passages, said annulus being provided with flow-passing ports, and pressure-responsive resilient means normally closing said latter ports and opening to outlet flow under pressure in said latter ports.

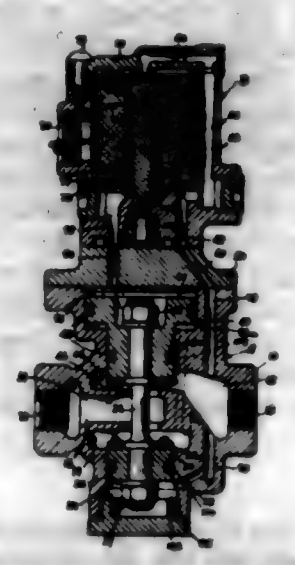
2,898,935
WATER HAMMER RELIEF DEVICE
Lewis J. Harris, Brooklyn, and Joseph J Carroll, Bronx, N.Y.
Application July 23, 1958, Serial No. 750,511
14 Claims. (Cl. 137—599.2)



1. A water hammer relief device, for connection to the discharge end of a relatively elongated charged line connected to a source of fluid under pressure and subject to water hammer when the flow therethrough is completely interrupted in less than a predetermined critical time; said device comprising, in combination, means forming a valve casing and inlet and outlet passages in communication with said casing; a valve member mounted in said casing and formed with a main waterway extending therethrough, and an auxiliary waterway extending therethrough; and pressure responsive valve means controlling flow through said auxiliary waterway; said member being movable between an open position, in which said main waterway interconnects said passages for substantially unrestricted flow through said device, and a closed position in which the flow through said device is interrupted; said auxiliary waterway, during movement of said member in a closing direction, interconnecting said passages after such movement has interrupted flow through said main waterway; whereby if the flow through said main waterway has been interrupted in less than the critical time, with resultant development of water hammer, the over pressure due to the water hammer will open said pressure responsive valve means for resumption of flow between said passages through said auxiliary waterway.

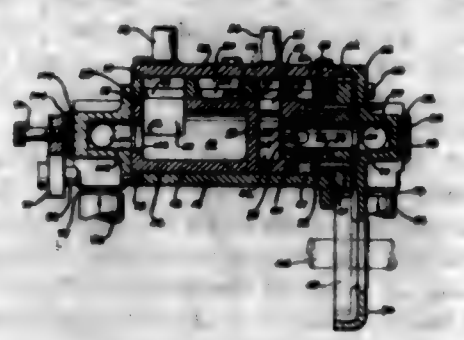
2,898,936
PILOT ACTUATED FLUID CONTROL VALVE
John E. Collins, Akron, Ohio, assignor, by mesne assignments, to International Basic Economy Corporation, New York, N.Y., a corporation of New York
Application April 17, 1957, Serial No. 653,448
8 Claims. (Cl. 137—620)

1. Valve mechanism comprising a housing having a bore with axially spaced poppet seats therein and having spaced passageways extending from the exterior of the housing to the bore, a plunger disposed in said bore for reciprocation and having poppet heads for selectively engaging said poppet seats and thereby directing fluid flow between said passageways as said plunger is reciprocated, said plunger further having opposed differential area effective pressure-responsive actuating surfaces thereon, means for communicating equal fluid pressure to said opposed surfaces simultaneously to bias said plunger in the direction of the fluid pressure force acting on the larger of said opposed surfaces to a predetermined position in said bore, means for selectively exhausting said fluid pressure from the larger actuating surface area of said plunger so that the plunger is thereupon displaced in said bore by the force of said pressure fluid against the opposing smaller area actuating surface, and means for automatically re-communicating said larger area actuating sur-



face with said fluid pressure in the event of operational failure of said exhausting means to automatically restore said plunger to said predetermined position in said bore.

2,898,937
ROTARY VALVE STRUCTURE
Leo C. Williams, Pearl River, N.Y., assignor, by mesne assignments, to Mobile-Gess-Dexter, Incorporated, a corporation of Delaware
Application February 23, 1955, Serial No. 489,902
15 Claims. (Cl. 137—633)

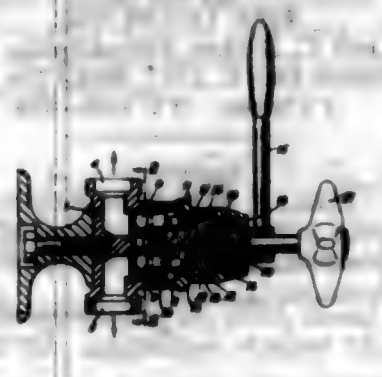


8. A rotary valve structure comprising, a single stationary casing having a bore extending therethrough and of the same diameter from end to end thereof, cover members removably mounted on said casing over the opposite ends of said bore, a single hollow rotor rotatably mounted in said bore and in running contact with the annular wall of said casing surrounding said bore, said rotor being axially divided by an integral transverse wall interiorly thereof into at least two compartments non-communicative with each other, one of said compartments opening through one end of said rotor and the other of said compartments opening through the other end of said rotor, each of said cover members having a passage therein opening at opposite ends thereof through the inner and outer surfaces, respectively, of said cover member, the inner ends of the passages in said cover members being arranged so that they communicate continuously with said rotor compartments, respectively, directly at the ends thereof adjacent said cover members, said casing having therein at least two passages spaced axially of said bore and leading to the exterior of said casing, one of said casing passages opening directly into said bore at a point intermediate the ends of one of said rotor compartments and the other of said casing passages opening directly into said bore at a point intermediate the ends of the other of said rotor compartments, said rotor having in the wall thereof at least two radial openings spaced axially of said rotor, one of said rotor openings communicating directly with one of said rotor compartments

sheath surrounding and elastically embracing said spring ring secured to an inner end of said sleeve, the inner rim

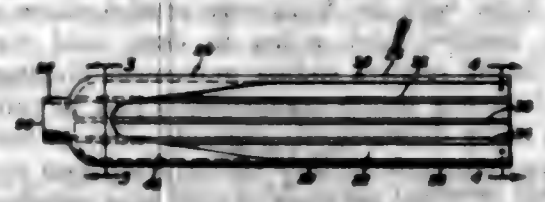
and being arranged to register directly with one of said casing passages for a predetermined interval as said rotor rotates and the other of said rotor openings communicating directly with the other of said rotor compartments and being arranged to register directly with the other of said casing passages for a predetermined interval as said rotor rotates, whereby communication is established for said intervals between said casing passages and said rotor compartments, respectively, and means operatively connected with said rotor for rotating the same, said last-mentioned means comprising a driven annular member disposed between one of said cover members and said rotor and drivably connected to the latter, said annular member having a passage extending axially therethrough and continuously registering at one end thereof with the inner end of the passage in the said one of said cover members and communicating continuously at the other end thereof with the rotor compartment adjacent said annular member.

2,898,938
MIXING VALVES
Pierre Dombre, Geneva, Switzerland
Application September 16, 1957, Serial No. 684,120
Claims priority, application Switzerland September 25, 1956
5 Claims. (Cl. 137—635)



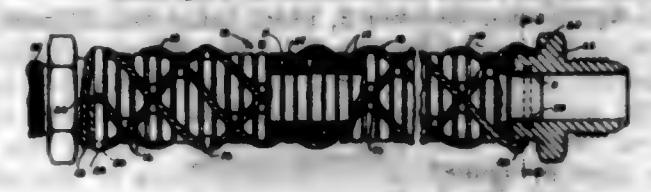
1. A fluid mixing valve comprising a body provided with at least two inlets and at least one outlet, valve members on said body and mobile in parallel directions selectively to control at least the inlets to regulate the fluid mixture and the volume thereof independently from one another, an oscillating plate, means urging the plate into contact with all of the valve members, a first control member which is rotatable and adapted to be operated by hand and which defines a hinge for the oscillation of said plate, and a second control member axially mobile in a direction which is parallel to the axes of the valve members, said second control member acting on the oscillating plate to adjust its inclination around said hinge, and therefore the position of the valve members.

2,898,939
WATER CONDUCTING DOWNSPOUT ATTACHMENT
Howard L. Fox, Evansdale, Iowa
Application May 6, 1957, Serial No. 657,392
6 Claims. (Cl. 138—46.5)



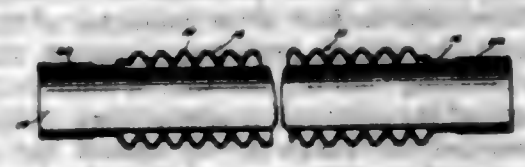
1. An attachment for a building supported downspout, said attachment comprising a substantially flat bottom wall which forms a table over which water from the downspout is adapted to be conducted, a plurality of flow directing longitudinal ribs rising upwardly from the upper surface of said bottom wall, means for fastening one end of said wall to said downspout in order to position said wall in registry with said, downspout and to at least partially support said wall at an angle so that the water flows down said bottom wall, said means for attaching said wall to the downspout including a collar adapted to telescopically connect to the downspout, an end wall rising from said bottom wall and having a hole, said collar being attached to said end wall and in registry with said hole.

2,898,940
HIGH PRESSURE HOSE
Howard W. Cole, Jr., Mountain Lakes, N.J.
Application May 13, 1957, Serial No. 658,816
13 Claims. (Cl. 138—99)



1. A flexible, high-pressure hose including a corrugated flexible tube with each corrugation extending circumferentially around the tube, an individual supporting ring in each of the corrugations and extending around the full circumference of the tube for restraining the tube against radial strain, and tension elements connecting different rings and on opposite sides of the hose, and other tension elements connecting others of said rings on opposite sides of the hose but at different angular positions around the circumference of the hose from the first tension elements to obtain universal flexing movement of the hose, all of the tension elements being between peripheral portions of the rings that extend beyond the convolutions of the tube.

2,898,941
INHALER TUBE
Ernest I. Kilcup, Barrington, R.I., assignor to Davol Rubber Company, a corporation of Rhode Island
Application October 10, 1956, Serial No. 615,858
3 Claims. (Cl. 138—55)



1. A flexible inhaler tube of the character described consisting of a normally corrugated outer wall having circumferentially extending corrugations for substantially the length of said tubing but terminating short of each end thereof whereby to leave a relatively short, straight, cylindrical portion at each tubing extremity, and a straight, cylindrical inner wall of greater length than said outer wall snugly mounted therein, the end portions of said inner wall being bent back into engagement with the outer surface of said outer wall cylindrical portions and secured thereto.

2,898,942
FLEXIBLE CONDUITS
Edward M. Rothermel, Waynesville, N.C., assignor to The Dayton Rubber Company, Dayton, Ohio, a corporation of Ohio
Application November 25, 1957, Serial No. 698,730
10 Claims. (Cl. 138—56)

1. A flexible, fluid-impervious conduit comprising a helical spring of plastic coated wire, a first elastomeric

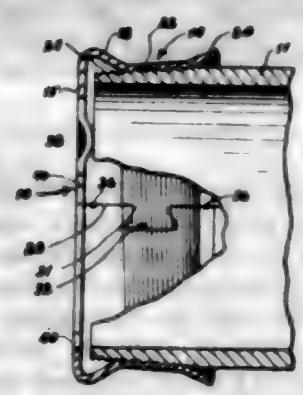
longitudinal terminal portions of said base member in

strand main wire together with a second intermittent feed

sheath surrounding and elastically embracing said spring and a second elastomeric sheath surrounding and coex-

tensive with said first sheath, said second sheath in partial elastically embracing contact with the first sheath and otherwise closely spaced therefrom.

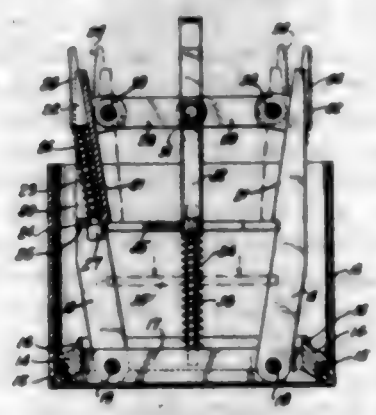
2,898,943
METAL THREAD PROTECTOR
Frank J. Kennedy, Mount Lebanon, Pa., assignor, by mesne assignments, to H. K. Porter Company Inc., Pittsburgh, Pa., a corporation of Delaware
Application October 5, 1955, Serial No. 538,600
2 Claims. (Cl. 138—96)



2. In a thread protector of the class wherein a single piece of metal is curved to bring its opposite longitudinal edges adjacent to one another and said edges are connected to form a generally cylindrical wall for surrounding the threads to be protected and in which a flange at one end of the piece of metal curves inwardly and extends across the end face of the wall of a pipe on which the protector is used, the improvement which comprises a side wall of increased diameter toward both ends and with a throat section intermediate the ends having a multi-convolution, continuous thread formed in the inner surface of the wall at the throat section for screwing over the pipe threads that are to be protected, the seam at which the opposite edge of the metal meet being a butt seam and the inside surface of the connector at the throat section having its threads extending across the seam, the end flange merging with the side wall at a juncture where the diameter of the side wall is greater than at the throat section, and the end flange having several corrugations of short circumferential extent and with large angular spacing from one another around the annular extent of the flange, the corrugations being displaced inwardly at locations where said corrugations contact with the end face of a pipe on which the protector is screwed, whereby the corrugations prevent the remainder of the flange from touching the end face of the pipe, and the total axial pressure component of the pressure between the pipe and connector threads is concentrated in the localized areas of contact of the flange corrugations with the end face of the pipe to provide resilient pressure for resisting rotation of the connector in a direction to unscrew it from the pipe.

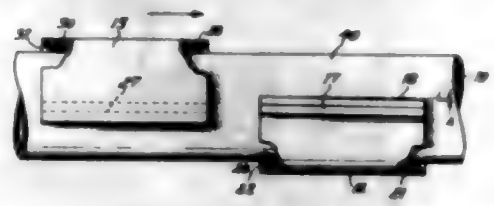
2,898,944
THREAD PROTECTOR
Edwin Richard Seward and William Charles Gainer, New Orleans, La., assignors to ASCO Automatic Specialties Corporation, New Orleans, La., a corporation of Louisiana
Application February 13, 1957, Serial No. 639,928
7 Claims. (Cl. 138—96)

1. An attachment formed as thread protector for externally threaded pipe ends comprising a sleeve, a base ring secured to an inner end of said sleeve, the inner rim of said ring being upturned to form a seat for a threaded pipe end, at least one pair of oppositely arranged upright posts pivotally secured to said base ring, a tapered recess



formed in the upper portion of said posts, wedge shaped locking members slidably arranged in said recesses, and a toggle joint operatively connected to said locking members to hold said locking members in locking position when stretched and to move said locking members out of locking position when buckled.

2,898,945
PIPE COUPLING
Leon C. Becker, Philadelphia, Pa.
Application July 1, 1957, Serial No. 668,934
2 Claims. (Cl. 138—99)



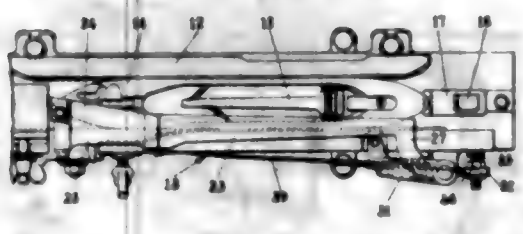
1. A completely self contained pipe union comprising, in combination, a hollow semi-cylindrical base member and a hollow semi-cylindrical draw member of slightly larger diameter than and receiving the longitudinal edges of said base member to define a cylindrical sleeve having a substantially circular central bore, each one of said members having an interior facing seating surface slidably accommodating a cylindrical member therewithin, each said seating surface defining a central recess, a pair of gasket liners each securely seated within and completely filling each said recess, each said gasket liner projecting uniformly above the level of said seating surface a distance less than the depth of said recess, said base member having marginal longitudinal terminal portions slidably overlapping the longitudinal edges of said gasket liner carried by said draw member, first longitudinally extending fastening means disposed along diametrically opposite sides of said base member, second longitudinally extending fastening means disposed along diametrically opposite sides of said draw member slidably receiving said first fastening means, at least one of said fastening means being directed along a line defining an acute angle with the transverse central plane of said respective member and acting to draw said members together during relative sliding movement therebetween, said first fastening means comprising a pair of rails each extending along diametrically opposite sides of said base member and circumferentially spaced from said marginal longitudinal terminal portions of said base member, said second fastening means comprising a pair of inwardly opening grooves extending along diametrically opposite sides of said draw member slidably receiving said rails therewithin, whereby said draw member is drawn toward said base member during forward movement of said draw member relative to said base member with said marginal

longitudinal terminal portions of said base member in frictional sliding engagement with said overlapped longitudinal edges of said gasket liner carried by said draw member.

2,898,946
SHUTTLE BINDER

Joseph M. Budzyna, East Douglas, Mass., assignor to Draper Corporation, Hopedale, Mass., a corporation of Maine

Application October 12, 1955, Serial No. 540,110
8 Claims. (Cl. 139—186)

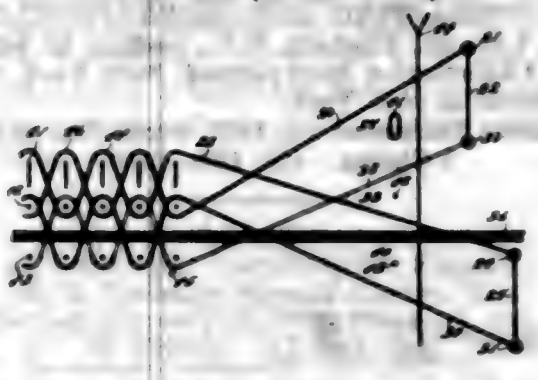


1. For a loom having a lay, a shuttle and a shuttle box including front and rear box plates, a shuttle retarding means which comprises a shuttle binder, a pivot at one of said box plates, and means for positioning said binder for receiving and retarding the shuttle as it enters the box comprising a lever hinged intermediate its ends at said pivot and having a curved arm the end of which is pivoted to said binder, and an oppositely directed arm carrying an abutment directly engaging the outer end of said binder for limiting movement of the binder outwardly laterally of the box.

2,898,947
MULTIPLE PILE FABRIC

Frank W. E. Hoeselbarth, Carlisle, Pa., assignor to C. H. Masland & Sons, Carlisle, Pa., a corporation of Pennsylvania

Original application August 23, 1955, Serial No. 530,105. Divided and this application August 13, 1956, Serial No. 603,769
1 Claim. (Cl. 139—403)



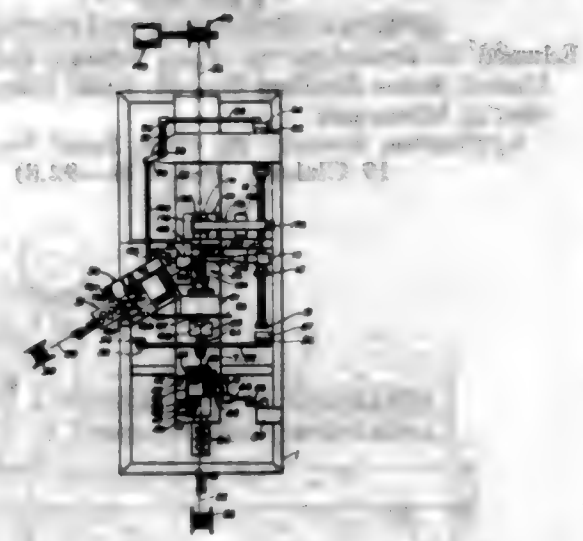
A two shot pile fabric, having three pile warp sets, three binder warp sets, and upper and lower wefts interwoven together, each pile warp set rising alternately in the pile and being bound below two upper weft shots between positions at which it rises in the pile, each binder warp set being woven above one upper weft shot then woven below two lower weft shots and then woven above another upper weft shot, at each upper weft shot at which a particular warp set is raised in the pile, a corresponding binder warp set being woven above an upper weft shot, and having a stuffer warp between the upper and lower weft shots.

2,898,948
MACHINE FOR MAKING BARBED WIRE

Raymond S. Doerr, Battle Creek, Mich., assignor to Dare Products, Incorporated, Battle Creek, Mich., a corporation of Michigan

Application March 15, 1954, Serial No. 416,007
17 Claims. (Cl. 140—59)

1. In a machine for producing single strand barbed wire and having an intermittent feed means for a single strand main wire together with a second intermittent feed means for a separate single strand wire for barbs, means controlling and timing the operation of said two intermittent feed means so that said barb stock is fed and severed at the proper time for winding on said main wire, means for guiding said barb stock in endwise direction into barb forming position, and means for cutting said last named wire into a barb length piece at the end of each barb stock feeding cycle and before the barb winding cycle, the combination which comprises a frame having a fixed location bearing assembly carrying an extending endwise movable sleeve which is retractable and which has mounted on the extending end of same a spinning head for winding said barb length piece of wire around the main wire and then releasing same to form a barb thereon, resilient means for projecting said sleeve and spinning head into starting spinning position, said spinning head and sleeve having a longitudinal passageway therethrough for said main wire and an acute angle barb stock receiving tubular passageway extending from one side of said spinning head and coming out of the end of same near and substantially tangent to the outlet end of said longitudinal passageway through said



spinning head to facilitate winding said severed piece of barb stock in an open spiral around said main wire, a fixed location jaw including gripping means mounted on said frame for receiving and holding the initially projected end of said severed barb length piece of wire stationary during the winding of the central portion of same by said spinning head around said main wire, and intermittent jaw operating means for releasing the grip of said fixed location jaw portion of said gripping means at the end of said barb winding operation and then moving same to grip the end of the next barb member supplied for winding, such gripping taking place prior to the start of each barb winding cycle, wherein a telescopable means on said fixed location bearing assembly carries a portion of which said retractable spinning head and sleeve assembly is rotatably mounted for winding the barb on the main wire, and wherein there is a compression spring normally holding the spinning head carrying portion of said telescopable means in extended position and which permits said spinning head to retract during the open spiral winding of the barb on the main wire and then returns it to extended position when the main wire and barb moves forward from the winding position.

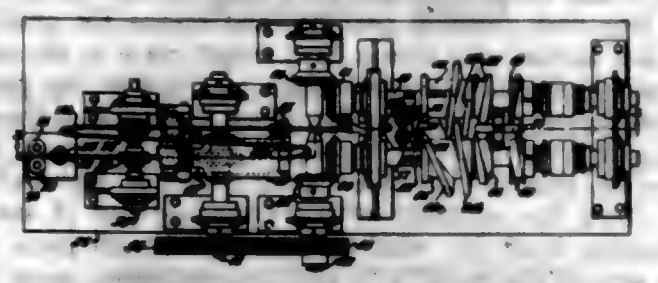
2,898,949
MACHINE AND PROCESS FOR THE PRODUCTION OF CONVOLUTIONS IN WIRE

Kalman Z. Hunzar, Foster, Ohio

Application December 8, 1953, Serial No. 396,930
5 Claims. (Cl. 140—71)

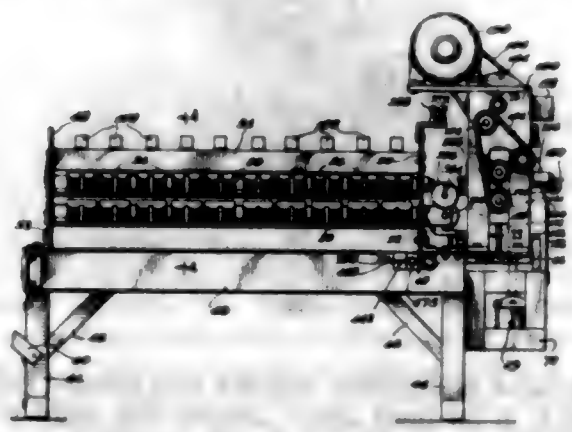
1. In a machine for producing serpentine-like bends in wire: a cooperating pair of parallel rotary bending ele-

ments; means for feeding a wire between said bending elements at a constant speed; said bending elements comprising solid worms; each of said worms comprising an initial cam portion having a relatively large pitch and a tooth height increasing from a minimum to a maximum,



and a mandrel portion of a smaller and constant pitch and a constant tooth height equal to said maximum; said feed means introducing said wire between said worms above the center lines thereof; and means for rotating said worms at such a speed that the lead of said portion of constant pitch is less than the speed of said wire.

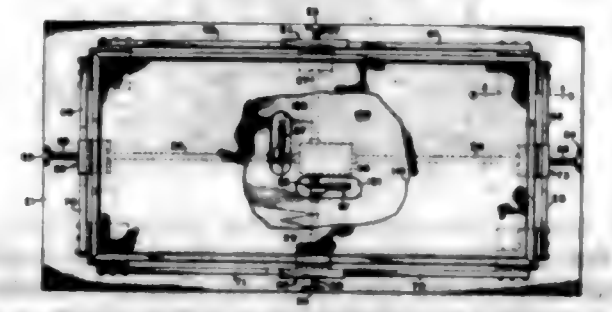
2,898,950
SPRING ASSEMBLY MACHINES
Edward L. Bronston, St. Paul, Minn., assignor to The United States Bedding Co., St. Paul, Minn., a corporation of Minnesota
Application January 20, 1955, Serial No. 482,943
19 Claims. (Cl. 140—92.8)



1. In a spring assembly machine of the class described having a frame, a series of pairs of opposed carriers for holding the end coils of adjacent rows of upholstery springs, means movably supporting said carriers in said frame, guide channels for helical tie wires for securing together the end coils of adjacent rows of springs, clamping bars for holding said springs engaged with said carriers while the tie wires are formed about the end coils of the springs, said guide channels and clamping bars being supported by said frame, the combination therewith of a platform pivotally mounted on said frame, means carried by said platform for forming helical tie wires and feeding them into said guide channels, means maintaining a predetermined relationship between each wire forming and feeding means and a particular guide channel whereby each wire forming and feeding means supplies only its own guide channel, and means mounted on said frame for raising and lowering said platform.

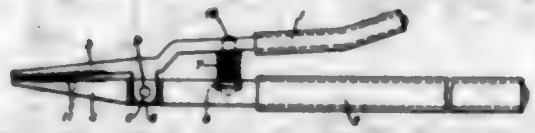
2,898,951
DEVICE FOR ASSEMBLING VARIABLE SIZES OF FRAMED SCREENS
John G. Watt, Miami, Fla., assignor to American Screen Products Company, Miami, Fla., a corporation of Florida
Application July 24, 1956, Serial No. 599,842
5 Claims. (Cl. 140—109)

1. An adjustable device for assembling the elements of different sizes of framed screens, said elements consisting of a frame having grooves on a face thereof, a sheet of screening, and splines adapted to be disposed in the grooves of the frame together with border edges of the screening; said device comprising a table, a plurality of units slidably supported on the table and arranged in the general shape of a rectangle, said units including angular units defining the corners of the rectangle and intermediate units positioned along the sides of the rectangle between consecutive pairs of angular units, said units comprising median supports for the splines, primary floating



carriers on the units extending above the median supports for yieldably supporting a sheet of screening, secondary floating carriers on the units extending above the primary floating carriers for yieldably supporting the frame, rotatable shafts connecting the intermediate units to each other, a central gear box interconnecting said shafts, said corner units being connected to the intermediate units by rack gears carried by the corner members and pinion gears meshing with the rack gears, said pinion gears being slidably carried on the shafts for rotation therewith, and bearings for rotatably supporting the ends of the shafts on the table.

2,898,952
WIRE UNWRAPPING AND REWRAPPING TOOL
Albert J. Lovecky, Flushing, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application December 28, 1956, Serial No. 631,149
2 Claims. (Cl. 140—124)



1. A tool for expanding and contracting an inelastic coil of wire spirally wrapped about a terminal, said tool comprising two jaws, means connecting said jaws in pivotal relation such that the opposing faces of said jaws when in the fully closed position meet only beyond a point relatively distant from said connecting means, and the space between said jaws in said position increases from said point toward said connecting means, said opposing faces being concave, screw-threaded and of substantially the same width, the threads per inch of said screw threading being slightly less than the turns per inch defined by the spirally wrapped wire, whereby rotation of said tool on said wire effects a gripping action between the screw threading and said wire turns, and means for opening said jaws, said connecting means permitting a relatively slight sidewise displacement of said jaws when said jaws are closed on said spirally wrapped wire and twisting force is applied to the tool.

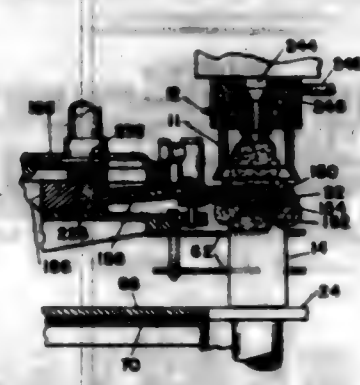
2,898,956

tudinal axis at an angle of more than 1° but less than 45°

2,896,953
VACUUM FILLING MACHINE

Walter Bertholem, Quincy, and Arthur F. Whitehead, Wollaston, Mass., assignors to Pneumatic Scale Corporation, Limited, Quincy, Mass., a corporation of Massachusetts

Application May 17, 1957, Serial No. 659,926
15 Claims. (Cl. 141—48)

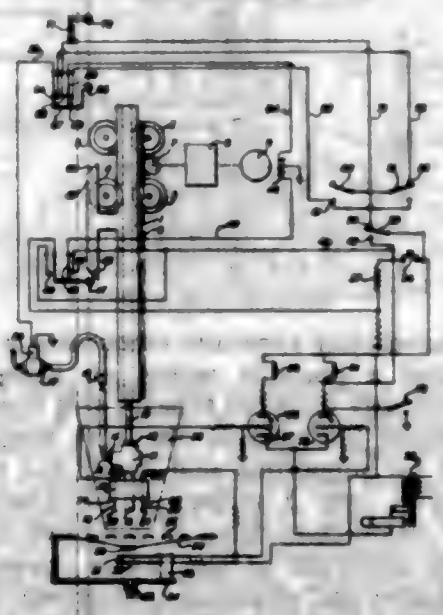


1. In a vacuum filling machine, in combination, vacuum filling means including a plurality of vacuum filling heads adapted for sealing engagement with the mouths of successive containers, means for transferring successive empty containers from a supply thereof into operative sealing relation to said filling heads, container purging means carried by said transfer means and engageable in sealing relation with said containers, said purging means including means for first evacuating the containers and means for then filling the containers with an inert gas released by said purging means during the transfer operation and while the containers are continuously maintained in sealing engagement with said purging means, means for continuing release of gas from said purging means during removal of the latter from sealing engagement with its container and during delivery of the container to the vacuum filling machine into alignment with a vacuum filling head, and means for simultaneously releasing inert gas from said aligned filling head to flood the area around the open mouth of the gas filled container during application of the container into sealing engagement with said vacuum filling head whereby the mouth of the gas filled container is continuously surrounded by a flow of inert gas without a break in continuity from the time the purging head is removed to the time the mouth is sealed by its vacuum filling head.

2,896,954
AUTOMATIC CONTAINER FILLER

Jeff E. Freeman, Tarrant County, Tex.

Application February 28, 1958, Serial No. 718,285
14 Claims. (Cl. 141—86)

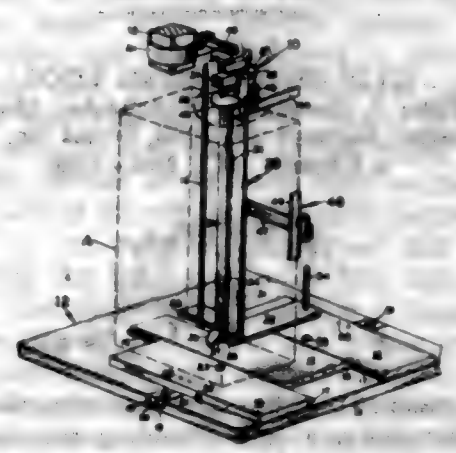


13. A container filling machine for dispensing liquids into open containers comprising a reciprocable nozzle means, means to deliver liquid to the nozzle means, means to control the delivery of liquid to the nozzle means, drain board means to support a container beneath the nozzle means, electric motor means to drive the nozzle means upwardly and downwardly relative to and into the container, means to limit the downward traverse of the nozzle means into the container, sensing probes connected to the nozzle means and acting to energize the motor means in the reverse sense when said probes are in contact with the dispensed liquid in the container to control the ascent of the nozzle means within the container, means to interrupt the traverse of said nozzle means in the upward direction and to deenergize the liquid delivery control means, means to continue the upward traverse of said nozzle, means to limit the traverse of said nozzle in the upward direction, and means positioned beneath the drain board means to interrupt operation of the machine and to return the machine to its non-operating condition upon a spillage of liquid about the exterior of a container.

2,896,955
INSULATION BLOCK HOLDING DEVICE FOR POWER SAWS

David L. Schwartz, North Miami, Fla.

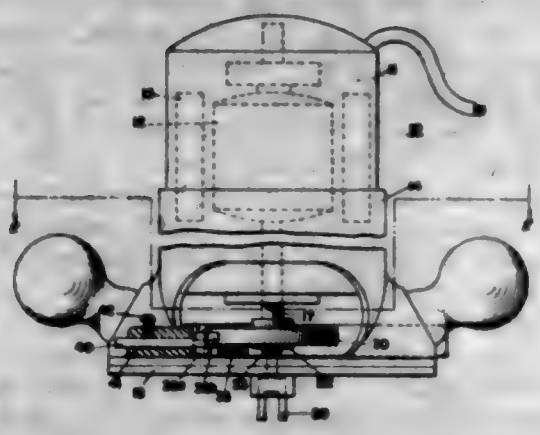
Application September 3, 1957, Serial No. 681,760
1 Claim. (Cl. 143—171)



An insulation block supporting device for mounting on a power saw having a saw blade, a table and a head, the combination comprising support locking means mounted on said table, a slidable support plate secured to said support locking means, said slidable support plate having a slot for receiving said blade, pivot means mounted on said slidable support plate in alignment with said slot, a lower block support member pivotally mounted on said slidable support plate, an upper block engaging member, an upright member secured to said lower block support member and extending above said upper block engaging member, pivot means securing said upper block engaging member to said upright member, clamp means engaging said head of said power saw, an arm member adjustably secured to said clamp at one end, a second pivot pin mounted on the other end of said arm member, said second pivot pin being in vertical alignment with said first pivot means, pivot support means receiving said second pivot pin mounted on said upright member above said upper block engaging member, handle means mounted on said upper block engaging means, spring means secured to said handle means yieldingly urging said upper block engaging means into engagement with said insulation block, an elongated member secured at one end to said upright member and extending normal thereto, a stop member slidably mounted on said elongated member for engaging a corner edge of said insulation block and a handle for pivoting said device on said table.

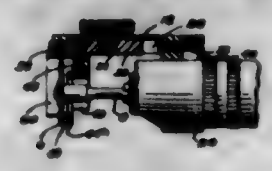
disk members having equal diameters each of which being connected to said power means to advance said slab

2,898,956
BRAKE FOR ELECTRIC HAND TOOL
Warren R. Zorn, near Pottstown, Pa.
Application October 24, 1957, Serial No. 692,873
7 Claims. (Cl. 144—134)



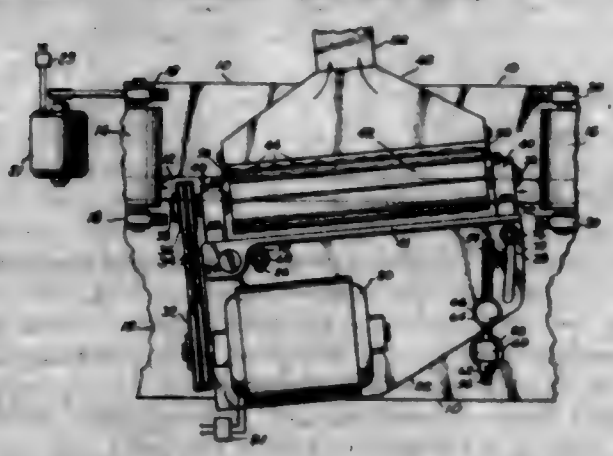
1. A portable electric hand tool comprising a frame, a driven rotatable member supported by said frame, chuck means carried by said rotatable member adapted to support a tool element for rotation therewith, a brake drum integral with said chuck means, and a brake shoe associated with said frame and movable into engagement with said drum to retard the rotation of said rotatable member and said tool element.

2,898,957
GUN CHECKERING TOOL
Peter J. Demarkis, Manchester, Mass.
Application January 29, 1958, Serial No. 711,841
6 Claims. (Cl. 144—136)



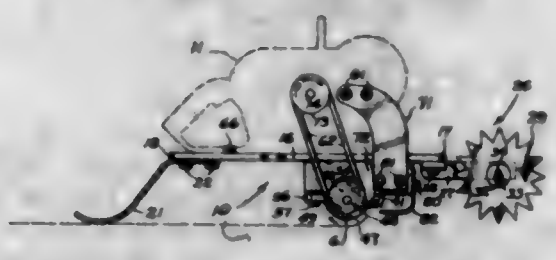
4. An article of the class described comprising an elongated holder body, a split clamping ring secured in a right angularly disposed position at one end of the elongated body, guide means adjustably supported in the elongated body at the opposite end thereof, and said guide means comprising a pair of projecting spaced apart arms and a pivoted guide element supported in one of the arms.

2,898,958
METHOD OF MAKING CROSSCUT WOOD FLAKES AND SAWMILL CROSS GRAIN FLAKING PLANER THEREFOR
Dale L. Schubert, Tacoma, Wash., assignor, by mesne assignments, of one-half to Industrial Development Co., Tacoma, Wash., a corporation of Washington
Application August 16, 1957, Serial No. 678,651
5 Claims. (Cl. 144—172)



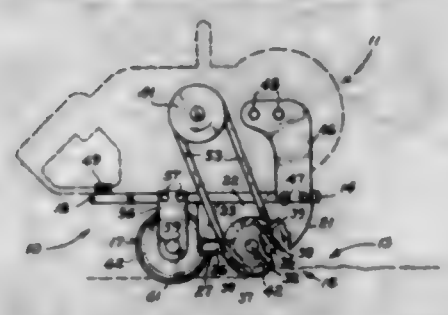
1. The method of producing cross cut wood flakes which comprises positioning a rotary cutter with its longitudinal axis at an angle of more than 1° but less than 45° relative to the grain direction of a piece of lumber, feeding the lumber longitudinally against the cutter, and controlling the cutter speed relative to the feed speed of the lumber until the resulting cutting path is substantially at right angles to the grain direction of the wood, thereby planing cross cut flakes from the wood surface.

2,898,959
ROTARY-CUTTER ATTACHMENT FOR PORTABLE CHAIN-SAW MOTOR
Elden G. Austin, Molalla, Oreg.
Application August 13, 1957, Serial No. 677,893
5 Claims. (Cl. 144—286)



4. Portable apparatus for routing timbers comprising an elongated shield member, support means at the forward and rear ends of said shield member for supporting the same, a pair of mounting portions depending from said shield member intermediate said forward and rear ends, a rotatable routing member rotatably carried by said mounting portions, a driven member connected to said routing member, and attaching means for detachably connecting a portable chain-saw-motor means to the upper side of said shield member, said portable chain-saw-motor means having a driving member and a planar surface normally supporting a saw-blade portion for said chain-saw-motor means, said attaching means having a planar surface adapted to be aligned with the planar surface of said chain-saw-motor means and operable when the two planar surfaces are aligned to align the driving member of said chain-saw-motor means and the driven member connected to said routing member.

2,898,960
ROUTING APPARATUS
Elden G. Austin, Molalla, Oreg., assignor to Molalla Manufacturing Co., Molalla, Oreg., a corporation of Oregon
Application February 11, 1958, Serial No. 714,647
3 Claims. (Cl. 144—208)



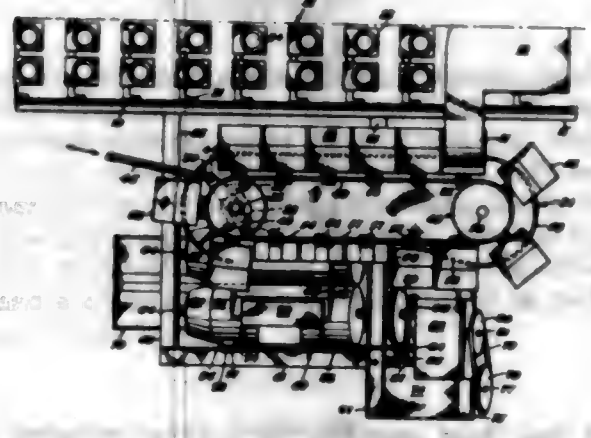
1. Timber-routing apparatus comprising a frame adapted to mount a portable motor, an elongated routing member rotatably mounted beneath said frame and transversely thereof for rotation about its longitudinal axis, and means for supporting said frame and routing member for travel over a surface to be treated, said last-mentioned means comprising an elongated shaft mounted beneath the underside of said frame rearwardly of said routing member and extending transversely of said frame and generally parallel to the longitudinal axis of said routing member, and a center and two laterally outer disk members mounted on said shaft, said two laterally outer

gated circularly cylindrical shank having a solid elongated

said tires upon application of the fastening device which

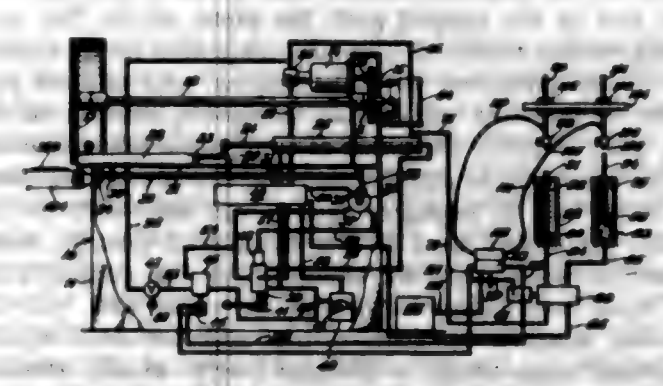
disk members having equal diameters each of which exceeds the diameter of said center disk member, said disk members supporting said frame and routing member independently of other support mechanism, thereby to position said frame above a surface for free pivotal movement thereof about a transverse axis.

2,898,961
EGG BREAKER AND SHELL EXPRESSER
Floyd L. Kauffman, Palos Park, and Delos B. Van Dolah, Chicago, Ill., and Allen W. Sharp, Ottumwa, Iowa, assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
Application September 16, 1955, Serial No. 534,780
15 Claims. (Cl. 146—2)



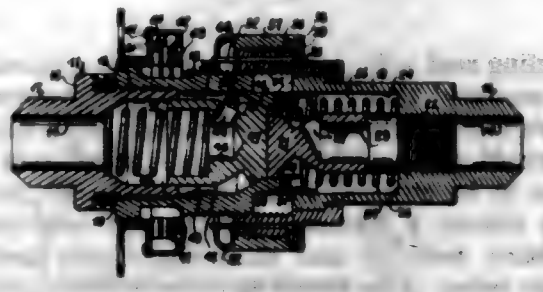
14. A device suitable for use in handling eggs for separation and inspection purposes, the said device comprising: a frame, egg breaking means mounted on said frame, egg meat and egg shell conveying means associated with said egg breaking means, receptacles detachably mounted on said conveying means to receive egg meat and broken egg shells from said egg breaking means, means associated with said conveying means for separating the bulk of said meat from said shells, and shell expressing means associated with said conveying means to remove residual egg meat from said shells.

2,898,962
MEAT SLICING MACHINE CONTROL APPARATUS
Alexander H. Barnett, Chicago, Ill., assignor to Swift & Company, Chicago, Ill., a corporation of Illinois
Application March 25, 1957, Serial No. 648,159
9 Claims. (Cl. 146—94)



1. A bacon slicing machine comprising a knife moving in a given plane; a conveyor including a hydraulic power means for advancing a slab of product toward said plane; and a control apparatus for said power means including a hydraulic pump to produce a given quantity of fluid for each rotation of said knife, and measuring means associated with said pump to alternately first count a predetermined number of said quantities and then a given number of said quantities; said measuring means being adjustable to permit said predetermined number and said given number to be independently varied; said measuring means being connected to said power means to advance said slab toward said knife during the rotations for which the quantities of fluid are produced for said predetermined number count to be made and to stop said slab for the rotations for which the quantities of fluid are produced for said given number count to be made.

2,898,963
NUT LOCKING MECHANISM WITH THREADED PAWL MANIPULATING SLEEVE
Louis R. Courtot, Euclid, Ohio, assignor to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Application September 17, 1953, Serial No. 380,715
1 Claim. (Cl. 151—10)



A locking mechanism comprising an externally threaded part, an internally threaded nut rotatable on said part to move axially relative thereto to couple said parts when said nut is rotated in one direction relative to the part, pawl means mounted on said nut for rotation therewith said pawl means being axially movable relative to said nut, said nut being externally threaded with threads of the same hand as those of the internal threads of the nut, an internally threaded sleeve screwed on to the external threads of said nut, stop means limiting the axial motion of said sleeve on said nut in both directions while providing a range of relative axial motion of said sleeve and nut in response to relative rotation of said latter members, ratchet means on said externally threaded part, means resiliently mounting said ratchet means on said part to urge said ratchet means axially outwardly toward said pawl means, means to limit the axially outward motion of said ratchet means, means on said sleeve rotatably receiving a portion of said pawl means for fully projecting said pawl means axially toward said ratchet means when said sleeve is turned in said one direction with respect to said nut as far as said stop means will permit and to retract axially the pawl when said sleeve is turned in the opposite direction, said pawl means being spaced from said ratchet means upon initial screw coupling of said nut and said externally threaded part, continued coupling rotation of said sleeve and nut in said one direction with said sleeve turned as far in said one direction as said stop means will permit closing said space between said pawl and ratchet means to bring said pawl means against said ratchet means, further rotation of said sleeve and nut in said one direction causing axially inward motion of said resiliently mounted ratchet means and simultaneous ratcheting of said pawl means about said ratchet means until said internally threaded part and said nut are fully coupled.

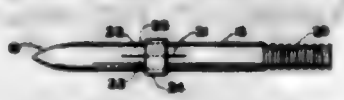
2,898,964
EXPLOSIVELY DRIVEN STUD WITH SPLIT SHANK LOCKING MEANS
Albert T. Masters, Fairview Park, Ohio, assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, a corporation of Virginia
Application December 23, 1953, Serial No. 400,049
2 Claims. (Cl. 151—41.73)

1. An anchoring stud adapted to be forcibly projected from the bore of the barrel of an explosive actuated stud driving tool into a base material and comprising an elon-

2,898,967
TIRE TRACTION CHAIN SECURING DEVICE

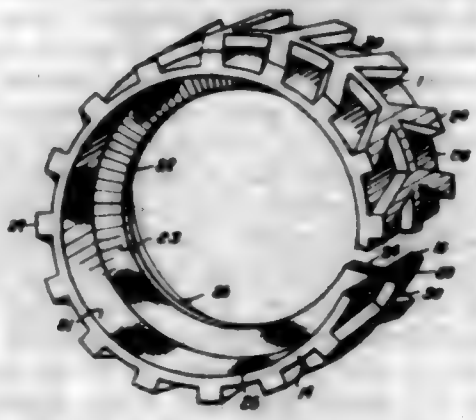
cords in the body thereof inclined at an angle of approximately 90° to that median plane of the tire which is nor-

gated circularly cylindrical shank having a solid elongated ogivally pointed front end portion adapted to penetrate said material and form a stud-retaining hole therein without disruption of said portion, said shank having a rear end portion for fastening members to said base material and also having a split portion adjacent said front end adapted to undergo lateral expansion upon penetration of said front end portion, said split portion including integral segments tending to assume a laterally bowed position in said material whereby said stud is more securely held in said material, and annular centering means snugly



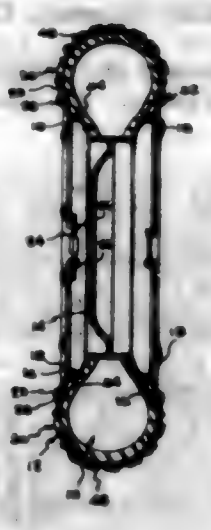
encircling said split portion frictionally retained and slidably mounted thereon for preventing excessive and premature lateral bowing of said portion until said stud has penetrated the base material and caused said encircling means to be stripped back from said split portion, said shank having a diameter substantially less than that of said bore, both of said encircling means and rear end portion being of an outer diameter substantially equal to but slidably fitting that of said barrel bore, whereby said stud may be readily inserted into said bore preparatory to driving and maintained therein in substantial axial alignment with said bore until driven.

2,898,965
AUXILIARY TREAD FOR DUAL WHEELS
Glen M. Eddy, Kansas City, Kans.
Application October 3, 1956, Serial No. 613,743
2 Claims. (Cl. 152—175)



1. An auxiliary tread device for dual wheels of a type having inner and outer wheels removably secured to a common hub by fastening means and carrying inner and outer pneumatic tires having annular treads and adjacent side faces of the respective tires spaced apart for providing an annular groove between said tires, said auxiliary tread device comprising a continuous annular band composed of resilient material having the characteristics of the material of the tires and having spaced apart inner circumferential faces and a continuous annular rib projecting inwardly intermediate said faces and having side faces cooperating with said inner circumferential faces of the tread device to provide a recess on one side of the rib adapted to receive therein the inner of said tires with the annular face on that side of the rib engaging the tread of the inner tire when the tread device is slid axially over the tread of the inner tire for bringing the annular rib into abutment with the outer face of the inner tire and to provide a recess on the other side of the rib to accommodate therein the outer of said tires when the outer wheel is applied to said hub for bringing the inner face of the outer tire into abutment with the outer face of the rib, said rib being adapted to be gripped between said tires upon application of the fastening device which retains the outer of said wheels for preventing the tread device from shifting laterally on said treads.

2,898,966
SNAP-ON TIRE CHAIN ASSEMBLY FOR VEHICLES
Henry J. Machesney, Pittsburgh, Pa.
Application July 12, 1957, Serial No. 671,535
2 Claims. (Cl. 152—233)



1. A tire chain assembly for a wheel including a rim and a tire casing, comprising: inner and outer mounting rings; means for connecting said rings to the inner and outer side edges, respectively, of the wheel rim; cross chains extendable across the casing between the rings; fastener elements detachably connecting the cross chains to the respective rings; and resilient, yielding means connected between at least one end of each cross chain and the fastening element adjacent thereto, comprising a cylindrical, rigid container having a deep cupped part provided with a cylindrical side wall and formed open at one end, the other end of the cupped part having an end wall formed with a center opening, said container being formed with a back wall adapted for engagement against the adjacent side wall of the tire casing, said back wall being projected longitudinally a substantial distance beyond the open end of the cupped part and being progressively increased in width in a direction away from the cupped part, said back wall being flat over the full length of the portion thereof that projects beyond said open end of the cupped part, the plane of the flat, projecting portion being substantially tangential to the cupped part of the container so as to dispose said cupped part wholly at one side of the flat, projecting portion of the back wall, whereby the plane of the flat back wall portion will lie between the cupped part and the tire casing when the back wall is engaged against the side wall of the casing, the widest part of the back wall portion being greater in width than the diameter of the cupped part, said back wall being formed at its wider end with an aperture adapted to receive the adjacent end of the associated cross chain, a plunger freely, axially slidable in said center opening of the end wall of the cupped part, said plunger being formed with a head at one end thereof and being connected at its other end to one of the fastening elements, whereby to connect said plunger at said other end thereof to the adjacent ring, and a compression, coil spring circumposed about the plunger and abutting at one end against said head, said spring at its other end abutting against the bottom wall of the cupped part, said side wall of the cupped part being spaced from the convolutions of the spring and extending completely around the portions of the spring and of the plunger that extend within the cupped part.

number to be independently varied; said measuring means

driving tool into a base material and comprising an elon-

2,898,967
TIRE TRACTION CHAIN SECURING DEVICE
Domenic Di Domenico, East Boston, Mass.
Application July 25, 1957, Serial No. 674,119
1 Claim. (Cl. 152—233)

A tire traction device comprising: transversely aligned, internally threaded sockets embedded in the side walls of the tire flush with the outer faces of said side walls and having heads thereon embedded in said side walls between the inner and outer faces of said side walls, double headed bolts threadedly mounted in the sockets with one head of each bolt flush with the outer face of the respective side wall, and a chain having its ends connected to said bolts between the heads thereof.

2,898,968
TIRE CHAIN
Murray Coven, Flushing, and Ferdinand T. Wiehl, Brooklyn, N.Y.
Application August 7, 1958, Serial No. 753,691
4 Claims. (Cl. 152—236)

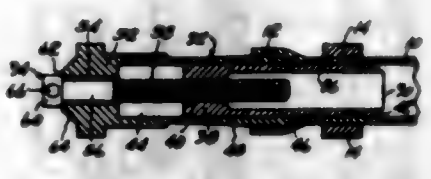
1. A tire chain for automobile wheels comprising a pair of integral holders each having an aperture for receiving a chain element and having a substantially semi-cylindrical portion disposed in spaced-relationship to said aperture, the semi-cylindrical surface of which is adapted to engage the exterior surface of a metal wheel rim adjacent the rim edge, said holder having an abutment intermediate said aperture and said semi-cylindrical portion for engaging with pressure an inflated tire, tongue means engaging said holder and adapted to be disposed immoveably between said metal rim and an inflated tire and a plurality of interconnected chain links secured on each end to a respective holder.

2,898,969
STABILIZER MEANS
Fred B. Pfeiffer, Akron, Ohio
Application March 11, 1957, Serial No. 645,133
2 Claims. (Cl. 152—341)

1. In combination, a tire rim, a fluid retaining laterally unstable tire mounted on said rim, and a tire stabilizer tube mounted in said tire; said tire having reinforcing cords in the body thereof inclined at an angle of approximately 90° to that median plane of the tire which is normal to its axis of rotation; said tube having a cylindrical crown and rounded shoulder portions, said tube having its radially inner portion in contact with said rim and its crown portion spaced from the crown portion of said tire a distance equal to approximately 50% of the inside cross-sectional height of the tire; a chamber defined by said tube and tire; said tube being composed of rubbery material reinforced across its crown portion and a distance radially inwardly on said shoulder portions with circumferentially spirally wound inextensible cord to prevent radial expansion of said crown portion when the

tube is subjected to inflation in service; the extent of said shoulder reinforcement and the width of said tube relative to the distance between the sides of the tire being such that at least a portion of each of said reinforced shoulder portions flexes with the adjoining tire sidewall and is continuously in contact therewith; a differential fluid valve incorporated in the wall of said tube, whereby inflation pressure within said tube is automatically retained at a higher pressure than the inflation pressure in said chamber, whereby the sides of the tire laterally outwardly of said tube are subjected to higher inflationary pressure than the sides of the tire radially outwardly of the area of contact of said tube with the tire.

2,898,970
TELESCOPING TUBULAR EXPANDER AND CYLINDRICAL PILOT FOR EXPANDING METAL TUBING IN SITU WHEN END OF TUBING IS CLAMPED AROUND INSERTED PILOT
Nate E. Teeter, Elkhart, Ind.
Application July 29, 1957, Serial No. 674,670
5 Claims. (Cl. 153—80.5)

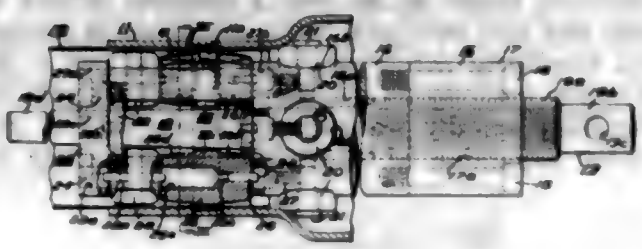


1. A device for expanding a metal tube, comprising a cylindrical pilot having a snug sliding fit in said tube, a clamp gripping said tube at a part thereof spaced from its end and embracing said tube and pilot to lock said tube and pilot against relative movement, a tubular expander telescopically receiving said pilot, said expander having a frusto conical pipe-flaring end, and means for advancing said expander on said pilot.

travel of said mandrel and adapted to press said liner and container together against the remaining sides and

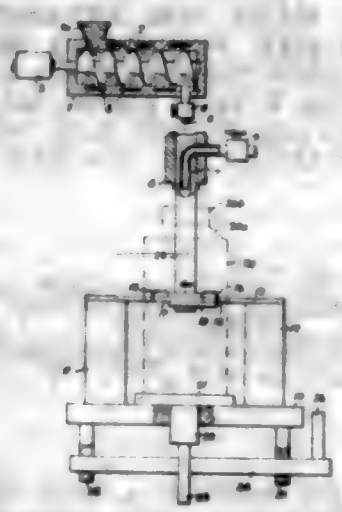
wardly and around the chair occupant's shoulder to restrain the occupant from being thrown forwardly in the

2,898,971
ROLLER EXPANDING AND PEENING TOOL
Gustav A. Hempel, Pittsburgh, Pa., assignor to McDowell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application May 11, 1955, Serial No. 507,699
6 Claims. (Cl. 153—82)



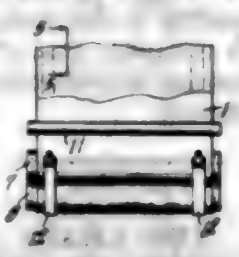
1. A roller expander device for securing a relatively thin wall tubing member to a relatively thicker wall member having an annular groove therein which comprises, joint-forming roller means, means mounting said roller means for advancing it radially-outwardly into expanding engagement with an inner peripheral portion of the thin wall member in alignment with the annular groove of the thicker wall member; said roller means having a centrally-positioned annular banding portion of a width substantially corresponding to the width of the annular groove in the thicker wall member, and having a pair of end portions projecting longitudinally from and of lesser outer diameter than said banding portion; each of said end portions having peening edges connected by surface portions of lesser diameter than said peening edges, and means for moving said roller means radially-outwardly while rotating it about the inside of the thin wall member to expand a wall portion of the thin wall member into the groove of the thicker wall member with said banding portion and to simultaneously peen and expand adjacent wall portions of the thin wall member with the peening edges of said end portions.

2,898,972
METHOD OF AND APPARATUS FOR THE MANUFACTURE OF LINED CONTAINERS
Bernard Streng, Northwood Hills, England, assignor to E. Shipton & Company Limited, Ferndown, Northwood Hills, England, a British company
Application April 5, 1954, Serial No. 420,929
Claims priority, application Great Britain April 10, 1953
7 Claims. (Cl. 154—1)



5. A method of lining a container having a base and an opening opposite to the base, which comprises providing at least one small vent aperture in the container adjacent its base, extruding a length of open-ended thermoplastic tube through a downwardly facing nozzle, stopping said extrusion, cutting said tube at a predetermined distance from the nozzle, which is shorter than the height of the container but which is not less than about one half the height of the container, pinching the end of the tube to close it, placing the container with its opening under the cut length of tube depending from the nozzle, enclosing said length of tube in the container by relative vertical movement, introducing fluid under pressure into said depending length of tube while the material thereof is still in a semiplastic state to expand the tube into intimate contact with the base and side walls of the container, maintaining said pressure while allowing the expanded tube material to set permanently in such intimate contact, and severing the said material from the nozzle.

2,898,973
APPARATUS AND METHOD OF BONDING PAPER HAVING THERMOPLASTIC COATING
John L. Marsh, Kalamazoo, Mich., assignor to Kalamazoo Vegetable Parchment Company, Kalamazoo, Mich.
Application July 28, 1955, Serial No. 525,012
6 Claims. (Cl. 154—1)

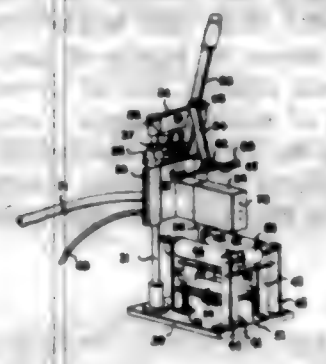


1. An apparatus for bonding webs of paper having continuous preset thermoplastic coatings on the inner sides thereof, the apparatus comprising, a pair of coacting pressure rollers through the nip of which the webs are passed and by which they are pressed together, means for supporting the webs in advance of the rollers so that the webs are in wrapped upon supported engagement with substantial arcs of the rollers in advance of the nip thereof relative to the direction of rotation of the rollers as the webs are supportedly translated around the rollers, and laterally spaced relatively narrow heating elements disposed in embracing relation to substantial arcs of the rollers and having arcuately curved faces concentric to the rollers and embracing substantial arcuately supported portions of the webs as they are translated around the rollers and so that strip-like areas of the coatings are all fused and brought into pressure engagement as the webs are bonded to each other only by laterally spaced strips of the fusedly united coating thereof.

2,898,974
APPARATUS FOR HEAT-SEALING METALLIC LINERS IN CONTAINERS
John B. Wilson, Louisville, Ky., assignor to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Application May 28, 1957, Serial No. 662,140
9 Claims. (Cl. 154—1)

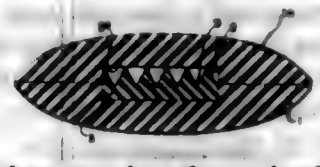
1. Apparatus for securing a heat-sealable liner in a container comprising, a movable mandrel for receiving a liner preform and a detached container substantially completely surrounding said preform, said preform and container being insertable endwise upon said mandrel and removable endwise therefrom, a pressure plate member for pressing said liner and container together against a first side of said mandrel and for holding the same in contact during the lining operation, a resiliently mounted member for pressing said liner and container together against a second side of said mandrel opposite to said first side thereof, means disposed adjacent the path of

travel of said mandrel and adapted to press said liner and container together against the remaining sides and one end of said mandrel during its movement into and



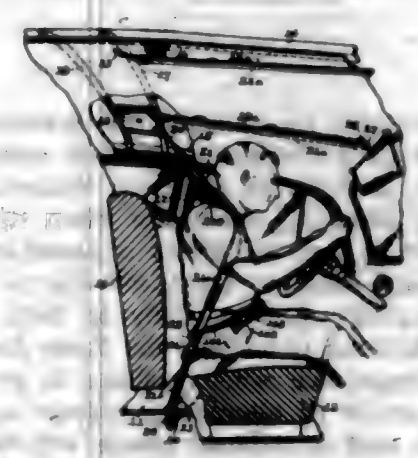
from engagement with said resiliently mounted member, means for moving said mandrel, and means for applying heat to said mandrel thereby to seal said liner preform to said container.

2,898,975
CUSHIONING CONSTRUCTION
William T. Wagner, Dayton, Ohio, assignor to The Dayton Rubber Company, Dayton, Ohio, a corporation of Ohio
Application October 28, 1957, Serial No. 692,688
6 Claims. (Cl. 155—179)



1. A cushioning member formed of cellular resilient elastomeric material, a cavity therein surrounded by the walls thereof, and a separate insert formed of the same type of material positioned within said cavity said insert being formed with a plurality of spaced recesses in at least one surface thereof.

2,898,976
SAFETY EQUIPMENT FOR VEHICLE OCCUPANTS
Chester J. Berecki, Grand Rapids, Mich., assignor to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey
Application April 29, 1957, Serial No. 655,693
7 Claims. (Cl. 155—189)

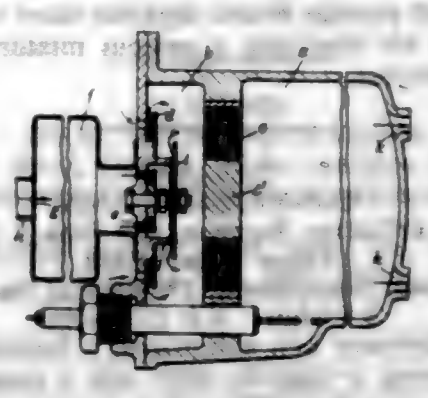


1. In combination with a vehicle having a forwardly facing chair therein and a frame including a rigid floor support below the chair and a rigid ceiling support above the chair: an elongated flexible non-elastic restraining element for the chair occupant having one end thereof connected to the ceiling support above and rearwardly of the occupant and the other end thereof connected to the floor support below and rearwardly of the occupant, the intermediate portion of said element extending forwardly and around the chair occupant's shoulder to restrain the occupant from being thrown forwardly in the vehicle upon abrupt deceleration of the vehicle.

2,898,977
TIRE RIM REMOVAL TOOL
John H. Dunn, Detour, Mich.
Application January 3, 1957, Serial No. 632,323
3 Claims. (Cl. 157—1.33)

1. A tool for removing a rim ring from a resilient tire casing, comprising: an elongated base bar, slightly longer than the internal diameter of the rim ring; guide means secured to said base bar near one end thereof and including a stop member for engaging the radially inner surface of the rim ring, said stop member extending transversely from said base bar and being spaced from said one end a distance slightly greater than one-half the difference between the internal diameter of said ring and the length of said base bar, said guide means also including means engageable with said rim ring for preventing axial movement of the rim ring with respect to said base bar; a pivot post secured to, and extending upwardly from, said base bar near the other end thereof, said pivot post being spaced from said other end a distance at least equal to the difference between the internal diameter of said ring and the length of said base bar; a lever arm pivotally mounted between the ends thereof upon said pivot post for rotation about an axis transverse of the longitudinal extent of said pivot post and said base bar; a tire engaging bead pivotally supported upon that end of said lever arm remote from said guide means; and means associated with the other end of said lever arm for urging same away from said base bar.

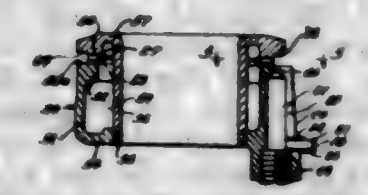
2,898,978
GASEOUS FUEL COMBUSTION APPARATUS
John Alfred Kitchen, Markham, Ontario, and Frederick Ronald Denham, Welland, Ontario, Canada, assignors, by mesne assignments, to Lucas-Rotax Limited, Ontario, Canada
Application February 19, 1957, Serial No. 641,166
Claims priority, application Great Britain February 20, 1956
3 Claims. (Cl. 158—7)



1. A gaseous fuel combustion apparatus comprising in combination a combustion chamber having an entrance end and at least one outlet, a mixing chamber situated at the entrance end of said combustion chamber and provided with a fuel gas inlet valve means and with a combustion air inlet valve means of annular form surround-

ing said fuel gas inlet valve means, which valve means are intermittently closable by pressure pulses generated in said combustion chamber, means provided in said mixing chamber to direct fuel gas, admitted to said mixing chamber through said fuel gas inlet valve means, into combustion air entering said mixing chamber through said combustion air inlet valve means, and partition means situated between said combustion chamber and mixing chamber and formed by a metal strip spirally coiled around an imperforate central portion to provide a flame trap which permits fuel gas mixed with combustion air to flow therethrough from said mixing chamber to said combustion chamber.

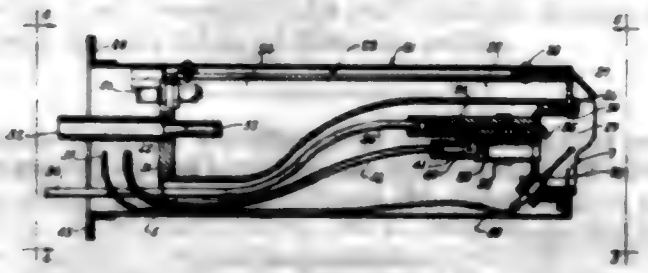
2,898,979
GAS-FUELED BURNER
Peter I. Hollmann and Lionel R. Jensen, Rockford, Ill., assignors, by mesne assignments, to Geo. D. Roper Corp., a corporation of Delaware
Application August 18, 1955, Serial No. 529,119
4 Claims. (Cl. 158—116)



4. In a gaseous fuel burner cooperating with a pilot burner, the combination of a burner body having an upstanding side wall and vertically spaced upper and lower horizontally disposed ledges extending around said side wall and defining a channel therebetween, said side wall having a plurality of spaced main burner ports therein located between said ledges and each arranged to direct a stream of gas substantially horizontally outwardly of said body between said ledges, said channel having a radial depth at least as large as the vertical width thereof to collect the gas issuing from said main ports at low rates of flow of gas from said main ports, said ports being annularly spaced apart a distance less than twice the radial depth of said channel to permit the gas to spread in said channel between adjacent main ports at low rates of gas flow, said burner body having a first passage means therein for supplying a gaseous mixture to all of said main ports, means defining an intermediate burner having an end port directed transverse to the direction of gas flow from said main ports and at one of said ledges whereby unburned gas issuing from said end port impinges on said one of said ledges to be spread thereby in said channel, said intermediate burner also having a side port extending between said pilot burner and said channel so as to carry flame to said channel, and a second passage means separate from said first passage means for supplying a gaseous mixture to said intermediate burner.

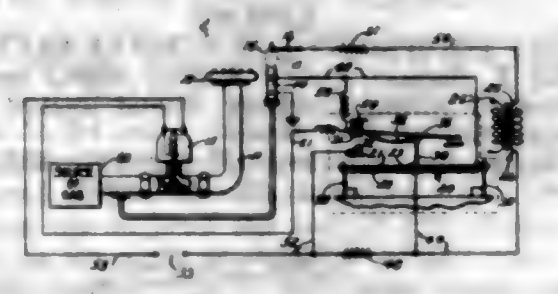
2,898,980
CONVERSION UNIT
Earl R. O'Connor, Pomona, and John L. Doonan, Yucca Valley, Calif.
Application November 1, 1954, Serial No. 465,784
2 Claims. (Cl. 158—109)

1. A conversion unit comprising a hollow cylindrical housing having a rear air inlet and a front air outlet, a main burner tube positioned in said housing and including a rear enlarged portion and a front portion of reduced diameter, there being an opening in the front of said tube adjacent said outlet for the passage therethrough of gas, an apertured head mounted in the front of said housing adjacent said outlet and including a chamber for receiving a portion of the gas issuing through said opening, a deflector plate secured to the front of said tube and housing for directing gas towards said chamber, a bracket mounted in the rear of said tube, securing elements for retaining said bracket in place, a conduit extending rearwardly from said bracket and adapted to be connected to a source of supply of gas, a valve communicating with said conduit, an air diverter arranged adjacent the front of said housing to direct air to the front of said opening, an air baffle secured at the rear of said tube and controlling the air inlet thereof, a gas supply nozzle projecting into said tube and communicating with



said conduit, a pilot tube supported by said head and communicating with said chamber, a pilot mixer arranged rearwardly of said pilot tube, a plug arranged rearwardly of said mixer, a pilot gas supply line connected to said plug and extending through said housing, an electrode supported by said head and extending rearwardly therefrom and said electrode having a tip projecting into said chamber, a high tension lead connected to said electrode and extending rearwardly through said housing, and a flange mounted on the rear of said housing and provided with a plurality of openings for the projection therethrough of securing elements.

2,898,981
FLAME DETECTION APPARATUS
Lowell V. Westbrook, Rockford, Ill., assignor to Barber-Colman Company, Rockford, Ill., a corporation of Illinois
Application December 24, 1954, Serial No. 477,439
5 Claims. (Cl. 158—123)



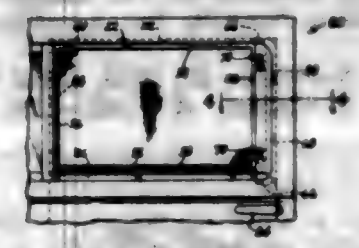
1. In apparatus for detecting the presence of a flame at a burner in a combustion control system, the combination of, a body of dielectric material having the property of changing dimension when subjected to an electric field, a pair of plates of conducting material straddling said body to create an electric field therein and cooperating with the body to form a capacitor, means constructed to include the flame for producing a rectifying impedance when a flame is present at said burner, a source of alternating voltage connected in a circuit with said impedance means and said plates for building up a charge on the latter and deforming said body when a flame is present at said burner, a switch having a part connected to said body and actuated in one sense by deformation of the body when said charge is higher than a first predetermined value and in the opposite sense by restoration of the body resulting from dissipation of the charge below a second predetermined value, and a normally open circuit shunting said capacitor and closed in response to actuation of said switch in said one sense, said shunting circuit including a resis-

ways, first and second vertical overhead doors, guide tracks for said doors guiding said doors upwardly from

cated in the midplane thereof and projecting into said

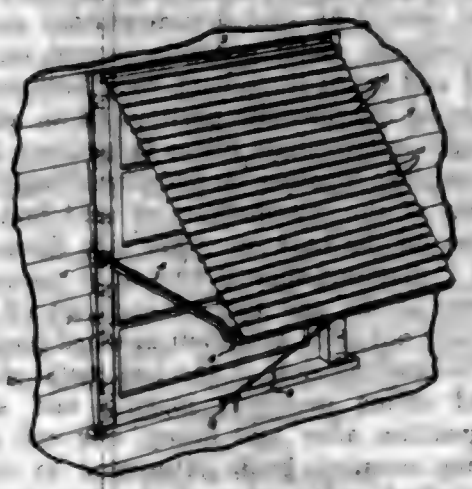
tor cooperating with said capacitor to reduce the discharge time of the latter after extinguishment of the flame and having a resistance high enough for the maintenance of said charge above said second value when the shunting circuit is closed and said impedance is rectifying.

2,898,982
AUTOMOBILE WINDOW SCREEN
Edward V. Lavoie, Beverly, Mass.
Application December 22, 1958, Serial No. 782,299
3 Claims. (Cl. 160—40)



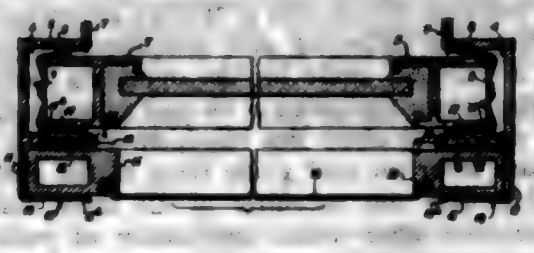
1. In a window unit mounted within a vehicle window opening having a vertically movable window and an upper and pair of side tracks for guiding said window, a rigid smooth-edged rectangular frame member of smaller dimensions than said window opening, and slightly lesser thickness than the said tracks; a single rigid adaptor member fixedly mounted at the side of and coextensively with said opening between the upper and lower marginal edges thereof decreasing the size of said opening; fixed engaging means on one side of said frame adjacent to and slidably engaged with said adaptor; said unit mounted in said opening with a lower marginal edge thereof in engagement with the upper edge of said window; said other side of said frame in said side track remote from said adaptor and said engaging means slidably engaged with said adaptor; and said unit slidable in said opening with respect to said side track and adaptor upon movement of said window to closed position, whereby said unit is wedgingly retained between said window and upper track.

2,898,983
ROLL-UP AWNING
Nicholas L. Etten, Cedar Falls, Iowa, assignor to Chamberlain Corporation, Waterloo, Iowa, a corporation of Iowa
Application November 30, 1956, Serial No. 625,369
1 Claim. (Cl. 160—62)



In a roll-up awning, an attaching member for securement to a building wall over an opening therein, a plurality of laterally extending slats, each slat being smoothly concavo-convex over its entire width and flexible from a normal curvature to a small curvature, a plurality of laterally spaced flexible straps supporting said slats and connected at one end to said attaching member, a roll attached to the other ends of said straps, means attachable to the building and carrying said roll and swingable to move the roll between a collapsed upper position adjacent to said attaching member and a downward and outward extended position relative to said attaching member, said slats being disposed in the extended position of the roll with a lower margin of each succeeding slat overlapping the upper margin of its contiguous lower companion slat, said slats being riveted to each strap close to the lower marginal edge of the slat, each slat having close to the upper marginal edge thereof a spaced series of slots matching said straps and through which the straps freely extend, said slots being normally overlapped by the overlapping lower margins of the next adjacent upper slats, and the straps being thus in holding relation to each of the upper and lower margins of the slats and by being freely movable through said slots compressing the slats to lessen their curvature in rolling them upon and about said roll when the roll is swung from said extended position to said collapsed position.

2,898,984
MOUNTING RAIL FOR SLIDING WINDOW SCREENS
Henry J. Bianco, Baltimore, Md., assignor to The Burch Company, Baltimore, Md., a corporation of Maryland
Application June 30, 1953, Serial No. 365,054
2 Claims. (Cl. 160—90)



1. In combination, a metal frame comprising confronting side members, a top member and a bottom member, each of said side members having window sash guide means including integral flanges projecting inwardly from said side members and providing a groove for a window sash; screen mounting rails attached to said side members, each of said screen mounting rails being generally S-shaped in transverse cross section and having a first channel receiving one of said flanges and having a second channel for slidably receiving one end of a screen therein; and a sash slidably mounted in said sash guide means, said grooves for the sash being substantially wider than the thickness of the sash, said sash having weather strips mounted thereon and disposed in said grooves, a wall portion of said mounting rails being disposed between said one flange of the side members and the weather strips on the sash.

2,898,985
DUAL DOOR MECHANISM
Norbert T. Starr, Detroit, Mich., assignor to Crawford Door Company, Detroit, Mich., a corporation of Michigan
Application July 23, 1958, Serial No. 750,346
7 Claims. (Cl. 160—113)

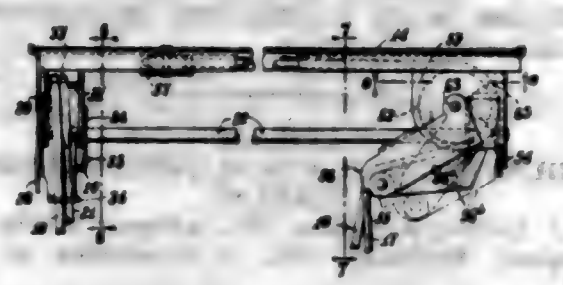
1. An overhead door mechanism comprising means defining first and second opposed facing vertical door-

2,898,989
FRAMELESS WINDOW CLOSURE CONSTRUCTION

tom rails at least one, resilient hanger clip compressible a predetermined distance in a vertical plane secured to

ways, first and second vertical overhead doors, guide tracks for said doors guiding said doors upwardly from a closed lowered position to an open overhead position, and an energy storing spring means connected to each of said doors and urging them to open position whereby movement of either door to closed position will increase the stored energy in said spring means for release in opening the other door.

2,896,986
VENETIAN BLIND AND TILT CONTROL MECHANISM THEREFOR
Kurt T. Klefer, Chicago, Ill.
Application February 28, 1957, Serial No. 643,154
2 Claims. (Cl. 160—168)

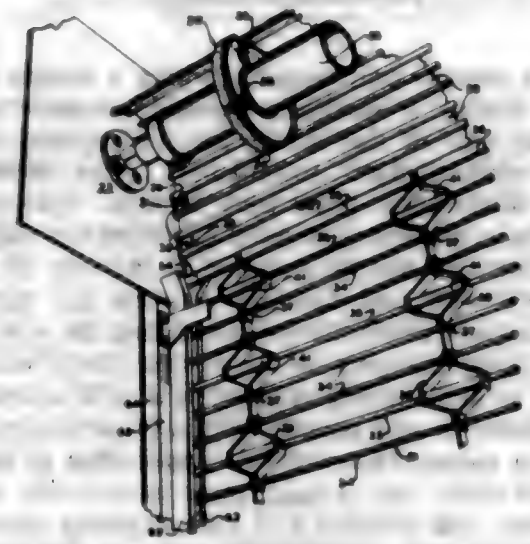


2. An actuator for a Venetian blind set actuable to operate means to gather, extend and tilt the slats thereof, said actuator comprising a bracket mounting a wheel over which slat gathering and extending pull-cords are trained, a movable guide for the operating ends of said pull-cords, means including a tilt-rod actuable to tilt the slats to open and close the blind, an eccentric on said rod, a cam lever on said guide lying in the path of and engageable with the eccentric at all times, said guide being movable upon initial application of pulling force on the pull-cords while gathering or extending the slats to cause the cam lever to move the eccentric into a predetermined position should it have been in any other position of rest.

2,896,987
DOOR CONSTRUCTION
Ralph E. Ford, Harper Woods, Mich., assignor to William A. Ternes
Application May 24, 1955, Serial No. 510,655
2 Claims. (Cl. 160—206)

1. In a door construction for a doorway having upper and lower horizontal surfaces and vertical side surfaces, a straight channel shaped track on one of said horizontal surfaces extending parallel to the plane of the doorway, a pivot socket mounted in said track adjacent one of said vertical surfaces, another pivot socket mounted on the other of said horizontal surfaces and acting with said first mentioned socket to define a vertical pivot axis in alignment with said track, a pair of door panels hinged together along a vertical axis so that they can be coplanar and parallel to said track in one position, one of said panels having pivot pins located in the midplane thereof and projecting into said sockets to pivotally mount said panels thereon, the other of said panels having a pin located in the midplane thereof and projecting into said track and movable along said track, said last mentioned pin being located farther from the hinge between said panels than said first mentioned pins whereby the exterior angle between the outside face of said other panel and said track is always greater than 90° during pivotal movement of the one panel.

2,896,988
ROLLING METAL GRILLE TO SERVE AS A CLOSURE DEVICE FOR A BUILDING
Maurice B. Zoll, Lynnhaven, Va., assignor to J. G. Wilson Corporation, Norfolk, Va., a corporation of Delaware
Application November 28, 1956, Serial No. 623,398
16 Claims. (Cl. 160—229)

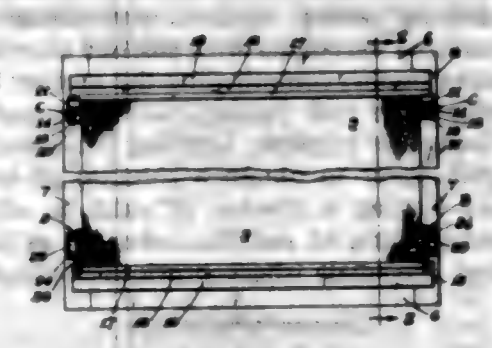


5. A closure device comprising a series of metal bars arranged generally parallel to one another and disposed substantially uniform distances apart, means spacing end and intermediate portions of pairs of said adjacent bars comprising metal plates with their end portions apertured for receiving said paired adjacent bars, longer slotted end and apertured intermediate metal plates alternating with said first-mentioned metal plates, with intermediate portions of said intermediate plates receiving the intermediate of a set of three bars and end portions receiving the other two bars of said set on either side thereof, said bars on either side thereof each being one of the adjacent paired bars spaced by said first-mentioned metal plates, hollow cylindrical metal portions carried on the intermediate of said set of three bars, each hollow cylindrical portion spacing intermediate portions of an adjacent pair of said longer intermediate plates therealong, leaving the end portions close together on and straddling the adjacent end portions of the intermediate of said first-mentioned metal plates on the bars on either side thereof, thereby presenting a diamond-shaped structural appearance, the end portions of the end two of each set of three bars being laterally notched, with their notched portions fitting in the corresponding slots in the end metal plates, metal leaf bowed spring members locking said slotted end plates in position after said fitting, one end of each of which spring member being bifurcated to straddle the adjacent notched end portion of the bar, and the other end of each of which has a tab of reduced width sprung into the end of the slot in its end plate to hold its bar spaced in the outermost end of said slot, and the bar disposed between the said notched bars, and which carries the hollow cylindrical members, being shorter than the end two of said set of three and held in position by its ends abutting unslotted intermediate portions of said longer end plates.

2,896,993
RECYCLING VARIABLE MOTOR TIMER

in removing said encrustants; separating the cellulose from

2,898,909
FRAMELESS WINDOW CLOSURE CONSTRUCTION
Albert Peterson, Saginaw, Mich., assignor to The Columbia Mills, Inc., Syracuse, N.Y.
Application April 8, 1954, Serial No. 421,818
9 Claims. (Cl. 160—329)



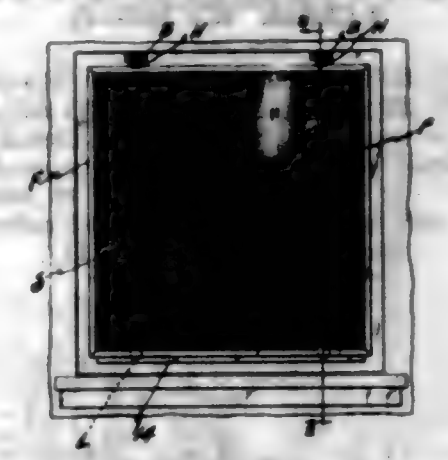
7. In a frameless window closure construction mounted on a frame with a window opening therein; a flexible, frameless window closure including a top rail; bracket means having at least one relatively deformable portion of resilient material, mounted adjacent the upper end of said frame for supporting the top rail, said bracket means having a section fixed to the frame and a resilient, depressible rail supporting section with a portion extending outwardly away from the frame and a portion turned reversely and extending toward the frame terminating in a resilient portion free to be depressed in a vertical direction relative to the frame; and locking means on the lower end of the frame for applying a downward pull on the closure, depressing said rail supporting section and thereby holding the closure in uniform tension and in snug engagement with the frame.

2,898,990
PLEAT PIN
Nicholas Murgolo, Uniondale, N.Y.
Application December 9, 1957, Serial No. 701,605
3 Claims. (Cl. 160—348)

1. A six prong pleat pin for making selectively box and french pleats in drapery having prong receiving tape sewn thereto comprising a rear U-shaped element having relatively widely flared spaced-apart upright prongs; an intermediate U-shaped element having closely spaced prongs of substantially the same height as said rear element and welded at its base to the base of the rear U-shaped element; a pair of substantially upright front spaced-apart prongs having divergent top portions and of substantially the same height as said intermediate and said rear prongs, welded to said pair of rear and intermediate elements at their base and hook means welded to the base of said rear U-shaped element.

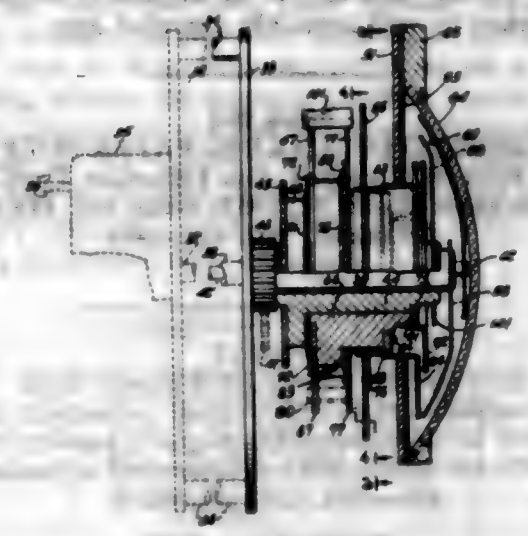
2,898,991
WINDOW SCREENS
John T. Kelly, Minetto, and Adolph C. Wulfert, Oswego, N.Y., assignors to The Columbia Mills, Inc., Syracuse, N.Y.
Application April 7, 1955, Serial No. 499,934
11 Claims. (Cl. 160—369)

1. A window screen adapted to be mounted on a window structure having at least one supporting bracket on the upper face thereof and at least one pocket in its lower face, a window closure frame including top, side and bottom rails at least one, resilient hanger clip compressible a predetermined distance in a vertical plane secured to said top rail and suspended it from said supporting bracket, and downwardly projecting locking means fixed



on said lower rail extending into said pocket a predetermined distance less than the distance said clip can be compressed so said locking means is removed from said pocket on lifting of said closure pockets.

2,898,992
TIME CONTROL MECHANISM
Clarence G. Montgomery, North Granby, Conn., assignor, by mesne assignments, of one-fourth to George C. Graham, Ridgewood, and one-fourth to Frank Pannizzo, Orndell, N.J., and one-fourth to I. Jordan Kmuit, New York, N.Y.
Application June 1, 1953, Serial No. 358,911
8 Claims. (Cl. 161—1)

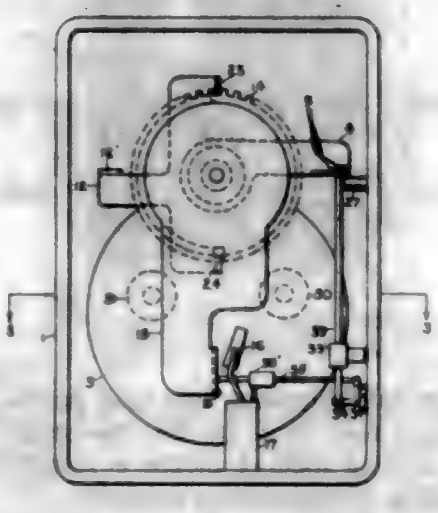


1. A time control device comprising a switch a rotatable spindle, a first cam mounted rotatably around said spindle, a first clutch for causing said first cam to rotate with said spindle, a second cam spaced apart from said first cam and mounted rotatably around said spindle, a second clutch for causing said second cam to rotate with said spindle, means for rotating said second cam relative to said spindle and to said first cam against the action of said second clutch, a cutout portion on said first cam of predetermined length, means on said second cam movable within said cutout portion of said first cam without moving the latter, said second cam when rotated beyond predetermined points in either direction causing the means thereon to engage a respective edge of the cutout portion of said first cam to rotate the latter relative to said spindle against the action of said first clutch, a cutout portion on said second cam, an arm on said switch operable by both of said cams simultaneously, the opening and closing of said switch being determined by the respective positions of the combined cutout portions of both of said cams relative to each other and to said arm.

2,898,996
MACHINE FOR TRIMMING CUP SHAPED ARTI-

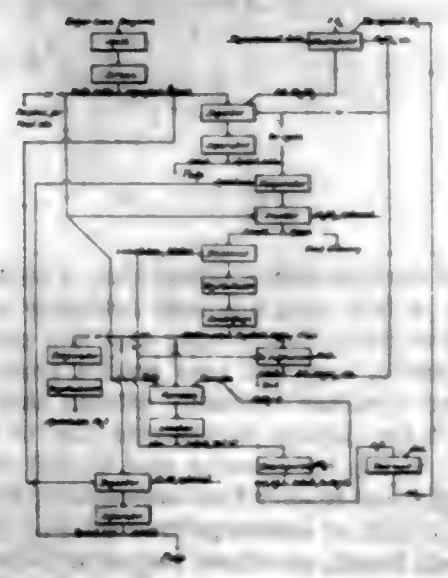
and the cutters, and control means including a switch operable in response to movement of the cradle to its

2,898,993
RECYCLING VARIABLE MOTOR TIMER
Melvin Hoff, Mount Vernon, N.Y., assignor to Viewlex, Inc., Long Island City, N.Y., a corporation of New York
Application October 24, 1956, Serial No. 618,098
2 Claims. (Cl. 161—1)



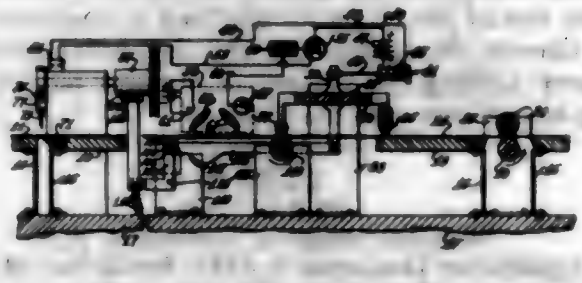
1. Recycling variable motor timer means comprising motor means of the type wherein the motor shaft is axially shifted on de-energization to uncouple its output shaft; a first extension arm directly and fixedly connected to said output shaft; a fixed stop; return spring means connected to return said output shaft to said fixed stop; variable stop means comprising a rotatably mounted plate having a second extension arm adapted to contact said first extension arm, a switch in said motor means circuit, a rotatably mounted arm adapted to contact said switch, and means to adjustably connect said variable plate to said rotatably mounted arm.

2,898,994
METHOD OF MAKING PAPER PULP
Alfred M. Thomsen, San Francisco, Calif.
Application March 31, 1953, Serial No. 345,805
5 Claims. (Cl. 162—24)



1. The method of making pulp from sugar cane bagasse which comprises; separating pith cells in said bagasse from the resident lignified fibers by subjecting same to attrition to liberate the pith cells from their adherence to the fibers and to one another and subsequently removing said pith cells by screening; digesting the cleaned fibers in a solution of neutral sodium sulphite until the resident cellulose is substantially freed from encrustants, said sodium sulphite being the sole active agent involved in removing said encrustants; separating the cellulose from the spent cooking liquor; incinerating said spent liquor; dissolving the resultant smelt in a solution of sodium carbonate obtained in a later step of the process; crystallizing a part of the therein resident sodium carbonate; separating said crystallized carbonate from the residual sulphide-containing mother liquor; neutralizing the separated crystallized carbonate with sulphur dioxide to make fresh cooking liquor; commingling the mother liquor previously referred to with calcium carbonate and then drying and fusing the mixture; leaching the resultant fused product with water to obtain a solution of sodium carbonate and leaving a residue of calcium sulphide; recycling said solution of sodium carbonate as the dissolving medium for smelt where previously called for.

2,898,995
DEMAND SHEAR WITH MEANS TO ALTERNATELY BRAKE AND ACCELERATE A CONTINUOUSLY MOVING WEB
William F. Fennell, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application March 29, 1954, Serial No. 419,517
The terminal fifteen years of the term of the patent to be granted has been disclaimed
2 Claims. (Cl. 164—42)



1. Apparatus for shearing a web into lengths which are determined by indicating marks printed on said web, said apparatus comprising rollers for continuously feeding said web which are coupled to a constant speed power source, a shear having opposing shearing blades, one stationary and one movable, an eccentric mechanism for operating said movable blade, a constant speed power source, a one revolution spring clutch coupled to said eccentric mechanism and driven by said constant speed power source, a braking mechanism positioned between said feed rollers and said shear for stopping the motion of said web at said shear, said braking mechanism comprising a bracket pivotally mounted over said web and carrying a brake bar and a roller for alternative engagement with said web, normally deenergized electromagnetic means coupled to said bracket for actuating said brake bar into engagement with said web in response to energization thereof, an energizing circuit for said electromagnetic means including, in series, a normally closed switch, a normally deenergized thyratron, and a photoelectric device for sensing said indicating marks and for producing electrical signals corresponding thereto, means for transmitting said signals to said thyratron, a mechanical linkage connected between said spring clutch and said braking mechanism for engaging said spring clutch in response to the actuation of said braking mechanism, means on said eccentric mechanism for opening said switch to thereby deenergize said thyratron and said electromagnetic means to thereby effect disengagement of said brake bar from said web and effect engagement of said bracket mounted roller with said web, and an accelerating roller acting in cooperation with said bracket mounted roller to accelerate said web when said brake bar is released from engagement with said web.

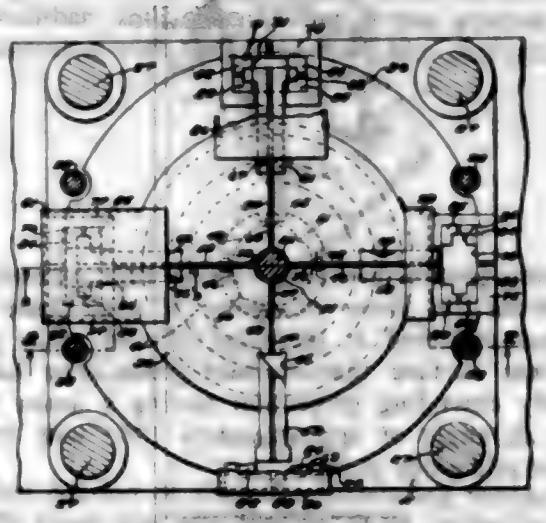
released, the improved method which comprises posi- and forwardly directed blade fixed to said shank, said

2,898,996

MACHINE FOR TRIMMING CUP SHAPED ARTICLES AND THE DIE DRIVE MEANS THEREFOR

William H. Hauser, Beech Grove, Ind., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Application July 23, 1956, Serial No. 599,418
5 Claims. (Cl. 164—47)



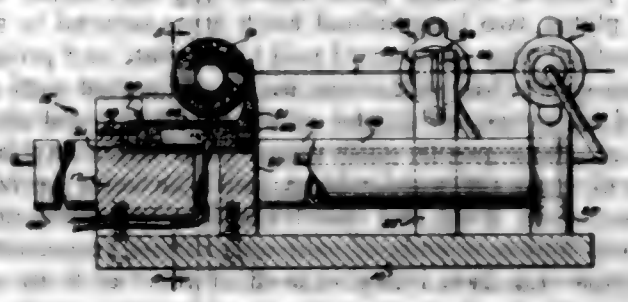
1. A device for shearing articles, comprising a base having a plurality of parallel cross-shaped grooves, a member spaced from and supported by the base for holding an article, a ram mounted above the base, a first die carried by the ram, a movable plate mounted on the base, a second die mounted on the plate for cooperating with the first die to shear a portion from the article, means on the base for laterally moving the plate and the second die along paths parallel to the cross-shaped grooves, and a plurality of members secured to the plate and having portions slidably mounted in said cross-shaped grooves for guiding the plate and the second die as said plate and second die are actuated by the moving means.

2,898,997

DEVICE FOR CUTTING LEADS OF ELECTRICAL COMPONENTS

Alvin J. Porter, Minneapolis, Minn., and Lester O. Reichelt, Downers Grove, Ill., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Application April 29, 1957, Serial No. 655,898
1 Claim. (Cl. 164—47)



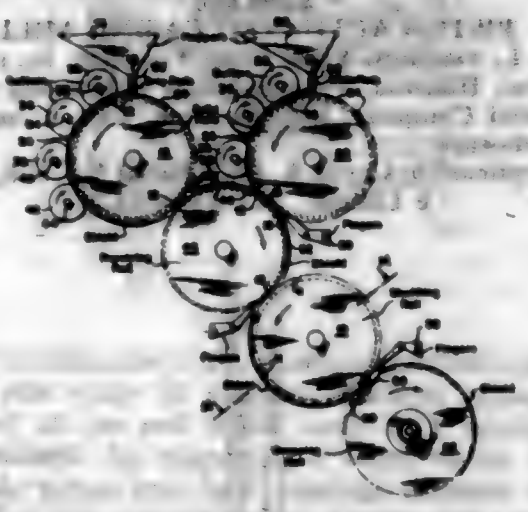
In a device for cutting coil leads to predetermined lengths, a base having a head, a cradle for supporting a coil pivotally mounted on the head for limited movement from a normal first position to a second position, a plurality of cutters having shear blades for severing the coil leads, a plurality of supporting members, one for each cutter mounted slidably on the base for supporting the cutters at various distances from the cradles and having grooves therein for supporting the coil leads between the shear blades of the cutters, a plurality of fluid actuators, one for each lead cutter, mounted on the supporting members for actuating the cutters, arms extending between the supporting members and the head for guiding the supporting members for movement toward and from the head, graduations on the arms for indicating the lengths of the leads between the cradles and the cutters, and control means including a switch operable in response to movement of the cradle to its shearing position for rendering the actuators operative to actuate the cutters and shear the coil leads.

2,898,998

METHOD OF AND APPARATUS FOR CUTTING AND COLLOCATING FILTER TIP

Milton O. Schur, Asheville, N.C., assignor to Olin Mathieson Chemical Corporation, Pisgah Forest, N.C., a corporation of Virginia

Application January 15, 1957, Serial No. 634,342
10 Claims. (Cl. 164—61)



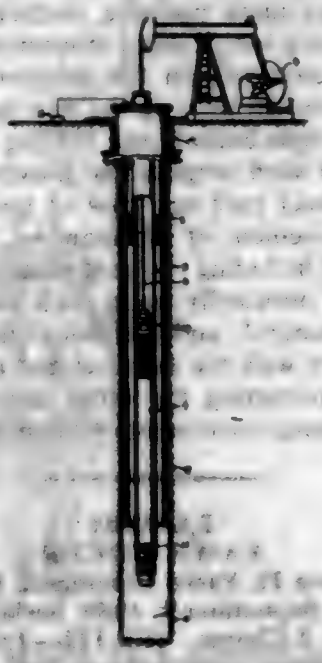
1. The process of making laminated filters for cigarettes which comprises delivering filter rods of multiple filter section lengths of one type to carriers on a moving member, delivering filter rods of another type of multiple filter section length to carriers on a moving member, cutting the filter rods into filter sections while on the carriers, transferring the filter sections of both types in aligned rows of filter sections to carriers on a plurality of shuffling wheels, the alternate shuffling wheels in which the filter sections are received traveling at different speeds, the speed of the shuffling wheels being such that an aligned row of alternate filter sections of the two types reach the discharge point at the same time, and discharging the aligned filter sections.

2,898,999

DISPOSABLE RUBBER PRODUCTS

Paul G. Carpenter, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application December 1, 1955, Serial No. 550,247
8 Claims. (Cl. 166—46)



4. In an operation wherein the application of a force is adapted to be temporarily restrained and subsequently

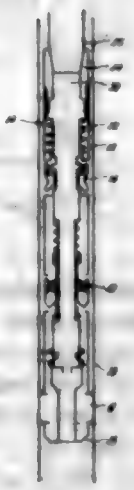
cut of said cutting edge regardless of the changes in

2,899,005

ELECTRIC-POWERED TRACTION WHEEL

released, the improved method which comprises positioning in the path of said force a body consisting essentially of a composition comprising a rubbery binder selected from the group consisting of natural rubber and synthetic, conjugated diene polymer and sufficient oxidant in admixture therewith to supply the oxygen necessary for combustion with substantial decomposition of said body, thereby rendering said composition both ignitible and self-sustaining in combustion even in the absence of any external source of oxygen, and igniting said body in situ so that said body substantially decomposes.

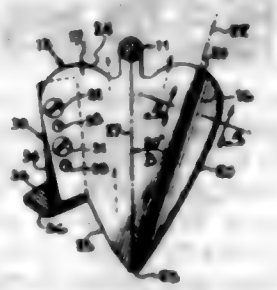
2,899,800
PISTON ACTUATED CASING MILL
Weldon L. Medders, Arnal Bruce Foreman, Jr., and Uvon Skipper, Houston, Tex., assignors to Houston Oil Field Material Company, Inc., Houston, Tex., a corporation of Delaware
Application August 5, 1957, Serial No. 676,210
6 Claims. (Cl. 166—55.8)



1. A casing mill for use in a cased well bore having fluid pressure therein comprising, an elongate body having a longitudinal bore, said body provided with at least two longitudinally-spaced circumferential rows of slots extending therethrough; knives mounted in said slots for radial movement outwardly of said body into engagement with the casing; cutting surfaces on one row of knives for cutting through the casing; milling surfaces on the knives for milling against an end of the casing; a knife actuating assembly including a tubular mandrel slidable in the body adjacent the rows of knives, a pressure surface associated with the mandrel adapted to cause longitudinal movement of the mandrel upon the application of fluid pressure upon pressure surface, resilient means yieldingly resisting longitudinal movement of the mandrel, inter-engaging elements on the exterior of the mandrel and on the knives for moving the one row of knives radially outwardly into cutting and milling engagement with the casing upon such longitudinal movement of the mandrel and to retract such one row of knives upon reverse longitudinal movement of the mandrel, additional means on the mandrel including resilient means urging the other rows of knives outwardly upon such longitudinal movement of the mandrel, and additional inter-engaging elements associated with the mandrel and on the other rows of knives for retracting the other raws of knives upon reverse longitudinal movement of the mandrel.

2,899,801
LAWN EDGER
Dave H. Paris, Cincinnati, Ohio
Application September 9, 1958, Serial No. 759,888
3 Claims. (Cl. 172—13)

1. A lawn edger comprising a pull handle, a shank fixed to the rearward end of said handle, a downwardly and forwardly directed blade fixed to said shank, said blade having a guide portion the plane of which is disposed at approximately 70° to the axis of said handle and a forwardly directed cutting portion forming an angle of approximately 120° with said guide portion,



said cutting portion having a cutting edge extending upwardly from the lower extremity of said blade and a guide shoe mounted at the edge of said guide portion on the rear surface thereof, said guide shoe having a rearwardly extending projection having a lower surface forming an angle of approximately 135° with the rear surface of said guide portion.

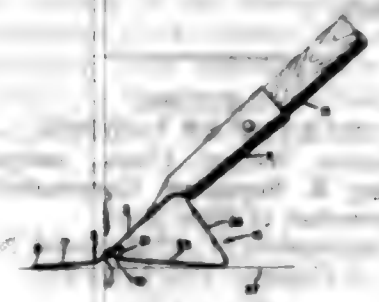
2,899,802
APPARATUS FOR CONNECTING PLOWS OR THE LIKE TO A TRACTOR
Edward C. Wink, Findlay, Ohio
Application February 19, 1958, Serial No. 716,155
3 Claims. (Cl. 172—319)

1. A tractor hitch comprising bearings for mounting in horizontal transverse alignment under the rear portion of a tractor, an upper substantially horizontal plate between said bearings and having transverse horizontal pivots engaged with said bearings to tiltably support said upper plate, a lower substantially horizontal plate underlying said upper plate, said lower plate having longitudinal edge portions extending laterally beyond said upper plate, a vertical pivot connecting said upper and lower plates, two longitudinal hitch arms secured to said longitudinal edge portions of said lower plate and projecting rearwardly from the same, means connected with one of said transverse horizontal pivots for tilting said upper plate on these pivots, said upper plate extending both forwardly and rearwardly from said transverse horizontal pivots, and front and rear transverse bars lying upon the front and rear ends of said upper plate respectively, said transverse bars being secured at their ends to said hitch arms.

2,899,803
TOOL
Richard Micek, Wahoo, Nebr.
Application October 26, 1956, Serial No. 618,620
1 Claim. (Cl. 172—371)

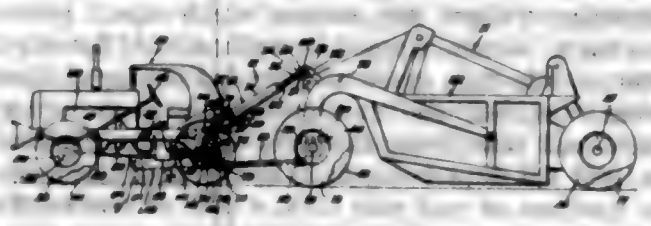
A cutting tool adapted to be pushed along the ground or like surface, comprising an angled plate member including a blade section provided with a cutting edge along its forward end and capable of being sharpened a plurality of times, and a body section extending upwardly and rearwardly from the rearward end of said blade section, a ferrule for a handle extending rearwardly and upwardly from the rear edge of said body section, and means connected with said angled plate member for limiting and making uniform the depth of the

cut of said cutting edge regardless of the changes in length of the blade caused by sharpening, said means being formed of bendable material and including a shoe portion having a section bent from the rear end thereof and extending upwardly and forwardly therefrom to a point adjacent to but spaced from said ferrule and having a further section bent from the forward end thereof and extending to and affixed to said body section of the angled plate member, said shoe having a rear portion thereof in engagement with the ground or like surface and the



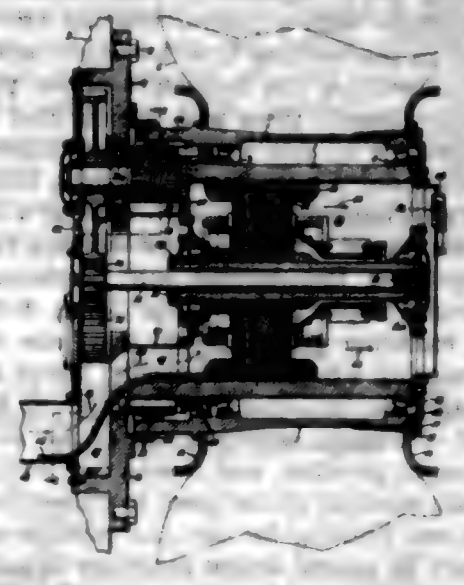
remaining portion of said shoe extending forwardly and upwardly from said rear portion at an inclination to the ground or like surface, said shoe portion and said blade section being angularly related so that said forward portion of the blade section will continue to contact the ground after a plurality of sharpenings with said cutting edge being maintained in contact with the ground or like surface by said means and the blade section extending upwardly and rearwardly from said cutting edge at an inclination to the ground or like surface.

2,899,004
WEIGHT-TRANSFERRING HITCH FOR FOUR-WHEEL-DRIVE TRACTORS
Lovel Reynolds Simmons, Jackson, Miss.
Application July 8, 1955, Serial No. 520,796
10 Claims. (Cl. 180—14)



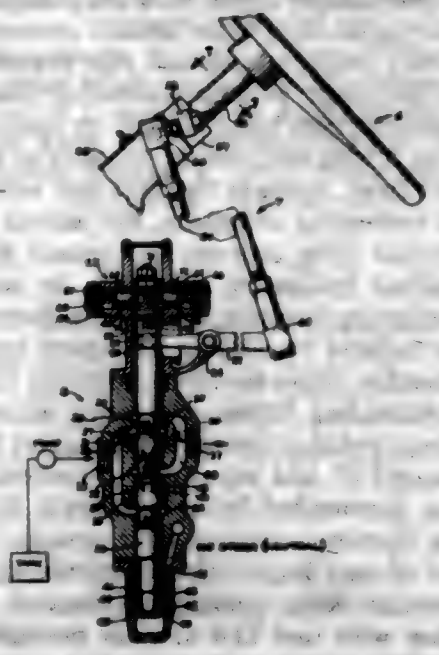
3. In a tractor for receiving traction improving weight transferred thereto from a vehicle towed therebehind through a weight-transferring hitch structure; the combination of a set of front traction wheels, a set of rear traction wheels, a frame body having a rear portion mounted on and disposed between the wheels of the rear wheel set and sill members connected with the rear body portion and projecting forwardly therefrom on opposite sides of a fore and aft median line of the tractor and supported at forward portions thereof upon the front wheel set, a lower draft-member-attachment pivot anchorage on the rear end of such body, an upper strut-attaching pivot anchorage on the rear end of such body, the upper anchorage being at such elevation relatively to the lower anchorage as to coincide with a line inclining rearwardly at an angle of at least substantially 30 degrees with respect to the horizontal from a point mid-way between the centers of the tractor wheel sets and at the same elevation as the lower anchorage, and a weight-transferring strut attached to said upper anchorage, and said strut being selectively energizable to forcibly elongate the same to react between the upper anchorage and the towed vehicle.

2,899,005
ELECTRIC-POWERED TRACTION WHEEL
William Speicher, North East, Pa., assignor to General Electric Company, a corporation of New York
Application July 20, 1955, Serial No. 523,239
3 Claims. (Cl. 180—60)



1. The combination with an enlarged cylindrical load-carrying axle made of magnetic material arranged to be secured at one end to the body of a vehicle in a position suitable for supporting a wheel of the vehicle, motor pole pieces and field windings mounted on the inner wall of said cylindrical axle, a motor rotor mounted concentrically within said cylindrical axle for electrodynamic cooperation with said pole pieces, at least a pair of axially spaced antifrictional bearings surrounding the outer surface of said enlarged cylindrical axle, said wheel including a felly rotatably mounted on said bearings, center lines of said rotor, stator and wheel considered in a direction normal to the axes of said rotor, stator and wheel all lying between planes defined by said spaced antifrictional bearings, said bearings having a greater internal diameter than the internal diameter of said enlarged cylindrical axle, and a driving connection between said rotor and said felly.

2,899,006
SLOW-FAST POWER STEERING SYSTEM
Edwin C. Brown and Carl W. Geden, Aurora, Ill., assignors to Baldwin-Lima-Hamilton Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application August 16, 1957, Serial No. 678,620
5 Claims. (Cl. 180—79.2)



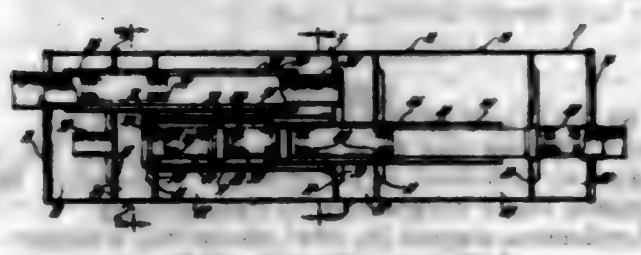
4. In a steering system for a wheeled vehicle, a two-way hydraulic motor for changing the angular position

of the wheels in accordance with the direction and rate of flow of high pressure oil, a hydraulic directional control valve housing having motor ports connected in circuit with said motor and having oil inlet and exhaust ports connected in circuit with an oil pump and exhaust tank, said housing ports separately communicating through housing passages with a central housing bore, a slidable valve spool in the housing bore having a series of spaced lands for uncovering the respective motor port passages to selectively connect them with the oil inlet and exhaust port passages for oil flow in a direction responsive to the direction of spool displacement beyond a center position and at a rate changing from zero flow at a center spool displacement range through a slow-steering rate displacement range to a fast-steering rate displacement range, said slow-rate displacement range being defined by the length of metering grooves in at least one of the spool lands, a steering wheel mechanically linked to the valve spool to displace the spool in response to the direction and extent of angular displacement of the steering wheel from its center position, and means for anticipating fast-steering rate position of the spool in either direction comprising an end housing for one end portion of said valve spool, a pair of spaced detent members in said end housing bearing against said end portion of said spool, said spool end portion having a recess with cam surfaces at each end of the recess each alined to engage one of said detent members at the spool position between the slow and fast steering rates in one flow direction, said detent members being yieldable to require a palpable increase in steering pressure to turn the wheel beyond the detent engagement in the direction of slow to full steering rate.

2,899,007
MUFFLER

Leonard M. Morrish and Lloyd E. Muller, Flint, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application September 19, 1955, Serial No. 534,918
1 Claim. (Cl. 181—54)

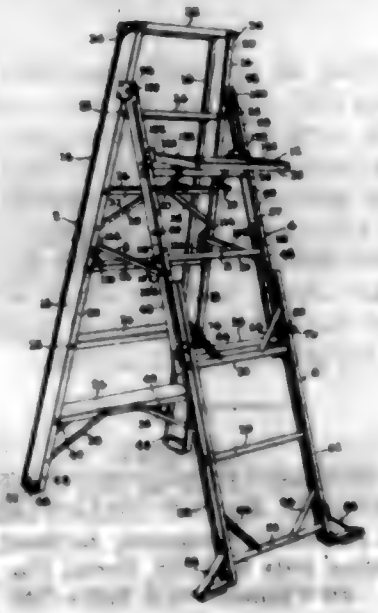


A muffler for engines comprising an elongated casing, said casing having at least three spaced resonating chambers of relatively large volume and two expansion chambers therein, said large volume resonating chambers and said expansion chambers being formed by transverse partitions extending across said casing, the first of said expansion chambers lying between the first and second of said large volume resonating chambers, the second of said expansion chambers lying between the second and third of said large volume resonating chambers, an acoustic coupling tube projecting from the partition between said first of said large volume resonating chambers and said first expansion chamber into said first resonating chamber, an inlet conduit extending within said casing across said first and second large volume resonating chambers terminating within the second of said expansion chambers, said inlet conduit being surrounded by a concentric first acoustic coupling tube forming a first annular passage terminating in the second of said large volume resonating chambers, said inlet conduit being partially perforated to provide communication with said first annular passage, an outlet conduit extending within said casing and across said second and third of said large volume resonating chambers and in communication with said first expansion chamber, an imperforate intermediate conduit surrounding said outlet conduit and connecting said first and second expansion chambers through said second large volume resonating chamber, the portion of said outlet conduit within said intermediate conduit being perforated and surrounded by a radially spaced tubular member forming therewith at least one small volume resonating chamber, said tubular member continuing into a second acoustic coupling tube forming a second annular passage terminating in the third of said large volume resonating chambers and means acoustically connecting said outlet conduit with said second annular space.

2,899,008
MULTI-WAY LADDER

Clayton E. Larsen, Weston, Conn., assignor to White Metal Rolling & Stamping Corporation, Brooklyn, N.Y., a corporation of New York

Application September 21, 1955, Serial No. 535,558
5 Claims. (Cl. 182—25)



2. A combination step, stair well and extension ladder comprising a front step section which tapers outwardly from top to bottom, formed by a plurality of flat steps and a pair of side rails made of extruded U-shaped channels having front, side and back portions, with the open portion of said rails facing inwardly of the front ladder section, said flat steps being fixed by rivets to the front and rear portions of said side rails, a pair of rearwardly extending brackets carried upon said front section side rails at the back thereof between the top step and the next-to-top step, an upper rear ladder section formed by two side channel members with serrated cylindrical rungs fixed at spaced intervals therebetween, said upper rear section being pivoted by its upper ends to said brackets, a lower rear section formed by two side channel members with serrated cylindrical rungs fixed at spaced intervals therebetween, the side channels of said upper rear section having longitudinal lugs extending outwardly from the sides thereof and the side channel members of said lower rear section having outwardly extending semi-circular channel extensions thereon, the lower rear section telescoping onto the upper rear section by having said semi-circular extensions slidably enclose said lugs.

2,899,009
FOLDING STEP LADDER

Milton Roth, Bronx, N.Y.

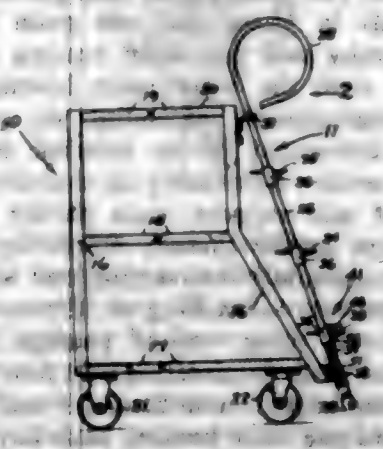
Application August 25, 1958, Serial No. 756,810
2 Claims. (Cl. 182—104)

1. A stepladder comprising upstanding front and rear ladder portions hingedly connected at their upper ends to swing relative to each other between inoperative positions in substantial longitudinal contact with each other

and use positions in which they diverge in a downward direction, each portion comprising a plurality of sections telescopically related for retraction and extension between inoperative and operative positions respectively, and means for releasably latching the several sections in said operative positions, each of the several sections of said front and rear portions being approximately of inverted U-shape, each section of the front portion including a horizontal, transversely extending tread and side rails rigid with and depending from the ends of the tread to cooperate with the tread in defining said inverted U-shape, each section of the rear portion including a horizontal, transverse cross member and side rails rigid with and depending from opposite ends of said cross member to cooperate therewith in defining the inverted U-shape of each section of the rear portion, the side rails

of several sections having inwardly turned guide flanges, the guide flanges of the side rails of each section embracing the flanges of the side rails of the section next above the same, the several side rails having openings registering in the extended positions of the section to receive the latching means, said openings being out of register in the retracted positions of the several sections, said latching means comprising a plurality of latch assemblies on each of the front and rear portions, each assembly including a pair of latching plungers and spring means interposed between the latching plungers and biasing the same outwardly from each other, into the registered openings, each plunger having lateral projections, the projections of the plungers of the latch assemblies of the front portion being interengageable with the corresponding projections of the latch assemblies of the rear portion, in the inoperative, longitudinally contacting positions of the front and rear portions.

2,899,010
TRANSFER TRUCK
Robert W. Ledgerwood, Portland, Oreg., assignor to Rel-Away Truck Manufacturing Company, Inc., Portland, Oreg., a corporation of Oregon
Application October 28, 1957, Serial No. 692,745
8 Claims. (Cl. 182—118)

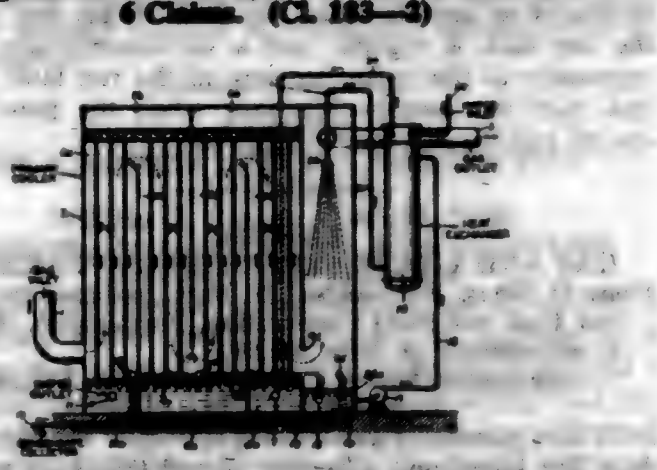


7. In a hand truck, the combination of a truck portion, wheel support for said body portion, said body portion including at least one substantially horizontal planar shelf, a ladder portion carried by said body portion at one end thereof for movement up and down relative thereto, and detachable latch means interposed between said ladder and body portions operable to anchor said ladder portion against a floor supporting the truck thereby to brake the truck, said last mentioned means having a foot operated latch member mounted on said ladder portion, a catch carried by said body portion adjacent said latch member and engagable with said latch member, and bias means interposed between said latch member and ladder portion energized upon engagement of said latch member with said catch and operable when energized to urge said ladder portion downwardly relative to said body portion.

2,899,011
LADDER STEP
Carl Bobkin, St. Clair Shores, Mich.
Application October 25, 1956, Serial No. 618,209
1 Claim. (Cl. 182—228)

A step unit for a ladder having side rails and spaced rungs extended between said rails, said step unit comprising a pair of spaced upright arm members each of which is provided at the upper end thereof with a laterally extended hook portion engageable with the back side of a rail, a substantially horizontal plate member consisting of a pair of telescoping portions connected to and extended between the lower ends of said arm members, said arm members being formed with seat portions adjacent the lower ends thereof adapted to seat on the top side of a rung adjacent opposite ends thereof, and arcuate retaining straps formed on said plate member at positions below said seat portions and adjacent the rear edge of said plate member and adapted to be positioned below a rung for retaining said seat portions in positions seated thereon with said plate member extending forwardly from said rung.

2,899,012
PROCESS AND APPARATUS FOR COOLING COKE OVEN GAS
George Allen Davis, deceased, late of Mountain Lakes, N.J., by Ethel Marie Davis, legal representative, Mountain Lakes, N.J., assignor to Allied Chemical Corporation, New York, N.Y., a corporation of New York
Application October 2, 1957, Serial No. 687,793
6 Claims. (Cl. 183—3)



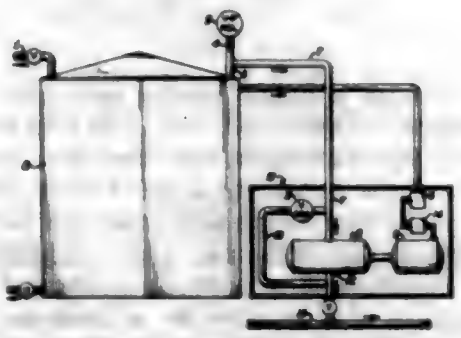
1. A continuous process for the primary cooling of coke oven gas, withdrawn from the collecting main of by-

product coke ovens and containing naphthalene in non-saturating quantity together with water, tar, ammonia and light oils, which comprises passing the coke oven gas in indirect countercurrent contact with a fluid cooling medium to partially cool the coke oven gas to a temperature of about 105° to about 140° F., thereby condensing water and tar and producing a gas still not saturated with naphthalene, collecting said condensate from the partially cooled gas, cooling at least part of the condensate, spraying said cooled condensate downwardly in direct countercurrent contact with the partially cooled coke oven gas to complete cooling of the gas to a temperature of about 90° to about 100° F. and to produce a gas supersaturated with naphthalene, said sprayed condensate simultaneously washing precipitated naphthalene particles out of the completely cooled gas, and recovering said completely cooled gas containing naphthalene in saturating amount together with ammonia and light oils.

2,899,013
APPARATUS FOR RECOVERY OF PETROLEUM VAPORS FROM RUN TANKS

Harry V. Carter, Tulsa, Okla., assignor, by mesne assignments, to National Tank Company, Tulsa, Okla., a corporation of Nevada

Application April 9, 1956, Serial No. 576,899
2 Claims. (Cl. 183—2.7)



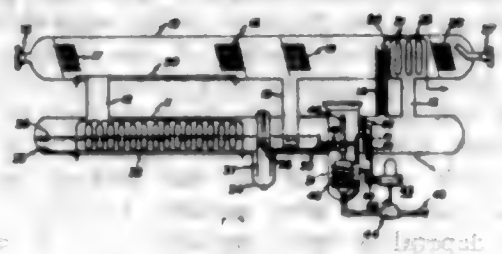
1. In combination with a crude petroleum oil run tank; a gas motor-compressor drawing vapors from the run tank and discharging the vapors into a receiver; and a control system for the motor-compressor with which the pressure of the run tank is maintained within desired limits and the motor-compressor is operated only during the times required to maintain the run tank pressure within the predetermined limits including; a by-pass connection between the discharge side of the motor-compressor and the intake side connected to the vapor space of the run tank, an adjustable pressure-reducing regulator valve in the by-pass connection which opens the by-pass connection when pressure at the inlet side of the motor-compressor connected to the vapor space of the run tank falls below a minimum value to prevent further decrease in the pressure within the tank while the motor-compressor continues to operate when the flow of gas and oil into the run tank is regular, and a vacuum-pressure switch responsive to the vapor pressure of the run tank to stop and start the motor-compressor when the flow of gas and oil into the run tank is irregular.

2,899,014
GAS AND LIQUID SEPARATING APPARATUS

Gene O. Sisex, Farmington, N. Mex., assignor to American Tank and Steel Corporation, Farmington, N. Mex., a corporation of New Mexico

Application March 4, 1957, Serial No. 643,569
7 Claims. (Cl. 183—2.7)

7. In a petroleum gas treating system or the like wherein a first liquid and a heavier second liquid are accumulated, means for collecting the two liquids and for stratifying them by gravity, sump means below said collecting means, means for conducting the separated first liquid from said collecting means to said sump means, a closed vessel mounted within said sump means and spaced from the walls thereof, means for conducting the heavier liquid from said collecting means to said vessel, means de-

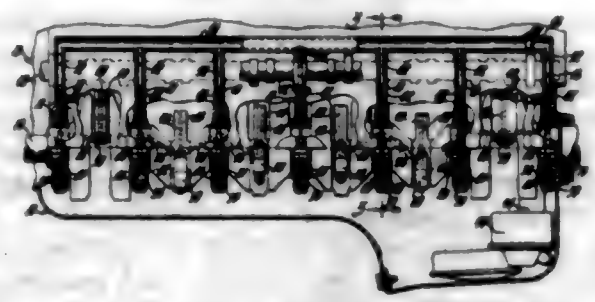


pendent upon the accumulation of the heavier liquid in said vessel for discharging the heavier liquid therefrom and for conducting it outside said system, and means arranged to control the discharge of the first liquid from said sump means for maintaining a predetermined level of the first liquid in said sump means about said vessel.

2,899,015
ENGINE BEARINGS AND LUBRICATION SYSTEM

Clayton B. Leach, Pontiac, and Mark H. Frank, Birmingham, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application December 13, 1956, Serial No. 628,093
2 Claims. (Cl. 184—6)



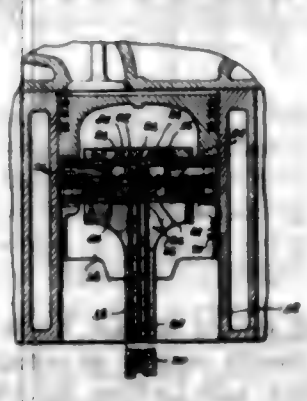
1. In an internal combustion engine bearing and lubrication system, an engine block having a plurality of cylinders formed therein and support walls integrally formed therewith intermediate said cylinders and at each end of said block, engine main bearings and camshaft bearings received in said support walls, a camshaft rotatably mounted in said camshaft bearings and a crankshaft rotatably mounted in said main bearings, an oil pan secured to said block and forming a lubricating oil sump in cooperation with the underside of said block, an oil pump in said sump secured to said block for lubricating the engine, each of said cylinders having reciprocating pistons therein and piston rods connecting said pistons with said crankshaft, crankpin bearings on said crankshaft and wristpin bearings on said pistons and connecting with said rods, two adjacent of said pistons having their dynamic loads in phase and one main bearing therebetween whereby said one main bearing is subjected to higher loads than the other main bearings, said block having a longitudinally extending oil gallery formed therein and connected by an internal passage to said oil pump to receive lubricating oil therefrom under pressure, each of said support walls having first integrally formed passage means therein connecting with said oil gallery and tangentially intersecting one of said camshaft bearings to provide lubricating oil thereto and terminating adjacent said sump, second passage means in each of said support walls intersecting said first passage means and terminating at said main bearings, said main bearings other than said one main bearing each having an annular groove formed therein connecting with said second passage means in oil flow relation, said one main bearing being substantially the same length as said other main

over which the vehicle may travel; the receptacle hav-

prising a blade member, rotatably mounted on the hoist-

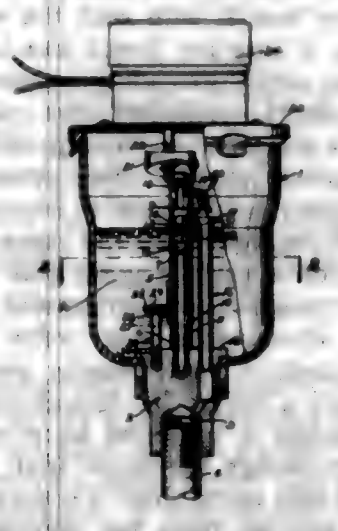
bearings but having a single continuous bearing surface whereby the higher dynamic loads may be carried by said one main bearing, said crankshaft having passages therein connecting said main bearing grooves with said crankpin bearings, and passages formed in said crankpin bearings and said piston rods in flow relation with said crankshaft passages for lubricating said wristpin bearings.

2,899,016
ENGINE LUBRICATING SYSTEM
Rae E. Swayze, Rosamond, Calif.
Application November 3, 1958, Serial No. 771,434
12 Claims. (Cl. 184—6)



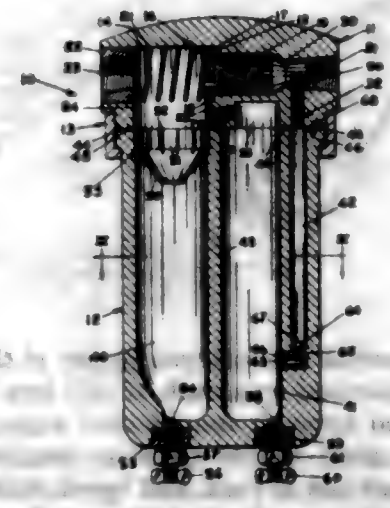
1. In a reciprocating engine with a cylinder, a reciprocatory piston in said cylinder and a connecting rod, the improvement comprising: a hollow wrist pin mounted in said piston and connected to said rod; a pump means in said wrist pin; passage means defining a circuit for a liquid from a source of liquid to at least one surface of said engine through said pump means; and actuating means interconnecting said pump means and said connecting rod to translate relative movement of said piston and said rod into actuation of said pump means for forcing liquid through said passage means.

2,899,017
METERING DEVICE FOR LIQUID LUBRICANT
Frank H. Liljemark, Minneapolis, Minn., assignor to Plews Manufacturing Co., Minneapolis, Minn., a corporation of Minnesota
Application February 18, 1959, Serial No. 794,140
3 Claims. (Cl. 184—27)



1. In a device of the class described, a reservoir having a discharge opening in its lower end, an outlet pipe secured to the lower end of said reservoir, said outlet pipe communicating at its lower end with said discharge opening and terminating at its upper end above the normal level of fluid in said reservoir, an upstanding stationary tubular pump element anchored at its lower end to the bottom of said reservoir in laterally spaced relation to said outlet pipe and having an inlet port adjacent said reservoir bottom, check valve means in the upper end of said stationary pump element, a tubular movable pump element telescopically slidably received over said stationary pump element and having an outlet in its upper end terminating in a downwardly directed spout overlying the open upper end of said outlet pipe, second check valve means in said movable pump element between the outlet therein and said first mentioned check valve means, yielding means biasing said movable pump element in an upward direction, means including a cam engageable with the upper end of said movable pump element for imparting downward pumping movements thereto against the bias of said yielding means, a stop flange and a cooperating guide element one mounted on the bottom of said reservoir and the other mounted on said movable pump element in sliding engagement with said one thereof, said guide element having an enlarged head engageable with said flange to limit upward movements of said movable pump element.

2,899,018
OIL FEEDER HAVING RESTRICTOR
William M. Booth, Spring Lake, Mich., assignor to Gardner-Denver Company, Quincy, Ill., a corporation of Delaware
Application July 18, 1955, Serial No. 522,810
5 Claims. (Cl. 184—55)



3. In a lubricator having a housing, said housing having an air passage and an oil passage communicating with said air passage, the combination comprising: a shell having a side aperture seated in said oil passage; an elongated sleeve of porous material seated in said shell; said sleeve being tubular and defining a central oil reservoir characterized by a porous wall; means closing one end of said reservoir; the portion of said shell having said aperture and a portion of said sleeve including both said end closing means and a portion of said reservoir projecting into said air passage; said reservoir extending axially of said sleeve at least to be coplanar with said aperture; said sleeve being axially adjustable in said oil passage; means in said housing adapted to maintain a column of oil in said reservoir.

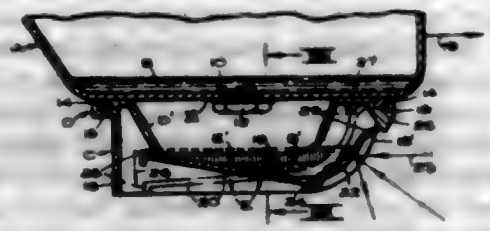
2,899,019
OIL CATCHER AND DISCHARGER FOR A VEHICLE
William G. Colgan, Oakland, Calif.
Application November 4, 1957, Serial No. 694,288
7 Claims. (Cl. 184—106)

1. In an oil catcher and discharger for a vehicle: a supporting frame mounted beneath an opening in a housing of a component of a vehicle power plant; and a swingably-mounted receptacle disposed within and being carried by said frame and having a sump positioned to receive oil draining through the opening in the housing; the receptacle being swingable into a position to discharge accumulated oil therefrom onto a roadway

2,899,823

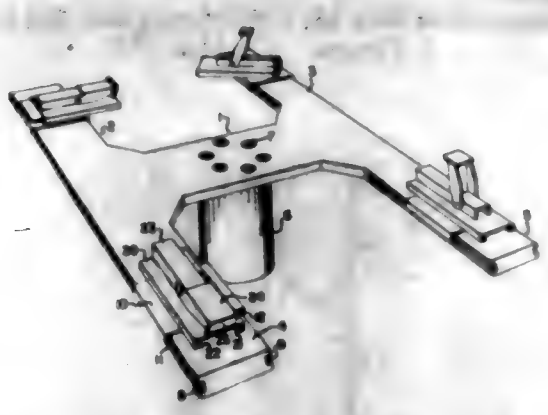
operable in consequence of such brake fluid loss for pre-

over which the vehicle may travel; the receptacle having an exposed forward portion against which wind



will strike with sufficient force, when the vehicle has attained a predetermined speed, to swing the receptacle into oil-discharging position.

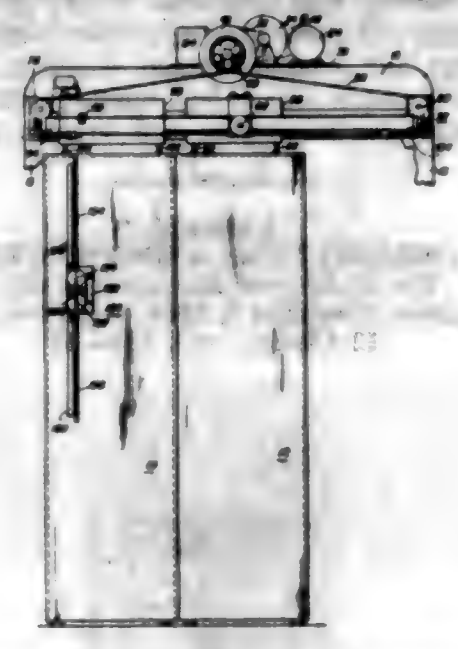
2,899,820
AUTOMOBILE LIFT
John H. Halstead, San Jose, Calif.
Application April 9, 1956, Serial No. 576,977
6 Claims. (Cl. 187—8.75)



6. An automobile lift, comprising an H-shaped frame having four horizontal legs, each of said legs having horizontally grooved opposite longitudinal edges, a horizontal lower slide plate having opposite longitudinal edges folded downward and inward, said lower slide plate being slidably mounted upon the top of one of said legs with said folded edges of the lower slide plate slidably engaging said grooved edges of the leg, a flat table mounted on the top of said lower slide plate substantially parallel and centered relative thereto, an upper slide plate having opposite longitudinal edges folded downward and inward, said upper slide plate fitting slidably over said table with said folded edges extending around and under opposite edges of said table so that said upper slide plate is held substantially parallel to said table and said lower slide plate while being capable of lengthwise sliding motion relative thereto, said upper slide plate being also capable of rotation relative to said lower slide plate in a horizontal plane, said upper slide plate being longer than said table and substantially covering and extending beyond the top of said table when fitted thereon, and a jack attached to said upper slide plate, said jack being movable to an upright position and to a reclining position, selectively.

2,899,821
DOOR OPERATOR
Joseph V. O'Grady, Middletown Township, Monmouth County, N.J., assignor to Elevator Supplies Company, Inc., a corporation of New Jersey
Application July 25, 1955, Serial No. 524,866
7 Claims. (Cl. 187—52)

1. Clutch mechanism for connecting an elevator door with a hoistway door, which comprises a driving vane mounted on the elevator door and a driven member mounted on the hoistway door, said driven member comprising a blade member, rotatably mounted on the hoistway door, locking means and mechanical means connect-



ing said locking means to said blade member, rotation of said blade member serving to actuate said mechanical means and unlock said locking means.

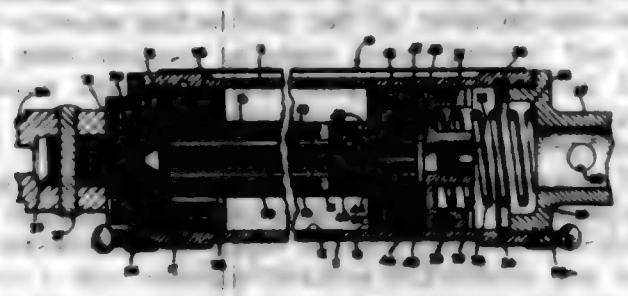
2,899,822
BRAKE OPERATING MEANS
Fred James White, Lakeland, Fla.
Application February 24, 1956, Serial No. 567,565
9 Claims. (Cl. 188—2)

1. A brake operating structure for attachment to the fire wall of an automobile adjacent the intersection of the sloping floor boards with such fire wall, said attachment including a base for direct attachment to the fire wall and an outwardly extending support projecting forwardly therefrom, a segmental gear rotatably mounted on a horizontal axis closely adjacent said base, said gear carrying an arcuate shaped cable receiving trough adjacent its periphery, a spur gear in engagement with said segmental gear for operating the same, said spur gear being mounted on a shaft, a worm gear mounted on said shaft, means to mount said shaft on said support, a worm gear housing surrounding said worm gear, a worm rotatably mounted in said housing and meshing with said worm gear, a motor for connection to said worm gear and including a universal coupling for operating said worm even though the motor shaft is not in perfect alignment with said worm shaft, a normally closed switch supplied with current from the ignition switch of the vehicle and being connected to the brake lamp of the said vehicle for causing energization of said brake lamp when the brake is effective and means on said gear segment for contacting said normally closed switch for opening said switch when the brake operating gear segment is in the limit of its brake releasing position, and an electrical control for operating the motor for causing said motor to rotate in one direction to apply the brake or to cause the motor to rotate in the other direction to release the brake.

brake actuating member to be moved in brake applying

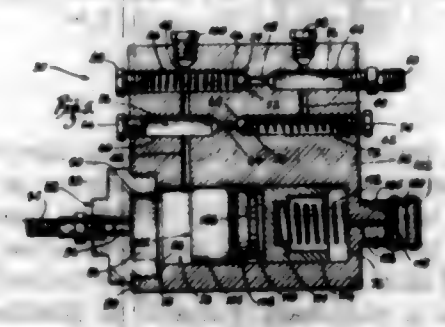
means therefor being so located that the upwardly fac-

2,899,023
DAMPER WITH THERMOSTATIC VALVE
Rollin Douglas Ramsey, Buffalo, N.Y., assignor to Hewitt-Robins Industries, Inc., Buffalo, N.Y., a corporation of Michigan
Application March 27, 1957, Serial No. 648,936
3 Claims. (Cl. 188—96)



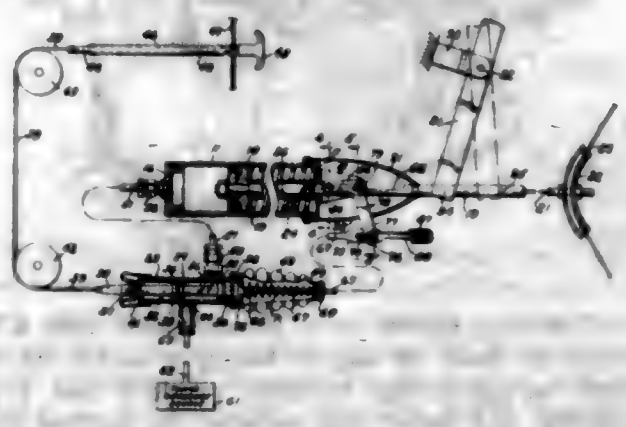
1. A linear damper comprising a housing having a cylindrical inner wall defining a damping chamber, a piston within said damping chamber having a piston rod extending from one end of said housing, a passageway extending axially along said piston and piston rod from the head end of said piston and terminating short of the outer end of said piston rod, a metering orifice leading through said piston rod to said passageway, a piston valve mounted in said passageway for axial movement therealong, a linearly expansible rod extending along said passageway and abutting the inner end thereof at one end and having said piston valve mounted on its opposite end for varying the cross-sectional area of said orifice in accordance with variations in temperature, to provide a substantially constant damping effect over a wide range of temperature variations, a passageway leading through said piston rod to said axial passageway extending therealong, on the opposite side of said piston valve from said orifice, and affording a means to supply fluid under pressure to said piston valve to close off said orifice upon predetermined high rates of motion of said piston with respect to said housing.

2,899,024
AUTOMATIC SAFETY VALVE FOR VEHICLE BRAKE SYSTEMS
Rollie D. Hamilton, Affton, and Samuel M. Rich, University City, Mo.; said Hamilton assignor to said Rich
Application September 25, 1957, Serial No. 686,223
3 Claims. (Cl. 188—152)



1. In combination with an automotive vehicle hydraulic brake system having a pedal operated master cylinder, hydraulic brake cylinders for the wheels, and an organization of pressure lines leading from said master cylinder to said brake cylinders: a first shutoff valve unit and a normally open pressure-responsive switch associated therewith interpolated in the line leading from the master cylinder to the brake cylinders of the front wheels; a second identical valve unit and pressure-responsive switch associated therewith interpolated in the line leading from the master cylinder to the brake cylinders of the rear wheels; a pair of signal lamps each controlled by one of said switches; each lamp being energizable in consequence of brake fluid loss in the line wherein it is interpolated; and means in each of said units instantly operable in consequence of such brake fluid loss for preventing further draining of brake fluid from the balance of the system, said means including a piston assembly slidable in a longitudinal bore provided at a lower level in the unit, a longitudinal bore in fluid communication with the master cylinder provided at an upper level in the unit, a longitudinal bore provided at an intermediate level in the unit, a first vertical bore connecting the upper and intermediate level bores, a second vertical bore interconnecting the upper, the intermediate and the lower level bores, a normally closed ball check valve in the upper level bore and a similar valve in the intermediate level bore, said check valves being adapted to open in opposite directions, and a compression spring in the lower level bore for propelling said piston assembly into a position wherein the piston thereof shuts off fluid communication between the lower level bore and said second vertical bore.

2,899,025
VEHICLE PARKING BRAKE
Jess Marcel, Farmington, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application October 4, 1956, Serial No. 613,927
1 Claim. (Cl. 188—170)

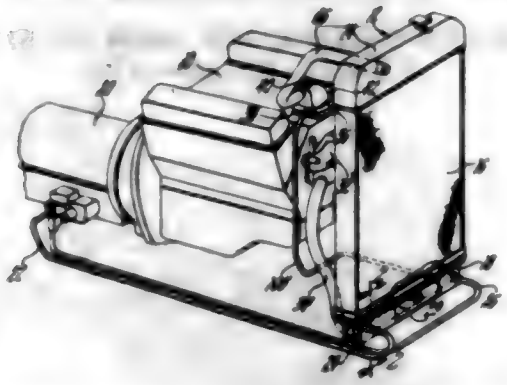


Control mechanism for a motor vehicle parking brake having an actuating member, comprising a cylinder mounted upon the vehicle, a piston reciprocable within said cylinder, a piston rod connected to said piston and projecting from one end of said cylinder, means connecting the projecting end of said piston rod to said brake actuating member, a coil spring within said cylinder surrounding said piston rod and urging said piston and piston rod in brake applying direction, a source of fluid pressure, a valve housing having a cylindrical bore therein, said valve housing being mounted upon said cylinder at one side thereof with the axes of said cylinder and said valve bore being parallel to each other, a valve spool reciprocably mounted in said valve bore and having an axially extended land thereon, a spring urging said valve to a retracted position, said valve bore having a connection to said fluid pressure source at the forward side of said valve spool land and a connection to exhaust at the rearward side of said valve spool land, said valve housing also having a plurality of axially spaced radially extending ports intersecting said valve bore forwardly of said valve spool land in the retracted position of said valve spool, a conduit interconnecting said brake cylinder and said ports to supply fluid under pressure to said cylinder when the valve spool is in its retracted position, manually operable control means to advance said valve spool against the action of said spring progressively first to a position in which said valve spool land covers said ports and then to positions successively uncovering said ports and establishing communication between said ports and exhaust to relieve the pressure in said cylinder and permit said piston and interconnected

the upper portion of the locking bar being in proximity bolt and preventing axial movement of the collar toward

brake actuating member to be moved in brake applying direction by said coil spring, an abutment on the projecting end portion of said piston rod, a safety latch mounted upon said cylinder, spring means normally holding said safety latch in engagement with said abutment to prevent inadvertent application of said brake, a bell crank lever pivotally mounted upon said cylinder to release said safety latch, and a rod having one end connected to said valve spool and its opposite end connected to said bell crank lever to move said safety latch out of engagement with said abutment simultaneously with the movement of said valve spool by said manually operable means in a direction to relieve the pressure in said brake cylinder.

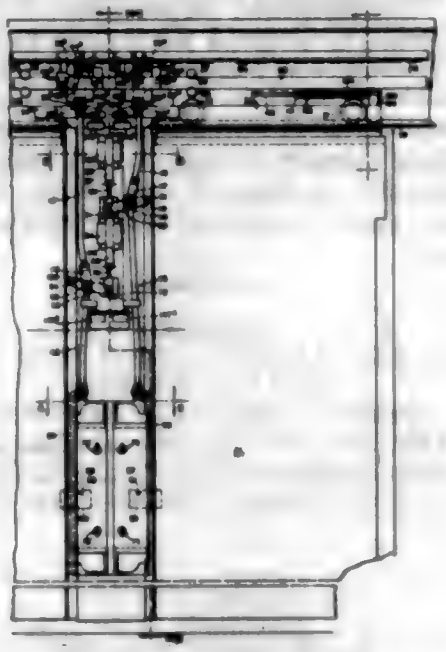
2,899,826
COOLING SYSTEM FOR FLUID OPERATED BRAKE
Paul E. Hitch, Birmingham, Mich., and John W. Walsh, Lockport, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application September 24, 1956, Serial No. 611,473
2 Claims. (Cl. 188—264)



1. A cooling system on a vehicle fitted with a brake operated by fluid, an engine having a jacket for liquid coolant, an air cooled radiator, conduits and a pump connecting said jacket and radiator for normal coolant circulation, a heat exchanger in a portion of said radiator and in contact with said engine coolant, means for conducting said brake fluid through said heat exchanger, a by-pass conduit connecting said jacket with said radiator portion, temperature sensitive valve means arranged, when the temperature of said engine is low, to direct said coolant through said by-pass conduit for abnormal circulation through said jacket and radiator portion and by-pass the remainder of said radiator.

2,899,827
JAIL LOCKING DEVICES, AND THE LIKE
Folger Adam, Joliet, Ill.
Application July 2, 1956, Serial No. 595,495
4 Claims. (Cl. 189—7)

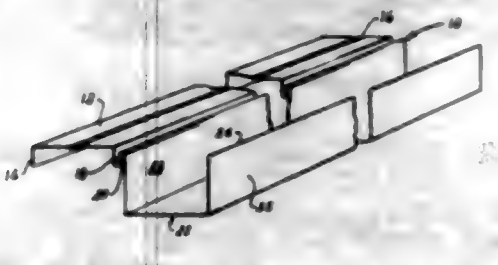
3. In a door locking system, the combination of a horizontally linearly movable door, means to support said door for back and forth movements between a door closed position and a door opened position, a horizontally extending control bar parallel to the path of door movement, means to support said control bar for reciprocating movement between a first deadlocked position, a second non-deadlocked position, and a third unlocked position, a vertically movable first defined locking element for said door, a companion door locking element connected to the door and having an upwardly facing recess for accommodation of the vertically movable first locking element when said locking element is in fully lowered door locking position, means to support said first locking element for vertical reciprocation between such fully lowered locking position and a raised position of non-engagement with said door locking element recess, such first locking element and supporting means therefor being so located that the upwardly facing recess of the door locking element registers vertically with such first locking element when the door is in said door closed position, a cam element connected to the control bar, a cam follower connected to the first door locking element, said cam including a rising cam follower engaging surface formed for vertical movement of the cam follower of the first locking element between said lowered recess engaging position when the control bar is in said second non-deadlocked position and said raised recess non-engaging position when the control bar is in said third unlocked position, the low end of said rising surface being at an elevation and having a length to permit the first locking element to remain in said lowered position when the control bar is in said first deadlocked position, together with a vertically movable locking bar, means to mount said locking bar for vertical movement adjacent to the closed door position of said door, a first key operated unit, means to mount said first key operated unit on a stationary element in position adjacent to the door closed position, said first key operated unit including a second defined vertically movable locking element movable between a lowered locking position and a raised non-locking position, and including key operated means to move said locking element between said lowered locking position and said raised non-locking position, a second defined companion door locking element connected to the door in position for locking cooperation with the second defined vertically movable locking element of said first key operated unit when the door is in its closed position and said second defined vertically movable locking element is in its lowered locking position, a second key operated unit, means to mount said second key operated unit on a stationary element in position adjacent to the first key operated unit and adjacent to the vertically movable locking bar, said second key operated unit including a movable tie element in connection with the second defined vertically movable locking element and movable vertically with said locking element, said tie element being movable between a locking bar engaging position and a locking bar non-engaging position, the second key operated unit including means to move said tie element between said locking bar engaging position and said locking bar non-engaging position, the locking bar moving vertically with said second defined vertically movable locking element between a lowered position corresponding to the locking position of the second defined vertically movable locking element and a raised position corresponding to the non-locking position of the second defined vertically movable locking element,



by compressed air, two compressed air chambers con- ing an inner cylindrical engaging surface coaxial with

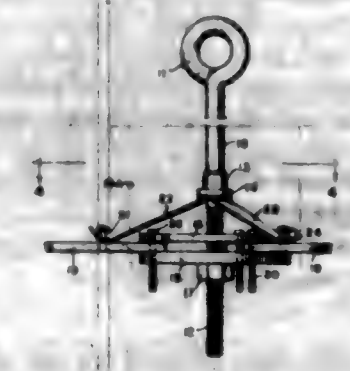
the upper portion of the locking bar being in proximity to the vertically movable first locking element of the door, and first locking element lifting means on the locking bar in position to raise the said first locking element from its lowered recess engaging position to its raised recess non-engaging position during movement of the second defined vertically movable locking element from its lowered locking position to its raised non-locking position.

2,899,028
PANEL CONSTRUCTION
Walter B. Walker, Allen Park, Mich., assignor to Walker Supply & Manufacturing Company, Ecorse, Mich.
Application December 21, 1956, Serial No. 629,892
5 Claims. (Cl. 189—34)



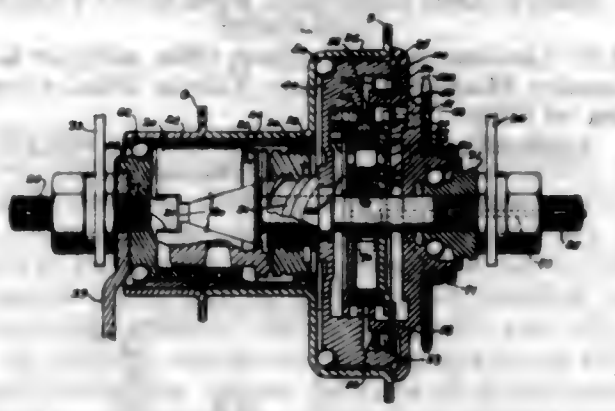
1. A one piece building panel, comprising a flat sheet formed into two adjacent opposed box members, each having a flat body portion and end flanges; a narrow downturned first end flange at the outer end of the first flat body portion; a wide upturned end flange at the opposite outer end of the second flat body portion; both box members integrally joined by an S-shaped intermediate section formed by the inside end flanges of the opposed box members, said S-shaped section forming an upwardly opening first groove and a downwardly opening second groove; said box members being of substantially the same width but different depths, the upwardly opening first groove of the S-shaped section being adapted to seat the downturned narrow end flange of a similar panel and the downward opening second groove beam adapted to seat the upper end portion of the upturned end flange of a similar panel.

2,899,029
ANCHORING DEVICE
Julius Raymond Ballew, Hobbs, N. Mex.
Application November 14, 1956, Serial No. 622,127
4 Claims. (Cl. 189—92)



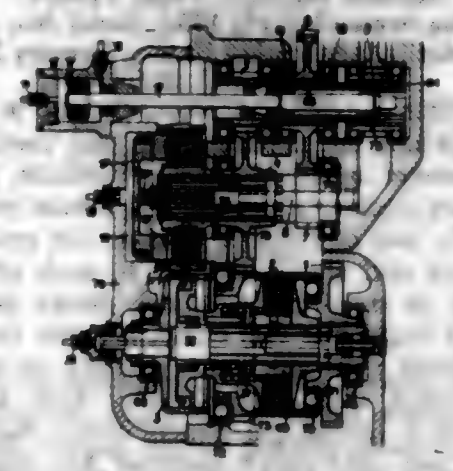
4. An anchoring device comprising an elongated bolt having connecting means at one end and threaded means at its other end, radially extending support means threadedly mounted on the bolt at its threaded end and comprising upper and lower spaced members, pins connecting said upper and lower members and spaced substantially from the bolt and from each other around the bolt, a blade pivotally mounted on each of said pins for swinging movement from a position between said upper and lower members to a position projecting outwardly therefrom, a collar rotatably mounted on the bolt at a position above the support means, means interengaging the collar and bolt and preventing axial movement of the collar toward the end of the bolt having the connecting means, a plurality of struts, each strut having one end pivotally attached to said collar on an axis transverse to that of the shaft and having its other end pivotally connected to one of the blades for motion about axes both transverse and parallel to the plane of the blades, said upper member having openings through which said struts and blades are connected and permitting movement thereof as said support means is moved along said bolt.

2,899,030
THREE SPEED BICYCLE TRANSMISSION
Alvin P. Douglas and Albert R. Golrick, Cleveland Heights, and Rudolph F. Skerl, Euclid, Ohio, assignors to The Murray Ohio Manufacturing Company, Cleveland, Ohio, a corporation of Ohio
Application January 25, 1954, Serial No. 405,968
52 Claims. (Cl. 192—6)



1. In a bicycle speed change mechanism the combination of a coaster brake mechanism, a selective gear transmission mechanism, a driving member, a transmission driven member, a lost motion connecting means between the said transmission mechanism and one of said members and an automatically operable clutch mechanism effective upon a reverse driving action of the driving member for coupling the driving member directly to the driven member thereby to operate the brake mechanism independently of movement of the gears of the transmission mechanism.

2,899,031
PNEUMATIC GEAR-SHIFT ARRANGEMENTS FOR TOOTHED WHEEL CHANGE-SPEED GEARS, ESPECIALLY FOR MACHINE TOOLS
Alois Meermann, Stuttgart-Birkach, Germany
Application September 9, 1955, Serial No. 533,376
Claims priority, application Germany September 13, 1954
6 Claims. (Cl. 192—18)



1. Pneumatic gear shift device for change-speed gears, particularly for machine tools, comprising a friction clutch and a friction brake adapted to be alternatively actuated

plate elements carried thereon and being disposed for rotation concentrically around said drive shaft, and a

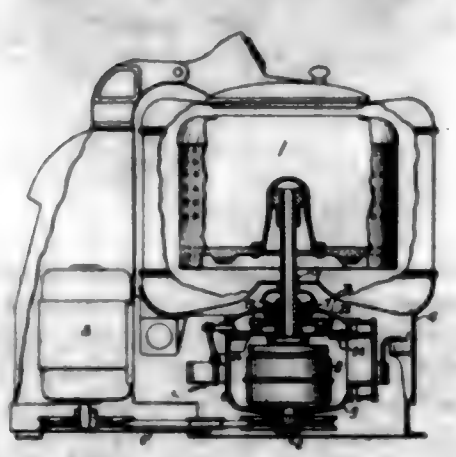
2,899,036
SLIPRING-LESS ELECTROMAGNETICALLY

by compressed air, two compressed air chambers connected by means of compressed air lines to said friction clutch and said friction brake respectively, a movable partition separating the two compressed air chambers, a piston arranged in a chamber and dividing said chamber into two compressed air chambers, said compressed air lines opening into said compressed air chambers from both sides opposite to said movable partition through bores adapted to be closed by said movable partition alternatively under the action of the air pressure acting on the opposed surfaces of said partition, said movable partition being adapted to obstruct the freshly supplied air at the inlet and thereby delaying its effect until the air pressure on the other side of the shift device has fallen to such a value that the force effect produced thereby has become ineffective on one of said friction elements.

2,899,032
DRIVE AND CONTROL FOR ROTATABLE MEMBERS

Carl H. Clement, Jr., Perrysburg, Ohio, assignor to Bock Laundry Machine Company, Toledo, Ohio, a corporation of Ohio

Application May 23, 1957, Serial No. 661,257
7 Claims. (Cl. 192—18)



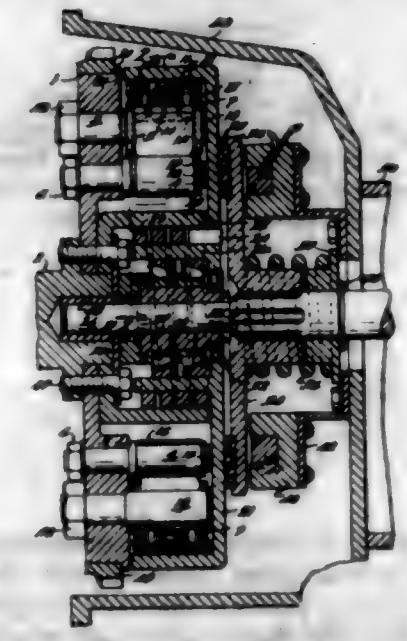
1. In a power transmission, a rotatable drive member, a driven shaft, a clutch connection between said drive member and driven shaft, a normally engaged brake for said driven shaft having a member movable parallel to the driven shaft axis to disengage the brake, and centrifugal acting weight means in the form of metal balls operable by rotation of the driving member of the clutch above a predetermined speed to impart disengaging movement to said movable brake member.

2,899,033
AUTOMATIC CLUTCH CONSTRUCTION

Michael Bochory, Paris, France

Application September 28, 1954, Serial No. 458,926
Claims priority, application France January 26, 1954
10 Claims. (Cl. 192—48)

9. A multiple clutch arrangement for use in motor vehicles, comprising, in combination, two coaxial shafts; a clutch member mounted for free rotation relative to said shafts; an electromagnetic clutch device between one of said shafts and said clutch member for coupling said one shaft and said clutch member to each other whenever desired; an over-running clutch device between the other of said shafts and said clutch member for coupling said other shaft and said clutch member to each other when said other shaft rotates faster than said clutch member; and a centrifugal clutch device between said other shaft and said clutch member for coupling said other shaft and said clutch member to each other when said other shaft rotates at at least a predetermined speed, said centrifugal clutch device comprising first frictional clutch means rotatable with said clutch member and having an inner cylindrical engaging surface coaxial with said shafts, and second frictional clutch means rotatable with said other shaft, said second clutch means including frictional engaging means mounted for sliding movement in substantial radial direction into and out of engagement with said engaging surface of said first frictional clutch means, guide means for guiding said engaging means in

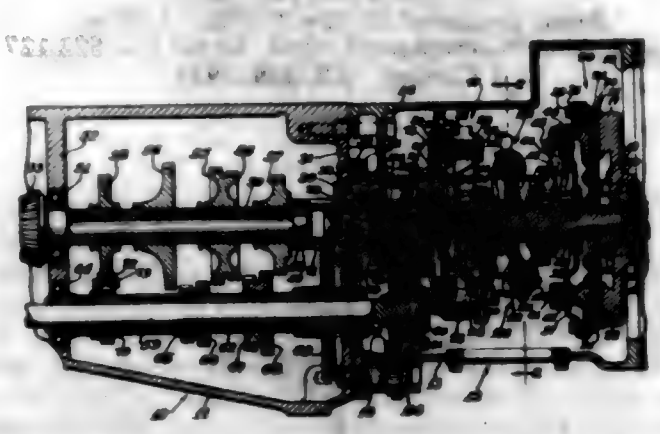


said radial direction, and centrifugal actuator means mounted independently of said engaging means, said centrifugal actuator means being so arranged that when said other shaft rotates at at least a predetermined speed, said centrifugal actuator means are centrifuged outwardly into engagement with said engaging means and move the latter radially into frictional engagement with said engaging surface of said first clutch means.

2,899,034
INDEPENDENT POWER TAKE-OFF MECHANISM

Clarence A. Hubert, Chicago, Ill., assignor to International Harvester Company, a corporation of New Jersey

Application October 29, 1956, Serial No. 618,771
6 Claims. (Cl. 192—48)



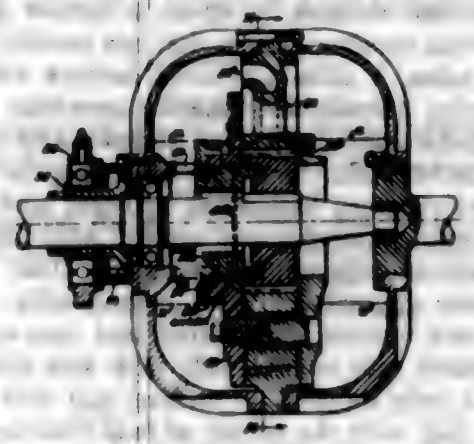
1. In a drive mechanism adapted for use with a tractor vehicle, the combination, comprising: an engine shaft; a drive shaft disposed coaxially with said engine shaft; a first clutch having a driving member connected to said engine shaft for rotation therewith, and a driven disc element drivingly connected to said drive shaft and engageable with said driving member for rotation therewith; a hollow shaft surrounding said drive shaft; means directly connecting said hollow shaft to said first clutch driving member in an axially slidable relation, for rotation of said hollow shaft independent of the operation of the driven disc element of said first clutch; a second clutch spaced axially from said first clutch; said second clutch including a driven body member having spring-loaded pressure

tending around the closed end of the core and axially

2,899,039
COIN SEPARATORS

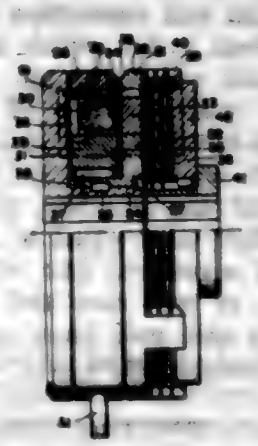
plate elements carried thereon and being disposed for rotation concentrically around said drive shaft, and a driving friction disc assembly drivingly connected to said hollow shaft axially intermediate said driven body member and said first clutch driven disc element and being adapted for engagement by said spring-loaded pressure plate elements for rotating said driven body member therewith; bracket means mounted intermediate said clutches and having an axially extending hollow bearing portion disposed concentrically relative to said hollow shaft; a separate clutch actuating means for each clutch being mounted on part on said hollow bearing portion and arranged for actuating said clutches independently of one another; said clutch actuating means for said second clutch including a throwout mechanism engageable with the driven body member of said second clutch to disengage said latter clutch and stop the rotation of said driven body member while the said clutch is so disengaged.

2,899,035
VARIABLE SPEED AND TORQUE TRANSMITTING FLUID CLUTCH
John R. Thomas, Wichita, Kans., assignor to Thomas Hydraulic Speed Controls, Inc., Wichita, Kans., a corporation of Kansas
Application August 6, 1956, Serial No. 602,172
11 Claims. (Cl. 192—61)



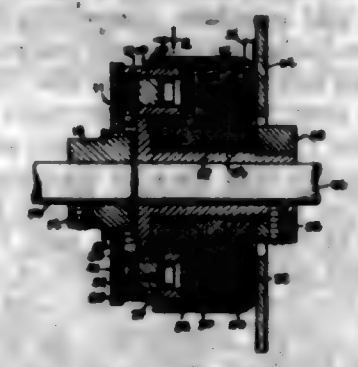
6. A variable speed and torque transmitting hydraulic clutch interposed between rotary power-driven means and a driven shaft and comprising a rotatable casing operatively connected with said power-driven means and having a chamber therein partially filled with oil whereby, during the rotation of said casing, there is provided in said chamber an outer annular zone of oil and an inner central zone of air, fluid pumping means operatively connected with said casing and with said driven shaft, an air intake passage, having an inlet opening disposed within said zone of air, adapted to communicate with said pumping means, an independent oil intake passage, having a constantly fully open inlet opening disposed within said zone of oil, communicating with said pumping means, the oil being initially restrained within said oil intake passage from flow into power transmitting function with said pumping means, during rotation of the clutch casing, by centrifugal force and unrestricted flow of air through said air intake passage, valve means interposed in said air intake passage to control and meter the flow of air into said pumping means whereby, in response to the actuation of said valve means, the flow of both air and oil fluids through said pumping means, independently or in relatively variable proportionate mixtures, is controlled concurrently with the control of the discharge of the fluids to thereby vary the speed and/or torque of said driven shaft.

2,899,036
SLIPRING-LESS ELECTROMAGNETICALLY ACTUATED COUPLING
Anton Rybe, Bolzano, Italy, assignor of thirty percent to Joseph Rohsloch and thirty percent to Ernst Vinatzer, both of Bolzano, Italy
Application August 29, 1956, Serial No. 606,816
Claims priority, application Austria September 5, 1955
15 Claims. (Cl. 192—84)



1. An electromagnetically actuated slipring-less coupling for releasably coupling two components, said coupling comprising two movable coupling members each adapted to receive one of said components and a stationary magnet body, each of said movable coupling members including coupling means engageable one with the other in coupling engagement in response to an electromagnetic force, one of said movable coupling members including two generally disc shaped wall portions disposed in uniformly spaced relationship, said stationary magnet body being mounted between said disc shaped wall portions to define with each wall portion an air-gap of fixed and constant width, the movable coupling member having said disc shaped wall portions and the stationary magnet body forming a magnetic flux path transversely traversing the respective juxtaposed boundary surfaces of said two disc shaped wall portions, said airgaps and said stationary magnet body, and exciting means on the stationary magnet body energizable for generating a magnetic flux through said path to produce said electromagnetic force.

2,899,037
ELECTROMAGNETIC TORQUE DEVICE
William C. Pierce, Beloit, Wis., assignor to Warner Electric Brake & Clutch Company, South Beloit, Ill., a corporation of Illinois
Application June 20, 1958, Serial No. 743,253
5 Claims. (Cl. 192—84)



1. In an electromagnetic friction device, the combination of, a core of magnetic material of generally U-shaped radial cross section having radially spaced annular pole pieces terminating in axially facing pole faces, an armature ring of magnetic material spanning and adapted for axial gripping engagement with said pole faces and cooperating with said core to define a toroidal flux path ex-

2,899,040
ELECTRICAL CONTROL SYSTEM FOR

2,899,042
COILING MEANS FOR SCREW CONVEYOR

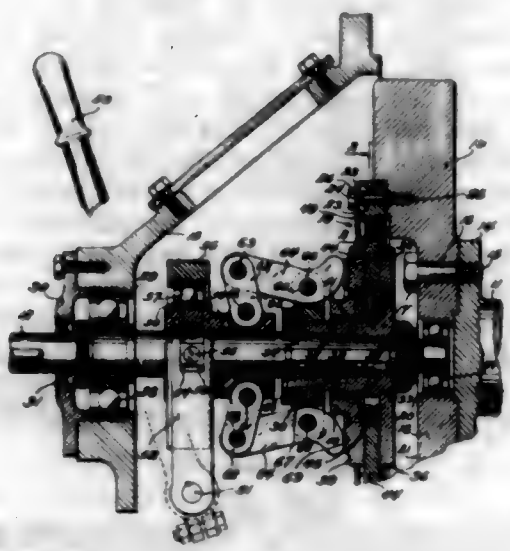
clutch means rotatable with said clutch member and hav- a driven body member having spring-loaded pressure

tending around the closed end of the core and axially back and forth between the core and the armature through the pole faces, means mounting said armature and said pole pieces for rotation relative to each other, a magnetic connection including permanent magnet material and spanning said pole pieces at points spaced from said pole faces so that the connection is in parallel with said armature, a coil seated within said core between said closed end and said connection and operable when energized to produce a flux which divides between the connection and said armature, and means providing a nonmagnetic gap in the portion of said flux path extending from said shunt around said closed end of said core, said gap reducing the residual flux in said core to a small fraction of said coil flux, said connection having a saturation flux value equal to a small fraction of said coil flux and a residual flux substantially equal to said residual flux of said core and armature so as to reduce the flux in said pole faces substantially to zero when said coil is deenergized.

2,899,038
CLUTCH

Edward J. Wellauer, Waxwatosa, Wis., assignor to The Falk Corporation, Milwaukee, Wis., a corporation of Wisconsin

Application August 5, 1954, Serial No. 447,967
4 Claims. (Cl. 192—68)

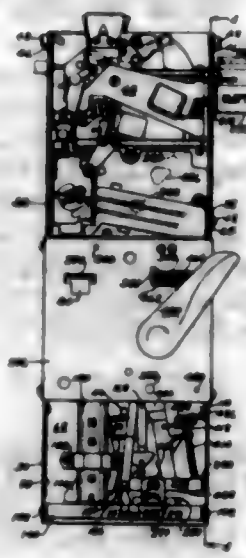


1. In a clutch the combination of relatively axially movable driving and driven members for respective attachment to the power input and output shafts of the transmission, one of said members comprising a pair of cooperating portions including a fixedly positioned internally toothed ring, an externally toothed disc having a width substantially less than that of said internally toothed ring, a yieldable annular ribbon-like corrugated element having an outer diameter less than the root diameter of the teeth on said ring and an inner diameter greater than the root diameter of the teeth on said disc, said element being interposed between the respective teeth of said ring and disc and having line contact with the sides only of said teeth to form a driving connection therebetween, said yieldable element having a width substantially the same as that of said internally toothed ring and being self positioning between the teeth of said ring and disc to automatically compensate for misalignment between the driving and driven shafts of the transmission, retaining means on said internally toothed ring to maintain said yieldable element in position between the teeth of said ring and said disc, and actuating means operative to effect the selective engagement or disengagement of said members.

2,899,039
COIN SEPARATORS

Gustav F. Erickson, Kirkwood, Mo., assignor, by mesne assignments, to National Rejectors, Inc., St. Louis, Mo., a corporation of Missouri

Application January 27, 1954, Serial No. 406,393
51 Claims. (Cl. 194—72)



1. In a manually operated coin-handling device that has a reservoir for coins, an opening in said reservoir through which coins can pass from said reservoir, a slide with a coin-receiving opening therein that can receive a pre-determined number of coins, a second slide with a coin-receiving opening therein that can receive a greater number of coins, a coin-supporting surface with a discharge opening therein, a manually operated actuator, and a linkage interconnecting said actuator and said slides the improvement which comprises mounting the first said slide for reciprocatory movement adjacent said opening in said reservoir, mounting said second slide for reciprocatory movement adjacent the first said slide with the first said slide intermediate said second slide and said opening in said reservoir, mounting said coin-supporting surface adjacent said second slide with said slides intermediate said coin-supporting surface and said opening in reservoir and with the center of said discharge opening displaced laterally from the center of said opening in said reservoir, springs that bias said slides for movement toward said discharge opening, said opening in said reservoir and said discharge opening in said coin-supporting surface being partially co-extensive, said coin-receiving openings in said slides receiving coins from said opening in said reservoir and transporting said coins to said discharge opening, the first said slide being movable with or independently of said second slide, said coin-supporting surface coacting with said coin-receiving opening in said second slide to hold and confine coins whenever said coin-receiving opening in said second slide is in register with said opening in said reservoir, said linkage including an oscillatable cam that rotates in one direction to move said slides toward said reservoir whenever said slides are to be moved toward said reservoir and to thereafter hold said coin-receiving openings of said slides in register with said opening in said reservoir until said cam reaches the end of its path of rotation in said one direction, said cam being rotatable in the opposite direction to free said slides, said cam having a camming surface that promptly moves said slides toward said reservoir and that thereafter enables said cam to hold said coin-receiving openings of said slides in register with said opening in said reservoir during the rest of said rotation of said cam in said one direction, and a ratchet that permits movement of said slides toward said reservoir and that prevents appreciable reverse movement of said slides while said cam is rotating in said one direction to move said slides toward said reservoir.

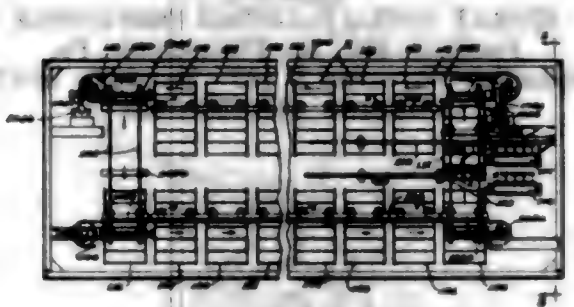
2,899,044

said string handle free end together in overlying relation

2,899,040
ELECTRICAL CONTROL SYSTEM FOR RACK TYPE PROOFER

Harold K. Smith and Charles G. Gibbons, Saginaw, Mich., assignors to Baker Perkins, Inc., Saginaw, Mich.

Application October 25, 1954, Serial No. 472,874
18 Claims. (Cl. 198—85)

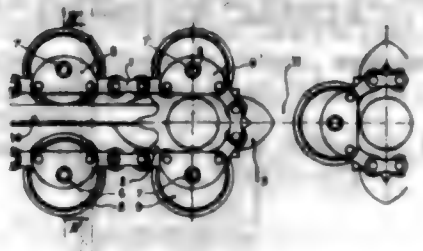


1. A proofer comprising a housing enclosing an upper rack conveyor, a lower rack conveyor, an elevator, a lowerator, a loader and unloader mechanism associated with said elevator, a driving motor individual to each of said conveyors, said elevator, said lowerator, and said loader and unloader mechanism, and means individual to each of said driving motors and driven thereby for operating said driving motors in sequential timed relation, said means individual to each of said driving motors controlling both the motor individual thereto and also one of the associated motors in a predetermined program of operations.

2,899,041
CONVEYORS FOR AUTOMOBILE VEHICLES

André Theon de Saint-André, Montreux-Clarens, Switzerland

Application January 17, 1957, Serial No. 634,788
Claims priority, application Switzerland January 20, 1956
11 Claims. (Cl. 198—183)

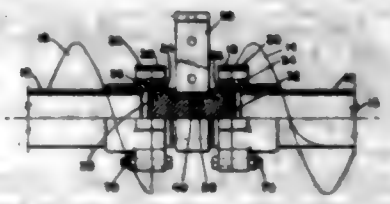


1. A horizontal conveyor which comprises, in combination, a frame, two driving sprocket wheels, having each the same even number of teeth, mounted in said frame at least at one end of the conveyor, said two wheels being identical, coaxial and in register with each other, two endless chains in mesh with said two wheels respectively, forming two horizontal portions respectively above and below the horizontal plane passing through the common axis of said sprocket wheels, each of said endless chains including fixation links at distances from one another equal to one half of the circumference along which said chain is being wound on the corresponding sprocket wheel supporting bars at right angles to said chains carried by said fixation links, at least two horizontal rails, parallel to said horizontal chain portions, supported by said frame, rollers freely rotatable about the axes of said bars, resting on said rails so as to run thereon, and a rigid shaft extending between said two sprocket wheels and fixed with respect thereto, at least a substantial portion of the outer surface of said shaft located opposite said supporting bars being shaped to correspond at least approximately with the surface enveloped by said bars in a reference system fixed with respect to said sprocket wheels so as to rotate with respect thereto.

2,899,042
COUPLING MEANS FOR SCREW CONVEYOR

Russell M. Wiseman, Mentor, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

Application June 3, 1957, Serial No. 663,266
4 Claims. (Cl. 198—213)

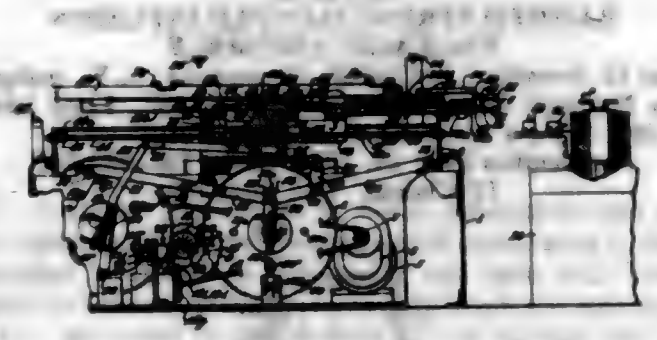


1. In a screw conveyor including a plurality of axially-aligned conveyor flights, an improved coupling means for the conveyor flights comprising outwardly extending flanges on the ends of the shafts of said flights, which flanges project axially as well as outwardly beyond said shafts, forming a shallow inner shoulder in said flanges, a solid spool-shaped coupling member disposed between the flanges of two of said shafts so as to be rotatable with said shafts, said member having outwardly extending flanges on each end thereof, said flanges corresponding to the flanges on the flight shafts, the area between said flanges on the spool being formed into a hardened bearing surface, said spool member having an axially extending portion on each end thereof, said portion fitting in aligning relationship into the shallow inner shoulder formed by the axially extending portion of the flanges on said flight shafts, and means for immovably securing the flanges on said flight shafts to the flanges on said coupling member.

2,899,043
AUTOMATIC MATERIAL HANDLING DEVICES

John R. Young, Hamilton, Ohio

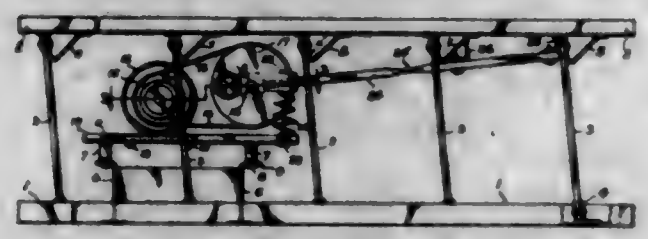
Application March 8, 1955, Serial No. 492,972
21 Claims. (Cl. 198—219)



1. In a device for feeding and taking work pieces to and from a machine, a main frame, an auxiliary frame mounted for vertical movement in said main frame, a carriage mounted for horizontal reciprocation in said auxiliary frame, means to move said auxiliary frame, means to move said carriage, work piece gripping means mounted on said carriage, and means to actuate said gripping means, the means for moving said auxiliary frame comprising a motor driven sprocket mounted in said main frame, a gear driveable by said sprocket, a crank-pin carried by said gear, a pitman arm engaging said pin, a pair of levers each of which are pivotally fastened at one end to said main frame and at the other end to said pitman arm, and means supporting said auxiliary frame from said levers.

2,899,048

2,899,044
VIBRATING CONVEYORS
Kenneth M. Allen and Chester H. Harper, Newberg, Oreg., assignors to Allen-Harper, Inc., Portland, Oreg., a corporation of Oregon
Continuation of application Serial No. 536,178, September 23, 1955. This application June 11, 1957, Serial No. 665,051
9 Claims. (Cl. 198—220)

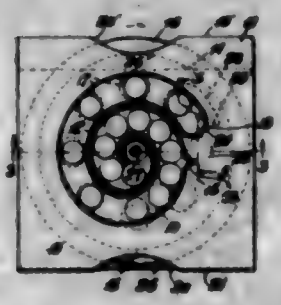


1. A vibrating conveyor comprising a conveying element having an upwardly facing surface for receiving material to be conveyed, frame means supporting said conveying element for oscillating motion having a major component parallel to said surface and a component normal to said surface which is small relative to said major component, a connecting rod extending in the direction of oscillating motion of said conveying element and having one end connected thereto, bearing means carried by the other end of said rod, and unbalanced rotor means journaled in said bearing means for rotation about an axis at right angles to said connecting rod, resilient means for supporting said bearing means and said other end of said rod to provide for substantially free oscillation of said bearing means in a direction at right angles to said connecting rod and to said axis and to provide for the transmission of reaction forces between said rotor means and said conveying element longitudinally through said connecting rod, motor means, means separate from said conveying element and said bearing means for supporting said motor means, and flexible driving means between said motor means and said rotor means to drive said rotor means and cause said rotor means to oscillate said conveying element without imparting substantial oscillating motion to said motor means or said frame means.

2,899,045
BANDED STRING HANDLE INFUSION PACKAGE ASSEMBLY
Hans O. Iruecher, Uniondale-Hempstead, N.Y., assignor to National Tea Packing Company, Inc., Long Island City, N.Y., a corporation of New York
Application May 14, 1956, Serial No. 584,567
10 Claims. (Cl. 206—5)

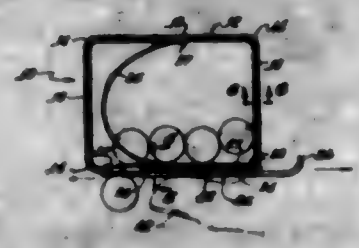
1. A banded package assembly comprising in combination with a flattened filled infusion bag having a string handle anchored at one end thereof to a closure seam of the bag, said string handle having a mid-portion thereof encircling the bag in a string non-tangling condition, a web strip having a length in excess of the wound distance thereof about the bag, said web strip having a fold across the mid-portion thereof with the bag position in the fold, side portions of the web strip extending from said fold overlying the bag encircling string handle, end portions of said web strip with a free end of the said string handle free end together in overlying relation providing a finger grip extension, the bag being positioned for sliding movement between said web strip side portions for separation therefrom, said separated web strip forming a looped band tag terminating the string handle.

2,899,046
SPIRAL ONE-AT-A-TIME DISPENSER
Frank G. Cox, Jr., Philadelphia, Pa.
Application November 5, 1957, Serial No. 694,573
7 Claims. (Cl. 206—42)



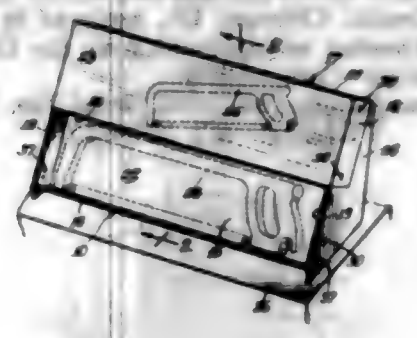
1. In a dispenser, a transparent magazine, a spiral passage in said magazine containing the objects to be dispensed the turns of which lie in a single plane, a manually rotatable discharge assistant closing the bottom of said spiral passage and thinner than the thickness of the objects, pockets in said discharge assistant arranged in a circle corresponding to the curvature of a part of said spiral passage, a base beneath said discharge assistant and a dispensing aperture in said base cooperating with one position of said pockets.

2,899,047
DISPENSING PILL BOX
Robert E. Butner, Hollywood, and Olive M. Young, Los Angeles, Calif.
Application December 6, 1957, Serial No. 701,251
8 Claims. (Cl. 206—42)



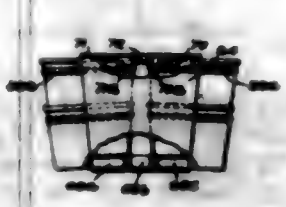
1. An improved dispensing pill box, comprising closed together upper and lower complementary box sections having certain opposite edge portions forming a slot extending along one side of the box, said box sections forming an opening through said side and sized for spilling pills one at a time from the box interior to the exterior, means including a closure placed in the slot and extending both inside and outside of said certain edge portions in overlapping relation therewith and in covering relation with said opening for guided manual retraction along said slot exposing said opening to the box exterior while remaining retained in said slot by said edge portions, and a wire spring carried by the box urging said closure into covering relation with said opening said spring being anchored to said means and to a portion of the box remote from said means, said spring having a bowed portion all of which extends closely adjacent the inner face of one of said box sections in all positions of said closure, whereby pills packed in the box adjacent the spring and

2,899,046
DISPLAY CARTON
Raymond C. Dreier, Chicago, Ill., assignor to Dreier Brothers, Inc., Chicago, Ill., a corporation of Illinois
Application December 24, 1956, Serial No. 630,184
6 Claims. (Cl. 206—45.24)



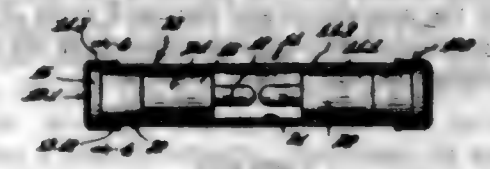
1. A display carton package comprising a carton having telescoping bottom and cover sections each equipped with side and end walls, a pair of generally planar support legs within said carton each provided with a straight bottom edge and an inclined forward edge having intermediate the ends thereof an inwardly extending slot for receiving a side wall of said cover section therein when said sections have been separated, the distance between each of said slots along said inclined edge and the upper end of the respective legs being no greater than the inner width of said cover section for insertion of that edge portion of the legs thereinto, the distance between each of said slots along said inclined edge and the lower edge of the respective legs being slightly greater than the width of said bottom section for securance of that edge portion of the legs to the end walls of the bottom section, with corresponding side walls of the cover and bottom sections in parallel adjacency along each slot.

2,899,049
OPEN-ENDED CARTON FOR PACKAGING PAPER CUPS AND OTHER ARTICLES
Harold Grinspoon, Springfield, Mass., assignor to Mold-Carton Corporation, Springfield, Mass., a corporation of Massachusetts
Application September 1, 1955, Serial No. 531,906
2 Claims. (Cl. 206—65)



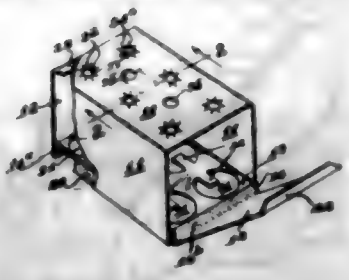
1. In combination: a pair of articles having upwardly projecting top rims and downwardly projecting bottom rims; and a carton comprising a continuous band having open ends through which said articles may be inserted and having a top wall overlying said top rims and a bottom wall underlying said bottom rims, means on said top wall engaging said top rims and resisting removal of said articles through said ends, and a first and a second flap projecting upward from said bottom wall and disposed in line with one another in the direction of insertion of articles into said open ends, said flaps having adjacent inside edges each engaging inside the bottom rim of one of said articles to prevent removal of the articles through said open ends, and a third flap disposed in line with and between said first and second flaps, said third flap having two side edges each engaging outside the bottom rim of one of said articles.

2,899,050
RADIATIONPROOF PACKAGE FOR CRYSTAL DIODES
Ralph B. Collins, Jr., Newburyport, Mass., assignor to Microwave Associates, Inc., Burlington, Mass., a corporation of Massachusetts
Application February 27, 1957, Serial No. 642,728
3 Claims. (Cl. 206—65)



1. A device for packaging and shielding against electromagnetic radiation a pair of electronic apparatus such as two crystal diodes each having a flange near one end, comprising: a smooth tube of yielding material having a layer of metal on the outside, being open at both ends and at least twice as long as the apparatus, and having its inner surface substantially mated to the outer surface of the apparatus, and having substantial uniform thickness such that its annular end surfaces are at least as wide as said flanges and such that the flange of the one apparatus abuts one end of the tube and the flange of the other apparatus abuts the other end of the tube when both apparatus are inserted therein; and two detachable metal caps fitting each flange and the tube such that the tube ends and caps are identical and one or both apparatus can be locked by the flanges between the ends of the tube and the metal caps; whereby either a single or both apparatus can be completely shielded and securely packaged.

2,899,051
CARRIER FOR BOTTLES AND OTHER CONTAINERS
Herbert A. Barnby, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application July 10, 1957, Serial No. 671,844
4 Claims. (Cl. 206—65)



1. A carrier for bottles or other containers, said carrier formed of foldable sheet material comprising a blank including a horizontal top panel and side wall panels folded to extend vertically downward from the side edges of the top panel to the bottom of the carrier, the end edges of the blank forming bottom edges of the carrier, and a second blank comprising a horizontal spacer panel and end wall panels, the spacer panel being spaced above the bottom of the carrier, the said second blank being folded downwardly at the ends of the spacer panel to extend downward to the bottom of the carrier and folded at the bottom of the carrier to extend vertically upward to the top of the carrier, thereby providing two-ply end wall strips extending from the spacer panel to the bottom of the carrier and single-ply end wall panels extending from the spacer panel to the top of the carrier, the said second blank having strip portions folded vertically downward from the side edges of the spacer panel and forming side strips extending to the bottom of the carrier, the said side wall panels overlying said side strips, means for adhering the side wall panels to said side strips, the end wall panels being formed at their upper edges with end strips

folded inwardly and attached to the top panel, the spacer panel being formed with openings therethrough to permit assembly of the carrier with a group of containers, the top panel being formed with openings in vertical register with said first mentioned openings, to receive the neck end portions of the containers, said carrier being adapted for assembly with a group of the containers by a vertical downward movement by which the spacer panel is telescoped with the containers and the neck ends of the containers are protruded through the openings in the top panel and held within the top panel.

2,899,652

CALCIUM CARBIDE

Robert Parmelee Van Ness, Murray Hill, N.J., assignor to Air Reduction Company, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Application October 2, 1957
Serial No. 687,626
2 Claims. (Cl. 206—84)

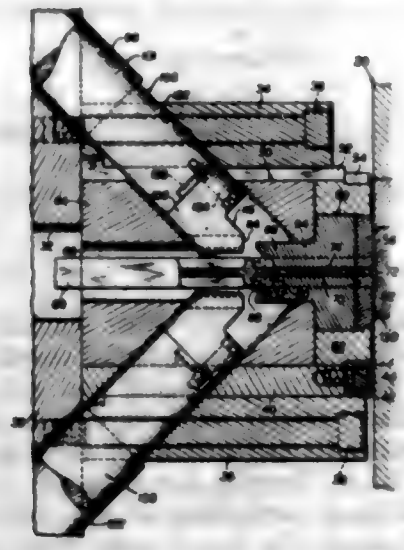
2. A unit for the safe handling and storage of calcium carbide comprising a sealed container, finely divided calcium carbide packed in said container, the carbide particles being of a fineness to pass through a 20-mesh screen, solid carbon dioxide in an amount sufficient to supply a volume of carbon dioxide gas ranging from two to four times the volume of the free air space within said container, a maximum amount of acetylene generated from said calcium carbide which is less than 1% of the gaseous mixture within said container, and said solid carbon dioxide ranging from about 0.05% to 0.60% of said calcium carbide by weight.

2,899,653

PRODUCTION OF SHAPES OF VARYING CROSS-SECTION

William L. Govan, Hicksville, N.Y., assignor to Baldwin-Lima-Hamilton Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Application March 17, 1959, Serial No. 799,965
5 Claims. (Cl. 207—2)



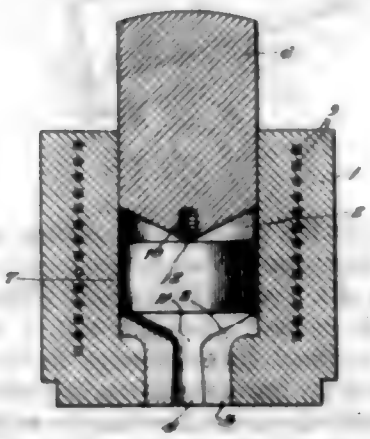
1. The method of extruding material through a passage having an entrance orifice and an enlarged terminal chamber at the discharge end, comprising the steps of extruding said material through said passage with the terminal chamber being open at its discharge side to form a shank travelling freely through said enlarged chamber to protrude therefrom, gripping said protruding shank to stop it from moving further out of said chamber, simultaneously closing said discharge side of the chamber around said protruding shank, continuing the extrusion operation to fill said chamber with material and thus form an enlarged upset portion on said shank, releasing said shank and opening said chamber again, and repeating said steps until the shank has reached a predetermined length and a desired number of spaced upset portions have been formed thereon.

2,899,654

REFRACTORY DIE FOR EXTRUDING URANIUM

Edward C. Crouch, Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application October 30, 1944, Serial No. 561,006
7 Claims. (Cl. 207—17)



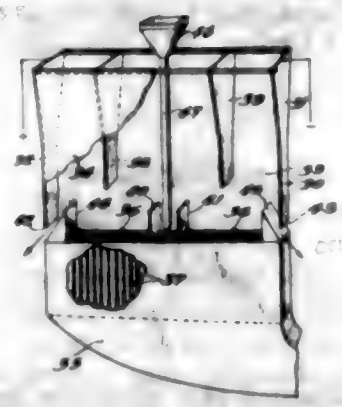
1. A die for extrusion of metals, said die being formed of a refractory complex oxide having the composition $M_mO_nR_xO_y$, where M is a divalent metal of the group consisting of magnesium, zinc, manganese and iron, R is a member of the group consisting of aluminum, chromic chromium, ferric iron, and manganic manganese, and m, n, x and y are whole numbers.

2,899,655

ELECTROSTATIC METHOD AND APPARATUS FOR BENEFICIATING MINERALS

Ira M. Le Baron, Evanston, Ill., assignor to International Minerals & Chemical Corporation, a corporation of New York

Application September 26, 1956, Serial No. 612,310
11 Claims. (Cl. 209—127)

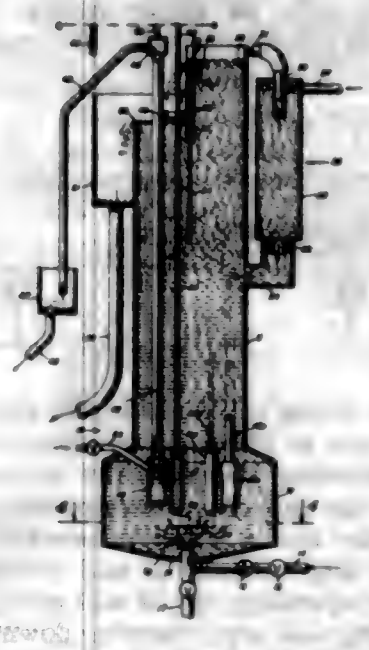


1. A method of separating relatively non-conductive materials which comprises introducing relatively uniform particle size material having excess moisture for effective electrostatic separation into a warm gas stream flowing vertically upward at a rate sufficient to fluidize said particles, directing the gas stream flowing from the fluidized particles vertically upward through a zone of larger cross sectional area between spaced electrodes of opposite charge in a path normally out of contact with said electrodes, whereby the gas velocity is reduced and dry entrained particles are held in a relatively rough unstable suspension, and particles of like electrical charge are caused to accumulate adjacent the electrode of opposite charge, and separately collecting the particles accumulating adjacent each of said electrodes.

2,899,056
HYDRAULIC CLASSIFICATION OF SOLIDS

Robert D. Evans, Pierce, Fla., assignor to The American Agricultural Chemical Company, New York, N.Y., a corporation of Delaware

Application March 11, 1957, Serial No. 645,214
11 Claims. (Cl. 209—158)

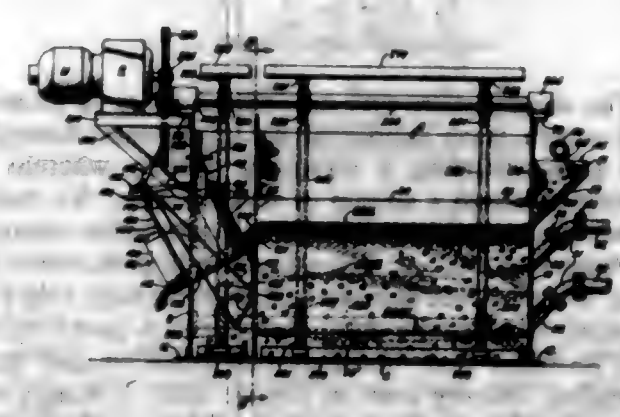


1. Hydraulic sizing apparatus comprising, in combination, upright tank means adapted to contain a column of liquid and having overflow means at a predetermined upper level thereof, means opening into the tank means at a position therein which is spaced below the top thereof for introducing feed pulp of particles to be sized, means at the foot of said tank means for introducing a flow of liquid to effectuate hindered settling of solid particles within the liquid of said column, for accumulating faster-settling particles at the foot of the tank means, and siphon discharge means opening at its lower end into the tank means at said foot thereof and extending upward therefrom for removal of pulp of particles accumulated by hindered settling, said tank means including a horizontally enlarged tank portion at the foot thereof and surrounding said lower end of the siphon discharge means and said liquid introducing means, to provide a lower rise velocity of liquid in said portion than in tank regions above the same.

2,899,057
HEAVY MEDIA SEPARATOR APPARATUS

William C. Menzies, Wyoming, Pa.

Application October 28, 1957, Serial No. 692,600
8 Claims. (Cl. 209—172.5)

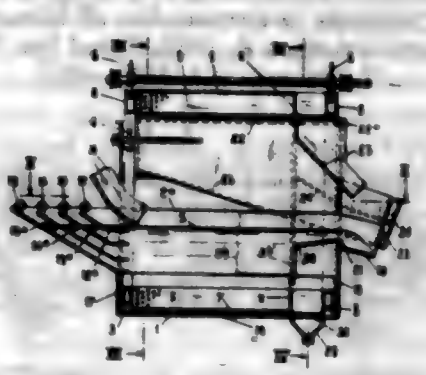


1. An apparatus for the continuous heavy-medium separation of mixed materials of different specific gravities comprising an elongated receptacle having upstanding side walls and opposed end walls, means to feed and maintain a flow of said medium and said materials across said receptacle, said receptacle having longitudinal dividing member forming two longitudinal chambers, one of said chambers being provided with a first flight conveyor system to remove the heaviest of said materials by movement longitudinally of said one chamber, means to admit the materials of intermediate specific gravity to the other of said chambers, a second flight conveyor system in said other chamber to remove said intermediate materials by longitudinal movement in said other of said chamber, means to remove the lightest and buoyant of said materials from said one chamber, said last named means comprising a trough member positioned in and through said second chamber and in line with said flow of said medium, and driving sprockets mounted in each corner of said receptacle, said first and second conveyors being mounted in driving relationship with said sprockets, said conveyor systems being arranged for movement in a direction right angularly to the direction of flow of said medium and materials.

2,899,058
APPARATUS FOR SEPARATING GRANULAR MATERIALS HAVING DIFFERENT SPECIFIC GRAVITIES BY MEANS OF A LIQUID

Klaas F. Tromp, Bilthoven, Netherlands

Application September 23, 1957, Serial No. 685,531
Claims priority, application Great Britain November 5, 1956
5 Claims. (Cl. 209—172.5)



1. Apparatus for separating granular material having different specific gravities by means of a suspension, comprising, in addition to a cylindrical trough, a bladed drum extending through practically the entire length of the trough and mounted for coaxial rotation therein so as to just clear the cylindrical wall thereof, the front portion of said drum preferably being provided with a substantially impervious shell and the rear portion thereof being open, the trough being provided, in addition to two suitably spaced longitudinal walls secured to its front and rear walls and defining a separating chamber, with means for supplying the material to be separated and means for supplying suspension to said chamber at the front end thereof, and with a shoot in the rear wall of the trough for discharging the surface layer of the suspension together with the floating fraction of the said material, wherein the bottom of the trough is provided, close to the rear wall of the trough, with an outlet opening covered by a sieve just cleared by the blades of the rotary drum.

2,899,059
VIBRATING SCREENS

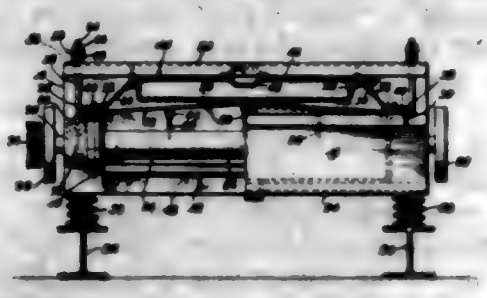
John J. Schroth, Doylestown, Pa., assignor to Link-Belt Company, a corporation of Illinois

Application February 27, 1958, Serial No. 717,913
18 Claims. (Cl. 209—403)

2. A vibrating screen comprising a box having spaced longitudinally extending side walls, means defining a bearing surface extending longitudinally along each of

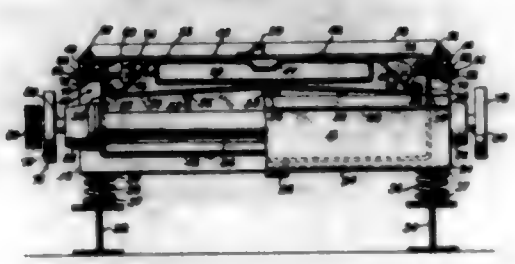
of said motor to drive the output shaft in one direction large portion of the pulp stock supply to be directed onto

said side walls, a screen cloth having longitudinal edges overlying said bearing surfaces, an edge element secured along each of said longitudinal edges, said edge elements projecting from said screen cloth in a direction away from the associated bearing surface, a cover assembly extending transversely between said edge elements on the side of said screen cloth opposite from said bearing



surfaces, clamping means on said box operable to urge said cover assembly toward said bearing surfaces, and means on said cover assembly engageable with each of said edge elements to clamp said screen cloth to the bearing surfaces and to concurrently force said edge elements laterally apart to apply a transverse tensioning force to said screen cloth when said clamping means is operated to urge said cover assembly toward said bearing surfaces.

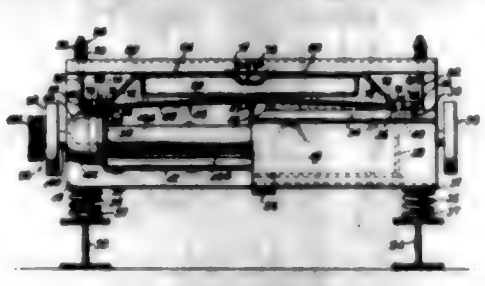
2,899,860
VIBRATING SCREEN
John J. Schroth, Doylestown, Pa., assignor to Link-Belt Company, a corporation of Illinois
Application August 8, 1958, Serial No. 753,937
8 Claims. (Cl. 209—403)



1. In a vibrating screen the improvement comprising a pair of laterally spaced longitudinally extending side walls, a cover substantially closing the space between the tops of said side walls, a pair of longitudinally extending skirts depending from the underside of said cover with each of said skirts having a free longitudinal edge spaced laterally from a respective one of said side walls, a screen cloth positioned between and attached to the free longitudinal edges of said skirts, and means connected to each of said skirts for urging the same towards its respective side wall to spread apart said free longitudinal edges and to tension the screen cloth positioned therebetween.

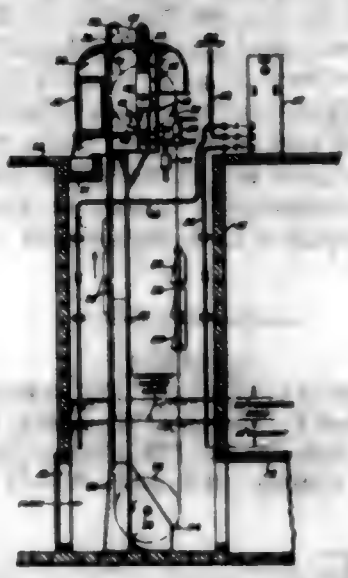
2,899,861
VIBRATING SCREEN
John J. Schroth, Doylestown, Pa., assignor to Link-Belt Company, a corporation of Illinois
Application August 8, 1958, Serial No. 753,910
5 Claims. (Cl. 209—403)

3. In a vibrating screen assembly, the improvement comprising a screen box having laterally spaced side walls each provided with an upwardly facing bearing surface extending longitudinally of said screen box, a substantially rigid screen panel spanning said side walls and including a plurality of transversely disposed stringers spaced longitudinally of said screen box with the opposite end portions thereof overlying said bearing surfaces, a strip of resilient cushioning material disposed along each side edge of said screen panel and having a plurality of openings through which the corresponding end portions of said stringers are passed, a rigid guide strip disposed along each side edge of said screen panel and secured to the corresponding end portions of said stringers laterally outwardly of the corresponding cushioning strip, said guide strip having a generally vertical guide surface facing laterally inwardly and projecting above said cushioning strip, an upper member positioned in overlying spaced relationship with said screen panel, said



upper member having two downwardly directed side portions each formed to provide a downwardly facing bearing surface extending longitudinally of said screen box and engaging the top of a corresponding one of said cushioning strips and a laterally outwardly facing surface extending longitudinally of said screen box and engaging the corresponding one of said guide surfaces, and means for urging said upper member downwardly toward said bearing surfaces to apply a clamping force to said cushioning means through said downwardly directed side portions.

2,899,862
DRIVE FOR WATER INTAKE SCREENS
Ward J. Hescock, Chicago, Ill., assignor to Link-Belt Company, a corporation of Illinois
Application May 9, 1957, Serial No. 658,099
11 Claims. (Cl. 210—97)

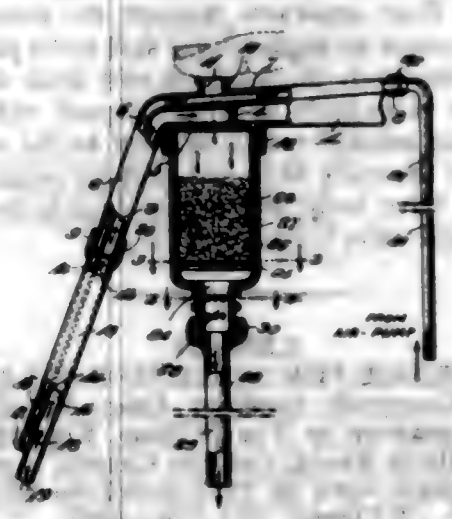


1. The combination with an endless series of interconnected screen trays supported for movement through a closed path including a screening portion wherein the trays extend across a stream of flowing water for removing trash from the stream, and spray means for removing trash from said trays at a location in said path above said stream, of a drive for moving said trays through said path, comprising a reversible drive motor, and a speed reducer having an input shaft drivingly connected to said motor for rotation thereby and an output shaft drivingly connected to said trays for moving the latter, said speed reducer having two gear trains between said input and output shafts with one of said trains having an even number of gears therein and the other of said trains having an odd number of gears therein, means selectively actuating said gear trains in accordance with the direction of rotation

wardly into said tank with the peripheries of said disks opposite ends of the filter apparatus and terminating with-

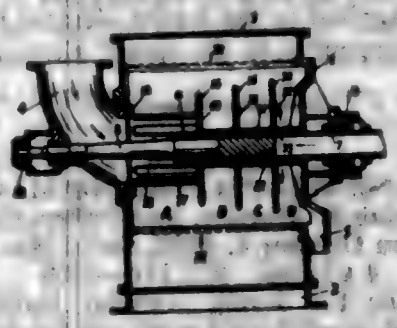
of said motor to drive the output shaft in one direction only and through the selected gear train and means for controlling the direction of the drive motor rotation in response to the difference in the levels of the water on opposite sides of the screen trays in said screening portion.

2,899,863
AQUARIUM CLEANER
Weldon T. Ellis, Jr., Arlington, Va.
Application June 17, 1955, Serial No. 516,144
2 Claims. (Cl. 210—169)



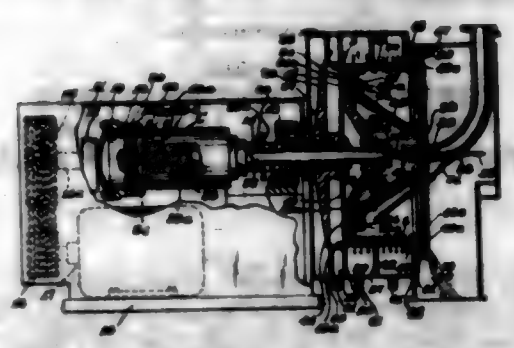
1. An aquarium cleaner comprising an angular elongated rigid one piece handle having an end portion to be manually held in the operation of the cleaner, said handle having a pair of bores therein each closed at one end and having an open end with the open ends of said bores being at opposite ends of said handle to one another and both bores being in communication adjacent the open end of one of said bores, and the closed end of the other of said bores, means providing air under pressure to the opening end of the other of said bores, an annular internally threaded flange provided on said handle at said end portion to be manually held, said handle having an external opening placing said first mentioned bore closed end in communication with the area within said flange, an open top container having external threads in threaded engagement with said flange, filtering material positioned within said container, and said container having a bottom outlet opening.

2,899,864
ROTARY PULP SCREENS
Ben Cowan and Elijah Cowan, Montreal, Quebec, Canada
Application October 24, 1955, Serial No. 542,360
5 Claims. (Cl. 210—219)



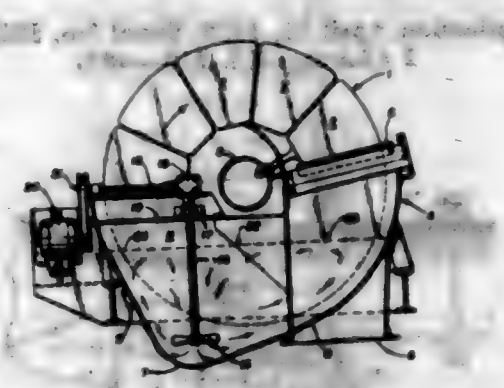
1. In a rotary pulp screening machine including a screen and a rotary impeller, a pulp supply inlet located axially with respect to said impeller, said impeller being sectionalized along its length by baffles set transversely of the axis of the impeller, an axial sleeve in the first section of the impeller, said sleeve being approximately the same diameter as the said axial pulp supply inlet, said sleeve having a series of longitudinal slots allowing a large portion of the pulp stock supply to be directed onto said screen, the said baffles having a series of apertures through which the remainder of the pulp stock from said sleeve passes into the various sections of the impeller to spread the pulp stock over a greater area of the screen.

2,899,865
CENTRIFUGAL MACHINE
Henry Francis Irving, Saginaw, Mich., assignor to Baker Perkins, Inc., Saginaw, Mich.
Application December 13, 1954, Serial No. 474,940
12 Claims. (Cl. 210—376)



1. In a centrifugal machine, a separating drum and end wall therefor, means for moving one of said end wall and drum axially relative to the other, means for revolvably supporting said drum, an imperforate distributor shell disposed in concentric relation with said drum mounted for rotation therewith and having a tapering interior surface with its end of largest diameter spaced from said end wall to form a feed passage therebetween, means revolving said drum and end wall in unison, means feeding a mixture comprising liquid and solid components to the opposite end of said distributor, means including screening spaced inwardly from said tapering interior surface of the shell for pre-draining liquid components from said mixture in the distributor shell and channeling them through said distributor shell to the face of said end wall remote from the distributor shell, and means exerting a force to move said end wall rapidly forwardly removing said force at the end of the forward travel of the wall to permit it to return slowly under pressure of the solids congregating in said feed passage so that the speed of the return stroke is in direct ratio with the rate of feed.

2,899,866
ROTARY VACUUM FILTER
Clarence J. Peterson, C. Lynn Peterson, and Robert J. Mattison, Jr., Salt Lake City, Utah, assignors to Peterson Filters and Engineering Company, Salt Lake City, Utah, a corporation
Application October 27, 1955, Serial No. 543,072
1 Claim. (Cl. 210—383)



A rotary vacuum filter comprising a slurry tank having end walls and downwardly converging front and rear walls to form a closed bottom, a horizontal shaft rotatably mounted relative to said end walls, a plurality of filter disks mounted on said shaft and extending down-

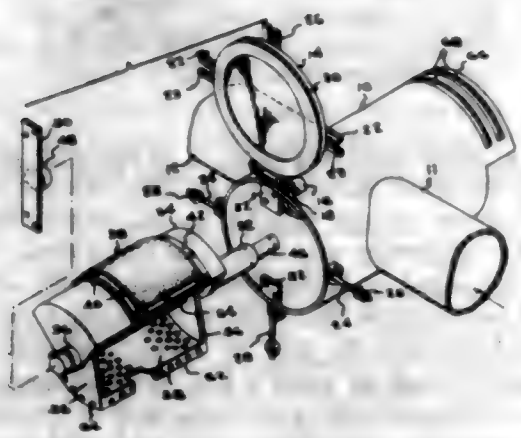
edge thereof positioned adjacent to and spaced slightly

2,899,872

each side edge of said screen panel and having a plu- gear trains in accordance with the direction of rotation

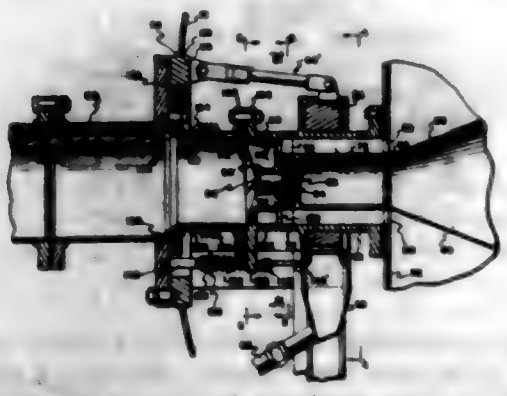
wardly into said tank with the peripheries of said disks closely adjacent the downwardly converging front and rear walls, an impeller shaft positioned between adjacent disks and extending from a location adjacent the bottom of the tank to a position above the normal level of the slurry normally in said tank, means to rotatably support said impeller shaft from a support above the level of said slurry including bearing means, an impeller on said shaft, and means to drive said impeller shaft in a direction to force the slurry axially away from the lower end of said shaft to agitate the slurry, and means to rotate said filter disks in an upward direction adjacent said impeller shaft.

2,899,067
THREE-WAY CONTROL VALVE
Clifton H. Pearson, Imperial, Tex.
Application April 5, 1957, Serial No. 650,932
8 Claims. (Cl. 210—390)



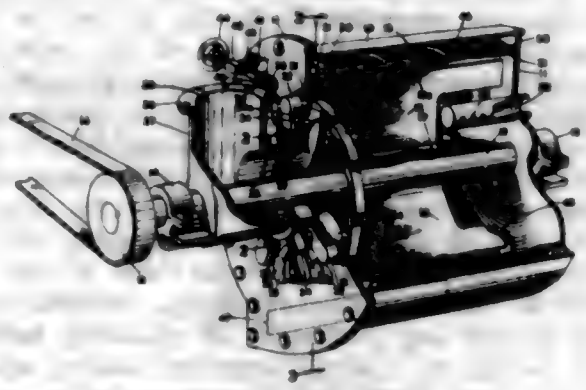
1. A valve comprising: a housing lying transversely of the path of the flow to be controlled, and having, in angularly spaced relation, an inlet and an outlet; a strainer and a gate transversely curved in concentric relation to the housing and mounted in the housing for swinging movement independently of each other about a common axis extending perpendicularly to said path of flow, said strainer and gate being angularly spaced about said axis within the housing and being selectively swingable into position about said axis within the housing across said outlet, the gate including gasket means sealably engaging said outlet when the gate is in said position; and means connected with the strainer and gate for operating the same to selected positions.

2,899,068
PRESSURE FILTER CONSTRUCTION
Donald L. King and Kent L. Davis, Salt Lake City, Utah, assignors, by mesne assignments, to The Elmco Corporation, Salt Lake City, Utah, a corporation of Delaware
Application April 21, 1955, Serial No. 502,874
2 Claims. (Cl. 210—402)



1. An industrial filter including a shell; a rotary filter apparatus within the shell; a trunnion projecting from opposite ends of the filter apparatus and terminating within the shell; a trunnion bearing for each of the trunnions positioned within the shell; means supporting each of the trunnion bearings within the shell and from the wall of the shell; drive means for the rotary filter including a drive shaft projecting into the shell; means rotatably supporting the drive shaft from the wall of the shell; cooperating spline means on one of the trunnions and on the drive shaft; a filter valve supported at the end of the other of the trunnions; said filter valve including a valve plate secured to rotate with the said other trunnion and providing ported communication with the interior of the filter apparatus through the trunnion; rigid axial shaft means projecting from said valve plate; a non-rotatable valve body mounted on said axial shaft means whereby the valve body is axially aligned with the valve plate; flexible conduit means secured to the wall of the shell; and to the valve body and resilient means normally urging said valve body into mating face to face engagement with said valve plate.

2,899,069
DEVICE FOR SCREENING PULP
Alexander Greswolde Sandison, Owen Sound, Ontario, Canada, assignor to The William Kennedy & Sons Limited, Owen Sound, Ontario, Canada, a corporation
Application April 18, 1957, Serial No. 653,553
6 Claims. (Cl. 210—405)



1. In combination with a device for screening pulp, the device including a screen element of the shape of a surface of revolution; a centrifugal impeller mounted for rotation within one end of the screen element about an axis coaxial with the screen element, means to deliver pulp to the impeller and a series of circumferentially spaced guide vanes positioned about the periphery of the impeller to define convergent outlet passages for the pulp acted on by the impeller, the vanes being directed so that the pulp passing through the outlet passages will be applied to the screen element in a direction substantially tangential to the screen element.

2,899,070
SAND AND GRAVEL DRYING MACHINE
Jeremiah T. Murphy, Sun Valley, Calif.
Application October 4, 1955, Serial No. 538,459
4 Claims. (Cl. 210—523)

1. A machine for drying granular material such as sand and gravel comprising a tilted pan having a flat floor and an upstanding rim, means rotatably mounting said pan around a tilted axis providing a lower portion to which liquid from material in said pan will drain by gravity and a higher portion from which liquid will drain to said lower portion, means for rotating said tilted pan about said tilted axis, means for continually loading wet material into said lower portion of said pan, a first non-rotatable baffle depending into said pan with the lower

able jaw through the stationary jaw structure and having spaced radially extending ridges on at least one of said

sleeve having a series of longitudinal slots allowing a of filter disks mounted on said shaft and extending down-

edge thereof positioned adjacent to and spaced slightly above said pan floor and being arranged angularly to the radial lines of said pan to pile up wet material and cause such piled up material to move by action thereon of said rotating pan in a direction across the radial lines of the pan, said first baffle serving to squeeze a portion of the liquid from said material, a second nonrotatable baffle depending into said pan and positioned adjacent to said pan floor and angularly to the radial lines of said pan to receive and pile up material leaving said first baffle, said second baffle being positioned to form a wedge with said

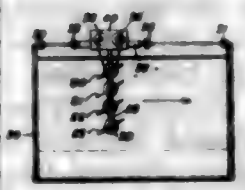
rim at said higher portion of said pan and at such an angle thereto as to move the piled up material toward the rim at said higher portion and to cause discharge thereof over the edge of said rim adjacent to the upper portion of said tilted pan by the rotation of said pan and the liquid removed by the squeezing action of said first and second baffles being directed to flow away from the discharge edge by the tilt of said pan and to return by gravity to said lower portion of said pan, and means located at the lower portion of said pan for continually withdrawing liquid removed from the material.

2,899,071

METHOD AND APPARATUS FOR ACCELERATING THE DEGREE AND RATE OF SEPARATION OF SOLIDS FROM LIQUIDS

Claude Bourain, Paris, France

Application November 21, 1955, Serial No. 547,950
Claims priority, application France November 25, 1953
7 Claims. (Cl. 210—527)



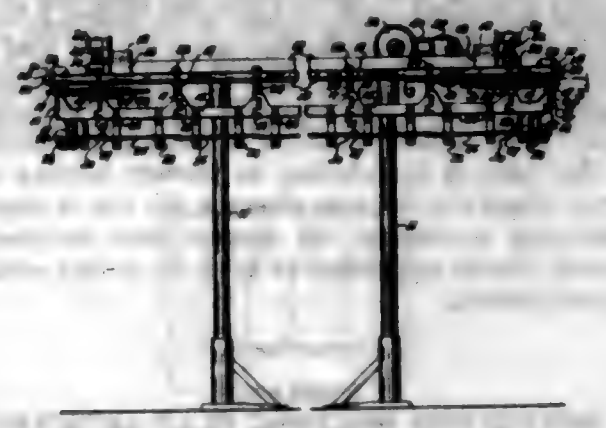
1. In apparatus for effecting the separation of solids from liquids in suspensions of the type wherein the solids have sufficient weight to eventually settle by gravity the improvement comprising a tank for confining a body of suspension fed thereto, said tank having a lower settled solids outlet and an upper effluent outlet, a plurality of imperforate blades, supporting means for the blades mounting all of the same at substantially the same acute angle and with the same pitch to the horizontal and at closely adjacent vertically spaced levels above the bottom of the tank and means for slowly horizontally displacing the supporting means and thereby the blades so that the latter always present during such horizontal displacement a downwardly facing surface which deflects the mass of suspension and exerts a downward component of force on solids and liquid, said blades being thin in cross section in relation to their extent in the direction of displacement and having a total surface area that is large in relation to the surface area of the suspension.

2,899,072

CONVEYOR RACKS

Morton A. Weiss, Springfield, N.J., assignor to White Machine Company, Inc., Kenilworth, N.J., a corporation of New Jersey

Application July 3, 1957, Serial No. 669,828
10 Claims. (Cl. 211—1.5)



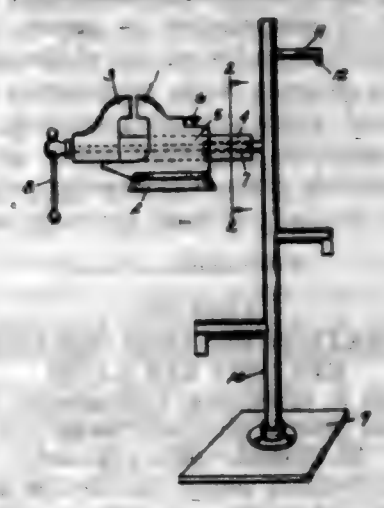
4. A conveyor rack for storing material subject to selection and removal therefrom comprising an endless track, a rack rail structure to carry stored material and adapted to be moved along and around the track, said rack rail structure comprising a series of frame members arranged in end to end relation, means to pivotally connect adjoining ends of said frame members to provide a continuous articulated assembly thereof, said pivotal connections terminating at their upper ends in trolley yokes straddling the track, said trolley yokes having traction rollers to ride upon the track, said trolley yokes and traction rollers being operative to suspend the rack rail structure from and for movement around the track, a rack rail section caried by each frame member, hanger members dependent from each frame member, said hanger members having outwardly offset upturned lower end portions to support a rack rail section carried thereby, said rack rail sections being also disposed in end to end relation with adjoining ends lapping one over the other, and the overlapping end of each rack rail section being chamfered whereby the end to end assembly of the rack rail sections provides a continuous slick rail adapted to permit unobstructed adjustable movement thereover of stored material carried thereby.

2,899,073

VISE STAND

Thomas G. Brown, Erie, Pa., assignor to Reed Manufacturing Company, Erie, Pa., a corporation of Pennsylvania

Application April 4, 1957, Serial No. 652,681
2 Claims. (Cl. 211—13)

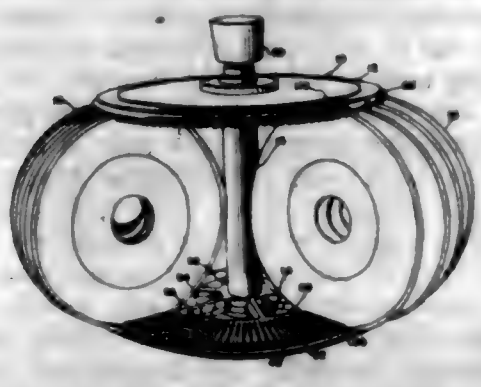


1. A stand for supporting machinists vises of the type having a movable jaw at the front of the vise carried by a channel shaped bar extending rearwardly from the mov-

apparatus within the shell; a trunnion projecting from rotatable baffle depending into said pan with the lower

able jaw through the stationary jaw structure and having a clamping screw threaded through the stationary jaw with the front end of the screw rotatably anchored in the front end of the movable jaw with the back end of the screw projecting to the back end of the bar between the sides of the channel, said stand comprising a supporting member, tubular arms projecting from the member with the outer ends open, each of said arms having a bore for slidably receiving the clamping screw of the vise to be supported thereon and providing the primary support for the vise, and a stop non-rotatably fixed on the arm and of a size to be slidably received between and to cooperate with the sides of the channel to prevent turning of the channel relative to the arm whereby the vise is supported in overhung relation to the support with the jaws and operating handle outermost so as to be readily accessible for manipulation.

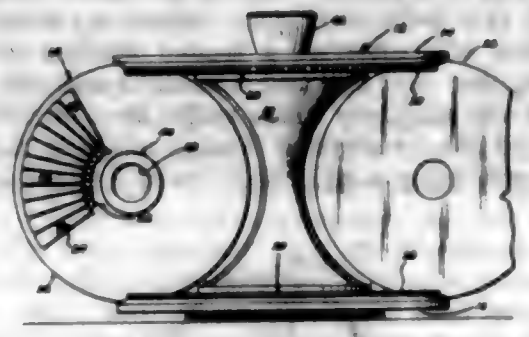
2,899,874
DEVICE FOR HOLDING FLAT ARTICLES OR THE LIKE
Harold R. Gulkison, Greensboro, N.C.
Application July 24, 1956, Serial No. 599,762
10 Claims. (Cl. 211—40)



1. In a device of the class described for holding substantially flat articles, a frame structure, said frame structure including spaced parallel plate elements, said elements having a plurality of aligned article-receiving grooves in their opposed surfaces, each pair of aligned article-receiving grooves being spaced apart a distance slightly greater than the width of an article being received therein, said article-receiving grooves extending from the edges of said elements inwardly therefrom to a point spaced from the edges thereof, and means carried by at least one of said elements adjacent its edge and restricting entrance of the grooves therein for retaining articles in aligned article-receiving grooves, said last mentioned means including a resilient strip carried on the edge of said element and restricting the entrance into each of the grooves of the element, said resilient strip being capable of compression to permit entry and removal of an article to and from one of the pairs of aligned article-receiving grooves while maintaining restriction of the other of said article-receiving grooves, said resilient strip being completely expanded when an article is in said article-receiving grooves to thereby retain the article in the aligned grooves without pressure on the article.

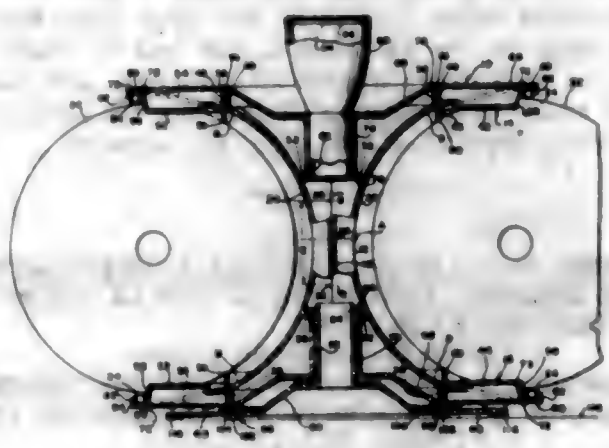
2,899,875
COMBINATION RECORD HOLDER AND RECORD LOCATOR
Harold R. Gulkison, Greensboro, N.C.
Application March 29, 1957, Serial No. 649,499
12 Claims. (Cl. 211—40)

1. An article locator device for use in filing flat disk-shaped articles such as phonograph records in an article holder; said article locator device being disk-shaped, said locator device also being substantially flat and having planar surfaces adapted to receive indicia, a plurality of spaced radially extending ridges on at least one of said planar surfaces, the surface between said ridges defining spaces for receiving indicia made by pencil or ink and identifying titles of articles filed in said holder and the



ridges providing an erasure guide to facilitate removal of the title identifying indicia, and indicia associated with each of the spaces between adjacent ridges for identifying positions of articles in said holder.

2,899,876
DEVICE FOR HOLDING FLAT ARTICLES OR THE LIKE
Harold R. Gulkison, Greensboro, N.C.
Application April 8, 1957, Serial No. 651,515
20 Claims. (Cl. 211—40)

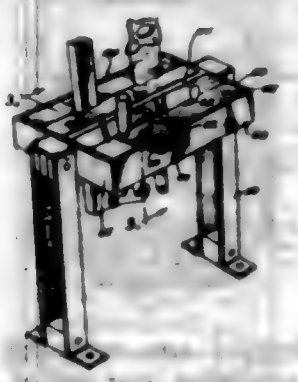


1. In a device of the class described for holding substantially flat articles, a frame structure, said frame structure including spaced parallel plate elements, said plate elements having a plurality of aligned article-receiving grooves in their opposed surfaces, said article-receiving grooves extending from adjacent the edges of said plate elements inwardly thereof, a strip made of a compressible resilient material and carried by at least one of said plate elements for restricting entrance to said aligned article-receiving grooves to thereby retain articles therein, said resilient strip being capable of compression in an area of one of said article-receiving grooves by insertion and removal of an article therefrom without disturbing restriction of adjacent article-receiving grooves, said resilient strip being completely expanded when an article is in said article-receiving grooves to thereby retain the article in the aligned article-receiving grooves without pressure on the article, means adjacent the edge of the plate element for receiving said resilient strip, said means for receiving said resilient strip including a flange provided on the edge of said plate element and spaced from the ends of the article-receiving grooves in the plate element and defining a groove on said plate element extending substantially transverse of the article-receiving grooves, said groove being of a width capable of receiving said resilient strip and said flange preventing said resilient strip from movement outwardly away from said article-receiving grooves when an article is removed therefrom.

2,899,881

carrier member on the striker, walls guiding said carrier

2,899,077
COMPRESSION HOLDER FOR ELONGATED OBJECTS
Louise Virginia Thomas, River Grove, Ill.
Application August 30, 1954, Serial No. 452,989
5 Claims. (Cl. 211—60)



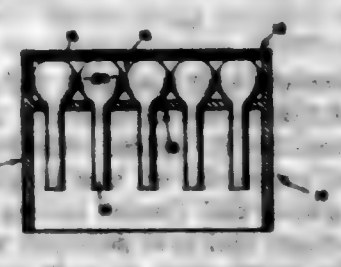
1. In a compression holder for elongated objects, opposed rigid spaced parallel members, at least one of which is covered with a cushioning material to substantially close the space between said rigid members, said cushioning material comprising a slab of cellular rubber-like material reinforced with spaced upstanding parallel ribs, said ribs being perpendicular to said parallel members and being made from a resilient material having a compression resistance greater than the compression resistance of the cellular material, thereby offering firm lateral holding pressure against objects inserted between said parallel members to hold the same without additional support.

2,899,078
DISPLAY STAND
Finn H. Magnus, Essex Fells, N.J.
Application December 3, 1954, Serial No. 472,820
3 Claims. (Cl. 211—60)

1. A display stand formed of paperboard material comprising a flat plate-like rectangular shaped body with an elongated slot centrally of the rectangular shaped body, a rack member having at least two angularly related edges and disposed rearwardly of the rectangular-shaped body at right angles thereto with the first edge coincident with one edge of said body to engage a supporting surface and hold said body generally upright, said rack member having a flange along a portion of the other of said edges extending through the slot in the rectangular shaped body and having a row of spaced openings therealong disposed outwardly of the front of said body for detachably receiving articles of merchandise in display position.

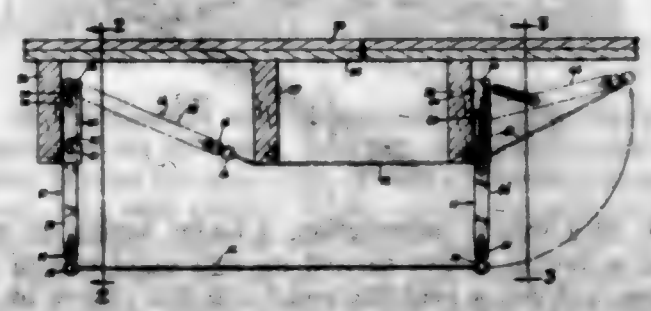
2,899,079
WASHING CLAMP
Benajah L. Davis, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
Application June 18, 1956, Serial No. 592,090
2 Claims. (Cl. 211—74)

1. In a washing clamp for washing laboratory flasks having enlarged lower portions and narrow necks, the combination comprising: an elongated, hollow, base section having spaced, opposed side walls, said base section being open at the top and the bottom; a cover hingedly connected to the upper edge of one of said side walls for pivotal movement about a hinge axis substantially coplanar with said upper edge, said cover being adapted to close off the open top of said base section, and said cover having perforations of small cross-sectional area therethrough so that the enlarged lower portions of the flasks may be supported by said cover and washing fluids may pass through said perforations; a planar rack supported



within said base section intermediate the top and bottom thereof, said rack having a series of laterally and transversely spaced openings therethrough, said openings being spaced substantially equal distances from each other; the upper surface of said planar rack being spaced from the planar lower surface of said cover a distance sufficient to permit snug reception of the enlarged portions of said flasks therebetween; said openings being of a cross-sectional area greater than the cross-sectional area of said perforations and being of a size sufficient to receive the elongated necks of said flasks therethrough, but of insufficient size to permit said enlarged portions of said flasks to pass therethrough.

2,899,080
RETRACTABLE CLOTHESLINE SUPPORT
James S. Markovic, Ironti, Minn.
Application July 9, 1954, Serial No. 442,281
3 Claims. (Cl. 211—119.17)

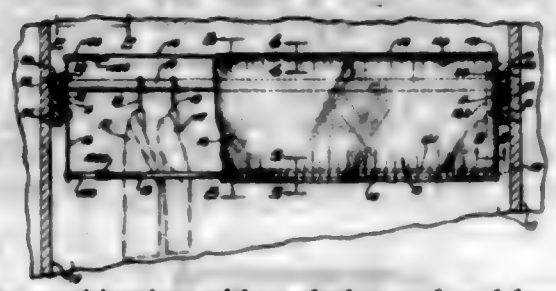


1. A retractable clothesline support comprising first and second pairs of upright, elongated supporting brackets, said pairs of brackets being adapted to be secured to the side faces of laterally-spaced ceiling joists, whereby their lowermost ends do not extend below the bottom edges of said joists, first and second U-shaped frames each comprising a horizontal cross-bar having a suspending arm secured to each end thereof, pivot pins pivotally suspending the arms of said first and second U-shaped frames from their respective first and second pairs of brackets, a plurality of clotheslines stretched between and secured to said crossbars, spring means connected to one of said U-shaped frames and to its respective supporting brackets and disposed in off-center relation to the frame supporting pivots, thereby to constantly urge said U-shaped frame into inoperative retracted position between adjacent joists, and whereby the other of said U-shaped members will be similarly swung upwardly into inoperative position between adjacent joists because of its connection with said first U-shaped frame through said clotheslines, and means for locking said U-shaped frames in downwardly extended operative positions, whereby the clotheslines are positioned below said joists.

forms for receiving the wheels of a vehicle thereon, a pair of spaced, parallel beams rigidly connecting the upper

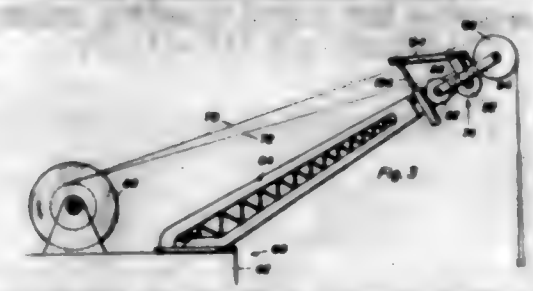
said parking areas including two endless belts running to said edge of said parking area at right angles thereto

2,899,681
CLOSET CLOTHES PROTECTOR
Irene H. Meyers, Livonia, Mich.
Application August 22, 1956, Serial No. 605,618
8 Claims. (Cl. 211—186)



1. In combination with a clothes rod and hanger rails supporting said clothes rod at each end thereof, a clothes protector mountable in spaced relationship over said clothes rod and supported on said hanger rails comprising a pair of spaced end frames having a ridge portion, sloping side portions and eave portions, a pair of brackets fixed in angular relationship to each other on each said hanger rail supporting said end frames centrally with respect to said hanger rod with the ridge portion of said end frames disposed thereabove, elastic ridge and eave members secured to and stretched between the ridge and eaves of said spaced end frames, and a dust cover including casings telescoped on said elastic ridge and eave members and said end frames, each of said brackets supporting said end frames including a pair of end portions having a re-entrant notch therein into which said end frames are retained under the tension of said elastic ridge and eave members when said end frames are positioned therein.

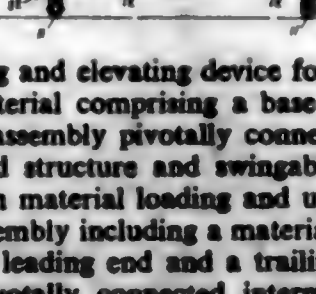
2,899,682
POWER LINE ATTACHMENT FOR SHOVELS
Norman F. Meloy, Nachos, Wash.
Application August 28, 1956, Serial No. 606,650
5 Claims. (Cl. 212—42)



3. In a shovel construction, a boom having an outer end, a double sheave carried by said outer end of said boom, a drum, a load line and a trip line carried by said drum, said load line and said trip line being entrained over said sheave, a power attachment for actuating said trip line independently of said load line, said power attachment including a first pulley carried by said boom intermediate said drum and said sheave, a second pulley, a mounting plate extending longitudinally of said boom, said mounting plate having a central pivot, said first and second pulleys being carried by said mounting plate on opposite sides of said pivot for rotation with said mounting plate, said trip line being entrained over said first and second pulleys, and remotely controllable power means connected to said mounting plate for rotating said mounting plate and said first and second pulleys to tension said trip line.

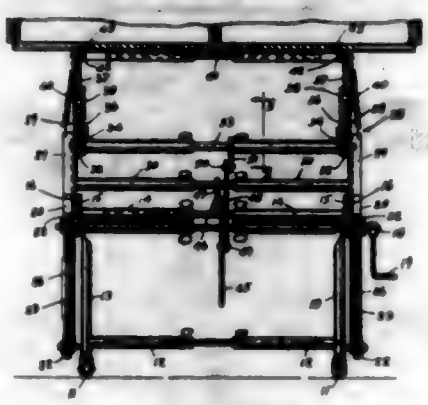
2,899,683
RETAINING MEANS FOR COUPLER CARRIER
Loree Elwyn Farabee, Groveport, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio
Application July 22, 1958, Serial No. 750,185
14 Claims. (Cl. 213—61)

1. In a support for the stem of a railway coupler, a striker, a carrier member, resilient means supporting said carrier member on the striker, walls guiding said carrier member for generally vertical movements relative to the striker, a hook shaped element carried by each end of the carrier member, means carried by the striker in abutting relation with lower ends of said resilient means, a web extending upwardly from each end of said means,



a horizontally disposed arm extending outwardly from each web, a link extending over one of said hook shaped elements and under one of said horizontally disposed arms, a link extending over the other of said hook shaped elements and under the other of said horizontally disposed arms, and said links being of such length as to retain said resilient means under compression.

2,899,684
HANDLING AND ELEVATING DEVICE FOR POSITIONING WALL AND CEILING BOARD
Howard D. Brunsmeier, Whiteland, and Adrian G. Mitchell, Morgantown, Ind.
Application September 13, 1956, Serial No. 609,619
7 Claims. (Cl. 214—1)



7. A handling and elevating device for positioning wall and ceiling material comprising a base structure, a normally upright assembly pivotally connected intermediate its ends to said structure and swingable about its connection between material loading and upright nailing positions, said assembly including a material supporting platform having a leading end and a trailing end, said platform being pivotally connected intermediate said ends adjacent the upper extremity of said assembly, and resilient means interconnecting the leading end of said platform and said assembly for biasing the leading end of said platform towards said base structure as said assembly swings from loading to nailing position.

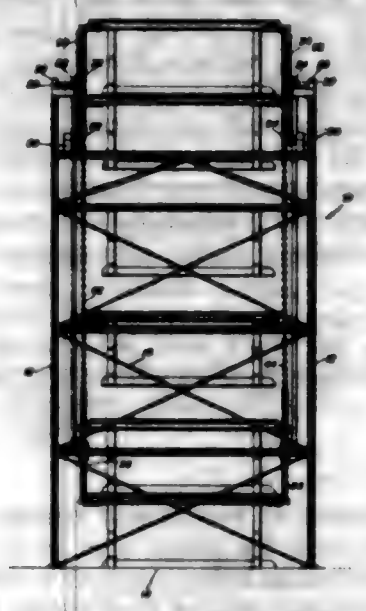
2,899,685
CAR PARKING TOWER
Pete J. Scott, Jackson, Miss.
Application May 22, 1956, Serial No. 586,428
1 Claim. (Cl. 214—16.1)

In a car parking tower having pairs of upper and lower sprocket wheels and a pair of drive chains trained about said wheels, a car carrying cage suspended between said chains, said cage including a pair of vertically disposed, spaced end frames, each of open form such that a vehicle may be driven therethrough, a horizontal lower frame assembly extending between and interconnecting said end frames, said lower frame including a central portion substantially midway between the opposite sides of said end frames mounted at its opposite sides by depressed plat-

bination a mechanically propelled vehicle, a power unit for driving the vehicle, a lifting mechanism mounted on bed thereof; roller means rotatably mounted on an end of said vehicle; a cable means connected between said

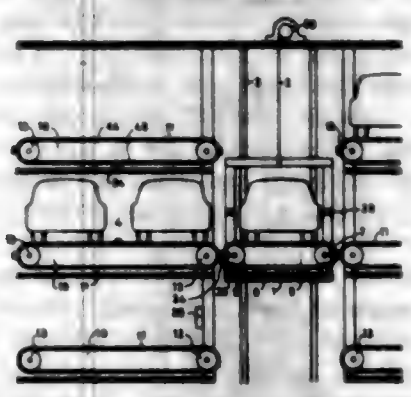
having enlarged lower portions and narrow necks, the frames in downwardly extended operative positions, whereby the clothestines are positioned below said joists.

forms for receiving the wheels of a vehicle thereon, a pair of spaced, parallel beams rigidly connecting the upper ends of said end frames and having opposite end portions



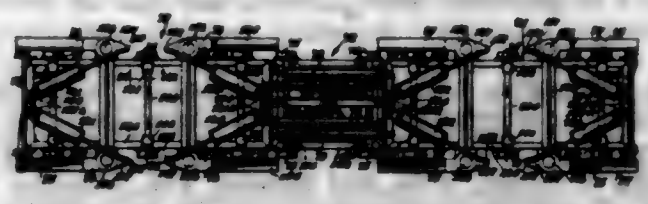
extending therebeyond, a tubular stub shaft fixed between each such end portion of the beams and projecting therebeyond, a support shaft journaled in each stub shaft and having an end portion projecting therebeyond, and a mounting member removably attached to said end portion of each support shaft attached to said drive chains for suspending the cage therebetween.

2,899,086
GARAGES FOR PARKING CARS AND IN PARTICULAR AUTOMOBILE VEHICLES
André Thoen de Saint-André, Montreux-Clarens, Switzerland
Application January 17, 1957, Serial No. 634,789
Claims priority, application Switzerland January 20, 1956
10 Claims. (Cl. 214—16.1)



1. A garage for parking cars which comprises, in combination, at least two substantially horizontal parking areas located at the same level at a distance from each other, each having a ground level area sufficient for parking at least one car thereon, a normally horizontal rectangular platform movable with respect to said parking areas, said platform having an area sufficient to receive a car entirely thereon, conveyor means mounted on said platform, said conveyor means including two parallel endless belts each running from one of the two longer sides of said platform to the other longer side thereof, each of said conveyor means being capable of supporting two coaxial wheels of a car placed on said platform with its axles parallel to the direction of displacement of said endless belts, said platform being dimensioned to fit between said two parking areas with said platform sides in close juxtaposition with the corresponding edges of said parking areas respectively, means for guiding said platform with respect to said parking areas into its active position where it fits between said parking areas, conveyor means carried by each of said parking areas including two endless belts running to said edge of said parking area at right angles thereto and each in line with one platform endless belt when said platform is located in said active position, a motor carried by said platform, coupling means between said motor and said platform conveyor means, two longitudinal shafts journalled on said platform, close to said edges thereof respectively, a sliding gear supported on each of said last mentioned shafts, coupling means interposed between said motor and each of said sliding gears, a parking area longitudinal shaft journalled on each of said parking areas close to said edge thereof, each of said last mentioned shafts being coupled with said conveyor means of the corresponding parking area, a gear wheel fixed on each of said two last mentioned shafts arranged to mesh with one of said sliding gears, respectively, for one position thereof along its shaft, control means for bringing one of said sliding gears into meshing engagement with the corresponding gear wheel, whereby the conveyor means of either of said parking areas can be coupled with said motor when the platform is in active position, control means for operating said motor, and means, responsive to movements of each of said parking area conveyor means, having its parking area shaft coupled with said motor through the corresponding gear wheel and sliding gear in mesh with each other, for automatically stopping said motor when said last mentioned conveyor means reach at least one predetermined position in the corresponding parking area.

2,899,087
AUTOMATIC PARKING SYSTEM
Dan Jacobsen, Clarks Summit, Pa., assignor to Cycon, Inc., Scranton, Pa., a corporation of Pennsylvania
Application April 19, 1957, Serial No. 653,804
13 Claims. (Cl. 214—16.1)



1. In combination with a vertically movable elevator platform having an upper face and two ends, a pair of parallel rails on the upper face of said platform extending between said ends thereof, loader means including roller wheels on said rails for supporting and moving an at least four-wheeled vehicle thereon, said loader means including a center dolly, a pair of end dollies each having frame means, two pairs of arms on the frame means of each of said end dollies articulable into substantial parallelism with and into a position substantially at right angles to said rails, first pneumatic means for articulating said arms, second pneumatic means for moving said end dollies toward and away from said center dolly, third pneumatic means for lifting the frame means of said end dollies above the level of said center dolly, means for sequentially actuating said first, said second and said third pneumatic means, means operatively connected with said center dolly for moving same along said rails, and electric means for actuating said last named means by remote control.

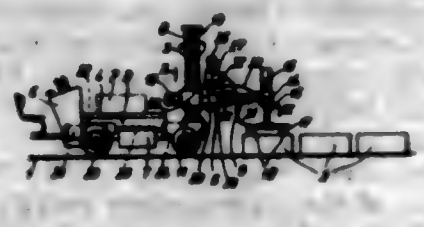
2,899,088
MOBILE LIFTING AND CONVEYING APPARATUS
Armand Corbin, Paris, France
Application May 14, 1957, Serial No. 659,017
Claims priority, application Germany May 15, 1956
8 Claims. (Cl. 214—75)

1. A mobile lifting and conveying apparatus, particularly suitable for the moving of cut stones having at least one substantially flat surface, comprising in com-

said sprocket within said carrier against rotation through- moving on the supporting portions of the fork to move

striker, a carrier member, resilient means supporting said frames mounted at its opposite sides by depressed plat-

bination a mechanically propelled vehicle, a power unit for driving the vehicle, a lifting mechanism mounted on the vehicle near its front end, a loading platform on the vehicle in the rear of said lifting mechanism, said lifting mechanism including a jib mounted for up and down movement as well as for horizontal swinging movement so as to extend with its free end forward in one position



and above said platform in another position, a driving transmission between said lifting mechanism and said power unit, a pneumatically operated load-gripping mechanism comprising at least one suction head carried at the free end of the jib, an adjustable suction pump operatively connected with said load-gripping mechanism and a driving transmission between the suction pump and said power unit driving the vehicle.

2,899,089
VEHICLE LIFT GATE ASSEMBLY
Fortunato S. Ajero, Galion, Ohio
Application November 4, 1957, Serial No. 694,428
11 Claims. (Cl. 214—77)

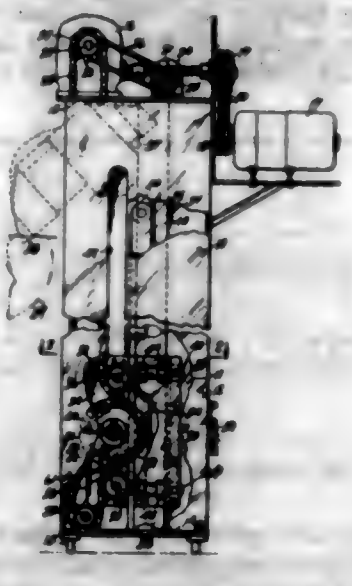
1. Apparatus comprising: a generally flat member; linkage for supporting said member including a lift arm pivotally attached with said member at one end, and link means connected with said member and arranged with said lift arm for cooperation therewith to maintain said member substantially horizontal during vertical movement thereof; a crank arm; means whereby said crank arm is arranged to rotate said lift arm; linkage actuating means including movable means arranged to turn said crank arm, further means arranged for guiding said movable means along a predetermined substantially linear path, power means connected with said linearly movable means for driving the same in either direction along said predetermined path, whereby upon movement of said linearly movable means in a first direction, said member moves towards a lowered position, and movement of said linearly movable means in an opposed direction moves said member towards a predetermined elevated position, said crank arm including means adapted to ride atop said linearly movable means and out of the path thereof upon said member reaching said predetermined elevated position, whereby said member is assuredly maintained in elevated position.

2,899,090
VEHICLE UNLOADING APPARATUS
Donald R. Holdren, West Liberty, Ohio, assignor to Holdren Brothers, Inc., West Liberty, Ohio, a corporation of Ohio
Application February 4, 1955, Serial No. 486,106
3 Claims. (Cl. 214—82)

1. An unloading apparatus for vehicles comprising, in combination, product moving means adapted to be mounted on the frame of a vehicle and moved across the bed thereof; roller means rotatably mounted on an end of said vehicle; a cable means connected between said roller and said product moving means whereby rotation of said roller winds said cable and moves said product moving means; power means for rotating said roller, said power means including a drive shaft; coupling means for detachably engaging an end of said drive shaft in driving relationship with the product moving means on one side of the vehicle; a second coupling means for detachably engaging said end of said drive shaft in driving relationship with the product moving means on the other side of the vehicle; a torque arm carried by said power

means and adapted to engage said vehicle; and mounting means for attaching the torque arm to the power means, said mounting means being adapted to selectively maintain the longitudinal axis of said torque arm in one direction of extension when the power means is coupled to one side of the vehicle and in another direction of extension transversely to the axis of rotation of said drive shaft when the power means is coupled to the other side of the vehicle, said longitudinal axis of said torque arm being disposed transversely to the axis of rotation of said drive shaft when said torque arm is mounted to said power means.

2,899,091
ELEVATORS
Lowell J. Collins, Oakland, Calif.
Application May 5, 1958, Serial No. 733,148
7 Claims. (Cl. 214—313)



1. An elevator, in combination, an elevator housing having a head and a base, a track extending from said base to said head, a head sprocket and driving means therefor, a foot sprocket, a chain operating about said sprockets, reversing means for said driving means, means limiting the travel of said chain in each direction and controlled by said chain, a carrier slidable on said track and a carrier shaft rotatably mounted in said carrier and projecting from said housing, a sprocket fixed on said shaft within said carrier and cooperating with said chain, a cam fixed on said carrier shaft and having a roller mounted at the lower end on one side, a rail fixed on said track and cooperative with said roller and terminating in spaced relation below said head and having a roller mounted at its upper end on the other side relative to said first mentioned roller, arcuately spaced stops on said cam, and a cooperative stop on said carrier selectively cooperative with said stops, said cam locking

an output portion, said power conversion and transmission

tially perpendicular to a straight back thereof, a lid for

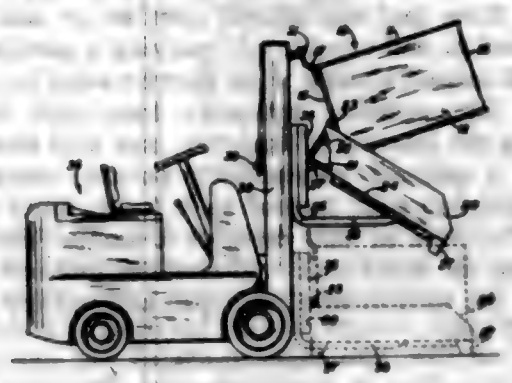
said parking areas, conveyor means carried by each of said sprocket within said carrier against rotation throughout the height of said rail for elevating said carrier and thence riding on said roller on the other side to release said sprocket within said carrier for rotation for rotating said shafts for inversion of a container carried thereby, with the degree of inversion being limited by one of said stops, reversal of the chain initially operating to right the container followed by lowering of the carrier.

2,899,692

DROP BOTTOM BINS

John K. Olszewski, Franklin Lakes, N.J., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Application October 22, 1956, Serial No. 617,527
1 Claim. (Cl. 214—317)



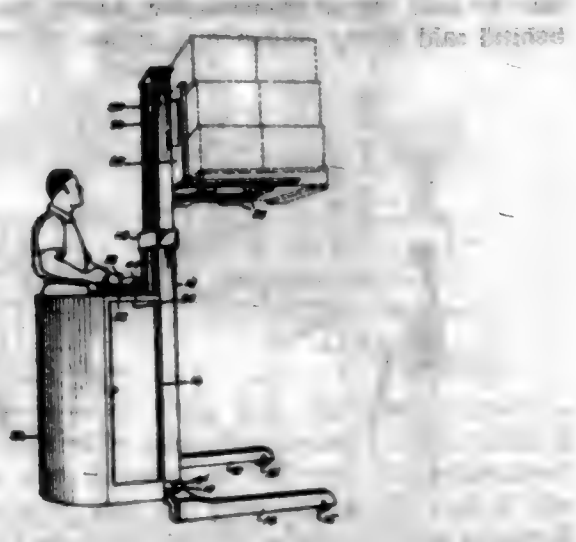
The combination with an industrial truck having a hook pivotally mounted on a mast adjacent a forward surface thereof, means actuable to move the hook into either a supporting position, where it extends forwardly a given distance away from the forward surface of the mast, or an out-of-the-way position closely adjacent the forward surface of the mast, and a fork movable vertically adjacent the forward surface of the mast and having parallel horizontal supporting portions with a predetermined space therebetween and a vertical face parallel with and disposed approximately said given distance from the forward surface of the mast, of a drop bottom bin having a body with sides and ends and open at the top and bottom, a bottom member L-shaped in vertical section with a smooth-surfaced lateral portion adapted to support the body and close the bottom thereof, a vertical portion to protect a selected end of the body and for abutting engagement with the vertical face of the fork, and an intermediate surface for sliding movement on the vertical face, legs fixed to outer extremities of the lateral portion to support the bottom member in an elevated position for movement of the horizontal supporting portions of the fork therebeneath until the vertical face of the fork abuts the vertical portion of the bottom member, a bail fixed to the selected end of the body adjacent the center of the top thereof and bent outwardly away from the body for engagement with the hook, when the hook is in its supporting position, pivotal means connecting the top edge of the vertical portion of the bottom member to the selected end of the body, and a guiding element extending longitudinally of the undersurface of the lateral portion of the bottom member, disposed centrally thereof and secured thereto to guide the horizontal portions of the fork with respect to the body, to substantially fill the space therebetween to centrally position the bin on the fork to position the hook in general alignment with the bail so that when the hook is in its out-of-the-way position the fork may lift the bin until the bail is positioned above the hook, and after the hook is moved to the supporting position the fork may lower the bin for engagement of the bail and hook and for freeing the L-shaped bottom member to move about its pivotal means with the intermediate surface sliding on the vertical face and the smooth-surfaced lateral portion moving on the supporting portions of the fork to move the body outwardly away from the forward surface of the mast in an arc about the bail and hook connection to empty the bin, the element guiding the bottom member in opening and closing to maintain central balance of the bin as the element moves between the supporting portions of the fork, upward movement of the fork causing closing of the bin and disengagement of the bail and hook for movement of the hook into its out-of-the-way position to free the bail for lowering of the empty bin to rest on the legs.

2,899,693

HYDRAULIC LIFT TRUCKS

John P. Merrell, Wheaton, Ill.

Application April 25, 1955, Serial No. 503,413
2 Claims. (Cl. 214—760)



1. A lift truck having a horizontally disposed U-shaped base frame, a horizontally disposed hydraulic plunger mounted on said base frame, a mast consisting of a pair of vertically disposed U-shaped channels positioned thereon in facing relation, a cross-brace connecting the upper ends of said channel members, an elevator positioned therein, said elevator comprising a pair of U-shaped channel members of a size that may reciprocate in the first mentioned channel members, a cross-brace connected between the upper ends of said second channel members, a cross-shaft supported by said cross-brace, a pair of sprockets on said shaft, a pair of chains trained about said sprockets, a hydraulic jack mounted on said base for raising and lowering said elevator, a face plate, said chains fastened at one end to said mast and at the other end to said face plate, a pair of angle members pivotally connected to the back of said face plate and rollers on said angle members for guiding said face plate between the legs of said second mentioned channel members, said face plate having a block on the back of the same adjacent the lower end thereof mounted in front of said hydraulic plunger.

2,899,694

STAMP APPLICATION MACHINE

Ulysses L. Lambert, Los Angeles, Calif., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., Los Angeles, Calif., a corporation of California

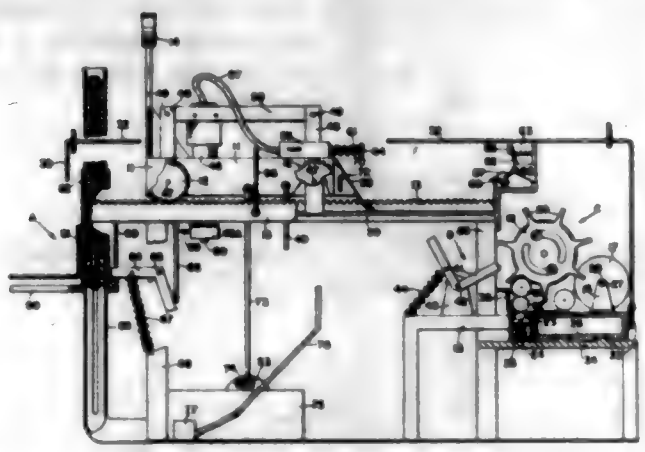
Application September 16, 1957, Serial No. 684,320
6 Claims. (Cl. 216—25)

1. A stamp application machine operable for picking up a stamp from a stamp pickup region, moistening it in a moistening region, and depositing it and affixing it to a surface in a stamp application region, comprising: actuating means including carriage means and means mounting said carriage means for movement in either direction between a stamp pickup region, a stamp moistening region, and a stamp application region, said actuating means including power conversion and transmission means having

cup edge for a distance less than 180° in position to provide diametrically opposite slot-like spaces between the of vertically extending elongated ribs peripherally spaced thereon extending toward said other shell, the bearing sur-

mounted on the frame of a vehicle and moved across the

an output portion, said power conversion and transmission means being coupled to said mounting means and said carriage means and reciprocatingly moving said output portion in response to relative movement of said carriage means and said mounting means between said stamp pick-up region and said stamp application region in either direction, said reciprocating movement of said output portion being substantially transverse to said relative movement of said carriage means and said mounting means; stamp transmissive means mounted adjacent said stamp pickup region in advancing cooperation with respect to a roll of stamps and operable to advance a stamp into said stamp pickup region in response to relative movement of said carriage means and said mounting means; severing knife means mounted for movement toward and away from said stamp pickup region in a direction transverse to the direction of movement of a stamp advanced thereinto by said stamp transmissive means, and immediately behind said stamp; moistening means positioned between



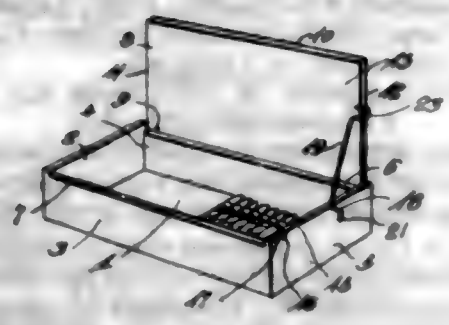
said stamp pickup region and said stamp application region; and pneumatic stamp pickup means carried by said reciprocating output portion of said power conversion and transmission means and operable for picking up a severed stamp from said stamp pickup region in response to relative movement of said carriage means and said mounting means in a predetermined location adjacent to said stamp pickup region, said pneumatic stamp pickup means being operable to release and deposit a picked-up stamp in response to relative movement of said carriage means and said mounting means in a predetermined location adjacent to said stamp application region; said reciprocating output portion being operable to reciprocate said stamp pickup means toward said moistening means to place said severed stamp in moistening contact therewith, in response to movement of said carriage means toward said stamp application region while said carriage means is in an intermediate position adjacent said moistening region.

2,899,095

STORAGE AND DISPLAY BOX WITH LID SUPPORT THEREFOR

Michael J. Figaretti, Wheeling, W. Va.

Application February 18, 1957, Serial No. 640,824
1 Claim. (Cl. 217—61)



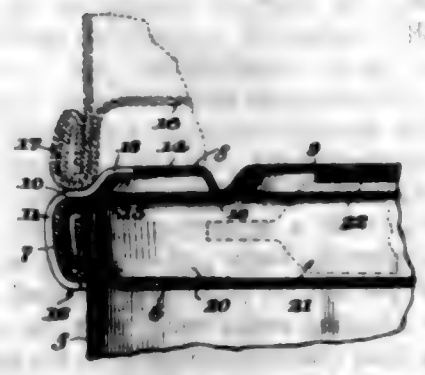
A storage and display box comprising an open top box having at least one straight side extending substantially perpendicular to a straight back thereof, a lid for covering the open top of said box having one straight edge hingedly connected to said back and a second straight edge provided substantially perpendicular to said hinged edge for extending substantially parallel to and at times alongside of said box straight side, said box straight side having an opening provided therethrough, an elongated rod shaped member having a substantially straight medial portion, a lateral portion extending through said box side opening with said member straight portion positioned substantially parallel to the interior face of said box side and an end portion extending substantially parallel to said medial portion positioned on the exterior face of said box, said rod shaped member having its other end portion formed with a U-shaped configuration the sides of which are substantially parallel to and extend in substantially the same direction from said rod shaped member as said member lateral portion and capable of receiving a portion of said lid at said second straight edge therebetween for supporting said lid extending upwardly from said box back displaying the interior of said box, and said box straight side has a pair of substantially parallel recesses provided in the top edge thereof each for at times receiving one of the sides of said member U-shaped end portion for storing the same with said member interiorly of said box, and the base of said U-shaped end portion exteriorly of said box.

2,899,096

DUAL COMPARTMENT CONTAINER STRUCTURE

John Henchert, River Forest, and Henry E. Frankenberg, Berwyn, Ill., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Application December 27, 1956, Serial No. 630,926
5 Claims. (Cl. 220—4)



1. A container structure comprising a container body, a closure top secured to the body by a seam, an overcap, means removably securing the overcap to the top closure seam in spaced relation above the closure top to provide a compartment for receiving an article therein, said overcap including a skirt portion curled under the top closure seam and a pry tool receiving opening into which a pry tool can be inserted and engaged over the seam as a fulcrum to pry the overcap off its seam mounting; said overcap also including an annular wall and an outwardly projecting annular seat portion disposed to rest upon the top closure seam and merge into the seam embracing overcap skirt.

2,899,097

CONTAINERS OF CAPSULE LIKE FORM

Lewis S. Haskins, Rio Piedras, Puerto Rico, assignor to Hardfield Corporation, Puerto Rico, a corporation of Puerto Rico

Application October 29, 1957, Serial No. 693,145
1 Claim. (Cl. 220—4)

A container of capsule-like form, that comprises a pair of cups each of which has a pair of ribs formed integrally with its edge and each rib extending peripherally of its

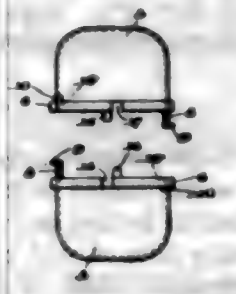
2,899,101

TEARING STRIP KEY

the vertical face and the smooth-surfaced lateral portion

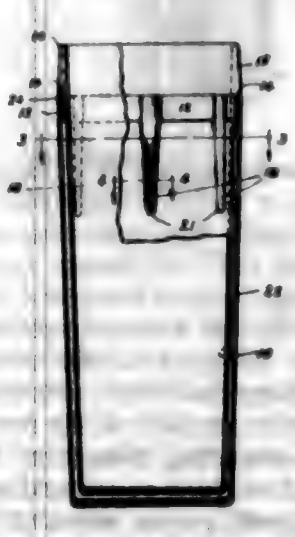
cluding power conversion and transmission means having

cup edge for a distance less than 180° in position to provide diametrically opposite slot-like spaces between the ends of the ribs, a finger projecting axially from the inner surface of each cup, at one of its ribs, at the area between the ends of the said one rib and being formed integrally with the cup, and an out-turned hook on the outer end of the finger, each cup having a hole through its sidewall at the rear face of its other rib and diametrally opposite its finger, the said fingers being resiliently flexible, the said hooks extending in opposite radial directions and each hole being in position to receive the hook of a mating cup when the cups are assembled with their ribs abutting each other in an axial direction, an axially-extending



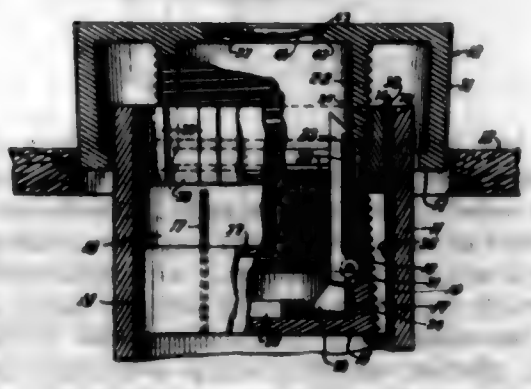
stop shoulder on each rib at a point adjacent to one of its ends, in position to enter the slot-like space between the ribs of the other cup when assembling the cups, the stop shoulders projecting axially beyond the ribs a lesser distance than the fingers, so that they will not abut the opposed ribs until after the finger of each cup has been inserted into the other cup at a point approximately opposite to the hole of said other cup, whereby when the cups are brought together in slightly radially offset relation and pressed toward each other while sliding them into axial alinement, the hooks will enter the said holes and the shoulders of each cup enter the spaces between the ribs of the other cup.

2,899,098
DRINKING VESSELS
Jules P. Gits, Chicago, Ill., assignor of one-half to Joseph A. Gits, Chicago, Ill.
Application September 6, 1955, Serial No. 532,662
3 Claims. (Cl. 220—15)



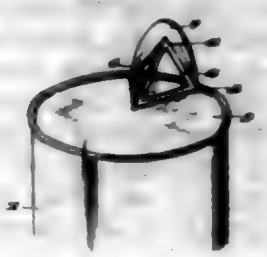
1. A double-wall container for liquids comprising inner and outer shells spaced from each other to provide an air space therebetween, said inner shell having a peripheral shoulder spaced downwardly from its upper edge adapted to abut the upper edge of the outer shell to limit downward movement of said inner shell with respect to said outer shell, facing surfaces of the spaced shells being frusto-conical, one of said shells being substantially inextensible but being readily bendable, said other shell being substantially inextensible and being resistant to bending, one of said shells having a plurality of vertically extending elongated ribs peripherally spaced thereon extending toward said other shell, the bearing surfaces of said ribs defining a generally frusto-conical area that has a radius which is larger than the radius of the undistorted frusto-conical area of the opposed surface of the other shell whereby assembly of the shells will cause distortion of the bendable shell to prevent accidental separation of said shells.

2,899,099
ADJUSTABLE BUT LOCKED-ON TEMPORARY CAP FOR PIPE
William S. Reier, Lake Geneva, Wis.
Application May 10, 1957, Serial No. 658,273
10 Claims. (Cl. 220—24.5)



1. A temporary cover for a pipe including a base including screw operative clamping means for clamping it to the pipe, a cap threaded to the base for adjustment axially of the pipe, said cap surrounding the end of the pipe and having an outer contour adapted, when removed from concrete poured around it, to leave a recess adapted to receive a fitting for the pipe, limiting means protected by the cap for preventing removal of the cap, and tamper-discouraging means for access through the cap to release said limiting means.

2,899,100
CAN OPENER
Joseph Wolkenberg, New York, N.Y.
Application January 9, 1956, Serial No. 558,845
1 Claim. (Cl. 220—48)

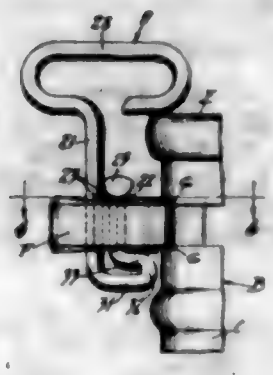


In a device of the class described for providing an opening in a can having a cylindrical side wall and end walls wherein one end wall of the can has a triangular shaped weakened area, an opener secured over said weakened area, said opener comprising three triangular walls secured together to form a pyramidal shaped structure, the weakened area of the end wall of the can forming the base of the pyramid, each of said walls having an opening therein, the wall adjacent the cylindrical side wall of the can having portions extending laterally outwardly of the planes of the other two walls of the opener, said wall forming a thumb engaging portion and adapted to be depressed to force the other two walls into the can, the thumb engaging wall being disposed against the end of the can when the can is opened, the contents of the can adapted to flow through the openings in the walls of the opener.

points adjacent the outer ends of the hinge lines of said

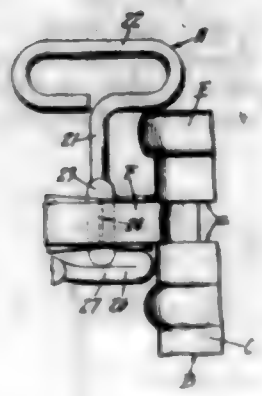
can puncturing means thereby preventing working pres-

2,899,101
TEARING STRIP KEY
Edward O. Thea, Newark, N.J., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Application August 9, 1957, Serial No. 677,334
9 Claims. (Cl. 220—52)



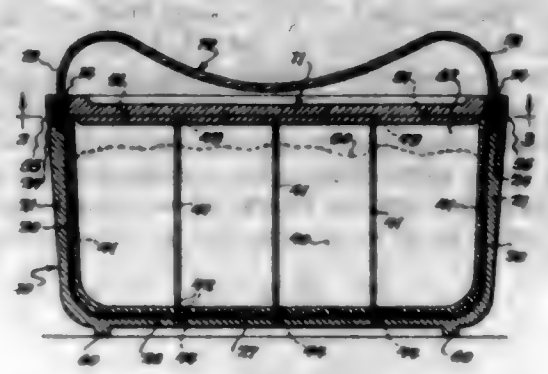
1. A key for removing a tear-strip from a container, comprising a pair of straight shanks disposed in spaced parallel relation for the reception therebetween of a tongue end of said tear-strip to facilitate winding of said strip in a coil onto said shanks, a protuberance extending laterally from one of said straight shanks engaging against the other shank to hold the shanks in said spaced parallel relation, and a guiding projection connecting said shanks and extending laterally from and normal to at least one of said shanks for retaining said wound-up strip in coil formation on said shank.

2,899,102
CONTAINER OPENING KEY
Edward O. Thea, Newark, N.J., assignor to American Can Company, New York, N.Y., a corporation of New Jersey
Application August 9, 1957, Serial No. 677,335
2 Claims. (Cl. 220—52)



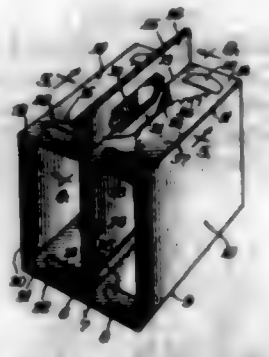
1. A key for removing a tear-strip from a container, comprising a one-piece stiff wire member having one end bent into a flat loop handle terminating in a centrally disposed angularly extending shank having a slotted intermediate portion for receiving the end of said tearing strip, the free end of said key shank having a laterally bent portion projecting in a direction normal to said shank, said laterally bent shank portion terminating in a reversely folded shank end projecting in the opposite direction and normal to said shank, said laterally bent shank portion constituting means for supporting the tear-strip convolutions in concentric coil formation on the intermediate slotted portion of said shank, the bottom surface of said loop handle being spaced a predetermined distance from said shank slot so that it will engage against the top of the container to locate the key and maintain the key slot in alignment with said tear-strip during the container opening operation.

2,899,103
BAIT CONTAINER
Edward A. Ebert, Snyder, N.Y.
Application August 17, 1956, Serial No. 604,663
3 Claims. (Cl. 220—94)



1. A container of the character described, comprising a body having side walls molded of a material capable of being distorted, a handle having opposite ends projecting into sockets in opposite sides of said body, metal members embedded in said opposite sides of said body and each formed to provide an eye embracing a corresponding socket and the end of the handle contained therein, each of said sockets being flanked by a pair of sockets extending from the exterior into said body and adapted to receive the nibs of a pair of pliers to distort said eyes into compressive relation with the ends of said handle.

2,899,104
BAND TYPE CAN CARRIER
Peter C. Cellura, Waltham, Mass., assignor to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Application December 28, 1956, Serial No. 629,528
2 Claims. (Cl. 220—115)



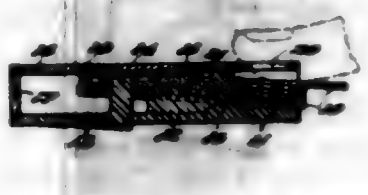
1. In an open ended carrier for chimed end cans and comprising a bottom wall, two side wall panels, two top wall panels, two handle flaps extending upward from the inner edges of said top wall panels, and a center partition panel extending upward from said bottom wall with its upper portion secured between said handle flaps providing therewith a three ply handle structure; load supporting flaps cut from the inner midportions of said top wall panels integrally attached to the lower edges of said handle flaps and extending therefrom downward along and secured to said partition panel, and can retaining tabs cut from said top wall panels adjacent the ends thereof and hinged thereto at their inner edges along fold lines extending transversely of said top wall panels, said load supporting flaps and the corresponding openings in said top wall panels being of materially less extent lengthwise of said top wall panels than the distance between said fold lines of said tabs, said top wall panels, except for the openings therein corresponding to said load supporting flaps and said tabs, being substantially imperforate and effective for restraining cans in said carrier against upward displacement therefrom, said top wall panels being respectively provided with weakened tear lines extending from the ends of the load supporting flap opening to

passage when the sealing valve is normally seated against said valve and also being normally biased toward the

upwardly sloping upper strip wall and an inwardly and downwardly sloping lower strip wall, the outer edges of

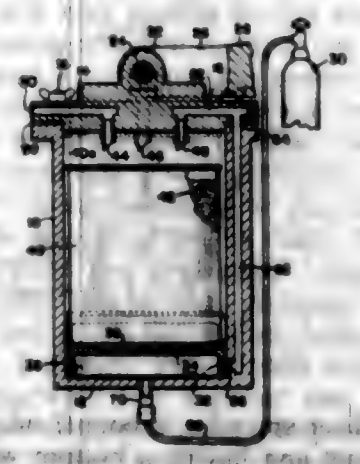
points adjacent the outer ends of the hinge lines of said tabs and defining between them a tear out portion having its inner edge exposed at said load supporting flap opening to be readily grasped for tearing said portion from said top wall panel for ready access to and removal of cans from said carrier.

2,899,105
SPRINGLESS BLADE DISPENSER
Nicholas Testi, New York, N.Y., assignor to The Gillette Company, Boston, Mass., a corporation of Delaware
Application February 28, 1956, Serial No. 568,227
6 Claims. (Cl. 221—309)



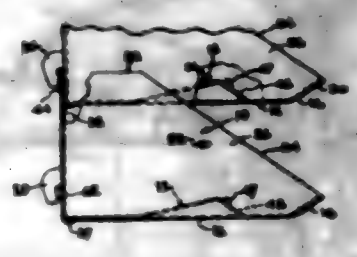
1. A blade dispenser comprising a rectangular enclosure having a bottom and a solid top wall and being closed at one end and open at the other, a fulcrum shoulder for the blade stack contained within the dispenser projecting inwardly from the bottom wall near the open end of the enclosure, and a stripping pin resiliently mounted on the bottom wall near the closed end of the enclosure, beneath and extending into proximity to the top wall.

2,899,106
DRY POWDER DISPERSING DEVICE
Carl R. Weinert, Pittsburgh, Pa., assignor to Federal Laboratories, Inc., Saltsburg, Pa., a corporation of Pennsylvania
Application December 28, 1956, Serial No. 631,095
13 Claims. (Cl. 222—82)



1. In a gas operated device for dispersing tear gas dust, a pressure cylinder having can puncturing means at the top end and can supporting means forming a movable wall chamber within the pressure cylinder at the other end, means for causing relative movement between the can puncturing means and the can supporting means to puncture an interposed can of dust, inlet and outlet passage means connected to said can puncturing means to cause a draft of working gas to circulate becoming dust laden between entering and leaving the top of the can, and two differently restricted supply and diversion passages jointly communicating with said movable wall chamber, said supply passage constituting the relatively free one of the two passages to freely communicate working pressure released from a source of compressed gas and freely deliver same into said movable wall chamber, whereas said diversion passage being the relatively restricted passage and connected to said inlet passage to insure an intervening pressure drop upstream of the can puncturing means thereby preventing working pressure in or about the interposed can from exceeding the pressure in said movable wall chamber.

2,899,107
FEEDER FOR DISPENSING SMALL ARTICLES
Charles W. Deeple and Blaine S. Aston, Cincinnati, Ohio, assignors, by mesne assignments, to Nestler Corporation, Cincinnati, Ohio, a corporation of Ohio
Application June 24, 1957, Serial No. 667,371
11 Claims. (Cl. 222—143)



1. A feeder for dispensing individual small parts from a batch comprising, a feed box, having a bottom, a pair of side walls, a rear wall, and an open mouth at the forward portion of the feed box, said side walls having upper edges which are inclined downwardly toward the forward portion of the feed box, the said forward portion having a parts retainer lip which is inclined upwardly and forwardly from said bottom, a feed control plate residing in the bottom of said feed box, coacting means on the feed box and control plate latching said plate within the feed box, said plate having a load-supporting section residing in the rearward portion of the feed box and supporting a batch of parts, said load-supporting section being inclined upwardly and forwardly from said rear wall toward the forward portion of the feed box, a skid section joined to the forward end of said load-supporting section, said skid section being inclined downwardly and forwardly from said load-supporting section toward the forward portion of the feed box, the end of said skid section contacting said bottom along a line which is displaced rearwardly from said retainer lip and exposing the bottom within said open mouth of the feed box and delineating a parts withdrawal section, said load-supporting section providing a partial barrier which sustains a batch of parts in the rearward portion of the feed box, the said exposed portion of the bottom providing a storage space for a limited quantity of parts, whereby a worker may advance parts from the batch which is sustained in storage in the said load-supporting section and down the inclined skid section to said exposed bottom and subsequently skid said parts individually by finger engagement across said bottom and upwardly along the inclined retainer lip to the edge thereof to be grasped as the part is skidded across said edge.

2,899,108
SELF-CLEANING AND METERING LIQUID SPRAY VALVE STRUCTURE
Robert S. Knapp, St. Louis, Mo., assignor to Knapp-Monarch Company, a corporation of Missouri
Application April 17, 1957, Serial No. 653,352
3 Claims. (Cl. 222—151)

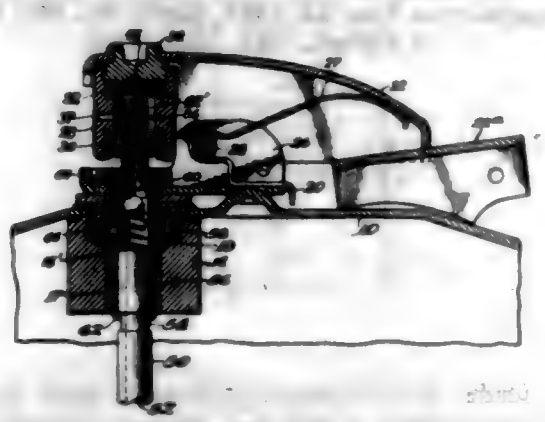
1. In a spraying valve structure, a valve stem having a flow passage therethrough terminating at its one end in a valve seat and at its other end in a port adapted to communicate with a reservoir of liquid under pressure, a sealing valve mounted for movement relative to said valve seat to open and close the valve seat end of said flow passage and being normally biased toward said valve seat to close said flow passage, a cleaning pin carried by said sealing valve and extending into said flow passage for reciprocating movement therethrough, a metering valve normally spaced from the port end of said flow

2,899,112
DISPOSABLE GREASE CONTAINER

2,899,113
AUTOMATIC DELAY-ACTION DEVICE

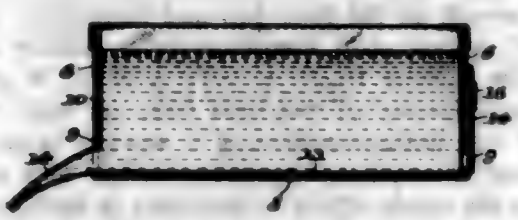
container opening operation.

passage when the sealing valve is normally seated against said valve and also being normally biased toward the said port end of said flow passage and tending to close said port, said cleaning pin being greater in length than said flow passage so as to extend through said port to engage said metering valve and maintain it in said spaced relation to said port when said sealing valve is in its normally closed position, the spacing of said metering valve from the port end of said flow passage being



substantially equal to the distance of the sealing valve from the valve seat when the sealing valve is in open position, so that upon movement of said sealing valve to an open position said cleaning pin will be withdrawn from said port and said metering valve will be free for movement to close said port, whereby dispensing flow of liquid, cleaning movement of said cleaning pin, and metering movement of said metering valve are effected simultaneously.

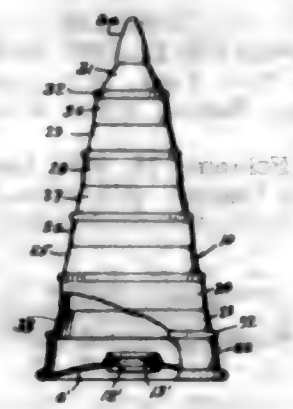
2,899,109
PAINT TANK AND DISPENSING LINER THEREFOR
Edward Stanfield Shorkey, Grosse Point Wood, Mich., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Application January 15, 1958, Serial No. 709,033
7 Claims. (Cl. 222—183)



1. In a paint mixing and dispensing tank and liner arrangement of the character described, a tank having side and bottom wall portions, one said wall portion having a dispensing opening therethrough near the bottom wall portion, a liner mounted in the tank and having a funnel-like dispensing extension projected through said dispensing opening and means for removably attaching the outer end of said extension to a tank wall portion exteriorly of the tank so that it can be readily detached to permit paint to pour out of the tank through the extension without any contact of paint with interior wall portions of the tank.

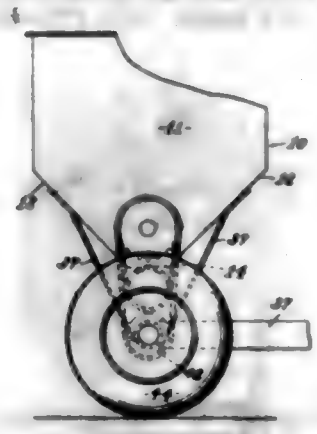
2,899,110
COLLAPSIBLE CONTAINER
Carol Parker, Glendale, Calif.
Application March 12, 1957, Serial No. 645,525
1 Claim. (Cl. 222—215)

A dispensing container comprising a generally circular top, a generally circular bottom, and a generally conical side wall of flexible resilient material connecting the peripheral portions of said top and bottom, said side wall comprising a plurality of side by side integrally formed pleats, each of said pleats consisting of an inwardly and upwardly sloping upper strip wall and an inwardly and downwardly sloping lower strip wall, the outer edges of said strip walls of each pleat intersecting to define an outwardly projecting hinged connection, and the inner edges of the strip walls of said pleats intersecting to define an inwardly projecting hinged connection, said strip walls being approximately flat in transverse direction and



being adapted to be brought into close face to face relation by the action of said hinged connections without exceeding the elastic limit thereof in response to collapsing movement applied to said top and bottom the degree of conicity of said walls being sufficient to permit said inwardly projecting hinged connections to substantially contact said bottom when said container is collapsed.

2,899,111
FERTILIZER SPREADER
Max C. Christensen, Royal Oak, Mich., assignor to Ford Motor Company, Dearborn, Mich., a corporation of Delaware
Application October 17, 1956, Serial No. 616,424
6 Claims. (Cl. 222—238)



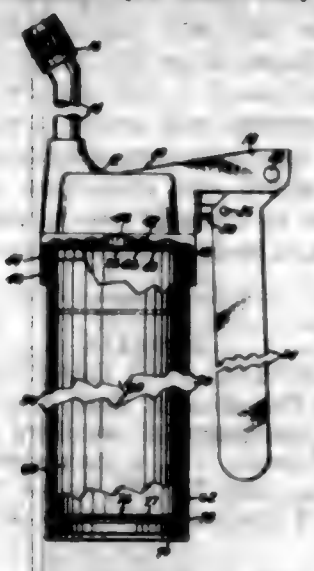
1. In a fertilizer spreader; a hopper adapted to receive granular material and having a bottom wall with an adjustable opening therein; a rotatably mounted, generally circular agitator having a plurality of generally radially outwardly extending peripheral teeth, the agitator being positioned so that, upon rotation thereof, the ends of the teeth move along a circular path across the inner side of the opening; a wheel mounted on an axis generally parallel to the bottom wall of the hopper and having a plurality of radially outwardly opening peripheral chambers separated by relatively narrow transverse walls, the wheel being mounted directly below the opening, the width of the wheel being greater than the width of the opening, the periphery of the wheel making substantially a wiping contact with the underside of the opening and the free passage of granular material about the periphery of the wheel being otherwise unobstructed, and the diameter of the wheel being several times the length of the opening to prevent leakage of granular material through the opening and about the periphery of the wheel when the wheel is at rest; and common means for rotating the agitator and the wheel.

ually moving said second member relative to said first member and establishing communication between the tank

communication from said supply compartment to said measuring compartment, said inlet passageway being

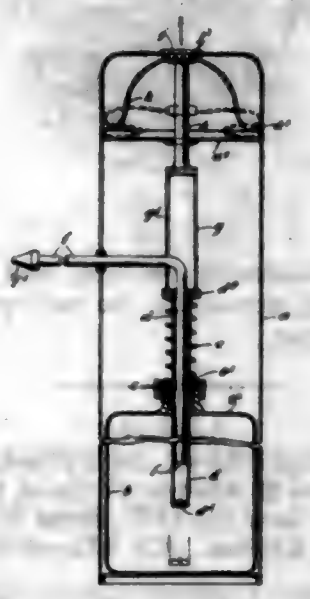
to insure an intervening pressure drop upstream of the valve normally spaced from the port end of said flow

2,899,112
DISPOSABLE GREASE CONTAINER
Glen R. Morton, Omaha, Nebr.
Application September 16, 1955, Serial No. 534,709
2 Claims. (Cl. 222—325)



1. In combination, a disposable grease container comprising an annular side wall portion for receiving grease and having forward and rearward ends, said side wall portion having open forward and rearward ends and having substantially all inner side surfaces parallel to an imaginary straight line extending through said container from the forward to the rearward end thereof, a forward cap portion closing the forward end of said container, said forward cap portion having a transverse section disposed transversely to said line and closing said forward end of said side wall portion and said forward cap portion having an attached annular flange disposed in a position extending rearwardly over the outer side of the forward end of said annular side wall portion, said cap flange being of a size and shape complemental to the shape of said annular side wall portion, means securing said cap flange to the outer side of said side wall, and said container side wall portion having an inwardly and forwardly extending attached annular end portion at its rearward end, and a rearward cap portion disposed forwardly of said inwardly turned rearward end portion and having a center section extending transversely across and closing the rearward end of said container, said rearward cap portion also having an annular cap flange which is connected to the periphery of the center portion of the rearward cap portion and is disposed transversely to the center cap portion and is also disposed slidably and snugly against, and which is also complementarily shaped with respect to, the inner wall of said side wall portion whereby said rearward cap member can function as a grease follower, and a lubricating pump having an elongated disposable grease container receiving portion, said receiving portion having a hollow interior of a size for snugly receiving said disposable container and said receiving portion being disposed about said disposable container side wall, and said receiving member having one end disposed against the rearward edge of said forward cap, said lubricating pump further having a pumping head section having a recess therein of a size and shape for snugly receiving the forward end of said cap, said recess having a side wall of cylindrical shape threaded on its rearward portion, and said container receiving portion also being of cylindrical shape and threaded on its exterior at its forward end and disposed in removable threaded engagement with said recess side wall with the forward end of said container receiving portion pressing against the rearward edge of said forward cap member, said pumping head section having an inlet aperture extending forwardly from said recess and said forward cap member having an opening therethrough in registry with the entrance to said pumping head aperture.

2,899,113
AUTOMATIC DELAY-ACTION DEVICE
Joseph Forster and Ellen Forster (nee Dixon), Felling-on-Tyne, England
Application June 27, 1956, Serial No. 594,316
5 Claims. (Cl. 222—336)



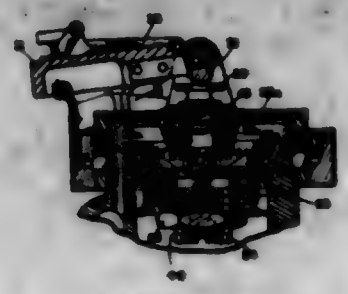
2. A dispensing device for automatically spraying liquid comprising a plate, a bore in the plate, a shaft slidably displaceable in said bore, a resilient compressible bell member mounted on said shaft, the rim of said bell member being free of said plate but being displaceable with said shaft to be engageable with said plate, and said bell member then co-operating with said plate as a compressible air chamber when said shaft is displaced in one direction in said bore to expel air between said rim and said plate, and a restricted vent for retarding entry of air into said chamber during automatic resilient decompression thereof to constitute a delay action device, in combination with compression spring means associated with said shaft, operative against displacement of said shaft prior to engagement of the rim of the bell member with said plate, and operative after decompression of said chamber to displace said rim from said plate, a liquid reservoir, a non-return inlet valve for admitting air to said reservoir, a tubular member connected with said shaft for displacement axially within said reservoir, a non-return valve in said tubular member permitting discharge of fluid from said reservoir into the interior of said tubular member, and a discharge duct in communication with the interior of said tubular member, said duct having an axial portion over which said tubular member is slidable to increase and decrease alternately the volume of the interior of said tubular member.

2,899,114
PRESSURE CAP WITH DUMP VALVE AND PRESSURE RELIEF VALVE
Robert J. Calleton, Los Angeles, and James W. Kragh, Culver City, Calif., assignors to North American Aviation, Inc.
Application August 13, 1956, Serial No. 603,712
12 Claims. (Cl. 222—396)

7. In combination, a tank, a nozzle on said tank defining an opening into the same, a closure means including a first member adapted to surround and sealingly engage said nozzle and a second member manually reciprocable within said first member adapted to close and sealingly engage said nozzle means, said first and second members coacting with said nozzle means to form a chamber in said closure means when in sealing engagement with the nozzle means, means in said nozzle for communicating the chamber pressure to the ambient atmosphere whereby the tank may be depressurized by man-

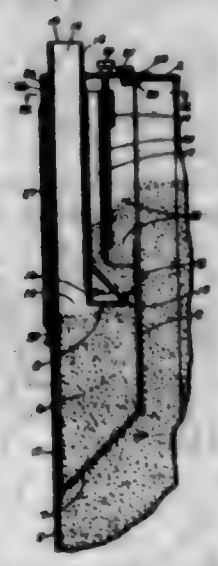
ing and transporting device including a tubular body of

ually moving said second member relative to said first member and establishing communication between the tank and said chamber, and pressure responsive means for



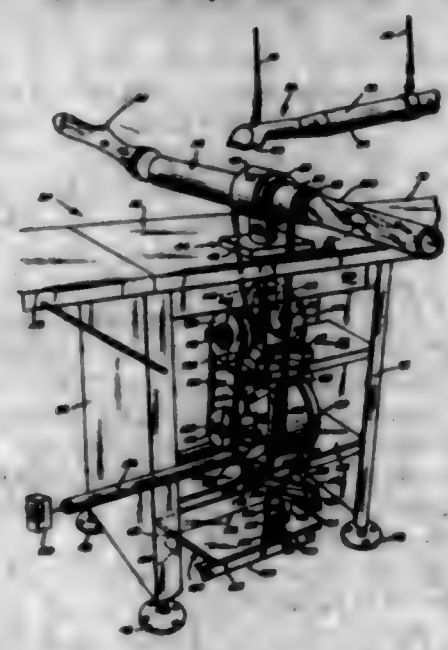
providing communication between said tank and said chamber upon an increase in the tank pressure above a predetermined value.

2,899,115
MEASURING DISPENSER
Gustave O. Matter, Portland, Oreg.
Application June 25, 1957, Serial No. 667,776
10 Claims. (Cl. 222—455)



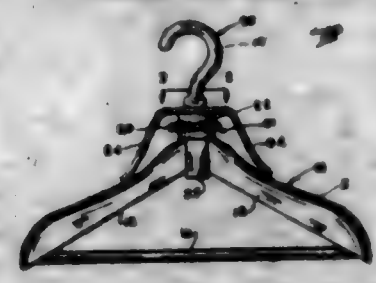
1. A dispenser for a container, said dispenser comprising two vertical side walls joined along one vertical edge thereof, a horizontal top plate joined to the top of said vertical side walls, a three-sided lower wall spaced below said top plate and joined on two sides to said two vertical side walls, a back wall spaced from the juncture of said two vertical side walls and extending upward from the other side of said lower wall and between the said two vertical side walls and joined thereto with the upper edge of said back wall spaced below said top plate, an inner wall depending from said top plate and extending between the said two vertical side walls and joined thereto, said inner wall being spaced inward from said back wall and from the juncture of said two vertical side walls, the lower end of said inner wall being below the upper edge of said back wall and spaced upward from said lower wall, a horizontal upper wall extending between the said two vertical side walls and extending from the lower end of said inner wall toward said back wall with one side edge of said upper wall being spaced from said back wall and the opposite side edge being spaced from the juncture of the said two vertical side walls, a supply compartment defined by said two vertical side walls, said top plate, said upper wall, said inner wall and an upper portion of said back wall, a material passageway leading into said supply compartment is provided between the said two vertical side walls, said top plate and the upper edge of said back wall, a measuring compartment below said supply compartment is defined by said two vertical side walls, said back wall, said lower wall and said upper wall, an inlet passageway providing communication from said supply compartment to said measuring compartment, said inlet passageway being bounded by the said two vertical side walls, said back wall and the side edge of said upper wall spaced from said back wall, an outlet passageway bounded by said two vertical side walls and that side edge of said upper wall which is spaced from the junction of the said two vertical side walls and is opposite the side edge along said inlet passageway, said outlet passageway providing communication from said measuring compartment into an outlet conduit above said measuring compartment and which is defined by the said two vertical side walls and said inner wall and leads out through said top plate.

2,899,116
HOSIERY CLIPPING AND EVERTING MACHINE
Stuart S. Long, Pulaski, and Basil B. Cox, Wurno Community, Va., assignors of one-third to Paul Knitting Mills, Inc., Pulaski, Va., a corporation of Virginia
Application May 7, 1958, Serial No. 733,700
9 Claims. (Cl. 223—43)



1. Apparatus for rotating and everting hosiery including, a tubular hosiery form having an open outer end, first means for mounting said form for rotation about its longitudinal axis, second means operatively connected to said form for mechanically rotating said form about its own longitudinal axis and relative to said first means, and means for inducing a flow of air inwardly into said form from the open outer end thereof whereby a sock fitted over said form will be drawn into said form and everted.

2,899,117
RUBBER COVERED CLOTHES HANGERS
Martin Glowka, New York, N.Y.
Application May 26, 1958, Serial No. 737,898
1 Claim. (Cl. 223—93)



A clothes hanger including obliquely disposed arms, a hook extending upwardly from the juncture of said arms, and a one-piece device on the hook adapted to press resiliently against a garment on the arms and adapted to provide means for transporting the hanger and supported garment on the fingers of the user, said press-

ing and transporting device including a tubular body of resilient material mounted on the hook over the arms, opposed integral arms on the tubular body extending internally thereof and downwardly therefrom, the free ends of said arms adapted to press against a garment supported on the arms of the hanger, said tubular body having depending legs spanning the juncture of the garment supporting arms, and opposed feet on the free ends of the legs, triangular in cross section, interlocking with the inner surfaces of the hanger arms to hold the device on the hanger.

2,899,113

UPPER END STRUCTURE FOR FIBER DRUMS

William J. Geist, Van Wert, Ohio, assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Application January 19, 1956, Serial No. 560,136
10 Claims. (Cl. 220—6.7)

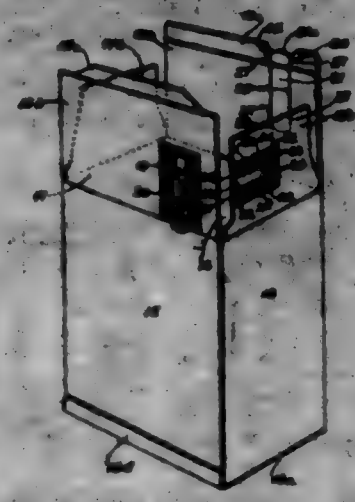
5. A fiber drum side wall having its upper end portion turned outwardly to form an upwardly presented bead, then extended downwardly from said bead to provide an inner channel wall, then turned outwardly from said inner channel wall to form a narrow channel bottom, and finally turned upwardly from said channel bottom to form an outer channel wall; and a metal band surrounding the drum wall and extending upwardly between this wall and said inner channel wall, said band being folded substantially upon itself under said bead and then extending downwardly to provide a second inner channel wall which contacts with the first mentioned inner channel wall, the metal being turned outwardly from said second inner channel wall to provide a second channel bottom which contacts with the first mentioned channel bottom, the metal being extended upwardly from said second channel bottom to provide a second outer channel wall which contacts with the first mentioned outer channel wall, the metal being turned inwardly over the upper edge of said first mentioned outer channel wall and being finally extended downwardly against the inner side of said first mentioned outer channel wall to form with the upwardly presented bead an upwardly opening metal reinforced V-shaped seat for engagement by a sealing gasket, said bead and the band metal extending over the upper edge of the first mentioned outer channel wall being of transversely arched form, and there also being included a cover having a transversely arched peripheral bead to extend over said arched portion of the bead metal and over a portion of the first mentioned arched bead and said V-shaped seat disposed between them, a resilient gasket seated in said transversely arched cover bead and normally projecting downwardly therefrom in position for engaging in said V-shaped seat, and a contractible locking band having an upper inwardly projecting flange to lie upon said transversely arched cover bead, said locking band also having a lower inwardly projecting flange to underlie and contact with said second channel bottom, the spacing of said flanges being such as to cause compression and tight sealing of said gasket in said V-shaped seat and over portions of said arched portion of the bead metal and said first mentioned arched bead when said locking band is applied.

2,899,119

DISPENSING CARTON WITH A PUSH-PULL CLOSURE FOR SAME

Frank H. Stawitz and Donald P. Wheeler, Battle Creek, Mich., assignors to Michigan Carton Co., Battle Creek, Mich., a corporation of Michigan

Application June 11, 1956, Serial No. 590,687
8 Claims. (Cl. 229—17)



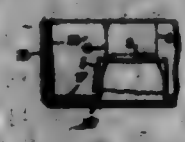
1. A dispensing carton having a top composed of a lower thickness, an intermediate thickness secured upon said lower thickness, and an upper thickness secured upon said intermediate thickness, said lower thickness having a dispensing opening therethrough, said intermediate thickness having a portion cut therefrom and constituting a slide valve member which normally covers said dispensing opening and rests slidably on said lower thickness, said lower thickness being free from said intermediate thickness in the operating area of said slide valve member, said upper thickness having an elongated valve-operating portion overlying said slide valve member and cut from said upper thickness, means securing said valve-operating portion upon said slide valve member to form a two-piece valve assembly, said valve-operating portion extending forwardly beyond said slide valve to provide a free-ended tongue by means of which said slide valve may be opened and closed.

2,899,120

KNOCK-DOWN SET-UP BOXES

Louise James, New Orleans, La.

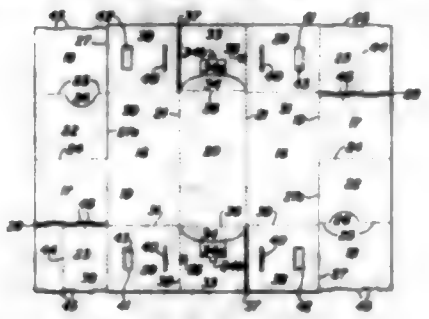
Application January 9, 1957, Serial No. 633,345
2 Claims. (Cl. 229—33)



1. Locking means for securing a pair of sheet material box sections in assembled relation against a disassembling force applied thereto in a given linear direction, one of said sections including a marginal upstanding lip having an inner lap connected to said lip at the free marginal edge of the lip only and disposed generally parallel to said lip, said lap being formed with a locking recess spaced from said marginal edge and with indented relatively spaced score lines extending from said recess normally to said edge, said score lines abutting against said lip to space the material of said lap between the score lines away from the lip and thereby to define a pocket opening toward said locking recess, the other of said box sections being disposed within and parallel to said marginal lip and including a locking tongue of greater width than said recess spanning said recess, said locking tongue having a free end directed toward the opening of said pocket and including a relatively narrower extension at its free end projecting into said pocket, the tongue having shoulders

on opposite sides of said extension abutting against and in locking engagement with said material at the opening of said pocket at locations in substantial registry with the respective score lines.

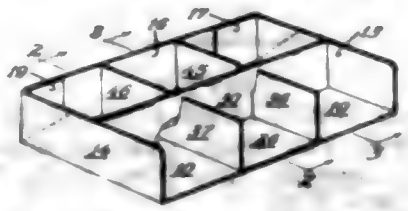
2,899,121
FOLDING BOX WITH PARTITION
Abraham B. Thorup, Salt Lake City, Utah, assignor to Central Fibre Products Company, Inc., Quincy, Ill., a corporation of Delaware
Application January 23, 1957, Serial No. 635,768
9 Claims. (Cl. 229—27)



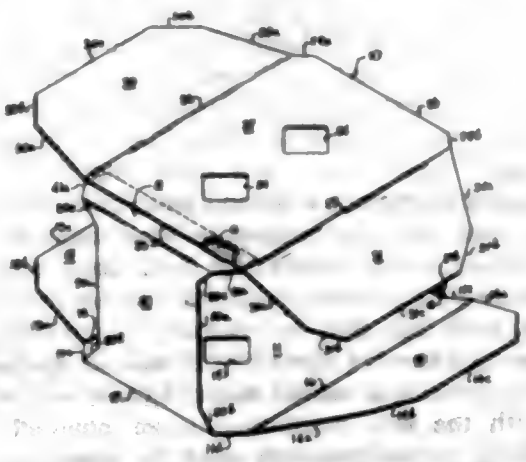
1. A collapsible, partitioned, folding box formed from a single blank of stiff but foldable sheet material, and including mutually opposite end walls, a bottom wall, mutually opposite side walls, and a partition wall, all of multilayer panel formation, individual panels of said partition wall being joined along fold lines at their opposite lateral edges to respective pairs of side wall panels which face each other across the interior of a compartment of the box, one of said side wall panels being joined to a next side wall panel disposed in face-to-face adjoining relationship therewith, the joinder being along a line of fold extending along a top edge of the box, such joinders for opposite partition panels lying at respective opposite lateral sides of the box; and interlocking means between the side walls proper and the corresponding side wall panels and partition wall panels, respectively, said interlocking means comprising tongues cut out from respective partition wall panels and projecting rigidly from and coplanar with said corresponding side wall panels, respectively, into frictional interlocking relationship with adjoining portions of the respective side walls corresponding thereto, and between the panel layers thereof, said box being of elongate and rectangular parellelepiped formation, partitioned transversely intermediate its length to provide two compartments; the side walls being each made up of an elongate outer panel and a pair of inner panels, the latter being aligned end to end and, together, being coextensive with the said outer panel; the partition wall being formed of two panels disposed face to face and joined at their lateral edges, respectively, along respective fold lines, to corresponding inner panels of said side walls that define corresponding compartments of the box; the end walls of the box each comprising two panels disposed face to face and joined, respectively, at mutually opposite lateral edges and along respective fold lines to the outer panels of said side walls; and the bottom wall being made up of an elongate outer panel, joined at its opposite lateral edges and along respective fold lines to the outer panels of the side walls, and, also, of a pair of inner panels disposed at respectively opposite sides of the partition wall and aligned end to end and joined, respectively, to the bottom edges of the outer panels of the end walls by respective fold lines.

2,899,122
PARTITIONED CARTON
Emil M. Schaefer, Minneapolis, Minn.
Application June 11, 1956, Serial No. 590,508
8 Claims. (Cl. 229—28)

1. A collapsible compartment member foldable into or out of flattened form including a base having a series of panels secured to an edge thereof, said panels including, in sequence, a connecting panel, a first partition panel, a second partition panel, and an anchoring panel, said anchoring panel being secured in surface contact and said connecting panel and said anchoring panel being in substantial surface contact with said base, said connecting panel and anchoring panel being relatively narrow as compared to said partition panels and said base and located intermediate the ends thereof, substantially aligned notches in said partition panels in the edges thereof connected to said connecting panel and anchoring panel respectively, said notches being located outwardly of the sides of said connecting and anchoring panels, partition forming flaps hingedly connected to the side edges of said connecting and anchoring panels, and means extending through said notches connecting the partition forming flaps of said connecting panel with the partition forming panels of said anchoring panel in surface contact.



2,899,123
CARTON
Grover C. Currie, Jr., Charlotte, N.C., assignor to Decam Corporation, Charlotte, N.C., a corporation of North Carolina
Application June 13, 1956, Serial No. 591,090
1 Claim. (Cl. 229—40)



A carton formed from a single blank of cardboard material comprising parallel upper and lower main walls, one of said main walls being of greater length than the other, a first end wall hingedly connecting proximal ends of said upper and lower main walls together, a second end wall hingedly connected to the opposite end of said longer main wall, a flap hingedly connected to said second end wall and having a free end extending inwardly in juxtaposition to the shorter main wall, a length of said flap equal to the difference in the length of said main walls being visible and serving to define an extension of said shorter main wall and adhesive securing the free end portions of said flap to said shorter main wall, and flaps hingedly connected to opposite sides of said main walls, said flaps extending from opposite sides of one main wall being secured to the flaps extending from the opposite sides of the other main wall to form carton side walls, at least a medial portion of the end walls being of a lesser width than said main walls, and the width of the flaps taken parallel to the longitudinal axis of the carton each being less at a medial portion thereof than the length of the main walls whereby substantial openings are presented at the corner portions of the carton.

spaced lengthwise thereof, vapor jet means positioned to

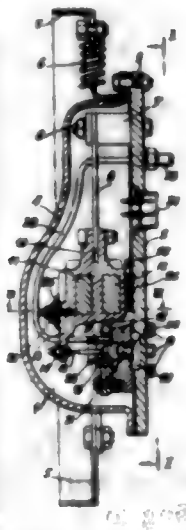
2,899,129

2,899,124

ELECTRO-MAGNETICALLY MAINTAINED OSCILLATING MOVEMENT HERMETIC COMPRESSOR

André Chaussen, Asnieres, France, assignor to Societe Anonyme des Usines Chaussen, Asnieres, France, a company of France

Application March 23, 1956, Serial No. 573,550
Claims priority, application France March 25, 1955
8 Claims. (Cl. 230—55)



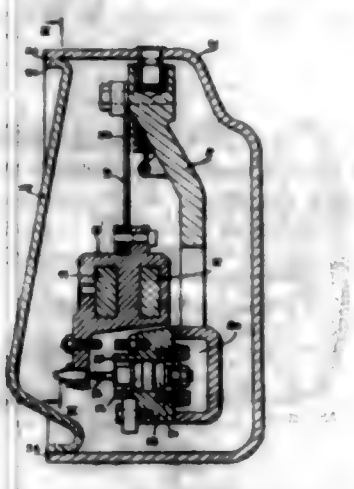
1. An electromagnetic motor for a compressor having a movable compressor element, comprising a support for the compressor and formed of magnetic material, a pair of electromagnets in spaced relation on said support and in magnetic relation therewith, a flexible blade on said support, and an armature magnet carried by said blade for connection with the movable compressor element, said armature magnet being insulated from said support and disposed between said electromagnets to complete a magnetic circuit through said support and be vibrated upon energization of said electromagnets with alternating current to drive the movable compressor element.

2,899,125

ELECTROMAGNETICALLY MAINTAINED OSCILLATING MOVEMENT HERMETIC COMPRESSOR

André Chaussen, Asnieres, France, assignor to Societe Anonyme des Usines Chaussen, Asnieres, France, a company of France

Original application March 23, 1956, Serial No. 573,550. Divided and this application June 21, 1957, Serial No. 667,152
Claims priority, application France March 25, 1955
3 Claims. (Cl. 230—55)



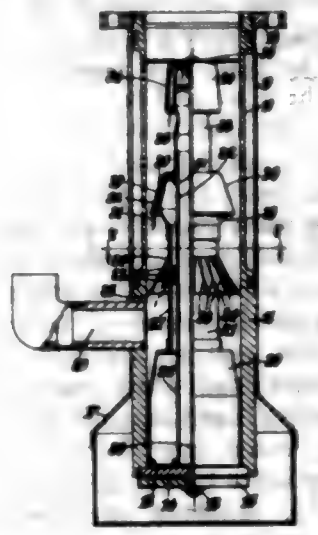
1. An electromagnetic motor for compressors or pumps, comprising a magnetic circuit provided with two symmetrical elements oppositely disposed in spaced relationship, each one of said symmetrical elements having three parallelly disposed and magnetically connected poles respectively provided with at least one alternating current winding, a reciprocable armature having two permanent magnets of opposite polarity inserted between the poles of said two symmetrical elements, a flexible member carrying said armature, and a bearing plate carrying said magnetic circuit and flexible member.

2,899,126

DIFFUSION VACUUM PUMPS

Peter Sadler, Pendleton, England, assignor to N.G.N. Electrical Limited, Patricroft, England, a British company

Application December 10, 1956, Serial No. 627,449
Claims priority, application Great Britain December 9, 1955
7 Claims. (Cl. 230—101)



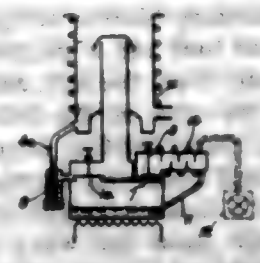
1. A diffusion pump comprising in combination an upstanding tubular body, a vapor tube centrally located within the body, means at the bottom of the vapor tube for producing an upward stream of vapor therein, a hood carried upon the vapor tube constituted by an assembly of little hoods side by side around the vapor-tube, with narrow parallel gaps between them, each hood communicating with the central vapor tube by ports passing through said tube, the outer edges of the little hoods being parallel with the inner wall of the tubular body and spaced therefrom by gaps equal in width to the gaps between the hoods, an inlet to the body at the top thereof, an outlet therefrom below the hood, and means adjacent the upper end of said vapor-tube for substantially obstructing the upward flow of vapor therefrom.

2,899,127

VAPOUR VACUUM PUMPS

Basil Dixon Power, Langley Green, Crawley, England, assignor to Edwards High Vacuum Limited, Crawley, England, a British company

Application December 10, 1956, Serial No. 627,455
Claims priority, application Great Britain December 8, 1955
8 Claims. (Cl. 230—101)



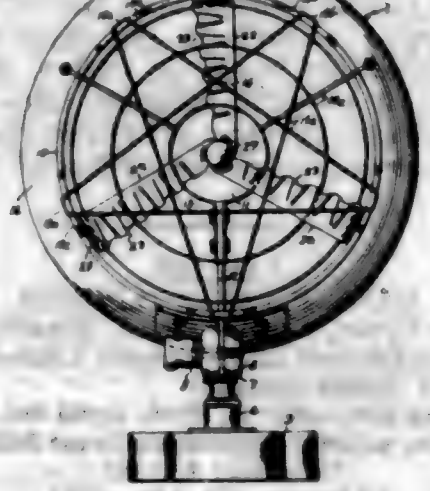
1. In combination, a vapor vacuum pump with means for controlling operation thereof; said pump comprising a boiler having a vapor space therein, a casing having a cooled wall surface with pump inlet and outlet means

and extends about the periphery of said space, said body having a pocket opening radially therethrough, a fluid-

the form of a plurality of indicia having two different characteristics thereby constituting a binary number code,

spaced lengthwise thereof, vapor jet means positioned to discharge into said casing intermediate said inlet and outlet means and toward said cooled surface and said outlet means, vapor duct means leading from said vapor space to said jet means for supplying vapor to said jet means for discharge thereby to effect pumping operation from said inlet means to said outlet means, and a heater for supplying heat to said boiler at a normal rate effective for maintaining a normal operating pressure and temperature in said boiler during such pumping operation; said means for controlling operation of the pump comprising isolating valve means in said vapor duct means, and heat extracting means connected with said boiler, said isolating valve means being openable to permit flow of vapor to said jet means for establishing pumping operation of the pump and being closable to suspend such flow of vapor for suspending pumping operation of the pump, and said heat extracting means having a capacity to extract heat from the boiler at a rate at least approaching said normal rate of supply of heat to said boiler by said heater, and means connected with said heat extracting means selectively operable for rendering said heat extracting means effective to extract heat from said boiler at said rate while said isolating valve means is closed and for rendering said heat extracting means ineffective to extract heat from said boiler while said isolating valve means is open; whereby a temperature gradient of heat flow from said heater to said boiler, and an operating pressure in the boiler, may be maintained while pumping operation of the pump is suspended, such that the pump may substantially immediately enter into fully effective operation when said isolating valve means is opened, and said heat extracting means is rendered ineffective, to establish pumping operation of the pump.

2,899,128
AIR CIRCULATING BLOWER
Joseph Vaghi, Bethel, Conn.
Application February 12, 1957, Serial No. 639,681
5 Claims. (Cl. 230—117)

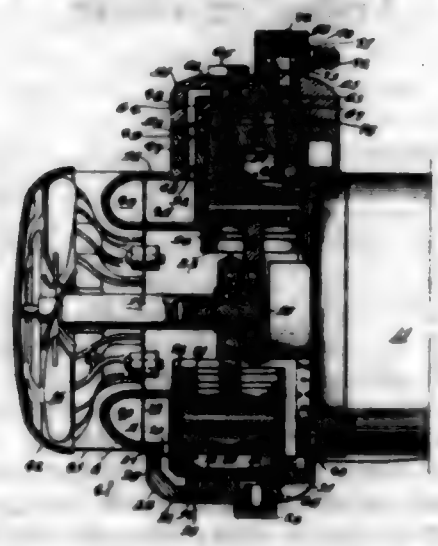


1. An air circulating blower comprising a rotary fan including a central hub and a plurality of radial blades extending outwardly from the hub, each blade being laterally inclined to the axis of the hub and comprising a straight relatively sharp leading edge and a wavy alternately convexly and concavely curved trailing edge with alternate transverse convex ridges and concave grooves extending inwardly from the wavy edge and gradually decreasing in height and depth respectively to substantially half way across the blade, the width of the blade increasing progressively from its inner to its outer end, and the outer end terminating with a concave channel on the front and air-impelling side of the blade.

2,899,129
ROTOR FOR A RADIAL BLOWER
Odilo L. Schwaiger, Stuttgart-Untertürkheim, Germany, assignor to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany
Application May 20, 1955, Serial No. 509,951
In Germany March 17, 1950
Public Law 619, August 23, 1954
Patent expires March 17, 1970
6 Claims. (Cl. 230—134)

1. Rotor for a radial blower comprising a first annular sheet metal plate formed with radial folds constituting radial channels extending to the periphery thereof, a second annular sheet metal plate mounted on and secured to the crests of said folds on one side of said first sheet so as to close said channels except for the outer and inner ends thereof, and a third annular sheet metal plate mounted on the other side of said first plate and secured to the bottoms of said channels so as to cover the spaces between said channels, said first sheet having an undulated peripheral sectional profile and said second and said third sheet having smooth peripheral sectional profiles, said folds being so shaped as to form parallel side walls confining said channels, whereas said spaces between said channels are sector-shaped, the central aperture of said second annular sheet metal plate exposing the inner portions of said folds thereby establishing communication of said aperture with said radial channels.

2,899,130
COMPRESSOR
Robert E. Sykes, Evanston, Ill., assignor to Bell & Gossett Company, Morton Grove, Ill., a corporation of Illinois
Application December 3, 1954, Serial No. 472,987
8 Claims. (Cl. 230—182)



1. In a compressor, in combination: casing means forming a compressor body having the general shape of an annulus to provide an axial air space, said body including radially spaced inner and outer exterior peripheral walls defining a pulsation chamber that is isolated from

2,899,134
ELECTRICAL ANALOG COMPUTING SYSTEMS

y . . . being equal to the respective coordinates of the

spectively provided with at least one alternating current

cooled wall surface with pump inlet and outlet means

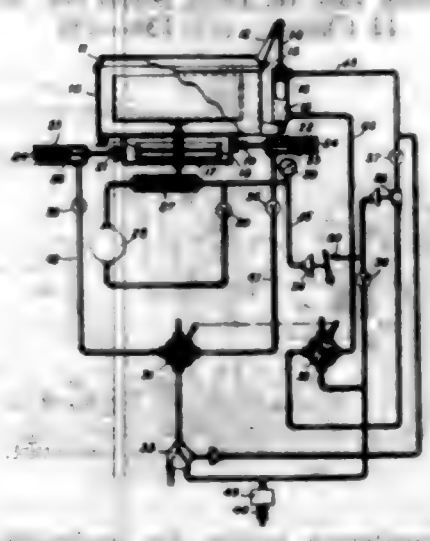
and extends about the periphery of said space, said body having a pocket opening radially therethrough, a fluid-compression assembly in said pocket and including a cylinder and head therefor carried by said body, a piston reciprocable in the cylinder, and means in said space for actuating said piston, means of communication between said cylinder and said chamber, and means for flowing a stream of air over and in heat-exchange relation with said walls.

2,899,131

CONTROLLING MEANS FOR ROTARY MACHINES

Viktor Wehler, Therwil, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

Application September 6, 1956, Serial No. 532,451
Claims priority, application Switzerland September 3, 1954
7 Claims. (Cl. 233—1)



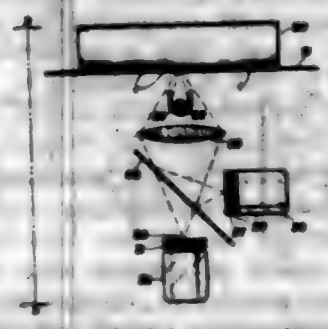
1. In a rotary machine of great inertia and having a rotary shaft and also having movable parts intended to be closed during rotation of said shaft and opened only when said shaft is stationary, a source of supply of motive power for said machine, automatic control means comprising a fluid pressure system for moving said movable parts to and from open and closed positions, switching means for operating said pressure system, locking means incorporated in the pressure system for reciprocally locking the drive of the machine and of said movable parts, means operated by the rotary shaft of the machine interrupting the application of opening fluid pressure to the control means while the said shaft is rotating, and means operated by the fluid pressure for interrupting the supply of motive power to the machine while the fluid pressure used to open the movable parts persists and also while the fluid pressure existing during closing of the said parts persists.

2,899,132

CHECKING SYSTEMS

Richard Kasper Orthuber, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation

Application December 30, 1955, Serial No. 556,687
14 Claims. (Cl. 235—61.6)



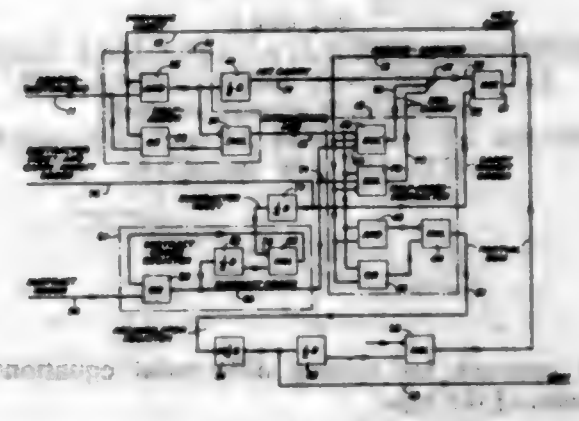
1. In a system for reading coded information carried by an article on a conveyor, said information being in the form of a plurality of indicia having two different characteristics thereby constituting a binary number code, a decoding system comprising: first photosensitive means arranged to scan said indicia and to provide first signal pulses in response to each indicia; second photosensitive means arranged to scan said indicia and to provide second signal pulses in response to indicia of only one characteristic; and binary-to-decimal converting means connected to said first and second photosensitive means and operable thereby to convert said first and second signal pulses to decimal information.

2,899,133

BINARY ADDER-SUBTRACTER

John G. Tryon, Chatham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application December 2, 1954, Serial No. 472,688
1 Claim. (Cl. 235—165)

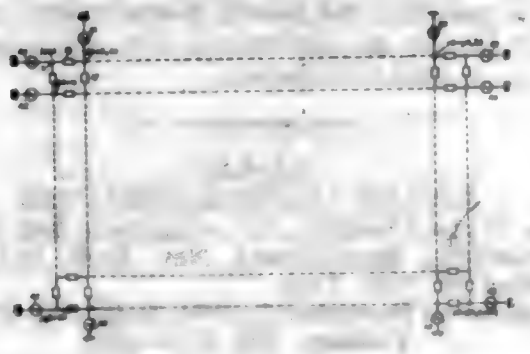


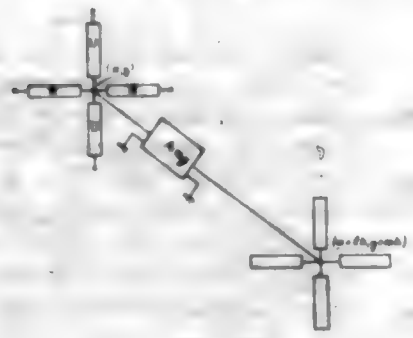
In a serial binary computing circuit for adding or subtracting two binary numbers in which the digits of the numbers appear successively spaced by a predetermined time period, a half-adder having a carry input circuit and a first number input circuit, and an intermediate sum output circuit and a carry output circuit; a half-adder-subtracter having an input terminal connected to said intermediate sum output circuit, a second number input circuit, and three output circuits, the first of said half-adder-subtracter output circuits representing the carry for addition operations, the second of said output circuits representing the carry for subtraction operations, and the third being the sum output terminal; switching means included in said half-adder-subtracter for selecting one of said carry output circuits; a subtract order register including a delay loop having a delay equal to one of said time periods, and an inhibit unit in said delay loop, said switching means being connected to said subtract order register to select the carry for subtraction operations upon the receipt of pulses from said register; a resultant carry circuit connected to receive the carry from said half-adder and the selected carry from said half-adder-subtracter; means for coupling said resultant carry circuit back to the carry input circuit of said half-adder with an elapsed time in the loop through the computing apparatus and back to the carry input circuit equal to one of said predetermined time periods; another inhibiting circuit connected in the loop between the resultant carry circuit and the input to said half-adder; means for concurrently energizing circuits connected to the inhibiting inputs to the inhibit unit in said subtract order register and the inhibit unit in said loop to reset the subtract order register and to inhibit carries applied to said last-mentioned loop; and a delay line connecting said sum output terminal to said second number input circuit to form an accumulator, the total number of time periods of delay of said accumulator being equal to the number of digits in the binary numbers which are employed in said computer circuit.

therefrom during rotation thereof; a distributor cup having a closed bottom positioned concentric with the geo-

tubes and engaging said horizontal axis, said tubes having discharge nozzles arranged for a mixing discharge

2,899,134
ELECTRICAL ANALOG COMPUTING SYSTEMS FOR SOLVING ORDINARY AND PARTIAL NON-LINEAR DIFFERENTIAL EQUATIONS
Yves Recard, Paris, France, assignor to Compagnie Generale de Telegraphie Sans Fil, a corporation of France
Application February 2, 1954, Serial No. 407,786
13 Claims. (Cl. 235—182)





1. A network for solving differential equations with n variables of the type

$$A_1\frac{\delta^2 V}{\delta x^2}+A_2\frac{\delta^2 V}{\delta y^2}+B_1\frac{\delta V}{\delta x}+B_2\frac{\delta V}{\delta y}+CV(x-l,\ y-m)+D=0$$

wherein A_1, A_2 C and D are known functions of x and y and B_1 is proportional to

$$\frac{\delta A_1}{\delta x}$$

and B_2 is proportional to

$$\frac{\delta A_2}{\delta y}$$

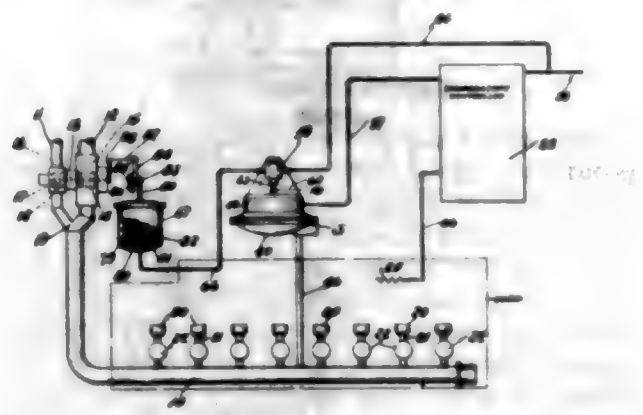
l and m being independent of x, V being an unknown function of x and y, comprising:

n families of chains of junction points having respective coordinates $x_1 \ldots x_n$, $y_1 \ldots y_m$ such that the coordinates of the two extreme among said junction points of each chain are values between which the above equation is to be integrated and such that the coordinates x_p, x_p+1, or y_p, y_p+1 of the consecutive other junction points of each chain differ by a fixed value h, which is small compared to the difference between the coordinates of said extreme junction points of each chain and is an integer submultiple of l and m; sources of fixed potential, respectively connected to said extreme junction points; a plurality of resistors, series connecting said junction points of each chain, and the respective resistance values of which simulate the values of functions of all the coordinates identical respectively to

$$\frac{1}{A_1} \text{ to } \frac{1}{A_1} \cdots$$

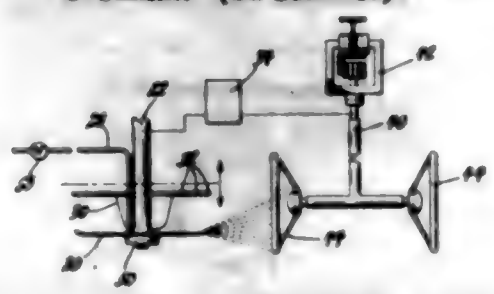
respectively provided by giving to said coordinates the values of the average of said coordinates of the two junction points to which each resistor is connected; a plurality of impedances, having two terminals, respectively connected by one of said terminals to said junction points; means for feeding currents from said respective other terminals to said respective junction points as a function of voltage sources the respective potentials of which are simulating respectively the term D, for x, y . . . being equal to the respective coordinates of the respective junction points; and amplifiers having an input and an output, each amplifier having its input connected to a first junction point, and its output connected for feeding in series said impedance connected to a second junction point whose coordinates differ respectively by l and m from the coordinates of said first junction point for providing respective feedback loops for said junction points; means for controlling the respective feedback ratio of said feedback loops; and means for measuring the respective potentials V of said junction points.

2,899,135
TEMPERATURE REGULATED MULTIPLE BURNER SUPPLY SYSTEM
Eugene O. Engelt, Saginaw, Mich., assignor to Baker Perkins, Inc., Saginaw, Mich.
Application July 10, 1953, Serial No. 367,322
12 Claims. (Cl. 236—15)



1. In a regulatory system for controlling the flow of a combustible fuel mixture to a header line which supplies the fuel mixture at a relatively low pressure to a plurality of oven burners, valve means operable to adjust the flow through said line, a pressure medium under a relatively high pressure, means for varying the pressure medium in accordance with the heat demands of the oven, a pressure stabilizer including a diaphragm carrying a central stem, a line leading from the header to impose the pressure therein on said diaphragm, said stabilizer also including a pair of diaphragms of different area connected to said stem, the diaphragm in said pair of larger area being adjacent to said first-mentioned diaphragm, port means admitting said pressure medium between said pair of diaphragms to differentially impose the pressure thereof on said stem in opposition to the pressure in said manifold, and means actuated by said stem for adjusting said valve means.

2,899,136
ELECTROSTATIC PAINTING APPARATUS
Harold J. Reindl, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application November 15, 1957, Serial No. 696,777
5 Claims. (Cl. 239—15)



1. In combination with a centrifugal distributor for a solvent containing paint wherein paint is supplied to the distributor adjacent the center thereof and is distributed

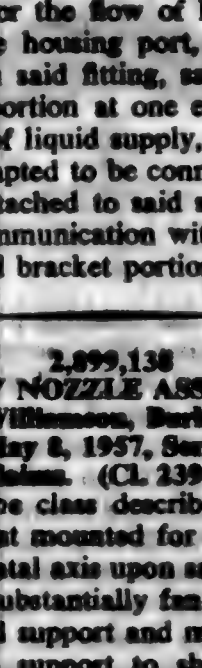
intermediate its ends, and comprising a shaft journaled

2,899,142
ARTICLE HANDLING APPARATUS

by an article on a conveyor, said information being in employed in said computer circuit.

therefrom during rotation thereof; a distributor cup having a closed bottom positioned concentric with the geometric center of said distributor, a lip on said cup, a paint supply tube extending into the top edge of said cup and opening below the lip and fixed with respect to said cup, said paint supply tube being adapted to supply paint to said cup which then overflows from the cup and over said lip onto said distributor for centrifugal distribution over the surface of the distributor.

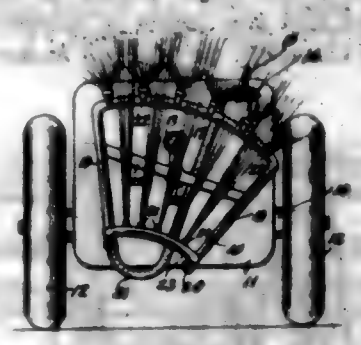
2,899,137
DRINKING FOUNTAIN WITH A CONNECTOR CONDUIT
William Martin, Arlington, Mass.
Application January 19, 1956, Serial No. 560,148
3 Claims. (Cl. 239—29)



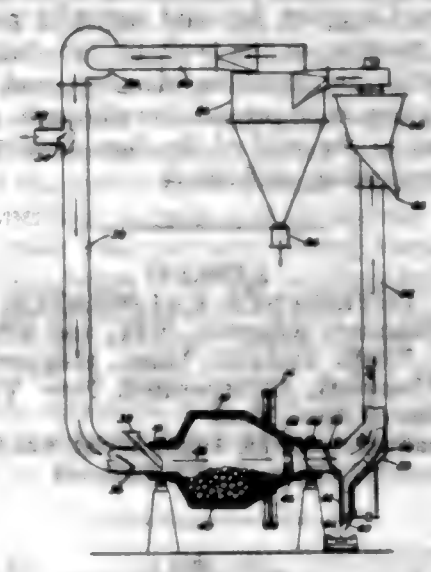
3. A fountain comprising a connector conduit embodying a leg part and a cross part in communication with said leg part, said leg part embodying teeth at one end, a hollow conduit fitting communicating with said leg part embodying a bracket portion having a hole therethrough and embodying teeth at one end adapted to mesh with said leg part teeth, valve apparatus operably supported by and in communication with said connector conduit and fitting embodying a valve housing adapted to adjustably connect with said leg part whereby said teeth of said leg part and fitting may be separated, and having a port in communication with said fitting, a valve stem movably extending into said valve housing and being spaced from the interior of said valve housing to thereby provide a passage for the flow of liquid in communication with said valve housing port, a supply conduit in communication with said fitting, said connector conduit embodying a feed portion at one end adapted to be attached to a source of liquid supply, a delivery portion at the opposite end adapted to be connected to a distributor member, a basin attached to said supply conduit, and a drain conduit in communication with said basin, and extending through said bracket portion hole.

2,899,138
SPRAY NOZZLE ASSEMBLY
Herbert J. Williamson, Burlingame, Calif.
Application May 8, 1957, Serial No. 657,869
4 Claims. (Cl. 239—77)

1. A device of the class described comprising a support, a spray element mounted for vertical rotation on a substantially horizontal axis upon said support, said spray element defining a substantially fan-shaped frame mounted exteriorly of said support and movable within the exterior area of said support to shield the frame when rotated upon said support, said frame comprising an upper arched-shaped tube having depending converging side tubes suspending a spray jet tube below said upper arched-shaped tube, a hub bracket connecting said side tubes and engaging said horizontal axis, said tubes having discharge nozzles arranged for a mixing discharge of fluid passing through said tubes, said support including a tank containing a spraying fluid, and flexible means connecting said tank to said spray element for supplying fluid to said spray element.



2,899,139
METHOD AND APPARATUS FOR CONCENTRATING AND CLASSIFYING MATERIAL
Harlowe Hardinge, York, Pa.
Application June 14, 1954, Serial No. 436,338
11 Claims. (Cl. 241—19)



1. A process of treating raw mineral material comprising the steps of progressively crushing and comminuting said raw material in a mill to produce fines of various sizes mixed with coarser particles, progressively removing said mixture from the exit of said mill and permitting the same to fall by gravity down a passage having a throat of adjustable size but afford a substantially constant cross-sectional area in any adjusted size of throat, and subjecting the falling material to a fluid current of controlled volume and adjusted cross-sectional area to produce a force moving upwardly in said passage and regulated to entrain and separate relatively fine particles of material of a predetermined range of sizes from said falling material while permitting the coarser particles of material to fall through said passage, the size of said throat being variable to adjust the force of said fluid current, thereby to determine the range of sizes of fine particles separated from said coarser particles.

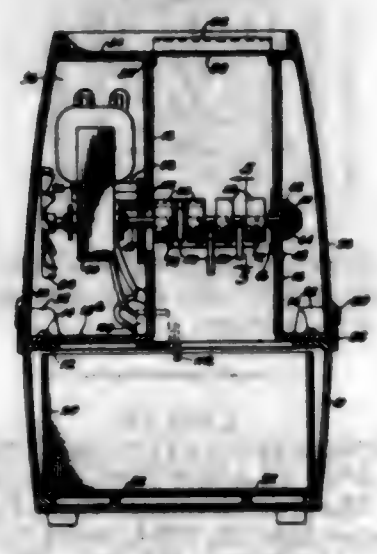
2,899,140
ICE CRUSHER DIRECTLY DRIVEN BY ELECTRIC MOTOR
John T. Hellyer, Wayne, Ill., assignor of one-half to Robert S. Strom, Wheaton, Ill.
Application July 9, 1956, Serial No. 596,575
1 Claim. (Cl. 241—190)

A material crusher comprising a tubular duct open at opposite ends, ice crushing means disposed in said duct,

2,899,144
MEANS FOR DISPENSING PACKAGING TAPE

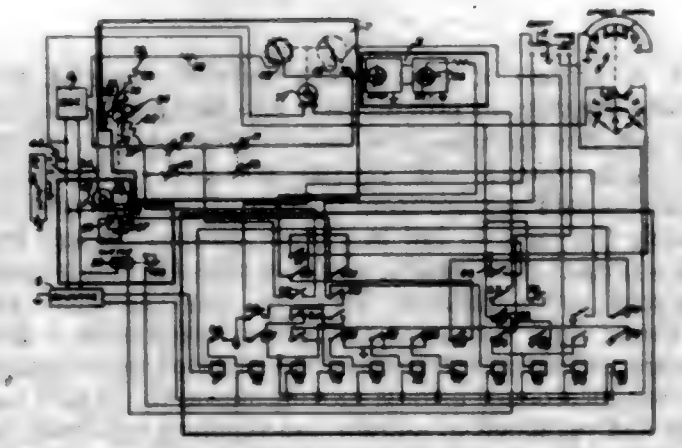
2,899,146
AUTOMATIC REEL

intermediate its ends, and comprising a shaft journaled at one end in one wall of said duct and the opposite portion extending through an enlarged opening in the opposite wall of said duct, material crushing elements mounted on said shaft, shear blades carried on the interior of the duct and positioned in cooperating relation to said crushing elements, an electric motor mounted on



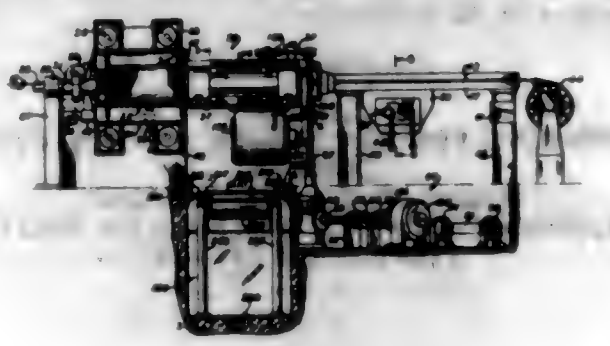
said duct and operably connected to said shaft and providing journal support for said opposite portion of the shaft, said opening in the wall of the duct being of a size to permit said crushing elements and shaft in assembled relation to be passed therethrough, and a sealing plate secured to the wall of the duct covering said opening and surrounding said shaft.

2,899,141
IMPEDANCE CALIBRATOR
George H. Harmon, Kingston, N.H., and Albert E. Rockwood, Jr., North Andover, Mass., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application April 18, 1956, Serial No. 578,917
7 Claims. (Cl. 242—9)



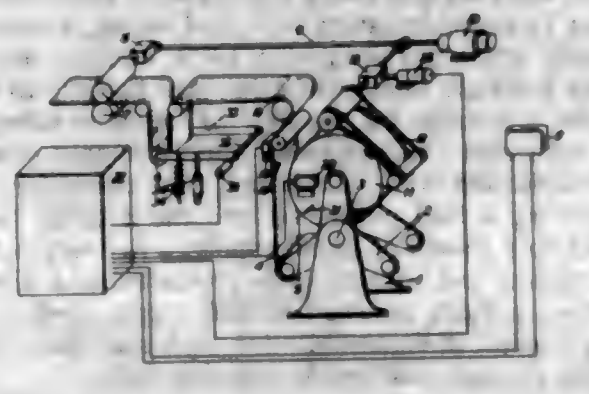
1. In a wire wound impedance element calibrator, means for progressively making electrical contact with wire being unwound from an overwound element to be calibrated, a two-speed driver for the electrical contacting means, a cutter for clipping the impedance element wire being unwound, an impedance bridge having means for connecting therein the unwound portion of an element being calibrated for comparing the impedance thereof with a standard, means for initially operating the two-speed driver at its higher speed, means responsive to a predetermined off-null condition of the bridge to reduce the speed of the driver to its lower speed, and means responsive to the output signal of the bridge for actuating the cutter when the impedance of the unwound portion reaches the desired value.

2,899,142
ARTICLE HANDLING APPARATUS
Tillman T. Bunch, near Ashland, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application April 5, 1957, Serial No. 652,961
14 Claims. (Cl. 242—25)



1. Apparatus for loading and unloading reels, which comprises an arbor for receiving a reel, means for supporting a reel, means for moving said supporting means to a first position where a supported reel is located for insertion and withdrawal of said arbor and to a second position where a reel can be loaded on said supporting means and a reel can be unloaded from said supporting means, means for moving said arbor longitudinally, means operable at the second position for reel loading and reel unloading of said reel supporting means, and means operated by said reel supporting means for actuating said arbor moving means and for actuating said loading and unloading means, whereby a reel can be loaded on said arbor and unloaded from said arbor.

2,899,143
REGISTER CONTROL OF MOVING WEBS
John F. Crosfield and Daniel Gold, London, England, assignors to J. F. Crosfield Limited, London, England, a British company
Application March 12, 1956, Serial No. 570,878
Claims priority, application Great Britain March 16, 1955
18 Claims. (Cl. 242—58.3)



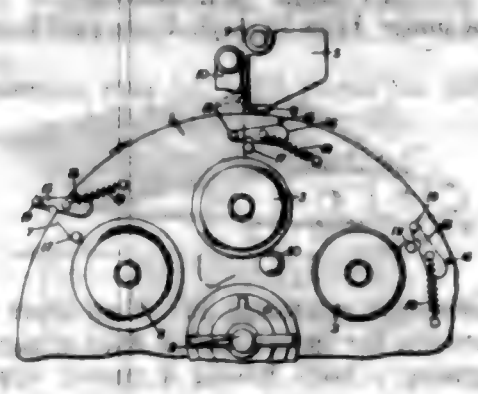
3. Apparatus for automatically sticking a moving first web of preprinted paper to a second web of preprinted paper on a rotating reel at an instant such that preprinted units on the first and second webs are substantially in register with one another, comprising two light-sensitive devices for scanning marks on the first and second webs respectively, pulse-generating means responsive to signals from the light-sensitive devices to generate a pulse the length of which represents the interval between two signals representing marks on the first and second webs respectively, correction means for modifying the speed of the reel in accordance with the length of the said pulses in such a manner as to reduce the said length, and means responsive to a predetermined minimum length of said pulses to operate a device for sticking the said moving web to the said further web on the rotating reel.

2,899,148

wing, and means for varying the position of said louvres

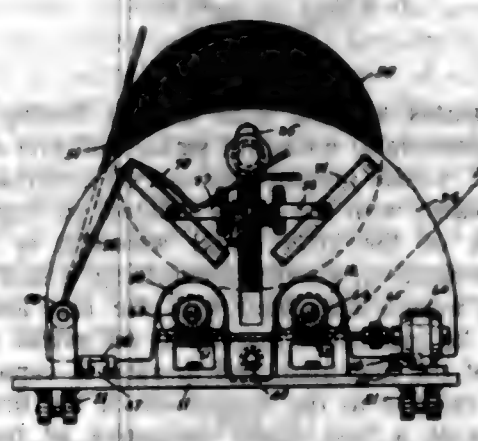
arched-shaped tube, a hub bracket connecting said side opposite ends, ice crushing means disposed in said duct,

2,899,144
MEANS FOR DISPENSING PACKAGING TAPE FROM ROLLS
John Kenneth Thompson, Malton, England
Application March 28, 1957, Serial No. 649,182
Claims priority, application Great Britain March 28, 1956
5 Claims. (Cl. 242—58.4)



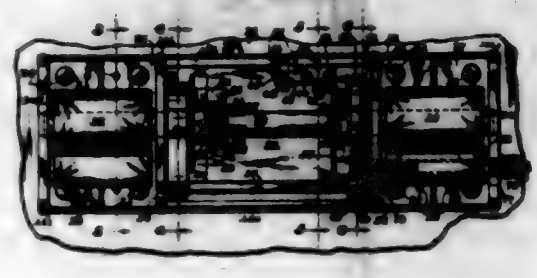
1. A device for withdrawing tape from a drum having means for connecting the commencing end of the tape from one drum to the finishing end of the tape from another drum, comprising a movable carrier in the form of a rotatably mounted magazine disc having tape carrying drums at spaced apart positions so that the drums can be successively moved to a station for withdrawing tape, a clamp having gripping jaws between the open jaws of which the tape travels when being withdrawn, means for operating the clamp to hold the tape from a spent drum whilst it is cut therefrom and whilst another drum is moved to the withdrawal station, and a jaw of said clamp forming a supporting face for fastening the tape from the loaded drum at said withdrawal station to the end of the tape held by the clamp, and means on the magazine carrier for carrying the beginning end of the tape from a loaded drum and applying such end to the end of the tape held by said clamp.

2,899,145
SHAFTLESS MILL ROLL STAND
Aloysius J. Carr, Knightstown, Ind.
Application November 23, 1955, Serial No. 548,852
5 Claims. (Cl. 242—58.6)



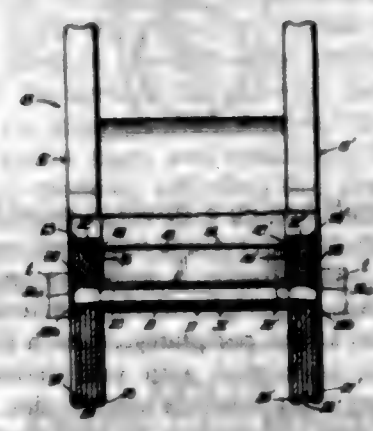
2. In combination in a roll handling machine, a pair of parallel side-by-side cylindrical rollers, stocks at opposite ends of the rollers, horizontal ways slidably carrying said stocks, said ways being parallel to said rollers, a vertical way in each stock, dead centers vertically movable in said vertical ways, means for sensing the diameter of the roll on said rollers and mechanical coupling means between the sensing means and said dead centers so that said dead centers will find the centers of the ends of the roll to be handled.

2,899,146
AUTOMATIC REEL
Chester J. Barechi, Grand Rapids, Mich., assignor to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey
Application March 14, 1956, Serial No. 571,392
4 Claims. (Cl. 242—107.4)



4. A safety device for mounting in a vehicle to restrain the movement of a body within the vehicle when the body is subjected to relatively high acceleration movement relative to the vehicle comprising an elongated flexible element adapted to be coupled to the body, a rotatably mounted reel having said element secured thereon, resilient means coupled to said reel for rotating said reel in a direction to wind said element on said reel, said reel rotating in the opposite direction to unwind said element therefrom due to forces exerted on the element by the body, a rotatably mounted inertia member having camming means thereon, a collar rotatable with the reel and slidable relative thereto, said collar having a cam thereon adjacent said camming means, spring means urging the collar toward the inertia member thus yieldably coupling said inertia member to said reel to thereby cause said member to rotate with said reel during rotation in said unwind direction below a certain acceleration, said camming means operating against said cam to overcome said spring means during rotation at said certain acceleration to cause said reel to rotate relative to said inertia member, and means associated with said collar operated when said reel rotates relative to said inertia member for stopping rotation of the reel in said unwind direction.

2,899,147
REEL STRUCTURE
Hilyard C. Howman, Aurora, Ill.
Application May 31, 1955, Serial No. 511,917
11 Claims. (Cl. 242—118.6)

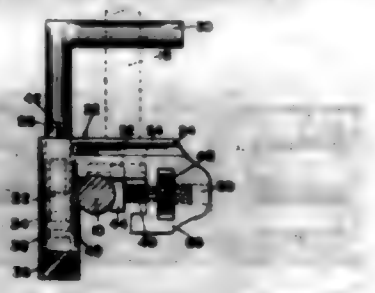


10. In a reel structure having a hub, a pair of heads at opposite ends of the hub, and angularly spaced rivets joining the end heads, the improvement comprising reinforced tubular rivets each including a rigid intermediate shank portion of polygonal cross-section which extends between the end heads of the reel and end portions of circular cross-section which extend through the said end heads and have outwardly turned ends in fixed engagement therewith.

signal to the control means so as to vary the magnitudes

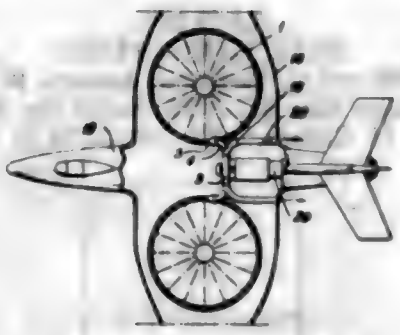
tending yieldable tabs formed upon the plate at equi-

2,899,148
WINDING DEVICE FOR FISHING REELS
Edwin Warren Brainard, Westminster, Mass.
Application December 3, 1956, Serial No. 625,678
1 Claim. (Cl. 242—129.8)



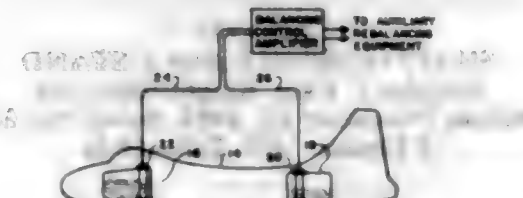
A device for holding a wound spool of fishing-line to a fishing rod having a reel for transfer of the line to the reel, said device comprising a body including a cylinder, a leg in the cylinder, means to move the leg axially in the cylinder, a spindle on the leg, a friction surface on the body adjacent the cylinder, said spindle and surface being parallel and the spindle moving toward and away from the surface as the leg is moved, a clamp member, on the body, and means to move the clamp member at right angles to the cylinder and parallel to the spindle to clamp the rod to the cylinder and at right angles to the spindle.

2,899,149
AIRCRAFT HAVING DUCTED TURBINE DRIVEN LIFT ROTORS
Louis Breguet, Paris, France; Claire J. Breguet, Antoine J. E. L. Breguet, Jacqueline Y. Breguet, Gilberte M. L. Breguet, Pierre E. L. Breguet, Paul G. R. L. Breguet; Pascal A. L. Breguet and Louis-Christian A. M. Breguet, under legal guardianship of Claire J. Breguet, sole heirs of Louis Breguet, deceased
Application December 8, 1953, Serial No. 396,912
Claims priority, application France December 18, 1952
4 Claims. (Cl. 244—12)



1. In an aircraft having a fuselage provided with wings the combination of lift rotors, mounted each inside one of said wings, respectively, a gas-compressor supported from said fuselage, a peripheral ring enclosing a plurality of driving-blades at the periphery of each lift-rotor, a gas discharge-nozzle associated with said driving blades and adapted to direct a jet towards said blades, piping means for connecting said compressor to said discharge-nozzles, means carried by each wing for ensuring correct relative position of the corresponding discharge-nozzle and ring, said means comprising a support for said nozzle and guide rollers adapted to roll on the outer periphery of said ring, a plurality of rollers rotatably supported from each wing above each ring and adapted to roll on same, means for enabling air displaced by each rotor to pass through the corresponding wing, said means comprising a plurality of hinged louvres in the upper surface of said wing, a plurality of hinged louvres in the lower surface of said wing, and means for varying the position of said louvres at will, in accordance with the condition of operation of said aircraft.

2,899,150
BOUND VORTEX SKIN
Frampton E. Ellis, Jr., Montgomery County, Md.
Application September 8, 1952, Serial No. 308,499
5 Claims. (Cl. 244—41)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A device for producing lift when there is relative motion between the device and a fluid stream, said device comprising a body having a curved upper surface forming member provided with closely spaced longitudinal grooves extending transversely to the direction of fluid flow, each groove being substantially circular in cross-section, the center of each groove lying below said surface and each groove having an open top over which the fluid is adapted to flow generating a vortex flow within the groove which flows at a velocity different from the velocity of the fluid stream whereby drag is reduced because the friction between adjacent layers of fluid moving at different velocities is less than the friction of fluid flowing along a solid surface.

2,899,151
CAPACITIVE PROPORTIONING SYSTEM
Robert J. Levine, New York, N.Y., assignor, by mesne assignments, to Avien, Inc., Woodside, N.Y., a corporation of New York
Application April 3, 1953, Serial No. 346,735
4 Claims. (Cl. 244—77)

3. Apparatus for use with a craft having a control means responsive to a control signal and first and second fluid loads, whose magnitudes can be controlled by the control means, with the loads located on opposite sides of an axis of the craft about which it is desired to control the center of gravity, comprising: a first capacitive measuring means associated with the first load and arranged to be immersed therein to an extent relative to the level of the first load, and to vary in capacitance, to an extent relative to the magnitude of the first load, so as to provide a first signal indicative of the moment of the first load with respect to the axis; a second capacitive measuring means associated with the second load and arranged to be immersed therein, to an extent relative to the level of the second load and to vary in capacitance, to an extent relative to the magnitude of the second load, so as to provide a second signal indicative of the moment of the second load with respect to the axis; network means connected to said first and said second measuring means and responsive to the ratio of the signals from said first and second measuring means to provide a control signal indicative of the center of gravity of the first and second loads, and means to apply said control

the fishing pole, said lower and upper sections being

duplicate of the first stay and having downwardly di-

roll to be handled.

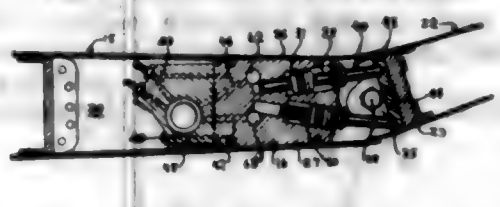
ment therewith.

signal to the control means so as to vary the magnitudes of the first and second loads in a direction tending to maintain the center of gravity of the craft.

2,899,152
AIRCRAFT CONTROL SURFACE OPERATING MECHANISM

Richard H. Welland, Wichita, Kans., assignor to Boeing Airplane Company, Wichita, Kans., a corporation of Delaware

Application May 16, 1955, Serial No. 508,701
5 Claims. (Cl. 244—85)



1. In an airplane flight control system of the class wherein a deflectable control airfoil is hinged along its leading edge to the trailing edge of a fixed airfoil by means of co-axial spanwise spaced hinge joints, the common axis of said joints being located centrally with respect to the opposite side surfaces of said airfoils, a mechanism for deflecting the control airfoil about its hinge axis comprising: a spanwise elongated rigid plate or spar constituting a major portion of the leading edge of the movable airfoil, that surface of the plate which faces the hinge joint having spaced recessed actuator seats formed therein along the respective marginal portions thereof; an elongated unitary cylinder block rigidly secured in the trailing edge of the fixed airfoil extending along said hinge axis and located between adjacent hinge joints; two spaced rows or banks of cylinders in said block, both rows extending along the hinge axis with the longitudinal axes of said cylinders disposed fore and aft, the respective rows lying in spaced planes which intersect the rigid plate of the movable airfoil within its contours and on opposite sides of said hinge axis; a plunger in each of said cylinders; rigid fore and aft movable airfoil actuators spanning the space between and in contact with plungers in the respective rows and with corresponding seats in said rigid plate on opposite sides of the hinge axis for transmitting thrust from the plungers in the respective rows to said plate to deflect the control airfoil about its hinge axis; and means for introducing hydraulic fluid under pressure into a selected row of said cylinders to simultaneously force the corresponding plungers and actuators to move toward the rigid plate and for simultaneously withdrawing fluid under back pressure from the other row of cylinders, with a consequent equal movement of the other row of plungers and actuators in an opposed direction, such actuator movement resulting in deflection of the controlled airfoil in one direction about its hinge axis.

2,899,153
BLANKET TIE-DOWN AND RECEPTACLE REST

Allen J. Parker, Lake Worth, Fla.

Application November 24, 1958, Serial No. 775,873
3 Claims. (Cl. 248—1)

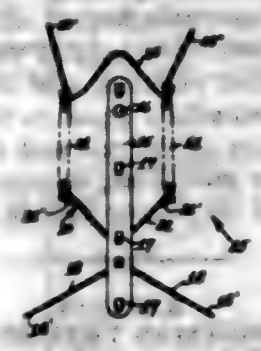
3. A combined blanket tie-down device and receptacle support that is stamped from a flat sheet of metal, the device embodying circular head plate having a forwardly extending tapered extension, the said extension being apertured to form a key hole opening for the wedging reception of a blanket corner to be anchored, a ground stake formed integral with the head plate and bent at a right angle thereto, the ground stake being triangular in cross-section and a plurality of upwardly extending yieldable tabs formed upon the plate at equidistantly spaced points throughout its marginal edge, the

said tabs adapted to frictionally receive a cylindrical receptacle such as a bottle.

2,899,154
ADJUSTABLE PLATE HOLDERS AND THE LIKE

Leo Zavelner, Brooklyn, N.Y.

Application February 9, 1956, Serial No. 564,567
5 Claims. (Cl. 248—30)



1. In a plate hanger or the like, an elongated central, vertically disposed member, a pair of arms extending from the bottom region of said member, one to each side thereof respectively; the free end of each of said arms having a hook adapted to engage and act as a support for the rim of a plate above them and a unitary structure comprising a pair of uprightly positioned, tension, helical coil springs, positioned one along each side of said member, a first element connecting the bottom regions of said springs, a second element connecting the top regions of said springs; said second element having arms extending upwardly from each of the springs respectively; each of said latter arms having an inverted hook adapted to engage the rim of the plate below them and means on the first element and the central member, affording that the first element be detachably hooked onto said central member at any of various positions along the central member, whereby the hanger is made to accommodate plates of different sizes, one at a time.

2,899,155
FISHING POLE HOLDER

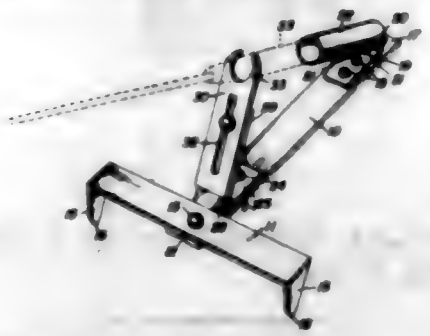
Willis E. Rogers, Oklahoma City, Okla.

Application January 18, 1957, Serial No. 634,895
1 Claim. (Cl. 248—46)

A fishing pole holder comprising a main base, a cross arm, a fishing pole rest, and a fishing-pole-handle-receiving horn, said fishing pole rest comprising a lower section and an upper section, the lower end of said lower section being connected by hinge means atop the main base, said hinge means being spaced, by the width of said cross arm, from one end of said main base, said upper section being provided at its upper end with a slot for receiving

plurality of hinged louvres in the lower surface of said

the fishing pole, said lower and upper sections being connected by pin and slot connection to vary the overall length of said rest and thus vary the angular inclination of the pole supported thereby, said horn being mounted atop the main base by hinge means adjacent the opposite end of the main base from the pole rest, said rest and horn being respectively hinged for swinging, when not in use, toward each other into position against said base, said main base having a slot cut into the end thereof adjacent the rest, a hole formed in said cross arm midway of its length and width, for accommodating a bolt passing through said base slot and through said cross arm hole,

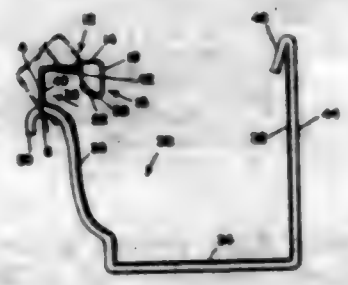


to hold said main base and cross arm together when in operative position, and yet permitting the cross arm to be loosened and slipped off in order to make it easier to carry, said main base being straight throughout its length, said cross arm being straight throughout its length except for short legs extending at right angles thereto at opposite ends thereof, for engaging the ground to support the device in desired position, said cross arm having an overall length substantially equal to the distance between the point of hinging of the rest and the point of hinging of the horn on the main base, to provide stability against lateral overturn of the fishing pole in supported position.

2,899,156
CHRISTMAS TREE STAND
Emil F. Marcucci, Jackson, Calif.
Application March 8, 1956, Serial No. 570,266
2 Claims. (Cl. 248—48)

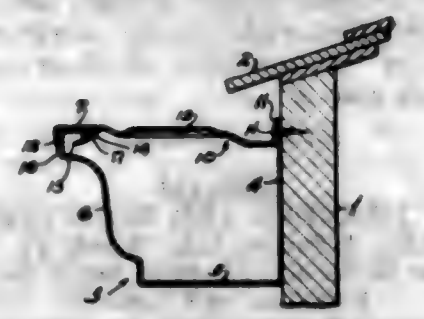
1. A portable knockdown stand for temporarily basing and supporting the trunk of a Christmas tree comprising a base cruciform in plan and embodying cooperating coplanar base members having median portions crossing each other and providing a hub, a trunk retaining member carried by said hub portion and embodying a pointed prong projecting above the level of the hub portion and adapted to penetrate the tree trunk, a first inverted V-shaped stay having an eye at the upper end to accommodate a fastener used in securing the eye to the trunk of the tree, also having downwardly divergent resilient arms the inherent resiliency of which tends to spread the arms apart from each other, a pair of headed fasteners mounted opposite each other on longitudinal edge portions of one radiating part of one of said base members, said arms straddling said part and having keeper notches at their lower ends releasably engaging said fasteners between the heads thereof and adjacent marginal edges of said part, and a second inverted V-shaped stay a duplicate of the first stay and having downwardly divergent resilient arms also straddling the other radiating part of said base member and formed at their lower ends with keeper notches likewise secured by headed fasteners to the longitudinal edges of said last-named radiating part.

2,899,157
GUTTER HANGER CLIP
Morton B. Wolfe, Norwood, Pa., assignor to Berger Bros. Company, Philadelphia, Pa., a corporation of Pennsylvania
Application September 14, 1956, Serial No. 609,890
5 Claims. (Cl. 248—48.1)



1. A gutter hanger clip for "K" type gutter having a squared bead and adapted to engage the outer hook end of a gutter hanger for "K" type gutter and secure the gutter to the hanger comprising: a strip of metal having an outer upstanding leg and an inwardly directed leg adapted to be opposite the side and top, respectively, of the gutter bead, the outer upstanding leg having a slot for the reception of the outer end of the hanger and the inner portion of said inwardly directed leg being raised above the outer portion, a spring portion contiguous with the inner end of said inwardly directed leg and comprising a pair of spaced legs substantially parallel to the upper portion of the outer upstanding leg and connected at their lower ends by cam portions extending upwardly at an angle to the horizontal, said cam portions adapted to engage the top of the bead and camming the inwardly directed leg upwardly as the clip is moved to the securing position and the inner side of said spring portion engaging the inner edge of the bead when the clip is in the securing position to clamp the bead between the outer upstanding leg and the spring portion.

2,899,158
GUTTER HANGER
Harry Lee Rehols, St. Louis, Mo., assignor, by mesne assignments, to E. E. Souther Iron Company, St. Louis, Mo., a corporation of Missouri
Application June 13, 1955, Serial No. 514,809
1 Claim. (Cl. 248—48.2)



A hanger for an eave gutter having an upright inner wall, an upright outer wall spaced therefrom with an inturned horizontal lip along its upper edge, the hanger comprising an elongated body corresponding in length to the distance between the upright walls of the gutter to which it is to be applied, said body having an upturned flange at its inner end and having a downturned flange at its outer end and having a tongue extending

said plate in a horizontal position in engagement at its opposite edges with said parallel bars, first and second

jacent the fixed bracket and an extended position wherein the legs extend outwardly from the fixed bracket, and

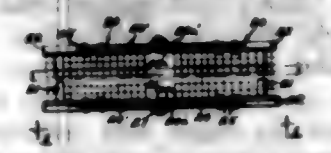
downwardly and outwardly and terminating near, but spaced from, said downturned flange to define a crotch to receive the inner end of a gutter wall inturned lip between the tongue and body, the spacing between the lip engaging portion of the crotch defined between said tongue and said body and the inner side of said downturned flange being such as to firmly engage said horizontal gutter lip therebetween to grip the gutter lip as a result of and only when the inner end of the hanger is swung upwardly about its outer end as a pivot into a position in which it extends across the distance between the gutter upright walls.

2,899,159

CABLE SUPPORT STRUCTURE

William M. Leblang, Cleveland Heights, Ohio, assignor to Hatfield Electric Company, Cleveland, Ohio, a corporation of Ohio

Application May 28, 1956, Serial No. 587,641
5 Claims. (Cl. 248—49)



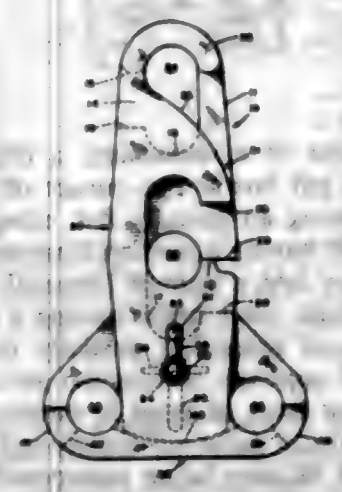
1. A cable support structure, comprising a pair of channel shaped members for supporting an electrical cable, each member including a bottom portion for providing cable support and opposite lateral side portions connected to said bottom portion to form said channel shape, and means connecting said members for alignment of the channels formed thereby and pivotally connecting said members for pivotal movement about a transverse pivotal axis, whereby the angular orientation of said members may be adjusted into any selected position, the bottom portion of each of said members including cross bars spaced along the length of the member and secured at opposite bar ends to said opposite side portions.

2,899,160

ELECTRIC CABLE CLAMP

Arnold Sher, New York, N.Y., and Joseph S. Amstock, Trenton, N.J., assignors to John A. Roebling's Sons Corporation, Trenton, N.J., a corporation of Delaware

Application February 7, 1957, Serial No. 638,811
4 Claims. (Cl. 248—61)



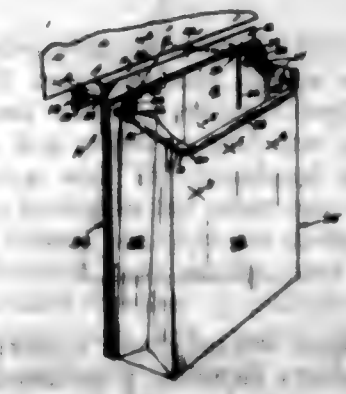
1. An electric cable clamp for use with messenger cables, comprising a first clamp element having a hook-like messenger receiving surface and a plurality of spaced cable gripping surfaces, a second clamp element having a hook-like messenger receiving surface and a like plurality of spaced cable gripping surfaces, said surfaces being arranged so that when said second element directly overlies said first element said messenger receiving surfaces form a substantially closed hole the sides of which are adapted to encompass and retain a messenger cable and corresponding ones of said cable gripping surfaces form a like plurality of substantially closed holes the sides of each of which are adapted to encompass and retain a cable, corresponding cable gripping surfaces of said elements, when said elements are in a vertically offset position, providing an opening through which a cable may be inserted or removed, said second element having a pair of vertically spaced holes and said first element having a vertically elongated slot and an opening spaced therefrom, said slot and said opening each being in registration with a respective one of said spaced holes when said second element directly overlies said first element, a generally U-shaped member having a long shank and a short shank, said long shank passing through one of said spaced holes and said elongated slot and extending beyond said first element and said short shank, in a first position of said U-shaped member, passing through the other spaced hole and into said opening adjacent an edge of said opening so as to prevent relative vertical motion of said elements, said short shank, in a second position of said U-shaped member, being clear of said opening thereby permitting relative vertical motion of said elements to said offset position thereof, and releasable means for retaining said member in either of said positions thereof.

2,899,161

BAG HOLDER AND OPENER

Kenneth T. Bayard, Cloquet, Minn.

Application December 3, 1957, Serial No. 700,342
4 Claims. (Cl. 248—101)



1. In a channel bag holder and opener, a frame member having a top portion and depending spaced front and rear wall portions, a U-shaped support member having a crossbar portion and spaced side portions extending therefrom, said side members of said U-shaped support member slidably mounted on said front and rear wall portions of said channel frame member, means for clamping one or more bags on said frame member, means for slidably mounting bags on said side members of said U-shaped support member, and means for attaching the upper edge of the outermost wall of the outermost bag to said cross-bar portion of said U-shaped support whereby the same may be moved to thereby open or close the mouth of the outermost bag.

2,899,162

SUPPORTING RACK

Elbert W. Young, Lubbock, Tex.

Application December 21, 1956, Serial No. 629,859
3 Claims. (Cl. 248—149)

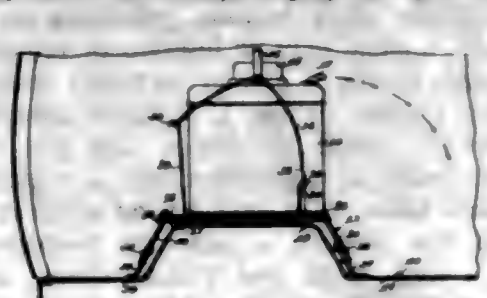
1. In a supporting rack, a first and second side wall arranged angularly with respect to each other, spaced parallel bars extending between the upper edges of said side walls and secured thereto in elevated relation to the lower edges of said side walls, a plate hingedly connected to the upper edge of one of said side walls, a latch on the other of said side walls for selectively maintaining

2,899,166

COMBINATION WINDOW BRACKET

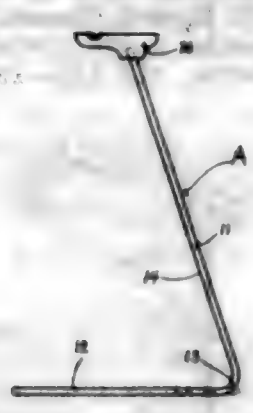
vided with a rail-engaging member operatively associated with each respective rail, a link connecting the rail-

said plate in a horizontal position in engagement at its opposite edges with said parallel bars, first and second arms extending upwardly from said plate and said arms having openings therein adjacent their upper ends, flanges on the lower ends of said arms adjustably connected to said plate, a third arm extending upwardly from said plate



and including a curved finger on its upper end, a flange on the lower end of said third arm adjustably connected to said plate, a cable arranged in engagement with said finger, and coil springs connected to said cable and arranged in engagement with the openings in the upper ends of said first and second arms.

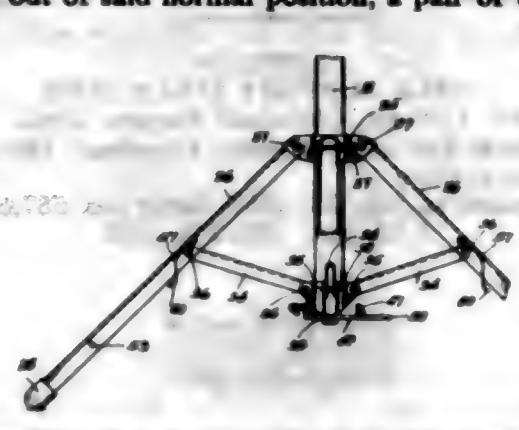
2,899,163
SOUSAPHONE STORAGE STAND
Palmer O. Rask, North St. Paul, Minn.
Application January 17, 1956, Serial No. 559,693
4 Claims. (Cl. 248—163)



1. A sousaphone storage stand comprising a pair of acute angle members including a horizontal foot portion and an upwardly and forwardly inclined leg portion in each member, a block support adapted to engage a section of the sousaphone to be stored having a pair of downwardly diverging apertures therein for the reception of the upper ends of said leg portions to thereby retain the upper ends of said leg portions at a downwardly diverging angle corresponding to that of said apertures, and spacing means between said foot portions adjacent the lower ends thereof for assisting in the maintenance of said diverging angle.

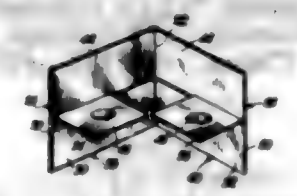
2,899,164
PORTABLE TRIPOD STAND FOR PROJECTION SCREEN
William Nicholas, Evanston, and Harry Kosel, La Grange, Ill., assignors to Radiant Manufacturing Corporation, Chicago, Ill., a corporation of Illinois
Application December 16, 1954, Serial No. 475,793
10 Claims. (Cl. 248—171)

1. In a portable tripod stand for a projection screen having a normally vertically arranged supporting member, a bracket fixed to the lower end of the supporting member, a bracket slidably mounted on the supporting member above the fixed bracket, three legs pivoted at their upper ends to the slidable bracket, a link pivotally connected between the fixed bracket and each leg intermediate the ends thereof, whereby the legs may be swung between a collapsed position wherein the legs lie adjacent the fixed bracket and an extended position wherein the legs extend outwardly from the fixed bracket, and means for releasably locking the legs in collapsed position, the improvement wherein said locking means comprises, a pin carried by each leg adjacent the fixed bracket when the legs are in collapsed position, a locking plate, means for resiliently and rockingly mounting the locking plate on the fixed bracket with the upper face of the locking plate engaging the lower face of the fixed bracket and with the locking plate resiliently urged to a position normal to the vertical axis of the supporting member but rockable out of said normal position, a pair of upwardly



facing hooks and a downwardly facing hook formed on the locking plate and receiving the pins carried by the legs when the legs are in the collapsed position and the locking plate is in said normal position for locking the legs in the collapsed position, and an outwardly extending operating projection on the locking plate between the upwardly facing hooks for rocking the locking plate out of said normal position, when the projection is downwardly depressed, to move the upwardly facing hooks downwardly and the downwardly facing hook upwardly for releasing the hooks from the pins carried by the legs to unlock the legs for movement to their extended position.

2,899,165
LEG STRUCTURE FOR GIFT BOXES
Bill Y. James, Miami, Okla.
Application December 28, 1953, Serial No. 400,581
4 Claims. (Cl. 248—189)



1. As an article of manufacture, a disposable device for supporting a gift box at one corner of the latter, said structure comprising an initially flat, elongated blank of bendable material having a median transverse line of fold dividing the same into a pair of identical relatively normal, upright panels, each panel having a median, transverse line of bend extending partially thereacross presenting a pair of opposed, rectangular sections folded inwardly along said lines of bend in overlapping relationship to the innermost faces of corresponding panels, the free ends of said sections being juxtaposed at the line of fold between the panels, thereby disposing the sections in perpendicular relationship, said blank having lines of severance transversely thereof in alignment with the lines of bend, presenting a pair of box-supporting flaps integral with corresponding sections, there being lines of fold between the flaps and the sections along which the flaps are folded into horizontal, perpendicular relationship to the panels and sections, said panels having box embracing wings extending upwardly beyond the sections and the flaps.

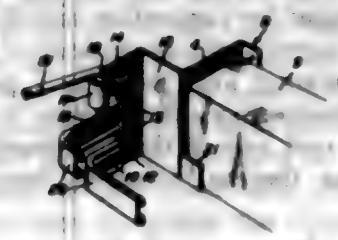
2,899,165

pivotally connected one to the other along their adjacent

2,899,166
COMBINATION WINDOW BRACKET

Gioacchino Pigliavento, Schenectady, N.Y.

Application July 3, 1956, Serial No. 595,725
4 Claims. (Cl. 248—263)

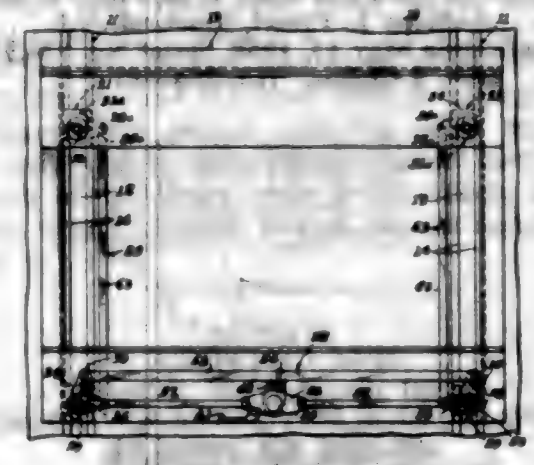


1. A support bracket for a window opening comprising a unitary sheet metal strip having parallel, laterally offset flat, plate-like end portions connected by an intermediate web perpendicular thereto, one end portion having means for securing the same in flat abutting engagement upon the inner vertical surface of a window opening with said intermediate portion lying flat upon an exterior surface of a window opening, one end portion having perpendicular side walls on the inner vertical and the bottom edges thereof and a partial side wall on the lower portion of the outer vertical edge thereof, said side walls constituting a pocket for receiving and retaining one end of a Venetian blind housing therein, the other end portion having three vertically spaced fingers lying in the same vertical plane, the upper finger being inturned upon itself to provide a socket for receiving a drapery crane, the two lower fingers being each flat and unbroken for receiving thereon and supporting the ends of a pair of curtain rods.

2,899,167
RAIL-CONNECTED UNIT

Edwin C. Elmer, Glendale, Calif., assignor, by mesne assignments, to Aeroquip Corporation, Jackson, Mich., a corporation of Michigan

Application July 12, 1956, Serial No. 597,388
6 Claims. (Cl. 248—361)

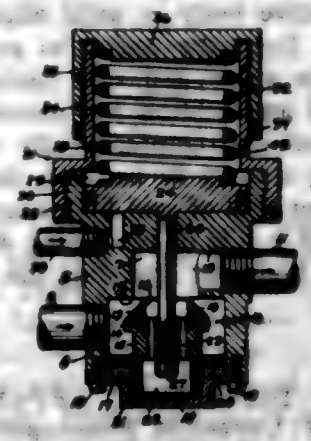


6. In combination, a pair of parallel rails each having longitudinally spaced and obliquely opposed recesses and provided with inturned longitudinal and transversely spaced flanges, a unitary device provided with a pair of anchor units each unit of the pair being provided with a rail-engaging member operatively associated with each respective rail, means common to each unit of said pair of anchor units to move the members thereof between a position partly beneath the rail flanges and engaged in said opposed recesses and a position aligned between the inturned flanges, said device being provided with a second pair of anchor units longitudinally spaced from the first pair and each unit of the second pair being provided with a rail-engaging member operatively associated with each respective rail, a link connecting the rail-engaging members of each rail to move together between the mentioned positions, means to releasably lock the rail-engaging members of the first pair of anchor units in the rail-engaging position thereof, means to actuate the same between locking and release positions, and lost-motion means interconnecting the anchor units to operate the same sequentially.

2,899,168
PRESSURE REGULATOR

Walter S. Klacsek, Schenectady, N.Y., assignor to the United States of America as represented by the Secretary of the Army

Application December 3, 1954, Serial No. 473,060
1 Claim. (Cl. 251—62)

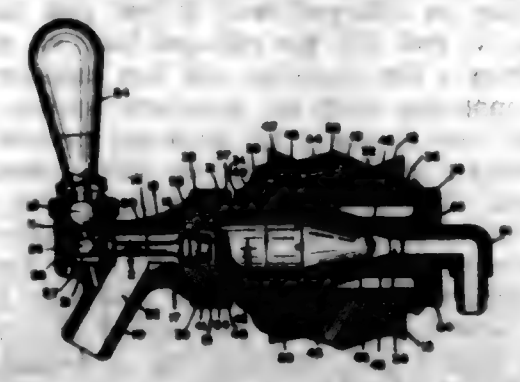


In a high pressure quick operating valve; a cylindrical body having an enlarged head at one end, said body having in the end with the enlarged head an axial first bore defining a first chamber, said first chamber having a port connecting with the peripheral surface of said body, said body having in the other end an axial second bore defining a second chamber, an outlet connection in said second chamber, said second bore being counter bored to form a third chamber, an inlet connection in said third chamber, said bore and counter bore forming at their junction a valve seat shoulder, said body having a partition between said first and second chambers and having a central bore therethrough; a detachable cap fastened in a fluid tight connection to the counterbored end of said body, said cap extending into said counterbore and having an axial bore therein of the same diameter as the second bore of said body; a cylindrical plunger having a base end of substantially the same diameter as the bore in said cap and adapted to slide axially therein, and having a head end of larger diameter than said base end, said head end having a beveled peripheral edge and an annular recess, said base end and said head end both having a bore, a partition provided therebetween, said partition having a central bore therethrough terminating in a counterbore at the head end, said partition being provided with a plurality of radially spaced longitudinal passageways through said partition; a beveled annular washer seated in said recess in the head end of said plunger; a control piston and rod integral therewith, said rod being adapted to slide in the bore of the body partition and received in said counter bore of said plunger, said piston being adapted to slide in said first chamber of said body; a fastening means in said central bore of said plunger securing said piston rod to said plunger; a detachable cylindrical spring housing fastened to the enlarged head of said body, said housing having a vent communicating with the atmosphere; a detachable spring stop threaded to said spring housing; a coil spring in said spring housing biased between said piston and spring stop and tending to force said plunger from said valve seat shoulder.

2,899,169
VALVE STRUCTURE
Karl A. Klingler, Naperville, Ill.
Application February 8, 1956, Serial No. 564,270
8 Claims. (Cl. 251—107)

1. In a valve construction, a valve casing having a fluid chamber therein, a discharge port in communication with said chamber, a valve body composed of resilient material slidably disposed within said chamber and yieldable to compensate for variations in its size and in the size tolerance of parts associated therewith, means for supporting the valve body in axial alignment with said port and spaced from the casing to permit passage of fluid between the valve and said casing comprising a plurality of rigid anti-friction rod elements arranged in spaced apart relation circumferentially about said valve body and having a snug fit between the resilient valve body and the inner wall of said fluid chamber, and means extending through a side of the casing and loosely penetrating the valve body for operating the valve body.

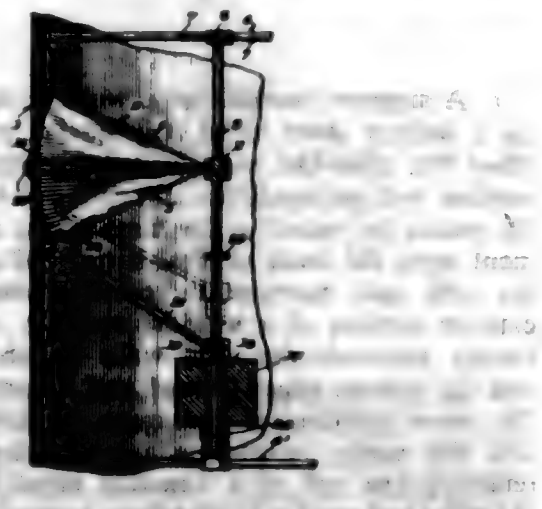
2,899,170
LIQUID DISPENSING APPARATUS
Richard T. Cornelius, Minneapolis, Minn.
Application September 10, 1956, Serial No. 608,955
5 Claims. (Cl. 251—122)



1. In a liquid dispensing apparatus comprising a body having a tapered bore, a core disposed in said body and having a tapered portion received in said bore and forming a restricted passageway therebetween, means for reciprocating said core within said bore, a detachable faucet having a passageway therethrough communicating with said bore, the combination of a sleeve constructed of metal and encircling said body, said body, core and faucet being constructed of plastic material, said body at the end thereof adjacent said faucet having a part engaging the end of the sleeve, clamping means engaging said sleeve and faucet and clamping said sleeve, body and faucet together, a slip joint between the other end of said sleeve and body and means mounted on said sleeve and engageable with the wall of a cabinet for attaching the liquid dispensing device to the cabinet.

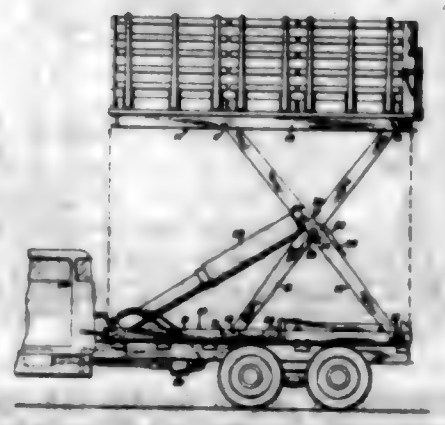
2,899,171
DAMPER CONSTRUCTION
Clyde S. Shapleigh, Racine, Wis., assignor to Modine Manufacturing Company, Racine, Wis., a corporation of Wisconsin
Application April 23, 1956, Serial No. 579,795
7 Claims. (Cl. 251—138)

5. In a damper structure, the combination of a plurality of damper elements, each comprising four walls pivotally connected one to the other along their adjacent edges, the pivotal axes thereof extending in converging directions, a duct member, said damper elements being assembled in co-operable relation radially disposed within the duct member about the axis of the duct member with their pivotal axes extending towards said axis of the duct member, means for supporting said damper elements within the duct member for movement of the walls with their respective pivotal axes whereby a pair of walls of each damper element may extend either in the same general direction as said axis of the duct member or in a direction transverse thereto, actuating means operatively



connected to each damper element for simultaneously adjusting all of said damper elements, said actuating means comprising a movable member operable along the axis of said duct member, a plurality of arms, each operatively connecting said movable member and a respective damper element for transmitting movement of said movable member thereto to selectively open and close said damper elements, and spring means biasing said movable member in a predetermined axial direction, an armature connected to said movable member, and a solenoid winding co-operable, when energized, with said armature for moving the same and said movable member in the opposite axial direction.

2,899,172
ELEVATING MECHANISM FOR TRUCK BODIES
Anthony L. Crucci, Vineland, N.J.
Application May 13, 1958, Serial No. 734,913
8 Claims. (Cl. 254—8)



1. A load carrying vehicle including a chassis frame, a body frame adapted to rest on said chassis frame, elevating mechanism for the body frame comprising a pair of arms pivoted to each other intermediate the ends of said arms, each of said arms comprising a rigid one-piece member, one end of one of said arms having a pivotal connection with said chassis frame, one end of the other of said arms having a pivotal connection with said body frame, said connections being in vertical alignment, said chassis frame and said body frame each having a track thereon, a roller mounted on the other end of said one arm

of said body of liquid by the rotary movement of said drum, said opening permitting liquid to flow from the

with respect to the center of said main portion and encompassing more than half the width of said main por-

engaging the track on said body frame, a roller mounted on the other end of said other arm engaging the track on said chassis frame, a cam member pivoted intermediate its ends to the other of said arms, a roller journaled on said chassis frame, power means connected to one end of said cam member, a land on said cam member engageable with said journaled roller to lift said body frame from its resting position on the chassis frame in the initial stages of elevation, the free end of said cam member comprising an elongated portion engaging said journaled roller during a subsequent period of elevation of the body frame, and an abutment on said other arm engageable by said one end of said cam to receive the direct thrust of said power means during the final stages of elevation of the body frame.

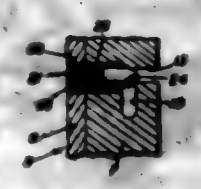
2,899,173
LINE SUPPORT
William Zadock Pentland, Jr., Louisville, Ky.
Application January 12, 1956, Serial No. 558,739
5 Claims. (Cl. 256—10)

3. A fence comprising a line member and a plurality of fence posts, each fence post comprising a pair of coplanar legs attached together at their upper ends, said legs each comprising an elongated rod member and formed so as to diverge from each other below said attachment, said legs being sufficiently resilient to be flexed at will yet rigid enough so that the lower ends can be inserted into the ground without collapsing under a downward force, an extension secured to said attachment and comprising an arm perpendicular to the plane of said legs, said fence posts being spaced from each other and generally aligned in a row along said line, the planes of the legs of each post being generally perpendicular to the line and the lower ends of the legs of said posts engaging the ground, said line being secured to each of said posts by being wrapped about each of said arms, each of said fence posts in its entirety being of such light weight as to be in part at least supported by the line.

2,899,174
CATTLE GUARD
Ernest R. Wells, Joseph, Oreg.
Application November 8, 1957, Serial No. 695,246
4 Claims. (Cl. 256—10)

1. A cattle guard comprising a pair of spaced apart parallel lower clamp plates, an upper clamp plate overlying each of said lower clamp plates, said upper and lower clamp plates having inter-engaging ribs and grooves formed on their adjacent faces, means extending through upper and lower clamp plates in laterally spaced relation releasably securing said plates in clamping relation, a plurality of spaced parallel longitudinally extending flat electric conductive members having their opposite ends releasably secured between said respective upper and lower clamp plates, means securing said clamp plates to an adjacent fence post with said members arranged in closely spaced relation to the ground, and means connecting said members to a source of electricity to provide an electric shock system for cattle.

2,899,175
FENCE POST
George G. Culver and Walter L. Culver, Rochdale, Ind.
Application February 28, 1957, Serial No. 643,871
1 Claim. (Cl. 256—48)



A substantially T-shaped metallic fence post comprising: a flat front bar and a flat back bar on one side of said front bar at right angles thereto and having longitudinally spaced bayonet slots therein for the reception of fence wire, sockets threaded into the front and back bars in alignment with the entrances of the bayonet slots and communicating therewith, and substantially bullet-shaped, spring actuated plungers slidable in the sockets and yieldingly engaged with the angles of the bayonet slots for releasably securing the wire therein.

2,899,176
HEAT EXCHANGER
Norman L. Francis, La Grange, and Maurice J. Erlemann, Oak Park, Ill., assignors to Link-Belt Company, a corporation of Illinois
Application January 22, 1958, Serial No. 710,564
7 Claims. (Cl. 257—86)

1. A heat exchange device comprising a tank having a body of heat transfer liquid therein, a horizontally arranged drum supported for rotation about its axis while partially submerged in said body of liquid, means for rotating said drum, a plurality of hollow flights mounted upon the interior surface of said drum, extending circumferentially of said drum, and projecting inwardly to define a discontinuous, internal conveying screw for moving material axially through said drum when the latter is rotated, each of said flights having an opening associated therewith adjacent the leading end thereof to place the interior of the flight in communication with the exterior of said drum to permit liquid to flow from said tank into the interior of the flight during one portion of the rotary movement of the drum and being otherwise substantially enclosed so as to retain a quantity of liquid therewithin after said opening is moved above the surface

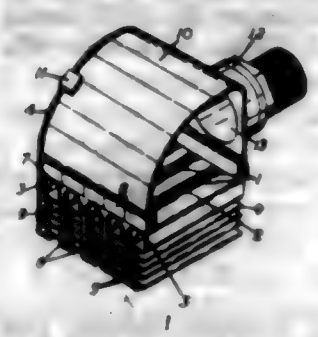
of said body of liquid by the rotary movement of said drum, said opening permitting liquid to flow from the interior of the flight to said tank when said drum partakes of another portion of its rotary movement.

2,899,177

BRAZED LIGHT ALLOY HEAT EXCHANGER AND METHOD OF MAKING SAME

Michael G. Harris, Cummer, and Sydney J. Walker, Bodley, England, assignors to Morris Motors Limited, Oxford, England

Application June 18, 1957, Serial No. 666,421
Claims priority, application Great Britain December 6, 1956
3 Claims. (Cl. 257—245)



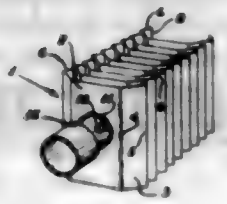
1. A method of assembling in situ a brazed light alloy heat-exchanger of the tubular pack type having side sheets, tube noses and tube-plate channel strips, which comprises the steps of arranging for the tube-noses to project longitudinally at both ends of the side sheets, cutting the flanges of the tube-plate channel strips at their end zones, flattening said end zones to make their side-walls co-planar with the bases of said channel strips, bending said end zones upwardly, and then folding said end zones in half to form a flat-sided hook of inverted U-section, and flattening the projecting tube nose portions to create spade-like terminations capable of being fitted snugly into the corresponding hooks of the tube-plate strips to effect interlocking engagement.

2,899,178

HEAT EXCHANGE FINS AND ASSEMBLY

Melvin Dubin and Isidore Turinsky, Brooklyn, N.Y., assignors to Slant-Fin Radiator Corporation, Richmond Hill, N.Y., a corporation of New York

Application September 27, 1956, Serial No. 612,413
3 Claims. (Cl. 257—262.16)



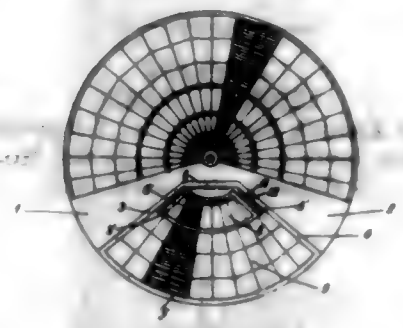
1. A heat exchange fin formed of light weight sheet metal material which comprises, a main portion and side portions extending from a pair of the opposite sides of said main portion, said side portions extending rearwardly and inwardly from and with respect to said main portion, said side portions each being formed of a plurality of flat strips extending at abrupt angles with respect to each other and to said main portion, the first of said strips departing from said main portion at an obtuse angle greater than a right angle and at substantially the mid position between the center and edge of said fin and the second of said strips departing from the first of said strips at substantially a right angle, said main portion formed with a hole therethrough for the reception of a pipe, said hole being concentrically positioned with respect to the center of said main portion and encompassing more than half the width of said main portion.

2,899,179

ROTARY REGENERATIVE PREHEATER FOR AIR FLOWS OF DIFFERENT PRESSURE CONNECTED IN PARALLEL

Friedrich Hässler, Neckargemund, Germany, assignor to Svenska Rotor Maskiner Aktiebolag, Nacka, Sweden, a corporation of Sweden

Application August 17, 1955, Serial No. 528,963
Claims priority, application Germany August 28, 1954
3 Claims. (Cl. 257—267)



1. A rotary regenerative heat exchanger for transferring heat from a gaseous medium to air, comprising a stationary structure provided with end plates forming sector plates extending from the central portion of said structure to the circumference thereof for separating streams of air and gas passing through the exchanger, said structure providing an inlet conduit and an outlet conduit for passage of gas to and from the exchanger and two separate inlet conduits and two separate outlet conduits for passage of air through said exchanger, said separate inlet conduits being at the same end of the exchanger and said separate outlet conduits being at the opposite end of the exchanger, a rotor mounted to rotate between said sector plates and having a plurality of sector-like compartments carrying heat transferring material, said sector plates being movably mounted for sealing against said rotor independent of the distortions of said rotor due to heat expansion, said stationary structure having a common arcuate partition wall at each end of said rotor for separating said air inlets and outlets, said partition wall being concentric with the axis of rotation of the rotor, said rotor being divided into an inner primary channel and an outer secondary channel by a circular partition wall aligned with said arcuate partition wall, one of said inlets and outlets communicating with said primary channel for conducting high pressure primary air therethrough, the other of said inlets and outlets communicating with said secondary channel for conducting low pressure secondary air therethrough, said sector plates being provided with radially extending sealing means cooperating with said rotor for sealing the radial edges of said inlets and outlets as well as circumferentially extending sealing means for sealing the same with respect to said air inlet and outlet conduits, sealing means rigidly conected to said sector plates for sealing between said circular partition wall and said arcuate partition wall and additional radial sealing means on said stationary structure cooperating with said rotor and said sealing means for sealing between said circular partition wall and said arcuate partition wall for sealing the radial edges of said primary air channel at which the rotor moves from the air side to the gas side, there being a space provided between said first mentioned radial sealing means and said additional radial sealing means and passages communicating with said primary air channel and said space whereby leakage air leaving said primary air channel may pass through said passages into said space and to said secondary air channel.

ing a liquid curtain flowing down over said flood sheet and across said air entrance opening, a plurality of con-

2,899,185

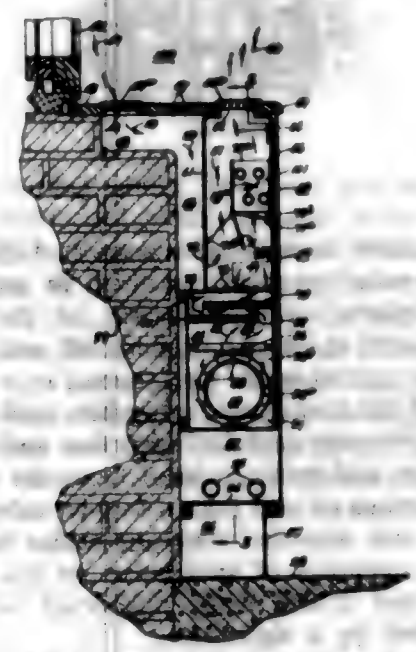
CARBURETOR

2,899,180

HIGH-VELOCITY AIR-CONDITIONING

Claes Allander, Jonkoping, Per-Olof Alfredsson, Bromma, and Sven Wallin, Jonkoping, Sweden, assignors to Aktiebolaget Svenska Flaktfabriken, Stockholm, Sweden

Application November 22, 1954, Serial No. 470,486
Claims priority, application Sweden November 23, 1953
3 Claims. (Cl. 257—277)



1. For air conditioning a room having a window, a conditioning unit adapted to be mounted below said window comprising a casing, a partition dividing the upper part of said casing into two channels, the first of said channels disposed adjacent said window and the second of said channels disposed outwardly of said window, a secondary air inlet in the top of said unit opening into said first channel, an air outlet in the top of said unit opening into said second channel, said secondary air inlet disposed intermediate said outlet and said window, ejector means at the lower end of said second channel for directing primary air upwardly through said second channel, supply means for supplying conditioned primary air to the ejector means, throttling means in said casing intermediate said supply means and said ejector means responsive to the pressure variation in the supplied primary air for maintaining automatically said primary air quantitatively constant, means adjacent the lower end of said second channel for mixing said secondary air from said first channel with the primary air in said second channel, means above said lower end of said second channel for regulating the condition of said mixed air in said second channel during its upward travel therethrough, whereby the regulated mixed air is discharged in a curtain through said outlet in the top of said unit.

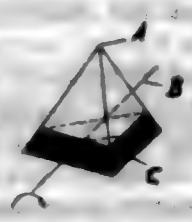
2,899,181

APPARATUS FOR MIXING OR BLENDING LIQUID, PULPY, POWDERY, GRANULAR, OR FIBROUS MATERIALS

Wilhelm Karl Weydanz, Gottingen, Germany, assignor to Fa. Penicillin-Gesellschaft Danckberg & Co., Gottingen, Germany

Application May 9, 1955, Serial No. 507,885
7 Claims. (Cl. 259—57)

1. In apparatus for mixing comminuted materials, shaft means, support means comprising bearings in which said shaft means is rotatably journaled, a container substantially in the shape of a tetrahedron and having four substantially flat walls meeting to form edges and vertices, said container being rotatably so



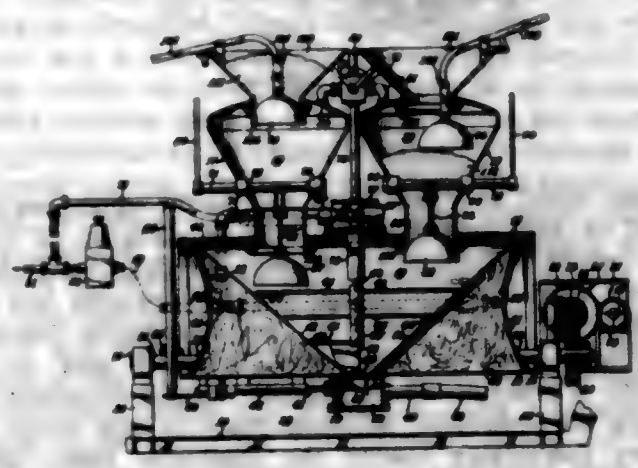
mounted on said shaft means that the axis of said shaft means passes the center of gravity of said container and parallel to one of said edges.

2,899,182

TILTABLE TANDEM REFRACTORY AND CONCRETE GUN APPARATUS

Ian M. Ridley, Apple Valley, Calif., assignor of three-sevenths to Richard L. Klosterman, Canoga Park, Calif.

Application June 18, 1957, Serial No. 664,585
12 Claims. (Cl. 259—151)



1. In portable apparatus for gunning, shooting and air placing materials, the combination comprising a frame mounted on wheels to be portable, a hermetically sealed agitating chamber mounted on said frame to be tiltable about a horizontal axis adjacent its bottom from a vertical to a horizontal position, means selectively operative to tilt the chamber to either of said two positions, a materials discharge port opening in the bottom of said chamber, a manually operative valve means for opening and closing said discharge port opening, an outlet chamber enclosing said discharge port opening from the atmosphere, said outlet chamber being mounted to be tiltable with said agitating chamber, means for feeding determined amounts of dry powdered materials to the interior of the agitating chamber, stirring and agitating means for mixing the materials in the agitating chamber, and means supplying a pressure of air to the agitating chamber interior to discharge the mixed material into the said outlet chamber.

2,899,183

GAS WASHING APPARATUS

Emil Unbricht, Jackson, and Francis G. Rylance, Royal Oak, Mich., assignors to Ajax Laboratories, Inc., Livonia, Mich.

Application March 6, 1956, Serial No. 569,891
1 Claim. (Cl. 261—24)

Apparatus for handling air having contaminating material entrained therein comprising a substantially vertical wall defining a flood sheet having a substantially horizontal lower limit and means defining an elongated horizontal air entrance opening beneath the lower limit of said flood sheet, first liquid supply means supplying liquid to the upper portion of said flood sheet and forma-

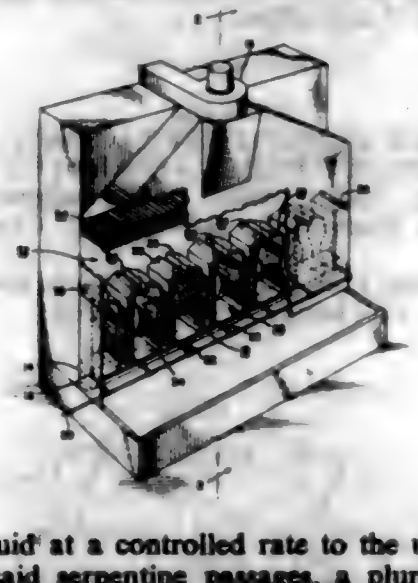
2,899,187

JET MOUNTING MEANS FOR BORING

2,899,189

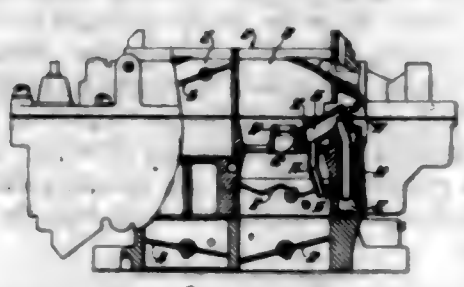
APPARATUS FOR PROCESSING COMPRESSED

ing a liquid curtain flowing down over said flood sheet and across said air entrance opening, a plurality of continuously smoothly curved walls arranged in spaced generally upright positions and extending back behind said flood sheet, said walls having vertically spaced concave and convex areas, pairs of adjacent walls defining a plurality of serpentine passages passing upwardly therebetween, the lower limits of said serpentine passages beginning behind said elongated horizontal air entrance opening at spaced points therealong, said serpentine passages having progressively increasing cross sectional areas from bottom to top, second liquid supply means



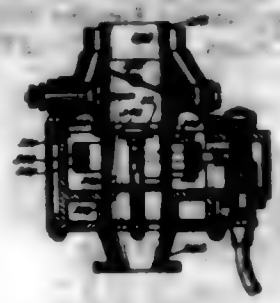
feeding liquid at a controlled rate to the upper portions of all of said serpentine passages, a plurality of vertically spaced horizontally extending air deflectors behind said air entrance opening and curving inwardly and upwardly, the lower limits of said serpentine passages beginning above the inner upper limits of said air deflectors, a plurality of horizontally spaced vertically extending air deflectors, adjacent pairs of said latter deflectors converging toward the respective lower limits of said serpentine passages, and blower means forcing the contaminated air in through said air entrance opening and upwardly through said serpentine passages.

2,899,184
CARBURETOR FUEL NOZZLE CONSTRUCTION
Elmer Olson, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application August 1, 1957, Serial No. 675,721
10 Claims. (Cl. 261—41)



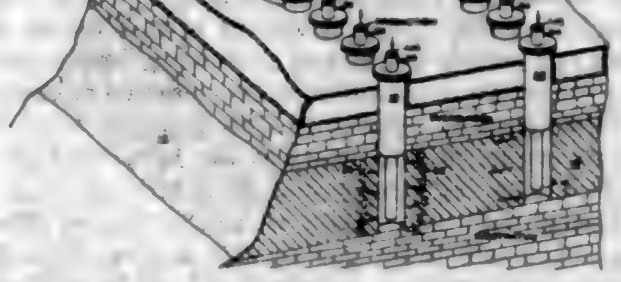
1. A charge forming device for an internal combustion engine comprising an induction passage including a mechanically actuated throttle valve, an air flow responsive throttle valve disposed in said induction passage anteriorly of said mechanically actuated throttle, a fuel well, first tube means projecting within said fuel well and extending within said induction passage anteriorly of said air flow responsive throttle for supplying fuel to said induction passage in response to air flow through said passage, and second tube means disposed in said induction passage and communicating proximate one end with said first tube means, the other end of said second tube means extending within the space between said throttles.

2,899,185
CARBURETOR
Enoch Rector, deceased, late of New York, N.Y., by Anne Rector Duffy, administratrix, New York, N.Y.
Application April 26, 1957, Serial No. 655,332
5 Claims. (Cl. 261—72)



1. A carburetor comprising a main fuel chamber traversed by a venturi passage, provided at one end open to the atmosphere with a throttle, at the other end with a connection to an engine manifold and with a plurality of holes located in the wall thereof in a plane above the surface of the fuel in said chamber, said holes forming openings between said fuel chamber and the interior of said passage and being inclined from the venturi passage to the surface of said fuel, a fuel jet mounted within said venturi and provided with an orifice in the same plane as the openings of said holes on the interior of the venturi, said orifice being connected with the fuel in said chamber by a duct.

2,899,186
IN SITU COMBUSTION OF STRATUM HAVING AN EXPOSED FACE
Francis W. Crawford, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application May 19, 1958, Serial No. 736,281
5 Claims. (Cl. 262—3)



1. A process for producing by in situ combustion a carbonaceous stratum having an exposed face which comprises establishing combustion of carbonaceous material in said stratum around a series of boreholes in a line substantially parallel with said face and spaced therefrom a short but substantial distance; driving hot, heavy liquid hydrocarbons from the combustion area toward said face whereby said hydrocarbons cool and become more viscous so as to plug said stratum intermediate said series of boreholes and said face; and moving a combustion front from said line of boreholes to a second line of boreholes more remote from said face and substantially parallel thereto by injecting O_2-containing, combustion-supporting gas thru said stratum from said second line of boreholes; and recovering produced hydrocarbons from said series of boreholes.

ing characteristics and to thereby affect the magnitude of

in said annealing apparatus including a unit containing

2,899,187
BIT MOUNTING MEANS FOR BORING HEAD CUTTERS

Anthony R. Bieden, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

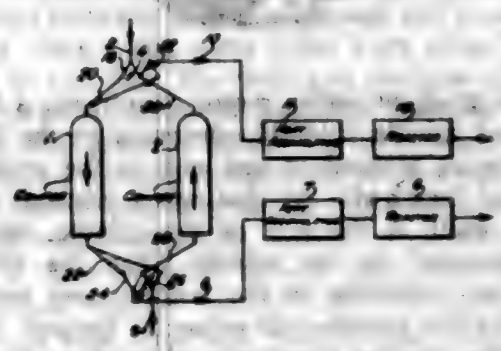
Application December 16, 1957, Serial No. 703,117
4 Claims. (Cl. 262—33)

1. In a mounting device for cutter bits and the like, a plurality of individual blocks adapted to be arranged in abutting relation with respect to each other, each block having an open bit receiving recess cut in an advance face thereof and having parallel side walls and a rear wall diverging outwardly from the inner side of said recess and conforming to a rectangular tapered shank of a cutter bit, an opening leading transversely through each block and intersecting said open recess adjacent the inner end thereof, and means securing said blocks in abutting engagement with respect to each other and closing the advance ends of said recesses.

2,899,188
REGENERATING AIR HEATER SYSTEM

Georg Bender, Leuna, Kreis Merseburg, and Alfred Krauthakel, Bad Durrenberg, Kreis Merseburg, Germany, assignors to VEB Leuna-Werke "Walter Ulbricht," Leuna, Kreis Merseburg, Germany

Application November 15, 1955, Serial No. 546,926
3 Claims. (Cl. 263—19)

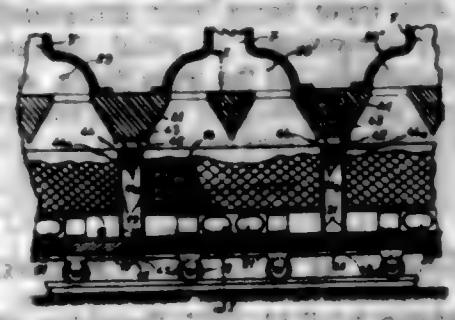


1. In a regenerating air heater system, the combination including a first and second reactor, a first and second Cowper stove for alternately feeding heated gases and burned flue gases respectively to said first and second reactors respectively, means for feeding heating gases to each of said Cowpers for burning therein during a heating period, means for blowing gaseous medium through the heated Cowpers during a blowing period, whereby the gaseous medium is heated as it passes through the Cowpers' interior, conduit means connecting said first Cowper to said first reactor for transporting the gaseous medium to the latter, second conduit means connected to said second Cowper and said second reactor for transporting the burned flue gases to the latter, a heat accumulator in each of first and second conduit means between the associated Cowper and reactor, said heat accumulator being adapted to collect heat from the gaseous medium and flue gases at the beginning of the blowing period and to transfer the collected heat to the gaseous medium and flue gases at the end of the blowing period, whereby the gaseous medium and burned flue gases entering the reactor are maintained at a substantially constant temperature over the entire blowing and heating cycle.

2,899,189
APPARATUS FOR PROCESSING COMPRESSED FUEL BRIQUETTES AND SIMILAR MATERIALS

Ernest Mathi and Pierre Demolon, Douai, Claude Nobecourt, Auberchicourt, and René Henri, Douai, France, assignors to Houillères du Bassin du Nord et du Pas-de-Calais, Douai, France, a French public establishment

Application July 22, 1955, Serial No. 523,898
Claims priority, application France July 24, 1954
7 Claims. (Cl. 263—28)

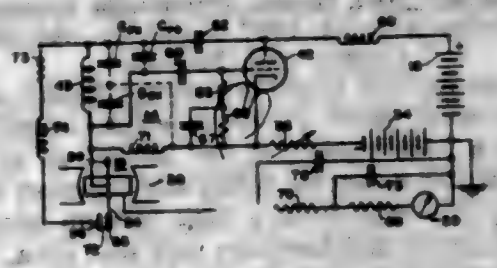


3. Apparatus for treating carbon agglomerates comprising an elongated furnace structure having side walls, a roof and a floor defining a tunnel-like interior and means within the latter defining a series of successive treating sections therein, conveying means for carrying the agglomerates to be treated longitudinally through said successive treating sections of the tunnel-like interior and having perforated bottoms adapted to support the agglomerates and transverse partitions spaced apart in the direction of movement of said conveying means, said furnace structure having a set of inlet and outlet orifices in each of said sections opening into and out of the related section of the interior below said perforated bottoms of the conveying means and above the latter, respectively, conduit means extending longitudinally along said furnace structure and communicating with said inlet and outlet orifices of said sections, pressure flow means for circulating treating gases through said conduit means to enter said sections at said inlet orifices, pass upwardly through the agglomerates in said sections and leave the latter at said outlet orifices, means for controlling the temperature and composition of the treating gases admitted to said sections at the related inlet orifices of the latter, and means defining gas-tight sliding joints between said transverse partitions of the conveying means and said walls, roof and floor of the furnace structure effective to isolate the adjacent successive sections from each other when said partitions of the conveying means are located between the sets of inlet and outlet orifices associated with said adjacent successive sections, thereby to prevent intermixing, within said tunnel-like interior, of the treating gases circulated through said sections.

2,899,190
FORCE MEASURING APPARATUS

Paul C. Driver, China Lake, Calif.

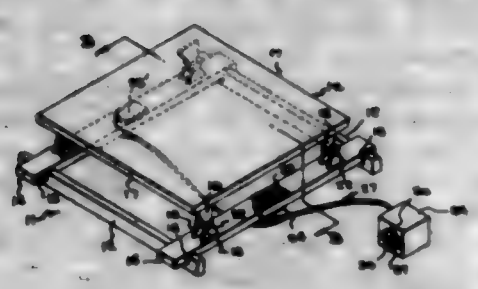
Application September 25, 1957, Serial No. 686,265
17 Claims. (Cl. 264—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In combination, a self-pulsing oscillator having a circuit element which is variable to affect the self-puls-

ing characteristics and to thereby affect the magnitude of averaged oscillator current, force-sensitive means directly coupled to vary said circuit element in response to input force experienced by said force-sensitive means, electro-magnetic means coupled to said force-sensitive means and adapted to exert thereagainst a feedback force proportional to energizing current supplied to the electro-magnetic means, and circuit means connecting said oscillator and said electro-magnetic means and supplying to said electro-magnetic means an energizing current corresponding to the averaged oscillator current and in a direction to oppose said input force, said force-sensitive means thereby being constrained to small displacement substantially proportional to the input force, and said energizing current correspondingly varying linearly with and serving as a measure of said input force.

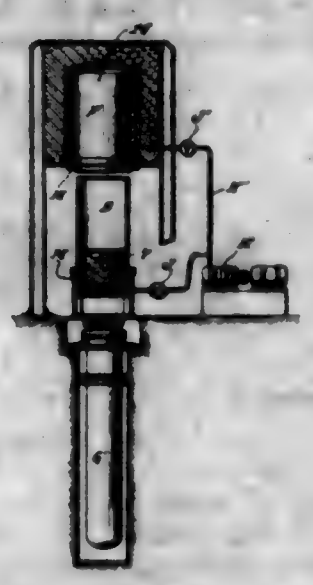
2,899,191
ELECTRICALLY ACTUATED WEIGHING DEVICE
Norman K. Hunt, Warren, Ark.
Application April 12, 1957, Serial No. 652,517
5 Claims. (Cl. 265—27)



1. In a weighing device of the character described, a pair of spaced supports, a first beam member disposed on said supports, said first beam member having flat horizontal top and bottom surfaces, a second beam member disposed over and spaced from the first beam member between said supports and substantially parallel to the first beam member, respective transversely extending pin connections between the beam members spaced inwardly of said supports and hingedly supporting said second beam member at longitudinally spaced points on said first beam member, respective strain-responsive resistance units secured on the flat top and bottom surfaces of the first beam member midway between said supports, a resistance measuring circuit, and means connecting said resistance units in said resistance measuring circuit, said circuit being formed and arranged whereby the response of said resistance units will provide an indication in said circuit in accordance with a load on said second beam member.

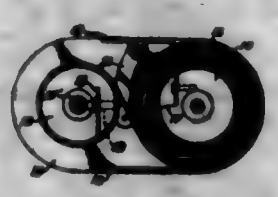
2,899,192
APPARATUS FOR BRIGHT-ANNEALING OF METALS
Karl Heinrich Fritz, Hagen, Westphalia, Germany
Application May 24, 1957, Serial No. 661,528
7 Claims. (Cl. 266—5)

1. An apparatus for bright-annealing of metal articles, including wires of small diameter, which comprises an oven having a wide opening at the bottom, an annealing container, hoisting means for lifting said container through said opening into said oven, a high vacuum pump with connecting lines to said container and said oven, respectively, for evacuation thereof, cock means in said lines for connecting said vacuum pump to said container and oven during the annealing operation, and a cooling system in said annealing apparatus including a unit containing protective gas, said unit comprising lines for connecting



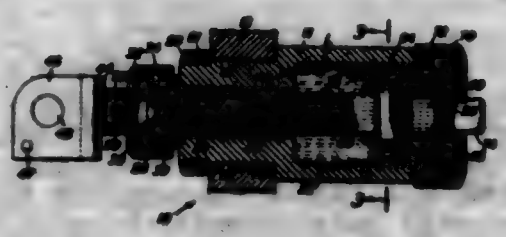
it to said annealing container and conveying said gas into the same to accelerate the cooling of said articles after the annealing thereof.

2,899,193
LOW GRADIENT SPRING MOTOR
Edwin E. Foster, Austin, Tex.
Application July 2, 1956, Serial No. 595,290
6 Claims. (Cl. 267—1)



1. A low gradient spring motor comprising a housing, a cylindrical spindle rotatably mounted in the housing, a ribbon spring secured at one end to the spindle and being biased lengthwise so that when released it tends to coil on itself at the side of the spindle, the spring being backwound on the spindle when the spindle is turned in one direction in the housing and tending to unwind from the spindle and return to the coil, the bias of the spring varying lengthwise thereof so that when it is backwound on the spindle successive increments of the spring will be deflected from their normal biased positions through the same angle.

2,899,194
DOUBLE-ACTING LIQUID SPRING
Robert F. Zumwalt, Tonawanda, N.Y., assignor to George F. Wales, Kenmore, N.Y.
Application September 5, 1956, Serial No. 608,062
4 Claims. (Cl. 267—1)



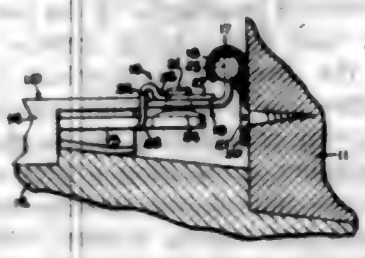
1. A liquid spring comprising, in combination: a body, said body having means disposed entirely intermediate and independent of its ends for attachment to a support and having a chamber therein filled with a compressible material selected from the group consisting of compress-

2,899,198
TAPE DISPENSER AND FOLDER

2,899,200
MECHANISM FOR POSITIONING AN ADHESIVE

ible solids and compressible liquids, two pistons reciprocable in said chamber and each projecting externally of said body, said pistons having, respectively, operating areas of different size in contact with said compressible material, lost motion means comprising rigid elements disposed within said chamber and connecting said two pistons, and means on said body limiting the reciprocation in a direction outwardly from said chamber of at least one of said pistons, the external projections of said pistons being disposed to be simultaneously engageable by members outside said body movable relative to the support to selectively load said spring differentially from either one of said projections, and to load said spring directly from one of said projections.

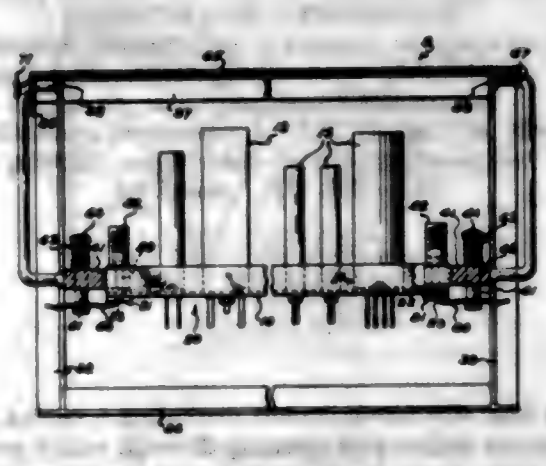
2,899,195
OPERATOR FOR WINDOWS WITH SWINGING SASH
Axel W. Ahlgren, Rockford, Ill., assignor to Amerock Corporation, Rockford, Ill., a corporation of Illinois
Application July 18, 1956, Serial No. 598,638
1 Claim. (Cl. 268—105)



An operator for a window having a frame and a sash mounted on the frame to swing about an axis extending along one edge of the sash, said operator comprising a support adapted to be attached to said frame, two elongated arms pivotally connected at one end to said support to swing toward and away from each other in a plane parallel to said axis, the outer end portions of said arms having spherical contours, manually operable means for swinging said arms in unison but in opposite directions, an elongated member adapted to be secured to the free edge portion of said sash and having a cylindrical surface extending lengthwise of the member, a plate having a hole therein, a shoe attached to said plate, said shoe having a cylindrical surface mating with the surface on said member to slide back and forth on the member, a post projecting outwardly from the spherical portion of one of said arms and through said hole and having an enlarged head, a latch element mounted on said plate to move toward and away from a latching position and having a slot receiving said post when in the latching position, said slot being narrower than said head to prevent said plate from being removed from said post, a second post on the spherical portion of the other of said arms, a second and similar plate and latching member mounted on said post, and a shoe attached to said second plate and slidably mating with said member, said plates swiveling on said spherical portions.

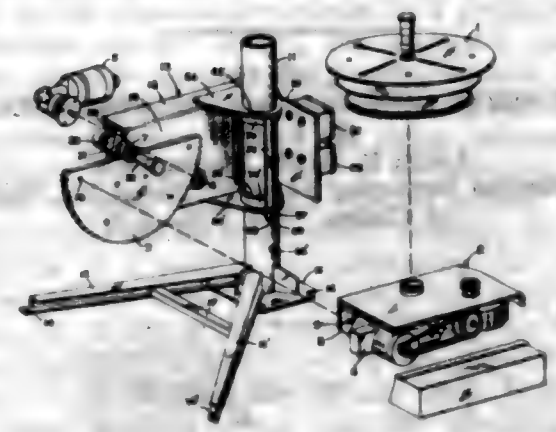
2,899,196
UNIVERSAL FIXTURE FOR SUPPORTING VARIOUS PARTS TO BE WORKED
Leif E. Haugensen, Barrington, Joel R. Johnson, Chicago, and William O. Odgers, Clarendon Hills, Ill., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application July 21, 1954, Serial No. 444,714
3 Claims. (Cl. 269—130)

1. A fixture for releasably supporting mounting plates thereon to permit components on the mounting plates to be worked on and wherein the mounting plates have apertures in the end portions thereof, said fixture comprising a base, a pair of vertically disposed frame members on said base having parallel vertical surfaces for receiving the mounting plates thereagainst, a plurality of pins, means for mounting said pins in a vertical row on each of said frame members in a predetermined spaced and parallel relation to each other for movement perpendicular to said vertical surfaces, resilient means for moving said pins to



a normal forward position with the ends thereof extending from the frame members and engageable with the mounting plates in the apertures thereof to support the mounting plates thereon, and a plurality of clamping members mounted on the frame members and movable into engagement with the end portions of said mounting plates for releasably holding them against said vertical surfaces.

2,899,197
SUPPORT STRUCTURE FOR A WELDING POSITIONER
Louis G. Hilkemeier, Plainfield, N.J., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Application January 17, 1957, Serial No. 634,706
1 Claim. (Cl. 269—284)



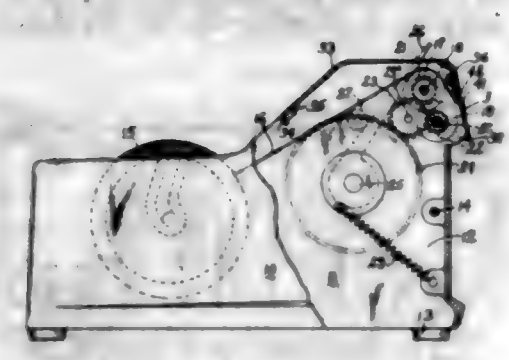
A support structure for a welding positioner comprising a column held upright by a pair of diverging legs connected to the base of said column, a frame having two spaced horizontal and two spaced vertical sides connected at right angles to each other, a pair of plates connected to said horizontal sides of said frame at one end thereof and extending laterally of said frame, said pair of plates having aligned openings therein for slidably mounting said frame on said column parallel to and horizontally displaced from the vertical plane bisecting the angle of said diverging legs and passing through the axis of said column, and at the other end of the frame a horizontally disposed cylindrical bushing extending laterally of said frame and connected to the ends of said vertical sides of said frame and adapted to carry the work positioning mechanism of the welding positioner.

ment in relation to one another about a vertically aligned, first supporting set of pulleys, the upper ones of said

adjacent to the cylinder, means to move the gaging member into and away from the path of movement of a sheet

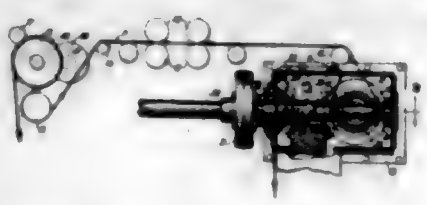
oven during the annealing operation, and a cooling system material selected from the group consisting of compress-

2,899,198
TAPE DISPENSER AND FOLDER
Alfred P. Krueger, Southbury, Conn., assignor to Derby Seniors Incorporated, Ansonia, Conn., a corporation of Connecticut
Application September 17, 1957, Serial No. 684,510
7 Claims. (Cl. 270—68)



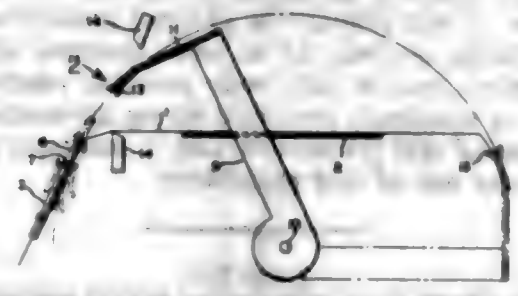
1. In a tape dispenser, means providing a casing having a part thereof defining an opening through which pressure-sensitive tape, tacky only on the under surface thereof, is served to the user, tape feeding means mounted in the casing including a feed roll for contact with the tacky surface of the tape, a stripper roll for contact with said surface of the tape, mounted in the casing adjacent the feed roll and adjacent said part of the casing, the feed roll and the stripper roll being geared together and the stripper roll having a faster peripheral speed than the feed roll, said part of the casing including a shear plate above the travel of the tape, and a fixed tape-supporting tacky body applied to and supported from said part of the casing at the inner side of the shear plate, adapted to stick to the upper surface of the tape when and as the tape is pressed against the shear plate and severed so that subsequently issuing tape forms a loop which sticks to the reversely turned end of the tape, whereby, after pulling the reversely turned end free from said body, a strip may be severed having an end doubled on itself with the tacky surfaces thereof face to face.

2,899,199
TENSION CONTROL MEANS FOR A WEB OF PAPER
Anton R. Stobb, Racine, Wis.
Application December 16, 1957, Serial No. 703,628
10 Claims. (Cl. 271—2.3)



1. A means for controlling tension in a web of paper passing through a printing press, comprising a cylinder rotatably mounted for support of said web of paper as the latter enters said printing press, means adjacent said cylinder for pressing said web of paper into contact with said cylinder, a differential drive means connected to said cylinder and powered by the drive of said printing press for rotating said cylinder in one direction for feeding said web of paper toward said printing press, and a constant torque motor connected to said differential drive means for rotatably urging said cylinder in the other direction to an amount necessary to maintain a constant tension on said web of paper while the latter is being fed into said printing press.

2,899,200
MECHANISM FOR POSITIONING AN ADHESIVE STRIP MATERIAL IN A SPLICING APPARATUS
Francis Peter Allen, Westfield, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
Application April 22, 1958, Serial No. 730,228
1 Claim. (Cl. 271—2.5)



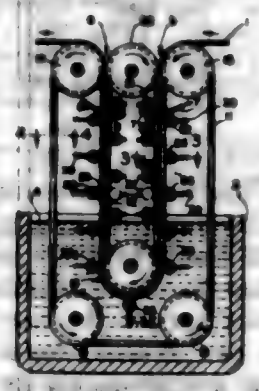
In a mechanism for feeding and positioning a continuous adhesive article in a splicing apparatus, the combination comprising (1) an adhesive article feeding member, said feeding member comprising a feed spring arm constructed of two first leaf springs secured together at their one ends and having at their other ends flared separable guide members positioned in the path of said continuous article, said flared guide members having protruding lips in the direction from which the continuous article approaches said flared guide members, and (2) a pivot arm carrying an adhesive article pick-up member, said pick-up member comprising a pick-up spring arm constructed of two second leaf springs secured together at their one ends and having at their other ends flared separable lip portions, said pivot arm positioned to move said flared lip portions into said path of said continuous adhesive article, said flared lip portions also having protruding lips in the direction from which said continuous adhesive article approaches said lip portions, the aforementioned elements so located with respect to each other whereby (a) upon moving in one direction said flared lip portions of said pick-up member in its operation to pick up a leading end of an adhesive article held firmly between said flared separable guide members of said feeding member, said flared lip portions contact said flared guide members and are spread and separated thereby until moved past said flared separable guide members, whereupon said flared lip portions come together again clamping and holding therebetween said adhesive article, and (b) upon subseqent moving in a reverse direction said flared lip portions of said pick-up member, carrying said adhesive article to position said adhesive article in proper splicing position, said flared guide members are contacted by said other ends of said pickup member and are spread and separated thereby until said other ends of said pick-up member are moved past said flared guide members, whereupon said flared guide members come together again to guide therebetween said adhesive article, and, (c) upon subsequent moving of said pivot arm and said pick-up member, said adhesive article is moved into proper splicing position.

2,899,201
GUIDE AND TENSIONING DEVICE FOR PROCESSING FILMS AND FOILS
Ernst Pirot, Wuppertal-Barmen, Germany, assignor to J. P. Bemberg Aktiengesellschaft, Wuppertal-Oberbarmen, Germany
Application January 23, 1958, Serial No. 710,206
Claims priority, application Germany January 30, 1957
8 Claims. (Cl. 271—45)

1. A unit device for the continuous fluid treatment of strips of sheetlike material under tension comprising a vertically suspended and inner first pair of endless V-belts in equally spaced horizontal relationship, said first pair of belts mounted for continuous and constant move-

irregular terrain, comprising a metal target plate, a target base including a plurality of legs one of which is tiltable defining a pair of downwardly and inwardly converging primary channels, a plurality of vertical bores overlying

ment in relation to one another about a vertically aligned, first supporting set of pulleys, the upper ones of said pulleys defining the ends of an upper cylinder, the lower ones of said pulleys defining the ends of a lower cylinder adapted to be submerged in a treating tank; an outer second pair of vertically suspended endless V-belts in substantially identical horizontal spaced relationship to said inner pair of belts, also mounted for continuous and constant movement in relation to one another and at the same linear velocity as said first inner pair of V-belts and vertically supported and aligned by means of a second outer set of pulleys the upper ones of which define cylinder ends, correlated ones of said inner and outer pulleys rotating in the same plane, said



outer set of pulleys space supported so that the backs of the inner V-belts carried thereon are in contacting relation with the backs of the said outer V-belts throughout a substantial portion of the length of said inner belts, the line of contact thereof defining a pair of spaced U's in parallel planes, said inner and outer V-belts and said upper cylinders adapted to engage strip sheet between their contacting surfaces in a bight at the point of entry into and exit from said device and to advance said sheet under both horizontal and vertical tension between said V-belts throughout the U-shaped path of mutual belt contact; and a series of spaced apart rollers along said U-shaped path of mutual contact on the interior side of each of said pairs of spaced apart V-belts adapted to provide substantially uniform contact pressure between said inner and outer belts.

2,899,202

OFFSET PRINTING MACHINE AND SHEET GAGE

Luis Mestre, New York, N.Y., assignor to Lowfer Development Corporation, New York, N.Y., a corporation of New York

Original application September 2, 1953, Serial No. 378,035, now Patent No. 2,821,911, dated February 4, 1958. Divided and this application May 16, 1957, Serial No. 659,595

8 Claims. (Cl. 271—53)

1. In a machine of the class specified to make impressions on successive sheets, the combination of a frame, a cylinder mounted for rotation in the frame and having a longitudinal opening, means at said opening to grip the leading edge of a sheet presented at said opening at a predetermined point in the rotation of said cylinder, and a single gaging member of a substantial length for the leading edge of each sheet mounted on the frame adjacent to the cylinder, means to move the gaging member into and away from the path of movement of a sheet to the cylinder, comprising means for adjusting said gaging member in accordance with the transverse direction of the leading edge of a sheet.

2,899,203

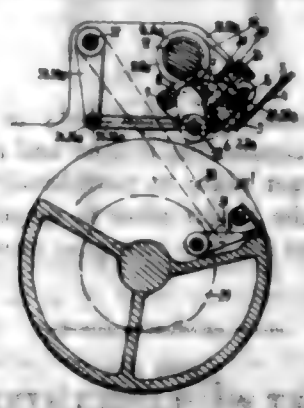
SHEET FEEDING MECHANISM FOR SHEET HANDLING APPARATUS

Artur Büttner, Heidelberg, Germany, assignor to Schnellpressenfabrik Aktiengesellschaft Heidelberg, Heidelberg, Germany, a corporation of Germany

Application December 2, 1957, Serial No. 700,106

Claims priority, application Germany December 7, 1956

8 Claims. (Cl. 271—53)



1. In a sheet-handling apparatus having sheet-support means to receive and support sheets, means for delivering individual sheets successively to the sheet-support means, an automatic sheet-feeding mechanism comprising, in combination, a movable gripper carrier, grippers spaced longitudinally of the carrier, means for automatically, cyclically operating the carrier and grippers to grip successively individual sheets from the sheet-support means and for causing the carrier and grippers to deliver the sheets successively to a predetermined point and means for subsequently operating the grippers as they reach said predetermined point to release the gripped sheets, sheet-truing means comprising front feed register lays cyclically operable for positioning the sheets successively on the sheet-support means in a predetermined trued position and for holding the successive sheets in said true position prior to the gripping thereof by the grippers, first means for cyclically operating and moving the sheet-truing means clear of the sheets independently of the gripper carrier subsequent to the gripping of the sheets and in timed relationship with the gripper carrier operating means and for subsequently restoring the sheet-truing means to a position for positioning and holding said sheets in said trued position while said grippers are delivering the sheets to said predetermined point thereby to allow the sheets to be gripped by the grippers subsequent to the positioning thereof and while being held in said trued position, means operably associated with said gripper carrier for moving the sheet-truing means toward the sheet-support means subsequent to the restoration thereof by said first means, independently of said first means and under control of said gripper carrier during the final phase of the gripper carrier cycle prior to the gripping of the individual sheets thereby to position the front feed register lays in exact timed relationship with the gripper carrier cycle insuring exact positioning and truing of the sheets prior to the gripping thereof by the grippers.

2,899,204

PORTABLE TARGET STAND

Harold E. Roisy, Chula Vista, Calif.

Application May 9, 1956, Serial No. 583,768

1 Claim. (Cl. 273—102)

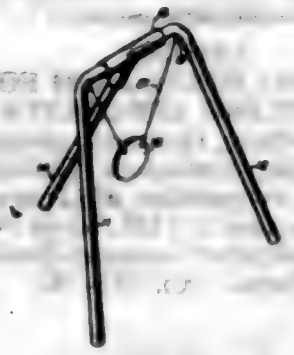
A portable knockdown target stand assembly self supporting on the surface of the ground and adjustable for

interconnected adjacent the ends thereof by horizontal struts, a main net attached to the upper of said hori-

2,899,210

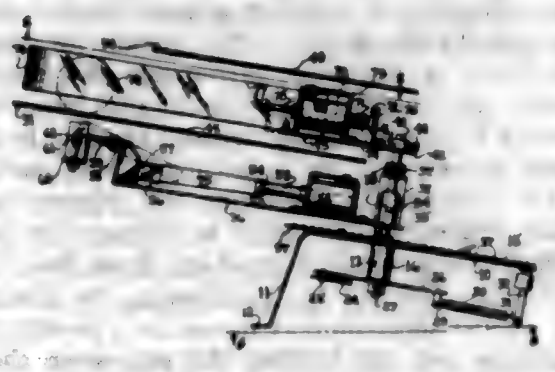
SAFETY SKI BINDING

irregular terrain, comprising a metal target plate, a target base including a plurality of legs one of which is tiltable with respect to the others and connecting means individually friction-fitted therewith for positioning said legs on the ground in spaced relationship, and a pair of spaced



flexible cables connected respectively to a pair of said legs adjacent said connecting means and respectively connected to said target plate at peripherally spaced points thereon whereby the target plate is suspended within the plane of said cables for free swinging movement from the top of said base.

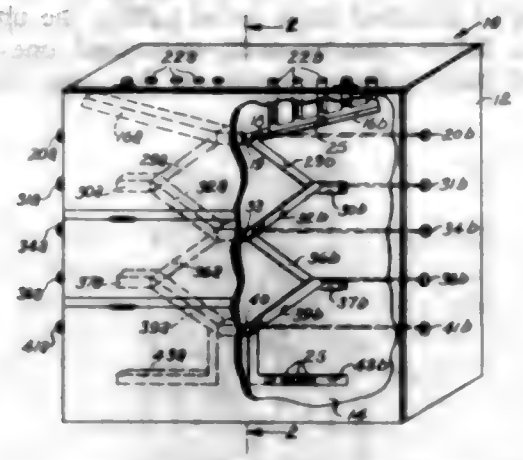
2,899,205
MOVING TARGET WITH SIMULATED PROJECTOR
Thad F. Zale, Chicago, Ill., assignor to Genco, Inc., Chicago, Ill., a corporation of Illinois
Application May 9, 1957, Serial No. 658,145
10 Claims. (Cl. 273—101.2)



1. An amusement and target apparatus comprising a pair of spaced apart inclined opaque plates of non-magnetically attractable material with the top plate thereof being of a width less than the bottom plate so as to expose a portion of said bottom plate therebeneath, a magnetically attractable target element carried by said bottom plate and movable between said plates, means for moving said target element by magnetic attraction over the exposed portion of said bottom plate, said means including a permanent magnet beneath the bottom surface of said bottom plate, means for moving said magnet beneath the bottom surface of said bottom plate, means for pivoting said magnet relative to its moving means in a direction away from said bottom plate to release said target element from its magnetic attraction to permit said target element to move down said bottom plate to a concealed position between said plates, and means for projecting said target element from its concealed position between said plates to a position to be attracted and moved by said magnet over the exposed portion of said bottom plate.

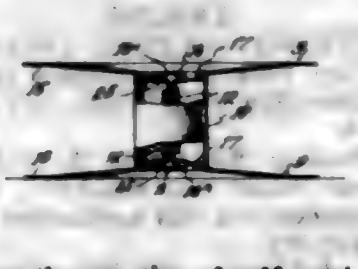
2,899,206
GAME
Harold Carter, Melvindale, Mich.
Application September 9, 1957, Serial No. 682,894
1 Claim. (Cl. 273—120)

A game comprising, in combination, a housing including a vertical wall member, said vertical wall member defining a pair of downwardly and inwardly converging primary channels, a plurality of vertical bores overlying each of said channels, a ball member rollably supported within each one of said bores, means for releasably supporting each of said ball members in spaced relationship above said respective primary channels, a center pocket at the point of intersection of said primary channels, a gate in said center pocket, means at each side of said housing independently controlling said gate, a pair of outwardly diverging channels extending downwardly from



said center pocket, a side pocket at the outermost extremity of each of said outwardly diverging channels, a gate in each of said side pockets, means at each side of said housing independently controlling said side pocket gates, a pair of final score channels beneath said pockets for receiving all of said balls to indicate the score of each player, and manually operable cover means for selectively covering all of said pockets and said channels, removal of said cover means providing access to said pockets and channels to tabulate the score of all of said balls in said pockets and said channels and to permit the removal thereof for the next game.

2,899,207
DEVICE FOR GOLF PUTTING PRACTICE
Wilfred A. Billinghurst, Elizabeth, N.J.
Application October 24, 1958, Serial No. 769,341
2 Claims. (Cl. 273—177)



1. A device for the practice of golf putting, comprising similar upper and lower circular disks, a hollow cylinder spacing the disks, and a helical spring disposed axially through the cylinder and attached at its ends to said disks and tensioned to hold the disks to the ends of the cylinder, the peripheral margins of the disks being horizontal when the device is on a horizontal surface, the disks being centrally depressed to fit into the ends of said tube and each inclined between the central depressed portion and the peripheral margin.

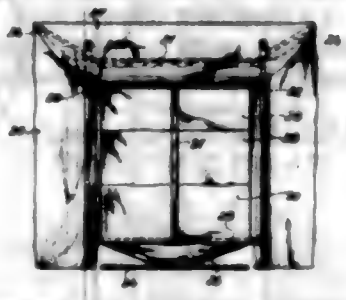
2,899,208
GOLF TRAINING DEVICE
Ewald Wallsteiner, Munich, Germany
Application January 14, 1957, Serial No. 634,875
Claims priority, application Germany January 14, 1956
7 Claims. (Cl. 273—182)

1. A ball-driving cage comprising a supporting frame having a pair of spaced forwardly inclined vertical struts

2,899,212
GOLF BAG CART

2,899,214
SAFETY ASSEMBLY FOR PROTECTING DRIVERS

interconnected adjacent the ends thereof by horizontal struts, a main net attached to the upper of said horizontal struts and spaced forwardly of said vertical struts, said main net having portions extending outwardly and forwardly of said frame, means on the top of said supporting frame diverging upwardly and forwardly of said frame for supporting said outwardly extending portions of said main net, a catch net suspended from said supporting means and having its lower edge fastened to the

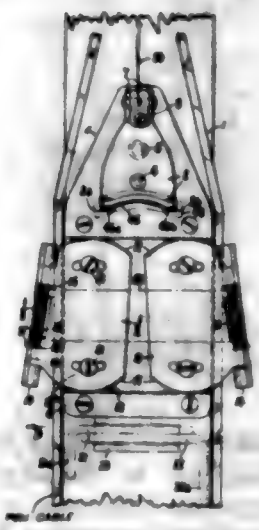


front side of said main net, said catch net further comprising a plurality of net portions being suspended by their top edges from the front side of said main net, said net portions being arranged at various heights with the bottom parts of each of said net portions overlapping the next following lower portion, and a ball-return surface inclined downwardly from the lower end of said main net and extending forwardly thereof.

2,899,209
COMBINED TRUCK AND TOE STOP FOR ROLLER SKATES
Clarence R. Reynolds, Samuel C. Asad, and Wilson R. Boodey, Cleveland, Ohio, assignors to The Cleveland Skate Co., Inc., Cleveland, Ohio, a corporation of Ohio
Application July 1, 1954, Serial No. 440,676
1 Claim. (Cl. 280—11.2)

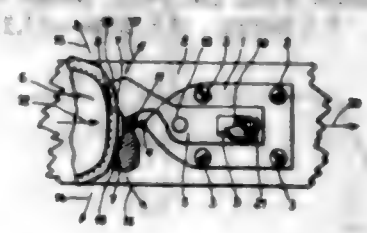
A roller skate comprising a base plate, forward and rearward truck brackets secured to the bottom of said base plate, wheel means on said rearward truck bracket, said forward truck bracket having two rigid struts spaced one ahead of the other longitudinally of the skate at their upper ends and converging downwardly, the foremost of said struts having a ball-and-socket connection with its associated bracket, the rearward of said struts having a threaded connection with its associated bracket, wheel supporting axle means mounted at the lower end of said foremost strut, an integrally connected flange near the lower end of said foremost strut and extending rearwardly therefrom, there being an opening through said flange through which said rearward strut extends, there being an enlarged head on the lower end of said rearward strut, resilient cushioning means between said enlarged head and the lower face of said flange, an upwardly and forwardly extending rigid bracket integrally connected to said foremost strut, and a downwardly projecting resilient stop secured to the forward end of said bracket and extending down approximately to the level of said axle means, whereby said stop terminates the forward movement of the skate when the skate is pivoted about said axle means to cause said stop to strike a supporting floor, whereupon said resilient cushioning means absorbs some of the shock of stopping.

2,899,210
SAFETY SKI BINDING
Hannes Marker, Garmisch-Partenkirchen, Germany
Application May 7, 1956, Serial No. 583,248
Claims priority, application Germany May 11, 1955
10 Claims. (Cl. 280—11.35)



1. A safety ski binding comprising a front cheek secured to the ski so as to form an abutment for the front edge of the boot and adapted to pivot laterally in case of excessive torsional stress upon the boot, means urging the boot against said front cheek, a pair of pivotable side cheeks on opposite sides of the longitudinal axis passing through the pivot of the front cheek gently spring-urged into their normal position in engagement with the flanks of the sole of the boot, so as to yield laterally without noticeable resistance in case of a rotary motion of the boot, and a locking device cooperable with said side cheeks adapted to lock the side cheeks in their normal position.

2,899,211
SAFETY THRUST BLOCK FOR SKIS
Georges Pierre Joseph Salomon, Annecy, France
Application May 7, 1956, Serial No. 583,014
Claims priority, application France May 7, 1955
12 Claims. (Cl. 280—11.35)

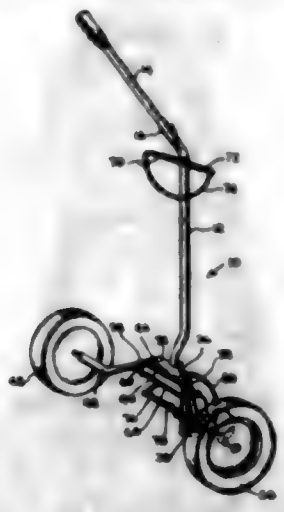


1. In a safety ski binding for skis, in combination, support means; a thrust block carried by said support means in front of a ski boot and having a front end and a rear end, the latter being located rearwardly from said front end in direction of the ski and in front of said ski boot; boot engaging means provided at the rear end of said thrust block extending in normal position of said block substantially transversal to the axis of the ski and adapted to engage only the front end of the boot arranged rearwardly of said thrust block; means for mounting said thrust block on said support means for turnable movement in opposite directions from said normal position thereof and for slidable movement from a rearmost position forwardly; means for blocking said forward slidable movement of said thrust block from said rearmost position thereof when said thrust block is in normal position and for permitting said thrust block to slide forward when it is turned from said normal position; and yieldable locking means tending to prevent turning of said thrust block in said rearmost normal position thereof.

the coupled members, the high and sloping surfaces move out of the way and the low surface permits the ring to

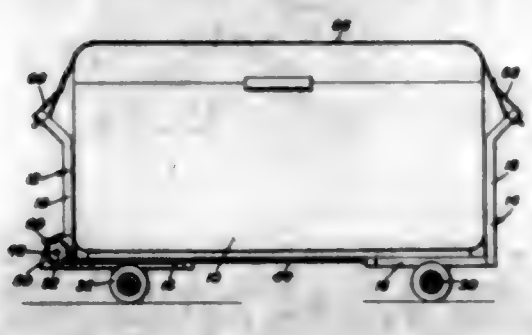
engagement with said housing and the inner annular portion is radially expanded by the engaging passage of a

2,899,212
GOLF BAG CART
Joseph E. Meyer, Minneapolis, Minn.
Application March 15, 1956, Serial No. 571,786
4 Claims. (Cl. 280—38)



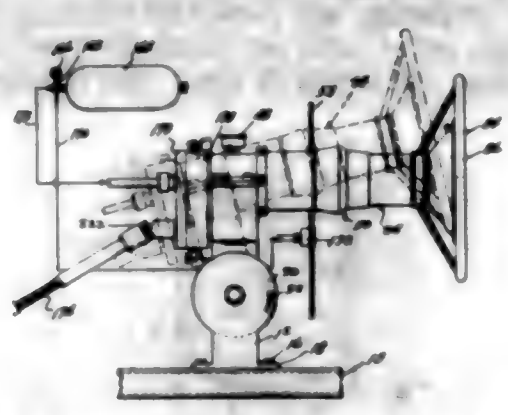
3. In a golf bag cart comprising in combination, an elongated upstanding member having a handle mounted on the upper portion, a support formed on the lower end of the elongated member extending rearwardly thereof, a plate secured adjacent the lower portion of the elongated member, a pair of arms extending forwardly and outwardly from the plate for a portion of their lengths, then extending outwardly from the plate for the remainder of their lengths, said arms being pivotally connected to the plate so as to move in a horizontal plane, a wheel journalled on the outer end of each of the pivotal arms, the wheels being in parallel planes when the arms are in their extended or operative position, said arm pivots permitting the two pivotal arms foldable around the lower end of the elongated member whereby the wheels are located at the rear of the support.

2,899,213
HEAVY EQUIPMENT MOVING DEVICE
Howard J. Winger, Spring Church, Pa.
Application April 16, 1956, Serial No. 578,417
5 Claims. (Cl. 280—47.13)



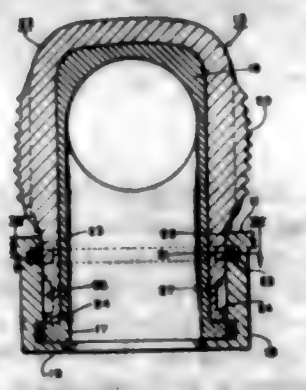
1. A heavy load moving device comprising a pair of L-shaped dollies each having a horizontal supporting platform and a vertical side wall at one end of the latter adapted to support and engage the bottom and side respectively of a load to be moved, each dolly having an axle and support wheels mounted thereon intermediate the ends of said dolly, a handle mounted upon and rising upwardly and outwardly from the upper end of said vertical side wall, a flexible strap secured at its ends to the handles of said pair of dollies at a position which is located vertically upward from and laterally outwardly of said side walls and adapted to overlie the top of a load for securing the same upon said dollies with the ends of said strap disposed at an acute angle to said side walls and spaced therefrom, horizontally extending tension means connected to said dollies at their horizontal platforms, means on one dolly for tightening said tension means.

2,899,214
SAFETY ASSEMBLY FOR PROTECTING DRIVERS AND PASSENGERS OF AUTOMOTIVE VEHICLES
Pasquale I. D'Antini, Toronto, Ontario, Canada
Application February 7, 1958, Serial No. 713,816
15 Claims. (Cl. 280—87)



1. A safety cushion assembly for automotive vehicles, comprising an inflatable cushion means adapted for mounting within an automotive vehicle, a steering wheel assembly including a steering wheel, a chamber for compressed air, means mounting the steering wheel assembly for rotary movement to operate the steerable road wheels, means mounting the steering wheel for forward movement and valve means actuated by the forward movement of the steering wheel of the assembly for communicating the compressed air chamber with the inflatable cushion means whereby the cushion means is inflated upon any forward movement of the steering wheel.

2,899,215
VACUUM CLEANER COUPLING WITH EXPANDABLE RING LOCKING MEANS
William A. Ardito, West Springfield, Mass., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application May 6, 1955, Serial No. 506,517
3 Claims. (Cl. 285—7)



1. A detachable coupling comprising an elbow shaped member having a convex circular surface and a cooperating member having a concave circular surface, said convex surface being adapted to be inserted in said concave surface, means to limit the extent of insertion, said surfaces having substantially annular grooves which register at maximum insertion, a spring locking ring normally disposed entirely within the groove in the convex surface, a locking cam of inverted U-shape having side arms, said elbow shaped member having grooves parallel to the axis of said convex circular surface, said side arms being received in said parallel grooves and extending under said spring ring and having low, high and sloping surfaces adapted to be moved adjacent said ring and disposed so that as the locking cam is moved in the direction of insertion the sloping surfaces move adjacent portions of the ring outwardly into the groove in the concave surface and then the high surfaces retain them there, and so that as the locking cam is moved in the direction of separating

overlapping engagement when said members are fully extended; radially projecting annular elements at said

to carry a component of apparatus to be adjusted, and being split at the other end to form elastic fingers; a

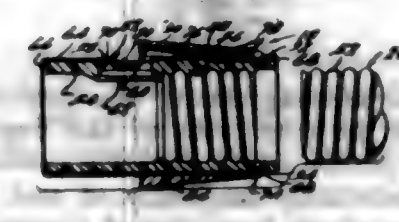
the coupled members, the high and sloping surfaces move out of the way and the low surface permits the ring to be retracted into the groove in the convex surface, whereby the members are locked by movement of the cam in the direction of insertion and are unlocked by movement of the cam in the direction of separation.

2,899,216

VACUUM CLEANER HOSE COUPLING HAVING A RIGIDLY ENCASED RESILIENT BUSHING

Clarence A. Brock, Toledo, Ohio, assignor, by mesne assignments, to Rexair, Inc., Detroit, Mich., a corporation of Michigan

Application February 14, 1956, Serial No. 565,334
1 Claim. (Cl. 285—7)



In a vacuum cleaner having a body, a flexible hose, a female coupling element on said body, and a male coupling element on one end of said hose adapted to be engaged within said female coupling element, said male coupling element comprising a resilient tubular bushing, the end of said flexible hose extending within one end of said resilient tubular bushing and having the outer surface thereof secured to the portion of the inner surface of said resilient tubular bushing overlapped thereby, a rigid tubular body disposed over said resilient tubular bushing, said one end of the resilient tubular bushing projecting beyond the end of said rigid body adjacent thereto, a longitudinally extending latch fixed to said rigid body adjacent said one end of the resilient bushing, and a protective outer sleeve encircling said end portion of said rigid tubular body and a portion of said latch and secured to the portion of said one end of the resilient bushing projecting from said rigid tubular body, the portion of said outer sleeve overlying said portion of the latch having an inner tapered longitudinal depression with relatively thin flexible side walls, said outer sleeve terminating at its unsecured end in a transverse plane intermediate the length of said rigid tubular body, an opening in the other end portion of said tubular body into which the free end of said latch projects, said resilient bushing having a recess aligned with said opening and adapted to receive said projecting latch portion, and said resilient bushing sealing said opening against passage of air therethrough.

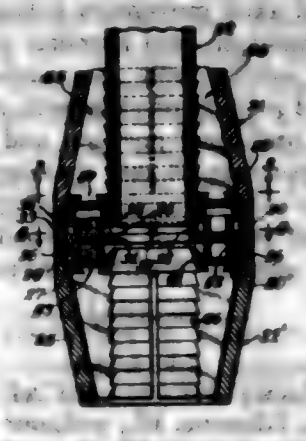
2,899,217

PIPE COUPLING DEVICE WITH PRESSURE ACTIVATED PIPE GRIPPING MEANS

Clifford L. Ashbrook, Houston, Tex., and Paul L. Peterschmidt, Park Forest, Ill., assignors to Henry T. Chamberlain, Evanston, Ill., trustee

Application December 31, 1954, Serial No. 479,171
4 Claims. (Cl. 285—105)

1. A pressure activated pipe coupling of the class described, comprising, a housing having an axial opening defining a camming surface, a set of slip segments arrayed lengthwise within said opening, exteriorly complementary with said camming surface and defining a pipe receptive bore, a deformable annular seal connected to the inner axial ends of said slip segments for maintaining their array and providing a cantilever support therefor, said seal having inner and outer lip portions extending radially inwardly and outwardly of the internal and external surfaces, respectively, of said arrayed slip segments so that the outer annular lip portion is radially compressed by its engagement with said housing and the inner annular portion is radially expanded by the engaging passage of a pipe therepast, such radial compression causing responsive diverging movement of the outermost ends of said attached slip segments and the said radial expansion causing converging movement of the said outermost ends whereby said bore is normally convergingly receptive of a pipe and said slips are automatically engaged with said pipe as it is inserted axially into said bore.

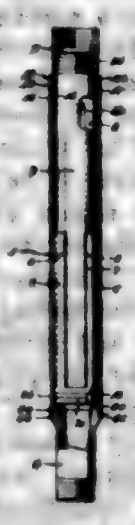


2,899,218

ADJUSTABLE CONNECTOR FOR WELL CASINGS HAVING VARIABLY COENGAGED ROTATION PREVENTION MEANS

Millard George Creighton, deceased, late of Long Beach, Calif., by Ethel Claire Creighton, executrix, Long Beach, Calif.

Application March 9, 1955, Serial No. 493,142
3 Claims. (Cl. 285—302)



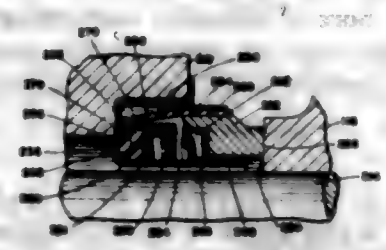
1. An axially adjustable connector for operation as a section of a casing string in an oil well comprising: a tubular body member having a bore therethrough and having one end adapted to be connected with a section of a casing string; a mandrel member having one end adapted to be connected with another section of the casing string; said members being telescopically connected for relative axial movement; splines on the interior surface of said body member and the exterior surface of said mandrel member, respectively; said splines extending from an intermediate portion to the distal end portion of each of said members, respectively; the unsplined portion of the interior surface of said body member being of a uniform diameter substantially the same as the external diameter of said splined portion of said mandrel member throughout the axial length thereof; said splines on said members being of substantially the same length and arranged so that the proximal ends thereof overlap in minimum overlapping engagement when said body and mandrel are fully collapsed; said overlapping engagement increasing in proportion to relative axial movement of said members from collapsed position to a maximum

sion means.

as the locking cam is moved in the direction of separating

overlapping engagement when said members are fully extended; radially projecting annular elements at said distal end portions of said members; said elements being joined to said splines and being engageable by said proximal ends to limit axial movement between said members; the annular element on said mandrel member having an outer diameter substantially the same as the diameter of said unsplined portion of said body member and being slidable in said unsplined portion; and sealing means at said distal end portions of said members forming axially spaced fluid seals between said members; the sealing means at said distal end portion of said mandrel member being carried by said annular element thereon.

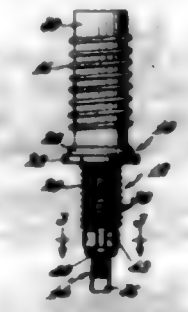
2,899,219
ROTARY MECHANICAL SEAL
Frank E. Payne, Glencoe, Ill., assignor to Crane Packing Company, Morton Grove, Ill., a corporation of Illinois
Application September 29, 1954, Serial No. 457,194
2 Claims. (Cl. 286—11)



1. A seal for relatively rotatable elements, one of which is in the form of a shaft, said seal comprising in combination a washer adapted to surround the shaft and having a forwardly disposed radial sealing surface and a generally cylindrical outer surface, a deformable sleeve of elastomeric material, said sleeve having a radially inwardly disposed flange at one end, a substantially cylindrical region at its other end, and an inwardly deformable intermediate region adapted to accommodate relative axial movement between the ends of the sleeve, means for compressing the cylindrical region of the sleeve inwardly against the outer cylindrical surface of the washer to form a fluid-tight connection therebetween, a retainer adapted to surround said shaft and having a cylindrical wall extending into said washer and serving to support the same and a radial wall disposed rearwardly of said washer and against which at least a portion of said inwardly disposed flange bears, said inwardly disposed flange having formed at its inner end an enlarged re-entrant portion immediately surrounding the cylindrical wall of the retainer, a coil spring disposed within the sleeve and compressed between said flange on the sleeve and the washer, and a confining ring disposed within the sleeve and having a portion surrounding said re-entrant portion and serving to preload the latter upon the cylindrical wall of the retainer, said confining ring having a portion surrounding said spring and extending forwardly therealong within the inwardly deformable intermediate region of the sleeve to prevent inward deformation of said latter portion of the sleeve and consequent contact of the latter with said coil spring.

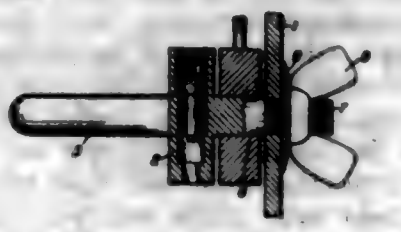
2,899,220
ADJUSTABLE ASSEMBLY
Ralph Abrams, Sharon, Mass., assignor to Cambridge Thermionic Corporation, Cambridge, Mass., a corporation of Massachusetts
Application January 3, 1955, Serial No. 479,615
3 Claims. (Cl. 287—20)

1. An adjustable assembly comprising: a hollow metal stud having an essentially uniform internal thread through its entire length, having near one end means for securing it to a supporting structure, and at said end being adapted to carry a component of apparatus to be adjusted, and being split at the other end to form elastic fingers; a screw threaded through said stud to produce longitudinal adjusting movement between the stud and the screw upon rotation of the screw, said screw extending with both ends from the stud and being adapted to carry a second component of said apparatus on the end that



extends at said securing means, and constrictor means applied around the outer ends of said fingers to compress the split portion of the stud into contact with said screw for substantially the length of said fingers, the resulting comparatively large area of pressurable contact thus providing considerable frictional torque which resists accidental rotation between the stud and the screw while permitting said longitudinal adjustment by rotating the screw from its free end.

2,899,221
ADJUSTING MEANS FOR TENSION MECHANISM
Alphonse F. Pieper, Brighton, N.Y.
Application August 15, 1955, Serial No. 528,366
4 Claims. (Cl. 287—20)



1. The combination with a fixed supporting plate having an opening therethrough and a holder mounted in said opening and rotatively adjustable on said plate, said holder including a shoulder engaging one side of the supporting plate and a threaded end extending through said opening, and a retaining nut engaging said threaded end, of a concavo-convex washer having an opening of the same diameter as said threaded end and having threaded engagement with said threaded end, the washer being located between and engaging the nut and the supporting plate with its concave surface facing the plate, the plate extending beyond the washer and the outer edge of the washer engaging the plate while the other parts of the concave surface are spaced from the plate whereby the holder, nut, and washer can be turned as a unit on the plate while the nut retains its tight adjusted relationship to the holder.

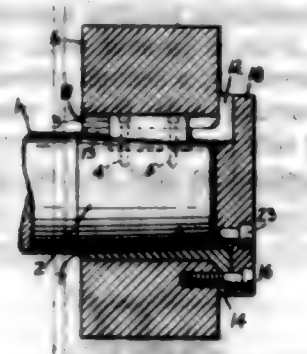
2,899,222
SHAFT END ROLL MOUNTING
John L. F. Ross, Cleveland, Ohio, assignor to The Ajax Manufacturing Company, Euclid, Ohio, a corporation of Ohio
Application July 31, 1953, Serial No. 371,470
6 Claims. (Cl. 287—53)

5. A shaft and roll assembly comprising a shaft having a tapered end portion, a longitudinally extending key secured in said tapered portion, a longitudinally split sleeve fitted over said tapered portion and having a complementary tapered inner periphery and a cylindrical outer

end portion of the shank, and a knotter spring rigidly

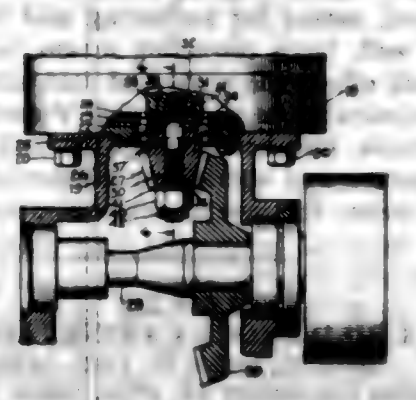
ing members and an intermediate portion engageable with

periphery, a roll having a central cylindrical opening therethrough firmly seated on such cylindrical outer surface of said sleeve and provided with a keyway tightly embracing said key, an end cap overlying the end of said



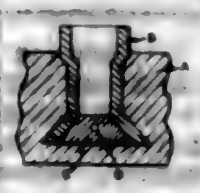
shaft and sleeve and having a portion fitting within the end of said sleeve, means axially adjustably joining said cap and roll, and means securing said cap to the end of said shaft for adjustment axially relative thereto.

2,899,223
INDUSTRIAL TRUCK DRIVE RATIO
Brouislaus I. Ulinski, Flossmoor, Ill., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Application February 28, 1956, Serial No. 566,572
5 Claims. (Cl. 287—53)



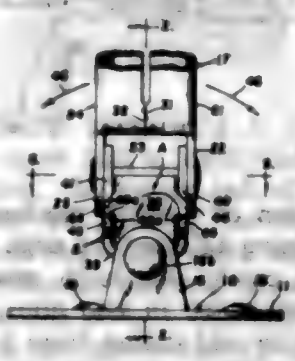
1. In a truck of the class described, a motor drive shaft, a retaining stud screwed into a threaded bore in the end of said shaft, a pinion or the like adapted to be fitted on the end of said shaft, said shaft and pinion having keying portions so that said pinion when fitted on the end of said shaft will not rotate relatively to the shaft, said pinion having an opening therethrough and through which the retaining stud extends, a nut on the end of the retaining stud holding the pinion against endwise removal from the shaft, and means between the stud and pinion holding the stud against rotation relatively to said shaft and pinion.

2,899,224
MEANS AND METHOD FOR JOINING PARTS
William B. Elliott, St. Catharines, Ontario, Canada
Application July 8, 1957, Serial No. 670,544
2 Claims. (Cl. 287—126)



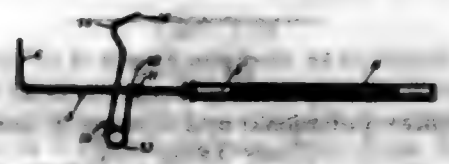
1. A male and a female member adapted to be frictionally retained together, said female member having a recess with an initial inwardly tapered portion, an intermediate parallel portion and an inner chamber; said male member being designed with sufficiently greater cross-sectional dimensions than the parallel portion of said recess, so that the male member is stressed substantially beyond its elastic limit upon insertion into the recess; said initial inward taper being adapted to act as a die to guide the male member and compress it into the parallel portion without deleterious deformation, said inward taper having an included angle of at least 1° but less than 30° and insufficient to cause shaving of the male member; said inner chamber having sufficiently greater cross-sectional dimensions than the parallel portion of the recess to permit the inner end of the male member to expand freely therein.

2,899,225
UNIVERSAL JOINT
Rudolph G. Birr, Lombard, Ill., assignor to American Linen Supply Co., Chicago, Ill., a corporation of Nevada
Application June 27, 1957, Serial No. 668,374
12 Claims. (Cl. 287—20)



1. A universal joint comprising, a pair of bifurcated end elements each having a pair of spaced apart arms, first and second pivot pins extending between the respective arms of said end elements, said end elements being arranged so that the axes of said pins are substantially at right angles to each other, a first intermediate yoke member having a base portion and a pair of spaced apart legs extending therefrom, said legs being journaled on said first pin with the base portion of said yoke abutting said second pin, a separate second intermediate yoke member having a base portion and a pair of spaced apart legs extending therefrom, said legs of said second yoke member being journaled on said second pin with said base portion of said second yoke member abutting said first pin, and means for retaining said base portions of said yoke members in abutment with said respective pins, the abutment of said base portions of said yoke members with said respective pins preventing substantial relative movement of said end elements toward each other.

2,899,226
WHIP FINISHER
Robert M. Lint, Hillsdale, Mich., assignor to Herter's, Inc., a corporation of Minnesota
Application November 23, 1956, Serial No. 624,003
2 Claims. (Cl. 289—17)

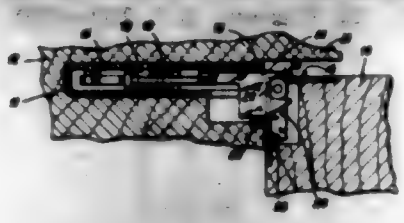


1. A whip finish knotter comprising in combination a relatively long, longitudinally extended handle member, a relatively long shank mounted at one end in the handle for axial rotation, the other end portion of said shank including a bend at right angles to the central axis of the shank and handle, and transversely flattened, an open-eyed hook on the extreme outer end portion of said other

one side of its related tube leaving a breach in the latter whereby upon adjustment of said gauge plate toward said

end portion of the shank, and a knotter spring rigidly affixed to the shank, said knotter spring being formed of a single spring wire and extending from the shank from a convolution on the shank engaging portion of the spring, thence having at least two convolutions formed therein to increase spring tension and continuing to a point substantially spaced from the central axis of the shank and terminating in the form of a relatively flat sharp pointed hook.

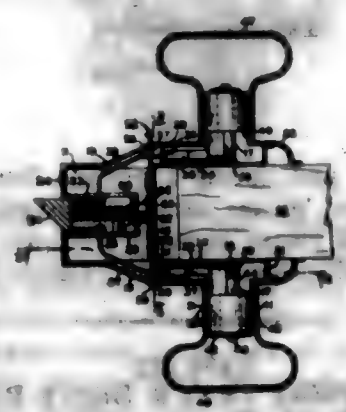
2,899,227
NOISELESS LOCK
Charles-Louis Gschwend, La Chaux de Fonds, Switzerland, assignor to Alfred Jeanrenaud, La Chaux de Fonds, Switzerland
Application August 29, 1956, Serial No. 606,851
Claims priority, application Switzerland August 31, 1955
1 Claim. (Cl. 292—163)



The combination of a latch mechanism mounted on a door; a jamb-lining adjacent the edge of the door adapted to support a catch; said latch mechanism including a latch casing embedded in said door, a latch bolt slidable horizontally in said casing from a retracted position to a projected position wherein an end of said latch bolt extends beyond an edge of said door for engaging the catch, the said end of said latch bolt having in sequence a beveled portion, the bevel of which faces the direction of closing of said door, and a terminal portion projecting from said end at a position spaced from said beveled portion and away from the direction of closing of said door, said beveled portion and said terminal portion forming a recess which is open toward the jamb-lining when the door is in the closed position for engaging the catch, said terminal portion being adapted to abut the catch when said latch bolt is in the projected position, and a spring carried by and in said casing urging said latch bolt toward the projected position, whereby, upon closing of said door from an open position, the beveled portion is adapted to engage the catch causing the latch bolt to slide to the retracted position under the pressure of the catch against the resistance of said spring, and thereafter allowing said latch bolt to slide to its projected position to engage and lock the catch in its said recess and allowing said terminal portion to abut the catch; and a vertical flange extending longitudinally of said door and projecting from said edge over and beyond the said end of said latch bolt when said latch bolt is in its projected position, said vertical flange also overlying a portion of said jamb-lining with a gap between said vertical flange and said portion of said jamb-lining when said door is in the closed position.

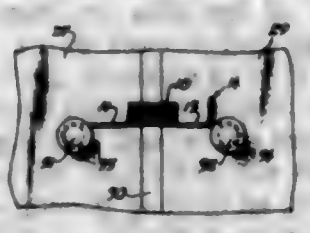
2,899,228
SURFACE DOOR LATCH
Stanley Polchinski and George I. Rascimo, New York, N.Y.
Application July 9, 1956, Serial No. 596,728
6 Claims. (Cl. 292—169)

I. A door latch adapted to be applied to a door having a V-notch in the edge thereof, comprising a U-shaped escutcheon member having two substantially parallel side plates having a part thereof spaced apart to correspond to the thickness of a door for engagement with the opposite sides of the door and apertured for door fastening members and an intermediate portion engageable with the edge face of the door, each of said side plates having a further part thereof spaced a substantial distance from said intermediate portion and offset outwardly so as to be spaced from the sides of the door, a latch well carried by said intermediate portion adapted to be received in said V-notch, a latch in said well, spring means urging said latch outwardly, a second substantially U-shaped frame having parallel side frame members contained within said offset side parts of said escutcheon and spaced apart a distance equal to said spaced side plates for en-



gagement with the side faces of said door and having a web portion spaced from said intermediate portion and adapted to be received in said V-notch adjacent to the apex thereof, means for anchoring said web portion to said latch well, latch retracting means disposed in part between said offset side parts and said side frame members and receivable in part in said V-notch and a manually operable member carried by each of said side frame members and operatively connected to said latch retracting means for independent operation thereof.

2,899,229
CHILD PROOF CABINET LOCK
Jean M. Jenks, St. Paul, Minn.
Application November 29, 1956, Serial No. 625,018
1 Claim. (Cl. 292—288)



A child proof cabinet clasp for use upon cabinet doors having spaced door handles thereupon, the clasp comprising a coil spring having oppositely directed substantially aligned shanks at opposite ends thereof, single hook ends on said shanks, and a grip means on one of the shanks and formed therefrom, the hook ends and grip means being substantially in a common plane, the hook ends extending in one direction from said shanks and said grip means extending in the opposite direction therefrom.

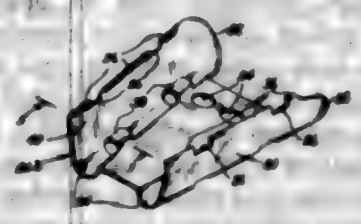
2,899,230
CORD SEAL AND METHOD OF MAKING THE SAME
Sigurd M. Moberg, Pompton Plains, N.J., assignor to E. J. Brooks Company, Newark, N.J., a corporation of New Jersey
Application July 26, 1957, Serial No. 674,370
7 Claims. (Cl. 292—325)

1. A cord seal comprising a sheet-metal sealing element having opposite, marginal cord tubes each of which has an inwardly protruding, semi-cylindrical loop comprising a bridge of the sheet metal, pushed inwardly from

with bottle receiving recesses, the walls of opposed re-

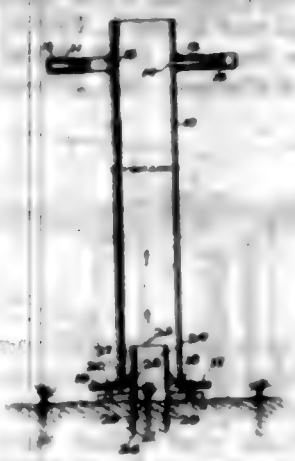
ber, actuating means including an actuating member slid-

one side of its related tube leaving a breach in the latter facilitating deformation of the tube, said loop in each



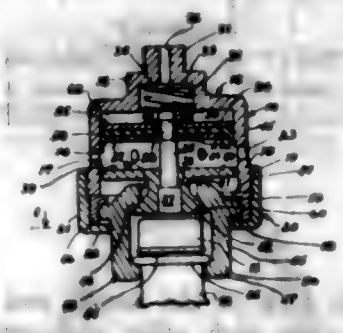
tube being adapted to become partially embedded in a cord in such tube, when the latter is deformed, to hold the cord against endwise slippage in the tube.

2,899,231
TURF PLUG CUTTER
Robert F. Steiner, Bethesda, Md.
Application April 20, 1955, Serial No. 502,622
1 Claim. (Cl. 294—50.7)



A turf plugging tool comprising an open ended turf plug receiving and discharging cylinder having a smooth cylindrical bore from one end thereof to the other, one end being a turf plug receiving end and the other a turf plug discharge end, a pair of handles projecting diametrically from the outer wall of said cylinder adjacent discharge end thereof, the plug receiving end of said cylinder having an annular inner chamfered seat formed around the inner rim of the cylinder bore at the turf plug receiving end, a flange rigid with said cylinder and projecting radially outwardly thereof adjacent the receiving end thereof, said flange being provided with a plurality of circumferentially spaced threaded openings having their respective axes extending substantially parallel to the longitudinal axis of said cylinder, a turf engageable gauge plate disposed adjacent the receiving end and below said flange in parallel relation therewith and in spaced relation to said plug receiving end of said cylinder, said gauge plate being provided with circumferentially spaced openings having their respective axes substantially parallel to the longitudinal axis of said cylinder and in alignment with said spaced threaded flange openings, threaded fastener elements extended through said gauge plate openings and threaded into said first openings aligned therewith for effecting adjustment of said gauge plate relatively to said flange, said gauge plate being provided with a circular opening co-axial with said cylinder and whose diameter is less than that of the bore in said cylinder, a cylindrical cutter axially aligned with the said cylinder projecting through said last opening and having cutting and non-cutting ends with the latter projecting into said receiving end of the cylinder, and an axially split collar having a bore freely receiving said cutter, a base normal to the axis of said bore seating on said gauge plate and an outer frusto-conical wall concentrically projecting into the plug receiving end of the cylinder engaged with said chamfered seat around the inner rim of the cylinder bore, whereby upon adjustment of said gauge plate toward said flange by said threaded fastener elements the wall of said bore in said collar frictionally grips the outer wall of said cutter for retaining same in any axially adjusted position therein.

2,899,232
BOTTLE CHUCK
Andrew Judson Walter, Jr., Hackensack, N.J., assignor to The Kraissl Company, Inc., Hackensack, N.J., a corporation of New Jersey
Application December 28, 1956, Serial No. 631,291
4 Claims. (Cl. 294—65)



1. A bottle chuck comprising a hollow cylindrical body having an upper and a lower end, said cylindrical body being vertical, the upper end of said body being closed and having an opening for the application of vacuum, the lower end being open and having a horizontally located annular internal recess having a lower surface for supporting jaws, a plurality of vertically-disposed jaws within the lower end of said body and arranged in a hollow circle in a horizontal plane, said jaws having upper and lower parts, the upper part of said jaws having outwardly extending fulcrums relative to the hollow of said body, means for holding said fulcrums in said recess, the lower part of said jaws having inwardly extending projections relative to the hollow of said body and being adapted to grip the neck of a bottle, a piston in said body, a piston rod secured to and extending downwardly from the under side of said piston, a clamp having upper and lower ends and located within said body below said piston and extending into the hollow circle within said jaws, cam surfaces adjacent to the lower end of said clamp in a horizontal plane opposite said fulcrums, complementary cam surfaces on the inside of and at the upper end of said jaws extending over the cam surfaces of said clamp, said clamp having a central vertical bore through which said rod passes, an enlargement in the lower part of said bore forming a shoulder, an enlargement on the lower end of said rod adapted to engage said shoulder and lift said clamp on upper movement of said rod, the side of said body having at least one hole so located that it is below said piston at its uppermost position and above said piston at its lowermost position, whereby the application of vacuum when said piston is at its lowermost position will draw air through said hole and will not cause said jaws to close about the neck of a bottle.

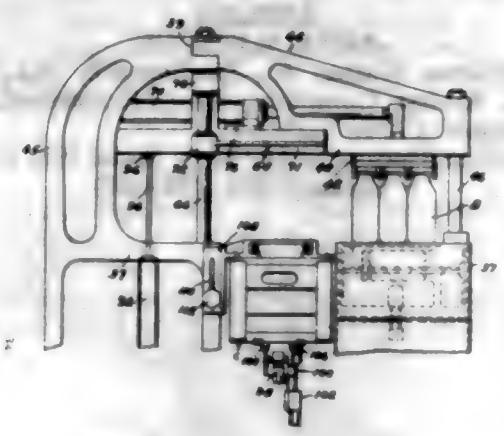
2,899,233
BOTTLE PACKAGING MACHINE
Joseph F. Celia, Bronxville, N.Y., and Paul Gemcis, Royal Oak, Mich., assignors, by direct and mesne assignments, to Celia Machinery, Inc., New York, N.Y., a corporation of New York
Application March 19, 1954, Serial No. 417,448
10 Claims. (Cl. 294—87.2)

1. In a bottle carrier for transferring a plurality of bottles into a crate, a pair of coacting bottle gripping bars supported upon the carrier for movement in a common plane toward and away from each other, the opposed faces of said bars provided at spaced intervals

near the plane of the upper ends of the columns so as to

line thereof frictionally retained between said felt and

with bottle receiving recesses, the walls of opposed recesses being shaped such that when the bars are moved toward each other and into gripping engagement with the neck of a bottle disposed between the bars the lip of the mouth of the bottle is spaced from the walls with a lower portion of the walls in gripping



contact with the neck of the bottle, and the bars being movable away from each other a distance sufficient to permit a bottle disposed opposite a pair of opposed recesses to move linearly between the bars to a position opposite another pair of recesses.

2,899,234

DEVICE FOR HANDLING AND TRANSPORTING A PLURALITY OF ELEMENTS

William Bornemann, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Application October 29, 1956, Serial No. 618,764
5 Claims. (Cl. 294—115)

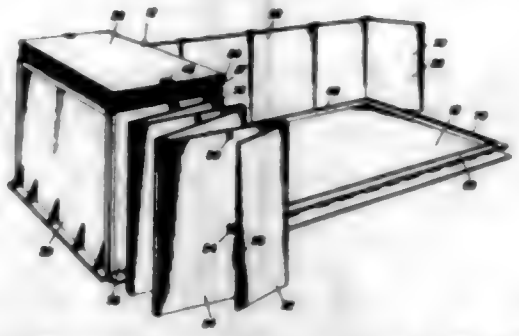
1. A device for handling and transporting a plurality of thin, discrete elements having a noncircular aperture adjacent one edge thereof, said noncircular aperture being elongated in a direction parallel to said one edge, said device comprising a carrier member, a relatively long and hollow member secured at one end to said carrier member and formed congruous in cross-section throughout its length to said elongated noncircular aperture for insertion therein to receive a plurality of elements in stacked relation, retaining members pivotally mounted within said hollow member adjacent the other end thereof for movement between a normally operative position and an inoperative position in a plane parallel to said one edge and normal to the plane of said element when said hollow member is positioned with respect to said elements for movement through said apertures thereof, each of said retaining members including an actuating arm and a support arm having a surface thereof extending beyond and normal to said hollow member in said operative position for engaging the surface of one of said elements on opposite sides of said aperture in the elongated direction to retain a plurality of said elements on said hollow member, actuating means including an actuating member slidably mounted within said hollow member and substantially coextensive therewith and an operating member secured to one end of said actuating member and movable with respect to said carrier member, said actuating member being provided at the other end thereof with a reduced portion having notches on opposed sides thereof for engaging said actuating arms and movable by said operating member for pivoting said retaining members simultaneously and completely within said hollow member to said operative position with said support arms adjacent said reduced portion for insertion and withdrawal of said hollow member with respect to the apertures in said plurality of elements, and spring means arranged within said carrier member and engaging said operating member for maintaining said actuating means in a position with respect to said hollow member whereby said retaining means are maintained in their normal operative position.

2,899,235

FOLDING VAN BODY

Robert L. Curtis and Arney L. Curtis, John Day, Oreg.

Application June 11, 1958, Serial No. 741,304
6 Claims. (Cl. 296—27)



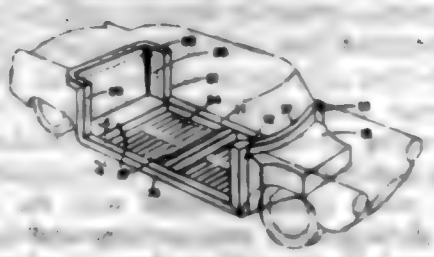
6. A folding enclosure for a truck or the like, said folding enclosure comprising sides for the bed of the truck, each side consisting of a plurality of panels, means hingedly connecting confronting edges of said panels, and means connected with the bed of the truck for clamping releasably the lower edges of said sides to hold the enclosure rigidly attached to the bed, said means clamping the lower panels of the sides including upstanding supports against which the lower edges of the side panels are adapted to engage, locking strips hingedly movable to a position contacting the outer surfaces of the lower parts of the panels of said sides and thereby forming an upwardly opening clamp for each side.

2,899,236

MOTOR VEHICLE CHASSIS AND SUSPENSION MEANS

David Hodkin, Dunstable, England, assignor to Engineering Research and Application Limited, a British company

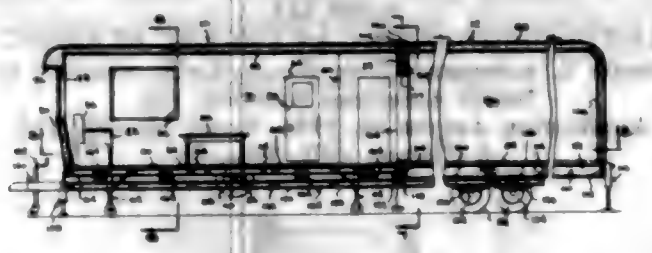
Application November 26, 1957, Serial No. 699,122
Claims priority, application Great Britain
November 30, 1956
5 Claims. (Cl. 296—28)



1. A motor-vehicle comprising a chassis, said chassis including longitudinal side elements of closed hollow cross-section, two upstanding column members of hollow closed cross-section connected to the forward ends of the side members, and a cross-member of closed hollow cross-section connected to the upper ends of the two upstanding columns, said cross-member being localised at and

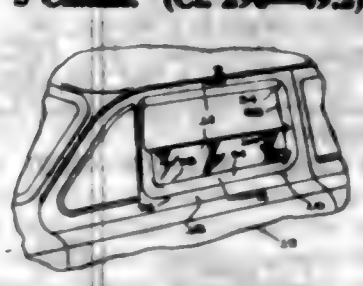
near the plane of the upper ends of the columns so as to form an arch structure through which the driver's legs can project, and front wheel suspension means including king posts, suspension links connected at their forward ends to the king posts and connected at their rear ends to said columns respectively, a box structure connected to the arch structure and extending forwardly thereof and adapted to receive the driver's feet, a supporting device connected to one of said structures at the lower part thereof and extending forwardly and suspension links disposed transversely of the vehicle and having their inner ends mounted pivotally on said supporting device and their outer ends pivotally connected to the lower ends of the king posts respectively.

2,899,237
DUAL PURPOSE HOUSE TRAILER HAVING SEPARABLY JOINED BODY SECTIONS
Max H. Nash, Lancaster, Calif.
Application November 8, 1957, Serial No. 695,453
7 Claims. (Cl. 296—35)



1. A trailer comprising: an elongated, rollable main frame; a hitch assembly removably mounted thereon; and an enclosed body supported upon the main frame, said body including a rear trailer body section mounted on one end portion of said main frame and a leading trailer section mounted on the other end portion of said main frame, said leading section being removable from the main frame and being adapted for use as a trailer independently of the rear section, said leading section including ground wheels and said hitch assembly being selectively connectable to each of the main frame and leading section, said sections when mounted upon the main frame being disposed in end-abutting relation and having communicating openings at their abutting ends.

2,899,238
VEHICLE WINDOW SEAL
Gosta Swanson, Hollis, N.H.
Application June 7, 1955, Serial No. 513,664
5 Claims. (Cl. 296—49.2)



1. A unitary weather seal for vehicle windows of the type comprising a channelled frame, a slotted felt in the channel of the frame and a glass slidable in said slot, said unitary seal comprising an elongated body of elastomeric, readily deformable, material of a length at least equal to the total length of the lower and side portions of said channel and mounted adjacent thereto; an outer side portion of said body, overlying the adjacent outer portion of said frame; attaching strip means of self supporting material, at least coextensive in length with, and firmly secured to the underface of, the outer side portion of said body, said strip means having a flange normal to the underface of said body along the longitudinal centre line thereof frictionally retained between said felt and the outer wall of said channel and a free, inner side portion of said body, terminating in a feather edge and of a width greater than the width of said channel, said inner side portion normally extending flatwise across said channel for covering, closing and sealing said channel when said glass is retracted, but being readily and progressively deformable, by said glass, out of the path of said glass into inclined sealing engagement therewith as said glass is advanced in said felt slot from fully retracted to fully advanced position.

2,899,239
DEMOUNTABLE RIM FOR VEHICLE TIRES
Felix Costa de la Fler, Havana, Cuba
Application September 30, 1957, Serial No. 687,197
1 Claim. (Cl. 301—31)

In a vehicle wheel, a demountable rim including a generally circular body formed with a rim flange, a plurality of arcuate rim sections cooperating to form a continuous, annular rim member, said sections including rim flanges complementary to that of said body, and means for detachably connecting the several rim sections to the body, said body and rim sections having planiform portions in face-to-face contact at the location of the connections of the sections to the body, said connecting means comprising studs rigid with and projecting forwardly from the body in positions angularly spaced circumferentially of the body, lugs on the rim sections adjacent the studs, and nuts threadable on the studs and bearing against the lugs to force the rim sections toward said body, said lugs being arranged in pairs with each stud extending between the lugs of a pair, each nut bearing against both lugs of a pair, said lugs projecting radially inwardly from the rim flanges of the sections, said wheel further including a hub cap engageable with the lugs, said hub cap including angularly spaced tongues each of which engages a pair of lugs, the lugs having on their inner ends cam surfaces biasing the tongues inwardly on mounting of the hub cap and adapted to extend as overhangs holding the tongues after biasing the same inwardly, thus to maintain the hub cap in position upon the wheel.

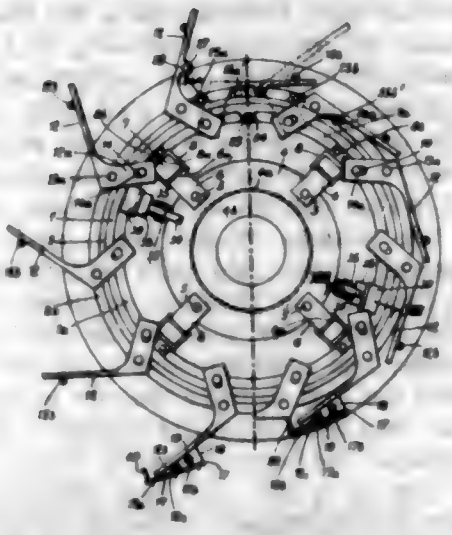
2,899,240
WHEEL TRIM ATTACHMENT
William A. Mathers, Detroit, Mich., assignor to Gar Wood Industries, Inc., Wayne, Mich., a corporation of Michigan
Application June 10, 1957, Serial No. 664,541
4 Claims. (Cl. 301—37)

1. In a wheel assembly including an automobile wheel having a body portion provided with a generally radially and axially outwardly facing flange, a series of bumps extending radially outwardly at the axially outer end of said flange for snap spring retention of a hub cap, a hub cap having a peripheral bead seated between said

bumps and said flange, and a trim assembly supported on the face of said wheel, the improvement comprising an annular trim retaining member including a radial flange

seated behind the hub cap bead and firmly wedged thereby against said flange, said member also including an axially outwardly projecting flange shaped for snap spring engagement by the trim assembly for securely mounting the trim assembly and supporting it on the face of said wheel.

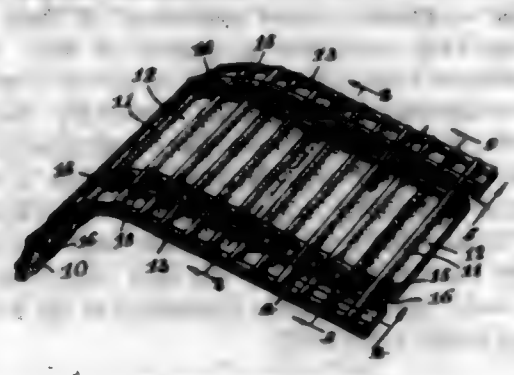
2,899,241
TRACTION INCREASING DEVICE FOR VEHICLE WHEELS
Louis Colin, Quimper, France
Application February 27, 1957, Serial No. 642,702
Claims priority, application France March 1, 1956
4 Claims. (Cl. 301—47)



1. A device for increasing the grip of the wheels of tractors and other automotive vehicles, comprising a fixed ring adapted to be secured to the vehicle wheel, a movable ring rotatably mounted on the peripheral surface of said fixed ring, traction teeth pivotally mounted on said movable ring, control means on said fixed ring and engaging said traction teeth to swing said teeth on their pivots upon rotation of said movable ring about said fixed ring, a ground engaging shoe hingedly and detachably mounted on each of said teeth, spikes on the ground-engaging face of said shoe and a resilient plug inserted between said shoe and its respective tooth.

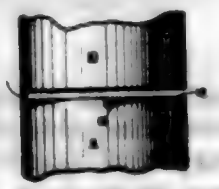
2,899,242
ENDLESS TREAD FOR MOTOR DRIVEN VEHICLES
Germain Bombardier, Valcourt, Quebec, Canada
Application July 28, 1958, Serial No. 751,534
5 Claims. (Cl. 305—10)

1. An endless belt made of rubber or the like material and in the form of a substantially flat strip, spaced reinforcing rods extending transversely of the belt within the body thereof, said belt having at least two longitudinal rows of spaced sprocket teeth receiving open-



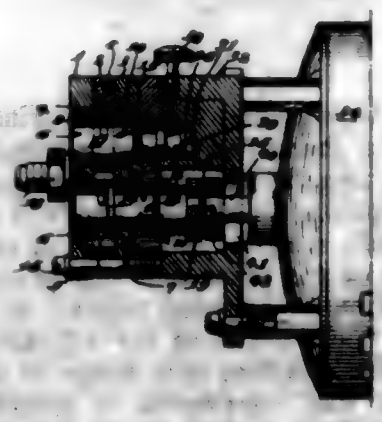
ings extending completely through said belt and disposed between said rods, said belt having a sprocket wheel engaging face which is flat and a ground engaging face which is corrugated.

2,899,243
AUTOLUBRICATED GAS THRUST BEARING
Joseph S. Acterman, Long Beach, Calif., assignor to North American Aviation, Inc.
Application August 30, 1956, Serial No. 607,220
6 Claims. (Cl. 308—9)



1. A gas lubricated thrust bearing comprising a first bearing surface, a second bearing surface in juxtaposed spaced relation to said first bearing surface and having a continuous series of alternating inclined sectors and surface sectors, said last-mentioned sectors being parallel to said first bearing surface, the inclined sectors having an inclination from said surface sectors extending to a maximum depth of from 0.00006 to 0.001 inch, shoulder portions normal to said surface sectors extending from maximum depth back to a corresponding surface sector and a gaseous medium surrounding and in the space between said first and second bearing surfaces.

2,899,244
ROTARY SHAFT SEAL
Oliver Malech, Chicago, Ill.
Original application December 12, 1952, Serial No. 325,730, now Patent No. 2,764,100, dated September 25, 1956. Divided and this application August 1, 1956, Serial No. 601,395
6 Claims. (Cl. 308—36.2)



1. In combination, a pump casing having an opening through one wall, an oilless bearing fixed in said opening

2,899,248
HYDRAULIC PUMP

of end leaves hingedly connected thereto whereby said leaves may pivot upwardly with respect to said center

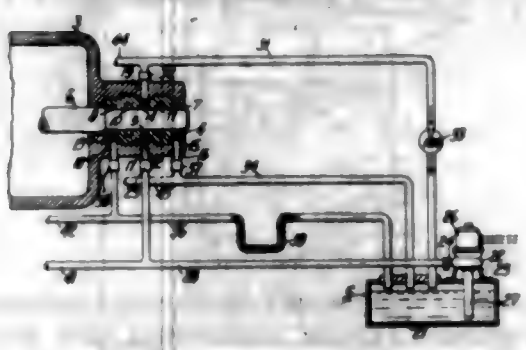
with opposed sides in the planes of the inner and outer surfaces, respectively, of said wall, a rotary pump shaft extending through said bearing, said shaft having thereon an annular shoulder bearing against the inner side of said bearing to form a seal, a cup surrounding the shaft on the outside of the casing and engaged at its bottom with the outer side of said bearing to form a second seal, a stop on the shaft outwardly from said cup, a closure for the open end of the cup including a packing ring within the cup and a loose tubular strut extending from the cup almost to the stop and a spring surrounding the strut and engaged at one end with the stop and acting on the strut to press the cup against said walls; whereby liquid leaking through said wall past the shaft may enter the cup between the bottom thereof and the packing and create a differential pressure tending to pull the shaft outwardly.

2,899,245

FLOODED BEARING SEAL FOR GAS-FILLED MACHINES

Robert G. Michel, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.

Application April 26, 1954, Serial No. 425,553
2 Claims. (Cl. 308—36.3)



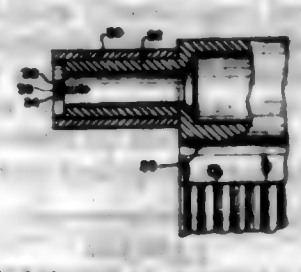
1. The combination with a machine provided with a housing adapted to be filled with a gas under pressure and a movable member within said housing having a shaft extending outwardly through said housing to atmosphere, of a lubricant system, said lubricant system comprising: a bearing mounted in gas tight relation to said housing and having said shaft journaled therein; the surface of said bearing engaging said shaft defining first and second annular grooves, said first groove surrounding said shaft at one end of said bearing and being exposed to atmosphere, said second groove surrounding said shaft at the other end of said bearing and being exposed to said pressurized gas in said housing; said surface of said bearing defining an annular passageway positioned intermediate said first and second annular grooves for directing lubricant into said bearing; said surface of said bearing defining at least one annular channel positioned intermediate said first and second grooves for receiving lubricant to provide a solid ring of lubricant surrounding said shaft; a reservoir; a pump arranged to draw lubricant from said reservoir; a first conduit connecting the outlet of said pump to said annular passageway to provide lubricant thereto; a second conduit connecting said bearing to said reservoir to return excess lubricant thereto; means connected to said second conduit for providing lubricant pressure in said bearing of a value greater than atmospheric pressure; a third conduit connecting said first groove to said reservoir to return lubricant that has passed axially along said shaft from said annular passageway to said first groove; a fourth conduit connecting said second groove to said reservoir to return lubricant that has passed axially along said shaft from said annular passageway to said second groove, said second groove being connected to said first groove through a second passageway including said fourth conduit, said reservoir and said third conduit, said lubricant in passing axially along said shaft from said annular passageway to said first and second grooves completely filling said annular channel therebetween with lubricant and further forming a moving lubricant film to form a seal between said bearing and said shaft, said lubricant absorbing a part of said gas in said housing attempting to leak through said seal; a trap interposed in said fourth conduit to prevent the remainder of said gas from passing to atmosphere, said trap comprising a U-shaped column of lubricant, the portion of said column of lubricant nearest said second groove being depressed by said gas pressure within said housing while preventing said remainder of said gas from passing into said reservoir.

2,899,246

SWING-JAW CRUSHERS

Lester R. Ferguson, Riveredge, N.J., assignor to Kennedy-Van Saun Mfg. & Eng. Corp., New York, N.Y., a corporation of Delaware

Application July 12, 1955, Serial No. 521,554
3 Claims. (Cl. 308—237)



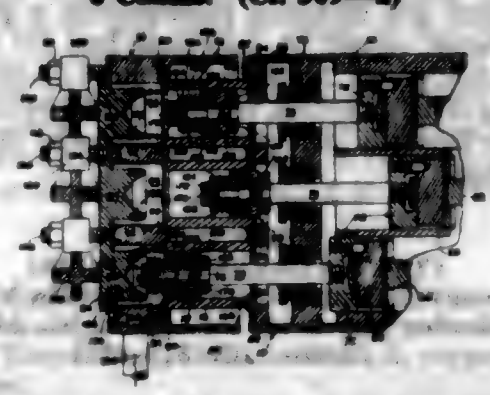
1. In a swing jaw for a swing-jaw crusher having a frame and in which the swing jaw is provided with a shaft engageable in a bearing for suspending the swing jaw in the crusher frame, a readily-replaceable bushing on said shaft engageable in said bearing, said bushing projecting beyond the end of the shaft on which it is mounted, a slot in the projecting end portion of the bushing, a bar engaging in said slot and extending onto and crosswise of the end of the shaft, and means for releasably securing said bar to the end of the shaft for retaining the bushing on the shaft and preventing relative rotation between the shaft and bushing, whereby the bushing is adapted to take the wear instead of the shaft and be readily replaceable when worn.

2,899,247

FEED WATER PUMP

Alick Clarkson, Paul Spur, Ariz., and William W. Parks, Chicago, Ill., assignors to Vapor Heating Corporation, Chicago, Ill., a corporation of Delaware

Application December 21, 1956, Serial No. 629,964
8 Claims. (Cl. 309—2)



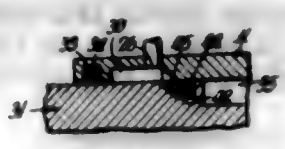
1. In combination with a pump cylinder and an axially reciprocating piston rod projecting into the cylinder, a piston assembly mounted on the free end of said piston rod and including a seating ring fixedly secured to the rod, a piston head having a sealed engagement with the inner wall of the cylinder and loosely disposed on said piston rod for limited lateral displacement thereon, and sealing means interposed between said seating ring and piston head.

doors both slidably mounted in each of the ceiling and floor guideways, one of the guideways being positioned

nal, the edge portions terminating in an inwardly turned flange extending perpendicular to the plane of the corre-

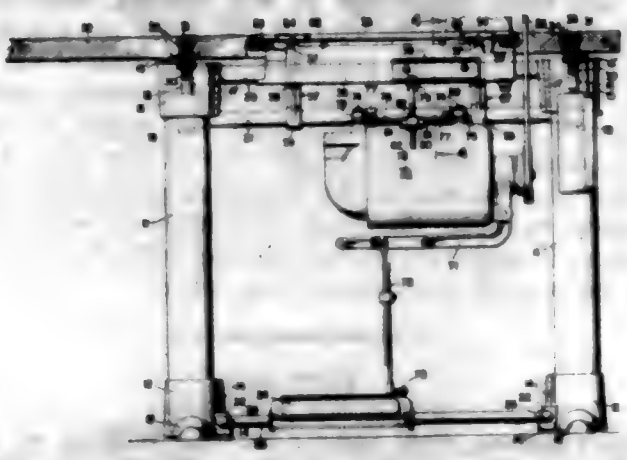
terial and in the form of a substantially flat strip, spaced through one wall, an oilless bearing fixed in said opening

2,899,248
HYDRAULIC PUMP
Jean Mercier, New York, N.Y.
Original application November 25, 1953, Serial No. 394,301, now Patent No. 2,817,955, dated December 31, 1958. Divided and this application December 30, 1957, Serial No. 705,936
1 Claim. (Cl. 309—23)



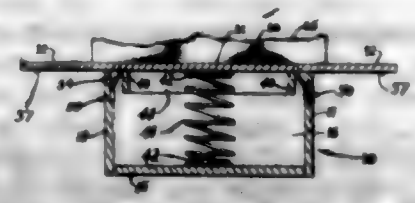
A pressure unit comprising a casing having a bore and a port leading into said bore, a piston slidably mounted in said casing, said piston having an annular groove in its periphery, said groove having a floor and side walls, a resilient seal ring in said annular groove, said piston having a passageway extending from the floor of said annular groove through the outer surface of said piston at a portion thereof longitudinally spaced from said annular groove, whereby when said piston is moved in said casing bore in direction first to bring the outer end of the passageway into communication with the port, the pressure on said seal ring will be relieved to prevent material extrusion thereof through said port.

2,899,249
SEWING MACHINE SUPPORTING STAND
Charles O. Kishbey, Trumbull, Conn., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Application May 21, 1958, Serial No. 736,790
11 Claims. (Cl. 311—12)



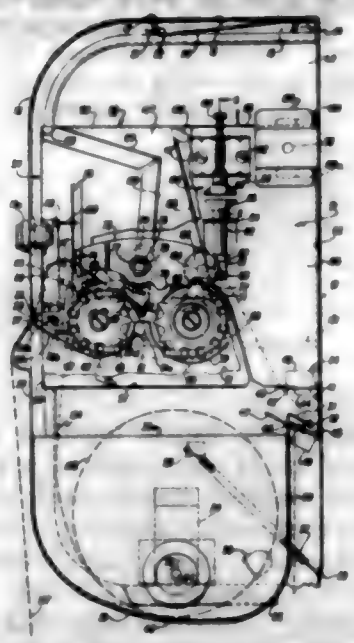
1. A supporting stand for a sewing machine, comprising a pair of upright leg members, a plurality of parallel substantially horizontal cross bars carried by said upright leg members and extending therebetween, a plurality of bracket means carried on said cross bars for supporting a sewing machine, a table top, and means carried on said supporting stand in spaced relation to said bracket means for supporting said table top independently of said sewing machine.

2,899,250
CONCEALABLE PLATFORM
Vennice E. Mark, East Grand Rapids, Mich.
Application March 11, 1957, Serial No. 645,236
3 Claims. (Cl. 312—21)



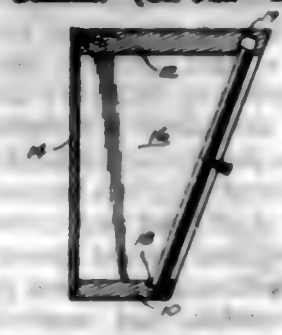
1. A combination work and storage unit, comprising: a hollow housing open at the top for defining a storage chamber; a platform having a center portion and a pair of end leaves hingedly connected thereto whereby said leaves may pivot upwardly with respect to said center portion; said platform when said leaves are folded upwardly being of a size to vertically telescope into said storage chamber; a plurality of latches each having a keeper portion and a pocket portion, one of said portions of each of said latches being on said housing and the other on said platform; each of said keeper portions being resiliently biased to engage said pocket portions when said platform is raised to the top of said housing; said platform in said raised position being adapted to rest upon said latches and the sides of said housing and in lowered position to be entirely received within said housing; arms on said leaves disposed to engage said keeper portions and retract them to platform releasing position as said leaves are folded upwardly.

2,899,251
TOWEL DISPENSING CABINETS
Rudolph G. Birr, Lombard, Ill., assignor to American Linen Supply Co., Chicago, Ill., a corporation of Nevada
Application November 27, 1953, Serial No. 394,528
23 Claims. (Cl. 312—38)



1. In a dispensing mechanism, first and second rolls, a pivoted lever, a first stop formed at one end of said lever, a cam surface formed at the other end of said lever, a second stop member carried by said first roll, a cam member carried by said second roll, means for simultaneously rotating said first and said second rolls during each dispensing operation, said cam member contacting said cam surface in response to rotation of said second roll through a fixed angle to actuate said pivoted lever to move said first stop into a position to engage said second stop and terminate said simultaneous rotation of said first and second rolls.

2,899,252
CABINET WITH SLIDING FLUSH DOORS
Charles Addison Rolfe, Longview, Wash.
Application January 18, 1957, Serial No. 634,907
3 Claims. (Cl. 312—138)



1. A cabinet including a ceiling and floor, a transverse guideway in each of the ceiling and floor, and a pair of

tomeric element having a longitudinally extending groove

means responsive to a change of said applied signal from

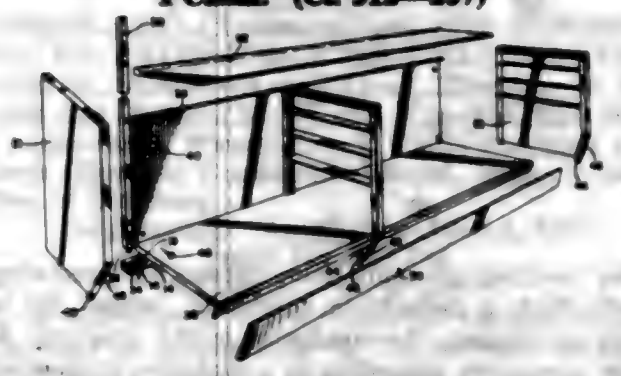
doors both slidably mounted in each of the ceiling and floor guideways, one of the guideways being positioned outwardly of the other guideway whereby the doors gravitationally rest in an inclined plane, the guideway in the floor having a door supporting surface extending substantially perpendicular to the inclined plane of the doors, the doors having an open overlapped position wherein one door is offset in a different plane from the other door and having a closed position wherein the doors are in side-by-side flush relation, the one door moving from its open offset position to its closed flush position by gravitational forces resulting from the inclined disposition thereof.

2,899,253

DOMESTIC APPLIANCE

James W. Jacobs, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application September 29, 1955, Serial No. 537,473
1 Claim. (Cl. 312—257)



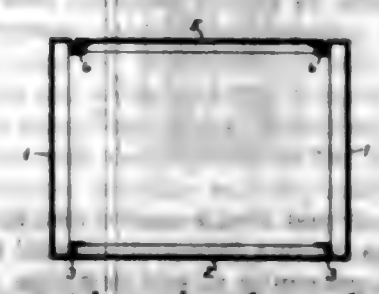
In a cabinet construction for mounting on a kitchen floor or the like, a horizontal support element adapted to be mounted on said floor adjacent the rear edge of said cabinet construction and having a slot in its upper surface, means for adjustably supporting said horizontal support element in a predetermined position relative to said floor, vertical support means having a tongue extending into said slot in said horizontal support element, a skeleton frame comprising a plurality of end panels having their rear edges secured to said vertical support means and each including means for individually adjustably supporting the forward edges of said frame elements so as to maintain said skeleton frame in a level position, means forming a work surface element resting on said skeleton frame, and means for securing said work surface element to said skeleton frame in a predetermined relationship to said vertical support means.

2,899,254

SHEET METAL SWITCH PANEL ENCLOSURE

John Alexander Latzko, Baden, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie., Baden, Switzerland

Application December 30, 1955, Serial No. 556,740
Claims priority, application Australia January 5, 1955
3 Claims. (Cl. 312—257)



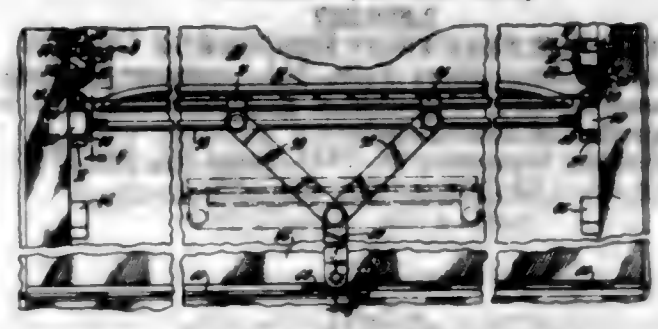
1. A sheet metal panel enclosure for high and low voltage installations, the walls of said enclosure consisting only of a pair of parallel spaced rectangular trough-like side plates of sheet metal having all four edge portions thereof bent to establish a peripheral channel, the edge portions terminating in an inwardly turned flange extending perpendicular to the plane of the corresponding sheet metal plate, top and bottom non-channeled plates of sheet metal secured to the inner faces of said inwardly turned flanges at the top and bottom of said side plates, the edge portions of said top and bottom plates being offset transversely inwardly to establish a flush outer surface between said plates and said flanges, and front and rear sheet metal closure plates extending between and secured to the channel portions along the sides of said side plates.

2,899,255

RANGE WITH PULL-OUT SHELF

Jesse L. Evans, Tipp City, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application November 17, 1955, Serial No. 547,403
2 Claims. (Cl. 312—274)



1. An enclosure including walls enclosing a compartment and having a door opening, a shelf within the compartment, shelf guide means at two different levels connected to said walls for movably mounting said shelf for lateral movement at two different levels in and from said compartment out said door opening and return, double doors for closing said door opening, a horizontally movable traveler outside said walls below and separate from said shelf, a horizontal guide means outside said walls for guiding said traveler horizontally along the outside of one of said walls, links connecting each of said doors with said traveler, a flange extending outwardly from said one wall adjacent said door opening, said flange having an aperture therein, a horizontal rod extending through said aperture and provided adjacent one end with a rotatable detachable connection with said traveler, said rod extending within and substantially parallel to said horizontal guide means, the opposite end of said rod being provided with a radially extending rigid arm in front of said flange extending into said door opening, a second set of links each connected adjacent an end portion to the end portion of said arm and provided at the opposite end portion with a detachable connection with the front of said shelf at either of said levels, the opposite end portions of said second links being normally spread apart, said arm and second links normally extending in the shape of a Y between the rod and the shelf, said arm and rod being rotatable in opposite directions to detach or attach said rod from or to said traveler.

2,899,256

REFRIGERATING APPARATUS

Curtis P. Kelley, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application August 21, 1956, Serial No. 605,335
1 Claim. (Cl. 312—296)

In a refrigerator, a cabinet having an access opening, a door for closing said opening, means for sealing the junction between said door and said cabinet, said means including interlocking portions carried by said cabinet and said door respectively, one of said interlocking portions comprising an elastomeric element having a longitudinally extending groove which is narrowest at its inlet and the other of said portions comprising an elas-

tomeric element having a longitudinally extending groove which is narrowest at its entrance and a substantially U-shaped metallic blade spring having the arms thereof curved and interlocked within said last named groove

and having the bight portion thereof arranged to extend into said first named groove, said bight portion of the U-shaped spring being wider than the width of said first named groove at the entrance of the first named groove.

2,899,257

GETTER FOR ELECTRON DISCHARGE DEVICE

Ernest A. Lederer, Essex Fells, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application September 26, 1955, Serial No. 536,377
12 Claims. (Cl. 316—25)

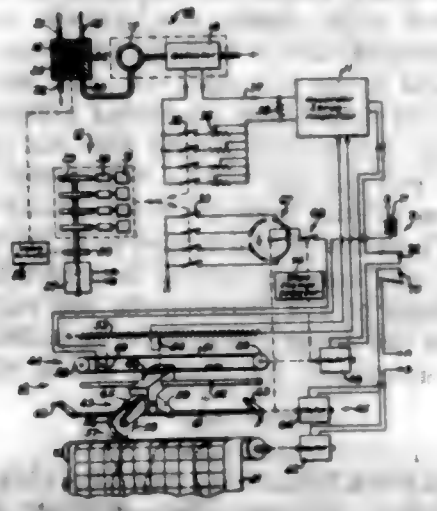
1. A gas cleanup device comprising a porous refractory body, said body being impregnated with a material which liberates a chemically active substance upon heating said body being inert with respect to said chemically active substance.

2,899,258

TREND RECORDER

Stanford Bruce Sprachlen, Fullerton, Calif., assignor to Beckman Instruments, Inc., a corporation of California

Application September 8, 1958, Serial No. 759,465
18 Claims. (Cl. 346—34)



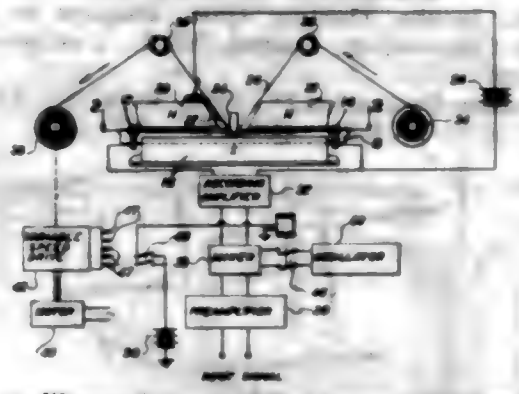
1. In a signal recording system, the combination of: analyzer means for determining components of a sample; means for cyclically introducing a sample into said analyzer means, said analyzer means generating upon each cyclical introduction a train of signal peaks providing a measure respectively of different components in said sample; signal recorder means including a chart, chart driving means, a chart marker, marker driving means responsive to a signal applied to said recorder means for displacing said marker laterally with respect to said chart as a function of said signal, and means for actuating said marker for registering a mark on said chart; sensing means responsive to a change of said applied signal from positive slope to negative slope; means for sequentially applying said component signal peaks to said recorder means; and means responsive to said sensing means for operating said marker actuating means upon occurrence of said change of slope, whereby said recorder means records the trend of maximum values of said component signal peaks.

2,899,259

OSCILLOGRAPH APPARATUS

Herbert I. Chambers, Pasadena, Calif., assignor to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California

Application June 25, 1956, Serial No. 593,671
2 Claims. (Cl. 346—69)



1. An oscillograph comprising means for producing a magnetic field, a deflectable conductor, means for supportably positioning the conductor in the magnetic field with the conductor extending in a direction transverse to the direction of the magnetic field, an elongated strip of flexible recording medium, means for moving the strip past the conductor, a portion of the conductor being in rubbing contact with the strip, means for imprinting the strip on contact therewith by the conductor, means for passing current through the conductor in response to an input signal, an oscillator having a frequency higher than the normal operating range of the oscillograph, and means for coupling the output of the oscillator across the conductor, whereby the conductor is caused to vibrate continuously at the frequency of the oscillator.

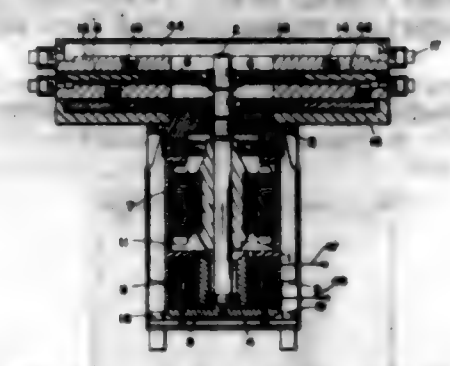
2,899,260

MAGNETIC DISC RECORDER

William A. Farrand, Downey, Spencer G. Johnston, Los Angeles, Lester L. Kilpatrick, Downey, and John P. Lekas, Hollywood, Calif., assignors to North American Aviation, Inc.

Application March 1, 1954, Serial No. 413,315
17 Claims. (Cl. 346—74)

1. In a magnetic recorder, a first disc having a plurality of troughs disposed in and distributed over a major portion of one face of said disc, a second disc having a magnetizable medium on one face and adapted to assume a position in close proximity to said first disc, at least one magnetic head disposed in said first disc, and means for rotating one of said discs relative to the other at a predetermined speed to develop a self-lubricated viscous shear gas bearing between said discs over a major portion of said one disc.



edge portions thereof bent to establish a peripheral channel and the other of said portions comprising an elas-

CHEMICAL

2,899,261
OXIDATION-INGRAIN COLOR EMULSIONS
Albert Voorhees, Somerville, and Edward F. Scott, New Brunswick, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Application May 28, 1957
Serial No. 661,994
16 Claims. (Cl. 8—62)

1. A stable printing composition comprising an oil-in-water emulsion having a non-alkaline pH containing an aniline salt, alkali metal chlorate, a water-soluble salt of a metal capable of existing in two valences acting as an oxygen carrier, a water-soluble lignin sulfonate and a bodying material selected from the group of galactans and polyacrylamide.

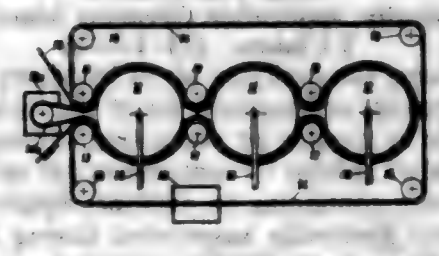
2,899,262
METHOD AND COMPOSITION FOR RENDERING POLYACRYLONITRILE READILY DYEABLE
George W. Stanton, Walnut Creek, Theodore B. Lefferdink and Richard W. Mellkle, Concord, and Mary J. Charlesworth, Walnut Creek, Calif., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Application April 6, 1953
Serial No. 347,144
4 Claims. (Cl. 8—100)

1. In a process in which a polymer containing at least 85 percent of acrylonitrile in the polymer molecule is spun from an aqueous saline solution thereof into an aqueous coagulant, the spun product is stretched to an extent sufficient to yield a dried product having a yield point of at least 0.8 gram per denier, and the stretched product is substantially freed from saline constituents and dried to destroy the aquagel condition, the improvement which consists in: applying to the product while still in the aquagel condition at least 1.0 percent of its dry weight of a water-soluble salt of an N-carboxyalkyl derivative of a polyethylene amine having a molecular weight of at least 200, drying the so-treated product irreversibly, and thereafter dyeing the product.

2,899,263
PROCESS OF APPLYING DIMETHYLOL ETHYLENEUREA, PROPYLENEUREAS AND BUTYLENEUREAS TO CELLULOSE AND REGENERATED CELLULOSE FABRICS AND MECHANICALLY FINISHING THE FABRICS
Albert C. Nuessle, Hatboro, and Peter J. McKone, Jr., Philadelphia, Pa., assignors, by mesne assignments, to Joseph Bancroft & Sons Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application July 1, 1950
Serial No. 171,752
2 Claims. (Cl. 8—116.3)

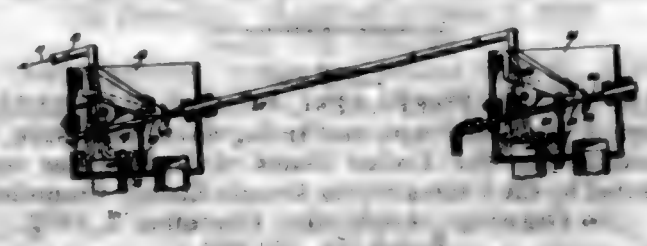
1. In the art of imparting a durable finish to fabric selected from the group consisting of cellulose fabrics and regenerated cellulose fabrics by applying a solution of an impregnant thereto and heating the impregnated fabric, the steps of impregnating said fabric with an acidic catalyst and an impregnant comprising a dimethylol derivative in solution in water, said dimethylol derivative being reactive with the cellulose of the fabric to produce a water insoluble reaction product under the conditions of heating, and then imparting a mechanical finish to the impregnated fabric by passing the impregnated fabric through the nip of the rolls of a pressure calender, the dimethylol derivative impregnant being selected from the class consisting of dimethylol ethyleneurea, dimethylol 1,2-propyleneurea, dimethylol 1,3-propyleneurea, dimethylol 1,3-butyleneurea, dimethylol 2,3-butyleneurea, and the quantity thereof applied to the fabric being from .5 to 50% of the weight of the bone dry fabric, the impregnated and mechanically finished fabric being heated to a temperature between 180° F. and 400° F. for a time sufficient to effect reaction between the dimethylol derivative impregnant and the cellulose of the fabric, and said dimethylol derivative impregnant being incapable of polymerization to a water insoluble state even at the temperature of said heating and the mechanical finishing being effected while the fabric contains from 4% to 70% of water calculated on the weight of the bone dry fabric to thereby reduce formation and accumulation of water insoluble deposits of impregnant on the surfaces of the mechanical finishing rolls.

2,899,264
PRINTING OF FABRICS
Jack Griffiths, Manchester, and William Gordon Harland, Wilmslow, England, assignors to The British Cotton Industry Research Association, Manchester, England, a British association
Application August 2, 1957, Serial No. 676,801
12 Claims. (Cl. 8—148)



6. In apparatus for heat treating a web of material to fix a dyestuff thereon: an array of internally heated rotatable cylinders in non-contacting adjacence with their axes parallel, an endless flexible band of fluid-tight material wider than the web to be treated and extending sinuously and progressively from one cylinder to the next and around a substantial peripheral area of each, means for guiding said band along a return lap out of contact with said cylinders, a second endless flexible band extending around said cylinders beneath said first-named band, means for guiding said second band along a separate return lap, means for introducing the web to be treated into the space between said bands where they come together and guiding the web away where the bands separate, and means disposed along said return laps for cleaning said bands respectively.

2,899,265
SPINNING TUBE
Ernest J. Griest, Jr., Asheville, N.C., assignor to American Enka Corporation, Enka, N.C., a corporation of Delaware
Application February 20, 1953, Serial No. 337,929
10 Claims. (Cl. 8—151.2)



7. In a process for the liquid treatment of continuous thread, the steps of propelling the thread by a flowing liquid around two bends in the same plane in the exit end of a treating tube, the bend around which the thread first passes being of greater than 90°, to thereby contact the thread with the exit end of said tube and then

withdrawing the thread from said tube in a path divergent to the downward path of said liquid wherein a substantially improved separation is obtained.

2,899,266
METHOD FOR COLD STERILIZATION USING BACTERICIDAL GASES
Rudolf Gewalt and Erich Stein, Weinheim, Germany
Application March 25, 1957, Serial No. 648,407
Claims priority, application Germany March 26, 1956
4 Claims. (Cl. 21—58)

1. In the method of sterilizing with bactericidal gases selected from the class consisting of alkylene oxides and alkylene imides, the improvement by which the sterilizing is carried out at a temperature of from about 20 to 60° C., under a pressure of from about 3 to 6 atmospheres, with a gas mixture in which the bactericidal gas is mixed with more than 9 and up to 25 parts of indifferent gas.

2,899,267
PROCESS FOR PURIFYING AIR
Franz Berndt, Kassel-B., and Hans-Georg Wendlandt, Kassel, Germany, assignors to Splittgaber Aktiengesellschaft, Kassel-Bettenhausen, Germany
No Drawing. Application March 23, 1956
Serial No. 573,341
Claims priority, application Germany March 24, 1955
2 Claims. (Cl. 23—4)

1. A process for purifying air of hydrogen sulfide comprising removing substantially all of the hydrogen sulfide from the air by passing air containing hydrogen sulfide at a flow speed of at least 30 centimeters per second through a gas scrubber containing an alkaline, aqueous, 2–5% by weight ferric hydroxide suspension having an alkalinity equivalent to more than 0.2% sodium carbonate, with a gas residence time in said scrubber of at least five seconds, the ferric hydroxide being present in said scrubber in an amount sufficient to make available for reaction with the hydrogen sulfide at least 20 moles ferric hydroxide per mol of hydrogen sulfide in said scrubber.

2,899,268
RECOVERY OF URANIUM FROM AQUEOUS PHOSPHATE-CONTAINING SOLUTIONS
Iver Igelsrud and Elmer F. Stephan, Columbus, Ohio, assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application March 5, 1952
Serial No. 275,828
16 Claims. (Cl. 23—14.5)

1. A process of recovering uranium from aqueous mineral acid solutions containing said uranium in the hexavalent state and phosphate anions, comprising adding a mixture of amines of cocoanut oil acids to said solution whereby the uranium is precipitated, separating the precipitate from said solution, and washing the precipitate with an aqueous solution selected from the group consisting of sodium carbonate solution, sodium hydroxide solution and hydrochloric acid solution whereby the uranium is eluted and the amine regenerated for reuse.

2,899,269
METHOD OF PREPARING METAL FLUORIDES
Joseph J. Katz, Chicago, and Irving Sheft, Oak Park, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application December 1, 1952
Serial No. 323,514
7 Claims. (Cl. 23—14.5)

1. The method of producing a non-volatile fluoride of a zirconium-type metal of the group consisting of zirconium, hafnium, thorium, neptunium and plutonium which comprises treating a mixture of an oxide of said zirconium-type element and an oxide of a molybdenum-type element of the group consisting of molybdenum, tungsten and uranium, with bromine trifluoride.

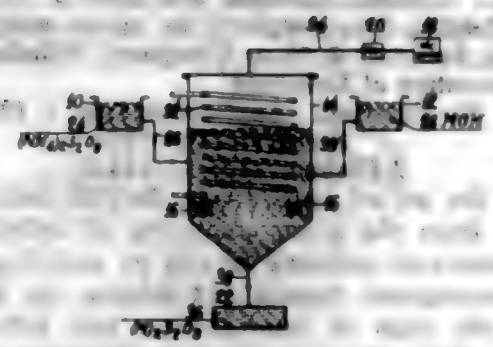
2,899,270
PRODUCTION OF THORIUM FLUORIDE
William H. Zachariasen, Chicago, Ill., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application November 25, 1952
Serial No. 322,551
1 Claim. (Cl. 23—14.5)

A process of producing anhydrous thorium fluoride comprising the step of contacting a saturated aqueous solution of thorium nitrate with an aqueous solution consisting of hydrofluoric acid and water and having a concentration of approximately 45 to 50% by weight of hydrogen fluoride at a temperature above 70° C. whereby anhydrous thorium fluoride precipitates.

2,899,271
PROCESS FOR THE MANUFACTURE OF PHOSPHATIC FERTILIZERS
Robert Michè, Chateau, France, assignor to Comptoir des Phosphates de l'Afrique du Nord, Paris, France, a corporation of the French Isve
No Drawing. Application February 8, 1955
Serial No. 486,981
Claims priority, application France February 11, 1954
3 Claims. (Cl. 23—109)

1. In a process for the manufacture of dicalcium phosphate from natural phosphate in which the natural phosphate is treated with a cold aqueous solution of SO_2 under pressure, followed by separation of the resulting phosphate solution from insoluble material, the improvement which comprises adding dicalcium phosphate to the phosphate solution in an amount sufficient to raise the P_2O_5/CaO ratio in the phosphate solution to a value equal to that of dicalcium phosphate, about 1.27, by the precipitation of calcium sulphite from the solution, separating the precipitated calcium sulphite from the solution, heating the solution to liberate SO_2 and thereby to precipitate dicalcium phosphate and recovering the precipitated dicalcium phosphate.

2,899,272
PRODUCTION OF PERSULFATES
Donald O. Finch, Williamsville, and Reed E. Garver, Snyder, N.Y., assignors to Food Machinery and Chemical Corporation, San Jose, Calif.
Application November 4, 1957, Serial No. 694,336
7 Claims. (Cl. 23—114)



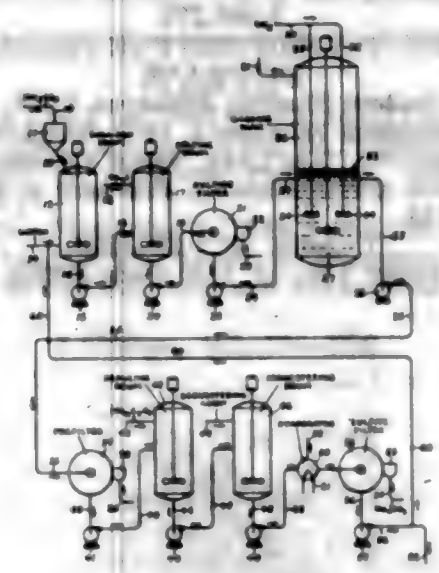
1. In the production of a metal persulfate from the group consisting of the persulfates of sodium, potassium, barium, lithium, strontium, rubidium and cesium, by reaction in an aqueous solution of ammonium persulfate and a hydroxide of said metal, the improvement which comprises mixing said ammonium persulfate and said hydroxide together in substantially stoichiometric proportions, at a temperature of about 0° to 45° C. and at a pressure of about 5 to 90 mm. of mercury absolute, whereby said ammonium persulfate and said hydroxide

2,899,277
RECOVERY OF AMMONIA FROM

said process comprising passing said stream through an

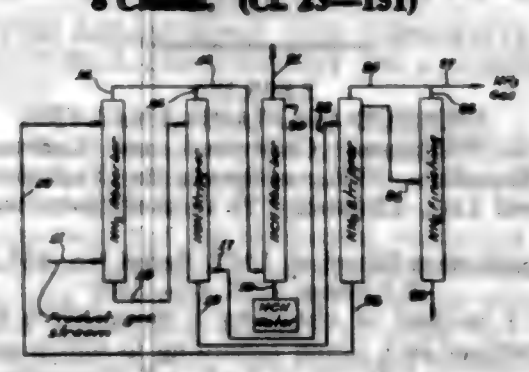
are caused to react to form a reaction mixture containing ammonia, water and said metal persulfate, and said metal persulfate is crystallized out from said reaction mixture as a solid, and said ammonia and water are removed from the reaction mixture as vapors.

2,899,273
PROCESS FOR THE MANUFACTURE OF ANHYDROUS, HEAVY METAL-FREE SULFITES
Cornelius M. Murphy, New York, N.Y., assignor to Allied Chemical Corporation, a corporation of New York
Application November 24, 1954, Serial No. 470,969
9 Claims. (Cl. 23—129)



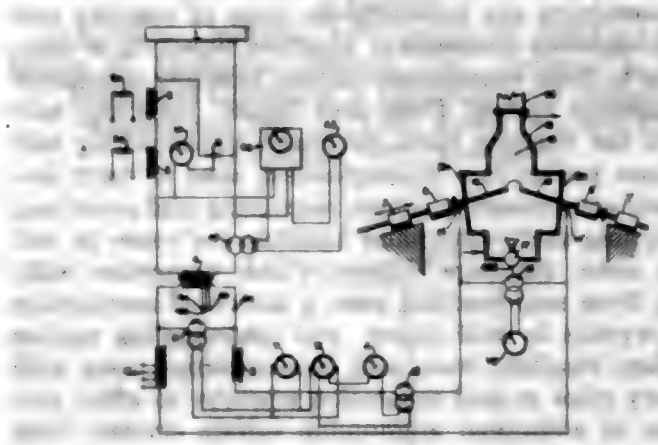
1. In the process of manufacture of heavy metal-free, anhydrous sodium sulfite from sodium carbonate wherein a major portion of heavy metal impurities are removed from sodium carbonate solution by precipitation as insoluble sulfides, said solution being gassed with sulfur dioxide to form sodium sulfite solution from which anhydrous sodium sulfite is crystallized, the improvement which comprises adding to said solution before crystallization of sodium sulfite a reducing agent in amount sufficient to reduce residual heavy metal impurities to lower states of oxidation, and adding a metal salt of ethylene diamine tetra-acetic acid in amount sufficient to sequester residual heavy metal impurities in said solution, whereby said crystallized anhydrous sodium sulfite is snow-white and heavy metal-free.

2,899,274
RECOVERY OF AMMONIA AND HYDROGEN CYANIDE FROM GASEOUS MIXTURES
Raymond A. Smith and Holmes H. McClure, Lake Jackson, and George C. Reed, Freeport, Tex., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Application December 31, 1956, Serial No. 631,579
8 Claims. (Cl. 23—151)



1. In a process for separating and recovering ammonia and HCN from a gaseous mixture containing the same, the steps which comprise contacting a stream of said gaseous mixture with an acidic solution containing essentially a saturated fatty acid containing from two to three carbon atoms, water and the ammonium salt of said fatty acid, the amount of said acid being in stoichiometric excess based on the ammonia in the gas stream, stripping all of the HCN from the acidic solution under conditions which will not crack the ammonium salt of said acid, such conditions comprising a temperature not exceeding about 100° C. and a pressure at least equal to about atmospheric pressure, and subjecting the acidic solution to such conditions of temperature and pressure as will crack the ammonium salt and thus recover the ammonia therefrom.

2,899,275
MANUFACTURE OF HYDROCYANIC ACID
Claude Michel Cherrier, St-Maude, France, assignor to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint-Gobain, Chauny & Cirey, Paris, France
Application July 9, 1957, Serial No. 670,725
Claims priority, application France July 31, 1956
7 Claims. (Cl. 23—151)



1. The method of making hydrocyanic acid from ammonia and an aliphatic hydrocarbon containing from 1 to 10 carbon atoms that comprises exposing a mixture of ammonia and such aliphatic hydrocarbon to an electric arc for a time on the order of .04 to .001 second at a ratio of 120 to 350 liters of mixed gas per hour per kilowatt consumed in the arc, and under an absolute pressure of about 40 to 120 mm. of mercury.

2,899,276
PROCESS FOR PREPARING DENSE FILTERABLE BERYLLIUM HYDROXIDE
Jean-Claude Hutter, Salindres, France, assignor to Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques, Paris, France, a corporation of France
No Drawing. Application June 5, 1956
Serial No. 589,390
Claims priority, application France June 21, 1955
6 Claims. (Cl. 23—183)

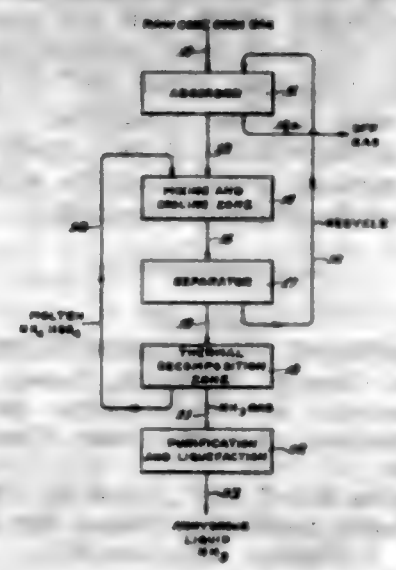
1. Process for the direct preparation of dense, filterable, crystalline beryllium hydroxide by neutralizing a solution of a beryllium salt by means of a base, comprising the steps of: simultaneously introducing the beryllium salt solution and the base into a reaction zone; maintaining the temperature in the reaction zone close to the boiling point of the solution; maintaining the pH in the reaction zone in the range between 6 and 8.5, and thereby obtaining a precipitate of stable, granular crystalline beryllium hydroxide, and recovering said precipitate.

each other by intervening segments of air, comprising alternatingly at a rapid rhythm each of said parallel

2,899,277
RECOVERY OF AMMONIA FROM COKE OVEN GAS

Michael O. Holowaty, Gary, Ind., assignor to Inland Steel Co., Chicago, Ill., a corporation of Delaware

Application August 9, 1957, Serial No. 677,317
8 Claims. (Cl. 23—196)

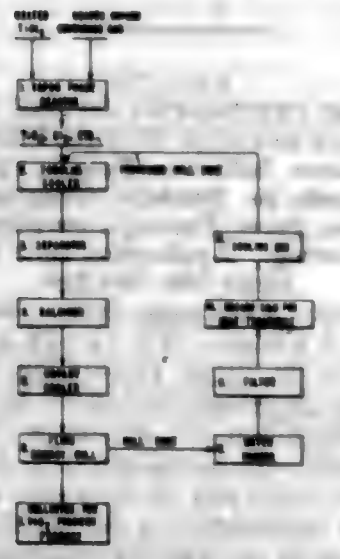


1. In the process of recovering ammonia from an ammonia-containing gas including the steps of reacting said gas with aqueous ammonium bisulfate liquor in a reaction zone to form ammonium sulfate, effecting separation of ammonium sulfate from said liquor, recycling said liquor to the reaction zone, thermally decomposing said ammonium sulfate in a decomposition zone to form ammonia and ammonium bisulfate, recovering said ammonia, and returning said ammonium bisulfate for reuse in said reaction zone; the improvement which comprises withdrawing from said reaction zone a slurry of ammonium sulfate crystals in said liquor, and commingling molten ammonium bisulfate from said decomposition zone with said slurry prior to said separation whereby to effect precipitation of additional ammonium sulfate crystals from said liquor and whereby to dissolve the ammonium bisulfate in said liquor for return to the reaction zone.

2,899,278
PIGMENT PRODUCTION

Ernest D. Lewis, Swarthmore, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application December 21, 1956, Serial No. 629,852
5 Claims. (Cl. 23—202)

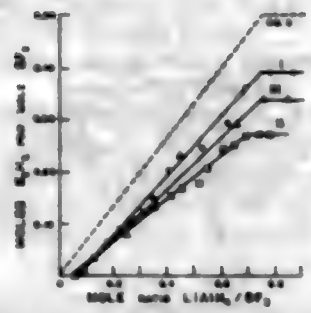


1. A process for cooling the reaction product stream of titanium dioxide and accompanying gases which results from the vapor phase oxidation of $TiCl_4$ to TiO_2, said process comprising passing said stream through an externally cooled conduit while removing titanium dioxide adhering to the walls of the conduit by adding to said stream, in an amount of about 1–10% of the weight of TiO_2 in the stream, titanium dioxide granules obtained by water-washing, collecting and heating to a temperature within the range of 500° C.–900° C. titanium dioxide dust from a fluid energy mill used for grinding to pigment particle size the TiO_2 product produced in a vapor phase oxidation of $TiCl_4$, separating the titanium dioxide exited from the cooling conduit and the exited gaseous products, and recovering cooled titanium dioxide.

2,899,279
CONTINUOUS PROCESS FOR PRODUCING DIBORANE

Isadore Shapiro, Pasadena, Calif.

Original application February 6, 1953, Serial No. 335,621, now Patent No. 2,857,248, dated October 21, 1958. Divided and this application February 2, 1956, Serial No. 563,168
1 Claim. (Cl. 23—204)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A continuous process for making diborane according to the equations

$$LiAlH_4 + BF_3 \rightarrow LiBH_4 + AlF_3 \quad (1)$$

$$3LiBH_4 + BF_3 \rightarrow 2B_2H_6 + 3LiF_3 \quad (2)$$

which combined gives

$$3LiAlH_4 + 4BF_3 \rightarrow 2B_2H_6 + LiF_3 + 3AlF_3 \quad (3)$$

and in which the reaction of Equation 1 has precedence over that of Equation 2, which comprises first adding boron trifluoride to a reaction vessel followed by the addition thereto of lithium aluminum hydride in an amount such that the mol ratio of lithium aluminum hydride to boron trifluoride is less than .75 based on Equation 3, and continuously replenishing the reaction vessel by the addition thereto of boron trifluoride and lithium aluminum hydride in incremental amounts such that the mol ratio of lithium aluminum hydride to boron trifluoride in the reaction vessel is always less than .75 based on Equation 3; whereby there will always be a stoichiometric excess of boron trifluoride based on Equation 3 in the reaction vessel to permit the reaction of Equation 2 to proceed with the result that diborane is continuously produced.

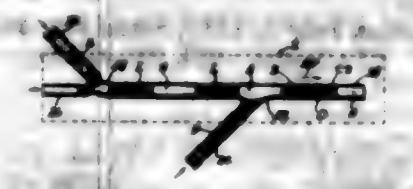
2,899,280
METHOD OF FLUID ANALYSIS

Edwin C. Whitehead, Crestwood, and Andrea Ferrari, Jr., Scarsdale, N.Y., assignors to Technicon International Ltd., Chauncey, N.Y., a corporation of New York

Application March 6, 1957, Serial No. 644,309
2 Claims. (Cl. 23—230)

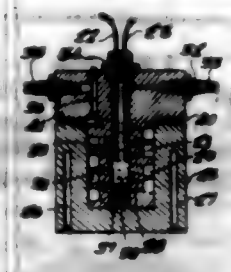
1. In a method of obtaining a quantitative indication of a substance in a liquid according to which said liquid and a processing liquid and air are transmitted in the form of a flowing stream in a conduit and according to which said air is effective to divide said stream into a series of spaced liquid segments separated from

each other by intervening segments of air, comprising introducing said air into said conduit at a time not



later than the introduction of said processing liquid whereby the formation of said liquid segments occurs not later than the introduction of said processing liquid.

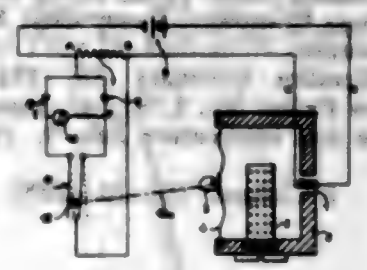
2,899,281
CATALYTIC OZONE ANALYZER
Francois J. Olmer, Highland Park, Ill., assignor, by mesne assignments, to American Petroleum Institute, New York, N.Y.
Application November 1, 1955, Serial No. 544,382
The entire term of the patent to be granted has been dedicated to the full, free and unrestricted use of the Public
3 Claims. (Cl. 23—254)



1. An apparatus for detecting and quantitatively indicating the concentration of ozone in the atmosphere which comprises in combination a massive casing of inert metal, a circuitous flow channel through said casing, said flow channel discharging into a test chamber arranged axially of said flow channel, means for establishing a flow of test gases through said channel at a uniform rate, means for maintaining the temperature of said casing at a selected uniform level, detector means including first and second matched thermistors in separate arms of a bridge circuit, the said thermistors being juxtapositioned in said chamber so as to be equally and simultaneously exposed to the sample flow therethrough, the second of said thermistors having associated therewith a quantity of a catalyst specific to accelerating the decomposition of ozone at the maintained temperature, and indicating means in said circuit adapted to measure the unbalance of said circuit due to the heat produced by the catalytic decomposition of ozone on the said second thermistor.

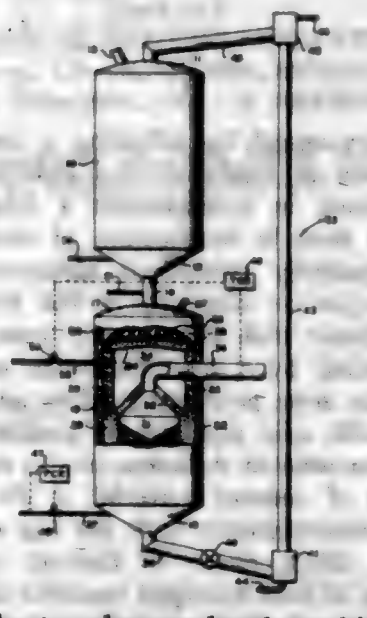
2,899,282
MEANS FOR MEASURING THE CONTENTS OF A COMBUSTIBLE COMPONENT IN A GASIFORM MIXTURE
Charles Eyraud, Lyon, France
Application November 2, 1955, Serial No. 544,570
Claims priority, application France November 19, 1954
7 Claims. (Cl. 23—255)

1. An apparatus for the differential measuring of the contents of the combustible component of a gasiform mixture comprising a catalytic variable resistance adapted to inflame said combustible component when hot, means sweeping alternatingly over said resistance batches of said gasiform mixture and of a reference non-combustible gasiform mixture, a circuit system inside which said resistance is inserted, said system including two parallel elements, an automatic control system adapted to insert alternatingly at a rapid rhythm each of said parallel elements in the resistance circuit and to simultaneously control the means sweeping in alternation batches of said gasiform mixture and of the reference mixture over said catalytic variable resistance, said control system operating at a predetermined high rhythm to make the sweeping of each mixture register in time with the insertion of



the corresponding element in the circuit and a measuring instrument fed by the pulses of variably different intensities passing through the resistance brought to correspondingly variably different temperatures by the reference mixture and by the first gasiform mixture upon combustion and through the corresponding parallel elements alternatingly.

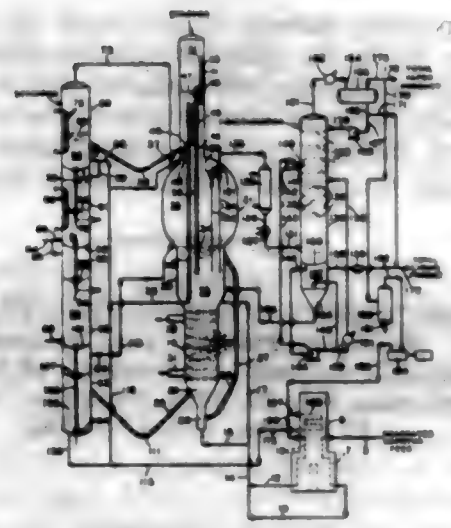
2,899,283
HYDROCARBON CONVERSION APPARATUS
Henry W. Hennigan, Phillips, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Application July 29, 1954, Serial No. 446,579
11 Claims. (Cl. 23—284)



1. A pebble heat exchange chamber which comprises, in combination, a closed, upright shell; pebble inlet conduit means in the upper portion of said shell; pebble outlet conduit means in the lower portion of said shell; fluid inlet conduit means in the lower portion of said shell; a dome disposed in said shell intermediate its ends and supported at its periphery by the walls of said shell; a baffle member disposed beneath and spaced apart from said dome so as to form a space therebetween; conduit means for passing pebbles from the upper portion of said shell above said dome into the lower portion of said chamber formed below said baffle member; effluent outlet conduit means extending from said baffle member to the exterior of said shell and communicating with the lower portion of said shell; inert gas inlet conduit means for introducing an inert gas into said space between said dome and said baffle member; temperature control means operatively connected to one of said baffle members and said effluent outlet conduit means and responsive to a predetermined temperature therein; and flow control means operatively connected to said temperature control

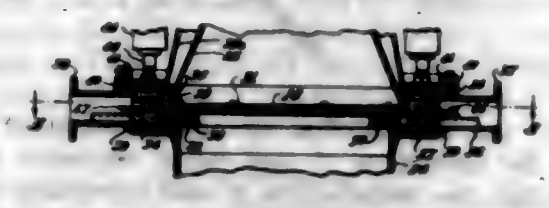
means and said inert gas inlet conduit means, and adapted to increase the flow of said inert gas when the temperature of said one of said baffle member and said effluent outlet conduit means reaches a predetermined value.

2,899,284
FLUID PLATINUM SYSTEM
Marvin F. Nathan, New York, N.Y., assignor to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware
Original application February 16, 1954, Serial No. 410,571, now Patent No. 2,791,542, dated May 7, 1957. Divided and this application July 9, 1956, Serial No. 596,721
8 Claims. (Cl. 23—288)



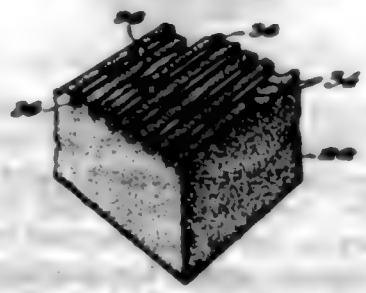
1. A unitary vessel for effecting a chemical reaction in the presence of finely divided fluidized contact material comprising in combination a first fluidized material contact zone in the bottom of said vessel, a plurality of adjacently positioned elongated substantially vertical passageways disposed in the lower portion of said vessel above said first contact zone, said passageways surrounded by a heat exchange medium, an enlarged reaction zone positioned above and in open communication with said plurality of passageways, said enlarged reaction zone of sufficient size to maintain a dense fluidized bed of contact material in the lower portion thereof in communication with the top of said passageways and a dilute phase of contact material in the upper portion of said enlarged reaction zone, a stripping chamber positioned above said reaction zone, a first conduit means extending from the lower portion of said reaction zone into said stripping zone, a second conduit means extending from the upper portion of said stripping chamber to the lower portion of said reaction zone, a third conduit in open communication with the upper portion of said stripping chamber and said reaction zone, a fourth conduit means connecting the upper portion of said dense fluidized bed in said reaction zone with said first contact zone, means for introducing reactants to said first contact zone, means for introducing finely divided contact material to said first contact zone, means for passing reactants in a dilute suspension of contact material from said contact zone upwardly through said elongated passageways into said dense fluidized bed, means for removing products of reaction from the upper portion of said reaction zone, means for introducing stripping gas to the lower portion of said stripping zone and means for returning stripped contact material from said stripping zone to said first contact zone.

2,899,285
CATALYTIC APPARATUS
Dugald M. Carr, Milford, Ohio, assignor to The Chemical and Industrial Corp., Cincinnati, Ohio, a corporation of Ohio
Application July 1, 1957, Serial No. 668,969
17 Claims. (Cl. 23—288)



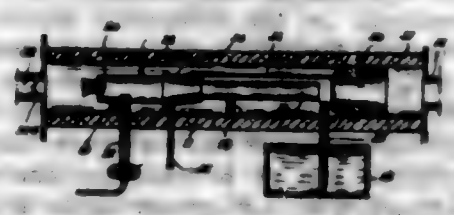
1. In catalytic apparatus, a converter element formed in two relatively movable parts, a catalyst holder having a portion adapted to lie between said two parts in sealing relationship with the ends thereof, a pressure chamber surrounding at least the juncture of the said two parts, said pressure chamber being sealed relative to each of said parts irrespective of relative movement between said parts, means for forcibly separating said parts, and means movable within said chamber to displace said catalyst holder and substitute a fresh one between the said parts, and means for bringing said parts together in sealed relationship to said fresh catalyst holder.

2,899,286
CATALYST BED SUPPORT
Guy D. Miller, Pasadena, Tex.
Application October 31, 1957, Serial No. 693,739
2 Claims. (Cl. 23—288)



1. A catalytic reactor having an inlet and an outlet for the flow of reactants, at least one refractory tile, a layer of refractory balls supported on said tile, a catalyst bed supported by said balls, fixed supports supporting said tile in position in the reactor, grooves in said tile upon which the refractory balls are supported, openings through said tile terminating in said grooves for the flow of reactants in the reactor from the inlet to the outlet, the width of said grooves in relation to their depth being such that the balls are supported above said openings in said tile whereby reactants flow unrestricted through said openings and layer of refractory balls.

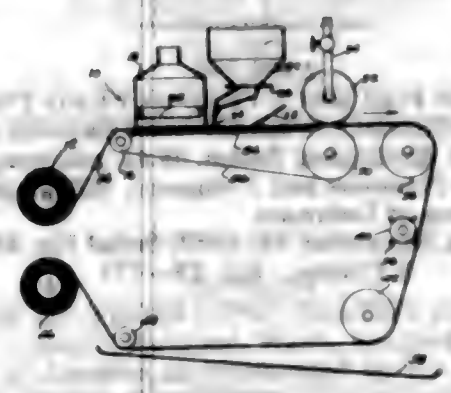
2,899,287
GAS PRODUCER WITH PULSATING FLOW
François Paris, Garches, France, assignor to Institut de Recherches de la Sidérurgie, Saint-Germain-en-Laye, France
Application June 3, 1957, Serial No. 663,263
Claims priority, application France June 12, 1956
2 Claims. (Cl. 48—61)



1. A gas producer with pulsating flow comprising in combination a tubular chamber, one inlet port at one end

of said tubular chamber, an exhaust outlet at the other end, a pulse jet in said tubular chamber, a non-return valve at the upstream end of said pulse jet, an injection pipe connected to said pulse jet, a pump connected to the injection pipe, a source of fuel connected to said pump, an ejector arranged at the downstream end of the pulse jet in the tubular chamber, a fuel tank, a pipe connected to said fuel tank, the free end of said pipe being located between the pulse jet and the ejector, and a regulating valve in the inlet air port.

2,899,288
METHOD OF FORMING AN ABRASIVE SHEET
Earle H. Barclay, Cleveland, Ohio
Application January 10, 1958, Serial No. 708,285
3 Claims. (Cl. 51—293)



1. The method of forming a backing sheet having an abrasive material on one face thereof which comprises providing a cloth backing sheet fabricated of thermoplastic material capable of being converted to a temporary softened state upon the application of heat thereto, feeding said sheet with one face facing upwardly through a zone heated to a temperature for conversion of said material to a temporary softened state to effect conversion of the material of said one face to a temporary softened state, applying abrasive material in a finely divided condition over the entire area of said sheet one face while in the temporary softened state, cooling the thus treated sheet to effect restoration of the thermoplastic material in said sheet one face to the original state, and recovering the thus cooled sheet.

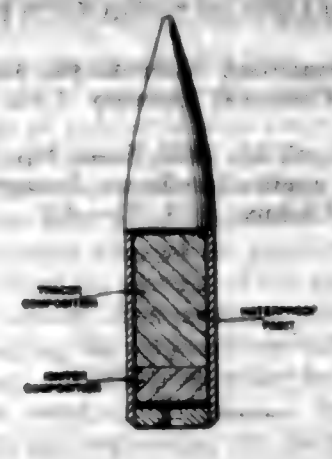
2,899,289
LIME BUFFING COMPOSITIONS AND METHOD FOR REDUCING SLAKING THEREOF
Le Roy B. High, Detroit, Mich., assignor to The Udylite Research Corporation, Detroit, Mich., a corporation of Michigan
No Drawing. Application August 30, 1956
Serial No. 606,967
11 Claims. (Cl. 51—304)

3. An improved buffing composition comprising in weight percent about 70% to about 80% lime, about 10% to about 20% long chain saturated fatty acid, about 1% to about 6% petrolatum, about 2% to about 5% tallow and about 0.1% to about 5% of at least one tertiary amine consisting of carbon, nitrogen and hydrogen and containing at least five carbon atoms.

2,899,290
ANTI-SLAKING BUFFING COMPOSITIONS
Werner L. Riegler, Western Springs, and Jack N. Dybalski, Chicago, Ill., assignors to Armour and Company, Chicago, Ill., a corporation of Illinois
No Drawing. Application April 11, 1957
Serial No. 652,093
6 Claims. (Cl. 51—304)

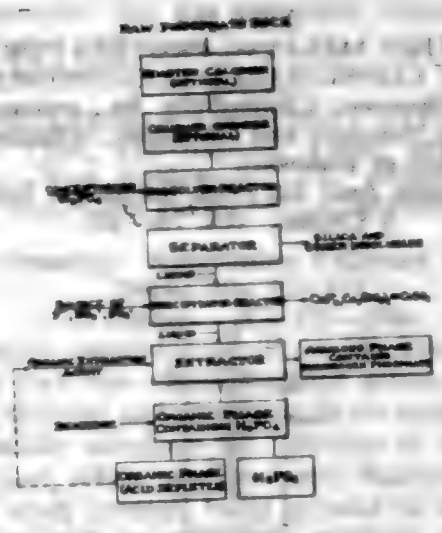
2. An improved lime buffing composition containing as an anti-slaking additive from about 2 to 7 weight percent of a mixture containing 6 to 10 parts by weight of N-tallow-trimethylene diamine per part of N-bis(2-hydroxyethyl)-soya amine.

2,899,291
COMPOSITION FOR TRACER UNIT
Raymond H. Holshall, Compton, Calif.
Application June 29, 1948, Serial No. 35,960
2 Claims. (Cl. 52—24)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A composition for a tracer unit comprising a tracer mixture containing about 31.8% magnesium, about 30.9% strontium nitrate, about 27.3% strontium tartrate, about 4.6% hexachlorobenzene, about 0.9% charcoal, and a binder therefor composed of about 4.5% stearic acid.

2,899,292
MANUFACTURE OF DIHYDROGEN PHOSPHATES
Ronald C. Vickery, Cleveland, Ohio, assignor to Hercules Incorporated, Princeton, N.J., a corporation of New Jersey
Application January 26, 1956, Serial No. 561,680
11 Claims. (Cl. 71—41)



1. A method of producing dihydrogen phosphates of the group consisting of alkali metal dihydrogen phosphates and ammonium dihydrogen phosphates which comprises: treating an alkaline earth phosphate-containing material at an elevated temperature with an amount of H_3PO_4 equal to that present in at least 1.8 times its weight of 85% H_3PO_4, said H_3PO_4 having a strength of between 60% H_3PO_4 and 100% H_3PO_4, the amount of said acid being sufficient to decompose the phosphate to a completely water soluble phosphate product; dissolving the said product in water; separating any insoluble residue from the solution formed; adding to the solution, an acid from the group consisting of sulphuric, boric and hydrofluoric and a salt of said acid from the group consisting of alkali metal and ammonium salts, whereby the alkaline earth salt of said acid is precipitated and phosphoric acid

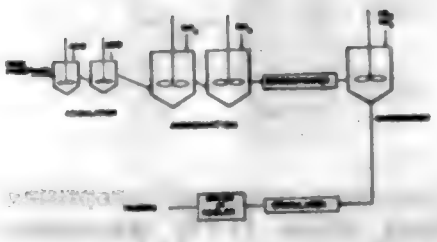
is regenerated; separating and separately recovering the precipitated alkaline earth salt and the phosphoric acid containing liquid; extracting the phosphoric acid from said separately recovered liquid by means of an organic extraction agent leaving an acid-depleted liquid; and evaporating the residual acid-depleted liquid to recover a dihydrogen phosphate therefrom.

2,899,293

METHOD OF PRODUCING A NITROGEN PHOSPHATE OR POTASSIUM NITROGEN PHOSPHATE FERTILIZER

Eiji Muneknta, Tsunetomi, Nobeoka-shi, Japan, assignor to The Asahi Chemical Industry Co., Ltd., Osaka, Japan

Application April 25, 1955, Serial No. 503,567
Claims priority, application Japan January 29, 1955
4 Claims. (Cl. 71—43)



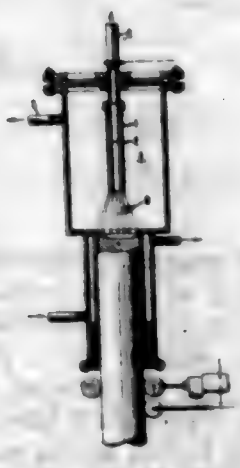
1. A method of producing a nitrogen phosphate fertilizer, which comprises completely dissolving rock phosphate in nitric acid, ammoniating the solution to produce an aqueous suspension consisting essentially of dicalcium phosphate, ammonium nitrate, calcium nitrate and from 20–40% water, concentrating the suspension to a slurry containing from 5–15% water and charging carbon dioxide and ammonia gas under pressure into the concentrated slurry.

2,899,294

PURIFICATION MELTING PROCESS FOR METALLIC CONSUMABLE ELECTRODES

Willem Jan Siemens, Landenburg, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application June 10, 1958, Serial No. 741,048
6 Claims. (Cl. 75—10)



1. The process for the purification of a metal, including alloys, which comprises arc melting a consumable electrode of said metal, said electrode having an axial bore through its length, maintaining the pressure within said bore lower than that prevailing in the axis of the arc plasma during the melting operation, removing volatile impurities through said bore, and recovering the purified melt product.

2,899,295

SEPARATION OF TIN FROM ALLOYS

Wilbur T. Kattner, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application December 17, 1952
Serial No. 326,603
2 Claims. (Cl. 75—64)

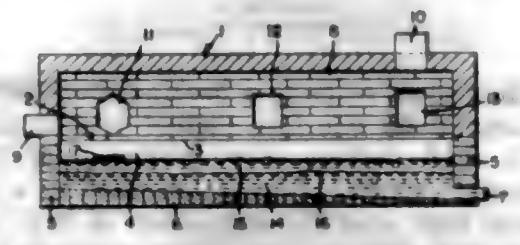
1. A process of recovering tin from bronze comprising melting the bronze; slowly cooling the melted metal to from 280 to 240° C. whereby eta-phase bronze crystallizes; separating the eta-bronze crystals from the liquid metal by mechanical means; melting the separated crystals; slowly cooling the melted eta-crystals to a temperature from 520 to 420° C. whereby crystals of epsilon-bronze precipitate; removing said epsilon-crystals from the remaining molten metal; and reintroducing the remaining molten metal into the process for eta-crystallization.

2,899,296

PROCESS FOR RECOVERING LEAD FROM BY-PRODUCT LEAD MATERIALS

Oscar Robert Kreimeier, Salem, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application November 15, 1957, Serial No. 696,686
9 Claims. (Cl. 75—77)



1. The process for recovering metallic lead from by-product lead materials which contain lead compounds and which are of the character of those obtained in the manufacture of tetraethyllead, which process comprises heating said by-product lead materials at a temperature in the range of from about 400° C. to about 850° C. in the presence of a member of the group consisting of sodium cyanide, potassium cyanide, mixtures of sodium cyanide and potassium cyanide, and mixtures of any of said cyanides with a hydroxide of a corresponding alkali metal, the temperature being sufficient to maintain said member in a molten state and the alkali metal cyanide being present in a proportion corresponding to at least about 20% excess over that theoretically required to react with said lead compounds and convert them to metallic lead, and separating molten metallic lead from the reaction mixture.

2,899,297

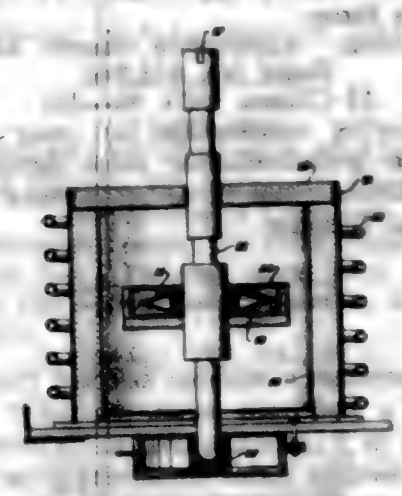
METHOD OF PRODUCING DENSE CONSOLIDATED METALLIC REGULUS

Theodore T. Magel, Cambridge, Mass., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application April 19, 1949, Serial No. 88,373
14 Claims. (Cl. 75—84.1)

1. A method for obtaining a dense consolidated metallic regulus from a dense metal composition, which comprises providing at least two communicating zones, a first zone for reducing the metal composition and a second zone for collecting reduced metal, a portion of the communication between said zones being constricted to provide resistance to the flow of low density materials but not sufficiently constricted to prevent the flow of the high density molten metal product, heating the dense metal composition and reductant in said first zone to a temperature substantially above the melting point of the

dense metal composition, and applying centrifugal force to said molten composition along an axis from the reac-



tion zone through the constricted communication to the collecting zone so as to collect only dense metal product in the latter zone.

2,899,296

PROCESS OF PRODUCING SHAPED PLUTONIUM

Robert J. Anicetti, Richland, Wash., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application March 9, 1954
Serial No. 415,185
2 Claims. (Cl. 75—84.1)

1. A process of producing and casting high-purity plutonium metal in one step from plutonium tetrafluoride, comprising heating a mixture of the plutonium tetrafluoride with calcium while said mixture is in contact with and defined as to shape by a material obtained by firing a mixture consisting of calcium oxide and from 2 to 10% by its weight of calcium fluoride at from 1260° to 1370° C.

2,899,299

METHOD OF MANUFACTURING SINTERED CATHODE

Robert T. Lynch, Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

No Drawing. Application May 11, 1956
Serial No. 584,189
7 Claims. (Cl. 75—207)

1. A method of forming a cathode element comprising mixing nickel powder with a powder material selected from the group consisting of barium carbonate, barium-strontium carbonate and barium-strontium-calcium carbonate together with an activator material, molding the resultant mixture under pressure, heating to a first temperature in the range of from 550° C. to 650° C. in a non-oxidizing atmosphere, the heating in the range of from about 400° C. to the said first temperature being carried out in a reducing atmosphere, further increasing the temperature of the pressed mixture above 650° C. and then decreasing to a second temperature in the range of from 550° C. to 650° C., which second temperature may be the same as the said first temperature, the last heating and cooling steps being carried out in an atmosphere of an inert gas, followed by further decreasing the temperature of the pressed mixture from the said second temperature to about 400° C. in a reducing atmosphere, and finally decreasing the temperature below about 400° C. in a non-oxidizing atmosphere.

2,899,300

METHOD FOR EXTRACTING NICKEL FROM LATERITE ORES

Richard Porter Bailey, Ottawa, Ontario, Canada, assignor to Quebec Metallurgical Industries Ltd., Ottawa, Ontario, Canada, a corporation of Canada

No Drawing. Application November 5, 1957
Serial No. 694,522
6 Claims. (Cl. 75—101)

1. In a method for extracting metal values from a nickel laterite ore which is essentially an oxidic complex at least partly in hydrated form and comprising nickel, cobalt, manganese, magnesia, iron and silica, the cycle of steps comprising subjecting the ore to a sulphating operation in which the ore in finely divided form is intimately mixed with an amount of an aqueous solution of a predetermined amount of sulphuric acid about sufficient to saturate the ore and the acid saturated ore is dried by baking at a temperature above 100° C. but below 150° C. until the material has been dried sufficiently to permit crushing, said predetermined amount of sulphuric acid being not greater than about 80 percent of the amount theoretically required to convert all the metal values in the ore to sulphates, leaching the sulphated ore with a liquid selected from the group consisting of water and a water solution of magnesium sulphate to obtain a leach residue and a leach solution, and separating the leach residue from the leach solution consisting essentially of water containing dissolved sulphates of iron, nickel, cobalt, manganese and magnesium.

2,899,301

TUNGSTEN-TANTALUM-NICKEL CATHODES

Richard L. Hoff, Norristown, Pa., assignor to Superior Tube Company, Norristown, Pa., a corporation of Pennsylvania

Application August 26, 1957, Serial No. 680,881
3 Claims. (Cl. 75—170)

1. An indirectly-heated cathode structure characterized by enhanced strength at cathode-operating temperatures and by good emission properties and composed of an alloy containing, by weight, 1% to 5% tungsten, .05% to 2% tantalum and the remainder essentially nickel.

2,899,302

NICKEL-SILICON-BORON ALLOYS

Arthur T. Cape, Los Angeles, Calif., and Charles V. Foerster, West Englewood, N.J., assignors to Coast Metals, Inc., Little Ferry, N.J., a corporation of Delaware

No Drawing. Application February 6, 1958
Serial No. 713,571
3 Claims. (Cl. 75—170)

1. An alloy consisting of .25 to 5% boron, .1 to 5% silicon, at least one element of the group consisting of titanium, niobium and tantalum, in an amount sufficient to substantially eliminate the diffusion of the alloy into stainless steel, when used to braze stainless steel parts, titanium, when present, being present in an amount of from about .05% to about 2%; niobium, when present, being present in an amount of from about .5% to about 5%, and tantalum, when present, being present in an amount of from about .5% to about 5%, the remainder being substantially all nickel.

2,899,303

ALPHA TITANIUM ALLOYS CONTAINING ALUMINUM AND COLUMBIUM

Lee S. Busch and George W. Bauer, Warren, Ohio, assignors to Mallory-Sharon Titanium Corporation, Niles, Ohio, a corporation of Delaware

No Drawing. Application October 30, 1956
Serial No. 619,136
4 Claims. (Cl. 75—175.5)

1. An alpha titanium alloy consisting essentially of about: 0.5% to 5.0% aluminum, 0.5% to 3.0% vana-

of chocolate flavor and aroma precursors therefrom

2,899,313

dium, 0.5% to 1% columbium, balance substantially titanium with carbon, nitrogen and oxygen as incidental impurities, further characterized in that the aluminum, vanadium and columbium contents have solubility with alpha titanium at 825° C. and below.

2. An alpha titanium alloy consisting essentially of about: 0.5% to 5.0% aluminum, 0.5% to 1% columbium, 0.05% to 1.5% silicon, balance substantially titanium with carbon, nitrogen and oxygen as incidental impurities, further characterized in that the aluminum, columbium and silicon contents have solubility with alpha titanium at 825° C. and below.

2,899,304

HIGHLY WEAR-RESISTANT ZINC BASE ALLOY

James C. Holzwarth, Birmingham, and Robert F. Thomson, Grosse Pointe Woods, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

No Drawing. Application July 5, 1955
Serial No. 520,147
15 Claims. (Cl. 75—178)

1. A zinc base alloy characterized by high wear resistance consisting essentially of at least 85% zinc and containing approximately 0.5% to 4% by weight of iron-titanium-aluminum particles generally uniformly dispersed throughout the matrix of the alloy, said particles having a hardness which is effective to materially increase the wear resistance of said zinc base alloy.

8. A method of increasing the wear resistance of a zinc base alloy which comprises adding to a zinc-rich melt a pre-alloy constituting 0.5% to 4% of the final alloy and consisting essentially of about 65% to 90% iron, 4% to 24% titanium and 3% to 23% aluminum.

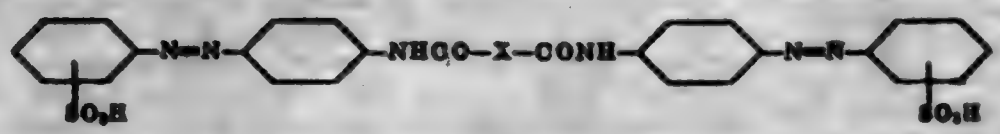
2,899,305

COLOUR PHOTOGRAPHY

Werner Bossard and Paul Duzzy, Basel, Switzerland, assignors to J. R. Geigy S.A., Basel, Switzerland, a Swiss company

No Drawing. Application April 14, 1958
Serial No. 728,966
Claims priority, application Great Britain May 9, 1957
5 Claims. (Cl. 96—53)

1. A process for the production of a yellow dyestuff image in a photographic layer which comprises forming a latent image in a light-sensitive gelatino silver halide emulsion layer containing a yellow dyestuff selected from the class consisting of dyestuffs of the formula:



where X is selected from the class consisting of divalent ethylenically unsaturated aliphatic radicles, phenylene radicles and unsaturated divalent heterocyclic radicles, dyestuffs of the said formula in which the various benzene rings carry substituents selected from the class consisting of alkyl groups, alkoxy groups, acylamino groups and halogen atoms and dyestuffs of the said formula in which the terminal benzene rings each carry one carboxylic acid group, the dyestuffs being symmetrical about the bridging group X, developing said image, subjecting the developed silver image to treatment which bleaches the silver image and simultaneously bleaches the dyestuff in situ therewith, and removing any residual silver and silver salts from the product.

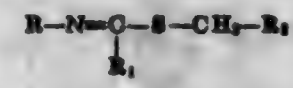
2,899,306

ANTIFOGGANTS FOR REVERSAL COLOR DEVELOPMENT

Catherine Marilyn Speth, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application January 24, 1957
Serial No. 635,944
10 Claims. (Cl. 96—56)

1. A developing composition for color photography comprising an arylenediamine color developer and a compound selected from those represented by the following general formula:



wherein R represents a member selected from the group consisting of a hydrogen atom, an alkyl group containing from 1 to 3 carbon atoms, and a monocyclic aryl group of the benzene series containing from 6 to 7 carbon atoms, R_1 represents an amino group, and R_2 represents a member selected from the group consisting of a carbalkoxyl group containing from 2 to 5 carbon atoms, an alkyl group containing from 1 to 4 carbon atoms, a tetrazaindenyl group, a pyridyl group, and an aminocarbonyl group.

2,899,307

DRY STABLE FEED SUPPLEMENT

Alexander L. Wilson, Palos Park, Ill., assignor to Corn Products Company, a corporation of Delaware

No Drawing. Application March 18, 1957
Serial No. 646,517
8 Claims. (Cl. 99—3)

1. A dry feed supplement having a high level of fat which is stable against oxidative deterioration comprising an admixture containing 10 to 35 percent of alkaline soapstock, 10 to 30 percent of acidic fermentation liquor and the balance fibrous carrier, all on dry basis, and having a pH between about 5 and 8.

2,899,308

POULTRY FEED

Charles M. Ely, Livingston, and John R. Fey, Bayonne, N.J., assignors to Nopco Chemical Company, Harrison, N.J., a corporation of New Jersey

No Drawing. Application February 23, 1956
Serial No. 567,877
10 Claims. (Cl. 99—4)

1. A method for improving the rate of growth and feed efficiency of poultry which comprises introducing into the feed consumed by said poultry, a soap selected from the group consisting of sodium and potassium soaps of fatty acids containing from 12 to 22 carbon atoms, the amount of soap which is present being from just in excess of 0.5% up to about 2.0% of the air dry weight of the amount of poultry feed which is fed to the poultry.

2,899,309

CHOCOLATE PRODUCT AND PROCESS THEREFOR

Irving I. Russell, Park Ridge, N.J., assignor to General Foods Corporation, White Plains, N.Y., a corporation of Delaware

No Drawing. Application April 3, 1958
Serial No. 726,035
16 Claims. (Cl. 99—23)

1. The process of treating the residue of fermented, unroasted cacao material after the aqueous extraction

2,899,316

STABILIZED CELLULOSE ESTER COMPOSITIONS

and containing a bicarbonate solution, the second compartment containing the first compartment being com-

of chocolate flavor and aroma precursors therefrom which comprises treating said cacao residue with a chemical reagent for a length of time sufficient to change its color, then adding a chocolate flavor factor to the residue.

15. The product of the process of claim 1.

2,899,310

BEVERAGE CHARGE HOLDER

Sheldon Dale, Chicago, Ill., assignor to Cory Corporation, a corporation of Delaware

Original application January 23, 1952, Serial No. 267,809, now Patent No. 2,743,664, dated May 1, 1956. Divided and this application September 8, 1955, Serial No. 533,201

3 Claims. (Cl. 99—77.1)

1. A disposable charge holder comprising: a cup-shaped member having a foraminous transverse portion and a depending annular flange defining a charge holding space; a sheet of filter material having a filter portion extending across the bottom of said space and a securing portion extending laterally thereof; a charge in said space; an annular support member secured sealingly to the flange; and an outer concentric annular band, said securing portion of the filter sheet being clamped between said support member and said band to secure the filter sheet to said support member, and thus, to said flange, said flange, support member and band having a complementary downwardly narrowing taper, and said support member extending upwardly from the plane of the transverse portion of the cup member to define a liquid holding space.

2,899,311

METHOD OF PREPARING GROUND MEAT PRODUCTS

William J. Zick, Crete, Ill., assignor to B. Heller & Company, a corporation of Illinois

No Drawing. Application October 28, 1957
Serial No. 692,527
7 Claims. (Cl. 99—108)

1. The method of preparing ground meat products having enhanced moisture retention comprising adding to a ground meat product an amount of at least 1% by weight of said product of carotene-free, carrot pulp residue and mixing said pulp with said ground meat to provide uniform distribution of said pulp residue throughout said ground meat product.

2,899,312

METHOD OF TREATING EGG ALBUMEN

John H. Stiffler, Park Forest, and Floyd L. Kauffman, Palos Park, Ill., and John L. Ohlson, South Braintree, Mass., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois

No Drawing. Application July 10, 1956
Serial No. 596,837
4 Claims. (Cl. 99—113)

1. The method of improving the whipping properties of egg albumen which comprises adding to the egg albumen at least about 0.09 and less than 1.12% of an alkali metal salt of capric acid based on the weight of the egg albumin solids to improve substantially said whipping properties of the egg albumen and adjusting the pH of the resulting mixture to between about 6.0 and 7.5.

2,899,313

PROCESS FOR PREPARING A SOLID FLAVORING COMPOSITION

Benjamin Makower, Berkeley, and Thomas H. Schultz, Lafayette, Calif., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application January 26, 1954
Serial No. 406,369
2 Claims. (Cl. 99—140)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for preparing a solid flavoring composition in which the flavoring component is protected from vaporization and deterioration which comprises forming a hot melt containing principally at least one sugar, incorporating therein a volatile, liquid flavoring agent, cooling the resulting mass under conditions which favor the formation of an amorphous solid, grinding the cooled mass, and then subjecting it to a vacuum to remove moisture where present and the portion of flavoring agent on the surface of the ground particles.

2,899,314

FERMENTATION PROCESS FOODS WITH LOW-SODIUM CONTENT AND METHOD OF PREPARING SAME

Verna R. Rehrkasts, Edwardsville, Ill.

No Drawing. Application October 17, 1955
Serial No. 541,065
1 Claim. (Cl. 99—156)

The process for preparing a low-sodium content basic pickle of the type from which may be ultimately produced sweet, sour, and mixed pickles, comprising providing a predetermined quantity of cucumbers, cleaning the said cucumbers, then placing same in a coverable container, covering said cucumbers in a sugar solution having a concentration of from about 40 to 60 grams of sugar per gallon of water, adding approximately 500 cc. of vinegar per gallon of water, then closing the container, and then permitting said cucumbers to remain covered by said solution until completion of the fermentation of the sugar.

2,899,315

STABILIZED CELLULOSE ESTER COMPOSITIONS AND PROCESS FOR PREPARING THE SAME

Robert F. Williams, Jr., and Carol S. Lowe, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application February 13, 1957
Serial No. 639,856
16 Claims. (Cl. 106—171)

1. A high heat resistant lower fatty acid ester of cellulose of not more than .05% active ash content and not more than 0.01% of total combined sulfur to which has been added .01–.05% of an alkali metal acid oxalate, a stabilizing quantity in an amount within the range of 0.01–0.5% of the cellulose ester of a salt stabilizer selected from the salts of cations having a "k" value of less than 40 in the relation

$$k=\frac{m(1+\epsilon)\sqrt{d}}{r^2\gamma^4}$$

with anions which are radicals of aliphatic and aromatic acids having dissociation constants less than 1.85×10^{-4} and at least .01% of a monohydroxy, monocyclic substituted phenol, the substituents of which are selected from the group consisting of methoxy and alkyl.

particle of the milk to a temperature of 300° F. and no higher, forming and maintaining a liquid seal of the milk

the range of 3050 to 3200° F. for a period of at least 2 hours so as to promote crystal growth of α-alumina and

silver salts from the product.

unroasted cacao material after the aqueous extraction

2,899,316

STABILIZED CELLULOSE ESTER COMPOSITIONS AND PROCESS FOR PREPARING THE SAME

Benjamin P. Bouse, Jr., and Roy O. Hill, Jr., Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application February 13, 1957
Serial No. 639,860
15 Claims. (Cl. 106—173)

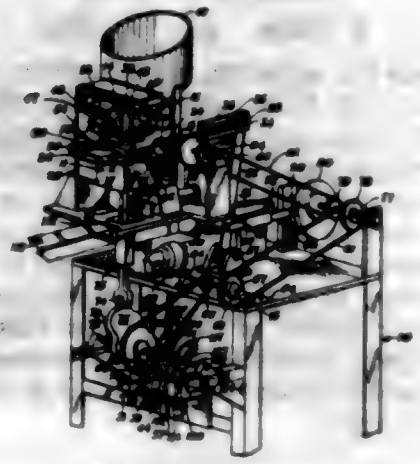
1. A high heat resistant lower fatty acid ester of cellulose having not more than 0.01% of total combined sulfur to which has been added 0.01–0.05% of an alkali metal oxalate, a stabilizing quantity within the range of 0.01–0.5% of a salt stabilizer selected from the group consisting of aluminum, calcium, magnesium, copper, cobalt, manganese, barium, strontium, tin, cadmium, and chromium salts of the alicylic acids having dissociation constants less than 1.86×10^{-6} and the lead, iron, and zinc salts of organic acids having dissociation constants of less than 1.86×10^{-4}, and at least 0.01% of a monohydroxy, monocyclic subetitute phenyl, the subetituents of which are selected from the group consisting of methoxy and alkyl.

2,899,317

METHOD AND APPARATUS FOR PREPARING SLABS OF FOOD PRODUCT

Bernard T. Hensgen and Clifford E. Evanson, Chicago, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois

Application August 9, 1954, Serial No. 448,612
10 Claims. (Cl. 99—178)



1. A device for forming a slab from a fluid food product such as process cheese on a parting material, said device including a mold, means to place parting material in the bottom of said mold, a metering pump to deposit a given amount of said product on said sheet of material, a tamper receivable within said mold to flow said product into slab form, chilling means to reduce the temperature of the product in the mold to solidify the product in the mold, means to remove the slab of product from the mold, and power means operatively connected to the first mentioned means, the pump, the tamper and the last mentioned means to sequentially insert parting material in the bottom of the mold, deposit a given amount of product on the sheet, tamp the product, and remove the slab from the mold.

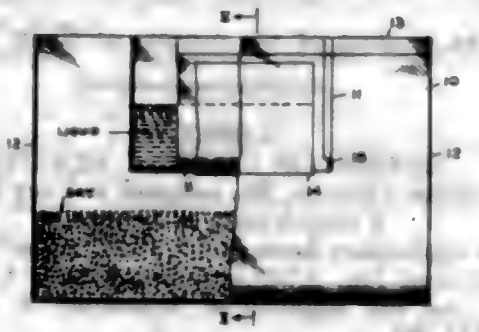
2,899,318

AUTOMATIC FOAMING UNIT

Florren E. Long, Fredericktown, Ohio, assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Application August 31, 1956, Serial No. 607,484
11 Claims. (Cl. 99—180)

1. A two compartment container, the first compartment being formed from polyethylene cellophane laminate having a paper facing on the exterior surface thereof and containing a bicarbonate solution, the second compartment containing the first compartment being composed of cellophane, the contents thereof having an acid



incorporated therein which reacts with the bicarbonate solution of the first mentioned container to form a foam when the contents of the first container are admixed with the contents of the second container.

2,899,319

DEHYDRATION OF CHERRIES

Myron John Powers, Lafayette, and Norma Jean Downes, Albany, Calif., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application August 30, 1957
Serial No. 681,419
2 Claims. (Cl. 99—204)
(Granted under Title 35, U.S. Code (1952), sec. 266)

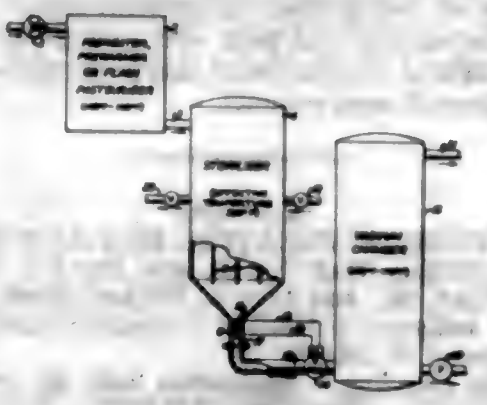
1. A process for preparing dehydrated cherries which comprises sulphiting pitted cherries, freezing the sulphited cherries to produce individual, discrete frozen cherries, subjecting the resulting material in the form of individual, discrete, frozen cherries to dehydration by the use of vacuum and a heating medium, the temperature of the heating medium being initially maintained at about 150–212° F., until the temperature of the cherries approaches a temperature of about 140–150° F. and then decreasing the temperature of the heating medium and maintaining it at about 140–150° F. until the dehydration is completed and thereafter packaging the dehydrated product in a non-oxygenous atmosphere.

2,899,320

PROCESS FOR THE STERILIZATION OF MILK

Elmer S. Davies, Takoma Park, Md., and Frank D. Peterson, Philadelphia, Pa., assignors, by mesne assignments, to Davost Milk Processes Co., Washington, D.C., a corporation of Delaware

Application September 26, 1956, Serial No. 612,240
10 Claims. (Cl. 99—216)



1. A process for the sterilization of milk while maintaining the natural characteristics of the same comprising the steps of prewarming the milk to a temperature of approximately 145° F. to approximately 165° F., subjecting the prewarmed milk in the form of a thin, downwardly flowing film within a closed sterilizing chamber to direct heat exchange contact with steam of a controlled and effective temperature sufficient to raise every

2,899,328

SALAD OIL AND METHOD OF OILING TIN

charged aerosol by passing through a brass orifice in tur-

mixture to between about 6.0 and 7.5.

selected from the group consisting of methoxy and alkyl.

particle of the milk to a temperature of 300° F. and no higher, forming and maintaining a liquid seal of the milk at the bottom of said sterilizing chamber inwardly of the discharge end thereof, holding the milk at said last-mentioned temperature for a minimum of one and a half seconds and a maximum of approximately three seconds, separating the steam from the milk, and instantaneously reducing the temperature of the milk preparatory to further processing, the liquid seal formed and maintained by the milk at the bottom of the sterilizing chamber preventing discharge of the steam with the milk.

2,899,321
DIELECTRIC MATERIALS
Isadore Mockrin, Philadelphia, Pa., assignor to Pennsalt Chemicals Corporation, a corporation of Pennsylvania
No Drawing. Application May 21, 1956
Serial No. 586,323
7 Claims. (Cl. 106—39)

1. A formed, fired, dielectric ceramic body prepared by firing a compacted mass of a finely divided material to produce intimate bonding of the particles thereof, and consisting essentially of a material selected from the group consisting of complex fluorine compounds of the formula ARF_5, where A is an element selected from the group consisting of monovalent Li, Na, K, Cu, Rb, Cs, Ag, and Tl, and R is an element selected from the group consisting of divalent Mn, Fe, Co, Ni, Mg, Zn and Pb, and mixtures of such compounds.

2,899,322
OPTICAL GLASS
Heinz Brüner, Hermannstein, and Norbert Meinert, Wetzlar, Germany, assignors to Ernst Leitz, G.m.b.H., Wetzlar (Lahn), Germany, a corporation of Germany
No Drawing. Application June 26, 1957
Serial No. 667,823
Claims priority, application Germany July 7, 1956
3 Claims. (Cl. 106—47)

1. Color poor optical glass which consists essentially of boron trioxide, lanthanum oxide, zirconium oxide, tantalum oxide, together with at least one oxide selected from the group consisting of zinc and cadmium in which in the melting charge the mol ratio of boron trioxide to lanthanum oxide is between 2.5 and 3.6, the mol ratio of the oxide of the bi-valent element to lanthanum oxide is between 0.36 and 0.9, the mol ratio of the sum of the oxides of the four and five valent elements to lanthanum oxide is between 0.2 and 0.45 and in which the sum of the given ratios is between 3.3 and 4.9.

2,899,323
HEAT EXCHANGE PEBBLES
Charles R. Venable, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Application March 15, 1957
Serial No. 646,371
11 Claims. (Cl. 106—65)

1. A process for making heat exchange material capable of withstanding mechanical and thermal shock at elevated temperatures comprising preparing a homogeneous mixture of alumina, silica, and at least one member of a compound of a metal of the group consisting of manganese and iron which is in the oxide form after firing, the amounts of the constituents of said mixture being selected so that said material contains silica in the range of 1.0 to 7.0 weight percent, the oxide of said member in the range of 0.05 to 1.5 weight percent, and the balance of alumina; forming said mixture into desired shapes with the aid of an organic binder before firing; and thereafter firing said articles at a temperature in the range of 3050 to 3200° F. for a period of at least 2 hours so as to promote crystal growth of α-alumina and develop lath-like crystallites of α-alumina therein.

2,899,324
PROCESS AND COMPOSITIONS FOR IMPROVING CLAY PRODUCTS
James G. MacArthur, Baxter Springs, Kans., assignor to Spencer Chemical Company, a corporation of Missouri
No Drawing. Application April 19, 1957
Serial No. 653,763
20 Claims. (Cl. 106—72)

1. The method of manufacturing improved clay products which comprises adding to the clay mix from which the clay products are formed an additive consisting essentially of a member selected from the group consisting of (1) from .001% to 3% by weight (based on dry clay) of hexamethylenetetramine and (2) an additive combination consisting of (*a*) from .001% to 1% by weight (based on dry clay) of hexamethylenetetramine and (*b*) from .005% to 2% by weight (based on dry clay) of a member of the group consisting of ammonium nitrate, ammonium sulfate, ammonium chloride, ammonium phosphate and mixtures thereof; forming clay products from such admixture; and firing the clay products.

2,899,325
COMPOSITION FOR BUILDING BLOCKS
Carl L. Kruse, Flint, and Theren A. Gremer, Bellevue, Mich.
No Drawing. Application September 25, 1956
Serial No. 612,066
1 Claim. (Cl. 106—93)

A building block consisting essentially of, by volume, 5 parts sawdust, 1 part sand, 1 part cement, .85–1.25 parts burned gypsum in a powdered state and .15 to .25 part powdered pine rosin, mixed with water, cured and formed into a convenient building block configuration.

2,899,326
WATER HARDENING MIXTURES
Donald H. Butler, Pittsburgh, Pa.
No Drawing. Application August 24, 1956
Serial No. 605,951
4 Claims. (Cl. 106—97)

1. A water hardening mixture consisting essentially of a water hardening, calcium containing cement and calcined alumina, the alumina being in the proportions of 2 to 15 percent by weight of the cement.

2,899,327
GLUE SETTING ACCELERATORS
Edward F. Christopher, Chicago, and Harland H. Young, Western Springs, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
No Drawing. Application December 5, 1955
Serial No. 550,813
10 Claims. (Cl. 106—125)

1. A relatively fast setting, gel forming composition of the class of glue and gelatin, comprising a mixture of mainly an animal protein derived from collagen normally tending to have a slow set, and a substituted ammonium salt of a water soluble polycarboxylic acid whose acid portion is characterized by an additional function selected from the group consisting of alcohols and ethers within the range of about 1 to 10% by weight of the total composition as a set accelerating agent to improve the setting rate of said animal protein.

upon exposure of said heat-sensitive area to radiant energy in heat conductive association with a pattern containing per cubic inch so as to be coherent but readily compressible with finger pressure, the surface fibers of said

2,899,328
SALAD OIL AND METHOD OF OILING TIN PLATE THEREWITH
John E. Furbish and Edward J. Kamman, Chicago, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois
No Drawing. Application January 7, 1955
Serial No. 480,596
11 Claims. (Cl. 106—250)

1. A composition for oiling electrolytically-produced tin plate which comprises: an admixture of an antioxidant; partial glycerides derived from cottonseed oil; and salad oil.

2,899,329
SOIL STABILIZATION
John W. Lyons, Reading, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application March 29, 1957
Serial No. 649,284
11 Claims. (Cl. 106—287)

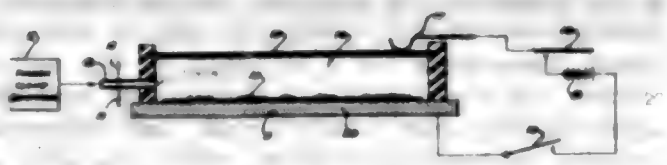
1. A method of effecting the stabilization of a clay soil having a plastic index of greater than about 15 and containing from about 10 to about 70 percent of clay comprising the addition thereto of from about 1 to about 5 weight percent of orthophosphoric acid, calculated as 100% H_3PO_4, based on the dry weight of said soil, effecting a substantially uniform distribution of the orthophosphoric acid in the said soil and thereafter compacting the treated soil to provide a stabilized soil characterized by substantially improved unconfined compressive strength over the untreated soil after immersion in water for at least two days.

2,899,330
SOIL STABILIZATION
John W. Lyons, Reading, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application March 29, 1957
Serial No. 649,300
17 Claims. (Cl. 106—287)

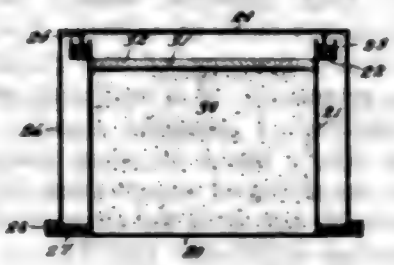
1. A method of effecting the stabilization of a clay-soil containing from about 10 percent to about 70 percent of clay and having a plastic index of greater than about 15 comprising the addition thereto of from about 1 to about 5 weight percent of phosphoric acid, calculated as 100% H_3PO_4, and from about 0.1 to about 2 weight percent of an alkenyl polyamine, defined by the formula $R—NH(C_2H_4NH)_nH$, wherein R is a higher alkenyl radical containing from 8 to 16 carbon atoms and n is an integer from 1 to 4, each based on the dry weight of said soil, effecting a substantially uniform distribution of the phosphoric acid and alkenyl polyamine in the said soil and thereafter compacting the treated soil to provide a stabilized soil characterized by a substantially improved unconfined compressive strength over the untreated soil after immersion in water for at least two days.

2,899,331
PROCESS OF DEVELOPING ELECTROSTATIC IMAGE WITH CHARCOAL
Richard E. Hayford, Pittsford, N.Y., assignor to Haloid Xerox Inc., a corporation of New York
Application January 25, 1955, Serial No. 484,000
3 Claims. (Cl. 117—17.5)

1. In a process for making visible an electrostatic image comprising areas of varying electrostatic charge on an electrically insulating surface by contacting said image with an aerosol of positively electrostatically charged finely-divided charcoal whereby said charcoal deposits on said insulating surface in conformity with said image, the improvement comprising generating said positively charged aerosol by passing through a brass orifice in turbulent flow a gas stream containing therein finely-divided wood charcoal characterized by having been heated to about 1000° F. in a non-oxidizing atmosphere.



2,899,332
CHROMIZING METHOD AND COMPOSITION
George A. Samsel, White Plains, N.Y., assignor to Metal Diffusions, Inc., Philadelphia, Pa., a corporation of New Jersey
Application December 14, 1955, Serial No. 553,022
3 Claims. (Cl. 117—22)

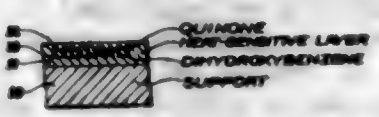


1. The method of chromizing ferrous metal parts, which comprises first prereacting together ammonium bifluoride and chromium to form a complex compound of ammonium, chromium and fluorine, drying the complex compound and then placing said dry compound, chromium and ferrous metal parts in a closed retort, with the said compound and the said chromium in contact with the ferrous metal parts and maintaining the contents of the retort at a temperature between 1650 and 2300 degrees F.

2,899,333
METHOD OF SILVERING MIRRORS
Robert E. Gee and James W. Gibbs, Philadelphia, Pa., assignors to Safetee Glass Company, Philadelphia, Pa., a corporation of Pennsylvania
No Drawing. Application February 1, 1955
Serial No. 485,577
5 Claims. (Cl. 117—35)

1. The method of producing a mirror surface including treating a glass surface with an aqueous solution containing titanous chloride, and depositing a coating of metallic reflectant material on said surface.

2,899,334
THERMOGRAPHIC COPYING MATERIAL
Thomas V. Crevling, Donald J. Haag, and Thomas I. Abbott, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Application May 19, 1958, Serial No. 736,248
9 Claims. (Cl. 117—36)



1. A heat-sensitive, copying sheet comprising a support and coated on said support a heat-sensitive area containing (*a*) a p-quinone compound and (*b*) a dihydroxybenzene compound, at least one of said compounds having a melting point between about 55 and 125° C., said compounds being maintained in physically-distinct relationship and in chemically-interactive relationship so that

upon exposure of said heat-sensitive area to radiant energy in heat conductive association with a pattern containing portions highly absorptive of said radiant energy and portions substantially nonabsorptive of said radiant energy, said heat-sensitive area undergoes a rapid color change only in those areas in heat conductive association with those areas highly absorptive of said radiant energy, said heat-sensitive, copying sheet being stable at room temperature, being substantially insensitive to visible radiation and being non-sticking at 125° C.

2,899,335

PROCESS FOR DEVELOPING ELECTROSTATIC IMAGE WITH LIQUID DEVELOPER

Virgil E. Stroughon, Euclid, Ohio, assignor, by mesne assignments, to General Dynamics Corporation, San Diego, Calif., a corporation of Delaware

No Drawing. Application October 31, 1956
Serial No. 619,399
8 Claims. (Cl. 117—37)

1. In a method of electrostatic printing which comprises: preparing a liquid developer composition consisting essentially of a finely divided electrostatically attractable solid opaque pigment material having a particle size not greater than 40 microns and which is dispersed in a high resistivity organic liquid having a specific resistivity of at least about 10^9 ohm centimeters, and bringing said liquid delevoper composition into contact with a member bearing an electrostatic charge image whereby said charge image is converted to a visible image by selective deposition thereon of the solid charged particles in said dispersion, the improvement which comprises modifying said liquid developer composition by including therein an organic material which is soluble in said liquid at elevated temperatures and which is relatively insoluble in said liquid at temperatures of about 20° C. and which is electrostatically attractable when in solid form and which comprises a solid particulate material of the group of materials consisting of polyamides and shellac.

2,899,336

RUST PROOFING PROCESS

George R. Peck, Corpus Christi, Tex., assignor of one-third to L. W. Wolford, Sr., and one-third to Duane C. Harper, both of Corpus Christi, Tex.

No Drawing. Application June 19, 1956
Serial No. 592,247
1 Claim. (Cl. 117—49)

A rust proofing process comprising subjecting metal having an iron content to a freezing temperature until the metal is covered by frost thereby excluding all moisture and air from the metal, then removing all frost and moisture from the pores of the metal, then immersing the metal in an oil bath having a graphite base, then increasing the temperature of the oil bath and metal to a higher degree of temperature than the metal eventually is to be subjected thereby changing any remaining moisture in the metal to steam and in this manner extruding the remaining moisture from the metal, the temperature of the oil and metal also causing expansion to impregnate and encircle each molecule of the metal and to give each molecule a protective film of oil, and finally removing the metal from the bath of oil and subjecting the metal to normal atmospheric temperature.

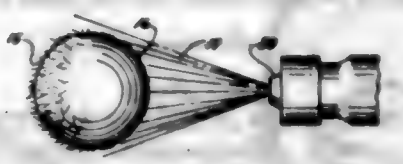
2,899,337

FIBROUS ABSORBENT BALL AND METHOD OF PRODUCING SAME

William H. Bird, Bernal Brook, and Oliver S. Plantinga, Milltown, N.J., and James R. Newsome, Clarendon Hills, Ill., assignors to Johnson & Johnson, a corporation of New Jersey

Application March 15, 1955, Serial No. 494,586
10 Claims. (Cl. 117—64)

1. A light-weight fibrous absorbent ball having density at least about 3 but not greater than about 20 grains per cubic inch so as to be coherent but readily compressible with finger pressure, the surface fibers of said product being bonded with a solid binder in amount to restrain and substantially prevent protrusion of surface



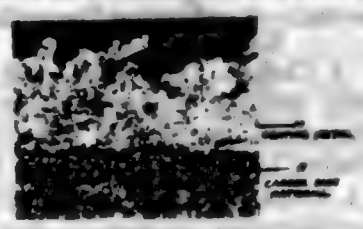
fibers, the amount of said agent being at least .007 but not greater than about .05 milligram per square centimeter of surface so as to preserve the compressibility of the product.

2,899,338

THERMAL ELEMENT

Claus G. Goetzel, Yonkers, N.Y., Nicholas J. Grant, Winchester, Mass., Leonard P. Skolnick, New York, N.Y., and Jack A. Yoblin, Roseville, Mich., assignors to Sintercast Corporation of America, Yonkers, N.Y., a corporation of New York

Application January 28, 1955, Serial No. 485,568
12 Claims. (Cl. 117—65)



1. In a method for producing a strongly coated thermal element by contacting a ductile heat resistant metal coating material with a composite base material comprising substantially refractory metal compound grains selected from the group consisting of carbides, borides, nitrides and silicides of titanium, zirconium, chromium, molybdenum, tungsten, vanadium, columbium and tantalum, and mixtures thereof, distributed through a matrix of a heat resistant binder metal containing a low melting phase based on the binder metal and the refractory metal compound and wherein the coating and composite materials in contact with each other are heated to an elevated temperature to effect the bonding of one with the other, the improvement which comprises maintaining the solidus temperature of at least one of the materials not higher than 100° C. below its lowest melting point for a time not exceeding 120 minutes, shorter times being employed when the melting points of the materials being joined are close together, whereby excessive diffusion of embrittling agents into the coating material is greatly inhibited.

2,899,339

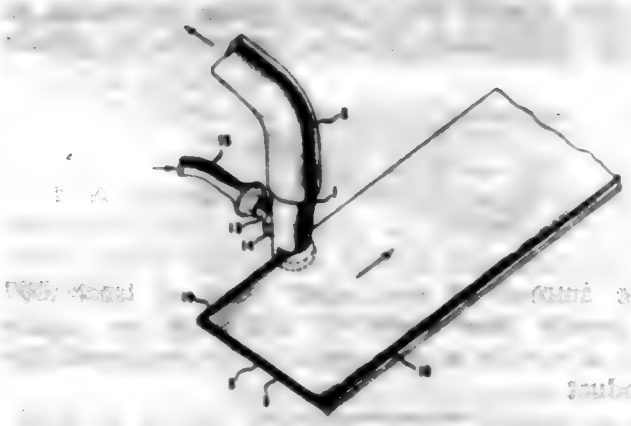
PROCESS AND APPARATUS FOR APPLYING A COATING TO A MOVING WEB

Alexander Bernard Rakus, Rochester, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application August 23, 1957, Serial No. 679,877
7 Claims. (Cl. 117—102)

1. The process of coating photographic material onto a flexible support comprising applying to said support a thin layer of a viscous aqueous solution containing a water-permeable colloid, applying a vacuum of from 10 to 200 inches of water locally in a zone at each lateral edge of said layer, said vacuum being directed

at an angle from 60° to 90° from the plane of the support, simultaneously with the application of vacuum



introducing a jet of water into each said zone adjacent each said lateral edge, and subsequently drying said coated layer.

2,899,340

METHOD OF RENDERING TEXTILE MATERIALS FUNGICIDAL AND THE PRODUCTS THEREBY PRODUCED

Sylvan I. Cohen, Flushing, and Martin S. Faust, Ossining, N.Y., assignors to Gallowhur Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Application December 27, 1954
Serial No. 477,922
4 Claims. (Cl. 117—138.5)

1. A two-step method of rendering a textile material durably mildewproof, germicidal and fungicidal, which comprises forming in situ in and on the fibers of the textile material a water-insoluble quaternary ammonium 2-mercaptobenzothiazolate by passing the textile material successively in either order through separate aqueous solutions, one of which is an aqueous solution of a germicidal quaternary ammonium compound and the other of which is an aqueous solution of a water-soluble 2-mercaptobenzothiazolate, said quaternary ammonium compound synergistically reacting, upon contact with said 2-mercaptobenzothiazolate to form said quaternary ammonium 2-mercaptobenzothiazolate which becomes an integral and leach-resistant part of the textile material.

2,899,341

TEXTILE FINISHING PROCESS

Timothy Leslie Dewson, Manchester, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application June 21, 1957
Serial No. 667,294
12 Claims. (Cl. 117—138.8)

1. A process for imparting a durable, stiff finish to polyamide textile materials which comprises treating said materials with an aqueous solution consisting essentially of the ammonium salt of an acrylic acid homopolymer, water, and a polyhydric alcohol, removing excess solution from the fabric, and drying and heating the impregnated material at an elevated temperature above 150° C.

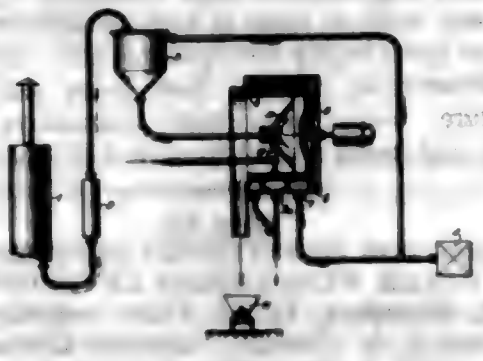
2,899,342

PROCESS AND APPARATUS FOR CLARIFYING AND DESUGARISING A CARBONATION SLUDGE

Walter Buddeberg, Sterneberg, and Paul Matthias Franz Heinrich Nebel, Braunschweig, Germany, assignors to Firma Krauss-Maffei Aktiengesellschaft, Munich-Allach, Germany

Application June 2, 1954, Serial No. 434,818
5 Claims. (Cl. 127—56)

1. Process for treating sugar juice containing carbonation sludge comprising concentrating said sludge to provide a minor portion of thick juice and a major portion of sludge juice, simultaneously and continuously centrifuging and filtering the sludge juice portion to provide a thick juice layer and a sludge layer, continuously separating said thick juice layer from the sludge layer, combining the separated thick juice and said minor portion of thick juice, filtering the combined portions of thick juice, and desugarizing the residual sludge layer.



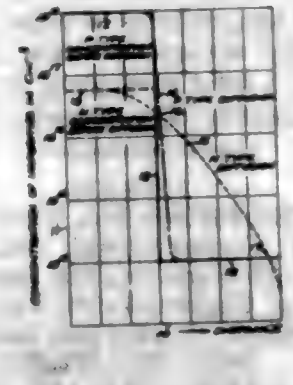
2,899,343

JUNCTION TRANSISTORS AND METHODS FOR MAKING THEM

Hermann Statz, Wayland, Mass.

Continuation of application Serial No. 432,644, May 27, 1954. This application September 16, 1957, Serial No. 684,053

11 Claims. (Cl. 148—1.5)

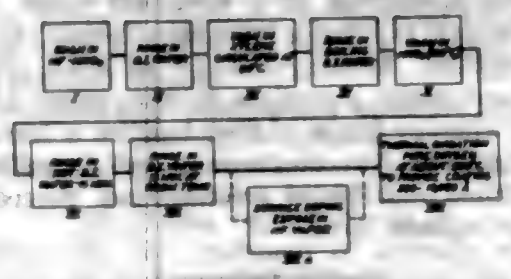


1. The method of making a semiconductor device, said method comprising growing a length of crystal from a melt of semiconductor material having a concentration of a first electrical conductivity type determining impurity therein to form a first region in said crystal in which said first type impurity is the predominant impurity, introducing a concentration of a second electrical conductivity type determining impurity and an additional concentration of said first type impurity into said melt, the concentration of said second type impurity being insufficient to overcome the concentration of said first electrical conductivity type determining impurity in a subsequently grown portion of said crystal, said first and second type impurities having substantially different diffusion constants, continuing the growth of said crystal to form a second region therein in which both types of said impurities are present but in which the concentration of said first type impurity is greater than the concentration of said second type impurity, maintaining said crystal at a temperature below the melting point of said crystal for a time sufficient to cause said second type impurity to diffuse within said crystal to convert a portion of at least one of said regions into a third region intermediate said first two regions in which the concentration of said second type impurity predominates over the concentration of said first type impurity, and establishing electrical connections to each of said regions.

ing material, which method comprises bringing the webs

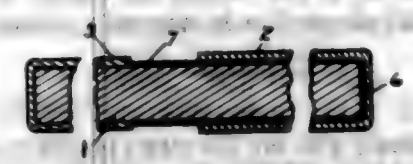
2,899,352

2,899,344
FABRICATION OF SEMICONDUCTOR DEVICES HAVING STABLE SURFACE CHARACTERISTICS
Martin M. Atalla, Mountainside, Edwin J. Scheibner, Westfield, and Ellison Tannenbaum, Murray Hill, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application April 30, 1958, Serial No. 732,826
6 Claims. (Cl. 148—1.5)



1. The method of providing an electrically stable semiconductor surface comprising washing a body of semiconductive material in an acid solution, rinsing said body in deionized water, immersing said body in a hydrocarbon solvent selected from the group consisting of benzene and xylene at about 100 degrees centigrade, rinsing said body in boiling deionized water, immersing said body in nitric acid at about 100 degrees centigrade for a short time, rinsing said body in circulating deionized water at about 90 degrees centigrade, then rinsing said body in circulating deionized water at room temperature, and immediately placing said body in a stream of substantially pure oxygen at a temperature of about 900 degrees centigrade for a sufficient time to provide an oxide film on the surfaces of said body the order of at least 200 Angstroms thickness.

2,899,345
METHOD OF MAKING TITANIUM DIOXIDE CAPACITORS
Howard I. Ochry, Erie, Pa., assignor to Erie Resistor Corporation, Erie, Pa., a corporation of Pennsylvania
Application March 23, 1953, Serial No. 344,923
4 Claims. (Cl. 148—6.3)



1. The method of making capacitors with a dielectric of titanium dioxide which comprises coating part of the area of a metallic titanium electrode with a gold coating in direct contact with the titanium, coating another part of the area of the metallic titanium electrode with a silver coating, and heating the coated titanium electrode with the coatings thereon in an oxidizing atmosphere to form a titanium dioxide film in situ under the silver coating by diffusion of oxygen through the silver.

2,899,346
CAST IRON HEAT TREATMENT
Lucien Pérus, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
No Drawing. Application February 15, 1955
Serial No. 488,428
Claims priority, application France April 30, 1954
6 Claims. (Cl. 148—21.5)

1. A method of heat treating white iron castings which comprises subjecting a casting of said white iron to austenization with heat at a temperature of approximately 840° C., cooling the casting in still air sufficiently for the surface temperature of the casting to cool to a temperature in the order of 650° C. to 700° C., quenching the casting to form martensite, subjecting the casting to nucleation tempering with heat at a temperature in the order of 450° C., subjecting the casting to graphitization with heat at a temperature between 800° C. to 950° C. for a period of time in the order of two hours.

2,899,347
METHOD OF MAKING BAG CLOSURE
Harold V. Kindseth, Minneapolis, Minn., assignor to Bemis Bro. Bag Company, Minneapolis, Minn., a corporation of Missouri
Application July 21, 1954, Serial No. 444,823
4 Claims. (Cl. 154—102)

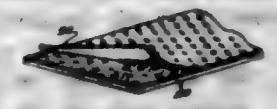
1. A method of providing a unitary bag closure which comprises punching a row of spaced apart perforations in at least one cut end of a tubular bag blank adjacent to the end edge thereof, continuously extruding a strip of hot softened thermoplastic resinous material to opposite sides of said perforated bag end over the perforations, pressing said thermoplastic resinous material through said perforations while said strip is in a heat softened condition to bond the resinous material to itself and thereafter trimming the ends of said strip beyond the side edges of the bag.

2,899,348
CEMENTS FOR BONDING HIGH POLYMER SHEETS TO EACH OTHER AND METHOD OF USING SAME
Sterling S. Sweet and Maurice H. Van Horn, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Application April 30, 1954
Serial No. 426,906
10 Claims. (Cl. 154—136)

1. A new composition of matter comprising a compound selected from the group consisting of cellulose acetate and cellulose triacetate dissolved in a solvent selected from the group consisting of trifluoroacetic acid and dichloroacetic acid and their mixtures.

6. The method of cementing an article of polyethylene glycol terephthalate to an article selected from the group consisting of gelatin, ethyl cellulose, cellulose acetate butyrate, regenerated cellulose, cellulose acetate propionate and polyethylene glycol terephthalate which comprises placing between the articles to be joined a cement comprising trifluoroacetic acid and pressing the articles together.

2,899,349
METHOD FOR BONDING LINER MATERIALS
Albert S. Jenkins, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Original application January 26, 1953, Serial No. 333,868. Divided and this application February 8, 1956, Serial No. 564,163
6 Claims. (Cl. 154—136)



1. The method of bonding together two webs of sheet material, one of which has a surface coated with a bond-

diene against oxidative deterioration of an antioxidant selected from the group consisting of hydrogen and lower

ing material, which method comprises bringing the webs together with one overlying and in contact with the other with their meeting faces extending in the same plane and with the bonding material between the webs at said plane, drawing the webs forwardly in intermittent stepwise fashion through a heating and pressing zone while maintaining said webs in said plane and in said superimposed relation, simultaneously applying heat and pressure to an extended surface area of one of the exterior surfaces of the superimposed webs within the said heating zone and thereby heating both webs and the interposed bonding material by conduction of the heat through the webs and bonding material while substantial surface areas of the webs and the bonding material are held together under said pressure, regulating and controlling the supply of heat so as to bring the bonding material to a temperature at which it is softened sufficiently to bond the webs together, intermittently advancing successive portions of said webs to a second pressing zone, and while the webs and bonding material are at substantially said temperature applying to the webs localized pressure substantially greater than said first mentioned pressure and with said localized pressure applied at and confined to a multiplicity of predetermined isolated small areas distributed over the area of the webs in a predetermined pattern and thereby bonding the webs together at said isolated areas.

2,899,350

PROCESS FOR STORING AND DIGESTING OF FIBROUS AGRICULTURAL RESIDUES

Clarence Birdseye, Gloucester, Mass., assignor, by mesne assignments, to Process Evaluation and Development Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application July 16, 1954
Serial No. 443,959
7 Claims. (Cl. 162—90)

1. A process for storing and simultaneously digesting fibrous material of the Graminae family for subsequent manufacture into paper pulp, comprising the steps of evenly and thoroughly impregnating the raw material with an alkaline digestant in sufficient quantity to raise the pH of the material above 8.0 so that it will not become acid in storage, adjusting the moisture content to 25–80% based on the dry weight of the fibrous material, storing the impregnated material in bulk for a period in excess of 30 days while maintaining it below cooking temperature, and removing the material from storage before its pH has fallen to 7.0 and after approximately 20% of the original dry weight of the fiber has been dissolved by the alkaline digestant.

2,899,351

THERMOPLASTIC PAPER

Edward A. Morse, Rahway, N.J., assignor to Personal Products Corporation, a corporation of New Jersey

No Drawing. Application February 25, 1957
Serial No. 641,841
6 Claims. (Cl. 162—146)

1. Thermoplastic paper comprising from about 20 percent to about 70 percent by weight of cellulosic fibers, from about 60 percent to about 10 percent by weight of synthetic vinyl resin fibers, said vinyl resin being a copolymerization product of from about 40% to about 60% vinyl chloride and from about 60% to about 40% acrylonitrile, and from about 20 percent to about 70 percent by weight of a second vinyl resin, said second vinyl resin being a copolymerization product comprising vinyl chloride, vinyl acetate and a material selected from the group consisting of the lower aliphatic unsaturated dibasic acids and anhydrides thereof, said vinyl chloride and said vinyl acetate being in monomeric proportions of from about 4:1 to about 40:1 and said dibasic acids and anhydrides being present in an amount from about 0.1% to about 3% by weight.

2,899,352

MANUFACTURE OF STRUCTURAL BOARD FROM RUMEN

Harland H. Young, Western Springs, and John L. Ohlson and Gustave Barshefsky, Chicago, Ill., assignors to Swift & Company, Chicago, Ill., a corporation of Illinois

No Drawing. Application September 24, 1953
Serial No. 382,186
12 Claims. (Cl. 162—148)

1. In the production of a structural board, wherein rumen is utilized as a major ingredient thereof, the method which comprises: forming a slurry of stock, said stock including as a major ingredient thereof rumen; felting the said stock whereby a mat of fiber bundles is formed, said mat being suitable for compressing; and thereafter pressing said felted mat under pressures not exceeding 300 pounds per square inch.

2,899,353

FLEXIBLE PAPER WEB AND PROCESS OF PRODUCING SAME

Edward William Engel, New Brunswick, and Isaac Richard Dunlap, Cranbury, N.J., assignors, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey

No Drawing. Application July 16, 1953
Serial No. 368,515
16 Claims. (Cl. 162—165)

1. A process of producing felted, fibrous webs, comprising the steps of mixing with a water dispersion comprising from about 0.05 to about 3 percent by weight of fiber, an anionic colloidal dispersion of a hydrophobic rubbery polymer and an alkaline hydrophilic condensation product of a phenol with formaldehyde in an aqueous medium, said phenol condensation product being dispersible in water without the aid of dispersing agents other than those formed in said condensation; precipitating said hydrophobic and hydrophilic polymers onto said fibers under non-acid conditions by addition of the organic water-soluble polymer formed by reacting a guanidine compound selected from the group consisting of guanidine and the water soluble salts of guanidine with formaldehyde under basic conditions; and subsequently forming a web at a pH within the range in which the anonic colloidal dispersion is normally stable.

2,899,354

DECYLTHIOACETIC ACID DIETHANOLAMIDE AS FUNGICIDAL AGENT

Alois Kleemann, Basel, and Jakob Binder, Riehen, near Basel, Switzerland, assignors to J. R. Geigy A.-G., Basel, Switzerland, a Swiss firm

No Drawing. Application May 7, 1956
Serial No. 582,950
Claims priority, application Switzerland May 5, 1955
1 Claim. (Cl. 167—22)

An agent for the control of fungi comprising as an active ingredient decylthioacetic acid diethanolamide in a fungicidal amount, and a fungicide adjuvant as a carrier therefor.

2,899,355

METHOD FOR COMBATING FUNGUS AND FUNGICIDAL COMPOSITION THEREFOR

Edward R. Degginger, North Syracuse, N.Y., and Everett E. Gilbert, Morris Township, Morris County, N.J., assignors to Allied Chemical Corporation, New York, N.Y., a corporation of New York

No Drawing. Application May 1, 1957
Serial No. 656,182
9 Claims. (Cl. 167—30)

1. A fungicidal composition adapted for combining with a diluent for application, which comprises tetrachlorocyclopentadiene as active ingredient, and a minor amount sufficient to stabilize the tetrachlorocyclopenta-

2,899,364

METHOD OF RECOVERING HYDRAZINE

least a portion of the combustible gases in said second

diene against oxidative deterioration of an antioxidant of the group consisting of alpha naphthol and 2,6-ditertiarylbutyl-para-cresol.

2,899,356

CYANACETHYDRAZIDE COMPOSITIONS FOR TREATING LUNGWORMS AND METHODS FOR USING SAME

Norman Greenhalgh and John Kenneth Walley, Manchester, England, assignors to Imperial Chemical Industries Limited, Millbank, London, England, a corporation of Great Britain

No Drawing. Application April 29, 1957
Serial No. 655,462
Claims priority, application Great Britain
September 21, 1956
12 Claims. (Cl. 167—53.1)

1. Process for the treatment of animals with worm infestations which comprises introducing into the said animals an effective amount of cyanacethydrazide.

2,899,357

ORAL PHARMACEUTICAL COMPOSITION FOR ENHANCED ABSORPTION OF THE THERAPEUTICALLY ACTIVE QUATERNARY AMMONIUM SALT INGREDIENT

Chester John Cavallito and Thomas Beniah O'Dell, Decatur, Ill., assignors to Irwin, Neisler and Company, Decatur, Ill., a corporation of Illinois

No Drawing. Application August 28, 1956
Serial No. 605,199
3 Claims. (Cl. 167—55)

1. A pharmaceutical composition for oral administration including one part by weight of a physiologically active, non-toxic, systemically absorbable quaternary ammonium salt in combination with between about 0.5 and 3.0 parts by weight of a substantially biologically inert bis-quaternary ammonium salt.

2,899,358

BLOOD ANTICOAGULANT COMPOSITION AND PROCESS

Nathan Sperber, Bloomfield, N.J., assignor to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Application February 23, 1956
Serial No. 567,866
3 Claims. (Cl. 167—65)

1. A blood anticoagulant composition in dosage form comprising a solid pharmaceutically acceptable carrier and from about 25 mg. to about 250 mg. of 2-(p-methoxyphenyl)-1,3-indandione.

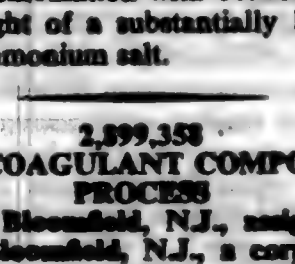
2,899,359

SUBSTITUTED-2,3,4,5 TETRAHYDRODIAZEPINE COMPOUNDS AND PHARMACEUTICAL COMPOSITIONS THEREWITH

Otis E. Fancher and Gust Nichols, Elkhart, Ind., assignors to Miles Laboratories, Inc., Elkhart, Ind., a corporation of Indiana

No Drawing. Application January 23, 1957
Serial No. 635,608
8 Claims. (Cl. 167—65)

1. An article of manufacture comprising a quantity of from about 25 to 300 milligrams of a compound selected from the group consisting of diazepine derivatives having the general formula:



wherein R and R_6 are hydrogen, R_1, R_2, R_3, and R_4 are selected from the group consisting of hydrogen and lower alkyl, and non-toxic water-soluble salts thereof, with a pharmaceutical carrier, in dosage unit form.

2,899,360

EXTRACTION OF VITAMIN B_{12} FROM MICROBIAL MATERIALS

Robert A. Fisher, Bakersfield, Calif., assignor, by mesne assignments, to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Application December 17, 1954
Serial No. 476,089
12 Claims. (Cl. 167—81)

1. In a method of extracting vitamin B_{12} from an organic solvent extract of microbial materials containing vitamin B_{12}, the steps which comprise evaporating said organic solvent extract to not in excess of about 15% of its original volume, then adding thereto a quantity of water sufficient to effectuate separation of undesired impurities, and then removing the desired liquid portion containing the vitamin B_{12} from said undesired impurities.

2,899,361

SOPORIFIC CAPSULE

Shelby Clyde McMillion, Detroit, Mich., assignor to R. P. Scherer Corporation, Detroit, Mich., a corporation of Michigan

No Drawing. Application June 23, 1952
Serial No. 295,117
2 Claims. (Cl. 167—83)

1. A gelatin capsule containing a mixture comprising 3-methyl-pentyne-ol-3 and a vehicle consisting of polymers of ethylene glycol having an average molecular weight of from 400 to 6000, which vehicle is liquid at capsulating temperature, said capsule having walls made up of gelatin and sorbitol together with water, the ratio of gelatin to sorbitol ranging from 3:1 to 1:1½.

2,899,362

HEMOSTATIC SPONGES AND METHOD OF PREPARING SAME

George Madison Sieger, Jr., Pearl River, William Valentine, Nanuet, and Joseph Francis Weidenheimer, Pearl River, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application June 12, 1957
Serial No. 665,136
10 Claims. (Cl. 167—84)

1. A method of making a hemostatic surgical product which comprises the steps of preparing an aqueous solution containing from 5 to 15 percent by weight of total solids comprising a mixture of cooked starch and gelatin in approximately the ratio of 40 to 80 percent by weight of starch and 20 to 60 percent by weight of gelatin and incorporating air into said solution to form a foam having a volume of from about two to seven times that of the solution, and thereafter drying said foam.

2,899,363

TREATMENT OF MICROSCOPE SPECIMEN SLIDES

Herbert E. Nieburgs, New York, N.Y.

No Drawing. Application June 3, 1957
Serial No. 663,007
8 Claims. (Cl. 167—84.5)

1. A method of treating slides having thereon smears of body cells for microscopic examination which comprises providing a solution of a water soluble synthetic film forming material in an ether-alcohol solvent, dropping said solution on said slide to fix said cells, allowing said solvent to evaporate, thereafter treating said slide with an aqueous liquid to dissolve said material, and staining said slide preparatory to microscopic examination.

2,899,368

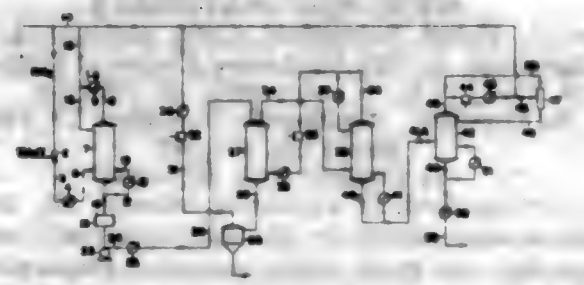
METHODS OF SEALING ANODIC ALUMINIUM

ternally circulating stream of liquid polychlorohydrocarbon, maintaining the chlorine feed rate and the chlorina-

is about 3% by weight.

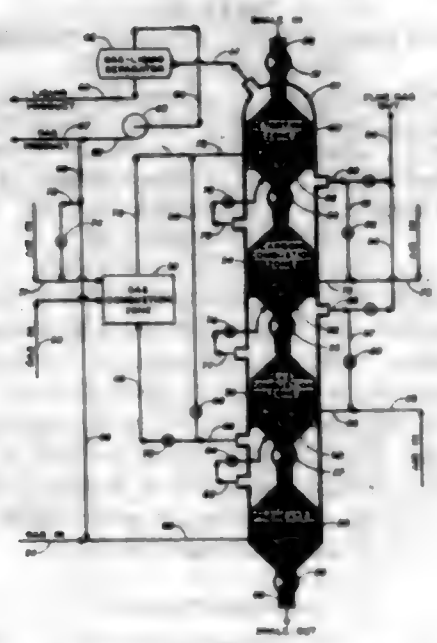
amount sufficient to stabilize the tetrachlorocyclopenta-

2,899,364
METHOD OF RECOVERING HYDRAZINE
Harry H. Sisler, Columbus, Ohio, and Forrest R. Harley, Glen Burnie, Md., assignors to The Ohio State University Research Foundation, Columbus, Ohio
Application August 30, 1955, Serial No. 531,470
8 Claims. (Cl. 202—50)



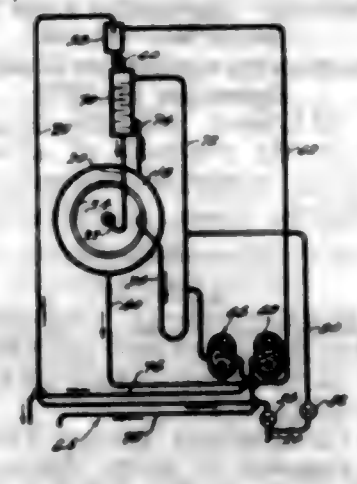
1. In the production of hydrazine by the reaction of chloramine with liquid ammonia under anhydrous conditions wherein there is obtained a product mixture consisting essentially of hydrazine and ammonium chloride dissolved in liquid ammonia, the method of recovering anhydrous hydrazine therefrom comprising continuously distilling from said product at an elevated temperature not above 130° C. the equilibrium vapors of hydrazine and ammonia, continuously removing said vapors from contact with the remaining liquid, fractionating said vapors into hydrazine and ammonia, and continuously returning ammonia to said product mixture to maintain the ammonium chloride in solution and to replace the ammonia removed by distillation.

2,899,365
SHALE RETORTING
John W. Scott, Jr., Ross, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Application September 20, 1956, Serial No. 611,009
2 Claims. (Cl. 202—87)



1. Apparatus for removing hydrocarbons from retortable solids, comprising a retorting zone, a first burning zone, a gas preheating zone and a second burning zone, means for passing said solids successively through said retorting zone, first burning zone and preheating zone, means for passing combustible product gases from said retorting zone to said preheating zone, means for passing preheated gas from said preheating zone to said first burning zone, means for passing preheated gas from said preheating zone to said second burning zone, means for selectively burning in said first burning zone carbon from solids therein and gas, means for burning in said second burning zone out of contact with said retortable solids at least a portion of the combustible gases in said second burning zone, and means for passing the gaseous effluent from said second burning zone, along with unburnt gases from the preheating zone, to the retorting zone.

2,899,366
COMPRESSION DISTILLATION
Kenneth C. D. Hickman, Rochester, N.Y.
Application May 25, 1955, Serial No. 511,067
16 Claims. (Cl. 202—205)



1. In a compression still having an evaporating chamber, a condensing chamber, a heat exchange and phase separation barrier separating said chambers and providing for the transfer of heat between the fluid therein, means for withdrawing vapor from said evaporating chamber, compressing said vapor and discharging the same into said condensing chamber, and means for supplying liquid feed to said evaporating chamber; means including a liquid trap for withdrawing residue from said evaporating chamber, a communication between said condensing chamber and said residue withdrawing means by means of which said condensing chamber is continuously purged by said residue withdrawing means during withdrawal of residue by said residue withdrawing means, means including a liquid trap for withdrawing distillate from said condensing chamber, and means including a communication between said feed supplying means and said distillate withdrawing means for degassing said feed, said residue and distillate withdrawing means and communications including provisions for preventing flow of fluid thereby between said condensing and evaporating chambers.

2,899,367
METHOD OF PREPARING SURFACES FOR ELECTROPLATING
Lloyd N. Veeder, Norwalk, Calif., assignor to North American Aviation, Inc.
No Drawing. Application December 31, 1956
Serial No. 631,483
10 Claims. (Cl. 204—32)

1. A method of preparing a metal-containing surface of a workpiece for electroplating with a metal in a non-aqueous electroplating bath, comprising cleaning said workpiece with an aqueous cleaning solution in a manner so as to leave an aqueous film on said surface, applying an organic composition consisting essentially of (1) 5–95 weight percent of at least one compound selected from the class consisting of organic acids having from about 9 to about 36 carbon atoms, and organic ether compounds having from about 8 to about 22 carbon atoms, and (2) 95–5 weight percent of a ketone having from 3 to 4 carbon atoms, said composition being applied so as to form a coating on said surface and thereby displacing said aqueous film, and immersing said composition-coated workpiece in a non-aqueous plating bath.

2,899,368

METHODS OF SEALING ANODIC ALUMINIUM OXIDE COATINGS

Roy C. Spooner, Kingston, Ontario, Canada, assignor to Aluminium Laboratories Limited, Montreal, Quebec, Canada, a corporation of Canada

No Drawing. Application July 29, 1957
Serial No. 674,562
Claims priority, application Great Britain July 30, 1956
5 Claims. (Cl. 204—35)

1. A method of sealing anodically formed aluminium oxide coatings on a metal selected from the group consisting of aluminium and aluminium-base alloys comprising immersing the coated metal in a bath containing an aqueous solution of at least one of the group consisting of sodium molybdate, potassium molybdate and ammonium paramolybdate, the said solution being held at a pH value within the range 5.6–8.0 and a temperature above 90° C.

2,899,369

SPECIAL ELECTROLYTIC PROCESSING

Harvey L. Slatin, New York, N.Y., assignor, by mesne assignments, to Titanx Associates, New York, N.Y., a partnership of New York

No Drawing. Application July 24, 1957
Serial No. 673,773
14 Claims. (Cl. 204—64)

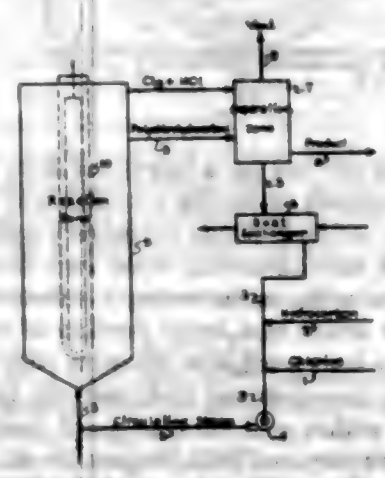
1. A process for the electrolytic production of a pure and ductile metal of the group columbium and tantalum comprising electrolyzing between an anode and a cathode a molten electrolyte comprising a solvent mixture of at least one halide of the group of alkaline earth halides and at least one oxide of the group of alkaline earth oxides, and also containing a substantial amount of at least one oxide of the said group columbium and tantalum, thereby discharging oxygen at said anode and depositing said pure and ductile metal in large crystalline form on said cathode.

2,899,370

PHOTOCHEMICAL CHLORINATION PROCESS

David S. Rosenberg, Niagara Falls, N.Y., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

Application April 16, 1956, Serial No. 578,216
10 Claims. (Cl. 204—163)



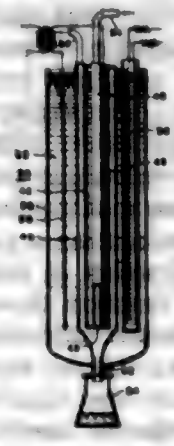
1. A continuous process for the photochemical chlorination of aliphatic and alicyclic hydrocarbons and partially chlorinated hydrocarbon derivatives thereof, containing three to eight carbon atoms in the molecule inclusive, which comprises: maintaining a circulating stream of liquid polychlorohydrocarbon in communication with a reaction zone containing the main body of liquid polychlorohydrocarbon said stream being external to said reaction zone; separately injecting the reactants consisting of liquid chlorine and liquid hydrocarbon into said externally circulating stream of liquid polychlorohydrocarbon, maintaining the chlorine feed rate and the chlorinator temperature such that 90 percent of the reactants entering said reaction zone are in the liquid phase; passing the mixture so produced through an irradiated reaction zone to effect chlorination of the organic feed; withdrawing a portion of said externally circulating stream leaving the reaction zone and recovering said portion as a product.

2,899,371

METHOD OF PREPARING ORGANO-SILICON COMPOUNDS

Gosta C. Akerlof, Princeton, N.J., assignor to Aerochem Research Laboratories, a corporation of Maryland

Application May 21, 1957, Serial No. 660,511
15 Claims. (Cl. 204—165)



1. Method of making silanes comprising passing a low temperature electrical discharge of an operating temperature below 200° C. through a vapor phase mixture of a silicon halide and a hydrocarbon in which the mol ratio of said hydrocarbon to said halide is at least 2 to 1.

2,899,372

METHOD OF MANUFACTURING PHOTOCONDUCTIVE AND RECTIFYING ELEMENTS

Jacques Marie Noël Hamlet, Paris, France, assignor to Centre d'Etudes et de Developpements de l'Electronique, CEDEL, Paris, France

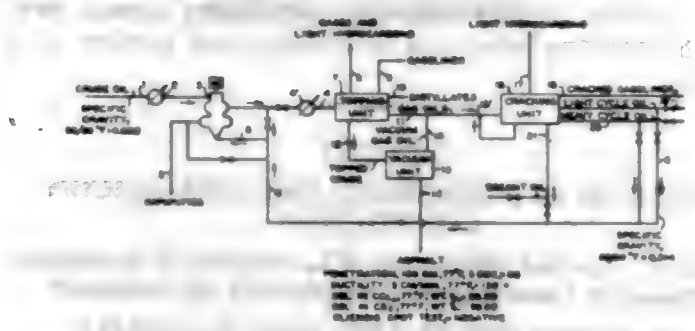
Application December 28, 1956, Serial No. 631,225
Claims priority, application France December 30, 1955
6 Claims. (Cl. 204—192)

1. A method of manufacturing photoconductive and rectifying elements of the metal sulfide and oxide kinds, which comprises the steps of preparing upon an intermediary transfer base plate a layer of the metallic component of the required semi-conductor, progressively transferring through a cathodic projection process the particles of part at least of the said metal layer onto a conducting base plate within an atmosphere selected from the group consisting of hydrogen sulfide and oxygen, heating the said base plate during the said transfer step, up to a temperature ensuring the crystallisation of the product deposited thereupon, and subsequently depositing a conductive coating over part at least of the semi-conductor layer of the said product upon the said base plate.

tion from the point of spraying, externally cooling said stationary zone to a temperature below the condensation

of 0.5 to 10 volumes/volume/hour, and forming a product of said reforming containing a maximum of 2 weight

2,899,373
CRUDE OIL CENTRIFUGING PROCESS
George J. Stoeves, Woods Cross, Utah, assignor to Phillips Petroleum Company, a corporation of Delaware
Application September 2, 1955, Serial No. 532,250
8 Claims. (Cl. 208—39)



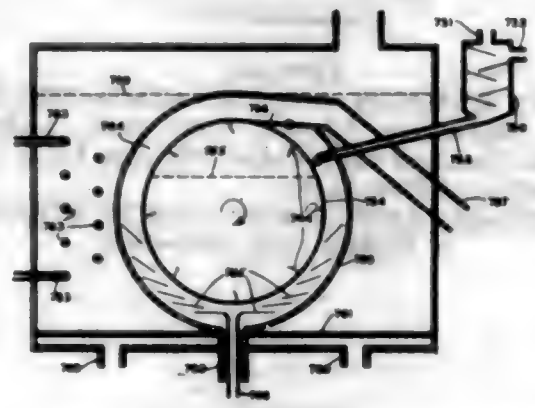
3. A process comprising passing a crude petroleum oil containing impurities removable by centrifugation into a centrifugation zone; also separately passing into said zone a separate hydrocarbon stream described hereinafter; centrifuging the resulting crude oil-hydrocarbon mixture in said zone at a temperature below about 100° F. to separate said impurities; withdrawing impurities from said zone; passing remaining crude oil-hydrocarbon admixture from said zone to a topping zone, and topping said crude oil therein; separating a gas oil fraction and a residual topped crude fraction in said topping zone and withdrawing each said fraction therefrom; passing said residual fraction to a vacuum reducing zone and therein separating same into a residual asphalt and a gas oil fraction; passing at least one of said gas oil fractions to a cracking zone and therein cracking same to produce cracking product including a light cycle oil; cycling said light cycle oil to said centrifugation zone as the said hydrocarbon fraction added thereto, above described, whereby the amount of crude oil centrifuged per unit time is markedly increased, and recovering said asphalt as product.

2,899,374
METHODS AND APPARATUS FOR HANDLING PARTICULATE SOLIDS
Paul L. Gomory, Bethesda, Md., assignor to Phillips Petroleum Company, a corporation of Delaware
Application March 6, 1956, Serial No. 569,760
10 Claims. (Cl. 208—47)

1. In a process which comprises passing a confined fluid stream of carrier fluid from a first point to a second point and introducing a confined stream of particulate solids into confluence with said fluid stream at a point intermediate said first and second points, the method which comprises introducing said stream of particulate solids substantially concentrically into a flowing annular portion of said confined fluid stream, introducing a plurality of streams of secondary fluid tangentially to said flowing stream of carrier fluid near said point of confluence, each of said plurality of streams being introduced at spaced intervals along the line of flow of said flowing stream of carrier fluid, th flow rate of each of said plurality of streams being adjusted individually in order to aid in obtaining a smooth confluence of said flowing stream of carrier fluid and said stream of particulate solids and to aid in minimizing migration of particulate solids to the periphery of said flowing stream of carrier fluid, said carrier fluid being a hydrocarbon to be catalytically cracked, said particulate solids stream being a stream of hot fluidizable particulate cracking catalyst and said secondary fluid being a readily cokable oil to be subsequently catalytically cracked, wherein upon injection of said readily cokable oil some cracking occurs resulting in the formation of carbonaceous material, at least a portion of which adheres to inside walls of a conduit confining said carrier fluid near said point of confluence and wherein said carbonaceous material which adheres to said walls protects said walls from excessive abrasion.

7. In a process which comprises passing a confined fluid stream of carrier fluid from a first point to a second point and introducing thereinto concentrically a confined stream of particulate solids into confluence with said fluid stream at a point intermediate said first and second points, the method which comprises providing at the point of confluence and surrounding said point of confluence an annular zone of said fluid stream, said annular zone extending from said point of confluence towards said first point a substantial distance and having an internal radius gradually decreasing in the direction of said first point to the end of said annular zone at which point said radius is substantially zero, introducing said stream of particulate solids substantially concentrically into said annular zone, and thereafter allowing said fluid stream and said solids stream to gradually diffuse one into the other during flow to said second point.

2,899,375
HEAT TRANSFER TO BEDS OF GRANULAR SOLIDS
Merrell R. Fenske, State College, and Richard H. Criswell, Port Matilda, Pa., assignors to Esso Research and Engineering Company, a corporation of Delaware
Application December 31, 1953, Serial No. 401,495
11 Claims. (Cl. 208—48)



11. A process for coking a heavy residual hydrocarbon feed which comprises revolving a cylindrical zone about a horizontal axis within a larger stationary cylindrical zone concentric with said revolving zone and forming an annular space therewith, maintaining a substantially settled bed of granular solids in a lower portion of said revolving zone in indirect heat exchange relation with said annular space, spraying heavy liquid hydrocarbon feed onto said revolving zone within said annular space near the crest of the cylinder downstream with respect to its direction of rotation, passing a gas stream at at least 850° F. longitudinally through said revolving zone above the surface of said granular bed at a rate sufficient to maintain said revolving zone above coking temperature, impelling a minor portion of said granular solids in said bed into said hot gas stream to be dispersed therein and thence at least partially returned to said bed by gravity separation from said gas stream, said solids minor portion abstracting heat from said gas stream and imparting heat to said bed as by direct heat exchange relationships, scraping and recovering resulting solid carbonaceous residue from the revolving zone at a point removed less than one revolu-

ing both sulfur and chloride wherein the naphtha is hydrofined under conditions to remove most of said sul- comprising maintaining a gravitating bed of hot solid particulate catalyst in a reaction zone; contacting said

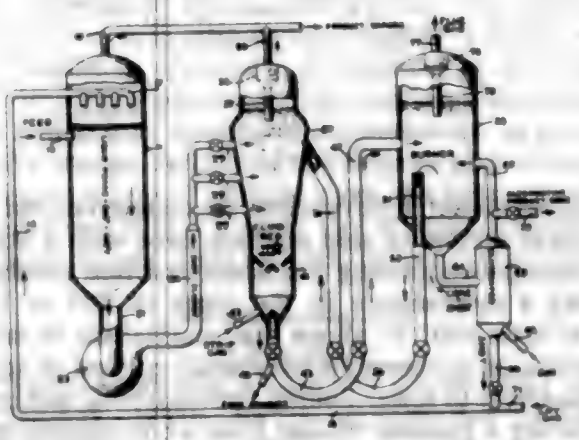
tion from the point of spraying, externally cooling said stationary zone to a temperature below the condensation temperature of the hydrocarbon vapors formed in the annular space, collecting unvaporized liquid feed portions in an intermediate collecting zone within said annular space, draining unvaporized liquid feed from a lower portion of said collecting zone, and separately draining condensed hydrocarbon vapors from a bottom portion of said annular space.

2,899,376

COKING HEAVY OILS WITH INERT SOLIDS IN TWO STAGES

Robert W. Krebs and Charles N. Kimberlin, Jr., Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application October 30, 1953, Serial No. 389,360
6 Claims. (Cl. 208—53)



1. In a combination hydrocarbon oil fluid coking process wherein an oil is initially subjected to relatively mild long time conversion conditions at a temperature in the range of 800° to 900° F. in a liquid phase delayed coking zone to cause substantial conversion to vapors and vaporizable liquid, and then the unconverted liquid residue of said oil and said vaporizable liquid are passed to the fluid coking zone of a two-vessel hydrocarbon oil fluidized solids coking system comprising a fluid coking zone and a heating zone to be further completely converted to coke and vapors; the improvement which comprises passing preheated shot of relatively large particle size downwardly through said liquid phase delayed coking zone to supply a major portion of the necessary heat thereto and to remove coke precursors therefrom, passing said shot along with the vaporizable liquid and unconverted liquid residue to said fluid coking zone whereby said shot is dried, then flowing said shot to said heating zone along with the portion of the fluidized solids transferred from said fluid coking zone to said heating zone to be reheated therein, and separating and returning said shot so reheated to said delayed coking zone.

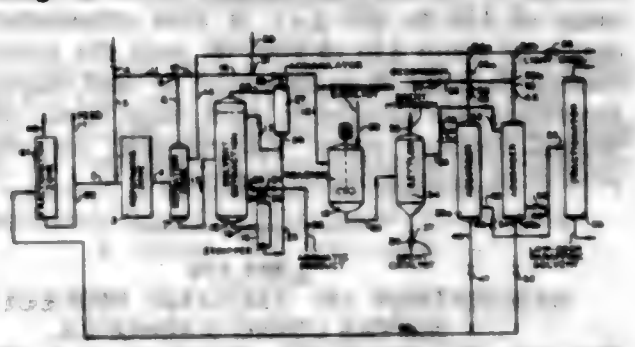
2,899,377

MANUFACTURE OF LOW ODOR SOLVENTS

Robert A. Findley, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application August 16, 1957, Serial No. 678,684
9 Claims. (Cl. 208—62)

1. An integrated process for preparing a low odor paraffinic solvent comprising the steps in combination and in sequence, as follows: catalytically reforming in a reforming zone a naphtha feed boiling in the range from 250 to 450° F. and containing 35 to 95 weight percent paraffins, 3 to 60 weight percent naphthenes, not more than 1 percent olefinic materials, not more than 25 weight percent aromatics, and small amounts of polar compounds including sulfur compounds, said reforming being effected at a temperature in the range from 600 to 1000° F., 50 to 1000 p.s.i.g. and at a space velocity of 0.5 to 10 volumes/volume/hour, and forming a product of said reforming containing a maximum of 2 weight percent naphthenes and a maximum of 1 weight percent olefins; distilling said reforming product to produce a first stream containing hydrogen and H_2S produced in the reforming step, a second stream containing the C_4 and lighter hydrocarbons, and a third stream containing the balance of said reforming product; subjecting said third stream to a solvent extraction step with a polar selective solvent, removing as extract product a stream containing substantially all of the aromatics and a paraffinic raffinate containing a maximum of 0.5 weight percent aromatics and 1 weight percent naphthenes; splitting said first stream into a fourth and fifth stream, recycling said fourth stream to said reforming zone in an amount necessary to supply from 20 to 200 standard cubic feet of hydrogen for each gallon of said naphtha feed; mixing said fifth stream with said raffinate in a



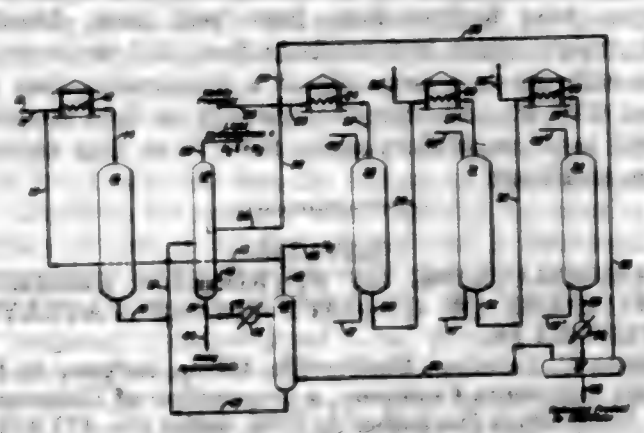
ratio to provide 1 to 1.5 cubic feet of hydrogen at standard conditions for each gallon of said raffinate; subjecting the resulting mixture to mild hydrogenation conditions in the presence of a hydrogenation catalyst at a temperature in the range from 30 to 90° F. and a residence time of 1 to 20 minutes, said conditions being effective to destroy substantially all of the aromatics and olefins present and also being effective to destroy traces of non-hydrocarbon organic compounds including organic sulfur, nitrogen and oxygen compounds; separating the hydrogenation product from said hydrogenation catalyst and removing normally gaseous materials therefrom; treating the resulting naphtha with a porous adsorbent selective for polar compounds and thereby removing traces of sulfur, nitrogen and oxygen compounds, olefins and aromatics; and recovering a solvent naphtha of low odor boiling in the range from 250 to 450° F. and having a minimum of 99 weight percent paraffins and substantially no olefins or aromatics.

2,899,378

INCREASING PLATINUM CATALYST ACTIVITY FOR HYDROFORMING HYDROFINED NAPHTHA

Marvin J. Den Herder, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Application December 27, 1954, Serial No. 477,715
3 Claims. (Cl. 208—65)



1. In the process of producing high octane number motor fuel from a low octane number naphtha contain-

said apertures of such a form that the distance between said material surrounding said aperture and the adjacent

ture is in the liquid phase until the product color and/or catalyst activity is substantially improved by contact of

ing both sulfur and chloride wherein the naphtha is hydrofined under conditions to remove most of said sulfur and chloride, then fractionated to remove water, light hydrocarbons and hydrogen sulfide and then contacted in at least initial, intermediate and final stages with platinum-on-alumina catalyst under hydroforming conditions, the method of eliminating the type of catalyst deactivation which would otherwise be caused by said chloride removal without substantially increasing the rate of cracking and carbon formation, which method comprises introducing into the hydrofined naphtha after the fractionation step and prior to the final hydroforming stage an amount of chloride in the range of about .1 to 10 parts per million, adding at least a part of said chloride to the effluent stream from the first hydroforming stage before it enters the last hydroforming stage, contacting said naphtha with said platinum-on-alumina catalyst in each of said stages under pressures in the range of 150 to 400 p.s.i. at inlet temperatures in the ranges of about 850 to 950° F. until the activity of the catalyst declines in at least one of said stages, and regenerating the catalyst in each stage when the activity thereof declines below that required for obtaining a product of desired octane number.

2,899,379

DESORPTION OF ZEOLITIC MOLECULAR SIEVES USING AMMONIA

Zigmond W. Wilchinsky, Westfield, and Charles E. Thompson, Fanwood, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application January 9, 1956, Serial No. 557,996
7 Claims. (Cl. 208—95)

5. An improved process for upgrading naphthas produced by the catalytic hydroforming of virgin naphthas, which comprises passing vaporized hydroformate into a zeolitic molecular sieve adsorption zone, maintaining a temperature in said zone below about 600° F., adsorbing straight chain hydrocarbons from said feed, withdrawing an upgraded higher octane rating naphtha depleted in staight chain hydrocarbons from said zone, desorbing said straight chain hydrocarbons form said sieves in said zone with gaseous ammonia at a temperature less than about 600° F., and thereafter passing an inert purge gas heated to a temperature above 600° F. to strip ammonia from said zone.

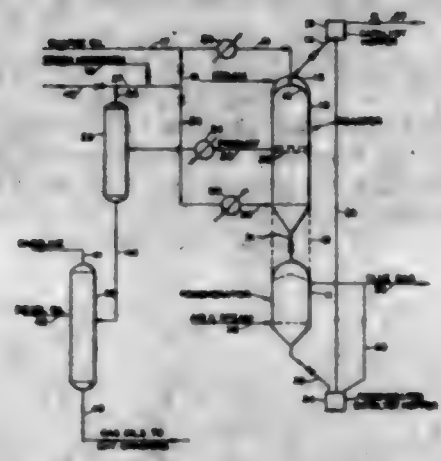
2,899,380

HYDROCRACKING OF PETROLEUM RESIDUUM WITH USE OF GRAVITY BED OF CATALYTIC PARTICLES

William C. Lanning, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application December 3, 1954, Serial No. 473,915
7 Claims. (Cl. 208—108)

1. A process for converting high boiling hydrocarbons to lower boiling hydrocarbons and coke by hydrocatalysis comprising maintaining a gravitating bed of hot solid particulate catalyst in a reaction zone; contacting said catalyst in concurrent flow in the upper section of said reaction zone with a stream of higher boiling hydrocarbon liquid and hydrogen under reaction conditions including a temperature in the range of 650 to 950° F. which convert a substantial portion of said hydrocarbons to lower boiling hydrocarbons and leave a substantial portion of unreacted liquid hydrocarbon; contacting said catalyst and



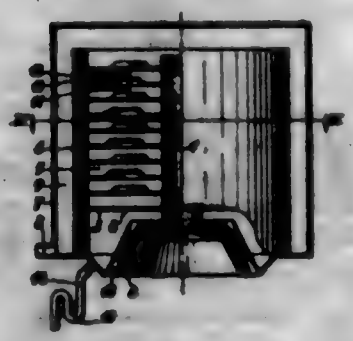
unreacted liquid hydrocarbon in countercurrent flow in the lower section of said reaction zone with a hot stream of hydrogen-containing gas under reaction conditions including a temperature in the range of 900 to 1100° F. and at least 100° F. above that maintained in said upper section so as to convert a substantial portion of said liquid hydrocarbon to lower boiling hydrocarbons and coke; and recovering a gaseous effluent from an intermediate section of said reaction zone comprising the reaction products from said upper and lower sections and free hydrogen.

2,899,381

HEAT EXCHANGER

Cornelius Otto Jonkers, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Application July 20, 1955, Serial No. 523,148
Claims priority, application Netherlands
August 4, 1954
4 Claims. (Cl. 62—6)



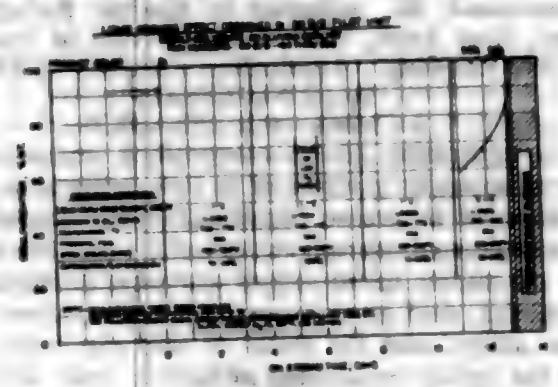
1. A heat exchanger for a cold gas refrigerator containing a medium in which a plurality of components are cooled and at least one of the components is separated out comprising; a freezer head for said refrigerator, a support mounted over said freezer head and a plurality of substantially parallel, apertured plate-shaped extensions located in spaced, superposed relationship on said support and extending in a plane transverse to the longitudinal axis of said support; said medium being in thermal contact with said extensions and entering the hot side of the heat exchanger and leaving from the cold side thereof after traversing all of said extensions successively; an insulating wall surrounding said extensions; the location of said apertures being staggered in succes-

said apertures of such a form that the distance between said material surrounding said aperture and the adjacent extension on the cold side thereof exceeds the distance between said material surrounding said aperture and the adjacent extension on the hot side thereof.

2,899,382
CATALYST AND PROCESS FOR THE CONVERSION OF HYDROCARBONS
John W. Myers, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Application September 7, 1954
Serial No. 454,611
18 Claims. (Cl. 208—138)

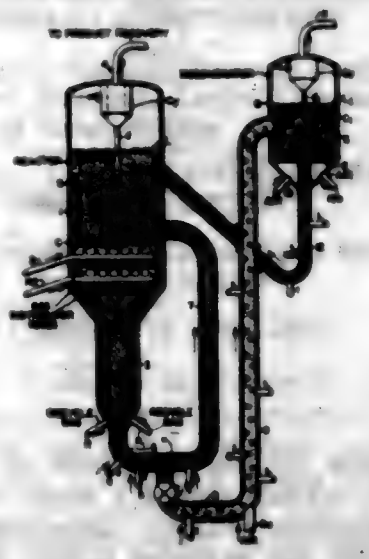
8. A process for reforming a petroleum distillate boiling in the range of 90 to 400° F. which comprises contacting said distillate under reforming conditions including a temperature in the range of 700 to 1000° F., a pressure in the range of 100 to 1000 p.s.i.g., and a hydrogen to hydrocarbon mol ratio in the range of 1 to 20; with a catalyst consisting essentially of platinum in the range of 0.01 to 10 weight percent of the catalyst deposited on a support comprising essentially silica-alumina in the range of 5 to 50 weight percent of the support and at least one inert support material selected from the group consisting of alumina and silica, at least one of the components of said support having been calcined before mixing with the other.

2,899,383
METHOD FOR INCREASING CATALYST ON-STREAM TIME IN A HYDROGENATION PROCESS
Donald F. Hill, West Deptford Township, Gloucester County, N.J., assignor to Socony Mobil Oil Company, Inc., a corporation of New York
Application December 7, 1956, Serial No. 626,958
3 Claims. (Cl. 208—143)



3. A method of hydrogenating a charge mixture of hydrocarbons having a 10 percent point of about 380° to about 470° F., a 90 percent point of about 480° to about 625° F., and an end boiling point of about 530° to about 660° F., which comprises subjecting the aforesaid hydrocarbon mixture substantially devoid of added diluent hydrocarbons to a reaction temperature of at least about 750° F. and a reaction pressure of at least about 500 p.s.i.g. in the presence of a particle-form catalytic material and at least about 800 cubic feet of hydrogen per barrel of hydrocarbon mixture whilst about 0 to about 35 percent of the aforesaid hydrocarbon mixture is in the liquid phase until the color of the product produced becomes darker than that of the product as originally produced, and/or catalyst activity decreases, reducing the reaction temperature below 750° F. to provide reaction conditions under which the volume of the aforesaid hydrocarbon mixture which is in the liquid phase is increased to at least 20–100 percent of said hydrocarbon mixture and the balance if any is in the vapor phase, subjecting the aforesaid hydrocarbon mixture to a temperature below 750° F. in the presence of hydrogen while about 20–100 percent of the hydrocarbon mixture is in the liquid phase until the product color and/or catalyst activity is substantially improved by contact of the catalyst with the liquid phase material thus derived solely and created in situ from the charge mixture, changing said reaction temperature to a reaction temperature of at least about 750° F. to provide reaction conditions under which the volume of the aforesaid hydrocarbon mixture which is in the liquid phase is decreased so that only about 0–35 percent of said hydrocarbon mixture is in the liquid phase, and in the presence of hydrogen but in the substantial absence of added diluent hydrocarbons subjecting the aforesaid hydrocarbon mixture having only about 0–35 percent in the liquid phase to a reaction temperature of at least 750° F. and a reaction pressure of about 500 p.s.i.g., whereby the hydrocarbon conversion is carried out with the same hydrocarbon charge mixture throughout the entire operation.

2,899,384
HYDROFORMING WITH THE USE OF A MIXTURE OF CATALYST AND INERT PARTICLES
Lawrence E. Swabb, Jr. and Worth W. Bolstore, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
Application June 21, 1954, Serial No. 438,252
6 Claims. (Cl. 208—149)



1. The method of supplying a major portion of the heat required for hydroforming naphthas to the hydroforming reaction zone in a system comprising a hydroforming zone containing a fluidized bed of finely divided catalyst, a regeneration zone containing a fluidized bed of finely divided catalyst and transfer lines connecting the said hydroforming zone and said regeneration zone which comprises fluidizing the finely divided catalyst and shot particles having a higher density and larger average particle size than the catalyst in the hydroforming reaction zone by the passage of gasiform reactant material upwardly through said zone, passing fluidized catalyst and shot downwardly through a well of reduced cross-sectional area disposed at the bottom of the hydroforming zone, introducing recycle gas near the bottom of said well and causing said recycle gas to flow upwardly through said well at a sufficient velocity to gas lift catalyst from said well into the bottom of the fluidized bed of catalyst in the reaction zone whereby the relative proportion of shot to catalyst in said well is increased, discharging the resultant mixture of shot and catalyst from the bottom of said well in the form of a confined stream of restricted cross-sectional area, passing said mixture downwardly, then with changing direction to a region of flow reversed wherein at its lowermost point a first mixture rich in shot particles is concentrated and a second mixture lean in shot is concentrated above the first mixture, passing said second mixture as a confined stream with changing direction then upwardly to complete a

2,899,390
NON-STAINING ALUMINUM ROLLING

2,899,393
ELECTROLYTE CONTAINING A KETONE, AN

U-shaped path of reversed flow to the upper portion of the dense bed in the hydroforming reaction zone, withdrawing said first mixture rich in shot downwardly from said lowermost point of flow reversal and passing said mixture in the form of a confined stream into the regeneration zone, maintaining in the regeneration zone a higher ratio of shot to catalyst than exists in the hydroforming zone, subjecting the mixture to oxidative regeneration and returning a highly heated mixture of shot and catalyst to the hydroforming zone.

2,899,385

PROCESS FOR THE TREATMENT OF CONTAMINATED WASTE WATERS

Leo F. Connell, Wynnewood, Harold F. Elkin, Bala-Cynwyd, and William E. Soden, Swarthmore, Pa., assignors to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Application June 2, 1955, Serial No. 512,820
3 Claims. (Cl. 208—238)

3. A process for the utilization of refinery waste waters which includes passing a water stream into contact with petroleum products comprising water soluble phenolic bodies and hydrogen sulfide, separating water containing dissolved phenolic bodies and hydrogen sulfide from the petroleum products, stripping hydrogen sulfide from the water, separating water insolubles from the water, passing the water and its phenolic contaminants to a cooling water system, circulating the water in said system between the cold side of an indirect heat exchanger and an evaporative water cooling tower while maintaining the temperature of the water at a value favoring bacterial growth, and substantially eliminating the phenolic contaminants by biochemical means within said cooling water system.

2,899,386

PROCESS FOR REMOVING MERCAPTAN SULFUR WITH AN ORGANIC PHOSPHITE

William L. Pierce, Crystal Lake, and Walter J. Sandner, Carpentersville, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Application November 18, 1957
Serial No. 696,971
14 Claims. (Cl. 208—237)

1. A process for substantially reducing the mercaptan-sulfur content and odor of a mercaptan-containing petroleum fraction which is substantially free from dissolved oxygen, which comprises intimately contacting said fraction with an organic phosphite from the group consisting of alkyl and cycloalkyl phosphites which is soluble in said hydrocarbon feed employing sufficient amounts not less than about 20 mols of phosphite per mol of mercaptan-sulfur and for a time sufficient to reduce the mercaptan-sulfur content of said fraction to produce a doctor sweet product.

2,899,387

PROCESS FOR PREVENTING CORROSION DURING DISTILLATION BY ADDING AN ORGANIC PHOSPHITE

William L. Pierce, Crystal Lake, and Walter J. Sandner, Carpentersville, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Application October 29, 1957
Serial No. 692,997
9 Claims. (Cl. 208—348)

1. In the fractional distillation of an oxidatively-sweetened, hydrocarbon fraction boiling within the naphtha boiling range and containing organic sulfur compounds, including disulfides, at an elevated temperature normally effective for the conversion of said compounds to produce doctor-positive products, the improvements wherein said conversion is minimized which comprises carrying out the distillation at said temperature in the presence of an added amount of an oil-soluble, saturated organic phosphite from the group consisting of alkyl and cycloalkyl phosphites and having a boiling point at least as high as the end boiling point of the hydrocarbon fraction being distilled, the amount of said organic phosphite being not less than about 0.4% by weight, based on the amount of said hydrocarbon fraction being fractionally distilled.

2,899,388

CALCIUM BASE GREASE CONTAINING A NICKEL, LEAD OR LITHIUM SALT OF A DIALKYL DITHIOPHOSPHORIC ACID DIESTER

John Walter Nelson, Lansing, and Milton P. Kleinholz, Homewood, Ill., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Application February 6, 1957
Serial No. 638,476
2 Claims. (Cl. 252—32.7)

1. A lubricating grease composition consisting essentially of a major portion of a base mineral lubricating oil thickened to grease consistency with anhydrous calcium 12-hydroxy stearate and about 0.1 to 5.0% by weight of an oil-soluble metal salt of a dialkyl dithiophosphoric acid diester, said alkyl groups containing about 4 to 12 carbon atoms, and the metal of said salt being selected from the group consisting of nickel, lead and lithium.

2,899,389

OIL-MISCIBLE, WATER INSOLUBLE SOAP COMPLEXES

John R. Allison, Whittier, Calif., assignor to Lellingwell Chemical Company, Whittier, Calif., a corporation of California

No Drawing. Application November 14, 1955
Serial No. 546,795
14 Claims. (Cl. 252—35)

1. An oil miscible, water insoluble soap composition derived from a polycarboxylic acid component and a monocarboxylic 8 to 22 carbon atom acid component, formed by precipitating a first water insoluble metal soap of one of said components from an aqueous solution of an alkali metal soap thereof, and precipitating directly on the soap so formed a second water insoluble metal soap of the other acid component from an aqueous solution of an alkali metal soap thereof, the precipitated polycarboxylic soap being between about 1% to 20% of the combined precipitated soaps.

2,899,396

ethoxyline resin comprising the reaction product of a

2,899,390

NON-STAINING ALUMINUM ROLLING LUBRICANT

John J. Piemich, Whiting, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application March 29, 1956
Serial No. 574,589
1 Claim. (Cl. 252—56)

A non-staining aluminum rolling lubricant which consists essentially of an undiluted polybutene, prepared by polymerizing butenes from a butane-butylene stream, which polybutene has a Saybolt viscosity at 100° F. in the range of about 40 to 80 seconds, which boils in the range of about 460 to 645° F., which has an average molecular weight in the range of about 200 to 270, and which polybutene contains about 1 percent of butyl stearate.

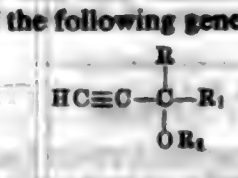
2,899,391

CORROSION PREVENTIVE COMPOSITIONS

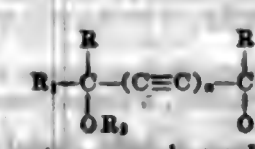
Raymond L. Mayhew, Phillipsburg, N.J., and Charles F. Jelinek, Delmar, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application October 18, 1956
Serial No. 616,610
6 Claims. (Cl. 252—56)

1. A corrosion preventing composition consisting essentially of a major proportion of a liquid petroleum hydrocarbon and a corrosion inhibiting amount of an acetylenic alcohol fatty acid ester selected from the group consisting of esters of the following general formulae:



and



wherein R represents a member selected from the group consisting of hydrogen and methyl, R_1 represents a member selected from the group consisting of hydrogen and alkyl of from 1 to 6 carbon atoms, R_2 represents an acyl group of from 10 to 34 carbon atoms, R_3 represents a member selected from the group consisting of hydrogen and an acyl of from 10 to 34 carbon atoms, and n represents a positive integer of from 1 to 2.

2,899,392

PROCESS OF REDUCING THE CONSISTENCY OF SOLID-AND-LIQUID MIXTURES

Hubert Schranz, Clausthal-Zellerfeld, Germany, assignor to Metallgesellschaft A.G., Frankfurt am Main, Germany

No Drawing. Application September 12, 1955
Serial No. 533,905
Claims priority, application Germany September 17, 1954
4 Claims. (Cl. 252—60)

1. In a sink-float separation process in which an aqueous suspension of a heavy solid is employed as a heavy medium for such separation, the step which comprises incorporating an alkyl amino compound selected from the group consisting of alkyl amines of the formula $C_nH_{2n+1}NH_2$, in which n is an integer between 6 and 18 and their salts in the aqueous suspension of the heavy solid employed for such separation medium to reduce the apparent viscosity thereof, the quantity of heavy solid in said suspension being so high that in the absence of said amino compound its apparent viscosity would be too great for use as a sink-float separation medium.

2,899,393

ELECTROLYTE CONTAINING A KETONE, AN ALKALINE EARTH METAL IODIDE, AND IODINE

John F. Schoeppel, Stuart L. Varner, and Frederick W. Herr, Grand Rapids, Mich., assignors to Lear, Incorporated, Grand Rapids, Mich., a corporation of Illinois

No Drawing. Application September 6, 1956
Serial No. 608,178
9 Claims. (Cl. 252—62.2)

1. In a variable resistor which includes a closed receptacle containing an electrolyte and electrodes having a surface adapted to contact said electrolyte to provide a current-conducting path between said electrolyte and said electrodes, the improvement wherein said electrolyte is a solution, in a saturated ketone, of iodine and an alkaline earth metal iodide, wherein said alkaline earth metal iodide is present in proportions ranging from about 3 to about 10 grams per 100 ml. of said electrolyte solution, and the iodine is present in proportions ranging from about 8 to about 16 grams per 100 ml. of said electrolyte solution.

2,899,394

COMPOSITE ANTIOXIDANTS AND PROCESS OF PREPARATION THEREOF

Herbert Pulfreeman, Newark, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application November 28, 1955
Serial No. 549,549
Claims priority, application Great Britain December 3, 1954
4 Claims. (Cl. 252—404)

1. A process for preparing composite antioxidants which comprises condensing in the presence of an acidic condensation agent 0.8 to 1.3 molecular proportions of n-butyraldehyde with 2 molecular proportions of a mixture comprising 2:4-dimethylphenol and 2:5-dimethylphenol, said 2:5-dimethylphenol being present in said mixture in an amount from one-quarter to one-half of the weight of said mixture, and then condensing the resulting reaction mixture with 0.1 to 0.4 molecular proportion of formaldehyde, followed by isolation and recovery of the product.

2,899,395

REGENERATION OF COBALT SULFATE-CONTAINING CATALYST SOLUTIONS

Karl Büchner, Duisburg-Hamborn, Germany, assignor to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, Germany, a corporation of Germany

No Drawing. Application June 17, 1953
Serial No. 362,424
Claims priority, application Germany July 19, 1952
5 Claims. (Cl. 252—411)

1. Process for the regeneration of aqueous catalyst solutions containing cobalt salts, the cobalt being present in said solutions in amounts of 2–20 g./l which catalyst solutions have been used for the catalytic addition of water gas to unsaturated carbon compounds in the presence of iron, which comprises adding to the spent catalyst solution which in its spent condition contains 2–20 g./l of iron in the form of its sulfate at 0–70° C. a quantity of cobalt carbonate equivalent to the loss in cobalt and stirring the solution while blowing in air to produce iron carbonate and cobalt sulfate.

2,899,402

PROCESS FOR MANUFACTURING FIBER RE-

silicon by C to Si bonds having a viscosity of substantially more than one poise, the said (*b*) siloxane having

2,899,396

2 VINYL PYRIDINE POLYMERS FOR ION EXCHANGE REACTIONS

Clark Edward Adams and Charles Newton Kimberlin, Jr., Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application December 23, 1954
Serial No. 477,462
6 Claims. (Cl. 260—2.1)

1. A solid, porous, insoluble, proliferous homo-polymer of 2-vinyl pyridine.

2,899,397

POLYAMIDE RESIN-EPOXY RESIN AND EMULSIONS

David Aelony and Harold Wittcoff, Minneapolis, Minn., assignors to General Mills, Inc., a corporation of Delaware

No Drawing. Application September 14, 1955
Serial No. 534,387
4 Claims. (Cl. 260—18)

1. A process of producing a mixed aqueous emulsion of a solution of an epoxy resinous material containing terminal epoxy groups and a solution of a polymeric polyamdie, said polyamide having a low acid number and an amine number within the approximate range of 50 to 300, and being the reaction product of an aliphatic polyamine and polymeric fat acids containing at least two carboxyl groups which comprises mixing the two solutions in the presence of an aqueous medium containing a water soluble organic carboxylic acid and agitating the mixture to produce an emulsion which is stabilized by means of salt groups formed from free amine groups and said water soluble organic acid.

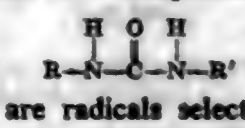
2,899,398

HEAT STABILIZED VINYL PLASTIC COMPOSITIONS, FLOOR TILES MADE THEREFROM, AND METHODS FOR PREPARING THE SAME

Arthur E. Pfleumer, Norristown, Pa.

No Drawing. Application December 19, 1957
Serial No. 703,728
6 Claims. (Cl. 260—23)

1. A plastic composition capable of being milled and calendered at elevated temperatures without rapid discoloration due to decomposition of the resin component of the composition which comprises a vinyl chloride polymer containing 70 to 95% vinyl chloride and 5 to 30% of other copolymerized material comprising vinyl acetate, at least an equal amount by weight of asbestos and a minor amount of a compound of the formula



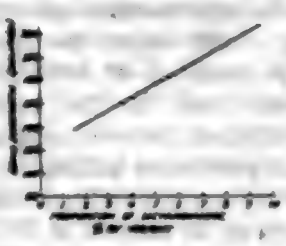
where R and R' are radicals selected from the group consisting of hydrogen and one to five carbon alkyl.

2,899,399

ETHOXYLINE RESIN-SHELLAC-DICYANDIAMIDE INSULATION COMPOSITION

Ralph G. Flowers, Pittsfield, Mass., assignor to General Electric Company, a corporation of New York

Application August 31, 1956, Serial No. 607,434
4 Claims. (Cl. 260—24)



1. A composition of matter comprising the product obtained by reacting (1) about 9–70% by weight of an ethoxyline resin comprising the reaction product of a dihydric phenol and an epihalogenohydrin, (2) about 25–90% by weight of shellac and (3) about 1–10% by weight dicyandiamide.

2,899,400

COMPOSITION COMPRISING STYRENE POLYMER, WAX AND MOLYBDENUM DISULFIDE AND PHONOGRAPH RECORD MOLDED THEREFROM

Paul H. Lipke, Jr., Midland, and Maurice J. Gifford, Freeland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application October 18, 1955
Serial No. 541,290
9 Claims. (Cl. 260—28.5)

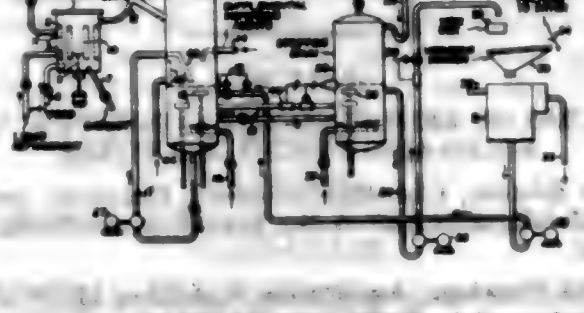
1. Composition for molding phonograph records comprising a thermoplastic alkenyl aromatic resin containing a quantity of a wax lubricating material in an amount between about 1 and about 16 percent by weight that is compatible with said resin, and between 0.1 and 10 percent by weight of molybdenum disulfide, said alkenyl aromatic resin containing at least about 50 weight percent of at least one alkenyl aromatic compound of the formula: $Ar—CR=CH_2$, wherein Ar is an aromatic radical having a hydrocarbon ring and R is selected from the group consisting of hydrogen and methyl.

2,899,401

METHOD OF INCORPORATING OIL IN RUBBERY ISOOLEFIN POLYMER

Lawrence T. Eby, Linden, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application December 6, 1955, Serial No. 551,246
7 Claims. (Cl. 260—33.6)



1. A process which comprises polymerizing a feed containing an isoolefin of not more than about 7 carbon atoms in a polymerization zone at a temperature level between about —40° and about —160° C., with a Friedel-Crafts catalyst dissolved in an organic non-complex forming solvent which is liquid but a polymer non-solvent at polymerization temperatures, mixing the resulting cold slurry of polymer particles in the non-solvent with an essentially monomeric petroleum hydrocarbon plasticizer oil and a water-insoluble fatty acid soap of a metal selected from the group consisting of magnesium, zinc, aluminum and calcium, subsequently discharging the resulting mixture in slurry form into an aqueous medium heated to a temperature of 100° to 180° F. to drive off the volatile materials in said reaction mixture and maintain the polymer in finely-divided form as a slurry in water, and recovering the polymer particles from the water.

and R_3 is a member of the group consisting of hydrogen

admixture with from about 5% to about 200% by weight

2,899,402
PROCESS FOR MANUFACTURING FIBER REINFORCED CROSS-LINKED METHACRYLATE RESIN

Edward Noonan Squire, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application September 21, 1955
Serial No. 535,749
2 Claims. (Cl. 260—41)

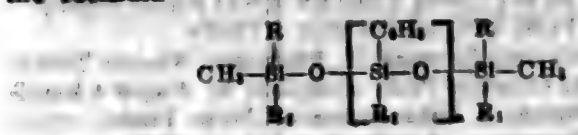
1. In a process for preparing a reinforced resin article the steps which comprise admixing a monomer-polymer syrup which is a mixture of monomeric and polymerized methyl methacrylate with from 0.1 to 20%, based on the weight of said monomeric methyl methacrylate, of ethylene dimethacrylate as a cross-linking agent, and with from 10 to 60%, based on the total weight of reinforced resin, of fibrous glass reinforcement, said syrup containing from 10 to 50% by weight of the polymeric component, subjecting the resulting mixture, in the presence of a catalyst suitable for converting methyl methacrylate to solid polymer, to a temperature in the range of 75° to 150° C. under a compacting pressure within the range of 10 to 200 pounds per square inch, for a period of time less than 20 minutes until polymerization and cross-linking have proceeded far enough to permit withdrawal of the reinforced resin in self-sustaining form from the influence of said compacting pressure, said polymerization being, however, incomplete, and thereupon withdrawing the said reinforced resin from the influence of the said pressure.

2,899,403
LOW VISCOSITY POLYSILOXANES AND COMPOSITIONS PREPARED THEREWITH

Daniel W. Lewis, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

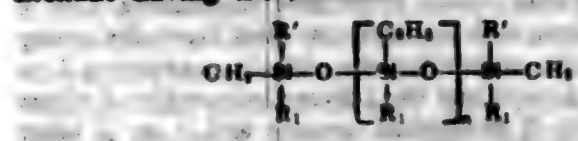
No Drawing. Application June 13, 1955
Serial No. 515,259
6 Claims. (Cl. 260—42)

1. A low viscosity, reactive fluid polysiloxane having the formula



wherein R represents at least one monovalent radical selected from the group consisting of alkyl radicals having not more than 4 carbon atoms and aryl radicals comprising a benzene ring with not more than two methyl groups substituted for hydrogen, R_1 represents at least one monovalent radical selected from the group consisting of methyl and vinyl groups per molecule, there being an average of at least two vinyl groups per molecule, and n is at least two, and has an average value of at least 2.0 and not exceeding 10.

5. A siloxane composition comprising a mixture of (*a*) at least 10% by weight of a low viscosity fluid polysiloxane having the formula



where R' represents a monovalent radical selected from the group consisting of methyl and phenyl radicals and R_1 represents a monovalent radical selected from the group consisting of methyl and vinyl radicals, there being an average of at least two vinyl groups per molecule, and n is at least two and has an average value of from 2 to 10, said (*a*) siloxane having a viscosity of less than one poise, and the balance, comprising at least 10% of the weight of the mixture, being (*b*) at least one compatible hydrocarbon substituted siloxane wherein said siloxane has about 2 hydrocarbon groups per silicon atom attached to silicon by C to Si bonds having a viscosity of substantially more than one poise, the said (*b*) siloxane having at least one ethylenic group per molecule directly attached to silicon by a C to Si bond, said ethylenic group being selected from the group consisting of vinyl, allyl and methallyl radicals and at least 50 percent of the radicals directly attached to silicon, other than oxygen and residual hydroxyl groups directly attached to silicon, consisting of at least one radical selected from the group consisting of methyl and phenyl radicals, the mixture having a viscosity of the order of from 40 centipoises to 10 poises.

2,899,404
STYRENE-ALLYL ALCOHOL-ACRYLIC ACID TERPOLYMERS, PROCESS OF PREPARING SAME AND COATING COMPOSITION THEREFROM

Earl C. Chapin, Springfield, and Richard F. Smith, Ludlow, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application January 16, 1955
Serial No. 480,997
9 Claims. (Cl. 260—43)

1. A terpolymer consisting of an allyl alcohol component, a styrene component and an alpha,beta-ethylenically unsaturated monocarboxylic acid component, the amount of allyl alcohol component in the terpolymer varying between 1 and 40% by weight, the amount of styrene component in the terpolymer varying between 30 and 90% by weight, and the amount of unsaturated acid component in the terpolymer varying between 1 and 50% by weight; said terpolymer having been prepared by the process which comprises mixing the allyl alcohol component, the styrene component and the unsaturated acid component together and heating the resulting mixture to a temperature of 100–250° C. under autogeneous pressure for from 15 to 75 minutes; said styrene component being a member of the group consisting of styrene, ring-substituted alkyl styrenes, ring-substituted chlorostyrenes, ring-substituted alkyl chlorostyrenes and mixtures thereof and said allyl alcohol component being a member of the group consisting of allyl and methallyl alcohols and mixtures thereof.

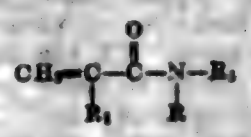
8. A coating composition comprising an organic solvent solution of (1) a thermosetting resin taken from the group consisting of phenol-, urea- and melamine-formaldehyde condensation products and (2) a terpolymer of claim 1.

2,899,405
POLYMERIZATION OF VINYL CHLORIDE OR VINYLIDENE CHLORIDE IN THE PRESENCE OF ISOLATED POLYMERS

Harry W. Coover, Jr., Kingsport, Tenn., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application November 26, 1954
Serial No. 471,591
5 Claims. (Cl. 260—45.5)

1. The process which comprises heating, at a temperature of 15°–75° C. in water and in the presence of a peroxide polymerization catalyst, a mixture consisting of (A) from 60–95% by weight of polymerizable monoethylenic material containing at least 30% by weight of a member of the group consisting of vinyl chloride and vinylidene chloride, and (B) from 40–5% by weight of an isolated preformed polymer from the group consisting of (*a*) a homopolymer of an amide by the general formula:



wherein R and R_1 are members of the group consisting of hydrogen and alkyl groups of from 1–4 carbon atoms

the polyhydroxy alkanes, primary and secondary alkane

one bicycloheptene derivative represented by the follow-

and R_3 is a member of the group consisting of hydrogen and methyl, and (*b*) a copolymer of an amide represented by said formula and a compound from the group consisting of a different amide represented by said formula, acrylonitrile, vinyl acetate and methyl acrylate.

2,899,406

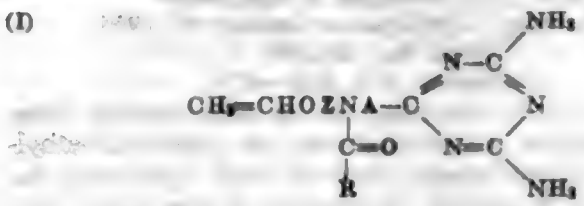
N-(VINYLOXYALKYL) ACYLAMIDOGUANAMINES, METHOD OF MAKING SAME, AND COPOLYMERS THEREOF

Peter L. De Benneville and Leo S. Luskin, Philadelphia, Pa., assignors to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

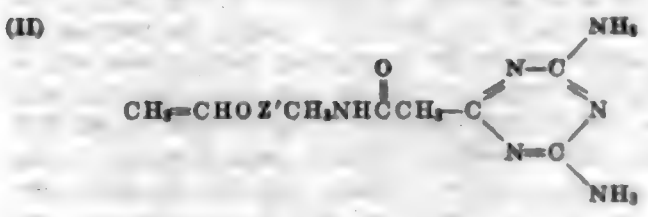
No Drawing. Application November 29, 1955
Serial No. 549,852
16 Claims. (Cl. 260—47)

1. A compound selected from the group consisting of those having the structure of one of Formulas I, II, and III:

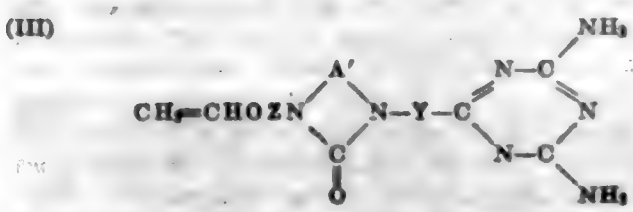
(I)



(II)



(III)



where Z is an alkylene group having 2 to 6 carbon atoms, the oxygen and the nitrogen being attached to different carbons thereof, A is selected from the group consisting of $—CH_2CH_2—$, $—CH(CH_3)CH_2—$, and —CHR′— where R′ is selected from the group consisting of hydrogen and alkyl groups having 1 to 8 carbon atoms, R is selected from the group consisting of H, alkyl groups having 1 to 18 carbon atoms, phenyl, halogenophenyl, and alkyl-substituted phenyl groups having 6 to 10 carbon atoms, benzyloxy, and alkoxy and alkoxyalkyl groups of the formulas $R^3O—$ and $R^3OR^4—$ where R^3 is an alkyl group having 1 to 4 carbon atoms and R^4 is an alkylene group having 1 to 4 carbon atoms; with the proviso that when R is H, the two carbon atoms in A and Z that are attached directly to the N atom therebetween each carry two hydrogen atoms, Z′ is an alkylene group having 1 to 5 carbon atoms, A′ is selected from the group consisting of $—CH_2CH_2—$, $—(CH_2)_3—$, $—CH_2CH(CH_3)—$, and $—CH(CH_3)CH_2—$, and Y is selected from the group consisting of $—CH_2CH_2—$, $CH_2CH(CH_3)—$, and $—CH(CH_3)CH_2—$.

2,899,407

CURING OF EPOXY RESINS

Henry A. Cyba, Chicago, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application October 3, 1956
Serial No. 613,606
7 Claims. (Cl. 260—47)

1. A method of curing an epoxy resin formed by the reaction of epichlorhydrin and 2,2-bis-(4-hydroxyphenyl)-propane, which comprises heating said resin to a temperature of from about 100° to about 300° C. in admixture with from about 5% to about 200% by weight of a curing agent selected from the group consisting of a diaminodiphenyl ether, a diaminodiphenyl sulfide and alkylated derivatives thereof.

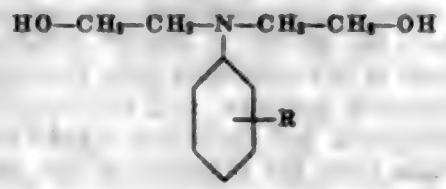
2,899,408

COPOLYESTERS OF A GLYCOL, p,p′-SULFONYLDIBENZOIC ACID AND AN ANILINE DERIVATIVE

John R. Caldwell and John W. Wellman, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application March 11, 1954
Serial No. 415,703
8 Claims. (Cl. 260—75)

1. The method which comprises coreacting at a temperature of 150–300° C. to an inherent viscosity of at least 0.4, a mixture of a first compound selected from the group consisting of dihydric alcohols and organic acyl esters thereof wherein the acyl group contains 2–4 carbon atoms, an alkyl diester of p,p′-sulfonyldibenzoic acid wherein the alkyl group contains 1–10 carbon atoms and an aniline derivative of the formula



wherein R is a member of the group consisting of hydrogen, dialkylamino, dialkylsulfamido, dialkylcarboxamido, alkyl and chloro groups in which the alkyl groups contain from 1 to 4 carbon atoms, said aniline derivative amounting to from about 5 to about 25% of said mixture and the combined amount of said aniline compound and said first compound amounting to at least 1.3 times the molar amount of said diester.

2,899,409

RUBBER-LIKE COPOLYMERS AND PROCESSES FOR THEIR PRODUCTION

Glenn A. Nesty and Edward W. Pietrusza, Morris Township, Morris County, N.J., assignors to Allied Chemical Corporation, a corporation of New York

No Drawing. Application July 1, 1955
Serial No. 519,622
14 Claims. (Cl. 260—75)

1. The process for producing a tough, rubber-like material which comprises reacting a diisocyanate from the group consisting of the C_3 to C_{10} polymethylene diisocyanates, the C_6 to C_8 cycloalkane diisocyanates, the phenylene diisocyanates, said diisocyanates all being characterized by containing two isocyanate substituted carbon atoms separated by at least one unsubstituted carbon atom, m-toluene diisocyanate, 3,3′bitoluene-4,4′diisocyanate and methylene diphenyl-4,4′-diisocyanate, with a copolyester of 4,4′-dicarboxydiphenylsulfone and at least one polymethylene dicarboxylic acid containing 2 to 8 methylene groups with at least one diol from the group consisting of the polymethylene glycols containing 2 to 10 methylene groups and the polymethylene glycol ethers containing 2 to 8 methylene groups and 1 to 3 ether oxygen atoms in a hetero-chain structure, which copolyester is characterized by having an OH number of 27 to 7, substantially all its terminal groups being hydroxy radicals, and by containing about 0.1 to 0.7 4,4′-dicarboxydiphenylsulfone units for every 1 alkane dicarboxylic acid unit, by mixing with said copolyester more than 1 gram mol of said diisocyanate for every 2 gram mol radicals of OH contained in the copolyester, incorporating with the resulting diisocyanate-treated copolyester, a polyfunctional cross-linking agent containing at least 2 active hydrogen atoms from the group consisting of water,

perature of 0 to 300° C. in the presence of an inert organic solvent with a catalyst formed by admixing an magnesium, beryllium, zinc, cadmium, gallium, indium, thallium, aluminum, and alloys thereof, and (2) a com-

the polyhydroxy alkanes, primary and secondary alkane polyamines, and the hydroxy alkane amines, and maintaining the mixture of cross-linking agent and diisocyanate-treated copolyester at reaction temperatures below those at which the polymer decomposes until said tough, rubber-like material is formed.

2,899,410

MANUFACTURE OF HIGHLY POLYMERIC POLYMETHYLENE TEREPHTHALATES

Norman Standring, Harrogate, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application September 24, 1956
Serial No. 611,744
Claims priority, application Great Britain October 7, 1955
2 Claims. (Cl. 260—75)

1. A process for the manufacture of dyeable fiber- and film-forming copolyesters of polymethylene terephthalate having a softening point between about 230° and 240° C., which comprises reacting a glycol mixture containing between 89 and 95 mol percent of ethylene glycol and between 11 and 5 mol percent of tetramethylene glycol with dimethyl terephthalate, under heating at a temperature between 150–215° C. to bring about ester-interchange, followed by heating under polycondensation conditions at a temperature of substantially about 250° C. and in the presence of litharge as an ester-interchange and polycondensation catalyst.

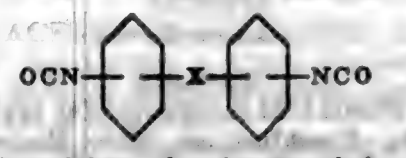
2,899,411

POLYURETHANE ELASTOMERS FROM HYDROXYL POLY(ALKYLENE OXIDES)S, ALIPHATIC GLYCOLS AND DIPHENYL DIISOCYANATES

Charles S. Schollenberger, Cuyahoga Falls, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York

No Drawing. Application July 30, 1956
Serial No. 600,659
8 Claims. (Cl. 260—77.5)

1. A polyurethane elastomer comprising the reaction product of heating under essentially anhydrous conditions (1) a mixture of one mol of a hydroxyl poly(polymethylene oxide) of the formula $HO[(CH_2)_nO]_xH$ wherein n is a number from 3 to 6 and x is an integer greater than 7 having a molecular weight of from about 800 to about 4,000 and about from 0.5 to 9.0 mols of a saturated aliphatic glycol containing from 4 to 12 carbon atoms and (2) from about 1.5 to 10 mols of a diphenyl diisocyanate having the formula



where X is selected from the class consisting of a valence bond, an alkylene radical containing from 1 to 5 carbon atoms, a NR radical where R is an alkyl group, an oxygen radical, a sulfur radical and a sulfonyl radical, the molar amount of said hydroxyl poly(polymethylene oxide) and said glycol combined being substantially equivalent to the molar amount of said diphenyl diisocyanate.

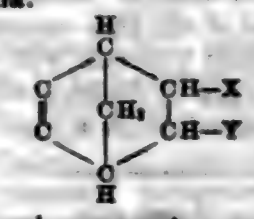
2,899,412

POLYSULFONE RESINS FROM BICYCLOHEPTENE DERIVATIVES AND SULFUR DIOXIDE

John R. Caldwell and Edward H. Hill, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application May 19, 1958
Serial No. 735,926
12 Claims. (Cl. 260—79.3)

1. A polysulfone resin of sulfur dioxide and at least one bicycloheptene derivative represented by the following general formula:



wherein X and Y each represents a member selected from the group consisting of a hydrogen atom, a chlorine atom, a bromine atom, an alkyl group of 1–8 carbon atoms, a cyclopentyl group, a cyclohexyl group, a hydroxyalkyl group of 1–4 carbon atoms, a phenyl group, a tolyl group, an —OH group, a —COOH group, a —COOR group, an —OCOR group, an —OR group, an $—NH_2$ group, an —NHR group and an —NRR, and wherein in each instance R represents an alkyl group of 1–4 carbon atoms, and wherein the total molar amount of the said bicycloheptene derivative is equal to the molar amount of the said sulfur dioxide.

2,899,413

CATALYTIC POLYMERIZATION OF α-OLEFINS TO SOLID POLYMERS OF IMPROVED CRYSTALLINITY AT INCREASED RATES

Hugh J. Hagemeyer, Jr., and Marvin B. Edwards, Longview, Tex., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application January 26, 1956
Serial No. 561,662
9 Claims. (Cl. 260—88.1)

1. In the polymerization of at least one normally gaseous α-monoolefin to form solid polymer, the improvement in preparing polymer of exceptional crystallinity at increased rates which comprises effecting the polymerization in an inert organic liquid vehicle at a temperature of 20–200° C. and a pressure of 0–20,000 p.s.i.g. and in the presence of a catalytic mixture of aluminum metal, aluminum chloride, an alkali metal fluoride and a titanium compound from the group consisting of titanium tetrahalides and titanium tetraalkoxides wherein each alkoxide group contains 1–18 carbon atoms, said aluminum chloride amounting to 0.1–2 molar equivalents per gram atom of aluminum metal, said alkali metal fluoride amounting to 1–10 molar equivalents per gram atom of aluminum metal, and said titanium compound amounting to .01–10 molar equivalents per gram atom of aluminum metal.

2,899,414

POLYMERIZATION OF OLEFINS WHILE SUBJECTING THE CATALYST TO ULTRASONIC WAVES

Thomas S. Mertes, Wilmington, Del., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

No Drawing. Application February 26, 1957
Serial No. 642,330
12 Claims. (Cl. 260—93.7)

1. Process for preparing solid polymers of normally gaseous olefins which comprises contacting a material selected from the group consisting of ethylene, propylene, and mixtures of ethylene and propylene with a solid polymerization catalyst while subjecting the catalyst to the effect of ultrasonic waves.

2,899,415

COORDINATION POLYMERIZATION CATALYSTS

William Lawrence Truett, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application September 13, 1954
Serial No. 455,769
3 Claims. (Cl. 260—94.9)

1. The process of polymerizing ethylene to form solid polymers which comprises contacting ethylene at a tem-

2,899,421

WATER-INSOLUBLE AZO DYESTUFFS

2,899,424

PHYSIOLOGICALLY ACTIVE HYDRAZINIUM

perature of 0 to 300° C. in the presence of an inert organic solvent with a catalyst formed by admixing an aluminum compound of the class consisting of aluminum chloride and aluminum ethoxide with ethyl magnesium bromide, the molar ratio of the magnesium compound to the aluminum compound being at least one.

2,899,416

CATALYST COMPOSITIONS COMPRISING A TITANIUM DIHALIDE

Ralph Courtenay Schreyer, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application September 30, 1954
Serial No. 459,547
2 Claims. (Cl. 260—94.9)

1. A medium in which to carry out polymerizations, consisting essentially of an inert liquid hydrocarbon, titanium dichloride and a member of the class consisting of titanium metal and aluminum trichloride, said member being synergistic with said titanium dichloride and present in quantity not in excess of twice the quantity of titanium dichloride when said member is titanium metal, nor in excess of 2.65 times the quantity of titanium dichloride when the said member is aluminum trichloride.

2,899,417

POLYMERIZATION PROCESS

George W. Hooker, New Brighton, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

No Drawing. Application June 6, 1955
Serial No. 513,575
15 Claims. (Cl. 260—94.9)

1. In a low pressure process for the polymerization of ethylene by contacting ethylene and a catalyst in the presence of an organic solven: which has a boiling point within the range of from 50 to 85° centigrade and at a temperature within the range of from 38 to 85° centigrade and below the catalyst decomposition temperature and under pressures of from 10 to 50 pounds per square inch, in which the catalyst is a mixture of (A) and (B), (A) having the general formula RR'AlX, in which R is a member selected from the group consisting of hydrogen, alkyl radicals and aryl radicals, R' is a member selected from the group consisting of hydrogen, alkyl radicals, and aryl radicals, X is a member selected from the group consisting of hydrogen, halogen atoms, alkyloxy radicals, alkyl, aryloxy radicals, secondary amino radicals, secondary acid amide radicals, mercapto radicals, thiophenyl radicals, radicals of carboxylic acids and radicals of sulfonic acids, and in which (B) is selected from the group consisting of inorganic and organic salts of metals of groups IV–B, V–B and VI–B of the periodic system including thorium and uranium, the improvement in said low pressure process of contacting in a reaction zone ethylene and a catalyst in the presence of an inert solvent which comprises the steps of venting gas from said reaction zone while removing condensable vapors of said solvent and constituents soluble therein from said vented gas by condensation and returning said vapors so removed and constituents soluble therein to said reaction zone.

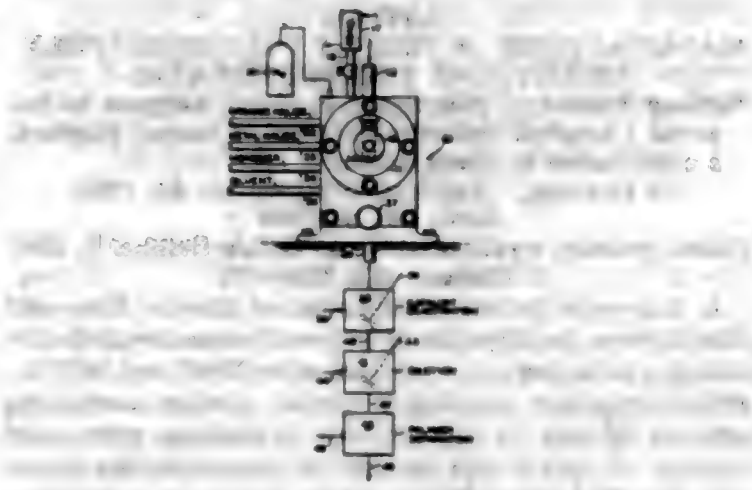
2,899,418

POLYMERIZATION OF OLEFINS BY MECHANICAL ACTIVATION PROCESS

William R. Reynolds, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application November 21, 1955, Serial No. 547,962
13 Claims. (Cl. 260—94.9)

1. In a process for the polymerization of monomers containing a $CH_2=C<$ group with a catalyst comprising (1) an elemental metal selected from the group consisting of sodium, potassium, lithium, cesium, rubidium, magnesium, beryllium, zinc, cadmium, gallium, indium, thallium, aluminum, and alloys thereof, and (2) a compound of a metal selected from the group consisting of titanium, zirconium, iridium, vanadium, molybdenum, tungsten, tellurium, selenium, polonium, hafnium, thorium, germanium, cerium, tin, lead and chromium, in the presence of a hydrocarbon diluent, which is inert under



conditions of the process, the improvement which comprises introducing said compound of a metal, said monomer and said hydrocarbon diluent into a polymerization zone; introducing a solid body of said elemental metal into said zone, at least one surface of said solid body of said metal being below the surface of reaction mixture in said zone; and continuously cutting chips from the surface of said body of metal below the surface of said reaction mixture.

2,899,419

PROCESS FOR OLEFIN POLYMERIZATION WITH ALKYL ALUMINUM-METAL OXIDE CATALYST

Robert R. Chambers, Homewood, and Robert H. Elkins, Flossmoor, Ill., and John J. Monagle, Chester, Pa., assignors to Sinclair Refining Company, New York, N.Y., a corporation of Maine

No Drawing. Application April 16, 1957
Serial No. 653,070
5 Claims. (Cl. 260—94.9)

1. The method of polymerizing a C_2 to C_3 olefin to obtain solid polymer which comprises contacting the olefin with a catalyst consisting essentially of a tri-lower alkyl aluminum and the solid product of calcining a mixture containing magnesium oxide and a material selected from the group consisting of titanium dioxide hydrate and zirconium dioxide hydrate.

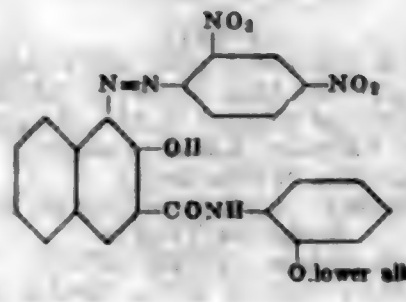
2,899,420

WATER INSOLUBLE MONOAZO DYESTUFFS

Albert Funke, Frankfurt am Main Hochst, and Hans Rasb, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Germany, a corporation of Germany

No Drawing. Application July 20, 1954
Serial No. 444,630
Claims priority, application Germany August 4, 1953
2 Claims. (Cl. 260—204)

1. Water insoluble monoazo dyestuffs of the general formula



than ten to the minus three moles per liter in aqueous

2,899,430

SENSITIZING DYES CONTAINING A 5,7-DIHYDRO

1. A polysulfone resin of sulfur dioxide and at least

polymers which comprises contacting ethylene at a tem-

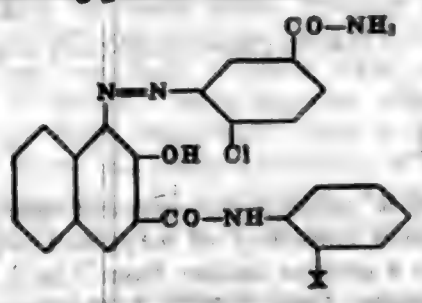
2,899,421

MONOAZO-DYESTUFFS INSOLUBLE IN WATER

Ernst Fischer, Offenbach am Main, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Application March 18, 1957
Serial No. 646,500
Claims priority, application Germany March 23, 1956
4 Claims. (Cl. 260—204)

1. The water-insoluble monoazo-dyestuffs corresponding to the following general formula



wherein X represents a member selected from the group consisting of hydrogen, methoxy and ethoxy.

2,899,422

PURIFICATION OF CHLORTETRACYCLINE

Robert Winterbottom, Pearl River, and Harold Mendelsohn, Nanuet, N.Y., Siegfried Arthur Muller, Chester, N.J., and Jerry Robert Daniel McCormick, New City, N.Y., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application August 31, 1956
Serial No. 607,296
6 Claims. (Cl. 260—207)

1. A process of purifying chlortetracycline which comprises the steps of adding to an aqueous solution having a pH within the range of about 1 to 3 and containing chlortetracycline and fermentation impurities at least one molecular equivalent based upon the chlortetracycline in the aqueous solution of an organic surface active compound selected from the group consisting of RSO_3H and $ROSO_3OH$ in which R is an inert hydrophobic organic radical free of groups reactive with chlortetracycline, the molecular weight of said compound being between about 200 and 600 whereby a salt of chlortetracycline and said surface active compound is formed and thereafter recovering said salt.

4. A process in accordance with claim 1 in which the surface active organic compound is parahydroxyazobenzene-para'-sulfonic acid.

2,899,423

MANUFACTURE OF CELLULOSE ACETATE

Carl J. Malm and Carlton L. Crane, Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application August 23, 1957
Serial No. 680,821
7 Claims. (Cl. 260—227)

1. A process of preparing cellulose acetate which comprises pretreating cellulose containing 1–7% of water with a mixture of acetic acid and acetic anhydride at 80–180° F. for a time of at least 15 minutes which is insufficient to destroy more than 50% of the water in the cellulose, the acetic anhydride being 30–80% of the mixture and in an amount which will completely esterify the cellulose but not more than 3.5 parts per part thereof, cooling the mass consisting of pretreated cellulose, acetic anhydride, and acetic acid to 35–50° F., adding to the mass 5–12%, based on the cellulose of sulfuric acid catalyst whereby esterification is induced and regulating the esterification so that the temperature of the mass progressively rises to a maximum temperature within the range of 80–130° F. and continuing the esterification until the cellulose has been substantially completely acetylated.

2,899,424

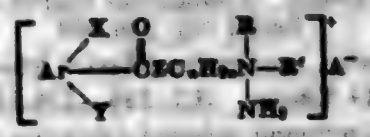
PHYSIOLOGICALLY ACTIVE HYDRAZINIUM SALTS

Bernard Rudner, Baltimore, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Application February 18, 1957
Serial No. 640,584
11 Claims. (Cl. 260—239.1)

10. As a new chemical compound, 1,1-diethyl-1-[2-(p-n-butylaminobenzoyloxy)ethyl]hydrazinium penicillinate.

11. New chemical compounds of the general formula:



wherein Ar is a member selected from the group consisting of benzene, pyridine, naphthalene and quinoline; X and Y are substituents affixed to the same ring of said Ar and are selected from the group consisting of hydrogen, hydroxy, lower alkoxy, amino and lower alkyl amino; Z is selected from the group consisting of O and NH; R and R', taken individually, are lower alkyl radicals; R and R', taken collectively with the nitrogen on which they are both substituents, form a ring selected from the group consisting of morpholine, piperidine and pyrrolidine; n is 2 to 6 inclusive; and A is a pharmacologically acceptable anion.

2,899,425

PROCESS FOR THE ISOLATION OF CEPHALOSPORIN N

Robert Rather Goodall and Neal Holden Sutcliffe, Manchester, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application January 9, 1958
Serial No. 707,875
Claims priority, application Great Britain
January 16, 1957
8 Claims. (Cl. 260—239.1)

1. A process for the isolation of solid, non-hygroscopic Cephalosporin N antibiotic material from crude culture fluid containing same which comprises first concentrating the said crude culture fluid, then treating the concentrate with barium bromide in the presence of methanol whereby the barium salt of Cephalosporin N is precipitated and thereafter recovering said precipitate.

2,899,426

SYNTHESIS OF 1,3-DIAZACYCLOALKENE-2

Barry M. Bloom, Jackson Heights, N.Y., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Application October 18, 1956
Serial No. 616,640
4 Claims. (Cl. 260—239.5)

1. The process for preparing an acid addition salt of 2-(N-substituted)-1,3-diazacycloalkene-2 which comprises reacting, in a polar hydroxylic solvent selected from the group consisting of water and lower alkanols containing up to five carbon atoms at a temperature of from 20 to 140° C., an isothiouronium salt selected from the group consisting of halide, sulfate and sulfonate salts wherein the groups attached to the number one nitrogen atom of said isothiouronium salt are free of acid substituents giving rise to isothiouronium salts having a hydrogen ion concentration greater than ten to the minus three moles per liter in aqueous solution and containing up to a total of thirty carbon atoms, with a diamino compound containing from two to three carbon atoms in a saturated chain between the amino groups, said carbon atoms being free of acid substituents giving rise to diamino compounds having a hydrogen ion concentration of greater

9. New chemical compounds having the general for-

than ten to the minus three moles per liter in aqueous solution, said carbon atoms, when adjacent to amino groups being free of hydroxyl groups.

2,899,427

PREGNANE DERIVATIVES

Carl Djerassi, Birmingham, Mich., and George Rosenkranz, Mexico City, Mexico, assignors, by mesne assignments, to Syntex S.A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Application March 6, 1953
Serial No. 340,900
Claims priority, application Mexico March 12, 1952
14 Claims. (Cl. 260—239.55)

1. A new compound selected from the class consisting of a 16α,17α-oxido-pregnan-3β,11α,21-triol-20-one, 11-mono lower fatty acid esters thereof, 11,21-di lower fatty acid esters thereof, the 11-mono benzoate thereof and the 11,21-di benzoate thereof.

11. A new compound selected from the group consisting of a pregnan-3β,11α,17α,21-tetrol-20-one. 11,21-di lower fatty acid esters thereof, 3,11,21-tri lower fatty acid esters thereof, the 11,21-di benzoate thereof and the 3,11,21-tri benzoate thereof.

2,899,428

11-KETO DIOSGENIN

Edward S. Rothman, Philadelphia, and Monroe E. Wall, Oreland, Pa., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application March 5, 1957
Serial No. 644,183
4 Claims. (Cl. 260—239.55)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A compound selected from the group consisting of 11-keto diosgenin and 11-keto diosgenin acetate.

2,899,429

NITROETHYLENES

Dale N. Robertson, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application October 18, 1956
Serial No. 616,652
6 Claims. (Cl. 260—240)

1. A process for preparing α-arylnitroethylenes having the formula

$$R-CH=\underset{\displaystyle Ar}{\overset{}{C}}-NO_2$$

wherein R represents a radical selected from the group consisting of the benzene, naphthalene, thiophene and furan radicals, and Ar represents an aryl radical selected from the group consisting of the benzene radicals, which comprises reacting a Schiff base having the structure

$$RCH=NR'$$

wherein R is as above defined and R' is a lower alkyl radical containing from 3 to 6 carbon atoms, inclusive, with a substantially equimolar proportion of an arylnitromethane having the structure

$$ArCH_2NO_2$$

wherein Ar is as above defined, in the presence of at least an equimolar proportion of a substantially anhydrous lower alkanoic acid at a temperature in the range of from 20° C. to 150° C. for at least 1 minute.

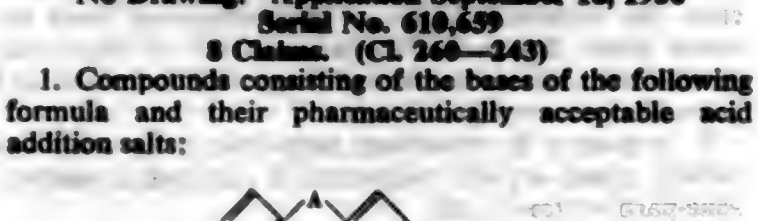
2,899,430

SENSITIZING DYES CONTAINING A 6,7-DIHYDRO-4-H-PYRANO (4,3D)-THIAZOLE NUCLEUS

Robert H. Sprague, East Hampton, Conn., assignor to Sperry Rand Corporation, a corporation of Delaware

No Drawing. Application March 22, 1955
Serial No. 496,057
19 Claims. (Cl. 260—240.4)

4. A dye selected from the group characterized by the following general formula



where R and R′ respectively represent members selected from the group consisting of alkyl and aralkyl groups, *m* represents a positive integer from 1 to 2, *n* represents a positive integer from 1 to 3, L represents a methine group, X^- represents an acid radical and Z represents the non-metallic atoms necessary to complete a heterocyclic nucleus containing from 5 to 6 atoms in the heterocyclic ring, said heterocyclic nucleus being selected from the group consisting of a nucleus of the oxazle series, a nucleus of the thiazole series, a nucleus of the thiazoline series, a nucleus of the benzoxazole series, a nucleus of the benzothiazole series, a nucleus of the alpha naphthoxazole series, a nucleus of the beta naphthoxazole series, a nucleus of the alpha naphthothiazole series, a nucleus of the beta naphthothiazole series, a nucleus of the selenazole series, a nucleus of the pyridine series, and a nucleus of the 3,3-dialkyl indolenine series.

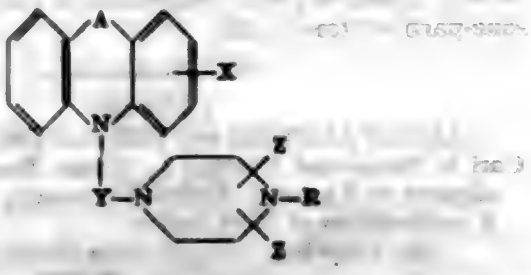
2,899,431

UNSATURATED-PIPERAZINO-ALKYL-PHENOTHIAZINES

Margaret H. Sherlock, Bloomfield, N.J., assignor to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Application September 18, 1956
Serial No. 610,659
8 Claims. (Cl. 260—243)

1. Compounds consisting of the bases of the following formula and their pharmaceutically acceptable acid addition salts:



wherein A is a member of the group consisting of S, SO, and SO_2; X is a member of the group consisting of H, halogen, lower alkoxy, lower alkyl; Y is an alkylene radical having 2 to 5 carbon atoms; Z is a member of the group consisting of H and lower alkyl and R is an unsaturated aliphatic hydrocarbon radical having less than six carbon atoms.

2,899,432

QUATERNARY PYRAZOLONYL COMPOUNDS

Bernard Rudner, Baltimore, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Application January 7, 1957
Serial No. 632,944
11 Claims. (Cl. 260—247.5)

6. 4-amino - 4 - (1,5 - dimethyl-2-phenyl-3-pyrazonoyl-4)-methylmorpholinium chloride.

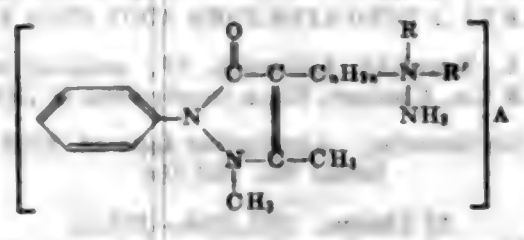
2,899,437

PYRIDYLETHYLATED SALICYLAMIDES

2,899,441

been substantially completely acetylated.

9. New chemical compounds having the general formula:



wherein R, taken alone, is a member selected from the group consisting of lower alkyl, hydroxy lower alkyl and sulfoalkyl; R', taken alone, is a member selected from the group consisting of lower alkyl and hydroxy lower alkyl; R and R', taken together with the N on which they are both substituents, form a non-aromatic ring selected from the group consisting of morpholine, piperidine, piperazine and pyrrolidine; *n* has the values of 3, 2, 1 and 0; and A is a pharmaceutically acceptable anion.

2,899,433

PROCESS FOR THE PRODUCTION OF MELAMINE AND GUANIDINE SULPHAMATE

Joseph Newton Robinson and Frederick John Leslie Miller, Trail, British Columbia, and Basil McDonnell, Rossland, British Columbia, Canada, assignors to The Consolidated Mining and Smelting Company of Canada Limited, Montreal, Quebec, Canada, a company of Canada

No Drawing. Application November 19, 1956
Serial No. 622,825
5 Claims. (Cl. 260—249.7)

1. In a continuous process for the production of a compound selected from the group consisting of melamine and guanidine sulphamate by reacting urea, ammonia and sulphur dioxide in a synthesis reaction vessel at a temperature within the range of from about 260° C. to about 360° C. and under a superatmospheric pressure of ammonia, the improvement which comprises the steps of continuously heating the reactants urea, ammonia and sulphur dioxide in a preliminary mixing vessel at a temperature between 200° C. and 280° C. for a period of time sufficient to react sulphur dioxide and ammonia and form a fluid, preliminary reaction mixture which comprises urea, ammonia and ammonia-sulphur dioxide reaction compounds but which is substantially free from sulphur dioxide, continuously passing said fluid preliminary reaction mixture from said preliminary mixing vessel to a synthesis reaction vessel, reacting said fluid preliminary reaction mixture in said synthesis reaction vessel at a temperature within the range of from about 260° C. to about 360° C. and under a superatmospheric pressure of ammonia to produce a reaction product which contains a recoverable amount of a compound selected from the group consisting of melamine and guanidine sulphamate, continuously discharging reaction product from said synthesis reaction vessel, and recovering a compound selected from the group consisting of melamine and guanidine sulphamate from said reaction product.

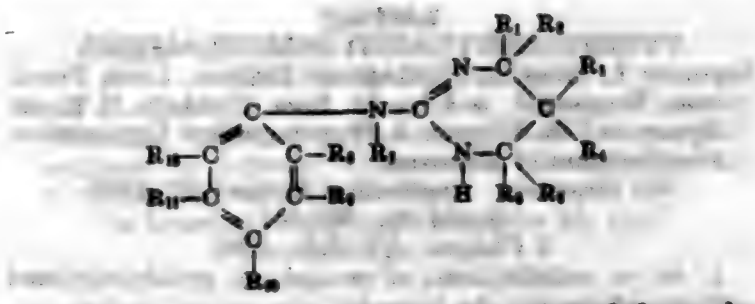
2,899,434

2-PHENYLAMINO-1,3-DIAZACYCLOHEXENE-2

Barry M. Bloom, Jackson Heights, N.Y., assignor to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Application October 18, 1956
Serial No. 616,593
11 Claims. (Cl. 260—256.4)

1. A compound selected from the group represented by the formula:



wherein R_1, R_2, R_3, R_6 and R_7 are selected from the group consisting of hydrogen and 1 to 4 carbon atom alkyl; R_3 and R_4 are selected from the group consisting of hydrogen, 1 to 4 carbon atom alkyl and hydroxy; and R_8, R_9, R_{10}, R_{11} and R_{12} are selected from the group consisting of hydrogen, chloro, bromo, iodo, hydroxy, 1 to 4 carbon atom alkyl, and alkoxy and thioalkyl containing up to 3 carbon atoms; and the pharmaceutically acceptable acid addition salts thereof.

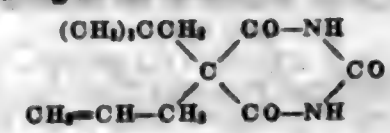
2,899,435

5-NEOPENTYL 5-ALLYL BARBITURIC ACID AND SALTS THEREOF

Arne Elof Brandstrom, Uppsala, Sweden, assignor to Aktiebolaget Pharmacia, Uppsala, Sweden, a company of Sweden

No Drawing. Application October 12, 1955
Serial No. 540,170
Claims priority, application Sweden October 14, 1954
1 Claim. (Cl. 260—257)

As a new chemical compound, 5-neopentyl-5-allyl barbituric acid having the formula:



and its alkali-metal non-toxic salts.

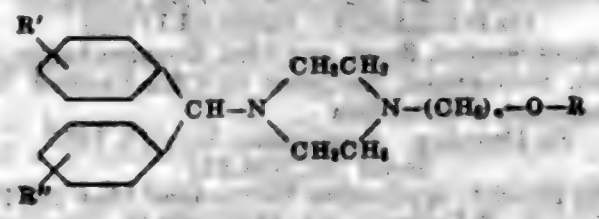
2,899,436

PIPERAZINE ETHERS AND THEIR METHOD OF PREPARATION

Henri Morren, Forest-Brussels, Belgium, assignor to Union Chimique Belge Societe Anonyme, Brussels, Belgium, a corporation of Belgium

No Drawing. Application January 17, 1957
Serial No. 634,608
Claims priority, application Belgium October 30, 1953
7 Claims. (Cl. 260—268)

1. A compound selected from the group consisting of compounds having the general formula



wherein R' and R'' are selected from the group consisting of a hydrogen atom, a chlorine atom, a bromine atom, an alkyl group containing 1 to 7 carbon atoms, and an alkoxy group containing 1 to 7 carbon atoms, R' and R'' being in one of the positions ortho, meta and para, and wherein R contains 2 to 11 carbon atoms and is selected from the group consisting of alkyl, phenyl, alkyl-substituted phenyl, aralkyl, cycloalkyl, hydroxyalkyl, hydroxycycloalkyl, and

$$-CH_2CH_2-O-CH_2CH_2OH$$

n being an integer from 1 to 6, inclusive, and their acid salts.

pyrazolone which comprises treating a pyrazolone of the

2,899,447

11,17 DISUBSTITUTED 3 KETO-$\Delta^{1,4,6}$

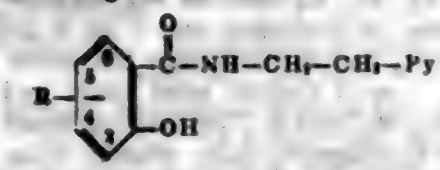
2,899,437

PYRIDYLETHYLATED SALICYLAMIDES

Seymour L. Shapiro, Hastings on Hudson, Louis Freedman, Bronxville, and Ira M. Ross, Yonkers, N.Y., assignors to U.S. Vitamin & Pharmaceutical Corporation, a corporation of Delaware

No Drawing. Application January 17, 1958
Serial No. 709,461
6 Claims. (Cl. 260—295)

1. As a composition of matter, a pyridylethylated salicylamide having the formula:



wherein Py is a member of the group consisting of 2-pyridyl, alkyl-substituted-2-pyridyl, said alkyl having 1-2 carbon atoms, and 4-pyridyl, and R is a member of the group consisting of hydrogen, chlorine, bromine, hydroxyl, lower alkyl, and phenyl, and non-toxic mineral acid addition and methyl quaternary ammonium salts thereof.

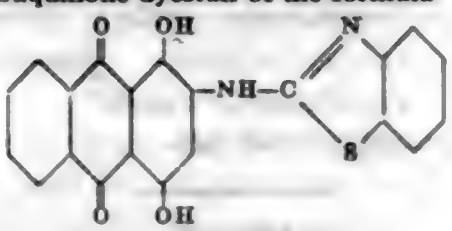
2,899,438

BENZOTHIAZOLYL-2-AMINO-1,4-DIHYDROXY ANTHRAQUINONE

Walter Jenny, Basel, Switzerland, assignor to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Application April 7, 1958
Serial No. 726,637
Claims priority, application Switzerland May 28, 1957
1 Claim. (Cl. 260—303)

The anthraquinone dyestuff of the formula



2,899,439

5-LOWER-CARBOXAMIDO-1,3,4-THIADIAZOLE-2-SULFENAMIDE

Jerome Korman, Portage Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application April 30, 1958
Serial No. 731,884
2 Claims. (Cl. 260—306.8)

1. 5-lower-carboxamido - 1,3,4 - thiadiazole - 2 - sulfenamide.

2,899,440

PROCESS FOR THE MANUFACTURE OF DI-IMIDAZOLE DERIVATIVES

Adolf Emil Siegrist, Basel, and Max Duennenberger, Birsfelden, Switzerland, assignors to Ciba Limited, Basel, Switzerland, a Swiss firm

No Drawing. Application May 13, 1957
Serial No. 658,523
Claims priority, application Switzerland May 18, 1956
9 Claims. (Cl. 260—309.2)

1. Process for the manufacture of di-imidazole derivatives which comprises reacting in the presence of a dilute aqueous mineral acid and in the absence of organic solvents at a temperature within the range of 80 to 120° C., about two molecular proportions of an aromatic orthodiamine of which one amino group is primary and the other amino group is at most secondary, with one molecular proportion of a compound which in its free acid state corresponds to the formula

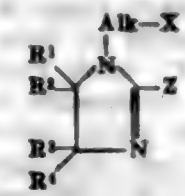
2,899,441

1-(AMINO AND HYDROXY)ALKYL-2-DIARYL-ALKYL-2-IMIDAZOLINES AND PROCESS

Clinton A. Dornfeld, Glenview, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Application June 18, 1958
Serial No. 742,714
12 Claims. (Cl. 260—309.6)

1. A compound of the formula



wherein X is selected from the group consisting of amino and hydroxyl radicals; Alk is an alkylene radical containing more than 1 and fewer than 5 carbon atoms; R^1, R^2, R^3, and R^4 are selected from the group consisting of hydrogen and methyl radicals, and Z is a lower alkyl radical in which each of 2 hydrogens is replaced by a member of the group consisting of phenyl, (lower alkyl)phenyl, halo phenyl, (lower alkoxy)phenyl, and naphthyl radicals.

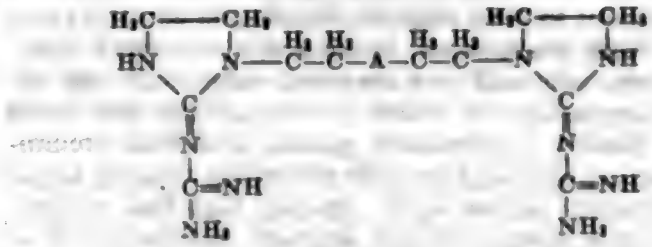
2,899,442

CERTAIN IMIDAZOLIDINEGUANYLIMINE COMPOUNDS

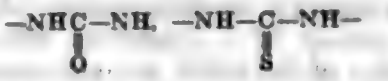
William B. Hughes, Webster Groves, Mo., assignor to Cities Service Research and Development Company, New York, N.Y., a corporation of New Jersey

No Drawing. Application December 31, 1957
Serial No. 706,275
4 Claims. (Cl. 260—309.7)

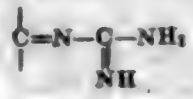
1. Compounds having the formula



wherein A is selected from the group consisting of



and



2,899,443

PROCESS OF PREPARING CERTAIN HALOGENATED 1,3-DISUBSTITUTED-5-PYRAZOLONES

Heinz Schulze, Cincinnati, Ohio, assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application July 7, 1958
Serial No. 746,665
9 Claims. (Cl. 260—310)

1. A process of halogenating the aryl groups in a 5-

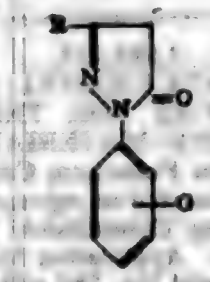
tion of said complex compound, separating said complex compound, and drying said compound until it has a con-

and extracting resulting urano-dithiocarbamate complex with an organic solvent.

by the formula:

salts.

pyrazolone which comprises treating a pyrazolone of the following general formula:



wherein R is selected from the class consisting of alkyl, phenyl, benzoylamino, amino, alkylamino and phenylamino, and G is selected from the class consisting of hydrogen, acylamino, amino, alkylamino and dialkylamino, wherein one of said radicals, R and G, always being one of said amino groups with a sufficient quantity of halogen in a solvent therefor so as to introduce two atoms of halogen on the carbon atom in the 4-position and at least one atom of halogen in an aryl ring, and selectively removing the halogen atoms from the 4-position by reduction.

2,899,444

SYNTHESIS OF TETRAHYDROTHIOPHENE

Bernard Loev, Philadelphia, and John T. Massengale, West Chester, Pa., assignors to Pennsalt Chemicals Corporation, a corporation of Pennsylvania

No Drawing. Application April 3, 1957
Serial No. 650,287
10 Claims. (Cl. 260—329)

6. In the process of preparing tetrahydrothiophene wherein tetrahydrofuran is reacted with a sulphurizing agent, the improvement whereby color body formation is avoided which comprises reacting said tetrahydrofuran with a mixture of hydrogen sulphide and carbon disulphide, in a molar ratio of said tetrahydrofuran to the total sulphur in said mixture of hydrogen sulphide and carbon disulphide of from about 1:2 to about 1:6, at a temperature of from about 350° to 380° C., in the presence of alumina as a catalyst, and at a space velocity of said tetrahydrofuran in respect to said alumina of from about 100 to about 110 gas volume/catalyst volume/hour.

2,899,445

2-(2',4'-DICHLOROPHENOXY)-3-CHLORODIOXANE

Irving Rosen, Painesville, Ohio, assignor to Diamond Alkali Company, Cleveland, Ohio, a corporation of Delaware

No Drawing. Application August 6, 1956
Serial No. 602,430
1 Claim. (Cl. 260—340.6)

2-(2',4'-dichlorophenoxy)-3-chlorodioxane.

2,899,446

IMPROVEMENT IN THE PROCESS OF PREPARING ENDRIN FROM ISODRIN

Daniel R. Marks, Memphis, Tenn., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Application August 14, 1956
Serial No. 603,571
3 Claims. (Cl. 260—348.5)

1. In the process for preparing endrin from isodrin by epoxidizing isodrin with an organic per-acid, the improvement which comprises conducting said epoxidation reaction in a reaction mixture containing dipicolinic acid.

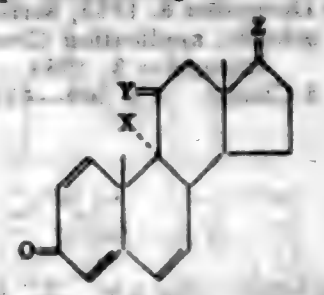
2,899,447

11,17 DISUBSTITUTED 3 KETO-$\Delta^{1,4,6}$ ANDROSTATRIENES

David H. Gould, Leonia, Herbert L. Herzog, Mountain View, and Emanuel B. Hershberg, West Orange, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

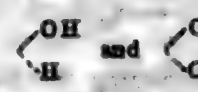
No Drawing. Application January 25, 1957
Serial No. 636,229
13 Claims. (Cl. 260—397.3)

1. Steroid compounds having the following formula:



wherein X is a member of the group consisting of hydrogen and fluorine; Y is a member of the group consisting of

and =O; and Z is a member of the group consisting of =O,



2,899,448

3β,11δ,17α21 - TETRAHYDROXY - 5 - PREGNEN-20-ONE,3,21-DIESTERS INTERMEDIATES AND PROCESS FOR THE PRODUCTION THEREOF

Phillip F. Beal and John A. Hogg, Kalamazoo, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application April 16, 1958
Serial No. 728,766
15 Claims. (Cl. 260—397.45)

1. 3β,11β,17α,21-tetrahydroxy-5-pregnen-20-one and the 3,2-diacylates thereof, wherein the acyl radical is that of a hydrocarbon carboxylic acid containing from one to twelve carbon atoms, inclusive.

2,899,449

PHOSPHATIDYL CHOLINE COMPOUNDS

André Debay, Paris, and Otto Sackur, Fontenay-aux-Roses, France, assignors to Societe Française de Recherches Biochimiques H. Besson & Cie. (Societe en Commandite par Actions), Paris, France, a company of France

No Drawing. Application April 19, 1957
Serial No. 653,730
Claims priority, application France April 27, 1956
9 Claims. (Cl. 260—403)

1. In a process for the production of a complex compound of magnesium sulphate and phosphatidyl choline, the steps of forming a methanol solution of magnesium sulphate and a phosphatidyl choline, and adding ethyl alcohol having a strength of at least 95 percent by volume to said methanol solution by an amount at least equal to the amount of methanol in said methanol solution, so as to cause precipitation of said complex compound.

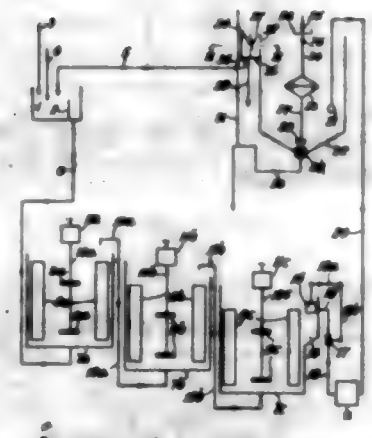
9. A complex compound of magnesium sulphate and phosphatidyl choline, which is a white, powdery, slightly hygroscopic substance soluble in methanol, insoluble in ethanol and in acetone and has been prepared by forming a methanol solution of magnesium sulphate and phosphatidyl choline, adding ethyl alcohol having a strength of at least 95 percent by volume to said methanol solution by an amount at least equal to the amount of methanol in said methanol solution, so as to cause precipita-

propanediol cyclic hydrogen phosphite with a compound

2,899,457

tion of said complex compound, separating said complex compound, and drying said compound until it has a constant weight.

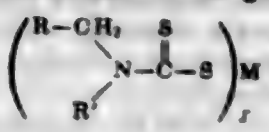
2,899,450
METHOD OF CAUSTIC RECOVERY IN SOAP MANUFACTURE
Ronald Vincent Owen, Sale, and Norman Albert Hart, Lymm, England, assignors to Lever Brothers Company, New York, N.Y., a corporation of Maine
Application December 6, 1955, Serial No. 551,449
Claims priority, application Great Britain December 8, 1954
8 Claims. (Cl. 260—418)



1. A process of neutralizing the free caustic alkali in spent lye from a soap-making process, the free caustic alkali content of said spent lye being not greater than 3%, comprising mixing a stream of the spent lye with a stream of fatty oil, the amount of fatty oil fed into the stream of the spent lye being stoichiometrically at least 10% in excess of the amount of free alkali in the spent lye, vigorously agitating the resultant mixture at a temperature in the range of from 90 to 100° C. and continuing the vigorous agitation within said temperature range until substantially all the free caustic alkali has been reacted with the glycerides in the fatty oil, separating the exhausted spent lye from the saponified oil, and separately discharging the exhausted spent lye and saponified oil.

2,899,451
RECOVERY OF URANIUM BY AROMATIC DITHIOCARBAMATE COMPLEXING
Orear Kenton Neville, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application April 6, 1950
Serial No. 154,450
15 Claims. (Cl. 260—429.1)

1. A selective complexing-organic solvent extraction process for the selective recovery of uranium values from an aqueous solution containing the same in the form of uranyl ions, which comprises contacting said solution with an aromatic dithiocarbamate of the general formula:



where:

R is an organic radical selected from the group consisting of aryl, aralkyl, and alkyl radicals;
R′ is so selected from the group consisting of aryl and aralkyl radicals and a hydrogen atom, that at least one of the respective radicals selected to constitute R and R′ possesses a benzene ring structure;
M is a metal atom selected from the group consisting of the alkali and alkaline earth metals; and
x is a number equal to the operative valence of the metal atom, M;

and extracting resulting urano-dithiocarbamate complex with an organic solvent.

2,899,452
THORIUM OXALATE-URANYL ACETATE COUPLED PROCEDURE FOR THE SEPARATION OF RADIOACTIVE MATERIALS
John W. Gofman, San Francisco, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application May 6, 1952
Serial No. 286,449
1 Claim. (Cl. 260—429.1)

A method of recovering fission products from neutron-irradiated uranium which comprises treating an acidic solution of uranium containing fission products including zirconium with a thorium oxalate carrier precipitate, separating the carrier precipitate and associated fission products from the solution, dissolving said carrier precipitate in an aqueous oxalate solution, acidifying the resultant solution to an access of acidity not greater than about 2 N whereby a thorium oxalate carrier precipitate containing lanthanide rare earths and alkaline earth metals is formed, separating the thorium oxalate carrier precipitate from the solution which contains soluble zirconium oxalate complex, dissolving the precipitate in an aqueous oxalate solution at an elevated temperature, treating the resultant solution with a lanthanide rare earth oxalate carrier precipitate, and separating from the solution said rare earth carrier precipitate together with associated lanthanide rare earth and alkaline earth element fission products associated therewith.

2,899,453
PREPARATION OF DIPHENYLSILANEDIOL
Marshall L. Spector, Ballston Lake, and Roger P. Strang, Valley Falls, N.Y., assignors to General Electric Company, a corporation of New York
No Drawing. Application January 31, 1957
Serial No. 637,363
4 Claims. (Cl. 260—448.2)

1. The process for making diphenylsilanediol which consists essentially of (1) hydrolyzing diphenyldichlorosilane with water, (2) separating the formed crude diphenylsilanediol, (3) dissolving the crude diphenylsilanediol in acetone and neutralizing the acetone solution to a pH of from about 5.5 to 6.8 with a bicarbonate selected from the class consisting of potassium bicarbonate and sodium bicarbonate, (4) precipitating the diphenylsilanediol with water from the acetone solution and (5) isolating the formed diphenylsilanediol.

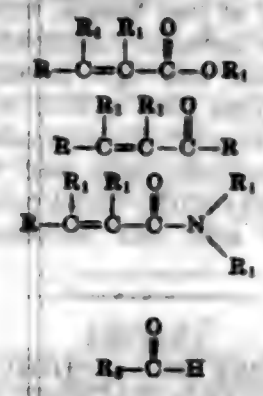
2,899,454
FLUORINE-CONTAINING PHOSPHONATES
Earl T. McBee, West Lafayette, Ind., Ogden R. Pierce, Midland, Mich., and Hyman Major Metz, Fair Lawn, N.J., assignors, by mesne assignments, to Research Corporation, New York, N.Y., a corporation of New York
No Drawing. Application February 9, 1955
Serial No. 487,216
14 Claims. (Cl. 260—461)

1. A lower-perfluoroalkyl-substituted dialkyl alkane phosphonate.

2,899,455
DERIVATIVES OF 2,2-DIMETHYL-1,3-PROPANEDIOL CYCLIC HYDROGEN PHOSPHITE
Harry W. Coover, Jr., and Richard L. McConnell, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
No Drawing. Application August 24, 1956
Serial No. 605,926
8 Claims. (Cl. 260—461)

6. The method for producing new organophosphorus compounds which comprises reacting 2,2-dimethyl-1,3-

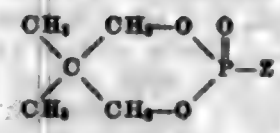
propanediol cyclic hydrogen phosphite with a compound represented by the formulas:



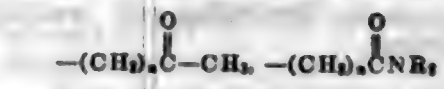
and

wherein R is selected from the group consisting of hydrogen, lower alkyl and phenyl, R_1 is selected from the group consisting of hydrogen and lower alkyl and R_2 is selected from the group consisting of lower alkyl, phenyl, chlorophenyl and nitrophenyl, at a temperature within the range of −25 to 150° C.

7. The organophosphorus compounds having the structural formula:



wherein Z is a radical having a carbon atom attached directly to the phosphorus atom in said structural formula and selected from the group consisting of



$-(CH_2)_nCOOR$, $-(CH_2)_nCN$ and $-CHOHR_1$ wherein R_1 is selected from the group consisting of trichloromethyl, chlorophenyl, nitrophenyl and lower alkyl, *n* being an integer of 1 to 4 and R being a lower alkyl radical.

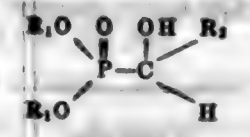
2,899,456

ESTERS OF HYDROXY PHOSPHONIC ACIDS AND ALKENE PHOSPHATES

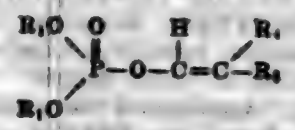
Jacob Rosin, Maplewood, and Joseph Haas, Clifton, N.J., assignors to Monsanto Chemical Company, a corporation of Delaware

No Drawing. Application September 13, 1956
Serial No. 609,515
6 Claims. (Cl. 260—461)

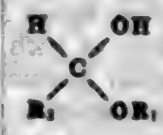
1. In the preparation of esters of hydroxy phosphonic acids of the general formula:



and alkene phosphates of the general formula:



wherein R_1 is lower alkyl and R_3 is a member of the group consisting of lower alkyl and halo-substituted lower alkyl and wherein R_2 and R_4 are members selected from the group consisting of hydrogen, a halogen, a lower alkyl radical and a halohydrin substituted lower alkyl radical, the step comprising reacting PCl_3 and a hemiacetal of the general formula:



wherein R_1 and R_2 are as aforesaid.

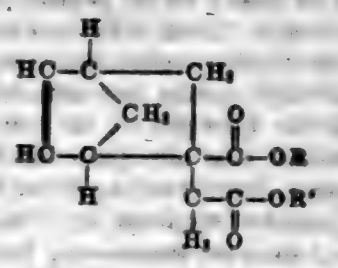
2,899,457

PRODUCT AND PRODUCTION OF DIESTERS OF 2-CARBOXYBICYCLO-[2.2.1]-HEPT-5-ENE-2-ACETIC ACID

Abraham Bavley, Brooklyn, and Bryce E. Tate, Kew Gardens, N.Y., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Application January 15, 1957
Serial No. 634,151
6 Claims. (Cl. 260—468)

1. A product of the formula:



wherein "R" and "R'" are alkyl containing up to and including ten carbon atoms.

2,899,458

PROCESS FOR PRODUCING OXY AROMATIC ACID CHLORIDES

Evelyn H. Wilson, Highland Park, N.J., assignor to Johnson & Johnson, a corporation of New Jersey

No Drawing. Application November 8, 1955
Serial No. 545,801
4 Claims. (Cl. 260—488)

1. A process for preparing an oxy-aroyl chloride of the group consisting of the hydroxy, alkyloxy, aryloxy, acyloxy and aroyloxy derivatives, which process comprises reacting a chloriding agent with the corresponding oxyaromatic carboxylic acid, in the presence of a catalytic amount of a tertiary base and a liquid medium selected from the group consisting of aliphatic hydrocarbons and their halogen derivatives at a temperature in the range of about 30 to 120° C., and recovering the said oxy-aroyl chloride, said medium being a solvent for the reaction product but substantially a nonsolvent for the acid reactant and said chloriding agent being free of phosphorus.

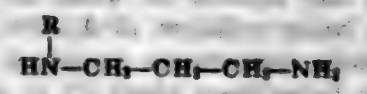
2,899,459

SALTS OF 2,4-DINAPHTHENYL-3-THIAGLUTARIC ACIDS AND 1,3-DIAMINOPROPANES

Elizabeth L. Fareri, Pittsburgh, and John P. Pellegrini, Jr., Blawnox, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Application August 12, 1954
Serial No. 449,492
6 Claims. (Cl. 260—501)

1. A salt of a 2,4-dinaphthenyl-3-thiaglutaric acid and a 1,3-diaminopropane having the general formula:



where R is an aliphatic radical containing from 8 to 30 carbon atoms, the molecular ratio of said acid and said 1,3-diaminopropane in said salt being in the range of about 1:1 to 1:2.

2,899,460

PURIFICATION OF ALKARYL SULFONIC ACIDS

Roy C. Sims and Warren W. Woods, Ponca City, Okla., assignors to Continental Oil Company, Ponca City, Okla., a corporation of Delaware

No Drawing. Application February 20, 1956
Serial No. 566,334
12 Claims. (Cl. 260—505)

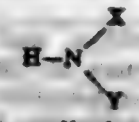
1. A process of separating a purified oil soluble alkaryl sulfonic acid from a mixture containing as contaminants

allowing the terephthalic acid to crystallize, heating under pressure an aqueous solution of said crystallized ter-

2,899,470

PURIFICATION OF POLYALKYLPHENOLS

oxides of sulfur and hydrates of the same which comprises (*a*) Adding to the crude sulfonic acid an organic nitrogen-containing compound having the structure:



wherein X represents a radical selected from the group consisting of hydrogen, lower alkyl, and phenyl radicals, and wherein Y represents a radical selected from the group consisting of lower alkyl, phenyl, lower-alkyl carbonyl, aminocarbonyl, lower-alkyl-amino-carbonyl and benzoyl, with the further restriction that said radicals containing a carbonyl group are attached by the carbonyl carbon to the nitrogen of said organic nitrogen-containing compound, said nitrogen-containing compound being added in an amount varying from 1 to 2 times the stoichiometric quantity required for reaction with said contaminants, and then (*b*) Recovering from the resulting mixture the alkaryl sulfonic acid.

2,899,461

PREPARATION OF ALKALI METAL ISETHIONATES

Robert Martin Smith, Odessa, Tex., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application September 13, 1957
Serial No. 683,686
4 Claims. (Cl. 260—513)

1. A method for preparing an alkali metal salt of isethionic acid which method comprises reacting at a temperature between 90° and 170° C. at least an equimolar proportion of ethylene sulfite with an alkaline compound of the group consisting of alkali metal carbonates and bicarbonates for a time sufficient to form an alkali metal isethionate.

2,899,462

PRODUCTION OF 2-CARBOXY-2-CARBOXYMETHYLBICYCLO-[2.2.1]-HEPT-5-ENE

Abraham Bavley, Brooklyn, and Bryce E. Tate, Kew Gardens, N.Y., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Application January 15, 1957
Serial No. 634,153
3 Claims. (Cl. 260—514)

1. The process of producing 2-carboxy-2-carboxymethyl-bicyclo-[2.2.1]-hept-5-ene which comprises the steps of reacting substantially equimolecular proportions of cyclopentadiene and itaconic acid in an aqueous organic solvent, the organic portion of said solvent consisting of a member selected from the group consisting of alkanols and ketones containing a total of up to four carbon atoms and mixtures thereof, the amount of said organic solvent being sufficient to dissolve said cyclopentadiene and the amount of water in said aqueous organic solvent being sufficient to dissolve said itaconic acid at the reaction temperature employed, the temperature of reaction being from about 15 to about 100° C. and the time of reaction being at least two hours, and separating resulting product.

2,899,463

PREPARATION OF OXYGENATED RESIN ACID DERIVATIVES

Richard N. Moore, El Dorado, Ark., and Ray V. Lawrence, Lake City, Fla., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application April 16, 1957
Serial No. 653,256
11 Claims. (Cl. 260—514.5)
(Granted under Title 35, U.S. Code (1952), sec. 266)

4. The process for producing 6-ketoabietic acid and 6-hydroxydehydroabietic acid which comprises contacting levopimaric acid with molecular oxygen in an alkaline medium in the presence of a sensitizing dye selected from the group consisting of rose bengal, methylene blue, erythrosin, eosin, retene quinone, 1,2-naphthoquinone, chlorophyl, and fluorescein and light having wavelengths in the range of about from 2000 to 7000 A at a temperature of about from 0° to 100° C. to produce 6-keto-14-hydroxy-Δ7(8)-dihydroabietic acid and then dehydrating said 6-keto-14-hydroxy-Δ7(8)-dihydroabietic acid to produce 6-ketoabietic acid and 6-hydroxydehydroabietic acid.

2,899,464

PROCESS OF PREPARING SODIUM SALTS OF SUBSTITUTED MALONIC ACIDS

Claude E. Teague, Jr., Winston-Salem, N.C., assignor to R. J. Reynolds Tobacco Company, Winston-Salem, N.C., a corporation of New Jersey

No Drawing. Application June 10, 1957
Serial No. 664,455
9 Claims. (Cl. 260—515)

9. A process for preparing a solid disodium salt of a monosubstituted malonic acid which comprises contacting at an elevated temperature a lower alkanol ester of a substituted malonic acid selected from the group consisting of lower alkyl, lower alkenyl and phenyl monosubstituted malonic acids with sodium hydroxide in an alcoholic solution for a time sufficient to saponify said ester, said alcohol in said alcoholic solution containing from one to three carbon atoms and said solution containing less than 30% by weight of water, whereby a major amount of said disodium salt is formed as a precipitate and thereafter separating said precipitate from the reaction mixture.

2,899,465

TRICHLOROBENZENE COMPOUNDS AND THEIR PRODUCTION

Theodore A. Girard, Wayne Township, Passaic County, and David X. Klein, Upper Montclair, N.J., assignors to Hayden Newport Chemical Corporation, a corporation of Delaware

No Drawing. Application March 21, 1955
Serial No. 495,781
6 Claims. (Cl. 260—523)

1. In the process of producing 2,3,6-trichlorobenzoic acid, heating at reflux temperature under atmospheric pressure a trichlorobenzyl compound selected from the group consisting of 2,3,6-trichlorobenzyl thiosulfuric acid, di-(2,3,6-trichlorobenzyl) sulfide and 2,3,6-trichlorobenzylamine with an amount of concentrated nitric acid in excess of the stoichiometric amount to form 2,3,6-trichlorobenzoic acid.

2,899,466

PURIFICATION OF TEREPHTHALIC ACID

William Alexander O'Neill, Blackley, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application November 28, 1955
Serial No. 549,534
Claims priority, application Great Britain December 15, 1954
1 Claim. (Cl. 260—525)

A process for decolorizing a crude product from the oxidation of para-substituted dialkyl aromatic compounds which consists essentially of terephthalic acid which comprises heating under pressure an aqueous solution of said crude acid to a temperature above 200° C., but below the decomposition temperature of such terephthalic acid, and in the presence of a small amount of a reducing agent selected from the group consisting of sodium hyposulfite, titanous sulfate, sulfur dioxide, hydrogen sulfide, nascent hydrogen, and phosphorous acid, cooling the solution and

in excess of about 195° C. under a pressure not in excess of about atmospheric pressure in the liquid phase in a manner, the improvement which comprises contacting said

allowing the terephthalic acid to crystallize, heating under pressure an aqueous solution of said crystallized terephthalic acid to a temperature above 200° C., but below the decomposition temperature of such terephthalic acid, and in the presence of a small amount of an oxidizing agent selected from the group consisting of manganese dioxide, potassium permanganate, sodium permanganate, chromic acid, sodium dichromate and potassium dichromate, cooling the solution and allowing the decolorized terephthalic acid to crystallize therefrom.

2,899,467

SURFACE HYDRATED CITRIC ACID CRYSTALS

Edward L. Brennan, Baldwin, Bernard J. Quinn, Garden City, and Robert S. Sellers, Huntington, N.Y., and Gilbert C. Wagner, Leonia, N.J., assignors to Chas. Pfizer & Co., Inc., New York, N.Y., a corporation of Delaware

No Drawing. Application August 2, 1957
Serial No. 675,812
3 Claims. (Cl. 260—535)

1. Surface hydrated crystals of finely-divided anhydrous citric acid of confectionery grade having a crystal size of U.S. Standard sieve from about 60 to about 100 and containing from about 3% to 6% by weight of water of hydration, the cores of said crystals being free of water of hydration and said crystals being blendable with molten candy to produce a homogenous substantially non-tacky product.

2,899,468

PERCHLORATE SALTS OF ALKANOL AMINES

Richard D. Cadle, Stanford, Calif., and Rees W. Mosher, Dayton, Ohio

No Drawing. Application February 25, 1957
Serial No. 642,320
3 Claims. (Cl. 260—584)
(Granted under Title 35, U.S. Code (1952), sec. 266)

2. The perchlorate salt of an alkanol amine taken from the group consisting of dimethylethanolamine, monoisopropanolamine, and aminoethylethanolamine.

2,899,469

HYDROPEROXIDES OF TERTIARY ALKYL CYCLOHEXENES

Jean P. Jones, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Original application September 4, 1951, Serial No. 245,093, now Patent No. 2,708,664, dated May 17, 1955. Divided and this application October 19, 1953, Serial No. 387,846

10 Claims. (Cl. 260—610)

7. A process for the preparation of a novel C_{14} hydroperoxide which comprises reacting in a hydrocarbon mixture 2,3-dimethylbutane and vinylcyclohexene in a molar ratio of about 1 to 20 parts of 2,3-dimethylbutane to 1 part of vinylcyclohexene under alkylation conditions and in the presence of an alkylation catalyst, said alkylation conditions including a temperature in the range of about 50 to 450° F., a residence time of from 5 to 1,080 minutes, and a pressure sufficient to maintain the reactants in a liquid phase, the ratio of said catalyst to said hydrocarbon mixture being in the range of about 0.01 to 2 parts by volume of catalyst to 1 part by volume of hydrocarbon mixture, thereby forming an alkylation reaction product, recovering a fraction of said alkylation reaction product boiling in the range of 465 to 490° F., oxidizing said fraction with an oxidizing gas at a temperature in the range of 122 to 320° F., for a time of from 1 to 10 hours, and in the presence of an oxidation catalyst, and recovering said hydroperoxide.

2,899,470

PURIFICATION OF POLYALKYLPHENOLS

Emanuel Goldstein, Paramus, and Robert M. Lambie, Haworth, N.J., assignors to The Trubek Laboratories, Rutherford, N.J., a corporation of New Jersey

No Drawing. Application September 7, 1956
Serial No. 608,437
16 Claims. (Cl. 260—624)

1. The method of separating diortho tertiary alkyl substituted phenol from a phenolic compound which has at least one unsubstituted ortho position which comprises the steps of heating a mixture containing said phenolic compounds with a trialkyl borate at a temperature above the melting point of the mixture the amount of the trialkyl borate employed being at least sufficient to react with a substantial portion of the phenolic compound having an unsubstituted ortho position, and thereafter fractionally distilling the reaction mixture and separately collecting the diortho alkyl substituted phenol as it distills over.

2,899,471

METHOD FOR THE MANUFACTURE OF ALKYL IODIDES

Frederic R. Huber, Ramsey, and Leslie M. Schenck, Mountainside, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application June 18, 1958
Serial No. 742,704
9 Claims. (Cl. 260—652)

2. The process of preparing alkyl iodides which comprises reducing 1 mole of elemental iodine in an aqueous slurry with at least 2 moles of sodium sulfite to yield 2 moles of hydriodic acid and reacting 1 mole of the latter with 1 mole of a dialkyl sulfate in which the alkyl contains from 1 to 5 carbon atoms and at a pH of 1 to 6 and at a temperature of 0°–100° C.

2,899,472

PREPARATION OF MONOCHLORO-1,1-DIFLUOROETHANES

Frank A. Bower, Woodstown, N.J., and Jack W. Heberling, Jr., Monroe Park, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application April 23, 1957
Serial No. 654,452
4 Claims. (Cl. 260—653.8)

1. The process for making monochloro-1,1-difluoroethanes which comprises passing a gaseous mixture of 0.2–0.8 mol of chlorine and 1 mol of 1,1-difluoroethane in the absence of light through an unobstructed reaction zone defined by solid surfaces which consist of a metal of the group consisting of nickel, Monel metal, Inconel and platinum while maintaining the reaction zone and the reactants at a temperature of from about 375° C. to about 475° C., and maintaining the gaseous mixture in the reaction zone for a period of from about 2 to about 6 seconds coordinated with the mol ratio of the reactants and with the temperature to coincide with substantially complete consumption of the free chlorine.

2,899,473

PROCESS FOR THE MANUFACTURE OF OLEFINIC COMPOUNDS BY THE DEHYDROCHLORINATION OF CORRESPONDING CHLORINATED DERIVATIVES

Pierre Lepidicq, Louvain, Belgium, and Fernand Cousemant and Jean Lindido, Paris, France, assignors to Institut Français du Petrole des Carburants et Lubrifiants, Rueil-Malmaison, Seine-et-Oise, France

Application July 28, 1955, Serial No. 525,042
Claims priority, application France July 29, 1954
8 Claims. (Cl. 260—666)

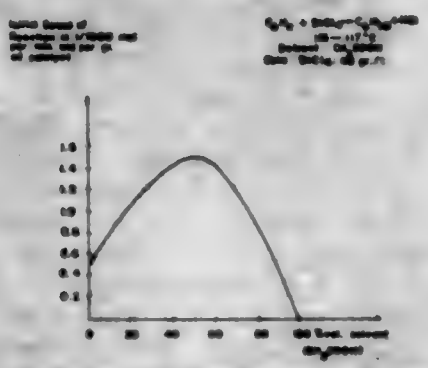
8. A method of producing an olefinic hydrocarbon containing 4 to 8 carbon atoms by way of dehydrochlorination of the corresponding chlorinated hydrocarbon, which comprises heating the latter to a temperature not

2,899,477

SAFETY DEVICE FOR REMOTELY CONTROLLED

including a pair of electrodes, a metallic shell, and an

in excess of about 195° C. under a pressure not in excess of about atmospheric pressure in the liquid phase in a catalyst system selected from the group consisting of (*a*) stannic chloride as dehydrochlorinating catalyst and acetic acid as solvent, (*b*) antimony chloride as dehydro-



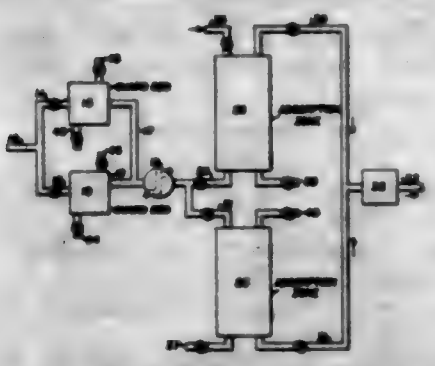
chlorinating catalyst and decahydronaphthalene as solvent, (*c*) antimony chloride as dehydrochlorinating catalyst and nitrobenzene as solvent, (*d*) dichloroacetic acid as dehydrochlorinating catalyst, (*e*) trichloroacetic acid as dehydrochlorinating catalyst, and (*f*) liquid phosphoric acid as dehydrochlorinating catalyst.

2,899,474

FEED PRETREAT IN HYDROCARBON ADSORPTION PROCESS

Harold A. Ricards, Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application May 2, 1957, Serial No. 656,710
5 Claims. (Cl. 260—676)



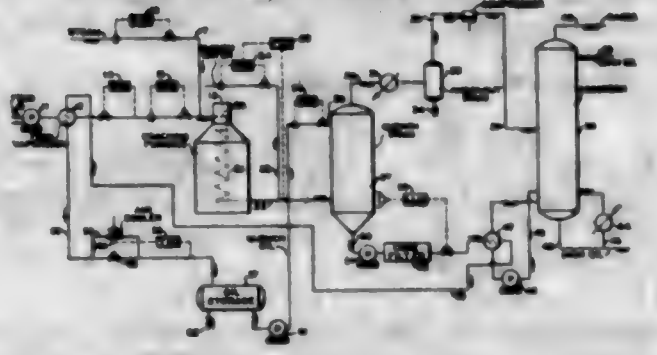
1. In a process for the separation of hydrocarbons of a selected type from mixtures thereof with hydrocarbons of other types wherein said mixtures are contacted with a zeolitic molecular sieve adsorbent of a selected pore size in an adsorption zone and adsorbed hydrocarbons are periodically desorbed from said adsorbent in a cyclic manner, the improvement which comprises contacting said mixtures with a zeolitic molecular sieve adsorbent of the same pore size as the adsorbent in said adsorption zone, in a pretreatment zone prior to said adsorption zone, the temperature in said pretreatment zone being considerably below the temperature in said adsorption zone.

2,899,475

THERMAL CRACKING PROCESS WITH AN IMPROVED HEAT CONSERVATIVE QUENCHING TECHNIQUE

Joseph W. Davison, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application December 19, 1955, Serial No. 553,754
4 Claims. (Cl. 260—683)



2. A process for producing ethylene which comprises heating a hydrocarbon feed stream to vaporize at least a portion of the stream, further heating the stream to effect thermal cracking of a substantial portion of the stream, to produce a substantial quantity of ethylene, adding water to the cracked stream to cool same to about 900° F., then directly passing the resulting cooled cracked stream in contact with a cooled hydrocarbon quench oil and thereby scrubbing tars from said cracked stream while also cooling said stream to about 180° F., said temperature being above the dew point so that water is not condensed passing the resulting cooled cracked stream to a heated absorbing zone, contacting the cooled cracked stream in the absorbing zone with a lean absorbing medium, passing the resulting heated quench oil in heat exchange relationship with fluid in the absorbing zone to heat the absorbing zone, thereafter passing the quench oil in heat exchange relationship with the hydrocarbon feed stream to effect the first mentioned heating thereof, and recycling the quench oil to contact additional cracked products.

ELECTRICAL

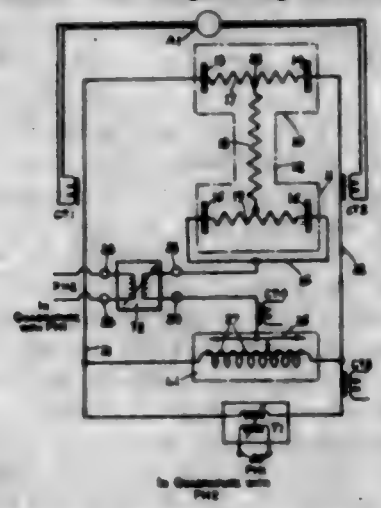
2,899,476

METHOD OF AND FURNACE FOR MELTING AND REFINING GLASS

Philip Anthony Maunsell Gell, Caynton, near Shifnal, England, assignor to Elemelt Limited, Bilston, England, a British company

Application November 6, 1956, Serial No. 620,618
19 Claims. (Cl. 13—6)

19. A method of refining glass comprising heating a body of glass melt by passing a main alternating current through it between main electrodes at respectively opposite ends of an outlet in a furnace chamber, withdrawing glass through said outlet from said body in a direction transverse to said main alternating current flow at a position in the current path between said main electrodes, and causing said withdrawn glass to flow along a duct, passing an auxiliary alternating electric current through said body of glass melt and through glass within said duct longitudinally of said duct to an auxiliary electrode to provide a controlled fall in glass temperature along said duct, detecting the magnitudes of the total currents communicated to said body of glass melt at said opposite ends of said outlet and regulating said total currents by



varying an electrical quantity in a circuit containing said main electrodes and said auxiliary electrodes.

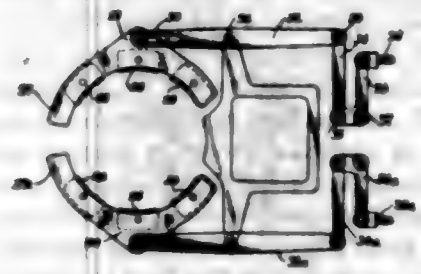
ulating material, the upper end of said insulator being

2,899,484

2,899,477
SAFETY DEVICE FOR REMOTELY CONTROLLED MANIPULATORS

Henri Carteux, Choisy, France, assignor to H. C. Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques, Paris, France

Application October 15, 1956, Serial No. 616,874
Claims priority, application France October 28, 1955
5 Claims. (Cl. 13—16)



5. In a remotely controlled manipulator having a power circuit for operation thereof for gripping electrodes and the like, a pair of levers pivotally mounted on a fixed portion of said manipulator, a pair of clamping jaws pivotally mounted at substantially their mid-points on said levers so that free access is provided to the front ends of said jaws, a lever system connected to one end of each of said first-mentioned levers to pivot said levers about their pivot points to exert forces at the mid-points of said clamping jaws, a counterweight, means connecting said counterweight to said lever systems with said counterweight normally urging said system and levers to maintain said clamping jaws closed, and means acting on said connecting means to selectively overcome the effect of said counterweight and to open said clamping jaws through said lever systems.

2,899,478
SPARK MODIFIER FOR SPARK PLUGS AND IGNITION SYSTEMS

Martin G. Schramm, Hastings, Mich.

Application March 27, 1957, Serial No. 648,893
12 Claims. (Cl. 123—148)

1. A modifier for attachment to spark plugs comprising an elongated strip of bendable metal arranged in a coil wound concentrically about an electrically conductive center post and electrically connected thereto, an insulating layer separating the turns of said coil, a lead wire extending from said post and having an eye in its outer end adapted for connection to the terminal of a spark plug, and an insulating cover enclosing said coil and part of said lead wire.

2,899,479
SPARK PLUG HAVING PROTRUDING TIP

Locke Paul Atwell, James F. Elwell, and George E. Spaulding, Jr., Toledo, Ohio

Application March 7, 1956, Serial No. 570,107
6 Claims. (Cl. 123—169)

1. In a high compression engine having a combustion chamber fitted with overhead valves adapted for use with hydrocarbon fuels having at least one cubic centimeter per gallon of tetraethyl lead additive, a spark plug including a pair of electrodes, a metallic shell, and an alumina insulator, mounted in the wall of the combustion chamber adjacent the inlet valve characterized by having the insulator tip protruding from the metallic shell into the combustion chamber a distance approximately one fifth the diameter of the internal bore of the shell, said protruding tip being mounted in a manner that it is adapted to be scoured by incoming fuel charges when the inlet valve is opened, and the sparking electrodes for the spark plug characterized by an alloy which has high heat and corrosion resistance.

2,899,480
METHOD OF MANUFACTURING CADMIUM PLATES FOR NICKEL-CADMIUM BATTERIES

Arthur Fleischer, Livingston, N.J., assignor to the United States of America as represented by the Secretary of the Army

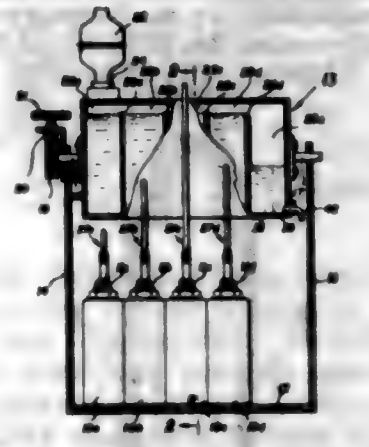
No Drawing. Application November 6, 1958
Serial No. 772,387
4 Claims. (Cl. 136—67)

1. A method of manufacturing cadmium plates from sintered nickel plaques comprising impregnating the plaques in a cadmium salt solution, cathodic polarization of the soaked plates in alkali solution, washing and drying the plates characterized in that polyethylene glycol is added to said cadmium salt solution said polyethylene glycol being used in a concentration of about 1 g. per liter of cadmium salt solution.

2,899,481
DEVICE FOR FILLING ELECTRIC BATTERY CELLS

Leon Kardorff, Jackson Heights, N.Y., assignor to Telecontrols-International, Inc., New York, N.Y., a corporation of New York

Application May 26, 1954, Serial No. 432,465
18 Claims. (Cl. 136—162)



1. A device for introducing measured quantities of liquid into a plurality of receptacles, comprising a container, a plurality of substantially vertical partitions in said container dividing the interior thereof into a plurality of principal compartments arranged in a row and an overflow compartment at the end of said row, said partitions being all of substantially the same height, said container having a filling aperture above the end of said row of principal compartments opposite said overflow compartment, and a plurality of discharge channels each extending from one of said principal compartments to one of said receptacles, respectively, said container having wall portions extending above said partitions and defining a flow channel for said liquid constituting the sole connection between said compartments.

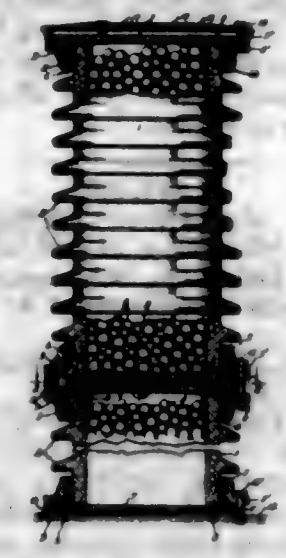
2,899,482
STACKING TYPE INSULATORS

Leland J. Stevens, Baltimore, Md., assignor to General Electric Company, a corporation of New York

Application May 8, 1956, Serial No. 583,574
1 Claim. (Cl. 174—30)

In an upright elongated hollow insulator which is partially filled with an insulating liquid and solid in-

sulating material, the upper end of said insulator being open, a collar surrounding and connected to said open end, a plate superposed with respect to said open end, a seal between said plate and open end, means connecting and drawing said plate to said collar which compresses said seal, and an annular open shield connected



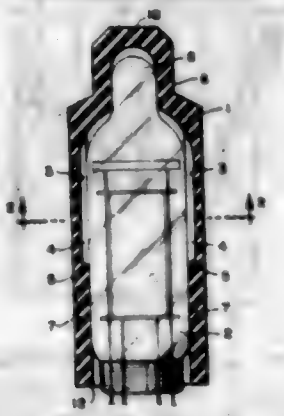
to the inside surface of said plate and extending down into the surface of said liquid, and means connected to said collar which is out of contact with said plate, said last mentioned means extending above said plate for spacing said plate from another and superposed insulator so that the superposed insulator transmits none of its load or bending moments to said plate and its seal.

2,899,483

ELECTRON TUBE PROTECTIVE DEVICE

Jack B. Robertson and Roy Volpone, Seattle, Wash., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application November 26, 1956, Serial No. 624,478
5 Claims. (Cl. 174—138)



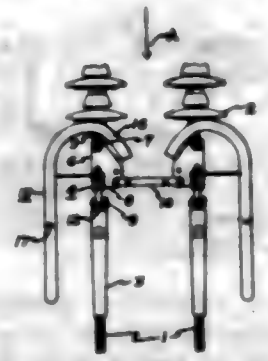
1. An electron tube protective device comprising a relatively thick walled cylindrical tube of resilient flexible material having one end closed and its other end open and adapted to snugly fit about the outside of the envelope of an electron tube, said cylindrical tube having substantially constant thickness and the inner wall formed with vertical grooves therein, said grooves defining ribs, said ribs and grooves cushioning said electron tube against shocks, said grooves and ribs terminating short of the open end of said cylindrical tube, the lower end of said cylindrical tube forming an annular seal which engages the lower end portion of the electron tube, said seal preventing foreign matter from entering said cylindrical tube and passing into said grooves, the upper closed end of said cylindrical tube above said ribs and grooves being smaller in diameter than the lower portion of the tube and also having a seal about the upper end of said electron tube, the seals about the lower end portion and the upper end of said tube completely sealing off said grooves and preventing the atmosphere from circulating therethrough.

2,899,484

SHIELDING MEANS FOR DEAD ENDED DOUBLE CONDUCTOR INSTALLATIONS

Robert L. McCoy, Ellicott City, and Joseph Kaminski, Jr., Baltimore, Md., assignors to General Electric Company, a corporation of New York

Application December 9, 1957, Serial No. 701,517
8 Claims. (Cl. 174—144)



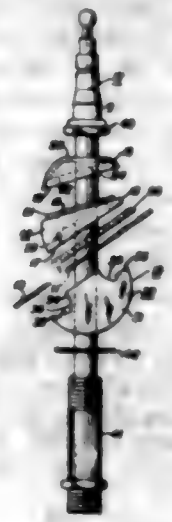
1. In a high voltage electrical transmission installation which comprises a pair of spaced and generally parallel electrical transmission lines for each phase of electrical energy, said lines being tensioned and disposed in generally the same horizontal plane, each of said lines comprising an elongated electrical conductor and an electrical insulator string which are interconnected by hardware, the hardware of each of said lines comprising a connector which is adapted to move in said plane with its conductor as its conductor moves sideways, corona suppressing and voltage grading means for said hardware and insulator strings, said means comprising a pair of shields which are removably connected to said connectors, each shield being adapted for movement in unison with its connector, and said shields extending along the outer sides of said hardware and the adjacent ends of said insulator strings.

2,899,485

ANTENNA MOUNTING DEVICE

Milton R. Friedberg, Cleveland, and Jack L. Stewart, Ashtabula, Ohio, assignors, by direct and mesne assignments, to The Antenna Specialists Company

Application October 20, 1954, Serial No. 463,355
3 Claims. (Cl. 174—153)



3. An antenna structure for mounting on a vehicle body panel including rod-like antenna means and mounting means for supporting the antenna means at an opening in said body panel, with said rod-like antenna means extending at a selected angle with respect to said panel, said mounting means including an interior anchor portion and an exterior adjustable base member, said anchor portion and adjustable base member adapted to be positioned on opposite sides of the panel, said base member having a recess in the surface positionable against the surface of the panel, an apex seat for said antenna means, and a passage-

nected electrically between said first and second elec-

so that a picture built up on said screen by said raster

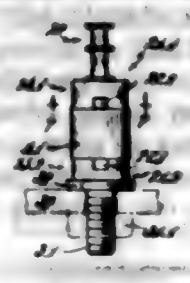
way from the recess to said apex seat, said seat and the antenna seated thereon are angularly adjusted with respect to the panel along a spherical field by adjustment of said base member, said anchor portion having peripheral surface areas proportioned and positioned with respect to said base member to provide the effect of a spherical surface positioned diametrically opposite of said spherical field, said spherical field of the base member and the spherical surface effect being on a common geometrical sphere and thereby provides a constant distance thereacross with respect to the antenna axis, the antenna thereby being provided with the effect of a spherical mount having a constant clamp area, said anchor having shoulders defining a chordal plane with respect to the said geometrical sphere, opposed tab means proportioned to extend from said chordal plane through said opening in said body panel, said tab means providing a snug fit of the anchor to the opening, said tab means proportioned to extend through the opening and into said recess of the base, said recess fitted snugly to said tab means, the tab means thereby stabilizing the entire mounting means with respect to said panel opening, and said tab means having an area of width greater than the panel opening at the chordal plane area of the anchor to cut into the panel member and electrically ground said anchor portion and simultaneously provide non-rotative mechanical anchor action.

2,899,486

INSULATING MOUNT

Ralph Abrams, Sharon, Mass., assignor to Cambridge Thermionic Corporation, Cambridge, Mass., a corporation of Massachusetts

Application April 3, 1956, Serial No. 575,757
6 Claims. (Cl. 174—166)



1. An insulating mount comprising: an elongate body of insulating material having physical properties characteristic of polyfluoroethylenes such as appreciable tendency to flow due to low internal friction and little tendency elastically to return, after deformation, to an original shape; and at an end of said body a metallic head having on one side a mounting member and on the other side a socket cup with teeth extending in axial direction from the rim of the cup with radially extending slots therebetween which slots are narrow as compared with the peripheral width of said teeth which teeth protrude inwardly to confine said end of the body within the essentially continuous inner surfaces of the cup and the teeth, said material substantially filling said cup and penetrating into said slots between said teeth; whereby said material of said body can be deformed within said cup to provide at said teeth contact surfaces which are sufficiently large to reduce the flow thereon to a degree that substantially prevents relative rotation of body and head as well as linear separation thereof.

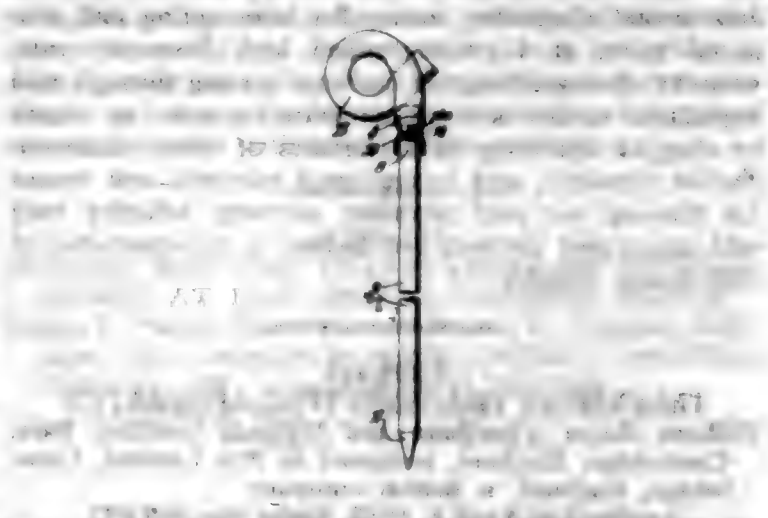
2,899,487

INSULATORS FOR SUPPORTING AN ELECTRIC WIRE FENCE

Rodney Shuttleworth Drake, Birmingham, England

Application May 8, 1956, Serial No. 583,465
Claims priority, application Great Britain May 11, 1955
2 Claims. (Cl. 174—170)

1. An insulator for an electric fence wire, comprising a metal member having a substantially cylindrical end with a keying means therein and an open pigtail portion for receiving the wire, the cylindrical end having an annular keying groove with a plurality of ribs being provided transversely of said groove, said pigtail portion be-



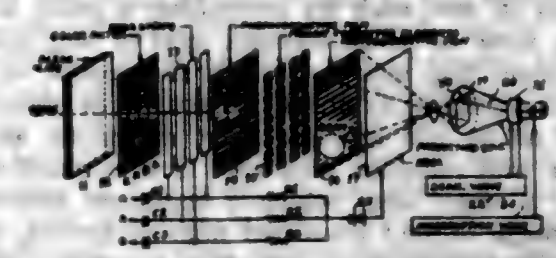
ing a sleeve of thermoplastic material which is practically rigid at normal temperatures, an end of the sleeve remote from the pigtail being in tight engagement with the cylindrical end of the metal member and its keying means whereby the metal member and the open pigtail portion are securely fastened together.

2,899,488

COLOR IMAGE AND FLYING SPOT SCANNER CONTROL OF DUAL PHOTOCONDUCTIVE FILM

Megner V. Kalfaian, Los Angeles, Calif.

Application March 17, 1955, Serial No. 494,948
4 Claims. (Cl. 178—5.4)



1. An optical composite screen, which comprises a first photoconductive surface adapted to translate optical images into representative electrical resistivity changes; a first translucent electrode, spaced coextensive and in close proximity with said surface; a mosaic of mutually insulated conductive elements in close contact with the first photoconductivity surface, remote from said electrode; a second photoconductive surface adapted to translate optical images into representative electrical resistivity changes, spaced coextensive and in close proximity with said mosaic elements; and a second translucent electrode spaced coextensive and in close proximity with the second surface, remote from said mosaic, whereby forming a mosaic of independent resistivity paths between the first and second electrodes, corresponding to representative values of optical images falling simultaneously upon said first and second photoconductive surfaces through said translucent electrodes.

4. The composite screen as set forth in claim 1, wherein is included means for projecting an optical image upon said first photoconductive surface through said first translucent electrode; means for producing a beam of light in constant intensity; means for projecting and forming a scanning raster upon said second photoconductive surface by said beam through said second electrode, whereby completing elemental resistive paths between said first and second electrodes, representative of elemental areas of said projected optical image; a series-connected impedance means and a potential source con-

the atmosphere from circulating therethrough.

panel, an apex seat for said antenna means, and a passage-

nected electrically between said first and second electrodes, whereby causing electric currents to pass through the impedance means proportionally corresponding to said elemental changes of resistivity between the first and second electrodes; means for interrupting said projected beam at a predetermined high frequency rate, whereby distinguishing the currents passing through said impedance means between retention currents, as caused by sluggish operating characteristics of some photoconductive elements, and image-signal currents; and means for filtering out said retention currents, whereby only said interrupted currents are derived as representative of said image signals.

2,899,489

TELEVISION TRANSMITTING APPARATUS

William Roger Cheetham and William Geoffrey Parr, Cambridge, England, assignors to Pye Limited, Cambridge, England, a British company

Application April 4, 1955, Serial No. 499,697
Claims priority, application Great Britain April 7, 1954
6 Claims. (Cl. 178—5.4)

1. Colour television transmitting apparatus comprising a television pick-up tube, a multiple filter divided into a plurality of sets, each set comprising a group of filter elements, some of which transmit light of only one particular colour and some of which are opaque to light, means for projecting an image of the scene or object to be televised on to said multiple filter, means for flooding said filter with radiation of a kind to which said tube is sensitive, a target upon which a combined electron or optical image of said irradiated filter is formed, means for scanning said target to generate a waveform containing a plurality of sequences each representing the individual filtered components of the scene or object, standing on a pedestal waveform representing the filtered components of the said flooding irradiation, means for separating at least part of the pedestal waveform from the complete signal, a plurality of signal channels, means for producing a plurality of pulses, each pulse occurring respectively during the time instants i.e. time interval of the waveform corresponding to one of the said filtered components, means for feeding the combined waveform to each of the signal channels, and means for applying the pulses respectively to the signal channels so that each channel passes only those successive signals that are representative of information due to irradiation through filter elements of the same kind.

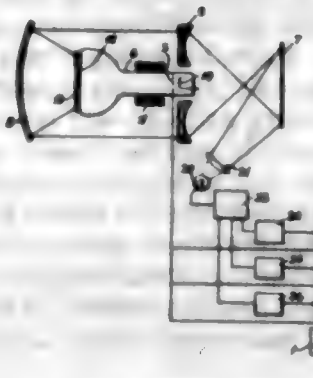
2,899,490

TELEVISION RECEIVING APPARATUS

William Roger Cheetham and William Geoffrey Parr, Cambridge, England, assignors to Pye Limited, Cambridge, England, a British company

Application April 18, 1955, Serial No. 501,956
Claims priority, application Great Britain April 21, 1954
2 Claims. (Cl. 178—5.4)

1. Colour television receiving apparatus adapted to receive colour television signals having colour information components, comprising a fluorescent screen, means for modulating an electron beam, means for deflecting said beam to form a raster on said fluorescent screen, a multiple filter separate from but located on said screen so that a picture built up on said screen by said raster may be viewed through said filter, the picture being preferably in focus at said filter, said filter comprising a plurality of sets of coloured areas, each set comprising a group of filter elements and at least some of said sets having at least one reference element arranged to pass a totally different band of frequencies from any other one element in the set and lying outside the total range of frequencies passed by all the other elements in the set, a pick-up device arranged in relation to said filter for receiving energy transmitted through said filter, means for causing said pick-up device to produce from said energy an output waveform incorporating reference components due to the said filter reference elements of dif-



ferent transmission characteristics, means for forming said reference components into separate gating waveforms, means for processing said gating waveforms, a plurality of channels, one for each different kind of colour component in the received colour television signal, a modulating means for the said scanning electron beam, and means for feeding said processed waveforms respectively to said channels whereby said channels are caused to pass the different kinds of colour components in predetermined sequence to said modulating means for said scanning electron beam so that when the scanning beam impinges on said screen it is in correct relation to the filter element of the correct kind for the colour component modulation that the scanning beam bears at that instant.

2,899,491

NON-LINEAR REACTANCE CHROMINANCE SIGNAL DEMODULATORS

Richard W. Sonnenfeldt, Haddonfield, Gustave L. Grandmann, Westmont, and Michael Cooperman, Barrington, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Application December 20, 1956, Serial No. 629,733
28 Claims. (Cl. 178—5.4)

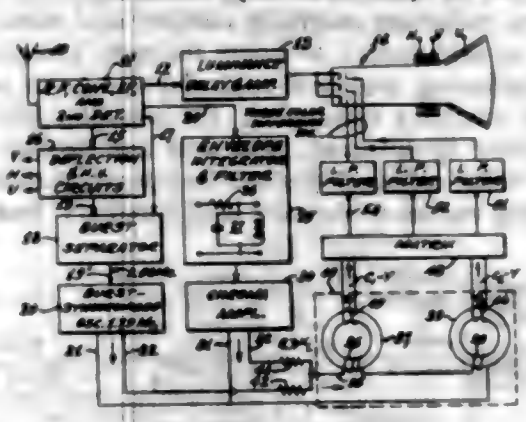
1. In combination, a nonlinear reactance device having controllable reactance, a source of a color subcarrier including a plurality of color information signals each occurring at a prescribed phase of said color subcarrier, means to vary the reactance of said nonlinear reactance device at a phase related to a selected phase of said

each line scanning interval, the generated image informa-

of said control pulses and to release following a time delay

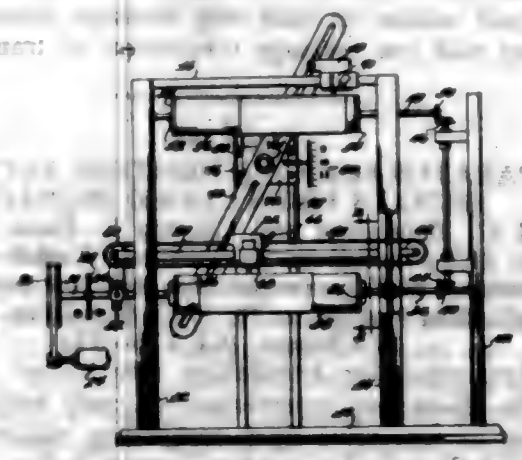
carrier, and means to apply said color subcarrier to said nonlinear reactance device to therefrom demodulate a color information signal occurring at the phase in said color subcarrier at which said nonlinear reactance device is varied.

2,899,492
MAGNETIC TWO-ANGLE DEMODULATOR
Michael Cooperman, Barrington, and Gustave L. Grandmann, Westmont, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Application February 1, 1957, Serial No. 637,677
9 Claims. (Cl. 178—5.4)



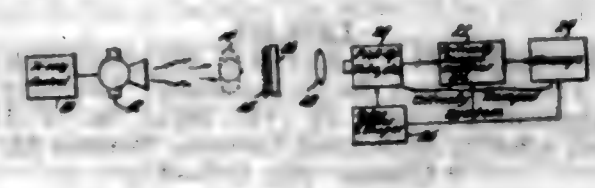
1. A two-angle demodulator for demodulating a two-phase modulated suppressed carrier signal from a source, comprising, a source of a reference oscillation having a frequency equal to a submultiple including unity of the frequency of said suppressed carrier, magnetic core means having two magnetic paths, a current path linking said two magnetic paths, means to couple said signal source and said reference oscillation source to said current path, said magnetic paths and said current path being characterized in that different magnetic field strengths are created in said two magnetic paths as the result of a given current in said current path, and output coils linking respective magnetic paths.

2,899,493
MULTIPLE RATIO ELECTRICAL ENGRAVING MACHINE
Samuel W. Levine, Westbury, N.Y., assignor to Fairchild Camera and Instrument Corp., a corporation of Delaware
Application January 24, 1957, Serial No. 636,003
2 Claims. (Cl. 178—6.6)



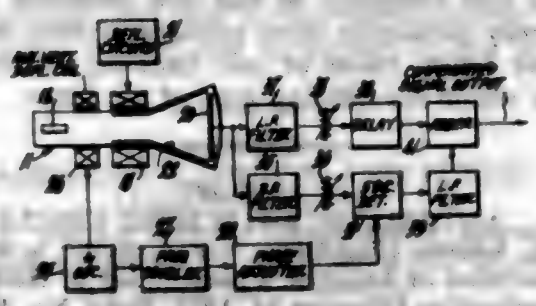
1. A photoelectric machine for making screened plates directly from original copy and to altered dimensional proportions, comprising a pair of cylinders adapted respectively to receive the original copy and an image receiving plate in wrap-around fashion, means for rotating said cylinders in synchronism, respective carriages mounted to traverse paths adjacent the cylinders and parallel to the cylinder axes, scanning means carried by one carriage for scanning copy on one cylinder, pattern-reproducing means carried by the other carriage for operating upon a plate on the other cylinder, power means for driving one of said carriages at a rate proportional to the rotational speed of the cylinders, and a variable-ratio linkage connecting the other carriage for movement thereof from the first carriage, said linkage comprising a single bar having a pin-and-slot connection with both carriages, and means for adjusting the position of the pivot axis of said lever with respect to the carriages.

2,899,494
SYSTEM FOR THE TRANSLATION OF INTELLIGENCE AT LOW SIGNAL-TO-NOISE RATIOS
Ralph E. Sturm, Pikesville, and Russell H. Morgan, Baltimore, Md., assignors to Bendix Aviation Corporation, Baltimore, Md., a corporation of Delaware
Application June 2, 1954, Serial No. 433,955
5 Claims. (Cl. 178—6.8)



3. A system for producing an intensified fluoroscopic image, comprising a source of X-radiation, means for projecting radiation from said source through a subject and onto a fluorescent screen to produce an image on said screen having a lower level of intensity of the order of 10^{-3} millilamberts or less, means for picking up said image of low level intensity and for converting said image to corresponding electrical signals in the presence of electrical noise having a level of intensity of the same order of magnitude as the intensity of said signals, amplifier means for amplifying said signals, means coupling said amplifier means and said pick-up means, means for reproducing said image from said amplified signals, means coupling said reproducing means and said amplifier means and electrical damping means for at least critically damping all the modes of oscillation of said pick-up means, said amplifier means, said reproducing means, and both said coupling means throughout their useful frequency range so that the signal-to-noise ratio is not decreased and the randomness of the noise is preserved.

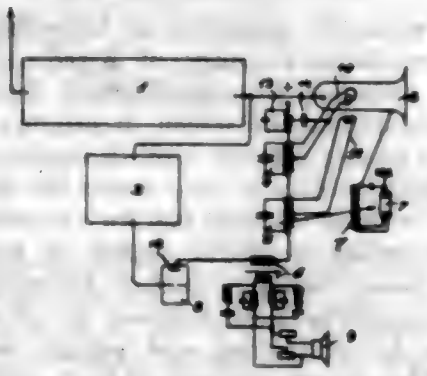
2,899,495
PICTURE SIGNAL APERTURE COMPENSATION SYSTEM
Walter G. Gibson, Princeton, N.J., and Alfred C. Schroeder, Huntingdon Valley, Pa., assignors to Radio Corporation of America, a corporation of Delaware
Application February 1, 1955, Serial No. 485,509
10 Claims. (Cl. 178—7.2)



1. Apparatus comprising the combination of an image scanning device including means for developing a scanning spot, and means for causing said scanning spot to trace a scanning raster comprising a series of parallel scanning lines, means for generating an image informative signal in response to the tracing of said scanning raster, means for wobbling said scanning spot in a direction substantially perpendicular to said scanning lines throughout

each line scanning interval, the generated image informative signal thereby regularly including a component representative of image information corresponding to a given line of said raster and additional components representative of image information corresponding to areas of said raster vertically adjacent to said given line, and means coupled to said signal generating means for deriving an aperture compensated video signal from said generated image informative signal, said deriving means comprising means for deriving from said generated image informative signal a video signal component representative of the sum of said given line image information and said adjacent area image information, and a video signal component corresponding to the difference between said given line image information and said adjacent area image information, said aperture compensated video signal comprising a combination of said sum and difference signal components.

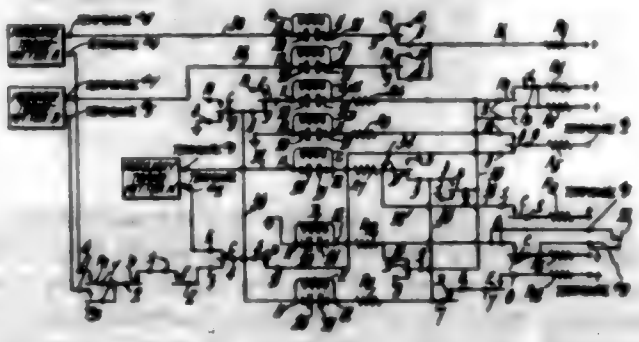
2,899,496
PROCESS FOR TELEVISION TRANSMISSION
Friedrich Herz, Berlin-Zehlendorf, Germany
Application October 20, 1953, Serial No. 387,134
Claims priority, application Germany October 21, 1952
3 Claims. (Cl. 178—7.5)



2. A television system comprising a receiver including a cathode-ray tube provided with a screen, means for directing a cathode-ray beam at said screen, vertical and horizontal deflection means positioned adjacent the path of said beam, first means operatively connected to said vertical deflection means for applying to the latter first sinusoidally varying deflection potentials of a predetermined frequency for moving said cathode-ray beam up and down over said screen so as to tend to thereby produce vertical lines on said screen, second means operatively connected to said horizontal deflection means for concurrently applying to the latter second sinusoidally varying deflection potentials for displacing said lines back and forth across said screen, and third means operatively connected to said second means for superimposing onto said second deflection potentials additional sinusoidally varying potentials of a frequency substantially double said frequency of said first deflection potentials, to thereby parallelize those portions of both the advancing and return traces of said lines on said screen and falling within the viewing area of the latter.

2,899,497
AUTOMATIC SWITCHING CIRCUIT
Roy K. Andres, Glen Cove, N.Y., assignor to Radio Corporation of America, a corporation of Delaware
Application February 24, 1955, Serial No. 490,175
6 Claims. (Cl. 178—17)

6. An automatic switching circuit for selectively controlling the operation of a pair of message transmitters and an auxiliary transmitter, each of said transmitters requiring a control pulse for enabling the same to transmit, said circuit comprising a source of signal energy in the form of a train of control pulses, a first relay device set to operate following a time delay less than the duration of said control pulses and to release following a time delay not exceeding the interval between said control pulses, a first switching means including at least a second relay device responsive to a condition in either one of said message transmitters indicating that said one message transmitter is ready to transmit to connect said first relay device to said source, said first relay device being set to operate upon the reception of a first control pulse from said source having a given duration corresponding to the operate time delay of said first relay device following the connection of said first relay device to said source, a second switching means including additional relay devices responsive to the operation of said first relay device and said first switching means to connect said auxiliary transmitter to said source to apply the next complete control pulse following said first control pulse from said source to said auxiliary transmitter for enabling said auxiliary transmitter to transmit, said first and second switching means being arranged so that the operation of said second switching means to connect said auxiliary transmitter to



said source causes said first switching means to operate to disconnect said first relay device from said source, said first relay device upon being disconnected from said source becoming inoperative following the release time delay of said first relay device, means included in said auxiliary transmitter operative upon the completion of the transmission by said auxiliary transmitter to operate said second switching means so as to operate said first switching means to reconnect said first relay device to said source, said first relay device being reoperated in response to the reception by said first relay device of a further control pulse of said given duration from said source following the reconnection of said first relay device to said source, said second switching means being responsive to the reoperation of said first relay device and the operation of said first switching means to connect said one message transmitter to said source to apply the next complete control pulse following said further control pulse from said source to said one message transmitter for enabling said one message transmitter to transmit.

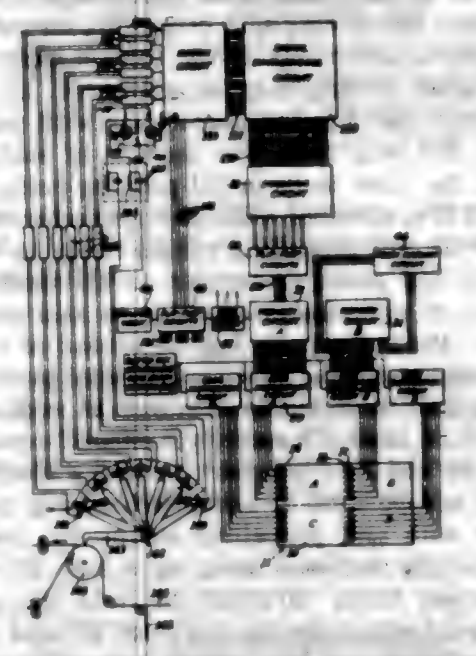
2,899,498
APPARATUS FOR SYNTHESIZING FACSIMILE SIGNALS FROM CODED SIGNALS
Russell G. Thompson and Clayton E. Haut, Jr., Rochester, N.Y., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Application November 30, 1953, Serial No. 394,926
17 Claims. (Cl. 178—22)

1. Apparatus for translating into visual representation the characters represented by code arranged on a medium in successive lines comprising means for scanning said lines and providing output pulses in accordance with the code in each line and individual to the character represented thereby, distribution means for receiving said output pulses and delivering successive electrical signals representative of the coded character in each of said scanned lines, memory means connected to said distribution means for receiving said electrical signals in any predetermined order and delivering said electrical signals successively in a fixed and predeter-

and receiving telephone calls, a telephone transmission line, a selector connection assembly between each station

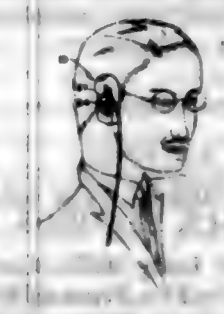
control of utilising machines, comprising a frame, a number of adjacent members mounted in said frame for mov-

mined order, a plurality of switching means each requiring two simultaneously applied signals to complete a switching operation arranged in the equivalent of columns and rows of a matrix, a circuit network connected to said memory means and to said matrix so that said switching means in each column common to more than one character are conditioned by any one of said electrical signals representative of such characters, the outputs of said switching means in each row being



connected in parallel, marking means for following each of a multiplicity of collateral paths extending along a surface on which the representation is to appear, each of said marking means being individual to a corresponding row of said switching means, circuit means for applying to said columns of said switching means in rapid succession a signal simultaneously with said electrical signal to provide an output, and means controlled by the output of each row of said switching means for operating the corresponding marking means.

2,899,499
HEARING DEVICE
Bernard Eichwald, New York, N.Y.
Application July 3, 1956, Serial No. 595,642
2 Claims. (Cl. 179—1)

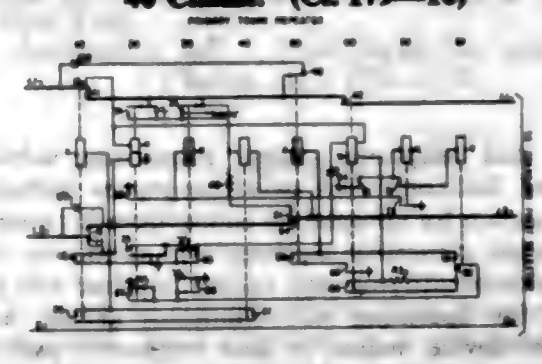


1. A hearing device for support in depending position from a person's ear, said device comprising a light-weight receptacle elongated along its vertical axis and of a height and width sufficient to encompass a human ear snugly, said device being of limited depth and having a continuous outer wall, a continuous peripheral wall and an open inner wall, the upper edge of said peripheral wall being arcuate and the outer wall having an upper and outwardly flaring portion communicating with said arcuate upper edge whereby said device may be supported upon the helix of a person's ear and will encompass the entire ear, means for supporting an electrical receiving device substantially centrally of said outer wall, and electrical conduit retaining means on said outer wall for adjustable retention of the electrical conduit associated with said receiving device.

2,899,500
TIMING EQUIPMENT
Frederick Harry Bray, Peter Morris King, and Joseph Rice, London, England, assignors to International Standard Electric Corporation, New York, N.Y.
Application September 10, 1953, Serial No. 379,373
Claims priority, application Great Britain September 19, 1952
8 Claims. (Cl. 179—7)

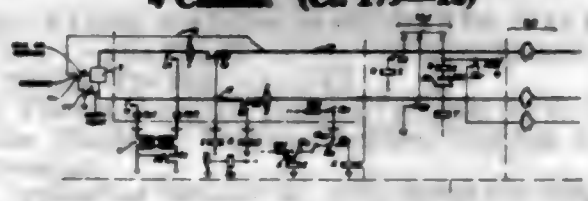
1. Timing equipment comprising a store having a plurality of elements, means for examining said store periodically, element by element, means external with respect to said store capable of assuming either of two conditions, and of producing a signal when in one of said conditions, a two-condition device, means operative only when said examining means is examining the first element of said store and responsive to said signal for causing said two-condition device to assume one of its conditions, means operative when said examining means is examining the rest of said elements for causing said two-condition device to assume the other of its conditions, a control circuit connected with said examining means and with said two-condition device and comprising means responsive to said two-condition device assuming its one condition when the first element of said store is examined for counting the number of successive examinations of said store during the time said signal is produced by said external means.

2,899,501
TELEPHONE SYSTEM WITH INDUCTIVE PULSING
Clarence E. Lomax, Chicago, Ill., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware
Application December 26, 1956, Serial No. 630,568
40 Claims. (Cl. 179—16)



1. In a telephone system, a first circuit including a first relay, a second circuit including a second relay connected to said first circuit and in bridge of said first relay, means for initially operating said first relay over said first circuit, means subsequently effective to intermittently decrease and restore the flow of current in said first circuit through said first relay, said decrease of current being ineffective to cause said first relay to restore, said second circuit being effective to operate said second relay in said second circuit over said bridge at the time said current flow is decreased, and said second relay restoring at the time the initial current flow is restored in said first circuit.

2,899,502
COMBINED TELEPHONE AND PUBLIC ADDRESS SYSTEM
Heinz K. Vonhof, Berlin-Charlottenburg, Germany
Application January 27, 1956, Serial No. 561,885
4 Claims. (Cl. 179—18)



1. A combined telephone and public address system comprising, a plurality of telephone stations for initiating

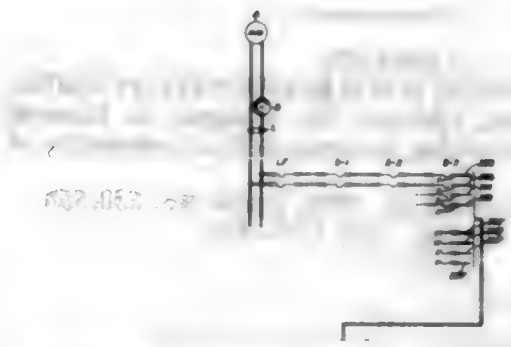
and receiving telephone calls, a telephone transmission line, a selector connection assembly between each station and the transmission line, means at each station for transmitting a personal code signal from the station to any selected one of the other stations, a loud speaker system, switching means at each station for selectively and alternatively connecting the branch line of the calling station to the loud speaker system or to the transmission line, selectively operable control means at each station for operating the switching means to connect the calling station to the loud speaker system when only the control means at the calling station is operated and to disconnect the calling station from the loud speaker system when any one such control means in addition to that at the calling station is operated.

2,899,503

DIAL TELEPHONE SYSTEM ARRANGED FOR MACHINE ANNOUNCEMENT ON INTERCEPTED CALLS

Arthur S. Dubner, Parsippany, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application December 14, 1956, Serial No. 628,321
6 Claims. (Cl. 179—18)



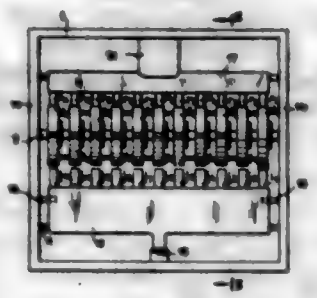
1. In a dial telephone system comprising subscriber stations and dial-controlled switching means including a connector switch for completing connections between calling and called subscriber stations, said connector switch having station-identifying and vacant terminal sets therein, means for operating said connector switch, an announcement device, means in said connector switch for discriminating between a connection completed to a station-identifying set of connector terminals and a vacant set of connector terminals, and means controlled by said discriminating means for connecting said connector switch to said announcement device and simultaneously disabling said connector switch-operating means.

2,899,504

ELECTRICAL IMPULSE RELEASED SELECTOR

Stefano Tyszkiewicz, Rome, Italy

Application December 10, 1956, Serial No. 627,239
Claims priority, application Italy December 10, 1955
15 Claims. (Cl. 179—27.51)



1. Selector operable by electrical impulses for use in automatic telephone exchange systems or selective remote control of utilising machines, comprising a frame, a number of adjacent members mounted in said frame for moving forwardly in the same direction, spring means for each member for opposing its forward movement, stop means for each member for holding it in a given initial position, propelling means common to all said members for successively moving them against the action of said spring means, towards an end position common to all members, arresting means common to all members for holding them as they reach said end position, an electric impulse motor for driving said propelling means common to all members, electrically driven release means for said arresting means common to all members, an engaging means on each member for cooperating with said propelling means, the stop means for the first of said members for holding the latter in its initial position being arranged to hold said first member with its engaging means in engagement with said propelling means ready to be moved towards said end position common to all members upon transmisison of one electric impulse to said electric impulse motor, the stop means for the second of said members designed to hold the latter in its initial position being arranged to hold said second member in such an initial position that it shall advance by a stroke equal to that performed by the first member on going over from its initial to its end position to bring its engaging means into engagement with said propelling means, the stop means for the remaining members designed to hold them in their initial positions being arranged to hold them in such initial positions, which are the same for all said members, that they shall advance by a stroke twice that performed by said first member on going over from its initial to its end position to bring their engaging means into engagement with said propelling means, said members being provided with means for interengagement of the successive members, said means being arranged to allow a relative movement between successive members equalling in length the stroke performed by said first member on going over from its initial to its end position, said means for interengagement of said first and second and said second and third members being arranged to simultaneously move forward said three members upon the forward movement of said first member from its initial to its end position, said means for interengagement of the members starting from the third member being arranged to start forward movement of the fourth member and remaining members only after the preceding member has performed a forward movement equalling in length the stroke performed by said first member on going over from its initial to its end position.

2,899,505

RE-RECORDING MIXER FOR MULTI-SOUND TRACK RECORDS

Willis Robert Dresser, Long Hill, Conn., assignor, by mesne assignments, to The Prudential Insurance Company of America, a corporation of New Jersey

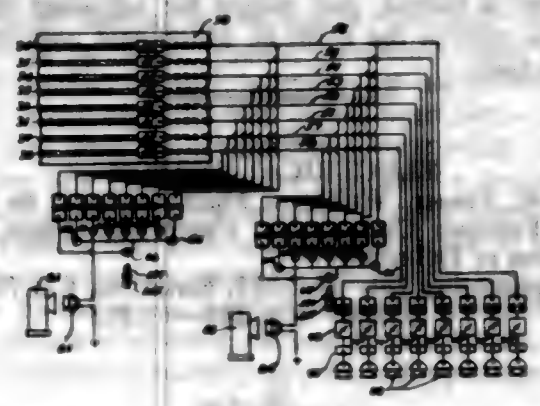
Application August 26, 1953, Serial No. 376,553
14 Claims. (Cl. 179—100.1)

1. Re-recording apparatus for recording a plurality of sound tracks for stereophonic effects, including a group of separate recorders for producing the different sound tracks, a different and independently movable operating element for each recorder including means operable into different positions for progressively changing the volume of the recorded sound, and an actuator that is movable selectively into different positions with two coordinates of motion to actuate one or more of the operating elements of the respective recorders and through different displacements to control the volume of the recorded sound, the number of operating elements actuated by said actuator

adjustable rotatable switch control members controlling respectively the closing and opening of the switch, two

beat portion of the broken ring to displace the broken ring out of its normal plane whereby said movable con-

depending upon the position of the actuator as it is moved with one coordinate of motion, and the extent of



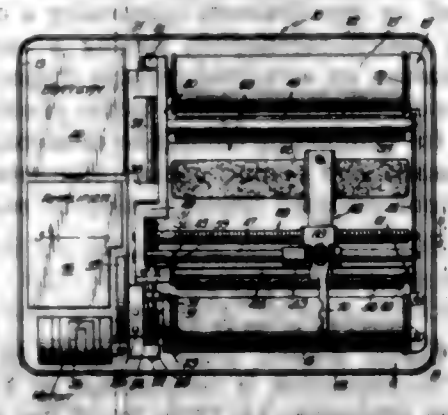
movement of the operating elements depending upon the extent of movement of the actuator in its other coordinate of motion.

2,899,506

MAGNETIC BELT RECORDER

Bruno F. Wehmer, Park Ridge, Ill., assignor to Charles P. Peirce, Chicago, Ill.

Application February 13, 1956, Serial No. 564,930
4 Claims. (Cl. 179—100.2)



1. A magnetic recorder employing an endless recording belt, comprising, a base, a pair of belt supporting cylinders, means mounting said cylinders for rotation on parallel spaced axes and supporting the same in cantilever fashion over said base, a recording belt being mounted on said cylinders by slipping the same axially over the unsupported ends thereof, drive means for rotatably driving one of said cylinders, a support member extending between said cylinders in spaced parallelism to said base and adapted to project between the runs of a belt mounted on said cylinders, magnetic pickup means movable over said belt, lead screw means driven by said drive means and having driving connection with said pickup means for moving the latter between said cylinders and parallel to their longitudinal axes, bracket means supporting said lead screw means and said pickup means, and means pivotally mounting said bracket means on said base for movement thereof about an axis transverse to the longitudinal axes of said cylinders and adjacent the outer free ends thereof whereby the said magnetic pickup and lead screw means may be pivotally swung simultaneously by said bracket means toward and away from said support member to operatively engage and disengage said pickup means and a belt mounted on said cylinders.

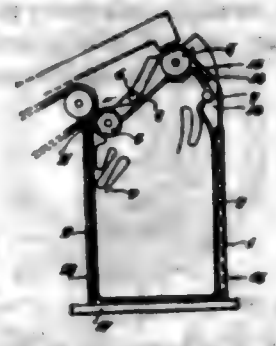
2,899,507

LOADING MEANS FOR MAGNETIC FILMS ENSURING THE ENDLESS WINDING UP AND UNWINDING OF THE BANDS

Antonin Martel, Bouches-du-Rhone, France

Application December 31, 1956, Serial No. 631,971
Claims priority, application France January 4, 1956
3 Claims. (Cl. 179—100.2)

1. In a sound recording and reproducing machine, a base, a plurality of magazines for magnetic tape mounted side by side in a row on said base, an endless magnetic tape in each magazine, a first roller on each magazine over which the tape is passed and forming a seating, a second roller on each magazine over which the tape is passed, and a tape-driving device and a magnetic recording and reproducing head assembled as a unit



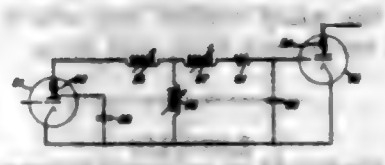
and mounted on the base, said tape-driving device including a motor, a driving pulley, an endless belt, and a driven pulley positioned such that the belt bears against the tape as said tape passes over the second roller, said unit being movable with respect to the base to permit it to be brought into a position wherein the head is disposed against a selected tape where the tape passes over its seating roller.

2,899,508

BROAD-BAND AMPLIFIER EMPLOYING PARALLEL-SERIES COUPLING NETWORK

William M. Goodall, Oakhurst, and Harrison E. Rowe, Red Bank, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application July 1, 1954, Serial No. 440,614
6 Claims. (Cl. 179—171)



2. In a circuit for amplifying high frequency signals over a broad band centered at a predetermined frequency, first and second tubes having a predetermined output capacitance, said tubes having an input capacitance which is more than three times as great as said predetermined output capacitance, said tubes also having a particular input capacitive reactance at said predetermined frequency, and an interstage radio frequency signal coupling network consisting of first, second, and third branch circuits connected to a common point, the other terminals of said first, second, and third branch circuits being connected respectively to the plate of said first tube, a radio frequency ground point and the grid of said second tube, said first branch circuit including an inductance, said second branch circuit consisting of an inductance, and said third branch circuit consisting of resistance and inductance means connected in series, said resistance means having an impedance which is at least equal to one half of said capacitive reactance.

2,899,509

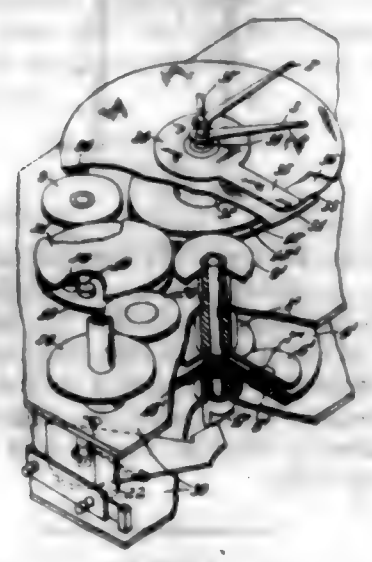
INDICATORS FOR INDICATING THE VALUES OF TWO VARIABLES AND A DIFFERENCE BETWEEN THOSE VALUES

Paul Flamm, London, England, assignor to S. Smith & Sons (England) Limited, London, England, a British company

Application October 26, 1956, Serial No. 618,599
3 Claims. (Cl. 200—35)

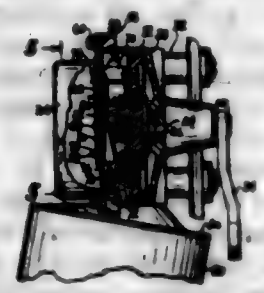
1. An indicator for indicating the closing and opening times of a clock driven electric switch comprising two

adjustable rotatable switch control members controlling respectively the closing and opening of the switch, two differential gears each having an output member connected to one of the switch control members and two input members having gear wheels one driven by a gear wheel of the clock and the other by a setting gear wheel and which two setting gear wheels drive respectively two indicating members rotatable relatively to one another and to a fixed time scale, one of which indicating members comprises a plate having an index mark which may



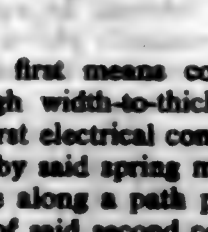
traverse the time scale and is provided with a cut away portion therein disposed away from the axis of rotation and the other indicating member comprises a flexible split annulus one end of which is inserted through said cut away portion so as to overlie the disc and is provided with an index mark which also traverses the time scale, while the other end of the annulus is attached to an inwardly extending portion which is rotatable about the same axis about which the plate rotates and which split annulus is arranged to be distinct from said plate.

2,899,510
PARKING SWITCH FOR WINDSHIELD WIPERS
Frank Richard Merriam, Toledo, Ohio
Application May 24, 1955, Serial No. 510,741
8 Claims. (Cl. 200—61.39)



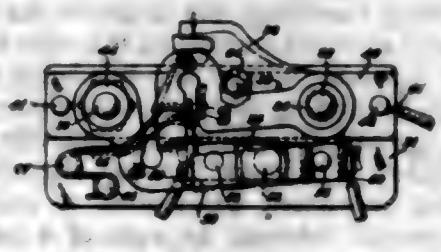
4. In a switching device, a relatively fixed contact point, a relatively movable contact point in normally-closed relation with the fixed contact point, a rotatable member driven by a reversible electric motor, said member including an actuating element driven by the rotatable member in a circular orbit in a plane displaced from said rotatable member, a relatively-fixed resiliently-mounted broken-ring element mounting the relatively movable contact point having one end portion of the broken-ring element bent out of its plane into the plane of rotation of the actuating element on the rotatable member, plate means mounting said fixed contact point and the broken-ring element, said actuating element when rotated in one direction being adapted to override the bent end portion of the broken-ring element, but when its direction of rotation is reversed, said actuating element underrides the bent portion of the broken ring to displace the broken ring out of its normal plane whereby said movable contact point is moved, and means for adjusting the plate means to control the point at which said contact points are separated.

2,899,511
ELECTRICAL SWITCH
Robert W. Fraser, Waltham, Mass., assignor to United-Carr Fastener Corporation, Cambridge, Mass., a corporation of Delaware
Application July 23, 1957, Serial No. 673,724
4 Claims. (Cl. 200—61.81)



1. In a refrigerator assembly compriaing a refrigerated compartment having access thereto by a door, means to be energized when the door is open for illuminating said compartment, and blower means for circulating air within said compartment, said blower means energized when the door is closed; an improvement comprising a continuously energized switch mechanism having a switch body, said switch having an actuating plunger disposed entirely within said body, alternate contact means positioned within said body for completing circuits to illuminating means or blower means said contact means alternately responsive to the door actuated linear motion of said plunger.

2,899,512
SWITCH MECHANISM
Lyndon W. Burch, Boston, Mass., assignor to Texas Instruments Incorporated, a corporation of Delaware
Application December 13, 1956, Serial No. 628,185
25 Claims. (Cl. 200—67)



1. In combination, first means comprising a spring member having a high width-to-thickness ratio; second means comprising a first electrical contact; a second electrical contact carried by said spring member; said spring member being flexible along a path perpendicular to its width for movement of said second contact into and out of engagement with said first contact, said spring member being substantially non-flexible in a direction at right angles to said path; and means mounting said first and second means for movement of one of said first and second means in said direction and laterally relative to the other of said first and second means while said contacts are in engagement with each other.

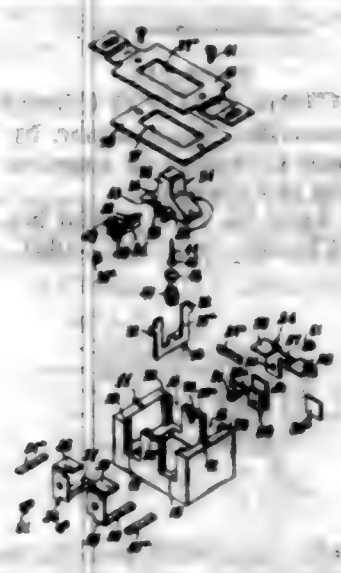
2,899,513
ELECTRICAL SWITCHES
Jacob H. Schmidt, Aurora, Ill.
Application April 9, 1957, Serial No. 651,639
7 Claims. (Cl. 200—67)

1. In an electric switch, a body of insulating material recessed from one face and including spaced side walls and a bottom wall, said side walls each having laterally aligned slotted openings one adjacent each end and open-

2,899,517
LIQUID LEVEL SIGNAL ARRANGEMENTS

each of said compartments, a float in one of said compartments movable in response to the level of liquid in

ing onto the said one face, a first contact structure mounted in one of said openings, a bearing on said structure arranged inwardly of one side wall and midway between the openings therein, a bearing in the other side wall between the openings therein, a contact plate in said recess journalled in said bearings for oscillation longitudinally of the body, a lever, means operatively connecting the lever with the contact plate for moving the same into either one of its extreme positions, a second contact structure in the wall opening aligned laterally with the first contact structure, a contact terminal on said second contact structure overlying the bottom wall and engageable by the contact plate when said plate is in one extreme position adjacent an end of said recess, a third contact structure in another of said wall openings, a con-

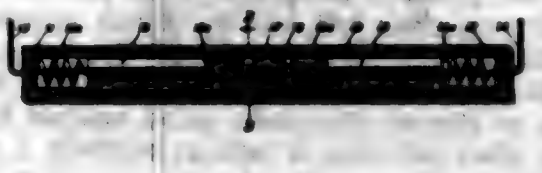


tact terminal on said third contact structure overlying the bottom wall and engageable by the contact plate when said plate is in its other extreme position, a fourth contact structure mounted in the wall opening aligned laterally with the wall opening containing the third contact structure, said third contact structure having a second contact terminal thereon and the fourth contact structure having a contact terminal laterally aligned with said second contact terminal, a contact element carried firmly by the lever and arranged to bridge said last two named contact terminals when the contact plate is in said one extreme position, a second contact terminal on said fourth contact structure, a second contact terminal on the second contact structure, and a contact element on the lever arranged to bridge said last two named contact terminals when the contact plate is in its said other extreme position.

2,899,514
SWITCH

James D. Jordan, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy

Application September 20, 1943, Serial No. 503,146
6 Claims. (Cl. 200—80)

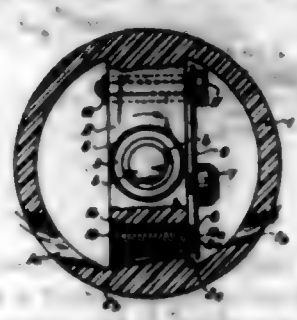


6. The combination in a centrifugally operated circuit-breaker, with an enclosing casing, of two spaced movable and insulating inertia elements forming part of an electric circuit, connecting means forming a separable joint uniting said inertia elements electrically as well as mechanically, said connecting means being frangible, and resilient means within the casing for absorbing bodily movement of the jointed structure.

2,899,515
CENTRIFUGAL CONTACT-BREAKERS

Alfred Schäfer, Hannover, Germany, assignor to Protona Produktionsgesellschaft für elektro-akustische Geräte G.m.b.H., Hamburg, Germany

Application November 12, 1957, Serial No. 695,565
Claims priority, application Germany November 12, 1956
5 Claims. (Cl. 200—80)

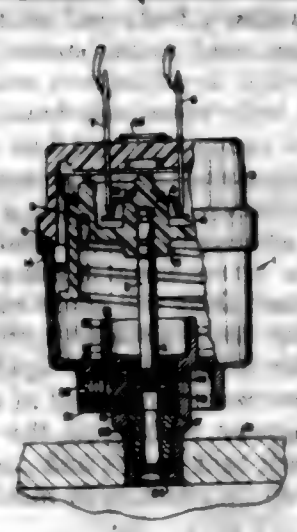


4. Centrifugal speed governor with breaking contact for electro-mechanical drive-means in which the contacts are swept by a current of air, particularly used in magnetic recorders, comprising an annular contact and a cone-shaped contact, wherein the annular surfaces of the contacts, if the contact is closed, are swept by the current of air which is caused to flow substantially in the direction of their axis of relative motion by the rotation of the governor.

2,899,516
VACUUM OPERATED SWITCH

Clifford B. Smith, Belleville, Mich., assignor to Vinco Corporation, Detroit, Mich., a corporation of Michigan

Application January 4, 1957, Serial No. 632,507
3 Claims. (Cl. 200—81)



1. A pressure operated electrical switch comprising a cylinder, a reciprocally movable piston in said cylinder defining therewith a pressure chamber and a contact chamber, electrical contacts extending through said cylinder into said contact chamber, conductor means mounted on the end of said piston adapted to engage said contacts at one extreme limit of reciprocal travel of said piston, means biasing said piston toward said contacts, passage means connecting said pressure chamber to a source of pressure fluid, check valve means inserted in said passage means for preventing flow of pressure fluid from said source to said pressure chamber when said contacts are out of engagement with said conductor, and adjustable bleed means by-passing said check valve for allowing fluid to meter from said source to said pressure chamber; said adjustable bleed means comprising a conduit extending between said pressure chamber and source, a tapped hole extending through said cylinder into said conduit, a pliable substance at the bottom of said tapped hole partially restricting said conduit and an adjustable screw in said tapped hole for regulating the restriction of said conduit by said pliable substance.

net at its free end, said magnets each having a like pole adjacent said other magnet, repulsion of said

2,899,522

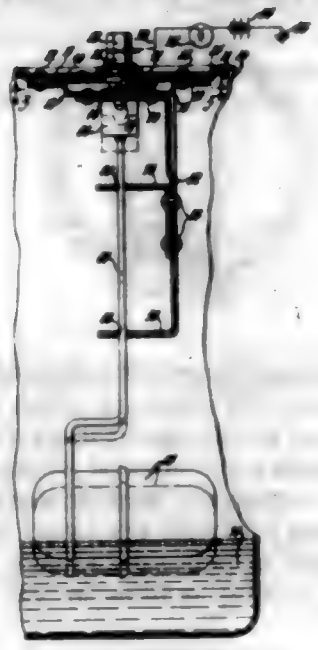
tion is reversed, said actuating element underrides the aligned slotted openings one adjacent each end and open-

2,899,517

LIQUID LEVEL SIGNAL ARRANGEMENTS

Homer R. Hastings, Flint, and Bryce L. Stevens, Davison, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application October 8, 1956, Serial No. 614,560
1 Claim. (Cl. 200—84)



A switch arrangement adapted to be supported on a substantially horizontal top wall of a tank, said arrangement including a housing of non-magnetic material with a peripheral flange for joinder to the margin of an opening in said wall, a switch enclosed in said housing and including a first magnetic body and spring means located beneath said flange, said spring means urging the said first body in a vertical direction into one switch position, a second magnetic body below said housing, a float below said housing, a rod connecting said float and second magnetic body for vertical and unitary movement, one of said bodies being permanently magnetized, a bracket fixed to said housing and arranged to guide said rod during said movement, and the arrangement being such that upward movement of the said float will cause relative movement of said bodies into their field of mutual attraction to change the position of said switch against the force of said spring and downward movement of said float will release said first magnetic body from the magnetic attraction existent between said bodies and cause the action of said spring means to be effective in moving the said first body.

2,899,518

TIME DELAY APPARATUS

Harry O. Moore, Charlotte, N.C.

Application November 22, 1957, Serial No. 698,209
6 Claims. (Cl. 200—84)

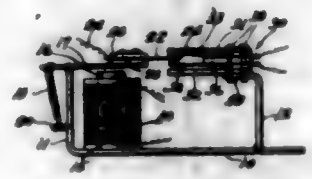
4. A time delaying apparatus comprising a tiltable chamber, a partition in said chamber dividing said chamber into separate compartments, a supply of liquid in each of said compartments, a float in one of said compartments movable in response to the level of liquid in said compartment, a switch actuating lever oscillatably mounted beneath said chamber, said switch lever being operable upon predetermined movement of said float, electrical switch means operatively connected to said lever, means for selectively tilting said chamber so that either of said compartments is positioned higher than the other compartment, and said partition having liquid passage means communicating with each compartment to permit a restricted predetermined rate of flow of said liquid from the high compartment to the other compartment upon tilting said chamber to thereby provide a time delay during the changing of the liquid level in said one compartment.

2,899,519

IMPACT ELECTRIC SWITCH CONSTRUCTION

Leo Kramer, Bensenville, Ill., assignor, by mesne assignments, to Controls Company of America, Schiller Park, Ill., a corporation of Delaware

Application April 16, 1956, Serial No. 578,410
9 Claims. (Cl. 200—104)



1. An impact electric switch construction comprising at least one flexible stationary contact arm carrying a contact, a flexible movable contact arm carrying a contact and adapted to move said contact carried thereby in and out of contact with the contact on said stationary contact arm, means for limiting the flexure of the stationary arm in response to contact closure, and means for driving the movable arm sufficiently hard to flex the stationary arm to its limit and to hold said movable arm in contact with said stationary arm in flexed position, the internal resilience of said flexible stationary contact arm providing the sole resistance to the movement of said movable contact arm until said means for limiting flexure becomes operative.

2,899,520

ELECTROMAGNETIC RELAY

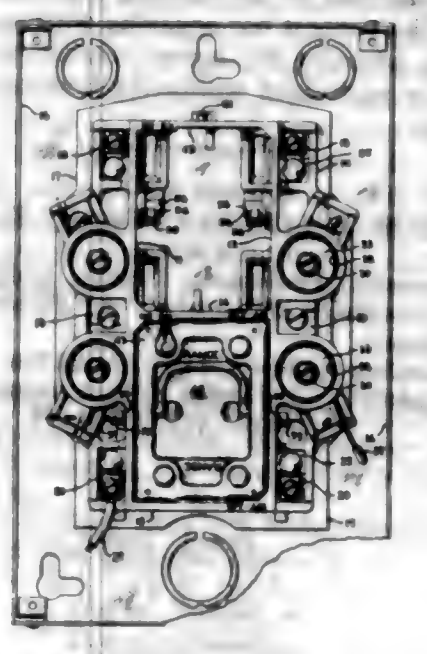
Harold J. McCreary, Lombard, Ill., assignor to General Telephone Laboratories, Incorporated, Chicago, Ill., a corporation of Delaware

Application August 8, 1957, Serial No. 677,123
6 Claims. (Cl. 200—104)

1. In an electro-magnetic relay having a single coil, an armature and a spring pileup of cantilever springs, said armature responsive to energization of said coil to be impelled against said spring pileup, a first of said cantilever springs comprising an armature spring contacted by said armature, a second of said cantilever springs comprising a flexible bifurcated spring having two arms at its free end, each of said arms securely bearing a permanent mag-

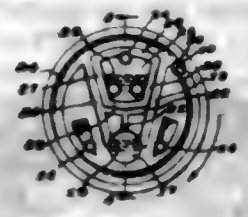
net at its free end, said magnets each having a like pole adjacent said other magnet, repulsion of said magnets causing one of said magnets to rest in a plane above the plane of said other magnet, said one magnet bearing arm spring thereby completing a circuit to a rigid third spring of said cantilever springs, said other magnet impelled upward on energization of said coil and subsequent impellation of said armature against said first spring, said other magnet thereupon deflected toward a position in a plane above that of said one magnet, said rigid third spring restraining said one magnet bearing arm from movement outward from said armature, said other magnet thereupon forcing said one magnet by magnetic repulsion to a lower plane, said other magnet bearing spring thereby completing a circuit to a fourth of said cantilever springs, said one magnet on being forced to a lower plane opening the prior mentioned circuit to said third spring.

2,899,521
FUSE-PULLER SWITCH
Rynold A. Salomone, Plainville, Conn., assignor to General Electric Company, a corporation of New York
Application October 14, 1955, Serial No. 540,558
2 Claims. (Cl. 200—133)



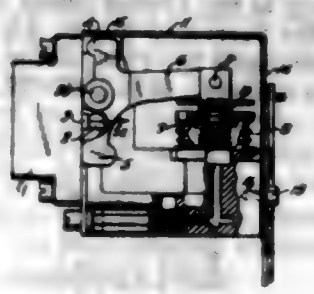
1. An electrical control device of the fuse-puller type comprising a generally rectangular insulating support, at least one generally rectangular recess in said support generally centrally thereof, said recess having end walls and side walls, a generally rectangular insulating cap receivable within said aperture so as to substantially close said recess, said insulating cap having means for mounting and electrically connecting electric fuses thereon and having contacts of the stab type for making contact with said contacts on said insulating support, a pair of main switch contacts adjacent each of said side portions of said recess, a pair of relatively short insulating barriers carried by said end walls generally centrally thereof and extending toward the generally central area of said recess parallel to said side walls, said end wall barriers being offset with respect to one another in a direction parallel to said end walls, said removable insulating cap having a pair of depending insulating barriers extending from the surface thereof on which said fuse-mounting means is carried, said fuse-cap barriers being offset or staggered with respect to one another in a direction parallel to its ends, each of said insulating barriers of said fuse cap being adapted to overlap one of said end wall barriers of said insulating support.

2,899,522
SAFETY MERCURY SWITCH
Stanley R. Matthews, Thomas J. Darlington, and Melvin G. Sheets, Winston-Salem, N.C.
Application December 8, 1958, Serial No. 778,716
2 Claims. (Cl. 200—152)



1. A safety switch for automotive vehicles comprising in combination a front casing of insulating material and a rear plate of metal, the front casing within its inner face having an enlarged cavity and a terminal piece extending through said casing into said cavity, a portion of mercury lying in the cavity, a plurality of channels communicating with the sides and upper portion of the cavity, an annular channel formed in the face of the casing and communicating with at least one of the channels, a second mercury receiving cavity located above the first mentioned cavity, a pair of terminals extending through the casing and terminating in spaced relation in the second cavity, a portion of mercury in the second cavity, the metal rear plate secured to the rear side of the front casing and provided with a terminal, the mercury in the lower cavity providing electrical connection between the terminal extending through the casing and the rear plate terminal, and a valve extending through the front casing and terminating within the annular channel, said valve having a slot therein, said slot registering with the annular channel in one position and blocking the channel in another position.

2,899,523
CONTACTOR RETARDER
Jacques Flatet, Chaton, and Marcel Corna, Rueil, France, assignors to La Telemecanique Electrique, Nanterre, France, a company of France
Application February 24, 1958, Serial No. 716,990
Claims priority, application France March 7, 1957
5 Claims. (Cl. 200—166)

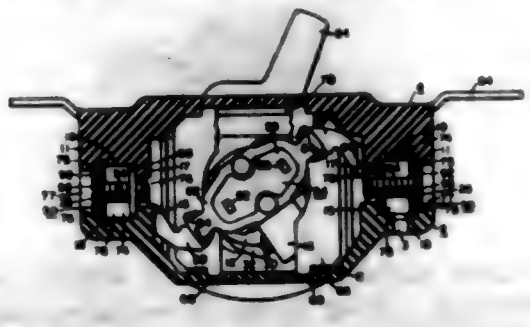


1. A contactor retarder in the form of a detachable unit comprising a known rapid-break contact having an operating button constantly urged by a spring in the direction in which it bears against a part of a T-lever pivotally mounted on the retarder base plate, one of the two opposite arms of the T being influenced by the rotation of a control member operated by the moving spindle of a contactor and acting in a plane perpendicular to the articulation of the lever, while the third arm acts on the moving part of a pneumatic retarder rigidly secured to the contact, the base of the device being mounted on a stationary support rigidly secured to the contactor through a casing in which it can be placed arbitrarily in two positions offset by 180° from one another around an axis perpendicular to the pivotal axis of the lever and substantially perpendicular to the opposite arms of the lever.

2,899,524
WIRING DEVICE

Clarence M. Smith, Trumbull, Conn., assignor to The Bryant Electric Company, Bridgeport, Conn., a corporation of Connecticut

Application June 28, 1956, Serial No. 594,412
21 Claims. (Cl. 200—168)

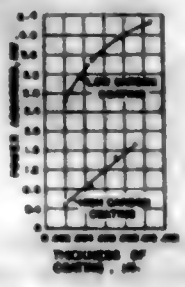


1. A wiring device comprising, an insulating housing having at least one generally quadrangular recess extending inwardly thereof, one side of said recess having an outwardly extending slot therein which is open to one side of said housing, an electrical conducting terminal comprising a pair of spaced rigid sides with an integral cross portion extending therebetween slidably insertable within said recess, at least a portion of said spaced sides of said terminal being closely received between the sides of said recess extending laterally from said one side thereof, said spaced sides of said terminal being formed to be engageable with the side of said recess opposite said one side to prevent any substantial movement of said terminal away from said slot, said cross portion extending across the inner end of said slot, a machine screw having a shank portion extending through a clearance opening in said cross portion into said recess between said spaced sides of said terminal, and a nut threadedly received on the inner end of said shank portion having spaced flat sides located closely adjacent the oppositely facing surfaces of the spaced sides of said terminal whereby said nut is moved only longitudinally over said shank portion upon rotation of said screw.

2,899,525
METHOD OF IMPROVING INDUCTION HEATING EFFICIENCY

Samuel Lederman and William R. MacLean, Brooklyn, N.Y., assignors to the United States of America as represented by the Secretary of the Air Force

Application April 24, 1958, Serial No. 730,729
6 Claims. (Cl. 219—10.41)



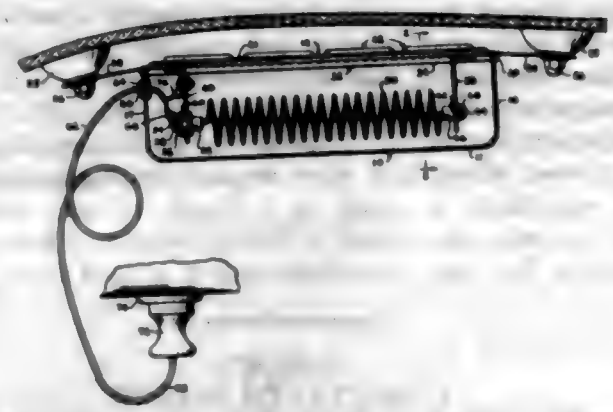
1. A method for improving the heating efficiency of induction heating comprising the steps of forming an aluminum member to be heated, spray coating said member with a layer of steel having a thickness of from 2×10^{-3} to 9×10^{-3} inches, and placing said coated member in an induction heating unit.

2,899,526
DEFROSTER

Fred A. Krohn, Hobart, Ind., assignor to The Anderson Company, a corporation of Indiana

Application December 7, 1956, Serial No. 627,022
4 Claims. (Cl. 219—19)

1. In a defroster the combination of a housing having an open side, a cover member having a perpendicularly disposed flange around the periphery thereof, a pair of aligned notches formed in the opposite ends of said flange, a heater, a support bar for said heater having a channel-shaped mid-portion and outwardly extending flat end portions, said channel-shaped mid-portion seating in said cover member with the flat end portions extending through and engaging with the edges of the notches in the flange

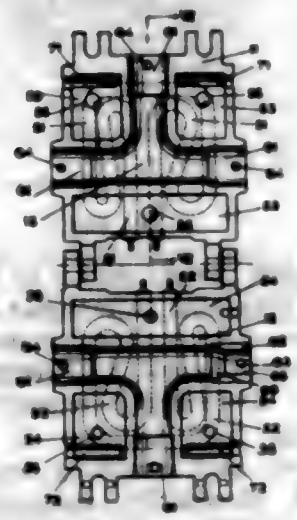


of the cover member, the flange of the cover member engaging with the edge portions of the housing adjacent the open side of the housing for holding the heater support bar assembled in the housing with the ends of the channel of the support bar engaging with end portions of the housing whereby the heater carried by the support bar is fixedly positioned within the housing along a preselected axis.

2,899,527
MOULD FOR VULCANIZATION OF ELECTRICAL CABLES

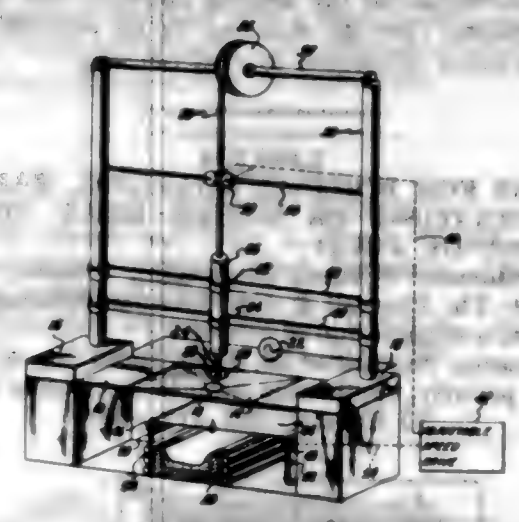
Lucien Bonnerre, Phalempin, France, assignor to Compagnie Auxiliaire d'Electricite et d'Entreprise, Lille, Nord, France

Application August 1, 1957, Serial No. 675,628
Claims priority, application France August 27, 1956
6 Claims. (Cl. 219—19)



1. A portable mould for the vulcanization of electric cables of various diameters, said mould comprising two hinged shells having superimposable inner surfaces, locking means for joining together said shells when superimposed, substantially half cylindrical longitudinal recesses in corresponding positions in said surfaces, said recesses accommodating the cables to be vulcanized, terminal groove at each end of said recesses, with the dimensions of said grooves being greater than the largest diameter of the cables to be vulcanized, a set of half rings of various diameters respectively corresponding to the various diameters of the cables to be vulcanized with the outer surface of said half-rings engaging said grooves, and means for detachably mounting said half-rings within said grooves.

2,899,528
METHOD AND APPARATUS FOR SUPPLYING MATERIAL TO AN EVAPORATOR
Walter Reichelt, Hanau am Main, Germany, assignor to W. C. Heraeus, G.m.b.H., Hanau, Germany
Application October 18, 1957, Serial No. 691,036
9 Claims. (Cl. 219—19)

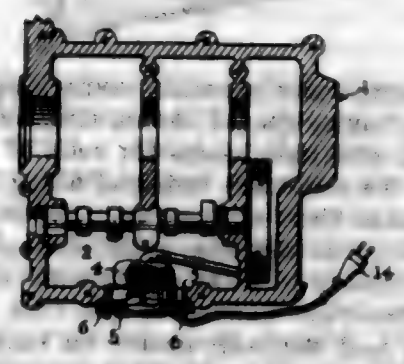


1. In the vacuum evaporation process, the method of continuously supplying melted coating material to evaporator which comprises supporting a metal strip in spaced relation to an evaporator whereby molten material from the upper surface of the metal strip drains into the evaporator, continuously feeding a portion of the length of coating material to the metal strip whereby at least the end of coating material strip contacts the surface of the metal strip, and heating the strip to melt the portion of the strip of coating material contacting the heated metal strip thereby continuously supply molten coating material to the evaporator.

2,899,529
ELECTRIC HEATING APPARATUS
Ernest N. Calhoun, Pittsburgh, Pa., assignor to Edwin L. Wiegand Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application October 18, 1955, Serial No. 541,191
9 Claims. (Cl. 219—34)

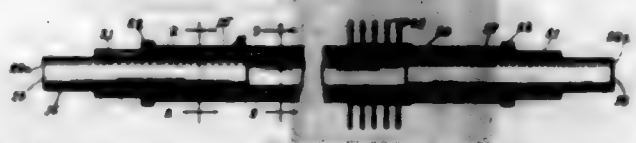
8. A baseboard heater, comprising a back plate adapted to be secured to the baseboard section of a room, a front plate spaced from said back plate, a pair of transverse plates between said back and front plates, each transverse plate having detachable resilient connection with said back plate and said front plate having detachable resilient connection with each of said transverse plates, each of said transverse plates having an angular tab portion disposed in the space between said back and front plates, said tab portions being in facing relation and each having a slot-like opening therein, a strip heater of a length greater than the spacing between said tab portions and having opposite end portions of a transverse configuration complementary and of a size to slidably pass through respective ones of said slot-like openings, said heater being assembled by moving it in a longitudinal direction to pass one portion through one tab portion opening a sufficient distance to clear the opposite end portion with respect to the other tab portion and thereafter moving said heater in the opposite longitudinal direction to pass said opposite end portion through the slot-like opening in said other tab portion a distance sufficient to pass through the latter without disengaging said first end portion, whereby said heater is slidably supported at its opposite ends for free expansion and contraction and is held against rotation about its longitudinal axis, baffle means carried by said strip heater and comprising a plate-like member transversely spaced from and coextensive with at least a part of said heater, said plate-like member having spaced transversely extending portions each having a slot-like opening complementary to the transverse configuration of said heater and slidably receiving said heater, whereby said baffle means is supported by said heater and held against rotation relative thereto.

2,899,530
OIL HEATER
Hans Wenstorf, Edmonton, Alberta, Canada
Application April 18, 1958, Serial No. 729,283
2 Claims. (Cl. 219—38)



1. A heater for the engine block of an engine which has an oil reservoir in the bottom of the engine block and an opening in the bottom of the block together with a cover adapted to seal the said opening and a replaceable oil filter secured within the oil reservoir by the said cover, such heater comprising a hollow member fixed to the cover to project at one end outside the cover and formed at its opposite end to lie below the filter, a heater element inside the said member below the filter and electrical connections extending from the hollow member to connect the said heating element to a source of electric current outside the block.

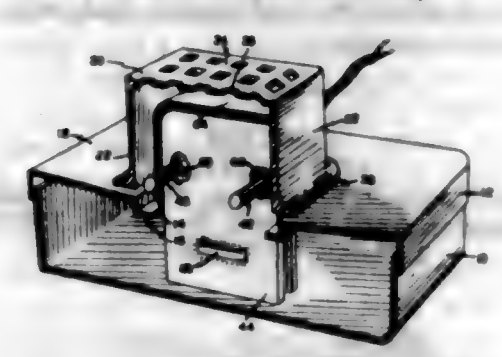
2,899,531
ELECTRIC HEATERS
Edwin L. Wiegand, Rye, N.Y., assignor to Edwin L. Wiegand Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application January 5, 1955, Serial No. 479,886
12 Claims. (Cl. 219—39)



1. An electric heater capable of producing and withstanding high temperatures, comprising a metallic tubular sheath, a heating element comprising a tubular metallic

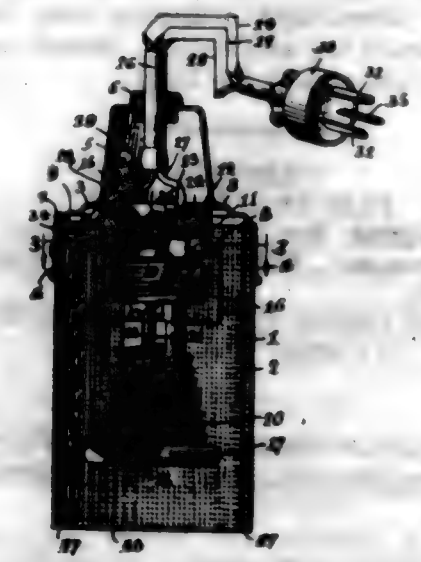
member within said sheath and capable of producing heat by resistance to passage of electrical current therethrough, said heating element having terminal portions extending through respective open ends of said sheath for connection to a source of electrical energy, heat durable material between facing surfaces of said member and said sheath to completely fill the space therebetween and hold said member laterally positioned relative to and electrically insulated from said sheath and to conduct heat from said heating element to said sheath, said terminal portions having less resistance to passage of electrical current than an intermediate portion of said tubular member whereby said terminal portions are at less temperature than said intermediate portion during heating operations, and heat durable material within an intermediate portion of said tubular metallic member.

2,899,532
ELECTRODE-WICK
Franklin Gerald Reick, Jamesville, N.Y.
Application June 28, 1957, Serial No. 668,796
9 Claims. (Cl. 219—40)



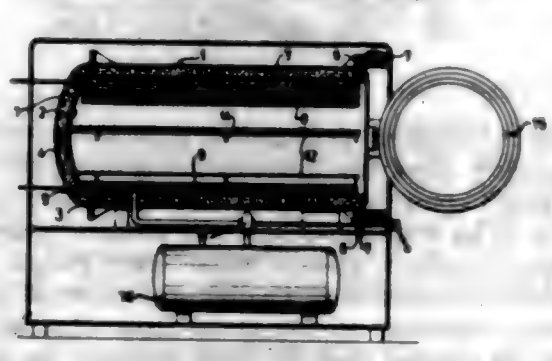
1. An electric water vaporizer comprising an inorganic fibrous wick, having spaced carbon terminal rods extending thereinto, electrode means for each of said rods and surrounding the respective rods and filling the interstices of the inorganic fibers adjacent said respective rods, said electrode means comprising a polymerized and subsequently carbonized mixture of phenolic resin, talc and calcined carbon coke bonded to said rods and the fibers of the wick, said electrode means for each of said rods being a porous globule and being electrically spaced from each other by an intervening portion of the fibrous wick.

2,899,533
ELECTRICAL WATER HEATER
Doris Farmer, Montreal, Quebec, Canada, assignor of fifty percent to Paul E. Bourque, Solon, Ohio
Application December 27, 1957, Serial No. 705,662
3 Claims. (Cl. 219—41)



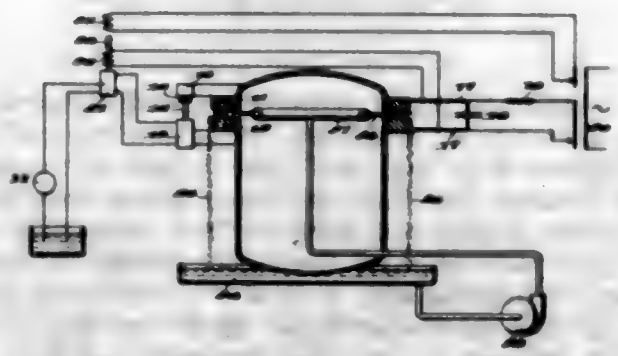
1. In a water heater adapted to be immersed in water, a cylindrical foraminous electrically conducting housing having a closure cap on its upper end and a foraminous electrically conducting bottom wall, an electric heating element within the housing spaced from the walls thereof, insulation means supporting said element within the housing, current supply conductors extending into said cap and having conductive connections with the terminals of the heating element, and a ground wire extending through said cap to an external ground and electrically connected to said housing.

2,899,534
MEANS FOR BOILING, ROASTING, BAKING, STERILIZING OR OTHER HEAT TREATMENT OF FOOD
Väinö Valdemar Sjöstrand, Stockholm, Sweden, assignor to Vict: Th. Engwall & Co. Kommanditbolag, Gavle, Sweden, a corporation of Sweden
Application November 28, 1956, Serial No. 624,926
Claims priority, application Sweden December 9, 1955
13 Claims. (Cl. 219—44)



1. Apparatus for heat treatment of food in superheated steam under pressure, comprising the combination of an oven chamber having at least one opening for introducing said food into the chamber, at least one door for closing said opening hermetically, means for producing an atmosphere of steam under substantial superatmospheric pressure in said oven chamber, heater elements for heating said steam in said oven chamber to superheated temperature, an outer casing surrounding said oven chamber and adapted to carry the steam pressure prevailing in the oven chamber during operation, and heat insulating material arranged at and engaging the inside of said casing for transferring the pressure prevailing in the oven chamber to said outer casing and for insulating said oven chamber from said outer casing so that in operation the latter will have a considerably lower temperature than that of the superheated steam.

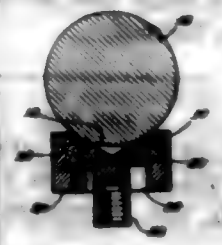
2,899,535
SEALING ELEMENTS, ESPECIALLY FLANGES, AND PROCESS FOR THEIR PRODUCTION
Friedrich Krall, Hanau (Main), Germany, assignor to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler, Frankfurt, Germany
Application April 4, 1957, Serial No. 650,675
Claims priority, application Germany April 4, 1956
4 Claims. (Cl. 219—69)



1. In a process for the production of two component sealing elements, the components of which have mutually

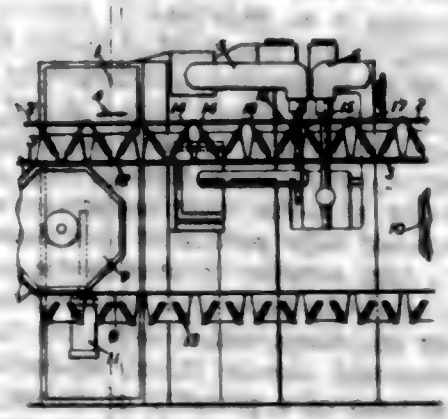
cooperating sealing faces providing a tight seal against high vacuum, the steps which comprise positioning the cooperating sealing faces of the components of the sealing elements in unfinished state opposite each other and evaporating material from the surfaces of the opposed faces by electric arc discharge erosion with removal of the evaporated material with a fluid flushing medium until such faces match with complementary elevations and depressions corresponding to each other.

2,899,536
CLEANING TORCH
Leroy M. Hoese and Mike A. Trtan, Granite City, Ill., assignors to American Steel Foundries, Chicago, Ill., a corporation of Illinois
Application March 13, 1957, Serial No. 645,838
10 Claims. (Cl. 219—76)



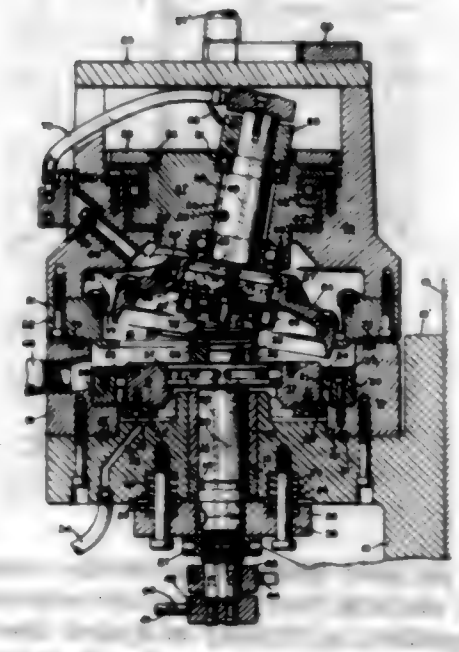
1. A gun of the class described comprising hinged jaws with each comprising an electrode holder and a related gripping surface, and a port in at least one of said holders to direct compressed gas along an associated electrode in contact therewith in a stream approximately parallel to its longitudinal axis, said holder having another port intersecting said surface to direct said gas against contacting surfaces of the electrode and holder.

2,899,537
MANUFACTURE OF GIRDERS OR MESH
Fritz Grebner, Mainz (Rhine), Germany, assignor to Voigt & Haeffner A.G., Frankfurt am Main, Germany
Application November 19, 1957, Serial No. 697,404
Claims priority, application Germany November 21, 1956
14 Claims. (Cl. 219—79)



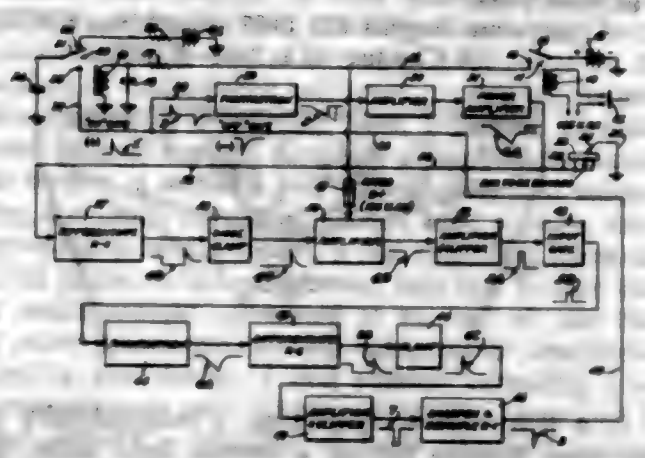
1. A machine for manufacturing constructional elements having at least three chords disposed in parallel relationship to each other and having no common plane and a series of connecting members of which successive members lie in planes oppositely inclined to a plane perpendicular to the axes of the chords, the said machine comprising a welding station at which are arranged a plurality of pairs of welding electrodes, one pair for each chord, means for feeding the chords in continuous lengths simultaneously in parallel relationship through said welding station and intermittently operated means for positioning said connecting members relatively to said chords at said welding station and holding them positioned while said electrodes are operated to weld them to the chords.

2,899,538
MACHINE FOR ELECTRICALLY WELDING ANEROID CAPSULES AND OTHER WELDABLE ARTICLES IN AN EVACUATED CHAMBER, AND METHOD
William J. Hughes, Baltimore, Stephen S. Haynes, Towson, John E. Tracey, Reisterstown, and Elwood L. Wheeler, Owings Mills, Md., assignors to Bendix Aviation Corporation, Baltimore, Md., a corporation of Delaware
Application September 5, 1956, Serial No. 608,065
25 Claims. (Cl. 219—82)



1. In an electric welding machine, means providing a plurality of interfitting welding chamber sections which when joined define a closed welding chamber, electrode means and a movable support therefor mounted in at least one of said sections, means for imparting relative movement to said sections to close and open said chamber, means for driving said movable electrode support in a substantially cycloidal path during the welding operation, means for evacuating said chamber when the latter is closed, and means sealing said chamber against the entrance of atmospheric air around said movable support.

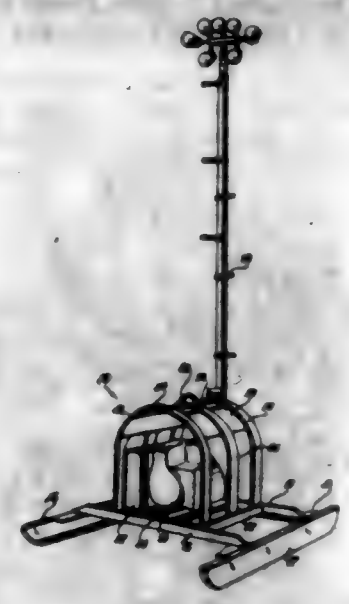
2,899,539
ELECTRONICALLY CONTROLLED BONDING MACHINE
Edwin G. Mills, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Application November 1, 1956, Serial No. 619,755
18 Claims. (Cl. 219—110)



1. An apparatus for bonding two objects by resistance welding comprising means for passing an electric current through the objects in series, sensing means for determining the commencement of fusion of the objects, and tim-

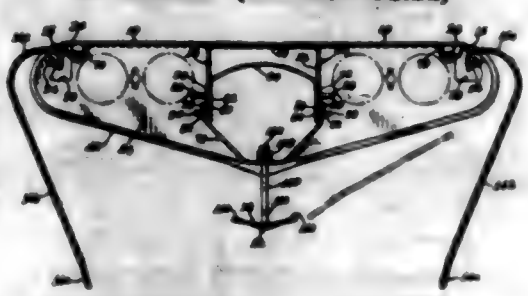
ing means responsive to said sensing means for terminating the electric current at a predetermined time after the objects begin to free.

2,899,540
ELECTRIC LANTERN
Leslie E. Allmand and Walter C. Allmand, Holdrege, Nebr.
Application May 4, 1956, Serial No. 582,869
5 Claims. (Cl. 240—10.5)



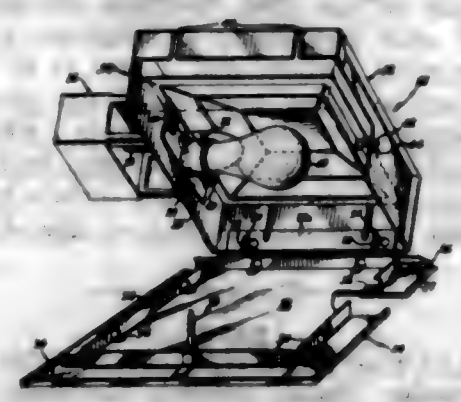
1. A portable illuminating device comprising a rectangular skeletal base having side members and transverse members, a plurality of spaced inverted U-shaped members having their depending legs attached to said side members, a member connecting the bights of said U-shaped members together, a socket on one of said transverse members, a hollow light standard removably received in said socket, means on said light standard cooperating with means on the bight of one of said U-shaped members adjacent said transverse member carrying said socket for removably conecting said standard to said U-shaped member, a telescoping section received in said standard, a plurality of lamp sockets adjustably mounted atop said telescoping section, means for raising and lowering said telescoping section within said light standard, and a power cable for connection to said lamp sockets and extending downwardly therefrom through said telescoping section and said standard and having a portion thereof coiled in said standard.

2,899,541
FLUORESCENT LIGHT FIXTURE
Peter De Mauro, Whitestone, N.Y., assignor to Globe Lighting Products, Inc., Brooklyn, N.Y., a corporation of New York
Application August 22, 1957, Serial No. 679,727
14 Claims. (Cl. 240—51.11)



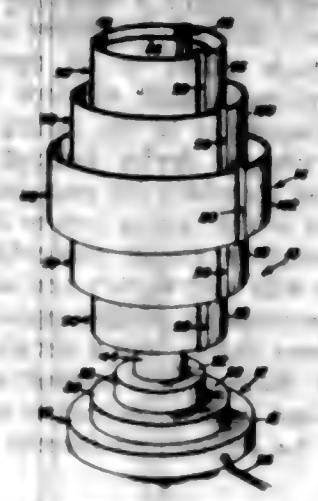
1. A light fixture comprising, a longitudinally extending lamp housing having a bottom light outlet opening and an end plate at each opposite end of said housing, a socket plate fixedly mounted on said housing at each end thereof inwardly of the adjacent end plate, inwardly extending pivot pins mounted at the upper corners, respectively, of said socket plates, closure means for said light outlet opening comprising a pair of light diffusing members extending longitudinally of said housing between said end plates, each of said closure members having a curved hooked portion extending along one side edge thereof, said curved hooked portion resting on and being pivotally supported by said pivot pins for pivotal movement under gravity bias from a position in which they close said light outlet opening and in which the lower edges of said members are in confronting relation to a position in which said members are laterally spaced from each other and depend from said pins and open said light outlet opening for providing access to the interior of said housing, and vertically retractable means carried by said housing for releasably engaging adjacent portions of said members for supporting said members when the latter are in the closing position thereof, said last mentioned means being movable vertically downward to a retractable position in which said members are released from engagement therewith and move by said gravity bias away from each other to the opening position thereof.

2,899,542
CEILING-RECESS LIGHT FIXTURE
Peter De Mauro, Whitestone, N.Y., assignor to Globe Lighting Products, Inc., Brooklyn, N.Y., a corporation of New York
Application December 13, 1956, Serial No. 628,031
2 Claims. (Cl. 240—78)



1. A light fixture, comprising a lamp housing adapted to be mounted in a ceiling recess and provided with a lamp support therein, said housing having a peripheral wall terminating in an edge portion defining an opening in the housing, a light transmitting closure for said opening, hinge means connecting said closure to said housing for pivotal movement to and from a closed position and to and from a retracted position to provide access to the interior of the housing through said opening, said closure having an outer marginal part extending laterally beyond said edge portion of said housing wall for providing a trim member to overlap the ceiling around said recess when the housing is mounted therein, means for securing said hinge means adjustably to the housing for disposing said closure in correspondingly adjusted positions in each of a plurality of planes, respectively, parallel to the plane of said housing opening, and adjustable means for releasably securing the closure in closed position in any one of said planes, said last mentioned securing means comprising a catch member on said housing wall and a latch member comprising a pin projecting from said closure transversely of the closure plane and into said housing when the closure is in closed position, said pin having a plurality of notches spaced longitudinally of the pin and forming a plurality of catch engageable portions respectively engageable with said catch according to the adjusted positions, respectively, of said hinge, said catch having an aperture into which said pin projects and said catch having an internal edge portion at said aperture engageable in said notches respectively of said pin.

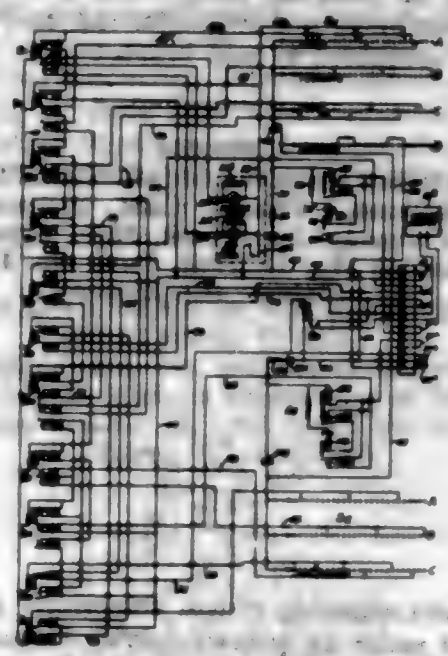
2,899,543
TABLE LAMP AND SHADE
Arnold R. Rasmussen, Sharon, N. Dak.
Application August 30, 1957, Serial No. 681,241
1 Claim. (Cl. 240—106)



A lamp shade assembly comprising a plurality of circumferentially spaced, radially extending upright frame members, each of said frame members including a vertical main body portion having an interior edge and an exterior edge, a lower support extending inwardly from the lower part of each of said body portions, a retaining loop along said interior edge of each of said body portions at the upper end thereof, said lower supports being disposed in overlapping relation and having aligned openings, fastening means extending through said lower supports and connecting said frame members together, a ring extending through said loops and further connecting said frame members together, a series of vertical shade mounting flanges extending normally to said body portions at the exterior edge thereof, adjacent mounting flanges of said series of mounting flanges being positioned at varying distances from said interior edge, like mounting flanges being horizontally aligned, shade elements telescoped over said mounting flanges, and vertically extending C-clips engaged over said shade elements and said mounting flanges and securing said shade elements to said mounting flanges.

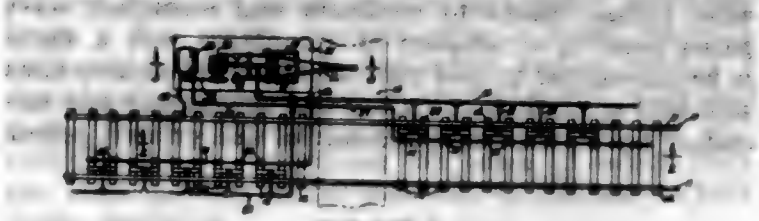
2,899,544
DEVICE TO DETERMINE THE POSITION OF A MOVING CAR IRRESPECTIVE OF THE NUMBER OF WHEELS ON EACH TRUCK THEREOF
John A. Marquardt, Elmhurst, Ill., assignor to Streeter-Amet Company, Chicago, Ill., a corporation of Illinois
Application April 5, 1954, Serial No. 420,792
9 Claims. (Cl. 246—77)

1. A mechanism to determine when a car is wholly within the space between an entrance track switch and an exit track switch and to determine when the car has completely left that space, irrespective of whether the car has four wheel trucks or six wheel trucks, the mechanism comprising: stepping switches for the track switches respectively and each operable to shift one step each time the respective track switch is actuated, each stepping switch having a series of spaced dwell positions; means operable to cause said stepping switches to hunt to dwell position after four actuations or six actuations, selectively; a timing switch unit having a pair of relatively movable members, one of which moves over the surface of the other, and having switch elements defining one circuit condition when the members are in a predetermined rest relation and a different circuit condition when the members are displaced from that position; the timing switch unit including means responsive to initial actuation of the entrance track switch to move the members relative to each other continuously from the rest relation in one direction; the timing switch unit further including means responsive to a second actuation of the entrance track switch to move the members continuously in the opposite direction relative to each other and from the position reached in response to the first means to restore the switch unit to the rest position after a predetermined time determined by the extent of



the first motion; and means controlled by the timing switch unit and operable to cause hunting of the stepping switches after six actuations each if said timing switch unit is displaced from the rest relation upon third actuation of the entrance track switch and otherwise to cause hunting after four actuations of each switch.

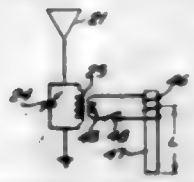
2,899,545
AUTOMATIC BARRIER FOR RAILWAY CROSSING
Jesus Velasco Fernandez, Santa Clara, Las Villas, Cuba
Application September 16, 1957, Serial No. 684,200
1 Claim. (Cl. 246—127)



In a device of the character described, a railroad track, a crossing extending at right angles to said track, a blocking means mounted for movement into and out of blocking relation with respect to said crossing, means for automatically operating said blocking means, said blocking means including a base arranged contiguous to the intersection of the crossing and track, a support member extending upwardly from said base, a barrier pivotally connected to said support member, a signal light carried by said barrier, a warning bell connected to said support member, a cylinder supported on said base, a piston movably mounted in said cylinder, a rod extending upwardly from said piston, a link connecting said rod to said barrier, a counterweight connected to an end of said barrier, a motor supported on said base, an air compressor operated by said motor, a first conduit extending from said compressor to said cylinder, a whistle connected to said first conduit, a plurality of body members secured to said track, a conductor rod extending above said body members and supported thereby, said conductor rod being connected to said motor, a conductor extending from said motor to one of said rails, a movable member mounted for movement along said track and including a

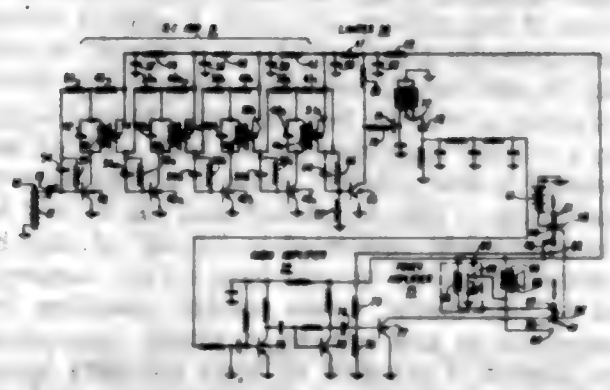
frame, a wheel connected to said frame for engagement with said rail, a plurality of pumps for engagement by the wheel, conduit means connecting said pumps to said first named conduit, a source of electrical energy on the frame of the movable member, means connecting said source of electrical energy to said wheel, a bracket extending from said frame and electrically connected to said source of electrical energy, and a roller mounted for movement along said conductor rod, said roller being operatably connected to said bracket.

2,899,546
PASSIVE RADIO COMMUNICATION
Hans E. Hollmann, Oxnard, Calif., assignor to Radio Patents Company, New York, N.Y., a partnership
Application May 25, 1954, Serial No. 432,094
4 Claims. (Cl. 250—6)



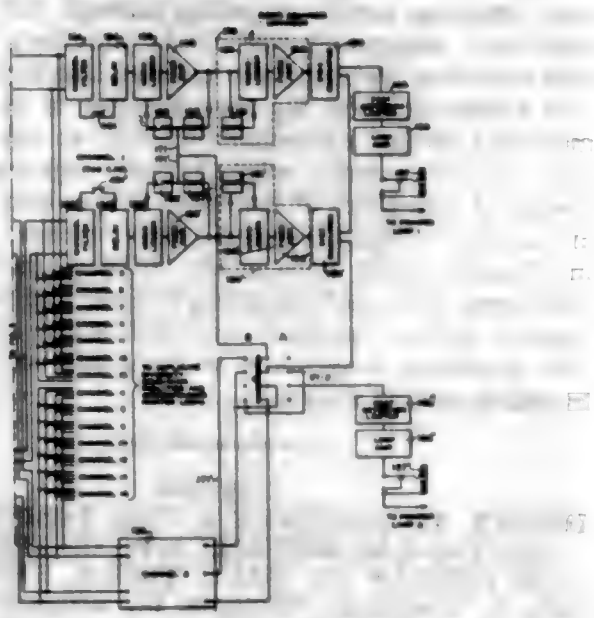
1. A radio signaling system comprising a transmitter radiating a series of primary carrier frequency electric wave pulses having a predetermined pulse recurrence frequency, a passive responder remote from said transmitter comprising antenna means, a piezoelectric crystal element and a pair of coupling electrodes disposed at one end of said element coupling the same with said antenna means, to cause the received wave pulses to be converted into ultrasonic wave pulses being propagated through and reflected by the opposite end of said crystal element, to effect a predetermined time delay of the reflected wave pulses upon reconversion through said coupling electrodes into electric pulses in said antenna means, thereby to cause secondary electric wave pulses to be reradiated by said antenna means during the spacing intervals of and in substantially fixed time-separated relation to said primary wave pulses, means to modulate said secondary wave pulses prior to reradiation in accordance with a signal to be transmitted by said responder, and means associated with said transmitter to receive and demodulate said secondary wave pulses independently of said primary pulses.

2,899,547
PAGING COMMUNICATION SYSTEM
Robert P. Crow, Park Ridge, Ill., and Russell R. Yost, Jr., Phoenix, Ariz., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Application August 22, 1955, Serial No. 529,838
8 Claims. (Cl. 250—6)



1. In a selective calling paging system utilizing a carrier wave modulated with a calling tone of a given audio frequency and with further audio intelligence, a receiver for the carrier wave including in combination, a pocket size housing, a receiver circuit enclosed in said housing comprising built-in antenna means, an energizing battery, sound reproducer means, and a plurality of semiconductor devices for amplifying and detecting a received wave, said receiver circuit further having an audio amplifier circuit including an output transistor, a manually operable switch having first contacts closed in a released condition thereof and second contacts closed in an operated condition thereof, an electro-mechanical vibrator device with vibrator contacts responsive to the calling tone, a circuit connecting said vibrator device through said first contacts to said output transistor for energizing said vibrator device in response to the calling tone in the released condition of said switch, a circuit connecting said vibrator contacts in series with said battery and said sound reproducer means to provide an audible signal upon energization of said vibrator device, and a circuit connecting said output transistor through said second contacts of said switch to said sound reproducer means so that the audio intelligence may be reproduced thereby upon operation of said switch.

2,899,548
DIVERSITY TELEGRAPH SYSTEM
John E. Boughtwood, Halesite, and Frank Howard Cusack, Spring Valley, N.Y., assignors to The Western Union Telegraph Company, New York, N.Y., a corporation of New York
Application April 22, 1955, Serial No. 503,052
17 Claims. (Cl. 250—3)



1. In a diversity telegraph system, a basic carrier channel and means for frequency-modulating said carrier channel in accordance with intelligence signals, means including a radio transmitter for propagating radio waves modulated in accordance with said intelligence signals of the modulated carrier channel and radio receiving means for receiving said signals over a plurality of associated diversity channel signal paths, said receiving means having associated diversity channel signal output paths and manually adjustable delay means in each of said paths for equalizing any signal delay differences between said associated channel signal paths, automatic gain controls respectively in said associated output paths and interconnected for operation for equal gain and having a predetermined limiting amplitude of output, signal ratio-squaring expanders respectively responsive to the outputs of said automatic gain controls, discriminators respectively connected to the outputs of said signal expanders and interconnected to derive a common signal from said paths of the basic carrier channel, and a post-detection limiting means responsive to said derived signals to recreate the transmitted intelligence signals.

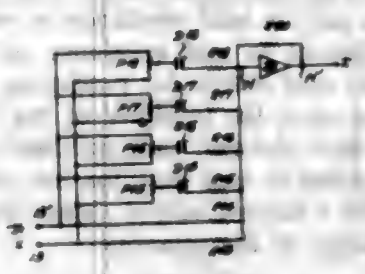
2,899,549
ANTENNA AND AUDIO CONNECTOR CABLE UNIT

Ralph E. Potter, Washington, D.C.
Application December 7, 1955, Serial No. 551,490
1 Claim. (Cl. 250—16)

In combination, a portable pocket radio receiver having terminal means, said terminal means including two terminals for the audio output and a third terminal constituting the antenna input terminal, sound reproducing earphone means having two terminals for receiving actuating currents, and a small flexible cable having terminal means at each end thereof, the terminal means at the first end of the cable having three terminals respectively adapted to engage the said three terminals of the receiver and the terminal means at the second end of the cable including two terminals adapted to engage the two terminals of the sound reproducing earphone means, said cable including wires respectively connecting the audio output terminals at the first end thereof with the two terminals at the second end of the cable, an antenna wire connected to the remaining terminal at the first end of the cable and extending along the length of the cable adjacent the other two wires of the cable, said antenna wire extending from said first end along most of the length of the cable, the several wires of the cable being twisted about each other, the terminal means at the first end of the cable being detachably connected to the terminal means of the radio receiver, and the terminal means at the second end of the cable being detachably connected to the terminal means of the sound reproducing earphone means.

2,899,550
ELECTRONIC FUNCTION GENERATOR OF A PLURALITY OF VARIABLES

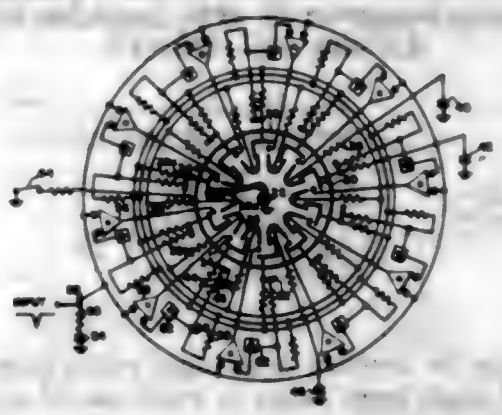
Hans F. Meissinger, Forest Hills, and Rawley D. McCoy, Bronxville, N.Y., assignors to Reeves Instrument Corporation, New York, N.Y., a corporation of New York
Application August 26, 1954, Serial No. 452,432
9 Claims. (Cl. 250—27)



1. A function generator for producing an output voltage which is a predetermined function of the voltages produced by first and second input voltage sources comprising voltage divider means adapted to be energized by voltages derived from said first and second input voltage sources, an output circuit including an amplifier having a feedback resistor connected in parallel therewith, first and second input resistors, means adapted for coupling said first input resistor between said first input voltage source and said output circuit, means adapted for coupling said second input resistor between said second input voltage source and said output circuit, a plurality of unidirectional conducting channels, each of said channels including a diode and series-connected resistive means, and means coupling each of said conducting channels between said voltage divider means and said output circuit.

2,899,551
BEAM ADVANCEMENT IN MAGNETRON BEAM SWITCHING TUBES

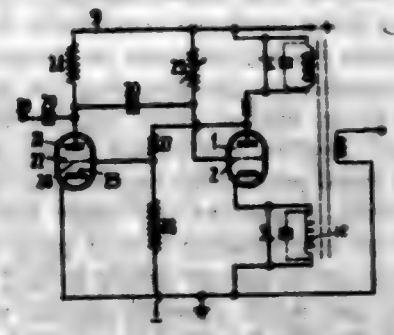
Eric Self, Philadelphia, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Application October 12, 1954, Serial No. 461,712
10 Claims. (Cl. 250—27)



1. An electronic system comprising a multi-position beam switching tube having beam forming structure, the tube having a plurality of beam receiving targets to accept the beam in any of its positions, the tube further having a set of switching means to cause the beam to advance from one target position to another, means deriving a first gating potential from a target electrode upon which the beam is impinging, means deriving a second gating potential from an external source, a separate gating circuit connected between each target and said switching means for causing the beam to switch from one target position to the next only in response to both gating potentials.

2,899,552
ELECTRIC PULSE GENERATING APPARATUS

Gordon Percival French, South Croydon, England, assignor to The General Electric Company Limited, London, England
Application January 3, 1955, Serial No. 479,697
Claims priority, application Great Britain January 1, 1954
5 Claims. (Cl. 250—27)



1. Electric pulse generating apparatus comprising an electric pulse source for supplying a trigger pulse having sharp leading and trailing edges, a pair of parallel reso-

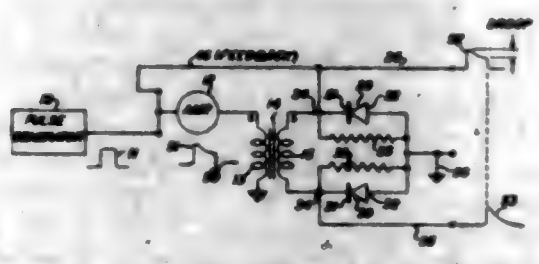
nant circuits both having the same natural period which is short relative to the duration of said trigger pulse, means having an input path to pass a current pulse simultaneously through both said resonant circuits for a period equal to the duration of a pulse applied to said input path, means connecting said pulse source and the input path to supply the trigger pulse to the input path, two asymmetrically conducting devices which are each connected across one of said parallel resonant circuits so that a damped oscillation, consisting substantially of a single half cycle, is excited in each resonant circuit in turn by the current pulse, one in response to the leading edge of the current pulse, and one in response to the trailing edge, and an output circuit coupled to both the resonant circuits so that the damped oscillations excited therein by the current pulse produce in the output circuit two pulses respectively which are of the same polarity.

2,899,553

PULSE DELAY CIRCUIT

William P. Horton, Natick, Mass., assignor, by mesne assignments, to Eastman Kodak Company

Application September 28, 1955, Serial No. 537,192
1 Claim. (Cl. 250—27)



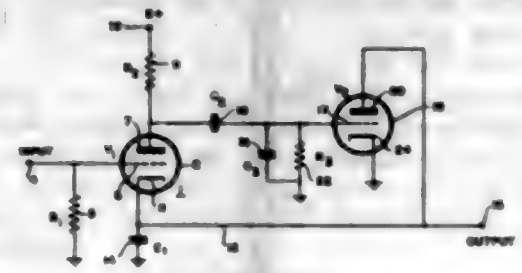
Apparatus for deriving two output pulses from each of a series of single input pulses in which one of said output pulses is delayed with respect to the other output pulse by an interval corresponding at least to the width of the input pulse, comprising in combination an input pulse source, means for amplifying the input pulses derived from said source, a transformer having a primary winding and a secondary winding, said primary winding being connected to said amplifying means and ground and inducing a first pulse of the same polarity as said input pulse and a second pulse of a polarity opposed to that of said input pulse in said secondary winding, a first load circuit including an electronic switching means connected in series circuit with one side of said secondary winding, a resistor connected across said switching means, and an output lead between said switching means and said secondary winding, said switching means being nonconductive for applying one of said induced pulses as an output pulse directly to its respective output lead and being rendered conductive by the other of said induced pulses for shorting out its respective resistor, a second load circuit including an electronic switching means connected in series circuit with the other side of said secondary winding and said first-mentioned switching means, a resistor connected across said switching means and an output lead between said switching means and said secondary winding, said switching means being rendered conductive by the one of said induced pulses for shorting out its respective resistor and being non-conductive for applying the other of said induced pulses as an output pulse directly to its respective output lead, said output pulses being of the same polarity as said input pulse with one of said output pulses being delayed with respect to the other and the amplitude and shape of said delayed output pulse being determined by the amount of energy stored in said transformer during the time said input pulse is applied and the time constant of said transformer and the resistor in the load circuit of said delayed output pulse, and means connecting the output lead of said first load circuit to the input lead of said amplifying means for buffering back the undelayed output pulse to provide regenerative action and for effectively increasing the delay of the delayed output pulse.

2,899,554

SELF RECYCLING PULSE STRETCHER

Samuel A. Rosen, Sherman Oaks, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Application September 4, 1956, Serial No. 608,647
2 Claims. (Cl. 250—27)



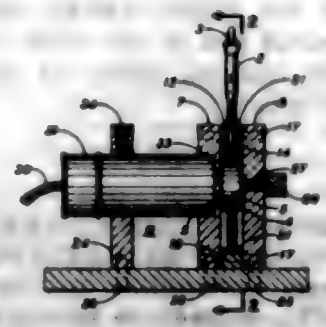
1. A pulse stretching circuit comprising an input terminal adapted to receive pulses, the duration of which is to be increased; a first tube having at least an anode, control grid and a cathode, said anode being connected through a load resistor to a source of positive potential and said control grid being connected to said input terminal; capacitive means coupling said cathode of said first tube to ground; an auxiliary tube having at least an anode, a control grid and a cathode, the control grid of said auxiliary tube being coupled to the anode of said first tube and the anode of said auxiliary tube being coupled to the junction between said cathode of said first tube and said capacitive means; an output terminal connected directly to the cathode of said first tube; and a resistance-capacitance network coupling the control grid of said auxiliary tube to a terminal maintained at a substantially fixed potential.

2,899,555

APPARATUS FOR DETERMINING CHARACTERISTICS OF HYDROGEN-CONTAINING SUBSTANCES

Bernard A. Fries, Berkeley, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Application July 23, 1953, Serial No. 369,893
1 Claim. (Cl. 250—43.5)



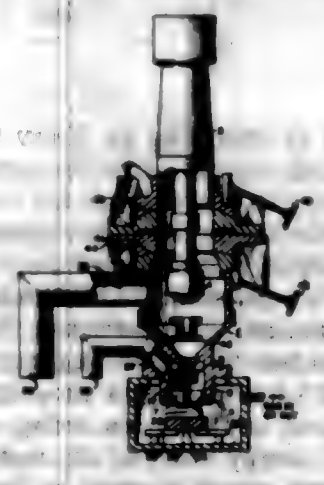
Apparatus for determining the hydrogen content of a hydrogen-containing substance comprising a source of beta particles mounted to transmit a beam of beta particles over a predetermined path in said substance, a radiation detector mounted adjacent to said substance on the opposite side thereof from said source for producing a first output signal dependent upon the intensity of the beam of beta particles transmitted through said substance, an integrating device connected to said detector for converting said output signal into a second output signal dependent upon the numerical value of the quantity

$$\frac{d(1+H)}{2}$$

for said substance, where d is the density of the substance

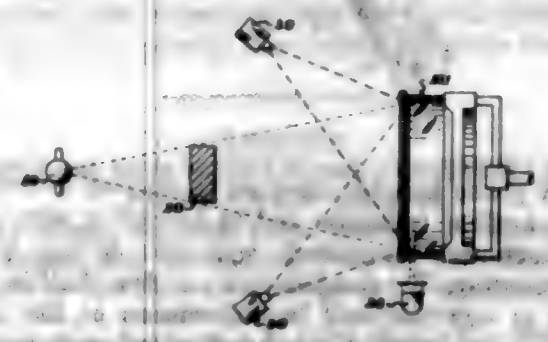
and H is the hydrogen content of said substance expressed as a percentage of unity, a density meter positioned in contact with said substance to produce a third output signal dependent upon the density of said substance, and correlating means connected to said density meter and said integrator for correlating said second and said third output signals to provide an indication of the hydrogen content of said substance.

2,899,556
APPARATUS FOR THE TREATMENT OF SUBSTANCES WITH CORPUSCULAR RAYS
Erwin Schopper and Berthold Schumacher, Stuttgart, Germany
Application October 14, 1953, Serial No. 386,083
Claims priority, application Germany October 17, 1952
3 Claims. (Cl. 250—49.5)



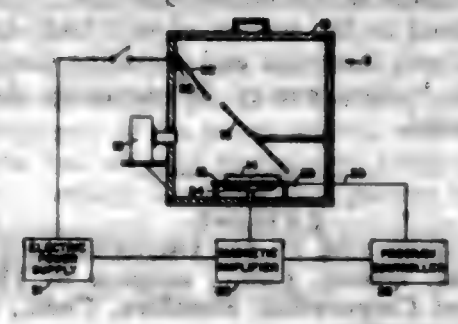
1. Apparatus for producing chemical reactions, comprising a source for a beam of electrically charged corpuscular rays having an energy not substantially exceeding 200 kv., said source being positioned in a vacuum chamber, means for maintaining in said chamber a gas pressure of less than 10^{-3} Torr, a pressure stage stretch including at least one intermediate chamber, means for maintaining in each intermediate chamber a gas pressure less than atmospheric, a partition wall between adjacent ones of said intermediate chambers, said partition walls having small apertures, the partition walls being so spaced that succeeding apertures are positioned in the minimum density region of the gas stream flowing into said intermediate chambers from the atmosphere, means for concentrating the corpuscular rays and the apertures being so aligned that the concentrated rays pass unimpeded therethrough from the vacuum chamber to the atmosphere to cause there said chemical reactions.

2,899,557
APPARATUS FOR PRODUCING SHADOWGRAPHS
Robert R. Wilson, Princeton, N.J., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application November 2, 1945, Serial No. 626,387
2 Claims. (Cl. 250—65)



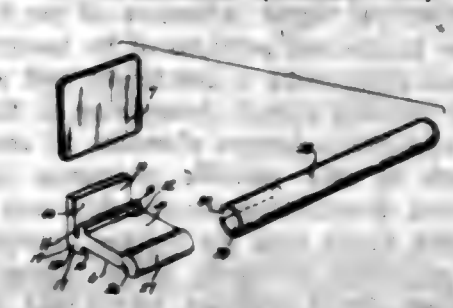
2. In a device for photographing a shadowgraph of a rapidly changing object subjected to X-ray radiation, the combination including a cloud chamber having a portion thereof transparent to light rays and X-rays, a controlled source of X-rays spaced from the cloud chamber on a median line normal to said portion, substantially; means supported laterally of said cloud chamber portion median line for illuminating the interior thereof, photographic recording means disposed laterally of the cloud chamber portion median line intermediate the X-ray source and the cloud chamber in oblique angularity with respect to said median line, an object to be studied disposed intermediate said source and chamber on said median line to provide an X-ray transmission barrier therebetween, said photographic means being adapted to record a shadowgraph produced in said cloud chamber in response to activation of said X-ray source.

2,899,558
METHOD OF CHARACTERIZING SOLID MATERIALS AND METHOD OF GEOPHYSICAL EXPLORATION
Donald R. Lewis, Houston, Tex., assignor to Shell Development Company, New York, N.Y., a corporation of Delaware
Application January 22, 1957, Serial No. 635,165
5 Claims. (Cl. 250—65)



5. A method of characterizing a plurality of similar materials comprising: taking a sample of each material heating each sample to release the thermoluminescence of each sample due to the inhomogeneity of the sample; recording the intensity and distribution of the thermoluminescence so released and then comparing the recordings of the plurality of samples to determine differences in the intensity and location of the released thermoluminescence in order to characterize the samples.

2,899,559
DENTAL X-RAY FILM HOLDER
Erwin H. Maurer, Wauwatosa, Wis.
Application December 6, 1955, Serial No. 551,272
5 Claims. (Cl. 250—70)



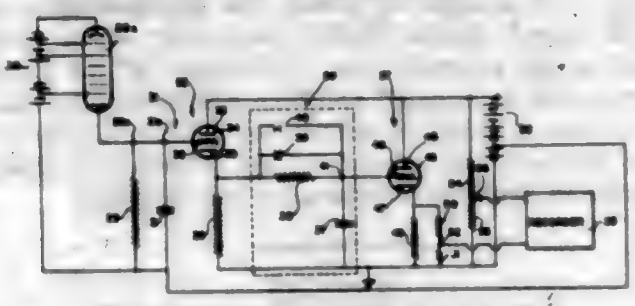
1. A holder comprising a "bite" portion of substantially rectangular shape and having at one end thereof a pair of flanges spaced to receive a dental X-ray film and extending from one side of the bite portion, and a third flange extending from the opposite side of the bite portion and having a reduced thickness neck and a substantially cylindrical head at the other end of the bite portion, and a handle having a socket of a depth substantially equal to the length of and detachably receiving the holder head portion from either end thereof, and a slot in the socket wall for receiving the holder neck portion,

the slot being wider than the thickness of the neck and the edges of the slot being engageable with the end of the bite portion adjacent the neck for limiting rotational movement of the bite portion about the center line of the handle.

2,899,560
RADIATION DETECTOR
Anthony Antal Nemet, Richmond, England, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application March 19, 1957, Serial No. 647,142
Claims priority, application Great Britain February 19, 1957
3 Claims. (Cl. 250—71)

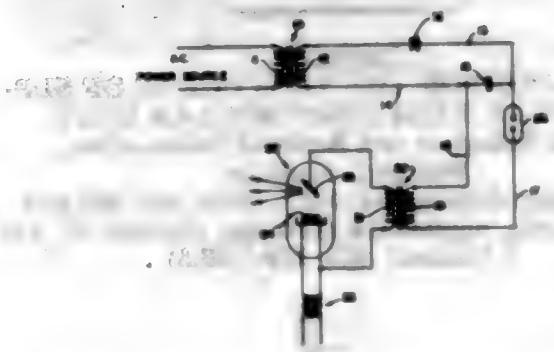
1. A radiation detector comprising a coherent supporting body comprised of photo-sensitive, semi-conductive material, a pair of electrodes coupled to said coherent body, and a mass of radiation-responsive, luminescent material mounted on the surface of said body and forming an integral unit therewith and providing luminescence in response to radiant energy for actuating the photo-sensitive material.

2,899,561
CIRCUITS FOR USE IN MEASURING SYSTEMS
John U. White, Darien, Conn., assignor to The White Development Corporation, Stamford, Conn., a corporation of Connecticut
Application March 29, 1956, Serial No. 574,664
17 Claims. (Cl. 250—83.3)



1. Spectrum-measuring apparatus, for testing samples, comprising means for producing radiation characteristic of a sample, radiation-dispersing and sensing means, for producing an electrical signal indicative of the intensity of said radiation in selected portions of its spectrum, an integrating circuit comprising a condenser and a parallel circuit, said parallel circuit comprising a fixed resistor and two variable resistance elements all connected in parallel, each of said variable resistance elements having a preferred direction of current flow and having a resistance which varies with the voltage applied to it, said variable resistance elements being connected in opposite directions, means applying across said integrating circuit a signal derived from said radiation-sensing means, and a device including a member movable in response to the voltage across said condenser, the combined parallel resistance of said variable resistance elements being larger than the resistance of said fixed resistor for small signals and smaller than same for large signals, said integrating circuit comprising a non-linear filter adapted to minimize the response of said device to spurious variations in said signal by averaging them out but to cause it to respond to the steads value of the true signal and to small, persistent changes in that steady value.

2,899,562
METHOD AND SYSTEM FOR OPERATING X-RAY TUBES
Frank Fruengel, Hamburg-Rissen, Germany
Application April 26, 1955, Serial No. 503,949
In Germany October 1, 1948
Public Law 619, August 23, 1954
Patent expires October 1, 1968
3 Claims. (Cl. 250—96)



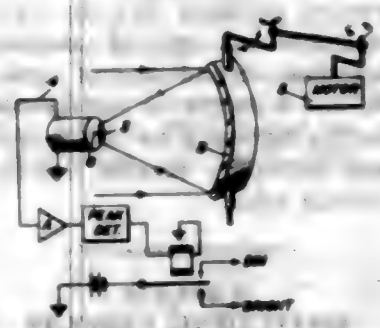
1. The method of operating an X-ray tube having an anode and a cathode which comprises supplying continuously electric energy to said cathode for heating the same and render it emissive for electrons; passing a train of electric energy impulses of selected peak voltage value and time spacing across anode and cathode of the tube to obtain X-ray radiation; and extending the duration of said train of impulses to last throughout the entire operating period of said tube, said time spacing between subsequent impulses of the train being selected in dependence of the energy content of each impulse such that the temperature rise of the tube in impulse operation is substantially not higher than the temperature rise allowable for continuous current operation of the tube.

2,899,563
PROBE HOUSINGS FOR NUCLEAR RADIATION DETECTOR
Donald D. Stellmacher, Los Angeles, and Robert C. Danta, Inglewood, Calif., assignors to Hoffman Electronics Corporation, a corporation of California
Application December 23, 1954, Serial No. 477,254
9 Claims. (Cl. 250—108)

1. A probe housing adapted to enclose a device sensitive to nuclear radiation and to cooperate with a mounting attachment associated with said device, said housing including, in combination, a first hollow element closed at one end and having means at the remaining end for securing said mounting attachment to said first hollow element, said first hollow element having at least one side aperture for exposing said enclosed radiation

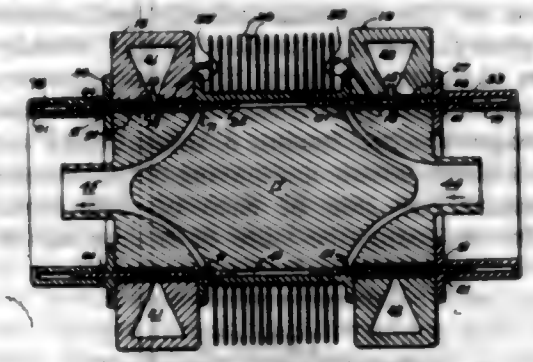
sensitive device to the ambient field, and a second hollow element disposed over said first hollow element and slidable thereover in either or two opposite lengthwise directions to alternately expose or cover said side aperture as is desired.

2,899,564
SINGLE-TRACK SCANNING TYPE DIMMER
Jacob Rabinow, Takoma Park, Md., and Max L. Libman, Vienna, Va.
Application April 26, 1957, Serial No. 655,265
9 Claims. (Cl. 250—235)



1. In a headlight dimmer, optical focusing means to produce an image of a desired field of view ahead of a vehicle, photoelectric means having a photosensitive surface substantially smaller than the area of said image, means to produce relative oscillation of said image and said photosensitive surface back and forth along a single line only, for a distance sufficient to sweep the entire width of the image of the field of view, said optical means and said photoelectric device being arranged to produce an output signal in response to the light output of small elongated areas of the field of view transverse to the direction of said oscillation, and means operable by the output of said photoelectric means to dim the headlights of a vehicle in response to the said output.

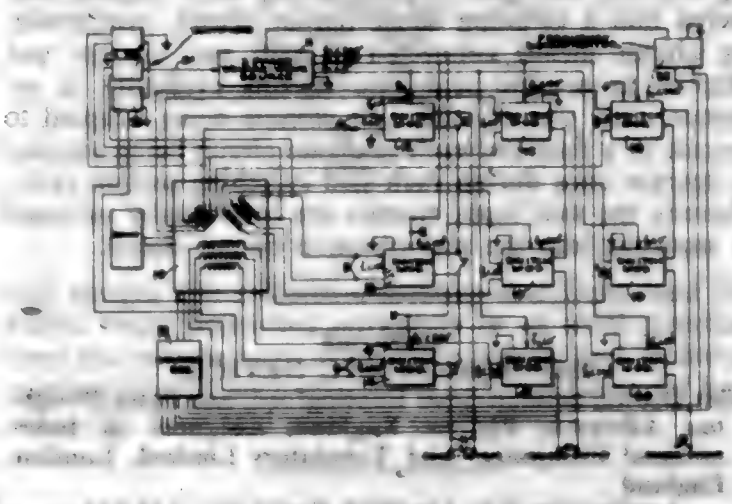
2,899,565
METHOD AND APPARATUS FOR ENERGY CONVERSION
Edwin E. Turner, West Roxbury, Mass.
Application February 7, 1957, Serial No. 638,883
27 Claims. (Cl. 290—1)



22. In a free piston electrical generator, means forming a magnetic field, at least one piston arranged to be reciprocated with respect to said field, said piston comprising at least in part an electrically inductive conductor.

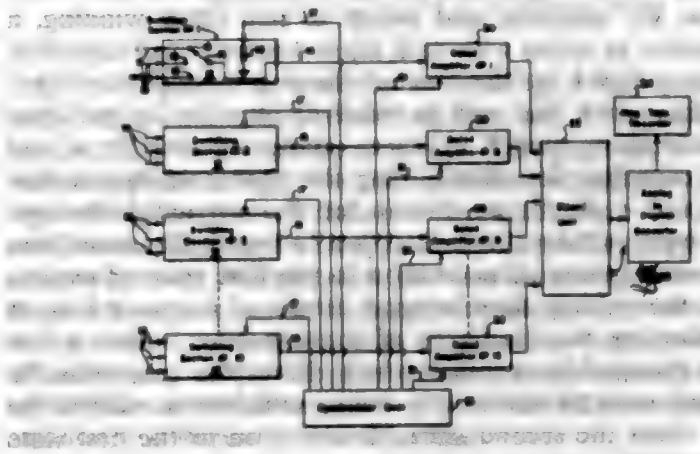
2,899,566
SYSTEM FOR SUPPLYING CONTROLLED FREQUENCY POWER
Colin C. Ware, Midland Park, Richard F. Blake, Mountain Lakes, and Edward A. Demers, Newark, N.J., assignors to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Application September 5, 1958, Serial No. 759,281
16 Claims. (Cl. 307—73)

8. Apparatus for converting polyphase power produced by an alternating current power source having at least two outputs which differ in phase angle into power of a different frequency comprising in combination a source of multiple phase controlled frequency having at least two outputs which differ in phase angle, the outputs of said controlled frequency source each having a phase angle which differs from the phase angle of another output of said controlled frequency source by an amount equal to the difference in phase angle between two outputs of the



power source, and a plurality of modulators each having an input circuit connected to only one phase of said controlled frequency source and having an output circuit and producing output power at the side band frequencies of the frequency of the power source, said output circuits of at least two of said modulators being connected together in a voltage summing arrangement to remove one of the fundamental side band frequencies thereby producing system output power predominantly at the other fundamental side band frequency.

2,899,567
HIGH-SPEED SWITCHING SYSTEM
George F. Rossano, Winter Park, Fla., assignor to The Martin Company, a corporation of Maryland
Application December 31, 1957, Serial No. 706,426
4 Claims. (Cl. 307—81)



1. A high-speed electromechanical switching system for individually switching a plurality of input circuits in sequence into an output circuit, comprising a predetermined smaller number of switching sections each having an input and an output, a separate portion of said input circuits being associated with each of said switching sections, said input circuits being individually connected to the input of the said switching section associated therewith and commonly connected to the output thereof, a separate switch having a movable contact connected in each said input circuit, the switches associated with the same switching section being adapted to close in sequence, only one of said switches being adapted to close at one time, synchronizing means for said switches connected to each said switching section, said synchronizing means

being adapted to close a single switch at a time in each of said switching sections cyclically in sequence from switching section to switching section, a complete switching section cycle being preselected to permit a switch in any one switching section to completely close prior to the commencement of a succeeding cycle in said switching section, a plurality of gate circuits having input circuits each connected to the output of a separate one of said switching sections, said gate circuits having their outputs connected into a common single output circuit, synchronizing circuit means connected to said gate circuits and adapted to operate said gate circuits cyclically in sequence, only one of said gate circuits being adapted to operate at a time and each said gate circuit being adapted to operate once during each said switching section cycle, whereby the said input circuits are individually switched in sequence into the said common output circuit.

2,899,568
IMPULSE GATING DEVICES

John Drewe, Sandon, near Buntingford, and Peter Doughton Atkinson, Elstree, England, assignors to International Computers and Tabulators Limited, London, England

Application July 13, 1954, Serial No. 443,842
Claims priority, application Great Britain August 26, 1953
16 Claims. (Cl. 307—88)

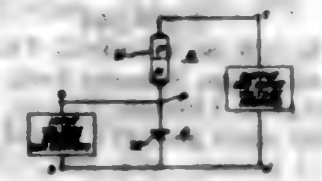
1. Apparatus for automatically resetting a magnetic core to a first limiting state of saturation, consequent upon switching of the core to a second limiting state of saturation, comprising a magnetic core of material with appreciable remanence and a substantially rectangular hysteresis characteristic, a source of input pulses for switching the core from the first state to the second state, an input winding and an output winding on said core, means for applying said pulses to said input winding, a capacitor in series with said input winding, said capacitor being charged by the current flowing through the input winding when the core is switched into the second state of saturation, switch contacts connected directly across said capacitor for determining the charge of the capacitor, and a discharge circuit for the capacitor through said input winding in a direction to switch the core from the second state of saturation to the first state of saturation, the voltage time integral produced across the input winding by the discharge of the capacitor, when it has been charged by a pulse which drives the core into the second state of saturation, being sufficient to switch the core from the second state of saturation to the first state of saturation.

2,899,569
DIODE CIRCUITS

Raymond J. Kircher, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application June 30, 1953, Serial No. 365,861
7 Claims. (Cl. 307—88.5)

1. A four-terminal voltage dividing network comprising a first pair of terminals and a second pair of terminals, a two-terminal p-n junction semiconduction translating device having a low resistance forward conduction characteristic and a high resistance reverse conduction characteristic for reverse voltages less than a critical value and a substantially constant voltage reverse conduction characteristic for reverse voltages equal to or greater than said critical value, a two-terminal asymmetrically conducting impedance device having a low resistance forward conduction characteristic and a high resistance reverse conduction characteristic, means connecting said devices in opposition, for forward currents, with respect to a common connection, a first circuit including said first

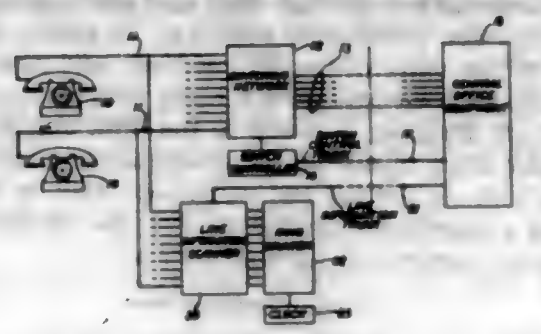


pair of terminals and one only of said devices, a second circuit including said second pair of terminals and both of said devices, and a source of voltage connected to one of said circuits for applying to said p-n junction device biasing voltages including reverse voltages at least as great as said critical value.

2,899,570
SWITCHING CIRCUIT

John D. Johannesen, Morris Plains, Peter B. Myers, Millington, and John E. Schwenker, Gillette, N.J., assignors to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application March 9, 1956, Serial No. 570,530
8 Claims. (Cl. 307—88.5)

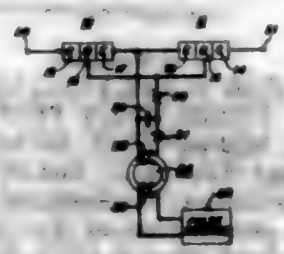


1. A gating circuit comprising a serial signal path including transistor means defining a first junction having a normally high impedance to signals of one polarity and a second junction having a normally high impedance to signals of the opposite polarity and control means for supplying minority carriers in the vicinity of said junctions to reduce them to their low impedance states for signals of both polarities, said control means including a magnetic core having a substantially rectangular hysteresis characteristic and having output winding means connected to one side of each of said junctions and means for reversing the state of magnetization of said core.

2,899,571
SWITCHING CIRCUIT

Peter B. Myers, Millington, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application March 9, 1956, Serial No. 570,593
10 Claims. (Cl. 307—88.5)



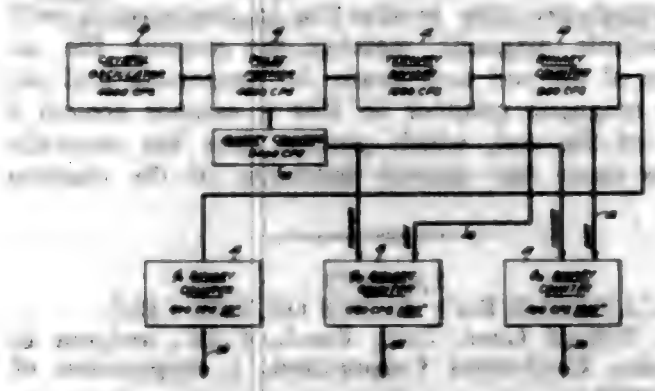
1. A gating circuit comprising a pair of similar conductivity type transistors each having a base, an emitter,

ing composition thermally fused to each other and to said

2,899,578

and a collector, the emitters being electrically connected together, the bases being electrically connected together, a magnetic core having two terminal input and output windings thereon, one terminal of said output winding connected to said electrically connected emitters, diode means connected between the other terminal of said output winding and said electrically connected bases, a capacitor connected across said output winding and said diode means, and means for applying pulses to said input winding to supply current to said transistors and to charge said capacitor.

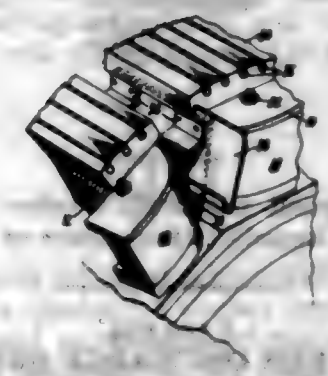
2,899,572
THREE PHASE POWER SUPPLY
Charles W. Skelton, Irving, and William F. Donnell, Richardson, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Application April 4, 1957, Serial No. 650,786
16 Claims. (Cl. 307—106)



7. A three phase power supply comprising a first bistable means, a second bistable means and a third bistable means, each of said bistable means having a first stable state and a second stable state and producing one output potential when in said first stable state and a second output potential when in said second stable state, trigger means feeding pulses to said first, second and third bistable means simultaneously to switch each of said bistable means to cause each of said bistable means to switch from the state that it is in to the opposite state, means to prevent said trigger means from switching said second bistable means from said first state to said second state whenever said first bistable means is in said second state, means to prevent said trigger means from switching said second bistable means from said second state to said first state whenever said first bistable means is in said first stable state, means to prevent said trigger means from switching said third bistable means from said second state to said first state whenever said second bistable means is in said first state, means to prevent said trigger means from switching said third bistable means from said first stable state to said second stable state whenever said second bistable means is in said second stable state, means to prevent said trigger means from switching said first bistable means from said second stable state to said first stable state whenever said third bistable means is in said first stable state, and means to prevent said trigger means from switching said first bistable means from said first stable state to said second stable state whenever said third bistable means is in said second bistable state.

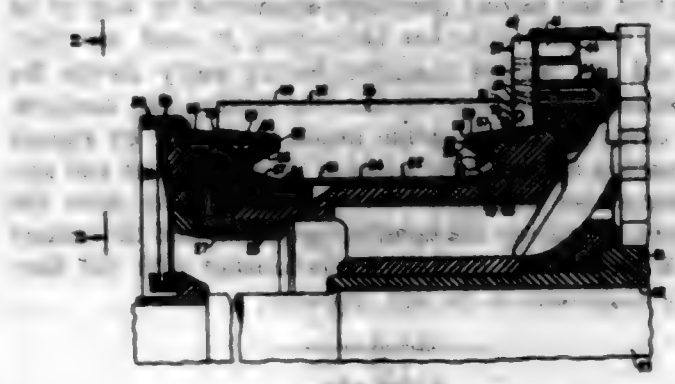
2,899,573
COOLING ARRANGEMENT FOR SALIENT POLE ROTORS
Adolph John Wesolowski, Erie, Pa., assignor to General Electric Company, a corporation of New York
Application August 21, 1957, Serial No. 679,481
3 Claims. (Cl. 310—60)

1. A rotor for a dynamoelectric machine having a plurality of spaced pole pieces including current carrying coils mounted on its outer peripheral surface, the improvement comprising a combined wedge and fan blade device positioned between each of said pole pieces and secured in intimate contact therewith so that heat generated in said pole pieces during rotor operation is conducted to



said wedges and radiated outwardly therefrom, said fan blades being positioned outwardly in an axial direction from the rotor so as to cause air to pass in heat exchange relationship with said wedges and carry said radiated heat outwardly from said rotor by convection.

2,899,574
CONSTRUCTION FOR FORMING COMMUTATOR SEGMENTS
Herbert G. Jungk, Columbus, Ohio, assignor, by mesne assignments, to McGraw-Edison Company, a corporation of Delaware
Application January 17, 1957, Serial No. 634,729
14 Claims. (Cl. 310—234)



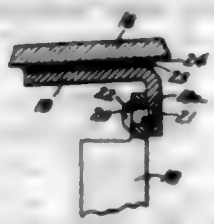
1. A commutator segment comprising a bar portion including a longitudinal brush surface and a lateral edge forming a junction portion; a first riser portion; a second riser portion, said two riser portions including spaced confrontnig surfaces defining a slot and edges abutting said lateral edge to form a laterally extending junction; and means for joining said riser portions together and to said bar portion, said means including a protrusion on certain of said edges and a recess in certain other of said edges, said protrusion being extended in a longitudinal direction transversely of said laterally extending junction and disposed in said recess.

2,899,575
GLASS-TO-METAL SEALS IN CATHODE-RAY TUBES
Harvard B. Vincent, Toledo, Ohio, assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application July 18, 1956, Serial No. 598,625
3 Claims. (Cl. 313—64)

1. As an article of manufacture, a load-supporting attachment for a glass cathode-ray tube part comprising a flat L-shaped metallic member, a coating of base glass over at least one attachment surface of said metallic member, said base glass having a coefficient of thermal contraction compatible with that of said metallic member, at least one layer of lower-melting glass sealing composition over said base glass, both said base glass and seal-

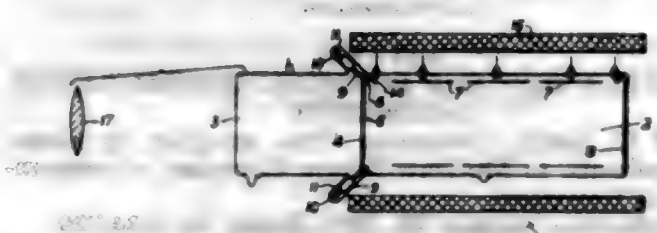
being held in place by a ring within the envelope of said closed discharge space containing an ionizable gas filling

ing composition thermally fused to each other and to said metallic member, said glass sealing composition having a



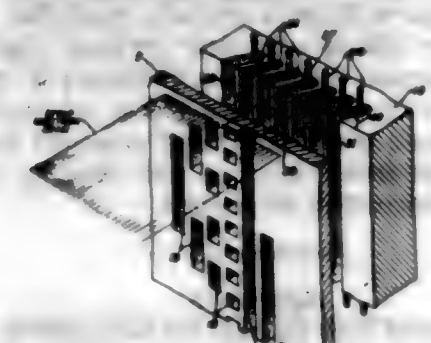
fiber softening point temperature below approximately 540° C. and the annealing temperature of said base glass.

2,899,576
ELECTRON DISCHARGE DEVICES
James Dwyer McGee, London, England, assignor to National Research Development Corporation, London, England
Application March 25, 1957, Serial No. 648,324
Claims priority, application Great Britain March 29, 1956
10 Claims. (Cl. 313—65)



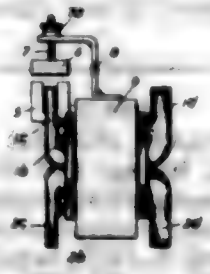
1. An electron discharge device comprising a vessel having first and second chambers connected by way of an aperture, the first chamber containing at least one electrode and the second chamber having entry means for the admission of vapour thereto, the device also comprising an electrode coated while inside the vessel by vapour condensation thereon and adapted to occupy first and second alternative positions, the first serving to close the said aperture during the coating operation and the second being in electrically operative relationship with the electrode or electrodes in the first chamber.

2,899,577
ELECTRON DISCHARGE DEVICE
John A. McCarthy, Morristown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application March 27, 1957, Serial No. 648,802
8 Claims. (Cl. 313—68)



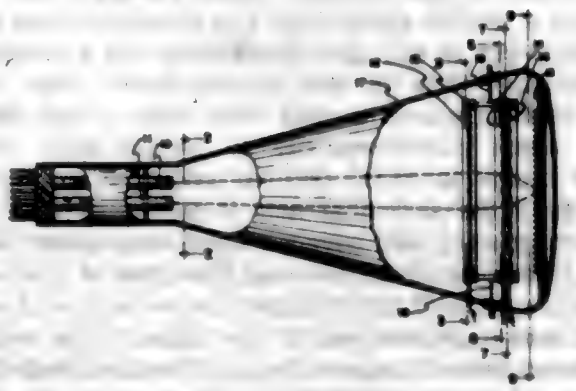
1. An electron discharge device comprising a code plate having rows of apertures, means opposite thereto for projecting an electron beam towards said code plate, a target block having surfaces constituting the walls of recesses behind each of said rows of apertures, at least one of said surfaces in each recess having high secondary emission properties and being at an oblique angle to the path of said beam, and a fine wire collector electrode positioned in each of said recesses out of the path of said beam projected through said apertures.

2,899,578
MAGNETIC SCANNING CIRCUITS FOR CATHODE RAY TUBES
Peter Kirkham and Raymond Gray Rippon Robinson, Cambridge, England, assignors to Pye Limited, Cambridge, England, a British company
Application May 5, 1955, Serial No. 506,304
Claims priority, application Great Britain May 10, 1954
14 Claims. (Cl. 313—76)



1. A deflector coil for deflecting the electron beam of a cathode-ray tube or the like in combination with an adjustable magnetic member for varying the inductance of the coil and means for supporting said adjustable magnetic member so that it extends around a portion of the coil, which portion does not normally serve to cause the desired deflection of the electron beam.

2,899,579
CATHODE RAY TUBES OR THE LIKE
Charles Willard Geer, Long Beach, Calif., assignor to Hoffman Electronics Corporation, a corporation of California
Application June 21, 1954, Serial No. 438,096
12 Claims. (Cl. 313—81)

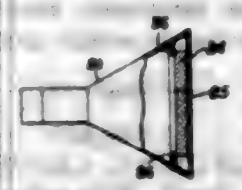


1. A cathode ray tube for presenting information in color, including a plurality of electron guns, a target structure including a plurality of sets of faces, the faces within each set lying in parallel planes at an angle toward the initial direction of the beams from said guns, and means for causing impingement of the beams upon the target faces substantially normal thereto including an apertured parallax grid between the guns and target for positioning the beams impinging thereon at similar locations in the apertures thereof, and a deflection grid between the parallax grid and target for deflecting the beams emerging from the parallax grid in a direction substantially normal to the target faces.

2,899,580
ELECTRON TUBE
Abraham I. Dranetz and Walter Wellowitz, Metuchen, N.J., assignors to Gulton Industries, Inc., Metuchen, N.J., a corporation of New Jersey
Application October 4, 1955, Serial No. 538,481
1 Claim. (Cl. 313—89)

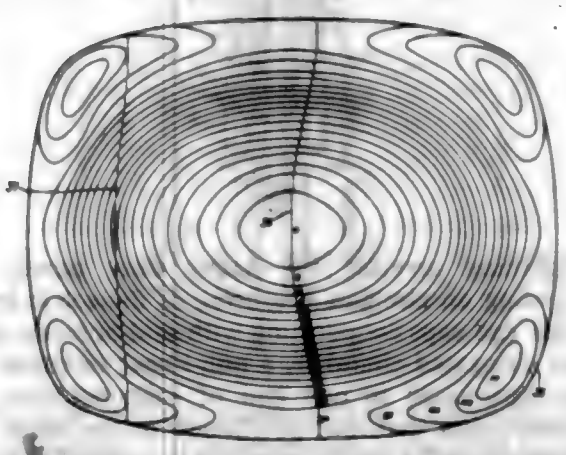
An electron tube comprising a tube envelope; an electro-mechanically sensitive body forming the face of said electron tube; and electron beam scanning means within said envelope; said electro-mechanically sensitive body

being held in place by a ring within the envelope of said electron tube bearing on the edge of the inner face of



said electro-mechanically sensitive body and a metallic plate bearing against the outer surface of said body, said plate being sealed to said envelope.

2,899,581
COLOR IMAGE-PRODUCING CATHODE RAY TUBE
Richard G. Clapp, Narberth, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application January 15, 1957, Serial No. 634,217
6 Claims. (Cl. 313—92)



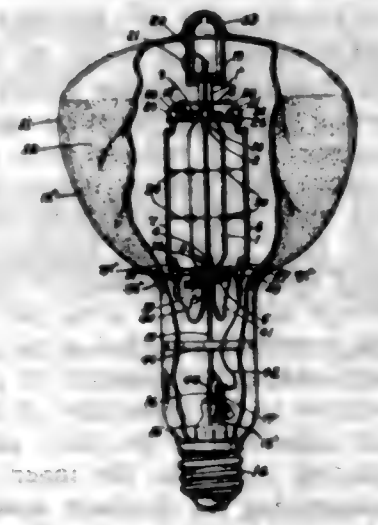
1. In a color image-producing cathode ray tube having an image screen comprising successive groups of colored light-emissive elements, the elements of each group being emissive of light of different colors in response to electron impingement in the course of each complete scanning of the screen area, and wherein for proper color rendition it is necessary to effect coordination at each instant between modulation and position of the image-producing beam by means of an indexing signal produced by flow of energy from successively scanned points of the screen area to a common output point which necessarily is variously distant from said scanned points, there being consequent variation in time required for flow of energy from the successively scanned points to said output point, tending to introduce phase error in the indexing signal and consequent color error in the reproduced image, means for producing an indexing signal substantially free of such phase error comprising index elements variously positioned in relation to said colored light-emissive elements throughout the screen area as a function of said time variation so that the times of electron impingement of said index elements are such as to compenate for said time variation throughout each complete scanning of the screen area and to render said indexing signal accurately representative of the position of the image-producing beam at each instant.

2,899,582
GEIGER-MULLER DETECTOR
Johannes Hermsen and Pieter J. Kranyeveld, Amsterdam, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application December 27, 1955, Serial No. 555,712
Claims priority, application Netherlands January 28, 1955
10 Claims. (Cl. 313—93)

4. A Geiger-Müller type radiation detector comprising a plurality of wall members defining a substantially closed discharge space containing an ionizable gas filling including at least 0.001% of a halogen-type quench, two of said wall members having substantially parallel, spaced, substantially plate-like, coaxial, cylindrical, conductive surface portions electrically insulated from one another and serving as cathode and anode electrodes, the remaining said wall members being electrically in-

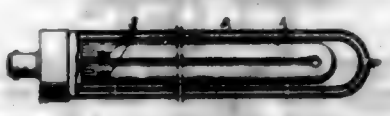
sulating and being arranged substantially at right angles to the plate-like conductive surface portions and defining therewith said substantially closed discharge space, and means for applying to the plate-like, conductive surfaces serving as cathode and anode electrodes a potential difference of a magnitude at which the detector operates along the Geiger-plateau region of its counting rate-voltage discharge characteristic.

2,899,583
LIGHT SOURCE
Michel E. Mackoul, New York, N.Y., assignor to Dure-Test Corporation, North Bergen, N.J., a corporation of New York
Application March 29, 1956, Serial No. 574,985
1 Claim. (Cl. 313—109)



A combination comprising an evacuated envelope having a fluorescent coating on the inner wall thereof, a visible light transmitting and ultra violet light reflecting layer of magnesium oxide underlying said coating, and a source of ultra violet light excitation within said envelope.

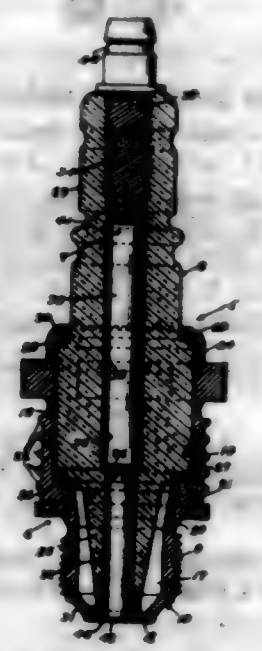
2,899,584
SODIUM-VAPOUR DISCHARGE TUBE
Wessel Verwey, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application January 11, 1956, Serial No. 558,556
Claims priority, application Netherlands January 24, 1955
2 Claims. (Cl. 313—112)



1. A sodium vapor lamp comprising a light-transmissible envelope having an inner wall consisting of a borate glass containing about 20% to 30% B_2O_3, about 20% to 30% Al_2O_3, and about 30% to 60% CaO and BaO, spaced electrodes positioned within said envelope,

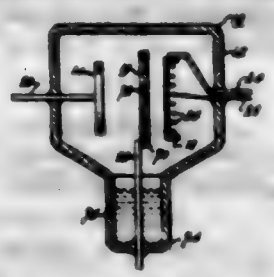
and a filling within said envelope consisting of a mixture of sodium and neon containing about 0.1 to 0.3% of xenon and about 1 to 4% helium.

2,899,585
SPARK PLUG
Frederick P. Dollenberg, Philadelphia, Pa.
Application November 27, 1957, Serial No. 699,381
8 Claims. (Cl. 313—143)



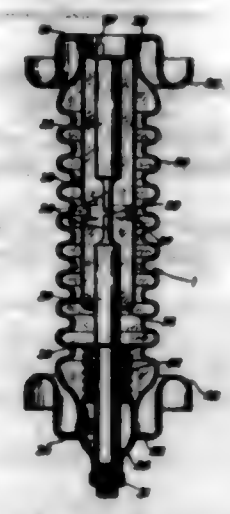
1. A spark plug comprising an elongated hollow shell of electrical conducting material having an outer end and an inner end, an elongated insulator having an enlarged intermediate portion secured in the outer end of the shell and an inner end portion, of reduced cross sectional size relative to the intermediate portion, disposed in the inner end of the shell and spaced therefrom, said insulator having a central bore extending longitudinally therethrough, a central electrode mounted in and extending substantially through said bore, a distal part of the inner end of said shell constituting a shell nose and including a substantially cylindrical wall surface of reduced cross sectional size relative to the remainder of the shell and defining the open inner end of the shell, said shell nose constituting a second electrode, the inner extremity of said insulator comprising an insulator nose surrounded by and spaced from said cylindrical wall surface of the shell nose, said central electrode having an inner end disposed within and surrounded by the insulator nose, and the thickness of the wall of the insulator nose being substantially less than one-half the width of the inner end of the central electrode.

2,899,586
ELECTRON DISCHARGE DEVICE
Karl G. Hernqvist, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application November 15, 1957, Serial No. 696,842
9 Claims. (Cl. 313—167)



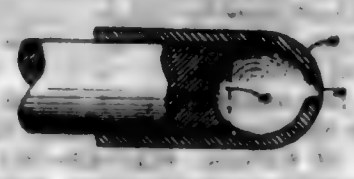
1. An electron discharge device comprising an envelope, a grid electrode wettable by mercury and subject to ion bombardment, a quantity of mercury, and means for transferring a portion of said mercury to said electrode for wetting the surface of said electrode with said mercury, said electrode, said mercury, and said transferring means being within said envelope.

2,899,587
LIGHTNING ARRESTER
Henry V. Dryer, South Milwaukee, Wis., assignor to McGraw-Edison Company, a corporation of Delaware
Application August 1, 1956, Serial No. 601,480
1 Claim. (Cl. 313—182)



A lightning arrester for heavy duty power circuit use including an elongated housing of dielectric material, connector end caps cooperating with said housing to define a closed elongated chamber, a non-linear resistance valve element positioned in one end of said chamber, and a removable spark gap unit positioned in the other end of said chamber, said unit including an evacuated envelope of dielectric material having conducting terminal caps at opposite ends thereof, one of said terminals being in electrical connection with a connecting end cap and the other of said terminals being in electrical connection with said valve element, a pair of opposed elongated spark gap electrodes each respectively in engagement with a conducting terminal cap, one of said electrodes being adjustably movable toward and away from the other to vary the dimension of the spark gap, an elongated vitreous shield surrounding said electrodes and said spark gap inside of said evacuated envelope, said shield being open at at least one end with the movable electrode extending through said open end, means to adjust and fix the movable electrode in a selected adjusted position, and an hermetically sealed bellows in operable association with said adjusting means whereby said adjustable electrode may be moved while maintaining the evacuated condition of said envelope.

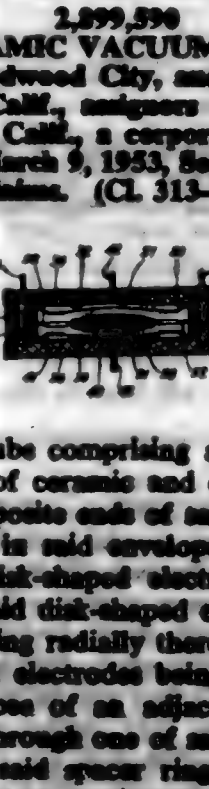
2,899,588
GASEOUS DISCHARGE DEVICE
Ralph L. Mueller, Emmaus, and William G. Shorlz, Allentown, Pa.; said Mueller assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York; said Shorlz assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application May 9, 1956, Serial No. 583,665
13 Claims. (Cl. 313—289)



1. A gaseous discharge device comprising an envelope having a gaseous atmosphere therein, a cathode lead wire

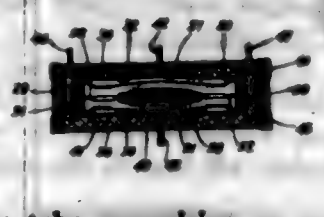
extending through one end of said envelope and having a solid end within said envelope, a hollow cap of conductive material fitted onto said lead end and secured thereto, the interior of said cap being substantially hemispherical and said cap having an aperture therein and defining with the solid end of said lead an enclosed volume, and an anode within said envelope and mounted in proximity to said aperture, the end of said lead being substantially hemispherically concave so that said enclosed volume is substantially spherical, whereby said cavity has a negative resistance characteristic in the abnormal discharge region.

2,899,589
MOUNT STRUCTURE FOR ELECTRON TUBES
Robert D. Reichert, Irvington, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application October 16, 1953, Serial No. 386,440
9 Claims. (Cl. 313—243)



2. A high voltage electron tube comprising an elongated envelope, a tubular anode supported coaxially in said envelope and defining a first space, integral electrically conductive support means defining opposite sides of an elongated space within and coaxial with said anode, a cathode substantially entirely within said space, and fixing means outside of said elongated space and within said first space and engaging adjacent sides of said support means and said cathode, whereby said cathode is equally shielded from said anode at opposite sides thereof.

2,899,590
CERAMIC VACUUM TUBE
Harold E. Sorg, Redwood City, and Louis H. La Verge, Jr., Palo Alto, Calif., assignors to Eitel-McCullough, Inc., San Bruno, Calif., a corporation of California
Application March 9, 1953, Serial No. 341,122
4 Claims. (Cl. 313—250)

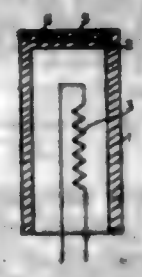


1. An electron tube comprising an envelope having a side wall cylinder of ceramic and end wall disks sealed vacuum-tight to opposite ends of said cylinder, a stacked electrode assembly in said envelope comprising ceramic spacer rings and disk-shaped electrodes fitted into said cylinder, each of said disk-shaped electrodes having supporting tabs extending radially therefrom, the supporting tabs of one of said electrodes being angularly displaced with respect to those of an adjacent electrode, a first lead-in pin sealed through one of said end wall disks and extending through said spacer rings into electrical contact with one of the supporting tabs of one of said electrodes, and a second lead-in pin sealed through said one end wall disk at a point angularly displaced from said first lead-in pin and extending through said spacer rings into electrical contact with one of the supporting tabs of said adjacent electrode, the inner surface of each of said end wall disks being in contact with said electrode assembly.

2,899,591
ELECTRICAL HEATING DEVICE
Isidore H. Stein, Clifton, N.J., assignor to Allen B. Du Mont Laboratories, Inc., Clifton, N.J., a corporation of Delaware
Application November 4, 1957, Serial No. 694,355
6 Claims. (Cl. 313—337)

1. An electron emission device for a cathode ray type tube comprising a cylindrical cathode having a closed end and an electron emissive coating on the exterior surface of said end; a toroidal heater coil having a reference plane, said plane positioned within said cylindrical cathode transverse to the axis of said cathode and parallel and closely adjacent to the interior surface of said end, whereby a high concentration of heat is supplied to said electron emissive surface; and a plurality of heat confining disks having flat reflective surfaces with embossments thereon, said disks being positioned parallel and in close proximity to said heater, whereby heat loss is minimized.

2,899,592
THERMIONIC DISPENSER CATHODE
Patrick P. Coppola, Dobbs Ferry, N.Y., assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application November 18, 1953, Serial No. 392,966
2 Claims. (Cl. 313—346)

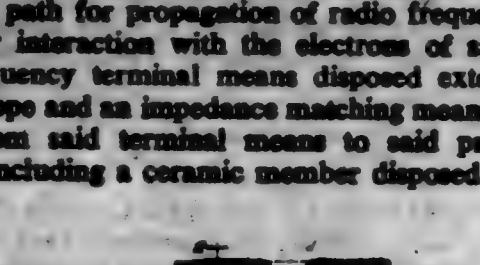


1. A thermionic cathode comprising a structure consisting of refractory metal, a portion of the wall of said structure constituting the emissive surface thereof consisting of a homogeneously-porous sintered refractory metal alloy, and a supply of a fused mixture of 5 moles of barium oxide and 2 moles of aluminum oxide distributed within and only within the pores of said wall portions and in intimate reactive relationship with said refractory metal alloy, said refractory metal alloy consisting of 75% by weight of molybdenum and 25% by weight of tungsten.

2,899,593
ELECTRON DISCHARGE DEVICES
Arthur K. Wing, Jr., Nutley, and Herbert W. Cole, Cedar Grove, N.J., assignors to International Telephone and Telegraph Corporation, Nutley, N.J., a corporation of Maryland
Application May 3, 1954, Serial No. 427,267
9 Claims. (Cl. 315—3.5)

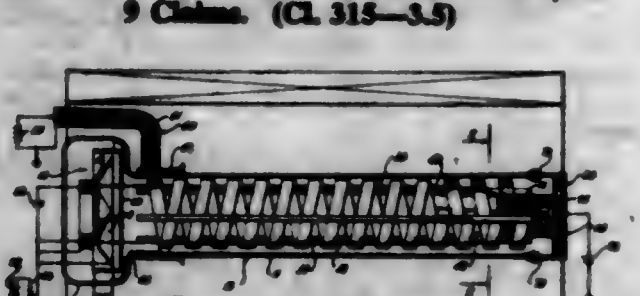
1. A traveling wave electron discharge device comprising an envelope, means at one end of said envelope for

producing a beam of electrons for flow along a given path within said envelope, a propagating structure disposed along said path for propagation of radio frequency wave energy for interaction with the electrons of said beam, radio frequency terminal means disposed externally of said envelope and an impedance matching means coupling energy from said terminal means to said propagating structure including a ceramic member disposed crosswise



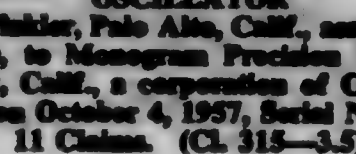
a portion of said one end of said envelope, a line of conductive material disposed adjacent one surface of said member extending between said terminal means and said propagating structure, conductive means disposed adjacent the other surface of said member to present a parallel planar conducting surface with respect to said line of conductive material to function in conjunction therewith as a waveguide for said wave energy, and means sealing said one surface and said line of conductive material to said envelope.

2,899,594
BACKWARD-WAVE OSCILLATOR
Horace R. Johnson, Venice, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Application August 25, 1954, Serial No. 452,191
9 Claims. (Cl. 315—3.5)



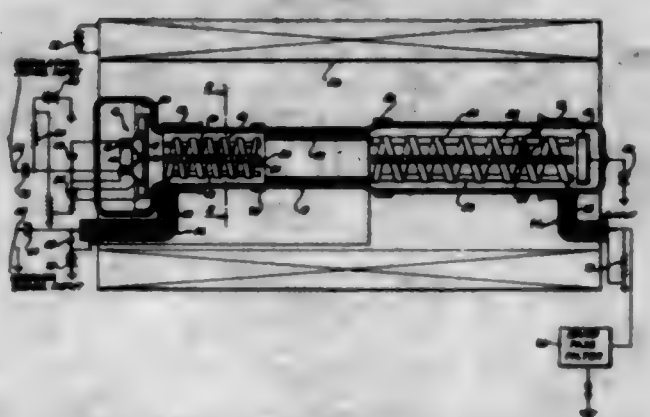
1. A backward-wave oscillator comprising a recurring slow-wave structure capable of propagating a backward wave along a predetermined path therethrough, means for producing an electron stream, means for directing said electron stream along said predetermined path to generate a backward wave on said recurring structure of a frequency substantially proportional to the velocity of said electron stream, output means coupled to said recurring structure at the extremity thereof first entered by said electron stream for making said backward wave available as an output signal from said oscillator, whereby a portion of the energy of said output signal is undesirably reflected and propagated towards the other extremity of said recurring structure, attenuating means for attenuating the reflected energy of said output signal along a portion of the length of said predetermined path adjacent said other extremity whereby a residual portion of the energy of said output signal is undesirably again reflected, and synchronous interaction limiting beam deflecting means for substantially preventing transfer of energy from said electron stream to said reflected residual portion along said portion of the length of said path adjacent

2,899,595
RESONANT WAVEGUIDE BACKWARD-WAVE OSCILLATOR
Richard H. Whitier, Palo Alto, Calif., assignor, by mesne assignments, to Monogram Precision Industries, Inc., Culver City, Calif., a corporation of California
Application October 4, 1957, Serial No. 688,317
11 Claims. (Cl. 315—3.5)



1. A backward-wave oscillator comprising the following combination: an evacuated microwave resonator containing a serpentine wave-transmitting passage, said passage having non-dissipative wave-reflecting terminations at both of its ends so that electromagnetic waves within said resonator are repetitively reflected at said terminations and travel back and forth through said passage, whereby there are produced backward-wave space harmonics having phase velocities that are small compared to the velocity of light; means for providing a beam of electrons moving along a path repetitively crossing said serpentine passage at a velocity approximately equal to the phase velocity of one of said backward-wave space harmonics, so that said beam supplies energy to said electromagnetic waves, whereby sustained electromagnetic oscillations are generated at a resonant frequency of said resonator; and coupling means for withdrawing microwave electromagnetic energy from said resonator.

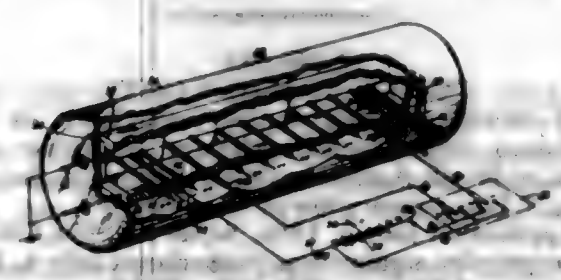
2,899,596
WIDE BAND MIXING SYSTEM
Horace R. Johnson, Venice, Calif., assignor, by mesne assignments, to Hughes Aircraft Company, a corporation of Delaware
Application December 30, 1953, Serial No. 401,302
1 Claim. (Cl. 315—3.6)



A wide-band mixing system comprising a traveling-wave device including means including a cathode for producing a tubular electron stream; means for directing said electron stream along a predetermined path having first, second, and third portions; means including a first helix disposed concentrically about and contiguous to said path along said first portion for varying the flow of current constituting said electron stream in accordance with a carrier signal thereby producing a correspond-

the second portion thereof for providing a drift region for said electron stream; means connected to said cathode and having a low magnitude of electrical capacitance with respect to the other elements of said system for varying the velocity as it leaves the cathode of said electron stream within said drift region about a first predetermined low velocity in accordance with a modulating signal whereby the velocity of said stream along said second portion of said path varies about a first predetermined velocity in accordance with said modulating signal thereby periodically changing the time required for said space charge wave to traverse said drift region; means including a second helix disposed concentrically about and contiguous to said path along the third portion thereof for accelerating said electron stream to a second predetermined velocity that is substantially greater than said first predetermined low velocity and for increasing the magnitude of the space charge wave which corresponds to the carrier signal phase-modulated at a frequency equal to that of the modulating signal, the circumference of said first and second helices being greater than 0.15 free space wavelength at the frequency of said carrier signal; first and second elongated dielectric members respectively disposed contiguously along each of said helices; and a plurality of patches of conductive material disposed in insulative relationship with each other on said elongated dielectric members to partially reflect waves propagated along the turns of said helices, thereby to prevent backward-wave oscillations from commencing.

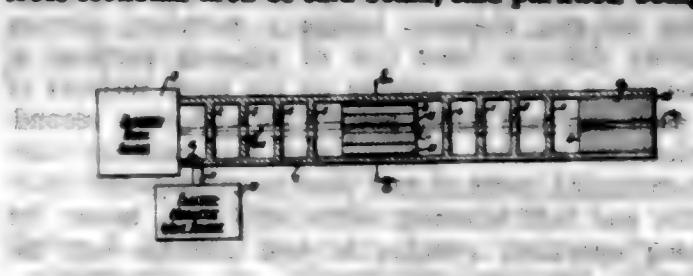
2,899,597
APPARATUS UTILIZING SLALOM FOCUSING
Rudolf Kompfner, Far Hills, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application June 10, 1955, Serial No. 514,424
11 Claims. (Cl. 315—3.6)



1. In an electron discharge device, in combination, means defining a spaced pair of conductive boundaries, a linear array of conductive elements which are positioned between said boundaries and maintained at a potential difference with respect thereto for establishing a pair of singular equipotential surfaces, means for injecting an electron beam with a velocity for flow substantially along one of said surfaces, and means for changing under the influence of control information the potential on at least one of said elements relative to the potential on other of said elements for modifying the path of said one surface and in turn the path of electron flow.

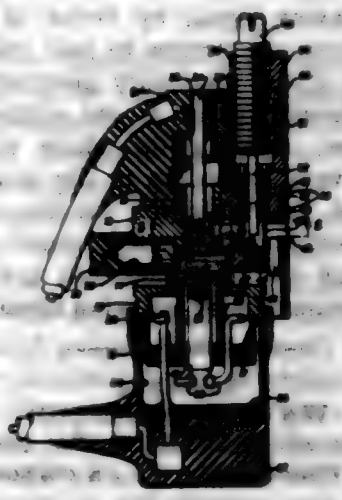
2,899,598
LINEAR ACCELERATOR
Edward L. Ginzton, Los Altos, Calif., assignor to The Board of Trustees of The Leland Stanford Jr. University, Stanford, Calif., trustees
Application May 28, 1956, Serial No. 587,543
15 Claims. (Cl. 315—3.6)

4. A linear accelerator comprising means for supplying a beam of electrons, a slow-wave structure for transmitting electromagnetic waves in electron-accelerating relation with said beam, a partition having an aperture axially alined with said beam for conveying a central portion thereof, other portions of said partition being substantially impermeable by said electrons for restricting the cross-sectional area of said beam, said partition being dis-



posed transverse to and between the ends of said slow-wave structure, and means for providing electromagnetic waves in said structure on both sides of said partition.

2,899,599
REFLEX KLYSTRON
Frederick L. Salisbury, Los Altos, and Wayne G. Abraham, Palo Alto, Calif., assignors to Varian Associates, San Carlos, Calif., a corporation of California
Application December 13, 1956, Serial No. 628,152
18 Claims. (Cl. 315—5.21)



1. An electron discharge device comprising a main body, means adapted to produce an electron beam within the body, said body having a cavity resonator formed within the same in the beam path for electromagnetic interaction with the electron beam, said body having an opening in the side thereof extending into the cavity resonator, a wave permeable vacuum seal in said opening, a waveguide flange fixedly secured on said first body, and adapted for mounting the device on an output load, said waveguide flange having an aperture therethrough, one end of which coincides with the opening in said first body, one portion of said aperture in said waveguide flange forming an external cavity resonator heavily coupled through said vacuum seal to said first cavity resonator, and a second portion of said aperture being reduced in cross-sectional area and serving as an output waveguide coupled to said external cavity resonator, and a tuning screw mounted on said waveguide flange and extending within said external cavity resonator opening for tuning the electron discharge device.

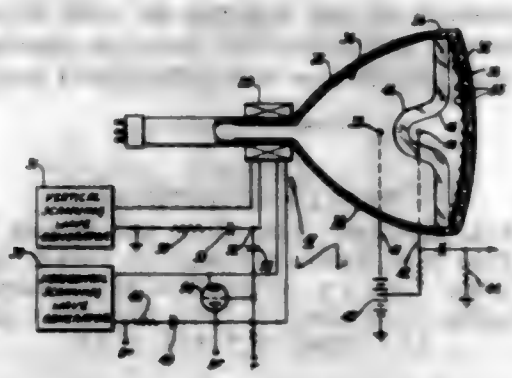
2,899,600
CATHODE RAY TUBE SYSTEMS UTILIZING SECONDARY ELECTRON EMISSION TO GENERATE INDEXING SIGNALS
James S. Bryan, Duncannon, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application August 13, 1956, Serial No. 603,622
9 Claims. (Cl. 315—12)

1. In a cathode ray tube system, a cathode ray tube having a wall forming the face of the tube and having a neck and a flared wall portion extending between the neck and said wall, a screen coating on the inner face

2,899,604
MAGNETRONS

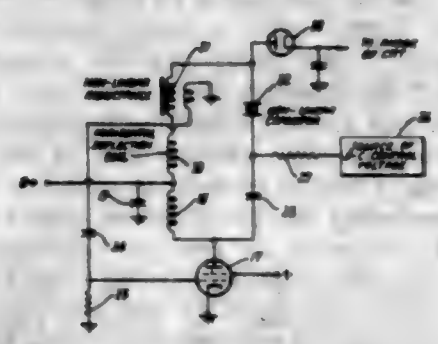
coupling to one of the anode or outer electrodes for

of said wall terminating substantially at the junction of said wall with the flared wall portion, said coating including indexing elements having a secondary electron emissivity different from that of adjacent portions of the screen, a collector coating on the inner surfaces of said neck and said flared portion for collecting secondary electrons emitted by the screen, said collector coating terminating short of said junction, means for effecting line and field scanning within said tube, means for applying operating voltages to said coatings and for



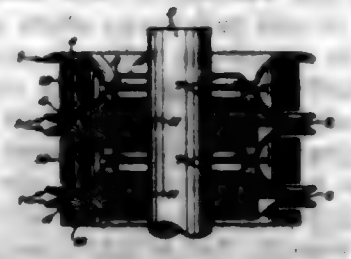
deriving an indexing signal by virtue of the secondary electron flow from the screen to said collector coating, the transit time of the secondary electrons varying over the width and height of the screen according to simple geometric curves, whereby the phase of the indexing signal tends to vary according to the transit time variations, and means for modifying the line scanning waveform so as to compensate for the transit time variations of said secondary electrons and thus prevent objectionable phase variation of said indexing signal.

2,899,601
WAVE GENERATOR
Charles D. Simmons, Philadelphia, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application November 21, 1955, Serial No. 548,019
9 Claims. (Cl. 315—27)



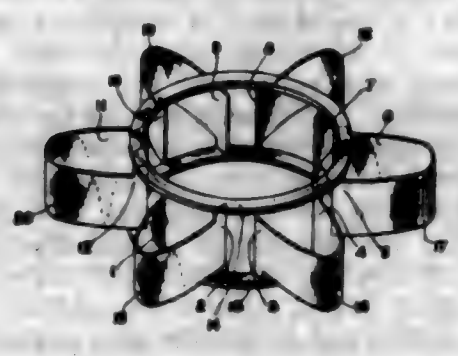
1. Apparatus for producing a current wave which during a major portion of each cycle varies in amplitude in one direction at a relatively low rate and during a minor portion of each cycle varies in amplitude in the opposite direction at a relatively high rate, said apparatus comprising an oscillatory circuit including a capacitor and an inductor in series, said capacitor being characterized in that its capacity varies in inverse relation to its voltage, means for supplying energy to said circuit to effect sustained oscillation thereof and thereby produce a current wave therein, and means for applying a control voltage to said capacitor to control the frequency of said current wave, whereby during operation the voltage across said capacitor varies about a level established by said control voltage and the capacity of said capacitor varies in inverse relation to the voltage variation about a value also established by said control voltage, and during each operating cycle said current wave comprises a partial low frequency oscillation and a partial high frequency oscillation due to the variation of said capacity about said value.

2,899,602
SPARK-GAP ASSEMBLY FOR LIGHTNING ARRESTERS
William H. Nash, South Milwaukee, Wis., assignor to McGraw-Edison Company, a corporation of Delaware
Application December 16, 1956, Serial No. 627,293
6 Claims. (Cl. 315—36)



1. A spark gap assembly comprising a pile of annular spaced apart electrode members each having a general concavo-convex configuration defining an annular base portion and a concentric radially spaced marginal flanged portion and being arranged in said pile to face alternately in opposed directions, said base portion and said flanged portion respectively jointly defining alternate spark gap surfaces with like surfaces of said opposed electrode members, and annular concentric insulating members interposed between adjacent electrode members to provide a means for maintaining predetermined spark gap dimensions between the said respective opposed portions, said insulating members comprising a first annular member disposed between said base portions to maintain the spark gap dimension between the spark gap surfaces of said flanged portion and a second annular member concentrically circumjacent to said first insulating member and to said base portion spark gap surface and disposed between said respective flanged portions to maintain the spark gap dimension between respective opposed base portion spark gap surfaces.

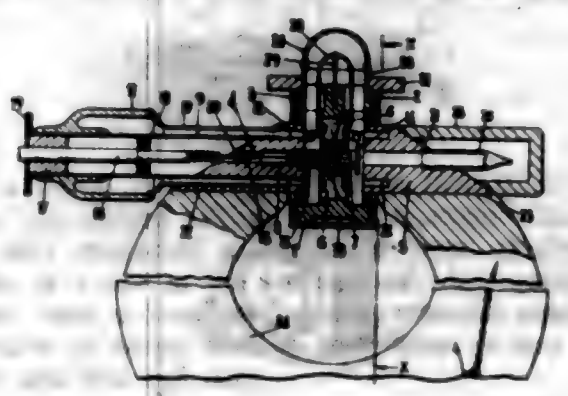
2,899,603
TUNABLE MAGNETRON
Johan Lodewijk Hendrik Jonker and Gerrit de Vries, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application July 3, 1956, Serial No. 595,620
Claims priority, application Netherlands July 4, 1955
5 Claims. (Cl. 315—39.51)



1. A tunable magnetron comprising a cylindrical cathode; an even number of U-shaped flexible conductors arranged in a circle coaxial with said cathode, the free ends of said U-shaped conductors constituting anode segments said cathode and said anode-segments making up an electrode system; a pair of superposed coaxial rings of substantially the same diameter; a mechanical connection between one of said rings and alternate ones of said anode-segments respectively; a mechanical connection between the other of said rings and the remaining ones of said anodes, respectively; and means to rotate one of said rings with respect to the other of said rings to vary simultaneously the spacing between the ends of each of said U-shaped conductors to tune said electrode system.

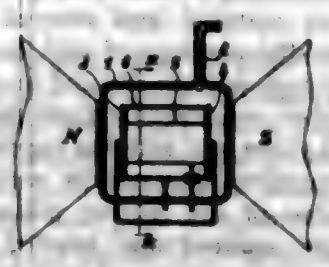
respect to its cathode during substantially the first ninety opposite sides of said plunger, said cross member means

2,899,604
MAGNETRONS
Cyril Henry Dix, Kenton, and Vincent Albert Heathcote, Fulham, London, England, assignors to The M-O Valve Company Limited, London, England
Application March 20, 1957, Serial No. 647,289
Claims priority, application Great Britain March 28, 1956
5 Claims. (Cl. 315—39.75)



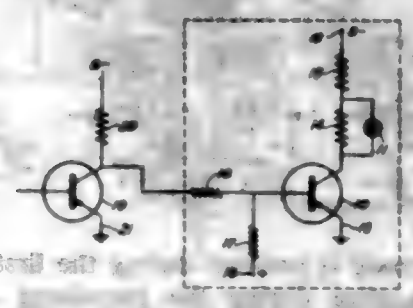
1. A magnetron having a cylindrical metal anode chamber, a plurality of anode segments extending inwards from the wall of said chamber and circumferentially spaced to define between themselves a plurality of cavity resonators, the inner tips of said segments bounding a cylindrical electron orbit space, a cylindrical cathode mounted coaxially within the electron orbit space, and two pole-pieces of magnetic material each sealed into a different end of the anode chamber for closing the chamber and projecting outwards for engagement with an external magnet for producing within the anode system the axial magnetic field required for the operation of the magnetron, each pole-piece having its outer end face bevelled and the bevels being oppositely directed so that the longer sides of the two pole-pieces lie on the same side of the anode.

2,899,605
GLOW DISCHARGE APPARATUS FOR MEASURING LOW GAS PRESSURES
Nicolaas Warmoltz, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application June 28, 1955, Serial No. 518,551
Claims priority, application Netherlands July 7, 1954
7 Claims. (Cl. 315—108)



1. In a pressure measuring device adapted to receive a gas whose pressure is to be measured, a pair of spaced, opposed, cathode electrodes, a hollow, perforated, anode electrode having a central axis extending parallel to an imaginary line joining the center of both cathode electrodes and surrounding a portion of the space between the spaced, cathode electrodes, a hollow, conductive, outer electrode coaxial with and surrounding the perforated, anode electrode, means for establishing a magnetic field having lines of force extending substantially between the cathode electrodes and generally parallel to the said imaginary line, means coupled to said anode and outer electrodes for applying thereto positive potentials relative to the cathode electrodes at which a discharge is established between the electrodes, and means for selectively coupling to one of the anode or outer electrodes for measuring the discharge current collected thereby and thus obtaining an indication of the pressure of the gas received by the device.

2,899,606
TRANSISTOR CONTROLLED GASEOUS INDICATOR CIRCUITS
Walter J. Hicks, Cambridge, Mass., assignor, by mesne assignments, to Minneapolis-Honeywell Regulator Company, a corporation of Delaware
Application May 2, 1957, Serial No. 656,696
3 Claims. (Cl. 315—135)



1. A circuit for controlling the operation of a visual indicator element in the form of a gaseous indicator tube having a predetermined firing potential comprising a pair of power supply terminals adapted to have thereon a potential greater than said firing potential, a pair of series connected fixed resistors, a switch comprising a transistor device having a base electrode, emitter electrode and collector electrode, circuit means connecting said pair of resistors and the emitter-collector electrode circuit in series between said pair of power supply terminals, said emitter-collector electrode circuit impedance, when biased to be nonconductive, and the impedance of said series connected resistors being selected so that the current flow through emitter-collector circuit of said transistor will be less than that which will damage said transistor even though the breakdown potential thereof has been exceeded, means directly connecting one terminal of said gaseous indicator tube to the junction point of said series connected resistors and the other terminal of said gaseous indicator tube to an electrode on said transistor in said emitter-collector electrode circuit, and a control signal circuit connected to the base electrode of said transistors, said control signal circuit being adapted to switch the impedance of said emitter-collector electrode circuit from a relatively high value to a substantial short circuit.

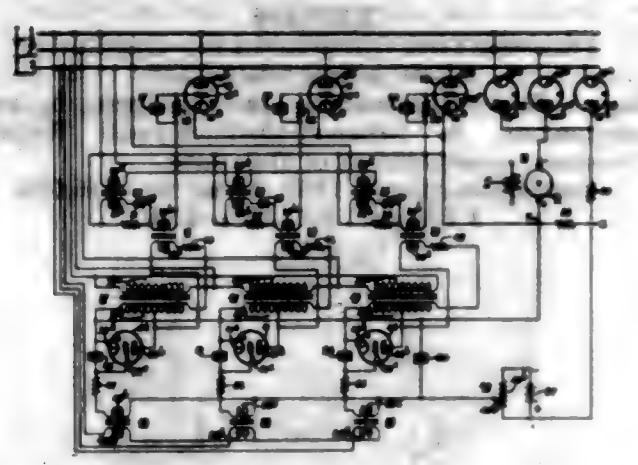
2,899,607
CONTROL SYSTEM FOR THREE PHASE BRIDGE RECTIFIER CIRCUITS
Norman L. Peterson, Wauwatosa, Wis., assignor to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Application November 28, 1955, Serial No. 549,277
5 Claims. (Cl. 315—195)

1. The combination with a three phase source of A.C. supply, a three phase bridge rectifier circuit of the type having a controllable gaseous type main supply tube comprising an anode, cathode and control electrode and a half-wave rectifier connected in each phase of said three phase source of A.C. supply so that the anode of each gas tube is positive with respect to its cathode for two hundred forty electrical degrees, of means to prevent current conduction in each gas tube for at least the first sixty of said two hundred forty degrees and to initiate conduction at a selected time during the remaining one hundred eighty degrees comprising means to apply to the control electrode of each gas tube a half-wave rectified potential having the frequency of said supply and phased so that said control electrode is negative with

jacket is comprised of a pair of like inwardly facing dished cups to form a cavity to receive the unit, and

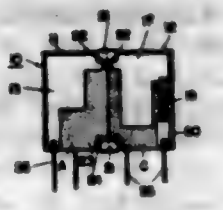
end cap hermetically joined to each end of the shell, a generally cylindrical bellows having an open end in-

respect to its cathode during substantially the first ninety of said two hundred forty degrees, means to apply to each of said control electrodes an alternating potential having the frequency of said supply and being so phased with respect to its associated cathode that each such



control electrode is positive during the first sixty and is normally negative during the remaining one hundred eighty of said two hundred forty electrical degrees, and means to invert the phase of the last mentioned alternating potential one hundred eighty degrees at a selected time after the first sixty of said two hundred forty degrees.

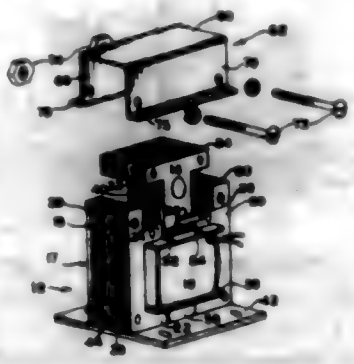
2,899,608
MULTIPLE ELEMENT PRINTED CIRCUIT COMPONENT
Charles Wellard, Bridgeport, Pa., assignor to International Resistance Company, Philadelphia, Pa.
Application December 7, 1954, Serial No. 473,615
3 Claims. (Cl. 317—101)



1. A multiple element printed circuit component comprising the combination of a plate of an electrical insulation material, a second plate of an electrical insulation material having an edge abutting an edge of said first named plate, a U-shaped clip of electrical conductive material extending across the juncture of the abutting edges of said plates and having its legs gripping only a small portion of each plate therebetween so as to hold said plates together and a coating printed on said plates to form electrical components, a portion of the printed coating on each plate contacting said clip so that the clip electrically connects the coatings on the plates.

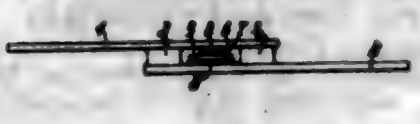
2,899,609
PLUNGER TYPE SOLENOID
Rufus A. Andrews, Glendale, Mo., assignor to Vickers, Incorporated, Detroit, Mich., a corporation of Michigan
Application May 27, 1954, Serial No. 432,648
7 Claims. (Cl. 317—191)

1. An electromagnet comprising a stator structure including a pair of parallel legs and an intermediate section joining the lower ends of said legs, said intermediate section having inner edges on opposite sides thereof, an energizing coil disposed between said legs and having a plunger receiving aperture extending therethrough along the winding axis of the coil and substantially parallel to said legs, a plunger having a shank movable along said axis within said aperture, cross member means secured to said structure and extending between said legs and on opposite sides of said plunger, said cross member means and said intermediate section being at opposite ends of said coil, said cross member means having outer surfaces with lower edges, and a pair of coil retainers contacting said coil and extending through said aperture on opposite sides of said plunger, the lower ends of said coil retainers extending beyond and outside of said inner edges and contacting said intermediate section to limit transverse



movement of the coil, said section being provided with an abutment means contacting the lower ends of said retainers to prevent axial movement of the coil retainers in only the downward direction, said lower edges of said cross member means contacting the upper ends of said retainers to prevent axial movement of said retainers in only the upward direction and to restrict transverse movement of the retainers in only a direction toward each other.

2,899,610
ELECTRODE SYSTEM COMPRISING CRYSTAL DIODES OR TRANSISTORS
Johannes Jacobus Asseres Ploos van Amstel, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application October 20, 1954, Serial No. 463,583
Claims priority, application Netherlands October 23, 1953
4 Claims. (Cl. 317—234)



1. A semi-conductor device comprising a pair of cooling plates having parallel, spaced portions, a semi-conductive body containing at least two portions of opposite conductivity type material and secured directly to and between said parallel portions of said cooling plates with one conductivity type portion secured to one of said plates and with the other conductivity type portion secured to the other of said plates and with the opposite-conductivity-type portions extending substantially parallel to the parallel spaced portions of the cooling plates, and insulating supporting means secured and bonded directly to and between said parallel portions of said cooling plates and rigidly interconnecting the latter together.

2,899,611
CAPACITOR
Harry L. Bradley, River Hills, and Robert S. Hower, Whitefish Bay, Wis., assignors to Allen-Bradley Company, Milwaukee, Wis., a corporation of Wisconsin
Application September 12, 1955, Serial No. 533,753
7 Claims. (Cl. 317—242)

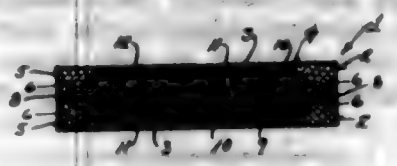
1. In an insulated capacitor the combination comprising a capacitor unit consisting of a dielectric body and electrode plates on opposite sides thereof, and lead wires connected to said plates and extending outwardly of said capacitor unit, a ceramic jacket surrounding the unit and a portion of each of said lead wires, which

and a moving armature operatively connected to the secondary indicator, the secondary indicator being responsive to said last named moving armature, the armature of

output armature current is substantially proportional to the input field current, a series connection between

jacket is comprised of a pair of like inwardly facing dished cups to form a cavity to receive the unit, and bedding material comprised substantially of epoxy resin in adherent contact with the unit and with said lead wire portions and with the ceramic jacket filling the space therebetween.

3. A capacitor comprising a disc of dielectric material

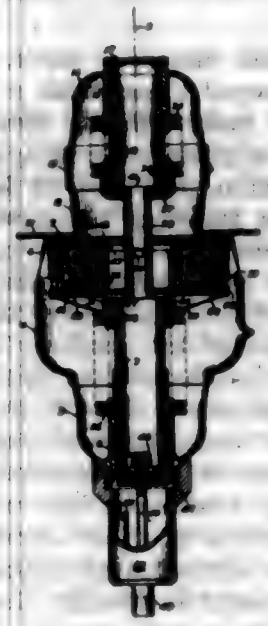


having a metal coating on each side thereof, enclosed between two mating shallow cups of ceramic material, a lead wire connected to each said metal coating and emerging in a slot at the juncture of edge surfaces of said cups, with a hardened resinous material comprised substantially of epoxy resin in such voids as may occur between said disc and cups.

2,899,612
VACUUM VARIABLE FEED-THROUGH CAPACITOR

Jo Emmett Jennings, San Jose, Calif., assignor to Jennings Radio Manufacturing Corporation, San Jose, Calif., a corporation of California

Application February 2, 1956, Serial No. 562,976
8 Claims. (Cl. 317—245)



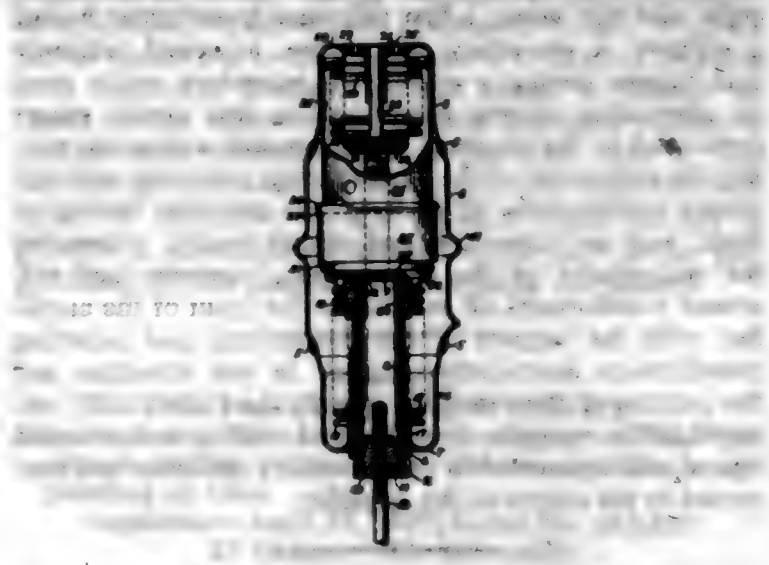
1. A vacuum variable feed-through capacitor comprising a vacuumized envelope having conductive ends constituting terminal electrodes and a conductive intermediate portion insulated from said terminal electrodes, an expansible conductive structure including a metallic bellows within the envelope integrally connecting the terminal electrodes, an assembly of fixed condenser plates mounted in the envelope on said intermediate portion thereof, an assembly of mobile condenser plates interleaved with the fixed plates and mounted on the expansible structure, and means external to the envelope for moving the expansible structure.

2,899,613
BALANCED VACUUM VARIABLE CAPACITOR

Jo Emmett Jennings, San Jose, Calif., assignor to Jennings Radio Manufacturing Corporation, San Jose, Calif., a corporation of California

Application February 19, 1957, Serial No. 641,200
6 Claims. (Cl. 317—245)

1. In a balanced vacuum variable capacitor, a generally cylindrical dielectric shell, an apertured conductive end cap hermetically joined to each end of the shell, a generally cylindrical bellows having an open end integrally united to each end cap around the aperture therein and having a closed end extending into the envelope, a dielectric link mechanically connecting the closed ends



of the bellows, fixed condenser plates within the envelope and mounted on an end cap adjacent one of the bellows, mobile condenser plates within the envelope and interleaved with the fixed plates and mounted on the other bellows, and an actuating stem within one of the bellows and fixed to the closed end thereof to control the interleaving of the condenser plates.

2,899,614
STABILIZED ORGANO-SILOXANE COMPOUNDS AS DIELECTRIC MATERIAL IN CAPACITORS

Joseph Edward Pedley, Troy, N.Y., assignor to General Electric Company, a corporation of New York

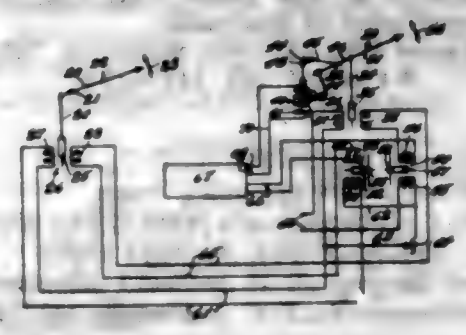
Application March 12, 1957, Serial No. 645,491
4 Claims. (Cl. 317—259)

1. An electrical device comprising, in combination, electrical conducting means, and dielectric material in contact with said conducting means, said dielectric material consisting essentially of a liquid organo-siloxane compound containing a minor proportion of quinoline yellow, the amount of quinoline yellow present being sufficient to stabilize the dielectric material against deterioration under electrical stress and elevated temperature conditions.

2,899,615
LINEAR MOVEMENT REMOTE CONTROL SERVOSYSTEM

James W. Williams III, Lansdale, Pa., assignor to Yarnall-Waring Company, Philadelphia, Pa., a corporation of Pennsylvania

Application May 7, 1958, Serial No. 733,534
23 Claims. (Cl. 318—22)

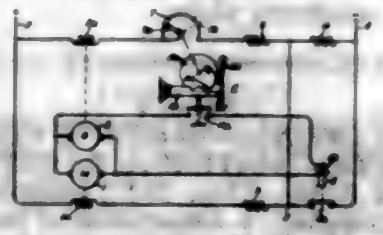


3. In a remote indicating system, a primary indicator, a transmitting transformer having a primary, a secondary, and a moving armature operatively connected and responsive to the primary indicator, a secondary indicator, a receiving transformer having a primary, a secondary

to said structure and extending between said legs and on unit and a portion of each of said lead wires, which

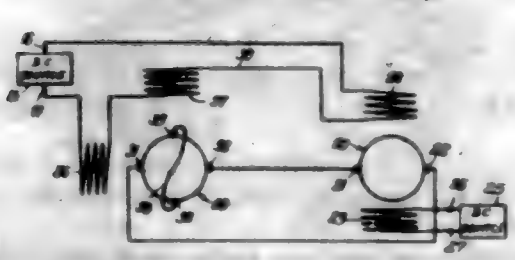
and a moving armature operatively connected to the secondary indicator, the secondary indicator being responsive to said last named moving armature, the armature of the transmitting transformer moving into its coils as the armature of the receiving transformer moves out of its coils, and vice versa, a first reference transformer having a primary, a secondary and a core, a second reference transformer having a primary, a secondary and a core, an alternating current power source, first circuit means connected to the alternate current power source connecting the primaries of the transmitting, receiving and reference transformers all in series, an amplifier having an input and an output, second circuit means connecting the secondaries of the transmitting, receiving and reference transformers all in series to the input of the amplifier, with the outputs of the transmitting and receiving transformers electrically oriented in one direction and the outputs of the reference transformers electrically oriented in the opposite direction, and electric motor means operatively connected to the secondary indicator and connected to the output of the amplifier.

2,899,616
ADJUSTABLE VOLTAGE CONTROL SYSTEM
Earl H. Sills, Roanoke, Va., assignor to General Electric Company, a corporation of New York
Application April 28, 1958, Serial No. 731,203
9 Claims. (Cl. 318—149)



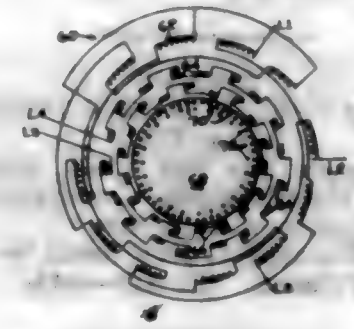
8. A control system comprising a pair of excitation supply conductors, an adjustable voltage generator having a field winding, a motor supplied from said generator and having a field winding, a common terminal, a common connection from said common terminal to one of said supply conductors, electrical connections from said field windings to the other of said supply conductors and to said common terminal, a rheostat in said generator field connections, a resistor, and means for inserting said resistor in said common connection comprising an interlock actuated in response to adjustment of said rheostat to a predetremined low resistance value and a switching device jointly responsive to said interlock and to a predetermined value of voltage of said generator.

2,899,617
METADYNE DRIVE ARRANGEMENT
Horace M. Norman and Hans R. A. Hansen, Milwaukee, Wis., assignors to The Louis Allis Co., Milwaukee, Wis., a corporation of Wisconsin
Application June 16, 1958, Serial No. 742,438
9 Claims. (Cl. 318—154)



1. A drive system including a D.C. drive motor provided with an armature and a main field winding and an auxiliary field winding, a generator provided with an armature and a control field winding for which the output armature current is substantially proportional to the input field current, a series connection between the armatures of said generator and of said motor whereby the current through the motor armature is proportional to the current in the control field winding of said generator, a current source, and a connection from said current source for applying the output current thereof through said generator field winding and said auxiliary field winding, whereby the current through the auxiliary field winding of said motor is substantially proportional to the current through the armature of said motor.

2,899,618
INDUCTION MOTOR AND CONTROL
Samuel Noodleman, Dayton, Ohio, assignor, by mesne assignments, to Standard Dayton Corporation, Dayton, Ohio, a corporation of Ohio
Application March 25, 1955, Serial No. 496,861
13 Claims. (Cl. 318—211)



1. In an induction motor, a stator, a rotor, a main stator winding arranged to establish a given number of poles, an auxiliary stator winding arranged to establish a different number of poles for braking operation, a short circuited stator winding displaced 90 degrees electrically with respect to the auxiliary stator winding, the short circuited stator winding being non-inductively wound with respect to the main stator winding, means for separate energization of the main stator winding, means for separate energization of the auxiliary stator winding, a first group of rotor conductor bars within the rotor and spaced from the periphery thereof, the number of the first group of rotor conductor bars being approximately equal to the number of poles established by the auxiliary stator winding, a second group of rotor conductor bars, the second group of rotor conductor bars being disposed in annular arrangement adjacent the periphery of the rotor and greater in number than the first group of rotor conductor bars, both groups of rotor conductor bars thus carrying rotor current during running operation of the motor and the second group of rotor conductor bars carrying most of the rotor current during braking operation.

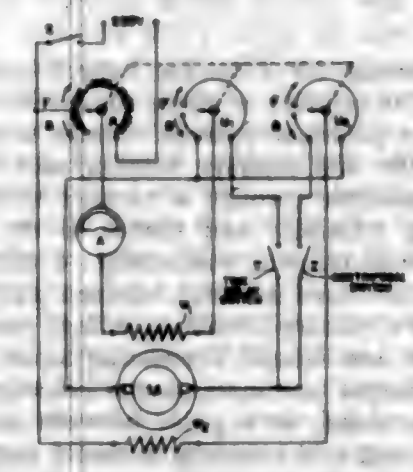
2,899,619
HOOK-UP FOR ALTERNATING CURRENT COMMUTATOR MOTOR-OPERATED LABORATORY CENTRIFUGES
Erwin Wiedemann, Riehen, near Basel, Switzerland, assignor, by mesne assignments, to Saul & Co., Newark, N.J., as nominee of Fidelity Union Trust Company, executive trustee under Sandoz trust
Application September 6, 1955, Serial No. 532,407
Claims priority, application Switzerland September 6, 1954
3 Claims. (Cl. 318—269)

1. A circuit for running and braking an alternating current commutator motor comprising a transformer having a secondary winding with a fixed takeoff at a predetermined number of turns from one end of the secondary winding and a continuously movable takeoff movable over the whole of the secondary winding, an alternating current commutator motor having stator and armature

controlling the electrical circuit of said timer device, biasing means normally urging said first switch to an open

2,899,624
RATE FINDER FOR BATTERY CHARGER

windings, said movable takeoff being connected to one of said stator windings, said one of said stator windings being connected to the other windings, one of the remaining windings being a winding in which the current flow is to be reversed to brake the motor, a first and a second changeover switch each having a rotatable member and two curved contacts the ends of which are spaced from each other, said rotatable members being mechanically connected to said movable takeoff for movement therewith with the position of the rotatable members at the space between said contacts corresponding to the positioning of the movable takeoff at the fixed takeoff on said transformer, one contact on the first changeover switch being connected to one side of the winding in which current flow is to be reversed, the other contact on said first changeover switch being connected to the other side of the



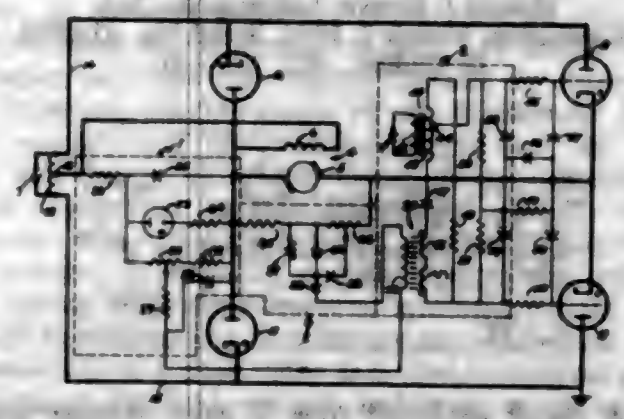
winding in which the current flow is to be reversed, and the rotatable contact on the first changeover switch being connected to at least one of the other windings of the motor, a time delay switch in the connection between said one contact on the first changeover switch and the winding in which the current flow is to be reversed, one contact on the second changeover switch being connected to the other contact on the first changeover switch, the other contact on the second changeover switch being connected to the winding in which the current flow is to be reversed, a centrifugal switch actuated by the rotor of said motor in the connection between the other contact of the second changeover switch and the winding in which the current flow is to be reversed, and the rotatable contact on said second changeover switch being connected to the fixed takeoff on said transformer.

2,899,620

ELECTRIC MOTOR CONTROLLERS

Ernest G. Anger, Wauwatosa, and Robert C. Montross, Thiensville, Wis., assignors to Square D Company, Detroit, Mich., a corporation of Michigan

Application September 4, 1956, Serial No. 607,337
10 Claims. (Cl. 318—331)



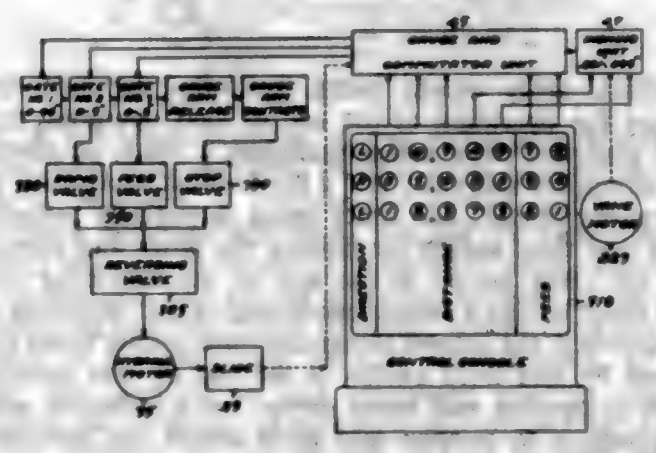
1. In electric motor controllers supplying the motor armature from a rectified alternating current source, feedback circuit means connected to said armature including a unidirectional conducting device having one side connected to said armature for producing a feedback voltage proportional to the voltage supplied to said armature, compensating circuit means connected to said feedback circuit means and to said armature at a different potential level than said feedback circuit means to couple the ripple voltage superimposed on said armature voltage at said different potential level to the other side of said unidirectional conducting device whereby said feedback circuit is responsive to said coupled ripple voltage to produce a unidirectional voltage across said device proportional to said coupled ripple voltage component.

2,899,621

DIGITAL POSITIONING DEVICE

Edward Bauer, Worcester, Mass., assignor to The Cincinnati Milling Machine Co., Cincinnati, Ohio, a corporation of Ohio

Application April 29, 1957, Serial No. 655,837
27 Claims. (Cl. 318—467)



20. A device for accurately positioning a machine tool slide in accordance with a dimension expressed as a multi-digit number comprising means for moving said slide on the machine tool, a gauging unit for accurately measuring movement of said slide through a predetermined distance, said distance being equal to that represented by the units digit of an intermediate order of the number, a gauging element contained in said unit having equally spaced gauging surfaces formed thereon, a reversible drive between said slide and said element for moving said element through a distance equal to the spacing between said gauging surfaces whenever said slide moves through said predetermined distance, an inching unit for moving said gauging unit relative to said machine tool through a distance equal to that signified by the digits of said number in all orders below said intermediate order to thereby subtract the distance from the setting of said gauging element, and means for stopping said moving means and said slide when said gauging element has been moved through a distance equal to that produced by the inching unit plus that signified by the digits in the intermediate order and all higher orders of the number.

2,899,622

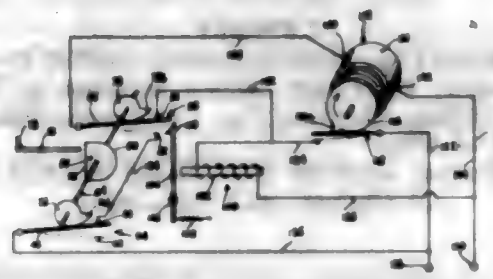
COIN-ACTUATED SWITCH CONTROL MEANS FOR ELECTRICAL APPLIANCES

Harry Greenwald, Flushing, N.Y., assignor to H. Greenwald Co., Inc., Brooklyn, N.Y., a corporation of New York

Application January 24, 1958, Serial No. 710,965
11 Claims. (Cl. 318—470)

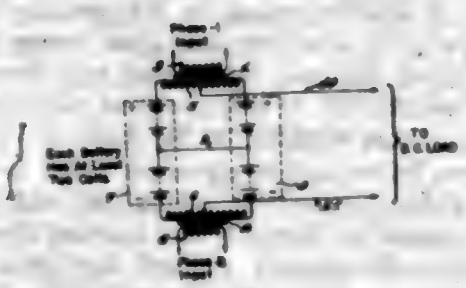
11. A control device for a coin-actuated electrical appliance including a timer device for operating said appliance through an operating cycle and having an electrical energizing circuit, said control device comprising a coin-releasable actuating member, a first and second switch

controlling the electrical circuit of said timer device, biasing means normally urging said first switch to an open position and said second switch to a closed position, means operatively connecting said actuating member with said switches for closing said first switch and opening said second switch when said actuating member is moved to an actuating position, whereby the timer circuit is interrupted by said second switch, latch means for physically holding said first switch in closed position when said actuating member is withdrawn from its actuating position, whereby said second switch is closed by said biasing means and said timer circuit is completed and electrical relay means for releasing the latch means and opening said first switch, said



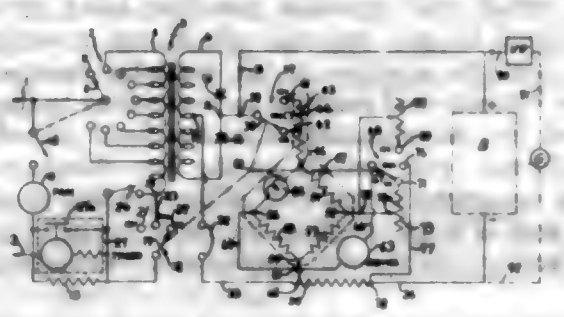
electrical relay means being controlled by said timer device for operation at the end of said operating cycle, said electrical relay means including a relay, an energizing circuit for said relay and a third switch controlling said energizing circuit, said timer being operatively associated with said third switch for closing the latter and completing the relay circuit at the end of the operating cycle, said timer having a second energizing circuit including said third switch, the second energizing timer circuit being completed by said third switch at the end of said operating cycle to operate said timer device for a sufficient period to permit it to re-open said third switch and de-activate said second energizing timer circuit.

2,899,623
BATTERY HEAT MAINTAINER
Lewis A. Medlar, Oreland, Pa., assignor to Fox Products Company, Philadelphia, Pa., a corporation of Pennsylvania
Application June 29, 1956, Serial No. 594,988
6 Claims. (Cl. 320—2)



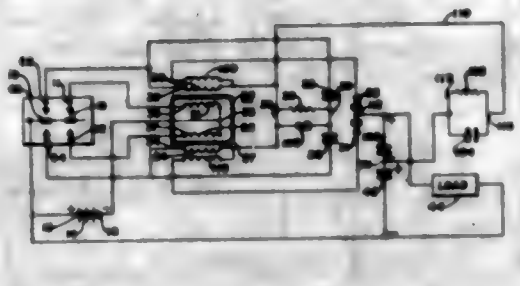
1. In an apparatus of the type described, at least a pair of batteries, an A.-C. source comprising transformer means for supplying voltages of at least two phases and including at least two secondary coils, one of said secondary coils being connected between the outside negative terminals of said batteries and the other of said secondary coils being connected between the outside positive terminals of said batteries, a D.-C. load circuit having its first lead connected to the midpoint of said one coil and its second lead connected to the mid-point of said other coil, and means connecting said batteries together at substantially equal potential points between their outside terminals, said batteries each having a number of cells at least as great as the number of phases of voltage supplied by said secondary coils.

2,899,624
RATE FINDER FOR BATTERY CHARGER
William L. Marriott, Kalamazoo, Mich., assignor to Allen Electric and Equipment Company, Kalamazoo, Mich., a corporation of Michigan
Application February 25, 1957, Serial No. 641,885
5 Claims. (Cl. 320—48)



1. In a charger for a storage battery having a transformer with its primary winding connectible to a source of alternating potential through voltage selecting means associated with said primary winding and its secondary winding connectible through a rectifier to first and second charging terminals and thence to the battery terminals, the improvement comprising: a shunt resistance of low value arranged in series between the first charging terminal and a battery terminal; voltage sensitive means having a first and second connecting terminals and first and second output terminals, means connecting said first connecting terminal to a point between said shunt resistance and said first charging terminal and means connecting said second connecting terminal to said second charging terminal; said voltage sensitive means creating a voltage between said output terminals in response to, and of magnitude in proportion to, the voltage applied between said connecting terminals; a meter responsive to the flow of current therethrough and means connecting said meter to said output terminals and a meter switch for disconnecting one side of said meter from one of said last named output terminals and connecting it to the side of said shunt resistance remote from said secondary winding; a first switch between said voltage sensitive means and the second of said charging terminals, means connecting said meter switch for movement simultaneously with said first switch; and a second switch simultaneously movable with said first switch and located in series with the primary winding of said transformer, said switches being connected together so that when the second switch is open the first switch is closed and the meter switch connects the meter to the voltage sensitive means, and vice versa, and a further switch connected around said second switch and operable independently thereof.

2,899,625
CONVERTER SYSTEM HAVING LOAD ENERGY ABSORPTION MEANS
Harold J. Brown, Indianapolis, Ind.
Application March 9, 1954, Serial No. 414,970
12 Claims. (Cl. 321—2)



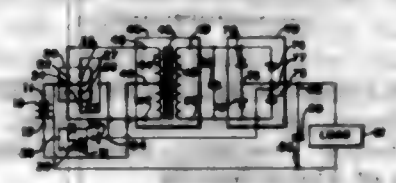
9. A circuit energized from a direct current source and having interrupter means including a vibrating contact and load contacts, said circuit comprising a trans-

networks and the second line winding on two of the converter transformers, means for preventing the voltage

2,899,630
REGULATING SYSTEM FOR DYNAMOELECTRIC

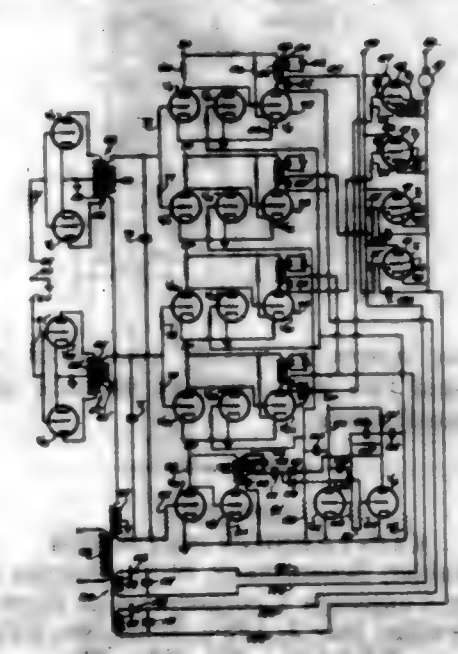
former energized from said direct current source and said interrupter means, said transformer having primary winding means including first and second primary windings and having secondary winding means including first and second secondary windings for supplying current to a load, said first and second primary windings being loosely coupled and said first primary winding and said first secondary winding, as a pair, being closely coupled, and said second primary winding and said second secondary winding, as another pair, being closely coupled, and buffer capacitor means connected in shunt relation with winding means on said transformer, said winding means having an intermediate terminal, said buffer capacitor means comprising two portions connected in series and having an intermediate capacitor terminal, combination means of resistor means and a diode connected in parallel, said combination means being connected between said terminals and transferring energy from said buffer capacitor means to said winding means having said intermediate terminal and opposing the transfer of energy from the direct current source to said buffer capacitor means, a load current diverting circuit to divert energy from the load contacts and comprising two diodes, each having first and second terminals, said second terminals being connected together and defining a common point therebetween, first circuit means for connecting the first terminals of the diodes, respectively, to the first and second secondary winding of the transformer to impress a voltage on the diodes, energy absorption means having low impedance, said energy absorption means comprising first and second connection means and capacitive element means and resistance means connected in parallel with each other and across said first and second connection means, first circuit means for connecting the first connection means of the energy absorption means to said vibrating contact, and second circuit means for connecting the second connection means of the energy absorption means to the common of the said diodes.

2,899,626
CONVERTER SYSTEM HAVING SEPARATION OF FUNCTION
Harold J. Brown, Indianapolis, Ind.
Application December 8, 1955, Serial No. 551,878
5 Claims. (Cl. 321—2)



2. In a vibrator system for energizing a load from a direct current source, said system having a vibrator with excitation and load interruption contacts, said excitation and load interrrupting contacts both being open in an intermediate position of said vibrator, a transformer having primary and secondary winding means, excitation circuit means including said excitation interruption contacts for connecting the primary winding means of the transformer in circuit relation with said direct current source, rectifier means, load circuit means including said load interruption contacts for connecting the secondary winding means of said transformer in circuit relation with said rectifier means and said load, and load energy absorption circuit means connected in shunt relation to the load interruption contacts of the vibrator, said excitation contacts opening subsequent to the opening of the load contacts and closing prior to the closing of the load contacts, said load current being cut off to substantially zero current and the voltage being substantially at a peak value at a time subsequent to the opening of the load contacts and prior to the opening of the excitation contacts.

2,899,627
RECTIFYING APPARATUS AND METHOD
Walter A. Steinberg, Brooklyn, N.Y., assignor to Reeves Instrument Corporation, New York, N.Y., a corporation of New York
Application December 11, 1953, Serial No. 397,697
12 Claims. (Cl. 321—27)

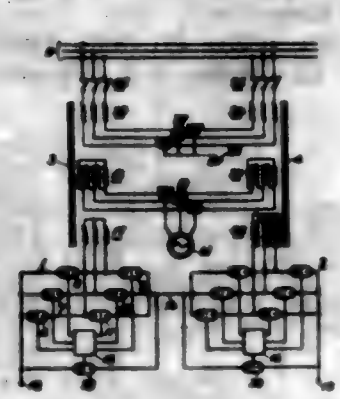


9. A full-wave rectifying system comprising in combination, four grid-controlled rectifier tubes conducting current in sequence, a transformer having primary and secondary windings and being adapted for receiving an applied alternating voltage to be rectified, means coupling the anodes of a first pair of said rectifier tubes to one end terminal of said secondary winding, means coupling the anodes of the other pair of said rectifier tubes to the other end terminal of said secondary winding, means coupling the cathodes of said first pair of rectifier tubes to the cathodes of said second pair of rectifier tubes, pulse generator means coupled respectively to the control grids of said four rectifier tubes, gate generator means coupled to each of said pulse generator means and responsive to the applied alternating voltage for sequentially actuating said pulse generator means, and phase-shifting means coupled to each of said pulse generator means and responsive to the applied alternating voltage for controlling the phase of the pulses produced by said pulse generator means with respect to the applied alternating voltage, each of said rectifier tubes being actuated by its corresponding pulse generator means in sequence once every two cycles of the applied alternating voltage, said full-wave rectifying system producing a direct output voltage between said interconnected cathodes and a tap on said secondary winding.

2,899,628
MEANS FOR OPERATING SEVERAL CO-OPERATING CONSTITUENT STATIC CURRENT CONVERTERS
Erich Uhlmann, Ludvika, Sweden, assignor to Allmanna Svenska Elektriska Aktiebolaget, Vasteras, Sweden, a corporation of Sweden
Application January 30, 1958, Serial No. 712,241
Claims priority, application Sweden February 1, 1957
8 Claims. (Cl. 321—27)

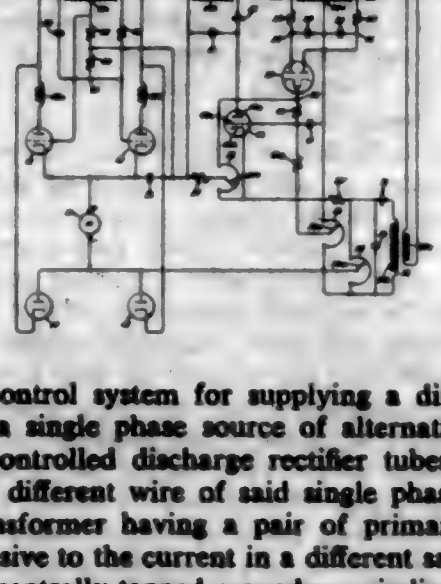
1. In a direct current transmission system, a converter station comprising at least two constituent static converters, a converter transformer for each converter, two separate alternating current networks, at least two windings (line windings) on each converter transformer, one of said alternating current networks being connected to one of said line windings of all converter transformers, a compensating reactor, said compensating reactor being connected between the second of said alternating current

networks and the second line winding on two of the converter transformers, means for preventing the voltage across said compensating reactor being short-circuited



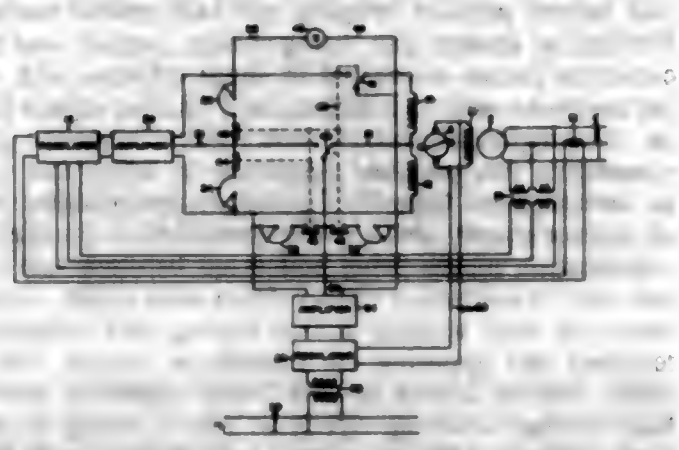
via the series connected leakage reactances existing between the said two line windings on each of said two converter transformers.

2,899,629
CONVERSION NETWORK
Ernest F. Kubler, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Application July 2, 1954, Serial No. 441,940
5 Claims. (Cl. 321—39)



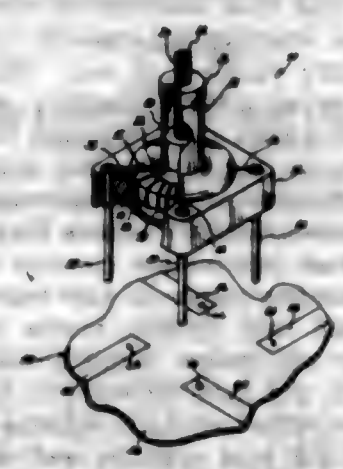
4. In a control system for supplying a direct current load from a single phase source of alternating current, a pair of controlled discharge rectifier tubes each connected in a different wire of said single phase source, a current transformer having a pair of primary windings each responsive to the current in a different said tube and a common centrally tapped secondary winding having an alternating voltage induced therein by the currents conducted in said primary windings, a pair of energy storing circuits each connected across a different portion of said secondary winding, rectifying means coupled to said circuits, means for producing a partially filtered unidirectional signal voltage in response to the current conducted by said rectifying means, a source of adjustable unidirectional reference voltage, means connecting said signal voltage producing means and said reference voltage source in series circuit, a voltage dividing network supplied from said signal and reference voltages for deriving between the voltage dividing network and said connecting means a unidirectional control voltage determined by the difference between said signal and reference voltages, a filtering capacitor connected in parallel with said control voltage to render said control voltage substantially ripple-free, means utilizing said control voltage to produce a voltage output whenever said control voltage exceeds a predetermined value, and means supplying said voltage output to said tubes in a manner to control the period of discharge in each said tube thereby to limit the maximum current conducted by said tubes to a safe value.

2,899,630
REGULATING SYSTEM FOR DYNAMOELECTRIC MACHINES
Murray Rosenblatt and Alan S. Rubenstein, Waynesboro, Va., assignors to General Electric Company, a corporation of New York
Application December 12, 1957, Serial No. 702,220
6 Claims. (Cl. 322—25)



6. In combination, a dynamoelectric machine having a direct current winding, a source of direct current for exciting said winding, control fields for said source, a first regulator having an input circuit and an output circuit, means for supplying a voltage proportional to the terminal voltage of said generator to said input circuit, a second regulator having an input circuit and an output circuit, means for supplying a voltage proportional to the voltage of said source to said second regulator input circuit, means selectively connectable across the output of said first regulator for approximating said direct current winding, means selectively connectable across the output of said second regulator for approximating said direct current winding, means for measuring the effect of one of said regulators on said source and the effect of the other regulator on one of said approximating means and switch means for connecting one of said output circuits to said control fields and disconnecting the other from said control fields when the effects of said regulators on said source and said approximating means are equal.

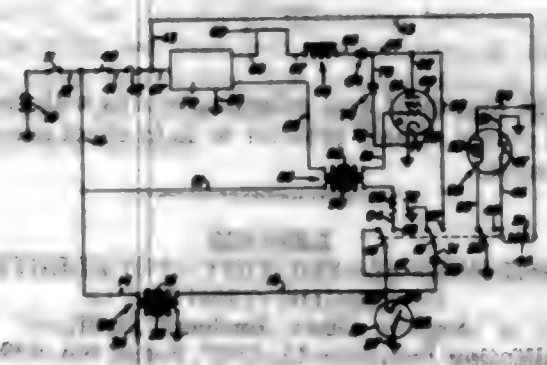
2,899,631
TRANSFORMER STRUCTURES
Norton Cushman, Williamstown, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Application July 11, 1955, Serial No. 521,123
1 Claim. (Cl. 323—44)



The combination of a plug-in type transformer and a printed circuit board; said transformer comprising a pair of substantially identical transformer windings, a base having four radially symmetrically disposed terminal pins, the ends of said windings being separately connected between

diametrically opposed pairs of said terminal pins; said printed circuit board comprising four radially symetrically disposed pin receiving openings, a pair of circuits having ends separately connected to diametrically opposed pairs of said openings; said pins of said transformer and said openings of said board so constructed and arranged that said transformer will be properly oriented in said board regardless of how said pins are inserted in said openings.

2,899,632
ELECTRONIC IGNITION SYSTEM
Harry W. Lawson, Jr., Avon, N.Y.
Application February 20, 1956, Serial No. 566,678
7 Claims. (Cl. 323—58)



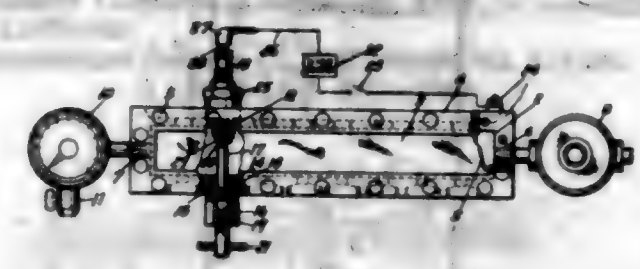
1. An ignition system for an internal combustion engine, comprising a source of electrical energy, a transformer, a capacitor, an electronic valve controlling opening and closing of a series circuit in one direction between said capacitor, said transformer, and said source of electrical energy, a resonant charging inductor, a rectifier disposed between said inductor and said capacitor, means for normally connecting said source of electrical energy, said inductor and said rectifier in series circuit to said capacitor to charge said capacitor, means separate from said source of electrical energy for charging said inductor when said electronic valve is conductive, an interrupter operable by said engine for rendering said electronic valve alternately conductive and non-conductive, and means for forming a series circuit in the opposite direction between said capacitor and said transformer when said electronic valve is non-conductive.

2,899,633
WELL LOGGING DEVICE
Orville R. Smith and Carl E. Reeby, Houston, Tex., assignors, by mesne assignments, to Welex, Inc., a corporation of Delaware
Application April 5, 1956, Serial No. 576,397
6 Claims. (Cl. 324—10)

1. In an electrical logging device for measuring electrical characteristics of a local section of a well bore wall, the combination of a conductor cable, a housing connected to said cable, said housing containing means to transmit measurements taken to the surface of the earth, a body attached to said housing, at least one measuring electrode mounted in an electrode pad being supported contiguous to a well bore wall from said body by a support means, said support means comprizing, an upper arm pivotally connected to said body and pivotally connected to a first end of said electrode pad, a first moment inducing means between said body and said upper arm to cause angular extension of said upper arm from said body, a lower arm pivotally connected to a second and opposite end of said electrode pad and pivotally connected to a crosshead means, said crosshead means being connected to said body whereby only longitudinal movement is permitted between said crosshead means and said body, and a

second moment inducing means between said crosshead means and said lower arm to cause angular extension of said arm from said crosshead.

2,899,634
SPARK PLUG TESTING AND SETTING APPARATUS
Gordon S. Carbonneau, Grand Rapids, Mich.
Application September 17, 1956, Serial No. 610,065
10 Claims. (Cl. 324—15)

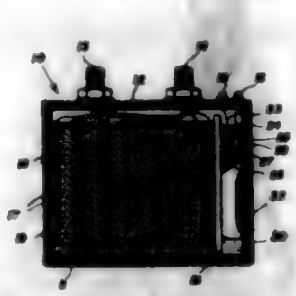


5. Spark plug testing and setting apparatus comprising means forming a cavity, a transparent pressure resistant plate secured over said cavity and sealed around the edges thereof, a source of gaseous pressure connected to said cavity, a plurality of threaded holes formed through a wall of said cavity and adapted to receive a plurality of spark plugs, other holes formed through a wall of said cavity and opposed to said first holes, a plurality of gap adjusting rods extending slidably through said other holes in opposed relation to the bottom points of spark plugs in said first holes, means sealing said cavity wall around said rods, means for axially adjusting said rods into gap closing engagement with said points, and a source of high voltage connected on one side to the shells of said plugs and adapted to be connected on the other side to the insulated center terminals of the plugs in said cavity.

2,899,635
ELECTRIC BATTERY WITH CHARGE TESTING MEANS
Michel N. Yardney, New York, N.Y., assignor to Yardney International Corp., New York, N.Y., a corporation of New York
Application December 28, 1954, Serial No. 476,367
14 Claims. (Cl. 324—29.5)

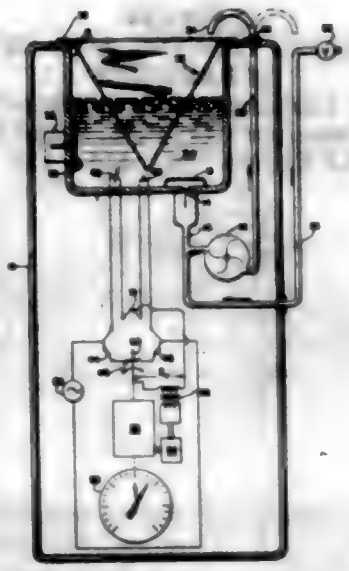
10. In combination, an electric battery comprising a casing, a set of alternately positive and negative electrodes in said casing, an alkaline electrolyte in said casing, separator means in said casing swellable in said electrolyte,

and means including said separator means and said casing maintaining said electrodes under pressure; an electrical pressure gauge inserted in said casing alongside said elec-



trodes in pressure-transmitting contact therewith, said gauge having an output circuit outside said casing; and pressure-indicating means connected in said output circuit and controlled by said gauge.

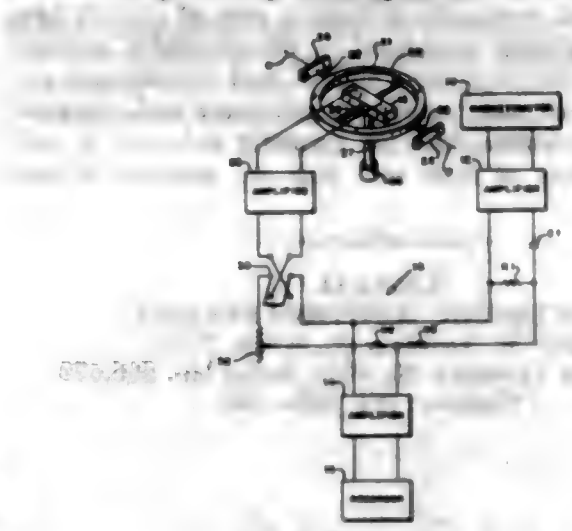
2,899,636
BLOOD LOSS DETERMINING DEVICE
Jeanette L. Rubricius, Jamaica, N.Y.
Application August 6, 1957, Serial No. 676,559
5 Claims. (Cl. 324—30)



1. An apparatus for determining blood loss comprising in combination, a container, a fluid contained within said container, a fluid impervious basket disposed within said container, agitator means disposed within said container for extracting blood from blood soaked materials disposed within said fluid, suction means for providing communication between said container and an operating site, a null-balancing conductivity bridge circuit, and electrodes disposed within said container and forming at least one arm of said bridge circuit for detecting changes in conductivity of said fluid.

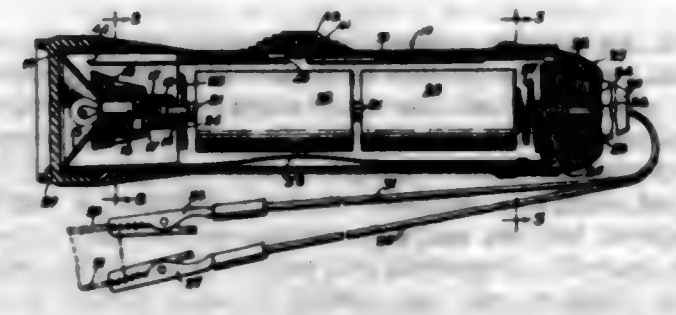
2,899,637
APPARATUS FOR CANCELLING TURN AND YAW NOISE IN A MAGNETOMETER
James H. Stein, Southampton, Pa.
Application December 16, 1955, Serial No. 553,672
7 Claims. (Cl. 324—43)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A compensator for noise in a field detector moving in a field gradient caused by non-linear motion of said detector comprising means to differentiate with respect to time the output of said detector, adjusting means for continuously producing an output in accordance with the magnitude and sense of the heading of said detector, and means compensating the output of said detector by com-



bining the output of said adjusting means with the differentiated output of said detector so as to effect cancellation of said noise.

2,899,638
COMBINED FLASHLIGHT AND ELECTRIC CIRCUIT TESTER
Axel V. Olsen, Burbank, Calif.
Application February 11, 1957, Serial No. 639,484
1 Claim. (Cl. 324—53)



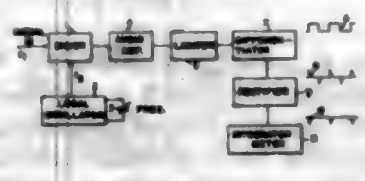
A combined flash light and electric circuit tester comprising, in combination, a non-metallic tubular flash light housing with external threads on the rear end thereof, a metallic female socket with internal threads at the forward end thereof removably assembled upon said external threads of said housing, an electric conductor connected with said female socket and extending inside said housing, a circuit closer movably secured to said housing intermediate its ends, a divider wall formed with the internal walls of said housing and extending transversely therein intermediate the ends thereof, said divider wall provided with a central opening and providing a battery chamber in the rear end of said housing and a lamp chamber in the forward end of said housing, a plurality of dry cell storage batteries supported end to end within said battery chamber, a lamp socket and reflector assembly secured to the forward end of said housing and extending into said lamp chamber, a lamp maintained within said lamp socket, an opening in the rear end of said lamp socket, a contact plunger embodying a cylindrical rear end shank portion and an enlarged cylindrical head portion, said head portion supported within said lamp socket with the shank portion of said contact plunger extending rearwardly through said opening in said lamp socket, a small coil spring assembled between said bulb and said head portion of said plunger, said shank portion of said contact plunger extending through said opening in said divider wall and in electrical contact with the forward end of one of said dry cells, an electrical conductor connected with said circuit closer in sliding contact with said conductor connected with said female socket and movable into contact with said reflector as-

2,899,642
TRANSISTOR TEST SET

to one position for operating said means; and means

sembly, electrical conductor means forming a closed electrical circuit between said reflector assembly and a first contact element in said female socket, a second contact element in said female socket, a large coil spring assembly secured by a bolt to said female socket and said second contact element and contacting the rear end of one of said batteries, the flashlight circuit including the circuit closer, the female socket and conductor extending into said housing, the electrical conductor connected with said circuit closer, the reflector assembly, the lamp bulb, the small coil spring, the contact plunger, the dry cell batteries, and the large coil spring, the bolt and the metallic female socket, the female socket having a pair of openings in the rear end thereof to receive a pair of male members embodied with a testing circuit, said first and second contact elements having prongs attached thereto and extending into said openings, the testing circuit including the first named contact element, the reflector assembly, the conductor extending between said reflector assembly and said first contact element, the lamp base, the small coil spring, the contact plunger, the dry cell batteries, the large coil spring, the bolt and said second contact element.

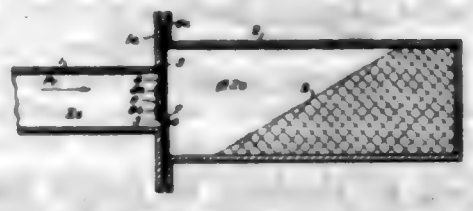
2,899,639
FREQUENCY DETECTION METHOD AND APPARATUS THEREFOR
Neal H. Shepherd, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Application September 24, 1954, Serial No. 458,092
4 Claims. (Cl. 324—79)



3. The method of measuring the peak variation in frequency of a first wave having frequencies extending over a band of frequencies comprising heterodyning said wave with a wave of controllably variable frequency, measuring the average frequency of said heterodyned wave, a slight variation in the frequency of said controllable frequency relative to the peak variation in frequency of said first wave causing a linear change or a nonlinear change in said average frequency depending upon whether said controllable frequency is outside or within the range of said band of frequencies, varying the frequency of said wave of controllably variable frequency until a point corresponding to the intersection of said linear change and said nonlinear change regions in said average frequency is reached, the controllable frequency at said point being equal to the peak frequency of said first wave, and measuring the frequency of said controllably variable frequency at said point, whereby the peak frequency of said first wave is obtained.

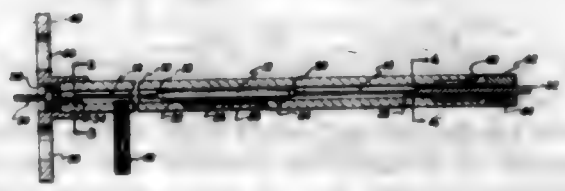
2,899,640
BROADBAND POWER METER
Herbert J. Carlin, East Orange, N.J., assignor to Polytechnic Institute of Brooklyn, Brooklyn, N.Y., a corporation of New York
Application May 6, 1953, Serial No. 353,381
7 Claims. (Cl. 324—95)

1. A power meter for measuring the energy of electromagnetic waves within a certain frequency band comprising, a waveguide including an input section of a size to propagate said band of frequencies, an output section coupled to receive wave energy from said input section and having a substantially larger transverse dimension throughout its length than said input section, thereby providing a discontinuity step at the junction between said sections, a bolometer element mounted in said waveguide substantially in the plane of said step and at the center of said waveguide, means presented exteriorly of said sections for connecting said bolometer element in an indicator circuit, said means comprising a pair of terminal connections extending in opposite directions within said waveguide from said element and parallel with the electric field in said waveguide to absorb a predetermined



and substantial fraction of the energy transmitted through said input section, said bolometer element and connections and said discontinuity presenting substantially a purely conductive admittance to said input section at the mid-band frequency, means short-circuiting the end of said output section to provide a terminated line behind said bolometer of a substantially higher characteristic impedance than that of said input section, and an energy dissipating load embodied in said output section for absorbing the remainder of the energy transmitted through said input section.

2,899,641
GALVANOMETER
Donald N. Montgomery, Glendora, and Jack L. Thom, Arcadia, Calif., assignors to Consolidated Electrodynamics Corporation, Pasadena, Calif., a corporation of California
Application January 17, 1957, Serial No. 634,666
1 Claim. (Cl. 324—154)

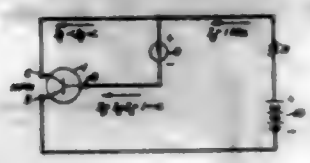


A miniature galvanometer assembly for operating in any relative position comprising a tubular case, a mounting flange member secured at one end of the case for supporting the case and having arcuate slots for permitting angular adjustment of the mounting flange and case, first and second insulator members positioned in the respective ends of the tubular case, the insulator members having openings positioned along the longitudinal axis of the tubular case, a first terminal member extending through the opening in the first insulator member into the interior of the tubular case, a second terminal member extending through the opening in the second insulator member into the interior of the tubular case, means including a set screw for adjustably securing the first terminal in the insulation member, a flat elongated coil of wire, a pair of electrically conductive suspension members respectively linking the ends of the elongated coil and being secured to the terminal members, the first terminal member being positioned and secured by the set screw to hold the coil and suspension members in tension, a mirror mounted on the coil, an oil having a high index of refraction completely filling the case, and an expansion tube connected to and communicating with the interior of the case, whereby all air bubbles can be removed from the case with the tube permitting changes in the oil volume with changes in temperature.

zones and is of conductivity type opposite that of said one end zone and the second portion which is contiguous

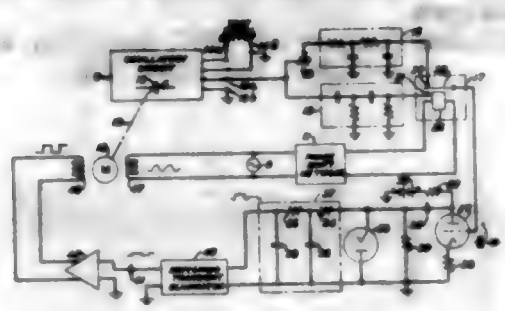
nected directly to said intermediate terminal of said coil, a relatively low resistance output circuit for said oscillator, a relatively high resistance connected directly between

2,899,642
TRANSISTOR TEST SET
Luther W. Hussey, Sparta, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application April 13, 1956, Serial No. 577,978
9 Claims. (Cl. 324—158)



1. Apparatus for measuring the current amplification factor of a transistor comprising means for connecting to the emitter, the base and the collector electrodes of a transistor to be tested, a source of substantially constant direct current, a circuit connecting said source in series with the collector and emitter electrode connecting means whereby a substantially constant current may be caused to flow through the emitter electrode, and a current indicating means connected between the base electrode connecting means and the collector electrode connecting means.

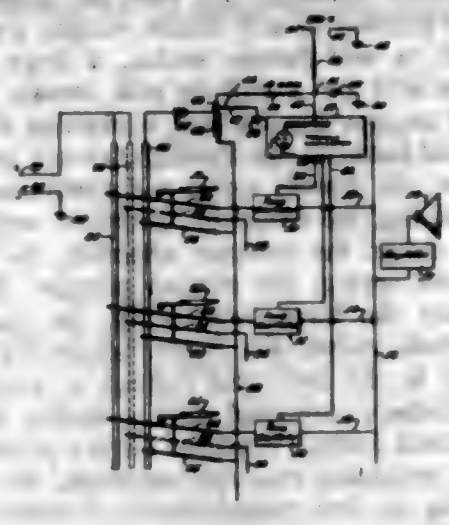
2,899,643
OSCILLATOR AUTOMATIC TUNING CIRCUIT
Thaddeus Slonczewski, Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application August 1, 1957, Serial No. 675,642
10 Claims. (Cl. 331—17)



1. An oscillatory circuit tuning means comprising an oscillatory circuit, and feedback means for controlling the frequency thereof comprising a source of alternating potential, tuning means in said oscillatory circuit for adjusting the frequency thereof, an electric motor mechanically coupled for actuating said tuning means in response to mistuning of said oscillatory circuit, a frequency-sensitive network comprising two transmission paths having equal attenuation at only one frequency and having the inputs thereof connected in multiple to the output of said oscillatory circuit, an envelope detector circuit, electric switching means actuated by said source for alternately connecting the outputs of said two transmission paths to the input of said envelope detector circuit, and means for applying the output of said envelope detector circuit to said motor.

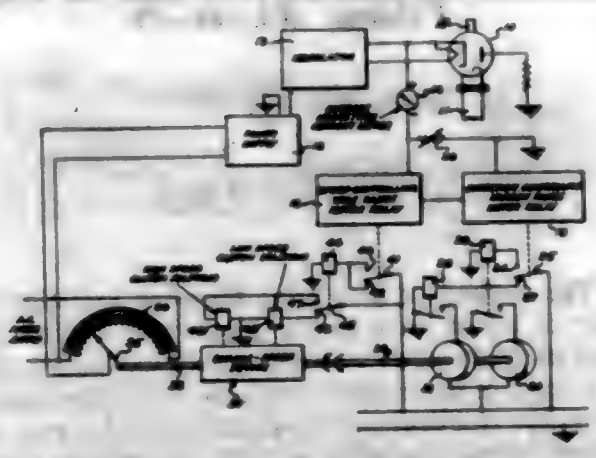
2,899,644
ELECTRONIC TREMOLO DEVICE
Donald J. Leslie, Penndorn, Calif.
Application March 12, 1956, Serial No. 571,827
26 Claims. (Cl. 331—49)

22. In a musical instrument: means for producing a tone corresponding to a musical note; a key movable to one position for operating said means; and means



for producing vibrato in increasing amounts dependent upon the period that the key is in said one position.

2,899,645
CONTROL SYSTEMS
David B. Erwin, La Grange, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York
Application September 8, 1955, Serial No. 533,121
12 Claims. (Cl. 331—86)

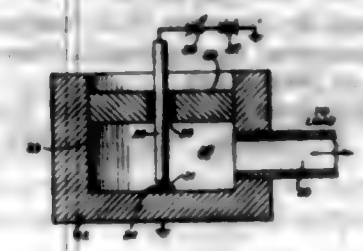


1. A control system, which comprises a device, means for measuring a characteristic of the device having a predetermined desired value, normally unoperated means for adjusting the device to vary the value of the characteristic, means operated by the measuring means for driving the adjusting means at a high rate of speed when the value of the characteristic differs from the desired value by more than a predetermined amount, and means operated by the measuring means for driving the adjusting means at a slow rate of speed when the value of the characteristic differs from the desired value by less than said predetermined amount.

2,899,646
HIGH FREQUENCY NEGATIVE RESISTANCE DEVICE
William T. Read, Jr., Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application May 1, 1957, Serial No. 656,239
5 Claims. (Cl. 331—96)

4. A microwave oscillator comprising a resonant cavity which has a pair of opposite wall portions which are isolated from one another for direct currents, and a semiconductive element positioned between said wall portions, said element comprising a pair of end zones of opposite conductivity type and an intermediate region including a first portion which is contiguous to one of the end

zones and is of conductivity type opposite that of said one end zone and the second portion which is contiguous



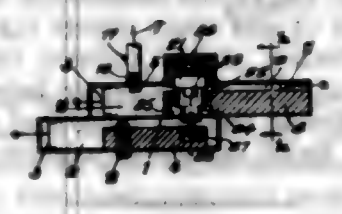
to the other of the end zones and has a specific resistivity higher than said other end zone, and each terminal zone making a low resistance connection to a different one of said wall portions.

2,899,647

FREQUENCY SELECTOR OF MICROWAVES

Erwin Willwacher, Ulm-Soflingen, and Herbert Weber, Ulm (Danube), Germany, assignors to Telefunken Gesellschaft fuer drahtlose Telegraphie G.m.b.H., Hannover, Germany

Application January 16, 1953, Serial No. 331,648
Claims priority, application Germany December 4, 1951
7 Claims. (Cl. 331—97)



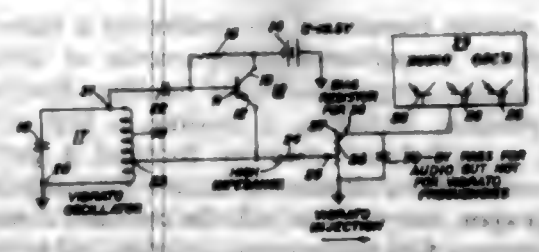
5. In a wave transmission system, in combination, a conductive wave guide, a source of high-frequency oscillations in said guide, capacitive loading means made of conductive material extending from said source through part of said guide, thereby dividing said guide into a loaded portion and an unloaded portion, said oscillations including at least one first component of relatively low frequency below the cutoff frequency of said unloaded portion but above the cutoff frequency of said loaded portion and further including at least one second component above the cutoff frequencies of both of said portions, and output means at said unloaded portion for selectively recovering said second component.

2,899,648

TRANSISTOR OSCILLATOR FOR VIBRATO PURPOSES

Marion E. Gregory, Cincinnati, Ohio, assignor to The Baldwin Piano Company, Cincinnati, Ohio, a corporation of Ohio

Application December 20, 1956, Serial No. 629,609
10 Claims. (Cl. 331—117)



1. An oscillator comprising a semi-conductor amplifier having a base electrode, an emitter electrode and a collector electrode, a tank circuit comprising a condenser and a coil connected in parallel, said coil including two end terminals and an intermediate terminal, one of said end terminals being connected to said base electrode, the other of said end terminals being connected to a point of reference potential, said emitter electrode being connected directly to said intermediate terminal of said coil, a relatively low resistance output circuit for said oscillator, a relatively high resistance connected directly between said emitter electrode and said low resistance output circuit, whereby said output circuit sees said oscillator as a constant current source and means for varying the resistance of said low resistance output circuit.

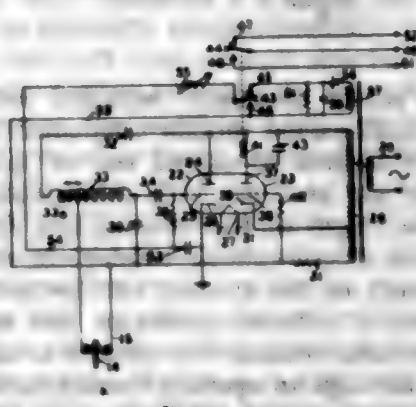
6. A frequency modulation system comprising a relatively high frequency oscillator, the frequency of which is to be modulated, said relatively high frequency oscillator being a transistor oscillator including a base electrode, the potential of said base electrode with respect to a reference potential being a factor in determining the frequency of said oscillator, a fixed relatively low resistance connected between said base electrode and said point of reference potential, a capacitive by-pass circuit for said relatively high frequency connected in shunt to said relatively low resistance, a variable tap on said relatively low resistance, and means for supplying relatively low frequency modulating signal from a constant current source to said variable tap.

2,899,649

CONTROL APPARATUS

David B. Savory, Marblehead, Mass., assignor to General Electric Company, a corporation of New York

Application April 29, 1957, Serial No. 655,595
9 Claims. (Cl. 331—172)



1. Control apparatus including an oscillator, said oscillator having an input circuit and an output circuit, first means in said input circuit for varying the oscillatory condition of said oscillator in response to changes in a condition, second means in said input circuit for varying the oscillatory condition of said oscillator, said second means including a condenser arranged to be selectively charged and discharged, a resistor associated with said condenser to fix the period for completing said charging and discharging cycle, and means in said output circuit for controlling the action of said condenser in response to changes in said oscillatory condition.

2,899,650

MULTIPLEX SIGNALLING SYSTEM

Herbert J. Carlin, Hicksville, N.Y., assignor to Polytechnic Institute of Brooklyn, Brooklyn, N.Y., a corporation of New York

Application June 22, 1955, Serial No. 517,252
7 Claims. (Cl. 333—9)

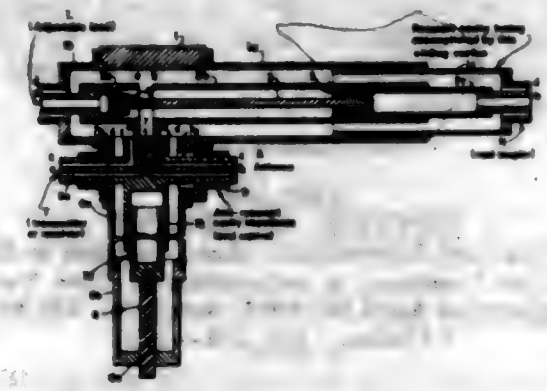
1. A multiplexing signalling system comprising a transmission line, a plurality of parallel-resonant circuits connected in cascade in said transmission line at a plurality of station locations, said circuits being tuned to different frequencies, a signalling device and a balancing impedance connected in series relation in a path shunting each parallel-resonant circuit, and a series-resonant circuit connected across said transmission line at each station and being tuned to the same frequency as the parallel-resonant circuit at the same station, one terminal of each series-resonant circuit being connected to the mid-point of the path shunting the parallel-resonant circuit at the

tone corresponding to a musical note; a key movable

a first portion which is contiguous to one of the end

same station, the parallel resonant circuit at each station location having an impedance which is the inverse of the impedance of the series-resonant circuit at the same station.

4. A multiplexing coupler comprising two sections of coaxial cable arranged in spaced axial alignment and having load terminals and coupler terminals respectively, a first tubular conductor connecting the outer conductors of said aligned cable sections and being of larger diameter than the outer conductors of said cable sections, a second tubular conductor mounted concentrically within said first tubular conductor and being formed of two sections separated by a gap, one section being relatively short and being connected to the inner conductor of one cable section and the other section being relatively long and connected to the inner conductor of the other cable



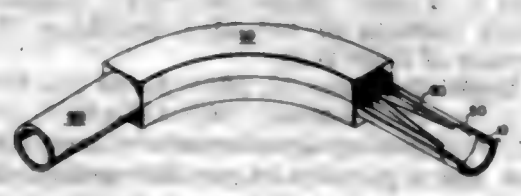
section, a center conductor mounted within said long section of said second tubular conductor and being slidable axially thereof to extend out of said long section across said gap and into said short section, means for varying the length of the coaxial line formed between said first and second tubular conductors, means for varying the length of the coaxial line formed between said long section of tubular conductor and said inner conductor, a tunable coaxial line coupled to said first tubular conductor through an opening formed in the wall thereof adjacent said gap and embodying a parallel-resonant circuit tunable over a band of frequencies, a coaxial line for connection to signalling apparatus and having an inner conductor connected to the end of said short section adjacent said gap, and another coaxial line for connection to a signal channel and having an inner conductor connected to the end of said long section adjacent said gap.

2,899,651

WAVEGUIDE BEND

Daniel A. Lanciani, West Medford, Mass., assignor to Microwave Associates, Inc., Boston, Mass., a corporation of Massachusetts

Application January 3, 1955, Serial No. 479,286
8 Claims. (Cl. 333—21)



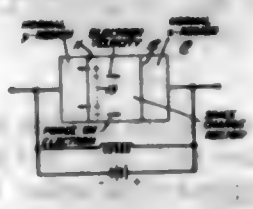
1. Apparatus for changing the direction of the TE_{01} mode in a circular waveguide which comprises a transition structure from circular waveguide to a waveguide having a cruciform cross-section in the shape of two intersecting rectangles of essentially constant width, a bent section of cruciform rectangular waveguide having the said cross-section, and a transition section transforming back from such cruciform to circular cross-section.

2,899,652

HIGH FREQUENCY NEGATIVE RESISTANCE DEVICE

William T. Read, Jr., Summit, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application June 24, 1954, Serial No. 438,917
14 Claims. (Cl. 333—80)



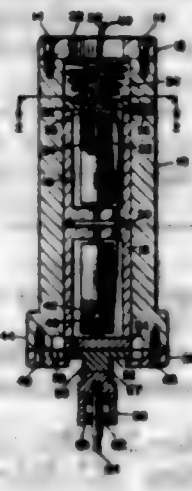
1. A high frequency negative resistance comprising a body of semiconductive material having portions of opposite conductivity type, a conductivity transition layer intermediate said portions, means for applying a reverse bias to said body to produce a space charge region encompassing said transition layer and means for applying an alternating signal to said body, the magnitude of the combined bias and signal in the bias aiding direction being sufficient to produce a maximum field greater than about 100,000 $(E_g/0.7)^{3/2}$ volts per centimeter where E_g is the energy gap of the material at said layer in a localized portion of said space charge region, the transit time of the effective charge carriers from said layer to the edge of said space charge region being so correlated with the signal period that the integrated product of signal voltage and signal current is negative.

2,899,653

TRANSDUCER

Robert W. Capron, Detroit, Mich., assignor to Bendix Aviation Corporation, Detroit, Mich., a corporation of Delaware

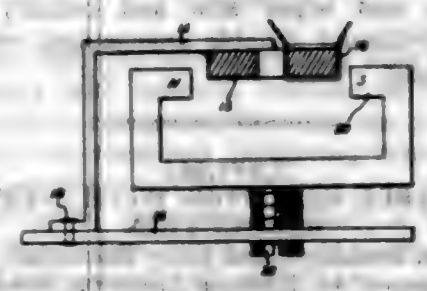
Application July 3, 1956, Serial No. 595,778
3 Claims. (Cl. 336—30)



1. A motion transducer for producing a signal having an amplitude proportional to the amount of deflection of a stylus along a single coordinate in either direction from a null position, including, a housing, a first coil in the housing, a cylindrical member forming a partial flux path for the coil, a circular armature for completing the flux path upon cooperation with the cylindrical member, a spring supported by the housing and attached to the armature for maintaining the armature in contact with the cylindrical member, an annular member secured to the spring and the armature in aligned relationship with the armature, means on the housing to limit the movement of the annular member, a stylus housing mounted on the annular member in detachable relationship to disengage the housing from the member upon a predetermined relative movement between them, and a stylus in the stylus housing for being deflected and for producing a

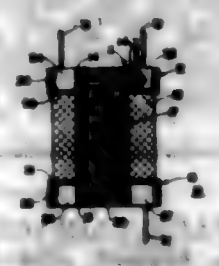
corresponding deflection of the stylus housing, the annular member, and the spring to displace the armature from the cylindrical member a corresponding amount and to produce a proportionate change in the reluctance of the flux path, the stylus housing being disengaged from the annular member upon a stylus deflection sufficient to cause the annular member movement to be limited and to produce the predetermined relative movement between the stylus housing and the annular member.

2,899,654
VARIABLE INDUCTANCE DEVICE
David T. Geiser, North Adams, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Application August 10, 1954, Serial No. 448,833
6 Claims. (Cl. 336—110)



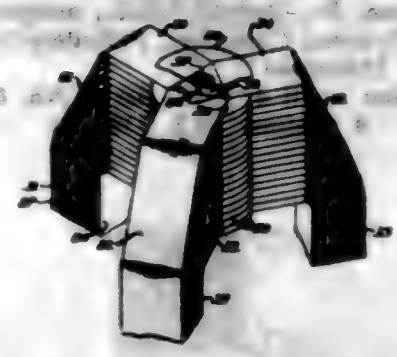
1. A variable inductance system comprising a rotatable permanent magnet, a body of soft ferromagnetic material magnetized by said permanent magnet, self-inductance windings associated with said body, said permanent magnet being rotatable with relation to said body on an axis extending through said body, said axis being perpendicular to the polarization of said magnet poles, and means supporting said permanent magnet in rotatable relationship with respect to said body so as to permit incremental relative movement between said permanent magnet and said body whereby said permanent magnet generates a reversing D.C. bias flux in said body upon incremental rotation with respect to said body and produces adjustable amounts of D.C. bias flux in said body.

2,899,655
COIL BOBBIN AND LAMINATION KEEPER
Donald J. Ferte, Robbinsdale, and John A. Wolfe, Roseville, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application April 26, 1957, Serial No. 655,298
6 Claims. (Cl. 336—198)



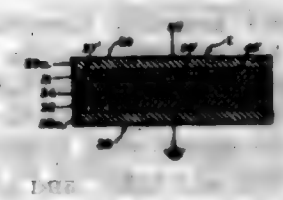
1. In an apparatus of the class described: a plurality of magnetic laminations having legs and yokes; winding and lamination support means including a winding form and two enlarged integral end members having an opening therethrough; said end members being substantially the same width as said lamination yokes and having said opening therein rectangular in shape; the length of said opening in the end members corresponding with the length of said yokes; and electric coil means wound on said winding form of said support means; said yokes and at least one leg of each lamination positioned in said opening wherein said laminations are held in a clamped relationship; said rectangular opening in said end members holding said yoke members; said laminations completing a magnetic circuit linking said electrical coil means.

2,899,656
MAGNETIC CORE
John R. Smith, Peters Township, Washington County, Pa., assignor to Pennsylvania Transformer Company, Canonsburg, Pa., a corporation of Delaware
Application January 11, 1954, Serial No. 403,251
8 Claims. (Cl. 336—211)



4. In combination, in a multiphase transformer core or the like, a plurality of radially nested continuous half turns of bent strip of magnetic material forming a core side having yoke portions at the ends and an intermediate portion which may constitute a winding leg, a plurality of core sides in generally circumferentially spaced radial arrangement, said half turns in each side being geometrically similar and having ends formed by cutting generally abruptly across the width of said half turns, a plurality of such core sides being arranged with the respective ends of said yoke portions of said sides being adjacent, said ends substantially defining a spatial column the axis of which constitutes the axis of said core, said yoke portions in each core side extending generally in the same direction and to about the same distance toward said axis, and a plurality of lap plates of magnetic material extending across the space in said column to form interleaved lap joints with the adjoining ends of corresponding half turns respectively in each core side, said lap plates covering the ends of said half turns.

2,899,657
MULTIPLE PATH COHERER
Edward A. Quade and Frederick B. Weed, San Jose, Calif., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application October 28, 1955, Serial No. 543,375
2 Claims. (Cl. 338—1)



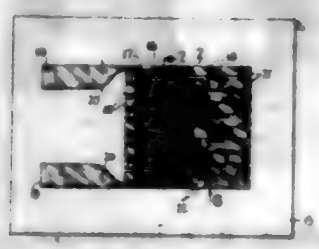
1. A multiple path coherer for use in a circuit having substantially no other resistance therein comprising a pair of electrodes mounted in parallel, spaced apart relation, each electrode comprising an outer plate portion of substantial surface area and of highly conductive material, a facing of resistance material over the inner surface of each outer plate portion, each facing being relatively thin in proportion to its width, and a quantity of metallic powder interposed between, and in contact with substantially the entire inner surfaces of the resistive facings of both electrodes, the resistive facings being of a thickness, and having an insulative value, so that when a firing current is impressed across the outer plate portions, and after the firing of the coherer along a first

wall and projecting beyond the open end of the housing; means on the housing side wall defining a radially in-

magnesium oxide disposed within the turns of said resistance conductor, an intermediate layer of amorphous

path through the powder, the resistive facings maintain a firing potential across the coherer, and a plurality of other probable firing paths through the powder remain, each of said other paths being separated from such first path and from each other by a resistance greater than the resistance between said outer plate portions and the powder.

2,899,658
LEAF-TYPE ELECTRICAL RESISTANCE STRAIN GAGE
William T. Bean, Jr., Detroit, Mich., assignor to Tatnall Measuring Systems Company, Philadelphia, Pa., a corporation of Delaware
Application April 4, 1957, Serial No. 650,602
9 Claims. (Cl. 338—2)



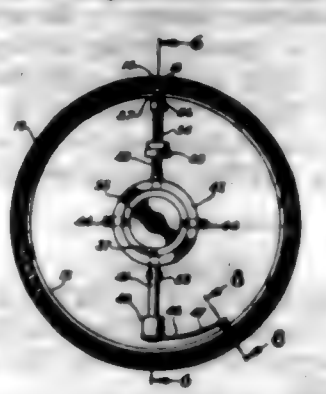
1. An electrical resistance strain gage which is formed of metal leaf material which is so thin and delicate that it is subject to tearing and disarrangement during installation face-down upon a test body, comprising a flat zig-zag or serpentine grid formed of narrow parallel resistance stripe, and wider connecting portions arranged in alternation at opposite ends of the narrow resistance stripe, leaving alternate spacing slots from opposite ends between joined pairs of narrow resistance stripe, the connecting portions at one end of the grid all having integral elongated extensions or handling tabs by which the grid can be held and kept smooth, the handling tab extensions being relatively long as compared to the end connecting portions to which they are joined and being unslotted throughout their length but divided from each other by the continuation of the slots of the grid.

2,899,659
PHOTOCELLS
Oran T. McIlvaine, St. Charles, Ill.
Application December 16, 1953, Serial No. 398,512
7 Claims. (Cl. 338—17)

1. A semiconductor assembly comprising a sheet of insulating material having holes therein, a second sheet of insulating material superposed over the first mentioned sheet and having holes of the respective sheets therein, conductor elements arranged in the holes in opposed and registering relation with each other, and a coating of semiconductor material interposed between the sheets and between the elements therein.

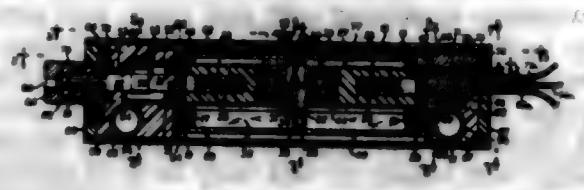
2,899,660
POTENTIOMETER
Richard H. Ford, Pacific Palisades, Calif., assignor to Summers Gyroscope Company, Santa Monica, Calif., a corporation of California
Application October 31, 1956, Serial No. 619,533
5 Claims. (Cl. 338—143)

1. In a potentiometer, the combination comprising: a central shaft rotatable about its longitudinal axis; a resistance element having a plurality of helical turns concentric about said axis; a rigid wiper arm pivotally mounted on said central shaft for free pivotal rotation in a plane including said longitudinal axis and for forced rotation about said longitudinal axis in cooperation with



said shaft upon rotation thereof; and wiper means mounted on said wiper arm and radially outwardly biased into frictional slidable engagement with said resistance element.

2,899,661
VARIABLE RESISTORS WITH INFINITE RESOLUTION
Morris Greer, Brooklyn, and Gary Rosenthal, New York, N.Y., assignors to Eastern Precision Resistor Corp., Brooklyn, N.Y., a corporation of New York
Application April 7, 1958, Serial No. 726,788
14 Claims. (Cl. 338—144)



1. In a variable resistor, an externally threaded mandrel member of insulating material, a centrally apertured internally threaded conductor wiper member mounted upon and in threaded engagement with said mandrel, means to rotate one of said members relative to the other, whereby said wiper member will move longitudinally relative to said mandrel, a continuous length of resistance wire releasably wound upon said mandrel member within portions of the threaded groove thereof in flanking relation to said wiper member, a portion of said wire being raised above the mandrel and disposed over and in slidable engagement with a portion of said wiper member, whereby successive portions of said wire will be progressively elevated by the underlying portion of said wiper member during the latter's operative movement relative to said mandrel, and conductors electrically connected to said resistance wire and said wiper member, respectively.

2,899,662
HIGH VOLTAGE VARIABLE RESISTOR
Wayne A. Barden, Elkhart, and Charles C. Snyder, Osceola, Ind., assignors to Chicago Telephone Supply Corporation, Elkhart, Ind., a corporation of Indiana
Application September 11, 1957, Serial No. 683,270
5 Claims. (Cl. 338—174)

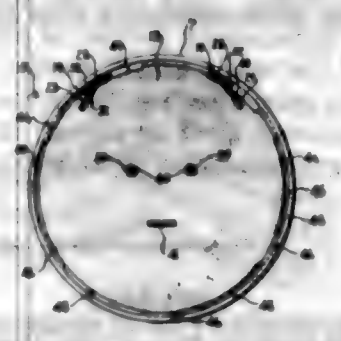
1. In a variable resistor of the type having a cup-shaped housing with an end wall and a cylindrical side wall, a resistance element in the housing, a rotatable actuating shaft normal to said end wall of the housing and accessible for actuation from the exterior of the housing, and a contactor in the housing carried by said shaft for rotation therewith and slidably engaged with the resistance element: a pair of terminals connected with the ends of the resistance element, each comprising a substantially flat strip of metal overlying the inner surface of the side

fitting engagement within said coiled resistor conductor strip, with the lower wall of the cavity coplanar with

relationship; said rectangular opening in said end mem-

tions, and after the firing of the coherer along a first

wall and projecting beyond the open end of the housing; means on the housing side wall defining a radially inwardly projecting circumferential ledge spaced inwardly from the open end of the housing and facing the same; a plurality of radially inwardly projecting lugs on the housing side wall spaced outwardly from said ledge and opposing the same; and a disc-like cover of insulating material having a notched periphery and having its marginal



edge portions overlying said ledge, said lugs on the housing cooperating with notched portions of the cover to provide a bayonet connection between the cover and the housing, and said terminals projecting through notches in the cover periphery and having their outer end portions twisted to cooperate with edge portions of the cover to hold the cover against rotation to a position in which said bayonet connection is disestablished.

2,899,663

ANNULARLY BULGED ELECTRIC HEATING UNIT AND METHOD OF ANNULARLY BULGING SAME

Edward J. Rost, Batavia, Ill., assignor, by mesne assignments, to Ferro Corporation, Cleveland, Ohio, a corporation of Ohio

Application September 6, 1955, Serial No. 532,664
13 Claims. (Cl. 338—238)

1. An electric heating unit which comprises an elongated tubular sheath containing compacted electrical insulating material with a heating resistance embedded therein, the said sheath being provided at a place spaced from the sheath ends with an annular shoulder which extends around the sheath and projects abruptly outward therefrom and comprises an intermediate portion of the length of the sheath compressed lengthwise to a reduced axial length and distended circumferentially to an increased circumferential length imparting the said annular projecting shoulder form thereto, the insulation in the sheath adjacent the shoulder being compacted to a higher density than the density initially present.

2,899,664

ELECTRIC HEATING UNITS AND METHODS OF MAKING THE SAME

John L. Andrews, Chicago, Ill., assignor to General Electric Company, a corporation of New York

Application February 27, 1956, Serial No. 567,759
7 Claims. (Cl. 338—240)

1. An electric heating unit comprising an elongated helical resistance conductor, an elongated tubular metallic sheath enclosing said resistance conductor and spaced therefrom, and a dense mass of compacted refractory material arranged in said sheath and embedding said resistance conductor and retaining the same in place in spaced relation with respect to said sheath; wherein said mass of refractory material includes a core of crystalline magnesium oxide disposed within the turns of said resistance conductor, an intermediate layer of amorphous magnesium oxide disposed upon said core and between the turns of said resistance conductor, and an outer layer of crystalline magnesium oxide disposed upon said re-

sistance conductor and said intermediate layer and extending into contact with said sheath; and wherein said amorphous magnesium oxide has both a higher coefficient of electrical resistance and a lower coefficient of heat conductivity than said crystalline magnesium oxide.

2,899,665

RESISTOR

Robert J. Cowles, Ridgway, Pa., assignor to Quality Components, Incorporated, St. Marys, Pa., a corporation of Pennsylvania

Application January 10, 1958, Serial No. 708,196
10 Claims. (Cl. 338—325)

1. An electrical resistor molded in the form of a polyhedron with two major axes and having embedded in the resistor material the headed portions of bendable solid wire leads characterized in that said head portions are in direct surface contact with the resistor material and the leads lie parallel with one major axis of the polyhedron and extend from opposite sides from the head and beyond opposite sides of the polyhedron for mounting and circuit connection therewith.

2,899,666

TERMINAL PIN RESISTOR ASSEMBLY FOR ELECTRIC HEATERS

Lester D. Drugmand and Joseph McOrlly, Pittsburgh, Pa., assignors to Edwin L. Wiegand Company, Pittsburgh, Pa.

Application May 8, 1957, Serial No. 657,827
7 Claims. (Cl. 338—329)

2. In an electric heater, the combination comprising a resistor member having a coiled end providing a plurality of turns in side by side relation and a terminal conductor pin secured to said resistor member end to provide electrical continuity therebetween, one end of said terminal conductor pin being tapered for close

reference to their associated stem portions and forming resilient inclined wiping surfaces extending in the direc-

portion of the disk for receiving lamp holder contacts, wiring passages extending through the embossed portion

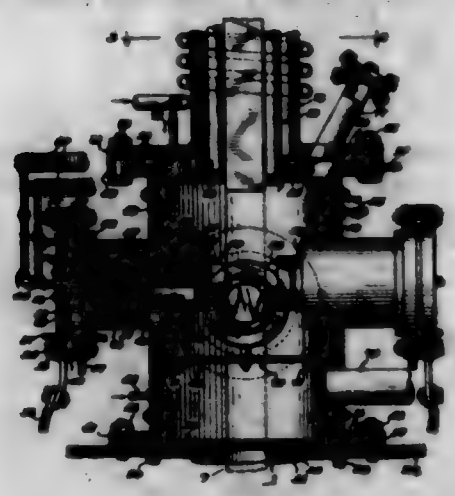
fitting engagement within said coiled resistor conductor end and the latter being welded to that terminal conductor pin portion which is in close fitting engagement therewith by clamping said coiled resistor member end between said terminal conductor pin and a welding electrode and passing welding current through said resistor member end and said terminal conductor pin, one of the endmost turns of said coiled resistor member end engaged by the welding electrode being subject to the greatest welding pressure and successive turns inwardly of such endmost turn being subject to progressively less welding pressure as a result of the taper of said terminal conductor pin whereby the degree of fusion of the weld progressively decreases inwardly of the coiled resistor member end from a maximum at said endmost turn to provide a graduated weld having both maximum mechanical strength and minimum electrical resistance.

2,899,667

CONNECTOR FOR THE CONSUMABLE ELECTRODE OF AN ARC MELTING FURNACE

Kurt B. Breitschneider and Frank M. Ozak, Chicago, Ill., and Murray H. Stuart, New York, N.Y., assignors to Crane Co., Chicago, Ill., a corporation of Illinois

Application February 21, 1955, Serial No. 489,517
5 Claims. (Cl. 339—9)



1. In an apparatus for energizing a consumable electrode in arc-melting operations, the combination comprising a shell member, an expansible bellows member positioned therein, an electrical lead member positioned therein and traversing the length thereof, a fluid-tight chamber defined in part by said expansible bellows member whereby cooling fluid may circulate therethrough, insulating means cooperating with said fluid-tight chamber, a metallic contact shoe member fixedly attached to one outer end limit of said fluid-tight chamber, said cooling fluid entering said fluid tight chamber directed against a transverse surface thereof immediately adjacent the inner contact area of the said shoe member whereby to spread cooling fluid over said inner contact area under pressure and whereby said expansible bellows member is forced into an extended position in the normal course of operation.

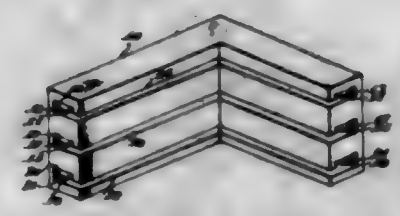
2,899,668

THREE BAR CONTINUOUS WALL OUTLET

Earl R. Gribben, Polk, Ohio

Application March 30, 1956, Serial No. 575,252
1 Claim. (Cl. 339—21)

In a continuous wall outlet unit the combination which comprises an elongated strip of insulating material, rectangular in cross-section and having three vertically spaced, horizontally disposed slots extending inwardly from a side surface thereof, each slot opening into a rectangular shaped cavity extending longitudinally of said strip, with the lower wall of the cavity coplanar with the lower wall of the slot and with the upper wall of the cavity higher than the upper wall of the slot, thereby providing an overhanging flange defining the upper wall of the slot and a side wall of the cavity, a resilient conductive strip positioned in each cavity, each conductive strip being arcuate in cross-section with the edges thereof engaging the upper corners of the cavity and with the middle portion thereof extending below the upper wall of the slot, each conductive strip being held in position by its inherent resiliency, the vertical distance between the middle portion of each conductive strip and the lower wall of the cavity being such as to resiliently grip the prong of a connector plug therebetween, each conductive strip having an aperture therethrough, a conductor wire extending through said aperture and being soldered to the inner surface of the conductive strip, and the end of each conductive strip being positioned on and secured to one leg of a flat, L-shaped bracket, the other leg of said bracket being adapted to be secured to the conductive strip of an adjacent unit.

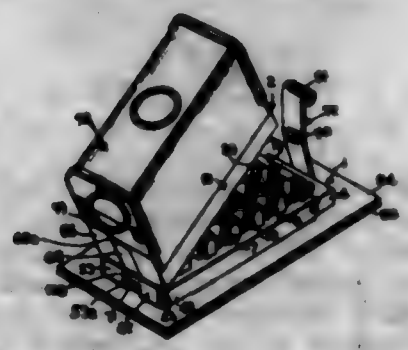


2,899,669

ELECTRICAL CONNECTOR

Bengt I. Johansson, Des Plaines, Ill., assignor, by mesne assignments, to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware

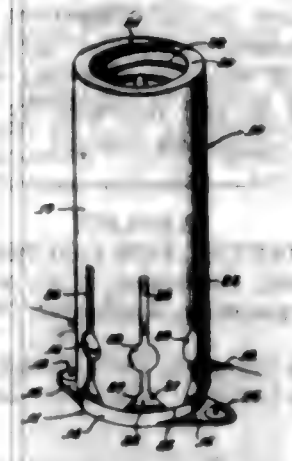
Application May 23, 1955, Serial No. 510,152
14 Claims. (Cl. 339—45)



14. A self-separable multiple connector comprising two complementary body portions of insulating material to be releasably connected to one another, the first of said body portions carrying a pair of contact members, each of said contact members having a stem portion in the form of a flat straight strip extending in the direction of the second body portion and a resilient flat contact finger integrally secured at one end to the free end of said stem portion and extending in a reverse angular direction with respect to said stem portion and in spaced relation thereto, said contact fingers of said pair of contact members lying in outwardly facing relation with reference to said stem portions and forming resilient inclined wiping surfaces on opposite sides of the pair of contact fingers, the second of said body portions carrying a second pair of contact members, each of said second contact members having a stem portion in the form of a flat strip extending in the direction of the first body portion, and a resilient flat contact finger extending inwardly in a reverse angular direction with respect to said stem portion and in spaced relation thereto, said contact fingers of said second pair of contact members lying in inwardly facing relation with

reference to their associated stem portions and forming resilient inclined wiping surfaces extending in the direction of one another, said body portions having separable hinge means at one end thereof for hinging said body portions together, said having fastener means disposed in opposed relation to the hinge means for retaining the hinged body portions in coupled relation, the inclined wiping surfaces of each pair of contact fingers being compressed independent of said body portions toward their stem portions when in mating relationship with those of the other pair of contact fingers when said body portions are in coupled relation, said mating wiping surfaces springing outwardly with respect to their associated stem portions to uncouple said body portions when said fastener means is released.

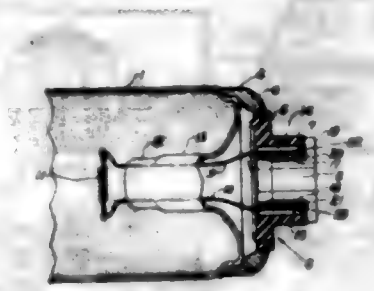
2,899,670
TUBE SHIELD ATTACHMENT
Leroy R. Woods, Whittier, Calif., assignor to International Electronic Research Corporation, Burbank, Calif., a corporation of California
Application February 6, 1956, Serial No. 563,655
3 Claims. (Cl. 339—143)



1. A tube shield mounting comprising a base having a chassis contacting portion and attachment means thereon, a substantially cylindrical socket member on the base, a substantially cylindrical casing member adapted to extend around and above an electronic tube, said casing member having a socket-engaging open end adapted to fit about said socket member with a snug sliding fit, one of said members having a protruding configuration on the side wall thereof, the other of said members having a plurality of circumferentially spaced open slots extending inwardly from an end edge, said slots having portions at ends thereof adjacent the open end of the member spreading progressively outwardly toward the end edge and having enlargements no greater in transverse dimension than the corresponding dimension of said configuration intermediate outer and inner ends whereby when one said member is forced over the other said member engagement of one of said slots with said configuration is adapted to guide said members to a position wherein said configuration projects into engagement with the wall of the enlargement of the respective slot.

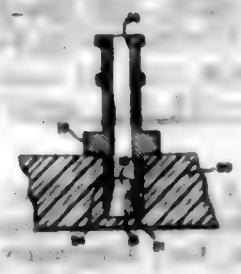
2,899,671
RECESSED DOUBLE CONTACT STRIP BASE
John E. Crilland, Chesterland, Ohio, assignor to General Electric Company, a corporation of New York
Application March 1, 1957, Serial No. 643,278
1 Claim. (Cl. 339—145)

A lamp base comprising an electrically insulating body member in the form of a disk having a raised elongated embossment extending outward from the base for engaging a lamp holder, a slot in the front face of the embossed portion of the disk for receiving lamp holder contacts, wiring passages extending through the embossed portion of the disk from the back to the front of said base and at the ends of said slot for receiving inlead wires of the lamp and metal strip contacts clamped to said disk, said strip contacts extending through said slot at the ends of said slot and having their end portions bent over into the ends of said wiring passages to secure said strip contacts to said base, the front face of the embossed portion of



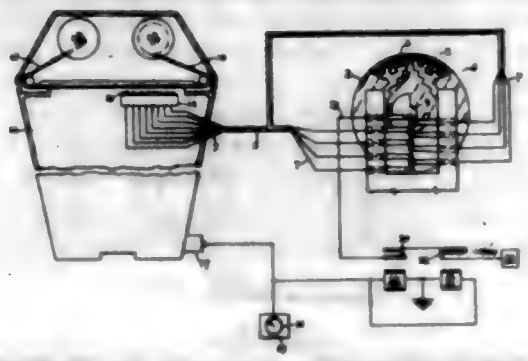
said disk between the ends of said slot and the outer ends of said wiring passages being recessed and exposing the ends of said strip contacts at the outer ends of said wiring passages for engagement with lamp holder contacts, the depth of said recesses being greater than the thickness of the portions of the strip contacts therein to protect said strip contact portions from accidental contacts.

2,899,672
ELECTRICAL TERMINAL STUD
Richard R. Lewis, Terrance, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Application November 7, 1955, Serial No. 545,294
1 Claim. (Cl. 339—220)



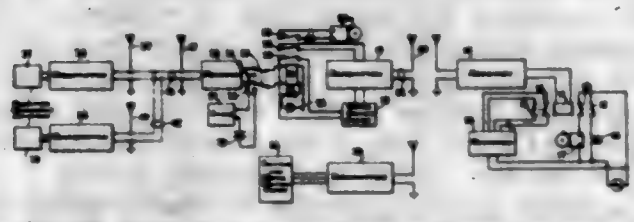
An electrical terminal stud adapted for disposition and retention in a cylindrical recess having a transverse inner end wall, said stud comprising, in combination: an elongated cylindrical terminal portion; a cylindrical retaining portion integral with and coextensively disposed relative to said terminal portion; a cylindrical bore extending through said terminal portion and into said retaining portion, said bore having a blind inner end terminating adjacent the free end of said retaining portion; a solid frusto-conical deforming portion disposed integrally from said retaining portion, the end of said deforming portion adjacent said retaining portion having a diameter substantially equal to the diameter of said bore, the end thereof remote from said retaining portion having a diameter substantially equal to the outer diameter of said retaining portion; and a flange carried by said stud at a junction of said terminal and retaining portions, said retaining and deforming portions being adapted for disposition in said recess with said remote end of said deforming portion engaging said recess inner wall, movement of said stud into said recess causing a compressive fracture between said retaining and deforming portions and disposition of a portion of said deforming portion into said bore circumferentially to expand said retaining portion into tight contact with a cylindrical wall of said bore, said flange acting to limit the distance of said movement of said stud into said recess.

2,899,673
CODE WHEEL SHAFT POSITION ENCODER, RECORDER AND DECODER
Stewart Reiner, New Rochelle, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application August 26, 1953, Serial No. 376,769
17 Claims. (Cl. 340—173)



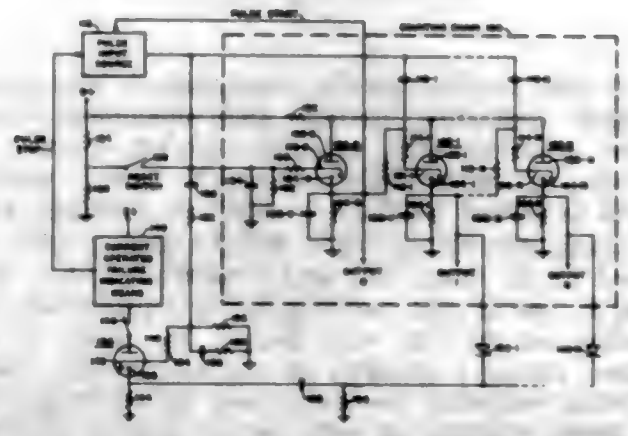
5. A system of the character described comprising a camera containing photographic film, a plurality of lights located within close proximity to the film to expose a certain area of said film, a rotatable code wheel containing a plurality of conducting and non-conducting segments, a means to rotate said wheel to couple selected segments to said plurality of lights to determine the combination of lights that will pass current, said combination of lights acting to record a coded image on said film which identifies other recorded data thereon, relays coupled to said code wheel to pass a voltage pulse through said selected segments to said selected lights at the instant of exposure and means to automatically decode said film representation of coded information comprising a scanning means to read the coded information on the exposed area of the film, comparison means connected to said scanning means, a second code wheel connected to said comparison means, and means for rotating said second wheel, said rotating means being controlled by said comparison means.

2,899,674
ALARM SYSTEM
Payson Sierer, Woodhaven, N.Y., assignor to Safer Electronic Fire Alarm, Inc., Edgewater, N.J., a corporation of New York
Application September 16, 1954, Serial No. 456,558
7 Claims. (Cl. 340—218)



5. An alarm system comprising a first transmitter for transmitting uncoded radio frequency energy, said transmitter comprising a vacuum tube having anode, control and cathode electrodes, said cathode electrode including a filament, a tuned circuit coupled to said anode and said control electrodes, a resistor interconnecting said control and said cathode electrodes, a source of electrical energy for heating said filament connected at one end to said filament and to said cathode electrode and means for connecting the opposite end of said source to said anode electrode and to said filament comprising a temperature-responsive switch connected to said opposite end and to said filament and a choke connected to said switch and to said tuned circuit, said source being the source of electrical energy for said anode electrode; a first receiver spaced from said transmitter but adapted to receive radio frequency energy from said transmitter; a second radio frequency energy transmitter comprising means for generating radio frequency energy, means for transmitting said last-mentioned energy connected to said generating means and coding means connected to one of said generating and transmitting means for interrupting the transmission of said last-mentioned energy in accordance with a predetermined code; switching means for energizing said coding means and said generating means connected thereto, said switching means being connected to said first receiver and being operated upon receipt of radio frequency energy by said first receiver from said first transmitter; a second receiver spaced from said second transmitter and adapted to receive radio frequency energy from said second transmitter, said second receiver comprising a limiting amplifier, a detector connected to said amplifier, a filter circuit connected to said detector and adapted to attenuate radio frequency signals and to pass audio frequency noise signals, a further amplifier connected to said filter for amplifying said noise signals, a rectifier connected to said further amplifier for rectifying the amplified noise signals and for thereby providing a biasing voltage upon receipt of said noise signals, and a control amplifier connected to said rectifier and controlled by said biasing voltage; and an alarm circuit connected to said control amplifier and controlled thereby, said alarm circuit comprising relay means connected to said control amplifier and energized thereby in the absence of noise signals and vice versa and an alarm connected to and operated by said relay means in the energized condition thereof.

2,899,675
FAILURE CIRCUIT FOR COUNTING CHAINS
Milton A. Clement, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Application March 5, 1957, Serial No. 644,820
4 Claims. (Cl. 340—248)

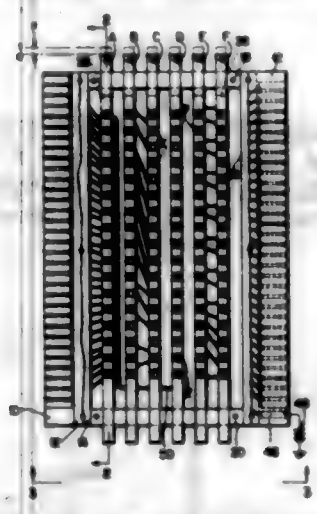


1. First means including a pulse-operated counting chain, wherein said chain includes a first terminal adapted to be coupled to a source of pulses of a given amplitude, a plurality of cold-cathode discharge devices each having a cathode, anode, and control electrode, individual second means comprising a first resistance shunted by a first capacitance connecting the cathode of each of said devices to a point of reference potential, a second resistance connected between a point of positive potential and the anodes of all of said devices, third means for momentarily applying a positive potential to said control electrode of the first device of said chain to effect the conduction thereof, individual fourth means connecting the control electrode of each device following said first device to the cathode of the immediately preceding device of the chain to thereby bias each of these control electrodes at the potential of the cathode to which it is connected, fifth means coupled between each fourth means and said first terminal for applying pulses to the control electrodes of each of said devices following said first device, said given

communicating with said cavity, radiator reflecting means about said rod, an adjustable electrical short at the

amplitude being per se insufficient to cause firing of a device of said chain but when added to the bias provided by a conducting preceding device being sufficient to normally cause firing of that device; and in combination therewith sixth means for indicating the failure of a device of said chain to be fired by a pulse applied thereto, wherein said sixth means includes a second terminal, a third resistance coupled between said second terminal and said point of reference potential, individual unidirectional conducting means connecting the cathode of the cathode of each device following said first device to said second terminal, each unidirectional conducting means being poled to be conductive when the cathode to which it is connected is at a positive potential, another cold-cathode discharge device having a cathode, anode and control electrode, a fourth resistance connecting said cathode of said other device to said point of reference potential, a second capacitance coupling said cathode of said other device to said second terminal, seventh means including current-operated failure indicating means connecting the anode of said other device to a point of positive potential, and an input circuit for coupling the control electrode of said other device to said first terminal for applying pulses thereto.

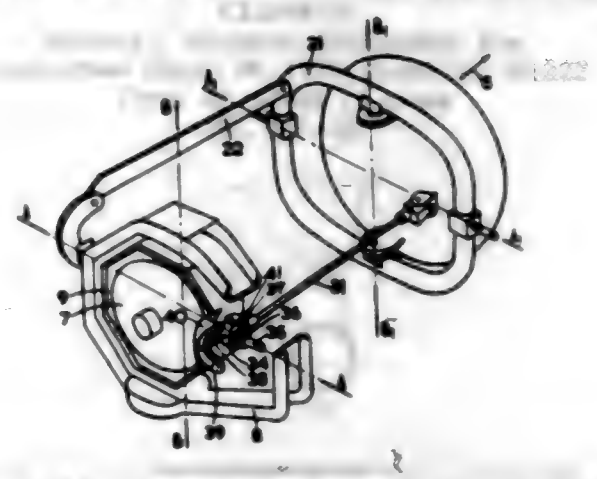
2,899,676
PRINTED CIRCUIT TRANSLATORS
George D. Rivers, Granby, and Donald H. Lapointe, Meriden, Conn., assignors to Royal McBee Corporation, Port Chester, N.Y., a corporation of New York
Application December 9, 1957, Serial No. 701,579
8 Claims. (Cl. 340—347)



1. A translator for decoding *n* level code group signals into *y* discrete output signals where $y=2^n$ comprising a plurality of isolated printed conductors arranged on the opposing faces of two cards fixedly spaced in parallel planes, said printed conductors being arranged so as to form together the branches of an *n* level switching tree having an input conductor and 2^n output conductors, bi-positional level switching beams, contacts carried by each of said beams, said contacts on each of said beams connecting the branches of one level of said tree to branches in the next higher level of said tree, and means responsive to signals representing an *n* level code for moving said switching beams whereby said input conductor is connected to one of said 2^n output conductors in accordance with the positional combination of said beams.

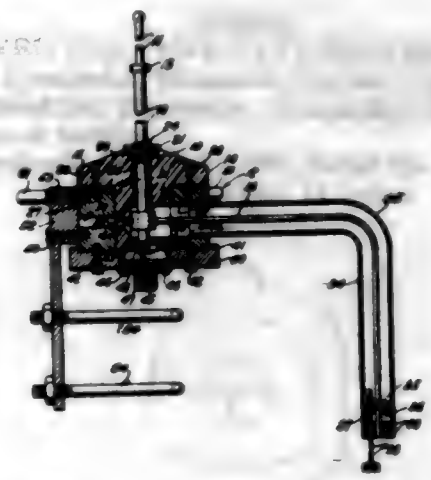
2,899,677
LINKING MECHANISMS
Frederick William Rockall, Harrow Weald, England, assignor to The General Electric Company Limited, London, England
Application July 22, 1954, Serial No. 444,945
Claims priority, application Great Britain July 27, 1953
5 Claims. (Cl. 343—757)

1. A linking mechanism comprising a first part which is mounted for movement about first and second axes which are at right angles to one another, a second part which is mounted for movement about associated first and second axes which are at right angles to one another, a first mechanical linkage between the two parts so that relative movement of the first part about its first axis produces a corresponding movement of the second part about its first axis, and a second mechanical linkage between the two parts so that relative movement of the first part about its second axis produces a corresponding



movement of the second part about its second axis, the second linkage including an arm and means which is arranged to vary the effective length of said arm in dependence upon the position of either the first or second part about its first axis, the arrangement being such that any relative movement of the first part about either of its axes when positioned anywhere within a range of positions produces a corresponding relative movement of the second part only about its appropriate axis.

2,899,678
IMPEDANCE MATCHED ANTENNA APPARATUS
Gerald E. Stetson, Buzzards Bay, Mass., assignor to Colonial Aircraft Corporation, Sanford, Maine, a corporation of New York
Application March 20, 1957, Serial No. 647,317
2 Claims. (Cl. 343—864)



1. Antenna structure comprising, an adjustable longitudinally extendable and retractable antenna radiator having a lower base portion, an insulated member having a large diametered upper portion and a smaller diametered lower portion depending longitudinally therefrom, said member having a through bore into which said base extends coaxially, an electrical conducting body encircling said smaller diametered part of said member and cooperating therewith to define an antenna housing, means latching said radiator to said housing to lock said radiator against longitudinal motion, said bore developing into a relatively large cavity in the intermediate portion of said member, said body having a transverse through passage, the inner end of said passage

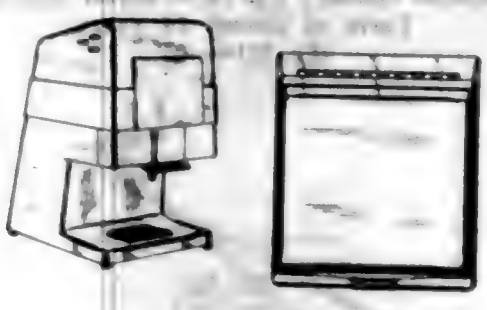
communicating with said cavity, radiator reflecting means electrically connected to said body, an electrical conducting coupling unit attached to said base portion of said antenna in the region of said cavity and having a radially extending tubular rod projecting through said passage and beyond the outer entrance thereof, a hollow tubular electrical conducting body having an open end fixed to said passage and being coaxially disposed about said rod, an adjustable electrical short at the ends of said rod and tubular body spaced from said housing and defining an adjustable tuning transformer, an electrical conducting terminal block mounted at the lower end of said housing and having a through aperture aligned with the lower bore end, and connector means mounted at said aperture and enclosing said bore for electrically coupling said radiator to a load.

DESIGNS

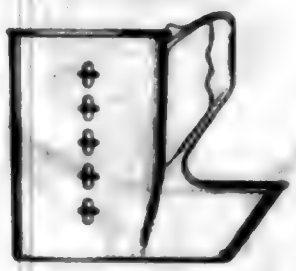
AUGUST 11, 1959

185,832
ILLUMINABLE SIGN
Kenneth W. Barnes, Poland, Ohio
Application March 13, 1958, Serial No. 50,020
Term of patent 14 years
(Cl. D1—12)

185,833
SOFT DRINK DISPENSER
Hans W. Brentjes, Hopkins, Minn.
Application September 10, 1958, Serial No. 52,585
Term of patent 14 years
(Cl. D2—3)

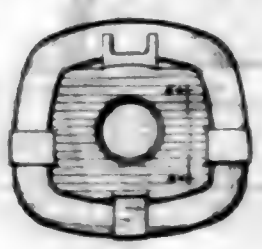


185,834
COMBINED BRUSH HOLDER AND RECEPTACLE FOR CLEANSING LIQUID OR THE LIKE
James C. Lower, Toledo, and Phillip D. Sanborn, Cherden, Ohio, assignors to National Laboratories, Inc., Toledo, Ohio, a corporation of Ohio
Application May 7, 1958, Serial No. 50,788
Term of patent 14 years
(Cl. D9—2)

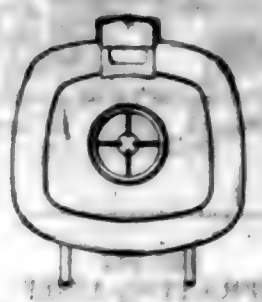


185,835
SUCTION NOZZLE FOR VENTILATING WATER CLOSETS
Manuel J. Mendoza, Hallandale, Fla.
Application March 28, 1958, Serial No. 50,222
Term of patent 14 years
(Cl. D9—2)

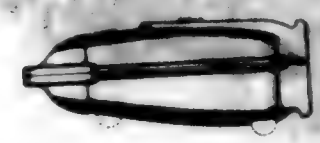
185,836
END COVER FOR VACUUM CLEANER
Raymond Descarries, Montreal, Quebec, Canada, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Application April 1, 1958, Serial No. 50,287
Term of patent 14 years
(Cl. D9—2)



185,837
END COVER FOR TANK-TYPE SUCTION CLEANER
Raymond Descarries, Montreal, Quebec, Canada, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden
Application April 1, 1958, Serial No. 50,288
Term of patent 14 years
(Cl. D9—2)



185,838
VACUUM CLEANER CASING
Herbert J. Allemang, Bloomington, Ill.
Application August 4, 1958, Serial No. 52,045
Term of patent 14 years
(Cl. D9—2)

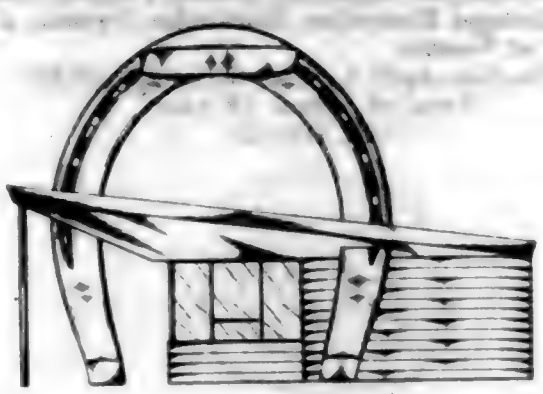


185,847
WHEEL COVER

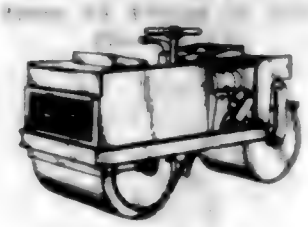
185,850
CHAIR

185,839
BUILDING
Howard W. Frank, Los Angeles County, Calif., assignor to Huntington Ice Cream Co., Burbank, Calif., a corporation of California
Application March 25, 1958, Serial No. 50,174
Term of patent 14 years
(Cl. D13—1)

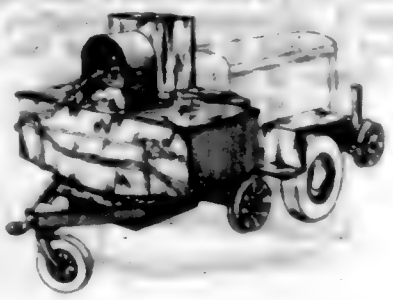
185,840
BUILDING
Jerome Clifton Hirschman, Indianapolis, Ind.
Application June 6, 1958, Serial No. 51,235
Term of patent 14 years
(Cl. D13—1)



185,841
ROAD ROLLER
Harry Schertzer, Newton, Mass.
Application March 13, 1958, Serial No. 50,015
Term of patent 14 years
(Cl. D14—3)

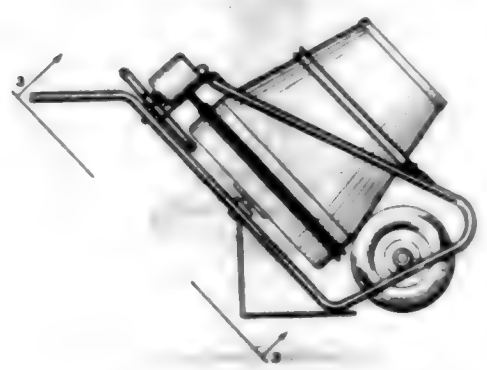


185,842
SPRAYING UNIT
Roy C. Patton, Charlotte, N.C.
Application March 24, 1958, Serial No. 50,140
Term of patent 14 years
(Cl. D14—3)

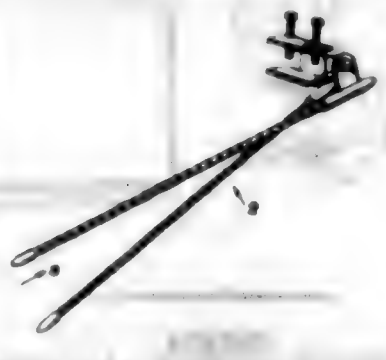


185,843
AUTOMOBILE
Norman J. James, Royal Oak, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 28, 1959, Serial No. 54,366
Term of patent 7 years
(Cl. D14—3)

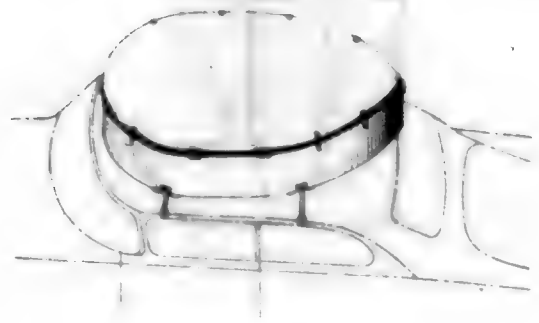
185,844
PORTABLE MIXER
Harry L. Yager, Portland, Oreg.
Application July 28, 1958, Serial No. 51,965
Term of patent 14 years
(Cl. D14—3)



185,845
CURB FEELER
David Frees, Encino, and Edwin L. Schwartz, Los Angeles, Calif., assignors to Sutone Corporation, Los Angeles, Calif.
Application January 12, 1959, Serial No. 54,145
Term of patent 14 years
(Cl. D14—6)



185,846
LUGGAGE CARRIER
William C. Baxter, Portland, Oreg.
Application February 26, 1957, Serial No. 44,998
Term of patent 14 years
(Cl. D14—27)

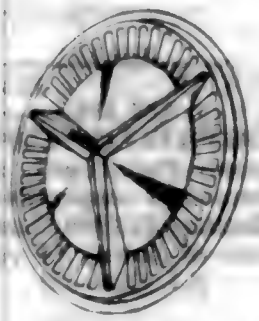


185,853
GIRDLE

185,856
ELECTRICAL CONDUCTOR OF THE SUSPENDED

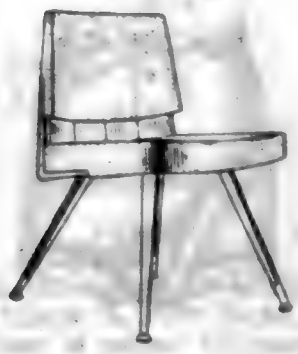
185,847
WHEEL COVER
Paul H. Deeson, Rochester, and Robert Deeton, Jr., Clawson, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 29, 1959, Serial No. 54,300
Term of patent 7 years
(Cl. D14—30)

185,848
WHEEL COVER
Frederic P. Piotkin, Los Angeles, Calif.
Application February 2, 1959, Serial No. 54,403
Term of patent 14 years
(Cl. D14—30)



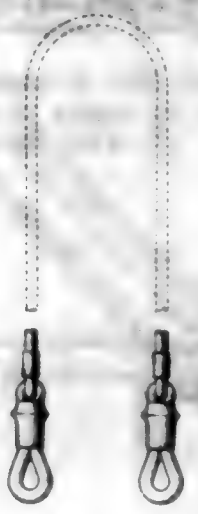
185,849
CHAIR
Trace Christensen and Wayne W. Good, Sturgis, Mich., assignors to Harter Corporation, Sturgis, Mich.
Application January 16, 1959, Serial No. 54,197
Term of patent 14 years
(Cl. D15—1)

185,850
CHAIR
Trace Christensen and Wayne W. Good, Sturgis, Mich., assignors to Harter Corporation, Sturgis, Mich.
Application January 16, 1959, Serial No. 54,198
Term of patent 14 years
(Cl. D15—1)



185,851
CHAIR
Trace Christensen and Wayne W. Good, Sturgis, Mich., assignors to Harter Corporation, Sturgis, Mich.
Application January 16, 1959, Serial No. 54,200
Term of patent 14 years
(Cl. D15—1)

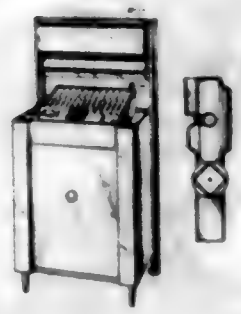
185,852
SPECTACLE HOLDER
Richard J. McFadyen, Upper Montclair, N.J., assignor to Ketcham and McDougall, Inc., Roseland, N.J., a corporation of New Jersey
Application March 28, 1958, Serial No. 50,215
Term of patent 14 years
(Cl. D17—15)



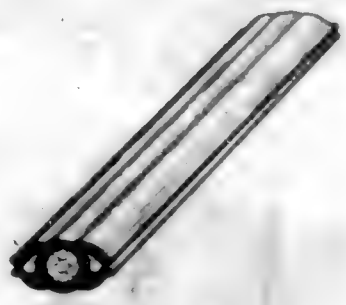
185,860
MICROPHONE CASE OR SIMILAR ARTICLE

185,853
GIRDLE
Joy Sexy Darcey, Palo Alto, Calif., assignor to Beverly Vogue Company, Los Angeles, Calif., a firm
Application September 17, 1957, Serial No. 47,764
Term of patent 14 years
(Cl. D20—2)

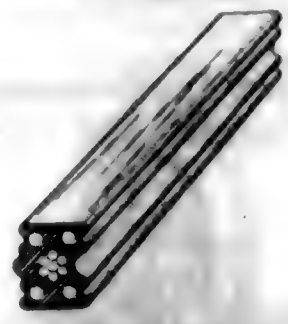
185,854
TESTER CABINET
Richard H. Van Den Berg, Milwaukee, Wis., assignor to U-Test-M Mfg. Co., Inc., Milwaukee, Wis., a corporation of Wisconsin
Application December 2, 1958, Serial No. 53,627
Term of patent 14 years
(Cl. D26—1)



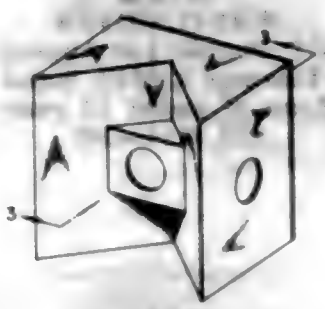
185,855
ELECTRICAL CONDUCTOR OF THE SUSPENDED CABLE TYPE
Donald H. Scofield, Redwood City, Calif., assignor to Insul-8-Corp., San Carlos, Calif., a corporation of California
Application March 26, 1959, Serial No. 55,206
Term of patent 14 years
(Cl. D26—1)



185,856
ELECTRICAL CONDUCTOR OF THE SUSPENDED CABLE TYPE
Donald H. Scofield, Redwood City, Calif., assignor to Insul-8-Corp., San Carlos, Calif., a corporation of California
Application March 26, 1959, Serial No. 55,203
Term of patent 14 years
(Cl. D26—1)



185,857
COMBINED FLOODLIGHT BRACKET AND OUTLET BOX
Elti Chiandussi, Youngstown, and Herschel L. Miller, Cortland, Ohio
Application October 16, 1957, Serial No. 48,124
Term of patent 7 years
(Cl. D26—5)



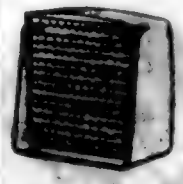
185,858
STORAGE BATTERY CONTAINER
Van Nelson, Monterey Park, Calif., assignor to Stauffer Chemical Company, a corporation of Delaware
Application January 8, 1959, Serial No. 54,884
Term of patent 14 years
(Cl. D26—6)

185,859
COMBINED ANTENNA HOUSING AND CHANNEL SELECTOR OR SIMILAR ARTICLE
Ralph N. Leonard, Crystal Lake, Ill., assignor to The Radion Corporation, Crystal Lake, Ill., a corporation of Illinois
Application March 13, 1959, Serial No. 54,991
Term of patent 7 years
(Cl. D26—14)

185,868
COMBINED CHAIR AND DESK

185,871
CLOCK

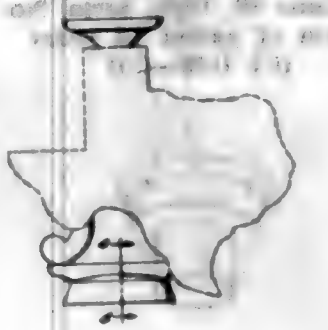
185,860
MICROPHONE CASE OR SIMILAR ARTICLE
Richard G. Armstrong, West Springfield, Pa., and Maurice M. Pate, Conneaut, Ohio, assignors to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Application October 6, 1958, Serial No. 52,878
Term of patent 7 years
(Cl. D26—14)



185,861
MEDAL OR SIMILAR ARTICLE
Adolph H. Humphreys, Fairfax County, Va.
Application July 9, 1958, Serial No. 51,719
Term of patent 14 years
(Cl. D29—19)
(Granted under Title 35, U.S. Code (1952), sec. 266)

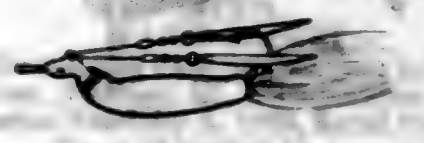
185,862
MEDAL OR SIMILAR ARTICLE
Adolph H. Humphreys, Fairfax County, Va.
Application September 22, 1958, Serial No. 52,783
Term of patent 14 years
(Cl. D29—19)
(Granted under Title 35, U.S. Code (1952), sec. 266)

185,863
TROPHY BASE
Thomas F. Merle, Lincolnwood, Ill., assignor to Dodge, Inc., Chicago, Ill., a corporation of Illinois
Application May 14, 1957, Serial No. 46,168
Term of patent 14 years
(Cl. D29—23)



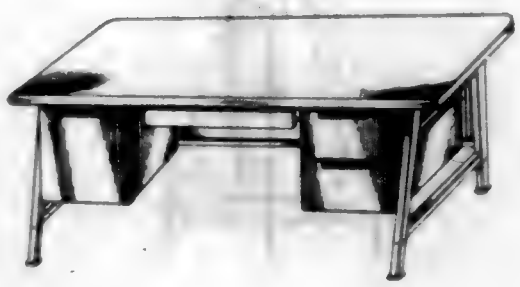
185,864
FISH LURE
Edward N. Kellogg, Harrisville, Mich.
Application December 13, 1958, Serial No. 53,767
Term of patent 14 years
(Cl. D31—4)

185,865
FISHING LURE
Clyde A. Herman, Fond du Lac, Wis.
Application March 16, 1959, Serial No. 55,003
Term of patent 14 years
(Cl. D31—4)



185,866
DECOY
Frank H. Anderson, Des Moines, Iowa
Application March 11, 1957, Serial No. 45,183
Term of patent 3½ years
(Cl. D31—4)

185,867
DESK
Joseph H. McCarthy, Youngstown, Ohio, and Herbert P. Zimmermann, Amityville, N.Y., assignors to The General Fireproofing Company, Youngstown, Ohio, a corporation of Ohio
Application November 8, 1957, Serial No. 48,396
Term of patent 14 years
(Cl. D33—7)

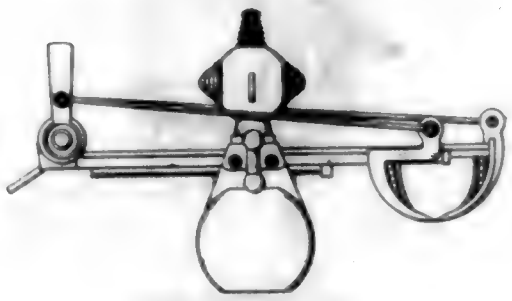


185,875
AUTOMOBILE TAIL LAMP

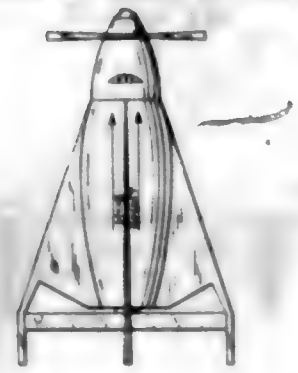
185,878
PAIR OF SUNGLASSES

185,868
COMBINED CHAIR AND DESK
Alfred C. Haven, William S. Lindberg, and Walter E. Nordmark, Grand Rapids, Mich., assignors to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey
Application June 23, 1958, Serial No. 51,481
Term of patent 14 years
(Cl. D33—11)

185,869
ROBOT SCOOP TOY
Sid Noble, Levittown, N.Y., assignor to Ideal Toy Corporation, Hollis, N.Y., a corporation of New York
Application January 22, 1959, Serial No. 54,271
Term of patent 3½ years
(Cl. D34—15)



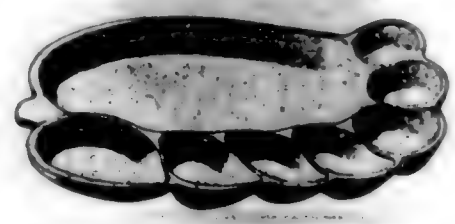
185,870
TOY ROCKET
Stefan Apostolescu, New York, N.Y.
Application January 28, 1958, Serial No. 49,428
Term of patent 7 years
(Cl. D34—15)



185,871
CLOCK
James R. Reichow, St. Paul, Minn., assignor to Brown & Bigelow, St. Paul, Minn.
Application August 6, 1958, Serial No. 52,681
Term of patent 7 years
(Cl. D42—7)

185,872
INFANT'S DISH
Fred O. Forsman, Los Angeles, Calif., assignor to Westland Plastics, Inc., Los Angeles, Calif., a corporation of California
Application June 9, 1958, Serial No. 51,242
Term of patent 14 years
(Cl. D44—15)

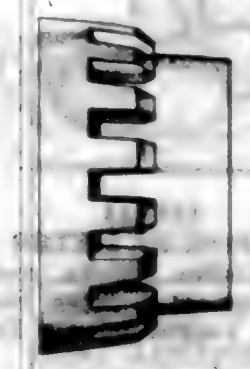
185,873
PLATE
Victor J. Bergeron, Orinda, Calif.
Application March 18, 1959, Serial No. 55,043
Term of patent 14 years
(Cl. D44—15)



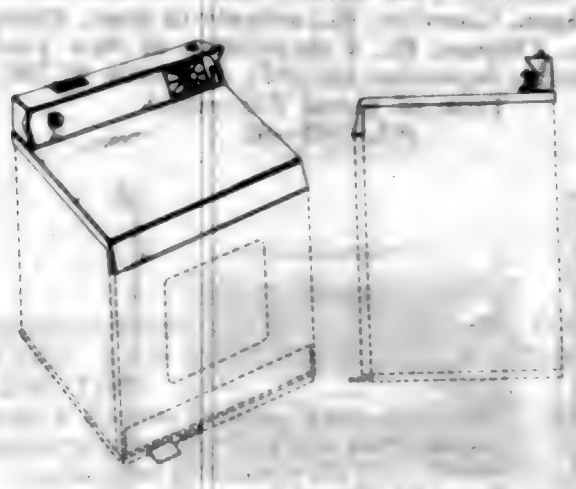
185,874
CEILING LIGHT FIXTURE OR SIMILAR ARTICLE
Harold W. Rambusch, Lloyd Harbor, and Joaquin Santos, Garden City, N.Y., assignors to Rambusch Decorating Company, New York, N.Y., a corporation of New York
Application June 30, 1958, Serial No. 51,595
Term of patent 14 years
(Cl. D48—23)

185,881

185,875
AUTOMOBILE TAIL LAMP
Homer C. Legassy, Jr., Royal Oak, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application June 26, 1958, Serial No. 51,543
Term of patent 7 years
(Cl. D48—32)



185,876
AUTOMATIC CLOTHES DRYER
Jean O. Reinecke, Oak Park, and James K. Gerrie, Wilmette, Ill., assignors to McGraw-Edison Company, Ripon, Wis., a corporation of Delaware
Application September 27, 1957, Serial No. 47,910
Term of patent 14 years
(Cl. D49—1)

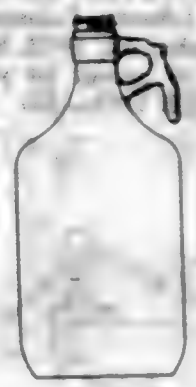


185,877
PAIR OF PLIERS
Flora M. Mattingly, Glen Ellyn, Ill.
Application July 30, 1958, Serial No. 51,989
Term of patent 14 years
(Cl. D64—13)

185,878
PAIR OF SUNGLASSES
Egon P. Von Seekamm, New York, N.Y., assignor, by mesne assignments, to The Electric Storage Battery Company, Philadelphia, Pa., a corporation of New Jersey
Application February 21, 1957, Serial No. 44,937
Term of patent 14 years
(Cl. D57—1)

185,879
WASTE BASKET
Jean O. Reinecke, Oak Park, Ill., assignor to Federal Tool Corporation, Chicago, Ill., a corporation of Illinois
Application February 6, 1958, Serial No. 49,526
Term of patent 14 years
(Cl. D58—4)

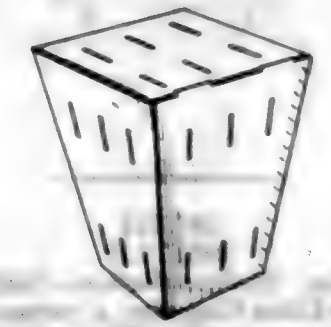
185,880
BOTTLE
Walter F. Baker, Hidden Valley, Calif., assignor to Owens-Illinois Glass Company, a corporation of Ohio
Application August 21, 1958, Serial No. 52,323
Term of patent 14 years
(Cl. D58—8)



185,888
STABILIZER FIN FOR BOATS
Julius G. Bomberger, Milwaukee, Wis., assignor to B-T

185,881
DECANTER
Brooks D. Fuerst, Sylvania, Ohio, assignor to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio
Application November 7, 1958, Serial No. 53,299
Term of patent 14 years
(Cl. D58—9)

185,882
PRODUCE CARTON
Robert A. Bamberg, West Monroe, La., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Application November 25, 1957, Serial No. 48,626
Term of patent 14 years
(Cl. D58—12)

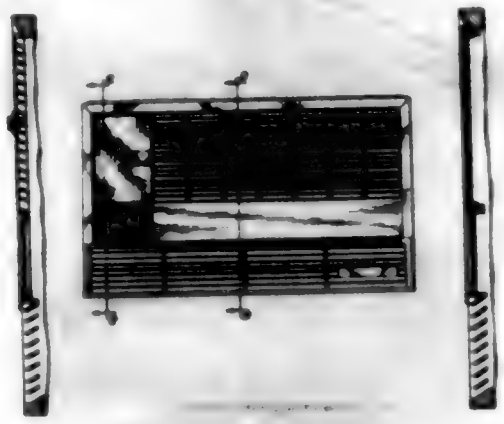


185,883
MILK CARTON HOLDER
Nicholas R. Liberty, Columbus, Ohio
Application November 18, 1958, Serial No. 53,421
Term of patent 14 years
(Cl. D58—26)

185,884
COMBINATION BOTTLE AND ASH TRAY HOLDER
Thomas Edward Cross, Des Moines, Iowa
Application February 6, 1959, Serial No. 54,499
Term of patent 14 years
(Cl. D58—26)

185,885
EXPOSURE METER
Junnosuke Kawa, Yoshio Akioka, and Itaru Kaneko, Tokyo, Japan, assignors to Seiko Electric Instrument Industry Co., Ltd., Tokyo, Japan, a limited corporation of Japan
Application July 9, 1957, Serial No. 46,870
Claims priority, application Japan March 26, 1957
Term of patent 14 years
(Cl. D61—1)

185,886
FRONT GRILLE FOR ROOM AIR CONDITIONER
Philip S. Egan, Glenview, Ill., assignor to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Application September 16, 1957, Serial No. 47,740
Term of patent 3½ years
(Cl. D62—4)

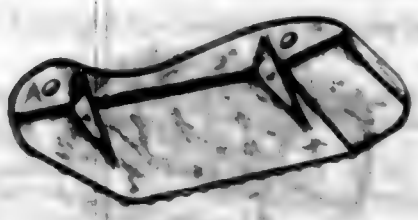


185,887
ROOM AIR CONDITIONER
George R. Holdenbiel, Knoxville, and Armour H. Titus, Jr., Galesburg, Ill.
Application January 24, 1958, Serial No. 49,398
Term of patent 3½ years
(Cl. D62—4)

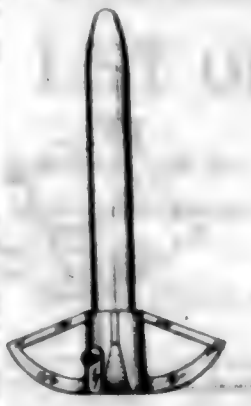
185,894
COMBINED TOOL CASE AND KEY CHAIN

185,896
TIRE

185,888
STABILIZER FIN FOR BOATS
Julien G. Bamberger, Milwaukee, Wis., assignor to B-T Company, Inc., Milwaukee, Wis., a corporation of Wisconsin
Application May 12, 1958, Serial No. 50,836
Term of patent 14 years
(Cl. D71—1)



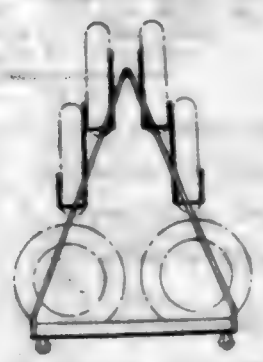
185,889
BOAT ANCHOR
William F. Hoberock, Highland, Ill.
Application April 1, 1959, Serial No. 55,298
Term of patent 14 years
(Cl. D71—1)



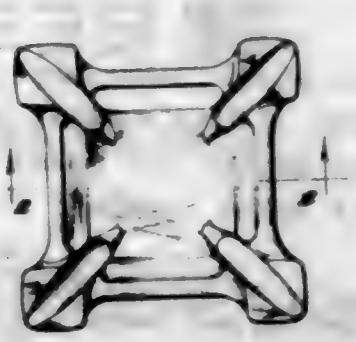
185,890
COMBINATION DISPLAY PACKAGE FOR TABLE LEGS AND APPURTENANT HARDWARE OR THE LIKE
Glenn I. Barton, Seattle, Wash., assignor to Totem Wood Industries, Seattle, Wash., a corporation of Washington
Application December 23, 1957, Serial No. 48,994
Term of patent 14 years
(Cl. D60—5)

185,891
MERCHANDISE DISPLAY STAND
Clarence G. Gephardt, Bethesda, Md., and Sidney Dannemann, Washington, D.C.
Application October 12, 1956, Serial No. 43,339
Term of patent 3½ years
(Cl. D60—9)

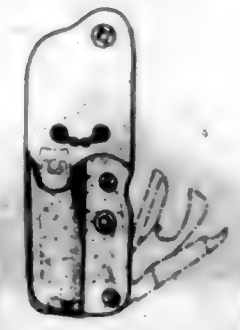
185,892
TIRE RACK
Ben W. Harley, Robert C. Sharpe, and Norris H. Mosly, Warren, Ohio, assignors to The Warren Steel Specialties Corporation, a corporation of Ohio
Application June 30, 1958, Serial No. 51,586
Term of patent 14 years
(Cl. D60—10)



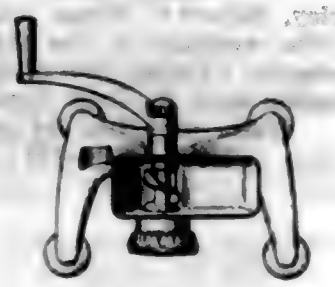
185,893
ASH TRAY
Charles Webbe, Weehawken, N.J.
Application March 13, 1959, Serial No. 54,981
Term of patent 14 years
(Cl. D65—2)



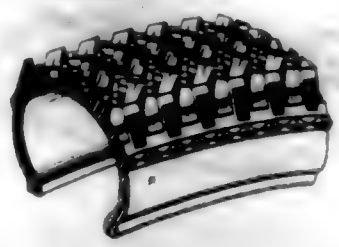
185,894
COMBINED TOOL CASE AND KEY CHAIN
Collins T. Dawson, Shelton, Conn., assignor to The W. E. Bassett Company, Derby, Conn., a corporation of Connecticut
Application March 25, 1957, Serial No. 45,416
Term of patent 14 years
(Cl. D87—3)



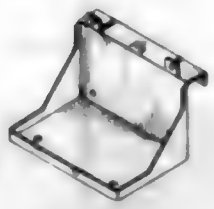
185,895
MEAT GRINDER
Henry J. Talge, Kansas City, Mo., and James B. Aberer, Mission, Kans., assignors to John C. Hockery, Kansas City, Mo., trustee
Application March 11, 1959, Serial No. 54,928
Term of patent 14 years
(Cl. D69—1)



185,896
TIRE
Rush M. Johnson, Jr., Wadsworth, Ohio, assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Application December 15, 1958, Serial No. 53,766
Term of patent 14 years
(Cl. D90—20)



185,897
PUMP HANGER FOR AQUARIUMS
Ludwig Stark, Springfield, N.J.
Application December 30, 1957, Serial No. 49,064
Term of patent 14 years
(Cl. D91—2)



Ideal Toy Corp.: *See*—
Patton, Roy C. Spraying unit. 185,842. 8–11–59. Cl. D14—3.

LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 11TH DAY OF AUGUST, 1959

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Chubb, Alexander A., and M. M. Levy, to The General Electric Co. Ltd. Automatic telephone systems. Re. 24,679, 8–11–59, Cl. 179—18.

Chubb, Alexander A., R. Mawson, and M. M. Levy, to The General Electric Co. Ltd. Automatic telephone exchanges. Re. 24,680, 8–11–59, Cl. 179—18.

General Electric Co. Ltd., The: *See*—
Chubb, Alexander A., and Levy. Re. 24,679.
Chubb, Alexander A., Mawson, and Levy. Re. 24,680.

Levy, Maurice M.: *See*—
Chubb, Alexander A., and Levy. Re. 24,679.
Chubb, Alexander A., Mawson, and Levy. Re. 24,680.

Mawson, Ronald: *See*—
Chubb, Alexander A., Mawson, and Levy. Re. 24,680.

Minneapolis-Honeywell Regulator Co.: *See*—
Pinckaers, Balthasar H. Re. 24,678.

Pinckaers, Balthasar H., to Minneapolis-Honeywell Regulator Co. Transistor control apparatus. Re. 24,678, 8–11–59, Cl. 307—88.5.

LIST OF PLANT PATENTEES

Peters, Geo., & Sons, Inc.: *See*—
Peters, Lincoln and N. 1,858.

Peters, Lincoln and N., to Geo. Peters & Sons, Inc. Rose plant. 1,858, 8–11–59, Cl. 47—61.

Peters, Norman: *See*—
Peters, Lincoln and N. 1,858.

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Aberer, James B.: *See*—
Talge, Henry J., and Aberer. 185,895.

Akioka, Yoshio: *See*—
Kawa, Junnosuke, Akioka, and Kaneko. 185,885.

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Descarries, Raymond. 185,837.

Allemang, Herbert J. Vacuum cleaner casing. 185,838, 8–11–59, Cl. D9—2.

American Seating Co.: *See*—
Hoven, Alfred C., Lindberg, and Nordmark. 185,868.

Anderson, Frank H. Decoy. 185,866, 8–11–59, Cl. D31—4.

Apostolescu, Stefan. Toy rocket. 185,870, 8–11–59, Cl. D34—15.

Armstrong, Richard G., and M. M. Palo, to The Astatic Corp. Microphone case or similar article. 185,860, 8–11–59, Cl. D26—14.

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Baker, Walter F., to Owens-Illinois Glass Co. Bottle. 185,880, 8–11–59, Cl. D58—8.

Bamberger, Julien G., to B-T Co., Inc. Stabiliser fin for boats. 185,888, 8–11–59, Cl. D71—1.

Bamburg, Robert A., to Olin Mathieson Chemical Corp. Produce carton. 185,882, 8–11–59, Cl. D58—12.

Barnes, Kenneth W. Illuminable sign. 185,832, 8–11–59, Cl. D1—12.

Barton, Glenn I., to Totem Wood Industries. Combination display package for table legs and appurtenant hardware or the like. 185,890, 8–11–59, Cl. D80—5.

Bassett, W. E., Co., The: *See*—
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Bergeron, Victor J. Plate. 185,873, 8–11–59, Cl. D44—15.

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Bruntjen, Hans W. Soft drink dispenser. 185,833, 8–11–59, Cl. D2—3.

Chiandussi, Elti, and H. L. Miller. Combined floodlight bracket and outlet box. 185,857, 8–11–59, Cl. D26—5.

Christenson, Trace, and W. W. Good, to Harter Corp. Chair. 185,849, 8–11–59, Cl. D15—1.

Christenson, Trace, and W. W. Good, to Harter Corp. Chair. 185,850, 8–11–59, Cl. D15—1.

Christenson, Trace, and W. W. Good, to Harter Corp. Chair. 185,851, 8–11–59, Cl. D15—1.

Cross, Thomas E. Combination bottle and ash tray holder. 185,884, 8–11–59, Cl. D58—26.

Danneman, Sidney: *See*—
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Dawson, Collins T., to The W. E. Bassett Co. Combined tool case and key chain. 185,894, 8–11–59, Cl. D67—3.

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Frank, Howard W., to Huntington Ice Cream Co. Building. 185,839, 8–11–59, Cl. D13—1.

Frees, David, and E. L. Schwartz, to Sutone Corp. Curb feeler. 185,845, 8–11–59, Cl. D14—6.

Fuerst, Brooks D., to Owens-Illinois Glass Co. Decanter. 185,881, 8–11–59, Cl. D58—8.

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James, Norman J. 185,843.

Gephardt, Clarence G., and S. Danneman. Merchandise display stand. 185,891, 8–11–59, Cl. 80—9.

Gerrie, James K.: *See*—
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Christenson, Trace, and Good. 185,851.

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Harley, Ben W., R. C. Shape, and N. H. Mealy, to The Warren Steel Specialties Corp. Tire rack. 185,892, 8–11–59, Cl. D80—10.

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Christenson, Trace, and Good. 185,850.
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Hebrank, William F. Boat anchor. 185,889, 8–11–59, Cl. D71—1.

Heidenblut, George R., and A. H. Titus, Jr. Room air conditioner. 185,887, 8–11–59, Cl. D62—4.

Herman, Clyde A. Fishing lure. 185,865, 8–11–59, Cl. D31—4.

Hirschman, Jerome C. Building. 185,840, 8–11–59, Cl. D13—1.

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Hoven, Alfred C., W. S. Lindberg, and W. R. Nordmark, to American Seating Co. Combined chair and desk. 185,868, 8–11–59, Cl. D33—11.

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Humphreys, Adolph H. Medal or similar article. 185,862, 8–11–59, Cl. D29—19.

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Johnson, Rush M., Jr., to The B. F. Goodrich Co. Tire. 185,896, 8–11–59, Cl. D60—20.
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Kawa, Junnosuke, Y. Akioka, and I. Kaneko, to Seiko Electric Instrument Industry Co., Ltd. Exposure meter. 185,885, 8–11–59, Cl. D61—1.
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Ketcham and McDougall, Inc.: *See*—
McFadyen, Richard J. 185,852.
Lagassey, Homer C., Jr., to Chrysler Corp. Automobile tail lamp. 185,875, 8–11–59, Cl. D48—32.
Leonard, Ralph N., to The Radion Corp. Combined antenna housing and channel selector or similar article. 185,859, 8–11–59, Cl. D26—14.
Liberty, Nicholas R. Milk carton holder. 185,883, 8–11–59, Cl. D58—26.
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Lower, James C., and P. D. Sanborn, to National Laboratories, Inc. Combined brush holder and receptacle for cleansing liquid or the like. 185,834, 8–11–59, Cl. D9—2.
Mattingly, Flora M. Pair of pliers. 185,877, 8–11–59, Cl. D54—13.
McCarthy, Joseph H., and H. P. Zimmermann, to The General Fireproofing Co. Desk. 185,867, 8–11–59, Cl. D32—7.
McFadyen, Richard J., to Ketcham and McDougall, Inc. Spectacle holder. 185,852, 8–11–59, Cl. D17—15.
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Rambusch, Harold W., and J. Santos, to Rambusch Decorating Co. Ceiling light fixture or similar article. 185,874, 8–11–59, Cl. D48—23.
Reichow, James R., to Brown & Bigelow. Clock. 185,871, 8–11–59, Cl. D42—7.
Reinecke, Jean O., and J. K. Gerrie, to McGraw-Edison Co. Automatic clothes dryer. 185,876, 8–11–59, Cl. D40—2.
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Sanborn, Phillip D.: *See*—
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Schwartz, Edwin L.: *See*—
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Scofield, Donald H., to Insul-8-Corp. Electrical conductor of the suspended cable type. 185,856, 8–11–59, Cl. D26—1.
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Harley, Ben W., Shape, and Mealy. 185,892.
Stark, Ludwig. Pump hanger for aquariums. 185,897, 8–11–59, Cl. D91—2.
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Sutone Corp.: *See*—
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Talge, Henry J., and J. B. Aberer, to J. C. Hockery. Meat grinder. 185,895, 8–11–59, Cl. D89—1.
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Barton, Glenn I. 185,890.
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Van Den Berg, Richard H. 185,854.
Van Den Berg, Richard H., to U-Test-M Mfg. Co., Inc. Tester cabinet. 185,854, 8–11–59, Cl. D26—1.
Von Seekamm, Egon F., to The Electric Storage Battery Co. Pair of sunglasses. 185,878, 8–11–59, Cl. D57—1.
Warren Steel Specialties Corp., The: *See*—
Harley, Ben W., Shape, and Mealy. 185,892.
Webke, Charles. Ash tray. 185,893, 8–11–59, Cl. D65—2.
Westland Plastics, Inc.: *See*—
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Yager, Harry L. Portable mixer. 185,844, 8–11–59, Cl. D14—3.
Zimmermann, Herbert P.: *See*—
McCarthy, Joseph H., and Zimmermann. 185,867.

for vacuum cleaner. 186,836, 8–11–59, Cl. D9—2.

Washington Ice Cream Co.: *See*—
Frank, Howard W. 186,839.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 11TH DAY OF AUGUST, 1959

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

ASCO Automatic Specialties Corp.: *See*—
Seward, Edwin R., and Gainer. 2,898,944.

Abbott, Thomas I.: *See*—
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Abrams, Ralph, to Cambridge Thermionic Corp. Adjustable assembly. 2,899,220, 8–11–59, Cl. 287—20.

Abrams, Ralph, to Cambridge Thermionic Corp. Insulating mount. 2,899,486, 8–11–59, Cl. 174—166.

Acterman, Joseph S., to North American Aviation, Inc. Auto-lubricated gas thrust bearing. 2,899,243, 8–11–59, Cl. 308—9.

Adam, Folger. Jail locking devices, and the like. 2,899,027, 8–11–59, Cl. 189—7.

Adams, Clark E., and C. N. Kimberlin, Jr., to Esso Research and Engineering Co. 2 vinyl pyridine polymers for ion exchange reactions. 2,899,396, 8–11–59, Cl. 260—2.1.

Adams, George P., to Western Electric Co., Inc. Apparatus for forming spring cords. 2,898,630, 8–11–59, Cl. 18—19.

Adams, Jane. Infant's diaper. 2,898,912, 8–11–59, Cl. 128—284.

Aelony, David, and H. Wittcoff, to General Mills, Inc. Polyamide resin-epoxy resin and emulsions. 2,899,397, 8–11–59, Cl. 260—18.

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Ajero, Fortunato S. Vehicle lift gate assembly. 2,899,089, 8–11–59, Cl. 214—77.

Akerlof, Gosta C., to Aerochem Research Laboratories. Method of preparing organo-silicon compounds. 2,899,371, 8–11–59, Cl. 204—165.

Aktiebolaget Elektrolux: *See*—
Ullstrand, Hugo M. 2,898,748.

Aktiebolaget Pharmacia: *See*—
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Alderfer, Sterling W., and Bodley. 2,898,626.

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Alderfer, Sterling W., to Sterling Alderfer Co. Method for producing foamed plastic material. 2,898,634, 8–11–59, Cl. 18—59.

Alfredsson, Per-Olof: *See*—
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Allander, Claes, P.-O. Alfredsson, and S. Wallin, to Aktiebolaget Svenska Flaktfabriken. High-velocity air-conditioning. 2,899,180, 8–11–59, Cl. 257—377.

Allemann, Hugo, to Hugo Allemann A.G. Automatically controlled machine tool. 2,898,784, 8–11–59, Cl. 77—34.5.

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Allen-Harper, Inc.: *See*—
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Allen, Kenneth M., and C. H. Harper, to Allen-Harper, Inc. Vibrating conveyors. 2,899,044, 8–11–59, Cl. 198—220.

Allen, Francis P., to E. I. du Pont de Nemours and Co. Mechanism for positioning an adhesive strip material in a splicing apparatus. 2,899,200, 8–11–59, Cl. 271—2.5.

Allied Chemical Corp.: *See*—
Davis, George A. 2,899,012.
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Allison, John R., to Lellingwell Chemical Co. Oil-miscible, water insoluble soap complexes. 2,899,389, 8–11–59, Cl. 252—35.

Allmand, Leslie E. and W. C. Electric lantern. 2,899,540, 8–11–59, Cl. 240—10.5.

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American Agricultural Chemical Co., The: *See*—
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American Petroleum Institute: *See*—
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Anderson, Donald: *See*—
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Anderson, Gordon C., and D. B. Hopkinson, to Saco-Lowell Shops. Roving frame lifting spindle. 2,898,729, 8–11–59, Cl. 57—96.

Anderson, John W. Universal windshield wiper arm remover. 2,898,674, 8–11–59, Cl. 29—278.

Andres, Roy K., to Radio Corp. of America. Automatic switching circuit. 2,899,497, 8–11–59, Cl. 178—17.

Andrews, John L., to General Electric Co. Electric heating units and methods of making the same. 2,899,664, 8–11–59, Cl. 338—240.

Andrews, Rufus A., to Vickers, Inc. Plunger type solenoid. 2,899,609, 8–11–59, Cl. 317—191.

Anger, Ernest G., and R. C. Montross, to Square D Co. Electric motor controllers. 2,899,620, 8–11–59, Cl. 318—331.

Anicetti, Robert J., to United States of America, Atomic Energy Commission. Process of producing shaped plutonium. 2,899,298, 8–11–59, Cl. 75—84.1.

Antenna Specialists Co., The: *See*—
Friedberg, Milton R., and Stewart. 2,899,685.

Ardito, William A., to Westinghouse Electric Corp. Vacuum cleaner coupling with expandable ring locking means. 2,899,215, 8–11–59, Cl. 285—7.

Bock Laundry Machine Co.: *See*—
Clement, Carl H., Jr. 2,899,082.

Bromley, James E., to The Chemstrand Corp. Flexible coupling. 2,898,751, 8–11–59, Cl. 64—11.

Armour and Co.: *See*—
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Reynolds, Clarence R., Asad, and Boodey. 2,899,209.
Asahi Chemical Industry Co., Ltd., The: *See*—
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Ashbrook, Clifford L., and P. L. Peterschmidt, to H. T. Chamberlain, trustee. Pipe coupling device with pressure activated pipe gripping means. 2,899,217, 8–11–59, Cl. 285—105.
Ashworth, Winthrop F., to United-Carr Fastener Corp. Fastening device. 2,898,656, 8–11–59, Cl. 24—217.
Aston, Blaine S.: *See*—
Doepke, Charles W., and Aston. 2,899,107.
Atalla, Martin M., E. J. Scheibner, and E. Tannenbaum, to Bell Telephone Laboratories, Inc. Fabrication of semiconductor devices having stable surface characteristics. 2,899,344, 8–11–59, Cl. 148—1.5.
Atkinson, Donald L., and L. E. Curriston, to Lear, Inc. Gyroscope. 2,898,765, 8–11–59, Cl. 74—5.
Atkinson, Peter D.: *See*—
Drewe, John, and Atkinson. 2,899,568.
Atlas Powder Co.: *See*—
Lutz, Earle R., and Sheffield. 2,898,817.
Atwell, Locke P., J. F. Elwell, and G. E. Spaulding, Jr. Spark plug having protruding tip. 2,899,479, 8–11–59, Cl. 123—169.
Austin, Eldon G. Rotary-cutter attachment for portable chainsaw motor. 2,898,959, 8–11–59, Cl. 144—208.
Austin, Eldon G., to Molalla Mfg. Co. Routing apparatus. 2,898,960, 8–11–59, Cl. 144—208.
Avery, Clarence L., to Woodward Governor Co. Speed controller for impulse turbines. 2,898,925, 8–11–59, Cl. 137—35.
Avien, Inc.: *See*—
Levine, Robert J. 2,899,151.
Aydlett, Guy D., to Eastman Kodak Co. Matrix registration folder. 2,898,833, 8–11–59, Cl. 95—73.
Babits, Carl. Ladder step. 2,899,011, 8–11–59, Cl. 182—228.
Backer, Leon C. Pipe coupling. 2,898,945, 8–11–59, Cl. 138—99.
Bahnson, Agnew H., Jr. Apparatus for controlling exhaust of motor alley heat in textile work rooms. 2,898,727, 8–11–59, Cl. 57—56.
Bailey, Richard P., to Quebec Metallurgical Industries Ltd. Method for extracting nickel from laterite ores. 2,899,300, 8–11–59, Cl. 75—101.
Bair, Lura K. Illuminated fishing lure. 2,898,698, 8–11–59, Cl. 43—17.5.
Baisley, Raymond J.: *See*—
Keely, Clifford D. 2,898,816.
Keely, Clifford D. 2,898,820.
Baker Perkins, Inc.: *See*—
Engels, Eugene O. 2,899,135.
Irving, Henry F. 2,899,065.
Smith, Harold K., and Gibbons. 2,899,040.
Baldwin-Lima-Hamilton Corp.: *See*—
Brown, Edwin C., and Gaden. 2,899,006.
Govan, William L. 2,899,053.
Baldwin Piano Co., The: *See*—
Gregory, Marion B. 2,899,648.
Ballew, Julius R. Anchoring device. 2,899,029, 8–11–59, Cl. 189—92.
Bamat, Joseph, to Amida S. A. Watch movement including a sweep seconds hand. 2,898,730, 8–11–59, Cl. 58—59.
Bancroft, George H., to Consolidated Electrodynamics Corp. Liquid level control apparatus. 2,898,933, 8–11–59, Cl. 137—392.
Bancroft, Joseph, & Sons Co.: *See*—
Nuessle, Albert C., and McKone. 2,899,263.
Barber-Colman Co.: *See*—
Westbrook, Lowell V. 2,898,981.
Barclay, Earle H. Method of forming an abrasive sheet. 2,899,288, 8–11–59, Cl. 51—293.
Barden, Wayne A., and C. C. Snyder, to Chicago Telephone Supply Corp. High voltage variable resistor. 2,899,662, 8–11–59, Cl. 338—174.
Barecki, Chester J., to American Seating Co. Safety equipment for vehicle occupants. 2,898,976, 8–11–59, Cl. 155—189.
Barecki, Chester J., to American Seating Co. Automatic reel. 2,899,146, 8–11–59, Cl. 242—107.4.
Barnby, Herbert A., to Owens-Illinois Glass Co. Carrier for bottles and other containers. 2,899,051, 8–11–59, Cl. 206—65.
Barr, John C., to Power Jets (Research & Development) Ltd. Power producing equipment incorporating gas turbine plant. 2,898,731, 8–11–59, Cl. 60—13.
Barshefsky, Gustave: *See*—
Young, Harland H., Ohlson, and Barshefsky. 2,899,352.
Battista, Anthony V. Lubricating rack construction. 2,898,841, 8–11–59, Cl. 20—.8.
Bauer, Eduard, to The Cincinnati Milling Machine Co. Digital positioning device. 2,899,621, 8–11–59, Cl. 318—467.
Bauer, George W.: *See*—
Busch, Lee S., and Bauer. 2,899,393.
Bauer, Kurt P., G. Bitzer, and H. E. Haehnel, to Textile Machine Works. Welt bar operating means for straight bar knitting machines. 2,898,753, 8–11–59, Cl. 66—96.
Bauf, Carl, and C. Otzen, to Agfa Camera-Werk Akt. Objective for enlargements. 2,898,808, 8–11–59, Cl. 88—57.
Bavley, Abraham, and B. E. Tate, to Chas. Pfizer & Co., Inc. Product and production of diesters of 2-carboxybicyclo-[2.2.1]-hept-5-ene-2-acetic acid. 2,899,457, 8–11–59, Cl. 260—468.
Bavley, Abraham, and B. E. Tate, to Chas. Pfizer & Co., Inc. Production of 2 - carboxy - 2 - carboxymethylbicyclo - [2.2.1] - hept - 5 - ene. 2,899,462, 8–11–59, Cl. 260—514.
Baza, James F., to Wheeling Steel Corp. Apparatus for forming a boiler head or the like. 2,898,788, 8–11–59, Cl. 78—61.
Bayard, Kenneth T. Bag holder and opener. 2,899,161, 8–11–59, Cl. 248—101.
Beal, Philip F., and J. A. Hogg, to The Upjohn Co. 3β,11β,-17α,21-tetrahydroxy-5-pregnen-20-one, 3,21-diesters intermediates and process for the production thereof. 2,899,448, 8–11–59, Cl. 260—397.45.
Bean, William T., Jr., to Tatnall Measuring Systems Co. Leaf-type electrical resistance strain gage. 2,899,638, 8–11–59, Cl. 338—2.
Beck, Raymond C., to The Fuller Brush Co. Handle connection for a mop. 2,898,619, 8–11–59, Cl. 15—144.
Beck, Robert H., to E. I. du Pont de Nemours and Co. Apparatus for coating and drying photographic layers. 2,898,882, 8–11–59, Cl. 118—50.
Becker, Philip D., to United-Carr Fastener Corp. Fastening device. 2,898,654, 8–11–59, Cl. 24—81.
Beckman Instruments, Inc.: *See*—
Sprackler, Stanford B. 2,899,258.
Bedford, William A., Jr., to United-Carr Fastener Corp. Fastening device. 2,898,653, 8–11–59, Cl. 24—73.
Bednarski, Thaddeus E., to John Oster Mfg. Co. Electric motor driven knife sharpener. 2,898,709, 8–11–59, Cl. 51—102.
Behring, Hans, to Kieler Howaldtswerke A.G. Fishing vessel. 2,898,695, 8–11–59, Cl. 43—8.
Bell & Gossett Co.: *See*—
Carlson, Gilbert F. 2,898,931.
Sykes, Robert E. 2,899,130.
Bell Telephone Laboratories, Inc.: *See*—
Atalla, Martin M., Scheibner, and Tannenbaum. 2,899,344.
Dubear, Arthur S. 2,899,503.
Goodall, William M., and Rowe. 2,899,508.
Hussey, Luther W. 2,899,642.
Johannesen, John D., Myers, and Schwenker. 2,899,570.
Kircher, Raymond J. 2,899,569.
Kompfner, Rudolf. 2,899,597.
Lovecky, Albert J. 2,898,962.
Lynch, Robert T. 2,899,299.
McCarthy, John A. 2,899,577.
Mueller, Ralph L., and Stiefitz. 2,899,568.
Myers, Peter B. 2,899,571.
Read, William T., Jr. 2,899,646.
Read, William T., Jr. 2,899,652.
Sloanewski, Thaddeus. 2,899,643.
Tryon, John G. 2,899,133.
Bemberg, J. P., Akt.: *See*—
Pirot, Ernst. 2,899,201.
Bemis Bro. Bag Co.: *See*—
Kindseth, Harold V. 2,899,347.
Bender, Georg, and A. Krauthakel, to VEB Leuna-Werke "Walter Ulbricht." Regenerating air heater system. 2,899,188, 8–11–59, Cl. 263—19.
Bendix Aviation Corp.: *See*—
Capron, Robert W. 2,899,653.
Hughes, William J., Haynes, Tracey, and Wheeler. 2,899,538.
Sturm, Ralph E., and Morgan. 2,899,494.
Berger Bros. Co.: *See*—
Wolfe, Morton B. 2,899,157.
Bergson, Gustav. Gas analyzing system of the radiant energy absorption type. 2,898,800, 8–11–59, Cl. 88—14.
Berndt, Franz, and H.-G. Wendlandt, to Spinnfaser Akt. Process for purifying air. 2,899,267, 8–11–59, Cl. 23—4.
Berthelsen, Walter, and A. F. Whitehead, to Pneumatic Scale Corp., Ltd. Vacuum filling machine. 2,898,953, 8–11–59, Cl. 141—48.
Bianco, Henry J., to The Burch Co. Mounting rail for sliding window screens. 2,898,984, 8–11–59, Cl. 160—90.
Biedess, Anthony R., to Goodman Mfg. Co. Bit mounting means for boring head cutters. 2,899,187, 8–11–59, Cl. 262—33.
Billinghurst, Wilfred A. Device for golf putting practice. 2,899,207, 8–11–59, Cl. 273—177.
Bindler, Jakob: *See*—
Kleemann, Alois, and Bindler. 2,899,354.
Bingham, Robert E.: *See*—
Salem, Samuel, Bingham, and Anderson. 2,898,665.
Bird, William H., O. S. Plantinga, and J. E. Newsome, to Johnson & Johnson. Fibrous absorbent ball and method of producing same. 2,899,337, 8–11–59, Cl. 117—64.
Birdseye, Clarence, to Process Evaluation and Development Corp. Process for storing and digesting of fibrous agricultural residues. 2,899,350, 8–11–59, Cl. 162—90.
Birr, Rudolph G., to American Linen Supply Co. Universal joint. 2,899,225, 8–11–59, Cl. 287—20.
Birr, Rudolph G., to American Linen Supply Co. Towel dispensing cabinets. 2,899,251, 8–11–59, Cl. 312—38.
Bitzer, Gottlob: *See*—
Bauer, Kurt P., Bitzer, and Haehnel. 2,898,753.
Blake, Richard F.: *See*—
Ware, Colin C., Blake, and Demers. 2,899,566.
Bley, Rudolph S., R. H. Carter, D. J. Edgar, L. R. Grayboal, and K. M. Schmidt, to North American Rayon Corp. Process and apparatus for the continuous production of synthetic thread. 2,898,627, 8–11–59, Cl. 18—8.
Bloom, Barry M., to Chas. Pfizer & Co., Inc. Synthesis of 1,3-diazacycloalkene-2. 2,899,426, 8–11–59, Cl. 260—239.5.
Bloom, Barry M., to Chas. Pfizer & Co., Inc. 2-phenylamino-1,3-diazacyclohexene-2. 2,899,434, 8–11–59, Cl. 260—256.4.
Bochory, Michael. Automatic clutch construction. 2,899,032, 8–11–59, Cl. 192—48.

Carbonneau, Gordon S. Spark plug testing and setting appa-
Cheetham, William R., and W. G. Parr, to Pye Ltd. Tele-

Bock Laundry Machine Co.: *See*—
Clement, Carl H., Jr. 2,899,082.

Bodley, Harry D.: *See*—
Alderfer, Sterling W., and Bodley. 2,898,626.

Boegle, Charles, to Societe anonyme Procedes Sauter. Hydraulic coupling. 2,898,739, 8–11–59, Cl. 60—54.

Boehm, Eric G., to Houdaille Industries, Inc. Torsional vibration damper. 2,898,777, 8–11–59, Cl. 74—574.

Boeing Airplane Co.: *See*—
Weiland, Richard H. 2,899,152.

Boisture, Worth W.: *See*—
Swabb, Lawrence E., Jr., and Boisture. 2,899,384.

Bolland, Oscar J. Automatic fishing devices. 2,898,696, 8–11–59, Cl. 43—15.

Bombardier, Germain. Endless tread for motor driven vehicles. 2,899,242, 8–11–59, Cl. 305—10.

Bond, George C.: *See*—
Smith, Raymond A., McClure, and Bond. 2,899,274.

Bonnerre, Lucien, to Compagnie Auxiliaire d'Electricite et d'Entreprise. Mould for vulcanization of electrical cables. 2,899,527, 8–11–59, Cl. 219—19.

Booth, William M., to Gardner-Denver Co. Oil feeder having restrictor. 2,899,018, 8–11–59, Cl. 184—55.

Bornemann, William, to Eastman Kodak Co. Device for handling and transporting a plurality of elements. 2,899,234, 8–11–59, Cl. 294—115.

Bossard, Werner, and P. Dussy, to J. R. Geigy S.A. Colour photography. 2,899,305, 8–11–59, Cl. 96—53.

Boughtwood, John E., and F. H. Cusack, to The Western Union Telegraph Co. Diversity telegraph system. 2,899,548, 8–11–59, Cl. 250—8.

Bounin, Claude. Method and apparatus for accelerating the degree and rate of separation of solids from liquids. 2,899,071, 8–11–59, Cl. 210—527.

Bourque, Paul E.: *See*—
Farmer, Doris. 2,899,533.

Bower, Frank A., and J. W. Heberling, Jr., to E. I. du Pont de Nemours and Co. Preparation of monochloro-1,1-difluoroethanes. 2,899,472, 8–11–59, Cl. 260—653.8.

Bowerston Shale Co., The: *See*—
Milliken, Frank H. 2,898,741.

Bowman, Anna H.: *See*—
Bowman, Samuel G. 2,898,794.

Bowman, Samuel G., deceased, ½ to A. H. Bowman and J. M. Guthrie. Pipe organ valve. 2,898,794, 8–11–59, Cl. 84—337.

Bradley, Harry L., and R. S. Hower, to Allen-Bradley Co. Capacitor. 2,899,611, 8–11–59, Cl. 317—242.

Bradley, William E., to Philco Corp. Electronic cooling device and method for the fabrication thereof. 2,898,743, 8–11–59, Cl. 62—3.

Brainard, Edwin W. Winding device for fishing reels. 2,899,148, 8–11–59, Cl. 242—129.8.

Brandstrom, Arne E., to Aktiebolaget Pharmacia. 5-neopentyl 5-allyl barbituric acid and salts thereof. 2,899,435, 8–11–59, Cl. 260—257.

Braunstain, Jules A. Automatic addressing machine. 2,898,850, 8–11–59, Cl. 101—134.5.

Bray, Frederick H., P. M. King, and J. Rice, to International Standard Electric Corp. Timing equipment. 2,899,500, 8–11–59, Cl. 179—7.

Bredtschneider, Kurt B., F. M. Onak, and M. H. Stuart, to Crane Co. Connector for the consumable electrode of an arc melting furnace. 2,899,667, 8–11–59, Cl. 339—9.

Breguet, Antoine J. E. L.: *See*—
Breguet, Louis. 2,899,149.

Breguet, Claire J.: *See*—
Breguet, Louis. 2,899,149.

Breguet, Gilberte M. L.: *See*—
Breguet, Louis. 2,899,149.

Breguet, Jacqueline Y.: *See*—
Breguet, Louis. 2,899,149.

Breguet, Louis, deceased; C. J., A. J. E. L., J. Y., G. M. L., P. E. L., P. G. R. L., P. A. L., and L-C. A. M. Breguet, under legal guardianship of C. J. Breguet, sole heirs. Aircraft having ducted turbine driven lift rotors. 2,899,149, 8–11–59, Cl. 244—12.

Breguet, Louis-Christian A. M.: *See*—
Breguet, Louis. 2,899,149.

Breguet, Pascal A. L.: *See*—
Breguet, Louis. 2,899,149.

Breguet, Paul G. R. L.: *See*—
Breguet, Louis. 2,899,149.

Breguet, Pierre E. L.: *See*—
Breguet, Louis. 2,899,149.

Brennan, Edward L., E. J. Quinn, R. S. Sellers, and G. C. Wagner, to Chas. Pfizer & Co., Inc. Surface hydrated citric acid crystals. 2,899,467, 8–11–59, Cl. 260—535.

Brenner, Al. Awning window locking mechanism. 2,898,645, 8–11–59, Cl. 20—42.

Brevetti Gaggia S.r.l.: *See*—
Gaggia, Giovanni A. 2,898,844.

Bright, Thomas J. R. Draught excluding strips and mounting means therefor. 2,898,648, 8–11–59, Cl. 20—69.

British Cotton Industry Research Association, The: *See*—
Griffiths, Jack, and Harland. 2,899,284.

Britt, Herbert E., to Air Products Co. Dump valve. 2,898,934, 8–11–59, Cl. 137—512.1.

Brock, Clarence A., to Rexair, Inc. Vacuum cleaner hose coupling having a rigidly encased resilient bushing. 2,899,216, 8–11–59, Cl. 285—7.

Broecker, Carl J. Depth indicator for trenching machines. 2,898,687, 8–11–59, Cl. 33—185.

Brogdex Co.: *See*—
Straley, James E. 2,898,851.

Brömer, Heinz, and W. Meinert, to Ernst Leitz, G.m.b.H. Optical glass. 2,899,322, 8–11–59, Cl. 106—47.

Bromley, James E., to The Chemstrand Corp. Flexible coupling. 2,898,751, 8–11–59, Cl. 64—11.

Bronstein, Harry. Cam operated ball detent coupling pin. 2,898,797, 8–11–59, Cl. 85—5.

Bronstien, Edward L., to United States Bedding Co. Spring assembly machines. 2,898,950, 8–11–59, Cl. 140—92.8.

Brooks, E. J., Co.: *See*—
Moberg, Sigurd M. 2,899,230.

Brown, Edwin C., and C. W. Gaden, to Baldwin-Lima-Hamilton Corp. Slow-fast power steering system. 2,899,006, 8–11–59, Cl. 180—79.2.

Brown, Harold J. Converter system having load energy absorption means. 2,899,625, 8–11–59, Cl. 321—2.

Brown, Harold J. Converter system having separation of function. 2,899,626, 8–11–59, Cl. 321—2.

Brown, Thomas G., to Reed Mfg. Co. Vise stand. 2,899,073, 8–11–59, Cl. 211—13.

Brundage, Robert W. Variable volume internal chamber type hydraulic pump. 2,898,862, 8–11–59, Cl. 103—120.

Brunsmeier, Howard D., and A. G. Mitchell. Handling and elevating device for positioning wall and ceiling board. 2,899,084, 8–11–59, Cl. 214—1.

Bryan, James S., to Philco Corp. Cathode ray tube systems utilizing secondary electron emission to generate indexing signals. 2,899,600, 8–11–59, Cl. 315—12.

Bryant Electric Co., The: *See*—
Smith, Clarence M. 2,899,524.

Bryant, James G. Corn sheller having an aspirator conduit. 2,898,921, 8–11–59, Cl. 130—6.

Buchner, Karl, to Ruhrchemie Aktiengesellschaft. Regeneration of cobalt sulfate-containing catalyst solutions. 2,899,395, 8–11–59, Cl. 252—411.

Buck, Clyde D. Heating stove using various kinds of fuel. 2,898,904, 8–11–59, Cl. 126—110.

Buckeye Steel Castings Co., The: *See*—
Furniss, Leroe E. 2,899,083.

Buddeberg, Walter, and P. M. F. H. Nebel, to Firma Krauss-Maffei Akt. Process and apparatus for clarifying and desugarising a carbonation sludge. 2,899,342, 8–11–59, Cl. 127—56.

Budayna, Joseph M., to Draper Corp. Shuttle binder. 2,898,946, 8–11–59, Cl. 139—186.

Bukosky, James R.: *See*—
Nordquist, Richard A., Miller, Bukosky, and Lindgren. 2,898,685.

Bunch, Tillman T., to Western Electric Co., Inc. Article handling apparatus. 2,899,142, 8–11–59, Cl. 242—25.

Bunn, B. H., Co.: *See*—
Bunn, Benjamin H. 2,898,847.

Bunn, Benjamin H., to B. H. Bunn Co. Tying machine. 2,898,847, 8–11–59, Cl. 100—4.

Burch Co., The: *See*—
Bianco, Henry J. 2,898,984.

Burch, Lewis D., to General Motors Corp. Engine. 2,898,898, 8–11–59, Cl. 123—52.

Burch, Lyndon W., to Texas Instruments Inc. Switch mechanism. 2,899,512, 8–11–59, Cl. 200—67.

Burch, Oscar G., to Owens-Illinois Glass Co. Method of forming hollow plastic articles. 2,898,633, 8–11–59, Cl. 18—55.

Burnett, Alexander H., to Swift & Co. Meat slicing machine control apparatus. 2,898,962, 8–11–59, Cl. 146—94.

Burroughs Corp.: *See*—
Self, Erle. 2,899,551.

Busch, Lee S., and G. W. Bauer, to Mallory-Sharon Titanium Corp. Alpha titanium alloys containing aluminum and columbium. 2,899,303, 8–11–59, Cl. 75—175.5.

Bush, Russell J., and R. E. Sayre, to General Motors Corp. Window frame. 2,898,643, 8–11–59, Cl. 20—11.

Bush, Russell J., and R. E. Sayre, to General Motors Corp. Window frame. 2,898,647, 8–11–59, Cl. 20—56.4.

Busser, Kay: *See*—
Coover, Richard E. 2,898,616.

Butler, Donald H. Water hardening mixtures. 2,899,326, 8–11–59, Cl. 106—97.

Butner, Robert E., and O. M. Young. Dispensing pill box. 2,899,047, 8–11–59, Cl. 206—42.

Buttner, Artur, to Schnellpressenfabrik Akt. Heidelberg. Sheet feeding mechanism for sheet handling apparatus. 2,899,203, 8–11–59, Cl. 271—53.

Butzow, George M. Sand conditioning apparatus. 2,898,651, 8–11–59, Cl. 22—89.

Cadle, Richard D., and R. W. Meshier. Perchlorate salts of alkanol amines. 2,899,466, 8–11–59, Cl. 260—584.

Caldwell, John R., and J. W. Wellman, to Eastman Kodak Co. Copolyesters of a glycol, p,p'-sulfonyldibenzoic acid and an aniline derivative. 2,899,408, 8–11–59, Cl. 260—75.

Caldwell, John R., and E. H. Hill, to Eastman Kodak Co. Polysulfone resins from bicycloheptene derivatives and sulfur dioxide. 2,899,412, 8–11–59, Cl. 260—79.3.

Cale, Stanley A., to Colborne Mfg. Co. Removable scraper assembly for dough sheeting machine. 2,898,873, 8–11–59, Cl. 107—12.

Calhoun, Ernest N., to Edwin L. Wiegand Co. Electric heating apparatus. 2,899,529, 8–11–59, Cl. 219—34.

California Research Corp.: *See*—
Price, Bernard A. 2,899,556.
Scott, John W., Jr. 2,899,365.

Cambridge Thermionic Corp.: *See*—
Abrams, Ralph. 2,899,220.
Abrams, Ralph. 2,899,488.

Campbell, Oliver, and N. R. Pennels, to Sinclair Refining Co. Heater. 2,898,892, 8–11–59, Cl. 122—356.

Campbell, Rufus M. Variable speed cone pulley drive. 2,898,772, 8–11–59, Cl. 74—217.

Cape, Arthur T., and C. V. Feerster, to Coast Metals, Inc. Nickel-silicon-boron alloys. 2,899,302, 8–11–59, Cl. 75—170.

Capron, Robert W., to Bendix Aviation Corp. Transducer. 2,899,653, 8–11–59, Cl. 336—30.

ratus. 2,899,634, 8–11–59, Cl. 324—15.
Cartin, Herbert J., to Polytechnic Institute of Brooklyn. Broadband power meter. 2,899,640, 8–11–59, Cl. 324—95.
Cartin, Herbert J., to Polytechnic Institute of Brooklyn. Multiplex signalling system. 2,899,650, 8–11–59, Cl. 333—5.
Carlson, Leonard O., and A. H. Krastel, to The Gleason Works. Index mechanism for a gear machine or the like. 2,898,780, 8–11–59, Cl. 74—813.
Carlson, Leonard O., and H. A. Male, to The Gleason Works. Chamfering machine. 2,898,813, 8–11–59, Cl. 90—1.4.
Carlson, Axel S. Cemetery vase. 2,898,705, 8–11–59, Cl. 47—41.
Carlson, Gilbert F., to Bell & Gossett Co. Vacuum breaker. 2,898,931, 8–11–59, Cl. 137—207.
Carlton, Raymond R., and P. E. Mortensen, to Omark Industries, Inc. Automatic cutter grinder. 2,898,706, 8–11–59, Cl. 51—98.
Carmody, Don R., and A. Zletz, to Standard Oil Co. Rocket propulsion method using phosphorus triamide rocket fuel. 2,898,732, 8–11–59, Cl. 60—35.4.
Carmody, Don R., E. A. Mayerle, and A. Zletz, to Standard Oil Co. Rocket propulsion method. 2,898,733, 8–11–59, Cl. 60—35.4.
Carmody, Don R., E. A. Mayerle, and A. Zletz, to Standard Oil Co. Rocket propulsion method. 2,898,734, 8–11–59, Cl. 60—35.4.
Carmody, Don R., and E. A. Mayerle, to Standard Oil Co. Rocket propulsion method. 2,898,735, 8–11–59, Cl. 60—35.4.
Carno, Samson Z. Blind rivet with sealing means. 2,898,798, 8–11–59, Cl. 85—40.
Carolina Textile Engraving Co.: *See*—
Schreiber, Louis. 2,898,834.
Carpenter, Paul G., to Phillips Petroleum Co. Disposable rubber products. 2,898,999, 8–11–59, Cl. 166—46.
Carr, Aloysius J. Shaftless mill roll stand. 2,899,145, 8–11–59, Cl. 242—58.6.
Carr, Dugald M., to The Chemical and Industrial Corp. Catalytic apparatus. 2,899,285, 8–11–59, Cl. 23—288.
Carr, Scott W.: *See*—
Walker, James H., Carr, and Horn. 2,898,825.
Carroll, Joseph J.: *See*—
Harris, Lewis J., and Carroll. 2,898,935.
Carter, Harold. Game. 2,899,206, 8–11–59, Cl. 273—120.
Carter, Harry V., to National Tank Co. Apparatus for recovery of petroleum vapors from run tanks. 2,899,013, 8–11–59, Cl. 183—2.7.
Carter, Ralph H.: *See*—
Bley, Rudolph S., Carter, Edgar, Graybeal, and Schmidt. 2,898,627.
Cartoux, Henri, to H. C. Pechiney Compagnie de Produits Chimiques et Electrometallurgiques. Safety device for remotely controlled manipulators. 2,899,477, 8–11–59, Cl. 13—16.
Cassidy, Elaine T.: *See*—
Murray, Arthur E. 2,898,649.
Cavallito, Chester J., and T. B. O'Dell, to Irwin, Neisler and Co. Oral pharmaceutical composition for enhanced absorption of the therapeutically active quaternary ammonium salt ingredient. 2,899,357, 8–11–59, Cl. 167—55.
Cella, Joseph F., to Cella Machinery, Inc. Bottle packaging machine. 2,898,715, 8–11–59, Cl. 53—62.
Cella, Joseph F., and P. Gancia, to Cella Machinery, Inc. Bottle packaging machine. 2,898,716, 8–11–59, Cl. 53—62.
Cella, Joseph F., and P. Gancia, to Cella Machinery, Inc. Bottle packaging machine. 2,899,233, 8–11–59, Cl. 294—87.2.
Cella Machinery, Inc.: *See*—
Cella, Joseph F. 2,898,715.
Cella, Joseph F., and Gancia. 2,898,716.
Cella, Joseph F., and Gancia. 2,899,233.
Central Fibre Products Co., Inc.: *See*—
Thorup, Abraham B. 2,899,121.
Centre D'Etudes Et De Developpements De L'Electronique, CEDEL: *See*—
Hanlet, Jacques M. N. 2,899,372.
Century Sportswear Co., Inc.: *See*—
Presson, David. 2,898,601.
Chamberlain Corp.: *See*—
Etten, Nicholas L. 2,898,983.
Chamberlain, Edward G. Swimming buoy or apparatus. 2,898,610, 8–11–59, Cl. 9—17.
Chamberlain, Henry T.: *See*—
Ashbrook, Clifford L., and Petarschmidt. 2,899,217.
Chambers, Herbert I., to Consolidated Electrodynamics Corp. Oscillograph apparatus. 2,899,259, 8–11–59, Cl. 346—69.
Chambers, Robert R., R. H. Elkins, and J. J. Monagle, to Sinclair Refining Co. Process for olefin polymerization with alkyl aluminum-metal oxide catalyst. 2,899,419, 8–11–59, Cl. 260—94.9.
Chao, Tsei Y., to Foster Wheeler Corp. Pellet forming apparatus. 2,898,625, 8–11–59, Cl. 18—2.7.
Chapin, Earl C., and R. F. Smith, to Monsanto Chemical Co. Styrene-allyl alcohol-acrylic acid terpolymers, process of preparing same and coating composition therefrom. 2,899,404, 8–11–59, Cl. 260—43.
Chapman Valve Mfg. Co., The: *See*—
Tefa, Edwin O. 2,898,932.
Charlesworth, Mary J.: *See*—
Stanton, George W., Lefferdink, Meikle, and Charlesworth. 2,899,262.
Chaumson, André, to Societe Anonyme des Usines Chaumson. Electro-magnetically maintained oscillating movement hermetic compressor. 2,899,124, 8–11–59, Cl. 230—55.
Chaumson, André, to Societe Anonyme des Usines Chaumson. Electromagnetically maintained oscillating movement hermetic compressor. 2,899,125, 8–11–59, Cl. 230—55.
Cheetham, William R., and W. G. Parr, to Pye Ltd. Television receiving apparatus. 2,899,489, 8–11–59, Cl. 178—5.4.
Cheetham, William R., and W. G. Parr, to Pye Ltd. Television receiving apparatus. 2,899,490, 8–11–59, Cl. 178—5.4.
Chellis, Fred F.: *See*—
Rohrer, Douglas P., and Chellis. 2,898,893.
Chemical and Industrial Corp., The: *See*—
Carr, Dugald M. 2,899,285.
Chemstrand Corp., The: *See*—
Bromley, James E. 2,898,751.
Goodwin, Chester H. 2,898,756.
Cherrier, Claude M., to Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint-Gobain, Chauny & Cirey. Manufacture of hydrocyanic acid. 2,899,275, 8–11–59, Cl. 23—151.
Chicago Dynamic Industries, Inc.: *See*—
Heide, Stanford M. 2,898,907.
Chicago Telephone Supply Corp.: *See*—
Barden, Wayne A., and Snyder. 2,899,662.
Christensen, Max C., to Ford Motor Co. Fertilizer spreader. 2,899,111, 8–11–59, Cl. 222—238.
Christopher, Edward F., and H. H. Young, to Swift & Co. Glue setting accelerators. 2,899,227, 8–11–59, Cl. 106—125.
Chudkowski, Edwin A.: *See*—
Gross, William J., and Chudkowski. 2,898,910.
Ciba Ltd.: *See*—
Jenny, Walter. 2,899,438.
Siegrist, Adolf E., and Duennenberger. 2,899,440.
Wohler, Viktor. 2,899,131.
Cinch Mfg. Corp.: *See*—
Willis, Grant N. 2,898,718.
Cincinnati Milling Machine Co., The: *See*—
Bauer, Eduard. 2,899,621.
Cities Service Research and Development Co.: *See*—
Hughes, William B. 2,899,442.
Clapp, Richard G., to Philco Corp. Color image-producing cathode ray tube. 2,899,581, 8–11–59, Cl. 313—92.
Clark Equipment Co.: *See*—
Hastings, Russell, Jr. 2,898,872.
Clarkson, Alick, and W. W. Parks, to Vapor Heating Corp. Feed water pump. 2,899,247, 8–11–59, Cl. 309—2.
Cleland, Charles E.: *See*—
Crane, Robert L., Cleland, and Whitmore. 2,898,669.
Clement, Carl H., Jr., to Bock Laundry Machine Co. Drive and control for rotatable members. 2,899,032, 8–11–59, Cl. 192—18.
Clement, Milton A., to General Dynamics Corp. Failure circuit for counting chains. 2,899,675, 8–11–59, Cl. 340—248.
Cleveland Skate Co., Inc., The: *See*—
Reynolds, Clarence R., Asad, and Beedey. 2,899,209.
Coast Metals, Inc.: *See*—
Cape, Arthur T., and Foerster. 2,899,302.
Cohen, Sylvan L., and M. S. Frant, to Gallowhur Chemical Corp. Method of rendering textile materials fungicidal and the products thereby produced. 2,899,340, 8–11–59, Cl. 117—138.5.
Colborne Mfg. Co.: *See*—
Cale, Stanley A. 2,898,873.
Cole, Herbert W.: *See*—
Wing, Arthur K., Jr., and Cole. 2,898,593.
Cole, Howard W., Jr. High pressure hose. 2,898,940, 8–11–59, Cl. 138—30.
Colgan, William G. Oil catcher and discharger for a vehicle. 2,899,019, 8–11–59, Cl. 184—106.
Colin, Louis. Traction increasing device for vehicle wheels. 2,899,241, 8–11–59, Cl. 301—47.
Collstra, Walter P., to Sperry Rand Corp. Quick setting means for gyro magnetic compass. 2,898,690, 8–11–59, Cl. 33—222.
Collins, John R., to International Basic Economy Corp. Pilot actuated fluid control valve. 2,898,936, 8–11–59, Cl. 137—620.
Collins, Lowell J. Elevators. 2,899,091, 8–11–59, Cl. 214—313.
Collins, Ralph B., Jr., to Microwave Associates, Inc. Radiationproof package for crystal diodes. 2,899,050, 8–11–59, Cl. 206—65.
Collura, Peter C., to Container Corp. of America. Band type can carrier. 2,899,104, 8–11–59, Cl. 220—115.
Colonial Aircraft Corp.: *See*—
Stetson, Gerald E. 2,899,678.
Columbia Mills, Inc., The: *See*—
Kelly, John T., and Wulfert. 2,898,901.
Peterson, Albert. 2,898,989.
Compagnie Auxiliaire d'Electricite et d'Enterprise: *See*—
Bonnerre, Lucien. 2,899,527.
Compagnie Generale de Telegraphie Sans Fil: *See*—
Rocard, Yves. 2,899,134.
"Comptoir des Phosphates de L'Afrique du Nord": *See*—
Michel, Robert. 2,899,271.
Connell, Leo F., H. F. Elkin, and W. R. Soden, to Sun Oil Co. Process for the treatment of contaminated waste waters. 2,899,385, 8–11–59, Cl. 208—208.
Consoletti, Paul C., to Draper Corp. Filling guide for saw chain teeth. 2,898,782, 8–11–59, Cl. 76—36.
Consolidated Electrodynamics Corp.: *See*—
Bancroft, George H. 2,898,933.
Chambers, Herbert I. 2,899,259.
Montgomery, Donald N., and Thom. 2,899,641.
Consolidated Mining and Smelting Co. of Canada Ltd., The: *See*
Robinson, Joseph N., Miller, and McDonnell. 2,899,433.
Container Corp. of America: *See*—
Collura, Peter C. 2,899,104.

Demers, Edward A.: *See*—
Ware, Colin C., Blake, and Demers. 2,899,566.
Du Mont, Allen B., Laboratories, Inc.: *See*—
Stein, Isidore H. 2,899,591.

Continental Can Co., Inc.: *See*—
Geist, William J. 2,898,118.
Henchert, John, and Frankenberg. 2,899,094.
Long, Florren E. 2,899,318.
Shorkey, Edward S. 2,899,109.
Continental Machines, Inc.: *See*—
Crane, Robert L., Cleland, and Whitmore. 2,898,669.
Continental Oil Co.: *See*—
Sias, Roy C., and Woods. 2,899,460.
Controls Co. of America: *See*—
Kramer, Leo. 2,899,519.
Cooperman, Michael: *See*—
Sonnenfeldt, Richard W., Grundmann, and Cooperman. 2,899,491.
Cooperman, Michael, and G. L. Grundmann, to Radio Corp. of America. Magnetic two-angle demodulator. 2,899,492, 8–11–59. Cl. 178—5.4.
Coover, Harry W., Jr., to Eastman Kodak Co. Polymerization of vinyl chloride or vinylidene chloride in the presence of isolated polymers. 2,899,405, 8–11–59. Cl. 260—45.5.
Coover, Harry W., Jr., and R. L. McConnell, to Eastman Kodak Co. Derivatives of 2,2-dimethyl-1,3-propanediol cyclic hydrogen phosphite. 2,899,455, 8–11–59, Cl. 260—461.
Coover, Richard E., to K. Kaeser. Brush holder for waxing and polishing machines. 2,898,616, 8–11–59, Cl. 15—49.
Coppola, Patrick P., to North American Philips Co., Inc. Thermionic dispenser cathode. 2,899,592, 8–11–59, Cl. 313—346.
Corbin, Armand. Mobile lifting and conveying apparatus. 2,899,088, 8–11–59, Cl. 214—75.
Corn Products Co.: *See*—
Wilson, Alexander L. 2,899,207.
Corneli, Ernest R. Flexible tube fluid measuring and controlling device. 2,898,859, 8–11–59. Cl. 103—37.
Cornelius, Richard T. Liquid dispensing apparatus. 2,899,170, 8–11–59, Cl. 251—122.
Cornu, Marcel: *See*—
Flatet, Jacques, and Cornu. 2,899,523.
Cory Corp.: *See*—
Dale, Sheldon. 2,899,310.
Cottar, Allen B.: *See*—
Cottar, Robert. 2,898,688.
Cottar, Robert, to A. B. Cottar. Marking device. 2,898,688, 8–11–59. Cl. 23—189.
Cottrell, Robert B., to American Steel Foundries. Railway car truck conversion method. 2,898,870, 8–11–59, Cl. 105—197.
Courtot, Louis B., to The Weatherhead Co. Nut locking mechanism with threaded pawl manipulating sleeve. 2,898,963, 8–11–59. Cl. 151—10.
Coussemant, Fernand: *See*—
Leprince, Pierre, Coussemant, and Limido. 2,899,473.
Coven, Murray, and F. T. Wiehl. Tire chain. 2,898,968, 8–11–59. Cl. 152—236.
Cowan, Ben and E. Rotary pulp screens. 2,899,064, 8–11–59, Cl. 210—219.
Cowan, Elijah: *See*—
Cowan, Ben and E. 2,899,064.
Cowles, Robert J., to Quality Components, Inc. Resistor. 2,899,665, 8–11–59. Cl. 338—325.
Cox, Basil B.: *See*—
Long, Stuart S., and Cox. 2,899,116.
Cox, Frank G., Jr. Spiral one-at-a-time dispenser. 2,899,046, 8–11–59. Cl. 206—42.
Crane, Carlton L.: *See*—
Malm, Carl J., and Crane. 2,899,423.
Crane Co.: *See*—
Bredtschneider, Kurt B., Onak, and Stuart. 2,899,667.
Crane Packing Co.: *See*—
Payne, Frank E. 2,899,219.
Crane, Robert L., C. H. Cleland, and C. H. Whitmore, to Continental Machines, Inc. Machine for cutting off bar stock. 2,898,669, 8–11–59, Cl. 29—68.
Crawford Door Co.: *See*—
Starr, Norbert T. 2,898,985.
Crawford, Earl A. Printing plate and cylinder. 2,898,854, 8–11–59, Cl. 101—415.1.
Crawford, Francis W., to Phillips Petroleum Co. In situ combustion of stratum having an exposed face. 2,899,186, 8–11–59, Cl. 262—3.
Creamery Package Mfg. Co., The: *See*—
Wakeman, Alden H. 2,898,881.
Creighton, Ethel C.: *See*—
Creighton, Millard G. 2,899,216.
Creighton, Millard G., deceased, by E. C. Creighton, executrix. Adjustable connector for well casings having variably coengaged rotation prevention means. 2,899,218, 8–11–59, Cl. 285—302.
Cresci, Anthony L. Elevating mechanism for truck bodies. 2,899,172, 8–11–59, Cl. 254—8.
Creutz, Edward C., to United States of America, Atomic Energy Commission. Refractory die for extruding uranium. 2,899,054, 8–11–59, Cl. 207—17.
Crevling, Thomas V., D. J. Haag, and T. I. Abbott, to Eastman Kodak Co. Thermographic copying material. 2,899,334, 8–11–59, Cl. 117—36.
Crewdson, Henry, Jr., to American Viscose Corp. Vane adjusting assembly for pulverized fuel type burner unit. 2,898,874, 8–11–59, Cl. 110—28.
Cridland, John E., to General Electric Co. Recessed double contact strip base. 2,899,671, 8–11–59, Cl. 339—146.
Criswell, Richard H.: *See*—
Fenske, Merrell R., and Criswell. 2,899,375.
Crosfield, J. F., Ltd.: *See*—
Crosfield, John F., and Gold. 2,899,143.
Crosfield, John F., and D. Gold, to J. F. Crosfield, Ltd. Register control of moving webs. 2,899,143, 8–11–59, Cl. 242—58.3.
Crosnier, Walter J., and J. Klink, to Standard Gage Co., Inc. Dial indicator gage. 2,898,696, 8–11–59, Cl. 33—172.
Crow, Robert P., and R. R. Yost, Jr., to Motorola, Inc. Paging communication system. 2,899,647, 8–11–59, Cl. 250—6.
Culleton, Robert J., and J. W. Kragh, to North American Aviation, Inc. Pressure cap with dump valve and pressure relief valve. 2,899,114, 8–11–59, Cl. 222—396.
Culver, George G. and W. L. Fence post. 2,899,175, 8–11–59, Cl. 256—45.
Culver, Walter L.: *See*—
Culver, George G. and W. L. 2,899,175.
Cummings, Albert R.: *See*—
Moorman, Amos K., and Cummings. 2,898,691.
Currie, Grover C., Jr., to Decam Corp. Carton. 2,899,123, 8–11–59, Cl. 229—40.
Curriston, Loren B.: *See*—
Atkinson, Donald L., and Curriston. 2,898,765.
Curtis, Arney L.: *See*—
Curtis, Robert L., and A. L. 2,899,235.
Curtis, Robert L. and A. L. Folding van body. 2,899,235, 8–11–59, Cl. 296—27.
Cusack, Frank H.: *See*—
Boughtwood, John E., and Cusack. 2,899,548.
Cushman, Norton, to Sprague Electric Co. Transformer structures. 2,899,631, 8–11–59, Cl. 323—44.
Cutler-Hammer, Inc.: *See*—
Peterson, Norman L. 2,899,607.
Cyba, Henry A., to Universal Oil Products Co. Curing of epoxy resins. 2,899,407, 8–11–59, Cl. 260—47.
Cycon, Inc.: *See*—
Jacobsen, Dan. 2,899,067.
Czay, Mary. Cake separator. 2,898,677, 8–11–59, Cl. 30—124.
Dail, Paul D. Ceiling construction. 2,898,840, 8–11–59, Cl. 20—4.
Daimler-Benz Akt.: *See*—
Schwaiger, Odilo L. 2,899,129.
Stump, Eugen. 2,898,773.
Dale, Sheldon, to Cory Corp. Beverage charge holder. 2,899,310, 8–11–59, Cl. 99—77.1.
Danta, Robert C.: *See*—
Stellmacher, Donald D., and Danta. 2,899,563.
D'Antini, Pasquale I. Safety assembly for protecting drivers and passengers of automotive vehicles. 2,899,214, 8–11–59, Cl. 280—87.
Dare Products, Inc.: *See*—
Doerr, Raymond S. 2,898,948.
Darlington, Thomas J.: *See*—
Matthews, Stanley R., Darlington, and Sheets. 2,899,522.
Datta, George E., to Enterprise Railway Equipment Co. Hopper-car discharge outlet construction. 2,898,871, 8–11–59, Cl. 105—253.
Daveat Milk Processes Co.: *See*—
Davies, Elmer S., and Petersen. 2,899,320.
Davies, Elmer S., and F. D. Petersen, to Daveat Milk Processes Co. Process for the sterilization of milk. 2,899,320, 8–11–59, Cl. 99—216.
Davis, Benajah L., to The Upjohn Co. Washing clamp. 2,899,079, 8–11–59, Cl. 211—74.
Davis, Ethel M.: *See*—
Davis, George A. 2,899,012.
Davis, George A., deceased, by E. M. Davis, legal representative, to Allied Chemical Corp. Process and apparatus for cooling coke oven gas. 2,899,012, 8–11–59, Cl. 183—2.
Davis, Kent L.: *See*—
King, Donald L., and Davis. 2,899,068.
Davison, Joseph W., to Phillips Petroleum Co. Thermal cracking process with an improved heat conservative quenching technique. 2,899,475, 8–11–59, Cl. 260—683.
Davol Rubber Co.: *See*—
Kilcup, Ernest I. 2,898,941.
Dawson, Timothy L., to Imperial Chemical Industries Ltd. Textile finishing process. 2,899,341, 8–11–59, Cl. 117—138.8.
Dayton Formold, Inc.: *See*—
Irwin, Harry B., and Waterhouse. 2,898,632.
Dayton Rubber Co., The: *See*—
Richter, Raymond R. 2,898,855.
Rothermel, Edward M. 2,898,942.
Wagner, William T. 2,898,975.
Deackoff, Leon P., to Manton-Gaulin Mfg. Co., Inc. Hydraulic pressure exchange pump. 2,898,866, 8–11–59, Cl. 103—152.
Debay, Andre, and O. Sackur, to Societe Francaise de Recherches Biochimiques H. Besson & Cie. (Societe en Commandite par Actions). Phosphatidyl choline compounds. 2,899,449, 8–11–59, Cl. 260—403.
De Benneville, Peter L., and L. S. Luskin, to Rohm & Haas Co. N-(vinyloxyalkyl) acylamidoguanamines, method of making same, and copolymers thereof. 2,899,406, 8–11–59, Cl. 260—47.
Decam Corp.: *See*—
Currie, Grover C., Jr. 2,899,123.
De Gee, Bob, to American Enka Corp. Apparatus for the production of high tenacity viscose rayon yarn. 2,898,629, 8–11–59, Cl. 18—8.
Degginger, Edward R., and E. R. Gilbert, to Allied Chemical Corp. Method for combating fungus and fungicidal compositions therefor. 2,899,355, 8–11–59, Cl. 167—30.
De la Flor, Felix C. Demountable rim for vehicle tires. 2,899,230, 8–11–59, Cl. 301—31.
Del Francia, Jose A. Gas fired broiler. 2,898,846, 8–11–59, Cl. 99—443.
De Lorean, John Z., to General Motors Corp. Universal joint. 2,898,750, 8–11–59, Cl. 64—8.
Demarkis, Peter J. Gun checkering tool. 2,898,957, 8–11–59, Cl. 144—136.
De Mauro, Peter, to Globe Lighting Products, Inc. Fluorescent light fixture. 2,899,541, 8–11–59, Cl. 240—51.11.
De Mauro, Peter, to Globe Lighting Products, Inc. Ceiling-recess light fixture. 2,899,542, 8–11–59, Cl. 240—78.

Ericson, Alf E., to Aircraft Specialties, Inc. Piston ring compressor. 2,898,672, 8–11–59, Cl. 29—224.
Flach, Donald O., and R. E. Garver, to Food Machinery and Chemical Corp. Production of persulfates. 2,899,272,

Demers, Edward A.: *See*—
Ware, Colin C., Blake, and Demers. 2,899,566.
Demolon, Pierre: *See*—
Matis, Ernest, Demolon, Nobecourt, and Henri. 2,899,189.
Denham, Frederick R.: *See*—
Kitchen, John A., and Denham. 2,898,978.
Den Herder, Marvin J., to Standard Oil Co. Increasing platinum catalyst activity for hydroforming hydrofined naphtha. 2,899,378, 8–11–59, Cl. 208—65.
Denn, John H. Tire rim removal tool. 2,898,977, 8–11–59, Cl. 157—1.33.
Derby Sealers, Inc.: *See*—
Krueger, Alfred P. 2,899,198.
Deutsche Gold- und Silber-Scheideanstalt vormals Roessler: *See*—
Krall, Friedrich. 2,899,535.
De Vries, Gerrit: *See*—
Jonker, Johan L. H., and de Vries. 2,899,603.
Dexter, Wilbur H. Duplicating device. 2,898,680, 8–11–59, Cl. 33—23.
Diamond Alkali Co.: *See*—
Rosen, Irving. 2,899,445.
Wiseman, Russell M. 2,899,042.
Dickinson, Edward D. Device for cleaning soldering tips. 2,898,620, 8–11–59, Cl. 15—160.
Di Domenico, Domenic. Tire traction chain securing device. 2,898,967, 8–11–59, Cl. 152—233.
Dight, Evelyn M. Combined skewer and thermometer. 2,898,845, 8–11–59, Cl. 99—421.
Divine, Wayne J.: *See*—
Packard, Clifton E., and Divine. 2,898,608.
Dix, Cyril H., and V. A. Heathcote, to The M-O Valve Co. Ltd. Magnetrons. 2,899,604, 8–11–59, Cl. 315—39.75.
Dixon, Ellen: *See*—
Forster, Joseph and E. 2,899,113.
Dixon, Joseph, Crucible Co.: *See*—
Sidebotham, Melvin H., Sr., G. L., and M. H., Jr. 2,898,824.
Djerassi, Carl, and G. Rosenkranz, to Syntex S.A. Pregnane derivatives. 2,899,427, 8–11–59, Cl. 260—239.55.
Doepke, Charles W., and B. S. Aston, to Nestler Corp. Feeder for dispensing small articels. 2,899,107, 8–11–59, Cl. 222—143.
Doerr, Raymond S., to Dare Products, Inc. Machine for making barbed wire. 2,898,948, 8–11–59, Cl. 140—59.
Dollenberg, Frederick P. Spark plug. 2,899,585, 8–11–59, Cl. 313—143.
Dombre, Pierre. Mixing valves. 2,898,938, 8–11–59, Cl. 137—635.
Donnell, William F.: *See*—
Skelton, Charles W., and Donnell. 2,899,572.
Doonan, John L.: *See*—
O'Cathey, Earl R., and Doonan. 2,898,980.
Dornfeld, Clinton A., to G. D. Searle & Co. 1-(amino and hydroxy)alkyl-2-diarylalkyl-2-imidazolines and process. 2,899,441, 8–11–59, Cl. 260—309.6.
Douglas, Alvin P., A. R. Golrick, and R. F. Skerl, to The Murray Ohio Mfg. Co. Three speed bicycle transmission. 2,899,030, 8–11–59, Cl. 192—6.
Dow Chemical Co., The: *See*—
Lipke, Paul H., Jr., and Gifford. 2,899,400.
Robertson, Dale N. 2,899,429.
Smith, Raymond A., McClure, and Bond. 2,899,274.
Smith, Robert M. 2,899,461.
Stanton, George W., Leferdink, Meikle, and Charlesworth. 2,899,262.
Downes, Norman J.: *See*—
Powers, Myron J., and Downes. 2,899,319.
Drake, Rodney. Insulators for supporting an electric wire fence. 2,899,487, 8–11–59, Cl. 174—170.
Dranetz, Abraham I., and W. Welkowitz, to Gulton Industries, Inc. Electron tube. 2,899,580, 8–11–59, Cl. 313—89.
Draper Corp.: *See*—
Budzyna, Joseph M. 2,898,946.
Consoletti, Paul C. 2,898,782.
Dreier Brothers, Inc.: *See*—
Dreier, Raymond C. 2,899,048.
Dreier, Raymond C., to Dreier Brothers, Inc. Display carton. 2,899,048, 8–11–59, Cl. 206—45.24.
Dresser, Willis R., to The Vitarama Corp. Re-recording mixer for multi-sound track records. 2,899,505, 8–11–59, Cl. 179—100.1.
Drew, Stanley J., and C. L. Kanty; said Kanty assor. to said Drew. Box assembly apparatus. 2,898,823, 8–11–59, Cl. 93—55.1.
Drowe, John, and P. D. Atkinson, to International Computers and Tabulators Ltd. Impulse gating devices. 2,899,568, 8–11–59, Cl. 307—88.
Driver, Paul C. Force measuring apparatus. 2,899,190, 8–11–59, Cl. 264—1.
Druckhamer, Arthur. Basement window well cover. 2,898,638, 8–11–59, Cl. 20—1.
Drugmand, Lester D., and J. McOrlly, to Edwin L. Weigand Co. Terminal pin resistor assembly for electric heaters. 2,899,666, 8–11–59, Cl. 338—329.
Dryer, Henry V., to McGraw Edison Co. Lightening arrester. 2,899,587, 8–11–59, Cl. 313—182.
Dubin, Melvin, and I. Turinsky, to Slant-Fin Radiator Corp. Heat exchange fins and assembly. 2,899,178, 8–11–59, Cl. 257—262.16.
Dubuar, Arthur S., to Bell Telephone Laboratories, Inc. Dial telephone system arranged for machine announcement on intercepted calls. 2,899,503, 8–11–59, Cl. 179—18.
Dudley, John S., to Whitin Machine Works. Combing machine cushion plate mounting. 2,898,637, 8–11–59, Cl. 19—120.
Duennenberger, Max: *See*—
Siegrist, Adolf R., and Duennenberger. 2,899,440.
Duffy, Anne R.: *See*—
Rector, Enoch. 2,899,185.
Du Mont, Allen B., Laboratories, Inc.: *See*—
Stein, Isidore H. 2,899,591.
Dunbar, Spurgeon P., to Hofmann Industries, Inc. Mop. 2,898,617, 8–11–59, Cl. 15—119.
Dunlap, Isaac R.: *See*—
Engel, Edward W., and Dunlap. 2,899,353.
Du Pont de Nemours, E. I., and Co.: *See*—
Allen, Francis P. 2,899,200.
Beck, Robert H. 2,898,882.
Bower, Frank A., and Heberling. 2,899,472.
Kreimeier, Oscar R. 2,899,296.
Lewis, Ernest D. 2,899,278.
Rakus, Alexander B. 2,899,339.
Schreyer, Ralph C. 2,899,416.
Siemons, Willem J. 2,899,294.
Squire, Edward N. 2,899,402.
Truett, William L. 2,899,415.
Duro-Test Corp.: *See*—
Macksoud, Michel R. 2,899,583.
Dussy, Paul: *See*—
Boesard, Werner, and Dussy. 2,899,305.
Dybalski, Jack N.: *See*—
Riegler, Werner L., and Dybalski. 2,899,290.
Souther, E. E., Iron Co.: *See*—
Rebeis, Harry L. 2,899,158.
E. R. D. Laboratories Inc.: *See*—
Reid, Henry. 2,898,775.
Eastern Precision Resistor Corp.: *See*—
Gruber, Morris, and Rosenthal. 2,899,661.
Eastman Kodak Co.: *See*—
Aydlett, Guy D. 2,898,833.
Bornemann, William. 2,899,234.
Caldwell, John R., and Hill. 2,899,412.
Caldwell, John R., and Wellman. 2,899,408.
Coover, Harry W., Jr. 2,899,405.
Coover, Harry W., Jr., and McConnell. 2,899,455.
Crevling, Thomas V., Haag, and Abbott. 2,899,334.
Ewald, William P. 2,898,806.
Ewald, William P. 2,898,807.
Hagemeyer, Hugh J., Jr., and Edwards. 2,899,413.
Horton, William P. 2,899,553.
Malm, Carl J., and Crane. 2,899,423.
Morrison, Charles A. 2,898,803.
Rouse, Benjamin P., Jr., and Hill. 2,899,316.
Spath, Catherine M. 2,899,306.
Staehle, Henry C., and Tupis. 2,898,852.
Sweet, Sterling S., and Van Horn. 2,899,348.
Thompson, Russell G., and Hunt. 2,899,498.
Williams, Robert F., Jr., and Lowe. 2,899,315.
Eaton Mfg. Co.: *See*—
Meese, Clarence. 2,898,789.
Ebert, Edward A. Bait container. 2,899,103, 8–11–59, Cl. 220—94.
Eby, Lawrence T., to Esso Research and Engineering Co. Method of incorporating oil in rubbery isoolefin polymer. 2,899,401, 8–11–59, Cl. 260—33.6.
Eddy, Glen M. Auxiliary tread for dual wheels. 2,898,965, 8–11–59, Cl. 152—175.
Edgar, Donald J.: *See*—
Bley, Rudolph S., Carter, Edgar, Graybeal, and Schmidt. 2,898,627.
Edwards High Vacuum Ltd.: *See*—
Power, Basil D. 2,899,127.
Edwards, Marvin B.: *See*—
Hagemeyer, Hugh J., Jr., and Edwards. 2,899,413.
Eichwald, Bernard. Hearing device. 2,899,499, 8–11–59, Cl. 179—1.
Eimco Corp., The: *See*—
King, Donald L., and Davis. 2,899,065.
Eitel-McCullough, Inc.: *See*—
Sorg, Harold E., and La Forge. 2,899,590.
Elemelt Ltd.: *See*—
Gell, Philip A. M. 2,899,476.
Elevator Supplies Co., Inc.: *See*—
O'Grady, Joseph V. 2,899,021.
Elkin, Harold F.: *See*—
Connell, Leo F., Elkin, and Soden. 2,899,385.
Elkins, Robert H.: *See*—
Chambers, Robert R., Elkins, and Monagle. 2,899,419.
Elliott, William B. Means and method for joining parts. 2,899,224, 8–11–59, Cl. 287—126.
Ellis, Frampton E., Jr. Bound vortex skin. 2,899,150, 8–11–59, Cl. 244—41.
Ellis, Weldon T., Jr. Aquarium cleaner. 2,899,063, 8–11–59, Cl. 210—169.
Elsner, Edwin C., to Aeroquip Corp. Rail-connected unit. 2,899,167, 8–11–59, Cl. 248—361.
Elwell, James F.: *See*—
Atwell, Locke P., Elwell, and Spaulding. 2,899,479.
Ely, Charles M., and J. R. Fey, to Nopco Chemical Co. Poultry feed. 2,899,308, 8–11–59, Cl. 99—4.
Ely, Robert F. Plural combustion products generators in ring coaxial with a turbine. 2,898,736, 8–11–59, Cl. 60—39.37.
Engel, Edward W., and I. R. Dunlap, to Johnson & Johnson. Flexible paper web and process of producing same. 2,899,353, 8–11–59, Cl. 162—165.
Engels, Eugene O., to Baker Perkins, Inc. Temperature regulated multiple burner supply system. 2,899,135, 8–11–59, Cl. 236—15.
Engineering Research and Application Ltd.: *See*—
Hodkin, David. 2,899,256.
Enterprise Railway Equipment Co.: *See*—
Dath, George R. 2,898,871.
Epstein, Max, to Hickok Mfg. Co., Inc. Concealed hole waist belt. 2,898,603, 8–11–59, Cl. 2—322.
Erickson, Gustav F., to National Rejectors Inc. Coin separators. 2,899,039, 8–11–59, Cl. 194—72.

Gaden, Carl W.: *See*—
Gewalt, Rudolf, and E. Stein. Method for cold sterilization

Ericson, Alf E., to Aircraft Specialties, Inc. Piston ring compressor. 2,898,673, 8–11–59, Cl. 29—224.
Erie Resistor Corp.: *See*—
Ochry, Howard I. 2,899,645.
Erisman, Maurice J.: *See*—
Francis, Norman L., and Erisman. 2,899,176.
Erwin, David E., to Western Electric Co., Inc. Control systems. 2,899,645, 8–11–59, Cl. 331—86.
Esso Research and Engineering Co.: *See*—
Adams, Clark E., and Kimberlin. 2,899,396.
Eby, Lawrence T. 2,899,401.
Fenske, Merrell R., and Criswell. 2,899,375.
Krebs, Robert W., and Kimberlin. 2,899,376.
Ricards, Harold A. 2,899,474.
Swabb, Lawrence E., Jr., and Boisture. 2,899,384.
Wilchinsky, Zigmond W., and Thompson. 2,899,379.
Etling, Harold A., to Weather-Seal, Inc. Door frame and sill therefor. 2,898,642, 8–11–59, Cl. 20—11.
Etten, Nicholas L., to Chamberlain Corp. Roll-up awning. 2,898,983, 8–11–59, Cl. 160—62.
Evanson, Clifford E.: *See*—
Henagen, Bernard T., and Evanson. 2,899,317.
Evans, Jesse L., to General Motors Corp. Range with pull-out shelf. 2,899,255, 8–11–59, Cl. 312—274.
Evans, Robert D., to The American Agricultural Chemical Co. Hydraulic classification of solids. 2,899,056, 8–11–59, Cl. 209—158.
Even, Georges. Overhead protection hood on combat vehicles. 2,898,810, 8–11–59, Cl. 89—36.
Ewald, William P., to Eastman Kodak Co. Polarizing filter for stereo projector. 2,898,806, 8–11–59, Cl. 88—26.
Ewald, William P., to Eastman Kodak Co. Slide changing mechanism. 2,898,807, 8–11–59, Cl. 88—28.
Eyraud, Charles. Means for measuring the contents of a combustible component in a gasiform mixture. 2,899,282, 8–11–59, Cl. 23—255.
Fa. Penicillin-Gesellschaft Dauelsberg & Co.: *See*—
Weydanz, Wilhelm K. 2,899,181.
Fairchild Camera and Instrument Corp.: *See*—
Levine, Samuel W. 2,899,493.
Falk Corp., The: *See*—
Wellauer, Edward J. 2,899,089.
Fancher, Otis E., and G. Nichols, to Miles Laboratories, Inc. Substituted-2,3,4,5 tetrahydrodiazepine compounds and pharmaceutical compositions therewith. 2,899,359, 8–11–59, Cl. 167—65.
Farbak, John E., and E. J. Kasmen, to Swift & Co. Salad oil and method of oiling tin plate therewith. 2,899,328, 8–11–59, Cl. 106—250.
Farbenfabriken Bayer Aktiengesellschaft: *See*—
Funke, Albert, and Raab. 2,899,420.
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
Fischer, Ernst. 2,899,421.
Fareri, Elizabeth L., and J. P. Pellegrini, Jr., to Gulf Research & Development Co. Salts of 2,4-dinaphthenyl-3-thiaglutaric acids and 1,3-diaminopropanes. 2,899,459, 8–11–59, Cl. 260—501.
Farmer, Doris, 50% to P. E. Bourque. Electrical water heater. 2,899,533, 8–11–59, Cl. 219—41.
Farrand, William A., S. G. Johnston, L. L. Kilpatrick, and J. P. Lekas, to North American Aviation, Inc. Magnetic disc recorder. 2,899,260, 8–11–59, Cl. 346—74.
Faulkner, Willard J., to V-M Corp. Speed-changing mechanism for phonographs. 2,898,771, 8–11–59, Cl. 74—200.
Federal Laboratories, Inc.: *See*—
Weinert, Carl R. 2,899,106.
Fedeson, Benjamin. Disc socket wrench. 2,898,793, 8–11–59, Cl. 81—121.
Feier, Milton: *See*—
Ritter, Jay S., Feier, and Pantzer. 2,898,913.
Feller, Arthur G., ½ to N. Ostermeyer. Portable lavatory. 2,898,606, 8–11–59, Cl. 4—166.
Fenske, Merrell R., and R. H. Criswell, to Esso Research and Engineering Co. Heat transfer to beds of granular solids. 2,899,375, 8–11–59, Cl. 208—48.
Ferguson, Lester R., to Kennedy-Van Saun Mfg. & Eng. Corp. Swing-jaw crushers. 2,899,246, 8–11–59, Cl. 308—237.
Ferrari, Andrea, Jr.: *See*—
Whitehead, Edwin C., and Ferrari. 2,899,280.
Ferro Corp.: *See*—
Ross, Edward J. 2,899,663.
Fidelity Union Trust Co.: *See*—
Weidemann, Erwin. 2,899,619.
Fierce, William L., and W. J. Sandner, to The Pure Oil Co. Process for removing mercaptan sulfur with an organic phosphite. 2,899,386, 8–11–59, Cl. 208—237.
Fierce, William L., and W. J. Sandner, to The Pure Oil Co. Process for preventing corrosion during distillation by adding an organic phosphite. 2,899,387, 8–11–59, Cl. 208—348.
Figaretti, Michael J. Storage and display box with lid support therefor. 2,899,095, 8–11–59, Cl. 217—61.
Findlay, Robert A., to Phillips Petroleum Co. Manufacture of low odor solvents. 2,899,377, 8–11–59, Cl. 208—62.
Finsterwalder, Ulrich. Method of constructing reinforced concrete bridge. 2,898,757, 8–11–59, Cl. 72—8.
Firma Contina Bureaux-und Rechenmaschinenfabrik Aktiengesellschaft: *See*—
Schmuck, Peter. 2,898,882.
Firma Krauss-Maffei Akt: *See*—
Buddeberg, Walter, and Nebel. 2,899,342.
Fischer, Ernst, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Monoazo-dyestuffs insoluble in water. 2,899,421, 8–11–59, Cl. 260—204.
Fisher, John C. Liquid pump. 2,898,858, 8–11–59, Cl. 103—1.
Fisher, Robert A., to Olin Mathieson Chemical Corp. Extraction of vitamin B_{12} from microbial materials. 2,899,360, 8–11–59, Cl. 167—81.
Flach, Donald O., and R. E. Garver, to Food Machinery and Chemical Corp. Production of persulfates. 2,899,272, 8–11–59, Cl. 23—114.
Flanigan, Richard J.: *See*—
Gusching, Nagle V., and Flanigan. 2,898,681.
Flatet, Jacques, and M. Corau, to La Telemecanique Electrique. Contactor retarder. 2,899,523, 8–11–59, Cl. 200—166.
Fleischer, Arthur, to United States of America, Army. Method of manufacturing cadmium plates for nickel-cadmium batteries. 2,899,480, 8–11–59, Cl. 136—67.
Fleuret, Marcel, to Societe Rhodiaceta. Device for throwing or twisting threads, fibres and similar products. 2,898,735, 8–11–59, Cl. 57—58.83.
Flowers, Ralph G., to General Electric Co. Ethoxyline resin-shellac-dicyandiamide insulation composition. 2,899,390, 8–11–59, Cl. 260—24.
Flumm, Paul, to S. Smith & Sons (England) Ltd. Indicators for indicating the values of two variables and a difference between those values. 2,899,509, 8–11–59, Cl. 200—35.
Foerster, Charles V.: *See*—
Cape, Arthur T., and Foerster. 2,899,302.
Foley, Edward A., to Masonite Corp. Wrapping machine. 2,898,720, 8–11–59, Cl. 53—209.
Food Machinery and Chemical Corp.: *See*—
Flach, Donald O., and Garver. 2,899,272.
Ford, Birchard H., to Summers Gyroscope Co. Potentiometer. 2,899,660, 8–11–59, Cl. 338—143.
Ford Motor Co.: *See*—
Christensen, Max C. 2,899,111.
Marosi, Jess. 2,899,025.
Ribaux, Paul A. 2,898,900.
Ford, Ralph E., to W. A. Ternes. Door construction. 2,898,987, 8–11–59, Cl. 160—206.
Foreman, Arnal B., Jr.: *See*—
Medders, Weldon L., Foreman, and Skipper. 2,899,000.
Forster, Joseph and E. (nee Dixon). Automatic delay-action device. 2,899,113, 8–11–59, Cl. 222—336.
Forster, Ellen (nee Dixon): *See*—
Forster, Joseph and E. (nee Dixon). 2,899,113.
Forte, Donald J., and J. A. Wolfe, to Minneapolis-Honeywell Regulator Co. Coil bobbin and lamination keeper. 2,899,655, 8–11–59, Cl. 336—198.
Foster, Edwin E. Low gradient spring motor. 2,899,193, 8–11–59, Cl. 267—1.
Foster, John V., to United States of America, Navy. Mechanically-limited, electrically operated hydraulic valve system for aircraft controls. 2,898,889, 8–11–59, Cl. 121—38.
Foster Wheeler Corp.: *See*—
Chao, Tsei Y. 2,898,625.
Fox, Howard L. Water conducting downspout attachment. 2,898,939, 8–11–59, Cl. 138—46.5.
Fox Products Co.: *See*—
Medlar, Lewis A. 2,899,628.
Fox, Robert L., and J. A. Smith, to Railway Maintenance Corp. Power-operated track wrench. 2,898,792, 8–11–59, Cl. 81—54.
Foy, John R.: *See*—
Ely, Charles M., and Foy. 2,899,308.
Francis, Norman L., and M. J. Erisman, to Link-Belt Co. Heat exchanger. 2,899,176, 8–11–59, Cl. 257—88.
Frank, Mark H.: *See*—
Leach, Clayton B., and Frank. 2,899,015.
Frankenberg, Henry E.: *See*—
Henchert, John, and Frankenberg. 2,899,096.
Frant, Martin S.: *See*—
Cohen, Sylvan I., and Frant. 2,899,340.
Fraser, Robert W., to United-Carr Fastener Corp. Electrical switch. 2,899,511, 8–11–59, Cl. 200—61.81.
Frederick, Henry E., to General Binding Corp. Unitary punch and binder. 2,898,613, 8–11–59, Cl. 11—1.
Fredrickson, Carl T., to Swift & Co. Hog polisher. 2,898,624, 8–11–59, Cl. 17—17.
Fredriksson, Per S. E., A. I. Arnelo, K. B. Lofgren, and L. G. W. Lotvik, to Aktiebolaget Svenska Metallverken. Apparatus for removing the casting in continuous casting processes. 2,898,650, 8–11–59, Cl. 22—57.2.
Freedman, Louis: *See*—
Shapiro, Seymour L., Freedman, and Rose. 2,899,437.
Freeman, Jeff E. Automatic container filler. 2,898,954, 8–11–59, Cl. 141—86.
French, Gordon P., to The General Electric Co. Ltd. Electric pulse generating apparatus. 2,899,552, 8–11–59, Cl. 250—27.
Friedberg, Milton R., and J. L. Stewart, to The Antenna Specialists Co. Antenna mounting device. 2,899,485, 8–11–59, Cl. 174—153.
Fries, Bernard A., to California Research Corp. Apparatus for determining characteristics of hydrogen-containing substances. 2,899,555, 8–11–59, Cl. 250—43.5.
Fritz, Karl H. Apparatus for bright-annealing of metals. 2,899,192, 8–11–59, Cl. 266—5.
Frost, George E., to Olin Mathieson Chemical Corp. Method of making bullets. 2,898,666, 8–11–59, Cl. 29—1.22.
Fruengel, Frank. Method and system for operating X-ray tubes. 2,899,562, 8–11–59, Cl. 250—96.
Fuller Brush Co., The: *See*—
Beck, Raymond C. 2,898,619.
Funke, Albert, and H. Raab, to Farbenfabriken Bayer Aktiengesellschaft. Water insoluble monoazo dyestuffs. 2,899,420, 8–11–59, Cl. 260—204.
Funnell, William F., to Radio Corp. of America. Demand shear with means to alternately brake and accelerate a continuously moving web. 2,898,995, 8–11–59, Cl. 164—42.
Furniss, Loree E., to The Buckeye Steel Castings Co. Retaining means for coupler carrier. 2,899,083, 8–11–59, Cl. 213—61.

Greenwald, Harry, to H. Greenwald Co., Inc. Coin-actuated switch control means for electrical appliances. 2,899,522, 8–11–59, Cl. 218—479.
Harper, Deane C.: *See*—
Peck, George R. 2,899,336.

Gaden, Carl W.: *See*—
Brown, Edwin C., and Gaden. 2,899,006.
Gadget-Of-The-Month Club, Inc.: *See*—
Lambert, Ulysses L. 2,899,094.
Sheehy, Edward M. 2,898,675.
Gaggia, Giovanni A., to Brevetti Gaggia S.r.l. Machines for infusing coffee and like liquid extracts. 2,898,844, 8–11–59, Cl. 99—289.
Gainer, William C.: *See*—
Seward, Edwin R., and Gainer. 2,898,944.
Gall, John C.: *See*—
Reid, Harry A., and Gall. 2,898,883.
Gallowhur Chemical Corp.: *See*—
Cohen, Sylvan L., and Frant. 2,899,340.
Gancia, Paul: *See*—
Cella, Joseph F., and Gancia. 2,898,716.
Cella, Joseph F., and Gancia. 2,899,233.
Gardner-Denver Co.: *See*—
Booth, William M. 2,899,018.
Garver, Reed R.: *See*—
Flach, Donald O., and Garver. 2,899,272.
Gates, Richard L., to Thompson Ramo Wooldridge Inc. Vacuum driven automotive fuel pump. 2,898,865, 8–11–59, Cl. 103—152.
Gateway Engineering Co.: *See*—
Henrickson, Henry G. 2,898,758.
Gee, Robert E., and J. W. Gibbs, to Safetee Glass Co. Method of silvering mirrors. 2,899,333, 8–11–59, Cl. 117—35.
Geer, Charles W., to Hoffman Electronics Corp. Cathode ray tubes or the like. 2,899,579, 8–11–59, Cl. 313—81.
Geigy, J. R., S.A.: *See*—
Bossard, Werner, and Dussy. 2,899,305.
Kleemann, Alois, and Bindler. 2,899,354.
Geiser, David T., to Sprague Electric Co. Variable inductance device. 2,899,654, 8–11–59, Cl. 336—110.
Geist, William J., to Continental Can Co., Inc. Upper end structure for fiber drums. 2,899,118, 8–11–59, Cl. 229—5.7.
Gell, Philip A. M., to Elemelt Ltd. Method of and furnace for melting and refining glass. 2,899,476, 8–11–59, Cl. 13—6.
Genco, Inc.: *See*—
Zale, Thad F. 2,899,205.
General Aniline & Film Corp.: *See*—
Huber, Frederic R., and Schenck. 2,899,471.
Mayhew, Raymond L., and Jelinek. 2,899,391.
Schulze, Heins. 2,899,443.
General Binding Corp.: *See*—
Frederick, Henry R. 2,898,613.
General Dynamics Corp: *See*—
Clement, Milton A. 2,899,675.
Stranghan, Virgil R. 2,899,335.
General Electric Co.: *See*—
Andrews, John L. 2,899,664.
Cridland, John E. 2,899,671.
Flowers, Ralph G. 2,899,399.
Kubler, Ernest F. 2,899,629.
McCoy, Robert L., and Kaminski. 2,899,484.
Petley, Joseph E. 2,899,614.
Rosenblatt, Murray, and Rubenstein. 2,899,630.
Salomone, Rynold A. 2,899,521.
Savory, David B. 2,899,649.
Shepherd, Neal H. 2,899,630.
Sille, Earl H. 2,899,616.
Spector, Marshall L., and Strang. 2,899,453.
Speicher, William. 2,899,005.
Stevens, Leland J. 2,899,482.
Wesolowski, Adolph J. 2,899,573.
General Electric Co. Ltd., The: *See*—
French, Gordon P. 2,899,552.
Knott, Ralph D., and Young. 2,898,668.
Rockall, Frederick W. 2,899,677.
General Foods Corp.: *See*—
Russoff, Irving I. 2,899,309.
General Mills, Inc.: *See*—
Aelony, David, and Witteoff. 2,899,397.
General Motors Corp.: *See*—
Burch, Lewis D. 2,898,898.
Bush, Russell J., and Sayre. 2,898,643.
Bush, Russell J., and Sayre. 2,898,647.
De Lorean, John Z. 2,898,750.
Evans, Jesse L. 2,899,253.
Geyer, Howard M. 2,898,888.
Hastings, Homer R., and Stevens. 2,899,517.
Hitch, Paul E., and Walsh. 2,899,020.
Holzwarth, James C., and Thomson. 2,899,304.
Jacobs, James W. 2,899,253.
Kelley, Curtis P. 2,899,256.
Kelley, Oliver K. 2,898,740.
Kelley, Oliver K., Hause, and Wrigley. 2,898,644.
Kinsey, Claude J., and Varterasian. 2,898,764.
Leach, Clayton B., and Frank. 2,899,015.
McKinney, Cecil A. 2,898,896.
Morrish, Leonard M., and Muller. 2,899,007.
O'Connor, Neal E. 2,898,712.
Olson, Elmer. 2,899,184.
Reindl, Harold J. 2,899,136.
Sand, Darrel R., and Zimmer. 2,898,738.
General Steel Castings Corp.: *See*—
Zach, Julius J. 2,898,899.
General Telephone Laboratories, Inc.: *See*—
Lomax, Clarence E. 2,899,501.
McCreary, Harold J. 2,899,520.
General Tire and Rubber Co., The: *See*—
Salem, Samuel. 2,898,664.
Salem, Samuel, Bingham, and Anderson. 2,898,665.
Gessner, Ross D. Portable chapel tent frame. 2,898,924, 8–11–59, Cl. 135—4.
Gewalt, Rudolf, and E. Stein. Method for cold sterilization using bactericidal gases. 2,899,266, 8–11–59, Cl. 21—58.
Geyer, Howard M., to General Motors Corp. Pneumatic actuator assembly. 2,898,886, 8–11–59, Cl. 121—38.
Gibbons, Charles G.: *See*—
Smith, Harold K., and Gibbons. 2,899,040.
Gibson, Walter G., and A. C. Schroeder, to Radio Corp. of America. Picture signal aperture compensation system. 2,899,495, 8–11–59, Cl. 178—7.2.
Gifford, Maurice J.: *See*—
Lipke, Paul H., Jr., and Gifford. 2,899,400.
Gilbert, Everett B.: *See*—
Deggінger, Edward R., and Gilbert. 2,899,355.
Gillespie, Russell A., 33⅓% each to C. F. Spickelmier, E. S. Greer, and E. S. Spickelmier. Metal window. 2,898,646, 8–11–59, Cl. 20—52.2.
Gillette Co., The: *See*—
Testi, Nicholas. 2,899,105.
Gillies, Duncan M., and C. F. Spencer, to Duncan M. Gillies Co., Inc. Printing apparatus for longitudinally extended cylindrical bodies. 2,898,848, 8–11–59, Cl. 101—36.
Gillies, Duncan M., to Duncan M. Gillies Co., Inc. Engraving apparatus. 2,898,849, 8–11–59, Cl. 101—37.
Gillies, Duncan M., Co., Inc.: *See*—
Gillies, Duncan M. 2,898,849.
Gillies, Duncan M., and Spencer. 2,898,848.
Ginzton, Edward L., to The Board of Trustees of the Leland Stanford Jr. University. Linear accelerator. 2,899,598, 8–11–59, Cl. 315—3.6.
Girard, Theodore A., and D. X. Klein, to Hayden Newport Chemical Corp. Trichlorobenzene compounds and their production. 2,899,465, 8–11–59, Cl. 260—523.
Gits, Joseph A.: *See*—
Gits, Jules P. 2,899,098.
Gits, Jules P., ½ to J. A. Gits. Drinking vessels. 2,899,098, 8–11–59, Cl. 220—15.
Gleason Works, The: *See*—
Carlsen, Leonard O., and Krastel. 2,898,780.
Carlsen, Leonard O., and Male. 2,898,813.
Glenn, Edward R. Fuel injecting apparatus. 2,898,901, 8–11–59, Cl. 123—139.
Globe Lighting Products, Inc.: *See*—
De Mauro, Peter. 2,899,541.
De Mauro, Peter. 2,899,542.
Glowka, Martin. Rubber covered clothes hangers. 2,899,117, 8–11–59, Cl. 223—93.
Goetzel, Clara G., N. J. Grant, L. P. Sholnick, and J. A. Yoblin, to Sintercast Corp. of America. Thermal element. 2,899,338, 8–11–59, Cl. 117—65.
Gofman, John W., to United States of America, Atomic Energy Commission. Thorium oxalate-uranyl acetate coupled procedure for the separation of radioactive materials. 2,899,452, 8–11–59, Cl. 260—429.1.
Gold, Daniel: *See*—
Crosfield, John F., and Gold. 2,899,143.
Goldstein, Emanuel, and R. M. Lanskin, to The Trubek Laboratories. Purification of polyalkylphenols. 2,899,470, 8–11–59, Cl. 260—624.
Goldtrap, Charley L. Toilet flush tank assembly. 2,898,604, 8–11–59, Cl. 4—57.
Golrick, Albert R.: *See*—
Douglas, Alvin P., Golrick, and Skeri. 2,899,030.
Gomory, Paul L., to Phillips Petroleum Co. Methods and apparatus for handling particulate solids. 2,899,374, 8–11–59, Cl. 208—47.
Goodall Equipment, Inc.: *See*—
Goodall, Leonard B. 2,898,723.
Goodall, Leonard B., to Goodall Equipment, Inc. Multiple bladed mower. 2,898,723, 8–11–59, Cl. 56—25.4.
Goodall, Robert R., and N. H. Sutcliffe, to Imperial Chemical Industries Ltd. Process for the isolation of cephalosporin N. 2,899,425, 8–11–59, Cl. 260—239.1.
Goodall, William M., and H. E. Rowe, to Bell Telephone Laboratories, Inc. Broad-band amplifier employing parallel-series coupling network. 2,899,508, 8–11–59, Cl. 179—171.
Goodman Mfg. Co.: *See*—
Biedess, Anthony R. 2,899,187.
Robbins, James S. 2,898,742.
Goodrich, B. F., Co., The: *See*—
Schollenberger, Charles S. 2,899,411.
Goodwin, Chester H., to The Chemstrand Corp. High speed washing and relaxing thread advancing storage reel. 2,898,756, 8–11–59, Cl. 68—205.
Gould, David H., H. L. Herzog, and E. B. Hershberg, to Schering Corp. 11,17 disubstituted 3 keto-$\Delta^{4,6}$ androstatrienes. 2,899,447, 8–11–59, Cl. 260—397.3.
Govan, William L., to Baldwin-Lima-Hamilton Corp. Production of shapes of varying cross-section. 2,899,053, 8–11–59, Cl. 207—2.
Grace, W. R., & Co.: *See*—
Rudner, Bernard. 2,899,424.
Rudner, Bernard. 2,899,432.
Graham, George C.: *See*—
Montgomery, Clarence G. 2,898,992.
Grant, Nicholas J.: *See*—
Goetzel, Clara G., Grant, Sholnick, and Yoblin. 2,899,338.
Graybeal, La Verne R.: *See*—
Bley, Rudolph S., Carter, Edgar, Graybeal, and Schmidt. 2,898,627.
Grebner, Fritz, to Voigt & Haeffner A.G. Manufacture of girders or mesh. 2,899,537, 8–11–59, Cl. 219—79.
Greenhalgh, Norman, and J. K. Walley, to Imperial Chemical Industries Ltd. Cyanacethydrazide compositions for treating lung-worms and methods for using same. 2,899,354, 8–11–59, Cl. 167—53.1.
Greenwald, H., Co., Inc.: *See*—
Greenwald, Harry. 2,899,622.

High, Le Roy B., to The Udylite Research Corp. Lime buffing compositions and method for reducing slaking thereof. 2,899,289, 8–11–59, Cl. 51—304.
Hughes Aircraft Co.: *See*—
Johnson, Horace R. 2,899,594.
Johnson, Horace R. 2,899,596.

Greenwald, Harry, to H. Greenwald Co., Inc. Coin-actuated switch control means for electrical appliances. 2,899,522, 8-11-59, Cl. 313—470.
Greer, Edith S.: See—
Gillespie, Russell A. 2,898,646.
Gregory, Marion B., to The Baldwin Piano Co. Transistor oscillator for vibrato purposes. 2,899,548, 8-11-59, Cl. 331—117.
Gribbon, Earl R. Three bar continuous wall outlet. 2,899,668, 8-11-59, Cl. 339—21.
Griffiths, Jack, and W. G. Harland, to The British Cotton Industry Research Association. Printing of fabrics. 2,899,264, 8-11-59, Cl. 8—148.
Grimspoon, Harold, to Multi-Carton Corp. Open-ended carton for packaging paper cups and other articles. 2,899,049, 8-11-59, Cl. 206—65.
Griset, Ernest J., Jr., to American Enka Corp. Spinning tube. 2,899,264, 8-11-59, Cl. 8—161.2.
Grüber, Christian, to Pleuger K.G. Electro-magnetic device for pumping liquids. 2,898,860, 8-11-59, Cl. 103—53.
Groner, Theron A.: See—
Kranz, Carl L., and Groner. 2,899,525.
Gross, William J., and E. A. Chudkowski. Dressing. 2,898,910, 8-11-59, Cl. 128—184.
Gruber, Morris, and G. Rosenthal, to Eastern Precision Resistor Corp. Variable resistors with infinite resolution. 2,898,661, 8-11-59, Cl. 338—144.
Grundmann, Gustave L.: See—
Cooperman, Michael, and Grundmann. 2,899,492.
Sonnenfeldt, Richard W., Grundmann, and Cooperman. 2,899,491.
Gschwend, Charles-Louis, to Alfred Jeanrenaud. Noiseless lock. 2,899,227, 8-11-59, Cl. 292—163.
Guardino, John. Blade ejecting mechanism for safety razors. 2,898,676, 8-11-59, Cl. 30—30.5.
Guiemi, Thomas A., to Sperry Rand Corp. Wire tagging machine. 2,898,718, 8-11-59, Cl. 53—198.
Gulf Research & Development Co.: See—
Fareri, Elizabeth L., and Pellegrini. 2,899,489.
Gullett Gin Co.: See—
Wallace, Jeffrey J. 2,898,686.
Gullixson, Harold R. Device for holding flat articles or the like. 2,899,074, 8-11-59, Cl. 211—40.
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Gulton Industries, Inc.: See—
Dranetz, Abraham I., and Welkowitz. 2,899,580.
Gusching, Nagle V., and R. J. Flanigan, to The Monarch Machine Tool Co. Hydraulic flow control. 2,898,891, 8-11-59, Cl. 121—45.
Guthrie, James M.: See—
Bowman, Samuel G. 2,898,794.
Haag, Donald J.: See—
Crevling, Thomas V., Haag, and Abbott. 2,899,334.
Haagensen, Leif E., J. R. Johnson, and W. O. Odgers, to Western Electric Co., Inc. Universal fixture for supporting various parts to be worked. 2,899,196, 8-11-59, Cl. 269—130.
Haehnel, Herbert E.: See—
Bauer, Kurt P., Bitzer, and Haehnel. 2,898,753.
Hafstad, Lawrence R., and R. B. Roberts, to United States of America, Navy. Fuze. 2,898,857, 8-11-59, Cl. 102—70.2.
Hagan Chemicals & Controls, Inc.: See—
Williams, Ray S. 2,898,929.
Hagemeyer, Hugh J., Jr., and M. B. Edwards, to Eastman Kodak Co. Catalytic polymerization of α-olefins to solid polymers of improved crystallinity at increased rates. 2,899,413, 8-11-59, Cl. 260—93.1.
Hake, Walter T., to American Steel Foundries. Power indexing arrangement for side head tool block. 2,898,781, 8-11-59, Cl. 74—820.
Haloid Xerox Inc.: See—
Hayford, Richard E. 2,899,331.
Halstead, John H. Automobile lift. 2,899,020, 8-11-59, Cl. 187—8.75.
Hamilton, Rollie D., and S. M. Rich, said Hamilton to said Rich. Automatic safety valve for vehicle brake systems. 2,899,024, 8-11-59, Cl. 188—152.
Han-D-Hook, Inc.: See—
Longfellow, Harold W. 2,898,657.
Haslet, Jacques M. N., to Centre D'Etudes Et De Developpements De L'Electronique, CEDEL. Method of manufacturing photoconductive and rectifying elements. 2,899,372, 8-11-59, Cl. 204—192.
Hansen, Hans R. A.: See—
Norman, Horace M., and Hansen. 2,899,617.
Hansen, Lewis C., to W. A. Sheaffer Pen Co. Operating mechanism for a writing instrument. 2,898,895, 8-11-59, Cl. 120—42.3.
Hardfield Corp.: See—
Haskins, Lewis S. 2,899,097.
Hardinge, Harlowe. Method and apparatus for concentrating and classifying material. 2,899,129, 8-11-59, Cl. 241—19.
Harland, William G.: See—
Griffiths, Jack, and Harland. 2,899,264.
Harmon, George H., and A. E. Rockwood, Jr., to Western Electric Co., Inc. Impedance calibrator. 2,899,141, 8-11-59, Cl. 242—8.
Harms, Arthur M., to Harms Hosiery Co., Inc. Garment and method of making. 2,898,754, 8-11-59, Cl. 66—177.
Harms Hosiery Co., Inc.: See—
Harms, Arthur M. 2,898,754.
Harper, Chester H.: See—
Allen, Kenneth M., and Harper. 2,899,044.
Harper, Duane C.: See—
Peck, George R. 2,899,236.
Harris, Lewis J., and J. J. Carroll. Water hammer relief device. 2,898,935, 8-11-59, Cl. 137—599.2.
Harris, Michael G., and S. J. Walker, to Morris Motors Ltd. Brazed light alloy heat exchanger and method of making same. 2,899,177, 8-11-59, Cl. 257—245.
Harrison, Benjamin M., and E. E. Mulloy, to The American Oil Co. Drip free distillation receiver. 2,898,762, 8-11-59, Cl. 73—426.
Harry, William R., to McGraw-Edison Co. Method and apparatus for the manufacture of ceramic ware. 2,898,655, 8-11-59, Cl. 25—22.
Haskins, Lewis S., to Hardfield Corp. Containers of capsule like form. 2,899,097, 8-11-59, Cl. 220—4.
Hast, Nils B. Ascertaining stresses and deformations in solid loaded materials. 2,898,761, 8-11-59, Cl. 73—88.
Hastings, Homer R., and B. L. Stevens, to General Motors Corp. Liquid level signal arrangements. 2,899,517, 8-11-59, Cl. 200—84.
Hastings, Russell, Jr., to Clark Equipment Co. Latch linkage means. 2,898,872, 8-11-59, Cl. 105—286.
Hatfield Electric Co.: See—
Leblang, William M. 2,899,150.
Hause, Joseph: See—
Rosin, Jacob, and Hause. 2,899,454.
Hause, Gilbert K.: See—
Kelley, Oliver K., Hause, and Wrigley. 2,898,644.
Haussler, Friedrich, to Svenska Rotor Maskiner Aktiebolag. Rotary regenerative preheater for air flows of different pressure connected in parallel. 2,899,178, 8-11-59, Cl. 257—267.
Hayford, Richard E., to Haloid Xerox Inc. Process of developing electrostatic image with charcoal. 2,899,331, 8-11-59, Cl. 117—17.5.
Haynes, Stephen S.: See—
Hughes, William J., Haynes, Tracey, and Wheeler. 2,899,538.
Heacock, Ward J., to Link-Belt Co. Drive for water intake screens. 2,899,062, 8-11-59, Cl. 210—97.
Heathcote, Vincent A.: See—
Dix, Cyril H., and Heathcote. 2,899,604.
Heberling, Jack W., Jr.: See—
Bower, Frank A., and Heberling. 2,899,672.
Heide, Stanford M., to Chicago Dynamic Industries, Inc. Vibratory apparatus. 2,898,907, 8-11-59, Cl. 128—33.
Heim Co., The: See—
Heim, Lewis R. 2,898,671.
Heim, Lewis R., to The Heim Co. Method of mounting a self-aligned bearing in a lever or other machine element. 2,898,671, 8-11-59, Cl. 29—149.5.
Heiskell, Raymond H. Composition for tracer unit. 2,899,291, 8-11-59, Cl. 52—24.
Helble, Dean R., to North American Aviation, Inc. Mount for rotatable multiple-barrel-gun. 2,898,811, 8-11-59, Cl. 89—37.
Heller, B., & Co.: See—
Zick, William J. 2,899,211.
Hellyer, John T., ⅛ to R. S. Strom. Ice crusher directly driven by electric motor. 2,899,140, 8-11-59, Cl. 241—190.
Hempel, Gustav A., to McDowell Mfg. Co. Roller expanding and peening tool. 2,898,971, 8-11-59, Cl. 153—82.
Hemphill Co.: See—
St. Pierre, Eugene. 2,898,752.
Henchert, John, and H. E. Frankenberg, to Continental Can Co., Inc. Dual compartment container structure. 2,899,094, 8-11-59, Cl. 220—4.
Hennigan, Henry W., to Phillips Petroleum Co. Hydrocarbon conversion apparatus. 2,899,282, 8-11-59, Cl. 23—284.
Henri, Rene: See—
Matis, Ernest, Demolon, Nobecourt, and Henri. 2,899,189.
Henrickson, Henry G., to Gateway Engineering Co. Anchor slot channel structure. 2,898,758, 8-11-59, Cl. 72—101.
Henagen, Bernard T., to Swift & Co. Machine for use in the packaging of product. 2,898,722, 8-11-59, Cl. 53—247.
Henagen, Bernard T., and C. E. Evanson. Method and apparatus for preparing slabs of food product. 2,899,317, 8-11-59, Cl. 99—178.
Heraeus, W. C., G.m.b.H.: See—
Reichelt, Walter. 2,899,528.
Hermsen, Johannes, and P. J. Kraayeveld, to North American Philips Co., Inc. Geiger-Muller detector. 2,899,582, 8-11-59, Cl. 313—93.
Hernqvist, Karl G., to Radio Corp. of America. Electron discharge device. 2,899,586, 8-11-59, Cl. 313—167.
Herr, Frederick W.: See—
Schoeppel, John F., Varner, and Herr. 2,899,291.
Hershberg, Emanuel B.: See—
Gould, David H., Herzog, and Hershberg. 2,899,447.
Herter's, Inc.: See—
List, Robert M. 2,899,226.
Hertz, Friedrich. Process for television transmission. 2,899,493, 8-11-59, Cl. 178—7.5.
Herzog, Hershel L.: See—
Gould, David H., Herzog, and Hershberg. 2,899,447.
Hayden Newport Chemical Corp.: See—
Girard, Theodore A., and Klein. 2,899,465.
Hickman, Kenneth C. D. Compression distillation. 2,899,366, 8-11-59, Cl. 202—205.
Hickok Mfg. Co., The: See—
Epstein, Max. 2,898,602.
Hicks, Walter J., to Minneapolis-Honeywell Regulator Co. Transistor controlled gaseous indicator circuits. 2,899,606, 8-11-59, Cl. 315—135.
Higdon, Louis B.: See—
Scibetta, Paul C., and Higdon. 2,898,716.

Jayet, David L. Device for supplying a diver with air. 2,898,900, 8-11-59, Cl. 128—142.
Jeanrenaud, Alfred: See—
Gschwend, Charles-Louis. 2,899,227.
Jeffrey, Robert W., to Jeffrey Galion, Inc. Motor grader. 2,898,693, 8-11-59, Cl. 37—8.
Jenkins, Thomas L., to Jenkins Bros. Valve. 2,898,931, 8-11-59, Cl. 137—625.3.
Jenkins Bros.: See—
Jenkins, Thomas L. 2,898,931.
Jenkins, Thomas L., to Jenkins Bros. Valve. 2,898,932, 8-11-59, Cl. 137—625.3.
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Jenkins, Thomas L. 2,898,932.
Jenkins, Thomas L., to Jenkins Bros. Valve. 2,898,933, 8-11-59, Cl. 137—625.3.
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Jenkins, Thomas L. 2,898,933.
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High, Le Roy E., to The Udylite Research Corp. Lime buffing compositions and method for reducing sinking thereof. 2,899,298, 8–11–59, Cl. 51—304.

Hillemeier, Louis G., to Worthington Corp. Support structure for a welding positioner. 2,899,197, 8–11–59, Cl. 269—304.

Hill, Donald F., to Socony Mobil Oil Co., Inc. Method for increasing catalyst on-stream time in a hydrogenation process. 2,899,382, 8–11–59, Cl. 208—142.

Hill, Edward H.: *See*—
Caldwell, John R., and Hill. 2,899,412.

Hill, Roy O., Jr.: *See*—
Rouse, Benjamin P., Jr., and Hill. 2,899,216.

Hitch, Paul E., and J. W. Walsh, to General Motors Corp. Cooling system for fluid operated brake. 2,899,028, 8–11–59, Cl. 188—264.

Hodkin, David, to Engineering Research and Application Ltd. Motor vehicle chassis and suspension means. 2,899,236, 8–11–59, Cl. 296—28.

Hosse, Leroy M., and M. A. Trtan, to American Steel Foundries. Cleaning torch. 2,899,536, 8–11–59, Cl. 219—70.

Hesselbarth, Frank W. E., to C. H. Masland & Sons. Multiple pile fabric. 2,898,947, 8–11–59, Cl. 139—403.

Hofbauer, Frank. Combined drill and tap having drill lands extending throughout the length of the tapping portion. 2,898,612, 8–11–59, Cl. 10—140.

Hofbauer, William J. Rotary cutting tool. 2,898,787, 8–11–59, Cl. 77—73.5.

Hoff, Richard L., to Superior Tube Co. Tungsten-tantalum-nickel cathodes. 2,899,301, 8–11–59, Cl. 75—170.

Hoffman Electronics Corp.: *See*—
Geer, Charles W. 2,899,579.
Stellmacher, Donald D., and Danta. 2,899,563.

Hofmann Industries, Inc.: *See*—
Dunbar, Spurgeon P. 2,898,417.

Hogg, John A.: *See*—
Beal, Philip F., and Hogg. 2,899,448.

Holdren Brothers, Inc.: *See*—
Holdren, Donald R. 2,899,090.

Holdren, Donald R., to Holdren Brothers, Inc. Vehicle unloading apparatus. 2,899,090, 8–11–59, Cl. 214—82.

Holley Carburetor Co.: *See*—
Karpiel, Chester. 2,898,899.

Hollman, Peter I., and L. R. Jensen, to Geo. D. Roper Corp. Gas-fueled burner. 2,898,979, 8–11–59, Cl. 158—116.

Hollmann, Hans E., to Radio Patents Co. Passive radio communication. 2,899,548, 8–11–59, Cl. 250—6.

Holowaty, Michael O., to Inland Steel Co. Recovery of ammonia from coke oven gas. 2,899,277, 8–11–59, Cl. 23—196.

Holt, George A., to Ricardo & Co., Engineers (1927) Ltd. Internal combustion engines of the liquid fuel injection compression ignition type. 2,898,894, 8–11–59, Cl. 123—32.

Holswarth, James C., and R. F. Thomson, to General Motors Corp. Highly wear-resistant zinc base alloy. 2,899,304, 8–11–59, Cl. 75—178.

Home Curtain Corp.: *See*—
Levinstein, Stanley. 2,898,594.

Hooker Chemical Corp.: *See*—
Rosenberg, David S. 2,899,370.

Hooker, George W., to Koppers Co., Inc. Polymerization process. 2,899,417, 8–11–59, Cl. 260—94.9.

Hoover Co., The: *See*—
Hurd, Claud C. 2,898,622.
Vance, John E. 2,898,621.

Hopkinson, David B.: *See*—
Anderson, Gordon C., and Hopkinson. 2,898,729.

Horizons Inc.: *See*—
Vickery, Ronald C. 2,899,292.

Horn, Charles H.: *See*—
Walker, James H., Carr, and Horn. 2,898,825.

Horton, William P., to Eastman Kodak Co. Pulse delay circuit. 2,899,553, 8–11–59, Cl. 250—27.

Houdaille Industries, Inc.: *See*—
Beehm, Eric G. 2,898,777.
Ramsey, Rollin D. 2,899,023.

Houilleres du Bassin du Nord et du Pas-de-Calais: *See*—
Matis, Ernest, Demolon, Nobecourt, and Henri. 2,899,189.

Housman, William L. Automatic fishing rod and pole holder. 2,898,697, 8–11–59, Cl. 43—15.

Houston Oil Field Material Co., Inc.: *See*—
Medders, Weldon L., Foreman, and Skipper. 2,899,000.

Hovermale, Carroll O., 25% to E. Lang. Toy gun. 2,898,903, 8–11–59, Cl. 124—2.

Howa Kogyo Kabushiki-Kaisha: *See*—
Noda, Shozo. 2,898,726.

Howell, William, to Mallory-Sharon Metals Corp. Titanium press scrap recovery and electrode manufacture. 2,898,672, 8–11–59, Cl. 29—184.

Hower, Robert S.: *See*—
Bradley, Harry L., and Hower. 2,899,611.

Howman, Hilyard C. Reel structure. 2,899,147, 8–11–59, Cl. 242—118.6.

Huber, Frederick R., and L. M. Schenck, to General Aniline & Film Corp. Method for the manufacture of alkyl iodides. 2,899,471, 8–11–59. Cl. 260—652.

Hubert, Clarence A., to International Harvester Co. Independent power take-off mechanism. 2,899,034, 8–11–59, Cl. 192—48.

Hubiak, Walter: *See*—
Lohr, Raymond J., and Hubiak. 2,898,796.

Huck, Alfred J., and C. D. Vince, to Knapp-Monarch Co. Automatic coffee maker for instant coffee. 2,898,842, 8–11–59. Cl. 99—275.

Huff, Malvin, to Viewlex, Inc. Recycling variable motor timer. 2,898,998. 8–11–59. Cl. 161—1.

Huggins-Young Co., Inc.: *See*—
Rockriver, Clyde R. 2,898,842.

Hughes Aircraft Co.: *See*—
Johnson, Horace R. 2,899,594.
Johnson, Horace R. 2,899,596.
Lewis, Richard B. 2,899,672.
Rosen, Samuel A. 2,899,554.

Hughes, William R., to Cities Service Research and Development Co. Certain imidazolidinoguanylimine compounds. 2,899,442, 8–11–59. Cl. 260—309.7.

Hughes, William J., S. S. Haynes, J. R. Tracey, and H. L. Wheeler, to Bendix Aviation Corp. Machine for electrically welding aneroid capsules and other weldable articles in an evacuated chamber, and method. 2,899,538, 8–11–59, Cl. 219—82.

Hunt, Clayton R., Jr.: *See*—
Thompson, Russell G., and Hunt. 2,899,496.

Hunt, Norman K. Electrically actuated weighing device. 2,899,191, 8–11–59. Cl. 265—27.

Hurd, Claud C., to The Hoover Co. Combination suction cleaners. 2,898,622, 8–11–59, Cl. 15—323.

Hurley, Forrest R.: *See*—
Sisler, Harry H., and Hurley. 2,899,364.

Hurt, Norman A.: *See*—
Owen, Ronald V., and Hurt. 2,899,450.

Huser, William H., to Western Electric Co., Inc. Machine for trimming cup shaped articles and the die drive means therefor. 2,898,996, 8–11–59, Cl. 164—47.

Hussey, Luther W., to Bell Telephone Laboratories, Inc. Transistor test set. 2,899,642, 8–11–59, Cl. 324—158.

Husnar, Kalman S. Machine and process for the production of convolutions in wire. 2,898,949, 8–11–59, Cl. 140—71.

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Murray, Hugh A., Sr. 2,898,879.

Igelsrud, Iver, and H. F. Stephan, to United States of America, Atomic Energy Commission. Recovery of uranium from aqueous phosphate-containing solutions. 2,899,268, 8–11–59, Cl. 23—14.5.

Imperial Chemical Industries Ltd.: *See*—
Dawson, Timothy L. 2,899,341.
Goodall, Robert R., and Sutcliffe. 2,899,425.
Greenhalgh, Norman, and Walley. 2,899,356.
O'Neill, William A. 2,899,466.
Palfreeman, Herbert. 2,899,394.
Phippa, John W. 2,898,628.
Standring, Norman. 2,899,410.

Industrial Development Co.: *See*—
Schubert, Dale L. 2,898,958.

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Wales, Nathaniel B. 2,898,747.

Inland Steel Co.: *See*—
Holowaty, Michael O. 2,899,277.

Institut de Recherches de la Siderurgie: *See*—
Paris, Francois. 2,899,287.

Institut Francis du Petrole des Carburants et Lubrifiants: *See*—
Leprince, Pierre, Coussemant, and Limide. 2,899,473.

International Basic Economy Corp.: *See*—
Collins, John E. 2,898,926.

International Business Machines Corp.: *See*—
Lynott, John J. 2,898,890.
Quade, Edward A., and Wood. 2,899,657.

International Computers and Tabulators Ltd.: *See*—
Drewe, John, and Atkinson. 2,899,568.

International Electronic Research Corp.: *See*—
Woods, Leroy R. 2,899,670.

International Harvester Co.: *See*—
Hubert, Clarence A. 2,899,034.

International Minerals & Chemical Corp.: *See*—
Le Baron, Ira M. 2,899,055.

International Resistance Co.: *See*—
Weibard, Charles. 2,899,608.

International Standard Electric Corp.: *See*—
Bray, Frederick H., King, and Rice. 2,899,500.

International Telephone and Telegraph Corp.: *See*—
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Wing, Arthur K., Jr., and Cole. 2,899,593.

Ireland, Glen V. V-belt fastener. 2,898,652, 8–11–59, Cl. 24—33.

Irmscher, Hans O., to National Tea Packing Co., Inc. Banded string handle infusion package assembly. 2,899,045, 8–11–59, Cl. 206—.5.

Irving, Henry F., to Baker Perkins, Inc. Centrifugal machine. 2,899,065, 8–11–59, Cl. 210—376.

Irwin, Harry B., and R. R. Waterhouse, to Dayton Formold, Inc. Molding plastic foam. 2,898,632, 8–11–59, Cl. 18—48.

Irwin, Neisler and Co.: *See*—
Cavallito, Chester J., and O'Dell. 2,899,267.

Jacobs, James W., to General Motors Corp. Domestic appliance. 2,899,253, 8–11–59. Cl. 312—257.

Jacobs, Ridley S., to The Nig Mfg. Co. Ltd. Apparatus for the continuous development of light sensitive papers. 2,898,835, 8–11–59, Cl. 95—94.

Jacobsen, Dan, to Cycon, Inc. Automatic parking system. 2,899,067, 8–11–59, Cl. 214—16.1.

Jacobsen, James J. Display and demonstration device. 2,898,682, 8–11–59, Cl. 35—49.

James, Bill Y. Leg structure for gift boxes. 2,899,165, 8–11–59. Cl. 248—188.

James, Louise. Knock-down set-up boxes. 2,899,120, 8–11–59. Cl. 229—22.

Jamson, Ake B. Adjustable work piece holder. 2,898,715, 8–11–59, Cl. 51—217.

Japolsky, Nicholas S., to Nicotron Developments Ltd. Rotary pumps. 2,898,864. 8–11–59, Cl. 103—149.

Jawett, Joseph A., to Petrometer Corp. Specific gravity indicators. 2,898,768, 8–11–59, Cl. 73—439.

Kragh, James W.: *See*—
Cullaton, Robert J., and Kragh. 2,899,114.

Lekas, John P.: *See*—
Farrand, William A., Johnston, Kilpatrick, and Lekas.

Jayet, David L. Device for supplying a diver with air. 2,896,909, 8–11–59, Cl. 128—142.
Jeanremaud, Alfred: See—
Gschwend, Charles-Louis. 2,899,327.
Jeffery, Norman H., to Rolls-Royce Ltd. Method of forming articles from siliceous aluminous and polytetra fluoroethylene. 2,899,681, 8–11–59, Cl. 18—47.5.
Jelinek, Charles F.: See—
Mayhew, Raymond L., and Jelinek. 2,899,951.
Jenkins, Albert E., to Owens-Illinois Glass Co. Method for bending linear materials. 2,899,348, 8–11–59, Cl. 154—121.
Jenkin, Jean M. Child proof cabinet lock. 2,899,229, 8–11–59, Cl. 292—206.
Jennings, Jo E., to Jennings Radio Mfg. Corp. Vacuum variable feed-through capacitor. 2,899,612, 8–11–59, Cl. 317—246.
Jennings, Jo E., to Jennings Radio Mfg. Corp. Reciprocal vacuum variable capacitor. 2,899,613, 8–11–59, Cl. 317—246.
Jennings Radio Mfg. Corp.: See—
Jennings, Jo E. 2,899,612.
Jennings, Jo E. 2,899,613.
Jenny, Walter, to Ciba Ltd. Benzothiazolyl-2-amino-1,4-dihydroxy anthraquinones. 2,899,438, 8–11–59, Cl. 260—368.
Jensen, Hans, to North American Philips Co., Inc. Binocular optical system. 2,899,758, 8–11–59, Cl. 88—1.
Jensen, Lionel R.: See—
Holman, Peter L., and Jensen. 2,896,979.
Johannesen, John D., P. R. Myers, and J. R. Schreuder, to Bell Telephone Laboratories, Inc. Switching circuit. 2,899,570, 8–11–59, Cl. 307—88.5.
Johansen, Bengt J., to United-Carr Fastener Corp. Electrical connector. 2,899,660, 8–11–59, Cl. 339—46.
Johnson, Horace R., to Hughes Aircraft Co. Backward-wave oscillator. 2,899,584, 8–11–59, Cl. 315—3.5.
Johnson, Horace R., to Hughes Aircraft Co. Wide band mixing system. 2,899,636, 8–11–59, Cl. 315—3.6.
Johnson, Joel R.: See—
Haagensen, Leif R., Johnson, and Odgers. 2,899,196.
Johnson & Johnson: See—
Bird, William H., Plastinga, and Newsome. 2,899,227.
Engel, Edward W., and Dunlap. 2,899,253.
Wilson, Evelyn H. 2,899,458.
Johnson, Leonard R., Jr. Door guides. 2,896,622, 8–11–59, Cl. 16—90.
Johnston, James M.: See—
Lightbody, Alexander, and Johnston. 2,899,856.
Johnston, Spencer G.: See—
Farrand, William A., Johnston, Kilpatrick, and Lukas. 2,899,260.
Jones, Jean P., to Phillips Petroleum Co. Hydroperoxides of tertiary alkyl cyclohexenes. 2,899,469, 8–11–59, Cl. 260—610.
Jonker, Johan L. H., and G. de Vries, to North American Philips Co., Inc. Tunable magnetron. 2,899,602, 8–11–59, Cl. 315—39.51.
Jonkers, Cornelius O., to North American Philips Co., Inc. Heat exchanger. 2,899,881, 8–11–59, Cl. 62—3.
Jordan, James D., to United States of America, Navy. Switch. 2,899,514, 8–11–59, Cl. 200—90.
Josephson, Gilbert. Decorative article. 2,896,755, 8–11–59, Cl. 67—25.
Jungk, Herbert G., to McGraw-Edison Co. Construction for forming commutator segments. 2,899,574, 8–11–59, Cl. 310—234.
Kabushiki Kaisha Hakko Denki Seisakusho: See—
Toyoda, Eijiro. 2,896,661.
Kalamazoo Vegetable Parchment Co.: See—
Marsh, John L. 2,896,973.
Kalfaian, Meguer V. Color image and flying spot scanner control of dual photoconductive film. 2,899,488, 8–11–59, Cl. 178—5.4.
Kaminski, Joseph, Jr.: See—
McCoy, Robert L., and Kaminski. 2,899,484.
Kammer, Karl. Implement for tying blood vessels. 2,896,915, 8–11–59, Cl. 128—326.
Kammer, Karl. Devices for the gripping and ligaturing of the ends of tubular vessels. 2,896,916, 8–11–59, Cl. 128—328.
Kanty, Charles L.: See—
Drew, Stanley J., and Kanty. 2,896,823.
Karabin, Harry. Spring-biased shear joint. 2,896,678, 8–11–59, Cl. 80—208.
Kardorff, Leon, to Telecontrols-International, Inc. Device for filling electric battery cells. 2,899,481, 8–11–59, Cl. 136—162.
Karpiej, Chester, to Holley Carburetor Co. Fuel control for spark ignition internal combustion engines. 2,896,899, 8–11–59, Cl. 123—139.
Kasmen, Edward J.: See—
Farbak, John R., and Kasmen. 2,899,328.
Kattner, Wilbur T., to United States of America, Atomic Energy Commission. Separation of tin from alloys. 2,899,295, 8–11–59, Cl. 75—64.
Katz, Joseph J., and I. Sheft, to United States of America, Atomic Energy Commission. Method of preparing metal fluorides. 2,899,269, 8–11–59, Cl. 23—14.5.
Kauffman, Floyd L.: See—
Silliker, John H., Kauffman, and Obison. 2,899,312.
Kauffman, Floyd L., D. B. Van Dolah, and A. W. Sharp, to Swift & Co. Rag breaker and shell expresser. 2,896,961, 8–11–59, Cl. 146—2.
Keely, Clifford D., ½ to R. J. Baisley. Machine for adhesively joining two surfaces. 2,896,816, 8–11–59, Cl. 93—36.
Keely, Clifford D., ¼ to R. J. Baisley. Carton flap sealing machine. 2,896,820, 8–11–59, Cl. 93—49.
Keen, Clifford P. Wrestling helmet. 2,896,996, 8–11–59, Cl. 2—3.
Kehoe, William R., to American Meter Co., Inc. Gas pressure regulator. 2,896,928, 8–11–59, Cl. 137—80.
Keith, Donald G. Method of and apparatus for packaging flowable materials in thermoplastic sheet material. 2,896,714, 8–11–59, Cl. 53—30.
Kelley, Curtis P., to General Motors Corp. Refrigerating apparatus. 2,899,296, 8–11–59, Cl. 312—39.5.
Kelley, Oliver K., C. E. Hann, and C. C. Wrigley, to General Motors Corp. Windshield cleaning mechanism. 2,899,644, 8–11–59, Cl. 15—250.1.
Kelley, Oliver K., to General Motors Corp. Transmission. 2,899,740, 8–11–59, Cl. 29—14.
Kellogg, M. W. Co., The: See—
Nathan, Marvin F. 2,899,264.
Kelly, John F., and A. C. Wolbert, to The Columbia Mills, Inc. Window screen. 2,899,991, 8–11–59, Cl. 160—383.
Kennedy, Frank J., to H. K. Porter Co. Inc. Metal shroud protector. 2,896,943, 8–11–59, Cl. 126—94.
Kennedy-Van Saun Mfg. & Eng. Corp.: See—
Fergusson, Lester E. 2,899,244.
Kennedy, William, & Sons Ltd., The: See—
Sandison, Alexander G. 2,899,068.
Kitchener, Harry D., to The Sheffield Corp. Pneumatic gage head. 2,896,362, 8–11–59, Cl. 33—147.
Kiefer, Kurt T. Venting blind and tilt control mechanism therefor. 2,896,906, 8–11–59, Cl. 160—168.
Kieler Howaldtswerke A.G.: See—
Behring, Hans. 2,896,595.
Kiesling, Harry E., to United States Steel Corp. Apparatus for drilling radial holes. 2,896,753, 8–11–59, Cl. 77—37.
Kilbane, James A., Jr., and R. H. Palmer. Tumbler. 2,896,711, 8–11–59, Cl. 81—164.
Kilcup, Ernest L., to Davol Rubber Co. Inhaler tube. 2,896,941, 8–11–59, Cl. 128—36.
Kilpatrick, Lester L.: See—
Farrand, William A., Johnston, Kilpatrick, and Lukas. 2,899,260.
Kimberlin, Charles N., Jr.: See—
Krebs, Robert W., and Kimberlin. 2,899,376.
Adams, Clark R., and Kimberlin. 2,899,206.
Kindseth, Harold V., to Bemis Bro. Bag Co. Method of making bag closure. 2,899,347, 8–11–59, Cl. 154—102.
King, Donald L., and K. L. Davis, to The Elmco Corp. Pressure filter construction. 2,899,066, 8–11–59, Cl. 210—402.
King, Peter M.: See—
Bray, Frederick H., King, and Rice. 2,899,506.
King, Richard C. Water craft for the transport of wheeled vehicles. 2,899,677, 8–11–59, Cl. 114—60.
Kinnaman, Chalmer E. Commutator undercutting tools. 2,896,314, 8–11–59, Cl. 30—28.
Kinsey, Claude J., and J. H. Vartanian, to General Motors Corp. Balancing machine. 2,896,764, 8–11–59, Cl. 73—462.
Kircher, Raymond J., to Bell Telephone Laboratories, Inc. Diode circuits. 2,899,569, 8–11–59, Cl. 307—88.5.
Kirkham, Peter, and R. G. R. Robinson, to Pye Ltd. Magnetic scanning circuits for cathode ray tubes. 2,899,578, 8–11–59, Cl. 315—78.
Kirkham, Charles O., to The Singer Mfg. Co. Sewing machine supporting stand. 2,899,949, 8–11–59, Cl. 311—13.
Kitahara, Kiyoshi. Method of producing narrow fabrics by cutting a specially woven wide fabric containing synthetic fibre wefts, by the aid of electrical heating of interwoven metal wires. 2,896,643, 8–11–59, Cl. 28—72.
Kitchen, John A., and F. R. Dunham, to Lucas-Rotax Ltd. Gaseous fuel combustion apparatus. 2,896,976, 8–11–59, Cl. 158—7.
Klecnek, Walter S., to United States of America, Army. Pressure regulator. 2,899,168, 8–11–59, Cl. 251—62.
Kleemann, Alois, and J. Bindler, to J. R. Geigy, A.-G. Decylthioacetic acid diethanolamide as fungicidal agent. 2,899,354, 8–11–59, Cl. 167—22.
Klein, David X.: See—
Girard, Theodore A., and Klein. 2,899,485.
Kleinholz, Milton P.: See—
Nelson, John W., and Kleinholz. 2,899,268.
Klingler, Karl A. Valve structure. 2,899,169, 8–11–59, Cl. 251—107.
Klink, John: See—
Crechiar, Walter J., and Klink. 2,896,696.
Klosterman, Richard L.: See—
Ridley, Ian M. 2,899,192.
Knapp-Monarch Co.: See—
Hack, Alfred J., and Vince. 2,899,842.
Knapp, Robert S. 2,899,106.
Knapp, Robert S., to Knapp-Monarch Co. Self-cleaning and metering liquid spray valve structure. 2,899,106, 8–11–59, Cl. 222—151.
Knott, Ralph D., and M. R. P. Young, to The General Electric Co. Ltd. Manufacture of semiconductor devices. 2,899,666, 8–11–59, Cl. 29—25.3.
Knutson, Harold and H. G. Air scupper. 2,896,541, 8–11–59, Cl. 98—110.
Knutson, Harold G.: See—
Knutson, Harold and H. G. 2,896,541.
Kompfner, Rudolf, to Bell Telephone Laboratories, Inc. Apparatus utilizing slalom focusing. 2,899,597, 8–11–59, Cl. 315—3.6.
Köppel, Walter, and W. Ott, to MAN, Maschinenfabrik Augsburg-Nürnberg AG. Cooling arrangement for injection nozzles of internal combustion engines. 2,896,596, 8–11–59, Cl. 123—41.31.
Koppers Co., Inc.: See—
Hooker, George W. 2,899,417.
Korman, Jerome, to The Upjohn Co. 5-lower-carboxamido-1,3,4, thiadiazole-2-sulfonamide. 2,899,429, 8–11–59, Cl. 260—306.8.
Kosel, Harry: See—
Nicholas, William, and Kosel. 2,899,164.
Kraayeveld, Pieter J.: See—
Hermsen, Johannes, and Kraayeveld. 2,899,562.

Lung, Elmer: See—
Matis, Ernest, P. Demolon, C. Nobecourt, and R. Henri, to

Kragh, James W.: *See*—
Culleton, Robert J., and Kragh. 2,899,114.

Kraissl Co., Inc., The: *See*—
Walter, Andrew J., Jr. 2,899,232.

Krall, Friedrich, to Deutsche Gold- und Silber-Scheideanstalt vormals Roessler. Sealing elements, especially flanges, and process for their production. 2,899,535, 8–11–59, Cl. 219—69.

Krall, Richard C.: *See*—
St. Clair, Theodore A., and Krall. 2,898,930.

Kramer, Leo, to Controls Co. of America. Impact electric switch construction. 2,899,519, 8–11–59, Cl. 200—104.

Kranz, Carl L., and T. A. Groner. Composition for building blocks. 2,899,325, 8–11–59, Cl. 106—93.

Krastel, Adolph H.: *See*—
Carlsen, Leonard O., and Krastel. 2,898,780.

Krauthakel, Alfred: *See*—
Bender, Georg, and Krauthakel. 2,899,188.

Krebs, Robert W., and C. N. Kimberlin, Jr., to Esso Research and Engineering Co. Coking heavy oils with inert solids in two stages. 2,899,376, 8–11–59, Cl. 208—53.

Kreimeier, Oscar R., to E. I. du Pont de Nemours and Co. Process for recovering lead from by-product lead materials. 2,899,296, 8–11–59, Cl. 75—77.

Krohm, Fred A., to The Anderson Co. Defroster. 2,899,526, 8–11–59, Cl. 219—19.

Krueger, Alfred P., to Derby Sealers, Inc. Tape dispenser and folder. 2,899,198, 8–11–59, Cl. 270—68.

Kubler, Ernest F., to General Electric Co. Conversion network. 2,899,629, 8–11–59, Cl. 321—39.

Kuehl, Ernest M. Artificial fishing lure. 2,898,699, 8–11–59, Cl. 43—42.09.

Kunik, I. Jordan: *See*—
Montgomery, Clarence G. 2,898,992.

Kunz, Jacob T., to Schulmerich Electronics, Inc. Free-free type tone generating bar. 2,898,795, 8–11–59, Cl. 84—403.

Kwartler, Irwin E., and R. L. Wade, to Royal McBee Corp. Card binders. 2,898,919, 8–11–59, Cl. 129—24.

Kwik-Kold of America, Inc.: *See*—
Robbins, Albert A. 2,898,744.

La Chapelle, Albert L.: *See*—
La Chapelle, Euclid I. 2,898,615.

La Chapelle, Beatrice H.: *See*—
La Chapelle, Euclid I. 2,898,615.

La Chapelle, Euclid I., deceased; B. H. La Chapelle, executrix, ¼ to A. L., ¼ to B. H., and ¼ to R. E. La Chapelle. Method of drafting uppers on lasts. 2,898,615, 8–11–59, Cl. 12—145.

La Chapelle, Rachel E.: *See*—
La Chapelle, Euclid I. 2,898,615.

La Forge, Louis H., Jr.: *See*—
Sorg, Harold E., and La Forge. 2,899,590.

Lambert, Ulysses L., ½ to Gadget-Of-The-Month Club, Inc. Stamp application machine. 2,899,094, 8–11–59, Cl. 216—25.

Lammers, Ernst, to Aktiengesellschaft fur Unternehmungen der Eisen- und Stahlindustrie. Reversible drive system. 2,898,774, 8–11–59, Cl. 74—377.

Lanciani, Daniel A., to Microwave Associates, Inc. Waveguide bend. 2,899,651, 8–11–59, Cl. 333—21.

Lanning, William C., to Phillips Petroleum Co. Hydrocracking of petroleum residuum with use of gravity bed of catalytic particles. 2,899,380, 8–11–59, Cl. 208—108.

Lapointe, Donald H.: *See*—
Rivers, George D., and Lapointe. 2,899,676.

Larson, Clayton E., to White Metal Rolling & Stamping Corp. Multi-way ladder. 2,899,008, 8–11–59, Cl. 182—25.

La Telemecanique Electrique: *See*—
Flatet, Jacques, and Cornu. 2,899,523.

Latzko, John A., to Aktiengesellschaft Brown, Boveri & Cie. Sheet metal switch panel enclosure. 2,899,254, 8–11–59, Cl. 312—257.

Lavoie, Edward V. Automobile window screen. 2,898,982, 8–11–59, Cl. 160—40.

Lawrence, Ray V.: *See*—
Moore, Richard N., and Lawrence. 2,899,463.

Lawson, Harry W., Jr. Electronic ignition system. 2,899,632. 8–11–59, Cl. 323—58.

Lazar, Michael, and E. T. Salz. Multi-stroke tool. 2,898,790, 8–11–59, Cl. 81—15.

Leach, Clayton B., and M. H. Frank, to General Motors Corp. Engine bearings and lubrication system. 2,899,015, 8–11–59, Cl. 184—6.

Lear, Inc.: *See*—
Axtinson, Donald L., and Curriston. 2,898,765.
Pittman, Roland. 2,898,766.
Schoeppel, John F., Varner, and Herr. 2,899,393.

Le Baron, Ira M., to International Minerals & Chemical Corp. Electrostatic method and apparatus for beneficiating minerals. 2,899,055, 8–11–59, Cl. 209—127.

Leblang, William M., to Hatfield Electric Co. Cable support structure. 2,899,159, 8–11–59, Cl. 248—49.

Lederer, Ernest A., to Westinghouse Electric Corp. Getter for electron discharge device. 2,899,257, 8–11–59, Cl. 316—25.

Lederman, Samuel, and W. R. MacLean, to United States of America, Air Force. Method of improving induction heating efficiency. 2,899,525, 8–11–59, Cl. 219—10.41.

Ledgerwood, Robert W., to Rol-Away Truck Mfg. Co., Inc. Transfer truck. 2,899,010, 8–11–59, Cl. 182—118.

Leferdink, Theodore R.: *See*—
Stanton, George W., Leferdink, Meikle, and Charlesworth. 2,899,262.

Leffingwell Chemical Co.: *See*—
Allison, John R. 2,899,389.

Leitz, Ernst, G.m.b.H.: *See*—
Brömer, Heins, and Meinert. 2,899,322.

Lekas, John P.: *See*—
Farrand, William A., Johnston, Kilpatrick, and Lekas. 2,899,260.

Leland Stanford Jr. University, The Board of Trustees of The: *See*—
Ginzton, Edward L. 2,899,598.

Leprince, Pierre, F. Coussemant, and J. Limido, to Institut Francais du Petrole des Carburants et Lubrifiants. Process for the manufacture of olefinic compounds by the dehydrochlorination of corresponding chlorinated derivatives. 2,899,473, 8–11–59, Cl. 260—666.

Leslie, Donald J. Electronic tremolo device. 2,899,644, 8–11–59, Cl. 331—49.

Lever Brothers Co.: *See*—
Owen, Ronald V., and Hurt. 2,899,450.

Levine, Robert J., to Avien, Inc. Capacitive proportioning system. 2,899,151, 8–11–59, Cl. 244—77.

Levine, Samuel W., to Fairchild Camera and Instrument Corp. Multiple ratio electrical engraving machine. 2,899,493, 8–11–59, Cl. 178—6.6.

Levinstein, Stanley, to Home Curtain Corp. Pleating and fastening device. 2,898,594, 8–11–59, Cl. 1—118.

Lewfor Development Corp.: *See*—
Mestre, Luis. 2,899,202.

Lewis, Daniel W., to Westinghouse Electric Corp. Low viscosity polysiloxanes and compositions prepared therewith. 2,899,403, 8–11–59, Cl. 260—42.

Lewis, Donald R., to Shell Development Co. Method of characterizing solid materials and method of geophysical exploration. 2,899,558, 8–11–59, Cl. 250—65.

Lewis, Ernest D., to E. I. du Pont de Nemours and Co. Pigment production. 2,899,278, 8–11–59, Cl. 23—202.

Lewis, Richard B., to Hughes Aircraft Co. Electrical terminal stud. 2,899,672, 8–11–59, Cl. 339—220.

Libman, Max L.: *See*—
Rabinow, Jacob, and Libman. 2,899,564.

Lightbody, Alexander, and J. M. Johnston, to Sir W. G. Whitworth Armstrong Aircraft Ltd. Self-projected missiles. 2,898,856, 8–11–59, Cl. 102—49.

Liljemark, Frank H., to Plews Mfg. Co. Metering device for liquid lubricant. 2,899,017, 8–11–59, Cl. 184—27.

Limark Corp.: *See*—
Walker, James H., Carr, and Horn. 2,898,825.

Lindgren, Howard W.: *See*—
Nordquist, Richard A., Miller, Bukosky, and Lindgren. 2,898,685.

Link-Belt Co.: *See*—
Francis, Norman L., and Erisman. 2,899,176.
Heacock, Ward J. 2,899,062.
Schroth, John J. 2,899,059.
Schroth, John J. 2,899,060.
Schroth, John J. 2,899,061.

Lint, Robert M., to Herter's, Inc. Whip finishers. 2,899,226, 8–11–59, Cl. 289—17.

Lipes, Alvin W., and H. H. Williams, Jr. Simulated tie knot and locking means therefor. 2,898,600, 8–11–59, Cl. 2—150.

Lipke, Paul H., Jr., and M. J. Gifford, to The Dow Chemical Co. Composition comprising styrene polymer, wax and molybdenum disulfide and phonograph record molded therefrom. 2,899,400, 8–11–59, Cl. 260—28.5.

Liquid Controls Corp.: *See*—
Richards, George B. 2,898,927.

Little, Arthur D., Inc.: *See*—
Rohrer, Douglas P., and Chellis. 2,898,893.

Livermont, Frank W. Paving machine. 2,898,826, 8–11–59, Cl. 94—45.

Ljungberg, Lars R., and L. E. Ohlin. Photoelectric colorimeter. 2,898,802, 8–11–59, Cl. 88—14.

Lockheed, John A. Building pressurization system. 2,898,836, 8–11–59, Cl. 98—1.5.

Lockwood, John C., to Scripto, Inc. Alternate push retractable ball pen having double rocking latch mechanism. 2,898,886, 8–11–59, Cl. 120—42.03.

Loev, Bernard, and J. T. Massengale, to Pennsalt Chemicals Corp. Synthesis of tetrahydrothiophene. 2,899,444, 8–11–59, Cl. 260—329.

Lofgren, Karl B.: *See*—
Fredriksson, Per S. E., Arnelo, Lofgren, and Lotvik. 2,898,650.

Lohr, Raymond J., and W. Hubiak, to Louis Marx & Co., Inc. Vibratory hammer for toy musical instrument. 2,898,796, 8–11–59, Cl. 84—404.

Lomax, Clarence E., to General Telephone Laboratories, Inc. Telephone system with inductive pulsing. 2,899,501, 8–11–59, Cl. 179—16.

Long, Florren E., to Continental Can Co., Inc. Automatic foaming unit. 2,899,318, 8–11–59, Cl. 99—180.

Long, Stuart S., and B. B. Cox, ⅓ to Paul Knitting Mills, Inc. Hosiery clipping and everting machine. 2,899,116, 8–11–59, Cl. 223—43.

Longfellow, Harold W., to Han-D-Hook, Inc. Implement holding device. 2,898,657, 8–11–59, Cl. 24—249.

Lotarski, Stephen P., and F. E. Speight, to United Shoe Machinery Corp. Insole rib attaching machines. 2,898,614, 8–11–59, Cl. 12—20.

Lotvik, Lars G. W.: *See*—
Fredriksson, Per S. E., Arnelo, Lofgren, and Lotvik. 2,898,650.

Lovecky, Albert J., to Bell Telephone Laboratories, Inc. Wire unwrapping and rewrapping tool. 2,898,952, 8–11–59, Cl. 140—124.

Lowe, Carol S.: *See*—
Williams, Robert F., Jr., and Lowe. 2,899,315.

Lucas-Rotax Ltd.: *See*—
Kitchen, John A., and Denham. 2,898,978.

Lummus Cotton Gin Co.: *See*—
Vandergriff, Arvel L. 2,898,635.

Mestre, Luis, to Lewfor Development Corp. Offset printing machine and sheet gage. 2,899,202, 8–11–59, Cl. 271—53.

Metal Diffusions, Inc.: *See*—
Morris, Beulah B.: *See*—
Morris, Evelyn C. and B. B. 2,898,598.

Morris, Evelyn C., and B. B. Dress shield. 2,898,598.

Lung, Elmer: *See*—
Hovermale, Carroll O. 2,898,903.

Luskin, Leo S.: *See*—
De Benneville, Peter L., and Luskin. 2,899,406.

Luskin, Robert M.: *See*—
Goldstein, Emanual, and Luskin. 2,80,470.

Luts, Earle R., and W. L. Sheffield, to Atlas Powder Co. Automatic machine for making and closing dynamite shell cartridges and casings and similar apparatus. 2,898,817, 8–11–59, Cl. 93—39.1.

Lyman, Raphael, to R. Ullman. Clip for pin curls, or the like. 2,898,922, 8–11–59, Cl. 132—48.

Lynch, Robert E. Vernier scribing tool. 2,898,682, 8–11–59, Cl. 33—42.

Lynch, Robert T., to Bell Telephone Laboratories, Inc. Method of manufacturing sintered cathode. 2,899,298, 8–11–59, Cl. 75—207.

Lynott, John J., to International Business Machines Corp. Motion transmitting device. 2,898,890, 8–11–59, Cl. 121—41.

Lyons, John W., to Monsanto Chemical Co. Improving the physical properties of clay soils by treating with alkenyl polyamines. 2,898,706, 8–11–59, Cl. 47—58.

Lyons, John W., to Monsanto Chemical Co. Soil stabilization. 2,899,329, 8–11–59, Cl. 106—287.

Lyons, John W., to Monsanto Chemical Co. Soil stabilization. 2,899,330, 8–11–59, Cl. 106—287.

MAN, Maschinenfabrik Augsburg-Nurnberg AG.: *See*—
Köppel, Walter, and Ott. 2,898,895.

M-O Valve Co. Ltd., The: *See*—
Dix, Cyril H., and Heathcote. 2,899,604.

MacArthur, James G., to Spencer Chemical Co. Process and compositions for improving clay products. 2,899,324, 8–11–59, Cl. 106—72.

Machesney, Henry J. Snap-on tire chain assembly for vehicles. 2,898,966, 8–11–59, Cl. 152—283.

Macksoud, Michel B., to Duro-Test Corp. Light source. 2,899,583, 8–11–59, Cl. 313—109.

MacLean, William R.: *See*—
Lederman, Samuel, and MacLean. 2,899,525.

Magee Carpet Co., The: *See*—
Penman, Montgomery B. 2,898,876.

Magel, Theodore T., to United States of America, Atomic Energy Commission. Method of producing dense consolidated metallic regulus. 2,899,297, 8–11–59, Cl. 75—84.1.

Magnus, Finn H. Display stand. 2,899,078, 8–11–59, Cl. 211—60.

Magnus, Oscar F., to American Brake Shoe Co. Blowers for railway switches. 2,898,062, 8–4–59, Cl. 246—428.

Mainland, John G.: *See*—
Wotring, John A., and Mainland. 2,898,863.

Maisch, Oliver. Rotary shaft seal. 2,899,244, 8–11–59, Cl. 308—36.2.

Makower, Benjamin, and T. H. Schulz, to United States of America, Agriculture. Process for preparing a solid flavoring composition. 2,899,313, 8–11–59, Cl. 99—140.

Male, Herman A.: *See*—
Carlsen, Leonard O., and Male. 2,898,813.

Mallory-Sharon Metals Corp.: *See*—
Howell, William. 2,898,672.

Mallory-Sharon Titanium Corp.: *See*—
Busch, Lee S., and Bauer. 2,899,303.

Malm, Carl J., and C. L. Crane, to Eastman Kodak Co. Manufacture of cellulose acetate. 2,899,423, 8–11–59, Cl. 260—227.

Manton-Gaulin Mfg. Co., Inc.: *See*—
Deackoff, Leon P. 2,898,866.

Marcucci, Emil F. Christmas tree stand. 2,899,156, 8–11–59, Cl. 248—48.

Mark, Vennice E. Concealable platform. 2,899,250, 8–11–59, Cl. 312—21.

Marker, Hannes. Safety ski binding. 2,899,210, 8–11–59, Cl. 280—11.35.

Marks, Daniel R., to Velsicol Chemical Corp. Improvement in the process of preparing endrin from isodrin. 2,899,446, 8–11–59, Cl. 260—348.5.

Marosi, Jess, to Ford Motor Co. Vehicle parking brake. 2,899,025, 8–11–59, Cl. 188—170.

Marquardt, John A., to Streeter-Amet Co. Device to determine the position of a moving car irrespective of the number of wheels on each truck thereof. 2,899,544, 8–11–59, Cl. 246—77.

Marriott, William L., to Allen Electric and Equipment Co. Rate finder for battery charger. 2,899,624, 8–11–59, Cl. 320—48.

Marsh, John L., to Kalamazoo Vegetable Parchment Co. Apparatus and method of bonding paper having thermoplastic coating. 2,898,973, 8–11–59, Cl. 154—1.

Martel, Antonin. Loading means for magnetic films ensuring the endless winding up and unwinding of the bands. 2,899,507, 8–11–59, Cl. 179—100.2.

Martin Co., The: *See*—
Romano, George P. 2,899,567.

Martin, William. Drinking fountain with a connector conduit. 2,899,137, 8–11–59, Cl. 239—29.

Marx, Louis, & Co., Inc.: *See*—
Lehr, Raymond J., and Hubiak. 2,898,798.

Masland, C. H., & Sons: *See*—
Hesselbarth, Frank W. E. 2,898,947.

Masonite Corp.: *See*—
Foley, Edward A. 2,898,720.

Massengale, John T.: *See*—
Leev, Bernard, and Massengale. 2,899,444.

Masters, Albert T., to Olin Mathieson Chemical Corp. Explosively driven stud with split shank locking means. 2,898,984, 8–11–59, Cl. 151—41.73.

Matiz, Ernest, P. Demolon, C. Nobecourt, and R. Henri, to Houilleres du Bassin du Nord et du Pas-de-Calais. Apparatus for processing compressed fuel briquettes and similar materials. 2,899,189, 8–11–59, Cl. 263—28.

Matter, Gustave O. Measuring dispenser. 2,899,115, 8–11–59, Cl. 222—455.

Matthews, Stanley R., T. J. Darlington, and M. G. Sheets. Safety mercury switch. 2,899,522, 8–11–59, Cl. 200—152.

Mattison, Robert J., Jr.: *See*—
Peterson, Clarence J. and C. L., and Mattison. 2,899,066.

Maurer, Erwin H. Dental X-ray film holder. 2,899,559, 8–11–59, Cl. 250—70.

Maurer, Spencer B. Rotary impact power tool. 2,898,791, 8–11–59, Cl. 81—52.3.

Maxwell, William A. Method for improving the high-temperature strength and other properties of molybdenum disilicide and other intermetallic compounds. 2,898,660, 8–11–59, Cl. 25—156.

Mayer, Joseph E. Golf bag cart. 2,899,212, 8–11–59, Cl. 280—38.

Mayerle, Evan A.: *See*—
Carmody, Don R., and Mayerle. 2,898,735.
Carmody, Don R., Mayerle, and Zletz. 2,898,733.
Carmody, Don R., Mayerle, and Zletz. 2,898,734.

Mayhew, Raymond L., and C. F. Jelinek, to General Aniline & Film Corp. Corrosion preventive compositions. 2,899,391, 8–11–59, Cl. 252—56.

McBee, Earl T., O. R. Pierce, and H. M. Metz, to Research Corp. Fluorine-containing phosphonates. 2,899,454, 8–11–59, Cl. 260—461.

McCarthy, John A., to Bell Telephone Laboratories, Inc. Electron discharge device. 2,899,577, 8–11–59, Cl. 313—68.

McClure, Holmes H.: *See*—
Smith, Raymond A., McClure, and Bond. 2,899,274.

McConnell, Richard L.: *See*—
Coover, Harry W., Jr., and McConnell. 2,899,455.

McCormick, Jerry R. D.: *See*—
Winterbottom, Robert, Mendelsohn, Muller, and McCormick. 2,899,422.

McCoy, Rawley D.: *See*—
Meissinger, Hans F., and McCoy. 2,899,550.

McCoy, Robert L., and J. Kaminski, Jr., to General Electric Co. Shielding means for dead ended double conductor installations. 2,899,484, 8–11–59, Cl. 174—144.

McCreary, Harold J., to General Telephone Laboratories, Inc. Electromagnetic relay. 2,899,520, 8–11–59, Cl. 200—104.

McDonnell, Basil: *See*—
Robinson, Joseph N., Miller, and McDonnell. 2,899,433.

McDowell Mfg. Co.: *See*—
Hempel, Gustav A. 2,898,971.

McGee, James D., to National Research Development Corp. Electron discharge devices. 2,899,576, 8–11–59, Cl. 313—65.

McGraw-Edison Co.: *See*—
Dryer, Henry V. 2,899,587.
Harry, William R. 2,898,658.
Jungk, Herbert G. 2,899,574.
Nash, William H. 2,899,602.

McGuire, George. Safety swimming pool cover. 2,898,607, 8–11–59, Cl. 4—172.

McIlvaine, Oran T. Photocells. 2,899,659, 8–11–59, Cl. 338—17.

McKann, Henry S. Sheet metal chimneys. 2,898,839, 8–11–59, Cl. 98—48.

McKinney, Cecil A., to General Motors Corp. Heat exchanger means. 2,898,896, 8–11–59, Cl. 123—41.33.

McKone, Peter J., Jr.: *See*—
Nuessle, Albert C., and McKone. 2,899,263.

McMillion, Shelby C., to R. P. Scherer Corp. Soporific capsule. 2,899,361, 8–11–59, Cl. 167—83.

McOrily, Joseph: *See*—
Drugmand, Lester D., and McOrily. 2,899,666.

Medart, Fred, Mfg. Co.: *See*—
Murphy, Raymond J. 2,898,639.

Medders, Weldon L., A. B. Foreman, Jr., and U. Skipper, to Houston Oil Field Material Co., Inc. Piston actuated casing mill. 2,899,000, 8–11–59, Cl. 166—55.8.

Medlar, Lewis A., to Fox Products Co. Battery heat maintainer. 2,899,623, 8–11–59, Cl. 320—2.

Meese, Clarence, to Eaton Mfg. Co. Hose clamp assembly tool. 2,898,789, 8–11–59, Cl. 81—9.3.

Meikle, Richard W.: *See*—
Stanton, George W., Lefferdink, Meikle, and Charlesworth. 2,899,262.

Meinert, Norbert: *See*—
Brömer, Heins, and Meinert. 2,899,822.

Meissinger, Hans F., and R. D. McCoy, to Reeves Instrument Corp. Electronic function generator of a plurality of variables. 2,899,550, 8–11–59, Cl. 250—27.

Meloy, Norman F. Power line attachment for shovels. 2,899,082, 8–11–59, Cl. 212—42.

Mendelsohn, Harold: *See*—
Winterbottom, Robert, Mendelsohn, Muller, and McCormick. 2,899,422.

Menzies, William C. Heavy media separator apparatus. 2,899,057, 8–11–59, Cl. 209—172.5.

Mercier, Jean. Hydraulic pump. 2,899,248, 8–11–59, Cl. 309—23.

Merkouris, James S. Retractable clothesline support. 2,899,080, 8–11–59, Cl. 211—119.17.

Merrell, Allen W., to Sattley Co. Bag filling mechanism. 2,898,721, 8–11–59, Cl. 53—244.

Merriam, Frank R. Parking switch for windshield wipers. 2,899,510, 8–11–59, Cl. 200—61.39.

Merten, Thomas S., to Sun Oil Co. Polymerization of olefins while subjecting the catalyst to ultrasonic waves. 2,899,414, 8–11–59, Cl. 260—93.7.

Messersmith, Benjamin K. Poultry blood testing equipment. 2,898,884, 8–11–59, Cl. 119—17.

Mestre, Luis, to Lewfor Development Corp. Offset printing machine and sheet gage. 2,899,202, 8–11–59, Cl. 271—53.
Metal Diffusions, Inc.: *See*—
Samuel, George A. 2,899,332.
Metallgesellschaft A.G.: *See*—
Schranz, Hubert. 2,899,392.
Metz, Hyman M.: *See*—
McKee, Earl T., Pierce, and Metz. 2,899,454.
Meyer, Edward J., to North American Aviation, Inc. Electrical gun-switch assembly. 2,898,812, 8–11–59, Cl. 89—126.
Meyers, Irene H. Closet clothes protector. 2,899,081, 8–11–59, Cl. 211—189.
Micek, Richard. Tool. 2,899,003, 8–11–59, Cl. 172—371.
Michd, Robert, to Comptoir des Phosphates de l'Afrique du Nord. Process for the manufacture of phosphatic fertilizers. 2,899,271, 8–11–59, Cl. 23—109.
Michel, Robert G., to Allis-Chalmers Mfg. Co. Flooded bearing seal for gas-filled machines. 2,899,245, 8–11–59, Cl. 308—36.3.
Michigan Carton Co.: *See*—
Stowitts, Frank H., and Wheeler. 2,898,119.
Mickelson, Chester L. Differential for motor vehicles. 2,898,779, 8–11–59, Cl. 74—711.
Microwave Associates, Inc.: *See*—
Collins, Ralph B., Jr. 2,899,650.
Lanciani, Daniel A. 2,899,651.
Miehle-Goss-Dexter, Inc.: *See*—
Peyrebrune, Henri E. 2,898,851.
Williams, Leo C. 2,898,937.
Miles Laboratories, Inc.: *See*—
Fancher, Otis E., and Nichols. 2,899,359.
Miller, Frederick J. L.: *See*—
Robinson, Joseph N., Miller, and McDonnell. 2,899,433.
Miller, Guy D. Catalyst bed support. 2,899,286, 8–11–59, Cl. 23—288.
Miller, Lloyd G., to United Shoe Machinery Corp. Welt shoe sewing machines. 2,898,875, 8–11–59, Cl. 112—52.
Miller, Robert C.: *See*—
Nordquist, Richard A., Miller, Bukosky, and Lindgren. 2,898,885.
Milliken, Frank H., to The Bowerston Shale Co. Spring clip for perforated pipes and the combination. 2,898,741, 8–11–59, Cl. 61—11.
Millis, Edwin G., to Texas Instruments Inc. Electronically controlled bonding machine. 2,899,539, 8–11–59, Cl. 219—110.
Mills, Wade H. Adjustable gauge for dressing saw chain depth gauges. 2,898,680, 8–11–59, Cl. 33—202.
Minneapolis-Honeywell Regulator Co.: *See*—
Forte, Donald J., and Wolfe. 2,899,655.
Hicks, Walter J. 2,899,604.
Mobarry, John W. 2,898,746.
Mitchell, Adrian G.: *See*—
Brunnemer, Howard D., and Mitchell. 2,899,084.
Mobarry, John W., to Minneapolis-Honeywell Regulator Co. Control means for refrigeration compressor. 2,898,746, 8–11–59, Cl. 62—209.
Moberg, Sigurd M., to E. J. Brooks Co. Cord seal and method of making the same. 2,899,230, 8–11–59, Cl. 292—325.
Mockrin, Isadore, to Pennsalt Chemicals Corp. Dielectric materials. 2,899,321, 8–11–59, Cl. 106—39.
Modine Mfg. Co.: *See*—
Simpelaar, Clyde S. 2,899,171.
Molalla Mfg. Co.: *See*—
Austin, Elden G. 2,898,960.
Monagle, John J.: *See*—
Chambers, Robert R., Elkins, and Monagle. 2,899,419.
Monarch Machine Tool Co., The: *See*—
Gusching, Nagle V., and Flanigan. 2,898,891.
Monogram Precision Industries, Inc.: *See*—
Winkler, Richard H. 2,899,595.
Monsanto Chemical Co.: *See*—
Chapin, Earl C., and Smith. 2,899,404.
Lyons, John W. 2,898,706.
Lyons, John W. 2,899,329.
Lyons, John W. 2,899,330.
Montgomery, C. G.: *See*—
Montgomery, Clarence G. 2,898,982.
Montgomery, Clarence G., ¼ to C. G. Montgomery, ¼ to G. C. Graham, ¼ to F. Pannizzo, and ¼ to I. J. Kunik. Time control mechanism. 2,898,992, 8–11–59, Cl. 161—1.
Montgomery, Donald N., and J. L. Thom, to Consolidated Electrodynamics Corp. Galvanometer. 2,899,641, 8–11–59, Cl. 324—154.
Montrose Chemical Co.: *See*—
Rosin, Jacob, and Haus. 2,899,456.
Montrose, Robert C.: *See*—
Anger, Ernest G., and Montrose. 2,899,620.
Mooney, John F. Swimming aid. 2,898,611, 8–11–59, Cl. 9—21.
Moore, George A. Method and apparatus for making container for liquid products. 2,898,822, 8–11–59, Cl. 93—51.
Moore, Harry O. Time delay apparatus. 2,899,518, 8–11–59, Cl. 200—84.
Moore, Richard N., and R. V. Lawrence, to United States of America, Agriculture. Preparation of oxygenated resin acid derivatives. 2,899,463, 8–11–59, Cl. 260—314.5.
Moormann, Alois. Pneumatic gear-shift arrangements for toothed wheel change-speed gears, especially for machine tools. 2,899,031, 8–11–59, Cl. 192—18.
Morgan, Russell H.: *See*—
Sturm, Ralph E., and Morgan. 2,899,494.
Morrell, John F. Hydraulic lift trucks. 2,899,093, 8–11–59, Cl. 214—700.
Morren, Henri, to Union Chimique Belge Societe Anonyme. Piperazine ethers and their method of preparation. 2,899,426, 8–11–59, Cl. 260—268.
Morris, Beulah B.: *See*—
Morris, Evelyn C. and B. B. 2,898,598.
Morris, Evelyn C. and B. B. Dress shields. 2,898,598, 8–11–59, Cl. 2—56.
Morris Motors Ltd.: *See*—
Harris, Michael G., and Walker. 2,899,177.
Morrish, Leonard M. and L. E. Muller, to General Motors Corp. Muffler. 2,899,007, 8–11–59, Cl. 181—54.
Morrison, Charles A., to Eastman Kodak Co. Dust meter. 2,898,803, 8–11–59, Cl. 88—14.
Morse, Edward A., to Personal Products Corp. Thermoplastic paper. 2,899,351, 8–11–59, Cl. 162—146.
Mortensen, Peter E.: *See*—
Carlton, Raymond R., and Mortensen. 2,898,708.
Morton, Glen E. Disposable grease container. 2,899,112, 8–11–59, Cl. 222—325.
Moseman, Amos K., and A. B. Cummings; said Cummings assor. to said Moseman. Animal drier. 2,898,691, 8–11–59, Cl. 34—231.
Moshier, Ross W.: *See*—
Cadle, Richard D., and Moshier. 2,899,468.
Moss, Ronald. Belt. 2,898,602, 8–11–59, Cl. 2—301.
Motorola, Inc.: *See*—
Crow, Robert P., and Yost. 2,899,547.
Mount Hope Machinery Co.: *See*—
Robertson, John D. 2,898,662.
Mueller, Ralph L., and W. G. Stieritz; said Mueller assor. to Western Electric Co., Inc., said Stieritz assor. to Bell Telephone Laboratories, Inc. Gaseous discharge device. 2,899,588, 8–11–59, Cl. 313—209.
Mulhern, William A., to Gar Wood Industries, Inc. Wheel trim attachment. 2,899,240, 8–11–59, Cl. 301—37.
Mulkey, Ellis E.: *See*—
Harrison, Benjamin M., and Mulkey. 2,898,762.
Muller, Lloyd E.: *See*—
Morrish, Leonard M., and Muller. 2,899,007.
Muller, Siegfried A.: *See*—
Winterbottom, Robert, Mendelsohn, Muller, and McCormick. 2,899,422.
Multi-Carton Corp.: *See*—
Grinspoon, Harold. 2,899,049.
Munekata, Eiji, to The Asahi Chemical Industry Co., Ltd. Method of producing a nitrogen phosphate or potassium nitrogen phosphate fertiliser. 2,899,293, 8–11–59, Cl. 71—42.
Murgolo, Nicholas. Plant pin. 2,898,990, 8–11–59, Cl. 160—348.
Murphy, Cornelius M., to Allied Chemical Corp. Process for manufacture of anhydrous, heavy metal-free sulfites. 2,899,273, 8–11–59, Cl. 23—120.
Murphy, Jeremiah T. Sand and gravel drying machine. 2,899,070, 8–11–59, Cl. 210—523.
Murphy, Raymond J., to Fred Medart Mfg. Co. Power actuated movers for telescoping gymnasium seat-structures. 2,898,639, 8–11–59, Cl. 20—1.126.
Murray, Arthur E., 40% to E. T. Cassidy and 20% to J. F. Rodriques. Perfume diffuser. 2,898,849, 8–11–59, Cl. 20—120.
Murray, Hugh A., Sr., to I. D. L. Inc. Portable traffic marker. 2,898,879, 8–11–59, Cl. 116—63.
Murray Ohio Mfg. Co., The: *See*—
Douglas, Alvin P., Golrick, and Skerl. 2,899,030.
Myers, John W., to Phillips Petroleum Co. Catalyst and process for the conversion of hydrocarbons. 2,899,382, 8–11–59, Cl. 208—138.
Myers, Peter B.: *See*—
Johannesen, John D., Myers, and Schwenker. 2,899,570.
Myers, Peter B., to Bell Telephone Laboratories, Inc. Switching circuit. 2,899,571, 8–11–59, Cl. 307—88.5.
N. G. N. Electrical Ltd.: *See*—
Sadler, Peter. 2,899,126.
Nash, Max H. Dual purpose house trailer having separably joined body sections. 2,899,237, 8–11–59, Cl. 296—35.
Nash, William H., to McGraw-Edison Co. Spark-gap assembly for lightning arresters. 2,899,602, 8–11–59, Cl. 315—36.
Nathan, Marvin F., to The M. W. Kellogg Co. Fluid platinum system. 2,899,284, 8–11–59, Cl. 23—288.
National Broach & Machine Co.: *See*—
Pernack, Frank. 2,898,670.
National Rejectors Inc.: *See*—
Erickson, Gustav F. 2,899,039.
National Research Development Corp.: *See*—
McGee, James D. 2,899,576.
National Tank Co.: *See*—
Carter, Harry V. 2,899,013.
National Tea Packing Co., Inc.: *See*—
Irmscher, Hans O. 2,899,045.
Nebel, Paul M. F. H.: *See*—
Buddeberg, Walter, and Nebel. 2,899,342.
Nelson, John W., and M. P. Kleinholz, to Sinclair Refining Co. Calcium base grease containing a nickel, lead or lithium salt of a dialkyl dithiophosphoric acid diester. 2,899,388, 8–11–59, Cl. 252—032.7.
Nemet, Anthony A., to North American Philips Co., Inc. Radiation detector. 2,899,560, 8–11–59, Cl. 250—71.
Nestler Corp.: *See*—
Deepke, Charles W., and Aston. 2,899,107.
Nesty, Glenn A., and E. W. Pietrusza, to Allied Chemical Corp. Rubber-like copolymers and processes for their production. 2,899,409, 8–11–59, Cl. 260—75.
Neville, Orear K., to United States of America, Atomic Energy Commission. Recovery of uranium by aromatic dithiocarbamate complexing. 2,899,461, 8–11–59, Cl. 260—429.1.
Newhouse, Walter F. Mechanical means for the making of wirebound box and crate mats. 2,898,695, 8–11–59, Cl. 1—148.
Newsome, James R.: *See*—
Bird, William H., Plantinga, and Newsome. 2,899,337.

Peterson, Norman L., to Cutler-Hammer, Inc. Control system for three phase bridge rectifier circuits. 2,899,607, 8–11–59, Cl. 315—195.
Petley, Joseph E., to General Electric Co. Stabilized current
Quality Components, Inc.: *See*—
Cowles, Robert J. 2,899,665.
Quebec Metallurgical Industries Ltd.: *See*—

Newton, Perry B., Jr. Single panel illuminated instrument dial. 2,898,880, 8–11–59, Cl. 116—129.
Nicholas, William, and H. Kosel, to Radiant Mfg. Corp. Portable tripod stand for projection screen. 2,899,164, 8–11–59, Cl. 248—171.
Nichols, Gust: *See*—
Francher, Otis E., and Nichols. 2,899,359.
Nicoll, Vincent J. Bag sealing and printing device. 2,898,717, 8–11–59, Cl. 53—131.
Nicotron Developments Ltd.: *See*—
Japolsky, Nicholas S. 2,898,864.
Nieburgs, Herbert E. Treatment of microscope specimen slides. 2,899,363, 8–11–59, Cl. 167—84.5.
Nig Mfg. Co. Ltd., The: *See*—
Jacobs, Ridley S. 2,898,835.
Nobecourt, Claude: *See*—
Matis, Ernest, Demolon, Nobecourt, and Henri. 2,899,189.
Noda, Shoso, to Howa Kogyo Kabushiki-Kaisha. Apparatus for winding silver around bobbin. 2,898,736, 8–11–59, Cl. 57—34.
Noodleman, Samuel, to Standard Dayton Corp. Induction motor and control. 2,899,618, 8–11–59, Cl. 318—211.
Nopco Chemical Co.: *See*—
Ely, Charles M., and Foy. 2,899,308.
Nordquist, Richard A., R. C. Miller, J. R. Bukosky, and H. W. Lindgren, to Penta Inc. Set up gauge. 2,898,685, 8–11–59, Cl. 33—170.
Norman, Horace M., and H. R. A. Hansen, to The Louis Allis Co. Metadyne drive arrangement. 2,899,617, 8–11–59, Cl. 318—154.
North American Aviation, Inc.: *See*—
Acterman, Joseph S. 2,899,243.
Culleton, Robert J., and Kragh. 2,899,114.
Farrand, William A., Johnston, Kilpatrick, and Lelas. 2,899,260.
Heible, Dean R. 2,898,811.
Meyer, Edward J. 2,898,812.
Simms, Harold A. 2,898,815.
Veeder, Lloyd N. 2,899,867.
North American Philips Co., Inc.: *See*—
Coppola, Patrick P. 2,899,592.
Hermsen, Johannes, and Kraayevald. 2,899,582.
Jensen, Hans. 2,898,799.
Jonker, Johan L. H., and de Vries. 2,899,603.
Jonkers, Cornelius O. 2,899,281.
Nemet, Anthony A. 2,899,560.
Van Amstel, Johannes J. A. P. 2,899,618.
Verwey, Wessel. 2,899,584.
Warmoltz, Nicolaas. 2,899,605.
North American Rayon Corp.: *See*—
Bley, Rudolph S., Carter, Edgar, Graybeal, and Schmidt. 2,898,627.
Nuessle, Albert C., and P. J. McKone, Jr., to Joseph Bancroft & Sons Co. Process of applying dimethylol ethyleneurea propyleneureas and butyleneureas to cellulose and regenerated cellulose fabrics and mechanically finishing the fabrics. 2,899,263, 8–11–59, Cl. 8—116.2.
O'Cathey, Earl R., and J. L. Doonan. Conversion unit. 2,898,980, 8–11–59, Cl. 158—109.
O'Connor, Neal E., to General Motors Corp. Work tool. 2,898,712, 8–11–59, Cl. 51—170.
O'Dell, Thomas B.: *See*—
Cavallito, Chester J., and O'Dell. 2,898,357.
Odgers, William O.: *See*—
Haagensen, Leif E., Johnson, and Odgers. 2,899,190.
Oehler, Roman S. Book hanger supports. 2,898,620, 8–11–59, Cl. 129—36.
O'Grady, Joseph V., to Elevator Supplies Co., Inc. Door operator. 2,899,021, 8–11–59, Cl. 187—62.
Ohio State University Research Foundation, The: *See*—
Sisler, Harry H., and Hurley. 2,899,284.
Öhlin, Lars E.: *See*—
Ljungberg, Lars R., and Öhlin. 2,898,802.
Ohlson, John L.: *See*—
Silliker, John H., Kaufman, and Ohlson. 2,899,312.
Young, Harland H., Ohlson, and Barshefsky. 2,899,352.
Olin Mathieson Chemical Corp.: *See*—
Fisher, Robert A. 2,899,306.
Frost, George E. 2,898,666.
Masters, Albert T. 2,898,944.
Schur, Milton O. 2,898,998.
Olmer, Francois J., to American Petroleum Institute. Catalytic cosme analyzer. 2,899,281, 8–11–59, Cl. 23—254.
Olson, Axel V. Combined flashlight and electric circuit tester. 2,899,636, 8–11–59, Cl. 324—52.
Olson, Elmer, to General Motors Corp. Carburetor fuel nozzle construction. 2,899,184, 8–11–59, Cl. 261—41.
Olszewski, John K., to Western Electric Co., Inc. Drop bottom bins. 2,899,092, 8–11–59, Cl. 214—317.
Omark Industries, Inc.: *See*—
Carlton, Raymond R., and Mortensen. 2,898,708.
Onak, Frank M.: *See*—
Bredtschneider, Kurt E., Onak, and Stuart. 2,899,867.
O'Neill, William A., to Imperial Chemical Industries Ltd. Purification of terephthalic acid. 2,899,466, 8–11–59, Cl. 260—525.
Orehoski, Michael A., and R. L. Stephenson, to United States Steel Corp. Method of preventing edge cracking in the rolling of stainless steel. 2,898,667, 8–11–59, Cl. 29—18.
Orthuber, Richard K., to International Telephone and Telegraph Corp. Checking systems. 2,899,132, 8–11–59, Cl. 235—61.6.
Oshry, Howard I., to Erie Resistor Corp. Method of making titanium dioxide capacitors. 2,899,345, 8–11–59, Cl. 148—6.3.
Oster, John, Mfg. Co.: *See*—
Bednarski, Thaddeus E. 2,898,709.
Ostermeyer, Norman: *See*—
Feiler, Arthur G. 2,898,906.
Ott, Wilhelm: *See*—
Köppel, Walter, and Ott. 2,898,895.
Otsen, Christian: *See*—
Baur, Carl, and Otsen. 2,898,808.
Owen, Ronald V., and N. A. Hurt, to Lever Brothers Co. Method of caustic recovery in soap manufacture. 2,899,450, 8–11–59, Cl. 260—418.
Owens-Illinois Glass Co.: *See*—
Barnaby, Herbert A. 2,899,061.
Burch, Oscar G. 2,898,633.
Jenkins, Albert S. 2,899,349.
Vincent, Harvard B. 2,899,575.
Packard, Clifton E., and W. J. Divine. Infant's bathing and dressing stand. 2,898,608, 8–11–59, Cl. 4—177.
Palfreeman, Herbert, to Imperial Chemical Industries Ltd. Composite antioxidants and process of preparation thereof. 2,899,394, 8–11–59, Cl. 252—404.
Palmér, Per A. Air inlet means, especially in ceiling panels or wall panels. 2,898,838, 8–11–59, Cl. 98—40.
Palmer, Sydney H.: *See*—
Kilbane, James A., Jr., and Palmer. 2,898,711.
Pannisno, Frank: *See*—
Montgomery, Clarence G. 2,898,992.
Penray Corp., The: *See*—
Ritter, Jay S., Feier, and Pantzer. 2,898,913.
Pantzer, Myron: *See*—
Ritter, Jay S., Feier, and Pantzer. 2,898,913.
Paris, Dave H. Lawn edger. 2,899,001, 8–11–59, Cl. 172—13.
Paris, Francois, to Institut de Recherches de la Siderurgie. Gas producer with pulsating flow. 2,899,287, 8–11–59, Cl. 48—61.
Parker, Allen J. Blanket tie-down and receptacle rest. 2,899,153, 8–11–59, Cl. 248—1.
Parker, Carol. Collapsible container. 2,899,110, 8–11–59, Cl. 222—215.
Parkman, William C. Universal joint adjusting means. 2,898,749, 8–11–59, Cl. 64—8.
Parks, William W.: *See*—
Clarkson, Alick, and Parks. 2,898,247.
Parr, William G.: *See*—
Cheetham, William R., and Parr. 2,899,489.
Cheetham, William R., and Parr. 2,899,490.
Patterson, Minnie. Protective covering for crawlers and other garments. 2,898,597, 8–11–59, Cl. 2—46.
Paul Knitting Mills, Inc.: *See*—
Long, Stuart S., and Cox. 2,899,116.
Payne, Frank E., to Crane Packing Co. Rotary mechanical seal. 2,899,210, 8–11–59, Cl. 286—11.
Pearson, Clifton H. Three-way control valve. 2,899,067, 8–11–59, Cl. 210—390.
Pearson, Raymond C. Water powered retractable showerhead. 2,898,605, 8–11–59, Cl. 4—145.
Pebley, Verner H. Method of repairing a basement wall. 2,898,759, 8–11–59, Cl. 72—126.
Pebley, Verner H. Apparatus for repairing basement wall. 2,898,760, 8–11–59, Cl. 72—128.
Pechiney, Compagnie de Produits Chimiques et Electrometallurgiques: *See*—
Hutter, Jean-Claude. 2,899,276.
Pechiney, H. C., Compagnie de Produits Chimiques et Electrometallurgiques: *See*—
Cartoux, Henri. 2,899,477.
Peck, George R., ⅛ to L. W. Wolford, Sr., and ⅛ to D. C. Harper. Rust proofing process. 2,899,336, 8–11–59, Cl. 117—49.
Peirce, Charles P.: *See*—
Wehmer, Bruno F. 2,899,506.
Pellegrini, John P., Jr.: *See*—
Pareri, Elizabeth L., and Pellegrini. 2,899,450.
Penland, William K., Jr. Line support. 2,899,178, 8–11–59, Cl. 256—10.
Penman, Montgomery B., to The Magee Carpet Co. Multiple needle tufting machines. 2,898,876, 8–11–59, Cl. 112—79.
Pennels, Norman E.: *See*—
Campbell, Oliver, and Pennels. 2,898,892.
Pennsalt Chemicals Corp.: *See*—
Loev, Bernard, and Mannengale. 2,899,444.
Mockrin, Isadore. 2,899,321.
Pennsylvania Transformer Co.: *See*—
Smith, John R. 2,899,656.
Penta Inc.: *See*—
Nordquist, Richard A., Miller, Bukosky, and Lindgren. 2,898,685.
Péras, Lucien, to Regie Nationale des Usines Renault. Cast iron heat treatment. 2,899,346, 8–11–59, Cl. 148—21.8.
Perez, Juan I.: *See*—
Roura, Carmen S., and Perez. 2,898,918.
Permock, Frank, to National Broach & Machine Co. Helical broach. 2,898,670, 8–11–59, Cl. 29—95.1.
Personal Products Corp.: *See*—
Morse, Edward A. 2,899,361.
Peterschmidt, Paul L.: *See*—
Ashbrook, Clifford L., and Peterschmidt. 2,899,217.
Peterson, Frank D.: *See*—
Davies, Elmer S., and Peterson. 2,899,320.
Peterson, Albert, to The Columbia Mills, Inc. Frameless window closure construction. 2,898,989, 8–11–59, Cl. 160—329.
Peterson, C. Lyga: *See*—
Peterson, Clarence J. and C. L., and Mattison. 2,899,066.
Peterson, Clarence J. and C. L., and R. J. Mattison, Jr., to Peterson Filters and Engineering Co. Rotary vacuum filter. 2,899,066, 8–11–59, Cl. 210—383.
Peterson Filters and Engineering Co.: *See*—
Peterson, Clarence J. and C. L., and Mattison. 2,899,066.

Peterson, Norman L., to Cutler-Hammer, Inc. Control system for three phase bridge rectifier circuits. 2,899,607, 8–11–59, Cl. 315—195.

Petley, Joseph E., to General Electric Co. Stabilized organosiloxane compounds as dielectric material in capacitors. 2,899,614, 8–11–59. Cl. 317—259.

Petrometer Corp.: *See*—
Jawett, Joseph A. 2,898,763.

Peyrebrune, Henri E., to Miehle-Goss-Dexter, Inc. Rotary perfector letterpress. 2,898,851, 8–11–59, Cl. 101—136.

Pfeiffer, Fred B. Stabilizer means. 2,898,069, 8–11–59, Cl. 152—341.

Pfizer, Chas., & Co.: *See*—
Taylor, Seymour. 2,898,911.

Pfizer, Chas., & Co., Inc.: *See*—
Bavley, Abraham, and Tate. 2,899,457.
Bevley, Abraham, and Tate. 2,899,462.
Bloom, Barry M. 2,899,426.
Bloom, Barry M. 2,899,434.
Brennan, Edward L., Quinn, Sellers, and Wagner. 2,899,467.

Pflaumer, Arthur E. Heat stabilized vinyl plastic compositions, floor tiles made therefrom, and methods for preparing the same. 2,899,398, 8–11–59, Cl. 260—23.

Philco Corp.: *See*—
Bradley, William E. 2,898,743.
Bryan, James S. 2,899,600.
Clapp, Richard G. 2,899,581.
Simmons, Charles D. 2,899,601.

Phillips Petroleum Co.: *See*—
Carpenter, Paul G. 2,898,999.
Crawford, Francis W. 2,899,186.
Davison, Joseph W. 2,899,475.
Findlay, Robert A. 2,899,377.
Gomory, Paul L. 2,899,374.
Hennigan, Henry W. 2,899,283.
Jones, Jesse P. 2,899,469.
Lanning, William C. 2,899,380.
Myers, John W. 2,899,382.
Reynolds, William B. 2,899,418.
Steeves, George J. 2,899,373.
Venable, Charles R., Jr. 2,899,323.

Phippe, John W., to Imperial Chemical Industries Ltd. Melt-spinning apparatus. 2,898,628, 8–11–59, Cl. 18—8.

Pieper, Alphonse F. Adjusting means for tension mechanism. 2,899,221, 8–11–59, Cl. 287—20.

Pierce, Ogden R.: *See*—
McBee, Earl T., Pierce, and Metz. 2,899,454.

Pierce, William C., to Warner Electric Brake & Clutch Co. Electromagnetic torque device. 2,899,037, 8–11–59, Cl. 192—84.

Pietrusza, Edward W.: *See*—
Nesty, Glenn A., and Pietrusza. 2,899,409.

Pigliavento, Gioacchino. Combination window bracket. 2,898,166, 8–11–59, Cl. 248—263.

Pignone, Edward H. Adjustable drafting board assembly. 2,898,702, 8–11–59, Cl. 45—131.

Pirot, Ernst, to J. P. Bemberg, Akt. Guide and tensioning device for processing films and foils. 2,899,201, 8–11–59, Cl. 271—45.

Pittman, Roland, to Lear, Inc. Single axis two-gyro stabilised platform. 2,898,766, 8–11–59, Cl. 74—5.34.

Plantinga, Oliver S.: *See*—
Bird, William H., Plantinga, and Newsome. 2,899,337.

Plemich, John J., to Standard Oil Co. Non-staining aluminum rolling lubricant. 2,899,390, 8–11–59, Cl. 252—56.

Pleuger K.G.: *See*—
Gröber, Christian. 2,898,860.

Plews Mfg. Co.: *See*—
Liljemark, Frank H. 2,899,017.

Pneumatic Scale Corp., Ltd.: *See*—
Bertheisen, Walter, and Whitehead. 2,898,953.

Polchinski, Stanley, and G. J. Rusciano. Surface door latch. 2,899,228, 8–11–59, Cl. 292—169.

Polytechnic Institute of Brooklyn: *See*—
Carlin, Herbert J. 2,899,640.
Carlin, Herbert J. 2,899,650.

Porter, Alvin J., and L. O. Reichelt, to Western Electric Co., Inc. Device for cutting leads of electrical components. 2,898,997, 8–11–59, Cl. 164—47.

Porter, H. K., Co. Inc.: *See*—
Kennedy, Frank J. 2,898,943.

Potter, Ralph E. Antenna and audio connector cable unit. 2,899,549, 8–11–59, Cl. 250—16.

Power, Basil D., to Edwards High Vacuum Ltd. Vapour vacuum pumps. 2,899,127, 8–11–59, Cl. 230—101.

Power Jets (Research & Development) Ltd.: *See*—
Barr, John C. 2,898,731.

Powers, Myron J., and N. J. Downes, to United States of America, Agriculture. Dehydration of cherries. 2,899,319, 8–11–59, Cl. 99—204.

Presson, David, to Century Sportswear Co., Inc. Reversible, knife-pleated skirt of the wrap-around type. 2,898,601, 8–11–59, Cl. 2—211.

Process Evaluation and Development Corp.: *See*—
Birdseye, Clarence. 2,899,350.

Protona Produktionsgesellschaft fur elektro-akustische Gerate G.m.b.H.: *See*—
Schuler, Alfred. 2,899,515.

Pure Oil Co., The: *See*—
Fierce, William L., and Sandner. 2,899,386.
Fierce, William L., and Sandner. 2,899,387.

Pye Ltd.: *See*—
Cheetham, William R., and Parr. 2,899,489.
Cheetham, William R., and Parr. 2,899,490.
Kirkham, Peter, and Robinson. 2,899,378.

Qunde, Edward A., and F. B. Wood, to International Business Machines Corp. Multiple path coherer. 2,899,657, 8–11–59, Cl. 338—1.

Quality Components, Inc.: *See*—
Cowles, Robert J. 2,899,665.

Quebec Metallurgical Industries Ltd.: *See*—
Bailey, Richard P. 2,899,300.

Quick, Carl F., and L. B. Rice, to Rohr Aircraft Corp. Drill jig. 2,898,785, 8–11–59, Cl. 77—62.

Quinn, Bernard J.: *See*—
Brennan, Edward L., Quinn, Sellers, and Wagner. 2,899,467.

Raab, Hans: *See*—
Funke, Albert, and Raab. 2,899,420.

Rabinow, Jacob, and M. L. Libman. Single-track scanning type dimmer. 2,899,544, 8–11–59, Cl. 250—235.

Radiant Mfg. Corp.: *See*—
Nicholas, William, and Kosel. 2,899,164.

Radio Condenser Co.: *See*—
Teaf, John H. 2,898,767.

Radio Corp. of America: *See*—
Andrea, Roy K. 2,899,497.
Cooperman, Michael, and Grundmann. 2,899,492.
Funnell, William F. 2,898,995.
Gibson, Walter G., and Schroeder. 2,899,495.
Hernqvist, Karl G. 2,899,586.
Reichert, Robert D. 2,899,589.
Sonnenfeldt, Richard W., Grundmann, and Cooperman. 2,899,491.

Radio Patents Co.: *See*—
Hollmann, Hans E. 2,899,546.

Ragan, Harry E. Projecting arrangement. 2,898,804, 8–11–59, Cl. 88—16.6.

Railway Maintenance Corp.: *See*—
Fox, Robert L., and Smith. 2,898,792.

Rakus, Alexander B., to E. I. du Pont de Nemours and Co. Process and apparatus for applying a coating to a moving web. 2,899,339, 8–11–59, Cl. 117—102.

Ransom, Richard B. Differential gear set. 2,898,778, 8–11–59, Cl. 74—711.

Rasmussen, Arnold R. Table lamp and shade. 2,899,543, 8–11–59, Cl. 240—108.

Ratay, Harold E. Portable target stand. 2,899,204, 8–11–59, Cl. 273—102.

Ratcliff, Harold B.: *See*—
Wirtz, Robert W., Ratcliff, and Turner. 2,898,827.
Wirtz, Robert W., Ratcliff, and Turner. 2,898,828.
Wirtz, Robert W., Ratcliff, and Turner. 2,898,829.
Wirtz, Robert W., Ratcliff, and Turner. 2,898,830.

Rauk, Palmer O. Sousaphone storage stand. 2,899,163, 8–11–59, Cl. 248—163.

Read, William T., Jr., to Bell Telephone Laboratories, Inc. High frequency negative resistance device. 2,899,646, 8–11–59, Cl. 331—96.

Read, William T., Jr., to Bell Telephone Laboratories, Inc. High frequency negative resistance device. 2,899,652, 8–11–59, Cl. 332—60.

Rector, Enoch, deceased, by A. R. Duffy, administratrix. Carburetor. 2,899,185, 8–11–59, Cl. 261—72.

Reed Mfg. Co.: *See*—
Brown, Thomas G. 2,899,073.

Reesby, Carl E.: *See*—
Smith, Orville R., and Reesby. 2,899,633.

Reeves Instrument Corp.: *See*—
Meissinger, Hans F., and McCoy. 2,899,550.
Steinberg, Walter A. 2,899,627.

Regie Nationale des Usines Renault: *See*—
Péras, Lucien. 2,899,346.

Rehein, Harry L., to E. E. Souther Iron Co. Gutter hanger. 2,899,158, 8–11–59, Cl. 248—48.2.

Reichelt, Lester O.: *See*—
Porter, Alvin J., and Reichelt. 2,898,997.

Reichelt, Walter, to W. C. Heraeus G.m.b.H. Method and apparatus for supplying material to an evaporator. 2,899,528, 8–11–59, Cl. 219—19.

Reichert, Robert D., to Radio Corp. of America. Mount structure for electron tubes. 2,899,589, 8–11–59, Cl. 313—243.

Reick, Franklin G. Electrode-wick. 2,899,532, 8–11–59, Cl. 219—40.

Reid, Harry A., and J. C. Gall, to Sears, Roebuck and Co. Apparatus for wetting a roll of pre-pasted wallpaper. 2,898,883, 8–11–59, Cl. 118—419.

Reid, Henry, to E.R.D. Laboratories Inc. Variable gear drive. 2,898,775, 8–11–59, Cl. 74—435.

Reier, William S. Adjustable but locked-on temporary cap for pipe. 2,899,099, 8–11–59, Cl. 220—24.5.

Reindl, Harold J., to General Motors Corp. Electrostatic painting apparatus. 2,899,136, 8–11–59, Cl. 239—15.

Reiner, Stewart, to United States of America, Navy. Code wheel shaft position encoder, recorder and decoder. 2,899,673, 8–11–59, Cl. 340—173.

Reinholdt, Friedrich. Emergency signal device. 2,898,878, 8–11–59, Cl. 116—28.

Reinisch, Joseph: *See*—
Ryba, Anton. 2,899,036.

Reishauer-Werkzeuge A.G.: *See*—
Rickenmann, Alfred. 2,898,707.

Research Corp.: *See*—
McBee, Earl T., Pierce, and Metz. 2,899,454.

Rexair, Inc.: *See*—
Brock, Clarence A. 2,899,216.

Reynolds, Clarence R., S. C. Amad, and W. R. Boodey, to The Cleveland Skate Co., Inc. Combined truck and toe stop for roller skates. 2,899,209, 8–11–59, Cl. 280—11.2.

Reynolds Metals Co.: *See*—
Wilson, John B. 2,898,974.

Reynolds, R. J., Tobacco Co.: *See*—
Teague, Claude E., Jr. 2,899,464.

Sand, Darrel R., and T. R. Zimmer, Jr., to General Motors Corp. Hydrodynamic drive device. 2,898,738, 8–11–59, Cl. 60—54.

Scibetta, Paul C., and L. B. Higdon, to United States of America, Navy. Lapping machine. 2,898,710, 8–11–59, Cl. 51—157.

Reynolds, William B., to Phillips Petroleum Co. Polymerization of olefins by mechanical activation process. 2,899,418, 8–11–59, Cl. 260—94.9.

Ribaux, Paul A., to Ford Motor Co. Injection system. 2,898,900, 8–11–59, Cl. 123—139.

Ricardo & Co., Engineers (1927) Ltd.: *See*—
Holt, George A. 2,898,894.

Ricards, Harold A., to Esso Research and Engineering Co. Feed pretreat in hydrocarbon adsorption process. 2,899,474, 8–11–59, Cl. 260—676.

Rice, Joseph: *See*—
Bray, Frederick H., King, and Rice. 2,899,500.

Rice, Leslie B.: *See*—
Quick, Carl F., and Rice. 2,898,785.

Rich, Samuel M.: *See*—
Hamilton, Rollie D., and Rich. 2,899,024.

Richards, George B., to Liquid Controls Corp. Liquid valves. 2,898,927, 8–11–59, Cl. 137—79.

Richter, Raymond R., to The Dayton Rubber Co. Roller train device. 2,898,855, 8–11–59, Cl. 101—425.

Rickenmann, Alfred, to Reishauer-Werkzeuge A.G. Machine for the grinding of spur gears and helical gears by the generating principle. 2,898,707, 8–11–59, Cl. 51—95.

Ridley, Ian M., ½ to R. L. Klosterman. Tiltable tandem refractory and concrete gun apparatus. 2,899,182, 8–11–59, Cl. 259—151.

Riegler, Werner L., and J. N. Dybalski, to Armour and Co. Anti-slaking buffing compositions. 2,899,290, 8–11–59, Cl. 51—304.

Rieseler, Hermann, deceased, by H. Rieseler, nee Scherber, heir. Piston for internal combustion engines. 2,898,897, 8–11–59, Cl. 123—41.38.

Rieseler, Helene: *See*—
Rieseler, Hermann. 2,898,897.

Ripke, August C. Rotary motion transmitting mechanism. 2,898,769, 8–11–59, Cl. 74—66.

Ritter, Jay S., M. Feier, and M. Pantzer, to The Panray Corp. Surgical device. 2,898,918, 8–11–59, Cl. 128—296.

Rivera, George D., and D. H. Lapointe, to Royal McBee Corp. Printed circuit translators. 2,899,676, 8–11–59, Cl. 340—347.

Robbins, Albert A., to Kwik-Kold of America, Inc. Chemical freezing package. 2,898,744, 8–11–59, Cl. 62—4.

Robbins, James S., to Goodman Mfg. Co. Rotary tunneling machine having ratcheting advancing and retracting means. 2,898,742, 8–11–59, Cl. 61—84.

Roberts, Richard B.: *See*—
Hafstad, Lawrence R., and Roberts. 2,898,857.

Robertson, Dale N., to The Dow Chemical Co. Nitroethylenes. 2,899,429, 8–11–59, Cl. 260—240.

Robertson, Jack B., and R. Volpone, to United States of America, Navy. Electron tube protective device. 2,899,483, 8–11–59, Cl. 174—188.

Robertson, John D., to Mount Hope Machinery Co. Expanding and contracting rolls. 2,898,662, 8–11–59, Cl. 26—63.

Robinson, Harry A. Power driven lawn rake. 2,898,724, 8–11–59, Cl. 56—27.

Robinson, Joseph N., F. J. L. Miller, and B. McDonnell, to The Consolidated Mining and Smelting Co. of Canada Ltd. Process for the production of melamine and guanidine sulphamate. 2,899,433, 8–11–59, Cl. 260—249.7.

Robinson, Raymond G. R.: *See*—
Kirkham, Peter, and Robinson. 2,899,578.

Robotron Corp.: *See*—
Rockafellow, Stuart C. 2,898,801.

Rocard, Yves, to Compagnie Generale de Telegraphie Sans Fil. Electrical analog computing systems for solving ordinary and partial non-linear differential equations. 2,899,134, 8–11–59, Cl. 235—182.

Rockafellow, Stuart C., to Robotron Corp. Inspection device for detecting differences in two objects. 2,898,801, 8–11–59, Cl. 88—14.

Rockall, Frederick W., to The General Electric Co. Ltd. Linking mechanisms. 2,899,677, 8–11–59, Cl. 343—757.

Rockriver, Clyde R., to Huggins-Young Co., Inc. Coffee brewer. 2,898,843, 8–11–59, Cl. 99—283.

Rockwell, Harvey W., to Allis-Chalmers Mfg. Co. Flow control valve. 2,898,737, 8–11–59, Cl. 60—52.

Rockwood, Albert E., Jr.: *See*—
Harmon, George H., and Rockwood. 2,899,141.

Rodriquez, Jim F.: *See*—
Murray, Arthur E. 2,898,649.

Roebling's, John A., Sons Corp.: *See*—
Sher, Arnold, and Amstock. 2,899,160.

Roesel, John F. Rotary mower cutter blade structure. 2,898,725, 8–11–59, Cl. 56—295.

Rogers, Willie E. Fishing pole holder. 2,899,155, 8–11–59, Cl. 248—46.

Rohm & Haas Co.: *See*—
De Benneville, Peter L., and Laskin. 2,899,406.

Rohr Aircraft Corp.: *See*—
Quick, Carl F., and Rice. 2,898,785.

Rohrer, Douglas P., and F. F. Chellis, to Arthur D. Little, Inc. Impact tool. 2,898,893, 8–11–59, Cl. 123—7.

Rohrkaste, Verna E. Fermentation process foods with low-sodium content and method of preparing same. 2,899,314, 8–11–59, Cl. 99—156.

Roi-Away Truck Mfg. Co., Inc.: *See*—
Ledgerwood, Robert W. 2,899,010.

Rolfe, Charles A. Cabinet with sliding flush doors. 2,899,252, 8–11–59, Cl. 312—138.

Rolls-Royce Ltd.: *See*—
Jeffery, Norman H. 2,898,631.

Romano, George F., to The Martin Co. High-speed switching system. 2,899,567, 8–11–59, Cl. 307—81.

Roper, Geo. D., Corp.: *See*—
Hollman, Peter L., and Jensen. 2,898,979.

Rose, Ira M.: *See*—
Shapiro, Seymour L., Freedman, and Rose. 2,899,487.

Rosen, Irving, to Diamond Alkali Co. 2-(2',4'-dichlorophenoxy)-3-chlorodioxane. 2,899,445, 8–11–59, Cl. 260—340.6.

Rosen, Samuel A., to Hughes Aircraft Co. Self recycling pulse stretcher. 2,899,554, 8–11–59, Cl. 250—27.

Rosenberg, David S., to Hooker Chemical Corp. Photochemical chlorination process. 2,899,370, 8–11–59, Cl. 204—163.

Rosenblatt, Murray, and A. S. Rubenstein, to General Electric Co. Regulating system for dynamoelectric machines. 2,899,630, 8–11–59, Cl. 322—25.

Rosenkranz, George: *See*—
Djerassi, Carl, and Rosenkranz. 2,898,427.

Rosenthal, Gary: *See*—
Gruber, Morris, and Rosenthal. 2,899,661.

Rosin, Jacob, and J. Haus, to Montrose Chemical Co. Esters of hydroxy phosphonic acids and alkene phosphates. 2,899,456, 8–11–59, Cl. 260—461.

Ross, Edward J., to Ferro Corp. Annularly bulged electric heating unit and method of annularly bulging same. 2,899,663, 8–11–59, Cl. 338—238.

Ross, John L. F., to The Ajax Mfg. Co. Shaft end roll mounting. 2,899,222, 8–11–59, Cl. 287—53.

Rotaprint Ltd.: *See*—
Wadlow, Derek N. 2,898,853.

Roth, Milton. Folding step ladder. 2,899,009, 8–11–59, Cl. 182—104.

Rothermel, Edward M., to The Dayton Rubber Co. Flexible conduits. 2,898,942, 8–11–59, Cl. 138—56.

Rothman, Edward S., and M. E. Wall, to United States of America, Agriculture. 11-keto diosgenin. 2,899,428, 8–11–59, Cl. 260—239.55.

Roura, Carmen S., and J. I. Perez. Pair of corset-panties. 2,898,918, 8–11–59, Cl. 128—525.

Rouse, Benjamin P., Jr., and R. O. Hill, Jr., to Eastman Kodak Co. Stabilized cellulose ester compositions and process for preparing the same. 2,899,316, 8–11–59, Cl. 106—173.

Rowe, Harrison E.: *See*—
Goodall, William M., and Rowe. 2,899,508.

Roy, Milton, Co.: *See*—
Saalfrank, Royal B. 2,898,867.

Royal McBee Corp.: *See*—
Kwartler, Irwin E., and Wade. 2,898,919.
Rivera, George D., and Lapointe. 2,899,676.

Rubenstein, Alan S.: *See*—
Rosenblatt, Murray, and Rubenstein. 2,899,630.

Rubricius, Jeanette L. Blood loss determining device. 2,899,636, 8–11–59, Cl. 324—30.

Rudner, Bernard, to W. R. Grace & Co. Physiologically active hydrazinium salts. 2,899,424, 8–11–59, Cl. 260—239.1.

Rudner, Bernard, to W. R. Grace & Co. Quaternary pyrazolonyl compounds. 2,899,432, 8–11–59, Cl. 260—247.5.

Ruger, William B., to Sturm, Ruger and Co., Inc. 22 caliber conversion for a Colt 45 caliber semi-automatic pistol. 2,898,893, 8–11–59, Cl. 42—77.

Ruhrchemie Aktiengesellschaft: *See*—
Buchner, Karl. 2,899,395.

Rumsey, Rollin D., to Houdaille Industries, Inc. Damper with thermostatic valve. 2,899,023, 8–11–59, Cl. 188—96.

Rusciano, George J.: *See*—
Polchinski, Stanley, and Rusciano. 2,899,228.

Rusoff, Irving I., to General Foods Corp. Chocolate product and process therefor. 2,899,309, 8–11–59, Cl. 99—23.

Ryan, John A., Jr. Low altitude bombing system and apparatus. 2,898,809, 8–11–59, Cl. 89—1.5.

Ryba, Anton, 30% to J. Reinisch and 30% to E. Vinatzer. Slipring-less electromagnetically actuated coupling. 2,899,036, 8–11–59, Cl. 192—84.

Rylance, Francis G.: *See*—
Umbricht, Emil, and Rylance. 2,899,183.

S & S Corrugated Paper Machinery Co., Inc.: *See*—
Shields, Albert F. 2,898,818.
Shields, Albert F. 2,898,819.
Shields, Albert F. 2,898,821.

Saalfrank, Royal B., to Milton Roy Co. Pump with sealing arrangement. 2,898,867, 8–11–59, Cl. 103—153.

Sackur, Otto: *See*—
Debay, Andre, and Sackur. 2,899,449.

Saco-Lowell Shops: *See*—
Anderson, Gordon C., and Hopkinson. 2,898,729.

Sadler, Peter, to N.G.N. Electrical Ltd. Diffusion vacuum pumps. 2,899,126, 8–11–59, Cl. 230—101.

Safer Electronic Fire Alarm, Inc.: *See*—
Sierer, Payson. 2,899,674.

Safetee Glass Co.: *See*—
Gee, Robert E., and Gibbs. 2,899,333.

St. Clair, Theodore A., and R. C. Krall, to The Weatherhead Co. Pressure regulator. 2,898,930, 8–11–59, Cl. 137—116.3.

St. Pierre, Eugene, to Hemphill Co. Pick for knitting machines. 2,898,752, 8–11–59, Cl. 66—48.

Salem, Samuel, to The General Tire and Rubber Co. Method for treating fiber cords. 2,898,664, 8–11–59, Cl. 28—76.

Salem, Samuel, R. E. Bingham, and D. Anderson, to The General Tire and Rubber Co. Cord fabric with removable weft thread. 2,898,665, 8–11–59, Cl. 28—78.

Salisbury, Frederick L., and W. G. Abraham, to Varian Associates. Reflex klystron. 2,899,599, 8–11–59, Cl. 315—5.21.

Salomon, Georges P. J. Safety thrust block for skis. 2,899,211, 8–11–59, Cl. 280—11.35.

Salomone, Rynold A., to General Electric Co. Fuse-puller switch. 2,899,521, 8–11–59, Cl. 200—133.

Salz, Edwin T.: *See*—
Lazar, Michael, and Salz. 2,898,790.

Samuel, George A., to Metal Diffusions, Inc. Chromizing method and composition. 2,899,332, 8–11–59, Cl. 117—22.

Sand, Darrel R., and T. R. Zimmer, Jr., to General Motors Corp. Hydrodynamic drive device. 2,898,738, 8–11–59, Cl. 60—54.
Sandison, Alexander G., to The William Kennedy & Sons Ltd. Device for screening pulp. 2,899,069, 8–11–59, Cl. 210—406.
Sandner, Walter J.: *See*—
Pierce, William L., and Sandner. 2,899,386.
Pierce, William L., and Sandner. 2,899,387.
Sandoz Trust: *See*—
Wiedemann, Erwin. 2,899,619.
Särdal, Per W. F. Foot raspers for removing of cellosities. 2,898,914, 8–11–59, Cl. 128—304.
Sattler, Karl C. Sounding toy. 2,898,704, 8–11–59, Cl. 46—178.
Sattley Co.: *See*—
Merrell, Allen W. 2,898,721.
Saul & Co.: *See*—
Wiedemann, Erwin. 2,899,619.
Savory, David B., to General Electric Co. Control apparatus. 2,899,649, 8–11–59, Cl. 331—172.
Sayre, Robert E.: *See*—
Bush, Russell J., and Sayre. 2,898,643.
Bush, Russell J., and Sayre. 2,898,647.
Scarselli, Thomas L. Ventilated bed enclosure. 2,898,837, 8–11–59, Cl. 98—33.
Schaefer, Emil M. Partitioned carton. 2,899,122, 8–11–59, Cl. 229—28.
Scheibner, Edwin J.: *See*—
Atalla, Martin M., Scheibner, and Tannenbaum. 2,899,344.
Schenck, Leslie M.: *See*—
Huber, Frederic R., and Schenck. 2,899,471.
Scherber, Helene: *See*—
Riesseler, Hermann. 2,898,897.
Scherer, R. P., Corp.: *See*—
McMillion, Shelby C. 2,899,361.
Schering Corp.: *See*—
Gould, David H., Herzog, and Hershberg. 2,899,447.
Sherlock, Margaret H. 2,899,451.
Sperber, Nathan. 2,899,358.
Schmidt, Jacob H. Electrical switches. 2,899,513, 8–11–59, Cl. 200—67.
Schmidt, Knute M.: *See*—
Bley, Rudolph S., Carter, Edgar, Graybeal, and Schmidt. 2,898,627.
Schmuck, Peter, to Firma Contina Bureaux- und Rechenmaschinenfabrik Aktiengesellschaft. Lens mount holder for optical elements. 2,898,832, 8–11–59, Cl. 95—64.
Schneider, Wilhelm. Dial-indicating slide gauge for millimeters and inches. 2,898,684, 8–11–59, Cl. 33—147.
Schnellpressenfabrik Akt. Heidelberg: *See*—
Buttner, Artur. 2,899,203.
Schoeppel, John F., S. L. Varner, and F. W. Herr, to Lear, Inc. Electrolyte containing a ketone, an alkaline earth metal iodide, and iodine. 2,899,393, 8–11–59, Cl. 252—62.2.
Schollenberger, Charles S., to The B. F. Goodrich Co. Polyurethane elastomers from hydroxyl poly (alkylene oxide)s, aliphatic glycols and diphenyl diisocyanates. 2,899,411, 8–11–59, Cl. 260—77.5.
Schopper, Erwin, and B. Schumacher. Apparatus for the treatment of substances with corpuscular rays. 2,899,556, 8–11–59, Cl. 250—49.5.
Schramm, Martin O. Spark modifier for spark plugs and ignition systems. 2,899,478, 8–11–59, Cl. 123—148.
Schrams, Hubert, to Metallgesellschaft A.G. Process of reducing the consistency of solid-and-liquid mixtures. 2,899,392, 8–11–59, Cl. 252—60.
Schreiber, Louis, to Carolina Textile Engraving Co. Machine for making photoprints on printing cylinders. 2,898,834, 8–11–59, Cl. 95—77.5.
Schreyer, Ralph C., to E. I. du Pont de Nemours and Co. Catalyst compositions comprising a titanium dihalide. 2,899,416, 8–11–59, Cl. 260—94.9.
Schroeder, Alfred C.: *See*—
Gibson, Walter G., and Schroeder. 2,899,495.
Schroth, John J., to Link-Belt Co. Vibrating screens. 2,899,059, 8–11–59, Cl. 209—403.
Schroth, John J., to Link-Belt Co. Vibrating screen. 2,899,060, 8–11–59, Cl. 209—403.
Schroth, John J., to Link-Belt Co. Vibrating screen. 2,899,061, 8–11–59, Cl. 209—403.
Schubert, Dale L., to Industrial Development Co. Method of making crosscut wood flakes and sawmill cross grain flaking planer therefor. 2,898,958, 8–11–59, Cl. 144—172.
Schuler, Alfred, to Pretema Produktionsgesellschaft fur elektro-akustische Gerate G.m.b.H. Centrifugal contact-breakers. 2,899,515, 8–11–59, Cl. 200—90.
Schulmerich Electronics, Inc.: *See*—
Kung, Jacob T. 2,898,795.
Schultz, Thomas H.: *See*—
Makower, Benjamin, and Schultz. 2,899,313.
Schulze, Heinz, to General Aniline & Film Corp. Process of preparing certain halogenated 1,2-disubstituted-5-pyranolones. 2,899,443, 8–11–59, Cl. 260—310.
Schumacher, Berthold: *See*—
Schopper, Erwin, and Schumacher. 2,899,556.
Schur, Milton O., to Olin Mathieson Chemical Corp. Method of and apparatus for cutting and collecting filter tip. 2,898,906, 8–11–59, Cl. 164—61.
Schwaiger, Odilo L., to Daimler-Benz Akt. Rotor for a radial blower. 2,899,129, 8–11–59, Cl. 230—134.
Schwartz, David L. Insulation block holding device for power saws. 2,898,955, 8–11–59, Cl. 142—171.
Schweniker, John E.: *See*—
Johannesen, John D., Myers, and Schweniker. 2,899,570.
Scibetta, Paul C., and L. B. Higdon, to United States of America, Navy. Lapping machine. 2,898,710, 8–11–59, Cl. 51—157.
Scott, Edward F.: *See*—
Voorhees, Albert, and Scott. 2,899,261.
Scott, John W., Jr., to California Research Corp. Shale retorting. 2,899,365, 8–11–59, Cl. 202—87.
Scott, Pete J. Car parking tower. 2,899,085, 8–11–59, Cl. 214—16.1.
Scripto, Inc.: *See*—
Lockwood, John C. 2,898,886.
Van Haitsma, Frank, Jr. 2,898,887.
Searle, G. D., & Co.: *See*—
Dornfeld, Clinton A. 2,899,441.
Sears, Roebuck and Co.: *See*—
Reid, Harry A., and Gall. 2,898,883.
Seckendorf, Hugo. Rain cape for postmen. 2,898,599, 8–11–59, Cl. 2—88.
Self, Eric, to Burroughs Corp. Beam advancement in magnetron beam switching tubes. 2,899,551, 8–11–59, Cl. 250—27.
Seiger, Harry W. Biopsy instrument. 2,898,906, 8–11–59, Cl. 128—2.
Sellers, Robert S.: *See*—
Brennan, Edward L., Quinn, Sellers, and Wagner. 2,899,467.
Senutovitch, Georges. Bore reducing device for fire-arms. 2,898,694, 8–11–59, Cl. 42—77.
Seward, Edwin R., and W. C. Gainer, to ASCO Automatic Specialties Corp. Thread protector. 2,898,944, 8–11–59, Cl. 138—96.
Shapiro, Isadore. Continuous process for producing diborane. 2,899,279, 8–11–59, Cl. 23—204.
Shapiro, Seymour L., L. Freedman, and I. M. Rose, to U.S. Vitamin & Pharmaceutical Corp. Pyridylethylated salicylamides. 2,899,437, 8–11–59, Cl. 260—295.
Sharp, Allen W.: *See*—
Kaufman, Floyd L., Van Dolah, and Sharp. 2,898,961.
Sheaffer, W. A., Pen Co.: *See*—
Hansen, Lewis C. 2,898,885.
Sheehy, Edward M., to Gadget-Of-The-Month Club, Inc. Can punches. 2,898,675, 8–11–59, Cl. 30—16.
Sheets, Melvin G.: *See*—
Matthews, Stanley R., Darlington, and Sheets. 2,899,522.
Sheffield Corp., The: *See*—
Klefaber, Harry D. 2,898,682.
Shefield, Wilbur L.: *See*—
Lutz, Earle R., and Shefield. 2,898,817.
Sheft, Irving: *See*—
Katz, Joseph J., and Sheft. 2,899,289.
Shell Development Co.: *See*—
Lewis, Donald R. 2,899,558.
Shepherd, Neal H., to General Electric Co. Frequency detection method and apparatus therefor. 2,899,639, 8–11–59, Cl. 324—79.
Sher, Arnold, and J. S. Amstock, to John A. Roebling's Sons Corp. Electric cable clamp. 2,899,160, 8–11–59, Cl. 248—61.
Sherlock, Margaret H., to Schering Corp. Unsaturated-piperazino-alkyl-phenothiazines. 2,899,451, 8–11–59, Cl. 260—243.
Shields, Albert F., to S & S Corrugated Paper Machinery Co., Inc. Folding machine. 2,898,818, 8–11–59, Cl. 93—49.
Shields, Albert F., to S & S Corrugated Paper Machinery Co., Inc. Folding and gluing machine. 2,898,819, 8–11–59, Cl. 93—49.
Shields, Albert F., to S & S Corrugated Paper Machinery Co., Inc. Folding machine. 2,898,821, 8–11–59, Cl. 93—49.
Shillin, Rudolph. Fish lure. 2,898,700, 8–11–59, Cl. 43—42.29.
Shipton, E., & Co. Ltd.: *See*—
Strong, Bernard. 2,898,972.
Shoemaker, James C., to Simplex Forms System, Inc. Concrete form locking means. 2,898,659, 8–11–59, Cl. 25—131.
Shorkey, Edward S., to Continental Can Co., Inc. Paint tank and dispensing liner therefor. 2,899,100, 8–11–59, Cl. 222—183.
Sias, Roy C., and W. W. Woods, to Continental Oil Co. Purification of alkaryl sulfonic acids. 2,899,460, 8–11–59, Cl. 260—505.
Sidebotham, Gordon L.: *See*—
Sidebotham, Melvin H., Sr., G. L., and M. H., Jr. 2,898,824.
Sidebotham, Melvin H., Jr.: *See*—
Sidebotham, Melvin H., Sr., G. L., and M. H., Jr. 2,898,824.
Sidebotham, Melvin H., Sr., G. L., and M. H., Jr., to Joseph Dixon Crucible Co. Method of and apparatus for winding a sheath around a core. 2,898,824, 8–11–59, Cl. 93—31.
Sieger, George M., Jr., W. Valentine, and J. F. Weidenheimer, to American Cyanamid Co. Hemostatic sponges and method of preparing same. 2,899,362, 8–11–59, Cl. 167—84.
Siegrist, Adolf E., and M. Duennenberger, to Ciba Ltd. Process for the manufacture of di-imidazole derivatives. 2,899,440, 8–11–59, Cl. 260—309.2.
Siemons, Willem J., to E. I. du Pont de Nemours and Co. Purification melting process for metallic consumable electrodes. 2,899,294, 8–11–59, Cl. 75—10.
Sierer, Payson, to Safer Electronic Fire Alarm, Inc. Alarm system. 2,899,674, 8–11–59, Cl. 340—218.
Silliker, John H., F. L. Kauffman, and J. L. Chilsen, to Swift & Co. Method of treating egg albumen. 2,898,212, 8–11–59, Cl. 99—113.
Sills, Earl H., to General Electric Co. Adjustable voltage control system. 2,899,616, 8–11–59, Cl. 318—145.

Stewitts, Frank H., and D. P. Wheeler, to Michigan Carton Co. Dispensing carton with a push-pull closure for same. 2,899,119, 8–11–59, Cl. 229—17.
Then, Edward O., to American Can Co. Container opening key. 2,899,102, 8–11–59, Cl. 220—52.
Thomas, Albert G. Cooking device. 2,898,905, 8–11–59, Cl.

Simmons, Charles D., to Philco Corp. Wave generater. 2,899,601, 8–11–59, Cl. 315—37.
Simmons, Level R. Weight-transferring hitch for four-wheel-drive tractors. 2,899,004, 8–11–59, Cl. 180—14.
Simms, Harold A., to North American Aviation, Inc. Metal honeycomb expansion. 2,898,815, 8–11–59, Cl. 93—1.
Simon, Andrew, to The American Monorail Co. Station preselector for traveling conveyor. 2,898,868, 8–11–59, Cl. 104—88.
Simon, Sidney. Take-apart kitchen range hood. 2,898,840, 8–11–59, Cl. 98—115.
Simpelaar, Clyde S., to Medina Mfg. Co. Damper construction. 2,899,171, 8–11–59, Cl. 251—122.
Simplex Forms System, Inc.: *See*—
Shoemaker, James C. 2,898,859.
Sinclair Refining Co.: *See*—
Campbell, Oliver, and Pennels. 2,898,892.
Chambers, Robert R., Elkins, and Monagle. 2,899,419.
Nelson, John W., and Kleinholz. 2,899,388.
Sinex, Gene O., to American Tank and Steel Corp. Gas and liquid separating apparatus. 2,899,014, 8–11–59, Cl. 183—2.7.
Singer Mfg. Co., The: *See*—
Kishibey, Charles O. 2,899,249.
Sintercast Corp. of America: *See*—
Goetzel, Claus G., Grant, Skolnick, and Yoblin. 2,899,338.
Sisler, Harry H., and F. R. Hurley, to The Ohio State University Research Foundation. Method of recovering hydrazine. 2,899,364, 8–11–59, Cl. 202—50.
Sjölund, Vilmå V., to Vict. Th. Engwall & Co. Means for boiling, roasting, baking, sterilizing or other heat treatment of food. 2,899,534, 8–11–59, Cl. 219—44.
Skelton, Charles W., and W. F. Donnell, to Texas Instruments Inc. Three phase power supply. 2,899,572, 8–11–59, Cl. 307—106.
Skeri, Rudolph E.: *See*—
Douglas, Alvin P., Gelrick, and Skeri. 2,899,030.
Skipper, Uvon: *See*—
Medders, Weldon L., Foreman, and Skipper. 2,899,090.
Skolnick, Leonard P.: *See*—
Goetzel, Claus G., Grant, Skolnick, and Yoblin. 2,899,338.
Slant-Fin Radiator Corp.: *See*—
Dubin, Melvin, and Turinsky. 2,899,176.
Slatin, Harvey L., to Timax Associates. Special electrolytic processing. 2,899,369, 8–11–59, Cl. 204—64.
Slonczewski, Thaddeus, to Bell Telephone Laboratories, Inc. Oscillator automatic tuning circuit. 2,899,643, 8–11–59, Cl. 331—17.
Small, Hervey W. Child's gun game. 2,898,703, 8–11–59, Cl. 46—116.
Smiley, Jan C. Babysitter protective tents. 2,898,923, 8–11–59, Cl. 135—1.
Smith, Alfred P., Jr., and E. H. Thoma. Lens turret and auxiliary lens for cameras. 2,898,831, 8–11–59, Cl. 95—11.
Smith, Clarence M., to The Bryant Electric Co. Wiring device. 2,899,524, 8–11–59, Cl. 200—168.
Smith, Clifford B., to Vinco Corp. Vacuum operated switch. 2,899,516, 8–11–59, Cl. 200—81.
Smith, Harold K., and C. G. Gibbons, to Baker Perkins, Inc. Electrical control system for rack type proofer. 2,899,040, 8–11–59, Cl. 198—35.
Smith, John A.: *See*—
Fox, Robert L., and Smith. 2,898,792.
Smith, John R., to Pennsylvania Transformer Co. Magnetic core. 2,899,656, 8–11–59, Cl. 336—211.
Smith, Orville R., and C. E. Roesby, to Welex, Inc. Well logging device. 2,899,633, 8–11–59, Cl. 324—10.
Smith, Raymond A., H. H. McClure, and G. C. Bond, to The Dow Chemical Co. Recovery of ammonia and hydrogen cyanide from gaseous mixtures. 2,899,274, 8–11–59, Cl. 23—151.
Smith, Richard F.: *See*—
Chapin, Earl C., and Smith. 2,898,404.
Smith, Robert M., to The Dow Chemical Co. Preparation of alkali metal isothionates. 2,899,461, 8–11–59, Cl. 260—512.
Smith, S., & Sons (England) Ltd.: *See*—
Fiamm, Paul. 2,899,509.
Snyder, Charles C.: *See*—
Barden, Wayne A., and Snyder. 2,899,662.
Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint-Gobain, Chauny & Cirey: *See*—
Cherrier, Claude M. 2,899,275.
Societe Anonyme des Usines Chausson: *See*—
Chausson, André. 2,899,124.
Chausson, André. 2,899,125.
Societe Anonyme Procedes Sauter: *See*—
Boegle, Charles. 2,898,739.
Societe Francaise de Recherches Biochimiques H. Besson & Cie. (Societe en Commandite par Actions): *See*—
Debay, Andre, and Sackur. 2,898,449.
Societe Rhodiaceta: *See*—
Fleuret, Marcel. 2,898,728.
Socony Mobil Oil Co., Inc.: *See*—
Hill, Donald F. 2,899,283.
Soden, William R.: *See*—
Connell, Leo F., Elkin, and Soden. 2,899,285.
Solow, Sidney P., and R. H. Yamin. Identification leader for motion picture film. 2,898,805, 8–11–59, Cl. 88—18.5.
Sonnenfeldt, Richard W., G. L. Grundmann, and M. Cooperman, to Radio Corp. of America. Non-linear reactance chrominance signal demodulators. 2,899,491, 8–11–59, Cl. 178—5.4.
Sorg, Harold E., and L. H. La Forge, Jr., to Eitel-McCullough, Inc. Ceramic vacuum tube. 2,899,590, 8–11–59, Cl. 313—250.
Sosa, Arthur. Cleaver. 2,898,679, 8–11–59, Cl. 30—272.
Sovinsky, Eugene, to United States of America, Army. Field protective mask. 2,898,906, 8–11–59, Cl. 128—141.
Spath, Catherine M., to Eastman Kodak Co. Antifoggants for reversal color development. 2,899,306, 8–11–59, Cl. 96—56.
Specialties Development Corp.: *See*—
Ware, Colin C., Blake, and Demers. 2,899,566.
Spector, Marshall L., and R. P. Strang, to General Electric Co. Preparation of diphenylallanediol. 2,899,453, 8–11–59, Cl. 260—448.2.
Speicher, William, to General Electric Co. Electric-powered traction wheel. 2,899,005, 8–11–59, Cl. 180—60.
Speight, Francis R.: *See*—
Lotarski, Stephen P., and Speight. 2,898,614.
Spencer, Charles F.: *See*—
Gillies, Duncan M., and Spencer. 2,898,848.
Spencer Chemical Co.: *See*—
MacArthur, James G. 2,899,324.
Spencer, Jack O. Replaceable faucet handle. 2,898,778, 8–11–59, Cl. 74—553.
Sperber, Nathan, to Schering Corp. Blood anticoagulant composition and process. 2,899,356, 8–11–59, Cl. 167—65.
Sperry Rand Corp.: *See*—
Calistra, Walter P. 2,898,690.
Gulemi, Thomas A. 2,898,719.
Sprague, Robert H. 2,899,430.
Spickelmier, Betty S.: *See*—
Gillespie, Russell A. 2,898,648.
Spickelmier, Carl F.: *See*—
Gillespie, Russell A. 2,898,648.
Spinnfaser Akt.: *See*—
Berndt, Franz, and Wendlandt. 2,899,267.
Spooner, Roy C., to Aluminium Laboratories Ltd. Methods of sealing anodic aluminium oxide coatings. 2,899,368, 8–11–59, Cl. 204—35.
Sprackler, Stanford B., to Beckman Instruments, Inc. Trend recorder. 2,899,258, 8–11–59, Cl. 346—34.
Sprague Electric Co.: *See*—
Cushman, Norton. 2,899,631.
Geiser, David T. 2,899,654.
Sprague, Robert H., to Sperry Rand Corp. Sensitizing dyes containing a 6,7-dihydro-4-H-pyrano(4,3D)-thiazole nucleus. 2,899,430, 8–11–59, Cl. 260—240.4.
Square D Co.: *See*—
Anger, Ernest C., and Montross. 2,899,620.
Squire, Edward N., to E. I. du Pont de Nemours and Co. Process for manufacturing fiber reinforced cross-linked methacrylate resin. 2,899,402, 8–11–59, Cl. 260—41.
Stachle, Henry C., and C. K. Tupin, to Eastman Kodak Co. Photomechanical spirit duplicating process. 2,898,852, 8–11–59, Cl. 101—149.4.
Standard Dayton Corp.: *See*—
Needleman, Samuel. 2,899,618.
Standard Gage Co., Inc.: *See*—
Groshier, Walter J., and Klink. 2,898,686.
Standard Oil Co. (Indiana): *See*—
Carmody, Don R., and Mayerle. 2,898,735.
Carmody, Don R., Mayerle, and Zletz. 2,898,732.
Carmody, Don R., Mayerle, and Zletz. 2,898,734.
Carmody, Don R., and Zletz. 2,898,733.
Den Herder, Marvin J. 2,898,378.
Flemich, John J. 2,899,390.
Standring, Norman, to Imperial Chemical Industries Ltd. Manufacture of highly polymeric polymethylene terephthalates. 2,899,410, 8–11–59, Cl. 260—75.
Stanton, George W., T. B. Lefferdink, R. W. Mefkie, and M. J. Charlesworth, to The Dow Chemical Co. Method and composition for rendering polyacrylonitrile readily dyeable. 2,899,262, 8–11–59, Cl. 8—100.
Starr, Norbert T., to Crawford Door Co. Dual door mechanism. 2,898,985, 8–11–59, Cl. 160—113.
Statz, Hermann. Junction transistors and methods for making them. 2,899,343, 8–11–59, Cl. 148—1.5.
Steeves, George J., to Phillips Petroleum Co. Crude oil centrifuging process. 2,899,372, 8–11–59, Cl. 208—39.
Stein, Erich: *See*—
Oswalt, Rudolf, and Stein. 2,898,208.
Stein, Leidore H., to Allen B. Dumont Laboratories, Inc. Electrical heating device. 2,899,501, 8–11–59, Cl. 315—337.
Stein, James H. Apparatus for cancelling turn and yaw noise in a magnetometer. 2,899,637, 8–11–59, Cl. 324—43.
Steinberg, Walter A., to Reeves Instrument Corp. Rectifying apparatus and method. 2,899,627, 8–11–59, Cl. 321—27.
Steiner, Robert F. Turf plug cutter. 2,898,231, 8–11–59, Cl. 294—50.7.
Stellmacher, Donald D., and R. C. Danta, to Hoffman Electronics Corp. Probe housings for nuclear radiation detector. 2,899,562, 8–11–59, Cl. 250—108.
Stephan, Elmer F.: *See*—
Igelsrud, Iver, and Stephan. 2,899,268.
Stephenson, Robert L.: *See*—
Orehoski, Michael A., and Stephenson. 2,898,667.
Stetson, Gerald E., to Colonial Aircraft Corp. Impedance matched antenna apparatus. 2,899,678, 8–11–59, Cl. 343—864.
Stevens, Bryce L.: *See*—
Hastings, Homer R., and Stevens. 2,899,517.
Stevens, Leland J., to General Electric Co. Stacking type insulators. 2,899,482, 8–11–59, Cl. 174—30.
Stewart, Jack L.: *See*—
Friedberg, Milton R., and Stewart. 2,899,485.
Stieritz, William G.: *See*—
Mueller, Ralph L., and Stieritz. 2,899,568.
Stinson, Harold S. Attachment for fishhooks. 2,898,701, 8–11–59, Cl. 43—44.6.
Stobb, Anton R. Tension control means for a web of paper. 2,899,109, 8–11–59, Cl. 271—2.3.
Storie, Reginald J. Beach pack. 2,898,609, 8–11–59, Cl. 5—344.

Smith, Alfred P., Jr., and E. H. Thoma. Lens turret and auxiliary lens for cameras. 2,898,831, 8–11–59, Cl. 95—11.
Smith, Clarence M., to The Bryant Electric Co. Wiring device. 2,899,524, 8–11–59, Cl. 200—168.
Smith, Clifford B., to Vinco Corp. Vacuum operated switch. 2,899,516, 8–11–59, Cl. 200—81.
Smith, Harold K., and C. G. Gibbons, to Baker Perkins, Inc. Electrical control system for rack type proofer. 2,899,040, 8–11–59, Cl. 198—35.
Smith, John A.: *See*—
Fox, Robert L., and Smith. 2,898,792.
Smith, John R., to Pennsylvania Transformer Co. Magnetic core. 2,899,656, 8–11–59, Cl. 336—211.
Smith, Orville R., and C. E. Roesby, to Welex, Inc. Well logging device. 2,899,633, 8–11–59, Cl. 324—10.
Smith, Raymond A., H. H. McClure, and G. C. Bond, to The Dow Chemical Co. Recovery of ammonia and hydrogen cyanide from gaseous mixtures. 2,899,274, 8–11–59, Cl. 23—151.
Smith, Richard F.: *See*—
Chapin, Earl C., and Smith. 2,898,404.
Smith, Robert M., to The Dow Chemical Co. Preparation of alkali metal isothionates. 2,899,461, 8–11–59, Cl. 260—512.
Smith, S., & Sons (England) Ltd.: *See*—
Fiamm, Paul. 2,899,509.
Snyder, Charles C.: *See*—
Barden, Wayne A., and Snyder. 2,899,662.
Societe Anonyme des Manufactures des Glaces et Produits Chimiques de Saint-Gobain, Chauny & Cirey: *See*—
Cherrier, Claude M. 2,899,275.
Societe Anonyme des Usines Chausson: *See*—
Chausson, André. 2,899,124.
Chausson, André. 2,899,125.
Societe Anonyme Procedes Sauter: *See*—
Boegle, Charles. 2,898,739.
Societe Francaise de Recherches Biochimiques H. Besson & Cie. (Societe en Commandite par Actions): *See*—
Debay, Andre, and Sackur. 2,898,449.
Societe Rhodiaceta: *See*—
Fleuret, Marcel. 2,898,728.
Socony Mobil Oil Co., Inc.: *See*—
Hill, Donald F. 2,899,283.
Soden, William R.: *See*—
Connell, Leo F., Elkin, and Soden. 2,899,285.
Solow, Sidney P., and R. H. Yamin. Identification leader for motion picture film. 2,898,805, 8–11–59, Cl. 88—18.5.
Sonnenfeldt, Richard W., G. L. Grundmann, and M. Cooperman, to Radio Corp. of America. Non-linear reactance chrominance signal demodulators. 2,899,491, 8–11–59, Cl. 178—5.4.
Sorg, Harold E., and L. H. La Forge, Jr., to Eitel-McCullough, Inc. Ceramic vacuum tube. 2,899,590, 8–11–59, Cl. 313—250.
Sosa, Arthur. Cleaver. 2,898,679, 8–11–59, Cl. 30—272.
Sovinsky, Eugene, to United States of America, Army. Field protective mask. 2,898,906, 8–11–59, Cl. 128—141.

Stowitts, Frank H., and D. P. Wheeler, to Michigan Carton Co. Dispensing carton with a push-pull closure for same. 2,899,119, 8–11–59, Cl. 229—17.

Straley, James B., to Brogdex Co. Apparatus for spraying waxy substances onto fruit surfaces. 2,898,881, 8–11–59, Cl. 118—24.

Strang, Roger P.: *See*—
Spector, Marshall L., and Strang. 2,899,453.

Straughan, Virgil E., to General Dynamics Corp. Process for developing electrostatic image with liquid developer. 2,899,335, 8–11–59, Cl. 117—37.

Streeter-Amet Co.: *See*—
Marquardt, John A. 2,899,544.

Strom, Robert S.: *See*—
Hellyer, John T. 2,899,140.

Strong, Bernard, to E. Shipton & Co. Ltd. Method of and apparatus for the manufacture of lined containers. 2,898,972, 8–11–59, Cl. 154—1.

Stuart, Murray H.: *See*—
Bredtschneider, Kurt B., Onak, and Stuart. 2,899,667.

Stump, Eugen, to Daimler-Benz Aktiengesellschaft. Electric control device, particularly for motor vehicle transmissions. 2,898,773, 8–11–59, Cl. 74—336.5.

Sturm, Ralph E., and R. H. Morgan, to Bendix Aviation Corp. System for the translation of intelligence at low signal-to-noise ratios. 2,899,494, 8–11–59, Cl. 178—6.8.

Sturm, Ruger and Co., Inc.: *See*—
Ruger, William B. 2,898,693.

Summers Gyroscope Co.: *See*—
Ford, Birchard H. 2,899,060.

Sun Oil Co.: *See*—
Connell, Leo F., Elkin, and Soden. 2,899,385.
Mertes, Thomas S. 2,899,414.

Superior Tube Co.: *See*——
Hoff, Richard L. 2,899,301.

Sutcliffe, Noel H.: *See*—
Goodall, Robert R., and Sutcliffe. 2,899,425.

Svenska Rotor Maskiner Aktiebolag: *See*—
Haussler, Friedrich. 2,899,179.

Swabb, Lawrence E., Jr., and W. W. Boisture, to Esso Research and Engineering Co. Hydroforming with the use of a mixture of catalyst and inert particles. 2,899,384, 8–11–59, Cl. 208—149.

Swanson, Gosta. Vehicle window seal. 2,899,238, 8–11–59, Cl. 296—49.2.

Swayze, Rue E. Engine lubricating system. 2,899,016, 8–11–59, Cl. 184—6.

Sweet, Sterling S., and M. H. Van Horn, to Eastman Kodak Co. Cements for bonding high polymer sheets to each other and method of using same. 2,899,348, 8–11–59, Cl. 154—136.

Swift & Co.: *See*—
Burnett, Alexander H. 2,898,962.
Christopher, Edward F., and Young. 2,899,327.
Farbak, John E., and Kasmen. 2,899,328.
Fredrickson, Carl T. 2,898,624.
Hennigen, Bernard T. 2,898,722.
Kauffman, Floyd L., Van Dolah, and Sharp. 2,898,961.
Silliker, John H., Kauffman, and Ohlson. 2,899,312.
Young, Harland H., Ohlson, and Barshefsky. 2,899,352.

Sykes, Robert E., to Bell & Gossett Co. Compressor. 2,899,130, 8–11–59, Cl. 230—182.

Syntex S.A.: *See*—
Djerassi, Carl, and Rosenkrans. 2,899,427.

Tannenbaum, Eileen: *See*—
Atalla, Martin M., Scheibner, and Tannenbaum. 2,899,344.

Tate, Bryce E.: *See*—
Bavley, Abraham, and Tate. 2,899,457.
Bavley, Abraham, and Tate. 2,899,462.

Tatnall Measuring Systems Co.: *See*—
Bean, William T., Jr. 2,899,658.

Taylor, Seymour, to Chas. Pfizer & Co. Ophthalmic dispenser. 2,898,911, 8–11–59, Cl. 128—249.

Teaf, John H., to Radio Condenser Co. Tuner. 2,898,767, 8–11–59, Cl. 74—10.33.

Teague, Claude E., Jr., to R. J. Reynolds Tobacco Co. Process of preparing sodium salts of substituted malonic acids. 2,899,464, 8–11–59, Cl. 260—515.

Technicon International Ltd.: *See*—
Whitehead, Edwin C., and Ferrari. 2,899,280.

Tefft, Edwin O., to The Chapman Valve Mfg. Co. Valve apparatus. 2,898,932, 8–11–59, Cl. 137—340.

Telecontrols-International, Inc.: *See*—
Kardorff, Leon. 2,899,481.

Telefunken Gesellschaft fuer drahtlose Telegraphie G.m.b.H.: *See*—
Willwacher, Erwin, and Weber. 2,899,647.

Ternes, William A.: *See*—
Ford, Ralph E. 2,898,987.

Testi, Nicholas, to The Gillette Co. Springless blade dispenser. 2,899,105, 8–11–59, Cl. 221—309.

Testo, Nate E. Telescoping tubular expander and cylindrical pilot for expanding metal tubing in situ when end of tubing is clamped around inserted pilot. 2,898,970, 8–11–59, Cl. 153—80.5.

Texas Instruments Inc.: *See*—
Burch, Lyndon W. 2,899,512.
Millis, Edwin G. 2,899,539.
Skelton, Charles W., and Donnell. 2,899,572.

Textile Machine Works: *See*—
Bauer, Kurt P., Bitzer, and Haehnel. 2,898,753.

Thaon de Saint-André, André. Conveyors for automobile vehicles. 2,899,041, 8–11–59, Cl. 198—183.

Thaon de Saint-André, André. Garages for parking cars and in particular automobile vehicles. 2,899,086, 8–11–59, Cl. 214—16.1.

Then, Edward O., to American Can Co. Tearing strip key. 2,899,101, 8–11–59, Cl. 220—52.

Then, Edward O., to American Can Co. Container opening key. 2,899,102, 8–11–59, Cl. 220—52.

Thomas, Albert G. Cooking device. 2,898,905, 8–11–59, Cl. 126—374.

Thomas Hydraulic Speed Controls, Inc.: *See*—
Thomas, John R. 2,899,035.

Thomas, John R., to Thomas Hydraulic Speed Controls, Inc. Variable speed and torque transmitting fluid clutch. 2,899,035, 8–11–59, Cl. 192—61.

Thompson, Charles E.: *See*—
Wilchinsky, Zigmond W., and Thompson. 2,899,379.

Thompson, John K. Means for dispensing packaging tape from rolls. 2,899,144, 8–11–59, Cl. 242—58.4.

Thompson Ramo Wooldridge Inc.: *See*—
Gates, Richard L. 2,898,865.
Wotring, John A., and Mainland. 2,898,863.

Thompson, Russell G., and C. E. Hunt, Jr., to Eastman Kodak Co. Apparatus for synthesizing facsimile signals from coded signals. 2,899,498, 8–11–59, Cl. 178—22.

Thoma, Earl H.: *See*—
Smith, Alfred P., Jr., and Thoma. 2,898,831.

Thomsen, Alfred M. Method of making paper pulp. 2,898,994, 8–11–59, Cl. 162—24.

Thomson, Robert F.: *See*—
Holswarth, James C., and Thomson. 2,899,304.

Thorup, Abraham B., to Central Fibre Products Co., Inc. Folding box with partition. 2,899,121, 8–11–59, Cl. 229—27.

Thoss, Jack L.: *See*—
Montgomery, Donald N., and Thoss. 2,899,041.

Timax Associates: *See*—
Slatin, Harvey L. 2,899,369.

Timms, Louise V. Compression holder for elongated objects. 2,899,077, 8–11–59, Cl. 211—60.

Tokheim Corp.: *See*—
Tsiguloff, George N. 2,898,926.

Toyoda, Eijiro, deceased; Hideko Toyoda, Hiroshige Toyoda, M. N. Toyoda, Y. K. Toyoda, Yoke Toyoda, Harumi Toyoda, Eiko Toyoda, and Mieko Toyoda, minors, by mother, Hideko Toyoda; to Kabushiki Kaisha Hakko Denki Seisakusho. Machine for cutting cycloid gears. 2,898,681, 8–11–59, Cl. 33—27.

Toyoda, Eiko: *See*—
Toyoda, Eijiro. 2,898,681.

Toyoda, Harumi: *See*—
Toyoda, Eijiro. 2,898,681.

Toyoda, Hideko: *See*—
Toyoda, Eijiro. 2,898,681.

Toyoda, Hiroshige: *See*—
Toyoda, Eijiro. 2,898,681.

Toyoda, Michiko N.: *See*—
Toyoda, Eijiro. 2,898,681.

Toyoda, Mieko: *See*—
Toyoda, Eijiro. 2,898,681.

Toyoda, Yoko: *See*—
Toyoda, Eijiro. 2,898,681.

Toyoda, Yoshiko K.: *See*—
Toyoda, Eijiro. 2,898,681.

Tracey, John E.: *See*—
Hughes, William J., Haynes, Tracey, and Wheeler. 2,899,538.

Tromp, Klaas F. Apparatus for separating granular materials having different specific gravities by means of a liquid. 2,899,058, 8–11–59, Cl. 209—172.5.

Trtan, Mike A.: *See*—
Hoese, Leroy M., and Trtan. 2,899,536.

Trubek Laboratories, The: *See*—
Goldstein, Emanuel, and Lustkin. 2,899,470.

Truett, William L., to E. I. du Pont de Nemours and Co. Coordination polymerization catalysts. 2,899,415, 8–11–59, Cl. 260—94.9.

Tryon, John G., to Bell Telephone Laboratories, Inc. Binary adder-subtracter. 2,899,133, 8–11–59, Cl. 235—165.

Tsiguloff, George N., to Tokheim Corp. Safety disconnect valve. 2,898,926, 8–11–59, Cl. 137—68.

Tupis, Carolyn K.: *See*—
Staehle, Henry C., and Tupis. 2,898,852.

Turinsky, Isidore: *See*—
Dubin, Melvin, and Turinsky. 2,899,178.

Turner, Edwin E. Method and apparatus for energy conversion. 2,899,565, 8–11–59, Cl. 290—1.

Turner, John S., Jr.: *See*—
Wirtz, Robert W., Ratcliff, and Turner. 2,898,827.
Wirtz, Robert W., Ratcliff, and Turner. 2,898,828.
Wirtz, Robert W., Ratcliff, and Turner. 2,898,829.
Wirtz, Robert W., Ratcliff, and Turner. 2,898,830.

Tyszkiewicz, Stefano. Electrical impulse released selector. 2,899,504, 8–11–59, Cl. 179—27.51.

Udylite Research Corp., The: *See*—
High, Le Roy B. 2,899,289.

Uhlmann, Erich, to Allmanna Svenska Elektriska Aktiebolaget. Means for operating several co-operating constituent static current converters. 2,899,628, 8–11–59, Cl. 321—27.

Ulinski, Bronislaus I., to The Yale & Towne Mfg. Co. Industrial truck drive ratio. 2,899,223, 8–11–59, Cl. 287—53.

Ullman, Robert: *See*—
Lyman, Raphael. 2,898,922.

Ullstrand, Hugo M., to Aktiebolaget Elektrolux. Refrigerator employing secondary refrigeration system. 2,898,748, 8–11–59, Cl. 62—333.

Umbricht, Emil, and F. G. Rylance, to Ajem Laboratories, Inc. Gas washing apparatus. 2,899,183, 8–11–59, Cl. 261—24.

Union Chimique Belge Societe Anonyme: *See*—
Morren, Henri. 2,899,436.

United-Carr Fastener Corp.: *See*—
Ashworth, Winthrop F. 2,898,654.
Becker, Philip D. 2,898,654.
Bedford, William A., Jr. 2,898,653.
Fraser, Robert W. 2,899,511.
Johanson, Bengt J. 2,899,669.

Wells, Frank W. Trencher transmission. 2,898,768, 8–11–59, Cl. 74—15.84.

Wilson, Robert R., to United States of America, Atomic Energy Commission. Apparatus for producing shadow-

United Shoe Machinery Corp.: *See*—
Lotarski, Stephen P., and Speight. 2,898,614.
Miller, Lloyd G. 2,898,875.
United States Bedding Co.: *See*—
Bronstien, Edward L. 2,898,950.
United States of America
Agriculture: *See*—
Makower, Benjamin, and Schultz. 2,899,313.
Moore, Richard N., and Lawrence. 2,899,483.
Powers, Myron J., and Downes. 2,899,319.
Rothman, Edward S., and Wall. 2,899,428.
Air Force: *See*—
Lederman, Samuel, and MacLean. 2,899,525.
Army: *See*—
Fleischer, Arthur. 2,899,480.
Klecnak, Walter S. 2,899,168.
Sovinsky, Eugene. 2,898,908.
Atomic Energy Commission: *See*—
Anicetti, Robert J. 2,899,298.
Creutz, Edward C. 2,899,054.
Gofman, John W. 2,899,452.
Igelsrud, Iver, and Stephan. 2,899,268.
Kattner, Wilbur T. 2,899,295.
Katz, Joseph J., and Sheft. 2,899,269.
Magel, Theodore T. 2,899,297.
Neville, Orear K. 2,899,451.
Wilson, Robert R. 2,899,557.
Zachariasen, William H. 2,899,270.
Navy: *See*—
Foster, John V. 2,898,889.
Hafstad, Lawrence R., and Roberts. 2,898,857.
Jordan, James D. 2,899,514.
Reiner, Stewart. 2,899,673.
Robertson, Jack B., and Volpone. 2,899,483.
Scibetta, Paul C., and Higdon. 2,898,710.
United States Steel Corp.: *See*—
Kiesling, Harry E. 2,898,763.
Orehoski, Michael A., and Stephenson. 2,898,667.
U.S. Vitamin & Pharmaceutical Corp.: *See*—
Shapiro, Seymour L., Freedman, and Ross. 2,899,427.
Universal Oil Products Co.: *See*—
Cyba, Henry A. 2,899,407.
Upjohn Co., The: *See*—
Beal, Philip F., and Hogg. 2,899,448.
Davis, Benajah L. 2,899,079.
Korman, Jerome. 2,899,439.
V. B. Grip Sales: *See*—
Van Buskirk, Paul. 2,898,655.
VEB Leuna-Werke "Walter Ulbricht": *See*—
Bender, Georg, and Krauthakel. 2,899,188.
V-M Corp.: *See*—
Faulkner, Willard J. 2,898,771.
Vaghi, Joseph. Air circulating blower. 2,899,128, 8-11-59, Cl. 230—117.
Valentine, William: *See*—
Sieger, George M., Jr., Valentine, and Weidenheimer. 2,899,362.
Van Amstel, Johannes J. A. P., to North American Philips Co., Inc. Electrode system comprising crystal diodes or translators. 2,899,618, 8-11-59, Cl. 317—234.
Van Buskirk, Paul, to V. B. Grip Sales. Cable ferrule. 2,898,655, 8-11-59, Cl. 24—4.5.
Vance, John E., to The Hoover Co. Combination suction cleaners. 2,898,621, 8-11-59, Cl. 15—324.
Vandergrift, Arvel L., to Lummus Cotton Gin Co. Hull extractor for seed cotton. 2,898,635, 8-11-59, Cl. 19—87.
Van Dolah, Delos B.: *See*—
Kaufman, Floyd L., Van Dolah, and Sharp. 2,898,861.
Van Haltern, Frank, Jr., to Scripto, Inc. Toggle actuated alternate push rocking latch mechanism for retractable ball pen. 2,898,887, 8-11-59, Cl. 120—42.3.
Van Hook, Charles F. Traverse drive mechanism. 2,898,770, 8-11-59, Cl. 74—123.
Van Horn, Maurice H.: *See*—
Sweet, Sterling S., and Van Horn. 2,899,848
Van Ness, Robert P., to Air Reduction Co., Inc. Calcium carbide. 2,899,052, 8-11-59, Cl. 206—84.
Vapor Heating Corp.: *See*—
Clarkson, Alick, and Parks. 2,899,247.
Varian Associates: *See*—
Salisbury, Frederick L., and Abraham. 2,899,599.
Varner, Stuart L.: *See*—
Schoeppel, John F., Varner, and Herr. 2,899,293.
Varterasian, John H.: *See*—
Kinsey, Claude J., and Varterasian. 2,898,764.
Veeder, Lloyd N., to North American Aviation, Inc. Method of preparing surfaces for electroplating. 2,899,367, 8-11-59, Cl. 204—32.
Velasco Fernandez, Jesus. Automatic barrier for railway crossing. 2,899,545, 8-11-59, Cl. 246—127.
Velsicol Chemical Corp.: *See*—
Marks, Daniel R. 2,899,446.
Venable, Charles R., Jr., to Phillips Petroleum Co. Heat exchange pebbles. 2,898,328, 8-11-59, Cl. 106—65.
Verwey, Wessel, to North American Philips Co., Inc. Sodium-vapour discharge tube. 2,898,584, 8-11-59, Cl. 313—112.
Vickers, Inc.: *See*—
Andrews, Rufus A. 2,899,606.
Vickery, Ronald C., to Horizons Inc. Manufacture of dihydrogen phosphates. 2,899,292, 8-11-59, Cl. 71—41.
Vict.: Th. Engwall & Co.: *See*—
Sjöland, Vilnö V. 2,899,534.
Viewlex, Inc.: *See*—
Hurr, Malvin. 2,898,981.
Vincent, Harvard B., to Owens-Illinois Glass Co. Glass-to-metal seals in cathode-ray tubes. 2,899,575, 8-11-59, Cl. 313—64.
Vinco Corp.: *See*—
Smith, Clifford B. 2,899,516.
Vince, Charles D.: *See*—
Huck, Alfred J., and Vince. 2,898,842.
Vitarama Corp., The: *See*—
Dresser, Willis R. 2,899,505.
Vogel, Ralph A. Apparatus for supplying additives to lubricating system. 2,898,902, 8-11-59, Cl. 123—196.
Voigt & Haeffner A.G.: *See*—
Grebner, Fritz. 2,899,537.
Volpone, Roy: *See*—
Robertson, Jack B., and Volpone. 2,899,483.
Voshof, Heinz K. Combined telephone and public address system. 2,899,502, 8-11-59, Cl. 179—16.
Voorhees, Albert, and E. F. Scott, to American Cyanamid Co. Oxidation-ingrain color emulsions. 2,899,281, 8-11-59, Cl. 8—62.
Wade, Richard L.: *See*—
Kwartler, Irwin E., and Wade. 2,898,919.
Wadlow, Derek N., to Rotaprint Ltd. Offset lithographic printing machines. 2,898,853, 8-11-59, Cl. 101—217.
Wagner, Gilbert C.: *See*—
Brennan, Edward L., Quinn, Sellers, and Wagner. 2,899,487.
Wagner, William T., to The Dayton Rubber Co. Cushioning construction. 2,898,975, 8-11-59, Cl. 155—179.
Wakeman, Alden H., to The Creamery Package Mfg. Co. Pump construction. 2,898,861, 8-11-59, Cl. 103—103.
Wales, George F.: *See*—
Zumwalt, Robert F. 2,899,194.
Wales, Nathaniel B., to Industrial Patent Corp. Self-refrigerating container. 2,898,747, 8-11-59, Cl. 62—294.
Walker, James H., S. W. Carr, and C. H. Horn, to Limark Corp. Marking stripe and method of applying same. 2,898,525, 8-11-59, Cl. 94—1.5.
Walker Supply & Mfg. Co.: *See*—
Walker, Walter B. 2,899,028.
Walker, Sydney J.: *See*—
Harris, Michael G., and Walker. 2,899,177.
Walker, Walter B., to Walker Supply & Mfg. Co. Panel construction. 2,899,028, 8-11-59, Cl. 189—34.
Wall, Monroe E.: *See*—
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Allander, Claes, Alfredsson, and Wallin. 2,899,180.
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Ware, Colin C., R. F. Blake, and B. A. Demers, to Specialties Development Corp. System for supplying controlled frequency power. 2,899,566, 8-11-59, Cl. 307—73.
Warmoltz, Nicolaas, to North American Philips Co., Inc. Glow discharge apparatus for measuring low gas pressures. 2,899,606, 8-11-59, Cl. 315—106.
Warner Electric Brake & Clutch Co.: *See*—
Pierce, William C. 2,899,037.
Waterhouse, Eugene R.: *See*—
Irwin, Harry B., and Waterhouse. 2,898,632.
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Weber, John, Jr.: *See*—
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Lieberman, Irving, and Liebowitz. 2,898,911.
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220: 2,899,672
340— 173: 2,899,673
218: 2,899,674
248: 2,899,675
347: 2,899,676
343— 757: 2,899,677
864: 2,899,678
346— 34: 2,899,258
69: 2,899,259
74: 2,899,260

Classification of Designs

D 1— 12: 185,832
D 2— 3: 185,833
D 9— 2: 185,834
185,835
185,836
185,837
185,838
D12— 1: 185,839
185,840
D14— 3: 185,841
185,842
D14— 3: 185,843
185,844
6: 185,845
27: 185,846
30: 185,847
185,848
D15— 1: 185,849
185,850
185,851
D17— 15: 185,852
D20— 2: 185,853
D20— 1: 185,854
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185,856
5: 185,857
6: 185,858
14: 185,859
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D29— 10: 185,861
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22: 185,863
D31— 4: 185,864
D31— 4: 185,865
185,866
D32— 7: 185,867
11: 185,868
D34— 15: 185,869
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D42— 7: 185,871
D44— 15: 185,872
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D46— 23: 185,874
33: 185,875
D49— 1: 185,876
D54— 13: 185,877
D57— 1: 185,878
D58— 4: 185,879
8: 185,880
185,881
12: 185,882
20: 185,883
185,884
D61— 1: 185,885
D62— 4: 185,886
D62— 4: 185,887
D71— 1: 185,888
185,889
D80— 5: 185,890
9: 185,891
10: 185,892
D86— 2: 185,893
D87— 3: 185,894
D89— 1: 185,895
D90— 20: 185,896
D91— 2: 185,897

ete.; **Reg. No. 420,657**, same, Articles composed wholly or in part of natural and/or synthetic rubber sold as parts for and same, Nucleonic radiation detection apparatus such as nucle-

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

August 11, 1959 Volume 745 Number 2

TRADEMARKS

NOTICES

Service by Publication

A petition to cancel each of the registrations identified below having been filed, and the notice of such proceedings sent by registered mail to each registrant at the last known address having been returned by the Post Office as undeliverable, notice is hereby given that unless the registrants listed herein, their assigns or legal representatives, shall enter an appearance within thirty days from the date of this publication, the cancelation will be proceeded with as in the case of default.

Doleith, Inc., Chicago, Ill., Reg. No. 400,194, Canc. No. 7289.

Ash-Bradford, Inc., South Bend, Ind., Reg. No. 374,669, Canc. No. 7308.

Re-Ly-On Products Company, Pittsburgh, Pa., Reg. No. 579,123, Canc. No. 7313.

Rudolph Scheibner, doing business as Magic Soap & Chemical Co., Oakland, Calif., Reg. No. 431,343, Canc. No. 7316.

Smith-Lockwood Manufacturing Co., Omaha, Nebr., Reg. No. 386,885, Canc. No. 7330.

American Tissue Mills, Holyoke, Mass., Reg. No. 394,859, Canc. No. 7333.

DAPHNE LEEDS,
Assistant Commissioner of Patents.

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 167,591 (RCA ENCIRCLED), Radio Corporation of America, Radio receiving, detecting and transmitting sets and parts thereof, etc.; **Reg. No. 258,286**, same, Broadcast transmitters, quartz crystals, condenser microphones, modulation reactors, etc.; **Reg. No. 281,281**, same, Electrical systems for receiving and/or distributing electrical waves of audible or super-audible frequency, amplifying and reproducing such waves and parts thereof, etc.; **Reg. No. 310,781**, same, RCA Victor Co., Inc., Photographic and electrophysical sound recording apparatus, etc.; **Reg. No. 378,800**, same, RCA Manufacturing Co., Inc., Current, voltage, pressure phase measuring and generating devices and appurtenances thereto and parts thereof, etc.; **Reg. No. 382,257**, same, Men's outer shirts, jackets, jumpers and coats; **Reg. No. 394,165**, same, Mechanical pencils, fountain pens, rubber stamps, ink pads, business cards, etc.; **Reg. No. 394,427**, same, Thermostatic electric heating system control units, apparatus and equipment for inspecting contents of bottles by means of photoelectric devices, electron microscopes, lens for same, film making kits, etc.; **Reg. No. 394,994**, same, Electrically operated laundry washing machines, ironers and parts thereof, etc.; **Reg. No. 395,748**, same, Furniture polish and refinishing and polishing kits for wooden cabinets, etc.; **Reg. No. 396,753**, same, Refrigerators, parts thereof and accessories therefor, namely, refrigerating units and temperature regulating units; **Reg. No. 402,402**, same, Electrically operated vacuum cleaners, facsimile transmitters, facsimile receivers, etc.; **Reg. No. 412,891**, same, Radio Corporation of America, Talking machine styli or needles, non-electric sound records, etc.; **Reg. No. 415,000**, same, Lubricating oil and grease; **Reg. No. 417,179**, same, House organs, news letters, catalogues, etc.; **Reg. No. 426,793**, same, High frequency electronic power generating and heating apparatus for use in treatment of materials etc.; **Reg. No. 428,256**, same, Set screw wrenches; **Reg. No. 429,872**, same, Phonograph record storage racks, rubber feet for radio, television and phonograph cabinets, merchandise display shelves,

CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1959

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	10,792
Date of oldest new application	Jan. 2, 1959
Date of oldest amended application	Feb. 3, 1959

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 16, 19, 21, 23, 24, 25, 26, 30, 31, 32, 33, 34, 35, 36, 44, 50	2-13-59	3-11-59
(II) R. F. SHRYOCK, Classes 6, 18, 27, 28, 46, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks Class 200	1-29-59	2-3-59
(III) K. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 20, 22, 29, 37, 38, 39, 40, 41, 42, 43, 45, 47, 48, 49, 52; and Certification Marks	1-2-59	3-2-59
Renewals (All Classes)	5-29-59	6-25-59
Sec. 12 (c) Publications (All Classes)	6-5-59	6-5-59

Applications filed during the month of June 1959—2,029

Registrations Issued	396—No. 683,063 to No. 683,458
Renewals Issued	86

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

	185,842	D20—	2:	185,853	D31—	4:	185,864		32:	185,875	D62— 4: 185,886	D91—	2:	185,897

etc.; **Reg. No. 430,637**, same, Articles composed wholly or in part of natural and/or synthetic rubber sold as parts for and replacement parts of radio, etc.; **Reg. No. 440,238**, same, Ash trays made of plastic material; **Reg. No. 440,272**, same, Electric clocks; **Reg. No. 441,526**, same, Calculators of the slide rule type, etc.; **Reg. No. 507,000**, same, Specially designed motor truck in the nature of a mobile television studio; **Reg. No. 509,421**, same, Internal combustion engine-driven electrical generators; **Reg. No. 509,806**, same, Global radio-telegraph communication service on both land and sea, commercial radiophoto service, etc.; **Reg. No. 515,819**, same, Periodical inspection and repair of industrial electronic equipment, etc.; **Reg. No. 516,231**, same, Flashlights, crystal pickup units for electrical phonographs, lightning arrestors for radio apparatus; **Reg. No. 517,135**, same, Internal combustion engine-driven power generating plant for industrial use; **Reg. No. 517,257**, same, Radio range and position detection equipment used as navigation aids, namely, radar and loran; **Reg. No. 533,217**, same, Beverage bottle uncaser and washer loader; **Reg. No. 534,661**, same, Toy cardboard collapsible trucks; **Reg. No. 542,747**, same, Woven carpets; **Reg. No. 543,428**, same, Nucleonic radiation detection apparatus such as nucleonic radiation measurement meters; **Reg. No. 543,434**, same, Instructing in television servicing by means of a correspondence course; **Reg. No. 582,443**, same, Air conditioners, their component and replacement parts, as well as any accessories, etc.; **Reg. No. 589,647**, same, Gas ranges, their parts and accessories, such as special purpose grates or grids, as well as grease collecting pans; **Reg. No. 606,657**, same, Electric ranges, their parts and accessories; **Reg. No. 608,296**, same, Electronic business machines for recording and storage of information, automatic sorting, etc.; **Reg. No. 625,978**, same, Tape recorders, component and replacement parts of such goods, and accessories for such goods; **Reg. No. 630,272**, same, Maintenance, repair and inspection service for radiotelephone and radiotelegraph apparatus for marine use and such services for marine electronic apparatus; **Reg. No. 630,553**, same, Recording tape, pre-recorded tape and accessories for the foregoing goods, namely, reels, filed May 14, 1959, D.C.N.J. (Newark), Doc. C–422/59, *Radio Corporation of America* v. *Axelrad-Lally Advertising et als.*

Class 8 — Smokers' Artides, Not Including Class 10 — Fertilizers

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 2—Receptacles

SN 67,164. Studley Paper Company, Inc., Far Rockaway, N.Y. Filed Feb. 5, 1959.

HI FI

For Vacuum Cleaner Filter Bags.
First use in or about April 1958.

SN 67,407. Tucker Products Corporation, Leominster, Mass. Filed Feb. 9, 1959.

STONE-AC

For Plastic Tableware—Namely, Cups and Saucers, Mugs, Bread and Butter Plates, Cereal Bowls, Dinner Plates, Sugar and Creamer, and Vegetable Dishes.
First use Jan. 14, 1959.

Class 4—Abrasives and Polishing Materials

SN 36,063. East Coast Soap Corporation, Brooklyn, N.Y. Filed Aug. 23, 1957.

COMET

For Floor Wax.
First use July 15, 1957.

SN 36,064. East Coast Soap Corp., Brooklyn, N.Y. Filed Aug. 23, 1957.

CORONET

For Floor Wax.
First use July 15, 1957.

SN 69,192. The Rutang Corporation, Miami, Fla. Filed Mar. 9, 1959.

ZIP

For Spray-Type Shoe Polish.
First use Oct. 7, 1957.

Class 6—Chemicals and Chemical Compositions

SN 34,477. United States Rubber Company, New York, N.Y. Filed July 26, 1957.

MH

For Plant Growth Inhibitor and Herbicide.
First use July 26, 1951.

SN 49,978. Sandoz, Inc., New York, N.Y. Filed Apr. 18, 1958.

GRAPHTOL

For Pigments To Be Used as Coloring Material in the Textile, Plastic, Paint, Printing Ink, Rubber, Lacquer, Color Pencils, Leather and Paper Industries.
First use July 1, 1955.

SN 54,779. S. B. Penick and Company, New York, N.Y. Filed July 8, 1958.

NOLANE

For Surface Treating Agent for Glass Fibers.
First use June 2, 1958.

SN 56,648. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Aug. 5, 1958.

3M

Owner of Reg. Nos. 542,961, 606,272, and others.
For Moldable Composition of Fine Particles With a Binding Agent and a Thermosetting Resin Capable of Being Compounded Into Tools.
First use July 26, 1957.

SN 65,700. Reichhold Chemicals, Inc., Detroit, Mich. Filed Jan. 12, 1959.

SATINOL

For Synthetic Resin Comprising Cyclic Polymers Used in the Wood Finishing Industry.
First use Dec. 15, 1958.

SN 67,106. Wilson & Toomer Fertilizer Co., Jacksonville, Fla. Filed Feb. 4, 1959.

FUMAGON

For Soil, Lawn, and Turf Treating Agent Against Nematodes.
First use not later than Jan. 1, 1958.

SN 67,424. Utility Chemical Company, Paterson, N.J. Filed Jan. 28, 1959.

L S. R.

For Ice and Snow Remover.
First use Sept. 10, 1958.

SN 69,219. Tradewell Stores, Inc., Seattle, Wash. Filed Mar. 9, 1959.

TRADEWELL

For Household Bleach, Deodorizer and Disinfectant, and Anti-Freeze.
First use Aug. 15, 1958.

SN 66,705. Dumac, Inc., Elizabeth, N.J. Filed Jan. 29, 1959.
For Window Ventilators.

SN 69,588. Wilson Jones Company, Chicago, Ill. Filed Mar. 13, 1959.

TATUM RASCAL

Class 8 — Smokers' Articles, Not Including Tobacco Products

SN 55,891. Yoshinaga & Company, Limited, Taito-ku, Tokyo, Japan. Filed July 23, 1958.

PRINCE

Owner of Japanese Reg. No. 234,754, dated May 25, 1932.
For Lighters.

SN 64,244. Bantob Products Corp., New York, N.Y. Filed Dec. 15, 1958.

VANGUARD

For Specially Treated Combination of Natural (Non-Tobacco) Fibers Smoked Like Cigarettes.
First use Sept. 20, 1958.
Subj. to Intf. with SN 59,883.

Class 9 — Explosives, Firearms, Equipments, and Projectiles

SN 27,793. J. L. Galef & Son, Inc., New York, N.Y. Filed Apr. 9, 1957.

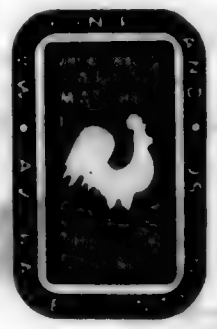
JETFIRE

For Pistols.
First use Apr. 29, 1952.

SN 48,124. Centrala Handlu Zagranicznego "Paged," Warsaw, Poland. Filed Nov. 15, 1957.

Applicant disclaims exclusive use of the words "Made in Poland," "Impregnated," "Safety Match," and "Average Contents 50." Owner of Polish Reg. No. 37,207, dated Aug. 27, 1955.
For Matches.

SN 48,125. Centrala Handlu Zagranicznego "Paged," Warsaw, Poland. Filed Nov. 15, 1957.



Applicant disclaims exclusive use of the words "Made in Poland," "Average Contents 50," and "Impregnated Safety Matches." Owner of Polish Reg. No. 37,206, dated Aug. 27, 1955.
For Matches.

SN 55,932. Marwyn Company, New York, N.Y. Filed July 24, 1958.

FITWELL

For Gun Grips and Handles.
First use June 16, 1958.

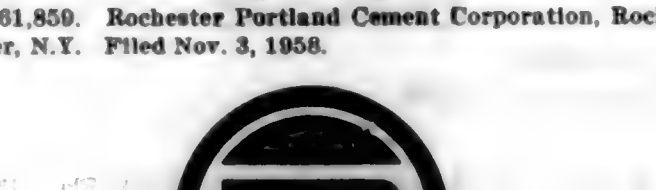
Class 10 — Fertilizers

SN 46,472. J. J. Manget Company, Los Angeles, Calif. Filed Feb. 24, 1958.

STA-GREEN

For Chelated Agricultural Minerals Used as Plant Nutrients.
First use Apr. 5, 1957.
Subj. to Intf. with SN 28,414.

SN 48,669. Tennessee Products & Chemical Corporation, Nashville, Tenn. Filed Mar. 28, 1958.



Owner of Reg. Nos. 579,699, 585,689, and 622,477.
For Horticultural Perlite.
First use Apr. 15, 1957.

SN 62,859. Hershey Estates, Incorporated, Hershey, Pa. Filed Nov. 20, 1958.

KO-K-O

For Mulching and Soil-Conditioning Materials.
First use in August 1946.

Class 11 — Inks and Inking Materials

SN 54,290. Claremont Pigment Dispersion Corporation, Rosslyn Heights, N.Y. Filed June 26, 1958.

PRINTBRITE

For Printing Inks.
First use May 9, 1958.

Class 12 — Construction Materials

SN 61,859. Rochester Portland Cement Corporation, Rochester, N.Y. Filed Nov. 3, 1958.

The words "Portland Cement" and "Rochester New York" are disclaimed.
For Cement, Bulk and Packaged, Crushed Rock and Limestone.
First use May 19, 1958.

SN 64,023. H. B. Reed & Company, Inc., Hammond, Ind. Filed Dec. 10, 1958.

Owner of Reg. Nos. 570,133 and 575,812.
For Ceramic Aggregate for Use in Building and Surfacing Roadways.
First use in April 1956.

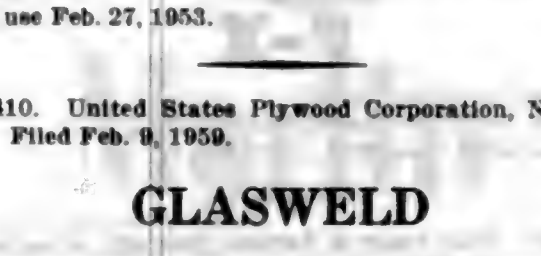
SN 53,508. Nat C. Jamison, Cincinnati, Ohio. Filed June 13, 1958.

SN 67,045. Crosby Forest Products Co., Picayune, Miss. Filed Feb. 4, 1959.

First use July 26, 1951.

First use Aug. 15, 1958.

SN 66,705. Dumac, Inc., Elizabeth, N.J. Filed Jan. 29, 1959.
For Window Ventilators.



First use Dec. 10, 1958.

SN 67,061. Harbison-Walker Refractories Company, Pittsburgh, Pa. Filed Feb. 4, 1959.

H-W MAGNASET

For Refractory Patching Material for Metallurgical Furnaces.
First use Jan. 29, 1959.

SN 67,349. Gustin-Bacon Manufacturing Company, Kansas City, Mo. Filed Feb. 9, 1959.

ULTRACOUSTIC

Owner of Reg. Nos. 500,585, 574,792, and 584,202.
For Acoustical Insulation Board Formed of Bonded Fibrous Material.
First use Feb. 27, 1953.

SN 67,410. United States Plywood Corporation, New York, N.Y. Filed Feb. 9, 1959.

GLASWELD

Owner of Reg. Nos. 551,562, 203,931, and 390,115.
For Incombustible, Asbestos-Calcium Silicate Board With a Vitreous Ceramic Coating.
First use Jan. 9, 1959.

SN 67,420. Wood Conversion Company, St. Paul, Minn. Filed Feb. 9, 1959.

CONSTELLATION

For Fibrous Acoustical Tile.
First use Jan. 16, 1959.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 54,508. Franklin Metal & Rubber Co., Hatboro, Pa. Filed June 30, 1958.

VISTA-PAK

Owner of Reg. No. 643,091.
For Transparently Packaged Nozzles, Connectors, Menders, Clamps for Garden Hose and for Rubber Hose Aerators, Replacement Valve Handles and Washers for Faucets and Spigots, Strainers and Stoppers for Tubs, Sinks and Basins, Rubber Strainers, Toilet Seat Bumpers, Curtain Pins, Toilet Flush Tank Mechanisms, and Toilet Flush Tank Balls.
First use on or about Oct. 5, 1954.

SN 69,588. Wilson Jones Company, Chicago, Ill. Filed Mar. 12, 1959.

TATUM RASCAL

Owner of Reg. Nos. 587,770 and 610,645.
For Staples.
First use Feb. 11, 1959.

Class 14—Metals and Metal Castings and Forgings

SN 68,292. Meier Brass & Aluminum Company, Hazel Park, Mich. Filed Feb. 24, 1959.

For Extruded Aluminum Bronze in Rectangular, Round, and Extruded Shapes for Wear Strips, Forming Blocks and Miscellaneous Tooling Applications.
First use Apr. 17, 1958.

SN 68,474. Consolidated Foundries and Mfg. Corp., Chicago, Ill. Filed Feb. 26, 1959.

MINICAST

For Steel and Alloy Steel Castings Including Investment Castings.
First use in July 1958.

SN 69,185. Reynolds Metals Company, Richmond, Va. Filed Mar. 9, 1959.

RMC

For Aluminum and Aluminum Alloy Ingots.
First use in the year 1947.

Class 15—Oils and Greases

SN 48,756. Robert E. Lancaster, d.b.a. Thermic Oil Refining Company, Santa Fe Springs, Calif. Filed Mar. 31, 1958.

TORCO

For Motor Oils, Oil Stabilizers, Tune-Up Oils, Valve Oils, Carburetor Cleaners in the Nature of Additives to Fuels Supplied to Carburetors, Gear Lubricants, Transmission Oils, Lubricating Greases, Oil Additives, and Fuel Additives.
First use Apr. 1, 1950.

SN 48,757. Robert E. Lancaster, d.b.a. Thermic Oil Refining Company, Santa Fe Springs, Calif. Filed Mar. 31, 1958.

For Motor Oils, Oil Stabilizers, Tune-Up Oils, Valve Oils, Additives to Fuels for Internal Combustion Engines Designed To Clean the Carburetors Thereof, Gear Lubricants, Transmission Oils, Lubricating Greases, Oil Additives, and Fuel Additives.
First use Apr. 1, 1950.

SN 71,911. Tobias Paint Mfg. Company, Cleveland, Ohio. Filed Apr. 20, 1959.

SN 45,696. The Miricil Chemical Company, Inc., Stamford, Conn. Filed Feb. 11, 1958.

SN 53,508. Nat C. Jamison, Cincinnati, Ohio. Filed June 13, 1958.

No claim is made to the words "New Fuel."
For Liquid Additive for Motor Vehicle Fuels.
First use July 7, 1954.

SN 68,021. Anderson Oil and Chemical Company, Inc., Portland, Conn. Filed Feb. 19, 1959.

UNIKOOL

For Water Soluble Cutting and Cooling Fluid for Use With Grinding and Cutting Tools.
First use on or about May 31, 1955.

SN 68,531. The Tresler Oil Company, Cincinnati, Ohio. Filed Feb. 26, 1959.

FUEL TANE

For Additive for Gasoline.
First use Jan. 21, 1959.

Class 16—Protective and Decorative Coatings

SN 47,105. Ekco Products Company, Chicago, Ill. Filed Mar. 5, 1958.

SUPER GLO

For Stainless Steel Culinary Implements Having Brilliant Finish Obtained by Electropolishing Action.
First use Jan. 2, 1957.

SN 67,039. Crosby Forest Products Co., Picayune, Miss. Filed Feb. 4, 1959.

TUNGVINYL

For Paint.
First use May 31, 1956.

SN 67,040. Crosby Forest Products Co., Picayune, Miss. Filed Feb. 4, 1959.

TUNGLYD

For Paint.
First use July 9, 1956.

SN 67,043. Crosby Forest Products Co., Picayune, Miss. Filed Feb. 4, 1959.

TUNGLAC

For Paint.
First use June 13, 1957.

SN 67,045. Crosby Forest Products Co., Picayune, Miss. Filed Feb. 4, 1959.

TUNGTEX

For Paint.
First use Jan. 22, 1959.

SN 70,027. Amchem Products, Inc., Ambler, Pa. Filed Mar. 23, 1959.

AMCHEM

For Chemicals for the Production of Decorative and Protective Coatings on Metal Surfaces.
First use May 23, 1958.

SN 70,034. Builder's Research and Chemical Co., Denver, Colo. Filed Mar. 23, 1959.

The drawing is lined for red.
For Fire Retardant Coatings and Paints.
First use on or about Mar. 17, 1959.

SN 71,525. West Paint & Varnish Company, Everett, Mass. Filed Apr. 14, 1959.

TOURAINE
LoLuster

Owner of Reg. Nos. 559,259 and 594,786.
For House Paint.
First use March 1957.

SN 71,526. West Paint & Varnish Company, Everett, Mass. Filed Apr. 14, 1959.

HI-STYLE

For Paint and Enamel.
First use in March 1955.

SN 71,653. Davis Paint Company, North Kansas City, Mo. Filed Apr. 16, 1959.

DAX

For Paints.
First use Mar. 11, 1959.

SN 71,911. Tobias Paint Mfg. Company, Cleveland, Ohio. Filed Apr. 20, 1959.

SHERMAN

For Paints, Paint Primers, Paint Enamels, Raw Linseed Oil, Asphalt Products, Stains, Varnishes, Paint Thinners, and Paint Colors.
First use in June 1951.

SN 72,488. Enterprise Paint Manufacturing Company, Chicago, Ill. Filed Apr. 29, 1959.

COLOR MAGIC

Owner of Reg. Nos. 552,132, 562,216, and 665,572.
For Interior and Exterior Paints, and Paint Colorants.
First use during January 1947.

Class 17—Tobacco Products

SN 59,883. Brown & Williamson Tobacco Corporation, Louisville, Ky. Filed Oct. 1, 1958.

VANGUARD

For Cigarettes.
First use Sept. 15, 1958.
Subj. to Intf. with SN 64,244.

SN 66,858. DWG Cigar Corporation, Detroit, Mich. Filed Feb. 2, 1959.

Marlin

For All Tobacco Cigaritos.
First use Jan. 20, 1959.

Class 18—Medicines and Pharmaceutical Preparations

SN 41,408. Societa Farmaceutici Italia, Milan, Italy. Filed Nov. 26, 1957.

f

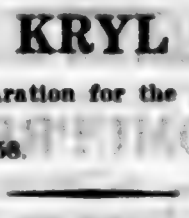
Owner of Italian Reg. No. 126,289, dated Jan. 14, 1956.
For Medicinal, Pharmaceutical and Veterinarian Preparations—Namely, Agents Used for Allergies, Analgesics, Anesthetics, Systemic Anti-Infectives, Anti-Spasmodics, Astringents, Caustics, Sclerosing Agents, Autonomics, Blood Derivatives, Agents Affecting Blood Formation and Coagulation, Cardiovascular Agents, Central Nervous System Depressants and Stimulants, Vaginal Jelly Suppositories, Diuretics, Mercury Compounds, Gastro-Intestinal Agents, Hormones and Synthetic Substitutes, Immunologic Agents, Agents Used in Metabolic Disorders, Oxytocics; Therapeutic Agents—Namely, Animal Venoms, Pyretics, Anti-Pyretics, Synthetic Resins, Urate Solvents, Gold Compounds, Medicinal Foods, Digestive Ferments, Emollients, Demulcents, Protectives, Organ Extracts, Alkaloids, Glycosides, Saponins, Enzymes, Expectorants, Emetics, Tonics, Anti-Cancerogenic Agents, Anti-Virus Agents; Vitamins and Anti-Vitamins.
Subj. to Intf. with SN 48,553.

SN 45,696. The Miricil Chemical Company, Inc., Stamford, Conn. Filed Feb. 11, 1958.

MIRICIL

For Medicated Skin Ointment Especially for Use in the Relief of Detergent Burns.
First use June 2, 1955.

SN 48,553. Charles E. Frosst & Co., Westmount, Quebec, Canada. Filed Mar. 27, 1958.



The representation of the tablet is disclaimed.
For Biological and Pharmaceutical Medicaments Except Antiseptics, Specifically Throat Lozenges.
First use Jan. 1, 1906; in commerce April 1924.
Subj. to Intf. with SN 41,408.

SN 48,994. International Minerals & Chemical Corporation, Chicago, Ill. Filed Apr. 8, 1958.

BIOFOS

For Defluorinated Phosphate, for Use as Animal Food Supplements.
First use Jan. 30, 1958.

SN 50,436. American Home Products Corporation, d.b.a. Ayerst Laboratories, New York, N.Y. Filed Apr. 28, 1958.

FORMATRIX

For Steroid-Vitamin Preparation in Combined Dosage Form.
First use Apr. 16, 1958.

SN 52,847. American Home Products Corporation, d.b.a. Ayerst Laboratories, New York, N.Y. Filed June 4, 1958.

KRYL

For Medicinal Preparation for the Symptomatic Relief of Respiratory Ailments.
First use May 14, 1958.

SN 53,585. Ciba Pharmaceutical Products Inc., Summit, N.J. Filed June 16, 1958.

SERMIX

For Reserpine Preparations Used as a Supplement in Animal Feed.
First use June 11, 1958.

SN 53,759. American Home Products Corporation, d.b.a. Ayerst Laboratories, New York, N.Y. Filed June 18, 1958.

MERPON

For Analgesic Preparation.
First use June 9, 1958.

SN 53,760. American Home Products Corporation, d.b.a. Ayerst Laboratories, New York, N.Y. Filed June 18, 1958.

SPECTRAFIL

For Antibacterial Preparation in Dosage Form.
First use June 9, 1958.

SN 57,582. Dale E. Van Vlack, d.b.a. Southwest Distributors, Inglewood, Calif. Filed Aug. 20, 1958.

Stypto

For Antiseptic and Styptic Lotions for External Application to Disinfect and Stop Bleeding.
First use Apr. 1, 1958.

SN 57,926. Sandoz, Inc., Hanover, N.J. Filed Aug. 26, 1958.

MELLARIL

For Medicinal Preparation Recommended for Use as a Tranquilizer.
First use July 30, 1958.

SN 59,394. Hall Pharmacal Co., Inc., Brooklyn, N.Y. Filed Sept. 23, 1958.

TRAVEL-VITE
Vitamins

The word "Vitamins" is disclaimed.
For Vitamin Preparation.
First use July 16, 1958.

SN 61,359. Chemway Corporation, Mountain View, N.J. Filed Oct. 27, 1958.

SENTOR

For Pharmaceutical Preparation Useful in the Treatment of Acne.
First use May 20, 1958.

SN 61,474. Benger Laboratories Limited, Cheshire, England. Filed Oct. 28, 1958.

LOMUPREN

Owner of British Reg. No. 777,698, dated May 15, 1958.
For Pharmaceutical Preparations for Human and Veterinary Use.

SN 62,778. The Norwich Pharmacal Company, d.b.a. Eaton Laboratories, Norwich, N.Y. Filed Nov. 19, 1958.

ALTEFUR

For Preparation for the Treatment of Bacterial Infections in Humans and Animals.
First use Nov. 6, 1958.

SN 63,500. Vita+Plus Corporation, Madison, Wis. Filed Dec. 1, 1958.

V+
Calf Glo

Owner of Reg. Nos. 576,674 and 675,512.
For Livestock Food Supplement Consisting Essentially of Vitamins, Proteins, Minerals, and a Drug Ingredient.
First use March 1952.

SN 63,961. Chas. Pfizer & Co., Inc., Brooklyn, N.Y. Filed Dec. 9, 1958.

PACIVET

For Veterinary Tranquilizer Preparation.
First use Oct. 28, 1958.

SN 65,336. Southwestern Drug Corporation, d.b.a. Red Arrow Laboratories, Waco, Tex. Filed Jan. 5, 1959.

RADAN

For Cold Preparation and Antibiotic Throat Lozenges.
First use Sept. 6, 1958.

SN 65,513. Pharmaceuticals, Incorporated, New York, N.Y. Filed Jan. 8, 1959.

VORALEX

For Medicinal Mouth Wash.
First use Dec. 22, 1958.

SN 65,779. Lovens Kemiske Fabrik's Handelsaktieselskab, Copenhagen, Denmark. Filed Jan. 13, 1959.

RONTYL

Owner of Danish Reg. No. 2079—1958, dated Oct. 11, 1958.
For Pharmaceutical and Medical Preparations for Human and Veterinary Uses.

SN 67,140. Nutrisearch Laboratories, Inc., New York, N.Y. Filed Feb. 5, 1959.

SURGE

For Multi-Vitamin Preparations.
First use Feb. 2, 1959.

SN 67,199. Canright Corporation, Glendale, Calif. Filed Feb. 6, 1959.

CANRIGHT

For Medicinal Preparations for Human Consumption To Be Taken Internally—Namely, Vitamin and Mineral Preparations Fortified With Calcium, Iron, Liver, Folic Acid and Ascorbic Acid; Preparation for Control of Functional Nervous Digestive Disorders; Hematinic Formula for Prevention and Treatment of Hypochromic Anemias and Associated Nutritional Deficiencies; Sedative Spasmolytic Preparation for Relief of Visceral Spastic States and Spastic Distress; Preparation To Aid Digestion; Preparation for Mood Elevation and Appetite Control; Preparations for the Treatment of Hypertension.
First use Oct. 1, 1948; Feb. 5, 1948, for "Canright" as to hematinic and digestant formulas.

SN 67,219. Hoffmann-La Roche Inc., Nutley, N.J. Filed Feb. 6, 1959.

MARSILID

Owner of Reg. No. 564,480.
For Central Nervous System Stimulant.
First use May 21, 1957.

SN 67,558. Merck & Co., Inc., Rahway, N.J. Filed Feb. 11, 1959.

PLEOVAX

Owner of Reg. Nos. 561,209, 609,433, and 617,105.
For Biological Antigenic Preparation.
First use Jan. 19, 1959.

SN 67,850. The Central Pharmacal Company, Seymour, Ind. Filed Feb. 17, 1959.

CODIMAL

For Medicinal Syrup for the Treatment of Coughs.
First use Sept. 23, 1953.

SN 67,851. The Central Pharmacal Company, Seymour, Ind. Filed Feb. 17, 1959.

CENIRON

For Medicinal Tablets for the Treatment of Iron Deficiency Anemias.
First use Mar. 30, 1955.

SN 67,853. The Central Pharmacal Company, Seymour, Ind. Filed Feb. 17, 1959.

CENASERT

For Vaginal Antiseptic Tablets.
First use Oct. 29, 1952.

SN 67,854. The Central Pharmacal Company, Seymour, Ind. Filed Feb. 17, 1959.

THOREZE

For Medicinal Lozenges for the Treatment of Coughs.
First use Oct. 29, 1958.

SN 67,912. American Home Products Corporation, d.b.a. Ayerst Laboratories, New York, N.Y. Filed Feb. 18, 1959.

FLETHER

For Inhalation Anesthetic.
First use Jan. 16, 1959.

SN 67,914. American Home Products Corporation, d.b.a. Ayerst Laboratories, New York, N.Y. Filed Feb. 18, 1959.

FLUOTHER

For Inhalation Anesthetic.
First use Jan. 16, 1959.

SN 67,915. American Home Products Corporation, d.b.a. Whitehall Laboratories, New York, N.Y. Filed Feb. 18, 1959.

TRENDAR

For Medicinal Preparation for the Relief of Premenstrual Tension and Periodic Distress.
First use Jan. 21, 1959.

SN 67,980. Chas. Pfizer & Co., Inc., Brooklyn, N.Y. Filed Feb. 18, 1959.

CANDETTES

Owner of Reg. No. 573,561.
For Cold and Cough Preparations.
First use Oct. 27, 1952.

SN 68,017. The Central Pharmacal Company, Seymour, Ind. Filed Feb. 17, 1959.

BIOTRES

For Antibiotic Ointment.
First use May 16, 1956.

SN 68,062. Irwin, Neisler & Co., Decatur, Ill. Filed Feb. 19, 1959.

NALERTA N

For Tablet Containing a Combination of Antihistaminic Drugs With a (Central Nervous System) Stimulant for the Treatment of Allergies.
First use Feb. 2, 1959.

SN 68,070. Michael W. Mettenleiter, New York, N.Y. Filed Feb. 19, 1959.

CAPACIN

For Vitamin Supplement Containing Aspirin, Sold in Capsule Form.
First use Jan. 23, 1956.

SN 68,165. Nutrilite Products, Inc., Buena Park, Calif. Filed Feb. 20, 1959.

CRYSTALITE

For Vitamin and Mineral Combination for Use as a Dietary Food Supplement To Fortify or Supplement the Diet, Sold in Dosage Form by the Package.
First use June 12, 1958.

SN 68,204. Aktiebolaget Bofors, Bofors, Sweden. Filed Feb. 24, 1959.

ETRYNIT

Owner of Swedish Reg. No. 86,205, dated Dec. 19, 1958.
For Medicines, Especially Heart Medicines, Pharmaceutical Preparations, and Drugs.

SN 68,245. Bill Flucker, Goodwater, Ala. Filed Feb. 24, 1959.

FLUCKER'S FORGETTING

For Liniment and Salve for External Medicinal Use.
First use on or about July 1, 1928.

SN 68,346. White Laboratories, Inc., Kenilworth, N.J. Filed Feb. 24, 1959.

OTOBIONE

For Preparations for the Treatment of the Ear.
First use Feb. 17, 1959.

SN 68,354. American Cyanamid Company, New York, N.Y. Filed Feb. 25, 1959.

TENPATH

Owner of Reg. Nos. 657,030, 659,518, and 672,411.
For Tranquilizer.
First use Feb. 10, 1959.

SN 68,356. American Cyanamid Company, New York, N.Y. Filed Feb. 25, 1959.

ARISTOTONE

Owner of Reg. Nos. 653,318, 672,109, and others.
For Steroid Preparation.
First use Feb. 10, 1959.

SN 68,619. Universal Products Corporation, Secaucus, N.J. Filed Feb. 27, 1959.

SN 39,196. Design Engineers, Rockford, Ill. Filed Oct. 21, 1957.

SN 68,548. Abbott Laboratories, North Chicago, Ill. Filed Feb. 27, 1959.

TRAL Gradumet

Owner of Reg. Nos. 656,327, 660,967, and 672,099.
For Anticholinergic Preparation in a Slow Release Dosage Form.
First use Feb. 18, 1959.

SN 68,549. Abbott Laboratories, North Chicago, Ill. Filed Feb. 27, 1959.

CALORIMUL

For Calorie Concentrate for Intravenous Administration.
First use Oct. 16, 1958.

SN 68,550. Abbott Laboratories, North Chicago, Ill. Filed Feb. 27, 1959.

DESOXYN Gradumet

Owner of Reg. Nos. 434,257 and 660,967.
For d-Desoxyephedrine Hydrochloride Prepared for Use as a Cerebro Stimulant in a Slow-Release Dosage Form.
First use Feb. 3, 1959.

SN 68,748. Spencer Laboratories Incorporated, Morristown, N.J. Filed Mar. 2, 1959.

EPHOXAMINE

For Composition for the Treatment of Asthma.
First use Oct. 30, 1958.

SN 68,759. Travenol Laboratories, Inc., Morton Grove, Ill. Filed Mar. 2, 1959.

UREVERT

For Lyophilized Urea and Invert Sugar To Be Administered Parenterally for the Reduction of Intracranial Pressure.
First use Feb. 19, 1959.

SN 68,932. Parsons Pharmaceuticals, Inc., d.b.a. The Plova Company, Washington, D.C. Filed Mar. 4, 1959.

PLOVA

Owner of Reg. No. 628,970.
For Laxative Preparations.
First use 1948.

SN 68,983. Carter Products, Inc., New York, N.Y. Filed Mar. 5, 1959.

SOMA

Owner of Reg. No. 665,933.
For Pharmaceutical Preparation for Use in the Relief of Pain, the Promotion of Muscle Relaxation and as a Tranquiliser.
First use Feb. 4, 1959.

SN 69,048. The Chattanooga Medicine Company, Chattanooga, Tenn. Filed Mar. 6, 1959.

NORMALIN

Owner of Reg. No. 645,046.
For Preparation for Relief of Upset Stomach and Simple Diarrhea.
First use Jan. 28, 1959.

SN 69,123. The Columbus Pharmacal Company, Columbus, Ohio. Filed Mar. 9, 1959.

GERONIAZOL

For Respiratory and Circulatory Stimulants for Geriatric Medication.
First use Mar. 15, 1954.

SN 69,209. Smith Kline & French Laboratories, Philadelphia, Pa. Filed Mar. 9, 1959.

COMPAGESIC

For Analgesic.
First use Jan. 13, 1959.

Class 19—Vehicles

SN 68,432. Rockwell Standard Corporation, Coraopolis, Pa. Filed Feb. 25, 1959.

STOPMASTER

For Brakes for Vehicles.
First use in January 1958.

SN 68,509. Northwestern Mobile Homes Inc., Veradale, Wash. Filed Feb. 26, 1959.

THE NORTHWESTERN

For House Trailers and Parts Thereof.
First use Jan. 3, 1958.

SN 68,523. Sealion Metal Fabricators, Philadelphia, Pa. Filed Feb. 26, 1959.

SEALION

For Trailers for Hauling Small Boats.
First use in June 1957.

SN 68,564. Columbian Bronze Corporation, Freeport, N.Y. Filed Feb. 27, 1959.

CB

For Marine Propellers.
First use Jan. 5, 1959.

SN 53,490. The Fanner Manufacturing Company, Division

Class 22—Games, Toys, and Sporting Goods

First use May 16, 1956.

First use Feb. 10, 1959.

SN 68,619. Universal Products Corporation, Secaucus, N.J. Filed Feb. 27, 1959.

MEALCADDY

For Serving Tables and Utility Carts for Carrying Food and Dishes and Silverware for Use in Cafeterias, Offices and the Like.
First use Nov. 28, 1958.

SN 69,346. Liberty Coach Company, Inc., Bremen, Ind. Filed Mar. 11, 1959.

STYLELINE

For Mobile Homes.
First use Aug. 10, 1954.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 31,416. Sanders Associates, Inc. (Delaware corporation), Nashua, N.H., assignee of Sanders Associates, Inc. (Massachusetts corporation), Nashua, N.H. Filed June 5, 1957.

TRI SCANNER

For Antennas and Antenna Accessories Including Transmission Lines, Reflectors, Antenna Motor Generator Sets, and Antenna Reflector Supports.
First use May 28, 1957.

SN 31,549. Eaton Manufacturing Company, Cleveland, Ohio. Filed June 7, 1957.

Dyna-TORQ

For Magnetic Friction Clutches and Brakes Other Than Those Used in Gas Engine Operated Industrial Trucks Designed for Localized Use in Tiering, Hauling, and Stacking Merchandise.
First use Apr. 30, 1957.

SN 32,380. Diamond Electronics Corporation, New York, N.Y. Filed June 21, 1957.

DIAMOND

For Small Electric Condensers of Low Capacity Suitable in Electronic Circuits.
First use on or about Feb. 15, 1957.

SN 33,643. Servo Corporation of America, New Hyde Park, N.Y. Filed July 12, 1957.

SERVOTRIP

For Railroad-Wheel Transducers—Namely, Devices Fixedly Mounted to or Adjacent a Railroad Track and Electromagnetically Responding to the Passage of a Wheel Flange To Develop Electrical Output Signals, for Identifying the Passage of Railroad Wheels.
First use June 19, 1957.

SN 39,198. Design Engineers, Rockford, Ill. Filed Oct. 21, 1957.

TELAFLASH

For Electrical Flasher Unit for Application to Tractors and the Like, Giving an Elevated Warning Signal Visible to Approaching Vehicles From a Safe Range.
First use Aug. 20, 1957.

SN 40,484. H. K. Porter Company, Inc., Pittsburgh, Pa., assignee of National Electric Products Corporation, Pittsburgh, Pa. Filed Nov. 12, 1957.

TUFFCOTE

For Insulated Telephone Transmission Wire and Cable.
First use Jan. 11, 1956.

SN 40,998. Amphenol Electronics Corporation, Chicago, Ill. Filed Nov. 20, 1957.

BLUE RIBBON

For Electrical Connectors.
First use in May 1952.

SN 41,967. American Sign and Indicator Corporation, Spokane, Wash. Filed Dec. 9, 1957.

DOUBLE

The drawing is lined for yellow and red. The words "Time and Temperature" are disclaimed. Owner of Reg. No. 667,344.
For Electrical Display Signs and Parts Thereof.
First use Aug. 24, 1957.

SN 45,722. Curtis Lighting, Inc., Chicago, Ill. Filed Feb. 12, 1958.

CURTIS

Owner of Reg. No. 596,661.
For Lighting Fixtures and Parts Thereof.
First use in the year 1924.

SN 52,688. Chemfab Corporation, Long Island City, N.Y. Filed June 2, 1958.

CHEMROD

For Reinforced Plastic Rods for Use in Electronic Equipment.
First use Feb. 1, 1958.

SN 53,487. Elias Mercantile of New York, Inc., New York, N.Y. Filed June 13, 1958.

Eterna

For Radios.
First use July 11, 1956.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

SN 64,056. Dow Corning Corporation, Midland, Mich. Filed Dec. 11, 1958.

SN 53,490. The Fanner Manufacturing Company, Division of Textron Inc., Providence, R.I. Filed June 13, 1958.

SUPERFORMED

For Preformed Helical Reinforcements and Gripping Devices for Cables and Electrical Lines.
First use Jan. 7, 1955.

SN 54,245. The Miller Company, Meriden, Conn. Filed June 25, 1958.

TEXTURE-LITE

For Electric Lighting Fixtures and Parts Thereof.
First use Jan. 1, 1956.

SN 56,991. Murray Manufacturing Corporation, Brooklyn, N.Y. Filed Aug. 11, 1958.

MP

For Circuit Breakers and Load Centers.
First use in February 1958.

SN 63,662. Motor Coils Manufacturing Company, Pittsburgh, Pa. Filed Dec. 4, 1958.

EPOXI-MICA

For Composition of a Plastic Nature Used as an Electrical Insulation for Armature and Field Coils for Rotating Electrical Machinery.
First use Oct. 23, 1957.

SN 64,606. Boyne Products, Inc., Boyne City, Mich. Filed Dec. 19, 1958.

BP

For Turn Indicators and Parts Thereof, Lamp Assemblies, Horn Assembly Parts, Switches, and Transmission Electrical Control Parts.
First use Oct. 12, 1954.

SN 65,609. Allis-Chalmers Manufacturing Company, West Allis, Wis. Filed Jan. 12, 1959.

POXEAL

For Electrical Insulation.
First use Nov. 30, 1958.

SN 65,890. DDH Corporation, Palisades Park, N.J. Filed Jan. 15, 1959.

HERCULES

For Floor Polishing Machines.
First use Sept. 5, 1957.

SN 65,891. DDH Corporation, Palisades Park, N.J. Filed Jan. 15, 1959.

MERCURY

For Floor Polishing Machines.
First use Aug. 30, 1957.

SN 66,473. The Muter Co., Chicago, Ill. Filed Jan. 26, 1959.

TWINkit

For Loudspeaker System Component Parts.
First use Dec. 4, 1958.

Class 22 — Games, Toys, and Sporting Goods

SN 40,731. Germain Giroud, Moingt-Montbrison, Loire, France. Filed Nov. 15, 1957.

GéGé

For Toys, Children's Playthings, and Equipment for Indoor and Outdoor Sports and Games.
First use May 1951.

SN 54,602. Crawford Manufacturing Co., Inc., Richmond, Va. Filed July 1, 1958.

LIFE BUOY

For Life Jackets, Life Vests, and Ski Belts.
First use June 17, 1957.

SN 59,550. John C. McAdam, Wollaston, Quincy, Mass. Filed Sept. 25, 1958.

MAG NET BOW

For Equipment Sold as a Unit for Playing a Target Game.
First use Sept. 22, 1958.

SN 64,345. Seron Industries, Santa Paula, Calif. Filed Dec. 15, 1958.

Yu-Doo

For Puppets.
First use Nov. 6, 1958.

SN 67,231. Paul Meminger, d.b.a. Memco Products Co., Alhambra, Calif. Filed Feb. 6, 1959.

PATIO PRO

For Practice Golf Driving Range and Accessories—Namely, Tees, Targets, and Balls.
First use Jan. 8, 1957.

SN 67,411. H. J. Veatch, d.b.a. Outdoor Products, Pittsburg, Kans. Filed Feb. 9, 1959.

Our COY

For Decoys.
First use Feb. 2, 1959.

SN 71,562. Gritzner-Kayser Aktiengesellschaft, d.b.a. Sewing Machine and Bicycle Factory, Motor and Motorvehicle Con-

SN 35,819. Springfield Instrument Company, Inc., New York, N.Y. Filed Aug. 19, 1957.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 44,742. North American Philips Company, Inc., New York, N.Y. Filed Jan. 27, 1958.

Speedshaver

For Electric Razors.
First use Jan. 11, 1957.

SN 44,979. Ramsey Corporation, Manchester, Mo. Filed Jan. 30, 1958.

CIRCOLOX

Owner of Reg. No. 530,170.
For Retaining Rings.
First use Oct. 4, 1957.

SN 55,215. Jesse J. Birchfield, Memphis, Tenn. Filed July 14, 1958.

ROCK & ROLL

For Hand Tool for Trimming Lawn Edges.
First use June 16, 1958.

SN 55,830. Anderson Machine and Tool Works, Inc., Chaska, Minn. Filed July 23, 1958.

ANDERSON

For Egg Washing Machines, Sanding Machines, Printing Machines, Reel Winding and Unwinding Machines, Glueing Machines, Bale Opening Machines, Spring Assembly Machines, Helical Wire Forming Machines, Mattress Tufting Machines, Mattress Boxing Measuring Machines, Mattress Vent Forming Machines, Cushion Filling Machines, Mattress Manufacturing Machines, and Parts Thereof.
First use in 1939.

SN 59,166. Bay Products, Inc., Philadelphia, Pa. Filed Sept. 19, 1958.

BAY
Handicabinet
Bench

The word "Bench" is disclaimed. The drawing is lined for gold.
For Mechanics' Work Bench With Cabinets.
First use Sept. 3, 1958.

SN 62,922. R. Funk & Co., Furlong, Pa. Filed Nov. 21, 1958.

PRINTFOLD

For Apparatus for Receiving Sheets of Generally Planar Flexible Material, Such as Blueprints and the Like, Supplied or Fed to the Apparatus, for Folding the Respective Sheets Automatically to Predetermined Dimensions of Smaller Area Than That of Such Sheets.
First use Mar. 31, 1958.

SN 64,056. Dow Corning Corporation, Midland, Mich. Filed Dec. 11, 1958.

SYLFLEX

For Machines for Treating Leather.
First use Apr. 8, 1955.

SN 68,590. Pak-Rapid, Inc., West Conshohocken, Pa. Filed Feb. 27, 1959.

PAK-RAPID

For Automatic Packaging Machinery.
First use Sept. 24, 1951.

SN 68,712. LeTourneau-Westinghouse Company, Peoria, Ill. Filed Mar. 2, 1959.

SPEEDPULL

For Land Leveling and Excavating Machinery, Tractors, Pushing Prime Movers, and Structural Parts for Such Products.
First use July 14, 1958.

SN 70,012. Western Gear Corporation, Seattle, Wash. Filed Mar. 20, 1959.

FLEX-MASTER

For Spring Marine Drive Couplings.
First use on or about Oct. 1, 1955.

SN 70,013. Western Gear Corporation, Seattle, Wash. Filed Mar. 20, 1959.

SEA-MASTER

Owner of Reg. No. 609,066.
For Marine Propulsion Gear Units.
First use on or about Nov. 1, 1952.

SN 70,466. Garden Queen Tool Corporation, Somerville, Mass. Filed Mar. 30, 1959.

THE TAKE-UP RAKE

The word "Rake" is disclaimed apart from the mark as shown.
For Garden Rake.
First use Feb. 20, 1959.

SN 71,432. Western Precipitation Corporation, Los Angeles, Calif. Filed Apr. 13, 1959.

TURBULAIRE-DOYLE

Owner of Reg. No. 422,157.
For Apparatus for Cleaning Gases by Impingement of a Gas Stream on a Liquid Body.
First use July 10, 1958.

SN 71,538. Allied Stores Corporation, New York, N.Y. Filed Apr. 15, 1959.

MANOR HOUSE

Owner of Reg. No. 369,989.
For Manually Operated Lawn Sweepers.
First use Feb. 15, 1959.

SN 63,678. Tektronix, Inc., Portland, Oreg. Filed Dec. 4, 1958.

SN 66,459. J. E. Lonergan Co., Philadelphia, Pa. Filed Jan. 26, 1959.

First use Dec. 4, 1958.

First use Feb. 2, 1959.

SN 71,562. Gritzner-Kayser Aktiengesellschaft, d.b.a. Sewing Machine and Bicycle Factory, Motor and Motorvehicle Construction, Karlsruhe-Durlach, Germany. Filed Apr. 15, 1959.

GRITZNER

Owner of German Reg. No. 630,225, dated Nov. 20, 1952.
For Sewing Machines and Parts Thereof.

SN 71,652. Danak Designs, Inc., Great Neck, N.Y. Filed Apr. 16, 1959.

TOKE

For Tableware.
First use in August 1958.

SN 71,863. Minneapolis-Moline Company, Hopkins, Minn. Filed Apr. 20, 1959.

Customatic

For Agricultural Combines.
First use Feb. 27, 1959.

SN 71,894. Simonds Saw and Steel Company, Fitchburg, Mass. Filed Apr. 20, 1959.

ROYAL CHINOOK

Owner of Reg. No. 100,897.
For Saws and Machine Knives.
First use in 1906.

Class 26—Measuring and Scientific Appliances

SN 21,442. Johnson Service Company, Milwaukee, Wis. Filed Dec. 21, 1956.

WEATHER ANALOG

For Control Instruments Responsive to Air Conditions, Such as Outdoor Temperature, Wind Velocity, Wind Direction and Solar Radiation.
First use June 1956.

SN 28,811. Johannes Sorteberg, d.b.a. Sorteberg Controls Co., South Norwalk, Conn. Filed Apr. 24, 1957.

FORCE BRIDGE

For Controls—Namely, Computing Devices Used in Pneumatic Measurement or Control Circuits for Many Purposes, Such as To Convert a Transmitted Signal From a Square Root Flow Meter Into a Linear Signal, To Maintain a Ratio Between Two Pneumatic Signals for Flow Ratio Control, To Multiply, Divide or Square Pneumatic Outputs, or To Provide Pressure and Temperature Compensation on Transmitted Flow Signals.
First use July 20, 1955.

SN 35,819. Springfield Instrument Company, Inc., New York, N.Y. Filed Aug. 19, 1957.

Early American

For Household Thermometers.
First use Aug. 1, 1957.

SN 35,941. Macbeth Corporation, Newburgh, N.Y. Filed Aug. 21, 1957.

LABLITE

For Electric Lighting Equipment, Recommended as a Control Unit for Checking Color Standards.
First use on or about June 21, 1957.

SN 36,159. Cadillac Gage Company, Roseville, Mich. Filed Aug. 26, 1957.

PLA-CHEK

For Height Gage Instruments Which Can Also Be Used for Precision Measurements.
First use May 2, 1945.

SN 54,809. The H. E. Anderson Company, Muskogee, Okla. Filed July 7, 1958.

CHLORINJECTOR

For Apparatus and Equipment for Measuring and Feeding Chemicals Into Domestic Water Supply.
First use Jan. 11, 1957, on the apparatus.

SN 55,857. Ernst Leitz, G.m.b.H., Wetzlar (Lahn), Germany. Filed July 23, 1958.

CLASSIMAT

Owner of German Reg. No. 713,910, dated May 13, 1958.
For Apparatus for Measuring and Testing of Dimensions Such as Length.

SN 57,287. The Powers Regulator Company, Skokie, Ill. Filed Aug. 15, 1958.

AUTOMATOR

For Devices Which Measure Temperature, and When the Temperature Varies Outside of Certain Pre-Set Tolerances, These Devices Actuate Other Equipment Which Is Designed to Either Raise or Lower the Temperature.
First use July 18, 1958.

SN 58,582. Scantlin Electronics, Inc., Los Angeles, Calif. Filed Sept. 8, 1958.

SEI

For Digital Computers for Use in Signal Selection and Identification and Components Thereof.
First use in May 1958.

SN 63,677. Tektronix, Inc., Portland, Oreg. Filed Dec. 4, 1958.

TEKTRONIX

Owner of Reg. No. 580,007.
For Oscilloscopes and Accessories Therefor and Components Thereof.
First use June 21, 1947.

SN 63,678. Tektronix, Inc., Portland, Oreg. Filed Dec. 4, 1958.

TEKTRONIX

Owner of Reg. No. 580,007.
For Oscilloscopes and Accessories Therefor and Components Thereof.
First use June 21, 1947.

SN 63,992. General Time Corporation, New York, N.Y. Filed Dec. 10, 1958.

INCREMAG

For Electronic Pulse Counters, More Specifically Described as Magnetic Counting Devices.
First use Dec. 23, 1957.

SN 64,464. Gevaert Photo-Producten N.V., Mortsel, Belgium. Filed Dec. 17, 1958.

REPLICA

Owner of Belgian Reg. No. 12,439, dated Dec. 10, 1942.
For Photographic and Cinematographic Cameras, Photographic Papers, Plates, and Films.

SN 64,466. Gevaert Photo-Producten N.V., Mortsel, Belgium. Filed Dec. 17, 1958.

DIAFLEX

Owner of Belgian Reg. No. 11,854, dated Apr. 12, 1939.
For Photographic and Cinematographic Cameras, Photographic Papers, Plates, and Films.

SN 66,283. B & K Manufacturing Co., Chicago, Ill. Filed Jan. 22, 1959.

B&K

For Electronic Testing Equipment and Picture and Pattern Generators for Television Receiving Sets, Comprising Cathode Rejuvenator Testers; Multiple Socket Tube Checkers and Test Equipment Calibrators; Shorted Turn Indicators; Color Picture Tube Adapters, Accessory Panels for Testing Receiving Tubes, Tube and Transistor Testers and Card Type Tube and Transistor Checkers; Flying Spot Scanners Which Transmit Sound and Pictures, Also Used for Signal Tracing; Transistor Testers, Automatic Picture and Sound Generators; Sink Circuit Analyzers and Capacitor Checkers.
First use December 1954.

SN 66,459. J. E. Lonergan Co., Philadelphia, Pa. Filed Jan. 26, 1959.

SAFE T KASE

For Pressure Gauges.
First use June 1958.

SN 66,835. Ansul Chemical Company, Marinette, Wis. Filed Feb. 2, 1959.

ANSUL LINE FLO

Owner of Reg. No. 620,348.
For Moisture Indicator Provided With a Color Indicator and Sight Glass for Refrigerating Systems.
First use Jan. 26, 1959.

SN 68,537. Vapor Heating Corporation, Chicago, Ill. Filed Feb. 26, 1959.

TELE-MERC

Owner of Reg. No. 649,286.
For Mercury Column Thermostats.
First use Aug. 5, 1958.

Class 27 — Horological Instruments

SN 65,623. Henry Blank & Company, Newark, N.J. Filed Jan. 12, 1959.

CRESAUX

For Watches and Parts Thereof.
First use Apr. 30, 1957.

SN 71,840. Helbros Watch Company, Inc., New York, N.Y. Filed Apr. 20, 1959.

Helbros
COMMAND PERFORMANCE

Owner of Reg. Nos. 411,544, 414,881, and 505,782.
For Watches.
First use Jan. 30, 1959.

Class 28 — Jewelry and Precious-Metal Ware

SN 66,331. Coro, Inc., New York, N.Y. Filed Jan. 23, 1959.

JINGLE RINGS

The word "Rings" is disclaimed apart from the mark as shown.
For Finger Rings, Necklaces, Bracelets, Earrings, Jewelry Clips, Brooches, Lockets, Charm Bracelets and Charms.
First use Dec. 15, 1958.

SN 71,271. Coro, Inc., New York, N.Y. Filed Apr. 10, 1959.

Softouch

For Earrings.
First use Mar. 23, 1959.

SN 71,360. Feature Ring Co., Inc., New York, N.Y. Filed Apr. 13, 1959.

TOGETHERNESS

Owner of Reg. No. 586,133.
For Finger Rings and Finger Ring Mountings Made of Precious Metal.
First use on or about Apr. 8, 1959.

SN 73,481. Forstner, Inc., Irvington, N.J. Filed May 12, 1959.

SNAP-ETTES

For Key Holders Made or Plated Wholly or in Part With Precious Metal.
First use on or about Apr. 30, 1959.

SN 73,517. Speidel Corporation, Providence, R.I. Filed May 12, 1959.

HEARTLINE

For Identification Bracelets.
First use Mar. 16, 1959.

SN 74,401. Gorham Manufacturing Company, Providence, R.I. Filed May 25, 1959.

FIRELIGHT

For Sterling Silver Flatware and Table Cutlery.
First use May 1, 1959.

SN 74,402. Gorham Manufacturing Company, Providence, R.I. Filed May 25, 1959.

SECRET GARDEN

For Sterling Silver Flatware and Table Cutlery.
First use May 1, 1959.

SN 74,551. Speidel Corporation, Providence, R.I. Filed May 26, 1959.

GRIDIRON

For Watch Bracelets.
First use May 12, 1959.

SN 74,744. Harold Goldkrantz, d.b.a. Burntwood Products Co., New York, N.Y. Filed May 29, 1959.

Tiny Ruralites BURNTWOOD

For Costume Jewelry—Namely, Necklaces, Bracelets, Brooches, Earrings, Pins, Jewelry Clips, Lockets, Hair Ornaments, Jewelry Initials, Tie Holders, Cuff Links and Finger Rings Made of Non-Precious, Semi-Precious, and Precious Metals, Cultured Pearls and Artificial Pearls.
First use in February 1958.

Class 29—Brooms, Brushes, and Dusters

SN 50,458. Devoe & Raynolds, Inc., Louisville, Ky. Filed Apr. 28, 1958.

FIBREKRAFT

Owner of Reg. No. 360,397.
For Brushes for Applying Such Products as Roof Coating Kalsomine, and Whitewash, and Soothing Brushes for Applying Wall Paper.
First use April 1937.

Class 31—Filters and Refrigerators

SN 59,215. Port Morris Machine & Tool Works, Inc., New York, N.Y. Filed Sept. 19, 1958.

Electro Freeze

For Frozen Custard Machines and the Like.
First use on or before Jan. 15, 1955.

Class 32—Furniture and Upholstery

SN 59,342. Schnadig Corporation, Chicago, Ill. Filed Sept. 22, 1958.

STEELASTIC

For Upholstered Furniture.
First use Sept. 2, 1958.

SN 64,476. Sam Kirschenbaum, d.b.a. Kirshway Store, Brooklyn, N.Y. Filed Dec. 17, 1958.

TEENTERIOR

For Living Room Furniture, Dining Room Furniture, Bedroom Furniture, Kitchen Furniture and Playroom Furniture.
First use Dec. 6, 1958.

SN 65,700. Precision Metal Products, Inc., Miami, Fla. Filed Jan. 12, 1959.

PRECISION

For Equipment Such as Steam Tables and Portable Cabinets for the Storage, Transportation and Service of Prepared Foods in Restaurants, Cafeterias, and Institutions.
First use Nov. 2, 1956.

SN 65,269. Shure Brothers, Incorporated, Evanston, Ill. Filed Jan. 2, 1959.

SN 44,651. The Slencil Company, Orange, Mass. Filed Jan. 24, 1958.

SLENCIL

SN 68,893. Norman Dine, New York, N.Y. Filed Mar. 4, 1959.

Tranquilizer

For Beds, Mattresses, Springs, and Every Type of Bedroom Furniture.
First use Mar. 14, 1957.

SN 71,558. The Dayton Rubber Company, Dayton, Ohio. Filed Apr. 15, 1959.

DAYTONIAN

Owner of Reg. Nos. 623,028 and 667,438.
For Pillows and Cushions.
First use Apr. 1, 1959.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 47,278. Peter Pepper Products, Inc., Lomita, Calif. Filed Mar. 7, 1958.

For Candelabras and Wall-Mounted Candle Holders.
First use Nov. 1, 1954.

SN 64,842. Pioneer Manufacturing Co., Los Angeles, Calif. Filed Dec. 23, 1958.

JETSTREAM

For Water Heaters.
First use Dec. 2, 1958.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 45,138. Daimler-Benz Aktiengesellschaft, Stuttgart-Untertuerkheim, Germany. Filed Feb. 3, 1958.

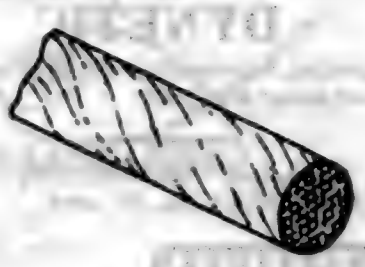
MERCEDES-BENZ

Owner of German Reg. No. 375,067, dated Oct. 7, 1927.
For (based on use in commerce): Hose; Gaskets; Brake Lining; Fan Belts; Transmission Belts; Piston Rings; and Tire Repair Material.
For (based on German registration): Mechanical Packing Materials.
First use in 1926; in commerce in 1927; in 1896 as to "Benz."

SN 53,984. American Manufacturing Company, Inc., Brooklyn, N.Y. Filed June 23, 1958.

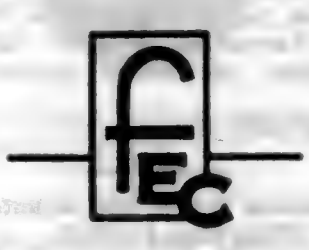
The drawing is lined for orange.
For Twisted Jute Packing.
First use on or about Mar. 19, 1958.

SN 53,985. American Manufacturing Company, Inc., Brooklyn, N.Y. Filed June 23, 1958.



No claim is made to the representation of the goods per se. The mark consists of orange coloring applied to the tip of the goods. The drawing is lined for orange.
For Twisted Jute Packing.
First use on or about Mar. 19, 1958.

SN 66,291. Friction Engineering Co., Inc., Palisades Park, N.J. Filed Jan. 22, 1959.



For Automotive and Industrial Clutch and Brake Linings.
First use June 28, 1953.

Class 36 — Musical Instruments and Supplies

SN 54,205. Buegeleisen & Jacobson, Inc., New York, N.Y. Filed June 25, 1958.

Corelli

For Accordions.
First use in September 1953.

SN 54,448. Urania Records Distributing Company, Belleville, N.J. Filed June 27, 1958.

AVON

For Grooved Phonograph Records.
First use May 27, 1958.

SN 55,892. Louis Zwicki, Copenhagen, Denmark. Filed July 23, 1958.

ZWICKI

For Grand Pianos and Pianos, Parts Thereof and Accessories Thereto.
First use Oct. 25, 1899; in commerce Feb. 18, 1956.

SN 57,626. Holland Records, Inc., New York, N.Y. Filed Aug. 21, 1958.

HOLLAND

For Phonograph Records.
First use July 21, 1958.

SN 65,269. Shure Brothers, Incorporated, Evanston, Ill. Filed Jan. 2, 1959.

DYNETIC

For Phonographic Reproducing Transducers.
First use in or about May 1957.

SN 66,556. Magnasync Manufacturing Co., Ltd., North Hollywood, Calif. Filed Jan. 27, 1959.

MAGNASYNC Magnaphonic

For Magnetic Film Sound Recording, Reproducing, and Amplifying Devices, Including Magnetic Recorders, Dubbers, Microphone Mixers, Electrical Interlock Systems, Portable Recorders, Rack Mount Recorders, Stereophonic Recorders, Single Reproducers, Double Reproducers, Triple Reproducers, and Parts and Accessories Thereof Including Amplifiers, Plug-In Preamplifier and Power Sections, Speakers, and Adapter Panels.
First use in July 1952.

SN 69,426. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Mar. 12, 1959.

SCOTCH

Owner of Reg. Nos. 503,908, 601,593, and others.
For Magnetic Recording Machines and a Magnetizable Recording Medium for Use Therewith.
First use Mar. 4, 1959.

SN 69,679. David Riemer Co., Inc., New York, N.Y. Filed Mar. 16, 1959.

RYSTL-MR

For Phonographic and Stereophonic Equipment—Namely, Pickup Arms, Pickups, Turntables, Tone Arms and Cartridges; Electric and Electronic Items—Namely, Switches, Plugs, Jackets, Microphones, Earphones, Telephone Pickup Coils, Alligator Clips, Test Lead Kits, Electric Meters and Sound Meters.
First use in February 1956.

SN 69,941. Boosey & Hawkes Limited, London, England. Filed Mar. 20, 1959.

SONORITE

Owner of British Reg. No. 758,887, dated Oct. 24, 1956.
For Musical Instruments and Parts Thereof.

Class 37—Paper and Stationery

SN 40,722. Rexall Drug Company, Los Angeles, Calif., assignee of Eastern Tablet Corporation, Albany, N.Y. Filed Nov. 15, 1957.

KING THE QUALITY LINE

The words "The Quality Line" are disclaimed apart from the mark as shown.
For Typewriting and Writing Paper, Tablets, Pads, Notebooks and Envelopes, Loose Leaf Binders and Fillers Therefor.
First use Oct. 11, 1957.

SN 44,651. The Slencil Company, Orange, Mass. Filed Jan. 24, 1958.

SLENCIL

For Pencils and Notebooks and Pads of Various Types Sold in Combination With Pencils.
First use Mar. 16, 1936.

SN 51,765. American Greetings Corporation, Cleveland, Ohio. Filed May 16, 1958.

TWINKLE WRAP

Applicant claims no exclusive rights in "Wrap" as the name of the goods identified herein.
For Wrapping Paper for Gifts and the Like.
First use July 15, 1956.

SN 57,283. Modern Pen Mfg. Co., Inc., New York, N.Y. Filed Aug. 15, 1958.

AUDITOR'S-POINT

For Ball Point Pens, Mechanical Pencils, and Fountain Pens.
First use June 16, 1958.

SN 65,458. Wausau Paper Mills Company, Brokaw, Wis. Filed Jan. 7, 1959.

GLENMOND

For Bond Paper.
First use Sept. 30, 1949.

SN 65,542. Diebold, Incorporated, Canton, Ohio. Filed Jan. 9, 1959.

Diebold

Owner of Reg. Nos. 161,934 and 404,085.
For Visible Sheet and Loose-Leaf Form Business Equipment—Namely, Business, Bookkeeping, Index and Record Forms, Sheets and Cards, and Guides, Dividers and Tabs Therefor; Loose-Leaf Record Books and Binders Which Are Adapted To Be Used for Business and Bookkeeping Records; and Composite Guides for Card Filing Equipment.
First use June 1, 1946.

SN 65,845. Jaite Display Bag Co., Peninsula, Ohio. Filed Jan. 14, 1959.

TWIN KOTE

For Receptacles or Bags for Packaging Bakery Products.
First use Nov. 28, 1958.

SN 65,894. Diebold, Incorporated, Canton, Ohio. Filed Jan. 15, 1959.

DIEBOLD

Owner of Reg. Nos. 161,934 and 404,085.
For Business, Bookkeeping, Index and Record Forms, Sheets and Cards, for V-Opening Files, Tray Files, Rotary Files, and Drawer Files.
First use Nov. 10, 1949.

SN 68,661. The Christian Science Publishing Society, Boston, Mass. Filed Mar. 2, 1959.

SN 56,094. Nina Footwear Co., Inc., New York, N.Y. Filed Aug. 11, 1958.

Class 38 — Prints and Publications

SN 42,140. Independent Grocers' Alliance Distributing Company, Chicago, Ill. Filed Dec. 10, 1957.

IGA GROCERGRAM

For Magazines Published Periodically.
First use Jan. 15, 1927.

SN 43,522. Edward A. Babka, d.b.a. The Babka Publishing Co., Decatur, Ill. Filed Jan. 7, 1958.

THE ANTIQUE TRADER

For Monthly Advertising Papers.
First use in May 1957.

SN 43,818. Consumers Union of United States, Inc., Mount Vernon, N.Y. Filed Jan. 13, 1958.

THE CONSUMER

For Annual Publication for Students.
First use on or about Dec. 6, 1957.

SN 43,819. Consumers Union of United States, Inc., Mount Vernon, N.Y. Filed Jan. 13, 1958.

CONSUMER

For Annual Publication for Students.
First use on or about Dec. 6, 1957.

SN 56,576. Samuel P. Murray and Anthony J. Gruszka, Milwaukee, Wis. Filed Aug. 4, 1958.

T.M. CO-ORDINATOR

For Publication Relating to Transportation Issued in a Series or From Time to Time.
First use July 7, 1958.

SN 58,127. Suburbia Publishing Corporation, Chicago, Ill. Filed Aug. 29, 1958.

SUBURBIA TODAY

For Magazines Published Periodically.
First use on or about May 19, 1958.

SN 61,976. United Press International, Inc., New York, N.Y. Filed Nov. 5, 1958.

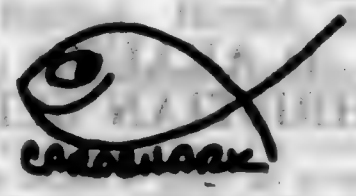
For Photograph Films of News Events for Reproduction by Newspapers.
First use Dec. 31, 1948.

SN 63,652. Horison House, Inc., Boston, Mass. Filed Dec. 4, 1958.

the microwave journal

Applicant disclaims exclusive right to the word "Journal" apart from the mark as shown.
For Bimonthly Magazine.
First use on or about July 18, 1958.

SN 63,768. Rosalie M. Stapleton, Redondo Beach, Calif. Filed Dec. 5, 1958.



For Greeting Cards.
First use July 1, 1957.

SN 64,329. One-Spot Publishers, Inc., Forest Park, Ill. Filed Dec. 15, 1958.

For Periodically Issued Catalogs of Phonograph Records.
First use about February 1942.

SN 64,672. Trendline Corp., New York, N.Y. Filed Dec. 19, 1958.

TRENDLINE SECURITIES SERVICE

For Newsletter or Bulletin.
First use Nov. 17, 1958.

SN 66,225. MacKay-Shields Associates, Inc., New York, N.Y. Filed Jan. 21, 1959.

MAC KAY-SHIELDS ECONOGRAPH

For Bi-Monthly News Bulletin of a Statistical Nature.
First use on or about Aug. 7, 1958.

SN 67,964. New York Herald Tribune Inc., New York, N.Y. Filed Feb. 18, 1959.

GRIMROSE GRAMMAR

For Syndicated Magazine or Newspaper Comic Panel or Feature.
First use Jan. 13, 1959.

SN 68,160. McGraw-Hill Book Company, Inc., New York, N.Y. Filed Feb. 20, 1959.

TEXT-FILMS

Owner of Reg. No. 532,248.
For Educational Motion Picture Films and Slide Films.
First use Oct. 15, 1946.

SN 68,362. Banner Magazines, Inc., New York, N.Y. Filed Feb. 25, 1959.

GUY

For Periodical Publication.
First use Sept. 14, 1958.

SN 66,719. L. Greif & Bro., Inc., Baltimore, Md. Filed Jan. 29, 1959.

Class 42 — Knitted, Netted, and Textile

SN 68,661. The Christian Science Publishing Society, Boston, Mass. Filed Mar. 2, 1959.

O ARAUTO DA CHRISTIAN SCIENCE

The translation of the words "O Arauto da Christian Science" is "The Herald of Christian Science." Owner of Reg. No. 415,009.

For Periodical Published in the Portuguese Language.
First use Dec. 8, 1958.

SN 68,726. Oz Greeting Cards, Inc., New York, N.Y. Filed Mar. 2, 1959.

CARTE BLANCHE

For Greeting Cards.
First use on or about April 1957.

Class 39 — Clothing

SN 27,506. Marubeni-Iida Co. (America), Inc., New York, N.Y., by change of name from Marubeni-Iida Co. (New York), Inc., New York, N.Y. Filed Apr. 4, 1957.

DIAMOND RANCH

For Men's, Women's, and Children's Denim Trousers, Jeans, Dungarees, Pants, and Slacks.
First use Mar. 26, 1957.

SN 40,322. Cohen Bros. Dresses Inc., Boston, Mass. Filed Nov. 8, 1957.

Cohen Bros. Style

For Women's Dresses.
First use Sept. 28, 1951.

SN 43,379. Sheldon Dietz, d.b.a. Six-Footer Company, Norwalk, Conn. Filed Jan. 3, 1958.

THE SIX-FOOTER

For Knitted Woolen Scarfs and Mufflers.
First use May 10, 1953.

SN 48,180. M.K.M. Knitting Mills, Inc., Manchester, N.H. Filed Mar. 21, 1958.

MIRALAM

Owner of Reg. Nos. 542,643 and 605,229.
For Sweaters.
First use Feb. 4, 1958.

SN 50,533. Rielly Company, Inc., New York, N.Y. Filed Apr. 28, 1958.

DACOTTA

For Ladies' and Girls' and Men's and Boys' Shirts.
First use Apr. 3, 1958.
Subj. to Intf. with SN 59,929.

SN 56,994. Nina Footwear Co., Inc., New York, N.Y. Filed Aug. 11, 1958.

Toreador

For Ladies' Shoes.
First use Dec. 15, 1955.

SN 62,096. Nannette Manufacturing Company, Inc., Philadelphia, Pa. Filed Nov. 7, 1958.

ONCE UPON A TIME

For Infants' and Children's Dresses.
First use May 31, 1957.

SN 62,677. The Electric Storage Battery Company, Philadelphia, Pa. Filed Nov. 18, 1958.

GEODETIC

For Suspensions for Safety Hats and Caps.
First use on or about Oct. 5, 1954.

SN 65,896. Double-Wear Shoe Co., Minneapolis, Minn. Filed Jan. 15, 1959.

THE DOUBLE WEAR SHOE CO

For Shoes.
First use on or about June 1, 1918.

SN 66,030. The Eagle-Picher Company, Cincinnati, Ohio. Filed Jan. 19, 1959.

ORTHANE

For Molded and Extruded Articles of Polyurethane Plastic, Particularly Toplifts for Ladies' Shoes.
First use Oct. 27, 1958.

SN 66,199. A. S. Beck Shoe Corporation, New York, N.Y. Filed Jan. 21, 1959.

Pep-Steps FOR EASY WALKING

Applicant disclaims the right to the exclusive use of the notation "For Easy Walking" apart from the mark as shown. Owner of Reg. No. 362,254.

For Men's and Women's Shoes and Slippers Made of Leather and/or Fabric or Mixtures of These Materials.
First use May 11, 1938.

SN 66,235. Preston Shirt Co., Inc., New York, N.Y. Filed Jan. 21, 1959.

Lady Preston

For Ladies' Shirts.
First use Oct. 1, 1958.

SN 69,436. Ormerod Bros. Limited, Brighouse, Yorkshire, England. Filed Mar. 31, 1959.

SN 68,964. Casco Products Corporation, Bridgeport, Conn. Filed Feb. 5, 1959.

SN 66,719. L. Greif & Bro., Inc., Baltimore, Md. Filed Jan. 29, 1959.

Fusilier

For Suits, Top Coats, Overcoats, Slacks, Sport Coats and Jackets for Men, Boys, and Youths.
First use Dec. 9, 1958.

SN 66,753. A. Sagner's Son, Frederick, Md. Filed Jan. 29, 1959.

NORTHPARK

Owner of Reg. Nos. 407,981, 630,488, and others.
For Men's Suits, Coats, Jackets and Slacks.
First use in July 1958.

SN 67,161. Stedman Manufacturing Company, Inc., Asheboro, N.C. Filed Feb. 5, 1959.

KIRKWOOD

For Cotton Underwear.
First use Jan. 13, 1959.

SN 69,109. S. D. Arrowood & Company, Incorporated, New York, N.Y. Filed Mar. 9, 1959.

DURATIGHTS

For Leotards and Tights.
First use Jan. 29, 1959.

SN 69,262. Georges Kaplan, New York, N.Y. Filed Mar. 10, 1959.

BLACK JADE

For Fur Garments—Namely, Jackets, Coats, Capes, Stoles, and Wraps.
First use Sept. 24, 1958.

SN 69,334. Golden Hours Incorporated, New York, N.Y. Filed Mar. 11, 1959.

GOLDEN HOURS

For Bathrobes for Infants and Children, Pajamas, Sleeping Gowns, and Lounging Wear for Infants and Leisure Wear Consisting of Trousers With Coordinated Tops of Shirts.
First use Dec. 12, 1958.

SN 69,560. Scher & Feldman Inc., New York, N.Y. Filed Mar. 13, 1959.

VICASHMA

For Infants', Children's, Teen-Agers', and Juniors' Coats, Suits, Jackets, Outer Skirts, Ski Pants, and Leggings.
First use Mar. 5, 1958.

Class 40—Fancy Goods, Furnishings, and Notions

SN 62,862. Laverne Inc., New York, N.Y. Filed Nov. 20, 1958.

busybeads

For Packaged Bead Kit, Consisting of Individual Beads, Used for Making Tapestries and Other Items.
First use Jan. 15, 1958.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 45,525. M. J. Borofsky & Sons, Inc., Boston, Mass. Filed Feb. 10, 1958.

CASHLON

For Woven Textile Fabrics Sold in Rolls for Making Women's and Girls' Coats, Suits, Skirts, Jackets, and Men's and Boys' Coats, Suits, and Jackets.
First use Feb. 1, 1958.

SN 59,929. Weberei Däfler G.m.b.H., Aschaffenburg, Germany. Filed Oct. 1, 1958.

dacotta

Owner of German Reg. No. 718,208, dated Apr. 23, 1958.
For Woven and Knitted Textile Piece Goods Used for Instance for Male and Female Wearing Apparel Such as Suits, Coats, Trousers, and Skirts.
First use July 23, 1957; in commerce Mar. 25, 1958.
Subj. to Intf. with SN 50,533.

SN 61,625. Faribault Woolen Mill Company, Faribault, Minn. Filed Oct. 30, 1958.

PAK·A·ROBE

Owner of Reg. No. 580,103.
For Combined Automobile or Stadium Robe and Carrying Case Therefor.
First use Dec. 10, 1948.

SN 67,731. Allen Industries, Inc., Detroit, Mich. Filed Feb. 16, 1959.

Silver-Tex

For Rug and Carpet Cushions.
First use Jan. 5, 1959.

SN 68,749. J. P. Stevens & Co. Inc., New York, N.Y. Filed Mar. 2, 1959.

NORWALK

For Cotton Fabrics.
First use Oct. 13, 1958.

SN 68,928. The Millville Manufacturing Company, Philadelphia, Pa. Filed Mar. 4, 1959.

STARDOWN

Owner of Reg. Nos. 370,846 and 584,812.
For Crib Sheets.
First use in April 1954.

SN 69,430. Monarch Rug Mills, Inc., Dalton, Ga. Filed Mar. 12, 1959.

CENTURI

For Fine Textured Carpets.
First use Jan. 2, 1959.

SN 43,800. American Can Company, Easton, Pa. Filed Jan. 13, 1958.

SN 51,966. Black Diamond Cheese Limited, Belleville, Ontario, Canada. Filed Mar. 19, 1958.

SN 69,436. Ormerod Bros. Limited, Brighouse, Yorkshire, England. Filed Mar. 12, 1959.

SPUNLOFT

Owner of British Reg. No. 778,952, dated June 19, 1958.
For Piece Goods of Cotton, Linen, Wool, Silk, Rayon, Nylon or Other Synthetic Textile Fibres, or of Mixtures of Two or More of These Materials.

SN 69,854. Textron Inc., Providence, R.I. Filed Mar. 18, 1959.

BARNWELL

For Wool, Cotton, and Synthetic Piece Goods and Combination Thereof.
First use Feb. 16, 1959.

Class 43—Thread and Yarn

SN 69,435. Ormerod Bros. Limited, Brighouse, Yorkshire, England. Filed Mar. 12, 1959.

SPUNLOFT

Owner of British Reg. No. 778,951, dated June 19, 1958.
For Yarns of Cotton, Linen, Wool, Silk, Rayon, Nylon or Other Synthetic Textile Fibres, or of Mixtures of Two or More of These Materials.

Class 44—Dental, Medical, and Surgical Appliances

SN 57,147. William H. Horn & Brother, Incorporated, Philadelphia, Pa. Filed Aug. 13, 1958.

SpunMist

For Ladies' Nylon Seamless Elastic Stockings of a Therapeutic Nature.
First use July 21, 1958.

SN 63,909. White-Horn, North Hollywood, Calif. Filed Dec. 8, 1958.

Mali

For Nylon Lined Plastic Sponge for Massaging the Skin.
First use Dec. 11, 1956.

SN 65,699. Power Brake Equipment Company, Portland, Oreg. Filed Jan. 12, 1959.

VARI-TROL

For Pneumatic Controls for Air Turbine Driven Dental Drills and Accessories.
First use on or before Dec. 30, 1958.

SN 68,577. International Biotical Corp., New York, N.Y. Filed Feb. 27, 1959.

VIBRA-THERM

For Combined Electrical Heating Pad and Vibrator.
First use Feb. 2, 1959.

SN 68,964. Casco Products Corporation, Bridgeport, Conn. Filed Feb. 5, 1959.

DIALATRON

For Heating Pads.
First use Jan. 23, 1959.

Class 45—Soft Drinks and Carbonated Waters

SN 64,192. Orange Smile Sirup Company, St. Louis, Mo. Filed Dec. 12, 1958.

Owner of Reg. No. 69,468.
For Soft Drinks.
First use Nov. 6, 1958.

Class 46—Foods and Ingredients of Foods

SN 28,151. Illinois Baking Corporation, Chicago, Ill. Filed Apr. 15, 1957.

For Cooky-Type, Chocolate Covered, Unfilled Ice-Cream Cones.
First use Nov. 10, 1954.

SN 31,554. Fransenburg Wolf Creek Smokehouse, Conrad, Iowa. Filed June 7, 1957.

For Prepared and Cooked Meats—Namely, Bologna, Dried Beef, Baked Ham, Liverwurst, Pork Sausage, and Bacon.
First use about May 1956; about February 1947 as to "Franzenburg."

SN 41,958. James O. Welch Company, Cambridge, Mass. Filed Dec. 6, 1957.

SUGAR LOAF MIX

For Candy.
First use Apr. 5, 1954.

SN 58,501. Colline-Dietz-Morris Co., Oklahoma City, Okla.

SN 63,513. Armour and Company, Chicago, Ill. Filed Dec. 2,

First use Jan. 15, 1958.

First use Jan. 2, 1959.

SN 43,800. American Can Company, Easton, Pa. Filed Jan. 13, 1958.

BOUQUET

For Ice Cream.
First use on or before Aug. 9, 1957.

SN 44,791. Carnation Company, Los Angeles, Calif. Filed Jan. 16, 1958.

For Pies With Sweet Fillings—Namely, Lemon Cream, Pineapple Cream, Chocolate Cream, Coconut Cream, Strawberry Cream, and Custard; Fruit Pies, Meat Pies, Poultry Pies, and Tuna Pies, All Frozen.
First use July 8, 1956.

SN 45,182. Midwestern Merchandising Company, Inc., San Francisco, Calif. Filed Feb. 3, 1958.

PERSIAN *Princess*

No claim is made to an exclusive right to the word "Persian."
For Frozen Shrimp.
First use Jan. 19, 1958.

SN 45,184. Midwestern Merchandising Company, Inc., San Francisco, Calif. Filed Feb. 3, 1958.

PERSIAN *Pearl*

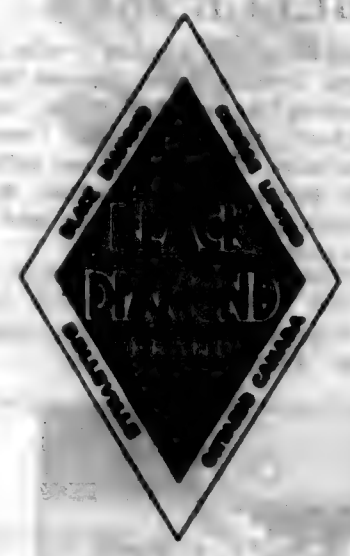
No claim is made to an exclusive right to the word "Persian."
For Frozen Shrimp.
First use Jan. 19, 1958.

SN 51,322. The Carey Salt Company, Hutchinson, Kans. Filed May 9, 1958.

PREMIUM

For Table Salt.
First use May 15, 1901.

SN 51,966. Black Diamond Cheese Limited, Belleville, Ontario, Canada. Filed May 19, 1958.



The drawing is lined for red. Applicant disclaims the words "Belleville Ontario Canada," "Cheese Limited" and "Brand." Owner of U.S. Reg. No. 631,878.
For Cheese.
First use November 1957.

SN 52,223. The Isaly Dairy Company, d.b.a. Isaly's, Youngstown, Ohio. Filed May 23, 1958.

SKYSCRAPER

For Ice Cream Cones Filled With Ice Cream.
First use Mar. 6, 1938.

SN 53,906. RGB Laboratories, Inc., Kansas City, Mo. Filed June 19, 1958.

Allerjoy

For Vegetable Fat Product, Used as a Milk Substitute.
First use Mar. 3, 1958.

SN 53,950. Rod's Food Products, Inc., Los Angeles, Calif. Filed June 20, 1958.

ROD'S OLD QUEBEC

Owner of Reg. No. 646,185.
For Salad Dressing.
First use June 5, 1958.

SN 54,180. Rosedale Dairy Co., Inc., New York, N.Y. Filed June 24, 1958.

PARAMOUNT

For Cottage and Cream Cheese.
First use Feb. 9, 1924.

SN 54,883. R. C. Nicoll, d.b.a. Valerie Jean Date Shop, Thermal, Calif. Filed July 7, 1958.

CACTUS

For Fruit Juice Concentrate for Use in Making Milk Shakes and as a Dessert Topping.
First use June 25, 1958.

SN 67,871. Hale Laboratories, Inc., Los Angeles, Calif. Filed Feb. 17, 1959.

SN 70,891. Hellwig Bros., Inc., Chesterfield, Mo. Filed Apr. 6, 1959.

First use Feb. 2, 1959.

First use Apr. 5, 1954.

SN 58,501. Collins-Dietz-Morris Co., Oklahoma City, Okla. Filed Sept. 8, 1958.

BELLE ISLE

For Canned Vegetables and Canned Fruits of All Kinds, Canned Fruit Juices, Tomato Juice, Canned Berries, Canned Soups, Canned Oysters, Canned Mushrooms, Canned Spanish Rice, Canned Spaghetti, Canned Hominy, Canned Pork and Beans, Canned Pimientos, Cranberry Sauce, Jellies, Preserves, Apple Sauce, Apple Butter, Peanut Butter, Salad Dressing, Relish Spread, Tomato Ketchup, Sorghum, and Waffle Syrup.
First use 1907 on canned vegetables.

SN 59,752. N.V. Vriesproducten Industrie "Kristal," Rotterdam, Netherlands. Filed Sept. 29, 1958.

No claim is made to the exclusive use of any of the words other than "Igloo" apart from the mark as shown. Owner of Dutch Reg. No. 109,668, dated July 17, 1951.
For Frozen Foods—Namely, Vegetables, Fruits, Vegetable Juices, Fruit Juices, Meat, Dressed Game Birds, and Dressed Poultry.

SN 60,126. Peter Finocchiaro, d.b.a. Fino Farms, Delano, Calif. Filed Oct. 6, 1958.

THE BIG F

For Fresh Grapes.
First use Aug. 5, 1958.

SN 61,425. Neto Sausage Co., Inc., Santa Clara, Calif. Filed Oct. 27, 1958.

ZORRO

For Sausage.
First use Oct. 6, 1958.

SN 62,076. General Foods Corporation, White Plains, N.Y. Filed Nov. 7, 1958.

NEW HORIZON FOODS

No claim is made to exclusive rights in the expression "Foods" apart from the mark as shown.
For Instant Pudding, Anhydrated Potatoes, and Frozen Mixed Vegetables.
First use on or about Nov. 6, 1958.

SN 63,392. All Star Mills, Inc., Albemarle, N.C. Filed Dec. 1, 1958.

ALL STAR

For Stock Feeds, Poultry Feeds and Fresh Eggs.
First use on or about July 1, 1937.

SN 63,513. Armour and Company, Chicago, Ill. Filed Dec. 2, 1958.

ABLE

For Shortening Made From Meat Fats and Vegetable Fat.
First use May 26, 1952.

SN 64,242. Anderson, Clayton & Co., Dallas, Tex. Filed Dec. 15, 1958.

FAS-STIR

For Vegetable Shortening.
First use Nov. 25, 1958.

SN 66,011. Erling H. Bendiksen, d.b.a. E. H. Bendiksen Co., Seattle, Wash. Filed Jan. 19, 1959.

EAST POINT

For Salmon, Oyster, Shrimp, and Crab in the Canned, Frozen, and Fresh States.
First use 1946.

SN 66,012. Erling H. Bendiksen, d.b.a. E. H. Bendiksen Co., Seattle, Wash. Filed Jan. 19, 1959.

BENDIKSEN'S

For Salmon, Shrimp, Sturgeon, Oyster, and Crab in the Canned, Frozen, and Fresh States.
First use 1939.

SN 66,180. United Bean Company, Eaton, Ind. Filed Jan. 20, 1959.

JARRON

The word "Jarron" means a tall narrow earthen pot, jug, or urn.
For Packaged Dried Beans, Peas, and Lentils.
First use Dec. 5, 1958.

SN 66,490. Rice By-Products, Inc., Crowley, La. Filed Jan. 26, 1959.

VICEROY

For Feeds for Livestock and Poultry.
First use Sept. 1, 1958.

SN 67,396. J. M. Rodrigues & Co., Inc., New York, N.Y. Filed Feb. 9, 1959.

RODDY BOY

Owner of Reg. No. 620,515.
For Dried Beans.
First use Jan. 6, 1959.

SN 67,548. Lance, Inc., Charlotte, N.C. Filed Feb. 11, 1959.

LANCE

The drawing is lined for red and blue. Owner of Reg. Nos. 554,573, 614,054, and others.
For Bubble Gum.
First use Feb. 2, 1959.

SN 66,017. V. Casazza & Bro. Inc., d.b.a. V. Casazza S.R.L., and V. Casazza S.N.C., New York, N.Y. Filed Jan. 19, 1959.

SN 65,355. The Foster Trading Corporation, d.b.a. T. W. Samuels Distillery, Deatsville, Ky. Filed Jan. 6, 1959.

First use May 15, 1901.

First use June 25, 1958.

SN 67,871. Hale Laboratories, Inc., Los Angeles, Calif. Filed Feb. 17, 1959.

NUTRISPREAD

For Vegetable Margarine.
First use Nov. 6, 1958.

SN 67,901. Sunset-Sternau Food Company, Modesto, Calif. Filed Feb. 17, 1959.

Sunset

Owner of Reg. No. 192,688.
For Shelled and Unshelled Brazil Nuts and Mixtures of Shelled and Unshelled Brazil Nuts, Walnuts, Pecans, Filberts, Almonds, Hazel Nuts, and/or Cashews.
First use about Apr. 1, 1903, on walnuts and pecans.

SN 68,230. Martin L. Close, d.b.a. Alexandria Packing Co., Alexandria, La. Filed Feb. 24, 1959.

HAM HOCK

For Dried Peas and Beans.
First use July 17, 1958.

SN 68,251. Gardetto Bakery, Inc., Milwaukee, Wis. Filed Feb. 24, 1959.

Gardetto's

For Bread Sticks.
First use 1946.

SN 69,221. Tradewell Stores, Inc., Seattle, Wash. Filed Mar. 9, 1959.

TRADEWELL

For Canned Fruits, Canned Berries, Canned Vegetables, Canned Fish, Canned Fruit Juices, Canned Vegetable Juices, Peanut Butter, Rolled Oats, Canned Pork and Beans, Canned Evaporated Milk, Tomato Catsup, Vegetable Shortening, Wheat Flour, Instant Coffee, Salt and Coffee.
First use Nov. 9, 1959, on coffee.

SN 70,891. Hellwig Bros., Inc., Chesterfield, Mo. Filed Apr. 6, 1959.

HI PLANE

For Fresh Vegetables—Namely, Spinach, Turnips, Soup Mix, Salad Mix, Slaw, Parsnips, Kale, and Persian Melons.
First use 1932.

SN 71,033. Pinder Products Company, Chicago, Ill. Filed Apr. 7, 1959.

KONGO

For Dates.
First use July 31, 1938.

SN 71,109. General Foods Corporation, White Plains, N.Y. Filed Apr. 8, 1959.

Gaines

Owner of Reg. Nos. 342,441, 546,067, and others.
For Dog Food.
First use on or about Oct. 20, 1958.

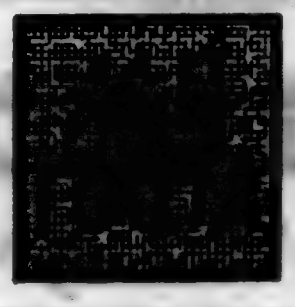
SN 75,239. Barnes Canning Company, Ltd., Tampa, Fla. Filed May 15, 1959.

Kozy Kitchen

For Canned Chicken With Yellow Rice.
First use Apr. 3, 1952.

Class 47 — Wines

SN 64,845. Schenley Industries, Inc., d.b.a. Dubonnet Co., New York, N.Y. Filed Dec. 23, 1958.



The drawing is lined for yellow. Owner of Reg. No. 677,448.
For Vermouth.
First use Oct. 13, 1958.

SN 68,602. Plastic Molded Parts, Incorporated, Irwin, Pa. Filed Feb. 27, 1959.

SN 39,009. Regal Stationery Company Limited, Toronto, Ontario, Canada. Filed Oct. 16, 1957.

First use on or about July 1, 1937.

First use Feb. 2, 1959.

SN 66,017. V. Casazza & Bro. Inc., d.b.a. V. Casazza S.R.L., and V. Casazza S.N.C., New York, N.Y. Filed Jan. 19, 1959.

CASAZZA

For Vermouth and Wines.
First use 1892.

Class 48 — Malt Beverages and Liquors

SN 56,443. Borun Bros., Los Angeles, Calif. Filed Aug. 1, 1958.

L&M

For Beer.
First use Jan. 27, 1956.

SN 59,220. Francis Sueji Sakamaki, d.b.a. Francis S. Sakamaki Co., San Francisco, Calif. Filed Sept. 19, 1958.

For Flavored Saki.
First use Jan. 22, 1934.

Class 49 — Distilled Alcoholic Liquors

SN 42,182. Ginebra Oso Negro, S.A., Mexico City, Mexico. Filed Dec. 3, 1957.

The Spanish term "Oso Negro," when translated, means "black bear." Owner of Mexican Reg. No. 47,151, dated July 19, 1944.
For Gin.

SN 56,638. Fernandes and Company Limited, Laventille, Trinidad. Filed Mar. 9, 1959.

FERNANDES

"Vat 19"

For Rum.
First use October 1946; in commerce October 1946.

SN 65,355. The Foster Trading Corporation, d.b.a. T. W. Samuels Distillery, Deatsville, Ky. Filed Jan. 6, 1959.

JIM PORTER

For Kentucky Straight Bourbon Whiskey.
First use Oct. 31, 1958.

Class 50 — Merchandise Not Otherwise Classified

SN 52,320. Mangel Stores Corporation, New York, N.Y. Filed May 26, 1958.

SHOPPER'S FAIR

For Bathroom Ensembles Including Bath Mat and Toilet Top Tray.
First use Mar. 26, 1958.

SN 59,598. Closures, Inc., Waterbury, Conn. Filed Sept. 26, 1958.

GOLDCOTE

Owner of Reg. No. 590,321.
For Plastic Closure Caps for Bottles, Jars, Vials, Collapsible Tubes, Etc.
First use Feb. 24, 1953.

SN 61,765. Arrick & Gray, Miami, Fla. Filed Nov. 3, 1958.

B-Gay Plaques

The word "Plaques" is disclaimed.
For Children's Wall Plaques.
First use Aug. 25, 1958.

SN 65,121. The Plastic Coating Corporation, Holyoke, Mass. Filed Dec. 30, 1958.

STATIMAT

For Photoelectrostatic Planographic Plates for Use in Offset Printing.
First use Nov. 19, 1958.

SN 66,048. Herbert V. Kleppinger, d.b.a. Finny Foods Company, West Alexandria, Ohio. Filed Jan. 19, 1959.

AUTOPOND

For Automatic Pond and Raceway Fish Feeder.
First use on or about Oct. 15, 1958.

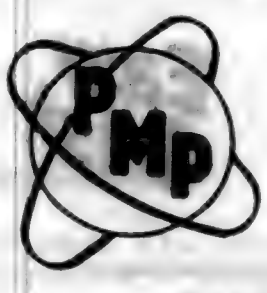
SN 67,673. Emergency Equipment Enterprises Co., St. Paul, Minn. Filed Feb. 13, 1959.

No rights are claimed in the words "St. Paul 16, Minn."
For Ladders.
First use Feb. 5, 1959.

SN 64,207. The Silicone Paper Company of America, Inc., New York, N.Y. Filed Dec. 12, 1958.

SN 68,255. Earl Griesmer Company, Indianapolis, Ind. Filed Feb. 24, 1959.

SN 68,602. Plastic Molded Parts, Incorporated, Irwin, Pa. Filed Feb. 27, 1959.



For Stoppers, Plugs, and Other Like Molded Plastic Articles.
First use in 1955.

SN 68,900. Samuel Furiness Mat Co., Inc., Union, N.J. Filed Mar. 4, 1959.

ALU-MAT

For Floor Mats Made of Plastic, Metal, or Rubber Elements, Some of Which Are Reinforced by Metal Plates, All of Which Are Mounted on Heavy Metal Wire.
First use November 1948.

SN 68,901. Samuel Furiness Mat Co., Inc., Union, N.J. Filed Mar. 4, 1959.

For Floor Mats Made of Plastic, Metal, or Rubber Elements, Some of Which Are Reinforced by Metal Plates, All of Which Are Mounted on Heavyy Metal Wire.
First use middle of 1948.

SN 69,222. Union Metal Products Inc., Memphis, Tenn. Filed Mar. 9, 1959.

HOIST-O-MATIC

For Scaffolding.
First use on or about Dec. 1, 1958.

Class 51 — Cosmetics and Toilet Preparations

SN 21,043. Aktiengesellschaft für Lizenzverwertungen Alvez, Coire, Switzerland. Filed Dec. 14, 1956.

F29:31.

Owner of Swiss Reg. No. 158,461, dated Oct. 25, 1955.
For Cosmetic Products Especially for Tanning the Skin.

SN 33,196. Elizabeth Arden Sales Corporation, New York, N.Y. Filed July 5, 1957.

CYCLAMEN

Owner of Reg. No. 373,416.
For Nail Polishes, Lipsticks, and Rouges.
First use Jan. 30, 1938.

SN 34,866. Randi Distributing Company, Incorporated, Chicago, Ill. Filed Aug. 2, 1957.

RANDI

For Cosmetics in Pressurized Containers—Namely, Hair Grooming Preparations, Hair Setting Preparations, Hand Lotion, Body Lotion, After Shave Lotion, Shaving Cream, Deodorant, and Nail Polish Drier.
First use on or about Mar. 26, 1957.

SN 39,009. Regal Stationery Company Limited, Toronto, Ontario, Canada. Filed Oct. 16, 1957.

CUPIDON

Owner of Canadian Reg. No. 113,786, dated Apr. 10, 1959.
For Deodorants, Anti-Perspirants, Dusting Powders, Colognes, and Toilet Waters.

SN 50,529. The Princess Marcella Borghese, Inc., New York, N.Y. Filed Apr. 28, 1958.

SCINTILLARE

The word "Scintillare" means "sparkling."
For Top and Base Coating for Fingernail Polishes.
First use Apr. 3, 1958.

SN 50,863. International Club, Inc., Wilton, Conn., assignee of Angelique and Company, Inc., Wilton, Conn. Filed May 2, 1958.

For Men's Cologne, After-Shave Lotion, and Deodorant.
First use Nov. 5, 1957, on cologne.

SN 58,480. Natcon Chemical Co. Incorporated, Bethpage, N.Y. Filed Sept. 5, 1958.

NURTONE

For Moisturising Cosmetic Cleansing Cream.
First use July 23, 1958.

SN 60,088. Antar Export Corporation, New York, N.Y. Filed Oct. 6, 1958.

CHANTAGE

For Perfume.
First use Sept. 5, 1958.

SN 65,068. Marcel Contier, Paris, France. Filed Dec. 30, 1958.

BIOTICIAN

Priority claimed under Sec. 44(d) on French Reg. No. 475,215, dated Oct. 17, 1958 (Seine); Natl. Inst. No. 114,468.
For Perfumery; Shampoos; Preparations To Beautify and Improve the Complexion, Skin, and Hair—Namely, Oils, Creams, Ointments, and Coloring Preparations.

Class 52 — Detergents and Soaps

SN 44,537. The Gerson Stewart Corporation, Cleveland, Ohio. Filed Jan. 23, 1958.

KLEENITOL

For Soap for Cleaning Tile, Terrazzo, Rubber, Asphalt, Vinyl, Linoleum, Cork, and Wood Surfaces.
First use Sept. 30, 1927.

SN 64,207. The Silicone Paper Company of America, Inc., New York, N.Y. Filed Dec. 12, 1958.

MAGIC, JR.

Owner of Reg. No. 528,364.
For Silicone Treated Lens Tissue Paper.
First use Dec. 1, 1958.

SN 67,830. Solventol Chemical Products, Incorporated, Detroit, Mich. Filed Feb. 16, 1959.

ACT-O-STRIP

For Paint Stripper.
First use Dec. 8, 1958.

SN 67,931. General Motors Corporation, Detroit, Mich. Filed Feb. 18, 1959.

BRUSH-GLO

For Rust Remover Paste.
First use Jan. 27, 1959.

SN 68,005. The Upson Chemical Corporation, Lockport, N.Y. Filed Feb. 18, 1959.

TILE SMILE

For Liquid Preparation for Cleaning and Polishing Porcelain and Plastic Wall Tile, Metal, Enamelled Metal and the Like.
First use Jan. 23, 1959.

SN 68,009. The J. R. Watkins Company, Winona, Minn. Filed Feb. 18, 1959.

BLUE CRYSTAL

For Hair Shampoo.
First use Jan. 14, 1959.

SN 68,153. Leeds Chemical Products, Inc., Chicago, Ill. Filed Feb. 20, 1959.

WOOL-O-LENE

For Cold Water Soap.
First use Feb. 25, 1957.

SN 68,186. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Feb. 20, 1959.

SR-10

For Cleaning Composition for Removing Film and Scale From Glassware and Utensils, Especially Milk Scale and Milkstone.
First use Sept. 1, 1941.

SN 68,255. Earl Grissmer Company, Indianapolis, Ind. Filed Feb. 24, 1959.

Easy Dust

For Liquid Cleaning Composition.
First use Sept. 20, 1958.

SN 68,327. Safeway Stores Incorporated, d.b.a. Newport Products Company, Oakland, Calif. Filed Feb. 24, 1959.

BROCADE

Owner of Reg. No. 533,412.
For Liquid Detergent for General Household Use.
First use Jan. 19, 1959.

SN 68,440. Shulton, Inc., Clifton, N.J. Filed Feb. 25, 1959.

For Shampoo for Men.
First use July 20, 1938.

SN 68,452. Amchem Products, Inc., Ambler, Pa. Filed Feb. 26, 1959.

AMCHEM

For Acid and Alkaline Cleaners.
First use May 23, 1958.

SN 68,627. Wyandotte Chemicals Corporation, Wyandotte, Mich. Filed Feb. 27, 1959.

ZORB-ALL

For Absorbent and Slip Prevention Compound for Floors, Sidewalks, Streets, and Driveways.
First use Jan. 19, 1959; June 3, 1947, as to "Zorball."

SN 69,280. Products Sales, Inc., Cleveland, Ohio. Filed Mar. 10, 1959.

BLUE CROWN

For Glass Cleaner.
First use July 11, 1958.

Class 102—Insurance and Financial

SN 67,097. State Mutual Life Assurance Company of America, Worcester, Mass. Filed Feb. 4, 1959.

SERVICE MARKS

Class 100—Miscellaneous

SN 47,357. William Effron, d.b.a. Effron Bakery Supply Company, Poughkeepsie, N.Y. Filed Mar. 10, 1958.

FINEST 50

For Services as Bakery Operation Consultants Including Advice and Training of Personnel in the Art of Doughnut Making, Advice on Plant and/or Store Layouts, Advice as to Selection of Doughnut Making Equipment, and Plant and/or Store Location Appraisals.
First use Aug. 28, 1957.

SN 52,221. Fred Harvey, Chicago, Ill. Filed May 23, 1958.

HARVEY HOUSE

Owner of Reg. No. 635,311.
For Restaurant Services.
First use in or before 1907.

SN 64,153. Educational and Technical Consultants, Inc., Evanston, Ill. Filed Dec. 12, 1958.

TEC-SEARCH

For Advisory and Consulting Services—Namely, Planning for Educational Programs and Presentations, and for Industrially Sponsored Scholarship and Employee Recruiting, Training and Management Development Programs; Technical and General Information Development and Analysis; and Literature and Product Design Work for Industrial and Commercial Purposes.
First use Oct. 10, 1958.

Class 101—Advertising and Business

SN 26,351. The Halle Bros. Co., Cleveland, Ohio. Filed Mar. 18, 1957.

The Treasure House of Gifts

For Mail Order Retail Selling of the Goods of Others in the Field of Gifts for the Home and Individual.
First use Dec. 16, 1920.

SN 38,309. Firstamerica Corporation, San Francisco, Calif., assignee of Transamerica Corporation, San Francisco, Calif. Filed Oct. 3, 1957.

FIRSTAMERICA

For Promotion of Banking and Banking Services by Advertising and the Issuance of Published Matter Including Directories.
First use Sept. 25, 1957.

SN 59,448. Martin C. Burns, Pearl River, N.Y. Filed Sept. 24, 1958.

M.C.BURNS

For Real Estate Brokerage.
First use 1934.

SN 60,895. Congress of Motor Hotels, Santa Monica, Calif. Filed Oct. 20, 1958.

CONGRESS OF MOTOR HOTELS

For Association Services—Namely, Distributing Hand Guide Books Identifying Members, Buying Supplies for Members, and Advertising Its Members Through Numerous Media.
First use May 1955.

SN 61,255. Big Chief Saving Stamps, Inc., Lubbock, Tex. Filed Oct. 24, 1958.

For Promoting the Sale of Goods and Services of Others Through the Medium of Trading Stamps Which Are Redeemable by Applicant.
First use Sept. 3, 1958.

SN 62,936. Larick Manufacturing Co. Inc., New York, N.Y. Filed Nov. 21, 1958.

Applicant disclaims the right to the exclusive use of the words "Sales Stimulators" apart from the other features of the mark.
For Printing Services—Namely, the Preparation and Formulation of Advertising Material and Printing of Advertising Messages on Various Advertising Novelties, Such as Rulers, Pens, Ash Trays, Etc.
First use on or about July 1, 1958.

Class 102—Insurance and Financial

SN 52,672. Banning-Preble Insurance, Chicago, Ill. Filed June 2, 1958.

Applicant makes no claim to the exclusive right to use the words "Life Insurance Plan."

For Insurance Brokerage Service.
First use Sept. 30, 1957.

SN 59,542. Insurance Company of North America, Philadelphia, Pa. Filed Sept. 25, 1958.

INAMATIC

For Insurance Collection Services Facilitating Periodic Payment of Insurance Premiums Due on Contracts of Insurance Issued by the Applicant.
First use Sept. 22, 1958.

SN 62,453. First Colony Life Insurance Company, Inc., Lynchburg, Va. Filed Nov. 14, 1958.

FIRST COLONY

For Underwriting Life Insurance.
First use Nov. 22, 1955.

SN 64,178. International Bank, Washington, D.C. Filed Dec. 12, 1958.

For Savings and Loan Service for United States Military Personnel.
First use Jan. 15, 1956.

SN 67,096. State Mutual Life Assurance Company of America, Worcester, Mass. Filed Feb. 4, 1959.

For Underwriting of Insurance.
First use Feb. 2, 1959.

SN 67,097. State Mutual Life Assurance Company of America, Worcester, Mass. Filed Feb. 4, 1959.

For Underwriting of Insurance.
First use Feb. 2, 1959.

Class 103—Construction and Repair

SN 55,762. West Philadelphia Decorating Co., Upper Darby, Pa. Filed July 21, 1958.

For Interior Decorating Services.
First use Apr. 26, 1958.

SN 55,763. West Philadelphia Decorating Co., Upper Darby, Pa. Filed July 21, 1958.

THE MAGIC TOUCH

For Interior Decorating Services.
First use Apr. 26, 1958.

SN 62,501. Well Production Services, Inc., Chicago, Ill. Filed Nov. 14, 1958.

The drawing is lined for blue but no claim is made to color.
For Oil and Gas Well Services—Namely, Cleaning Out Plugged Casing Perforations and Open Hole Production Zones, Removing Drilling Mud From Well Walls and Dispersing Acids and Surfactants by Means of Controlled Discharges of High Pressure Gases.
First use Aug. 19, 1957.

Class 104—Communication

SN 64,440. J. H. Whitney & Company, New York, N.Y. Filed Dec. 16, 1958.

THE CORINTHIAN STATIONS

For Radio and Television Broadcasting Service.
First use Apr. 29, 1957.

SN 62,776. National Telefilm Associates, Inc., New York, N.Y. Filed Nov. 19, 1958.

SN 64,420. The Little Singers of Paris, Paris, France. Filed Dec. 16, 1958.

Class 105—Transportation and Storage

SN 41,418. Westheimer Transfer and Storage Company, Houston, Tex. Filed Nov. 26, 1957.

SECUR-O-VAULT

For Storage of Household and Other Goods.
First use Sept. 21, 1957.

SN 41,419. Westheimer Transfer and Storage Company, Houston, Tex. Filed Nov. 26, 1957.

SECUR-O-VAULT

For Storage of Household and Other Goods.
First use Sept. 21, 1957.

SN 58,819. Alaska Airlines, Inc., Seattle, Wash. Filed Sept. 12, 1958.

Golden Nugget service

Applicant disclaims the use and inclusion of the word "Service" in its mark.
For Air Transportation of Freight and Passengers.
First use July 21, 1958.

SN 65,872. Western Air Lines, Inc., Los Angeles, Calif. Filed Jan. 14, 1959.

FIESTA FLIGHTS

No claim is made to the word "Flights" apart from the mark as shown.
For Transportation of Passengers by Air.
First use Dec. 1, 1958.

Class 106—Material Treatment

SN 19,904. New Notions, Inc., Medford, Mass. Filed Nov. 26, 1956.

"ALKOTE"

For Treating Fabric Covers of Ironing Boards With Aluminum Silicone Compound.
First use Aug. 15, 1956.

SN 58,080. Dodgeville Finishing Co., Inc., Attleboro, Mass. Filed Aug. 29, 1958.

ENDURA-SET

For Finishing Goods of Others by Means of Heat Setting and Resin Treatment.
First use May 27, 1958.

SN 61,272. John Z. Duling, d.b.a. Duling Tree Expert Co., Muncie, Ind. Filed Oct. 24, 1958.

DULING TREE EXPERT CO

The words "Specializing in the Care of Trees" are disclaimed.
For Care of Trees.
First use in July 1954.

Class 107—Education and Entertainment

SN 47,582. Cinerama, Inc., New York, N.Y. Filed Mar. 14, 1958.

CINERAMA

Owner of Reg. Nos. 591,085 and 595,508.
For Entertainment Services Consisting of Production and Exhibition of Motion Pictures.
First use Sept. 30, 1952.

SN 55,660. Four Star-Sussex, Los Angeles, Calif. Filed July 21, 1958.

THE RIFLEMAN

For Title of a Television Program.
First use Feb. 28, 1958.

SN 59,569. Scholastic Magazines, Inc., New York, N.Y. Filed Sept. 25, 1958.

INSTITUTE OF STUDENT OPINION ISO

The words "Institute of Student Opinion" are disclaimed apart from the mark as shown.
For Conducting Surveys of Facts, Opinions and Attitudes of High School Students on Various Subjects and Disseminating Information as to the Results of Such Surveys Through the Medium of Informational Pamphlets, Bulletins, Correspondence and Periodical Publications.
First use Sept. 8, 1958.

SN 60,554. Shirley Papé, Eugene, Oreg. Filed Oct. 13, 1958.

CASTLE IN THE SKY

For Title of a Television Program.
First use Jan. 18, 1958.

SN 61,570. Junior Achievement, Incorporated, New York, N.Y. Filed Oct. 29, 1958.

JUNIOR ACHIEVEMENT

For Promotion of Educational Programs Throughout the United States and Foreign Countries for Groups of Boys and Girls for the Purpose of Encouraging and Educating Them in Productive Enterprises in Industry, Commerce, and Homemaking, Through Assembly Programs in High Schools Sponsored and Conducted by Applicant's Staff Personnel; Through the Organizing of Groups of Boys and Girls Under the Guidance of Volunteer Advisors; and Through the Publication and Distribution of Educational Literature for Such Groups Including Booklets, Instructions, Manuals, Guides and Other Media.
First use on or about Dec. 28, 1948.

SN 62,776. National Teleflim Associates, Inc., New York, N.Y. Filed Nov. 19, 1958.

THIS IS ALICE

For Title of a Television Program.
First use Oct. 6, 1958.

SN 64,092. National Education Association of the United States, d.b.a. Future Teachers of America and National Education Association, Washington, D.C. Filed Dec. 11, 1958.

FTA

For Stimulating and Maintaining the Interest of Good Students in Junior and Senior High Schools in Becoming Teachers, and in Organizing and Maintaining Local and State Units of a National Organization of Such Students.
First use June 28, 1937.

SN 64,420. The Little Singers of Paris, Paris, France. Filed Dec. 16, 1958.

THE LITTLE SINGERS OF PARIS

For Choral Singing of Religious and Classical Music Rendered Through the Medium of Concerts, Radio and Television Programs.
First use about Jan. 2, 1947.

SN 68,710. Lee Broadcasting, Inc., Quincy, Mass. Filed Mar. 2, 1959.

CACTUS CLUB THEATRE

For Title of a Television Program.
First use October 1953.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 34,132. M. K. Guertin, d.b.a. Best Western Motels, Long Beach, Calif. Filed July 22, 1957.

No claim is made to the exclusive right to use the word "Best" or the word "Motels" or the word "Member" apart from the mark as shown.
For Indicating Membership in Applicant's Organization.
First use 1947.

SN 53,488. Epsilon Delta Chi, Kansas City, Mo. Filed June 13, 1958.

Epsilon Delta Chi

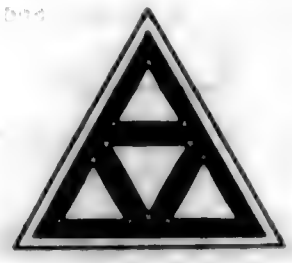
For Indicating Membership in Applicant.
First use 1928.

SN 62,998. California Compensation and Fire Company, San Francisco, Calif. Filed Nov. 24, 1958.

WOLOLI CLUB

For Indicating Elective Membership in a Non-Profit Organization of Its Employees, Customers, Clients or Policy Holders Whose Members Are Elected to Membership as a Reward for Service.
First use Mar. 1, 1955.

SN 71,096. Delta Delta Delta, Chicago, Ill. Filed Apr. 8, 1959.



Owner of Reg. No. 223,230.
For Indicating Pledged Membership in a National Collegiate Fraternal Organization.
First use 1912.

CERTIFICATION MARKS

Class B—Services

SN 50,333. The National Association of Broadcasters, Washington, D.C. Filed Apr. 24, 1958.

A GOOD PRACTICES STATION (WITH MUSICAL ACCOMPANIMENT)

The mark certifies that the radio station broadcasting the mark presents a balanced program and presents no program unsuitable for family listening, in accordance with applicant's Radio Standards of Good Practice.
For Broadcasting of Radio Programs.
First use Apr. 2, 1958.

Class 9—Explosives, Firearms, Equipments, Class 14—Metals and Metal Castings and

First use May 27, 1958.

First use on or about Dec. 28, 1948.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

683,063. CAL-DRIFT ETC. AND DESIGN. Eugene E. Ballif, d.b.a. Eugene Ballif Display Materials. SN 32,229. Pub. 5–26–59. Filed 6–19–57.

683,064. MASTERPLUG. Masterseal Company. SN 47,876. Pub. 5–26–59. Filed 3–17–58.

683,065. ROYALITE. United States Rubber Company. SN 55,616. Pub. 5–26–59. Filed 7–18–58.

683,066. MELOPIG. Dreher Leather Mfg. Corp. SN 58,408. Pub. 5–26–59. Filed 9–5–58.

683,067. PROPLENE. Ludlow Papers, Inc. SN 58,651. Pub. 5–17–59. Filed 9–9–58.

Class 2—Receptacles

683,068. FOLD-A-PLANTER. Joseph J. Clement, d.b.a. Fold-A-Planter. SN 51,326. Pub. 5–26–59. Filed 5–9–58.

683,069. FOSTACRYL. Foster Grant Co., Inc. SN 53,455. Pub. 5–26–59. Filed 5–19–58.

683,070. TIME FOR SERVICE AND DESIGN. Time Container Corporation. SN 54,578. Pub. 5–26–59. Filed 6–30–58.

683,071. HOLIDAY HOUSE AND DESIGN. G. Harold Tice, d.b.a. Holiday House. SN 57,228. Pub. 5–26–59. Filed 8–14–58.

683,072. CRYSTAL-EEN. Crystal-een Corporation. SN 63,695. Pub. 5–26–59. Filed 12–5–58.

683,073. TRAIL-BLAZER. Hamilton-Skotch Corporation. SN 64,632. Pub. 5–26–59. Filed 12–19–58.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

683,074. MY-T-LITE. ABC Industries, Inc. SN 58,483. Pub. 5–26–59. Filed 9–8–58.

Class 4—Abrasives and Polishing Materials

683,075. HARD GLOSS AND DESIGN. S. C. Johnson & Son, Inc. SN 15,281. Pub. 5–26–59. Filed 9–7–56.

683,076. LIFETIME HANDY SANDER. Tar-Gon Products, Inc., d.b.a. Handyman Tool Co. SN 34,266. Pub. 5–26–59. Filed 7–23–57.

683,077. PAR. Par Enterprises & Novelty Co. SN 60,556. Pub. 5–26–59. Filed 10–13–58.

Class 5—Adhesives

683,078. DR AND DESIGN. The Dayton Rubber Company. SN 55,984. Pub. 5–26–59. Filed 7–25–58.

Class 6—Chemicals and Chemical Compositions

683,079. DESIGN OF BARS. Mobay Chemical Company. SN 23,239. Pub. 5–26–59. Filed 1–25–57.

683,080. PROPAZIN. Geigy Chemical Corporation. SN 31,982. Pub. 5–26–59. Filed 6–14–57.

683,081. SYNOVA. Seaboard Chemicals, Inc. SN 33,506. Pub. 5–26–59. Filed 7–10–57.

683,082. SIMATIN. Geigy Chemical Corporation. SN 34,288. Pub. 5–26–59. Filed 7–24–57.

683,083. NANSA. Marchon Products Limited. SN 36,306. Pub. 5–26–59. Filed 8–27–57.

683,084. PLUG-BAN. Humble Oil & Refining Company. SN 38,922. Pub. 5–26–59. Filed 10–15–57.

683,085. RENIN. Rena, Büromaschinenfabrik G.m.b.H. SN 35,882. Pub. 6–2–59. Filed S.R. 8–20–57; Am. P.R. 8–1–58.

683,086. SIMAZINE. Geigy Chemical Corporation. SN 40,044. Pub. 5–26–59. Filed 11–4–57.

683,087. CHASE-A-BUG. Orchard Paper Co., d.b.a. Rich Products Company. SN 48,778. Pub. 5–26–59. Filed 3–31–58.

683,088. RID-ON. The Berjon Company, d.b.a. Berjon Co. SN 50,218. Pub. 5–26–59. Filed 4–23–58.

683,089. BUGA-LAWN AND DESIGN. Mock Seed Company. SN 56,160. Pub. 5–26–59. Filed 7–28–58.

683,090. BUGA-LAWN. Mock Seed Company. SN 56,162. Pub. 5–26–59. Filed 7–28–58.

683,091. CRABA-LAWN AND DESIGN. Mock Seed Company. SN 56,164. Pub. 5–26–59. Filed 7–28–58.

683,092. S'PEER. Whitmel H. Gibson. SN 57,145. Pub. 5–26–59. Filed 8–13–58.

683,093. PYRAZOXON. Geigy Chemical Corporation. SN 57,198. Pub. 5–26–59. Filed 8–14–58.

683,094. MESULFANE. Geigy Chemical Corporation. SN 57,199. Pub. 5–26–59. Filed 8–14–58.

683,095. DIMETAN. Geigy Chemical Corporation. SN 57,201. Pub. 5–26–59. Filed 8–14–58.

683,096. LITTLE BENJY. Lewis Knox, d.b.a. Knox Soap Company. SN 58,353. Pub. 5–26–59. Filed 9–4–58.

683,097. MARVAL DRI. Finetex Incorporated. SN 58,523. Pub. 5–26–59. Filed 9–25–58.

683,098. PHENSULFANE. Geigy Chemical Corporation. SN 59,714. Pub. 5–26–59. Filed 9–29–58.

683,099. HEPTAZINE. Geigy Chemical Corporation. SN 59,715. Pub. 5–26–59. Filed 9–29–58.

683,100. PALLADEX. Sel-Rex Corporation. SN 60,980. Pub. 5–26–59. Filed 10–30–58.

683,101. HOKUREN AND DESIGN. Hokkaido Keizai Nogyo Kyodokumiai Rengokai. SN 61,392. Pub. 5–26–59. Filed 10–27–58.

683,102. NOPCO. Nopco Chemical Company. SN 63,956. Pub. 5–26–59. Filed 12–9–58.

683,103. T8–3. Baxter Laboratories, Inc., by merger from Wallerstein Company, Inc. SN 64,568. Pub. 5–26–59. Filed 12–18–58.

683,104. VANSTAY. R. T. Vanderbilt Company, Inc. SN 64,851. Pub. 5–26–59. Filed 12–23–58.

683,105. CIBACROLAN. Ciba Limited. SN 65,147. Pub. 5–26–59. Filed 12–31–58.

Class 7—Cordage

683,106. AMCO STRAP. American Manufacturing Company, Incorporated. SN 51,161. Pub. 5–26–59. Filed 5–7–58.

683,156. TUAZOLE. R. J. Strasenburgh Company. SN 61,935. Pub. 5–26–59. Filed 11–4–58.

683,187. MAGIC-DOOR. The Stanley Works. SN 58,752. Pub. 4–28–59. Filed 9–10–58.

Class 9—Explosives, Firearms, Equipments, and Projectiles

683,107. TRAPMAX. Alcan Shells, Inc. SN 54,471. Pub. 5–26–59. Filed 6–30–56.

683,108. ALPHAMAX. Imperial Chemical Industries Limited. SN 63,448. Pub. 5–26–59. Filed 12–1–58.

Class 11—Inks and Inking Materials

683,109. SELECTRAMATIC. Manifold Supplies Company. SN 60,045. Pub. 5–26–59. Filed 10–3–58.

Class 12—Construction Materials

683,110. CAMPBELL AND DESIGN. Harry T. Campbell Sons' Corp. SN 24,676. Pub. 5–26–59. Filed 2–19–57.

683,111. CHILDERS CONTINENTAL. Childers Manufacturing Company. SN 30,404. Pub. 5–26–59. Filed 5–21–57.

683,112. AMBASSADOR. The F. C. Russell Company. SN 31,869. Pub. 5–26–59. Filed 6–12–57.

683,113. F AND DESIGN. Fabricators, Inc. SN 35,643. Pub. 5–26–59. Filed 8–16–57.

683,114. REGENT. Morrison Steel Products, Inc. SN 47,125. Pub. 5–26–59. Filed 3–5–58.

683,115. SOUNDSHEET. Bien Corporation. SN 48,537. Pub. 5–26–59. Filed 3–27–58.

683,116. SOIL SAVER. James W. Houston. SN 51,191. Pub. 5–26–59. Filed 5–7–58.

683,117. EASYFIT. Locke Manufacturing Co. SN 51,201. Pub. 5–26–59. Filed 5–7–58.

683,118. ZENITH AND DESIGN. Crown Aluminum, Incorporated, d.b.a. Zenith Aluminum. SN 58,294. Pub. 4–21–59. Filed 9–3–58.

683,119. SUPER X AND DESIGN. Pacific Clay Products. SN 63,542. Pub. 5–26–59. Filed 12–2–58.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

683,120. FLEXZORBER. T. R. Finn & Company, Inc. SN 694,056. Pub. 3–27–56. Filed 9–1–55.

683,121. DURABLA BASIC CHECK UNIT AND DESIGN. Durabla Manufacturing Company. SN 26,691. Pub. 5–26–59. Filed 3–22–57.

683,122. D.R.S. Jones & Laughlin Steel Corporation. SN 42,857. Pub. 5–26–59. Filed 1–13–58.

683,123. SEAL-LOCK. Resistoflex Corporation. SN 44,115. Pub. 5–26–59. Filed 1–16–58.

683,124. DEFCO AND DESIGN. Deutsch Fastener Corporation. SN 50,034. Pub. 5–26–59. Filed 4–21–58.

683,125. FLOWLINE. Flowline Corporation, by change of name from Welding Fittings Corporation. SN 52,541. Pub. 5–26–59. Filed 4–29–58.

683,126. TA AND DESIGN. T-A Mfg. Corp. SN 54,334. Pub. 5–26–59. Filed 6–26–58.

683,127. SHOCK TRAP. Pulsation Controls Corporation. SN 60,239. Pub. 5–26–59. Filed 10–7–58.

683,128. B S & B SUPER 70 AND DESIGN. Black, Sivalls & Bryson, Inc. SN 60,260. Pub. 5–26–59. Filed 10–8–58.

683,129. STAR SELFDRIL SHIELDS. Star Expansion Company. SN 63,188. Pub. 5–26–59. Filed 11–25–58.

683,130. RX°. Markwell Manufacturing Company, Inc. SN 63,949. Pub. 5–19–59. Filed 12–9–58.

Class 14—Metals and Metal Castings and Forgings

683,131. DUCTIMAG. Metallurgical Associates, Inc. SN 43,470. Pub. 5–26–59. Filed 1–6–58.

683,132. STEELMET. P. R. Mallory & Co. Inc. SN 44,727. Pub. 5–26–59. Filed 1–27–58.

683,133. ERFTAL. Vereinigte Aluminium-Werke Aktiengesellschaft. SN 48,373. Pub. 5–26–59. Filed 3–24–58.

683,134. SKODA AND DESIGN. Zavody V.I. Lenina Plzen, Narodni Podnik. SN 54,459. Pub. 5–26–59. Filed 6–27–58.

683,135. PLATE MATE ETC. AND DESIGN. Lukens Steel Company. SN 54,873. Pub. 5–26–59. Filed 7–7–58.

683,136. BI-TEMP PROCTOR WIRE AND DESIGN. Proctor & Schwartz, Inc. SN 60,963. Pub. 5–26–59. Filed 10–20–58.

683,137. MATRIX STEEL. Vanadium-Alloys Steel Company. SN 63,772. Pub. 5–26–59. Filed 12–5–58.

Class 15—Oils and Greases

683,138. LUBRICHANICS. The Hodson Corporation. SN 56,637. Pub. 5–26–59. Filed 9–5–58.

683,139. AIM. Le Fevre Laboratories, Inc. SN 62,768. Pub. 5–26–59. Filed 11–19–58.

Class 16—Protective and Decorative Coatings

683,140. BLACK BULL AND DESIGN. Insul-Mastic, Incorporated. SN 44,469. Pub. 5–26–59. Filed 1–22–58.

683,141. BRITE SEAL AND DESIGN. Durosel, Inc., assignee of Charles E. Vierheller. SN 51,957. Pub. 5–26–59. Filed 5–19–58.

Class 18—Medicines and Pharmaceutical Preparations

683,142. P PRIMEDICS. Jack B. Jones, d.b.a. Primedics Laboratories. SN 685,911. Pub. 5–26–59. Filed 4–20–55.

683,143. APAVITE. Kenwood Laboratories, Inc. SN 29,729. Pub. 5–26–59. Filed 5–9–57.

683,144. PANMYCIN KM. The Upjohn Company (Delaware corporation), assignee of The Upjohn Company (Michigan corporation). SN 38,504. Pub. 5–26–59. Filed 10–7–57.

683,145. TOX-I-TON ETC. AND DESIGN. Right Weight Company, Inc. SN 49,386. Pub. 5–26–59. Filed 4–9–58.

683,146. SOQUETTE. Barnes-Hind Ophthalmic Product, Inc., d.b.a. Barnes-Hind Ophthalmic Products Company. SN 52,648. Pub. 5–26–59. Filed 5–26–58.

683,147. BO-ANA. American Cyanamid Company. SN 56,287. Pub. 5–26–59. Filed 7–30–58.

683,148. GROTESQUE OF LEMON. Vick Chemical Company. SN 58,764. Pub. 5–26–59. Filed 9–10–58.

683,149. SULFABROM. Merck & Co., Inc. SN 59,044. Pub. 5–26–59. Filed 9–17–58.

683,150. KALMS. Ortho Pharmaceutical Corporation. SN 59,055. Pub. 5–26–59. Filed 9–17–58.

683,151. IPTOR. Laboratoires Toraude, Societe Anonyme. SN 59,305. Pub. 5–26–59. Filed 9–22–58.

683,152. PARNETRIL. Geigy Chemical Corporation. SN 59,463. Pub. 5–26–59. Filed 9–24–58.

683,153. DEXTRURIDE. Laboratoire Sapos. SN 60,465. Pub. 5–26–59. Filed 10–8–58.

683,154. GETRIC. The Wander Company, d.b.a. Smith-Dorsey. SN 61,880. Pub. 5–26–59. Filed 11–3–58.

683,155. TICHOLIN. The Wander Company, d.b.a. Smith-Dorsey. SN 61,881. Pub. 5–26–59. Filed 11–3–58.

683,216. ERKA. Roger Kuentz. SN 56,999. Pub. 5–26–59. Filed 9–19–58.

683,244. GRAMERCY. Raygram Corporation. SN 62,670. Pub. 5–26–59. Filed 12–4–58.

SN 23,239. Pub. 5-26-59. Filed 1-25-57.

683,156. TUAZOLE. R. J. Strasenburgh Company. SN 61,935. Pub. 5-26-59. Filed 11-4-58.

683,157. ARGOSYN. American Cyanamid Company. SN 61,985. Pub. 5-26-59. Filed 11-6-58.

683,158. KENAMATE. Olin Mathieson Chemical Corporation. SN 62,030. Pub. 5-26-59. Filed 11-6-58.

683,159. TEDRAL ANTI-H. Warner-Lambert Pharmaceutical Company. SN 62,044. Pub. 5-26-59. Filed 11-6-58.

683,160. ANUSOL-HC. Warner-Lambert Pharmaceutical Company. SN 62,045. Pub. 5-26-59. Filed 11-6-58.

683,161. TAOMID. Chas. Pfizer & Co., Inc. SN 62,318. Pub. 5-26-59. Filed 11-12-58.

683,162. RUBEVAX. Merck & Co., Inc. SN 62,474. Pub. 5-26-59. Filed 11-14-58.

683,163. SUSTETS. American Cyanamid Company. SN 62,507. Pub. 5-26-59. Filed 11-17-58.

683,164. SEQUELS. American Cyanamid Company. SN 62,509. Pub. 5-26-59. Filed 11-17-58.

683,165. BALCORT. Endo Laboratories Inc. SN 62,540. Pub. 5-26-59. Filed 11-17-58.

Class 19—Vehicles

683,166. ELECTRALLOY N. Columbian Bronze Corporation. SN 42,691. Pub. 5-26-59. Filed 12-19-57.

683,167. PRAGA AND DESIGN. Automobilove Zavody Klementa Gottwalda, Narodni Podnik. SN 48,000. Pub. 5-26-59. Filed 3-19-58.

683,168. J & J. Jarvis & Jarvis, Inc. SN 52,731. Pub. 5-26-59. Filed 6-2-58.

683,169. MINIVAN. Boyertown Auto Body Works, Incorporated. SN 54,669. Pub. 5-26-59. Filed 7-2-58.

683,170. BALLERINA. Lines Bros. Limited. SN 63,844. Pub. 5-26-59. Filed 12-8-58.

683,171. SWAN. Simpson Fawcett & Company Limited. SN 63,894. Pub. 5-26-59. Filed 12-8-58.

683,172. CPI AND DESIGN. Cleveland Pneumatic Industries, Inc. SN 64,051. Pub. 5-26-59. Filed 12-11-58.

683,173. KUL-RYDE. B. T. Crump Company, Inc. SN 64,456. Pub. 5-26-59. Filed 12-17-58.

Class 21—Electrical Apparatus, Machines, and Supplies

683,174. DESIGN OF FANCIFUL SCROLL. Sunbeam Corporation. SN 697,037. Pub. 5-26-59. Filed 10-24-55.

683,175. N-900. Essex Wire Corporation. SN 42,638. Pub. 5-26-59. Filed 12-18-57.

683,176. VERSALINE. The Miller Company. SN 44,479. Pub. 5-26-59. Filed 1-22-58.

683,177. ASBESTOHM. Dossert Manufacturing Corp. SN 47,244. Pub. 5-26-59. Filed 3-7-58.

683,178. MICON. Dossert Manufacturing Corp. SN 47,245. Pub. 5-26-59. Filed 3-7-58.

683,179. MYPRENE. Dossert Manufacturing Corp. SN 47,247. Pub. 5-26-59. Filed 3-7-58.

683,180. BETACHRON. Universal Winding Company. SN 48,674. Pub. 5-26-59. Filed 3-13-58.

683,181. MOLDED-ON. Component Manufacturing Service, Inc. SN 49,251. Pub. 5-26-59. Filed 4-8-58.

683,182. FILTERMATIC. Benco Television Associates Limited. SN 50,210. Pub. 5-26-59. Filed 4-23-58.

683,183. DI-CLAD. Continental-Diamond Fibre Corporation. SN 50,775. Pub. 5-26-59. Filed 5-1-58.

683,184. CYCLEMAG AND DESIGN. Aeromag, Incorporated. SN 53,754. Pub. 5-26-59. Filed 6-18-58.

683,185. MUTAC. The General Electric Company, Limited. SN 54,694. Pub. 3-24-59. Filed 7-2-58.

683,186. HARTLEY. Robert Schmetterer, d.b.a. Hartley Products Company. SN 58,671. Pub. 3-24-59. Filed 9-9-58.

683,187. MAGIC-DOOR. The Stanley Works. SN 58,753. Pub. 4-28-59. Filed 9-10-58.

683,188. GRIDALOY P. Molecu-Wire Corporation. SN 59,201. Pub. 3-17-59. Filed 9-19-58.

683,189. ASCO AND DESIGN. Automatic Switch Company. SN 60,202. Pub. 3-31-59. Filed 10-7-58.

683,190. HOPE AND DESIGN. Hope Electrical Products Company. SN 61,118. Pub. 5-26-59. Filed 10-22-58.

683,191. UDYSIL. The Udylite Corporation. SN 62,636. Pub. 5-26-59. Filed 11-17-58.

683,192. TRANSISTOCOM. Modern Telephones (Great Britain) Ltd. SN 62,944. Pub. 5-26-59. Filed 11-21-58.

683,193. TELE-TRACER. N.V. Nederlandse Industrie Radio Artikelen (Nira). SN 63,955. Pub. 5-26-59. Filed 12-9-58.

683,194. REDIRAY AND DESIGN. Infra-Red Systems, Inc. SN 64,299. Pub. 5-26-59. Filed 12-15-58.

683,195. ARPOL. Arpol Petroleum Co. SN 64,521. Pub. 5-26-59. Filed 12-18-58.

683,196. HATCHET. Hatchet Petroleum Co. SN 64,543. Pub. 5-26-59. Filed 12-18-58.

683,197. PELICAN. The Old Oil Company. SN 64,555. Pub. 5-26-59. Filed 12-18-58.

683,198. VAPO-VENT. N.J. Thermex Company, Inc. SN 64,642. Pub. 5-26-59. Filed 12-19-58.

683,199. NEO-TITE. N.J. Thermex Company, Inc. SN 64,643. Pub. 5-26-59. Filed 12-19-58.

Class 22—Games, Toys, and Sporting Goods

683,200. BRILLANT CYCLES APELDOORN HOLLAND AND DESIGN. Juncker Rijwielfabriek N.V. SN 51,132. Pub. 5-26-59. Filed 5-6-58.

683,201. COIN-O-RAMA. Mark Coin Company. SN 52,051. Pub. 5-26-59. Filed 5-21-58.

683,202. PAR-BALL. The Worthington Ball Company. SN 52,870. Pub. 5-26-59. Filed 5-26-58.

683,203. BANTAM. Commerce-Pacific Inc. SN 58,906. Pub. 5-26-59. Filed 9-15-58.

683,204. DRAG-N-FLY. Hodgman Rubber Company. SN 59,727. Pub. 5-26-59. Filed 9-29-58.

683,205. HI-FI-LOPHONE. Louis Marx & Co., Inc. SN 60,296. Pub. 5-26-59. Filed 10-8-58.

683,206. LUCKY LOUIE. William David Minser, d.b.a. Minser Tackle Company. SN 60,948. Pub. 5-26-59. Filed 10-20-58.

683,207. TENSTRIKE. Trenton Sports Bag Company. SN 61,672. Pub. 5-26-59. Filed 10-30-58.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

683,208. COOLEVAYOR. National Engineering Company, assignee of The Herbert S. Simpson Trust. SN 38,714. Pub. 5-26-59. Filed 10-10-57.

683,209. FEC AND DESIGN. Friction Engineering Co., Inc. SN 44,612. Pub. 5-26-59. Filed 1-24-58.

683,210. ORAMA. H. F. Livermore Corporation. SN 44,722. Pub. 5-26-59. Filed 1-27-58.

683,211. MAT-AWAY. K & N Machine Works, Inc., assignee of Greens Aerification Company. SN 49,691. Pub. 5-26-59. Filed 4-15-58.

683,212. UNISORB LEVEL-RITE. The Pelters Company. SN 50,613. Pub. 5-26-59. Filed S.R. 4-29-58; Am. P.R. 1-28-59.

683,213. FORAGIZER. Sumner Iron Works, Inc. SN 54,110. Pub. 5-26-59. Filed 6-23-58.

683,214. HI-WAY. Highway Equipment Company. SN 55,479. Pub. 5-26-59. Filed 7-17-58.

683,215. CHALLENGER. Highway Equipment Company. SN 55,480. Pub. 5-26-59. Filed 7-17-58.

Class 34—Heating, Lighting, and Ventilating

683,290. GROTESQUE OF EAGLE. Eagle Pencil Company. SN 61,171. Pub. 5-26-59. Filed 10-23-58.

683,216. ERKA. Roger Kuents. SN 56,999. Pub. 5–26–59. Filed 9–16–58.

683,217. DENALBA ETC. AND DESIGN. Esie Lipkin Corporation. SN 60,158. Pub. 5–26–59. Filed 10–6–58.

683,218. DIE-PART. The Hamilton Tool Company. SN 61,952. Pub. 5–26–59. Filed 11–5–58.

683,219. RIDGEFIELD. Imperial Knife Associated Companies, Inc. SN 63,816. Pub. 5–26–59. Filed 11–28–58.

683,220. DEI. Diversified Enterprises, Incorporated. SN 63,643. Pub. 5–26–59. Filed 12–4–58.

683,221. LAMPLIGHTER. Telsta Corporation. SN 63,770. Pub. 5–26–59. Filed 12–5–58.

683,222. CHECO AND DESIGN. Crane Hoist Engineering Corporation. SN 63,810. Pub. 5–26–59. Filed 12–8–58.

683,223. VORTAIR. Infilco Incorporated. SN 63,938. Pub. 5–26–59. Filed 12–8–58.

683,224. BEAVER FACE DESIGN. The Auto-Soler Company. SN 64,035. Pub. 5–26–59. Filed 12–9–58.

683,225. AJAX. Ajax Iron Works. SN 64,037. Pub. 5–26–59. Filed 12–11–58.

683,226. HERCULES. H. D. Hudson Manufacturing Company. SN 64,075. Pub. 5–26–59. Filed 12–11–58.

683,227. MINI-METAL. Sealol Corp. SN 64,204. Pub. 5–26–59. Filed 12–12–58.

683,228. HEILOADER. The Heil Co. SN 64,473. Pub. 5–26–59. Filed 12–17–58.

683,229. LINK-BELT ROTOLINE ETC. AND DESIGN. Link-Belt Company. SN 64,551. Pub. 5–26–59. Filed 12–18–58.

683,230. VIBROLATOR. Martin Engineering Company. SN 66,461. Pub. 5–26–59. Filed 1–26–59.

683,231. AMNOVCO. American Novelty Company. SN 67,294. Pub. 5–26–59. Filed 2–9–59.

683,232. SEALOL. Sealol Corp. SN 67,483. Pub. 5–26–59. Filed 2–10–59.

683,233. THE MECHANICAL SERVANT. Mechanical Servants, Incorporated. SN 67,951. Pub. 5–26–59. Filed 2–18–59.

Class 24—Laundry Appliances and Machines

683,234. FABRIC-FEEL. Pantex Manufacturing Company, assignee of Butler Manufacturing Company. SN 63,602. Pub. 5–26–59. Filed 12–8–58.

Class 25—Locks and Safes

683,235. BISON AND DESIGN. The Waterbury Metal Stamping Company. SN 60,323. Pub. 5–26–59. Filed 10–8–58.

Class 26—Measuring and Scientific Appliances

683,236. GYROTORY. New Brunswick Scientific Company. SN 25,022. Pub. 5–26–59. Filed 2–25–57.

683,237. POLAROTRON. Rolf K. Ladisch. SN 43,545. Pub. 5–26–59. Filed 1–7–58.

683,238. UNIPRINTER. Miehle-Goss-Dexter, Incorporated. SN 50,634. Pub. 5–26–59. Filed 4–29–58.

683,239. SUPERSCOPE. The Heyer Corporation. SN 57,268. Pub. 3–24–59. Filed 8–15–58.

683,240. FUL-VU. Johnson & Quin Products Company. SN 57,819. Pub. 5–26–59. Filed 9–25–58.

683,241. CHATILLON. John Chatillon & Sons. SN 63,293. Pub. 5–26–59. Filed 11–28–58.

683,242. CLINGABLE. Clingable Patterns, Inc. SN 63,420. Pub. 5–26–59. Filed 12–1–58.

683,243. DILLON. W. C. Dillon & Co., Inc. SN 63,640. Pub. 5–26–59. Filed 12–4–58.

683,244. GRAMERCY. Raygram Corporation. SN 63,670. Pub. 5–26–59. Filed 12–4–58.

683,245. NITE EYE. Q.O.S. Corporation. SN 63,885. Pub. 5–26–59. Filed 12–8–58.

683,246. CON-CHEK AND DESIGN. John P. St. Amour, d.b.a. Mayes Tool Company. SN 64,103. Pub. 5–26–59. Filed 12–11–58.

683,247. PARKWAY. Tokheim Corporation. SN 64,117. Pub. 5–26–59. Filed 12–11–58.

Class 27—Horological Instruments

683,248. SEAWAY. Langendorf Watch Co., d.b.a. Uhrenfabrik Langendorf, Societe d'Horlogerie de Langendorf and Lonville Watch Co. SN 55,822. Pub. 5–26–59. Filed 7–10–58.

683,249. GMT-MASTER. Montres Rolex S.A. SN 63,731. Pub. 5–26–59. Filed 12–5–58.

683,250. MAUTHE. Friedrich Mauthe GmbH. SN 65,079. Pub. 5–26–59. Filed 12–30–58.

683,251. BERNARD. Louis J. Bernard. SN 65,140. Pub. 5–26–59. Filed 12–31–58.

683,252. TODAY. Benrus Watch Company, Inc. SN 65,292. Pub. 5–26–59. Filed 1–5–59.

683,253. IMPALA. The Impala Corporation. SN 65,428. Pub. 5–26–59. Filed 1–7–59.

Class 28—Jewelry and Precious-Metal Ware

683,254. TEA TIME. The International Silver Company, d.b.a. Wm. Rogers Mfg. Co. SN 56,013. Pub. 5–26–59. Filed 7–25–58.

683,255. TICKLED PINK. Coro, Inc. SN 57,249. Pub. 5–26–59. Filed 8–15–58.

Class 29—Brooms, Brushes, and Dusters

683,256. MY OWN. Lakewood Manufacturing Co. SN 48,998. Pub. 5–26–59. Filed 4–3–58.

Class 31—Filters and Refrigerators

683,257. CHEMEX-BONDED. Chemex Corporation. SN 64,442. Pub. 5–26–59. Filed 12–15–58.

683,258. COL-TEMP. Colvin-Templeton, Inc. SN 67,111. Pub. 5–26–59. Filed 2–3–59.

Class 32—Furniture and Upholstery

683,259. HARCO AND DESIGN. The Acme-Harding Glass, Inc. SN 58,069. Pub. 5–26–59. Filed 8–29–58.

683,260. HEIRLOOM AND DESIGN. Metalcraft Corp. SN 66,066. Pub. 5–26–59. Filed 1–19–59.

683,261. GOLD TONE AND DESIGN. Daniel Silverman, d.b.a. Jameco Metal Products Company. SN 69,207. Pub. 5–26–59. Filed 3–9–59.

683,262. CUMBERLAND. United Furniture Corp. SN 69,576. Pub. 5–26–59. Filed 3–13–59.

Class 33—Glassware

683,263. 5X. Glass Processing Co. SN 38,476. Pub. 5–26–59. Filed 7–10–57.

683,264. SCHOTT & GEN MAINZ AND DESIGN. Jenaer Glaswerk Schott & Gen. SN 58,788. Pub. 5–26–59. Filed 9–11–58.

683,318. KARMAN AND DESIGN. Karman, Incorporated.

Class 43—Thread and Yarn

Class 34—Heating, Lighting, and Ventilating Apparatus

683,265. KINETIC. The Webster Engineering Company. SN 18,379. Pub. 5-26-59. Filed S.R. 10-29-56; Am. P.R. 10-15-58.

683,266. PYROCORE. American Thermocatalytic Corporation. SN 50,860. Pub. 5-26-59. Filed 5-2-58.

683,267. NEGATROL. American Thermocatalytic Corporation. SN 50,861. Pub. 5-26-59. Filed 5-2-58.

683,268. GOUR-MAID. Chesley Industries Inc. SN 50,972. Pub. 5-26-59. Filed 5-5-58.

683,269. DURA-AIR. Dura-Vent Corporation. SN 51,179. Pub. 5-26-59. Filed 5-7-58.

683,270. DURA-CHIMNEY. Dura-Vent Corporation. SN 51,180. Pub. 5-26-59. Filed 5-7-58.

683,271. DURA-FLUE. Dura-Vent Corporation. SN 52,106. Pub. 5-26-59. Filed 5-22-58.

683,272. COMBINEX AND DESIGN. Peerless of America, Incorporated. SN 54,426. Pub. 5-26-59. Filed 6-27-58.

683,273. DIT MCO AND DESIGN. Dit-Mco, Incorporated, d.b.a. Drive-In-Theatre Manufacturing Company. SN 62,747. Pub. 5-26-59. Filed 11-19-58.

683,274. W AND DESIGN. Wallace Silversmiths, Inc. SN 65,134. Pub. 5-26-59. Filed 12-30-58.

683,275. PORT-A-Q. Morris Mark, d.b.a. Star Ornamental Iron Works. SN 65,435. Pub. 5-26-59. Filed 1-7-59.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

683,276. NYCOIL HOSE AND DESIGN. Frank J. Rodgers, d.b.a. Nycoil Company. SN 47,783. Pub. 5-26-59. Filed 3-14-58.

Class 36—Musical Instruments and Supplies

683,277. PERFECTONE. Jensen Industries, Inc. SN 41,281. Pub. 5-26-59. Filed 11-25-57.

683,278. MAR-VEL ETC. Harry Glenn, d.b.a. Mar-Vel Records. SN 46,221. Pub. 5-26-59. Filed 2-20-58.

683,279. SPIN. John W. Schaum, d.b.a. Spin Records. SN 47,286. Pub. 5-26-59. Filed 3-7-58.

683,280. CITATION SERIES. Coral Records, Inc. SN 50,980. Pub. 5-26-59. Filed 5-5-58.

683,281. SPEED-EEZ. Pearl Heyman, d.b.a. Speed-Eez Products. SN 58,532. Pub. 5-26-59. Filed 9-8-58.

Class 37—Paper and Stationery

683,282. PH AND DESIGN. Port Huron Sulphite & Paper Co. SN 18,456. Pub. 5-26-59. Filed 10-30-56.

683,283. ROCKY AND DESIGN. The Weston Paper and Manufacturing Co. SN 29,982. Pub. 5-26-59. Filed 5-13-57.

683,284. ECONORAP. Glas-Kraft, Inc. SN 46,930. Pub. 5-26-59. Filed 3-3-58.

683,285. KIMONO PACK. International Paper Company. SN 50,063. Pub. 5-26-59. Filed 4-21-58.

683,286. SATINTONE. Fox River Paper Corporation. SN 57,470. Pub. 5-26-59. Filed 8-19-58.

683,287. FENIMORE. The Whitaker Paper Company. SN 58,889. Pub. 5-26-59. Filed 9-12-58.

683,288. MARA-POLY. American Can Company. SN 58,896. Pub. 5-26-59. Filed 9-15-58.

683,289. PRENZEL EASIESNAP SETS. Edward C. Prenzel. SN 60,565. Pub. 5-26-59. Filed 10-13-58.

683,290. GROTESQUE OF EAGLE. Eagle Pencil Company. SN 61,171. Pub. 5-26-59. Filed 10-23-58.

683,291. ECUSTA. Olin Mathieson Chemical Corporation. SN 61,313. Pub. 5-26-59. Filed 10-24-58.

683,292. K. S. H. Kress and Company. SN 61,574. Pub. 5-26-59. Filed 10-29-58.

Class 38—Prints and Publications

683,293. ALL THE NEWS THAT'S FIT TO PRINT AND DESIGN. The New York Times Company. SN 57,704. Pub. 5-26-59. Filed 8-22-58.

683,294. PARAMETRIC. Autometric Corporation. SN 59,249. Pub. 5-26-59. Filed 9-22-58.

683,295. CREST DESIGN. Dale Carnegie & Associates (New York), Inc., by change of name from Dale Carnegie Publishers, Inc. SN 59,686. Pub. 5-26-59. Filed 9-29-58.

683,296. EXECUTONE. Executone, Inc. SN 61,174. Pub. 5-26-59. Pub. 10-23-58.

683,297. NUBBIN. The Hearst Corporation. SN 61,294. Pub. 5-26-59. Filed 10-24-58.

683,298. THE JOURNAL OF NUTRITION. The Wistar Institute of Anatomy and Biology. SN 62,350. Pub. 5-26-59. Filed 11-5-58.

683,299. OUR NEW AGE. The Hall Syndicate, Inc. SN 62,456. Pub. 5-26-59. Filed 11-14-58.

683,300. EVER HAPPEN TO YOU? The Hearst Corporation. SN 62,554. Pub. 5-26-59. Filed 11-17-58.

683,301. AMERICAN STUDIOS AND DESIGN. American Studios, Inc. SN 62,662. Pub. 5-26-59. Filed 11-18-58.

683,302. ARTIST AID. Jay G. Lissner. SN 63,079. Pub. 5-26-59. Filed 11-24-58.

683,303. ELECTROMET METALS AND ALLOYS REVIEW. Union Carbide Corporation. SN 63,194. Pub. 5-26-59. Filed 11-25-58.

683,304. PIANO MAGIC. Song Dex, Inc. SN 63,256. Pub. 5-26-59. Filed 11-26-58.

683,305. ORGAN MAGIC. Song Dex, Inc. SN 63,257. Pub. 5-26-59. Filed 11-26-58.

Class 39—Clothing

683,306. BLENDTONES FOR BY ALBA AND DESIGN. Alba Hosiery Mills, Inc., by change of name from Pilot Full Fashion Mills, Inc. SN 655,426. Pub. 5-4-54. Filed 10-27-53.

683,307. ROBERT BRUCE CHROME TONE. Robert Bruce, Inc. SN 9,080. Pub. 5-26-59. Filed 5-28-58.

683,308. MONTEREY. Monterey Mills, Inc. SN 32,970. Pub. 5-26-59. Filed 7-1-57.

683,309. NIAGARA MAID. Fantashere, Inc. SN 34,937. Pub. 5-26-59. Filed 8-5-57.

683,310. SOFDOWN. Merit Clothing Company. SN 35,373. Pub. 5-26-59. Filed 8-12-57.

683,311. SPORTMOOR. The Joseph & Feiss Company. SN 36,446. Pub. 5-26-59. Filed 8-29-57.

683,312. LUXAIRE. The Joseph & Feiss Company. SN 36,448. Pub. 5-26-59. Filed 8-29-57.

683,313. PICADOON. The Joseph & Feiss Company. SN 36,451. Pub. 5-26-59. Filed 8-29-57.

683,314. LITE-TIMER. The Joseph & Feiss Company. SN 36,454. Pub. 5-26-59. Filed 8-29-57.

683,315. CRUX. The Joseph & Feiss Company. SN 37,169. Pub. 5-26-59. Filed 9-13-57.

683,316. COMMANDO. M. Rubin & Sons, Inc. SN 41,837. Pub. 5-26-59. Filed 12-5-57.

683,317. MISS LONG JOHNS. Washington Hosiery Mills, Inc. SN 45,040. Pub. 5-26-59. Filed 2-10-58.

683,370. MISTER DONUT. Mister Donut of America, Inc., d.b.a. Mister Donut, by change of name from Harwin Man-

Class 50—Merchandise Not Otherwise

683,318. KARMAN AND DESIGN. Karman, Incorporated. SN 45,982. Pub. 5–26–59. Filed 2–17–58.

683,319. FIANCEES SOFT TOUCH. Clark Shoe Company. SN 46,050. Pub. 5–26–59. Filed 2–18–58.

683,320. LEINON. Simon Gabai. SN 47,757. Pub. 5–26–59. Filed 3–14–58.

683,321. CARBUM. Simon Gabai. SN 47,758. Pub. 5–26–59. Filed 3–14–58.

683,322. MINKLANDER. M.K.M. Knitting Mills, Inc. SN 48,181. Pub. 5–26–59. Filed 3–21–58.

683,323. R. & O. HAWICK AND DESIGN. Troy Shirt Makers Guild, Inc. SN 49,395. Pub. 5–26–59. Filed 4–9–58.

683,324. KRISP-SPUN. Rose Brothers, Inc. SN 49,800. Pub. 5–26–59. Filed 4–3–58.

683,325. SAN GIORGIO IMPERMEABILI ETC. AND DESIGN. Impermeabili San Giorgio, Società per Azioni. SN 51,456. Pub. 5–26–59. Filed 5–12–58.

683,326. LOU LYNN. Austin Knitting Mills, Inc. SN 52,091. Pub. 5–26–59. Filed 5–22–58.

683,327. RUSTICOS. Trans World Shoe Corporation. SN 52,919. Pub. 5–26–59. Filed 6–4–58.

683,328. KORDELL ADD-UPS—ADD-UPS KORDELL. Kordell Sportswear, Inc. SN 53,339. Pub. 5–26–59. Filed 6–11–58.

683,329. DIPLO-MATE. Wales Manufacturing Company. SN 54,339. Pub. 5–26–59. Filed 6–26–58.

683,330. FLEX-EM. Federated Department Stores, Inc., d.b.a. Wm. Filene's Sons Company. SN 55,062. Pub. 5–26–59. Filed 7–10–58.

683,331. ELBEO. Louis Bahner Elbeo-Werke, G.m.b.H. SN 56,441. Pub. 5–26–59. Filed 8–1–58.

683,332. VERA. Scarves by Vera, Inc. SN 57,096. Pub. 5–26–59. Filed 8–12–58.

683,333. SARGON. Irving Kasher, d.b.a. Sargon Knitwear. SN 57,154. Pub. 5–26–59. Filed 8–13–58.

683,334. LI TUL. B. A. Ravera Co. SN 57,567. Pub. 5–26–59. Filed 8–20–58.

683,335. LA TOUR D'OR. Wallach's, Inc. SN 58,131. Pub. 5–26–59. Filed 8–29–58.

683,336. YOUNG VIEWPOINT. Ginsburg and Abelson, Inc. SN 58,301. Pub. 5–26–59. Filed 9–3–58.

683,337. HER CHOICE. Merrill Hosiery Company, Inc. SN 58,932. Pub. 5–26–59. Filed 9–15–58.

683,338. TRAIL RIDGE WESTERNS AND DESIGN. Miller & Co. SN 58,935. Pub. 5–26–59. Filed 9–15–58.

683,339. LA MER INTERNATIONAL DESIGN AND DESIGN. Bedford Shirt Corp. SN 59,252. Pub. 5–26–59. Filed 9–22–58.

683,340. MARCY FAYE. Weinberger Garment Co. SN 60,067. Pub. 5–26–59. Filed 10–3–58.

683,341. TODDLY WINKS. Quality Mills, Incorporated. SN 62,877. Pub. 4–21–59. Filed 11–20–58.

Class 41—Canes, Parasols, and Umbrellas

683,342. KRISTALL. Emil Brauer & Co. SN 57,461. Pub. 5–26–59. Filed 8–19–58.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

683,343. COMSTOCK. Deering, Milliken & Co. Inc. SN 51,879. Pub. 5–26–59. Filed 5–19–58.

683,344. SPORTELLON. William Hollins & Company Limited. SN 58,198. Pub. 5–26–59. Filed 9–2–58.

683,345. ORVIS. J. P. Stevens & Co. Inc. SN 63,260. Pub. 5–26–59. Filed 11–26–58.

Class 43—Thread and Yarn

683,346. ESTREL. Eastman Kodak Company. SN 63,008. Pub. 5–26–59. Filed 11–24–58.

683,347. MADARA. Madison Throwing Company, Inc. SN 63,084. Pub. 5–26–59. Filed 11–24–58.

Class 44—Dental, Medical, and Surgical Appliances

683,348. DP AND DESIGN. Dental Perfection Company, Inc. SN 32,063. Pub. 5–26–59. Filed 6–17–57.

683,349. MARK FORE. Market Forge Company. SN 51,036. Pub. 5–26–59. Filed 5–5–58.

683,350. CIRCOLECTRIC. Orthopedic Frame Company. SN 58,231. Pub. 5–26–59. Filed 9–2–58.

683,351. AURALFONE AND DESIGN. New York Auralfone Corp. SN 61,842. Pub. 5–26–59. Filed 11–3–58.

683,352. D & G IN DESIGN FORM. American Cyanamid Company. SN 61,986. Pub. 5–26–59. Filed 11–6–58.

683,353. SAFAR. Johnson & Johnson. SN 63,063. Pub. 5–26–59. Filed 11–24–58.

683,354. SPORTS-3. Jung Products, Inc. SN 64,548. Pub. 5–26–59. Filed 12–18–58.

683,355. PULMO-PAK. Abbott Laboratories. SN 66,277. Pub. 5–26–59. Filed 1–22–59.

683,356. CONTOUR MAGIC. Modern Aids, Inc. SN 66,361. Pub. 5–26–59. Filed 1–23–59.

683,357. FIRM-A-FORM. American Vita-Saage Products, Inc. SN 67,184. Pub. 5–26–59. Filed 2–6–59.

683,358. POSTUR-DENT. Denseo, Incorporated. SN 67,321. Pub. 5–26–59. Filed 2–9–59.

683,359. STEELE'S KROMASK. The Columbus Dental Manufacturing Company. SN 67,758. Pub. 5–26–59. Filed 2–16–59.

683,360. CRITOSEAL. Biological Research Inc. SN 68,028. Pub. 5–26–59. Filed 2–19–59.

Class 45—Soft Drinks and Carbonated Waters

683,361. ORANGE CRUSH. Orange-Crush Company. SN 38,378. Pub. 5–26–59. Filed 10–4–57.

683,362. CLICK. Roland W. Dedekind, d.b.a. Click Beverage Co. SN 54,300. Pub. 5–26–59. Filed 6–26–58.

Class 46—Foods and Ingredients of Foods

683,363. PHIL AND ED'S. Phil & Ed's Barbecue, d.b.a. Phil & Ed's. SN 671,958. Pub. 5–26–59. Filed 8–19–54.

683,364. DESIGN OF BIRD. General Foods Corporation. SN 19,132. Pub. 5–26–59. Filed 11–13–56.

683,365. LAZY-GARLIC. S.L.I.A. Sicule Lombarde Industrie Associate S.p.A. SN 22,221. Pub. 5–26–59. Filed 1–7–57.

683,366. FRESHER BRAND. Coldwater Seafood Corporation. SN 24,122. Pub. 5–26–59. Filed 2–11–57.

683,367. LUCRATIVA. Manniello Bros. & Manniello, Inc. SN 35,942. Pub. 5–26–59. Filed 8–21–57.

683,368. GREEN MEADOW GLO. Blue Ridge Food Processing Co., Inc. SN 36,048. Pub. 5–26–59. Filed 8–23–57.

683,369. OHIO. Ohio Fruit Products Company, Inc. SN 36,467. Pub. 5–26–59. Filed 8–29–57.

683,424. CENTO. Center Chemical Company. SN 54,289.

Class 103—Construction and Repair

SN 60,565. Pub. 5-26-59. Filed 10-13-58.

Inc. SN 45,640. Pub. 5-26-59. Filed 2-10-58.

683,370. MISTER DONUT. Mister Donut of America, Inc., d.b.a. Mister Donut, by change of name from Harwin Management Corporation, d.b.a. Mister Donut. SN 38,608. Pub. 5-26-59. Filed 10-9-57.

683,371. CROWN JEWELS. King Candy Company. SN 40,178. Pub. 7-15-58. Filed 11-6-57.

683,372. AUNT MARY. The Sharaf Company, Inc., assignee of Royal Confectionery Co., d.b.a. Aunt Mary Chocolates. SN 41,309. Pub. 5-26-59. Filed 11-25-57.

683,373. INTER-OCEAN. Inter-Ocean Trading Corporation. SN 41,754. Pub. 5-26-59. Filed 12-4-57.

683,374. CYANAMID AND DESIGN. American Cyanamid Company. SN 42,264. Pub. 5-26-59. Filed 12-12-57.

683,375. TRU-VAL. Fritzsche Brothers, Inc. SN 42,282. Pub. 2-24-59. Filed 12-12-57.

683,376. JAZZ FLO-SWEET AND DESIGN. Cosby-Hodges Milling Company. SN 43,013. Pub. 5-26-59. Filed 12-26-57.

683,377. OSCOLA. Joseph Oscola. SN 46,751. Pub. 5-26-59. Filed 2-27-58.

683,378. HI-METH. Corn Products Company, by merger from Corn Products Refining Company. SN 55,383. Pub. 3-3-59. Filed 7-16-58.

683,379. SEABROOK AND TAG DESIGN. Seabrook Farms Co. SN 55,528. Pub. 5-26-59. Filed 7-17-58.

683,380. NUTRI SEAL AND DESIGN. Nutri-Seal Corporation. SN 56,177. Pub. 5-26-59. Filed 7-28-58.

683,381. ISLAND PUNCH. Krasdale Foods Inc. SN 56,858. Pub. 5-26-59. Filed 8-8-58.

683,382. SCANDIC. A. V. Olsson Trading Co. Inc. SN 57,561. Pub. 5-26-59. Filed 8-20-58.

683,383. SKANSEN. A. V. Olsson Trading Co. Inc. SN 57,562. Pub. 5-26-59. Filed 8-20-58.

683,384. GARDEN FLAVOR. Western Oregon Packing Corporation. SN 57,864. Pub. 5-26-59. Filed 8-25-58.

683,385. TRU-CUT. Renaire Corporation. SN 58,810. Pub. 5-26-59. Filed 9-11-58.

683,386. BRONCO AND DESIGN. Oelerich & Berry Company. SN 59,563. Pub. 5-26-59. Filed 9-25-58.

683,387. SUGAR TIME AND DESIGN. Ponca Wholesale Mercantile Company, d.b.a. Sugar Time Candies. SN 60,844. Pub. 5-26-59. Filed 10-17-58.

683,388. VIN ROUGE. James W. Young, d.b.a. Rancho de la Canada. SN 61,344. Pub. 5-26-59. Filed 10-24-58.

683,389. HANDI CARVE. Heil Packing Company. SN 62,437. Pub. 5-26-59. Filed 11-13-58.

683,390. SHUR-NUFF. Meat Industry Suppliers, Inc. SN 62,864. Pub. 5-26-59. Filed 11-20-58.

683,391. BREAKFAST DELIGHT. D. E. Winebrenner Co., Inc. SN 63,502. Pub. 5-26-59. Filed 12-1-58.

683,392. BLUEPOINT. Bluepoints Sea Foods Corp. SN 63,796. Pub. 5-26-59. Filed 12-8-58.

683,393. PROMATE. The Griffith Laboratories, Inc. SN 63,828. Pub. 5-26-59. Filed 12-8-58.

683,394. HOFCO. J. S. Hoffman Company. SN 63,835. Pub. 5-26-59. Filed 12-8-58.

683,395. EL KIDDO. Leaf Brands, Inc. SN 63,843. Pub. 5-26-59. Filed 12-8-58.

683,396. TA-TOS. The Frito Company. SN 64,884. Pub. 6-9-59. Filed 12-24-58.

Class 48 — Malt Beverages and Liquors

683,397. 14-K. The Hudepohl Brewing Company. SN 57,812. Pub. 5-26-59. Filed 8-25-58.

Class 49 — Distilled Alcoholic Liquors

683,398. BARTON. Barton Distilling Company. SN 57,183. Pub. 4-14-59. Filed 8-14-58.

Class 50 — Merchandise Not Otherwise Classified

683,399. PLAST-A-WELD. Louis L. Borick. SN 31,745. Pub. 5-26-59. Filed 6-11-57.

683,400. FEATHERWATE. Cat's Paw Rubber Company, Inc. SN 31,896. Pub. 5-26-59. Filed 6-13-57.

683,401. FLOATILLA BAR. May E. Nolte. SN 49,964. Pub. 5-26-59. Filed 4-16-58.

683,402. ANGEL PINE. Modern Coatings, Inc., assignee of Modern Coatings. SN 57,916. Pub. 5-26-59. Filed 8-26-58.

683,403. SLIP-X. Franklin C. Schlitt & Doris G. Schlitt, d.b.a. Slip-X Safety Treads. SN 59,419. Pub. 5-26-59. Filed 9-23-58.

683,404. OOPS. De Witt W. Hanmore. SN 59,613. Pub. 5-26-59. Filed 9-26-58.

Class 51 — Cosmetics and Toilet Preparations

683,405. LAN-O-TRESS. Gold Medal Hair Products, Inc., d.b.a. G M Hair Products, Inc. SN 698,159. Pub. 12-25-56. Filed 11-14-55.

683,406. WAVE-TRESS. Gold Medal Hair Products, Inc., d.b.a. G M Hair Products, Inc. SN 698,159. Pub. 12-18-56. Filed 11-14-55.

683,407. COLOGNETTE. Ferdinand Mülhens, d.b.a. Eau de Cologne- & Parfümerie-Fabrik Glockengasse No. 4711 gegenüber der Pferdepost von Ferd. Mülhens. SN 4,823. Pub. 5-26-59. Filed 3-19-56.

683,408. CREME NATALE. Richard Hudnut. SN 36,889. Pub. 5-26-59. Filed 9-9-57.

683,409. K-Q & LUSTRE TOO. Bailey Laboratories. SN 38,891. Pub. 5-26-59. Filed 10-15-57.

683,410. "SPARKLING." George H. Weyer, Inc. SN 40,631. Pub. 5-26-59. Filed 11-13-57.

683,411. LIVING CURL. Revlon, Inc. SN 47,213. Pub. 5-26-59. Filed 3-6-58.

683,412. DANGARD. Ar. Winarick, Inc. SN 49,648. Pub. 5-26-59. Filed 4-14-58.

683,413. W WILLIAMS AND DESIGN. The J. B. Williams Company. SN 51,095. Pub. 5-26-59. Filed 5-5-58.

683,414. SECRET DE VICHY. Societe Anonyme: Societe d'Hygiene Dermatologique de Vichy—Vichy, Source de Beaute. SN 55,534. Pub. 5-26-59. Filed 7-17-58.

683,415. FEMALE FIGURE AND FOUNTAIN DESIGN. Societe Anonyme: Societe d'Hygiene Dermatologique de Vichy—Vichy, Source de Beaute. SN 55,813. Pub. 5-26-59. Filed 7-22-58.

683,416. ZELITA. Francisco L. Anselmi, d.b.a. Laboratorios Flar-Arkadia. SN 59,441. Pub. 5-26-59. Filed 9-24-58.

683,417. MORHANGE. Parfumerie Morhange. SN 59,841. Pub. 5-26-59. Filed 9-30-58.

683,418. VAGABOND. Helene Curtis Industries, Inc., d.b.a. Lentheric. SN 60,273. Pub. 5-26-59. Filed 10-8-58.

683,419. "SO NATURAL!" The Realistic Company. SN 60,367. Pub. 5-26-59. Filed 10-9-58.

683,420. GLISN. The Realistic Company. SN 60,368. Pub. 5-26-59. Filed 10-9-58.

Class 52 — Detergents and Soaps

683,421. WOMAN OF TOMORROW. John H. Breck, Inc. SN 46,277. Pub. 5-26-59. Filed 2-21-58.

683,422. MAN OF TOMORROW. John H. Breck, Inc. SN 46,278. Pub. 5-26-59. Filed 2-21-58.

683,423. HANQUIK. William Pearson, Ltd. SN 54,251. Pub. 5-26-59. Filed 6-25-58.

683,424. CENTO. Center Chemical Company. SN 54,289. Pub. 5-26-59. Filed 6-26-58.

683,425. HALF TIME. Knot Manufacturing Company. SN 63,322. Pub. 5-26-59. Filed 11-28-58.

Service Marks

Class 100—Miscellaneous

683,426. DEBURGH. Maria Luisa De Burgh and Raymond J. De Burgh, assignee of Maria Luisa De Burgh, executrix, estate of Albert R. De Burgh. SN 34,223. Pub. 5-26-59. Filed 7-23-57.

683,427. GIFTS BY WIRE AND DESIGN. Gifts by Wire, Inc. SN 45,319. Pub. 5-26-59. Filed 2-5-58.

683,428. DESIGNERS FOR INDUSTRY. Designers for Industry, Inc. SN 48,404. Pub. 5-26-59. Filed 3-25-58.

683,429. WONDER WORLD. National Corporation of America. SN 64,896. Pub. 5-26-59. Filed 12-24-58.

Class 101—Advertising and Business

683,430. EVERYTHING WILL "G" IF YOU BUY FROM GRO"NEE". Willard Le Blond Groene. SN 25,249. Pub. 12-9-58. Filed 2-28-57.

Class 102—Insurance and Financial

683,431. N/W NATIONAL LIFE ETC. AND DESIGN. Northwestern National Life Insurance Company. SN 47,207. Pub. 5-26-59. Filed 3-6-58.

683,432. CHARGE-RITE THROUGH THE BANK AND DESIGN. Girard Trust Corn Exchange Bank. SN 57,686. Pub. 5-26-59. Filed 8-22-58.

683,433. HEALTH BANK. Kenneth L. Hales & Son, Inc. SN 59,465. Pub. 5-26-59. Filed 9-24-58.

683,434. $5,000 FAMILY SECURITY CLUB AND DESIGN. Family Life Insurance Company, d.b.a. $5000 Family Security Club. SN 62,749. Pub. 5-26-59. Filed 11-19-58.

683,435. FARMPAC. The Northern New York Trust Company. SN 63,343. Pub. 5-26-59. Filed 11-28-58.

Class 103—Construction and Repair

683,436. WENDELIGHT. Rudolf Wendel, Incorporated. SN 39,019. Pub. 5-26-59. Filed 10-16-57.

683,437. "ROOST NO MORE" AND DESIGN. Joseph H. Fink, d.b.a. National Bird Control Laboratories. SN 57,363. Pub. 4-28-59. Filed 8-18-58.

683,438. HERCULOCK. Herculock Limited. SN 61,117. Pub. 5-26-59. Filed 10-22-58.

Class 105—Transportation and Storage

683,439. P AND DESIGN. The Parking Authority of Toronto. SN 26,013. Pub. 5-26-59. Filed 3-12-57.

683,440. TR AND DESIGN. Trailer Rentals, Inc. SN 37,385. Pub. 5-26-59. Filed 9-17-57.

Class 107—Education and Entertainment

683,441. REPRESENTATION OF DOG'S HEAD. Leader Dogs for the Blind. SN 12,036. Pub. 5-26-59. Filed 7-12-56.

683,442. PAUL BUNYAN. Paul Bunyan Entertainment, Inc. SN 52,195. Pub. 5-26-59. Filed 5-23-58.

683,443. IT'S IN THE BAG. J. L. Milani and June O. Milani. SN 53,178. Pub. 5-26-59. Filed 6-9-58.

683,444. REX KING SHOW. Plaza Court Broadcasting Company. SN 55,190. Pub. 5-26-59. Filed 6-25-58.

683,445. THE LITTLE RED DOOR AND DESIGN. American Cancer Society, Inc. SN 59,803. Pub. 5-26-59. Filed 9-30-58.

683,446. THE FRIENDLY RED DOOR AND REPRESENTATION OF DOOR. American Cancer Society, Inc. SN 59,804. Pub. 5-26-59. Filed 9-30-58.

Collective Membership Mark

Class 200

683,447. REPRESENTATION OF A GROTESQUE HUMAN FIGURE. National Rural Electric Cooperative Association. SN 38,841. Pub. 5-26-59. Filed 10-14-57.

Class 49—Distilled Alcoholic Liquors

683,458. Campbell & Clark Limited, Glasgow, Scotland. SN 41,385. Filed P.R. 12-6-57; Am. S.R. 6-18-59.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 1—Raw or Partly Prepared Materials

683,448. Clopay Corporation, Cincinnati, Ohio. SN 21,423. Filed P.R. 12–21–56; Am. S.R. 12–9–57.

poly-mat

For Ribbed Sheets of Polyethylene Used for Covering for Floors, Shelves, Stairtreads, Drainboards and the Like.
First use Dec. 4, 1956.

683,449. Wight Nurseries, Inc., Cairo, Ga. SN 49,647. Filed P.R. 4–14–58; Am. S.R. 4–13–59.

TOPS THEM ALL

For Nursery Stock—Namely, Evergreens, Shrubs, Trees, and Vines.
First use Mar. 25, 1958.

Class 16—Protective and Decorative Coatings

683,450. The Lowe Brothers Company, d.b.a. Dayton Color Works, Dayton, Ohio. SN 60,613. Filed P.R. 10–14–58; Am. S.R. 5–18–59.

For Wood Finishing System Including Base, Color Grain and Clear Finish Coating Compositions.
First use Feb. 21, 1958.

Class 21—Electrical Apparatus, Machines, and Supplies

683,451. Curtis Lighting, Inc., Chicago, Ill. SN 45,720. Filed P.R. 2–12–58; Am. S.R. 6–4–59.

VISIONEERS IN PLANNED LIGHTING

For Lighting Fixtures and Parts Thereof.
First use Sept. 15, 1957.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

683,452. S. H. Kress and Company, New York, N.Y. SN 10,093. Filed P.R. 6–12–56; Am. S.R. 4–23–59.

FILES THAT BITE

For Files.
First use Aug. 1, 1934.

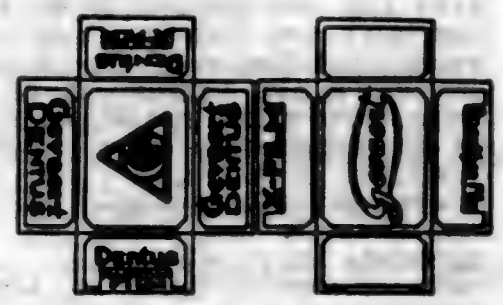
Class 26—Measuring and Scientific Appliances

683,453. Quick-Set, Incorporated, Skokie, Ill. SN 55,165. Filed P.R. 7–11–58; Am. S.R. 5–11–59.

CARLTON

For Tripods.
First use Apr. 23, 1958.

683,454. Gevaert Photo-Producten N.V., Mortsel, Belgium. SN 64,465. Filed P.R. 12–17–58; Am. S.R. 5–20–59.
Owner of Belgian Reg. No. 6,662, dated June 15, 1927; and U.S. Reg. Nos. 162,250 and 657,416.



For Photographic and Cinematographic Cameras, Photographic Papers, Plates, and Films.

Class 39—Clothing

683,455. Savada Bros., Inc., New York, N.Y. SN 23,347. Filed P.R. 1–29–57; Am. S.R. 1–13–59.

"STAY-PUT"

For Collars Which Form a Part of Outer Shirts for Boys, Men, and Young Men.
First use September 1956.

Class 45—Soft Drinks and Carbonated Waters

683,456. Smith-Junior Company, Incorporated, Rochester, N.Y. SN 21,277. Filed 12–18–56.

LEMON SLUSH

For Fruit Flavored Syrup Base for Making Soft Drinks.
First use September 1933.

Class 49 — Distilled Alcoholic Liquors

683,457. W. Koerner & Co., Hamburg-Altona, Germany. SN 6,529. Filed P.R. 4-17-56; Am. S.R. 1-26-59.

Owner of Reg. No. 346,230.
For Liqueurs.
First use Oct. 23, 1950; in commerce Oct. 26, 1955.

683,458. Campbell & Clark Limited, Glasgow, Scotland. SN 41,385. Filed P.R. 12-6-57; Am. S.R. 6-18-59.

Owner of British Reg. No. 761,562, dated Jan. 19, 1957.
For Scotch Whisky.

TRADEMARK REGISTRATIONS RENEWED

126,010. ADE-II-TAN. Cl. 6. 7-22-19.
126,782. GARNET. Cl. 15. 9-30-19.
127,424. BEN HUR. Cl. 51. 11-11-19.
127,471. PURITAN MAID AND DESIGN. Cl. 18. 11-11-19.
127,553. BERNARD. Cl. 23. 11-11-19.
127,577. A AND STAR AND EAGLE DESIGN. Cl. 46. 11-18-19.
127,639. OLD JUDGE AND DESIGN. Cl. 46. 11-18-19.
364,784. FRUZOLA. Cl. 45. 2-14-39.
365,258. COROCO. Cl. 4. 2-28-39.
365,306. A. S. BECK ETC. AND DESIGN. Cl. 39. 3-7-39.
367,076. MARY ANN AND DESIGN. Cl. 46. 5-9-39.
367,077. CERTIRIPE AND DESIGN. Cl. 46. 5-9-39.
367,554. WMMM AND DESIGN. Cl. 18. 5-23-39.
367,557. GROVERIPE AND DESIGN. Cl. 46. 5-23-39.
367,733. MICROMATIC SPEED FLASH. Cl. 26. 5-30-39.
367,929. PW WITHIN CIRCLE. Cl. 19. 6-6-39.
367,934. CAVALIER. Cl. 21. 6-6-39.
368,048. SUN PUNCH. Cl. 45. 6-6-39.
368,135. ETHOMULSION. Cl. 6. 6-6-39.
368,197. GARDENIA. Cl. 37. 6-13-39.
368,245. VOICE OF PROPHECY. Cl. 38. 6-13-39.
368,271. MAPLE LEAF. Cl. 37. 6-13-39.
368,295. ECONOMY ETC. AND DESIGN. Cl. 37. 6-13-39.
368,296. ECONOMY. Cl. 37. 6-13-39.
368,303. SPUDLAND'S BEST. Cl. 46. 6-13-39.
368,427. EZYTITE. Cl. 50. 6-20-39.
368,557. S-A-A. Cl. 6. 6-27-39.
368,578. SMART GIRL AND DESIGN. Cl. 39. 6-27-39.
369,064. SMA AND DESIGN. Cl. 46. 7-11-39.
369,230. MORPEL. Cl. 6. 7-18-39.
369,513. ENCHANTED NIGHTS. Cl. 32. 7-25-39.
369,558. JANE SEYMOUR. Cl. 51. 8-1-39.
369,624. FHF. Cl. 27. 8-1-39.
369,736. STOP RED. Cl. 51. 8-1-39.
370,119. WILLOWBROOKE. Cl. 39. 8-15-39.
370,139. POSTURE PILLOW. Cl. 32. 8-15-39.
370,144. HI-FLEX. Cl. 35. 8-15-39.
370,279. SIGNATURE. Cl. 37. 8-22-39.
370,493. BEAUTY BLEST. Cl. 51. 8-29-39.
370,577. CW. Cl. 13. 8-29-39.
370,582. KROMALIN. Cl. 16. 8-29-39.
370,585. B-C-A. Cl. 6. 8-29-39.
370,594. LINOZIPS. Cl. 23. 8-29-39.
370,777. PARKAY. Cl. 46. 9-5-39.
371,058. KK. Cl. 46. 9-19-39.
371,287. PLEDGE. Cl. 46. 9-19-39.
371,288. DEHYDROL. Cl. 6. 9-19-39.
371,289. GRAPHIC ARTS AND DESIGN. Cl. 16. 9-19-39.
371,310. DURA BEAU. Cl. 6. 9-19-39.
371,420. "PERMA VENEER." Cl. 16. 9-26-39.
371,479. GENERAL BAKING COMPANY, ETC. AND DESIGN. Cl. 46. 9-26-39.
371,622. RED SKIN AND DESIGN. Cl. 46. 10-3-39.
371,655. HERCULES AND DESIGN. Cl. 23. 10-3-39.
371,659. FLAVOTAINER. Cl. 2. 10-3-39.
371,686. LEVOLIER. Cl. 21. 10-3-39.
372,094. THE EMPIRE WATCH. Cl. 27. 10-24-39.
372,307. MOHAWK AND DESIGN. Cl. 37. 10-31-39.
372,399. McCUNN'S AND DESIGN. Cl. 49. 10-31-39.
372,435. CEMETERY LEGAL COMPASS AND DESIGN. Cl. 38. 10-31-39.
372,587. LOVELY LADY. Cl. 46. 11-7-39.
372,593. PAR TAN. Cl. 1. 11-7-39.
372,615. PARKER'S P AND DESIGN. Cl. 8. 11-7-39
372,684. KEEN KASTER. Cl. 22. 11-7-39.
372,712. CEBECO. Cl. 46. 11-14-39.
372,713. PAVONE. Cl. 46. 11-14-39.
372,748. GREEN TREE G AND DESIGN. Cl. 46. 11-14-39.
372,778. SABLE AND DESIGN. Cl. 11. 11-14-39.
372,791. SHERDYE. Cl. 16. Cl. 11-14-39.
372,798. HOTTENTOT. Cl. 46. 11-14-39.
372,815. PADDOCK PICKS 'EM. Cl. 38. 11-14-39.
372,822. SV. Cl. 45. 11-14-39.
372,844. TEN-B-LOW. Cl. 46. 11-14-39
372,849. FRINGE-TEX. Cl. 32. 11-14-39.
372,855. PERMISETTE. Cl. 42. 11-14-39.
372,862. A TRIANGULAR DESIGN. Cl. 22. 11-14-39.
372,901. CREAM CITY. Cl. 46. 11-21-39.
372,949. SCOLDY MAID. Cl. 40. 11-21-39.
372,983. VINICOTE. Cl. 16. 11-21-39.
372,993. MERCURY AND DESIGN. Cl. 17. 11-21-39.
373,007. PUTNAM. Cl. 6. 11-21-39.
373,020. LOJEL. Cl. 6. 11-21-39.
373,052. BATHSHEEN. Cl. 6. 11-21-39.
373,059. BONFIRE. Cl. 51. 11-21-39.
373,170. WALLMASTER. Cl. 23. 11-28-39.
373,171. WALLMASTER. Cl. 4. 11-28-39.
373,183. POLSKA BABKA AND DESIGN. Cl. 46. 11-28-39.

542,131. SHIPSIDE. Cl. 42. Texas Textile Mills. 5-8-51. New Cert. Sec. 7(c) to Texas Textile Mills, Inc., Dallas,

584,419. McKINNEY. Cl. 42. Texas Textile Mills. 1-5-54. New Cert. Sec. 7(c) to Texas Textile Mills, Inc., Dallas,

TRADEMARK REGISTRATIONS CANCELED

Section 7(d)

673,737. DORLON. Cl. 13. 2–10–59.

Section 8

232,101. TREASURY. Cl. 37. 8–30–27.
240,923. LUSEAUX. Cl. 18. 4–10–28.
294,622. FOOT CARESS. Cl. 39. 6–7–32.
304,873. BLUE DUCKY AND DESIGN. Cl. 39. 7–18–33.
379,445. COMPESTRIN. Cl. 18. 7–9–40.

The following registrations issued June 23, 1953

576,171. DAVIDSON DUAL DUPLICATOR. Cl. 23.
576,195. MURTEX. Cl. 18.
576,196. STANCO ULTRA-LITE SOUR AND DESIGN. Cl. 6.
576,198. TEL-I-VISION AND DESIGN. Cl. 18.
576,204. DALLAS HUT AND DESIGN. Cl. 12.
576,209. CHILDREN'S CHEER CLUB. Cl. 22.
576,211. AN EXAGGERATED T. Cl. 12.
576,217. WACO. Cl. 42.
576,219. MARTHA BONEE. Cl. 39.
576,221. ROTO-HONE. Cl. 4.
576,228. HAIR-RITE. Cl. 51.
576,229. HAIR-RITE. Cl. 51.
576,232. GOLDI-LOCKS. Cl. 51.
576,234. HALOVEIL. Cl. 39.
576,235. AIRCASTLE. Cl. 21.
576,239. GENTASOL. Cl. 18.
576,240. SUVAN. Cl. 42.
576,242. VITA-LONG AND PHOTOGRAPH. Cl. 18.
576,248. FRANCHET. Cl. 18.
576,252. FOR THE MAN WITH THE MARK OF SUCCESS. Cl. 51.
576,258. POSE. Cl. 51.
576,258. EXIDOR. Cl. 25.
576,259. MS AND DESIGN. Cl. 26.
576,260. ORYCLON. Cl. 51.
576,265. ATOMO-WHITE. Cl. 6.
576,276. WOODCRETE. Cl. 12.
576,278. BANFLY. Cl. 6.
576,280. SULFOZIN. Cl. 18.
576,281. SURACAPS. Cl. 18.
576,282. "360." Cl. 21.
576,283. NEWENE. Cl. 51.
576,285. FLAG DESIGN. Cl. 25.
576,286. MICRO-SYSTEM. Cl. 39.
576,288. ETRO. Cl. 23.
576,293. JONQUILJOY. Cl. 51.
576,294. SUNNY PINK. Cl. 51.
576,295. PARA-CAKE. Cl. 6.
576,301. SILVER SLIPPER. Cl. 39.
576,303. THAW AND DESIGN. Cl. 21.
576,304. THE VIEWER AND DESIGN. Cl. 39.
576,310. STAR OF TELEVISION AND DESIGN. Cl. 39.
576,312. "VINA-PINA." Cl. 51.
576,314. AXCENT. Cl. 23.
576,321. STAR AND DESIGN. Cl. 14.
576,323. CHLOROCONE. Cl. 18.
576,324. TRAVELEER. Cl. 19.
576,328. TEXAS SANDY. Cl. 39.
576,330. PERMACORD. Cl. 43.
576,331. DEHACHROM. Cl. 6.
576,332. DEHALAN. Cl. 6.
576,333. PEGGYLANE. Cl. 39.
576,334. MIGHTY MO. Cl. 39.
576,337. JUNIPOL. Cl. 15.
576,341. LYNX. Cl. 13.
576,352. SHELLWELD. Cl. 13.
576,353. ALUMI-SLATE. Cl. 12.
576,357. NEIMAN-MARCUS PALOMINO. Cl. 39.
576,362. DORIE DARE AND DESIGN. Cl. 39.
576,369. GUIDASEME AND DESIGN. Cl. 39.
576,373. NOZOLA. Cl. 13.
576,378. S.Y.-4. Cl. 18.
576,379. REPRESENTATION OF 3 STARS. Cl. 12.
576,381. DRI-NITE. Cl. 39.
576,385. KON-TUR. Cl. 18.
576,393. AIREX. Cl. 12.
576,395. FLARE KNIT AND DESIGN. Cl. 39.
576,396. MIR-CLE AND DESIGN. Cl. 13.
576,406. DESIGN OF MAN ON CARPET. Cl. 3.
576,407. MAGIC CARPET. Cl. 3.
576,414. FLYING TRIP. Cl. 3.
576,425. AZURENE. Cl. 18.
576,433. LIGERIC. Cl. 18.
576,442. FLANDRE. Cl. 39.
576,444. "HOT-FROST." Cl. 18.
576,452. WARRANT. Cl. 13.
576,463. HANTITE. Cl. 13.
576,466. STAYPO. Cl. 18.
576,469. MUTUAL. Cl. 22.
576,479. FELO'RAL. Cl. 18.
576,481. NORCINE. Cl. 18.
576,485. AC'CENT. Cl. 6.
576,486. APPROVED QUALITY FRUIT WASHINGTON STATE FRUIT COMMISSION AND DESIGN. Cl. 46.
576,487. YOUR QUALITY GUARANTEED ETC. AND DESIGN. Cl. 12.
576,496. HUDSON RAINBOW COLORS. Cl. 37.
576,498. SAPPHIRIZED TITANIA AND DESIGN. Cl. 28.
576,500. SAVE-A-SEAT. Cl. 19.
576,502. SPRAY-DENT. Cl. 51.
576,505. FEDOR. Cl. 27.
576,506. AMERICAN FALCONER AND DESIGN. Cl. 32.
576,508. DELUSTRE FINISH. Cl. 39.
576,509. NU-LOOK. Cl. 52.
576,510. HUTCHISON HOUSE AND DESIGN. Cl. 42.
576,514. SEC. Cl. 8.
576,517. LANCASTER FINE SHOES. Cl. 39.
576,518. BARBECUE. Cl. 47.
576,519. MARKWELL DRIPAINT THE BRUSHLESS PAINT. Cl. 37.
576,521. VENT ROLL ETC. AND DESIGN. Cl. 12.
576,522. TELE-EX-PAND. Cl. 12.
576,525. FROSTTITE. Cl. 12.
576,528. DR. KELLER'S ELECTRON DISPERSION SHOE. Cl. 44.
576,529. FLAVORAY. Cl. 21.
576,530. SILK-EE. Cl. 46.
576,538. CORY CASUALS AND DESIGN. Cl. 39.
576,539. WILL-KLEEN. Cl. 15.
576,541. WACKER-BEAGID (PRESSKARBID) AND DESIGN. Cl. 6.
576,543. DETROIT ABRASIVE CEMENT. Cl. 5.
576,549. SAVE-WAY STAMPS. Cl. 38.
576,552. DE SOTO. Cl. 28.
576,556. "EVERYTHING IN OUTDOOR BEAUTY" ETC. Cl. 103.

Section 18

183,209. SUZANNE. Cl. 49. 4–22–24.

TRADEMARK REGISTRATIONS—NEW CERTIFICATES

New Certificates issued under sections 7(c), 7(f), 7(g) of the Trademark Act of 1946 for the unexpired term of the original registrations.

386,033. MUSCULAID AND DESIGN. Cl. 6. John Toth. 3–25–41. New Cert. Sec. 7(c) to Helen T. Snellenberger and Johanna M. Krepe, South Bend, Ind.

442,365. A TEX*TEX FABRIC. Cl. 42. Texas Textile Mills. 4–5–49. New Cert. Sec. 7(c) to Texas Textile Mills, Inc., Dallas, Tex.

542,131. SHIPSIDE. Cl. 42. Texas Textile Mills. 5–8–51. New Cert. Sec. 7(c) to Texas Textile Mills, Inc., Dallas, Tex.

547,173. SEACREST. Cl. 42. Texas Textile Mills. 8–28–51. New Cert. Sec. 7(c) to Texas Textile Mills, Inc., Dallas, Tex.

547,174. TAHOE. Cl. 42. Texas Textile Mills. 8–28–51. New Cert. Sec. 7(c) to Texas Textile Mills, Inc., Dallas Tex.

584,419. McKINNEY. Cl. 42. Texas Textile Mills. 1–5–54. New Cert. Sec. 7(c) to Texas Textile Mills, Inc., Dallas, Tex.

656,398. SANDS CLINSTEEL. Cl. 23. Unit Rail Anchor Company, Inc. 12–31–57. New Cert. Sec. 7(c) to Harmon Machine Co., Inc., Wichita, Kans.

Click Beverage Co.: *See*—
Dedekind, Roland W.
Clingable Patterns, Inc., New York, N.Y. 683,242, pub.
Drive-in-Theatre Mfg. Co.: *See*—
Dit-Mco, Inc.
Drug Products Co., Inc., The, East Orange, N.J. 576,280,

and Johanna M. Kreps, South Bend, Ind.

Inc., Dallas, Tex.

INDEX OF REGISTRANTS

AUGUST 11, 1959

(Registered; Renewed; Canceled; Amended, Disclaimed, Corrected, etc.; New Certificates; 12c Publications.)

ABC Industries, Inc., Milwaukee, Wis. 683,074, pub. 5–26–59. Cl. 3.
Abbott Laboratories, North Chicago, Ill. 576,466, canc. Cl. 18.
Abbott Laboratories, North Chicago, Ill. 683,355, pub. 5–26–59. Cl. 44.
Acme-Harding Glass, Inc., The, Topeka, Kans. 683,259, pub. 5–26–59. Cl. 32.
Acromag, Inc., Detroit, Mich. 683,184, pub. 5–26–59. Cl. 21.
Aisenstein, Louis, & Bros. Inc.: *See*—
Aisenstein-Woronock & Sons, Inc.
Aisenstein-Woronock & Sons, Inc., to Louis Aisenstein & Bros. Inc., New York, N.Y. 372,094, ren. 8–11–59. Cl. 27.
Ajax Iron Works, Corry, Pa. 683,225, pub. 5–26–59. Cl. 23.
Alba Hosiery Mills, Inc., by change of name from Pilot Full Fashion Mills, Inc., New York, N.Y. 683,306, pub. 5–4–54. Cl. 39.
Alcan Shells, Inc., Alton, Ill. 683,107, pub. 5–26–59. Cl. 9.
Altman, B., & Co., New York, N.Y. 576,406, canc. Cl. 8.
Altman, B., & Co., New York, N.Y. 576,407, canc. Cl. 8.
American Cancer Society, Inc., New York, N.Y. 683,445–6, pub. 5–26–59. Cl. 107.
American Can Co., New York, N.Y. 683,288, pub. 5–26–59. Cl. 37.
American Cyanamid Co., New York, N.Y. 683,147, pub. 5–26–59. Cl. 18.
American Cyanamid Co., New York, N.Y. 683,157, pub. 5–26–59. Cl. 18.
American Cyanamid Co., New York, N.Y. 683,352, pub. 5–26–59. Cl. 44.
American Cyanamid Co., New York, N.Y. 683,162–4, pub. 5–26–59. Cl. 18.
American Cyanamid Co., New York, N.Y. 683,374, pub. 5–26–59. Cl. 46.
American Home Products Corp.: *See*—
S.M.A. Corp.
American Mfg. Co., Inc., Brooklyn, N.Y. 683,106, pub. 5–26–59. Cl. 7.
American Mfg. Concern, Falconer, N.Y. 576,506, canc. Cl. 32.
American Novelty Co., Wellsville, N.Y. 683,231, pub. 5–26–59. Cl. 23.
American Studios, Inc., La Crosse, Wis. 683,301, pub. 5–26–59. Cl. 38.
American Thermocatalytic Corp., Mineola, N.Y. 683,266–7, pub. 5–26–59. Cl. 34.
American Vita-Sauce Products, Inc., Media, Pa. 683,357, pub. 5–26–59. Cl. 44.
Ames, Butler, Lowell, Mass. 576,301, canc. Cl. 39.
Anchor Chemical Corp., Hollywood, Calif. 576,509, canc. Cl. 52.
Anheuser-Busch Brewing Association, to Anheuser-Busch, Inc., St. Louis, Mo. 127,577, ren. 8–11–59. Cl. 46.
Anheuser-Busch, Inc.: *See*—
Anheuser-Busch Brewing Association.
Anselmi, Francisco L., d.b.a. Laboratorios Flar-Arkadia, Coamo, Puerto Rico. 683,416, pub. 5–26–59. Cl. 51.
Arden, Elizabeth, Inc., to Elizabeth Arden Sales Corp., New York, N.Y. 369,736, ren. 8–11–59. Cl. 51.
Arden, Elizabeth, Sales Corp.: *See*—
Arden, Elizabeth, Inc.
Arnol Petroleum Co., New York, N.Y. 683,195, pub. 5–26–59. Cl. 21.
Arruda, Jesse D., Chicago, Ill. 576,556, canc. Cl. 108.
Aunt Mary Chocolates: *See*—
Sharaf Co., Inc., The.
Austin Knitting Mills, Inc., Albemarle, N.C. 683,326, pub. 5–26–59. Cl. 39.
Automatic Switch Co., Florham Park, N.J. 683,189, pub. 5–31–59. Cl. 21.
Autometric Corp., New York, N.Y. 683,294, pub. 5–26–59. Cl. 38.
Automobilove Zavody Klementa Gottwalda, Narodni Podnik, Prague, Czechoslovakia. 683,167, pub. 5–26–59. Cl. 19.
Auto-Soler Co., The, Atlanta, Ga. 683,224, pub. 5–26–59. Cl. 23.
Ayer, Harriet Hubbard, Inc., New York, N.Y. 373,052, ren. 8–11–59. Cl. 6.
Bahner, Louis, Elbeo-Werke, G.m.b.H., Augsburg, Germany. 683,331, pub. 5–26–59. Cl. 39.
Bailey Laboratories, Buffalo, N.Y. 683,409, pub. 5–26–59. Cl. 51.
Ballif, Eugene E., d.b.a. Eugene Ballif Display Materials, Los Angeles, Calif. 683,063, pub. 5–26–59. Cl. 1.
Barnes-Hind Ophthalmic Products Co.: *See*—
Barnes-Hind Ophthalmic Product, Inc.
Barnes-Hind Ophthalmic Product, Inc., d.b.a. Barnes-Hind Ophthalmic Products Co., Sunnyvale, Calif. 683,146, pub. 5–26–59. Cl. 18.
Barton Distilling Co., Chicago, Ill. 683,398, pub. 4–14–59. Cl. 49.
Baxter Laboratories, Inc., to Wallerstein Co., Inc., New York, N.Y. 683,103, pub. 5–26–59. Cl. 6.
Beck, A. S., Shoe Corp., New York, N.Y. 365,306, ren. 8–11–59. Cl. 39.
Bedford Shirt Corp., New York, N.Y. 683,339, pub. 5–26–59. Cl. 39.
Benco Television Associates Ltd., Rexdale, Ontario, Canada. 683,182, pub. 5–26–59. Cl. 21.
Benrus Watch Co., Inc., New York, N.Y. 683,252, pub. 5–26–59. Cl. 27.
Berjon Co.: *See*—
Berjon Co., The.
Berjon Co., The, d.b.a. Berjon Co., Memphis, Tenn. 683,088, pub. 5–26–59. Cl. 6.
Bernard, Louis J., New Orleans, La. 683,251, pub. 5–26–59. Cl. 27.
Biological Research Inc., St. Louis, Mo. 683,360, pub. 5–26–59. Cl. 44.
Black and Decker Mfg. Co., The, Towson, Md. 576,221, canc. Cl. 4.
Black, Sivalls & Bryson, Inc., Kansas City, Mo. 683,128, pub. 5–26–59. Cl. 13.
Blen Corp., Cambridge, Mass. 683,115, pub. 5–26–59. Cl. 12.
Bluepoints Sea Foods Corp., Brooklyn, N.Y. 683,392, pub. 5–26–59. Cl. 42.
Blue Ridge Food Processing Co., Inc., Westminster, Md. 683,368, pub. 5–26–59. Cl. 46.
Bonforte Construction Co.: *See*—
Bonforte, John.
Bonforte, John, d.b.a. Bonforte Construction Co., Colorado Springs, Colo. 576,521, canc. Cl. 12.
Booth, George G., d.b.a. Booth Welding Shop, Berwick, Pa. 576,522, canc. Cl. 12.
Booth Welding Shop: *See*—
Booth, George G.
Borick, Louis, St. Paul, Minn. 683,399, pub. 5–26–59. Cl. 50.
Boyertown Auto Body Works, Inc., Boyertown, Pa. 683,169, pub. 5–26–59. Cl. 19.
Brauer, Emil, & Co., Aachen, Germany. 683,342, pub. 5–26–59. Cl. 41.
Breck, John H., Inc., Springfield, Mass. 683,421–22, pub. 5–26–59. Cl. 52.
Bregman, Jack, Los Angeles, Calif. 576,209, canc. Cl. 22.
Bridgeport Brass Co., Bridgeport, Conn. 576,253, canc. Cl. 51.
Brocator, Joseph G., Washington, D.C. 372,815, ren. 8–11–59. Cl. 38.
Bruce, Robert, Inc., Philadelphia, Pa. 683,307, pub. 5–26–59. Cl. 39.
Bunyan, Paul, Entertainment, Inc., Chicago, Ill. 683,442, pub. 5–26–59. Cl. 107.
Butler Mfg. Co.: *See*—
Pantex Mfg. Co.
Campbell & Clark Ltd., Glasgow, Scotland. 683,458. Cl. 49.
Campbell, Harry T., Son's Corp., Towson, Md. 683,110, pub. 5–26–59. Cl. 12.
Carew Mfg. Co., South Hadley Falls, Mass. 232,101, canc. Cl. 37.
Carnegie, Dale, & Associates, by change of name from Dale Carnegie Publishers, Inc., New York, N.Y. 683,295, pub. 5–26–59. Cl. 38.
Carnegie, Dale, Publishers, Inc.: *See*—
Carnegie, Dale, & Associates.
Carrier Corp., Syracuse, N.Y. 576,314, canc. Cl. 23.
Cat's Paw Rubber Co., Inc., Baltimore, Md. 683,400, pub. 5–26–59. Cl. 50.
Cavalier Corp.: *See*—
Tennessee Furniture Corp.
Celotex Corp., The, Chicago, Ill. 576,211, canc. Cl. 12.
Cemetery Legal Compass, Los Angeles, Calif. 372,435, ren. 8–11–59. Cl. 38.
Center Chemical Co., Atlanta, Ga. 683,424, pub. 5–26–59. Cl. 52.
Charles of the Ritz, Inc., New York, N.Y. 373,059, ren. 8–11–59. Cl. 51.
Chatillon, John, & Sons, New York, N.Y. 683,241, pub. 5–26–59. Cl. 26.
Chemex Corp., New York, N.Y. 683,257, pub. 5–26–59. Cl. 31.
Chesley Industries Inc., Detroit, Mich. 683,268, pub. 5–26–59. Cl. 34.
Chicago Duplicator Co.: *See*—
Davidson Mfg. Corp.
Childers Mfg. Co., Houston, Tex. 683,111, pub. 5–26–59. Cl. 12.
Ciba Ltd., Basel, Switzerland. 683,105, pub. 5–26–59. Cl. 6.
Cilag Aktiengesellschaft, Schaffhausen, Switzerland. 576,425, canc. Cl. 18.
Circodre Spark Plug Co., Hamtramck, Mich. 576,282, canc. Cl. 21.
Clark Shoe Co., Auburn, Maine. 683,319, pub. 5–26–59. Cl. 39.
Clayton, Lulu, d.b.a. Madam Lulu Clayton, Kinloch, Mo. 370,493, ren. 8–11–59. Cl. 51.
Clayton, Madam Lulu: *See*—
Clayton, Lulu.
Clement, Joseph J., d.b.a. Fold-A-Planter, Buffalo, N.Y. 683,068, pub. 5–26–59. Cl. 2.
Cleveland Pneumatic Industries, Inc., Cleveland, Ohio. 683,172, pub. 5–26–59. Cl. 19.

Geigy Chemical Corp., Ardsley, N.Y. 683,086, pub. 5–26–59. Cl. 6.
Geigy Chemical Corp., Ardsley, N.Y. 683,093–5, pub. 5–26–59.
Highway Equipment Co., Cedar Rapids, Iowa. 683,214–15, pub. 5–26–59. Cl. 23.
Hodgman Rubber Co., Framingham, Mass. 683,291, pub.

Click Beverage Co.: *See*—
Dedekind, Roland W.
Clingable Patterns, Inc., New York, N.Y. 683,242, pub. 5–26–59. Cl. 26.
Clopay Corp., Cincinnati, Ohio. 372,849, ren. 8–11–59. Cl. 32.
Clopay Corp., Cincinnati, Ohio. 683,448. Cl. 1.
Coldwater Seafood Corp., New York, N.Y. 683,366, pub. 5–26–59. Cl. 46.
Columbian Bronze Corp., Freeport, N.Y. 683,166, pub. 5–26–59. Cl. 19.
Columbian Rope Co., Auburn, N.Y. 365,258, ren. 8–11–59. Cl. 4.
Columbus Dental Mfg. Co., The, Columbus, Ohio. 683,359, pub. 5–26–59. Cl. 44.
Colvin-Templeton, Inc., Oakland, Calif. 683,258, pub. 5–26–59. Cl. 31.
Commerce-Pacific Inc., Los Angeles, Calif. 683,203, pub. 5–26–59. Cl. 22.
Component Mfg. Service, Inc., West Bridgewater, Mass. 683,181, pub. 5–26–59. Cl. 21.
Continental Can Co., Inc.: *See*—
Royal, Thomas M., & Co.
Continental-Diamond Fibre Corp., Newark, Del. 683,183, pub. 5–26–59. Cl. 21.
Cool Maid Candy Co., to J. F. Smith and L. F. Smith, d.b.a. Frugola Co., Salt Lake City, Utah. 364,784, ren. 8–11–59. Cl. 45.
Coon, W. B., Co., Rochester, N.Y. 294,622, canc. Cl. 39.
Cooper Alloy Foundry Co., The, Hillside, N.J. 576,352, canc. Cl. 13.
Coral Records, Inc., New York, N.Y. 683,280, pub. 5–26–59. Cl. 36.
Corn Products Co., by merger from Corn Products Refining Co., New York, N.Y. 683,378, pub. 3–3–59. Cl. 46.
Corn Products Refining Co.: *See*—
Corn Products Co.
Coro, Inc., New York, N.Y. 683,255, pub. 5–26–59. Cl. 28.
Cory Casual Sportswear Corp., New York, N.Y. 576,538, canc. Cl. 39.
Cosby-Hodges Milling Co., Birmingham, Ala. 683,376, pub. 5–26–59. Cl. 46.
Crane Hoist Engineering Corp., Bell, Calif. 683,222, pub. 5–26–59. Cl. 23.
Crown Aluminum, Inc., d.b.a. Zenith Aluminum, Pittsburgh, Pa. 683,118, pub. 4–21–59. Cl. 12.
Crump, B. T., Co., Inc., Richmond, Va. 683,173, pub. 5–26–59. Cl. 19.
Crystal-Een Corp., Salt Lake City, Utah. 683,072, pub. 5–26–59. Cl. 2.
Cudahy Brothers Co., to Patrick Cudahy Inc., Cudahy, Wis. 372,712, ren. 8–11–59. Cl. 46.
Cudahy Brothers Co., to Patrick Cudahy Inc., Cudahy, Wis. 372,713, ren. 8–11–59. Cl. 46.
Cudahy Brothers Co., to Patrick Cudahy Inc., Cudahy, Wis. 372,901, ren. 8–11–59. Cl. 46.
Cudahy, Patrick, Inc.: *See*—
Cudahy Brothers Co.
Curtis, Helene, Industries, Inc., Chicago, Ill. 683,418, pub. 5–26–59. Cl. 51.
Curtis Lighting, Inc., Chicago, Ill. 683,451. Cl. 21.
Daniels, Veronica T., Minneapolis, Minn. 576,381, canc. Cl. 39.
D'Aquila, Patrick J., Jersey City, N.J. 368,303, ren. 8–11–59. Cl. 46.
Davidson Corp.: *See*—
Davidson Mfg. Corp.
Davidson Mfg. Corp., now by change of name Chicago Duplicator Co., to Davidson Corp., Chicago, Ill. 576,171, canc. Cl. 23.
Davis, B. F., Garment Co. Inc., New Orleans, La. 576,334, canc. Cl. 39.
Dayton Color Works: *See*—
Lowe Brothers Co., The.
Dayton Rubber Co., The, Dayton, Ohio. 683,078, pub. 5–26–59. Cl. 5.
De Burgh, Albert R.: *See*—
De Burgh, Maria L., and Raymond J. De Burgh.
De Burgh, Maria L., and Raymond J. De Burgh, from M. L. Luisa De Burgh, executrix, estate of A. R. De Burgh, Evansville, Ind. 683,426, pub. 5–26–59, Cl. 100.
De Burgh, Raymond J.: *See*—
De Burgh, Maria L., and Raymond J. De Burgh.
Dedekind, Roland W., d.b.a. Click Beverage Co., West Lawn, Pa. 683,362, pub. 5–26–59. Cl. 45.
Deering, Milliken & Co. Inc., New York, N.Y. 683,343, pub. 5–26–59. Cl. 42.
Densco, Inc., Denver, Colo. 683,358, pub. 5–26–59. Cl. 44.
Dental Perfection Co., Inc., Glendale, Calif. 683,348, pub. 5–26–59. Cl. 44.
Designers for Industry, Inc., Cleveland, Ohio. 683,428, pub. 5–26–59. Cl. 100.
Deutsch Fastener Corp., Gardena, Calif. 683,124, pub. 5–26–59. Cl. 13.
Dillon, W. C., & Co., Inc., Van Nuys, Calif. 683,243, pub. 5–26–59. Cl. 26.
Dit-Mco, Inc., d.b.a. Drive-in-Theatre Mfg. Co., Kansas City, Mo. 683,373, pub. 5–26–59. Cl. 34.
Diversified Enterprises, Inc., Byron, Mich. 683,220, pub. 5–26–59. Cl. 23.
Dore, John L., Inc., Houston, Tex. 673,737, canc. Cl. 13.
Dossert Mfg. Corp., Brooklyn, N.Y. 683,177–9, pub. 5–26–59. Cl. 21.
Dow Chemical Co., The, to The Dow Chemical Co., Midland, Mich. 368,125, ren. 8–11–59. Cl. 6.
Dreher Leather Mfg. Corp., New York, N.Y. 683,066, pub. 5–26–59. Cl. 1.
Drive-in-Theatre Mfg. Co.: *See*—
Dit-Mco, Inc.
Drug Products Co., Inc., The, East Orange, N.J. 576,280, canc. Cl. 18.
Dubuque, William D., d.b.a. Lebanon Chemical Co., Lebanon, N.H. 576,539, canc. Cl. 15.
Durable Mfg. Co., New York, N.Y. 683,121, pub. 5–26–59. Cl. 13.
Durand & Huguenin A.G., Basel, Switzerland. 576,331, canc. Cl. 6.
Durand & Huguenin A.G., Basel, Switzerland. 576,332, canc. Cl. 6.
Dura-Vent Corp., Redwood City, Calif. 683,269–71, pub. 5–26–59. Cl. 34.
Durosel, Inc., from C. E. Vierheller, St. Louis, Mo. 683,141, pub. 5–26–59. Cl. 16.
Eagle Pencil Co., Danbury, Conn. 683,290, pub. 5–26–59. Cl. 37.
Eastern Isles Importing Co., Inc., The, to J. C. Penney Co., New York, N.Y. 368,578, ren. 8–11–59. Cl. 39.
Eastman Kodak Co., Rochester, N.Y. 683,346, pub. 5–26–59. Cl. 43.
Eaton Chemical and Dyestuff Co., Detroit, Mich. 576,265, canc. Cl. 6.
Eau de Cologne- & Parfumerie-Fabrik Glockengasse No. 4711 gegenuber der Pferdepost von Ferd Mulhens: *See*—
Mulhens, Ferdinand.
Eisman, Ewen and Rose, Inc., New York, N.Y. 576,500, canc. Cl. 19.
Endo Laboratories Inc., Richmond Hill, N.Y. 683,165, pub. 5–26–59. Cl. 18.
Enrich, Henry A., & Co., Inc., New York, N.Y. 576,295, canc. Cl. 6.
Erwin Pharmacals, Inc., Chicago, Ill. 576,378, canc. Cl. 18.
Essex Wire Corp., Fort Wayne, Ind. 683,175, pub. 5–26–59. Cl. 21.
Etrofile & Tool Mfg. Corp., Brooklyn, N.Y. 576,288, canc. Cl. 23.
Eugene Ballif Display Materials: *See*—
Ballif, Eugene E.
Executone, Inc., New York, N.Y. 683,296, pub. 5–26–59. Cl. 38.
Faber, A. W., Inc., to A. W. Faber-Castell Pencil Co., Newark, N.J. 368,271, ren. 8–11–59. Cl. 37.
Faber-Castell, A. W., Pencil Co., Inc.: *See*—
Faber, A. W., Inc.
Fabricators, Inc., South Norwalk, Conn. 683,118, pub. 5–26–59. Cl. 12.
Fabrique D'Horlogerie De Fontainemelon, Fontainemelon, Switzerland. 369,624, ren. 8–11–59. Cl. 27.
Family Life Insurance Co., d.b.a. $5000 Family Security Club, Seattle, Wash. 683,434, pub. 5–26–59. Cl. 102.
Fantashere, Inc., Buffalo, N.Y. 683,309, pub. 5–26–59. Cl. 39.
Farbenfabriken Bayer, Krefeld-Uerdingen, Germany. 576,260, canc. Cl. 51.
Fashion Crest Hosiery Co.: *See*—
Kros, Frank J.
Fawcett, Simpson, & Co. Ltd., London, England. 683,171, pub. 5–26–59. Cl. 19.
Federated Department Stores, Inc., d.b.a. Wm. Filene's Sons Co., Boston, Mass. 683,330, pub. 5–26–59. Cl. 39.
Fellows Medical Mfg. Co., Inc., New York, N.Y. 576,479, canc. Cl. 18.
Felters Co., The, Boston, Mass. 683,212, pub. 5–26–59. Cl. 23.
Fiat Metal Mfg. Co., Franklin Park, Ill. 576,452, canc. Cl. 13.
Filene's, Wm., Sons Co.: *See*—
Federated Department Stores, Inc.
Finejex Inc., East Paterson, N.J. 683,097, pub. 5–26–59. Cl. 6.
Fink, Joseph H., d.b.a. National Bird Control Laboratories, Skokie, Ill. 683,437, pub. 4–28–59. Cl. 103.
Finn, T. R., & Co., Inc., Hawthorne, N.J. 683,120, pub. 3–27–56. Cl. 13.
$5000 Family Security Club: *See*—
Family Life Insurance Co.
Flowline Corp., by change of name from Welding Fittings Corp., New Castle, Pa. 683,125, pub. 5–26–59. Cl. 13.
Fold-A-Planter: *See*—
Clement, Joseph J.
Foord, William M., Litchfield, Conn. 576,278, canc. Cl. 6.
Foster Grant Co., Inc., Leominster, Mass. 683,069, pub. 5–26–59. Cl. 2.
Fox River Paper Corp., Appleton, Wis. 683,286, pub. 5–26–59. Cl. 37.
Franchet Metal Craft, Inc., Jamaica, N.Y. 576,248, canc. Cl. 13.
Friction Engineering Co., Inc., Palisades Park, N.J. 683,209, pub. 5–26–59. Cl. 23.
Friedrich Mauthe G.m.b.H., Kronenstrasse, Germany. 683,250, pub. 5–26–59. Cl. 27.
Friendly Frost Sales Corp., Ozone Park, N.Y. 576,525, canc. Cl. 12.
Frito Co., The, Dallas, Tex. 683,396, pub. 6–9–59. Cl. 46.
Fritzsche Brothers, Inc., New York, N.Y. 683,375, pub. 2–24–59. Cl. 46.
Frugola Co.: *See*—
Cool Maid Candy Co.
G M Hair Products, Inc.: *See*—
Gold Metal Hair Products, Inc.
Gabai, Simon, Paris, France. 683,320–1, pub. 5–26–59. Cl. 39.
Geigy Chemical Corp., Ardsley, N.Y. 683,080, pub. 5–26–59. Cl. 6.
Geigy Chemical Corp., Ardsley, N.Y. 683,082, pub. 5–26–59. Cl. 6.

Knox, Lewis, d.b.a. Knox Soap Co., Chicago, Ill. 683,096, pub. 5–26–59. Cl. 6.
Knox Soap Co.: *See*—
Knox, Lewis.
Kros, Frank J., d.b.a. Fashion Crest Hosiery Co., New York, N.Y. 683,170, pub. 5–26–59. Cl. 19.
Kuhn, Robert P., Inc., Minneapolis, Minn. 683,217, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,215, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,216, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,217, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,218, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,219, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,221, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,223, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,224, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,225, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,226, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,227, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,228, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,229, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,230, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,231, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,232, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,233, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,234, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,235, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,236, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,237, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,238, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,239, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,240, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,241, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,242, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,244, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,245, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,246, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,247, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,248, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,249, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,250, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,251, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,252, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,253, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,254, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,255, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,256, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,257, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,258, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,259, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,260, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,261, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,262, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,263, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,264, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,265, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,266, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,267, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,268, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,269, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,270, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,271, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,272, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,273, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,274, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,275, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,276, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,277, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,278, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,279, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,280, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,281, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,282, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,283, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,284, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,285, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,286, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,287, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,288, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,289, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,290, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,291, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,292, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,293, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,294, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,295, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,296, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,297, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,298, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,299, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,300, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,301, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,302, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,303, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,304, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,305, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,306, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,307, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,308, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,309, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,310, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,311, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,312, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,313, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,314, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,315, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,316, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,317, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,318, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,319, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,320, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,321, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,322, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,323, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,324, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,325, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,326, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,327, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,328, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,329, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,330, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,331, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,332, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,333, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,334, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,335, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,336, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,337, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,338, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,339, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,340, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,341, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,342, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,343, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,344, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,345, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,346, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,347, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,348, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,349, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,350, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,351, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,352, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,353, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,354, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,355, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,356, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,357, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,358, pub. 5–26–59. Cl. 23.
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Lamb Rubber Co., Inc., Cleveland, Ohio. 683,361, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,362, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,363, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,364, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,365, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,366, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,367, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,368, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,369, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,370, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,371, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,372, pub. 5–26–59. Cl. 23.
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Lamb Rubber Co., Inc., Cleveland, Ohio. 683,374, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,375, pub. 5–26–59. Cl. 23.
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Lamb Rubber Co., Inc., Cleveland, Ohio. 683,382, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,383, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,384, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,385, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,386, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,387, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,388, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,389, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,390, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,391, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,392, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,393, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,394, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,395, pub. 5–26–59. Cl. 23.
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Lamb Rubber Co., Inc., Cleveland, Ohio. 683,399, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,400, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,401, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,402, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,403, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,404, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,405, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,406, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,407, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,408, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,409, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,410, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,411, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,412, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,413, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,414, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,415, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,416, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,417, pub. 5–26–59. Cl. 23.
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Lamb Rubber Co., Inc., Cleveland, Ohio. 683,419, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,420, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,421, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,422, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,423, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,424, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,425, pub. 5–26–59. Cl. 23.
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Lamb Rubber Co., Inc., Cleveland, Ohio. 683,427, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,428, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,429, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,430, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,431, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,432, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,433, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,434, pub. 5–26–59. Cl. 23.
Lamb Rubber Co., Inc., Cleveland, Ohio. 683,435, pub. 5–26–59. Cl. 23

Geigy Chemical Corp., Ardsley, N.Y. 683,086, pub. 5–26–59. Cl. 6.
Geigy Chemical Corp., Ardsley, N.Y. 683,093–5, pub. 5–26–59. Cl. 6.
Geigy Chemical Corp., Ardsley, N.Y. 683,098–9, pub. 5–26–59. Cl. 6.
Geigy Chemical Corp., Ardsley, N.Y. 683,152, pub. 5–26–59. Cl. 18.
General Baking Co., New York, N.Y. 371,479, ren. 8–11–59. Cl. 46.
General Electric Co., Ltd., The, London, England. 683,185, pub. 3–24–59. Cl. 21.
General Foods Corp., White Plains, N.Y. 683,364, pub. 5–26–59. Cl. 46.
General Metal Products Corp., Lakewood, N.J. 576,469, canc. Cl. 22.
Gevaert Photo-Producten N.V., Mortsel, Belgium. 683,454. Cl. 26.
Gibson, Whitmel H., Jourdanton, Tex. 683,092, pub. 5–26–59. Cl. 6.
Gifts By Wire, Inc., Delray Beach, Fla. 683,427, pub. 5–26–59, Cl. 100.
Ginsburg and Abelson, Inc., New York, N.Y. 683,336, pub. 5–26–59. Cl. 39.
Giovinazzi, Mary P., New York, N.Y. 576,219, canc. Cl. 39.
Girard Trust Corn Exchange Bank, Philadelphia, Pa. 683,432, pub. 5–26–59. Cl. 102.
Gladding, McDean & Co., Los Angeles, Calif. 576,379, canc. Cl. 12.
Glaser, Harry, Inc., New York, N.Y. 576,362, canc. Cl. 39.
Glas-Kraft, Inc., Lonsdale, R.I. 683,284, pub. 5–26–59. Cl. 37.
Glass Processing Co., Chicago, Ill. 683,263, pub. 5–26–59. Cl. 33.
Glenn, Harry, d.b.a. Mar-Vel Records, Hammond, Ind. 683,278, pub. 5–26–59. Cl. 36.
Glidden, Homer W., Sierra Madre, Calif. 576,258, canc. Cl. 25.
Gold Leaf Pharmacal Co., Inc., New Rochelle, N.Y. 576,239, canc. Cl. 18.
Gold Medal Hair Products, Inc., d.b.a. G M Hair Products, Inc., Brooklyn, N.Y. 683,405–6, pub. 12–25–56. Cl. 51.
Goodrich, B. F., Co., The, Akron, Ohio. 370,144, ren. 8–11–59. Cl. 35.
Green Bay Food Co., Green Bay, Wis. 372,798, ren. 8–11–59. Cl. 46.
Greenebaum, M. H., Inc., New York, N.Y. 372,748, ren. 8–11–59. Cl. 46.
Greens Aerification Co.: *See*—
K & N Machine Works, Inc.
Griffith Laboratories, Inc., The, Chicago, Ill. 683,393, pub. 5–26–59. Cl. 46.
Groene, Willard L., Scottsdale, Ariz. 683,430, pub. 12–9–58. Cl. 101.
Groves Thread Co., Inc., Gastonia, N.C. 576,330, canc. Cl. 43.
Gutmann & Co., to The Tannade Co., Chicago, Ill. 126,010, ren. 8–11–59. Cl. 6.
Hair-Rite Chemical Co.: *See*—
Smithline, Herman.
Hales, Kenneth L., & Son, Inc., Chicago, Ill. 683,433, pub. 5–26–59. Cl. 102.
Hall Syndicate, Inc., The, New York, N.Y. 683,299, pub. 5–26–59. Cl. 38.
Hamilton-Skotch Corp., Hamilton, Ohio. 683,073, pub. 5–26–59. Cl. 2.
Hamilton Tool Co., The, Hamilton, Ohio. 683,218, pub. 5–26–59. Cl. 28.
Hamilton, Van A., Palestine, Tex. 576,276, canc. Cl. 12.
Handyman Tool Co.: *See*—
Tar-Gon Products, Inc.
Hanmore, De Witt W., Rumson, N.J. 683,404, pub. 5–26–59. Cl. 50.
Hantite Co., Denver, Colo. 576,463, canc. Cl. 13.
Harmon Machine Co., Inc.: *See*—
United Rail Anchor Co.
Harris, Mechell F., d.b.a. P. M. Pharmaceutical Co., Kansas City, Mo. 576,198, canc. Cl. 18.
Harris, Robert, New York, N.Y. 576,232, canc. Cl. 51.
Harrower Laboratory, Inc., The, Glendale, Calif. 379,445, canc. Cl. 18.
Hartley Products Co.: *See*—
Schmetterer, Robert.
Harwin Management Corp.: *See*—
Mister Donut of America, Inc.
Hatchet Petroleum Co., New York, N.Y. 683,196, pub. 5–26–59. Cl. 21.
Hearst Corp., The, New York, N.Y. 683,297, pub. 5–26–59. Cl. 38.
Hearst Corp., The, New York, N.Y. 683,300, pub. 5–26–59. Cl. 38.
Heil Co., The, Milwaukee, Wis. 683,226, pub. 5–26–59. Cl. 23.
Heil Packing Co., St. Louis, Mo. 683,389, pub. 5–26–59. Cl. 46.
Heli-Coil Corp., Danbury, Conn. 576,341, canc. Cl. 13.
Hercules Tool Co., Tulsa, Okla. 371,655, ren. 8–11–59. Cl. 23.
Herculock Ltd., Niagara Falls, Ontario, Canada. 683,438, pub. 5–26–59. Cl. 103.
Herman Chemical Co.: *See*—
Smithline, Herman.
Herring-Hall-Marvin Safe Co., Hamilton, Ohio. 576,285, canc. Cl. 25.
Heyer Corp., The, Chicago, Ill. 683,239, pub. 3–24–59. Cl. 26.
Heyman, Pearl, d.b.a. Speed-Ess Products, Hollywood, Calif. 683,281, pub. 5–26–59. Cl. 36.
Highway Equipment Co., Cedar Rapids, Iowa. 683,214–15, pub. 5–26–59. Cl. 23.
Hodgman Rubber Co., Framingham, Mass. 683,204, pub. 5–26–59. Cl. 22.
Hodson Corp., The, Chicago, Ill. 683,188, pub. 5–26–59. Cl. 15.
Hoffman, J. S., Co., Chicago, Ill. 683,394, pub. 5–26–59. Cl. 46.
Hokkaido Keizai Nogyo Kyodokumiai Rengokai, Sapporo, Japan. 683,101, pub. 5–26–59. Cl. 6.
Holiday House: *See*—
Tice, G. Harold.
Hollins, William, & Co. Ltd., Nottingham, Nottinghamshire, England. 683,344, pub. 5–26–59. Cl. 42.
Hope Electrical Products Co., Hillside, N.J. 683,190, pub. 5–26–59. Cl. 21.
Houston, James W., Oak Park, Mich. 683,116, pub. 5–26–59. Cl. 12.
Hudepohl Brewing Co., The, Cincinnati, Ohio. 683,397, pub. 5–26–59. Cl. 48.
Hudnut, Richard, New York, N.Y. 576,252, canc. Cl. 51.
Hudnut, Richard, Morris Plains, N.J. 683,406, pub. 5–26–59. Cl. 51.
Hudson, H. D., Mfg. Co., Chicago, Ill. 683,226, pub. 5–26–59. Cl. 23.
Hudson Pulp and Paper Corp., New York, N.Y. 576,496, canc. Cl. 37.
Humble Oil & Refining Co., Houston, Tex. 683,084, pub. 5–26–59. Cl. 6.
Hunt, C. Howard, Pen Co., Camden, N.J. 370,279, ren. 8–11–59. Cl. 37.
Hunt, C. Howard, Pen Co., Camden, N.J. 370,594, ren. 8–11–59. Cl. 28.
Impala Corp., The, Smithfield, Va. 683,253, pub. 5–26–59. Cl. 27.
Imperial Chemical Industries Ltd., London, England. 683,108, pub. 5–26–59. Cl. 9.
Imperial Knife Associated Companies, Inc., Providence, R.I. 683,219, pub. 5–26–59. Cl. 23.
Impermeabili San Giorgio, Società per Azioni, Genoa-Sturla, Italy. 683,325, pub. 5–26–59. Cl. 39.
Inflico Inc., Tucson, Ariz. 683,223, pub. 5–26–59. Cl. 23.
Infra-Red Systems, Inc., Wayne, N.J. 683,194, pub. 5–26–59. Cl. 21.
Insul-Matic, Inc., Summit, Ill. 683,140, pub. 5–26–59. Cl. 16.
International Minerals & Chemical Corp., Chicago, Ill. 576,485, canc. Cl. 6.
International Paper Co.: *See*—
Southern Kraft Corp.
International Paper Co., New York, N.Y. 683,285, pub. 5–26–59. Cl. 37.
International Silver Co., The, d.b.a. Wm. Rogers Mfg. Co., Meriden, Conn. 683,254, pub. 5–26–59. Cl. 28.
Inter-Ocean Trading Corp., Clearwater, Fla. 683,373, pub. 5–26–59. Cl. 46.
Ireland, Elston L., Portland, Oreg. 576,529, canc. Cl. 21.
Ismert-Hincke Milling Co., The, d.b.a. The Riverview Mills Co., Kansas City, Mo. 372,587, ren. 8–11–59. Cl. 46.
Jacoby-Bender, Inc., New York, N.Y. 576,552, canc. Cl. 28.
Jameco Metal Products Co.: *See*—
Silverman, Daniel.
Jarvis & Jarvis, Inc., Palmer, Mass. 683,168, pub. 5–26–59. Cl. 19.
Jenaer Glaswerk Schott & Gen., Mainz, Germany. 683,264, pub. 5–26–59. Cl. 33.
Jensen Industries, Inc., Forest Park, Ill. 683,277, pub. 5–26–59. Cl. 36.
Jergens, Andrew, Co., The, Cincinnati, Ohio. 127,424, ren. 8–11–59. Cl. 51.
Johnson & Johnson, New Brunswick, N.J. 683,353, pub. 5–26–59. Cl. 44.
Johnson & Quin Products Co., Chicago, Ill. 683,240, pub. 5–26–59. Cl. 26.
Johnson, S. C., & Son, Inc., Racine, Wis. 683,075, pub. 5–26–59. Cl. 4.
Jones, Jack B., d.b.a. Primedics Laboratories, Los Angeles, Calif. 683,142, pub. 5–26–59. Cl. 18.
Jones & Laughlin Steel Corp., Pittsburgh, Pa. 683,122, pub. 5–26–59. Cl. 13.
Joseph & Feiss Co., The, Cleveland, Ohio. 683,311–15, pub. 5–26–59. Cl. 39.
Julliard, A. D., & Co., Inc., New York, N.Y. 576,240, canc. Cl. 42.
Juncker Rijwielfabriek N.V., Apeldoorn, Netherlands. 683,200, pub. 5–26–59. Cl. 22.
Jung Products, Inc., Cincinnati, Ohio. 683,354, pub. 5–26–59. Cl. 44.
Juniper, A. T., Ltd., Liverpool, England. 576,837, canc. Cl. 15.
K & N Machine Works, Inc., St. Paul, from Greens Aerification Co., Hopkins, Minn. 683,211, pub. 5–26–59. Cl. 23.
Kalart Co. Inc., The: *See*—
Kalart Co., The.
Kalart Co., The, New York, N.Y., to The Kalart Co. Inc., Plainville, Conn. 367,733, ren. 8–11–59. Cl. 26.
Karman, Inc., Denver, Colo. 683,318, pub. 5–26–59. Cl. 39.
Kasher, Irving, d.b.a. Sargon Knitwear, Perth Amboy, N.J. 683,333, pub. 5–26–59. Cl. 39.
Keller, Roy M., Sedalia, Mo. 576,528, canc. Cl. 44.
Keiling Nut Co., The, Chicago, Ill. 371,058, ren. 8–11–59. Cl. 46.
Kelly, Arthur W., New York, N.Y. 576,328, canc. Cl. 39.
Kenwood Laboratories, Inc., Brooklyn, N.Y. 683,143, pub. 5–26–59. Cl. 18.
King Candy Co., Fort Worth, Tex. 683,371, pub. 7–15–58. Cl. 46.
Knot Mfg. Co., Lester, Pa. 683,425, pub. 5–26–59. Cl. 52.

National Engineering Co., from The Herbert S. Simpson Trust, Chicago, Ill. 683,208, pub. 5–26–59. Cl. 23.
Pennsalt Chemicals Corp.: *See*—
Sterling Products Co.

Knox, Lewis, d.b.a. Knox Soap Co., Chicago, Ill. 683,096, pub. 5–26–59. Cl. 6.
Knox Soap Co.: *See*—
Knox, Lewis.
Koerner, W., & Co., Hamburg-Altona, Germany. 683,457. Cl. 49.
Kon-Tur Products, Chicago, Ill. 576,385, canc. Cl. 18.
Kordell Sportswear, Inc., New York, N.Y. 683,328, pub. 5–26–59. Cl. 39.
Kraft-Phenix Cheese Corp., to National Dairy Products Corp., Chicago, Ill. 370,777, ren. 8–11–59. Cl. 46.
Krasdale Foods Inc., New York, N.Y. 683,381, pub. 5–26–59. Cl. 46.
Kreps, Johanna M.: *See*—
Snellenberger, Helen T., and Johanna M. Kreps.
Kress, S. H., and Co., New York, N.Y. 683,292, pub. 5–26–59. Cl. 37.
Kress, S. H., and Co., New York, N.Y. 683,452. Cl. 23.
Kros, Frank J., d.b.a. Fashion Crest Hosiery Co., Hatfield, Pa. 576,369, canc. Cl. 39.
Kuents, Roger, La Ferte-Sous-Jouarre, Seine et Marne, France. 683,216, pub. 5–26–59. Cl. 23.
Laboratorios Flar-Arkadia: *See*—
Anselmi, Francisco L.
Laboratoire Sapos, Geneva, Switzerland. 683,153, pub. 5–26–59. Cl. 18.
Laboratoires Tornade, Societe Anonyme, Paris, France. 683,151, pub. 5–26–59. Cl. 18.
Ladisch, Rolf K., Lansdowne, Pa. 683,237, pub. 5–26–59. Cl. 26.
Lakewood Mfg. Co., Westlake, Ohio. 683,256, pub. 5–26–59. Cl. 29.
Lancaster Shoe Co., Elizabethtown, Pa. 576,517, canc. Cl. 39.
Langendorf Watch Co., d.b.a. Uhrenfabrik Langendorf, Societe d'Horlogerie de Langendorf and Lonville Watch Co., Langendorf and Solothurn, Switzerland. 683,248, pub. 5–26–59. Cl. 27.
Lass O'Scotland, Ltd., New York, N.Y. 576,395, canc. Cl. 39.
Leader Dogs for the Blind, Rochester, Mich. 683,441, pub. 5–26–59. Cl. 107.
Leaf Brands, Inc., Chicago, Ill. 683,395, pub. 5–26–59. Cl. 46.
Lebanon Chemical Co.: *See*—
Dubuque, William D.
Le Fevre Laboratories, Inc., Cleveland, Ohio. 683,139, pub. 5–26–59. Cl. 15.
Lerner Blouse Co., Philadelphia, Pa. 576,333, canc. Cl. 39.
Liebovitz, S., & Sons, Inc., New York, N.Y. 183,209, canc. Cl. 49.
Lines Bros. Ltd., London, England. 683,170, pub. 5–26–59. Cl. 19.
Ling-Belt Co., Chicago, Ill. 683,229, pub. 5–26–59. Cl. 23.
Lipkin, Ezie, Corp., New York, N.Y. 683,217, pub. 5–26–59. Cl. 23.
Lissner, Jay G., Los Angeles, Calif. 683,302, pub. 5–26–59. Cl. 38.
Livermore, H. F., Corp., Boston, Mass. 683,210, pub. 5–26–59. Cl. 23.
Locke Mfg. Co., Lodi, Ohio. 683,117, pub. 5–26–59. Cl. 12.
Long, Dr. Geo. S., Corp., Pineville, La. 576,242, canc. Cl. 18.
Lowe Brothers Co., The, d.b.a. Dayton Color Works, Dayton, Ohio. 683,450. Cl. 16.
Ludlow Papers, Inc., Needham Heights, Mass. 683,067, pub. 3–.7–59. Cl. 1.
Lukens Steel Co., Coatesville, Pa. 683,135, pub. 5–26–59. Cl. 14.
Luse, Oscar P., Los Angeles, Calif. 240,923, canc. Cl. 18.
M.K.M. Knitting Mills, Inc., Manchester, N.H. 683,322, pub. 5–26–59. Cl. 39.
M & R Dietetic Laboratories, Inc., Columbus, Ohio. 372,844, ren. 8–11–59. Cl. 46.
Madison Throwing Co., Inc., Madison, N.C. 683,347, pub. 5–26–59. Cl. 43.
Mallory, P. R., & Co. Inc., Indianapolis, Ind. 683,132, pub. 5–26–59. Cl. 14.
Manifold Supplies Co., New York, N.Y. 683,109, pub. 5–26–59. Cl. 11.
Manniello Bros. & Manniello, Inc., New York, N.Y. 683,367, pub. 5–26–59. Cl. 46.
Marchon Products Ltd., London, England. 683,083, pub. 5–26–59. Cl. 6.
Mariana Grove, Inc., The: *See*—
Mariana Grove Packers, Inc.
Mariana Grove Packers, Inc., to The Mariana Grove, Inc., Fort Myers, Fla. 367,076, ren. 8–11–59. Cl. 46.
Mariana Grove Packers, Inc., to The Mariana Grove, Inc., Fort Myers, Fla. 367,077, ren. 8–11–59. Cl. 46.
Mariana Grove Packers, Inc., to The Mariana Grove, Inc., Fort Myers, Fla. 367,557, ren. 8–11–59. Cl. 46.
Mark Coin Co., Campello, Mass. 683,201, pub. 5–26–59. Cl. 22.
Mark Cross Co., New York, N.Y. 576,414, canc. Cl. 3.
Mark, Morris, d.b.a. Star Ornamental Iron Works, Los Angeles, Calif. 683,275, pub. 5–26–59. Cl. 34.
Market Forge Co., Everett, Mass. 683,349, pub. 5–26–59. Cl. 44.
Markwell Mfg. Co., Inc., New York, N.Y. 576,519, canc. Cl. 37.
Markwell Mfg. Co., Inc., New York, N.Y. 683,130, pub. 5–19–59. Cl. 13.
Marroquin, Carlos C., d.b.a. Nova Laboratories, San Antonio, Tex. 576,312, canc. Cl. 51.
Martax Botanical Corp., Chicago, Ill. 576,195, canc. Cl. 18.
Martin Engineering Co., Neponset, Ill. 683,230, pub. 5–26–59. Cl. 23.
Martin & Schwartz, Inc., to The Wayne Pump Co., Salisbury, Md. 576,259, canc. Cl. 26.
Mar-Vel Records: *See*—
Glenn, Harry.
Marx, Louis, & Co., Inc., New York, N.Y. 683,205, pub. 5–26–59. Cl. 22.
Masterseal Co., Ventura, Calif. 683,064, pub. 5–26–59. Cl. 1.
Mathieson Chemical Corp.: *See*—
Squibb, E. R., & Sons.
Matthews, Erress: *See*—
Matthews, Walter S.
Matthews, Walter S., Defuniak Springs, to E. Matthews, Jacksonville, Fla. 367,554, ren. 8–11–59. Cl. 18.
Mayes Tool Co.: *See*—
St. Amour, John P.
McCunn, James M., d.b.a. James M. McCunn and Co., to James M. McCunn & Co., Inc., New York, N.Y. 372,399, ren. 8–11–59. Cl. 49.
McCunn, James M., and Co.: *See*—
McCunn, James M.
McCunn, James M., & Co., Inc.: *See*—
McCunn, James M.
McFaull, Dolores, New York, N.Y. 576,234, canc. Cl. 39.
McGill Mfg. Co., Inc., Valparaiso, Ind. 371,686, ren. 8–11–59. Cl. 21.
Meadows, Virgil E., Bronxville, N.Y. 576,281, canc. Cl. 18.
Meat Industry Suppliers, Inc., Northfield, Ill. 683,390, pub. 5–26–59. Cl. 46.
Mechanical Servants, Inc., Chicago, Ill. 683,233, pub. 5–26–59. Cl. 23.
Merck & Co., Inc., Rahway, N.J. 683,149, pub. 5–26–59. Cl. 18.
Merck & Co., Inc., Rahway, N.J. 683,162, pub. 5–26–59. Cl. 18.
Merit Clothing Co., Mayfield, Ky. 683,310, pub. 5–26–59. Cl. 39.
Merrill Hosiery Co., Inc., Hornell, N.Y. 683,337, pub. 5–26–59. Cl. 39.
Metalcraft Corp., Chicago, Ill. 683,260, pub. 5–26–59. Cl. 32.
Metallurgical Associates, Inc., New York, N.Y. 683,131, pub. 5–26–59. Cl. 14.
Meyer Bros. Coffee and Spice Co., to Old Judge Coffee Co., St. Louis, Mo. 127,639, ren. 8–11–59. Cl. 46.
Miehle-Goss-Dexter, Inc., Chicago, Ill. 683,238, pub. 5–26–59. Cl. 26.
Milani, J. L., and June O. Milani, Hollywood, Calif. 683,443, pub. 5–26–59. Cl. 107.
Milani, June O.: *See*—
Milani, J. L., and June O. Milani.
Miller & Co., Denver, Colo. 683,338, pub. 5–26–59. Cl. 39.
Miller Co., The, Meriden, Conn. 683,176, pub. 5–26–59. Cl. 21.
Minser Tackle Co.: *See*—
Minser, William D.
Minser, William D., d.b.a. Minser Tackle Co., Chinook, Wash. 683,206, pub. 5–26–59. Cl. 22.
Mister Donut: *See*—
Mister Donut of America, Inc.
Mister Donut of America, Inc., d.b.a. Mister Donut, by change of name from Harwin Management Corp., d.b.a. Mister Donut, Brookline, Mass. 683,370, pub. 5–26–59. Cl. 46.
Mobay Chemical Co., Pittsburgh, Pa. 683,079, pub. 5–26–59. Cl. 6.
Mock Seed Co., Pittsburgh, Pa. 683,089–91, pub. 5–26–59. Cl. 6.
Modern Aids, Inc., New York, N.Y. 683,356, pub. 5–26–59. Cl. 44.
Modern Coatings: *See*—
Modern Coatings, Inc.
Modern Coatings, Inc., from Modern Coatings, Chicago, Ill. 683,402, pub. 5–26–59. Cl. 50.
Modern Telephones (Great Britain) Ltd., London, England. 683,192, pub. 5–26–59. Cl. 21.
Moench, R. G., & Co. Inc., New York, N.Y. 576,530, canc. Cl. 46.
Mohawk Tablet Co., Chicago Heights, Ill. 372,307, ren. 8–11–59. Cl. 37.
Molecu-Wire Corp., Scobeyville, N.Y. 683,188, pub. 3–17–59. Cl. 21.
Monroe Chemical Co., Quincy, Ill. 373,007, ren. 8–11–59. Cl. 6.
Montres Rolex S.A., Geneva, Switzerland. 683,249, pub. 5–26–59. Cl. 27.
Monterey Mills, Inc., New York, N.Y. 683,308, pub. 5–26–59. Cl. 39.
Monument Bottling Co., Inc., to Pepsi-Cola Bottling Co., Inc. of Indianapolis, Indianapolis, Ind. 368,048, ren. 8–11–59. Cl. 45.
Morrison Steel Products, Inc., Buffalo, N.Y. 683,114, pub. 5–26–59. Cl. 12.
Morton Chemical Co., Greensboro, N.C., to Chas. Pfizer & Co., Inc., Brooklyn, N.Y. 369,230, ren. 8–11–59. Cl. 6.
Mountain Folks Remedy Co., Forsyth, Mo. 576,444, canc. Cl. 18.
Mulhens, Ferdinand, d.b.a. Eau de Cologne- & Parfumerie-Fibrik Glockengasse No. 4711 Gegenuber der Pferdepost von Ferd. Mulhens, Cologne, o/Rhine, Germany. 683,407, pub. 5–26–59. Cl. 51.
N. J. Thermex Co., Inc., Harrison, N.J. 683,198–9, pub. 5–26–59. Cl. 21.
N.V. Nederlandse Industrie Radio Artikelen (Nira), Emmen, Netherlands. 683,193, pub. 5–26–59. Cl. 21.
National Advertising Co., Springfield, Mass. 576,349, canc. Cl. 38.
National Bird Control Laboratories: *See*—
Fink, Joseph H.
National Corp. of America, Washington, D.C. 683,420, pub. 5–26–59. Cl. 100.
National Dairy Products Corp.: *See*—
Kraft-Phenix Cheese Corp.
Pabst-Ett Corp.

Schlitt, Doris G.: *See*—
Stein, Hall & Co., Inc., New York, N.Y. 373,020, ren. 8–11–59. Cl. 6.

National Engineering Co., from The Herbert S. Simpson Trust, Chicago, Ill. 683,208, pub. 5–26–59. Cl. 23.
National Rural Electric Cooperative Association, Washington, D.C. 683,447, pub. 5–26–59. Cl. 200.
National Supply Co., The, to The National Supply Co., Pittsburgh, Pa. 370,577, ren. 8–11–59. Cl. 13.
Neiman-Marcus Co., Dallas, Tex. 576,357, canc. Cl. 39.
Nethercutt, Jack B., d.b.a. Nethercutt Laboratories, Santa Monica, Calif. 576,293, canc. Cl. 51.
Nethercutt, Jack B., Nethercutt Laboratories, Santa Monica, Calif. 576,294, canc. Cl. 51.
Nethercutt Laboratories: *See*—
Nethercutt, Jack B.
Neumaier, Adolph: *See*—
Neumaier, Mayer, Corp.
Neumaier Co., The: *See*—
Neumaier, Mayer, Corp.
Neumaier, Mayer, Corp., to A. Neumaier, d.b.a. The Neumaier Co., New York, N.Y. 372,855, ren. 8–11–59. Cl. 42.
Nevel Co., The: *See*—
Nevel, Jack M.
Nevel, Jack M., d.b.a. The Nevel Co., Detroit, Mich. 576,543, canc. Cl. 5.
New Brunswick Scientific Co., New Brunswick, N.J. 683,236, pub. 5–26–59. Cl. 26.
New England Collapsible Tube Co., The, to The Sheffield Tube Corp., New London, Conn. 372,983, ren. 8–11–59. Cl. 16.
New Warsaw Bakery Co., Inc., New York, N.Y. 373,183, ren. 8–11–59. Cl. 46.
New York Auralfone Corp., New York, N.Y. 683,351, pub. 5–26–59. Cl. 44.
New York Times Co., The, New York, N.Y. 683,293, pub. 5–26–59. Cl. 38.
Nolte, May E., Plandome, N.Y. 683,401, pub. 5–26–59. Cl. 50.
Nopco Chemical Co., Newark, N.J. 683,102, pub. 5–26–59. Cl. 6.
Norden Laboratories, Lincoln, Nebr. 576,481, canc. Cl. 18.
Northern New York Trust Co., The, Watertown, N.Y. 683,435, pub. 5–26–59. Cl. 102.
Northwestern National Life Insurance Co., Minneapolis, Minn. 683,431, pub. 5–26–59. Cl. 102.
Nova Laboratories: *See*—
Marroquin, Carlos C.
Nutri-Seal Corp., Los Angeles, Calif. 683,380, pub. 5–26–59. Cl. 46.
Nycoil Co.: *See*—
Rodgers, Frank J.
Oelerich & Berry Co., Chicago, Ill. 683,386, pub. 5–26–59. Cl. 46.
Ohio Fruit Products Co., Inc., North East, Pa. 683,369, pub. 5–26–59. Cl. 46.
Old Oil Co., The, New York, N.Y. 683,197, pub. 5–26–59. Cl. 21.
Old Judge Coffee Co.: *See*—
Meyers Bros. Coffee and Spice Co.
Old Town Corp.: *See*—
Old Town Ribbon & Carbon Co. Inc.
Old Town Ribbon & Carbon Co. Inc., to Old Town Corp., Brooklyn, N.Y. 372,778, ren. 8–11–59. Cl. 11.
Olin Mathieson Chemical Corp., New York, N.Y. 683,158, pub. 5–26–59. Cl. 18.
Olin Mathieson Chemical Corp., East Alton, Ill. 683,291, pub. 5–26–59. Cl. 37.
Olsson, A. V., Trading Co. Inc., New York, N.Y. 683,382–3, pub. 5–26–59. Cl. 46.
Orange-Crush Co., Evanston, Ill. 683,361, pub. 5–26–59. Cl. 45.
Orchard Paper Co., d.b.a. Rich Products Co., St. Louis, Mo. 683,087, pub. 5–26–59. Cl. 6.
Ortho Pharmaceutical Corp., Raritan, N.J. 683,150, pub. 5–26–59. Cl. 18.
Orthopedic Frame Co., Kalamazoo, Mich. 683,350, pub. 5–26–59. Cl. 44.
Oscola, Joseph, Pompano Beach, Fla. 683,377, pub. 5–26–59. Cl. 46.
Oxygen Gas Co., to Puritan Compressed Gas Corp., Kansas City, Mo. 127,471, ren. 8–11–59. Cl. 18.
P. M. Pharmaceutical Co.: *See*—
Harris, Mechell F.
Pabst-Ett Corp., to National Dairy Products Corp., Chicago, Ill. 371,622, ren. 8–11–59. Cl. 46.
Pacific Clay Products, Los Angeles, Calif. 683,119, pub. 5–26–59. Cl. 12.
Pacific Union Association of Seventh Day Adventists, The, to Voice of Prophecy, Inc., Glendale, Calif. 368,245, ren. 8–11–59. Cl. 38.
Pantex Mfg. Co., Pawtucket, R.I., from Butler Mfg. Co., Kansas City, Mo. 683,234, pub. 5–26–59. Cl. 24.
Par Enterprises & Novelty Co., Northbrook, Ill. 683,077, pub. 5–26–59. Cl. 4.
Parfumerie Morhange, Meaux, Seine et Marne, France. 683,417, pub. 5–26–59. Cl. 51.
Parker Brothers, Inc., Salem, Mass. 372,862, ren. 8–11–59. Cl. 22.
Parker Pipe Co. Ltd., The, London, England. 372,615, ren. 8–11–59. Cl. 8.
Parking Authority of Toronto, The, Toronto, Ontario, Canada. 683,439, pub. 5–26–59. Cl. 105.
Parks, E. W., Co., Worcester, Mass. 372,593, ren. 8–11–59. Cl. 1.
Pearson, William, Ltd., London, England. 683,423, pub. 5–26–59. Cl. 52.
Peerless of America, Inc., Chicago, Ill. 683,272, pub. 5–26–59. Cl. 34.
Penney, J. C., Co.: *See*—
Eastern Isles Importing Co., Inc., The.
Pennsalt Chemicals Corp.: *See*—
Sterling Products Co.
Pepsi-Cola Bottling Co., Inc. of Indianapolis: *See*—
Monument Bottling Co., Inc.
Pfizer, Chas., & Co., Inc., Brooklyn, N.Y. 683,161, pub. 5–26–59. Cl. 18.
Phil & Ed's: *See*—
Phil & Ed's Barbecue.
Phil & Ed's Barbecue, d.b.a. Phil & Ed's, Los Angeles, Calif. 683,363, pub. 5–26–59. Cl. 46.
Pilot Full Fashion Mills, Inc.: *See*—
Alba Hosiery Mills, Inc.
Plaza Court Broadcasting Co., Oklahoma City, Okla. 683,444, pub. 5–26–59. Cl. 107.
Pointer, Robert W., d.b.a. Pointer-Willamette Trailer Equipment Co., Portland, Oreg., to Pointer-Willamette Co., Inc., Edmonds, Wash. 367,929, ren. 8–11–59. Cl. 19.
Pointer-Willamette Co., Inc.: *See*—
Pointer, Robert W.
Pointer-Willamette Trailer Equipment Co.: *See*—
Pointer, Robert W.
Pollak Industrial Corp., Stratford, Conn., and New York, N.Y. 576,442, canc. Cl. 39.
Ponca Wholesale Mercantile Co., d.b.a. Sugar Time Candies, Amarillo, Tex. 683,387, pub. 5–26–59. Cl. 46.
Port Huron Sulphite & Paper Co., Port Huron, Mich. 683,282, pub. 5–26–59. Cl. 37.
Prefinished Wallpanel Council, Cleveland, Ohio. 576,487, canc. Cl. 12.
Prensel, Edward C., Demopolis, Ala. 683,289, pub. 5–26–59. Cl. 37.
Primedics Laboratories: *See*—
Jones, Jack B.
Proctor & Schwartz, Inc., Philadelphia, Pa. 683,136, pub. 5–26–59. Cl. 14.
Pulsation Controls Corp., Santa Paula, Calif. 683,127, pub. 5–26–59. Cl. 13.
Puritan Compressed Gas Corp.: *See*—
Oxygen Gas Co.
Puschin, Albert J., Centerdale, R.I. 576,510, canc. Cl. 42.
Q/A Co., Inc., Jersey City, N.J. 576,323, canc. Cl. 18.
Q.O.S. Corp., New York, N.Y. 683,245, pub. 5–26–59. Cl. 26.
Quaker Maintenance Co. Inc.: *See*—
Wall Washing Machines, Inc.
Quality Mills, Inc., Mount Airy, N.C. 683,341, pub. 4–21–59. Cl. 39.
Quick-Set, Inc., Skokie, Ill. 683,453. Cl. 26.
Rancho de la Canada: *See*—
Young, James W.
Ravera, B. A., Co., Walnut Creek, Calif. 683,334, pub. 5–26–59. Cl. 39.
Raygram Corp., New York, N.Y. 683,244, pub. 5–26–59. Cl. 26.
Realistic Co., The, Cincinnati, Ohio. 683,419–20, pub. 5–26–59. Cl. 51.
Rena, Buromaschinenfabrik G.m.b.H., Deisenhofen, near Munich, Bavaria, Germany. 683,085, pub. 6–2–59. Cl. 6.
Renaire Corp., Springfield, Pa. 683,385, pub. 5–26–59. Cl. 46.
Resistoflex Corp., Roseland, N.J. 683,128, pub. 5–26–59. Cl. 13.
Revlon, Inc., New York, N.Y. 683,411, pub. 5–26–59. Cl. 51.
Rex Windows, Inc., Columbus, Ohio. 576,393, canc. Cl. 12.
Reynolds Metals Co., Richmond, Va. 576,353, canc. Cl. 12.
Rich Products Co.: *See*—
Orchard Paper Co.
Riegel Textile Corp., New York, N.Y. 804,873, canc. Cl. 39.
Right Weight Co., Inc., Fort Worth, Tex. 683,145, pub. 5–26–59. Cl. 18.
Riverview Mills Co., The: *See*—
Ismert-Hincke Milling Co., The.
Roddenberry, H. D., Santa Maria, Calif. 371,287, ren. 8–11–59. Cl. 46.
Rodgers, Frank J., d.b.a. Nycoil Co., Westfield, N.J. 683,276, pub. 5–26–59. Cl. 35.
Rogers, Wm., Mfg. Co.: *See*—
International Silver Co., The.
Rose Brothers, Inc., New York, N.Y. 683,324, pub. 5–26–59. Cl. 39.
Rosedale Knitting Co., Reading, Pa. 576,508, canc. Cl. 39.
Royal Confectionery Co.: *See*—
Sharaf Co., Inc., The.
Royal, Thomas M., & Co., Philadelphia, Pa., to Continental Can Co., Inc., New York, N.Y. 371,659, ren. 8–11–59. Cl. 2.
Rubin, M., & Sons, Inc., New York, N.Y. 683,316, pub. 5–26–59. Cl. 39.
Russell, F. C., Co., The, Cleveland, Ohio. 683,112, pub. 5–26–59. Cl. 12.
S.I.I.A. Sicule Lombarde Industrie Associate S.p.A., Codogno, Italy. 683,365, pub. 5–26–59. Cl. 46.
S.M.A. Corp., Chicago, Ill., to American Home Products Corp., New York, N.Y. 369,064, ren. 8–11–59. Cl. 46.
St. Armour, John P., d.b.a. Mayes Tool Co., Detroit, Mich. 683,246, pub. 5–26–59. Cl. 26.
Sandler, A., Co., Needham Heights, Mass. 370,119, ren. 8–11–59. Cl. 39.
Saratoga Vichy Spring Co., Saratoga Springs, N.Y. 372,822, ren. 8–11–59. Cl. 45.
Sargent & Co.: *See*—
Schollhorn, William, Co., The.
Sargon Knitwear: *See*—
Kasher, Irving.
Savada Bros., Inc., New York, N.Y. 683,455. Cl. 39.
Scarves By Vera, Inc., New York, N.Y. 683,332, pub. 5–26–59. Cl. 39.
Schaum, John W., d.b.a. Spin Records, Milwaukee, Wis. 683,279, pub. 5–26–59. Cl. 36.

Schlitt, Doris G.: *See*—
Schlitt, Franklin C., and Doris G. Schlitt.

Schlitt, Franklin C., and Doris G. Schlitt, Springfield, Ill. 683,408, pub. 5–26–59. Cl. 50.

Schmetterer, Robert, d.b.a. Hartley Products Co., New York, N.Y. 683,186, pub. 5–26–59. Cl. 21.

Scholler Brothers, Inc., Philadelphia, Pa. 371,310, ren. 8–11–59. Cl. 6.

Schollhorn, William, Co., The, to Sargent & Co., New Haven, Conn. 127,553, ren. 8–11–59. Cl. 23.

Scolding Locks Corp., Appleton, Wis. 372,949, ren. 8–11–59. Cl. 40.

Schweitzer, Peter J., Inc., New York, N.Y. 576,514, canc. Cl. 8.

Seaboard Chemicals, Inc., Salem, Mass. 683,081, pub. 5–26–59. Cl. 6.

Seabrook Farms Co., Seabrook, N.J. 683,379, pub. 5–26–59. Cl. 46.

Sealol Corp., Providence, R.I. 683,227, pub. 5–26–59. Cl. 23.

Sealol Corp., Providence, R.I. 683,232, pub. 5–26–59. Cl. 23.

Sealy, Inc., Chicago, Ill. 369,513, ren. 8–11–59. Cl. 32.

Sealy, Inc., Chicago, Ill. 370,139, ren. 8–11–59. Cl. 32.

Sel-Rex Corp., Nutley, N.J. 683,100, pub. 5–26–59. Cl. 6.

Seymour, Jane, Ltd., London, England. 369,558, ren. 8–11–59. Cl. 51.

Shapleigh Hardware Co.: *See*—
Simmons Hardware Co.

Sharaf Co., Inc., The, East Boston, assignee of Royal Confectionery Co., d.b.a. Aunt Mary Chocolates, Boston, Mass. 683,372, pub. 5–26–59. Cl. 46.

Sheffield Merchandise, Inc., New York, N.Y. 576,505, canc. Cl. 27.

Sheffield Tube Corp., The: *See*—
New England Collapsible Tube Co., The.

Sherwin-Williams Co., The, Cleveland, Ohio. 370,582, ren. 8–11–59. Cl. 16.

Sherwin-Williams Co., The, Cleveland, Ohio. 370,585, ren. 8–11–59. Cl. 6.

Sherwin-Williams Co., The, Cleveland, Ohio. 371,288, ren. 8–11–59. Cl. 6.

Sherwin-Williams Co., The, Cleveland, Ohio. 371,289, ren. 8–11–59. Cl. 16.

Sherwin-Williams Co., The, Cleveland, Ohio. 372,791, ren. 8–11–59. Cl. 16.

Sierra Gems Inc., Sierra Madre, Calif. 576,498, canc. Cl. 28.

Silverman, Daniel, d.b.a. Jameco Metal Products Co., New York, N.Y. 683,261, pub. 5–26–59. Cl. 32.

Simmons Hardware Co., to Shapleigh Hardware Co., St. Louis, Mo. 372,684, ren. 8–11–59. Cl. 22.

Simpson, Herbert S., Trust, The: *See*—
National Engineering Co.

Sinclair Refining Co., New York, N.Y. 126,782, ren. 8–11–59. Cl. 15.

Sistrunk Cosmetics Dist.: *See*—
Sistrunk, Thomas.

Sistrunk, Thomas, d.b.a. Sistrunk Cosmetics Dist., Chicago, Ill. 576,283, canc. Cl. 51.

Slip-X Safety Treads: *See*—
Schlitt, Franklin C., and Doris G. Schlitt.

Smart Set Frocks, New York, N.Y. 576,304, canc. Cl. 39.

Smith, J. Fish: *See*—
Cool Maid Candy Co.

Smith-Dorsey: *See*—
Wander Co., The.

Smith-Junior Co., Inc., Rochester, N.Y. 683,456. Cl. 45.

Smithline, Herman, d.b.a. Herman Chemical Co., New York, N.Y. 576,228, canc. Cl. 51.

Smithline, Herman, d.b.a. Hair-Rite Chemical Co., New York, N.Y. 576,229, canc. Cl. 51.

Snellenberger, Helen T., and Johanna M. Kreps: *See*—
Toth, John.

Societe Anonyme: Societe d'Hygiene Dermatologique de Vichy-Vichy, Source de Beaute, Vichy, Allier, France. 683,414–15, pub. 5–26–59. Cl. 51.

Song Dex, Inc., New York, N.Y. 683,304–5, pub. 5–26–59. Cl. 38.

Southern Kraft Corp., to International Paper Co., New York, N.Y. 368,197, ren. 8–11–59. Cl. 37.

Southern Kraft Corp., to International Paper Co., New York, N.Y. 368,295, ren. 8–11–59. Cl. 37.

Southern Kraft Corp., to International Paper Co., New York, N.Y. 368,296, ren. 8–11–59. Cl. 37.

Speed-Ees Products: *See*—
Heyman, Pearl.

Sperti Faraday Inc., Cincinnati, Ohio, and Adrian, Mich. 576,303, canc. Cl. 21.

Spicer and Co., Glendale, Calif., to Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 368,557, ren. 8–11–59. Cl. 6.

Spiegel, Inc., Chicago, Ill. 576,235, canc. Cl. 21.

Spin Records: *See*—
Schaum, John W.

Spray-Dent Co., Inc., New York, N.Y. 576,502, canc. Cl. 51.

Squibb, E. R., & Sons, New York, N.Y., to Mathieson Chemical Corp., Saltville, Va. 576,433, canc. Cl. 18.

Standard Chemical Works Co.: *See*—
Standard Chemical Works Co., The.

Standard Chemical Works Co., The, to Standard Chemical Works Co., Columbus, Ohio. 576,196, canc. Cl. 6.

Standard Industrial Products, Inc., Evansville, Ind. 371,420, ren. 8–11–59. Cl. 16.

Stanley Works, The, New Britain, Conn. 683,187, pub. 4–28–59. Cl. 21.

Star Expansion Co., Mountainville, N.Y. 683,129, pub. 5–26–59. Cl. 13.

Star Ornamental Iron Works: *See*—
Mark, Morris.

Stein, Hall & Co., Inc., New York, N.Y. 373,020, ren. 8–11–59. Cl. 6.

Stephano Brothers, Philadelphia, Pa. 372,903, ren. 8–11–59. Cl. 17.

Sterling Products Co., Easton, Pa., to Pennsalt Chemicals Corp., Philadelphia, Pa. 368,427, ren. 8–11–59. Cl. 50.

Stevens, J. P., & Co. Inc., New York, N.Y. 683,345, pub. 5–26–59. Cl. 42.

Strasenburgh, R. J., Co., Henrietta, N.Y. 683,156, pub. 5–26–59. Cl. 18.

Sugar Time Candies: *See*—
Ponca Wholesale Mercantile Co.

Sumner Iron Works, Inc., Everett, Wash. 683,213, pub. 5–26–59. Cl. 23.

Sunbeam Corp., Chicago, Ill. 683,174, pub. 5–26–59. Cl. 21.

Sunderland, Louis, d.b.a. Louis Sunderland Co., Philadelphia, Pa. 576,286, canc. Cl. 39.

Sunderland, Louis, Co.: *See*—
Sunderland, Louis.

Surgical Rubber Co., Norristown, Pa. 576,396, canc. Cl. 13.

T-A Mfg. Corp., Los Angeles, Calif. 683,126, pub. 5–26–59. Cl. 13.

Tannade Co., The: *See*—
Gutmann & Co.

Tar-Gon Products, Inc., d.b.a. Handyman Tool Co., Chicago, Ill. 683,076, pub. 5–26–59. Cl. 4.

Television Hosiery Corp., New York, N.Y. 576,310, canc. Cl. 39.

Telsta Corp., Redwood City, Calif. 683,221, pub. 5–26–59. Cl. 23.

Tennessee Furniture Corp., to Cavalier Corp., Chattanooga, Tenn. 367,934, ren. 8–11–59. Cl. 21.

Texas Housing Co., Dallas, Tex. 576,204, canc. Cl. 12.

Texas Textile Mills, to Texas Textile Mills, Inc., Dallas, Tex. 442,365, new cert. Cl. 42.

Texas Textile Mills, to Texas Textile Mills, Inc., Dallas, Tex. 542,131, new cert. Cl. 42.

Texas Textile Mills, to Texas Textile Mills, Inc., Dallas, Tex. 547,173, new cert. Cl. 42.

Texas Textile Mills, to Texas Textile Mills, Inc., Dallas, Tex. 547,174, new cert. Cl. 42.

Texas Textile Mills, Dallas, Tex. 576,217, canc. Cl. 42.

Texas Textile Mills, to Texas Textile Mills, Inc., Dallas, Tex. 584,419, new cert. Cl. 42.

Texas Textile Mills, Inc.: *See*—
Texas Textile Mills.

Tice, G. Harold, d.b.a. Holiday House, Bay Shore, N.Y. 683,071, pub. 5–26–59. Cl. 2.

Time Container Corp., Chicago, Ill. 683,070, pub. 5–26–59. Cl. 2.

Tokheim Corp., Fort Wayne, Ind. 683,247, pub. 5–26–59. Cl. 26.

Toth, John, to Helen T. Snellenberger and Johanna M. Kreps, South Bend, Ind. 386,033, new cert. Cl. 6.

Trailer Rentals, Inc., Chicago, Ill. 683,440, pub. 5–26–59. Cl. 105.

Trans World Shoe Corp., New York, N.Y. 683,327, pub. 5–26–59. Cl. 39.

Traveleer Trailer Co., Inc., Hawthorne, Calif. 576,324, canc. Cl. 19.

Trenton Sports Bag Co., Trenton, N.J. 683,207, pub. 5–26–59. Cl. 22.

Troy Shirt Makers Guild, Inc., Glens Falls, N.Y. 683,323, pub. 5–26–59. Cl. 39.

Udylite Corp., The, Detroit, Mich. 683,191, pub. 5–26–59. Cl. 21.

Union Carbide Corp., New York, N.Y. 683,303, pub. 5–26–59. Cl. 38.

United Furniture Corp., Lexington, N.C. 683,262, pub. 5–26–59. Cl. 32.

United Rail Anchor Co., Inc., to Harmon Machine Co., Inc., Wichita, Kans. 656,398, new cert. Cl. 23.

United States Rubber Co., New York, N.Y. 683,065, pub. 5–26–59. Cl. 1.

United States Steel Co., now by merger, United States Steel Corp., Pittsburgh, Pa. 576,321, canc. Cl. 14.

United States Steel Corp.: *See*—
United States Steel Co.

Universal Winding Co., Cranston, R.I. 683,180, pub. 5–26–59. Cl. 21.

Upjohn Co., The, from The Upjohn Co., Kalamazoo, Mich. 683,144, pub. 5–26–59. Cl. 18.

Vanadium-Alloys Steel Co., Latrobe, Pa. 683,137, pub. 5–26–59. Cl. 14.

Vanderbilt, R. T., Co., Inc., New York, N.Y. 683,104, pub. 5–26–59. Cl. 6.

Vereinigte Aluminum-Werke Aktiengesellschaft, Bonn, Germany. 683,133, pub. 5–26–59. Cl. 14.

Vick Chemical Co., New York, N.Y. 683,148, pub. 5–26–59. Cl. 18.

Vierheller, Charles E.: *See*—
Durosel, Inc.

Voice of Prophecy, Inc.: *See*—
Pacific Union Association of Seventh Day Adventists, The.

Wacker, Dr. Alexander, Gesellschaft fur Elektrochemische Industrie, G.m.b.H., Munich, Bavaria, Germany. 576,541, canc. Cl. 6.

Wadsworth, Donald E., North Miami, Fla. 576,373, canc. Cl. 13.

Wales Mfg. Co., Boston, Mass. 683,329, pub. 5–26–59. Cl. 39.

Wall Washing Machines, Inc., Conshohocken, Pa., to Quaker Maintenance Co. Inc., New York, N.Y. 373,170, ren. 8–11–59. Cl. 23.

Wall Washing Machines, Inc., Conshohocken, Pa., to Quaker Maintenance Co. Inc., New York, N.Y. 373,171, ren. 8–11–59. Cl. 4.

Wallace Silversmiths, Inc., Wallingford, Conn. 683,274, pub. 5–26–59. Cl. 24.
Wallach's, Inc., New York, N.Y. 683,235, pub. 5–26–59. Cl. 39.
Wallerstein Co., Inc.: See—
Baxter Laboratories, Inc.
Wander Co., The, d.b.a. Smith-Dorsey, Chicago, Ill. 683,154–5, pub. 5–26–59. Cl. 18.
Warner-Lambert Pharmaceutical Co.: See—
Spicer and Co.
Warner-Lambert Pharmaceutical Co., Morris Plains, N.J. 683,159–60, pub. 5–26–59. Cl. 18.
Washington Hosiery Mills, Inc., Washington, N.J. 683,317, pub. 5–26–59. Cl. 39.
Washington State Fruit Commission, Yakima, Wash. 576,486, canc. Cl. 46.
Waterbury Metal Stamping Co., The, Waterbury, Conn. 683,235, pub. 5–26–59. Cl. 26.
Wayne Pump Co., The: See—
Martin & Schwartz, Inc.
Webster Engineering Co., The, Tulsa, Okla. 683,265, pub. 5–26–59. Cl. 34.
Weinberger Garment Co., St. Louis, Mo. 683,340, pub. 5–26–59. Cl. 39.
Welding Fittings Corp.: See—
Flowline Corp.
Wendel, Rudolf, Inc., New York, N.Y. 683,436, pub. 5–26–59. Cl. 108.
Western Oregon Packing Corp., Corvallis, Oreg. 683,294, pub. 5–26–59. Cl. 46.
Weston Paper and Mfg. Co., The, Dayton, Ohio. 683,283, pub. 5–26–59. Cl. 37.
Weyer, George H., Inc., Kansas City, Mo. 683,410, pub. 5–26–59. Cl. 51.
Whitaker Paper Co., The, New York, N.Y. 683,287, pub. 5–26–59. Cl. 37.
Wight Nurseries, Inc., Cairo, Ga. 683,449. Cl. 1.
Williams, J. B., Co., The, Glastonbury, Conn. 683,413, pub. 5–26–59. Cl. 51.
Winarick, Ar., Inc., New York, N.Y. 683,412, pub. 5–26–59. Cl. 51.
Wine Growers Guild, Lodi, Calif. 576,518, canc. Cl. 47.
Winebrenner, D. E., Co., Inc., Hanover, Pa. 683,391, pub. 5–26–59. Cl. 46.
Wistar Institute of Anatomy and Biology, The, Philadelphia, Pa. 683,296, pub. 5–26–59. Cl. 38.
Worthington Ball Co., The, Elyria, Ohio. 683,202, pub. 5–26–59. Cl. 22.
Young, James W., d.b.a. Rancho de la Canada, Pena Blanca, N. Mex. 683,388, pub. 5–26–59. Cl. 46.
Zavody V. I. Lenina Plzen, Narodni Podnik, Plzen, Czechoslovakia. 683,184, pub. 5–26–59. Cl. 14.

U. S. GOVERNMENT PRINTING OFFICE: 0——1959

Mark, Morris.

8-11-59. Cl. 4.

2,776,776. Liquefied Gas Container.
2,795,020. Methods of Making Insulated Cabinets.

Pat. 2,548,789, R. C. Hergenrother, Electronic storage devices, decided Mar. 30, 1959, Interference No. 87,203, claim 5.

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PATENTS

NOTICES

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, November 23, 1959.

This examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than October 23, 1959.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 8718, Department of Commerce Building, Washington 25, D.C.

ARTHUR W. CROCKER,
July 23, 1959. *Chairman, Committee on Enrollment.*

Copies of Subclass Lists

Any person who desires, for any reason, a list of the patents which are grouped together in any official subclass may obtain such a list upon application to the Patent Office. The lists cost 30¢ per sheet. Each full sheet contains approximately 100 patent numbers. Cross-referenced patents are listed separately. If a list of these is also desired this fact should be specified when ordering; otherwise, the list supplied may be limited to original patents.

M. C. ROSA,
July 21, 1959. *Director, Patent Examining Operation.*

Errata

All references to Patent No. 2,896,350 to Kenneth E. Golden, assignor to Sawyer's Inc., for Transparency Viewing Device, appearing in the OFFICIAL GAZETTE of July 28, 1959, should be deleted as the application was withdrawn from issue and the patent was not issued.

All references to Patent No. 2,896,984 to Edward J. Schaefer, for Shaft Coupling, appearing in the OFFICIAL GAZETTE of July 28, 1959, should be deleted as the application was withdrawn from issue and the patent was not issued.

In the OFFICIAL GAZETTE, issue of May 26, 1959, page 865, under the heading "Patent Suits," first column, line 39, name of litigant, for "The A. C. Gilbert Co., Inc." read *The A. C. Gilbert Company.*

Classification Order No. 285

The following transfers are hereby ordered to take effect on Monday, July 27, 1959:

From Division 67 to Division 91

Class 41, ORNAMENTATION, for concurrent reclassification and examination of applications pending therein.

From Division 91 to Division 67

Class 154, LAMINATED FABRIC AND ANALOGOUS MANUFACTURES. The reclassification of this class has reached a stage at which concurrent examination of applications pending therein is no longer advantageous. Reclassification will continue to completion in Division 91.

M. C. ROSA,
Director, Patent Examining Operation.

Patents Available for Licensing or Sale

The following three patents are offered by Carl Breer, 15600 Windmill Pointe, Grosse Pointe, Mich.

Applications for license or information relating to the sale of these patents should be addressed to: George W. Talburtt, 612 Brookside, Birmingham, Mich.

2,618,068. Map Guide.
2,761,265. Bottle Capper.
2,763,456. Camera Bi-Pod.

General Electric Company is prepared to grant non-exclusive licenses under the following 18 patents upon reasonable terms to domestic manufacturers.

Applications for license may be addressed to: Research Services, Legal Department, General Electric Company, Post Office Box 1088, Schenectady, N.Y.

2,649,101. Double-Wall Portable Shelter.
2,699,583. Method of Making Insulated Cabinets.
2,700,633. Insulating Structure and Method of Forming Same.
2,706,911. Heat Conductivity Manometer.
2,710,993. Insulated Door Structures.
2,728,958. Insulating Structure.
2,729,863. Insulated Cabinet.
2,742,115. Insulated Construction Panel.
2,742,385. Insulated Structures.
2,742,556. Heating Panel.
2,745,173. Method of Thermal Insulation.
2,747,269. Insulating Structures.
2,766,046. Insulating Structures.

New Applications Received During June 1959

Patents	7,109
Designs	466
Plant Patents	14
Reissues	21
Total	7,610

Issue

Patents	958—No.	2,899,679 to No.	2,900,636, incl.
Designs	51—No.	185,396 to No.	185,946, incl.
Plant Patents	2—No.	1,859 to No.	1,860, incl.
Reissues	8—No.	24,681 to No.	24,688, incl.
Total	1,019		

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1959

Total number of pending applications (excluding Designs)	198,248
Total number of pending Design applications	7,004

2,776,776. Liquefied Gas Container.

2,795,020. Methods of Making Insulated Cabinets.

2,819,609. Closure Leak Detection.

2,824,364. Method of Assembling and Evacuating an Insulated Vacuum Panel.

2,867,035. Thermal Insulation.

Removed From Register

2,535,690. Fibrous Dielectric Compositions. General Electric Company hereby withdraws this patent from the *Register of Patents Available for Licensing or Sale*. It was listed in the NOTICES section of the OFFICIAL GAZETTE, Oct. 30, 1956.

Adverse Decisions in Interferences

In the designated interferences involving the indicated claims of the following patents final decisions have been rendered that the respective patentees were not the first inventors with respect to the claims listed.

Pat. 2,533,001, E. Eberhard, Flip-flop counter circuit, decided Mar. 31, 1959, Interference No. 85,578, claims 13 and 14.

Pat. 2,548,789, R. C. Hergenrother, Electronic storage devices, decided Mar. 30, 1959, Interference No. 87,203, claim 5.

Pat. 2,691,940, F. R. McFarland, Transmission, decided Apr. 16, 1959, Interference No. 87,781, claim 7.

Pat. 2,724,428, J. W. Sellner, Combined seat and exerciser, decided Aug. 30, 1957, Interference No. 88,049, claim 1.

Pat. 2,771,282, E. Olson and L. C. Dermond, Carburetor, decided July 7, 1959, Interference No. 88,812, claim 14.

Pat. 2,796,263, R. F. Moore, Phonograph record basket, decided July 8, 1959, Interference No. 89,489, claims 1, 2, 4, 5, 6, and 7.

Board of Appeals Decisions Rendered in the Month of July 1959

Examiner affirmed	180
Examiner affirmed in part	32
Examiner reversed	47
Total	259

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1959

Total number of pending applications (excluding Designs)	198, 248
Total number of pending Design applications	7, 004
Total number of applications awaiting action (excluding Designs)	87, 060
Total number of Design applications awaiting action	1, 931
Date of oldest new application	July 7, 1958
Date of oldest amended application	June 16, 1958

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 38, 43, 46, 50, 56, 59, 60, 62, 64.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 26, 37, 41, 42, 44, 48, 51, 54, 69.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 83.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 36, 52, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 32, 33, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 22, 23, 25, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 28, 30, 32, 49, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
1. (VI) GOLDBERG, A. J., Brakes; Excavating; Planting; Plant Husbandry; Scattering Unloaders; Harrows and Diggers; Plows	12-2-58	12-1-58
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	12-5-58	12-2-58
3. (VII) MARMELSTEIN, N. (WINDHAM, R. K., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Electrical Resistors	1-5-59	12-30-58
4. (VI) FALLER, E. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	12-2-58	12-2-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	10-6-58	10-1-58
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	12-2-58	12-1-58
7. (IV) GONSALVES, J. E. (ANDERSON, E. G., acting), Optics	11-3-58	11-3-58
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	1-2-59	1-2-59
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	12-15-58	12-15-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	12-11-58	12-3-58
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	12-2-58	12-3-58
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	11-30-58	12-1-58
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	12-1-58	12-1-58
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	8-22-58	8-18-58
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	12-8-58	12-1-58
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	11-10-58	11-10-58
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	12-30-58	12-30-58
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	12-10-58	11-19-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	12-3-58	12-3-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	12-1-58	12-1-58
21. (III) MADER, R. C., Textiles	12-30-58	12-17-58
22. (VI) PAUL, E. (acting), Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	12-3-58	11-28-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	7-7-58	7-7-58
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	12-19-58	12-19-58
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	1-2-59	1-2-59
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	12-1-58	11-3-58
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	1-2-59	1-2-59
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Pressure Modulating Relays; Wheel Substitutes	12-1-58	12-5-58
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	12-15-58	12-10-58

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	12-1-58	12-1-58
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Polypropylenes, Polyisobutylenes); Mineral Oils	3-2-59	2-24-59
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Agitation; Fire Extinguishers	12-15-58	12-12-58
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs; Building Structures	12-1-58	11-12-58
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Separating and Assorting Solids (part)	8-15-58	6-16-58
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	2-2-59	2-2-59
36. (V) EVANS, R. L., Measuring and Testing (part)	8-12-58	8-14-58
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	12-8-58	12-1-58
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	12-8-58	12-16-58
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	1-16-59	1-16-59
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	12-10-58	12-15-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	1-5-59	1-2-59
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	10-15-58	10-15-58
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	12-4-58	12-2-58
44. (II) EVANS, N. H., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	9-3-58	9-2-58
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	1-19-59	1-7-59
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	12-1-58	12-3-58
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	12-10-58	12-8-58
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	11-13-58	11-10-58
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass; Earth Boring	12-2-58	12-1-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	10-8-58	10-1-58
51. (II) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas; Oscillators	11-3-58	11-3-58
52. (V) LE ROY, C. A., Supports and Racks	1-12-59	1-12-59
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	12-3-58	12-1-58
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	1-15-59	1-15-59
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	11-3-58	11-4-58
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-12-58	12-1-58
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting and Punching	9-10-58	9-10-58
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Punching	12-2-58	12-9-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	9-26-58	11-10-58
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	11-3-58	11-3-58
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	11-18-58	11-21-58
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	12-15-58	12-15-58
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	12-5-58	12-1-58
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	10-7-58	10-1-58
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	1-2-59	1-2-59
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	9-4-58	9-2-58
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators	12-1-58	12-1-58
81. (III) MONCURE, J. A., Industrial Arts	3-16-59	4-13-59
82. (III) GRAY, M. A., Household, Personal and Fine Arts	3-23-59	3-23-59
91. BAILEY, J. S., Laminated Fabrics	11-4-58	11-3-58
92. GAUSS, H., Detectors, Miscellaneous Electron Tube Circuits	10-24-58	10-8-58
93. WAHL, R. A., Metal Bending; Web Feeding	10-1-58	10-3-58
94. BERLOWITZ, W., Gas Separation	11-21-58	10-15-58
95. ANGEL, C. D., Masonry and Concrete Structures; Time-Controlling Apparatus; Packed Rod Joints; Joint Packings	11-3-58	10-21-58
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part), i. e., Polyethylenes	2-19-59	10-17-58

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during August 1959, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1953*.

Patents..... Numbers 2,891,597 to 2,894,257, inclusive
Plant Patents..... Numbers 637 to 643, inclusive

The patents to Wurster and Farley were cited to "submerged jets of wash water." [1] The word "jet"

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

IN RE ALTMANN ET AL.

No. 6389. Decided December 8, 1953

[— CCPA —, 264 F.2d 894; 121 USPQ 262]

1. WORDS AND PHRASES—"JET."
   Held that the word "jet" implies a rapid flow.
2. PATENTABILITY—INVENTION—FACTORS PERTINENT IN ESTABLISHING PRESENCE OF INVENTION.
   "* * *, the record presented here justifies the conclusion that no process of deinking at low temperatures, without the use of chemicals, has enjoyed substantial commercial success, despite the obvious desirability of using a process of that type; that appellants' process has been sufficiently tested to give reasonable assurance of its commercial success; and that funds are available to launch it commercially if a patent is granted. These circumstances alone do not, of course, establish the presence of invention, but they are factors which are pertinent to consider."
3. SAME—SAME—DOUBT RESOLVED IN FAVOR OF APPLICANT.
   "While the claimed process is generally similar in some respects to those of Hill and Moeller, there are, * * *, a number of substantial differences. It may be that no such single difference defines a matter of patentable invention but, taken together, they coact with each other to produce a unitary process which has given superior results, at least in some definite respects, over the processes of the references. The claims have been carefully drawn to limit them to the particular combination of steps which produce the improved result and, in our opinion, and in view of the circumstances enumerated * * *, there is at least a doubt as to whether the rejections of record are proper. Such doubts under the authorities are to be resolved in favor of the applicants."
4. SAME—PARTICULAR SUBJECT MATTER—METHOD OF DEINKING WASTE PAPER.
   Claims to a method of deinking waste paper *Held* patentable over the cited prior art.

APPEAL from the Patent Office. Serial No. 392,582.

REVERSED.

Cromwell, Greist & Warden (*Fred S. Lockwood* of counsel) for Altmann et al.

Clarence W. Moore (*Arthur H. Behrens* of counsel) for the Commissioner of Patents.

Before O'CONNELL, *Acting Chief Judge*, and WORLEY, RICH AND MARTIN, *Associate Judges*

O'CONNELL, *Acting Chief Judge*, delivered the opinion of the court.

This is an appeal from the decision of the Board of Appeals of the United States Patent Office affirming the Primary Examiner's rejection, as unpatentable over the cited art of record, of claims 11 to 15 inclusive in appellants' application for a patent on a method of deinking waste paper. Claim 11, which is representative of the appealed claims, reads as follows:

11. The method of deinking waste paper in cool or cold water without cooking and use of deinking chemicals, so as to reclaim a large percent of the fiber content as clean pulp suitable for re-use in papermaking, comprising, coarsely pulping waste paper in cool or cold water, refining the resulting coarse pulp slurry by passing it at least once through a revolving disk refiner in a few seconds while maintaining the temperature of the pulp below about 112° F. so as to shatter the ink from the fibers, said refiner having closely set opposed refining surfaces having a relative speed of at least several thousand feet per minute to produce an intense refining and shattering action, subjecting an enclosed stream of the resulting slurry of refined pulp to the action of a plurality of submerged jets of wash water so as to intensely agitate the slurry stream and disperse the fibers and shattered ink particles throughout the water vehicle without dewatering and with a substantial lowering of the consistency, and then dewatering the slurry so as to separate the ink particles from the fibers.

The references relied on are:

Wurster, 807,228, Dec. 12, 1905.
Hammond, 1,026,578, May 14, 1912.
Moeller (British), 258,630, Sept. 24, 1926.
Farley et al., 1,984,869, Dec. 18, 1934.
Inglis, 2,394,182, Feb. 5, 1946.
Hill et al., 2,641,164, June 9, 1953.
Casey Pulp & Paper—Vol. 1, page 325; 1952.
Pulp & Paper Manufacture—Vol. 2, pages 158, 159, 167 and 180—1951.

Appellants' application discloses a process of removing ink from waste paper which, as described and claimed, involves four principal steps, namely: (1) Coarsely pulping the paper in cold water; (2) Fiberising a slurry of such pulp in a revolving disk refiner at high speed and low temperature to shatter the ink particles and loosen them from the paper fibers; (3) Subjecting an enclosed stream of the resulting slurry of refined pulp to the action of submerged high velocity jets of wash water; and (4) Dewatering the washed slurry whereby the ink is finally removed. It is stated in the specification of the application that a temperature below about 112° F. and a high speed of rotation are essential in the disk refiner.

The patent to Hill discloses a method of processing fibrous pulp in which the pulp is fed centrally between two plates which are spaced a short distance apart. One of these plates is fixed while the other is given a gyratory movement and the adjacent faces of the plates are provided with projections which grip and agitate the pulp. Water in excess of that which can be retained by the pulp is supplied through openings in the upper plate and, after passing through the pulp, is drained off through openings in the lower plate. The pulp moves outwardly and is discharged at the periphery of the plates. The plates are shaped so that they are more closely spaced at the periphery than at the center and the pulp is thus compressed as it moves outwardly. After leaving the plates the pulp is collected in a trough and then removed from the machine.

The patent to Hill suggests several ways in which the apparatus just described may be used in the deinking of paper, either with or without the use of chemicals. In such deinking the paper may be "partially disintegrated," as by hammer milling, or may be "essentially repulped" by means, such as a disk refiner, after which it is fed to the previously described apparatus, where it is "completely repulped to individual fibres" and the ink particles are "freed from the fibres."

The British patent to Moeller discloses a deinking process in which wet paper pulp is coarsely disintegrated by tearing and is then passed along an agitating and washing conveyor, after which it is ground in one or more rotary cylindrical grinders and again agitated and washed. The initial tearing may be done in any suitable device, the preferred procedure comprising reciprocating plates provided with spikes. The washers are in the form of cylindrical rotary screens through which the pulp passes axially while it is agitated and water is sprayed on it.

The patents to Wurster and Farley were cited to show that it is old to use disk refiners for disintegrating paper pulp. Farley also suggests the operation of such a refiner at a speed comparable to that called for by the appealed claims.

The remaining references were held by the Board to be merely cumulative and were not discussed in detail. They are clearly no more pertinent than the references above discussed and accordingly need not be further considered here.

The appealed claims were rejected on either Hill or Moeller, considered alone, or in conjunction with Wurster or Farley. The two latter patents, as above noted, were merely cited to show that disk refiners of the kind referred to in the claims are old and, since that does not appear to be disputed, the respective grounds of rejection are essentially the same with, or without, the secondary references.

Each of the claims recites the four principal steps referred to above in the description of appellants' invention, and it is evident that all the claims must stand or fall together. Accordingly, they will not be discussed individually.

In holding the claims unpatentable over Hill the Board pointed out that the patent to Hill teaches that the pulp may be subjected to the action of a disk refiner before being acted on by the gyrating plate device which forms the principal feature defined by Hill. The Board was of the opinion that the introduction of wash water into the latter device would necessarily lower the consistency of the pulp slurry and would produce a washing action comparable to that called for by the appealed claims. No specific reference was made by the Board to the coarse pulping step which is recited in each of these claims. With respect to the dewatering step, the Board stated that the slurry of Hill "is ultimately dewatered just as appellants' slurry is finally dewatered."

Notwithstanding the similarities noted by the Board, there appear to be several material distinctions between the disclosure of the Hill process, and that defined by the appellants' claims. In the first place, Hill does not suggest coarse pulping of the paper before subjecting it to the action of the disk refiner. Coarse pulping by a hammer mill is suggested as an alternative to the disk refining and not as preliminary to it. This preliminary coarse pulping is important, in that it apparently enables the disk refiner to shatter off the ink particles or loosen them from the pulp, whereas in the Hill process, where there is no preliminary coarse pulping, the disk refiner is relied on only to pulp the paper, while the gyrating plate is relied on to effect the separation of the ink from the pulp.

Moreover, we are unable to agree with the Board that the patent to Hill discloses anything reasonably corresponding to appellants' claimed step of "subjecting an enclosed stream of the resulting slurry of refined pulp to the action of a plurality of submerged jets of wash water." Merely feeding what the patent refers to as "a slow flow of water" through the pulp while it is being compressed between the plates of the patent does not fairly answer to the language just quoted. The flat sheet of pulp undergoing compression cannot properly be called an "enclosed stream"; nor would the openings in the upper plate through which the water enters the slurry ordinarily be though of as providing "submerged jets of wash water." [1] The word "jet" implies a rapid flow as distinguished from the slow flow described by the patent. Furthermore, the consistency of the pulp is increased by the compression, whereas the appealed claims call for a substantial lowering of consistency during washing.

It is to be noted also that the claims call for the dewatering of the slurry as a separate step, following the washing, whereas in Hill, as interpreted by the Board, those steps take place simultaneously while the pulp is being compressed between the perforated plates.

In addition to the foregoing, the particular temperature and speed of the disk refiner, which are set forth in the appealed claims and are said in appellants' application to be critical, or at least important, are nowise disclosed by Hill.

Similarly, there are substantial differences between the process of the Moeller patent and that claimed by appellants. Moeller employs coarse pulping, grinding and washing which correspond generally to appellants' first three steps. However, the grinding is done in a cylindrical disintegrator, which differs materially from a disk refiner, and the patent is silent as to speed and temperature conditions. Also, the washing is carried out in a manner entirely distinct from the enclosed steam and submerged jets called for by the appealed claims. While Moeller's description of his washer is somewhat vague, it consists primarily of a cylindrical screen through which the pulp moves axially while it is agitated and sprayed with water. There is no enclosed stream defined by Moeller and no submerged jets. Finally, appellants' fourth claimed step of dewatering the washed slurry so as to separate the ink particles from the fibers is not disclosed by Moeller.

There are of record affidavits filed in connection with a petition to make appellants' application special in the Patent Office. Those affidavits show that the claimed process herein has been extensively tested with satisfactory results, and that, if a patent is granted, appellants' assignee is prepared to build a plant for carrying out the process on a large scale.

On the other hand, the record contains a copy of a letter by A. E. Johnson, Sales Manager of the Curlator Corporation which, as stated by the Examiner, is the assignee of the patent to Hill. The Curlator corresponds closely to the disclosure of that patent and Johnson's letter states that its use is not recommended for deinking. As properly noted by the Examiner and the Board, this letter does not establish that the process defined by Hill is inoperative for deinking, but it does afford a clear indication that no commercial use of the process for that purpose has been made.

Similarly, there is of record an affidavit by appellant, Bureau, to the effect that he made an investigation but was unable to discover that the Moeller process had ever been used commercially.

[2] Taken as a whole, the record presented here justifies the conclusion that no process of deinking at low temperatures, without the use of chemicals, has enjoyed substantial commercial success, despite the obvious desirability of using a process of that type; that appellants' process has been sufficiently tested to give reasonable assurance of its commercial success; and that funds are available to launch it commercially

Claims 25 and 28 are representative of the claims

polishing process disclosed herein have been allowed,

if a patent is granted. These circumstances alone do not, of course, establish the presence of invention, but they are factors which are pertinent to consider.

[3] While the claimed process is generally similar in some respects to those of Hill and Moeller, there are, as hereinbefore noted, a number of substantial differences. It may be that no such single difference defines a matter of patentable invention but taken together, they coact with each other to produce a unitary process which has given superior results, at least in some definite respects, over the processes of the references. The claims have been carefully drawn to limit them to the particular combination of steps which produce the improved result and, in our opinion, and in view of the circumstances enumerated above, there is at least a doubt as to whether the rejections of record are proper. Such doubts under the authorities are to be resolved in favor of the applicants. *In re Pappas et al.*, 38 CCPA (Patents) 746, 185 F.2d 695, 88 USPQ 108; *In re Hummer*, 44 CCPA (Patents) 814, 241 F.2d 742, 113 USPQ 66.

[4] The decision of the Board of Appeals is reversed.
REVERSED

U.S. Court of Customs and Patent Appeals

IN RE TOUVAY ET AL.

No. 6382. Decided December 15, 1958

[— CCPA —; 264 F.2d 901; 121 USPQ 265]

1. APPEAL TO THE U.S. COURT OF CUSTOMS AND PATENT APPEALS—MATTER BEFORE COURT—PATENTS NOT CONSIDERED
"In affirming the Examiner's rejections, the Board of Appeals did not refer specifically to the patents to Groff and Crowley, and discussion of those patents was expressly omitted from the brief for the Commissioner. They will not be considered further here."

2. PATENTABILITY—EVIDENCE—COMPARISON OF REJECTED AND ALLOWED CLAIMS.
"Appellants maintain that since a number of method claims pertaining to the glass grinding and polishing process disclosed herein have been allowed, the apparatus which performs the process is therefore patentable. Of course, this is not the law. It is well settled that the allowability of one set of claims cannot be predicated on the patentability of other claims in the same application. * * * The apparatus and the process must each independently meet the test of patentability."

3. SAME—SAME—SAME—INVENTION.
"The requirement of 'invention' is applicable to all claims presented, irrespective of the allowance of other claims in the application, be they in the same or different statutory classes."

4. WORDS AND PHRASES—"POLISHING."
"The process of treating glass after its formation includes grinding with coarse abrasives to remove the major defects, then with finer abrasives to remove the microscopic imperfections. In this industry, this latter action is termed 'polishing.'"

5. PATENTABILITY — INVENTION—CRITICALITY—PROPORTIONS OR VALUES DIFFERING IN KIND.
"It is well established that 'proportions or values are critical only when they involve a difference in kind rather than in degree.'"

6. SAME—SAME—CRITERIA DISCLOSED BY PRIOR ART.
Where a reference patent disclosed the criteria by which the hardness of the glass polishing pad disclosed therein may be chosen, *Held* that it "would be within the capabilities of any person skilled in the glass polishing art, and thus not require patentable invention, to discover the optimum or workable hardness range by routine experimentation."

7. SAME—SAME—SUBSTITUTION OF MATERIAL.
Where there was no showing in the record that the use of sawdust in a glass polishing pad would accomplish any results other than those naturally expected from the fibrous materials or fillers of a reference patent, *Held* that it would be within the skill of the art to substitute a sawdust filler for the "carbon black and similar fillers" disclosed by the said patent.

8. SAME—ANTICIPATION—NON-ANALOGOUS ART — EFFECTIVENESS.
"* * *, it is well settled that the relevance of a reference depends on whether it would suggest to one skilled in the art, in this instance the glass polishing art, to do what appellants have done. This is true even though the reference in question may be alleged to have been derived from a non-analogous art. * * * Here, the Benner patent, a reference in the precise art to which the instant application pertains, has disclosed the utilization of rubber 'tire-like pads' made 'with a resilience comparable to the tread of an automobile tire . . .' and including various means designed to alter the hardness thereof, which means 'are familiar to skilled rubber workers.' It is therefore clear that the teaching of the inclusion of the sawdust filler particles in the rubber tire of Gapen et al. would be suggested to any person skilled in the art of glass polishing armed with the teachings of Benner."

9. SAME—INVENTION—SUBSTITUTION OF MATERIAL.
In connection with a claim to a glass and stone polishing tool with a rubbery resin face composed of substantially equal parts of a soft wood sawdust, polyvinyl chloride, and a plasticizer, *Held* that to substitute another "synthetic rubber-like material" for those taught by a reference patent would be obvious in the absence of any unexpected result occurring thereby.

10. SAME—PARTICULAR SUBJECT MATTER—APPARATUS FOR POLISHING GLASS.
The decision of the Board of Appeals rejecting certain claims to apparatus for polishing glass as unpatentable over cited patents is affirmed.

APPEAL from the Patent Office. Serial No. 165,858.
AFFIRMED.

John L. Seymour and *Bauer & Seymour* (*N. Douglas Parker, Jr.*, of counsel) for Touvey et al.

Clarence W. Moore (*S. Wm. Cochran* of counsel) for the Commissioner of Patents.

Before O'CONNELL, *Acting Chief Judge*, and WORLEY, RICH, and MARTIN, *Associate Judges*

MARTIN, *J.*, delivered the opinion of the court.

This is an appeal from the decision of the Patent Office Board of Appeals affirming the final rejection by the Examiner of apparatus claims 25, 26 and 28 to 31 inclusive, of application Serial No. 165,858, for "Method and Apparatus for Polishing." Certain claims drawn to a method of polishing glass and a composition usable therewith, have been allowed.

The appealed claims relate to an apparatus for grinding and polishing glass surfaces comprising a rigid base having a working face composed of a rubbery resin such as natural rubber or polyvinyl chloride, which resin may be mixed with a filler such as sawdust. The hardness of the material composing the working face as measured on the Shore scleroscope scale[1] is disclosed as "being somewhere near 84–92 on that scale." The rigid base is attached to suitable driving means to rotate the base during the polishing operation. In practice, the device is utilized to rub the surface to be polished with an appropriate abrasive polishing sludge.

[1] The Shore scleroscope is an instrument which measures the hardness of the work in arbitrary terms of elasticity. A diamond-tipped hammer is allowed to drop from a known height on the material to be tested. As this hammer strikes the material, it rebounds, and the harder the substance, the greater the rebound. The height of rebound is measured on a scale and serves as an arbitrary index of hardness. Condensed Encyclopedia of Engineering, 1928.

may ordinarily be though of as providing and that funds are available to launch it commercially

Claims 25 and 28 are representative of the claims on appeal and read as follows:

25. A grinding and polishing apparatus adapted for use in the smoothing of surfaces of objects such as glass and stone comprising a hard base adapted to exert pressure evenly on the surface of the object, a rubbing body covering said base consisting essentially of a layer of rubbery resin having a wet hardness circa Shore 84–92, and driving means connected to said base whereby to rub the surface with the said body.

28. A glass and stone polishing tool adapted to the polishing of glass, having a rigid base and a thin polishing face composed of substantially equal parts of a soft wood sawdust, polyvinyl chloride, and a plasticiser, and having a hardness circa Shore 84–92.

The Board relied on the following references:

Groff, 1,966,856, July 17, 1934.

Crowley, 2,057,882, October 20, 1936.

Diehl, 2,279,450, April 14, 1942.

Benner, 2,309,819, February 2, 1943.

Gapen et al., 2,434,207, January 6, 1948.

[1] In affirming the Examiner's rejections, the Board of Appeals did not refer specifically to the patents to Groff and Crowley, and discussion of those patents was expressly omitted from the brief for the Commissioner. They will not be considered further here. *In re Libby*, 45 CCPA (Patents) 944, 255 F.2d 412, 118 USPQ 94.

The Diehl patent shows a gasket composed of a synthetic elastomer to which have been added asbestos fibres and comminuted cork to provide a desired hardness of between substantially 75 and 100 as measured on a Shore hardness gauge. The hardness range disclosed is taught to be desirable to provide "the desired compression and rebound or cushioning qualities for sealing purposes."

Benner shows a device for grinding and polishing glass sheets comprising a rotatable support covered with a polishing pad. The polishing pad may be made by impregnating a fibrous material such as sisal, manila or jute with a solution or dispersion of an elastomer. The elastomer is disclosed as "vulcanised to a tough, more or less hard but yieldable resilient texture." Alternatively, non-fibrous pads of rubber or synthetic elastomers of the class of copolymers of butadiene with acrylonitrile or styrene or copolymers of chloroprene may be made whose resilience is disclosed by Benner as "comparable to the tread of an automobile tire." Benner further teaches the use of pads of varying degrees of hardness dependent upon the "size and nature of the abrasive being used" and the degree of hardness of the glass composition being polished. The hardness of the pad is variable in accordance with these criteria and the further recognition by Benner that:

Soft pads tend to give less scratches than stiffer ones, but wear out more rapidly and take slightly more power. Hence I prefer to use the hardest pad in each case which I can *without scratching the work*." [Emphasis ours.]

Benner shows forming pads of differing hardness by impregnating the resin matrix with "carbon black and similar fillers" as well as by other practices, all of which means "are familiar to skilled rubber workers."

Gapen et al. shows an automobile tire in which wood chips are incorporated in the rubber tread for increasing traction and grip properties. The patentees, while intending their invention to apply primarily to tires, recognise that the rubber-wood chip admixture may be useful for other purposes "where non-slipping qualities are especially needed."

[2] Appellants maintain that since a number of method claims pertaining to the glass grinding and polishing process disclosed herein have been allowed, the apparatus which performs the process is therefore patentable. Of course, this is not the law. It is well settled that the allowability of one set of claims cannot be predicated on the patentability of other claims in the same application. *In re Wright*, 45 CCPA (Patents) 1005, 256 F.2d 583, 118 USPQ 287, 292; *In re Schuttc*, 44 CCPA (Patents) 922, 244 F.2d 323, 113 USPQ 537. The apparatus and the process must each independently meet the test of patentability.

Applicants cite *In re Barnett*, 33 CCPA (Patents) 1119, 155 F.2d 540, 69 USPQ 609, to substantiate their contention. We agree with the principle of that case that:

If the machine performs a new, useful, *inventive* method, the party is entitled to method claims along with his machine claims not only because his method requires protection but because they are related inventions. [Emphasis ours.]

[3] The requirement of "invention" is applicable to all claims presented, irrespective of the allowance of other claims in the application, be they in the same or different statutory classes.

Appellants lay great stress on the fact that their apparatus facilitates wet polishing which eliminates the excessive internal friction occasioned by the dry polishing stage allegedly required by the prior art. However, the primary reference, Benner, in describing both his method and apparatus, includes the use of water together with various abrasives of different granularity. For example, in claims 4 and 7 of the said patent, the following is set forth:

Claim 4: In an apparatus for finishing glass surfaces, a porous resilient pad comprising felted fibres in an elastomer matrix, said pad having an irregularly porous working face and being rotatable about an axis, and means for introducing abrasive powder and *water* between the pad and the glass surface in proximity to the axis. [Emphasis ours.]

Claim 7: In the surfacing of glass, the method which comprises applying abrasive to the surface thereof by flowing said abrasive with *water admixed therewith* through the pores of a resilient porous pad and thereafter wiping said abrasive over the surface of the glass by impulsion from said pad. [Emphasis ours.]

Appellants argue that Benner cannot be used as a reference because the apparatus and method disclosed therein were used only for grinding glass and not for polishing it, whereas the appellants' apparatus performs both "grinding" and "polishing." It appears that appellants are endeavoring to establish two or more independent processes where only one exists. [4] The process of treating glass after its formation includes grinding with coarse abrasives to remove the major defects, then with finer abrasives to remove the microscopic imperfections. In this industry, this latter action is termed "polishing." Whenever abrasives are used, no matter how fine a grinding action is achieved, the surface of the subject matter is being modified. Throughout the disclosure of the Benner patent the patentee refers to the apparatus shown as a polishing device and discloses in great detail the different types of abrasives to be used during the different stages of operation. Benner discloses a method and tool to finish glass after it has been formed including both grinding and polishing. There is nothing in the record to indicate that the Benner apparatus does not perform the polishing function set forth herein.

Appellants further contend that the polishing apparatus of the instant claims comprising a resinous layer "having a wet hardness circa Shore 84–92" attains the greatest possible efficiency in polishing plate glass. In support of this claim, the appellants have filed an affidavit which reveals the variation of "efficiency" with

cizer. It does not appear that the particular materials used are critical since all of the claims are not limited to the

We affirm the rejection of claim 28 for the above

change in hardness, both within and without the range of Shore 84–92. It will be noted that the affidavit itself is not explicit with regard to the degree of hardness that is required to obtain the results claimed, in that it states:

> The inventors have discovered that if the polishing surface is too hard, that is if it is *far above the range* Shore 84–92 filasses occur. On the other hand, if the material is too soft, *too far below the range* 84–92, the phenomenon of orange peel appears. [Emphasis ours.]

The record contains no assertion that any particular value of polishing "efficiency" as measured by the "coefficient of 'wear'" is of critical importance in the glass polishing art. It will be further noted that the above quoted paragraph of the affidavit refers to certain imperfections known as "filasses" and "orange peel." In another part of the affidavit, these two terms are defined, but nowhere in the record is there any showing that these flaws are solely avoided by the use of a glass polishing device having a hardness "circa Shore 84–92." [5] It is well established that "proportions or values are critical only when they involve a difference in kind rather than in degree." *In re Bourdon*, 44 CCPA 740, 240 F.2d 358, 112 USPQ 323, and cases cited therein. Accordingly, the affidavit is not deemed persuasive in establishing the criticality of the hardness of the polishing pad, or, in other words, that the hardness limitation renders the appealed claims patentable.

Coming now to the specific claims on appeal, the rejection of claim 25 as unpatentable over Benner alone was affirmed by the Board of Appeals. The Benner patent reads in part as follows:

> I have found it desirable to use pads of different degrees of hardness, depending upon the size and nature of the abrasive being used. The different degrees of hardness are obtained by varying the composition of the impregnating matrix by use of carbon black and similar fillers in the rubber mix as well as by the use of various accelerators and vulcanization practices, all of which means are familiar to skilled rubber workers. The finer the abrasive, the stiffer the pad which may be advantageously used. Likewise, the softer the abrasive (Mohs' scale of hardness), the harder or stiffer the pad advantageously may be made. Emery for instance should be used with a softer pad than sand of the same grit and silicon carbide with a still softer one. Soft pads tend to give less scratches than stiffer ones, but wear out more rapidly and take slightly more power. Hence I prefer to use the hardest pad in each case which I can without scratching the work.

It is apparent that Benner determines the hardness of his pad by empirical analysis of several features. The coarseness of the abrasive, as evidenced by the excerpt quoted above, is one such feature. In addition, Benner states that when "working with two different glass compositions having different degrees of hardness that it is in general desirable to use a somewhat softer pad on the harder glass . . .", thereby indicating a second determining factor.

[6] Therefore, the Benner patent discloses those criteria by which the hardness of the rubber pad disclosed therein may be chosen. It would be within the capabilities of any person skilled in the glass polishing art, and thus not require patentable invention, to discover the optimum or workable hardness range by routine experimentation. *In re Aller et al.*, 42 CCPA (Patents) 824, 220 F.2d 454, 105 USPQ 233; *In re Bourdon*, supra.

We accordingly agree with the Board's analysis of the Benner disclosure. The Board found as follows:

> Thus it is clear that Benner contemplates the use of the hardest pad which can be used without scratching the work just as appellants have done. It is deemed immaterial that Benner has not stated specific values of hardness. The effects of different ingredients and methods of manufacture upon the specific hardness are known to workers in the art as shown by Diehl.

We affirm the Board's rejection of claim 25 as unpatentable over Benner alone. It is therefore unnecessary to consider the other rejection of claim 25 or to further refer to the Diehl patent. *In re De Jariatt*, 43 CCPA (Patents) 900, 233 F.2d 328, 110 USPQ 36.

Claim 26 is similar to claim 25 with two exceptions, namely, the word "thin" is used to qualify "layer of rubbery resin" and "the rubbing body" is set forth as containing sawdust. In rejecting claim 26 the Board of Appeals held that "the addition of sawdust is merely a matter of choice since it has not been shown to be productive of any different result than the fibrous material incorporated in the rubber body of Benner." In addition to the above rejection predicated on the reference Benner alone, the Board also found that "since Benner teaches the comparable properties between the tire art and that of polishing pads, we do not think that there would be any invention in using rubber having sawdust incorporated therein as taught by Gapen et al." Therefore, the Board of Appeals rejected claim 26 as unpatentable over Benner alone or in combination with Gapen et al.

We find that the word "thin" is a relative term which fails to patentably distinguish over the Benner pad. In addition, the inclusion of the sawdust filler does not define patentably over the fibrous pads disclosed by Benner. [7] It would be within the skill of the art to substitute a sawdust filler for the "carbon black and similar fillers" disclosed by Benner in the paragraph cited, supra. There is no showing in the record that the use of sawdust will accomplish any results other than those naturally expected from the fibrous materials or fillers of Benner.

Furthermore, Gapen et al. teach the efficacy of combining sawdust with rubber for increasing traction in automobile tires and for other purposes wherein grip properties are important. Appellants contend that Gapen et al. cannot be used as a reference because that patent is from a non-analogous art. However, [8] it is well settled that the relevance of a reference depends on whether it would suggest to one skilled in the art, in this instance the glass polishing art, to do what appellants have done. This is true even though the reference in question may be alleged to have been derived from a non-analogous art. *In re Flick et al.*, 41 CCPA (Patents) 799, 210 F.2d 832, 101 USPQ 70; *In re O'Connor*, 34 CCPA (Patents) 1055, 161 F.2d 221, 73 USPQ 433. Here, the Benner patent, a reference in the precise art to which the instant application pertains, has disclosed the utilization of rubber "tire-like pads" made "with a resilience comparable to the tread of an automobile tire . . ." and including various means designed to alter the hardness thereof, which means "are familiar to skilled rubber workers." It is therefore clear that the teaching of the inclusion of the sawdust filler particles in the rubber tire of Gapen et al. would be suggested to any person skilled in the art of glass polishing armed with the teachings of Benner. Therefore, we affirm the Board's rejection of claim 26; for the same reasons, we affirm the rejection of claim 29 which does not differ in any material respect from claim 26.

In rejecting claim 28, the Board of Appeals stated:

> Claim 28 is similar to claim 25 except that it defines the rubbery resin body as being composed of substantially equal parts of soft wood sawdust, polyvinyl chloride and a plasti-

method claims pertaining to the glass grinding and

davit which reveals the variation of "efficiency" with

cizer. It does not appear that the particular materials used are critical since all of the claims are not limited to the materials recited. The prior art of record is deemed to show the interchangeability of various synthetic rubbery resins. Thus the use of the particular materials is deemed to be a matter of choice not amounting to invention.

[9] We agree that to substitute another "synthetic rubber-like material" for those taught by Benner would be obvious in the absence of any unexpected result accruing thereby.

Appellants further contend that the Board in considering each of claims 26 and 28 incorrectly used the word "critical." They argue that the word is one "of process, or of property, not of substance." However, it is obvious that the Board merely used the term to connote the lack of patentable significance of sawdust as an ingredient in the polishing pad in view of the disclosures of the prior art.

We affirm the rejection of claim 28 for the above reasons.

Claim 30 is essentially the same as claim 26 except that it recites that "the essential and major constituent" of the polishing pad is a resin. Inasmuch as Benner discloses that "non-fibrous pads of an elastomer" may be used in the polishing device therein described such recitation fails to distinguish over the reference grounds previously applied to claim 26.

We also sustain the rejection of claim 31 since the use of sawdust "from soft wood" is considered a matter of choice, not involving invention over the teachings of Benner, alone or in view of Gapen et al.

[10] For the foregoing reasons, the decision of the Board of Appeals is affirmed.

AFFIRMED.

REISSUES

AUGUST 18, 1959

Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,681
LITHIUM BASE GREASE

Richard A. Babcock, Uniondale, N.Y., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

No Drawing. Original No. 2,842,493, dated July 8, 1958, Serial No. 623,298, November 20, 1956. Application for reissue February 25, 1959, Serial No. 795,572

12 Claims. (Cl. 252—36)

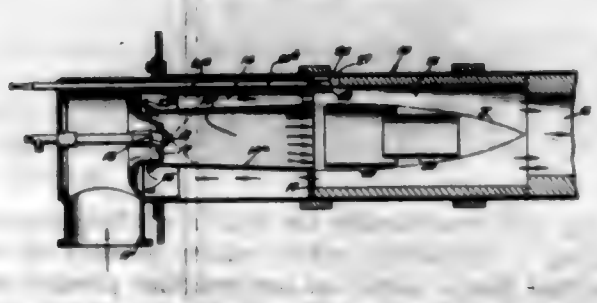
1. A lubricating grease comprising: a major proportion of mineral oil and a minor proportion, sufficient to form a grease, of a mixture of soaps, the acid components of said soaps comprising from about fifteen percent by weight to about eighty percent by weight of wool grease fatty acids and the balance of said acid components comprising aliphatic acids having at least about twelve carbon atoms per molecule, one of the metal components of said soaps being lithium and at least one other metal component of said soaps being selected from the group consisting of calcium, strontium, barium and zinc, with the mole ratio of lithium (Li) to calcium (Ca) being between about 27:1 and about [6:1] *4:1*, the mole ratio of lithium (Li) to strontium (Sr) being between about 42:1 and about 2.8:1, the mole ratio of lithium (Li) to barium (Ba) being between about 33:1 and about 3:1, and the mole ratio of lithium (Li) to zinc (Zn) being between about 30:1 and about 5:1.

24,682
FLUID FUEL BURNER

John A. Johnson, Short Hills, N.J., assignor to Thermal Research and Engineering Corporation, Waltham, Mass., a corporation of Delaware

Original No. 2,701,608, dated February 8, 1955, Serial No. 209,293, February 3, 1951. Application for reissue February 6, 1957, Serial No. 639,600.

9 Claims. (Cl. 158—1)



1. A burner comprising a *first* tube through which a column of air [passes] *is adapted to pass*, said tube being longitudinally divided into a mixing section *including therein a mixing tube* of Venturi form *with its smaller end upstream and its larger end downstream, said mixing tube defining therein a mixing chamber within said mixing section;* and a combustion section formed immediately downstream from the mixing section [by abruptly increasing the diameter of said tube], *said combustion section being of substantially greater diameter than the downstream end of said mixing tube;* means for dispersing an oil fuel into the air column passing through the mixing [section of said] tube near [its Venturi throat,] *the upstream end thereof;* [and] means for igniting the fuel-air mixture passing through said [tube] *combustion section*, [the abruptly increasing diameter of said tube providing an annular shoulder in said tube]: *an annular shoulder at the function of the downstream end of said mixing tube and the upstream end of said combustion section, said shoulder projecting outwardly from said downstream end of said mixing tube* to act as a flame holder in the combustion section [thereof], in combination with means for vaporizing the oil dispersion in the mixing [section of said] tube, said means comprising a conduit [connecting] *providing fluid communication between* the combustion section of said *first* tube at the annular shoulder [thereof with] *and* the mixing [section of said] tube substantially at [its Venturi throat,] *the upstream end of said mixing tube*, whereby the difference in static pressure between the combustion section and the [Venturi throat] *upstream end* of the mixing [section of said] tube carries the burning gases reversely to the *direction of flow of the fuel and air through the* mixing [section of said] tube to vaporize the dispersed oil fuel therein for intimate mixture with the air column prior to combustion.

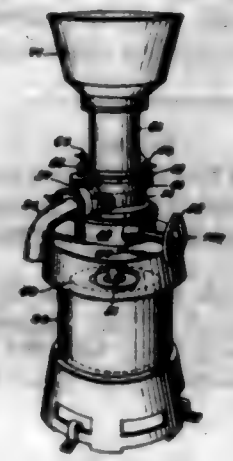
24,683
METHOD OF COMMINUTING MEAT

Carl Schnell, Winterbach, Germany, assignor of one-half to The Griffith Laboratories, Inc., Chicago, Ill., a corporation of Illinois

Original No. 2,836,825, dated May 27, 1958, Serial No. 675,997, August 2, 1957. Application for reissue January 19, 1959, Serial No. 787,788

Claims priority, application Germany June 15, 1956

16 Claims. (Cl. 99—108)



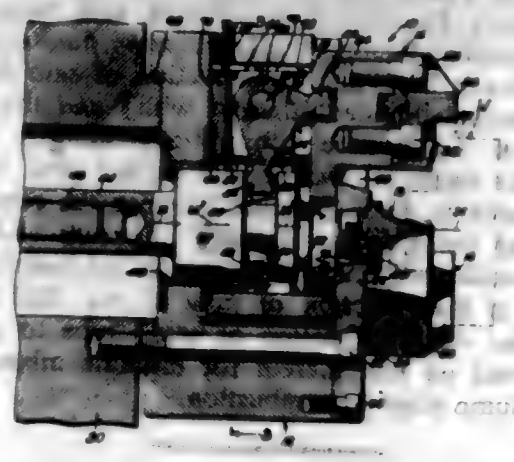
1. The method of processing meat which comprises continuously feeding meat under its own weight into a supply chamber and therefrom through an unobstructed space into a cutting chamber adjacent a foraminous exit, sealing the cutting chamber from the atmosphere by maintaining in said supply chamber a hydraulic head of raw meat to be comminuted, centrifugally moving the meat about an axis in the cutting chamber, subjecting the so moving meat to impact-cutting and draw-cutting, passing that portion of the meat having a predetermined fineness through the foramens of the exit and deflecting the remaining centrifugally flowing meat to move spirally in an axial direction away from said exit, obstructing the deflected flow of said meat and thereby mixing the same with incoming meat, shearing the meat entering said foramens at the edges of the foramens, propelling the meat in said cutting chamber toward said foramens as said meat is moved

centrifugally, applying suction to the exit side of said foramens whereby to assist in moving material through said foramens, and discharging the resulting material.

24,684
POWER-OPERATED CHUCK OF THE COMPENSATING TYPE

Linwood B. Swanson, Newington, Conn., assignor to The Cushman Chuck Company, Hartford, Conn., a corporation of Connecticut

Original No. 2,867,443, dated January 6, 1959, Serial No. 578,945, April 18, 1956. Application for reissue February 13, 1959, Serial No. 793,224
16 Claims. (Cl. 279—119)

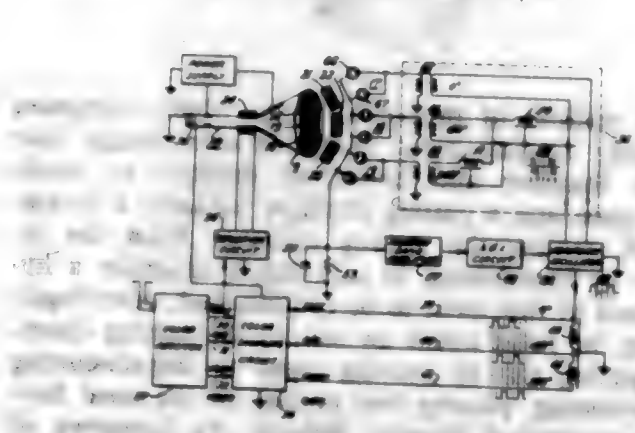


1. In a compensating chuck, the combination with a chuck body having a longitudinal axis and jaws guided thereon for movement into and from gripping engagement with work, of a carrier floatable in said body in any direction in a plane at right angles to said axis; devices associated with said jaws, respectively, being pivoted on said carrier *for floating movement therewith relative to said body* and having with their associated jaws driving connections floatable transversely of the latter for moving said jaws on rocking said devices about their pivot axes; and means in said body for simultaneously rocking said devices while permitting said carrier to float.

24,685
COLOR TELEVISION INDEXING SYSTEM

Richard G. Clapp, Narberth, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Original No. 2,752,418, dated June 26, 1956, Serial No. 390,062, November 3, 1953. Application for reissue March 11, 1957, Serial No. 645,388
21 Claims. (Cl. 178—5.4)

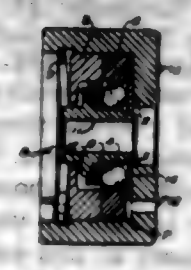


19. In a color television receiver, color image-reproducing means adapted to produce light of different colors in response to color video signals, dual-element detector means responsive differentially to light of one color produced by said image-reproducing means, oscillator means connected to drive said detector means, phase control means responsive to signals from said detector means to control said oscillator means, and means controlled by said oscillator means for correcting color error in the color image produced by said image-reproducing means.

24,686
BALL BEARING

Lawrence S. Williams, Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio

Original No. 2,848,286, dated August 19, 1958, Serial No. 553,101, December 14, 1955. Application for reissue October 30, 1958, Serial No. 770,877
23 Claims. (Cl. 308—193)

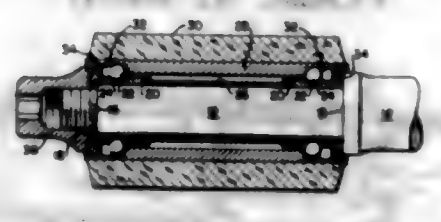


1. A device of the class described comprising, in combination, a bearing housing, a ball bearing assembly that is supported within the housing and that includes an outer race, an inner race, a series of bearing balls, and guiding means at the sides of the balls to keep the balls tracking in a substantially vertical plane, the guiding means at one side of the balls being depressed in an area below the inner race to permit axial movement of the balls under load so that axial pressure of said balls under load against said guiding means having said depressed area does not occur, and retainer means for holding the ball bearing assembly within the housing.

24,687
TOP ROLLS FOR SPINNING MACHINES

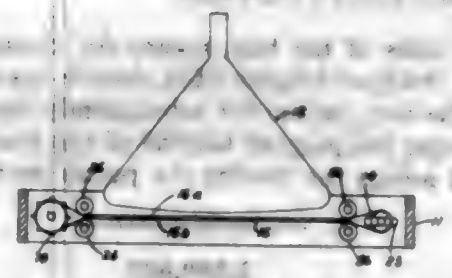
Kenneth P. Swanson, Abington, Mass.

Original No. 2,812,554, dated November 12, 1957, Serial No. 361,037, June 11, 1953. Application for reissue December 5, 1957, Serial No. 706,926
3 Claims. (Cl. 19—142)



3. Top roll construction for textile drafting machines, comprising a cylindrical arbor, means forming an annular external flange about an intermediate portion of the arbor, said arbor having a threaded end, a tubular drawing roll having end portions reduced to form internal shoulders, sleeves on said arbor, one set of bearing balls mounted in spaced relation upon each of two of said sleeves, said sleeves being carried in abutting relation upon said arbor and dimensioned to space the sets of balls apart by a distance greater than the distance between the internal shoulders of the tubular drawing roll, a first lint sealing ring mounted on the arbor adjacent said annular flange and one end of one of said sleeves, a second lint sealing ring mounted on said arbor adjacent said threaded portion and the end of another sleeve, and means threaded on the threaded end of the arbor for exerting axial pressure on said sleeves and flange to bind the sleeves against rotation about said arbor, said drawing roll being supported for rotation upon said sets of balls with axial clearance between said sets of balls and the internal shoulders of the drawing roll.

24,683
COLOR TELEVISION SYSTEM AND APPARATUS
Christian Dean Berger, North Canton, Ohio
Original No. 2,728,814, dated December 27, 1955, Serial No. 322,406, November 25, 1952. Application for reissue September 4, 1957, Serial No. 683,195
16 Claims. (Cl. 178—5.4)



2. A color television receiver for a field-sequential polychrome television system, comprising a picture tube having means for producing a cathode ray beam therewithin, a screen and means for periodically and cyclically sweeping said beam across said screen to form an image raster, said beam being modulated in intensity in accordance with a polychrome field-sequential video signal to produce a monochrome image on said screen, said image being formed by successive color fields representative of the primary color components of the polychrome scene being transmitted; and a color converter for converting said monochrome reproduced image into a polychrome produced image, comprising an endless filter band disposed in a narrow loop having two planar portions disposed parallel and closely adjacent to one another and positioned in front of said picture tube screen with the width of said filter band arranged along the vertical dimension of said image raster and with said band completely covering said raster, said filter band comprising an endless sequence of filter stripe arranged parallel to one another and of equal width *not more than approximately one thirty-second of an inch, said strips thereby being blendable by the human eye at normal viewing distances*, said stripe being cyclically of the respective primary colors of said polychrome television system, each of said stripe being slanted with respect to the vertical by being offset from the vertical by a distance equal to a multiple of one-half the strip width, and means for moving said filter band horizontally at a uniform speed synchronized with the field repetition rate of the said television system, with said filter band moving a horizontal distance equal to said offset in the time interval of the duration of a single field.

PLANT PATENTS

GRANTED AUGUST 18, 1959

Illustrations for plant patents are usually in color and therefore it is not practicable to reproduce the drawing.

1,359
ROSE PLANT
Marcel Robichon, Pithiviers, Loiret, France, assignor to Eisenfritz Nurseries, Inc., Monroe, Mich., a corporation of Michigan
Application December 18, 1958, Serial No. 779,512
1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the hybrid tea class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of glossy foliage of distinctive shape and color, a compact habit of bloom, and a distinctive yellow general color tonality of the blooms which persists without appreciably fading from the bud stage to the fully open flowers.

1,360
ROSE PLANT
Frank Spanbauer, Decatur, Ill.
Application December 15, 1958, Serial No. 780,648
1 Claim. (Cl. 47—61)

A new and distinct variety of rose plant of the polyantha class, substantially as herein shown and described, characterized particularly as to novelty by the unique combination of an upright habit of growth, excellent cut flower production, exceptionally fine flower qualities, long buds borne on vigorous and upright stems of medium length, a slow bud-opening habit and uniform color throughout growing season, a distinctive Camellia Rose and Rose Opal general color tonality of the outer and inner petal surfaces, respectively, which remains constant from the opening bud stage throughout the life of the flowers, including the dehydrated petal stage even when cut from the plant, and exceptionally good keeping qualities of the flowers.

ing body part in the form of a band, said band having a surface of the inner panel and having a bottom selvage

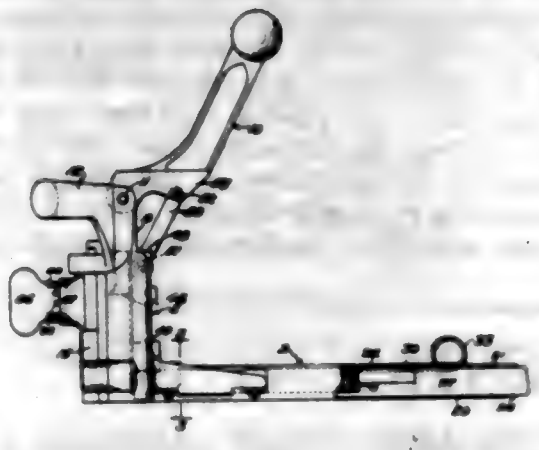
...detected to drive the detector means, phase control balls and the internal shoulders of the drawing roll.

PATENTS

GRANTED AUGUST 18, 1959

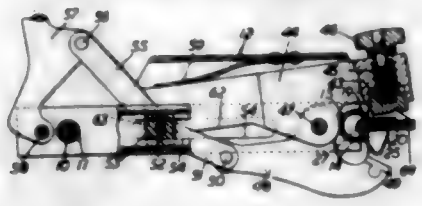
GENERAL AND MECHANICAL

2,899,679
FASTENER-APPLYING IMPLEMENT
Howard G. Allen, Stonington, Conn., assignor to Bostitch, Inc., Stonington, Conn., a corporation of Rhode Island
Application June 4, 1957, Serial No. 663,519
12 Claims. (Cl. 1—49)



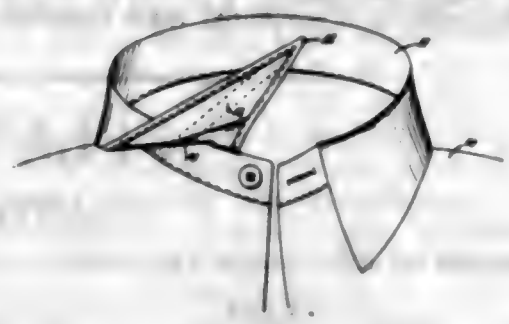
1. In a stapling machine, a housing adapted to rest against the work, a reciprocable plunger slidable vertically in said housing, an operating lever pivoted to a stationary part of said housing, means connecting said lever to said reciprocable plunger for reciprocating it, a staple-driver connected to said plunger for movement thereby, a crosshead, means for releasably connecting said crosshead to said plunger for movement therewith, an adjustable member, clinching anvils pivoted to said adjustable member to adapt them to oscillate relatively thereto, means connecting said crosshead to oscillate the anvils to cause them to penetrate the work in position to engage the legs of a staple to clinch them, and means for adjusting said adjustable member for locating the pivots of said anvils at different distances from the pivotal axis of said lever to regulate the extent of penetration of the anvils into the work.

2,899,680
BELT-FASTENING MACHINES
John J. Potter, Sheffield, England, assignor to Hayden-Niles Limited, Sheffield, England
Application April 28, 1958, Serial No. 731,350
Claims priority, application Great Britain May 1, 1957
5 Claims. (Cl. 1—49.4)



1. A belt-fastening machine for inserting into the end of a belt double hooks, each consisting of two lengths of wire both connected together by a bridge and each connected to a bent and pointed length, the machine comprising a slotted comb-bar to receive a row of open hooks, clamping means to hold the edge of a belt against the comb-bar inside the open hooks, a jaw-unit movable progressively along the comb-bar, with two jaws facing opposite sides of the belt, means for closing one jaw to hold the bridged lengths of a double hook against one side of the belt, means for subsequently closing the other jaw to press the pointed lengths of the hook through the belt, and means for turning the points over the bridge.

2,899,681
COLLAR STIFFENER
Martin L. Oscard, Ridgefield Park, N.J.
Original application February 8, 1954, Serial No. 408,752, now Patent No. 2,799,824, dated July 16, 1957. Divided and this application May 13, 1957, Serial No. 658,813
2 Claims. (Cl. 2—132)



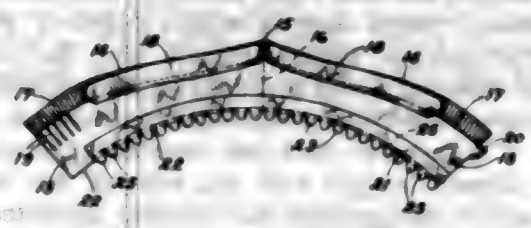
1. An adjustable collar stay including in combination a first elongated thin flexible member, a second elongated thin flexible member juxtaposed and longitudinally slidable with respect to said first member, a first pair of arms extending from said first member and formed to movably retain said second member in close contact with said first member, a second pair of arms extending from said second member at a point adjacent said first member and formed to movably retain said first member in close contact with said second member, a first dimple protruding from said first member in the direction of said juxtaposed second member and slidable with relation thereto, a series of apertures in said second member along the path of said slidable dimple, said arms being of sufficient width to prevent buckling between said members during use and therefore to retain said dimple in one of said apertures to prevent longitudinal movement between said first member and said second member, a second dimple protruding from said first member in the direction of the juxtaposed other member and being spaced from said first dimple and further being normally spaced from said other member and adapted to engage said other member to thus cooperate to limit relative longitudinal sliding movement of said members in one direction, and said second pair of arms being normally spaced from said first pair of arms and adapted to engage same to thus cooperate to limit relative sliding movement of said members in the opposite direction.

2,899,682
GRADUATION CAP
Thomas La Maida, Cleveland, Ohio
Application June 13, 1957, Serial No. 665,566
6 Claims. (Cl. 2—195)

1. A graduation cap of the type including a flat top part, securing means attached to the underside of said top, with the marginal portion of said securing means spaced therefrom, and a separate downwardly extend-

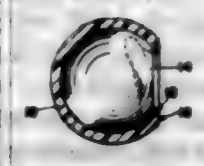
bination a flexible priming tube vertically positioned in a retractible rack adapted to be movably mounted on

ing body part in the form of a band, said band having a transversely extending top edge, the improvement comprising, a securing strip disposed along the inner surface of the upper margin of said band with the upper edge of the securing strip disposed a short distance below the upper margin of said band, the transverse upper edge of said band being tightly seated against the flat



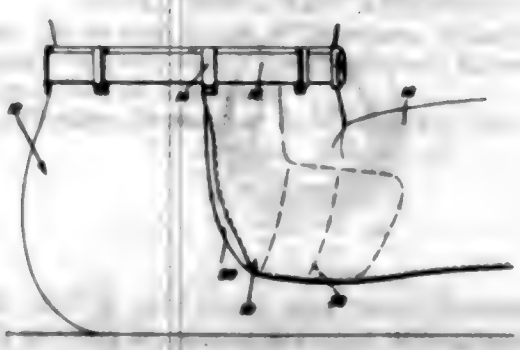
underside of said top, said securing strip being provided with flexible engagement means connected to and extending from the upper edge of the securing strip and bent inwardly therefrom into the space between said top and said securing means, said flexible engagement means extending around a major portion of said band and retaining the top transverse edge of said band squarely against the flat underside of said top.

2,899,683
EAR PROTECTORS
William B. Wadsworth, Concord, and Forrest R. Poole, Worcester, Mass.
Application July 11, 1956, Serial No. 597,161
5 Claims. (Cl. 2—209)



1. An acoustical ear protector comprising a substantially rigid imperforate hollow body of substantially spherical shape and of substantial thickness, having an inner diameter substantially greater than the size of the human ear, said body being larger than a hemisphere and having a single substantially circular ear-receiving opening therein communicating with the interior of the hollow body, said opening having a diameter substantially less than the inner diameter of the spherical hollow body.

2,899,684
TROUSERS POCKET
Dorcas R. Riley, Farmington, N. Mex.
Application July 25, 1957, Serial No. 674,238
1 Claim. (Cl. 2—254)

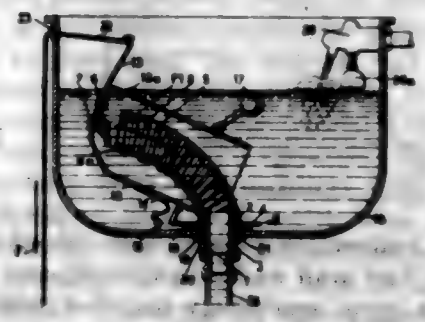


In combination with a side opening pocket in a pair of trousers with the pocket having an inner and outer panel having a portion of one edge free for providing an access opening and subject to movement to a substantially horizontal position when the wearer of the trousers assumes a sitting position, a generally elongated rectangular retaining panel extending transversely across the inner surface of the inner panel and having a bottom selvage edge, said retaining panel being stitched to the pocket along the top and side edges with the bottom edge being free and shorter than the portion of the inner panel between the side stitching for spacing the free edge of the retaining panel from the inner panel of the pocket and with the free edge spaced above the bottom of the pocket, thereby forming a downwardly opening pocket for receiving articles normally carried in the trousers pocket thereby preventing movement of the articles to the access opening as the trousers pocket moves to a generally horizontal position.

2,899,685
RESILIENT STILTS
Christian M. L. L. Bourcier de Carbon, Neuilly-sur-Seine, France
Application November 8, 1955, Serial No. 545,670
2 Claims. (Cl. 3—4)

1. A jumping device particularly for sport use comprising a hollow cylinder closed at the top, a plunger rod entering the cylinder through the lower end thereof and adapted to reciprocate therein, an airtight sealing packing at the lower end of the cylinder through which the plunger rod passes, the lower end of said plunger rod comprising the ground contacting portion of the device, a supply of gas under pressure in said cylinder, said plunger having at its upper end portion a flange, the peripheral margin of which is in free sliding contact with the inner wall of the cylinder for the purpose of axial guidance only, the flange being provided with openings large enough for the free passage of gas therethrough so as to place the space in the cylinder above the flange and the space beneath the flange between the flange and said packing and surrounding the plunger in free communication with each other.

2,899,686
RAPID PRIMING SIPHON FOR WATER FLUSHING TANKS
Michel Tchoubritch, Boissy-St-Leger, and Georges Terroir, Paris, France, assignors to Societe d'Etudes et d'Applications de Procedes Nouveaux, Paris, France, a corporation of France
Application May 17, 1957, Serial No. 659,944
4 Claims. (Cl. 4—42)



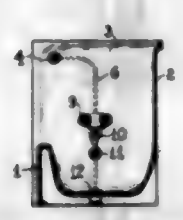
1. A quick-starting siphon for a flush tank of the type provided with an outlet in its bottom, comprising in com-

progressively along the comb-bar, with two jaws facing

spaced therefrom, and a separate downwardly extend-

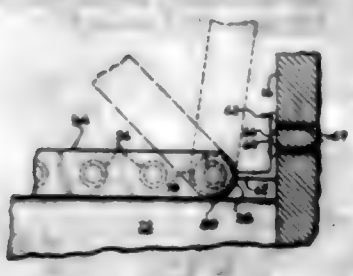
bination a flexible priming tube vertically positioned in said tank and permanently sealed at its lower end to said outlet to form therewith a cotninuous fluid impervious passageway, the upper end of said tube being open and lying above the normal level of the water in said tank, a rigid bottomless chamber within said tank having side-walls which encircle and overlap said tube with their lower edges lying below normal level of the water in said tank, said chamber being closed at the top and attached to said tube by means spacing the top of said chamber from the upper end of said tube to provide a passageway therebetween, the volume of said chamber outside said tube being greater than that of said tube, and means for bending said tube laterally to immerse its upper end, thereby priming said siphon, said bending means comprising means fixed to said chamber for pivoting said chamber and the upper end of said tube about the point at which said tube is attached to said outlet.

2,899,687
BATHTUB
Frederick S. Rossetti, Branford, and John B. Rossetti, East Haven, Conn.
Application March 28, 1955, Serial No. 496,983
1 Claim. (Cl. 4—149)



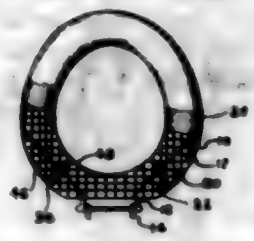
A bathtub having back wall and end walls; conjoint vertical wall extensions integral and coextensive with said back wall and end walls adapted to form a sanitary and watertight cover over the adjacent wall surface of the bathroom; a tubular brace having its ends secured to the upper free corners of said conjoint wall extensions and being adapted to tie, brace, and reinforce said wall extensions to permit the moving of the bathtub into its place of installation without harmful deformation; said tubular brace having shower holes directed toward said back wall, and being in communication with a water supply adapted to produce a flow of water through said shower holes; curtain carrying hooks slidably mounted on said tubular brace; the portion of the tubular brace, having the shower holes, being rotatable permitting the changing of the direction of said shower holes in order to regulate the slope of the spray of water coming from the tubular brace.

2,899,688
BATH TUB ACCESSORY
Norris E. Hopkins, Chesterton, Ind.
Application February 4, 1958, Serial No. 713,202
1 Claim. (Cl. 4—185)



For use in connection with a bath tub alcove having a side wall, a foot wall and a head wall, and a bath tub of the built-in type operatively installed within said alcove with the horizontal rim of the bath tub being sealed coextensively along three sides thereof to said walls, a retractible rack adapted to be movably mounted on said head wall of the alcove and movable from an extended operative position of use to a retracted out-of-the way position, said rack comprising a pair of elongated parallel normally straight side members formed of a resilient elastomeric material and capable of yielding flexing movement, each of said side members being substantially rectangular in transverse cross section and having semi-cylindrical ends, the inner side faces of said side members being formed with a plurality of aligned pairs of cylindrical sockets therein with the sockets of each side member being arranged in a longitudinally extending row with equal socket-spacing between adjacent sockets, a transverse rack bar extending between each pair of aligned sockets with the ends of the bar fitting snugly within the sockets, the internal diameter of said sockets being slightly less than the external diameter of said bars whereby said bar ends are disposed within their respective sockets with a forced fit, a pair of unitary one-piece mounting brackets for attaching said rack to said head wall, each mounting bracket comprising a vertical attachment flange adapted to be secured to said head wall, a horizontal flange extending laterally from said vertical flange and a bearing ring formed at the distal end of said horizontal flange and loosely encircling one of the outermost rack bars whereby the rack as a whole is pivotally connected to said mounting brackets, said rack in its extended position being adapted to be in a substantially horizontal plane with said resilient side members resting squarely on the bath tub rim in coextensive face-to-face contact therewith, said rack in its retracted position being adapted to lie in a plane which is slightly inclined from a vertical plane with the upper ends of the side members engaging the head wall and with the lower ends thereof resting endwise on said bath tub rim, the surfaces of said semi-cylindrical ends of the side members being concentric with said one outermost rack bar, the radius of curvature of said semi-cylindrical ends of said side members being substantially equal to the vertical distance between the axis of said outermost rack bar and the plane of the bath tub rim when the rack is in its extended position of rest on the rim whereby the weight of said rack will be supported on the bath tub rim in all positions of the rack, said horizontal flange being of appreciable extent so that when the rack is in its retracted position, the same will assume an unstable degree of equilibrium with the end of the rack remote from said mounting brackets being adapted to lean against said head wall.

2,899,689
CUSHIONED TOILET SEAT
Alfred J. Pastl, Chicago, Ill.
Application February 3, 1956, Serial No. 563,225
7 Claims. (Cl. 4—237)



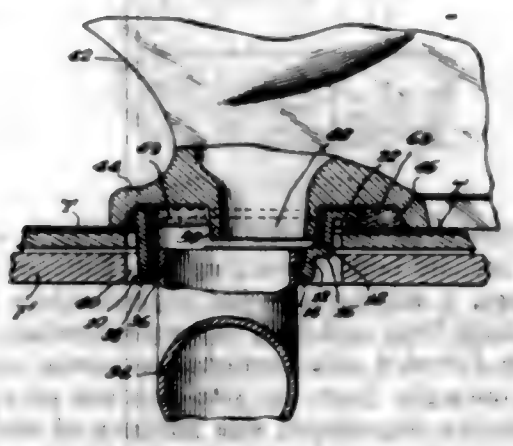
1. A cushioned toilet seat comprising a base formed of rigid material with separate groups of grooves formed in the top side thereof with one group of grooves extending in one direction in parallel spaced apart relation and with another group of grooves extending in parallel spaced apart relation in other direction for intersecting the grooves of the first group, and openings through the base in communication with one or more of said grooves, a cushioning member of soft and resilient material di-

2,899,693

for independently raising either of said end sections to

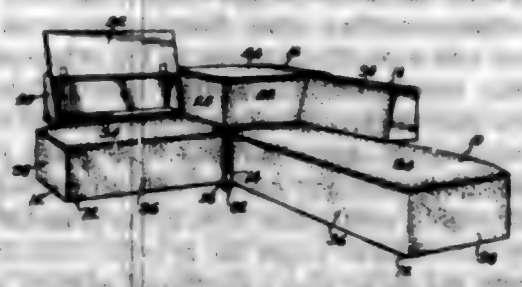
mensioned to correspond with the base and resting on the grooved surface of the base, and a fluid impervious cover extending in sealing relation over the outer surfaces of the cushioning member.

2,899,690
ADJUSTABLE WATER CLOSET COLLAR
William Clifford, Chicago, Ill.; Sven Mary Clifford, sole legatee of said William Clifford, deceased, assignor of one-third to Cleo Clifford Pajdowski, Chicago, Ill.
Application November 16, 1955, Serial No. 547,146
5 Claims. (Cl. 4—252)



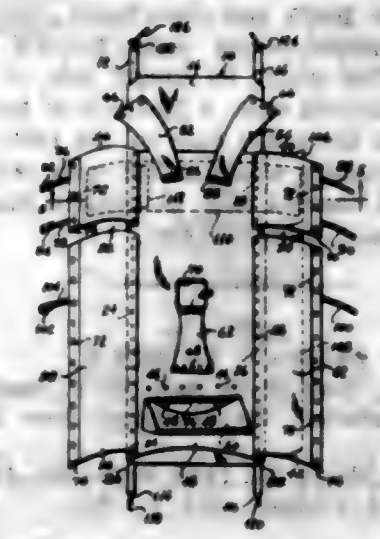
1. An adjustable water closet collar for operably connecting a closet bowl discharge outlet with the inlet of a closet bend pipe spaced below but aligned with an opening in a floor comprising; an integral hollow member having an irregularly annular vertical inner wall including a circular portion defining a circular opening at the bottom end of the collar the diameter of which is greater than the diameter of the inlet, an elongated portion defining an elongated opening at the top end of the collar, said elongated opening having major and minor axes and being symmetrical about both said axes, the major axis of said elongated opening being greater than the diameter of the outlet, the major axis of the elongated opening being disposed perpendicular to and passing through the axis of the circular opening, a flange encircling said elongated end positioned exterior of the elongated opening, medial portions of said flange having arcuate slots adapted to receive fastening members therethrough for securing the collar to the water closet, said collar being rotatable on the vertical axis of said circular portion whereby said elongated portion is rotated eccentrically to permit adjustment of mis-registry of said closet bowl discharge outlet and closet bend pipe inlet upon installation of the water closet.

2,899,691
DUAL SOFA-BED ASSEMBLY
Hyman Davis and Jacob J. Hartman, Denver, Colo., assignors to Paramount Products, Inc., Denver, Colo., a corporation of Colorado
Application September 8, 1958, Serial No. 759,679
15 Claims. (Cl. 5—2)



1. In a dual couch assembly of a type designed for use in a corner of a room, an upright pivot member, a pair of caster-supported frames each having spaced substantially parallel side frame elements, means operatively interconnecting the rear inside corner of each frame with the pivot member for arcuate swinging movement between an open position wherein said frames occupy a substantially perpendicular relation to one another and a closed position in which they lie in side-by-side substantially parallel relation, at least one top roller mounted for rotation about a horizontal axis in the upper surface of each side frame element, at least one side roller mounted for rotation about a vertical axis in the outside surface of each side frame element, a pair of couch units each having a head end and a foot end, a pair of spaced substantially parallel side rails located on the underside thereof and positioned to roll along the top rollers of the swinging frames, a pair of spaced substantially parallel side panels extending downwardly beyond the side rails and positioned to roll along the outside of the side rollers of the swinging frames, and at least one caster supporting the foot end of each couch unit, the head ends thereof being supported for longitudinal rolling movement by the swinging frames so that the head end of either of said couch units may be moved into a retracted position behind the head end of the other from the open position and both of said couch units may be swung into closed position from their extended positions.

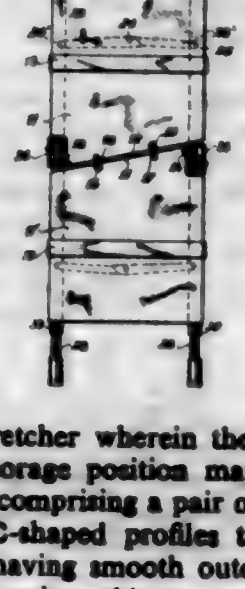
2,899,692
EVACUATION LITTER
Walter S. Finken, Brooklyn, N.Y., assignor to Gentex Corporation, New York, N.Y., a corporation of Delaware
Application July 13, 1955, Serial No. 521,724
3 Claims. (Cl. 5—82)



1. An evacuation litter for transporting a patient including a litter having an apron and having means for carrying the apron, an envelope formed with pairs of flaps adapted to be folded over the patient, means for securing said envelope to said apron, means for retaining a patient in position in said envelope, means for individually closing said pairs of flaps over the patient, said pairs of flaps being adapted to be individually opened to permit access to predetermined parts of the patient's body, a pair of auxiliary flaps carried by the respective flaps of one pair of said envelope flaps, said auxiliary flaps being shorter than the envelope flaps with which they are associated and means for closing said auxiliary flaps over said envelope flaps carrying the auxiliary flaps to accommodate a patient of smaller size than the size of the patient accommodated by said envelope flaps carrying said auxiliary flaps.

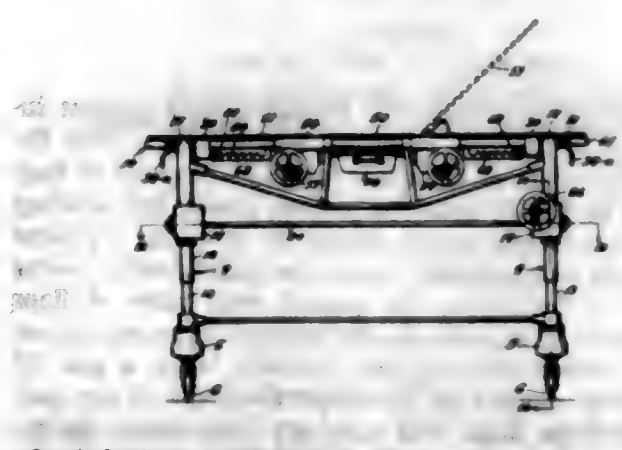
coextensively along three sides thereof to said walls, a cushioning member of soft and resilient material di-

2,899,693
STRETCHER
Hans Stollenwerk, Koln-Dellbrueck, Germany
Application October 15, 1956, Serial No. 616,693
2 Claims. (Cl. 5—82)



1. A foldable stretcher wherein the longitudinal support rails in the storage position may abut each other along their lengths, comprising a pair of longitudinal support rails having C-shaped profiles to define compartments therein and having smooth outer surfaces to prevent catching on foreign objects, a plurality of transverse members pivotally connected between said rails for disposition within said compartments, a cover, means mounting said cover along the length of said rails, said means being disposed within the outer surfaces of said rails, said rails being divided in the middle so that two stretcher halves are formed, means for connecting the divided rails to each other including a pair of large shoes surrounding the rails and disposed on obliquely opposed portions of the stretcher halves, said cover being made in two parts and detachably joined along a straight line disposed at an angle to said rails, each part being attached along its longer side to an inward portion of the adjacent shoe, a plurality of handles pivotally connected to the outer ends of the rails, means for locking and unlocking said handles with respect to the rails so that said handles may be pivoted into a storage position within said compartments.

2,899,694
BEDPAN VEHICLE
Sidney Horowitz, New Hyde Park, N.Y., assignor to Inventions Association, Incorporated, New Hyde Park, N.Y.
Application March 24, 1955, Serial No. 496,561
6 Claims. (Cl. 5—90)



2. A bedpan vehicle including a frame having thereon a central table section with an opening therein, a pair of end table sections hingedly mounted adjacent to said central section and disposed at opposite sides thereof, the said end sections having notches in opposite sides thereof forming openings between said frame and end sections, means for independently raising either of said end sections to angular positions relatively to the central section, a pair of oppositely disposed brackets depending from said frame adjacent to the notches of each end section, and supporting bars mounted on said brackets and adjustable thereon relatively to the central section and spaced from and disposed below the said notches in the end sections.

2,899,695
LIFEBOAT
Ernst Willy Nicol, Husum, Nordsee, Germany
Application June 8, 1956, Serial No. 590,246
1 Claim. (Cl. 9—4)

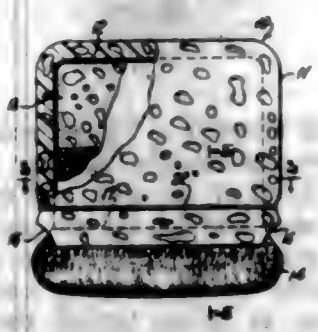
In a lifeboat, an elongated hull including a substantially flat, arcuate bottom merging into flattened arcuate side portions, a substantially flat superstructure integral with and rising from said hull, said superstructure including arcuate flattened side portions, horizontal walkways extending inwardly from the side portions of said hull and intersecting the arcuate side portions of said superstructure, an unobstructed access hatch extending through and substantially the length and width of said superstructure to provide unimpeded ingress and egress during emergency conditions, a flexible hatch cover displaceably and sealingly retained at opposite sides of said access hatch and foldable longitudinally thereof toward at least one end of said hull, a boarding hatchway in said superstructure at one end of said access hatch, a plurality of transverse seats, longitudinally spaced in said hull, and a hand grip rail on the arcuate side portions of said superstructure immediately adjacent opposite sides of said access hatch and extending along the major extent thereof for facilitating disembarking from said hull by standing on the seats and grasping said hand rail and available for use regardless of the position of the hatch cover.

2,899,696
SHOE LAST CONSTRUCTION
Willi Albert Otto, Alfeld (Leine), Germany
Application January 29, 1957, Serial No. 636,930
Claims priority, application Germany September 15, 1956
4 Claims. (Cl. 12—136)

1. A bipartite last construction comprising heel and toe parts, an interconnecting plate fixedly connected to one of said parts and movably received in the other part, said plate having two distinct elongated substantially rectilinear guide slots formed in the portion thereof which is movably received in said other part, two guide pins carried by said other part and each slidably received in one of said guide slots, said guide slots being oriented to one another by an oblique angle to provide exclusively in coaction with the guide pins a combined angular and pivotal movement for said parts with respect to each other between a working position wherein said last is extended and a work removing position wherein said last is both

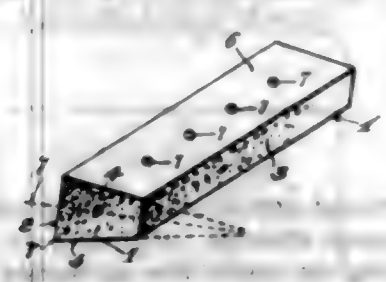
broken and shortened and detent means extending into one of said slots for yielding engagement with the guide pin therein to lock said parts against relative movement.

2,899,697
SCOURING TOOL
Henry Von Kohorn, Greenwich, Conn., and Ralph S. Von Kohorn, White Plains, N.Y.
Application June 6, 1958, Serial No. 740,441
6 Claims. (Cl. 15—123)



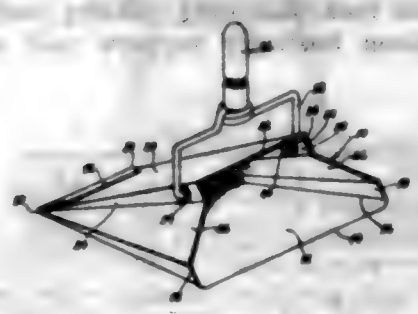
1. An improved scouring tool comprising a plurality of substantially parallel base strips having front edges and a plurality of scouring strips formed of bands of intermatted rust-proof fibers, each of said bands being folded along their longitudinal axis to provide an outwardly directed looped portion and inwardly directed legs, said legs being secured to said base strips whereby said scouring strips are substantially parallel to each other and said outwardly directed looped portions are disposed forwardly of said base strip front ends and define a working surface, and means maintaining said base strips and said scouring strips in assembled condition.

2,899,698
SPONGE CLEANING ELEMENTS FOR MOPS
Sidney P. Vaughn, San Diego, Calif.
Application July 9, 1956, Serial No. 596,566
2 Claims. (Cl. 15—244)



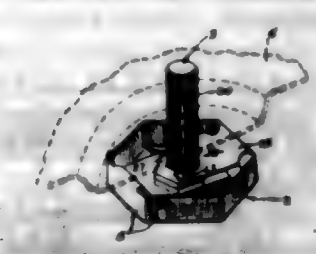
1. A sponge element of substantially universal application to spong mops and capable of use with back and front presser mops or mops without pressers and comprising a sponge element, the cross-sectional shape of which is substantially in the form of an isoceles trapezoid with the longer parallel side thereof constituting the front face of the element and the shorter parallel side constituting the rear face thereof, and with said front face intersecting the adjacent top and bottom faces at an angle of about 80°, a relatively rigid backing secured to the top face of the element, said element when in operative position with its lower face in engagement with the floor presenting a forwardly projecting toe portion enabling the element to reach into corner intersections of the floor with the wall, said sponge element being formed, among other ways, by being capable of being cut from a sponge blank of parallelogram cross-sectional form without wastage, in which the length of the blank is equal to the length of the sponge element, the height of the blank is equal to the height of said trapezoid, and one of the inclined sides of the parallelogram makes an angle with one of the parallel sides thereof of about 80°.

2,899,699
DUSTPAN AND HANDLE
Paul G. Caisse, Hartford, Conn., assignor to The Fuller Brush Company, Hartford, Conn., a corporation of Connecticut
Application October 19, 1956, Serial No. 617,011
9 Claims. (Cl. 15—257.4)



1. A dustpan including a substantially horizontal bottom wall having parallel front and rear edges and having rearwardly converging sides, a top wall narrower than said bottom wall and having substantially parallel sides symmetrically disposed relatively to the converging sides of the bottom wall, two substantially vertical rearwardly converging lower side walls extending upwardly from the converging sides of the bottom wall, two substantially vertical parallel upper side walls extending downwardly from the parallel sides of the top wall, and two intermediate side walls inclined upwardly and inwardly and connecting the upper edges of the lower side walls with the lower edges of the upper side walls.

2,899,700
SNAP-ON CASTER
Thomas R. Egan, Galesburg, Ill., assignor to Midwest Manufacturing Corporation, Galesburg, Ill., a corporation of Illinois
Application March 2, 1956, Serial No. 569,057
2 Claims. (Cl. 16—30)

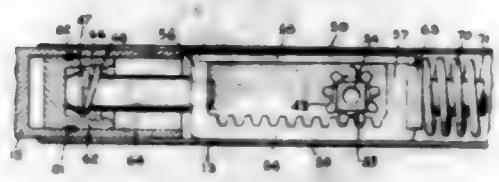


1. A one-piece caster for attachment to a bolt having a shank and a polygonal head, said caster comprising a base portion having a bottom wall and sides extending therefrom, one of said sides having a tongue extending substantially parallel to said bottom wall in overlying relationship thereto, said tongue having a polygonal opening centrally disposed within said base for receiving the polygonal head of said bolt, said tongue having depending sides extending to said bottom wall for spacing said opening a predetermined distance from said bottom wall, and a retainer plate extending from another of said sides in overlying spaced and substantially parallel relationship with said tongue, the free end of said plate having an open slot for receiving the shank of said bolt when the head of said bolt is received within said opening.

2,899,701
CONCEALED DOOR CLOSER
Charles S. Schroeder, Wynnewood, Pa., assignor to The Yale & Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Application May 10, 1954, Serial No. 428,398
9 Claims. (Cl. 16—64)

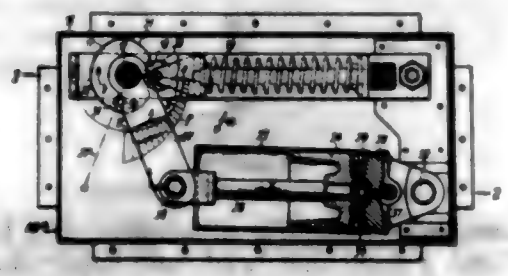
2. In a door closer of the class adapted to be mounted in a hollow upper rail of a door, an elongated casing

having an internal longitudinal chamber formed with a longitudinal bearing surface, a rack within said casing chamber and having a bearing surface adapted to slide on the said longitudinal bearing surface of said casing chamber, a cylindrical piston mounted in a cylindrical opening in said casing communicating with said longitudinal chamber, means connecting said piston to one end of the said rack, including yielding means through which said piston floatingly supports said one end of



said rack in the chamber, a guide member mounted on the opposed end of the rack and movable within said casing for floatingly supporting the opposed end of the rack for sliding in the chamber with said rack spaced from all surfaces of said chamber except said longitudinal bearing surface, a closer pinion rotatably mounted in said chamber in meshed relation to the rack, and a part of the pressure incidental to the meshing of said closer pinion and rack being accepted by the bearing surface of said rack pressing against the longitudinal bearing surface of said chamber.

2,899,702
DOOR CHECK, IN PARTICULAR FLOOR-TYPE DOOR CHECK
Walter Vöster, Stuttgart-Feuerbach, and Eugen Schnell, Stuttgart-Bad Cannstatt, Germany, assignors to Vereinigte Baubeschlag-Fabriken Gretsch & Co. G.m.b.H., Stuttgart-Feuerbach, Germany
Application March 25, 1955, Serial No. 496,877
Claims priority, application Germany April 8, 1954
9 Claims. (Cl. 16—66)

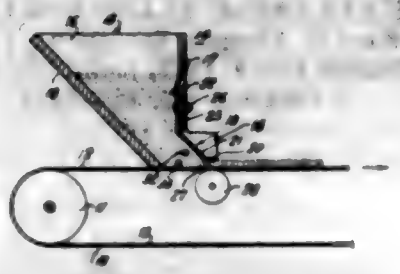


1. A door check comprising a door check housing, a door pivot supported in said housing, a device in cooperative engagement with said door pivot and adapted for returning a door mounted on said pivot from open position to the closed position, a lever turnably supported on said door pivot, a stop for said lever connected with said door pivot, a piston connected with said lever, a cylinder for said piston in which the latter moves to and fro and forms a compression chamber in which air enclosed therein is compressed when the door is being closed, a throttling opening of constant cross-section in communication with said compression chamber and adapted for permitting the air compressed therein to escape to the open air, spring means acting to move said piston in a direction opposite to that in which the air in the compression chamber is compressed so as to effect abutting engagement of said lever with said stop, and stop means engaging said lever during the opening movement of the door to stop further movement of said piston under the influence of said spring means, and to disconnect said stop from said lever during further movement of the door in opening direction.

2,899,703
DOOR STOP
Loyd C. Johnson, Winnetka, Ill.
Application January 13, 1955, Serial No. 481,608
10 Claims. (Cl. 16—86)

7. A door stop adapted to be secured to a wall comprising a resilient deformable bumper having a recess opening on the front of the stop and extending toward the back of the stop and having an annular recess near its rear end, a plate extending across the back of the bumper and having means thereon extending into the annular recess so as to be locked therein, said plate and the bumper at the bottom of the recess in the bumper having substantially aligned openings therein, a screw extending through the opening in the plate and adapted to be secured to the wall, the opening in the bumper being smaller than the head of the screw and being distendable to receive a screw driver.

2,899,704
APPARATUS FOR PRODUCING FIBER REINFORCED SPONGE SHEETING
Frank Pekarek, Cleveland, Ohio, assignor to Nylonge Corporation, Cleveland, Ohio, a corporation of Ohio
Application March 14, 1957, Serial No. 646,866
5 Claims. (Cl. 18—1)

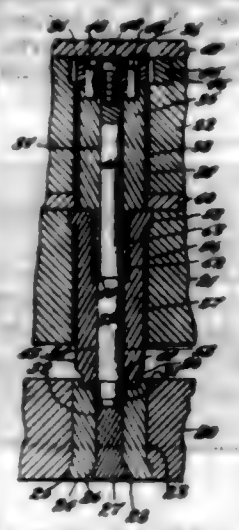


1. An improved apparatus for the production of fiber reinforced sponge sheeting comprising an endless driven first belt having an upper run advancing longitudinally from a feed end to a discharge end and provided with a top face, a hopper disposed above said endless belt top face adjacent to said feed end and having a downwardly directed bottom opening immediately above and directed downwardly to said first belt top face, said hopper having a transversely extending front opening formed in the lower portion thereof extending to said first belt top face and facing said belt discharge end and a transversely extending driven endless second belt disposed in said hopper above said first belt and in alignment with said front opening.

2,899,705
METHOD AND APPARATUS FOR THE MOLDING OF THREADED ARTICLES
Henry S. Darlington, Jr., Media, Pa., assignor to A. H. Wirz, Inc., Chester, Pa., a corporation of Pennsylvania
Application July 6, 1956, Serial No. 596,189
5 Claims. (Cl. 18—3)

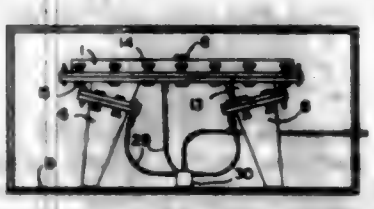
3. In a device for molding threaded objects from a plastic having a tendency to shrink, a mold cavity having a thread, a force pin tapering at the end and cooperating with the mold cavity, the force pin having a longitudinally

extending interlock element adapted to maintain sliding interlock with the molded object, a hollow force body surrounding the force pin and cooperating with the force pin and the mold cavity to complete the mold, means for bringing the mold cavity axially toward the force pin and the force body for molding an object, means for relatively moving the mold cavity axially away from the force pin and the force body while maintaining the slidable interlock between the force pin and the molded object and per-



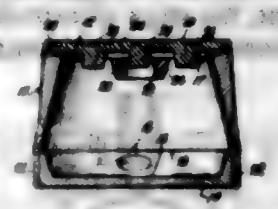
mitting some shrinkage of the molded object which still surrounds the force pin, means for rotating the force pin as the mold cavity moves away and thereby unscrewing the molded object from the threads in the mold cavity while the molded object still grips the force pin due to further shrinkage and means for axially moving the force body with respect to the force pin to push the molded object off the force pin against the gripping caused by the shrinkage.

2,899,706
MOLDING PLASTIC ARTICLES
Robert S. Cavineas, Bethesda, Md.
Application July 26, 1955, Serial No. 524,517
3 Claims. (Cl. 18—19)



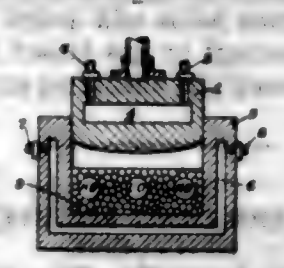
1. Apparatus for molding articles of plastic material comprising a pressure chamber for fluid under pressure, a mold including a pair of mating hollow self-supporting dies subject to deformation under the influence of non-uniformly applied molding pressures forming a mold chamber within said pressure chamber, adjacent parallel flanges projecting outwardly from said dies, aligned circumferential recesses in the abutting surfaces of said flanges, flexible sealing means in said recesses, means for drawing said dies together upon said sealing means to tightly seal the interior of said dies from said pressure chamber with said flanges in spaced relation, means for introducing fluid under substantial pressure in said chamber to close said dies and bring said flanges into molding engagement by the substantially uniform pressure of said fluid over the entire outer surface of said mating dies and at least one bleeder tube extending through one of said flanges and opening into the interior of said dies at a point between said sealing means and said mold chamber, said bleeder tube extending to a point having pressure less than the fluid pressure in said pressure chamber.

2,899,707
DENTAL FLASK
George F. McGowan, Kansas City, Mo.
Application December 27, 1955, Serial No. 555,414
6 Claims. (Cl. 18—33)



1. In a dental flask, a tubular section having a pair of opposed, open ends; a closure section for one of said ends; investment-retaining bridge means across the other of said ends; and a pressure-receiving edge on the tubular section at said other end thereof spaced outwardly from the bridge along the axis of said tubular section.

2,899,708
MODIFICATION AND CONTROL OF PLASTIC FOAM DENSITY AND FOAM BODIES OBTAINED THEREBY
Walter E. Donaldson and Alden W. Hanson, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
Application June 14, 1954, Serial No. 436,506
13 Claims. (Cl. 18—48)

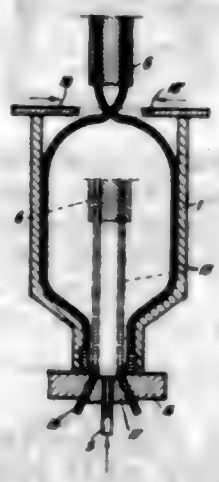


5. A method of modifying a solid foam of a thermoplastic resin, which foam possesses individually closed cells and is of irregular density, throughout a considerable portion of the body of the same to increase the density of portions of the body of foam to a predetermined extent, which method comprises determining the density variations through the thickness of the body of foam from one side of the latter to the other and thereby determining the extent to which the various portions of the foam must be reduced in thickness by compression by pressing said sides of the foam body toward one another in order to eliminate said variations in average density, compressing the plastic foam of irregular density within a mold to reduce the thickness of the various portions of the foam body by amounts such as to bring all portions of the body of foam to desired and predetermined density values between those initially possessed by the respective portions of the foam body and the absolute density of the resin in the cell walls thereof, heating the compressed foam in the mold to a temperature between the second order transition temperature of the cell walls thereof and 30° C. thereabove, and then cooling the foam to below said second order transition temperature while it is confined within the mold.

2,899,709
PROCESS OF MAKING BLOWN HOLLOW BODIES FROM PLASTIC MATERIALS
Maurice Steiner, Paris, France, assignor, by mesne assignments, to Societe Plastus S.A., Fribourg, Switzerland, a corporation of Switzerland
Application October 12, 1954, Serial No. 461,833
4 Claims. (Cl. 18—55)

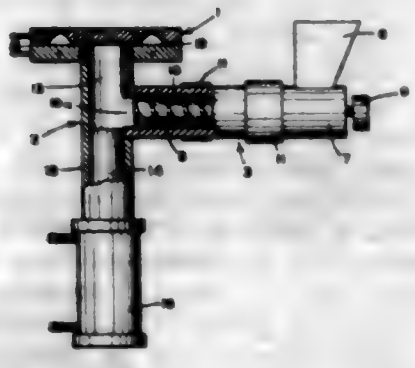
1. In a process of forming hollow articles of plastic material which comprises extruding through an extruding nozzle inside a mold body a tubular element of said

plastic material having an open end and simultaneously expanding said tubular element by blowing gas into said element through a blowing nozzle through said open end of said tubular element, moving away from one another said extruding nozzle and said blowing nozzle, and closing the end of said article opposite to said open end of said tubular element, the steps of extruding said open end of said tubular element at the beginning of the extrusion



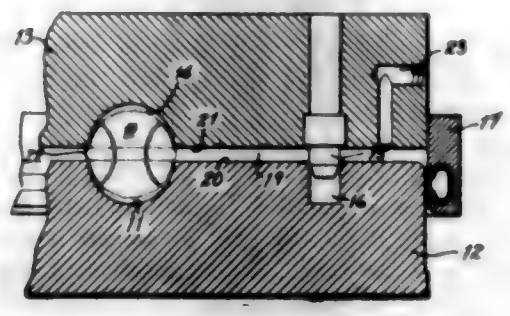
process into another mold surrounding said nozzle forming an anchoring extension of said open end of said tubular element; forming the whole of the hollow article by simultaneous extrusion, blowing and relative displacement of said extruding and blowing nozzles while said anchored extension of said tube holds said article during its molding against displacement by gas blown into said tubular element; and removing said anchoring extension from said hollow article.

2,899,710
PROCESS FOR MOLDING POLYTETRAFLUOROETHYLENE
James W. Hendry, Louisville, Ky., assignor to Tube Turns Plastics, Inc., Louisville, Ky., a corporation of Delaware
Application February 14, 1957, Serial No. 640,255
11 Claims. (Cl. 18—55)



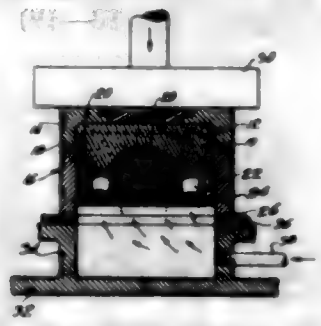
1. In a process for molding polytetrafluoroethylene, the steps comprising: heating and agitating granular tetrafluoroethylene until it attains a substantially uniform temperature in excess of 580 degrees F.; applying sufficient pressure to said material to form same into a dense mass, but without further raising its temperature; subsequently applying sufficient pressure to said mass to move same into a mold and to fill said mold, but without permitting the temperature to rise sufficiently to convert said mass into a gel state; after the filling of said mold, heating said material sufficiently to convert same into a gel state and simultaneously holding a pressure in excess of at least about 30,000 p.s.i. thereon to cause said mass to assume the contour of the mold cavity, and holding said pressure thereon until said mass has assumed the contour of said mold cavity; diminishing the temperature to a level below that at which material will remain in a gel state; diminishing said pressure sufficiently to terminate extrusion of material through the mold vents and holding said diminished pressure until said material has set; releasing said pressure and removing the molded part from the mold.

2,899,711
METHOD FOR MOLDING TENNIS BALLS
Harold F. Hawkins, Lockport, and Cuyler S. McChesney, Kenmore, N.Y., assignors to Dunlop Tire and Rubber Corporation, Buffalo, N.Y., a corporation of New York
Application June 14, 1957, Serial No. 665,735
2 Claims. (Cl. 18—55)



1. A method of molding hollow articles which comprises applying gaseous pressure to the exterior of the article to be molded to reduce its dimensions below the dimensions of the mold cavity, placing the article within one mold cavity, closing the cavity, releasing the pressure on the exterior of the article and molding the article.

2,899,712
METHOD OF CONSTRUCTING DENTURES
Clark C. Smith, Kansas City, Mo.
Application February 20, 1956, Serial No. 566,413
5 Claims. (Cl. 18—55.1)

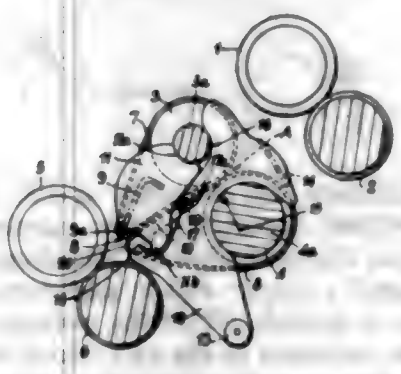


1. A process for producing artificial dentures comprising the steps of placing a divider between a pair of mold sections, said divider being substantially impermeable to flow of fluid therethrough, one of said sections including an internal first denture cast and the other section having an internal second denture cast of porous substance, at least a portion of said divider being of uncured synthetic resin denture material and disposed between normally opposed segments of said casts; compressing the mold sections together under sufficient pressure to force said segments of the casts into firm engagement with said material; effecting a fluid pressure through the substance defining said second cast of not greater force than said compression pressure; and maintaining said compression and fluid pressures during polymerization and curing of the synthetic resin material to control the direction of volumetric shrinkage thereof and force the same into conformity with the configuration of said segment of the first cast.

2,899,713
ORIENTATION OF POLYETHYLENE TEREPHTHALATE FILM
Christian Bent Lundsager, Buffalo, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application June 5, 1958
Serial No. 739,978
5 Claims. (Cl. 18—56)

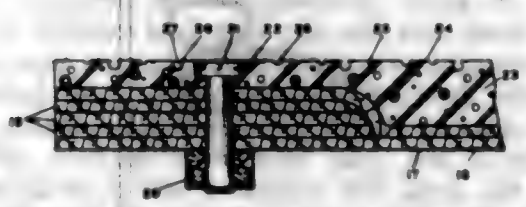
1. The process for simultaneously heat-setting and orienting polyethylene terephthalate film which comprises rolling out unoriented, crystalline polyethylene terephthalate film, having a density of at least 1.36, with heated pressure rolls maintained at a temperature within the range of from 150°–190° C.

2,899,714
TEXTILE FIBRE DRAFTING APPARATUS
Joseph Noguera, London, England, assignor to Casablancas High Draft Company Limited, Manchester, Lancashire, England, a British company
Application May 1, 1958, Serial No. 732,403
Claims priority, application Great Britain May 2, 1957
10 Claims. (Cl. 19—131)



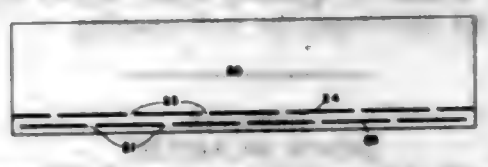
9. A textile fibre drafting apparatus comprising upper and lower belt driving rollers, a pair of co-operating belts running one over each said roller, a lower belt guide cradle, a front platform-like lower belt supporting tensor interchangeably carried by said lower cradle, an upper front belt supporting tensor and an upper belt guide cradle which carries said upper tensor and is adapted for adjustable hooked engagement with said lower tensor.

2,899,715
TEXTILE RUB APRON
Daniel A. Meyer, Dayton, Ohio, assignor to The Dayton Rubber Company, a corporation of Ohio
Application February 28, 1956, Serial No. 568,285
9 Claims. (Cl. 19—153)



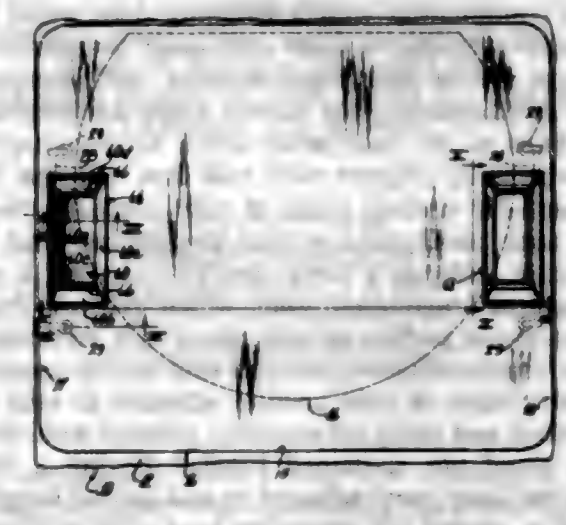
1. An apron for textile processing units comprising an inner roller-contacting surface and an outer facing layer composed of an elastomeric matrix material having a plurality of rounded frangible siliceous particles dispersed therein, the rubbing surface of said facing layer being substantially free of such particles and having a plurality of voids in the form of at least segments of said particles opening thereon and conforming to the cavities remaining in said surface after the removal of said particles therefrom.

2,899,716
WALLS
Hobart Woodward, Minneapolis, Minn., assignor to Minnesota and Ontario Paper Company, Minneapolis, Minn.
Application June 29, 1956, Serial No. 594,859
12 Claims. (Cl. 20—4)



6. A siding strip comprising a substantially rectangular member of fibrous material, said strip having substantially parallel spaced ridges, spaced valleys in each of said spaced ridges, the valleys in one ridge offset from the valleys in the substantially parallel ridges to provide tortuous vapor escape channels and with the ridge of one of the parallel ridges extending to substantially the edge of the strip.

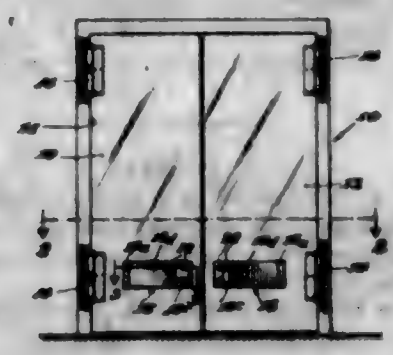
2,899,717
CLOSURE MEANS FOR A CABINET OR THE LIKE
Charles K. Billings, St. Joseph, and Raymond S. Platt, Benton Harbor, Mich., assignors to Whirlpool Corporation, a corporation of Delaware
Application September 28, 1956, Serial No. 612,843
5 Claims. (Cl. 20—16)



1. In combination in a closure assembly for a cabinet or the like, a wall having an outer surface with a break in said surface defining an opening in the wall, an inwardly extending apron defining a throat within said opening positioned inwardly and recessed from the outer surface of the wall and extending inwardly from the wall opening to an inner edge defining an access opening within said wall opening, first and second keeper rods positioned within said wall opening with one of said rods at each side of the opening and said rods extending substantially parallel to each other, said rods located inwardly of said outer surface of the wall and between said wall surface break defining said wall opening and the inner edge of said apron and outwardly of the apron, a door adapted to close said access opening and having an outer edge of a dimension to pass into said wall opening and being larger than said access opening for closing the access opening to be positioned in juxtaposition to said apron, means mounted on said apron supporting said rods whereby said supporting means will be hidden behind the door in closed position, first and second hinge members attached to opposite sides of the door and on the inner surface thereof inside of the outer edge of the door, said hinge members having slots to fit over said keeper rods with the door in closed position, spring biased latch members supported on each side and on the inner surface of the door within the outer edge of the door and projecting to engage the keeper rods and hold the hinge slots over the rods, cam-

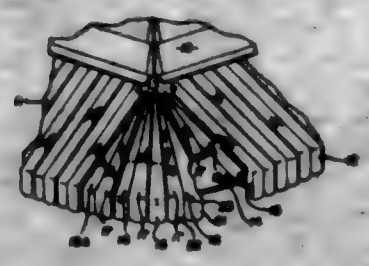
ming surfaces between the latch members and the keeper rods shaped to cam the latch members away from the rods to permit the hinge members to be removed from the rods with pressure on the door drawing it away from the access opening, and rigid handle members secured to each side of the door for applying pressure normal to the door surface for selectively opening either side of the door or removing the door from the wall opening.

2,899,718
DOOR BUMPERS
Walter Engels, Tryon, N.C., assignor to Bommer Spring Hinge Co., Inc., Landrum, S.C., a corporation of New York
Application March 6, 1958, Serial No. 719,625
3 Claims. (Cl. 20—16)



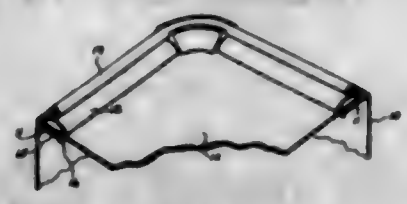
1. In combination with a swinging door panel having two major surfaces, at least one door bumper attached to at least one of said major surfaces, said bumper comprising an elongated plate having a first longitudinal end rigidly fixed to the door panel and a second longitudinal end horizontally aligned with said first end and bent in a substantially vertical plane at right angles to the plane of the door panel, said second longitudinal end having a free edge defining a hook, the plate having a portion between said longitudinal ends which diverges from the adjacent major surface of said panel in a direction from said first longitudinal end toward said second longitudinal end and a zone of said portion adjacent to said second longitudinal end being substantially parallel with the plane of the panel, an L-shaped bracket having a first leg fixed to the door panel adjacent to said second longitudinal end and a second leg extending in a vertical plane substantially at right angles to the adjacent major surface of the panel, said second leg having a free vertical edge defining a second hook in the path of said first mentioned hook, and resilient means removably inserted between said first leg and said zone for constantly urging said second longitudinal end away from the door panel whereby said hooks engage with one another and limit the extent of movement of said second longitudinal end away from the door panel.

2,899,719
CIRCULAR AWNING
Paul Shapiro, Youngstown, Ohio
Application February 18, 1957, Serial No. 640,936
2 Claims. (Cl. 20—57.5)



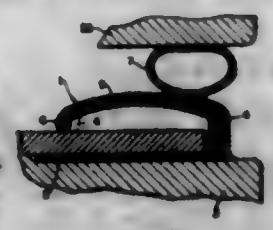
1. A circular awning component comprising an elongated pan including a substantially flat central portion having opposite longitudinally extending side edges, a substantially planar flange formed along each of said edges and extending substantially normally to said central portion, said flanges being formed substantially throughout the entire length of said pan, the flanges converging inwardly toward one another from the outer end portion of said pan to the inner end portion of said pan, each of said flanges sloping upwardly from said outer end portion to said inner end portion such that each flange has a height adjacent said inner end portion greater than the height adjacent said outer end portion, said central portion and said flanges being of substantially constant thickness and said pan having a substantially constant cross sectional area at spaced points along the longitudinal axis thereof.

2,899,720
GASKET
Earl C. Vollmer, Rock Island, Ill., assignor to Midwest Mfg. Company, Galesburg, Ill. a corporation of Illinois
Application August 6, 1957, Serial No. 676,690
6 Claims. (Cl. 20—69)



5. In combination, an elongated gasket comprising a base and a resilient distortable outer member connected to said base and disposed outward therefrom, said gasket extending around a corner and at said corner having its base removed to provide a cutaway portion disposed between adjacent segments of the base which are located at the opposite sides of said corner, said outer member of the gasket being continuous across said cutaway portion at the corner, and a support for the gasket at said corner in the form of a resilient body received in said cutaway portion of the gasket between the adjacent segments of the base at the opposite sides of said corner, said body at its outer face defining a seat which receives and supports said outer member of the gasket at said corner.

2,899,721
REFRIGERATOR DOOR SEAL
Eugene T. Herman, St. Marys, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Application August 8, 1957, Serial No. 676,973
4 Claims. (Cl. 20—69)

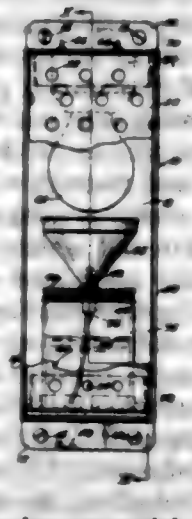


1. A gasket for a refrigerator door adapted to be secured around the periphery of the door to provide a seal between the door and the refrigerator, said gasket comprising a strip of resilient material of similar cross-sectional shape throughout its length, said cross-section including a base to position and secure said strip on a door, a convexly arched, cantilever member attached only at one end to said base whereby the other end thereof is free to move laterally with respect to said base and a door to which the gasket is secured, and a closed, flexible tubular member formed integrally with said cantilever member and said base positioned adjacent said at-

tion shaped to define openings in a core, means for heat- offset from the cavity of the mold and vertically disposed

tached end of said cantilever member on the side of the cantilever portion opposite to said base, the wall thickness of said tubular member being appreciably less than the wall thickness of said cantilever member, the size of the opening in said tubular member being at least several times greater than said wall thickness of the tubular member, the peripheral length of said tubular member being at least about as great as the length of said cantilever member, and the length of the portion of the wall of the tubular member which is integral with the cantilever member being less than one fifth of said peripheral length of said tubular member, said geometric arrangement between said tubular member and said cantilever member causing the tubular member to be appreciably flattened prior to any substantial deformation of the cantilever member when the door of the refrigerator upon which the gasket is attached is closed upon the gasket.

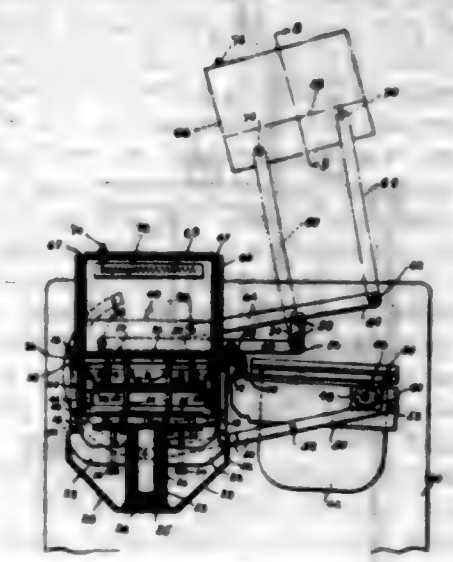
2,899,722
VAPORIZING DEVICE
Raybern L. Adams, Kansas City, Mo.
Application May 14, 1956, Serial No. 584,654
3 Claims. (Cl. 21—120)



1. A vaporizing device comprising a hollow body provided with a number of openings and having a top and a foraminous bottom; an electric lamp socket secured to said top; a lamp in said socket and depending therefrom, the lamp having a substantially spherical bulb; an open top liquid container resting on said bottom and spaced below the bulb in alignment therewith; a detachable lid secured to the container in covering relationship to said open top thereof and provided with a central perforation; a funnel between the bulb and the container and provided with a large, open, upper end immediately below and aligned with the bulb, and a small, lower, tubular spout end extending through the perforation into the container; an absorbent element partially lining the funnel therewithin between said open end and said spout end of the funnel, said element having a concave uppermost face and a central opening; and an elongated wick secured to said face, extending through said central opening, thence downwardly through said spout end, and terminating within the liquid in said container, the lamp, the socket, the container and the funnel all being within the body.

2,899,723
SHELL MOLDING MACHINE
Thomas K. Hutchinson and Oliver C. Kemp Hutchinson, Alton, Ill.
Application April 2, 1956, Serial No. 575,418
7 Claims. (Cl. 22—9)

5. In a shell molding machine that can be operated to apply admixed binder and sand to a heated pattern to form a shell mold and wherein that shell mold is cured before it is stripped from said pattern, a pattern mount to support said pattern, an oven, a support for said oven that moves said oven toward and away from said pattern mount and said pattern, and a source of heat for said oven, said support including a spring to urge said



oven away from said pattern mount and an air cylinder to overcome the force of said spring and move said oven adjacent said pattern mount.

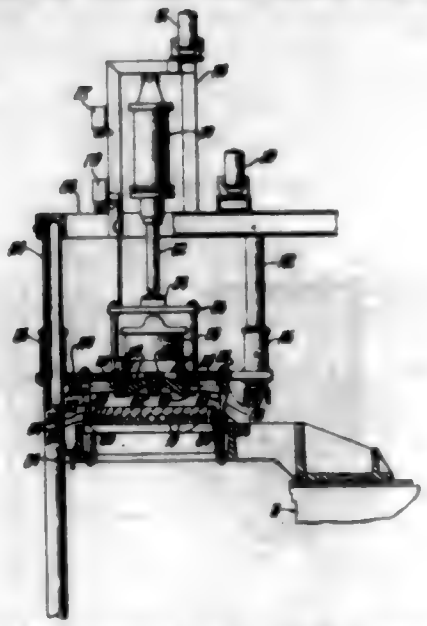
2,899,724
BLIND END CORE BOX BLOW TUBE
Edwin F. Peterson, Neponset, Ill.
Application August 29, 1955, Serial No. 530,961
3 Claims. (Cl. 22—10)

1. In combination with a core box defining a cavity and having an upper wall containing an access aperture extending therethrough into an intermediate portion of said cavity, a sand conducting tube having a rubber tip extending through said aperture and depending freely in said cavity, said tip having a portion lying within said aperture, a closed end lying within said cavity, and a portion lying within said cavity containing a radially disposed discharge opening spaced from said end and in communication with said cavity to direct sand radially outwardly from said discharge opening into said cavity, whereby the introduction of sand under pressure through said tube tends to produce a seal between said core box and tip.

2,899,725
CORE MAKING APPARATUS
George A. Zink, James P. Child, and John Servi, Bedford, Ind., and Rudolph J. Gersky, Fenton, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 29, 1956, Serial No. 594,870
13 Claims. (Cl. 22—10)

1. An apparatus for forming shell cores, said apparatus comprising a horizontally rotatable turntable, a magazine for containing a mixture of sand and thermosetting binder located above a portion of said turntable, a blowhead attached to the outlet end of said magazine, a plurality of core boxes supported on said turntable and successively rotatable therewith into position beneath said blowhead, said core boxes each being provided with a plurality of radially movable inserts each having a por-

tion shaped to define openings in a core, means for heating said core box, a plurality of arms actuated by a fluid-operated piston for moving said inserts radially inward



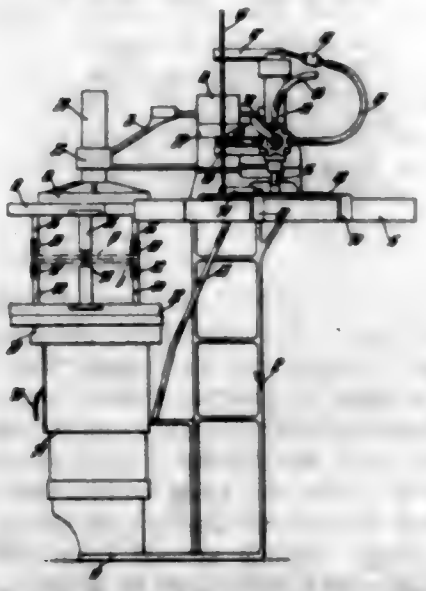
into core-forming position and radially outward out of core-forming position, and means for blowing said mixture from said magazine into said core boxes.

2,899,726

APPARATUS FOR ASSEMBLING SHELL MOLDS

William S. Hackett, Saginaw, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application July 24, 1953, Serial No. 370,182
4 Claims. (Cl. 22—31)



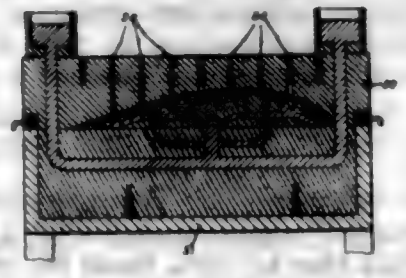
1. Apparatus for securing together mating halves of a shell mold, said halves having matching surfaces substantially surrounding the mold cavities and defining the parting line of the mold, said halves being secured together by a bond formed between said matching surfaces, said apparatus comprising a pair of horizontally disposed pressure plates mounted in vertically spaced relation, one of said plates being pivotally movable in the horizontal plane from a position in vertical registration with the other plate to a position laterally offset therefrom, each of said pressure plates having a plurality of post members extending vertically therefrom in opposed vertically spaced relationship at their outer ends in the registered position of the plates, adhesive discharge mechanism mounted adjacent said plates, said adhesive discharge mechanism and said lower plate being mounted for relative movement and arranged for vertical registration, said mechanism including a tray adapted to carry a powdered resin bonding agent and having a bottom perforated in a predetermined pattern above a mold half carried by the lower plate, said pattern providing perforations laterally offset from the cavity of the mold and vertically disposed above said matching surface of said mold, means for discharging powdered resin from said tray and through said perforations when said mold is registered therebeneath, and means for vertically moving one of said plates in the direction of the other to press together the halves of an assembled shell mold supported on said lower plate.

2,899,727

MOLDED STRUCTURES AND METHOD FOR FORMING SAME

Charles C. Minfeldt, Phoenix, Ariz.

Application January 11, 1957, Serial No. 633,727
9 Claims. (Cl. 22—193)



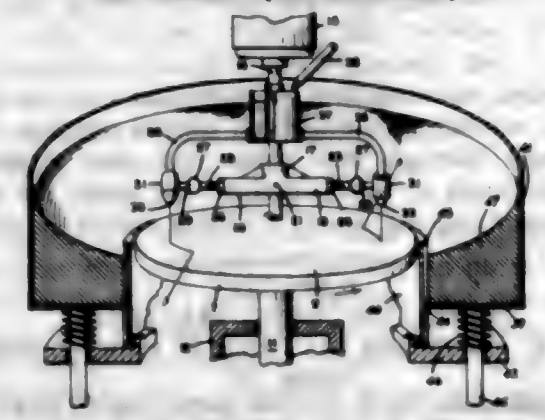
1. The method of forming thin monocoque structural elements of the stressed-skin type from non-ferrous alloys which comprises the steps of forming a mold for a plate which will form the skin of the element, forming within the mold a plurality of intersecting passages at least part of which are of decreasing size and which passages communicate with the plate area to divide it into a number of relatively small areas and through which passages metal, when flowed into the mold, is adapted to fill the region which will form the skin and which passages, when filled with the metal integrally associated with the flowed skin portion, form reinforcing elements for the structure, forming a plurality of vents extending outwardly from the forward intersecting passages to vent air and other gases from the mold, preheating the mold to approach the temperature of the melting point of the alloy to form the monocoque structural element, filling the mold with the selected alloy in a molten phase, maintaining substantially the preheat temperature during the mold filling, and gradually reducing the temperature subsequent to filling to permit the poured alloy to harden in a condition free of internal stresses so as to control and equalize the crystalline grain thereof.

2,899,728

METHOD AND APPARATUS FOR FORMING METAL FILAMENTS

Thomas P. Gibbons, Havertown, Pa., assignor, by mesne assignments, to Marvaland, Incorporated, Westminster, Md., a corporation of Maryland

Application January 19, 1956, Serial No. 560,123
10 Claims. (Cl. 22—200.1)

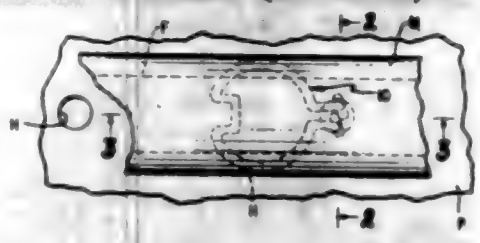


8. The method of casting and collecting metal filaments including the steps of impinging a stream of molten metal against a smooth polished open chill surface to solidify the metal, moving the surface about an axis relative to the stream as it is impinged thereon to centrifugally discharge the solidified filament therefrom, moving the stream of

spring pressed detents within said casing for retaining passage between said external chamber and the interior

molten metal along an arcuate path about said axis of the chill surface, the movement of the stream of molten metal causing the point at which the stream of molten metal impinges against the chill surface to travel along the chill surface in a circular path concentric therewith so that the solidified filament is coiled about and outwardly of the chill surface as it is discharged therefrom.

2,899,729
MOLDING FASTENER
Donald F. Garman, Toledo, Ohio, assignor to Prestole Corporation, Toledo, Ohio, a corporation of Michigan
Application June 12, 1957, Serial No. 665,149
5 Claims. (Cl. 24—73)

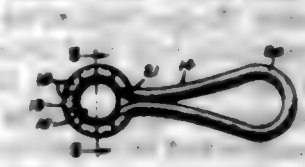


1. A fastener for supporting a molding having a top face joining laterally spaced longitudinal flanges disposed under the face, on a panel having an aperture, said fastener comprising a head having a pair of substantially co-planar diametrically opposed head portions curved along arcs of a circle, said portions fitting over the flanges of the molding and being rotatable thereon, a spaced pair of generally parallel arms respectively integral and co-planar with said head portions and extending directly laterally outward from the periphery of said circle, and a cooperating pair of spring studs respectively integral with said arms and extending generally perpendicular to the plane of said head portions and arms and engaging in said aperture, said curved head portions engaging the inner sides of the molding face with point contact, whereby the molding may be adjusted by moving the same so as to swing said head about the studs while rocking said curved head portions along the inner sides of the molding face.

2,899,730
LACING HOOK
Joseph W. Bergen, Braintree, Mass.
Application September 27, 1954, Serial No. 458,721
2 Claims. (Cl. 24—146)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A lacing hook adapted for assembly with a temperature insulating blanket, said lacing hook being of sheet metal and including a first elongated section adapted to extend from one blanket surface through said blanket in intimate contact therewith to the other blanket surface and whose width is substantially greater than its thickness to resist any force tending to turn said elongated section in said blanket about its long dimension, one wide face of said elongated section facing a predetermined direction, a head section adapted to engage face-to-face with one surface of said blanket and integrally joined at a portion of the periphery thereof with one end of said elongated section and extending in predetermined direction, said head section being several times wider than said elongated section extending to a substantial extent in both directions transverse to its junction with said elongated section to resist any force tending to rock said lacing hook transversely in said blanket, a hook prong overlaying said head section in spaced relation thereto and integrally joined at one end with said head section at a peripheral portion thereof opposite its junction with said elongated section whereby lacing may be readily inserted between said head section and said hook prong to engage said hook prong, a second elongated section of substantially the same cross section dimensions as said first elongated section integrally joined at one end to the other end of said first section and extending transversely from said first section and adapted to contact face-to-face with the other surface of said blanket and doubled back upon itself with its free end extending back substantially beyond the junction of said first and second sections to resist any tensile force applied to said lacing hook at the hook prong end from pulling said lacing hook through said blanket, the length of said first section which is adapted to extend through said blanket being such that said blanket is under some compression between said head section and said second section of said lacing hook so that said blanket firmly gripe said blanket.

2,899,731
BUTTON LOOP FASTENER
Oren B. Maxim, Waterbury, Conn., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Application September 21, 1955, Serial No. 535,635
1 Claim. (Cl. 24—262.1)



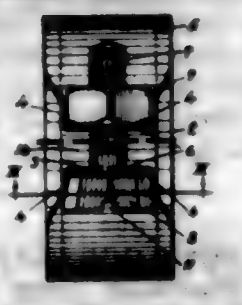
A button loop comprising a circular eyelet completely devoid of any lateral extensions and having a central neck or barrel portion substantially as high as the circular eyelet in its finish form when attached to the loop, a circular crown base surrounding the barrel portion, indentations formed upwardly from said crown base and terminating in roughened irregular edges, a circumferential wall terminating in a series of closely spaced scalloped lugs and having a lateral notch therein, and a flexible cord loop of elastic material covered with a sheathing of stretchable cloth material, said loop having its end portions extend through said notch in opposite directions around the central neck, said scalloped lugs being crimped inwardly and downwardly to a position where they lie substantially in a plane common with the terminal end of said neck and in which position said lugs cause the roughened edges of said indentations in said crown base to penetrate through said sheathing with the roughened irregular edges embedded into said elastic material.

2,899,732
QUICK RELEASE BUCKLE
Clifford E. Cushman, Burbank, Calif., assignor to Pacific Scientific Aeroproducts, Glendale, Calif., a corporation of California
Application August 6, 1956, Serial No. 602,295
8 Claims. (Cl. 24—265.17)

1. A buckle of the character described, comprising a casing having strap terminal receiving openings therein,

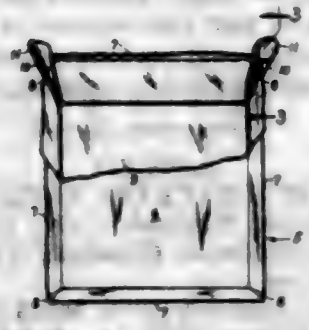
spring pressed detents within said casing for retaining strap terminals inserted into said openings to thereby secure straps to said buckle, means on said casing connected with said detents for releasing all of said strap terminals simultaneously, and additional means on said casing connected with certain of said detents for selectively releasing certain of said strap terminals only.

2,899,733
HOSE CLAMPS
Sven Axel Sundberg, Nacby Park, Sweden, assignor to Allmänna Brandredskapsfabriken AB, Stockholm, Sweden, a corporation of Sweden
Application May 28, 1956, Serial No. 587,679
Claims priority, application Sweden May 28, 1955
1 Claim. (Cl. 24—279)



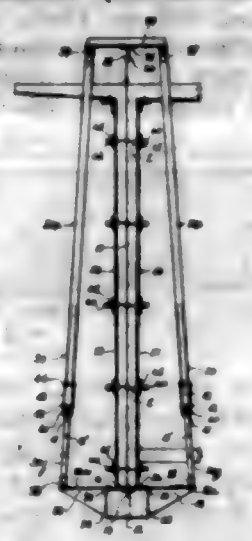
Improvements in hose clamps comprising an annularly bent metal band having substantially radially outwardly bent ends formed with holes therein, a clamping screw passing through said holes and being provided with a head and nut, border flanges bent at an angle upon said ends formed in one piece with said annularly bent metal band to reinforce the corners between the latter and said ends, the head and nut of said clamping screw being of a polygonal cross section and arranged between the border flanges, the flanges situated at the sides of the nut being disposed at such distance from each other as to prevent said nut from turning between them, and the flanges at the sides of the head of the clamping screw being arranged at such distance from each other that by tightening the clamping screw the sides of said flanges will be resiliently pressed apart by said head, whereby to retain the clamping screw in position by means of friction, the head of the clamping screw being conically tapered towards said nut and provided with a groove.

2,899,734
CONCRETE BLOCK MOLD
Leon R. Klang, Fulton, Mo.
Application September 16, 1957, Serial No. 684,279
3 Claims. (Cl. 25—118)



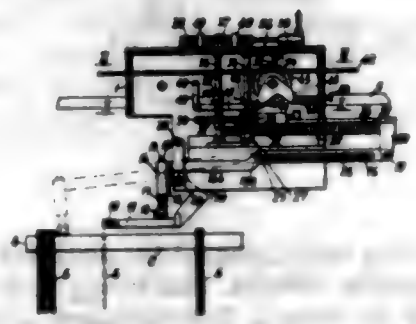
1. A mold comprising a receptacle of an integral sheet material having a bottom and side walls flexibly and rigidly joined to said bottom, said side walls providing corners on the receptacle, the end edges of the side walls at a corner of the receptacle being separated from each other to form a narrow opening, an integral removable water impervious sheet material lining fitting loosely on the inside of said receptacle, said lining having a portion thereof projecting outwardly of said receptacle through said corner opening to provide an external chamber, the walls of the portion of said lining through said narrow opening being spaced apart appreciably to form a clear passage between said external chamber and the interior of the receptacle, whereby liquid in said mold will drain readily to said external chamber.

2,899,735
WALL MOLDING FORMS FOR MAKING A REINFORCED CONCRETE WALL
Edward L. Graef, Seattle, Wash.
Application January 24, 1955, Serial No. 483,613
6 Claims. (Cl. 25—131)



1. A form structure for use in the making of a poured concrete wall, in combination, a footing, a reticulated wall reinforcing curtain extended along said footing and anchored at its lower edge thereto, tensioning means attached to the curtain along its upper edge, supporting it rigidly and immovably in fixed position, form defining walls disposed at opposite sides of the curtain, and means fixing said walls to the curtain for support in spaced relationship for the reception of a wall forming material between them; said tensioning means being entirely independent of the form defining walls and detachable from the curtain after the poured concrete has set.

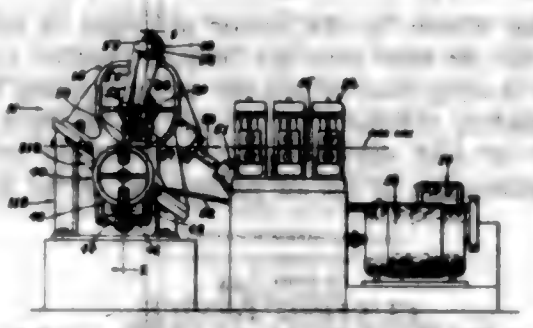
2,899,736
APPARATUS FOR SEPARATING MAGNETIZABLE DROP WIRES DESIGNED TO INDICATE BREAKAGE IN THREADS OF A WARP IN A LOOM
Svend Sigurd Christie Fleischer, Charlottenlund, Denmark
Application May 9, 1957, Serial No. 658,116
5 Claims. (Cl. 28—46)



1. In an apparatus for separating magnetizable drop wires which are situated in a number of groups on guide rods and are designed to indicate breakage in warp threads, the combination of a frame, a carriage movable on the frame, and means to drive the carriage, holding magnets in a number corresponding to the number of groups of drop wires and placed stationary on the carriage, each of said magnets alined with a respective guide rod and facing the group of drop wires thereon, a lever displaceably mounted on the carriage, on which lever there are mounted gripping magnets in a number corresponding to the number of groups of drop wires, which gripping magnets, when the lever is moved forwards, are

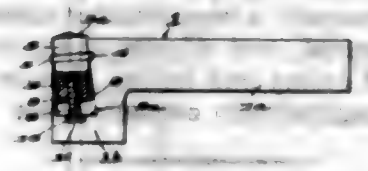
displaced towards the drop wires and each grips the foremost drop wire of the respective groups of drop wires, and by a displacement backwards of the lever place the drop wires on the holding magnets which hold the drop wires while the warp threads are being passed through the drop wires, means for the displacement forwards and backwards of the lever and means for the displacement of the gripping magnets vertically simultaneously with the displacement forwards and backwards.

2,899,737
CUTTING APPARATUS
Einar W. Nilsson, Youngstown, Ohio
Application October 3, 1955, Serial No. 538,165
7 Claims. (Cl. 29—69)



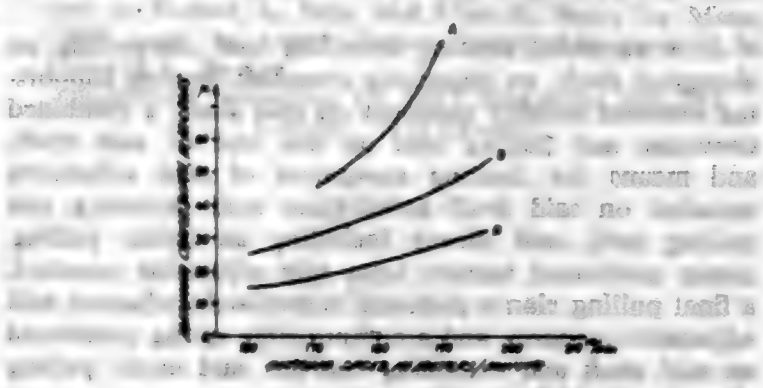
1. Apparatus for transversely cutting material which moves longitudinally along a predetermined path of travel, comprising means providing a first axis extending transversely of the path of the material, a rotatable cutting blade having its rotational axis extending transversely of said first axis, said cutting blade axis being off-set radially of and being rotatable about said first axis to effect movement of said blade in a circular path which intersects the path of the material, means for varying the off-set relationship of said cutting blade axis to increase or decrease the peripheral rate of travel of said cutting blade about said first axis, means for maintaining a predetermined angular relationship between said material and said cutting blade despite rotation of the latter about said first axis, and drive means for rotating said cutting blade about said first axis with predetermined angular acceleration and deceleration during the time of intersection of said blade with the path of said material whereby the linear component movement of said blade along said path is substantially uniform and synchronous with the movement of said stock.

2,899,738
CUTTING TOOL
Bengt Sven Olof Almén, Sandviken, Sweden, assignor to Sandvikens Jernverks Aktiebolag, Sandviken, Sweden
Application September 12, 1955, Serial No. 533,664
Claims priority, application Sweden September 11, 1954
4 Claims. (Cl. 29—96)



1. In a cutting tool including a holder having therein a recess with a solid bottom wall and a cutter bit slidably and non-rotatably extending within said recess, said cutter bit having a cutting edge at the upper end thereof and a threaded bore extending longitudinally therein from the opposite lower end thereof, an adjustment screw threaded into said bore and protruding from the lower end of said cutting bit, said adjustment screw terminating at its lower extremity in a non-circular head, means in the bottom wall of said recess restricting said adjustment screw against rotary movement relative to said holder and said bit comprising a second recess in the bottom wall of said holder recess, said second recess having a non-circular configuration corresponding to the head of said screw, said screw head extending into said second recess, and clamping means connected to said holder and securing said cutting bit within said holder recess.

2,899,739
SINTERED HARD METAL ALLOY
Fall Johan Olof William Ohlsson, Enskede, Sweden, assignor to Sandvikens Jernverks Aktiebolag, Sandviken, Sweden, a corporation of Sweden
Application June 11, 1957, Serial No. 664,943
6 Claims. (Cl. 29—182.7)

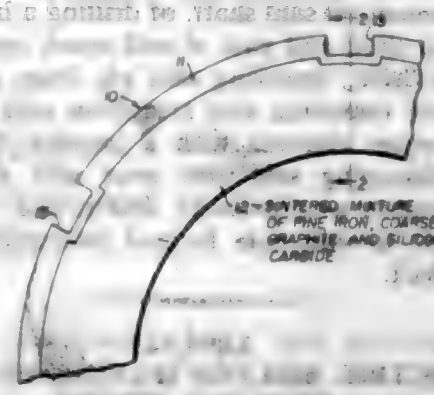


1. A sintered hard metal alloy consisting essentially of the following components in the following percentages by weight: TiC, 30 to 45%; a carbide of the group consisting of TaC and NbC, 1 to 3%; auxiliary bonding metal of the group consisting of Ni, Co and Fe, 8–11%; the remainder being substantially all WC, said alloy being further characterized in that said alloy is composed of a γ-phase consisting of a solid solution, in TiC, of all of the carbide of the group consisting of TaC and NbC and substantially all of the WC and an α-phase consisting of the remaining undissolved WC and a β-phase consisting of auxiliary bonding metal, the amount of the β-phase thereof and the amount of the γ-phase thereof being related to one another by the relationship

$$100-\beta \geq \gamma \geq 100-1.5\beta$$

and the sum of the amounts of the three phases α-, β- and γ- equals 100, where α, β and γ represent the amounts of the respective phases in volumes percent.

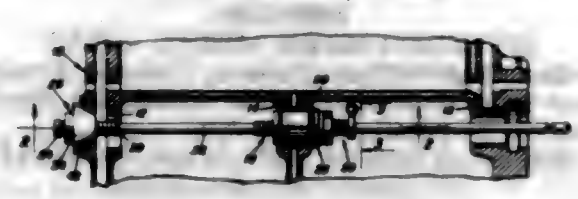
2,899,740
BRAKE MATERIAL FOR EXTREME HEAVY DUTY
Cecil Thomas Cox, Pepper Pike, Ohio, assignor to The S. K. Wellman Company, Bedford, Ohio, a corporation of Ohio
Application August 30, 1957, Serial No. 681,192
3 Claims. (Cl. 29—182.8)



1. A friction composition product for aircraft brakes and consisting of a pressed and sintered mixture of about 10% by weight of divided graphite, of coarseness such that at least 80% will pass through a 40 mesh screen and remain on a 100 mesh screen, about 10% by weight of

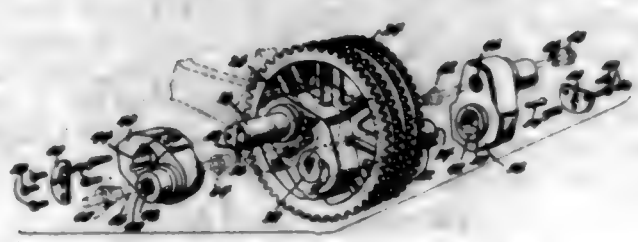
silicon carbide, of coarseness such that at least 95% remains on a 100 mesh screen, and the balance iron powder.

2,899,741
CAMSHAFT BEARING INSTALLING TOOL
Arthur A. Dunkerley, Los Angeles, Calif.
Application November 15, 1956, Serial No. 622,427
7 Claims. (Cl. 29—263)



1. A camshaft bearing installing tool comprising an elongated shaft, an adjustable camshaft bearing supporting mandrel slidably mounted on said shaft, a combined centering and pulling unit on one end of said shaft, and means for limiting movement of said adjustable mandrel on said shaft away from said centering and pulling unit, said means including an initial pulling clamp positioned remote from said adjustable mandrel, a final pulling clamp disposed immediately adjacent said adjustable mandrel, and a compressible spring positioned on said shaft and extending between said initial pulling clamp and said final pulling clamp.

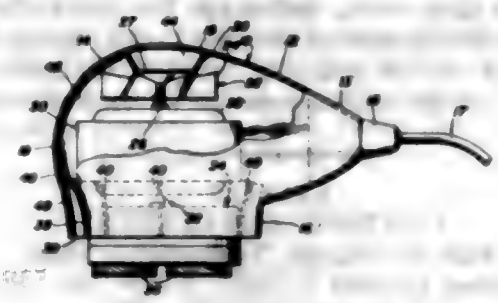
2,899,742
METHOD OF MAKING A CRANK SHAFT ASSEMBLY FOR RECIPROCATING PUMPS
Application January 7, 1955, Serial No. 480,445
John Hart Wilson, Wichita Falls, Tex.
7 Claims. (Cl. 29—447)



1. A method of assembling a crank shaft comprising the steps of heating a perforate hub portion, inserting a length of shaft into the perforation of said heated hub portion, the diameter of said shaft being slightly larger than the normal cooled inside diameter of said perforation of said hub portion, cooling said hub portion, telescoping a spacer element over said shaft in abutting relation with said hub portion, installing a crank arm on said shaft in abutting relation with said spacer element, aligning the rotational axis of said crank arm with the rotational axis of said hub, securing said crank arm in binding engagement on said shaft, of drilling a hole to remove part of said shaft and part of said crank arm, of fitting a pin in said hole, removing said pin from said hole and subsequently removing said arm from said shaft, replacing said spacer element with a bearing of comparable length, telescoping said arm over said shaft in exact aligned relation as previously determined, and re-inserting said pin in said hole formed intermediate said arm and said shaft.

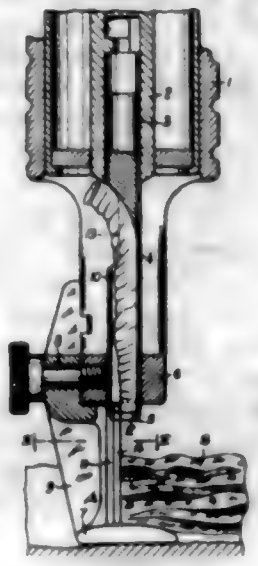
2,899,743
ELECTRIC SHAVER HAVING BUILT-IN COOLING MEANS
Johan G. F. Heuvel, Montreal, Quebec, Canada
Application September 19, 1957, Serial No. 684,925
3 Claims. (Cl. 30—34)

1. An electric shaver comprising a hollow housing having an air inlet opening and an outlet opening; a shaving head centrally mounted in said outlet opening, and defining in cooperation with the edge of the outlet opening an annular space through which air may pass out of the housing to impinge against the skin; a motor mounted within the housing and driving the shaving head; and a



suction fan driven by the motor arranged to draw air through the air inlet into the housing, baffles arranged about the shaving head within the outlet opening in positions extending obliquely to the axis of the opening peripherally of said shaving head, whereby to impart a swirling movement to the air passing out of the housing.

2,899,744
CUTTING DEVICE
Gustaf Erik Björklund, Stockholm, and Svante Roland Edvardsson, Solna, Sweden, assignors to Aktiebolaget Dentatus, Hagersten, Sweden, a corporation of Sweden
Application June 26, 1958, Serial No. 744,872
4 Claims. (Cl. 30—180)



1. A cutting device for plaster bandages and similar materials, comprising a casing, a reciprocatable member in said casing, a longitudinally slotted tubular cutting tool having an edged mouth and being connected to said reciprocatable member and adapted to be alternatingly driven into, and withdrawn from, the material to be cut and to be fed transversely of the direction of its reciprocating movement, a base member adapted to be slid under said material, and a web connecting said base member to said casing and having grooves to guide the edges of the longitudinally extending slot.

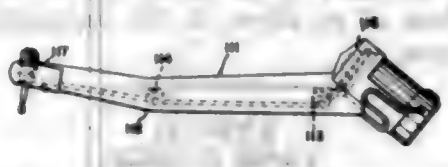
2,899,745
DENTAL ANGLE DEVICE
Lloyd P. Flatland, San Francisco, Calif.
Application October 11, 1957, Serial No. 689,696
3 Claims. (Cl. 32—28)

1. A dental angle device comprising an elongated hollow sheath, a dental instrument rotating unit mounted transversely on one end of said sheath, said unit including a driven pulley, a guard detachably mounted on said one end of said sheath and covering said one end of said sheath, said guard having an aperture circumscribing a

opposite ends thereof by a straight line drawn in extension

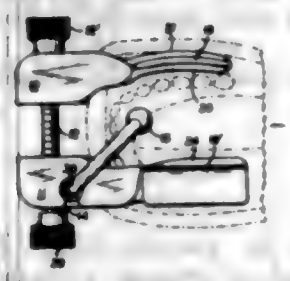
selected angular relationships, one of said quadrants hav-

dental instrument disposed in said unit, a cylindrical housing mounted on the other end of said sheath, the axis of said housing being inclined to and in intersecting relation with the axis of said sheath, a first tubing adapted to convey water mounted on the exterior surface of said housing in sinuous and close-coupled heat transferring relation therewith, said first tubing being led interiorly of said sheath and forwardly therein to a lo-



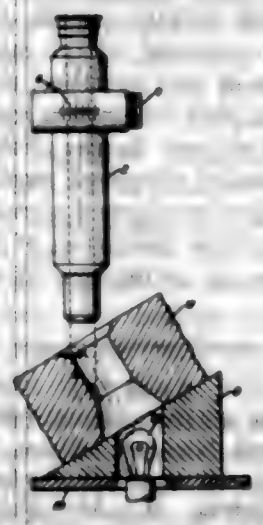
cation adjacent said guard aperture, a second tubing adapted to convey pressurized air mounted on the exterior surface of said housing in sinuous and close-coupled heat transferring relation therewith, said second tubing being led interiorly of said sheath and opening therein forwardly of said housing, an electric motor mounted in said housing in air tight relation thereto, said motor including a driving pulley, and an endless belt reeved about said driving pulley and said driven pulley.

2,899,746
DENTAL APPLIANCE
Jules S. Nayfack, New York, N.Y.
Application October 10, 1957, Serial No. 689,348
8 Claims. (Cl. 32—40)



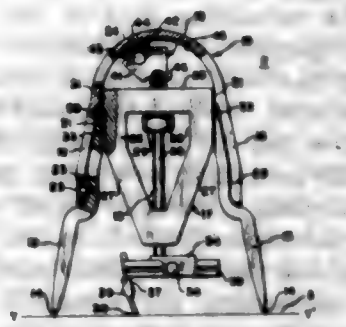
1. A dental appliance comprising a pair of body members, means carried by the body members for adjusting and holding them in laterally spaced relation, each body member having a rearwardly extending relatively flat flange terminating in a curved guard plate extending upwardly from the flange substantially perpendicularly thereto and each of the guard plates has a base flange directed toward the other.

2,899,747
METHOD OF MEASURING THE BEARING LENGTH OF DRAWING DIES
Joseph T. Weir, Parma, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey
Application June 27, 1955, Serial No. 518,110
1 Claim. (Cl. 33—1)



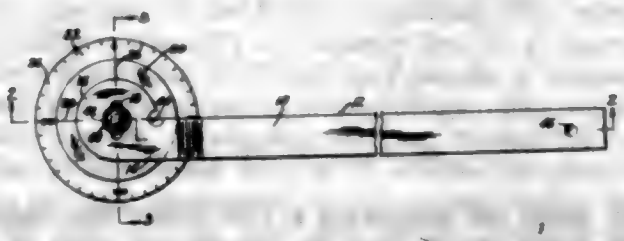
The method for determining the length of the bearing surface of a wire drawing die which comprises arranging the die with its axis inclined at a predetermined acute angle to the axis of a micrometer microscope, illuminating the bearing surface of the die, locating the image of the bearing surface on the scale of said micrometer microscope, the line representing the distance normal to the axis of the microscope, extending from one end of the bearing surface to the other as viewed through the microscope, constituting the base of a right triangle the hypotenuse of which is the true length of the bearing surface of said die, and said acute angle being the angle of said right triangle opposite said base.

2,899,748
INSTRUMENT FOR INSCRIBING AN ELLIPSE
Kermit A. Bowen, La Mesa, Calif., assignor of three percent to Robert A. Sage and Cleo B. Sage, La Mesa, Calif., and by court decree, twenty-five percent to Howard E. Rector
Application November 15, 1957, Serial No. 696,852
7 Claims. (Cl. 33—30)



1. An instrument for inscribing an ellipse upon a surface, said instrument comprising support means having side portions connected by an intermediate portion and ends for resting upon said surface, a frame pivotally mounted to said side portions and constrained against rotational movement with respect to said side portions, inscriber means rotatably carried by said frame and including an inscriber offset from the axis of rotation thereof, said inscriber means being pivotable with said frame, and means coupling said inscriber means and said intermediate portion for providing relative pivotal movement between said support means and said frame upon rotation of said inscriber means whereby the combined pivotal movement of said frame and the rotational movement of said inscriber means causes elliptical movement of said inscriber with respect to said surface.

2,899,749
MOVABLE GRADUATOR
Milford McWhirter and Wayne T. McWhirter, Arlington Heights, Ill.
Application September 16, 1955, Serial No. 534,748
1 Claim. (Cl. 33—75)



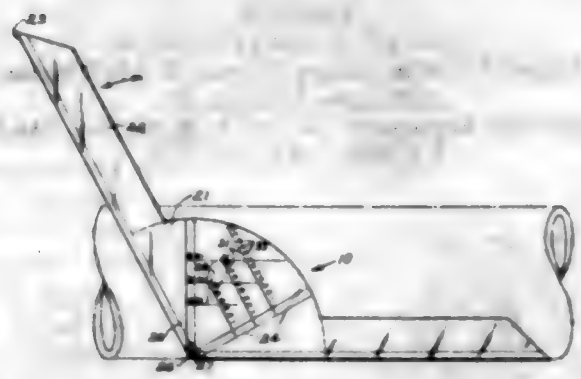
A drafting instrument of the type described, comprising: an elongated, straight arm one longitudinal edge of which is adapted to provide a straight edge along which a line may be drawn, said arm being formed at one end with an upwardly offset portion having a circular enlargement formed centrally with a straight slot the length of which extends normally to the length of the arm, said slot being intersected medially between

having an air inlet opening and an outlet opening; a shav-

sheath, said guard having an aperture circumscribing a

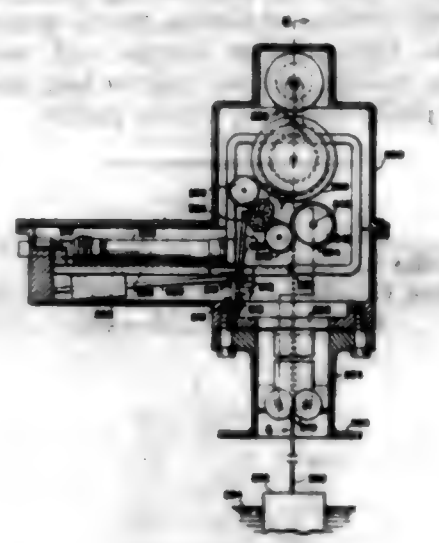
opposite ends thereof by a straight line drawn in extension of the straight edge across said enlargement, said straight edge constituting one longitudinal edge of the arm and the other longitudinal edge of the arm being extended tangentially to said enlargement, said straight edge being extended radially of said enlargement, the arm being formed adjacent the extremity thereof remote from the enlargement with a rounded projection on the underside of the arm adapted to ride upon a support surface, the upwardly offset portion being connected to the remaining portion of the arm by a sloped part inclined slightly from the horizontal; and a support disc underlying the upwardly offset part of the arm, said disc having a beveled peripheral portion, the slope of which matches the inclination of said sloped part, said beveled portion underlying said sloped part, the disc having, inwardly from said beveled portion, a flat top surface extending in parallel relation to the undersurface of the upwardly offset part, the top surface of the beveled marginal portion of the disc extending in parallel relation to and underlying the bottom surface of the sloped part of the arm, the remaining part of the arm having a bottom surface parallel to the bottom surface of the upwardly offset part and adapted to extend parallel to a work surface from which it is spaced by the rounded projection; and a pin pivotally connecting the arm to the disc, said pin projecting upwardly, centrally through the disc and including a shoulder spaced a short distance upwardly from the top surface of the disc in contact with the underside of the upwardly offset portion of the arm, said shoulder supporting the upwardly offset portion of the arm above the top surface of the disc a distance equal to that between the underside of the sloped part and the top surface of the beveled marginal portion of the arm, said distance also being equal to the distance that the underside of the remaining portion of the arm is spaced upwardly from the work surface by the rounded projection, the pin having a reduced portion extending upwardly from the shoulder through the slot and threaded at its upper end; and a nut threaded upon the upper end of the reduced portion of the pin and constituting means for holding the arm and disc assembled with each other with the upwardly offset portion of the arm in contact with the shoulder of the pin.

2,899,750
MEASURING DEVICE FOR PIPES
James O. Becroft, Wallingford, Conn.
Application August 19, 1957, Serial No. 679,013
3 Claims. (Cl. 33—75)



1. A gauge for measuring a pipe layout and defining measurements of cut from the intersection point of two connecting pipes comprising a base member and an auxiliary member, each of said base and auxiliary members having a straight side and a quadrant, pivot means securing said quadrants together in overlapping sliding engagement with said straight edges in intersecting angular relationship with each other and with said quadrants in the interior angle between said edges, said members being pivotally mounted for movement of said straight edges to selected angular relationships, one of said quadrants having thereon a set of spaced parallel lines running parallel to the associated straight edge to indicate diverse pipe diameters and the other of said quadrants having thereon a second set of spaced parallel lines running parallel to the straight edge associated with said quadrant, and the lines of one of said sets being calibrated to indicate, where crossed by the lines of the other set, the inches of cut from the face of an elbow to the intersection point of the pipe layout.

2,899,751
TANK GAUGE
Fred M. Mayes, Newtown Square, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey
Application March 16, 1955, Serial No. 493,367
8 Claims. (Cl. 33—126.6)



2. Apparatus for gauging liquid level comprising a member arranged to traverse a liquid surface, an elongated support for said member, means normally maintaining said member and said support in approximately constant relationship with said liquid surface during variations of level of said surface, means for imparting a limited range of vertical movement to said support and member to cause the member to deviate from said approximately constant relationship and to traverse the liquid surface, said limited range of vertical movement being small relatively to the range of liquid level change throughout which said approximately constant relationship is maintained, means providing an output signal upon the attainment of a predetermined relationship between said member and the liquid surface during said limited range of movement, means providing markings individually and uniquely identified with lengthwise increments of said support, means responsive to said markings and providing sequential output signals during said limited range of vertical movement of the support serving as a measure of position of said member, the positions of said markings relative to said responsive means changing with movements of said support during changes of liquid level and during said limited range of movement, and means receiving both the first mentioned signal and the last mentioned signals to provide indication of the position of said member at the time of occurrence of said predetermined relationship.

2,899,752
GAGE FOR INDICATING KING PIN INCLINATION
Frederik Nielsen, Milton, Mass.
Application March 30, 1955, Serial No. 497,979
2 Claims. (Cl. 33—203.18)

1. A gage of the class described, comprising a tube having a larger internal diameter at its inner end adapted

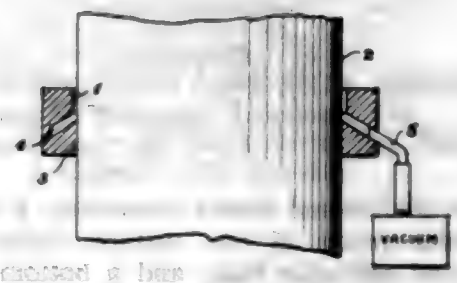
to fully engage the inner portion of a wheel spindle and an outer smaller diameter portion adapted to slidably engage the outer reduced diameter extremity of said spindle, said tube having a rod extending therethrough at right angles to the axis of said tube and having a free end turned toward the upper end portion of the spindle

support arm and terminating adjacent to the center point of said arm when said arm is in proper position and said wheel spindle is straight, and an indicating rod carried by the opposite end of said first mentioned rod and terminating adjacent to another predetermined portion of the vehicle when said gage is correctly positioned on said spindle.

2,899,753
WHEEL-TRACK GAUGE FOR MOTOR VEHICLES
Douglas Walter Hair, New Plymouth, New Zealand
Application December 4, 1957, Serial No. 700,643
Claims priority, application New Zealand, December 4, 1956
8 Claims. (Cl. 33—203.21)

1. A wheel-track gauge for motor vehicles, comprising a frame having parallelly arranged tubular bars spaced from each other in a horizontal plane, and one of which can be placed against the treads of the steerable wheels of the vehicle; a first arm extending at right-angles to the said bars and joined to one end thereof; a second arm also extending at right-angles to the said bars and having laterally projecting members engaged slidably in the other end of the said bars; pointers mounted on and extending along the said arms, the pointers being pivotally connected at one end to the arms so that their opposite ends can be moved in relation to graduation markings on the frame, each pointer being provided with a longitudinally disposed line; and two comparison bars having straight edges and fitted with spaced magnets for engagement with the rims of the steerable wheels at opposite sides of the axes thereof so that the comparison bars will then be held to the rims by magnetic attraction, thus allowing the straight edges of the comparison bars to be sighted in conjunction with the lines on the pointers, for comparing angles.

2,899,754
DRYING PROCESS AND APPARATUS
John Francis Edward Adams and Kenneth George Gerber, Welwyn Garden City, and George Patrick Wilkes, St. Albans, England, assignors to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain
Application July 12, 1956, Serial No. 597,393
Claims priority, application Great Britain July 13, 1955
3 Claims. (Cl. 34—21)

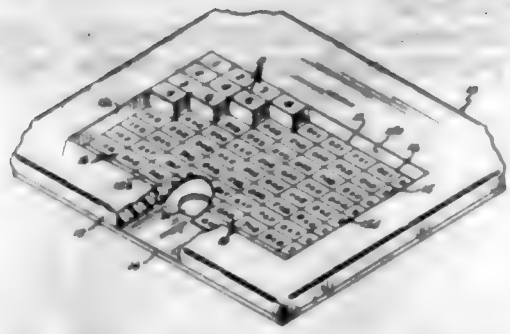


1. A process for removing surface liquid from a continuously advancing length of tubular film of an organic thermoplastic material comprising the steps of passing the fully inflated film successively through a first annular member having a diameter at least as large as that of the inflated film, a continuous annular space completely surrounding the inflated film, and a second annular member having a diameter substantially equal to that of the inflated film and in full contact therewith, and maintaining sub-atmospheric pressure in said annular space, whereby an effective seal is maintained between said second member and said inflated tube, and surface liquid is removed from said tube and said space.

2,899,755
COLOR COMPARISON
Emil Terilli, New York, N.Y.
Application April 7, 1954, Serial No. 421,554
1 Claim. (Cl. 35—28.3)

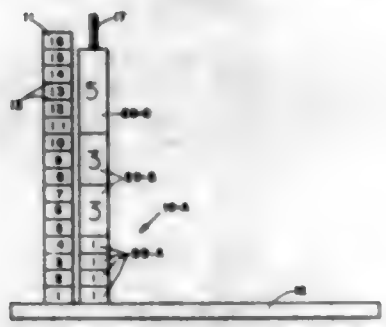
The method of displaying graphically the effects of surprinting a plurality of basic colors in a superposed relation, consisting of the steps of placing a rectangular-shaped transparent tab of a deep basic color on a supporting surface, overlaying another transparent tab of similar configuration and of a contrasting deep basic color on said first-named tab in perpendicular fashion so that the ends of said tabs project laterally of the superposed portions of the tabs, and overlaying a third transparent tab of similar configuration and of a deep basic color contrasted to the colors of the first two named tabs upon said second-named tab in a perpendicular fashion so that the end of said third-mentioned tab extends laterally between the laterally extending ends of the first two named tabs, said surprinting producing a final color constituting a combination of the three colors indicated by the extending ends.

2,899,756
ARITHMETIC TUTORING DEVICE
Paul H. Wise, Lewiston, Idaho
Application August 13, 1956, Serial No. 603,518
3 Claims. (Cl. 35—31)



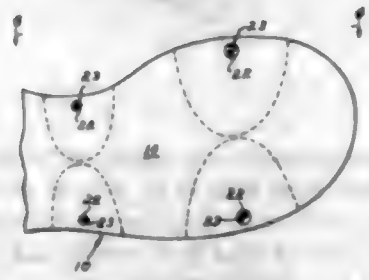
1. An educational device comprising a board having a rectangular recess in one surface thereof, said recess having end and side walls and a bottom wall, a notch in one of said end walls adjacent the bottom wall and extending parallel to the bottom wall, a card having longitudinal and transverse grid lines thereon dividing the card surface into a plurality of uniform spaces, said card having an identification space at one edge thereof, the card being received in the recess and having the identification space received in the notch whereby to expose in the recess that portion of the card having the grid lines thereon, a plurality of rectangular blocks received in the recess above the card, each of said blocks having identification indicia thereon, indicia marked in the spaces of said card indicating the proper positions of the blocks, and an aperture in said board extending from the opposite surface of said board into said recess whereby to permit lifting engagement with the card for removing the card and the blocks from the recess.

2,899,757
ADD-UP BLOCK TOY FOR TEACHING ARITHMETIC
Goebel William Webb, Bowling Green, Ky.
Application December 30, 1957, Serial No. 706,128
2 Claims. (Cl. 35—32)



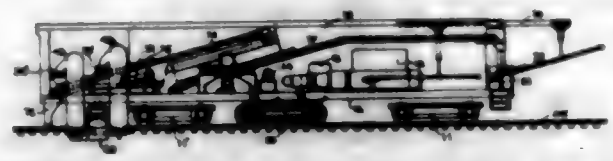
1. In a device for teaching arithmetic, a base of rectangular configuration, a vertical column of rectangular configuration rigidly secured adjacent one end of said base and upon the upper surface thereof, said column divided into a plurality of identical sections by circumferentially extending lines which are longitudinally equally spaced apart and in planes parallel with said upper surface of said base, a circular rod rigidly secured upon said base in parallel spaced apart relation from and with said vertical column, and a number of rectangular blocks, said blocks provided with longitudinal bores centrally located therethrough for positioning same upon said circular rod and adjacent said vertical column, said sections on said column are marked to represent a series of denominations, a number is positioned in each section to represent a particular denomination, said blocks being numbered and of lengths corresponding to integral multiples of said sections on said column and a number corresponding to the number of the block, whereby when said blocks are arranged on said circular rod adjacent said vertical column, the total height of the column of blocks being indicated by the number on said vertical column and the circumferential line thereon adjacent the upper end of said column of blocks.

2,899,758
ADJUSTABLE ORTHOPEDIC SUPPORT
Abe Samuels and John F. Callison, Douglas, Ariz.
Application August 6, 1958, Serial No. 753,555
3 Claims. (Cl. 36—71)



1. An orthopedic support for a shoe having inner and outer soles comprising a pair of spaced substantially parallel resilient plates having similar areas less than half the width and length of a shoe, said pair of plates being interposed in stacked relation between the inner sole and the outer sole of the shoe, a coupling means formed at corresponding peripheral positions of said plates aligning each plate to the other when in the interposed stacked relation, spaced means along the edge of one of said plates remote from said coupling means for attaching to a peripheral portion of one of said soles and a rotatable adjusting screw member extending through at least a portion of each of said plates at a position adjacent said edge of said one plate for varying the spacing of said plates.

2,899,759
DUAL SPEED RAILROAD BALLAST CLEANER
Frank D. Campbell, Chicago, Ill.
Application February 18, 1954, Serial No. 411,106
11 Claims. (Cl. 37—104)



1. A self-propelling ballast cleaner for railways comprising a railway vehicle, means within said vehicle for propelling the same at relatively high speeds over tracks of said railway, a retractable track engaging self-propelling tractor carried beneath said vehicle for propelling said vehicle at relatively slow speed over the tracks, means carried within said vehicle for retracting said tractor from engagement with said tracks, a plurality of elevating means carried by said vehicle and adapted to elevate ballast from said tracks while said vehicle is being propelled by said tractor, means carried by said vehicle for retracting said elevators from engagement with said ballast when said vehicle moves at high speed over the tracks, an excavator carried at one end of a vertically extending rotatable shaft pivotally carried by said vehicle, said excavator having a portion disposed in a horizontal plane and movable beneath said tracks by rotation of said shaft to excavate said ballast therefrom, said excavator having an inclined portion providing an elevated discharge chute having operative connection to said horizontal portion to receive said ballast excavated by said excavator and to

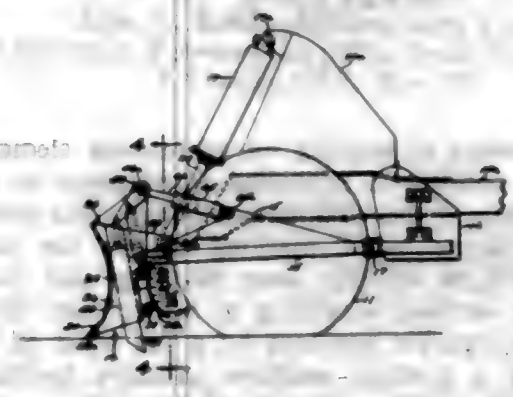
discharge the same into a predetermined position with respect to certain of said elevators while said vehicle is being propelled, means for pivoting said excavator about the vertical axis of said shaft out of position from beneath said tracks to a position parallel to said vehicle, and means carried by said vehicle and cooperating with said pivoting means for retracting said excavator from engagement with said ballast after it has been pivoted about its vertical axis.

2,899,760

MULTI-PURPOSE BULLDOZER BLADE

Raymond Q. Armington, Shaker Heights, and Arthur P. Armington, Willoughby, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application April 28, 1954, Serial No. 424,341
13 Claims. (Cl. 37—145)



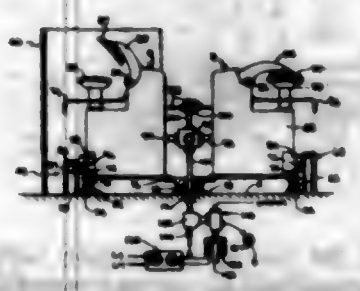
1. In combination, a blade and tooth mounting frame for connection with a propelling vehicle with said mounting frame located near one end thereof, a blade operative when the vehicle moves in one direction, scarifying teeth movably mounted on said mounting frame for extending down below the bottom of said blade during movement in the other direction to provide a material loosening action and being retractable above the bottom of said blade during movement in said one direction, hydraulic means for raising or lowering said scarifying teeth relative to said frame, and hydraulic means for positively holding said frame and blade fixed in various adjusted angular positions about a transverse axis to control not only the cutting angle but also the effective cutting depth.

2,899,761

ROTARY PRESSING MACHINE

Ralph L. Dugger, Hopkins, Minn., assignor to The Uni-press Company, Incorporated, Minneapolis, Minn., a corporation of Minnesota

Application March 16, 1956, Serial No. 572,016
4 Claims. (Cl. 38—5)



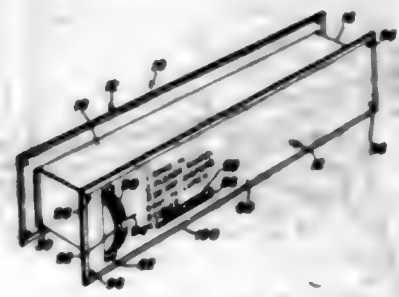
1. In a rotary pressing machine having a frame mounted for rotation about a fixed axis on a stationary base, said frame having thereon a plurality of separate presses each having cooperating pressing elements at least one of which is steam heated, a stationary steam line and a stationary condensate return line, and power means connected to said elements and controls therefor, for moving said elements into and out of pressing engagement, the improvement comprising a single steam and condensate feeder pipe having a rotary gland therein extending coaxially in respect to said fixed axis and terminating as a junction and rotatable with said rotary frame, branch feeders from said junction to each heated pressing element of said presses, said feeders supplying steam to said elements to heat the heated elements, valve means in said feeder exterior in respect to said frame for operation alternately to connect said feeder to the steam supply line and to the condensate return line and operator means connected to the valve means for cyclicly operating said valve means on a predetermined basis.

2,899,762

SELECTIVELY ADJUSTABLE SIGN ASSEMBLY

James M. Wellman, Lakeland, Fla.

Application January 17, 1958, Serial No. 709,614
4 Claims. (Cl. 40—68)



1. A selectively adjustable sign assembly for use in a slotted support panel comprising a housing member including an apertured face plate, an indicia rotor journaled in said housing member, a plurality of indicia signs on said rotor selectively exposable at said apertured face plate, and manually-operable operating means in said housing operatively connected to said indicia rotor for rotating said indicia signs to a position to be observed through said face plate, said operating means including an operating portion exposed in spaced relation from said face plate and accessible to be rotated from the side of the housing in which the sign assembly is supported opposite that side from which the indicia signs will be observed, orienting means in said housing member in engagement with said indicia rotor for positioning said indicia signs in a proper observation position relative to said apertured face plate, said operating portion including selectively positionable plural indicia portions related to said plural indicia signs whereby a selected indicia portion located in a predetermined position orients a selected indicia sign in an observation position, and a separate back plate having mounting means for engagement on the panel member upon which the sign assembly is to be mounted, said back plate being positionable in spaced relation from said face plate, said operating portion extending partially through said back plate, said back plate including indicia means thereon correlated to said indicia portions on said operating portion whereby a selected indicia sign may be positioned at said back plate from the side of the support panel opposite that which the face plate and indicia signs are exposed.

2,899,763

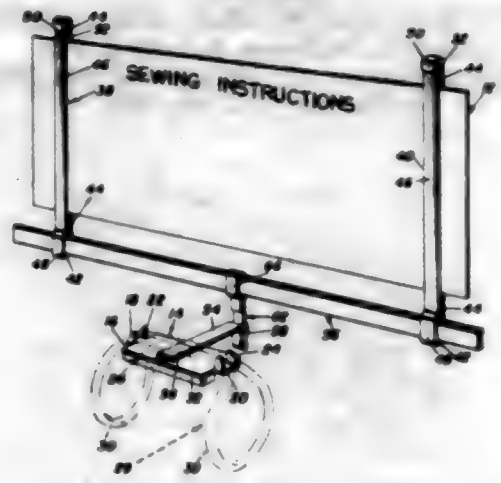
ATTACHMENT TYPE RACK FOR SEWING MACHINES

Jack Jones, Sr., Eden, Tex.

Application July 24, 1957, Serial No. 673,862
4 Claims. (Cl. 40—125)

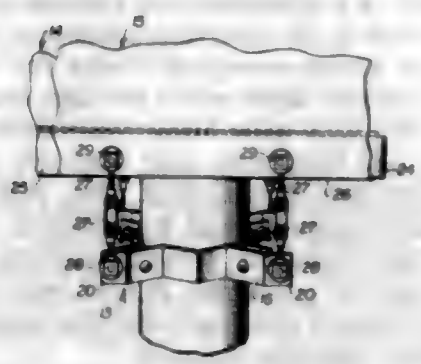
3. For use on the head of a sewing machine, a readily applicable and removable attachment comprising a saddle-like mounting adapted to rest atop a median portion of a sewing machine head, retaining means detachably connectible to said mounting and adapted to substantially and retentively embrace minimal portions of the head in

a manner to clampingly fasten the mounting in its given usable place on the head, a rack by way of which a sewing instruction sheet is perpendicularly held for viewing while the user works at her machine, and means carried by said mounting and connected with the rack so that the latter assumes its intended readable position, said mounting comprising a plate provided on its bottom with a pair of spaced parallel rubber strips to conformingly cooperate with limited surfaces of said head and to prevent the plate from accidentally slipping from its given position, said plate having pairs of upstanding lugs on its



top side, said pairs of lugs being located at the respective end portions of said plate and functioning as keepers, and said retaining means comprising an endless elastic band which is such that portions thereof may be looped to embrace said head and the end portions may be hooked over their respectively required lugs to be thus anchored in place, whereby said band when applied in this manner functions to strap and hold the mounting plate in its useful position on said head.

2,899,764
SIGN STRUCTURE
Ralph E. Oberlin, Jr., Massillon, Ohio, assignor to Igelstroom-Oberlin, Inc., Massillon, Ohio, a corporation of Ohio
Application November 14, 1958, Serial No. 774,015
4 Claims. (Cl. 40—125)

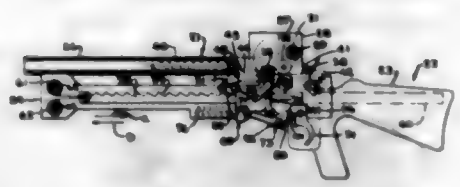


1. A device for mounting signs of flexible fabric or the like on a vertical post, comprising an annular post-gripping assembly adapted to surround a post, said assembly including adjustable means for contracting the assembly to releasably grip a post surrounded thereby, a pair of ears extending from said assembly, relative to a post embraced thereby, outwardly to horizontally aligned and spaced points, and a pair of turnbuckles respectively having ends pivotally attached to said ears at said points and having opposite free ends for attachment to one edge portion of a sign to be mounted on a post.

2,899,765
METHOD OF MAKING AN ADVERTISING SIGN
Ira W. Fuller, Dorchester, Mass.
Application November 12, 1957, Serial No. 695,859
6 Claims. (Cl. 41—25)

1. The process of making an advertising element in relief which consists in providing a prototype in relief which duplicates in size and surface contour the advertising element to be made, marking out on the surface of said prototype division lines dividing said surface into separate sections according to the contour thereof, producing in separate positions on a flat sheet of white paper having a pressure sensitive adhesive backface a duplicate of the outlines of each of the various sections as marked out on the surface of the prototype, cutting said sheet of white paper into separate sections as indicated by the division lines thereon, applying the separate sections of said sheet of white paper to the corresponding sections as marked out on the surface of the prototype, applying to the outside face of the covered prototype any desired decoration, removing the decorated sections from the prototype and mounting them in different locations on a flat layout sheet, making a reproduction of the layout sheet with the decorated sections mounted thereon, cutting said reproduction into sections corresponding to the decorated sections mounted on the layout sheet, and adhesively securing each section of the reproduction to the corresponding section as marked out on the prototype.

2,899,766
TOY CAP GUN WITH LONGITUDINALLY MOVABLE ACTUATOR
Karel J. Staller, Rutherford, N.J.
Application November 5, 1956, Serial No. 620,528
9 Claims. (Cl. 42—57)



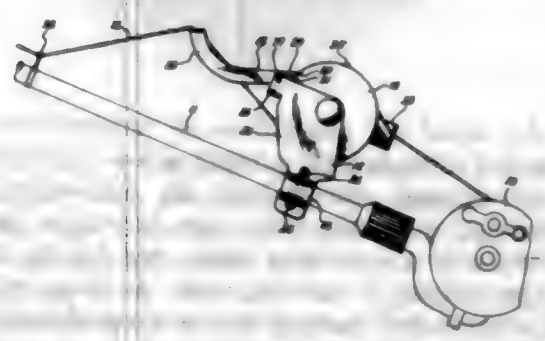
1. A toy gun, for use in connection with a cap tape, comprising in combination, a gun stock, an actuator reciprocably movable longitudinally of the gun stock, spring means urging said actuator in one direction, a hammer pivoted to said stock and tiltable between a cocking position and a striking position and operable to be engaged by said actuator to be tilted thereby into the cocking position, means for feeding the tape to position the caps for striking of a cap by the hammer in said striking position, resilient means operable for urging said hammer into the striking position, the force of said spring means being greater than the force of said resil-

ient means whereby said actuator when engaging said hammer may cock said hammer against the force of said resilient means and said resilient means return said hammer to the striking position upon cessation of said engagement of the hammer by said actuator, and means for temporarily arresting said actuator comprising a control member pivoted to said stock and including a detent and being tiltable between an inactive position wherein said detent is disengaged from said actuator and movable by said hammer during the cocking movement thereof into an active position wherein said detent engages said actuator for temporary arrest thereof, and latching means operable to latch said member releasably in the inactive position.

2,899,767
PISTOL WITH GRIP FORMING AN ANGLE OF 31° WITH FRAME
John L. Boudreau, Stratford, Conn.
Application February 29, 1956, Serial No. 568,521
8 Claims. (Cl. 42—75)

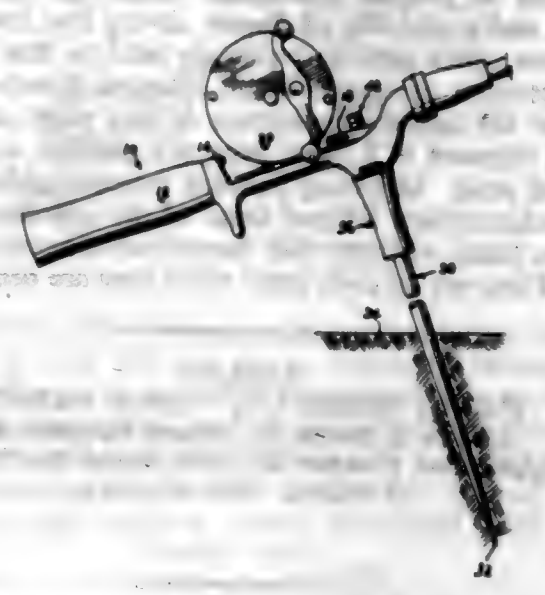
8. A pistol comprising a frame having a trigger, a grip depending from the rear portion of the frame and having the gripping surface of the grip adjacent the trigger forming an angle of 31° with the longitudinal axis of the frame, and a barrel carried by the lower part of the frame, said frame being substantially as long as the barrel and of a height substantially greater than the diameter of the barrel, the upper end of the grip being disposed above the barrel and the barrel being disposed above the trigger and on an axis passing through the grip intermediate the ends thereof, and located immediately above the bottom three fingers and passing through the palm of the hand grasping the grip and in line with the forearm.

2,899,768
FISHING APPARATUS
Julius J. Steinmeier, Lincoln, Nebr.
Application July 24, 1957, Serial No. 673,864
2 Claims. (Cl. 43—15)



1. In a fishing apparatus, a fishing pole, a fish line reel mounted on said fishing pole, a saddle member adapted to be fixedly positioned on said fishing pole ahead of said reel, a second drum-like reel pivotally mounted in said saddle, said drum-like reel having a pin extending radially outwardly from the surface thereof, a spring member fixedly attached at one end to said pivotal mounting, the other end being fixedly attached to the outer periphery of said drum-like reel, a guide member radially distant from said pivotal mounting, a trigger means pivotally positioned on said saddle member opposite said radial guide means, a plurality of notches positioned on said drum-like reel and adapted to engage said trigger means, a fishing line wound on said first reel and adapted to be threaded through said guide means about said drum-like reel and about said radially extending pin thence in reverse about said reel and over said trigger means, whereby movement of said line shall cause said trigger mechanism to disengage said notch, thereby releasing stored energy in said spring to cause the movement of said fishing line.

2,899,769
ROD AND REEL HOLDER
Vergil A. Niles, Yukon, Okla.
Application December 12, 1957, Serial No. 702,321
2 Claims. (Cl. 43—21.2)



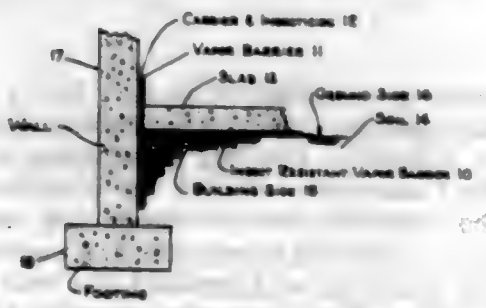
1. A holder for a fishing rod formed with a transversely extending aperture adjacent the handle thereof, comprising: a cylindrical standard terminating at one end in a pointed extremity adapted for insertion into the ground, the remaining end portion of said standard being threaded; a centrally bored mounting member threadedly carried axially by said standard, the wall of the upper end portion of said mounting member being flared outwardly medially its ends substantially twice its original diameter to form an upwardly open inverted conical socket; and a screw secured to said fishing rod through the aperture, said screw having a substantially conical shaped head projecting laterally of said fishing rod a distance substantially equal to the length of the conical socket and adapted to be removably received pivotally and completely within the socket in said mounting member.

2,899,770
POCKET-TYPE LURE CONTAINER
George H. Bartlett, Billings, Mont.
Application November 20, 1956, Serial No. 623,380
1 Claim. (Cl. 43—57.5)

A holder and carrier for a plurality of artificial lures, for example, spoons equipped with gang hooks, comprising a box having a receptacle portion generally rectangular in plan and a hinged portion providing a cover

for said receptacle portion, a single panel-like substantially imperforate plate generally flat and rectangular in form and providing a holder on which the lures are adapted to be removably stored when they are not in use, said plate normally having and occupying a position opposed to the bottom of said receptacle portion and being of a size to fit with requisite nicety into the confines of the walls of the receptacle portion and having one transverse end bifurcated and providing a pair of furcations and a bight portion between the furcations, said bight portion constituting an edge and being serrated and providing teeth, the end portions of said furcations being provided with hinging knuckles and being hingedly attached to an interior surface of one end wall of said receptacle portion, the transverse edge of the plate opposite to the hingedly attached edge being free and also serrated to provide additional selectively usable hook teeth, and a plurality of fingers having free resilient end portions which serve to yieldingly hold the free apertured end portions of spoons in an intended flatwise position against the cooperating surface of said plate, said fingers being disposed in a plane generally parallel to the plane of said plate and having portions thereof rigidly attached to predetermined isolated areas of the opposite flat sides of the plate, whereby said fingers are separated and are out of the way of each other when they are being used.

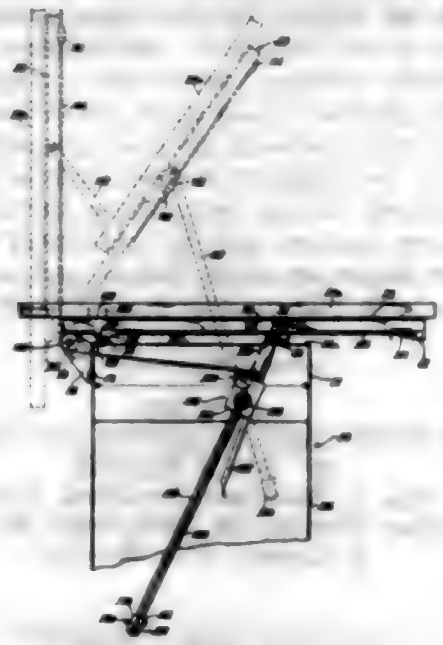
2,899,771
INSECT RESISTANT VAPOR BARRIER
Alonzo A. Burris, Jr., Mount Pleasant, S.C.
Application October 20, 1958, Serial No. 768,877
7 Claims. (Cl. 43—124)



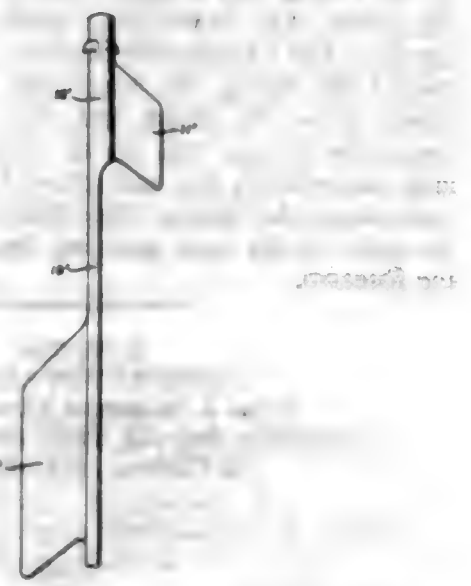
1. A building construction including, a relatively thin flexible vapor barrier, a water soluble carrier capable of retaining an effective quantity of insecticide and releasing same on exposure to moisture, covering a substantial portion of said barrier and being fully exposed to contact by moisture, and an insecticide carried by said water soluble carrier, wherein the vapor barrier is positioned between the building side and the ground side so that the water soluble carrier is so exposed to moisture presenting itself from the ground side as to release insecticide to resist the entry of insects into the building.

2,899,772
DRAFTING BOARD MECHANISM WITH AUTOMATIC RETRACTION MEANS
Paul L. Paulsen, Victor H. Hiers, and Claude G. Kanzelberger, Two Rivers, Wis., assignors to Hamilton Manufacturing Company, Two Rivers, Wis., a corporation of Wisconsin
Application February 6, 1958, Serial No. 713,677
14 Claims. (Cl. 45—131)

1. In drafting board mechanism, an angularly rotatable frame tiltable from a horizontal to a vertical position, a drawing board slidably mounted on said frame for inward and outward movement thereon, whereby the drawing board may be elevated in vertical positions of the frame, and means for automatically retracting the board on the frame in angular movements of the frame from the vertical toward the horizontal, wherein the retractive movement of the board is effected progressively, whereby the board may be moved outwardly a progressively less distance, from full movement in the vertical position of the frame to substantially no movement in the horizontal position of the frame.



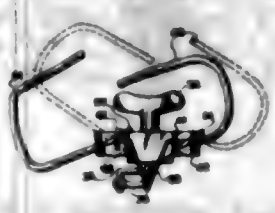
2,899,773
AERIAL TOY
Raymond M. Lockwood, Los Altos, Calif.
Application February 25, 1957, Serial No. 641,988
14 Claims. (Cl. 46—74)



6. An aerial toy adapted to be catapult-launched to a substantial altitude with a rapid arrow-movement ascent, and to descend slowly with an auto-rotating action, comprising: a longitudinal spar having a leading end provided with a launching hook, and having its opposite end constituting a trailing end; a wing of relatively small area at said leading end; a wing of relatively large area at said trailing end; said wings being both disposed substantially in a diametral plane of the spar axis, on diametrically opposite sides thereof, and having respective side margins joined to opposite sides of the spar; said wings being arranged to cause the toy to spin about its longitudinal axis during launching flight for facilitating attainment of height of said arrow movement; and means providing a weight mass on said spar at said leading end; the respective areas of said wings being proportioned so that the ratio of area of the trailing wing to that of the forward wing is in the range between approximately 2:1 and 2.5:1 to provide a dynamic balance such

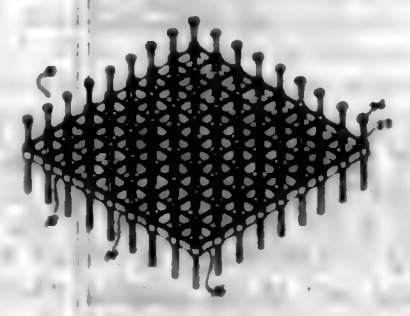
ascent to said auto-rotating descent automatically as the result of aerodynamic forces acting on the toy during its momentum-powered ascent, on the one hand, and the result of aerodynamic forces acting on the toy near the summit of its flight, when the momentum of ascent has been substantially dissipated.

2,899,774
ANIMATED TOY BOXER
Henri Mandel, Bronx, N.Y., assignor of one-half to Ethel Scott, Bronx, N.Y.
Application July 19, 1956, Serial No. 598,848
2 Claims. (Cl. 46—120)



1. An animated toy figure comprising a hollow body including arm and leg portions, and an animating assembly within the body including a motor having a shaft, a motion-translating linkage driven by the motor, arms mounted on said assembly for oscillating movement, said linkage being connected between the shaft and said arms and being adapted to convert rotary motion of the shaft into oscillating motion of the arms, and legs swingably mounted on said assembly, the arm and leg portions encasing the arms and legs respectively of said assembly, said arms being extended forwardly from the body and being oppositely curved, the arms lying in horizontal planes and having vertically extending shaft portions for the oscillation of the arms about vertical parallel axes.

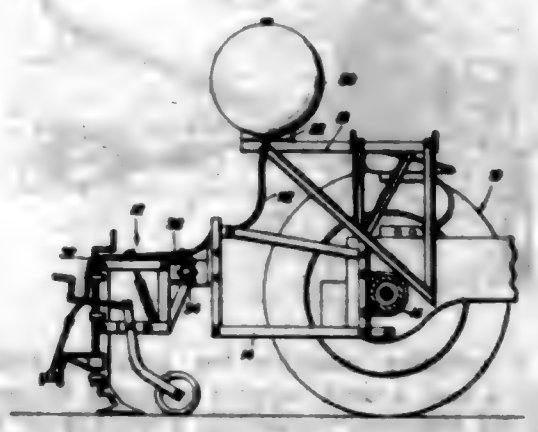
2,899,775
GRASS PROTECTION DEVICE
Earl A. Partin, Ypsilanti, Mich.
Application August 2, 1957, Serial No. 675,837
3 Claims. (Cl. 47—1)



1. A grass root protecting device comprising a plurality of relatively thin substantially rectangular intersecting rank and file elements, said rank and file elements being disposed at right angles with respect to each other and intersecting at an enlarged boss having a bore extending transversely therethrough, and a headed pin extending through each of said bores and fixedly secured within said bosses intermediate the ends of said pins.

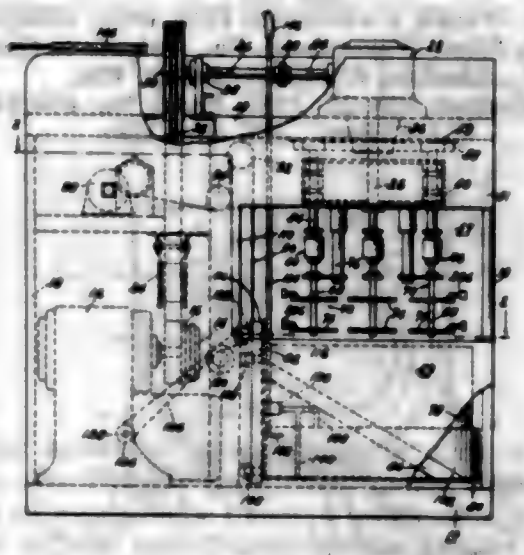
2,899,776
MULTI-PURPOSE IMPLEMENT FOR CULTIVATION INCLUDING FLAMING
R. L. Arnold, Tunica, Miss.
Application August 4, 1958, Serial No. 753,004
7 Claims. (Cl. 47—1)

1. A multi-purpose implement adapted to be attached to a tractor, said implement comprising an essentially vertical front beam, a clamp to attach the front beam to a part of the tractor, a rear beam parallel to said front beam, a pair of links pivoted to said beams and parallel to each other thereby forming an essentially parallelogram frame structure, means for adjusting the rear beam with respect to said front beam and attached to one of said links to effect the adjustment, a depth gauge wheel, means adjustably mounting said depth gauge wheel on one of said links to preserve the adjustment of the rear beam, and means adjustably carried by



said rear beam for cultivation, the last mentioned means including at least one burner, a mounting bracket to which said burner is adjustably secured, a slide mounted on said rear beam and fixed to said mounting bracket, manually operable means for adjusting said slide and thereby adjusting said bracket and burner on said rear beam, and fuel delivery means connected with said burner.

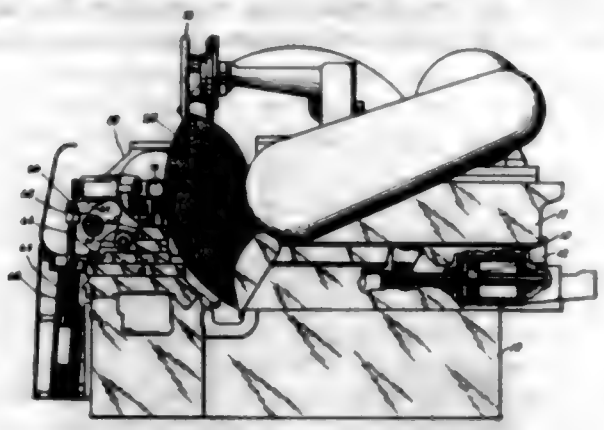
2,899,777
METHOD, APPARATUS AND COMPOUND FOR MECHANICALLY FINISHING WORK PIECES
Leo Richard Davidson, Sturgis, Mich.
Application January 24, 1957, Serial No. 636,052
29 Claims. (Cl. 51—7)



10. In a machine for mechanically finishing work pieces, a receptacle for containing finishing compound, a support journalled for rotation about a vertical axis above said receptacle, said support having at least one rotatable spindle depending therefrom, said spindle having socket means in the lower ends thereof for engaging a work holding fixture, means for moving said support and receptacle vertically relative to one another so that the work pieces supported by said spindle can be driven downwardly into the compound in said receptacle and means on said support adjacent said spindle for supporting and lifting a work loaded fixture into said socket means.

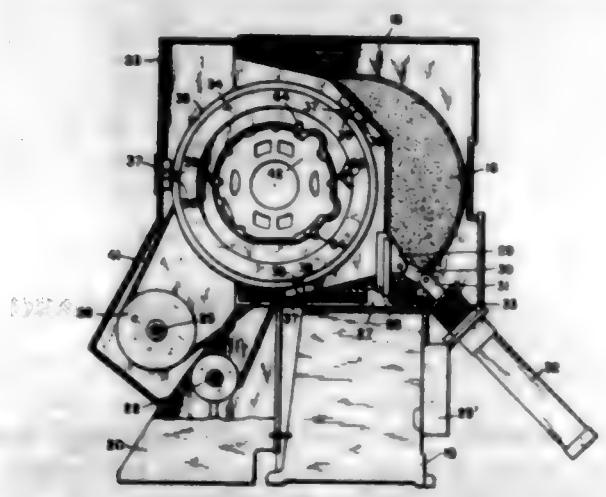
against the sheet of material shearing the metallic cores

2,899,778
AUTOMATIC GRINDING CYCLE
Robert E. Bricker, William P. Flohr, Jr., and Kurt M. Gobel, Waynesboro, Pa., assignors to Landis Tool Company, Waynesboro, Pa.
Application December 21, 1956, Serial No. 629,905
25 Claims. (Cl. 51—105)



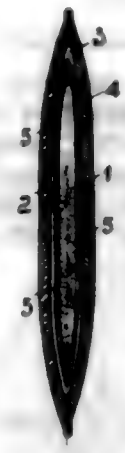
10. In a grinding machine for grinding cylindrical workpieces, a bed, a work support mounted thereon having means for rotatably supporting a workpiece, a work drive motor for rotating said workpiece, a grinding wheel support slidably mounted on said bed for movement transversely toward and from said work support, a grinding wheel rotatably mounted on said grinding wheel support, means for advancing said grinding wheel support at a rapid positioning rate, means for advancing said grinding wheel at a fast grinding rate, means operable at the end of said positioning movement for actuating said fast grinding feed, means operable at a predetermined point in said fast grinding feed for stopping said feed and starting a timing device, a steady rest, means for moving said steady rest toward and from operative engagement with a workpiece, said timer being operable to effect operation of said moving means to move said steady rest to work engaging position at the end of said predetermined interval.

2,899,779
ROTARY WORK CARRIERS FOR DISC GRINDERS
Ralph E. Price, Waynesboro, Pa., assignor to Gardner Machine Company, Beloit, Wis.
Application July 25, 1957, Serial No. 674,141
11 Claims. (Cl. 51—118)



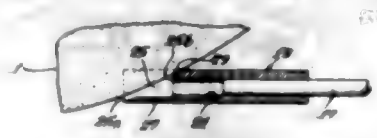
1. A grinder for the opposite faces of a work-piece comprising a base, a pair of grinding discs having spaced parallel faces mounted on said base for simultaneous rotation, a housing pivotally journaled on said base for rocking movement into operating position between said discs, a work-carrier rotatably mounted in said housing, means for rotating the carrier parallel to the disc faces and midway between them, and means for holding a work-piece in said carrier.

2,899,780
SCOURING PAD CONTAINING DISPENSABLE SUBSTANCE
Ada Bottino, Rome, Italy
Application December 27, 1956, Serial No. 630,967
3 Claims. (Cl. 51—185)



1. A scouring pad comprising a bag consisting at least partly of permeable flexible material having a cellular structure, a flexible dispenser inside said bag, and a dispensable substance in said dispenser; said dispenser being made of an inherently water-impenetrable material provided with a plurality of permanently open apertures distributed around its periphery, said apertures enabling the ejection of said substance upon a squeezing of said bag, said dispenser occupying a volume substantially smaller than the interior of said bag, said bag thus forming a water-penetrable compartment about at least a portion of said dispenser.

2,899,781
COOLANT APPLICATOR
Lynn A. Williams, Winnetka, Ill. assignor to Anocut Engineering Company, Chicago, Ill., a corporation of Illinois
Application May 10 1957, Serial No. 658,264
7 Claims. (Cl. 51—267)

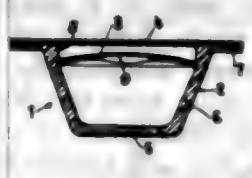


1. A device for applying a liquid coolant to a rotating grinding wheel having a continuous working face from a coolant supply tube, comprising means forming an air interceptor lip at the discharge end of the supply tube so that said lip is substantially in contact with the continuous working face of the grinding wheel to provide only a minute clearance therebetween, thereby to intercept with one side of said means the layer of air rotating with the wheel, and said means forming at its other side a space communicating with the outlet from the supply tube and from which the wheel picks up liquid coolant on its working face.

2,899,782
METHOD OF MANUFACTURE OF PACKING
Hans Haldegger, Soleure, Switzerland, assignor to Ebauches, S.A., Neuchatel, Switzerland
Original application March 1, 1954, Serial No. 413,330. Divided and this application July 10, 1957, Serial No. 676,459
3 Claims. (Cl. 53—14)

1. The method of cutting and positioning a partition member in a packing recess having a cylindrically-shaped wall comprising placing a sheet of material over a female die formed by the edge of said recess, moving a male die

against the sheet of material shearing the partition member from the sheet of material against the edge of the



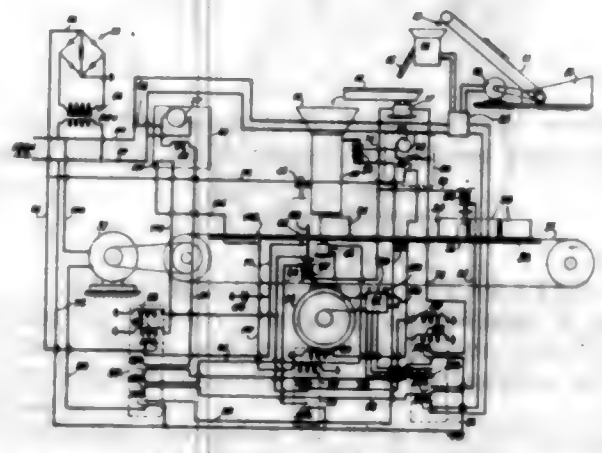
recess by further movement of the die, and positioning the partition member in the desired position in the recess by further movement of the die.

2,899,783

ELECTROMAGNETIC PACKAGING APPARATUS

Stuart Otte, Westport, Conn.

Application July 5, 1955, Serial No. 520,079
23 Claims. (Cl. 53—59)



1. Apparatus for the packaging of magnetizable objects in parallelism into a container comprising an electromagnet having a pair of oppositely facing poles for producing a magnetic field of parallel lines of force, an elongated chute of non-magnetizable material having its lower end disposed between the pole faces, automatic means above the chute for intermittently introducing a predetermined weight of objects into the chute for parallel orientation thereof along said lines of force, automatic means for conveying an empty container into proper position under the chute for the purpose of filling the container with paralleled objects, automatic means for telescoping said chute into said container, automatic means for energizing said electromagnet, automatic means for demagnetizing said electromagnet, a vibrator for vibrating said container of parallel packed objects for a predetermined period of time, and means for moving the chute from its telescoped position within the container to permit the removal of said filled container from its filling position.

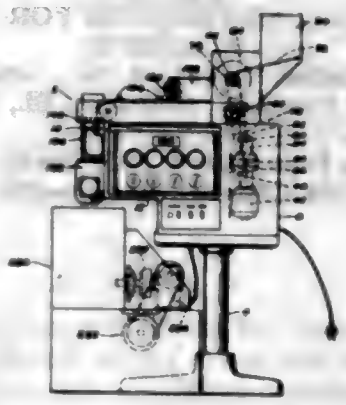
2,899,784

METHOD AND APPARATUS FOR COUNTING AND PACKAGING ARTICLES

Eric G. Cleveland, Melrose, and Archibald D. Standley, Jr., Danvers, Mass., assignors to Delta Engineering Corporation, Boston, Mass., a corporation of Massachusetts

Application January 6, 1956, Serial No. 557,819
11 Claims. (Cl. 53—61)

1. Apparatus for counting articles and packaging said articles in predetermined quantities comprising, means for storing a plurality of like articles, means for removing said articles from said storage means, means for separating said removed articles and advancing them in single file to secondary storage means provided with a removable gate normally acting to prevent said articles from escaping therefrom, a photoelectric tube, a light source providing a beam of light directed at said photoelectric tube across the path traveled by said removed articles as they advance in single file to said secondary storage means, electronic counting means coupled to said photoelectric tube and adapted to provide an output signal when said light beam has been interrupted a predetermined number of times by successive ones of said removed articles advancing in single file to said secondary storage means, means responsive to said output signal for moving said gate to release articles accumulated



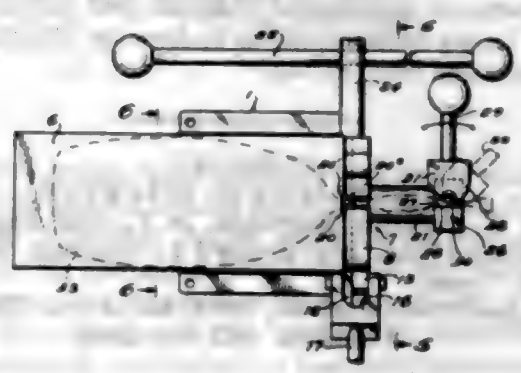
within said secondary storage means and for reclosing said gate thereafter to allow additional articles to accumulate, a packaging machine positioned to receive articles discharged from said secondary storage means, said packaging machine comprising means for forming a sealed package about said articles, drive means for said package forming means, electrically operated means responsive to said output signal for actuating said drive means in timed relation with movement of said gate, and means for terminating operation of said drive means after said articles have been packaged.

2,899,785

APPARATUS FOR AND METHOD OF CLAMPING THE ENDS OF BAGS FOR HAMS, SAUSAGES OR THE LIKE

Otto Gebhardt, Douglaston, N.Y.

Application March 23, 1954, Serial No. 418,183
3 Claims. (Cl. 53—124)



1. In an apparatus for clamping the ends of a bag, casing, or the like for ham, sausages or similar food by means of an eyelet, a frame, a longitudinal platform supported by the said frame, means disposed at one end of the said platform in crosswise direction for clamping together the ends of the said bag, the said clamping means having a substantially circular recess adapted to receive the said eyelet with the end of the said bag threaded therethrough, and means spaced apart from the said clamping means for pulling the said bag through the said clamping means prior to the clamping operation to retain the end portion of the said bag in stressed position during the clamping operation, the said clamping means comprising a crosswise disposed upwardly extending portion of said frame having the said recess with a slot disposed between the said recess and the upper

work-piece in said carrier.

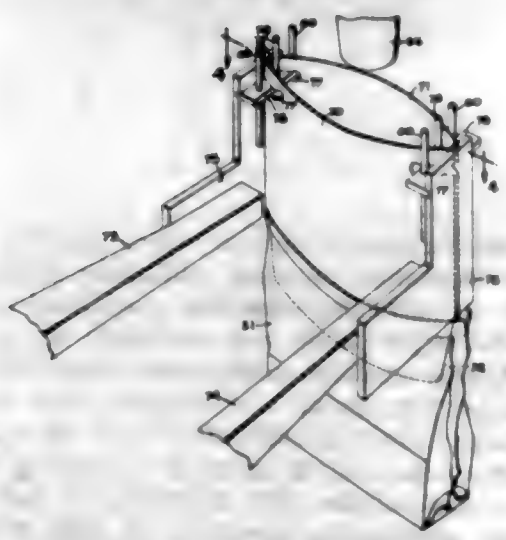
die formed by the edge of said recess, moving a male die

margin of the said portion, the latter forming the tubular guide, a clamping tool reciprocating in the said guide and in its clamping position entering the said slot, and a lever pivotally secured to the said upwardly extending portion and pivotally connected with the rear end of the said clamping tool, so that upon turning of the said lever, the said clamping tool may reciprocate in the said guide.

2,899,786
BAG OPENING MECHANISM FOR PACKAGING MACHINE

Charles B. Harker, Rockford, Ill., assignor to Bartelt Engineering Company, Rockford, Ill., a corporation of Illinois

Application September 6, 1957, Serial No. 682,476
14 Claims. (Cl. 53—187)

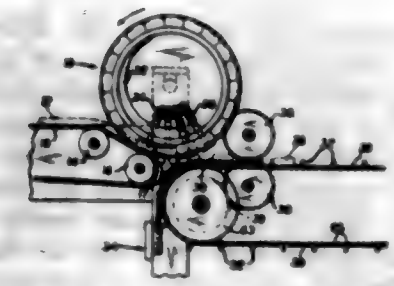


14. In a machine for packaging material in a bag, the combination of, two flat plates disposed face to face in vertical planes, means for delivering a bag open end up beneath said plates with the plates projecting into the bag through the open end, mechanism for moving the edges of each plate relatively toward each other to bow the plates outwardly from each other thereby to spread apart the walls of the bag and form a spout to guide material into the bag, and filling mechanism operable to dispense a quantity of material and having a downwardly facing outlet operable to dispense material through said spout and into the bag.

2,899,787
CAN PACKING MACHINE

Arthur B. Ereksen, Scarsdale, N.Y., Malcolm S. Lane, Baltimore, Md., and Richard L. Seidman, South Norwalk, Conn.

Application April 21, 1958, Serial No. 729,909
8 Claims. (Cl. 53—244)

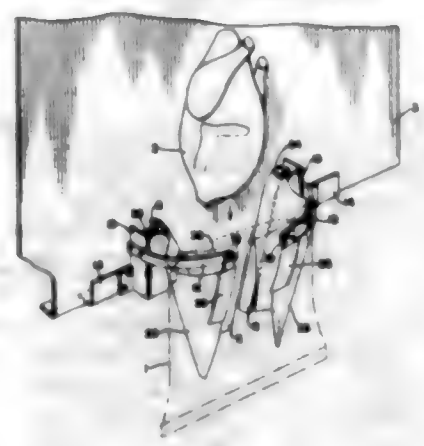


1. A machine for filling uniformly shaped and generally flat surfaced objects into a can with open upper end comprising means for delivering the objects to a moving conveyor in line and in evenly spaced relationship to each other lengthwise of the conveyor, means for moving the can adjacent to one of the said objects on the conveyor and offset to the side of the said line of objects, lifting mechanism for lifting the object from the conveyor, means for moving the object lifting mechanism continuously in the path of a complete circle and, at one position in the circle, downwardly to the object to be lifted and at another downwardly into the can and there releasing the object from the lifting mechanism, for returning the lifting mechanism to a succeeding one of the said objects on the said conveyor and for repeating the cycle.

2,899,788
BAG LOADING DEVICE

Paul Beebe, Jr., Cuyahoga Falls, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Application June 3, 1955, Serial No. 513,055
3 Claims. (Cl. 53—262)



1. A bag-loading device which includes a bed plate with an elongated tongue extending from one edge thereof, brackets mounted adjacent said edge of the bed plate and slidable toward one another and the tongue, and also slidable away from each other and the tongue, with means for fastening them when spaced apart any desired distance, guide pieces pivotally mounted on the sides of the brackets nearest the tongue with springs holding the upper ends thereof above said mountings toward the respective brackets, a spring member mounted on each bracket and substantially perpendicular to the bed plate with the outer ends of the respective spring members approaching one another, a front guide mounted on each of said spring members and extending therefrom in a generally parallel position and parallel to the bed plate, and fabric with a slick inner surface fastened to the guide pieces and the front guides and bulging outwardly therebetween and forming guideshields for the insertion of objects moved away from the bed plate and along the tongue into the space between the shields and pushed against the bottom portions of the guide members against the action of the aforesaid springs.

2,899,789
MACHINE FOR PACKAGING FLUENT MATERIAL

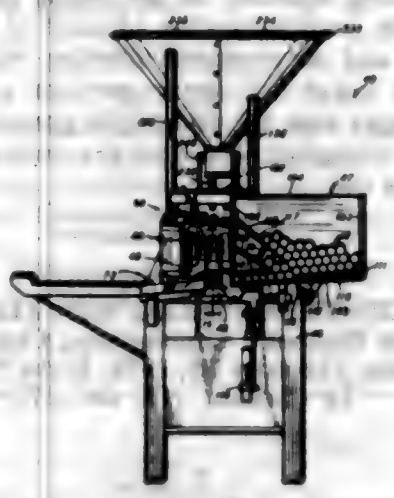
Charles C. Smith, Peoria, Ill.

Application August 5, 1954, Serial No. 448,037
10 Claims. (Cl. 53—281)

2. A machine for packaging fluent material, comprising a magazine for holding a supply of container tubes, a conveyor having a plurality of pockets for receiving the tubular containers, a feeding mechanism for feeding the tubes from the magazine to said conveyor, means for indexing said conveyor to advance the containers to a plurality of stations, means at one of said stations for inserting a disk-shaped cap into the lower end of each of the tubes, means at a succeeding station for stopping said machine in response to the absence of a cap in the

respective trunnions on the conveyor for permitting ver- projecting through the slot and into the passage for effect-

lower end of the tube at said succeeding station, filling means at another succeeding station for extruding fluent material into the tubes, means at another succeeding station for inserting a disk-shaped cap into the upper end



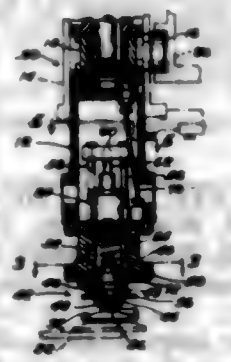
of each of the tubes, and means at still another succeeding station for removing the tubes from said conveyor.

2,899,790

CLOSURE APPLYING APPARATUS

William H. Nowey, Hingham, and Walter S. Sterling, Quincy, Mass., assignors to Pneumatic Scale Corporation, Limited, Quincy, Mass., a corporation of Massachusetts

Application December 31, 1956, Serial No. 631,775
14 Claims. (Cl. 53—321)



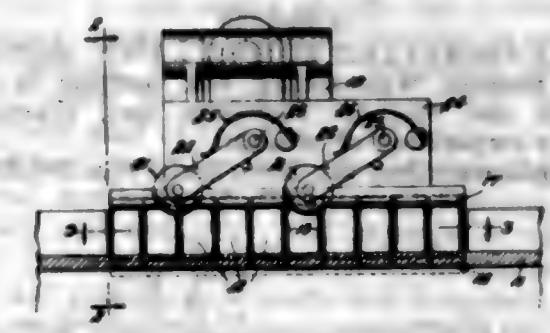
1. Closure applying mechanism particularly adapted for applying closures to pressurized containers having exterior elements adapted to be depressed to release the pressurized material comprising a vertically reciprocal chuck housing, a chuck unit including a closure gripping element carried by said housing and mounted for limited vertical movement therein for receiving and gripping a closure for application to a container, and resilient means for normally maintaining the closure gripping element in its vertically extended position relative to the housing, said resilient means permitting vertical retracting movement of the gripping element relative to the housing when the gripping element meets a predetermined resistance less than the force required to depress said pressurized material releasing element whereby to prevent inadvertent depression of said releasing element during the downward movement of the housing to apply the closure, the mounting for said gripping element comprising a retaining plate, and a supporting member mounted for vertical movement in said retaining plate, said supporting member having upper and lower shouldered portions for limiting the vertical movement of the supporting member in said plate.

2,899,791

MECHANISM FOR HEAT SEALING WRAPPERS AND A METHOD OF SEALING PACKAGES

Andrew W. Anderson, Nutley, N.J., assignor to Scandia Packaging Machinery Company, a corporation of New Jersey

Application June 14, 1957, Serial No. 665,740
2 Claims. (Cl. 53—376)



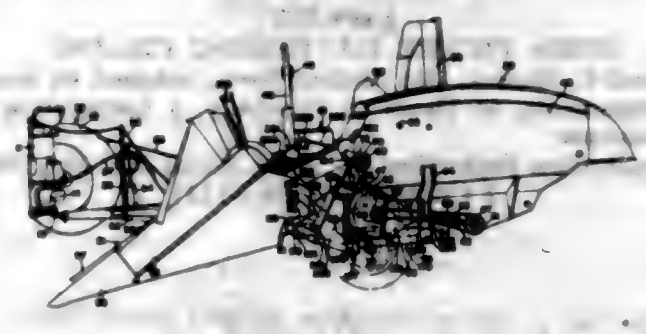
1. In combination, a platform for supporting movable packages to be sealed, means at one side of the platform for loosely and flexibly supporting a plurality of heating members, a plurality of flexibly connected heating members mounted in said support, means for transmitting heat to said members, and means above the path of the packages on the platform for resiliently engaging the edges of the packages adjacent said sealing means and forcing the package flaps to be sealed against the heating members.

2,899,792

CORN HARVESTER

Joe H. Hoekstra, Des Moines, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware

Application February 14, 1958, Serial No. 715,254
9 Claims. (Cl. 56—18)



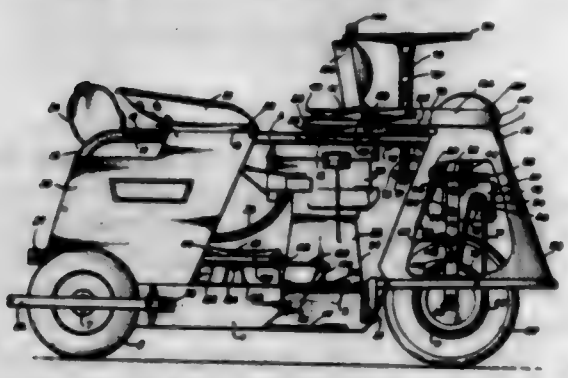
1. An attachment for connecting a corn harvesting unit to a combine having a main mobile frame with fore-and-aft spaced transverse frame portions supporting from underneath an elongated relatively narrow fore-and-aft combine body having a forwardly positioned crop-inlet opening, the corn harvesting unit having forwardly disposed harvesting mechanism, a centrally positioned conveyor extending rearwardly from the harvesting mechanism with a rear crop discharge outlet for feeding material into the crop-inlet, and outwardly extending structure adjacent the outlet forming a pair of axial alined horizontal trunnions projecting oppositely outwardly from the conveyor, said attachment comprising; an attachment frame composed of a pair of transversely spaced elongated frame members, each of the members having a fore-and-aft section disposed beneath the main frame of the combine and an upright section rigid with and extending upwardly from the forward end of the fore-and-aft section; means for mounting the fore-and-aft sections on the fore-and-aft spaced transverse portions of the main frame whereby the forward upright sections shall be disposed forwardly of and adjacent the combine body and spaced transversely on the order of the trunnions on the harvester conveyor; trunnion receiving means on the upper ends of each of the upright sections adaptable to receive the

heater, a yarn engaging roller movable from a first position wherein it guides said yarn into contact with said

connecting said source of fuel through said pilot valve to said fuel chamber, said cylinder having an annular

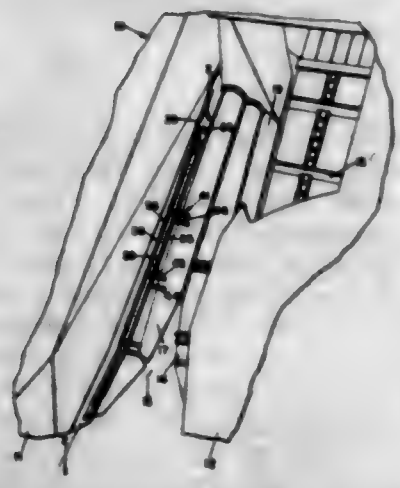
respective trunnions on the conveyor for permitting vertical movement of the harvesting unit relative to the combine; hydraulic means mounted on the lower ends of the upright sections; and means for connecting the hydraulic means to the corn harvesting unit to effect selective vertical adjustment of the unit.

2,899,793
SELF-PROPELLED RIDING LAWN MOWER
Max B. Swisher, Warrensburg, Mo., assignor to Swisher Mower and Machine Company, Inc., Warrensburg, Mo., a corporation of Missouri
Application July 23, 1956, Serial No. 599,536
3 Claims. (Cl. 56—25.4)



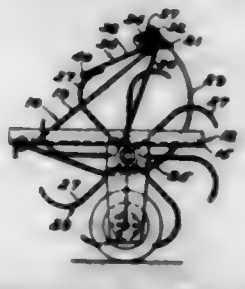
1. A self-propelled riding type lawn mower comprising, a chassis having rear supporting wheels and a front driven steering wheel, a motor on the chassis having a vertically arranged shaft, a horizontally rotatable cutter on said chassis having a vertically extending shaft, drive connections between said motor shaft and said cutter and front driven steering wheel, and steering means on said chassis connected to said front driven steering wheel.

2,899,794
CORN PICKER GATHERING CHAINS
Howard C. Hadley, Des Moines, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware
Application September 11, 1956, Serial No. 609,198
2 Claims. (Cl. 56—111)



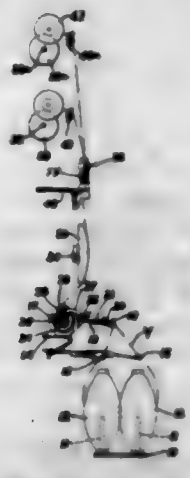
1. In a corn harvester movable forwardly over a field of row planted corn, housing structure defining a fore-and-aft extending passage for successively receiving stalks of corn as the harvester moves over the field, the housing structure including vertically disposed panel means adjacent the passage having an elongated and fore-and-aft extending slot with upper and lower edges, and fore-and-aft extending harvesting mechanism in the passage adjacent to and beneath the slot effecting detachment of the ears from the stalks; a chain mounted in the housing structure having a fore-and-aft extending run proximate to the slot with rigidly connected U-shaped lugs thereon projecting through the slot and into the passage for effecting movement of the ears rearwardly as they are detached from the stalks, each of said lugs having vertically spaced upper and lower rigid portions rigidly interconnected by a vertically disposed bight portion, the upper portion moving adjacent to the upper edge of the slot and the lower portion moving adjacent to the lower edge of the slot; and an elongated housing member disposed between the upper and lower portions adjacent to and on the passage side of said bight portion for partially closing the elongated slot and preventing entry of the ears into the slot.

2,899,795
ADJUSTABLE DRAG FOR TEDDER
Arthur Raymond Cunningham, Chicago, Ill.
Application February 25, 1958, Serial No. 717,345
10 Claims. (Cl. 56—370)



1. An adjustable drag to control spin of a tedder or like field implement having a frame rotatively supporting an axial series of tine carrying wheels, comprising a cross support carried by said frame and extending across the said tine wheels, and a flexible sheet-like drag member having means securing the same to said support to extend therefrom to a position in the path of movement of said tine wheels to be successively frictionally engaged from beneath by the tines of said wheels to control spin thereof.

2,899,796
TEXTILE MACHINE
Dimitri G. Soussloff, Wallingford, Pa., and Richard G. Hilbert, Smithfield, R.I., assignors to Universal Winding Company, Cranston, R.I. a corporation of Massachusetts
Original application July 7, 1955, Serial No. 520,537. Divided and this application July 9, 1956, Serial No. 596,758
3 Claims. (Cl. 57—35)

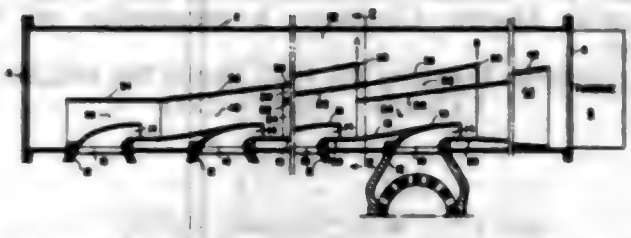


1. Apparatus for imparting crimp to thermoplastic yarn comprising a heater adapted to be contacted by said yarn, a false twisting device disposed to impart false twist to said yarn, means for drawing said yarn over said heater and through said false twisting device whereby said device imparts a false twist to said yarn emerging from said heater and said twist feeds along said yarn across said

walls in a closed position, conduit means communicatively connecting the interior of said housing with that of each and an outlet tube connected to said storage compartment

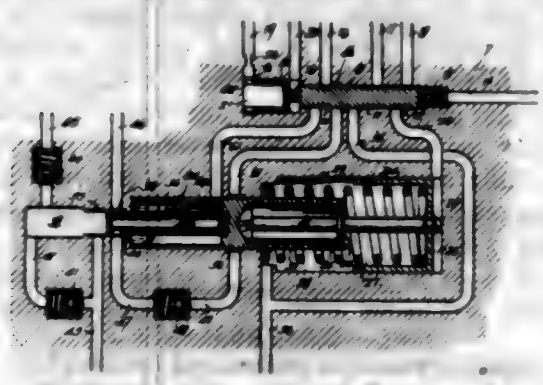
heater, a yarn engaging roller movable from a first position wherein it guides said yarn into contact with said heater to a second position wherein it holds said yarn out of contact with said heater, and means to positively rotate said roller when in its said first position to thereby feed said yarn toward said heater.

2,899,797
TURBOCHARGER FOR INTERNAL COMBUSTION ENGINES
Rudolph Birmann, Newtown, Pa., assignor to De Laval Steam Turbine Company, Trenton, N.J., a corporation of New Jersey
Application February 3, 1956, Serial No. 563,347
8 Claims. (Cl. 60—13)



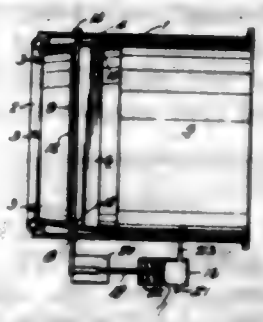
1. In combination with an internal combustion engine of reciprocating type, a turbocharger comprising a turbine and compressor driven thereby, means for leading exhaust gases from said engine to said turbine; said means comprising means defining a first elongated passage having an inlet end, means defining a second passage extending along the length of said first passage, nozzles receiving exhaust gases from the engine and discharging said gases at high velocity in the same direction, away from said inlet end, into said first passage, a plurality of diffusers distributed along the length of said first passage and receiving gases therefrom and discharging directly into said second passage at locations distributed along the length thereof, and means providing communication between said second passage and the inlet end of said first passage; and means for leading air from said compressor to said engine.

2,899,798
IGNITER CONTROL
Claude O. Broders, Simsbury, William W. Jacobus, Columbia, and Arthur B. Swenson, Glastonbury, Conn., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application July 31, 1957, Serial No. 675,506
1 Claim. (Cl. 60—35.6)



In a gas turbine power plant having a source of afterburner fuel manifold pressure, a source of fluid pressure, a combustion chamber and a source of fuel, a fuel booster device for supplying a predetermined amount of fuel to said combustion chamber comprising, a cylinder having a piston therein dividing said cylinder into a fuel chamber and a fluid pressure chamber, a pilot valve, a restricted inlet means connecting said source of afterburner fuel manifold pressure to said pilot valve for actuation thereof, a first fuel inlet means normally connecting said source of fuel through said pilot valve to said fuel chamber, said cylinder having an annular groove covered at all times by said piston, a second fuel inlet means connecting said source of fuel through said pilot valve to said cylinder at said annular groove upon actuation of said pilot valve, said cylinder having a first outlet means connecting said annular groove and said fuel chamber to said source of fuel and a second fuel outlet means connecting said fuel chamber to said combustion chamber, a sleeve valve operatively connected with said piston for alternatively connecting said fuel chamber with each of said outlets, said sleeve valve normally connecting said fuel chamber through said first outlet to said fuel source, a fluid pressure passage means connecting said source of fluid pressure to said fluid pressure chamber through said pilot valve upon actuation of said pilot valve, whereby fuel is normally circulated through said fuel chamber from said fuel source and on operation of said pilot valve fluid pressure is introduced to said fluid pressure chamber actuating said piston and sleeve valve thereby to displace fuel from said fuel chamber through said second outlet into said combustion chamber and placing said source of fuel in communication with said annular groove and said first outlet to lubricate, cool and cleanse said piston.

2,899,799
COMBUSTION CONTROL ARRANGEMENT FOR AFTERBURNERS
Earl O. Setterblade, Stratford, Conn., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application July 3, 1956, Serial No. 595,861
1 Claim. (Cl. 60—39.72)



A combustion control arrangement for a jet engine afterburner comprising an afterburner housing adapted to accommodate the flow of combustible fluids therethrough and having a combustion chamber therein, fuel injection means associated with said afterburner housing and being operable to discharge fuel therein upstream of said combustion chamber, squeal baffle means within said afterburner housing, a plurality of rotatable, spaced and parallel shafts mounted in said housing and extending across the interior thereof, an extremity of each of said shafts protruding through said housing, a plurality of spaced and parallel, fixed, plate-like gutter walls extending across the interior of said housing and secured to said squeal baffle means, a fixed gutter wall having an edge adjacent and parallel to each of said shafts, a plurality of movable plate-like gutter walls, each of said movable gutter walls having an edge secured to one of said shafts for rotation therewith between open and closed positions relative said fixed gutter walls, resilient means engaging and urging said movable and fixed gutter walls to a normally closed position, a plurality of cylinders carried externally of said housing, a plurality of pistons, a piston operatively engaged with each of said cylinders, linkage means including a cam connecting a piston to a protruding extremity of each shaft for rotation of said shaft with piston movements, spring bias means in said cylinder urging said pistons to permit said resilient means to maintain said gutter

wall; a generally flat air-conditioning coil disposed in

said ice blocks; said ice bucket including an end wall

to the slot with rigidly connected U-shaped lugs thereon heater and said twist feeds along said yarn across said

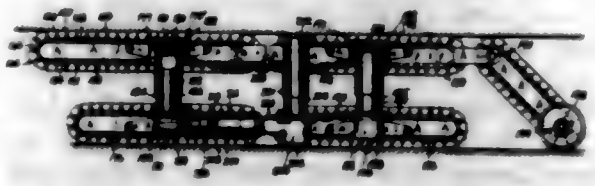
walls in a closed position, conduit means communicatively connecting the interior of said housing with that of each of said cylinders to provide a means for bleeding said cylinders, and conduit means connecting each of said cylinders adapted for introducing afterburner fuel pressure into said cylinders to actuate said pistons thereby rotating said shaft-carried movable gutter walls.

2,899,800

APPARATUS FOR MINE ROOF CONTROL

Joseph F. Joy, Pittsburgh, Pa., assignor to Joy Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania

Original application May 1, 1948, Serial No. 24,574, now Patent No. 2,714 505, dated August 2 1955. Divided and this application July 27, 1955, Serial No. 524,904
15 Claims. (Cl. 61—45)



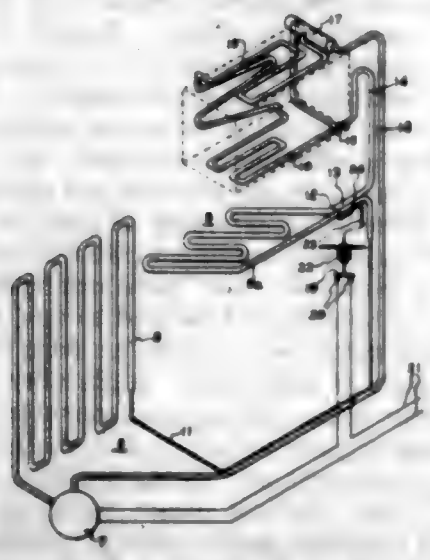
1. In a jack mechanism, a plurality of spaced roof supporting jacks including a first and a second roof supporting jack and an abutment jack located between said first and second roof supporting jacks, a cylinder and piston mechanism comprising a telescopically arranged cylinder and piston with a piston rod, said cylinder rigidly connected to the first of said roof supporting jacks and said piston rigidly connected to said abutment jack, and a second cylinder and piston mechanism comprising a telescopically arranged cylinder and piston with a piston rod, said latter cylinder pivotally connected to said abutment jack and the piston rod of said second cylinder and piston mechanism rigidly connected to the second roof supporting jack.

2,899,801

AUTOMATIC DEFROSTING EVAPORATOR ARRANGEMENT

Charles S. Grimshaw, Fulton, Ill., assignor to General Electric Company, a corporation of New York

Application June 25, 1956, Serial No. 593,618
3 Claims. (Cl. 62—156)



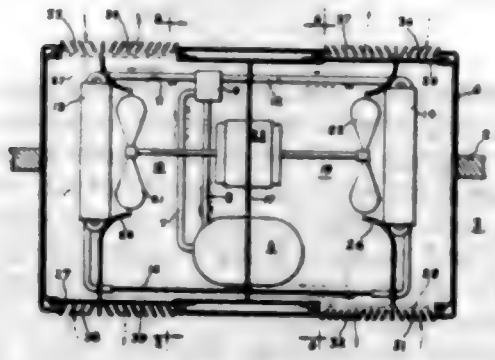
1. A refrigerator comprising a cabinet including a freezer compartment and a fresh food storage compartment, an evaporator disposed in each of said compartments, a condensing unit, means connecting said unit and evaporators in closed series connection and including an inlet tube connected to the evaporator in said storage compartment for supplying refrigerant to said evaporator and an outlet tube connected to said storage compartment evaporator for withdrawing refrigerant therefrom, temperature-responsive means including a feeler bulb partially filled with a volatile liquid for controlling the operation of said condensing unit and adapted to energize said unit only when all temperatures sensed by said feeler bulb are above freezing, said feeler bulb being disposed in said storage compartment in thermal contact with both said inlet and outlet tubes within said storage compartment to assure complete defrosting of said storage compartment evaporator prior to energization of said condensing unit.

2,899,802

ROOM AIR CONDITIONING APPARATUS HAVING AUTOMATIC ODOR REMOVAL OPERATION

Stephen L. McMillan, Jeffersontown, Ky., assignor to General Electric Company, a corporation of New York

Application February 25, 1957, Serial No. 642,241
7 Claims. (Cl. 62—157)



1. In an air conditioning apparatus for conditioning the air within an enclosure, the combination comprising a refrigeration system including a compressor and a pair of heat exchangers interconnected in refrigerant flow relationship, at least one of said heat exchangers capable of being refrigerated by the flow of refrigerant therethrough, air moving means in said apparatus for circulating separate streams of air over each of said heat exchangers, air valve means in said apparatus movable between first and second positions, said air valve means directing air from within said room over said one heat exchanger when said air valve means is in said first position and said air valve means directing air from outside said enclosure over said one heat exchanger when said air valve means is in said second position, control means for discontinuing the refrigeration of said one heat exchanger, said control means also actuating said air valve means to said second position when said refrigeration of said one heat exchanger is discontinued so that condensate water and odors collected from said indoor air stream passing over said one heat exchanger while refrigerated are discharged into said outdoor air stream when said refrigeration of said one heat exchanger is discontinued.

2,899,803

AIR CONDITIONING APPARATUS

Albert A. Paley, Kew Gardens, N.Y.

Application February 15, 1955, Serial No. 488,332
2 Claims. (Cl. 62—291)

1. An air-conditioning device comprising an upright box-like casing having extensive, parallel front and rear walls, said casing being relatively shallow from front to rear and including tall and narrow side walls extending between and joining the said front and rear walls, said front casing wall having an air intake louver extending along its bottom portion and an air outlet louver extending along its top portion, said louvers being vertically spaced from each other by a solid portion of the front

from a log washer log having an open end within which and having at least two spaced prongs extending substan-

wall; a generally flat air-conditioning coil disposed in the upper portion of the casing, said coil tilting backward and having its upper portion disposed rearward of the air outlet louver in the upper portion of the front wall, the lower portion of the air-conditioning coil being disposed at a level below the said outlet louver and rearward of the said solid portion of the front wall; a centrifugal rotary blower disposed in the lower portion of the casing, said blower having its axis extending perpendicular to the said front and rear casing walls and being constituted of solely one centrifugal rotor and solely one blower scroll, said rotor and scroll having corresponding substantially coplanar ends juxtaposed to the said rear wall of the casing, the said centrifugal blower having a driving motor disposed partially in the rotor and the blower scroll, said motor being spaced

from the front casing wall and being disposed rearward of the inlet louver in the bottom portion of said wall, the air entering the casing through the said inlet louver flowing in an axial direction past the motor and to the interior of the rotor, thereby to cool the motor, said centrifugal blower further including a supporting spider attached to the forward end of the motor and mounted on the said blower scroll; and sheet-like filtering means disposed within the lower portion of the casing between the said intake louver and the motor of the blower, to filter the air which is sucked into the casing by the blower, said blower scroll having a discharge orifice in its upper portion located forward of and adjoining the rear casing wall and under the air-conditioning coil, said discharge orifice having a mouth of reduced area and an angularly disposed wall, thereby to increase appreciably the velocity of the air discharged from the blower against the air-conditioning coil.

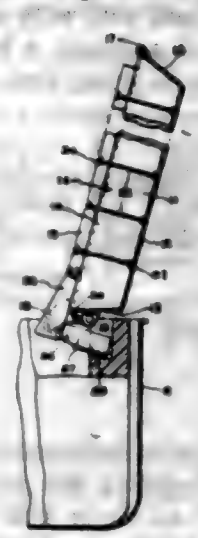
2,899,804

ICE EJECTING AND STORAGE MEANS

Arthur W. Carew, Louisville, Ky., assignor to General Electric Company, a corporation of New York

Application February 28, 1958, Serial No. 718,300
2 Claims. (Cl. 62—344)

1. In combination, a portable ice receiving and storage bucket and a freezing tray of the type comprising an elongated tray and a grid structure secured in said tray for limited movement relative thereto, said grid structure including a plurality of transverse dividers dividing said tray into a plurality of sections and arranged for tilting movement relative to said tray to loosen ice blocks frozen in said sections, means for tilting said inclined dividers relative to said tray, said tilting means including a T-shaped lever arm having a flat cross portion, said arm being pivotally secured to said grid and extending beyond one end of said tray and adapted upon pivotal movement relative to said tray to tilt said dividers for releasing said ice blocks; said ice bucket including an end wall having a T-shaped slot therein for receiving said lever arm and for supporting said tray by means of said portion in a substantially vertical position above said end wall



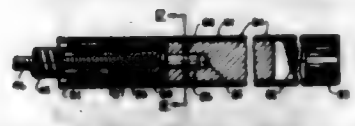
of said bucket with the top of said tray facing said bucket whereby pivotal movement of said tray towards said bucket with said flat portion engaging said slot actuates said dividers to release and discharge ice blocks into said bucket.

2,899,805

TELESCOPIC TERMINAL FOR FLEXIBLE DRIVE SYSTEMS

Robert W. Hugo, Cleveland, Ohio, assignor to Ernest P. Miller, Sr., Lakewood, Ohio

Original application January 19, 1955, Serial No. 482,480, now Patent No. 2,801,833, dated August 6, 1957. Divided and this application August 5, 1957, Serial No. 676,684
4 Claims. (Cl. 64—4)



1. A terminal for a flexible shaft characterized by a casing and a core within the casing comprising a generally tubular receptacle provided at one end with means for engaging a power take-off unit; a shank-like element within the hollow in the body of the receptacle, said shank-like element being capable of movement axially of the receptacle; and, connecting the proximate end of the shaft casing and the end of the shank-like element remote from the means for engaging the power take-off unit, coupling means of size and shape such as to permit not only the shaft core but also the shaft casing to accompany the shank-like element into and out of the hollow in the body of the receptacle, said receptacle and said shank-like element being non-circular in cross-section, precluded thereby from turning independently of each other, and so designed that the shank-like element can slide axially of the receptacle until it reaches the means for engaging the power take-off unit.

2,899,806

LOG WASHER LOG AND GUDGEON AND METHOD AND APPARATUS FOR ASSEMBLING THE GUDGEON WITH AND REMOVING SAME FROM THE LOG

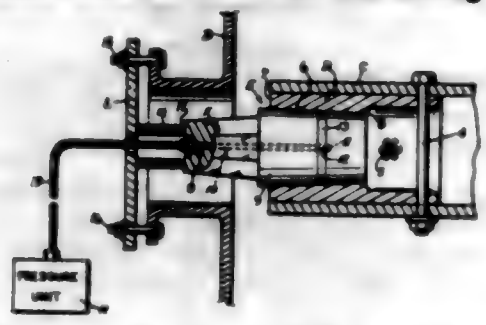
Ronald L. Fye, Hollidaysburg, Pa., assignor to McLanahan & Stone Corporation, Hollidaysburg, Pa., a corporation of Pennsylvania

Application May 17, 1957, Serial No. 659,954
4 Claims. (Cl. 64—5)

1. A gudgeon constructed for rapid and easy tight driving connection with and removal and detachment

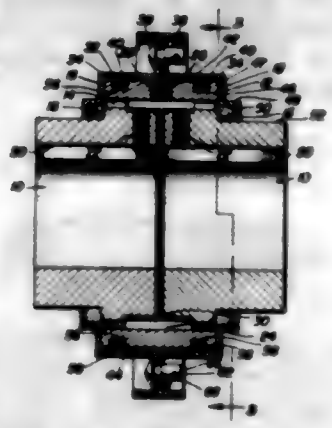
compartment for supplying refrigerant to said evaporator spaced from each other by a solid portion of the front

from a log washer log having an open end within which is secured a gudgeon block provided with a longitudinally extending inwardly tapered seat, said gudgeon having a tapered inner end of a size to snugly and accurately fit within the gudgeon block seat with an outer end disposed outwardly of the block and seat, a bore extending axially of the gudgeon from its outer end and having an inner



end terminating at a point substantially midway the length of the tapered inner end of the gudgeon, a radially extending bore having an inner end communicating with the inner end of the longitudinal bore and an outer open end at the outer face of the gudgeon, and a groove encircling the tapered portion of the gudgeon and having communication with the outer end of the radial bore.

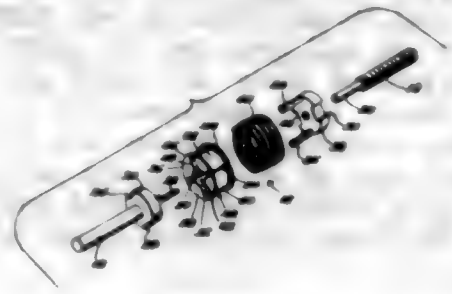
2,899,807
GEARED FLEXIBLE SHAFT COUPLINGS
Roy E. Schwettman, Indianapolis, Ind., assignor to Link-Belt Company, a corporation of Illinois
Application March 6, 1958, Serial No. 719,594
7 Claims. (Cl. 64—8)



2. A flexible shaft coupling comprising a pair of substantially axially aligned hubs each having a circumferential row of teeth formed on the radially outer surface thereof, an outer sleeve surrounding at least a portion of each of said hubs and having teeth formed on the radially inner surface thereof which mesh with the teeth formed on said hubs, said sleeve having two axially spaced grooves formed in the radially outer surface thereof, a cover formed of two separate sections for enclosing said sleeve and the hub portions positioned within said sleeve, said two cover sections being joined together at a location disposed between said two grooves, a compressible annular sealing element disposed in each of said grooves for effecting a seal between said sleeve and each of said cover sections, and seal means between each of said cover sections and a corresponding one of said hubs.

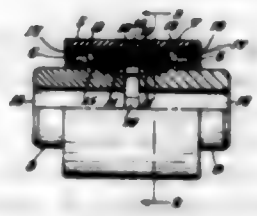
2,899,808
SHAFT COUPLER
Gregory E. Berens, Phoenix, Ariz., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Application November 13, 1956, Serial No. 621,959
7 Claims. (Cl. 64—14)

6. An anti-backlash, extensible, universal, bidirectional coupler including in combination, first and second rotatable shafts, a rotatable member secured on each shaft and having at least two spaced prongs extending substantially parallel to the axis of rotation of the shaft and rotatable thereabout, said shafts and rotatable members being positioned with said prongs in an overlapping relation longitudinally and substantially equally spaced angularly about the axis of the shafts, a plurality of spacer members positioned between said prongs to transmit



torque from one shaft to another, said prongs being extensibly movable in the direction of the axis of rotation and angularly movable in the plane of engagement with said spacer members, and resilient means surrounding said spacer members and said prongs along substantially the entire length of said spacer members in the direction of said axis of rotation and exerting a constrictive force holding said spacer members and said prongs in operative engagement.

2,899,809
FLEXIBLE COUPLING
John R. Battalino, Wethersfield, Conn.
Application December 17, 1957, Serial No. 703,364
4 Claims. (Cl. 64—15)

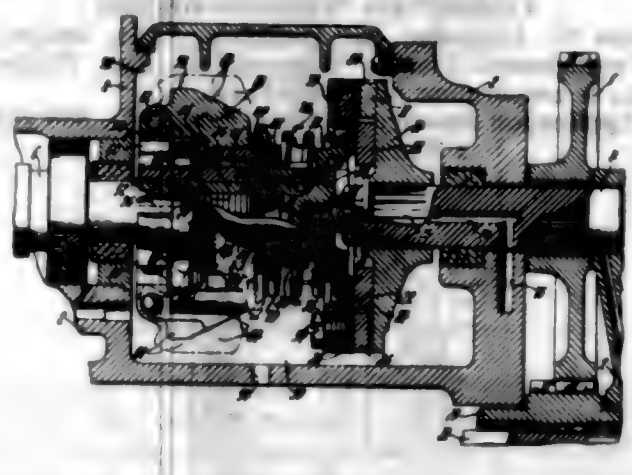


2. A flexible coupling including a tubular outer member having a plurality of slots spaced around the inner surfaces thereof, a pair of inner members each having a substantially spherical portion fitting swivelly within said outer member, the said portions of the inner members having therein a plurality of spaced notches cooperating with the slots in the outer member to form chambers between said outer and inner members, the bottoms of said notches being concave, a plurality of elongated keys comprising spring members contained within said chambers and each having a pair of enlarged outer portions disposed in the notches of the opposite inner members and an intermediate connecting portion of a lesser diameter than the said end portions, the said spring members being operative to retain the said inner members in spaced position by endwise abutment between the end portions of the spring members and the bottoms of the respective notches in the inner members, means for swivelly retaining said inner members within the outer member, and means for axially mounting said inner members upon adjacent end portions of separate shafts.

2,899,810
AUTOMATIC TIMING DEVICE
Earl R. Pierce, Bow, Wash., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application January 14, 1957, Serial No. 634,107
7 Claims. (Cl. 64—25)

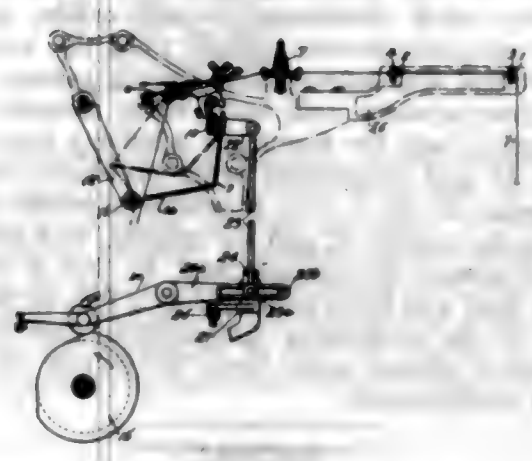
1. In a device of the character described, a drive shaft, a shaft adapted to be driven by said drive shaft, said shafts being rotatably mounted in spaced coaxial rela-

tion, and means for operatively connecting said shafts and adjusting the angular relationship between said drive and driven shafts, said means including a member having a manually adjustable driving connection with one of said shafts and having a cylindrical portion extending coaxially of said one shaft, a centrifugal weight carrier mounted on the other of said shafts and having a cylindrical portion extending coaxially of said other shaft, said cylindrical portions having axially spaced helical splines formed thereon of opposite hand, a sleeve member embracing said splined cylindrical portions and having splines



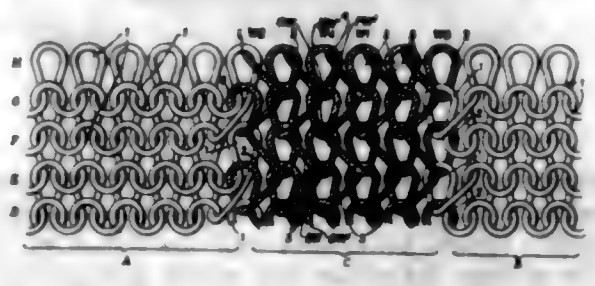
thereon slidably coacting with the splines on said cylindrical portions to adjust the angular relationship between said drive and driven shafts upon axial shifting of said sleeve member relative thereto, a speeder spring compressively interposed between said sleeve member and said first-mentioned member, said weight carrier having a plurality of outwardly extending arm portions and centrifugal weight members pivotally mounted by said arm portions for speed responsive outward movement, and means operably connecting said weight members to said sleeve member whereby said speed responsive movement of said weight members biases said sleeve member in opposition to said speeder spring.

2,899,811
STRAIGHT BAR KNITTING MACHINES
Ernest Sturt, Wilford, Nottingham, and Leonard Brown, Nottingham, England, assignors to William Cotton Limited
Application February 15, 1954, Serial No. 410,384
Claims priority, application Great Britain August 24, 1953
7 Claims. (Cl. 66—126)



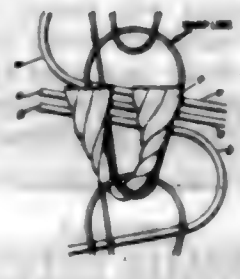
1. A method of controlling selvedging in a Cotton's patent or other straight bar knitting machine having a yarn supply, a thread carrier, sinkers, and snapping tackle, in which the lead of the thread carrier over the sinkers during the latter's advancement is variable, which method consists in drawing-off an additional length of yarn from the supply at a location between the snapping tackle and the thread carrier to a length slightly greater than said lead, and in varying the length of additional yarn in accordance with the variation of said lead.

2,899,812
KNITTED FABRICS OR ARTICLES
Walter Bruce Arnold Attenborough, Leicester, England
Application July 14, 1955, Serial No. 522,125
Claims priority, application Great Britain July 15, 1954
5 Claims. (Cl. 66—169)



1. Fabric comprising interknitted weft and warp knitted portions in coursewise adjoining relation of contrastingly coloured threads suchwise as to produce solid colour effects, loops of the said two types of knitting being incorporated in at least one and the same wale at the places where the said portions of weft and warp knitting adjoin.

2,899,813
KNITTED PILE FABRICS
Gerald E. Herrmann, Cornwall, and John L. Hubbard, Cornwall on the Hudson, N.Y., assignors to The Firth Carpet Company, Inc., New York, N.Y., a corporation of New York
Application July 25, 1957, Serial No. 674,154
2 Claims. (Cl. 66—191)



1. A knitted pile fabric comprising a plurality of parallel chain stitch warps having the stitches thereof aligned transversely in courses, laid in base wefts extending individually back and forth in successive courses, each across three adjacent chains, and U-pile tufts bound individually in the backing only by a respective bight of the stitches of the chain stitch warps and the opposed bight portion of the following stitch of the same warp engaging the bend portion of the tuft between them.

2,899,814
RINSING AGENT DISPENSER FOR CLOTHES WASHING MACHINE
William R. Baechler, Morrison, Ill., assignor to General Electric Company, a corporation of New York
Application October 24, 1957, Serial No. 692,075
3 Claims. (Cl. 68—12)

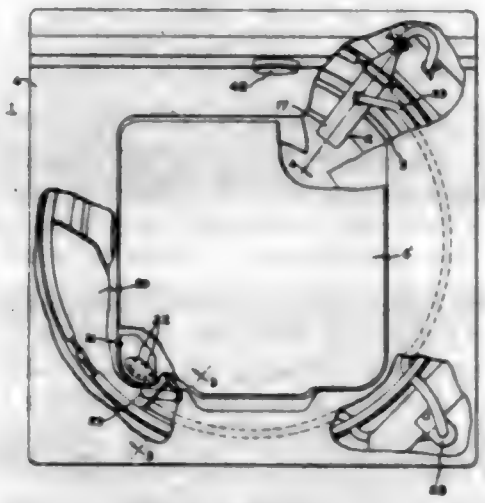
1. In a washing machine having an automatically controlled cycle including washing and rinsing operations, means adapted to contain liquid including a clothes basket, cleaning and rinsing water supply means including a conduit extending into cooperative relation with said basket to supply water thereto, a pair of valves for respectively supplying hot and cold water to said conduit, a pair of solenoids respectively controlling said valves, switch

ing air under compression as said container is filled with

assembled to said bearing sleeve for rotation relatively

able shafts, a rotatable member secured on each shaft shafts being rotatably mounted in spaced coaxial rela-

means for alternatively connecting said hot water solenoid or said cold water valve solenoid for energization, timer controlled means for moving said switch means to its hot water solenoid energizing position during the washing operation and to its cold water energizing position during the rinsing operation, a receptacle for a rinse agent positioned above the liquid level in said clothes basket, a second conduit communicating at one end with said supply conduit and at its other end with said receptacle, said one end of said second conduit being arranged in said supply conduit to divert flow of part of the water in said first conduit through said second conduit to said receptacle



upon flow through said first conduit, valve means controlling flow through said second conduit, electrical means controlling said second conduit valve means, said electrical control means being responsive to said hot water solenoid energizing position of said switch means to close said valve and being responsive to said cold water solenoid energizing position of said switch means to open said valve whereby during a rinsing operation the water flows into said receptacle and mixes with the rinse agent, said receptacle being arranged with respect to said basket and said flow into said receptacle being large enough so that the mixture of the water and rinse agent rises to a predetermined level and thereafter flows out of said receptacle down into said first mentioned means.

2,899,815

WASHING APPARATUS HAVING MEANS FOR AUTOMATICALLY ADMITTING DETERGENT THERETO

George L. Hetrick, Mansfield, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application September 30, 1957, Serial No. 687,178
6 Claims. (Cl. 68—17)

1. In washing apparatus, the combination of a tub for containing washing solution and the material to be treated,

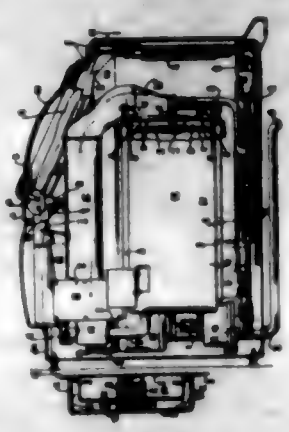
means for admitting variable quantities of water to the tub and including an adjustable member movable to a plurality of stations, an adjusting handle movable to a plurality of stations corresponding to the amount of soil in the material to be treated, means for admitting variable quantities of detergent to the tub and means conjointly actuated by said adjusting member and said handle for positioning the detergent admitting means to determine the quantity of detergent admitted to the tub.

2,899,816

COMBINED WASHER-DRYER

Jerome G. Jacobson, Jr., Mansfield, Ohio, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application January 16, 1956, Serial No. 559,251
1 Claim. (Cl. 68—20)



In apparatus for washing and drying fabrics, the combination of a casing enclosing a washing and drying chamber and a condensing compartment, means for tumbling fabrics within said chamber during washing and drying periods, said casing including an arcuate wall member separating said chamber and compartment and having a passage formed therein for the flow of water and air from the chamber to the bottom of the compartment, said compartment extending upwardly about said arcuate wall member to adjacent an upper region of the chamber, a hollow header closing the top of said condensing compartment, means for withdrawing air from the compartment during drying periods, means for heating the air and returning it to said chamber, means including an orifice within said header for admitting water at relatively high rate to the upper end of said compartment for washing operations and at a lower rate for condensing vapor in the air withdrawn from the compartment during drying periods, a baffle supported within the compartment and extending transversely thereof for intercepting water discharged by said orifice, said baffle having marginal portions spaced from the walls of the compartment and defining slots for the passage of water to the compartment, said baffle being recessed adjacent said arcuate wall for forming a relatively large opening portion of said condensing water gravitates toward the for passage of air, a dam extending upwardly from the baffle at the margin of said air opening, said baffle being inclined toward the arcuate wall so that a substantial arcuate wall and flows thereover as a film to the bottom region of the condensing compartment and means for discharging vitiated water from the bottom of the condensing compartment.

2,899,817

VARIABLE LIQUID LEVEL CONTROL

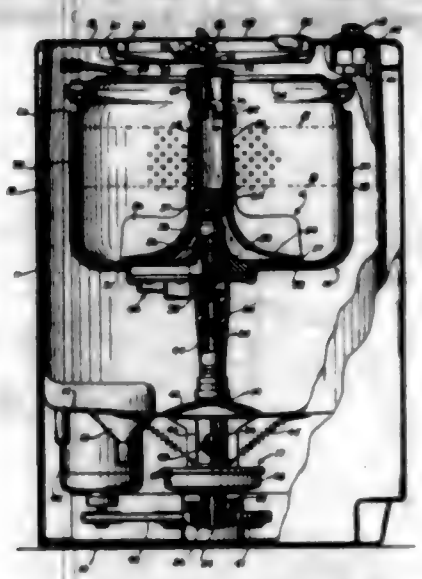
Thomas R. Smith, Newton, Iowa, assignor to The Maytag Company, Newton, Iowa, a corporation of Delaware

Application August 13, 1953, Serial No. 373,957
3 Claims. (Cl. 68—133)

1. In a washing machine having a liquid receiving container, an agitator having a hollow center post for hold-

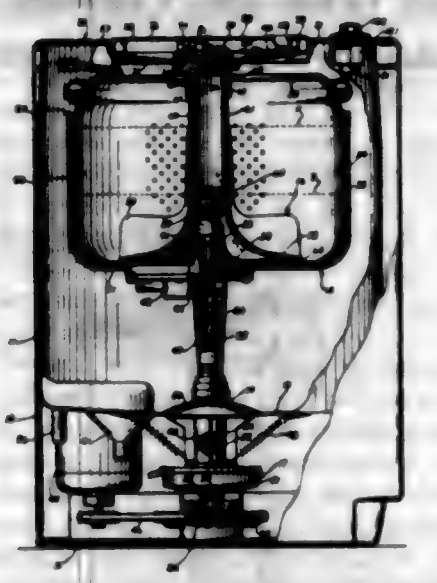
exterior side of said layer of insulating slabs, said insulat- shaft and a transverse dynamic stabilizing shaft fixed to

ing air under compression as said container is filled with liquid, a movable control member adjacent said agitator, said center post including a pressure responsive diaphragm movable toward said control member to actuate said control member when air is compressed within said



hollow center post, means for biasing said diaphragm away from said control member, and manually operable means controlling the degree of bias exerted by said last named means to increase the amount of air pressure necessary to move said diaphragm towards said control member.

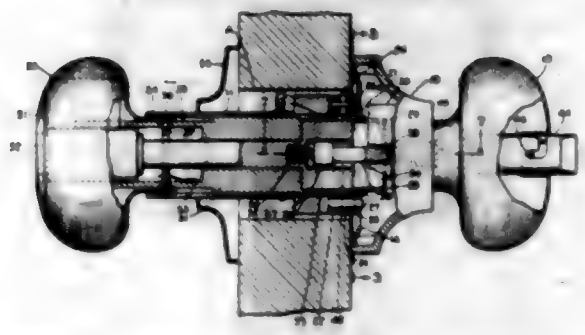
2,899,818
VARIABLE LIQUID LEVEL CONTROL
Thomas R. Smith and William F. Scott, Newton, Iowa, assignors to The Maytag Company, Newton, Iowa, a corporation of Delaware
Application August 13, 1953, Serial No. 374,024
6 Claims. (Cl. 68—207)



3. In a washing machine having a liquid receiving container, an agitator having a hollow center post for holding air under compression as said container is filled with liquid, a control member, a pressure responsive diaphragm on said center post controlling movement of said control member, and presettable means biasing said control member toward said diaphragm to vary the amount of the air pressure necessary to move said control member.

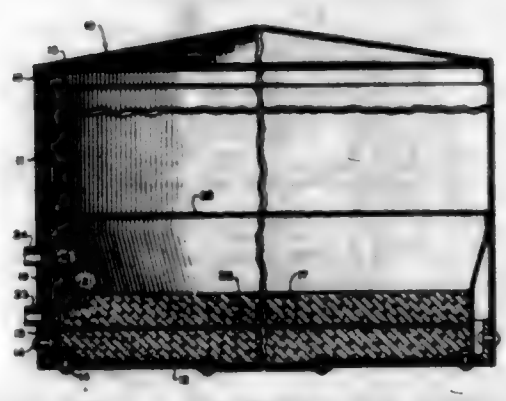
2,899,819
TUBULAR LOCK
Henry D. Rolph, Duesseldorf, Germany, assignor to The Yale & Towne Manufacturing Company, Stamford, Conn., a corporation of Connecticut
Application March 11, 1955, Serial No. 493,675
15 Claims. (Cl. 70—146)

1. In a lock of the class described, a lock case having a bolt, a bearing sleeve, an outside knob and knob spindle assembled to said bearing sleeve for rotation relatively thereto, a mounting portion for the bearing sleeve on one side of the lock case, coacting means on said mounting portion and bearing sleeve through which the sleeve and spindle are held in aligned relation to the lock



case when the sleeve is in assembled position relatively to the mounting portion of the case, a bolt retracting cam on the lock case, and releasable detents acting between the bearing sleeve and mounting portion to lock the bearing sleeve in assembled relation to the lock case with the spindle in position to retract the bolt through said cam.

2,899,820
PRESTRESSED JOINT BETWEEN BOTTOMS AND SHELLS OF LARGE TANKS
John F. Hendrick, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Application September 13, 1954 Serial No. 455,428
5 Claims. (Cl. 72—13)



4. A metal tank having an upright expansible cylindrical metal wall; a rigid concrete bottom within said tank extending to within a short distance from said wall forming a narrow annular space between the lower inside surface of the tank wall and the outer peripheral wall of the said bottom; a separate rigid solid annulus of cast cement material under compression in said space and filling said annular space, thus holding said metal wall adjacent said annulus in expanded condition so that when said tank is filled with liquid said metal wall retains tight contact with said annulus.

2,899,821
VENTILATED FACADE INSULATION
Sven Hilding Nycander, Bromma, Sweden, assignor to Internationella Siporex AB, Stockholm, Sweden, a corporation of Sweden
Application July 8, 1955, Serial No. 520,887
Claims priority, application Sweden July 15, 1954
1 Claim. (Cl. 72—18)

A novel wall construction of a building, the combination which includes an inner sustaining wall, a layer of insulating slabs adhesively bonded to the exterior face of said sustaining wall, one entire face of each insulating slab being bonded to a portion of the external surface of said sustaining wall by adhesive mortar, a substantially moisture-impermeable continuous coating adhering to the

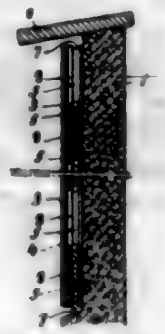
2,899,825
FLUID QUANTITY MEASURING APPARATUS

ing means in accordance with the movement of said tilt

1. In washing apparatus, the combination of a tub for containing washing solution and the material to be treated,

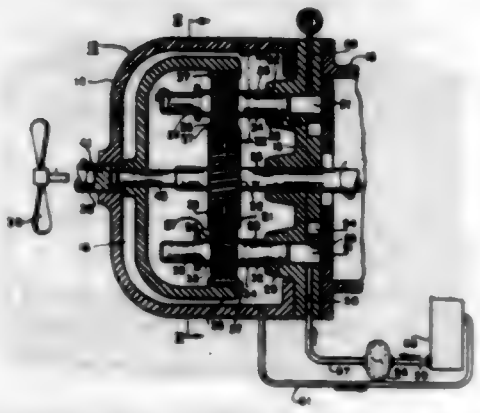
1. In a washing machine having a liquid receiving container, an agitator having a hollow center post for hold-

exterior side of said layer of insulating slabs, said insulating slabs being arranged in adjacent edge-to-edge relationship, each of said insulating slabs having a continuous channel connecting together the four remaining sides of said insulating slab, said channel being isolated from the aforementioned front and back faces of said insulating



slabs, said channels in adjacent slabs thus forming a concealed network of unobstructed intercommunicating ventilating channels extending throughout said layer of insulating slabs, and said network of unobstructed intercommunicating ventilating channels opening into the outer air at the upper and lower margins of said insulating layer.

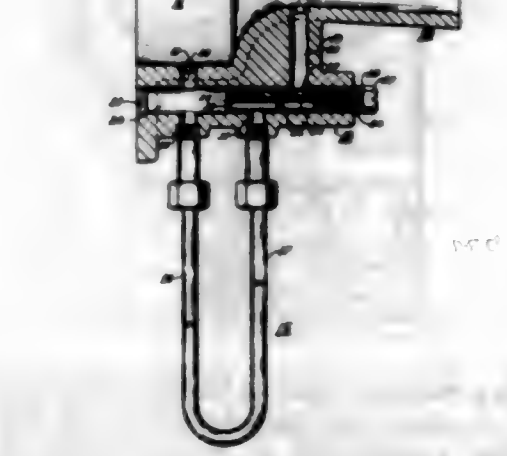
2,899,822
TURBINE APPARATUS
Jennie Matthews, Kansas City, Mo., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application August 8, 1957, Serial No. 677,824
7 Claims. (Cl. 73—136)



1. In a gear system, a first helical gear, a plurality of helical pinion gears spaced around said first gear and meshed therewith, said pinion gears being mounted on axially movable layshafts, bearings for said layshafts, a second helical gear meshed with said pinion gears, means for driving one of said first and second gears, said first gear and said pinion gears meshing along a first pitch circle of the pinion gears, said pinion gears meshing with said second gear along a second pitch circle of said pinion gears, said first pitch circle being of different diameter than said second pitch circle, said difference in pitch circle diameters being effective to induce net axial thrusts upon said pinion gears which cause said pinion gears to move axially, and means for opposing the net axial thrust of said pinion gears.

2,899,823
AIR MILES AND AIR SPEED MEASURING SYSTEM
James S. Parsent, Ottawa, Ontario, Canada, assignor to Computing Devices of Canada Limited, Ottawa, Ontario, Canada
Application January 10, 1955, Serial No. 480,944
Claims priority, application Canada February 24, 1954
8 Claims. (Cl. 73—181)

1. A device for measuring velocity of fluid flow comprising a cross-shaped sensing vane including a finned shaft and a transverse dynamic stabilizing shaft fixed to each other at their mid-length positions and at right angles to a mast, a spinner rotatable about an axis, means supporting the mast and vane freely rotatable in the spinner about a mast axis at right angles to the spinner axis, a motor, means to drive said spinner by the motor, a motor control circuit, means actuated by the mast and



operative in the motor control circuit to regulate the rotational speed of the spinner, a vane-angle sensing device operated by the mast, means for measuring the rotational speed of the spinner, means to compute the product of the said rotational speed and the cotangent of the vane angle, and means to indicate the product as velocity of flow in a direction parallel to the spinner axis.

2,899,824
DIFFERENTIAL PRESSURE ADJUSTER FOR FLUID FLOW METER
Samuel L. Adelson, Tucson, Ariz., assignor to Inflico Incorporated, Tucson, Ariz., a corporation of Delaware
Application May 3, 1954, Serial No. 427,175
6 Claims. (Cl. 73—213)

1. In combination with a venturi tube, a differential adjuster for reducing the sensed pressure difference obtained from said venturi tube so that it corresponds to the true square of the rate of flow, comprising a body affixed to said tube and having a bore forming a conduit, high and low pressure connections to said conduit through unrestricted ports from high and low pressure points of said venturi, said conduit being provided with two orifices, means for adjusting the effective area of one of said orifices, and outlet ports from said conduit adapted for transmitting the reduced differential pressure obtained across said variable area orifice to a differential pressure sensitive device.

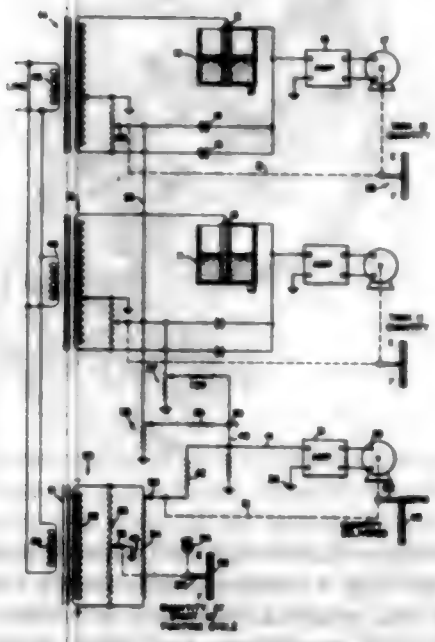
of symmetry of said first shell, means suspending said first

cooperate with a selected one of said cams to rotate the

a bolt, a bearing sleeve, an outside knob and knob spindle

moisture-impermeable continuous coating adhering to the

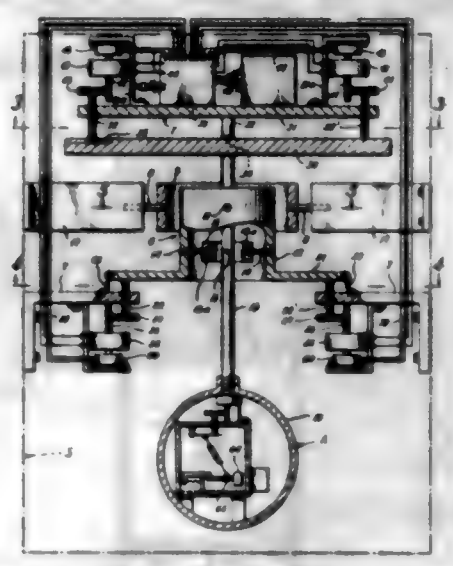
2,899,825
FLUID QUANTITY MEASURING APPARATUS
Foster L. Adams, Pomona, Calif., and Robert E. Pidcock, Minneapolis, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application October 4, 1954, Serial No. 460,134
6 Claims. (Cl. 73—304)



1. Fluid quantity measuring apparatus for use with fluid storage means comprising; electrical means for deriving a signal voltage of a first sense indicative of the fluid quantity in the fluid storage means; a source of voltage, a first and a second potentiometer each having a movable tap, means connecting said first and second potentiometers in parallel to said source of voltage; voltage responsive means; means connecting said voltage responsive means to said electrical means to apply a signal voltage of a first sense thereto, means connecting said voltage responsive means to said taps of said first and second potentiometers in a manner to apply a signal voltage thereto of a second sense opposite to said first sense; manually operable means connected to the tap of said first potentiometer to control the position thereof; drive means connected to said voltage responsive means to be controlled thereby, rebalance means connecting said drive means to the tap of said second potentiometer to control the position thereof, and a scale bearing indicia of quantity of fluid delivered associated with said drive means so that operation of said manually operable means causes said drive means to indicate a predetermined reading and subsequent change of fluid quantity will be indicated on said scale as said signal voltage of said first sense changes in magnitude with the quantity of fluid in the storage means and said drive means positions the tap of said second potentiometer to change the magnitude of said signal voltage of said second sense.

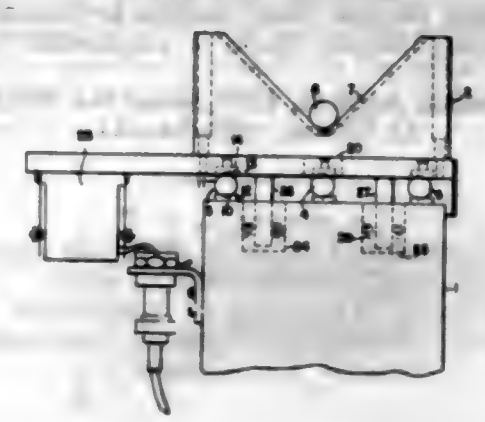
2,899,826
LEVELING MEANS FOR GRAVITY METERS OR THE LIKE
Lucien J. B. La Coste, Austin, Tex., assignor to La Coste & Romberg, Austin, Tex., a partnership
Application January 25, 1956, Serial No. 561,236
16 Claims. (Cl. 73—382)

1. An apparatus for damping out oscillations of a body hanging from a point of suspension which permits free swinging of the body in any direction, comprising tilt responsive means having an operative connection with said body and movable in accordance with the oscillations of said body, means for shifting the point of suspension of said body, and means for actuating said shifting means in accordance with the movement of said tilt responsive means, said shifting being out of phase with



the oscillations of said body and in a direction to damp out said oscillations without introducing friction at the point of suspension.

2,899,827
THREE BALL MOUNT
Karl F. Frank, Garden City, N.Y., assignor to Micro Balancing, Inc., Garden City Park, N.Y.
Application September 8, 1958, Serial No. 759,618
3 Claims. (Cl. 73—475)

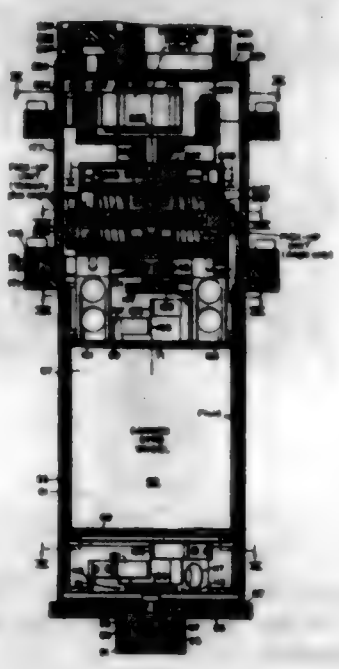


1. Mounting means for rotor balancing machines comprising a lower mounting means having three curved indentations on its top surface, at least one in a different vertical plane than said other two indentations, a ball in each of said indentations, an upper mounting means having three curved indentations on its bottom surface corresponding to each of said indentations in said lower mounting means, said upper mounting means resting on said balls, a slot in said upper mounting means, a post mounted in said lower mounting means and extending through said slot, and a ball bearing on said post contacting the inner surface of said slot, whereby the motion of said upper mounting means is constrained to the plane of said slot.

2,899,828
STABILIZING APPARATUS
Lawrence B. Lynn, Wilkinsburg, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application October 18, 1955, Serial No. 541,279
13 Claims. (Cl. 74—5.5)

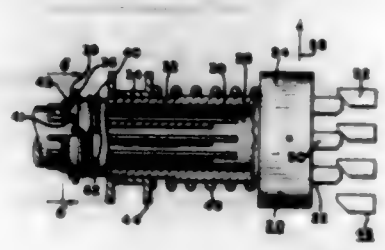
1. A gyroscopic unit comprising a gyro wheel, means restraining said wheel to precess about a single precession axis, a first shell having an axis of symmetry, a second shell having an axis of symmetry, resilient means suspending said wheel and said restraining means from said first shell with said precession axis coaxial with said axis

of symmetry of said first shell, means suspending said first shell from said second shell with said axis of symmetry



of said first shell coaxial with said axis of symmetry of said second shell, and fluid means interposed between said first shell and said second shell.

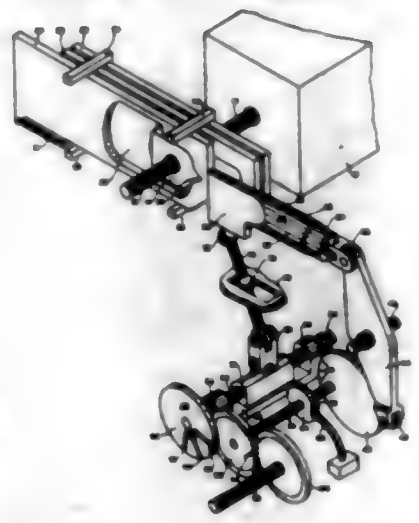
2,899,829
ENGINE STARTER
John H. Smith, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application April 12, 1957, Serial No. 652,556
12 Claims. (Cl. 74—6)



1. An engine starting apparatus comprising: a motor, a shaft rotated by the motor, a pinion gear movable into mesh with a gear of the engine to be started, said pinion gear and said engine gear having reverse chamfers, means for transmitting rotation between said shaft and pinion gear in one direction of rotation only, means for bodily moving said pinion and rotation transmitting means axially on said shaft, and means comprising a backlash connection between said motion transmitting means and said shaft for permitting limited rotative movement between the rotation transmitting means and the shaft in a direction opposite to said one direction of rotation when the pinion gear is prevented from meshing with the gear of the engine to be started.

2,899,830
SHAFT POSITIONING DEVICE
Harry J. Leiming, Springfield, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application June 26, 1952, Serial No. 295,637
3 Claims. (Cl. 74—10.29)

1. In a shaft positioning device, in combination, a first shaft journaled for rotation, a plurality of cams secured to said first shaft to rotate therewith, a plurality of cam actuating members, each of said actuating members being adapted to move through a predetermined path and to cooperate with a selected one of said cams to rotate the shaft to a predetermined position, a plunger mounted for a first movement to a position adjacent a selected one of said actuating members and for a second movement to move the selected actuating member through its predemined path, and means operative for moving said plunger



in sequence through the first and second movements, said means comprising a second shaft, means operative upon rotation of said second shaft for actuating the plunger through its first movement and other means operative upon further rotation of the second shaft for actuating the plunger through its second movement.

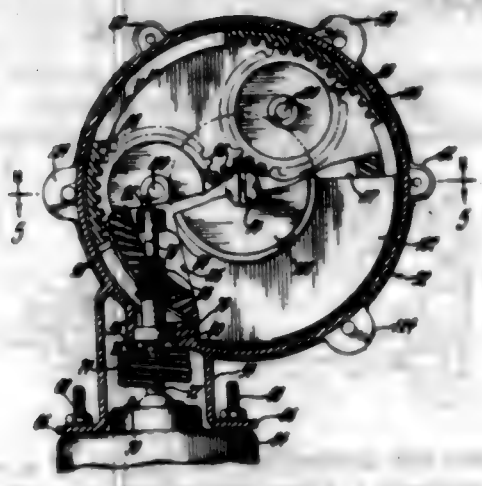
2,899,831
MACHINE MECHANISM
Frank J. Haverland, Chicago, Ill.
Application April 12, 1957, Serial No. 652,630
2 Claims. (Cl. 74—63)

1. A machine mechanism comprising a hollow fixed casing having closed ends, a rotatable drive shaft having a portion adjacent one end thereof extending through one end of said casing, a rotatable driven shaft having a portion adjacent one end thereof extending through the other end of said casing, means connecting said portion of said drive shaft to said portion of said driven shaft so that for each partial or complete revolution of said drive shaft said driven shaft will travel a fractional part of said partial or complete revolution first at a slower rate and then at a faster rate than said drive shaft and for the remainder part of said partial or complete revolution will travel at the same rate as said drive shaft, said means comprising a cam track positioned within said casing eccentrically with respect to said driven shaft, an arm arranged perpendicularly with respect to said one end of said driven shaft, an eccentric connecting said arm to said one end of said driven shaft, a cam member in engagement with said cam track and connected to said drive shaft end portion for orbital camming movement along said cam track responsive to rotary movement of said drive shaft, and means connecting said cam member to said arm and operable to shift said arm relative to said drive shaft responsive to camming movement of said cam member.

ated member mounted for combined pivotal and longitudinal slidable movement on said rod and swingable into

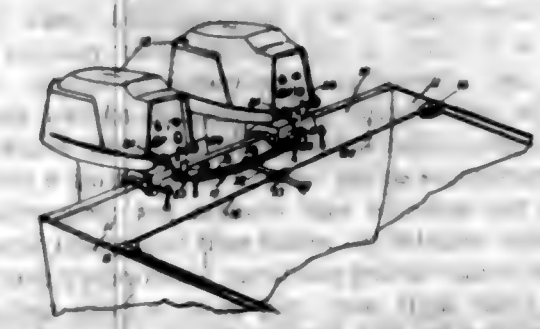
2,899,837
MECHANISM CONTROL

2,899,832
WINDOW REGULATOR DRIVE MECHANISM
Berthold F. Meyer, St. Clair Beach, Ontario, Canada, assignor to General Motors Corporation, Detroit Mich., a corporation of Delaware
Application December 17, 1956, Serial No. 628,849
4 Claims. (Cl. 74—413)



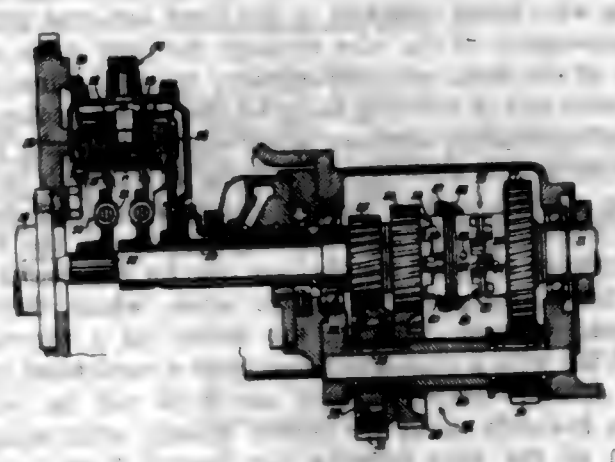
3. A window regulator drive mechanism comprising, a support, a shaft having one end thereof rotatably mounted on said support and defining an axis of rotation, an input gear rotatably mounted on said shaft adjacent said one end thereof, a worm wheel secured to said input gear and extending radially outwardly therefrom, means for driving said worm wheel to thereby drive said input gear, an output ring gear encircling said worm wheel in radially spaced relationship thereto, said ring gear including a hub portion fixed to said shaft adjacent the other end thereof and a web portion lying in a plane containing said driving means, means rotatably mounting said hub portion on said support to rotatably mount said ring gear and the other end of said shaft thereon, a plurality of pinion gears rotatably mounted on said support and disposed within the radial space between said input and ring gears in meshing relationship therewith for driving said ring gear upon rotation of said input gear, and means limiting the movement of said ring gear with respect to said driving means to prevent engagement of said web portion with said driving means.

2,899,833
DUAL OUTBOARD MOTOR STEERING RIG
William A. Prier, Sherwood, Oreg.
Application September 3, 1957, Serial No. 681,543
4 Claims. (Cl. 74—471)



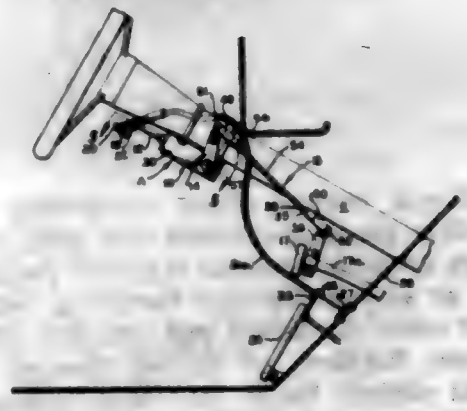
1. A steering rig for a pair of outboard motors mounted side-by-side in operative position on a boat comprising a pair of members adapted to be secured respectively to the motors, a rigid link of adjustable length extending transversely between said members, universal joint means respectively connecting the ends of said link to said members, a steering rod rigid with said link and projecting from said link intermediate the length of said link and transversely with respect to said link, a sleeve slidably and rotatively mounted on said steering rod, and means on said sleeve to attach helm ropes thereto.

2,899,834
HYDRAULIC CONTROLS FOR TRANSMISSION
John R. Polomski, Detroit, Mich., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application September 13, 1954, Serial No. 455,513
7 Claims. (Cl. 74—472)



1. In transmission mechanism for an automotive vehicle having an accelerator, the combination of a drive shaft, a driven shaft, means providing a plurality of different speed ratio power trains between said shafts, fluid pressure responsive means for changing from one of said power trains to another of said power trains, a pump driven by one of said shafts and connected to said fluid pressure responsive means for applying pressure thereto that varies with the speed of said last-named shaft, and a valve connected to and under the control of said accelerator for providing a variable sized fluid pressure relief for said pump and thereby modifying the pressure from said pump applied to said fluid pressure responsive means according to accelerator position.

2,899,835
HAND CONTROL FOR AUTOMOBILE BRAKE AND ACCELERATOR PEDALS
Ethelbert H. Moreland, San Jose, Calif.
Application November 5, 1957, Serial No. 694,579
3 Claims. (Cl. 74—481)

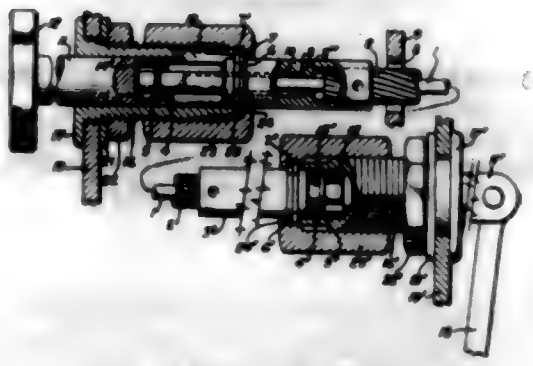


1. A one-hand control mechanism for the brake and accelerator pedals of an automobile, and comprising a gear housing adapted to be fixedly mounted on the steering post of an automobile, gearing mounted in said housing, a control lever operatively connected to said gearing, a transversely extending arm on said lever and positioned for free swinging movement beneath the steering wheel, and within easy reach of one hand of an operator of such automobile, means operatively connected to the gearing and adapted to be connected to the brake pedal of such automobile, whereby an upward swinging movement of the control lever will depress such brake pedal, a frame element mounted on the control lever, a track rod parallel to said frame element and spaced therefrom, a hand actu-

brake-setting position against the urging of said further second stud for axial displacement of said handle, resilient

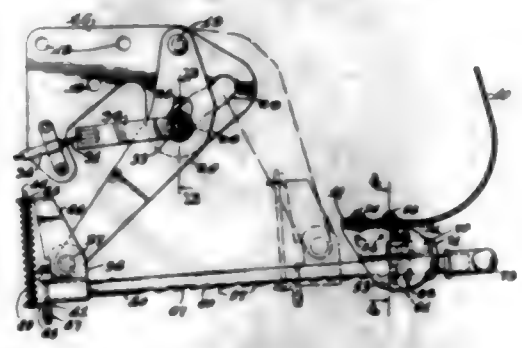
ated member mounted for combined pivotal and longitudinal slidable movement on said rod and swingable into frictional engagement with said frame element, a flexible tube, non-compressible lengthwise and with its upper end secured relative to the frame element, the lower end of said tube being adapted to be connected to an accelerator pedal, a wire threaded through said tube, the upper end of the wire being attached to the hand actuated member for movement of the wire through the tube upon movement of the hand actuated member along the track rod, the lower end of the wire being adapted to be anchored to a fixed automobile element below such accelerator pedal, the wire and its enclosing tube being of a length to have a free, curved portion therein when the control mechanism is mounted on an automobile, whereby, the frame and its hand actuated member are free for movement with the transversely extending arm upon which they are mounted without changing the setting of a throttle to which the wire is connected, and upon a movement of the hand actuated member along the track rod the wire is drawn inwardly along the frame, thereby shortening the length of the wire between the control lever and the anchor member to straighten the free, curved portion of the tube and depress such accelerator pedal, the swinging of the hand actuated member into frictional engagement with the frame element tending to retain the hand actuated member and the accelerator pedal in adjusted position.

2,899,836
PUSH-PULL CABLE APPARATUS
Clifford E. Cushman, Burbank, and Robert J. Wrighton, Tarzana, Calif., assignors, by mesne assignments, to Pacific Scientific Aeroproducts, Glendale, Calif., a corporation of California
Application February 16, 1955, Serial No. 488,564
6 Claims. (Cl. 74—502)



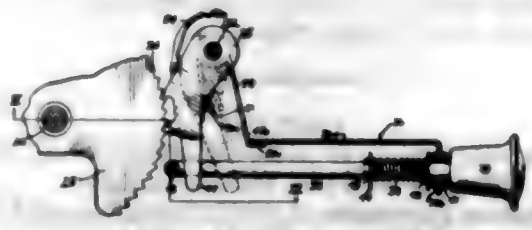
1. A push-pull control device comprising a flexible cable, a flexible sheath enveloping said cable, a terminal collar slightly larger in diameter than said sheath secured to the end of said sheath and having an annular slot therein, said cable, its sheath and attached collar being capable, when installed, of passing through bulkhead openings but slightly larger than said terminal collar, thereby facilitating the installation thereof, a removable C-shaped washer for engaging in said slot, a ferrule secured to the end of said cable, a sleeve member, a control member surrounded over part of its length by, and slidable within, said sleeve member, said control member having a transverse opening therein, a lock nut for engaging said C-shaped washer and adapted to be threaded upon said sleeve member for detachably coupling said sheath terminal collar to said sleeve member, and means provided on said ferrule and projecting into said control member opening for detachably coupling the control member to said ferrule, whereby the cable can be moved longitudinally relatively to its sheath in response to sliding movement of the control member in the sleeve member.

2,899,837
MECHANISM CONTROL
Willard C. Shureen, Toledo, Ohio, assignor, by mesne assignments, to The Bingham-Herbrand Corporation, a corporation of Ohio
Original application October 19, 1949, Serial No. 122,175, now Patent No. 2,716,902, dated September 6, 1955. Divided and this application March 31, 1955, Serial No. 498,369
1 Claim. (Cl. 74—518)



Mechanism for controlling the brakes of a vehicle including a support; a lever fulcrumed upon the support; means including a clevis connecting the lever with the vehicle brake mechanism; a cam slot formed in the support; a slot formed in the lever; a roller carried by said clevis and adapted for traverse in said slots, said slots being shaped whereby movement of the lever about its fulcrum toward brake-setting position variably increases the force applied to the clevis means connecting the lever with the braking mechanism; and means connected with the lever for actuating the same to brake setting positions and retaining the lever in said positions.

2,899,838
DELAYED ACTION BRAKE RELEASE
Theodore H. Johnstone, Detroit, Mich., assignor, by mesne assignments, to The Bingham-Herbrand Corporation, a corporation of Ohio
Application August 30, 1954, Serial No. 452,978
10 Claims. (Cl. 74—540)



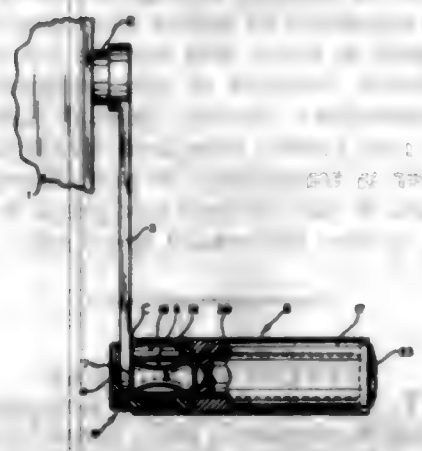
1. In combination in a foot-operated brake lever assembly, a bracket, a foot pedal lever pivoted to said bracket and depending therefrom, a ratchet member pivoted to said bracket and connected to said foot pedal lever for pivotal movement relative to the bracket upon pivotal movement of the lever, a pawl having a pivot shaft securing the same to said bracket for cooperation with said ratchet member to retain said foot pedal lever in incremental brake-setting positions, a secondary arm pivoted on said pivot shaft with said pawl, a wire spring operatively carried by said bracket for urging said pawl into ratcheting relation to said ratchet member, a manual release rod reciprocally mounted on said bracket for movement from a normal to an actuated position and engageable with said secondary arm to pivot the same from a normal to an actuated position, said secondary arm being engageable with said wire spring to release the tension thereof on said pawl by movement to actuated position, and further spring means for urging said pawl out of engagement with said ratchet member, the normal force of the brakes on said retaining mechanism in a brake-setting position being operative to maintain said pawl in

2,899,843

gears tending to turn the latter about said first axis as a

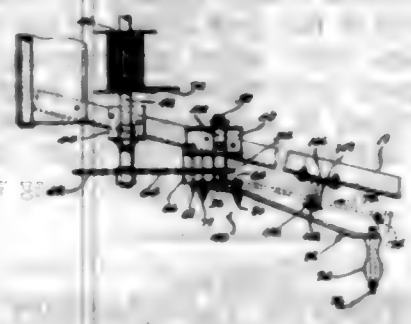
brake-setting position against the urging of said further spring means until a brake-setting pressure is applied to said foot lever.

2,899,839
APPARATUS FOR EXTENDING THE LENGTH OF A MEASURING TAPE WINDING CRANK HANDLE
Charles Zelnick, Saginaw, Mich., assignor to Lufkin Rule Company, Saginaw, Mich.
Application July 25, 1956, Serial No. 600,832
8 Claims. (Cl. 74—545)



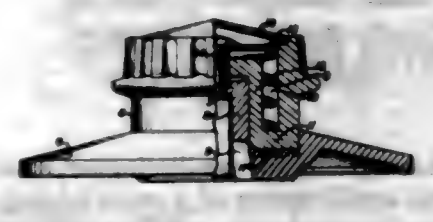
1. Apparatus for extending the length of a tape drum winding crank handle, said apparatus comprising a body member slotted for reception of the handle and a portion of the crank, said body member having an opening therein towards which the handle faces when the latter is received within said slot; a tubular member having a bore at one end of a dimension to accommodate said body; a fastening element for insertion within said tubular member and having one of its ends open for accommodation of the crank handle; and means on said fastening element for securing said members in assembled relation.

2,899,840
SAFETY WINCH CRANK
Earal M. Reeser, Pecatonica, Ill., assignor to J. I. Case Company, Racine, Wis., a corporation
Application September 26, 1958, Serial No. 763,694
6 Claims. (Cl. 74—545)



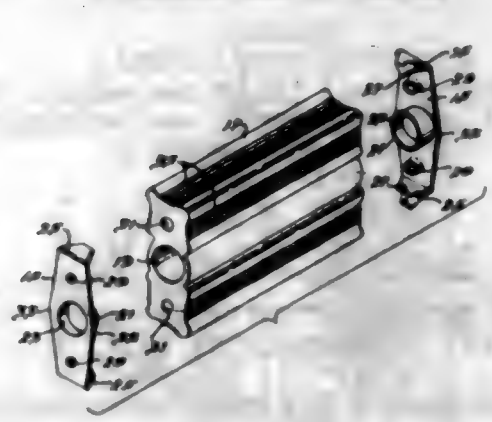
1. A safety winch crank, for an elevator having a frame, a shaft and a disk fixed normal to said shaft and having a front face, a means for manually rotating said shaft comprising a handle diametrically positioned across said face, said handle being provided with a cylindrical extremity the axis thereof being parallel to said face and normal to said handle, said extremity being provided with a central notch longitudinally of said handle and normal to said face, and an elongated aperture in said handle spaced longitudinally from said notch, a first and second stud fixed to said disk and extending normal to said face, said first stud being embraced by said notch, and means to prevent displacement of said handle axially of said first stud, said elongated aperture embracing said second stud for axial displacement of said handle, resilient means on said second stud urging said handle into contact with said face, and a stop member on said frame in the rotative path of said handle when the latter is in contact with said face.

2,899,841
CONTROL KNOBS
Harold J. Molloy, Knoxville, Tenn., assignor to The Patent Button Company of Tennessee, Inc., Knoxville, Tenn., a corporation of Tennessee
Application November 1, 1955, Serial No. 544,222
3 Claims. (Cl. 74—548)



A control knob comprising a center post adapted to be connected with an appliance control member, a dial plate connected with the inner end of the center post and extending laterally therefrom, a knob member journaled on the center post for rotary and axial movement relative thereto, said knob member comprising an outer body portion and an inner wall spaced therefrom with a closed bottom joining said body portion and inner wall together, a washer extending over the outer end of the center post and inner wall of the control knob and over the space between said inner wall and outer body portion of said knob, a fastening connecting said washer with the center post, a coiled spring surrounding the inner wall and interposed between the washer and the closed bottom normally tending to urge the control knob downward on the center post, and one-way engaging clutch means between the inner end face of the knob member and the dial plate.

2,899,842
BICYCLE PEDAL
Raymond M. Krekos and Michael Nichols, Jr., Detroit, Mich., assignors to Evans Products Company, Plymouth, Mich., a corporation of Delaware
Application March 9, 1956, Serial No. 570,485
9 Claims. (Cl. 74—594.4)

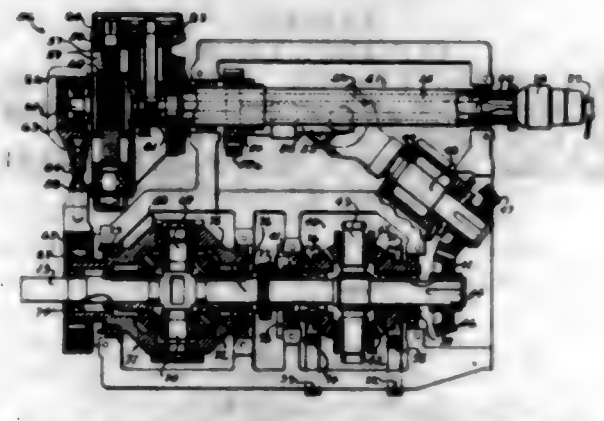


1. A three piece pedal consisting of a pedal body having an opening extending therethrough, a pair of opposite end plates clamped to said body, the end plates having openings aligned with said through opening in the body and the edges of the plate openings serving as bearing surfaces for rotatably mounting the pedal on a member adapted to extend through said through opening, said bearing surfaces providing the means for rotatably supporting said pedal on the member.

fixed rotary and axial relationship, said compound carrier

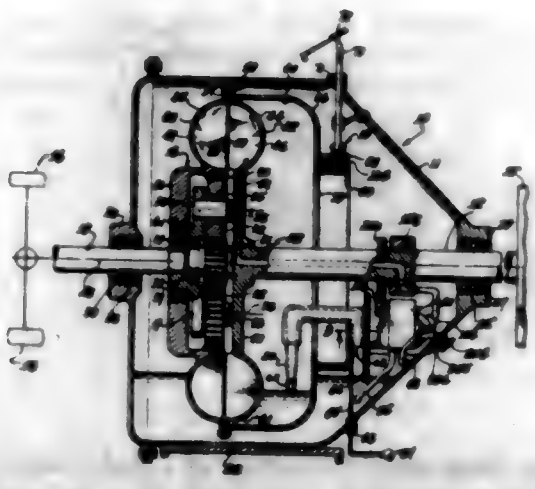
pressure engagement with the inner face of said belt and

2,899,843
DRIVE MECHANISM FOR FLYING SHEARS AND THE LIKE
Elmer W. Nilsson, Youngstown, Ohio
Application February 9, 1956, Serial No. 564,438
27 Claims. (Cl. 74—681)



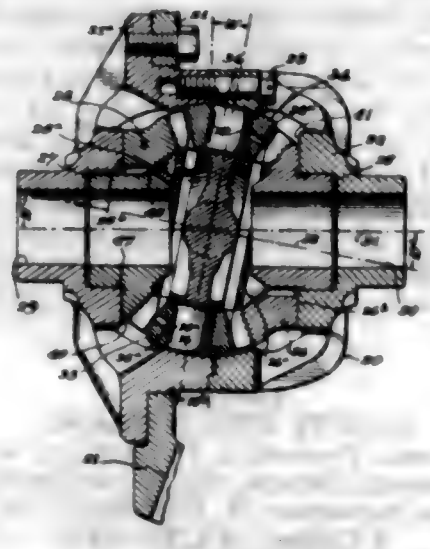
1. In a drive system for oscillating or rotating devices or the like; the combination of a main driving means and a variable speed transmission, a differential gear assembly having a pair of independently rotatable gears and a differential element engaged by each of said rotatable gears and rotatable at a speed which is a function of the relative speeds of said independently rotatable gears, said means driving one of said independent gears and said variable speed transmission driving the other, said differential element keyed to a first shaft, a second shaft disposed in angled relation to said first shaft, means for drivingly connecting said first and second shafts, a third shaft disposed in generally parallel relation to said first shaft, means interconnecting said second and third shafts whereby said third shaft is caused to have a non-uniform motion relative to the motion of said first shaft, an output shaft driven primarily by said first shaft, and means for superimposing the motion of said third shaft on the motion of said output shaft whereby said output shaft is caused to rotate at an angular velocity which is a function of the resultant of said first and third shaft angular velocities.

2,899,844
ROTARY TRANSMISSIONS
Mark Hattna, Pasadena, Calif., assignor of one-fourth to William P. Green, Los Angeles, Calif.
Application April 1, 1957, Serial No. 649,697
12 Claims. (Cl. 74—686)



1. A transmission comprising a first gear adapted to be rotatably driven about an axis, a second gear mounted to turn about said axis, a planet gear meshing with both of said first two gears and adapted to rotate about an axis which revolves about said first axis, a power output member adapted to be rotatably driven about said first axis by the revolving movement of said planet gear, and a fluid drive connection between said first and second gears tending to turn the latter about said first axis as a result of rotation of the former thereabout, said fluid connection including a pump section connected to said first gear for rotation therewith and a turbine section connected to said second gear for rotation therewith, said two sections being located opposite one another in proximate closely coupled relation and in contact with a common body of liquid so that rotation of the pump section tends to correspondingly rotate said turbine section, and a multiple setting liquid regulating control operable to regulate the amount of liquid in said sections and adapted to be adjusted to, and remain for a substantial period in, any of a series of different settings including a maximum fill setting, a minimum fill setting and a plurality of intermediate settings in which said sections are only partially filled with liquid, whereby in said maximum fill setting power is transmitted directly through said fluid connection at a 1 to 1 speed ratio, and in said partially filled settings power is transmitted in part through said fluid connection and in part through said gears, in controllable proportions, to vary the overall speed ratio of the transmission.

2,899,845
DIFFERENTIAL GEAR
Andor T. Nogrady, Sr., Port Washington, Wis.
Application September 9, 1957, Serial No. 682,834
12 Claims. (Cl. 74—711)



1. In a positive drive differential: a housing; a pair of bevel gears mounted in said housing for rotation about an axis, the axis of the pitch circles of the bevel gears describing conical orbits about said rotational axis; and bevel pinion gears interconnecting said bevel gears and mounted to oscillate in said housing in accordance with movement of said bevel gears, the tooth ratio of said bevel gears to said bevel pinion gears being two to one.

2,899,846
AUTOMATIC TRANSMISSION
Robert M. Tuck, Indianapolis, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application August 20, 1954, Serial No. 451,146
13 Claims. (Cl. 74—759)

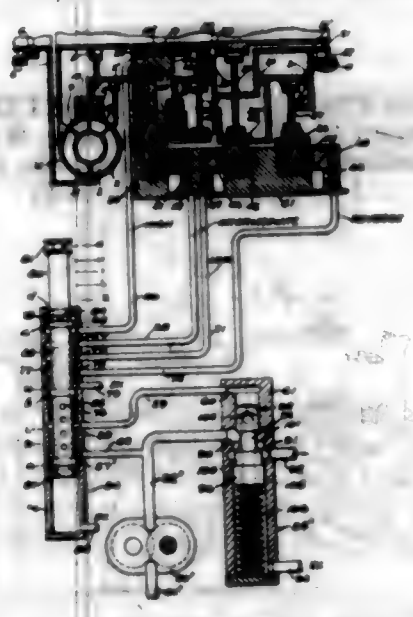
1. In a multiple ratio transmission, an input shaft, an output shaft, an intermediate ratio planetary gear set, a low ratio planetary gear set, each of said planetary gear sets having a sun gear member, planet gears on a carrier member and a ring gear member, said input shaft being connected to one of said members of said intermediate and low planetary gear sets, said output shaft being connected to a second member of said low planetary gear set, a compound carrier connected to a second member of said intermediate gear set and a third member of said low planetary gear set and holding said carrier connected members in a

2,899,850
GEARING AND ELECTRIC DRILLS EMBODYING

of the plate through the hole formed in the plate by the

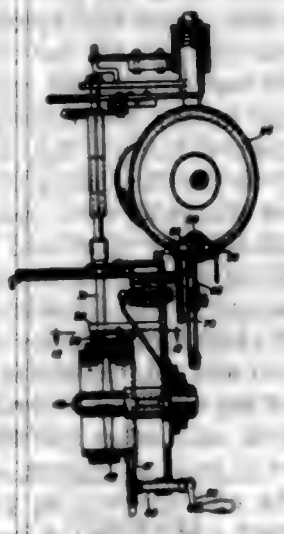
said first stud, said elongated aperture embracing said supporting said pedal on the member.

fixed rotary and axial relationship, said compound carrier and connected members being mounted for rotary and self-centering movement entirely on the gears on the carrier and gears in mesh therewith, and thrust bearing means on one of said shaft axially locating said compound carrier



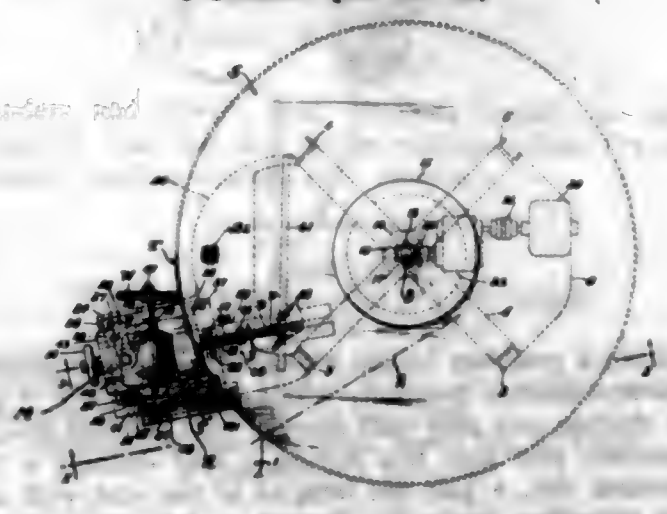
against movement in both directions, means to lock two members of said intermediate planetary gear set together for direct drive, means to stop the third member of said intermediate planetary gear set for intermediate ratio, and means to stop said compound carrier for low ratio.

2,899,847
MACHINE FOR SHARPENING HANDSAWS
Byron G. Daggett, San Diego, Calif.
Application December 21, 1956, Serial No. 629,887
5 Claims. (Cl. 76—43)



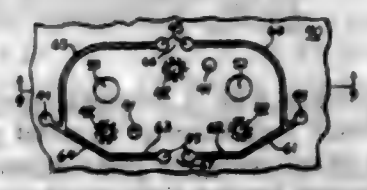
3. In an apparatus for sharpening the set teeth of a saw, a frame, cam wheel rotatably supported by the frame and having a belt groove, a motor driven pulley having a belt groove, a belt engaged within said grooves, an elongated arm having one end thereof pivotally supported by said frame, a grooved roller rotatably supported by said arm adjacent the opposite end thereof and disposed within the belt, a spring engaged with said frame and said arm normally urging said roller into pressure engagement with the inner face of said belt with resulting frictional driving engagement between said belt and the groove in said pulley whereby said cam wheel is driven by said motor, crank operated means pivotally supported by said frame and being in inoperative position when said roller is in pressure engagement with the inner face of the belt, and cooperating means on said arm and said crank operated means operative to hold said roller out of pressure engagement with the inner face of said belt and to move said crank operated means into driving engagement with the belt.

2,899,848
APPARATUS FOR DRESSING ROTARY SAWS
Joseph W. Spodelniski, Philadelphia County, Pa., assignor to Morris, Wheeler & Company, Inc., Philadelphia, Pa., a corporation of Pennsylvania
Continuation of application Serial No. 364,528, June 29, 1953. This application July 1, 1953, Serial No. 366,743
8 Claims. (Cl. 76—48)



1. Apparatus for dressing the teeth on a rotary disk-type saw comprising a rotatable support for a saw; first mechanism for continuously rotating said support; second mechanism for intermittently rotating said support including control means operative as a function of the width of a tooth of the saw being worked; means to render said first mechanism inoperative when the second mechanism is operating; a drive shaft for mounting rotary means for use in dressing the saw; and mechanism for supporting said drive shaft including means for universally tilting the shaft within defined limits with respect to the axis of rotation of the support, means for angularly orienting the shaft while in any position of tilt, and means operable while the shaft is so tilted and oriented for selectively positioning the shaft in a direction generally toward and away from the axis of rotation of the support and while in a selected position for further moving the shaft a predetermined amount toward the axis of rotation and then back to said selected position.

2,899,849
FABRICATION OF TOOLS
Cecil M. Laughter and James J. Laughter, Kettering, Ohio
Application June 26, 1958, Serial No. 743,378
13 Claims. (Cl. 76—107)



1. The method of making a device for punching blanks of predetermined configuration from sheet stock which comprises the steps of fabricating a punch of said predetermined configuration, securing said punch to a die block, cutting a slot in said block of predetermined width in accurately aligned relation with the periphery of said punch while retaining said punch secured to said block as a guide template for said cutting step, forming die blade material of the same thickness as said slot width to fit said slot, fitting said blade material in said slot, and securing a backing plate to the back surface of said block.

form thereon; said second die means including a base ad- cylinders so as to create a build-up of pressure therein,

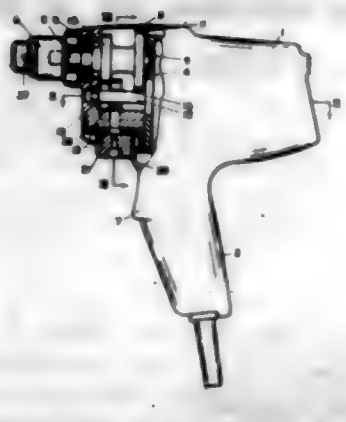
axis by the revolving movement of said planet gear, and a fluid drive connection between said first and second mediate gear set and a third member of said low planetary gear set and holding said carrier connected members in a

2,899,850

GEARING AND ELECTRIC DRILLS EMBODYING THE SAME

James Selby, Pinner, Alec Bradley Kirkbride, London, and Maurice William Trebble, Ealing, London, England, assignors to R. Elliott & Company Limited, London, England

Application October 15, 1957, Serial No. 690,276
Claims priority, application Great Britain October 18, 1956
6 Claims. (Cl. 77—7)



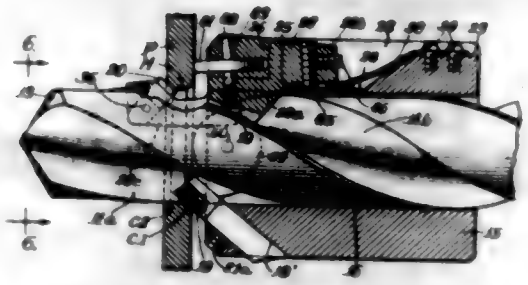
1. In a gear box having a gear shift element movable between selected positions within said gear box, a glut for shifting said gear shift element between said selected positions, said gear box having a wall defining a longitudinal slot, a glut pin integral at one end with said glut extending outwardly through said longitudinal slot in said gear box wall, and a sealing plate rotatably supported upon the outside of said wall in constant overlapping relationship with said longitudinally slot, said sealing plate having a radial slot in communication with said longitudinal slot and slidably receiving said glut pin therethrough, the opposite end of said glut pin having a head in flush engagement with the outside of said sealing plate and in constant overlapping engagement with said radial slot.

2,899,851

CHAMFERING TOOL

Hugo H. Grobecker, Milwaukee, Wis., assignor to Cleaver-Brooks Company, a corporation of Wisconsin

Application May 11, 1956, Serial No. 584,357
8 Claims. (Cl. 77—66)



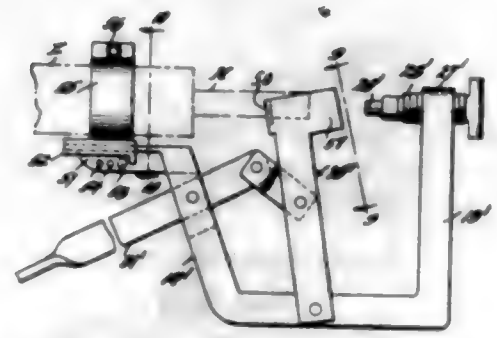
1. In combination with a rotatable twist drill bit for forming a circular hole through a metal plate, a chamfering tool for chamfering the plate about the periphery of the hole formed by the drill bit, comprising, a part fixed on the drill bit for rotation therewith and for movement therewith along the axis of rotation toward and away from the plate and a level pivotally mounted on said part and having one end portion adapted to support a chamfering bit, said lever extending generally longitudinally of said axis and inclined thereto at an angle conforming generally to the twist of the drill bit so that the lever is positioned with said one end portion in a flute of the twist drill bit for movement about its pivot generally radially toward and away from said axis between a first, radially inward position within the periphery of the drill bit wherein said chamfering bit will pass from one side of the plate through the hole formed in the plate by the drill bit without engaging the plate and a second, radially outward position wherein the chamfering bit will engage the edge of the plate about the periphery of the hole at the opposite side of the plate when the bit has passed substantially through the hole.

2,899,852

TOOL FOR SUPPORTING AND UPSETTING RIVETS

Bernard Lee Burgess, Wheeling, W. Va.

Application May 6, 1955, Serial No. 506,425
3 Claims. (Cl. 78—53.5)



1. A tool for upsetting rivets comprising a frame member having a base and three legs upstanding from said base, the first and second legs being integrally connected to the ends of said base and the third leg being pivotally connected to said base intermediate said ends and extending upwardly therefrom between said first and second legs, an operating lever fulcrumed intermediate its ends on said first integral leg, a short link pivotally connected at one of its ends to an end of said lever and at the other of its ends to said pivotable third leg intermediate its ends, said lever and said short link constituting a toggle for rocking said pivotable third leg toward and to pull the pivotable third leg away from said second integral leg, an anvil on said second integral leg for contacting one end of a rivet, said anvil and said second integral leg in which the anvil is mounted having cooperating means to adjust the anvil in said second integral leg, a clamping sleeve adjustably secured on the first integral leg and adapted to receive therein an elongated rivet upsetting means with a hammer for contacting the other end of said rivet supported on said tool, said upsetting means being an axial alignment with the anvil, the adjustability of the anvil permitting work of various thicknesses to be clamped intermediate said anvil and said pivotable third leg so that said pivotable third leg and said second integral leg are generally parallel with each other and said anvil and rivet upsetting means are in axial alignment, and said third leg having means in the end opposite its pivotal connection to the base to support and guide the hammer of the upsetting means.

2,899,853

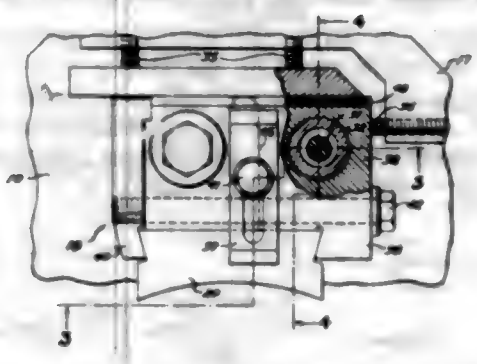
MOVABLE DIE MOUNTING

Daniel Howard Pratten, Cleveland, Ohio

Application October 13, 1954, Serial No. 462,080
3 Claims. (Cl. 80—7)

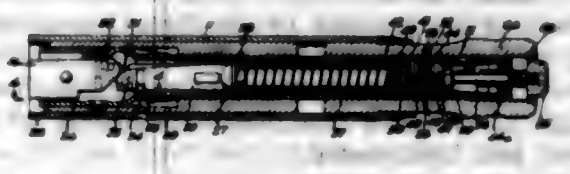
1. Apparatus for rolling forms on generally cylindrical surfaces of workpieces comprising a frame, a first die means rotatably mounted on said frame and having a generally circular periphery with a contour rolling surface thereon, a second die means located on said frame and including an outer die having a contour rolling surface thereon complementary to and located outwardly from the rolling surface on said first die means, means operatively connecting said first die means to said frame for rotating said first die means surface relative to the other to frictionally engage a workpiece and roll a contour

form thereon; said second die means including a base adjustable relative to said frame toward and away from said first die means, a slide movably supported by said base and detachably carrying said outer die, a single connecting means clamping together said base and frame



in any given adjusted position and forming a lost motion connection between said slide and base, and resilient means biasing said slide relative to said base against one end of said lost motion connection wherein said contour rolling die surfaces are closest together.

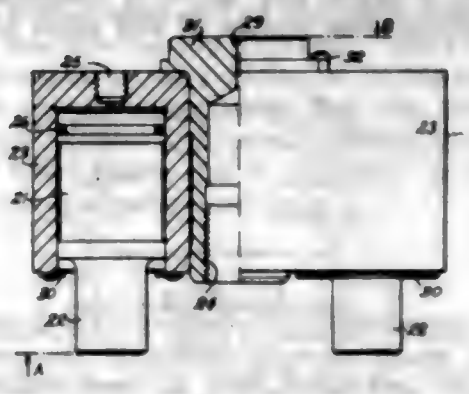
2,899,854
ATTITUDE COMPENSATED PREDETERMINED TORQUE RELEASE WRENCH
Frank W. Livermont, Duarte, Calif.
Application October 21, 1957, Serial No. 691,323
4 Claims. (Cl. 81—62.4)



4. An adjustable predetermined torque release wrench, comprising: a pair of lever elements disposed in tandem relation and having interengaging means at their confronting ends to cause said lever elements to pivot in opposite directions; an elongated housing pivotally supporting said lever elements intermediate their respective ends, the relative mass and lengths of the arms of said lever elements being so proportioned that said lever elements maintain a balanced condition irrespective of the position of said housing; a work-engaging, torque-transmitting device at the remote end of one of said lever elements; and a means at the remote end of the other lever element tending to restrain said levers until a predetermined torque is applied on said device.

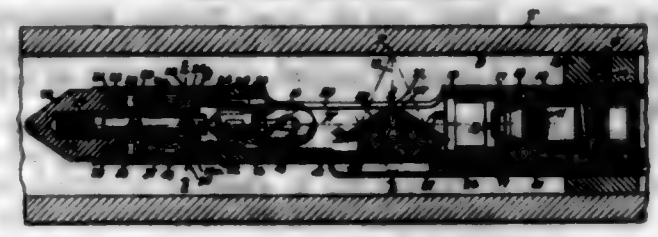
2,899,855
BOLT-TENSIONING DEVICES
Sidney Neville, Hale, England, and Trefor Owen, Denbigh, North Wales, assignors to Metropolitan-Vickers Electrical Company Limited, London, England, a British company
Application August 21 1957, Serial No. 679,461
Claims priority, application Great Britain September 6, 1956
2 Claims. (Cl. 81—53)

1. A bolt-tensioning tool for applying tension to a bolt which passes through a member and has a nut screwed thereon for fastening the member to a body on which the bolt is mounted, comprising in combination a pair of cylinders rigidly mounted side by side, said cylinders each containing a piston provided with a plunger extending outwardly in the same direction from said cylinders, means for securing said cylinder assembly to the end of said bolt with said plungers positioned either side of and parallel to said bolt, and means for admitting liquid under pressure to the interior of said cylinders so as to create a build-up of pressure therein, said pressure tending to force said pistons out of said



cylinders and toward said member, thereby to apply tension to said bolt due to the reaction caused by said plungers bearing against said member.

2,899,856
ILLUMINATING HEAD FOR BORE INSPECTION DEVICE
Francis M. Shull, Rochester, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Application June 15, 1954, Serial No. 437,018
3 Claims. (Cl. 88—14)



1. In a gun bore inspection instrument adapted for insertion in a gun tube, a cylindrical housing having a portion of its periphery cut away to form a viewing aperture, a lens system in one end of said housing, a source of illumination facing the lens system removably attached to the opposite end of the housing and projecting into said aperture, mirrored mounting blocks positioned back to back in said housing between the lens system and said source of illumination and within said aperture, means for adjusting the mounting blocks until the mirrors are at equal angles with the horizontal axis of the housing, centering means, sized to fit the bore, externally secured to the housing at the lens end and adapted to permit freedom of movement of the housing within the bore of the gun tube for a complete inspection thereof.

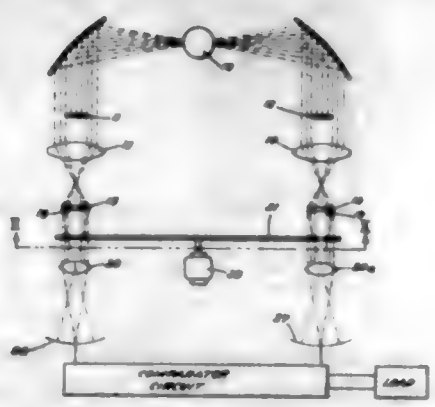
2,899,857
METHOD FOR COMPARING THE CONTOUR OF AN ARTICLE WITH A STANDARD
Stuart C. Rockafellow, Plymouth, Mich., assignor to Robotron Corporation, Detroit Mich., a corporation of Michigan
Application October 3, 1956, Serial No. 613,724
2 Claims. (Cl. 88—14)

1. A process for inspecting the contour of a test article and comparing the same with a standard, the steps including: projecting a shadow of said article upon a first screen and transmitting radiation past said shadow around the portion of the contour thereof to be inspected; placing an image of said standard corresponding to a shadow thereof upon a second screen, said image being of predetermined size with respect to said shadow, and transmitting radiation past said image around the portion of the contour thereof corresponding to the portion of the contour of the shadow to be inspected; masking portions of said transmitted radiation to provide zones of transmitted radiation surrounding said portions of the contours

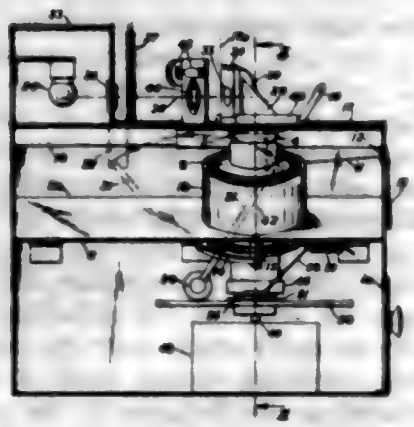
the light transmitting and reflecting characteristics of said mirror whereby said virtual image of said facial cut-

curvature of a radius of 8.639 inches and of a curvature sign which is opposite to that of the first lens first sur-

of said image and said shadow; simultaneously moving an aperture transversely across each of said zones at the same rates of speed, said apertures transversely moving across corresponding regions of said zones to simultaneously and longitudinally transmit radiation from successive regions of said zones through said apertures; measuring the intensity of the radiation transmitted from said successive regions; and actuating a load means if the radiation transmitted from said successive regions varies from a predetermined ratio.

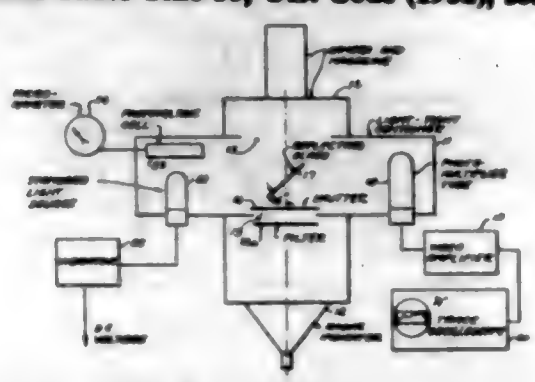


2,899,858
ABSORPTIOMETERS
Frank Dudley Stott, Askett, near Princes Risborough, England, assignor to National Research Development Corporation, London, England, a corporation of Great Britain
Application October 22, 1956, Serial No. 617,458
Claims priority, application Great Britain November 4, 1955
10 Claims. (Cl. 88—14)



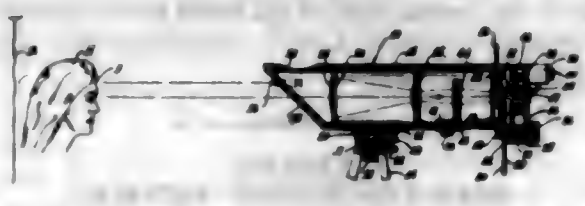
1. A titration absorptiometer having a pair of similar open-mouthed vessels with transparent bases and shaped so that the depth of a liquid therein is accurately proportioned to its volume; means for supporting each vessel with its axis normally vertical; an optical system for producing two steady light beams; a reflecting prism mounted vertically above the axis of one vessel at a constant height above the mouth thereof for directing one of the said steady light beams downwards along the axis of the said vessel, the said prism having a narrow vertical slot formed through a portion thereof to register with the mouth of the said vessel; a calibrated titrating liquid dispenser having a controllable discharge nozzle adapted to pass through the said slot; means located at a constant height above the mouth of the other vessel for directing the other of the said steady light beams downwards along the axis of the said other vessel; two photocells mounted below the vessels for irradiation by the respective downward focused light beams; and means for continuously comparing the outputs of the photocells while titrating liquid is being added to the said one vessel.

2,899,859
EXPOSURE METER FOR CATHODE-RAY TUBE PRESENTATION PHOTOGRAPHY
David G. Clute, Dayton, Ohio
Application April 14, 1955, Serial No. 501,458
6 Claims. (Cl. 88—23)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An exposure meter particularly useful for aiding in determining the proper exposure for photographing radar and television screen pictures comprising a photomultiplier tube positioned to view a cathode-ray tube presentation, a filter passing substantially only short persistence light positioned in the light path between said photomultiplier tube and the cathode-ray tube presentation, amplifier means connected to amplify the output of the photomultiplier tube, an "A" trace oscilloscope having a subject and standard light source calibrations on its screen connected to said amplifier, an off-on square wave mercury vapor light source of adjustable intensity viewable by said photomultiplier tube, a photovoltaic cell positioned to be exposed to the light from said light source, and a microammeter connected to said photovoltaic cell to measure the current generated therein by said light source as a quantitative indication of the intensity of said light source.

2,899,860
FASHION PREVIEWING PROJECTOR
Arthur D. Scott, Los Angeles, Calif., William B. Greenlee, deceased, late of Downey, Calif., by Helen B. Greenlee, administratrix, Downey, Calif., George H. Evans, Los Angeles, and William G. Sinn, Beverly Hills, Calif.; said administratrix and said Evans assignors of one-twelfth to said Scott and one-twelfth to said Sinn
Application August 30, 1955, Serial No. 531,495
7 Claims. (Cl. 88—24)



7. Apparatus for previewing the appearance of various coiffures on a particular person which includes: a housing; a convex optical element having a partially reflecting mirror coating on one face thereof mounted at the front of said housing for producing a reduced virtual image of the facial outline of a subject positioned in front of said said housing, said virtual image being apparently located in a zone within said housing; a member having a pictorial image of a coiffure thereon positioned within said housing; means for projecting said pictorial image; means for intercepting the light rays from said pictorial image and forming a projected image in the zone of said virtual image; means in said projecting means for adjusting the size of said projected image to scale said projected image to said virtual image; and means for illuminating said projected pictorial image with light balanced in accordance with the incident light upon said subject and

wire by means of a pair of lead wires, means in said circuit to shield said teaser wire during the charging of end in the direction from the entrance port to the feed throat during the recoil stroke of the barrel, a first air

admitting liquid under pressure to the interior of said

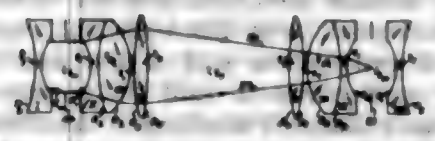
of said transmitted radiation to provide zones of transmitted radiation surrounding said portions of the contours

the light transmitting and reflecting characteristics of said mirror whereby said virtual image of said facial outline and said pictorial image of said coiffure are brought into registry and are simultaneously observable by said subject.

2,899,861
FOLLOWER MAGNIFIER FOR PLANIMETERS OR SIMILAR INSTRUMENTS
Hermann Ott, Kempten, Germany
Application October 15, 1954, Serial No. 462,518
Claims priority, application Germany October 16, 1953
6 Claims. (Cl. 88—39)

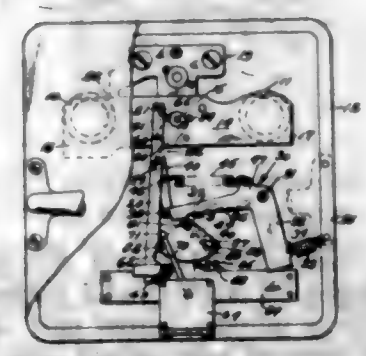
1. A tracing magnifier for instruments such as planimeters, integraphs, pantographs and the like comprising a cylindrical body of transparent light-refracting material adapted to rest on the surface containing the representations to be traced, the upper end of said cylindrical body forming a convex lens face and the lower end of said cylindrical body forming a substantially plane face of a plane-convex lens, the axis of said lens coinciding with the axis of said cylindrical body, said body having a first-tapered circumferential face adjacent to and below the said upper convex lens face and a second-tapered circumferential face adjacent to and below the said first-tapered circumferential face and a cylindrical circumferential face between said second-tapered circumferential face and said lower end of said body, the two tapered faces tapering towards the upper convex lens face of said body and the angle of taper of the first-tapered circumferential face being smaller than the angle of taper of the second-tapered circumferential face, the tapering angles of said tapered faces being such that lateral light passing through said first-tapered face is reflected by internal reflection by said second-tapered face towards the said lower end face of said body.

2,899,862
SIGHTING INSTRUMENT OPTICAL SYSTEM
James G. Baker, Winchester, Mass., assignor to the United States of America as represented by the Secretary of the Air Force
Application February 28, 1956, Serial No. 566,740
11 Claims. (Cl. 88—57)



1. An optical system, comprising a lens group of three lenses assembled in consecutive sequential order of arrangement within an instrument tube and on a common axis as a double compound divergent lens and a convergent lens in the mutual relationship of continuously conducting a light beam through all three lenses in the group and with each lens modifying the light beam distinctively as the light beam passes through each such lens, the three lenses having the following relative surface dimensions as determining the true lens dimensions, a first lens first surface curvature of a radius of 2.637 inches, a first lens second surface curvature of a radius of 8.639 inches and of opposite sign to that of the first lens first surface curvature, a second lens first surface curvature of a radius of 8.639 inches and of a curvature sign which is opposite to that of the first lens first surface curvature, a second lens second surface curvature of a radius of 4.031 inches and of the same curvature sign as the first lens first surface curvature, and a third lens first surface curvature of a radius of 24.768 inches and of opposite curvature sign as the first lens first surface curvature, and a third lens second surface curvature of a radius of 9.967 inches and of the same curvature sign as the first lens first surface curvature.

2,899,863
BINOCULAR SHUTTER CONTROL
Lawrence E. Hamilton, Daytona Beach, Fla.
Application June 25, 1958, Serial No. 744,590
7 Claims. (Cl. 88—61)



1. In a viewing device, a lens system, a shutter pivotally mounted for rotation from a first position wherein it intercepts light passing through said lens system to a second position where the lens system is open for the passage of light; a latching arm pivotally connected to said shutter at one side of the pivotal mounting thereof; a latch element; biasing means engaging said latch arm and urging said shutter to said first position and urging said latch arm toward engagement with said latch element; means for moving said shutter from the first position to the second position, said latch arm moving therewith to a position where it engages said latch element, said means comprising a latch lowering arm; means at the end of the latch lowering arm for engaging the shutter; a member operable to move the latch lowering arm into engagement with the shutter while the shutter is in the first position; additional means for moving the latch lowering arm back to its original position to move the shutter to the second position; a time operable control arm extending to said latching arm for normally disengaging it from said latch element; a cam carrying said member; and a second member mounted on said cam predeterminedly spaced from the first said member for displacing said control arm from said latching arm when said first member is motivated towards its said engagement and for further positioning the control arm into a predetermined time phase.

2,899,864
HIGH VELOCITY GUN SYSTEM
Daniel E. Bleenem, Jr., Tullahoma, Tenn.
Application December 26, 1956, Serial No. 630,716
3 Claims. (Cl. 89—7)
(Granted under Title 35, U.S. Code (1952), sec. 266)

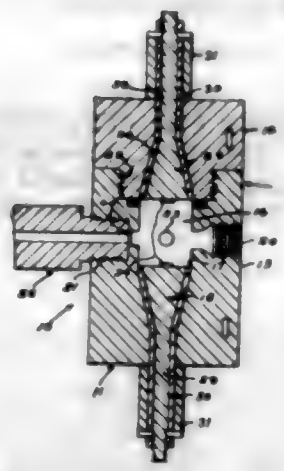
1. An electrical accelerator to expel a projectile at a high velocity comprising: a closed chamber having a barrel projecting outwardly therefrom for release of the projectile; a high density gas contained within said chamber, an electrical discharge circuit to transfer heat energy to the gas consisting of two electrodes stationed at opposite ends of said chamber and a doubled teaser wire connected to said electrodes so as to extend across the gap therebetween, a high energy capacitor bank electrically connected in parallel to said electrodes and teaser

face of said gear and of a diameter larger than the root

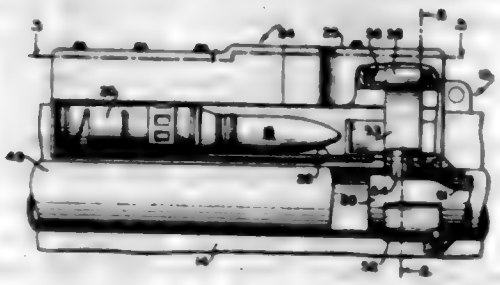
2,899,869

said one vessel.

wire by means of a pair of lead wires, means in said circuit to shield said teaser wire during the charging of said capacitor to a predetermined energy level whereupon the capacitor is discharged across said electrodes for the isovolumic heating of said gas comprising an electrical discharge gap in one of said pair of lead wires between said pair of electrodes and a source of power supply in parallel connection with a second capacitor and an electrical switch through which said first-named capacitor bank is discharged on reaching said predetermined energy level to discharge initially across part of said electrical discharge gap through said second capacitor and subsequently across the entire discharge gap, and diaphragm means between said closed chamber and the inlet end of said barrel rupturable under predetermined pressure of the gas in said chamber.

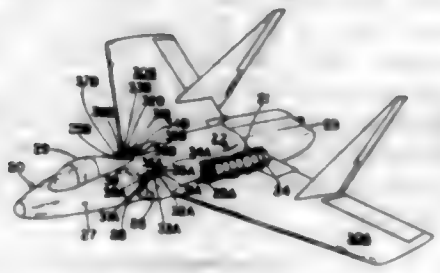


2,899,865
CARTRIDGE FEEDING MECHANISM
Richard H. Colby, South Hadley, Mass., assignor to the United States of America as represented by the Secretary of the Army
Application June 27, 1956, Serial No. 594,334
1 Claim. (Cl. 89—33)
(Granted under Title 35, U.S. Code (1952), sec. 266)



In combination with a firearm provided with a receiver, a barrel mounted for reciprocation in the receiver in a recoil stroke and a counterrecoil stroke having a reduced velocity with a predetermined relationship to that of the recoil stroke, and an ammunition belt composed of a plurality of linked cartridges, a feeder for engageably moving the cartridges in the ammunition belt into the firearm and having an entrance port and a feed throat, said feeder including a first carriage and a second carriage in superimposed relationship and slidingly disposed for respective reciprocation between the entrance port and the feed throat, a lever intermediately mounted between the front and rear ends thereof on a vertically disposed lug for oscillating movement in a plane parallel to the path of movement of said first and second carriages, a crosshead slidingly disposed for reciprocation parallel to the movement of said first and second carriages and forward thereof, cam means for converting the longitudinal reciprocation of the barrel to lateral reciprocation of said crosshead, means for connecting said crosshead to the front end of said lever to move such end in the direction from the entrance port to the feed throat during the recoil stroke of the barrel, a first pin mounted to said lever between the front end thereof and the lug for engagement with said first carriage whereby said first carriage is moved by said lever away from the entrance port during the recoil stroke of the barrel, a second pin mounted to the rear end of said lever at a distance from the lug which is related to the distance of said first pin therefrom as the velocity of the recoil stroke of the barrel is related to the counterrecoil stroke thereof whereby said first and second carriages are moved simultaneously in opposite directions and are moved with similar velocities during movement thereof away from the entrance port and towards the feed throat, a first pawl pivotally mounted to said first carriage for engagement with the leading cartridge in the ammunition belt during the recoil stroke of the barrel for unidirectionally moving the leading cartridge from the entrance port towards the feed throat a portion of the distance therebetween, said portion having a relationship to the remaining distance to the feed throat as the velocity of the counterrecoil stroke is related to that of the recoil stroke, and a second pawl pivotally mounted to said second carriage for subsequent engagement with the leading cartridge to continue moving such cartridge to the feed throat at a uniform velocity during the reduced velocity counterrecoil stroke of the barrel.

2,899,866
BLAST-CONTROLLING MEANS
Herbert Clark, Dallas, Paul M. Owen, Arlington, and Marvin G. Starr, Dallas, Tex., assignors to Chance Vought Aircraft Incorporated, Dallas Tex., a corporation of Delaware
Application January 20, 1956, Serial No. 560,379
13 Claims. (Cl. 89—37.5)



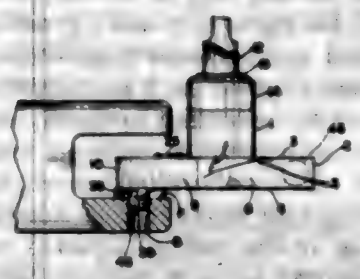
10. A device for preventing malfunction in a jet engine propelling an aircraft having an air inlet opening for said engine and further having projectile-discharging tubular members firing in proximity to said air inlet, said device comprising, in combination with said air inlet and tubular members: first means for receiving gases of blasts emitted from said tubular members and for deflecting at least some of said gases away from the inlet opening through which air is provided to said engine; and means for apportioning said blasts to said first means in an order wherein blasts likely, if discharged simultaneously, to reinforce each other and thereby jointly produce an atmospheric disturbance of a severity capable of occasioning malfunction in said engine are delivered to said first means at substantially separate times.

2,899,867
SPOT FACING TOOL
Mark Brayack, Cleveland, Ohio
Application August 23, 1956, Serial No. 605,776
1 Claim. (Cl. 90—11)

In a tool of the character described, including a housing having therein a drive gear, a driven gear and an intermediate idler gear, a cutter assembly including said driven gear having a threaded spindle extending axially from one face of the gear, a thrust washer secured to the other

nected to said crankpin for reciprocating said tool slide, foldable articles advancing individually and successively

face of said gear and of a diameter larger than the root diameter of said gear, and a key extending from said first face of the gear, a cutter secured to said gear and having a recess to receive said key, said cutter having an axial opening through which the spindle extends, said opening



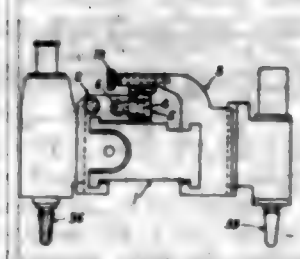
having a counterbore, and a pilot threadedly secured to said spindle and having a portion extending into said counterbore and clamping the cutter to said gear, the thrust washer overlying said idler gear and maintaining the assembly in said housing.

2,899,868

AUTOMATICALLY OPERATED PROFILE MILLING MACHINE

Rolf Glaser, Rorschach, Switzerland, assignor to Starrfräsmaschinen A.G., Rorschacherberg, Switzerland, a Swiss company

Application March 29, 1956, Serial No. 574,750
Claims priority, application Switzerland April 2, 1955
4 Claims. (Cl. 90—13.1)



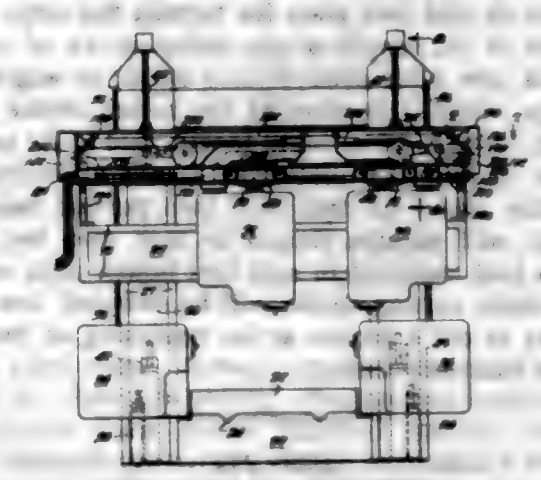
1. In a milling machine for automatic copying having a cutter, a tracer, supporting means, a cutter slide and a tracer slide arranged for independent reciprocating movement along said supporting means and in parallel directions with respect to each other; hydraulic drive means operatively connected with said cutter slide and including a cylinder and a piston movable in said cylinder, means supplying a fluid to said cylinder for moving said piston in either one of two directions and including a reversing valve movable between two end positions, said reversing valve when in said one end position causing movement of said piston in one of said directions and when in said other end position causing movement of said piston in the other of said directions to thereby reverse said cutter slide and cause said reciprocating movement thereof, and transmission means between said cutter slide and said tracer slide for transmitting to the latter said reciprocating movement of said cutter slide; actuating means supported by said cutter slide and including an actuating cylinder and an actuating piston, said actuating piston being operatively connected to said transmission means and movable between two locations to determine two positions of said tracer slide relative to said cutter slide, and conduit means connecting said actuating cylinder with said reversing valve for supplying said fluid to said cylinder and for moving said actuating piston into one of said locations thereof when said slide valve is in said one end position and into the other of said locations thereof when said reversing valve is in said other end position, to thereby displace said tracer slide between said two positions when said cutter slide is reversed and to cause a displacement of said tracer with respect to said cutter.

2,899,869

SUSPENSION MECHANISM FOR MACHINE TOOLS

James Dougherty, Fond du Lac, Wis., assignor to Giddings & Lewis Machine Tool Company, Fond du Lac, Wis., a corporation of Wisconsin

Application September 2, 1955, Serial No. 532,172
25 Claims. (Cl. 90—16)



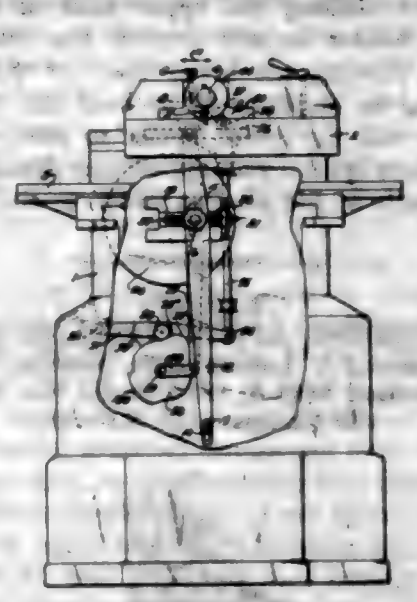
16. A headstock suspension mechanism for use with a machine tool having an upright member, a cross-member mounted thereon for vertical movement, and a headstock means mounted on the cross member for horizontal movement and having a center of gravity with shifts horizontally relative to said upright member, said suspension mechanism comprising, in combination, a pair of suspension elements spaced apart and secured to the cross member on opposite horizontal sides of the center of gravity of the headstock, and a counterbalance means for exerting a lifting force to take up the weight of the cross member and the headstock means, said counterbalance exerting a force on each of said suspension elements in accordance with the distribution of headstock weight on the upright member as a result of a horizontal shift in the center of gravity of the headstock means on the cross member thereby to compensate for unbalance of the headstock means relative to the upright member and maintain the headstock means in a horizontal position on the upright member.

2,899,870

METAL PLANING OR SHAPING MACHINE

Ludwig Gack, Muhlacker, Germany

Application June 14, 1955, Serial No. 515,409
Claims priority, application Germany June 16, 1954
11 Claims. (Cl. 90—39)



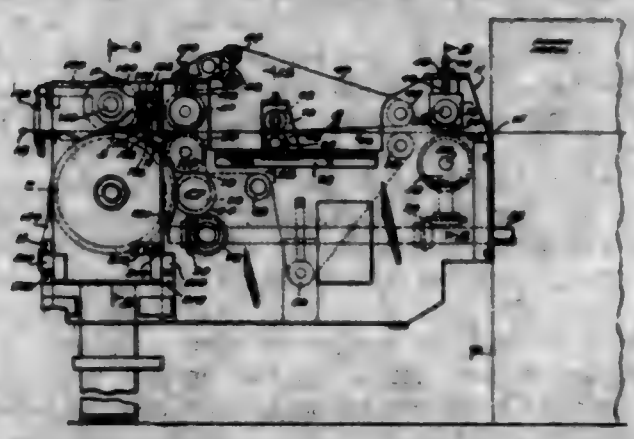
1. A metal planing and shaping machine comprising a tool slide, a tool holder rotatably mounted within said tool slide, a rotatable member, means for driving said member, a crankpin adjustably mounted on said member, a rocker arm mounted on said tool slide and con-

veyor; scoring and folding apparatus adapted to score

2,899,876

nected to said crankpin for reciprocating said tool slide, a second crankpin adjustably mounted on said rotatable member, means connected to said crank pins for simultaneously adjusting both of said crankpins in a radial direction of said rotatable member and relative to each other, a cam plate rotatably mounted on said machine, a connecting rod mounted on said second crankpin and connected to said cam plate for turning the same so that, regardless of the length of the entire stroke of said tool slide, said cam plate always turns about an angle of the same size within a portion of the return stroke of said tool slide which is of constant length, said angle enclosing a portion of said cam plate, and means for turning said tool holder about its axis, said cam portion being connected to said turning means to turn said tool holder so that a tool mounted in said tool holder after completing a straight cutting stroke will be swiveled toward one side so as to cut a groove at the beginning of the return stroke of said tool slide.

2,899,871
STRIPPER MECHANISM
Frederick G. Aser, Teaneck, N.J., assignor to Champlain Company, Inc., Bloomfield, N.J., a corporation of New York
Application August 28, 1953, Serial No. 377,620
8 Claims. (Cl. 93—36)



3. A stripper comprising a cylinder having means for detachably holding stripper pins, a plurality of stripper bands cooperating with said cylinder, said bands being flat in section and disposed in closely spaced edge to edge relation and providing narrow slots between said bands for receiving the pins, an upper band holder located ahead of the cylinder beneath the paper line for receiving and holding the upper ends of the bands, a lower band holder located beyond the cylinder for receiving and holding the lower ends of the bands, said holders being so disposed as to hold the bands around the cylinder with the lower holder so positioned that the bands are there spaced radially further from the cylinder than the length of the pins, in order to strip scrap from the pins.

2,899,872
FLAP FOLDING APPARATUS AND METHOD
Raymond A. Labombarde, Nashua, N.H.
Application May 8, 1956, Serial No. 583,494
20 Claims. (Cl. 93—49)

1. An untimed, article actuated, folding apparatus for overfolding the leading flaps of each of a plurality of flat foldable articles advancing individually and successively along a path through a folding machine, said apparatus comprising a folding finger supported at its upper end for oscillation of its lower end in the direction of the path of said articles, said finger having a trailing, hooked portion normally presenting a notch in the path of the leading edge of a flat leading flap of an article advancing along said path and having a terminal tip normally well below the path of said articles, said finger being adapted to engage the leading edge of each successive article with said notch and then to be swung upwardly and forwardly by said advancing article while folding a leading flap thereof upwardly and rearwardly; stop means, below said article path, supporting said finger in said normal position; positive stop means in the path of upward oscillation of said finger and adapted to stop the oscillation thereof at a predetermined distance above the path of said articles to cause a leading flap to fold on its line of articulation, and spring means associated with said finger and adapted to oppose the upward oscillation thereof with a predetermined increasing pressure and to return said finger downwardly when opposite article pressure is released.

2,899,873
FOLDING AND GLUING APPARATUS
Leon E. La Bombard, Nashua, N.H., assignor to The International Paper Box Machine Company, Nashua, N.H., a corporation of New Hampshire
Application July 23, 1956, Serial No. 599,536
11 Claims. (Cl. 93—52)

4. A machine for forming tapered collapsed tubular cartons from flat, flexible carton blanks, said machine comprising means for feeding and advancing a plurality of flat blanks individually and successively in untimed relation along a path through said machine, prefolding means along said path adapted to prefold each blank on the third crease thereof; side register means along said path including upper and lower parallel rows of spaced, staggered, uniformly angled driven rolls for gripping the first crease side of each advancing blank and accurately orienting the glue lap thereof in alignment with the glue roll of said machine while further longitudinally misaligning the fourth crease of said blank; prefolding means along said path adapted to prefold each blank on the first crease, a glue roll along said path for applying an adhesive strip to the glue lap of each blank, prefolding means along said path adapted to prefold each blank on the fourth crease, while the fourth crease advances in longitudinal misalignment; and twist belt overfolding means along said path for overfolding each blank on the second and fourth creases thereof into collapsed tubular boxes.

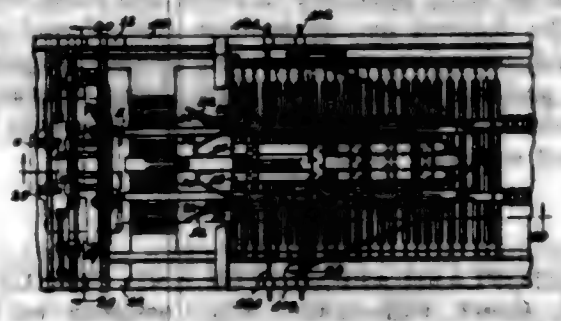
2,899,874
MANUFACTURE OF GUSSET TYPE ENVELOPES
William O. Normandin, Montreal, Quebec, Canada
Application April 28, 1958, Serial No. 731,414
26 Claims. (Cl. 93—62)

1. As an attachment to a standard open end envelope machine having a supporting frame, a continuous conveyor mounted on and adapted to convey envelope blanks along the length of said frame, and adhesive applying means mounted on said frame in the path of said con-

and hopper above the road surface and to control the

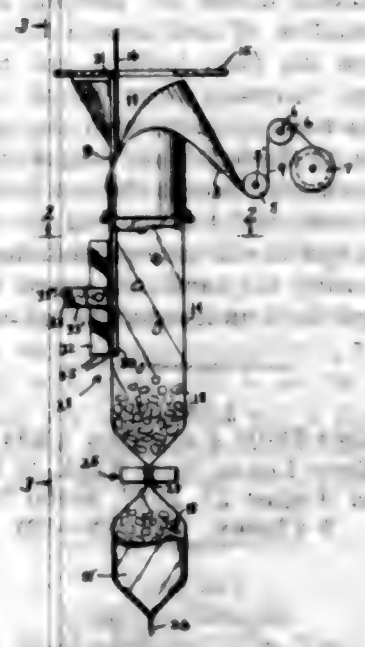
together at one end thereof, a first camera lens mounted

veyor; scoring and folding apparatus adapted to score and fold suitable blanks into gusset type expansible envelopes and comprising; a first scoring roller assembly having a pair of axially spaced apart sets of three scoring disks adapted for mounting on said frame transversely to and at each side of said machine conveyor with said disks in alignment with the feeding direction of said conveyor, a second scoring roller assembly spaced from said first roller assembly and having a plurality of circumferentially spaced apart scoring blades adapted for mounting on said frame in spaced relationship in the



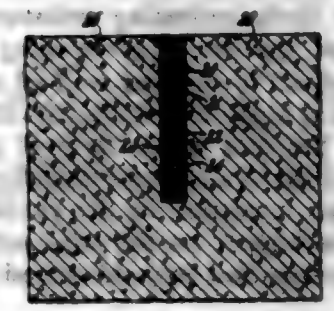
feeding direction of the conveyor from said first scoring roller assembly with said scoring blades disposed transversely to the path of said conveyor, a pair of opposed folding blade sets adapted for mounting on said frame at each side of and in alignment with the path of said conveyor and spaced from said first and second scoring roller assemblies, each of said blade sets having a plurality of opposed sequential folding blades disposed in staggered relationsip one above the other.

2,899,875
APPARATUS FOR PACKAGING
William C. Lessure, Houston, Tex., assignor to Mira-Pak, Inc., Houston, Tex., a corporation of Texas
Application December 28, 1956, Serial No. 631,342
7 Claims. (Cl. 93—82)



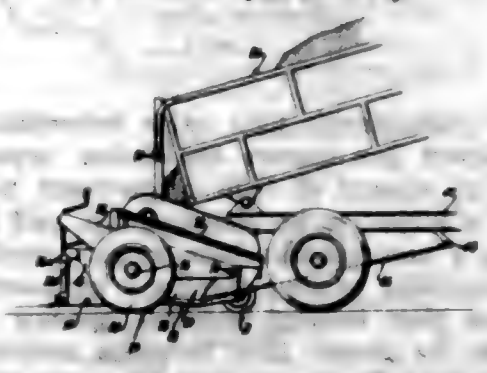
1. In a packaging machine of the class described, a former for transforming sheet material into tubular form, said former having a back portion, curved wing portions and a tubular portion, said back portion extending at an acute angle with respect to said tubular portion, a line of transformation between said curved wing portions and said tubular portion, the line of transformation having a length substantially equal to one-half the circumference of said tubular portion times pi.

2,899,876
SEALERS FOR JOINTS
Samuel P. Tauber, New York, N.Y., and George J. Blumott, San Antonio, Tex., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey
Application October 24, 1957, Serial No. 692,228
3 Claims. (Cl. 94—18)



1. A joint sealer between opposed faces of adjacent sections of concrete paving construction comprising a thermoplastic joint filling material having embedded therein adjacent the surface of the pavement a wire with a covering thereon of loose mineral fibrous material, said covering substantially filling the space between the opposed faces of the concrete sections adjacent the surface of the pavement, said wire acting as a resistance element and heating up on passage of an electric current therethrough.

2,899,877
PAVING MACHINE
Bruce B. Phillips and Orville Jackson Smith, San Pablo, Calif., assignors to North Bay Engineering Company, Richmond, Calif., a copartnership
Application September 18, 1953, Serial No. 380,994
7 Claims. (Cl. 94—44)



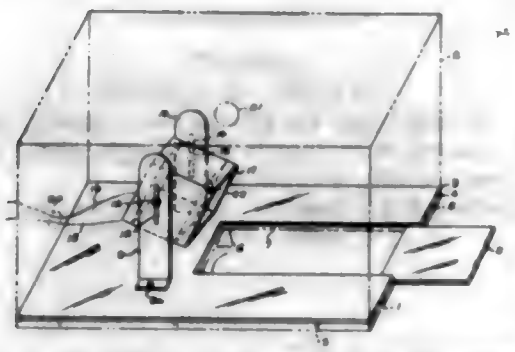
1. A paving machine of the class described comprising a hopper having charging and discharging openings adapting it to receive paving material and deposit the same upon a surface to be paved; wheel supporting means for said hopper adapting it to be towed behind a truck in a position to receive paving material from said truck through said charging opening, said means comprising laterally spaced main wheel assemblies each including an adjustable member pivotally mounted at its forward end on a side wall of said hopper and carrying a main wheel journalled intermediate its ends, and an auxiliary wheel assembly carried by said hopper forwardly of said main wheels; a horizontally disposed screed plate adjustably hinged at its forward edge to a portion of said hopper adjacent the rearward edge of said discharge opening for compacting paving material discharged from said hopper; adjustable operating means including first adjustable operating connections between said screed plate and said hopper, adapted to adjust the angle between said screed plate and the rearward wall portion of said hopper, and second adjustable operating connections between said screed plate and said main-wheel supporting members, respectively, said first and second operating connections cooperating through said screed plate, hopper and supporting member, respectively, to adjust the height of said screed plate

a lens and provided with a plurality of perforations, a partition dividing the interior of the casing into upper

stantially contiguous image areas on the material, and viewing apparatus comprising means for supporting said

and hopper above the road surface and to control the pressure exerted by said screed plate on the discharged material compacted thereby, said second adjustable operating connections being separately adjustable with respect to each other and said main-wheel supporting members to permit independent adjustment of said main wheels for different elevations in the road surface; and an adjustable grading blade extending transversely across the rearward edge of the discharge opening and angularly mounted with respect to the rear wall of said hopper, the lower edge of said blade extending forward of the lower edge portion of the wall of said hopper and the leading edge of said screed plate, respectively, and forming a chamber in which a portion of the paving material discharged from the hopper on the road surface is worked prior to being compacted by said screed plate.

2,899,878
PHOTOELECTRIC SENSING UNIT FOR AIRCRAFT GUN CAMERAS
Fred A. Farinet, Jr., Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force
Application February 20, 1956, Serial No. 566,738
4 Claims. (Cl. 95—10)
(Granted under Title 35, U.S. Code (1952), sec. 266)

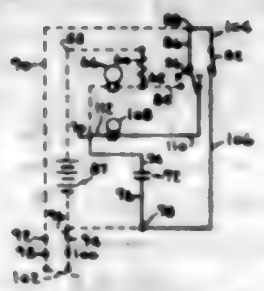


1. In a photographic light value determining means for an aircraft gun camera installation, apparatus for reflecting an amount of light proportional to that reflected by a subject to be photographed, said apparatus comprising a non-reflective base support provided with an insert receiving opening therein; a replaceable reflective surface plate inserted into said opening adaptable to simulate the greater light reflection surface of said subject for the reflection of light rays onto said photocell; and rotatable light-responsive means fixed to said support adaptable to be rotated downwardly to receive the light reflected by said reflective surface to the substantial exclusion of the light reflected by the scene to be photographed in air-to-air photography and to be rotated upwardly to receive primarily incident light in air-to-ground photography.

2,899,879
CAMERA CASE
Rene Lopez, New York, N.Y.
Application July 31, 1957, Serial No. 675,371
6 Claims. (Cl. 95—11)

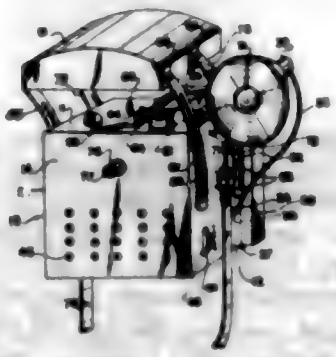
1. A case for a camera, comprising a hollow rectangular box composed of a pair of hollow sections hinged together at one end thereof, a first camera lens mounted in the front wall of one section, a catch located on the top side of said one section, inclined wall sections in the other hollow section forming a wall of a film compartment therein, said partition having a central opening, another lens disposed in said opening and supported in optical alignment with the first lens when said sections are closed, and a generally L-shaped member pivotally supported on the top wall of said other section, said member having an upstanding arm and a base, said base having an enlarged plate portion and carrying a latch, said member being operative to cover said other lens and unlock the sections in one position thereof and to uncover said other lens and lock the sections together in another position thereof, said latch being operative to retain said arm in an erect position when said catch is engaged with said latch.

2,899,880
PHOTOFLASH APPARATUS AND CIRCUIT
John N. Graef, Milwaukee, Wis., assignor to David White Company, Milwaukee, Wis., a corporation of Wisconsin
Application April 1, 1955, Serial No. 498,640
8 Claims. (Cl. 95—11.5)



7. In a B-C flash circuit of the open circuit type in which the flash bulb completes a charging circuit including a battery, a capacitor and a resistor in series and which is provided with a flash circuit terminating in electrical contacts adapted for connection to camera shutter controlled contacts, means for shorting said contacts in response to actuation of said camera shutter to short the capacitor across the flash bulb, a test bulb of the incandescent type, normally open circuit means for connecting the test bulb in series with the capacitor and in parallel relation to the flash bulb, switch controlled means for closing the circuit through the test bulb and capacitor in the flash circuit, and for opening the circuit through the flash bulb, and circuit means including an additional switch for shorting the capacitor across either the flash bulb or the test bulb independently of said contacts.

2,899,881
COMBINATION CAMERA AND RADIO
Rene Lopez, New York, N.Y.
Application August 21, 1957, Serial No. 679,390
3 Claims. (Cl. 95—12)



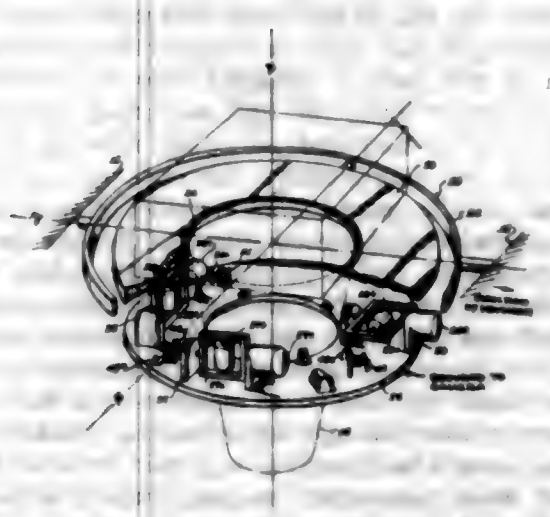
1. A combined radio and camera comprising a cubical casing, said casing having a front wall for mounting

having a filter screen opening therein and a coffee ground

2,899,887

a lens and provided with a plurality of perforations, a partition dividing the interior of the casing into upper and lower compartments with the perforations opening into the lower compartment, a pair of doors hinged to one side of the casing and closing the rear of said compartments, the lower compartment being adapted to contain an operable radio receiver, said upper compartment being adapted to contain photographic film, a plurality of spaced projections formed on the free ends of said doors and extending laterally therefrom, a post pivotally mounted on the casing and hinged to the bottom thereof, said post having a plurality of spaced recesses in one side shaped to be removably engaged with said projections to hold the doors closed, and a hood retractibly mounted on the casing to cover the casing in one position and to shade a lens on the front wall in another position.

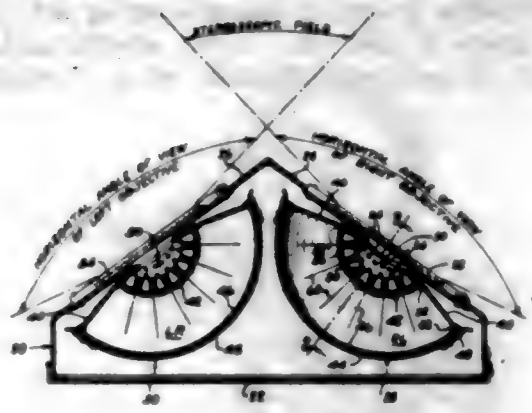
2,899,882
CAMERA SYSTEM FOR IMAGE MOTION COMPENSATION
Jean Wylie, Santa Monica, William E. Osborne, North Hollywood, and Clyde R. Amsler, Altadena, Calif., assignors to Hycon Manufacturing Company, a corporation of Delaware
Application January 2, 1951, Serial No. 203,998
17 Claims. (Cl. 95—12.5)



1. A camera control system for use on a vehicle comprising: a double gimbals mount wherein one gimbal axis is aligned with the normal direction of motion of the vehicle; a rotatable camera support secured to the inner gimbals so that a camera is freely rotatable about its optical axis thereon; a first gyro dynamically secured to said camera support; second and third gyros dynamically secured to each gimbal respectively; a forcing motor associated with each gyro; and a source of power connected with each forcing motor; and a control establishing the relative and absolute amounts of power to each forcing motor for simultaneous operation of all three motors.

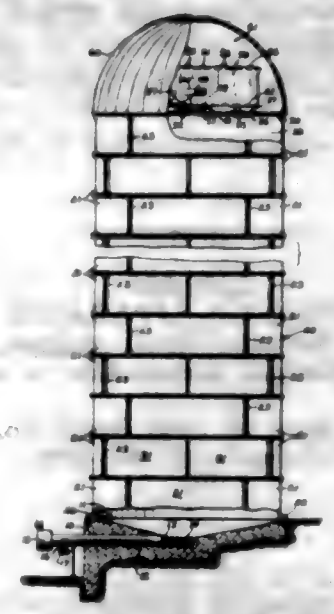
2,899,883
STEREOSCOPY
Roger de Montebello, New York, N.Y.
Application June 29, 1955, Serial No. 518,790
14 Claims. (Cl. 95—18)

1. A stereoscopic system including two groups of spherically arranged lens arrays, each lens array comprising a plurality of adjacent short focal length lenses, means means for holding two generally spherically shaped areas of film material in focused position with respect to the lenses, the areas of film material and their respective lens arrays being located substantially concentric with each other and the areas of film material and their respective lens arrays being so arranged that the lenses form substantially contiguous image areas on the material, and viewing apparatus comprising means for supporting said areas of exposed film material in a curved position each substantially concentric with one eye of an observer and



adapted to receive a plurality of short focal length lenses between the material and the observer's eye and substantially concentric with the respective eyes.

2,899,884
STORAGE CONTAINER
Robert A. Herbruck, Dayton, Ohio
Application January 16, 1957, Serial No. 634,453
6 Claims. (Cl. 99—235)



1. A silo construction for storing commodities in a pressure compensating controlled atmosphere comprising, a sealed container defining a storage chamber for a quantity of a commodity, said container having an upper wall providing a working platform, means located on the upper end of said container above said upper wall and cooperating therewith to form a protective receiving chamber open to the atmosphere, a gas retaining envelope supported within said receiving chamber above said storage chamber, and means connecting the interior of said envelope to the interior of said container for transmitting gas from one to the other to equalize pressure variations existing therebetween while maintaining said storage chamber sealed.

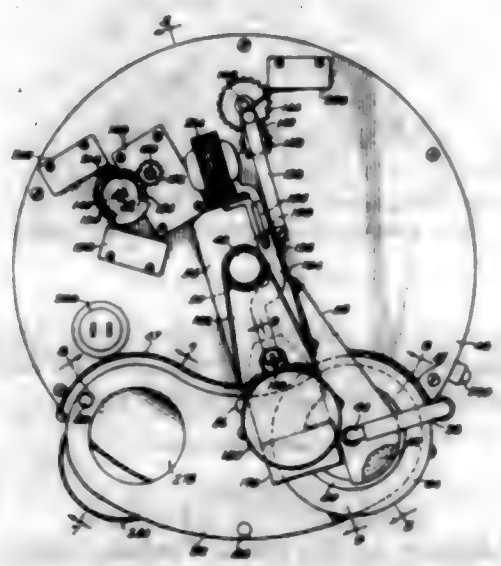
2,899,885
COFFEE BREWER
Ernest H. Thompson, Evanston, Ill.
Application October 1, 1956, Serial No. 613,829
8 Claims. (Cl. 99—289)

1. In a coffee brewing machine, a brew chamber, means for introducing hot water into said brew chamber, means for introducing ground coffee into said brew chamber, a plate for supporting said brew chamber, said plate

cured to each of said cases, a pair of radiant heating ele- by said arm, said compressed coil spring acting on said

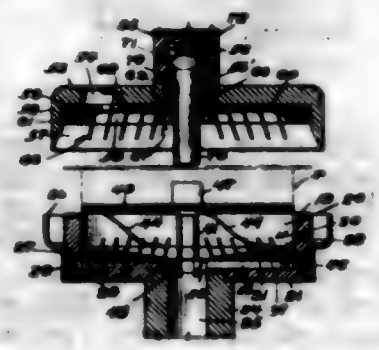
lar box composed of a pair of hollow sections hinged casing, said casing having a front wall for mounting

having a filter screen opening therein and a coffee ground discharge opening therein spaced from said filter screen opening, means for oscillating said brew chamber from a position over said filter screen opening to a position over said coffee ground discharge opening and vice versa, a filter screen in said filter screen opening and forming a bottom for said brew chamber when in position over



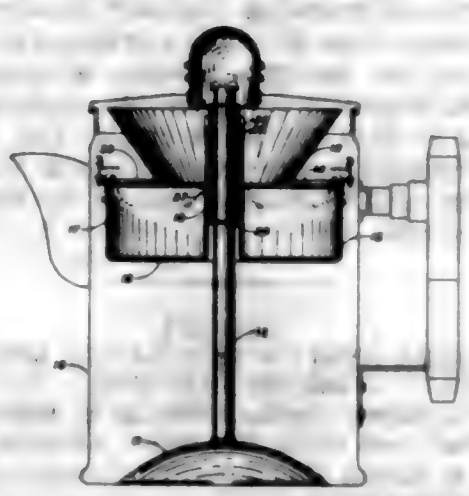
said filter screen opening, and a wiper for said filter screen rotatably carried by said plate and formed of sheet metal flatwise against said filter to permit said brew chamber to move onto and off said wiper during the oscillations thereof, said filter screen being countersunk in said supporting plate to a depth substantially equal to the thickness of such sheet metal.

2,899,886
BEVERAGE APPARATUS
Joseph J. Rodth, Swansea, Mass., assignor, by mesne assignments, to Sealpak Corporation, a corporation of New York
Application April 26, 1955, Serial No. 504,042
5 Claims. (Cl. 99—295)



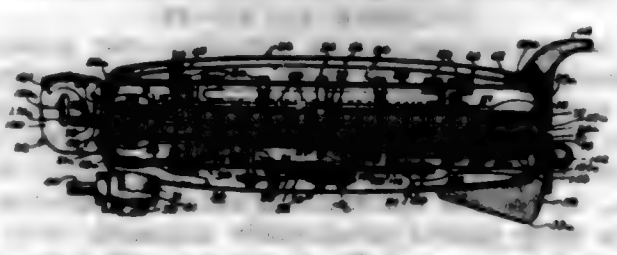
1. In an apparatus for making a beverage, said apparatus having an infusion chamber provided with an inlet thereto and an outlet therefrom, a seat within said chamber adapted to receive thereon a pellet of infusion material, means including said pellet for sealing the upper part of said chamber from the lower part thereof, a plurality of nested disks in the upper part of said chamber, each of said disks having a diameter larger than the adjacent inner disk, each of said disks having a plurality of piercing prongs at the peripheral edge thereof for piercing the top wall of said pellet, a plurality of nested annuluses in the lower part of said chamber, each of said annuluses having an inner diameter larger than the next adjacent inner annulus, and each of said annuluses having a plurality of piercing prongs about the inner edge thereof for piercing the bottom wall of said pellet.

2,899,887
APPARATUS FOR BREWING COFFEE
Charles H. De Berry, Redwood City, and Albert J. Geidl, San Bruno, Calif.; Marcella De Berry, administratrix of said Charles H. De Berry, deceased, assignors to De Berry, Geidl and Andreotis, doing business as Skyline Products, New York, N.Y., a partnership
Application November 8, 1954, Serial No. 467,569
2 Claims. (Cl. 99—310)



1. In a coffee percolator of the type wherein water is recirculated through a coffee brewing bowl and includes a pot having a generally cylindrical body with a pouring spout near the top of said body and communicating with the interior of said body, a vapor collector adjacent the bottom of said body, a fountain tube in communication with said vapor collector and extending thereabove to near the top of said body, a coffee brewing bowl positioned on and intermediate the ends of said fountain tube and radially spaced from the sides of said body, said brewing bowl having closed sides and bottom for confining comminuted coffee particles therein while preventwater flow therethrough, reservoir means above said brewing bowl and below the top of said fountain tube, cover means for the top of said bowl intermediate said reservoir and bowl top, said cover means having fluid passageway means therethrough for admitting fluid from said reservoir to said bowl only around said fountain tube, additional fluid passageway means formed adjacent the sides of said bowl for permitting outward flow from said bowl to cause substantially all of the enriched coffee liquor resulting from contact between heated water and coffee particles in said bowl to rise above said particles when flowing out of said bowl for continuous percolation and recirculation of water from the bottom of said cylindrical body through said fountain tube to said reservoir, thence down into said brewing bowl along said fountain tube and radially outward and upward in said brewing bowl for overflow through the radial space between said bowl and said body into the cylindrical body.

2,899,888
COMBINED WAFFLE BAKER AND GRILL
Ludvik J. Koci, Hinsdale, Ill., assignor to Sunbeam Corporation, Chicago, Ill., a corporation of Illinois
Application June 15, 1955, Serial No. 515,660
6 Claims. (Cl. 99—331)



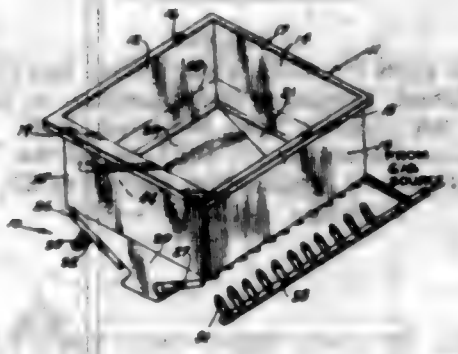
1. An electric cooking appliance comprising a pair of hingedly related cases, a pair of reflector plates one se-

said rotary plate to prevent said main feeding claw from

feeding rollers and coacting pressure rollers to feed the

cured to each of said cases, a pair of radiant heating elements one supported on each of said reflector plates, means defining a first cooking surface overlying one of said cases, a first latch means for releasably securing said means defining said first cooking surface in position, means defining a second cooking surface overlying the other of said cases, a second latch means for releasably securing said means defining said second cooking surface in position, and temperature responsive means mounted within one of said cases and responsive solely to radiation from one of said cooking surfaces for maintaining the temperature of said cooking surfaces within a predetermined range, said temperature responsive means being wholly out of physical contact with any part of the means defining said one of said cooking surfaces.

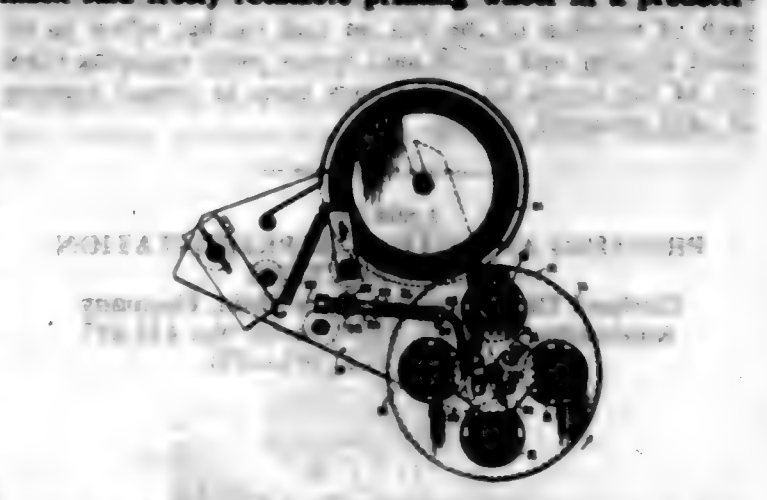
2,899,889
FRYING DEVICE
James L. Wilson, Chicago, Ill., assignor to Wilson Metal Products, Inc., Chicago, Ill., a corporation of Illinois
Application March 12, 1958, Serial No. 720,866
6 Claims. (Cl. 99—408)



1. A deep-fat frying device comprising: a cooking fat receptacle having a substantially vertical side wall portion and a bottom wall portion, said bottom wall portion being inclined at an angle of 18° to 23° with respect to the horizontal to form a relatively shallow fat-containing frying section of varying depth; indicator means on said receptacle for identifying an optimum upper level for said frying section closely adjacent the top of said bottom wall portion; and relatively shallow basket means, removably mounted within said receptacle and having a bottom wall portion essentially similar in configuration to the bottom wall portion of said receptacle, for suspending food within said frying section of said receptacle for frying with a minimum of foaming.

2,899,890
INDEXING MEANS FOR PACKAGE PRINTING MECHANISMS
Alfred J. Farkas, Chicago, Ill.
Application September 19, 1955, Serial No. 535,167
1 Claim. (Cl. 101—35)

An indexing apparatus for a freely rotating printing wheel comprising spaced apart parallelly extending plates carried by and rotatable with said wheel, indexing members providing roller bearings arranged between said plates and spaced from each other in a predetermined pattern, a longitudinally movable horizontally extending indexing arm having one end bent at a substantially right angle to provide an indexing finger extending between said plates for continuous successive engagement with said roller bearings, a bracket carried by said apparatus for supporting said horizontally extending indexing arm, a fixed sleeve supported by said bracket through which said horizontally extending indexing arm longitudinally moves, a coil spring encircling said arm and compressed between said fixed sleeve and an adjustable nut carried by said arm, said compressed coil spring acting on said arm to yieldably bear said indexing finger in one direction between said plates and against a roller bearing to index said freely rotatable printing wheel in a predeter-



mined position, and a stop member on one end of said arm and engageable with a portion of said fixed sleeve to limit projection of said arm in said one direction under action of said spring.

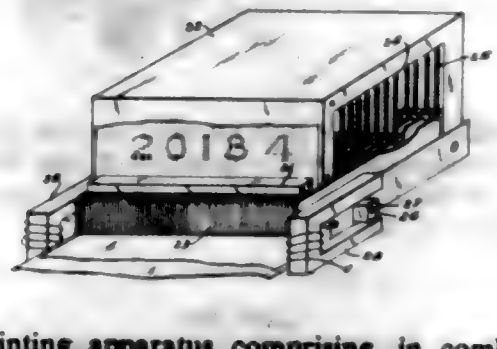
2,899,891
NUMBERING MACHINE
Kimpei Nishigori and Takeo Hayashi, Nishi-Kambaragun, Niigata Prefecture, Japan, assignors to Marusan Kabushiki Kaisha, Tokyo, Japan, a corporation of Japan
Application August 30, 1957, Serial No. 681,330
4 Claims. (Cl. 101—83)

1. A numbering machine comprising a main frame, a main feeding claw and a reversing claw pivoted to said frame, an auxiliary frame reciprocable in said main frame for carrying the numerals to be applied by the machine, a rotary spindle carried by said auxiliary frame, a series of numeral wheels mounted for free rotation on said rotary spindle, a rotary plate mounted for free rotation upon said rotary spindle adjacent said numeral wheels, said rotary plate having oppositely disposed engaging recesses in its periphery, a ratchet wheel also mounted for free rotation about said rotary spindle, said ratchet wheel having an arcuate slot therein and also having a pin fixed thereto, adjacent its periphery, a toothed stop wheel fixedly mounted upon said rotary spindle, a rod fixed at one end to said stop wheel, the other end of said rod extending into the slot in said ratchet wheel, and a spring fixed at one end to said ratchet wheel, coiled about said rotary spindle and fixed at its other end to said rod at its point of fixation to said stop wheel to apply torque from said fixed stop wheel to said freely rotating ratchet wheel, in combination with a manually operable dial fixed at one end of said rotatable spindle for setting the number of numeral repetitions of the machine, a common shaft, a stop claw pivoted on said common shaft for engaging the teeth of said stop wheel, a claw pivoted on said shaft for engaging the teeth of said ratchet wheel, a claw pivoted on said shaft for engaging one of the recesses in

array of type characters affixed to the pad, and an integral tion plate connected to and extending radially inward

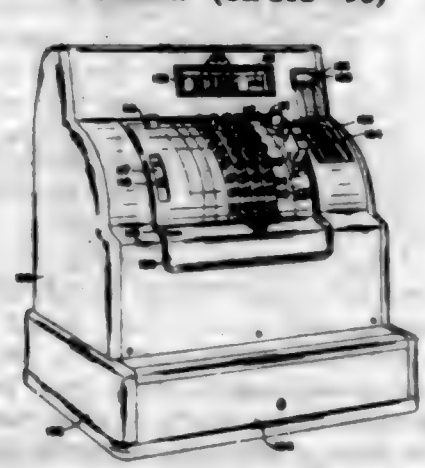
said rotary plate to prevent said main feeding claw from operating to turn a numeral wheel, and a hooked arm fixed to said rotary-plate-engaging claw, and extending to said ratchet wheel with its hook positioned in the path of rotation of the pin on said ratchet wheel to be lifted thereby and to lift said rotary plate engaging claw out of the recess on said rotary plate to permit turning of said numeral wheels.

2,899,892
PRINTING AND OTHER REPRESENTATION OF CHARACTERS
Gerhard Dirks, Frankfurt am Main, Germany
Application May 25, 1954, Serial No. 432,297
11 Claims. (Cl. 101—93)



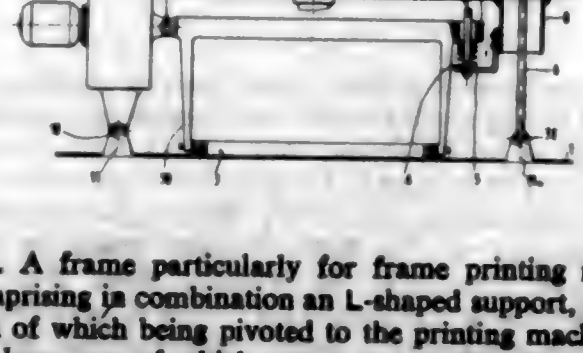
1. A printing apparatus comprising, in combination, a series of printing levers arranged side by side and having printing surfaces at one end; operating means acting on an intermediate part of each of said levers for imparting a reciprocating movement to said printing levers intermediate the ends thereof; first and second magnetic restraining means for selectively restraining the ends of said levers against said reciprocating movement so that the restrained ends of said printing levers respectively constitute fulcrums for pivotal reciprocating movement of said levers under the action of said operating means; and control means adapted to be controlled by signals representing the characters to be printed for counteracting said first restraining means when said second restraining means is to be effective.

2,899,893
RECORD MATERIAL FEEDING AND CONTROL EQUIPMENT
Frank R. Werner, Dayton, Kenneth C. Flint, West Carrollton, and Walter G. Sterner, Dayton, Ohio, assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Original application March 11, 1953, Serial No. 341,633. Divided and this application July 24, 1958, Serial No. 750,658
5 Claims. (Cl. 101—93)



1. In a machine of the class described, constructed and arranged to perform various types of operations and having printing means to print records of said operations on receipt material, the combination of means including feeding rollers and coacting pressure rollers to feed the record material; a ratchet device to drive the feeding rollers, said ratchet device having a variable retrograde take-up movement and a constant forward feeding movement to feed the receipt material different extents; means comprising a reciprocable member to operate the ratchet device in take-up and feeding directions; means to drive the member, said member constructed and arranged to be positioned in relation to said driving means to vary the degree of take-up movement imparted to said member and to the ratchet device to control the extent of feeding movement imparted to the feeding rollers by said ratchet device; control keys to initiate and control the various machine operations; a control disk positioned by the control keys and having graduated control surfaces thereon corresponding to said control keys; and means connected to the member and constructed and arranged to sense the graduated surfaces on the control disk to position said member in relation to the driving means, and in accordance with the effective control key, to regulate the degree of take-up movement of said member and the ratchet device to cause the record material to be fed an extent corresponding to said effective control key.

2,899,894
FRAME FOR FRAME PRINTING MACHINES
Adolfo Giani, Bergamo, Italy, assignor to Reggiani Meccanotex S.A., Bergamo, Italy
Application December 17, 1957, Serial No. 703,400
Claims priority, application Italy May 21, 1957
3 Claims. (Cl. 101—123)



1. A frame particularly for frame printing machines comprising in combination an L-shaped support, the short arm of which being pivoted to the printing machine bed, the long arm of which serves as a trolley for a scraper mechanism; an inverted U-shaped carrier supporting the printing frame and being pivoted to upper end of said short arm; power operated lifting means for said L-shaped support mounted between the free end of said long arm and said printing machine bed; shock absorber connection means between the free end of said long arm and the head of said carrier so that a pivotal movement is imparted by lifting means first to the L-shaped support and subsequently to the carrier.

2,899,895
RUBBER STAMP
Fred R. Tannery, New York, N.Y.
Application April 13, 1956, Serial No. 577,990
1 Claim. (Cl. 101—381)

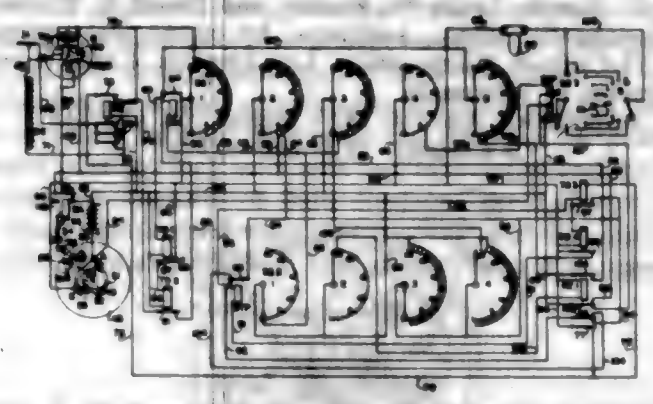
A hand stamp comprising a rectangular block, having a recess therein, a handle attached to one side of said block, an opposite side of said block having at least one groove therein, said groove having overhanging sides and being of a predetermined width and depth, and a type strip slidably engaged in said groove, said strip comprising a rigid rectangular base engaged by said overhanging sides, a resilient pad attached to said base and having a width less than the width of said base to leave exposed lateral margins thereon, said pad having a thickness greater than the depth of the groove, a strip bearing an

the atmosphere at supersonic speeds, which comprises for storing energy in said torsion spring means to al-

array of type characters affixed to the pad, and an integral tab extending from one of said stripe with indicia thereon

identifying said type characters, said tab being curved and extending into the recess in said block.

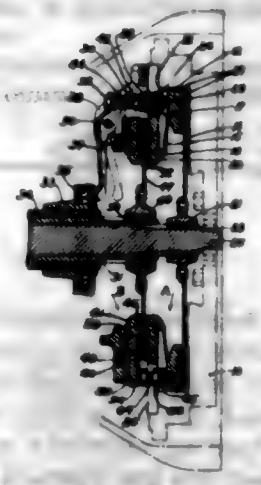
2,899,896
MINE FIRING CONTROL SYSTEM
Charles A. Hobbs, Charlotte, N.C.
Application January 6, 1943, Serial No. 471,452
16 Claims. (Cl. 102—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A submarine mine of the character disclosed arranged within a magnetic field, means including a sensitive relay adapted to detect a changing condition within said field, a control relay adapted to be operated by said sensitive relay, an electro-responsive selector switch, means including a pair of slow releasing relays for causing the electro-responsive selector switch to be stepped ahead to a predetermined setting in response to the operation of said control relay, means controlled by the electro-responsive selector switch for releasing said sensitive relay, a second selector switch, means including a second pair of slow releasing relays for causing said second selector switch to be stepped ahead a sufficient number of steps to effect a cycle of operations thereof in response to the movement of the first named selector switch to the next succeeding position beyond said predetermined setting, means for stepping the first named selector switch beyond said next succeeding position as the sensitive relay operates in response to a changing condition within the magnetic field during a cycle of operations of said second selector switch, a third selector switch adapted to be operated by the first named selector switch as the first named selector switch moves beyond said next succeeding position, a firing circuit having a detonating device therein, a source of electrical power, and means for causing the detonating device to be operated by said source of power when the third selector switch has made a predetermined number of operations.

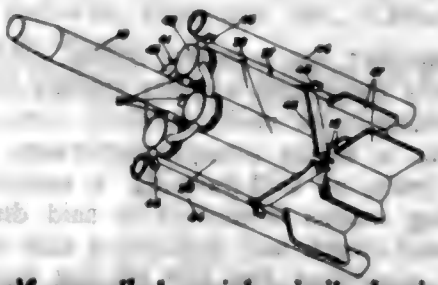
2,899,897
TRACTOR TAKE-OFF CLUTCH
John Robert Ludwig, Swanton, Ohio, assignor to Dana Corporation, Toledo, Ohio, a corporation of Virginia
Application July 28, 1953, Serial No. 368,904
8 Claims. (Cl. 192—48)

1. In a friction clutch, a first driven plate; a flywheel and a pressure plate between which said driven plate is adapted to be engaged; a clutch housing attached to the flywheel for encompassing said plates; an annular reaction plate connected to and extending radially inward from said housing in spaced relation to said pressure plate; means effecting a driving connection between said pressure plate and said reaction plate; a second driven plate; a second pressure plate between which and said reaction plate said second driven plate is adapted to be engaged; means for effecting a driving connection between said second pressure plate and said housing; telescoped



driven shafts connected to the respective driven plates; spring means for urging said pressure plates into engagement with their respective driven plates; common clutch release means for the respective pressure plates including a single sleeve, a single set of release levers and a single set of release rods operating directly on said first pressure plate; and means for effecting sequential disengagement of said driven plates, said second pressure plate being released by means on said first pressure plate.

2,899,898
AUXILIARY CARRIAGE ARRANGEMENT FOR A MISSILE
Wilbur H. Goss, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Original application April 3, 1946, Serial No. 659,188. Divided and this application December 23, 1954, Serial No. 477,435
5 Claims. (Cl. 102—49)



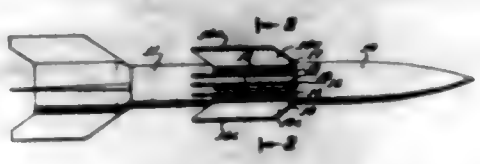
2. In a self-propelled aerial missile having a sustaining propulsion motor; in combination, a separable launching carriage for said missile, said carriage comprising a number of auxiliary rockets, means securing said auxiliary rockets to each other at their forward ends, other means, including a thrust plate, securing them to each other at their rear ends, said auxiliary rockets being symmetrically spaced, to provide room for the aerial missile amid said auxiliary rockets, said plate abutting the rear end of said missile.

2,899,899
STIFFENER AND STABILIZER FOR SUPERSONIC VEHICLES
Joseph Hirsch, Pacific Palisades, Calif.
Application March 14, 1955, Serial No. 494,031
6 Claims. (Cl. 102—49)
(Granted under Title 35, U.S. Code (1952), sec. 266)

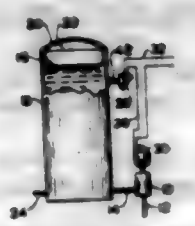
1. A device for operatively associating two vehicle or missile elements affixed together and traveling through

and spaced facing end walls, a rotor within said chamber, said circumferential wall of said casing in the region of

the atmosphere at supersonic speeds, which comprises first and second plates or fins rigidly mounted on one of said elements in spaced generally parallel relation relative to each other, and a third plate or fin rigidly mounted on the other of said elements and normally disposed midway between said first and second plates or fins, all of said plates or fins being exposed to the ambient atmosphere through which said elements are traveling, said third plate or fin providing normally identical parallel channels between its opposite faces and the confronting faces of the first and second plates or fins for producing shock waves of equal magnitude of force in said channels when said plates are so disposed, and of unequal magnitude of force when said plates tend to relatively move to a position wherein said channels are not identical, whereby a restoring force tends to render said channels identical and apply forces through the respective plates to the elements to which they are mounted.



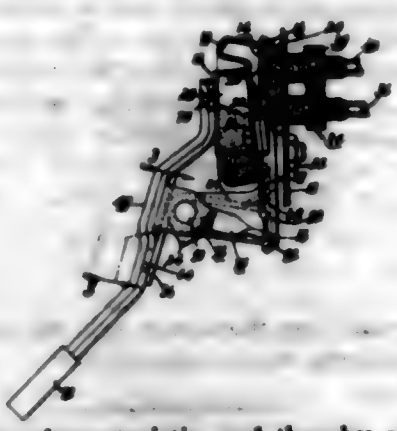
2,899,900
CONTROLLER FOR WATER SYSTEMS
Herbert L. Haskett, Stevensville, Mich.
Application May 24, 1956, Serial No. 587,092
13 Claims. (Cl. 103—6)



1. A controller for a water system having a motor driven supply pump and a water storage tank having a trapped cushion of air under pressure, comprising a two-part housing, a spring pressed diaphragm clamped between the parts of said housing, a switch carried by said housing, means connected to said diaphragm for actuating said switch and controlling said pump motor, means for connecting one part of said housing to said tank to subject said diaphragm to the pressure in said tank, air inlet means communicating with the other part of said housing and including a check valve, and air transfer means connecting said housing parts and including a check valve for admitting air to said tank-connected housing part.

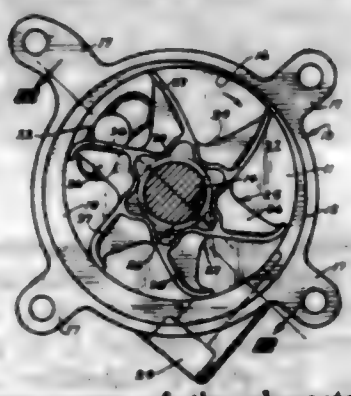
2,899,901
WINDSHIELD WASHER PUMP
Kenneth A. Kesbeh, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application February 1, 1956, Serial No. 562,773
8 Claims. (Cl. 103—148)

1. A windshield washer pump unit including, an elastic bulb having a natural recovery characteristic, torsion spring means for compressing said bulb to effect the delivery stroke of said pump unit, and manual means engageable with and disengageable from said bulb and operatively connected with said torsion spring means for storing energy in said torsion spring means to allow said bulb to resume its expanded shape due to its



natural recovery characteristic and thereby effect the intake stroke of said pump unit.

2,899,902
ROTARY PUMP IMPELLER
John C. Bandli, Leslie W. Foster, and David K. Farmer, Minneapolis, Minn., assignors, by mesne assignments, to McCulloch Corporation, Los Angeles, Calif., a corporation of Wisconsin
Application April 4, 1957, Serial No. 650,711
3 Claims. (Cl. 103—117)



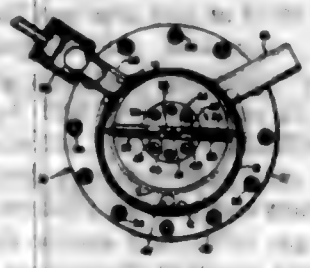
1. In a rotary pump of the character described, a housing providing a pump chamber having parallel end walls connected by a circumferential wall, a rotary drive shaft extending through the chamber end walls and being eccentrically disposed with respect to the cylindrical wall, an impeller of molded material capable of being deformed disposed within the chamber and mounted on said drive shaft for rotation therewith, the impeller having a central mounted portion and a plurality of flexible vanes extending outwardly from the mounted portion for constant endwise engagement with the circumferential wall so that the vanes will bend substantially in a trailing direction as they pass along the eccentrically near portion of the cylindrical wall, said vanes having a normal width greater than the distance between the end walls so as to be held under compression therebetween, and the impeller having a plurality of integral backing teeth extending radially outward from the central portion to a point adjacent the tips of said flexible vanes one of said teeth being immediately behind each vane relative to the direction of rotation of the impeller to stiffen the vane as it is bent in a trailing direction, said teeth being spaced from said vanes when said vanes are in non-flexed position and narrower than the distance between the chamber end walls and being radially tapered in thickness in their outward extension.

2,899,903
VARIABLE DISPLACEMENT PUMP
Elmer Ryder, Aurora, Ill.
Application December 7, 1956, Serial No. 627,000
3 Claims. (Cl. 103—120)

1. In a variable displacement rotary pump, a housing, a chamber within said housing having a cylindrical wall

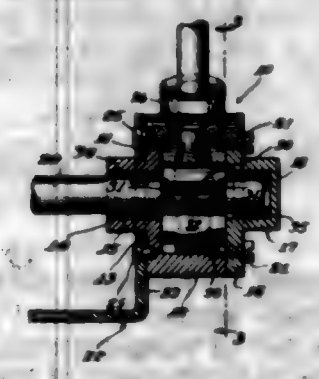
said wear surface and movable along an annular path ceiver so disposed in a triangle that the receiver is tiltable

and spaced facing end walls, a rotor within said chamber eccentric of the center of said chamber, the space between the periphery of said rotor and said cylindrical wall defining a crescent shaped pumping chamber, said rotor having a slot extending diametrically thereacross, at least one sliding vane slidably mounted in said slot and having slidable engagement with said cylindrical wall, an inlet into said pumping chamber at one end thereof, an outlet from said pumping chamber at the opposite end thereof, a semicircular passageway in an end wall of said chamber,



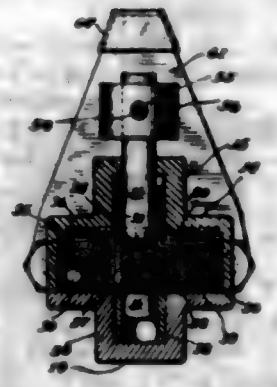
extending from a position adjacent said inlet to a position adjacent said outlet, an outlet from said passageway adjacent said outlet from said chamber, a plate rotatably mounted in said chamber and covering said semicircular passageway, a port leading through said plate in communication with said semicircular passageway, and means for rotatably moving said plate and varying the position of said port between said inlet and said outlet and thereby varying the quantity of fluid displaced through said outlet from said semicircular passageway and the quantity of fluid displaced through said outlet from said pump.

2,899,904
ROLLER PUMP
James J. Becher, Chicago, Ill., assignor, by direct and mesne assignments, to Roll-Flex Industries, Inc., a corporation of Illinois
Application April 27, 1955, Serial No. 504,197
4 Claims. (Cl. 103—149)



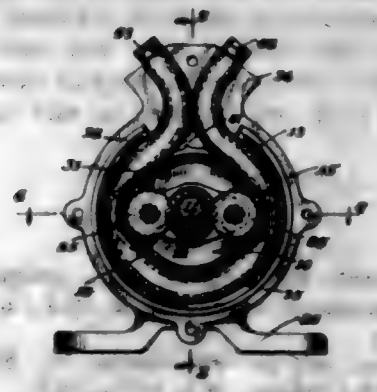
1. A pump of the class described comprising a pair of casing members rigidly secured together to form a cylindrical pumping chamber bounded about its outer extremity by a circumferential wall, said members having oppositely projecting coaxial tubular extensions arranged concentrically with said chamber to provide bearing sleeves, a driving shaft passing through said chamber and rotatably supported on said sleeves, one of said tubular extensions having an open outer end to accommodate said driving shaft and the other extension having a closed outer end to substantially isolate the pumping chamber, a length of collapsible tubing formed into a single loop surrounding said shaft in said casing and arranged in a common plane that is substantially normal to the axis of said shaft, the end portions of said tubing loop being coplanar and in side-by-side contact within said chamber and being turned radially outwardly to extend through a common opening in said circumferential wall of said casing, and planetary roller means disposed between said shaft and said tubing and in frictional surface contact therewith, said roller means being of such radial dimension as to compress said tubing against said circumferential wall of said casing in the region of contact such that rotation of said shaft drives said roller means along an annular path to momentarily compress successive portions of said tubing.

2,899,905
ROLLER PUMP
James J. Becher, Chicago, Ill., assignor, by direct and mesne assignments, to Roll-Flex Industries, Inc., a corporation of Illinois
Application September 11, 1956, Serial No. 609,119
10 Claims. (Cl. 103—149)



1. In a pump, casing means including spaced side walls and an outer circumferential wall extending therebetween and defining a cylindrical pumping chamber, a rotatable drive shaft mounted in said casing means in coaxial relationship with said chamber, collapsible tubing in said casing means surrounding said shaft and having its ends extending through said casing means, resilient means in said chamber reacting between said tubing and one of said side walls to urge said tubing against the other side wall, and compression means disposed between said shaft and said tubing in driving engagement with said shaft and movable along an annular path in response to rotation of said shaft to compress successive portions of said tubing against said outer circumferential wall.

2,899,906
ROLLER PUMPS
James J. Becher and Virgil R. Norris, Chicago, Ill., assignors to Roll-Flex Industries, Inc., Chicago, Ill., a corporation of Illinois
Application February 13, 1957, Serial No. 640,839
10 Claims. (Cl. 103—149)



1. In a pump, a casing defining a cylindrical chamber bounded by an outer circumferential wall, a rotatably mounted drive shaft in said chamber and coaxial therewith, collapsible tubing in said casing surrounding said shaft and having its ends extending through said casing, said tubing carrying a wear flange along the major portion of its inner circumference, with said wear flange having spaced apart opposite ends, a flange insert disposed between the opposite ends of said wear flange to bridge across the ends of said tubing and provide a substantially uniform continuous wear surface, and compression means in driving engagement between said shaft and

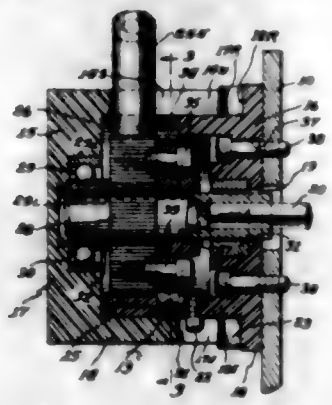
swinging movement transversely of the path of travel of

2. An amusement and educational device comprising

operatively connected with said torsion spring means a chamber within said housing having a cylindrical wall

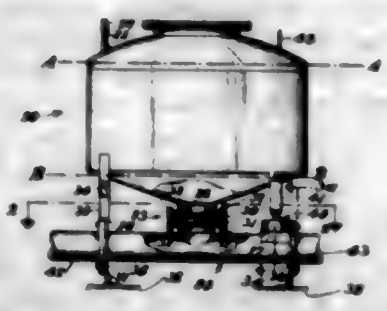
said wear surface and movable along an annular path in response to rotation of said shaft to compress successive portions of said tubing against said outer circumferential wall.

2,899,907
ROLLER PUMP
James J. Becher, North Chicago, Ill., assignor to Roll-Flex Industries, Inc., Chicago, Ill., a corporation of Illinois
Application March 17, 1958, Serial No. 721,715
16 Claims. (Cl. 103—149)



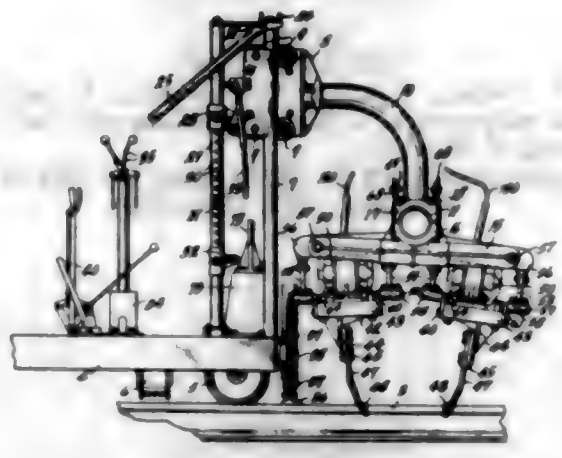
1. In a pump including a casing having a cylindrical pumping chamber bounded by a peripheral wall and opposed end walls, a driving shaft supported in said casing for rotation about the axial center line of said chamber, a generally annular loop of collapsible pumping hose within said chamber in the outer regions thereof, and roller means actuated by said shaft and rotatably mounted within said loop to compress said hose outwardly against said peripheral wall; the improvement wherein cooperating outer and inner housing members comprise said casing, releasable means secure said members in case-forming relation, with the outer housing member including one of said end walls and said peripheral wall and with the inner housing member including the other of said end walls and being adapted for rigid mounting on a supporting structure, the end wall of said inner housing having a shaft access opening therethrough and the end wall of said outer housing having a bearing pocket formed therein, and a bearing fixed in said pocket against accidental removal therefrom, said bearing receiving one end of said shaft to rotatably support the same, and said shaft and said bearing having interengaging portions cooperating to resist endwise removal of said shaft from said bearing such that when said outer housing member is removal, said loop of hose, said roller means and said shaft are retained in said outer housing member.

2,899,908
EJECTOR POTS
Louis J. Nemecsek, Bergenfield, N.J., assignor to Ralph B. Carter Company, Hackensack, N.J., a corporation of New Jersey
Application July 5, 1956, Serial No. 595,924
13 Claims. (Cl. 103—243)



1. A sewage ejecting apparatus comprising, in combination: a sewage receiver; three supporting legs for said receiver so disposed in a triangle that the receiver is tiltable on two of said legs about a horizontal axis; piping connected with the receiver for introducing sewage into and for leading sewage out of said receiver; a source of compressed gas; conduit means in communication with said receiver and connected with said source; flexible coupling means disposed between said piping and said receiver, and between said conduit means and said receiver, respectively, for permitting displacements of the receiver relative to said piping and said conduit means; a weighing device disposed beneath the third of said legs and having continuous supporting contact therewith, said weighing device comprising means for conveying pressures generated by the combined weight of said receiver and its contents acting upon said last mentioned leg; and actuating means operatively connected with said weighing device through said last mentioned means and with said source for causing flow of a compressed gas from said source through said conduit means into said receiver throughout a fixed pressure range generated by the combined weight of the receiver and its contents acting upon said last mentioned leg and said weighing device.

2,899,909
BALLAST TAMPING MACHINE
Cerwill Jackson, Ludington, Mich., assignor to Jackson Vibrators, Inc., Ludington, Mich.
Application January 13, 1954, Serial No. 403,798
7 Claims. (Cl. 104—12)



1. In a tie tamping or ballasting machine, the combination of a carriage adapted to travel on the rails of a railway track, a pair of elongated crossheads disposed transversely of the path of travel of the carriage with one above each rail when the carriage is traveling on rails, cross arms fixedly mounted on said crossheads in transversely spaced relation to each other with one at each side of the rail on which the carriage is traveling and general'y parallel thereto, a pair of transversely spaced upright ways for each crosshead mounted on said carriage, crosshead slides on said ways provided with forwardly and downwardly projecting arms on which said crossheads are fixedly mounted, means mounted on said carriage operatively connected to said crosshead slides for independently raising and lowering the crossheads and applying downward thrust thereto, opposed pairs of vibratory tamping units mounted on each of said cross arms of said crossheads, each tamping unit comprising a base member, a motor supportedly mounted on said base member and having an unbalanced rotor having its axis disposed longitudinally relative to the path of travel of the carriage, blades fixedly mounted on said base members for vibration therewith, hanger bars pivotally mounted on said cross arms of said crosshead for vertical swinging movement in planes parallel to the path of travel of the carriage, and hangers pivotally mounted on opposite sides of the pivots of said hanger bars for

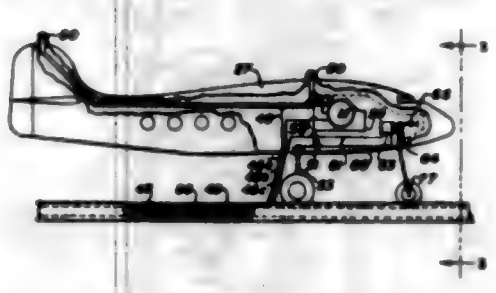
2,899,913

2,899,915

such radial dimension as to compress said tubing against means in driving engagement between said shaft and

swinging movement transversely of the path of travel of the carriage, said base members having a vibration absorbing connection to said hangers.

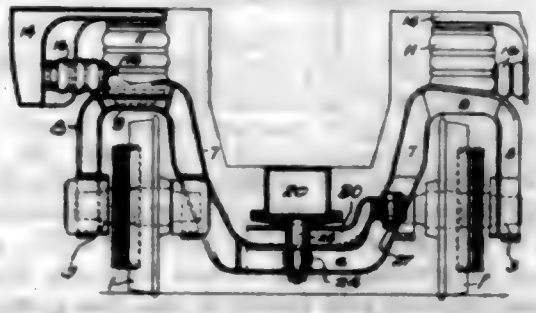
2,899,910
AMUSEMENT AND EDUCATIONAL DEVICE
Joseph Vivari, Green Acres, Md.
Application June 3, 1955, Serial No. 513,128
4 Claims. (Cl. 104—150)



1. An amusement and educational device comprising an interconnected system of a plurality of lengthwise supporting and guiding common courses for wheels of a plurality of wheeled vehicles, said courses each including a base structure for supporting said vehicles and vehicle wheel guide elements extending longitudinally of said base, each guide element comprising an upwardly projecting wall fixed to said base and adapted to be engaged by sides of vehicle wheels for laterally constraining said wheels while providing for longitudinally guiding said wheels, said vehicle wheel guide elements being arranged in spaced parallel pairs for all portions of said courses with different portions of said courses extending in diverse directions, means connecting together adjacent portions of said courses and with certain of said differently extending course portions intersecting each other, said guide element wheel constraining walls of different course portions at intersections thereof providing lateral guiding surfaces for each respective course direction, a plurality of vehicles having wheels engaged with said guide element constraining walls for movement therealong, a vehicle guide wheel lateral constraining surface formed on a longitudinally extending guide track located between and extending parallel to said vehicle wheel guide element walls, a guide wheel for each of said vehicles, means securing each of said guide wheels to its respective vehicle in a position depending therefrom into engagement with said vehicle guide wheel track for movement therealong, a plurality of mutually insulated current conductors parallel to said guide element walls on said base structure each having a longitudinally extending exposed conductive surface, a plurality of current collectors for each of said vehicles, means securing each of said current collectors to each respective vehicle in a position extending therefrom into contact with the exposed conductive surfaces of a selected one of said conductors, current collectors extending from different of said vehicles being arranged in contact with different selected conductors, an electrically operated vehicle steering device in each of said vehicles, means electrically connecting each of said steering devices to a current collector of its respective vehicle, means for connecting said steering device with said vehicle guide wheel for turning said vehicle guide wheel toward a selected direction when said steering device is electrically energized for guiding said vehicle in said selected direction when said guide wheel moves into an intersection having a course portion extending in said selected direction, and an electrical control panel electrically connected to said conductors and having means for selectively and separately energizing said conductors selectively to control said electrically operated vehicle steering devices to turn their operatively connected vehicle guide wheels in a selected direction.

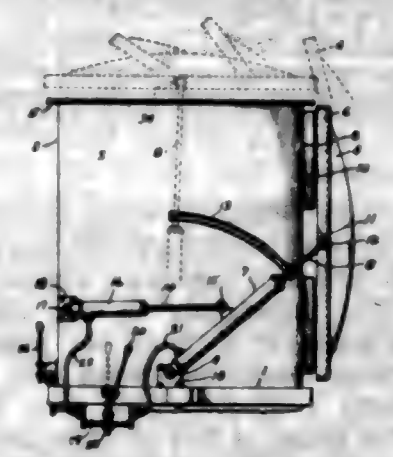
2. An amusement and educational device comprising an interconnected system as set forth in claim 1 with an electric drive motor in each of said vehicles, means electrically connecting each of said drive motors to a separate one of said current collectors of its respective vehicle from said current collector connected to its steering device, and said electrical control panel also having means for selectively and separately energizing said conductors selectively to control said drive motors to control propulsion of said vehicles.

2,899,911
RAILWAY VEHICLE BODY AND TRUCK ASSEMBLY
Richard L. Lich, Ferguson, Mo., assignor to General Steel Castings Corporation, Granite City, Ill., a corporation of Delaware
Application July 5, 1956, Serial No. 596,032
12 Claims. (Cl. 105—171)



1. A railway vehicle two wheel truck comprising a frame rigid from side to side of the truck, a stub axle at each side of the truck individually mounted in the frame and mounting an individual wheel, a vehicle body-supporting spring seated directly on the truck frame above each wheel, links at opposite sides of the longitudinal center line of the truck extending from the frame parallel to each other longitudinally of the truck, and a cross bar pivotally connected at its ends to said links at their outer ends and provided with structure between its ends for pivotal connection to a vehicle body.

2,899,912
TOP LOADING BOXCAR
William A. Janoczko, Hammond, Ind.
Application September 27, 1955, Serial No. 536,807
9 Claims. (Cl. 105—377)

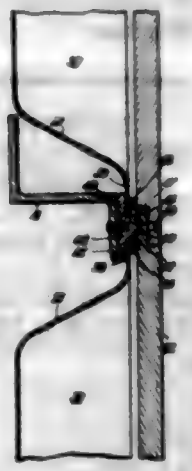


1. In combination: a boxcar having an open top, a cover for the open top, means at the ends of the car for moving the cover relative to the car, each of said means comprising first and second reciprocating units, said first units having ends pivotally connected to the cover and ends pivotally connected to the ends of the car at locations spaced below its upper edges for moving the cover upwardly from the car, and said second units having ends respectively connected to the first units and the ends of the car at locations spaced from the connections between the first units and the car for controlling movement of the first units.

engageable with the free edge portion of said back wall

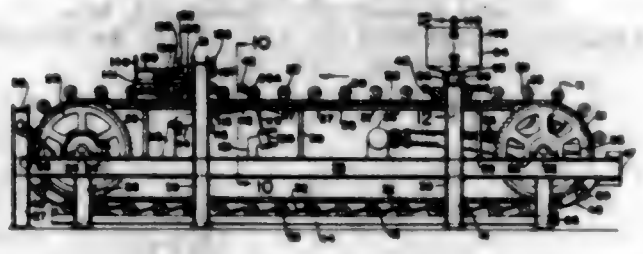
and adapted to distribute plants in a furrow, an end-

2,899,913
WALL STRUCTURE FOR REFRIGERATOR CARS
Kurt E. Zeidler, Chicago, Ill., assignor to Standard Railway Equipment Manufacturing Company, Chicago, Ill., a corporation of Delaware
Application January 4, 1956, Serial No. 557,416
4 Claims. (Cl. 105—409)



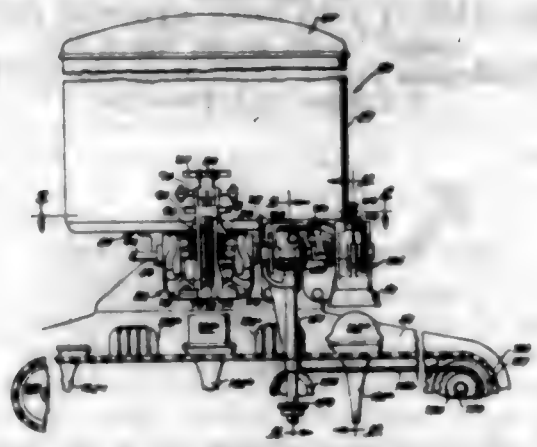
1. In a refrigerator car having vertical posts, elongated flue sheet fasteners trapezoidal in cross section removably attached to said posts and coextensive therewith, a groove along each longitudinal edge of said fasteners, flue sheets compressed between said fasteners, said flue sheets having a body portion with vertical side marginal edges held within said grooves by the resilience of said sheets, and lining secured to said flue sheet fasteners, whereby said lining, said fasteners and said flue sheets form enclosed vertical flues.

2,899,914
CONTINUOUS GRIDDLE CAKE BAKING APPARATUS
Fred C. Van Arsdell, Medina, Ohio, assignor to The Quaker Oats Company, Chicago, Ill., a corporation of New Jersey
Application June 28, 1956, Serial No. 594,613
14 Claims. (Cl. 107—4)



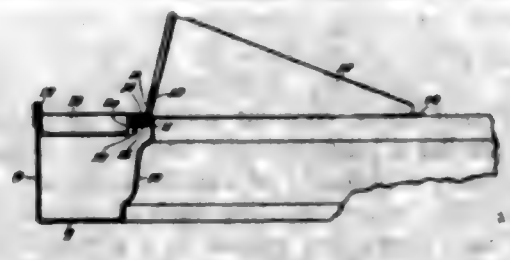
1. Griddle cake baking apparatus including an endless conveyor, a series of transversely extending griddle plates carried on the conveyor, means for depositing a measured charge of batter successively on each plate, means for indexing the conveyor to move the plates successively under the batter depositing means and maintain each plate thereunder a predetermined time interval, means for heating the plates as they progress step-by-step along the conveyor, means for successively turning plate after the batter thereon is cooked on one side to invert said plate over the next forwardly adjacent plate and to return said inverted plate to normal position, scraper means to free said partly cooked batter from said inverted plate whereby the party cooked batter will be deposited on the adjacent underlying plate to be advanced past the heating means to cook the other side thereof, said turning and scraping means operating in timed sequence during said predetermined time interval, and scraper means to free batter cakes cooked on both sides from successive plates.

2,899,915
DISPENSER
George A. Tomik, Libertyville, Ill.
Application October 2, 1956, Serial No. 613,550
17 Claims. (Cl. 107—8)



1. A dispenser mechanism for dispensing material of semi-solid consistency contained in a multi-sectional packing container having a transversely disposed flexible cutting element positioned adjacent each of the transverse planes formed by the junctures of said sections comprising a base structure, a rotatable drum mounted on said base structure with its axis vertically disposed, said drum being compartmented and positioned to support vertically at least one of said containers, means supported by said base structure for engaging one of said cutting elements for severing said material in said container while supporting said container, means supported by said base structure for separating a lower section of said container with said severed material therein while supporting the remaining upper sections of said container, and heated means for receiving said separated section of said container for discharging the severed material therefrom and subsequently expelling said separated section of said container.

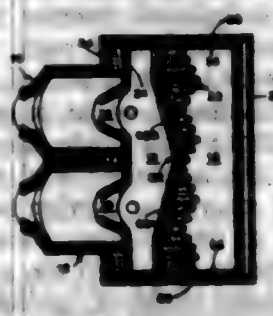
2,899,916
SPLASH GUARD FOR ROOF GUTTERS
Louis Ertman, West Hartford, Conn.
Application April 4, 1957, Serial No. 650,677
2 Claims. (Cl. 108—28)



1. A roof gutter and splash guard having a front wall with an inwardly extending flange along the top thereof and a back wall, a splash guard portion including an upright wall portion, an inwardly extending foot flange on said wall portion resting upon the said inwardly extending flange of the gutter, an outwardly open hook portion on said foot flange extending downwardly and outwardly over the free edge portion of said inwardly extending flange of the gutter and having an opening therein inwardly of the gutter flange, and a retaining member including a tubular body portion disposed between said hook portion and said back wall of the gutter for preventing disengagement of said hook portion from said inwardly extending flange of the gutter, the said retaining member including a downwardly extending tongue at one end thereof projecting through said opening in said hook portion of the inwardly extending flange and a downwardly open hook portion at the opposite end thereof

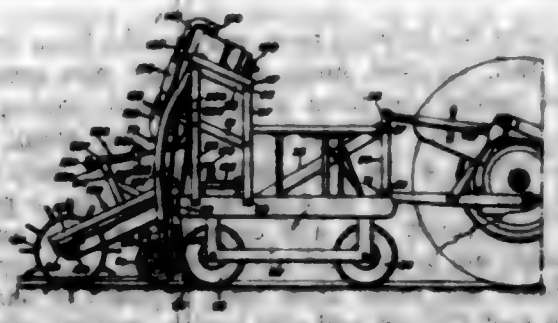
engageable with the free edge portion of said back wall of the gutter for mounting said retaining member in retaining position.

2,899,917
CYCLONE FIRING
Horst Lichtenberger, Wesel, Rhineland, Germany, assignor to The Babcock & Wilcox Company, New York, N.Y., a corporation of New Jersey
Application June 24, 1957, Serial No. 667,364
6 Claims. (Cl. 110—28)



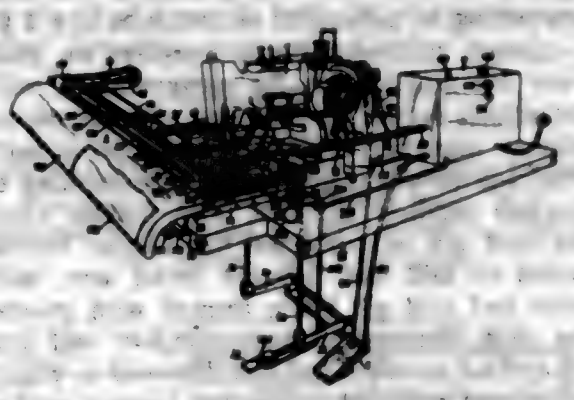
1. A fluid heating unit comprising upwardly extending fluid cooled walls, including front and side walls, defining a furnace chamber, a pair of cyclone furnaces of substantially circular cross-section disposed on opposite sides of the centerline of said furnace chamber and arranged in the front wall thereof, each cyclone furnace having a gas outlet in one end thereof opening to said furnace chamber, said furnace chamber including upright wall portions opposite the gas outlets of the cyclone furnaces to receive the impact of the discharged heating gases, said front and upright walls being horizontally spaced and relatively arranged to provide a heating gas flow space decreasing in depth in a horizontal plane from the center toward the side walls of said furnace chamber, said cyclone furnaces being arranged so that imaginary vertical planes including the major axes thereof extend substantially normal to said front wall and at an obtuse angle to said upright wall portions with reference to the sides of said vertical planes facing each other, and means for introducing a combustible mixture into said cyclone furnaces for discharge through the respective gas outlets into impacting relation with said upright wall portions.

2,899,918
ONION TRANSPLANTING MACHINES
George W. McMillan, Carrizo Springs, Tex., assignor of one-half to E. C. McReary, Carrizo Springs, Tex.
Application September 15, 1955, Serial No. 534,538
2 Claims. (Cl. 111—3)



1. In a machine for transplanting onion plants, a carriage adapted to be drawn forwardly along a furrow in a field and comprising a deck having sides provided with ground wheels, a transverse platform on said carriage for supporting onion plants in upright position, means mounting said platform in elevated position on said deck for access thereto by an operator on the deck, a plant discharge nipple fixed in and depending from said platform and having a plant distributing tube depending therefrom and adapted to distribute plants in a furrow, an endless traveling chain conveyor above said platform having its longitudinal dimension extending transversely of the carriage in front of said discharge nipple and having fixed thereon a plurality of side by side plant conveying tubes having lower ends sliding on the platform with the tubes perpendicular to said platform for loading through their upper ends with upright plants to move the same in upright position over the platform to said nipple and having a front longitudinal loading run, and means on said platform operatively mounting said conveyor to travel past said nipple and successively axially align said tubes with said nipple for discharge of plants from said loaded tubes into said nipple, said platform and conveyor slanting downwardly and forwardly to similarly slant said tubes for convenient access to the upper ends of the tubes of the loading run by an operator on said deck in front of the platform and conveyor.

2,899,919
AUTOMATIC WORK CONTROL FOR MULTIPLE-OPERATION SEWING MACHINES
Gunter Mysko, Kaiserslautern, Pfalz, Germany, assignor to G. M. Pfaff A.G., Kaiserslautern, Pfalz, Germany, a corporation of Germany
Application August 21 1956, Serial No. 605,358
16 Claims. (Cl. 112—67)



1. The combination with a group-stitch sewing or the like machine of the type having stitch forming mechanism, electrically actuatable starting means for initiating a stitching cycle and stop motion means to arrest the machine upon completion of a stitching cycle, of automatic control apparatus comprising a movable carriage having means for supporting a work piece to be operated on by said stitch forming mechanism at a plurality of predeterminedly spaced operating points, electrical drive means to advance said carriage past said stitch forming mechanism from one to the next operating point, first switch means connected to said machine for operation to open and closed positions, respectively, during the operative and non-operative conditions of said machine, step relay means to control said drive means having contacts alternately operable by successive energizing current pulses from closed to open position, and vice versa, said step relay means controlled by said first switch means upon stopping of said machine to energize said drive means upon completion of a stitching cycle after manual initiation of a first stitching cycle by said starting means, second switch means to control said step relay means and actuatable by said carriage at predetermined operating positions thereof to arrest said drive means upon reaching of successive carriage positions corresponding to said predetermined operating points, third switch means similar to said second switch means and actuatable by said carriage at points corresponding to said operating points and delayed-action starting pulse producing means controlled by said third switch means, to operate said starting means and to initiate a stitching cycle upon reaching of successive operating positions of said carriage.

relative to said cavity die past said closed die position,

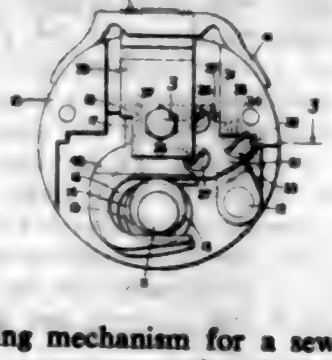
2,899,924

2,899,920

SEWING MACHINE FEEDING MECHANISMS

Earl F. Dunn, Monroe, Conn., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Application October 17, 1957, Serial No. 691,524
10 Claims. (Cl. 112—210)



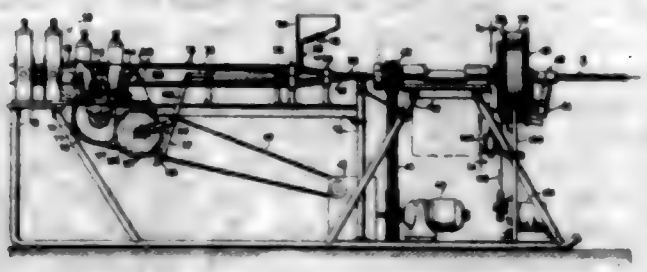
1. In a feeding mechanism for a sewing machine of the type having a rotary actuating shaft journaled in said sewing machine, an eccentric carried by said shaft, a feed bar carrier supported on said shaft for feed advance movement transverse to said actuating shaft, a feed bar embracing said eccentric and slidable on said feed bar carrier in a direction normal to said feed advance movement of said feed bar carrier, a rock-shaft journaled in said sewing machine, and a crank arm fixedly secured to said rock-shaft and connected to said feed-bar carrier for effecting feed advance movement thereto; the improvement comprising an adjustable slideway having a pair of spaced opposed guiding surfaces provided on said feed bar carrier for maintaining the movement of said feed bar substantially normal to said feed advance movement, said slideway including a gib disposed against said feed bar carrier and having a guiding surface forming one of said slideway guiding surfaces, and means adjustably mounting said gib on said feed bar carrier including a stud carried by said feed advance crank arm, said feed bar carrier and said gib being formed with overlapping apertures each disposed to accommodate said stud, an eccentric carried on said stud and disposed to engage the aperture in said gib, and means for turning said eccentric to move said gib toward or away from the other of said guiding surfaces.

2,899,921

APPARATUS FOR MAKING SHEATHED CABLES

Reidar J. Nicolaisen, New York, N.Y., and Harold M. McCall, Fairlawn, N.J., assignors to Raymond International Inc., New York, N.Y., a corporation of New Jersey

Application February 10, 1954, Serial No. 409,394
5 Claims. (Cl. 113—35)



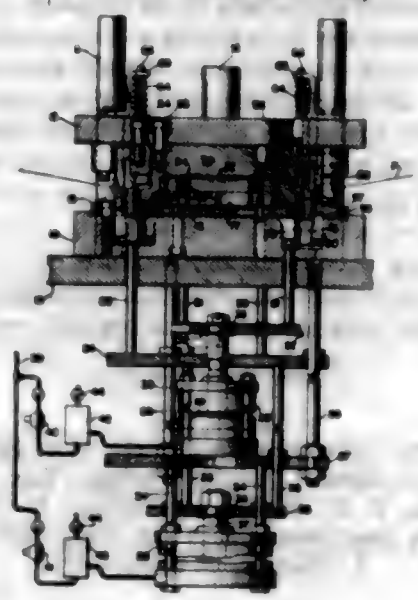
1. Apparatus for forming a cable assembly containing a plurality of wires separated by spacer elements, said wires being loosely surrounded by a sheath formed of helically wound metal ribbon, the edges of the convolutions of which are interlocked, such apparatus comprising in combination: pluralities of pairs of rollers, each pair respectively being shaped and positioned to engage in a nip therebetween one of the wires to individually push same through the apparatus; means for driving said rollers all with the same predetermined peripheral speed; means for guiding the advancing wires in converging relation into the space to be surrounded by the sheath; means for feeding spacer elements of a shape adapted to maintain said wires in spaced apart relationship one from the other; a rotatable reel for carrying a coil of the metal ribbon and an adjacent rotatable headpiece, said headpiece surrounding the path of the wires; a pair of driven shaping rollers mounted on said headpiece and shaped and positioned to provide a nip therebetween for pulling the ribbon from the reel therethrough and at the same time to shape the ribbon edges for forming the interlocking joint between its convolutions on the sheath when formed; a die assembly having a hollow cylindrical interior mounted to rotate with said headpiece about said path, said die assembly interior being provided with a helical formation extending therealong and shaped so as to matingly engage a portion of said ribbon and guide same along a helical path through the die assembly; and means for driving the headpiece and means for driving said shaping rollers at speeds relative to one another such that the shaping rollers push the ribbon into said die assembly and wrap it into a sheath under pressure against the internal formation in the die assembly and cause the resulting sheath to be extruded independently of the wires contained therein, but at approximately the same linear speed as that of the wires as pushed by the first mentioned rollers.

2,899,922

APPARATUS FOR FORMING RECEPTACLES

Edward M. Wheeler, New Kensington, Pa., assignor, by mesne assignments, to Ekco-Alcoa Containers Inc., a corporation of Illinois

Application November 3, 1953, Serial No. 389,965
1 Claim. (Cl. 113—42)



In apparatus for forming pans and the like from frangible metal foil, co-axial male and cavity dies movable into closed position to form a bottom and sloping side wall of a pan from an interposed foil disc blank, said cavity die having a flat rim surrounding its cavity for forming a pan rim with its edge lift projecting, a punch encircling said cavity die and cooperating with an opposed cutedge die to cut said blank from a foil strip, depressible inner and outer draw rings opposed to and coactive with said die rim and said punch, respectively, for placing contiguous marginal areas of the blank under draw tension insufficient to prevent wrinkle formation in said side wall and pan rim during the die closing movement, the outer draw ring having a notch formed in the inner edge of its face, means yieldingly holding said cavity die within said punch in projecting relation thereto, whereby said draw rings are moved thereby into offset planes and the foil blank bent diagonally across said notch to control the wrinkle formation during the die closing movement, said punch being movable forwardly

rollers about which the web is trained and a feed drum ing, a pair of adhesive applicators adjacent said path and

and having a plant distributing tube depending therefrom reaching of successive operating positions of said carriage.

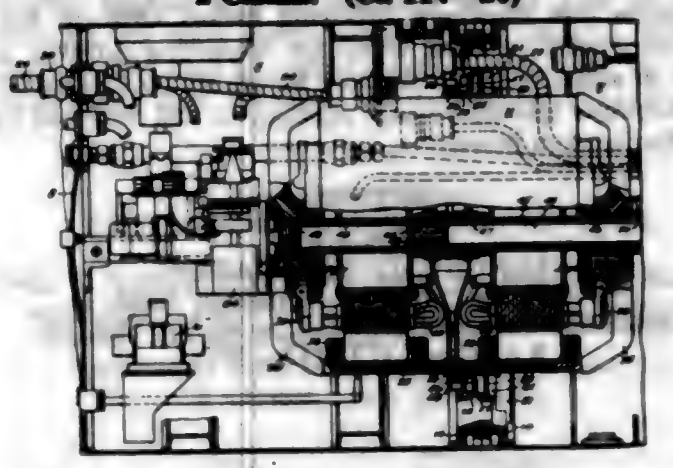
relative to said cavity die past said closed die position, a ring internal of and movable with said punch and having radial clearance with respect to said inner draw ring by an amount slightly greater than the average thickness of the foil for drawing said rim edge along the outer side of said inner draw ring and smoothing out the wrinkles therein to form a rim flange with its free edge flared outwardly, said notch having a flat bottom to roll said flange back into a substantially fully closed rim bead and bend the same into position beyond the plane of said pan rim during initial retractive movement of said punch, the area of said notch being greater than the diameter of said bead, and bolt and spring elements associated with said internal ring to normally yieldingly hold the same in projecting relation to said punch, whereby the ring serves as an ejector to exert outward pressure on said bead and assist in releasing the completd pan from said cavity die during die opening movement.

2,899,923

SOUND DAMPING APPARATUS FOR TORPEDO PROPULSION MECHANISMS

Thomas A. Daly and Herbert L. Prescott, Sharon, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application March 13, 1948, Serial No. 14,736
2 Claims. (Cl. 114—20)



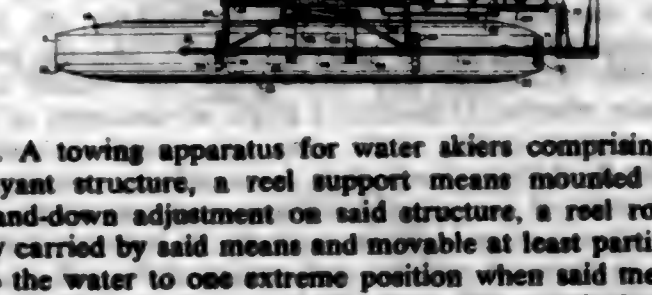
1. In a torpedo of the acoustic type having a metallic shell formed of a plurality of compartment, the combination comprising an electric propulsion motor, a pair of counter-rotating propulsion shafts, said motor having a pair of rotors rotating in opposite directions independently of each other, each of said rotors being directly connected with a different one of said shafts so that rotary motion of said rotors will be effective to impart counter rotation to said shafts directly without the necessity of conventional reversing gearing between said shafts and motor, an L-shaped bracket for mounting said motor in one of said compartments, said one compartment having a support extending radially inwardly to which said bracket may be secured, a layer of sound insulating material between said bracket and motor for damping the transmission of noise vibrations in a radial outward direction from said motor, a layer of sound insulating material between said bracket and support for damping the transmission of noise vibrations in a direction longitudinally of said motor, said layers of sound insulating material being operable to damp the transmission of noise vibrations produced by operation of said motor to said shell, the fore compartment of said shell being the nose of said torpedo, said fore compartment having sound responsive control devices mounted therein for directing the travel of said torpedo to a target, and means connecting said fore compartment to the next aft compartment including a layer of sound insulating material for damping the transmission of noise vibrations from said shell to said fore compartment and thereby to the sound control devices mounted in said fore compartment.

2,899,924

ANCHOR BOOM ASSEMBLY

Fred C. Good, Philadelphia, Pa., assignor to Fred C. Good & Sons, Inc., Philadelphia, Pa., a corporation of Pennsylvania

Application July 2, 1958, Serial No. 746,242
5 Claims. (Cl. 114—218)



5. An anchor boom assembly for mounting on the deck of a boat, comprising: an elongated inverted channel shaped boom for guiding an anchor line, said boom terminating in an upwardly extending bifurcated abutment, a pair of parallel transverse pins longitudinally spaced from each other and mounted on said boom adjacent the inboard end thereof; a mounting plate for attachment to the boat deck; upstanding plate members secured to said mounting plate, said upstanding plates being spaced to receive said boom and each having a slot to detachably receive the outboard one of said pair of spaced pins, said plates further including an abutment for engaging the inboard pin of said pair to limit the pivotal movement of said boom about said outboard pin.

2,899,925

TOWING APPARATUS FOR WATER SKIERS

Gregory G. Mesk, Williston Park, N.Y.

Application December 4, 1957, Serial No. 702,599
11 Claims. (Cl. 114—235)

1. A towing apparatus for water skiers comprising a buoyant structure, a reel support means mounted for up-and-down adjustment on said structure, a reel rotatably carried by said means and movable at least partially into the water to one extreme position when said means is adjusted in a downward direction, said reel including blades arranged for effecting rotation of the reel by the water during the forward movement of the apparatus therein, a towing cable wound upon the reel, said reel when rotated by the water turning in a cable-winding direction, and a combination landing and launching platform on said structure disposed rearwardly from said reel.

2,899,926

APPARATUS FOR EDGE-GLUING, CUTTING, AND STACKING CARBON PAPER FROM ROLL CARBON STOCK

Elden L. Leibold, Clanton, Ala.

Application August 9, 1957, Serial No. 677,366
18 Claims. (Cl. 118—41)

7. Apparatus for edge-gluing, cutting into sheet form, and stacking rolled carbon stock, comprising: a support structure; a roll carbon support assembly thereon adapted for rotatably supporting a roll from which a web is to extend; a web-advancing assembly on said support structure for advancing the web, including a series of idler

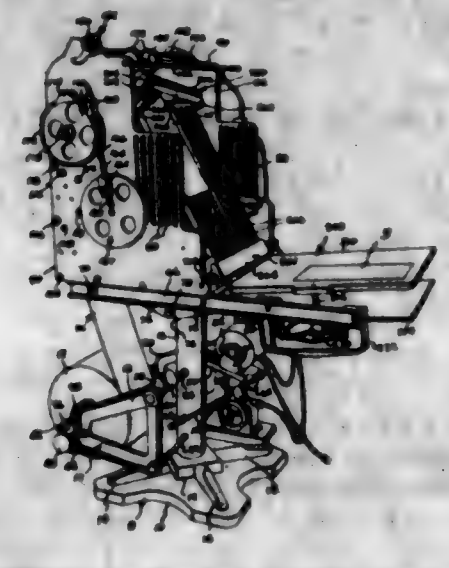
2,899,929

CLEANING SPRAY NOZZLES

2,899,931

WRITING DEVICE HAVING AN EXTENSIBLE AND

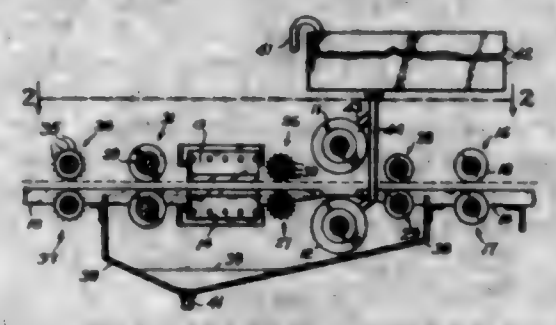
rollers about which the web is trained and a feed drum to which the web is led after passing about the idler rollers; a feed mechanism operatively connected to the feed drum and rotating the same intermittently at predetermined, timed intervals, to effect a step-by-step advancement of the web at said intervals; mechanism on the support structure for applying glue to a selected edge portion of the web during said advancement thereof; a fly delivery mechanism to which said web is advanced, pivoted on said structure to swing between a normally retracted, upwardly extending position in which the web is in overlying relation thereto and a forwardly projecting, delivery position to deliver a sheet cut from the web; a receiving table assembly on said support structure disposed in position to receive delivered sheets for stacking of the sheets on the delivery table assembly; a knife assembly on the support structure for cutting the web to produce said sheets, said knife assembly including a blade mounted on the support structure in a position extending transversely of and in closely spaced, overlying relation



to the fly delivery mechanism in said retracted position of the fly delivery mechanism; and means on the support structure for driving the web-advancing assembly, the feed mechanism, the fly delivery mechanism, and the knife assembly, said web-advancing assembly, the feed mechanism, the fly delivery mechanism, and the knife assembly being operatively, drivingly interrelated in a manner effective to produce a single advancement of the web, a single cutting of the same, and a single movement of the fly delivery mechanism to its delivery position, in each cycle of operation of the apparatus, the single-step web advancement occurring with the fly delivery mechanism in retracted position, said cutting of the web occurring following said single-step advancement, said fly delivery mechanism including a series of fingers spaced transversely of the support structure with their lengths extending normally to the length of said blade, the fingers being hollow and having perforations spaced apart longitudinally of the fingers over the full length thereof, said fly delivery mechanism including means tending to create a vacuum condition in the fingers for causing the web to adhere to the fingers, said fingers having distal ends terminating in close proximity to the blade in said retracted position of the fly delivery mechanism.

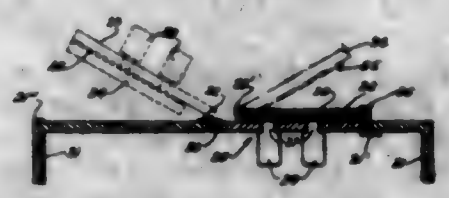
2,899,927
APPARATUS FOR APPLYING ADHESIVE TO WOOD VENEER
Thomas H. Prentice, Portland, Oreg.
Application August 17, 1956 Serial No. 604,835
3 Claims. (Cl. 118—102)

1. An apparatus for applying a film of liquid adhesive to wood veneer comprising means for supporting said veneer in a path as it is advanced through said apparatus, a pair of adhesive applicators adjacent said path and on opposite sides of said path for depositing adhesive on opposite faces of said veneer, each of said applicators having a plurality of discharge orifices whereby said adhesive is ejected as a deluge against both faces of said veneer, supply means delivering adhesive to said applicators, film control means for removing excess adhesive deposited by said applicators whereby a regulated film is formed on both faces of said veneer, said film control



means comprising a pair of stationary wipers mounted on either side of the path for the veneer, each of the wipers having an elongated and resilient contacting portion for resiliently pressing against a face of the veneer thus to determine film thickness, grooving means adjacent said path forwardly of each wiper for imparting grooves to a film of adhesive, and collection means for recovering excess adhesive ejected by said applicators and removed by said film control means.

2,899,928
STENCILING APPARATUS
Veronica de Pulsky, Los Angeles, Calif.
Application February 16, 1956, Serial No. 564,738
5 Claims. (Cl. 118—301)

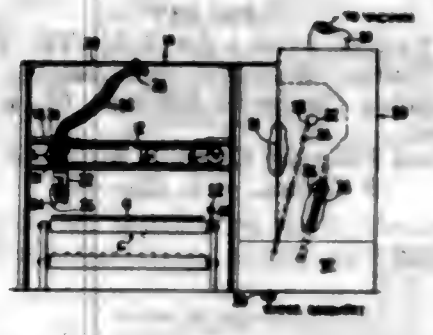


1. An applicator device for applying a flowable decorative material or the like upon at least one portion of the surface of a card or the like, comprising, in combination, receiving means for receiving a card or the like upon at least one portion of the surface of which a flowable decorative material or the like is to be applied; stencil means having a stenciling face and being adapted to be superposed upon the surface of the card or the like while the same is received by said receiving means so said stenciling face of said stencil means is substantially in face-to-face relationship with the surface of the card or the like, said stencil means being formed with at least one passage means therethrough opening at one end thereof in said stenciling face, said passage means having at said one end a cross-section corresponding to the configuration of said one portion of the surface of the card or the like and being in registration with said one portion of said surface of the card when said stencil means is superposed thereupon; and conduit means communicating with said passage means at a point thereof spaced from said one end thereof, whereby when a flowable decorative material or the like is moved through said conduit means toward said one end of said passage means, the material will be applied only upon said one portion of the surface of the card or the like.

of a suitable material such as chamois covering the upper

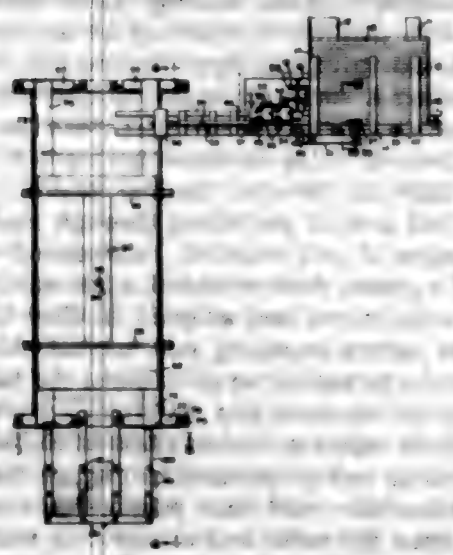
necting the chamber with a source of compressed air, a

2,899,929
CLEANING SPRAY NOZZLES
William J. Monroe, Ford City, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Application November 7, 1957, Serial No. 694,986
5 Claims. (Cl. 118—302)



1. In apparatus for spraying a surface of sheet material comprising a spraying station including sheet support means, spray means spaced from said support means for applying a liquid dispersion of a coating composition onto the upper surface of said sheet material, means for reciprocating the spray means across the width of said sheet material and a freely rotatable brush having bristles aligned with an extremity of the path of reciprocating for each spray means and so located with respect to said path to enable the bristles to wipe the spray means each time the spray means reaches said extremity.

2,899,930
AUTOMATIC HOPPER FED PAINTING MACHINE
John C. Stanley, Robert B. Meere, Jr., William B. Frazier, and Charles Fred Williams, Corinth, Miss., assignors to Gateway Corporation, Corinth, Miss.
Application June 10, 1957, Serial No. 664,739
2 Claims. (Cl. 118—404)

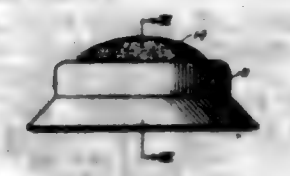


1. Apparatus for the treatment of round slender articles comprising a holder for such articles, means for removing such articles from said holder comprising upper and lower cooperating members between which said articles are adapted to be disposed one by one for endwise movement, article coating mechanism for receiving and coating articles, the upper cooperating member including a driven rotary member, the lower cooperating member including a conveyor providing a substantially continuous support on which the articles are adapted to rest and be carried along one by one, said cooperating members being spaced so that the rotary member moves the articles into alignment with the path of their movement, driving means for said rotary member and substantially continuous support.

2,899,931
WRITING DEVICE HAVING AN EXTENSIBLE AND RETRACTABLE WRITING ELEMENT
Helmut Brun, Brunswick, Germany, assignor to Gunther Wagner, Hannover, Germany
Application May 2, 1955, Serial No. 505,401
12 Claims. (Cl. 120—22)

1. In a writing device of the type having an extensible and retractable rigid writing element provided with a point, a hollow barrel surrounding said writing element blocked at one end and having an opening at the other end through which the point of said writing element may extend, means to normally bias said writing element away from said opening, said barrel being at least in part of flexible material so that it may be bent for curving the barrel transversely of its axis, coacting surfaces on the barrel and the rigid writing element, one of said surfaces being inclined to the axis of the barrel so that upon curving the barrel, said surfaces cooperate to force the writing element point through said opening, and means adjacent said blocked end and acting under the influence of the bias means to retain the writing element in position with its point through said opening, said writing element being released, upon subsequent curving of the barrel, to return under the influence of said biasing means to its original position.

2,899,932
PENCIL POINT CLEANER
Latham S. Bennett, Chicago, Ill.
Application August 22, 1956, Serial No. 605,659
3 Claims. (Cl. 120—106)

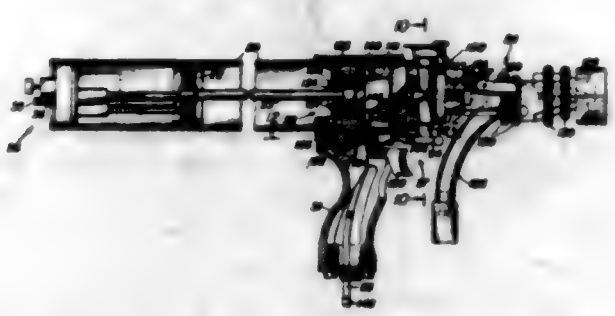


1. In a pencil point cleaner, a one-piece holder comprised of a frusto-conical base, a cylindrical extension projecting upwardly from the top of said base and having an open upper end, an inwardly projecting lip upon the upper end portion of said cylindrical extension providing an open throat portion, a dome-like projection centrally and integrally arranged with the upper surface of said base extending upwardly and spaced from the inner side wall of said cylindrical extension and terminating substantially at the throat portion thereof, a circular groove of semi-circular configuration in the upper surface of said base between said dome-like projection and the side wall of said extension and below said lip, a circular cleaning pad with cylindrical side portions composed of resilient foam rubber engaged between said lip and said circular groove at its circumference and with its base portion pressing against the upper surface of said dome-like projection of said base so that the upper surface of said pad forms a dome-like rubber projection which projects through and above said throat and above said lip of said cylindrical extension and an ink cleaning pad comprised

relative to said piston assemblage and to each other for, which are formed integrally with said one portion and

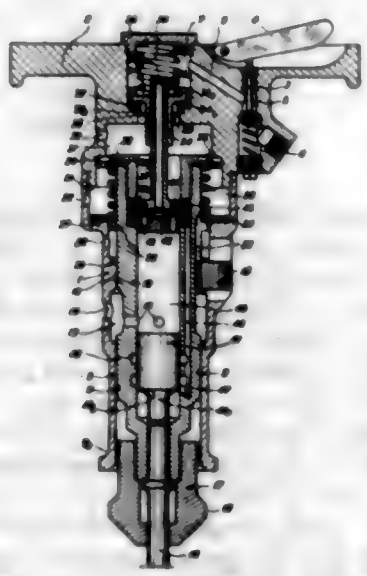
of a suitable material such as chamois covering the upper surface of said circular cleaning pad and removably arranged between the outer peripheral surface of said circular cleaning pad and the underside of said lip, the cleaning pads both being removable from assembly with the one-piece holder by merely bending the pads upwardly and inwardly and withdrawing them from underneath the lip.

2,899,933
PNEUMATIC IMPACT TOOL
Romer F. Good, Brighton, N.Y., assignor to Morgan Machine Company, Inc., Rochester, N.Y., a corporation of New York
Application December 3, 1954, Serial No. 472,887
19 Claims. (Cl. 121—13)



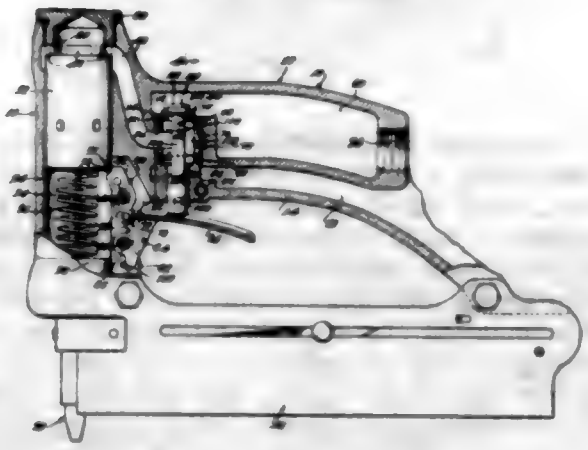
1. A pneumatic impact tool comprising a cylinder having a front and a rear end, a piston movable therein, releasable latch means normally holding said piston in a position adjacent to but spaced from the rear end of said cylinder, a source of air under pressure connected with said cylinder, valve means for introducing said air to the rear end of said cylinder behind said piston, means actuated by said piston when in rearmost position for opening said valve means, and means for releasing said latch means to allow said piston to move forwardly under the urging of said compressed air.

2,899,934
POWER-DRIVEN TOOLS
Paul A. Salengro, Antony, France
Application January 2, 1957, Serial No. 632,189
Claims priority, application France January 19, 1956
12 Claims. (Cl. 121—13)



1. A pneumatic drilling tool comprising in combination a hollow casing element having opposing ends, one of said ends being open and grip means provided on the casing element adjacent the other end, a percussive motor element slidably mounted in the casing element for limited movement through the open end, a partition means extending across the casing element above the open end and defining a chamber above the open end, means connecting the chamber with a source of compressed air, a tube mounted on one of the elements for conducting air from the chamber to the motor element and double-acting resilient means interposed between said motor element and said casing element for biasing said motor element to a mean position with respect to said casing element.

2,899,935
AIR VALVE FOR A PNEUMATIC TOOL
Joseph H. Dalton, Elmhurst, Ill., assignor to Signode Steel Strapping Company, Chicago, Ill., a corporation of Delaware
Application February 12, 1957, Serial No. 639,706
9 Claims. (Cl. 121—21)



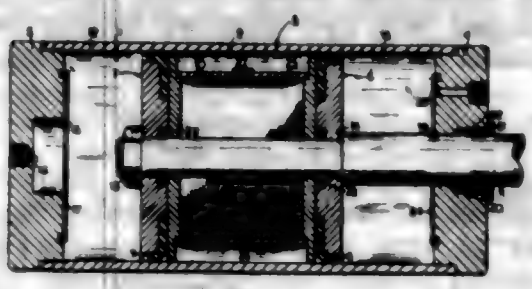
1. A valve for a pneumatic tool adapted to control the flow of air under pressure to and from an air motor and to be positioned between an air motor and an air inlet and an air exhaust, comprising in combination, a sleeve providing a first valve seat open toward the air inlet and having a port communicating with the air motor and an exhaust port communicating with the air exhaust, said ports normally communicating with each other through the interior of said sleeve, a first valve member coacting with and sealing against said valve seat, said first valve member comprising an annulus and providing a second valve seat open toward the air inlet, said annulus having a single passage therethrough from said seat to communicate the air inlet with the underside thereof, a second valve member having a head portion subject to inlet air pressure sealing against said second valve seat and a stem projecting through said passage in spaced relation to said annulus, said second valve member having a piston portion connected to said valve stem, slidable in said sleeve and adapted to close said exhaust port, trigger means engaging said second valve member and adapted to be moved so as to move the latter to open the valve at the air inlet and simultaneously to close the valve at the air exhaust, and annulus lifting shoulders on said valve stem and positioned to engage the underside of said annulus after said head portion has been unseated initially to open the valve and to admit air under pressure to the air motor and said second valve member has been moved a predetermined distance and said piston portion has closed said exhaust port.

2,899,936
FLUID PRESSURE MOTOR DEVICE EMBODYING PISTON BOUNCE INHIBITING MEANS
John R. Edmund, Berkeley, Calif., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Application March 5, 1957, Serial No. 644,874
5 Claims. (Cl. 121—38)

1. A fluid pressure motor device comprising casing means, a double-acting hollow piston assemblage reciprocable in a bore in said casing means, and means in the form of loose particles of solid material disposed within said hollow piston assemblage and movable by inertia

valve element having four lands spaced axially therealong, each of said sections; means forming an exhaust passage

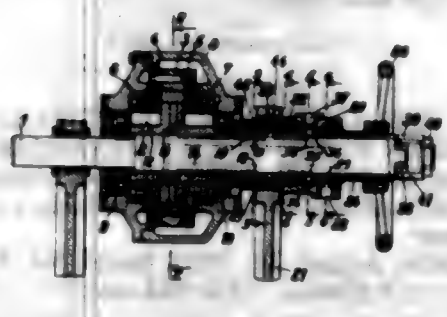
relative to said piston assemblage and to each other for dissipating energy when movement of said piston assemblage in one direction and the opposite direction, respectively, is suddenly arrested so as to thereby damp the tendency of said assemblage to rebound after such sudden arresting.



2,899,937
PRESSURE-OIL OPERATED ROTARY SERVO-MOTOR

Otto Nuebling, Berlin-Frohnau, Germany, assignor to Hanomag Aktiengesellschaft, Hannover-Linden, Germany, a corporation of Germany

Application April 13, 1956, Serial No. 578,116
Claims priority, application Germany April 15, 1955
3 Claims. (Cl. 121—39)



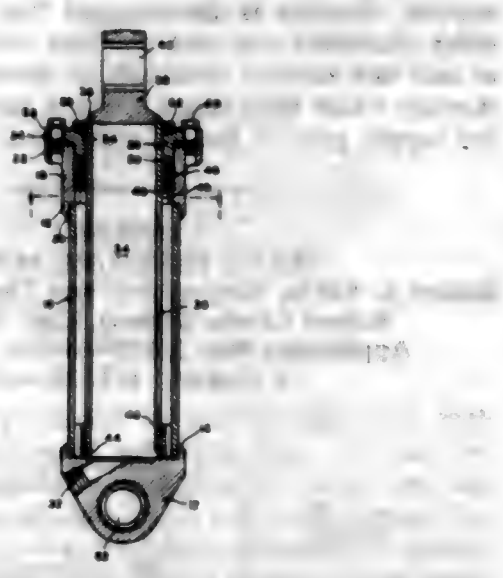
1. A pressure oil operated rotary servo-motor comprising a housing, a shaft rotatably projecting through said housing, a control sleeve immovably secured to said housing and disposed concentrically on said shaft, an externally toothed gear keyed to and rotatable with said shaft and an internally toothed gear disposed eccentrically in relation to and meshing with said externally toothed gear for relative rotation with the latter, the number of teeth on said gears differing by one, both said gears defining tooth chambers therebetween, bearing means disposed in said housing for both said gears, a bushing secured to said control sleeve around said shaft and defining a pressure chamber and a return chamber, respectively, said shaft having axially disposed channels for communication between said tooth chambers and said pressure chamber and said return chamber, respectively, and providing direct power transmission and a control slide rotatably disposed between said sleeve and said shaft and having annular chambers communicating with axially disposed channels in said shaft and an inlet and an outlet disposed in said control sleeve, respectively, and the latter controlling selectively the flow of pressure oil to said tooth chambers.

2,899,938
HYDRAULIC CYLINDER AND PISTON CONSTRUCTION

Richard H. Gardner, Buchanan, Mich., assignor to Clark Equipment Company, a corporation of Michigan

Application September 26, 1955, Serial No. 536,485
1 Claim. (Cl. 121—46)

In combination, hollow cylinder means including first and second vertically extending portions, an annular weld between adjacent ends of said first and second portions for rigidly connecting together said portions, an internal spline formed on the inner periphery of one of said portions comprising a plurality of axially extending teeth, which are formed integrally with said one portion and which extend radially inwardly only of said inner periphery, hollow cylindrical piston means closed at one end thereof and of predeterminately smaller diameter than the diameter of said cylinder means, and external spline connected to the outer periphery of said piston means having a plurality of teeth extending axially of said piston means, said first mentioned spline limiting the extent of movement of said piston means when the teeth of said second mentioned spline are actuated into contact with the teeth of said first mentioned spline, a cap member

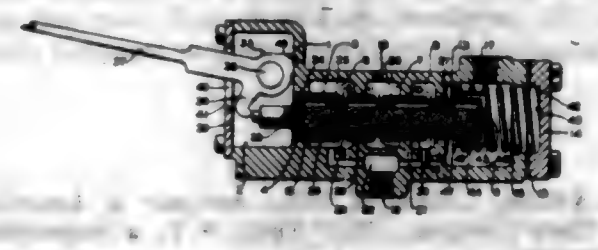


connected to the end of said cylinder means, annular packing means located radially between the walls of said piston means and said cylinder means and located axially between and in abutment with said cap member and said first mentioned spline, means closing the one end of said cylinder means, and passage means in said closing means adapted to connect the inner chamber of said hollow piston means with a source of pressure fluid, said first and second mentioned splines forming passage means for conducting piston actuating fluid pressure to said packing means.

2,899,939
VALVE DEVICE HAVING ARRANGEMENT FOR PREVENTING EXTRUSION OF O-RING SEALS ON VALVE ELEMENT

Charles E. Norris, West Mifflin, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania

Application June 24, 1957, Serial No. 667,331
2 Claims. (Cl. 121—46.5)



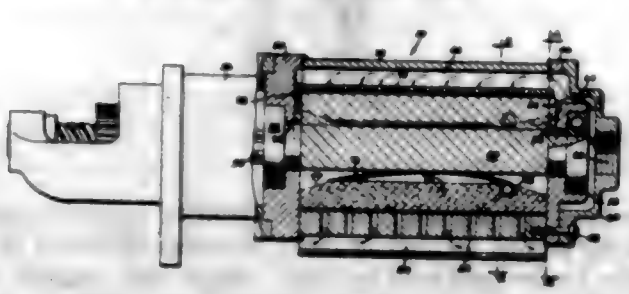
2. A valve device comprising a tubular casing member, a cylindrical bushing member supported within said casing member, said tubular casing member being formed to provide three axially spaced annular chambers surrounding said bushing member and two end chambers into which opposite ends of said bushing extend respectively, a supply opening through which fluid under pressure may be supplied to one of said end chambers, a delivery opening opening out of two of said annular chambers, and an exhaust opening opening out of the third annular chamber intermediate the said two annular chambers, four sets of radial ports in said bushing member connecting the interior of said bushing member to respective annular chambers and one of said end chambers, a spool-valve element slidable in said bushing member, said spool-

2,899,943

box and having its upper portion extending through the

valve element having four lands spaced axially therealong, each land having an annular groove therein, an O-ring in each of said annular grooves for sealing contact with the inner surface of said bushing member, biasing means urging said spool-valve element longitudinally in one direction to one position in which the said two annular chambers are connected in series with each other and the said intermediate annular chamber whereby to exhaust fluid under pressure from the device connected to said delivery opening, and means for shifting said spool-valve element in opposition to the force of said biasing means to a second position in which said intermediate annular chamber is disconnected from the said two annular chambers and said one end chamber is connected to said two annular chambers to provide communication through which fluid under pressure may be supplied from the supply port to the delivery port.

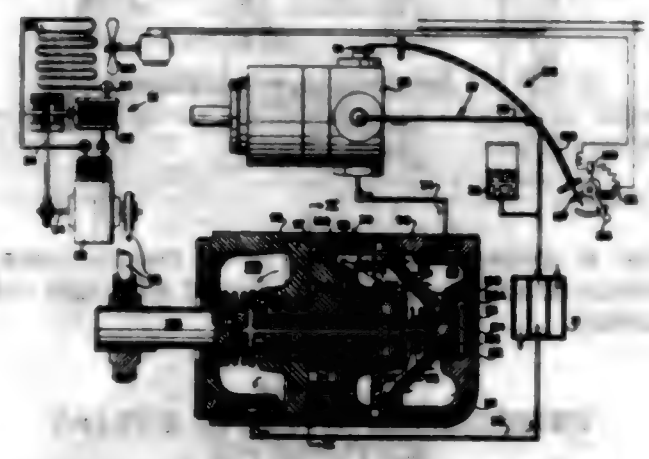
2,899,940
FLUID PRESSURE MOTOR
Robert A. Gibbs, Greensboro, and Thomas A. Gibbs and Robert Laurie Brinson, High Point, N.C.
Application May 3, 1954, Serial No. 427,306
2 Claims. (Cl. 121—86)



1. A fluid motor comprising a housing having a bore therein, a rotor rotatably mounted in said bore on an axis offset with respect to said bore, said rotor being provided with a plurality of radially extending slots, a plurality of blades mounted in said slots, a relatively flat elongated leaf spring of approximately the width of a slot mounted in each slot and urging the cooperating blade outwardly, means to detachably secure one end of said spring to its associated blade, the other end of said spring reacting against said blade and an intermediate portion of said spring reacting against the bottom of the slot whereby the blades are biased to project against the housing, each blade being provided with a transverse substantially circular bore opening along its periphery into the inner edge of the blade, the leaf spring being provided with a curved end adapted to be pivotally received in the circular bore with the leaf spring projecting from the peripheral opening in said bore and permitting flexure of the leaf spring without localized stress.

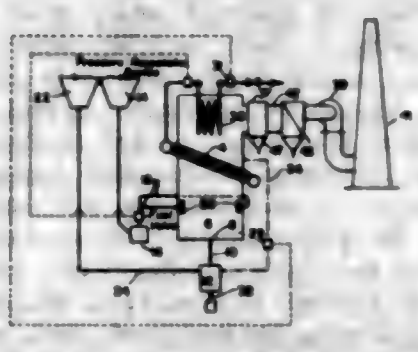
2,899,941
FLUID MOTOR
Cecil E. Adams, Columbus, Ohio, assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Original application December 17, 1954, Serial No. 475,994. Divided and this application September 2, 1958, Serial No. 758,461
5 Claims. (Cl. 121—86)

5. In a fluid motor, a casing forming a rotor chamber, inlet and exhaust chambers at opposite sides of said rotor chamber and inlet and outlet ports communicating with said inlet and exhaust chambers, respectively; a shaft in said casing; rotor means in said rotor chamber driving said shaft, fluid flow through said rotor chamber imparting rotary motion to said rotor means and shaft; a partition supported in said inlet chamber for limited movement and dividing said inlet chamber into high and low pressure sections and having surface areas exposed to each of said sections; means forming an exhaust passage for said low pressure section; a valve element carried by said partition for movement toward and away from a position closing said passage means; means urging said partition and valve away from said passage closing position; means establishing restricted communication be-



tween said high and low pressure sections in said inlet chamber through which fluid flows to create different pressures in said high and low pressure sections the difference between which urges said partition and valve to said passage closing position upon a predetermined flow of fluid through said orifice.

2,899,943
PROCESS FOR OPERATING A TUBULAR HEAT EXCHANGER FIRED WITH PULVERIZED COAL
Georg Brunn, Stuttgart-Bad Cannstatt, Germany, assignor to Kohlenscheidungs-Gesellschaft m.b.H., a corporation of Germany
Application August 30, 1955, Serial No. 531,495
2 Claims. (Cl. 122—479)



1. A method for controlling the temperature of superheated steam in a steam generator having a slagging bottom type furnace equipped with fuel burning means and with a slag outlet for liquid slag discharge and a gas generator the gas outlet thereof being in operative flow communication with said slag discharge opening of said furnace, said steam generator having a superheater absorbing heat from the gases leaving said furnace and means for by-passing hot gases directly from said gas generator to a point intermediate said fuel burning means and said superheater, the steps comprising: increasing or decreasing respectively the amount of fuel burned in said furnace in response to an increase or decrease in steam generating load demand, which increase or decrease respectively tends to increase or decrease the temperature of the superheated steam; passing gases from said gas generator into said furnace by way of said slag outlet; by-passing a controlled amount of hot gases from said gas generator to a point intermediate said fuel burning means and said superheater; and increasing or decreasing the amount of hot gases being by-passed from the gas generator to the superheater in response to a decrease or increase respectively in superheated steam temperature; whereby the superheated steam temperature is held constant regardless of changes in steam generating load.

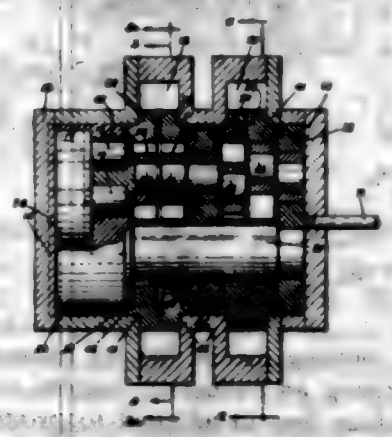
passageway in communication with and above said bore secured to said housing, a link pivotally connected to

tions comprising a plurality of axially extending teeth, valve element slidable in said bushing member, said spool-

2,899,943
PREVENTING STALLING OF CARBURETED INTERNAL COMBUSTION ENGINES
Vladimir Haensel, Hinsdale, and Herman S. Bloch, Skokie, Ill., assignors, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware
No Drawing. Application May 26, 1958
Serial No. 737,471
6 Claims. (Cl. 123—1)

1. The method of preventing stalling due to icing of a carbureted internal combustion engine which comprises coating at least one member of the group of surfaces consisting of the throttle plate and adjacent internal surfaces of the carburetor with a gasoline resistant anti-nucleating hydrophobic material.

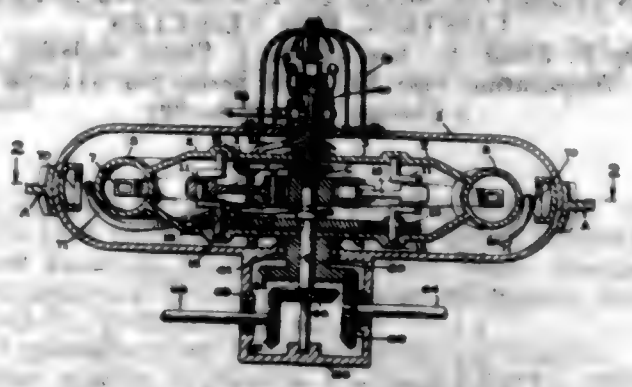
2,899,944
ROTARY INTERNAL COMBUSTION ENGINE
George A. Pratton, Windsor, Ontario, Canada
Application July 25, 1956, Serial No. 524,176
3 Claims. (Cl. 123—11)



1. A rotary internal combustion engine comprising: an annular combustion chamber, a pair of rotors for said chamber, an equal number of pistons mounted on each said rotor for movement in said chamber, the said pistons on said rotors alternating about the circumference of said chamber, means for connecting said rotors together adapted to cause said pistons to approach and recede from each other as they revolve around inside said combustion chamber, including: a number of equiangularly spaced intersecting grooves perpendicular to the axis of said rotors, rigidly located relative to said pistons with said intersection on the axis of said annulus, a cylindrical block rotatably mounted co-axially with said annulus, a coupling member eccentrically and rotatably mounted in said cylindrical block, a number of studs corresponding to said number grooves in said coupling member each being adapted to ride in one of said intersecting grooves during the rotation of said cylindrical block, and a crank arm comprising the means adapted to cause the approach and recession of said pistons geared to said coupling member.

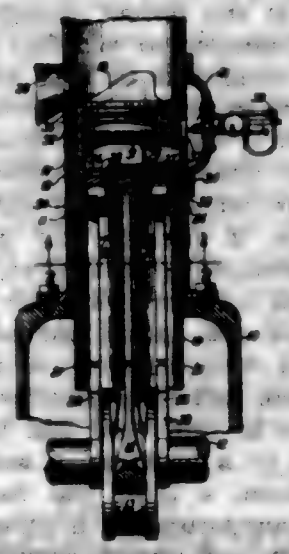
2,899,945
GYROSCOPE MOTOR
Jonas Nogueira Carvalho, Rio de Janeiro, Brazil
Application September 8, 1958, Serial No. 759,762
Claims priority, application Brazil April 28, 1954
1 Claim. (Cl. 123—18)

An internal combustion engine operating on the principle of a gyroscope including, a housing in the shape of a flattened sphere having peripheral exhaust ports and supported in a fixed position, a motor functioning as a flywheel mounted within the housing and having substantially upper and lower side walls and cylinders formed in the periphery thereof at substantially diametrically opposite locations, intake and exhaust valves for said cylinders, a gear box at the underside of the housing, a primary shaft having its lower end journalled in the gear box and having its upper portion extending through the motor and constituting the axis of rotation thereof, a hub fixed to the bottom wall of the motor housing and rotatable about said shaft, a driving gear on said hub, a primary gear keyed to said shaft between said upper and lower walls, crank members journalled in said upper and lower walls, pinions on said crank members meshing with said primary gear, a Z-shaped lever having piston rod portions provided at their outer ends, pistons operating with said cylinders, the medial shank portion of said lever being freely rotatable about said shaft, links at op-



posite sides of the shaft and connecting said lever with said crank elements, valve actuating cams on said primary shaft for respectively operating the intake and exhaust valves, bell-crank type valve actuators adapted for engagement by said cams and in turn alternatively actuating said valves, a bevel gear on said primary shaft meshing with a bevel gear on a workshaft journalled in said gear box, a second bevel gear meshing with the driving gear on said hub and having a workshaft journalled in the gear box, means for supplying fuel to the motor, governor means for controlling the cam, controlling the intake valves, and ignition means for each cylinder.

2,899,946
TWO-CYCLE GASOLINE ENGINE
Garland E. Lyvers, Racine, Wis.
Application January 22, 1957, Serial No. 635,439
5 Claims. (Cl. 123—65)



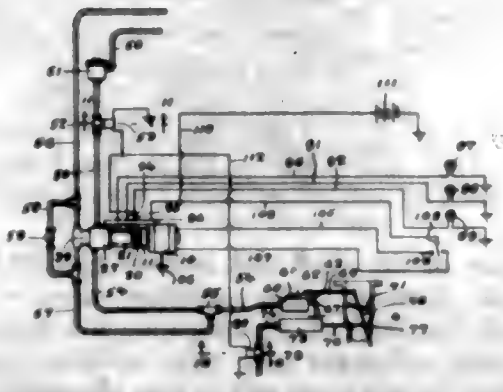
1. In a two-cycle gasoline engine, the combination comprising an engine cylinder, a first piston reciprocably disposed within said cylinder and including a skirt portion, a crank case attached to said cylinder, a crank shaft rotatably mounted within said crank case, a wrist pin attached to said first piston at the top of the latter and extending diametrically therecross, a connecting rod attached between said crank shaft and said wrist pin of said first piston for rotation of said crank shaft upon reciprocation of said first piston, said first piston having a bore in said skirt portion thereof, a second piston disposed within said bore reciprocable therewithin, said wrist pin having an air

lytic material in the path of the vapors in the intake

pressure, conduit means communicating said fuel source

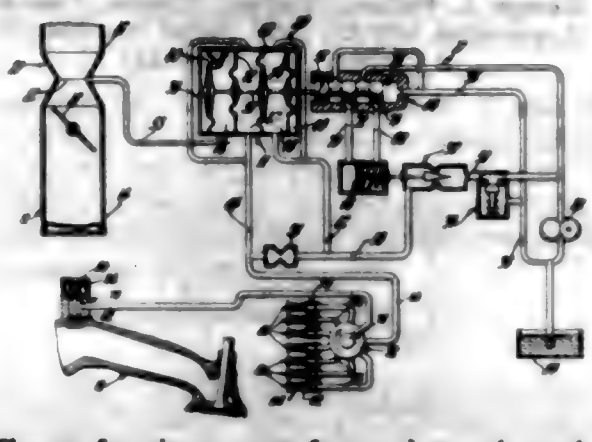
passageway in communication with and above said bore and opening to the side of said cylinder, said cylinder having a port in communication with said passageway at the bottom center position of said first piston and extending to said cylinder at a location above said top of said first piston when the latter is in said bottom center position, and a rod attached to said second piston for causing said pistons to be relatively movable.

2,899,947
AUTOMATIC SELECTIVE VARIABLE SPEED CONTROL FOR VEHICLES
Philip F. Flahr, Jr., and Joseph J. Flahr, Melville, N.Y.
Application May 27, 1955, Serial No. 511,654
3 Claims. (Cl. 123—99)



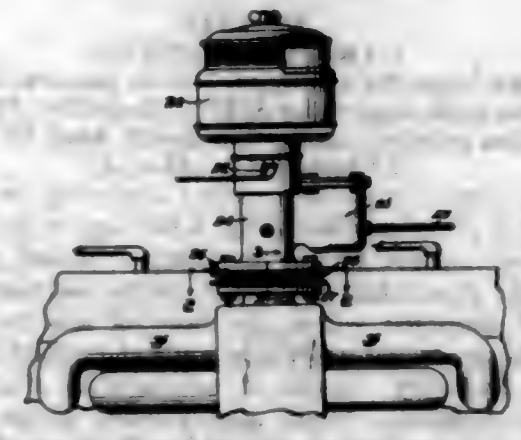
1. In combination, a governor pilot including a motor, a casing arranged contiguous to said motor, plates extending from said casing, said plates having slots, a drive shaft extending from said motor, a first gear mounted on said drive shaft, a stub shaft positioned in said casing, a gear member mounted on said stub shaft and having a section meshing with said first gear, a driven shaft rotatably mounted between said plates, a second gear secured to said driven shaft and meshing with a second section of said gear member, a block movably mounted between said plates and threadedly engaging said driven shaft, fingers extending from said block and slidably projecting through said slots, a base connected to said plates and provided with a chamber, there being a first and second passageway in said base, a first conduit connected to said first passageway and a second conduit connected to said second passageway, there being a bore in said base interconnecting said passageways together, a stem slidably mounted in said bore and including an intermediate portion defining a valve mounted for movement into and out of registry with said passageways, a packing nut positioned in said chamber and surrounding said stem, a body member movably mounted between said plates and connected to said stem, a first coil spring interposed between said packing nut and body member, a second coil spring interposed between said body member and said block, a casing connected to said base and including compartments separated by a partition, a wall member spaced from said partition, a third and fourth conduit connected to said compartments, a fitting connecting said fourth conduit to said second conduit, there being an aperture in said partition, a disc mounted for movement into and out of closing relation with respect to said aperture, a shank connected to said disc and having a flange thereon, said stem being provided with a lip, a third coil spring interposed between said flange and lip, a valve member mounted in said first conduit, a first solenoid for operating said valve member, a housing connected to said second conduit, a plunger slidably mounted in said housing, a diaphragm positioned in said housing for actuating said plunger, a coil spring interposed between said plunger and the adjacent end of the housing, a rod extending from said plunger, a lug secured to said housing, a link pivotally connected to said rod, a coil spring extending between said lug and said link, a butterfly valve, a lever connecting said link to said butterfly valve, said diaphragm being actuated by the movement of the valve in said second conduit to control said butterfly valve to control the speed of a motor vehicle, a tube spaced from said housing, a vacuum line connected to said tube, a solenoid operated valve in said vacuum line, a plunger mounted in said tube, and a rod connecting said last named plunger to said bar.

2,899,948
FUEL INJECTION SYSTEM
Ronald C. Groves, Grandville, Mich., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 28, 1955, Serial No. 555,820
26 Claims. (Cl. 123—119)



1. Charge forming means for an internal combustion engine comprising an induction system having an inlet with a restriction therein adapted to produce a pressure differential indicative of the quantity of air flowing therethrough and a throttle for controlling said flow, a fuel system including a source of pressurized fuel having a fuel line with a restriction therein to produce a pressure drop indicative of the quantity of fuel flowing therethrough, said restriction including a pair of orifices for said fuel to flow therethrough, only one of said orifices normally being inoperative, and a control unit for varying said fuel flow through said last mentioned restriction to maintain a predetermined relationship between said pressure differentials, means responsive to the intake vacuum in said induction system and being effective to actuate said second orifice only during certain vacuum conditions to cause a modification of the charge during such conditions.

2,899,949
DEVICE FOR IMPROVING THE OPERATION OF INTERNAL COMBUSTION ENGINES
J. Byron Hicks, Euclid, Ohio
Application January 31, 1957, Serial No. 637,500
13 Claims. (Cl. 123—119)

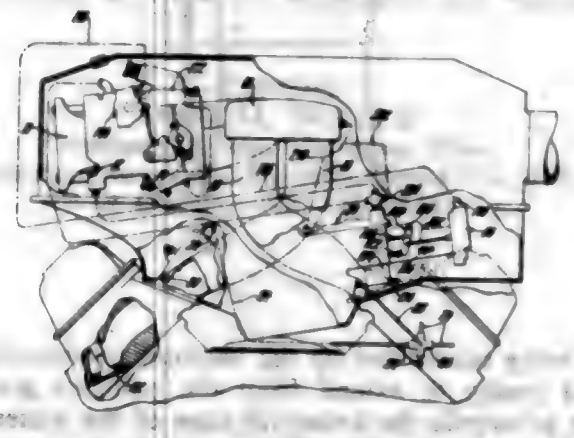


1. A device for improving the operation of an internal combustion engine comprising means for supporting cata-

ing in combination fuel metering means coupled with said for releasably securing said casing about the body of the

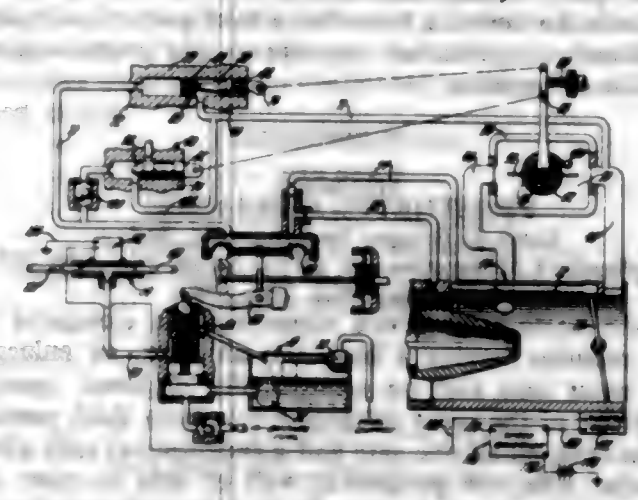
lytic material in the path of the vapors in the intake passage of the engine, said means comprising a plurality of reticulated supporting elements, and thereby supported catalytic material comprising separate catalysts separately supported by said reticulated elements.

2,899,950
FUEL INJECTION ACCELERATION ENRICHMENT DEVICE
Lawrence C. Dormond, Rochester, N.Y., assignor to General Motors Corporation, Detroit Mich., a corporation of Delaware
Application March 14, 1957, Serial No. 646,083
8 Claims. (Cl. 123—119)



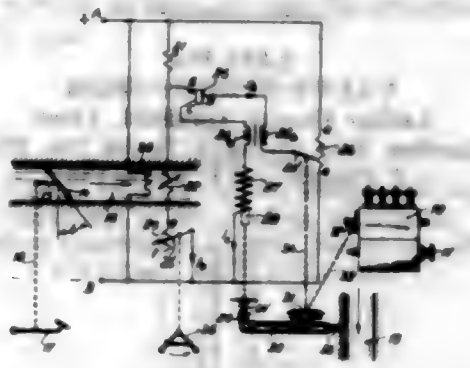
1. A fuel injection system for an internal combustion engine comprising an induction passage for supplying air to the cylinders of the engine, a throttle for controlling the flow of air through said passage, a source of fuel under pressure, conduits respectively communicating each cylinder with said fuel source, valve means disposed intermediate said fuel source and said conduits for controlling the quantity of fuel delivered to the cylinders, a member responsive to the mass of air flowing through said induction passage for controlling said valve, means for applying substantially equal and opposite engine load responsive forces to said valve, and means for creating a pressure differential between said forces during acceleration of said engine whereby the force unbalance shifts said valve to increase the quantity of fuel delivered to said cylinders.

2,899,951
FUEL CUT-OFF DEVICE FOR FUEL INJECTION SYSTEM
Elmer Olson, Ellsworth A. Kehoe, and Lawrence C. Dormond, Rochester, N.Y., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application March 25, 1957, Serial No. 648,300
6 Claims. (Cl. 123—119)



1. A fuel injection system for an internal combustion engine comprising an air induction passage, a venturi formed in said passage, a throttle valve in said induction passage posterior to said venturi, a source of fuel under pressure, conduit means communicating said fuel source with the cylinders of the engine, a valve disposed in said conduit means for metering the quantity of fuel supplied to said cylinder, a device for controlling said valve, conduit means connecting said valve control device with said venturi to actuate said device in accordance with the mass of air flowing through said venturi, a valve device disposed in said conduit means intermediate the metering valve and cylinders for interrupting the flow of fuel, said valve device comprising a solenoid, a throttle controlled switch and an engine speed responsive switch in series with each other and with said solenoid, said valve device blocking the flow of fuel through said conduit means when said switches are closed to energize the solenoid.

2,899,952
ELECTRICAL FUEL INJECTION CONTROL DEVICE FOR INTERNAL-COMBUSTION ENGINES
Richard Zechnall, Stuttgart, and Kurt Pauls, Stuttgart-Obertürkheim, Germany, assignors to Robert Bosch G.m.b.H., Stuttgart, Germany
Application May 13, 1958, Serial No. 734,921
Claims priority, application Germany May 17, 1957
11 Claims. (Cl. 123—140)



1. Electrical fuel injection control device for internal-combustion engines, comprising, in combination, an air supply duct for permitting air to be drawn into the engine; mechanical control means for controlling the amount of fuel injected into said engine; pressure-sensitive control means connected with said air duct and with said mechanical control means, and including a vacuum chamber communicating with said air duct and provided with a diaphragm device mechanically coupled with said mechanical control means, so that said pressure-sensitive control means is capable of actuating the latter depending upon the pressure existing in said vacuum chamber, said chamber having an ordinarily closed air inlet valve which, when opened, causes decrease of any vacuum existing in said chamber; and electrical control means operatively connected with said air inlet valve and with said air duct, and capable of modifying the vacuum in said vacuum chamber by opening said inlet valve depending upon the velocity of the air stream in said air duct.

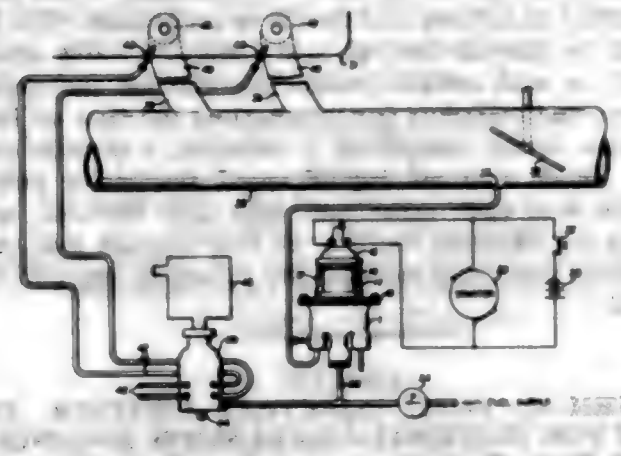
2,899,953
FUEL SUPPLYING SYSTEM FOR SPARK-IGNITION FUEL INJECTION INTERNAL COMBUSTION ENGINES
John Neville Morris, Birmingham, England, assignor to The S. U. Carburetter Co. Ltd., Birmingham, England, a British company
Application December 18 1956, Serial No. 629,120
Claims priority, application Great Britain December 22, 1955
11 Claims. (Cl. 123—179)

1. A fuel supplying system for spark-ignition internal combustion engines which are provided with a starting system, said fuel system including means for supplying liquid fuel to the combustion chambers of the engine by injection, and having provision for cold-starting compris-

thereof, the base of said member being readily severable intermediate portion whose axis extends at an angle ob-

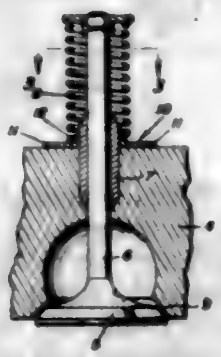
ing, a rod extending from said plunger, a lug combustion engine comprising means for supporting cata-

ing in combination fuel metering means coupled with said engine for metering out a quantity of fuel which varies in proportion to the cranking time of the engine, and means coupling said metering means with said combustion



chambers for adding said metered quantity of fuel to the normal supply provided by said injection means, whereby the fuel mixture supplied to said combustion chambers is enriched during starting for an interval determined by the difficulty encountered in starting.

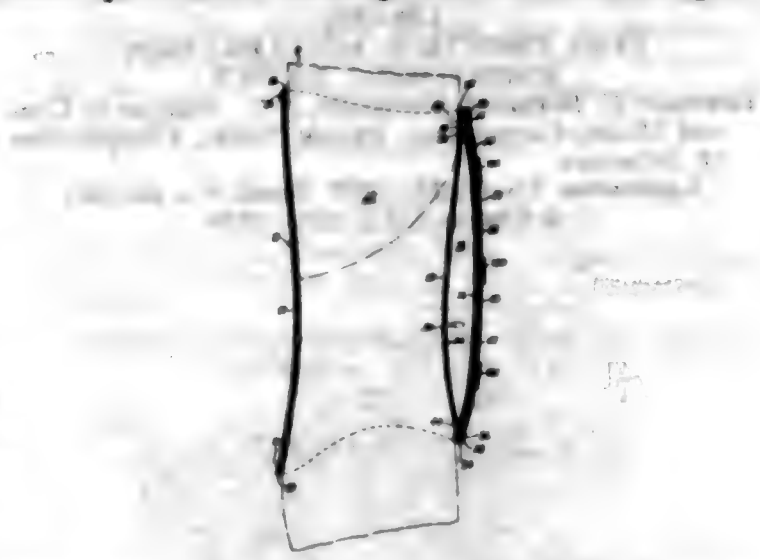
2,899,954
VALVE SPRING SHIM
Luther Daniel, Oakfield, Tenn.
Application July 12, 1956, Serial No. 597,414
2 Claims. (Cl. 123—188)



1. A valve mechanism for internal combustion engines comprising a valve stem, a valve spring encircling said stem, a valve spring shim disposed between one end of said valve spring and the surface of an engine block through which the valve stem extends, said valve spring shim comprising a flat, two-piece washer-like shim having a central circular opening formed therethrough, a circular flange extending upwardly from said shim and about said opening, said shim encircling said valve stem and said flange having its outer surface in contacting relation to the inner surface of said spring, each piece of said shim being generally semi-circular in shape with the flat ends of each disposed in end to end abutting relation, said shim being of sufficient thickness whereby when it is placed between said spring and said surface, said spring will be compressed by a predetermined amount thereby increasing the tension of said spring which may have become weakened from prolonged use.

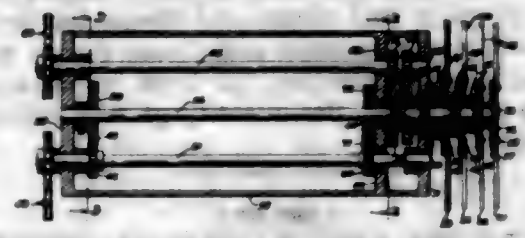
2,899,955
RESPIRATOR BELT
Thomas C. Hartley III, Manhasset, and Irving Eckman, New York, N.Y., assignors to Comitech Ltd., Chauncey, N.Y., a corporation of New York
Application October 9, 1957, Serial No. 689,124
11 Claims. (Cl. 128—30)

1. Apparatus for producing artificial respiration, comprising a flexible casing adapted to be fitted over the frontal portion of the patient's abdominal region, means for releasably securing said casing about the body of the patient in said position, said casing having provision to permit for the passage of fluid into and out of the casing for rhythmically expanding and contracting the latter, when the casing is secured about the body of the patient in said position, and said casing having provision to reduce paradoxical breathing, said last mentioned pro-



vision being constituted by the longitudinal dimensioning of said casing to extend from the patient's groin upwardly to overlie the lower rib cage of the patient, and a panel associated with said casing and adapted to overlie the patient's back, said panel being dimensioned to extend from the coccyx to the shoulder blades, said panel having a greater longitudinal extent than said casing.

2,899,956
EYE STIMULATOR
Phillip S. Newton, Oakland, Calif.
Application July 23, 1956, Serial No. 599,549
9 Claims. (Cl. 128—76.5)



8. An eye stimulator comprising a target consisting of a plurality of pairs of rotatable discs all mounted on a common axis and each containing a different ocular objective, means for rotating said discs in pairs in both directions of rotation, means for rotating one disc of each of said pairs in a predetermined direction of rotation, and means for rotating the other disc of each of said pairs in a direction of rotation opposite to said predetermined direction of rotation.

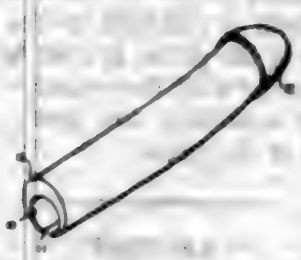
2,899,957
PROSTHETIC APPLIANCE
John J. Briggs, Indianapolis, Ind.
Application November 13, 1957, Serial No. 696,175
2 Claims. (Cl. 128—79)

1. An anatomical device comprising an elongated tubular member having a base and an apex, an enlarged solid outer end and an eccentrically disposed opening lengthwise of the same forming a relatively thick portion or backbone along one side and a longitudinal split along the other side, the peripheral wall of said member decreasingly tapering transversely to longitudinal edges at each side of said split, the structure being such that it may be applied by expanding the adjacent edges to increase the transverse size of the longitudinal opening

formed with attaching means adjacent its lower edge thereof, a bouffant with a waist band, and said waist band and the sides of the girdle, and a reinforcing belt formed of a strip of trapezoidal shape and substantially constant

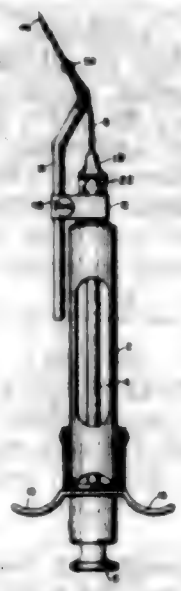
passage posterior to said venturi, a source of fuel under injection, and having provision for cold-starting compris-

thereof, the base of said member being readily severable transversely of its length in order to provide a device of



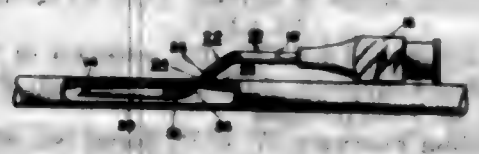
the desired length, said device being of such proportions composition and resiliency to remain securely in place when applied in a manner to support and supplement.

2,899,958
DENTAL NEEDLE
Anthony J. Sen, Mattapan, Mass.
Application November 17, 1955, Serial No. 547,416
4 Claims. (Cl. 128—215)



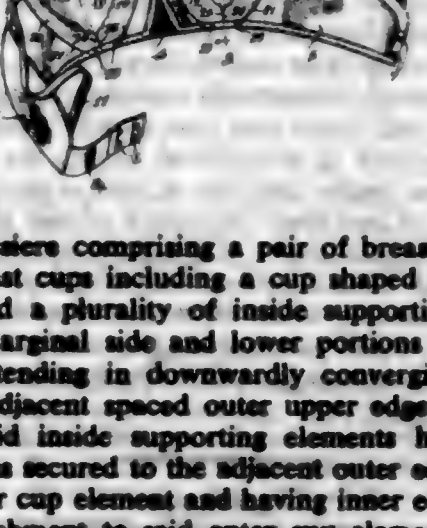
1. In a syringe, the combination of an injection needle and an adapter for holding said needle in any one of a plurality of angular positions with respect to said adapter, said needle having a diagonally disposed discharge end and having a polysided hub affixed thereto, said adapter having a needle receiving bore and a polysided cavity to receive and hold said hub in any selected angular position with respect to said adapter, said adapter having an other cavity immediately adjacent and axially aligned with said polysided cavity of a size large enough to permit axial rotation of said hub when said hub has been moved thereto from said polysided cavity, whereby without removing said needle and hub from said adapter the position of said needle may be changed and the hub thereafter returned to non-rotatable position in said polysided cavity.

2,899,959
HYPODERMIC NEEDLE
Abraham Ginsburg, Philadelphia, Pa.
Application February 10, 1958, Serial No. 714,149
3 Claims. (Cl. 128—221)



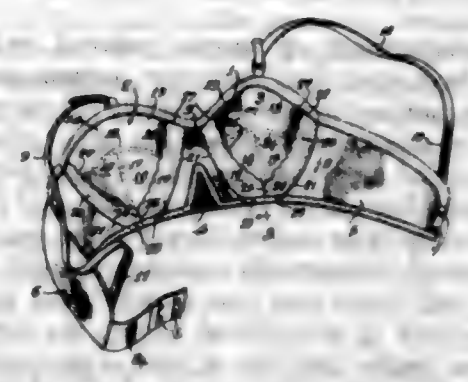
3. A hypodermic needle having a hollow shank terminating in an insertion point, said shank having two vertically spaced horizontally extending portions joined by an intermediate portion whose axis extends at an angle obtuse to each of the axes of said vertically spaced portions and means on said intermediate portion to lockingly receive the wall of a vein after needle insertion.

2,899,960
HYPODERMIC NEEDLE
Abraham Ginsburg, Philadelphia, Pa.
Application March 13, 1958, Serial No. 721,183
1 Claim. (Cl. 128—221)



A hypodermic needle having an elongated hollow shank terminating in an insertion point and means on said shank to lockingly receive the wall of a vein after needle insertion, said means comprising a constricted portion spaced from said insertion point formed by reducing the outer diameter of said shank at a predetermined location, the ends of said constricted portion forming shoulders with said shank serving to limit to and fro movement of the needle in the vein.

2,899,961
BRASSIERE
Evelyn E. Faron, Oak Lawn, Ill., assignor to A. Stein & Company, a corporation of Illinois
Application September 6, 1957, Serial No. 682,436
9 Claims. (Cl. 128—465)



1. A brassiere comprising a pair of breast cups, each of said breast cups including a cup shaped outer fabric element, and a plurality of inside supporting elements overlying marginal side and lower portions only of the cup and extending in downwardly converging relationship from adjacent spaced outer upper edge portions of the cup, said inside supporting elements having outer edge portions secured to the adjacent outer edge portions of said outer cup element and having inner edge portions free of attachment to said outer cup element, and said breast cups being of such size and shape that the lower portions of said cups are adapted to extend below the lower portions of the breasts of the wearer and form portions of a band extending around the body and immediately below the breasts of the wearer.

2,899,962
BASIC UNDERGARMENT AND BOUFFANT
Marina Entringer and Susan Entringer, Cedar Rapids, Iowa
Application September 26, 1957, Serial No. 686,448
2 Claims. (Cl. 128—519)

1. A garment comprising a girdle having a waist portion and leg portions, a snap band attached to the girdle intermediate the waist portion and the leg portions and

from comprising, in combination, a framework, a pair sleeve, and said cushioning means comprising a relatively

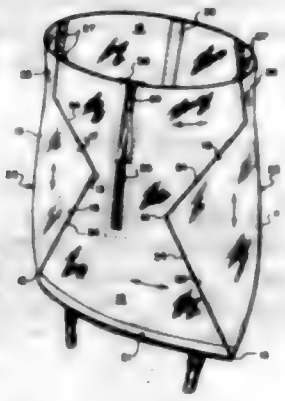
frontal portion of the patient's abdominal region, means

crease the transverse size of the longitudinal opening

formed with attaching means adjacent its lower edge thereof, a bouffant with a waist band, and said waist band

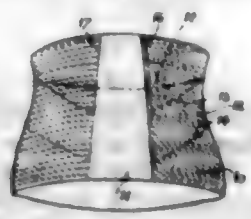
having mating attaching means engageable with the attaching means on the snap band.

2,899,963
UNDERGARMENT
Anne Spitzer, Bayside, N.Y., assignor to Lily Of France, Inc., New York, N.Y., a corporation of New York
Application December 29, 1958, Serial No. 783,429
7 Claims. (Cl. 128—542)



1. An undergarment of woven material including a tight-fitting body-encircling structure comprising front, rear and side panels extending vertically the garment; the upper edges of said panels defining the upper edge of said garment; each of said side panels forming along their opposite longitudinal edges, obtuse angles; said front and rear panels comprising inserts having acute angles along the sides thereof substantially coextensive with said obtuse angles; said front and rear panels being interposed between the arms of said obtuse angles, the sum of one of said obtuse angles and one of said acute angles being in the order of less than 360°, each of said obtuse angles meeting said acute angles of the front panel generally in the upper half of said garment and said acute angle of the rear panel generally in the lower half of said garment; the lower edges of said panels extending obliquely downward from the front of said garment to the rear to form the bottom edge thereof.

2,899,964
LADY'S ELASTIC GIRDLE
André Edmond Benrié, Paris, France
Application May 31, 1957, Serial No. 662,699
Claims priority, application France June 12, 1956
3 Claims. (Cl. 128—548)

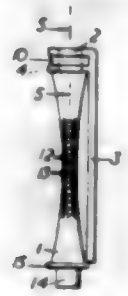


1. A lady's elastic girdle, comprising a front panel of non-elastic material, an elastic section forming the rear and the sides of the girdle, and a reinforcing belt formed of a strip of trapezoidal shape and substantially constant height cut on the straight, the lateral ends of which are attached to the outer edges of the front panel and the upper edge of which is attached to the inner surface of the elastic section of the girdle at least to the rear thereof, in an area registering with the wearer's waist, the lower edge of said strip remaining free and spaced away from the elastic section of the girdle.

2,899,965
BROMATE-UREA OXIDATIVE FIXING COMPOSITION AND PROCESS
Virginia McGoldrick and Everett G. McDonough, Yonkers, N.Y.
No Drawing. Application July 9, 1954
Serial No. 442,440
5 Claims. (Cl. 132—7)

5. A neutralizing solution for fixing mercaptan treated hair comprising a solution of bromate and an additive consisting of urea, said urea being present in a molar concentration of about 1.5 parts per part of bromate.

2,899,966
HAIR CURLERS
Wilfred Skelton, Sheffield, England
Application January 30, 1957, Serial No. 637,115
Claims priority, application Great Britain February 1, 1956
5 Claims. (Cl. 132—40)



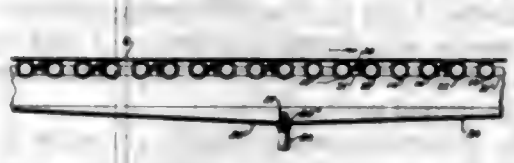
1. A hair curler comprising two one-piece members, one of said members being a barrel comprising an elongated portion of substantially circular cross-section, the other of said members being a combined clip and carrier for one said member and comprising an elongated portion, said members further comprising means for rotatably and detachably securing them together with their respective elongated portions either in side by side or in oppositely directed from the point of detachable securement relationship, said means comprising a cylindrical extension at one end of one of said members, and a cylindrical annulus at one end of the other of said members, said cylindrical annulus having a diameter commensurate with the diameter of the cylindrical extension, the opposite end of each of said members being free and unattached, whereby the extension on one of said members may be inserted into the annulus of the other of said members by lengthwise movement only and in such direction as thereby to rotatably support said clip and carrier on said barrel in either of said relationships, and means coacting between the said extension and annulus for adjustably securing the two members together in any rotative position.

2,899,967
CONVEYOR AND WASHER FOR ELONGATED PLATES
Vance S. Firestone, Ford City, Pa., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania
Application February 17, 1955, Serial No. 488,903
4 Claims. (Cl. 134—63)

1. In a conveyor and washer for elongated plates having encrusted coating to be loosened and removed there-

cally spaced horizontally extending portions joined by an intermediate the waist portion and the leg portions and

from comprising, in combination, a framework, a pair of horizontally disposed and spaced-apart primary rollers mounted on said framework and adapted to support and move the plates placed thereon, a secondary roller disposed between and spaced from said primary rollers and having contact with the lower face of the plates moved thereover, power means for rotating said primary rollers and secondary roller in one direction for movement of said plates, a spray nozzle disposed adjacent said secondary roller and in spaced relation below said plates and so constructed and arranged as to spray cleaning fluid only in the general direction of movement of the plates and

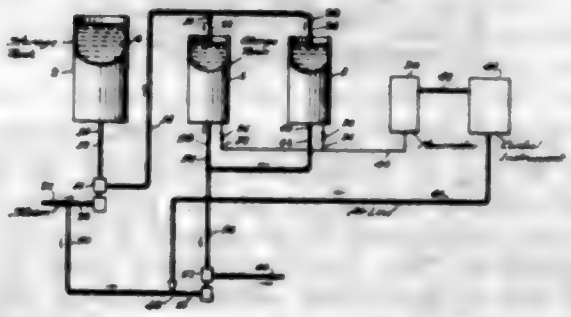


into the line of contact between said secondary roller and the plates moving in contact thereover, whereby a pool of the cleaning fluid is deposited at the line of contact between said plate and said roller, said spray nozzle being spaced in from the end of said secondary roller, and a cleaning fluid supply under pressure connected with and supplying fluid to said spray nozzle, said secondary roller having a flexible rubber covering extending the full length thereof and with said cleaning fluid performing a combined mechanical and chemical loosening of said encrusted coating on said plates supported thereabove and moved therealong, said primary rollers having a hard surface and mechanically breaking up said encrusted coating.

2,899,968
EASY WALKER APPLIANCE
Laurence Leo Reichenbach, Astoria, N.Y.
Application October 15, 1957, Serial No. 690,343
1 Claim. (Cl. 135—45)

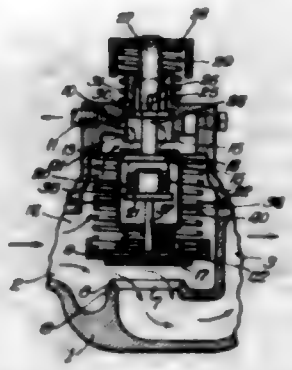
A compressible shank for walking appliances comprising, in combination, a tubular shaft, a fixed sleeve secured to one end of said shaft, a longitudinally slidable sleeve carried by the opposite end of said shaft, means for cushioning the inward movement of said longitudinally slidable sleeve, means for securing a ground engaging member to one sleeve, and means for securing a body engaging member to the other sleeve, said opposite end of said shaft comprising a pair of longitudinally extending slots at diametrically opposite sides thereof spaced inwardly from the outer extremity of said opposite end of said shaft, a pin extending diametrically through the inner end of said slidable sleeve slidably received within said slots for reciprocating longitudinal movement, a transverse wall within the outer end of said slidable sleeve, and said cushioning means comprising a relatively short stiff compression spring acting between said transverse wall and said pin, wherein said body engaging member comprises a handle having a substantially straight shank of reduced diameter, said shank having a longitudinally extending recess, a clip plate secured to said handle shank within said recess, and a tongue integral with said clip plate extending outwardly therefrom for releasable frictional engagement within said slidable sleeve.

2,899,969
CONTROLLING FLOW RATES
Lawrence J. Kirby, Port Arthur, Tex., assignor to Gulf Oil Corporation, Pittsburgh, Pa., a corporation of Pennsylvania
Application March 9, 1954, Serial No. 415,033
10 Claims. (Cl. 137—8)



1. A method of continuously controlling the weight rate of flow of liquid from at least two receptacles, each containing a selected amount of said liquid, which comprises continuously measuring the hydrostatic head of said liquid in one of said receptacles, removing liquid from said one receptacle and controlling the flow of liquid therefrom with a fluid under pressure, continuously varying the pressure of said fluid in accordance with changes in said hydrostatic pressure, substantially immediately upon completion of flow of liquid from said one receptacle continuously measuring the hydrostatic head of said liquid in another of said receptacles, removing liquid from said latter receptacle and controlling the flow of liquid therefrom with a fluid under pressure, continuously varying the pressure of said latter fluid in accordance with changes in said latter hydrostatic head, and continuing the weight rate of flow of liquid from a receptacle containing a selected amount of liquid upon completion of flow of liquid from a receptacle in the manner described above, whereby a continuous operation is obtained.

2,899,970
CONTROL APPARATUS
Russell B. Matthews, Waurwatosa, Wis., assignor to Bece Inc., Milwaukee, Wis., a corporation of Wisconsin
Application November 14, 1955, Serial No. 546,623
23 Claims. (Cl. 137—66)



21. In control apparatus the combination of first and second coupling members having separated initial positions and relatively movable to coupled relation, biasing

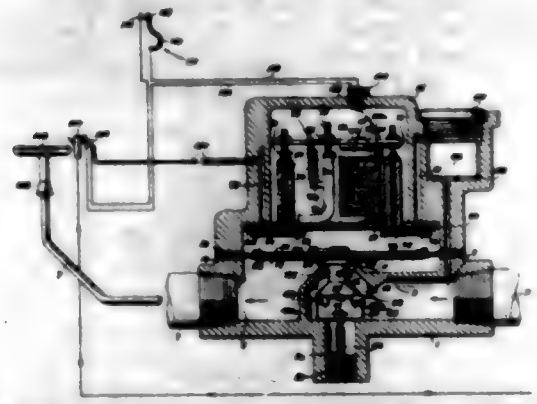
an outwardly flared portion bendable by inlet pressure that ing a central block body portion of a diameter greater

means to bias both of said coupling members toward their initial positions, and positioning means operatively coacting with said coupling members, when coupled, to position said coupling members independent of said biasing means so that neither one of said coupling members is in its initial position, said biasing means on uncoupling of said coupling members, effecting movement of each of said coupling members toward its initial position.

2,899,971
FEEDING DEVICES
Casimir J. Munter, Upper St. Clair Township, Allegheny County, Pa., assignor, by mesne assignments, to Hagan Chemicals & Controls, Inc., a corporation of Pennsylvania
Application September 10, 1954, Serial No. 455,337
7 Claims. (Cl. 137—216)

1. A feeder for introducing additive solution to a liquid flowing in a conductor comprising an elongated hollow member having an entrance end and a discharge end, said entrance end being adapted to be connected to the conductor, flow velocity changing means at the entrance end of said hollow member receiving liquid from the conductor, a second flow velocity changing means intermediate the ends of the hollow member receiving liquid from the first flow velocity changing means, said second flow velocity changing means having an enlarged cross section at its junction with the first flow velocity changing means whereby a vacuum is created at said junction, atmospheric connections in said second flow velocity changing means adjacent its connection with the first flow velocity changing means whereby air is drawn into the hollow member, an elongated mixing chamber at the discharge end of the hollow member receiving liquid from the second flow velocity changing means, said chamber having an enlarged cross section at its junction with the second flow velocity changing means whereby a vacuum is created adjacent said junction and inlet means connected at one end to the mixing chamber adjacent its junction with the second flow velocity changing means and being adapted to be connected at the opposite end to a source of additive solution, said inlet means lying between the atmospheric connections and the discharge end of the feeder.

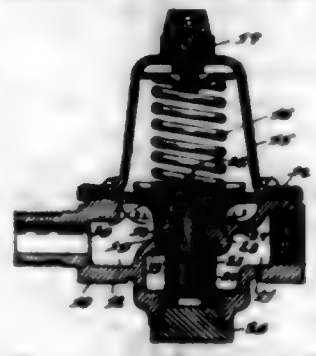
2,899,972
FLUID PRESSURE OPERATED CONTROL DEVICES
Russell B. Matthews, Wauwatosa, Wis., assignor to Bass Inc., Milwaukee, Wis., a corporation of Wisconsin
Application March 29, 1956, Serial No. 574,781
13 Claims. (Cl. 137—495)



1. In a fluid flow control device, in combination, a valve member having flow-permitting and flow-preventing positions, a metering valve movable with said valve member and having a first position permitting full fuel flow therepast and movable in a flow-decreasing direction, fluid pressure operated actuating means for said valve member and metering valve, movement of said valve member from its flow-preventing to a first flow-permitting position permitting full fuel flow, and further movement of said valve member in the same direction effecting movement of said metering valve in a flow decreasing direction from said first position toward a second position affording reduced fuel flow, and biasing means having a lost motion connection with said valve member rendered operative by predetermined movement of said valve member from its flow-preventing position and effective to oppose said further movement of said valve member and movement of said metering valve from its first toward its second position.

12. An electroresponsive diaphragm valve for controlling fluid flow comprising in combination, a valve member having flow-permitting and flow-preventing positions, a metering valve movable with said valve member and having a first position permitting fuel flow therepast and movable in a flow-decreasing direction, pressure responsive valve actuating means including a diaphragm connected to move said valve member, electroresponsive pilot valve means for said actuating means, movement of said valve member from flow-preventing to flow-permitting position affording predetermined fuel flow, further movement of said valve member in the same direction caused by an increase in the pressure of the fluid controlled effecting movement of said metering valve in a flow-decreasing direction from said first position to a second position affording reduced fuel flow, and means comprising biasing means operable to urge said metering valve against movement in said flow-decreasing direction and including means rendering said biasing means ineffective during movement of said valve member between its flow-preventing and flow-permitting positions.

2,899,973
PRESSURE REDUCING VALVE
Gilbert F. Carlson, Skokie, Ill. assignor to Bell & Gossett Company, Morton Grove, Ill., a corporation of Illinois
Application October 16, 1956, Serial No. 616,218
3 Claims. (Cl. 137—505.41)



2. In a pressure reducing valve comprising a valve body including an inlet and an outlet separated by a wall within the body and passage means in the wall for connecting the inlet and outlet, a valve member for controlling flow through the passage means from the inlet to the outlet, a diaphragm connected to the valve member and responsive to pressure in the outlet for shifting the valve member to closed position, and a spring loading the diaphragm for biasing the valve member towards an open position, the improvement that comprises resilient annular check valve means in coaxial relation to one end of the passage means and held under compression between said wall and said diaphragm in all positions of the diaphragm to normally isolate said outlet from said passage means, said resilient check valve means including

transverse wall within the outer end of said slidable sleeve and slidable for reciprocating longitudinal movement, a second coupling members having separated initial positions and relatively movable to coupled relation, biasing

an outwardly flared portion bendable by inlet pressure that is greater than the outlet pressure to open the check valve means and permit flow from the inlet to the outlet.

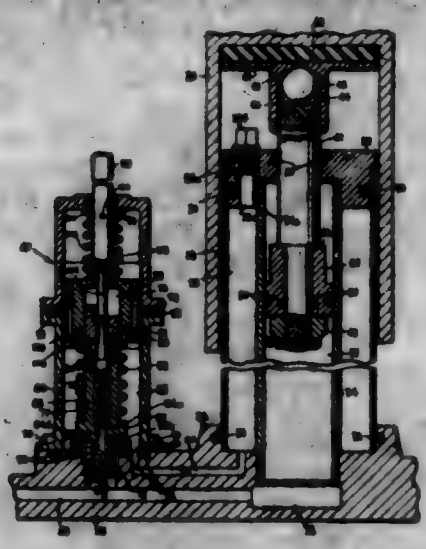
2,899,974
NON-RETURN BALL VALVE FOR RECIPROCATING HYDRAULIC PUMPS
Jean Louis Gratzmuller, Paris, France
Application January 26, 1954, Serial No. 406,262
Claims priority, application France February 3, 1953
1 Claim. (Cl. 137—533.11)

A ball check valve comprising a casing providing a cylindrical valve chamber having an open end and a fluid outlet port, a cylindrical seat member inserted in said open end of the valve chamber and having an inlet portion provided with an axial bore and a tubular cage portion coaxial with said bore and extending longitudinally within said valve chamber, the internal diameter of said cage portion being greater than the diameter of said bore to provide an internal annular shoulder forming a valve seat, and the external diameter of said cage portion being smaller than the diameter of said valve chamber so as to provide an annular clearance space of full flow capacity therebetween, said external diameter of the cage portion being also smaller than the external diameter of said inlet portion so as to provide an external shoulder spaced below the plane of the internal shoulder, a freely floating ball valve confined in said cage portion with just sufficient clearance for free longitudinal movement with respect to said seat and adapted to engage the latter, abutment means for trapping said ball valve in said cage portion, and a plurality of apertures provided in the base of said cage portion to permit the fluid which passes the ball valve when displaced from its seat to escape through said apertures into said annular clearance space, the total area of said apertures being at least as large as the area of the seat bore, said apertures extending each from said external shoulder to a plane transverse of said cage portion nearer said internal shoulder than the line contact with the cage portion of the ball valve when seated, so that the surface of the ball valve can at no time be abraded by the edges of said apertures, said internal shoulder being provided with a depression for each said aperture extending radially outwardly and downwardly from the valve seat to the bottom of the adjacent aperture.

2,899,975
FLUID PRESSURE REGULATING VALVE
John J. Fernandez, Baltimore, Md., assignor of one-half to John R. Bonsal, Philadelphia, Pa.
Application January 22, 1957, Serial No. 635,248
3 Claims. (Cl. 137—543.17)

1. In a low pressure fluid pulsation regulator valve, the combination of a cylindrical valve casing member having a central block body portion of a diameter greater than the thickness thereof, a diametral partition wall formed integral with the body portion to divide the casing into an inlet chamber on one side of the partition wall and an outlet chamber on the opposite side of said partition wall, disc-shaped casing members secured to the opposite side peripheral end portions of the casing block body portion to complete the inlet and outlet chamber casing walls, an inlet passage formed in the casing block wall for conducting fluid to the inlet chamber, an outlet passage formed in the casing block wall for conducting fluid from the outlet chamber, a throated fluid flow passage formed in said partition wall for conducting fluid between the two chambers to effect a fluid pressure differential between the two chambers for initially dampening the fluid pulses, a valve unit located in the outlet chamber for controlling the flow of fluid through the throated passage, said unit comprising a corrugated spring metal bellows mounted in the outlet chamber to effect a variable capacity of said outlet chamber, the upper peripheral edge of said bellows being secured between said end portion of said block and the disc-shaped casing member, and a valve member mounted at the lower extremity of the bellows to control the flow of fluid through the throated passage and finally dampen the pulses, said valve member having a larger surface area than the discharge end of said throated passage and including a concave surface formed therein adjacent said throated passage to provide a supplemental inlet pressure chamber on a portion of the partition wall.

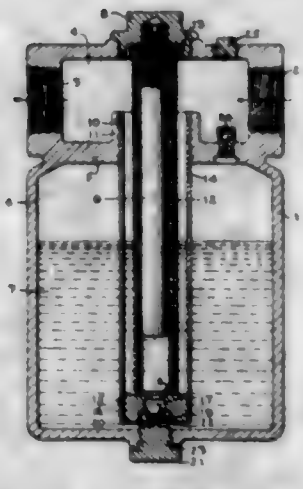
2,899,976
RELEASE RELIEF VALVE
Charles A. Ellis, Hamden, Conn., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts
Original application January 12, 1949, Serial No. 70,699, now Patent No. 2,711,632, dated January 28, 1955. Divided and this application January 7, 1955, Serial No. 480,540
2 Claims. (Cl. 137—599.3)



1. A hydraulic release-relief valve comprising a solid outer wall casing having a centrally disposed fluid inlet port in the base thereof and at least one fluid outlet port also in said base spaced from said inlet port, a tubular member dividing the interior of said casing into a pair of pressure chambers, said tubular member resting on the base of said casing when in normally closed position and having a central bore therein forming one of said pressure chambers, said central bore being in communication with said inlet port, said outlet port communicating with the other of said chambers, the central bore of said tubular member having an elongated upper section of reduced cross-sectional size, a longitudinally adjustable gate means disposed in said upper section, said gate

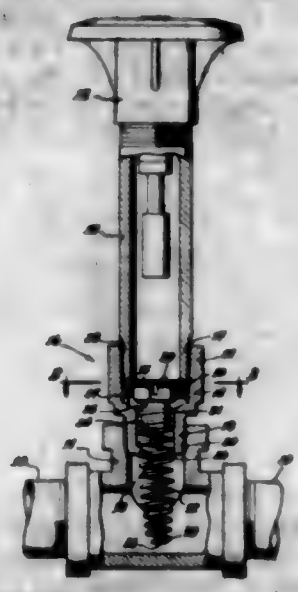
means embodying an enlarged closure portion within said bore of a cross-sectional size greater than that of said upper section for normally closing the communication between said upper section and the remaining portion of said central bore and an elongated gradually tapering conical shank portion extending substantially throughout the length of said upper elongated reduced section of the central bore, said conical shank portion of the gate means having its end of greatest cross-sectional area substantially equal to the cross-sectional area of the elongated reduced upper section of said central bore and being in connected relation with said enlarged closure portion thereof, said tubular member having transversely disposed apertures extending between said upper section of the central bore therein and said other of the chambers, operable means for adjusting said gate means longitudinally in the upper reduced section of said central bore to open and close communication between the chambers in said casing whereby said gradually tapering conical shank portion will function to meter a flow of fluid through said communication in accordance with the extent to which said gate means is adjusted in said upper section of said central bore in the tubular member, said tubular member being adapted for movement toward and away from the base of said casing, and spring means normally urging said tubular member to remain at rest on said base, said spring means being under such tension that when a fluid in the tubular member exceeds a maximum pressure the said pressure, in excess of said maximum, acting on said tubular member will overcome the tension of said spring means and lift the tubular member off said base to permit a flow of said fluid into said other chamber having an outlet port to reduce said pressure and allow the tubular member to return to its normal closed position.

2,899,977
ANTI-FREEZER FOR PIPE LINES
Robert B. Morris, Chatham, N.J., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Application October 25, 1955, Serial No. 542,641
6 Claims. (Cl. 138—34)



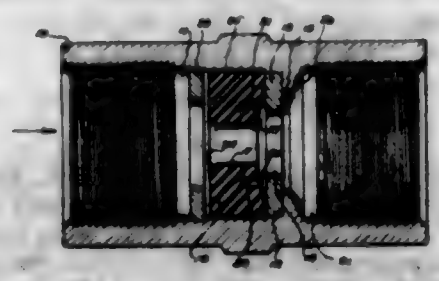
1. An anti-freezer device comprising a casing interposable in a fluid-pressure-transmitting conduit and having a first chamber through which fluid under pressure in the conduit flows and a second chamber for storing a volatile anti-freeze liquid, a wick disposed partly in said first chamber and partly in said second chamber for conducting the anti-freeze liquid from said second chamber to said first chamber for introducing it by vaporization into the fluid under pressure flowing in the conduit, and valve means by which, when in one position, said second chamber is in communication with said first chamber and operable to another position in which said communication is closed without interrupting the flow of fluid under pressure through said first chamber.

2,899,978
FLOW RESTRICTOR
John O. Hruby, Jr., Burbank, Calif., assignor to Rain Jet Corporation, Burbank, Calif., a corporation
Application July 9, 1958, Serial No. 747,417
3 Claims. (Cl. 138—43)



1. A flow restrictor for a tubular conduit comprising a tubular body adapted to be mounted in the conduit for flow through the body, the body having an inside wall defining a bore extending therethrough, a plug member comprising a stem portion receivable coaxially in the downstream end of the bore, and a cylindrical coil of resilient material having a downstream end portion thereof around the stem portion and secured to the plug, the axial length of the coil being substantially greater than that of the stem portion, the outside diameter of the stem portion being about equal to the inside diameter of the coil, the outside diameter of the coil being about equal to the diameter of the bore whereby a flow passageway through the restrictor is provided around the stem portion and between adjacent turns of the coil, and a projection on the inside wall of the body extending between a pair of adjacent turns in the coil.

2,899,979
FLOW CONTROL DEVICE
Robert R. Dahl and Howard L. Erickson, Chicago, Ill., assignors to The Dole Valve Company, Chicago, Ill., a corporation of Illinois
Application May 19, 1955, Serial No. 509,549
6 Claims. (Cl. 138—45)

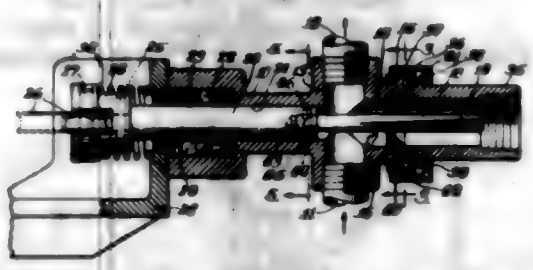


5. A fluid flow control device comprising a casing having a passageway leading therethrough, a flat seat in said passageway facing the upstream side thereof, a resilient annular flow control device loosely carried in said passageway and seating against said seat upon the flow of fluid therethrough, the inner margin of said flow control device defining a central fluid flow orifice decreasing in cross-sectional area upon increases in pressure on the upstream face of said flow control device, and a metal stabilizing ring molded within said flow control device concentric with the center of said orifice and closer to the downstream face of said flow control device

ings and the seal downstream of the cut portion, there- one group to be raised over successive independent pairs

than the upstream face thereof, for preventing distortion of said flow control device and maintaining the contour of said orifice uniform in the extreme restricted positions thereof and thereby enabling the flow capacity of said flow control device to be increased without an increase in the size of the casing therefor.

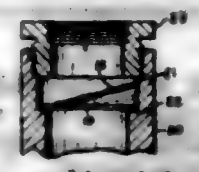
2,899,980
MODULATING VALVE
Frederick A. Loebel and Hugo Herman Grabecker, Milwaukee, Wis., assignors to Cleaver-Brooks Company, a corporation of Wisconsin
Application January 20, 1956, Serial No. 560,393
4 Claims. (Cl. 138—46)



3. A modulating valve, comprising; a housing having a fluid inlet and a fluid outlet and a passage connecting the inlet and outlet, means within the housing in the passage between said inlet and outlet means defining a thin walled circular orifice, an elongated cylindrical valve member in the housing mounted with a close sliding fit in said orifice for reciprocal movement therethrough, said valve member having a uniform diameter throughout the portion of its length sliding in said orifice substantially equal the diameter of the orifice and having a slot in one side varying progressively in size to define cooperatively with the wall of said orifice a variable sized opening through the orifice for fluid passage, means for operating said valve including a rod substantially aligned with the valve member and reciprocal in the housing, means forming a loose connection between said rod and said valve member providing positive sliding movement of said valve member with said rod, preventing relative rotation therebetween, and enabling movement of the valve member relative to the rod in any direction transverse to the axis of the valve member thereby permitting the valve member to align itself and slide freely within the orifice, said means defining said orifice comprising a cylindrical orifice block, an annular recess formed in said housing concentrically with said passage and receiving said orifice block, means for clamping said block axially against the bottom of said annular recess, said orifice block having an outer diameter less than the diameter of said annular recess to provide an annular clearance between the periphery of the block and the periphery of the recess enabling adjustment of said block in said recess within the limits of said annular clearance before the block is clamped, and enabling lateral movement of the block under excessive force end cap and said housing, thereby providing a double after clamping.

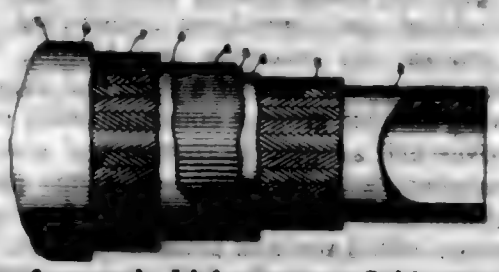
2,899,981
FLOW CONTROL DEVICE
Chester J. Blaha, La Grange, Ill., assignor to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Application October 1, 1957, Serial No. 687,469
3 Claims. (Cl. 138—46)

1. A flow control device comprising a conduit having a chamber therein with an outer annular shoulder facing the upstream side thereof, a metal disc extending across said chamber and seated against said shoulder, said disc having a resilient tongue which extends lengthwise substantially more than half-way across the disc and integrally joined to the disc at one end, said tongue normally projecting at an acute angle from the plane of the disc toward the upstream side of the chamber, the disc having an opening under said tongue which is progressively restricted as the tongue flexes toward the plane of the disc under the influence of increasing fluid



pressure on the upstream side of the disc, the free end of said tongue extending substantially to the region of the periphery of the disc so that it will engage said shoulder to limit flexing of the tongue beyond the plane of the disc.

2,899,982
HYDRAULIC BRAKE HOSE
Donald E. Harpfer, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Application June 25, 1957, Serial No. 667,796
8 Claims. (Cl. 138—55)



1. A hose for use in high pressure fluid systems comprising an elastomeric fluid impervious inner tube, a fabric reinforcing layer of regenerated cellulose superimposed thereon, an elastomer coated layer of nylon elements about the said tube and said fabric layer, said elements being closely spaced with respect to each other and substantially parallel with each other and oriented substantially parallel to the longitudinal axis of the said inner tube, and an outer elastomeric fluid impervious tubular cover about the whole.

2,899,983
METHOD AND APPARATUS FOR REPAIRING A FLUID PRESSURE LINE
Vernie L. Farris, Houston, Tex.
Application March 24, 1958, Serial No. 723,585
3 Claims. (Cl. 138—97)

1. A method of repairing a fluid line under pressure including the steps of sealing off about the fluid line in the portion to be repaired, cutting the fluid line in the sealed off portion, sealing off between the cut portions of the fluid line, sealing off the fluid line downstream of the seal between the cut portions, removing the seal between the cut portions while maintaining the seal about the cut por-

plurality of columns of said first yarns, each pair of adjacent columns of yarns including a pair of adjacent

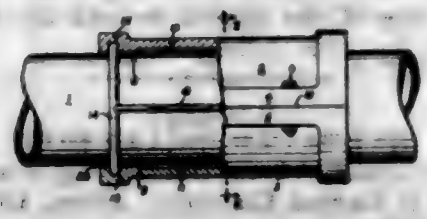
a log for movement toward and from the saw, and manually powered ratchet means to move the knees toward

under pressure through said first chamber.

closer to the downstream face of said flow control device

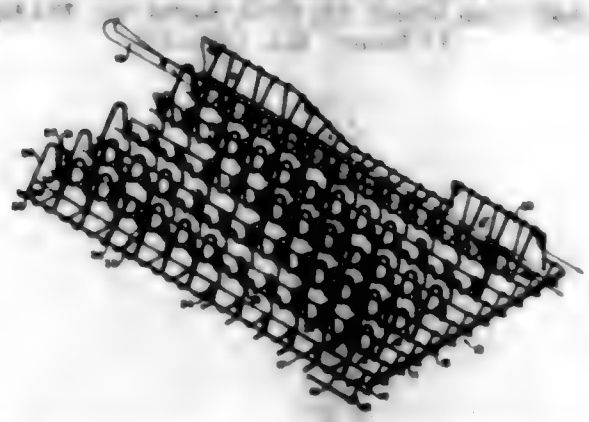
tions and the seal downstream of the cut portion, thereafter moving the downstream seal to a position upstream of the cut portion whereby repair operations may proceed while the fluid pressure is sealed off by the upstream seal.

2,899,984
PIPE SLEEVE AND GASKET THEREFOR
Harry Goslin, East Orange, N.J., assignor to The A. P. Smith Manufacturing Company, East Orange, N.J., a corporation of New Jersey
Application June 21, 1955, Serial No. 516,825
3 Claims. (Cl. 138—99)



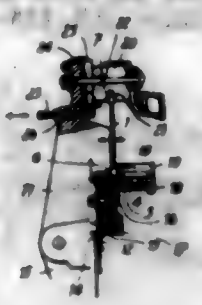
2. In a mechanical joint pipe sleeve, and in combination, a pair of sleeve halves each being substantially semi-cylindrical and comprising cooperating side flanges having grooves for receiving and holding a gasket in spaced relation to the wall of a pipe, and comprising also ends having annular grooves communicating with the first said grooves and adapted to receive end gaskets in sealing engagement with the pipe, and a one piece integral gasket comprising portions within the first said grooves and portions within the said annular grooves, the radially outward surfaces of all the said grooves being substantially in a common cylindrical surface.

2,899,985
METHOD OF WEAVING PILE FABRIC FLOOR COVERINGS WITH PILE CONTAINING LOOPS AND TUFTS
David Karpeff, Amsterdam, N.Y., assignor to Mohasco Industries, Inc., Amsterdam, N.Y., a corporation of New York
Original application October 23, 1957, Serial No. 691,934, now Patent No. 2,884,020, dated April 28, 1959. Divided and this application October 2, 1958, Serial No. 764,859
7 Claims. (Cl. 139—39)



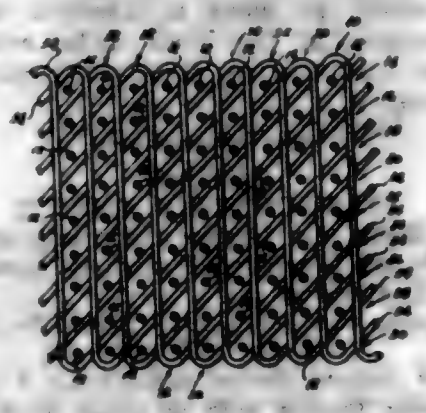
1. In the production of a pile fabric having weft shots in upper and lower series bound against opposite sides of stuffer warps by chain warps and pile warps in two groups intermingled across the fabric and having portions rising above the upper weft shots to form the elements of a pile and other portions bound under weft shots, the method comprising carrying out in repeated cycles the steps of forming a shed, inserting a pile wire into the shed above the stuffer warps and simultaneously inserting a lower weft shot into the shed, beating up the wire and lower weft shot, forming a second shed, inserting an upper weft shot into the second shed, and beating up the upper weft shot, and, during the formation of the sheds, manipulating the pile warps to cause the warps of one group to be raised over successive independent pairs of adjacent wires and the warps of the second group to be raised over alternate wires and to pass beneath intermediate wires.

2,899,986
REED ADJUSTMENT DEVICE FOR WEAVING LOOMS
Jaime Picanol, Zillebeke-lez-Ypres, Belgium
Application November 1, 1956, Serial No. 619,789
Claims priority, application Belgium December 17, 1955
1 Claim. (Cl. 139—192)



A device for tightening the reed of a weaving loom having a batten, said reed having upper and lower horizontal bars, said device comprising a fixed cross-bar having an oblique wall, a cross-member having an inclined surface, said oblique wall and said inclined surface forming a V-shaped profile supporting the lower horizontal bar of the reed, an angle-iron, an adjusting screw meshing with threads of a threaded opening formed in said angle-iron and engaging said cross-member, a bolt carried by said angle-iron and extending through a vertically elongated opening formed in said cross-member, whereby said cross-member is movable up and down by said adjusting screw to vary the outline of said V-shaped profile, said fixed cross-bar having a projecting edge overhanging said oblique wall for limiting the upward displacement of the reed, an upper movable cross-bar having a V-shaped groove formed upon a downwardly facing surface thereof, the upper horizontal bar of the reed resting within said V-shaped groove, an adjusting slab between the last-mentioned cross-bar and the batten, and an adjusting bolt carried by the batten and engaging the lower end of said adjusting slab for shifting the last-mentioned cross-bar horizontally.

2,899,987
UNITARY BALLISTIC FABRIC
Walter S. Fluhon, Brooklyn, N.Y., and Harold K. Robinson, Olyphant, Pa., assignors to Gentex Corporation, New York, N.Y., a corporation of Delaware
Application May 19, 1955, Serial No. 509,455
8 Claims. (Cl. 139—408)



1. A unitary ballistic fabric including in combination a plurality of superimposed layers of first yarns including a top layer and a bottom layer, the yarns of each of said layers being substantially vertically aligned with respective yarns of the remainder of said layers to form a

along a line at a predetermined rate of speed, a rotary

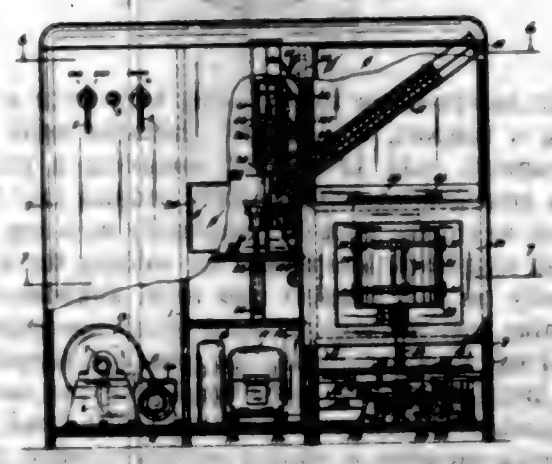
2,899,994

and integrally joined to the disc at one end, said tongue normally projecting at an acute angle from the plane

between the cut portions, removing the seal between the cut portions while maintaining the seal about the cut por-

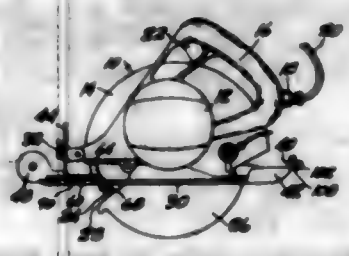
plurality of columns of said first yarns, each pair of adjacent columns of yarns including a pair of adjacent yarns from each of said layers, and a plurality of second yarns, at least one of said second yarns alternately passing downwardly from said top layer between a pair of adjacent columns between the yarns of each one of said pairs of layer yarns making up said adjacent columns to said bottom layer and diagonally upwardly from said bottom layer to said top layer, said one of said second yarns traversing a plurality of columns in its passage from the bottom layer to the top layer.

2,899,988
ICE CREAM DISPENSER
Dale L. Stanley, West Allis, Wis.
Application April 12, 1957, Serial No. 652,521
4 Claims. (Cl. 141—90)



1. In an ice cream dispenser, a scoop, means for moving said scoop downwardly into a circular ice cream container, means for moving said scoop radially within said container, means for withdrawing the scoop therefrom, means for rotary indexing movement of the container, and means for retaining said scoop at different levels in said container during such action, whereby successive layers of ice cream may be removed from the container.

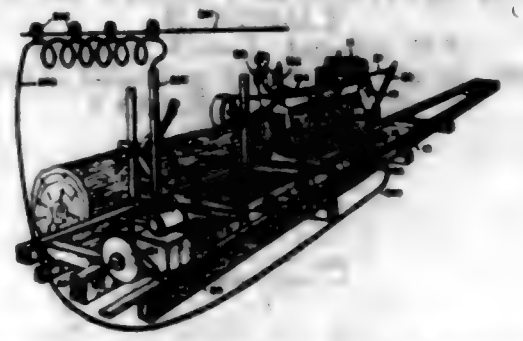
2,899,989
PORTABLE POWER SAW WITH GUIDE
Gary L. Sells, South Bend, Ind.
Application December 17, 1956, Serial No. 628,607
9 Claims. (Cl. 143—43)



2. A portable power saw comprising a housing, a saw blade, a base plate carried by said housing, a work-engaging member, means mounting said member on said plate for movement in a guided path relative to said blade, spring means normally urging said member in one direction, and a resilient abutment on said plate limiting movement of said member by said spring.

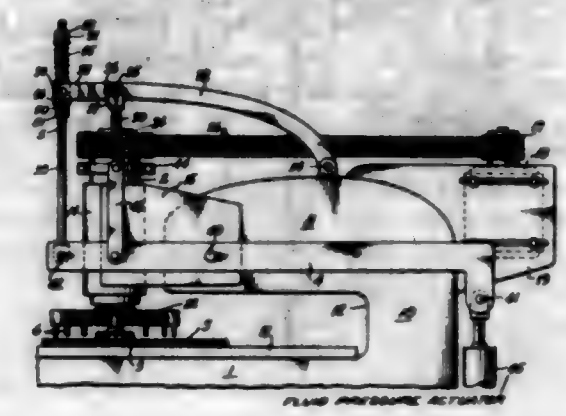
2,899,990
ELECTRICALLY OPERATED SAW MILL SET WORKS OF THE RATCHET TYPE
Stanley L. Landis, Coopersburg, Pa.
Application June 1, 1955, Serial No. 512,483
15 Claims. (Cl. 143—120)

7. A control unit for application to a sawmill having a fixed saw, a movable carriage with knees for supporting a log for movement toward and from the saw, and manually powered ratchet means to move the knees toward the saw, said control system including a unit for mounting on the carriage, power operated means on the unit for moving said knees toward and from the saw, a control for location adjacent the saw blade, said control including



means to operate said power operated knee moving means on the carriage a definite predetermined selected amount, means to move the knees toward and from the saw an unpredetermined amount, and means to automatically release the ratchets of said manually powered means when the control means for moving the knees an unpredetermined amount is operated.

2,899,991
CIRCLE CUTTING MACHINE FOR WOODY SHEET MATERIAL
Herbert G. Whiting, Oswego, Oreg., assignor to Cascades Plywood Corporation, Portland, Oreg., a corporation of Delaware
Application July 8, 1957, Serial No. 670,432
8 Claims. (Cl. 144—136)



1. Rotary cutting mechanism comprising a rotatable annular cutter head, a tubular upright shaft carrying said cutter head on its lower end, means guiding said shaft for upward and downward movement, a hold-down beneath and disposed concentrically of said cutter head, an upright rod carrying said hold-down on its lower end and extending upwardly through said tubular shaft, means guiding said rod for upward and downward movement relative to said shaft, and differential drive means including a relatively slow moving member connected to said shaft and a relatively fast moving member connected to said rod, said two members being interconnected for simultaneous movement to effect downward movement of said rod faster than downward movement of said shaft.

2,899,992
APPARATUS FOR MAKING WOOD PULP CHIPS
Edward M. Key, McMinnville, Oreg., assignor of one-half to Herbert B. Fleishhern, Portland, Oreg.
Application September 23, 1957, Serial No. 685,491
3 Claims. (Cl. 144—162)

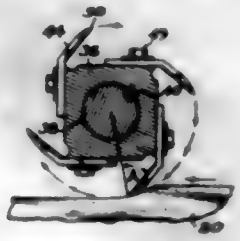
1. Apparatus for making chips of predetermined length from wood, comprising feed means for feeding wood

able thereon, said disk being located on said bolt member between said second jaw member and said nut mem-

decoys in the pockets of the other panel, whereby said retaining strap may effect a decoy-retaining contact with

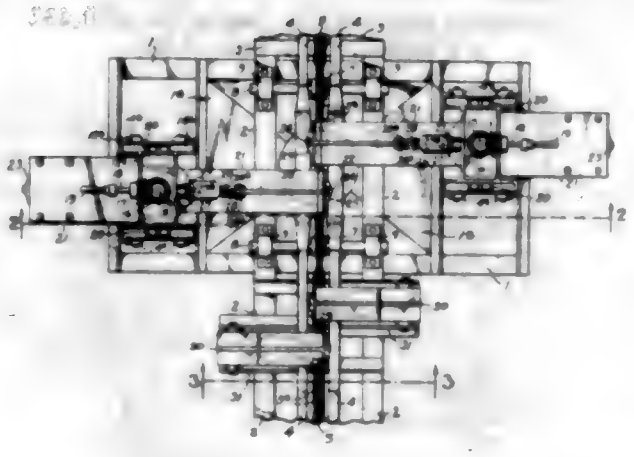
sheds, manipulating the pile warps to cause the warps of tive yarns of the remainder of said layers to form a

along a line at a predetermined rate of speed, a rotary chipper head having a chipper knife mounted thereon, the knife being arranged with its leading face forming with the radial line of rotation of the cutting edge of the knife an included angle of at least 50°, the chipper head being mounted relative to the feed means such that a



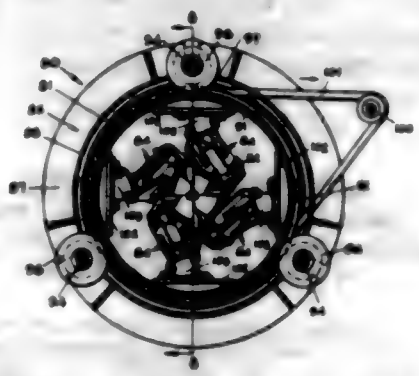
predetermined thickness of wood is intercepted by the knife through an arc of rotation of the latter, the chipper head being rotatable in the direction for movement of the knife through said arc in the direction of said feed of wood and at a speed of rotation for movement of the knife through said arc at a predetermined speed greater than said feed of wood.

2,899,993
SLAB-ROSSING MACHINE
John H. Durant, Portland, Oreg., assignor to Lloyd J. Ruble, Eugene, Oreg.
Application June 25, 1956, Serial No. 593,444
4 Claims. (Cl. 144—208)



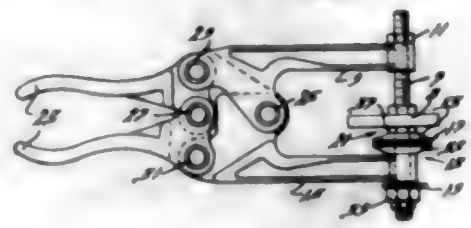
1. A slab-debarking machine that feeds an elongated slab of wood endwise therethrough, each slab having a plane surface and an opposed bark-covered surface of curved peripheral outline, said machine being proportioned and arranged to remove such bark, said machine comprising, a plane slab-supporting table, a conveyor associated therewith for engaging a slab to be debarked and to move it endwise over said table with the plane face of such slab bearing upon said table, a pair of power-driven, rotary, concave cutting heads offset from each other in the direction of feed of a slab and presenting cutting edges corresponding generally to the peripheral outline of a slab to be debarked, a pair of upstanding supports, one lying at each side of said table, and each defining a vertical way, vertically adjustable crossheads carried by said supports, and each being slidably mounted in the way thereon, a threaded stem mounted on said crosshead, a gear threaded on said stem, means for rotating said gear for moving and fixing each of said crossheads along and relatively with respect to its support and the way defined thereon, a pivotal arm carried by each crosshead, one of said cutting heads being carried by one end of said pivotal arm, and a motor operatively joined to said cutting head and carried by the other end of said arm.

2,899,994
APPARATUS FOR STRIPPING BARK
Donald J. Yeadon, Menominee, Leland W. Hooker, and Hereford Garland, Houghton, Mich., assignors to Board of Control of the Michigan College of Mining and Technology
Application May 6, 1957, Serial No. 657,435
15 Claims. (Cl. 144—208)



1. In an apparatus for stripping bark from a log comprising a support, a vertically shiftable knife head on said support, said knife head including a plurality of knives arranged circumferentially around said head and adapted to slit the bark longitudinally as a log is moved through said head, and means for shifting the knife head vertically on said support into axial alignment with an oncoming log, the improvement which comprises an annular rotor member, means for rotatably supporting said rotor member on said knife head with the axis thereof in alignment with the axis of said knife head, whereby said rotor member is shifted vertically when said knife head is shifted vertically into axial alignment with an oncoming log, means for rotating said rotor member, and a plurality of strippers mounted on said rotor member and adapted to contact the slitted bark on a log moved through said member to insure separation of bark from such a log when the rotor is rotated.

2,899,995
CLAMP WITH PREDETERMINED CLAMPING FORCE INDICATING MEANS
Friedrich W. Lampe, Detroit, Mich., assignor to Lapeer Manufacturing Company, a corporation of Michigan
Application February 20, 1956, Serial No. 566,676
1 Claim. (Cl. 144—302)



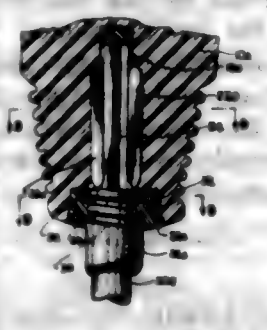
In a clamp having a pair of jaws movably mounted for travel of portions thereof toward each other; means on the clamp for indicating the application of a predetermined clamping force to work engaged thereby, said indicating means comprising a first work-engaging member adjustably mounted on one of said jaws, a second work-engaging member comprising a bolt member having the shank extended through said other jaw and having its head positioned opposite said first member, spring means extending between one side of said other jaw and said bolt head for exerting a resilient pre-load force on said bolt member in the direction of said first work-engaging member, a nut member mounted on said bolt member on the opposite side of said other jaw and positioned so that it is urged in the direction of the second jaw member by said pre-load force, and an annular indicating disk loosely positioned on said bolt so that it is freely movable longitudinally thereof and rotat-

mounted with respect thereto, resilient means operatively ber attached to an inner surface of each section, said

a fixed saw, a movable carriage with knees for supporting from wood, comprising feed means for feeding wood

able thereon, said disk being located on said bolt member between said second jaw member and said nut member so that it is clamped therebetween by said pre-load force when the clamping force on said second work-engaging member is less than said pre-load force, said indicating disk being freely movable on said bolt member when the clamping force on said indicating disk is released in response to a force on said second work-engaging member equal to or greater than said pre-load force.

2,899,996
INSULATED SCREW DRIVER
Earle F. Stockman, Flushing, N.Y., assignor of one-half to Frank M. Nichio, New York, N.Y.
Application December 13, 1957, Serial No. 702,591
5 Claims. (Cl. 145—50)

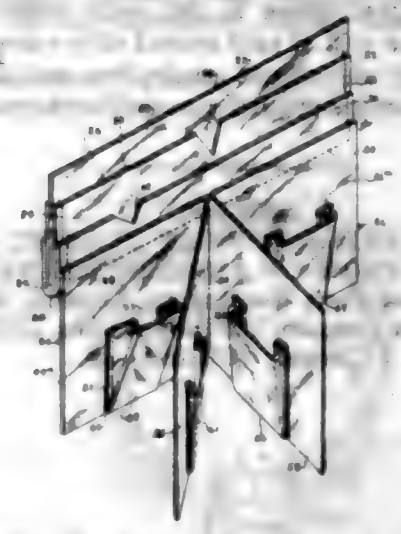


1. An electrically insulative tool comprising a handle having a recess, a shank having an inner end portion engaged in said recess and having a work-engaging outer end portion projecting exteriorly of the recess, an electrically insulative covering on said shank, said covering substantially completely enclosing the outer end portion and extending over part of the inner end portion, and a material of high electrically insulative qualities disposed within the handle and sealably encasing the part of the inner end portion of the shank that is enclosed by said covering, said recess of the handle extending axially thereof, the handle having a counterbore communicating with the recess, said material being disposed within said counterbore, said counterbore being of flared formation, said handle having diametrically opposed locking grooves communicating with the counterbore, for engagement of said material in the locking grooves.

2,899,997
DUCK DECOY CARRIER
Raymond J. Rasen, Detroit, Mich.
Application December 23, 1957, Serial No. 704,596
2 Claims. (Cl. 150—1)

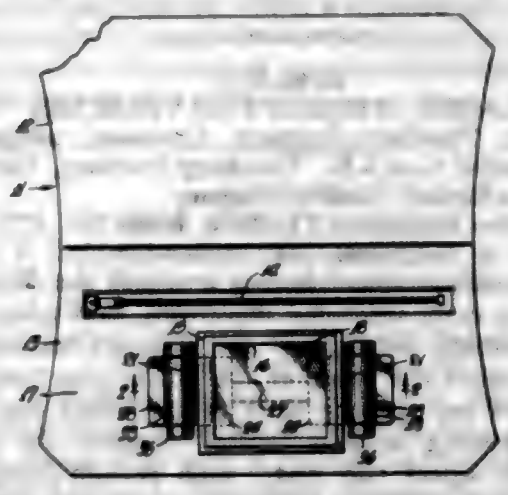
1. A duck-decoy carrying device, comprising a pair of marginally interconnected, elongated panels of flexible material, having an upper and a lower longitudinal edge, stiffening means enclosed between said panels a plurality of decoy-receiving pockets permanently joined to said panels, and opening upwardly immediately below said upper edge, an elongated decoy retaining strap extending from end to end of the device above said upper edge, said pockets being formed in two rows respectively joined to the respective panels, said rows being offset relative to each other longitudinally of said panels to afford disposal of an upwardly and laterally protruding portion of a decoy in each pocket of each panel over said upper edge in adjacent, alternate relationship to like portions of decoys in the pockets of the other panel, whereby said retaining strap may effect a decoy-retaining contact with and above all of such portions.

2,899,998
SECTIONAL INSERT FOR UNFITTED LADIES' HANDBAGS
Esther T. Carroll, Jamaica, N.Y.
Application December 13, 1957, Serial No. 702,589
5 Claims. (Cl. 150—36)



1. A purse organizer comprising a first rectangular panel, a second rectangular panel folded longitudinally, said first panel being disposed in the fold of the second panel to define two pockets therewith, a third rectangular panel folded longitudinally, said second panel being disposed in the fold of the third panel to form two other pockets therewith, said second and third panels having outer edges formed with triangular cut-outs to facilitate entry into the pockets thereat, a fourth rectangular panel folded transversely intermediate its ends to define two sections, one of the sections being secured to one side of said third panel to define therewith a fifth pocket, the other section of the fourth panel extending outwardly as a hinged leaf from the one section, and a fifth rectangular panel, said fifth panel being folded transversely intermediate its ends to define two other sections, one of the other sections being secured to said one side of the third panel to define therewith a sixth pocket, the other section of the fifth panel extending outwardly as a hinged leaf from said one side of the third panel, opposite ends of the first, second and third panels being secured together.

2,899,999
RELEASABLE CONTAINER HOLDER
Frank G. Dobbs, Kew Gardens, and Stephen H. Dobbs, Elmhurst, N.Y.
Application December 13, 1956, Serial No. 628,824
4 Claims. (Cl. 150—34)



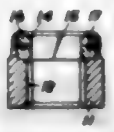
1. A container holder comprising a support having a slot, a strip extending through said slot and slidably

of said arm.

that it is freely movable longitudinally thereof and rotat-

mounted with respect thereto, resilient means operatively connected at one end to the inner end of said strip, means substantially to restrain the other end of said resilient means from movement when tension is applied to the first named end thereof, said resilient means thereby normally retaining the strip in retracted position, a second strip extending through said slot, said resilient means also being operatively connected at its first named end to the inner end of said second strip, the portion of said second strip extending outwardly through said slot defining a loop positioned in juxtaposition to the outer portion of said first strip, the free end of said second strip extending back through said slot, and means on the free end of said second strip to prevent outward movement thereof through said slot.

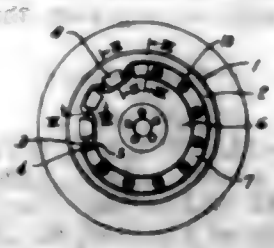
2,900,000
LOCK NUT HAVING A SPLIT PLASTIC COLLAR AND METHOD OF ASSEMBLING SAME
Bernard Arthur Parr, Kensington, London, England
Application June 16, 1951, Serial No. 231,923
4 Claims. (Cl. 151—7)



2. A nut lock comprising a nut having a threaded bore and a counter bore with a radial shoulder between said bore and counter bore, a plastic split collar positioned within said counter bore and having its inner face seated upon said shoulder and comprising a pair of substantially semicircular portions each having a free end provided with a cam face, the opposite ends of said collar portions being joined together, and means preventing rotation of said collar in said counter bore cooperating with said radial shoulder for placing and maintaining said collar portions under pressure substantially parallel to the longitudinal axis of the collar whereby the material of said collar portions is radially displaced outwardly and inwardly to effect a tight frictional engagement between the outer faces of the side walls of the said collar portions and the inner face of the counter bore of the nut, to cause a part of said collar portions to project slightly into the bore of the nut and to bring the cam faces of said free ends of the collar portions into abuting camming engagement to cause radially outward movement of translation of said collar portions to augment the frictional engagement between the outer faces of the side walls of the collar portions and the inner face of the counter bore of the nut and to maintain said collar portions in their outwardly moved positions of translation regardless of the vibrations induced in the device during its use.

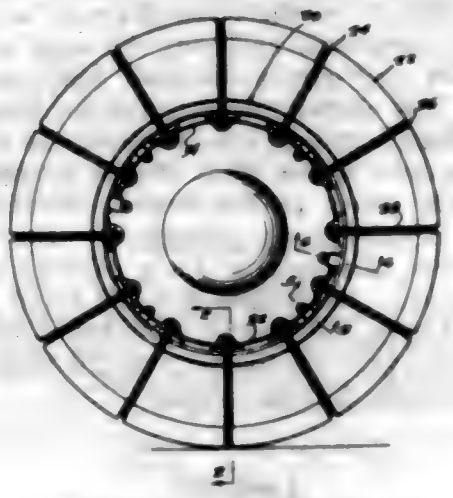
2,900,001
ELASTIC WHEELS FOR VEHICLES
Raoul Jörn, Hamburg-Harburg, Germany, assignor to Metallgummi G.m.b.H., Hamburg-Harburg, Germany, a German limited liability company
Application December 27, 1954, Serial No. 477,624
2 Claims. (Cl. 152—49)

1. In an elastic wheel having a wheel rim body and a wheel disc body separated therefrom, said bodies having intermeshing projections and recesses located substantially within the plane of the wheel disc body, two rings located on opposite sides of the wheel disc body, said rings having sections located opposite the projections of the wheel rim body, each section having opposed inclined portions extending from the center of the section toward the edges of the last-mentioned projections, a separate substantially rectangular rubber member attached to an inner surface of each section, said rubber members forming two groups having inner surfaces located opposite each other, metal wedges attached to the last-mentioned inner surfaces and having inner surfaces engaging the last-mentioned projections, said wedges and said rubber members having opposed



recesses, pins carried by the last-mentioned projections and fitting into the last-mentioned recesses, said rings having portions located between said sections and recessed relatively to said sections, and a plurality of bolts located in the recessed portions of said rings and extending transversely to the plane of the wheel disc, said bolts interconnecting said rings.

2,900,002
ANTI-SKID MECHANISM
Fred C. Ecker, Seattle, Wash.
Application January 31, 1958, Serial No. 712,465
3 Claims. (Cl. 152—216)

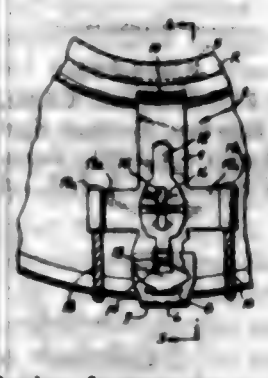


1. The combination with a vehicle traction wheel rim, and a pneumatic tire carried by said wheel rim, said tire being provided with a plurality of grooves extending transversely through the tread surface and arranged in spaced relation about said tread surface, of an anti-skid mechanism comprising an endless chain positioned in each of said grooves and extending about the adjacent portion of said wheel rim, each of said chains having on a part thereof and extending therealong a plurality of spaced projecting traction elements, said parts of said chains being each normally held along the side of said tire and out of the adjacent groove, means connecting each of said chains to said wheel rim for movement of said chain from the position in which said part is adjacent the side of the tire to a position in which said part is wholly within said groove, said means including a flexible driven shaft extending about and journaled on said wheel rim, a plurality of sprockets arranged in spaced relation and carried by said driven shaft, said sprockets being in meshing engagement with said chains, a roller in lateral alignment with each of said sprockets and journaled on said wheel rim for free rotation, each of said rollers rollably engaging the underneath portion of the adjacent chain to hold it away from the contiguous side of said wheel rim, and drive means operatively connected to said driven shaft for effecting in unison the movements of said chains.

the engaging portions of the lock ring and driving lug having a greater radius than the predetermined uniform

tion interconnecting the rear end of the upper portion

2,900,003
TRACTION DEVICE FOR VEHICLE TIRES
Delbert L. Nelson, Meadville, Pa., assignor of thirty percent to Ralph E. Mesch, Meadville, Pa.
Application January 4, 1956, Serial No. 557,376
6 Claims. (Cl. 152—225)



1. A traction device for use on a pneumatic tire and rim assembly comprising a clamp member made of relatively thin strap-like metal having a central traction bar portion and side arm portions adapted to span the tread and side walls of the tire, one of said side arm portions being longer than the other and of sufficient length to clamp onto the rim, an arm member having the lower end thereof pivotally attached to the shorter side arm portion, a latch member pivotally secured to the shorter side arm portion of said clamp member for holding said arm member in engagement with the side wall of the tire, and means for holding said latch member in locked position, the central traction portion of said clamp member being resilient and terminating at each end thereof in a portion disposed radially outwardly so as to provide lug-like portions whereby the pressure of the tire on said traction bar portion tends to urge said side arm portion together with said arm member toward the opposite side arm portion so as to maintain said clamp member securely in engagement with the side walls of the tire.

2,900,004
DETACHABLE TRACTION DEVICE FOR WHEELS
Walter G. Robinson, Walpole, Mass.
Application November 26, 1956, Serial No. 624,292
1 Claim. (Cl. 152—226)

An anti-skid device for a vehicle wheel of the class having a tire mounted thereon, said device comprising a plurality of resilient, U-shaped retaining members, cleats fixed to said retaining members, said retaining members presenting extremities which are reversely bent to define two sets of ring supporting eyes, one of said sets of eyes being constructed and arranged in a circumferentially spaced-apart manner and projecting axially inwardly with respect to the said cleats, the other of said sets of eyes being constructed and arranged in circumferentially spaced-apart relation and projecting radially and axially outwardly away from the said cleats, a fixed circumferential ring member located through said outwardly projecting set of eyes, said ring being supported by the eyes in an axially outwardly offset position, a variable circumferential locking ring located through said first set of inwardly projecting eyes and being supported in axially spaced relation to said fixed circumferential ring, said locking ring including interlocking surfaces and a device for securing the interlocking surfaces in a tightened position of adjustment whereby a radially exerted resistance force is present to oppose displacement of the U-shaped retaining members from said tire.

2,900,005
SAFETY TIRE CONSTRUCTION
Mart B. Riggs, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Application August 9, 1954, Serial No. 448,534
9 Claims. (Cl. 152—341)

7. In combination, an open-bellied tire having beads, a rim provided with tire bead mounting seats, and a diaphragm comprising an annular outwardly bowed portion of generally C-shape spanning the space between the beads of said tire throughout the peripheral extent thereof, said C-shaped portion having a substantially lesser outer diameter at its median plane than the inner tread surface of said tire but greater than the inner diameter of the tire beads, whereby, when mounted with said tire and rim, it provides an inner rim adjacent chamber and an outer tire adjacent chamber, said C-shaped portion constituting a reserve tire for carrying the load when the outer chamber fails and being made of materials which, when both of said chambers are inflated to normal operating pressures, restrain the C-shaped portion of the diaphragm in a position spaced substantially from the inner tread surface of said tire, means for inflating said chambers, and means integral with said C-shaped portion for separably holding said diaphragm member in place on said tire and rim, comprising two annular extensions, one at each of the opposite edges of said C-shaped portion, each extension having a first portion extended axially outward between the base of the adjacent tire bead and adjacent rim seat, and a second portion extending radially outward to engage the bead at the outer sidewall of said tire, each of said first portions having a greater normal outer diameter, unmounted, than the inner diameter of the bead of said tire on which it is mounted and made of resilient material compressible in a circumferential direction to permit reduction of its circumferential dimension to fit the base of said tire bead.

2,900,006
RIM CONSTRUCTION
Hilton J Lafaye, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Application June 12, 1957, Serial No. 665,256
5 Claims. (Cl. 152—410)

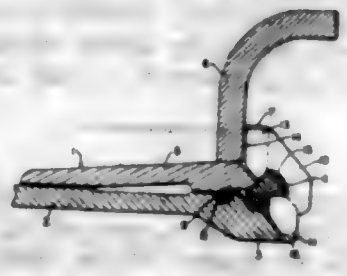
4. A multiple-piece rim assembly for mounting tubeless tires thereon which includes a rim base, a bead base ring, a flange ring and a circular split lock ring, said lock ring having a substantial portion thereof having a predetermined uniform radius and a driving lug attached thereto engaging opposed surfaces of the lock ring with

and-aft tilting movement, thereby providing adjustment of the size of the parallelogram defined by said frame

the seat back, said cushion being of a triangular con-

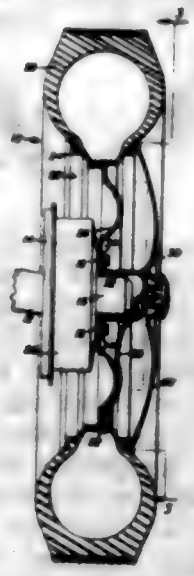
the section toward the edges of the last-mentioned projections, a separate substantially rectangular rubber member for effecting in unison the movements of said chains.

the engaging portions of the lock ring and driving lug having a greater radius than the predetermined uniform



radius of the lock ring whereby circumferential displacement of the lug around the lock ring is prevented.

2,900,007
CENTRAL VALVE FOR PNEUMATIC TIRE WHEEL
Gilbert C. Hoogendoorn, Walnut, Calif.
Application August 28, 1957, Serial No. 680,690
4 Claims. (Cl. 152—415)

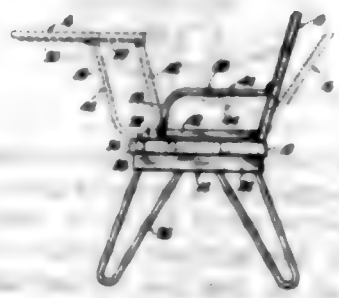


1. In combination with a vehicle wheel assembly, a tire valve assembly, said wheel assembly including a wheel hub, lug bolts carried by said wheel hub, a wheel including a rim and a central disc, said disc being mounted on said lug bolts, a wheel cover, and a tire mounted on said rim, said tire valve assembly including a mounting bracket generally overlying said hub and mounted on said lug bolts, a valve stem disposed along the axis of said hub and secured to said mounting bracket, an air line connecting said valve stem to said tire, said wheel cover having a central opening therein providing access to said valve stem.

2,900,008
TRAINING DEVICE FOR SKATERS
Harold B. Segar, Wheat Ridge, Colo.
Application December 23, 1957, Serial No. 704,417
3 Claims. (Cl. 155—22)

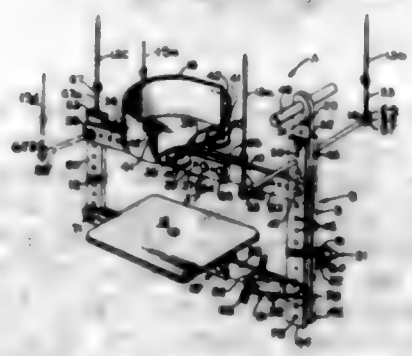
1. A training device for skaters and the like comprising a frame including two generally Z-shaped side frame elements, a center section and an inverted generally U-shaped bow, the side frame elements and upper portion, a lower runner-forming portion and an intermediate portion interconnecting the rear end of the upper portion with the front end of the lower portion, the center section interconnecting the upper portions of the side frame elements to maintain the same in transversely spaced relation, and the bow interconnecting the center frame section and the intermediate and lower portions of the side frame elements.

2,900,009
COMBINATION FOLDABLE TABLE AND BENCH
William J. Haynes, Bonner Springs, Kans.
Application March 17, 1958, Serial No. 721,852
4 Claims. (Cl. 155—43)



2. A combination bench and table unit comprising an elongated seat provided with support means; an elongated back rest normally disposed in a substantially upright position extending upwardly from one longitudinal edge of said seat; a pair of spaced, parallel links, each pivotally secured to the back rest adjacent the normally lower longitudinal edge thereof and pivotally connected to the seat in transversely spaced relationship to the back rest for swinging movement about a common axis parallel with said back rest; and a substantially L-shaped member interconnecting a corresponding link and said back rest, each of said members being releasably secured to the back rest, releasably and pivotally connected to the seat at the point of pivotal interconnection of the link with the seat for swinging movement with the link about said common axis and provided with normally substantially upright portions adapted to be moved into engagement with the seat for supporting the back rest when the latter is swung about said axis to a horizontal, table position spaced above the seat, said back rest being pivotal into proximal overlying relationship upon disengagement and removal of the members from respective links and said back rest.

2,900,010
THERAPEUTIC SAFETY SWING
Raymond J. Oliver, San Jose, Calif.
Application August 15, 1955, Serial No. 528,341
3 Claims. (Cl. 155—65)

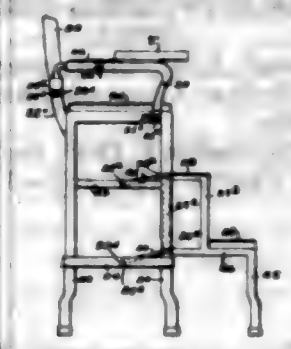


3. A swing comprising four frame members arranged in the form of an upright parallelogram with the top and bottom frame members substantially horizontal, each member having a plurality of axially aligned holes therethrough adjacent each end thereof, a pivot pin inserted in selected holes of the frame members at their intersections, thereby hingedly interconnecting the frame members at each corner of the parallelogram for relative fore-

first set of inwardly projecting eyes and being supported thereto engaging opposed surfaces of the lock ring with

and-aft tilting movement, thereby providing adjustment of the size of the parallelogram defined by said frame members, a handle bar extension adjustably secured to the upper end of the front frame member, a handle bar mounted transversely of the upper end of said extension, a suspension bar extending transversely of the upper portion of the front frame member, the front frame member comprising a pair of frame portions in parallel spaced relation, the top frame member comprising a single forward portion inserted between the spaced portions of the front frame member, and a pair of top frame rear portions mounted one on each side of the top frame forward portion and extending rearwardly therebeyond in parallel spaced relation, the rear frame member being inserted therebetween, a bottom frame member similar to the top frame member its forward end being inserted between the spaced portions of the upright front frame member and its rear portions receiving the upright rear frame member therebetween, a seat mounted on the top frame member, a guide strip mounted on said seat and interposed between the spaced rear portions of the top frame member thereby guiding the seat for fore-and-aft movement on the top frame member, clamp means securing the seat in longitudinally adjusted position on the top frame member, a pair of suspension cables secured one to each end of the suspension bar, and a third suspension cable secured to the upper end of the rear frame member.

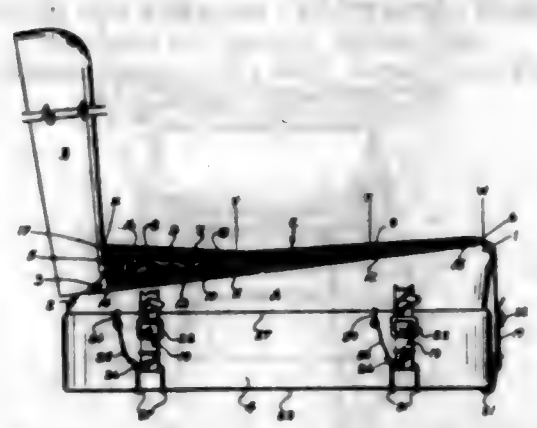
2,900,011
MULTI-USE CHAIR
Patricia L. Casey, Munich, Germany
Application December 14, 1954, Serial No. 475,823
3 Claims. (Cl. 155—127)



1. A multiple-use chair for children comprising legs, a seat and seat-supporting frame, provided with lugs at its outer forward side portions, at the upper ends of the legs, a chair back supported at the rear of the seat, one part of a bayonet-type joint rigid with relation to each side of the back, arms, each arm having a part complementary to the part of the bayonet-type joint at the respective side of the seat and securable thereto, the lower forward portions of the arms and the lugs on the forward portions of the seat-supporting frame, having complementary and coacting parts for securing the lower forward ends of the arms in place with relation to the seat, and lever means beneath the seat having locking portions for engaging said parts locking the lower forward ends of the arms to the respective lugs and for, at will, releasing the arms for their removal from the chair.

2,900,012
SEAT CUSHION
Reuce H. McGlone, Flint, Mich.
Application December 16, 1957, Serial No. 701,751
3 Claims. (Cl. 155—182)

1. For use with a vehicle seat wherein the seat is supported upon a frame and slants downwardly from its front edge towards its rear edge and is provided at its rear edge with a back, a seat cushion of a size to completely cover the top of the seat which is forward of the seat back, said cushion being of a triangular configuration in transverse vertical section with the apex of the triangle at the front edge of the cushion, the back edge of the cushion abutting the front of the seat back, straps secured to the front and side edges of the cushion, each strap being provided with a hook each of which is hooked beneath the lower edge of the seat supporting frame, each strap having therein a buckle arrangement



whereby the strap can be shortened or lengthened to properly position the hooks, and a supplemental hook associated with each strap carried hook and being hooked over the upper edge of the seat supporting frame and serving to prevent sufficient downward movement of said strap carried hooks as would result in disengagement of said hooks with the lower edge of the seat supporting frame.

2,900,013
CHAIR OR THE LIKE
Earl F. Hamilton, Columbus, Ind., assignor to Hamilton Manufacturing Corporation, Columbus, Ind., a corporation of Indiana
Application April 19, 1956, Serial No. 579,210
4 Claims. (Cl. 155—196)

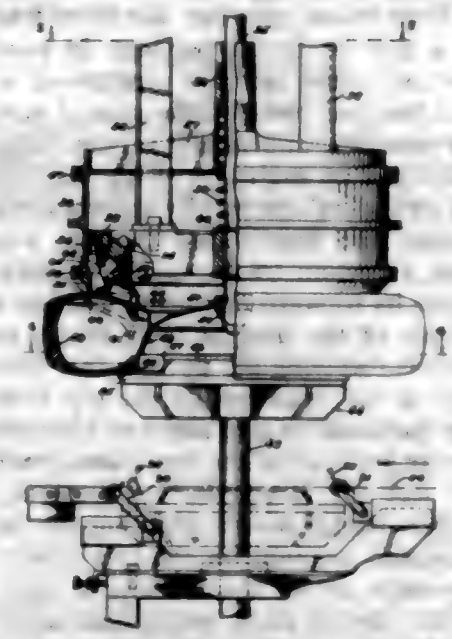
1. In a chair, a seat, a pair of similar side members, and a back structure, each of said side members being formed of a length of metal stock bent to provide a base portion, an upright portion extending upwardly from the front of said base portion, and an arm extending rearwardly from the upper end of the upright portion, said back structure including a pair of rigidly interconnected, generally vertical elements, means for connecting said vertical elements respectively with the base portions of said side members, said means being unreleasable when said back structure is in upright position but releasable when the back structure is swung rearwardly relative to the side members, the upright portions of the side members being provided with rearwardly facing openings and the vertical elements of the back structure being provided with forwardly facing openings, said seat having projections extending respectively forwardly and rearwardly for reception in said openings as the back structure is swung into said upright position; and means for securing the rear ends of said arm portions to said vertical elements.

2,900,014
SUPPORTING STRUCTURE
Robert H. Savage, Schwenksville, and Richard Schultz, Berlo, Pa., assignors, by mesne assignments, to Knoll Associates, Inc., New York, N.Y., a corporation of New York
Application March 18, 1957, Serial No. 646,916
1 Claim. (Cl. 155—196)

A chair structure comprising a one-piece, curved seat having a smooth concave upper surface adapted to be directly engaged by the body of a seated person and a smooth, convex under surface, a pair of curved elongated metal stamping connecting members extending transversely of the under surface of said seat near the front and rear portions thereof and having a length somewhat less than the width of said seat, each said member comprising two side flanges and two end flanges cooperating to form an integral, generally horizontally extending, peripheral flange contoured to conform to the under surface of the seat, a channel portion integral with and between said side flanges and extending downwardly therefrom, said channel portion including downwardly extending side and end walls adjoining the respective side and end flanges, and a central web connecting the lower ends of the walls and curved concentrically with the flanges and the under surface of the seat, a pair of horizontal flat portions integral with the web at the opposite ends thereof, each said flat portion being provided with a first aperture near the center thereof, a second aperture for each flat portion being provided in each end wall adjacent the outer side of the flat portion, means bonding the peripheral flange to the under surface of the seat, a base supporting said seat and including horizontal support elements extending under said first apertures, and having holes therein aligned with said first apertures, four screws each having its threaded end passing through an aligned aperture and hole, and four nuts within said connecting members, accessible through said second apertures and cooperating threadedly with said screws to maintain said connecting members and base together, said screws, nuts, connecting members and bonding means constituting the only support for the seat so that no structural member extends through the upper surface of the seat, and cooperating to distribute stresses due to a load on said seat and to transfer said stresses to said base.

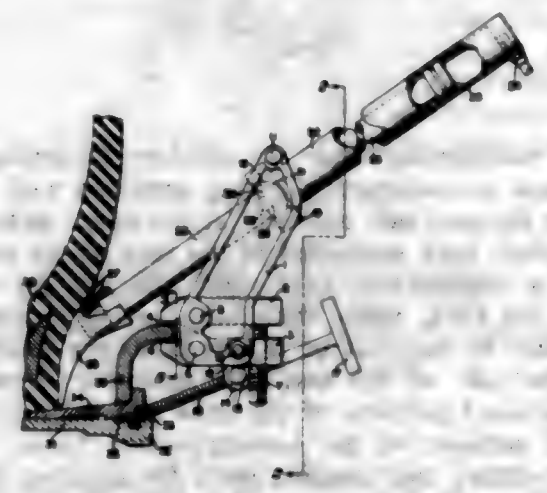
2,900,015
AUTOMATIC TUBELESS TIRE BEAD SEATING AND INFLATING MACHINE
Homer S. Harrison, Detroit, Mich., assignor to Allied Steel and Conveyors, Inc., Detroit, Mich., a corporation of Michigan
Application March 10, 1955, Serial No. 493,344
16 Claims. (Cl. 157—1.1)

1. A device for introducing air under pressure into a rim-mounted tubeless tire comprising first annular sealing means adapted to engage a wheel rim, a rigid cylinder, second annular sealing means on said cylinder adapted to engage the adjacent side wall of a tubeless tire, means including said first and second sealing means defining an inflation chamber, means for creating a superatmospheric



pressure in said chamber, said rigid cylinder being axially movable with respect to the rim-engaging sealing means and adapted to hold the bead of said side wall out of engagement with said rim to permit air pressure to flow from said chamber to the inside of said tire.

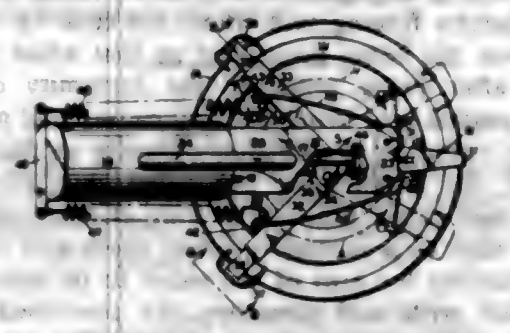
2,900,016
RIM FLANGE SUPPORTED TIRE REMOVING TOOL
Alva W. Woodward, Kent, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Application November 9, 1955, Serial No. 545,866
4 Claims. (Cl. 157—1.17)



1. A tire removing tool for unseating the bead of a tire mounted on a rim having a rim flange with an axially extending peripheral portion comprising at least one rim flange clamp having an upper and a lower rim flange engaging member with each of said members having a gripping edge adjacent one end thereof, spaced side plates, means to mount the flange engaging members between the side plates to maintain said gripping edges of said members in spaced opposed relation, and means engaging the flange engaging members adjacent the ends opposite the gripping edges to controllably move said ends apart and thereby move the gripping edges into gripping engagement with the axially extending peripheral portion of the rim flange; a bead unseating assembly mounted between said side plates cooperating with said rim clamp including a presser member and pressure means to urge the

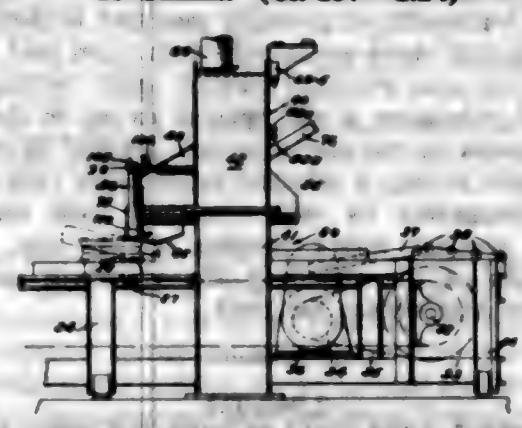
presser member against the bead to displace the bead axially inwardly and away from the rim flange when the rim clamp is gripping the rim flange, the gripping force of the rim clamps being substantially normal to the direction in which the bead moves; and a supporting member adjustably mounted on the rim flange clamp oppositely of the bead unseating assembly and bearing against the edge of the rim to support the tool during the use thereof.

2,900,017
CIRCUMFERENTIALLY TRAVELING SHOE TYPE PORTABLE TIRE MOUNTING DEVICE
Orval M. Lewis, Sweet Home, Oreg.
Application August 12, 1957, Serial No. 677,586
4 Claims. (Cl. 157—1.22)



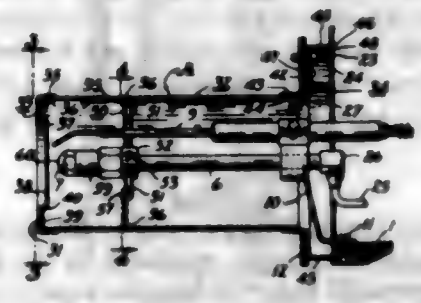
1. In a tire mounting device, a base member adapted to be placed on the top of a vehicle wheel when the wheel is resting on its side on the ground, said base member being longer than the diameter of the outer periphery of the top side rim of said wheel, means at the front end of said base member for engaging said wheel rim, a pair of arm assemblies hinged at opposite sides of said base member, a tire-engaging shoe adjustably carried on each of said arm assemblies and engaging the periphery of said wheel rim, spring means in said assemblies pulling said shoes against said wheel rim periphery, an element on each shoe extending under the wheel rim for holding the shoe down on said wheel rim while enabling said shoe to be moved along said rim, and means for forcibly moving said arm assemblies and therewith said shoes forwardly towards each other and towards said front end of said base member through arms in excess of 90° but less than 180°.

2,900,018
CONVEYOR MOUNTED AUTOMATICALLY ADJUSTING UNIVERSAL TIRE MOUNTING MACHINE
Homer S. Harrison, Detroit, Mich., assignor to Allied Steel and Conveyors, Division of the Sparks-Withington Company, Jackson, Mich., a corporation of Ohio
Application February 28, 1956, Serial No. 566,414
13 Claims. (Cl. 157—1.24)



1. A tire mounting machine comprising a conveyor adapted to carry wheels having tires partially inserted between the rims of the wheel, a fixed frame adjacent said conveyor, a mounting head on said frame continuously adjustable to accommodate different wheel widths, a pair of mounting arms each reactively connected at one end to said mounting head, the other end of each of said arms including rim engaging and tire bead spreading means adapted to be interposed between a wheel rim and the associated tire bead in reactive engagement with opposite side edges of a wheel rim passing said mounting head.

2,900,019
PRESSURE ATOMIZING LIQUID FUEL BURNER WITH AIR STREAM CENTERING RING
Reginald W. Beckett, Elyria, Ohio
Application October 31, 1956, Serial No. 619,565
15 Claims. (Cl. 158—76)

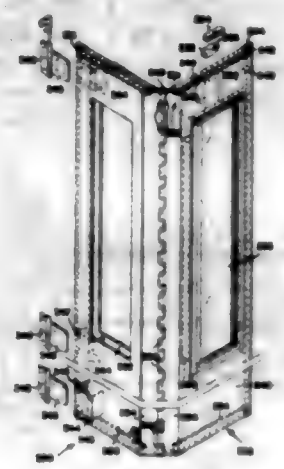


7. A fluid fuel burner comprising in combination a generally circular sectioned air tube having a receiving end and a discharge end formed with a reduced diameter outlet opening, means supplying air tangentially to the receiving end of the air tube to advance such air through the tube in the form of a circular sectioned spirally rotating column, a nozzle having a discharge orifice, means supplying fluid fuel to the nozzle under pressure, means supporting the nozzle with the nozzle orifice located intermediate the ends of the air tube to project fuel into the air at the discharge end of the air tube, an annular ring shaped substantially flat thin metal air control member, means supporting the air control member within the air tube in a plane normal to the longitudinal axis of the air tube, the control member having an outer periphery spaced radially inwardly from the air tube to form an annular clearance through which the outermost portions of the air column pass the control member, the control member having an inner periphery defining a central axial opening having an effective area for the passage of air at least four times the area of the annular clearance about the outer periphery of such control member whereby the air in the advancing column divides at the control member with one portion passing through the central opening and another portion passing through the annular clearance, the control ring member being generally of greater radial extent in relation to the section of the air tube in the plane of the ring member than the annular clearance between the outer periphery of such ring member and the tube, and the control member being spaced from the opening in the discharge end of the air tube a distance no less than the diameter of such discharge opening and no greater than the diameter of the air tube and from the nozzle orifice toward the receiving end of the air tube to intercept and deflect a portion of the spirally advancing air before such air passes the nozzle orifice.

2,900,020
TELEPHONE BOOTH DOOR ASSEMBLY
Percival H. Sherren, Jamaica, N.Y.
Original application September 3, 1952, Serial No. 307,630. Divided and this application April 16, 1956, Serial No. 578,233
2 Claims. (Cl. 160—206)

1. A door assembly adapted for use in a telephone booth, said door assembly comprising a pair of door members, each of said door members including spaced inner and outer panels, and a window assembly set into

cutouts in the panels of each of said pair of doors, each window assembly including a plate of transparent material, a yielding retainer for the edge of said plate, a pair of angles in opposed position on opposite sides of said retainer and each having one leg extending toward and in engagement with said retainer and having the other leg extending outwardly from and parallel to said transparent plate, a first channel, the outside of the base

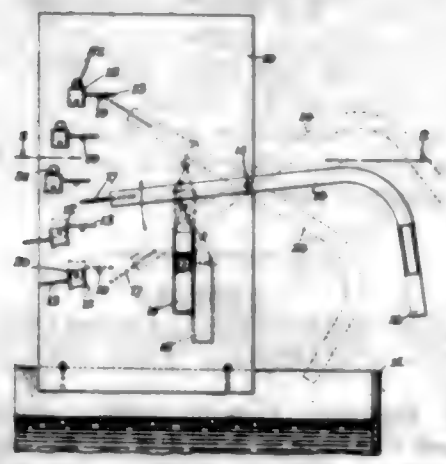


of said first channel engaging the back of said retainer and the sides of said channel lying between the outwardly extending legs of said angles, and a second channel receiving and supporting said first channel and said angles, said second channel being adapted to lie between the inner and outer door panels and having the end portions of its sides bent backwardly and outwardly to engage the rim of the cutout in each of the door panels and to support the window assembly thereby.

2,900,021
ELECTROMECHANICAL TIMER
Lawson E. Richtmyer, Silver Spring, Md., and Paul G. Gerhard, Palmerton, Pa., assignors to the United States of America as represented by the Secretary of the Army
Application May 10, 1955, Serial No. 507,519
1 Claim. (Cl. 161—1)
(Granted under Title 35, U.S. Code (1952), sec. 266)

In combination: an escape wheel mounted for spring-biased rotation about a first pivot, a series of teeth spaced-apart around the periphery of said wheel, each tooth being formed with substantially parallel leading and trailing edges, the leading edge of each tooth being shorter than the trailing edge so that the extremity of each tooth is at an angle with respect to either tooth edge, spring-biased rotation of said wheel being in a direction from the trailing to the leading edge, a pallet mounted for rotation about a second pivot, a pallet actuating means adapted to drive said pallet, said pallet actuating means comprising, a magnetically sensitive armature having one end pivotally fixed and the other end free for pivotal movement, an electromagnet positioned adjacent said armature and adapted to attract the free end of said armature upon electrical pulsing of said electromagnet, a capacitor in circuit with said electromagnet, electronic circuit means including a battery and a diode adapted to discharge said capacitor at a predetermined repetitive rate, said electromagnet adapted to attract said free end of said armature at said predetermined repetitive rate in response to the pulsing of said capacitor, an arm depending from said pallet and extending to contact said free end of said armature so that said armature drives said arm in the direction of spring-biased rotation of said wheel upon discharge of said capacitor, upper and lower pins at the end of said pallet nearest said wheel, said upper pin located above an axis extending through said first and second pivots, said lower pin located below said axis, the radial distance from said second pivot to the upper pin being substantially greater than the radial distance from said second pivot to the lower pin, the upper pin initially engaging said leading edge of a tooth of said wheel in the absence of an electrical pulse from said capacitor so as to prevent rotation of said wheel and urge said arm against said armature, said electromagnet receiving an electrical pulse from said capacitor only for a duration sufficient to cause said armature to drive said pallet a large enough distance to move said upper pin out of locking engagement with said leading edge of said tooth thereby freeing said wheel for rotative movement, said lower pin being positioned so that when said wheel rotates after being unlocked the extremity of a tooth pushes against said lower pin and causes said arm of said pallet to rotate in a direction opposite to that of wheel rotation, the rotation of the pallet thus caused again forcing said upper pin into locking engagement with the leading edge of a successive wheel tooth and at the same time restoring the arm of the pallet to its initial position in contact with said armature, the combined action of the pulsed actuating means and the pallet pins engaging the teeth of said wheel then continuing to intermittently rotate said wheel one tooth distance for each electrical pulse applied to said electromagnet by said capacitor.

2,900,022
FISH FEEDING DEVICE
Sol Friedmann, Bronx, N.Y.
Application August 17, 1955, Serial No. 528,961
2 Claims. (Cl. 161—10)



1. A fish feeding device for attachment to the edge of an aquarium comprising, a vertically disposed support member, a plurality of pivotally mounted fishfood receptacles disposed along an arcuate path upon said support, an actuating arm pivotally carried upon the support in a state of imbalance, a vial open at its top to the atmosphere secured to the said arm and adapted to receive a fluid therein having a selected evaporation rate and trip means engageable by said arm and food receptacles whereby gradual rotary motion of the arm, due to evaporation of the liquid in the vial, will rotate the receptacles and release the food.

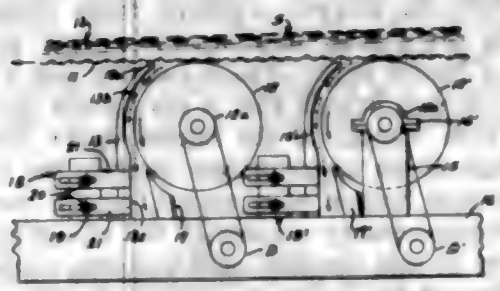
2,900,023
TABLE ROLL AND DEFLECTOR SUCTION DEVICE
Lloyd Hornbostel, Beloit, Wis., assignor to Beloit Iron Works, Beloit, Wis., a corporation of Wisconsin
Application April 10, 1956, Serial No. 577,386
6 Claims. (Cl. 162—352)

1. In a paper machine, a travelling forming wire carrying stock thereon, a table roll rotatably supporting the

2,900,023

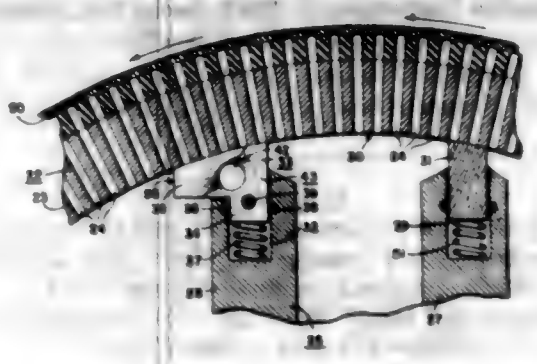
water chambers, said means also manually rectably

wire from beneath, and a deflector extending from close running relation beneath the wire along the downrunning side of the roll conforming to the arcuate contour of the



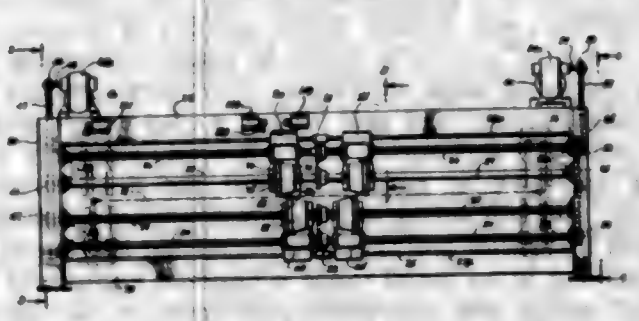
roll and in close running relation thereto to effect a pumping action between the roll and deflector to assist in drawing water through the wire.

2,900,024
SILENCER
Donald E. Holcroft, Chester, Pa., assignor to Scott Paper Company, Chester, Pa., a corporation of Pennsylvania
Application October 7, 1955, Serial No. 539,181
16 Claims. (Cl. 162—371)



1. The combination of a perforate moving sheet, a suction box on one side of said sheet, and a silencer adjacent the suction box, said silencer being generally comb-like and having tapered teeth with the teeth lying in a plane generally parallel to the plane of the sheet and with the tips of the teeth pointing generally in the direction of movement of the sheet.

2,900,025
TAIL SLITTER
George Emerson Lamb, Hoquiam, Wash., assignor to Lamb-Grays Harbor Co., Inc., Hoquiam, Wash.
Application June 25, 1956, Serial No. 593,597
6 Claims. (Cl. 164—65)



1. The combination with means for supporting and advancing a paper web or the like, of a tail slitting mechanism comprising a pair of parallel and revolubly driven shafts extended across the web at opposite sides thereof, paired disk-cutters slidably keyed on said shafts and movable therealong between outer positions, beyond the opposite side edges of the web, and inner positions closely adjacent the longitudinal center line of the web, threaded shafts located at opposite sides of the web, parallel to and coextensive with the first mentioned shafts, carrier housings mounted on said threaded shafts corresponding to the disk-cutters, means for rotating said threaded shafts in unison in one direction to cause the two carrier housings on each to move inwardly therealong in unison from beyond opposite side edges of the web to their inner limits of travel, and for rotating said shafts in the opposite direction to cause the carrier housings to move outwardly therealong in unison; each of the carrier housings, as associated with one of said threaded shafts, having a sleeve-like actuating element threaded on the shaft, and keyed for limited endwise sliding in said housing, thus providing a lost motion connection between housing and shaft whereby travel of the corresponding disk-cutter under influence of that housing is delayed at the start of the turning of said threaded shafts for an inward moving operation, thus to provide for the relative adjustment of the complemental disks to non-functional relationship, and at the start of the subsequent reverse turning of said shafts to cause said disk-cutters to be brought back to their coacting relationship for slitting the web.

2,900,026
PROCESS FOR FREEING STUCK DRILLING TOOLS
Ferdinand H. D. A. Trusheim, Steimbke Kries Nienburg, Weser, Germany, assignor to Shell Development Company, New York, N.Y., a corporation of Delaware
No Drawing. Application July 16, 1956
Serial No. 597,877
Claims priority, application Germany July 21, 1955
9 Claims. (Cl. 166—22)

1. A method of treating formations and earth material containing a substantial amount of clay encountered in well drilling operations which comprises introducing a quantity of hydrogen peroxide into a borehole drilled into the earth, positioning said quantity of hydrogen peroxide adjacent the location to be treated, and maintaining said hydrogen peroxide in contact with the borehole wall at said location for at least 15 minutes until at least a portion of said earth material has disintegrated.

2,900,027
OIL WELL TREATMENT
Ronald H. Cooper, Clare, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Application September 26, 1956
Serial No. 612,093
16 Claims. (Cl. 166—33)

1. Method for treating a well penetrating the earth's surface to seal sand in an unconsolidated interval present therein from movement into the bore hole which comprises forming a dispersion in and with an inert liquid vehicle of a thermoplastic-thermosetting mixture comprising a preponderant proportion of a finely divided, particulated, inert aggregate material that has been coated and uniformly mixed with a minor proportion of an active powdered magnesium oxide catalyzed aqueous phenolic liquid resin binder; introducing said dispersion into said well bore; moving said dispersion in said well bore to the unconsolidated sand interval therein to supply said mixture, under sufficient depositing pressure, to said interval, said interval occurring in surroundings in said well that are at a temperature between about 150 and 400° F.; agglomerating the mixture under pressure against the sand in said interval; and permitting the deposited, agglomerated mixture to cure under pressure in situ against the unconsolidated sand interval under the influence of the surrounding temperature to form a porous, resin bonded aggregate matrix formation against the sand in said interval; said phenolic liquid resin being an aqueous phenol-formaldehyde liquid resin that has a greater than 1:1 mole ratio of formaldehyde to phenol, respectively, a solids content of at least about 50 percent by weight, a pH between 5 and 9 and a viscosity at 77° F. between about 100 and 1,000 centipoises; said powdered magnesium oxide having a setting time of up to about ½ hour.

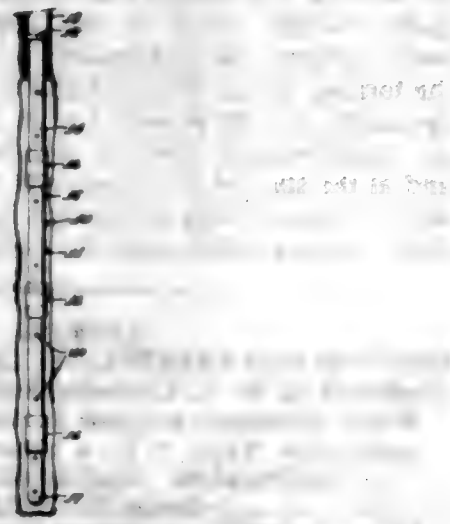
end of said armature so that said armature drives said ing stock thereon, a table roll rotatably supporting the

2,900,028

WELL PIPE AND FLEXIBLE JOINTS THEREFOR

James W. E. Hanes, Ventura, Calif., assignor to Huntsinger Associates, a joint venture consisting of Fritz Huntsinger, Mathilde Huntsinger, Carl F. Huntsinger, Fritz R. Huntsinger, James W. E. Hanes, and Joel L. Glenn

Application December 13, 1955, Serial No. 552,913
21 Claims. (Cl. 166—242)



1. In a tubular string adapted to be disposed in a well bore: an outer tubular member; an inner tubular member telescoped within said outer member; means for preventing substantial longitudinal movement in both directions between said members, including a transversely extending portion integral with one of said members and being of extended length circumferentially around said one member, said portion being shearable from said one member; means on said other member engaging said portion to transmit longitudinal loads therebetween; the force required to shear said portion from said one member being a predetermined value substantially less than the ultimate strength of both of said members.

2,900,029

DRY PIPE CLAPPER VALVES FOR AUTOMATIC SPRINKLER SYSTEMS

Harold Herkimer, New York, N.Y., assignor to The Raisler Corporation, New York, N.Y., a corporation of New York

Application June 17, 1957, Serial No. 666,870
3 Claims. (Cl. 169—22)

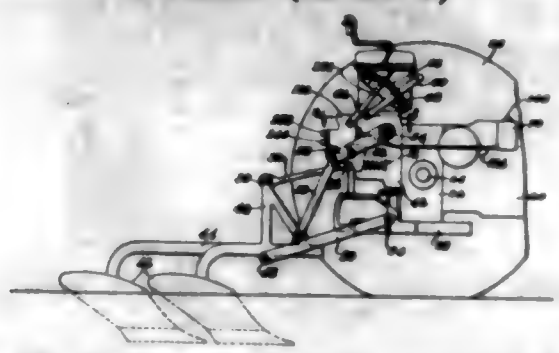
1. In a dry pipe clapper valve comprising a clapper disposed in a casing having an air chamber and a water chamber, combined locking and mounting means for said clapper, said means mounting said clapper for rotatable movement between an open position and a closed position in which it blocks communication between the air and water chambers, said means also manually resettably locking the clapper in open position, said means comprising a mounting element extending away from and movable with the clapper, a gravity hinge clutch bracket located on the casing, said bracket having an opening including a lateral upper branch running into a vertically elongated vertical branch that is rearwardly eccentrically disposed with respect to the lateral upper branch, the bottom edge of the upper branch meeting the front edge of the vertical branch at a corner, and a non-circular trunnion non-rotatably secured to the mounting element and located in said opening, said trunnion resting on the bottom edge of the lateral branch in closed position of the clapper and sliding around said corner as the clapper starts to turn away from closed position so that said trunnion will shift into said vertical branch as the clapper opens.

2,900,030

MULTIPLE-FUNCTION IMPLEMENT CONTROL SYSTEM FOR AGRICULTURAL TRACTOR

John H. Edmon, Waterloo, Iowa, assignor, by mesne assignments, to Deere & Company, a corporation of Delaware

Application November 3, 1954, Serial No. 466,649
10 Claims. (Cl. 172—9)



1. In a tractor having vertically adjustable draft linkage connectible to an agricultural implement and power means for raising, lowering and supporting the linkage, the combination of control means connected to the power means and selectively operative to activate and deactivate said power means; a draft-actuated member carried by the tractor and connectible to the implement for movement back and forth in accordance with changes in draft forces between the tractor and implement; means interconnecting said member and the control means for causing the control means to activate and deactivate the power means in response to movement of said member; yielding biasing means acting between the tractor and the draft-actuated member and substantially balanced against a draft force of a predetermined value for immobilizing said member, said biasing means yielding in response to draft forces of a greater value to enable movement of said member to cause activation of the power means by the control means; and said biasing means comprising a first, relatively soft spring and a second, relatively stiff spring operative in parallel against the draft-actuated member, said stiff spring having a lost-motion connection between the tractor and said member so that movement of said member in an initial range is opposed exclusively by the soft spring and subsequent movement of said member is opposed by both springs.

2,900,031

VERTICALLY ADJUSTABLE AND FOLDABLE ROD WEEDER SUPPORT WHEELS

Knud B. Sorensen, Rock Island, and Brian E. Kent, Moline, Ill., assignors, by mesne assignments, to Deere & Company, a corporation of Delaware

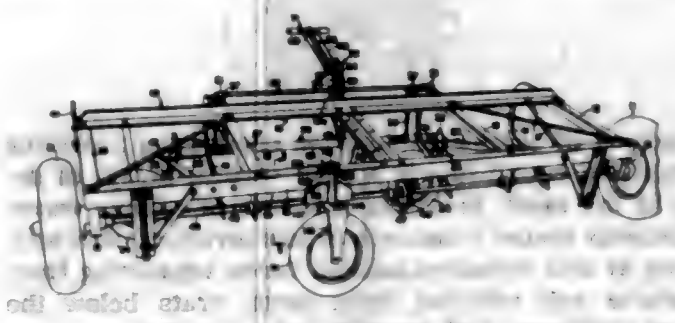
Application February 20, 1957, Serial No. 641,363
13 Claims. (Cl. 172—44)

3. In a rod weeder, a main frame, a transport frame movably connected with the main frame, a weeder rod

said supporting structure thereby being adaptable to swing the implement between a position proximate to the

2,900,037

rotatably supported by the main frame, and ground engaging wheels carried by the transport frame, the improvement comprising a bracket carried by said main frame, a hand lever pivotally mounted on said bracket, means to raise and lower the rod-carrying portion of the main frame relative to the transport frame and including a notched sector rockable relative to said bracket, a first latch carried by the hand lever and releasably engage-



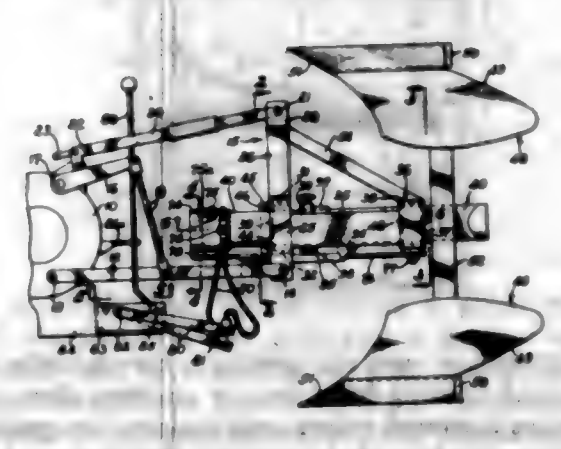
able with said sector whereby oscillation of said hand lever in one direction or the other acts to rock said sector so as to shift the main frame in one direction or the other relative to said transport frame, a second latch carried by said bracket and releasably engageable with said sector for releasably locking the sector against movement relative to the main frame, and means connected with said latches for alternately engaging and releasing the latches.

2,900,832

AUTOMATIC SELF-ALIGNING TWO-WAY PLOW

William Fisk Mellen, Anaheim, Calif., assignor to Alice Marion Mellen, Anaheim, Calif.

Application July 30, 1956, Serial No. 600,870
10 Claims. (Cl. 172—210)



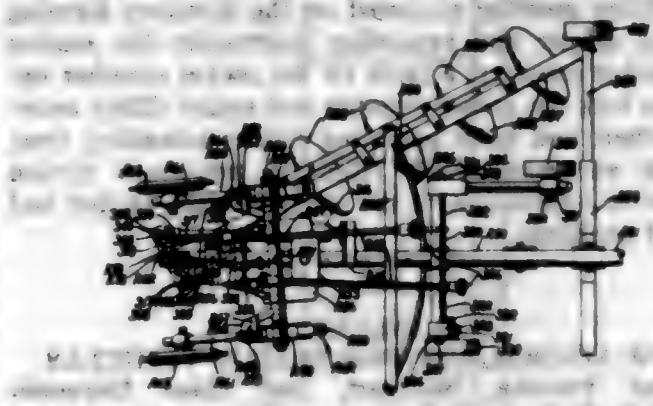
1. In combination in a two-way plow structure for tractors: a frame having means thereon for mounting the frame on supporting and draft means carried by a tractor; a horizontally disposed rearwardly extending rotary plow shaft having at its rearward end oppositely disposed, oppositely pitched plow bottoms of a two-way plow; means in a lower forward portion of said frame and adjacent the forward end of said shaft rotatably mounting said shaft in said frame; vertical pivot means adjacent the forward end of said shaft and mounting said forward end of said shaft in a lower portion of said frame to swing in a horizontal plane about said vertical pivot means; and transversely extending rearward guide means on a rearward lower portion of said frame behind said pivot means and said means rotatably mounting said shaft, such guide means freely receiving a rearward portion of said plow shaft for free movement thereof laterally in a horizontal plane during forward draft by the tractor of the frame, the plow shaft thereon and said plow bottoms while plowing, said rearward guide means including means for supporting and positioning the rearward end of said shaft and also including means preventing movement of said plow shaft vertically independently of said guide means.

2,900,833

AGRICULTURAL IMPLEMENT, PARTICULARLY A REVERSIBLE PLOW, AND SUPPORT VEHICLE THEREFOR

Anthony R. Coviello, Tulare, Calif.

Application October 21, 1955, Serial No. 542,067
22 Claims. (Cl. 172—212)



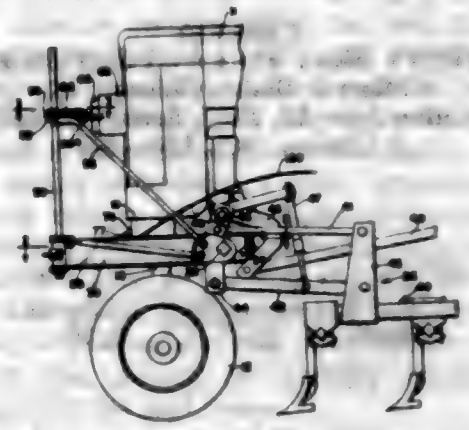
1. An agricultural implement comprising a frame, a tool support beam pivotally mounted in the frame for horizontal pivotal movement and having oppositely extended ends, a substantially vertically disposed shaft rotatably mounted adjacent to one end of the beam, a support wheel rotatably mounted on the shaft, a support wheel positioning arm extended from the shaft, means mounted on the frame engaging the arm for rotating the shaft incident to beam movement, a substantially horizontally disposed shaft rotatably mounted transversely on the frame for horizontal pivotal movement, legs journalled on the substantially horizontally disposed shaft, guide wheels rotatably mounted on the legs, control arms rigidly connected to the horizontal shaft and extended for engagement with the legs, means connected to the shaft for controlled rotation thereof, and means connecting the shaft with the end of the beam opposite to the end mounting the vertical shaft for pivoting the horizontal shaft incident to beam movement.

2,900,834

IMPLEMENT MOUNTING MEANS

Charles S. Morrison, Moline, Ill., assignor, by mesne assignments, to Deere & Company, a corporation of Delaware

Application January 7, 1957, Serial No. 632,699
3 Claims. (Cl. 172—273)



1. Attachment means for mounting an implement having ground engageable portions on a tractor having a longitudinal extending tractor body with an operator's station thereon, comprising: structure forming vertical pivot means at the forward end of the tractor body; an elongated supporting structure connected to said implement and having a forward end mounted on the pivot means and extending from the pivot means rearwardly,

ly adjacent to the inner surface of said end wall, means for insulating said transmitting chamber against exterior

against the ends of the side members of the other section to limit slidable telescoping movement of said ends to-

in which it blocks communication between the air and

movably connected with the main frame, a weeder rod

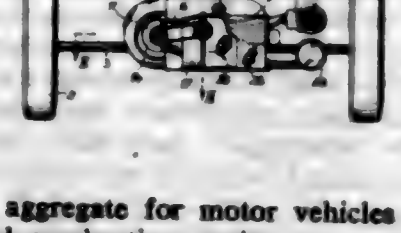
said supporting structure thereby being adaptable to swing the implement between a position proximate to the tractor body and a position spacedly outward from the tractor body; means detachably connecting the frame structure to the tractor body while in its position proximate to the tractor body; a socket member fixed to the front end of the tractor and opening forwardly; a cooperating socket fitting member mounted on the structure forming the pivot means and extending rearwardly for seating in the socket member; a latch on the socket member operative to lock the socket member and socket fitting member together; and latch operating means extending from the latch and controllable from the operator's station for selective adjustment of the latch between locked and unlocked positions.

2,900,035

DRIVE AGGREGATE FOR MOTOR VEHICLES

Ferdinand Porsche, Stuttgart, and Hans Hermann Hoenick, Stuttgart-Zuffenhausen, Germany, assignors to Firma Dr. Ing. h.c.F. Porsche KG, Stuttgart-Zuffenhausen, Germany

Application August 20, 1956, Serial No. 604,955
Claims priority, application Germany September 8, 1955
7 Claims. (Cl. 180—57)



1. A drive aggregate for motor vehicles with an air cooled internal combustion engine arranged behind the rear axle of the vehicle and on one side of the longitudinal axis thereof, a change-speed transmission connected to said engine and disposed forwardly of said rear axle, said engine being an in-line engine provided with horizontally disposed cylinders and with a crankshaft extending essentially in the longitudinal direction of the vehicle and including a crankcase, and axial blower means for cooling said engine disposed opposite said cylinders with respect to said engine and on the other side of said longitudinal axis and including a blower housing formed at least in part by the outer surfaces of said crankcase to thereby cool the oil in said crankcase by the cooling air supplied by said blower means.

2,900,036

SAFETY SEAT FOR AUTOMOBILES

William J. Blake, Chicago, Ill.

Application June 25, 1957, Serial No. 667,885
5 Claims. (Cl. 180—82)

1. In an automobile of the type driven by an engine secured to a front engine mount, a pair of parallel supporting members extending fore and aft of the automobile, a seat supporting carriage slidably mounted on said supporting members for movement rearwardly of the automobile and including structure disposed adjacent the engine of the automobile so that rearward movement of the engine caused by an accident causes the engine to engage said structure to move the seat supporting carriage rearwardly of the automobile.

2,900,037

SEISMOGRAPHIC EXPLORATION

Lacoste G. Ellis, Beaumont, Tex., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Application July 15, 1954, Serial No. 443,477
1 Claim. (Cl. 181—.5)

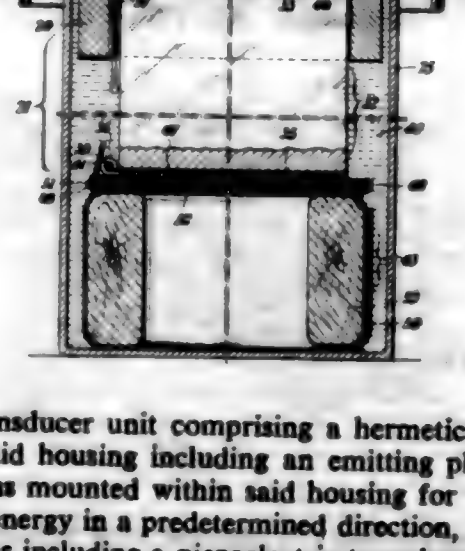
A method of seismic exploration comprising providing a plurality of equi-distantly spaced vertical arrays of detectors in the earth, providing a source of seismic waves equi-distantly spaced from each of said arrays of detectors, detecting at said detectors seismic waves emanating from said source and reflected from earth strata below the array of detectors, and recording the simultaneous outputs of said detectors and determining direction and dip of a reflecting horizon by comparing said recordings.

2,900,038

ULTRASONIC CLEANING APPARATUS

Stanley E. Jacke, Walled Lake, Lowell C. Newsome, Inkster, and Thomas J. Kearney, Detroit, Mich., assignors to Detrex Chemical Industries, Inc., Detroit, Mich., a corporation of Michigan

Application February 1, 1957, Serial No. 637,888
9 Claims. (Cl. 181—.5)



1. A transducer unit comprising a hermetically sealed housing, said housing including an emitting plate, transducer means mounted within said housing for generating ultrasonic energy in a predetermined direction, said transducer means including a piezoelectric transducer attached to and suspended from the emitting plate, a gas-filled sealed compression chamber comprising an envelope formed of a resilient impervious film surrounding a compressible material, said compression chamber being contained within said housing, reflector means interposed between said transducer means and said compression chamber, and a cooling liquid contained within the housing in contact with the transducer means.

2,900,039

PICK-UP DEVICE

Henry J. Burnett, West Hartford, Conn.

Application July 3, 1953, Serial No. 365,979
8 Claims. (Cl. 181—24)

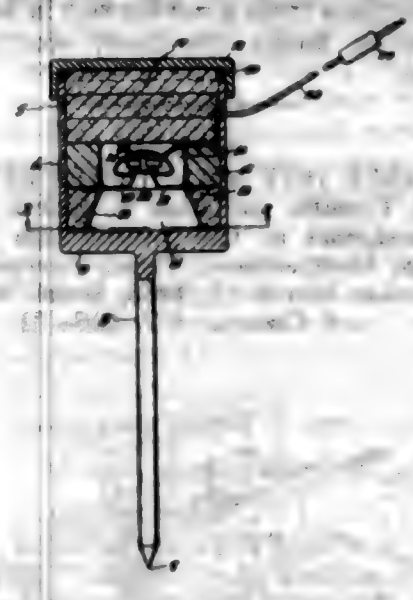
1. A pick-up device of the character described including a cup-shaped body portion having a surrounding wall, an end wall, an axial stem extending from said end wall, said end wall being of substantial thickness to prevent transmission therethrough of air-borne noises and noise energy other than that picked up through the stem, a transmitting chamber within said body portion and direct-

ing concentric cylindrically shaped members in said hous- to remove carbon dioxide therefrom, flashing the resultant

plow shaft vertically independently of said guide means.

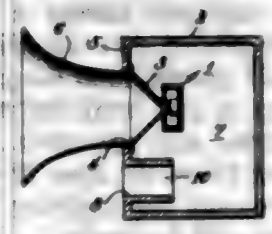
means and extending from the pivot means rearwardly,

ly adjacent to the inner surface of said end wall, means for insulating said transmitting chamber against exterior noises not transmitted through said end wall, an electrical transmitting device contained within a separate chamber adjacent to said transmitting chamber and including means



responsive to noise vibrations transmitted across said transmitting chamber from said end wall to said transmitting device for causing flow of electric current, and conductors connected to said transmitting device for conducting said current to an electric amplifier.

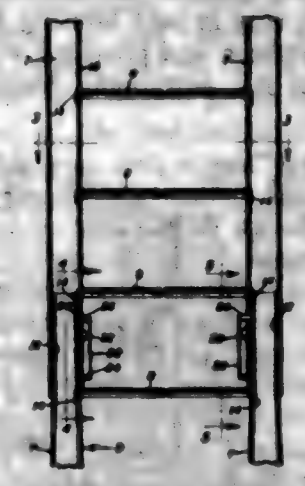
2,900,040
LOUDSPEAKER SYSTEM
James F. Novak, Berwyn, Ill., assignor to The Muter Company, a corporation of Illinois
Application September 12, 1955, Serial No. 533,536
11 Claims. (Cl. 181—31)



11. A loudspeaker system having a given frequency cut-off characteristic and including a speaker having a diaphragm and an enclosure for said speaker having an opening therein, and a horn having a frequency cut-off characteristic higher than said given frequency cut-off characteristic of said system, said horn extending outwardly from said opening, said speaker being mounted with the diaphragm thereof at said opening to project sound through said opening and said horn and to define with said enclosure a cavity, the walls of said cavity having a port providing limited communication of said cavity with the atmosphere, said ported cavity having a resonant frequency approximately equal to the resonant frequency of said horn loaded speaker.

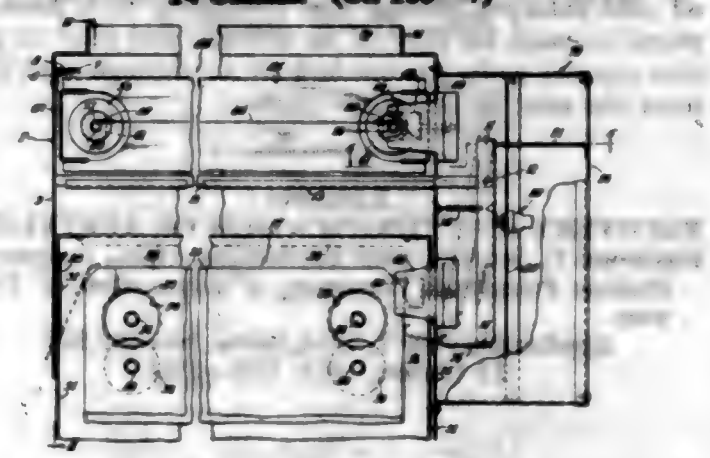
2,900,041
SECTIONAL LADDERS
Cyril E. Leavitt and Charles E. Whitehurst, Marianna, Fla.
Application June 28, 1957, Serial No. 668,636
1 Claim. (Cl. 182—178)

A ladder comprising a pair of ladder sections each embodying a pair of tubular side members, and transverse members connecting the side members, the side members of each pair having ends telescopically slidable together to connect said sections together, one transverse member of one section having end tabs inserted through slots in the side members of said one section and seating against the ends of the side members of the other section to limit slidable telescoping movement of said ends together, a pair of longitudinally extending leaf springs on said ends of one pair of side members fixed at one end thereto and spaced therefrom and having locking pins on the other ends thereof snapped through openings in



said ends of the side members in the limit of telescopic movement thereof, and a pair of triangular lugs on said ends of said one pair of side members intermediate the ends of and behind said springs and against which said springs are flexible toward said ends of said one pair of side members to withdraw said pins from said openings.

2,900,042
ELECTRICAL PRECIPITATOR
John E. Coolidge, Jr., Arlington Heights, and Harry W. Greene, Chicago, Ill., assignors to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application March 15, 1957, Serial No. 646,293
14 Claims. (Cl. 183—7)



1. In an electrical precipitator having a cabinet with a door, a collector section within the said cabinet comprising alternately spaced positive and negative plates, a power supply connectible to a power source for charging the said plates positively and negatively respectively, a switch biased to an open position connected to said power supply, a means comprising a lever supported with respect to said cabinet carrying a laterally extending arm at its lower end, and a rod associated with the lever of the said cabinet door for causing the said lever to move when the said cabinet door is opened and thereby permit the said switch to open and shut off the power source and at the same time to cause the laterally extending arm to contact and short the said plates.

2,900,043
FILTER
Arthur H. Jubilin, Chicago, and Albert L. Macnn, La Grange, Ill., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application June 18, 1956, Serial No. 591,994
2 Claims. (Cl. 183—46)

1. A filter assembly comprising an upstanding outer housing having an inlet and an outlet, a pair of upstand-

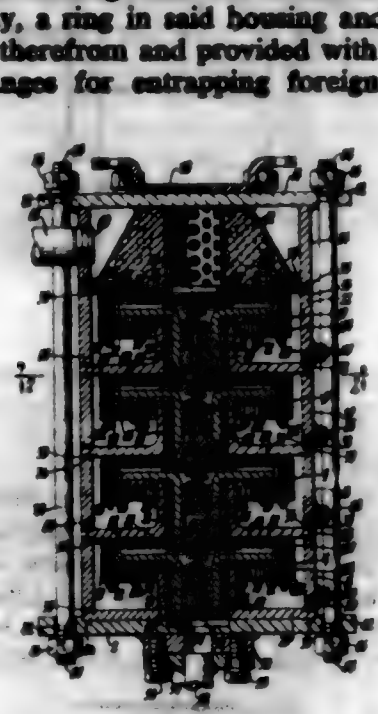
to drive said conveyor, said receptacle having a side open-

elevator cars while traveling in the second direction to

rage rearwardly of the automobile.

transmitting chamber within said body portion and direct-

ing concentric cylindrically shaped members in said housing having juxtaposed flanges on adjacent ends thereof, said concentric members forming an annular scrubbing passageway therebetween, said flanges forming horizontally extending spiral passages therebetween connected by said housing with the outlet thereof and to said passageway, a ring in said housing and around said flanges spaced therefrom and provided with vertical slots facing said flanges for entrapping foreign matter cen-



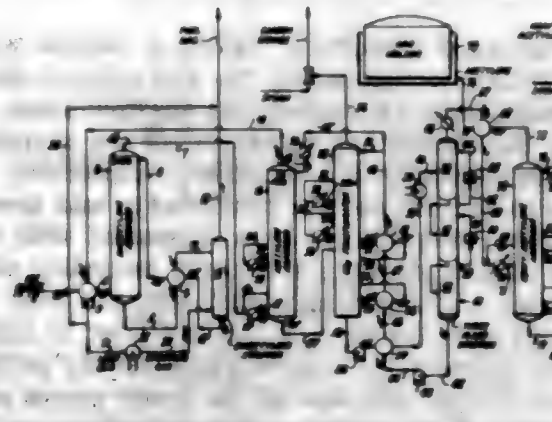
trifuged by the passage of air through said passage and said passages, the inner of said members having an enlarged passageway therein extending from the inlet of said filter to the outlet thereof via said housing, and a spring-loaded ball check in said enlarged passage normally biased to a seat in said enlarged passage to close off said enlarged passage and responsive to a predetermined demand for flow of air through said filter to provide parallel paths for the flow of air through said filter from the inlet to the outlet thereof.

2,900,044

RECOVERY AND PURIFICATION OF ACETYLENE

Raymond C. Scofield, near Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application July 7, 1954, Serial No. 441,909
15 Claims. (Cl. 183—115)



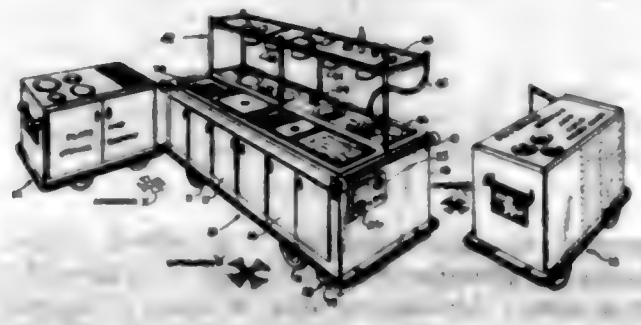
1. The removal of acetylenes from a gas stream containing acetylene, heavy acetylenes, diacetylene and carbon dioxide which comprises contacting said gas stream with dimethylformamide solvent to remove substantially only diacetylene from said stream, stripping diacetylene from said solvent and removing diacetylene as a separate stream from the system, returning the stripped solvent to said contacting for reuse, passing the resulting substantially diacetylene free gas into contact with dimethylformamide solvent to remove substantially all the acetylenes therefrom, thus obtaining an acetylene rich solvent stream, fractionating said acetylene rich solvent stream to remove carbon dioxide therefrom, flashing the resultant rich stream to recover an acetylene and heavy acetylenes containing gas stream and solvent, returning the solvent for reuse in the system, contacting the acetylene and heavy acetylenes containing gas stream with heptane to separate acetylene from a solvent rich in heavy acetylenes and recovering, finally, the heavy acetylenes from the said solvent.

2,900,045

MOVABLE HOT MEAL ASSEMBLY TABLE

William R. Conklin and Blair E. Stentz, Murfreesboro, Tenn., assignors to The Swartzbaugh Manufacturing Company, Murfreesboro, Tenn., a corporation of Ohio

Application March 10, 1958, Serial No. 720,167
5 Claims. (Cl. 186—1)



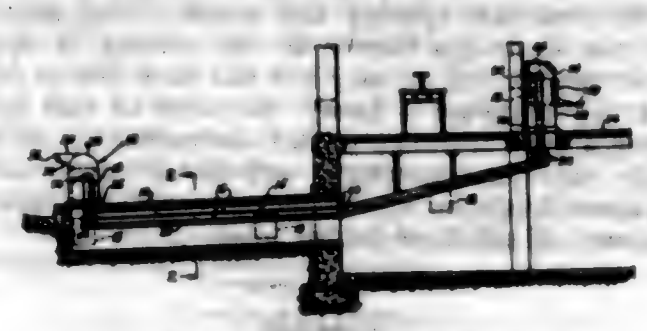
1. A movable hot meal assembly table comprising, in combination, a main body that is readily movable between feeding stations, said body having insulated walls, heating means in the interior of said body, racks in said body for carrying modular size bulk food pans, said body having a length greater than its width and a generally flat top, an elongated opening in said top extending along one side of said body for receiving a group of such food pans therein in combinations of modular sizes, a conveyor having a flat span extending along the other side of said top adjacent and parallel to the extent of said opening and the group of bulk food pans therein, means in said body for mounting said conveyor drive means for said conveyor, and a superstructure extending along above the span of said conveyor and mounting heating means for applying heat to the foods on service plates on said conveyor.

2,900,046

STREET COLLECTION CONVEYOR MAIL BOX

Paul W. Bailey, Oakland, Calif.

Application July 14, 1958, Serial No. 748,251
1 Claim. (Cl. 186—1)



A mail-pickup system comprising a collection box, a tunnel connecting said collection box to a delivery station, a delivery box at said delivery station, said collection box and said delivery box each having an open bottom, said tunnel being connected to each open bottom, a conveyor positioned between said collection box and said delivery box, and extending through said tunnel and into both of said collection and delivery boxes, at least one receptacle on said conveyor said receptacle being movable by said conveyor from a position within said collection box to a position in said delivery box, reversible means

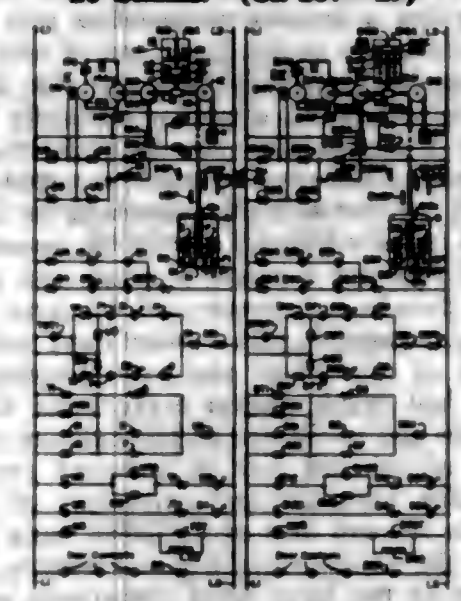
in the side members of said one section and seating housing having an inlet and an outlet, a pair of upstand-

to drive said conveyor, said receptacle having a side opening with a closure door thereon, said delivery box having a delivery opening therein with which said closure door is adapted to be aligned when said receptacle is positioned within said delivery box, said receptacle having an open top, hinged door means on said receptacle adapted to close said open top resilient means biasing said door into closed position, an opening in said collection box, closure means adapted to close said opening, said opening forming the upper end of a chute, the lower end of the chute being arranged above the top of said receptacle when said receptacle is in said collection box, means operatively connecting said closure means and said hinged door means for simultaneous opening and closing, means normally biasing said closure means to closed position, a solenoid operatively connected to said closure means, and means actuating said solenoid to move said closure means and hence said hinged door means to open position.

2,900,047
ELEVATOR SYSTEMS

William F. Ramos, Westfield, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application October 1, 1958, Serial No. 764,650
20 Claims. (Cl. 187—29)

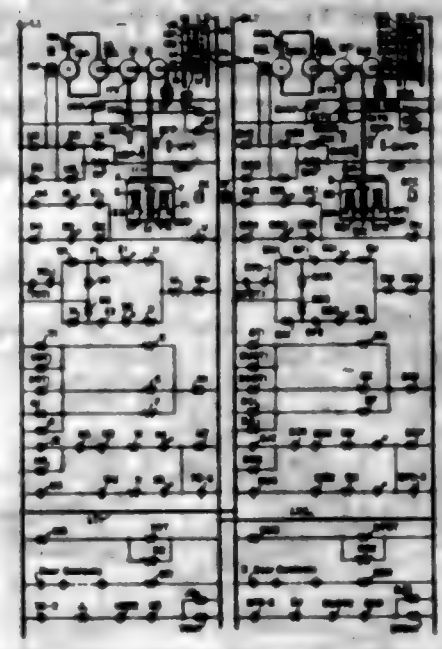


20. An elevator system including a structure having landings, said landings comprising first and second groups, a plurality of elevator cars, means mounting the elevator cars for movement in two directions relative to the structure to serve the landings, landing first call means operable from each of the landings for registering calls for elevator service in a first of said two directions of movement from said landings, landing second call means operable from each of the landings for registering calls for elevator service in the second of said two directions of movement from said landings, car call means for each of the elevator cars operable for registering a call for each of the landings desired for the load within the associated elevator car, control means for operating each of the elevator cars for travel in said two directions and for stopping each of the elevator cars at each of the landings approached by the respective elevator cars for which a call for service is registered by said landing first or second call means or by said car call means which may be answered by the approaching elevator car without a change in the direction of travel of the approaching elevator car, modifying means responsive to the registration by said landing first call means of greater than a first predetermined number of calls for said first group of landings for conditioning all of said elevator cars to serve only said first group of landings although a call is registered by said landing first or second call means for said second group of landings and for causing each of the elevator cars while traveling in the second direction to stop and to reverse its direction of travel at the farthest landing in said first group reached by the last-named elevator car for which a call is registered by said landing first call means or by said car call means which may be answered by the last-named elevator car provided that no call is registered by said landing second call means for such farthest landing and no call is registered by said car call means for said second group of landings requiring further travel of the last-named elevator car from such farthest landing in said second direction, means for preventing said modifying means from becoming ineffective upon the termination of the registration by said landing first call means of said first predetermined number of calls for said first group of landings provided that at least one of said elevator cars at said termination is serving said second group of landings and provided further that no greater than a second predetermined number of calls is registered by said landing first and second call means for said second group of landings, and means responsive to registration by said landing first and second call means of greater than a second predetermined number of calls for said second group of landings for initially preventing said elevator cars from serving only said first group of landings although greater than said first predetermined number of calls is registered by said landing first call means for said first group of landings, said second predetermined number being greater than zero.

2,900,048
ELEVATOR SYSTEMS

William F. Ramos, Westfield, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application October 10, 1958, Serial No. 766,565
8 Claims. (Cl. 187—29)



8. In an elevator system for a structure having a plurality of landings including first and second terminal landings and a plurality of landings intermediate the terminal landings, a plurality of elevator cars, means mounting the elevator cars for movement in two directions relative to the structure to service said landings, motive means for moving each of the elevator cars relative to the structure, control means operable in cooperation with the motive means to move the elevator cars relative to the structure and to stop the elevator cars at predetermined landings, car-call means operable from each of the elevator cars for registering a call for each of the landings desired for the load within the associated elevator car, landing call means comprising only a single movable member disposed at each of the landings operable for registering calls for elevator service from

the landings, said control means comprising means responsive to the movement of each of said members to a first position for moving the elevator cars and for stopping the elevator cars to provide service in a first of said two directions from each of the landings for which said member is moved to said first position, reversing means for causing each of the elevator cars while traveling in the second of said two directions to stop and for conditioning such elevator car for subsequent travel in the first direction at the farthest landing in the second direction for which a landing call is registered which may be answered by such elevator car provided no car call is registered requiring further travel of such elevator car in the second direction, and modifying means responsive to the maintenance of each of said members in said first position as an elevator car approaches in the second direction a landing for which said member is so operated for stopping the last-named elevator car at the last-named landing, for rendering said reversing means ineffective for a predetermined time to condition said last-named elevator car for subsequent travel in the first direction although no landing call and no car call previously has been registered requiring further travel of said last-named elevator car in the second direction, for permitting the registration of a car call in response to operation of the car-call means for said last-named elevator car during such predetermined time for a landing requiring further travel of said last-named elevator car in the second direction, and for preventing any elevator car which approaches said last-named landing in said first direction from stopping at said last-named landing provided no car call is registered for such elevator car for said last-named landing.

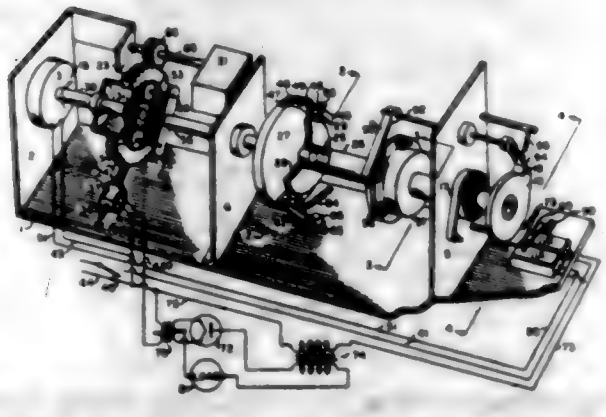
2,900,049

DELAYED CIRCUIT CLOSERS

Felix Kozikowski and Frank Arthur Pearson, Moline, Ill., assignors to Eagle Signal Corporation, Moline, Ill., a corporation of Massachusetts

Original application January 5, 1954, Serial No. 402,244, now Patent No. 2,820,860, dated January 21, 1958. Divided and this application April 8, 1957, Serial No. 654,054

21 Claims. (Cl. 188—1)



1. A device to absorb the energy of an accelerating revolving mass, comprising, a revolving mass, a radial surface carried by said revolving mass, a source of power to turn said revolving mass in one direction at an accelerating speed, stopping means engaging said surface when the revolving mass reaches a particular angular position, a spring biased to remove said stopping means from the path of said surface, a releaser carried by the revolving mass and free to move angularly relative to the revolving mass, a first stop carried by the revolving mass determining the position of said releaser when the revolving mass is accelerating, a second stop carried by the revolving mass determining the position of said releaser when the revolving mass is decelerating, means carried by the releaser that, in one position of the releaser permits said spring to act.

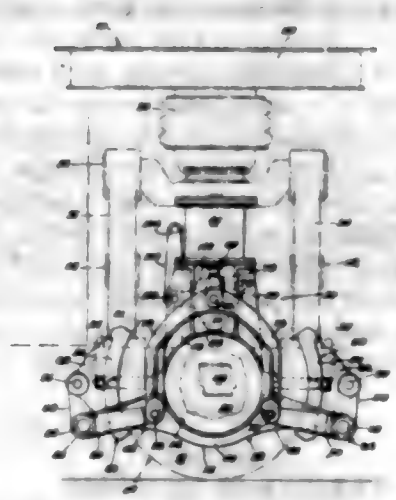
2,900,050

CLASP BRAKE

Arthur F. Baker, Granite City, Ill., assignor to American Steel Foundries, Chicago, Ill., a corporation of New Jersey

Application April 20, 1956, Serial No. 579,602

7 Claims. (Cl. 188—56)



1. In a brake arrangement for a railway car, a wheel and axle assembly, a journal box mounted on the axle, a brake frame mounted on said journal box, said brake frame comprising a housing surrounding said box and having a fulcrum arm at the lower end of said housing, said arm extending outwardly from one side thereof, a pair of mounting brackets extending upwardly from the upper surface of said housing, said brackets being spaced from each other, a power cylinder mounted on said brackets with its operative axis extending in a vertical plane normal to the rotational axis of the assembly, said power cylinder having a piston, a piston rod extending downwardly therefrom between said brackets, a brake shoe assembly engageable with a wheel tread surface of a related wheel of said wheel and axle assembly, and a substantially bell crank shaped brake lever fulcrumed intermediate its end to the end of said fulcrum arm, said lever having an inboard and an outboard arm spaced from each other inboardly and outboardly of said fulcrum arm, the inboard arm of the lever being pivotally connected to the adjacent brake shoe assembly, and the outboard arm of the lever being operatively connected to the power cylinder, said inboard arm and pivotal connection supporting the related shoe assembly and urging the latter to move towards and away from said wheel.

2,900,051

CAM ROLLER SELF-ENERGIZING DISC BRAKE

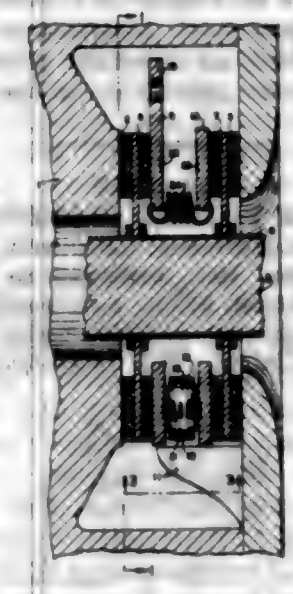
Kenneth P. Hillegass, Copley, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

Application April 24, 1958, Serial No. 730,584

2 Claims. (Cl. 188—72)

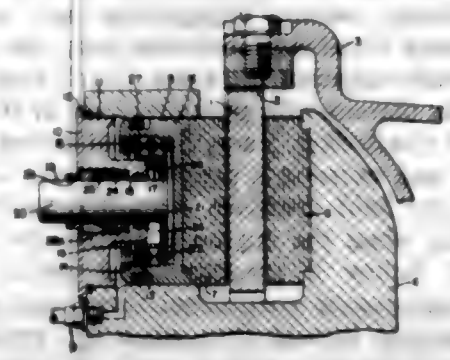
1. The combination in a brake, of a housing including a pair of stationary, axially-spaced, circular, opposed and radially-directed pressure surfaces, a rotary member mounted on an axis coincident to the axis of the surfaces, a pair of friction discs splined on the member for axial sliding movement and axially-spaced thereon and adapted to have frictional engagement with the surfaces, a pair of pressure plates mounted between the discs, means on the housing and on the peripheries of the pressure plates allowing limited arcuate movement of each pressure plate, a plurality of elliptical cam rollers circumferentially spaced between the pressure plates, an annular cage concentric with the rotary member and independent thereof carrying the rollers, said cage being spaced from said pressure plates and having bearings for rotatably engaging trunnions formed on ends of said cam rollers, teeth on the periphery of the rollers and cooperating teeth on the pres-

sure plates, and power means for effecting relative rotation between the pressure plates to cause movement of the rollers in the direction to position the major axis of the



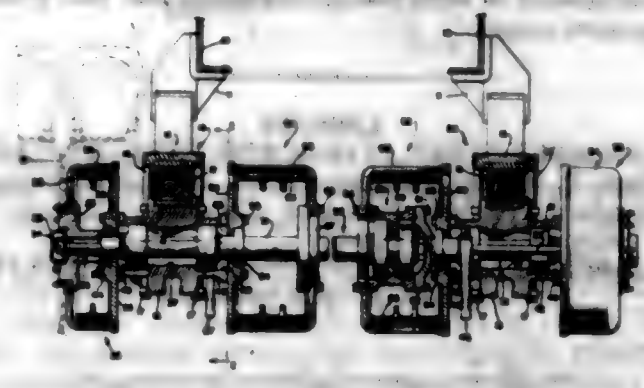
rollers between the pressure plates to move the plates against the discs and the discs against the surfaces and effect braking action.

2,900,852
CONSTANT CLEARANCE BRAKE ADJUSTER
Theodore Frayer, North Canton, and John W. Runner, Akron, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Application April 3, 1957, Serial No. 650,395
4 Claims. (Cl. 188—73)



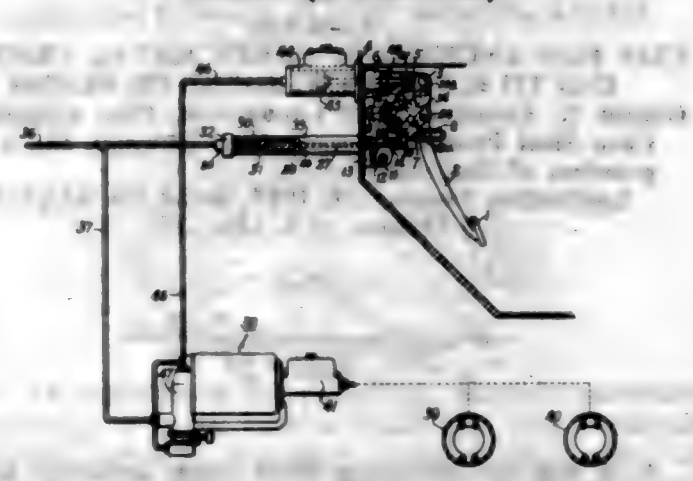
1. A brake operating cylinder having a piston for advancing a brake shoe under the force of hydraulic pressure, an automatic adjustment pin held frictionally by a friction grip against movement axially of said cylinder under normal braking movements of said piston, axially spaced stop means on said pin and said piston limiting advance movement of said piston without axial movement of said pin, said stop means including spring means mounted between a shoulder of said piston and a shoulder of said adjustment pin for returning said piston when the hydraulic pressure is released, said spring means comprising a first spring mounted between a shoulder of said piston and a shoulder of said pin and having a high rate of deflection for returning the piston under conditions of normal brake clearance, said first spring being of strength and dimensions to be fully compressed with axial closing of the space between said stop means and a second stronger spring having a lower rate of deflection and having a total limit of deflection equal to normal brake clearance for returning the piston from an abnormal movement of the piston resulting from wear of the brake or resilient deflection of brake parts to provide normal brake clearance, said second spring being of strength and dimensions to prevent substantial deflection thereof under a force less than the resistance of said friction grip to movement relative to said pin, said second spring being also mounted between said axially spaced stop means and being compressible by an amount equal to the clearance of the brake, the friction grip on said adjustment pin being clamped to said pin by a force exceeding that necessary to fully deflect said first spring and partially deflect the second spring, and at least one of said spring means comprising a bowed washer of spring metal having a limit of deflection equal to the normal brake clearance.

2,900,853
EMERGENCY BRAKING SYSTEM FOR VEHICLES
Fred Lowery and Joseph D. Phillips, Republic, Pa.
Application October 4, 1956, Serial No. 613,967
18 Claims. (Cl. 188—106)



1. An emergency brake system for a heavy trailer automotive vehicle having brake equipped support wheels and two vehicle supporting means mounted between the support wheels, said emergency brake system comprising a two part axle, means rotatively coupling the inner ends of said two part axle together between the two vehicle supporting means, the outer ends of said two part axle being rotatively journaled through the vehicle supporting means and having the brake equipped support wheels mounted thereon, and emergency brakes mounted on each inner end of said two part axle, between the axle coupling and the two vehicle supporting means, one of said emergency brakes completely enclosing said rotative coupling means.

2,900,854
MULTIPLE RATIO BRAKE PEDAL CONSTRUCTION
Edward A. Rockwell, Los Angeles, Calif.
Application October 25, 1954, Serial No. 464,468
8 Claims. (Cl. 188—152)



1. A brake operating mechanism comprising a brake operating member, a brake pedal lever pivotally mounted upon a fixed support, and a changeable ratio motion transmitting coupling between said brake pedal lever and said brake operating member, said coupling including a coupling lever pivotally mounted on said support adjacent said brake pedal lever, means connecting said coupling lever and said brake operating member, means interconnecting said levers including a toggle linkage, said toggle

linkage comprising a pair of toggle links pivotally connected to each other, said pair of toggle links when straightened providing a rigid connection to move said coupling lever at one ratio when the brake pedal lever is operated, spring means, means including a lost motion connection means between said spring means and said toggle links so arranged that said spring means after taking up the lost motion of the latter connection means tends to move said toggle links in one direction to straighten the latter, pressure responsive means opposing said spring means and tending to stress the latter, said toggle linkage including means to collapse the same when said spring means is so stressed, and means connecting said levers when said toggle linkage is collapsed at a different ratio, said lost motion connection means providing for movement of said brake pedal lever, and said coupling lever, independently of both said spring means and said pressure responsive means.

2,900,055

NAILABLE STEEL FLOOR FOR FREIGHT CARS

William R. Shaver, Hammond, Ind., assignor to Pullman-Standard Car Manufacturing Company, Chicago, Ill., a corporation of Delaware

Application September 26, 1957, Serial No. 685,112
5 Claims. (Cl. 189—34)

1. In a nailable steel floor comprised of juxtaposed metal members each having a horizontal web and a depending flange at one side edge of the web, said depending flanges being disposed in opposed spaced relation to provide a nailing groove therebetween, one of said flanges having a spacer embossment thereon extending toward the other flange in said groove, said other flange having a portion overlying said embossment whereby to prevent relative vertical displacement of the members in one direction, said embossment having a reversely bent portion, and a reversely bent portion in said other flange complemental to said first-named reversely bent portion, said reversely bent portion in said other flange underlying said embossment whereby to prevent relative vertical displacement of the members in another direction.

2,900,056

CLIP FOR ANCHORING SHEET METAL CENTERING TO SUPPORTING JOISTS OR BEAMS

Gerald G. Greulich, Fort Lauderdale, Fla., assignor to Coco Steel Products Corporation, Chicago, Ill., a corporation of Delaware

Application January 11, 1957, Serial No. 633,778
6 Claims. (Cl. 189—35)

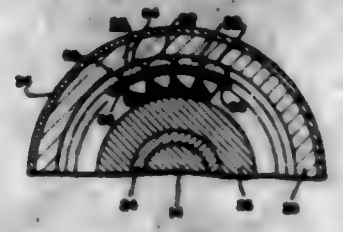
1. A clip for anchoring sheet metal centering to the opposed top flanges of a supporting joist, beam or flanged member, comprising a strip of deformable metal provided with spaced, depending prongs each having a point for piercing the sheet metal centering beyond the outer marginal edges of said top flanges, an upstanding driving stub aligned with each prong for causing the prongs to pierce the centering beyond the outer marginal edges of said top flanges, said driving stubs when bent outwardly and downwardly against the sheet metal centering tilting said depending prongs upwardly and inwardly against the outer marginal edge and the underside of the flanges of said supporting joist, and a top ridge provided between said driving stubs which when depressed draws the bent prongs toward each other to effectively anchor these prongs and the sheet metal centering to the top flanges, said top ridge having an upwardly projecting prong for anchoring a concrete slab to the supporting joist.

2,900,057

CLUTCH FOR ENGINE STARTING DEVICE

Paul L. Schneider, Harold J. Cromwell, and William H. Taylor, Anderson, Ind., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application February 3, 1954, Serial No. 407,998
3 Claims. (Cl. 192—45.1)



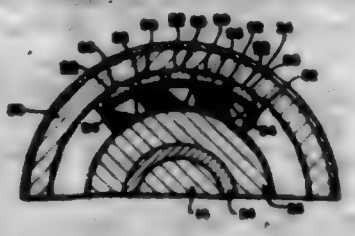
1. A one-way overrunning clutch operable to establish driving connection between a prime mover and mechanism operated thereby and having in combination inner and outer clutch rings, one of which is a driving member adapted to be rotatably connected to said prime mover and the other of which is a driven member adapted to be operatively connected to said mechanism, a plurality of tiltable gripping members positioned in the space between said inner and outer clutch rings and so positioned that adjacent elements are substantially in contact with each other throughout said space, said gripping elements causing engagement and disengagement of said clutch by tilting movement only, the outer ends of said elements adjacent the outer clutch ring having open ended slots therein with the open ends of the slots facing said outer clutch ring, a single helical spring positioned in said slots and exerting a pressure on said elements tending to force said elements inwardly toward the inner clutch ring when the engine is inoperative or operating at speeds below a predetermined speed, said spring being responsive to centrifugal force and movable outwardly thereby in said slots when the engine is operating at said predetermined speed or higher speeds, so that said spring is rendered ineffective at said predetermined speeds or higher speeds.

2,900,058

CLUTCH FOR ENGINE STARTING DEVICE

Harold J. Cromwell, Anderson, Ind., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application February 17, 1954, Serial No. 410,977
2 Claims. (Cl. 192—45.1)



1. A one-way overrunning clutch comprising; inner and outer spaced clutch rings, one of rings being a driving member and the other ring being a driven member, a plurality of tiltable gripping elements positioned in the space between the inner and outer rings for establishing driving connection between said rings when said elements

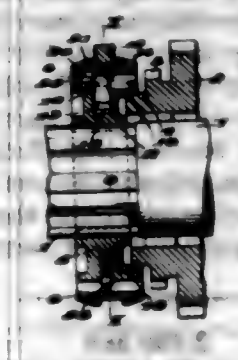
are tilted in a predetermined direction, means for limiting the pressure exerted by said tiltable elements on said driving and driven members to a predetermined maximum, when said elements are tilted in said predetermined direction, said means comprising a plurality of wedge-shaped blocks each having flat side surfaces extending across their lengths and each of which is positioned between adjacent tiltable elements and arranged to have one flat side engaged by one of tiltable elements when said element is tilted in said predetermined direction to effect the driving connection between said driving and driven elements, an open ended slot in each of said elements extending from an outer edge thereof, an open ended slot in each block facing the outer clutch ring and located in alignment with the slots in said elements, and a garter spring received in said slots of each element and normally exerting a force on each element tending to tilt said elements in said predetermined direction, said slots being of sufficient width as to permit said spring to move in the slots under centrifugal force, said spring being arranged in said slots and responsive to the action of centrifugal force and movable thereby to relieve the force normally exerted by said spring on the tiltable elements when the clutch assembly is rotated at or above a predetermined speed.

2,900,059

SYNCHRONIZING DEVICE

Anton Zittrell and Albert Maier, Friedrichshafen am Bodensee, Germany, assignors to Zahnradfabrik Friedrichshafen, Friedrichshafen am Bodensee, Germany

Application January 28, 1954, Serial No. 406,797
2 Claims. (Cl. 192—53)



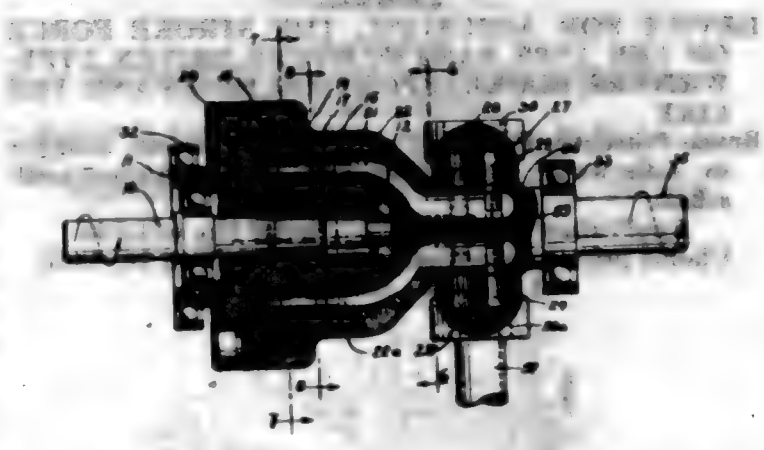
1. A clutch comprising a coupling sleeve and a driving gear having interengageable teeth, said coupling sleeve having toothed engagement with and being slidably carried on an inner concentric synchronizing sleeve, a friction drive element concentrically carried by said synchronizing sleeve and having limited relative rotation with respect thereto, said friction element being engageable, upon manual shifting of said coupling sleeve, with a complementary friction element carried by said driving gear, a cam notch in said synchronizing sleeve, a radially movable locking pin having an inner cam follower engageable with said cam notch so as to be moved radially upon relative rotation between the friction element carried by said synchronizing sleeve and said synchronizing sleeve, and a protuberance inside said coupling sleeve engageable with the outer end of said pin to lock said coupling sleeve against longitudinal motion prior to synchronization of speed between said coupling sleeve and said driving gear, wherein the protuberance inside said coupling sleeve is provided with cam sides sloping in opposite directions and engageable with respective sloping sides provided on the outer end of said locking pin when said coupling sleeve moves in either direction with respect to said driving gear, said cam sides being of unequal slope, one slope to effect greater resistance to movement of said coupling sleeve when moved in the direction of coupling and the other slope to effect lesser resistance to motion of said coupling in the uncoupling direction.

2,900,060

VARIABLE SPEED CONSTANT TORQUE FLUID DRIVE

Ernest E. Wagner, Santa Ana, Calif.

Application August 24, 1955, Serial No. 530,367
10 Claims. (Cl. 192—58)



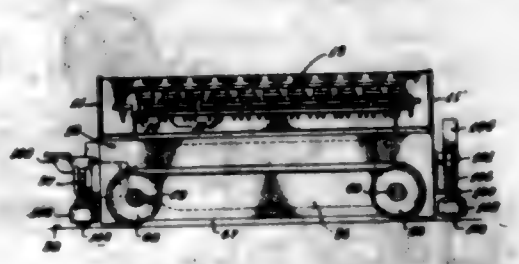
1. In a fluid transmission of the character referred to, means to define a reservoir for a fluid, bearing means, a housing mounted for rotation in said bearing means, a drive shaft concentric with said housing, bearings in said housing for said shaft, balanced rotary pump means of the vane type connected with said shaft to rotate therewith, said housing surrounding and rotatable relative to and independently of said pump means and provided with inlet-outlet passageways in communication with said pump means and terminating in inlet and outlet ports, said ports being axially spaced in a diametrically diminished journal portion of said housing, said housing being provided with an output shaft coaxial with said input shaft, a stationary body associated with said housing and provided with inlet-outlet ports arranged to mate with said axially spaced inlet-outlet ports in said housing, a conduit leading from said reservoir to the inlet ports in said body and housing, pressure compensated flow control means, a conduit leading from said outlet ports to said pressure compensated flow control means for metering out a definite volume of fluid from said pump means and thereby governing the speed of said output shaft, and a conduit leading from said flow control means to said reservoir.

2,900,061

AMBULATORY TYPEWRITER

George Vincent Palmer and Harley E. Pritchett, Los Angeles, Calif.

Application February 12, 1957, Serial No. 639,827
13 Claims. (Cl. 197—2)



1. An ambulatory, self-propelling, portable typewriter comprising: a frame, keyboard and type bars associated therewith, belt-type, elongated traction means carried by the frame and arranged to support the frame upon any virtually plane supporting surface, a printing center lying in a plane virtually co-planar with such supporting surface, a down-strike actuating mechanism connecting the keyboard with the type bars, said belt-type traction means being in alignment with bases of type in imprinting position; a pressure-fluid-operated motor means and a reservoir of pressure fluid carried by the frame, said reservoir being connected to the motor means; an operable connec-

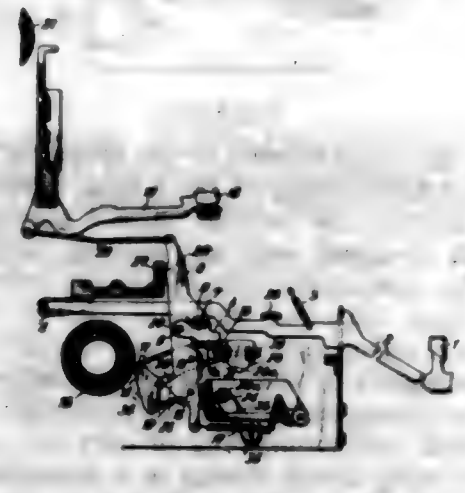
tion between the motor means and traction means; and means for energizing the motor means when the down-strike actuating mechanism is actuated.

2,900,062

DEVICE FOR ADJUSTING THE STROKE FORCE OF THE TYPE BARS IN POWER-DRIVEN TYPEWRITERS, BOOKKEEPING MACHINES AND THE LIKE

Bruno Nitschke, Frankfurt am Main, Germany, assignor to Adlerwerke vorm. Heinrich Kleyer Aktiengesellschaft

Application April 10, 1957, Serial No. 651,946
Claims priority, application Germany April 14, 1956
13 Claims. (Cl. 197—17)



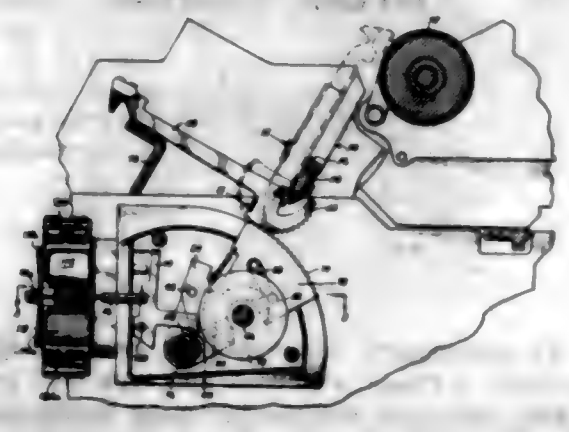
1. Mechanism for regulating the striking force of the type heads of power-driven typewriters, bookkeeping machines and the like comprising an actuating lever pivotally connected to a frame of the typewriter and provided for each key lever, a contact portion pivotally mounted on the actuating lever, an impacting part on said contact portion and having an impacting surface, and means for adjustably mounting the impacting part.

2,900,063

POWER DRIVEN TYPE ACTION FOR CHARACTER-BY-CHARACTER PRINTERS

Henry L. Tholstrup, Rochester, N.Y., assignor to Commercial Controls Corporation, Rochester, N.Y., a corporation of Delaware

Original application October 4, 1956, Serial No. 613,877. Divided and this application October 2, 1957, Serial No. 687,768
10 Claims. (Cl. 197—17)



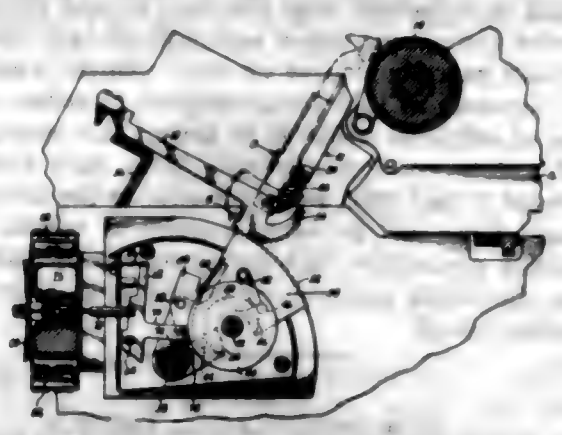
1. In a power operated typewriter, a constantly rotatable power shaft, a drive pin carried by said power shaft, a type lever mounted for oscillation into and out of typing position, a pivot shaft mounted parallel to said power shaft, a typing segment for said type lever mounted on said pivot shaft for oscillation thereon, a gear segment on said type lever, a gear segment on said typing segment disposed in engagement with said first named gear segment, a movable abutment pivoted to said typing segment, and means for moving said abutment into the path of said drive pin, thereby coupling said typing segment with said power shaft to oscillate said typing segment on said pivot shaft.

2,900,064

TYPE BASKET AND TYPE LEVER MOUNTING

Henry L. Tholstrup, Rochester, N.Y., assignor to Commercial Controls Corporation, Rochester, N.Y., a corporation of Delaware

Original application October 4, 1956, Serial No. 613,877. Divided and this application October 2, 1957, Serial No. 687,693
3 Claims. (Cl. 197—39)



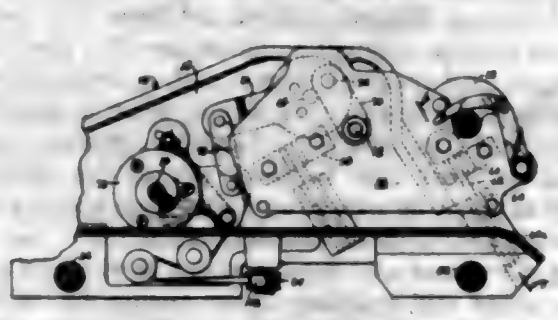
1. In a power operated typewriter, a segment for mounting type bars comprising, a base member having slots through one edge thereof to receive type bars, a clamping member having corresponding slots, said members having complementary bearing seats intersecting the slots thereof, means for securing said members together with the slots and bearing seats thereof in registration, type bars mounted independent of each other for oscillation in said segment, each of said type bars having a bearing seated in one of said bearing seats formed between said members, and a peripheral slot in one of said members disposed in perpendicular relation to the first named slots therein and extending beyond said bearing seats therein.

2,900,065

CARRIAGE AND PLATEN CONTROL FOR TYPEWRITERS

Henry L. Tholstrup, Rochester, N.Y., assignor to Commercial Controls Corporation, Rochester, N.Y., a corporation of Delaware

Application October 4, 1956, Serial No. 613,900
5 Claims. (Cl. 197—73)



1. In a power operated typewriter, a stationary base structure, a carriage mounted for transverse reciprocating movement on said base structure, a platen support mounted on said carriage for movement therewith, platen support shifting mechanism also mounted on said carriage for imparting to said platen support generally vertical movement between upper and lower case printing positions, a case shift key in said base structure, laterally fixed case shift mechanism in said base structure under control of said case shift key, a pair of flexible power transmitting tapes having one end thereof attached to said case shift mechanism and the opposite ends thereof to said platen support shifting mechanism for shifting said platen

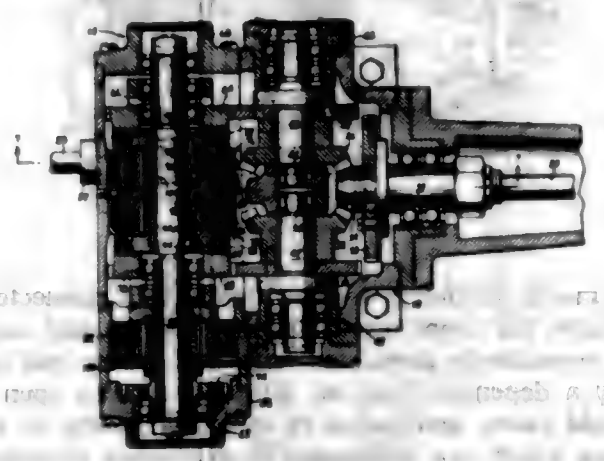
of the tongue and respectively having bight portions with said cup supporting means whereby certain of said

support between upper and lower case printing position, and means for maintaining a uniform amount of tension on said tapes as said carriage reciprocates transversely of said base structure.

2,900,866
CARRIAGE CONTROL MECHANISM FOR POWER DRIVEN PRINTER

Henry L. Tholstrup, Rochester, N.Y., assignor to Commercial Controls Corporation, Rochester, N.Y., a corporation of Delaware

Application October 4, 1956, Serial No. 613,877
7 Claims. (Cl. 197—82)

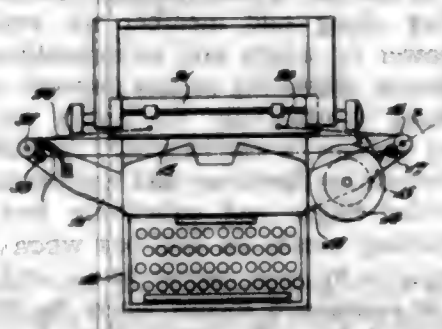


1. In a power operated typewriter having a base structure and a carriage adapted to reciprocate on said base structure, a power shaft in said base structure, a power transmission device having a forward drive gear and a reverse drive gear connected to said power shaft, an escapement rack fixed to said carriage, electromagnetic clutch means for selectively connecting said escapement rack to said forward and reverse drive gears, an electrical control circuit including a pair of circuit breakers for said electromagnetic clutch means and cam means connected for rotation with said power shaft for operating said circuit breakers for timing the connection of said rack to said gears.

2,900,867
ATTACHMENTS FOR TYPEWRITERS

Hilda May England, Dunstable, England

Application December 10, 1957, Serial No. 701,836
6 Claims. (Cl. 197—151)

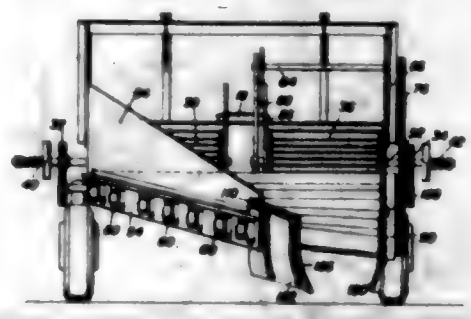


1. In a typewriter having a frame, a carriage reciprocably movable on said frame in a letter-spacing direction and in a reverse direction and a platen rotatably mounted on said carriage, the provision of means at each end of said frame to support a coated strip in such manner that said strip lies for at least part of its length adjacent said platen, driving means on said support means at one end of said frame operative in response to movement of said carriage in said letter-spacing direction to effect movement of said strip in one direction, a second driving means on said support means at the opposite end of said frame synchronized with said first-mentioned driving means and acting to produce movement of said strip in the same direction whereby tensional stress in said strip intermediate said two driving means is avoided and means to render both said driving means inoperative on movement of said carriage in said reverse direction.

2,900,868
RESILIENT ROLLER POTATO DIGGER ATTACHMENT

Robert B. Carl, Twin Falls, and Homer H. Butler, Jr., Kimberly, Idaho

Application October 18, 1957, Serial No. 690,978
2 Claims. (Cl. 198—65)

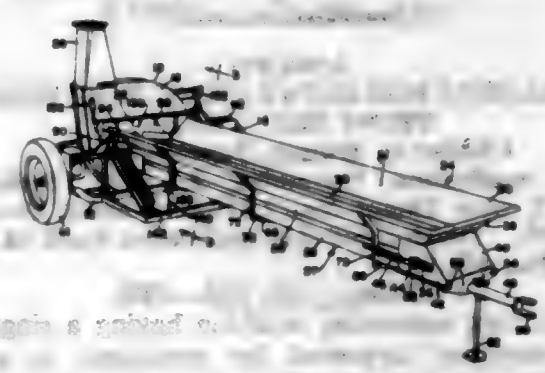


1. In a two-row potato digger having parallel sides, an attachment to collect the potatoes that are discharged from the two-row potato digger and issue them in a single row, said attachment having a rear discharge end comprising a pair of sides that are spaced from each other in the rear of the potato digger, a plurality of rollers extending across said sides of the attachment, each roller having a resilient surface to prevent bruising the potatoes, said rollers sloping downwardly toward one side of the attachment and at greater angles successively towards said discharge end to tend to slide the potatoes toward said one side, means responsive to the forward movement of the two-row potato digger for rotating said rollers, resilient upright guides of soft material attached to said sides of the attachment at the discharge end of said attachment in order to direct the potatoes in a row.

2,900,869
CONVEYOR FEEDER FOR MOBILE ENSILAGE LOADER

William F. Manns, Albia, Lee G. Chesteen, and Blaine W. Gustafson, Ottumwa, Iowa, assignors, by mesne assignments, to Deere & Company, a corporation of Delaware

Application May 9, 1957, Serial No. 658,193
7 Claims. (Cl. 198—204)



1. A feed table for a material-handling machine of the type having a housing provided with a material-receiving opening, said feed table comprising: an elongated trough structure extending from the housing and having a discharge end at and communicating with the material-receiving opening and having an opposite end remote from said opening and said trough having opposite sides; an elongated tongue below and running lengthwise of said structure substantially centrally between said sides from said discharge end to and beyond said remote end; a plurality of U-shaped elements spaced apart lengthwise

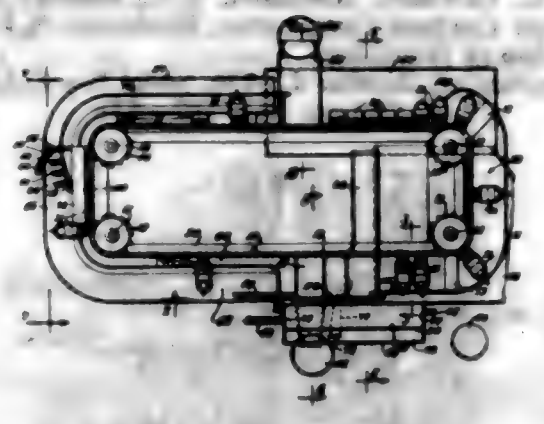
of the tongue and respectively having bight portions transverse to and rigid on said tongue and leg portions extending upwardly alongside and rigidly secured to the sides of said structure.

2,900,670
TENSIONING APPARATUS FOR ROPE SIDEFRAME CONVEYORS
Ralph L. Sharpe, Charleston, W. Va., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Application January 23, 1958, Serial No. 710,647
8 Claims. (Cl. 198—208)

1. In a flexible sideframe conveyor having a pair of flexible strand means trained along a course, anchor means for supporting each of the strand means along the course, tensioning means for simultaneously substantially equally tensioning the strand means, said tensioning means including an extensible-retractable hydraulic cylinder connected to and interposed between each of the strand means and the respective anchor means, each of said cylinders having an inlet port for admitting grease under pressure to extend the cylinder and tension the corresponding strand means, an outlet port for expelling grease to enable the cylinder to retract and release tension from the corresponding strand means and means for selectively closing off the outlet port to maintain pressure within the cylinder, a grease pump, a bifurcated pressure line coupled between the grease pump and each of the inlet ports for pressurizing each of the cylinders, a pressure gauge communicating with said pressure line to indicate the tension in the strand means, and means for locking each of the cylinders against movement in case of leakage of the grease therefrom.

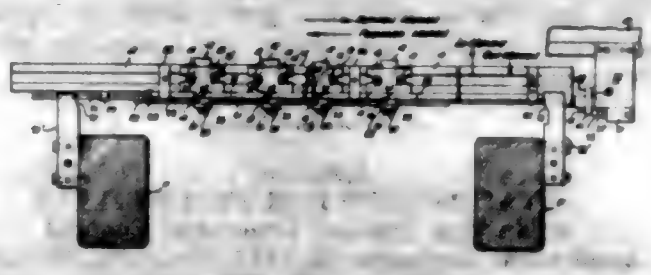
2,900,671
MECHANISM FOR SEPARATING EGG WHITES FROM EGG YOLKS
Charles H. Wilsey, Topeka, Kans.
Original application November 2, 1953, Serial No. 389,795, now Patent No. 2,818,896, dated December 31, 1957. Divided and this application April 10, 1957, Serial No. 651,972
6 Claims. (Cl. 198—229)

1. In an egg separating machine having a single line endless conveyor supported for movement in a horizontal plane and a plurality of egg separating cups mounted in single line relation at successive points along said conveyor, hinge means for connecting each of said cups for free swinging movement transversely of the conveyor, means mounted along the conveyor in outwardly spaced relation thereto for supporting the cups in outwardly extending relation while they are advanced by the conveyor, means forming a passageway between the conveyor and said cup supporting means which passageway extends along beneath the conveyor and said cup supporting means, said cups having means which is selectively movable for engagement or non-engagement with said cup supporting means whereby certain of said cups are carried by said conveyor onto said cup supporting means and other cups are allowed to swing to a position in depending relation on said conveyor and are advanced through said passageway, a spray nozzle mounted in a fixed position in said passageway and located to direct a spray laterally of said conveyor and against a cup which is in depending position on said con-



veyor, means including a valve operatively connected to said nozzle for supplying a cleaning fluid to said nozzle, means operatively associated with said valve and operated by a depending cup on said conveyor to open and close said valve, and means in said passageway to guide the cups which are positioned in depending relation on said conveyor through said passageway and past said spray nozzle.

2,900,672
STOP MECHANISM FOR MULTI-PLUNGER PRESS
John J. Tully, New Britain, Conn., assignor to Waterbury Farrel Foundry & Machine Company, Waterbury, Conn., a corporation of Connecticut
Application May 12, 1958, Serial No. 734,657
17 Claims. (Cl. 198—332)



1. In a carrier mechanism for transferring articles from one station to another, a reciprocating member, a control rod extending along said member for controlling the source of power by which said reciprocating member is actuated, motion entraining means disposed on said control rod along substantially the entire length thereof between said stations, a carrier finger movably mounted on said reciprocating member, and a projection movable by said carrier finger and selectively free from said motion entraining means on said rod when an article is properly engaged by said carrier finger and engageable with said last-mentioned means when the article is not properly engaged by said carrier finger to actuate said control rod by the movement of said member and thereby to disconnect said source of power.

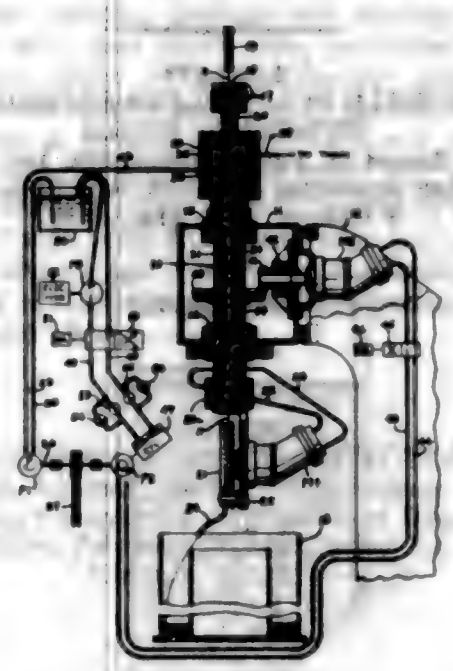
2,900,673
WIRE COILING MACHINE
Charles Benjamin Blake, North Haven, and Robert S. Cady, Watertown, Conn., assignors to Scovill Manufacturing Company, Waterbury, Conn., a corporation of Connecticut
Application March 16, 1954, Serial No. 416,523
4 Claims. (Cl. 205—16)

1. Wire-drawing and coiling apparatus comprising a wire-drawing die, means for rotating said die to impart

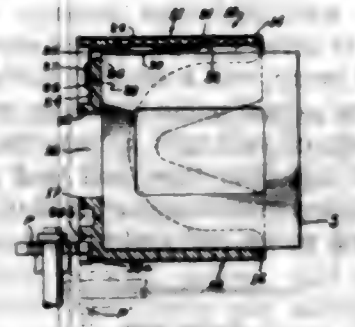
2,900,677
DEVICE FOR SCREENING PULP

holding time of 30 minutes, wherein said mixture sep-

a rotating movement to the wire about its own longitudinal axis during the drawing operation, a capstan for pulling the wire through said die, the axis of said die and wire being substantially tangent to the surface of the capstan, means for bodily revolving said capstan about the axis of said wire and in the same direction as the rotating wire, means for applying power to the capstan to rotate the same on its own axis while revolving about the axis of said wire, and a distributor for receiving the wire from the capstan and directing it outwardly to a coil of the desired diameter, and means for rotating said distributor around the axis of said wire.

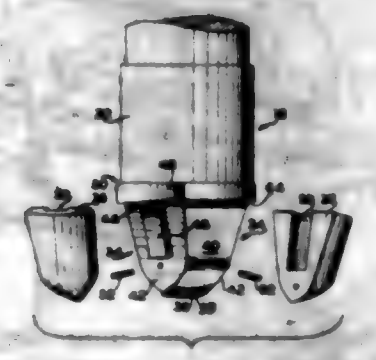


2,900,874
SLIDE TRAY FOR SLIDE CHANGERS
Murray Windmann, Los Angeles, Calif., assignor to Windmann Brothers, Los Angeles, Calif., a copartnership
Application September 26, 1955, Serial No. 536,492
4 Claims. (Cl. 206—62)



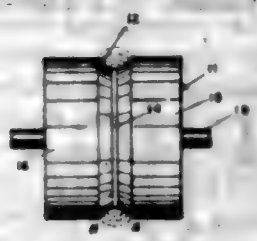
1. In a slide tray for photographic slide changers: a frame comprising a pair of spaced walls, a flange secured to an end of each wall, said flanges extending toward each other in spaced relation; a plurality of parallel partitions extending between and secured to said walls and flanges, said partitions being spaced from each other to provide compartments for the reception of transparency slides; one of said flanges having openings therethrough from the exterior of said one flange to said compartments; and a slide retainer having a base portion secured to the exterior of said one flange and having leaf spring elements extending from said base portion through said openings into said compartments along the wall secured to said one flange, said leaf spring elements being adapted to engage edges of slides in the compartments containing said elements.

2,900,875
COLLAPSIBLE PLUNGER HEAD
Fortunato J. Ristuccia, Framingham, Mass., assignor to the United States of America as represented by the Secretary of the Army
Application May 28, 1957, Serial No. 662,301
3 Claims. (Cl. 207—6)
(Granted under Title 35, U.S. Code (1952), sec. 266)



2. A punch mountable to a reversible press for insertion into a billet to displacingly form a hole therein, said punch including in combination a domelike head, a pair of recessed sections in said head formed by chordially disposed inner walls extending upwardly and outwardly from the end of said head and end walls extending outwardly from the upper ends of said inner walls, a tongue portion formed by said sections, a clearance cut provided in said head above each of said sections to provide space between said head and the hole when said punch is rotated 90 degrees after withdrawal from a finished workpiece, and segments cammingly engaged with said inner and end walls for firmly seating said segments in said sections when said punch is pressed into the billet, said segments being disposed to complement said tongue portion in forming the hole, said segments being held in assembled position on said tongue portion by shear pins before the punch contacts the billet.

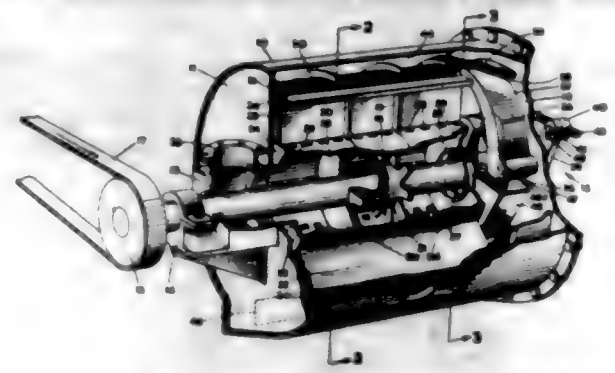
2,900,876
MAGNETIC SEPARATOR FOR PILLS
Arlo F. Israelsen and Emerson J. Tempas, Erie, Pa., assignors to F. J. Stokes Machine Company, Philadelphia, Pa., a corporation of Pennsylvania
Substituted for abandoned application Serial No. 616,570, October 17, 1956. This application December 19, 1957, Serial No. 703,979
6 Claims. (Cl. 209—215)



6. A magnetic roll for a magnetic separating device comprising a non-magnetic shaft, two cup shaped members made of magnetic material and supported on said shaft with the open ends of said cup shaped members facing each other and a non-magnetic gap therebetween, and magnets disposed around said shaft with one end of each said magnet engaging the inside of the bottom of each said cup shaped member, the edge of each said cup shaped member being reduced in thickness around the periphery thereof adjacent the other whereby a peripheral groove is provided.

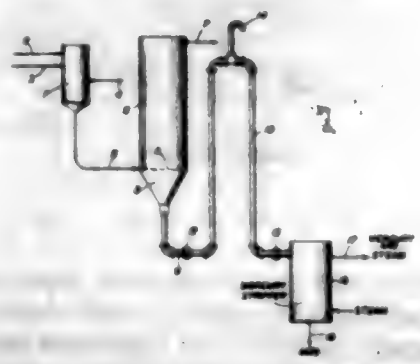
selectively movable for engagement or non-engagement wire-drawing die, means for rotating said die to impart

2,900,077
DEVICE FOR SCREENING PULP
Alexander Greenwolde Sandison, Owen Sound, Ontario, Canada, assignor to The William Kennedy & Sons Limited, Owen Sound, Ontario, Canada, a corporation
Application March 26, 1957, Serial No. 648,665
4 Claims. (Cl. 209—300)



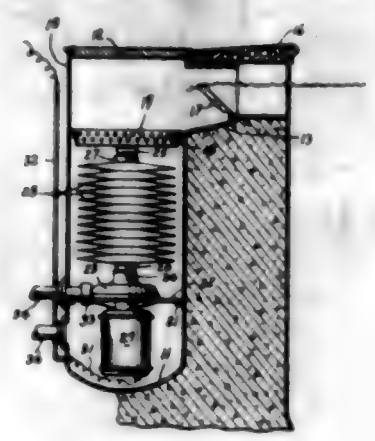
2. A device for screening pulp comprising an outer casing having end walls, a hollow screen element having an internal surface which is a surface of revolution mounted within and in spaced relationship to the casing, a rotatable impeller within the screen element mounted on a shaft journalled in the end walls of the casing and coaxial with the screen element, the impeller comprising a hollow drum mounted coaxially with the shaft, a plurality of circumferentially spaced vanes on the outer surface of the drum, the vanes lying parallel to the axis of the drum and extending substantially radially outwardly therefrom, the drum being divided into two sections, an inlet in one end wall of the casing to admit unscreened stock to one section of the drum and an inlet in the other end wall to admit diluting water to the other section of the drum, means to apply unscreened stock to the leading face of each vane, an outlet in the casing for screened stock which has passed through the screen element, each vane having adjacent its radially outer edge means projecting in the direction of rotation of the impeller to reduce the radial velocity of the stock acted on by the vanes and an adjustable scoop at the end of the screen remote from the stock inlet to remove tailings which have not passed through the screen element.

2,900,078
CONTINUOUS SEPARATION OF MERCURY-CONTAINING SULFURIC ACID FROM ORGANIC LIQUIDS
Nathan Federgreen, Newark, N.J., and Donald G. Jordan, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
Application January 23, 1956, Serial No. 560,845
4 Claims. (Cl. 210—83)



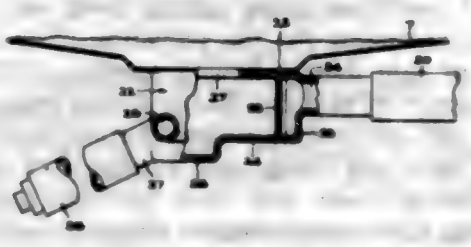
1. A method of continuously separating the components of a liquid mixture containing liquid sulfuric acid, organic liquid and a dispersion of metallic mercury, obtained from the synthesis of unsymmetrical diarylalkanes which comprises charging said mixture into a separating vessel having a suitable height and cross-sectional area at a rate such that the organic liquid layer has a minimum holding time of 30 minutes, wherein said mixture separates into two layers and at a point in said vessel approximately at the interface of said layers, withdrawing the supernatant organic liquid stream from the top of said vessel and withdrawing the lower heavier liquid acid layer containing liquid mercury from the bottom through an inverted U-stream in order to effect control of the level of said interface.

2,900,079
SUBMERSIBLE PUMP FILTER-SKIMMER FOR SWIMMING POOLS
Robert M. Pace, Indianapolis, Ind.
Application September 23, 1958, Serial No. 762,816
5 Claims. (Cl. 210—169)



1. A unitary pump and filter-skimmer assembly for swimming pools comprising, a cylindrical skimmer tank having a closed bottom and adapted to be mounted in axially erect position adjacent the pool with its upper end extending above the normal water level in the pool, an inlet neck projecting laterally from said tank near the upper end thereof, a buoyant weir pivotally mounted in said neck to admit floating debris to the tank and preclude its return to the pool, abutments extending from the inner face of said tank side wall intermediate the ends of the tank, a plate supported by said abutments, a pump having an inlet passage and an outlet passage mounted on said plate with the center of its inlet passage coinciding with the axial center line of said tank, a filter structure removably supported above said pump and communicating with said inlet passage, a submersible motor adapted to drive said pump and supported by said plate below the pump, and a conduit having a quick disconnect coupling to said pump discharge passage and extending exteriorly of said tank to provide a pool return line, removal of said filter from said tank and disconnection of said coupling permitting removal of said plate and consequently said pump and motor from said tank.

2,900,080
DRAIN MEANS FOR CLOTHES WASHER
Walter J. Raczynski and Joseph C. Worst, Louisville, Ky., assignors to General Electric Company, a corporation of New York
Application February 17, 1956, Serial No. 566,154
5 Claims. (Cl. 210—171)

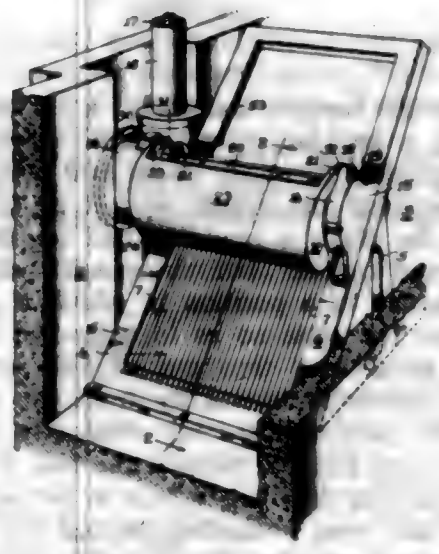


1. For use with a clothes washing machine having a liquid holding tub, a sump arranged for mounting at the

tally-elongate vertically-narrow outlet slot, said cooperating means being in the form of an overlying canopy clip unit frictionally gripping the shelf and slidable along and embracing the forward edge of the shelf with one

bottom of said tub for draining said tub, said sump having an opening through the roof thereof for communicating with the interior of said tub for emptying said tub, a drain port in the side wall of said sump for discharging the liquid entering through said opening, a generally rectangularly shaped baffle having upper and lower edges and lateral ends positioned within said sump and disposed between said opening and said drain port for deflecting solid objects entering through said opening away from said drain port, said baffle being positioned directly in front of said drain port and extending generally vertically from said roof of said sump to the floor thereof, and being spaced at its ends from the side wall of said sump for the passage of liquid to said drain port, means forming a recessed area on the floor of said sump on the opposite side of said baffle from said drain port for catching said solid objects, and a downwardly extending chamber opening off of said recessed area for collecting and retaining said solid objects.

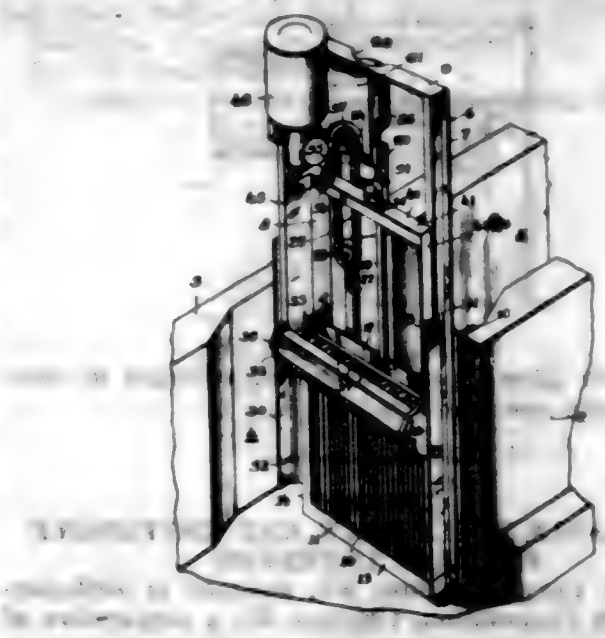
2,900,661
FLOATING SHIELD FOR COMMINUTING DEVICE
William H. Lennert, Skokie, Ill., assignor to Chicago Pump Company, a corporation of Delaware
Application February 21, 1955, Serial No. 489,651
7 Claims. (Cl. 210—173)



1. In combination with a comminuting device comprising a screen extending across an influent channel to intercept solids from a stream of sewage containing solids flowing through said channel, and a cutting cylinder extending transversely of said screen in proximity to the upstream surface of said screen, said cylinder being adapted to move solids from said screen into an area where they are comminuted, a pivoted shield extending transversely of said screen upstream of and in close proximity to said cutting cylinder to protect solids on said cutting cylinder against accidental displacement therefrom, said shield being movable vertically about its pivot in response to variations in the liquid level of said sewage.

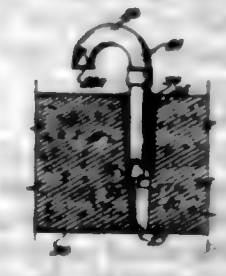
2,900,662
SCREENING AND COMMINUTING DEVICE
William H. Lennert, Skokie, Ill., assignor to Chicago Pump Company, a corporation of Delaware
Application February 2, 1956, Serial No. 563,023
11 Claims. (Cl. 210—173)

1. A screening and comminuting device comprising a frame including a guide bar, a screen mounted in said frame, a second frame movably mounted adjacent said first mentioned frame, a bracket slidably secured to said guide bar and pivotally secured to the top of said second frame, whereby the lower portion of said second frame



may swing outwardly from said screen while the top thereof is held adjacent to said first mentioned frame.

2,900,683
FILTER BED STRUCTURE
Burton L. Oliver, Kansas City, Mo.
Application September 10, 1956, Serial No. 608,985
1 Claim. (Cl. 210—293)



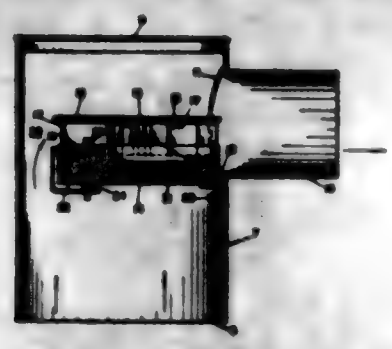
An assembly for use in forming a bed for a filter basin, said assembly comprising: a block provided with a plurality of elongated, vertical openings therethrough, and an upwardly facing shoulder in each opening respectively, defining a lower portion, and a frusto-conical upper portion tapering inwardly as the shoulder is approached; an inverted J-shaped, tubular nozzle for each opening respectively having a looped portion having an open extremity spaced above and facing the top of the block and an elongated, vertical leg extending downwardly into a corresponding opening and having an outwardly flared lower extremity resting on the shoulder and in substantially continuous lateral engagement with the internal surface of the block defining said upper portion of the opening, said lower extremity of the leg being open and registering directly with said lower portion of the opening in coaxial relationship thereto; and a cementitious seal surrounding the leg of each nozzle and filling the upper portion of the corresponding opening, said block being provided with a plurality of supporting legs depending from the bottom thereof for holding the lower extremity of the openings spaced above the bottom of a filter basin in which the assembly is used.

2,900,684
OUTLET TRAP FOR SEPTIC TANKS
Robert L. Zabel, Fern Creek, Ky.
Application July 18, 1956, Serial No. 598,611
7 Claims. (Cl. 210—460)

1. An outlet trap for a septic tank comprising: a dam providing a horizontally-elongate upper overflow edge; and means cooperating with that edge to form a horizon-

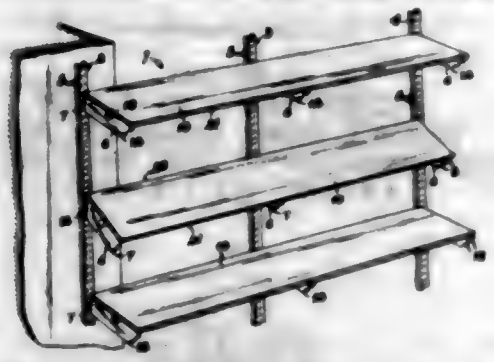
at a rate such that the organic liquid layer has a minimum liquid holding tub, a sump arranged for mounting at the

tally-elongate vertically-narrow outlet slot, said cooperating means being in the form of an overlying canopy



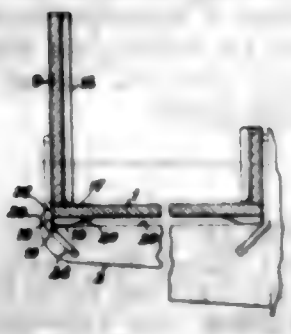
positioned to close to said edge and arranged to overhang it on the upstream side.

2,900,085
ADJUSTABLE SHELF RACK AND REVERSIBLE BRACKET THEREFOR
Edward M. Levy, Evanston, Ill., assignor to Reflector-Hardware Corporation, Chicago, Ill., a corporation of Illinois
Application June 2, 1955, Serial No. 512,823
3 Claims. (Cl. 211—90)



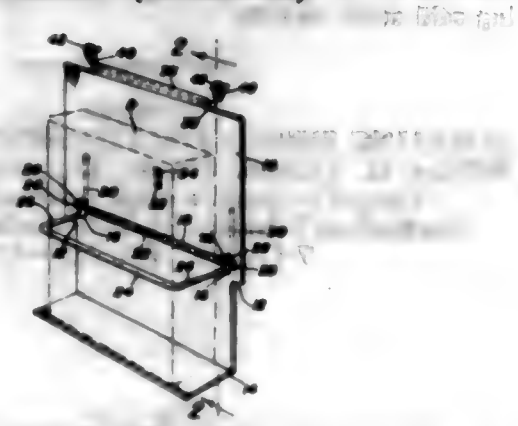
1. A display rack which comprises a pair of uprights having hook-receiving means formed therein, and a pair of horizontally spaced elongated bracket plates having longitudinal support surface and respective hook means projecting at one angle from one bracket end, said hook means interengaging with the hook-receiving means of said uprights to support the brackets in a position where longitudinal surfaces thereof lie in one plane extending at a given angle, the other end of each of said bracket plates having hook means projecting therefrom at an angle substantially different from said one angle, and said last-mentioned hook means interengageable with the hook-receiving means of the associated uprights for supporting the then active longitudinal support surface of said brackets at an angle inclined with respect to said given angle.

2,900,086
SHELF BANDING SPLICER
Edward M. Levy, Evanston, Ill., assignor to Reflector-Hardware Corporation, Chicago, Ill., a corporation of Illinois
Application September 19, 1955, Serial No. 535,041
7 Claims. (Cl. 211—90)



1. In combination with a shelf bracket and a shelf supported thereon, a shelf holding channel-shaped splicer clip unit frictionally gripping the shelf and slidable along and embracing the forward edge of the shelf with one flange of the channel clip overlapping the top of the shelf and the other flange of the channel clip extending below the shelf, the bracket having a lip overlapping the web of the clip and acting as a stop for the clip to prevent forward movement of the clip and of the shelf held thereby, and shelf banding means secured to the clip, said banding means including a member secured to the clip and extending upwardly thereof and a band gripping channel secured to said member above the clip.

2,900,087
HOLDER FOR TELEPHONE DIRECTORIES AND THE LIKE
Eugene M. Danchowski, Toronto, Ontario, Canada
Application August 16, 1957, Serial No. 678,695
4 Claims. (Cl. 211—90)



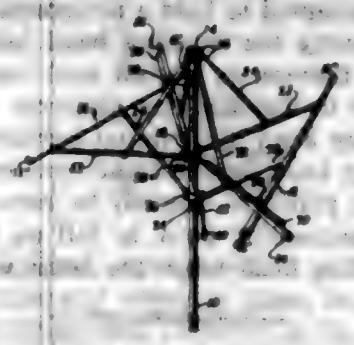
1. An article support comprising a flat sheet member constituting a backing plate for the supported article; a ledge projecting forwardly from said plate to provide a rest supporting the article against movement downwardly of the plate; a retaining bail for the supported article pivoted on the plate above said ledge, said bail being swingable to a position in which it projects forwardly from the plate so as to extend in front of the supported article and thus engage said article against movement forwardly outwardly from the plate; and a latch on the plate disposed for releasably engaging the bail in a second position thereof, the bail in said second position overlying the plate in face to face contact therewith, said bail being swingable through 90° between its first and second position, the bail when in its first position lying in a plane perpendicular to the plane of the plate, whereby to dispose the bail, when in its second position, parallel to said plane of the plate, said bail including arms projecting rearwardly from said bail at opposite sides of the bail in perpendicular relation to said plane of the bail to dispose said arms in contact with the back surface of the plate in the first position of the bail, and in position projecting rearwardly from the plate at right angles to the plane of the plate when the bail is in its second position retained by said latch, said arms in the second position of the bail being adapted for engaging a supporting surface for disposing the plate in an inclined position in respect to said supporting surface.

2,900,088
COLLAPSIBLE CLOTHES LINE SUPPORT
Daniel J. Choi, Springfield, Mass.
Application January 15, 1958, Serial No. 709,832
3 Claims. (Cl. 211—178)

1. A clothes line support comprising in its operative position an upright center post, a pair of parallel, horizontally disposed, rigid outboard members, one on each side of the center post and between which a plurality of lines are adapted to extend, a spider slidable on said center post, a pair of diagonally disposed spreaders

other, means on the pipe supporting means and uprights for driving the subsidiary conveyor belt in the same

pivotably connected to said spider and respectively pivotably connected at the outer ends of the spreaders to diagonally opposite end portions of the rigid outboard members, a second pair of spreaders disposed in diagonal fashion and crosswise of said first-mentioned spreaders and pivotably connected to said spider, means interconnecting said second spreaders respectively with the other diagonally opposite end portions of the outboard mem-



bers for sliding movement of said other opposite end portions longitudinally of said second spreaders, braces pivotably mounted at their inner ends above said spider at a fixed position on said post and respectively pivotably connected at their outer ends to each of said spreaders intermediate the ends thereof, a collar slidable on said post, a pair of stiffeners pivotably connected to said collar and respectively pivotably connected to the outboard members at points centrally of said members.

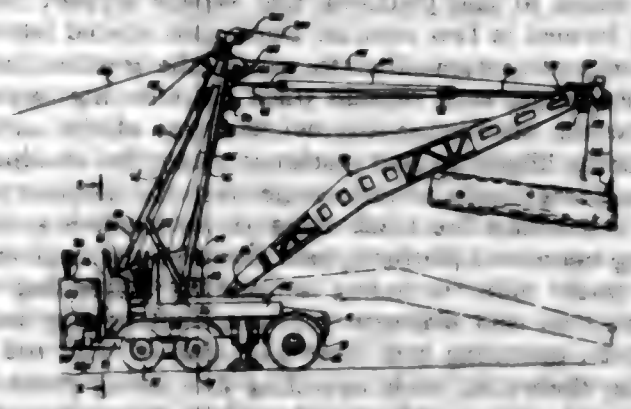
2,900,089

LOG YARDING AND LOADING APPARATUS

Sidney S. McIntyre, Sr., Seahe Woolley, Wash., assignor to The Humboldt Company, Seattle, Wash., a corporation of Washington

Original application July 2, 1951, Serial No. 234,735, now Patent No. 2,745,559, dated May 15, 1956. Divided and this application January 3, 1956, Serial No. 556,927

2 Claims. (Cl. 212—59)



1. A log yarding and load vehicle comprising a rigid frame structure equipped with wheels or the like, log handling means mounted on the vehicle, said log handling means including a mast rigidly fixed to the frame structure, a boom hinged and pivotally mounted at its inner end on the frame structure, a suspending connection between the outer end of the boom and the upper end of said mast, means for guying and positioning the upper end of the mast, a pair of aligned, operatively interconnected, double acting, hydraulic jacks fixed to the frame structure at opposite sides thereof and intermediate its ends, each of said jacks including a cylinder and a downwardly extendible piston, a cross beam interconnecting the lower ends of said pistons and adapted to engage the ground, an unobstructed fluid pressure line extending between the upper ends of the jacks, and an unobstructed fluid pressure line extending between the lower ends of the jacks whereby the pressure on the jacks is constantly equalized and the weight of the frame structure and log handling means is supported by the jacks and removed from the wheels.

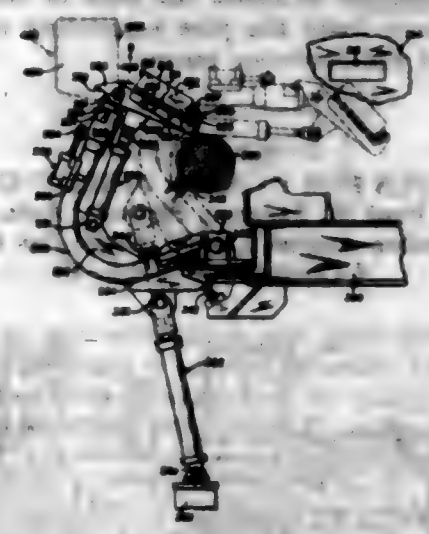
2,900,090

LOADING APPARATUS FOR HORIZONTAL METAL WORKING MACHINES

Joel Seck, Briarwood, N.Y., assignor to Baldwin-Lima-Hamilton Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Application October 25, 1957, Serial No. 692,443

7 Claims. (Cl. 214—1)



1. Apparatus for loading a billet of oblong cross section in a horizontal metal working machine, comprising support means, a loading member mounted on said support means for pivotal movement crosswise of said machine, actuating mechanism on said support means for moving said member between a billet-receiving station and a billet-charging station, a tray having a bottom wall for cooperation with the bottom of the billet and a smaller upright wall for engaging one side of the billet, said tray being movably mounted on said member and disposed thereon in an inclined position at the billet-receiving station with its upright wall lowered, and operating means on said member for moving said tray to a level position at the billet-charging station, whereby the billet will be maintained in engagement with said upright wall of the tray throughout the loading movement of said member to secure alignment of the billet with said machine when said tray is leveled at said charging station.

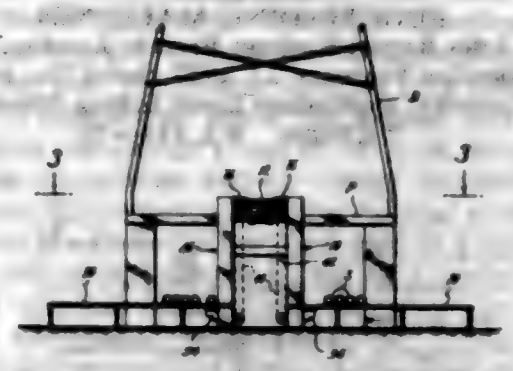
2,900,091

PIPE HANDLING EQUIPMENT

John O. Minter, Thompson, Tex.

Application December 5, 1955, Serial No. 550,900

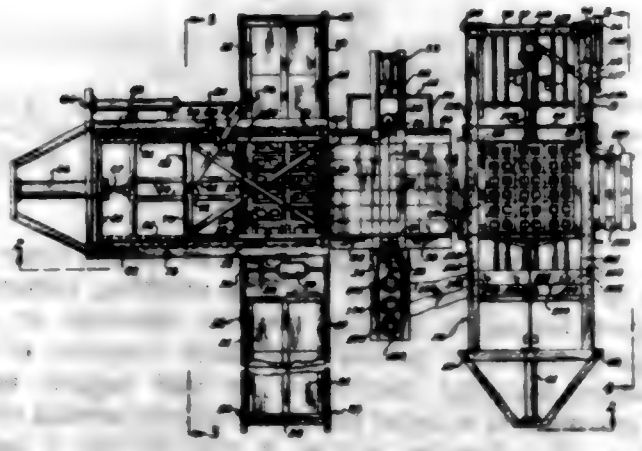
2 Claims. (Cl. 214—2.5)



1. Pipe handling equipment comprising longitudinally spaced pairs of laterally spaced uprights, conveyor means movably supported on the uprights for horizontal movement and positioned to support a pipe in a horizontal position for longitudinal movement, pipe supporting means movably carried on the uprights for vertical movement at each side of the conveyor means and engageable with pipes at longitudinally spaced points to support the pipes in horizontal positions, means for moving the pipe supporting means to move the pipes from one level to an-

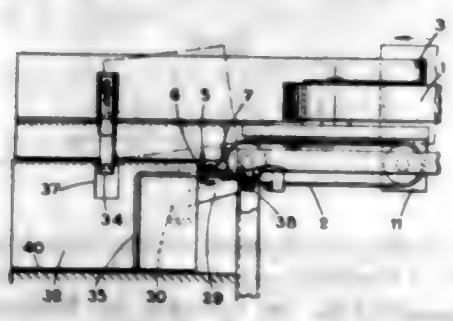
other, means on the pipe supporting means and uprights positioned for coaction to move the pipes from the pipe supporting means to the conveyor means when the pipes are at the level of the conveyor means, and means for tilting the conveyor means in one direction to cause the pipe to roll from the conveyor means onto the pipe supporting means at one side of the conveyor means and in the other direction to cause the pipe to roll off of the conveyor means onto the pipe supporting means at the other side of the conveyor means.

2,900,092
APPARATUS FOR CUBING BUILDING BLOCKS
Paul M. Theunes, Phoenix, Ariz.
Application August 6, 1956, Serial No. 602,328
4 Claims. (Cl. 214—6)



1. In a cubing machine for cored hole building blocks, a frame, a trap door horizontally reciprocatable on said frame, a scraper bar fixed on said frame above said trap door to hold blocks on said trap door against horizontal displacement when said trap door is withdrawn, a rocking trough adjacent an edge of said trap door when in block receiving position, means on said frame for loading horizontally disposed blocks on said trap door and said rocking trough, a series of horizontally disposed block receiving tines, means on said frame for actuating said rocking trough to turn up a row of blocks and to present said upturned blocks supported by their cored holes on said block receiving tines, and means on said frame under said trap door when in loading position to receive blocks from said trap door when said trap door moves to retracted position.

2,900,093
BOOKBINDING MACHINES
Lionel John Bryant Rushout French, London, England
Application February 27, 1957, Serial No. 642,710
Claims priority, application Great Britain March 2, 1956
2 Claims. (Cl. 214—7)



1. In a bookbinding machine a pair of parallel, horizontally spaced, main conveyor belts between which the books are conveyed horizontally in closely spaced, end-to-end relationship spine downwards, a subsidiary conveyor belt adjacent the discharge end of and below the main conveyor belts onto which the books pass in succession before leaving the main conveyor belts, means for driving the subsidiary conveyor belt in the same general direction and at a higher speed than the main conveyor belts whereby each book will be speeded up just before leaving the latter, a stacking head having a top portion on to which the books pass one by one from the auxiliary conveyor, means for retaining a book in spine downwards position while on the top portion of said stacking head, a stacking platform lying beneath the stacking head adapted to hold a horizontal stack of books, means for moving the stacking head laterally from beneath a book thereon to permit said book to fall spine downwards on to the stacking platform and for returning said stacking head to its initial position to receive the next succeeding book, at the same time moving the book on the stacking platform laterally to leave sufficient space for the next succeeding book to fall on to the platform from the stacking head when the latter is next moved.

2,900,094
RAMP DEVICE
D C. Ferguson, Tomball, Tex., assignor of thirty-seven and one-half percent to R. Windham Rider and twenty-five percent to Robert L. Windham
Application July 11, 1957, Serial No. 671,198
4 Claims. (Cl. 214—85)

1. A ramp device for loading and unloading vehicles from a platform on a vehicle or the like, comprising vehicle support means which is adapted to extend from the platform to the ground in an inclined position with respect to the ground to support vehicles moving thereon from the ground to the platform or from the platform to the ground, means pivotally connecting said vehicle support means to said platform, said vehicle support means being formed in two separate track units spaced laterally with respect to each other to receive the traction means of the vehicle, each of said track units having two sections which are hinged together with one of the sections also being hinged to said platform, means for manipulating said track units to raise same from the inclined position to position the track units in an inactive position resting upon said platform, said means for manipulating said track units including a laterally extending rod mounted on said platform for rotational turning movement, an operating arm near each end of said rod for turning therewith, each operating arm being positioned under said sections when said track units are in the inclined position and between said sections when said track units are in the inactive position, and each of said arms being free from connection with the track units while slidably engaging said one of the sections which is hinged to said platform for raising the same from the inclined position to the inactive position.

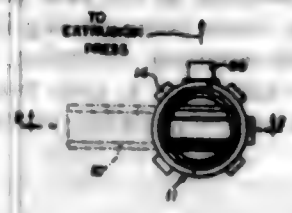
2,900,095
HANDLING DEVICE FOR FEEDING TOOLS TO A METAL WORKING MACHINE
Joel Sack, Briarwood, N.Y., assignor to Baldwin-Lima-Hamilton Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Original application October 25, 1957, Serial No. 692,443. Divided and this application September 17, 1958, Serial No. 761,650
3 Claims. (Cl. 214—95)

1. A convertible handling device for selectively feeding disk-shaped and oblong, flat tools to a horizontal metal working machine comprising a stationary vertical, substantially cylindrical housing having an opening near

2,900,099
CARGO LIFT FOR A TRUCK BODY

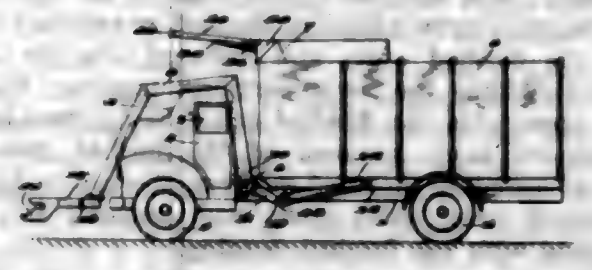
standing circular flange, a leveling ring telescopically

its lower end for receiving one of said tools, a member movable within said housing between an initial position and an elevated position and having a passage therethrough, said passage being aligned with said opening in the initial position of said movable member to accommodate said one tool, an inclined rollerway in said passage, plate means releasably connected to the movable



member in an inclined position within said passage so as to cover said rollerway when in place on said member, mechanism for lifting said member to its elevated position and for simultaneously turning it substantially through a right angle, and means in the region of the upper end of said housing for discharging said tool from said device upon completion of said lifting and turning movement.

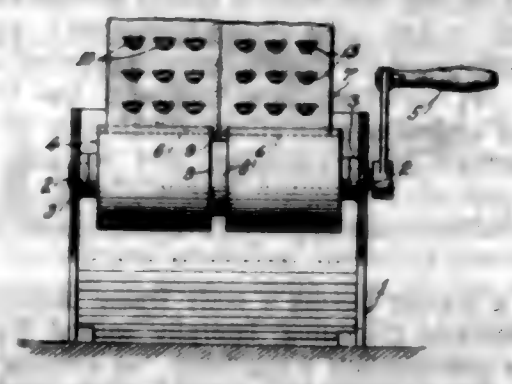
2,900,696
FRONT END LOADERS
George R. Dumpster and William A. Herpich, Knoxville, Tenn.; said Herpich assignor to Dumpster Brothers, Inc., Knoxville, Tenn., a corporation of Tennessee
Application May 28, 1957, Serial No. 662,252
24 Claims. (Cl. 214—382)



1. In a front end loader of the character described, the combination with a motor vehicle chassis including a chassis frame, a cab and a refuse body on the chassis frame, of loading mechanism on the vehicle comprising a pair of lifting arms of gooseneck shape extending over the top of the cab and downwardly at the front and back thereof, means pivotally mounting the rear lower end portions of the lifting arms on the vehicle for upward swinging movement, power means connected with the lifting arms for causing upward lifting movement thereof, pick-up arms supported by the front end portions of the lifting arms and having means thereon for detachable engagement with a container to lift the container to an elevated position over the body and for dumping the contents thereof into the body, a torque tube journaled on the lifting arms and supporting the pick-up arms, and means for rotating the torque tube to move the pick-up arms to different positions with respect to the lifting arms.

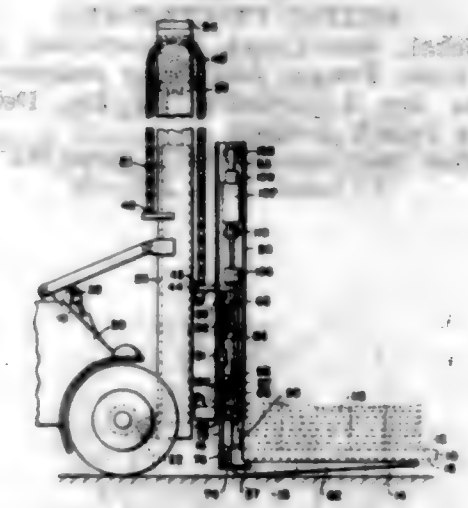
2,900,697
STRIPPER FOR COIN MAILERS
Joseph J. Mero-Lin, Fair Lawn, N.J.
Application November 10, 1956, Serial No. 772,999
3 Claims. (Cl. 214—310)

1. A coin stripper for removing coins from laminated coin mailers having slots in the upper lamination into which coins are inserted and held between laminations, comprising a housing, a rotatable drum mounted on a shaft riding in said housing, a narrow axially-directed groove disposed in the periphery of said roller and of dimensions adequate to accommodate and anchor the edge of a coin filled mailer, a guide mounted in said housing adjacent said drum and designed to hold the mailer close to the drum while it is rotating so that the coin ends project out of said slots tangentially to said drum, coin engaging means mounted on said housing and disposed adjacent said drum and designed to engage



the projecting coin ends below said guide and to restrain them while said drum is rotating whereby said coins are torn out of said mailer, and means for rotating said drum in the direction of said coin engaging means.

2,900,698
FORK LIFT TRUCK LOAD SUPPORT CARRIER
John R. Forrest, Vancouver, British Columbia, and Albert A. Maul, Burnaby, British Columbia, Canada, assignors to MacMillan & Bloedel Limited, Vancouver, British Columbia, Canada, a corporation of British Columbia, Canada
Application November 12, 1957, Serial No. 695,811
11 Claims. (Cl. 214—650)

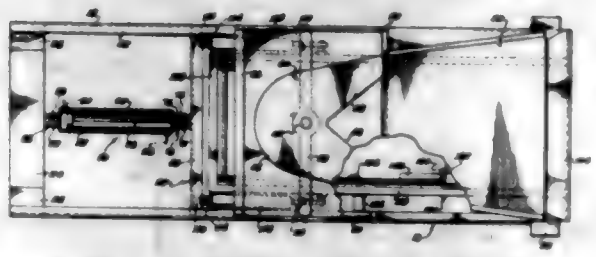


1. A load support carrier for fork lift trucks having substantially vertical lifting frames with forks at the bottoms thereof projecting outwardly therefrom, said frames being movable from and to lower positions where the forks are near the ground, and the load support has a projecting part spaced beove the ground and is such that the forks can engage a load to lift it off the support, said carrier comprising pick-up means mounted on a lifting frame for vertical movement relative thereto and located near the forks thereof, said pick-up means when the forks are moved beneath a load on a support being positioned to move beneath the projecting part of the latter and the relative movement of the pick-up means preventing said means from lifting the support during the first part of upward movement of the forks to take the load, means on the frame for stopping downward relative movement of the pick-up means when the forks have moved upwardly a predetermined distance, and stop means mounted near but spaced above the level of the pick-up means, whereby the pick-up means presses the projecting part of the support against the stop means firmly to grip said part after the above-mentioned relative movement has taken place during the upward movement of the forks, at which time the support is moved with the load independently thereof.

cession before leaving the main conveyor belts, means

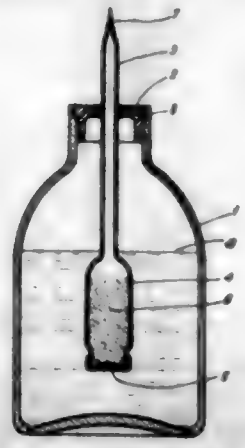
substantially cylindrical housing having an opening near

2,900,099
CARGO LIFT FOR A TRUCK BODY
Harold E. Cook, South Gate, Calif., assignor of one-half to Raymond G. Schneyer, Whittier, Calif.
Application October 7, 1954, Serial No. 460,805
10 Claims. (Cl. 214—674)



1. In a tractor having a body frame including a pair of horizontally extending, laterally spaced frame members, the combination comprising: an elevator frame; a coupling slidably mounted on and between said two body frame members to move longitudinally thereof and pivotally connected to said elevator frame for angular movement of said elevator frame about a horizontal axis relative to said coupling; a first motor means for producing a horizontal sliding movement of the coupling and elevator frame rearwardly relative to the tractor body frame to a position in which a portion of the elevator frame projects beyond the body frame members; a second motor means for producing pivotal movement of the elevator frame relative to the coupling after said sliding movement of the elevator frame; and fork means removably associated with the elevator frame for lifting objects.

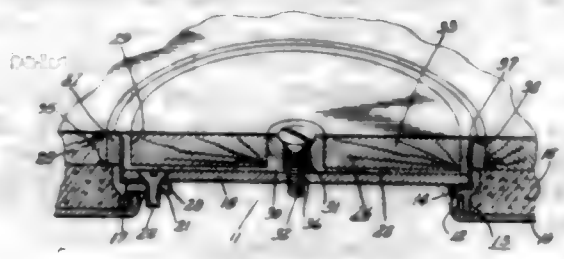
2,900,100
MIXING CONTAINERS
Jacques Debat, Saint-Cloud, Seine-et-Oise, and André Polgar, Paris, France; said Debat assignor to Societe Anonyme des Laboratoires du Dr. Debat, Paris, France, a French company
Application December 23, 1957, Serial No. 704,369
3 Claims. (Cl. 215—6)



1. The combination comprising a partially evacuated funnel-shaped rigid frangible ampoule having a substance-enclosing enlarged body portion, an air-pressure removable cap hermetically sealing said body portion, said body portion tapering to an elongated stem portion, a manually severable tapered tip on the end of said stem portion; and an air evacuated, hermetically sealed receiving container for supporting said ampoule with said stem projecting outside said receiving container and said body portion projecting inside said receiving container.

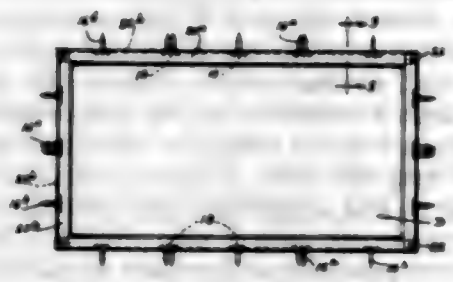
2,900,101
FINISHED COVER FOR UNDERFLOOR JUNCTION BOX
Edward B. Clark, Milford, Conn., assignor to General Electric Company, a corporation of New York
Application September 30, 1957, Serial No. 687,329
2 Claims. (Cl. 220—3.4)

2. An underfloor duct box comprising in combination a hand hole in the top wall that is defined by an upstanding circular flange, a leveling ring telescopically arranged over the said flange and having an inwardly directed ledge extending from the interior surface of the leveling ring, the underside of the said ledge being disposed over the top surface of the circular flange, a resilient gasket positioned on said ledge, and a metal cover plate seated on the gasket to close the open top wall of the box, the said ledge including several spaced lugs that extend inwardly of the said gasket and contain threaded apertures, there being mating holes in the cover for receiving flush-mounted fastening screws that are threaded into the said lugs, a trim ring fitted over the leveling ring with an outer flange at its lower end that



is adapted to be covered and held down by a finished flooring that will lie flush with the top surface of the trim ring, and a finished cover assembled in the trim ring and over the said cover plate, the finished cover including a top flange with a tapered underside for mating engagement with a beveled inner edge of the trim ring, and a fastening screw extending through an enlarged opening in the finished cover and threaded into the cover plate for holding the cover members together, the enlarged opening in the finished cover being threaded to facilitate the ready removal of the finished cover by means of a mating threaded member, the top surface of the finished cover being inlaid with material that will correspond with the finished flooring.

2,900,102
HOLDING MEMBER FOR INSULATING CLIPS
Oliver C. Eckel, Boxborough, Mass.
Application January 26, 1954, Serial No. 406,198
2 Claims. (Cl. 220—9)



1. A holding member in combination with a container having a plurality of straight sides extending angularly to each other, said holding member embodying a plurality of straight sections surrounding said container, means to attach said sections together at their ends, each said section embodying in cross section a part spaced from and parallel to a container side and having holes therethrough, clips embodying shank portions and base portions, said shank portions extending through said holes, said base portions being too large to extend therethrough, each said section embodying another part at an angle to said first part in contact with the exterior surface of said container.

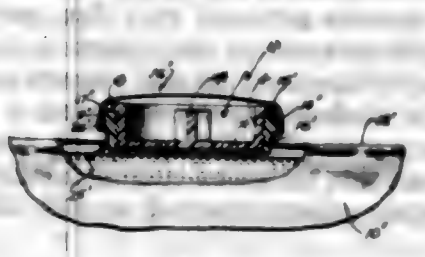
2,900,106
CARRIER CARTON

stack formation in the dispenser and withdrawing it therefrom, said dispenser comprising a base having on its

2,900,103
CLOSURE COMBINATION AND ELEMENTS THEREOF

James B. Taylor III, Fairfield, and George W. Barreden, Stamford, Conn., assignors, by mesne assignments, to American Flange and Manufacturing Co., Inc., New York, N.Y., a corporation of Delaware

Application February 8, 1955, Serial No. 486,892
1 Claim. (Cl. 220—39)

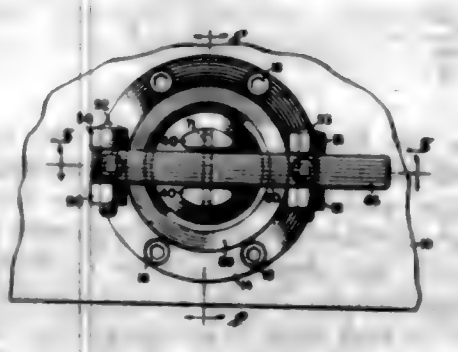


In combination with a container having a metal discharge nozzle adapted to be closed by a snap-on, snap-off cap, said nozzle having an interior annular channnel extending completely therearound in a plane substantially parallel to the plane of the discharge mouth of the nozzle, a closure consisting of an annular flexible resilient plastic insert in the annular channel within said nozzle but readily removable therefrom without damage to or deformation of said nozzle, the inner face of said insert having threads formed therein and the outer face thereof conforming generally in shape to the cross-sectional shape of said channel, and a plastic diaphragm member spanning the opening through said nozzle, said diaphragm having an annular ridge or flange formed on and projecting from one face thereof, the outer face of said annular flange being threaded and threadably engaging the inner face of said insert, said diaphragm member when in place in said insert serving to hold the later in said channel with the outer surface thereof in sealing contact with the inner surface of the channel, said nozzle being provided with a flange at its outer end extending in a direction transverse the axis of the nozzle and having its free edge defining the nozzle mouth, one end of the insert firmly engaging in sealing relation the axial inner face of said nozzle flange and said diaphragm being provided with a resilient flange extending at right angles to the direction of extent of the threaded ridge or flange thereof and pressing in sealing contact against the axial outer face of said nozzle flange throughout the lateral extent thereof.

2,900,104
CLOSURE MEANS

Carl Oscar Schmidt, Jr., Wyoming, Ohio, assignor to The Cincinnati Butchers' Supply Company, Cincinnati, Ohio, a corporation of Ohio

Application November 8, 1955, Serial No. 545,630
1 Claim. (Cl. 220—57)

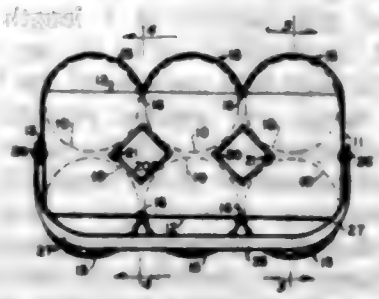


A closure for a port in the wall of a pressure vessel, comprising a circular yoke including inner and outer faces and having a port therethrough, means securing the yoke to the vessel wall with the yoke port coinciding with the port in said wall, extending perforate ears on the outer face of the yoke, located at opposite ends of a diameter thereof, said ears being spaced from one another a distance exceeding the distance across the yoke port, a locking bar having a pivot end and an apertured handle end, means pivoting the pivot end of the bar to one of the perforate ears aforesaid, for movement of said bar toward and from the other perforate ear, the bar spanning the yoke diametrically when swung to proximity with said other ear, a cap including a plug portion dimensioned to fit slidingly within the port of the yoke, a pair of spaced parallel abutments disposed substantially centrally of the cap and extending outwardly therefrom to provide a channel of greater width than the bar receptive of the locking bar, said abutments having aligned openings formed therethrough, a pin being mounted in fixed position within said openings and spanning said channel, said pin being disposed outwardly of said locking bar for loosely and slidably maintaining the locking bar within the channel and adapted to engage a surface of the locking bar for exerting a plug withdrawing action to the cap upon outward pivotal movement of said locking bar, whereby the cap may be slid bodily along the locking bar toward and from the handle end thereof, a circumferential flange on the cap to abut and overlap the outer face of the yoke marginally of the yoke port, said flange having bearing contact upon the locking bar adjacent to the pivot end and the handle end thereof, whereby the cap is forced against the yoke at points on the cap periphery as the locking bar is swung into registry with both yoke ears.

2,900,105
RECEPTACLE

Ray Rucker, Greeley, Colo.

Application February 4, 1957, Serial No. 638,060
2 Claims. (Cl. 220—102)



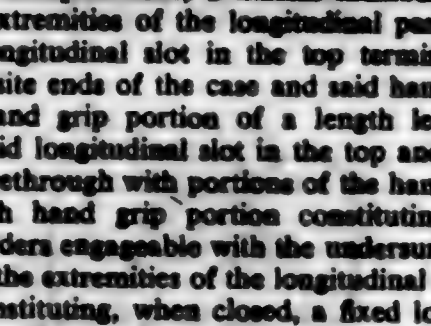
1. A receptacle comprising a bottom and upright ends and sides formed of apertured metal, said ends and sides being single-walled and each side being provided with a plurality of upright, outwardly extending and intersecting cylindrical surfaces, said surfaces being slightly less than semicylindrical, the intersections of said surfaces forming spaced vertical corners of juncture at the inner edges thereof and the corners of juncture of opposite sides being disposed opposite each other; a bottom extending from end to end of said receptacle and having a width corresponding to the distance between said opposite points of juncture, the side edges of said bottom being attached to each side at the bottom of each vertical corner of juncture and the ends of said bottom being attached to the ends of said receptacle; and a spacer attached to said bottom and extending in upright position therefrom generally in alignment with the opposite vertical corners of juncture of said sides, each said spacer being generally diamond-shaped in cross section and the number of spacers corresponding to the number of opposite corners of juncture of said sides.

a hand hole in the top wall that is defined by an up- face of said container.

2,900,106
CARRIER CARTON

Joseph Vesnk, Richmond, Vancouver, British Columbia, Canada, assignor to Crown Zellerbach Canada Limited, Vancouver, British Columbia, Canada, a corporation of British Columbia

Application March 15, 1956, Serial No. 571,645
2 Claims. (Cl. 220—105)



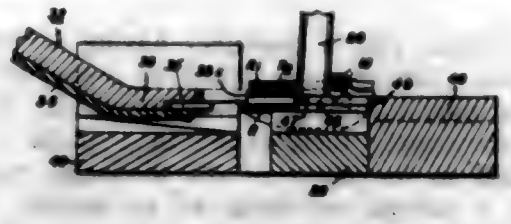
1. A carrier carton comprising a case having side and end walls, a bottom wall and a top, said top being normally closed and having a central slot therein extending longitudinally of the case but being openable to expose the interior of the case, a plurality of spaced transverse partitions secured at opposite ends thereof to the side walls and said partitions extending upwardly from near the case bottom, each of said partitions having a vertical slot therein extending upwardly part way from the lower edge thereof and midway between the ends thereof leaving above the upper end of each such slot a web in the partition, a longitudinal partition disposed within said case, said longitudinal partition having a plurality of slots extending from the upper edge thereof downwardly but terminating short of the bottom edge thereof to leave webs therebelow the last mentioned slots being equal in number to the number of transverse partitions and receiving therein respective web portions of such transverse partitions, a handle member secured to the upper extremities of the longitudinal partition member, said longitudinal slot in the top terminating short of the opposite ends of the case and said handle member having a hand grip portion of a length less than the length of said longitudinal slot in the top and being projectable therethrough with portions of the handle member beyond such hand grip portion constituting upwardly facing shoulders engageable with the undersurface of said top beyond the extremities of the longitudinal slot therein, said top constituting, when closed, a fixed load carrying member, the distance between the bottom edges of said webs in the transverse partitions to the undersurface of said top, when closed, being less than the distance between the upper extremities of said webs in the longitudinal partition to the upper extremities of said upwardly facing shoulders whereby the handle member supports the case only through engagement of the upwardly facing shoulders of the handle member against the undersurface of said top, when the top is closed, and the top when opened, permitting the handle member to support the case only through engagement between the web portions of the longitudinal and transverse partitions.

2,900,107
DISPENSERS FOR SPRING RETAINING RINGS

Hans Erdmann, Maplewood, N.J., assignor to Waldes Kohinoor, Inc., Long Island City, N.Y., a corporation of New York

Application June 18, 1957, Serial No. 666,397
8 Claims. (Cl. 221—220)

7. The combination of a dispenser for dispensing bowed open retaining rings of the type having locking prongs extending from the convex face thereof and a ring gripping and withdrawing tool for gripping the lowermost ring of a plurality of such rings maintained in stack formation in the dispenser and withdrawing it therefrom, said dispenser comprising a base having on its upper surface a support part for supporting the plurality of rings to be dispensed arranged with their convex faces upwardly disposed and their openings rearwardly disposed, a substantially vertically disposed flexible stack rod for normally maintaining said rings in vertical stack formation on said support part, means supporting the stack rod from the base in such manner and at a level such that its lower end is spaced a predetermined distance above said support part and may flex rearwardly both of said support part and of the lowermost ring of a stack thereof directly supported on said support part, said tool comprising a blade-like member having a substantially semi-circular recess provided in its end edge and being defined on one side by a semi-circular backing flange and including spring means mounted on said blade for resil-

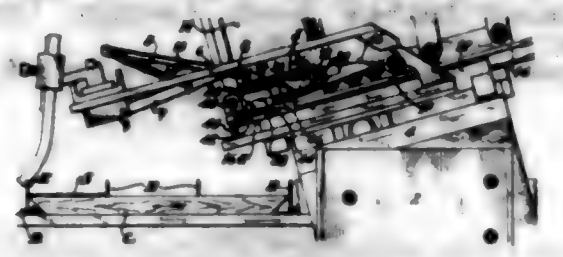


iently clasping a ring received in said recess to said flange, said dispenser base being provided with means for guiding said tool faced so that its backing flange is upwardly disposed and at a level such that its ring recess is disposed in horizontal alignment with the lowermost ring of the stack towards said stack rod and ring stack thereon, said support part including means providing an abutment for maintaining said lowermost ring of the stack stationary against the thrust of the tool moving thereagainst, and means responsive to movement of the tool through the guide means toward the ring stack for shifting the ring next above the lowermost ring of the stack rearwardly of said lowermost ring and simultaneously therewith raising said next above ring above the upwardly directed locking prongs of said lowermost ring as is necessary to the withdrawal of the latter, said means including oppositely chamfered surfaces on the free end edge of the tool and on said support part, respectively.

2,900,108
SLAT FEEDING APPARATUS FOR BOX-MAKING MACHINES

John P. Greene, Denville, N.J., assignor to Stapling Machines Co., Rockaway, N.J., a corporation of Delaware

Application July 27, 1954, Serial No. 446,875
4 Claims. (Cl. 221—268)



1. In a slat feeding apparatus of the type having a hopper for holding a generally vertical stack of slats, a slat feeding member mounted at the bottom of said hopper for movement in a direction parallel to the bottom of the stack and perpendicular to its broad faces, said slat feeding member having a hook portion shaped and positioned at such level as to engage the trailing edge of the bottom slat only in the stack, an exit opening in said hopper opposite the leading edge of said bottom slat, said opening being high enough to permit the bottom slat only to be fed out of the hopper, and motor means for driving

the outlet opening, an electric motor driven pump unit having a bottom inlet and a side outlet, a press on said

with the under side of the bead on the side wall of said

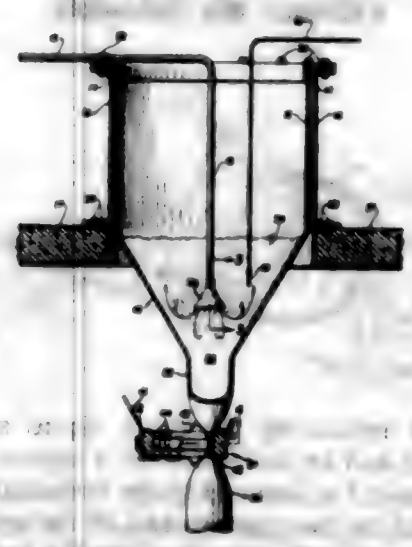
said slat feeding member across the bottom of said hopper in feeding and return strokes, means for supporting said stack of slats in said hopper with the bottom slat in said stack at proper vertical position despite the bowing of said bottom slat, said means comprising a pair of transversely spaced arms extending at least partially across the bottom of said hopper in a direction perpendicular to the broad faces of said stack, said arms being pivotally mounted on an axis generally parallel to and adjacent to the plane of one of the broad faces of said stack, and yieldable means urging said arms upwardly about their pivots, said yieldable means being sufficiently resistant to withstand the downward pressure of said stack of slats imposed in the plane of said broad face but sufficiently yielding to permit said arms to be pushed downwardly by the pressure of said stack of slats imposed at a distance from the plane of said broad face not exceeding one-half the width of said slats.

2,900,109

METHOD FOR PREHEATING CEMENTITIOUS INSULATING MATERIAL

Harry P. Hoopes and William P. Rissenberg, Berkeley, Calif., assignors to Fiberboard Paper Products Corporation, San Francisco, Calif., a corporation of Delaware

Application April 29, 1957, Serial No. 655,611
3 Claims. (Cl. 222—1)



1. In the preparation of a lightweight mass of porous cementitious heat insulating material wherein an aqueous slurry of said material is presented and then preset in a mold until it forms a firm self-supporting mass, the method of preheating such slurry which comprises providing a resilient container with an opening in its upper portion, introducing the slurry into said container through said opening, resiliently supporting said container while maintaining the mass of the slurry in a relatively stationary position, introducing steam into said slurry to effect preheating of the slurry and simultaneously vibrate said resiliently supported container, and removing the preheated slurry from said container.

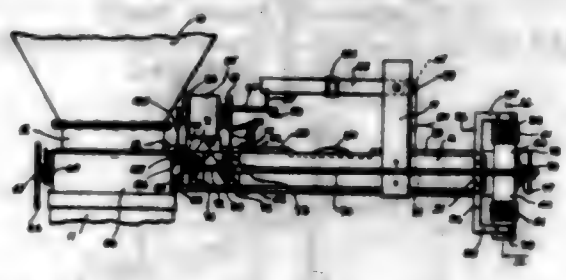
2,900,110

GRAVIMETRIC SCREW TYPE FEEDERS AND WEIGHERS

Paul A. Coffman, Jr., Warwick, and Lyndon E. Harper, West Barrington, R.I., assignors, by mesne assignments, to B-I-F Industries, a corporation of Rhode Island

Application October 18, 1954, Serial No. 462,863
17 Claims. (Cl. 222—55)

3. In a feeding device, a horizontally elongated housing having an open end providing an inlet in one end thereof and having an outlet at the other end thereof, means for mounting said housing for limited up and down movement including fulcrum means transversely aligned with the inlet end of said housing and flexible members at opposite ends thereof, means disposed endwise with respect to said housing for supplying loose material to said housing through said open end of said housing, means within said housing for continuously



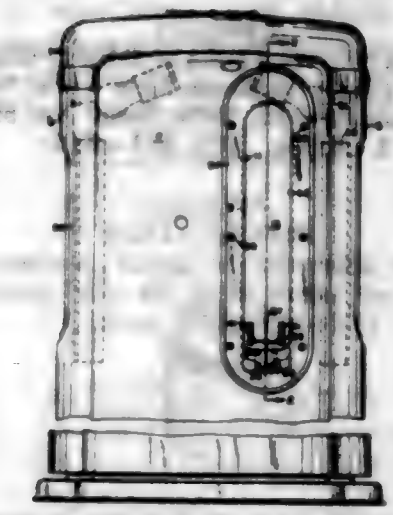
positively moving said material lengthwise thereof from said inlet toward said outlet at a unform rate, and means for continuously weighing the material in said housing comprising a scalebeam and means connecting said housing between said inlet and outlet with said scalebeam.

2,900,111

DISPENSER NOZZLE RECEPTACLE

Otto R. Schoerer, Fort Wayne, Ind., assignor to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana

Application January 18, 1956, Serial No. 559,926
7 Claims. (Cl. 222—74)



1. In a liquid dispensing apparatus having a housing including a panel, means defining a vertically elongated opening in said panel, a reinforced plastic receptacle, shaped to receive the guard and tip of a dispensing nozzle, adapted to enter said housing through said open, said receptacle having an outwardly directed peripheral flange adapted to overlie said panel, a nozzle guide cover having a central opening and including an outwardly directed peripheral flange adapted to overlie the flange of said receptacle, said cover including a second flange disposed to extend into said receptacle a limited distance, said second flange conforming closely with the interior shape of the contiguous portion of said receptacle and defining said central opening and means for fastening the outwardly directed peripheral flanges together and to said panel.

2,900,112

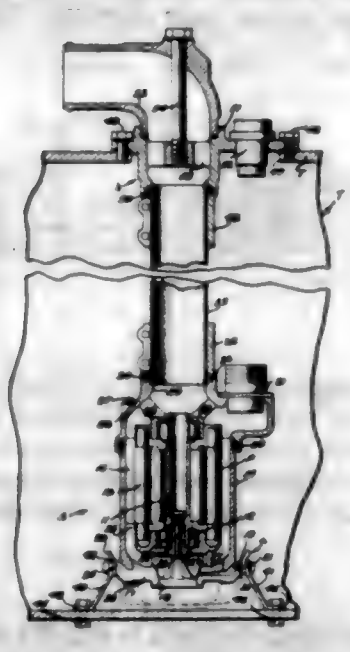
PUMP MOUNTINGS

Miles Lowell Edwards, Portland, Oreg.

Application February 3, 1956, Serial No. 563,283
11 Claims. (Cl. 222—190)

1. In combination with a fuel cell having top, bottom and side walls with an access hole in the top wall and an outlet opening in the bottom wall aligned with the access hole, a mounting bracket in the tank on a side wall, a coupling on the bottom wall of the tank projecting through

the outlet opening, an electric motor driven pump unit having a bottom inlet and a side outlet, a prong on said unit slidably engageable with said bracket, an elbow fitting detachably mounted on said coupling, and a rigid



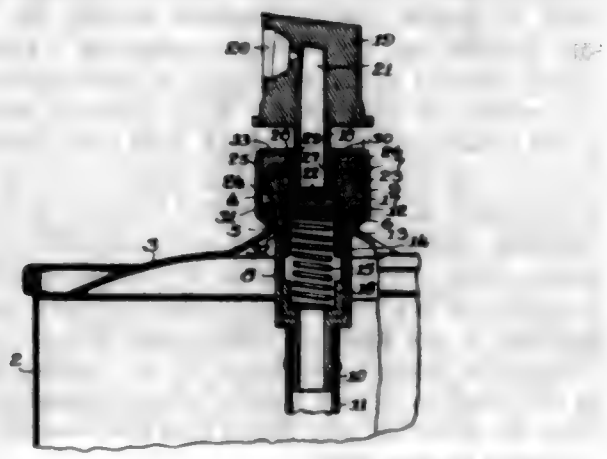
tube connecting the outlet with the elbow unit whereby the coupling, rigid tube and the bracket will rigidly suspend the pump unit in the tank in spaced relation from the bottom wall thereof.

2,900,113
CLEANSING CREAM DISPENSER
Elissa Daggs McKone, New York, N.Y.
Application June 15, 1956, Serial No. 591,737
2 Claims. (Cl. 222—215)

1. A dispenser for a moist plastic on the order of a cosmetic cream comprising a container for matter to be dispensed, a removable cover for said container, a dispensing disk of frusto-conical configuration having a relatively short axis and a central discharge opening, said disk being formed of substantially transparent plastic and having a series of radial ribs and a marginal flange which tapers to a thin outer edge, said disk being adapted to be disposed within said container.

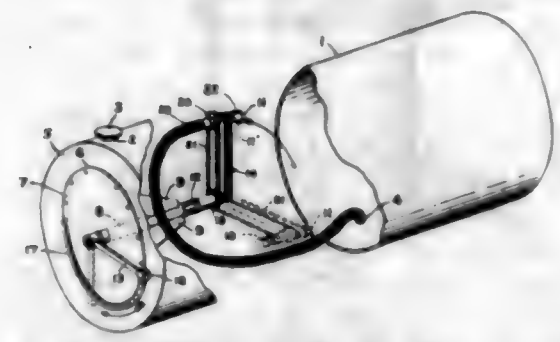
2,900,114
AEROSOL VALVE MOUNTING
Ernst J. Utz, Chicago, Ill., assignor to Aerosol Research Company, a corporation of Illinois
Application August 27, 1956, Serial No. 606,426
13 Claims. (Cl. 222—394)

4. An aerosol valve assembly comprising a tubular shell having an upstanding side wall and an outer peripheral bead on said side wall adjacent to the upper edge thereof, a valve body movable in said shell, a valve seating gasket positioned in the path of said valve body against the top of the side wall of said shell, said gasket sealing against said valve body, a ferrule having a top wall overlying and engaging said gasket, a depending circumferential side wall on said ferrule, and an inwardly extending peripheral bead on said side wall of said ferrule, said bead on said side wall of said ferrule being interengaged with the under side of the bead on the side wall of said shell to secure the valve parts together in operative assem-



bled relation, to provide a self-sustaining valve assembly, and to maintain said gasket against the top of said side wall of said shell.

2,900,115
LIQUID MEASURING DEVICE
Louis G. Hilkemeier, Plainfield, N.J., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Application May 24, 1957, Serial No. 661,364
1 Claim. (Cl. 222—416)



In a liquid measuring device, a liquid storage tank having an inlet and an outlet therein, a siphon tube within the tank connected at one end to the tank outlet, a siphon head connected to the opposite end of the siphon tube, a hollow tubular element extending into the tank from one end thereof, a shaft rotatably disposed in the tubular element and having an arm extending from one end thereof, said arm provided with an opening in one end for rotatably receiving the siphon head, a stationary sprocket gear on the tubular element, a sprocket gear on the rotatable siphon head, and a closed loop chain about the sprocket gears, whereby as the siphon head is rotated in one direction about the tubular element to draw off varying quantities of liquid from the said storage tank, the chain causes rotation of the siphon head about its own axis in an opposite direction to maintain a substantially constant siphon head angular position.

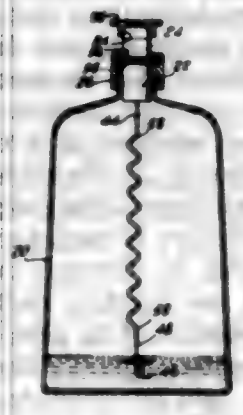
2,900,116
DISPENSING DEVICE
Frederick W. Lutz, Garden City, N.Y., assignor to Lectronics, Inc., Brooklyn, N.Y., a corporation of New York
Application February 28, 1958, Serial No. 718,334
8 Claims. (Cl. 222—477)

2. A liquid dispenser comprising a container for the liquid to be dispensed and including liquid outlet means to permit said liquid to flow therethrough, gravity actuable closure means engageable with said outlet means to substantially restrict flow of liquid through said outlet means when said container is in an inverted position, and closure delay means to delay said engagement of said

2,900,120
DIVIDER AND DIVIDED TRAY

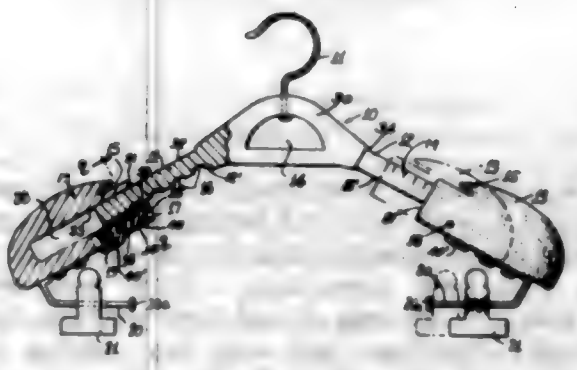
being narrow as compared with the width of the structure panel to which said edge is to be secured, means

liquid outlet means and said closure means, said closure delay means including a closure carrier disposed within said container, said closure carrier including an elongated rod-like element in sinusoidal form and a closure element



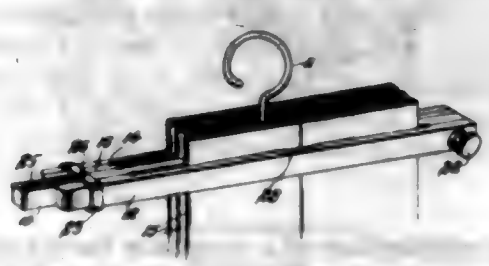
positioned thereon and confined for movement therealong on said elongated element from a rest position to a position where said closure means engages said outlet means when said container is inverted.

2,900,117
ADJUSTABLE GARMENT HANGER
Dominick Veltry, New York, N.Y.
Application January 11, 1956, Serial No. 558,457
2 Claims. (Cl. 223—94)



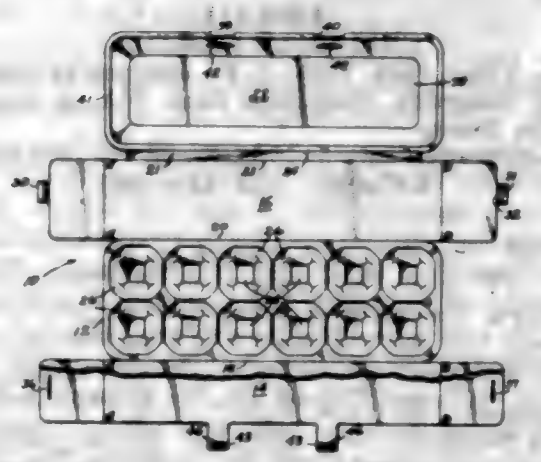
1. An adjustable garment hanger comprising the combination with a garment hanger section having an arched central portion, a pair of opposed, outwardly directed, downwardly inclined arms extending therefrom, a suspension hook midway the central portion whereby the hanger section may be suspended from a support, and a plurality of spaced-apart notches throughout the normally underside of the arms; of means selectively adjusting the size of the garment hanger, said adjusting means comprising a pair of elongated clamps, one for each of the arms, each of said clamps having a longitudinal bore therein extending from one end of each clamp toward the other end of each clamp, whereby dividing each clamp into a normally upper part and a normally lower part, said clamps slidable longitudinally upon the arms from a retracted position to an extended position, a chamber in the normally lower part of each of said clamps and having a roof, an adjustment retaining element pivotally mounted in each of said chambers, each of said adjustment retaining elements having two ends, one end of each of said adjustment retaining elements constituting a seat for a spring, a pair of coil springs, each of said springs having one end on each of said spring seats, the other end of each of said springs pressing against the roof of each of said chambers, whereby normally urging each of said spring seats away from each roof of said chambers, the other end of each of said adjustment retaining elements terminating in a finger, each of said fingers normally retained in one of the notches in the arms, and manual pressure against each spring seat disengaging each finger from one of said notches for selective engagement in another of said notches.

2,900,118
TROUSERS HANGER
Frank Simon, Brooklyn, N.Y.
Application September 11, 1957, Serial No. 683,259
2 Claims. (Cl. 223—96)



1. A trousers hanger, comprising an elongated rigid abutment member provided with a longitudinal slot at one end; a rigid clamping bar associated lengthwise therewith and of lesser length; means passing through the unslotted end of the abutment member for pivotally mounting said clamping bar thereon, the opposite end of the latter terminating behind the associated abutment member; means associated with the pivotal mounting means to exert axially pressure between the pivoted ends of the abutment member and clamping bar; and means slidably mounted about the opposite free ends of said abutment member and bar to hold said free ends, when juxtaposed, to each other, said slidable means being movable outwardly to free the said ends from each other, together with stop means for the slidable means to limit its outward travel and passing through the slot.

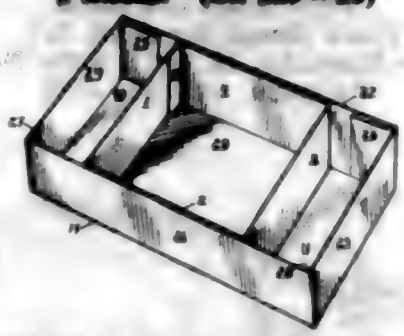
2,900,119
EGG CARTON
Florence A. Groat, McMinnville, Oreg.
Application May 26, 1958, Serial No. 737,566
7 Claims. (Cl. 229—2.5)



3. A formed paper pulp stock egg carton comprising a one-piece body portion and a detachable tray section positioned therein, the latter having plural egg receiving cavities formed therein, said body portion having a floor section of substantially rectangular outline with egg receiving cavities formed therein, a pair of elongated strip sections forming a first pair of oppositely disposed side walls, each of said strip sections being joined along one edge to one of a pair of oppositely disposed edges of said floor section, at least one of said strip sections having extension tab means integral therewith forming a second pair of oppositely disposed side walls for the carton, and a rectangular cover section integral with and joined along one edge to one of said strip sections, said cover section being joined to an edge of said one strip section opposite to the edge of the section which is joined to said floor section.

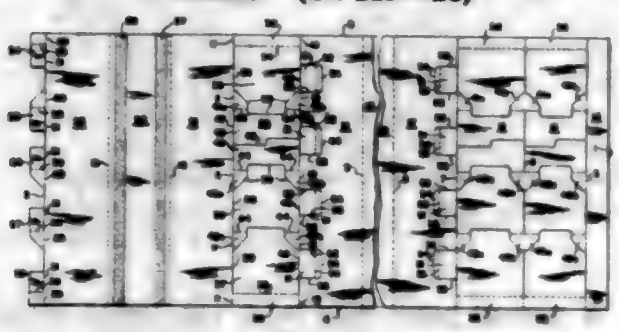
bead on said side wall of said ferrule being interengaged closure delay means to delay said engagement of said

2,900,120
DIVIDER AND DIVIDED TRAY
Marie A. Wichmann, Appleton, Wis., assignor, by mesne assignments, to American Can Company, New York, N.Y., a corporation of New Jersey
Application July 18, 1956, Serial No. 598,623
1 Claim. (Cl. 229—16)



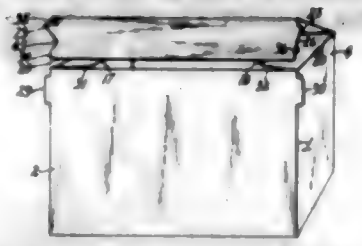
In the combination of a receptacle having opposed side walls, opposed end wall and a bottom wall, and a sleeve snugly positioned therein to form a pair of separate end compartments and an intermediate compartment therebetween, said sleeve being formed from a unitary blank cut and scored to provide a first pair of opposed side panels having a length less than the length of the side walls of the receptacle, a second pair of opposed end panels, said end panels having a width slightly less than the width of the end walls of the receptacle, said panels being hingedly connected together along their side edges, a floor panel hingedly connected to each of the lower edges of said end panels and folded outwardly to lie perpendicularly to said end panels, the edges of said floor panels being adjacent the end walls and in abutment with the side wall portions of the receptacle, the combined length of said floor panels and width of said side panels being substantially equal to the length of the side walls of the receptacle, said end panels being spaced from the end walls of the receptacle to form end compartments adjacent the end walls of the receptacle, said side panels being juxtaposed in face contact with the side walls of the receptacle to provide said intermediate and end compartments completely separate from each other.

2,900,121
CELLULAR CARTON
Oscar L. Vines, New York, N.Y., assignor to Continental Paper Company, Ridgefield Park, N.J., a corporation of New Jersey
Application July 5, 1955, Serial No. 519,888
3 Claims. (Cl. 229—28)



1. A blank for a cellular carton having three rows of cells, each row having three or more cells, which blank comprises a rectangular piece of carton stock having a plurality of transverse hinge lines delineating on the blank a plurality of panels which serve the erected carton formed from the blank as the named structural members thereof, the panels being, from one end of the blank in the order named, intermediate and first row divider structure panels, a first monopanelar side wall panel, a main bottom panel, a second monopanelar side wall panel, a second row divider structure panel, a first monopanelar interior wall panel, a secondary bottom panel, a second monopanelar interior wall panel, glue strips on the distal edge of said second interior wall panel for securing said distal edge to one of said structure panels, said glue strips being narrow as compared with the width of the structure panel to which said edge is to be secured, means on the distal edge of said intermediate structure panel for securing the last named edge to another of said panels, each of said divider structure panels comprising four or more divider supporting members at spaced locations along the hinge lines delineating that panel and extending inwardly of that panel, end row dividers for the supporting members nearest the longitudinal edges of the blank, each of said end row dividers being joined to its associated supporting member at a hinge line along a portion of the periphery of the divider and extending away from the nearest longitudinal edge of the blank, the remainder of the periphery of each end divider being separated from the panel by through cuts, and a pair of opposed intermediate row dividers, each being joined at a hinge line along a portion of its periphery to one of adjacent supporting members remote from the longitudinal edges of said blank, said intermediate dividers extending in opposite directions from their respective hinge lines and having the remainder of their peripheries separated from the structure panel by through cuts.

2,900,122
CARTON
Donald Z. Steiner, Miami, Fla.
Application November 4, 1957, Serial No. 694,160
3 Claims. (Cl. 229—39)



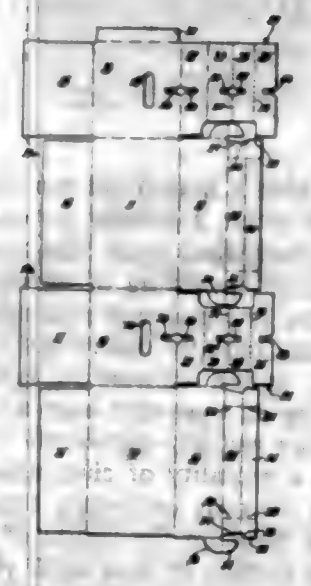
1. In a container, a box body, a cover panel swingably connected to said body and having a foldable tuck flap hingedly joined thereto along the forward edge of said panel, said body comprising a front wall and side walls joined to the ends of said front wall and extending rearwardly therefrom, said tuck flap entering between said side walls and against the inner face of said front walls upon swinging of said cover panel into closed position on said body, said front wall having a predetermined length between said side walls, said tuck flap having opposite upper edge portions defining a length substantially less than the length of said front panel and intermediate edge portions extending at each end of said flap outwardly beyond said upper edge portions forming outwardly projecting shoulder extensions, said extensions defining an overall flap length greater than said front wall length, said shoulder extensions having lower edges tapering inwardly and terminating in lower opposite flap end edges defining therebetween a lower flap portion length which is substantially equal to and not greater than said front wall length, said side walls having respective shoulder-extension-receiving openings formed therethrough adjacent their respective front edges and spaced below their respective upper edges by distances corresponding to the heights of said respective upper edge portions of said flap.

2,900,123
HEAVY DUTY PAPERBOARD CONTAINER
Harry F. Druce, Chicago, Leonard W. Snyder, Mount Prospect, and Richard H. Johnson, Arlington Heights, Ill., assignors to Container Corporation of America, Chicago, Ill., a corporation of Delaware
Application June 12, 1957, Serial No. 665,184
8 Claims. (Cl. 229—45)

1. In a paperboard container, a body portion comprising side and end walls and bottom closure flaps, said end

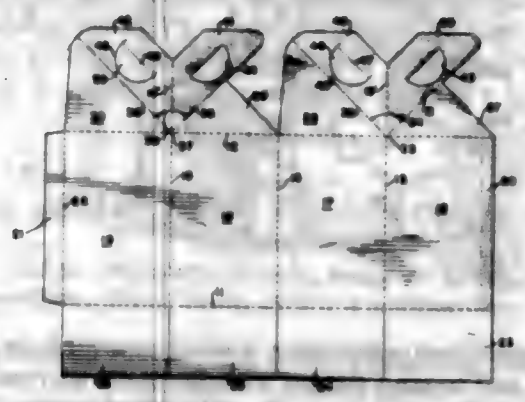
the notches in the arms, and manual pressure against is joined to said floor section.

walls having slots intermediate their sides extending from their upper edges, cover panels hinged at their outer edges to the upper edges of said side walls and provided at their inner edges with downwardly extending tuck in flanges respectively comprising an outer panel and an inner panel integrally attached at its lower edge for substantially the full length thereof to the lower edge of said outer panel and folded over onto the latter, said flange panels having cooperating spacer means disposed inwardly from the ends thereof effective for holding their end portions spaced apart and being secured together in face to face relation between said spacer means, positioning tabs secured to the



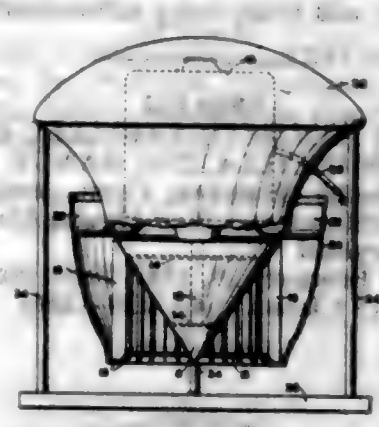
ends of the respective cover panels disposed to extend therefrom downwardly along the outer faces of said end walls adjacent said slots in the closed position of said cover panels, and holding tabs secured to said positioning tabs and inserted endwise between the end portions of said flange panels and disposed to extend into said slots in the closed position of said cover panels, said spacer means being spaced from the ends of said inner panels of said truck in flanges a distance at least as great as the length of said holding tabs and spacing the end portions of said flange panels apart a distance approximating the thickness of said holding tabs to facilitate endwise insertion thereof into the ends of said tuck in flanges.

2,906,124
CARTON WITH TOP HANDLE
Salvatore J. Leone, Wallingford, Conn., assignor to The New Haven Board and Carton Company, New Haven, Conn., a corporation of Connecticut
Application April 11, 1958, Serial No. 727,965
9 Claims. (Cl. 229—52)



1. A carton having a top and a handle, comprising side walls connected together to form a body of rectangular cross-section, top flaps attached to the upper edges of respective side walls, each flap partially closing the upper end of the body and all the flaps having an edge lying along a common diagonal line extending across the end of the carton from one corner to the opposite corner, a pair of handle flaps connected together along a fold line and having edges longer than half the length of the diagonal line and connected to said diagonal edges of respective top flaps hinged to a pair of adjacent side walls, the handle flaps lying face to face and substantially at right angles to their associated top flaps, and a second pair of handle flaps connected together along a fold line and having edges longer than half the length of the diagonal line and connected to said diagonal edges of respective top flaps hinged to the remaining pair of adjacent side walls, the handle flaps of the second pair lying face to face and parallel to and in registry with the handle of the first pair.

2,906,125
FLUID MOVING MEANS
Thomas E. Quick, Wichita, Kans.
Application March 5, 1954, Serial No. 414,357
7 Claims. (Cl. 230—117)

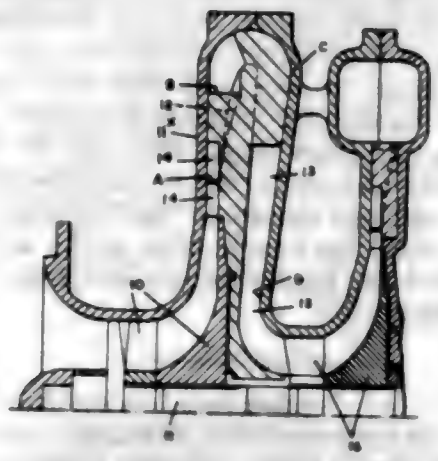


3. A fluid moving device, comprising, in combination, a streamlined body having a continuous and smooth aerodynamic surface, said body having a conoidal and rotatable end portion and a smooth and gently curved fixed end portion, the surface of said conoidal end portion at its inner end portion being substantially flush with the surface of said fixed end portion at its inner end portion, said portions of said body being closely adjacent, and said surface of said fixed end portion extending substantially abruptly and longitudinally away from the point of juncture of said body portions, a plurality of spaced, straight and shallow centrifugal blower blades mounted around the base of said conoidal end portion with the longitudinal axes of said blades parallel to the longitudinal axis of said body and with the outer tip portions of said blades closely positioned at said point of juncture of said conoidal body portion and fixed body portion, and a housing around said rotatable end portion and a portion of said fixed portion of said body, said housing having less total cross sectional area forward of said rotatable end portion than at a point immediately to the rear of same.

2,906,126
CENTRIFUGAL COMPRESSORS
Kenneth J. Dungfield, Selly Oak, Birmingham, England, assignor to The Austin Motor Company Limited, Birmingham, England
Application August 18, 1954, Serial No. 450,740
Claims priority, application Great Britain August 29, 1953
5 Claims. (Cl. 230—130)

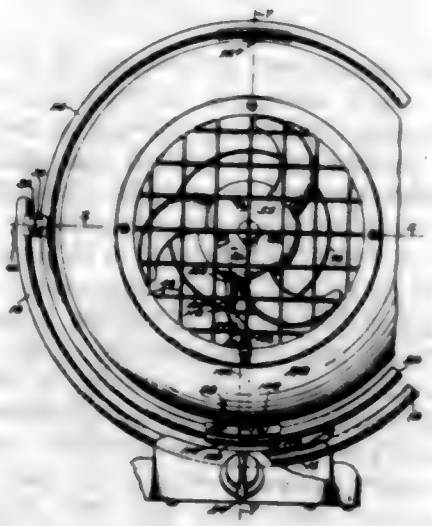
4. A centrifugal air compressor having diffuser passages of rectangular cross section throughout their length, characterised in that the inlet end of each diffuser passage is of elongated rectangular cross section with the greater dimension of the latter disposed transaxially, the transaxial dimension of the passage cross section being constant throughout the length of said passage and the axial dimension of said passage cross section progres-

sively increasing from the inlet end up to a point at which it is equal to the constant transaxial dimension so



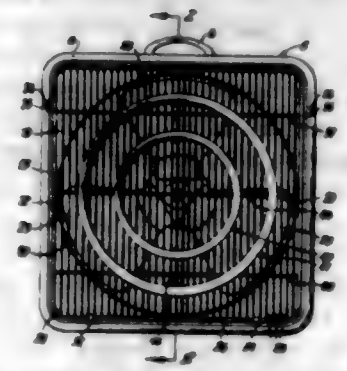
that the perimeter to area ratio becomes a minimum, the cross section at said point being substantially square.

2,900,127
AXIAL FLOW FAN WITH VARIABLE DIRECTION OF OSCILLATING RANGE
Raymond E. Smith, Hamden, Conn., assignor to The A. C. Gilbert Company, New Haven, Conn., a corporation of Maryland
Application February 10, 1955, Serial No. 487,357
15 Claims. (Cl. 230—256)



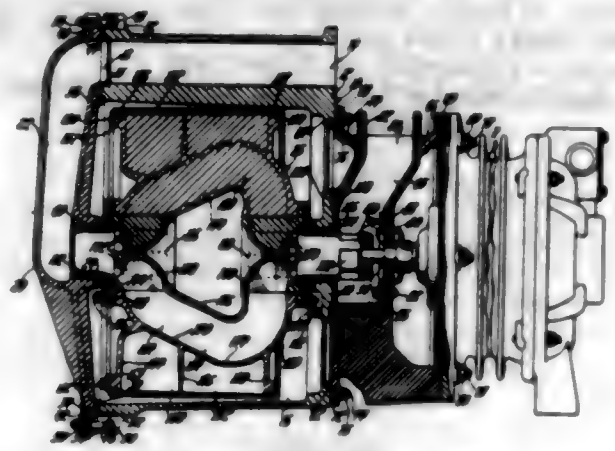
1. An axial flow oscillating fan in which the median line of the angular range of fan oscillation can be oriented in selective directions, embodying in combination, a frame ring, spaced apart pivotal bearings carried by said frame ring aligned with an axis of fan oscillation that spans said ring, an air stream generating unit including a motor driven fan shaft, a cowl surrounding and fixedly supporting said unit located between and pivotally supported by said bearings thereby to swing about said axis of oscillation, a crank carried by said unit rotated by said motor, an anchorage member, a pitman link pivotally coupling said crank to said anchorage member whereby rotation of said crank causes said unit and cowl to oscillate in unison about said axis, a support for said anchorage member mounted on said frame ring for shifting movement relative thereto in directions to set said anchorage member in various dispositions laterally of said axis of oscillation, thereby to orient the median line of the angular range of fan oscillation to different directions, clutch means operative to oppose said shifting movement, and a handle projecting accessibly from said support by which to effect said shifting movement.

2,900,128
DIFFUSER FOR PORTABLE ELECTRIC FAN
Richard C. Piper, Jr., Wauakah, and Dennis R. Ogden, Buffalo, N.Y., assignors to Markel Electric Products, Inc., Buffalo, N.Y., a corporation of New York
Application November 15, 1956, Serial No. 622,382
1 Claim. (Cl. 230—274)



In combination with a household fan having a foraminous grid across its outlet, a diffuser for enlarging radially the stream of air discharged from said fan, comprising a pair of diffusing rings consisting of an inner sheet metal diffusing ring having an upstream edge arranged adjacent said grid and flaring radially outwardly toward a larger downstream edge, and a concentric outer sheet metal diffusing ring having an upstream edge arranged adjacent said grid and flaring radially outwardly toward a larger downstream edge, a plurality of circumferentially spaced radially extending tie rods extending through said rings and each having a head on the inside of said inner ring and a head on the outside of said outer ring and holding said rings together under opposing radial stress whereby said tie rods are maintained under tension and said diffusing rings maintained under radial stress, and circumferentially spaced gripper means adjacent said outer ring for securing said rings and tie rods to said grid, each of said gripper means having penetrated by the outer end of a corresponding tie rod and including a shoulder engaging said upstream edge of said outer ring to prevent said gripper means from rotating about said tie rods.

2,900,129
CENTRIFUGE FOR CLEANING FLUIDS
Robert L. Degn, Downers Grove, Ill., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application May 25, 1955, Serial No. 510,965
7 Claims. (Cl. 233—28)



1. A centrifuge comprising a bowl mounted on hollow trunnions and having spaced annular webs surrounding it and integral therewith, two of said webs forming circular end plates, a cylindrical sleeve coaxially mounted on said bowl between said trunnions and detachably affixed to the peripheries of said webs and defining with said webs at least one pocket for the retention of impurities after removal of said sleeve, at least one opening extending

2,900,133

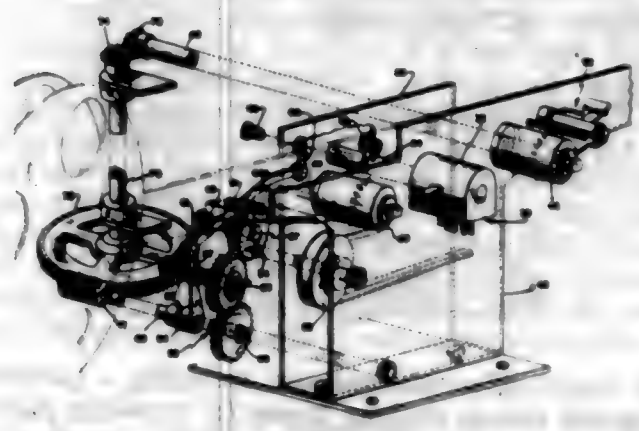
age sections to provide new signal indications repre-

outwardly through the wall of said bowl and communicating with said pocket, a bulbous fluid flow separator in said bowl and cooperating therewith to define passages communicating with said hollow trunnions, and said sleeve, bowl and separator being adapted to rotate together as a unit.

2,900,130
PERFORATED RECORD READER AND FEED MECHANISM

Harry Long Lambert, West Hartford, Conn., assignor to Royal McBee Corporation, New York, N.Y., a corporation of New York

Application February 27, 1957, Serial No. 642,764
8 Claims. (Cl. 235—61.11)



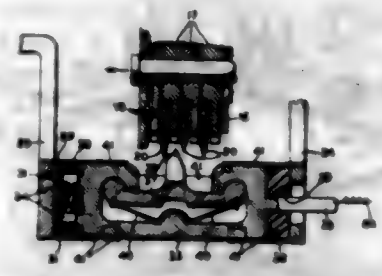
4. A pneumatic perforated tape reader for reading out perforated tapes having record data items in parallel columns across the shorter dimensions thereof, said columns being spaced apart a distance less than the dimensions of the perforations therein, said reader compriaing a body at least as wide as the short dimension of a tape to be sensed, a cylindrical passage formed in said body across said wide dimension, aligned inlet ports connecting said passage to the surface of said body over which a tape is to be moved, oppositely positioned outlet ports adapted to connect said passage to pneumatically responsive control units, a chamber within said body opening into said passage adapted to be connected to a suction pump, a cylindrical valving member mounted for rotary motion within said passage, said valving member having a plurality of diametral holes and a plurality of radial holes therein, drive means, means connected to said drive means for oscillating said valving element thereby to periodically move said diametral holes in registry with said inlet and outlet ports when a perforated column is over said inlet ports and to move said diametral holes and said radial holes in registry with the opening to said chamber and said outlet ports respectively during the interval between columns of perforations, and means connected to said last named means for intermittently driving said tape in synchronism with the oscillatory motion of said valving element whereby said tape will be momentarily halted while said diametral holes are in registry with said inlet ports.

2,900,131
READOUT MEANS FOR ACCOUNTING MACHINES

Paul Z. Rider, Stamford, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Application January 20, 1956, Serial No. 560,314
7 Claims. (Cl. 235—59)

1. In a machine of the character described having a carriage adapted for escapement movement and a totalizer associated therewith, the several denominational orders thereof relating to respective escapement positions of said carriage, read-out means comprising a contact member for each denominational order of said totalizer differentially driven to indicate the value in the respective order, sensing means including a contact element for each digital value and disposed for a momentary selective engagement by one of said contact members during the

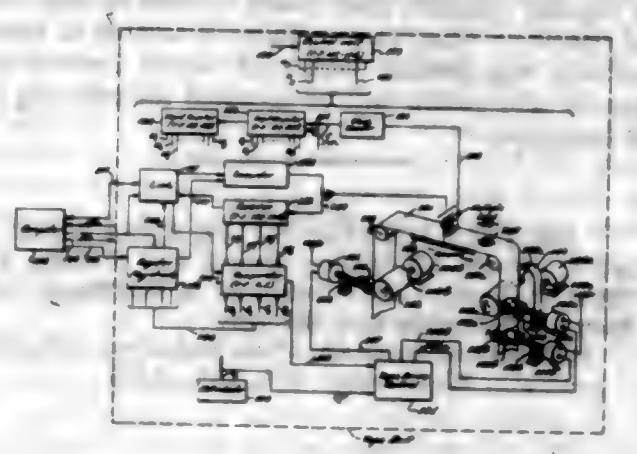


carriage escapement movement, and storage means connected to each contact element for holding the read-out signal until the carriage escapement movement is completed.

2,900,132
DATA RETRIEVAL SYSTEM

Cecil H. Burns, Jr., Norwalk, and Myron J. Mendelson, Los Angeles, Calif., assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Application January 11, 1956, Serial No. 558,510
13 Claims. (Cl. 235—61.7)



5. An information retrieval system operable to scan a file of individual transactional accounts maintained as magnetic recordings on a medium such as a magnetic tape, an area of the tape in each account being reserved for a plurality of binary recordings, each representing a characteristic of the accounts, comprising: means for moving the tape in a forward direction; a reader for sensing the binary recordings on the moving tape representing characteristics of the accounts and having an electrical signal output corresponding to each binary "zero" recording; a register set up from an external source with one or a plurality of binary "one" signals each representing a characteristic for which the account file is to be scanned and having an electrical signal output corresponding to each binary "one" signal set up therein; a logical network for generating a signal output when an electrical signal is on the outputs of both said reader and said register; a flip-flop circuit settable in a first state at the beginning of an account scanning and capable of being triggered into a second state in response to an output from said logical network; and means responsive to the outputs of said flip-flop circuit after each account is scanned to reposition said reader relative to said tape for reading out the magnetic signals of an account when said flip-flop circuit is in said first state, and to continue moving said tape in a forward direction to scan the next account when said flip-flop circuit is in the second state.

which to effect said shifting movement.

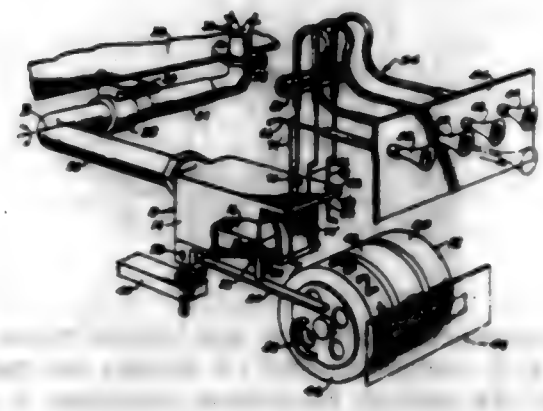
removal of said sleeve, at least one opening extending

2,900,133

SELECTIVELY POSITIONED ELECTRICAL CONTROL FOR COMPUTING REGISTERS

William H. Durnal, Omaha, Nebr.

Application November 19, 1956, Serial No. 623,072
5 Claims. (Cl. 235—132)



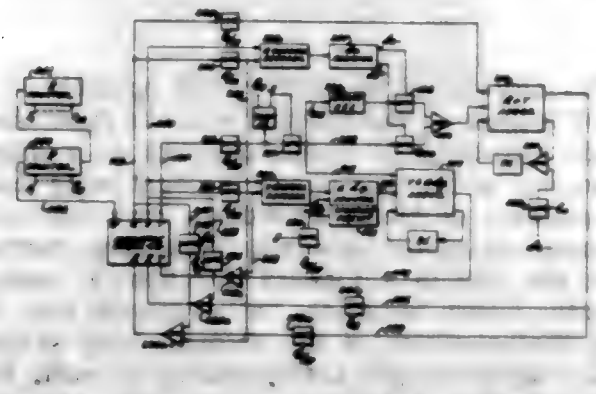
1. In combination with a computing register of the type having an intermittently rotated cylinder, an automatic electric control comprising, a switch having contact means, pivotal supporting means mounting said switch closely adjacent and above said computing register cylinder for arcuate movement toward and away therefrom, adjusting means comprising a plurality of pull-wires adapted when manually drawn to engage and elevate said switch in cooperation with said supporting means to various predetermined height levels relative to said computing register cylinder, cam means carried by said cylinder and operative when said cylinder is rotated to effect cooperating engagement with said switch contact means, whereby said switch will be actuated for effecting a control operation.

2,900,134

DIGITAL DIFFERENTIAL ANALYZER

Floyd G. Steele, Manhattan Beach, and William F. Collison, Waiteria, Calif., assignors to Northrop Corporation, a corporation of California

Application March 26, 1951, Serial No. 217,478
32 Claims. (Cl. 235—152)



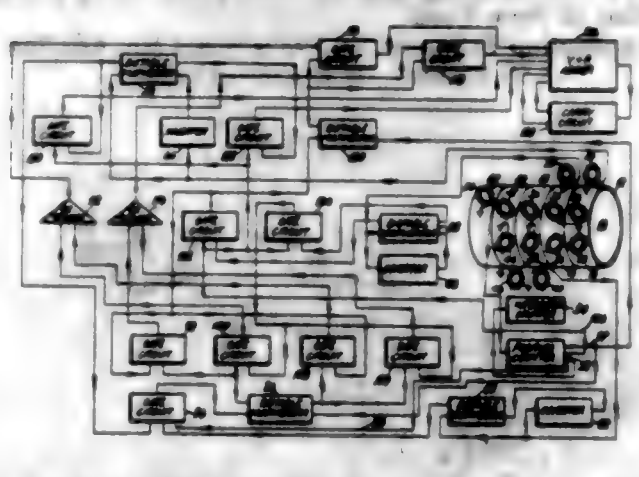
1. A digital differential analyzer, including, a plurality of integrator storage sections, means for providing in each integrator storage section signal indications representing variations in an independent variable quantity, means for providing in each integrator storage section digital signal indications representing a dependent variable quantity, sensing means for sequentially sensing said integrator storage sections including means to alter the signals recorded therein, means connected to said sensing means for differentially combining the signal indications representing the dependent quantity and the variations in the independent quantity for each integrator storage section upon occurrence of each signal representing a variation in the independent quantity of the integrator storage section to produce output signal indications for the integrator storage section and means for transferring the output signal indications of predetermined integrator storage sections to provide new signal indications representing the dependent quantity for other integrator storage sections.

2,900,135

DIGITAL DIFFERENTIAL ANALYZERS

Reno V. Bonaglio, Birmingham, Jack M. Patterson, Berkley, and Charles A. Piper, Detroit, Mich., assignors to Bendix Aviation Corporation, Detroit, Mich., a corporation of Delaware

Application June 18, 1953, Serial No. 362,584
10 Claims. (Cl. 235—152)



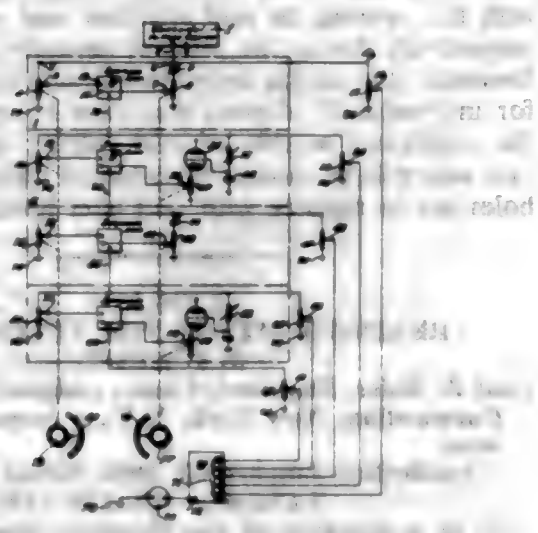
1. A digital differential analyzer, including, a plurality of integrator storage sections, means for providing digital signal indications alternatively representing: a positive increment, a negative increment, or no increment in an independent quantity from each integrator storage section, means for providing digital signal indications representing a dependent quantity from each integrator storage section, and means for combining the signal indications representing the dependent quantity and variations in the independent quantity from each integrator storage section upon the occurrence of digital variations in the independent quantity for the integrator storage section and in accordance with the polarity of such occurrences to provide signal indications representing the differential combination of the integrator storage section.

2,900,136

POLYNOMIAL SOLVER

Kenneth B. Tuttle, Playa Del Rey, and Lee C. Keene, Palos Verdes Estates, Calif., assignors to Northrop Corporation, Hawthorne, Calif., a corporation of California

Application March 23, 1953, Serial No. 344,628
12 Claims. (Cl. 235—189)



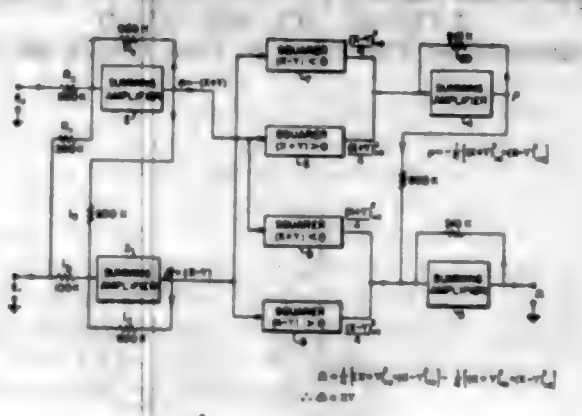
1. An electronic computer for solving polynomials comprising: means adapted to receive a sinusoidal voltage; a plurality of voltage control stages of first and second types having inputs and outputs, and different types

cured to the bottom front portion of said body for de- mounting said rotor for rotation relative to and closely

member for each denominational order of said totalizer scan the next account when said flip-flop circuit is in the second state.

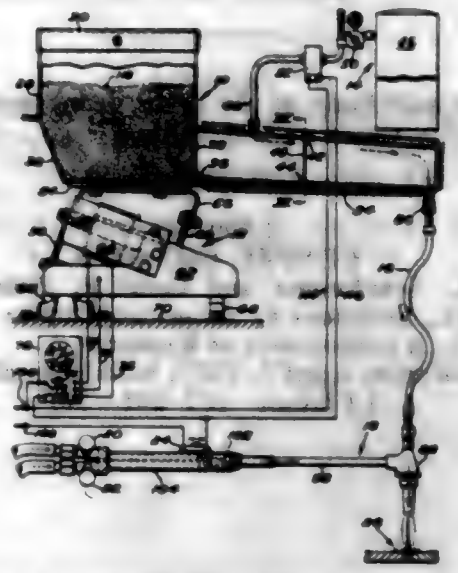
alternately serially connected to said means for receiving said sinusoidal voltage; said first type voltage control stage comprising: a first control potentiometer, connected to vary the amplitude of a voltage received at the input of said first type stage; a differentiating phase-shift circuit connected to shift the phase and vary the amplitude of a voltage received at the input of said first type stage; and a first feedback amplifier connected to receive and vectorially summarize a voltage from said first control potentiometer and a voltage from said differentiating phase-shift circuit to form an output from said first type voltage control stage; said second type voltage control stage comprising: a second control potentiometer connected to vary the amplitude of a voltage received at the input of said second type stage; an integrating phase-shift circuit connected to shift the phase and vary the amplitude of a voltage received at the input of second type stage; and a second feedback amplifier connected to receive and vectorially summarize a voltage from said second control potentiometer and a voltage from said integrating phase-shift circuit to form an output from said second type voltage control stage; said computer further comprising: a final feedback amplifier; and means for applying a portion of each of the voltages appearing at the inputs to said voltage control stages to said final feedback amplifier whereby said portions will be vectorially summarized.

2,900,137
ELECTRONIC MULTIPLIER
Samuel Gleer, Sharon, Mass., assignor, by mesne assignments, to Research Corporation, New York, N.Y., a corporation of New York
Application February 21, 1955, Serial No. 489,499
5 Claims. (Cl. 235—194)



1. An electronic multiplier for four quadrant multiplication of two variables comprising, means for producing first and second potentials having amplitude and polarity representing the magnitude and sign respectively of first and second variables, means responsive to said first and second potentials to derive a first output potential proportional in amplitude to the sum thereof but inverted in polarity, means responsive to said second potential and said first output potential to derive a second output potential proportional in amplitude to the difference of said first and second potentials and having the same polarity, a plurality of single quadrant square law devices, each of said devices being responsive only to a given polarity of input signal to derive an output signal of the same polarity having an instantaneous amplitude substantially proportional to one-fourth the square of the amplitude of said input signal, means applying said first output potential as the input signal to a first pair of said devices having opposite polarity of response, means applying said second output potential as the input signal to a second pair of said devices having opposite polarity of response, and means for so combining and inverting the output signals of said plurality of square law devices that an instantaneous summation output voltage is derived substantially proportional to one-fourth the square of said sum minus one-fourth the square of said difference to represent the product of said variables.

2,900,135
METAL POWDER WELDING APPARATUS
Frank R. Stirnis, Alden, N.Y.
Application April 5, 1954, Serial No. 421,148
11 Claims. (Cl. 239—61)

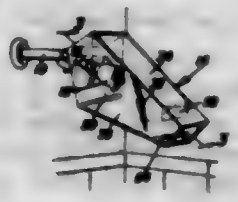


1. In a metal depositing apparatus, metal powder feeding means comprising a covered powder storage hopper, a covered powder feeding trough cantilever mounted by said hopper by a vibration transmitting connection to extend to one side from said hopper and forming a gas tight container therewith, the bottom of said trough being downwardly sloped toward its outer end, first baffle means comprising the hopper wall adjacent said trough and forming a first aperture in cooperation with the trough bottom, second baffle means intermediate the ends of said trough and forming a second aperture in cooperation with said trough bottom, said second aperture being of smaller cross-sectional area than that of said first aperture, electrically operable vibrator means mounting said hopper and adapted to impart vibratory motion thereto in an adjustable degree, a supply of inert gas comprising electrically operable gas delivery control means including adjustably preset flow rate control means, means connecting said supply to said trough at the tops of said trough approximately midway between said first and second baffle means, said second baffle means having bypass vent means in the upper portion thereof, and funnel shaped outlet means at the bottom of said trough at said outer end thereof, torch means comprising torch tip means, said torch tip means comprising powder nozzle means and separate flame nozzle means directed parallel to said powder nozzle means, flexible conduit means interconnecting said outlet means and said powder nozzle means, and control means comprising a switch connected to control operation of both said vibrator means and said delivery control means.

2,900,139
SHOWER ATTACHMENT
Robert K. Hensley, Jr., Hillcrest Heights, Md.
Application September 4, 1957, Serial No. 681,936
6 Claims. (Cl. 239—499)

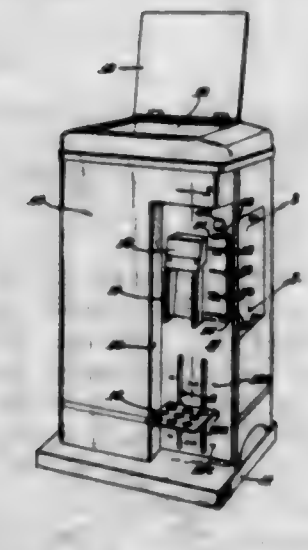
1. A shower attachment comprising a clamp for attachment to a shower pipe, a hollow body pivoted to said clamp, said hollow body having positioned therein at the upper part thereof a back splash plate adapted to fit over a shower spray head for preventing back splash of water impinging against said body from said spray head, an upflow plate secured to the bottom rear portion of said body below said back splash plate, a baffle se-

cured to the bottom front portion of said body for delivering water from said body in a stream, and a guide



secured to said body at the upper front portion thereof for deflecting water to said baffle.

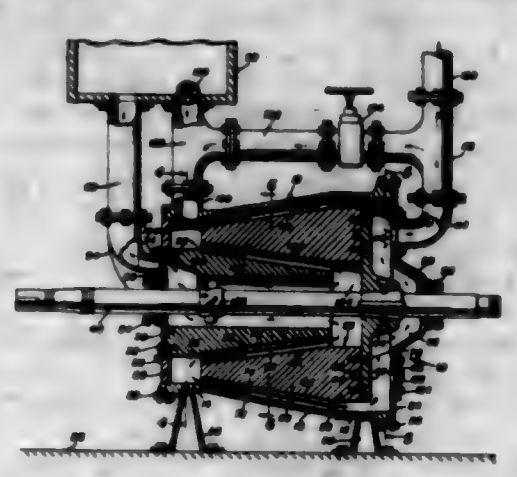
2,900,140
COFFEE GRINDER
Richard L. Schuhmann and Louis R. Zehnder, Louisville, Ky., assignors to American Duplex Co., Louisville, Ky., a corporation of Kentucky
Application April 2, 1957, Serial No. 650,278
6 Claims. (Cl. 241—36)



5. In a coffee grinder including a mill, a driving motor for said mill, a feed hopper, a discharge spout and a grind adjustment control shiftable between an "off" position and a plurality of different grind positions, the combination of interlocking electrical control apparatus to prevent inadventent improper operation of the mill, comprising a spout switch actuated by positioning a receptacle on the spout of the mill, a starting switch adapted to be closed and instantly reopened by movement of the grind adjustment control from the "off" position toward one of the grind positions, and an electrical circuit adapted to be closed and maintained in a closed position as a result of the initial contemporaneous actuation of said spout switch and said starting switch.

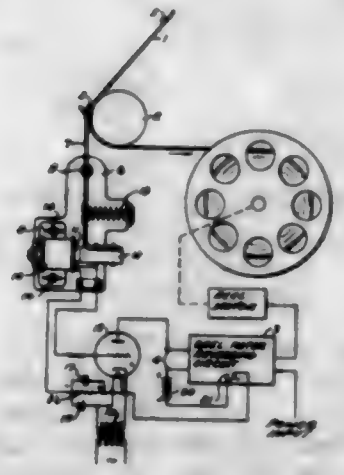
2,900,141
JORDAN
William Subert, Merritton, Ontario, Canada; Charles Vidas, Merritton, Ontario, Canada, and John Doran McNamara, Thorold, Ontario, Canada, executors of the estate of said William Subert, deceased, assignors to Charles Vidas, individually
Application May 21, 1956, Serial No. 586,171
11 Claims. (Cl. 241—155)

1. A machine for refining paper pulp comprising a fixed shell, end plates secured to said shell and closing opposite ends thereof, a fixed core disposed within said shell between said end plates, means securing said core to one of said end plates in concentric relation to said shell, a rotor, mounting means secured to said rotor mounting said rotor for rotation relative to and closely adjacent said shell and said core, said rotor having inner and outer blading, said shell and said core having blading opposing said rotor blading and cooperating therewith,



means including a central pulp inlet passage for distributing pulp between said core and said rotor, means including a mixing chamber for receiving pulp from between said core and said rotor and directing the pulp in between said rotor and said shell, said mixing chamber being in communication with the blading of said core, said rotor and said shell at one end thereof, and means including a combined mixing and discharge chamber for receiving pulp from between said rotor and said shell.

2,900,142
TAPE REEL DRIVE REVERSING SWITCH
Leland W. Sprinkle, Broadview, Mont.
Application January 14, 1957, Serial No. 634,131
2 Claims. (Cl. 242—55.12)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a tape rewinding mechanism in which the tape is rewound on a reel driven by a reel motor, in which motor reversing means are provided for applying a reverse torque to said motor for braking purposes, and in which said tape is provided with a series of bumps thereon for signalling the end of the tape, a switch actuated by said bumps for energizing said motor reversing means, said switch comprising a thyratron having an anode, a cathode and a grid, means for connecting the anode and cathode of said thyratron to said motor reversing circuit for energizing said circuit in the conductive condition of said thyratron, a coil having a core of high magnetic permeability and a source of negative bias connected in series between said grid and cathode, said negative bias being sufficient to prevent conductivity in said thyratron, a magnet normally positioned adjacent to said core so that its flux passes through said core and

the carrier and adjustably mounted thereon for adjust- member mounted in said bracket, a hollow body mem-

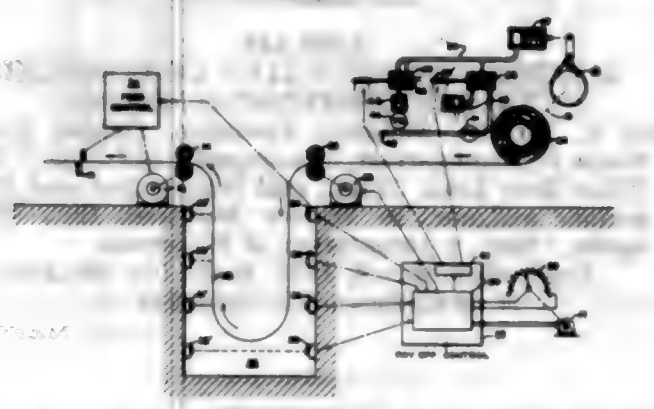
links said coil, and a mechanical actuator for said switch attached to said magnet and operated by said bumps to displace said magnet relative to said core so as to change the flux in said core and induce a voltage in said coil, the polarity of said coil and said magnet being such that said voltage drives said grid in a positive direction relative to said cathode for firing said thyratron.

2,900,143

BRAKE CONTROL FOR UNCOILER

Kenneth L. Bandy, Canfield, and Richard C. Davidson, Youngstown, Ohio, assignors to The McKay Machine Company, Youngstown, Ohio, a corporation of Ohio

Application September 20, 1954, Serial No. 457,092
5 Claims. (Cl. 242—75.44)



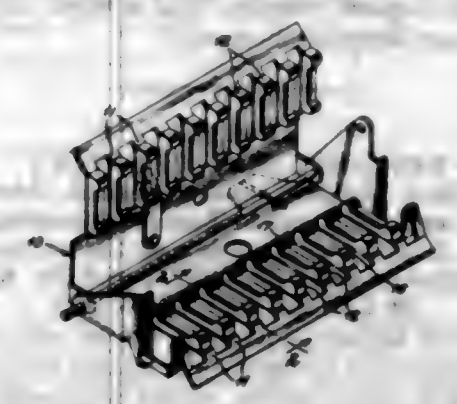
1. In a strip feeding line of the type adapted for intermittent feeding of measured lengths of strip material, and of the type having an uncoiler, a pay-off device associated with said uncoiler and having variable drive means and control means for causing said drive means to accelerate and decelerate, said uncoiler being of the type having means to firmly grip a coil of strip material and to automatically apply frictional braking pressure thereto; the improvement in said last mentioned means comprising a fluid cylinder, a fluid system leading to said cylinder and including a source of fluid under pressure, a first valve in said fluid system having a normally open passage leading to said cylinder and communicating between said passage and said source with a pressure reducing valve having a relatively low pressure outlet, a second valve in said fluid system having a normally closed passage leading to said cylinder and communicating between said passage and said source with a pressure reducing valve having a relatively high pressure outlet, and means to actuate said second valve to open said last mentioned passage when said drive means is decelerating.

2,900,144

THREAD GUIDE

Robert Maier, Esslingen (Neckar), Germany, assignor to American Feldmuehle Corporation, New York, N.Y., a corporation of Delaware

Application April 24, 1957, Serial No. 654,822
1 Claim. (Cl. 242—153)



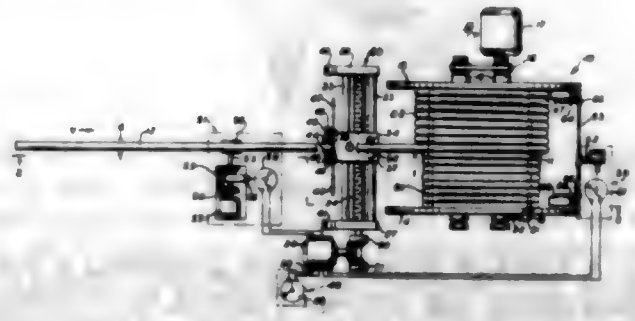
In a tensioning thread guide assembly for textile machinery, a guide and tensioning device comprising one set of spaced parallel thread guide supports, a second set of thread guide supports positioned over and in offset relation to said first set whereby said thread guide supports are in staggered clamping relationship, said supports having transverse slots formed therein, wear members consisting of aluminum oxide bars formed with a convex cross-section on one side to engage the thread and on the opposite side with a projecting dovetail portion to engage and be supported in said slots, each slot having a bar-supporting portion and an adjacent slot portion tapered toward said bar-supporting portion to facilitate the insertion and removal of said bars.

2,900,145

VARIABLE SPEED DISTRIBUTOR

Estyle D. Hanson, Baltimore, Md., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Application September 26, 1957, Serial No. 686,342
6 Claims. (Cl. 242—158.2)



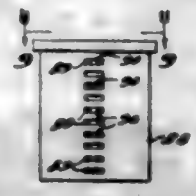
6. Apparatus for controlling the rate of traverse of a distributor for a moving strand, which comprises a variable speed motor for causing traverse of the distributor, a control circuit for said variable speed motor, a differential gear unit having two rotatable input shafts and an output shaft responsive to any difference between the speeds of rotation of the two input shafts, a grooved roller mounted on the first input shaft of said differential gear unit and over which the moving strand passes to cause rotation of the first input shaft at a speed proportional to the speed of the moving strand, a pilot motor for driving the second input shaft of said differential gear unit at a constant speed preselected in accordance with the expected speed of the moving strand, and a variable electrical component disposed in the control circuit for said variable speed motor and regulated by the output shaft of said differential gear unit, whereby the rate of traverse of the distributor is substantially in direct proportion to the speed of the moving strand.

2,900,146

PNEUMATIC CONVEYOR SYSTEM

William J. Hafner, Berkley, and Gordon H. Cork, Birmingham, Mich.; said Hafner assignor to said Cork

Application September 11, 1952, Serial No. 309,114
10 Claims. (Cl. 243—36)



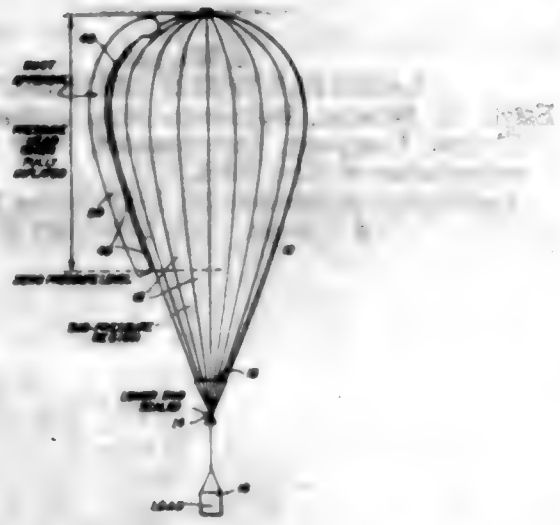
5. A message carrier adapted to travel along a conduit system, and signal means on said carrier comprising a plurality of permanent magnets polarized radially of

charge retaining means to initially propel and ignite said rocket device, and a discharge nozzle connected with

tion adjacent one of its ends bifurcated to form a pair of resilient fishpole gripping fingers defining a fish pole

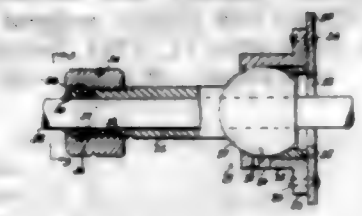
the carrier and adjustably mounted thereon for adjustment both axially of the carrier and reversibly as to polarity to effect a predetermined magnetic field pattern.

2,900,147
DUCT APPENDIX BALLOON
William F. Huch, St. Paul, Edward P. Ney, Minneapolis, and John R. Winckler, St. Paul, Minn., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application November 30, 1954, Serial No. 472,265
5 Claims. (Cl. 244—31)



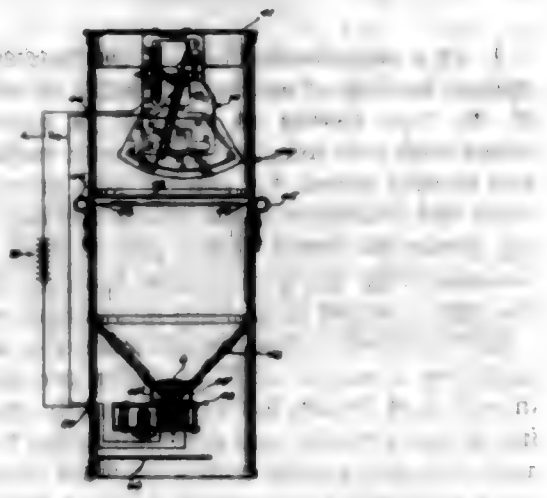
1. A free high altitude balloon comprising a free high altitude plastic film envelope prepared for launching and having an opening at the top thereof and being otherwise closed, an imperforate duct sealed at one end to the envelope about the opening in constant communication with the envelope thereat and extending throughout its length outside of the envelope and from the opening toward and terminating short of the bottom of the envelope and attached at its lower end to the adjacent part of the side of the envelope, whereby, when the balloon is in flight, gas will escape from the duct bottom whenever the gas in the envelope tends to be superpressured at a level below that of the duct bottom, the gas in the duct serves as the sole barrier preventing atmospheric air from entering the opening when the gas in the envelope at a level below that of the opening is superpressured, and the envelope in flight cannot be fully inflated, the distance of the lower end of the duct from the bottom of the envelope being predetermined to thereby predetermine the desired ceiling altitude of the balloon.

2,900,148
LOCKING DEVICE
William H. Nichols, Carrizozo, N. Mex.
Application May 29, 1958, Serial No. 738,742
2 Claims. (Cl. 244—83)



1. In an airplane including a cabin having an instrument panel therein, and said airplane further including a floor board, a column extending through said floor board, there being an opening in said instrument panel, a control shaft extending through the opening in said instrument panel and connected to said column, a bracket having a flange secured to said instrument panel, a bearing member mounted in said bracket, a hollow body member mounted on said control shaft and having a rounded base on an end thereof engaging said bearing member, there being a recess in said bracket, a pin extending through said recess and engaging said base piece, an end of said body member being tapered, there being a plurality of spaced parallel slots in said body member, an end portion of said body member being threaded externally, a knurled collar arranged in engagement with the threaded portion of said body member, said collar being provided with a beveled portion for coaction with the tapered end of the body member, clamps mounted within said body member and engaging the outer periphery of the control shaft, and said collar adapted to be loosened or tightened on said body member.

2,900,149
ELECTROMAGNETICALLY CONTROLLED BALLAST DISPENSING MEANS
Otto C. Winzen, Mendota Township, Dakota County, Verne E. Baumgartner, Minneapolis, and John T. Beck, White Bear Lake, Minn.; said Winzen and said Baumgartner assignors to Winzen Research, Inc., Minneapolis, Minn., a corporation of Minnesota
Application May 4, 1956, Serial No. 584,648
9 Claims. (Cl. 244—94)



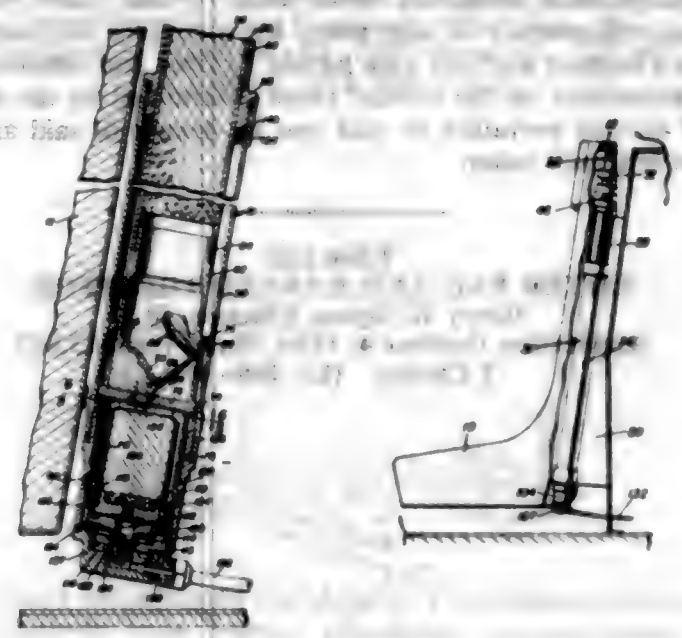
1. A ballast control mechanism comprising in combination a container adapted to be suspended from a balloon and having means for retaining comminuted ballast therein, a magnetic valve normally operative to retain said ballast in said container, said magnetic valve operative when energized to release said ballast therefrom, an electric circuit connected to said valve and a pressure differential switch for energizing said circuit, said pressure differential switch including means for sequent conditioning of said circuit as external pressure is changed in one direction only, and means for energizing said circuit only as said pressure is changed in the other direction, and said means for sequent conditioning of said circuit including an elongated member and a wiper arm adapted to travel in one direction thereover.

2,900,150
EJECTION SEAT CATAPULT
Gerald E. Hirt, Madison, and Eugene A. Martino, East Haven, Conn., assignors to Talco Engineering Co., Inc., Hamden, Conn., a corporation of Connecticut
Application January 22, 1957, Serial No. 635,266
26 Claims. (Cl. 244—122)

25. Ejection apparatus adapted for use with an aircraft seat, said apparatus comprising a rocket device, support means for said rocket device, means adapted for securing said rocket device to a seat, an initial charge retaining means in said support means, a charge in said initial

said legs, a bracket including a back portion secured to material lateral divergency from said plane to engage

charge retaining means to initially propel and ignite said rocket device, and a discharge nozzle connected with



said rocket device and providing a canted thrust axis for said rocket device.

2,900,151
SPOON AND FORK REST FOR KITCHEN UTENSILS
Don C. Sims, Berkeley, Calif.
Application May 31, 1955, Serial No. 512,118
3 Claims. (Cl. 248—37.3)

1. A spoon and fork rest for kitchen utensils such as pots and pans, comprising a clip involving a pair of lever components, means pivotally securing said lever components together at a corresponding intermediate point of each to provide a pair of opposing jaws to one side of said pivotal securing means, and a pair of finger grips to the other side of said pivotal securing means, and a spoon and fork supporting arm extending from each of said jaws.

2,900,152
FISH POLE HOLDER
Frank J. Hahn, Delhi Hills, Ohio
Application September 28, 1954, Serial No. 456,956
2 Claims. (Cl. 248—42)

1. A fishpole holder comprising a channel-shaped clamp frame having a pair of spaced parallel arms integrally joined by a web, a thumb-screw extending in threaded engagement through one of said arms and advanceable toward the other arm, a bracket having a post portion and a base portion extending perpendicularly to the post portion, a pivot pin securing the base portion of the bracket in face-to-face abutment with said web, said bracket having locking means spaced from said pivot pin and adapted to co-operate with said web for precluding rotation of the bracket relative to said web, a pair of spaced hook-shape integral fingers extending from said portion remote from said base portion, the tip portion of each finger extending parallel to said post portion and toward said base portion, an abutment block parallel to said post portion and spaced from said fingers on said post portion, an elongate curved cradle bar having a portion adjacent one of its ends bifurcated to form a pair of resilient fishpole gripping fingers defining a fish pole receiving V-notch, a cup member pivotally mounted on the other end of the cradle bar for receiving and cooperating with the butt-end portion of a fish pole, said cup being biased to swing toward mouth-upward position to receive the butt end portion of a fish pole and swing in substantial alignment therewith when so engaged, said curved cradle bar being slidably received between said abutment block and fingers and being adapted to engage said block and at least one of said fingers for locking said cradle in position relative to said post, a clamp for clamping said cradle in fixed position against said post, whereby a fish pole may be held in position as desired readily operable and removable by a fisherman.

2,900,153
ADJUSTABLE FISHING ROD
Thomas Lazar, Tamaqua, Pa.
Application May 2, 1957, Serial No. 656,601
3 Claims. (Cl. 248—44)

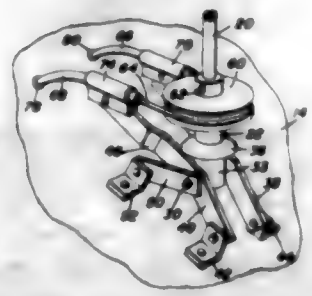
3. In an adjustable fishing rod support, a vertically disposed hollow standard, a pointed tip on the lower end of said standard, a hollow rod adjustably mounted in said standard, there being a plurality of spaced apart notches in said rod and an apertured bushing secured to the end of said rod, an elongated body member slidably mounted in said rod and having its lower end extended through the bushing on the end of the rod and secured at its lower end to the pointed tip at the lower end of said standard, interengaging means on the upper end of said body member for engagement with said bushing for limiting upward movement of said rod in said standard, a fork on the upper end of said standard defining a pair of angularly arranged legs, cover members mounted on

2,900,157

top bar when the legs are in spread position, means to

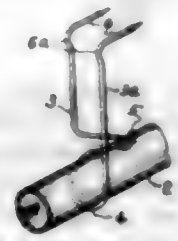
said legs, a bracket including a back portion secured to the upper end of said standard, a pair of spaced apart flanges extending outwardly from the back portion of said bracket, a spring member supported on a pin extending between said flanges, and said spring member being mounted for movement into and out of engagement with said notches, an apertured ear extending outwardly from the lower portion of said bracket, a ring connected to said ear, and a cable connected to said ring and adapted to be connected to a portion of the fishing rod being supported, a plate secured to said standard, a horizontally disposed flange on the upper end of said plate, said last named flange adapted to be engaged by a person's foot so as to facilitate projecting the tip down into the ground, and said plate being provided with plurality of teeth thereon.

2,900,154
MANUAL ROTATOR FOR ANTENNA
Walter C. Schweim, Mankato, Minn.
Application March 6, 1956, Serial No. 569,905
4 Claims. (Cl. 248—45)



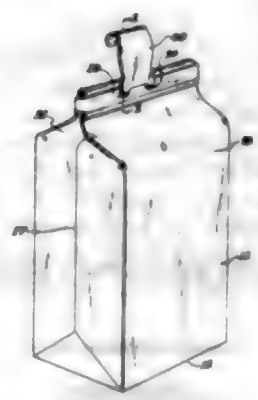
2. In a rotatably adjusted antenna that has a mast, an upwardly opening bearing in which the mast is mounted for rotation, a pulley attached to said mast and mounted above said bearing, a socket in which said bearing is disposed, a pair of brackets attached on opposite sides of said socket, means for anchoring one pair of ends of said brackets, adjustable means attached to said socket and said brackets between the ends of said brackets in order to further anchor said brackets, a flexible member attached to said pulley in order to rotate said pulley, means for guiding said flexible member to a remote location so that the ends thereof may be pulled in order to rotate said pulley and thereby rotate said mast, said guiding means including a pair of tubes, means fastening one pair of ends of said tubes to said brackets, and means for anchoring the opposite ends of said tubes.

2,900,155
PIPE HANGER
William L. Cameron, Detroit, Mich.
Application October 3, 1955, Serial No. 537,993
5 Claims. (Cl. 248—71)



1. A pipe hanger comprising a length of wire-like material bent to form a pair of divergent arms extending integrally upward from an arcuate seat for a pipe and flexible toward each other substantially in a common plane to oppositely engage such pipe, one of said arms forming a loop of approximate U-shape in close proximity to said arcuate seat and projecting diagonally to and at a material lateral divergency from said plane to engage above a pipe occupying said seat when the arms are swung toward each other, the upper ends of said arms being bent transversely to said plane for mounting the hanger on a support and said loop having a closed end disposable substantially in the vertical plane determined by the axis of arcuate curvature of said seat by flexure of said arms toward each other.

2,900,156
LITTER BAG AND HANGER THEREFOR
Henry H. Styers, Chicago, Ill.
Application October 4, 1956, Serial No. 613,887
2 Claims. (Cl. 248—99)



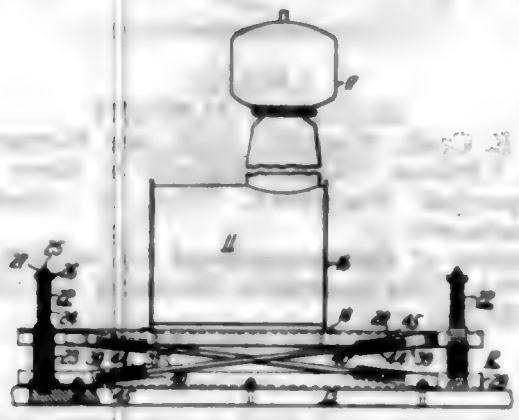
1. A container construction of the character described which comprises: a flexible disposable bag; a bendable band member secured thereto and effective to maintain the bag in an open position during use and to close one end of the bag prior to disposing the same; and a one-piece plate member removably attached to the bag and to the band member for supporting the bag in a dependent position from a supporting member; said bag being of generally rectangular shape and having a bottom, front and rear walls, a pair of side walls, and an open top wall, the front and rear walls each having two pairs of openings therein with the openings in the front wall in horizontal alignment with the openings in the rear wall when the bag is in an open position of use, said openings comprising an upper pair and a lower pair, the bag being adapted to be folded into a closed position along a horizontal line between the upper and lower pairs of openings, the side walls being provided with vertical slits terminating at their lower ends above the horizontal fold line and at their upper ends downwardly of the open top wall of the bag; the bendable band member having a pair of horizontally aligned openings therein registering with the upper pair of openings in the rear wall of the bag, said band member being secured to the bag rear wall parallel to the top wall of the bag with openings of said member in registration with the upper pair of openings in the rear wall of the bag, the band member being bendable at the juncture of the side walls and rear wall of the bag to provide forwardly extending end portions received in the vertical slits in the side walls to maintain the bag in an open position; and the supporting one-piece plate member being shaped at one end to provide a pair of spaced generally U-shaped tangs to be received in the pair of openings in the band member and aligned upper pair of openings in the bag rear wall, and at its opposite end being provided with a pair of substantially U-shaped spaced tangs to be engaged with a supporting member; said bag being closable by contacting the upper ends of the front and rear walls, folding the same along the horizontal line, and bending the end portions of the band member onto the rear wall of the bag, the openings in the band member, and upper and lower pairs of openings in the front and rear walls being thereupon in registry.

with thrust bearing-forming flat end faces engageable with

crum, said resilient means including a first resilient ele-

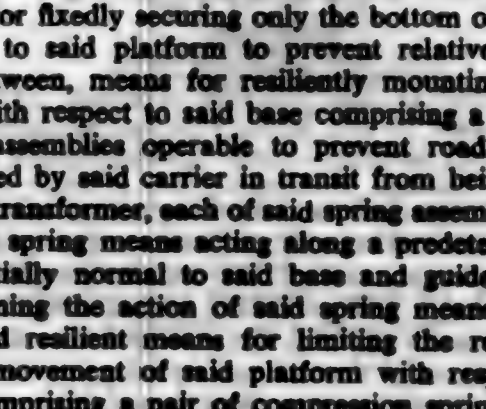
post portion, an elongate curved cradle bar having a portion of angularly arranged legs, cover members mounted on

2,900,157
FRANGIBLE ARTICLE SHIPPING ASSEMBLY
John Regis Anke, Pittsburgh, Pa., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application November 28, 1955, Serial No. 549,403
4 Claims. (Cl. 248—119)



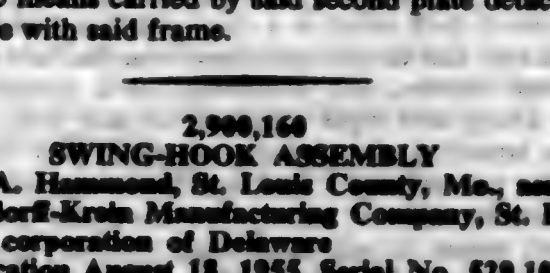
1. An arrangement for shipping a transformer having a relatively large bushing comprising in combination a carrier having a horizontal base; a mounting platform, means for fixedly securing only the bottom of said transformer to said platform to prevent relative movement therebetween, means for resiliently mounting said platform with respect to said base comprising a plurality of spring assemblies operable to prevent road shocks encountered by said carrier in transit from being imparted to said transformer, each of said spring assemblies including coil spring means acting along a predetermined axis substantially normal to said base and guide means for maintaining the action of said spring means along said axis and resilient means for limiting the relative horizontal movement of said platform with respect to said base comprising a pair of compression spring biased tie bars, each said tie bar having one end movably connected to the forward portion of said platform and the other end movably connected to the rearward portion of said base, to prevent straining said guide means beyond its elastic limit when the forward movement of said carrier is stoped suddenly.

2,900,158
SUPPORT
Francis J. Ditter, Minneapolis, Minn., assignor to Federal Hardware Products, Inc., Minneapolis, Minn., a corporation of Minnesota
Application October 22, 1954, Serial No. 463,858
10 Claims. (Cl. 248—166)



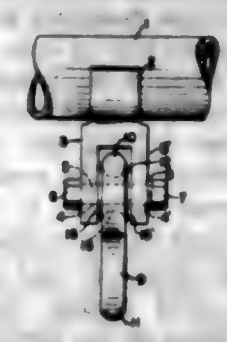
1. A support comprising in combination a first U-shaped supporting member having a top supporting bar with legs at the ends, a second U-shaped supporting member having a top bar with legs at the ends, said second supporting member having a shorter top bar than the first supporting member so that the legs of the second member will pass inside of the first with relative pivotal movement, means for pivotally connecting said top bars with the second top bar positioned directly beneath the first top bar when the legs are in spread position, means to limit the relative pivotal movement of the support members to prevent the legs from spreading beyond a predetermined distance, and means for holding the said first and second top bars in continual line contact to obtain concert of action and enhance their strength.

2,900,159
SIGHTING LEVEL
Milton E. Matter, Dumont, N.J.
Application August 31, 1956, Serial No. 607,354
3 Claims. (Cl. 248—239)



1. For use with a horizontally disposed frame including a spirit level, a support assembly for said frame, said support assembly comprising an upstanding clamp, an arm projecting perpendicularly from said clamp intermediate the ends thereof, an attaching element carried by said arm, a plate member secured to said attaching element, a bracket having an upper surface disposed horizontally positioned above and adjacent said plate member and secured to said plate member, a horizontally disposed first plate resting on the upper surface of said bracket, a second plate arranged in superimposed abutting relation with respect to said first plate, means embodying a vertically disposed bolt passing through said first and second plates and said bracket connecting said second plate to said first plate for rotary movement relative to the first plate, securing means on said bolt and engageable with said bracket for securing said second plate in any selected position of movement relative to said first plate, and clamp means carried by said second plate detachably engageable with said frame.

2,900,160
SWING-HOOK ASSEMBLY
Leonard A. Hammond, St. Louis County, Mo., assignor to Nizdorff-Krein Manufacturing Company, St. Louis, Mo., a corporation of Delaware
Application August 18, 1955, Serial No. 529,102
3 Claims. (Cl. 248—341)



1. A swing-hook assembly comprising a bracket formed with a pair of spaced parallel substantially rigid ears, said ears having axially aligned apertures, a bolt-like pintle passing through, and non-rotatively secured in, said apertures and having a smooth bearing portion between said ears, said pintle, furthermore, having an enlarged head on one end and a nut threaded on the other end, a tubular nylon bushing of limited elasticity rotatably mounted on said smooth bearing portion and provided

ber separated from said inlet, a passage between said inlet and said chamber, means at the inlet end of said

2,900,165
GATE VALVE AND SEAL

to said arcuate seat and projecting diagonally to and at a

rear walls being thereupon in registry.

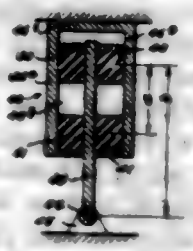
with thrust bearing-forming flat end faces engageable with said ears, said nylon bushing, furthermore, being provided around its outer surface with a peripheral groove, and a swing-hook formed with a circular eye-portion and a hook-like member depending therefrom, said eye-portion having a minimum internal diametral size substantially equal to the minimum internal diametral size of the groove whereby the eye is embracingly disposed around the bushing and being rotatably mounted in said peripheral groove so that when the swing-hook swings to and fro along an arcuate path during use, the nylon bushing will, during some portion of such arcuate path, rotate with respect to the pintle, and will, during other portions of such arcuate path, rotate with respect to said eye portion.

2,900,161

RESILIENT SUPPORT

Charles E. Crede, Winchester, Mass., assignor to Barry Controls Incorporated, a corporation of Massachusetts

Application January 29, 1954, Serial No. 406,929
7 Claims. (Cl. 248—358)



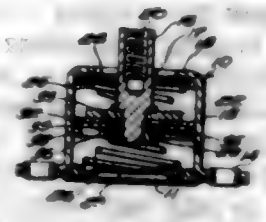
1. A resilient support for supporting a supported structure relative to a supporting structure, said support comprising a first rigid member and a second rigid member spaced from said first rigid member, said members having oppositely facing spaced surfaces having a first dimension in one direction and a second dimension in a second direction normal to said first direction, said rigid members being free to move with relation to each other a substantial distance in said first and second directions and toward each other in a third direction generally normal to said first and second directions, resilient means interposed between and extending for a substantial distance along said rigid members in said first direction, means attaching said resilient means to said rigid members for transmitting a load applied to one of said rigid members in said first and second directions through said resilient means to said other rigid member, hinge means spaced from said resilient means in said first direction and having an axis extending in said second direction for attaching one of said rigid members to one of said structures for swinging movement of said one rigid member about said axis and in said third direction toward and away from the other of said rigid members, said support having a first stiffness in said first direction which is determined by the stiffness of the resilient means in said first direction, a second stiffness in said second direction which is determined by the stiffness of the resilient means in said second direction, and a third stiffness in said third direction, said hinged rigid member forming a lever arm, a portion of the resilient means forming a resilient fulcrum for said lever arm when a force is applied to the axis of said hinge means in said third direction, whereby force is transmitted through said lever arm to another portion of said resilient means spaced a different distance from said hinge means in said first direction than said fulcrum, the stiffness of the support in said third direction being a function of the ratio of the distance in said first direction between the hinge means and said other portion and the distance in said first direction between said other portion and the fulcrum, said resilient means including a first resilient element spaced a predetermined distance from said hinge means in said first direction and a second resilient element separate from said first resilient element and spaced a predetermined distance from said hinge means and from said first resilient element in said first direction.

2,900,162

RESILIENT SUPPORT

Charles E. Crede, Pasadena, Calif., and Bertrand S. Furbeck, Littleton, Mass., assignors to Barry Controls Incorporated, Watertown, Mass., a corporation of Massachusetts

Continuation of application Serial No. 482,272, January 17, 1955. This application December 19, 1958, Serial No. 781,753
12 Claims. (Cl. 248—358)



12. A vibration isolator comprising a supporting member and a supported member resiliently supported on said supporting member, one of said members comprising a housing having a wall extending in one direction, said housing having an opening, the other member extending in said one direction through said opening into said housing, the edge of said opening being spaced from said other member in a direction lateral to said one direction, said other member and said housing being movable with respect to each other in said one direction and said lateral direction, said other member having a surface extending in said lateral direction, a damping element movable with said other member and with respect to said housing in said one direction and movable with said housing and with respect to said other member in said lateral direction, a first resilient element biased between said damping element and at least one of said other member and said housing for urging said damping element in said one direction into damping relationship with said lateral surface to frictionally damp movement of said other member and said housing with respect to each other in said lateral direction and to force said damping element to move with said other member and with respect to said housing in said one direction and a second resilient element for resiliently urging said damping element in said lateral direction into damping relationship with said wall to frictionally damp movement of said other member and said housing with respect to each other in said one direction and to force said damping element to move with said housing and with respect to said other member in said lateral direction.

2,900,163

DIAPHRAGM VALVE

Stanley W. Nichols, Wayzata, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

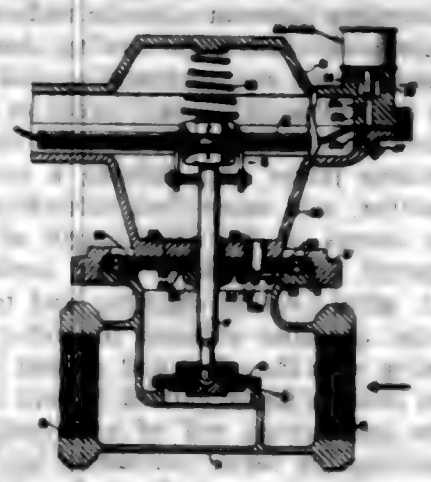
Application July 10, 1957, Serial No. 670,967
9 Claims. (Cl. 251—30)

1. A pressure operated valve comprising a valve body having an inlet and an outlet with a valve seat therebetween, a valve cooperable with said valve seat and normally biased into closed position on said seat, a movable wall connected to said valve and positioned in a cham-

radial direction upon the gasket and distort it endwise elevated temperature to require cooling thereof by a

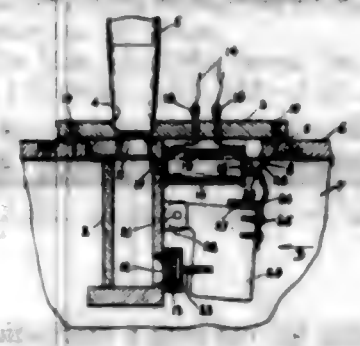
the second top bar positioned directly beneath the first mounted on said smooth bearing portion and provided

ber separated from said inlet, a passage between said inlet and said chamber, means at the inlet end of said



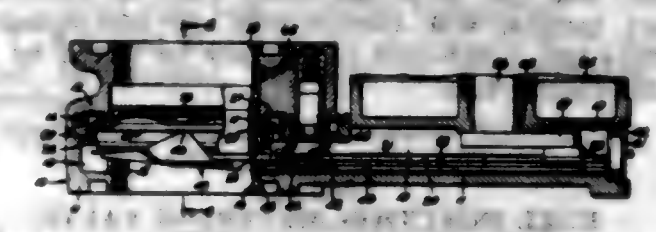
passage and responsive to fluid flow surges to substantially close said passage and thus prevent undesired opening of said valve.

2,900,164
PIPE ORGAN VALVES
Samuel C. Bowman, deceased, late of Mount Lebanon Township, Allegheny County, Pa., by Virginia B. Caldwell, administratrix, Mount Lebanon Township, Allegheny County, Pa., assignor of one-half to Anna H. Bowman, Mount Lebanon Township, Allegheny County, and one-half to James M. Gallaris, Crafton Borough, Allegheny County, Pa.
Application July 10, 1957, Serial No. 671,162
4 Claims. (Cl. 251—139)



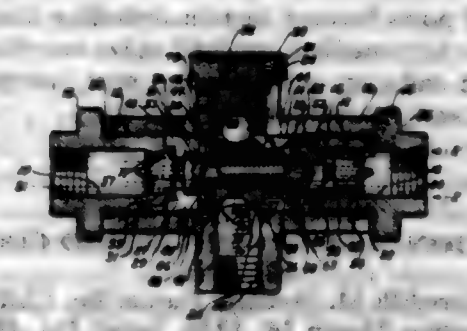
1. An organ pipe-controlling device adapted for assembly with an opening in the wall of an air-chest, said device comprising a seat portion for the air-receiving end of an organ pipe, a recessed body portion extending from said seat portion, with an air passage opening from the interior of said recessed body portion through said seat portion, the wall of said recessed body portion having a port through which air may enter, a valve normally positioned on said port for blanking the flow of air therethrough, and means for lifting the valve from the port in response to the closing of an electric circuit; said means comprising an electro-magnetic coil extending laterally from said body portion, a magnetic core in said coil, the core being extended from the distal end of the coil and provided at its end with an exposed face, a disk of non-magnetic material disposed in a substantially vertical plane and pivoted at a point adjacent to its edge to said body portion for angular movement in said plane, a stem for securing said valve to the edge of said disk at a point below said pivot, and an armature secured to the edge of said disk at a point substantially opposite to the point at which said disk is pivoted, said armature extending from said disk and having a distal end positioned adjacent to the exposed end face of said core, whereby when said coil is electrically energized said disk is swung upwardly to lift said valve from said port.

2,900,165
GATE VALVE AND SEAL
Everett H. Bodger, Jr., Whittier, and Samuel D. Burton, Los Angeles, Calif., assignors to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Application March 30, 1955, Serial No. 497,934
4 Claims. (Cl. 251—172)



1. In a gate valve, the combination of: a housing having aligned flow conduits, a gate movable transversely within the housing to a closed position between said flow conduits, seal means encircling one of said conduits and movable axially with respect thereto into engagement with the gate, said means including an annular carrier having a seal ring thereon for contacting the gate, the carrier and the housing having spaced radial shoulders and having concentric cylindrical wall surfaces cooperating to define an annular chamber, a resilient diaphragm element having a first cylindrical portion establishing a static seal with the housing and a second cylindrical portion establishing a static seal with the carrier, a conical portion within the chamber integrally joining the said other portions, the junction between the conical portion and said first portion comprising a bead in the chamber positioned adjacent the corner defined between the cylindrical wall surface on the housing and the radial shoulder on the carrier, and the junction between the conical portion and said second portion comprising a bead in the chamber positioned adjacent the corner defined between the cylindrical wall surface on the carrier and the radial shoulder on the housing.

2,900,166
SHUTTLE VALVE
Frank C. Bowman, Los Angeles, Calif., assignor to Parker-Hannifin Corporation, Cleveland, Ohio, a corporation of Ohio
Original application November 24, 1953, Serial No. 393,231, now Patent No. 2,685,296, dated August 3, 1954. Divided and this application December 14, 1953, Serial No. 398,819
2 Claims. (Cl. 251—175)



1. In a valve, a seat member having a bore surrounded at one end by an annular projecting rib, said projecting rib having a cylindrical surface, a valve member movable relative to the seat member for opening and closing the bore, said valve member having formed therein an annular recess open at one end, a distortable gasket disposed wholly within the recess with the walls of the recess projecting outwardly beyond the gasket, said projecting rib being adapted to enter the recess and sealingly engage the gasket for closing the bore, one wall of the recess being so spaced from at least a part of a radial surface of the gasket as to permit fluid gaining access to the recess when the valve is seated to set in a

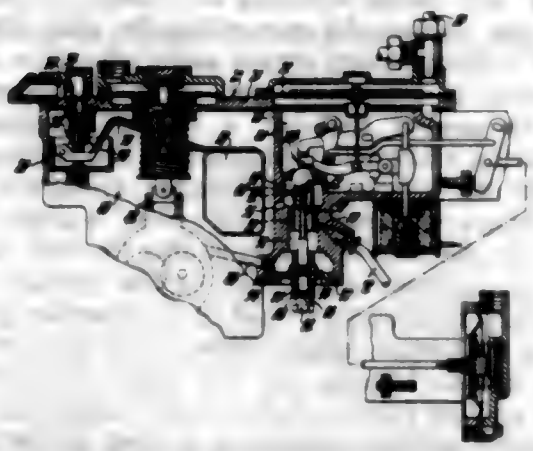
zontally extending journal bolts, angularly offset brackets all of said diverting means whereby the formerly in-

first direction between said other portion and the full-

wall connected to said valve and positioned in a cham-

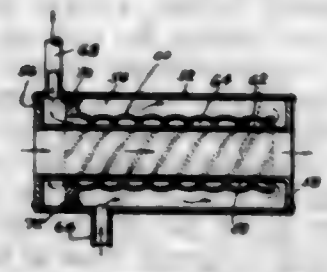
radial direction upon the gasket and distort it endwise into tighter sealing engagement with the projecting rib, another wall of said recess being adapted to overlap said cylindrical surface when the valve member moves toward closed position and having a close sliding fit therewith so that at no time after initial contact between the gasket and said projecting rib is there an appreciable space between said another wall and said cylindrical surface into which said gasket may be forced by said radially acting fluid.

2,900,167
FUEL INJECTION METERING VALVE
Lawrence C. Dormond, Rochester, N.Y., assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application March 14, 1957, Serial No. 646,681
3 Claims. (Cl. 251—321)



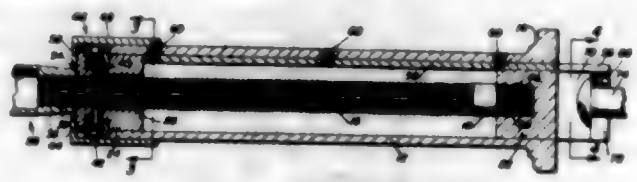
1. A metering valve for a fuel injection system comprising a valve body having a bore therein, a hollow sleeve fixed within the bore and terminating at one end in an annular seat, a ball valve member disposed within said seat, a perforate cap disposed in one end of said bore proximate the ball valve member, said cap having an opening within which the ball may project, the end of said cap remote from the sleeve being restricted to prevent the ball from passing completely therethrough, an imperforate end cap disposed in the other end of said body, a spring element mounted upon the imperforate end cap and biasing said valve away from its seat, said valve being axially movable between the annular seat and the perforate end cap, said valve body having a plurality of ports formed therein including fuel inlet and outlet ports intermediate the ball valve member and the imperforate end cap, and a bypass port intermediate the ball valve and the perforate end cap.

2,900,168
REACTION MOTOR WITH LIQUID COOLING MEANS
Meredith M. Nyborg, Camarillo, Calif.
Application March 24, 1955, Serial No. 496,631
2 Claims. (Cl. 257—246)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. Heat exchange apparatus comprising, an inner shell adapted to be subjected internally thereof to sufficient elevated temperature to require cooling thereof by a pressurized liquid coolant, a cooling jacket surrounding said inner shell having an integral inwardly directed spiral partition extending between opposite ends of the jacket forming a first concentric spiral cooling chamber open at opposite ends thereof and surrounding said shell, means for limiting the movement of said jacket in one direction with relation to said inner shell, an outer shell surrounding said cooling jacket and defining a second annular cooling chamber, said outer shell extending in an axial direction in excess of the axial length of the cooling jacket to permit entry of said liquid coolant into one end of said spiral cooling chamber and to provide an annular outlet chamber adjacent the other end thereof communicating with the other end of said spiral cooling chamber, an annular flange carried by said cooling jacket adjacent the last named end of said cooling chamber slidably engaging the inside surface of said outer shell, sealing means carried by said flange for preventing fluid leakage from said second chamber to said outlet chamber, said jacket being constructed of flexible material whereby the pressure of said liquid coolant in said second annular cooling chamber forces substantially the entire length of said partition into contact with the outer surface of said inner shell and axial leakage of liquid between successive convolutions of the spiral cooling chamber is minimized, and means for pressurizing, cooling and circulating said liquid coolant through the cooling and outlet chambers of said heat exchanger.

2,900,169
BOLT PULLER
Herman E. White, Elizabeth City, N.C.
Application August 24, 1954, Serial No. 451,901
2 Claims. (Cl. 254—28)

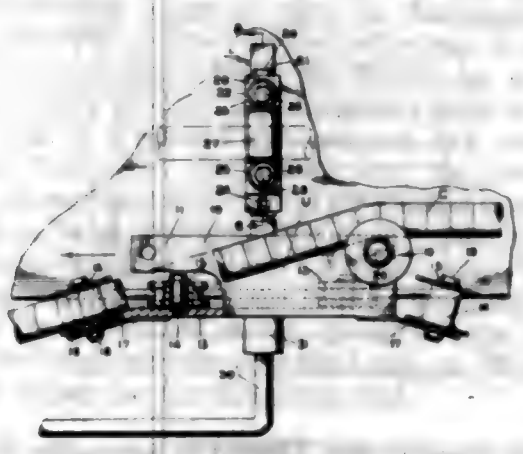


1. A bolt puller for use with a mechanical driver, said bolt puller comprising an elongated barrel having a work engaging seat at one end thereof, an elongated threaded shaft extending through said barrel and out of the end opposite to said one end, a collet disposed in said one end and carried by said shaft, a nut on said shaft seated relative to said opposite end to move said shaft and collet through said barrel in response to rotation of said nut, a bolt head receiving socket formed in said collet, a thrust bearing at said opposite end, said nut engaging said thrust bearing, said nut being elongated and tubular to form a lubricant container, a lubricant shield forming cover removably carried by said barrel enclosing said thrust bearing, an opening in said cover receiving said nut.

2,900,170
CABLE LAYING DEVICE
Alfred C. Synstegard, Lyle, Wash.
Application August 6, 1958, Serial No. 753,575
5 Claims. (Cl. 254—134.3)

1. A cable laying and aligning device for laying and aligning cables in cable supporting trays of the type having an upright side wall, comprising a frame having a horizontal platform and an integral depending side frame secured to one side edge of said platform, a pair of grooved trunnion wheels secured to said side frame in underlying relation with respect to said platform on hori-

zontally extending journal bolts, angularly offset brackets secured to each end of said side frame and extending angularly therefrom oppositely of said platform, a cable guide roller positioned adjacent each of said offset brackets, a bolt securing each of said cable guide rollers to said offset bracket for rotary movement thereon, a cable guide sheave positioned in overlying relation to one end



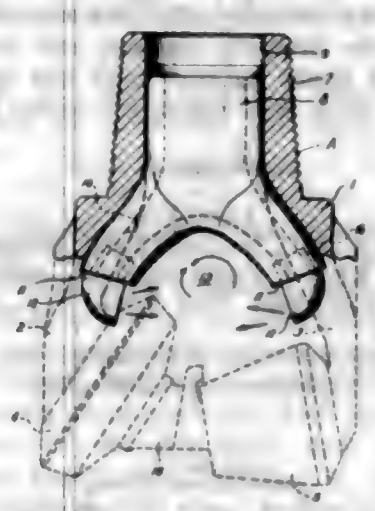
of said platform, a vertically extending journal bolt securing said sheave to said platform for rotary movement thereon, a supporting bar secured to the under side of said platform and extending transversely outwardly therefrom oppositely of the side from which said side frame depends, and laterally adjustable cable guide means rigidly mounted on said support bar and extending upwardly therefrom.

2,900,171

EROSIBLE NOZZLE FOR ROLLER BIT

Elvas A. Miller and Duke A. Johnson, Oklahoma City, Okla., assignors to Reed Roller Bit Company, Houston, Tex., a corporation of Texas

Application May 19, 1953, Serial No. 288,626
3 Claims. (Cl. 255—313)



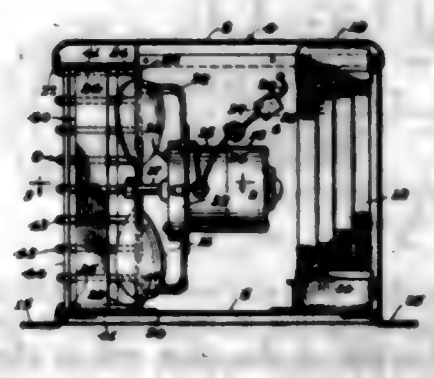
1. A cross roller bit having a head, cross rollers and side cutters mounted in the lower portion of said head with a recess formed thereabove, said head having a drilling fluid discharge passageway provided with a nozzle at its discharge end for directing the drilling fluid in a straight line course, means for diverting the drilling fluid from said straight line course and turning it inwardly towards said cutters consisting of a hollow substantially spherical thin-walled metal member having a portion thereof open and inwardly directed towards said cutters and mounted on the lower end of said passageway whereby said drilling fluid is initially turned toward the central portion of the bit so as to be directed onto said rollers and cutters and into said recess to clean the bit, said diverting means having a portion of its wall where the straight line directed drilling fluid impinges thereagainst preliminarily weakened so that the drilling fluid will by eroding action ultimately destroy substantially all of said diverting means whereby the formerly inwardly turned drilling fluid is again returned to its straight line course and directed toward the bottom of the hole being drilled by said bit.

2,900,172

HEATER FOR MOTOR VEHICLES

Earl L. Schofield, Rockford, Ill., assignor to E. L. Schofield, Incorporated, Rockford, Ill., a corporation of Delaware

Application March 30, 1956, Serial No. 575,172
3 Claims. (Cl. 257—137)



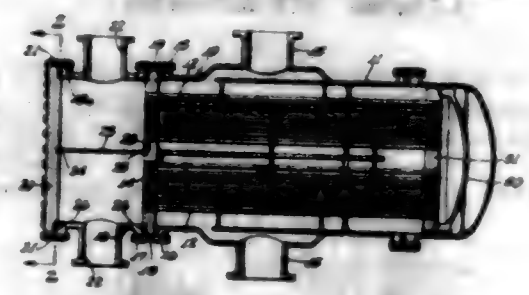
1. In a heat exchange unit of the class described comprising a housing of generally rectangular straight tubular form having opposed parallel vertical side walls in fixed relationship and parallel top and bottom walls, the housing's front end being open and likewise the rear end, and a heat exchange radiator mounted vertically in one open end thereof, the top and bottom walls of said housing extending outwardly in parallel relationship to one another from the other end of said housing, the improvement which consists in the provision of a quickly removable and replaceable service head closing the end of said housing remote from said radiator, said head comprising a vertical frame of one-piece sheet metal construction bent to define a vertical wall and horizontal top and bottom walls extending therefrom in one direction, said frame being removably secured in said housing with its vertical wall in abutment with the ends of the side walls of said housing and with its top and bottom walls extending outwardly from the vertical wall and disposed in wide area surface to surface abutment with the inner sides of said outwardly extending end portions of the top and bottom walls of said housing for rigid support of said vertical frame in said housing, vertically disposed, fixed air deflecting baffle plates mounted in said vertical frame between said top and bottom walls and having their upper and lower ends rigidly connected to said walls whereby to lend greater rigidity to said frame, said frame having an air discharge opening provided in the vertical wall thereof, a rotary fan disposed behind said baffle plates in a vertical plane in said opening and rotatable therein with small operating clearance for drawing air horizontally through the radiator for discharge through said opening, a vertical shroud plate rigidly secured to and reinforcing the vertical wall of said frame on the inner side thereof in the plane of said fan, said shroud plate having a substantially circular opening provided therein in register with the air discharge opening provided in said vertical wall, a motor having an armature shaft on a horizontal axis connected to and driving said fan, and a spider rigidly secured to the inner side of said shroud plate and carrying a perforated ring at the center thereof in concentric relation to the circular opening in the shroud plate, the motor having one end thereof detachably secured in the perforations in said ring with its armature shaft and the fan detachably secured thereon centrally arranged in said circular opening, whereby said motor and fan are supported on said shroud plate inside said housing between the

tank for concentrated dye solution having means for mixing solutions therein, a source of diluting liquid

parallel side faces, said cutting portion having two pairs

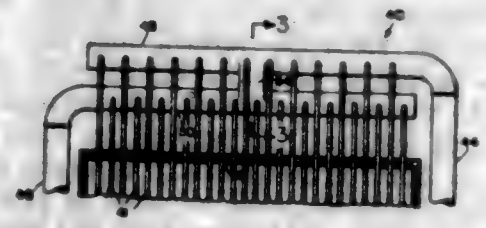
radiator and baffle plates and the motor and fan and readily removable from the rest of the assembly.

2,906,173
PASS-RIB GASKET FOR HEAT EXCHANGER
Allan L. Pickford, Arcadia, Calif., assignor to C. F. Braun & Co., Alhambra, Calif., a corporation of California
Application February 18, 1957, Serial No. 640,856
10 Claims. (Cl. 257—239)



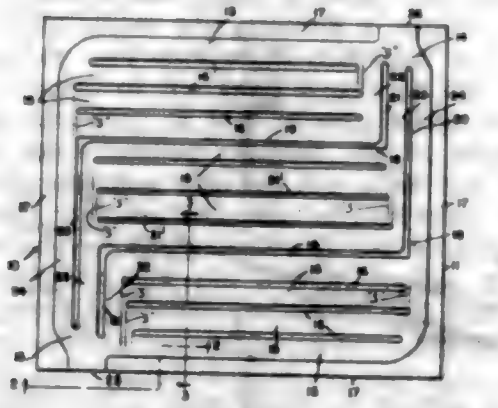
1. For use in a shell-and-tube heat exchanger having a flanged channel bolted at one end to a channel-cover member and bolted at the other end to clamp a tube-sheet member, and having at least one pass-rib positioned within the channel between the members, the improvement comprising: a gasket having a flat ring adapted to be clamped between the channel and one of said members, the gasket also having at least one integral cross bar extending across the ring, the cross bar being transversely curved in cross section and having a side thereof adapted to contact an edge of the pass-rib.

2,906,174
VAPOR GENERATOR HAVING A VAPOR HEATER WITH A NOVEL OUTLET HEADER
Stapleton C. Deitrick, Jr., Summit, N.J., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware
Application May 13, 1954, Serial No. 429,483
2 Claims. (Cl. 257—241)



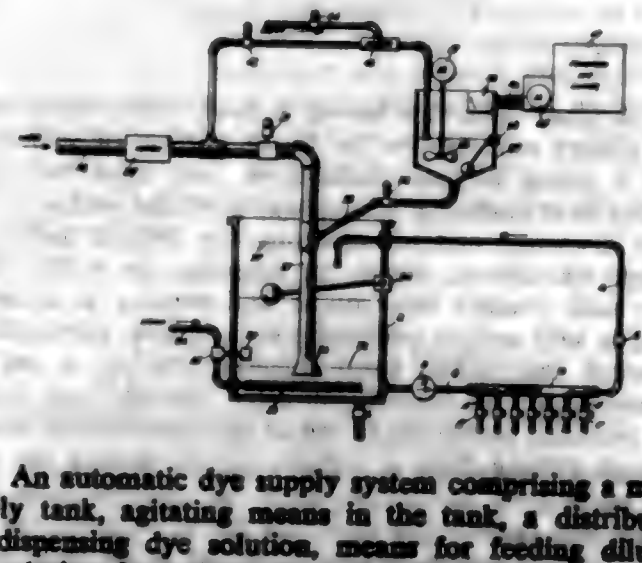
1. In a vapor generator for generating superheated vapor, the combination of a passageway having a heating source that is nonuniform across the width of the gas pass, a vapor heater disposed in said gas passageway, said heater being comprised of a plurality of tubular panels each of which has its median plane disposed in parallel relation with the gas flow with these median planes of the several panels being parallel and with the panels being spaced across the width of the gas passageway, inlet header means connected with said panels to supply vapor thereto from a common source, a first outlet header disposed outwardly of said passageway and extending across the width thereof normal to said median planes, a second outlet header parallel and coextensive with the first and disposed close thereto in side by side relation, an unobstructed conduit separate from said panels interconnecting said headers, the outlets of substantially half of the panels being directly interconnected with a single of said headers, the outlets of the remaining panels being directly interconnected with the remaining header, these interconnections lying generally within the median plane of the respective panel, and the panels that are interconnected with one header being generally uniformly intercalated with those connected with the other header.

2,906,175
PLATE HEAT EXCHANGE UNIT
Orton S. McGuffey, Lansing, Mich., assignor to Transfer Manufacturing, Inc., Lansing, Mich., a corporation of Michigan
Application March 28, 1958, Serial No. 724,749
30 Claims. (Cl. 257—256)



7. A heat transfer unit adapted to internally circulate a fluid heat transfer medium under substantial pressure, comprising a pair of plates marginally secured together in face to face relation, at least one of which is provided with concave formations facing the other to afford fluid intake and discharge headers between the secured plates and longitudinal circulatory passages communicating therewith, said headers communicating with the exterior of said unit and said plates being in contacting relation to one another in longitudinally extending secured zones separating said longitudinal passages and ending in adjacent spaced relation to at least one of said headers, said zones including at least one secured zone of substantially Z-shaped outline having a longitudinal portion separating passages on opposite sides thereof and transverse portions each spaced inwardly of a secured margin of the plates and outwardly of one of the ends of a longitudinally extending secured zone, thereby to reduce the bridging distance and resultant beam loading of said plates between said last named margin and zone end when said plates are under internal pressure.

2,906,176
AUTOMATIC FLUID DISTRIBUTION SYSTEM
Christopher J. Krogel, Cranford, N.J., assignor to Western Electric Company, New York, N.Y., a corporation of New York
Application April 10, 1957, Serial No. 651,898
3 Claims. (Cl. 259—95)



1. An automatic dye supply system comprising a main supply tank, agitating means in the tank, a distributor for dispensing dye solution, means for feeding diluted dye solution from the tank to the distributor, means including a pressure regulating valve for returning a portion of the solution supplied to the distributor back to the tank to keep the solution in circulation, a dissolving

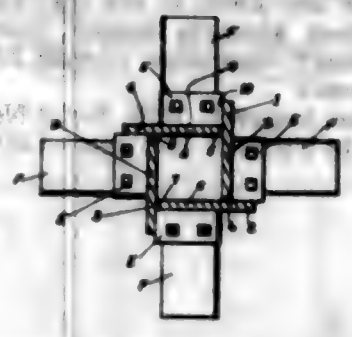
let, said connecting means including a tubular fitting having a gas inlet end containing a gas inlet opening positioned

by the spacing between said metal layers is maintained substantially constant, notwithstanding the application of

will by eroding action ultimately destroy substantially on said shroud plate inside said housing between the

tank for concentrated dye solution having means for mixing solutions therein, a source of diluting liquid, a supply hopper for powdered dye, means for feeding prescribed amounts of diluting liquid and powdered dye to the dissolving tank from the source and hopper, respectively, means including a first valve and a mixing pipe for discharging diluting liquid from the source to the supply tank within the effective area of the agitator, means including a second valve for discharging concentrated dye solution from the dissolving tank to the mixing pipe, means operative when the diluted dye in the main supply tank is lowered to a minimum level for opening the valves to discharge concentrated dye solution and diluting liquid into the mixing pipe, the rates of flow of the concentrated solution and the diluting liquid through the valves being approximately in the ratio required for the diluted solution, means operative when the diluted solution reaches a maximum level in the supply tank for closing the valves and means operative when the valves are closed to actuate the powdered dye and diluting liquid feeding means for the dissolving tank.

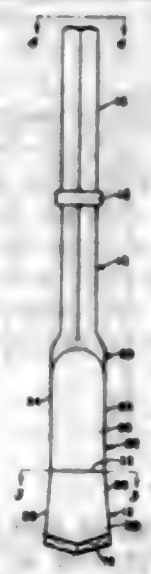
2,900,177
LOG WASHER
Ronald L. Fye, Hollidaysburg, Pa., assignor to McLanahan & Stone Corporation, Hollidaysburg, Pa., a corporation of Pennsylvania
Application February 25, 1957, Serial No. 642,838
6 Claims. (Cl. 259—130)



3. A washer log composed of a plurality of plates secured together to form the side walls of a hollow elongated body which is polygonal in cross sectional configuration, each plate being secured to two other plates, each plate having one edge extending outwardly beyond the outer face of one of the two plates to which it is secured, the outwardly extending edges of the plates providing a flange extending longitudinally of the body at each of the points of joinder of one plate with another plate, a plurality of paddle base members disposed in spaced relationship along each side wall of the body and extending transverse the side walls, each base member having an edge abutting and secured to the outer face of a side wall plate and an edge abutting and secured to a side of one of the flanges, and a paddle secured to each base member.

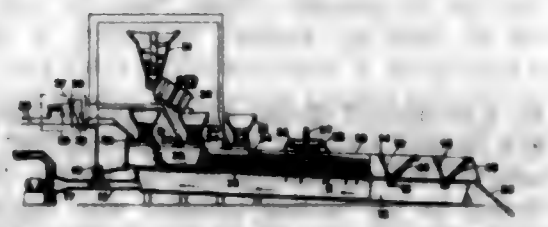
2,900,178
PAVING BREAKER STEEL
Henry Harrison and Henry C. Harrison, Port Washington, N.Y., assignors to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey
Application March 10, 1958, Serial No. 720,197
3 Claims. (Cl. 262—33)

1. In a percussively operated tool for breaking concrete and the like, an elongated body comprising a shank at one end and a cutting portion at the other end, a cutting edge formed at the lower end of said cutting portion, and a wedge portion extending from said cutting portion towards the shank, said wedge portion having two pairs of opposed faces of which one pair converges towards the cutting portion and the other pair being substantially parallel side faces, said cutting portion having two pairs of opposing faces of which one pair being side faces extending from said parallel side faces of the wedge portion



and diverging towards said cutting edge, the other pair of faces of said cutting portion extending parallelly from the wedge portion towards the cutting edge to prevent said tool from wedging in the concrete during initial penetration of the tool in such concrete.

2,900,179
IMPROVEMENTS IN OR RELATING TO TREATING MATERIALS BY A HEAT TRANSFER PROCESS SUCH AS ROASTING, SINTERING, CALCINING, DRYING AND THE LIKE
Otto Kaufmann, Friern Barnet, London, England
Application October 7, 1953, Serial No. 384,671
Claims priority, application Great Britain October 10, 1952
5 Claims. (Cl. 263—32)



1. A method of operating a heat treating machine of the type including an elongated perforated trough including the steps of feeding materials to be heat treated and fuel to the trough adjacent one end thereof, shaking the trough intermittently for short periods of time at a speed to cause materials thereon to progress from said one end to the other end thereof and maintaining said trough stationary in longer intervals between said short periods of time, igniting the fuel thereon, causing air to pass through the material and fuel thereon, and discharging heat treated material intermittently from said other end.

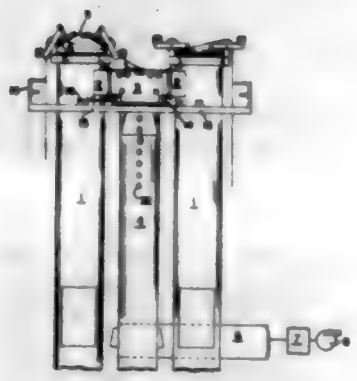
2,900,180
CUPOLA GAS RECEIVING AND COOLING SYSTEMS
Raymond C. Ortgies, Louisville, Ky., assignor to American Air Filter Company, Inc., Louisville, Ky., a corporation of Delaware
Application June 8, 1956, Serial No. 590,261
15 Claims. (Cl. 266—32)

1. A cupola-cooling tower system comprising: a first cupola having a lateral hot gas outlet near its top; an adjacent cooling tower having an inlet for said hot gas and an outlet for the cooled gas; and gas passage providing means connecting said cupola outlet to said tower in-

with those connected with the other header.

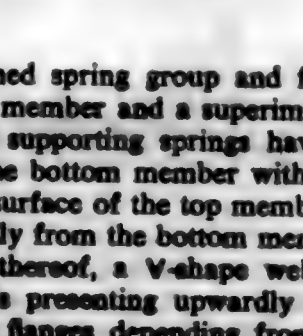
the tank to keep the solution in circulation, a dissolving

let, said connecting means including a tubular fitting having a gas inlet end containing a gas inlet opening positioned to receive hot gas from said lateral outlet, said connecting means providing a ventilating air inlet positioned ad-



jacent the gas inlet end of said fitting and arranged to direct incoming cool exterior air along an inner surface of said fitting to shield it from hot gas flowing through said fitting.

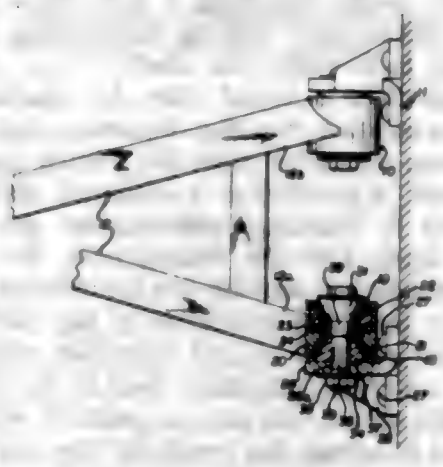
2,900,181
SPRING GROUP AND DAMPING MECHANISM
James C. Settles, Columbus, Ohio, assignor to The Buckeye Steel Castings Company, Columbus, Ohio
Application March 4, 1954, Serial No. 414,078
9 Claims. (Cl. 267—9)



1. In a combined spring group and friction damping device, a bottom member and a superimposed top member, helical load supporting springs having their lower ends seated on the bottom member with upper ends engaging an under surface of the top member, spaced walls extending upwardly from the bottom member at an intermediate portion thereof, a V-shape web structure connecting said walls presenting upwardly diverging under surfaces thereon, flanges depending from the top member opposite said diverging surfaces having substantially vertical inner surfaces, a pair of wedges positioned between said walls each having a sloping face engaging one of said diverging surfaces and a vertical face engaging one of said vertical surfaces, helical springs seated on the bottom member urging the wedges into frictional engagement with said vertical surfaces and said diverging surfaces, the axis of each spring being substantially in alignment with the bisector of an angle between the sloping face and the vertical face of the associated wedge, and said walls under said diverging surfaces forming lateral abutments for said wedges.

2,900,182
STATIC LOAD BEARINGS
William L. Hinks, Cuyahoga Falls, Ohio
Application April 27, 1955, Serial No. 504,324
13 Claims. (Cl. 267—57.1)

1. A laminated bearing having shear spring properties, comprising; alternate layers of metal and elastomer bonded to each other; said elastomer layers being uniform in thickness and being substantially incompressible whereby the spacing between said metal layers is maintained substantially constant notwithstanding the application of force urging said metal layers towards each other; said



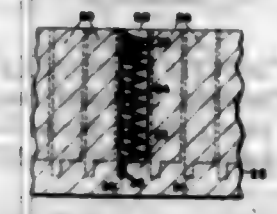
elastomer layers yielding to shear forces whereby said metal layers may shift relatively of each other while the spacing between the same is maintained substantially constant.

2,900,183
OPERATING MEANS FOR WINDOW REGULATOR MECHANISM
James D. Leslie and Louis P. Garvey, Birmingham, and Wilson H. West, Madison Heights, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application August 6, 1958, Serial No. 753,535
14 Claims. (Cl. 268—126)

1. In a vehicle body having a window mounted thereon for movement to open and closed positions and a window regulator mechanism for so moving said window, operating means for said mechanism comprising, an operating member movably mounted on said body, clutch means selectively and alternately movable to clutched and first and second declutched positions to selectively and alternately connect said operating member to said window regulator mechanism to thereby operate said mechanism or disconnect said member from said mechanism and allow said member to be moved independently thereof, and selectively operable means for locking said clutch means in one of said declutched positions to maintain said member and mechanism in disconnected relationship.

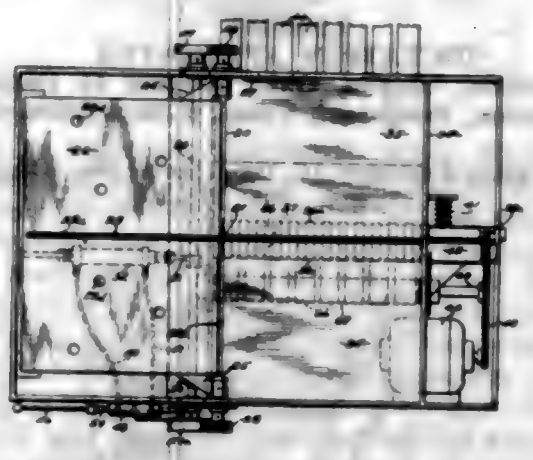
gated slots extending lengthwise thereof and parallel to middle of the neutral zone then gradually decreasing in

2,900,184
DRILL REMOVING MEANS FOR MULTIPLE SPINDLE DRILL
Edgar A. Leering, International Falls, Minn., assignor to Minnesota and Ontario Paper Company, Minneapolis, Minn.
Application December 27, 1957, Serial No. 705,536
3 Claims. (Cl. 269—127)



1. A drill removing means for a multiple spindle apparatus comprising a platen having openings therein for the reception of coil springs, a coiled spring having an open end for the reception of a drill in each opening, said coiled springs having a minor portion of the coils adjacent the outer end spaced a less distance apart axially than the major portion of said coils, and means at the inner ends of said coil springs for preventing rotation of the inner ends of the springs in the said openings.

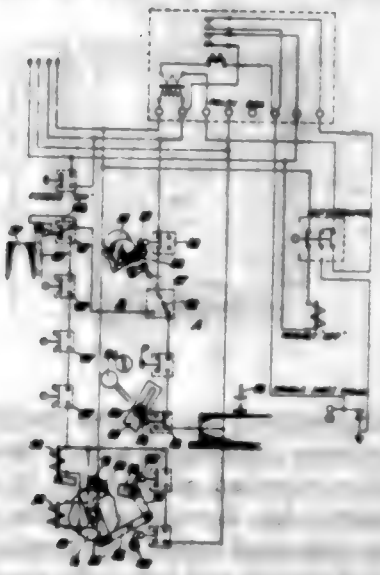
2,900,185
FLATWORK FOLDING MEANS
John R. Petre, Cincinnati, Ohio, assignor to The American Laundry Machinery Company, Cincinnati, Ohio, a corporation of Ohio
Application January 31, 1955, Serial No. 485,231
7 Claims. (Cl. 270—62)



1. A flatwork folder including a layout table having two fixed planar portions and a movable planar portion, said movable portion being hingedly attached to said fixed portions along a transverse axis between said fixed portions, each said fixed portion having a slot therethrough, said transverse axis extending between said slots, and said folder having a pair of folding rolls immediately beneath and parallel to each said slot, a folding member carried by said movable portion and disposed to be registrable with either said slot so as to be extendable therethrough into the bite of the folding rolls adjacent the registered slot when said movable portion is swung to a position immediately above and substantially parallel to the fixed portion having the last-named slot.

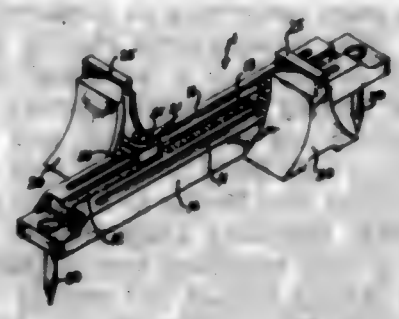
2,900,186
SHEET FEEDER FOR PRINTING AND OTHER SHEET HANDLING MACHINES
Adolf Schwobel, Offenbach (Main), Germany, assignor to MABEG Maschinenbau G.m.b.H., Offenbach (Main), Germany
Application May 23, 1956, Serial No. 586,767
17 Claims. (Cl. 271—62)

12. In a machine for operating on sheets, a sheet feeder having mechanism for lifting and effecting uninterrupted feed of piles of sheets, comprising a table supporting a pile of sheets, a set of conveyor chains for conveying said pile table upwards into its sheets delivery position, top and bottom sprockets over which the said conveyor chains are driven, and means including a set of pawls for holding a table supporting a rest pile in elevated position, table carriers at spaced intervals on the conveyor chains, rollers on each of said table carrier one of them being the leading roller to guide the carrier, a guide rail for guiding said conveyor chains and table carriers, two grooves one on each side of said guide rail for guiding the said table carriers, a plurality of lever-like pawls for supporting pile tables with rest piles thereon, spring means urging said pawls into table supporting position, a mechanical switch member yield-



ingly arranged at the upper part of said guide, control means in cooperation with the said table carriers for displacing said switch member so as to cause a break in the up-groove forming a recess for the entrance of said leading roller of each carrier thereby to tilt the said carrier and to permit its passing the edge of the pile rest supporting table while the latter is being held by the said lever-like pawls, an electric control switch on each of the said table supporting pawls penetrating through the table seating surface of the said pawl, an eccentric pivot for the said pawl by which the operation of the control switches under the weight of the rest pile and pile table may be adjusted, a pin on the said pawl, a slotted member outside the said pawl through which the said pin projects, and a spring within the said slot to resiliently hold the pawl in its adjusted position.

2,900,187
STARTING BLOCK
Donald J. Hoodorp, Grand Rapids, Mich.
Application February 14, 1957, Serial No. 640,151
4 Claims. (Cl. 272—59)



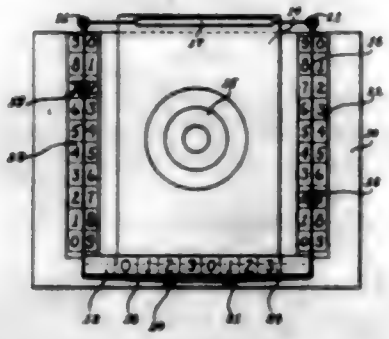
1. In a starting block for contestants in a foot race, the combination comprising: a generally rectangular bar having an inverted U-shaped cross-section formed by a web and depending side flanges; said web having elon-

cally thereacross, a manual control knob extending outward from said frame and mounted for horizontal shift-

centrally located between the side walls and extending between the end walls; a plurality of arm elements axially

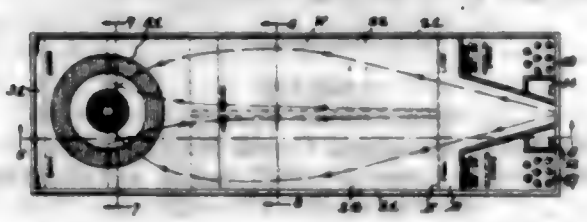
gated slots extending lengthwise thereof and parallel to said side flanges; a pair of blocks one located on each of said side flanges; each of said blocks having a side abutting one of said side flanges and corresponding in shape thereto; a substantially horizontal flange extending from said side of said block above said web; said horizontal flange having an opening aligned with one of said slots; and releasable locking means extending through said aligned slot and opening.

2,900,188
DART BOARD WITH INTEGRAL SCORING MEANS
George E. Lemon, Youngstown, Ohio
Application September 17, 1956, Serial No. 610,317
7 Claims. (Cl. 273—102)



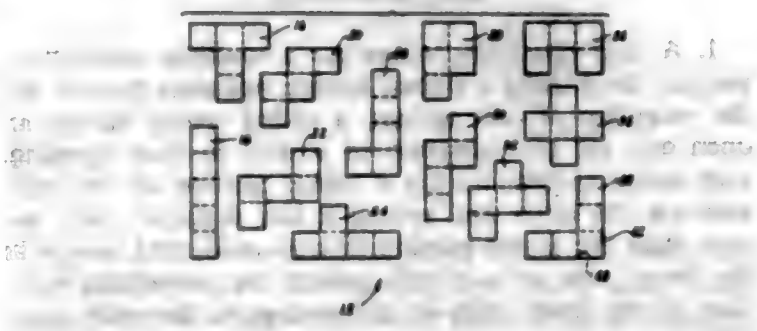
1. A target structure for thrown missiles having integral scoring means comprising a back board, a target retaining member mounted on the face of said back board near the bottom edge thereof, yieldable means normally under tension entrained below said retaining member and having a pair of spaced and generally parallel portions extending generally from said retaining member to the top portion of said back board, a plurality of scoring markers slidably mounted on said yieldable means, a removable target panel, said yieldable means passing over said target panel and with said retaining member holding said target panel against said back board, and reference indicia adjacent at least said spaced parallel portions of said yieldable means whereby said scoring markers may be utilized to record the score of a game.

2,900,189
PLAY CURLING GAME
Percy W. Howlett, Quebec, Canada
Application February 24, 1958, Serial No. 716,912
3 Claims. (Cl. 273—126)



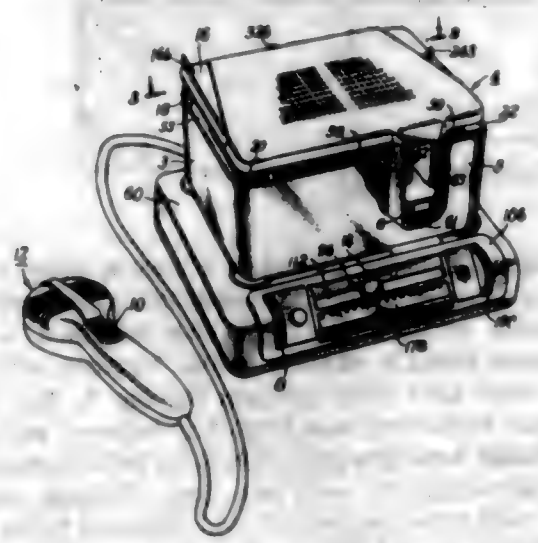
1. A curling game comprising an elongated board having a smooth rigid uninterrupted playing surface over which a missile is slid from a horizontal delivery area to a horizontal scoring area with a neutral zone intervening the delivery and scoring areas, said playing surface in the neutral zone being provided with a continuous symmetrical guiding area having as integral parts thereof a pair of gulleys extending longitudinally thereof and intervened by a ridge extending longitudinally along the middle of the playing surface and equally spaced from the sides thereof, the surface of the board sloping smoothly downwards and inwards from its sides and then smoothly upwards to the ridge to form the gulleys, the gulleys first gradually increasing in depth from adjacent to the delivery area towards the scoring area to near the middle of the neutral zone then gradually decreasing in depth towards the scoring area thereby to urge the missile to curl towards the middle of the playing surface in the area near the side and away from the middle in the region near the ridge first more and more to a transition zone and then less and less as the scoring area is approached.

2,900,190
SCIENTIFIC PUZZLE
Jules Pastiaux, Hainaut, Belgium
Application July 2, 1956, Serial No. 595,384
5 Claims. (Cl. 273—157)



1. A game comprising a member having a flat rectangular area, said area being divisible into a plurality of squares of equal size, and a plurality of flat pieces of equal areas but different configurations having a total area equal to that of said rectangular surface, the areas of each of said pieces being divisible into a plurality of squares equal in size to the first mentioned squares.

2,900,191
DICTATION APPARATUS
Bruce Roberts, Oberlin, Ohio, assignor to Dictaphone Corporation, Bridgeport, Conn., a corporation of New York
Application February 11, 1953, Serial No. 336,375
7 Claims. (Cl. 274—4)



7. A sound recording and reproducing machine especially suited for dictation and utilizing a sound record in the form of a wide endless belt having an inner surface adapted for scanning by a transducer recording and reproducing head, said machine comprising a frame housing having a horizontal base and a box-like turret extending upward from said base, record supporting rollers mounted at the corners of said turret to support and rotate said record horizontally around a vertical axis, a transducer head, a feedscrew rotatably mounted within said turret to support said head and move it vertically across the inside surface of said record, a motor mounted within said frame and mechanically coupled to said feedscrew and at least one of said rollers to rotate said record horizontally and simultaneously to scan said head verti-

2,900,195
STEERING MECHANISM FOR MOTOR VEHICLES

ing said shank to one of said arms, and a socket member

feeder having mechanism for lifting and effecting uninweb and depending side flanges; said web having elon-

cally therecross, a manual control knob extending outward from said frame and mounted for horizontal shifting movement along a line closely adjacent an edge of said record, and linkage means interconnecting said control knob with said transducer head wherein horizontal movement of said control knob imparts vertical movement to said head whereby the operating mechanism for moving said head and driving said rollers is within the general volume defined by said belt record thus reducing the overall size of said machine for a given size record.

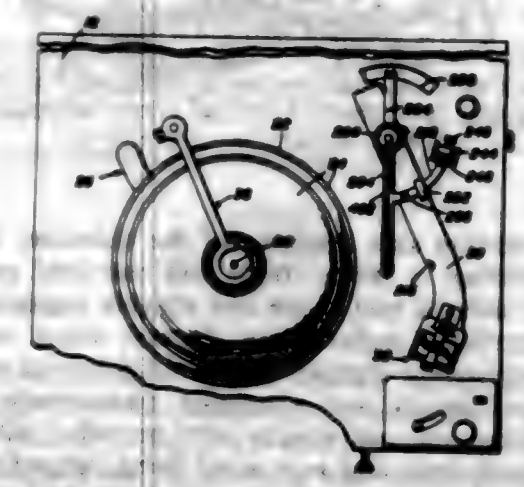
2,900,192

TONE ARM CONTROL FOR THE FULLY AUTOMATIC OR MANUALLY CONTROLLED PLAYING OF INTERMIXED RECORDS

Herman H. Mueller, Ephrata, Pa., assignor of small interests to various assignees

Original application July 10, 1953, Serial No. 367,316, now Patent No. 2,841,406, dated July 1, 1958. Divided and this application November 4, 1954, Serial No. 476,732

11 Claims. (Cl. 274—10)



1. In an automatic phonograph record player, means for supporting and rotating a record, a tone arm, means mounting said tone arm for vertical and horizontal swinging movement, and indexing means for limiting the horizontal movement of the tone arm towards the center of a record to be played, a gauge movably mounted on and slidable upon the top surface of said tone arm for contacting the rim of said record to be played, said gauge including a gauge element projecting vertically above and below the tone arm, means connecting said gauge to said indexing means for adjusting the latter in conformity to the size of the said record to be played, including means for vertically tilting said tone arm for setting its needle in a sound track of a record, said gauge having a gauge element mounted for vertical movement relative to the tone arm into gauging and non-gauging position, means responsive to initial tilting of said tone arm for moving said gauge element into its gauging position.

2,900,193

FLAIL-TYPE MANURE SPREADER

Willis L. Hartzell, Moline, Ill., assignor, by mesne assignments, to Deere & Co., a corporation of Delaware

Application February 5, 1958, Serial No. 713,383

8 Claims. (Cl. 275—3)

1. A material unloading implement adapted for attachment to a tractor or other type of vehicle for effecting movement of the implement in a given direction of travel, said tractor having thereon a power take-off shaft, comprising: a main mobile implement frame attachable to the vehicle; a material container having an elongated body portion of U-shaped cross section including oppositely disposed upwardly extending side walls, and oppositely disposed end walls closing the ends of the body portion; a longitudinally extending rotatable shaft centrally located between the side walls and extending between the end walls; a plurality of arm elements axially spaced on the shaft, said arm elements being operative upon rotation of the shaft to discharge material over a side wall of the container; means mounting the material container on the main frame including vertical pivot means effective to permit lateral swinging of the container, and guide means radially spaced from the pivot means effective to resist vertical movement between the

container and main frame; an extensible member between the main frame and container for effecting lateral movement of the container about the pivot means and to afford angular adjustment of the container relative to the direction of travel; and structure forming drive means extending from the tractor power take-off shaft to the rotatable shaft for effecting rotation of the latter, said drive means structure being automatically adjustable to accommodate lateral movement of the container without effecting rotation of the shaft.

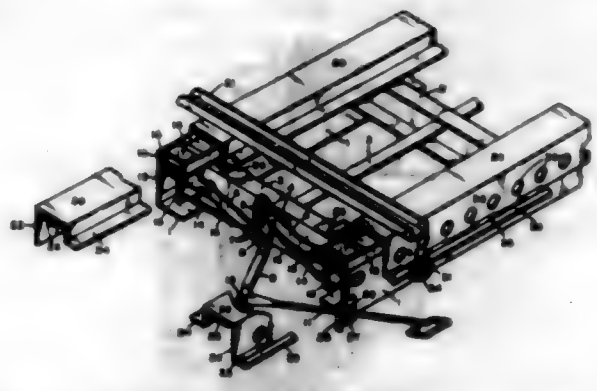
2,900,194

LOAD EQUALIZER FOR TRAILER

Manfred Samuel De Lay, St. Louis, Mo.

Application March 8, 1957, Serial No. 644,836

4 Claims. (Cl. 280—34)

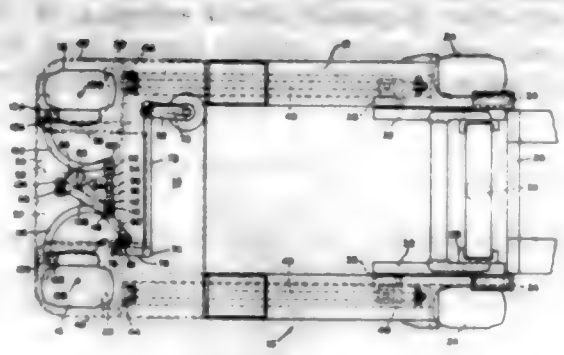


2. In a trailer of the character described, a wheel truck frame including side channel beams arranged with their open sides faced inward, means bracing said side channel beams, channel members secured to the said channel beams and arranged with their open sides faced upward, a body frame having side channel rails inverted over said channel members, a bearing element longitudinally disposed and mounted in each rail, a plurality of bearing elements longitudinally spaced along each channel member to provide a plurality of lubricant pockets, lubricant in the pockets substantially to the level of the said plurality of bearing elements, the last said bearing elements engaging the said bearing elements in said rails and supporting said rails so as to seal out water and dirt.

secured together, a plurality of generally horizontal trans- sleeve projecting radially inwardly from said sleeve into

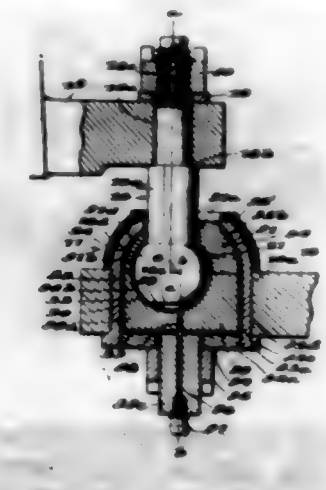
to the delivery area towards the scoring area to near the horizontally and simultaneously to scan said head verti-

2,900,195
STEERING MECHANISM FOR MOTOR VEHICLES
Robert L. Carter, Battle Creek, Mich., assignor to Clark Equipment Company, a corporation of Michigan
Application June 28, 1956, Serial No. 594,571
7 Claims. (Cl. 280—95)



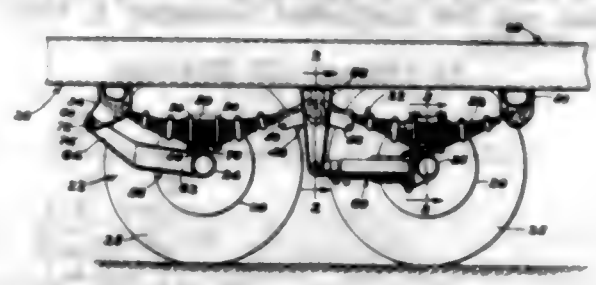
1. A steering mechanism for vehicles having a frame and right and left hand laterally spaced dirigible wheels supported by said frame for turning movement relative thereto, comprising a right hand rod means operatively connected to the right hand wheel for turning same relative to the frame, a left hand rod means operatively connected to the left hand wheel for turning same relative to the frame, said right and left hand rod means being of equal length and of like configuration, a center rod means pivotally connected at one end thereof to said left hand rod means and at the opposite end thereof to said right hand rod means, first and second pivot means supported by the frame and spaced from each other in a direction which is transverse to the vehicle, first and second control arms respectively connecting said first and second pivot means to opposite ends of said center rod means and to said right and left hand rod means in such a manner that one of said control arms crosses over the other, and means connected to one of said control arms for rotating same about one of said pivot means.

2,900,196
ECCENTRICALLY OFFSET BALL JOINT FOR FRONT WHEEL STUB AXLE SUSPENSION
Artis D. Nieska, Roanoke, Va.
Application January 23, 1958, Serial No. 710,754
4 Claims. (Cl. 280—96.1)



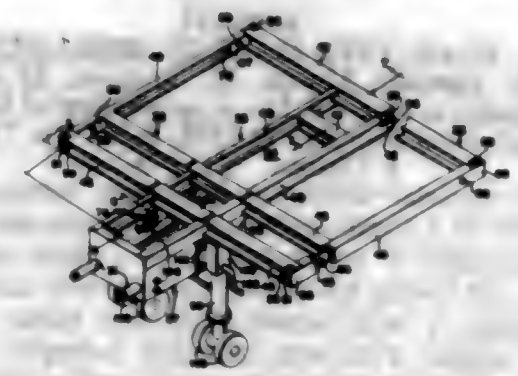
1. In a suspension device for independently supporting a front steerable wheel of a vehicle comprising upper and lower vertically spaced control arms secured to the vehicle frame and a knuckle member having a spindle on which the wheel is mounted and upper and lower arms disposed above and below the spindle axis for connection respectively to said upper and lower control arms, the improvement constituted by a ball and socket joint connecting one of said control arms with one of said arms of said knuckle member, said joint comprising an integral ball and shank, said ball being located centrically with respect to the longitudinal axis of said shank, means securing said shank to one of said arms, and a socket member supported by the other arm, said socket member comprising upper and lower separable portions each including eccentric spherically curved seats receiving respectively the upper and lower portions of said ball, means interlocking said separable socket portions to prevent relative rotation therebetween, a threaded stud portion depending from said lower socket portion and a lock nut on said stud portion coacting with a part fixed with respect to said other arm for securing said upper and lower socket portions in a desired position of rotational adjustment about the longitudinal axis thereof.

2,900,197
TANDEM SPRING SUSPENSION SYSTEM
Charles T. Hutchens, Springfield, Mo.
Application January 13, 1958, Serial No. 708,415
2 Claims. (Cl. 280—104.5)



1. A tandem axle assembly of the character described and including: a frame; front and rear leaf springs on opposite sides of said frame and slidably engaged thereto and extending longitudinally thereof; front and rear axles respectively engaged to the midpoints of said front and rear springs and extending transversely of said frame; front and rear torque arms on either side of said frame, said front and rear arms being respectively connected at their rear ends to said front and rear axles and extending longitudinally of said frame in substantial vertical alignment with said springs, said arms further being pivotally engaged at their forward ends to said frame for pivotal movement about a transverse horizontal axis; said rear arms including a longitudinally adjustable portion; the connection between said rear arms and their respective axles providing a vertical pivotal axis; the connection between said front arms and their respective axles being rigid; and the connections between said axles and said springs providing a transverse horizontal pivotal axis for pivotal movement of said springs relative to said axles.

2,900,198
POLE TRAILER
Frank M. Patton, Thorofare, N.J.
Application April 4, 1958, Serial No. 726,522
4 Claims. (Cl. 280—404)

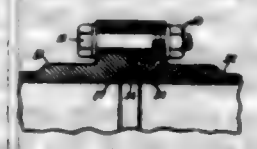


1. A load supporting frame for a pole trailer comprising, a pair of generally horizontal longitudinally extending laterally spaced central structural members fixedly

2,900,204

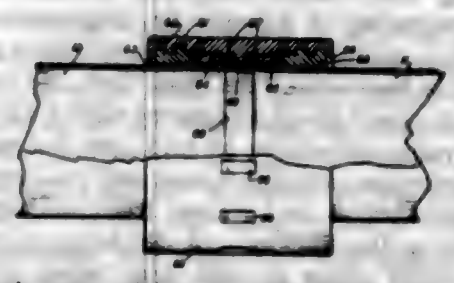
secured together, a plurality of generally horizontal transversely extending structural members fixedly secured to and extending laterally outward beyond opposite sides of said pair of central structural members for direct supporting engagement with a load, a pair of generally horizontal facing channels respectively extending along the underside of and fixedly secured to said pair of central structural members, a pair of generally vertically extending parallel spaced plates fixedly secured in each of said channels, each of said plates being formed with a laterally inwardly facing cut-out with the cut-outs of each pair of plates being in substantial horizontal alignment longitudinally of the adjacent channel for receiving a trailer pole, said channels each being formed in its web in the space between the adjacent pair of vertically extending plates with a pair of vertically spaced through apertures, and a generally U-shaped clamping member extending through each of said pair of apertures and adapted to embrace and firmly retain a trailer pole received in the adjacent cut-outs.

2,900,199
PIPE SEAL
Stanley E. Logan, Round Lake, N.Y., assignor to General Electric Company, a corporation of New York
Application April 20, 1953, Serial No. 349,678
7 Claims. (Cl. 285—187)



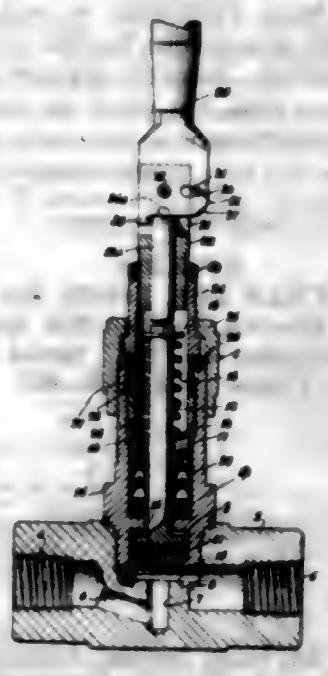
1. In combination a fluid container having a passage for containing low temperature fluids and having portions of the container defining an opening through the container leading from the passage, said container portions additionally defining a recess leading to said opening and formed within said container, a gasket sealing means positionable within said recess, said gasket including a seal member of easily deformable material having a greater coefficient of thermal contraction than said container and adapted to nest within the recess against said container, a spacer member having a lower thermal coefficient of contraction than said container and positioned against said seal member to hold said seal member against said container, the overall thermal coefficient of contraction of said gasket being lower than that of the container whereby said gasket provides an efficient seal at ambient temperature and retains its sealing effectiveness as the temperature is lowered due to increased compressive forces being placed on the gasket by virtue of the greater contraction of the recessed portions of the container than that of the gasket.

2,900,200
PACKED SLEEVE COUPLING FOR FLARED CONDUITS
Harold W. Umstadter, Long Valley, N.J., assignor to American Portable Irrigation Co., Philadelphia, Pa., a corporation of Delaware
Application November 4, 1954, Serial No. 466,781
1 Claim. (Cl. 285—332.3)



A conduit comprising a cylindrical sleeve having a central passage therethrough, an annular rib on said sleeve projecting radially inwardly from said sleeve into said passage, said rib having a side wall inclined inwardly from said sleeve at a constant radial inclination toward the adjacent end of said passage and terminating at a cylindrical inner wall, an annular elastomeric gasket mounted upon said rib having an annular side wall of constant thickness lying against said side wall of said rib and completely covering said side wall and a cylindrical inner side wall lying against said inner wall of said rib, a thin walled pipe section projecting axially into said passage from said adjacent end and terminating within said passage at a circumferentially continuous flange smoothly curved outwardly from said pipe section to project in a substantially radial direction from said pipe section, said flange having an outer diameter substantially equal to the internal diameter of said passage and said pipe section having an internal diameter substantially equal to the internal diameter of said inner side wall of said gasket and when in coupled relation with said sleeve and said rib forming an annular cavity adjacent the internal wall of said sleeve to provide an extrusion space for said gasket, a follower ring slideably mounted upon said pipe section and slideably received within said passage, said ring having an inner end face complementary in shape to said flange and engageable therewith, and a gland nut threadably received on said adjacent end of said sleeve engageable with said follower ring to drive said ring axially inwardly of said passage to clamp the radially outwardly curved portion of said flange in tangential sealing engagement with the radially inclined side wall of said gasket.

2,900,201
VALVE STEM PACKING
Donald B. Salmon, Englewood, N.J., and Robert C. Haynes, New York, N.Y., assignors to Hoke Incorporated, Englewood, N.J., a corporation of New York
Application August 5, 1955, Serial No. 527,853
1 Claim. (Cl. 286—34)

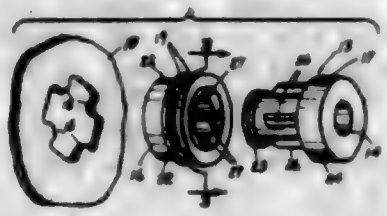


A packing means between a valve stem and a valve bonnet, said packing means comprising the combination of an annular resilient washer surrounding the valve stem, a plurality of chevron washers surrounding the valve stem having pointed legs facing in the direction of said annular resilient washer, one endmost chevron washer having its outer and inner pointed legs adjacent to the outer and inner edges of the annular washer, a packing sleeve adapted for being threadedly connected to the valve bonnet for adjustment axially of the valve stem and

pin being disposed nearer said socket than the outermost portion of said base which contacts the finger latch so

having one surface facing and engaging the chevron washer positioned most remotely from said annular resilient washer whereby said packing sleeve may be moved axially of the valve stem and against the chevron washers to compress them and to urge their pointed legs to spread outwardly against the valve stem and the valve bonnet, and means to lock the packing sleeve with respect to the valve bonnet comprising a locking ring surrounding the valve stem and slidably engaging the packing sleeve to prevent motion about the valve stem, and a fastening means to secure the locking ring to the valve bonnet.

2,900,202
PROPELLER HUB ASSEMBLY
Charles E. Thompson, Indianapolis, Ind., assignor to Motor Electric and Machine Company, Inc., Indianapolis, Ind., a corporation
Application July 12, 1957, Serial No. 671,582
1 Claim. (Cl. 287—52.04)

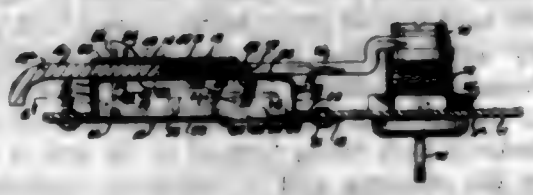


A coupling assembly for mounting a propeller element on a rotating shaft comprising a propeller blade mounting spider, a central opening in the spider defining spaced inwardly directed teeth positioned diametrically opposite each other, a non-metallic grommet accommodated within said opening having a central bore and having spaced circumferential ridges overlying opposite faces of said spider, circumferentially spaced depressions formed in said grommet for receiving said teeth, a shaft receiving hub having spaced, diametrically opposed vanes thereon, said hub extending through the grommet bore, spaced slots formed in said grommet to accommodate said vanes, said slots being positioned so as to fall between the circumferential depressions formed in the grommet, the tip-to-tip distance between diametrically opposed vanes being greater than the tip-to-tip distance between diametrically opposed teeth to prevent complete freeing of the spider from the hub upon rupture of the grommet.

2,900,203
TURNBUCKLE FOR LOOM HARNESS
Boyd Hayden, Newtonville, Mass.
Application December 12, 1957, Serial No. 702,326
1 Claim. (Cl. 287—60)

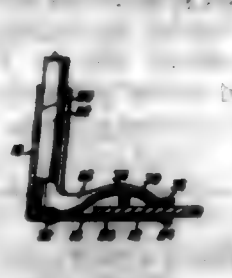
A turnbuckle for loom harness frames, comprising a tubular outer sleeve having an internally threaded cuff of reduced diameter at each end thereof, two terminal members each having a shank formed with a longitudinal flat and in threaded engagement with one of said cuffs, an inner sleeve nested within said outer sleeve between said cuffs, said inner sleeve having end portions slightly flattened to form non-round orifices shaped to receive the shanks of said members slidably but non-rotatably, a nut threaded on one of said shanks, and a lock-washer between said nut and the adjacent end of said outer sleeve.

2,900,204
LATCH DEVICE
Albert L. Pekin, Maple Heights, Ohio, assignor to The Eastern Malleable Iron Company, Cleveland, Ohio, a corporation of Connecticut
Application July 12, 1957, Serial No. 671,609
8 Claims. (Cl. 292—173)



2. A latch device comprising: a body formed by two cooperating hollow pan and housing members having substantially parallel bottom walls; said members being disposed with said housing member mounted on said pan member on the rear side of the latter and with a portion of said pan member extending into a nested engagement in said housing member; said pan member having spaced side walls and said housing member having side walls lying alongside of the side walls of said pan member; said body having a guideway therein between said bottom walls; said pan member also having a front recess therein and a pair of slots in the bottom wall thereof connecting said recess with said guideway; a plate type handle in said recess and having a normally retracted position substantially flush with the front portion of said pan member; said handle having laterally spaced flanges thereon with portions of the flanges forming finger projections extending through said slots into said guideway; a bolt actuatable in said guideway by said projections in response to swinging of said handle; and a transverse pin mounted in said body and forming a hinge pin for said handle; said pin having end portions extending through the side walls of said pan and housing members for connecting the said members, and having other portions extending through and engaged by said flanges for mounting said handle on the pin.

2,900,205
SLIDE FASTENER HANDLE
Joseph Cirone, Jersey City, N.J.
Application August 26, 1957, Serial No. 680,303
5 Claims. (Cl. 294—1)



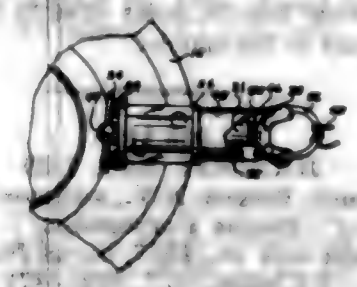
4. A slide fastener actuating handle comprising a body having a laterally extending arm integrally formed with an upwardly extending leg, said leg forming a socket, an elongated rod secured in said socket, said arm including a base having side flanges integrally formed therewith, said base terminating in a lower lip, clip means secured to said arm for engaging and initially retaining the finger piece of a slide fastener to the arm, said clip means terminating in an upper lip in alignment with said lower lip, said lips diverging outwardly of said arm for guiding the finger piece between said clip means and said base, means secured to said flanges and spaced from said base a distance as great as the thickness of the finger piece for retaining the finger piece to said arm when said rod is moved in a direction to close the slide fastener, said retaining means including a pin secured to said flanges, said

sure from said brake pipe at a restricted rate and closed rotatable approximately about its axis, and a stationary

central passage therethrough, an annular rib on said bonnet for adjustment axially of the valve stem and

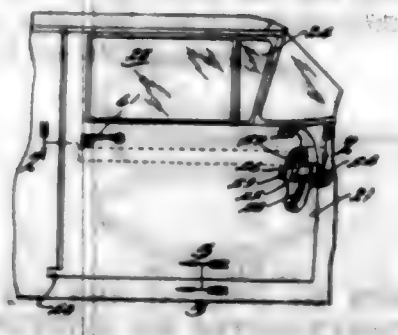
pin being disposed nearer said socket than the outermost portion of said fuse which contacts the finger latch so that the finger latch will be cam locked in said arm when the rod is moved in a direction to close the slide fastener.

2,900,206
STATIC LINE RELEASE
Walter Mojzisek, Dayton, Ohio
Application July 25, 1956, Serial No. 600,148
8 Claims. (Cl. 294—83)
(Granted under Title 35, U.S. Code (1952), sec. 266)



7. In a release mechanism, a plunger, a bracket and a cam sleeve, spaced walls on said bracket having aligned openings for receiving said plunger, a spiral groove on one end of said plunger, means attached to one wall for engaging said spiral groove for locking said plunger in position, a cylindrical member rigidly secured on the other of said walls for slidably receiving said cam sleeve, means for preventing relative rotation of said cylindrical member and said cam sleeve, interengaging cam surfaces on said cam sleeve and said plunger, a compression spring, a seat for one end of said spring positioned within said cylindrical member, seating means for the other end of said spring on said plunger, means for imparting axial movement to said cam sleeve, whereby rotary movement is imparted to said plunger, releasing said plunger from locked position and forcefully ejecting it from the space between said walls.

2,900,207
ROAD VEHICLE DOOR CONSTRUCTION
Claude H. May, Detroit, Mich., assignor to The Murray Corporation of America, a corporation of Delaware
Original application March 17, 1951, Serial No. 216,182, now Patent No. 2,778,656, dated January 22, 1957. Divided and this application January 22, 1957, Serial No. 638,191
6 Claims. (Cl. 296—67)

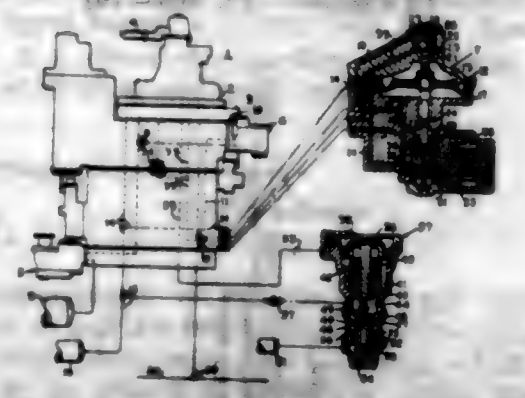


1. In a vehicle body having a cutaway side portion forming a door opening in a vertical plane offset inwardly at one edge from the outer surface of the body, a door, having at its lower end an inwardly extending portion of triangular cross section which is matable in said opening, relatively movable supporting means directly interconnecting the body and the lower end portion of the door, and means at one point of the body for supporting the upper portion of the door in a manner permitting the door to move laterally relative thereto.

2,900,208
WHEEL COVER
George Albert Lyon, Detroit, Mich.
Application October 25, 1954, Serial No. 464,563
16 Claims. (Cl. 301—37)

1. In a wheel structure including a tire rim and a wheel body with openings through the wheel for air circulation, a cover assembly for disposition at the outer side of the wheel including a ring member and a cover plate member, said ring member being engageable with the wheel over the juncture between the tire rim and the wheel body and over the wheel openings and having a series of openings therethrough with air circulation promoting vanes directed generally axially outwardly and obliquely, said plate cover member being arranged to cover the wheel and said ring member separably in pressed, pry-off relation, one of said members being retainingly engageable with the wheel and having shoulder structure thereon for shouldering firmly in separable relation against the other of said members to retain the same against axial displacement from the wheel in service.

2,900,209
FLUID PRESSURE BRAKE APPARATUS WITH EQUALIZING RESERVOIR PRESSURE BUILD-BACK PREVENTING MEANS
George S. Anderson, Turtle Creek, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Application February 27, 1956, Serial No. 568,126
9 Claims. (Cl. 303—67)



9. In a fluid pressure brake apparatus, the combination of a brake pipe, an equalizing reservoir, a volume of substantially smaller capacity than said reservoir, operator-controlled brake valve means for effecting a reduction in equalizing reservoir pressure at a service rate and of a chosen degree and then bottling up fluid in the equalizing reservoir following such chosen degree of reduction, brake pipe discharge valve means opened responsively to a reduction in equalizing reservoir pressure below brake pipe pressure for releasing fluid under pres-

walls of the ring groove, one of said rings having a lug integrally formed upon said one edge thereof in registra-

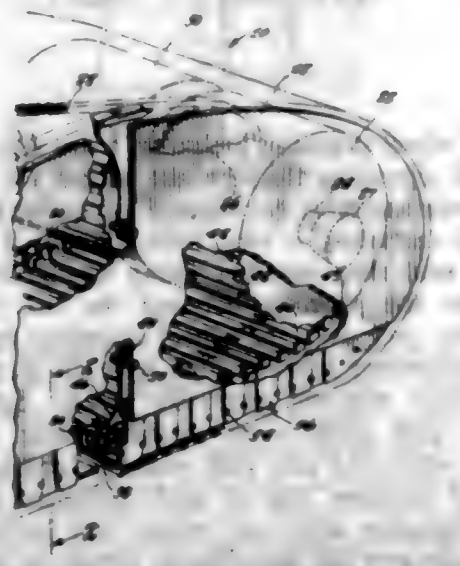
2,900,215
TRANSISTOR RECORD DRIVER

said outer sleeve.

taining means including a pin secured to said flanges, said

sure from said brake pipe at a restricted rate and closed when brake pipe pressure has been reduced to substantially the value of equalizing reservoir pressure, and means for automatically effecting venting of said volume whenever the brake pipe discharge valve means is opened and for automatically establishing a restricted flow connection between said equalizing reservoir and volume whenever the brake pipe discharge valve means is closed, whereby equalizing reservoir pressure will be dissipated at a restricted rate corresponding to the flow capacity of said flow connection and to an extent corresponding to the capacity of said volume.

2,900,210
GROUND TRACTION UNIT
Frederick L. Parsons, Ridgewood, N.J.
Application August 11, 1958, Serial No. 754,487
16 Claims. (Cl. 305—2)

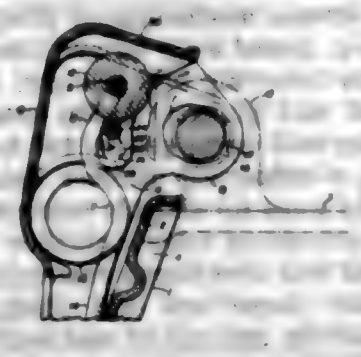


1. A ground traction device comprising spaced rollers, a resilient endless belt extending around said rollers and drivingly connected to at least one, spaced members closing a portion of the openings formed at the sides of said endless belt, and resilient air sealing members between each of said spaced members and said endless belt.

2,900,211
MAGNETIC SUSPENSION WITH FLEXIBILITY
Stanley S. Green, Indianapolis, Ind., assignor, by mesne assignments, to Duncan Electric Company, Inc., a corporation of Indiana
Application July 6, 1954, Serial No. 441,433
12 Claims. (Cl. 308—10)

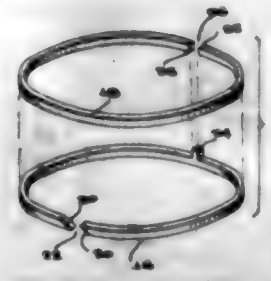
1. A magnetic suspension for an element rotatable on a substantially vertical axis including a rotary assembly rotatable approximately about its axis, and a stationary assembly; one assembly including a cylindrical permanent magnet and poles at opposite ends thereof having outwardly radially facing annular pole faces each terminated abruptly at an edge forming the boundary of the face in one vertical direction; the other assembly having annular poles each with a face facing radially inward opposite one of the first-named faces and abruptly terminating at an edge forming the boundary of the face in the opposite vertical direction, and a tube of magnetic material in contact with both of said annular poles to complete a circuit from the magnet through one pair of poles causing them to attract one another, through the tube and through the other pair of poles causing them to attract one another, back to the magnet.

2,900,212
JOURNAL BOX LID
Glenn F. Couch, Bergen, N.Y., assignor to Symington Wayne Corporation
Application July 16, 1957, Serial No. 672,155
5 Claims. (Cl. 308—47)



1. In a journal box lid having a spring reacting against a journal box for holding the lid in engagement with the journal box about an access opening therein, the improvement comprising temporary restraining means seatable in seat means in said lid for limiting the pressure exertable by said spring against said journal box, and means associated with said seat means for effecting automatic unseating of said restraining means and ejection thereof from said lid under service shocks thereby to release the full pressure of said spring.

2,900,213
PISTON RING CONSTRUCTION
Aaron A. Bruce, Albuquerque, N. Mex.
Application June 13, 1958, Serial No. 741,857
2 Claims. (Cl. 309—46)



1. In a dual piston ring assembly adapted to be mounted in a single piston ring groove having opposite walls lying in parallel planes, a pair of superposed rings of like diameter each of which is formed with a gap, the gaps of the rings being offset angularly from each other, each of said rings having its opposite edges lying in parallel planes, one edge of one ring extending in contact with one edge of the other ring in coplanar relation therewith, the other edges of the respective rings being adapted to extend in contact with the respective

2,900,217
PROCESS FOR DYEING PRODUCTS OF COPOLY-

2,900,228

permitting the door to move laterally relative thereto.

below brake pipe pressure for releasing fluid under pres-

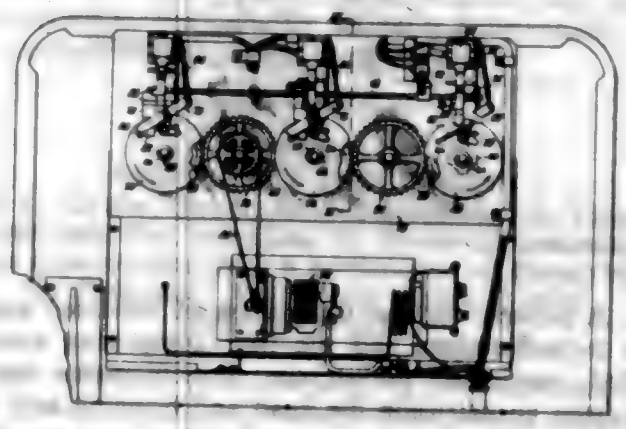
walls of the ring groove, one of said rings having a lug integrally formed upon said one edge thereof in registration with and filling the gap of the other ring, said lug projecting axially of the rings through the common plane of the contacting edges of the rings fully to the plane of the other edge of said other ring.

2,900,214

VENDOR DRIVING MECHANISM

Elmer C. Johnson, Kansas City, Mo., assignor to The Vendo Company, Kansas City, Mo., a corporation of Missouri

Application August 16, 1954, Serial No. 449,952
4 Claims. (Cl. 312—97)



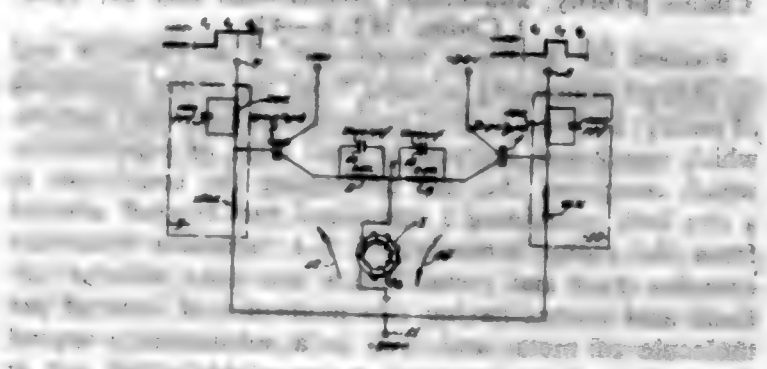
1. In a vending machine having a prime mover and a control device for said prime mover, a cabinet having a storage compartment; a plurality of conveyors in the storage compartment; a shaft operably coupled with each conveyor respectively; a driven element loosely mounted on each shaft respectively; means coupling said elements with said prime mover for simultaneous operation thereby; a control member fast to each shaft respectively, each member being provided with releasable locking means adapted for coupling the same with a corresponding element; releasable latching means for each member respectively, normally holding the latter against rotation, and normally holding the corresponding locking means in an inoperative position whereby, upon release of the latching means, the shafts are driven from said elements through the members; and mechanism operably interconnecting the latching means and said control device for actuating the latter and energizing the prime mover upon said release of the latching means.

2,900,215

TRANSISTOR RECORD DRIVER

Seymour Schoen, Los Angeles, Calif., assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland

Application July 5, 1955, Serial No. 519,958
4 Claims. (Cl. 346—74)



1. A magnetic recording means comprising: a recording-head winding; a pair of transistors including one of n-p-n type and one of p-n-p type and each comprising an emitter, a base, and a collector and each connected to pass its respective collector current through said winding; first and second signal input means each receiving a respective signal input each comprising a respective series of binary "1's" and "0's" all of substantially the same time duration and the "1's" being evidenced by a higher input potential level and the "0's" being evidenced by a lower input potential level separated from the higher input potential level by a substantially uniform potential difference; a first bias circuit means connected to said first signal input means and connected to the emitter-base circuit of a first one of said transistors and effective to bias that transistor to conduction in response to reception of a binary "0" signal on that input means and to bias that transistor to cut-off in response to reception of a binary "1" signal on that input means; a second bias circuit means connected to said first bias circuit means and to said second signal input means and connected to the emitter-base circuit of the second one of said transistors and effective to bias that transistor to conduction in response to reception of a binary "1" signal on that input means and to bias that transistor to cut-off in response to reception of a binary "0" signal on that input means; whereby upon concurrent receipt of a binary "1" signal on one of said input means and a binary "0" signal on the other of said input means, substantially no current flows through said winding, and upon concurrent receipt of like binary signals on both of said input means a current will flow through said winding in a direction dependent upon which type of signal is received at said input means.

CHEMICAL

2,900,216

PROCESS FOR THE DYEING OF POLYMERS OF ACRYLONITRILE OR ASYMMETRIC DICYANOETHYLENE

Heinz Werner Schwechten, Josef Singer, and Otto Bayer, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application May 22, 1956
Serial No. 586,288
Claims priority, application Germany May 28, 1955
12 Claims. (Cl. 8—39)

1. A process for the dyeing of a polymer based on a member selected from the group consisting of acrylonitrile, asymmetrical dicyanoethylene and copolymers thereof in an acid dye bath which comprises using as dyestuff a basic phenylaminoanthraquinone which is substituted in the phenyl nucleus by a radical having the formula

—R—Y

in which R is a member selected from the group consisting of a lower alkylene radical, an oxy-lower alkylene radical, a thio-lower alkylene radical and an imino-lower alkylene radical, and Y is a member selected from the group consisting of an unsubstituted, lower-alkyl-substituted and quaternized amino group.

steps of forming the filaments by extruding the copolymer solution into aqueous acetone having a concentration of

hydride in tetrahydrofuran, and recovering the product,

a substantially vertical axis including a rotary assembly being adapted to extend in contact with the respective

2,900,217

PROCESS FOR DYEING PRODUCTS OF COPOLYMERS OF ACRYLONITRILE

Hendrik Wenker, Nijmegen, Netherlands, assignor to Nederlandse Vereenigde Kunstzijdespinnerij Nyma, Nijmegen, Netherlands, a Dutch company

No Drawing. Application July 6, 1955
Serial No. 520,355
Claims priority, application Netherlands July 16, 1954
1 Claim. (Cl. 8—42)

Process for dyeing a copolymer of acrylonitrile and an olefinic compound selected from the group consisting of methyl acrylate, methyl methacrylate and vinyl acetate, which copolymer contains at least 80% of acrylonitrile, which comprises the step of treating the copolymer in a dye bath containing a metallized azo dyestuff selected from the group consisting of 1–1 monoazo chromium complex dyes and metalliferous azo dyes without sulfonic acid groups having two molecules of dyestuff per molecule of metal and used in a substantially neutral dye bath, and an inorganic water-soluble alkali salt at a temperature above 100° C.

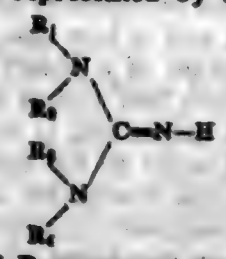
2,900,218

DYEING PROTEINACEOUS AND NYLON MATERIALS

Coy J. Grey, Clemson, S.C., assignor to Deering Milliken Research Corporation, Pendleton, S.C., a corporation of Delaware

No Drawing. Application February 7, 1956
Serial No. 563,839
20 Claims. (Cl. 8—54)

1. In a process for dyeing with high affinity milling colors textile fibers selected from the group consisting of nylon and proteinaceous fibers, the improvement which comprises adding to the bath in which the fibers are dyed a guanidine compound selected from the group consisting of bases represented by the formula:



wherein R_1, R_2 and R_3 represent members selected from the group consisting of hydrogen, monocyclic aromatic radicals, aliphatic radicals, and cycloalkyl radicals, and R_4 represents a radical selected from the group consisting of monocyclic aromatic, aliphatic and cycloalkyl radicals; and acid addition salts thereof.

2,900,219

BLEACHING PROCESS BY MEANS OF CHLORITES

Wilhelm Walbel, Frankfurt am Main, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Application September 7, 1955
Serial No. 533,805
Claims priority, application Germany September 9, 1954
5 Claims. (Cl. 8—108)

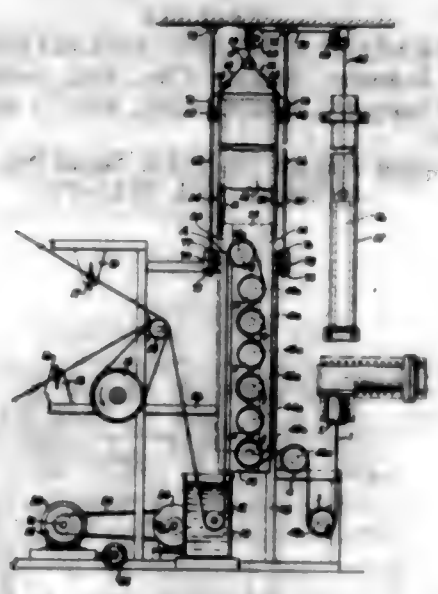
1. In the impregnating process for the bleaching of textile fibers and fabrics wherein the goods to be bleached are impregnated with an aqueous chlorite solution, squeezed out to about twice the dry weight, and thereafter heat treated at an elevated temperature, the improvement which comprises maintaining the pH of the solution in the squeezed out goods in the range of 3.5 to 5, and effecting the heat treatment by maintaining said goods at a temperature of from about 40° C. to about 70 C. for at least about two hours whereby foreign residues in the goods are decomposed while evolution of gaseous chlorine dioxide is substantially eliminated.

2,900,220

PROCESS FOR MELT SPINNING AND ORIENTING POLYSTYRENE FILAMENTS

Gilbert Shaw, Middlebury, Vt.

Application January 8, 1954, Serial No. 402,896
5 Claims. (Cl. 18—54)



1. A process for the orientation of extruded polystyrene monofilaments and the like, comprising emerging melted unoriented polystyrene monofilaments and the like from an extrusion die head and bringing said unoriented monofilaments into contact with at least one driven cooling roller heated to a temperature in the range of 210 to 330° F. while maintaining monofilament-roller contact for a sufficient period of time to cool said unoriented monofilaments to orientation temperature in the range of 210 to 330° F., maintaining a sufficiently insulated zone through which said monofilaments pass while being cooled to and while at orientation temperature to control heat loss from said monofilaments to prevent cooling thereof below orientation temperature, maintaining the monofilaments in an unoriented state while they are being cooled to orientation temperature by maintaining sufficient monofilament-roller frictional contact so that the monofilaments in contact with a cooling roller move at substantially the same surface speed as said cooling roller to prevent monofilament roller slippage prior to orientation, and applying a sufficient orienting tensioning force to said monofilaments, after they have been cooled to and while at orientation temperature to stretch said monofilaments to a degree sufficient to produce oriented monofilaments.

2,900,221

MANUFACTURE OF ARTIFICIAL FILAMENTARY MATERIALS OF HIGH BULK

John William Grabby, Selwyn George Hewitt, and John Downing, all of Spondon, near Derby, England, assignors to British Celanese Limited, a British company

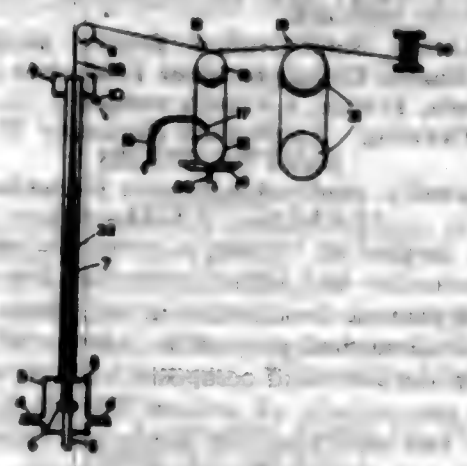
Application February 27, 1957, Serial No. 642,725
Claims priority, application Great Britain March 16, 1956
4 Claims. (Cl. 18—54)

1. In a process for the manufacture of artificial filamentary materials by forming filaments by spinning an acetone solution of an acetone-soluble copolymer of vinylidene chloride and acrylonitrile and stretching the filaments so produced while they are softened by heat and subsequently relaxing them by causing them to shrink by at least 5% of their length by the action of heat, the improvement which comprises in combination the

2,900,223

2,900,232

steps of forming the filaments by extruding the copolymer solution into aqueous acetone, having a concentration of

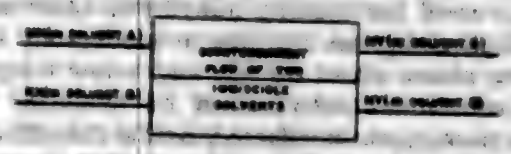


9 to 20% by weight of acetone, as coagulant and as the next operations washing the filaments substantially free from acetone with water and drying them.

2,900,223
INHIBITING CORROSION
Harry L. Kahler, Feasterville, and William A. Tanzola, Havertown, Pa., assignors, by mesne assignments, to Betz Laboratories, Inc., a corporation of Pennsylvania
No Drawing. Application March 8, 1954
Serial No. 414,872
8 Claims. (Cl. 21—2.7)

1. The process of protecting against corrosion the metal parts in a cooling water system, which comprises flowing water in a stream through the cooling water system and maintaining the water continuously in contact with the metal parts, adding to the water between 1 and 200 p.p.m. of a water soluble phosphate compound, between 1 and 500 p.p.m. of a water soluble chromate compound and a water soluble zinc compound, the concentration of zinc ion being between 0.1 and 25 p.p.m., while maintaining a pH in the range between 5 and 8.5.

2,900,224
TWO LIQUID LAYER SALT CONVERSION PROCESS
George L. Cunningham, Cleveland, Ohio, assignor to Callery Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application November 18, 1954, Serial No. 468,982
4 Claims. (Cl. 23—14)



2. A method of converting $NaBH_4$ into $Ba(BH_4)_2$ which comprises contacting a solution of $NaBH_4$ in triethylamine countercurrently with an aqueous solution of $BaBr_2$, and separating and recovering a solution of $Ba(BH_4)_2$ in triethylamine and an aqueous solution of NaBr.

2,900,224
METHOD FOR PREPARING SODIUM ALUMINUM HYDRIDE
Alfred Armand Hinckley and Frank Paul Del Guidice, Beverly, Mass., assignors to Metal Hydrides Incorporated, Beverly, Mass., a corporation of Massachusetts
No Drawing. Application November 30, 1954
Serial No. 472,232
1 Claim. (Cl. 23—14)

The method for preparing sodium aluminum hydride which comprises reacting aluminum chloride and sodium hydride in tetrahydrofuran, and recovering the product, the aluminum chloride used being in the form of an etherate of diethyl ether, said sodium hydride having been prepared by hydriding a dispersion of sodium metal in an inert liquid hydrocarbon.

2,900,225
PROCESS FOR THE PRODUCTION OF SiH_2Cl_2
Hermann Clasen, Frankfurt am Main, Germany, assignor, by mesne assignments, to Siemens & Halske Aktiengesellschaft, Munich, Germany
No Drawing. Application June 25, 1956
Serial No. 593,385
9 Claims. (Cl. 23—14)

1. A process for the production of SiH_2Cl_2 which comprises heating a compound selected from the group consisting of silicon tetrachloride and silicon chloroform in the presence of monosilane at a temperature between 100° C. and 400° C.

2,900,226
RECOVERY OF URANIUM VALUES FROM RESIDUES
Ward B. Schnap, Bloomington, Ind., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application May 26, 1952
Serial No. 288,969
13 Claims. (Cl. 23—14.5)

1. In a process for the recovery of uranium values, soluble in a strong mineral acid and contained and bound in compound form within a comminuted solid residue comprised predominantly of at least one material selected from the group consisting of inorganic oxides, sulfates, and silicates, comprising leaching such residue with said strong mineral acid in which leaching at most only part of the uranium values are recovered, the improvement step for substantially increasing the degree of completeness of dissolution and recovery of the uranium values from the residue by the leaching, which comprises subjecting said residue, prior to said leaching, to the actions, in consecutive alternation, of gaseous hydrogen fluoride, and of gaseous hydrogen, thereby liberating uranium values therein.

2,900,227
ION EXCHANGE PROCESS—REMOVAL OF SULFATE IONS FROM ELUATE
William B. Dancy and Alfred F. Nylander, Carlsbad, N. Mex., assignors to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Application January 13, 1956
Serial No. 558,820
4 Claims. (Cl. 23—14.5)

1. In a process in which an aqueous sulfate solution bearing soluble uranium is passed through an ion exchange resin bed, whereby a uranyl complex is sorbed by the resin, the resin is eluted with an aqueous ammonium nitrate solution, the uranium-bearing ammonium nitrate eluate is neutralized to precipitate a solid uranium salt, the uranium salt is separated from the barren eluate, a minor portion of the barren eluate is removed and discarded, and the remainder of the barren eluate is reconstituted for recycle to elute a uranium-bearing resin bed, the improved method of controlling impurities in the recycled stream which comprises the steps of reacting the ammonium nitrate eluate with an alkaline earth metal nitrate selected from the group consisting of calcium nitrate, barium nitrate, and strontium nitrate, whereby an insoluble alkaline earth metal sulfate is precipitated, and separating said alkaline earth metal sulfate.

fluotitanate, separating said fluotitanate from evolved ther contact with the oxide, and the spent gases from

2,900,228

SELECTIVE SEPARATION OF URANIUM FROM THORIUM, PROTACTINIUM AND FISSION PRODUCTS BY PEROXIDE DISSOLUTION METHOD

Glenn T. Seaborg, Chicago, Ill., John W. Gofman, Berkeley, Calif., and Raymond W. Stoughton, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application November 3, 1944
Serial No. 561,836
7 Claims. (Cl. 23—14.5)

1. The method of separating U^{233} from foreign products present in neutron irradiated thorium, which method comprises forming a solution of said neutron irradiated thorium, precipitating the uranium and thorium with a soluble peroxide, treating the peroxide precipitate wtih sodium hydroxide to selectively dissolve the uranium peroxide, and recovering U^{233} from the resulting solution.

2,900,229

URANIUM LEACHING AND RECOVERY PROCESS

Leslie A. McClaine, Palo Alto, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application August 10, 1956
Serial No. 603,466
10 Claims. (Cl. 23—14.5)

1. In a process for recovering hexavalent uranium values from a carbonate solution, the steps comprising introducing tetravalent uranium carbonate complex ion into said solution, and then elevating the basicity of said solution to a pH value of above about 13, whereby the uranium precipitates as a hydrous oxide of mixed valence state.

2,900,230

METHOD OF DISINTEGRATING REFRACTORY BODIES

Robert P. Larsen, Park Forest, and Richard C. Vogel, Hinsdale, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application February 6, 1958
Serial No. 713,770
4 Claims. (Cl. 23—14.5)

1. The method of disintegrating a fuel element composed of compacted sintered particles including uranium dioxide which comprises contacting the fuel element with liquid alkali metal for a time and at a temperature sufficient to form cracks in the fuel element; removing the liquid metal, and contacting the fuel element with a mineral acid solvent for the uranium dioxide.

2,900,231

PROCESS FOR EXTRACTING RARE EARTHS FROM ORES AND RESIDUES

Howard E. Kremers, David W. Newman, and Frank C. Kantzky, West Chicago, Ill., assignors to American Potash & Chemical Corporation, a corporation of Delaware

No Drawing. Application June 20, 1952
Serial No. 294,718
17 Claims. (Cl. 23—19)

9. The process of extracting rare earth metal values from a material rich in a substance selected from the group consisting of bastnasite and cerium-containing rare earth fluocarbonates which comprises the steps of roasting such a material to drive off a substantial portion of carbon dioxide therefrom and oxidize at least part of the cerium, treating the roasted material with a dilute non-reducing acid so as to dissolve the rare earth metal values of the material, and adding a water soluble fluoride to the resulting solution of rare earth metal values to obtain an easily filterable precipitate of rare earth fluoride.

2,900,232

SEPARATION OF POTASSIUM AND SODIUM IONS FROM A MIXTURE OF SODIUM AND POTASSIUM CHLORIDES

Jacques Lafont, Saint-Gratien, France, assignor to Societe d'Etudes Chimiques pour l'Industrie et l'Agriculture, Paris, France, a French company

No Drawing. Application December 19, 1955
Serial No. 554,103
Claims priority, application France December 21, 1954
10 Claims. (Cl. 23—64)

1. In a method of treating a composite aqueous solution of potassium and sodium chlorides, the step of adding isopropylamine bicarbonate in solid form in substantially stoichiometrical proportion relative to the sodium chloride in the aforesaid composite solution thereby precipitating substantially all sodium chloride as sodium bicarbonate and separating the precipitate from the resulting solution containing potassium chloride.

2,900,233

PROCESS FOR THE PRODUCTION OF CALCIUM CYANAMIDE

Gustave Soetaert, Oostacker, Belgium, assignor to Societe Belge d'Electrochimie, Société Anonyme, Langerbrugge, Belgium, a Belgian company

No Drawing. Application December 21, 1955
Serial No. 554,392
Claims priority, application Great Britain
January 11, 1955
2 Claims. (Cl. 23—78)

1. A process for the production of calcium cyanamide comprising the steps of partially reacting nitrogen with calcium carbide at a pressure of less than two kilograms per square centimeter to form a partially nitrogenated product which comprises one to nine parts of calcium cyanamide to one part of calcium carbide and reacting the partially nitrogenated product with nitrogen at a higher pressure of from twenty to one hundred kilograms per square centimeter to complete the formation of said calcium cyanamide.

2,900,234

MANUFACTURE OF TITANIUM TETRAFLUORIDE

Ralph B. Jackson, Dover, Donald H. Kelly, Gladstone, and Robert V. Townend, Morris Township, Morris County, N.J., assignors to Allied Chemical Corporation, a corporation of New York

No Drawing. Application February 11, 1957
Serial No. 639,225
8 Claims. (Cl. 23—88)

1. The process for making anhydrous titanium tetrafluoride which comprises reacting at moderately elevated temperature, above about 50° C. and below temperature at which substantial dehydration of hereafter defined total-metal fluotitanate is effected, oxidic titaniferous material with HF and metal compound of the group consisting of oxides, hydroxides, carbonates and fluorides of aluminum, barium, calcium, iron, magnesium and zinc and mixtures thereof, while providing the presence of HF in the form of the group consisting of anhydrous HF and aqueous solution of HF strength not less than about 50%, and in amount sufficient to convert any silicon compound present to SiF_4, all titanium present to TiF_4 and to convert all metal compound other than metal fluoride present to metal fluoride, and while providing the presence of total metal of metal compound in amount sufficient to combine with substantially all TiF_4 to form total-metal fluotitanate, heating resultant reaction materials, to temperature higher than said reaction temperature and high enough but not substantially higher than that needed to substantially completely dehydrate total-metal fluotitanate, for a period of time sufficient to drive off substantially all free and combined water to thereby form solid substantially completely dehydrated total-metal

first conduit means in a side portion of the column ex- to flow through the cooling-oxidizing zone countercur-

fluotitanate, separating said fluotitanate from evolved water; thereafter heating the dehydrated total-metal fluotitanate to higher temperature above about 500° C. and high enough to decompose the same to vaporous anhydrous TiF_4 and solid total-metal fluoride residue, and recovering said anhydrous TiF_4.

2,900,235

REDUCED PHOSPHOMOLYBDIC ACIDS WHEREIN THE AVERAGE VALENCE OF THE MOLYBDENUM IS NOT MORE THAN 4

Herrick R. Arnold, Frank S. Fawcett, and Walter W. Gilbert, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application August 19, 1955
Serial No. 529,575
6 Claims. (Cl. 23—139)

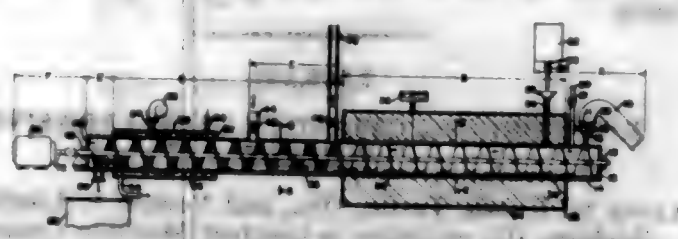
1. Phosphomolybdic acid from the class represented by the formula $P_2Mo_{24-2x}O_{72-3x}$ and wherein the average valence of the molybdenum is not more than 4.

2,900,236

PRODUCTION OF FERROMAGNETIC IRON OXIDE

William C. Speed, Pound Ridge, N.Y., and George Martin Sutherlin, Stamford, Conn., assignors to Audio Devices, Inc., New York, N.Y., a corporation of New York

Application August 3, 1955, Serial No. 526,269
6 Claims. (Cl. 23—200)



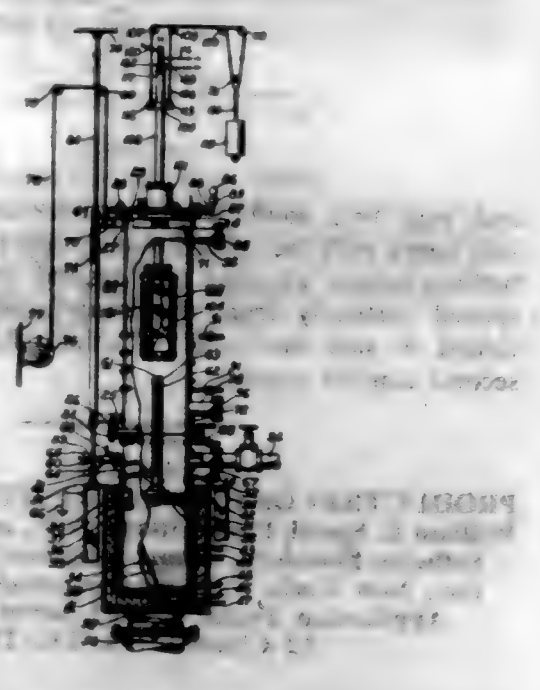
1. In the method of converting non-magnetic alpha ferric oxide into magnetic gamma ferric oxide, wherein a confined body of the alpha ferric oxide is successively and continuously passed through a heating-reducing zone to convert it to magnetic ferrosoferric oxide and then through a cooling-oxidizing zone to convert the ferrosoferric oxide into magnetic gamma ferric oxide, regulated amounts of a reducing agent being introduced into the heating-reducing zone, regulated amounts of oxidizing air being introduced into the cooling-oxidizing zone, and cooled gamma ferric oxide is discharged from the cooling-oxidizing zone, the improvement in which the heating-reducing and the cooling-oxidizing zones are generally horizontally disposed and in direct communication with one another, the ferric oxide is caused to pass continuously in the same direction and in a relatively thin body through the communicating heating-reducing and the cooling-oxidizing zones, the reducing agent is introduced into the charging end of the heating-reducing zone and passes concurrently with the relatively thin body of ferric oxide through said zone, and in contact therewith, the oxidizing air is introduced into the discharging end of the cooling-oxidizing zone and passes countercurrently to the relatively thin body of ferric oxide moving through said zone and in contact therewith, a relatively large free gas space is provided in each of said zones adjacent the ferric oxide therein to facilitate contact between the individual ferric oxide particles and the reducing and oxidizing gases, respectively, and to facilitate venting of the spent reducing and oxidizing gases from the heating-reducing and cooling-oxidizing zones, the spent gases from the heating-reducing zone are vented from adjacent the end of that zone directly to the open atmosphere to prevent their entry into the cooling-oxidizing zone and their further contact with the oxide, and the spent gases from the cooling-oxidizing zone are vented from adjacent the end of that zone directly to the atmosphere to prevent their entry into the heating-reducing zone and their further contact with the oxide.

2,900,237

APPARATUS FOR CHARGING A RECEPTACLE WITH A DENSE SUBLIMATE FORM OF URANIUM CHLORIDE

Philip H. Davidson, Visalia, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application April 5, 1946, Serial No. 659,715
5 Claims. (Cl. 23—264)



1. Apparatus for filling a tubular storage receptacle with a uranium chloride in dense massive form comprising a closured cylindrical housing including a transverse partition therein dividing the interior volume of the housing into a portion adapted to receive said receptacle in which receptacle the walls define a condensation zone and the remainder into a uranium chloride vaporizing chamber, a storage receptacle disposed in said receptacle portion of the housing, nozzle means communicating with said vaporizing chamber and extending into the interior of said receptacle for conducting uranium chloride vapors into the condensation zone therein, means for cooling the walls of said receptacle below the triple point of said uranium chloride, means for evacuating said housing to the level at which the mean free path of the molecules is at least of the order of the dimension of the condensing zone in said receptacle, and means supporting said receptacle and operable through a vacuum seal in said housing to provide longitudinal movement of the receptacle with respect to said nozzle.

2,900,238

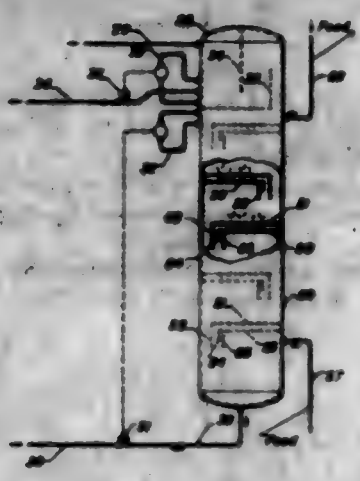
APPARATUS USEFUL FOR LIQUID-LIQUID CONTACTING

Edwin K. Jonas, Kenilworth, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Application December 24, 1956, Serial No. 630,118
4 Claims. (Cl. 23—270.5)

1. In a contacting column, the combination of a pair of vertically spaced, horizontal plates within the column and forming upper and lower contacting zones in the column, one of said plates being perforated and the other being imperforate, and the perforated plate being of larger cross-sectional area than the imperforate plate,

first conduit means in a side portion of the column extending in a vertical plane beyond the imperforate plate and connecting said upper and lower contacting zones, second vertical conduit means in said side portion of the column between the extremity of the imperforate plate



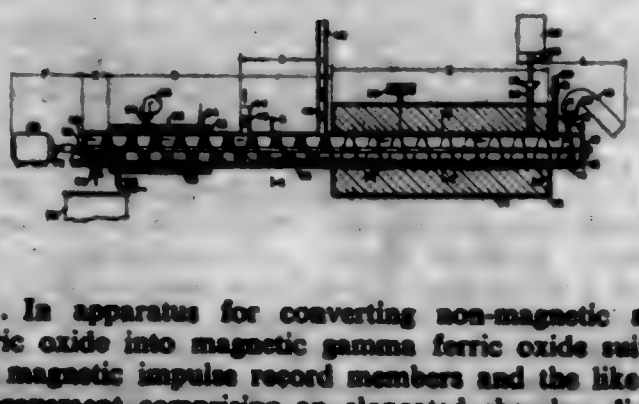
and said first conduit means, and connecting one of said zones with the space between said plates, and vertical baffling means adjacent said second conduit means and spaced vertically from the imperforate plate and positioned in said one zone to shield the opening of the second conduit means.

2,900,239

PRODUCTION OF FERROMAGNETIC IRON OXIDE

William C. Speed, Pound Ridge, N.Y., and George Martin Sutherlin, Stamford, Conn., assignors to Audio Devices, Inc., New York, N.Y., a corporation of New York

Application August 3, 1955, Serial No. 526,270
12 Claims. (Cl. 23—277)



1. In apparatus for converting non-magnetic alpha ferric oxide into magnetic gamma ferric oxide suitable for magnetic impulse record members and the like, the improvement comprising an elongated chamber divided generally into a heating-reducing zone and a cooling-oxidizing zone, the two zones being in open communication with each other, means for heating the heating-reducing zone, means for cooling the cooling-oxidizing zone, an inlet in the charging end of the heating-reducing zone for feeding non-magnetic alpha ferric oxide thereto, an inlet in the charging end of the heating-reducing zone for the introduction of a reducing agent, means for progressively advancing a body of ferric oxide continuously and successively through the two zones, an outlet for the withdrawal of spent gases from the heating-reducing zone and the cooling-oxidizing zone positioned intermediate the length of the chamber and extending from the chamber adjacent the location where the heating-reducing zone terminates and the cooling-oxidizing zone begins, an inlet in the discharging end of the cooling-oxidizing zone for the introduction of air, an outlet in the discharging end of the cooling-oxidizing zone for the withdrawal of magnetic gamma ferric oxide, means for causing the reducing agent to pass through the heating-reducing zone concurrently with the movement of the ferric oxide therethrough, and means for causing the air to flow through the cooling-oxidizing zone countercurrently to the movement of the ferric oxide therethrough.

2,900,240

PREPARATION OF SODIUM BOROHYDRIDE

Edward R. Whitcomb, Lynn, Mass., assignor to Metal Hydrides Incorporated, Beverly, Mass., a corporation of Massachusetts

No Drawing. Continuation of application Serial No. 566,362, February 20, 1956. This application November 13, 1956, Serial No. 621,644
7 Claims. (Cl. 23—312)

1. In a method for preparing sodium borohydride, the steps which comprise dissolving in water a reaction mixture consisting essentially of sodium borohydride and sodium methoxide to form a solution consisting essentially of water and methanol containing sodium borohydride and sodium hydroxide, removing methanol from said solution to obtain an aqueous solution consisting essentially of water containing sodium borohydride and sodium hydroxide in the proportion of about one mole of sodium borohydride to each three moles of sodium hydroxide, extracting sodium borohydride from said aqueous solution with an organic liquid solvent for sodium borohydride which is substantially immiscible with said aqueous solution to obtain a solution which is essentially sodium borohydride and water dissolved in said solvent in relative amounts which approximate that for the dihydrate of sodium borohydride, and recovering solid sodium borohydride from the last mentioned solution.

2,900,241

REINFORCING CYLINDER-TYPE ABRASIVE WHEELS

Leroy M. Kubsh, Turtle, Wis., and Vernon L. Leefbere, Rockton, Ill., assignors to Gardner Machine Company, Beloit, Wis.

Application September 6, 1957, Serial No. 682,425
2 Claims. (Cl. 51—293)

1. The method of making a reinforced abrasive wheel of the cylinder type which consists of placing a pair of concentric ring-like members in a mold, the outer member being removable after the wheel is molded, the inner ring being solid and made of a wearable material, adding a predetermined amount of abrasive mixture, inserting in the mold another pair of concentric ring-like members similar to said first mentioned ring-like members, adding another predetermined amount of abrasive material and continuing the addition of successive ring-like members and abrasive material until the mold is filled, curing the wheel by heating or drying, removing the wheel from the mold, removing the outer ring-like members and truing the periphery of the wheel to a predetermined size where the periphery of the wheel is flush with the inner ring-like members.

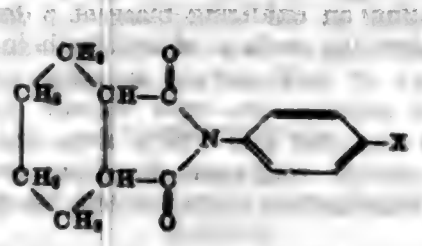
gas largely composed of hydrogen and carbon monoxide velocity of said jet between 10 and 150 meters per second

2,900,242
IGNITER FOR GAS GENERATOR GRAINS AND PROPELLANTS
Harry Williams and William A. Gey, China Lake, Calif., assignors to the United States of America as represented by the Secretary of the Navy
No Drawing. Application December 16, 1958
Serial No. 780,902
3 Claims. (Cl. 52—14)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An igniter composition comprising from about 5.5% to about 7.5% boron and the remainder ammonium perchlorate and poly-trifluorochloroethylene in substantially equal amounts, the latter having a molecular weight range of about 500,000 to 1,000,000.

2,900,243
HERBICIDES 1596(A)
Norman J. Lewis, Kirkwood, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application December 28, 1955
Serial No. 555,793
6 Claims. (Cl. 71—2.5)

4. A method of minimizing the preemergent germination of seeds and growth of plants thereof in agricultural soil which comprises applying to the soil from 2 to 15 pounds per acre of a compound having the structure:



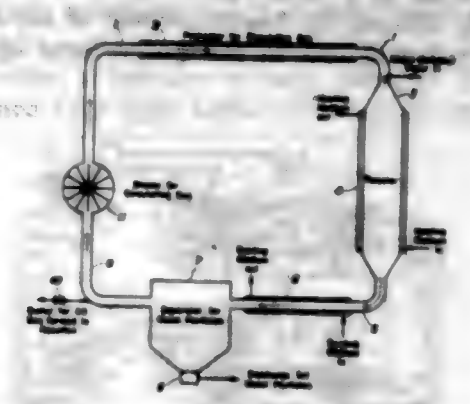
wherein X is a halogen atom.

2,900,244
FINE PARTICLE PRODUCTION
Samuel W. Bradstreet and James S. Griffith, Chicago, Ill., assignors to Armour Research Foundation of Illinois Institute of Technology, Chicago, Ill., a corporation of Illinois
No Drawing. Application May 19, 1954
Serial No. 431,003
10 Claims. (Cl. 75—.5)

10. A method of obtaining a fine powder, which comprises applying to a surface an adherent thin cryptocrystalline metal oxide coating, then heating the coating in the presence of a gaseous reducing atmosphere to reduce the metal oxide to the metal, and then mechanically breaking down the coating and removing the same from the surface to obtain a powdered metal.

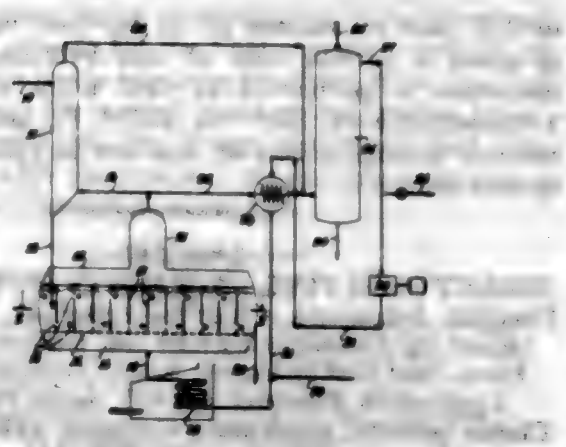
2,900,245
PRODUCTION OF FINELY DIVIDED METALS
Hans Müller, Watchung, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
Application January 24, 1957, Serial No. 636,169
3 Claims. (Cl. 75—.5)

1. Process for the production of fine metal powders by thermally decomposing a metal carbonyl, which comprises introducing a vaporized metal carbonyl into a moving stream of inert gas circulating in a relatively closed system, so as to cause a highly dilute mixture of inert gas and metal carbonyl vapor to be formed, continuously passing the resulting mixture through a reaction zone, maintained at a temperature of 150 to 350° C. and at a pressure of 2 mm. to 2 atmospheres, under streamlined conditions of flow without turbulence whereby decomposition of the metal carbonyl is effected with the production of metal particles and carbon monoxide, removing the products of decomposition together with said inert



gas from the reaction zone, separating the metal particles and the carbon monoxide from the inert gas and recycling the inert gas.

2,900,246
IRON OXIDE REDUCTION
Percival C. Keith, Peapack, and Herman N. Woebcke, Emerson, N.J., assignors to Hydrocarbon Research, Inc., New York, N.Y., a corporation of New Jersey
Application January 14, 1953, Serial No. 331,142
11 Claims. (Cl. 75—26)



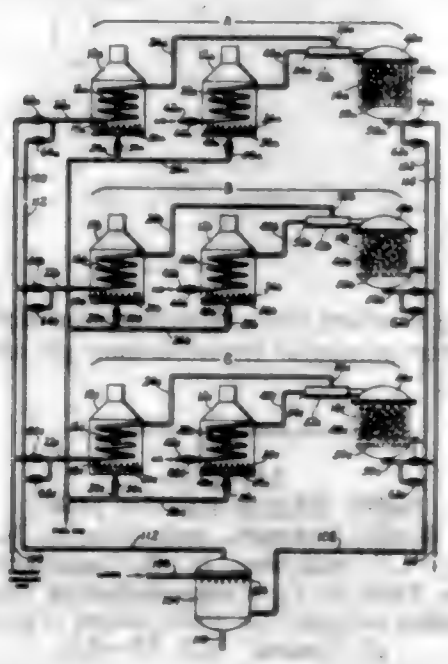
1. The process of reducing iron oxide which comprises passing high-purity hydrogen upwardly through a bed of finely divided iron oxide at a rate to cause mobility of said bed, the horizontal extent of said mobilized bed being interrupted by closely spaced, substantially vertical surfaces so that the particles in said mobilized bed which are farthest from any vertical surface are not less than about 1 inch and not more than about 6 inches away from any vertical surface, and maintaining said mobilized bed at a temperature in the range of about 700° to 1000° F. and at a pressure of about 200 to 600 p.s.i.g. while said high-purity hydrogen is passing therethrough, said high-purity hydrogen containing small amounts of carbon oxides, methane, nitrogen and water vapor and initially having a composite average molecular weight not exceeding about 7.5 and a maximum water vapor content related to the reaction temperature such that said water vapor content does not exceed about 0.5% by volume of the hydrogen content of said high-purity hydrogen at a reaction temperature of 700° F. and does not exceed about 3% by volume of the hydrogen content of said high-purity hydrogen at a reaction temperature of 1000° F.

2,900,247
METHOD OF MAKING SPONGE IRON
Juan Celada, Monterrey, Nuevo Leon, Mexico, assignor to Fierro Esponja Sa, Monterrey, Nuevo Leon, Mexico
Application August 5, 1957, Serial No. 676,972
9 Claims. (Cl. 75—34)

1. The method of reducing iron ore to produce sponge iron comprising the steps of heating a stream of reducing

with the molten glass, said portions consisting of from 0.5 up to 3.5 percent by weight copper, 10.0 to 35.0 per- porcelain-enamel, metallic surfaces, and the like, comprising covering portions of the fusible material to be

gas largely composed of hydrogen and carbon monoxide to a temperature of 1300° to 1750° F., separately heating a stream of air to a temperature of 1300° to 1750° F., continuously mixing the heated stream of air and heated stream of reducing gas in the proportions of from 0.1



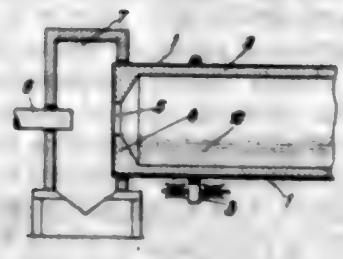
to 0.25 part by volume of air per part of reducing gas to cause a portion only of said hydrogen and carbon monoxide to be burned to yield a gas mixture having a temperature of 1800° to 2250° F., and passing said mixture through a bed of iron ore to reduce the ore to sponge iron.

2,900,248

DIRECT SMELTING PROCESS IN ROTARY KILNS

Friedrich Johannsen, Clausthal-Zellerfeld, Germany, assignor to Aktiengesellschaft für Unternehmungen der Eisen- und Stahlindustrie, Essen, Germany

Application February 4, 1957, Serial No. 638,163
Claims priority, application Germany February 4, 1956
1 Claim. (Cl. 75—36)



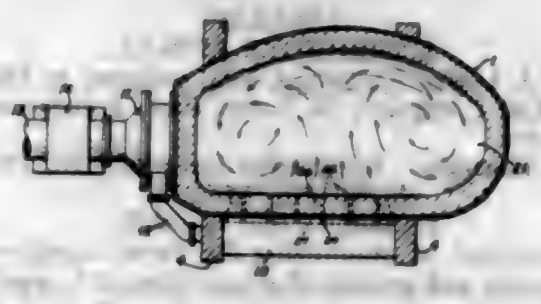
In the Krupp direct smelting process for the reduction of iron and related metals from ores and other raw materials containing said metals with a solid carbonaceous reducing agent in a rotary kiln having a baffle ring at its discharge end for damming up the charge and a central aperture in said baffle ring, the improvement, whereby the carbon content and the physical state of the reduced metal and, when the reduced metal is in the solid phase, the nodule sizes thereof are selectively controlled and the product obtained varies between solid metal nodules having a carbon content below 1.5% and a liquid metal having a carbon content above 1.5%, which improvement comprises the steps of injecting at least part of the oxygen-containing gases required for carrying out the process into the kiln countercurrently to the movement of the charge therethrough so as to create an excess pressure in the entire rotary kiln interior by releasing a jet of said gases outside the rotary kiln interior in front of said baffle ring, additionally introducing the remaining part of said gases separately into said kiln through the discharge end thereof, adjusting selectively the gas velocity of said jet between 10 and 150 meters per second dependent upon the releasing distance of said jet from said baffle ring and the ratio of the internal width of the baffle ring aperture to that of the kiln interior ranging between 1:3 and 1:6.5, and maintaining a determined ratio of the amount of said gases in said jet to the amount of additionally introduced gases.

2,900,249

SURFACE BLOWING PROCESS FOR MAKING STEEL

Walter L. Kerlin, Monroeville, Pa., assignor to United States Steel Corporation, a corporation of New Jersey

Application June 1, 1956, Serial No. 588,763
6 Claims. (Cl. 75—60)



1. A pneumatic process for refining iron which comprises charging a bath of molten iron and slag in a converter, projecting an oxidizing blast at a low angle of incidence against the surface of said bath in a direction across an area of said surface arranged centrally between surface areas at the ends thereof, utilizing said blast to move slag over said central area, and circulating the slag in opposite rotational directions over the said end areas of said bath to return it into the path of said blast.

2,900,250

FREE-MACHINING AUSTENITIC ALLOYS

Kenneth Metcalfe, Bridgeville, Pa., assignor to Universal Cyclops Steel Corporation, Bridgeville, Pa., a corporation of Pennsylvania

No Drawing. Application June 18, 1958
Serial No. 742,728
8 Claims. (Cl. 75—124)

1. Free-machining, austenitic chromium-nickel steels consisting essentially, by weight, of 15 to 30 percent of chromium, 6 to 40 percent of nickel, up to 0.25 percent of carbon 0.05 to 0.20 percent of sulfur, 0.25 to 1.35 percent of aluminum, and the remainder iron and incidental impurities and alloying elements that do not deleteriously affect the character of the resulting steels.

2,900,251

HIGH-TEMPERATURE BRAZING ALLOYS

Robert Melvin Evans and Harry Edward Pattee, Columbus, Ohio, assignors, by mesne assignments, to The Trane Company, La Crosse, Wis., a corporation of Wisconsin

No Drawing. Application February 26, 1958
Serial No. 717,558
11 Claims. (Cl. 75—170)

1. An alloy for brazing for use at high temperatures consisting essentially of 30 to 60 percent nickel, 20 to 45 percent tin, 10 to 30 percent palladium, 4 to 8 percent silicon.

2,900,252

APPARATUS FOR CONTACTING MOLTEN GLASS

Robert M. Woodward, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Application June 15, 1954, Serial No. 436,757
9 Claims. (Cl. 75—171)

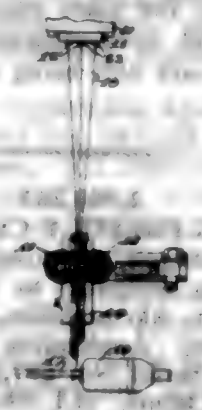
1. In a glass working and handling apparatus, a container for molten glass having portions in direct contact

2,900,257

PREPARATION OF SWISS CHEESE

drochloride film which contains 25 to 40 parts of liquid

with the molten glass, said portions consisting of from 0.5 up to 3.5 percent by weight copper, 10.0 to 35.0 per-



cent by weight chromium, the remainer being nickel except for impurities in amounts less than 1.5 percent by weight.

2,900,253

NICKEL BASE BRAZING ALLOYS FOR HIGH-TEMPERATURE APPLICATIONS

Robert M. Evans and Harry E. Pattee, Columbus, Ohio, assignors, by mesne assignments, to The Trane Company, La Crosse, Wis., a corporation of Wisconsin

No Drawing. Application February 26, 1958
Serial No. 717,559
6 Claims. (Cl. 75—171)

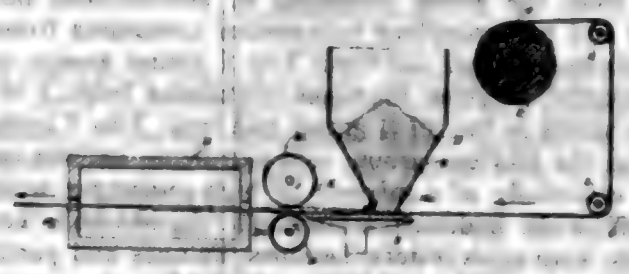
1. An alloy for brazing for use at high temperatures consisting essentially of 58 to 68 percent nickel, 25 to 40 percent tin, 3 to 10 percent cobalt.

2,900,254

PROCESS OF PRODUCING SINTERED METAL SHEETS

Hyman I. Ralkin, Flushing, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Application October 13, 1954, Serial No. 462,083
3 Claims. (Cl. 75—214)



1. In the manufacture of a metallic sheet from metal powder, the steps including uniformly spreading a loose non-compacted layer of metal powder onto a horizontally movable sheet of a material which will be destroyed at temperatures which cause said metal to sinter and having rigidity and strength sufficient to support said non-compacted layer, compacting said layer whereby a composite of said layer and sheet is continuously formed which composite is self-sustaining, horizontally passing said composite through a heat-treatment apparatus to cause said layer to sinter and to burn off said heat-destroyable sheet, and removing any residues of said heat-destroyable sheet from the sintered layer.

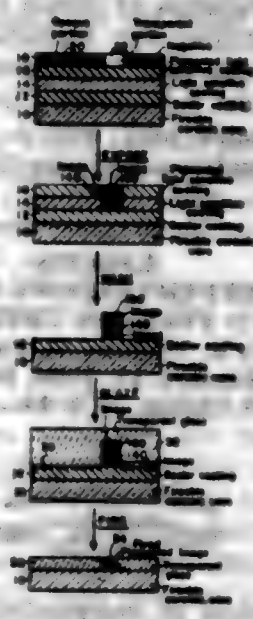
2,900,255

FIRED PHOTOGRAPHICALLY DECORATED OBJECTS AND THEIR MANUFACTURE

Alexander E. Charlton, Cincinnati, Ohio, assignor to Photoceramics, Inc., Cincinnati, Ohio, a corporation of Ohio

Application February 18, 1953, Serial No. 337,500
26 Claims. (Cl. 96—34)

1. The method of photographically decorating fireable materials including ceramic ware, porcelain, glass, porcelain-enamel, metallic surfaces, and the like, comprising covering portions of the fireable material to be decorated with non-pigmented organic colloidal light sensitive coating, overlaying said coating with an organic colloidal light sensitive coating containing a fireable pigment, exposing a portion of said coatings to a design image defined by a light source to cause the exposed and



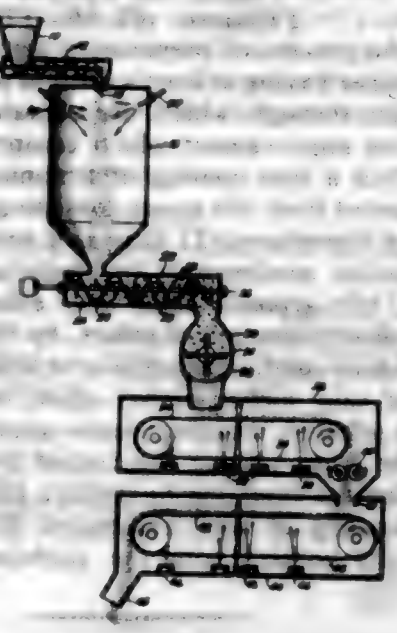
unexposed portions to be in contrast as to hardness and solubility in a solvent for the light sensitive material, removing the non-image carrying portions from the light sensitive coatings for leaving intact on the fireable material to be decorated only the design image, and then firing said material with the retained design image thereon to form a finished decorated product.

2,900,256

METHOD AND APPARATUS FOR PRODUCING GRANULATED FOOD PRODUCTS

Everette C. Scott, Brookfield, Ill.

Application June 25, 1956, Serial No. 593,578
13 Claims. (Cl. 99—56)



1. A process for producing readily soluble granules or clusters from solid powdered material which comprises adding moisture to the particles of said powdered material to produce a homogeneous mixture of adhesive particles and agglomerating said particles into clusters by subjecting said particles to repeated high velocity impact with each other, said clusters being of larger size and lesser density than the powder particles from which they are formed.

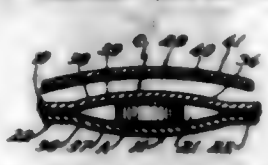
2,900,264

from 10 to 30% by weight of an alkylene oxide selected

2,900,257
PREPARATION OF SWISS CHEESE
Zola D. Ramsdy, Clarendon Hills, Ill., assignor to Armour and Company, Chicago, Ill., a corporation of Illinois
No Drawing. Application July 9, 1952
Serial No. 297,983
4 Claims. (Cl. 99—116)

1. In the preparation of cheese of the Swiss type, the method of controlling eye formation, characterized by the steps of treating raw, unpasteurized cow's milk with hydrogen peroxide, subsequently inoculating the hydrogen peroxide-treated milk with a Swiss cheese starter culture, and thereafter completing the preparation of said cheese.

2,900,258
PACKAGED EFFERVESCENT CONCENTRATES AND PROCESS THEREFOR
James R. Wagner, St. Paul, Minn.
Application January 17, 1956, Serial No. 559,659
9 Claims. (Cl. 99—171)



1. In the method of independently packaging tablets the combination of steps comprising feeding tablets in spaced relationship between pinhole free foil sheets, puncturing one of the sheets at spaced intervals, sealing the sheets together about each of said tablets to form a pocket therebetween with each pocket being provided with at least one puncture in the covering foil therefor, covering the aperture with an air permeable closure, and sealing said closure to said sheets about the edges thereof but leaving said covering unsealed about said aperture.

2,900,259
PROCESS OF PACKAGING DRIED FRUIT
James E. Snyder and Ruby J. Swartz, Akron, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
No Drawing. Application November 29, 1956
Serial No. 624,900
2 Claims. (Cl. 99—171)

1. In the process of preparing a package of dried fruit in a container having at least a portion made from a transparent film through which the contained fruit may be viewed, the improvement which comprises first applying to said fruit a thin coating of a nonionic surface-active agent selected from the group consisting of (1) polyethylene glycol thio ethers, (2) fatty acid amide esters, (3) fatty acid amide condensates, (4) fatty alkylol amide condensates, (5) glycerol fatty acid esters and (6) alkyl phenyl polyethylene glycol ethers, by immersing the fruit in an aqueous solution containing at least about 0.25% by weight of said surface-active agent, removing the fruit from the solution, draining excess solution from the fruit drying the fruit, placing the coated fruit in a container and closing the container to create a complete package in which clouding of said transparent film portion of the package by contact with the contained dried fruit is avoided.

2,900,260
METHOD OF PRESERVING THE RED COLOR OF RED MEAT AND PRODUCT
James E. Snyder, Akron, and George W. Ferner, Cuyahoga Falls, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
No Drawing. Application January 30, 1956
Serial No. 561,981
8 Claims. (Cl. 99—174)

1. The method of preserving the red color of red meat which comprises packaging red meat in rubber hydrochloride film which contains 25 to 40 parts of liquid plasticizer per 100 parts of rubber hydrochloride the plasticizer being of the class consisting of butoxyethyl laurate, butoxyethyl epoxystearate and butoxyethoxyethyl pelargonate, said film being substantially 0.0003 to 0.0012 inch thick.

2,900,261
PACKAGING FRESHLY CUT RED MEATS
James E. Snyder, Akron, and George W. Ferner, Cuyahoga Falls, Ohio, assignors to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
No Drawing. Application July 16, 1956
Serial No. 597,892
8 Claims. (Cl. 99—174)

1. Red meat packaged in rubber hydrochloride film containing 25 to 40 parts of ester plasticizer per 100 parts of rubber hydrochloride, at least 10 parts of said plasticizer being a permanent liquid dialkyl adipate whereby the life of the red color of the meat is prolonged, said film being 0.0003 to .0015 inch thick.

2,900,262
CORROSION PREVENTIVE COMPOSITIONS
Harold A. Green, Elkins Park, Pa., assignor to Quaker Chemical Products Corporation, Conshohocken, Pa., a corporation of Pennsylvania
No Drawing. Application December 15, 1955
Serial No. 553,199
11 Claims. (Cl. 106—14)

1. A liquid corrosion preventive composition for metal surfaces consisting essentially of a petroleum hydrocarbon and the reaction product of from 1 to 15 parts by weight of a petroleum hydrocarbon oxidate with 1 part by weight of the product obtained from condensation under dehydrating conditions of about 1 to 2 mols of a mono carboxylic acid containing from 8 to 22 carbon atoms and about 1 mol of a polyalkylene polyamine selected from the group consisting of polyethylene polyamines and polypropylene polyamines containing from 2 to 4 alkylene groups and from 3 to 5 amino groups and hydroxyalkyl alkylene diamines containing from 2 to 3 carbon atoms in the alkyl group and from 2 to 3 carbon atoms in the alkylene group, said petroleum oxidate consisting essentially of a mixture of high molecular weight aliphatic acids, hydroxy-carboxylic acids, alcohols, keto-alcohols, keto-acids, esters, lactones, ketones and partially oxidized hydrocarbons having 5 to 35 carbon atoms, said oxidate having a mean molecular weight in the range of 200 to 600, acid number in the range of 10 to 200, saponification number in the range of 40 to 300 and an unsaponifiable content in the range of 10 to 70 percent by weight.

2,900,263
METHOD OF PREPARING A FUEL ELEMENT FOR A NUCLEAR REACTOR
Joseph H. Handwerk, Joliet, and Roland A. Buch, La Grange, Ill., assignors to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application February 13, 1957
Serial No. 640,056
3 Claims. (Cl. 106—39)

1. A method of preparing a reactor fuel element which comprises forming a mixture of thorium dioxide and an oxide of uranium in which the uranium is present in an oxidation state at least as high as it is in U_3O_8 into a desired shape and firing in air at a temperature sufficiently high to reduce the higher uranium oxide to uranium dioxide.

thereof surrounding said wet clumps with said ends of: passing said material into a molten salt bath; vibrat-

2,900,264
METHOD OF CHANGING GLASS COMPOSITION
Wilbur F. Brown, Toledo, Ohio, assignor to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio
No Drawing. Application April 28, 1958
Serial No. 502,728
2 Claims. (Cl. 106—47)

1. In the manufacture of glass, a method of changing from the production of regular glass to the production of glare-resistant glass containing appreciably larger amounts of iron oxide in a continuously operating tank furnace during the continuous operation thereof comprising, adding to the regular glass in said continuously operating furnace glare-resistant glass batch material along with substantially 43% to 75% of the calculated deficiency of iron oxide existing in said tank furnace at the start of the change-over period as compared to the desired iron oxide content required in said tank furnace for the production of glare-resistant glass, said iron oxide deficiency being added along with the glare-resistant glass batch material over a fixed period of time, said change-over period having a minimum limit for a given percentage of said calculated deficiency being added based on a minimum of about 15 hours when 70% of said calculated deficiency is added.

2,900,265
HYDRAULIC CEMENTITIOUS MIXTURES
Alexander Klein, near Danville, Calif.
No Drawing. Application May 20, 1957
Serial No. 660,059
7 Claims. (Cl. 106—91)

1. A cementitious mixture consisting essentially of hydraulic cement as the cementing ingredient and a small amount of the reaction product resulting from the hydrolysis of concentrated Steffen filtrate and containing glutamic acid, said amount, reckoned on a dry basis, being between about 0.02 and 0.8 percent by weight of the cement content of said mixture.

2,900,266
METHOD OF INCREASING FLUIDITY OF AQUEOUS INDUSTRIAL MINERAL SLURRIES
Kenneth J. Shaver, Stoneham, Mass., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application February 18, 1957
Serial No. 640,626
19 Claims. (Cl. 106—100)

1. A method of treating aqueous industrial mineral slurries comprising uniformly incorporating from about 0.005 to about 0.5 percent by weight of the slurry solids of an alkali metal polyphosphatesulfate composition, defined by the formula $xM_2O:yP_2O_5:zSO_3$, wherein M is an alkali metal selected from the group consisting of sodium and potassium, and x, y, and z are integers, wherein the ratio of x to the sum of y plus z is at least about 0.4 but less than one, to an aqueous mineral slurry, selected from the group consisting of raw cement slurries, clay slurries, pigment suspensions, and mineral-based paper-coating compositions, whereby a substantial increase in the fluidity of the said slurry is effected.

2,900,267
MODIFIED ANIMAL GLUE AND METHOD OF PREPARATION
Edward F. Cavanaugh, Wilmette, and Havard L. Kell, Clarendon Hills, Ill., assignors to Armour and Company, Chicago, Ill., a corporation of Illinois
No Drawing. Application October 17, 1956
Serial No. 616,381
20 Claims. (Cl. 106—136)

12. As a new composition of matter, animal glue esterified in a non-alkaline aqueous reaction medium with from 10 to 30% by weight of an alkylene oxide selected from the group consisting of styrene oxide, ethylene oxide and propylene oxide, said esterified animal glue as compared with its properties prior to esterification being characterized by a reduced gelling temperature, by increased solubility in water, and by appreciable solubility in polar organic solvents, said esterified animal glue being adjusted to an acidity within the pH range of 4 to 6.

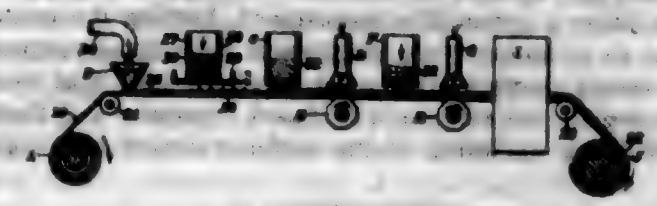
2,900,268
PROCESS FOR PREPARING HYDROXYALKYLATED CEREAL FLOUR
John C. Rankin and Charles L. Mehltretter, Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Application November 15, 1956
Serial No. 622,906
10 Claims. (Cl. 106—150)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for preparing hydroxyalkylated cereal flour which comprises admixing dry cereal flour with about 2 to 5 percent of a dry alkaline catalyst, mixing the dry mixture with an alkylene oxide in a reaction system free from any liquid dispersing medium, permitting the dry mixture of cereal flour and alkaline catalyst to remain in contact with said alkylene oxide until said cereal flour has been hydroxyalkylated, and recovering the hydroxyalkylated cereal flour as a free-flowing powder.

2,900,269
PREPARATION OF MOLDED ARTICLES FROM KEROGENIC MINERALS
William C. Bauman and Eldon L. Graham, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware
No Drawing. Application April 30, 1956
Serial No. 581,313
4 Claims. (Cl. 106—241)

1. A process of making shaped articles whose tensile strength is at least 1000 pounds per square inch when tested in the form of a bar having a cross-section ¼ inch by ⅜ inch which comprises subjecting to at least 5000 pounds per square inch pressure at a heat-plastifying temperature a material consisting essentially of a kerogenic mineral having a kerogenic equivalent of at least 60 gallons of oil per ton of mineral, said temperature being below the temperature of appreciable decomposition of the kerogen.

2,900,270
ORNAMENTAL MATERIAL AND METHOD FOR MAKING SAME
Charles Klein, Mexico City, Mexico, assignor to Verifelt, Inc., Lowell, Mass., a corporation of New York
Application May 4, 1956, Serial No. 582,828
9 Claims. (Cl. 117—25)



1. A method of producing an improved flocked pile fabric which includes the steps of depositing a plurality of individual clumps of fibres, while wet, on a heat settable adhesively coated base fabric so that the lower portion of each said wet clump is firmly secured to the adhesive coating, with the fibres thereof adhered to each other solely by moisture and all substantially recumbent, then depositing pile forming flock fibres upon said adhesively coated and clump-carrying base fabric and causing said pile fibres to stand erectly on end in the areas

the package with a dye composition comprising in com- mercic polyurethane which comprises impregnating said

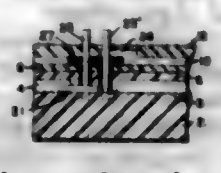
thereof surrounding said wet clumps with said ends firmly secured to said adhesive coating and then removing any unsecured pile forming fibres from, and heat setting, said adhesive.

2,900,271

ELECTROLUMINESCENT DEVICES AND METHODS THEREFOR

Alfred J. MacIntyre, Jr., Los Angeles, and Richard A. Martel, Gardena, Calif., assignors to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware

Application July 29, 1958, Serial No. 751,746
10 Claims. (Cl. 117—33.5)



3. The method of manufacturing and assembling an electroluminescent device comprising the steps of: roughening a surface of a plastic base member, vapor-depositing a light-transparent electrode onto said roughened surface, disposing an electroluminescent phosphor material dispersed in a light-transparent dielectric medium adjacent said light-transparent electrode, and disposing a second electrode adjacent said electroluminescent material dispersed in said dielectric medium.

2,900,272

METHOD OF HEAT TREATING METALS EMPLOYING AN OXIDATION SCALE INHIBITOR

Edward B. Schneider, Canoga Park, Calif., assignor to North American Aviation, Inc.

No Drawing. Application October 28, 1957
Serial No. 692,552
14 Claims. (Cl. 117—46)

1. The process of heat treating metal articles comprising applying to the surface to be heat treated a coating composition consisting essentially of (1) an organic ammonium clay compound represented by the general formula

wherein Y is clay substituent; N is nitrogen; R_1, R_2, R_3 and R_4 are selected from the class consisting of hydrogen and an organic radical; and wherein not more than 3 of said R groups are hydrogen atoms; (2) an organic binding composition and (3) an organic hydrocarbon diluent wherein the ratio of organic ammonium clay compound-to-binder composition is from about 10:1 to about 1:5 and the amount of diluent is sufficient to give the composition a spreadable consistency, heating the coated article to a temperature sufficiently high to decompose said coating composition at the outset of said heat treating, covering the surface with fused bentonite and thereby inhibiting oxidation of the surfaces during heat treating.

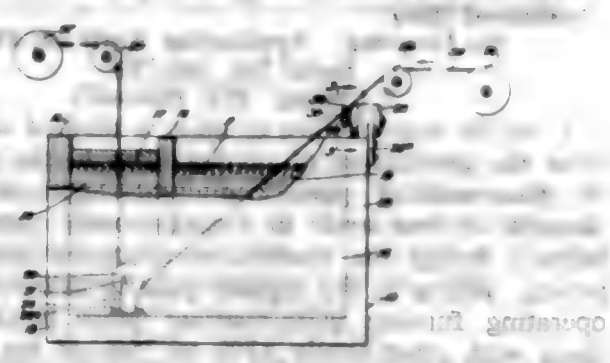
2,900,273

METHOD AND MEANS FOR CONTINUOUSLY PRETREATING AND COATING VIBRATING METAL OBJECTS

Herbert E. Linden, Los Angeles, Calif., assignor to American Molikrizing Corporation, Beverly Hills, Calif., a corporation of Nevada

Application September 26, 1955, Serial No. 536,445
13 Claims. (Cl. 117—51)

1. A method of coating a continuously moving material with a molten coating metal which includes the steps of: passing said material into a molten salt bath; vibrating said material while in said salt bath, the vibratory motion imparted to said material being substantially



dampened by said salt bath prior to the exit of said material from said salt bath; and thereafter passing said material from said salt bath directly into said molten metal.

2,900,274

METHOD OF PROVIDING GLASS FILAMENTS WITH A COATING OF SILVER

Harry B. Whitehurst, Newark, Ohio, assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware

Continuation of abandoned application Serial No. 398,544, December 16, 1953. This application December 24, 1956, Serial No. 630,379
4 Claims. (Cl. 117—54)

1. A method of coating individual glass filaments in a strand with a substantially continuous coating of metal comprising advancing a strand along an established path, suspending a globule of a solution of silver nitrate from an applicator, passing the strand through the suspended globule of silver nitrate, suspending a globule of hydrazine sulfate solution from a second applicator, directing the advancing strand through the globule of hydrazine sulfate, both the solution of silver nitrate and hydrazine sulfate being distributed throughout the interstices of said strand by capillary action in such quantities as to allow the reaction to go to completion, and allowing the reduction reaction to proceed to completion to effect a substantially continuous deposit of silver upon the surfaces of the filaments of the strand.

4. The method of claim 1 wherein the advancing strand is heated to from 485° C. to 650° C. prior to application of the solution of silver nitrate to provide heat cleaned glass surfaces.

2,900,275

DYE COMPOSITION AND METHOD OF DYEING TIGHTLY WOUND GLASS FIBERS SIZED WITH A WATER SWELLABLE MATERIAL

Ralph N. Kingsbury, Stratford, Conn., and Remus F. Carosella, Manville, R.I., assignors to Owens-Corning Fiberglas Corporation, Toledo, Ohio, a corporation of Delaware

No Drawing. Application January 21, 1955
Serial No. 483,427
12 Claims. (Cl. 117—63)

8. The method of coloring glass fibers while tightly wound in a package and in which the glass fibers are sized with a composition containing a water swellable, hydrophilic colloid, comprising the step of impregnating

emitting material on a graphite holder, heating the boride

2,900,284

the package with a dye composition comprising in combination a spirit soluble dye consisting of a guanidine salt of a metallized azo dye having at least one acid group selected from the group consisting of sulfonic and carboxy and present in amounts sufficient to impart the desired depth of color and in which the guanidine is disubstituted with a radical selected from the group consisting of alkyl, aralkyl, aryl and cyclohexyl, alcohol and water as the solvent media in which the water is present in amounts up to 10 percent by weight, and a Werner complex compound in which an organic acido group is coordinated with a trivalent nuclear chromium atom and is present in amounts ranging from 1 part by weight dye to ¼–8 parts by weight of the Werner complex compound.

2,900,276

CERMET COMPOSITION AND METHOD OF COATING THEREWITH

John V. Long, San Diego, and John V. Furth, La Jolla, Calif., assignors to Solar Aircraft Company, San Diego, Calif., a corporation of California

No Drawing. Application May 31, 1955
Serial No. 512,315
27 Claims. (Cl. 117—70)

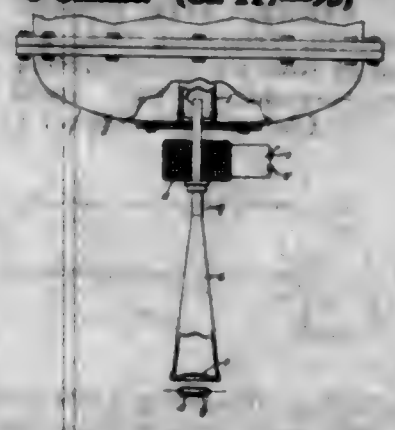
1. A method of providing a surface with an aluminum-ceramic cermet coating comprising the steps of: applying to the surface to be coated a slip including a liquid vehicle, 20 to 70 parts by weight aluminum in particle form, and 70 to 20 parts by weight of a heat-reacted alkaline earth borate frit consisting essentially of a major portion of boron oxide and at least one alkaline earth oxide in a quantity at least sufficient to render said frit relatively insoluble in water; and firing said surface to be coated to at least the fusion temperature of the aluminum to form a cermet coating on said surface.

2,900,277

PROCESS OF APPLYING PROTECTIVE COATINGS BY MEANS OF HIGH ENERGY ELECTRONS

John V. Schmitz, Anaheim, Calif., and Elliott J. Lawton, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Application February 8, 1955, Serial No. 486,838
3 Claims. (Cl. 117—93)



1. The process of encapsulating a heat-sensitive article selected from the class consisting of resistors, capacitors, transformers, transistors, and diodes with a protective resinous coating which comprises the steps of coating said element with a liquid composition comprising a polymerizable monomeric compound and thereafter polymerizing said composition by means of high energy electrons.

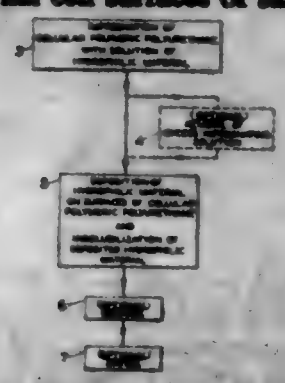
2,900,278

CELLULAR PRODUCT AND METHOD OF MAKING THE SAME

William R. Powers, Pennsgrove, N.J., and Robert A. Volz, Philadelphia, Pa., assignors to Scott Paper Company, Chester, Pa., a corporation of Pennsylvania

Application June 15, 1956, Serial No. 591,533
10 Claims. (Cl. 117—98)

1. The method of improving the spongiform characteristics of open-celled, cellular structures of foamed polymeric polyurethanes which comprises impregnating said structure with a solution of hydrophilic material capable of wetting the internal cell surfaces of said structure, and



depositing the hydrophilic material in adherent, water-insoluble form, on the external and internal cell surfaces of said structure.

2,900,279

PROCESS FOR MAKING FIRE RETARDANT CELLULOSIC ARTICLES

Robert R. Dreisbach and John L. Lang, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application October 1, 1954
Serial No. 459,858
4 Claims. (Cl. 117—136)

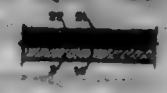
1. The process of rendering a normally flammable cellulosic article fire retardant consisting of (1) immersing the cellulosic article in an aqueous solution of the amine salt formed by the reaction of an alkylene polyamine containing at least two free amino groups and about equimolar proportions of an acid from the group consisting of phosphoric and boric acids, (2) immersing the said cellulosic article in a second solution of an organic aliphatic carboxylic acid having not more than 4 carbon atoms to insolubilize said amine salt, each of said steps (1) and (2) being carried out at a temperature below 50° C. and (3) drying the so-treated article.

2,900,280

FORMATION OF LAYERS OF PHOTO-CONDUCTIVE MATERIALS

Hans Gerhard Lubszynski, St. Lawrence, and John Wardley, Hounslow, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain

Application July 16, 1956, Serial No. 598,029
Claims priority, application Great Britain
July 23, 1955
19 Claims. (Cl. 117—215)



1. A method of forming a composite layer of photoconductive material on the surface of a support comprising evaporating said material on said surface by evaporation of said material in a gas atmosphere to form a spongy layer on said surface heating said layer after deposition thereof to such a temperature and for such a period of time to increase the sensitivity of said layer, and then evaporating a layer of a photo-conductive material in vacuo so as to provide a solid layer on said spongy layer.

2,900,281

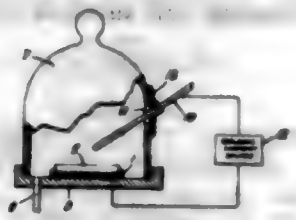
METHOD OF BONDING METAL BORIDES TO GRAPHITE

William R. Grams, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Application July 20, 1953, Serial No. 369,175
4 Claims. (Cl. 117—216)

1. The method of making a thermionic cathode which comprises placing an amount of a metal boride electron

emitting material on a graphite holder, heating the boride at a localized portion until it begins to melt, further heat-



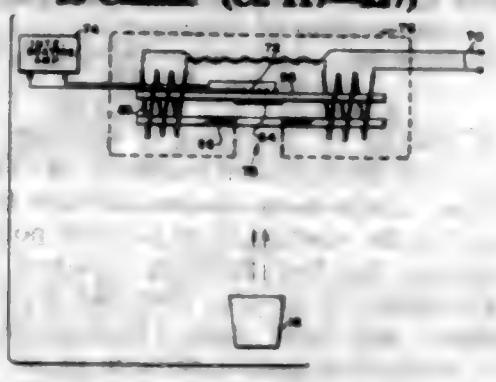
ing the unmelted portions until all the boride is melted to avoid localized heating of the melted boride portions and resulting contamination of the boride with carbon, and allowing the melted boride to cool.

2,900,282

METHOD OF TREATING MAGNETIC MATERIAL AND RESULTING ARTICLES

Sidney M. Rubens, St. Paul, Minn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Application July 20, 1956, Serial No. 599,100
13 Claims. (Cl. 117—227)



1. In a method for the vacuum deposition of a metallic film onto a di-electric substrate, the improvement which comprises preheating said substrate to an elevated temperature below the melting point thereof, applying a magnetic field across at least one surface of said substrate in a direction parallel thereto while vaporizing in said vacuum an alloy having about 83% nickel and the remainder iron, and maintaining the temperature of said substrate in the course of said vaporizing in the range of from about 300° to 400° C. until a thin bistable magnetic film having a thickness up to 5000 Angstrom units and a coercivity up to 10 oersteds is deposited on said surface of the substrate, the method being such that said magnetic film has a preferred direction of magnetization in a direction parallel to the direction of said magnetic field and exhibits substantially no magnetostriction in said preferred direction but has single domain properties.

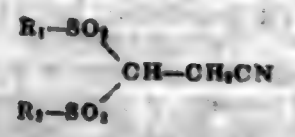
2,900,283

PROCESS AND PRODUCT TO INHIBIT SUGAR INVERSION

Joe W. McGahen, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application June 19, 1957
Serial No. 666,756
5 Claims. (Cl. 127—30)

1. The method of inhibiting sucrose inversion caused by microorganisms in raw cane juice comprising the addition to such juice of at least one compound selected from the formula:



where R_1 and R_2 are each selected from the group consisting of alkyl groups containing 1 through 4 carbon atoms.

2,900,284

PROCESS FOR THE SACCHARIFICATION OF CELLULOSE-CONTAINING MATERIAL

Motoyoshi Oshima, Shibuya-ku, Tokyo-to, Jun Kanema, Ota-ku, Tokyo-to, and Tadao Ishii, Tsurumi-ku, Yokohama-shi, Japan

No Drawing. Application September 30, 1955
Serial No. 537,294
3 Claims. (Cl. 127—37)

1. In the process of saccharifying cellulose-containing material by pretreating the said material with dilute acid to remove hemi-cellulose therefrom and treating the resulting residue with hydrogen chloride gas, the steps of drying the pretreated material, adding an amount of hydrochloric acid to said dried material such that 45–70 parts of water will be contained in the said mixture per 100 parts of said dry material, suspending said mixture in a hydrogen chloride gas stream at a temperature below 75° F., and thereby causing said material to absorb said hydrogen chloride gas, and subjecting the resulting product to complete hydrolysis by suspending the same in a hydrogen chloride gas stream at a temperature of the order of 100° F.

2,900,285

PROCESS FOR CLEANING THE CHAMBERS OF REGENERATIVE FURNACES

Otto Dürrmann, Helmut Kelmsch, and Karl Georg Speith, Duisburg, Germany, assignors to Mannesmann Aktiengesellschaft, a company of Germany

No Drawing. Application October 4, 1956
Serial No. 613,812
Claims priority, application Germany October 7, 1955
4 Claims. (Cl. 134—2)

1. A process for cleaning the air chambers of a Siemens-Martin regenerative furnace which has air chambers in addition to gas chambers, which comprises introducing blast furnace gas into the air chambers while excluding the admission of air, and then immediately removing the gas through a chimney.

2,900,286

METHOD OF MANUFACTURING SEMI-CONDUCTIVE BODIES

Bernard Goldstein, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

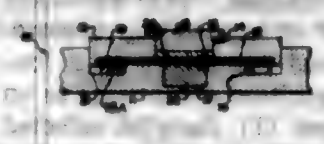
Application November 19, 1957, Serial No. 697,416
17 Claims. (Cl. 148—1.5)

2. The method of introducing a PN junction in a given conductivity type wafer of a semiconductive compound having a metallic element and a non-metallic element, said compound being selected from the group consisting of the phosphides and arsenides of aluminum, gallium, and indium, and the sulfides of zinc and cadmium, comprising heating said wafer to a temperature below the melting point of said compounds but above the dissociation temperature of said compound so as to drive off said non-metallic element from the wafer surface and leave a molten layer of said metallic element on said surface, said heating being performed in an atmosphere of a substance which induces opposite conductivity type in said wafer, and being continued for a period time sufficient for said substance to saturate said molten layer and diffuse into the region of said wafer adjacent said molten layer so as to form a PN junction between said diffused region and the remainder of said wafer, then cooling said wafer.

subjecting the web to heat to cause spot bonding at points

2,900,295

2,900,287
METHOD OF PROCESSING SEMICONDUCTOR DEVICES
Gerald M. Rostler and Theodore W. Miner, Richfield, Minn., assignors to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application July 14, 1958, Serial No. 748,369
4 Claims. (Cl. 148—1.5)

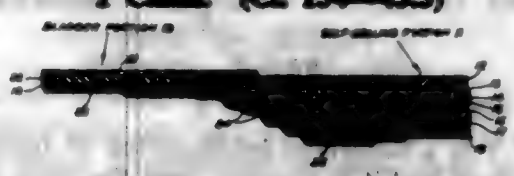


1. The method of preparing alloyed junctions in a crystalline semiconductor which comprises the steps of providing an alloying enclosure having a horizontally disposed supporting surface and at least two spaced depression cavities arranged thereunder and communicating therewith, loading a first depression cavity with a predetermined volume of a fusible impurity substance having a certain first melting temperature, said volume being substantially equal to the volume of said depression cavity, placing an ohmic contact assembly which includes a second fusible body portion in the second depression cavity, said second body having a thickness dimension which is in excess of the difference between the depth of said second cavity and the thickness of a non-fusible portion of said ohmic contact member, and having a second melting temperature which is in excess of said first melting temperature, placing a crystalline semiconductor wafer in said enclosure which substantially covers said first and said second fusible members and which is maintained in spaced relationship from said supporting surface, heating said assembly to an elevated temperature which is in excess of said second predetermined temperature and maintaining said elevated temperature for a period of time sufficient to fuse said fusible substances and thereby bring said crystalline semiconductor wafer into physical contact with said first fusible metal, and thereby accomplish preparation of an alloy junction between said semiconductor crystal and said fusible impurity substance.

2,900,288
PROCESS FOR HEAT-TREATING A BEARING ALLOY
Erich Poisel, Stallberg, Germany, assignor to Vereinigte Österreichische Eisen- und Stahlwerke Aktiengesellschaft, Linz (Donau), Austria, a firm
No Drawing. Application July 5, 1956
Serial No. 595,835
Claims priority, application Austria February 9, 1952
2 Claims. (Cl. 148—13)

1. A method of producing an aluminum-zinc-copper alloy for bearing purposes comprising the steps of: producing a composition alloy of 35 to 50% Al, 5.8 to 8.3% Cu, 0 to 0.3% Fe, 0 to 0.25% Si, and 59.2 to 41.15% of Zn; of shaping said alloy, and of heat-treating said alloy at temperatures from 100 to 280° C. for a time from 24 to 48 hours.

2,900,289
TRANSITION FUEL CELLS
Kenneth G. Harlan, Gahanna, Ohio, assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application January 30, 1957, Serial No. 637,342
1 Claim. (Cl. 154—43.5)

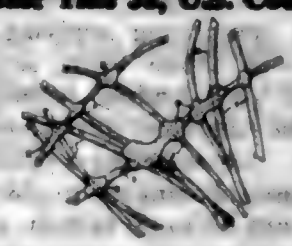


A fuel cell having a self-sealing portion and a bladder portion comprising, a natural rubber inner liner in said self-sealing portion in abutting relation with a layer of rubber in said bladder portion, a layer of rubberized fabric in said bladder portion in united relation with said layer of rubber and extending into and united to a portion of said inner liner of said self-sealing portion, a layer of nylon united to the inner liner of said self-sealing portion and continued into and united to the layer of rubber of said bladder portion, first and second layers of a sealant material in said self-sealing portion separated by a layer of tire cord said sealant layers and tire cord layer having the ends thereof adjacent said bladder portion terminating in step relations, second and third layers of tire cord in said self-sealing portion in cross-plied relation with one another and having the ends thereof adjacent said bladder portion terminating in step relations, a plurality of forming strips one each contiguous with the ends of each layer of said self-sealing portion whereby the stepped layers are blended in a more smooth contour, and a rubberized fabric in united relation with the layer of nylon in said bladder portion and overlapping the stepped layer portions in said self-sealing portion.

2,900,290
METHOD OF PRODUCING ELECTRIC SHEET-TYPE HEATER
Walther Bedrge, Moutier JB, Switzerland, assignor of two-thirds to Jean-Pierre de Montmollin and Rene Gugger, both of Neuchatel, Switzerland
Application July 29, 1957, Serial No. 674,647
Claims priority, application Switzerland April 30, 1957
1 Claim. (Cl. 154—90)

A method of producing a sheet-type heater comprising the steps of: softening a first sheet of thermosetting hardenable organic material, embedding electrical heating wires in the softened portions of said first sheet, covering said first sheet of organic material with the wires embedded therein with a second sheet of thermosetting organic material, covering said two sheets at both sides thereof with two fabrics consisting of electrically insulating inorganic fibers, and subjecting the thus formed heater to pressure and heat to an extent sufficient to cause said organic material to penetrate into said fabrics until said wires contact at least one of said fabrics and to harden.

2,900,291
PRODUCTION OF NON-WOVEN FABRICS
Richard A. O'Connell, El Cerrito, Calif., assignor to the United States of America, as represented by the Secretary of Agriculture
Application March 18, 1957, Serial No. 646,942
3 Claims. (Cl. 154—101)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A process for producing a fiber-like, porous, air-permeable flexible sheet material which comprises coating a first batch of fibers with a first bonding composition, coating a second batch of fibers with a second bonding composition of different chemical constitution from said first bonding composition, blending said first and second batches of fibers to form a uniform mass of fibers, compacting said mass into a thin web of intermingled fibers,

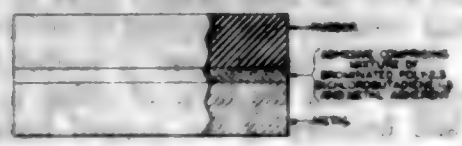
subjecting the web to heat to cause spot bonding at points where fibers of the first batch contact fibers of the second batch, and washing the web to remove the bonding compositions from non-contacting portions of the fibers, the said bonding compositions having the ability of retaining their original state with essentially no polymerization when subjected to heat in the absence of one another but having the ability to react to form a resinous copolymer when subjected to heat in presence of one another.

2,900,292

BONDING RUBBER TO METAL

Elmer W. Coleman, Jr., and Donald M. Alstadt, Erie, Pa., assignors to Lord Manufacturing Company, Erie, Pa., a corporation of Pennsylvania

Application April 29, 1955, Serial No. 505,021
29 Claims. (Cl. 154—130)



4. In the bonding of rubber to metal involving interposing between the rubber body and the metal body an intermediate phase adherable to metal and to rubber and heating the composite structure under pressure, the improvement which comprises the step of interposing between said metal body and rubber body an intermediate phase comprising brominated poly 2,3 dichlorobutadiene-1,3, brominated poly 2,3 dichlorobutadiene-1,3 being in direct contact with at least the rubber surface.

2,900,293

PROCESS FOR THE PREPARATION OF FUNGICIDES, BACTERICIDES, INSECTICIDES AND MICROBICIDES

Lawrence Herbert Nash, Belle Glade, Fla.

No Drawing. Application July 12, 1954
Serial No. 442,921
2 Claims. (Cl. 167—22)

1. The process of manufacturing a new composition of matter consisting of reacting an anhydrous mixture of alcohol and a base in carbon disulfide with ammonium hydroxide, the ammonium hydroxide and the base being in less than molecular proportions with respect to the alcohol, followed by spraying the liquid product on a water soluble metallic salt in solid anhydrous state while said anhydrous salt is being mixed in a mixing device.

2,900,294

SULFAMATE RUST ERADICANTS

Joseph B. Skaptason and Johnstone S. Mackay, Pittsburgh, Pa., assignors to Pittsburgh Coke & Chemical Company, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Application December 8, 1955
Serial No. 551,735
13 Claims. (Cl. 167—22)

1. A method of treating cereal grains from the group consisting of wheat, oats, barley and rye to protect them against rust injury, comprising applying an amine salt of sulfamic acid, said amine being selected from the group consisting of alkyl amines having 1 to 18 carbon atoms, ethylene diamine, propylene diamine, diethylene triamine, tetraethylene pentamine, benzyl amine, alkenyl amines having 3 to 18 carbon atoms, alkanol amines having 2 to 8 carbon atoms, methoxy propyl amine, ethoxy propyl amine, mono-chloro-alkyl amines having 2 to 4 carbon atoms, mono-bromo-propyl amine, amino diacetonitrile, aniline, toluidine, xylidine, N-methyl aniline, N,N-diethyl aniline, phenylene diamine, naphthyl amine, morpholine, pyridine, quinoline, pyrrolidine, melamine, picoline, lutidine, triethyl melamine, monophenyl melamine, triphenyl melamine and cyclohexyl amine to the growing plant in an amount effective to control rust.

2,900,295

METHOD OF TREATING NEMATODES WITH THIOUREA AND SUBSTITUTED-THIOUREA COPPER COMPLEXES

Bobbie D. Stone, Miamisburg, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application April 17, 1957
Serial No. 653,294
6 Claims. (Cl. 167—22)

1. The method of controlling nematodes which comprises exposing said nematodes to a toxic quantity of a nematocidal composition comprising as an essential active ingredient a copper (I) complex selected from the class consisting of those having 1 to 3 molecules of thiourea per copper atom, 1 to 4 molecules of ethylenethiourea per copper atom, 1 to 3 molecules of phenylthiourea per copper atom, and 1 to 2 molecules of diphenylthiourea per copper atom, said ranges specified above being inclusive of the numbers mentioned and including fractional as well as integer intermediate numbers.

2,900,296

NITROBENZOYLPHOSPHONATES

Joseph W. Baker and George A. Seal, Nitro, W. Va., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application September 18, 1956
Serial No. 610,674
7 Claims. (Cl. 167—30)

1. A nitrobenzoylphosphonate of the formula

where R represents an alkyl group containing less than three carbon atoms and R′ is selected from the group consisting of p-nitrophenyl and 3,5-dinitrophenyl.

2,900,297

FUNGICIDAL COMPOSITION AND METHOD FOR ITS PREPARATION

James C. Wygant, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application March 4, 1957
Serial No. 643,540
4 Claims. (Cl. 167—30)

1. 1,2,3,4,6,7,7-heptachloro-5-phenylbicyclo[2,2,1]-2-heptene.

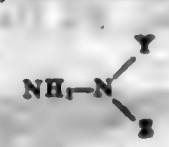
2,900,298

METHOD OF INHIBITING FUNGUS GROWTH COMPRISING THE APPLICATION OF THE REACTION PRODUCT OF A MONO-OLEFINIC ALDEHYDE AND AROMATIC HYDRAZINE

Ernest G. Jaworski, Florissant, Mo., and Van R. Gaertner, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application June 18, 1957
Serial No. 664,482
8 Claims. (Cl. 167—30)

1. The method of inhibiting fungus growth on living plants which comprises applying to the plants a fungus-inhibiting quantity of the reaction product of a mono-olefinic aldehyde selected from the class consisting of α,β-alkenals and aryl-substituted α,β-alkenals having from 3 to 14 carbon atoms, and a substituted hydrazine of the formula



in which Y is a benzenoid hydrocarbon of from 6 to 12 carbon atoms and Z is selected from the class consisting of Y, hydrogen and an alkyl radical of from 1 to 12 carbon atoms.

2,900,307

CLEAR LIQUID SOLUBILIZED LANOLIN

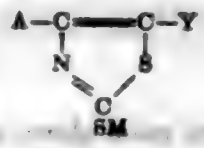
tillation in the presence of a liquid aliphatic polyol con-

2,900,299
AMINOETHYLTHIAZOLES

Marion W. Harman and John J. D'Amico, Nitro, W. Va., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application March 29, 1956
Serial No. 574,612
9 Claims. (Cl. 167—33)

1. A fungicidal composition comprising a carrier from which the active component is released by evaporation having dispersed therein a compound of the structure



where A and Y are selected from a group consisting of hydrogen, lower alkyl, lower carboalkoxy, lower alkyl carbonyl and phenyl carbamyl radicals and M represents a di-(lower alkyl) aminoethyl group.

2,900,300
METHOD AND COMPOSITION FOR PACIFYING BEES

Stewart R. Taylor, Oakwood, Ill.

No Drawing. Application April 4, 1955
Serial No. 499,215
6 Claims. (Cl. 167—39)

1. A composition of matter consisting essentially of a liquefied, normally gaseous, halogenated, low molecular weight hydrocarbon and a smoke-odor simulating component comprising from about 0.1% to about 10% by weight of a portion of the substantially anhydrous product of the destructive distillation of woody material which is soluble in said halogenated hydrocarbon.

5. A process for separating components having the pacifying effect on bees of the natural smoke of burning woody materials which comprises mixing a liquefied, normally gaseous, halogenated, low boiling hydrocarbon, having not more than two carbon atoms per molecule and containing at least one fluorine atom per molecule, with wood tar, separating the resultant solution from the insoluble portions of said tar, and maintaining said solution in liquid form.

2,900,301
ROOM DISINFECTION BY MEANS OF VOLATILE SUBSTANCES IN THE FORM OF AEROSOLS

Karl Heinz Schmidt, Bad Soden, Taunus, Germany, assignor to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Application August 26, 1955
Serial No. 530,911
Claims priority, application Germany September 1, 1954
6 Claims. (Cl. 167—39)

1. The method of killing microorganisms in room disinfection which comprises atomizing 6-chloro-3-hydroxy-4-isopropyl-toluene as the main active toxicant.

2,900,302
RODENTICIDE

John T. Correll, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application February 27, 1956
Serial No. 567,733
6 Claims. (Cl. 167—46)

1. As a rodenticidal composition, a dry food product as an edible carrier and as a toxic ingredient an effective concentration of a compound selected from the group consisting of 2-diphenylacetyl-1,3-indandione and metal, ammonia and amine salts thereof.

2,900,303
SEED TREATING COMPOSITION COMPRISING IRON OXIDE, CALCIUM CARBONATE AND A WATER-INSOLUBLE COPPER SALT

Ernest McWilliams, East Aurora, N.Y., assignor to The Stanford Seed Co., Inc., Buffalo, N.Y.

No Drawing. Application February 6, 1957
Serial No. 638,438
4 Claims. (Cl. 167—46)

1. A composition for coating seed grain to cause predator birds from consuming seed grain coated therewith, comprising a finely ground mixture passing 200 mesh of oxide of iron, calcium carbonate and a water-insoluble copper salt, the oxide of iron being from about 33 to 75 parts by weight of the composition and the calcium carbonate from about 66 to 25 parts by weight of the composition, the water insoluble copper salt being in the range of 2% to 10% by weight of the total composition.

2,900,304
GRISEOFULVIN USES AND COMPOSITIONS

Alfred Ronald Martin, Manchester, England, assignor to Imperial Chemical Industries Limited, London, England, a corporation of Great Britain

No Drawing. Application September 3, 1957
Serial No. 681,472
Claims priority, application Great Britain
September 21, 1956
14 Claims. (Cl. 167—65)

1. The process for treating man and animals having an external fungus disease which comprises internally administering to said man and animals an effective amount of griseofulvin.

2,900,305
PREPARATION OF IODINE POLYVINYL-PYRROLIDONE ADDUCTS

Sidney Siggia, Phillipsburg, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application August 9, 1956
Serial No. 603,185
13 Claims. (Cl. 167—70)

1. Process for the preparation of a polyvinylpyrrolidone-iodine composition which is stable in aqueous solution, which comprises thoroughly mixing elemental iodine and powdered 1-vinyl-2-pyrrolidone polymer containing from 4.9–13.2% water, and heating the resulting composition at a temperature of from about 90 to 100° C. until a product containing an appreciable amount of available iodine is obtained.

2,900,306
COSMETIC AND DEODORANT STICKS

Joseph Nelson Slater, Jersey City, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

No Drawing. Application March 1, 1956
Serial No. 568,938
7 Claims. (Cl. 167—90)

1. A deodorant cosmetic stick comprising a gel of a major amount of alcohol of 2 to 3 carbon atoms and a minor amount of sodium stearate sufficient to solidify said alcohol to a solid gel, a deodorant, and having incorporated therein about ½ to 5% by weight of a water-soluble soap of myristic acid effective to improve the yielding properties of said stick.

cyclohexyl amine to the growing plant in an amount effective to control rust.

of Y, hydrogen and an alkyl radical of from 1 to 12 carbon atoms.

2,900,307

CLEAR LIQUID SOLUBILIZED LANOLIN COMPOSITIONS

Ling Wei, North Bergen, N.J., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

No Drawing. Application July 5, 1957
Serial No. 669,967
16 Claims. (Cl. 167—90)

1. A process for the preparation of a clear aqueous liquid cosmetic composition containing about 0.05 to 5% by weight of lanolin and at least about 50% by weight of water which comprises admixing said lanolin under substantially anhydrous conditions with a minor proportion of at least 0.25% by weight of a higher fatty acid alkylolamide having from 8 to 18 carbon atoms in the acyl radical and up to 5 carbon atoms in each alkylol group, the ratio of said alkylolamide to lanolin being at least 1:1 by weight and sufficient to solubilize the lanolin and form a homogeneous mixture, dissolving said mixture in a sufficient amount of said water as a liquid solvent medium and forming a clear aqueous liquid cosmetic composition.

2,900,308

SOLVENT EXTRACTION APPARATUS

Charles Mistyear, Jr., Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application April 11, 1956, Serial No. 577,559
8 Claims. (Cl. 196—14.52)

1. Solvent extraction apparatus comprising a vessel, cooling means disposed in the lower region of said vessel, an inlet in said vessel through which a fluid mixture to be separated and a solvent can be introduced, a first outlet in the upper region of said vessel spaced from said inlet, a second outlet in the lower region of said vessel spaced from said inlet, a first baffle disposed generally vertically in the upper region of said vessel between said inlet and said first outlet, a mixer extending through said first baffle to permit fluid flow therethrough, a second baffle disposed generally horizontally in said vessel in engagement with the lower edge of said first baffle and extending to regions spaced from the ends of said vessel, and means to introduce solvent through said mixer into the upper region of said vessel on the side of said first baffle adjacent said first outlet.

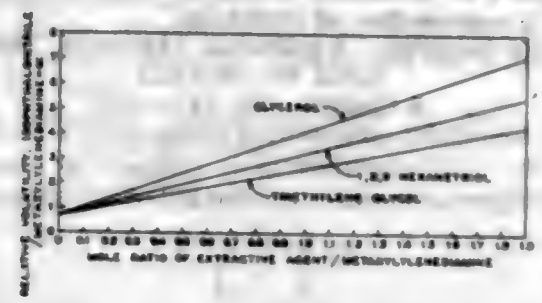
2,900,309

SEPARATION OF AROMATIC COMPOUNDS BY EXTRACTIVE DISTILLATION

Ralph S. Valentine, San Pablo, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Application August 12, 1958, Serial No. 754,669
13 Claims. (Cl. 202—39.5)

1. A process for separating xylylene diamines from a mixture comprising said diamines and aromatic nitriles which comprises subjecting said mixture to extractive distillation in the presence of a liquid aliphatic polyol containing only carbon, hydrogen and oxygen atoms, said



polyol having a boiling point above and being essentially inert to said diamines and aromatic nitriles.

2,900,310

REMOVING ω-AMINOCAPRONITRILE FROM CRUDE MIXTURES THEREOF

Johannes H. Ottenheym, Sittard, Netherlands, assignor to Stamicarbon N.V., Heerlen, Netherlands

Application December 13, 1957, Serial No. 702,660
Claims priority, application Netherlands December 21, 1956
9 Claims. (Cl. 202—42)

1. A process for recovering ω-aminocapronitrile from crude mixtures thereof with ω-caprolactam and water which comprises adding to said mixture, an inert organic solvent which forms an azeotrope with water, evaporating at least part of the water in said mixture together with said solvent and thereafter distilling the ω-aminocapronitrile from the remainder of said mixture.

2,900,311

PURIFICATION OF ACETOACETIC ESTERS BY DISTILLATION

Amelio E. Montagna, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

No Drawing. Application October 11, 1952
Serial No. 314,401
4 Claims. (Cl. 202—57)

1. In a distillation process for purifying an acetoacetic ester, the improvement consisting of rapid purification of said ester with respect to impurities with boiling points near that of the keto isomer, which comprises treating said acetoacetic ester with about 0.01 to 1.0 part for each 100 parts of the ester by weight of an alkaline substance so as to continuously supply the enolic form of the ester while vaporizing said enolic ester under reduced pressure at a temperature not higher than 100° C. and distilling the vapors thus produced over-head free of alkaline substances and the keto isomer, and allowing such distillate of enolic ester thus obtained to revert to an equilibrium mixture of the isomers.

2,900,312

FRACTIONATION

Forrest E. Gilmore, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

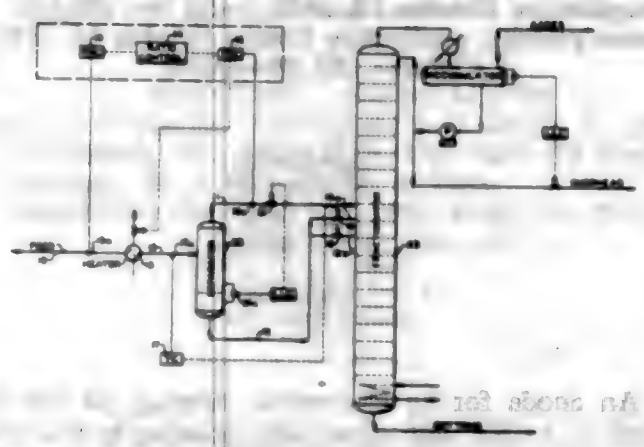
Application October 16, 1957, Serial No. 690,570
4 Claims. (Cl. 202—160)

1. A vapor-liquid fractionating apparatus comprising, in combination, a fractionator tower having an overhead vapor discharge pipe and a bottoms liquid draw-off pipe, a vapor-liquid separator tank, a vapor pipe from said tank to said tower, a liquid feed pipe from said tank to said tower, at least one branch on said liquid feed pipe to said tower, a liquid level controller operatively installed in said tank, a vapor flow control valve in said vapor pipe from said tank to said tower operatively connected and responsive to said liquid level controller, a

trically insulative filling disposed between said wire electrode and the inside of said tubular electrode with surface

above and in contact with the anode the chlorine gas evolved at the surface of the anode in contact with the

liquid flow control valve in each of said liquid feed pipe from said tank to said tower and in said branch of said feed pipe, a liquid-vapor feed pipe for feeding fractionation feed to said tank, a flow rate detector, a heater and a thermoresponsive element in said last-mentioned pipe, said thermoresponsive element being connected to a temperature controlled valve actuator, said actuator being connected to each of said valves in said liquid feed pipe from said tank to said tower and said branch of said feed



pipe, a vapor flow rate detector in said vapor pipe from said tank to said tower, a flow controller operatively connected to said vapor flow rate detector and to said heater, a flow recorder controller, a ratio controller, said last two controllers being operatively connected to said flow controller operatively connected to said flow rate detector in said pipe for feeding fractionation feed to said tank to reset same responsive to flow detected by said flow rate detector last mentioned.

2,900,313

ADDITION MATERIALS FOR IMPROVING PLATING SPEEDS

Edward B. Saubestre, Elmhurst, and Edward P. Bolan, Flushing, N.Y., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

No Drawing. Application March 6, 1956
Serial No. 569,679

1. A process for plating of metals from an alkaline plating bath including cyanide ion and hydroxide ion, which comprises increasing the speed of operation of said bath by adding to said bath an addition agent, said addition agent consisting of ammonium molybdate in a concentration of one to three ounces per gallon of said bath and at least one ingredient selected from the group consisting of gelatine in the range of from one-eighth to one-half ounce per gallon of bath and glycerine in the range of from one to two ounces per gallon of bath and passing current through said bath at a current density in the range from 80 to 225 amperes per square foot of cathode.

2,900,314

BRIGHT PLATING SOLUTION AND METHOD

Edward B. Saubestre, Elmhurst, N.Y., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Application March 6, 1956, Serial No. 569,683
10 Claims. (Cl. 204—43)

1. A process for producing a solderable, bright zinc-tin deposit by electrodeposition from a zinc-tin plating bath containing cyanides and hydroxides which consists in adding to said bath only the following: gelatin and ammonium molybdate, each of said additives being present in a concentration of between one-eighth to two ounces per gallon.

2,900,315

SHEATHED TUBE AND APPARATUS AND METHOD OF PRODUCTION THEREOF

Lee A. Oldinger, Los Angeles, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application December 15, 1952, Serial No. 326,035
7 Claims. (Cl. 204—193.2)

1. As an article of manufacture a uranium tube having a close fitting covering comprising a tube of aluminum covering the inner surface of said tube, both ends of said tube, and the entire outer surface of said tube, the ends of said aluminum tube being joined together.

3. The method of covering a tube having an inner and an outer surface comprising fitting a second tube of deformable material over one of said surfaces so that the second tube extends beyond an end of the first tube, directing the ends of said second tube around the ends of said first tube and over the entire other surface of said first tube, and joining the ends of said second tube together.

2,900,316

REACTOR CONTROL DEVICE

Harold B. Kaufmann, Jr., New York, N.Y., and Albert Weiss, Whitehall Borough, Pa., assignors to the United States of America as represented by the United States Atomic Energy Commission

Application October 17, 1955, Serial No. 541,108
5 Claims. (Cl. 204—193.2)

1. A device for controlling neutronic reactivity within the active portion of a neutronic reactor comprising a series of hollow neutron-absorbing elements, said elements having cavities therein to permit substantially a coextensive engagement therebetween, and a common longitudinal member for slidably supporting said elements, said member being effective in response to actuation to distribute the elements along its entire length throughout the reactor, whereby maximum control is exerted over neutron generation.

2,900,317

COULOMETRIC REAGENT GENERATION

Frederick A. Keidel, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application May 3, 1955, Serial No. 506,597
2 Claims. (Cl. 204—195)

1. A coulometric gaseous reagent generating apparatus comprising in combination an exposed wire electrode, a tubular electrode having an inside diameter substantially greater than the outside diameter of said wire electrode disposed in concentric relationship with respect to said wire electrode, a self-supporting unitary non-porous elec-

negative pointed electrode, first and second roller means mounted outside said bath, a first continuous web carried

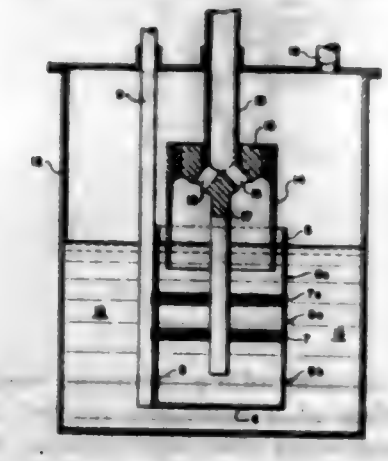
2,900,323

LUBRICATING OIL CONTAINING A WAX POUR

trically insulative filling disposed between said wire electrode and the inside of said tubular electrode with surface exposed adjacent exposed surfaces of said wire and tubular electrodes, a hygroscopic substance which is electrically conductive only when wet coated on said exposed surfaces and bridging the span between said electrodes, a direct current power source of voltage sufficient to electro-

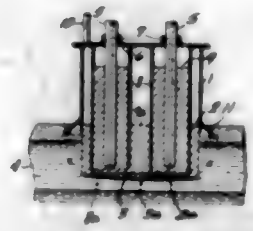
lyze water and dissolved materials absorbed in said hygroscopic substance connected across said electrodes, and current measuring means connected in circuit with said power source and said electrodes for measuring quantitatively said gaseous reagent generated as a function of the current delivered by said power source in the course of electrolysis of the absorbate in said hygroscopic substance.

2,900,318
ELECTROLYZING DEVICE
Earl W. Andrews, Sintington, Pa., assignor to The New Jersey Zinc Company, New York, N.Y., a corporation of New Jersey
Application November 29, 1955, Serial No. 549,765
6 Claims. (Cl. 204—246)



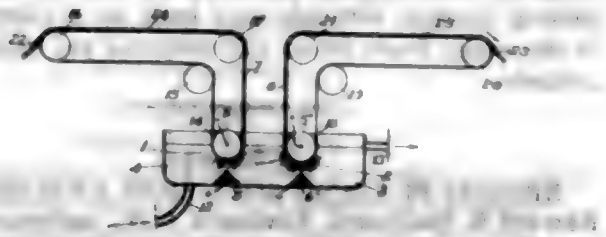
6. An electrolytic cell for producing metallic titanium by electrolysis of a titanium chloride contained in a fused halide salt bath, the cell comprising enclosing walls adapted to hold a body of the fused bath, there being suspended in the fused salt an electrolyzing device capable of being used as a diaphragm and as a combined diaphragm and deposition cathode and comprising an open-topped vessel composed essentially of impervious sections and at least one pervious screen-like section, all of electrically conductive material, each pervious section of the vessel being bordered by impervious sections thereof so that fluid communication between portions of the fused salt bath separated solely by the walls of the vessel is possible only through a pervious section thereof, an electronegative connection to said device, an anode supported in the fused salt bath within the interior of said device, barrier means for maintaining separation of the portions of the cell atmosphere above the bath on opposite sides of the side walls of said electrolyzing device, discharge means for discharging from the portion of the cell atmosphere above and in contact with the anode the chlorine gas evolved at the surface of the anode in contact with the bath, and delivery means for supplying titanium tetrachloride to the other portion of the cell atmosphere.

2,900,319
DISSOCIABLE GASEOUS HYDROCARBON ANODE FOR IGNEOUS ELECTROLYTIC FURNACES, PARTICULARLY FOR ALUMINUM-MAKING
Louis Ferrand, Paris, France
Application October 14, 1957, Serial No. 690,860
Claims priority, application France October 19, 1956
7 Claims. (Cl. 204—284)



1. An anode for an electrolytic furnace, of the type adapted to be fed with dissociable gaseous hydrocarbon and immersed in the furnace electrolyte, which comprises a stationary metal casing consisting of a vertical cylinder open at the bottom, a fluid-tight horizontal plate closing the top of said metal casing, a porous anodic mass enclosed in said casing, metal studs disposed vertically in said casing and extending through said horizontal plate in a fluid-tight manner, said metal studs being formed with an axial passage adapted to supply at the lower end of said studs a gaseous hydrocarbon under pressure, said studs also serving as means for supporting the anodic mass and as current lead-in terminals, a cylindrical metal sheath secured to said horizontal plate and surrounding each of said studs, the level of the anodic mass in each sheath being considerably higher than that of the anodic mass included outside said sheaths, the length of said sheaths being slightly greater than that of said studs, said porous anodic mass surrounding and extending below the lower open ends of said studs and sheaths.

2,900,320
SOLID SEPARATION BY ELECTROPHORETIC MEANS
Kenneth Archibald Metcalfe, Graymore, and Robert John Wright, South Paynehams, Australia, assignors to Commonwealth of Australia care of the Secretary of the Department of Supply, Melbourne, Victoria, Australia
Application July 5, 1957, Serial No. 670,286
Claims priority, application Australia July 9, 1956
1 Claim. (Cl. 204—300)



Apparatus for separating solid material from a liquid dispersion thereof, comprising a container having an inlet in the bottom thereof through which said liquid dispersion is introduced to form a bath in said container and an outlet, a positive pointed electrode and a negative pointed electrode disposed between said inlet and outlet in the bottom of said container, a first negatively charged roller disposed opposite said positive pointed electrode and a second positively charged roller disposed opposite said

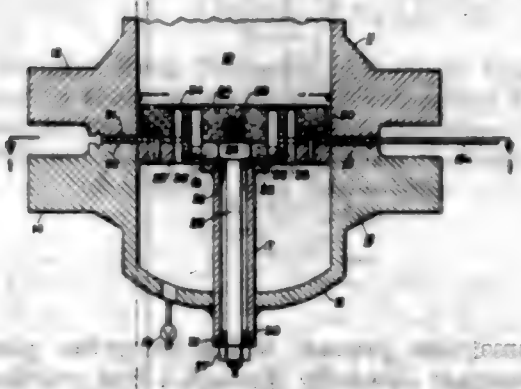
negative pointed electrode, first and second roller means mounted outside said bath, a first continuous web carried on said first charged roller and on said first roller means through said bath, a second continuous web carried on said second charged roller and said second roller means through said bath, scrapers mounted adjacent said first and second roller means and engaging each web, whereby positive and negative charged solid material deposited on said first and second webs, respectively, is removed therefrom by the scrapers.

2,900,321

ELECTRIC ARC REACTOR

Don J. Wangelin, Barrington, and Edgar C. Bowen, Woodstock, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Application December 23, 1955, Serial No. 555,132
3 Claims. (Cl. 204—323)



1. A tubular reactor employed in the electropyrolytic conversion of organic liquids where, in said conversion, reaction temperatures are produced by means of transient electric arcs created between mobile granular electrodes superimposed in a shallow layer on an electrically energized fixed electrode assembly, which comprises an upper section and a removable lower section fitted thereto, forming a joint, the terminal end of each section being capped with a suitable closure, a re-entrant flange laterally depending from the inner wall of said reactor adjacent to said joint, a fixed electrode assembly comprising a first electrode and a second electrode, said first electrode being superposed on said flange and having a perimetric side coextensive with the inner wall of said reactor and an opposed inner side, forming an internal opening in said first electrode, a second electrode having substantially the same geometric configuration as said opening, mounted within said opening in spaced relation from said first electrode to provide a smooth-walled passage of uniform width between said first and second electrode, the upper surfaces of said electrodes being substantially coplanar, said second electrode being supported in position by an electrode support mounted in the lower section of said reactor, an electrically nonconducting baffle resistant to incremental changes in electrical conductivity disposed in an intermediate position between said electrodes, in a fixed spaced relation with each of said electrodes, and defining slots adjacent to each electrode of a size permitting fluid flow of triturate material therethrough without permitting the passage of granular aggregate, said slots being substantially narrower in width than the width of said baffle, the top surface of said baffle being positioned substantially flush with the adjacent top surfaces of said electrodes, the upper portion of said baffle being rectangular in cross section, having a thickness of not more than about one-fourth the thickness of said adjacent electrodes, and electrical conductor means for interconnecting said electrodes to a power network.

2,900,322

LUBRICATING OIL CONTAINING A WAX POUR POINT AND CLOUD POINT SUPPRESSER

Herman J. Zoeller, Union, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application August 6, 1956
Serial No. 602,441
4 Claims. (Cl. 208—19)

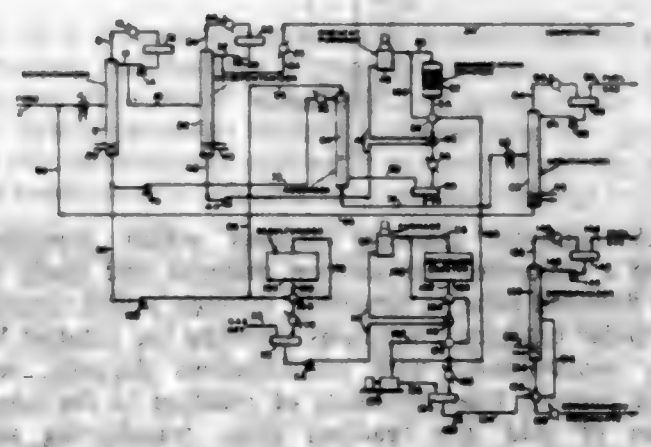
1. A hydrocarbon oil to which has been added as a haze and cloud point suppressor from about 0.001% to about 0.02% by weight of a petroleum wax composition melting in the range between about 100° F. and about 118° F., said composition containing about 45 to 55 mol. percent of normal paraffin waxes, about 15 to 25 mol. percent of isoparaffin waxes, and about 15 to 25 mol. percent of naphthenic waxes.

2,900,323

UPGRADING OF A NAPHTHA WITH THE RECYCLING OF THE HYDROGEN PRODUCED IN THE REFORMING STAGE

James L. Patton, Ramsey, George W. Stanford, Linden, and William P. Burton, Little Silver, N.J., assignors to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

Application November 26, 1954, Serial No. 471,253
10 Claims. (Cl. 208—63)



1. A combination catalytic reforming and catalytic isomerization process which comprises separating a light hydrocarbon oil rich in normal paraffins in a first separation zone from a hydrocarbon feed suitable for reforming, effecting a further separation of a stream rich in isoparaffins from said light hydrocarbon oil in a second separation zone, contacting the normal paraffin-rich oil from the second separation zone in a first reaction zone with a solid isomerization catalyst in the presence of hydrogen under conditions suitable to effect isomerization of the normal paraffins, separating a hydrogen rich stream from the isomerization zone effluent, passing the separated hydrogen rich stream containing unreacted normal paraffins, product isomers, lower and higher boiling products and hydrogen to a third separation zone wherein lower boiling products and hydrogen are removed, passing the thus separated hydrogen to a desulfurization zone passing isomerization effluent substantially free of hydrogen with the feed to the first separation zone, passing the heavy fraction from the first separation zone to a second reaction zone wherein it is contacted with a desulfurization catalyst in the presence of hydrogen separated from said isomerization effluent under conditions suitable to effect desulfurization of said heavy fraction, contacting the desulfurized material in a third reaction zone with a reforming catalyst in the presence of hydrogen under conditions suitable to produce a conversion product containing hydrogen, separating hydrogen from the reforming zone effluent and passing hydrogen separated from the reforming effluent to said isomerization zone.

portion of the latter stream to said cracking zone; raising low as room temperature, permitting the naphtha to re-

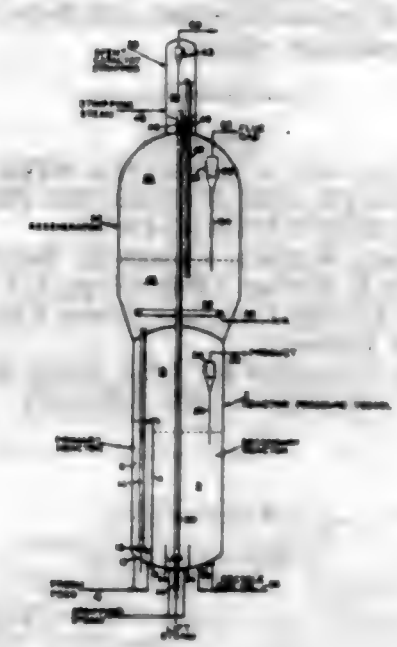
2,908,324

TWO STAGE FLUIDIZED CATALYTIC CONVERSION SYSTEM WITH MULTIPLE STRIPPING ZONES

James L. Patton, Ramsey, N.J., and George F. Tinsley, Alton, Ill., assignors to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

Application June 6, 1956, Serial No. 589,613

12 Claims. (Cl. 208—74)



9. A catalytic cracking process which comprises passing a vaporous hydrocarbon material and finely divided fluidized catalyst upwardly through a first reaction zone under cracking conditions whereby the catalyst becomes contaminated with carbonaceous deposits, separating catalyst from products of reaction in the upper portion of said first reaction zone, transferring said separated catalyst from the upper portion of said first reaction zone to the upper portion of a dense fluidized bed of cracking catalyst in a second reaction zone adjacent to said first reaction zone and in open communication with one another in the upper portion thereof, passing a vaporous hydrocarbon upwardly through said dense fluidized bed of catalyst in said second reaction zone under conversion conditions whereby the catalyst becomes spent due to carbonaceous deposits thereon, withdrawing spent catalyst from said dense fluidized bed and passing the same downwardly through a first stripping zone, partially stripping the catalyst in said first stripping zone, passing partially stripped catalyst from the lower portion of said first stripping zone upwardly as a suspension in a gaseous material through an elongated confined second stripping zone to a third stripping zone, stripping catalyst in said third stripping zone in a dense fluidized condition, passing stripped catalyst from said third stripping zone substantially vertically downwardly as a confined stream into a regeneration zone, regenerating the catalyst in said regeneration zone, passing regenerated catalyst from the lower portion of said regeneration zone substantially vertically downwardly as a confined stream through said first reaction zone to the lower portion thereof and recovering a mixture of cracked products from the first and second reaction zones as a product of the process.

10. A process according to claim 9 in which the hydrocarbon passed into said first reaction zone is fresh hydrocarbon feed and the hydrocarbon passed into said second reaction zone is recycle stock.

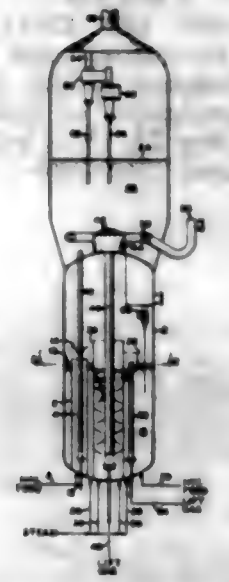
2,908,325

CONVERSION PROCESS AND APPARATUS FOR USE THEREIN

Louis F. Rice, Ridgewood, and James L. Patton, Ramsey, N.J., George F. Tinsley, East Alton, Ill., and William R. Partridge, Livingston, N.J., assignors to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

Application December 12, 1956, Serial No. 627,866

14 Claims. (Cl. 208—78)



1. A conversion process which comprises passing a chemical reactant upwardly through a first reaction zone in contact with a dilute suspension of finely divided catalytic material, separating products of reaction from said dilute catalytic suspension, passing catalytic material separated from the first reaction zone to a dense fluidized bed of catalytic material in a second reaction zone, surrounding said first reaction zone, said first and second reaction zones being in open communication with one another in the upper portion thereof, passing a chemical reactant upwardly through the dense fluidized bed of catalytic material in said second reaction zone, commingling products of the first reaction zone with those of the second reaction zone above the dense fluidized bed of catalyst in the second reaction zone, withdrawing catalytic material from the lower portion of the second reaction zone and passing the same upwardly through a first stripping zone to the upper portion of a second stripping zone within said second reaction zone, passing the catalytic material downwardly through said second stripping zone as a relatively dense bed of catalytic material, passing stripped catalytic material from the lower portion of said second stripping zone to a regeneration zone, passing regenerated catalyst to the lower portion of said first reaction zone and recovering reaction products from the upper portion of said second reaction zone.

2,908,326

CATALYTIC CRACKING PROCESS

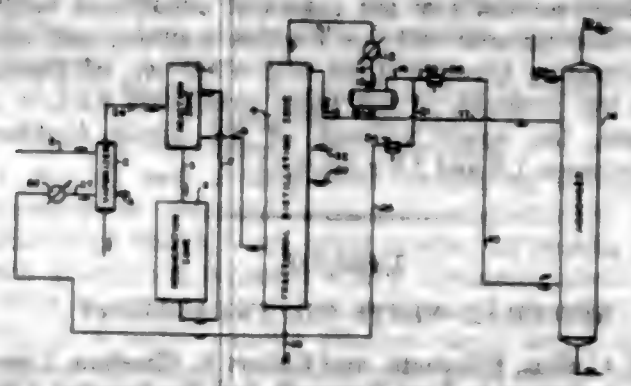
Forrest E. Gilmore, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application March 28, 1957, Serial No. 649,500

11 Claims. (Cl. 208—101)

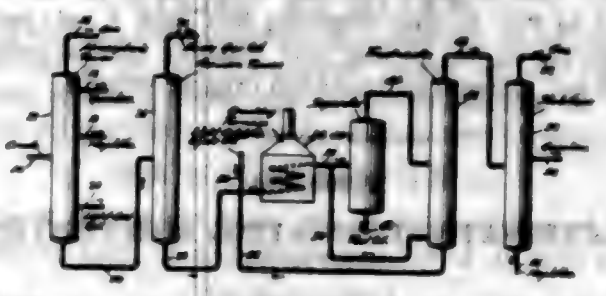
11. A process which comprises catalytically cracking a hydrocarbon in a cracking zone in the presence of a moving mass of catalyst; separating from the reaction products a low boiling gaseous fraction containing hydrogen and C_1 to C_3 hydrocarbons; splitting said fraction into two gaseous streams; raising the pressure of one of said gaseous streams and returning at least a

portion of the latter stream to said cracking zone; raising the pressure of the other of said streams to a higher



pressure than the stream returned to said cracking zone; and treating said higher pressure stream with an absorbent.

2,900,327
VISBREAKING OF REDUCED CRUDE IN THE PRESENCE OF LIGHT CATALYTIC CYCLE STOCK
Harold Bonfiglio, Penn Township, Allegheny County, Pa., assignor to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware
Application March 9, 1953, Serial No. 341,126
5 Claims. (Cl. 208—106)

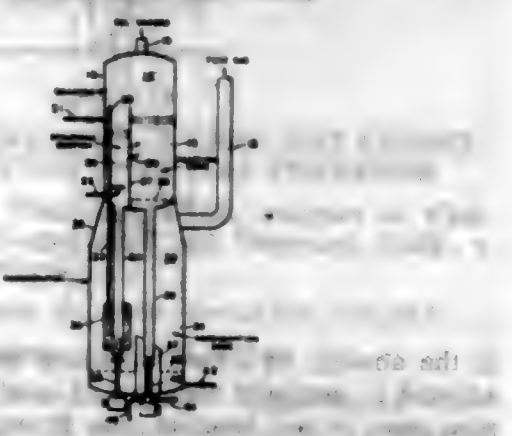


1. A process for the thermal conversion of petroleum hydrocarbons comprising vacuum distilling a petroleum oil to form a heavy residue as a bottoms product having a gravity in °API of less than 10, Conradson carbon residue number of at least 18, and an SUS viscosity at 210° F. of at least 6000, mixing the residue with a light catalytic cycle oil having a boiling range of approximately 400–650° F. to form a mixture having a ratio of residue to light catalytic cycle oil ranging from 1:2 to 6:1, heating the mixture to a temperature of 900 to 1000° F. in a short period to crack residue and light catalytic cycle oil in the mixture, separating the cracked products into fuel oil and a vapor phase, fractionating the vapor phase to produce gasoline and a recycle oil having a higher boiling range than gasoline as separate fractions, and returning recycle oil to the mixture for heating to cracking temperatures.

2,900,328
HYDROFORMING PROCESS USING ALUMINA SUPPORTED SHOCK-COOLED CATALYST
Charles H. Wernham, Fanwood, and Charles W. Starstrom, Montvale, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Application August 10, 1954
Serial No. 449,823
5 Claims. (Cl. 208—136)

4. A method of hydroforming a naphtha which comprises contacting naphtha at hydroforming conditions of temperature and pressure in the presence of hydrogen with a catalyst comprising an adsorptive form of alumina containing molybdenum oxide and made by heating said catalyst to a calcining temperature above about 1100° F. for at least 2 hours, rapidly cooling said catalyst in no more than about 50 seconds to a temperature at least as low as room temperature, permitting the naphtha to remain in contact with said catalyst under said hydroforming conditions for a sufficient period of time to effect the desired conversion and recovering a product of improved octane rating.

2,900,329
MOVEMENT OF FLUIDIZED CATALYST IN A STANDPIPE
John B. Osborne, South Orange, and James L. Patton, Ramsey, N.J., assignors to The M. W. Kellogg Company, Jersey City, N.J., a corporation of New Jersey
Application June 4, 1954, Serial No. 434,378
10 Claims. (Cl. 208—164)



2. In a hydrocarbon conversion process wherein a hydrocarbon feed material is passed in contact with a fluidized bed of catalyst to convert said hydrocarbon feed into desired products thereby contaminating the catalyst and the contaminated catalyst is stripped of volatile reaction products in a stripping zone and the stripped catalyst is removed from said stripping zone as a downwardly moving elongated confined stream of catalyst for transfer to a regeneration zone wherein catalyst contaminants are removed from the catalyst by burning in the presence of an oxygen containing gas to regenerate the catalyst and the regenerated catalyst is returned to the conversion zone, the improved method of operation to maintain a relatively dense fluidized bed of catalyst moving continuously downwardly as an elongated confined stream which comprises venting the lower portion of the elongated confined stream with said conversion zone for the separate flow of accumulated gaseous material from within the lower portion of the elongated confined stream to said conversion zone.

2,900,330
FLUIDIZED SOLIDS HYDROCARBON CONVERSION SYSTEM WITH AN IMPROVED SOLIDS TRANSFER BETWEEN THE REACTION AND STRIPPING ZONES
Joseph F. Skelly, New York, N.Y., assignor to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware
Application November 12, 1954, Serial No. 468,359
5 Claims. (Cl. 208—164)

2. In a hydrocarbon conversion process wherein a hydrocarbon reactant is passed through a dense fluidized bed of finely divided catalyst in a reaction zone to convert said hydrocarbon to desired products, thereby contaminating the catalyst with products of reaction and the contaminated catalyst is passed to a dense fluidized bed of catalyst in a stripping zone to remove products of reaction with a stripping gas and said stripping zone forms a part of said reaction zone and is separated from said hydrocarbon conversion section by a common partition in the lower portion of said reaction zone, the improved method for transferring catalyst from the dense fluidized catalyst bed employed in the reaction zone to the dense fluidized catalyst bed in the stripping zone, which comprises defluidizing a portion of the hydrocar-

bon conversion catalyst in the reaction zone adjacent to the partition, passing the defluidized catalyst downwardly along said partition and into an elongated passageway extending through said partition, into said stripping zone

in the absence of added fluidizing gas, said passageway adapted to preclude backflow of catalyst from said stripping zone to said reaction zone through said passageway and withdrawing products of reaction and stripped products of reaction from the upper portion of said reaction zone.

2,900,331

HYDROCATALYTIC DESULFURIZATION OF A MIXTURE OF STRAIGHT-RUN AND CATALYTICALLY CRACKED GAS OILS

Frederick William Bertram Porter and Ernest Carlton Housam, Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited

No Drawing. Application November 30, 1954
Serial No. 472,242
Claims priority, application Great Britain
December 10, 1953
4 Claims. (Cl. 208—214)

1. A process for the hydrocatalytic desulfurization of a petroleum feedstock consisting of a blend of catalytically cracked gas oil and straight-run gas oil, said cracked gas oil being present in said blend in an amount up to about 20% by volume, which comprises contacting the feedstock with a catalyst consisting essentially of the oxides of cobalt and molybdenum supported on alumina, said catalyst also containing fluorine in an amount of about 0.1% to about 6% by weight of the catalyst, at a temperature within the range 750 to 800° F. and at a space velocity of the liquid feedstock within the range 1 to 5 v./v./hr., separating a hydrogen-rich gas from the treated feedstock, recycling said hydrogen-rich gas to the reaction zone until the pressure therein reaches equilibrium, separating hydrogen sulfide from the treated feedstock, and recovering a treated feedstock having a reduced sulfur content.

2,900,332

HYDROCATALYTIC DESULFURIZATION OF GAS OIL

Roy Purdy Northcott and Ernest Carlton Housam, Sunbury-on-Thames, England, assignors to The British Petroleum Company Limited, London, England, a British joint-stock corporation

No Drawing. Application March 27, 1956
Serial No. 574,097
Claims priority, application Great Britain
April 6, 1955
1 Claim. (Cl. 208—216)

A process for the hydrocatalytic desulfurization of gas oil which comprises contacting the gas oil at a temperature within the range of 650° F. to 750° F. and at a pressure within the range 200–500 p.s.i. ga. with a catalyst consisting essentially of the oxides of cobalt and molybdenum incorporated with an alumina support, said catalyst containing between 0.1% and 6.0% wt. of fluorine and in the presence of not more than 2000 s.c.f./b. of hydrogen, the space velocity of the liquid feedstock being between 1.0 and 2.0 v./v./hr.

2,900,333

MINERAL WHITE OIL TREATMENT

John F. Collins, Elizabeth, and Robert V. Sheehan, Union, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application July 13, 1956
Serial No. 597,589
4 Claims. (Cl. 208—274)

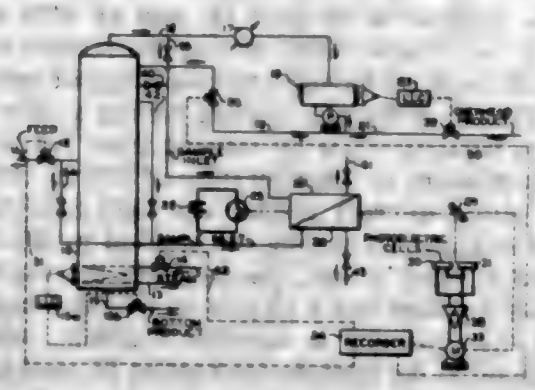
1. In a process for washing a white oil formed by sulfuric acid treatment following neutralization of the treated oil to remove color-forming organic impurities from said oil, the improvement which comprises washing said oil with about equal parts of a washing solvent formed by combining an aqueous isopropanol containing 40 to 60 vol. percent isopropanol with a low molecular weight aliphatic Oxo organic solvent which boils in the range of 56.5 to 97° C. and dissolves less than 3 vol. percent C_{20+} paraffinic oil, so that said washing solvent contains 5 to 30 vol. percent of said Oxo organic solvent.

2,900,334

FRACTIONATOR INDICATING AND CONTROL METHOD

Elmer C. Miller, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

Application July 18, 1955, Serial No. 522,681
3 Claims. (Cl. 208—350)



1. In a fractionation system wherein the efficiency of separation is controlled by adjustment of an operating variable, the steps which comprise continuously withdrawing samples from two spaced locations in the fractionation column, passing a beam of radiation capable of being refracted sequentially through the two samples, whereby said beam is deflected in accordance with the relative refraction indices of the two samples, producing an output representative of such deflection, controlling said operating variable to maintain said deflection at a constant preselected value, said spaced locations both being at a region where there is substantially no variation in the concentration gradients of the components present in the overhead product, the upper location being at a region normally free from heavy components present in the bottom product, the lower location being at a region normally containing appreciable amounts of such components.

2,900,341

2,900,344

2,900,335
OIL WELL DRILLING MUD

George T. Brewer, Chicago, Ill., and James W. Evans, Highland, Ind., assignors to American Maize-Products Company, a corporation of Maine

No Drawing. Application June 13, 1956
Serial No. 591,614
3 Claims. (Cl. 252—8.5)

1. An oil well drilling fluid comprising an aqueous suspension of colloidal clay and pregelatinized cereal starch which starch is the dried product of pasting cereal starch granules in aqueous slurry containing about 10% to 45% by weight of starch solids and about 0.1% to 3.0% of a water soluble alkaline earth metal salt by weight of the starch granules, said dried starch product having a water holding capacity equivalent to a "wall test" of less than 12.5 ml. water loss and being present in the drilling fluid in an amount sufficient to increase the water holding capacity of the fluid.

2,900,336
DRILLING FLUIDS

William E. Brown, Dallas, Tex., William J. McVeagh, Pittsburgh, Pa., and Thomas H. Wallace, Los Angeles, Calif., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Application December 28, 1956
Serial No. 629,485
6 Claims. (Cl. 252—8.5)

1. A drilling fluid comprising a solution in oil, wherein the oil is in the continuous phase, of an organic material selected from the group consisting of compounds represented by the following general formulae:

$$[RN^+H_2(CH_2)_2NH_3^+][X^-]_2$$

wherein R is selected from the group consisting of alkyl and alkene radicals and X is an anion of an acid and

$$[H_3N^+R][X^-]$$

wherein R is an alkyl radical and said latter X is an anion of an acid, the amount of said organic material present being in excess of that necessary to suspend solids originally present in the compounding of a mud prepared with said drilling fluid, said excess being sufficient to suspend in said drilling fluid solids subsequently encountered during drilling.

2,900,337
WEIGHTING MATERIAL

James W. Earley, Oakmont, and William J. McVeagh, Pittsburgh, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Application December 28, 1956
Serial No. 629,486
3 Claims. (Cl. 252—8.5)

1. Weighing material carrying an adsorbed layer of an organic material selected from the group consisting of compounds represented by the following general formulae:

$$[RN^+H_2(CH_2)_2NH_3^+][X^-]_2$$

wherein R is selected from the group consisting of alkyl and alkene radicals and X is an anion of an acid; and

$$[H_3N^+R]X^-$$

wherein R is an alkyl radical and said latter X^- is an anion of an acid, the amount of said organic material being sufficient to provide a layer covering at least about 50 percent of the surface of the individual weighting material, said weighting material being rendered oil wet as a result of carrying such layer of organic material.

2,900,338
GLASS FIBER-THICKENED GREASE COMPOSITIONS

William Postelnek, Dayton, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

No Drawing. Application May 1, 1956
Serial No. 582,854
10 Claims. (Cl. 252—13)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A lubricating composition consisting essentially of a lubricating oil thickened to a grease consistency by from 2 to 15 percent by weight of glass fibers, said fibers having a diameter less than 3 microns.

2,900,339
PROCESS FOR PREPARING LUBRICANT COMPOSITIONS AND CONCENTRATES THEREFOR

Warren Lowe, San Francisco, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Application March 13, 1958, Serial No. 721,127
10 Claims. (Cl. 252—33.4)

1. A process for producing stable dispersions of more than 0.15% by weight of terephthalic acid in a mineral lubricating oil which comprises reacting terephthalic acid with a tertiary amine selected from the group consisting of tertiary hydrocarbon amines and tertiary hydroxy alkyl amines containing a total of from 5 to 15 carbon atoms in proportions of at least 20 moles of tertiary amine per mole of terephthalic acid, combining the reaction mixture thus obtained with the mineral lubricating oil containing calcium petroleum sulfonate, which oil analyzes at least about 0.2% by weight calcium, heating the combined oil and reaction mixture to liberate the tertiary amine and separating the tertiary amine and the resulting dispersion of terephthalic acid in mineral lubricating oil.

2,900,340
ANHYDROUS CALCIUM BASE GREASES CONTAINING FREE FATTY ACID

Thomas W. Martinek and Ernest T. Fronczak, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Application December 31, 1954
Serial No. 479,244
13 Claims. (Cl. 252—40)

1. An anhydrous calcium soap grease comprising viscous mineral oil treated with sufficient sodium hydroxide to neutralize naturally occurring acids and a gelation agent, substantially all of said gelation agent in the grease, except the soap resulting from the neutralization of the naturally occurring acids present in the mineral oil, consisting of calcium soaps of mixed acids from group (1) saturated mono-hydroxy fatty acids containing from eighteen to twenty four carbon atoms per molecule, and group (2) non-hydroxy fatty acids having not more than one unsaturated linkage in the molecule and containing from eighteen to twenty four carbon atoms per molecule, the group (1) acids constituting approximately 25–75 percent by weight of the mixed acids of said calcium soaps and the group (2) acids constituting approximately 75–25 percent by weight of the mixed acids of said calcium soaps and the gelation agent being present in an amount which will produce a gelled grease structure, and free fatty acids selected from the group consisting of above-defined group (1) acids and above-defined group (2) acids and mixtures thereof in a weight ratio to said gelation agent of 0.3–1.85:20.

nitrogen gas mixtures used in ammonia synthesis to remove carbon monoxide and carbon dioxide therefrom, attributable to oxyalkylene groups in said addition product is at least 1000 and the combined weight of oxy-

2,900,341

EXTREME PRESSURE LUBRICANT ADDITIVE

Joseph Lyons, Wappingers Falls, N.Y., Otto C. Elmer, Akron, Ohio, and Robert E. Berry, deceased, late of Fishkill, N.Y., by Mary E. Berry, administratrix, Elizabeth, N.J., assignors to Texaco Inc., a corporation of Delaware

No Drawing. Application January 25, 1956
Serial No. 561,300
25 Claims. (Cl. 252—48.4)

11. An extreme pressure lubricating oil comprising a mineral lubricating oil and a minor amount of the halogen-containing product of the reaction of about 1 to 3 moles of a polyhalogenated aliphatic carboxylic acid ester wherein the acid portion has from 6 to 22 carbon atoms and the alcohol portion has from 1 to 12 carbon atoms with about 0.5 to 5 moles of a metal salt of an organic mercaptan, said metal selected from the group consisting of alkali and alkaline-earth metals, sufficient to improve the extreme pressure property of said oil.

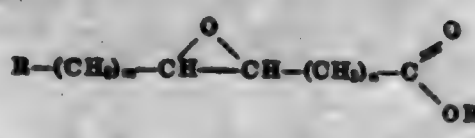
2,900,342

LUBRICANTS

Allan A. Mantonffel, Crystal Lake, George R. Cook, Des Plaines, and Warren W. Cortlin, Crystal Lake, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

Application December 18, 1956, Serial No. 629,076
8 Claims. (Cl. 252—57)

1. A lubricating oil composition, exhibiting load-carrying ability, comprising a mineral lubricating oil and from about 1.0 to about 50.0 weight percent of an epoxidized alkyl ester of an unsaturated fatty acid, said esters having the general formula



wherein R is an alkyl radical of 1 to 6 carbon atoms, *m* is an integer of from 0 to 7, *n* is an integer of from 5 to 7, and R' is an alkyl group of 1 to 8 carbon atoms.

2,900,343

MAGNETIC FLUID FOR MAGNETIC FLUID CLUTCH

Robert Lee Ray Burns, Wichita, Kans., Ralph Tilman Dasher, Jr., Mary Louise Humphries, and Jack K. Jensen, Dallas, Tex., Luther Lawrence Lyon, Jr., Wichita, Kans., Edward Gordon Perry, Dallas, Robert James Speer, Richardson, and Charles E. Earhart, Dallas, Tex., assignors to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware

No Drawing. Application June 3, 1953
Serial No. 359,444
2 Claims. (Cl. 252–62.5)

1. A magnetic fluid for magnetic fluid clutches consisting essentially of a carrier liquid including as its major ingredients a U.S.P. white oil derived from a naphthenic base stock and having a general formula of C_nH_{2n-2}, a density of around 0.874 gm./ml. at 26° C., a pour point below —30° C., a viscosity of around 126 centipoises at 26° C., a refractive index at 20° C. of around 1.4802 and an unsulfonatable residue of approximately 100%, and dodecene-1, the dodecene-1 being present in a proportion less than 30% by weight, said carrier having dispersed therein a quantity of finely divided dry iron particles of an average size of between about 3 and 10 microns and the ratio of iron to carrier oil

2,900,344

MAKING ANISOTROPIC PERMANENT MAGNETS

Andreas Leopoldus Stuyts, Age Hylke Hoekstra, Gerard Hugo Weber, and Gerhard Wolfgang Rudnick, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Application July 29, 1953
Serial No. 371,166
5 Claims. (Cl. 252—62.5)

1. A method of manufacturing a permanent magnet having a $(BH)_{max}$ value of more than 2.3×10^6 Gauss-Oersted comprising the steps, adding to a powdered mass consisting essentially of hexagonal crystals with a magnetoplumbite structure of a compound $MO.6Fe_2O_3$, in which M is a metal selected from the group consisting of barium, strontium and lead, as a recrystallization inhibitor, about 0.01 to 1% of an oxide selected from the group BaO, CaO, La_2O_3, Bi_2O_3, B_2O_3, As_2O_3 and Sb_2O_3, magnetically orienting said mass, forming said magnetically oriented mass into a body, and heating said body to a temperature of about 1150° C. to 1350° C. to form said permanent magnet.

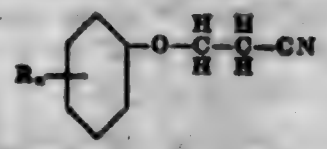
2,900,345

DIELECTRIC COMPOSITION CONTAINING A PHENOXYPROPIONITRILE

Samuel Allen Heininger, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

Application February 24, 1954, Serial No. 412,225
7 Claims. (Cl. 252—63.7)

2. A dielectric composition comprising from 9% to 90% by weight of a petroleum oil in combination with from 10% to 91% by weight of a polyalkyl phenoxypropionitrile



in which R is selected from the group consisting of hydrogen and alkyl radicals having from 1 to 18 carbon atoms, and *n* is a whole number from 1 to 3.

2,900,346

FOAMING DETERGENT COMPOSITIONS

Frederick M. Fowkes and Webster M. Sawyer, Orinda, and Martin J. Schick, Berkeley, Calif., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

No Drawing. Application February 20, 1956
Serial No. 566,338
12 Claims. (Cl. 252—161)

1. A detergent composition consisting essentially of a detergent of the group consisting of water-soluble organic secondary monosulfate and secondary monosulfonate detergents together with about 5% to about 30% by weight of said detergent of glycerol monoalkyl ether having in the alkyl group 8 to 16 carbon atoms in straight chain which is linked to the ether oxygen atom by a carbon atom not more than once removed from the end of the chain.

2,900,347

PROCESS FOR PREPARING COPPER LIQUOR FOR USE IN REMOVING CARBON OXIDES FROM AMMONIA SYNTHESIS GAS AND PRODUCT

Robert W. Foreman, Lyndhurst, Ohio, assignor to The Standard Oil Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Application May 7, 1956
Serial No. 582,923
4 Claims. (Cl. 252—182)

result of carrying such layer of organic material.

ratio to said gelation agent of 0.3–1.85:20.

nitrogen gas mixtures used in ammonia synthesis to remove carbon monoxide and carbon dioxide therefrom, the said copper liquor comprising cuprous and cupric copper ions and ammonia, the improvement which comprises initiating the dissolution of the metallic copper in aqueous ammonia solution in the presence of added copper acetate in an amount within the range from about 1 to about 20% of the total copper content of the final solution.

2,900,348

PREPARATION OF SILICA SOLS

Jacob Elston Ahlberg and Edgar A. Simpson, Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Application February 2, 1954
Serial No. 407,797
4 Claims. (Cl. 252—313)

1. A method of preparing a silica sol stable at silica concentrations up to 30% which comprises preparing an alkaline silica hydrogel by incompletely neutralizing an alkali metal silicate solution by commingling therewith less than the stoichiometric amount of acid required to neutralize the alkali in the silicate solution, washing said hydrogel with deionized water to remove soluble alkali metals salts, gradually raising the temperature of said hydrogel at a pH between 9 and 9.5 under non-evaporative conditions over a period of about 6 hours to 95°–100° C., maintaining the hydrogel at said temperature thereby converting between 98% and 100% of said hydrogel to silica hydrosol, further heat treating said hydrosol under non-evaporative conditions at a fixed temperature within the range 160°–210° C. for a period of 45–90 minutes to stabilize the micelles of the colloid against further growth, and concentrating the sol.

2,900,349

ATTRITION-RESISTANT INORGANIC OXIDE GELS AND METHOD FOR PREPARING THE SAME

Albert B. Schwartz, Philadelphia, Pa., assignor to Socony Mobil Oil Company, Inc., a corporation of New York

Application February 11, 1954, Serial No. 409,586
18 Claims. (Cl. 252—317)

1. A method for preparing an inorganic oxide gel characterized by high resistance to attrition, which comprises dispersing in an inorganic oxide sol a powdered material insoluble therein having a weight mean particle diameter of between 2 and 4 microns, effecting gelation of said sol containing powdered material and drying the resulting hydrogel at a temperature below the fusion point of said material.

2,900,350

BREAKING WATER-IN-OIL EMULSIONS

Willard H. Kirkpatrick, Sugar Land, Tex., assignor to Visco Products Company, Houston, Tex., a corporation of Delaware

No Drawing. Application February 27, 1956
Serial No. 567,728
10 Claims. (Cl. 252—331)

1. A process of breaking water-in-oil emulsions which comprises treating such emulsions with an addition product of a component from the group consisting of aldehydes and ketones and an aliphatic hydroxy compound containing a primary hydroxyl group, said addition product being further characterized by having a structure containing at least one interiorly located oxymethylene group to which is linearly attached at least one larger polyoxyalkylene chain and at least one aliphatic chain from the group consisting of aliphatic hydrocarbon chains, aliphatic oxyhydrocarbon chains, N-hydrocarbon chains and mixtures of said chains in the same molecule, with the further proviso that the average molecular weight attributable to oxyalkylene groups in said addition product is at least 1000 and the combined weight of oxyalkylene groups from the class consisting of oxymethylene and oxyethylene does not exceed the combined weight of the remainder of the molecule by a weight ratio greater than 4:1.

2,900,351

ION EXCHANGE MATERIAL

Mayer B. Goren and Ira D. Hicks, Oklahoma City, Okla., assignors to Kerr-McGee Oil Industries Inc., a corporation of Delaware

No Drawing. Application February 6, 1956
Serial No. 563,431
16 Claims. (Cl. 252—422)

1. A process for producing an activatable char comprising homogeneously incorporating a sulfuric acid reactive and extractable organic substance selected from the class consisting of phenols and amines containing not more than 10 carbon atoms in asphaltic bituminous material, reacting in particulate form each part by weight of the resultant material in the presence of ½ to 9 parts by weight of concentrated sulfuric acid at a temperature of 60–150° C. to extract at least a portion of the organic substance from the asphaltic bituminous material and produce a sulfonated product readily wet by water, raising the temperature of at least the sulfonated asphaltic bituminous material product to about 300–450° C. and heating to dryness, and charring the sulfonated asphaltic bituminous material product in the absence of elemental oxygen.

2,900,352

ANION EXCHANGE RESINS AND METHOD OF PREPARATION THEREOF

James A. Patterson, Menlo Park, and Irving M. Abrams, San Carlos, Calif., assignors to Chemical Process Company, San Francisco, Calif., a corporation of Nevada

No Drawing. Application December 28, 1955
Serial No. 555,791
18 Claims. (Cl. 260—2.1)

1. The method of making an anion exchange resin which comprises reacting a solid linear polymer selected from the group consisting of a solid linear polymer of a mono vinyl aryl hydrocarbon and a linear polymer of a mono vinyl aryl nuclear chlorinated hydrocarbon, with chlorosulfonic acid and formaldehyde to cross-link the polymer, and including a primary alcohol containing from 1 to 4 carbon atoms to introduce side chains in said polymer, there being at least one mole of chlorosulfonic acid and one mole of formaldehyde for each group in said polymer, the concentration of acid being at least 70% of the weight of acid and water present, and then treating the resultant reacted polymer with an amine whereby anion exchange groups are attached to active side chains in the polymer.

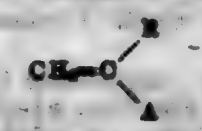
2,900,363

COMBINED ELECTRON AND ION EXCHANGE COMPOSITIONS

Harold G. Cassidy, West Haven, Conn., and Myer Ezrin, Springfield, Mass., assignors to Research Corporation, New York, N.Y., a corporation of New York

No Drawing. Application November 15, 1954
Serial No. 469,005
8 Claims. (Cl. 260—2.2)

1. The product obtained by the sulfonation of a copolymer of vinylhydroquinone with a monomer of the formula



wherein R is selected from the group consisting of hydrogen and alkyl groups containing 1 to 8 carbon atoms and A is a monovalent aryl radical.

between 5 and 70% by weight; said terpolymer having been prepared by the process which comprises mixing

2,900,354

PIGMENTED OIL-IN-WATER EMULSION TEXTILE DECORATING COMPOSITIONS YIELDING IMPROVED RESISTANCE TO ABRASIVE LAUNDERING

Laszlo Auer, South Orange, and Leslie L. Balassa, Madison, N.J., assignors, by mesne assignments, to J. R. Geigy, S.A., Basel, Switzerland, a corporation of Switzerland

No Drawing. Application February 3, 1955
Serial No. 486,835
18 Claims. (Cl. 260—21)

1. An oil-in-water emulsion having the consistency of a textile printing paste which when admixed with dispersed pigment produces textile prints with improved resistance to abrasive laundering, in which emulsion the total non-volatile resin binder content of the oil-phase ranges from about 3.5 weight percent to about 14.5 weight percent based upon the total weight of the emulsion, said emulsion comprising as sole non-volatile resin binder components (i) a thermo-settable resinous ester of a polyhydric alcohol, which is at least trihydric, formed with a long chain unsaturated fatty acid, which resinous ester is a member of the group consisting of an ester of the reaction product of p'-p-dihydroxydiphenyldimethylmethane and epichlorhydrin, an oil-modified alkyd and a styrenated oil, (ii) an elastomer, and (iii) an organic solvent soluble thermo-setting aminoaldehyde resin selected from the group of melamine-formaldehyde and ureaformaldehyde resins, said aminoaldehyde resin being present in the percentage range of from about 18 weight percent to about 35 weight percent, the resinous ester ranging from about 17 weight percent to about 37 weight percent and the elastomer content ranging from about 37 weight percent to about 57 weight percent based upon the total weight of said non-volatile resin binder components, and said elastomer being at least one member of the group consisting of copolymers of acrylonitrile and butadiene, copolymers of styrene and butadiene, ternary copolymers of acrylonitrile and butadiene and styrene, polyvinyl chloride, copolymers of vinyl chloride and vinyl acetate, polyvinylidene chloride, copolymers of styrene and acrylonitrile, polychloroprene and polyisobutylene, said emulsion containing a hydrocarbon solvent.

2,900,355

COMPOSITION CONTAINING POLY-1,1-DIHYDROXYPERFLUOROBUTYL ACRYLATE, SILICON DIOXIDE, CARBON BLACK AND CURING AGENT

Louis E. Novy, Columbus, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

No Drawing. Application November 12, 1957
Serial No. 695,995
5 Claims. (Cl. 260—28.5)

1. A polymeric rubber composition consisting essentially of 100 parts by weight of poly-1,1-dihydroperfluorobutyl acrylate, from 10 to 15 parts by weight of silicon dioxide, from 10 to 20 parts by weight of carbon black, and 1.4 parts by weight of triethylene tetramine.

2,900,356

SOLUTION COMPRISING ZINC AROMATIC POLYESTER, METHOD OF MAKING, AND WIRE COATED THEREWITH

Rudolph Paul Arndt, Muskegon, Mich., assignor to Anaconda Wire and Cable Company, a corporation of Delaware

No Drawing. Application October 9, 1956
Serial No. 614,819
15 Claims. (Cl. 260—33.4)

1. Magnet wire comprising a metallic conductor coated with a thin substantially uniform and continuous insulating film comprising a zinc polyester reaction product of (*a*) a zinc salt of an organic carboxylic acid containing not more than about ten carbon atoms, and (*b*) a substantially stoichiometric equivalent quantity of a polyester reaction product of an aromatic dicarboxylic diester and at least one aliphatic polyhydroxy alcohol containing not more than about ten carbon atoms, said polyester reaction product containing from about 5 to about 50 percent by equivalent weight of the orignal equivalent weight of carbalkoxy groups.

2,900,357

OIL EXTENDED GR-S RUBBER HAVING UNUSUAL LOW TEMPERATURE RETRACTION CHARACTERISTICS

George W. Ayers and Norman D. Williams, Chicago, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Application September 2, 1953
Serial No. 378,168
10 Claims. (Cl. 260—33.6)

1. An improved vulcanizable rubber composition comprising, a synthetic hydrocarbon polymer rubber having permanently incorporated therein a rubber extending amount of a mineral oil consisting of the raffinate phase obtained in the solvent extraction of a petroleum fraction boiling in the lubricating oil boiling range and obtained from a paraffinic base crude, said mineral oil consisting essentially of a predominant proportion of saturates and a minor proportion of second acidifins by Rostler analysis, having an average viscosity of 30–150 SUS at 210° F., and being present in said composition in an amount sufficient to improve substantially the low temperature retraction characteristics of the rubber produced upon vulcanization of the composition.

2,900,358

PROCESS FOR COMPOUNDING CONJUGATED DIENE RUBBERS WITH CYCLOTETRATHIOTETRAIMINE AND PRODUCT OBTAINED THEREBY

Bobbie D. Stone, Miamisburg, and Morris L. Nielsen, Dayton, Ohio, assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application December 12, 1956
Serial No. 627,749
15 Claims. (Cl. 260—41.5)

5. The process which comprises mixing a rubbery copolymer of at least 85% by weight of isobutylene and a conjugated diene hydrocarbon, with carbon black, and cyclotetrathiotetraimine, the proportion of the said cyclotetrathiotetraimine being from 0.1 to 3.0 parts by weight per 100 parts of the said rubber, and heating the mixture at 250° F. to 370° F., and thereafter adding sulfur, mixing, and further heating to vulcanize the said rubber.

2,900,359

INTERPOLYMERS OF ACRYLONITRILE, AN ALLYL ALCOHOL AND A STYRENE COMPOUND, PROCESS OF PREPARING SAME AND COATING COMPOSITION THEREFROM

Earl C. Chapin, Springfield, and Richard F. Smith, Ludlow, Mass., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application January 10, 1955
Serial No. 481,804
8 Claims. (Cl. 260—43)

1. A terpolymer consisting of an allyl alcohol component, a styrene component and an acrylonitrile component, the amount of allyl alcohol component in the terpolymer varying between 2 and 25% by weight, the amount of styrene component in the terpolymer varying between 20 and 75% by weight and the amount of acrylonitrile component in the terpolymer varying

2,900,364

COMPOSITIONS OF MATTER AND METHODS

setting condensation reaction product of one mol of (1)

the formula provide that the average molecular weight and A is a monovalent aryl radical.

between 5 and 70% by weight; said terpolymer having been prepared by the process which comprises mixing the allyl alcohol component, the styrene component and the acrylonitrile component together and heating the resulting mixture to a temperature of 100–250° C. under autogenous pressure; said styrene component being a member of the group consisting of styrene, ring-substituted alkyl styrenes, ring-substituted chlorostyrenes, ring-substituted alkyl chlorostyrenes and mixtures thereof; said acrylonitrile component being a member of the group consisting of acrylonitrile, methacrylonitrile and mixtures thereof; and said allyl alcohol component being a member of the group consisting of allyl and methallyl alcohols and mixtures thereof.

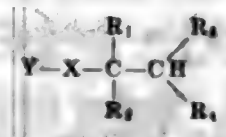
2,900,360

PROCESS FOR POLYMERIZING ETHYLENICALLY UNSATURATED COMPOUNDS USING A SULFUR CONTAINING CATALYST

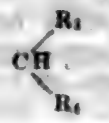
Robert Schmitz-Josten, Bergheim (Erft), Germany, assignor to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application May 24, 1955
Serial No. 510,838
Claims priority, application Germany May 28, 1954
4 Claims. (Cl. 260—45.4)

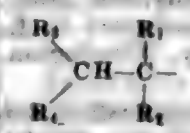
1. A process of polymerizing ethylenically unsaturated polymerizable compounds which comprises contacting said ethylenically unsaturated compounds with a polymerization catalyst comprising a compound of the formula:



in which each of R_1 and R_2 represents a member of the group consisting of hydrogen and alkyl radicals, X represents a member of the group consisting of sulfur and SO_2, each of R_3 and R_4 represents a radical selected from the group consisting of —COZ, —COOZ, —CN and SO_2Z, wherein Z is a monovalent alkyl radical and R_3 and R_4 taken together represent a cycloaliphatic ring system containing two CO-groups which latter are bonded to the carbon of the



group, and Y represents a member of the group consisting of an aryl radical, an alkyl radical, and



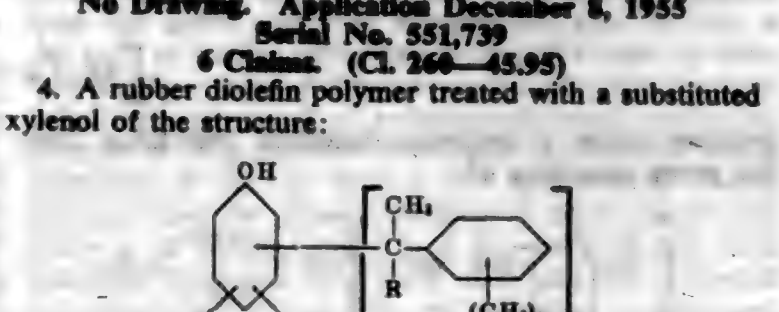
2,900,361

DIBENZOYL RESORCINOL LIGHT STABILIZER

Carl B. Havens, Hope, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application April 6, 1955
Serial No. 499,757
11 Claims. (Cl. 260—45.95)

1. A light stable composition of matter comprising an organic thermoplastic synthetic polymeric material normally subject to discoloration on exposure to light and from 0.1 to 10 percent of the weight of said thermoplastic of a dibenzoyl resorcinol compound as a stabilizer having the general formula:



wherein R_1 to R_6, inclusive, are selected from the group consisting of H, Cl, Br, F, an alkyl group having from 1–8 carbon atoms, and —$COOR_7$ where R_7 is selected from the group consisting of an alkyl group having from 1–8 carbon atoms, phenyl, monochlorophenyl, monobromophenyl, and R_6 is selected from the group consisting of R_1, benzoyl, and benzoyl substituted with R_1 and R_2; there being not over 4 bromine atoms, not over 3 fluorine atoms, and not over 3 —$COOR_7$ groups in the compound, and not over one —$COOR_7$ group attached to any benzene ring and wherein any benzoyl substituents on said dibenzoyl resorcinol compound are positioned in non-vicinal relationship.

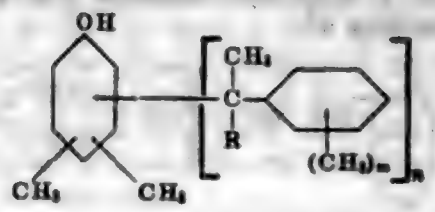
2,900,362

SUBSTITUTED XYLENOLS AS RUBBER ANTIOXIDANTS

Ronald B. Specht, Franklin Township, Portage County, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Application December 8, 1955
Serial No. 551,739
6 Claims. (Cl. 260—45.95)

4. A rubber diolefin polymer treated with a substituted xylenol of the structure:



wherein R is selected from the group consisting of H and CH_3; wherein *m* is an integer from 0 to 1; wherein *n* is an integer from 1 to 2; wherein the two methyl substituents on the xylenol ring are substituted in one of the pairs of positions (2,4), (2,5), and (3,4), and wherein the aralkyl substituents are attached through the alkylene group to the xylenol ring in ortho or para positions not occupied by said methyl substituents.

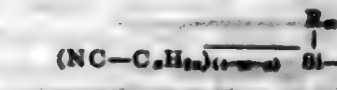
2,900,363

PREPARATION OF CARBOXYALKYL POLYSILOXANES

Ben A. Bluestein, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Application March 28, 1957
Serial No. 647,221
6 Claims. (Cl. 260—46.5)

1. The process for making carboxyalkylpolysiloxanes which comprises hydrolyzing a composition containing as an essential ingredient a cyanoalkylchlorosilane of the formula



in a hydrolyzing medium comprising concentrated aqueous hydrochloric acid of at least 20 weight percent concentration, where R is a lower alkyl radical having less than four carbon atoms, *m* is a whole number equal to from 0 to 1, inclusive, *n* is a whole number equal to from 2 to 3, inclusive, the total of *m* plus *n* being equal to at most 3, and *x* is a whole number equal to at least 2.

of a water-soluble salt of a vinyl arene sulfonic acid, and, as a solubilizing agent therefor, a glycol having a molec-

2,900,373

ETHYLENE POLYMERIZATION PROCESS

2,900,364

COMPOSITIONS OF MATTER AND METHODS FOR PREPARING THEM

David Wasserman, Irvington, N.J., assignor to Minnesota Mining and Manufacturing Company, St. Paul, Minn., a corporation of Delaware

No Drawing. Application August 29, 1955
Serial No. 531,290
10 Claims. (Cl. 260—47)

1. A novel composition of matter comprising glycidyl polyether of dihydric mononuclear phenol having nuclear alkyl hydrocarbon substituent of 14–28 carbon atoms, said polyether having an epoxide equivalency greater than 1, said composition of matter characterized as follows: a mixture of a 100 gram sample thereof and 1 gram of boron trifluoride ether complex (50% boron trifluoride) after being maintained at 120° C. for 1 hour will have been converted to the solid state infusible at 200° C.

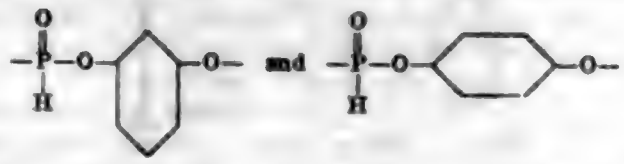
2,900,365

ORGANOPHOSPHORUS POLYMERS

Alfred Colez Haven, Jr., Haverchs Bridge, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application October 25, 1955
Serial No. 542,763
4 Claims. (Cl. 260—47)

1. A linear organophosphorus polymer having, as the polymer chain, a recurring structural unit taken from the group consisting of



and

2,900,366

RECOVERY OF COMPOUND 1,2,3,4,7,7-HEXACHLOROBICYCLO(2,2,1) - HEPTADIENE - 2,5 FROM HEXACHLOROCYCLOPENTADIENE-ACETYLENE REACTION PRODUCTS

George F. Johnson, Baytown, Clifford D. Marshall, Houston, and Richard H. Criswell, Pasadena, Tex., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

No Drawing. Application October 17, 1957
Serial No. 690,612
10 Claims. (Cl. 260—648)

1. The method of recovering 1,2,3,4,7,7-hexachlorobicyclo(2,2,1)-heptadiene-2,5 from mixtures containing 1,2,3,4,7,7 - hexachloro - bicyclo(2,2,1) - heptadiene - 2,5 in admixture with hexachlorocyclopentadiene which comprises, adding bicycloheptadiene to said mixture, heating the resulting mixture, thereby selectively reacting bicycloheptadiene with hexachlorocyclopentadiene, and separating 1,2,3,4,7,7 - hexachloro - bicyclo(2,2,1) - heptadiene-2,5 from the resulting reaction mixture.

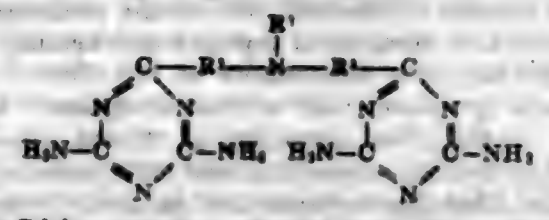
2,900,367

RESINOUS COMPOSITIONS

Tzong Jinoq Soon, New Canaan, and Yun Jen, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application December 31, 1956
Serial No. 631,416
12 Claims. (Cl. 260—47.6)

1. A composition of matter which comprises a thermosetting condensation reaction product of one mol of (1) a compound having the general formula:



in which R^1 is a member selected from the group consisting of hydrogen, alkyl, aryl, and aralkyl radicals containing up to 30 carbon atoms, R^2 and R^3 each represents an alkylene radical containing up to 30 carbon atoms, and from about one to eight mols of (2) an aldehyde selected from the group consisting of formaldehyde, acetaldehyde, propionaldehyde, butyraldehyde, benzaldehyde and furfural, wherein the condensation reaction of said (1) with said (2) is carried out at a temperature from about 40° C. to 100° C.

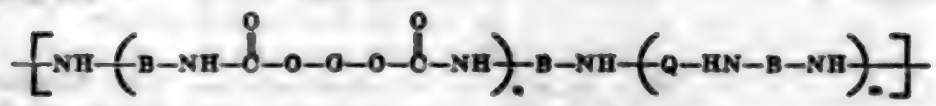
2,900,368

POLYURETHANES OF POLYALKYLENE ETHER-THIOETHER GLYCOLS

Frederic B. Stilmar, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application May 23, 1956
Serial No. 586,650
14 Claims. (Cl. 260—77.5)

1. A polymer consisting essentially of structural units having the formula



wherein O—G—O is a bivalent radical resulting from removal of the terminal hydrogen atoms from a polyalkylene etherthioether glycol having a molecular weight of at least 750, said glycol having a ratio of ether oxygen atoms to sulfur atoms of from about 1:1 to 15:1; B is a bivalent organic radical, said radical being inert to isocyanate groups; Q is a radical selected from the group consisting of a carbonyl radical and a diacyl radical; *n* is an integer greater than zero; and *m* is an integer including zero; each of the said structural units being connected to the next by a radical Q, having the significance defined; the overall ratio of the number of B to O—G—O radicals in the polymer being between 1.1:1 and 12:1 with at least 35% of the total weight of the polymer being the bivalent radicals O—G—O.

2,900,369

POLYIMIDE COMPOSITION

Walter Murray Edwards and Ivan Maxwell Robinson, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application October 11, 1955
Serial No. 539,942
3 Claims. (Cl. 260—78)

1. Poly-para-phenylene-bis-(1,1-dimethyl-5-pentamethylene) pyromellitimide characterized in that it can be cold-drawn when in the form of a melt-spun filament.

2,900,370

COPOLYMERIZATION OF VINYL ARYL SULFONATES IN THE PRESENCE OF GLYCOLS

William Kenneth Wilkinson, Waynesboro, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application December 3, 1954
Serial No. 473,856
14 Claims. (Cl. 260—79.3)

1. A homogeneous single-phase monomer blend comprising at least about 85% acrylonitrile, up to about 5%

to remove nitrogen-bound trityl, recovering S-trityl L-cysteinyl glycinate hydrochloride, dissolving said compound in methylene chloride, reacting the resulting

said adduct with from about 2% to about 50% of a phosphorus sulfide at a temperature of from about 85°

having the general formula: to at most 3, and x is a whole number equal to at least 2.

of a water-soluble salt of a vinyl arene sulfonic acid, and, as a solubilizing agent therefor, a glycol having a molecular weight less than about 7500, said blend being one which forms two phases in the absence of the said glycol.

2,900,371

METHOD OF MAKING MERCAPTOBENZOTHIAZOTHIAZYL DISULFIDE AGGLOMERATES

Donald W. Hayes, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Application July 22, 1957
Serial No. 673,144
9 Claims. (Cl. 260—79.5)

8. A method for preparing an agglomerated compounding ingredient for rubber which comprises forming an aqueous slurry of mercaptobenzothiazyl disulfide, a water-soluble, non-volatile stabilizer selected from the group consisting of sodium chloride, sodium hydroxide and potassium hydroxide, and a latex containing a maximum of 10% rubber hydrocarbon by weight and an antioxidant for the rubber portion of said latex, said latex being selected from the group consisting of natural rubber latex, polychloroprene latex, polybutadiene latex, the latices of the rubbery copolymers of butadiene and styrene and the latices of the rubbery copolymers of butadiene and acrylonitrile, and the rubber hydrocarbon content thereof having a Mooney plasticity not greater than 120, the mercaptobenzothiazyl disulfide being present in an amount of 100 parts by weight, the latex being present in an amount to provide from 4 to 10 parts rubbery hydrocarbon by weight per 100 parts of said mercaptobenzothiazyl disulfide, the water-soluble stabilizer being present in an amount of at least 25% by weight of said marcaptobenzothiazyl disulfide, water being present in said aqueous slurry in an amount so that the weight ratio of water to mercaptobenzothiazyl disulfide is at least 11.5 to 1, mixing the aqueous slurry until the rubber latex coagulates, removing excess water to reduce the total water content of the mixture to range from about 50% to about 70% by weight of the total mass, forming agglomerates of the mixture, drying and collecting the dried agglomerates.

2,900,372

ETHYLENE POLYMERIZATION WITH CATALYSTS PREPARED FROM MOLYBDENUM PENTACHLORIDE AND REDUCING COMPOUNDS

William Frank Gresham and Nikolaus George Merckling, Wilmington, Del., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application August 30, 1954
Serial No. 453,146
6 Claims. (Cl. 260—94.9)

1. Process for polymerizing ethylene which comprises reacting ethylene with the reaction product of molybdenum pentachloride and a sufficient quantity of a compound having at least one metal to hydrocarbon bond to reduce said molybdenum, said compound having at least one metal to hydrocarbon bond being selected from the class consisting of Grignard reagents, lithium aluminum tetraalkyls and tin tetraalkyls, said alkyl groups having from 4 to 18 carbon atoms, in the presence of an inert liquid hydrocarbon, at a temperature of 0° to 300° C. and a pressure of 1 to 200 atmospheres, said reaction product being employed in a quantity of 0.001 to 10% by weight of the ethylene, and recovering a solid, high molecular weight polymer of ethylene.

2,900,373

ETHYLENE POLYMERIZATION PROCESS

John W. Martin, Jr., Butler, Pa., assignor to Koppers Company, Inc., a corporation of Delaware

No Drawing. Application March 13, 1956
Serial No. 571,135
18 Claims. (Cl. 260—94.9)

1. In the process of producing a non-corrosive high molecular weight solid polymer of polyethylene by polymerizing ethylene in the presence of a catalyst in an inert solvent, said catalyst comprising a mixture of an alkyl aluminum halide and titanium tetrachloride, the improvement which comprises treating the polymer-catalyst slurry resulting from the reaction with a lower aliphatic alcohol, filtering the slurry to obtain said solid polymer, refluxing the separated polymer with an alkaline metal alkoxide of a lower aliphatic alcohol, filtering and subsequently washing the polymer with a lower aliphatic alcohol.

2,900,374

ALUMINUM HALIDE CATALYSIS OF ETHYLENE POLYMERIZATION

Robert S. Aries, New York, N.Y.

No Drawing. Application November 15, 1956
Serial No. 622,277
14 Claims. (Cl. 260—94.9)

14. The process for polymerizing ethylene which comprises bubbling ethylene into a suspension in an inert organic solvent of a complex of an aluminum halide containing from about 0.00025 moles to about 0.0067 mole per mole of aluminum halide of an activator selected from the group consisting of vanadium and titanium in the form of halides with from about 0.067 mole to about 0.20 mole per mole of aluminum halide of a hydrocarbon-substituted compound of a tetravalent metal having the formula $M(R)_n$ wherein M is selected from the group consisting of tin and lead, R is a hydrocarbon radical selected from the group consisting of alkyl and phenyl, and n is an integer from 3 to 4, the metal of said metal compound having at least three of its valences connected to hydrocarbon radicals with any remaining valences connected to halogen atoms.

2,900,375

METHOD OF MAKING GLUTATHIONE

Gaston Amiard, Noisy le Sec, Rene Heymes, Romainville, and Leon Velluz, Paris, France, assignors to UCLAF, Paris, France, a body corporate of France

No Drawing. Application December 18, 1956
Serial No. 628,975
Claims priority, application France December 23, 1955
1 Claim. (Cl. 260—112)

The method of preparing L-glutathione which comprises treating an aqueous solution of L-cysteine hydrochloride in the presence of ether and diethylamine with an excess of trityl chloride while stirring, adding chloroform, permitting the mixture to separate into two layers, recovering N,S-ditrityl cysteine in form of the diethylamine salt from the organic layer, dissolving the salt in chloroform, adding aqueous hydrochloric acid to decompose said salt, separating the mixture into two layers, recovering N,S-ditrityl L-cysteine from the chloroform layer, dissolving said compound in methylene chloride, adding a glycine ester of the group consisting of methyl, ethyl and benzyl glycinate, stirring, adding a disubstituted carbodiimide taken from the group consisting of dicyclohexylcarbodiimide, diisopropylcarbodiimide and methyl terbutylcarbodiimide as condensing agent, allowing the mixture to stand for several hours at room temperature, adding sufficient acid to destroy excess disubstituted carbodiimide, filtering, washing, recovering N,S-ditrityl L-cysteinyl glycinate from the filtrate, taking up said glycinate with acetone, treating the resulting solution at room temperature with dilute hydrochloric acid

1. A composition of matter which comprises a thermo-

to remove nitrogen-bound trityl, recovering S-trityl L-cysteinyl glycinate hydrochloride, dissolving said compound in methylene chloride, washing the resulting solution with normal ammonia and water, adding thereto the triethylamine salt of N-trityl glutamic acid prepared by dissolving dibenzyl N-trityl glutamate in ethyl acetate and hydrogenating in the presence of palladium black and triethylamine; adding one of said disubstituted carbodiimides, allowing the mixture to stand for several hours at room temperature, adding sufficient acid to destroy excess disubstituted carbodiimide, filtering, washing, recovering N,S-ditrityl L-glutathione ethyl ester, dissolving said ester in alcohol, saponifying the dissolved ester by heating with a dilute alkaline solution, recovering N,S-ditrityl L-glutathione, taking up said compound with dilute acetic acid, heating the solution on a water bath to remove nitrogen bound trityl, recovering S-trityl L-glutathione, dissolving said compound in chloroform, treating the resulting solution with gaseous hydrochloric acid to remove sulfur-bound trityl, recovering L-glutathione hydrochloride, treating an aqueous solution of said compound with an anion-exchange resin to remove the hydrochloride and recovering L-glutathione.

2,900,376

HYDROLYSIS OF PHOSPHORUS SULFIDE-HYDROCARBON REACTION PRODUCT

Albert R. Sabel, Munster, and Randel Q. Little, Jr., Hammond, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application October 31, 1955
Serial No. 544,858
6 Claims. (Cl. 260—139)

1. In the preparation of the reaction product of a phosphorus sulfide and a hydrocarbon in which the hydrocarbon is reacted with from about 1% to about 50% of a phosphorus sulfide at a temperature of from about 200° F. to about 600° F., the improvement comprising hydrolyzing the phosphorus sulfide-hydrocarbon reaction product at a temperature of from about 150° F. to about 220° F. for a period of time from about 1 to about 10 hours with at least about 10% by weight of a mixture consisting of water and from about 5% to about 90% by weight of a water soluble hydroxy compound selected from the group consisting of lower alkanols, phenyl substituted lower alkanols, phenol, alkyl substituted phenols, and mixtures thereof.

2,900,377

PHOSPHORUS SULFIDE DERIVATIVES OF HEXACHLOROCYCLOPENTADIENEPOLYOLEFIN ADDUCTS

Ellis Kirby Fields, Chicago, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application June 26, 1956
Serial No. 593,792
7 Claims. (Cl. 260—139)

1. As a composition of matter the phosphorus- and sulfur-containing reaction product of a phosphorous sulfide and an adduct of hexachlorocyclopentadiene with a polyolefin having from about 4 to about 30 carbon atoms and from 2 to about 3 double bonds, obtained by reacting said adduct with from about 2% to about 50% of a phosphorus sulfide at a temperature of from about 85° C. to about 200° C. for a time sufficient to complete said reaction and recovering the resultant reaction product.

2,900,378

PROCESS FOR MODIFICATION OF OLEFIN POLYMERS

Clark O. Miller, Willoughby, Ohio, assignor to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio

No Drawing. Application December 10, 1956
Serial No. 627,114
17 Claims. (Cl. 260—139)

1. The process of preparing phosphorus-, sulfur-, and chlorine-containing compositions which comprises adding phosphorus trichloride to a mixture of sulfur and a substantially aliphatic olefin polymer at a temperature above 140° C. but below the decomposition point of the components of the reaction mixture, the mole ratio of the total amount of sulfur used to the total amount of phosphorus trichloride used being at least 1:1 and the mole ratio of the total amount of phosphorus trichloride used to the total amount of substantially aliphatic olefin polymer used being at least 1:1.

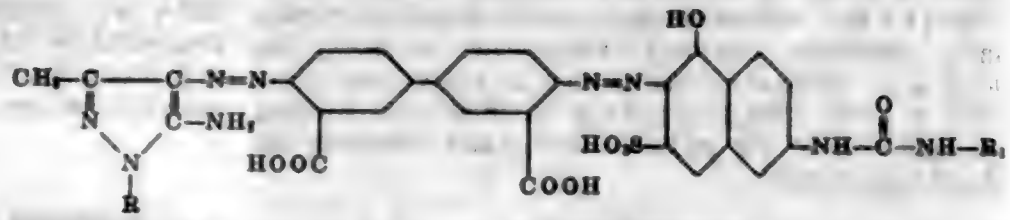
2,900,379

COPPERABLE DISAZO DYESTUFFS

Klaus Böckmann, Koln-Stammheim, and Carl Taube, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application June 25, 1957
Serial No. 667,960
Claims priority, application Germany August 16, 1956
3 Claims. (Cl. 260—161)

1. A copperable disazo dyestuff corresponding to the formula



wherein R and R_1 each stand for an aryl radical selected from the group consisting of the benzene and naphthalene series.

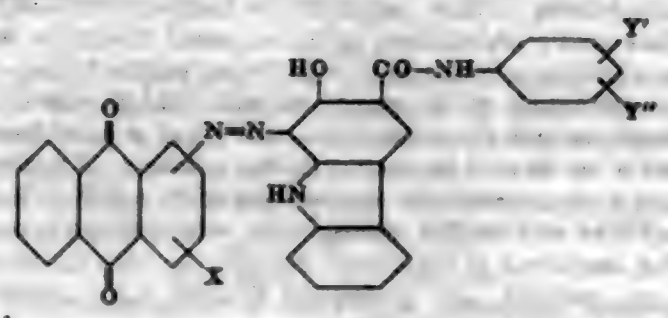
2,900,380

ANTHRAQUINONE-AZOIC PIGMENTS

Herman A. Bergstrom, Londonville, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application February 15, 1957
Serial No. 640,330
10 Claims. (Cl. 260—164)

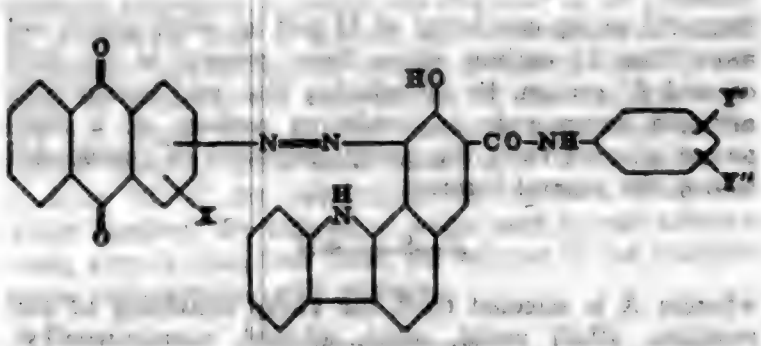
1. Insoluble pigments of the anthraquinone-azoic series selected from the group consisting of compounds of the formula



and

2,900,386

from the group consisting of H and an alkyl group, not



wherein X represents a member of the group consisting of chlorine and bromine, Y' represents a member of the group consisting of hydrogen, halogen, Y'' represents a member of the group consisting of hydrogen, halogen, lower alkyl and lower alkoxy when produced by diazotizing the leuco sulfuric acid esters of halogenated aminoanthraquinone corresponding to the diazo moiety of the pigment and coupling the same with a 2-hydroxy-3-carbazolecarboxanilide coupler corresponding to the coupling moiety of the pigment, subjecting the thus obtained product to the action of an oxidizing agent to convert it to the anthraquinoid-azoic pigment.

2,900,381

SEPARATION OF HMX FROM RDX

Donald Nixon Thatcher, Sewell, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application April 13, 1957
Serial No. 652,361

3 Claims. (Cl. 260—239)

1. In the process for the separation of cyclotetramethylenetetranitramine from its mixtures with cyclotrimethylenetrinitramine, the improvement which comprises dissolving a mixture of cyclotetramethylenetetranitramine and cyclotrimethylenetrinitramine in dimethyl sulfoxide at a temperature between about 70 and about 90° C. and thereafter adding water in an amount sufficient to initiate the precipitation of said cyclotetramethylenetetranitramine in a crystalline form characterized by low sensitivity to impact.

2,900,382

METHOD OF MAKING $\Delta^{4,6}$ STEROID COMPOUNDS FROM Δ^4 STEROID COMPOUNDS

Franz Sondheimer and George Rosenkranz, Mexico City, Mexico, assignors, by mesne assignments, to Syntex S.A., Mexico City, Mexico, a corporation of Mexico

No Drawing. Application June 25, 1953
Serial No. 364,184

Claims priority, application Mexico June 28, 1952

9 Claims. (Cl. 260—239.55)

9. A process for the production of a steroidal compound selected from the class consisting of a $\Delta^{4,6}$-3-keto cholestadiene, a $\Delta^{4,6}$-3-keto pregnadiene, a $\Delta^{4,6}$-3-keto-androstadiene and a $\Delta^{4,6}$-3-keto spirostadiene which comprises heating with manganese dioxide in an organic solvent and under reflux conditions a corresponding compound selected from the class consisting of a Δ^4-3-keto cholestene, a Δ^4-3-hydroxy cholestene, a Δ^5-3-hydroxy cholestene, a Δ^4-3-keto pregnene, a Δ^4-3-hydroxy pregnene, a Δ^5-3-hydroxy pregnene, a Δ^4-3-keto androstene, a Δ^4-3-hydroxy androstene, a Δ^5-3-hydroxy androstene, a Δ^4-3-keto spirostene, a Δ^4-3-hydroxy spirostene and a Δ^5-3-hydroxy spirostene.

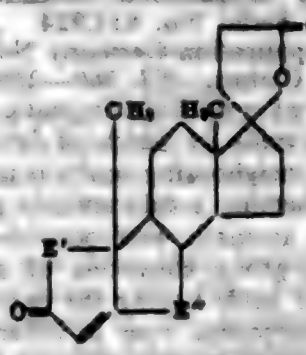
2,900,383

DEHYDRO-17α-CARBOXYETHYL-17β-HYDROXY-ANDROST-4-EN-3-ONE LACTONES

John A. Cella, Skokie, Ill., assignor to G. D. Searle & Co., Chicago, Ill., a corporation of Delaware

No Drawing. Application December 18, 1957
Serial No. 703,491
4 Claims. (Cl. 260—239.57)

1. A compound of the formula



wherein E', and E'' are selected from the group consisting of ethylene and vinylene radicals, at least one of the radicals selected being vinylene.

2,900,384

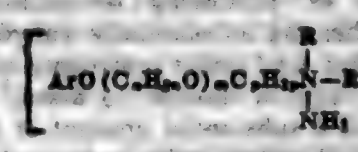
ARYLOXYALKYLHYDRAZINIUM CHLORIDES

Bernard Rudner, Baltimore, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Application May 2, 1956
Serial No. 582,085
11 Claims. (Cl. 260—247.5)

5. A new chemical compound, 4-amino-4-(3-phenoxypropyl-1)morpholinium chloride.

6. Chemical compounds having the general formula:



wherein Ar is a member selected from the group consisting of phenyl, alkyl-phenyl and alkoxy-phenyl in which the alkyl carbons of the alkyl-phenyl and alkoxy-phenyl members total less than 10; x and y are small whole numbers of at least 2 and not more than 5; m is a whole number of value less than 4; R is lower alkyl; R' is a member selected from the group consisting of lower alkyl, benzyl and chlorobenzyl; R and R' taken together with the N on which they are both substituents complete a heterocycle selected from the group consisting of pyrrolidine, piperidine and morpholine; and X is an anion of an acid stronger than carbonic acid.

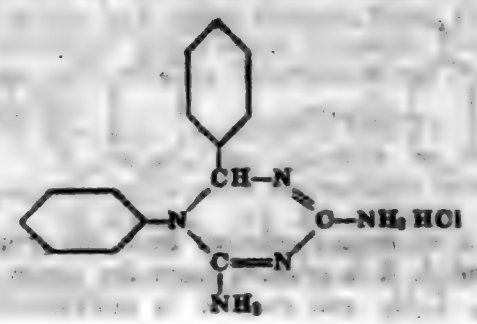
2,900,385

DIHYDROTRIAZINES AND METHOD OF MANUFACTURE

Edward J. Modest, Newton Center, Mass., assignor to Children's Cancer Research Foundation, Inc., Boston, Mass., a corporation of Massachusetts

No Drawing. Application July 10, 1956
Serial No. 596,822
2 Claims. (Cl. 260—249.9)

1. A compound having the following structure



phthalic anhydride, a copper salt and urea in the presence of a catalyst and a solvent, the improvement which

2,900,394

PREPARATION OF TETRACHLOROTHIOPHENE

Emil J. Gearing, Grand Island, N.Y., assignor to Hooker

2,900,386
PRODUCTION OF HETEROCYCLIC DICARBOXYLIC ACIDS

Bernhard Raecke, Duesseldorf, Bruno Bineer, Duesseldorf-Urdenbach, Werner Stein, Duesseldorf-Holthausen, Hubert Schirp, Duesseldorf, and Hartwig Schutt, Hagen, Westphalia, Germany, assignors to Henkel & Cie, G.m.b.H., Duesseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Application November 2, 1956
Serial No. 619,924
Claims priority, application Germany November 4, 1955
15 Claims. (Cl. 260—250)

1. The process of producing aromatic heterocyclic di- and tricarboxylic acids in which at least one carboxyl group stands in a neighboring position to a hetero-atom, which comprises heating a substantially anhydrous alkali metal salt of an aromatic heterocyclic carboxylic acid selected from the group consisting of aromatic heterocyclic dicarboxylic acids having the carboxyl groups attached to the heterocyclic ring in other than the positions of the products to be produced and aromatic heterocyclic monocarboxylic acids, the heterocyclic nucleus of said aromatic heterocyclic carboxylic acids comprising carbon atoms and at least one heteroatom selected from the group consisting of sulfur, oxygen and nitrogen, in an inert atmosphere under anhydrous conditions to a temperature above 275° C. and below the decomposition temperature of the starting material until at least one carboxyl group has changed position in comparison with the starting material, converting the aromatic heterocyclic carboxylic acid alkali metal salt formed thereby into the corresponding free aromatic heterocyclic carboxylic acid by acidifying and separating the free aromatic heterocyclic carboxylic acid so produced from the remaining reaction mixture components.

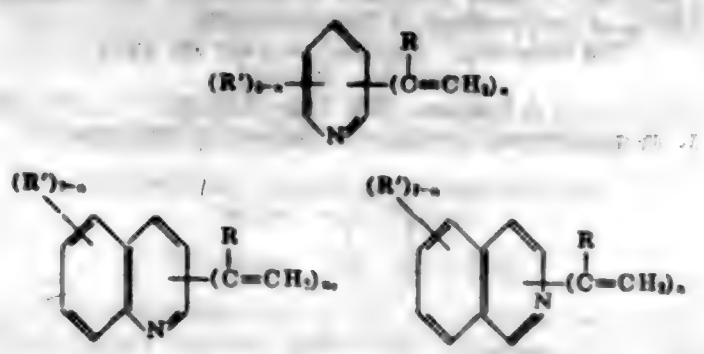
5. The process of producing isocinchomeric acid, which comprises heating substantially anhydrous potassium salt of nicotinic acid under anhydrous conditions in an atmosphere of carbon dioxide to about 330° C. to about 450° C. until a substantial amount of the dipotassium salt of isocinchomeric acid is formed, dissolving the dipotassium salt of isocinchomeric acid in water, converting the dipotassium salt of isocinchomeric acid into free isocinchomeric acid by acidifying the aqueous solution with hydrochloric acid, and separating the free isocinchomeric acid from the acidified solution.

2,900,387
STABILIZATION OF HETEROCYCLIC NITROGEN COMPOUNDS

Clyde W. Mertz, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application July 28, 1953
Serial No. 369,217
18 Claims. (Cl. 260—290)

2. A method for inhibiting the polymerization of heterocyclic nitrogen compounds selected from the group consisting of compounds having the general formula



wherein n is an integer selected from the group consisting of 1 and 2, R is selected from the group consisting of H, CH_3, C_2H_5, and each R′ is individually selected from the group consisting of H and an alkyl group, not more than 12 carbon atoms being present in the total of said R′ groups, by introducing into said heterocyclic nitrogen compounds an inhibiting amount of a compound selected from the group consisting of compounds having the general formula

$$X—S—C\equiv N$$

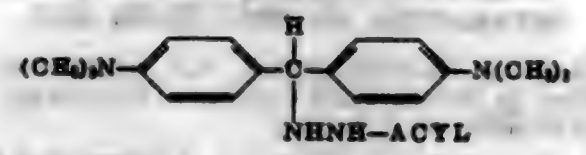
wherein X is selected from the group consisting of ammonium, alkali metal, alkyl, alkenyl, mononitroalkyl, phenyl, and nitrophenyl radicals, said alkyl, alkenyl and mononitroalkyl radicals each having up to 12 carbon atoms, and said nitrophenyl radical being selected from the group consisting of mononitrophenyl, di-nitrophenyl and tri-nitrophenyl radicals with the nitro radicals being limited to the 2, 4 and 6 positions on the phenyl radical.

2,900,388
ACYL HYDRAZINE DERIVATIVES OF BIS(4-DIMETHYLAMINOPHENYL) METHANE AND PROCESS

Jack M. Tien, Mount Vernon, N.Y.

No Drawing. Application August 8, 1957
Serial No. 677,165
28 Claims. (Cl. 260—295)

1. A compound having the structural formula



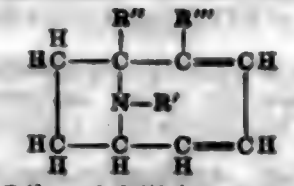
in which "ACYL" is a radical selected from the group consisting of the radicals of an alkanoic acid of from 1–20 carbon atoms, benzoyl, naphthoyl, and these aromatic radicals substituted by not more than two radicals of the group halogen, hydroxy, lower alkyl, lower alkoxy, and nitro, and pyridyl carbo, chloropyridylcarbo, and dihydroxypyridylcarbo, and thienyl carbo, and furylcarbo.

2,900,389
9-AZA-BICYCLO-[4,2,1]-NONA-2,4-DIENES

Gerhard Ottmann, Columbus, Ohio, assignor to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia

No Drawing. Application March 20, 1957
Serial No. 647,186
12 Claims. (Cl. 260—313)

1. A compound selected from the group consisting of free bases of the general formula:



wherein each of R″ and R‴ is selected from the group consisting of hydrogen, lower alkyl and phenyl and R′ is selected from the group consisting of hydrogen, lower alkyl, amino lower alkyl, hydroxy lower alkyl, lower alkoxy lower alkyl, phenyl lower alkyl and cyclohexyl; and pharmacologically acceptable acid addition salts thereof.

6. 9-aza-bicyclo-[4,2,1]-nona-2,4-diene.

2,900,390
MANUFACTURE OF COPPER PHTHALOCYANINE

Robert E. Brouillard, Westfield, N.J., and Thomas R. Tarantino, Staten Island, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application July 26, 1956
Serial No. 600,154
12 Claims. (Cl. 260—314.5)

1. In a process for preparing copper phthalocyanine by reacting together at a temperature of about 200° C.

in 3-position by an oxo group and which are at most unsaturated in ring A in the 4,5-position by means of

2,900,402
PREPARATION OF ALUMINUM ALKYLS

Δ^5-3-hydroxy spimostene.

phthalic anhydride, a copper salt and urea in the presence of a catalyst and a solvent, the improvement which comprises recovering the copper phthalocyanine by the steps of reducing the temperature of the reaction mass but not below 120° C., then forming a mixture of the cooled reaction mass with water at a temperature of at least 50° C. by pulverizing the reaction mass and water together, the volume of water used in said mixture being greater than four times the volume of the reaction mass, and agitating said mixture.

2,900,391

SYNTHESIS OF GLUTAMIC ACID

Oscar L. Norman, Northbrook, Ill., assignor to International Minerals & Chemical Corporation, a corporation of New York

No Drawing. Application September 25, 1957
Serial No. 686,018
9 Claims. (Cl. 260—326.3)

1. A process for preparing pyrrolidonecarboxylic acid which comprises subjecting a solution of a strong acid salt of Δ^2-cyclopentenylamine to contact with an ozone-containing gas until the absorption of ozone by said solution substantially ceases, cleaving the resulting ozonization product under oxidizing conditions, and recovering pyrrolidonecarboxylic acid therefrom.

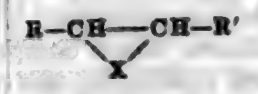
2,900,392

PREPARATION OF DITHIANES

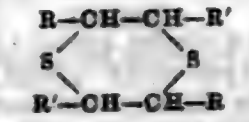
Nathaniel L. Rennes, Elgin, and William A. Krewer, Arlington Heights, Ill., assignors to The Pure Oil Company, Chicago, Ill., a corporation of Ohio

No Drawing. Application December 20, 1955
Serial No. 554,139
6 Claims. (Cl. 260—327)

1. A method for preparing substituted dithianes which comprises heating an epi-compound containing at least five carbon atoms per molecule, and having the general formula



where X is selected from the group consisting of oxygen and sulfur, R is selected from the group consisting of alkyl and aryl radicals, and R′ is selected from the group consisting of hydrogen, alkyl, and aryl radicals, with at least an equimolar amount of a compound selected from the group consisting of metal thiocyanates and ammonium thiocyanate, to a temperature in the range from about 50° to 200° C., in solution in a mutual solvent for the reactants, and recovering a dithiane of the formula



where the R and R′ groups are as hereinbefore defined.

2,900,393

PREPARATION OF 3-METHYL 1,3-PROPANE SULTONE

Edward Broderick, Philadelphia, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application December 11, 1956
Serial No. 627,573
3 Claims. (Cl. 260—327)

1. A process for making 3-methyl 1,3 propane sultone which comprises distilling crotyl sulfonic acid and collecting the distillate which comes off at a temperature between 65° and 300° C.

2,900,394

PREPARATION OF TETRACHLOROTHIOPHENE

Emil J. Geering, Grand Island, N.Y., assignor to Hooker Chemical Corporation, Niagara Falls, N.Y., a corporation of New York

No Drawing. Application December 13, 1957
Serial No. 702,548
5 Claims. (Cl. 260—332.5)

1. A process for the preparation of tetrachlorothiophene which comprises heating up to the decomposition temperature of hexachlorobutadiene, sulfur with hexachlorobutadiene.

2,900,395

PROCESS FOR THE PRODUCTION OF 2-PARADIOXANONE

Howard R. Guest, Charleston, and Ben W. Kilt, Ona, W. Va., assignors to Union Carbide Corporation, a corporation of New York

Application March 12, 1958, Serial No. 721,031
6 Claims. (Cl. 260—340.2)

1. An improvement in the production of 2-paradioxanone by the catalytic dehydrogenation of vapors of diethylene glycol at temperatures of at least 200° C., said improvement comprising conducting the process in the presence of a copper-chromium catalyst wherein the proportion of chromium to copper is between about 12 parts by weight chromium to 90 parts by weight copper and about 75 parts by weight chromium to 25 parts by weight copper.

2,900,396

OXIDATION OF 1,3 BUTADIENE TO FURAN

John Rufford Harrison, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application October 1, 1957, Serial No. 687,554
7 Claims. (Cl. 260—346.1)

1. The process for producing furan which comprises reacting 1,3-butadiene with oxygen at a temperature of 250°–550° C. in the presence of a catalyst comprising metallic (VI) oxide of a metal of group VI of the periodic system.

2,900,397

PROCESS FOR MANUFACTURING ALPHA-ANTHRAQUINONESULFONATES CONTAINING LOW AMOUNTS OF MERCURY

Robert D. Donaldson, Nixon, N.J., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application December 30, 1957
Serial No. 705,740
2 Claims. (Cl. 260—370)

1. A method of removing mercury from anthraquinonesulfonates obtained by the sulfonation of anthraquinone in the presence of mercury which comprises slurrying the potassium salt of said mercury-containing anthraquinonesulfonate in water, adding potassium iodide to said slurry in an amount of at least 4.5 molar proportions of potassium iodide to one molar proportion of mercury, boiling said slurry for a substantial period of time, whereby the mercury is solubilized in the water and recovering the potassium salt of the anthraquinonesulfonate from the water.

2,900,398

PROCESS FOR THE MANUFACTURE OF STEROID DEHYDROGENATION PRODUCTS

Albert Wettstein and Alfred Hunger, Basel, Charles Meystre, Arlesheim, and Ludwig Ehrenstein, Basel, Switzerland, assignors to Ciba Pharmaceutical Products Inc., Summit, N.J.

No Drawing. Application June 11, 1957
Serial No. 664,920
Claims priority, application Switzerland June 15, 1956
10 Claims. (Cl. 260—397.4)

1. In a process for the dehydrogenation of steroids of the pregnane, androstane and testane series substituted

yions, the mono chloro substituted phenylenes, the mono

of H, CH_3, C_2H_5, and each R' is individually selected by reacting together at a temperature of about 200° C.

in 3-position by an oxo group and which are at most unsaturated in ring A in the 4,5-position by means of selenium dioxide, the improvement wherein the dehydrogenation is carried out in the presence of mercury.

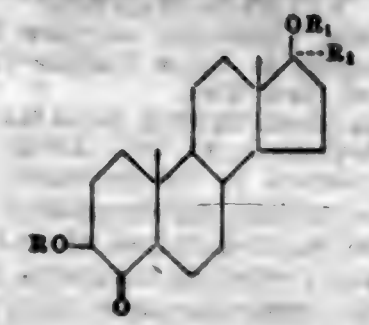
2,900,399

ANDROSTAN-3,17-DIOL-4-ONE DERIVATIVES

Percy L. Julian, Oak Park, and Helen C. Printy, Chicago, Ill., assignors to The Julian Laboratories, Inc., Franklin Park, Ill., a corporation of Illinois

No Drawing. Application July 7, 1958
Serial No. 746,689
12 Claims. (Cl. 260—397.4)

1. A chemical compound having the structural formula:



in which R is a member selected from the group consisting of hydrogen and an acyl moiety derived from a nontoxic, stable, pharmaceutically-acceptable carboxylic acid having from 1 to 7 carbon atoms; R_1 is a member selected from the group consisting of hydrogen and an acyl moiety derived from a nontoxic, stable, pharmaceutically-acceptable carboxylic acid having from 2 to 7 carbon atoms; and R_2 is a member selected from the group consisting of hydrogen, methyl and ethyl.

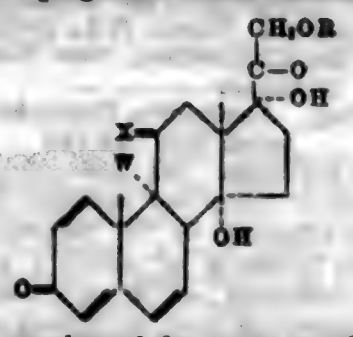
2,900,400

14α-HYDROXY PREGNATRIENES

David H. Gould, Leonia, Emanuel B. Hershberg, West Orange, and Elliot Shapiro, Irvington, N.J., assignors to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Application April 30, 1956
Serial No. 581,265
20 Claims. (Cl. 260—397.45)

1. Unsaturated pregnanes of the formula:



wherein X is a member of the group consisting of O and (H,OH); R is a member of the group consisting of H and acyl radicals of lower alkanoic acids and W is a member of the group consisting of H and halogen having an atomic number less than 53.

2,900,401

FERROCENE DERIVATIVES

William Baptist Hardy, Bound Brook, and Erwin Klingsberg, Mountainside, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application January 21, 1954
Serial No. 405,506
1 Claim. (Cl. 260—439)

A process of producing a chlorinated phthaloyl ferrocene which comprises heating an ortho-carboxybenzoyl ferrocene with titanium tetrachloride until ring closure is substantially complete.

2,900,402

PREPARATION OF ALUMINUM ALKYLS

William K. Johnson, Dayton, Ohio, assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application March 17, 1955
Serial No. 495,039
8 Claims. (Cl. 260—448)

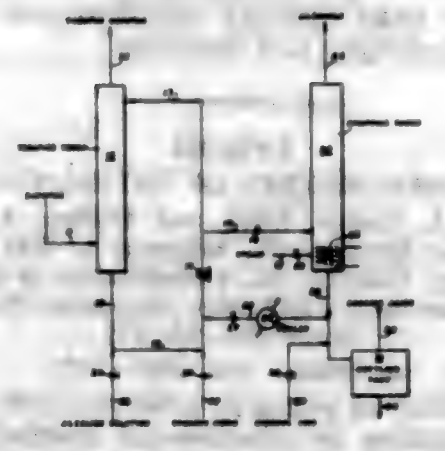
1. In the preparation of aluminum alkyls by reaction of finely divided aluminum with a mono-olefin containing the group: $CH_2{=}C<$, and hydrogen, the step of contacting at an elevated temperature and superatmospheric pressure hydrogen with a mixture of aluminum in finely divided form and said olefin, in which mixture aluminum is present in excess over that reacted.

2,900,403

REMOVAL OF OXYGENATED COMPOUNDS FROM NAPHTHA

Joseph T. Horecky and Edward F. Wadley, Baytown, Tex., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application August 29, 1956, Serial No. 606,912
5 Claims. (Cl. 260—450)



1. A method of removing carboxylic acids and alcohols from a naphtha fraction synthesized by the hydrogenation of carbon monoxide containing said carboxylic acids and alcohols in a low content which comprises contacting the hydrocarbon fraction containing said acids and alcohols at a temperature in the range of between 60° and 120° F. with an aqueous solution of a water soluble petroleum sulfonate, which comprises an aromatic petroleum sulfonate, said sulfonate being present in amount between 1 to 20 weight percent calculated as the free acid, removing the aqueous solution from contact with the hydrocarbon fraction, and recovering the hydrocarbon fraction substantially free of carboxylic acids and alcohols.

2,900,404

DIARYL DISULFIDES CONTAINING ARYL SULFONOXY GROUPS

Arthur H. Weinstein, Akron, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio

No Drawing. Application January 30, 1958,
Serial No. 712,061
3 Claims. (Cl. 260—456)

1. The diaryl disulfides containing arylsulfonoxy groups defined by the formula

$$[Ar{-}SO_2{-}O{-}R{-}Ar'{-}S{-}]_2$$

in which R is selected from the group consisting of $-(CH_2)_x-$ and $-(CH_2)_x-O-$ wherein x is a whole number from 1 to 4; Ar is an aryl radical selected from the group consisting of naphthyl, phenyl, the mono lower alkyl substituted phenyls, the mono chloro substituted phenyls, the mono bromo substituted phenyls and the mono nitro substituted phenyls; Ar' is an arylene radical selected from the group consisting of naphthylene, phen-

yleno, the mono chloro substituted phenylenes, the mono bromo substituted phenylenes and the lower alkyl substituted phenylenes.

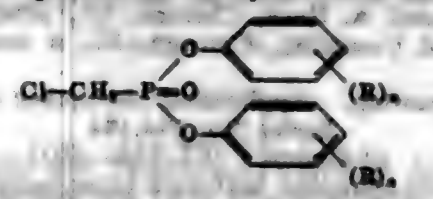
2,900,405

HALOMETHANEPHOSPHONATES

Marvin A. McCall and Richard L. McConnell, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application May 29, 1953
Serial No. 358,548
7 Claims. (Cl. 260—461)

1. New compounds of the symmetrical formula:



wherein R is selected from a single member of the group consisting of alkyl, containing 1 to 8 carbon atoms, chlorine, bromine and *n* is 1 to 2.

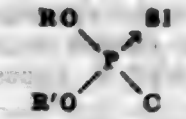
2,900,406

PREPARATION OF PHOSPHORODITHIOATE TRIESTERS

Paul W. Vogel, Warrensville Heights, and Norman A. Meinhardt, Euclid, Ohio, assignors to The Lubrizol Corporation, Wickliffe, Ohio, a corporation of Ohio

No Drawing. Application July 2, 1954
Serial No. 441,156
2 Claims. (Cl. 260—461)

1. The process of preparing triesters of phosphorodithioic acids which comprises reacting at a temperature within the range of 50–175° C. a phosphorochloridothionate having the structure



where R and R' are selected from the class consisting of cycloalkyl and alkyl radicals, with the triethyl amine salt of a dialkyl phosphorodithioic acid.

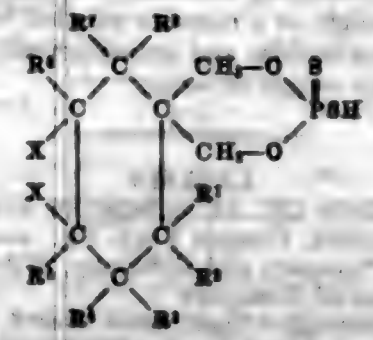
2,900,407

PRODUCTION OF SPIRO HETEROCYCLIC DITHIOPHOSPHORIC ACIDS

William M. Lanham, Charleston, W. Va., assignor to Union Carbide Corporation, a corporation of New York

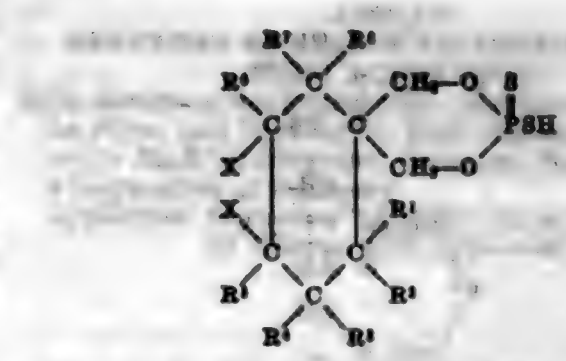
No Drawing. Application September 9, 1954
Serial No. 455,690
11 Claims. (Cl. 260—461)

1. As new compounds, spiro heterocyclic dithiophosphoric acids having structures corresponding to the formula:

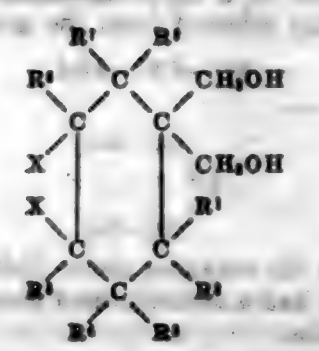


wherein R^1, R^2, R^3, R^4, R^5, R^6, R^7 and R^8, respectively, designates a radical of the class consisting of hydrogen, the chlorine, bromine, and the lower alkyl and phenyl radicals; and each X designates hydrogen and the two X's collectively represent a second bond between the adjacent carbon atoms.

8. Process for preparing spiro heterocyclic dithiophosphoric acids having the structure:



wherein R^1, R^2, R^3, R^4, R^5, R^6, R^7 and R^8, respectively, designates a radical of the class consisting of hydrogen, chlorine, bromine, and the lower alkyl and phenyl radicals; and each X designates hydrogen, and two X's collectively represent a second bond between the adjacent carbon atoms; which process comprises reacting phosphorus pentasulfide with a 1,3-diol having a structure corresponding to the formula:



wherein R^1, R^2, R^3, R^4, R^5, R^6, R^7, R^8 and X have the aforesaid meanings.

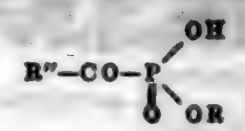
2,900,408

ACID ESTERS OF ACYL-PHOSPHOROUS ACIDS AND METHOD OF MAKING THE SAME

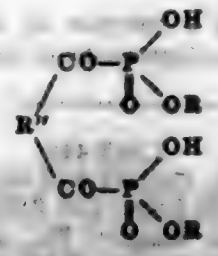
Bruno Bieser, Duesseldorf-Urdenbach, and Wilhelm Jakob Kaiser, Duesseldorf-Holthausen, Germany, assignors to Henkel & Cie. G.m.b.H., Duesseldorf-Holthausen, Germany, a corporation of Germany

No Drawing. Application May 7, 1957
Serial No. 657,496
Claims priority, application Germany May 8, 1956
18 Claims. (Cl. 260—461)

8. Acid esters of acyl-phosphorous acids having a structural formula selected from the group consisting of

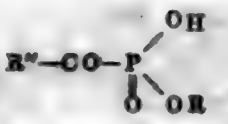


and

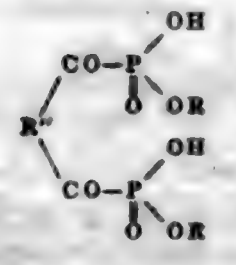


wherein R is an alkyl radical, and R'' is selected from the group consisting of mono- and di-valent saturated aliphatic and aromatic hydrocarbon radicals containing 1 to 7 carbon atoms and the radicals of saturated monovalent higher fatty acids, and the alkali metal salts thereof.

16. The process of producing acid esters of acyl-phosphorous acid having a structural formula selected from the group consisting of



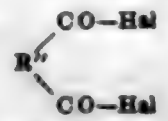
and



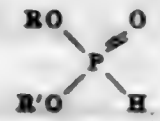
wherein R is selected from the group consisting of lower alkyl radicals with less than eight carbon atoms, and R'' is selected from the group consisting of mono- and divalent aliphatic, cycloaliphatic and aromatic radicals containing from 1 to 18 carbon atoms, which comprises heating a mixture of a carboxylic acid halide having a structural formula selected from the group consisting of

R''—CO—Hal

and



wherein R'' has the meaning above indicated and Hal is a halogen atom, and a di-substituted phosphite having the structural formula



wherein R has the meaning above indicated and R' is selected from the group consisting of lower alkyl radicals with less than 8 carbon atoms, in a ratio of 1 mol di-substituted phosphite per-CO-halide group in the carboxylic acid halide to a temperature between 50 and 150° C., and removing the lower alkyl halide formed by the reaction from the reaction mixture.

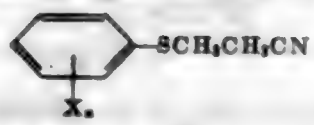
2,900,409

MITICIDAL NITRILES

Samuel Allen Heininger, Dayton, Ohio, and Eugene L. Ringwald, Decatur, Ala., assignors to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application June 25, 1956
Serial No. 593,316
5 Claims. (Cl. 260—465)

1. Halophenylthiopropionitriles of the formula



where X represents a halogen of molecular weight of from 30 to 80, and *n* represents an integer of from 1 to 5.

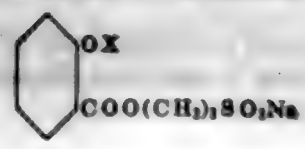
2,900,410

WATER-SOLUBLE DERIVATIVES OF SALICYLIC ACID AND PROCESS FOR PREPARING SAME

Remsen T. Schenck, Bangor, Pa., assignor to Keystone Chemurgic Corporation, Bethlehem, Pa., a corporation of Pennsylvania

No Drawing. Application March 7, 1957
Serial No. 644,486
8 Claims. (Cl. 260—474)

1. The products of the general formula



wherein X is selected from the group consisting of H and $COCH_3$.

4. In a process for preparing the sodium of γ-sulfopropyl salicylic ester the step of heating sodium salicylate with a stoichiometric proportion of propane sultone in a non-solvolytic ionizing solvent.

2,900,411

WATER INSOLUBLE PLANT HORMONE CARBOXYLIC ACID SALTS OF HIGHER ALKYL AMINES

James Harwood, Western Springs, and Robert G. Brault and Richard A. Reck, Chicago, Ill., assignors to Armour and Company, Chicago, Ill., a corporation of Illinois

No Drawing. Application November 4, 1950
Serial No. 194,184
11 Claims. (Cl. 260—501)

1. A water-insoluble herbicide comprising a salt of a plant hormone carboxylic acid with an aliphatic amine having at least 6 carbon atoms in an aliphatic hydrocarbon radical thereof.

2,900,412

OXIDATION PROCESS EMPLOYING SULFUR DIOXIDE

William G. Toland, Jr., San Rafael, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Application August 7, 1958
Serial No. 753,655
6 Claims. (Cl. 260—524)

1. A process for oxidizing a material of the group consisting of methyl-substituted aromatic hydrocarbons and aromatic carboxylic acids having at least one nuclear hydrogen replaced by a methyl group, which comprises heating said material in the absence of an inorganic base with water and sulfur dioxide to a temperature in the range from 550° to 800° F. under a superatmospheric pressure.

2,900,413

PURIFICATION OF LOWER ALIPHATIC ACIDS

Adin L. Stautzenberger and Alexander F. MacLean, Corpus Christi, Tex., assignors to Celanese Corporation of America, New York, N.Y., a corporation of Delaware

No Drawing. Application March 12, 1956
Serial No. 570,688
9 Claims. (Cl. 260—540)

1. Process for purifying an impure lower aliphatic acid containing from 2 to 4 carbon atoms which comprises heating in the liquid phase at a temperature of at least 235° C. but below the temperature at which substantial decomposition of the acid occurs for from about 1 to 20 hours a mass consisting essentially of said impure acid, 0 to 10% by weight of a member selected from the group consisting of the sodium and potassium salts of said acid and 0 to 10% by weight of water.

2,900,414

SYNTHESES OF ARYLBORON HALIDES

Earl L. Muetterties, Chadds Ford, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application June 3, 1957
Serial No. 662,971
6 Claims. (Cl. 260—543)

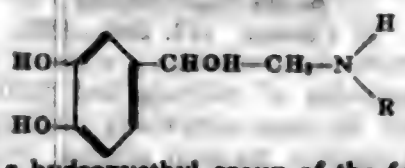
1. A process for preparing arylboron halides which comprises contacting a boron trihalide, whose halogens have an atomic number of at least 17, with an aromatic hydrocarbon having hydrogen on at least one of the annular carbons at a temperature of from about 0° to about 200° C. in the presence of a member of the group consisting of aluminum and aluminum chloride.

2,900,415
SYNTHESIZED ANTISPASMODIC COMPOUNDS

John H. Biel, Milwaukee, Wis., assignor to Laboratories, Inc., a corporation of Wisconsin

No Drawing. Application December 14, 1954
Serial No. 475,382
2 Claims. (Cl. 260—570.6)

1. A composition of the formula



wherein R is a hydroxyethyl group of the formula

$$-CH_2-CH_2OH$$

2,900,416
METHOD OF PREPARATION OF ALKYL-SUBSTITUTED PHOSPHINES

Robert D. Stewart, Whittier, and Ross L. Wagner, Pico, Calif., assignors to American Potash & Chemical Corporation, a corporation of Delaware

No Drawing. Application February 21, 1956
Serial No. 566,759
4 Claims. (Cl. 260—606.5)

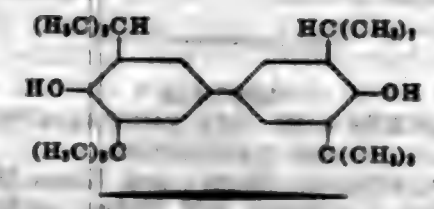
1. A process for preparing a lower alkyl substituted phosphine comprising: forming a solution of at least one member from the group consisting of sodium and lithium in a substantially inert solvent therefor; adding thereto solid phosphorus in finely divided form; placing the solution so formed under an inert atmosphere; adding sufficient water to the reaction product so formed to replace the blue color of said reaction product with a red color; thereafter adding a member selected from the group consisting of sodium and lithium in an amount of approximately one equivalent per gram atom of phosphorus present in said solution whereby to cause the re-formation of a blue color; continuing said alternate addition of metal and addition of water until said solution precipitates out a reddish material and said solution becomes yellow whereby to form a phosphinide ion; and contacting the phosphinide ion so formed with a lower alkyl halide whereby to form said phosphine.

2,900,417
3,3' - DIISOPROPYL - 5,5' - DI - TERT - BUTYL-4,4'-DIHYDROXYDIPHENYL, ITS PREPARATION AND USE

Allen H. Filbey, Royal Oak, and Thomas H. Coffield, Detroit, Mich., assignors to Ethyl Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application March 21, 1955
Serial No. 495,788
1 Claim. (Cl. 260—620)

3,3'-diisopropyl-5,5'-di-t-butyl-4,4' - dihydroxydiphenyl having the formula



2,900,418
PRODUCTION OF ALKYL PHENOLS

George Hazett and William O. Ranky, Chicago, Ill., assignors, by mesne assignments, to The Stepan Chemical Company, Chicago, Ill., a corporation of Delaware

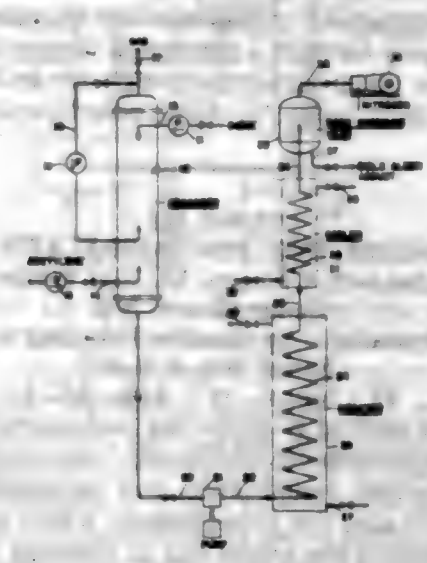
No Drawing. Application June 20, 1957
Serial No. 667,046
2 Claims. (Cl. 260—624)

1. A method of producing p-tertiary butyl phenol that comprises heating together at 200–220° F. one mol of phenol and one mol of isobutylene in the presence of iodine in an amount equal to 7–10% of the phenol.

2,900,419
REACTION OF HALOCYCLOPENTADIENES WITH ACETYLENE

John Anderson, San Pedro, Calif., and George F. Johnson, La Porte, and Norman W. Hall, Houston, Tex., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

Application September 24, 1956, Serial No. 612,347
13 Claims. (Cl. 260—648)

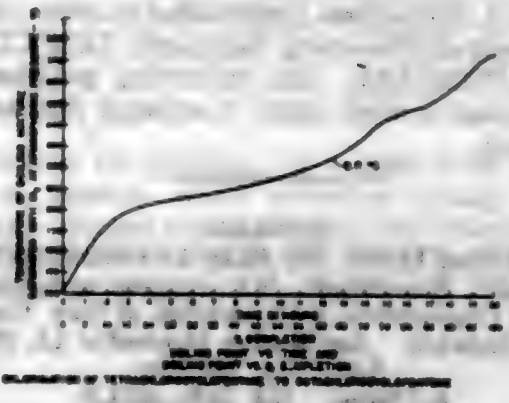


13. The process for the production of a reaction mixture comprising a halobicycloheptadiene which comprises dissolving acetylene in a halocyclopentadiene at a temperature below about 50° C. and at a pressure below about 500 p.s.i.g., compressing the resulting solution to a high reaction pressure above the partial pressure of acetylene at the temperature prevailing in the reaction zone of the process, thereafter heating said solution while at said high reaction pressure in homogeneous liquid phase in a liquid-full reaction zone maintained at a temperature of from about 75 to about 300° C., thereby reacting acetylene with said halocyclopentadiene with the formation of a reaction mixture comprising halocyclopentadiene in the absence of any substantial by-product formation.

2,900,420
PREPARATION OF POLYCHLORO-ALICYCLIC COMPOUNDS

Rex E. Lidov, Great Neck, N.Y., assignor to Shell Development Company, New York, N.Y., a corporation of Delaware

Application July 22, 1957, Serial No. 673,475
11 Claims. (Cl. 260—648)



1. A process for producing a chlorinated derivative of a monocyclic five carbon hydrocarbon in which all five carbon atoms are contained in the ring which comprises the liquid phase chlorination of cyclopentadiene at a temperature —50° and 80° C. and at a pressure lying between atmospheric and 500 pounds per square inch gauge, by adding chlorine and cyclopentadiene in

2,900,427

a mole ratio of at least seven to one to a relatively large volume of a solution which contains elemental chlorine under conditions such that the molar ratio of chlorine to tetrachlorocyclopentane in the reaction system is at least four to one, to form tetrachlorocyclopentane; the further chlorination of the tetrachlorocyclopentane, substantially in liquid phase, at a controlled temperature which increases, as the chlorination proceeds, from approximately 170° to approximately 275° C., said further chlorination being effected by causing the mixture obtained in the chlorination of cyclopentadiene to tetrachlorocyclopentane to pass through a controlled temperature reactor, at a pressure lying between atmospheric and 500 pounds per square inch gauge, to form octachlorocyclopentane.

2,900,421

INHIBITING POLYMERIZATION

Morris S. Kharasch, Chicago, Ill., and Walter Nudenberg, Cedar Grove, N.J.

No Drawing. Application February 6, 1957
Serial No. 638,427
12 Claims. (Cl. 260—652.5)

1. In that method of inhibiting undesirable polymerization of a polymerizable olefinically unsaturated monomer which comprises maintaining said monomer in contact with a nitrite salt, the improvement which comprises the step of supplying the nitrite salt in solution in an organic solvent selected from the group consisting of glycols, polyalkylene glycols, polyhydroxy-substituted hydrocarbons, alkanolamines having more than 2 carbon atoms in the alkylene group, and alkyl-subetituted phenols.

2,900,422

MANUFACTURE OF PERCHLOROFLUORO-PROPENES

Richard F. Stahl, Madison, and Cyril Woolf, Morristown, N.J., assignors to Allied Chemical Corporation, a corporation of New York

No Drawing. Application May 28, 1957
Serial No. 660,835
2 Claims. (Cl. 260—653.4)

1. The process for making an organic reaction product containing $CCl_2FCCl{=}CCl_2$ and $CClF_2CCl{=}CCl_2$ which comprises subjecting gas-phase starting material, of the group consisting of $CCl_3CCl{=}CCl_2$ and $CCl_3FCCl{=}CCl_2$, at temperatures substantially in the range of 200–375° C. and while in the presence of zirconium tetrafluoride-activated carbon catalyst to the action of anhydrous HF in quantity, depending upon the starting material employed and product desired, approaching but not substantially in excess of stoichiometric proportions, for a time sufficient to fluorinate a substantial amount of said starting material and to form a substantial quantity of organic reaction product containing dominantly $CClF_2CCl{=}CCl_2$ and $CCl_3FCCl{=}CCl_2$, and recovering perchlorofluoropropene which is more highly fluorinated than said starting material.

2,900,423

MANUFACTURE OF PERFLUOROPROPENE

Lee B. Smith, Woodbridge, N.J., assignor to Allied Chemical Corporation, a corporation of New York

No Drawing. Application December 13, 1957
Serial No. 702,536
6 Claims. (Cl. 260—653.5)

1. The process for making $CF_3CF{=}CF_2$ which comprises subjecting $CF_3CFClCF_3$ in a reaction zone to the action of hydrogen in quantity sufficient to react with a substantial amount of said $CF_3CFClCF_3$, while maintaining temperatures substantially in the range of 375–475° C. and while in the presence of a metallic copper-oxide of chromium-metallic nickel catalyst, and recovering $CF_3CF{=}CF_2$ from the resulting reaction product.

2,900,424

METHOD FOR PRODUCING ISOTOPIC METHANES AND PARTIALLY HALOGENATED DERIVATIVES THEREOF

Jack W. Fraser, Livermore, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application April 10, 1958
Serial No. 727,756
19 Claims. (Cl. 260—653)

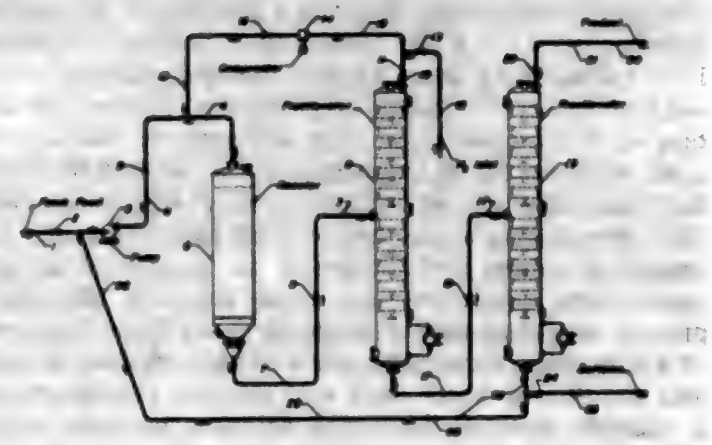
1. In a process for producing a material selected from the group consisting of methane and partially halogenated methanes, the step comprising reacting lithium hydride with a gaseous material selected from the group consisting of a halogenated methane and a halogenated methane admixed with free halogen to yield a reaction mixture containing said material.

2,900,425

ISOMERIZATION PROCESS

Herman S. Bloch, Skokie, and Vladimir Haensel, Hinsdale, Ill., assignors, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

Application August 10, 1956, Serial No. 603,409
12 Claims. (Cl. 260—666)



1. A process for the isomerization of an isomerizable saturated hydrocarbon which comprises contacting said hydrocarbon at an isomerization temperature with a catalyst comprising calcined alumina, a platinum group metal, and a Friedel-Crafts metal halide in which the halogen is selected from the group consisting of chlorine and bromine, said calcined alumina containing hydroxyl groups reactable with at least a portion of said metal halide, said catalyst having been prepared by compositing the platinum group metal with the alumina, drying the resultant composite and subsequently impregnating the dried composite with said metal halide in anhydrous form under conditions to react said hydroxyl groups and at least a portion of said metal halide with evolution of hydrogen halide.

2,900,426

PROCESS FOR THE PREPARATION OF AZULENES

Karl Ziegler, Mulheim (Ruhr), and Klaus Hafner, Marburg (Lahn), Germany; said Hafner assignor to said Ziegler

No Drawing. Application December 8, 1958
Serial No. 778,626
Claims priority, application Germany December 20, 1956
8 Claims. (Cl. 260—666)

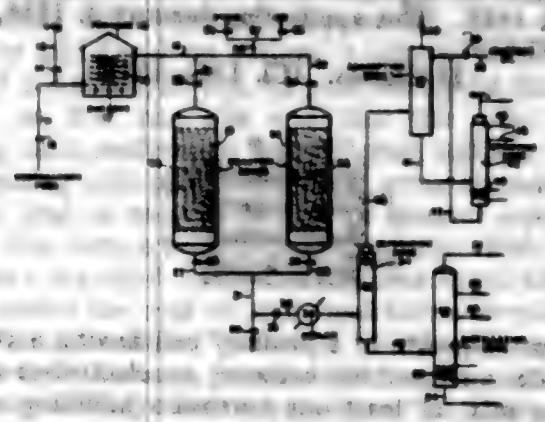
1. A method of producing azulenes which comprises reacting a member of the group consisting of the alkali and the alkaline earth metal compounds of a cyclopentadiene which is subetituted by hydrogen in at least one position adjacent to the CH_2-group with a pyrylium salt so as to form a fulvene and subjecting the fulvene thus formed to a temperature of about 0° C. to about 100° C.

2,900,427

PRODUCTION OF AROMATICS FROM PARAFFIN HYDROCARBONS

Prentiss S. Viles, Baytown, Tex., assignor, by mesne assignments, to Esso Research and Engineering Company, Elizabeth, N.J., a corporation of Delaware

Application September 28, 1956, Serial No. 612,607
12 Claims. (Cl. 260—673)



1. A method for forming aromatic hydrocarbons from paraffinic hydrocarbons of lower molecular weight which comprises forming a mixture consisting essentially of a normally liquid paraffinic hydrocarbon having a chain length sufficient to form an aromatic ring and having a boiling range up to 750° F. and sulfur dioxide in an amount within the range from about 0.5% to about 50% by weight of the mixture, contacting said mixture with a catalyst consisting of alumina-supported cobalt molybdate at a pressure from about 0 pounds absolute to about 1000 pounds per square inch gauge, at a rate from about 1 to about 500 volumes of mixture per volume of catalyst per hour and at a temperature within the range from about 800° F. to about 1600° F. to form a product containing aromatics and heavier hydrocarbons, and recovering said product.

2,900,428

HYDROCARBON SEPARATION BY COMPLEX FORMATION WITH PYROMELLITIC DIANHYDRIDE

Charles D. Heaton and William G. Toland, Jr., San Rafael, Calif., assignors to California Research Corporation, San Francisco, Calif., a corporation of Delaware

No Drawing. Application June 20, 1958
Serial No. 743,486
7 Claims. (Cl. 260—674)

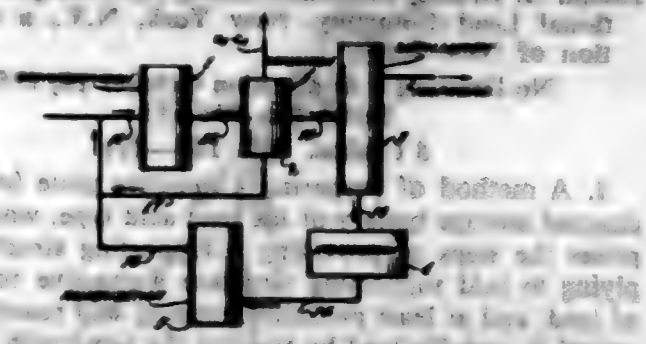
1. A method of recovering at least one aromatic compound selected from the group consisting of benzene and mononuclear aromatic hydrocarbons having only methyl substituents from a mixture containing at least one of said aromatic compounds which comprises contacting in at least one contacting stage said mixture with pyromellitic dianhydride to form a liquid phase and a solid phase comprising at least one complex of said compounds and pyromellitic dianhydride, separating said phases, and recovering a product of at least one of said compounds from said solid phase.

2,900,429

PREPARATION OF ISOPRENE

Heinz Heinemann, Swarthmore, Thomas Henry Milliken, Jr., Moylan, and Donald Herbert Stevenson, Millmont Park, Pa., assignors to Houdry Process Corporation, Wilmington, Del., a corporation of Delaware

Application April 5, 1957, Serial No. 651,011
12 Claims. (Cl. 260—680)



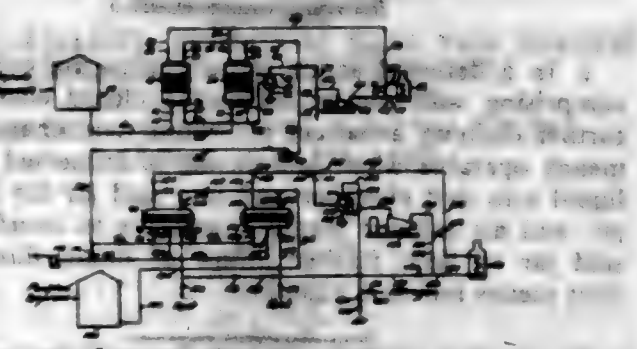
1. A method for the selective preparation of isoprene from acyclic C_5 hydrocarbons, which comprises dehydrogenating a charge of such C_5 hydrocarbons producing an effluent containing diolefins and monoolefins, separating said effluent into at least three separate streams comprising respectively substantially all hydrocarbons below C_5 plus hydrogen as a first stream, substantially only C_5 diolefins as a second stream, and a third stream containing C_5 monoolefins, separating said C_5 diolefin stream into an overhead fraction of product isoprene and a bottoms fraction of residual C_5 diolefins, selectively hydrogenating said residual C_5 diolefin fraction to predominantly normal C_5 monoolefins, isomerizing at least part of the normal olefins in said selectively hydrogenated fraction to isoolefins, and recycling said isoolefins as part of said charge of C_5 hydrocarbons to said dehydrogenation together with at least a portion of said third stream for further production of isoprene.

2,900,430

PROCESS FOR THE REMOVAL OF STRAIGHT CHAIN ACETYLENES FROM ISOPRENE

Alfred M. Henke, Springdale, and Harry C. Stauffer, Cheswick, Pa., assignors to Gulf Research & Development Company, Pittsburgh, Pa., a corporation of Delaware

Application December 28, 1956, Serial No. 631,230
15 Claims. (Cl. 260—681.5)



1. A process for reducing the straight chain acetylene content of isoprene which comprises drying isoprene containing a straight chain acetylene and contacting said dried isoprene with dry molecular sieves having a channel diameter of 5 Angstrom units.

plastic screw-threads being truncated, thereby having flat crests, the diameter of said flat crests being substantially

2,900,437

PORTABLE ELECTRIC CORD

ELECTRICAL

2,900,431

METHOD FOR MANUFACTURE OF DRY-CHARGED BATTERY PLATES

Joseph A. Orsino, Mountain Lakes, N.J., assignor to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Application October 18, 1956
Serial No. 616,613
5 Claims. (Cl. 136—37)

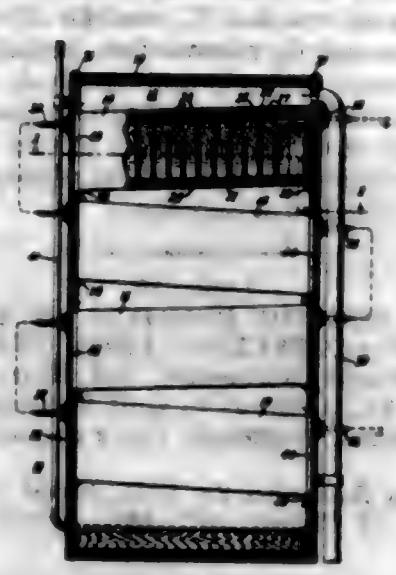
1. A method of preparing a negative plate for a dry-charged storage battery of the lead-acid type, which comprises the steps of providing a supporting structure, applying to said supporting structure a reactive compound of lead, and at least partially reducing said reactive compound to metallic lead by treating the same with a reducing gas in the absence of liquid water.

2,900,432

BATTERY CASING

Edward P. Broglio, Jasper, Mo., assignor to General Electric Company, a corporation of New York

Application August 30, 1955, Serial No. 531,417
10 Claims. (Cl. 136—90)



1. In a deferred action battery, a casing construction comprising wall means defining a closed chamber and further defining a battery jar within said chamber, inlet means operable when said casing is immersed to admit liquid into said chamber and into said jar for filling the jar, and air exhaust means responsive to overflow from said jar to limit further inflow of liquid through said inlet means into said chamber.

2,900,433

BARRIER FILMS FOR GALVANIC CELLS

Nelson C. Cahoon, Fairview Park, and Margaret P. Korver, Brecksville, Ohio, assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application April 18, 1955
Serial No. 502,183
4 Claims. (Cl. 136—146)

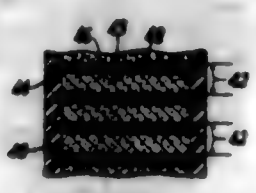
1. A barrier film portion adapted for use in primary galvanic dry cells comprising dilute alkali-soluble, non-fibrous, bibulous, water insoluble substantially insolubilizing acid free and salt free methyl cellulose ether having 10 percent to 20 percent methoxy content based on the dry weight of said methyl cellulose ether.

2,900,434

CORROSION INHIBITORS

Herman M. Zimmerman, Lakewood, and Robert A. Powers, Cleveland, Ohio, assignors to Union Carbide Corporation, a corporation of New York

Continuation of application Serial No. 541,856, September 15, 1955. This application January 3, 1956, Serial No. 557,013
11 Claims. (Cl. 136—161)



1. In combination in a primary cell having a consumable anode, an insoluble cathode, an electrolyte-wet depolarizing mix, at least one corrosion inhibitor selected from the group consisting of mercury and mercury salts together with inhibiting means consisting of an organic corrosion inhibitor in contact with said consumable anode, said organic inhibitor being defined by the formula

$$R—O(R')_n—R''$$

wherein R is initially a hydroxyl compound, R' is an alkylene oxide radical selected from the group which consists of the ethoxy and propoxy radicals, and n is any number between 1 and 50, and R'' is at least one radical selected from the group which consists of hydrogen, alkyl, aryl and alkyl aryl radicals.

2,900,435

ELECTRICAL CONDUIT BUSHING

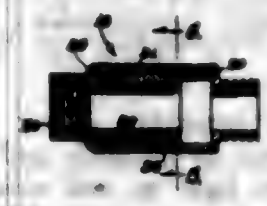
Lawrence M. Curtin, Mountainside, N.J., assignor to The Thomas & Betts Co., Elizabeth, N.J., a corporation of New Jersey

Application May 2, 1955, Serial No. 505,882
1 Claim. (Cl. 174—83)

A knock-on insulating bushing, for terminating a rigid metallic electrical conduit, to protect the insulation of electrically charged wiring where it emerges from the open end of said electrical conduit, the latter having external standard rigid screw-threads; said knock-on bushing comprising a one-piece body structure, consisting of an annulus, having a shorter axial length than the axial length of said standard rigid screw-threads on the end of the electrical conduit with which it is adapted to be used; and also having a masking flange, with a central throat of frictionless insulation adapted to loosely pass said electrically charged insulated wiring therethrough; said knock-on bushing being formed of semi-hard elastically tough plastic, having a hard surface, with a smooth and frictionless finish, which resists scratching, but is of less hardness than said rigid screw-threads of the conduit, and which gives and expands when hammered; said knock-on bushing having screw-threads formed integrally on the inside thereof, the root diameter of which conventionally conforms to the crest diameter of said rigid screw-threads, and the surfaces of which also conform to the surfaces of said rigid screw-threads; and the

plastic screw-threads being truncated, thereby having flat crests, the diameter of said flat crests being substantially greater than the root diameter of said rigid metallic screw-threads, whereby the flat crests are spaced (have clearance) from said root diameter; the combination of the truncated plastic screw-threads with said rigid metallic screw-threads thus providing a coacting frictional differential, resulting from the dissimilarity of their constituent materials, also from the difference in degree of their two hardnesses, and from the dimensional difference (clearance) between their root and flat crest diameters; whereby said knock-on bushing is adapted to be installed on said conduit open end, by hammering the flange alternately on first one side and then the other, thereby forcing said conforming screw-thread surfaces together, and causing said plastic truncated screw-threads to cam against, and to radially stretch an amount equal to the thread flat crest truncation, and radially climb outward and over the rigid screw-threads, and elastically spring back toward the root of said rigid screw-threads, effecting a "thread-crossing" action of the two differently constituted screw-threads; thus quickly locking said knock-on insulating bushing in service position, the flange of which dielectrically seals off and isolates all metallic burr roughness at the conduit end-edge from the wiring insulation, and being removable therefrom by the conventionally slow operation of unscrewing said bushing with a wrench.

2,900,436
ELECTRICAL CONDUIT UNION AND EXPANSION COUPLING
Arthur L. Appleton, Northbrook, Ill.
Continuation of application Serial No. 430,152, May 17, 1954. This application March 6, 1958, Serial No. 719,539
1 Claim. (Cl. 174—86)

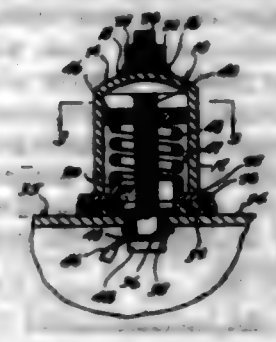


A two-piece explosionproof electrical conduit union comprising the combination of a pair of inner and outer metallic cylindrical telescoping members having respective outer and inner surfaces rotationally and axially slidably interengaging with close tolerance, said tolerance being sufficiently great to permit restricted passage of fluids and gases between said surfaces, threads on the opposite extremities of said members for connecting the latter to matingly threaded components of an explosionproof conduit system, said threads being at least as long as the minimum length for explosionproof threaded connections in the conduit system, means to prevent a conduit component threadably connected to either of said members from engaging the other of said members when said threads are tightened, said inner surface having an axial length at least equal to four times the minimum length of each threaded connection in the conduit system and said outer surface having an axial length at least equal to twice the minimum length of each such threaded connection to thereby provide a tortuous path of sufficient length to prevent the escape of hot gases from within the union, means for preventing axial separation of said members and assuring that the length of mutual engagement between said surfaces is never less than twice the length of said threaded connection, said outer surface of the inner member having an annular groove formed therein, and a resilient snap ring of conductive material captive in said groove and yieldably urged into sliding electrical contact with the inner surface of said outer member to thereby insure electrical continuity between said members as they are shifted relative to one another.

2,900,437
PORTABLE ELECTRIC CORD
Paul F. Thompson, Bristol, R.I., assignor, by mesne assignments, to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Application November 4, 1954, Serial No. 466,814
4 Claims. (Cl. 174—116)

1. A portable electric cord having high resistance to flex fatigue comprising a plurality of insulated conductors, each conductor comprising a core of substantially straight and parallel fibrous strands, a plurality of layers of metallic strands wrapped around said core in substantially parallel relationship, an inner serving comprising a plurality of fibrous strands wrapped around said metallic strands in substantially parallel relationship and in the same direction of lay as said metallic strands, and a relatively thin elastomeric cover composed of a plurality of thin layers deposited from latex surrounding said inner serving one of said thin layers comprising an insulating layer for the conductor and another thinner layer comprising a protective covering for said insulating layer, the insulated conductors being twisted together in the same direction of lay as said metallic strands and combined with filler material to form an assembly, an outer serving comprising a plurality of fibrous strands wrapped around said assembly in substantially parallel relationship and in the same direction of lay as the twist of said conductors and an outer elastomeric covering surrounding said outer serving.

2,900,438
SPRING LOADED TERMINAL SEAL FOR SEALED REFRIGERATION COMPRESSORS
Paul J. Hirtzer, Tampa, Fla.
Application March 7, 1956, Serial No. 719,795
5 Claims. (Cl. 174—153)



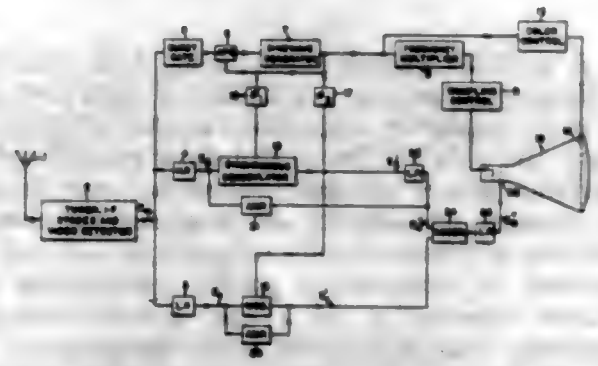
1. A terminal seal for a refrigeration unit having an externally projecting terminal post constituting a connection between external and internal lead wires of said unit, comprising: an electrically conductive shell proportioned to enclose said post, said shell including an end wall at one end thereof; electrically conductive means on said end wall for connecting said external lead wire to the shell, the shell having a cavity the wall of which is of non-circular cross section; an electrically conductive nut within the cavity slidably engaged with the

an optical image, means for causing the light from said tube to sweep said image, a photoelectric means, means

intensity of said reproduced pulses, and means connected with the output of said transducer heads and with said

wall of said cavity and having a cross-section mating with that of said wall, for conjoint rotation of the nut and shell and for sliding of the nut along the wall of the cavity, said nut being threadedly engageable with the post; a base plate sealably connected to the other end of the shell; a compression, coil spring interposed between said base plate and nut; and a gasket adapted to extend about said post in contact with the base plate, thus to be interposed between the base plate and said unit, said gasket being of a compressible material for compression of the same responsive to threading the nut on said post in a direction toward the base plate.

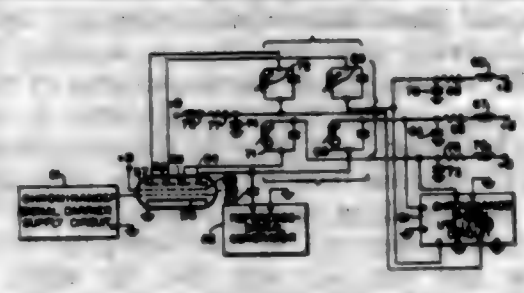
2,900,439
COLOR TELEVISION SIGNAL CONVERSION SYSTEM
Arthur P. Stern, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Application December 29, 1953, Serial No. 400,857
11 Claims. (Cl. 178—5.4)



1. A system for modifying a composite color television signal, said composite color television signal comprising a luminance component and at least one chrominance component, said chrominance component having been impressed on a subcarrier wave, said system including at least two parallel branches, each of which is disposed to be excited by said composite color television signal, a first one of said parallel branches including low-pass filter means for extracting said luminance component from said composite color television signal and modulator means for multiplying said luminance component by a wave having a frequency substantially equal to that of said chrominance component subcarrier wave and having a first predetermined phase with respect to said sub-carrier wave to produce a wave whose frequency is equal to the sum of the frequencies of the waves applied thereto, a second one of said parallel branches including demodulator means for multiplying its input signal by a wave having a frequency substantially equal to that of said chrominance component subcarrier wave and having a second predetermined phase with respect to said sub-carrier wave to produce a wave whose frequency is equal to the difference in the frequencies of the input waves applied thereto, means shunting said demodulator means for providing a path of predetermined gain to signals from the input to the output of said demodulator, and a signal adder excited from the output and of each of said parallel branches.

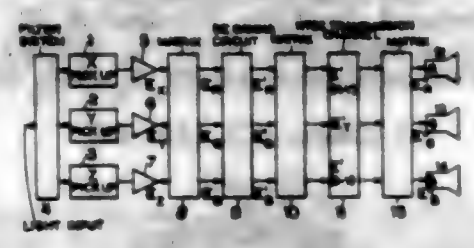
2,900,440
CHROMINANCE-SIGNAL DETECTOR
John A. Rado, Flushing, N.Y., assignor to Hazeltine Research, Inc., Chicago, Ill., a corporation of Illinois
Application August 31, 1954, Serial No. 453,236
1 Claim. (Cl. 178—5.4)

A chrominance-signal detector for a co'or-television receiver comprising: circuit means for supplying a signal carrier of chrominance signals to be detected; circuit means for supplying four quadrature phase-displaced reference signals of carrier frequency; an electron-discharge device comprising four electrode sections including a common central cathode and four anodes circumferentially spaced around said cathode and a common control electrode intermediate said cathode and said anodes, said



control electrode being responsive to said chrominance-signal carrier and said anodes being responsive to said reference signals; and frequency-selective circuit means for deriving from said four anodes four components of said chrominance signals.

2,900,441
GENERATION OF COLOUR TELEVISION SIGNALS
Keith Gordon Hendley, Dukeswood, Gerrards Cross, England, assignor to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Application March 29, 1955, Serial No. 497,618
Claims priority, application Great Britain April 3, 1954
7 Claims. (Cl. 178—5.4)



1. Apparatus for generating colour television signals comprising three pick-up channels and filter means for distributing incident light to said channels, said filter means having transmittances to the different channels in overlapping spectral bands and the channels being responsive to the distributing light to produce electrical signals representing predetermined primary colours of the incident light, the transmittances of light filters being predetermined in conjunction with the sensitivities of the pick-up channels to produce overall spectral responses of the different pick-up channels which, as functions of frequency, are at least approximately linearly related to the tristimulus values for the equal energy spectrum of said primary colours, and the transmittances of the filter means in conjunction with the sensitivities of the pick-up channels being further predetermined to cause the ratio of the responses of a selected channel to that of each other channel to be substantially greater than the ratio of corresponding primary colour co-ordinates of a light stimulus of mixed colours, to reduce the apparent effect of noise on reproduced pictures when there is insufficient light to saturate the pick-up channels.

2,900,442
ELECTRO-OPTICAL CONTOUR OUTLINING APPARATUS
Leslie S. G. Kovasznay, Baltimore, Md.
Application April 23, 1954, Serial No. 425,334
10 Claims. (Cl. 178—6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An electro-optical system, comprising a first cathode-ray tube, sweep means for causing the electron beam of said tube to move in the horizontal and vertical directions at the same constant velocity during each frame,

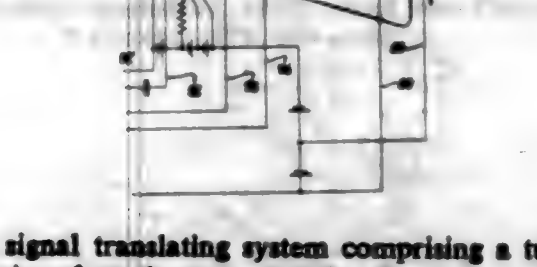
sistance paths during the energization of each respective

stages through a cycle of operation, means for controlling

and members as they are shifted relative to one another.

ductive slit within the cavity slidably engaged with the

an optical image, means for causing the light from said tube to sweep said image, a photoelectric means, means for focusing the light from said image on said photoelectric means, means for differentiating the output of



said photoelectric means, means for rectifying the differentiated signal, a second cathode-ray tube, means for connecting the deflection circuits of said second tube to said sweep means, and means for applying the rectified signal to the control grid of said second cathode-ray tube.

2,908,443
MAGNETIC RECORDER AND REPRODUCER FOR VIDEO

Marvin Camras, Chicago, Ill., assignor to Armour Research Foundation of Illinois Institute of Technology, Chicago, Ill., a corporation of Illinois

Application April 11, 1952, Serial No. 281,939
19 Claims. (Cl. 178—6.6)

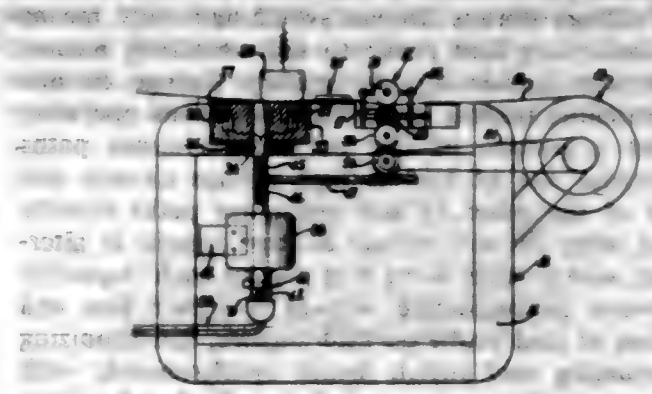
1. A signal translating system comprising a tube having a series of conductors extending through a wall thereof, means in said tube for establishing a current flow along each of said conductors in succession, a record medium disposed in close proximity to each of said conductors at the exterior of said tube in comparison with the cross-sectional dimensions of said conductors, and means including said conductors for recording fields of a nature capable of directly stimulating electric current flow on the record medium in accordance with a signal to be recorded.

2,908,444
MEANS FOR RECORDING AND REPRODUCING VIDEO SIGNALS

Marvin Camras, Chicago, Ill., assignor to Armour Research Foundation of Illinois Institute of Technology, Chicago, Ill., a corporation of Illinois

Application January 12, 1953, Serial No. 330,667
8 Claims. (Cl. 178—6.6)

1. In combination in a magnetic transducer apparatus for a video signal having synchronizing pulses, a plurality of magnetic transducer heads, means for mounting said heads in arcuately spaced relation about a central axis, means for rotating said heads about said axis, means for moving an elongated medium having a video signal recorded thereon across a portion of the path of travel of said heads for successive interaction with said head, means for shifting said record member moving means to shift said medium relative to said heads, means responsive to said synchronizing pulses reproduced by said heads for actuating said shifting means to increase the intensity of said reproduced pulses, and means connected with the output of said transducer heads and with said

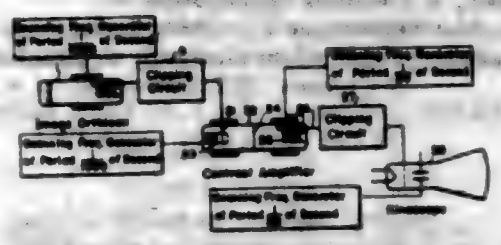


responsive means for delivering said synchronizing pulses reproduced by said heads to said responsive means.

2,908,445
INCREASE OF IMAGE CONTRAST WITH TELEVISION PICKUP TUBE

Richard L. Langlai, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application January 26, 1952, Serial No. 268,371
8 Claims. (Cl. 178—6.8)

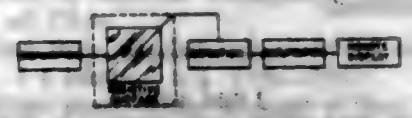


1. A picture-reproducing system comprising a picture pickup means of the type which employs a first picture scanning agency, means for clipping a substantial portion of the output from said picture pickup means without affecting the light intensity variation signal of the viewed scene, a second scanning agency having the same frequency as said first scanning agency and connected to the output of said first scanning agency and provided with means whereby the output of said means for clipping produces a charge-distribution that varies from point-to-point with the light-intensity distribution in said picture, a third scanning-agency which scans said charge-distribution with a frequency substantially lower than that of said first scanning-agency and thereby produces an output voltage which varies in time in correspondence with said point-to-point distribution, and picture-receiving means connected to translate said output voltage into visible pictures which are excited by a light-generating scanning agency having said substantially lower scanning frequency.

2,908,446
TELESCRIBER SYSTEM

Donald J. McLaughlin and Richard E. Gerender, Washington, D.C., assignors to the United States of America as represented by the Secretary of the Navy

Application March 2, 1954, Serial No. 413,734
9 Claims. (Cl. 178—18)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A telescriber system which comprises a substantially uniform resistive surface, a voltage source, voltage applying means for alternately applying said voltage source across orthogonal resistance paths on said surface, means for establishing a voltage reference line on said surface in perpendicular relation to each of said orthogonal re-

2,908,450
DIAL SYSTEM

and thereby generate electrical energy, a needle-transport

means for supplying four quadrature phase-displaced re-

tions at the same constant velocity during each frame,

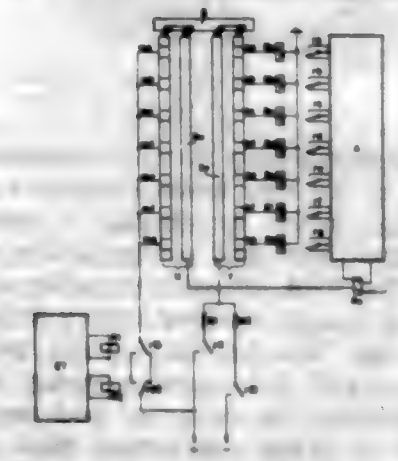
sistance paths during the energization of each respective path, a probe positionable at any point on said surface, a pair of voltage storage circuits, switching means, means directly connecting said probe to said switching means, means directly connecting said voltage storage circuits to said switching means, said switching means operative to connect a portion of one of said resistance paths directly across one of said voltage storage circuits and a portion of the other of said resistance paths directly across the other of said voltage storage circuits in alternate order, said portion being that part of each respective path between its respective voltage reference line and the position of said probe on said surface, synchronizing means actuating said switch means synchronously with said voltage applying means such that each of said voltage storage circuits is connected across said portion of its respective resistance path during the energization thereof, and a display means connected to said storage circuits and responsive to the magnitude of the voltage stored.

2,900,447

APPARATUS FOR CORRECTING THE EFFECTS OF DISTURBANCES IN TELEGRAPHIC COMMUNICATION

Fritz Hennig, Munich-Solln, Germany, assignor to Siemens & Halske Aktiengesellschaft, Munich and Berlin, Germany, a German corporation

Application September 22, 1954, Serial No. 457,746
Claims priority, application Germany September 24, 1953
3 Claims. (Cl. 178—23)



1. In a telegraph system, a receiver for receiving code combinations formed by signal elements of one or the other of two possible current types and for also releasing a marker signal in case code combinations are disturbed, comprising a first circuit for ascertaining which of the two possible current types are contained in each signal element of a received code combination and responsive to simultaneous presence or absence of both types, a scanning circuit cooperatively connected with said first circuit for the successive scanning of the ascertained current types of the signal elements, a second circuit controlled by said scanning circuit responsive to disturbances in the received code combination due to interchange of current types of a signal element, actuatable if the received code combination contains less than a predetermined number of signal elements of one or the other of the two possible current types, and means controlled by said first circuit and also by said second circuit for marking the signal to be printed if the corresponding received code combination is so disturbed.

2,900,448

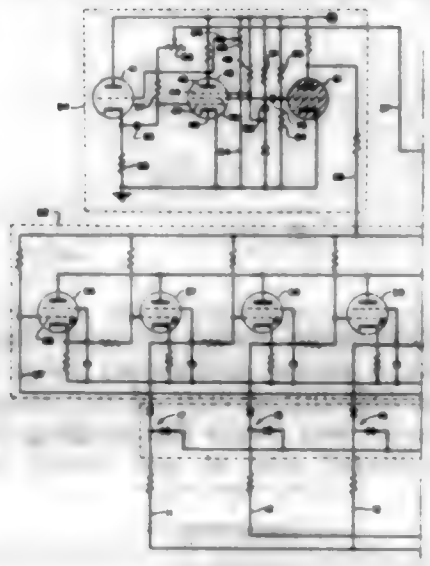
START-STOP TELEGRAPH SIGNAL GENERATOR

Joseph Gordberg, Chicago, Ill., assignor to Teletype Corporation, Chicago, Ill., a corporation of Delaware

Application November 14, 1955, Serial No. 546,385
6 Claims. (Cl. 178—26)

1. An electronic distributor comprising a plurality of electronic stages, an oscillator for driving the electronic

stages through a cycle of operation, means for controlling the oscillator to operate at a predetermined frequency, and means actuated by one of said electronic stages for



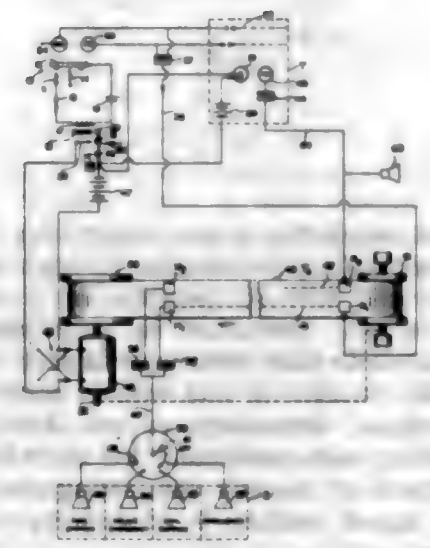
imparting to at least one stage of said distributor an operative interval different from that of at least one other stage by changing the frequency of operation of said oscillator.

2,900,449

TELEPHONE CALL TRACING AND RECORDING SYSTEM

Lawrence Lea, Bronx, N.Y.

Application September 9, 1957, Serial No. 682,865
7 Claims. (Cl. 179—6)



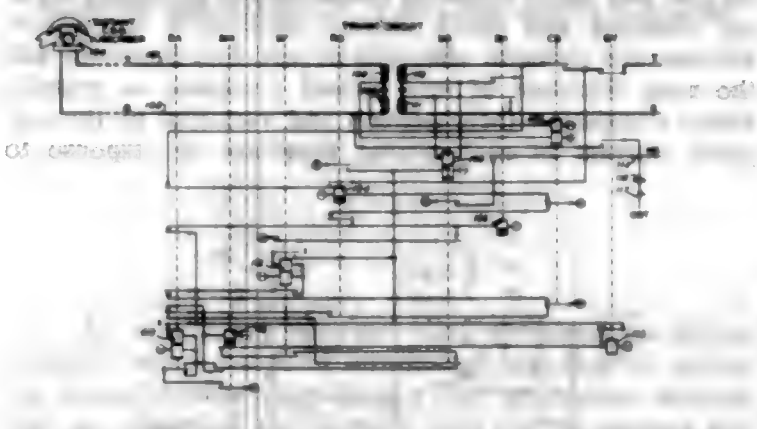
1. An emergency call tracing and reproducing system, comprising a receiver station, a telephone central station, an emergency service station, said receiver station having a telephone receiver connected to said central station via a telephone line, a dual track tape recording and reproducing device located at the receiver station, one of said tracks having a recorder head connected with said telephone receiver to record a call received by said telephone receiver, a signal means located at the central station and operatively connected to the receiver station to be lit when said call is received at the receiver station, a microphone at the central station connected via a first amplifier and another telephone line to another recorder head for recording a message on the other of the dual tracks, a pair of reproducing heads spaced longitudinally along the tape from the recorder heads to pick up signals from the tracks respectively and transmit them to a pair of amplifiers, and a loud-speaker located at said emergency service station and connected in circuit with said pair of amplifiers.

cathode of the first stage discharge device to the return

electrodes, a second transistor including base, emitter, and

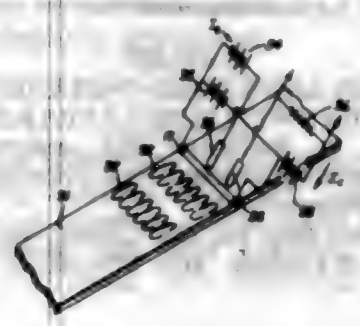
heads for actuating said shifting means to increase the in perpendicular relation to each of said orthogonal re-

2,900,450
DIAL SYSTEM
Ernest H. Getzert, Rochester, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Application May 16, 1956, Serial No. 585,282
8 Claims. (Cl. 179—16)



1. In a telecommunication system, a selector switch having digit adding and digit cancelling means variously associated with different levels thereof, said means including an unlocking relay for rendering any level of said switch freely accessible, a trunk line from a distant point, means for extending said trunk line to said selector and means in said trunk line for automatically operating said unlocking relay.

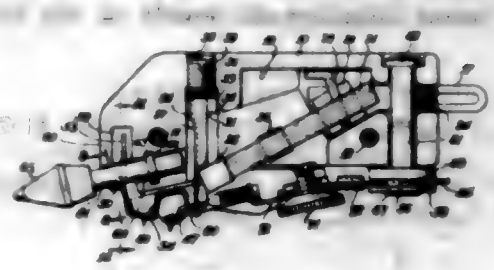
2,900,451
MAGNETIC TRANSDUCING APPARATUS
James W. Havstad, Atherton, Calif., assignor to Ampex Corporation, Redwood City, Calif., a corporation of California
Application August 24, 1955, Serial No. 530,334
5 Claims. (Cl. 179—100.2)



1. Magnetic transducing apparatus of the type which serves to translate the remanent magnetism in a magnetic medium which moves relative thereto comprising, a filament of material in which electrons and holes may be concentrated by magnetic fields, said filament having one edge adapted to be disposed adjacent said magnetic medium having remanent magnetism whereby the magnetic field passes through said filament, means for applying an electric field along said filament, means for injecting carriers into said electric field, and means in contact with the other edge serving to develop a signal which varies in accordance with the changes in concentration of said carriers due to the remanent magnetic field along said medium.

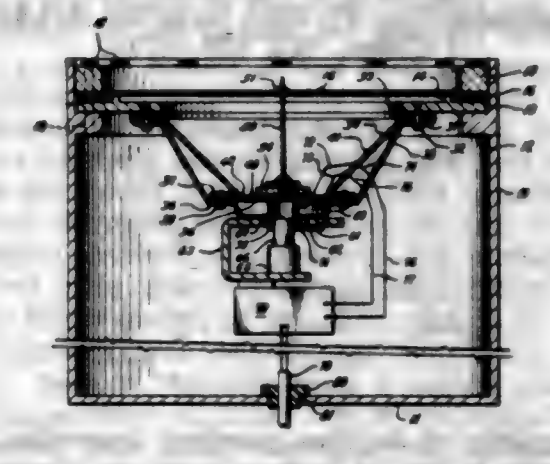
2,900,452
PHONOGRAPH PICKUP
Benjamin B. Bauer, Oak Park, Lee Gunter, Jr., Mount Prospect, and Charles E. Seeler, Chicago, Ill., assignors to Shure Brothers, Incorporated, Chicago, Ill., a corporation of Illinois
Application October 18, 1955, Serial No. 541,152
10 Claims. (Cl. 179—100.41)

1. In a phonograph pickup, a casing, a transducer element mounted in said casing with a portion thereof adapted to undergo motion relative to another portion and thereby generate electrical energy, a needle-transport member, a pair of needles mounted on said transport member with their playing points projecting generally in the same direction, said transport member being pivotally mounted on said casing for lateral shift movement from a position in which one of said needles is in operative



position to a position in which the other needle is in operative position, and vice versa, a coupling member substantially rigid for transmitting motion from a needle in operative position to said transducer element, one end of said coupling member being pivotally mounted, shift means for imparting selectively at will said lateral shift movement to said needle-transport member.

2,900,453
MICROPHONE
Arthur R. Cammack, Houston, Tex., assignor to Associated Engineering & Equipment Company, Inc., Houston, Tex., a corporation of Texas
Application April 16, 1957, Serial No. 653,233
3 Claims. (Cl. 179—115.5)



1. An electroacoustic transducer comprising a cup shaped housing, an annular rib, means supporting said rib at the mouth of the housing, a diaphragm supported by said rib and having its outer periphery extending radially beyond said rib, means securing the periphery of said diaphragm to said housing, the last said means being adjustable to tune said diaphragm to a desired frequency, means mounted in said housing and including relatively movable portions for generating electricity in response to motion of one of said portions relative to the other of said portions, and a wire connecting one of said portions of the last said means to the center of said diaphragm.

2,900,454
D.C. AMPLIFIER
Robert S. Enabnit, Cuyahoga Falls, Ohio, assignor to The Goodyear Tire & Rubber Company, Akron, Ohio, a corporation of Ohio
Application July 26, 1954, Serial No. 445,761
4 Claims. (Cl. 179—171)

1. An amplifier comprising at least a first input stage, a second and a third amplifying stage, and a fourth output stage, each stage including an electron discharge device having at least a cathode, a control electrode, and an anode, voltage means coupled to the anodes and cathodes of and for energizing the second, third, and fourth stage discharge devices, means for directly connecting the

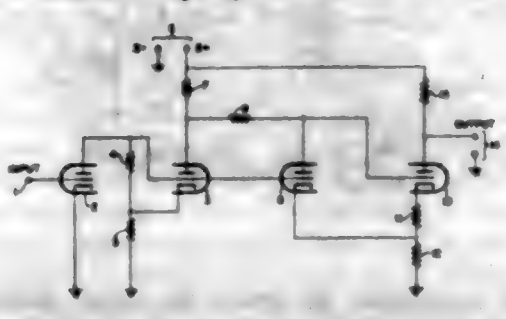
2,900,458
METHOD OF ELIMINATING SCALING ERRORS IN ANALOG COMPUTATION

plified copy of said amplitude modulation component including said average amplitude component, and means

electronic stages, an oscillator for driving the electronic

in circuit with said pair of amplifiers.

cathode of the first stage discharge device to the return circuit of said voltage means, means adapted to receive an input and connected to the control electrode of the first stage discharge device, conductive means connecting the anode of the first stage discharge device to the control electrodes of the second and third stage discharge devices, conductive means coupling the anode of the first stage

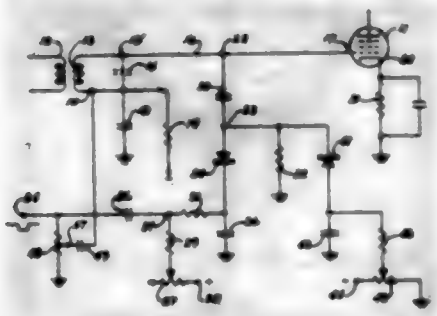


discharge device to the cathode of the second stage discharge device, conductive means coupling the control electrode of the fourth stage discharge device to both the anodes of the second and third stage discharge devices, conductive means coupling the cathodes of the third and fourth stage discharge devices, and output means coupled to the anode of the fourth stage discharge device.

2,900,455
Q-GATED AMPLIFIER

Arden H. Fredrick, Mount Kisco, and Leonard T. Winship, Roslyn Heights, N.Y., assignors to General Precision Laboratory Incorporated, a corporation of New York

Application May 27, 1955, Serial No. 511,635
1 Claim. (Cl. 179—171)



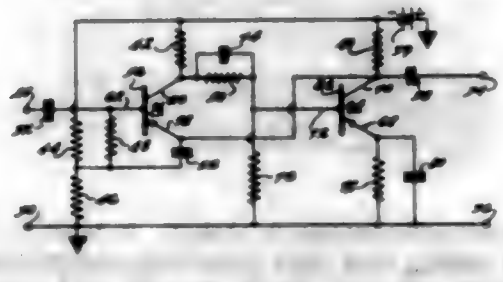
An amplifier of the class described comprising, a discharge tube having at least cathode and control electrodes, a resonant input circuit coupled between said cathode and control electrodes, a first diode having its anode capacitatively connected to said control electrode and its cathode coupled to said cathode, a second diode having its cathode connected to the anode of said first diode and its anode coupled to the cathode of said discharge tube, bias means rendering said first diode normally nonconductive, bias means for rendering said second diode normally nonconductive, means for applying a negative gating pulse to the cathode of said first diode to override both said bias means and causing both said diodes to conduct thereby providing a low impedance path across said resonant input while applying negative potential to said control electrode and means for applying a potential proportional to the amplitude of said gating pulse to said resonant circuit to prevent shock excitation thereof.

2,900,456
DIRECT COUPLED FEEDBACK TRANSISTOR AMPLIFIER CIRCUITS

James J. Davidson, Audubon, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Application April 30, 1956, Serial No. 581,538
6 Claims. (Cl. 179—171)

3. A signal amplifier circuit comprising, in combination, a first transistor including base, emitter, and collector electrodes, a second transistor including base, emitter, and collector electrodes, said transistors being of the same conductivity type, signal input means including signal coupling means connected with said first base electrode for applying an input signal thereto, a capacitor connected between the emitter electrode of said first transistor and said signal coupling means, means providing a signal coupling and direct current conductive connection between the collector electrode of said first transistor and the base electrode of said second transistor to provide signal translation therebetween and variation of the collector current of said second transistor in response to

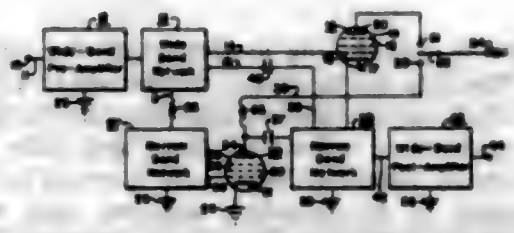


collector current variation of said first transistor, means providing a direct current conductive connection between the collector electrode of said second transistor and the emitter electrode of said first transistor to provide variation in the emitter voltage of said first transistor in response to collector current variation of said second transistor and signal feedback from the collector electrode of said second transistor to said signal input means through said capacitor for stabilizing the operation of said amplifying circuit and providing a high input impedance therefor, and means providing a signal output circuit connected between the collector and emitter electrodes of said second transistor.

2,900,457
WIDE BAND AMPLIFIER INCLUDING BANDWIDTH SWITCHING APPARATUS

Keefer S. Stall, Jr., Baltimore, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application July 18, 1957, Serial No. 672,822
6 Claims. (Cl. 179—171)



1. Bandwidth switching apparatus comprising, in combination, a first wide-band amplifier, a second wide-band amplifier, wide-band frequency response network means including a normally de-energized cathode follower operatively connecting the output of the first wide-band amplifier to the input of the second wide-band amplifier, narrow-band network means including a normally de-energized electron discharge tube connected in parallel with said wide-band network means and coupling the output of the first wide-band amplifier to the input of the second wide-band amplifier, switching means for selectively energizing the wide-band network and the narrow-band network means, and means operatively connected between the wide-band network and the narrow-band network means for neutralizing the leakage of unwanted signal energy through the wide-band network means while the narrow-band network means is selectively energized.

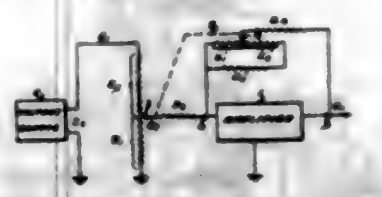
terial having rotating support in said opening and overlying the margin of one surface of the stator around the

bridge member whereby a first set of said cam means protrudes from said opening in said support member to

adapted to undergo motion relative to another portion

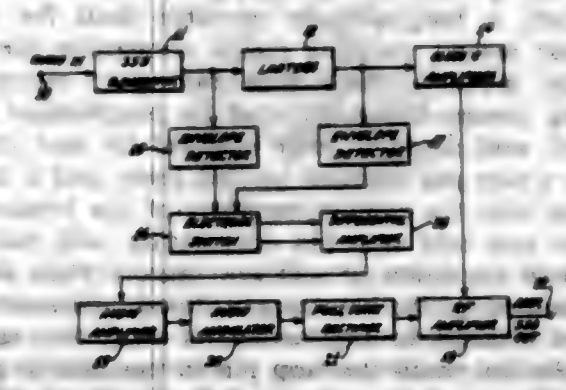
stage discharge devices, means for directly connecting the

2,900,458
METHOD OF ELIMINATING SCALING ERRORS IN ANALOG COMPUTATION
Eugene Rawdin, Levittown, Pa., assignor to the United States of America as represented by the Secretary of the Air Force
Application August 13, 1957, Serial No. 678,823
3 Claims. (Cl. 179—171)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An amplifier having an input terminal, an output terminal and a common terminal; a signal level adjusting potentiometer comprising a first impedance element and an adjustable tap thereon, said first impedance element being connected across a source of signal voltage and having one end connected to said common terminal; a connection between said adjustable tap and said input terminal; a feedback circuit connected between said output and input terminals; and means for making the fraction of the voltage at said output terminal fed back to said input terminal independent of the position of said tap, said means comprising: a two-terminal network connected in said feedback circuit; said network comprising a second impedance element having an adjustable tap, said tap being connected to one network terminal, one end of said second impedance element being connected to the other network terminal, and the other end of said second impedance element being connected to said other network terminal through a third impedance proportional to the impedance of said signal source; and means for ganging the taps of said first and second impedance elements for simultaneous adjustment.

2,900,459
SINGLE SIDEBAND AMPLIFIER
George A. Oliva, Lawrenceville, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application July 28, 1958, Serial No. 751,251
15 Claims. (Cl. 179—171)

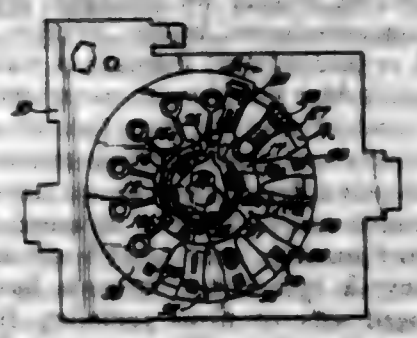


1. In combination, means for generating a single sideband wave having phase and amplitude modulation components, said amplitude modulation component having an average amplitude component, means connected to the output of said generating means for amplifying only said phase modulation component, means connected to the output of said generating means and responsive to said amplitude modulation component and to the envelope of said phase modulation component to transform said amplitude modulation component into an alternating current wave representative of said amplitude modulation component, rectifying means connected to the output of said transforming means to derive from said alternating current wave an output wave corresponding to an amplified copy of said amplitude modulation component including said average amplitude component, and means connected to the output of said rectifying means and to the output of said amplifying means for modulating the amplified phase modulation component with said output wave to produce an amplified copy of said single sideband wave.

2,900,460
ELECTRIC SWITCH
Kenneth R. Wallace, Dolphin, Ind., assignor to Essex Wire Corporation, Fort Wayne, Ind.
Application March 24, 1958, Serial No. 723,449
5 Claims. (Cl. 200—6)

1. An electric switch for a directional indicating signal system comprising four spaced, fixed contacts carried by a switch housing; four yieldable spring arms carried by said housing; a first terminal member electrically connected to the first and second arms of said arms and a second terminal member electrically connected to the third and fourth arms of said arms; each of said first and second arms being provided with a contact element; the contact element of said first arm normally being urged against a first contact of said fixed contacts and the contact element of said second arm normally being urged against a second contact of said fixed contacts; each of said third and fourth arms being provided with two contact elements; the contact elements of said third arm normally overlying and being spaced from said first fixed contact and a third contact of said fixed contacts for engagement therewith upon deflection of said third arm; the contact elements of said fourth arm normally overlying and being spaced from said second fixed contact and the fourth contact of said fixed contacts for engagement therewith upon deflection of said fourth arm; an actuator member movable from a central position to operating positions on either side of the central position and having cam means for selectively deflecting said spring arms; said first and third arms being positioned to be deflected from their normal positions by said cam means upon movement of said actuator member to one of said operating positions; and said second and fourth arms being positioned to be deflected from their normal positions by said cam means upon movement of said actuator member to the other of said operating positions.

2,900,461
ELECTRICAL SWITCHING UNITS
Kenneth C. Allison, Crystal Lake, Ill.
Application June 1, 1955, Serial No. 512,517
7 Claims. (Cl. 200—11)



1. In a rotary switch assembly, a stator of insulating material having an opening, a rotor of insulating ma-

speed which varies in accordance with the speed of an

2,900,467

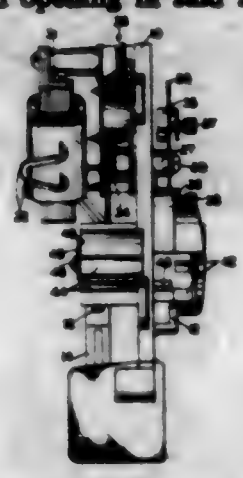
terial having rotating support in said opening and overlying the margin of one surface of the stator around the opening, a conductor blade secured to the rotor having an outer edge portion extending beyond the periphery of the rotor in spaced opposed relation to said surface of the stator, resilient wiping contacts on the stator with which said outer edge portion of the conductor blade is engageable, and one or more other contacts on the stator presenting flat faces in a plane removed from the path of the aforesaid edge portion of the conductor blade, said conductor blade being slotted radially inwardly from said outer edge portion thereof to define a resilient finger forming an extension of the conductor blade which has wiping engagement with the latter stator contacts.

2,900,462
ROTARY SELECTIVE SWITCH
Leon E. Thomas, Jr., Fairfield, and George A. Gross, Trumbull, Conn., and John W. Huley, Fairview Park, Ohio, assignors to International Instruments, Incorporated, a corporation of Connecticut
Application June 27, 1957, Serial No. 668,509
7 Claims. (Cl. 200—11)

1. A rotary electric switch comprising a laminated stator having a central aperture, and a plurality of distributor contacts fixed to said stator on one side thereof and at least one feed contact fixed to said stator on the other side thereof in alignment with one of said distributor contacts, each of said aligned contacts being fixed solely to the respective outer lamina of said laminated stator and separate means fixing each of said aligned contacts to its respective lamina, said stator including insulating means insulating said aligned contacts from each other, further means extending through all the laminae of said stator for fixing the remaining distributor contacts to their respective lamina and for maintaining said lamina in abutting stator forming position, and a rotor operatively mounted in said aperture and operable to electrically connect said feed contact with a selected distributor contact.

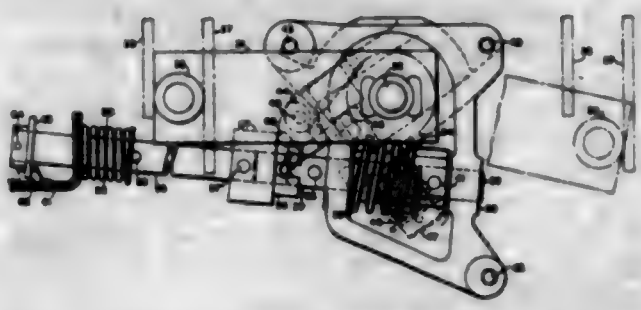
2,900,463
TIME SWITCH ASSEMBLY
William J. Schultz and Carl F. van Bemmelen, Lynnfield, Mass., assignors to General Electric Company, a corporation of New York
Application November 18, 1957, Serial No. 697,206
10 Claims. (Cl. 200—38)

1. A time switch assembly comprising in combination a support member having an enlarged opening therethrough, a concavo-convex bridge member across said opening fixed to said support member, a stationary shaft carried by said bridge member so as to extend through said opening and beyond the rear face of said support member, relatively movable switching elements mounted to the rear of said support member, an actuating device including a timed rotary member mounted to the front of said support member and spaced actuator elements carried thereby, a cylindrical operator having longitudinally arranged sets of arms radiating from the peripheral surface thereof, said operator being rotatably mounted on said shaft and rotated by said actuating device within said opening and the concavity of said bridge member whereby a first set of said cam means protrudes from said opening in said support member to



be periodically engageable with said actuator means and a second set of said cam means is in operative relation with said switch means.

2,900,464
METAL-CLAD SWITCHGEAR
Russell E. Frink, Forest Hills, and Paul Olsson, Penn Township, Allegheny County, Pa., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application March 31, 1958, Serial No. 725,287
10 Claims. (Cl. 200—50)

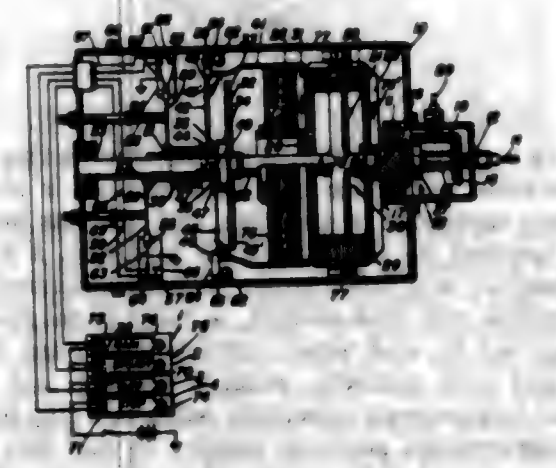


10. In a switchgear structure, in combination, a cell, a circuit breaker unit having openable and closable contact members disposed in the cell, a shaft horizontally disposed in the breaker unit, lever arms secured to said shaft and cooperating with the cell to move the breaker unit from one predetermined position to another predetermined position in the cell, gear means for rotating said shaft, a longitudinally movable shaft for driving said gear means, coupling means connecting the longitudinally movable shaft with said gear means, said coupling means being actuated by longitudinal movement of said shaft, a lever engaged by said coupling means, a stop pin actuated by said lever, and a member movable with the contact members of the breaker, said member and said stop pin cooperating with said lever to prevent operation of said gear means when the contact members of the breaker are closed, and interlocking member secured to the horizontal shaft for engaging said lever to retain the stop pin in position to prevent closing the contact members of the breaker while it is between said predetermined positions, spring-biased latch members pivotally mounted on said interlocking member to control movement of said lever, and an indicating device actuated by longitudinal movement of said longitudinally movable shaft.

2,900,465
SPEED CHANGE INDICATOR
August C. Weiss, Los Angeles, Calif.
Application October 4, 1955, Serial No. 538,388
7 Claims. (Cl. 200—61.46)

3. In a speed change indicator of the character described: a driving connection adapted to rotate at a

speed which varies in accordance with the speed of an object; first and second rotatable members supported for rotation; differential means for rotating said members from said driving connection, whereby said members may rotate at different speeds and may obtain the same speed of rotation, said differential means being the sole driving connection between said members; and indicating means having first and second rotatable parts respec-

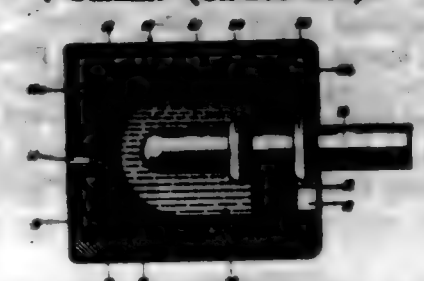


tively connected to said first and second rotatable members; and means for maintaining said parts in one relative position when said members are rotating at the same speed and for moving said parts out of said relative position when said members tend to rotate at different speeds due to the change in speed of one of said members as the result of change in speed of said driving connection.

2,900,466
ELECTRIC SWITCH WITH MINIATURE TOGGLE MECHANISM
George B. Benander and Luther M. Sheldon, Oaklawn, R.I., assignors to General Electric Company, a corporation of New York
Application November 29, 1957, Serial No. 699,614
6 Claims. (Cl. 200—67)

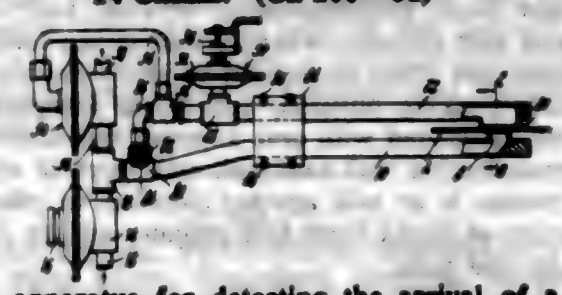
1. An electric toggle switch comprising a hollow housing, a manually-operable trigger pivotally mounted in the housing about a transverse axis, the bottom wall of the housing having a narrow groove with a concave track extending lengthwise of the housing, and an upright heart-shaped flapper of thin insulating material supported edgewise for sliding movement on the track and guided by the sides of the groove, the flapper having an upper extension that is received in a slot in the lower end of the trigger, and a coil spring fitted over the flapper extension and a portion of the lower end of the trigger to hold them together, the spring being under compression to establish a snap acting toggle mechanism, and a pair of spring contact blades arranged at one end of the housing on opposite sides of the track and representing the fixed contacts of the switch, the said insulating flapper carrying an electrically conducting member for bridging the two contact blades when the flapper is forced between them.

2,900,467
SWITCH
Ben W. Sewell, Tulsa, Okla., assignor to the United States of America as represented by the Secretary of the Navy
Application February 25, 1944, Serial No. 523,879
7 Claims. (Cl. 200—80)



1. In a switch for use in a projectile, two electrodes forming part of an electric circuit, a body of mercury adapted to complete a circuit across said electrodes, a chamber for said mercury, and flow-restrictive means mounted in a wall of said chamber in offset relation to the axis of rotation of said projectile for normally retaining said mercury in said chamber and through which said mercury is movable at a predetermined, retarded, rate under pressure incident to firing said projectile, whereby the said circuit is interrupted by displacement of the mercury after the passage of a predetermined time-interval.

2,900,468
SEAM DETECTOR
Raymond D. Joy, Brookneal, Va., assignor to Pacific Mills, New York, N.Y., a corporation of Massachusetts
Application March 4, 1957, Serial No. 643,596
14 Claims. (Cl. 200—81)



1. An apparatus for detecting the arrival of a seam in a traveling web of cloth at a station at which an operation is performed on the cloth and for thereupon controlling said operation, comprising a delivery nozzle for directing a stream of gas against one face of the web, a recovery nozzle on the other side of the web opposite the delivery nozzle, means for regulating the pressure of said stream in accordance with variation of pressure in said recovery nozzle, and means responsive to substantial increase of pressure in said recovery nozzle for controlling said operation.

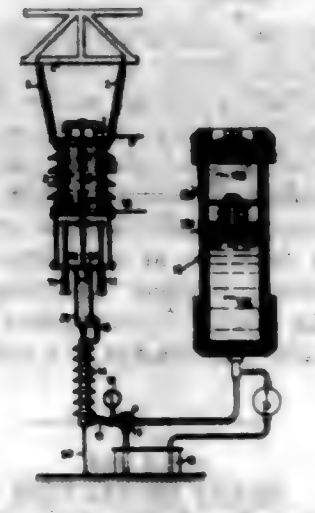
2,900,469
CIRCUIT-BREAKER CONTROL DEVICE
Jean Louis Gratzmuller, Paris, France
Application December 27, 1954, Serial No. 477,670
Claims priority, application France January 15, 1954
4 Claims. (Cl. 200—82)

1. A circuit-interrupting device including a stationary contact, a movable contact, spring force applying means operably connected to said movable contact to constantly urge the same toward circuit-breaking position, cylinder and piston means one of which is movable relative to the other, means permanently and kinematically connecting the movable one of said cylinder and piston means to said movable contact so that for every position of said movable one of said means corresponds a precise position of said movable contact, an oleo-pneumatic accumulator including a casing, a movable partition within the casing and dividing the interior thereof into a liquid containing

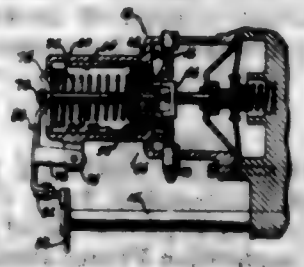
2,900,473
MAGNETIC SHIELD

exceeds the holding force of said magnet on said member to snap said contacts apart, the separation of said

compartment and a compressed gas containing compartment, liquid in the liquid containing compartment under a constantly available pressure far in excess of the force of said spring force-applying means, a tank, conduit means between the liquid compartment of the accumulator and the cylinder, and between said cylinder and said tank, manually actuated valve means operably associated in said conduit means and operable in one position to establish communication between said cylinder and liquid compartment and block communication between said cylinder and tank so as to effect movement of said movable contact into circuit making position and to permanently maintain said circuit solely by the pressure of liquid in the cylinder, said valve means being operable in another position to establish communication between said cylinder and tank and block communication between said compartment and said cylinder, whereby said spring force applying means can effect movement of said movable contact to circuit-breaking position, and liquid dumping means operably associated with and adjacent said cylinder and in communication with said tank and operable when said valve means is in said another position to effect rapid evacuation of liquid from said cylinder and to discharge liquid to said tank.

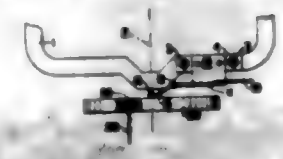


2,900,470
CARBURETOR STARTER SWITCH
William E. Egerer, Detroit, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation of Michigan
Application November 4, 1957, Serial No. 694,151
10 Claims. (Cl. 200—83)



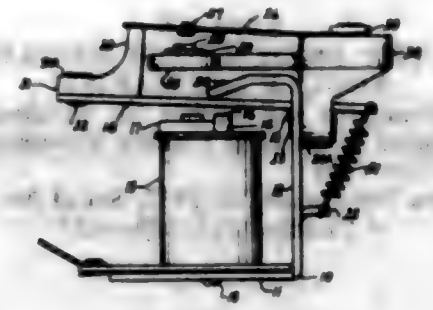
1. A carburetor controlled engine starter switch for use with a carburetor having a rotatable throttle shaft, comprising a support, a pair of spaced apart fixed contacts adapted to be connected in series with the starter circuit, a pair of contact members movable into and out of engagement with said spaced contacts, means responsive to rotation of said throttle shaft for controlling the position of said pair of movable contacts, a bridging contact movable into and out of engagement with said pair of movable contacts, and means operable in response to starting of the engine for moving said bridging contact out of engagement with said pair of movable contacts.

2,900,471
MAGNETIC SWITCH
Leonard E. Ashe, Minneapolis, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware
Application April 26, 1957, Serial No. 655,268
5 Claims. (Cl. 200—87)



1. In a magnetic switch, a first member, a ring mounted for rotation relative to said first member, a plurality of magnets embedded in said ring, said magnets having portions exposed on the surface of said ring, a wiper arm mounted on said first member in such a manner as to be contiguous with said surface, a piece of magnetic material carried by said wiper, attraction between said magnets and said magnetic material causing said wiper to contact said magnets selectively when said ring has rotated to predetermined positions relative to said first member, and means electrically connected to said magnets and said wiper so that circuits are closed when said wiper contacts said magnets.

2,900,472
RELAY
Walter F. Dowdle, Lincoln, Ill., assignor to Essex Wire Corporation, Fort Wayne, Ind.
Application July 22, 1957, Serial No. 673,246
2 Claims. (Cl. 200—87)



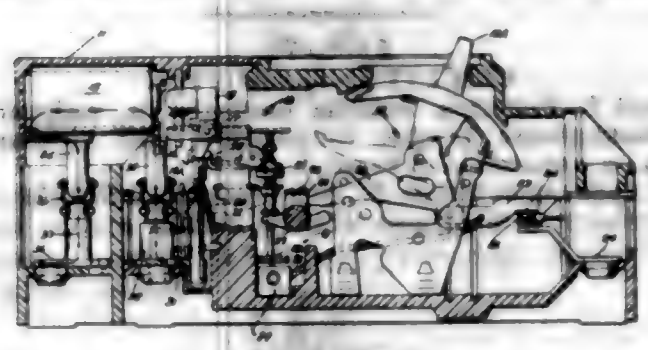
2. In a relay of the type of having a magnetic core structure; an energizing winding carried on said core structure; an armature supported by said core structure and movable between magnetically attracted and unattracted positions; a cantilever spring supported at one end on said core structure and having its free end extending over said armature; a relatively fixed contact supported by said core structure; said cantilever spring being biased in a direction toward said fixed contact and carrying a movable contact arranged to engage said fixed contact; and a contact actuator secured to the armature adjacent the free end of said cantilever spring for engagement therewith when said armature is in its unattracted position; the improvement in said contact actuator wherein said contact actuator comprises a substantially L-shaped bracket having an arm for engaging said cantilever spring and a base extending at substantially right angles to said arm; said base being secured on one side of said armature; said arm having a selected height providing a desired separation between the free end of said cantilever spring and said arm in the attracted position of said armature; and said arm being provided with a plurality of indentations having bottom portions located at different distances from the end of said bracket arm adjacent said armature to indicate the height of said bracket arm.

bodies being arranged to engage each other in a contact area completely surrounding said recess and exerting atmospheric air externally of the arc chute and into the constricted end of the arc passage in the general direc-

between them.

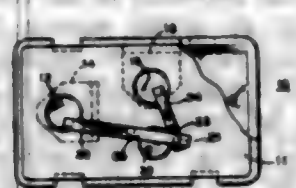
and dividing the interior thereof into a liquid containing

2,900,473
MAGNETIC SHIELD
George J. Glesmer, Oaklyn, N.J., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Application December 28, 1956, Serial No. 631,151
7 Claims. (Cl. 200—88)



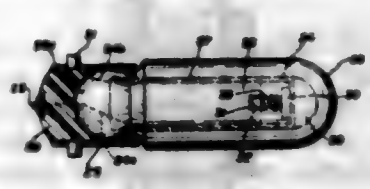
1. A multiphase circuit breaker; each phase of said circuit breaker including a current path comprising a current limiting device and a bimetallic element; a rigid connecting means joining a first end of said bimetallic element and said current limiting device; a second end of said bimetallic element being free to move as said bimetallic element is heated; said bimetallic element and said connecting means comprising a loop; a body of magnetic material placed within said loop; said magnetic material constructed and positioned to balance magnetic forces on said loop accompanying a current flow therethrough and thereby protect said bimetallic element from permanent distortion.

2,900,474
FLASHER
James W. Welsh, Summit, N.J., assignor to Signal-Stat Corporation, Brooklyn, N.Y., a corporation of New York
Application May 12, 1958, Serial No. 734,471
4 Claims. (Cl. 200—113)



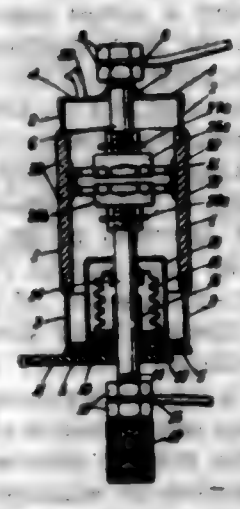
1. A thermostatic circuit breaker comprising, in combination, a dielectric base; a first fixed terminal on said base; a relatively elongated bimetallic strip having one end electrically and mechanically fixed to said first terminal; a relatively elongated paramagnetic member electrically and mechanically secured to the free end of said bimetallic strip to extend therefrom; a first contact fixed to said member; a permanent magnet fixed to said base beneath said member to attract the latter against said magnet; a second fixed terminal on said base; and a second contact electrically connected to said second terminal and substantially fixed relative to said first contact; said first and second contacts being held in pressure engagement when said armature is attracted against said magnet; said bimetallic strip, upon the establishment of current flow between said terminals and thus through said strip, tending to deflect in a contact separating direction and, when restrained against such deflection, storing a progressively increasing amount of kinetic energy tending to so deflect said strip; the relative strength of said magnet in producing a magnetic field acting on said member being correlated with the deflecting force of said bimetallic strip to retain said member engaged with said magnet until the kinetic energy developed in said strip has attained a high value sufficient to snap said member away from said magnet when the deflecting force of said strip exceeds the holding force of said magnet on said member to snap said contacts apart, the separation of said contacts being accelerated by the rapid decrease in the strength of the magnetic field acting on said member as said member moves away from said magnet; said strip, upon disengagement of said contacts, cooling and deflecting to move said member toward said magnet, said movement being accelerated, to snap said contacts together due to the rapid increase in the strength of the magnetic field acting on said member, as said member approaches said magnet, augmenting the contact closing action of said strip said second contact being on said second terminal, and said member extending laterally at an angle not exceeding 90° from the end of said strip over said second terminal, with the first contact being at the free end of said member.

2,900,475
ELECTRIC FUSE
Charles Reese, Cimarron, N. Mex.
Application April 10, 1957, Serial No. 651,950
6 Claims. (Cl. 200—131)



1. A plug-type fuse comprising a base, an elongated support member of insulating material extending from said base, said member having a notch at the outer end thereof remote from said base, an elongated U-shaped fusible element extending along both sides of said member and through said notch, external electric contacts on said base, conducting means connecting said ends of said elements and respective ones of said contacts, and a transparent envelope secured in said base and extending closely about and completely enclosing said member and said fusible element.

2,900,476
ELECTRICAL SWITCHING APPARATUS
Michael Peter Reece, Greenford, England, assignor to E. R. A. Patents Limited, Leatherhead, England, a British company
Application April 8, 1957, Serial No. 651,280
Claims priority, application Great Britain April 17, 1956
8 Claims. (Cl. 200—144)



1. A vacuum switch comprising an evacuated envelope, and two contacts mounted in said envelope for movement into and out of engagement with one another to close and open said switch, each of said contacts comprising a mechanically strong body having at least one recess formed within its contact area, and non-fluid conducting material disposed in said recess, the contact

tacts.

adjacent said armature to indicate the height of said bracket arm.

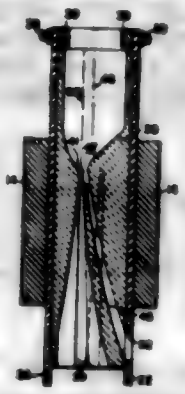
bodies being arranged to engage each other in a contact area completely surrounding said recess and exerting pressure on one another through their operating faces on closing of the switch, said contact bodies being formed of a material substantially more refractory than said non-fluid material, and said non-fluid material having a lower arcing voltage than that of the said bodies and being capable of forming an adherent film on the operating faces of the contact bodies during operations of the switch.

2,900,477

CIRCUIT INTERRUPTERS

Samuel A. Bettoneri, Donora, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application September 21, 1956, Serial No. 611,183
2 Claims. (Cl. 200—147)



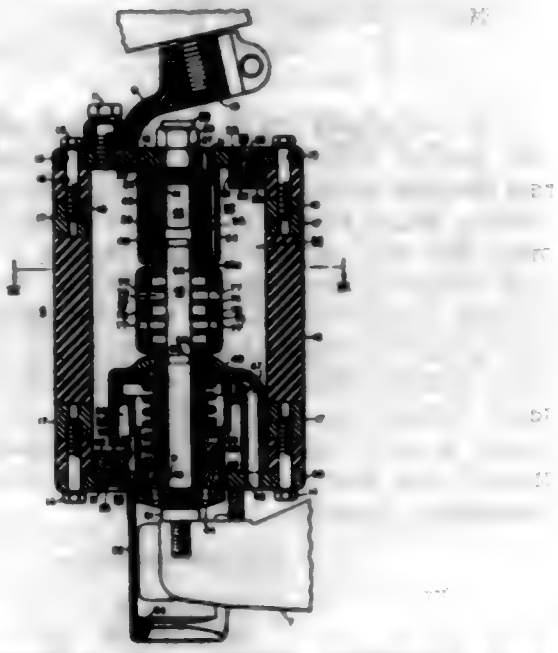
1. A magnetic air circuit interrupter of the type operable in atmospheric air independently of an external source of stored compressed gas including a generally rectangularly-shaped arc chute, the arc chute having opposite ends thereof open defining an entrance portion and an exhaust portion, contact means separable to establish an arc adjacent to said entrance portion of the generally rectangularly-shaped arc chute, a magnetic blowout structure including a U-shaped portion having side magnetic pole plates disposed on opposite sides of the generally rectangularly-shaped arc chute, means for setting up a transverse magnetic field between said magnetic pole plates for effecting movement of said established arc through the arc chute toward the exhaust portion thereof, said generally rectangularly-shaped arc chute including a plurality of relatively thin, insulating, non-gas-evolving plate portions of at least two different types, a first type of relatively thin insulating non-gas-evolving plate portion being elongated in the direction of arc movement and having a closed tapered elongated slot therein extending in the long direction of the elongated plate portion with the open end of the closed slot disposed at the entrance portion of the arc chute, a second type of relatively thin insulating, non-gas-evolving plate portion also being elongated in the direction of arc movement and also having a closed tapered slot therein extending in the long direction of the elongated second plate portion with the open end of the closed slot also disposed at the entrance portion of the arc chute, the side edges of the tapered closed slots in the first and second types of insulating relatively thin plate portions collectively defining a tapered arc passage within said arc chute becoming more constricted in the direction of arc movement toward the exhaust portion of the arc chute, the second plate portion in addition having embossed raised portions on its surface cooperating with a contiguously disposed first plate portion to define one or more elongated aspirator ducts extending in the general direction of the plate slot and at only a small angle thereto, the one or more aspirator ducts leading from the sides of the arc chute to the region immediately adjacent the apices of the closed slots of the first and second plate portions and directing one or more auxiliary jets of cool atmospheric air externally of the arc chute and into the constricted end of the arc passage in the general direction of arc movement toward the exhaust portion of the arc chute, and said one or more aspirator induced jets of cool atmospheric air assisting arc interruption at said apices and deionizing remnant arc products to prevent reignition of the arc at said separable contact means.

2,900,478

CIRCUIT INTERRUPTER

Robert E. Friedrich, Baldwin Borough, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application March 27, 1956, Serial No. 574,171
6 Claims. (Cl. 200—150)



1. A liquid-break circuit interrupter including an arc-extinguishing unit immersed in an arc-extinguishing liquid, said arc-extinguishing unit including a hollow tubular insulating shell, said hollow tubular shell having a pair of support openings provided in the side walls thereof, a grid block having an arcing passage therein supported diametrically across said hollow tubular shell within said support openings, contact means including a rod-shaped movable contact for establishing an arc within said arc passage of the grid block, a lower substantially flat metallic closure plate for the arc-extinguishing unit, means detachably securing said substantially flat metallic closure plate to the lower peripheral edge of said insulating hollow tubular shell, an inverted cup-shaped metallic operating cylinder extending upwardly within the arc-extinguishing unit from the lower closure plate and having at least one cut-out portion in the lower side wall thereof, means securing said inverted metallic cup-shaped operating cylinder to said substantially flat lower metallic closure plate so as to be removable therewith, a pumping piston operable within the operating cylinder for pumping liquid through said cut-out portion toward said arc within said arc passage to effect the extinction thereof, and said movable rod-shaped contact being reciprocally movable through the upper end of said inverted cup-shaped operating cylinder to effect the charging of said pumping piston therein.

2,900,479

FURNACE CONSTRUCTION

John A. Redmond, James W. Peach, Richard K. Wuerfel, and Earnest L. Weight, Baltimore, Md., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application April 24, 1958, Serial No. 730,627
14 Claims. (Cl. 219—10.67)

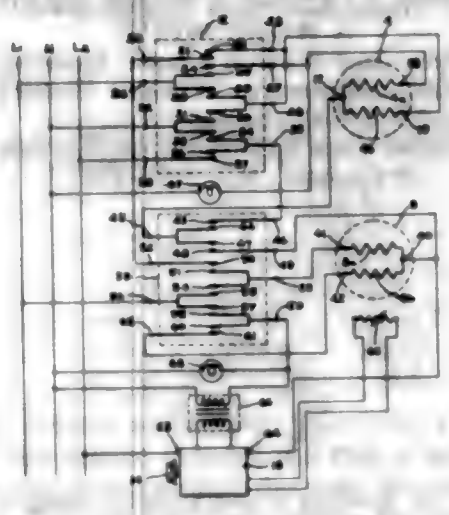
11. In an induction heating furnace comprising a hollow thin-walled support member disposed within an electrical coil, the combination therewith of guide elements attached

for moving the slides simultaneously toward or away fluid mass being considerably greater than the cross sec-

to said support member to define parallel side walls of a longitudinally-extending guide channel within said support member, smooth-surfaced thin-sheet metallic liner

means disposed between said guide elements to define the bottom surface of said guide channel, and a removable workpiece supportable wear rail assemblage disposed in said guide channel.

2,900,480
ELECTRIC RANGE
Samuel C. Jordan, Lyndon, Ky., assignor to General Electric Company, a corporation of New York
Application November 14, 1958, Serial No. 773,979
4 Claims. (Cl. 219—20)

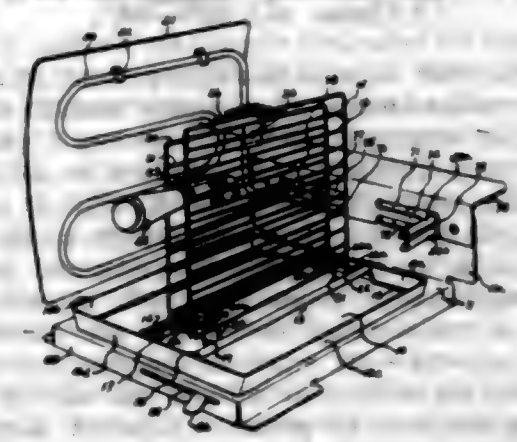


1. An electric range comprising first and second adjacent surface heating units, said first heating unit including a pair of resistance elements having a common terminal and first and second separate terminals whereby said first heating unit is adapted to be connected in circuit with a three-wire power source so as to provide a plurality of wattage outputs, a multiple-position multiple-contact control switch adapted to be connected to said power source and to said resistance elements so as to control the energization thereof, thermostatic means connected in circuit with said power source and said second heating unit for controlling the energization thereof in accordance with the temperature of a utensil supported thereon, a selector switch connected in circuit with said power source and said first and second heating units, said selector switch including a plurality of contacts arranged to provide a first switch position in which only said second heating unit is connected so as to be controlled by said thermostatic means and a second switch position in which both of said heating units are connected so as to be controlled by said thermostatic means, said selector switch also including a pair of normally closed contacts connected in circuit with said common terminal of said resistance elements and said control switch so that said common terminal may be disconnected from said control switch by actuation of said selector switch, and means for opening said normally closed contacts when said selector switch is moved to said second switch position, whereby said common terminal of said resistance elements is disconnected from said control switch when said first heating unit is connected in circuit with said thermostatic means.

2,900,481
ELECTRICAL DEVICE FOR FORMING HOLES IN NURSING NIPPLES
Daniel L. Marcantonio, Westport, Conn.
Application February 14, 1956, Serial No. 565,446
2 Claims. (Cl. 219—39)

1. In a device of the character described, a tubular handle member, a fine wire bent upon itself to form a loop with a relatively sharp point at the bend, means removably mounting the wire in the handle member with said point projecting a short distance therefrom comprising a conductor socket mounted in the handle adjacent one end, a metal shell removably mounted in said socket in contact therewith and including a central contact at its inner end, means mounting said loop in the shell including conductor wires to which the loop is fastened and which wires are connected with the shell and central contact, and means for supplying an electric current connected with said socket and central contact for supplying a current to the loop for heating the wire and pointed end to form a discharge opening in a nursing nipple by placing the projecting heated pointed end of the wire against the nipple.

2,900,482
BROILER
Elmo E. Ayler, Woodland Hills, Calif., assignor to Midwest Manufacturing Corporation, Galesburg, Ill., a corporation of Illinois
Application November 4, 1957, Serial No. 694,212
19 Claims. (Cl. 219—35)



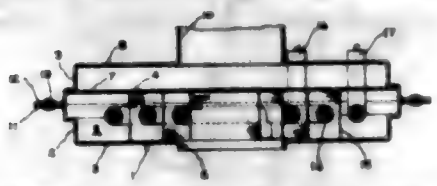
1. A broiler comprising a base, a pair of slides mounted on the base for movement laterally along the base toward and away from each other, a pair of support members having individual connections to the respective slides to be carried thereby laterally of the base toward and away from each other, a pair of electrical heating units carried individually by said support members above the base and mounted to be positioned upright opposite one another, a single movable operating handle projecting from the base, linkage means pivotally mounted on the base and connected between said handle and the slides

comprises supplying flux and filler metal with the flux as a core in a composite wire of filler metal, maintain-

extensive rear edges thereof for receiving an electrode therein, said jaws being positioned above a workpiece

for moving the slides simultaneously toward or away from each other to carry the upright heating units toward or away from each other when the handle is moved, and said support members being rotatably supported from the slides to be turned from positions in which they support the heating units upright to positions in which they support the heating units substantially horizontal overlying one another.

2,900,483
ELECTRIC CATALYTIC CONTACT DEVICE
Stanley B. Welch, Louisville, Ky., assignor to General Electric Company, a corporation of New York
Application September 29, 1958, Serial No. 763,993
5 Claims. (Cl. 219—38)



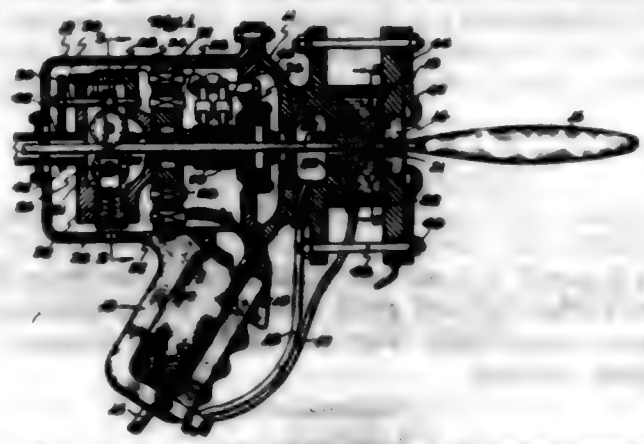
1. A catalytic fluid contact device comprising a housing including side wall means and a pair of end walls forming a substantially closed compartment, an electric heating element of sinuous configuration in said housing, catalytic screen means in said housing, said screen means including screen portions positioned in generally parallel spaced relation to at least the major portion of said heating element, said screen portions being generally perpendicular to and in abutting relation with said end walls so as to provide a sinuous passageway for said heating element, said housing having a first opening adjacent one end of said passageway and a second opening adjacent the other end thereof, whereby fluid passing through said openings and said housing necessarily contacts a large percentage of the surface of said screen means during its passage through said housing.

2,900,484
AUTOMATIC ARC WELDING PROCESS AND MACHINE
François Georges Dumbler, Anderlecht, Belgium, assignor to La Soudure Electrique Autogene, S.A., Brussels, Belgium, a corporation of Belgium
No Drawing. Application February 19, 1958
Serial No. 716,017
Claims priority, application Belgium March 5, 1957
1 Claim. (Cl. 219—74)

A process for automatic electric arc welding of austenitic stainless steel under a shielding gaseous atmosphere, which comprises feeding a continuous metallic electrode consisting of a metallic shell surrounding a granulated core composed essentially of a mixture of deoxidizers and slag-forming materials, to a point of welding, said core amounting to between 24 and 42 percent of the weight of the metallic portion of the electrode, and said electrode comprising in addition metallic chromium and nickel, and maintaining an electric arc between the electrode and the work while surrounding the arc with a protective gas mixture of nitrogen and carbon dioxide containing less than 40 percent of carbon dioxide and more than 60 percent of nitrogen.

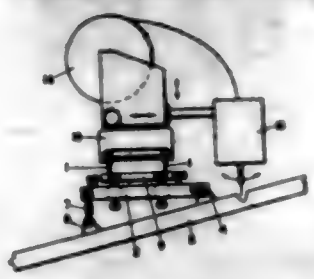
2,900,485
PORTABLE ELECTRICAL TORCH
Albert G. Clark, Wayne, Pa., assignor to General Electric Company, a corporation of New York
Application March 19, 1957, Serial No. 647,159
3 Claims. (Cl. 219—75)

1. A portable electrical torch including a housing, a pair of electrodes supported within said housing and energizable by a power source to transmit an arc therebetween, means forming a continuously moving mass of fluid about said arc and the portions of said electrodes in contact therewith, the cross sectional thickness of said fluid mass being considerably greater than the cross section of said arc and moving at a rate such that the housing is thermally insulated from said arc, and means re-



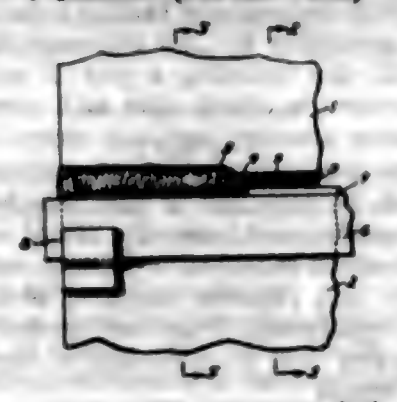
sponsive to the magnitude of the arc electrical current for regulating the distance between said electrodes to maintain said current substantially constant.

2,900,486
MEANS FOR GUIDING A WORK HEAD OVER A WORK PIECE
Harry Williams and William Clarke Holliday, Darlington, England, assignors to Wheeco Limited, Darlington, England, a British company
Application June 5, 1958, Serial No. 740,066
9 Claims. (Cl. 219—125)



1. Means for guiding a work head along a predetermined path relative to a work piece, comprising a track spaced from the surface of the work piece and extending parallel to the said path, and a plurality of supports for the track secured to the work piece and distributed at intervals along the length of the track, whereby to support the track from the work piece, the track serving to support and guide the work head, said track comprising a plurality of flexible rails detachably secured to the support members, so that the rail can be reshaped and used together with the support members to constitute guiding means of different size and shape.

2,900,487
PROCESS AND DEVICE TO RETAIN IN POSITION THE LIQUID METAL IN AUTOMATIC VISIBLE ARC WELDING IN 3 O'CLOCK BUTT JOINTS
François Georges Dumbler, Anderlecht, Brussels, Belgium, assignor to La Soudure Electrique Autogene, S.A., Brussels, Belgium, a corporation of Belgium
Application April 11, 1958, Serial No. 727,898
4 Claims. (Cl. 219—126)



1. The process of welding 3 o'clock horizontal butt joints between two butt assembled vertical plates which

plurality of baseless miniature bulbs, each having a rounded bottom and containing a filament, the ends of a fixed casing mounted on the outside of and extending outwardly from said tubular body, a bridging contact

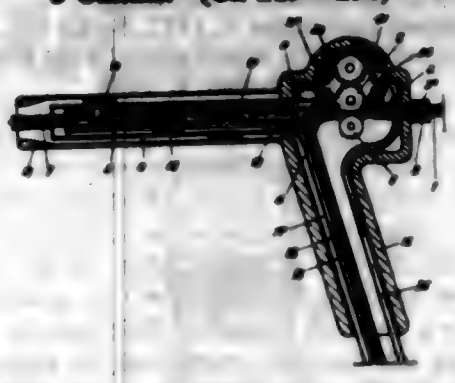
comprises supplying flux and filler metal with the flux as a core in a composite wire of filler metal, maintaining a visible arc to the plates at the joint from said wire, with the arc unobstructed by the slag, blanketing the arc with a protective screen of carbon dioxide discharged from a nozzle surrounding said wire, allowing slag formed by the welding arc to flow down over the side of the weld bead and solidifying the slag overflow below the weld bead against a copper element having cooling capacity and thus forming and supporting a dam of solidified slag on the upper surface of the copper element, and maintaining the dam of solidified slag in position stationary with respect to the weld bead and plates until the weld metal completely solidifies.

2,900,488

ARC WELDING GUNS WITH CONSUMABLE ELECTRODE WIRE

André Bassot, Boulogne-sur-Seine, France, assignor to L'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude, Paris, France

Application November 9, 1955, Serial No. 545,912
Claims priority, application France November 18, 1954
3 Claims. (Cl. 219—130)



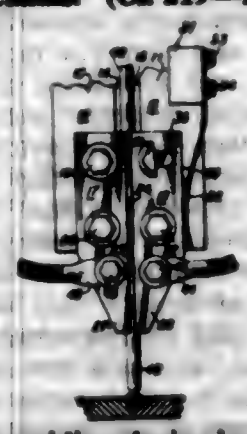
1. In an electric arc-welding gun with a consumable electrode wire moved through the gun, a gun body provided with means for guiding the wire, with a mechanism for moving the wire and with means for supplying said wire with an electric welding current, a hydraulic gear motor mounted on said body and directly coupled with said mechanism, a volumetric pump remote from the gun body and having its outlet connected to the inlet of said hydraulic motor, an electric motor for driving the pump, and means for supplying said pump with a hydraulic fluid, said hydraulic fluid being used also as a cooling medium for the gun body.

2,900,489

CONTACT JAW ASSEMBLY FOR ELECTRIC WELDING

Howard N. Kenner, Fort Worth, Tex.

Application September 14, 1956, Serial No. 609,921
3 Claims. (Cl. 219—136)



1. In an electric welding device having a jaw supporting frame including forward vertical supporting members and a rear frame member having an adjacent rear frame member, vertical jaw members secured to said vertical supporting members in side by side relation, said jaw members having opposing vertical grooves in co-extensive rear edges thereof for receiving an electrode therein, said jaws being positioned above a workpiece therebeneath and movable relative to the arc end of said electrode and toward said rear frame member, and an L-shaped guide member carried by said rear frame member, the lower projecting end of said L-shaped guide member being in contact with the exposed surface of said electrode between and carried in the arcuate grooves in said rear edges of said jaw members.

2,900,490

COATED ELECTRODE FOR WELDING CAST IRON

Leon M. Petryck, Cranford, and George R. Pense, Westfield, N.J., assignors to The International Nickel Company, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Application June 24, 1958
Serial No. 744,078
17 Claims. (Cl. 219—137)

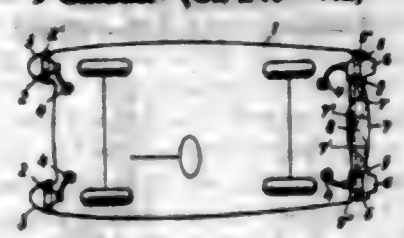
1. A coated arc welding electrode adapted for joining workpieces of cast iron comprising the combination of a steel core wire made of a steel containing about 0.08% to 0.35% carbon, up to about 0.9% manganese and the balance essentially iron, and a flux coating thereabout which contains by weight about 25 to about 50 parts of alkaline earth metal carbonate with the proviso that any portion exceeding 40 parts by weight must be strontium carbonate, about 15 to about 30 parts of alkaline earth metal fluoride, at least about 15 parts and up to 30 parts of carbon, about 3 to about 6 parts of silicon introduced as a ferrosilicon alloy, at least about 2 parts and up to about 10 parts of an agent selected from the group consisting of rare earth metals and rare earth metal oxides, and a binder.

2,900,491

LIGHT SYSTEM FOR AUTOMOBILES

Béla Barényi, Stuttgart-Hohenheim, and Karl Wilfert, Stuttgart-Degerloch, Germany, assignors to Daimler-Benz Aktiengesellschaft, Stuttgart-Untertürkheim, Germany

Application February 21, 1958, Serial No. 489,662
Claims priority, application Germany February 22, 1954
9 Claims. (Cl. 240—7.1)



1. In a motor vehicle having an outer body, said body having apertures in its front end and rear end near the outer corners thereof, a housing removably secured within each of said apertures, adapted for receiving a plurality of light fixtures, and a light transmitting cap surrounding each housing, at least one license plate, an elongated cover interconnecting and integral with the caps at least at one end of said vehicle and surrounding said license plate, means affording a view of said license plate, said means comprising a gap in said cover substantially of the size of and in line with said license plate, one of said housings associated with the caps integral with the cover being provided with an outlet for light from one of said fixtures therein, the inner surfaces of said cover being provided with reflecting means, and means including said reflecting means for directing the light from said outlet upon said license plate.

2,900,492

LIGHTING APPLIANCE

Fulvio Bossi, Chiasello, Italy, assignor to Frankel Associates, Inc., New York, N.Y., a corporation of New York

Application February 21, 1958, Serial No. 716,783
1 Claim. (Cl. 240—10)

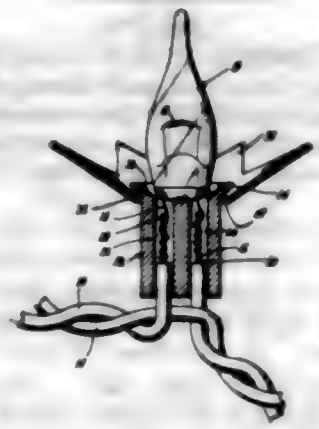
A lighting appliance comprising in combination, a

2,900,495

2,900,497

in contact therewith, the cross sectional thickness of said joints between two butt assembled vertical plates which

plurality of baseless miniature bulbs, each having a rounded bottom and containing a filament, the ends of said filament extending through and beyond the bottom of the bulb in spaced relation, a plurality of cylindrical non-conductive members each having a pair of spaced bores therethrough, and each of said members having a cup shaped seat adapted to receive the bottom of a rounded bulb and an annular outwardly flared rim, a wire conductor extended into each bore, each end of each



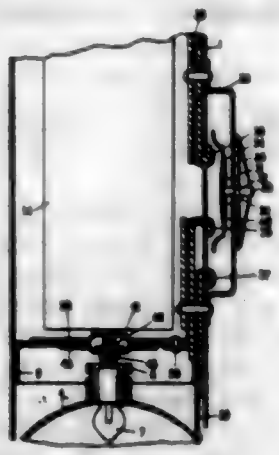
filament being wound around said conductor extending into each bore to establish electrical contact therewith, an electrical conductor connected in an electrical circuit with said first mentioned wire conductor and twisted thereabout to retain said non-conductive members in abutting relation with the bottoms of said bulbs, and a corolliform ornamental and reflecting body surrounding each non-conductive member and seating against said outwardly flared rim.

2,900,493

ELECTRIC TORCHES

Wing G. Cheng, Kowloon, Hong Kong, assignor of one-half to Meyer Manufacturing Company Limited, Kowloon, Hong Kong

Application June 22, 1956, Serial No. 593,256
Claims priority, application Great Britain November 9, 1955
5 Claims. (Cl. 240—10.66)



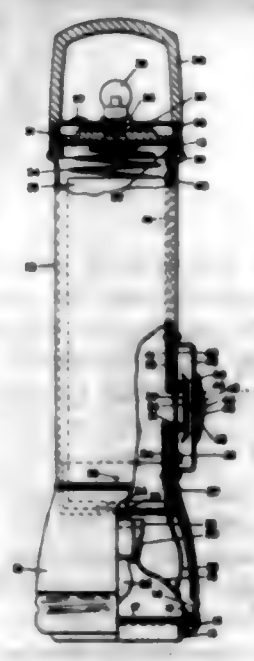
1. A portable electric illuminating device supplied by a dry battery and comprising a tubular body to receive the dry battery, one end of said tubular body being formed so as to constitute a foot or base on which the device can stand on a supporting surface such as a table, two electric lamp bulbs fitted respectively one at each end of said body portion, means for electrically connecting said lamp bulbs to said battery, said means comprising two alternative energising circuits each of which is associated with one of said lamp bulbs, and a switch for selectively controlling the supply of energising current from said battery to one or other of said alternative circuits to illuminate the lamp bulb associated therewith, said switch having a neutral position in which it disconnects both of said alternative circuits from said battery, a fixed casing mounted on the outside of and extending outwardly from said tubular body, a bridging contact arm slidably mounted on the inside of said fixed casing, outwardly of said tubular body, said arm constituting the movable part of said switch, a push button slidably mounted on said fixed casing and mechanically coupled to said bridging contact arm, and a locking device for normally retaining said bridging contact arm in a neutral or "off" position, said locking device comprising a stud fixed on said bridging contact arm so as to be movable therewith and normally engaging in an opening in said fixed casing, spring means carried on said bridging contact arm and acting on said stud in a direction to press it into said opening, and means for releasing said stud from said opening when it is required to move the switch into either one of its two "on" positions, said release means comprising a stud slidably mounted in said push button in permanent alignment with said locking stud.

2,900,494

ELECTRIC TORCHES

Wing Gee Cheng, Kowloon, Hong Kong, assignor of one-half to Meyer Manufacturing Company Limited, To-kwa-wan, Kowloon, Hong Kong

Application November 4, 1957, Serial No. 694,271
Claims priority, application Great Britain November 9, 1955
3 Claims. (Cl. 240—10.66)



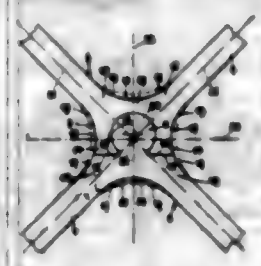
1. A portable electric illuminating device adapted for use either as a table lamp or as a hand torch, comprising a tubular body or casing to receive a dry battery, two lamp bulbs mounted respectively one at each end of said tubular body on opposite sides of said dry battery, alternative circuits for electrically connecting one or other of said lamp bulbs to said battery, a movable switch member for controlling said alternative circuits, a transverse partition of insulating material between the positive terminal of said battery and the terminal of one of said lamp bulbs, said transverse partition having a slot into which the positive terminal of said battery penetrates, said slot extending along an upstanding wall integral with the partition, a first conductor strip located in said slot and forming part of one of said alternative circuits, means for pressing said positive terminal of said battery into electrical contact with said first conductor strip and for pressing said first conductor strip into electrical contact with said terminal of said lamp bulb, a second conductor strip located in said slot and forming part of the other of said alternative circuits, the ends of said two conductor strips forming fixed contacts cooperating respectively with said movable switch member in one or other of the operative or "on" positions thereof.

to said carrier receiving means for controlling said traffic control devices to display proceed indications when and on or off, means interconnecting one of said controlling

jaw members having opposing vertical grooves in co-

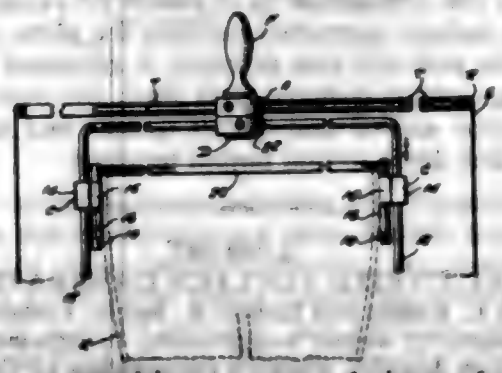
A lighting appliance comprising in combination, a

2,900,495
LOUVER CONSTRUCTION FOR LIGHTING FIXTURES
Franz Zwick, Ulm (Danube), Germany
Application April 30, 1957, Serial No. 655,976
1 Claim. (Cl. 240—78)



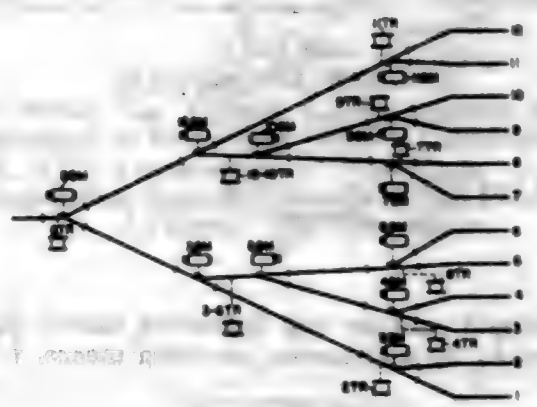
In a louver of the type described comprising a plurality of interconnectible louver sections, each of said sections consisting of two sets of parallel walls intersecting one another at an angle, to provide a multiplicity of light chambers, and each section being of rectangular shape with said walls terminating in equally spaced corners along the boundary lines of the rectangle, each of said corners provided with flats such that the flats of one section engage the flats of an adjacent section in planes parallel to said boundary lines in the assembled position of the sections, each pair of engaging flats being formed, respectively, with a projecting pin and a cylindrical recess forming a claw member engaging said pin, the improvement consisting in the end portions of said walls adjacent to said corners flaring outwardly, starting at predetermined points from the ends thereof, such as to cause the surfaces of one wall to gradually merge into the surfaces of the adjacent walls of both the same and adjacent sections in the assembled position and to cause the shanks of said claw members to have a substantially lesser thickness in the center than at the ends thereof, the medial lines of the walls of adjacent sections having a common intersection point being displaced from the center of said pin and recess in a direction at a right angle to the boundary line between the sections and away from the section formed with the claw member.

2,900,496
LAMP SHADE FRAME
Evan T. Williams, Westfield, N.J.
Application March 1, 1956, Serial No. 568,815
13 Claims. (Cl. 240—138)



1. A frame comprising a supported ring and an abutment ring arranged in concentric relation, and struts spaced around and connecting said rings; said struts each comprising an abutment ring portion having a fixed end secured to said abutment ring and a free end extending toward said supported ring, and a supporting ring portion having a fixed end secured to said supported ring and a free end extending toward said abutment ring, the free ends of said strut portions being arranged in overlapping relation; and clips of sheet metal having central tubular portions permanently secured to the free ends of the strut portions secured to one of said rings, said clips having side flanges forming spring sockets adapted to receive the overlapping free ends of the other strut portions secured to the other of said concentric rings.

2,900,497
AUTOMATIC SWITCHING SYSTEM
George Vande Sande, Rochester, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.
Application June 14, 1956, Serial No. 591,463
11 Claims. (Cl. 246—2)



1. In an automatic switching system for a railway car classification yard, a stretch of track extending over a plurality of route-selecting switches to a number of classification tracks, a rectangular matrix of bi-stable state storage devices comprising, a column of said devices corresponding to each of said classification tracks, each of said columns including a bi-stable state device for each route selecting switch that a car must traverse to reach the corresponding classification track, circuit means for operating said device in the upper-most row of a selected column from the normal to the abnormal state when it is desired to route a car to the particular classification track corresponding to that column, transfer circuit means for successively transferring to the abnormal state the devices of a column one at a time in order according to the switch-by-switch progression of the car through the yard to thereby advance each car description through its respective column, switch controlling means for each route-selecting switch including all the bi-stable state devices of a particular row relating to the same track switch, said switch controlling means acting to distinctively control said switch to its respective normal or reverse condition in accordance with the column in which said car description appears, said switch thereby being operated to the position required to give access to the particular classification track corresponding to that column.

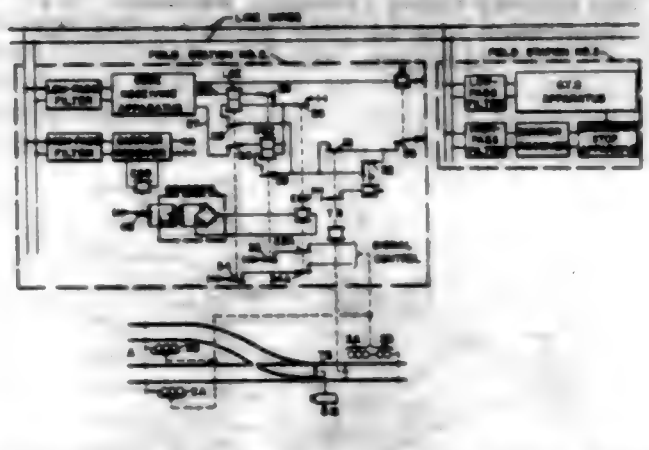
2,900,498
FAIL-SAFE PROTECTION FOR CODE COMMUNICATION CONTROL SYSTEMS
William D. Hailes, Rochester, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.
Application August 2, 1955, Serial No. 525,898
5 Claims. (Cl. 246—5)

1. A system for operating traffic control devices at a plurality of remote field stations from a single control office comprising, traffic control devices at each field station for displaying stop and proceed indications, normally inactive code communication apparatus of the step-by-step type connecting the control office and each said field station for selectively controlling the display of each said traffic control device in accordance with manually initiated code signals, over-control means including a normally active transmitter at the control office for normally continuously transmitting a separate carrier signal of distinctive frequency and manually operable switching apparatus for deactivating said transmitter, carrier receiving means at each said field station responsive to said separate and distinctive carrier signal, and emergency control means at each said field station responsive

connecting the anodes of said electron tubes to a source of positive potential; means connecting the cathodes of

between said elements with said capacitor having a capacitance substantially larger than said given capacitance,

to said carrier receiving means for controlling said traffic control devices to display proceed indications when and



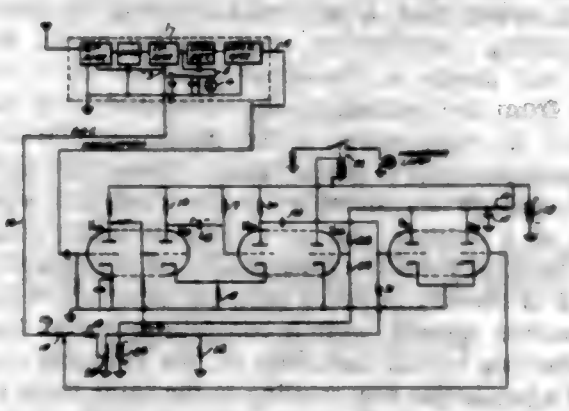
only when said separate and distinctive carrier signal is being received by said carrier receiving means.

2,900,499

RADIO RECEIVER HAVING MODULATION INDICATOR OPERATED BY AUTOMATIC GAIN CONTROL BIAS AND DEMODULATED SIGNAL

Herman L. Blosbelg, Baltimore, Md., assignor to the United States of America as represented by the Secretary of the Air Force

Application June 11, 1957, Serial No. 665,106
5 Claims. (Cl. 250—20)



2. For use with a radio receiver having means for producing an automatic gain control voltage in the presence of a received carrier wave and having a modulation output, apparatus for indicating the presence of a received carrier wave having a modulation less than a predetermined amount, said apparatus comprising: a condenser, a resistor, means for charging said condenser through said resistor, a normally conductive device and a normally nonconductive device connected in shunt to said condenser, means responsive to said automatic gain control voltage for rendering said normally conductive device nonconductive, means responsive to said modulation for rendering said normally nonconductive device conductive when said modulation exceeds said predetermined amount, and an indicator circuit energized by the voltage across said condenser.

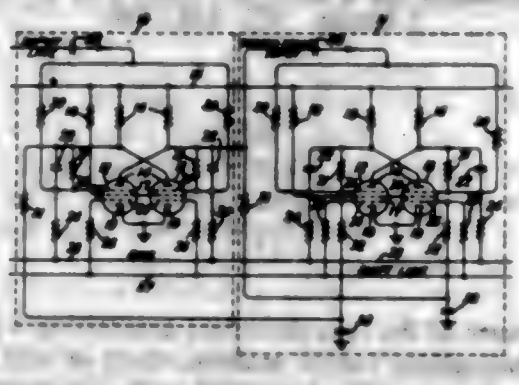
2,900,500

ELECTRONIC COUNTER AND SHIFT REGISTER

Robert A. Edwards, Little Falls, N.J., assignor to General Electric Company, a corporation of New York

Application October 19, 1954, Serial No. 463,890
13 Claims. (Cl. 250—27)

10. In a switching circuit, a plurality of flip-flop connected stages in concatenated arrangement, each stage having two cross connected on-off elements, the potentials of each of which vary dependent upon its on-off condition, and each element having two separate controlling means separately operable to turn the element on or off, means interconnecting one of said controlling means of each element in said flip-flop arrangement and means for interconnecting said second controlling means for shifting, said shifting interconnection including means



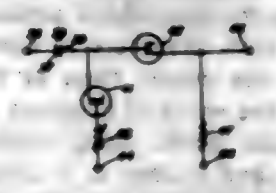
for transposing the potentials of both elements of each stage to prime different ones of the second controlling means of a different stage and means for conducting shift impulses to all said second controlling means in common, whereby the on-off condition of each stage is transferred to said different stage for each shifting impulse received independently of said concatenated arrangement of the stages.

2,900,501

SUBTRACTING CIRCUIT

Vernon B. Meinberg, Coronado, Calif.

Application August 15, 1955, Serial No. 528,567
1 Claim. (Cl. 250—27)
(Granted under Title 35, U.S. Code (1952), sec. 266)



A subtracting circuit for subtracting a selectable portion of an input wave, said circuit comprising: an input terminal for connection to a circuit for receiving said input wave, a charging capacitor having a positive plate and a negative plate, leads for connecting said positive plate to said input terminal, a first diode, a second diode, leads for joining said negative plate to the plate of said first diode and the cathode of said second diode, a bias terminal for connection to a source of variable bias, a variable resistor connected between the plate of said second diode and said bias terminal, a grounded output resistor, an output terminal, and leads for connecting the ungrounded end of said output resistor and the cathode of said first diode to said output terminal.

2,900,502

SAWTOOTH VOLTAGE GENERATOR

Rudolph L. Kuehn and Robert K. Seigle, Pasadena, Calif., assignors, by mesne assignments, to Hycon Corporation, Los Angeles, Calif., a corporation of California

Application May 21, 1956, Serial No. 586,287
6 Claims. (Cl. 250—27)

1. A sawtooth voltage generator for both recurrent, free-running and triggered, monostable operation, comprising: a first electron tube including a cathode, a first control grid, a second control grid and an anode; a second electron tube including a cathode, control grid and anode; means for applying a positive potential to the second control grid of said first electron tube; an input connection to said second control grid for applying control signals thereto; an electrical storage element connecting the control grid of said second electron tube to a reference point of fixed potential; means for providing positive charging energy to said storage element; means

of a predetermined level in the output signal from said generating means, a reactor so connected in the path of

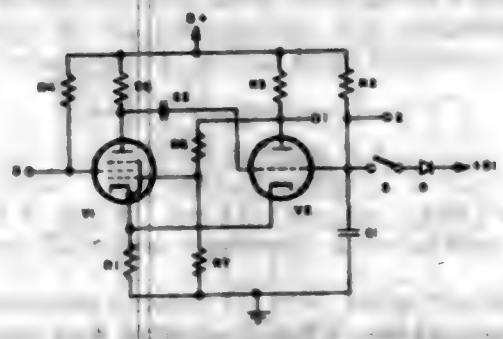
2,900,503

DISCRIMINATOR

to the other of said concentric rings.

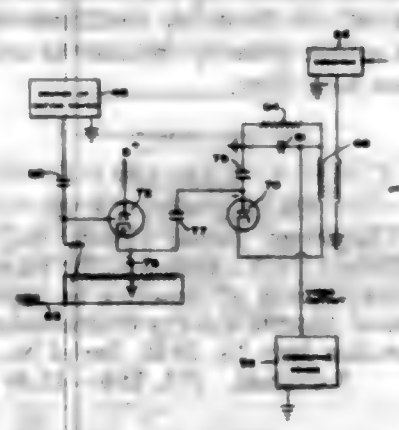
gency control means at each said field station responsive

connecting the anodes of said electron tubes to a source of positive potential; means connecting the cathodes of said electron tubes to said reference point for biasing said cathodes relative to said anodes; means for applying the anode potential of said second electron tube proportionately to the first control grid of said first electron tube; means for maintaining the control grid of said sec-



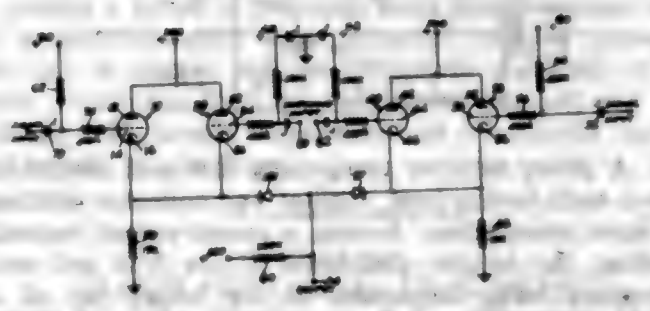
ond electron tube below a fixed predetermined potential to prevent conduction thereof in recurrent, free-running operation; switching means operable to connect said potential maintaining means to the control grid of said second electron tube; and an output connection to said storage element for obtaining a positive sawtooth output voltage, whereby said sawtooth voltage generator functions in recurrent, free-running operation when said switching means disconnects said potential maintaining means from the control grid of said second electron tube, and in triggered, monostable operation when said switching means connects said potential maintaining means to the control grid of said second electron tube.

2,900,503
DIODE GATING CIRCUIT
Ivan L. Joy, Topeka, Kans.
Original application December 4, 1952, Serial No. 324,104. Divided and this application May 25, 1956, Serial No. 587,415
2 Claims. (Cl. 250—27)



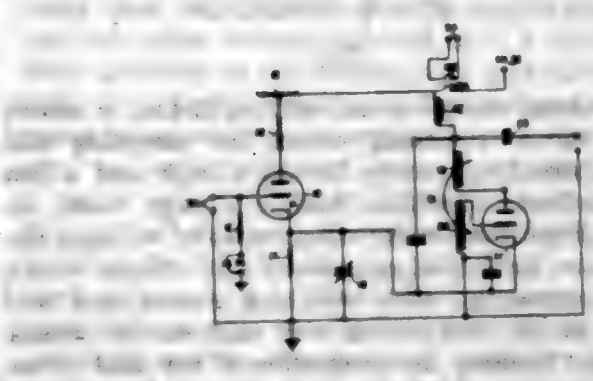
2. In an apparatus for controlling the transmission of energy of a specified frequency characteristic from a receiving device to an indicating device, the combination therewith of an electrical gating circuit that produces output pulses of a given polarity, and blocking means including a unidirectional current-path forming means having a current-collecting element and a current-emitting element with one of said elements biased oppositely to said given polarity to maintain the current path interrupted, a first circuit in the form of a series loop connecting the elements of the unidirectional current-path forming means and including in series connection with said elements a capacitor and input means, said capacitor being connected between said one element and said input means, said input means being responsive to and receiving energy from said receiving device, said first circuit being tuned to the frequency characteristic of the energy received by said input means and having said indicating means connected in parallel with said capacitor, said unidirectional current-path forming means having a given capacitance between said elements with said capacitor having a capacitance substantially larger than said given capacitance, and a second circuit connecting the output of said gating circuit to said one element such that the gating pulses temporarily overcome the bias on said one element and establish a path through said unidirectional current-path forming means without actuating said indicating means by transients in said gating circuit.

2,900,504
ELECTRONIC SWITCH
Phil H. Weiss, Los Angeles, Calif., assignor, by mesne assignments, to Paramount Pictures Corporation, New York, N.Y., a corporation of New York
Application June 11, 1956, Serial No. 590,608
4 Claims. (Cl. 250—27)



1. An electronic switch for selectively switching two signal sources to a common output comprising a first pair of electron discharge tubes, a second pair of electron discharge tubes each having an anode, cathode, and control grid, a pair of cathode load impedances, the cathodes of said first pair of tubes being connected to one of said cathode load impedances, the cathodes of the second pair of tubes being connected to the other of said cathode load impedances, an output terminal, a separate rectifier means coupled between said output terminal and each of said cathode load impedances, means to bias the tubes of said first pair of tubes to block them for the translation of signals applied to the control grid of one of them, means to bias the tubes of said second pair of tubes to enable the translation of signals applied to the control grid of one of them, and means to apply a bias to said rectifier means to enable the conduction only of the one coupled to said second pair of tubes.

2,900,505
PULSE DELAY SYSTEM
Robert M. Page, Washington, D.C.
Application August 28, 1945, Serial No. 613,194
5 Claims. (Cl. 250—27)
(Granted under Title 35, U.S. Code (1952), sec. 266)



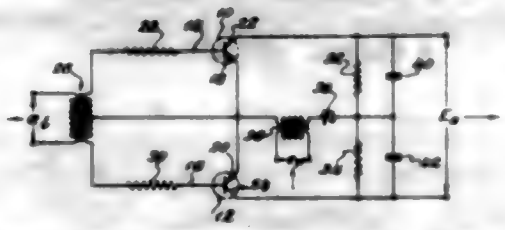
1. A delay circuit, comprising, a source of voltage, generating means including a gas tube for producing a voltage signal whose amplitude increases continually with time, said generator being adapted to be rendered operative in response to an input signal, a vacuum tube oscillator, said oscillator so connected to said source of voltage as to be in a state of operation and to said generator as to be rendered quiescent in response to the attainment

meable plate assemblies respectively arranged in face to

connecting said regulating tube in series between said

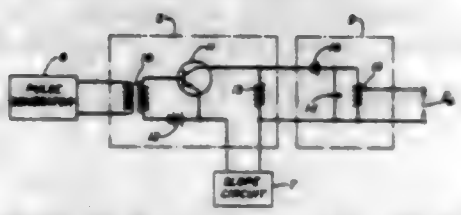
of a predetermined level in the output signal from said generating means, a reactor so connected in the path of plate current flow for said oscillator as to produce a voltage pulse in response to the quiescence of said oscillator.

2,900,506
PHASE DETECTOR
Lloyd A. Whetter, Hicksville, N.Y., assignor to Sperry Rand Corporation, a corporation of Delaware
Continuation of abandoned application Serial No. 405,112, January 20, 1954. This application May 13, 1955, Serial No. 508,035
8 Claims. (Cl. 250—31)



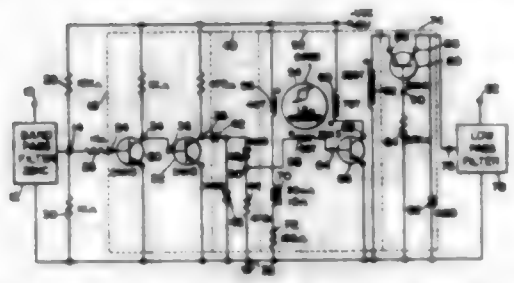
1. A phase detector comprising first and second transistors each having base, emitter and collector electrodes, an input transformer having a center-tapped secondary winding, the emitter electrodes of the first and second transistors being connected to the center tap of said secondary winding, a first resistor connecting the base electrode of the first transistor to one end of said secondary winding, a second resistor connecting the base electrode of the second transistor to the other end of said secondary winding, a pair of resistors connected in series between the collector electrodes of the transistors, means for coupling an alternating reference voltage of the same frequency as the input signal applied to said input transformer between the center tap of said secondary winding and the series connection point of said pair of resistors, a diode connected in series with said means, and capacitor means connected across said pair of resistors for smoothing the direct current output signal developed across said pair of resistors.

2,900,507
SAMPLING CIRCUIT
Samuel C. Rogers, Morristown, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application June 28, 1955, Serial No. 518,542
13 Claims. (Cl. 250—31)



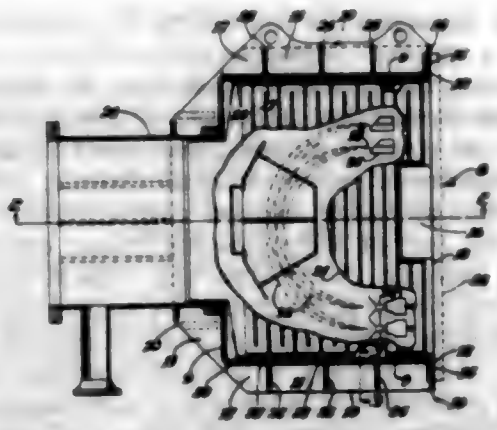
1. In a voltage sampling and storing circuit, a source of voltage waves, switching means for sampling said waves, said switching means having a high and a low internal impedance condition, sample storage means responsive in proportion to the magnitudes of voltages impressed thereon for storing samples of said voltage waves, means for connecting said switching means and said source in a series loop circuit with said storage means, and means for limiting the proportion of the total potential of said source which may be impressed upon said storage means, said limiting means comprising a resistor connected in shunt with said storage means, the impedance of said switching means in said high impedance condition being at least one order of magnitude larger than the resistance of said resistor whereby negligible voltage is developed across said resistor and said storage means during said high impedance condition.

2,900,508
DISCRIMINATOR
Robert M. Tillman, Willow Grove, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Application April 2, 1957, Serial No. 650,122
4 Claims. (Cl. 250—31)



1. In combination: a band-pass filter, first circuit means for squaring signals applied to said first circuit, a differentiating circuit, a blocking oscillator, a rectifying circuit and a low-pass filter, an input terminal adapted to have applied to it frequency modulated signals, said band-pass filter interconnecting the input terminal and said first circuit means, said first circuit means adapted to produce a square wave output signal of the same frequency as the signal passed through the band-pass filter, means for applying the square wave produced by the first circuit to the differentiating circuit, said differentiating circuit producing one trigger pulse for each square wave applied to it, circuit means for applying trigger pulses to the blocking oscillator, said blocking oscillator comprising a magnetic core having substantially rectangular hysteresis loop and a transistor, said core having four windings on it, a collector winding, a base winding, a bias winding and an output winding, said windings and transistor being so connected that a positive pulse and a negative pulse having substantially constant and substantially equal voltage time products are induced in the output winding for each trigger pulse applied to said blocking oscillator, said rectifying circuit connecting the low pass filter to the output winding of the blocking oscillator and adapted to apply pulses of one polarity induced in said output winding to the low pass filter.

2,900,509
CALUTRON TANK
James M. Cumming, Turtle Creek, Pa., and Leon R. Ludwig, Buffalo, N.Y., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Application July 24, 1946, Serial No. 685,928
3 Claims. (Cl. 250—41.9)



1. An open-sided calutron tank comprising a pair of heavy magnetically permeable side walls, a non-magnetic U-shaped intermediate wall structure spaced inward from the edges of the side walls and arranged between and cooperating with the side walls to enclose three sides of an operating chamber, a pair of U-shaped magnetically per-

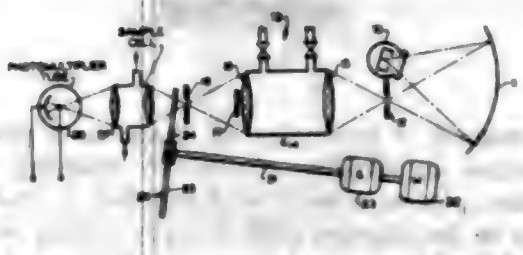
2,900,513
X-RAY APPARATUS

2,900,515
RADIOGRAPHY BY GAS IONIZATION

current-path forming means having a given capacitance as to be rendered quiescent in response to the attainment

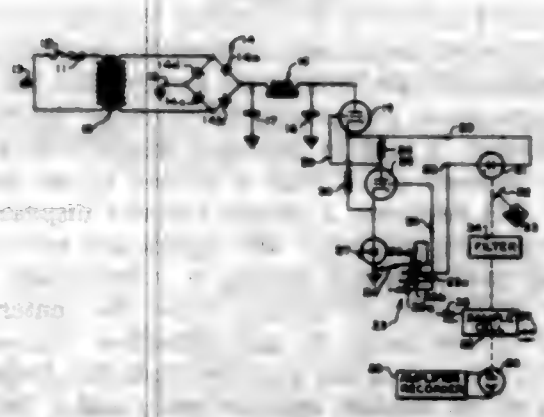
meable plate assemblies respectively arranged in face to face contact with areas of the side walls outside the intermediate wall structure, said plates extending between the intermediate wall structure and the respective adjacent side walls and having their open sides coinciding with the open side of the intermediate wall structure, and plural non-magnetic struts arranged in a series around the outside of the intermediate wall structure and extending between the U-shaped plate assemblies.

2,900,510
ANALYZER
Marshall S. Sparks, Jr., Los Angeles, Calif., assignor to Phillips Petroleum Company, a corporation of Delaware
Application October 31, 1955, Serial No. 543,733
8 Claims. (Cl. 250—43.5)



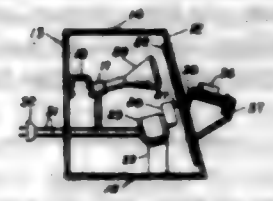
1. Apparatus for measuring fluctuations in radiation beams comprising a photomultiplier tube having an anode, a cathode and a plurality of dynodes; a voltage dividing network comprising a plurality of resistors connected in series relationship; a capacitor connected in parallel with said network; means connecting said dynodes to junctions between selected ones of said resistors; means applying potential differences between the anode and cathode of said tube and across said network so that conduction through said tube is a function of radiation impinging thereon; means responsive to conduction through said tube to vary the potential across said network so that the potential across said network is an inverse function of conduction through said tube; and means to measure fluctuations in current through said tube.

2,900,511
REGULATED POWER SUPPLY
Marshall S. Sparks, Jr., Los Angeles, Calif., and Thomas H. Harp, Jr., Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware
Application July 23, 1956, Serial No. 599,576
7 Claims. (Cl. 250—43.5)



4. An analytical instrument comprising, in combination, a power transformer having a primary winding and a secondary winding, means for supplying line voltage to said primary winding, a rectifier bridge defined by four fused germanium diodes connected to the secondary winding of said transformer, a filter connected to said rectifier and comprising a series choke of low inductance and a plurality of parallel condensers of high capacitance, a regulating tube having at least an anode-cathode control grid, first and second output terminals, means for connecting said regulating tube in series between said filter and said first terminal, hydrogen discharge lamp connected between; said output terminals, said lamp forming the sole connection between said terminals, a control tube having at least an anode, a cathode, and a control grid, a resistance having one terminal thereof connected to the second of said output terminals, a neon tube connecting the terminal of said resistance remote from said output terminal to the cathode of said control tube, a lead connecting the grid of said control tube to a portion of said resistance remote from the terminal thereof connected to said neon tube, a lead connecting the anode of said control tube to the control grid of said regulator tube, means for applying a positive voltage to the cathode of said control tube and a more positive voltage to the anode thereof, a photoelectric cell arranged to receive a beam of radiation from said hydrogen lamp, an amplifier-recorder unit connected to said photoelectric cell, a sample cell positioned in the path of said beam, means for feeding a sample to said cell and withdrawing said sample therefrom, and a rotatable chopper in the path of said beam.

2,900,512
CLOTH DEMONSTRATION DEVICE
George M. Jolly, Huntington, N.Y., assignor to Deering Milliken Research Corporation, near Pendleton, S.C., a corporation of Delaware
Application November 7, 1952, Serial No. 319,393
2 Claims. (Cl. 250—52)



1. An educational cloth demonstration device comprising a cabinet having a heat radiation transmitting aperture formed in one wall thereof, a heat source mounted in said cabinet and emitting heat radiation in the direction of said aperture, a disc rotatably supported by said cabinet and having its axis adjacent a peripheral edge portion of said aperture, said disc having at least two openings therein each adapted for mounting of a separate sample of cloth thereover, said disc being at least of a size and diameter corresponding to the size of said cabinet aperture sufficient to cover said aperture in all rotative positions of said disc, and whereby a sample being tested is easily in view of an observer, said openings and samples being each successively brought into registry with said aperture upon rotation of said disc, a heat sensing element mounted on and externally of said cabinet and in the path of radiation from said heat source, an indicating meter mounted on said cabinet at one side of said aperture and in full and clear view to an external observer, a motor connected in driving relation to said disc and driving said disc at a slow speed within the speed range in which the human eye can easily discern each individual cloth sample and a corresponding meter reading upon each cloth sample passing between said heat source and said heat sensing element, said meter being operatively connected to said heat sensing means and adapted to successively indicate the heat radiation transmitted to said heat sensing element through said cabinet aperture and the individual samples as they slowly pass into registry with said cabinet aperture and between said heat radiation source and said heat sensing element, whereby an observer is given an effective visual display of successive samples of cloth under test and the test results in one visual observation.

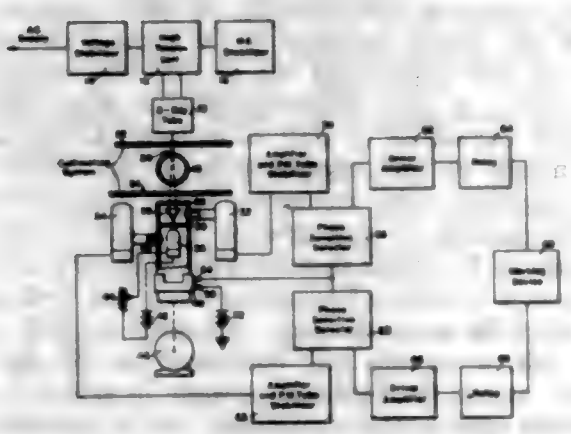
2,900,517
PRODUCTIVITY WELL LOGGING

liquid contained within said vessel, and means establishing a thermal gradient across a selected region of said liquid

means during said high impedance condition.

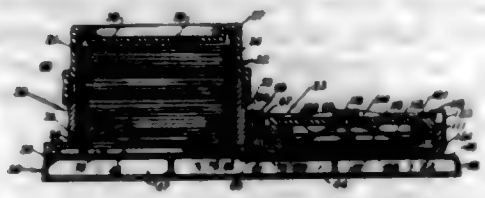
operating chamber, a pair of U-shaped magnetically per-

2,900,513
X-RAY APPARATUS
Philip A. Duffy, Catonsville, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application January 13, 1955, Serial No. 481,598
4 Claims. (Cl. 250—53)



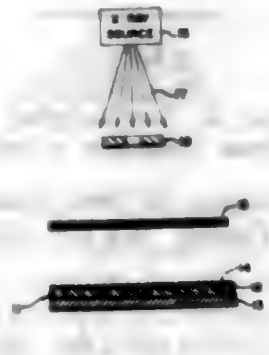
2. In X-ray apparatus including an X-ray source positioned to radiate X-rays through a workpiece, the combination of a first light source including a fluorescent material positioned to receive the X-rays passing through said workpiece and having a first light output, a second light source having a second light output operative as a standard for comparison with said first light output, first photoelectric means having a first output circuit, second photoelectric means having a second output circuit, workpiece marking means connected to said first output circuit and said second output circuit, and light scanning means positioned between the first photoelectric means and said first and second light source and positioned between the second photoelectric means and the first and second light sources.

2,900,514
DAYLIGHT FILM LOADING AND DEVELOPING APPARATUS
Cormack E. Boucher, Seattle, Wash.
Application May 18, 1955, Serial No. 509,366
20 Claims. (Cl. 250—65)



1. Portable light weight apparatus for use in making X-ray examinations comprising in combination, a cassette having a compartment for holding a film element during the X-ray exposure, a film dispenser comprising means defining a magazine, a stock of sensitized film elements in said magazine, said film elements each comprising an X-ray sensitive film member and a relatively stiff supporting ring encompassing said film member and extending outwardly on each of the opposite sides of the plane of said film member whereby said film member is supported by said ring in spaced relation from a supporting surface, means for ejecting said film elements one at a time from said magazine for loading into said cassette, a film developing unit having a light tight tank into which an exposed film unit may be placed for developing the same, and means on said cassette and said dispenser and developing unit for releasably mounting said cassette in light tight relation on said dispenser to receive a film element from the magazine of the dispenser and in light tight relation on said developing unit for transferring the exposed film element to the said tank of said developing unit.

2,900,515
RADIOGRAPHY BY GAS IONIZATION
Edward L. Criscuolo, Silver Spring, Md., and Donald T. O'Connor, New Canaan, Conn., assignors to the United States of America as represented by the Secretary of the Navy
Application March 16, 1956, Serial No. 572,169
6 Claims. (Cl. 250—65)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A method of producing an image on a photoinsensitive surface comprising, electrically charging an insulating plate, placing a wire mesh parallel to and in close proximity to the charged plate thereby setting up an electrical field in the air gap between the plate and the wire mesh wherein the force paths in the field are substantially parallel to each other and normal to the plate and wire mesh, ionizing certain paths through the field by exposing to X-rays to discharge said insulating plate leaving the surface of the plate charged in small areas of different concentrations of ions.

2,900,516
FAST NEUTRON SPECTROMETER
Francis J. Davis, Oak Ridge, George S. Hurst, Knoxville, and Paul W. Reinhardt, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission
Application April 26, 1957, Serial No. 655,453
4 Claims. (Cl. 250—71.5)

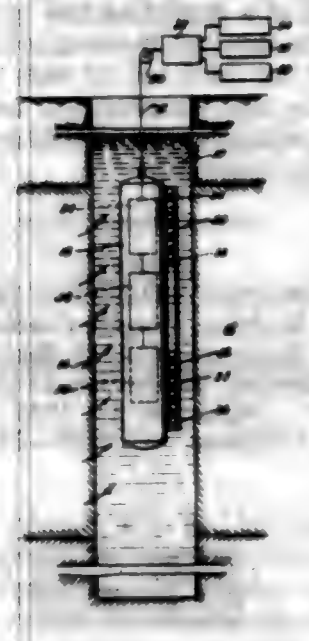
1. In a proton recoil spectrometer for receiving a beam of neutrons and determining the energy spectrum thereof, the improvement comprising an envelope defining a recoil chamber, a proton sensitive scintillating phosphor coating disposed on at least a portion of the inner surface of said envelope, a proton radiator disposed in the path of said neutron beam and within said envelope near one end, said envelope having a substantially ovoidal contour such that the distance from the center of said radiator to any point on said phosphor surface equals $L \cos^{2n} \theta$, where θ is the angle between the projection of the axis of the incident neutron beam and a line joining the center of said radiator with said point, L is the distance between said radiator and the point on said phosphor surface intersected by said projected axis, and n is a constant determined by the type and pressure of gas within said envelope, a gas disposed within said envelope to slow down recoil protons, means optically coupling said phosphor with said photomultiplier, pulse amplitude analyzer circuit means connected to said photomultiplier, and pulse counting means connected to said analyzer circuit.

2,900,521
DOOR CONTROL APPARATUS

input terminals, the cells of each of said units being ar-

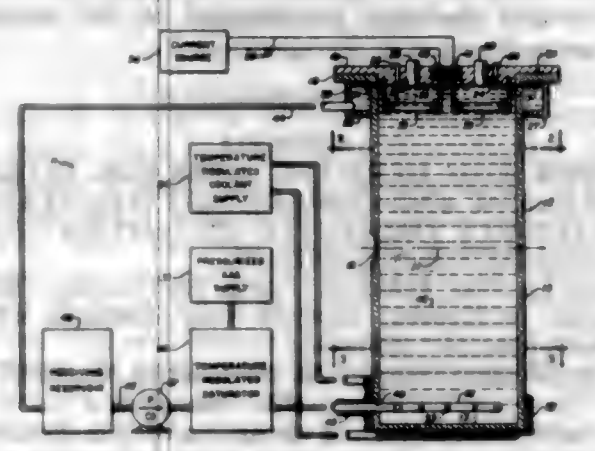
trol grid, first and second output terminals, means for visual observation.

2,900,517
PRODUCTIVITY WELL LOGGING
Joseph C. Allen, Bellaire, and Ralph C. Reynolds, Houston, Tex., assignors to Texaco Inc., a corporation of Delaware
Application December 8, 1955, Serial No. 551,755
8 Claims. (Cl. 250—83)



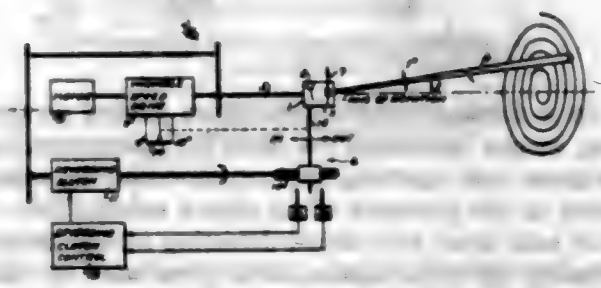
5. Apparatus for determining the density of borehole fluids entering a liquid containing borehole of a producing well from producing formations traversed by the borehole and wherein the fluids being produced at different depths mix with and change the density of the liquid in the borehole opposite the various producing formations, comprising in combination, an assembly including an elongated sealed casing, a radiation detecting device enclosed within said casing, means providing a restricted guide path mounted along one side of the casing on the exterior thereof in fixed relationship to said detecting device, an object freely movable within said guide path means along the restricted length thereof, said object having a known density and including a radioactive substance, said guide path means being open so that said object is exposed to the surrounding borehole fluid on the outside of said casing, means for suspending said assembly in the well bore at a predetermined depth, and means for moving said assembly within said well bore to different predetermined depths.

2,900,518
CONTINUOUSLY SENSITIVE BUBBLE CHAMBER
Robert H. Good, Berkeley, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application June 3, 1958, Serial No. 739,633
12 Claims. (Cl. 250—83)



1. In apparatus for the detection of ionizing radiation, the combination comprising a vessel, a gas-saturated liquid contained within said vessel, and means establishing a thermal gradient across a selected region of said liquid within said vessel, said thermal gradient having a temperature range including the saturation temperature of said liquid and including temperatures in excess of said saturation temperature thereby establishing a supersaturated region within said liquid whereby said ionizing radiation produces gas bubbles within said region of said liquid.

2,900,519
VARIABLE SPEED DRIVE FOR SPIRAL SCANNER
Nathan Sorel, Carle Place, and Warren A. Wiener, Islip, N.Y., assignors to the United States of America as represented by the Secretary of the Air Force
Application March 31, 1954, Serial No. 420,214
2 Claims. (Cl. 250—83.3)



2. A spiral scanner comprising means forming a scanning beam, means for rotating said scanning beam about an axis passing through said beam forming means and fixed relative to said scanner, means associated with said beam forming means for cyclically varying the tilt angle of said beam relative to said axis from a minimum value to a maximum value and back to said minimum value, a differential gear, means for driving the spider of said differential gear at constant speed, means for braking one output gear of said differential gear, means for braking the other output gear of said differential gear, means for coupling said one output gear to said beam rotating means, means associated with said beam rotating means and said tilt angle varying means for generating a voltage that is a direct function of both the speed of rotation of said beam and the tilt angle of said beam, and means responsive to said voltage and acting on said braking means for applying the braking means of said one output gear when said voltage exceeds a predetermined value gear when said voltage falls below said predetermined value.

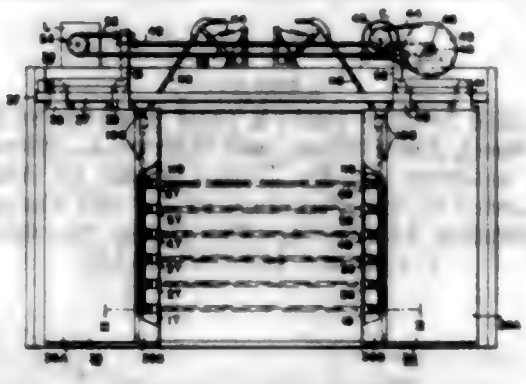
2,900,520
LIGHT SENSITIVE CONTROL MEANS
Karl F. Frank, Garden City, N.Y., assignor to Micro Balancing, Inc., Garden City Park, N.Y.
Application March 24, 1958, Serial No. 723,405
6 Claims. (Cl. 250—206)

1. Light sensitive control means comprising a photo-sensitive means, heat operated control contact means connected to and responsive to the integrated output of said photo-sensitive means, and heat operated power contact means connected to and responsive to the integrated output of said control contact means.

ing connected between said cathode and said control

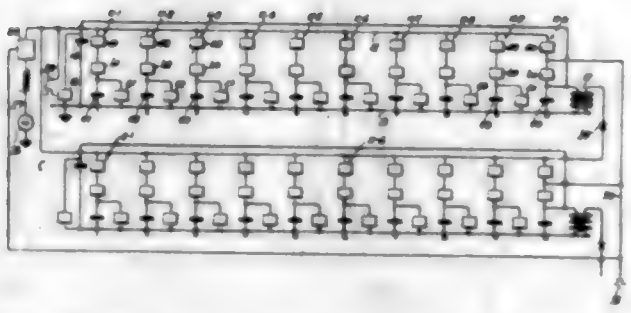
2,900,526
ENGINE STARTER GEARING

2,900,521
DOOR CONTROL APPARATUS
William F. Ramos, Westfield, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application July 21, 1953, Serial No. 369,469
10 Claims. (Cl. 250—206)



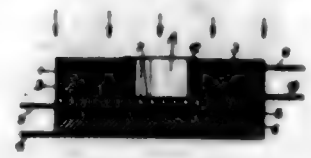
1. In a closure system, a structure having an opening, a door, means mounting the door for movement to close and expose said opening, and object-detecting means responsive to the presence of an object substantially in the path of said door, said object-detecting means comprising a plurality of transmitters each positioned to direct a separate beam of radiant energy other than visible light substantially across said opening, said beams being spaced from each other in a direction parallel to the plane of the opening, separate detecting means responsive to such radiant energy positioned in the path of each of said beams for controlling the operation of said door, motive means for moving the door relative to said structure, and translating means controlled by the detecting means for conditioning the motive means to retard movement of the door by the motive means as a function of the number of said beams which are interrupted, said translating means being responsive to the change in condition of the detecting means following interruption of at least a predetermined first number of said beams for retarding movement of the door in a closing direction by the motive means, said translating means being responsive to the change in condition of the detecting means only if a second number of said beams larger than said predetermined first number of said beams are interrupted for further retarding movement of the door.

2,900,522
SOLID STATE NETWORK
Charles S. Rois, Mountain View, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California
Application January 8, 1957, Serial No. 633,025
6 Claims. (Cl. 250—208)



1. A solid state counter adapted to be operated in response to electrical input pulses comprising means for applying a bias voltage to the counter, a plurality of units each including first, second and third serially connected photoconductive cells and an electroluminescent cell connected in parallel with said third photoconductive cell, said units being connected in parallel between a pair of input terminals, the cells of each of said units being arranged so that the first and second photoconductive cells are illuminated by the electroluminescent cell of the same unit whereby the resistance of the unit is lowered and the electroluminescent cell is maintained energized by the bias voltage, said units being arranged whereby the first photoconductive cell is illuminated by the electroluminescent cell of a preceding unit to thereby condition the unit whereby the unit is energized in response to an input pulse and the third cell of each of said units is illuminated by the electroluminescent cell of a succeeding unit to thereby extinguish the electroluminescent cell connected in parallel therewith.

2,900,523
PHOTOCOLORIMETRIC DEVICE
Otakar Ráliška, Prague, Czechoslovakia
Application September 6, 1956, Serial No. 608,305
Claims priority, application Czechoslovakia September 16, 1955
6 Claims. (Cl. 250—211)



1. A photocolorimetric device for oximetric apparatus adapted to be illuminated from a single section of a tested translucent layer of tissue, the device comprising, in combination, a first photocell; a first filter superimposed on said first photocell and transmitting only a first continuous portion of the spectrum to said first photocell; a second photocell superimposed on said first filter and being formed with a plurality of openings passing therethrough; a plurality of opaque tubular elements respectively arranged in said openings and at least coextensive therewith; a second filter superimposed on said second photocell and being formed with a plurality of apertures respectively superimposed on said openings and coinciding with the same, said second filter transmitting only a second different continuous portion of the spectrum to said second photocell so that only said second portion of the spectrum impinges on and excites said second photocell, while light falling on said apertures passes through the same and through said openings onto said first filter whereby only said first portion of the spectrum impinges on and excites said first photocell; a first pair of terminal contacts attached to said first photocell; and a second pair of terminal contacts attached to said second photocell whereby across said first pair of terminal contacts a voltage is produced by said first photocell proportional to the intensity of said first portion of the spectrum, and whereby across said second pair of terminal contacts another voltage is produced by said second photocell proportional to the intensity of said second portion of the spectrum.

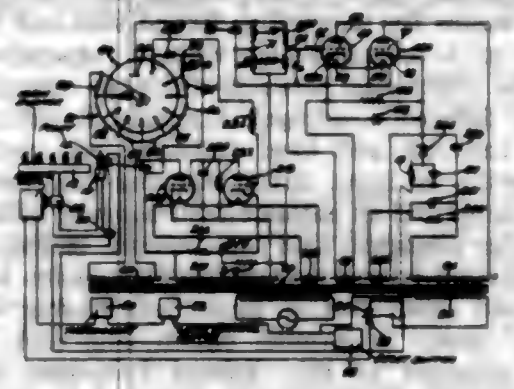
2,900,524
SYSTEM FOR DERIVING AVERAGE INTENSITY OF FLAME AND COMPARING INSTANTANEOUS INTENSITY THEREWITH INCORPORATING AUTOMATIC GAIN CONTROL
Robert Le Roy Peterson, North Hollywood, Calif., assignor to General Controls Co., Glendale, Calif., a corporation of California
Application October 22, 1953, Serial No. 387,750
7 Claims. (Cl. 250—214)

1. In a flame detecting apparatus of the character described, a first device having a cathode control grid and an anode, a first transformer winding connected between said cathode and said anode, a second transformer wind-

2,900,528
NETWORK PROTECTOR

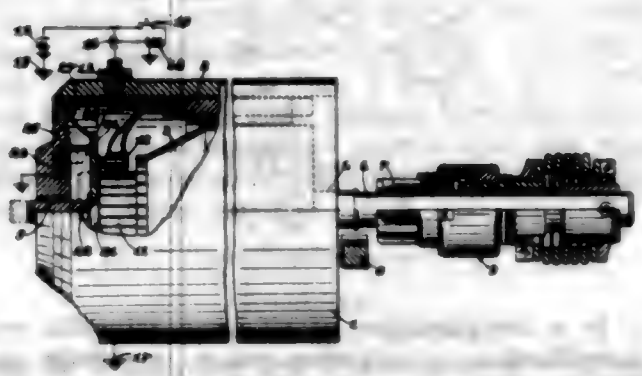
formers, a fourth pair of said secondary windings on said third and fourth transformer pairs, means connect-

ing connected between said cathode and said control grid and poled such that in the absence of a flame it renders said control grid negative when said anode is positive to thereby render said device normally nonconductive, means connected between the cathode and control grid for developing a voltage representative of the average intensity of a sporadically fluctuating flame, the last mentioned means, incorporating means, for rendering said device conductive when said flame intensity is above



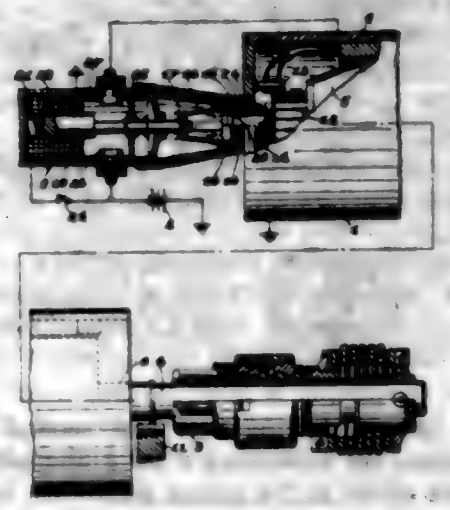
a predetermined average level and incorporating a photoelectric cell energized from an alternating current source, said cell having an electrode connected to said source and controlling said voltage developing means in accordance with the radiation impinging on said cell, and means connected to and responsive to the voltage on said electrode for controlling the current through said cell so as to render the output of said photoelectric cell substantially independent of variations in the magnitude of the voltage of said source.

2,900,525
ENGINE STARTER GEARING
Glenn S. Spencer, Horseheads, N.Y., assignor to Bendix Aviation Corporation, Elmira Heights, N.Y., a corporation of Delaware
Application October 23, 1957, Serial No. 691,916
1 Claim. (Cl. 290—38)



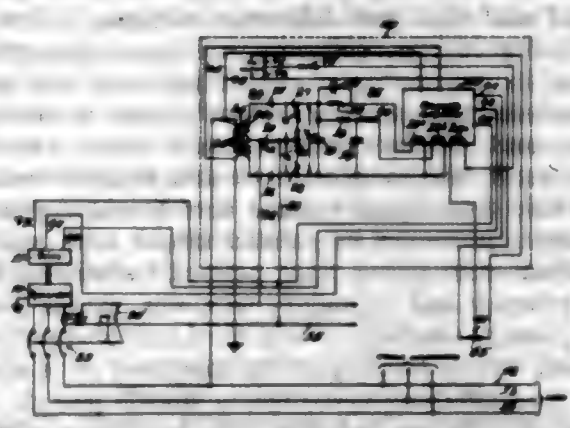
In an electrical starting system for internal combustion engines, a starting motor having a stationary field and a rotary armature including a shaft which is shiftable axially to move the armature into and out of centered relation to the field, yielding means normally holding the armature in decentered position, a pinion mounted on the armature shaft for movement therewith into and out of engagement with a gear of the engine to be started, an overrunning driving connection from said shaft to the pinion, a ring of magnetic material swiveled on the armature shaft, an annular electromagnet fixedly mounted in one end of the motor in position, when energized, to attract said ring and thereby move the armature to its centered position, and means for simultaneously energizing said motor and electro magnet; the starting motor armature having a commutator on its end adjacent the electromagnet, and brushes bearing on the commutator mounted on said ring; and means for preventing rotation of the ring.

2,900,526
ENGINE STARTER GEARING
Glenn S. Spencer, Horseheads, N.Y., assignor to Bendix Aviation Corporation, Elmira Heights, N.Y., a corporation of Delaware
Application October 23, 1957, Serial No. 691,925
4 Claims. (Cl. 290—38)



1. In an electrical starting system for internal combustion engines a motor having a field and an armature which is shiftable axially into and out of centered position with respect to the field, an armature shaft, a pinion slidably mounted for movement thereon and therewith into and out of mesh with a gear of the engine to be started, an overrunning driving connection from said shaft to the pinion, means for energizing the starting motor including an electro-magnetic starting switch having a plunger in alinement with the armature shaft and spaced axially therefrom, said shaft having a circumferential groove adjacent its end, and a latch member mounted on said plunger and movable thereby on closure of the starting switch into position to engage said groove when the motor armature is in central position.

2,900,527
GENERATOR CONTROL SYSTEM
Evans W. Erikson, Rockford, Ill., assignor to Sundstrand Machine Tool Co., a corporation of Illinois
Application July 25, 1956, Serial No. 600,891
7 Claims. (Cl. 307—57)



7. In a method of operating a plurality of power sources in parallel to drive a common load connected thereto, hence constrained to operate at the same speed, the step of increasing or decreasing force exerted on said power sources respectively in accordance with the integral sum of the difference between loading of the particular power source and average loading of all the power sources, and the difference between power source speed and a predetermined reference speed, thereby to maintain equalization of power delivery to the load by the different power sources and regulation of speed of the power sources.

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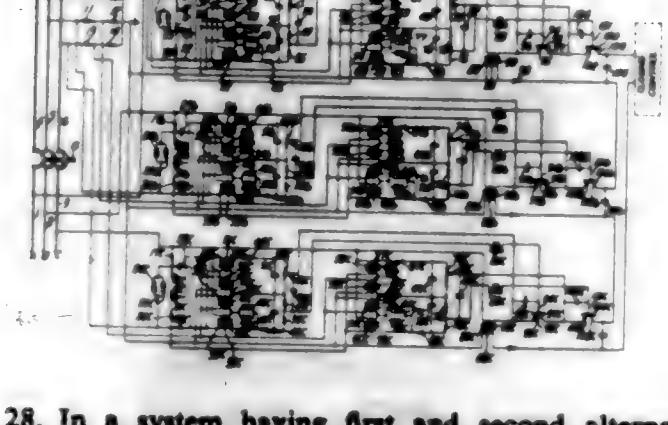
electrode and one of the base and emitter electrodes, two

quency as said input signal; a first blocking oscillator for

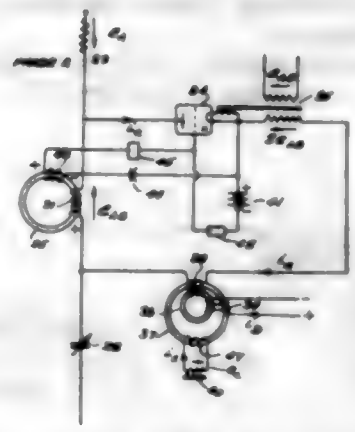
said units being connected in parallel between a pair of said cathode and said anode, a second transformer wind-

2,900,528
NETWORK PROTECTOR
John Baude, Milwaukee, Wis., assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application November 26, 1957, Serial No. 699,166
32 Claims. (Cl. 307—87)



28. In a system having first and second alternating voltages, means for producing a third alternating voltage responsive in phase to the vector difference between said first and second alternating voltages, a first pair of transformers each having primary and secondary windings, means connecting the primary windings of said first pair of transformers in parallel circuit relation to be energized by a measure of said first alternating voltage, a second pair of transformers each having primary and secondary windings, means connecting the primary windings of said second pair of transformers in parallel circuit relation to be energized by a voltage proportional to the vector difference between said first and second alternating voltages, means connecting a first pair of said secondary windings to produce a sum voltage proportional to the vector sum of the voltages energizing the primary windings of said first and second pair of transformers, means connecting a second pair of said secondary windings to produce a difference voltage proportional to the vector difference between the voltages energizing the primary windings of said first and second pair of transformers, voltage limit means associated with one transformer of said second pair of transformers for limiting the voltage across the secondary winding when the value of said third voltage approaches the value of said second alternating voltage, rectifier means for converting said sum and difference voltages into a first signal voltage responsive to the arithmetic difference between the peak values of said sum and difference voltages, a first transistor having emitter, collector and base elements, said transistor having an input circuit between said emitter and base elements and an output circuit between said collector and emitter elements, said input circuit including means for connection to said rectifier means to impress said first signal voltage across said emitter and base, capacitor means in parallel circuit with said base and emitter elements, a third pair of transformers each having primary and secondary windings, means connecting the primary windings of said third pair of transformers in parallel circuit relation to be energized by a measure of said first alternating voltage, a fourth pair of transformers each having primary and secondary windings, phase shift means energized by said third voltage for producing a fourth voltage responsive in phase to the vector difference between said first and second alternating voltages but displaced in phase by a predetermined amount from said vector difference, means connecting the primary windings of said fourth pair of transformers in parallel circuit relation to be energized by said fourth voltage, a third pair of secondary windings on said third and fourth transformer pairs, means connecting said third pair of windings to produce a second sum voltage proportional to the vector sum of the voltages energizing the primary · ndings of said third and fourth pair of transformers, a fourth pair of said secondary windings on said third and fourth transformer pairs, means connecting said fourth pair of windings to produce a second difference voltage proportional to the vector difference of a voltage energizing the primary windings of said third and fourth pair of transformers, voltage limit means associated with one transformer said fourth pair of transformers limiting the voltage across the secondary winding when the value of said third alternating voltage approaches the value of said second alternating voltage, rectifier means for converting second sum and difference voltages to a second signal voltage responsive to the arithmetic difference between the peak values of said sum and difference voltages, a second transistor having emitter, collector and base elements, said second transistor having an input circuit between said emitter and base elements and an output circuit between said collector and emitter elements, said input circuit including means for connection to said second rectifier means to impress said second signal voltage across said emitter and base, capacitor means in parallel circuit with said base and emitter elements of said second transistor, said output circuits of said first and second transistors including power source and circuit breaker closing means, said transistors so disposed with relation to said power source and said closing means that the transfer of power to circuit breaker closing means is controlled by the condition of said transistors.

2,900,529
NON-LINEAR COMPENSATION CIRCUIT FOR COMMUTATING REACTORS
Samuel Weiner, Philadelphia, Pa., assignor to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Application November 23, 1954, Serial No. 470,765
6 Claims. (Cl. 307—88)



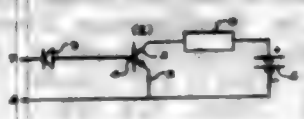
1. In a compensation circuit for a saturable reactor, in combination, a triggering means; a voltage source; a first non-linear element; a second non-linear element; said triggering means, voltage source and non-linear elements connected in series, one end of said series connection connected to one end of a coil of said saturable reactor, the other end of said series connection connected to the other end of said saturable reactor coil; said voltage source constructed to impress a voltage 180° out of phase and having approximately twice the magnitude of the voltage appearing on said saturable reactor coil.

2,900,530
TRANSISTOR PROTECTION CIRCUITRY
Ralph W. Rowland, Silver Spring, Md., assignor to Vitro Corporation of America, Verona, N.J.
Application April 16, 1954, Serial No. 423,638
2 Claims. (Cl. 307—88.5)

1. Transistor amplifier circuits comprising an NPN junction transistor having collector, emitter and base electrodes, a loaded output circuit including the collector

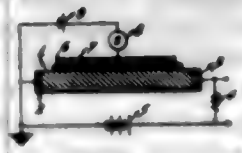
differentiating means connected to said first input circuit longitudinal neutral plane, means interconnecting said

electrode and one of the base and emitter electrodes, two amplifier input terminals adapted to be joined to a source of signals, means to energize the transistor electrodes to present a low impedance to current flow resulting from signals of one polarity applied across the base and emitter electrodes and a high impedance to current flow resulting from signals of opposite polarity applied across the base and emitter electrodes, whereby only the current flow caused by the one polarity signals will be amplified to provide load energization, a crystal diode connected to



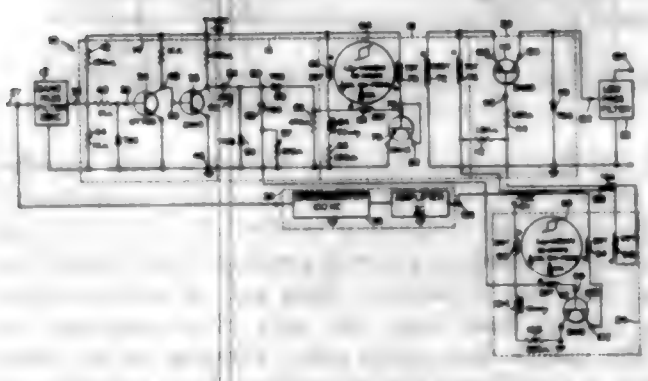
carry the entire current flowing between one of the input terminals and the other of the base and emitter electrodes, the crystal diode being in a series circuit between the input terminals which also includes the base and emitter electrodes, the crystal diode being polarized to present a high impedance to the current flow caused by the one polarity signals to which the transistor presents a low impedance to limit the transistor current flow and thereby prevent damage to the transistor from excessive current flow.

2,900,531
FIELD-EFFECT TRANSISTOR
John Torkel Wallmark, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application February 28, 1957, Serial No. 643,009
17 Claims. (Cl. 307—88.5)



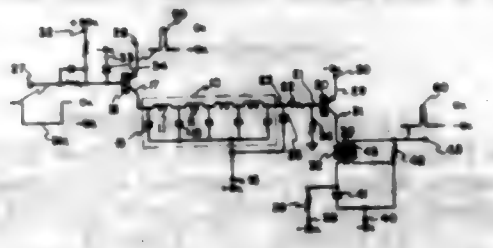
1. A semiconductor device comprising a body of semiconductive material, a pair of spaced-apart electrodes connected to said body, a source of potential for biasing said electrodes for establishing a flow of charge carriers therebetween in said semiconductor body, a genetic insulating layer covering at least a portion of a surface of said semiconductor body between said electrodes, a control electrode adjacent said genetic layer and means for biasing said control electrode for variably influencing said flow of charge carriers.

2,900,532
COMPENSATING CIRCUIT
George H. Barnes, Berwyn, Pa., assignor to Burroughs Corporation, Detroit, Mich., a corporation of Michigan
Application April 15, 1957, Serial No. 652,855
5 Claims. (Cl. 307—88.5)



1. In combination: first circuit means adapted to have an input signal applied to it, said first circuit means producing trigger pulses having substantially the same frequency as said input signal; a first blocking oscillator for producing output pulses, said output pulses having substantially constant amplitudes and pulse widths; a second blocking oscillator, a source of varying unidirectional error voltage, circuit means for applying the trigger pulses and the error voltage to said second blocking oscillator, said second blocking oscillator producing compensating pulses having substantially constant voltage time products, the width of each of said compensating pulses being a function of the magnitude of said error voltage; said first and second blocking oscillators responsive to each trigger pulse produced by said first means, producing an output pulse and a compensating pulse; the leading edges of said output pulses and said compensating pulse occurring substantially at the same time; second circuit means to which said output pulses and said compensating pulses are applied; and a low pass filter, said second circuit means providing a low impedance path for the output pulses from the first blocking oscillator to the low pass filter when a control pulse is applied to said second circuit means if a compensating pulse is not simultaneously applied to said second circuit means.

2,900,533
MULTIPLE DELAY LINE
Royal E. Howes, Inglewood, Calif., assignor to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Application July 2, 1957, Serial No. 669,653
5 Claims. (Cl. 307—88.5)



1. A pulse delay circuit comprising: a delay device having a first and a second terminal; an input line for receiving a positive input pulse to be delayed; input switching means controlled to pass a positive pulse from said input line onto the first terminal of said delay device, and to reflect a negative pulse reflected back through the delay device from the second terminal; a diode connected to the second terminal of said delay device to cause a positive pulse sensed thereon to be reflected back through the delay device as a negative pulse and to present a substantially infinite impedance to a negative pulse sensed thereon to thereby permit the passage of said negative pulse; an output line; and, output switching means having a characteristic impedance which matches the characteristic impedance of said delay line and connected to be controlled by a negative pulse on the second terminal of said delay device to pass a pulse onto said output line.

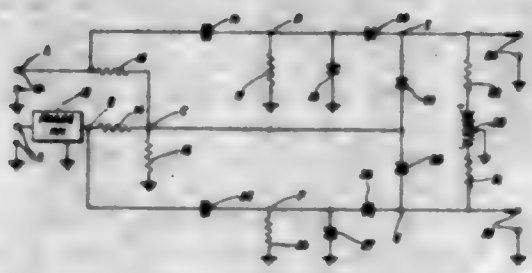
2,900,534
PHASE DISCRIMINATOR
William T. Chater, El Segundo, Calif., assignor to Hughes Aircraft Company, Culver City, Calif., a corporation of Delaware
Application September 30, 1957, Serial No. 686,911
6 Claims. (Cl. 307—88.5)

2. A phase discriminator for determining the phase relationship of two waves having opposite polarities, steep leading edges and substantially equal amplitudes, said phase discriminator comprising: an adding network having a first and second input circuit; means for applying one of said waves to said first input circuit; means for applying the other of said waves to said second input circuit, said adding network producing an output signal representative of the addition of said two waves; first

blades and said stator portion comprising walls defining a volute in which said blades are adapted to rotate, means

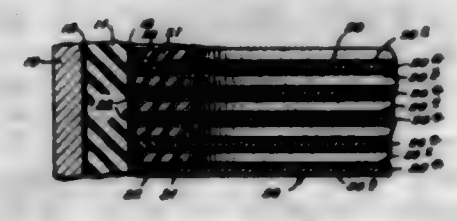
tudinal opening formed therein adapted to have a brush arranged therein for longitudinal movement toward the

differentiating means connected to said first input circuit for differentiating said one wave; second differentiating means connected to said second input circuit for differentiating said other wave, each of said differentiating means including an output circuit; clipping means coupled individually to each of the output circuits of said first and second differentiating means for clipping a portion of said differentiated waves; first gating means coupled between said adding network and the output circuit of said first differentiating means for producing an output signal when the differentiated wave developed in said



differentiating means and having a predetermined polarity is coincident with a portion of the output signal from said adding network having said predetermined polarity; and second gating means coupled between said adding network and the output circuit of said second differentiating means for producing an output signal when a portion of the differentiated wave developed in said differentiating means and having the opposite of said predetermined polarity is coincident with a portion of the signal developed in said adding network having said opposite polarity.

2,900,535
RADIOACTIVE BATTERY
Alexander Thomas, Weston, Mass., assignor to Tracerlab, Inc., Boston, Mass., a corporation of Massachusetts
Application June 28, 1956, Serial No. 594,564
14 Claims. (Cl. 310—3)

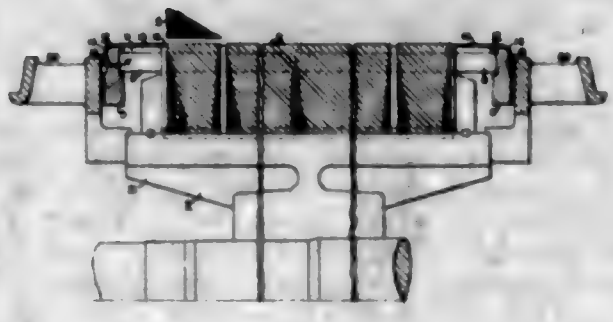


1. Apparatus for primarily generating electrical energy comprising a sealed envelope having an insulating liner, a plurality of spaced, parallel electrodes stacked within said insulating liner, each constituted by high and low work function surfaces supported on opposite sides of a relatively rigid planar member, an ionizable gas in the spaces between said electrodes, and a beta-emitting radioactive gas mixed with said ionizable gas.

2,900,536
DESIGN OF ELECTRO-MECHANICAL TRANSDUCER ELEMENTS
Maurice M. Pale, Conneaut, Ohio, assignor to The Astatic Corporation, Conneaut, Ohio, a corporation of Ohio
Application November 18, 1954, Serial No. 469,617
6 Claims. (Cl. 310—9.6)

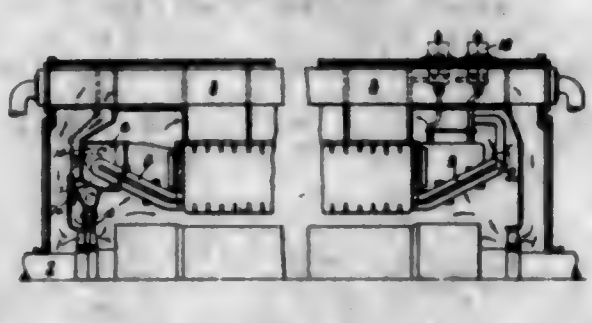
1. A piezo-electric transducer element comprising spaced layers of polarized polycrystalline piezo-electric material disposed in symmetrical relation to a principal longitudinal neutral plane, means interconnecting said spaced layers, said element being adapted to be fixedly mounted at one end portion and flexed at its other end portion, and electrode means covering only portions of said element which upon bending of the electrode are substantially uniformly stressed.

2,900,537
QUIET SQUIRREL-CAGE MOTORS
William H. Morse, Penn Township, Allegheny County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application April 5, 1957, Serial No. 650,965
4 Claims. (Cl. 310—51)



1. A squirrel-cage motor having a rotor-core, damper-bars carried by the rotor-core and extending out beyond the ends of the rotor-core, resistance-rings joined to the ends of the damper-bars, there being a space between each resistance-ring and the adjacent end of the rotor-core, a noise-baffling shield spanning each of said spaces, each shield being composed of a thin sheet of aluminum having a substantially cylindrical portion extending peripherally over its associated resistance-ring and extending axially across to the adjacent end of the rotor-core, each shield further having an integral-substantially radially disposed flange which extends down around the end of its associated resistance-ring, and a means for securing each of said flanges to its associated resistance-ring; the flange of each shield having an inwardly disposed portion, which extends into a depressed portion in the end of the associated resistance-ring.

2,900,538
DYNAMO-ELECTRIC MACHINES
Joseph Tudge, Walkden, Manchester, England, assignor to Metropolitan-Vickers Electrical Company Limited, London, England, a British company
Application June 6, 1956, Serial No. 589,790
Claims priority, application Great Britain June 14, 1955
4 Claims. (Cl. 310—59)



1. A dynamo-electric machine having a rotor member and a stator member, said stator member containing a plurality of axially extending conductors at least some of which are hollow to provide cooling ducts therealong, an axial flow fan situated at each end of said rotor for forcing cooling fluid from the ends of the machine towards the centre thereof to effect cooling in the stator generally, a centrifugal fan of annular form mounted adjacent to and surrounding one of the axial flow fans, said centrifugal fan comprising a rotor portion and a stator portion, said rotor portion comprising forward curved

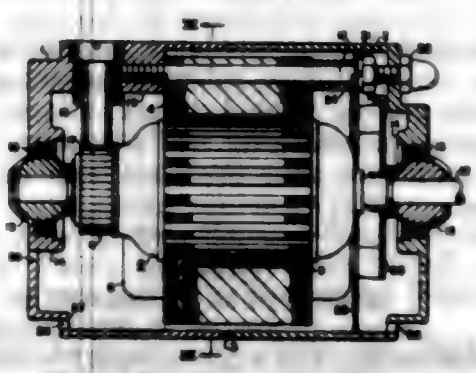
electrons, said cathode structure comprising a plurality of

beam components with said luminescent screen comprising a plurality of rotatable permanent magnets, a rotat-

ducing trigger pulses having substantially the same frequency as the repetition rate of said pulses, and means for applying said trigger pulses to said sweep circuit to synchronize the operation thereof with the repetition rate of said pulses, said sweep circuit including means for producing a sweep voltage representative of the addition of said two waves; first

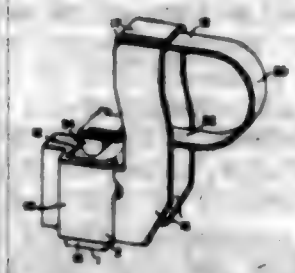
blades and said stator portion comprising walls defining a volute in which said blades are adapted to rotate, means for fixing said rotor portion to the rotor member of the machine, an annular chamber surrounding the stator portion of said centrifugal fan and enclosing the noses of the conductor coils, means for connecting said annular chamber with said conductor cooling ducts, and means defining openings in the dead portion of said stator portion volute communicating with said annular chamber whereby said centrifugal fan may suck cooling fluid from said annular chamber through said conductor cooling ducts, and a cooler, and means for directly feeding the cooling fluid discharged from said centrifugal fan to said cooler.

2,900,539
ELECTRIC MOTOR
William H. Mitchell, Lima, and Richard P. Percy, American Township, Allen County, Ohio, assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application February 24, 1956, Serial No. 567,490
3 Claims. (Cl. 310—62)



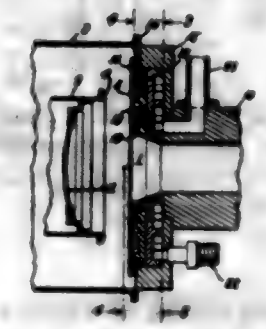
1. An electric motor having a housing, a rotor member supported for rotation in the housing, said rotor member including a commutator at one end thereof, a stator core having windings thereon, means for supporting the stator core in the housing with the outer peripheral surface of the stator core spaced from the housing at all points, the housing having ventilating openings at the ends thereof, the ventilating openings at least at the end of the housing adjacent the commutator being substantially in axial alignment with the space between the stator core and the housing, and shielding means in the housing adjacent the openings at said end disposed so that there is no direct linear path through the openings extending toward the commutator, the flow of ventilating air to the commutator being otherwise unobstructed.

2,900,540
BRUSH HOLDER FOR DYNAMOELECTRIC MACHINES
Günter Gärtner, Berlin-Weissensee, and August Schwab and Hermann Herz, Berlin-Siemensstadt, Germany, assignors to Siemens-Schuckertwerke Aktiengesellschaft, Erlangen, Germany, a corporation of Germany
Application November 7, 1956, Serial No. 620,927
3 Claims. (Cl. 310—246)



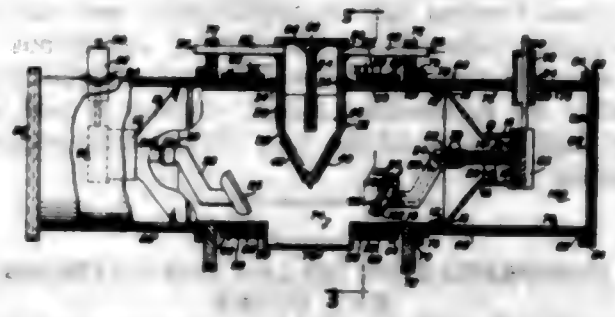
1. A brush holder for dynamoelectric machines, said brush holder comprising a brush support having a longitudinal opening formed therein adapted to have a brush arranged therein for longitudinal movement toward the periphery of a substantially cylindrical rotating member, a brush biasing means including a transversely curved, U-shaped flat spring, said U-shaped spring being longitudinally curved beyond its buckling point, the initial radius of curvature of said transverse curve and the radius of curvature of said longitudinal curve being substantially the same, spring support means secured to said brush support and extending vertically upward from said brush support, one leg of said U-shaped flat spring being secured to the upper end of said spring support, a pressure piece secured to the other leg of said U-shaped spring, said pressure piece overlying said brush and bearing thereon to urge said brush toward the periphery of said rotating member whereby constant pressure is applied to the brush throughout its useful life.

2,900,541
ELECTRODE ASSEMBLY
Ralph J. Beaudley, Scotia, and William H. Teare, Ballston Lake, N.Y., assignors to General Electric Company, a corporation of New York
Application November 14, 1956, Serial No. 622,226
5 Claims. (Cl. 313—32)



4. An electrode assembly comprising an apertured molybdenum disk, a support for said disk comprising a generally annular copper body recessed from one face to provide a plurality of concentric circular arrays of annular segments and recessed from the opposite side to provide a plurality of passages for cooling fluid, said segments being brazed to said molybdenum disk and providing with said segments a yieldable connection between said molybdenum disk and said copper body.

2,900,542
X-RAY APPARATUS
Harry B. McEuen, Jacksonville, Fla.
Application September 22, 1954, Serial No. 457,629
6 Claims. (Cl. 313—56)



3. X-ray apparatus capable of producing homogeneous crossfire radiations comprising an evacuated X-ray tube, an anode at least partially disposed within the tube and having a plurality of uniform discrete target areas, a cathode structure having at least one filament associated with each target area, means for superimposing a high potential between each filament and its corresponding target area, and means for providing an equal flow of electrons from each filament so that an equal emission of X-ray results from each anode target area upon impingement by said

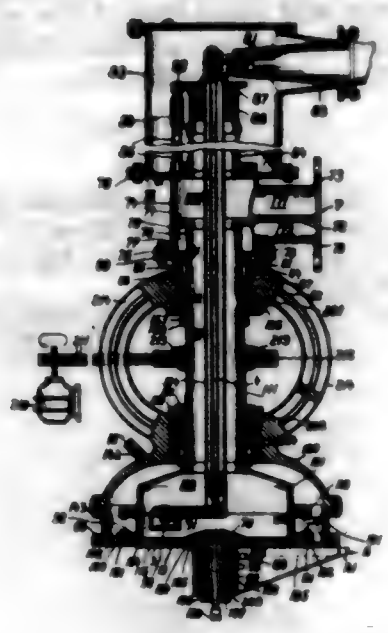
2,900,547
SPARK PLUGS AND THE LIKE

stantially tubular extension on one side thereof, a heater relatively closely confined within the extension for heat-

material disposed in symmetrical relation to a principal portion, said rotor portion comprising forward curved

electrons, said cathode structure comprising a plurality of focusing cups, each having a separate adjustable and removable solid floor section holding one of said filaments at a predetermined focus and completely covering the bottom of the cup.

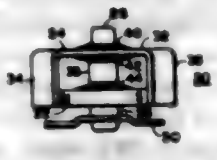
2,900,543
X-RAY TUBE
Otto L. Hesse, Kronberg (Taunus), Germany, assignor to Max-Planck-Institut für Biophysik, Frankfurt am Main, Germany
Application May 24, 1955, Serial No. 510,790
Claims priority, application Germany May 24, 1954
3 Claims. (Cl. 313—60)



3. An X-ray tube having an anode and a cathode movable relative to one another, and wherein the useful portion of the X-rays is transmitted through the focal spot of the anode to the work space outside the tube, comprising a cathode-carrying assembly having an axis; an anode mounted for rotation about an axis coincident with said first-mentioned axis; a ray-transmissive membrane covering the base of said anode, said focal spot being located on said membrane; detachable fastening means for fastening said membrane to said anode so as to make said membrane exchangeable, said fastening means comprising a bisecting straining ring having a first and second ring, said membrane being clamped therebetween, the membrane-carrying member and said second ring of said bisected straining ring each being provided with conical surfaces registering with one another so as to hold said membrane substantially in the plane of the surface of said second ring away from said membrane-carrying member; and sealing means between said rotatable anode and said cathode-carrying assembly and permitting continuous rotation of said anode with respect to said cathode-carrying assembly for maintaining a high vacuum in said anode under high loading of the tube during long periods of operation.

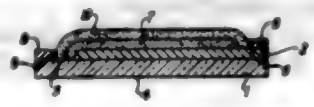
2,900,544
COMPENSATION MEANS FOR CATHODE RAY TUBES
Thomas W. Cunniff, Westfield, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application January 25, 1956, Serial No. 561,302
5 Claims. (Cl. 313—77)

1. In a color television image-reproducing system including a cathode ray tube having a luminescent screen of a type producing light of the component colors of an image when impinged by electron beam components, apparatus disposed adjacent to said luminescent screen for compensating for errors in registration of said electron beam components with said luminescent screen comprising a plurality of rotatable permanent magnets, a rotatable magnetic shunt coaxial with each of said magnets, the axis of each of said magnets and said shunts being



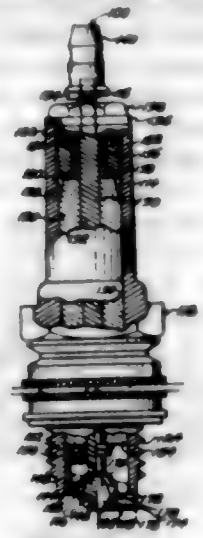
perpendicular to the longitudinal axis of said tube, with each of said magnets and said shunts being fixed in relation to movement along its axis.

2,900,545
CURVED ELECTROLUMINESCENT LAMP
Richard M. Ralon, Wenham, and Willard Henry Drew, Peabody, Mass., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application July 21, 1953, Serial No. 369,344
3 Claims. (Cl. 313—108)



1. An electroluminescent lamp comprising a glass plate having a curved surface, a light-transmitting electrically-conductive coating on said surface, a layer of phosphor embedded in ceramic over said conductive layer, and a second conductive layer over said layer of ceramic and phosphor.

2,900,546
SPARK PLUG ASSEMBLY
Andrew C. Russell, Shawnee, Okla.
Application July 9, 1956, Serial No. 596,631
2 Claims. (Cl. 313—125)

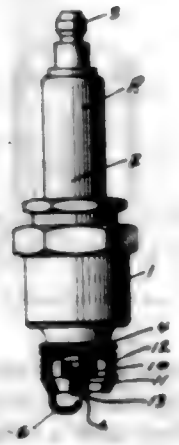


1. In a spark plug, an elongated, tubular metal casing provided with a substantially flat, annular, sparking surface on one end thereof and in a plane substantially perpendicular to the longitudinal axis of the casing; an elongated, metal electrode extending through said casing and beyond both ends of the latter; structure mounting said electrode upon said casing in electrically insulated relationship to the latter; a laterally extending, metal extension releasably mounted on the end of the electrode extending beyond said one end of said casing and having a sparking part thereof disposed in spaced, proximate relationship to a segment only of said sparking surface of said casing, said extension always being in substantially the same disposition relative to the electrode longitudinally of the latter; means for shifting said extension longitudinally relative to said casing without shifting said extension rotationally relative to said casing; and means for shifting said electrode rotationally relative to said casing without shifting said electrode longitudinally relative to said casing.

2,900,551

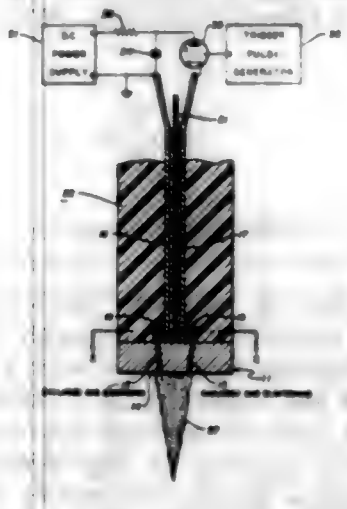
2,900,553

2,900,547
SPARK PLUGS AND THE LIKE
Edward Engel, Philadelphia, Pa.
Application August 3, 1956, Serial No. 601,943
5 Claims. (Cl. 313—130)



1. In a spark plug, a pair of electrodes in juxtaposition with one another to form a spark gap, one of the electrodes being formed of electrically conductive material and having a molecularly bonded insulating surface forming a portion of one end of the spark gap.

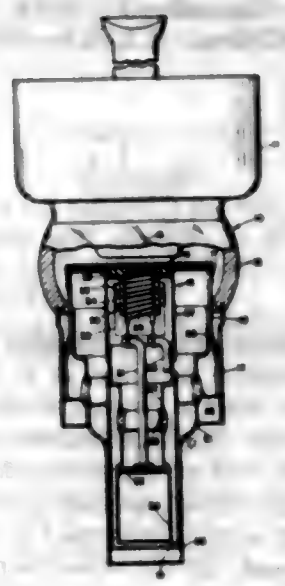
2,900,548
PLASMA GENERATOR
Winston H. Bostick, Danville, and Virgil G. McIntosh, Livermore, Calif., assignors to the United States of America as represented by the United States Atomic Energy Commission
Application June 6, 1956, Serial No. 589,831
3 Claims. (Cl. 313—131)



1. A plasma generator comprising an insulator having a planar face, a pair of electrodes extending through said insulator flush with said face, a gas supply for supplying gas between said electrodes at said insulator face, and a pulsed circuit connected to said electrodes for providing a pulsed high voltage therebetween to establish an arc discharge, said discharge being curved between electrodes whereby the self-induced magnetic field thereof deforms the discharge outwardly from the insulator face.

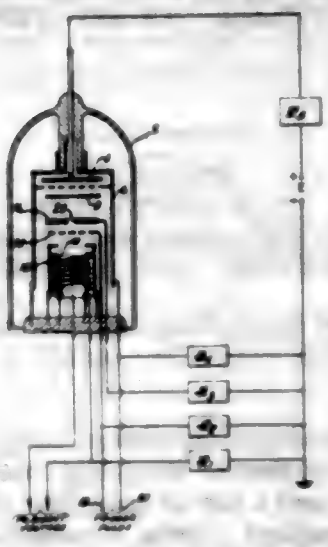
2,900,549
GETTER FOR ELECTRON TUBE
Howard D. Doolittle, Stamford, Conn., assignor to Machlett Laboratories, Incorporated, Springdale, Conn., a corporation of Connecticut
Application June 20, 1957, Serial No. 666,940
3 Claims. (Cl. 313—178)

1. A cathode structure for electron tubes, said structure comprising a metal emitter having an integral substantially tubular extension on one side thereof, a heater relatively closely confined within the extension for heating the emitter and extension, a tubular support having one end secured to the periphery of the emitter and extending in encircling relation parallel to and spaced from the extension, a getter encircling the extension and



located between it and the support, the getter being a material which readily alloys with the material of the extension, and means mounting the getter on the outer surface of the extension in closely spaced relation thereto comprising a strip of material which is non-alloying with the getter and extension at tube operating temperatures.

2,900,550
TRANSFER CATHODE THYRATRON
Richard G. Fowler, Norman, Okla., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application January 24, 1957, Serial No. 636,220
8 Claims. (Cl. 313—189)



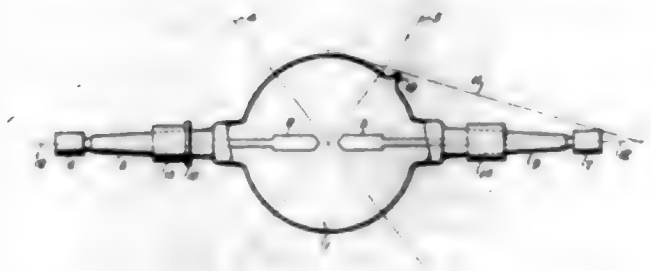
1. In a thyratron having an anode, a hot cathode, and a grid, the improvement which comprises an accelerating anode adjacent the hot cathode and interposed between the hot cathode and the anode; and a cold cathode, said cold cathode being disposed on the extension of the straight line defined by the path of electrons flowing through said grid to said anode and being spaced from said grid a distance, measured in the direction of said straight line, in excess of the mean free path of electrons under the pressure present in said thyratron.

said film of semi-insulating material having an amorphous furnace ram so that the ram will travel vertically with

2,900,551
ELECTRIC DISCHARGE TUBE
Gerald Offley Crowther, New Malden, and Christopher Haly Tenwill, Reigate, England, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application December 20, 1955, Serial No. 554,343
Claims priority, application Great Britain December 21, 1954
3 Claims. (Cl. 313—193)

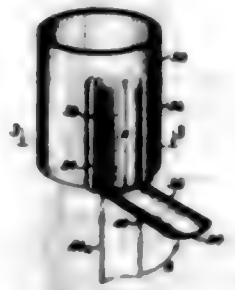
1. A glow-discharge tube comprising a sealed envelope containing an ionizable medium at a pressure at which the tube operates with a glow-discharge and enclosing a cathode electrode, a planar screen electrode spaced from said cathode, said screen electrode having an aperture therein through which an axis intersecting the cathode passes, and an anode positioned in proximity to said screen electrode and on the side thereof remote from the cathode, said anode being positioned on one side of said axis a distance therefrom at which a discharge path extending between the cathode and anode passes through said aperture and is substantially parallel to said screen electrode, the length of said discharge path from said aperture to said anode being more than one-half of the length of the discharge path between the anode and cathode, whereby the breakdown potential between the anode and cathode in said discharge path is lower than by any other path, the breakdown and burning potentials of the screen electrode relative to any positive electrode being comparatively high.

2,900,552
GASEOUS ELECTRIC DISCHARGE LAMP
Willis A. Pennow, Cleveland, Ohio, assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application May 19, 1955, Serial No. 509,701
3 Claims. (Cl. 313—220)



1. A gaseous electric discharge lamp comprising; an envelope of transparent insulating material having a bulbous portion and a pair of oppositely extending, axially aligned and elongated narrow extensions integral therewith; a pair of electrodes spaced apart at the center of the bulbous portion of said envelope and coaxial with said extensions of said envelope; the free end of each extension having a terminal connector; conductor means connecting each of said electrodes to a terminal connector at the free end of a respective one of the aligned extensions of said envelope; an annular positioning ring surrounding and secured to each of said extensions intermediate of the ends of each of the aligned extensions of said envelope and spaced a predetermined and substantial distance from said electrodes and from the adjacent terminal connector.

2,900,553
ELECTRON TUBE ELECTRODE
William K. Botzle, Bloomfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application March 22, 1956, Serial No. 573,187
7 Claims. (Cl. 313—331)



1. An electrode comprising an elongated tubular sheet metal body having a portion of major transverse extent concave in one direction and a longitudinally extending bendable tab having a transverse extent concave in a direction other than said one direction, the portion of said body coextensively adjacent to said tab having a minor transverse extent and a curvature in the same direction as that of said tab, whereby said tab is adapted to be bent in said other direction while being preserved from rupture, said portion of said body being at least as remote from the axis of said body as said portion of major transverse extent, whereby the space within said tubular body is preserved from encroachment.

2,900,554
SLEEVE FOR INDIRECTLY HEATED CATHODE
John George Woehling, Verona, and Robert Friedl, Jr., Short Hills, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Application June 1, 1951, Serial No. 229,466
7 Claims. (Cl. 313—337)

1. A sleeve for an indirectly heated cathode, said sleeve having a relatively small diameter of the order of from 25 to 30 mils and including a seam extending longitudinally thereof and following the transverse contour of said sleeve, said seam comprising two overlapping portions only of the material of said sleeve, one of said overlapping portions having a relatively sharp edge extending into the material of the other of said portions to improve the uniformity in the outer and inner surfaces of said sleeve, and to increase the strength of said seam, the material of said sleeve comprising sheet metal, said sheet metal being relatively stiff when formed into a sleeve of said relatively small diameter, whereby said stiffness and said relatively sharp edge preserve said seam from opening.

2,900,555
BOMBARDMENT CONDUCTING TARGET
Robert J. Schnoeberger, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application August 1, 1955, Serial No. 525,594
6 Claims. (Cl. 313—355)

2. A target electrode for a pick-up tube comprising a thin film of a semi-insulating material selected from the group consisting of antimony trisulphide, arsenic trisulphide and amorphous selenium which exhibit the property of decreased resistivity when bombarded with electrons,

jecting an electron beam into said electric field adjacent to the circuit, said beam following a spiral path about

frequency with end sections beyond said ridge section being proportioned to be beyond cutoff for said frequency

said film of semi-insulating material having an amorphous structure and low bulk density and inclusions consisting

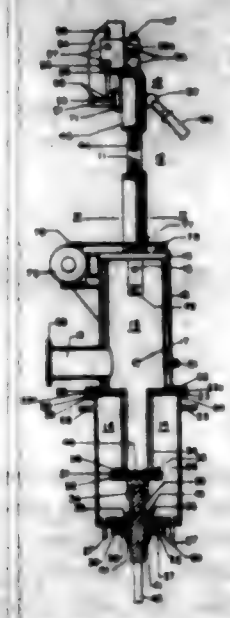
of a high atomic number electron scattering material within said film of semi-insulating material.

2,900,556

ELECTRODE POSITIONING DEVICE

Paul B. Gifford, Troy, N.Y., assignor to Allegheny Ludlum Steel Corporation, Brackenridge, Pa., a corporation of Pennsylvania

Application November 12, 1957, Serial No. 695,796
7 Claims. (Cl. 314—69)



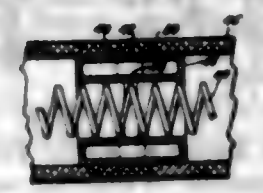
7. In a consumable electrode melting furnace having a vertically positioned cylindrically shaped ram disposed to carry a metal electrode into a crucible to be consumably melted therein, the combination comprising, a ram positioning and driving member having two vertically mounted threaded screw receptacles open at both ends, two vertically mounted rotatable drive screws disposed in threaded engagement with said receptacles and disposed to be rotated to actuate said ram positioning and driving member, a clamping part comprising a sleeve shaped member disposed about said ram, said sleeve shaped member being formed with a void area running the length of the member and constituting an area less than one half the circumference thereof, said sleeve shaped member being further formed with two flanges projecting outwardly on either side of said void area, said flanges each possessing a circular perforation, said perforations having a substantially common axis across said void area, a bolt shaped member positioned as projected through the perforation of both flanges across said void area and threaded into the threaded receptacle of a nut-like retaining member positioned next to one of the flanges on the opposite side of said void area and opposing the head of said bolt shaped member, said nut-like retaining member being substantially non-rotatable and means for rotating said bolt-like member so that upon rotating of said bolt-like member in one direction the member will advance into the nut-like retaining member forcing the flanges toward one another reducing the void area and the diameter of the sleeve-like part causing a tight connection between said sleeve-like member and the furnace ram so that the ram will travel vertically with said ram positioning and driving member upon rotation of said drive screws, and when said bolt-like member is rotated in the reverse direction the member will retreat from the threaded retaining member causing the flanges to expand away from one another expanding the void area and the diameter of said sleeve-like member effecting a loose connection between the sleeve and the furnace ram so that the ram positioning and driving member, upon rotation of said drive screws, will slide over said ram.

2,900,557

TRAVELING WAVE DIRECTIONAL ATTENUATOR

Stanley E. Webber and Joseph A. Rich, Schenectady, N.Y., assignors to General Electric Company, a corporation of New York

Application August 26, 1954, Serial No. 452,245
1 Claim. (Cl. 315—3.5)



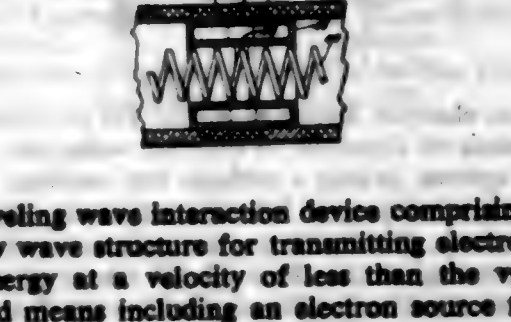
A traveling wave interaction device comprising at least one slow wave structure for transmitting electromagnetic wave energy at a velocity of less than the velocity of light and means including an electron source for directing an electron beam in interacting relation with the wave energy transmitted by said structure, said structure providing an alternating magnetic field including a circularly polarized component rotating in a first direction when electromagnetic wave energy is propagated in a forward direction along said slow wave structure and rotating in opposite direction when electromagnetic wave energy is propagated in a backward direction, a hollow toroidal member of ferromagnetic attenuating material surrounding said slow wave structure to absorb a relatively small portion of the electromagnetic wave energy traveling in a forward direction on said structure and a relatively large portion of the wave energy traveling in a substantially backward direction on said structure, said toroidal member of ferromagnetic attenuating material including a member of permanently magnetized material and at least one low permeability region in the wall thereof.

2,900,558

BEAM-TYPE TUBE

Dean A. Watkins, Portola Valley, Calif., assignor to Hewlett-Packard Company, Palo Alto, Calif., a corporation of California

Application July 18, 1957, Serial No. 672,736
4 Claims. (Cl. 315—3.5)



1. A beam-type tube comprising a travelling wave circuit, said circuit comprising at least a pair of rectilinear conductors arranged to form a pair of longitudinal gaps therebetween, a conductor surrounding said circuit and spaced therefrom, means for applying an electric field between said circuit and said conductor, means for pro-

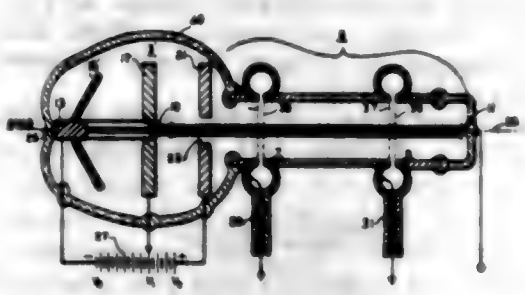
tively by signals representative of such respectively certain temperature coefficient of resistance such that its

nal connector.

of decreased resistivity when bombarded with electrons,

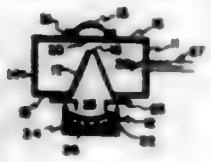
jecting an electron beam into said electric field adjacent to the circuit, said beam following a spiral path about said circuit and coupling with the electromagnetic wave carried by the same.

2,900,559
DOUBLE STREAM GROWING-WAVE AMPLIFIER
John A. Ruetz, Mountain View, Calif., assignor to the United States of America as represented by the Secretary of the Army
Application January 18, 1957, Serial No. 635,565
8 Claims. (Cl. 315—5.12)



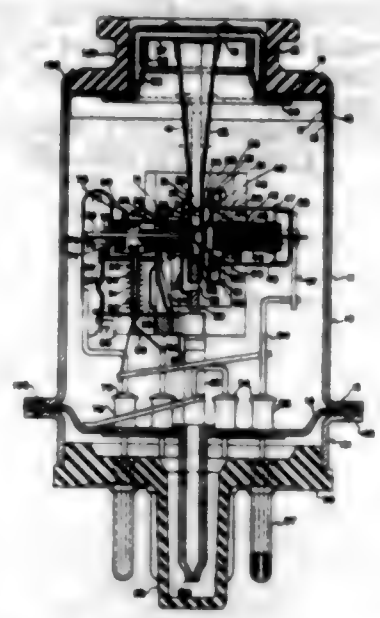
5. In an electron discharge device for producing intermixed beams of electrons of different velocities: an electron gun system having a cathode for emitting a stream of primary electrons, a focusing electrode surrounding said cathode, a dynode having an aperture with tapering walls narrowing in the direction of travel of said electrons away from said cathode, said walls being coated with secondary emissive material, said stream of electrons being focused by said focusing electrode so that a first portion of said stream of electrons passes through said aperture and a second portion of said stream of electrons strikes said secondary emissive material causing secondary electrons to be emitted therefrom, an anode beyond said dynode in the direction of travel of said electrons and having an aperture aligned with that of said dynode for accelerating said primary electrons and said secondary electrons away from said cathode, thereby forming said intermixed beam of electrons of different velocities, means for maintaining said dynode at a higher positive potential than said cathode and said anode at a higher positive potential than said dynode, a drift region beyond said anode in the direction of travel of said electrons having therein means for velocity modulating said intermixed beams of electrons and forming two sets of electron waves, means for extracting energy from said electron waves, and a collector electrode beyond said drift region in the direction of travel of said electrons for intercepting electrons passing through said enclosure.

2,900,560
HIGH FREQUENCY STRUCTURE
William Gerald Shepherd, St. Paul, Minn., assignor to Bendix Aviation Corporation, Eatontown, N.J., a corporation of Delaware
Application August 12, 1954, Serial No. 449,337
2 Claims. (Cl. 315—5.19)



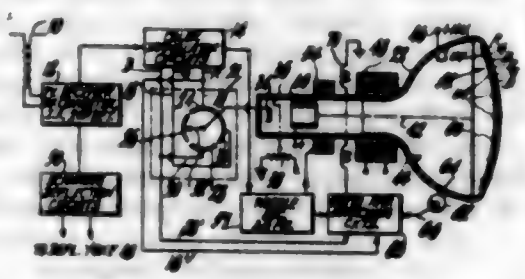
1. A reflex klystron comprising a rectangular cavity having an internal inverted V-shaped ridge section in one wall thereof, said ridge section terminating in a grid, a second grid in the wall of said cavity opposite said ridge, said grids being parallel and in alignment with each other to form a gap therebetween, said cavity being proportioned to be at cutoff in said ridge section for a predetermined frequency with end sections beyond said ridge section being proportioned to be beyond cutoff for said frequency and having its lateral dimensions expanded for operation at a higher mode, an electron gun including an elongated cathode positioned exteriorly of said cavity adjacent to and in alignment with said ridge section, and a repeller electrode positioned exteriorly of said cavity adjacent to and in alignment with said other grid.

2,900,561
ELECTRON DISCHARGE DEVICE
Robert S. Gormley, West Long Branch, N.J., assignor to Bendix Aviation Corporation, Eatontown, N.J., a corporation of Delaware
Application December 15, 1953, Serial No. 398,321
1 Claim. (Cl. 315—5.23)



In an electron discharge device having a supporting plate forming the walls of a cavity resonator, an electron gun comprising a cylindrical cathode, a heater element extending into said cathode, a flanged cylinder, means for supporting said cathode in said cylinder at each end thereof, a focus electrode, and means for securing said flanged cylinder and said focus electrode to said supporting plate concentric relative to each other.

2,900,562
ELECTRON BEAM CONTROLLING APPARATUS
Leslie L. Burns, Jr., Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application January 18, 1955, Serial No. 482,445
12 Claims. (Cl. 315—18)



1. In image reproduction apparatus of the type comprising a cathode ray tube having means for causing a plurality of electron beam components to scan across a target screen made up of a plurality of areas of respectively different characteristics and tracking index signal-producing elements associated with the screen in a fixed relation to selected ones of such areas for providing signals in response to electron impingement indicative of the relative position of at least one of the beam components with respect to the index elements, means for intensity-modulating such beam components respec-

centrally apertured terminal plates, and means including

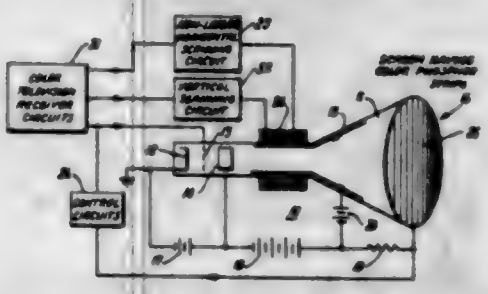
raster for developing output electric signals correspond-

area and the diameter of the sleeve-like part causing a tight connection between said sleeve-like member and the

between said circuit and said conductor, means for pro-

tively by signals representative of such respectively different characteristics; tracking control means associated with each tube for receiving such index signals and operative to correct the position of such beam components in accordance with such index signals, said index signals being undesirably subject to spurious effects from such intensity modulation of said beam components so as to cause said tracking control means to respond erroneously to such spurious effects; means for providing a signal proportional to the difference between the respective intensities of one of such modulating signals and another of such modulating signals; and means coupled to said tracking control means for counteracting the action of said tracking control means in response to a difference between the respective intensities of one of such modulating signals and another of such modulating signals, such counteraction being in such direction as to overcome the erroneous response of said tracking control means.

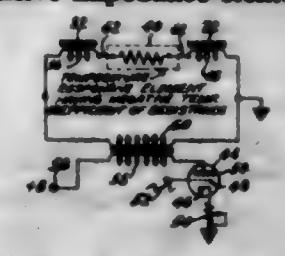
2,900,563
CATHODE RAY TUBE DEVICES HAVING SIGNAL-GENERATING MEANS
Wilson P. Boothroyd, Huntingdon Valley, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application July 3, 1956, Serial No. 595,751
10 Claims. (Cl. 315—21)



1. In a color television receiver, a cathode ray image-producing tube having an electron beam intensity control electrode and having a screen to be scanned in lines by the electron beam whose intensity is controlled by said electrode, said screen having elemental areas each successively emissive of light of different colors during each line scan of the screen by said electron beam, means for supplying to said electrode a color television signal having successively occurring components representative respectively of different chromatic aspects of elemental areas of an image to be reproduced, means for effecting line-by-line scanning motion of said electron beam, which motion is inherently of non-uniform velocity during each line scan, means responsive to the beam traversal of said screen for producing an alternating control signal having minimum frequency variation despite the non-uniformity of the scanning motion of the beam, said last means including elements on said screen positionally arranged according to the non-uniformity of velocity of the beam's line-scanning motion so as to effect more uniform timing of beam impingement on said elements, and means for utilizing said control signal to insure coincidence between the modulation of said electron beam by each color-representative component of said color television signal and the beam impingement upon the desired portion of said screen.

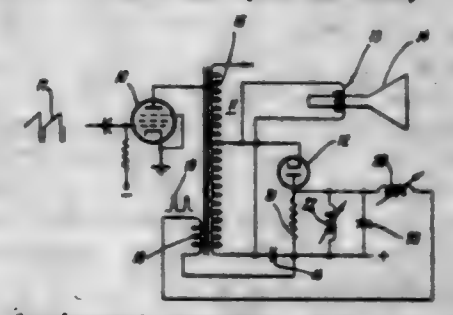
2,900,564
TEMPERATURE COMPENSATED ELECTROMAGNETIC DEFLECTION YOKE
William H. Barlow, Pennsauken, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application August 31, 1956, Serial No. 607,307
8 Claims. (Cl. 315—27)

1. An electromagnetic deflection yoke which comprises: an electromagnetic coil formed of a conductor having a certain temperature coefficient of resistance such that its resistance varies as a function of its temperature; and a temperature-responsive impedance element in circuit with



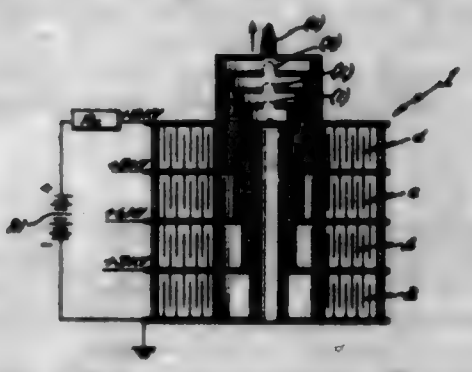
said coil and disposed in heat transfer relationship with said coil such that the net resistance of said coil and element remains substantially constant despite temperature variations of said coil.

2,900,565
HORIZONTAL DEFLECTION SYSTEM FOR CATHODE RAY TUBES
Robert C. Moore, Huntingdon Valley, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application October 31, 1956, Serial No. 619,467
6 Claims. (Cl. 315—27)



1. In a horizontal deflection system for effecting horizontal scanning in a cathode ray tube, a grid-controlled driver tube to the control grid of which a driving voltage is supplied, an output transformer connected to said driver tube, a deflection yoke for said cathode ray tube having horizontal deflection coils connected to said transformer to receive energy therefrom, a damper diode connected to said transformer and to said coils, the aforementioned elements producing deflection current in said coils which tends to be non-linear, there being time-spaced voltage pulses produced across said transformer during retrace portions of successive operating cycles, means for deriving such voltage pulses from said transformer during successive operating cycles, means for integrating said derived pulses into a desired current, and means for deriving a corrective voltage from the latter current and for applying such voltage to said diode to effect substantial linearity of the deflection current in said coils.

2,900,566
ULTRA-RAPID DISPLACEMENT OF GASES
Heinz Fischer, Belmont, Mass.
Application June 24, 1958, Serial No. 744,302
2 Claims. (Cl. 315—36)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A series of high-energy capacitors aligned along a common longitudinal axis, said capacitors having nested,

means of the first gas tube of the associated pair, an out-

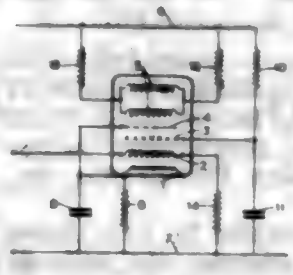
triggering device to apply pulse trains to the anodes of

to be at cutoff in said ridge section for a predetermined

for intensity-modulating such beam components respec-

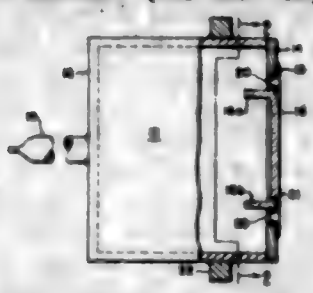
centrally apertured terminal plates, and means including progressively larger central apertures in said terminal plates for causing an ionized gas bubble to form and expand along said longitudinal axis.

2,900,567
ELECTRON DISCHARGE VALVES
William Spencer Percival, West Ealing, London, England, assignor to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Application September 13, 1956, Serial No. 609,768
Claims priority, application Great Britain September 15, 1955
2 Claims. (Cl. 315—39)



1. An electron discharge valve having at least three electrodes two of said electrodes being inductive and forming respectively a transmission line for input signals to said valve and a transmission line for output signals from said valve, one of said inductive electrodes being formed of different parts and said one inductive electrode being wound to cause the flux linkages between the different parts thereof and the other inductive electrode to be at least partly mutually cancelling.

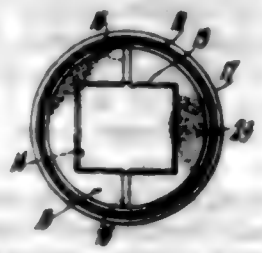
2,900,568
MICROWAVE SWITCHING DEVICE
Dudley N. Brewster, Wellesley Hills, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application February 17, 1958, Serial No. 715,566
2 Claims. (Cl. 315—39)



1. In a microwave switching device including an envelope formed in part by a section of metallic wave guide, a diaphragm comprising a metallic frame defining a substantially rectangular window area sealed across an end of said wave guide, and a ceramic window structure seated in said area and sealed to said frame, said window structure having a flat portion lying in the plane of said diaphragm and including integral upstanding shelves extending along at least the long edges thereof and extending into said envelope in a direction substantially perpendicular to the plane of said flat portion for shielding said flat portion from metal sputtered during operation of the device.

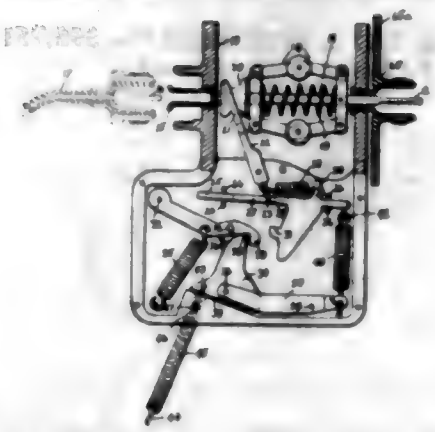
2,900,569
PHOTOCONDUCTIVE TYPE PICKUP TUBES
Appleton D. Cope, Hightstown, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application July 11, 1955, Serial No. 521,172
7 Claims. (Cl. 313—65)

1. Electron tube apparatus comprising, a tube having means to develop a beam of electrons, a light-responsive target arranged to be scanned by said beam in a scanning raster for developing output electric signals corresponding to the light excitation of the scanned areas of the target, said target including a conductive layer of a predetermined size, means for making an electrical connec-



tion with said conductive layer, a photoconductive layer over said conductive layer and facing said means, and said photoconductive layer extending beyond the boundaries of said conductive layer.

2,900,570
CONTROL FOR HEADLIGHT BEAM SWITCHES
William P. Kennedy, Marietta, Ga.
Application June 25, 1956, Serial No. 593,649
8 Claims. (Cl. 315—83.1)



1. A device for operating a beam selector switch for motor vehicle headlights including, a switch actuating lever selectively movable between a plurality of switch controlling positions to selectively actuate the switch for pre-selected circuit control, control means for moving said lever to and from said positions to actuate said switch for pre-selected circuit control, and speed responsive means operable to retain said lever in one switch controlling position.

2,900,571
ELECTRICAL GAS DISCHARGE TUBE COUNTING OR DISTRIBUTING CIRCUITS
John Henry Beesley, Leamington Spa, England, assignor to The General Electric Company Limited, London, England
Application May 3, 1956, Serial No. 582,469
Claims priority, application Great Britain May 10, 1955
10 Claims. (Cl. 315—84.5)

1. An electrical counting circuit comprising a plurality of gas tubes connected in a chain and each having an anode, a cathode and a trigger electrode, the gas tubes forming a lesser plurality of groups than there are gas tubes and each group comprising at least two of the gas tubes that occur in the chain at a regular spacing which is the same for each group and which is such that adjacent gas tubes in the chain belong to different groups, individual resistance means connected in series with the anode to cathode gap of each gas tube to provide an electric signal when the associated gas tube is conducting, a separate signal carrying lead for each group of gas tubes, a separate coincidence device between each pair of consecutive gas tubes in the chain, each coincidence device having an input circuit connected across the resistance

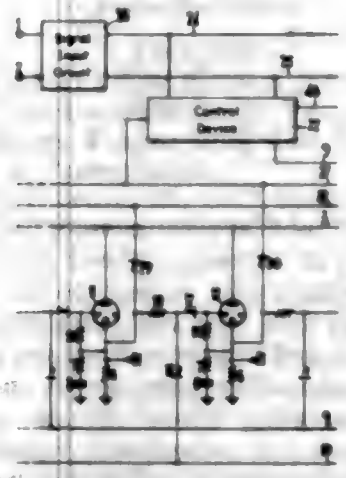
means including said absorbing means connecting said

2,900,576

an electromagnetic coil formed of a conductor having a

1. A series of high-energy capacitors aligned along a common longitudinal axis, said capacitors having nested,

means of the first gas tube of the associated pair, an output connected to the trigger electrode of the second gas tube of that pair and an input connected to the particular signal carrying lead associated with the said second gas tube and operating upon a coincidence of electric signals applied to its input circuit and its input from said resistance means and said particular signal carrying lead to apply an electric signal to its output and thereby to strike said second gas tube, mutual extinguishing means which includes individual capacitance connected to each gas tube and resistance connected in common to all the gas tubes and which is to extinguish a conducting gas tube upon the striking of any other gas tube in the chain, a lesser plurality of input leads than gas tubes for receiving



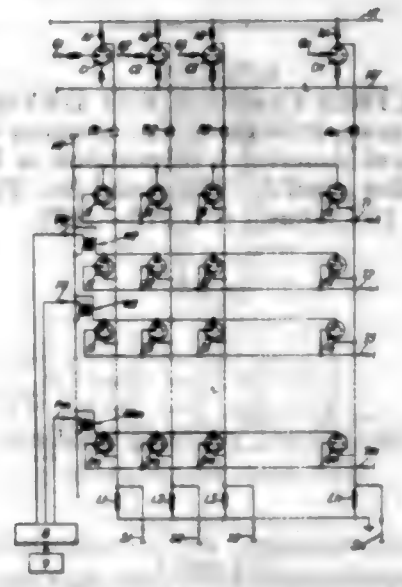
input signals applied to the circuit and a separate control device associated with each group of gas tubes, each control device having a first input, a second input, a third input and an output and operating to supply an electric signal to its output upon the supply of electric signals to its inputs according to a predetermined order, each first input being connected to the resistance means of the gas tubes in the associated group, each output being connected to the particular signal carrying lead associated with the group wherein the gas tubes occupy succeeding positions in the chain relative to the gas tubes of the said associated group and the said second and third inputs being connected to the input leads so that the said second and third inputs of any control device are connected to different ones of the input leads.

2,900,572
ELECTRIC STORAGE AND DATA ROUTING APPARATUS

John Harold Lucas, Caterham, and Kenneth Leslie Smith, Orpington, England, assignors to Powers-Samas Accounting Machines Limited, London, England, a British company

Application October 10, 1957, Serial No. 689,277
Claims priority, application Great Britain November 9, 1956
4 Claims. (Cl. 315—84.5)

1. An electric storage and data routing apparatus comprising cold-cathode gas-filled triodes arranged in columns and rows, a cathode load being connected to the cathode of each triode of the column appropriated to the load, a column-conditioning switch operable to condition the columns of triodes for triggering, a rectifier for each column connected with the load for the column and with said switch, said rectifiers each being arranged to provide a low resistance to current applicable to a cathode load through said switch, a selectively operable triode-triggering device having for each row a connection common to all trigger electrodes of the row and operable to trigger conditioned triodes of the row, and a pulse train generator having for each row a connection common to all anodes of the row and operable subsequent to operation of said triggering device to apply pulse trains to the anodes of said rows for transmission through triggered triodes and

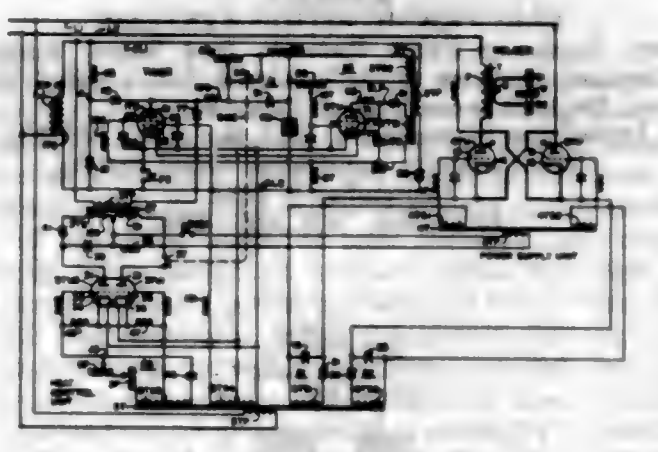


development as output pulse trains across cathode loads connected to triggered triodes.

2,900,573
RESISTANCE WELDING CONTROL FOR BENCH WELDER

William E. Large, Clarence, N.Y., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application August 12, 1957, Serial No. 677,672
19 Claims. (Cl. 315—165)



1. A timer comprising in combination first and second conductors for supplying a potential, a first electric discharge device having an anode, a cathode and a control electrode, a second electric discharge device having an anode, a cathode and a control electrode, normally open starting switch means, a time-constant network, rectifier means, means connecting said anode of said first device to said first conductor, means including said switch means and connected to said cathodes for connecting said cathodes to said second conductor, means including said rectifier means connecting said network in circuit with said first and second conductors to be charged by the potential between said first and second conductors, said network when charged having a positive terminal and a negative terminal, means connecting said positive terminal to said anode of said first device and said negative terminal to said control electrode of said second device, voltage absorbing means, means including said voltage absorbing means connecting said control electrode of said first device to said second conductor, capacitive means, means connected to said capacitive means for charging said capacitive means with one of its terminals positive and the other negative, means connecting said last-named positive terminal to said anode of said second device and

with said fixture, the first secondary winding being closely coupled with the primary winding and the second second-

electrolyte in said can occupying a volume substantially greater than the volume occupied by said tantalum wire

target arranged to be scanned by said beam in a scanning

having an input circuit connected across the resistance

means including said absorbing means connecting said last-mentioned negative terminal to said second conductor.

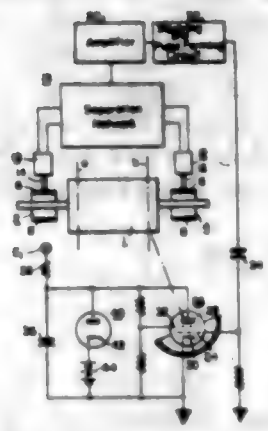
2,900,574
ELECTROLUMINESCENT DEVICE
Benjamin Kazan, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application April 5, 1956, Serial No. 576,261
10 Claims. (Cl. 315—169)

1. An electroluminescent device comprising a row of spaced electroluminescent cells each exposed to view, a row of photoconductive cells each electrically insulated from but arranged to receive light from a different one of said electroluminescent cells and forming therewith an elemental unit, first means connecting each photoconductive cell except the last one in the row in series with the electroluminescent cell of the next unit in said row, second means connecting all of said units in parallel with each other for applying a voltage thereacross, whereby excitation of the first photoconductive cell results in automatic excitation of said electroluminescent and photoconductive cells in succession.

2,900,575
ELECTRIC IGNITION SYSTEMS
Frank Raymond Faber Ramsay, East Sheen, London, England, assignor to D. Napier & Son Limited, London, England, a company of Great Britain
Application September 4, 1956, Serial No. 607,726
Claims priority, application Great Britain September 5, 1955
10 Claims. (Cl. 315—209)

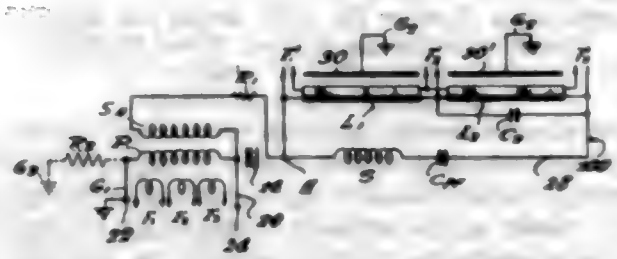
1. An electric ignition system for use with a sparking plug having low resistance of a few hundred to a few thousand ohms comprising an inductive winding whose number of turns and impedance are only a fraction of those of the secondary winding of an ignition system for an air gap sparking plug, a charging circuit for said inductive winding including a source of direct current and a contact breaker, an oscillating spring balanced mass having a natural periodicity of not more than about twenty oscillations per second adapted to actuate said contact breaker to close said charging circuit to build up flux in said inductive winding and to interrupt said charging circuit to cause said flux to collapse, a condenser, connections permanently connecting said condenser across said sparking plug, and connections permanently connecting said inductive winding across said sparking plug whereby energy released by each collapse of flux in said inductive winding first ionizes said sparking plug and then provides a spark discharge across said ionized sparking plug.

2,900,576
ELECTRONIC TUBE CONTROL CIRCUIT
Sheldon I. Rambo, Baltimore, Md., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application March 14, 1955, Serial No. 494,011
4 Claims. (Cl. 315—241)



1. Stroboscopic tube apparatus comprising, a stroboscopic tube having an anode, a cathode and a grid, circuit means for producing cyclic voltage pulses connected to said grid to trigger said tube and cause tube conduction, said tube being selected to have a minimum anode voltage at which tube conduction may occur and to have a normal higher operating anode voltage, an energizing circuit for the anode and cathode and including a resistor and a capacitor connected in series, the voltage of said energizing circuit being selected to be approximately double said normal operating voltage for said anode, the time constant of said resistor and capacitor being so selected as to delay charging of said capacitor to said energizing circuit voltage an interval of time substantially longer than the time interval between grid voltage pulses and thus flattening the voltage versus time characteristic of said capacitor voltage during the grid voltage pulse time interval, whereby the capacitor voltage rise to said minimum anode voltage is delayed for substantially two-thirds of the grid voltage pulse time interval, the anode and cathode being connected across the capacitor, and a voltage biased rectifier also connected across said capacitor and connected to conduct capacitor discharge current whenever the voltage of said capacitor reaches said normal operating voltage.

2,900,577
BALLAST AND LIGHTING SYSTEM FOR FLUORESCENT LAMPS
Albert E. Feinberg, Chicago, Ill.
Application November 3, 1955, Serial No. 546,413
7 Claims. (Cl. 315—257)



1. Apparatus for igniting and operating at least one fluorescent discharge lamp which comprises, a source of relatively low A.C. voltage, a fluorescent discharge lamp and a fixture supporting the same, metallic starting aid means arranged in capacitive relation to the discharge lamp and metallically connected with said fixture, a transformer having an iron core and a primary winding, and two secondary windings in electromagnetic relation thereon, the primary winding being connected across the source and having one terminal thereof metallically connected

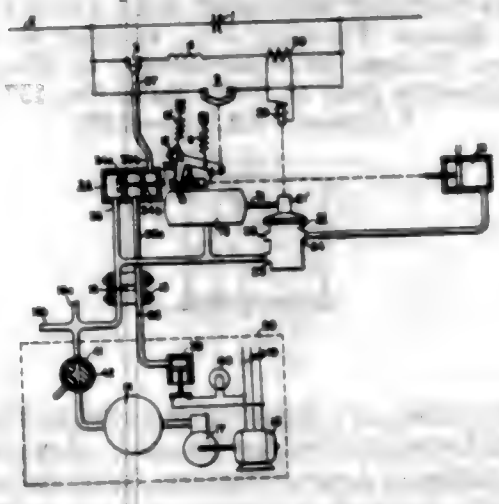
cooperating fixed and movable contact springs associated tively slightly spaced from said reed at a point interme-

of the row and operable subsequent to operation of said

and the other negative, means connecting said last-named positive terminal to said anode of said second device and

with said fixture, the first secondary winding being closely coupled with the primary winding and the second secondary winding being loosely coupled relative to the primary winding and connected in series with the fluorescent discharge lamp and having one terminal thereof making a juncture with one terminal of the fluorescent discharge lamp, a high ohmage isolating resistor in series with the first secondary winding and together therewith connected between the second terminal of the primary and the said juncture, with the first secondary winding in voltage aiding relation to the primary winding, the combined voltage of said primary and first secondary windings being applied between said metallic starting aid means and said fluorescent lamp, but excluded from the operating circuit of said lamp.

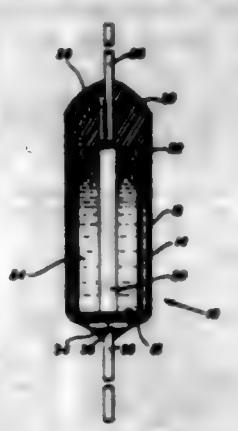
2,900,578
SERIES CAPACITOR PROTECTIVE DEVICE
Ralph Eugene Marbury, Pittsburgh, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application February 25, 1957, Serial No. 642,067
7 Claims. (Cl. 317—12)



1. A series capacitor installation for an alternating current line comprising a capacitor adapted to be connected in series in the line, a spark gap device connected across the capacitor and adapted to break down and bypass the capacitor upon the occurrence of a voltage across the capacitor in excess of a predetermined value, switch means connected across the capacitor and the gap device, spring means for biasing said switch means to closed position, means for applying air pressure to the switch means to normally hold the switch means in open position, and means for releasing the air pressure to permit the switch means to move to closed position in response to current flow through the gap device and self-operating means for reapplying the air pressure to reopen the switch means after a predetermined time interval.

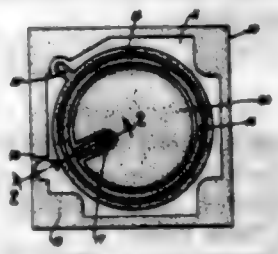
2,900,579
TANTALUM WIRE CAPACITORS
Donald G. Rogers, Pownal, Vt., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Application October 4, 1954, Serial No. 460,974
3 Claims. (Cl. 317—230)

1. In a miniature electrolytic capacitor having a capacitance measured in microfarads, a tubular silver can of the order of ⅛ inch in diameter, ½ inch in length and 6 mils in thickness, a straight tantalum anode axially positioned in said can composed of a wire of 10 to 50 mils in diameter, an etched surface on said straight wire anode providing an anode surface to said capacitor whereby said miniature capacitor has said capacitance, an electrolyte in said can occupying a volume substantially greater than the volume occupied by said tantalum wire



anode and the anode assembly being sealed to the open end of the can by an insulating resin mass.

2,900,580
PRINTED ELECTRICAL CIRCUIT COMPONENTS HAVING INTEGRAL LEAD-OUTS AND METHODS OF MAKING SAME
John T. Beck, White Bear Lake, Minn., assignor to Beck's, Inc., St. Paul, Minn., a corporation of Minnesota
Application June 4, 1954, Serial No. 434,401
7 Claims. (Cl. 317—101)



1. An electrical circuit component comprising a pair of superimposed hardened and cured thermosetting resinous layers of insulating material bonded together to form a composite sheet, thin conductive metal in the form of elongated areas forming circuit elements at the surface of said composite sheet, at least some of said circuit elements being positioned interiorly from the edges of said composite sheet, a terminal lead-out formed integrally with said interiorly positioned circuit element, said lead-out passing between said superimposed resinous layers out of contact with and beneath the more exteriorly positioned circuit elements and re-emerging exposed at the surface of said composite sheet adjacent an exterior edge thereof, the terminal portion of said lead-out being bonded to and embedded in the surface of said composite sheet.

2,900,581
MECHANICALLY RESONANT DECODING APPARATUS
Gerald E. Marsh, Rochester, N.Y., assignor to General Railway Signal Company, Rochester, N.Y.
Application July 27, 1954, Serial No. 446,026
7 Claims. (Cl. 317—147)

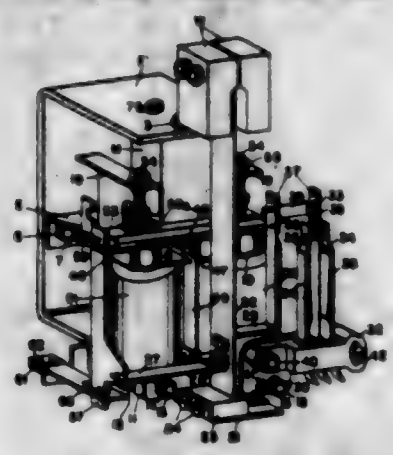
1. In an electromechanical device for detecting pulsating energy of a particular frequency of pulsation, an armature member, electromagnetic means responsive to pulsating energy for actuating said armature member, an inverted pendulum member fixed at its lower extremity, resilient means directly connecting said pendulum member and said armature member, said resilient means having a restoring force capable of actuating said pendulum member but incapable of actuating said armature member, a first group of cooperating fixed and movable contact springs associated with said armature member, said armature member being operatively connected to the movable contact springs in said first group, and a second group of

tube is gastight shut, two electrodes fixed at the inner

ing ends, means connecting the leading end of a first of

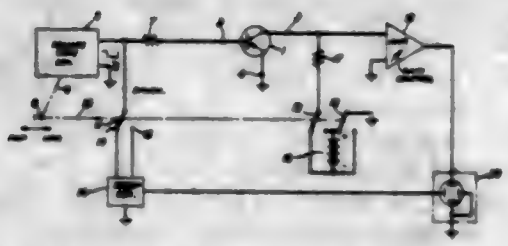
vides a spark discharge across said ionized sparking plug.

cooperating fixed and movable contact springs associated with said pendulum member, said pendulum member having another resilient means attached near its lower extremity for operatively connecting said pendulum member to the movable contact spring in said second group, said second group of contact springs being arranged so that the movable contact spring coacts with the fixed contact



springs only when said pendulum member oscillates at a near-resonant frequency attaining a maximum motional amplitude; whereby the contact springs in said first and second groups simultaneously coact only when the frequency of energy applied to said electromagnetic means is nearly equal to the resonant frequency of oscillation of said pendulum member.

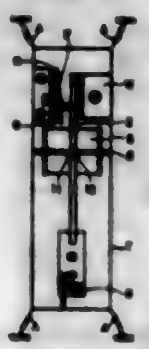
2,900,582
TRANSISTOR TEST SET
John L. Moll, New Providence, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application September 1, 1955, Serial No. 532,060
6 Claims. (Cl. 317—158)



1. The method of determining the large-signal alpha cut-off frequency of a transistor having base, emitter and collector electrodes comprising passing a substantially square wave current pulse of predetermined amplitude between the base and the emitter electrodes, producing an oscillogram of the resulting collector current as a function of time, and constructing a tangent to the initial portion of said oscillogram passing through the intersection of said oscillogram with the current axis, the slope of said tangent being a measure of the large-signal alpha cut-off frequency.

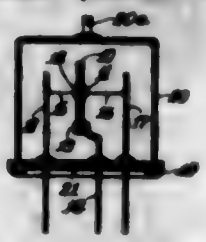
2,900,583
RESONANCE RELAY
Walter Rauch, Munich, Germany, assignor to Siemens & Halske Aktiengesellschaft, Berlin and Munich, a corporation of Germany
Application April 10, 1957, Serial No. 651,912
Claims priority, application Germany April 20, 1956
5 Claims. (Cl. 317—182)

1. A resonance relay comprising a permanent magnet, a single resonance reed mounted for vibration with one end thereof anchored adjacent said permanent magnet, said permanent magnet polarizing said reed, an electromagnet for driving said reed, and an iron core for said electromagnet disposed with the free ends thereof relatively slightly spaced from said reed at a point intermediately the opposite ends of said reed, said iron core having high permeability and relatively very small cross-section to provide for relatively low saturation inductance for the purpose of imparting to said relay the character-



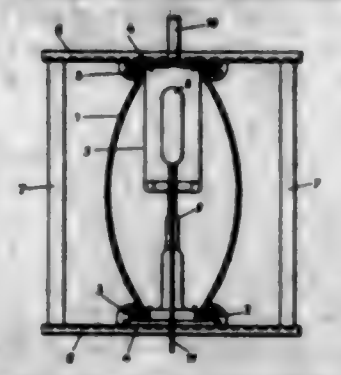
istics of a band pass filter, a support for said resonance relay, and resilient suspension means for mounting said support so that the natural frequency of said resilient suspension means is only substantially a fraction of the operating frequency of said resonance reed.

2,900,584
TRANSISTOR METHOD AND PRODUCT
Virgil E. Bottom, Phoenix, Ariz., assignor to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Application June 16, 1954, Serial No. 437,091
7 Claims. (Cl. 317—235)



3. A transistor unit including in combination, a wafer of semiconductor material having a pair of opposite faces, a pair of bodies of a metal impurity fused and alloyed on said opposite faces of said wafer, a base assembly comprising an insulating member with three leads extending therethrough and supported thereby in spaced and insulated relation from one another, a U-shaped metallic clip having a length corresponding to the width of said wafer affixed to one of said leads and supporting said wafer with one end of said wafer extending into said clip, said clip being affixed to said semiconductor wafer to establish electrical contact therewith, and means for establishing respective electrical connections from said fused bodies to the others of said leads.

2,900,585
COMPRESSED GAS CONDENSER
Alexander Keller, Frankfurt am Main, Germany, assignor to Hartmann & Braun Aktiengesellschaft, Frankfurt am Main, Germany, a corporation of Germany
Application May 12, 1955, Serial No. 507,938
Claims priority, application Germany June 29, 1954
3 Claims. (Cl. 317—244)



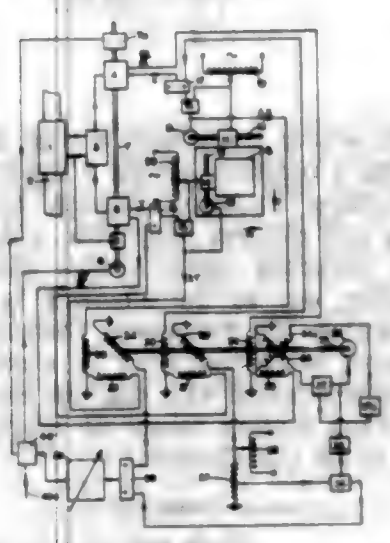
1. High voltage condenser, comprising a tube of flexible material, a top and a bottom plate so that the flexible

said field coils to energize the latter, a source of current, and a resonant network including another voltage gen-

by said miniature capacitor has said capacitance, an contact springs in said first group, and a second group of

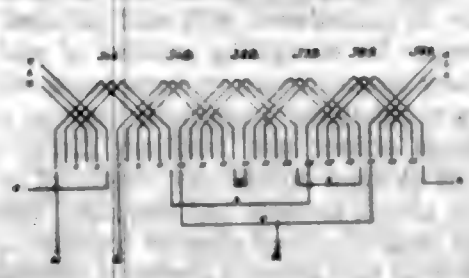
tube is gastight shut, two electrodes fixed at the inner face of the top and bottom plates, means for supporting said plates in order to maintain a definite position to each other, the case comprising the tube and top and bottom plates being filled with compressed gas so that the tube assumes a barrel shape, the diameter being largest in that range where near the electrodes the potential gradient is highest.

2,900,586
DISPLACEMENT ERROR REDUCING PATTERN SERVOSYSTEM
Rolf Edmund Spencer, West Ealing, and Roger Voles, Chiswick, London, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Application July 17, 1957, Serial No. 672,459
Claims priority, application Great Britain July 19, 1956
5 Claims. (Cl. 318—162)



1. A servo mechanism comprising a servo-motor, means for deriving from a record signals representing successive desired displacements, means for interpolating among said signals to derive a continuously variable signal, means for comparing said continuously variable signal with a signal representing displacement produced by said motor to provide a difference signal, said motor tending in response thereto to reduce said difference signal and control means responsive to said difference signal for controlling the rate of application to said interpolating means of the signals derived from said record to maintain said difference signal below a predetermined value whereby errors in the displacement produced by said servo motor are maintained at less than a predetermined value.

2,900,587
ELECTRIC MOTORS
Georges Piquet, Paris, France, assignor to Moteurs Electriques Segal & Cie, Saint-Denis (Seine), France, a company of France
Application February 13, 1957, Serial No. 639,937
Claims priority, application France February 16, 1956
2 Claims. (Cl. 318—224)



1. In an induction motor having first, second and third motor supply terminals and a rotor and a stator, a field winding arrangement on said stator comprising six sets of conductor sections, each set including leading and trailing ends, means connecting the leading end of a first of said sets to the first motor supply terminal, means connecting the trailing end of said first set to the leading end of a fifth of said sets, means connecting the trailing end of the fifth set to the trailing end of a sixth of said sets, means connecting the leading end of the sixth set to the leading end of a third of said sets and to the second motor supply terminal, means connecting the trailing end of the third set to the trailing end of a fourth of said sets, means connecting the leading end of the fourth set to the trailing end of a second of said sets, and means connecting the leading end of the second set to the third supply terminal, whereby with said first and third terminals connected across a one-phase supply the current flow through all said conductor sections will set up six magnetic poles in said stator, while with said first and third terminals connected in common with one side of said supply and said second terminal connected to the other side of said supply the current flow through all said conductor sections will set up four magnetic poles in said stator.

2,900,588
MULTIPLE SPEED SINGLE PHASE MOTORS
Lyle A. Ramer, Elkton, Md., assignor to R M R Corporation, Elkton, Md., a corporation of Maryland
Application October 7, 1958, Serial No. 765,841
5 Claims. (Cl. 318—225)

1. A two-speed A.-C. single phase multipolar motor having N main poles of alternate polarity, where N is an even integer; *N—S* substantially identical main field windings comprising main coils respectively mounted on *N—S* of said poles, where S is an integer greater than zero and less than ½N, said main coils being wound in the same direction on their respective poles, each coil having a start turn and a finish turn, intercoil series connections between the oppositely related turns of the first and second coils, second and third coils, etc., to the last coil, *N—S*; means for impressing an external line voltage on said series connected main coils for high speed operation of the motor; an additional secondary main winding comprising S coils respectively mounted on the remaining S poles of the motor and connected in series with said main winding; means for alternatively impressing said external line voltage on all of said windings, both main and secondary main, in series to produce a desired low speed operation of said motor, the coils of said secondary main windings having a greater number of turns of smaller size wire than the coils of said main winding.

2,900,589
MAGNETIC GOVERNOR-CONTROLLED CONSTANT-SPEED MOTOR
Joseph G. Putnoeky, Jr., Fairfield, Conn.
Application October 28, 1957, Serial No. 692,655
7 Claims. (Cl. 318—254)

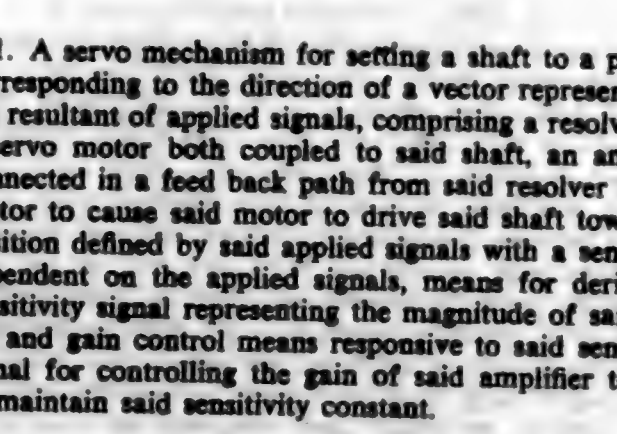
1. A magnetic governor controlled motor comprising a rotatably mounted armature shaft, an armature, having salient poles, on said shaft, field coils of a greater number than said armature poles cooperating with the latter to drive the shaft, a commutator shaft having a resilient driving connection with said armature shaft, a commutator on the commutator shaft electrically connected to

2,900,594
SYSTEMS INCLUDING SLIPPING COUPLING MEANS BETWEEN A DRIVING SHAFT AND

2,900,596
METHOD AND MEANS FOR DETECTING FLAWS IN MAGNETIC MATERIAL

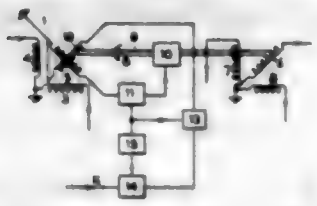
electromagnet disposed with the free ends thereof rela- ible material, a top and a bottom plate so that the flexible

said field coils to energize the latter, a source of current, electrical connection between said source of current, the commutator, and the field coils, said commutator compris-



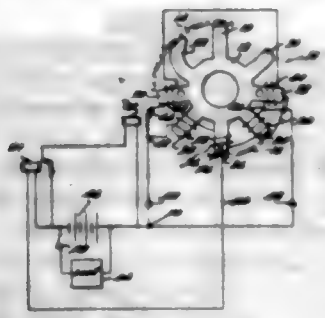
ing a number of segments and an unequal number of brushes cooperating therewith, and a magnetic governor connected to the commutator shaft to apply a drag thereto.

2,900,590
SERVO MECHANISMS
Rolf Edmund Spencer, West Ealing, London, and Roger Voles, Chiswick, London, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Application June 14, 1957, Serial No. 665,863
Claims priority, application Great Britain June 16, 1956
5 Claims. (Cl. 318—448)



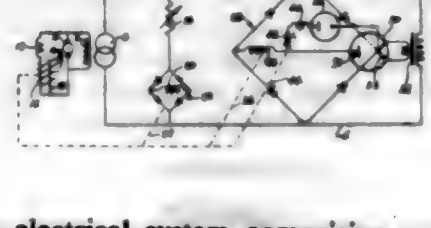
1. A servo mechanism for setting a shaft to a position corresponding to the direction of a vector represented by the resultant of applied signals, comprising a resolver and a servo motor both coupled to said shaft, an amplifier connected in a feed back path from said resolver to said motor to cause said motor to drive said shaft towards a position defined by said applied signals with a sensitivity dependent on the applied signals, means for deriving a sensitivity signal representing the magnitude of said vector and gain control means responsive to said sensitivity signal for controlling the gain of said amplifier to tend to maintain said sensitivity constant.

2,900,591
GENERATOR REGULATOR SYSTEM
Allan S. Jacob, Rochester, Mich., assignor to Syncro Corporation, Oxford, Mich., a corporation of Michigan
Application February 12, 1958, Serial No. 714,800
18 Claims. (Cl. 320—59)



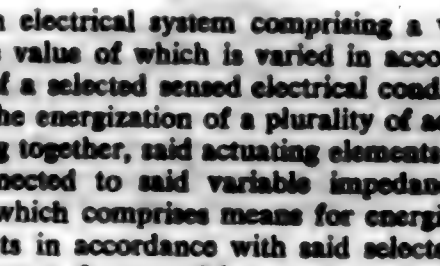
1. A regulated power supply system comprising a generator including first voltage generating winding means and a resonant network including another voltage generating winding means, and selectively actuatable means responsive to a voltage in said system for connecting said network across at least a portion of said first winding means.

2,900,592
POWER SOURCES
Sydney Norton Baruch, New York, N.Y.
Application October 3, 1958, Serial No. 765,261
7 Claims. (Cl. 321—8)



1. A power source comprising a free piston arrangement including a member having a linear reciprocating motion, a circular magnetic element including radial spokes, and a coil element concentric with the magnetic element and including radial spokes aligned with the first said spokes, one of the elements being connected with said member for movement therewith, the other of said elements being stationary in a position whereat it is magnetically coupled with said one element whereby said reciprocating motion causes an electrical signal to be generated in the coil element.

2,900,593
ELECTRIC GENERATOR REGULATING SYSTEM
Thomas F. McHenry, New Canaan, and Joseph J. Grabinski, Meriden, Conn., assignors to Electric Regulator Corporation, Norwalk, Conn., a corporation of New York
Application February 16, 1955, Serial No. 488,558
16 Claims. (Cl. 322—24)



10. In an electrical system comprising a variable impedance the value of which is varied in accordance with variations of a selected sensed electrical condition in said system by the energization of a plurality of actuating elements acting together, said actuating elements being operatively connected to said variable impedance; the improvement which comprises means for energizing one of said elements in accordance with said selected electrical condition, means for energizing another of said elements via an auxiliary circuit device in accordance with said selected electrical condition, a normally inactive circuit element connected across said auxiliary circuit device, a third actuating element operatively connected to said normally inactive circuit element and energized thereby when said normally inactive circuit element becomes active, and means sensitive to said selected electrical condition and to the condition of said auxiliary circuit device for causing said normally inactive circuit element to become active upon the existence of a predetermined value of said selected electrical condition.

having discrete pickup coils therein arranged to be energized by voltages present in the horizontal and vertical

in series with the primary winding, means for rectifying the output voltage of each secondary winding, included

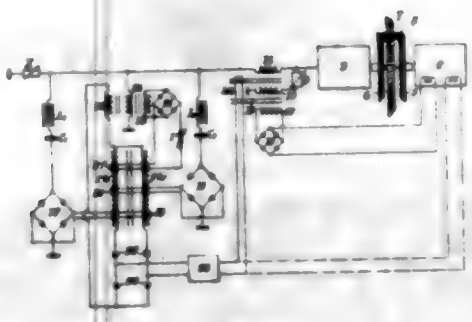
of conductor sections, each set including leading and trail-

tator on the commutator shaft electrically connected to

2,900,594
SYSTEMS INCLUDING SLIPPING COUPLING MEANS BETWEEN A DRIVING SHAFT AND A DRIVEN SHAFT FOR GENERATORS

Pierre Etienne Bessieré, Paris, France, assignor, by mesne assignments, to Societe Anonyme Etablissements Labinal, Paris, France, a society of the French Republic

Application February 12, 1957, Serial No. 639,826
Claims priority, application France February 15, 1956
5 Claims. (Cl. 322—32)

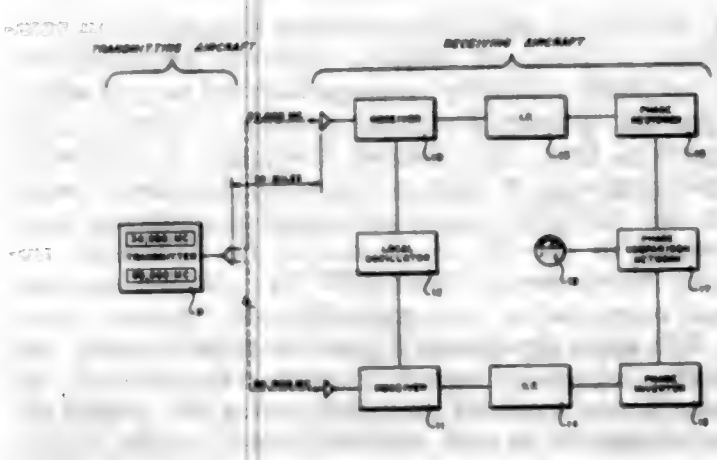


5. A system which comprises, in combination, a driving shaft of substantially variable speed, a shaft to be driven at uniform speed, a differential gear including an input element and two output elements, one of said elements being coupled with said driving shaft, another of said elements being coupled with said driven shaft, a braking device coupled with the third of said elements, said braking device being constituted by an eddy current brake capable of supplying, for a given excitation, a resistant torque of constant value irrespective of variations of the speed of rotation thereof in a very large range of said speed variation, and means for adjusting the excitation of said eddy current brake in accordance with variation of the load of said driven shaft.

2,900,595
MAGNETIC FIELD DETECTOR

Clare L. Mengel, Sellersville, and Dickerson P. Miles, Oreland, Pa.

Application August 31, 1955, Serial No. 531,854
7 Claims. (Cl. 324—6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

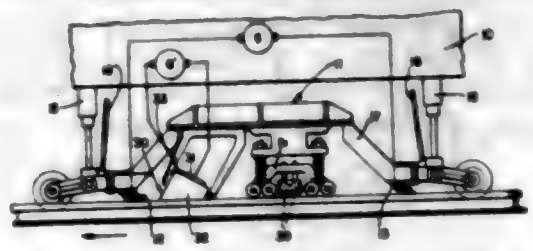


4. A method of detecting submarines comprising the steps of simultaneously radiating two signals at two different microwave frequencies, one of the frequencies being a second harmonic of the other frequency, receiving said signals at a point removed from said source of signals, comparing the phase shift of each of said signals, and producing a signal proportional to the relative phase shift of said two signals for indicating changes in the earth's magnetic field swept by said radiated signals.

2,900,596
METHOD AND MEANS FOR DETECTING FLAWS IN MAGNETIC MATERIAL

Harcourt C. Drake, Hempstead, N.Y., assignor to Sperry Products, Inc., Danbury, Conn., a corporation of New York

Application December 31, 1956, Serial No. 631,670
8 Claims. (Cl. 324—37)

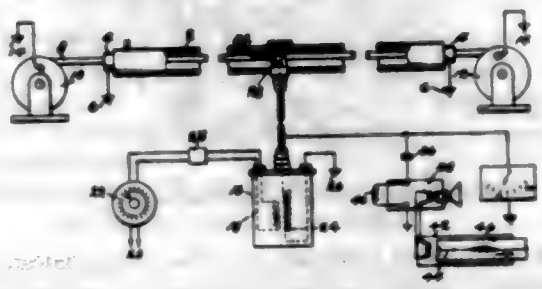


1. In a rail flaw detection system in which the rail is progressively energized with flux in a given length of rail and flux responsive means is employed for detecting variations in flux, the method of activating the rail portion which is to be energized and of rendering the flux responsive means insensitive to flux variations caused by surface defects, which comprises transmitting continuous ultrasonic vibrations to a substantial depth into the rail in the field of the energization to provide activation and transmitting continuous ultrasonic vibrations to a shallow depth into the rail adjacent the flux responsive means.

2,900,597
APPARATUS FOR TESTING ELECTRIC CABLE INSULATION

Francis H. Gooding, Lodi, N.J., assignor to The Okonite Company, Passaic, N.J., a corporation of New Jersey

Application December 6, 1956, Serial No. 626,766
16 Claims. (Cl. 324—54)



1. Apparatus for the ionization-testing of electric wire and cable insulation, said apparatus comprising, in combination, a pipe of semi-conducting material; a grounded stuffing box at each end of said pipe; a high dielectric-strength gas within said pipe; means for continuously advancing an insulated wire or cable, having its conductor grounded, through said pipe, an annular electrode so positioned within the pipe that the wire or cable will pass through the said annulus, and the total periphery of the insulation of the wire or cable will be contacted thereby; a high-voltage source, one side of which is connected to said electrode, and the other side of which is grounded; and an electrically operated indicating device connected to ground and to that side of the high-voltage source which is connected to said electrode, whereby, as a wire or cable being tested progresses through said pipe and electrode, the ionization characteristics of the insulation of the wire or cable will be indicated continuously.

2,900,598
METHOD AND APPARATUS FOR TESTING TELEVISION RECEIVERS

Fred E. Singelmann, Palatine, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware

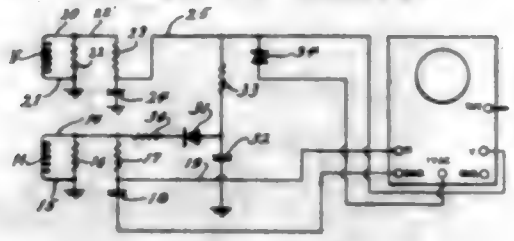
Application November 30, 1956, Serial No. 625,517
9 Claims. (Cl. 324—72)

7. An apparatus for testing a television receiver circuit in the absence of the picture tube which comprises a probe

associated with a lower portion of said rotor member and providing magnetic forces which support said lower por-

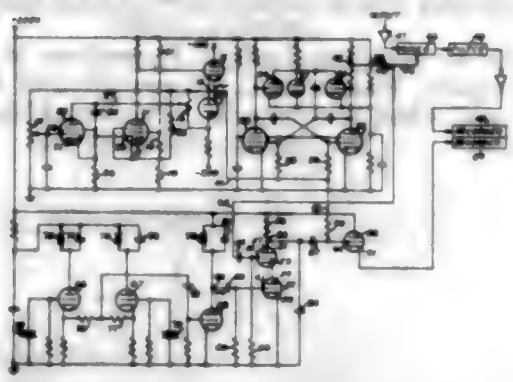
diverting a portion of one of said magnetic fluxes away from the air gap to control the effective strength of the

having discrete pickup coils therein arranged to be energized by voltages present in the horizontal and vertical deflection coils of the yoke, a cathode ray oscilloscope having horizontal and vertical deflection circuits connected to said coils in the probe for deflecting the beam



of the oscilloscope, a source of varying voltage, a diode connecting said source of voltage to one of the deflection circuits of the oscilloscope, and means in said probe for developing a bias voltage in the presence of a signal in the probe connected to said diode to bias said diode against conduction.

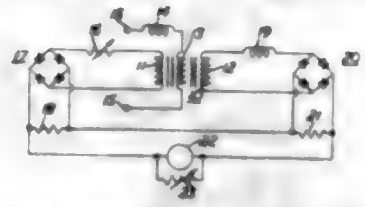
2,900,599
FREQUENCY MARKING CIRCUIT
John W. Gray, Pleasantville, N.Y., assignor to General Precision Laboratory Incorporated, a corporation of New York
Application September 8, 1954, Serial No. 454,743
8 Claims. (Cl. 324—78)



2. A frequency indicating circuit comprising, means for generating a signal whose frequency is periodically varied over a selected range of frequencies, means for generating a standard frequency signal whose frequency is lower than said range of frequencies, means for producing the second harmonic of said standard frequency signal, means for combining said second harmonic with said standard frequency signal to produce a signal waveform having accentuated positive peaks at the fundamental frequency of said standard signal, coincidence mixer means having said variable frequency signal and said signal waveform impressed thereon and rendered conductive only during coincidence of the positive peaks of the fundamental of said standard frequency signal and the positive portions of said variable frequency signal, and low-pass filter means connected to the output of said coincidence mixer means.

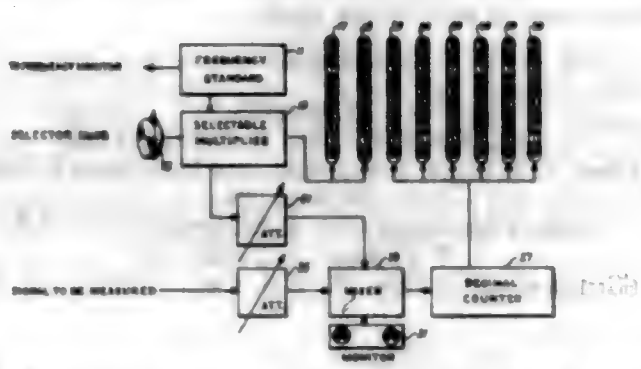
2,900,600
ELECTRICAL FREQUENCY METERS
William Gregson, Newton, Chester, and William F. S. Turner, Whaley Bridge, near Stockport, England, assignors to Ferranti, Limited, Hollinwood, Lancashire, England, a company of Great Britain and Northern Ireland
Application August 15, 1957, Serial No. 678,328
Claims priority, application Great Britain August 18, 1956
5 Claims. (Cl. 324—78)

1. An electrical frequency meter including a transformer with a saturable core common to two like secondary windings and a single primary winding, an impedance in series with the primary winding, means for rectifying the output voltage of each secondary winding, included in series with one of the secondary windings an inductor of value such that the rectified output voltage of this winding is substantially independent of frequency and dependent only on amplitude changes effective because of incomplete saturation of said core, and means for applying the difference between the rectified output voltages of the secondary windings to an instrument adapted



to respond to such a difference, whereby when the series combination of the primary winding and the impedance are energised by a voltage of amplitude large enough to cause the core approximately to saturate during each half cycle of the energising voltage the response of the instrument varies with the frequency of the energising voltage but not appreciably with the amplitude thereof, said impedance having a value small enough to allow such saturation but large enough to absorb the excess voltage after such saturation.

2,900,601
DIRECT READING FREQUENCY MEASURING DEVICE
John L. Cori, Richmond, and James F. Gordon, Concord, Calif., assignors to Beckman Instruments, Inc., South Pasadena, Calif., a corporation of California
Application November 17, 1952, Serial No. 320,951
5 Claims. (Cl. 324—79)



1. Frequency measuring apparatus comprising in combination, a source of constant reference frequency output, selectable multiplier means connected to said source to provide constant frequency outputs of higher order frequencies than the reference frequency, a differential circuit connected to receive a selected frequency output from the multiplier means and an input frequency to be measured to provide as an output the difference frequency therebetween, summation type decimal counting means connected to receive the difference frequency from the differential circuit and display the same as digits, and indicator means connected to receive the selected frequency output from the multiplier means and display the same as digits to be read with the counting means display.

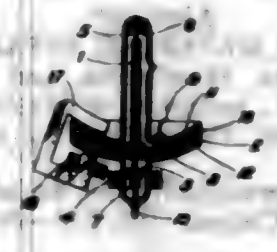
2,900,602
ELECTRICITY METER
Oskar Stettler, Zurich, Switzerland, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application March 7, 1955, Serial No. 492,576
Claims priority, application Switzerland March 13, 1954
7 Claims. (Cl. 324—137)

1. In an electricity meter, the combination of a rod-like, vertically-oriented, rotor member, magnetic means

for current energizing one of said terminal means, said

non-conductive and said second unidirectional conductive

associated with a lower portion of said rotor member and providing magnetic forces which support said lower portion in space and free of contact with other members and which provide a horizontal, centering action on said lower portion, point and cup bearing means associated with the upper end of said rotor member for locating



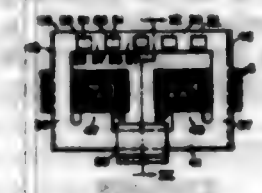
said upper end, a conductive member having the shape of a segment of a hollow sphere symmetrically surrounding and secured to the rotor member, the center of said spherical segment coinciding with the fulcrum of the point and cup bearing, and field-producing means to drive the rotor in close proximity to and surrounding a portion of said conductive member.

2,900,683

COMPENSATING UNIT FOR WATTHOUR METERS

Frederick E. Mindt, Raleigh, N.C., and Warren J. Schmidt, Bloomfield, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application May 18, 1955, Serial No. 507,194
2 Claims. (Cl. 324—138)



1. A flux lagging unit for an induction instrument comprising an electroconductive member disposed in the form of a closed first loop, and an integral magnetic strip formed substantially entirely of a material having a negative temperature coefficient of magnetic permeability, said strip having a pair of ends and having a pair of surfaces spaced by the thickness dimension of the strip, said thickness dimension being substantially uniform throughout the length of the strip, said strip being disposed in the form of a closed second loop having a single turn surrounding a portion of the first loop with a portion of one of said surfaces engaging a portion of the other of said surfaces along a plane, said ends being positioned in overlapping relation on a common side of said electroconductive member, said surfaces being welded together in a direction transverse to said plane.

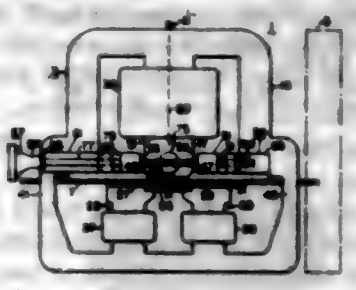
2,900,684

ELECTRICAL MEASURING DEVICE

Warren J. Schmidt, Bloomfield, and Emanuel T. Rudy, Belleville, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application June 23, 1955, Serial No. 517,488
6 Claims. (Cl. 324—138)

1. In an electrical meter, a magnetic structure having an air gap, said magnetic structure including a plurality of magnetic poles, winding means for the magnetic poles effective when energized for producing a plurality of magnetic fluxes cooperating to establish a shifting magnetic field in the air gap, an electro-conductive armature mounted for rotation relative to the magnetic structure about an axis through the air gap under the influence of the magnetic field, and magnetic diverting means for diverting a portion of one of said magnetic fluxes away from the air gap to control the effective strength of the shifting magnetic field, said magnetic diverting means including an adjustable first magnetic member adjustable for effecting diversion of a variable portion of said one of the fluxes to adjust the strength of the magnetic field, said one of said fluxes normally having a symmetrical condition relative to the magnetic structure, said first magnetic member operating also to provide an asymmetrical condition of said one of said fluxes relative to the magnetic structure to adversely affect the response



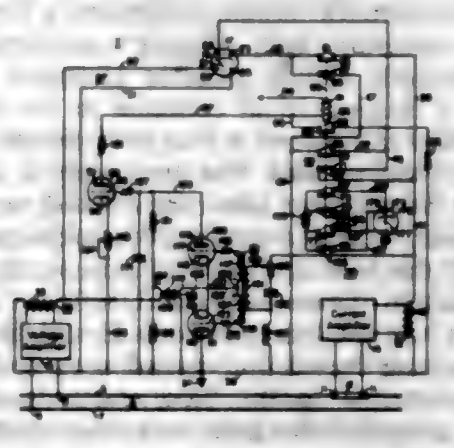
of the meter, and compensating means for substantially compensating for the effect of said first magnetic member upon the response of the meter, said compensating means comprising a second magnetic member movable relative to the magnetic structure and relative to the first magnetic member in response to adjustment of the first magnetic member for effecting diversion of a variable portion of one of said fluxes, said second member being movable to provide with said first member a symmetrical condition of said one of said fluxes relative to said structure for any position of movement of said members.

2,900,685

ELECTRICAL MEASURING SYSTEM

Rathbun B. Squires, Forest Hills, Pa., and Dale O. Ballinger, Lakewood, Colo., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application May 20, 1955, Serial No. 509,854
4 Claims. (Cl. 324—142)



1. In an electrical measuring system responsive to alternating quantities having a phase relationship variable between a pair of phase conditions, an electrical instrument having a pair of input terminal means, circuit means for energizing said terminal means with energizing currents representative of said alternating quantities, said instrument producing when energized a response which is a product function of said alternating quantities, said instrument including a calibrated scale having an end zero marking, and an indicating pointer adapted to traverse said scale in response to energization of said terminal means to provide a visual indication of said response, said pointer tending to assume a first position on the scale side of said zero marking for one of said phase conditions, and a second position on the off scale side of said zero marking for the other of said phase conditions, said circuit means including a pair of paths

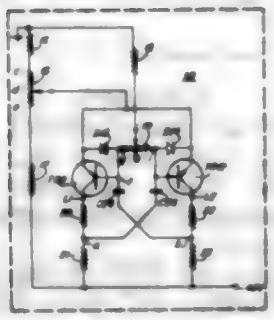
2,900,689

TONE COMPENSATED LOUDNESS CONTROL

said outer conductor of said coaxial line throughout its movement, said line section and said slug having a length

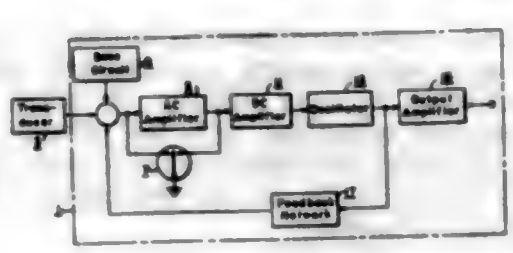
for current energizing one of said terminal means, said paths providing opposing instantaneous polarities of energization of said one of said terminal means relative to each other, and control means for controlling the path of energization of said one of said terminal means to maintain the first position of said pointer for each of said phase conditions, said control means including switch means actuable from a first position effective to establish one of said paths to a second position effective to establish the other of said paths, a first electric discharge device having a first electrode for controlling said switch means in accordance with biasing of said first electrode, said first device being effective in response to variation of said biasing from a first bias condition to a second bias condition for actuating said switch means, and biasing means for biasing said first electrode, said biasing means including a pair of second electric discharge devices, each of said second devices being effective when conducting to provide a separate one of said bias conditions, and circuit means for biasing said second devices in accordance with said alternating quantities to render a separate one of said second devices conducting for each of said phase conditions.

2,900,606
TRANSISTOR MULTIVIBRATOR
Alfred H. Faulkner, Chicago, Ill., assignor to General Telephone Laboratories, Incorporated, a corporation of Delaware
Application August 1, 1956, Serial No. 601,466
12 Claims. (Cl. 331—113)



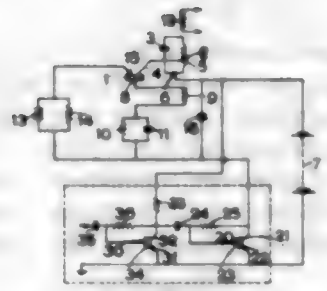
1. A multivibrator circuit comprising a first transistor, a second transistor, each of said transistors having an emitter electrode and a collector electrode and a base electrode, a biasing circuit common to the emitter electrodes of said transistors, a first load circuit for the collector electrode of said first transistor, a second load circuit for the collector electrode of said second transistor, first reactive means connected between said first load circuit and the base electrode of said second transistor, second reactive means connected between said second load circuit and the base electrode of said first transistor, a first charging connection including a first impedance element connected to the base electrode of said first transistor, a second charging connection including a second impedance element connected to the base electrode of said second transistor, whereby said first reactive means is responsive to the first transistor being rendered non-conductive and being rendered conductive for biasing said second transistor respectively conductive and non-conductive and said second reactive means is responsive to the second transistor being rendered non-conductive and being rendered conductive for biasing said first transistor respectively conductive and non-conductive, a first unidirectional conductive device connected between the emitter electrode and the base electrode of said first transistor, and a second unidirectional conductive device connected between the emitter electrode and the base electrode of said second transistor, said first unidirectional conductive device being poled to provide a by-pass connection between the emitter electrode and the collector electrode of said first transistor when the same is biased non-conductive and said second unidirectional conductive device being poled to provide a by-pass connection between the emitter electrode and the collector electrode of said second transistor when the same is biased non-conductive.

2,900,607
REMOTE METERING APPARATUS
Theodore Barabutes, Morristown, and Andrew Kulick, Jr., Passaic, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application February 27, 1958, Serial No. 717,901
10 Claims. (Cl. 332—16)



1. In an electrical system, alternating voltage amplifying means energized from a reversible direct voltage input, means effective to alternately shunt the input and output of said amplifying means to supply to said amplifying means an alternating voltage modulated in accordance with said voltage input, and to demodulate the amplified alternating voltage, an oscillator responsive to the demodulated voltage for producing oscillations having a frequency proportional to the demodulated voltage, and feedback means connected to apply a direct feedback voltage derived from the oscillator to the shunting means which is proportional to the frequency of said oscillations.

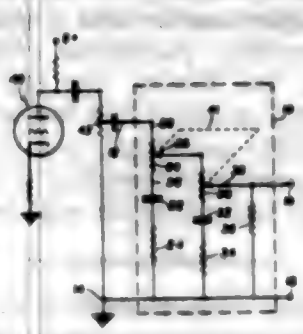
2,900,608
MODULATING CIRCUITS
John Louis Carroll, Ealing, London, and John Ewels, Harrow, England, assignors to Electric & Musical Industries Limited, Hayes, Middlesex, England, a company of Great Britain
Application August 1, 1955, Serial No. 525,719
Claims priority, application Great Britain August 5, 1954
3 Claims. (Cl. 332—52)



1. A modulating circuit arrangement comprising oscillation means and modulation means, said oscillation means comprising a first transistor operative to sustain the generated oscillations and a piezo electric crystal connected in the emitter to base circuit of said first transistor and operative to stabilise the frequency of said oscillations, said modulation means comprising a second transistor, the internal path from the collector electrode to another electrode of said second transistor being in series with the collector circuit of said first transistor and apart from the base-emitter circuit thereof and circuit connections for applying modulation signals to the emitter-base circuit of said second transistor to cause the collector current of said second transistor to modulate the collector current of said first transistor, thereby modulating the amplitude of said generated oscillations.

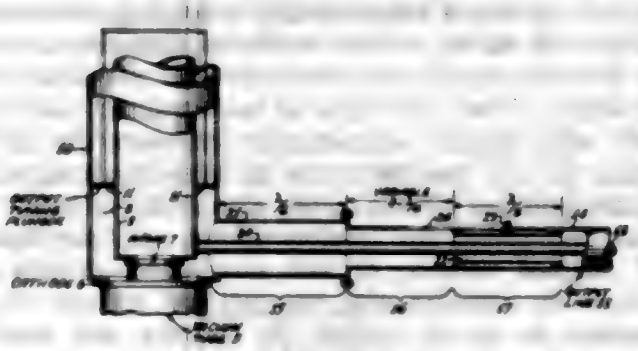
the magnetic field, and magnetic diverting means for conditions, said circuit means including a pair of paths

2,900,609
TONE COMPENSATED LOUDNESS CONTROL
Michael H. Esthewaid, Benton Harbor, Mich., assignor To V-M Corporation, Benton Harbor, Mich., a corporation of Michigan
Application July 27, 1954, Serial No. 446,907
2 Claims. (Cl. 333—28)



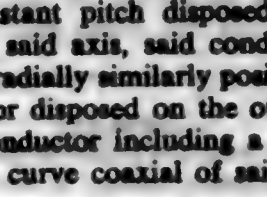
2. A tone compensated loudness control comprising a pair of input terminals and a pair of output terminals, and a common connection between one of said input terminals and one of said output terminals, first and second networks connected in cascade between said pair of input terminals and said pair of output terminals, each of said networks comprising two resistors and a condenser connected in series, and said condenser being between said resistors, one resistor of each network having an adjustable tap, the tap in the first network being coupled to the outer end of the second network resistor having the tap, an input circuit coupled across said first network at said input terminals and an output circuit coupled across said second network at said output terminals by way of said adjustable tap of said second network resistor having an adjustable tap, the values of the resistors and condenser of each network being such as to provide a set of characteristic curves which resemble the Fletcher-Munson hearing curves, both networks acting conjointly to more nearly conform to said Fletcher-Munson curves than a single network acting alone.

2,900,610
VARIABLE IMPEDANCE TRANSFORMER
Richard W. Allen, Haddon Heights, N.J., and Fred Cohen, Philadelphia, Pa., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Application May 19, 1955, Serial No. 509,486
1 Claim. (Cl. 333—35)



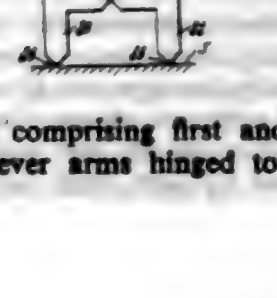
A coupling for a vacuum tube comprising, a tunable resonant cavity defined by inner and outer coaxial conductors adapted at one end for coupling to electrode contact rings of a vacuum tube and having a tuning plunger at the other end, a coaxial line having inner and outer conductors, a coaxial line section having inner and outer conductors connected at one end to the respective inner and outer conductors of said cavity and connected at the other end to the respective inner and outer conductors of said coaxial line, and a slug positioned between said inner and outer conductors of said coaxial line, said slug being longitudinally moveable within said coaxial line and arranged so that it contacts said outer conductor of said coaxial line throughout its movement, said line section and said slug having a length equal to a quarter-wavelength at a frequency in the tuning range of said cavity, said line section having a characteristic impedance greater than the characteristic impedance of said line.

2,900,611
A METHOD OF RESTRAINING FORCES OF NON-CIRCULAR CYLINDRICAL COILS
Frank W. Banks, Hickory Township, Mercer County, Pa., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application January 10, 1957, Serial No. 633,434
2 Claims. (Cl. 336—100)



2. In an inductive device, a non-circular electrical coil, said electrical coil being adapted to be energized from a source of electrical energy, a magnetic core disposed in said coil, and a band of glass fibers impregnated with a polyester resin and comprising a plurality of layers tightly surrounding said coil.

2,900,612
VARIABLE COUPLING TRANSFORMERS
Robert W. Tripp, Bronxville, N.Y., assignor, by mesne assignments, to Inductosyn Corporation, Carson City, Nev., a corporation of Nevada
Application September 26, 1955, Serial No. 536,464
24 Claims. (Cl. 336—123)



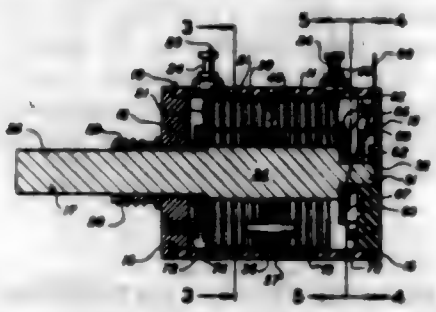
1. A transformer comprising two members having each a plane face, means to support said members with their said faces parallel to each other for relative rotation in an axis perpendicular to said faces, two spiral conductors of equal and constant pitch disposed on one of said faces coaxially of said axis, said conductors being connected in series at radially similarly positioned ends thereof, and a conductor disposed on the other of said faces, said last-named conductor including a portion conforming to an arc of a curve coaxial of said axis.

2,900,613
UNBONDED ELECTRIC STRAIN GAGE
Norman C. Dahl, Lexington, Mass.
Application May 8, 1957, Serial No. 657,779
9 Claims. (Cl. 338—6)

1. A strain gage comprising first and second spaced generally parallel lever arms hinged to each other for

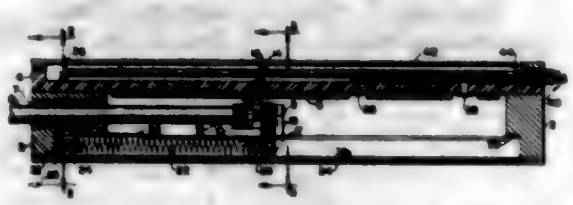
independent pivotal movement within their common plane, said arms at one end thereof being provided with sharp points for engagement with the strained surface, a member movably mounted on the first of said arms for relative movement with respect to said first arm in a direction toward and away from said second arm, a resistance wire stretched between said second arm and said movable member, an adjustable clamping device for clamping said member to said first arm when said points are disposed in gaging position and otherwise to permit relative movement of said member with respect to said first arm, and biasing means acting on said movable member to urge the same in a direction away from said second arm.

2,900,614
POTENTIOMETER
June E. Gech and Robert L. Gech, Claremont, Calif., assignors, by mesne assignments, to Daystrom, Incorporated, Elizabeth, N.J., a corporation of New Jersey
Application November 8, 1956, Serial No. 620,474
2 Claims. (Cl. 338—149)



1. A potentiometer, comprising: a case, an elongated resistance element supported as a space wound helix in the case, a shaft journalled for rotation in the case within the helix, a disk rotatable with said shaft and slidably keyed on the shaft for axial movement thereon, said disk having a peripheral circumferentially extending opening therein, the periphery of the disk being threaded to engage at least one turn of the helix in a portion thereof extending from opposite sides of said opening, a spring contact mounted on the disk in said opening engageable with the resistance element in the portion of said helix turn adjacent said opening as the disk travels along the helix, a collector bar supported at its opposite ends on said shaft, said bar being positioned radially outwardly from and parallel to the shaft axis, and extending through said disk opening, means slidably connecting the contact to the collector bar, and electrically conductive means connected to the resistance element and the collector bar for access exteriorly of the case.

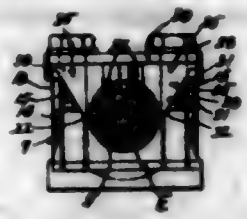
2,900,615
POTENTIOMETER
Herbert A. Gottschall, Nutley, S. Frederic Guggenheim, Teaneck, N.J., and Peter J. Wanuya, Richmond Hill, N.Y.
Application August 24, 1956, Serial No. 606,841
2 Claims. (Cl. 338—176)



1. In a rectilinear potentiometer, the combination comprising: a housing; a resistance element; means for supporting said resistance element in said housing; means to connect said resistance element to an external circuit; an actuating shaft extending into said housing; an insulator block carried by said shaft; electrically conductive wiper means carried by said insulator block and arranged to electrically contact said resistance element; a fixed terminal for connecting said wiper means to an external circuit; a tubular insulator member substantially coextensive with said resistance element, provided with a slot parallel to its axis, an electrically conductive arm member, carried by said insulator block, having one end connected to said wiper means; and a stretchable helically coiled spring member, positioned entirely within said tubular member, and having one end electrically connected to said fixed terminal and the other end mechanically and electrically connected to said arm member so that said spring member is stretched to an extent relative to the position of said wiper on said resistance element.

2,900,616
WITHDRAWN

2,900,617
CABLE CONNECTOR
George M. Hixon, Braintree, Mass., assignor to Trego, Inc., Boston, Mass., a corporation of Massachusetts
Application December 19, 1955, Serial No. 553,800
2 Claims. (Cl. 339—265)



1. A cable connector having, in combination, a body portion formed to provide an elongated open top groove having, in transverse cross-section, an arcuate bottom surface on which the lower surface portion of a longitudinally extending length of cable received by said groove is adapted to rest, and having upwardly relatively widely diverging side wall surfaces tangent to said arcuate bottom surface, the angle at which said side wall surfaces diverge being such as to cause the points of tangency to lie below the horizontal plane that includes the center of curvature of said arcuate bottom surface; a pair of oppositely arranged members in said groove, each of which members has a longitudinally extending inclined side surface conforming to and slidable downwardly on one of said diverging side wall surfaces of said groove, and each having a longitudinally extending, downwardly and laterally facing surface which in transverse cross-section is concavely arcuate and extends for substantially the full width of the under side of said member, and at the lower edge thereof substantially intersects the inclined surface of said member so as to adapt such surface to contact portions of the cable extending to below said plane; and means for forcibly sliding said members on said inclined surfaces of said groove for causing such surfaces by coaction with the inclined surfaces of said members to act as wedges for moving said members downward and laterally toward each other for downward and inward gripping of the cable.

2,900,618
CONTACT TERMINAL
William Geier, Fairhaven, Mass., assignor to John I. Paulding, Inc., New Bedford, Mass., a corporation of Massachusetts
Application May 2, 1957, Serial No. 656,687
1 Claim. (Cl. 339—272)

In combination a base with a recess therein, said recess having a face outwardly inclined at one side near its upper edge, an angle conductor plate having a portion overlying said recess and having a notch in an edge there-

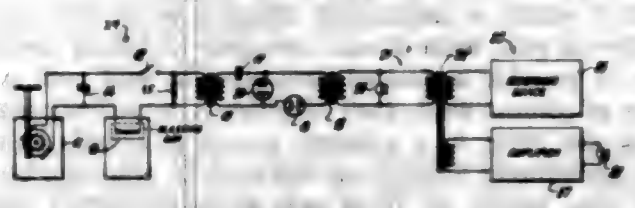
2,900,622
FERROELECTRIC SYSTEMS

one end of the last of said series-connected column windings, and means connecting other ends of alternate ones

of facing said inclined face of the recess, a second angle plate having a neck portion in loose engagement with said conductor plate in the notch thereof, said second plate then being separable from said conductor plate for the lateral insertion of a conductor wire therebetween, said conductor plate having an opening therethrough the upper portion thereof being tapered in width and said second plate having a tapered head adapted to be thrust

through the lower portion of said opening and a neck adapted to engage in the narrower upper portion of said opening for locking together the adjacent portion of said plates, and a screw threaded through said second plate for engagement at its inner end with a conductor placed between said plates and effective to move said second plate into locking engagement with said first plate when the neck of said second plate is in said opening.

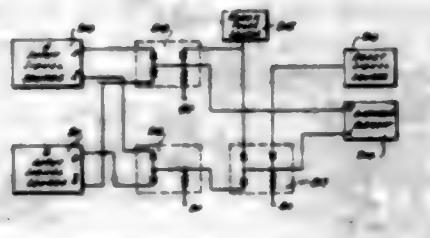
2,900,619
SYSTEM FOR RECORDING TIME
Orin C. Montgomery, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application July 12, 1954, Serial No. 442,743
7 Claims. (Cl. 340—15)



1. In a system for recording a time break, in combination, an energy storage condenser, a first rectifier connected in series therewith, a firing circuit including a blasting cap and a source of current for firing said blasting cap connected in series, means for feeding the output of said firing circuit to the series combination of condenser and rectifier, said rectifier being so poled as to permit said condenser to charge responsive to flow of current in said firing circuit, a recording device, a second rectifier connected to said condenser, means for coupling said condenser to said recording device through said second rectifier, said second rectifier being so poled as to prevent flow of charging current therethrough, whereby firing of said blasting cap interrupts the flow of current through said firing circuit, thereby permitting said storage device to discharge and provide a signal at said recording device.

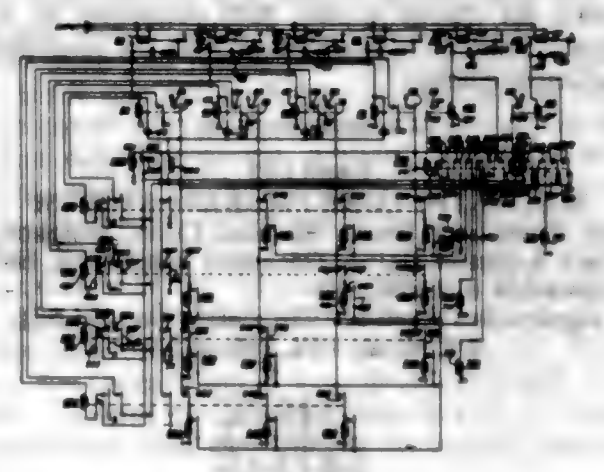
2,900,620
ELECTRONIC MAGNITUDE COMPARATOR
Robert Royce Johnson, Pasadena, Calif., assignor, by mesne assignments, to Hughes Aircraft Company, a corporation of Delaware
Application November 25, 1953, Serial No. 394,441
17 Claims. (Cl. 340—146)

1. A substantially delay-free electronic magnitude comparator for comparing and instantaneously indicating the relative magnitudes of first and second binary numbers, said comparator comprising: first means for producing a first series of bi-valued electrical digit signals representing, respectively, the digits of the first number; second means for producing a second series of bi-valued electrical signals representing, respectively, the digits of the second number; a bistable electronic element; a source of clock pulses; third means responsive solely to the simultaneous application of said clock pulses and said signals for setting said bistable electronic element to one of its stable states when corresponding digit signals of the two numbers being compared are dissimilar in one



sense; and fourth means responsive solely to the simultaneous application of said clock pulses and said signals for setting said bistable electronic element to the other of its stable states when corresponding digit signals of the two numbers being compared are dissimilar in the opposite sense.

2,900,621
LINE SELECTION SYSTEM
Charles Keith Stevenson, Chicago, and Herbert C. Waterman, Lincolnwood, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois
Application February 5, 1954, Serial No. 408,519
10 Claims. (Cl. 340—166)

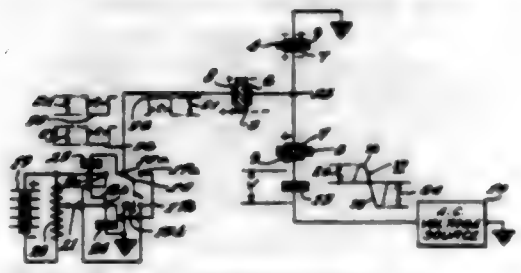


1. A selection system for establishing electrical connection at a desired point in a matrix by a signal including first and second frequency components applied in sequence, said system including in combination, a plurality of frequency responsive means each operable in response to reception of a component of a particular frequency, a first plurality of circuit means each individually coupled to and operated in response to operation of said frequency responsive means and defining one coordinate of the matrix, means including switching means responsive to a first frequency component for operation of one of said first plurality of circuit means and for disabling all of the other of said first plurality of circuit means, and a second plurality of circuit means each individually coupled to and operated in response to operation of a frequency responsive means to which one of said first plurality of circuit means is coupled, said second plurality of circuit means being operated by said frequency responsive means in response to a second frequency component different from the first frequency and received subsequent to reception of the first frequency component, said second plurality of circuit means defining the other coordinate of the matrix, each circuit means of said first plurality having portions cooperating with said circuit means of said second plurality so that a connection is established at a point defined by an operated circuit means of said first and second groups.

of the rotating drum by contact with said surface pushing the head out just enough so that it no longer touches; output circuit, a phase comparison device coupled for energization from said output circuit and said alternating

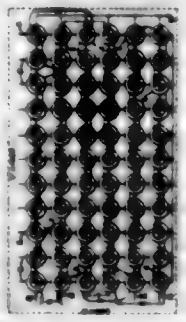
tor block carried by said shaft; electrically conductive overlying said recess and having a notch in an edge there-

2,900,622
FERROELECTRIC SYSTEMS
Jan A. Rajchman and George R. Briggs, Princeton, N.J., assignors to Radio Corporation of America, a corporation of Delaware
Application May 31, 1955, Serial No. 511,915
16 Claims. (Cl. 340—173)



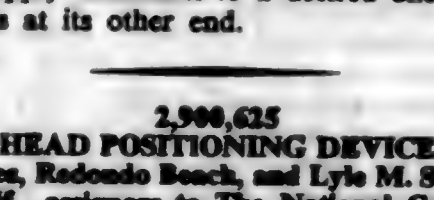
6. An electrical system comprising at least three condensers each having a dielectric of ferroelectric material, and each characterized by remanent and saturated charges of substantially equal values, a first and a second of said condensers being connected in series with each other, said third condenser being connected to a junction point between said first and second condensers, means for applying a saturating voltage of one polarity to said third condenser to saturate said first and second condensers with charge in the same one direction with reference to said junction point and to saturate said third condenser with charge in the opposite direction with reference to said junction point, and means for applying setting impulses of the opposite polarity to said third condenser to thereby reduce the charge in said third condenser by a predetermined amount in accordance with the amplitude of said setting impulses.

2,900,623
MAGNETIC CORE MEMORY SYSTEM
Milton Rosenberg, Santa Monica, Calif., assignor, by mesne assignments, to Telemeter Magnetics, Inc., a corporation of California
Application April 5, 1954, Serial No. 421,031
2 Claims. (Cl. 340—174)



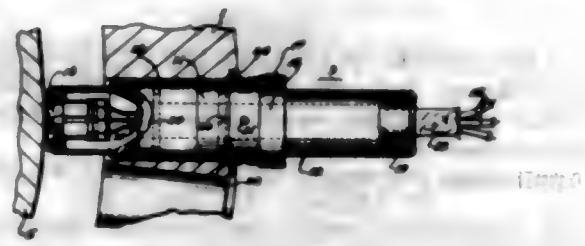
1. In a magnetic matrix memory system of the type including a plurality of cores of magnetic material having substantially rectangular hysteresis characteristics, said cores being arrayed in columns and rows, a plurality of row coils each of which is coupled to all the cores in a different one of said rows, a plurality of column coils each of which is coupled to all the cores in a different column, and means for applying current pulses to a column coil and to a row coil coupled to a selected core to drive said selected core to saturation at a desired polarity, said current pulses being applied to said column coil sufficiently before the application of said current pulses to said row coil to permit disturbances caused thereby to subside, a reading coil for said magnetic matrix comprising a winding on every core, the sense of said windings being the same on every core, means connecting the windings on each core in each column in series, means connecting one end of alternate ones of said series connected column windings to each other, means connecting one end of the next to last of said series-connected column windings to one end of the last of said series-connected column windings, and means connecting other ends of alternate ones of said series-connected column windings to each other to form a reading coil for said matrix.

2,900,624
MAGNETIC MEMORY DEVICE
Raymond Stuart-Williams, Pacific Palisades, and Milton Rosenberg, Santa Monica, Calif., assignors, by mesne assignments, to Telemeter Magnetics, Inc., a corporation of California
Application August 9, 1954, Serial No. 448,603
13 Claims. (Cl. 340—174)



1. A magnetic memory core array consisting of a plurality of memory core planes, each core plane including a plurality of magnetic memory cores each of which is capable of assuming two stable remanence conditions, said cores in each core plane being arranged in columns and rows, each column being folded over with approximately one-half of the cores in a column being aligned and spaced alongside of the other half of the cores in the column, each core plane having a plurality of row coils, each of which is inductively coupled to all the cores in a different row, each of said row coils including resistance wire to provide a desired resistance in said coil, a plurality of column coils, each of which is inductively coupled to all the cores in a column, means to couple in series correspondingly located column coils in alternate ones of said core planes to form two series-connected column coils for each of said correspondingly located columns in all said core planes, and means to couple each one of said two series-connected column coils together at one end to provide a single re-entrant series-connected column coil for each of said correspondingly located columns in all said core planes, a plurality of terminating impedances a different one of which is connected to one end of a different one of said re-entrant coils, and means to selectively apply excitation to a desired one of said re-entrant coils at its other end.

2,900,625
HEAD POSITIONING DEVICE
Dan H. Jones, Redondo Beach, and Lyle M. Stone, Hollydale, Calif., assignors to The National Cash Register Company, Dayton, Ohio, a corporation of Maryland
Application June 24, 1955, Serial No. 517,707
8 Claims. (Cl. 340—174)



4. Apparatus for holding a magnetic transducing head with a minimum of clearance relative to the magnetizable surface of a rotating drum comprising a tubular housing; a magnetic head affixed to the end of said tubular housing; mounting means for enabling said tubular housing to radially position itself relative to the surface

in series therein and adapted to have a direct current thereon one of the sides of which is adjacent the back

electrical signals representing, respectively, the digits of means of said first and second groups.

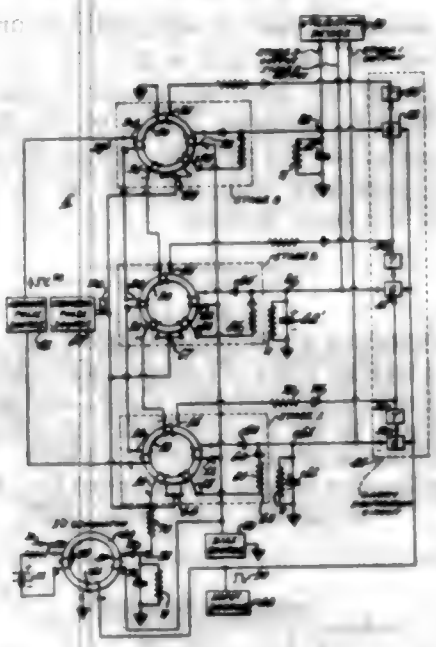
of the rotating drum by contact with said surface pushing the head out just enough so that it no longer touches; means for holding said tubular housing relative to the surface of said rotating drum such that the housing is prevented from any further inward radial movement but can move radially outward due to further contact with said surface; and means supporting said mounting means for adjusting said head tangentially about the surface of the drum.

2,900,626

MAGNETIC CORE COUNTER CIRCUITS

Vernon L. Newhouse, Haddonfield, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Application June 3, 1957, Serial No. 663,194
10 Claims. (Cl. 340—174)



1. In an "*n*" stage counter circuit, the combination comprising respectively "*n*" magnetic cores of substantially rectangular hysteresis loop material, said cores each having separate input, output, feedback, and inhibit windings linked thereto, "*n*" temporary storage devices connected respectively to the output windings of said cores, "*n*" feedback circuits, the "*n*th" one of said feedback circuits being connected between the "*n*th" temporary storage device and the feedback winding of the "*n*th" one of said cores, a carry propagation circuit having "*n*" gated amplifier stages, each stage having a plurality of inputs and an output, the "*n*th" gated amplifier stage having one input connected to the "*n*th" temporary storage means, and having another input connected to the output of the "*n*—1th" gated amplifier, and the "*n*th" gated amplifier having its output connected serially to the inhibit winding of the "*n*th" core and to the input winding of the "*n*+1th" core, and further having its output connected directly to the said other input of the "*n*+1th" gated amplifier, and means for applying an input signal to all said gated amplifier stages at the same time.

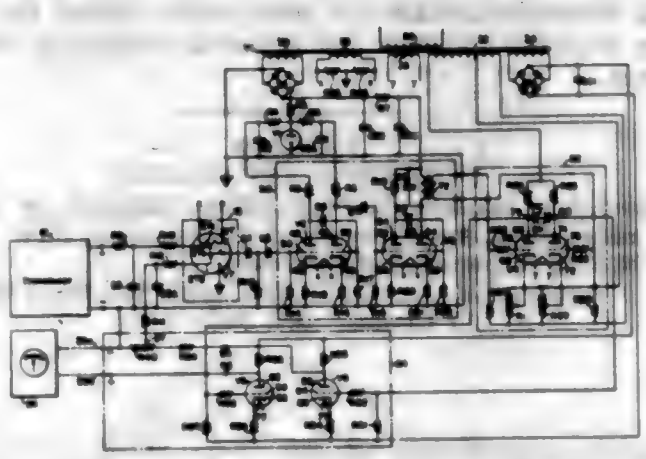
2,900,627

REMOTE METERING APPARATUS

Theodore Barabutas, Highland Park, and Andrew Kulick, Jr., Bloomfield, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application June 21, 1955, Serial No. 516,972
7 Claims. (Cl. 340—186)

7. In a telemetering transmitter, a source of alternating current, a synchronous inverter device having first and second input circuits for coupling the device to separate energizing sources, an output circuit and means effective when energized from said alternating current source for alternately coupling the input circuits to the output circuit, a phase comparison device coupled for energization from said output circuit and said alternating current source for producing an electrical output having a phase and a magnitude controlled by the difference in magnitude between the energization received by the phase comparison device through the inverter device from the first input circuit and from the second input circuit, said comparison device comprising first and second discharge circuits having an alternating voltage thereacross derived from said source, a first control circuit for the first discharge circuit permitting substantial current flow through the first control circuit only for a first phase of current in said output circuit, a second control circuit for the second discharge circuit permitting substantial current



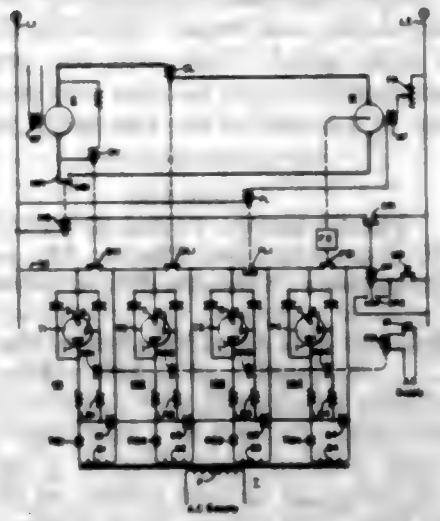
flow through the second control circuit only for a second phase of current in said output circuit, third and fourth discharge circuits, means for supplying a direct voltage for the third and fourth discharge circuits, a third control circuit permitting current to flow in the third discharge circuit only when substantial current flows through the first discharge circuit, a fourth control circuit permitting current to flow through the fourth discharge circuit only when substantial current flows through the second discharge circuit, an output circuit energized in accordance with the difference between the currents in the third and fourth discharge circuits for producing an electrical output, and means coupling the first input circuit for energization in accordance with said electrical output, whereby the electrical output may be controlled in accordance with the input to the second input circuit.

2,900,628

MULTIPLE FAULT INDICATING SYSTEM

Hugh S. Fegely, Buffalo, N.Y., and Hubert W. Van Ness, Diablo, Calif., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application January 27, 1956, Serial No. 561,778
3 Claims. (Cl. 340—213)



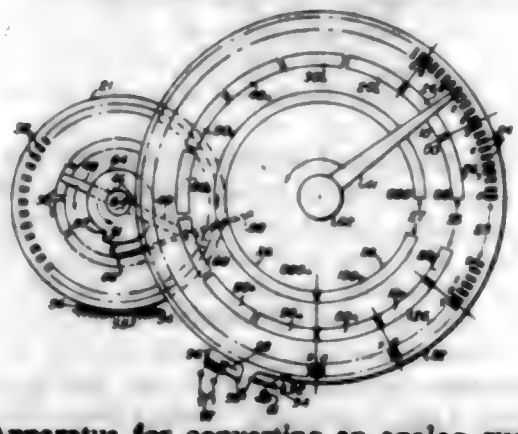
2. A multiple fault indicating system comprising, a control circuit having a plurality of switches connected

put of each stationary coil for controlling the potential distributed power amplifier connecting the output circuit

next to last of said series-connected column windings to housing to radially position itself relative to the surface

in series therein and adapted to have a direct current voltage applied thereto, a plurality of electronic tubes, one for each switch, each having an anode, a cathode and a starting electrode, direct current supply circuit means separate from the direct current voltage applied to said control circuit, individual circuits each including a respective one of said plurality of switches in series therein and connecting the anode and cathode of a respective one of said plurality of tubes across said direct current supply circuit means, a plurality of starting electrode switches each connected between a starting electrode of a respective one of said tubes and said direct current supply circuit means, said starting electrode switches being normally open, and means operatively connected with said starting electrode switches for temporarily closing the starting electrode switches and initiating conduction of said tubes.

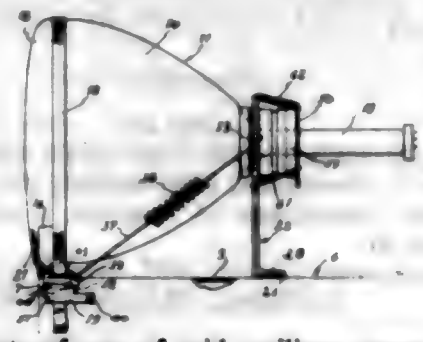
2,900,629
INDEXING APPARATUS
Howard L. Daniels, St. Paul, Minn., assignor, by mesne assignments, to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Application March 23, 1955, Serial No. 496,170
17 Claims. (Cl. 340—347)



10. Apparatus for converting an analog quantity into a digital quantity comprising at least a high speed commutator and a low speed commutator each having at least one annular row of discrete contact segments representing respectively the possible significant digits in a digital quantity, a rotatable driving shaft the angular displacement of which represents said analog quantity, a commutator wiper arm for each of said high and low speed commutators with brushes thereon for each annular row of contact segments on the respective commutator, means associated with said rotatable shaft for driving said high and low speed wiper arms at a speed ratio of n:1, where n equals the total possible number of discrete contact segments in an annular row on the low speed commutator, means associated with said high speed wiper arm for positively indexing a brush thereon to only one contact segment in an annular row on the high speed commutator, and means including means rotatable with said high speed wiper arm for positioning only one contact segment in an annular row on the low speed commutator to a brush on the low speed wiper arm.

2,900,630
TELEVISION TUBE SUPPORT
William H. Summerer, Des Plaines, Ill., assignor to Admiral Corporation, Chicago, Ill., a corporation of Delaware
Application July 19, 1954, Serial No. 444,267
6 Claims. (Cl. 340—367)

1. Apparatus for support of a picture tube above and in a predetermined relation to a horizontal base, the tube having a back portion converging to a neck of uniform diameter including an upright carrier on the base for the rear of the tube, said carrier being higher than the neck above the base and having an opening upwardly thereof for accommodation of the neck and an operating coil thereon one of the sides of which is adjacent the back portion, a confining plate having an aperture therein at the other side of the coil and being engageable with said coil when the neck extends through said apreture, and separate resilient means angularly spaced about the neck by being anchored to both the carrier and plate, the



anchorate points of one of said resilient means being directly above the neck and a pair of the means being anchored below the level of the neck and equidistantly spaced from the anchorate points of the first mentioned resilient means, all the resilient means urging said member into engagement with the coil to in turn bias said coil toward the back portion.

2,900,631
CENTERING AND MOUNTING MEANS FOR CATHODE RAY TUBES AND THE LIKE
John W. Love, Los Angeles, Calif., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force
Application July 6, 1955, Serial No. 520,209
6 Claims. (Cl. 340—367)

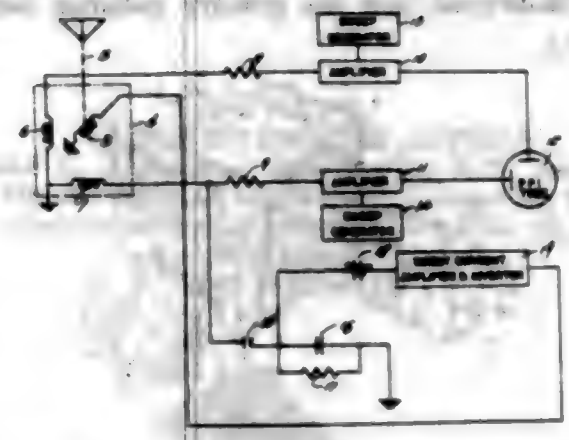
1. A supporting structure for the neck of a cathode ray tube comprising a tubular member formed with a given plurality of mounting means equi-angularly spaced from one another relative to the axis of said member at one end portion of said tubular member, and a like plurality of mounting means equi-angularly spaced from one another relative to the axis of said member at the opposite end portion of said tubular member; and a plurality of flexible struts, equal in number to said first plurality of mounting means, each supported at one end thereof by one of the mounting means at one end portion of the tubular member and at the other end thereof by one of the mounting means at the other end portion of said tubular member, said struts positioned entirely within said tubular member intermediate said strut ends, successive ones of said struts being mounted to successive ones of said mounting means, and each of said struts being at the same acute angle with the axis of said tubular member.

2,900,632
PLAN-POSITION INDICATOR SYSTEM
Henry Arlus, Brooklyn, N.Y., assignor to the United States of America as represented by the Secretary of the Navy
Original application January 12, 1955, Serial No. 481,501. Divided and this application January 30, 1956, Serial No. 562,357
2 Claims. (Cl. 343—10)

1. Electron deflection apparatus for a radar system having a rotating antenna and a cathode ray display tube, said apparatus comprising; a two phase generator having a pair of stationary coils and an armature coil that rotates with the antenna; a sweep generator responsive to the out-

said one superheterodyne receiver, and means responsive plates extending forwardly of the antenna aperture and

put of each stationary coil for controlling the potential across each pair of deflection plates of the tube; a diode element; a condenser; a circuit including the diode and the condenser in series between one of the field coils

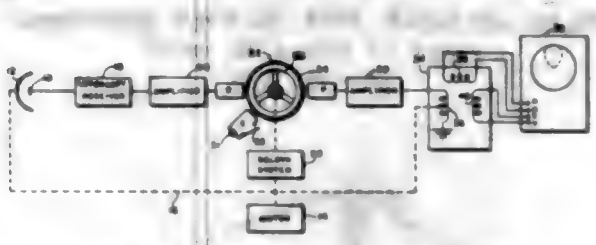


and ground; a D.C. reference voltage source; a D.C. amplifier inverter; and a circuit including the reference voltage source and the amplifier inverter in series between the junction of the diode element and the condenser and the said armature coil.

2,900,633
RADIO DIRECTION FINDER

Nello R. Castellini, Red Bank, and Anthony J. Di Giacomo, Interlaken Estates, N.J., assignors to the United States of America as represented by the Secretary of the Army

Application June 30, 1954, Serial No. 440,568
5 Claims. (Cl. 343—118)
(Granted under Title 35, U.S. Code (1952), sec. 266)



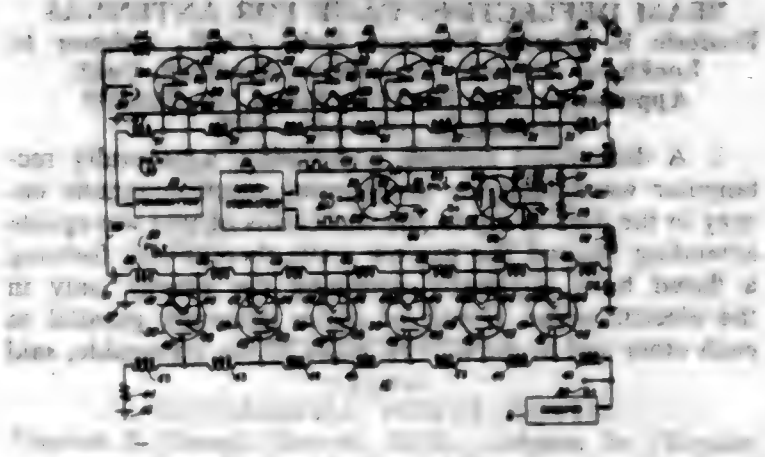
1. In a radio signal direction finder including a rotatably driven receiving antenna having a predetermined beam width and a directive pattern and adapted to intercept the beam of a transmitting antenna, means for outlining the antenna response pattern of said receiving antenna corresponding to said beam width, comprising means for demodulating the signals intercepted by said antenna, means driven synchronously with said receiving antenna for magnetically recording and magnetically reproducing successive demodulated signals whereby the respective amplitude and angular relationship of successive discrete intercept signals are maintained and reproduced in said relationship for a prescribed duration, said angular relationship being determined with respect to a prescribed azimuth direction, and indicating means responsive to said reproduced signals and including a cathode ray line trace synchronously driven with said receiving antenna whereby the successive reproduced intercept signals outline the receiving antenna response pattern.

2,900,634
DUPLEX OPERATION USING ALTERNATELY KEYED DISTRIBUTED AMPLIFIERS

Lawrence I. Algase, Bethpage, N.Y., assignor to Instruments for Industry, Incorporated, Mineola, N.Y., a corporation of New York

Application October 9, 1957, Serial No. 689,178
6 Claims. (Cl. 343—178)

6. A radio signalling system comprising a transmitter, a receiver, a common antenna, a multi-stage broad band distributed power amplifier connecting the output circuit of said transmitter to the antenna, thereby to apply outgoing signals to the antenna for radiation into space, a multi-stage broad band distributed preamplifier, the output of said preamplifier being connected to the input of said receiver, coupling means connecting the input circuit of said preamplifier to the output circuit of said power amplifier whereby space signals received by the antenna are applied through the output circuit of said power amplifier and said coupling means in series to the input of said preamplifier and therethrough to said receiver, switching means for separately applying control pulses to the con-

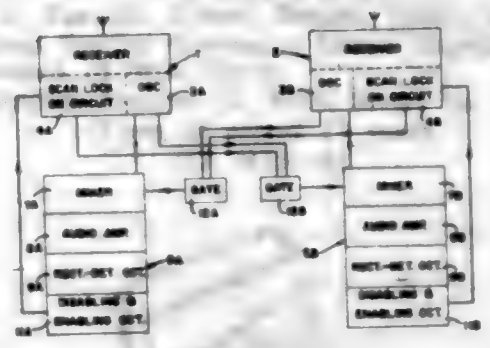


trol elements of the power amplifier and the preamplifier, the polarity of the control pulses being alternated whereby these amplifiers are alternately conductive and cut off, each being conductive while the other is cut off, and terminating means connected to the preamplifier input circuit, the maximum voltage applied through said coupling means from the output circuit of said power amplifier to the input circuit of said preamplifier being limited by phase difference between stages of the power amplifier and said voltage being dissipated by said terminating means, the limitation and dissipation of this voltage being effective to prevent damage to the preamplifier.

2,900,635
CONTROL APPARATUS FOR RADIO MONITORING STATION

Philip Yaffee, Kensington, Md., assignor to the United States of America as represented by the Secretary of the Navy

Application November 4, 1955, Serial No. 545,141
5 Claims. (Cl. 343—205)
(Granted under Title 35, U.S. Code (1952), sec. 266)



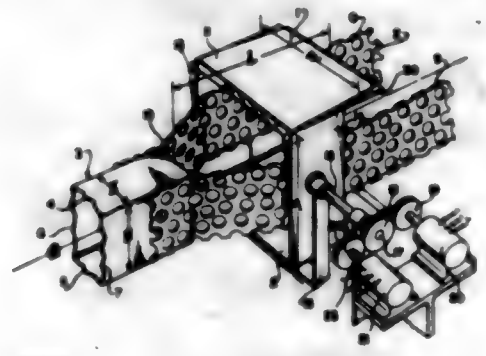
4. An electromagnetic wave signal monitoring station comprising a multiplicity of sweeping superheterodyne receivers for intercepting electromagnetic wave signals in a preselected frequency band, each of said receivers having lock-on circuit means for terminating further sweeping upon signal interception by the respective receiver, control circuit means coupled respectively to each of said receivers for producing an electrical control signal correlative to a predetermined frequency difference between the instantaneous oscillator frequency of all but one of said superheterodyne receivers and the oscillator frequency of

for accommodation of the neck and an operating coil with the antenna; a sweep generator responsive to the out-

said one superheterodyne receiver, and means responsive to said electrical control signal being adapted to render the lock-on circuit means of all but said one superheterodyne receiver nonresponsive at the frequency of said intercepted signal, and switching means actuable by the lock-on circuit means of said one superheterodyne receiver for transmitting the oscillator frequency thereof to all but the control circuit means respective to said one receiver.

2,900,636
BEAM DEFLECTING CAGE FOR ANTENNAS
Frederic R. Zberil, Sherman Oaks, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.
Application May 24, 1956, Serial No. 510,695
6 Claims. (Cl. 343—767)

1. A directional antenna comprising, a generally rectangular waveguide for propagating electromagnetic energy in the desired mode, the wide walls of said waveguide extending beyond the narrow walls thereof and forming a flared horn physically confining the energy only in the electric plane, a pair of plates generally parallel to each other and to the narrow walls of the waveguide, said plates extending forwardly of the antenna aperture and spaced apart a distance greater than the wide dimension of the waveguide and substantially equi-distant on either side of the antenna centerline whereby side lobe energy will be re-directed into the primary radiation pattern,



a frame supporting said plates for rotation about an axis generally normal to the antenna centerline and to the wide walls of the waveguide for tilting the antenna aiming axis, and drive means engaging said frame for controlling the rotational movement of said plates.

185,904
SHAVER

185,907
FLAG UNIT FOR AN AUTOMOBILE OR THE LIKE

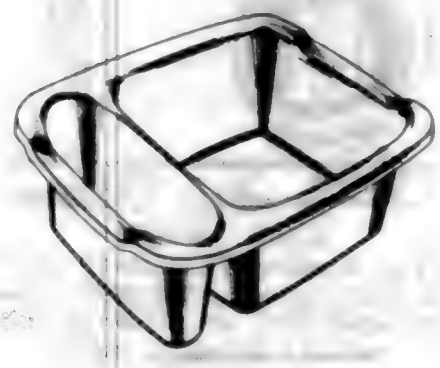
a receiver, a common antenna, a multi-stage broad band superheterodyne receivers and the oscillator frequency of

DESIGNS

AUGUST 18, 1959

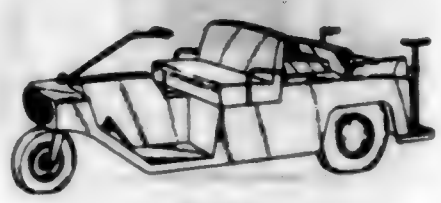
185,898
GLOVE OR SIMILAR ARTICLE
Richard C. Zuckerwar, Gloversville, N.Y., assignor to Alexette Becmo Corporation, Gloversville, N.Y.
Application August 15, 1958, Serial No. 52,225
Term of patent 7 years
(Cl. D3—11)

185,899
COMBINATION BASIN FOR WASHING AND RINSING DISHES
Rudolph Bernhardt, Evanston, Ill., assignor to Federal Tool Corporation, Chicago, Ill., a corporation of Illinois
Application April 24, 1957, Serial No. 45,874
Term of patent 14 years
(Cl. D4—2)

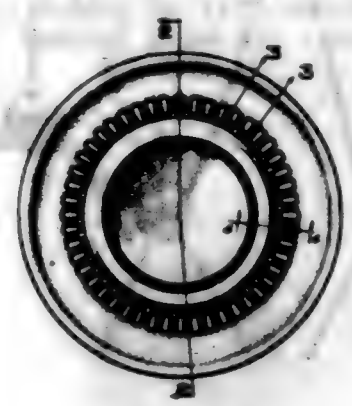


185,900
HEEL FOR LADIES' SHOES
Roger Vivier, Mougins, France, assignor to Christian Dior, Paris, France, a limited liability company of France
Application March 13, 1959, Serial No. 54,973
Claims priority, application France January 14, 1959
Term of patent 7 years
(Cl. D7—5)

185,901
GOLFING VEHICLE OR THE LIKE
John T. Parrett, Benton Harbor, Mich.
Application February 9, 1959, Serial No. 54,519
Term of patent 7 years
(Cl. D14—3)



185,902
AUTOMOBILE WHEEL COVER
Vincent J. Geraci, Detroit, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application October 10, 1957, Serial No. 48,843
Term of patent 7 years
(Cl. D14—30)

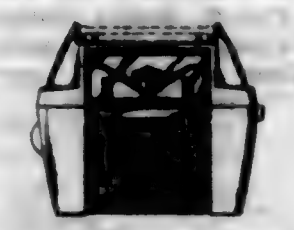


185,903
VEHICLE SEAT
Chester J. Barecki, Grand Rapids, Mich., assignor to American Seating Company, Grand Rapids, Mich., a corporation of New Jersey
Application January 22, 1959, Serial No. 54,263
Term of patent 14 years
(Cl. D15—8)

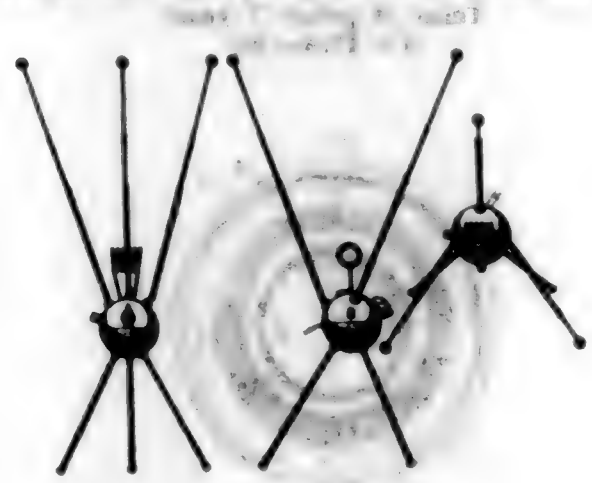
185,910

185,914

185,904
SHAVER
Raymond A. Somers, Fairfield, Conn., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Application January 5, 1959, Serial No. 54,037
Term of patent 14 years
(Cl. D22—3)

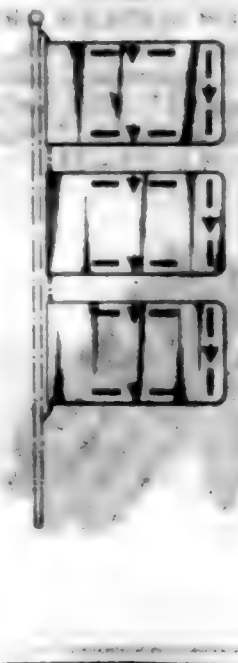


185,905
SIX POLE TELEVISION AND RADIO ANTENNA
Sam Gertz, Chicago, Ill.; Sylvia Edith Gertz executrix of said Sam Gertz, deceased
Application March 14, 1958, Serial No. 50,028
Term of patent 7 years
(Cl. D26—14)

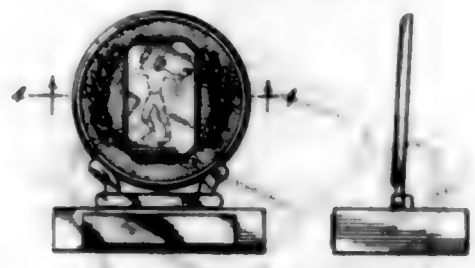


185,906
HANGING ORNAMENT OR SIMILAR ARTICLE
Jack Burnbaum, Newton, Mass.
Application November 20, 1958, Serial No. 53,456
Term of patent 14 years
(Cl. D29—1)

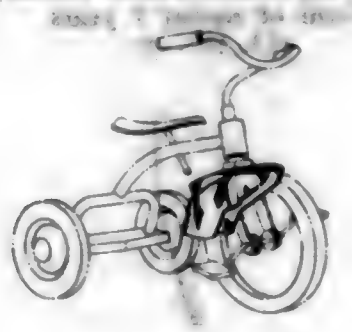
185,907
FLAG UNIT FOR AN AUTOMOBILE OR THE LIKE
Howell D. Morris, Scranton, Pa.
Application February 7, 1956, Serial No. 40,065
Term of patent 3½ years
(Cl. D29—17)



185,908
TROPHY
Marvin Kramer, Chicago, Ill.
Application January 12, 1959, Serial No. 54,140
Term of patent 7 years
(Cl. D29—23)



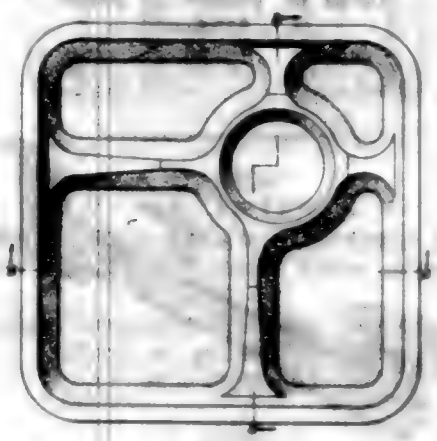
185,909
VELOCIPEDE FENDER
Viktor Schreckengost, Cleveland Heights, Ohio, assignor to The Murray Ohio Manufacturing Company, Nashville, Tenn., a corporation of Ohio
Application March 5, 1959, Serial No. 54,856
Term of patent 14 years
(Cl. D34—15)



185,917

185,910
TOY BOOMERANG GUN
George W. Dunbar, Nashville, Tenn., assignor to Keenn Incorporated, Nashville, Tenn.
Application May 13, 1959, Serial No. 55,889
Term of patent 14 years
(Cl. D34—15)

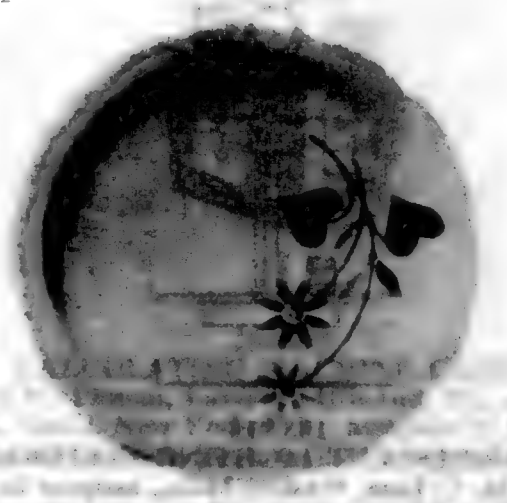
185,911
DIVIDED PLATE
Gilbert R. Chadbourne, Oakland, Maine, assignor to Keyes Fibre Company, Portland, Maine, a corporation of Maine
Application May 27, 1958, Serial No. 51,094
Term of patent 14 years
(Cl. D44—15)



185,912
COVER KNOB
James L. Hvale, Chicago, Ill., assignor to Ekco Products Company, Chicago, Ill., a corporation of Illinois
Application September 19, 1958, Serial No. 52,696
Term of patent 14 years
(Cl. D44—29)

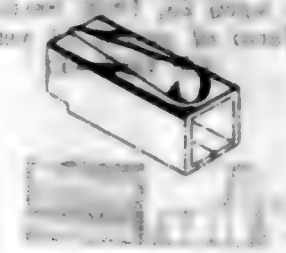
185,913
HANDLE FOR KITCHEN UTENSILS AND SIMILAR ARTICLES
Richard S. Latham, Chicago, Ill., assignor to Ekco Products Company, Chicago, Ill., a corporation of Illinois
Application September 19, 1958, Serial No. 52,698
Term of patent 14 years
(Cl. D44—29)

185,914
DINNER PLATE OR SIMILAR ARTICLE
Michael J. Szymanski, Camillus, N.Y.
Application February 26, 1959, Serial No. 54,758
Term of patent 14 years
(Cl. D44—15)



185,915
CHARM
Bert Walter Strassburger, New York, N.Y.
Application October 25, 1957, Serial No. 48,239
Term of patent 3½ years
(Cl. D45—17)

185,916
EXPANSIBLE CHAIN FOR A BRACELET OR SIMILAR ARTICLE
Sol P. Kaufmann, Providence, R.I., assignor to Speidel Corporation, Providence, R.I., a corporation of Rhode Island
Application March 31, 1959, Serial No. 55,263
Term of patent 14 years
(Cl. D45—4)

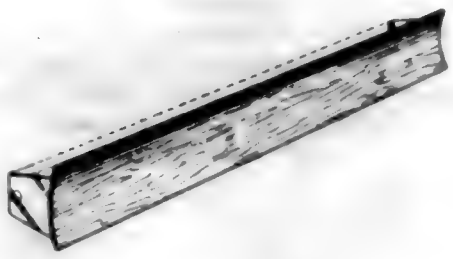


185,924
CARTON FOR CIGARETTE PACKS

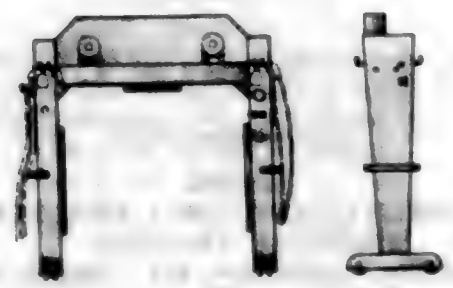
185,928
MOTION PICTURE CAMERA

185,917
TABLE LAMP OR SIMILAR ARTICLE
William J. Carpenter, Burbank, Calif.
Application March 3, 1958, Serial No. 49,872
Term of patent 14 years
(Cl. D48—20)

185,918
FLUORESCENT LIGHTING FIXTURE
William M. C. Lam, Weston, Mass., assignor to Lam Inc., a corporation of Massachusetts
Application September 8, 1958, Serial No. 52,569
Term of patent 14 years
(Cl. D48—4)



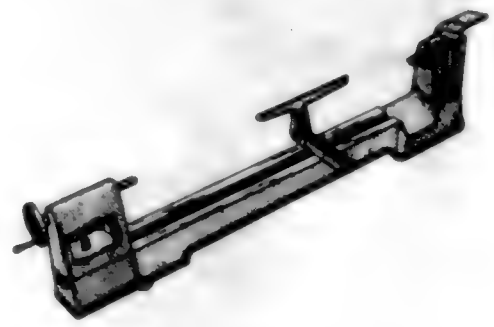
185,919
AUTOMOBILE WASHER OR SIMILAR ARTICLE
Max Fruchter, Springfield, N.J.
Application May 13, 1958, Serial No. 50,866
Term of patent 14 years
(Cl. D49—1)



185,920
SPAN MEASURING DEVICE FOR BOWLING BALLS AND THE LIKE
George E. Schaefer, Muskegon, Mich., assignor to The Brunswick-Balke-Collender Company, Chicago, Ill., a corporation of Delaware
Application April 25, 1958, Serial No. 50,618
Term of patent 14 years
(Cl. D52—1)

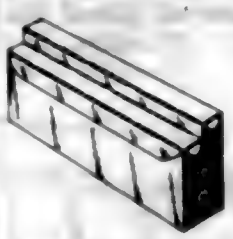
185,921
COMBINATION WINDSHIELD SCRAPER, RADIATOR CAP REMOVER, BOTTLE OPENER, AND RULER
Robert B. Draper, Merryfield, Va.
Application November 3, 1958, Serial No. 53,238
Term of patent 3½ years
(Cl. D52—1)

185,922
WOOD LATHE
Frederick S. Brosman, Evanston, Ill., assignor to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application April 15, 1957, Serial No. 45,731
Term of patent 14 years
(Cl. D54—6)

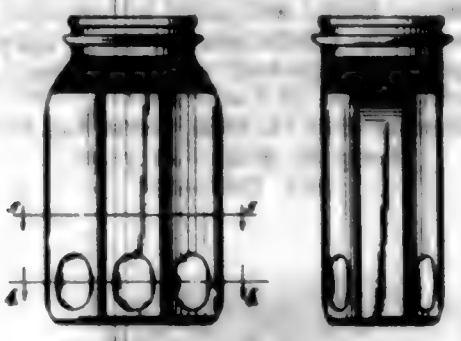


185,923
SPOON OR SIMILAR ARTICLE
Frank R. Perry, Oneida, N.Y., assignor to Oneida Ltd., Oneida, N.Y., a corporation of New York
Application April 1, 1959, Serial No. 55,308
Term of patent 14 years
(Cl. D54—12)

185,924
CARTON FOR CIGARETTE PACKS
William E. Gagnon, Whitman, Mass.
Application October 5, 1954, Serial No. 32,547
Term of patent 14 years
(Cl. D58—13)

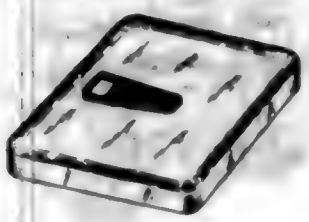


185,925
JAR
Arnold I. Lorenzen, Toledo, and Bruce L. Roberts, Rossford, Ohio, assignors to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio
Application August 4, 1958, Serial No. 52,041
Term of patent 14 years
(Cl. D58—25)

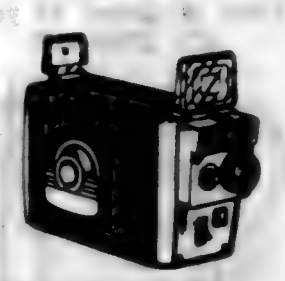


185,926
DECANTER
Walter F. Baker, Lafayette, Calif., assignor to Owens-Illinois Glass Company, Toledo, Ohio, a corporation of Ohio
Application November 28, 1958, Serial No. 53,562
Term of patent 14 years
(Cl. D58—8)

185,927
LID FOR A WASTE RECEPTACLE
James F. Warren, Toronto, Ontario, Canada, assignor to General Steel Wares Limited, Toronto, Ontario, Canada
Application April 3, 1959, Serial No. 55,331
Term of patent 14 years
(Cl. D58—17)



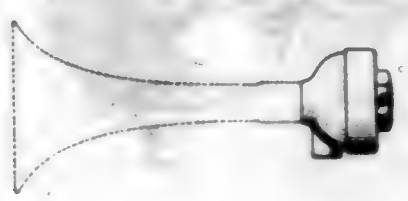
185,928
MOTION PICTURE CAMERA
Frederick G. Knowles, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Application March 23, 1959, Serial No. 55,110
Term of patent 14 years
(Cl. D61—1)



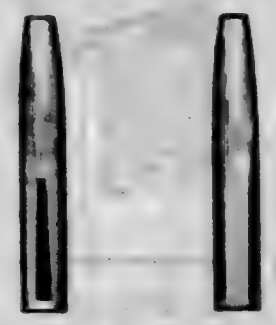
185,929
CALCULATING MACHINE CASING
Richard W. Pitman, Laverock-Hillcrest, Pa., and Lurelle V. A. Guild, New York, N.Y., assignors to Underwood Corporation, New York, N.Y., a corporation of Delaware
Application April 2, 1958, Serial No. 50,368
Term of patent 14 years
(Cl. D64—11)

185,930
BOBBIN WINDER FOR SEWING MACHINES
Malcolm S. Park, Verplanck Point, N.Y., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Application October 27, 1958, Serial No. 53,172
Term of patent 14 years
(Cl. D70—2)

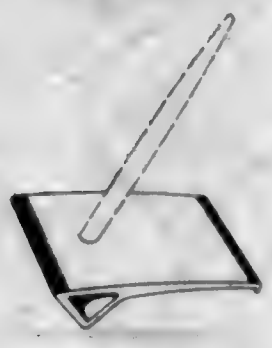
185,931
HORN HOUSING
Charles E. Graham Reeves, Summit, N.J., assignor to Falcon Alarm Co., Inc., Summit, N.J., a corporation of New Jersey
Application November 18, 1957, Serial No. 48,499
Term of patent 14 years
(Cl. D72—1)



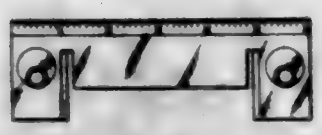
185,932
CAP FOR A WRITING INSTRUMENT OR A SIMILAR ARTICLE
David Kahn, deceased, late of Englewood Cliffs, N.J., by Harry Yager, Englewood Cliffs, N.J., Julius M. Kahn, Englewood, N.J., and Samuel Kahn, Englewood Cliffs, N.J., executors, assignors to David Kahn, Inc., North Bergen, N.J., a corporation of New Jersey
Application June 24, 1958, Serial No. 51,497
Term of patent 14 years
(Cl. D74—17)



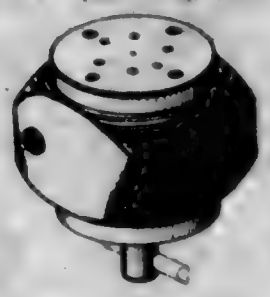
185,933
DESK BASE FOR A WRITING INSTRUMENT
Walter Irion Bieger, Janesville, Wis., assignor to The Parker Pen Company, Janesville, Wis., a corporation of Wisconsin
Application August 28, 1958, Serial No. 52,436
Term of patent 14 years
(Cl. D74—1)



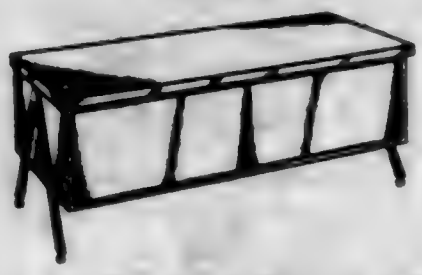
185,934
COMBINED RULER, MEMO PAD HOLDER AND DESK SET
Michael Barron, Woodmere, N.Y.
Application March 6, 1959, Serial No. 54,867
Term of patent 14 years
(Cl. D74—1)



185,935
HYDRAULIC TRACER VALVE FOR MACHINE TOOL
Victor Ruzick, Fullerton, and Harry C. Mix, Anaheim, Calif.
Application November 4, 1957, Serial No. 48,326
Term of patent 14 years
(Cl. D78—1)

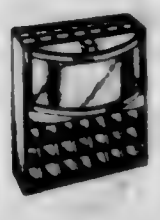


185,936
COMPOSITE STORE COUNTER AND STORAGE CABINET OR THE LIKE
Louis A. Banks, Glenview, Ill., assignor to The Waddell Company, Greenfield, Ohio, a corporation of Ohio
Application November 14, 1957, Serial No. 48,447
Term of patent 14 years
(Cl. D86—11)



185,937
BOX FOR STORING AND DISPLAYING GASKET RINGS OR THE LIKE
Joseph M. Breening, Cleveland, and Robert C. Vanlew, Rocky River, Ohio, assignors of one-half to E. F. Houghton & Co., Philadelphia, Pa., a corporation of Pennsylvania, and one-half to Bearings, Inc., Cleveland, Ohio, a corporation of Delaware
Application May 16, 1958, Serial No. 50,929
Term of patent 14 years
(Cl. D86—5)

185,938
COMBINED DISPLAY CASE AND DISPENSER FOR CEREAL BOXES AND THE LIKE
Carl A. Sand, Cincinnati, Ohio, assignor to The Brunhoff Manufacturing Company, Cincinnati, Ohio, a corporation of Ohio
Application June 26, 1958, Serial No. 51,562
Term of patent 14 years
(Cl. D86—11)

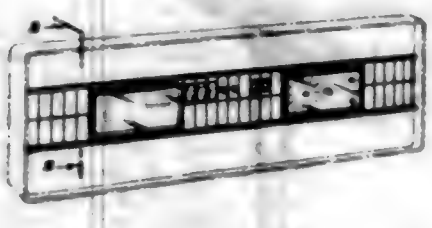


185,939
MOBILE KITCHEN AND SERVING UNIT
William H. Frick, Cleveland, Ohio
Application October 11, 1957, Serial No. 48,064
Term of patent 14 years
(Cl. D81—10)

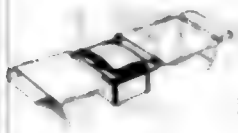
185,947

185,948

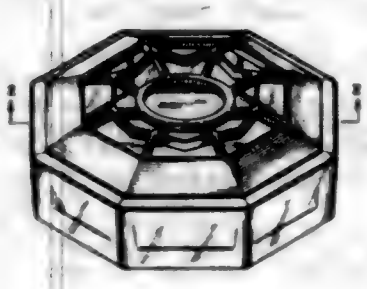
185,940
COMBINED GUARD RAIL AND CONTROL PANEL FOR A COOKING RANGE OR THE LIKE
Frank Breckenridge, Whittier, and Thomas D. Tweedie, Monrovia, Calif., assignors to O'Keefe & Merritt Company, Los Angeles, Calif., a corporation of California
Application April 8, 1958, Serial No. 50,383
Term of patent 14 years
(Cl. D81—25)



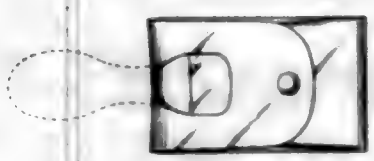
185,941
MASSAGE TABLE AND VIBRATOR COMBINATION
Sammy Davis, Glendale, and Wayne C. Shank, Sherman Oaks, Calif.; said Shank assignor to said Davis
Application February 11, 1957, Serial No. 44,836
Term of patent 14 years
(Cl. D83—1)



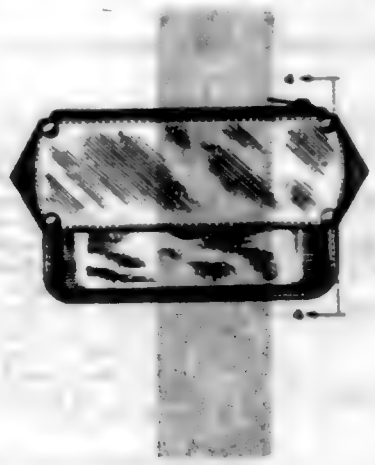
185,942
ASH TRAY
George Ajdukovich, St. Louis, Mo.
Application November 20, 1958, Serial No. 53,462
Term of patent 14 years
(Cl. D85—2)



185,943
CONTAINER FOR A HAIR BRUSH
Murray Schotland, New York, N.Y.
Application December 31, 1957, Serial No. 49,086
Term of patent 14 years
(Cl. D86—10)

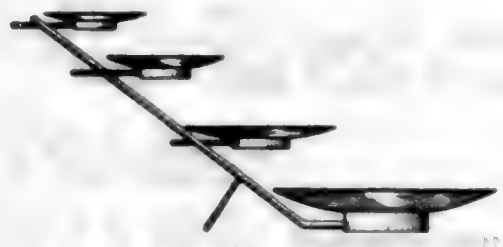


185,944
SLIP-ON BELT BILLFOLD
Howard A. Kehl, Detroit, Mich.
Application October 22, 1958, Serial No. 53,897
Term of patent 14 years
(Cl. D87—3)



185,945
WATER SPRAY GUN
Jules Rosenkranz, New York, N.Y., assignor to Lafayette Brass Mfg. Co., Inc., a corporation of New York
Application May 12, 1958, Serial No. 50,845
Term of patent 14 years
(Cl. D91—1)

185,946
FOUNTAIN
Kenneth I. Nign, Temple City, Calif.
Application January 15, 1959, Serial No. 54,182
Term of patent 14 years
(Cl. D91—4)



185,947
NARROW WOVEN FABRIC OR SIMILAR ARTICLE
Jack Davis, New York, N.Y.
Application March 10, 1959, Serial No. 54,914
Term of patent 3½ years
(Cl. D92—1)

185,948
MASONRY HAMMER
Finn Schmidt, Sacramento, Calif.
Application December 26, 1958, Serial No. 53,910
Term of patent 14 years
(Cl. D93—4)

Mix, Harry C.: *See*—
Rusick, Victor, and Mix, 185,935.

Schaefer, George E., to The Brunswick-Balke-Collender Co.
Span measuring device for bowling balls and the like, 185,939.

LIST OF REISSUE PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 18TH DAY OF AUGUST, 1959

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Berger, Christian D. Color television system and apparatus. Re. 24,688, 8–18–59, Cl. 178—5.4.

Butcosk, Richard A., to Socony Mobil Oil Co., Inc. Lithium base grease. Re. 24,681, 8–18–59, Cl. 252—37.

Clapp, Richard G., to Philco Corp. Color television indexing system. Re. 24,685, 8–18–59, Cl. 178—5.4.

Cushman Chuck Co., The: *See*—
Swanson, Linwood B. Re. 24,684.

Griffith Laboratories, Inc., The: *See*—
Schnell, Carl. Re. 24,683.

Johnson, John A., to Thermal Research and Engineering Corp. Fluid fuel burner. Re. 24,682, 8–18–59, Cl. 158—1.

Philco Corp.: *See*—
Clapp, Richard G. Re. 24,685.

Schnell, Carl, ⅓ to The Griffith Laboratories, Inc. Method of comminuting meat. Re. 24,683, 8–18–59, Cl. 99—108.

Socony Mobil Oil Co., Inc.: *See*—
Butcosk, Richard A. Re. 24,681.

Swanson, Kenneth P. Top rolls for spinning machines. Re. 24,687, 8–18–59, Cl. 19—142.

Swanson, Linwood B., to The Cushman Chuck Co. Power-operated chuck of the compensating type. Re. 24,684, 8–18–59, Cl. 279—119.

Thermal Research and Engineering Corp.: *See*—
Johnson, John A. Re. 24,682.

Toledo Scale Corp.: *See*—
Williams, Lawrence S. Re. 24,686.

Williams, Lawrence S., to Toledo Scale Corp. Ball bearing. Re. 24,686, 8–18–59, Cl. 308—193.

LIST OF PLANT PATENTEES

Ilgenfritz Nurseries, Inc.: *See*—
Robichon, Marcel. 1,859.

Robichon, Marcel, to Ilgenfritz Nurseries, Inc. Rose plant. 1,859, 8–18–59, Cl. 47—61.

Spanbauer, Frank. Rose plant. 1,860, 8–18–59, Cl. 47—61.

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Ajdukovich, George. Ash tray. 185,942, 8–18–59, Cl. D85—2.

Alexette Bacmo Corp.: *See*—
Zuckerwar, Richard C. 185,898.

American Seating Co.: *See*—
Barecki, Chester J. 185,903.

Baker, Walter F., to Owens-Illinois Glass Co. Decanter. 185,926, 8–18–59, Cl. D58—8.

Banks, Louis A., to The Waddell Co. Composite store counter and storage cabinet or the like. 185,936, 8–18–59, Cl. D80—11.

Barecki, Chester J., to American Seating Co. Vehicle seat. 185,903, 8–18–59, Cl. D15—6.

Barron, Michael. Combination ruler, pad and pen holder desk set. 185,934, 8–18–59, Cl. D74—1.

Bearings, Inc.: *See*—
Bruening, Joseph M., and Vanlew. 185,937.

Bernhardt, Rudolph, to Federal Tool Corp. Combination basin for washing and rinsing dishes. 185,899, 8–18–59, Cl. D4—2.

Bieger, Walter I., to The Parker Pen Co. Desk base for a writing instrument. 185,933, 8–18–59, Cl. D74—1.

Breckenridge, Frank, and T. D. Tweedie, to O'Keefe & Merritt Co. Combined guard rail and control panel for a cooking range, or the like. 185,940, 8–18–59, Cl. D81—25.

Brennan, Frederick S., to Rockwell Mfg. Co. Wood lathe. 185,922, 8–18–59, Cl. D54—6.

Bruening, Joseph M., and R. C. Vanlew, ⅓ to E. F. Houghton & Co., and ⅓ to Bearings, Inc. Box for storing and displaying gasket rings or the like. 185,937, 8–18–59, Cl D80—3.

Brunhoff Mfg. Co., The: *See*—
Sand, Carl A. 185,938.

Brunswick-Balke-Collender Co., The: *See*—
Schaefer, George E. 185,920.

Burnbaum, Jack. Hanging ornament or similar article. 185,906, 8–18–59, Cl. D29—1.

Carpenter, William J. Table lamp or similar article. 185,917, 8–18–59, Cl. D48—20.

Chadbourne, Gilbert R., to Keyes Fibre Co. Divided plate. 185,911, 8–18–59, Cl. D44—15.

Chrysler Corp.: *See*—
Geraci, Vincent J. 185,902.

Davis, Jack. Narrow woven fabric or similar article. 185,947, 8–18–59, Cl. D92—1.

Davis, Sammy, and W. C. Shank; said Shank assor. to said Davis. Massage table and vibrator combination. 185,941, 8–18–59, Cl. D83—1.

Dior, Christian: *See*—
Vivier, Roger. 185,900.

Draper, Robert B. Combination windshield scraper, radiator cap remover, bottle opener, and ruler. 185,921, 8–18–59, Cl. D52—1.

Dunbar, George W., to Kusan Inc. Toy boomerang gun. 185,910, 8–18–59, Cl. D34—15.

Eastman Kodak Co.: *See*—
Knowles, Frederick G. 185,928.

Ekco Products Co.: *See*—
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Latham, Richard S. 185,913.

Falcon Alarm Co., Inc.: *See*—
Reeves, Charles E. G. 185,931.

Federal Tool Corp.: *See*—
Bernhardt, Rudolph. 185,899.

Frick, William H. Mobile kitchen and serving unit. 185,939, 8–18–59, Cl. D81—10.

Fruchter, Max. Automobile washer or similar article. 185,919, 8–18–59, Cl. D49—1.

Gagnon, William E. Carton for cigarette packs. 185,924, 8–18–59, Cl. D58—13.

General Steel Wares Ltd.: *See*—
Warren, James F. 185,927.

Geraci, Vincent J., to Chrysler Corp. Automobile wheel cover. 185,902, 8–18–59, Cl. D14—30.

Gertz, Sam, deceased; S. E. Gertz, executrix. Six pole television and radio antenna. 185,905, 8–18–59, Cl. D26—14.

Gertz, Sylvia E.: *See*—
Gertz, Sam. 185,905.

Guild, Lurelle V. A.: *See*—
Pitman, Richard W., and Guild. 185,929.

Houghton, E. F., & Co.: *See*—
Bruening, Joseph M., and Vanlew. 185,937.

Hvale, James L., to Ekco Products Co. Cover knob. 185,912, 8–18–59, Cl. D44—29.

Kahn, David, deceased, by H. Yager, and J. M. and S. Kahn, executors, to David Kahn, Inc. Cap for a writing instrument or a similar article. 185,932, 8–18–59, Cl. D74—17.

Kahn, David, Inc.: *See*—
Kahn, David. 185,932.

Kahn, Julius M.: *See*—
Kahn, David. 185,932.

Kahn, Samuel: *See*—
Kahn, David. 185,932.

Kaufman, Sol P., to Speidel Corp. Expansible chain for a bracelet or similar article. 185,916, 8–18–59, Cl. D45—4.

Kehl, Howard A. Slip-on belt billfold. 185,944, 8–18–59, Cl. D87—3.

Keyes Fibre Co.: *See*—
Chadbourne, Gilbert R. 185,911.

Knowles, Frederick G., to Eastman Kodak Co. Motion picture camera. 185,928, 8–18–59, Cl. D61—1.

Kramer, Marvin. Trophy. 185,908, 8–18–59, Cl. D29—23.

Kusan Inc.: *See*—
Dunbar, George W. 185,910.

Lafayette Brass Mfg. Co., Inc.: *See*—
Rosenkrans, Jules. 185,945.

Lam Inc.: *See*—
Lam, William M. C. 185,918.

Lam, William M. C., to Lam Inc. Fluorescent lighting fixture. 185,918, 8–18–59, Cl. D48—4.

Latham, Richard S., to Ekco Products Co. Handle for kitchen utensils and similar articles. 185,913, 8–18–59, Cl. D44—29.

Lorensen, Arnold I., and B. L. Roberts, to Owens-Illinois Glass Co. Jar. 185,925, 8–18–59, Cl. D58—25.

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Mix, Harry C.: *See*—
Ruzick, Victor, and Mix. 185,935.

Morris, Howell D. Flag unit for an automobile or the like. 185,907, 8–18–59, Cl. D29—17.

Murray Ohio Mfg. Co., The: *See*—
Schreckengost, Viktor. 185,909.

Nign, Kenneth I. Fountain. 185,946, 8–18–59, Cl. D91—4.

O'Keefe & Merritt Co.: *See*—
Breckenridge, Frank, and Tweedie. 185,940.

Oneida Ltd.: *See*—
Perry, Frank R. 185,923.

Owens-Illinois Glass Co.: *See*—
Baker, Walter F. 185,926.
Lorenzen, Arnold I., and Roberts. 185,925.

Park, Malcolm S., to The Singer Mfg. Co. Bobbin winder for sewing machines. 185,930, 8–18–59, Cl. D70—2.

Parker Pen Co., The: *See*—
Bieger, Walter I. 185,933.

Parrett, John T. Golfing vehicle or the like. 185,901, 8–18–59, Cl. D14—3.

Perry, Frank R., to Oneida Ltd. Spoon or similar article. 185,923, 8–18–59, Cl. D64—12.

Pitman, Richard W., and L. V. A. Guild, to Underwood Corp. Calculating machine casing. 185,929, 8–18–59, Cl. D64—77.

Reeves, Charles E., to Falcon Alarm Co., Inc. Horn housing. 185,931, 8–18–59, Cl. D72—1.

Roberts, Bruce L.: *See*—
Lorenzen, Arnold I., and Roberts. 185,925.

Rockwell Mfg. Co.: *See*—
Brennan, Frederick S. 185,922.

Rosenkranz, Jules, to Lafayette Brass Mfg. Co., Inc. Water spray gun. 185,945, 8–18–59, Cl. D91—1.

Ruzick, Victor, and H. C. Mix. Hydraulic tracer valve for machine tool. 185,935, 8–18–59, Cl. D78—1.

Sand, Carl A., to The Brunhoff Mfg. Co. Combined display case and dispenser for cereal boxes and the like. 185,938, 8–18–59, Cl. D80—11.

Schaefer, George E., to The Brunswick-Balke-Collender Co. Span measuring device for bowling balls and the like. 185,920, 8–18–59, Cl. D52—1.

Schmidt, Finn. Masonry hammer. 185,948, 8–18–59, Cl. D93—4.

Schotland, Murray. Container for a hair brush. 185,943, 8–18–59, Cl. D66—10.

Schreckengost, Viktor, to The Murray Ohio Mfg. Co. Velocipede fender. 185,909, 8–18–59, Cl. D34—15.

Shank, Wayne C.: *See*—
Davis, Sammy, and Shank. 185,941.

Singer Mfg. Co., The: *See*—
Park, Malcolm S. 185,930.

Somers, Raymond A., to Sperry Rand Corp. Shaver. 185,904, 8–18–59, Cl. D22—3.

Speidel Corp.: *See*—
Kaufman, Sol P. 185,916.

Sperry Rand Corp.: *See*—
Somers, Raymond A. 185,904.

Straseburger, Bert W. Charm. 185,915, 8–18–59, Cl. D45—17.

Szymanski, Michael J. Dinner plate or similar article. 185,914, 8–18–59, Cl. D44—15.

Tweedie, Thomas D.: *See*—
Breckenridge, Frank, and Tweedie. 185,940.

Underwood Corp.: *See*—
Pitman, Richard W., and Guild. 185,929.

Vanlew, Robert C.: *See*—
Bruening, Joseph M., and Vanlew. 185,937.

Vivier, Roger, to C. Dior. Heel for ladies' shoes. 185,900, 8–18–59, Cl. D7—5.

Waddell Co., The: *See*—
Banks, Louis A. 185,936.

Warren, James F., to General Steel Wares Ltd. Lid for a waste receptacle. 185,927, 8–18–59, Cl. D58—17.

Yager, Harry: *See*—
Kahn, David. 185,932.

Zuckerwar, Richard, to Alexette Bacmo Corp. Glove or similar article. 185,898, 8–18–59, Cl. D3—11.

LIST OF PATENTEES

Baker, James G., to United States of America, Air Force. Sighting instrument optical system. 2,899,862, 8–18–59, Cl. 88—57.

Benander, George B., and L. M. Sheldon, to General Electric Co. Electric switch with miniature toggle mechanism.

Knowles, Frederick G. 185,928.

Lorensen, Arnold T., and B. L. Roberts, to Owens-Illinois Glass Co. Jar. 185,925, 8–18–59, Cl. D58—25.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 18TH DAY OF AUGUST, 1959

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Abrams, Irving M.: *See*—
Patterson, James A., and Abrams. 2,900,352.
Adams, Cecil E., to American Brake Shoe Co. Fluid motor. 2,899,941, 8–18–59, Cl. 121—36.
Adams, Foster L., and R. E. Pidcock, to Minneapolis-Honeywell Regulator Co. Fluid quantity measuring apparatus. 2,899,825, 8–18–59, Cl. 73—304.
Adams, John F. E., K. G. Gerber, and G. P. Wilkes, to Imperial Chemical Industries Ltd. Drying process and apparatus. 2,899,754, 8–18–59, Cl. 34—21.
Adams, Rayburn L. Vaporizing device. 2,899,722, 8–18–59, Cl. 21—120.
Adelson, Samuel L., to Inflico Inc. Differential pressure adjuster for fluid flow meter. 2,899,824, 8–18–59, Cl. 73—213.
Adlerwerke vorm. Heinrich Kleyer Akt.: *See*—
Nitschke, Bruno. 2,900,062.
Admiral Corp.: *See*—
Singelman, Fred E. 2,900,598.
Summerer, William H. 2,900,630.
Aerosol Research Co.: *See*—
Uts, Ernst J. 2,900,114.
Ahlberg, Jacob E., and E. A. Simpson, to W. R. Grace & Co. Preparation of silica sols. 2,900,348, 8–18–59, Cl. 252—313.
Aktiebolaget Dentatus: *See*—
Björklund, Gustaf E., and Edvardsson. 2,899,744.
Aktiengesellschaft fur Unternehmungen der Eisen- und Stahlindustrie: *See*—
Johannsen, Friedrich. 2,900,248.
Algase, Lawrence I., to Instruments for Industry, Inc. Duplex operation using alternately keyed distributed amplifiers. 2,900,634, 8–18–59, Cl. 343—178.
Allegheny Ludlum Steel Corp.: *See*—
Gifford, Paul B. 2,900,556.
Allen, Howard G., to Boutitch, Inc. Fastener-applying implement. 2,899,679, 8–18–59, Cl. 1—49.
Allen, Joseph C., and R. C. Reynolds, to Texaco Inc. Productivity well logging. 2,900,517, 8–18–59, Cl. 250—83.
Allen, Richard W., and F. Cohen, to United States of America, Army. Variable impedance transformer. 2,900,610, 8–18–59, Cl. 333—35.
Allied Chemical Corp.: *See*—
Jackson, Ralph B., Kelly, and Townend. 2,900,234.
Smith, Lee B. 2,900,423.
Stahl, Richard F., and Woolf. 2,900,422.
Allied Steel and Conveyors, Inc.: *See*—
Harrison, Homer S. 2,900,015.
Allied Steel and Conveyors, Division of the Sparks-Withington Co.: *See*—
Harrison, Homer S. 2,900,018.
Allis-Chalmers Mfg. Co.: *See*—
Anke, John R. 2,900,157.
Baude, John. 2,900,528.
Allison, Kenneth C. Electrical switching units. 2,900,461, 8–18–59, Cl. 200—11.
Allmänna Brandredskapsaffären AB: *See*—
Sundberg, Sven A. 2,899,733.
Almén, Bengt S. O., to Sandvikens Jernverks Aktiebolag. Cutting tool. 2,899,738, 8–18–59, Cl. 29—96.
Alstadt, Donald M.: *See*—
Coleman, Elmer W., Jr., and Alstadt. 2,900,292.
American Air Filter Co., Inc.: *See*—
Ortgies, Raymond C. 2,900,180.
American Brake Shoe Co.: *See*—
Adams, Cecil E. 2,899,941.
American Can Co.: *See*—
Wichman, Merle A. 2,900,120.
American Cyanamid Co.: *See*—
Federgreen, Nathan, and Jordan. 2,900,078.
Hardy, William B., and Klingsberg. 2,900,401.
Suen, Tseng J., and Jen. 2,900,367.
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Schuhmann, Richard L., and Zehnder. 2,900,140.
American Feldmuehle Corp.: *See*—
Maier, Robert. 2,900,144.
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Taylor, James B., III, and Barradas. 2,900,103.
American Laundry Machinery Co., The: *See*—
Petre, John R. 2,900,185.
American Maize-Products Co.: *See*—
Bravos, George T., and Evans. 2,900,335.
American Mollerizing Corp.: *See*—
Linden, Herbert E. 2,900,273.
American Optical Co.: *See*—
Ellis, Charles A. 2,899,976.
American Portable Irrigation Co.: *See*—
Umstadter, Harold W. 2,900,200.
American Potash & Chemical Corp.: *See*—
Kremers, Howard E., Newman, and Kautsky. 2,900,231.
Stewart, Robert D., and Wagner. 2,900,416.
American Steel Foundries: *See*—
Baker, Arthur F. 2,900,050.
Amiard, Gaston, R. Heymes, and L. Vellus, to UCLAF. Method of making glutathione. 2,900,375, 8–18–59, Cl. 260—112.
Ampex Corp.: *See*—
Havstad, James W. 2,900,451.
Amsler, Clyde R.: *See*—
Wylie, Jean, Osborne, and Amsler. 2,899,882.
Anaconda Wire and Cable Co.: *See*—
Arndt, Rudolph P. 2,900,356.
Anderson, Andrew W., to Scandia Packaging Machinery Co. Mechanism for heat sealing wrappers and a method of sealing packages. 2,899,791, 8–18–59, Cl. 53—376.
Anderson, George S., to Westinghouse Air Brake Co. Fluid pressure brake apparatus with equalizing reservoir pressure build-back preventing means. 2,900,209, 8–18–59, Cl. 303—67.
Anderson, John, G. F. Johnson, and N. W. Hall, to Shell Development Co. Reaction of halocyclopentadienes with acetylene. 2,900,419, 8–18–59, Cl. 260—648.
Andrews, Earl W., to The New Jersey Zinc Co. Electrolyzing device. 2,900,318, 8–18–59, Cl. 204—246.
Anke, John R., to Allis-Chalmers Mfg. Co. Frangible article shipping assembly. 2,900,157, 8–18–59, Cl. 248—119.
Anocut Engineering Co.: *See*—
Williams, Lynn A. 2,899,781.
Appleton, Arthur I. Electrical conduit union and expansion coupling. 2,900,436, 8–18–59, Cl. 174—86.
Aries, Robert S. Aluminum halide catalysis of ethylene polymerization. 2,900,374, 8–18–59, Cl. 260—94.9.
Arkus, Henry, to United States of America, Navy. Plan-position indicator system. 2,900,632, 8–18–59, Cl. 343—10.
Armington, Arthur P.: *See*—
Armington, Raymond Q. and A. P. 2,899,760.
Armington, Raymond Q. and A. P., to General Motors Corp. Multi-purpose bulldozer blade. 2,899,760, 8–18–59, Cl. 37—145.
Armour and Co.: *See*—
Cavanaugh, Edward F., and Keil. 2,900,267.
Harwood, James, Brault, and Reck. 2,900,411.
Roundy, Zola D. 2,900,257.
Armour Research Foundation of Illinois Institute of Technology: *See*—
Bradstreet, Samuel W., and Griffith. 2,900,244.
Camras, Marvin. 2,900,443.
Camras, Marvin. 2,900,444.
Arndt, Rudolph P., to Anaconda Wire and Cable Co. Solution comprising zinc aromatic polyester, method of making, and wire coated therewith. 2,900,356, 8–18–59, Cl. 260—33.4.
Arnold, Herrick R., F. S. Fawcett, and W. W. Gilbert, to E. I. du Pont de Nemours and Co. Reduced phosphomolybdic acids wherein the average valence of the molybdenum is not more than 4. 2,900,235, 8–18–59, Cl. 23—139.
Arnold, R. L. Multi-purpose implement for cultivation including flaming. 2,899,776, 8–18–59, Cl. 47—1.
Aske, Leonard E., to Minneapolis-Honeywell Regulator Co. Magnetic switch. 2,900,471, 8–18–59, Cl. 200—87.
Associated Engineering & Equipment Co., Inc.: *See*—
Cammack, Arthur R. 2,900,453.
Astatic Corp., The: *See*—
Palo, Maurice M. 2,900,536.
Attenborough, Walter B. A. Knitted fabrics or articles. 2,899,812, 8–18–59, Cl. 66—169.
Audio Devices, Inc.: *See*—
Speed, William C., and Sutheim. 2,900,236.
Speed, William C., and Sutheim. 2,900,239.
Auer, Frederick G., to Champlain Co., Inc. Stripper mechanism. 2,899,871, 8–18–59, Cl. 93—36.
Auer, Laszlo, and L. L. Balassa, to J. R. Geigy, S.A. Pigmented oil-in-water emulsion textile decorating compositions yielding improved resistance to abrasive laundering. 2,900,354, 8–18–59, Cl. 260—21.
Austin Motor Co. Ltd., The: *See*—
Dangerfield, Kenneth J. 2,900,126.
Ayers, George W., and N. D. Williams, to The Pure Oil Co. Oil extended GR-S rubber having unusual low temperature retraction characteristics. 2,900,357, 8–18–59, Cl. 260—33.6.
Aylor, Elmo E., to Midwest Mfg. Co. Broiler. 2,900,482, 8–18–59, Cl. 219—35.
B-I-F Industries: *See*—
Coffman, Paul A., Jr., and Harper. 2,900,110.
Babcock & Wilcox Co., The: *See*—
Lichtenberger, Horst. 2,899,917.
Bach, Roland A.: *See*—
Handwerk, Joseph H., and Bach. 2,900,263.
Badger, Everett H., Jr., and S. D. Burton, to Parker-Hannifin Corp. Gate valve and seal. 2,900,165, 8–18–59, Cl. 251—172.
Bailey, Paul W. Street collection conveyor mail box. 2,900,046, 8–18–59, Cl. 186—1.
Baker, Arthur F., to American Steel Foundries. Clasp brake. 2,900,050, 8–18–59, Cl. 188—56.

Bottom, Virgil E., to Motorola, Inc. Transistor method and product. 2,900,584, 8–18–59, Cl. 317—235.
Cady, Robert S.: *See*—
Blake, Charles B., and Cady. 2,900,073.
Caisse, Paul G., to The Fuller Brush Co. Dustpan and

Baker, James G., to United States of America, Air Force. Sighting instrument optical system. 2,899,862, 8–18–59, Cl. 88—57.

Baker, Joseph W., and G. A. Saul, to Monsanto Chemical Co. Nitrobenzoylphosphonates. 2,900,296, 8–18–59, Cl. 167—30.

Balassa, Leslie L.: *See*—
Auer, Laszlo, and Balassa. 2,900,354.

Baldwin-Lima-Hamilton Corp.: *See*—
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Sack, Joel. 2,900,095.

Ballinger, Dale O.: *See*—
Squires, Rathbun B., and Ballinger. 2,900,605.

Bandil, John C., L. W. Foster, and D. K. Farmer, to McCulloch Corp. Rotary pump impeller. 2,899,902, 8–18–59, Cl. 103—117.

Bandy, Kenneth L., and R. C. Davidson, to The McKay Machine Co. Brake control for uncoiler. 2,900,143, 8–18–59, Cl. 242—75.44.

Barabutes, Theodore, and A. Kulick, Jr., to Westinghouse Electric Corp. Remote metering apparatus. 2,900,607, 8–18–59, Cl. 332—16.

Barabutes, Theodore, and A. Kulick, Jr., to Westinghouse Electric Corp. Remote metering apparatus. 2,900,627, 8–18–59, Cl. 340—186.

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Barkow, William H., to Radio Corp. of America. Temperature compensated electromagnetic deflection yoke. 2,900,-564, 8–18–59, Cl. 315—27.

Barnes, George H., to Burroughs Corp. Compensating circuit. 2,900,532, 8–18–59, Cl. 307—88.5.

Barna, Robert L., R. T. Dosher, Jr., M. L. Humphries, J. K. Jeanes, L. L. Lyon, Jr., E. G. Perry, R. J. Speer, and C. E. Earhart, to Texas Instruments Inc. Magnetic fluid for magnetic fluid clutch. 2,900,343, 8–18–59, Cl. 252—62.5.

Barradas, George W.: *See*—
Taylor, James B., III, and Barradas. 2,900,103.

Barry Controls Inc.: *See*—
Crede, Charles E. 2,900,161.
Crede, Charles E., and Furbeck. 2,900,162.

Bartele Engineering Co.: *See*—
Harker, Charles B. 2,899,786.

Bartlett, George H. Pocket-type lure container. 2,899,770, 8–18–59, Cl. 43—57.5.

Baruch, Sydney N. Power sources. 2,900,592, 8–18–59, Cl. 321—8.

Baso Inc.: *See*—
Matthews, Russell B. 2,899,970.
Matthews, Russell B. 2,899,972.

Bassot, André, to L'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude. Arc welding guns with consumable electrode wire. 2,900,488, 8–18–59, Cl. 219—130.

Battaline, John R. Flexible coupling. 2,899,809, 8–18–59, Cl. 64—15.

Batzle, William K., to Radio Corp. of America. Electron tube electrode. 2,900,553, 8–18–59, Cl. 313—331.

Baude, John, to Allis-Chalmers Mfg. Co. Network protector. 2,900,528, 8–18–59, Cl. 307—87.

Bauer, Benjamin B., L. Gunter, Jr., and C. R. Seeler, to Shure Brothers, Inc. Phonograph pickup. 2,900,452, 8–18–59, Cl. 179—100.41.

Bauman, William C., and E. L. Graham, to The Dow Chemical Co. Preparation of molded articles from kerogenic minerals. 2,900,269, 8–18–59, Cl. 106—241.

Baumgartner, Verne E.: *See*—
Winsen, Otto C., Baumgartner, and Beck. 2,900,149.

Becher, James J., to Roll-Flex Industries, Inc. Roller pump. 2,899,904, 8–18–59, Cl. 103—149.

Becher, James J., to Roll-Flex Industries, Inc. Roller pump. 2,899,905, 8–18–59, Cl. 103—149.

Becher, James J., and V. R. Norris, to Roll-Flex Industries, Inc. Roller pumps. 2,899,906, 8–18–59, Cl. 103—149.

Becher, James J., to Roll-Flex Industries, Inc. Roller pump. 2,899,907, 8–18–59, Cl. 103—149.

Beck, John T.: *See*—
Winsen, Otto C., Baumgartner, and Beck. 2,900,149.

Beck, John T., to Beck's, Inc. Printed electrical circuit components having integral lead-outs and methods of making same. 2,900,580, 8–18–59, Cl. 317—101.

Beckett, Reginald W. Pressure atomizing liquid fuel burner with air stream centering ring. 2,900,019, 8–18–59, Cl. 158—76.

Beckman Instruments, Inc.: *See*—
Cori, John L., and Gordon. 2,900,601.

Beck's, Inc.: *See*—
Beck, John T. 2,900,580.

Becroft, James O. Measuring device for pipes. 2,899,750, 8–18–59, Cl. 33—75.

Beebe, Paul, Jr., to The Goodyear Tire & Rubber Co. Bag loading device. 2,899,788, 8–18–59, Cl. 53—262.

Beesley, John H., to The General Electric Co. Ltd. Electrical gas discharge tube counting or distributing circuits. 2,900,571, 8–18–59, Cl. 315—84.5.

Bell & Gossett Co.: *See*—
Carlson, Gilbert F. 2,899,973.

Bell Telephone Laboratories, Inc.: *See*—
Moll, John L. 2,900,582.
Rogers, Samuel C. 2,900,507.

Beller, Hans, to General Aniline & Film Corp. Production of finely divided metals. 2,900,245, 8–18–59, Cl. 75—.5.

Beloit Iron Works: *See*—
Hornbostel, Lloyd. 2,900,023.

Benaglio, Reno V., J. M. Patterson, and C. A. Piper, to Bendix Aviation Corp. Digital differential analysers. 2,900,135, 8–18–59, Cl. 235—152.

Benander, George B., and L. M. Sheldon, to General Electric Co. Electric switch with miniature toggle mechanism. 2,900,466, 8–18–59, Cl. 200—67.

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Benaglio, Reno V., Patterson, and Piper. 2,900,135.
Gormley, Robert S. 2,900,561.
Shepherd, William G. 2,900,560.
Spencer, Glenn S. 2,900,525.
Spencer, Glenn S. 2,900,526.

Benke, Frank W., to Westinghouse Electric Corp. Method of restraining forces of non-circular cylindrical coils. 2,900,-611, 8–18–59, Cl. 336—100.

Bennett, Latham S. Pencil point cleaner. 2,899,932, 8–18–59, Cl. 120—108.

Berens, Gregory E., to Motorola, Inc. Shaft coupler. 2,899,-808, 8–18–59, Cl. 64—14.

Bergen, Joseph W. Lacing hook. 2,899,730, 8–18–59, Cl. 24—146.

Bergstrom, Herman A., to General Aniline & Film Corp. Anthraquinone-azoic pigments. 2,900,380, 8–18–59, Cl. 260—164.

Berry, Mary E.: *See*—
Lyons, Joseph, Elmer, and Berry. 2,900,341.

Berry, Robert E.: *See*—
Lyons, Joseph, Elmer, and Berry. 2,900,341.

Bessiere, Pierre E., to Societe Anonyme Etablissements Labinal. Systems including slipping coupling means between a driving shaft and a driven shaft for generators. 2,900,594, 8–18–59, Cl. 322—32.

Bestler, Gerald M., and T. W. Miner, to Minneapolis-Honeywell Regulator Co. Method of processing semiconductor devices. 2,900,287, 8–18–59, Cl. 148—1.5.

Bethge, Walther, ⅓ to J. de Montmollin and R. Gugger. Method of producing electric sheet-type heater. 2,900,290, 8–18–59, Cl. 154—90.

Bets Laboratories, Inc.: *See*—
Kahler, Harry L., and Tanzola. 2,900,222.

Beurié, André E. Lady's elastic girdle. 2,899,964, 8–18–59, Cl. 128—548.

Beuther, Harold, to Gulf Research & Development Co. Visbreaking of reduced crude in the presence of light catalytic cycle stock. 2,900,327, 8–18–59, Cl. 208—106.

Biel, John H., to Lakeside Laboratories, Inc. Synthesized antispasmodic compounds. 2,900,415, 8–18–59, Cl. 260—570.6.

Billings, Charles K., and R. S. Platt, to Whirlpool Corp. Closure means for a cabinet or the like. 2,899,717, 8–18–59, Cl. 20—16.

Bingham Herbrand Corp., The: *See*—
Johnstone, Theodore H. 2,899,838.
Skareen, Willard C. 2,899,837.

Binks, Chester J., to Scovill Mfg. Co. Flow control device. 2,899,981, 8–18–59, Cl. 138—46.

Birmann, Rudolph, to De Laval Steam Turbine Co. Turbocharger for internal combustion engines. 2,899,797, 8–18–59, Cl. 60—13.

Björklund, Gustaf E., and S. R. Edvardsson, to Aktiebolaget Dentatus. Cutting device. 2,899,744, 8–18–59, Cl. 30—180.

Blake, Charles B., and R. S. Cady, to Scovill Mfg. Co. Wire coiling machine. 2,900,073, 8–18–59, Cl. 205—16.

Blake, William J. Safety seat for automobiles. 2,900,036, 8–18–59, Cl. 180—82.

Blasbalg, Herman L., to United States of America, Air Force. Radio receiver having modulation indicator operated by automatic gain control bias and demodulated signal. 2,900,499, 8–18–59, Cl. 250—20.

Blaser, Bruno: *See*—
Raecke, Bernhard, Blaser, Stein, Schirp, and Schutt. 2,900,386.

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Bloch, Herman S.: *See*—
Haensel, Vladimir, and Bloch. 2,899,943.

Bloch, Herman S., and V. Haensel, to Universal Oil Products Co. Isomerization process. 2,900,425, 8–18–59, Cl. 260—666.

Bloxsom, Daniel E., Jr. High velocity gun system. 2,899,864, 8–18–59, Cl. 89—7.

Bluestein, Ben A., to General Electric Co. Preparation of carboxyalkyl polysiloxanes. 2,900,363, 8–18–59, Cl. 260—46.5.

Böckmann, Klaus, and C. Taube, to Farbenfabriken Bayer Aktiengesellschaft. Copperable disazo dyestuffs. 2,900,379, 8–18–59, Cl. 260—161.

Bommer Spring Hinge Co. Inc.: *See*—
Engels, Walter. 2,899,718.

Bondley, Ralph J., and W. H. Teare, to General Electric Co. Electrode assembly. 2,900,541, 8–18–59, Cl. 313—32.

Boosman, Frank C., to Parker-Hannifin Corp. Shuttle valve. 2,900,166, 8–18–59, Cl. 251—175.

Boothroyd, Wilson P., to Philco Corp. Cathode ray tube devices having signal-generating means. 2,900,563, 8–18–59, Cl. 315—21.

Borg-Warner Corp.: *See*—
Coolidge, John F., Jr., and Grossen. 2,900,042.
Polomski, John B. 2,899,834.

Bosch, Robert, G.m.b.H.: *See*—
Zechnall, Richard, and Paule. 2,899,952.

Bossi, Fulvio, to Frankel Associates, Inc. Lighting appliance. 2,900,492, 8–18–59, Cl. 240—10.

Bostick, Winston H., and V. G. McIntosh, to United States of America, Atomic Energy Commission. Plasma generator. 2,900,548, 8–18–59, Cl. 313—131.

Bostitch, Inc.: *See*—
Allen, Howard G. 2,899,679.

Bottino, Ada. Scouring pad containing dispensable substance. 2,899,780, 8–18–59, Cl. 51—185.

Clark, Edward B., to General Electric Co. Finished cover for underfloor junction box. 2,900,101, 8–18–59, Cl.

Cromwell, Harold J., to General Motors Corp. Clutch for engine starting device. 2,900,058, 8–18–59, Cl. 192—45.1.

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Bottonari, Samuel A., to Westinghouse Electric Corp. Circuit interrupters. 2,900,477, 8–18–59, Cl. 200—147.

Boucher, Cormack E. Daylight film loading and developing apparatus. 2,900,514, 8–18–59, Cl. 250—65.

Bourcier de Carbon, Christian M. L. L. Resilient stilts. 2,899,685, 8–18–59, Cl. 3—4.

Boudreau, John L. Pistol with grip forming an angle of 31° with frame. 2,899,767, 8–18–59, Cl. 42—75.

Bowen, Edgar C.: *See*—
Wangelin, Don J., and Bowen. 2,900,321.

Bowen, Kermit A., 3% to R. A. and C. B. Sage, and by court decree 25% to H. E. Rector. Instrument for inscribing an ellipse.. 2,899,748, 8–18–59, Cl. 33—30.

Bowman, Anna H.: *See*—
Bowman, Samuel G. 2,900,164.

Bowman, Samuel G., deceased, by V. B. Caldwell, administratrix, ½ to A. H. Bowman and ½ to J. M. Guthrie. Pipe organ valves. 2,900,164, 8–18–59, Cl. 251—138.

Bradstreet, Samuel W., and J. S. Griffith, to Armour Research Foundation of Illinois Institute of Technology. Fine particle production. 2,900,244, 8–18–59, Cl. 75—.5.

Brault, Robert G.: *See*—
Harwood, James, Brault, and Reck. 2,900,411.

Braun, C. F., & Co.: *See*—
Pickford, Allan E. 2,900,173.

Braun, Georg, to Kohlenscheidungs-Gesellschaft m.b.H. Process for operating a tubular heat exchanger fired with pulverized coal. 2,899,942, 8–18–59, Cl. 122—479.

Bravos, George T., and J. W. Evans, to American Maize-Products Co. Oil well drilling mud. 2,900,335, 8–18–59, Cl. 252—8.5.

Brayack, Mark. Spot facing tool. 2,899,867, 8–18–59, Cl. 90—11.

Brewster, Dudley N., to Sylvania Electric Products Inc. Microwave switching device. 2,900,568, 8–18–59, Cl. 315—39.

Bricker, Robert E., W. P. Flohr, Jr., and K. M. Gebel, to Landis Tool Co. Automatic grinding cycle. 2,899,778, 8–18–59, Cl. 51—105.

Briggs, George R.: *See*—
Rajchman, Jan A., and Briggs. 2,900,622.

Briggs, John J. Prosthetic appliance. 2,899,957, 8–18–59, Cl. 128—79.

Brinson, Robert L.: *See*—
Gibbs, Robert A., Gibbs, and Brinson. 2,899,940.

British Celanese Ltd.: *See*—
Grebby, John W., Hawtin, and Downing. 2,900,221.

British Petroleum Co. Ltd., The: *See*—
Northcott, Roy P., and Housam. 2,900,332.
Porter, Frederick W. B., and Housam. 2,900,331.

Broderick, Edward, to Rohm & Haas Co. Preparation of 3-methyl 1,3 propane sultone. 2,900,393, 8–18–59, Cl. 260—327.

Broders, Claude O., W. W. Jacobus, and A. B. Swenson, to United States of America, Navy. Igniter control. 2,899,798, 8–18–59, Cl. 60—35.6.

Broglio, Edward P., to General Electric Co. Battery casing. 2,900,432, 8–18–59, Cl. 136—90.

Bross, Helmut, to G. Wagner. Writing device having an extensible and retractable writing element. 2,899,931, 8–18–59, Cl. 120—22.

Brouillard, Robert E., and T. R. Tarantino, to General Aniline & Film Corp. Manufacture of copper phthalocyanine. 2,900,390, 8–18–59, Cl. 260—314.5.

Brown, Leonard: *See*—
Start, Ernest, and Brown. 2,899,811.

Brown, Wilbur F., to Libbey-Owens-Ford Glass Co. Method of changing glass composition. 2,900,264, 8–18–59, Cl. 106—47.

Brown, William E., W. J. McVeagh, and T. H. Wallace, to Gulf Research & Development Co. Drilling fluids. 2,900,336, 8–18–59, Cl. 252—8.5.

Bruce, Aaron A. Piston ring construction. 2,900,218, 8–18–59, Cl. 309—46.

Buckeye Steel Castings Co., The: *See*—
Settles, James C. 2,900,181.

Buechler, William R., to General Electric Co. Rinsing agent dispenser for clothes washing machine. 2,899,814, 8–18–59, Cl. 68—12.

Bulan, Edward P.: *See*—
Saubestre, Edward B., and Bulan. 2,900,313.

Burgess, Bernard L. Tool for supporting and upsetting rivets. 2,899,852, 8–18–59, Cl. 78—53.5.

Burnett, Henry J. Pick-up device. 2,900,039, 8–18–59, Cl. 181—24.

Burns, Cecil H., Jr., and M. J. Mendelson, to The National Cash Register Co. Data retrieval system. 2,900,132, 8–18–59, Cl. 235—61.7.

Burns, Leslie L., Jr., to Radio Corp. of America. Electron beam controlling apparatus. 2,900,562, 8–18–59, Cl. 315—18.

Burris, Alonso A., Jr. Insect resistant vapor barrier. 2,899,771, 8–18–59, Cl. 43—124.

Burroughs Corp.: *See*—
Barnes, George H. 2,900,532.
Tillman, Robert M. 2,900,508.

Burton, Samuel D.: *See*—
Badger, Everett H., Jr., and Burton. 2,900,165.

Burton, William P.: *See*—
Patton, James L., Stanford, and Burton. 2,900,323.

Butler, Homer H., Jr.: *See*—
Curl, Robert B., and Butler. 2,900,068.

Cahoon, Nelson C., and M. P. Korver, to Union Carbide Corp. Barrier films for galvanic cells. 2,900,433, 8–18–59, Cl. 136—146.

Cady, Robert S.: *See*—
Blake, Charles B., and Cady. 2,900,073.

Caisse, Paul G., to The Fuller Brush Co. Dustpan and handle. 2,899,699, 8–18–59, Cl. 15—257.4.

Caldwell, Virginia B.: *See*—
Bowman, Samuel G. 2,900,164.

California Research Corp.: *See*—
Heaton, Charles D., and Toland. 2,900,428.
Lowe, Warren. 2,900,339.
Toland, William G., Jr. 2,900,412.
Valentine, Ralph S. 2,900,309.

Callery Chemical Co.: *See*—
Cunningham, George L. 2,900,223.

Callison, John F.: *See*—
Samuels, Abe, and Callison. 2,899,758.

Cameron, William L. Pipe hanger. 2,900,155, 8–18–59, Cl. 248—71.

Cammack, Arthur R., to Associated Engineering & Equipment Co., Inc. Microphone. 2,900,453, 8–18–59, Cl. 179—115.5.

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Camras, Marvin, to Armour Research Foundation of Illinois Institute of Technology. Magnetic recorder and reproducer for video. 2,900,443, 8–18–59, Cl. 178—6.6.

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Carew, Arthur W., to General Electric Co. Ice ejecting and storage means. 2,899,804, 8–18–59, Cl. 62—344.

Carlson, Gilbert F., to Bell & Gossett Co. Pressure reducing valve. 2,899,973, 8–18–59, Cl. 137—505.41.

Caroselli, Remus F.: *See*—
Kingsbury, Ralph N., and Caroselli. 2,900,275.

Carroll, Esther T. Sectional insert for unfitted ladies handbags. 2,899,998, 8–18–59, Cl. 150—30.

Carroll, John L., and J. Ewels, to Electric & Musical Industries Ltd. Modulating circuits. 2,900,608, 8–18–59, Cl. 332—52.

Carter, Ralph B., Co.: *See*—
Nemecsek, Louis J. 2,899,908.

Carter, Robert L., to Clark Equipment Co. Steering mechanism for motor vehicles. 2,900,195, 8–18–59, Cl. 280—95.

Carvalho, Jones N. Gyroscope motor. 2,899,945, 8–18–59, Cl. 123—18.

Casablancas High Draft Co. Ltd.: *See*—
Noguera, Joseph. 2,899,714.

Cascades Plywood Corp.: *See*—
Whiting, Herbert G. 2,899,991.

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Reeser, Esral M. 2,899,840.

Casey, Patricia L. Multi-use chair. 2,900,011, 8–18–59, Cl. 155—127.

Cassidy, Harold G., and M. Ezrin, to Research Corp. Combined electron and ion exchange compositions. 2,900,353, 8–18–59, Cl. 260—2.2.

Castellini, Nello R., and A. J. Di Giacomo, to United States of America, Army. Radio direction finder. 2,900,633, 8–18–59, Cl. 343—118.

Cavanaugh, Edward F., and H. L. Keil, to Armour and Co. Modified animal glue and method of preparation. 2,900,267, 8–18–59, Cl. 106—135.

Caviness, Robert S. Molding plastic articles. 2,899,706, 8–18–59, Cl. 18—19.

Ceco Steel Products Corp.: *See*—
Greulich, Gerald G. 2,900,056.

Celada, Juan, to Fierro Esponja SA. Method of making sponge iron. 2,900,247, 8–18–59, Cl. 75—34.

Celanese Corp. of America: *See*—
Stautzenberger, Adin L., and MacLean. 2,900,413.

Cella, John A., to G. D. Searle & Co. Dehydro-17α-carboxyethyl-17β-hydroxyandrost-4-en-3-one lactones. 2,900,383, 8–18–59, Cl. 260—239.57.

Champlain Co., Inc.: *See*—
Auer, Frederick G. 2,899,871.

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Clark, Herbert, Owen, and Starr. 2,899,866.

Chapin, Earl C., and R. F. Smith, to Monsanto Chemical Co. Interpolymers of acrylonitrile, an allyl alcohol and a styrene compound, process of preparing same and coating composition therefrom. 2,900,359, 8–18–59, Cl. 260—43.

Charlton, Alexander E., to Photoceramics, Inc. Fired photographically decorated objects and their manufacture. 2,900,255, 8–18–59, Cl. 96—34.

Chater, William T., to Hughes Aircraft Co. Phase discriminator. 2,900,534, 8–18–59, Cl. 307—88.5.

Cheatum, Leo G.: *See*—
Manns, William F., Cheatum, and Gustafson. 2,900,069.

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Patterson, James A., and Abrams. 2,900,352.

Cheng, Wing G., ½ to Meyer Mfg. Co. Electric torches. 2,900,493, 8–18–59, Cl. 240—10.66.

Cheng, Wing G., ½ to Meyer Mfg. Co. Ltd. Electric torches. 2,900,494, 8–18–59, Cl. 240—10.66.

Chicago Pump Co.: *See*—
Lannert, William H. 2,900,081.
Lannert, William H. 2,900,082.

Child, James P.: *See*—
Zink, George A., Child, Servi, and Gorsky. 2,899,725.

Children's Cancer Research Foundation: *See*—
Modest, Edward J. 2,900,385.

Ciba Pharmaceutical Products Inc.: *See*—
Wettstein, Albert, Hunger, Meystre, and Ehmann. 2,900,398.

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Schmidt, Carl O., Jr. 2,900,104.

Cirone, Joseph. Slide fastener handle. 2,900,205, 8–18–59, Cl. 294—1.

Clark, Albert G., to General Electric Co. Portable electrical torch. 2,900,485, 8–18–59, Cl. 219—75.

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Gray, Coy J. 2,900,218.

Durand, William H. Selectively positioned electrical control for computing registers. 2,900,133, 8–18–59, Cl. 235—

Clark, Edward B., to General Electric Co. Finished cover for underfloor junction box. 2,900,101, 8–18–59, Cl. 220—3.4.

Clark Equipment Co.: *See*—
Carter, Robert L. 2,900,195.
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Clark, Herbert, P. M. Owen, and M. G. Starr, to Chance Vought Aircraft Inc. Blast-controlling means. 2,899,866, 8–18–59, Cl. 89—37.5.

Clasen, Hermann, to Siemens & Halske Aktiengesellschaft. Process for the production of SiH_2Cl_2. 2,900,225, 8–18–59, Cl. 23—14.

Cleaver-Brooks Co.: *See*—
Grobecker, Hugo H. 2,899,851.
Loebel, Frederick A., and Grobecker. 2,899,980.

Cleveland, Eric G., and A. D. Standley, Jr., to Delta Engineering Corp. Method and apparatus for counting and packaging articles. 2,899,784, 8–18–59, Cl. 53—61.

Clifford, Svea M.: *See*—
Clifford, William. 2,899,690.

Clifford, William, deceased; S. M. Clifford, sole legatee of said W. Clifford; ⅓ to C. C. Pajdowski. Adjustable water closet collar. 2,899,690, 8–18–59, Cl. 4—252.

Clini, Daniel J. Collapsible clothes line support. 2,900,088, 8–18–59, Cl. 211—178.

Clute, David G. Exposure meter for cathode-ray tube presentation photography. 2,899,859, 8–18–59, Cl. 88—23.

Coffield, Thomas H.: *See*—
Filbey, Allen H., and Coffield. 2,900,417.

Coffman, Paul A., Jr., and L. E. Harper, to B-I-F Industries. Gravimetric screw type feeders and weighers. 2,900,110, 8–18–59, Cl. 222—55.

Cohen, Fred: *See*—
Allen, Richard W., and Cohen. 2,900,610.

Colby, Richard H., to United States of America, Army. Cartridge feeding mechanism. 2,899,865, 8–18–59, Cl. 89—33.

Coleman, Elmer W., Jr., and D. M. Alstadt, to Lord Mfg. Co. Bonding rubber to metal. 2,900,292, 8–18–59, Cl. 154—130.

Colgate-Palmolive Co.: *See*—
Slater, Joseph N. 2,900,306.
Wei, Ling. 2,900,307.

Collins, John F., and R. V. Sheehan, to Esso Research and Engineering Co. Mineral white oil treatment. 2,900,333, 8–18–59, Cl. 208—274.

Collison, William F.: *See*—
Steele, Floyd G., and Collison. 2,900,134.

Combustion Engineering, Inc.: *See*—
Deitrick, Stapleton C., Jr. 2,900,174.

Commercial Controls Corp.: *See*—
Tholstrup, Henry L. 2,900,063.
Tholstrup, Henry L. 2,900,064.
Tholstrup, Henry L. 2,900,065.
Tholstrup, Henry L. 2,900,066.

Commonwealth of Australia care of the Secretary of the Department of Supply: *See*—
Metcalfe, Kenneth A., and Wright. 2,900,320.

Computing Devices of Canada Ltd.: *See*—
Parsons, James S. 2,899,823.

Conitech Ltd.: *See*—
Huxley, Thomas C., III, and Eckman. 2,899,955.

Conklin, William R., and B. E. Stents, to The Swartzbaugh Mfg. Co. Movable hot meal assembly table. 2,900,045, 8–18–59, Cl. 186—1.

Container Corp. of America: *See*—
Drnec, Harry F., Snyder, and Johnson. 2,900,128.

Continental Paper Co.: *See*—
Vines, Oscar L. 2,900,121.

Cook, George R.: *See*—
Manteuffel, Allan A., Cook, and Cortiss. 2,900,342.

Cook, Harold E., ½ to R. G. Schneyer. Cargo lift for a truck body. 2,900,099, 8–18–59, Cl. 214—674.

Coolidge, John E., Jr., and H. W. Groesen, to Borg-Warner Corp. Electrical precipitator. 2,900,042, 8–18–59, Cl. 183—7.

Cooper, Ronald H., to The Dow Chemical Co. Oil well treatment. 2,900,027, 8–18–59, Cl. 166—33.

Cope, Appleton D., to Radio Corp. of America. Photoconductive type pickup tubes. 2,900,569, 8–18–59, Cl. 313—65.

Cork, Gordon H.: *See*—
Hafner, William J. and Cork. 2,900,146.

Corl, John L., and J. F. Gordon, to Beckman Instruments, Inc. Direct reading frequency measuring device. 2,900,601, 8–18–59, Cl. 324—79.

Correll, John T., to The Upjohn Co. Rodenticide. 2,900,302, 8–18–59, Cl. 167—46.

Cortiss, Warren W.: *See*—
Manteuffel, Allan A., Cook, and Cortiss. 2,900,342.

Cotton, William, Ltd.: *See*—
Start, Ernest, and Brown. 2,899,811.

Couch, Glenn F., to Symington Wayne Corp. Journal box lid. 2,900,212, 8–18–59, Cl. 308—47.

Coviello, Anthony R. Agricultural implement particularly a reversible plow, and support vehicle therefor. 2,900,033, 8–18–59, Cl. 172—212.

Cox, Cecil T., to The S. K. Wellman Co. Brake material for extreme heavy duty. 2,899,740, 8–18–59, Cl. 29—182.8.

Crede, Charles E., to Barry Controls Inc. Resilient support. 2,900,161, 8–18–59, Cl. 248—358.

Crede, Charles E., and B. S. Furbeck, to Barry Controls Inc. Resilient support. 2,900,162, 8–18–59, Cl. 248—358.

Criscuolo, Edward L., and D. T. O'Connor, to United States of America, Navy. Radiograph by gas ionization. 2,900,515, 8–18–59, Cl. 250—65.

Criswell, Richard H.: *See*—
Johnson, George F., Marshall, and Criswell. 2,900,366.

Cromwell, Harold J.: *See*—
Schneider, Paul L., Cromwell, and Taylor. 2,900,057.

Cromwell, Harold J., to General Motors Corp. Clutch for engine starting device. 2,900,058, 8–18–59, Cl. 192—45.1.

Crown Zellerbach Canada Ltd.: *See*—
Vesak, Joseph. 2,900,106.

Crowther, Gerald O., and C. H. Toeswill, to North American Philips Co., Inc. Electric discharge tube. 2,900,551, 8–18–59, Cl. 313—193.

Cumming, James M., and L. R. Ludwig, to United States of America, Atomic Energy Commission. Calutron tank. 2,900,309, 8–18–59, Cl. 250—41.9.

Cunniff, Thomas W., to Westinghouse Electric Corp. Compensation means for cathode ray tubes. 2,900,544, 8–18–59, Cl. 313—77.

Cunningham, Arthur R. Adjustable drag for tedder. 2,899,795, 8–18–59, Cl. 56—370.

Cunningham, George L., to Callery Chemical Co. Two liquid layer salt conversion process. 2,900,223, 8–18–59, Cl. 23—14.

Curl, Robert B., and H. H. Butler, Jr. Resilient roller potato digger attachment. 2,900,068, 8–18–59, Cl. 198—65.

Curtiss, Lawrence M., to The Thomas & Betts Co. Electrical conduit bushing. 2,900,435, 8–18–59, Cl. 174—83.

Cushman, Clifford E., to Pacific Scientific Aeroproducts. Quick release buckle. 2,899,732, 8–18–59, Cl. 24—205.17.

Cushman, Clifford E., and R. J. Wrighton, to Pacific Scientific Aeroproducts. Push-pull cable apparatus. 2,899,836, 8–18–59, Cl. 74—502.

Daggett, Byron G. Machine for sharpening handsaws. 2,899,847, 8–18–59, Cl. 76—43.

Dahl, Norman C. Unbonded electric strain gage. 2,900,613, 8–18–59, Cl. 338—6.

Dahl, Robert R., and H. L. Erickson, to The Dole Valve Co. Flow control device. 2,899,979, 8–18–59, Cl. 138—45.

Daimler-Benz Akt.: *See*—
Barényi, Béla, and Wilfert. 2,900,491.

Dalton, Joseph H., to Signode Steel Strapping Co. Air valve for a pneumatic tool. 2,899,935, 8–18–59, Cl. 121—21.

Daly, Thomas A., and H. L. Prescott, to United States of America, Navy. Sound damping apparatus for torpedo propulson mechanisms. 2,899,923, 8–18–59, Cl. 114—20.

D'Amico, John J.: *See*—
Harman, Marion W., and D'Amico. 2,900,299.

Dana Corp.: *See*—
Ludwig, John R. 2,899,897.

Dancy, William B., and A. F. Nylander, to International Minerals & Chemical Corp. Ion exchange process—removal of sulfate ions from eluate. 2,900,227, 8–18–59, Cl. 23—14.5.

Dangerfield, Kenneth J., to The Austin Motor Co. Ltd. Centrifugal compressors. 2,900,126, 8–18–59, Cl. 130—130.

Danhier, Francois G., to La Soundure Electrique Autogene, S.A. Automatic arc welding process and machine. 2,900,484, 8–18–59, Cl. 219—74.

Danhier, Francois G., to La Soundure Electrique Autogene, S.A. Process and device to retain in position the liquid metal in automatic visible arc welding in 3 o'clock butt joints. 2,900,487, 8–18–59, Cl. 219—126.

Daniel, Luther. Valve spring shim. 2,899,954, 8–18–59, Cl. 123—188.

Darlington, Henry S., Jr., to A. H. Wirz, Inc. Method and apparatus for the molding of threaded articles. 2,899,705, 8–18–59, Cl. 18—2.

Darmann, Otto, H. Kobusch, and K. G. Speith, to Mannesmann Akt. Process for cleaning the chambers of regenerative furnaces. 2,900,285, 8–18–59, Cl. 134—2.

Daugherty, Jesse, to Giddings & Lewis Machine Tool Co. Suspension mechanism for machine tools. 2,899,869, 8–18–59, Cl. 90—16.

Davidson, James J., to Radio Corp. of America. Direct coupled feedback transistor amplifier circuits. 2,900,456, 8–18–59, Cl. 179—171.

Davidson, Leo R. Method, apparatus and compound for mechanically finishing work pieces. 2,899,777, 8–18–59, Cl. 51—7.

Davidson, Philip H., to United States of America, Atomic Energy Commission. Apparatus for charging a receptacle with a dense sublimate form of uranium chloride. 2,900,237, 8–18–59, Cl. 23—264.

Davidson, Richard C.: *See*—
Bandy, Kenneth L., and Davidson. 2,900,143.

Davis, Francis J., G. S. Hurst, and P. W. Reinhardt, to United States of America, Atomic Energy Commission. Fast neutron spectrometer. 2,900,516, 8–18–59, Cl. 250—71.5.

Davis, Hyman, and J. J. Hartman, to Paramount Products, Inc. Dual sofa-bed assembly. 2,899,691, 8–18–59, Cl. 5—2.

Daystrom, Inc.: *See*—
Gach, June E. and R. L. 2,900,614.

Dayton Rubber Co., The: *See*—
Meyer, Daniel A. 2,899,715.

Debat, Jacques, and A. Polgar, said Debat assor. to Societe Anonyme des Laboratoires du Dr. Debat. Mixing containers. 2,900,100, 8–18–59, Cl. 215—6.

De Berry, Charles H., deceased (M. De Berry, administratrix), and A. J. Guidi, to De Berry, Guidi, and Andreadis d.b.a Skyline Products. Apparatus for brewing coffee. 2,899,887, 8–18–59, Cl. 99—310.

De Berry, Guidi, and Andreadis: *See*—
De Berry, Charles H., and Guidi. 2,899,887.

De Berry, Marcella: *See*—
De Berry, Charles H., and Guidi. 2,899,887.

Deere & Co.: *See*—
Harriott, Billie L. 2,900,193.
Edman, John H. 2,900,030.
Hadley, Howard C. 2,899,794.
Hoeksema, Joe H. 2,899,792.
Manns, William F., Cheatum, and Gustafson. 2,900,069.
Morrison, Charles S. 2,900,034.
Sorensen, Knud B., and Kent. 2,900,031.

Ethyl Corp.: *See*—
Filbey, Allen H., and Coffield. 2,900,417.

Foster, Leslie W.: *See*—
Bandil, John C., Foster, and Farmer. 2,899,902.

Deering Milliken Research Corp.: *See*—
Gray, Coy J. 2,900,218.
Jolly, George M. 2,900,512.

Dega, Robert L., to General Motors Corp. Centrifuge for cleaning fluids. 2,900,129, 8–18–59, Cl. 233—28.

Deitrick, Stapleton C., Jr., to Combustion Engineering, Inc. Vapor generator having a vapor heater with a novel outlet header. 2,900,174, 8–18–59, Cl. 257—241.

De Laval Steam Turbine Co.: *See*—
Birmann, Rudolph. 2,899,797.

De Lay, Manford S. Load equalizer for trailer. 2,900,194, 8–18–59, Cl. 280—34.

Del Guidice, Frank P.: *See*—
Hinckley, Alfred A., and Del Guidice. 2,900,224.

Delta Engineering Corp.: *See*—
Cleveland, Eric G., and Standley. 2,899,784.

De Montebello, Roger. Stereoscopy. 2,899,883, 8–18–59, Cl. 95—18.

De Montmollin, Jean-Pierre: *See*—
Bethge, Walther. 2,900,290.

Dempster Brothers, Inc.: *See*—
Dempster, George R., and Herpich. 2,900,096.

Dempster, George R., and W. A. Herpich, said Herpich assor. to Dempster Brothers, Inc. Front end loaders. 2,900,096, 8–18–59, Cl. 214—302.

De Pataky, Veronica. Stenciling apparatus. 2,899,928, 8–18–59, Cl. 118—301.

Dermond, Lawrence C.: *See*—
Olson, Elmer, Kehoe, and Dermond. 2,899,951.

Dermond, Lawrence C., to General Motors Corp. Fuel injection acceleration enrichment device. 2,899,950, 8–18–59, Cl. 123—119.

Dermond, Lawrence C., to General Motors Corp. Fuel injection metering valve. 2,900,167, 8–18–59, Cl. 251—321.

Detrex Chemical Industries, Inc.: *See*—
Jacke, Stanley E., Newsome, and Kearney. 2,900,038.

Dictaphone Corp.: *See*—
Roberts, Bruce. 2,900,191.

Di Giacomo, Anthony J.: *See*—
Castellini, Nello R., and Di Giacomo. 2,900,633.

Ditter, Francis J., to Federal Hardware Products, Inc. Support. 2,900,158, 8–18–59, Cl. 248—166.

Dmochowski, Eugene M. Holder for telephone directories and the like. 2,900,087, 8–18–59, Cl. 211—90.

Dobbs, Frank G. and S. H. Releasable container holder. 2,899,999 8–18–59, Cl. 150—34.

Dobbs, Stephan H.: *See*—
Dobbs, Frank G. and S. H. 2,899,999.

Dole Valve Co., The: *See*—
Dahl, Robert R., and Erickson. 2,899,979.

Donaldson, Robert D., to General Aniline & Film Corp. Process for manufacturing alpha-anthraquinonesulfonates containing low amounts of mercury. 2,900,397, 8–18–59, Cl. 260—370.

Donaldson, Walter E., and A. W. Hanson, to The Dow Chemical Co. Modification and control of plastic foam density and foam bodies obtained thereby. 2,899,708, 8–18–59, Cl. 18—48.

Doolittle, Howard D., to Machlett Laboratories, Inc. Getter for electron tube. 2,900,549, 8–18–59, Cl. 313—178.

Dosher, Ralph T., Jr.: *See*—
Barns, Robert L., Dosher, Humphries, Jeanes, Lyon, Perry, Speer, and Earhart. 2,900,343.

Dow Chemical Co., The: *See*—
Bauman, William C., and Graham. 2,900,269.
Cooper, Ronald H. 2,900,027.
Donaldson, Walter E., and Hanson. 2,899,708.
Dreisbach, Robert R., and Lang. 2,900,279.
Havens, Carl B. 2,900,361.

Dowdle, Walter F., to Essex Wire Corp. Relay. 2,900,472, 8–18–59, Cl. 200—87.

Downing, John: *See*—
Grebby, John W., Hawtin, and Downing. 2,900,221.

Drake, Harcourt C., to Sperry Products, Inc. Method and means for detecting flaws in magnetic material. 2,900,596, 8–18–59, Cl. 324—37.

Dreisbach, Robert R., and J. L. Lang, to The Dow Chemical Co. Process for making fire retardant cellulosic articles. 2,900,279, 8–18–59, Cl. 117—136.

Drew, Willard H.: *See*—
Rulon, Richard M., and Drew. 2,900,545.

Drnec, Harry F., L. W. Snyder, and R. H. Johnson, to Container Corp. of America. Heavy duty paperboard container. 2,900,123, 8–18–59, Cl. 229—45.

Duffy, Philip A., to Westinghouse Electric Corp. X-ray apparatus. 2,900,513, 8–18–59, Cl. 250—53.

Dugger, Ralph L., to The Unipress Co., Inc. Rotary pressing machine. 2,899,761, 8–18–59, Cl. 38—5.

Duncan Electric Co., Inc.: *See*—
Green, Stanley S. 2,900,211.

Dunkerley, Arthur A. Camshaft bearing installing tool. 2,899,741, 8–18–59, Cl. 29—203.

Dunlop Tire and Rubber Corp.: *See*—
Hawkins, Harold F., and McCheaney. 2,899,711.

Dunn, Earl F., to The Singer Mfg Co. Sewing machine feeding mechanisms. 2,899,920, 8–18–59, Cl. 112—210.

Du Pont de Nemours, E. I., and Co.: *See*—
Arnold, Herrick R., Fawcett, and Gilbert. 2,900,225.
Edwards, Walter M., and Robinson. 2,900,369.
Gresham, William F., and Merckling. 2,900,372.
Harrison, John R. 2,900,396.
Haven, Alfred C., Jr. 2,900,365.
Keidel, Frederick A. 2,900,317.
Lundsager, Christian B. 2,899,713.
McGahen, Joe W. 2,900,283.
Muetterties, Earl L. 2,900,414.
Stillmar, Frederic B. 2,900,368.
Thatcher, Donald N. 2,900,381.
Wilkinson, William K. 2,900,370.

Durand, William H. Selectively positioned electrical control for computing registers. 2,900,133, 8–18–59, Cl. 235—132.

Durant, John H., to L. J. Ruble. Slab-rossing machine. 2,899,993, 8–18–59, Cl. 144—208.

E. R. A. Patents Ltd.: *See*—
Reece, Michael P. 2,900,476.

Eagle Signal Corp.: *See*—
Kozikowski, Feliz, and Pearson. 2,900,040.

Eames, William F., to Westinghouse Electric Corp. Elevator systems. 2,900,047, 8–18–59, Cl. 187—29.

Eames, William F., to Westinghouse Electric Corp. Elevator systems. 2,900,048, 8–18–59, Cl. 187—29.

Eames, William F., to Westinghouse Electric Corp. Door control apparatus. 2,900,521, 8–18–59, Cl. 250—208.

Earhart, Charles E.: *See*—
Barns, Robert L., Dosher, Humphries, Jeanes, Lyon, Perry, Speer, and Earhart. 2,900,343.

Earley, James W., and W. J. McVeagh, to Gulf Research & Development Co. Weighting material. 2,900,337, 8–18–59, Cl. 252—8.5.

Eastern Malleable Iron Co., The: *See*—
Pelcin, Albert L. 2,900,204.

Eastman Kodak Co.: *See*—
McCall, Marvin A., and McConnell. 2,900,403.

Ebauches, S. A.: *See*—
Haldegger, Hans. 2,899,782.

Eckel, Oliver C. Holding member for insulating clips. 2,900,102, 8–18–59, Cl. 200—9.

Ecker, Fred C. Anti-skid mechanism. 2,900,002, 8–18–59, Cl. 152—216.

Eckman, Irving: *See*—
Huxley, Thomas C., III, and Eckman. 2,899,955.

Edman, John H., to Deere & Co. Multiple-function implement control system for agricultural tractor. 2,900,030, 8–18–59, Cl. 172—9.

Edmund, John R., to Westinghouse Air Brake Co. Fluid pressure motor device embodying piston bounce inhibiting means. 2,899,936, 8–18–59, Cl. 121—38.

Edvardsson, Svante R.: *See*—
Björklund, Gustaf E., and Edvardsson. 2,899,744.

Edwards, Miles L. Pump mountings. 2,900,112, 8–18–59, Cl. 222—180.

Edwards, Robert A., to General Electric Co. Electronic counter and shift register. 2,900,500, 8–18–59, Cl. 250—27.

Edwards, Walter M., and I. M. Robinson, to E. I. du Pont de Nemours and Co. Polyimide composition. 2,900,369, 8–18–59, Cl. 260—78.

Egan, Thomas R., to Midwest Mfg. Corp. Snap-on caster. 2,899,700 8–18–59, Cl. 16—30.

Egerer, William E., to Holley Carburetor Co. Carburetor starter switch. 2,900,470, 8–18–59, Cl. 200—83.

Ehmann, Ludwig: *See*—
Wettstein, Albert, Hunger, Meystre, and Ehmann. 2,900,398.

Ekco-Alcoa Containers Inc.: *See*—
Wheeler, Edward M. 2,899,922.

Electric & Musical Industries Ltd.: *See*—
Carroll, John L., and Ewels. 2,900,608.
Huntley, Keith G. 2,900,441.
Lubszynski, Hans G., and Wardley. 2,900,280.
Percival, William S. 2,900,567.
Spencer, Rolf E., and Voles. 2,900,586.
Spencer, Rolf E., and Voles. 2,900,590.

Electric Regulator Corp.: *See*—
McHenry, Thomas F., and Grabinski. 2,900,593.

Elkins, Ira D.: *See*—
Goren, Mayer B., and Elkins. 2,900,351.

Elliott, B., & Co. Ltd.: *See*—
Selby, James, Kirkbride, and Trebble. 2,899,850.

Ellis, Charles A., to American Optical Co. Release relief valve. 2,899,976, 8–18–59, Cl. 137—599.2.

Ellis, Lacoste G., to Sun Oil Co. Seismographic exploration. 2,900,037, 8–18–59, Cl. 181—.5.

Elmer, Otto C.: *See*—
Lyons, Joseph, Elmer, and Berry. 2,900,341.

Enabnit, Robert S., to The Goodyear Tire & Rubber Co. D.C. amplifier. 2,900,454, 8–18–59, Cl. 179—171.

Engel, Edward. Spark plugs and the like. 2,900,547, 8–18–59, Cl. 313—130.

Engels, Walter, to Bommer Spring Hinge Co, Inc. Door bumpers. 2,899,718, 8–18–59, Cl. 20—16.

England, Hilda M. Attachments for typewriters. 2,900,067, 8–18–59, Cl. 197—151.

Entringer, Marian and S. Basic undergarment and bouffant. 2,899,962, 8–18–59, Cl. 128—319.

Entringer, Susan: *See*—
Entringer, Marian and S. 2,899,962.

Erdmann, Hans, to Waldes Kohinoor, Inc. Dispensers for spring retaining rings. 2,900,107, 8–18–59, Cl. 221—220.

Erekson, Arthur B., M. S. Lane, and R. L. Seidman. Can packing machine. 2,899,787, 8–18–59, Cl. 53—244.

Erickson, Howard L.: *See*—
Dahl, Robert R., and Erickson. 2,899,979.

Erikson, Evans W., to Sundstrand Machine Tool Co. Generator control system. 2,900,527, 8–18–59, Cl. 307—57.

Ertman, Louis. Splash guard for roof gutters. 2,899,916, 8–18–59, Cl. 108—28.

Essex Wire Corp.: *See*—
Dowdle, Walter F. 2,900,472.
Wallace, Kenneth R. 2,900,460.

Esso Research and Engineering Co.: *See*—
Collins, John F., and Sheehan. 2,900,338.
Horeczy, Joseph T., and Wadley. 2,900,403.
Viles, Prentiss S. 2,900,427.
Worsham, Charles H., and Skarstrom. 2,900,328.
Zoeller, Herman J. 2,900,322.

Estkowski, Michael H., to V-M Corp. Tone compensated loudness control. 2,900,609, 8–18–59, Cl. 333—28.

General Electric Co.: *See*—
Benander, George B., and Sheldon. 2,900,466.

Gooding, Francis H., to The Okonite Co. Apparatus for testing electric cable insulation. 2,900,597, 8–18–59, Cl.

Ethyl Corp.: *See*—
Filbey, Allen H., and Coffield. 2,900,417.
Evans, George H.: *See*—
Scott, Arthur D., Greenlee, Evans, and Sinn. 2,899,860.
Evans, James W.: *See*—
Bravos, George T., and Evans. 2,900,335.
Evans Products Co.: *See*—
Krokos, Raymond M., and Nichols. 2,899,842.
Evans, Robert M., and H. E. Pattee, to The Trane Co. Nickel base brazing alloys for high-temperature applications. 2,900,253, 8–18–59, Cl. 75—171.
Evans, Robert M., and H. E. Pattee. High-temperature brazing alloys. 2,900,251, 8–18–59, Cl. 75—170.
Ewels, John: *See*—
Carroll, John L., and Ewels. 2,900,608.
Ezrin, Myer: *See*—
Cassidy, Harold G., and Ezrin. 2,900,353.
Farbenfabriken Bayer Aktiengesellschaft: *See*—
Böckman, Klaus, and Taube. 2,900,379.
Schmitz-Josten, Robert. 2,900,360.
Schwechten, Heins W., Singer, and Bayer. 2,900,216.
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning: *See*—
Schmidt, Karl H. 2,900,301.
Waibel, Wilhelm. 2,900,219.
Farinet, Fred A., Jr., to United States of America, Air Force. Photoelectric sensing unit for aircraft gun cameras. 2,899,878, 8–18–59, Cl. 95—10.
Farkas, Alfred J. Indexing means for package printing mechanisms. 2,899,890, 8–18–59, Cl. 101—35.
Farmer, David K.: *See*—
Bandli, John C., Foster, and Farmer. 2,899,902.
Faron, Evelyn E., to A. Stein & Co. Brassiere. 2,899,961, 8–18–59, Cl. 128—465.
Farris, Vernie L. Method and apparatus for repairing a fluid pressure line. 2,899,983, 8–18–59, Cl. 138—97.
Faulkner, Alfred H., to General Telephone Laboratories, Inc. Transistor multivibrator. 2,900,606, 8–18–59, Cl. 331—113.
Fawcett, Frank S.: *See*—
Arnold, Herrick R., Fawcett, and Gilbert. 2,900,235.
Federal Hardware Products, Inc.: *See*—
Ditter, Francis J. 2,900,158.
Federgreen, Nathan, and D. G. Jordan, to American Cyanamid Co. Continuous separation of mercury-containing sulfuric acid from organic liquids. 2,900,078, 8–18–59, Cl. 210—83.
Fegely, Hugh S., and H. W. Van Ness, to Westinghouse Electric Corp. Multiple fault indicating system. 2,900,628, 8–18–59, Cl. 340—213.
Feinberg, Albert E. Ballast and lighting system for fluorescent lamps. 2,900,577, 8–18–59, Cl. 315—257.
Ferguson, D. C., 37½% to R. W. Rider and 25% to R. L. Windham. Ramp device. 2,900,094, 8–18–59, Cl. 214—83.
Fernandez, John J., ½ to J. S. Renard. Fluid pressure regulating valve. 2,899,975, 8–18–59, Cl. 137—543.17.
Ferner, George W.: *See*—
Snyder, James E., and Ferner. 2,900,260.
Snyder, James E., and Ferner. 2,900,261.
Ferrand, Louis. Dissociable gaseous hydrocarbon anode for igneous electrolytic furnaces, particularly for aluminum-making. 2,900,319, 8–18–59, Cl. 204—284.
Ferranti, Ltd.: *See*—
Gregson, William, and Turner. 2,900,600.
Fibreboard Paper Products Corp.: *See*—
Hoopes, Harry P., and Riesenberg. 2,900,109.
Fields, Ellis K., to Standard Oil Co. Phosphorus sulfide derivatives of hexachlorocyclopentadienepolyolefin adducts. 2,900,377, 8–18–59, Cl. 260—139.
Fierro Esponja SA: *See*—
Celada, Juan. 2,900,247.
Filbey, Allen H., and T. H. Coffield, to Ethyl Corp. 3,3'-diisopropyl-5,5'-di-tert-butyl-4,4'-dihydroxydiphenyl, its preparation and use. 2,900,417, 8–18–59, Cl. 260—620.
Finken, Walter S., to Gentex Corp. Evacuation litter. 2,899,692, 8–18–59, Cl. 5—82.
Finken, Walter S., and H. K. Robinson, to Gentex Corp. Unitary ballistic fabric. 2,899,987, 8–18–59, Cl. 139—408.
Firestone, Vance S., to Pittsburgh Plate Glass Co. Conveyor and washer for elongated plates. 2,899,967, 8–18–59, Cl. 134—63.
Firma Dr. Ing. h.c.F. Porsche KG.: *See*—
Porsche, Ferdinand, and Hoenick. 2,900,035.
Firth Carpet Co., Inc., The: *See*—
Herrnstadt, Gerald E., and Hubbard. 2,899,813.
Fischborn, Herbert B.: *See*—
Key, Edward M. 2,899,992.
Fischer, Heins. Ultra-rapid displacement of gases. 2,900,566, 8–18–59, Cl. 315—36.
Flatland, Lloyd P. Dental angle device. 2,899,745, 8–18–59, Cl. 32—28.
Fleischer, Svend S. C. Apparatus for separating magnetizable drop wires designed to indicate breakage in threads of a warp in a loom. 2,899,736, 8–18–59, Cl. 28—46.
Flint, Kenneth C.: *See*—
Werner, Frank R., Flint, and Sterser. 2,899,893.
Flohr, William P., Jr.: *See*—
Bricker, Robert E., Flohr, and Gebel. 2,899,778.
Fluhr, Joseph J.: *See*—
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Fredrick, Arden H., and L. T. Winship, to General Precision Laboratory Inc. Q-gated amplifier. 2,900,455, 8–18–59, Cl. 179—171.
French, Lionel J. B. R. Bookbinding machines. 2,900,093, 8–18–59, Cl. 214—7.
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Caisse, Paul G. 2,899,699.
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Long, John V., and Furth. 2,900,276.
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Fye, Ronald L., to McLanahan & Stone Corp. Log washer. 2,900,177, 8–18–59, Cl. 259—130.
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Gardberg, Joseph, to Teletype Corp. Start-stop telegraph signal generator. 2,900,448, 8–18–59, Cl. 178—26.
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Price, Ralph E. 2,899,779.
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Garman, Donald F., to Prestole Corp. Molding fastener. 2,899,729, 8–18–59, Cl. 24—73.
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Leslie, James D., Garvey, and West. 2,900,183.
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Donaldson, Robert D. 2,900,397.
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Peterson, Robert L. 2,900,524.
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Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,352, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,353, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,354, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,355, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,356, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,357, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,358, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,359, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,360, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,361, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,362, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,363, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,364, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,365, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,366, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,367, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,368, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,369, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,370, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,371, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,372, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,373, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,374, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,375, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,376, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,377, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,378, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,379, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,380, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,381, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,382, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,383, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,384, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,385, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,386, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,387, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,388, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,389, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,390, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,391, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,392, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,393, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,394, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,395, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,396, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,397, 8–18–59, Cl. 252—182.
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Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,399, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,400, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,401, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,402, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,403, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,404, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,405, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,406, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,407, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,408, 8–18–59, Cl. 252—182.
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Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,410, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,411, 8–18–59, Cl. 252—182.
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Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,414, 8–18–59, Cl. 252—182.
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Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,416, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,417, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,418, 8–18–59, Cl. 252—182.
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Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,420, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,421, 8–18–59, Cl. 252—182.
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Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,424, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,425, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,426, 8–18–59, Cl. 252—182.
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Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,428, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,429, 8–18–59, Cl. 252—182.
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Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,431, 8–18–59, Cl. 252—182.
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Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,452, 8–18–59, Cl. 252—182.
Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,453, 8–18–59, Cl. 252—182.
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Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,458, 8–18–59, Cl. 252—182.
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Hackbarth, Fred W., and R. E. Lee, to Standard Oil Co. Process for preparing copper liquor for use in removing carbon oxides from ammonia synthesis gas and product. 2,900,461, 8–18–59, Cl. 252—182.
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Benander, George B., and Sheldon. 2,900,460.
Bluestein, Ben A. 2,900,363.
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Broglio, Edward P. 2,900,432.
Buechler, William R. 2,899,814.
Carew, Arthur W. 2,899,804.
Clark, Albert G. 2,900,485.
Clark, Edward B. 2,900,101.
Edwards, Robert A. 2,900,500.
Grams, William R. 2,900,281.
Grimshaw, Charles S. 2,899,801.
Jordan, Samuel C. 2,900,480.
Logan, Stanley E. 2,900,199.
McMillan, Stephen L. 2,899,802.
Raczynski, Walter J., and Worst. 2,900,080.
Schmitz, John V., and Lawton. 2,900,277.
Schultz, William J., and van Bennekom. 2,900,463.
Stern, Arthur P. 2,900,439.
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Beesley, John H. 2,900,571.
General Motors Corp.: *See*—
Armington, Raymond Q. and A. P. 2,899,760.
Cromwell, Harold J. 2,900,058.
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Dermond, Lawrence C. 2,899,950.
Dermond, Lawrence C. 2,900,167.
Groves, Ronald C. 2,899,948.
Hackett, William S. 2,899,726.
Juhlin, Arthur H., and Macan. 2,900,043.
Kosbab, Kenneth A. 2,899,901.
Leslie, James D., Garvey, and West. 2,900,183.
Meyer, Barthold F. 2,899,832.
Olson, Elmer, Kehoe, and Dermond. 2,899,951.
Pierce, Earl R. 2,899,810.
Schneider, Paul L., Cromwell, and Taylor. 2,900,057.
Smith, John H. 2,899,829.
Tuck, Robert M. 2,899,846.
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General Precision Laboratory Inc.: *See*—
Fredrick, Arden H., and Winship. 2,900,455.
Gray, John W. 2,900,599.
General Railway Signal Co.: *See*—
Hailes, William D. 2,900,498.
Marsh, Gareld E. 2,900,581.
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General Steel Castings Corp.: *See*—
Lich, Richard L. 2,899,911.
General Telephone Laboratories, Inc.: *See*—
Faulkner, Alfred H. 2,900,606.
Gentex Corp.: *See*—
Finken, Walter S. 2,899,692.
Finken, Walter S., and Robinson. 2,899,987.
Gerber, Kenneth G.: *See*—
Adams, John F. E., Gerber, and Wilkes. 2,899,754.
Gerhard, Paul G.: *See*—
Richtmyer, Lawson E., and Gerhard. 2,900,021.
Gey, William A.: *See*—
Williams, Harry, and Gey. 2,900,242.
Giani, Adolfo, to Reggiani Meccanotex S.A. Frame for frame printing machines. 2,899,894, 8–18–59, Cl. 101—123.
Gibbons, Thomas P., to Marvaland, Inc. Method and apparatus for forming metal filaments. 2,899,728, 8–18–59, Cl. 22—200.1.
Gibbs, Robert A. and T. A., and R. L. Brinson. Fluid pressure motor. 2,899,940, 8–18–59, Cl. 121—86.
Gibbs, Thomas A.: *See*—
Gibbs, Robert A. and T. A., and Brinson. 2,899,940.
Giddings & Lewis Machine Tool Co.: *See*—
Daugherty, Jesse. 2,899,869.
Gleasner, George J., to I-T-E Circuit Breaker Co. Magnetic shield. 2,900,473, 8–18–59, Cl. 200—88.
Gifford, Paul B., to Allegheny Ludlum Steel Corp. Electrode positioning device. 2,900,556, 8–18–59, Cl. 314—69.
Gilbert, A. C., Co., The: *See*—
Smith, Raymond E. 2,900,127.
Gilbert, Walter W.: *See*—
Arnold, Herrick R., Fawcett, and Gilbert. 2,900,235.
Gilmore, Forrest E., to Phillips Petroleum Co. Fractionation. 2,900,812, 8–18–59, Cl. 202—160.
Gilmore, Forrest E., to Phillips Petroleum Co. Catalytic cracking process. 2,900,326, 8–18–59, Cl. 208—101.
Ginsburg, Abraham. Hypodermic needle. 2,899,959, 8–18–59, Cl. 128—221.
Ginsburg, Abraham. Hypodermic needle. 2,899,960, 8–18–59, Cl. 128—221.
Giser, Samuel, to Research Corp. Electronic multiplier. 2,900,187, 8–18–59, Cl. 235—194.
Glaser, Rolf, to Starrfrasmaschinen A.G. Automatically operated profile milling machine. 2,899,868, 8–18–59, Cl. 90—13.1.
Gofman, John W.: *See*—
Seaborg, Glenn T., Gofman, and Stoughton. 2,900,228.
Goldstein, Bernard, to Radio Corp. of America. Method of manufacturing semi-conductive bodies. 2,900,286, 8–18–59, Cl. 148—1.5.
Good, Fred C., to Fred C. Good & Sons, Inc. Anchor boom assembly. 2,899,924, 8–18–59, Cl. 114—210.
Good, Fred C., & Sons, Inc.: *See*—
Good, Fred C. 2,899,924.
Good, Robert H., to United States of America, Atomic Energy Commission. Continuously sensitive bubble chamber. 2,900,518, 8–18–59, Cl. 250—83.
Good, Romer F., to Morgan Machine Co., Inc. Pneumatic impact tool. 2,899,933, 8–18–59, Cl. 121—13.
Gooding, Francis H., to The Okonite Co. Apparatus for testing electric cable insulation. 2,900,597, 8–18–59, Cl. 324—54.
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Sharpe, Ralph L. 2,900,070.
Goodyear Tire & Rubber Co., The: *See*—
Beebe, Paul, Jr. 2,899,788.
Enabnit, Robert S. 2,900,454.
Frayer, Theodore, and Runner. 2,900,052.
Harpfer, Donald R. 2,899,982.
Hayes, Donald W. 2,900,371.
Herman, Eugene T. 2,899,721.
Hillegass, Kenneth P. 2,900,051.
Lafaye, Hilton J. 2,900,006.
Riggs, Mart B. 2,900,005.
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Snyder, James E., and Ferner. 2,900,261.
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Gormley, Robert S., to Bendix Aviation Corp. Electron discharge device. 2,900,561, 8–18–59, Cl. 315—5.23.
Gorosdos, Richard E.: *See*—
McLaughlin, Donald J., and Gorosdos. 2,900,446.
Gorsky, Rudolph J.: *See*—
Zink, George A., Child, Servi, and Gorsky. 2,899,725.
Goss, Wilbur H., to United States of America, Navy. Auxiliary carriage arrangement for a missile. 2,899,898, 8–18–59, Cl. 102—49.
Gottschall, Herbert A., S. F. Guggenheim, and P. J. Waszys. Potentiometer. 2,900,615, 8–18–59, Cl. 338—176.
Gould, David H., E. B. Hershberg, and E. Shapiro, to Schering Corp. 14a-hydroxy pregnatrienes. 2,900,400, 8–18–59, Cl. 260—397.45.
Grabinski, Joseph J.: *See*—
McHenry, Thomas F., and Grabinski. 2,900,592.
Grace, W. R., & Co.: *See*—
Ahlberg, Jacob E., and Simpson. 2,900,348.
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Graef, Edward L. Wall molding forms for making a reinforced concrete wall. 2,899,735, 8–18–59, Cl. 25—131.
Graef, John N., to David White Co. Photoflash apparatus and circuit. 2,899,880, 8–18–59, Cl. 95—11.5.
Graham, Eldon L.: *See*—
Bauman, William C., and Graham. 2,900,269.
Grams, William R., to General Electric Co. Method of bonding metal borides to graphite. 2,900,281, 8–18–59, Cl. 117—216.
Gratsmuller, Jean L. Non-return ball valve for reciprocating hydraulic pumps. 2,899,974, 8–18–59, Cl. 137—538.11.
Gratsmuller, Jean L. Circuit-breaker control device. 2,900,469, 8–18–59, Cl. 200—82.
Gray, Coy J., to Deering Milliken Research Corp. Dyeing proteinaceous and nylon materials. 2,900,218, 8–18–59, Cl. 8—54.
Gray, John W., to General Precision Laboratory Inc. Frequency marking circuit. 2,900,599, 8–18–59, Cl. 324—78.
Grebby, John W., S. G. Hawtin, and J. Downing, to British Celanese Ltd. Manufacture of artificial filamentary materials of high bulk. 2,900,221, 8–18–59, Cl. 18—54.
Green, Harold A., to Quaker Chemical Products Corp. Corrosion preventive compositions. 2,900,262, 8–18–59, Cl. 106—14.
Green, Stanley S., to Duncan Electric Co., Inc. Magnetic suspension with flexibility. 2,900,211, 8–18–59, Cl. 308—10.
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Scott, Arthur D., Greenlee, Evans, and Sinn. 2,899,860.
Greenlee, William B.: *See*—
Scott, Arthur D., Greenlee, Evans, and Sinn. 2,899,860.
Gregson, William, and W. F. S. Turner, to Ferranti, Ltd. Electrical frequency meters. 2,900,600, 8–18–59, Cl. 324—78.
Gresham, William F., and N. G. Merckling, to E. I. du Pont de Nemours and Co. Ethylene polymerization with catalysts prepared from molybdenum pentachloride and reducing compounds. 2,900,372, 8–18–59, Cl. 260—94.9.
Greulich, Gerald G., to Ceco Steel Products Corp. Clip for anchoring sheet metal centering to supporting joists or beams. 2,900,056, 8–18–59, Cl. 189—35.
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Grimshaw, Charles S., to General Electric Co. Automatic defrosting evaporator arrangement. 2,899,801, 8–18–59, Cl. 62—156.
Grobecker, Hugo H., to Cleaver-Brooks Co. Chamfering tool. 2,899,851, 8–18–59, Cl. 77—66.
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Gross, Florence A. Egg carton. 2,900,119, 8–18–59, Cl. 229—2.5.
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Coolidge, John E., Jr., and Grossen. 2,900,042.
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Hilton, Robert, to Hilton Davis Chemical Co. Process for the production of 1-(2-hydroxy-3-alkylaminopropyl)-3-(2-alkoxyphenyl) hydantoins. 2,900,395, 8–18–59, Cl. 260—309.5.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,731, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,732, 8–18–59, Cl. 29—421.
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Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,813, 8–18–59, Cl. 29—421.
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Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,815, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,816, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,817, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,818, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,819, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,820, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,821, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,822, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,823, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,824, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,825, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,826, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,827, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,828, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,829, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,830, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,831, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,832, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,833, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,834, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,835, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,836, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,837, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,838, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,839, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,840, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,841, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,842, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,843, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,844, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,845, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,846, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,847, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,848, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,849, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,850, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,851, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,852, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,853, 8–18–59, Cl. 29—421.
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Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,857, 8–18–59, Cl. 29—421.
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Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,860, 8–18–59, Cl. 29—421.
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Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,862, 8–18–59, Cl. 29—421.
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Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,865, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,866, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,867, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,868, 8–18–59, Cl. 29—421.
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Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,870, 8–18–59, Cl. 29—421.
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Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,889, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,890, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,891, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,892, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,893, 8–18–59, Cl. 29—421.
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Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,895, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,896, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,897, 8–18–59, Cl. 29—421.
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Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,899, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,900, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,901, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,902, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,903, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,904, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,905, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,906, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,907, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,908, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,909, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899,910, 8–18–59, Cl. 29—421.
Hinchman, Robert R., to Hinchman Corp. Method of and apparatus for forming metal articles. 2,899

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Guggenheim, S. Frederic: *See*—
Gottschall, Herbert A., Guggenheim, and Warnya. 2,900,615.

Gugger, Reno: *See*—
Bethge, Walther. 2,900,290.

Guidi, Albert J.: *See*—
De Berry, Charles H., and Guidi. 2,899,887.

Gulf Oil Corp.: *See*—
Kirby, Lawrence J. 2,899,969.

Gulf Research & Development Co.: *See*—
Beuther, Harold. 2,900,327.
Brown, William E., McVeagh, and Wallace. 2,900,836.
Earley, James W., and McVeagh. 2,900,337.
Henke, Alfred M., and Stauffer. 2,900,430.

Gunter, Lee, Jr.: *See*—
Bauer, Benjamin B., Gunter, and Seeler. 2,900,452.

Gustafson, Blaine W.: *See*—
Manns, William F., Cheatum, and Gustafson. 2,900,069.

Guthrie, James M.: *See*—
Bowman, Samuel G. 2,900,164.

Hackett, William S., to General Motors Corp. Apparatus for assembling shell molds. 2,899,726, 8–18–59, Cl. 22—31.

Hadley, Howard C., to Deere & Co. Corn picker gathering chains. 2,899,794, 8–18–59, Cl. 56—111.

Haensel, Vladimir: *See*—
Bloch, Herman S., and Haensel. 2,900,425.

Haensel, Vladimir, and H. S. Bloch, to Universal Oil Products Co. Preventing stalling of carbureted internal combustion engines. 2,899,943, 8–18–59, Cl. 123—1.

Hafner, Klaus: *See*—
Ziegler, Karl, and Hafner. 2,900,426.

Hafner, William J., and G. H. Cork; said Hafner assor. to said Cork. Pneumatic conveyor system. 2,900,146, 8–18–59, Cl. 243—36.

Hagan Chemicals & Controls, Inc.: *See*—
Munter, Casimir J. 2,899,971.

Hahn, Frank J. Fish pole holder. 2,900,152, 8–18–59, Cl. 248—42.

Haidegger, Hans, to S. A. Ebauches. Method of manufacture of packing. 2,899,782, 8–18–59, Cl. 53—14.

Hailes, William D., to General Railway Signal Co. Fail-safe protection for code communication control systems. 2,900,498, 8–18–59, Cl. 246—5.

Hair, Douglas W. Wheel-track gauge for motor vehicles. 2,899,753, 8–18–59, Cl. 33—203.21.

Hall, Norman W.: *See*—
Anderson, John, Johnson, and Hall. 2,900,419.

Hamilton, Earl F., to Hamilton Mfg. Corp. Chair or the like. 2,900,013, 8–18–59, Cl. 155—196.

Hamilton, Lawrence E. Binocular shutter control. 2,899,863, 8–18–59, Cl. 88—61.

Hamilton Mfg. Corp.: *See*—
Hamilton, Earl F. 2,900,013.
Paulsen, Paul L., Hiers, and Kanzelberger. 2,899,772.

Hammond, Leonard A., to Nixdorff-Krein Mfg. Co. Swing-hook assembly. 2,900,160, 8–18–59, Cl. 248—341.

Handwerk, Joseph H., and R. A. Bach, to United States of America, Atomic Energy Commission. Method of preparing a fuel element for a nuclear reactor. 2,900,263, 8–18–59, Cl. 106—39.

Hanes, James W. E., to Huntsinger Associates. Well pipe and flexible joints therefor. 2,900,028, 8–18–59, Cl. 166—242.

Hanomag Aktiengesellschaft: *See*—
Nuebling, Otto. 2,899,937.

Hanson, Alden W.: *See*—
Donaldson, Walter E., and Hanson. 2,899,708.

Hanson, Estyle D., to Western Electric Co., Inc. Variable speed distributor. 2,900,145, 8–18–59, Cl. 242—158.2.

Hardy, William B., and E. Klingsberg, to American Cyanamid Co. Ferrocene derivatives. 2,900,401, 8–18–59, Cl. 260—439.

Harker, Charles B., to Bartele Engineering Co. Bag opening mechanism for packaging machine. 2,899,786, 8–18–59, Cl. 53—187.

Harlan, Kenneth G., to United States of America, Navy. Transition fuel cells. 2,900,289, 8–18–59, Cl. 154—43.5.

Harman, Marion W., and J. J. D'Amico, to Monsanto Chemical Co. Aminoethylthiazoles. 2,900,299, 8–18–59, Cl. 167—33.

Harp, Thomas H., Jr.: *See*—
Sparks, Marshall S., Jr., and Harp. 2,900,511.

Harper, Lyndus E.: *See*—
Coffman, Paul A., Jr., and Harper. 2,900,110.

Harpfer, Donald E., to The Goodyear Tire & Rubber Co. Hydraulic brake hose. 2,899,982, 8–18–59, Cl. 138—55.

Harriott, Billie L., to Deere & Co. Flail-type manure spreader. 2,900,193, 8–18–59, Cl. 275—3.

Harrison, Henry and H. C., to Ingersoll-Rand Co. Paving breaker steel. 2,900,178, 8–18–59, Cl. 262—33.

Harrison, Henry C.: *See*—
Harrison, Henry and H. C. 2,900,178.

Harrison, Homer S., to Allied Steel and Conveyors, Inc. Automatic tubeless tire bead seating and inflating machine. 2,900,015, 8–18–59, Cl. 157—1.1.

Harrison, Homer S., to Allied Steel and Conveyors, Division of the Sparks-Withington Co. Conveyor mounted automatically adjusting universal tire mounting machine. 2,900,018, 8–18–59, Cl. 157—1.24.

Harrison, John R., to E. I. du Pont de Nemours and Co. Oxidation of 1,3 butadiene to furan. 2,900,396, 8–18–59, Cl. 260—346.1.

Hartman, Jacob J.: *See*—
Davis, Hyman, and Hartman. 2,899,691.

Hartmann & Braun Aktiengesellschaft: *See*—
Keller, Alexander. 2,900,585.

Harwood, James, R. G. Brault, and R. A. Beck, to Armour and Co. Water insoluble plant hormone carboxylic acid salts of higher alkyl amines. 2,900,411, 8–18–59, Cl. 260—501.

Hars, Hermann: *See*—
Gärtner, Günter, Schwab, and Hars. 2,900,540.

Haskett, Herbert L. Controller for water systems. 2,899,900, 8–18–59, Cl. 103—6.

Hattan, Mark, ¼ to W. P. Green. Rotary transmissions. 2,899,844, 8–18–59, Cl. 74—688.

Haven, Alfred C., Jr., to E. I. du Pont de Nemours and Co. Organophosphorus polymers. 2,900,365, 8–18–59, Cl. 260—47.

Havens, Carl B., to The Dow Chemical Co. Dibenzoyl resorcinol light stabilizer. 2,900,361, 8–18–59, Cl. 260—45.95.

Haverland, Frank J. Machine mechanism. 2,899,831, 8–18–59, Cl. 74—63.

Havstad, James W., to Ampex Corp. Magnetic transducing apparatus. 2,900,451, 8–18–59, Cl. 179—100.2.

Hawkins, Harold F., and C. S. McChesney, to Dunlop Tire and Rubber Corp. Method for molding tennis balls 2,899,711, 8–18–59, Cl. 18—55.

Hawtin, Selwyn G.: *See*—
Grebby, John W., Hawtin, and Downing. 2,900,221.

Hayashi, Takeo: *See*—
Nishigori, Kimpei, and Hayashi. 2,899,891.

Hayden, Boyd. Turnbuckle for loom harness. 2,900,203, 8–18–59, Cl. 287—60.

Hayden-Niles Ltd.: *See*—
Potter, John J. 2,899,880.

Hayes, Donald W., to The Goodyear Tire & Rubber Co. Method of making mercaptobenzothiazothiazyl disulfide agglomerates. 2,900,371, 8–18–59, Cl. 260—79.5.

Haynes, Robert C.: *See*—
Salmon, Donald B., and Haynes. 2,900,201.

Haynes, William J. Combination foldable table and bench. 2,900,009, 8–18–59, Cl. 155—43.

Haseltine Research, Inc.: *See*—
Rado, John A. 2,900,440.

Headrick, John F., to Phillips Petroleum Co. Prestressed joint between bottoms and shells of large tanks. 2,899,820, 8–18–59, Cl. 72—13.

Heaton, Charles D., and W. G. Toland, Jr., to California Research Corp. Hydrocarbon separation by complex formation with pyromellitic dianhydride. 2,900,428, 8–18–59, Cl. 260—674.

Heinemann, Heinz, T. H. Milliken, Jr., and D. H. Stevenson, to Houdry Process Corp. Preparation of isoprene. 2,900,429, 8–18–59, Cl. 260—680.

Heininger, Samuel A., to Monsanto Chemical Co. Dielectric composition containing a phenoxypropionitrile. 2,900,345, 8–18–59, Cl. 252—63.7.

Heininger, Samuel A., and E. L. Ringwald, to Monsanto Chemical Co. Miticidal nitriles. 2,900,409, 8–18–59, Cl. 260—465.

Hendry, James W., to Tube Turns Plastics, Inc. Process for molding polytetrafluoroethylene. 2,899,710, 8–18–59, Cl. 18—55.

Henke, Alfred M., and H. C. Stauffer, to Gulf Research & Development Co. Process for the removal of straight chain acetylenes from isoprene. 2,900,430, 8–18–59, Cl. 260—681.5.

Henkel & Cie. G.m.b.H.: *See*—
Blaser, Bruno, and Kaiser. 2,900,408.
Raecke, Bernhard, Blaser, Stein, Schirp, and Schutt. 2,900,386.

Hennig, Fritz, to Siemens & Halske Aktiengesellschaft. Apparatus for correcting the effects of disturbances in telegraphic communication. 2,900,447, 8–18–59, Cl. 178—23.

Hensley, Robert K., Jr. Shower attachment. 2,900,139, 8–18–59, Cl. 239—499.

Herbruck, Robert A. Storage container. 2,899,884, 8–18–59, Cl. 99—235.

Herkimer, Harold, to The Raisler Corp. Dry pipe clapper valves for automatic sprinkler systems. 2,900,029, 8–18–59, Cl. 169—22.

Herman, Eugene T., to The Goodyear Tire & Rubber Co. Refrigerator door seal. 2,899,721, 8–18–59, Cl. 20—69.

Herpich, William A.: *See*—
Dempster, George R., and Herpich. 2,900,096.

Herrnstadt, Gerald E., and J. L. Hubbard, to The Firth Carpet Co., Inc. Knitted pile fabrics. 2,899,813, 8–18–59, Cl. 66—191.

Hershberg, Emanuel B.: *See*—
Gould, David H., Hershberg, and Shapiro. 2,900,400.

Hetrick, George L., to Westinghouse Electric Corp. Washing apparatus. 2,899,815, 8–18–59, Cl. 68—17.

Heuse, Otto L., to Max-Planck-Institut für Biophysik. X-ray tube. 2,900,543, 8–18–59, Cl. 313—60.

Heuvel, Johan G. F. Electric shaver having built-in cooling means. 2,899,743, 8–18–59, Cl. 30—34.

Hewlett-Packard Co.: *See*—
Reis, Charles S. 2,900,522.
Watkins, Dean A. 2,900,558.

Heymes, Rene: *See*—
Amiard, Gaston, Heymes, and Veilus. 2,900,375.

Hicks, J. Bryon. Device for improving the operation of internal combustion engines. 2,899,949, 8–18–59, Cl. 123—119.

Hiers, Victor H.: *See*—
Paulsen, Paul L., Hiers, and Kanzelberger. 2,899,772.

Hilbert, Richard G.: *See*—
Soussloff, Dimitri G., and Hilbert. 2,899,796.

Hilkemeier, Louis G., to Worthington Corp. Liquid measuring device. 2,900,115, 8–18–59, Cl. 222—416.

Joy, Raymond D., to Pacific Mills. Seam detector. 2,900,468, 8–18–59, Cl. 200—81.

Juhlin, Arthur H., and A. L. Macan, to General Motors Corp. [illegible]

Kosbab, Kenneth A., to General Motors Corp. Windshield washer pump. 2,899,901, 8–18–59, Cl. 103—148.

Hilliegass, Kenneth P., to The Goodyear Tire & Rubber Co. Cam roller self-energizing disc brake. 2,900,051, 8–18–59, Cl. 188—72.
Hinckley, Alfred A., and F. P. Del Guidice, to Metal Hydrides Inc. Method for preparing sodium aluminum hydride. 2,900,224, 8–18–59, Cl. 23—14.
Hinks, William L. Static load bearings. 2,900,182, 8–18–59, Cl. 267—57.1.
Hirsch, Joseph. Stiffener and stabilizer for supersonic vehicles. 2,899,899, 8–18–59, Cl. 102—49.
Hirt, Gerald E., and E. A. Martino, to Talco Engineering Co., Inc. Ejection seat catapult. 2,900,150, 8–18–59, Cl. 244—122.
Hirtner, Paul J. Spring loaded terminal seal for sealed refrigeration compressors. 2,900,438, 8–18–59, Cl. 174—153.
Hixon, George M., to Trego, Inc. Cable connector. 2,900,617, 8–18–59, Cl. 339—265.
Hobbs, Charles A. Mine firing control system. 2,899,896, 8–18–59, Cl. 102—18.
Hoeksema, Joe H., to Deere & Co. Corn harvester. 2,899,792, 8–18–59, Cl. 56—18.
Hoekstra, Age H.: *See*—
Stuyts, Andreas L., Hoekstra, Weber, and Rathenau. 2,900,344.
Hoenick, Hans H.: *See*—
Porsche, Ferdinand, and Hoenick. 2,900,035.
Hoke Inc.: *See*—
Salmon, Donald B., and Haynes. 2,900,201.
Holcroft, Donald E., to Scott Paper Co. Silencer. 2,900,024, 8–18–59, Cl. 162—371.
Holley Carburetor Co.: *See*—
Egerer, William E. 2,900,470.
Holliday, William C.: *See*—
Williams, Harry, and Holliday. 2,900,486.
Hondorp, Donald J. Starting block. 2,900,187, 8–18–59, Cl. 272—59.
Hoogendoorn, Gilbert C. Central valve for pneumatic tire wheel. 2,900,007, 8–18–59, Cl. 152—416.
Hooker Chemical Corp.: *See*—
Geering, Emil J. 2,900,394.
Hooker, Leland W.: *See*—
Yeadon, Donald J., Hooker, and Garland. 2,899,994.
Hoopes, Harry P., and W. P. Riesenberg, to Fibreboard Paper Products Corp. Method for preheating cementitious insulating material. 2,900,109, 8–18–59, Cl. 222—1.
Hopkins, Norris E. Bath tub accessory. 2,899,688, 8–18–59, Cl. 4—185.
Horecky, Joseph T., and E. F. Wadley, to Esso Research and Engineering Co. Removal of oxygenated compounds from naphtha. 2,900,403, 8–18–59, Cl. 260—450.
Hornbostel, Lloyd, to Beloit Iron Works. Table roll and deflector suction device. 2,900,023, 8–18–59, Cl. 162—352.
Horowitz, Sidney, to Inventions Assn., Inc. Bedpan vehicle. 2,899,694, 8–18–59, Cl. 5—90.
Houdry Process Corp.: *See*—
Heinemann, Heinz, Milliken, and Stevenson. 2,900,429.
Housam, Ernest C.: *See*—
Northcott, Roy P., and Housam. 2,900,332.
Porter, Frederick W. B., and Housam. 2,900,331.
Howes, Royal E., to The National Cash Register Co. Multiple delay line. 2,900,533, 8–18–59, Cl. 307—88.5.
Howlett, Percy W. Play curling game. 2,900,189, 8–18–59, Cl. 273—120.
Hruby, John O., Jr., to Rain Jet Corp. Flow restrictor. 2,899,978, 8–18–59, Cl. 138—43.
Huch, William F., K. P. Ney, and J. R. Winckler, to United States of America, Navy. Duct appendix balloon. 2,900,147, 8–18–59, Cl. 244—31.
Hubbard, John L.: *See*—
Herrnstadt, Gerald E., and Hubbard. 2,899,813.
Huett, George, and W. O. Ranky, to Stepan Chemical Co. Production of alkyl phenols. 2,900,418, 8–18–59, Cl. 260—624.
Huge, Robert W., to E. P. Miller, Sr. Telescopic terminal for flexible drive systems. 2,899,805, 8–18–59, Cl. 64—4.
Hughes Aircraft Co.: *See*—
Chater, William T. 2,900,534.
Johnson, Robert R. 2,900,620.
MacIntyre, Alfred J., Jr., and Martel. 2,900,271.
Huley, John W.: *See*—
Thomas, Leon E., Jr., Gruss, and Huley. 2,900,462.
Humboldt Co., The: *See*—
McIntyre, Sidney S., Sr. 2,900,089.
Humphries, Mary L.: *See*—
Barns, Robert L., Dosher, Humphries, Jeanes, Lyon, Perry, Speer, and Earhart. 2,900,343.
Hunger, Alfred: *See*—
Wettstein, Albert, Hunger, Meystre, and Ehmann. 2,900,398.
Huntley Keith G., to Electric & Musical Industries Ltd. Generation of colour television signals. 2,900,441, 8–18–59, Cl. 178—5.4.
Huntsinger Associates: *See*—
Hanes, James W. R. 2,900,028.
Hurst, George S.: *See*—
Davis, Francis J., Hurst, and Reinhardt. 2,900,516.
Hutchens, Charles T. Tandem spring suspension system. 2,900,197, 8–18–59, Cl. 280—104.5.
Hutchinson, Oliver C. K.: *See*—
Hutchinson, Thomas K. and O. C. K. 2,899,723.
Hutchinson, Thomas K. and O. C. K. Shell molding machine. 2,899,723, 8–18–59, Cl. 22—9.
Huxley, Thomas C., III, and I. Eckman, to Conitech Ltd. Respirator belt. 2,899,955, 8–18–59, Cl. 128—30.
Hycon Mfg. Co.: *See*—
Wylie, Jean, Osborne, and Amsler. 2,899,882.
Hydrocarbon Research, Inc.: *See*—
Keith, Percival C., and Woebcke. 2,900,246.
Hymac Corp.: *See*—
Kuehn, Rudolph L., and Seigle. 2,900,502.
I-T-E Circuit Breaker Co.: *See*—
Giesaner, George J. 2,900,472.
Weiner, Samuel. 2,900,529.
Igelstroem Oberlin, Inc.: *See*—
Oberlin, Ralph E., Jr. 2,899,764.
Imperial Chemical Industries Ltd.: *See*—
Adams, John F. E., Gerber, and Wilkes. 2,899,754.
Martin, Alfred R. 2,900,304.
Inductosyn Corp.: *See*—
Tripp, Robert W. 2,900,612.
Inflico Inc.: *See*—
Adelson, Samuel L. 2,899,824.
Ingersoll-Rand Co.: *See*—
Harrison, Henry and H. C. 2,900,178.
Instruments for Industry, Inc.: *See*—
Algase, Lawrence I. 2,900,634.
International Instruments, Inc.: *See*—
Thomas, Leon E., Jr., Gruss, and Huley. 2,900,462.
International Minerals & Chemical Corp.: *See*—
Dancy, William B., and Nylander. 2,900,227.
Norman, Oscar L. 2,900,391.
International Nickel Co., Inc., The: *See*—
Petryck, Leon M., and Pease. 2,900,490.
International Paper Box Machine Co., The: *See*—
Le Bombard, Leon E. 2,899,873.
Internationella Siporex AB: *See*—
Nycander, Sven H. 2,899,821.
Inventions Assn., Inc.: *See*—
Horowitz, Sidney. 2,899,694.
Ishii, Tadao: *See*—
Oshima, Motoyoshi, Kusama, and Ishii. 2,900,284.
Israelsen, Arlo F., and E. J. Tenpas, to F. J. Stokes Machine Co. Magnetic separator for pills. 2,900,076, 8–18–59, Cl. 209—215.
Jacke, Stanley E., L. C. Newsome, and T. J. Kearney, to Detrex Chemical Industries, Inc. Ultrasonic cleaning apparatus. 2,900,038, 8–18–59, Cl. 181—.5.
Jackson, Corwill, to Jackson Vibrators, Inc. Ballast tamping machine. 2,899,909, 8–18–59, Cl. 104—12.
Jackson, Ralph B., D. H. Kelly, and R. V. Townend, to Allied Chemical Corp. Manufacture of titanium tetrafluoride. 2,900,234, 8–18–59, Cl. 23—88.
Jackson Vibrators, Inc.: *See*—
Jackson, Corwill. 2,899,909.
Jacob, Allan S., to Syncro Corp. Generator regulator system. 2,900,591, 8–18–59, Cl. 320—59.
Jacobsen, Jerome G., Jr., to Westinghouse Electric Corp. Combined washer-dryer. 2,899,816, 8–18–59, Cl. 68—20.
Jacobus, William W.: *See*—
Broders, Claude O., Jacobus, and Swenson. 2,899,798.
Janeczko, William A. Top loading boxcar. 2,899,912, 8–18–59, Cl. 105—377.
Jaworski, Ernest G., and V. R. Gaertner, to Monsanto Chemical Co. Method of inhibiting fungus growth comprising the application of the reaction product of a mono olefinic aldehyde and aromatic hydrazine. 2,900,296, 8–18–59, Cl. 167—30.
Jeanes, Jack K.: *See*—
Barns, Robert L., Dosher, Humphries, Jeanes, Lyon, Perry, Speer, and Earhart. 2,900,343.
Jen, Yun: *See*—
Suen, Treng J., and Jen. 2,900,367.
Johannsen, Friedrich, to Aktiengesellschaft fur Unternehmungen der Eisen- und Stahlindustrie. Direct smelting process in rotary kilns. 2,900,248, 8–18–59, Cl. 75—36.
Johnson, Duke A.: *See*—
Miller, Elvas A., and Johnson. 2,900,171.
Johnson, Elmer C., to The Vendo Co. Vendor driving mechanism. 2,900,214, 8–18–59, Cl. 312—97.
Johnson, George F.: *See*—
Anderson, John, Johnson, and Hall. 2,900,419.
Johnson, George F., C. D. Marshall, and R. H. Criswell, to Shell Development Co. Recovery of compound 1,2,3,4,7,7-hexachloro-bicyclo-(2,2,1)-heptadiene-2,5 from hexachlorocyclopentadiene-acetylene reaction products. 2,900,366, 8–18–59, Cl. 260—648.
Johnson, Loyd C. Door stop. 2,899,703, 8–18–59, Cl. 16—86.
Johnson, Richard H.: *See*—
Drnec, Harry F., Snyder, and Johnson. 2,900,123.
Johnson, Robert R., to Hughes Aircraft Co. Electronic magnitude comparator. 2,900,620, 8–18–59, Cl. 340—149.
Johnson, William K., to Monsanto Chemical Co. Preparation of aluminum alkyls. 2,900,402, 8–18–59, Cl. 260—448.
Johnstone, Theodore H., to The Bingham Herbrand Corp. Delayed action brake release. 2,899,838, 8–18–59, Cl. 74—540.
Jolly, George M., to Deering Milliken Research Corp. Cloth demonstration device. 2,900,512, 8–18–59, Cl. 250—52.
Jones, Dan H., and L. M. Stone, to The National Cash Register Co. Head positioning device. 2,900,625, 8–18–59, Cl. 340—174.
Jones, Edwin K., to Universal Oil Products Co. Apparatus useful for liquid-liquid contacting. 2,900,238, 8–18–59, Cl. 23—270.5.
Jones, Jack, Sr. Attachment type rack for sewing machines. 2,899,763, 8–18–59, Cl. 40—125.
Jordan, Donald G.: *See*—
Federgreen, Nathan, and Jordan. 2,900,078.
Jordan, Samuel C., to General Electric Co. Electric range. 2,900,480, 8–18–59, Cl. 219—20.
Jörn, Raoul, to Metallgummi G.m.b.H. Elastic wheels for vehicles. 2,900,001, 8–18–59, Cl. 152—49.
Joy, Ivan L. Diode gating circuit. 2,900,503, 8–18–59, Cl. 250—27.
Joy, Joseph F., to Joy Mfg. Co. Apparatus for mine roof control. 2,899,800, 8–18–59, Cl. 61—45.
Joy Mfg. Co.: *See*—
Joy, Joseph F. 2,899,800.

Leibold, Eldon L. Apparatus for edge-gluing, cutting, and stacking carbon paper from roll carbon stock. 2,899,926, 8–18–59, Cl. 118—5.
Leiter, Jack, to Leiter Mfg. Co. Combination tool. 2,900,870, 8–25–59, Cl. 81—15.5.
Leiter Mfg. Co.: *See*—
Leiter, Jack. 2,900,870.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,078, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,079, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,080, 8–18–59, Cl. 194—10.
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Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,190, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,191, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,192, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,193, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,194, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,195, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,196, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,197, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,198, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,199, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,200, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,201, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,202, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,203, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,204, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,205, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,206, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,207, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,208, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,209, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,210, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,211, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,212, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,213, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,214, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,215, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,216, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,217, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,218, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,219, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,220, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,221, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,222, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,223, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,224, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,225, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,226, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,227, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,228, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,229, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,230, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,231, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,232, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,233, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,234, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,235, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,236, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,237, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,238, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,239, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,240, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,241, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,242, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,243, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,244, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,245, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,246, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,247, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,248, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,249, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,250, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,251, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,252, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,253, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,254, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,255, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,256, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,257, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,258, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,259, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,260, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,261, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,262, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,263, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co. of America. Vending machine. 2,900,264, 8–18–59, Cl. 194—10.
Lemelson, Jerome H., to Automatic Canteen Co.

Hartman, Jacob J.: *See*—
Davis, Hyman, and Hartman. 2,899,091.

Hilkemeier, Louis G., to Worthington Corp. Liquid measuring device. 2,900,115, 8–18–59, Cl. 222—416.

Joy, Raymond D., to Pacific Mills. Seam detector. 2,900,468, 8–18–59, Cl. 200—81.

Juhlin, Arthur H., and A. L. Macan, to General Motors Corp. Filter. 2,900,043, 8–18–59, Cl. 183—40.

Julian Laboratories, Inc., The: *See*—
Julian, Percy L., and Printy. 2,900,399.

Julian, Percy L., and H. C. Printy, to The Julian Laboratories, Inc. Androstan-3,17-diol-4-one derivatives. 2,900,399, 8–18–59, Cl. 260—397.4.

Kahler, Harry L., and W. A. Tanzola, to Betz Laboratories, Inc. Inhibiting corrosion. 2,900,222, 8–18–59, Cl. 21—2.7.

Kaiser Aluminum & Chemical Corp.: *See*—
Thompson, Paul F. 2,900,437.

Kaiser, Wilhelm J.: *See*—
Blaser, Bruno, and Kaiser. 2,900,408.

Kanzelberger, Claude G.: *See*—
Paulsen, Paul L., Hiers, and Kanzelberger. 2,899,772.

Karpoff, David, to Mohasco Industries, Inc. Method of weaving pile fabric floor coverings with pile containing loops and tufts. 2,899,985, 8–18–59, Cl. 139—39.

Kaufman, Harold B., Jr., and A. Weiss, to United States of America, Atomic Energy Commission. Reactor control device. 2,900,316, 8–18–59, Cl. 204—193.2.

Kaufmann, Otto. Improvements in or relating to treating materials by a heat transfer process such as roasting, sintering, calcining, drying and the like. 2,900,179, 8–18–59, Cl. 263—52.

Kautsky, Frank C.: *See*—
Kremers, Howard E., Newman, and Kautsky. 2,900,231.

Kazan, Benjamin, to Radio Corp. of America. Electroluminescent device. 2,900,574, 8–18–59, Cl. 315—169.

Kearney, Thomas J.: *See*—
Jacke, Stanley E., Newsome, and Kearney. 2,900,038.

Keene, Lee C.: *See*—
Tuttle, Kenneth B., and Keene. 2,900,136.

Keener, Howard N. Contact jaw assembly for electric welding. 2,900,489, 8–18–59, Cl. 219—136.

Kehoe, Ellsworth A.: *See*—
Olson, Elmer, Kehoe, and Dermond. 2,899,951.

Keidel, Frederick A., to E. I. du Pont de Nemours and Co. Coulometric reagent generation. 2,900,317, 8–18–59, Cl. 204—195.

Keil, Havard L.: *See*—
Cavanaugh, Edward F., and Keil. 2,900,267.

Keith, Percival C., and H. N. Woebcke, to Hydrocarbon Research, Inc. Iron oxide reduction. 2,900,246, 8–18–59, Cl. 75—26.

Keller, Alexander, to Hartmann & Braun Aktiengesellschaft. Compressed gas condenser. 2,900,585, 8–18–59, Cl. 317—244.

Kellogg, M. W., Co., The: *See*—
Osborne, John B., and Patton. 2,900,329.
Patton, James L., Stanford, and Burton. 2,900,323.
Patton, James L., and Timson. 2,900,324.
Rice, Louis F., Patton, Timson, and Partridge. 2,900,325.
Skelly, Joseph F. 2,900,330.

Kelly, Donald H.: *See*—
Jackson, Ralph B., Kelly, and Townend. 2,900,234.

Kennedy, William P. Control for headlight beam switches. 2,900,570, 8–18–59, Cl. 315—83.1.

Kennedy, William, & Sons Ltd., The: *See*—
Sandison, Alexander G. 2,900,077.

Kent, Brian E.: *See*—
Sorensen, Knud B., and Kent. 2,900,031.

Kerlie, Walter L., to United States Steel Corp. Surface blowing process for making steel. 2,900,249, 8–18–59, Cl. 75—60.

Kerr-McGee Oil Industries Inc.: *See*—
Goren, Mayer B., and Elkins. 2,900,351.

Key, Edward M., ½ to H. B. Fischborn. Apparatus for making wood pulp chips. 2,899,992, 8–18–59, Cl. 144—162.

Keystone Chemurgic Corp.: *See*—
Schenck, Remsen T. 2,900,410.

Kharasch, Morris S., and W. Nudenberg. Inhibiting polymerization. 2,900,421, 8–18–59, Cl. 260—652.5.

Kiff, Ben W.: *See*—
Guest, Howard R., and Kiff. 2,900,395.

Kingsbury, Ralph N., and R. F. Caroselli, to Owens-Corning Fiberglas Corp. Dye composition and method of dyeing tightly wound glass fibers sized with a water swellable material. 2,900,275, 8–18–59, Cl. 117—63.

Kirby, Lawrence J., to Gulf Oil Corp. Controlling flow rates. 2,899,969, 8–18–59, Cl. 137—8.

Kirkbride, Alec B.: *See*—
Selby, James, Kirkbride, and Trebble. 2,899,850.

Kirkpatrick, Willard H., to Visco Products Co. Breaking water-in-oil emulsions. 2,900,350, 8–18–59, Cl. 252—331.

Klang, Leon R. Concrete block mold. 2,899,734, 8–18–59, Cl. 25—118.

Klein, Alexander. Hydraulic cementitious mixtures. 2,900,265, 8–18–59, Cl. 106—91.

Klein, Charles, to Vertipile, Inc. Ornamental material and method for making same. 2,900,270, 8–18–59, Cl. 117—25.

Klingsberg, Erwin: *See*—
Hardy, William B., and Klingsberg. 2,900,401.

Knoll Associates, Inc.: *See*—
Savage, Robert H., and Schultz. 2,900,014.

Kobusch, Helmut: *See*—
Darmann, Otto, Kobusch, and Speith. 2,900,285.

Koci, Ludvik J., to Sunbeam Corp. Combined waffle baker and grill. 2,899,888, 8–18–59, Cl. 99—331.

Kohinoor, Walden, Inc.: *See*—
Erdmann, Hans. 2,900,107.

Kohlenscheidungs-Gesellschaft, m.b.H.: *See*—
Braun, Georg. 2,899,942.

Koppers Co., Inc.: *See*—
Martin, John W., Jr. 2,900,373.

Korver, Margaret P.: *See*—
Cahoon, Nelson C., and Korver. 2,900,433.

Kosbab, Kenneth A., to General Motors Corp. Windshield washer pump. 2,899,901, 8–18–59, Cl. 103—148.

Kovasznay, Leslie S. G. Electro-optical contour outlining apparatus. 2,900,442, 8–18–59, Cl. 178—6.

Kozikowski, Felix, and F. A. Pearson, to Eagle Signal Corp. Delayed circuit closers. 2,900,049, 8–18–59, Cl. 188—1.

Kremers, Howard E., D. W. Newman, and F. C. Kautsky, to American Potash & Chemical Corp. Process for extracting rare earths from ores and residues. 2,900,231, 8–18–59, Cl. 23—19.

Krewer, William A.: *See*—
Remes, Nathaniel L., and Krewer. 2,900,392.

Krogel, Christopher J., to Western Electric Co., Inc. Automatic fluid distribution system. 2,900,176, 8–18–59, Cl. 239—93.

Krokos, Raymond M., and M. Nichols, Jr., to Evans Products Co. Bicycle pedal. 2,899,842, 8–18–59, Cl. 74—594.4.

Kubah, Leroy M., and V. L. Loffboro, to Gardner Machine Co. Reinforcing cylinder-type abrasive wheels. 2,900,241, 8–18–59, Cl. 51—293.

Kuehn, Rudolph L., and R. K. Seigle, to Hymac Corp. Sawtooth voltage generator. 2,900,502, 8–18–59, Cl. 250—27.

Kulick, Andrew, Jr.: *See*—
Barabutes, Theodore, and Kulick. 2,900,607.
Barabutes, Theodore, and Kulick. 2,900,627.

Kusama, Jun: *See*—
Oshima, Motoyoshi, Kusama, and Ishii. 2,900,284.

La Bombard, Leon E., to The International Paper Box Machine Co. Folding and gluing apparatus. 2,899,873, 8–18–59, Cl. 93—52.

Labombarde, Raymond A. Flap folding apparatus and method. 2,899,872, 8–18–59, Cl. 93—49.

La Coste, Lucien J. B., to La Coste & Romberg. Leveling means for gravity meters or the like. 2,899,826, 8–18–59, Cl. 73—382.

La Coste & Romberg: *See*—
La Coste, Lucien J. B. 2,899,826.

Lafaye, Hilton J., to The Goodyear Tire & Rubber Co. Rim construction. 2,900,006, 8–18–59, Cl. 152—410.

Lafront, Jacques, to Societe d'Etudes Chimiques pour l'Industrie et l'Agriculture. Separation of potassium and sodium ions from a mixture of sodium and potassium chlorides. 2,900,232, 8–18–59, Cl. 23—64.

Laiming, Harry J., to United States of America, Navy. Shaft positioning device. 2,899,830, 8–18–59, Cl. 74—10.29.

L'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude: *See*—
Bassot, André. 2,900,488.

Lakeside Laboratories, Inc.: *See*—
Biel, John H. 2,900,415.

La Maida, Thomas. Graduation cap. 2,899,682, 8–18–59, Cl. 2—193.

Lamb, George E., to Lamb-Grays Harbor Co., Inc. Tail slitter. 2,900,023, 8–18–59, Cl. 164—65.

Lamb-Grays Harbor Co., Inc.: *See*—
Lamb, George E. 2,900,025.

Lambert, Harry L., to Royal McBee Corp. Perforated record reader and feed mechanism. 2,900,120, 8–18–59, Cl. 235—61.11.

Lampe, Friedrich W., to Lapeer Mfg. Co. Clamp with predetermined clamping force indicating means. 2,899,995, 8–18–59, Cl. 144—302.

Landis, Stanley L. Electrically operated saw mill set works of the ratchet type. 2,899,990, 8–18–59, Cl. 143—120.

Landis Tool Co.: *See*—
Bricker, Robert E., Flohr, and Gebel. 2,899,778.

Lane, Malcolm S.: *See*—
Erekson, Arthur B., Lane, and Seidman. 2,899,787.

Lang, John L.: *See*—
Dreisbach, Robert R., and Lang. 2,900,279.

Lanham, William M., to Union Carbide Corp. Production of spiro heterocyclic dithiophosphoric acids. 2,900,407, 8–18–59, Cl. 260—461.

Lannert, William H., to Chicago Pump Co. Floating shield for comminuting device. 2,900,081, 8–18–59, Cl. 210—173.

Lannert, William H., to Chicago Pump Co. Screening and comminuting device. 2,900,082, 8–18–59, Cl. 210—173.

Lapeer Mfg. Co.: *See*—
Lampe, Friedrich W. 2,899,995.

Large, William E., to Westinghouse Electric Corp. Resistance welding control for bench welder. 2,900,573, 8–18–59, Cl. 315—165.

Larsen, Robert P., and R. C. Vogel, to United States of America, Atomic Energy Commission. Method of disintegrating refractory bodies. 2,900,230, 8–18–59, Cl. 23—14.5.

La Soundure Electrique Autogene, S.A.: *See*—
Danhier, Francois G. 2,900,484.
Danhier, Francois G. 2,900,487.

Laughter, Cecil M. and J. J. Fabrication of tools. 2,899,849, 8–18–59, Cl. 76—107.

Laughter, James J.: *See*—
Laughter, Cecil M. and J. J. 2,899,849.

Lauring, Edgar A., to Minnesota and Ontario Paper Co. Drill removing means for multiple spindle drill. 2,900,184, 8–18–59, Cl. 269—127.

Lawton, Elliott J.: *See*—
Schmitz, John V., and Lawton. 2,900,277.

Lazur, Thomas. Adjustable fishing rod. 2,900,153, 8–18–59, Cl. 248—44.

Lea, Lawrence. Telephone call tracing and recording system. 2,900,449, 8–18–59, Cl. 179—6.

Leasure, William C., to Mira-Pak, Inc. Apparatus for packaging. 2,899,873, 8–18–59, Cl. 93—82.

Leavitt, Cyril E., and C. E. Whitehurst. Sectional ladders. 2,900,041, 8–18–59, Cl. 182—178.

Leetronics, Inc.: *See*—
Lutz, Frederick W. 2,900,116.

McIntyre, Sidney S., Sr., to The Humboldt Co. Log yarding and loading apparatus. 2,900,089, 8–18–59, Cl. 212—59.

Miner, Theodore W.: *See*—
Bestler, Gerald M., and Miner. 2,900,287.

Leibold, Eldon L. Apparatus for edge-gluing, cutting, and stacking carbon paper from roll carbon stock. 2,899,926, 8–18–59, Cl. 118—41.

Lemon, George E. Dart board with integral scoring means. 2,900,188, 8–18–59, Cl. 273—102.

Leone, Salvatore J., to The New Haven Board and Carton Co. Carton with top handle. 2,900,124, 8–18–59, Cl. 229—52.

Leslie, James D., L. P. Garvey, and W. H. West, to General Motors Corp. Operating means for window regulator mechanism. 2,900,183, 8–18–59, Cl. 268—126.

Levy, Edward M., to Reflector-Hardware Corp. Adjustable shelf rack and reversible bracket therefor. 2,900,085, 8–18–59, Cl. 211—90.

Levy, Edward M., to Reflector-Hardware Corp. Shelf banding splicer. 2,900,086, 8–18–59, Cl. 211—90.

Lewis, Norman J., to Monsanto Chemical Co. Herbicides 1596 (A). 2,900,243, 8–18–59, Cl. 71—2.5.

Lewis, Orval M. Circumferentially traveling shoe type portable tire mounting device. 2,900,017, 8–18–59, Cl. 157—1.22.

Libbey-Owens-Ford Glass Co.: *See*—
Brown, Wilbur F. 2,900,264.

Lich, Richard L., to General Steel Castings Corp. Railway vehicle body and truck assembly. 2,899,911, 8–18–59, Cl. 105—171.

Lichtenberger, Horst, to The Babcock & Wilcox Co. Cyclone firing. 2,899,917, 8–18–59, Cl. 110—28.

Lidov, Rex E., to Shell Development Co. Preparation of polychloro-alicyclic compounds. 2,900,420, 8–18–59, Cl. 260—648.

Lily of France, Inc.: *See*—
Spitzer, Anne. 2,899,963.

Linden, Herbert E., to American Mollerizing Corp. Method and means for continuously pre-treating and coating vibrating metal objects. 2,900,278, 8–18–59, Cl. 117—31.

Link-Belt Co.: *See*—
Schwettman, Roy E. 2,899,807.

Little, Randel Q., Jr.: *See*—
Sabol, Albert R., and Little. 2,900,376.

Livermont, Frank W. Attitude compensated predetermined torque release wrench. 2,899,854, 8–18–59, Cl. 81—52.4.

Lockheed Aircraft Corp.: *See*—
Zboril, Frederic R. 2,900,636.

Lockwood, Raymond M. Aerial toy. 2,899,773, 8–18–59, Cl. 46—74.

Loebel, Frederick A., and H. H. Grobecker, to Cleaver-Brooks Co. Modulating valve. 2,899,980, 8–18–59, Cl. 138—46.

Loffboro, Vernon L.: *See*—
Kubsh, Leroy M., and Loffboro. 2,900,241.

Logan, Stanley E., to General Electric Co. Pipe seal. 2,900,199, 8–18–59, Cl. 285—187.

Long, John V., and J. V. Furth, to Solar Aircraft Co. Cermet composition and method of coating therewith. 2,900,276, 8–18–59, Cl. 117—70.

Longini, Richard L., to Westinghouse Electric Corp. Increase of image contrast with television pickup tube. 2,900,445, 8–18–59, Cl. 178—6.8.

Lopes, Rene. Camera case. 2,899,879, 8–18–59, Cl. 95—11.

Lopes, Rene. Combination camera and radio. 2,899,881, 8–18–59, Cl. 95—12.

Lord Mfg. Co.: *See*—
Coleman, Elmer W., Jr., and Alstadt. 2,900,292.

Love, John W., to United States of America, Air Force. Centering and mounting means for cathode ray tubes and the like. 2,900,631, 8–18–59, Cl. 340—367.

Lowe, Warren, to California Research Corp. Process for preparing lubricant compositions and concentrates therefor. 2,900,339, 8–18–59, Cl. 252—33.4.

Lowery, Fred, and J. D. Phillips. Emergency braking system for vehicles. 2,900,053, 8–18–59, Cl. 188—106.

Lubrizol Corp., The: *See*—
Miller, Clark O. 2,900,378.
Vogel, Paul W., and Meinhardt. 2,900,406.

Lubasynski, Hans G., and J. Wardley, to Electric & Musical Industries Ltd. Formation of layers of photo-conductive materials. 2,900,280, 8–18–59, Cl. 117—215.

Lucas, John H., and K. L. Smith, to Powers-Samas Accounting Machines Ltd. Electric storage and data routing apparatus. 2,900,572, 8–18–59, Cl. 315—84.5.

Ludwig, John R., to Dana Corp. Tractor take-off clutch. 2,899,897, 8–18–59, Cl. 192—48.

Ludwig, Leon R.: *See*—
Cumming, James M., and Ludwig. 2,900,509.

Lufkin Rule Co.: *See*—
Zelnick, Charles. 2,899,839.

Lundsager, Christian B., to E. I. du Pont de Nemours and Co. Orientation of polyethylene terephthalate film. 2,899,713, 8–18–59, Cl. 18—56.

Lutz, Frederick W., to Leetronics, Inc. Dispensing device. 2,900,116, 8–18–59, Cl. 222—477.

Lynn, Lawrence B., to Westinghouse Electric Corp. Stabilizing apparatus. 2,899,828, 8–18–59, Cl. 74—5.5.

Lyon, George A. Wheel cover. 2,900,208, 8–18–59, Cl. 301—37.

Lyon, Luther L., Jr.: *See*—
Barna, Robert L., Dosher, Humphries, Jeanes, Lyon, Perry, Speer, and Earhart. 2,900,343.

Lyons, Joseph, O. C. Elmer, and R. E. Berry, deceased (by M. E. Berry, administratrix), to Texaco Inc. Extreme pressure lubricant additive. 2,900,341, 8–18–59, Cl. 252—48.4.

Lyvers, Garland E. Two-cycle gasoline engine. 2,899,946, 8–18–59, Cl. 123—65.

MABEG Maschinenbau G.m.b.H.: *See*—
Schwebel, Adolf. 2,900,186.

Macan, Albert L.: *See*—
Juhlin, Arthur H., and Macan. 2,900,043.

Machlett Laboratories, Inc.: *See*—
Doolittle, Howard D. 2,900,549.

MacIntyre, Alfred J., Jr., and R. A. Martel, to Hughes Aircraft Co. Electroluminescent devices and methods therefor. 2,900,271, 8–18–59, Cl. 117—33.5.

Mackay, Johnstone S.: *See*—
Skaptason, Joseph B., and Mackay. 2,900,294.

MacLean, Alexander F.: *See*—
Stautzenberger, Adin L., and MacLean. 2,900,413.

MacMillan & Bloedel Ltd.: *See*—
Forrest, John R., and Moul. 2,900,098.

Maier, Albert: *See*—
Zittrell, Anton, and Maier. 2,900,059.

Maier, Robert, to American Feldmuehle Corp. Thread guide. 2,900,144, 8–18–59, Cl. 242—153.

Majusick, Walter. Static line release. 2,900,206, 8–18–59, Cl. 294—83.

Mandel, Henri, ½ to E. Scott. Animated toy boxer. 2,899,774, 8–18–59, Cl. 46—120.

Mannesmann Akt.: *See*—
Darmann, Otto, Kobusch, and Speith. 2,900,285.

Manns, William F., L. G. Cheatum, and B. W. Gustafson, to Deere & Co. Conveyor feeder for mobile ensilage loader. 2,900,069, 8–18–59, Cl. 198—204.

Manteuffel, Allan A., G. R. Cook, and W. W. Cortiss, to The Pure Oil Co. Lubricants. 2,900,342, 8–18–59, Cl. 252—57.

Marbury, Ralph E., to Westinghouse Electric Corp. Series capacitor protective device. 2,900,578, 8–18–59, Cl. 317—12.

Marcantonio, Daniel L. Electrical device for forming holes in nursing nipples. 2,900,481, 8–18–59, Cl. 219—29.

Markel Electric Products, Inc.: *See*—
Piper, Richard C., Jr., and Ogden. 2,900,128.

Marsh, Gareld E., to General Railway Signal Co. Mechanically resonant decoding apparatus. 2,900,581, 8–18–59, Cl. 317—147.

Marshall, Clifford D.: *See*—
Johnson, George F., Marshall, and Criswell. 2,900,366.

Martel, Richard A.: *See*—
MacIntyre, Alfred J., Jr., and Martel. 2,900,271.

Martin, Alfred R., to Imperial Chemical Industries Ltd. Griseofulvin uses and compositions. 2,900,304, 8–18–59, Cl. 167—65.

Martin, John W., Jr., to Koppers Co., Inc. Ethylene polymerization process. 2,900,373, 8–18–59, Cl. 260—94.9.

Martinek, Thomas W., and E. T. Froncsak, to The Pure Oil Co. Anhydrous calcium base greases containing free fatty acid. 2,900,340, 8–18–59, Cl. 252—40.

Martino, Eugene A.: *See*—
Hirt, Gerald E., and Martino. 2,900,150.

Marusen Kabushiki Kaisha: *See*—
Nishigori, Kimpei, and Hayashi. 2,899,891.

Marvaland, Inc.: *See*—
Gibbons, Thomas P. 2,899,728.

Matthews, Jennie, to Westinghouse Electric Corp. Turbine apparatus. 2,899,822, 8–18–59, Cl. 73—136.

Matthews, Russell B., to Baso Inc. Control apparatus. 2,899,970, 8–18–59, Cl. 137—66.

Matthews, Russell B., to Baso Inc. Fluid pressure operated control devices. 2,899,972, 8–18–59, Cl. 137—495.

Mattox, Milton E. Sighting level. 2,900,159, 8–18–59, Cl. 248—229.

Matyear, Charles, Jr., to Phillips Petroleum Co. Solvent extraction apparatus. 2,900,308, 8–18–59, Cl. 196—14.52.

Max-Planck-Institut fur Biophysik: *See*—
Hense, Otto L. 2,900,543.

Maxim, Oren B., to Scovill Mfg. Co. Button loop fastener. 2,899,731, 8–18–59, Cl. 24—202.1.

May, Claude H., to The Murray Corp. of America. Road vehicle door construction. 2,900,207, 8–18–59, Cl. 296—47.

Mayes, Fred M., to Sun Oil Co. Tank gauge. 2,899,751, 8–18–59, Cl. 33—126.6.

Maytag Co., The: *See*—
Smith, Thomas R. 2,899,817.
Smith, Thomas R., and Scott. 2,899,818.

McCall, Harold M.: *See*—
Nicolaisen, Reidar J., and McCall. 2,899,921.

McCall, Marvin A., and R. L. McConnell, to Eastman Kodak Co. Halomethanephosphonates. 2,900,405, 8–18–59, Cl. 260—461.

McChesney, Cuyler S.: *See*—
Hawkins, Harold F., and McChesney. 2,899,711.

McClaine, Leslie A., to United States of America, Atomic Energy Commission. Uranium leaching and recovery process. 2,900,229, 8–18–59, Cl. 23—14.5.

McConnell, Richard L.: *See*—
McCall, Marvin A., and McConnell. 2,900,405.

McCulloch Corp.: *See*—
Bandli, John C., Foster, and Farmer. 2,899,902.

McDonough, Everett G.: *See*—
McGoldrick, Virginia, and McDonough. 2,899,965.

McEuen, Harry B. X-ray apparatus. 2,900,542, 8–18–59, Cl. 313—56.

McGahen, Joe W., to E. I. du Pont de Nemours and Co. Process and product to inhibit sugar inversion. 2,900,283, 8–18–59, Cl. 127—30.

McGlone, Roscoe H. Seat cushion. 2,900,012, 8–18–59, Cl. 155—182.

McGoldrick, Virginia, and E. G. McDonough. Bromate-urea oxidative fixing composition and process. 2,899,965, 8–18–59, Cl. 132—7.

McGowan, George F. Dental flask. 2,899,707, 8–18–59, Cl. 18—33.

McGuffey, Orton S., to Tranter Mfg., Inc. Plate heat exchange unit. 2,900,175, 8–18–59, Cl. 257—258.

McHenry, Thomas F., and J. J. Grabinski, to Electric Regulator Corp. Electric generator regulating system. 2,900,593, 8–18–59, Cl. 322—24.

McIntosh, Virgil G.: *See*—
Bostick, Winston H., and McIntosh. 2,900,548.

National Research Development Corp.: *See*—
Stott, Frank D. 2,899,853.

Nelson, Ralph E., to Nelson Electric Co. Electrical connector. 2,900,618, 8–18–59, Cl. 339—176.

Nelson Electric Co.: *See*—
Nelson, Ralph E. 2,900,618.

Nelson Stud Welding, Inc.: *See*—
Arnold, Robert E., and Nelson. 2,899,532.

Nesbitt, Inc., John J.: *See*—
Bergstein, Harold, and Nesbitt. 2,900,281.

Nestle-Le Mur Co.: *See*—
Bergstein, Harold, and Nesbitt. 2,900,281.

Neuhaus, Hans, to Siemens-Schuckertwerke Akt. Electrical switching device. 2,900,471, 8–18–59, Cl. 200—153.

Neumann, Hans, to Siemens-Schuckertwerke Akt. Electrical switching device. 2,900,472, 8–18–59, Cl. 200—153.

Newell, Robert E., to Sperry Rand Corp. Electrical circuit. 2,900,599, 8–18–59, Cl. 328—58.

Nicolaisen, Reidar J., and McCall. 2,899,921.

Nicolaisen, Reidar J., and Nicolaisen. 2,899,922.

Nicolaisen, Reidar J., and Nicolaisen. 2,899,923.

Nicolaisen, Reidar J., and Nicolaisen. 2,899,924.

Nicolaisen, Reidar J., and Nicolaisen. 2,899,925.

Nicolaisen, Reidar J., and Nicolaisen. 2,899,926.

Nicolaisen, Reidar J., and Nicolaisen.

McIntyre, Sidney S., Sr., to The Humboldt Co. Log yarding and loading apparatus. 2,900,089, 8–18–59, Cl. 212—59.
McKay Machine Co., The: *See*—
Bandy, Kenneth L., and Davidson. 2,900,143.
McKone, Elissa D. Cleansing cream dispenser. 2,900,118, 8–18–59, Cl. 222—215.
McLanahan & Stone Corp.: *See*—
Fye, Ronald L. 2,899,806.
Fye, Ronald L. 2,900,177.
McLaughlin, Donald J., and R. E. Gorosdos, to United States of America, Navy. Telescriber system. 2,900,446, 8–18–59, Cl. 178—18.
McMillan, George W., ½ to E. C. McRorey. Onion transplanting machines. 2,899,918, 8–18–59, Cl. 111—3.
McMillan, Stephen L., to General Electric Co. Room air conditioning apparatus having automatic odor removal operation. 2,899,802, 8–18–59, Cl. 62—157.
McNamara, John D.: *See*—
Subart, William. 2,900,141.
McRorey, E. C.: *See*—
McMillan, George W. 2,899,918.
McVeagh, William J.: *See*—
Brown, William E., McVeagh, and Wallace. 2,900,836.
Earley, James W., and McVeagh. 2,900,337.
McWhirter, Milford and W. T. Movable graduator. 2,899,749, 8–18–59, Cl. 33—75.
McWhirter, Wayne T.: *See*—
McWhirter, Milford and W. T. 2,899,749.
McWilliams, Ernest, to The Stanford Seed Co., Inc. Seed treating composition comprising iron oxide, calcium carbonate and a water-insoluble copper salt. 2,900,303, 8–18–59, Cl. 167—46.
Meech, Ralph E.: *See*—
Nelson, Delbert L. 2,900,003.
Meek, Gregory G. Towing apparatus for water skiers. 2,899,925, 8–18–59, Cl. 114—235.
Mehltretter, Charles L.: *See*—
Rankin, John C., and Mehltretter. 2,900,268.
Meier Electric and Machine Co., Inc.: *See*—
Thompson, Charles E. 2,900,202.
Meinhardt, Norman A.: *See*—
Vogel, Paul W., and Meinhardt. 2,900,406.
Mellen, Alice M.: *See*—
Mellen, William F. 2,900,032.
Mellen, William F., to A. M. Mellen. Automatic self-aligning two-way plow. 2,900,032, 8–18–59, Cl. 172—210.
Melloy, Harold J., to The Patent Button Co. of Tennessee. Control knobs. 2,899,841, 8–18–59, Cl. 74—548.
Mendelson, Myron J.: *See*—
Burns, Cecil H., Jr., and Mendelson. 2,900,132.
Mengel, Clare L., and D. P. Miles. Magnetic field detector. 2,900,595, 8–18–59, Cl. 324—6.
Merckling, Nikolaus G.: *See*—
Gresham, William F., and Merckling. 2,900,372.
Mertz, Clyde W., to Phillips Petroleum Co. Stabilization of heterocyclic nitrogen compounds. 2,900,387, 8–18–59, Cl. 260—290.
Metal Hydrides Inc.: *See*—
Hinckley, Alfred A., and Del Guidice. 2,900,224.
Winiarczyk, Edward R. 2,900,240.
Metallgummi G.m.b.H.: *See*—
Jörn, Raoul. 2,900,001.
Metcalfe, Kenneth, to Universal Cyclops Steel Corp. Free-machining austenitic alloys. 2,900,250, 8–18–59, Cl. 75—124.
Metcalfe, Kenneth A., and R. J. Wright, to Commonwealth of Australia, care of the Secretary of the Department of Supply. Solid separation by electrophoretic means. 2,900,320, 8–18–59, Cl. 204—300.
Metropolitan-Vickers Electrical Co. Ltd.: *See*—
Neville, Sidney, and Owen. 2,899,855.
Tudge, Joseph. 2,900,538.
Meyer, Barthold F. to General Motors Corp. Window regulator drive mechanism. 2,899,832, 8–18–59, Cl. 74—413.
Meyer, Daniel A., to The Dayton Rubber Co. Textile rub apron. 2,899,715, 8–18–59, Cl. 19—153.
Meyer Mfg. Co.: *See*—
Cheng, Wing G. 2,900,493.
Meyer Mfg. Co. Ltd.: *See*—
Cheng, Wing G. 2,900,494.
Meystre, Charles: *See*—
Wettstein, Albert, Hunger, Meystre, and Ehmann. 2,900,398.
Michigan College of Mining & Technology, Board of Control of the: *See*—
Yeadon, Donald J., Hooker, and Garland. 2,899,994.
Micro Balancing, Inc.: *See*—
Frank, Karl F. 2,899,827.
Frank, Karl F. 2,900,520.
Midwest Mfg. Co.: *See*—
Aylor, Elmo E. 2,900,462.
Egan, Thomas R. 2,899,700.
Vollmer, Earl C. 2,899,720.
Miles, Dickerson P.: *See*—
Mengel, Clare L., and Miles. 2,900,595.
Miller, Clark O., to The Lubrizol Corp. Process for modification of olefin polymers. 2,900,378, 8–18–59, Cl. 260—139.
Miller, Elmer C., to Phillips Petroleum Co. Fractionator indicating and control method. 2,900,334, 8–18–59, Cl. 208—350.
Miller, Elvas A., and D. A. Johnson, to Reed Roller Bit Co. Erosible nozzle for roller bit. 2,900,171, 8–18–59, Cl. 255—313.
Miller, Ernest P., Sr.: *See*—
Huge, Robert W. 2,899,805.
Milliken, Thomas H., Jr.: *See*—
Heinemann, Heins, Milliken, and Stevenson. 2,900,429.
Mindt, Frederick E., and W. J. Schmidt, to Westinghouse Electric Corp. Compensating unit for watthour meters. 2,900,603, 8–18–59, Cl. 324—138.
Miner, Theodore W.: *See*—
Beatler, Gerald M., and Miner. 2,900,287.
Minneapolis-Honeywell Regulator Co.: *See*—
Adams, Foster L., and Pidcock. 2,899,825.
Aske, Leonard E. 2,900,471.
Beatler, Gerald M., and Miner. 2,900,287.
Nickells, Stanley W. 2,900,163.
Minnesota Mining and Mfg. Co.: *See*—
Wasserman, David. 2,900,364.
Minnesota and Ontario Paper Co.: *See*—
Lauring, Edgar A. 2,900,184.
Woodward, Hobart. 2,899,716.
Minter, John O. Pipe handling equipment. 2,900,091, 8–18–59, Cl. 214—2.5.
Mira-Pak, Inc.: *See*—
Leasure, William C. 2,899,875.
Misfeldt, Charles C. Molded structures and method for forming same. 2,899,727, 8–18–59, Cl. 22—193.
Mitchell, William H., and R. P. Percy, to Westinghouse Electric Corp. Electric motor. 2,900,539, 8–18–59, Cl. 310—62.
Modest, Edward J., to Children's Cancer Research Foundation. Dihydrotriazines and method of manufacture. 2,900,385, 8–18–59, Cl. 260—249.9.
Mohasco Industries, Inc.: *See*—
Karpoff, David. 2,899,985.
Moll, John L., to Bell Telephone Laboratories, Inc. Transistor test set. 2,900,582, 8–18–59, Cl. 317—158.
Momberg, Vernon B. Subtracting circuit. 2,900,501, 8–18–59, Cl. 250—27.
Monroe, William J., to Pittsburgh Plate Glass Co. Cleaning spray nozzles. 2,899,929, 8–18–59, Cl. 118—302.
Monsanto Chemical Co.: *See*—
Baker, Joseph W., and Saul. 2,900,296.
Chapin, Earl C., and Smith. 2,900,359.
Harman, Marion W., and D'Amico. 2,900,299.
Heininger, Samuel A. 2,900,345.
Heininger, Samuel A., and Ringwald. 2,900,409.
Jaworski, Ernest G., and Gaertner. 2,900,298.
Johnson, William K. 2,900,402.
Lewis, Norman J. 2,900,243.
Shaver, Kenneth J. 2,900,266.
Stone, Bobbie D. 2,900,295.
Stone, Bobbie D., and Nielsen. 2,900,358.
Wygant, James C. 2,900,297.
Montagna, Amelio E., to Union Carbide Corp. Purification of acetoacetic esters by distillation. 2,900,311, 8–18–59, Cl. 202—57.
Montgomery, Orin C., to Phillips Petroleum Co. System for recording time. 2,900,619, 8–18–59, Cl. 340—15.
Moore, Robert B., Jr.: *See*—
Stanley, John C., Moore, Frazier, and Williams. 2,899,930.
Moore, Robert C., to Philco Corp. Horizontal deflection system for cathode ray tubes. 2,900,565, 8–18–59, Cl. 315—27.
Moreland, Ethelbert H. Hand control for automobile brake and accelerator pedals. 2,899,835, 8–18–59, Cl. 74—481.
Morgan Machine Co., Inc.: *See*—
Good, Romer F. 2,899,933.
Moro-Lin, Joseph J. Stripper for coin mailers. 2,900,097, 8–18–59, Cl. 214—310.
Morris, John N., to The S. U. Carburetter Co. Ltd. Fuel suplying system for spark-ignition fuel injection internal combustion engines. 2,899,953, 8–18–59, Cl. 123—179.
Morris, Robert B., to Westinghouse Air Brake Co. Anti-freezer for pipe lines. 2,899,977, 8–18–59, Cl. 138—34.
Morris, Wheeler & Co., Inc.: *See*—
Spodobalski, Joseph W. 2,899,848.
Morrison, Charles S., to Deere & Co. Implement mounting means. 2,900,034, 8–18–59, Cl. 172—273.
Morse, William H., to Westinghouse Electric Corp. Quiet squirrel-cage motors. 2,900,537, 8–18–59, Cl. 310—51.
Moteurs Electriques Segal & Cie: *See*—
Piquet, Georges. 2,900,587.
Motorola, Inc.: *See*—
Berens, Gregory E. 2,899,808.
Bottom, Virgil E. 2,900,584.
Stenerson, Charles K., and Waterman. 2,900,621.
Moul, Albert A.: *See*—
Forrest, John R., and Moul. 2,900,098.
Mueller, Herman H.; small interests to various assignees. Tone arm control for the fully automatic or manually controlled playing of intermixed records. 2,900,192, 8–18–59, Cl. 274—10.
Muetterties, Earl L., to E. I. du Pont de Nemours and Co. Synthesis of aryiboron halides. 2,900,414, 8–18–59, Cl. 260—543.
Munter, Casimir J., to Hagan Chemicals & Controls, Inc. Feeding devices. 2,899,971, 8–18–59, Cl. 137—216.
Murray Corp. of America, The: *See*—
May, Claude H. 2,900,207.
Muter Co., The: *See*—
Novak, James F. 2,900,040.
Myska, Gunter, to G. M. Pfaff A.G. Automatic work control for multiple-operation sewing machines. 2,899,910, 8–18–59, Cl. 112—57.
Naamloose Vennootschap Kunstzijdespinnerij Nyma: *See*—
Waning, Hendrik. 2,900,217.
Napier, D., & Son Ltd.: *See*—
Ramsay, Frank R. F. 2,900,575.
Nash, Lawrence H. Process for the preparation of fungicides, bactericides, insecticides and microbicides. 2,900,293, 8–18–59, Cl. 167—22.
National Cash Register Co., The: *See*—
Burns, Cecil H., Jr., and Mendelson. 2,900,132.
Howes, Royal E. 2,900,533.
Jones, Dan H., and Stone. 2,900,625.
Schoen, Seymour. 2,900,215.
Werner, Frank R., Flint, and Sterner. 2,899,893.
National Lead Co.: *See*—
Orsino, Joseph A. 2,900,431.

Doolittle, Howard D. 2,900,549.

National Research Development Corp.: *See*—
Stott, Frank D. 2,899,858.
Nayfack, Jules S. Dental appliance. 2,899,746, 8–18–59, Cl. 32—40.
Nelson, Delbert L., 30% to R. H. Meech. Traction device for vehicle tires. 2,900,003, 8–18–59, Cl. 152—225.
Nemecsek, Louis J., to Ralph B. Carter Co. Ejector pots. 2,899,908, 8–18–59, Cl. 105—243.
Neville, Sidney, and T. Owen, to Metropolitan-Vickers Electrical Co. Ltd. Bolt-tensioning devices. 2,899,855, 8–18–59, Cl. 81—53.
Newey, William H., and W. S. Sterling, to Pneumatic Scale Corp., Ltd. Closure applying apparatus. 2,899,790, 8–18–59, Cl. 53—321.
New Haven Board and Carton Co., The: *See*—
Leone, Salvatore J. 2,900,124.
Newhouse, Vernon L., to Radio Corp. of America. Magnetic core counter circuits. 2,900,626, 8–18–59, Cl. 340—174.
New Jersey Zinc Co., The: *See*—
Andrews, Earl W. 2,900,318.
Newman, David W.: *See*—
Kremers, Howard E., Newman, and Kautsky. 2,900,231.
Newsome, Lowell C.: *See*—
Jacks, Stanley E., Newsome, and Kearney. 2,900,036.
Newton, Phillip S. Eye stimulator. 2,899,956, 8–18–59, Cl. 128—76.5.
Ney, Edward P.: *See*—
Huch, William F., Ney, and Winckler. 2,900,147.
Nichols, Michael, Jr.: *See*—
Krokos, Raymond M., and Nichols. 2,899,842.
Nickells, Stanley W., to Minneapolis-Honeywell Regulator Co. Diaphragm valve. 2,900,163, 8–18–59, Cl. 251—30.
Nickels, William H. Locking device. 2,900,148, 8–18–59, Cl. 244—83.
Nicol, Ernst W. Lifeboat. 2,899,695, 8–18–59, Cl. 9—4.
Nicolaisen, Reidar J., and H. M. McCall, to Raymond International Inc. Apparatus for making sheathed cables. 2,899,921, 8–18–59, Cl. 113—35.
Nielsen, Frederik. Gage for indicating king pin inclination. 2,899,752, 8–18–59, Cl. 33—203.18.
Nielsen, Morris L.: *See*—
Stone, Bobbie D., and Nielsen. 2,900,353.
Nienke, Artie D. Eccentrically offset ball joint for front wheel stub axle suspension. 2,900,196, 8–18–59, Cl. 280—96.1.
Niles, Vergil A. Rod and reel holder. 2,899,769, 8–18–59, Cl. 43—21.2.
Nilsson, Einar W. Cutting apparatus. 2,899,737, 8–18–59, Cl. 29—69.
Nilsson, Einar W. Drive mechanism for flying shears and the like. 2,899,843, 8–18–59, Cl. 74—681.
Nishigori, Kimpei, and T. Hayashi, to Marusen Kabushiki Kaisha. Numbering machine. 2,899,891, 8–18–59, Cl. 101—63.
Nishio, Frank M.: *See*—
Stockman, Earle F. 2,899,996.
Nitschke, Bruno, to Adlerwerke vorm. Heinrich Kleyer Akt. Device for adjusting the stroke force of the type bars in power-driven typewriters, book-keeping machines and the like. 2,900,062, 8–18–59, Cl. 197—17.
Nixdorff-Krein Mfg. Co.: *See*—
Hammond, Leonard A. 2,900,160.
Nogrady, Andor T., Sr. Differential gear. 2,899,845, 8–18–59, Cl. 74—711.
Noguera, Joseph, Casablancas High Draft Co. Ltd. Textile fibre drafting apparatus. 2,899,714, 8–18–59, Cl. 19—181.
Norman, Oscar L., to International Minerals & Chemical Corp. Synthesis of glutamic acid. 2,900,391, 8–18–59, Cl. 260—326.3.
Normandin, William O. Manufacture of gusset type envelopes. 2,899,874, 8–18–59, Cl. 93—62.
Norris, Charles B., to Westinghouse Air Brake Co. Valve device having arrangement for preventing extrusion of O-ring seals on valve element. 2,899,939, 8–18–59, Cl. 121—46.5.
Norris, Virgil R.: *See*—
Becher, James J., and Norris. 2,899,906.
North American Aviation, Inc.: *See*—
Schneider, Edward B. 2,900,272.
North American Philips Co., Inc.: *See*—
Crowther, Gerald O., and Toeswill. 2,900,551.
Stettler, Oskar. 2,900,602.
Stuyts, Andreas L., Hoekstra, Weber, and Rathenau. 2,900,344.
North Bay Engineering Co.: *See*—
Phillips, Bruce B., and Smith. 2,899,877.
Northcott, Roy P., and E. C. Housam, to The British Petroleum Co. Ltd. Hydrocatalytic desulfurization of gas oil. 2,900,332, 8–18–59, Cl. 208—216.
Northrop Aircraft, Inc.: *See*—
Steele, Floyd G., and Collison. 2,900,134.
Tuttle, Kenneth B., and Keene. 2,900,126.
Novak, James F., to The Muter Co. Loudspeaker system. 2,900,040, 8–18–59, Cl. 181—31.
Novy, Louis E., to United States of America, Air Force. Composition containing poly-1, 1-dihydroxyperfluorobutyl acrylate, silicon dioxide, carbon black and curing agent. 2,900,355, 8–18–59, Cl. 260—28.5.
Nudenberg, Walter: *See*—
Karasch, Morris S., and Nudenberg. 2,900,421.
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Rathenau, Gerard W., to North American Philips Co., Inc. Electrical discharge device. 2,900,702, 8–18–59, Cl. 313—109.
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Matyear, Charles, Jr. 2,900,308.
Mertz, Clyde W. 2,900,387.
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Montgomery, Orin C. 2,900,619.
Scofield, Raymond C. 2,900,044.
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Monroe, William J. 2,899,929.

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Billings, Charles K., and Platt. 2,899,717.

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Daly, Thomas A., and Prescott. 2,899,923.

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Prier, William A. Dual outboard motor steering rig. 2,899,833, 8–18–59, Cl. 74—471.

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Martinek, Thomas W., and Froncsak. 2,900,340.
Remes, Nathaniel L., and Kewer. 2,900,392.
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Ramer, Lyle A. 2,900,588.

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Batzle, William K. 2,900,553.
Burns, Leslie L., Jr. 2,900,562.
Cope, Appleton D. 2,900,569.
Davidson, James J. 2,900,456.
Goldstein, Bernard. 2,900,286.
Kasan, Benjamin. 2,900,574.
Newhouse, Vernon L. 2,900,626.
Olive, George A. 2,900,459.
Rajchman, Jan A., and Briggs. 2,900,622.
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Hruby, John O., Jr. 2,899,978.

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Hnett, George, and Ranky. 2,900,418.
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Giani, Adolfo. 2,899,894.
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Cassidy, Harold G., and Earin. 2,900,353.
Giser, Samuel. 2,900,137.
Reynolds, Ralph C.: *See*—
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Ferguson, D. C. 2,900,094.
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Robinson, Ivan M.: *See*—
Edwards, Walter M., and Robinson. 2,900,269.
Robinson, Walter G. Detachable traction device for wheels. 2,900,004, 8–18–59, Cl. 152—226.
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Rockafellow, Stuart C. 2,899,857.
Rockafellow, Stuart C., to Robotron Corp. Method for comparing the contour of an article with a standard. 2,899,857, 8–18–59, Cl. 88—14.
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Lambert, Harry L. 2,900,130.
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Durant, John H. 2,899,993.
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Ruetz, John A., to United States of America, Army. Double stream growing-wave amplifier. 2,900,559, 8–18–59, Cl. 315—5.12.
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Frayer, Theodore, and Runner. 2,900,052.
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Bowen, Kermit A. 2,899,748.
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Alméa, Bengt S. O. 2,899,738.
Ohlsson, Fall J. O. W. 2,899,739.
Saubestre, Edward B., and E. P. Buhan, to Sylvania Electric Products Inc. Addition materials for improving plating speeds. 2,900,313, 8–18–59, Cl. 204—43.
Saubestre, Edward B., to Sylvania Electric Products Inc. Bright plating solution and method. 2,900,314, 8–18–59, Cl. 204—43.
Saul, George A.: *See*—
Baker, Joseph W., and Saul. 2,900,296.
Savage, Robert H., and R. Schultz, to Knoll Associates, Inc. Supporting structure. 2,900,014, 8–18–59, Cl. 155—196.
Sawyer, Webster M.: *See*—
Fowkes, Frederick M., Sawyer, and Schick. 2,900,346.
Scandia Packaging Machinery Co.: *See*—
Anderson, Andrew W. 2,899,791.
Schaap, Ward B., to United States of America, Atomic Energy Commission. Recovery of uranium values from residues. 2,900,226, 8–18–59, Cl. 23—14.5.
Schenck, Remsen T., to Keystone Chemurgic Corp. Water-soluble derivatives of salicylic acid and process for preparing same. 2,900,410, 8–18–59, Cl. 260—474.
Schering Corp.: *See*—
Gould, David H., Hershberg, and Shapiro. 2,900,400.
Scheurer, Otto R., to Tokheim Corp. Dispenser nozzle receptacle. 2,900,111, 8–18–59, Cl. 222—74.
Schick, Martin J.: *See*—
Fowkes, Frederick M., Sawyer, and Schick. 2,900,346.
Schirp, Hubert: *See*—
Raecke, Bernhard, Blaser, Stein, Schirp, and Schatt. 2,900,386.
Schmidt, Carl O., Jr., to The Cincinnati Butcher's Supply Co. Closure means. 2,900,104, 8–18–59, Cl. 220—57.
Schmidt, Karl H., to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Room disinfection by means of volatile substances in the form of aerosols. 2,900,301, 8–18–59, Cl. 167—39.
Schmidt, Warren J.: *See*—
Mindt, Frederick E., and Schmidt. 2,900,603.
Schmidt, Warren J., and E. T. Rudy, to Westinghouse Electric Corp. Electrical measuring device. 2,900,604, 8–18–59, Cl. 324—138.
Schmitz, John V., and E. J. Lawton, to General Electric Co. Process of applying protective coatings by means of high energy electrons. 2,900,277, 8–18–59, Cl. 117—93.
Schmitz-Josten, Robert, to Farbenfabriken Bayer Aktiengesellschaft. Process for polymerizing ethylenically unsaturated compounds using a sulfur containing catalyst. 2,900,360, 8–18–59, Cl. 260—45.4.

Societe Anonyme des Laboratoires du Dr. Dubat: *See*—
Dubat, Jacques, and Polgar. 2,900,100.
Stapling Machines Co.: *See*—
Greene, John P. 2,900,106.

Schneeberger, Robert J., to Westinghouse Electric Corp. Bombardment conducting target. 2,900,555, 8-18-59, Cl. 313—355.

Schneider, Edward B., to North American Aviation, Inc. Method of heat treating metals employing an oxidation scale inhibitor. 2,900,272, 8-18-59, Cl. 117—46.

Schneider, Paul L., H. J. Cromwell, and W. H. Taylor, to General Motors Corp. Clutch for engine starting device. 2,900,057, 8-18-59, Cl. 192—45.1.

Schnell, Eugen: *See*—
Vöster, Walter, and Schnell. 2,899,702.

Schnoyer, Raymond G.: *See*—
Cook, Harold E. 2,900,090.

Schoen, Seymour, to The National Cash Register Co. Transistor record driver. 2,900,215, 8-18-59, Cl. 246—74.

Schofield, E. L., Inc.: *See*—
Schofield, Earl L. 2,900,172.

Schofield, Earl L., to E. L. Schofield, Inc. Heater for motor vehicles. 2,900,172, 8-18-59, Cl. 257—137.

Schroeder, Charles S., to The Yale & Towne Mfg. Co. Concealed door closer. 2,899,701, 8-18-59, Cl. 16—84.

Schuhmann, Richard L., and L. R. Zehnder, to American Duplex Co. Coffee grinder. 2,900,140, 8-18-59, Cl. 241—86.

Schultz, Richard: *See*—
Savage, Robert H., and Schultz. 2,900,014.

Schultz, William J., and C. F. van Bennekom, to General Electric Co. Time switch assembly. 2,900,468, 8-18-59, Cl. 200—38.

Schutt, Hartwig: *See*—
Raecke, Bernhard, Blaser, Stein, Schirp, and Schutt. 2,900,386.

Schwab, August: *See*—
Gärtner, Günter, Schwab, and Harz. 2,900,540.

Schwartz, Albert B., to Socony Mobil Oil Co., Inc. Attrition-resistant inorganic oxide gels and method for preparing the same. 2,900,349, 8-18-59, Cl. 252—317.

Schwebel, Adolf, to MABEG Maschinenbau G.m.b.H. Sheet feeder for printing and other sheet handling machines. 2,900,186, 8-18-59, Cl. 271—62.

Schwechten, Heinz W., J. Singer, and O. Bayer, to Farbenfabriken Bayer Aktiengesellschaft. Process for the dyeing of polymers of acrylonitrile or asymmetric dicyanoethylene. 2,900,216, 8-18-59, Cl. 8—39.

Schweim, Walter C. Manual rotator for antenna. 2,900,154, 8-18-59, Cl. 248—45.

Schwettman, Roy E., to Link-Belt Co. Geared flexible shaft couplings. 2,899,807, 8-18-59, Cl. 64—9.

Scofield, Raymond C., to Phillips Petroleum Co. Recovery and purification of acetylene. 2,900,044, 8-18-59, Cl. 183—115.

Scott, Arthur D., W. B. Greenlee, deceased (by H. B. Greenlee, administratrix), G. H. Evans, and W. G. Sinn; said administratrix and said Evans assors. of ½ to said Scott and ¼ to said Sinn. Fashion previewing projector. 2,899,860, 8-18-59, Cl. 88—24.

Scott, Ethel: *See*—
Mandel, Henri. 2,899,774.

Scott, Everette C. Method and apparatus for producing granulated food products. 2,900,256, 8-18-59, Cl. 99—56.

Scott Paper Co.: *See*—
Holcroft, Donald E. 2,900,024.
Powers, William R., and Volz. 2,900,278.

Scott, William F.: *See*—
Smith, Thomas R., and Scott. 2,899,818.

Scovill Mfg. Co.: *See*—
Binks, Chester J. 2,899,981.
Blake, Charles B., and Cady. 2,900,073.
Maxim, Oren B. 2,899,781.

Seaborg, Glenn T., J. W. Gofman, and R. W. Stoughton, to United States of America, Atomic Energy Commission. Selective separation of uranium from thorium, protactinium and fission products by peroxide dissolution method. 2,900,228, 8-18-59, Cl. 23—14.5.

Sealpack Corp.: *See*—
Rodth, Joseph J. 2,899,886.

Searle, G. D., & Co.: *See*—
Cella, John A. 2,900,383.

Seeler, Charles E.: *See*—
Bauer, Benjamin B., Gunter, and Seeler. 2,900,452.

Seger, Harold B. Training device for skaters. 2,900,008, 8-18-59, Cl. 155—22.

Seidman, Richard L.: *See*—
Erickson, Arthur B., Lane, and Seidman. 2,899,787.

Seigle, Robert K.: *See*—
Kuehn, Rudolph L., and Seigle. 2,900,502.

Selby, James, A. B. Kirkbride, and M. W. Trebble, to B. Elliott & Co. Ltd. Gearing and electric drills embodying the same. 2,899,850, 8-18-59, Cl. 77—7.

Sells, Gary L. Portable power saw with guide. 2,899,989, 8-18-59, Cl. 143—43.

Servi, John: *See*—
Zink, George A., Child, Servi, and Gorsky. 2,899,725.

Setterblade, Earl O., to United States of America, Navy. Combustion control arrangement for afterburners. 2,899,799, 8-18-59, Cl. 60—39.72.

Settles, James C., to The Buckeye Steel Castings Co. Spring group and damping mechanism. 2,900,181, 8-18-59, Cl. 267—8.

Sewell, Ben W., to United States of America, Navy. Switch. 2,900,467, 8-18-59, Cl. 200—80.

Shapiro, Elliot: *See*—
Gould, David H., Hershberg, and Shapiro. 2,900,406.

Shapiro, Paul. Circular awning. 2,899,719, 9-18-59, Cl. 20—87.5.

Sharpe, Ralph L., to Goodman Mfg. Co. Tensioning apparatus for rope sideframe conveyors. 2,900,070, 8-18-59, Cl. 198—208.

Shaver, Kenneth J., to Monsanto Chemical Co. Method of increasing fluidity of aqueous industrial mineral slurries. 2,900,266, 8-18-59, Cl. 106—100.

Shaver, William R., to Pullman-Standard Car Mfg. Co. Nailable steel floor for freight cars. 2,900,065, 8-18-59, Cl. 189—34.

Shaw, Gilbert. Process for melt spinning and orienting polystyrene filaments. 2,900,220, 8-18-59, Cl. 18—54.

Sheehan, Robert V.: *See*—
Collins, John F., and Sheehan. 2,900,333.

Sheldon, Luther M.: *See*—
Benander, George B., and Sheldon. 2,900,466.

Shell Development Co.: *See*—
Anderson, John, Johnson, and Hall. 2,900,419.
Fowkes, Frederick M., Sawyer, and Schick. 2,900,346.
Johnson, George F., Marshall, and Criswell. 2,900,366.
Lidov, Rex R. 2,900,420.
Trusheim, Ferdinand H. D. A. 2,900,026.

Shepherd, William G., to Bendix Aviation Corp. High frequency structure. 2,900,560, 8-18-59, Cl. 315—5.19.

Sherron, Percival H. Telephone booth door assembly. 2,900,020, 8-18-59, Cl. 160—206.

Shull, Francis M., to United States of America, Army. Illuminating head for bore inspection device. 2,899,856, 8-18-59, Cl. 88—14.

Shure Brothers, Inc.: *See*—
Bauer, Benjamin B., Gunter, and Seeler. 2,900,452.

Siemens & Halske Aktiengesellschaft: *See*—
Clasen, Hermann. 2,900,225.
Hennig, Fritz. 2,900,447.
Rauch, Walter. 2,900,583.

Siemens-Schuckertwerke Akt.: *See*—
Gartner, Gunter, Schwab, and Harz. 2,900,540.

Siggia, Sidney, to General Aniline & Film Corp. Preparation of iodine polyvinylpyrrolidone adducts. 2,900,305, 8-18-59, Cl. 167—70.

Signal-Stat Corp.: *See*—
Welsh, James W. 2,900,474.

Signode Steel Strapping Co.: *See*—
Dalton, Joseph H. 2,899,935.

Simon, Frank. Trousers hanger. 2,900,118, 8-18-59, Cl. 223—96.

Simpson, Edgar A.: *See*—
Ahlberg, Jacob E., and Simpson. 2,900,348.

Sims, Don C. Spoon and fork rest for kitchen utensils. 2,900,151, 8-18-59, Cl. 248—37.2.

Singelman, Fred E., to Admiral Corp. Method and apparatus for testing television receivers. 2,900,598, 8-18-59, Cl. 324—72.

Singer, Josef: *See*—
Schwechten, Heinz W., Singer, and Bayer. 2,900,216.

Singer Mfg. Co., The: *See*—
Dunn, Earl F. 2,899,920.

Sinn, William G.: *See*—
Scott, Arthur D., Greenlee, Evans, and Sinn. 2,899,860.

Skaptason, Joseph B., and J. S. Mackay, to Pittsburgh Coke & Chemical Co. Sulfamate rust eradicants. 2,900,294, 8-18-59, Cl. 167—22.

Skareen, Willard C., to The Bingham-Herbrand Corp. Mechanism control. 2,899,837, 8-18-59, Cl. 74—518.

Skarstrom, Charles W.: *See*—
Worsham, Charles H., and Skarstrom. 2,900,328.

Skelly, Joseph F., to The M. W. Kellogg Co. Fluidized solids hydrocarbon conversion system with an improved solids transfer between the reaction and stripping zones. 2,900,330, 8-18-59, Cl. 208—164.

Skelton, Wilfred. Hair curlers. 2,899,966, 8-18-59, Cl. 132—40.

Skyline Products: *See*—
De Berry, Charles H., and Guidi. 2,899,887.

Slater, Joseph N., to Colgate-Palmolive Co. Cosmetic and deodorant sticks. 2,900,306, 8-18-59, Cl. 167—90.

Smith, A. P., Mfg. Co., The: *See*—
Gaffin, Harry. 2,899,984.

Smith, Charles C. Machine for packaging fluent material. 2,899,789, 8-18-59, Cl. 53—281.

Smith, Clark C. Method of constructing dentures. 2,899,712, 8-18-59, Cl. 18—55.1.

Smith, John H., to General Motors Corp. Engine starter. 2,899,829, 8-18-59, Cl. 74—6.

Smith, Kenneth L.: *See*—
Lucas, John H., and Smith. 2,900,572.

Smith, Lee B., to Allied Chemical Corp. Manufacture of perfluoropropene. 2,900,422, 8-18-59, Cl. 260—653.5.

Smith, Orville J.: *See*—
Phillips, Bruce B., and Smith. 2,899,877.

Smith, Raymond E., to The A. C. Gilbert Co. Axial flow fan with variable direction of oscillating range. 2,900,127, 8-18-59, Cl. 230—256.

Smith, Richard F.: *See*—
Chapin, Earl C., and Smith. 2,900,359.

Smith, Thomas R., to The Maytag Co. Variable liquid level control. 2,899,817, 8-18-59, Cl. 68—138.

Smith, Thomas R., and W. F. Scott, to The Maytag Co. Variable liquid level control. 2,899,818, 8-18-59, Cl. 68—207.

Snyder, James E., and R. J. Swartz, to The Goodyear Tire & Rubber Co. Process of packaging dried fruit. 2,900,259, 8-18-59, Cl. 99—171.

Snyder, James E., and G. W. Ferner, to The Goodyear Tire & Rubber Co. Method of preserving the red color of red meat and product. 2,900,260, 8-18-59, Cl. 99—174.

Snyder, James E., and G. W. Ferner, to The Goodyear Tire & Rubber Co. Packaging freshly cut red meats. 2,900,261, 8-18-59, Cl. 99—174.

Snyder, Leonard W.: *See*—
Drnec, Harry F., Snyder, and Johnson. 2,900,122.

Swanson, Arthur B.: *See*—
Broders, Claude O., Jacobus, and Swanson. 2,899,798.

Sylcher, Max R., to Sylcher Motors and Machine Co., Inc. [illegible]

Teland, William G., Jr., to California Research Corp. Oxidation process employing sulfur dioxide. 2,900,412, 8-18-59,

Societe Anonyme des Laboratoires du Dr. Debat: See—
Debat, Jacques, and Peiger. 2,900,100.
Societe Anonyme Etablissements Labinal: See—
Boisserd, Pierre R. 2,900,594.
Societe Belge d'Electrochimie, Societe Anonyme: See—
Soetaert, Gustave. 2,900,233.
Societe d'Etudes Chimiques pour l'Industrie et l'Agriculture: See—
Lafont, Jacques. 2,900,232.
Societe d'Etudes et d'Applications de Procedes Nouveaux: See—
Tchoubritch, Michel, and Terroir. 2,900,696.
Societe Plastus S.A.: See—
Steiner, Maurice. 2,900,708.
Socony Mobil Oil Co., Inc.: See—
Schwartz, Albert B. 2,900,349.
Soetaert, Gustave, to Societe Belge d'Electrochimie, Societe Anonyme. Process for the production of calcium cyanamide. 2,900,233, 8-18-59, Cl. 23—73.
Solar Aircraft Co.: See—
Long, John V., and Furth. 2,900,276.
Son, Anthony J. Dental needle. 2,900,964, 8-18-59, Cl. 128—315.
Sondheimer, Franz, and G. Rosenkranz, to Syntex S.A. Method of making Δ^5 steroid compounds from Δ^4 steroid compounds. 2,900,382, 8-18-59, Cl. 260—239.55.
Sorel, Nathan, and W. A. Wismer, to United States of America, Air Force. Variable speed drive for spiral scanner. 2,900,510, 8-18-59, Cl. 250—83.3.
Sorensen, Knud B., and B. B. Kent, to Deere & Co. Vertically adjustable and foldable rod weeder support wheels. 2,900,031, 8-18-59, Cl. 172—44.
Soussloff, Dimitri G., and R. G. Hilbert, to Universal Winding Co. Textile machine. 2,900,796, 8-18-59, Cl. 57—36.
Specht, Ronald E., to The Goodyear Tire & Rubber Co. Substituted xylenols as rubber antioxidants. 2,900,362, 8-18-59, Cl. 260—45.95.
Sparks, Marshall S., Jr., to Phillips Petroleum Co. Analyser. 2,900,510, 8-18-59, Cl. 250—43.5.
Sparks, Marshall S., Jr., and T. H. Harp, Jr., to Phillips Petroleum Co. Regulated power supply. 2,900,511, 8-18-59, Cl. 250—43.5.
Speed, William C., and G. M. Sutheim, to Audio Devices, Inc. Production of ferromagnetic iron oxide. 2,900,236, 8-18-59, Cl. 23—200.
Speed, William C., and G. M. Sutheim, to Audio Devices, Inc. Production of ferromagnetic iron oxide. 2,900,239, 8-18-59, Cl. 23—277.
Speer, Robert J.: See—
Barna, Robert L., Dosher, Humphries, Jeanes, Lyon, Perry, Speer, and Barbaret. 2,900,342.
Speith, Karl G.: See—
Darmaan, Otto, Kobusch, and Speith. 2,900,285.
Spencer, Glenn S., to Bendix Aviation Corp. Engine starter gearing. 2,900,525, 8-18-59, Cl. 290—38.
Spencer, Glenn S., to Bendix Aviation Corp. Engine starter gearing. 2,900,526, 8-18-59, Cl. 290—38.
Spencer, Rolf E., and R. Velez, to Electric & Musical Industries Ltd. Displacement error reducing pattern servo-system. 2,900,553, 8-18-59, Cl. 318—162.
Spencer, Rolf E., and R. Velez, to Electric & Musical Industries Ltd. Servo mechanisms. 2,900,560, 8-18-59, Cl. 318—448.
Sperry Products, Inc.: See—
Drake, Harcourt C. 2,900,506.
Sperry Rand Corp.: See—
Daniels, Howard L. 2,900,529.
Rider, Paul E. 2,900,131.
Rubens, Sidney M. 2,900,282.
Whetter, Lloyd A. 2,900,506.
Spitzer, Anne, to Lily of France, Inc. Undergarment. 2,900,962, 8-18-59, Cl. 128—542.
Spodobalski, Joseph W., to Morris, Wheeler & Co., Inc. Apparatus for dressing rotary saws. 2,900,848, 8-18-59, Cl. 76—43.
Sprague Electric Co.: See—
Rogers, Donald G. 2,900,579.
Sprinkle, Leland W. Tape reel drive reversing switch. 2,900,142, 8-18-59, Cl. 242—55.12.
Squires, Rathbun B., and D. O. Ballinger, to Westinghouse Electric Corp. Electrical measuring system. 2,900,605, 8-18-59, Cl. 324—142.
Stahl, Richard F., and C. Woolf, to Allied Chemical Corp. Manufacture of perchlorofluoropropenes. 2,900,422, 8-18-59, Cl. 260—653.4.
Staller, Karel J. Toy cap gun with longitudinally movable actuator. 2,900,764, 8-18-59, Cl. 42—57.
Stamicarbon N.V.: See—
Ottenheym, Johannes H. 2,900,310.
Standard Oil Co. (Indiana): See—
Fields, Ellis K. 2,900,377.
Sabel, Albert R., and Little. 2,900,376.
Standard Oil Co. (Ohio), The: See—
Foreman, Robert W. 2,900,347.
Standard Railway Equipment Mfg. Co.: See—
Zeidler, Kurt E. 2,900,913.
Standley, Archibald D., Jr.: See—
Cleveland, Eric G., and Standley. 2,900,784.
Stanford, George W.: See—
Patton, James L., Stanford, and Burton. 2,900,323.
Stanford Seed Co., Inc., The: See—
McWilliams, Ernest. 2,900,308.
Stanley, Dale L. Ice cream dispensers. 2,900,803, 8-18-59, Cl. 141—90.
Stanley, John C., R. B. Moore, Jr., W. B. Frazier, and C. F. Williams, to Gateway Corp. Automatic hopper fed painting machine. 2,900,930, 8-18-59, Cl. 118—404.
Stapling Machines Co.: See—
Greene, John P. 2,900,106.
Starr, Marvin G.: See—
Clark, Herbert, Owen, and Starr. 2,900,864.
Starrfrasmaschinen A.G.: See—
Glaser, Rolf. 2,900,943.
Start, Ernest, and L. Brown, to William Cotton Ltd. Straight bar knitting machines. 2,900,811, 8-18-59, Cl. 66—126.
Stauffer, Harry C.: See—
Hemke, Alfred M., and Stauffer. 2,900,430.
Stautzenberger, Adin L., and A. F. MacLean, to Celanese Corp. of America. Purification of lower aliphatic acids. 2,900,413, 8-18-59, Cl. 260—540.
Steele, Floyd G., and W. F. Collison, Northrop Aircraft, Inc. Digital differential analyser. 2,900,124, 8-18-59, Cl. 235—152.
Stein, A., & Co.: See—
Furca, Evelyn E. 2,900,961.
Stein, Werner: See—
Raecke, Bernhard, Bieser, Stein, Schirp, and Schutt. 2,900,296.
Steinauer, Julius J. Fishing apparatus. 2,900,762, 8-18-59, Cl. 43—15.
Steiner, Donald E. Carton. 2,900,122, 8-18-59, Cl. 229—39.
Steiner, Maurice, to Societe Plastus S.A. Process of making blown hollow bodies from plastic materials. 2,900,708, 8-18-59, Cl. 18—55.
Stemerson, Charles K., and H. C. Waterman, to Motorola, Inc. Line selection system. 2,900,621, 8-18-59, Cl. 340—166.
Stentz, Blair R.: See—
Conklin, William R., and Stentz. 2,900,045.
Stepan Chemical Co.: See—
Hnett, George, and Ranky. 2,900,418.
Sterling, Walter S.: See—
Newey, William H., and Sterling. 2,900,790.
Stern, Arthur P., to General Electric Co. Color television signal conversion system. 2,900,439, 8-18-59, Cl. 178—5.4.
Sterner, Walter G.: See—
Werner, Frank R., Flint, and Sterner. 2,900,803.
Stettler, Oskar, to North American Philips Co., Inc. Electricity meter. 2,900,602, 8-18-59, Cl. 324—157.
Stevenson, Donald H.: See—
Heinemann, Heinz, Milliken, and Stevenson. 2,900,429.
Stewart, Robert D., and R. I. Wagner, to American Potash & Chemical Corp. Method of preparation of alkyl-substituted phosphines. 2,900,416, 8-18-59, Cl. 260—606.5.
Stilmar, Frederic E., to E. I. du Pont de Nemours and Co. Polyurethanes of polyalkylene ether-thioether glycols. 2,900,366, 8-18-59, Cl. 260—77.5.
Stinnett, George J.: See—
Tauber, Samuel P., and Stinnett. 2,900,876.
Stockman, Earle F., Jr., to F. M. Nichols. Insulated screw driver. 2,900,896, 8-18-59, Cl. 145—50.
Stokes, F. J., Machine Co.: See—
Ernstsson, Arle F., and Teepen. 2,900,076.
Stollenwerk, Hans. Stretcher. 2,900,693, 8-18-59, Cl. 5—62.
Stone, Bobbie D., to Monsanto Chemical Co. Method of treating nematodes with thiourea and ethylene thiourea copper complexes. 2,900,295, 8-18-59, Cl. 167—22.
Stone, Bobbie D., and M. L. Nielsen, to Monsanto Chemical Co. Process for compounding conjugated diene rubbers with cyclotetrathiotetrimine and product obtained thereby. 2,900,359, 8-18-59, Cl. 260—41.5.
Stone, Lyle M.: See—
Jones, Dan H., and Stone. 2,900,625.
Stott, Frank D., to National Research Development Corp. Absorptiometers. 2,900,856, 8-18-59, Cl. 88—14.
Stoughton, Raymond W.: See—
Seaberg, Glenn T., Gedman, and Stoughton. 2,900,228.
Strate, Frank R. Metal powder welding apparatus. 2,900,-128, 8-18-59, Cl. 219—61.
Stuart-Williams, Raymond, and M. Rosenberg, to Telemeter Magnetics, Inc. Magnetic memory device. 2,900,634, 8-18-59, Cl. 340—174.
Stull, Keefer E., Jr., to Westinghouse Electric Corp. Wide band amplifier including bandwidth switching apparatus. 2,900,457, 8-18-59, Cl. 178—171.
Stuyts, Andreas L., A. H. Hoekstra, G. H. Weber, and G. W. Rathenau, to North American Philips Co., Inc. Making anisotropic permanent magnets. 2,900,244, 8-18-59, Cl. 252—62.5.
Styers, Henry H. Litter bag and hanger therefor. 2,900,156, 8-18-59, Cl. 248—96.
Subart, William, deceased; C. Vidas, and J. D. McNamara, executors of the estate, to C. Vidas. Jordan. 2,900,141, 8-18-59, Cl. 241—155.
Suen, Tsung J., and Y. Jen, to American Cyanamid Co. Resinous compositions. 2,900,367, 8-18-59, Cl. 260—67.6.
Summerer, William H., to Admiral Corp. Television tube support. 2,900,630, 8-18-59, Cl. 340—367.
Sun Oil Co.: See—
Ellis, Lacoste G. 2,900,037.
Mayes, Fred M. 2,900,751.
Sunbeam Corp.: See—
Kocl, Ludvik J. 2,900,886.
Sundberg, Sven A., to Allmanna Brandredskapsaktiebolaget AB. Hose clamps. 2,900,733, 8-18-59, Cl. 24—270.
Sundstrand Machine Tool Co.: See—
Eriksen, Evans W. 2,900,527.
Sutheim, George M.: See—
Speed, William C., and Sutheim. 2,900,236.
Speed, William C., and Sutheim. 2,900,239.
Swartz, Ruby J.: See—
Snyder, James E., and Swartz. 2,900,259.
Swartzbaugh Mfg. Co., The: See—
Conklin, William R., and Stentz. 2,900,045.

Swenson, Arthur B.: *See*—
Brodera, Claude O., Jacobus, and Swenson. 2,899,798.
Swisher, Max B., to Swisher Mower and Machine Co., Inc. Self-propelled riding lawn mower. 2,899,793, 8–18–59, Cl. 56—25.4.
Swisher Mower and Machine Co., Inc.: *See*—
Swisher, Max B. 2,899,793.
Sylvania Electric Products Inc.: *See*—
Brewster, Dudley N. 2,900,568.
Raiklen, Hyman I. 2,900,254.
Rulon, Richard M., and Drew. 2,900,545.
Saubestre, Edward B. 2,900,314.
Saubestre, Edward B., and Bulan. 2,900,313.
Symington Wayne Corp.: *See*—
Couch, Glenn F. 2,900,212.
Synchro Corp.: *See*—
Jacob, Allan S. 2,900,591.
Syvertsen, Alfred C. Cable laying device. 2,900,170, 8–18–59, Cl. 254—134.3.
Syntex S.A.: *See*—
Sodaheimer, Frans, and Rosenkranz. 2,900,382.
Talco Engineering Co., Inc.: *See*—
Hirt, Gerald E., and Martino. 2,900,150.
Tannery, Fred R. Rubber stamp. 2,899,895, 8–18–59, Cl. 101—381.
Tansola, William A.: *See*—
Kahler, Harry L., and Tansola. 2,900,222.
Tarantino, Thomas R.: *See*—
Brosillard, Robert E., and Tarantino. 2,900,380.
Taube, Carl: *See*—
Böckmann, Klaus, and Taube. 2,900,379.
Tauber, Samuel P., and G. J. Stinnett, to United States Rubber Co. Sealers for joints. 2,899,876, 8–18–59, Cl. 94—18.
Taylor, James B., III, and G. W. Barradas, to American Flange and Mfg. Co. Inc. Closure combination and elements thereof. 2,900,103, 8–18–59, Cl. 220—39.
Taylor, Stewart E. Method and composition for pacifying bees. 2,900,300, 8–18–59, Cl. 167—39.
Taylor, William H.: *See*—
Schneider, Paul L., Cromwell, and Taylor. 2,900,057.
Tchoubritch, Michel, and G. Terroir, to Societe d'Etudes et d'Applications de Procedes Nouveaux. Rapid priming siphon for water flushing tanks. 2,899,686, 8–18–59, Cl. 4—42.
Teare, William H.: *See*—
Bendley, Ralph J., and Teare. 2,900,541.
Telemeter Magnetics, Inc.: *See*—
Rosenberg, Milton. 2,900,623.
Stuart-Williams, Raymond, and Rosenberg. 2,900,624.
Teletype Corp.: *See*—
Gardberg, Joseph. 2,900,448.
Tenpas, Emerson J.: *See*—
Israelson, Arlo F., and Tenpas. 2,900,076.
Terilli, Emil. Color comparison. 2,899,755, 8–18–59, Cl. 35—35.3.
Terroir, Georges: *See*—
Tchoubritch, Michel, and Terroir. 2,899,686.
Texaco Inc.: *See*—
Allen, Joseph C., and Reynolds. 2,900,517.
Lyons, Joseph, Elmer, and Berry. 2,900,341.
Texas Instruments Inc.: *See*—
Barna, Robert L., Dosher, Humphries, Jeanes, Lyon, Perry, Speer, and Earhart. 2,900,343.
Thatcher, Donald N., to E. I. du Pont de Nemours and Co. Separation of HMX from RDX. 2,900,381, 8–18–59, Cl. 260—239.
Tholstrup, Henry L., to Commercial Controls Corp. Power driven type action for character-by-character printers. 2,900,063, 8–18–59, Cl. 197—17.
Tholstrup, Henry L., to Commercial Controls Corp. Type basket and type lever mounting. 2,900,064, 8–18–59, Cl. 197—39.
Tholstrup, Henry L., to Commercial Controls Corp. Carriage and platen control for typewriters. 2,900,065, 8–18–59, Cl. 197—73.
Tholstrup, Henry L., to Commercial Controls Corp. Carriage control mechanism for power driven printer. 2,900,066, 8–18–59, Cl. 197—82.
Thomas, Alexander, to Tracerlab, Inc. Radioactive battery. 2,900,535, 8–18–59, Cl. 310—3.
Thomas & Betts Co., The: *See*—
Curtiss, Lawrence M. 2,900,435.
Thomas, Leon E., Jr., G. A. Gruss, and J. W. Huley, to International Instruments, Inc. Rotary selective switch. 2,900,462, 8–18–59, Cl. 200—11.
Thomas, Paul M. Apparatus for cubing building blocks. 2,900,092, 8–18–59, Cl. 214—6.
Thompson, Charles E., to Meier Electric and Machine Co., Inc. Propeller hub assembly. 2,900,202, 8–18–59, Cl. 287—53.4.
Thompson, Ernest H. Coffee brewer. 2,899,885, 8–18–59, Cl. 99—289.
Thompson, Paul F., to Kaiser Aluminum & Chemical Corp. Portable electric cord. 2,900,437, 8–18–59, Cl. 174—110.
Tien, Jack M. Acyl hydrazine derivatives of bis (4-dimethylaminophenyl) methane and process. 2,900,388, 8–18–59, Cl. 260—295.
Tillman, Robert M., to Burroughs Corp. Discriminator. 2,900,508, 8–18–59, Cl. 250—31.
Timson, George F.: *See*—
Patton, James L., and Timson. 2,900,324.
Rice, Louis F., Patton, Timson, and Partridge. 2,900,325.
Tokheim Corp.: *See*—
Scheurer, Otto R. 2,900,111.
Toland, William G., Jr.: *See*—
Heaton, Charles D., and Toland. 2,900,428.
Toland, William G., Jr., to California Research Corp. Oxidation process employing sulfur dioxide. 2,900,412, 8–18–59, Cl. 260—524.
Tomik, George A. Dispenser. 2,899,915, 8–18–59, Cl. 107—8.
Toswill, Christopher H.: *See*—
Crowther, Gerald O., and Toswill. 2,900,551.
Townend, Robert V.: *See*—
Jackson, Ralph B., Kelly, and Townend. 2,900,234.
Tracerlab, Inc.: *See*—
Thomas, Alexander. 2,900,535.
Trane Co., The: *See*—
Evans, Robert M., and Pattee. 2,900,253.
Tranter Mfg., Inc.: *See*—
McGuffey, Orton S. 2,900,175.
Trego, Inc.: *See*—
Hixon, George M. 2,900,617.
Tripp, Robert W., to Inductosyn Corp. Variable coupling transformers. 2,900,612, 8–18–59, Cl. 336—123.
Trusheim, Ferdinand H. D. A., to Shell Development Co. Process for freeing stuck drilling tools. 2,900,026, 8–18–59, Cl. 166—22.
Tube Turns Plastics, Inc.: *See*—
Hendry, James W. 2,899,710.
Tuck, Robert M., to General Motors Corp. Automatic transmission. 2,899,846, 8–18–59, Cl. 74—759.
Tudge, Joseph, to Metropolitan-Vickers Electrical Co. Ltd. Dynamo-electric machines. 2,900,538, 8–18–59, Cl. 310—59.
Tully, John J., to Waterbury Farrel Foundry & Machine Co. Stop mechanism for multi-plunger press. 2,900,072, 8–18–59, Cl. 198—232.
Turner, William F. S.: *See*—
Gregson, William, and Turner. 2,900,600.
Tuttle, Kenneth B., and L. C. Keene, to Northrop Corp. Polynomial solver. 2,900,126, 8–18–59, Cl. 235—180.
UCLAF: *See*—
Amiard, Gaston, Heymes, and Velluz. 2,900,375.
Umstadter, Harold W., to American Portable Irrigation Co. Packed sleeve coupling for flared conduits. 2,900,200, 8–18–59, Cl. 285—332.3.
Union Carbide Corp.: *See*—
Cahoon, Nelson C., and Korver. 2,900,433.
Guest, Howard R., and Kiff. 2,900,395.
Lanham, William M. 2,900,407.
Montagna, Amelio E. 2,900,311.
Zimmerman, Herman M., and Powers. 2,900,434.
Unipress Co., Inc., The: *See*—
Dugger, Ralph L. 2,899,761.
United States of America
Agriculture: *See*—
O'Connell, Richard A. 2,900,291.
Rankin, John C., and Mehltretter. 2,900,268.
Air Force: *See*—
Baker, James G. 2,899,862.
Blasbalg, Herman L. 2,900,499.
Farinet, Fred A., Jr. 2,899,878.
Love, John W. 2,900,631.
Novy, Louis E. 2,900,355.
Postelnek, William. 2,900,338.
Rawdin, Eugene. 2,900,458.
Sorel, Nathan, and Wiener. 2,900,519.
Army: *See*—
Allen, Richard W., and Cohen. 2,900,610.
Castellini, Nello R., and Di Giacomo. 2,900,633.
Colby, Richard H. 2,899,865.
Richtmyer, Lawson E., and Gerhard. 2,900,021.
Rizzitano, Fortunato J. 2,900,075.
Ruetz, John A. 2,900,559.
Shull, Francis M. 2,899,856.
Atomic Energy Commission: *See*—
Bostick, Winston H., and McIntosh. 2,900,548.
Cumming, James M., and Ludwig. 2,900,509.
Davidson, Philip H. 2,900,237.
Davis, Francis J., Hurst, and Reinhardt. 2,900,516.
Fraser, Jack W. 2,900,424.
Good, Robert H. 2,900,518.
Handwerk, Joseph H., and Bach. 2,900,263.
Kaufman, Harold B., Jr., and Weiss. 2,900,316.
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McClaine, Leslie A. 2,900,229.
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Brodera, Claude O., Jacobus, and Swenson. 2,899,798.
Criscuolo, Edward L., and O'Connor. 2,900,515.
Daly, Thomas A., and Prescott. 2,899,923.
Fowler, Richard G. 2,900,550.
Goss, Wilbur H. 2,899,898.
Harlan, Kenneth G. 2,900,289.
Huch, William F., Ney, and Winckler. 2,900,147.
Laiming, Harry J. 2,899,830.
McLaughlin, Donald J., and Gorondos. 2,900,446.
Pennow, Willis A. 2,900,552.
Setterblade, Earl O. 2,899,799.
Sewell, Ben W. 2,900,467.
Williams, Harry, and Gey. 2,900,242.
Yaffee, Philip. 2,900,635.
United States Rubber Co.: *See*—
Tauber, Samuel P., and Stinnett. 2,899,876.
United States Steel Corp.: *See*—
Kerlie, Walter L. 2,900,249.
Weir, Joseph T. 2,899,747.
Universal Cyclops Steel Corp.: *See*—
Metcalfe, Kenneth. 2,900,250.
Universal Oil Products Co.: *See*—
Bloch, Herman S., and Haensel. 2,900,428.
Haensel, Vladimir, and Bloch. 2,899,943.
Jones, Edwin K. 2,900,238.

Wichman, Merle A., to American Can Co. Divider and divided tray. 2,900,120, 8–18–59, Cl. 229—15.
Wiener, Warren A.: *See*—
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Wilkinson, Robert E., to Wilkinson Rubber Corp. Tire tread. 2,900,006, 8–18–59, Cl. 152—209.
Williams, Harry, and Gey. 2,900,242.
Williams, Robert R., to Bell Telephone Laboratories, Inc. Electrical circuit. 2,900,609, 8–18–59, Cl. 333—70.
Wilson, Ralph E., to Wilson Mfg. Co. Inc. Tool for removing and replacing valve seat inserts. 2,900,711, 8–25–59, Cl. 29—214.
Wilson Mfg. Co. Inc.: *See*—
Wilson, Ralph E. 2,900,711.
Winckler, Ralph A.: *See*—
Huch, William F., Ney, and Winckler. 2,900,147.
Wing, Leonard W.: *See*—
Drnec, Harry F., Snyder, and Johnson. 2,900,123.
Wolf, Jacob, to Wolf Electric Tools Ltd. Electric motor driven tool. 2,900,555, 8–18–59, Cl. 310—50.
Wolf Electric Tools Ltd.: *See*—
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Woodward, Robert M., to Owens-Corning Fiberglas Corp. Apparatus for contacting molten glass. 2,900,252, 8–18–59, Cl. 75—171.
Wright, Jesse L., to Wright Chemical Corp. Process for preparing hydrazine. 2,900,231, 8–18–59, Cl. 23—190.
Wright Chemical Corp.: *See*—
Wright, Jesse L. 2,900,231.
Wurtz, Henry L., to Sperry Rand Corp. Electrical circuit. 2,900,610, 8–18–59, Cl. 333—76.
Yaffee, Philip. 2,900,635.
Yamada, Yoshio, to Yamada Dental Mfg. Co. Ltd. Dental articulator. 2,900,727, 8–25–59, Cl. 32—14.
Yamada Dental Mfg. Co. Ltd.: *See*—
Yamada, Yoshio. 2,900,727.
Yeager, Charles L., to Bell Aircraft Corp. Rocket motor. 2,900,788, 8–25–59, Cl. 60—35.6.
Yeomans, Allen, to Chance Vought Aircraft, Inc. Aircraft control system. 2,900,151, 8–18–59, Cl. 244—77.
Young, Robert R., to Young Spring & Wire Corp. Method of making a spring. 2,900,705, 8–25–59, Cl. 29—200.
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Young, Robert R. 2,900,705.
Zimmerman, Herman M., and Powers. 2,900,434.
Zimmerman, Robert E., to Zimmerman Co. Method of making a pipe joint. 2,900,193, 8–18–59, Cl. 285—21.
Zimmerman Co.: *See*—
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Universal Winding Co.: *See*—
Soussloff, Dimitri G., and Hilbert. 2,899,796.
Upjohn Co., The: *See*—
Correll, John T. 2,900,302.
Utz, Ernst J., to Aerosol Research Co. Aerosol valve mounting. 2,900,114, 8–18–59, Cl. 222—394.
V-M Corp.: *See*—
Estkowski, Michael H. 2,900,609.
Valentine, Ralph S., to California Research Corp. Separation of aromatic compounds by extractive distillation. 2,900,309, 8–18–59, Cl. 202—39.5.
Van Arsdell, Fred C., to The Quaker Oats Co. Continuous griddle cake baking apparatus. 2,899,914, 8–18–59, Cl. 107—4.
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Vande Sande, George, to General Railway Signal Co. Automatic switching system. 2,900,497, 8–18–59, Cl. 246—2.
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Fegely, Hugh S., and Van Ness. 2,900,628.
Vaughn, Sidney P. Sponge cleaning elements for mops. 2,899,698, 8–18–59, Cl. 15—244.
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Veitry, Dominick. Adjustable garment hanger. 2,900,117, 8–18–59, Cl. 223—94.
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Johnson, Elmer C. 2,900,214.
Vereinigte Baubeschlag-Fabriken Gretsch & Co. G.m.b.H.: *See*—
Vöster, Walter, and Schnell. 2,899,702.
Vereinigte Osterreichische Eisen-und Stahlwerke Akt.: *See*—
Peisel, Erich. 2,900,288.
Vertipile, Inc.: *See*—
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Vesak, Joseph, to Crown Zellerbach Canada Ltd. Carrier carton. 2,900,106, 8–18–59, Cl. 220—105.
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Subart, William. 2,900,141.
Viles, Prentiss S., to Esso Research and Engineering Co. Production of aromatics from paraffin hydrocarbons. 2,900,427, 8–18–59, Cl. 260—673.
Vines, Oscar L., to Continental Paper Co. Cellular carton. 2,900,121, 8–18–59, Cl. 229—28.
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Kirkpatrick, Willard H. 2,900,350.
Vitro Corp. of America: *See*—
Rowland, Ralph W. 2,900,530.
Vivari, Joseph. Amusement and educational device. 2,899,910, 8–18–59, Cl. 104—150.
Vogel, Paul W., and N. A. Meinhardt, to The Lubrizol Corp. Preparation of phosphorodithioate triesters. 2,900,406, 8–18–59, Cl. 260—461.
Vogel, Richard C.: *See*—
Larsen, Robert P., and Vogel. 2,900,230.
Voles, Roger: *See*—
Spencer, Rolf E., and Voles. 2,900,566.
Spencer, Rolf E., and Voles. 2,900,590.
Vollmer, Earl C., to Midwest Mfg. Co. Gasket. 2,899,720, 8–18–59, Cl. 20—69.
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Von Kohorn, Henry and R. S. Scouring tool. 2,899,697, 8–18–59, Cl. 15—123.
Von Kohorn, Ralph S.: *See*—
Von Kohorn, Henry and R. S. 2,899,697.
Vöster, Walter, and E. Schnell, to Vereinigte Baubeschlag-Fabriken Gretsch & Co. G.m.b.H. Door check, in particular floor-type door check. 2,899,702, 8–18–59, Cl. 16—66.
Wadley, Edward F.: *See*—
Horecsy, Joseph T., and Wadley. 2,900,403.
Wadsworth, William B., and F. R. Poole. Ear protectors. 2,899,683, 8–18–59, Cl. 2—209.
Wagner, Ernest E. Variable speed constant torque fluid drive. 2,900,060, 8–18–59, Cl. 192—58.
Wagner, Guenther: *See*—
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Waldes Kohinoor, Inc.: *See*—
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Wallace, Kenneth R., to Essex Wire Corp. Electric switch. 2,900,460, 8–18–59, Cl. 200—6.
Wallace, Thomas H.: *See*—
Brown, William E., McVeagh, and Wallace. 2,900,336.
Wallmark, John T., to Radio Corp. of America. Field-effect transistor. 2,900,531, 8–18–59, Cl. 307—88.5.
Wangelin, Don J., and E. C. Bowen, to The Pure Oil Co. Electric arc reactor. 2,900,321, 8–18–59, Cl. 204—323.
Waning, Hendrik, to Naamloose Vennootschap Kunstzijdespinnerij Nyma. Process for dyeing products of copolymers of acrylonitrile. 2,900,217, 8–18–59, Cl. 8—42.
Wardley, John: *See*—
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Tully, John J. 2,900,072.
Waterman, Herbert C.: *See*—
Stenerson, Charles K., and Waterman. 2,900,621.
Watkins, Dean A., to Hewlett-Packard Co. Beam-type tube. 2,900,558, 8–18–59, Cl. 315—3.5.
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Webb, Goebel W. Add-up block toy for teaching arithmetic. 2,899,757, 8–18–59, Cl. 35—32.
Webber, Stanley E., and J. A. Rich, to General Electric Co. Traveling wave directional attenuator. 2,900,557, 8–18–59, Cl. 315—3.5.
Weber, Gerard H.: *See*—
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Redmond, John A., Peach, Wuerfel, and Weight. 2,900,479.
Weiner, Samuel, to I-T-E Circuit Breaker Co. Non-linear compensation circuit for commutating reactors. 2,900,529, 8–18–59, Cl. 307—96.
Weinstein, Arthur H., to The Goodyear Tire & Rubber Co. Diaryl disulfides containing aryl sulfonoxy groups. 2,900,404, 8–18–59, Cl. 260—456.
Weir, Joseph T., to United States Steel Corp. Method of measuring the bearing length of drawing dies. 2,899,747, 8–18–59, Cl. 33—1.
Weiss, Albert: *See*—
Kaufman, Harold B., Jr., and Weiss. 2,900,316.
Weiss, August C. Speed change indicator. 2,900,465, 8–18–59, Cl. 200—61.46.
Weiss, Phil H., to Paramount Pictures Corp. Electronic switch. 2,900,504, 8–18–59, Cl. 250—27.
Welch, Stanley B., to General Electric Co. Electric catalytic contact device. 2,900,453, 8–18–59, Cl. 219—38.
Wellman, James M. Selectively adjustable sign assembly. 2,899,762, 8–18–59, Cl. 40—68.
Wellman, S. K., Co., The: *See*—
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Welsh, James W., to Signal-Stat Corp. Flasher. 2,900,474, 8–18–59, Cl. 200—113.
Werner, Frank R., K. C. Flint, and W. G. Sterser, to The National Cash Register Co. Record material feeding and control equipment. 2,899,893, 8–18–59, Cl. 101—93.
West, Wilson H.: *See*—
Leslie, James D., Garvey, and West. 2,900,183.
Western Electric Co., Inc.: *See*—
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Krogel, Christopher J. 2,900,176.
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Edmund, John R. 2,899,936.
Morris, Robert B. 2,899,977.
Norris, Charles R. 2,899,939.
Westinghouse Electric Corp.: *See*—
Barabutes, Theodore, and Kulick. 2,900,607.
Barabutes, Theodore, and Kulick. 2,900,627.
Benke, Frank W. 2,900,611.
Bottonari, Samuel A. 2,900,477.
Cunniff, Thomas W. 2,900,544.
Duffy, Philip A. 2,900,513.
Eames, William F. 2,900,047.
Eames, William F. 2,900,048.
Eames, William F. 2,900,521.
Fegely, Hugh S., and Van Ness. 2,900,628.
Friedrich, Robert E. 2,900,478.
Frink, Russell E., and Olsson. 2,900,464.
Hetrick, George L. 2,899,815.
Jacobsen, Jerome G., Jr. 2,899,816.
Large, William E. 2,900,573.
Longini, Richard L. 2,900,445.
Lynn, Lawrence B. 2,899,828.
Marbury, Ralph E. 2,900,578.
Matthews, Jennie. 2,899,822.
Mindt, Frederick E., and Schmidt. 2,900,603.
Mitchell, William H., and Percy. 2,900,539.
Morse, William H. 2,900,537.
Rambo, Sheldon I. 2,900,576.
Redmond, John A., Peach, Wuerfel, and Weight. 2,900,479.
Schmidt, Warren J., and Rudy. 2,900,604.
Schneeberger, Robert J. 2,900,555.
Squires, Rathbun B., and Ballinger. 2,900,605.
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Wettstein, Albert, A. Hunger, C. Meystre, and L. Ehmann, to Ciba Pharmaceutical Products Inc. Process for the manufacture of steroid dehydrogenation products. 2,900,398, 8–18–59, Cl. 260—397.4.
Wheeler, Edward M., to Ekco-Alcoa Containers Inc. Apparatus for forming receptacles. 2,899,922, 8–18–59, Cl. 113—42.
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Whetter, Lloyd A., to Sperry Rand Corp. Phase detector. 2,900,506, 8–18–59, Cl. 250—31.
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White, David, Co.: *See*—
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White, Herman E. Bolt puller. 2,900,169, 8–18–59, Cl. 254—20.
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Whitehurst, Harry B., to Owens-Corning Fiberglas Corp. Method of providing glass filaments with a coating of silver. 2,900,274, 8–18–59, Cl. 117—54.
Whiting, Herbert G., to Cascades Plywood Corp. Circle cutting machine for woody sheet material. 2,899,991, 8–18–59, Cl. 144—136.

Wichman, Merle A., to American Can Co. Divider and divided tray. 2,900,120, 8–18–59, Cl. 229—15.

Wiener, Warren A.: See—
Sorel, Nathan, and Wiener. 2,900,519.

Wilfert, Karl: See—
Bardayi, Béla, and Wilfert. 2,900,491.

Wilkes, George P.: See—
Adams, John F. B., Gerber, and Wilkes. 2,899,754.

Wilkinson, William K., to E. I. du Pont de Nemours and Co. Copolymerization of vinyl aryl sulfonates in the presence of glycols. 2,900,370, 8–18–59, Cl. 260—79.3.

Williams, Charles F.: See—
Stanley, John C., Moore, Frazier, and Williams. 2,899,930.

Williams, Evan T. Lamp shade frame. 2,900,496, 8–18–59, Cl. 240—136.

Williams, Harry, and W. A. Goy, to United States of America, Navy. Igniter for gas generator grains and propellants. 2,900,242, 8–18–59, Cl. 52—14.

Williams, Harry, and W. C. Holliday, to Wheeco Ltd. Means for guiding a work head over a work piece. 2,900,486, 8–18–59, Cl. 219—125.

Williams, Lynn A., to Anocut Engineering Co. Coolant applicator. 2,899,781, 8–18–59, Cl. 51—267.

Williams, Norman D.: See—
Ayers, George W., and Williams. 2,900,257.

Willsey, Charles H. Mechanism for separating egg whites from egg yolks. 2,900,071, 8–18–59, Cl. 198—220.

Wilson, James L., to Wilson Metal Products, Inc. Frying device. 2,899,889, 8–18–59, Cl. 99—406.

Wilson, John H. Method of making a crank shaft assembly for reciprocating pumps. 2,899,742, 8–18–59, Cl. 29—447.

Wilson Metal Products, Inc.: See—
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Winckler, John R.: See—
Huch, William F., Noy, and Winckler. 2,900,147.

Windham, Robert L.: See—
Ferguson, D. C. 2,900,094.

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221—	220:	2,900,107
	268:	2,900,108
222—	1:	2,900,109
	55:	2,900,110
	74:	2,900,111
	180:	2,900,112
	215:	2,900,113
	394:	2,900,114
	416:	2,900,115
	477:	2,900,116
223—	94:	2,900,117
	96:	2,900,118
229—	2.5:	2,900,119
	15:	2,900,120
	28:	2,900,121
	39:	2,900,122
	45:	2,900,123
	52:	2,900,124
230—	117:	2,900,125
	130:	2,900,126
	256:	2,900,127
	274:	2,900,128
233—	28:	2,900,129
235—	59:	2,900,131
	61.11:	2,900,130
	61.7:	2,900,132
	132:	2,900,133
	182:	2,900,134
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	180:	2,900,136
	194:	2,900,137
239—	61:	2,900,138
	265:	2,900,617
	499:	2,900,139
240—	7.1:	2,900,491
	10:	2,900,492
	10.66:	2,900,493
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	78:	2,900,495
	138:	2,900,496
241—	36:	2,900,140
	155:	2,900,141
242—	55.12:	2,900,142
	75.44:	2,900,143
	183:	2,900,144
	158.2:	2,900,145
243—	36:	2,900,146
244—	31:	2,900,147
	83:	2,900,148
	94:	2,900,149
	122:	2,900,150
246—	2:	2,900,497
	5:	2,900,498
249—	37.3:	2,900,151
	42:	2,900,152
	44:	2,900,153
	45:	2,900,154
	71:	2,900,155
	99:	2,900,156
	119:	2,900,157
	166:	2,900,158
	229:	2,900,159
	341:	2,900,160
	358:	2,900,161
		2,900,162
250—	20:	2,900,499
	27:	2,900,500
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250—	31:	2,900,507
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	65:	2,900,514
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	71.5:	2,900,516
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	83.3:	2,900,519
	206:	2,900,520
	208:	2,900,521
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	211:	2,900,523
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	138:	2,900,164
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	175:	2,900,166
	321:	2,900,167
252—	8.5:	2,900,335
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	13:	2,900,338
	32.4:	2,900,339
	36:	Re.24,681
	40:	2,900,340
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254—	20:	2,900,169
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255—	313:	2,900,171
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	230:	2,900,173
	241:	2,900,174
	246:	2,900,168
	256:	2,900,175
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	130:	2,900,177
260—	2.1:	2,900,352
	2.2:	2,900,353
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	41.5:	2,900,358
	43:	2,900,359
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	249.9:	2,900,385
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	681.5:	2,900,430
262—	33:	2,900,178
263—	52:	2,900,179
266—	32:	2,900,180
267—	9:	2,900,181
	57.1:	2,900,182
268—	126:	2,900,183
269—	127:	2,900,184
270—	62:	2,900,185
271—	62:	2,900,186
272—	59:	2,900,187
273—	102:	2,900,188
273—	126:	2,900,189
	157:	2,900,190
274—	4:	2,900,191
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275—	3:	2,900,193
279—	119:	Re.24,684
280—	34:	2,900,194
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	104.5:	2,900,197
	404:	2,900,198
285—	187:	2,900,199
	332.3:	2,900,200
286—	34:	2,900,201
287—	52.04:	2,900,202
	60:	2,900,203
290—	38:	2,900,525
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292—	173:	2,900,204
294—	1:	2,900,205
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296—	47:	2,900,207
301—	37:	2,900,208
302—	67:	2,900,209
305—	2:	2,900,210
307—	57:	2,900,527
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308—	10:	2,900,211
	47:	2,900,212
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310—	3:	2,900,535
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	62:	2,900,539
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312—	97:	2,900,214
313—	32:	2,900,541
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320—	59:	2,900,591
321—	8:	2,900,592
322—	24:	2,900,593
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324—	6:	2,900,595
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336—	100:	2,900,611
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338—	6:	2,900,613
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339—	272:	2,900,616
340—	15:	2,900,619
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	174:	2,900,623
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	367:	2,900,630
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343—	10:	2,900,632
	118:	2,900,633
	178:	2,900,634
	205:	2,900,635
	767:	2,900,636
346—	74:	2,900,315

Classification of Designs

D 3—	11:	185,898
D 4—	2:	185,899
D 7—	5:	185,900
D14—	3:	185,901
	30:	185,902
D15—	8:	185,903
D22—	3:	185,904
D26—	14:	185,905
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D29—	17:	185,907
	23:	185,908
D34—	15:	185,909
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D44—	15:	185,911
		185,914
	29:	185,912
		185,913
D45—	4:	185,916
D45—	17:	185,915
D49—	4:	185,918
	20:	185,917
D52—	1:	185,919
		185,920
		185,921
D54—	6:	185,922
	12:	185,923
D58—	8:	185,926
D58—	13:	185,924
	17:	185,927
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D61—	1:	185,928
D64—	11:	185,929
D70—	2:	185,930
D72—	1:	185,931
D74—	1:	185,933
		185,934
D74—	17:	185,932
D78—	1:	185,935
D80—	5:	185,937
	11:	185,936
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	4:	185,946
D92—	1:	185,947
D93—	4:	185,948

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

August 18, 1959 Volume 745 Number 3

TRADEMARKS

NOTICES

Service by Publication

A petition to cancel each of the registrations identified below having been filed, and the notice of such proceedings sent by registered mail to each registrant at the last known address having been returned by the Post Office as undeliverable, notice is hereby given that unless the registrants listed herein, their assigns or legal representatives, shall enter an appearance within thirty days from the date of this publication, the cancelation will be proceeded with as in the case of default.

Kentile, Inc., Brooklyn, N.Y., Reg. Nos. 617,353 and 651,638, Canc. No. 7315.

Papik Products Company, St. Louis, Mo., Reg. No. 385,773, Canc. No. 7319.

Souvenair Company, New York, N.Y., Reg. No. 431,104, Canc. No. 7324.

DAPHNE LEEDS,
Assistant Commissioner of Patents.

CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1959

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)] 10,792
Date of oldest new application ..... Jan. 2, 1959
Date of oldest amended application ..... Feb. 3, 1959

J. H. MERCHANT, Director, Trademark Examining Operation TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application	
	New	Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 16, 19, 21, 23, 24, 25, 26, 30, 31, 32, 33, 34, 35, 36, 44, 50	2-13-59	3-11-59
(II) R. F. SHRYOCK, Classes 6, 18, 27, 28, 46, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks Class 200	1-29-59	2-6-59
(III) K. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 20, 22, 29, 37, 38, 39, 40, 41, 42, 43, 45, 47, 48, 49, 52; and Certification Marks	1-2-59	1-2-59
Renewals (All Classes)	5-29-59	6-25-59
Sec. 12 (c) Publications (All Classes)	6-6-59	6-6-59

Applications filed during the month of June 1959—2,029

Registrations Issued ..... 360—No. 683,459 to No. 683,818
Renewals Issued 80

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

Class 6—Chemicals and Chemical Com-

Class 9—Explosives, Firearms, Equipments,

MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.

As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

Class 1—Raw or Partly Prepared Materials

SN 44,500. United States Rubber Company, New York, N.Y. Filed Jan. 22, 1959.

ROYALEX

Owner of Reg. No. 539,903.
For Thermoplastic Sheet Material for Further Use in Industrial Arts.
First use Dec. 30, 1957.

SN 65,494. The Charles C. Hart Seed Company, Wethersfield, Conn. Filed Jan. 8, 1959.

The drawing is lined for the color red. Applicant disclaims the words "Plant" and "Seeds" apart from the mark as shown.
For Garden Seeds, Flower Seeds, and Lawn Seeds.
First use on or about Nov. 14, 1925.

SN 67,598. Farbenfabriken Bayer Aktiengesellschaft, Leverkusen-Bayerwerk, Germany. Filed Feb. 12, 1959.

PERBUNAN

Owner of German Reg. No. 515,092, dated Aug. 28, 1939.
For Rubber and Rubber Substitute Materials.

SN 69,577. Albert Trostel & Sons Company, Milwaukee, Wis. Filed Mar. 13, 1959.

CENTAN

For Leather.
First use Jan. 8, 1959.

SN 69,627. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Mar. 16, 1959.

TESLAR

For Films or Sheets Made From Polymers of Vinyl Fluoride for Use in Glazing Applications, in Packaging Applications, in Tapes, in Decorative or Protective Laminations, and for General Use in the Industrial Arts.
First use Jan. 30, 1959.

TM 82

SN 65,680. Mascotte Ralston Henderson, Encino, Calif. Filed Jan. 12, 1959.

For Dust Pan.
First use on or about May 1, 1948.

Class 4—Abrasives and Polishing Materials

SN 44,168. The Esbec Barrel Finishing Corporation, Byram, Conn. Filed Jan. 17, 1958.

ESBEC

For Powdered and Liquid Abrasive and Burnishing Compounds for Use in Barrel Finishing.
First use May 4, 1953.

SN 66,658. Super-Cut, Inc., Chicago, Ill. Filed Jan. 28, 1959.

ZURALITE

Owner of Reg. No. 413,027.
For Diamond Abrasive Wheels.
First use Jan. 21, 1959.

SN 68,558. B. T. Babbitt, Inc., New York, N.Y. Filed Feb. 27, 1959.

BAB-O

Owner of Reg. No. 208,724.
For Scouring Pads.
First use on or about Jan. 21, 1959.

Class 5—Adhesives

SN 53,993. Balfour, Guthrie & Co., Limited, Seattle, Wash. Filed June 23, 1958.

WOODWELD

For Glues.
First use Jan. 1, 1928.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

Class 6—Chemicals and Chemical Compositions

SN 36,304. Marchon Products Limited, London, England. Filed Aug. 27, 1957.

Marchon

For Chemical Compositions for Use as Foaming and Wetting Agents, Emulsifiers, Intermediates, Stabilizers, Catalysts, Fatty Alcohols, and Phosphates.
First use 1949; in commerce 1949.

SN 44,098. Kimberly-Clark Corporation, Neenah, Wis. Filed Jan. 16, 1958.

ADDITIVE-A

For Conditioner for Clay Products.
First use Dec. 27, 1957.

SN 51,770. Armour and Company, Chicago, Ill. Filed May 16, 1958.

ARMOMIST

For Fatty Acid Derivatives Used as Foaming Agents.
First use Apr. 30, 1958.

SN 55,590. Marshall Hyde, Port Huron, Mich. Filed July 18, 1958.

FORMULA 55

The word "Formula" is disclaimed apart from its use with the mark.
For Chemical for Inserting in Natural Gas as an Odorant for Detection Purposes.
First use July 2, 1955.

SN 68,118. Cook Chemical Company, Kansas City, Mo. Filed Feb. 20, 1959.

STAPH-O-SOL

For Aerosol Steriliser.
First use Feb. 18, 1959.

SN 69,914. Regal Chemical Corporation, Brooklyn, N.Y. Filed Mar. 19, 1959.

ROOM MATE

For Spray Type Room Deodorizer and Air Refresher.
First use Oct. 14, 1958.

SN 70,160. Penick & Ford, Ltd., Incorporated, New York, N.Y. Filed Mar. 24, 1959.

PEN-COTE

For Starches Used in Processing Industrial Products.
First use July 18, 1958.

SN 70,264. Vaughn, Incorporated, Memphis, Tenn. Filed Mar. 25, 1959.

SPECTRONOX

For Non-Ionic Flame Reagents Used in Spectrophotometric Procedures for Lowering Surface Tension.
First use Nov. 24, 1958.

Class 9—Explosives, Firearms, Equipments, and Projectiles

SN 27,790. J. L. Galef & Son, Inc., New York, N.Y. Filed Apr. 9, 1957.

PUMA

For Pistols.
First use Apr. 3, 1952.

SN 27,791. J. L. Galef & Son, Inc., New York, N.Y. Filed Apr. 9, 1957.

MINX

For Pistols.
First use June 10, 1952.

SN 46,581. United Commercial Company, Culver City, Calif. Filed Feb. 25, 1958.

SHELL CRACKER

For Remote Exploding, Delayed Action Firearm Projectiles.
First use Aug. 14, 1956.

SN 50,084. The Marlin Firearms Company, New Haven, Conn. Filed Apr. 21, 1958.

VARMINT KING

For Firearms—Namely, Rifles and Shotguns.
First use Mar. 3, 1958.

Class 10—Fertilizers

SN 68,470. Clover Chemical Company, Pittsburgh, Pa. Filed Feb. 26, 1959.

FERTI-START

For Fertilizer in Dehydrated, Concentrated Water Soluble Powder Form, and in Liquid Form, for Use in Transplanting Solutions.
First use Sept. 11, 1958.

Class 12—Construction Materials

SN 67,891. Earl R. Randall, d.b.a. Three Rivers Aluminum Company, Pittsburgh, Pa. Filed Feb. 17, 1959.

THREE RIVERS

For Aluminum Window and Door Frames, Roofing, and Siding.
First use during 1947.

SN 67,763. De Erven de Wed. J. van Nelle N.V., Rotterdam, Netherlands. Filed Feb. 16, 1959.

SN 20,106. Kokuryu-do Company Limited, Chuo-ku, Tokyo, Japan. Filed Nov. 29, 1956.

First use Jan. 30, 1959.

TM 82

First use Jan. 1, 1928.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 34,063. Masonite Corporation, Chicago, Ill. Filed July 19, 1957.

Owner of Reg. No. 563,975.
For Metal Fixtures—Namely, Hooks, Bars, Racks, Hanger Clips, Brackets, Shelf Supports, Easels, Holders, Hook Stabilizers, Spacers, Screws, Ticket Holders and Clips, and Legs.
First use November 1950; Jan. 27, 1948, as to "Peg-Board."

SN 55,964. Aluminum Distributors, Incorporated, Forest Park, Ill. Filed July 25, 1958.

KEEP NEET

For Lawn Edging.
First use on or about Jan. 1, 1958.

SN 56,119. The Geo. H. Gascoigne Company Limited, Reading, England. Filed July 28, 1958.

KEE KLAMP

Owner of U.S. Reg. No. 558,583.
For Fittings for Joining and Locking the Tubes in Tubular Metal Constructions.
First use in 1937; in commerce Apr. 15, 1953.

SN 56,320. The B. F. Goodrich Company, Akron, Ohio. Filed July 30, 1958.

UNILOCK

For Expansible Tubular Rivets.
First use June 24, 1958.

SN 56,664. Wm. Steinen Mfg. Company, Newark, N.J. Filed Aug. 5, 1958.

FAN-JET

For Spraying Equipment for Spraying Aqueous Fertilizer and Insecticidal Solutions for Agricultural Purposes.
First use June 2, 1958.

SN 57,403. National Aluminate Corporation, Chicago, Ill. Filed Aug. 18, 1958.

SOLFEEDER

For Apparatus for Feeding Chemicals Into Pipes, Vessels, or the Like.
First use July 24, 1958.

Class 14—Metals and Metal Castings and Forgings

SN 70,626. Union Carbide Corporation, New York, N.Y. Filed Mar. 31, 1959.

CHROMTEMP

For Ferrous Metal Alloys.
First use on or about Feb. 9, 1959.

Class 15—Oils and Greases

SN 69,690. Stewart-Warner Corporation, Chicago, Ill. Filed Mar. 16, 1959.

ALEMITE HI-PO

Owner of Reg. Nos. 148,635, 418,904, and others.
For Additive for Automatic Transmission Oil.
First use at least as early as Feb. 4, 1950.

Class 16—Protective and Decorative Coatings

SN 59,789. United States Mineral Wool Company, Stanhope, N.J. Filed Sept. 29, 1958.

BLAZE-SHIELD

For Coating Applied by Spraying Pre-Mixed Mineral Fibers and Binders.
First use Sept. 15, 1958.

SN 59,790. United States Mineral Wool Company, Stanhope, N.J. Filed Sept. 29, 1958.

HEAT-SHIELD

For Coating Applied by Spraying Pre-Mixed Mineral Fibers and Binders.
First use Sept. 12, 1958.

SN 71,989. C. A. Woolsey Paint & Color Co. Inc., New York, N.Y. Filed Apr. 21, 1959.

"MFP"

For Marine Paint.
First use Jan. 15, 1959.

SN 72,080. Sheffield Bronze Paint Corporation, Cleveland, Ohio. Filed Apr. 22, 1959.

The drawing is lined for red. Owner of Reg. No. 521,283.
For House Paint, Enamels, and Latex Paint and Paint Specialties.
First use Apr. 1, 1950.

Class 17—Tobacco Products

SN 67,232. John Middleton, Inc., Philadelphia, Pa. Filed Feb. 6, 1959.

Variety Kit

Owner of Reg. No. 373,784.
For Smoking Tobacco.
First use October 1938.

SN 64,259. Ciba Limited, Basel, Switzerland. Filed Dec. 15,

SN 69,749. Merck & Co., Inc., Rahway, N.J. Filed Mar. 17,

Procedures for Lowering Surface Tension.
First use Nov. 24, 1958.

Siding.
First use during 1947.

SN 67,763. De Erven de Wed. J. van Nelle N.V., Rotterdam, Netherlands. Filed Feb. 16, 1959.

ZUIDERZEE

Priority claimed under Sec. 44(d) on Dutch application filed Nov. 4, 1958; Reg. No. 132,646, dated Dec. 6, 1958.
For Shag and Pipe-Tobacco.

SN 68,825. The Imperial Tobacco Company (of Great Britain and Ireland), Limited, Bedminister, Bristol, England. Filed Mar. 3, 1959.

DIGGER

Owner of British Reg. No. 206,420, dated July 20, 1897.
For Smoking Tobacco.

SN 68,826. The Imperial Tobacco Company (of Great Britain and Ireland), Limited, Bedminister, Bristol, England. Filed Mar. 3, 1959.

PASSING CLOUDS

Owner of British Reg. No. 176,403, dated Nov. 15, 1893.
For Cigarettes.

SN 68,827. The Imperial Tobacco Company (of Great Britain and Ireland), Limited, Bedminister, Bristol, England. Filed Mar. 3, 1959.

NO NAME

Owner of British Reg. No. 439,658, dated Aug. 7, 1923.
For Smoking Tobacco.

SN 68,828. The Imperial Tobacco Company (of Great Britain and Ireland), Limited, Bedminister, Bristol, England. Filed Mar. 3, 1959.

BACHELORS

Owner of British Reg. No. 209,831, dated Dec. 4, 1897.
For Cigarettes.

SN 68,829. The Imperial Tobacco Company (of Great Britain and Ireland), Limited, Bedminister, Bristol, England. Filed Mar. 3, 1959.

ANCHOR

Owner of British Reg. No. 266,883, dated Oct. 7, 1904.
For Cigarettes.

Class 18—Medicines and Pharmaceutical Preparations

SN 698,248. The Upjohn Company (Delaware corporation), Dover, Del., assignee of The Upjohn Company (Michigan corporation), Kalamazoo, Mich. Filed Nov. 14, 1955.

U

Owner of Reg. No. 289,473.
For Pharmaceutical Preparations in Tablet Form.
First use on or about Oct. 9, 1953.

SN 20,106. Kokuryu-do Company Limited, Chuo-ku, Tokyo, Japan. Filed Nov. 20, 1956.

玄龍

KOKURYU

The Chinese characters are pronounced "Kokuryu" and mean "black dragon." Owner of U.S. Reg. Nos. 638,570, 670,359, and 670,507.
For Medicated Cream Used in Connection With Prickly Heat, Frost Bite, Burns, Cuts, and Scratches.
First use Nov. 11, 1953; in commerce Sept. 1, 1955.

SN 25,397. Carter Products, Inc., New York, N.Y. Filed Mar. 4, 1957.

CARTER'S PILLS

The word "Pills" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 19,608, 53,591, and others.
For Laxative.
First use Jan. 3, 1957; at least the year 1891 as to "Carter's."

SN 25,398. Carter Products, Inc., New York, N.Y. Filed Mar. 4, 1957.

CARTER'S CAPSULES

The word "Capsules" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 19,608, 53,591, and others.
For Laxative.
First use Jan. 3, 1957; at least the year 1891 as to "Carter's."

SN 25,399. Carter Products, Inc., New York, N.Y. Filed Mar. 4, 1957.

CARTER'S LITTLE PILLS

The words "Little Pills" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 19,608, 53,591, and others.
For Laxative.
First use Jan. 3, 1957; at least the year 1891 as to "Carter's."

SN 47,015. The Sporodyne Company, Dayton, Ohio. Filed Mar. 3, 1958.

Sporodyne

For Antiseptic Preparation for Tineal and Fungus Infections of the Skin.
First use October 1935.

SN 64,257. Ciba Limited, Basel, Switzerland. Filed Dec. 15, 1958.

DIANABOL

Priority claimed under Sec. 44(d) on Swiss Reg. No. 171,109, dated July 11, 1958.
For Pharmaceutical Hormone Preparation.

First use on or about Feb. 9, 1959.

First use October 1958.

SN 64,259. Ciba Limited, Basel, Switzerland. Filed Dec. 15, 1958.

MAXAFORM

Owner of Swiss Reg. No. 172,265, dated Oct. 2, 1958; and U.S. Reg. No. 666,783.

For Pharmaceutical Preparation for the Treatment of Intestinal Diseases.

SN 65,060. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed Dec. 30, 1958.

SYMPATOVIT

Owner of German Reg. No. 713,820, dated May 12, 1958.

For Multi Vitamin Preparation.

SN 65,374. Chas. Pfizer & Co., Inc., Brooklyn, N.Y. Filed Jan. 6, 1959.

COMBISTEROID

For Anti-Inflammatory and Tranquilizing Preparation.

First use Dec. 11, 1958.

SN 66,467. Miles Laboratories, Inc., Elkhart, Ind. Filed Jan. 26, 1959.

ARIDEN

For Preparation for Colds and for Sinus Disorders, Having Analgesic and Antipyretic Properties.

First use Dec. 19, 1958.

SN 69,208. Smith Kline & French Laboratories, Philadelphia, Pa. Filed Mar. 9, 1959.

VONTIL

For Central Nervous System Depressant, Especially Useful in the Control of Nausea and Vomiting.

First use Jan. 26, 1959.

SN 69,294. Schering Corporation, Bloomfield, N.J. Filed Mar. 10, 1959.

AKROVAL

For Medicinal Antiseptic Preparation.

First use Nov. 7, 1958.

SN 69,295. Schering Corporation, Bloomfield, N.J. Filed Mar. 10, 1959.

FULVIMED

For Antibiotic-Antifungal Preparation.

First use Jan. 28, 1959.

SN 69,609. Broemmel Pharmaceuticals, San Francisco, Calif. Filed Mar. 16, 1959.

DERMO-PARIN

For Ointment for Topical Application on the Skin.

First use on or about Feb. 16, 1959.

SN 69,691. Sutliff & Case Co., Inc., Peoria, Ill. Filed Mar. 16, 1959.

CORPARID

For Medicinal Preparation—Namely, a Anorexigenic and Euphoriant.

First use on or about Mar. 15, 1955.

SN 69,749. Merck & Co., Inc., Rahway, N.J. Filed Mar. 17, 1959.

DICHLOTRIDE

Owner of Reg. Nos. 669,790 and 669,791.

For Medicinal Compound for Use as a Diuretic and as an Agent in the Treatment of Hypertension.

First use Mar. 2, 1959.

SN 69,764. Purepac Corporation, New York, N.Y. Filed Mar. 17, 1959.

BLISTONE

For Spray Ointment for Burns.

First use Mar. 2, 1959.

SN 69,792. Community Science, Inc., New York, N.Y. Filed Mar. 18, 1959.

ZEARIM

For Liquid Which Removes Impacted Ear Wax.

First use Mar. 11, 1959.

SN 69,843. Pharmaceuticals, Incorporated, New York, N.Y. Filed Mar. 18, 1959.

SEDALIN

For Preparation for the Relief of Heartburn, Acid Indigestion, and Gas Distress.

First use Nov. 19, 1958.

SN 69,866. Abbott Laboratories, North Chicago, Ill. Filed Mar. 19, 1959.

PRAMILETS

For Multiple Vitamin-Mineral Preparation.

First use Mar. 5, 1959.

SN 69,940. Blair Laboratories, Inc., New York, N.Y. Filed Mar. 20, 1959.

KERID

For Preparation for the Removal of Ear Wax.

First use Mar. 11, 1959.

SN 70,010. The Vitablen Corporation, New York, N.Y. Filed Mar. 20, 1959.

VITABLEN

For Vitamin Capsules.

First use Jan. 11, 1959.

SN 70,092. Merck & Co., Inc., Rahway, N.J. Filed Mar. 23, 1959.

HUMORSOL

For Medicinal Preparation for Use in the Treatment of Glaucoma and Allied Conditions.

First use Feb. 27, 1959.

SN 70,196. Doho Chemical Corporation, New York, N.Y. Filed Mar. 25, 1959.

AURALGAN

Owner of Reg. No. 309,463.

For Ear Medication.

First use Sept. 1, 1931.

SN 57,359. Elektro-Mechanik G.m.b.H., Wendenerhutte Kreis Olpe, Westfalen, Germany. Filed Aug. 18, 1958.

SN 68,194. Gibson Manufacturing Company, Atlanta, Ga. Filed Jan. 26, 1959.

SN 70,199. Doho Chemical Corporation, New York, N.Y. Filed Mar. 25, 1959.

O-TOS-MO-SAN

Owner of Reg. Nos. 350,399 and 531,020.
For Ear Medication.
First use May 29, 1946.

Class 19—Vehicles

SN 45,904. Monroe Auto Equipment Company, Monroe, Mich. Filed Feb. 14, 1958.

LOAD-LEVELER

For Combination Spring and Shock Absorber Units for Automotive Vehicles.
First use on or about May 31, 1957.

SN 50,589. American Machine & Foundry Company, New York, N.Y. Filed Sept. 26, 1958.

EXPLORER

For Wheel Goods—Namely, Bicycles.
First use Aug. 28, 1958.

SN 68,711. LeTourneau-Westinghouse Company, Peoria, Ill. Filed Mar. 2, 1959.

LW

For Trucks, Tractor-Trailers, and Structural Parts Therefor.
First use Jan. 28, 1957.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 52,270. Bourns Laboratories, Inc., Riverside, Calif. Filed May 26, 1958.

SILVERWELD

For Variable Resistor Element Terminations.
First use Dec. 16, 1957.

SN 53,724. Peerless Fabrikkerne A/S, Copenhagen, Denmark. Filed June 17, 1958.

ROYAL COPENHAGEN

For Loud Speakers.
First use Feb. 1, 1958; in commerce Mar. 14, 1958.

SN 53,909. W. S. Shamban & Co., Culver City, Calif. Filed June 19, 1958.

MICROTHIN

For Polytetrafluoroethylene Tubing To Be Used as an Insulator for Electrical Conductors.
First use Nov. 1, 1957.

SN 54,658. The Acme Wire Company, Hamden, Conn. Filed July 2, 1958.

LAMPLIGHTER

For Photo-Electric Street Lighting Control.
First use June 10, 1958.

SN 54,666. Auto-Electronics, Incorporated, Elwood, Ind. Filed July 2, 1958.

NEOPHONIC

For Channel Generators Used With Monaural Pick-Ups To Provide Stereo Sound Illusion.
First use Apr. 25, 1958.

SN 55,207. Armel Electronics, Inc., Brooklyn, N.Y. Filed July 14, 1958.

HIRELI

For Electrical Terminals, Connectors, Fittings; and Electrical Equipment Units—Namely, Insulators, Resistors, Capacitors, and Inductances.
First use Dec. 15, 1957.

SN 55,883. Scanoptic, Inc., New York, N.Y. Filed July 23, 1958.

SCANOSCOPE

Owner of Reg. Nos. 600,742 and 652,720.
For Television Receivers, Television Monitors, Television Cameras.
First use July 1, 1956.

SN 55,950. Secode Corporation, San Francisco, Calif. Filed July 24, 1958.

SECODE

For Selective Control Devices—Namely, Electrical Coding and Decoding Equipment.
First use in 1939.

SN 56,088. Marguerite V. Boyce, d.b.a. Electrical Service Co., San Francisco, Calif. Filed July 28, 1958.

BOY-MAR

For Impulse Relays, Photoelectric Relays, Momentary Contact Switches, Time Delay Relays, Electronic Counting Devices, Electronic Conveyor Control Devices, Electronic Power Pack Units, Rectifier Units, Battery Operated Burglar Alarms and Direct and Alternating Electric Current Operated Burglar Alarms, Photocells, and Photocrystals Enclosed in Plastics.
First use in October 1938.

SN 57,294. Scalectro Corporation, Mamaroneck, N.Y. Filed Aug. 15, 1958.

CON HEX

For Certain Electronic Components—Namely, Connectors, Stand-Off and Feed-Through Terminals, Plugs, Test Point Jacks, and Printed Circuit Jacks.
First use May 2, 1958.

SN 46,334. Mattel, Incorporated, Los Angeles, Calif. Filed

SN 66,580. Rocco Products, Inc., Minneapolis, Minn. Filed Sept. 22, 1959.

Euphoriant.
First use on or about Mar. 15, 1955.

First use Sept. 1, 1931.

SN 57,359. Elektro-Mechanik G.m.b.H., Wendenerhutte Kreis Olpe, Westfalen, Germany. Filed Aug. 18, 1958.

Owner of German Reg. No. 613,052, dated Oct. 23, 1951; and U.S. Reg. No. 658,023.
For Electrically Controlled Hydraulic Servo-Motors, Electromagnetic Clutches, Couplings, and Brakes.

SN 65,660. Francis Brothers, Tustin, Calif. Filed Jan. 12, 1959.

For Portable Electric Converting Devices for Converting A.C. Current to D.C. Current and Vice Versa.
First use Oct. 3, 1958.

SN 66,153. Instruments for Industry, Inc., Hicksville, N.Y. Filed Jan. 20, 1959.

Owner of Reg. No. 613,520.
For Wide Band Amplifiers, Preamplifiers, Intermediate Frequency Amplifiers, Power Distributed Amplifiers, and Power Supplies.
First use November 1955.

SN 66,435. Gibson Manufacturing Company, Atlanta, Ga. Filed Jan. 26, 1959.

For Fluorescent Fixtures, Materials, and Parts Therefor.
First use June 1954.

SN 66,678. Delaware Research & Development Corporation, Delaire, Wilmington, Del. Filed Jan. 14, 1959.

DYLEC

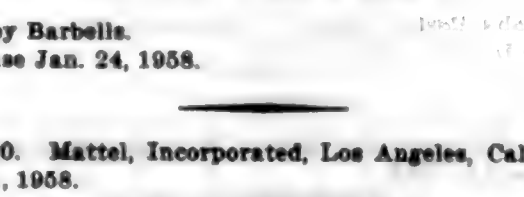
For Polymeric Dielectric and Insulating Materials for Radio Frequency and Power Applications.
First use Dec. 12, 1958.

SN 68,194. Gibson Manufacturing Company, Atlanta, Ga. Filed Jan. 26, 1959.

ORTHO

Owner of Reg. No. 594,166.
For Fluorescent Fixtures, Materials, and Parts Therefor.
First use September 1953.

SN 68,629. The Astatic Corporation, Conneaut, Ohio. Filed Feb. 12, 1959.



Owner of Reg. Nos. 367,366 and 372,577.
For Phonograph Pick-Ups, Pick-Up Scratch Filters, Phonograph Tone Arms, Microphones, Microphone Stands, Recording Cutters, Radio and Television Broadcasting and Receiving Systems, Public Address Systems, Sound Recording and Reproducing Systems, Etc.
First use Dec. 9, 1936.

Class 22 — Games, Toys, and Sporting Goods

SN 43,210. Radio Steel & Mfg. Co., Chicago, Ill. Filed Dec. 30, 1957.

RADIO LINE

Owner of Reg. Nos. 561,829 and 635,875.
For Coaster Wagons and Scooters.
First use May 24, 1950; 1919 as to "Radio."

SN 46,329. Mattel, Incorporated, Los Angeles, Calif. Filed Feb. 21, 1958.

POWERARM

For Toy Barbells.
First use Jan. 24, 1958.

SN 46,330. Mattel, Incorporated, Los Angeles, Calif. Filed Feb. 21, 1958.

TIPPEE-TIM

For Toy Organ Grinder.
First use Jan. 24, 1958.

SN 46,331. Mattel, Incorporated, Los Angeles, Calif. Filed Feb. 21, 1958.

M.M.P.—MATTEL MACHINE PISTOL

No claim of exclusive right is made to "Machine Pistol" as used on toy pistols. Owner of Reg. Nos. 635,129 and 657,701.
For Toy Pistols.
First use Jan. 24, 1958.

SN 46,332. Mattel, Incorporated, Los Angeles, Calif. Filed Feb. 21, 1958.

FIREBOLT

For Toy Gun.
First use Jan. 24, 1958.

SN 67,991. Saks & Company, New York, N.Y. Filed Feb. 18,

SN 73,189. Berkley & Company, Inc., Spirit Lake, Iowa.

First use June 10, 1958.

First use May 2, 1958.

SN 46,334. Mattel, Incorporated, Los Angeles, Calif. Filed Feb. 21, 1958.

SWIVELSHOT

For Toy Gun and Holster Combination.
First use Jan. 24, 1958.

SN 54,090. Plas-Steel Products, Inc., Walkerton, Ind. Filed June 23, 1958.

"ZIP-POLE"

The drawing is lined for brown, but color is not claimed as a feature of the mark.
For Fishing Poles.
First use May 16, 1958.

SN 61,407. Morris Kumm, d.b.a. M & M Advertising Studio, New York, N.Y. Filed Oct. 27, 1958.

For Equipment Sold as a Unit for Playing a Board Game.
First use Oct. 1, 1958.

SN 64,072. Jack F. Horn, Milwaukee, Wis. Filed Dec. 11, 1958.

BOFARI

For Archery Equipment.
First use Oct. 13, 1958.

SN 64,406. Elio Goroni, Allen Park, Mich. Filed Dec. 16, 1958.

SHURLURE

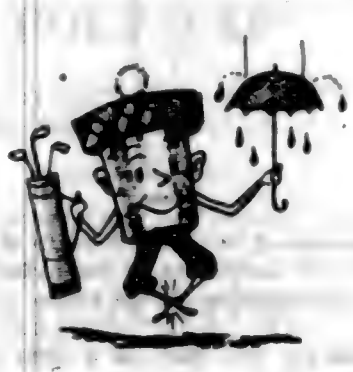
For Live Bait Container.
First use Nov. 15, 1958.

SN 65,439. Origami Creations, Inc., New York, N.Y. Filed Jan. 7, 1959.

ORA·GA·ME

For Equipment or Set Sold as a Unit for Playing a Game Where Animal and Similar Designs Are Made by Folding Paper.
First use Nov. 13, 1958.

SN 65,817. CSI Sales Company, Solon, Ohio. Filed Jan. 14, 1959.



For Grips for Golf Clubs.
First use Oct. 31, 1958.

SN 66,590. Rocco Products, Inc., Minneapolis, Minn. Filed Sept. 22, 1958.

ROYAL NORSEMAN

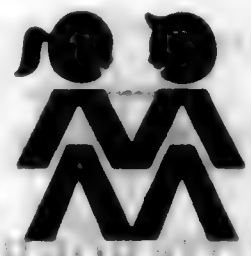
For Wheeled Pushmobiles and Sleds.
First use Nov. 5, 1957.

SN 67,541. John J. Hildebrandt Corporation, Logansport, Ind. Filed Feb. 11, 1959.

BOTTOM DOLLAR

For Artificial Fishing Lures.
First use Oct. 3, 1958.

SN 67,559. Merry Manufacturing Company, Cincinnati, Ohio. Filed Feb. 11, 1959.



For Toy Kits for Children—Namely, Manicure Sets, Make-Up Sets, Shampoo Sets, Bath Sets, Beauty Shop Sets, Facial Sets, Shoe Shine Sets, Shaving Sets, Cleaning Sets, Diaper Sets, Laundry Closet Sets, Linen Closet Sets, Cookie Decorator Sets, First Aid Sets, Ice Cream Shop Sets, Infant's Shop Sets, Bank Sets, and Bubble Horns.
First use Jan. 25, 1959.

SN 67,684. Kilgore, Inc., Westerville, Ohio. Filed Feb. 13, 1959.

SPIN-TWINS

For Toy Comprising a Pair of Hoops Mounted for Rotation on a Handle.
First use Jan. 5, 1959.

SN 67,719. West Coast Chemicals and Solvents Corporation, d.b.a. Swimaster, Los Angeles, Calif. Filed Feb. 18, 1959.

BEL-AQUA

For Underwater-Surface Breathing Devices Such as Snorkels.
First use April 1952.

SN 67,790. Hoppy Taw Corporation, Salt Lake City, Utah. Filed Feb. 16, 1959.

MOON SHOOTER

For Toy Projector for Shooting Rope Pellets.
First use Oct. 15, 1958.

SN 67,873. Inez Holland, d.b.a. Inez Holland House, New York, N.Y. Filed Feb. 17, 1959.

"LITTLE ONE"

For Dolls, and Dolls' Clothing.
First use Feb. 11, 1959.

SN 67,890. Ramrod Products, Inc., San Francisco, Calif. Filed Feb. 17, 1959.

RAMROD

For Wheel Toys—Namely, Toy Coasters.
First use Aug. 15, 1958.

SN 68,025. Babson Bros. Co., Chicago, Ill. Filed Feb. 19, 1959.

Class 26—Measuring and Scientific

SN 67,991. Saks & Company, New York, N.Y. Filed Feb. 18, 1959.

For Dolls.
First use Feb. 13, 1959.

SN 68,651. Bradson Manufacturing Corporation, Saline, Mich. Filed Mar. 2, 1959.

AUTO-BOBBER

For Fishing Bobbers.
First use Feb. 1, 1959.

SN 68,671. Dolls of Hollywood, Santa Monica, Calif. Filed Mar. 2, 1959.

color records

For Paper Disks With Pictures for Coloring.
First use Dec. 24, 1958.

SN 68,751. Sunset Line & Twine Co., Petaluma, Calif. Filed Mar. 2, 1959.

MERMAID

For Fishing Lines.
First use Jan. 5, 1956.
Subj. to Intf. with SN 73,189.

SN 68,991. The B. F. Goodrich Company, Akron, Ohio. Filed Mar. 5, 1959.

B F Goodrich

Owner of Reg. Nos. 64,996 and 586,835.

For Ring Life Buoys, Marine Fenders, Seine Floats, Marine Floats, and Surf Boards.

First use about January 1955; at least as early as 1880 as to "Goodrich."

SN 73,189. Berkley & Company, Inc., Spirit Lake, Iowa. Filed May 8, 1959.

Mermaid

For Nylon Spinning-Type Fishing Line.
First use Nov. 15, 1956.
Subj. to Intf. with SN 68,751.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 55,431. James B. Winn, Jr., Wimberley, Tex. Filed July 16, 1958.

ARCHILITHIC

For Apparatus for Formation of Walls and Ceilings in Situ and Apparatus for Applying Coatings to Wall and Ceiling Foundations.
First use June 10, 1957.

SN 57,805. Vail Manufacturing Company, Chicago, Ill. Filed Aug. 15, 1958.

MONARCH

For Desk-Type Stapling Machines.
First use Sept. 28, 1957.

SN 61,854. Racine Hydraulics & Machinery, Inc., Racine, Wis. Filed Nov. 3, 1958.

ANCHOR-FAST

For Machines for Applying Rail Anchors.
First use Sept. 22, 1958.

SN 68,024. Babcon Bros. Co., Chicago, Ill. Filed Feb. 19, 1959.

The mark consists of two narrow bands of light orange color on the bead at the large end of the inflation. No claim is made to the representation of the goods. Owner of Reg. No. 416,682.

For Inflations for the Shell of a Teat Cup Assembly for Milking Machines.

First use Dec. 11, 1958.

SN 65,996. Morris Adwar, d.b.a. A.L.A. Casting Co., New York, N.Y. Filed Jan. 19, 1959.

SN 69,412. The Lane Company, Inc., Altavista, Va. Filed May 13, 1959.

First use Oct. 31, 1958.

First use Aug. 15, 1958.

SN 68,025. Babson Bros. Co., Chicago, Ill. Filed Feb. 19, 1959.

The mark consists of two narrow bands of a dark green color on the bead at the large end of the inflation. No claim is made to the representation of the goods. Owner of Reg. No. 416,682.

For Inflations for the Shell of a Teat Cup Assembly for Milking Machines.

First use Dec. 22, 1958.

SN 68,376. Cullman Wheel Co., Chicago, Ill. Filed Feb. 25, 1959.

GRIP-MASTER

Owner of Reg. No. 583,348.

For Sprocket Wheels, Hubs, and Bushings for All Types of Chain Driven Machinery.

First use in March 1954.

SN 69,114. Broderick & Bascom Rope Company, St. Louis, Mo. Filed Mar. 9, 1959.

AMERICAN ETHAN ALLEN

For Axes.

First use Jan. 9, 1959; 1920 as to "Ethan Allen."

SN 69,115. Broderick & Bascom Rope Company, St. Louis, Mo. Filed Mar. 9, 1959.

AMERICAN RIXFORD

For Axes and Scythes.

First use Dec. 12, 1958.

SN 72,108. American Saw and Tool Company, Louisville, Ky. Filed Apr. 23, 1959.

POLY-TAP

For Hand Metal Cutting Tools.

First use Mar. 20, 1959.

SN 72,252. Plane Parts, Inc., New Haven, Conn. Filed Apr. 24, 1959.

AIR-O-ETCH

For Pneumatic Tools for Marking Metal Parts.

First use on or about Jan. 1, 1958.

Class 26—Measuring and Scientific Appliances

SN 62,026. Mitsuboshi Photo Industry Co., Ltd., Chiyoda-ku, Tokyo, Japan. Filed Nov. 6, 1958.

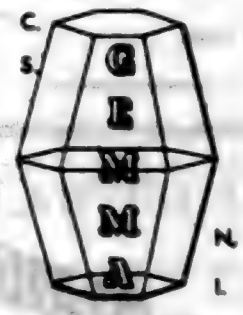
VELBON

For Photographic Camera Parts and Accessories Such as Tripod.

First use Mar. 25, 1955; in commerce May 10, 1958.

Class 27—Horological Instruments

SN 39,304. Werner Conrad Von Clemm, d.b.a. W. C. Von Clemm, New York, N.Y. Filed Oct. 21, 1957.



For Jewel Boxes Made in Whole or in Part of Precious Metal.

First use Aug. 16, 1957.

SN 45,127. Daimler-Benz Aktiengesellschaft, Stuttgart-Untertuerkheim, Germany. Filed Feb. 3, 1958.

MERCEDES-BENZ

Owner of German Reg. No. 375,067, dated Oct. 7, 1927.

For (based on use in commerce): Clocks.

For (based on German registration): Watches and Parts Thereof, and Watch Crystals.

First use in 1926; in commerce in 1953; 1900 as to "Mercedes"; 1896 as to "Benz."

SN 71,839. Helbros Watch Company, Inc., New York, N.Y. Filed Apr. 20, 1959.

Helbros

INVINCIBLE

Owner of Reg. Nos. 411,544, 414,881, and 505,782.

For Watches.

First use in December 1949.

Class 28—Jewelry and Precious-Metal Ware

SN 54,125. L. J. Wright, Hauser, Oreg. Filed June 23, 1958.

Wrightway Gemcraftre

For All Forms of Costume Jewelry.

First use May 15, 1951.

Class 25—Belting, Hose, Machinery Packing

SN 24,250. Crown Zellerbach Corporation, San Francisco, Calif. Filed Feb. 12, 1957.

SN 65,996. Morris Adwar, d.b.a. A.L.A. Casting Co., New York, N.Y. Filed Jan. 19, 1959.

For Jewelry—Namely, Rings, Charms, Scatter Pins, Bracelets, Earrings, Brooches, Cuff Links, Pendants, Clasps.
First use Jan. 16, 1959.

SN 67,994. Selfit Inc., Providence, R.I. Filed Feb. 18, 1959.

SELFIT

For Finger Rings.
First use December 1948.

SN 68,747. Speidel Corporation, Providence, R.I. Filed Mar. 2, 1959.

No claim is made to the word "Diamond" apart from the remainder of the mark.
For Watch Bracelets.
First use Feb. 16, 1959.

SN 70,706. Ben Gartner, d.b.a. Circle Jewelry Products, New York, N.Y. Filed Apr. 2, 1959.

Goldette

For Costume Jewelry.
First use Oct. 15, 1958.

SN 73,488. Larry Guthman, d.b.a. Larry Guthman Wholesale Jewelers Supplies, Lake Worth, Fla. Filed May 12, 1959.

LA RAY

For Jewelry Findings and Chains—Namely, Bead Clasps, Jump Rings, Spring Rings, Watch Crowns, Earrings, Eyeglass Guard Chains, Watch Chains, and Key Chains, All Constructed of or Plated Wholly or in Part With Precious Metal.
First use on or about July 1952.

Class 32—Furniture and Upholstery

SN 41,462. Warren Lloyd, Inc., Paterson, N.J. Filed Nov. 27, 1957.

For Upholstered Living Room, Dining Room, and Bedroom Furniture.
First use Sept. 10, 1953.

SN 69,412. The Lane Company, Inc., Altavista, Va. Filed Mar. 12, 1959.

ACCLAIM

For Tables and Case Goods—Namely, Dressers, Chests on Chests, Chests of Drawers, Panel Beds, Bookcase Beds, and Spindle Beds.
First use Jan. 17, 1959.

SN 70,870. S. A. Cook & Co., Medina, N.Y. Filed Apr. 6, 1959.

POLY-AIRE

For Foam Cushioning, Cut to Size, for Use in Upholstered Furniture.
First use Oct. 16, 1958.

SN 71,000. Drexel Furniture Company, Drexel, N.C. Filed Apr. 7, 1959.

BASQUE PROVINCIAL

Applicant does not claim exclusive rights in the word "Provincial" apart from the mark.
For Bedroom, Dining Room, and Occasional Furniture.
First use Jan. 2, 1959.

SN 71,101. Dillingham Manufacturing Co., Inc., Sheboygan, Wis. Filed Apr. 8, 1959.

SAMARA GROUP

The word "Group" is disclaimed apart from the mark as shown.
For Correlated Group of Household Furniture Including Living Room Furniture, Dining Room Furniture, and Bed Room Furniture.
First use June 5, 1958.

SN 73,757. R. G. Barry Corporation, Columbus, Ohio. Filed May 15, 1959.

PARKEE

For Adjustable Back Rest Pillows.
First use Feb. 1, 1959.

Class 34—Heating, Lighting, and Ventilating Apparatus

SN 47,882. Modine Manufacturing Company, Racine, Wis. Filed Mar. 17, 1958.

SCHOOL-VENT

For Heating and Ventilating Units.
First use Feb. 17, 1958.

SN 57,580. Thermotank, Inc., Detroit, Mich. Filed Aug. 20, 1958.

THERMO-REG

For Regulating Unit for Controlling the Mixture of Hot Air and Cold Air Being Passed Into an Enclosure To Maintain a Predetermined Temperature Therein.
First use on or about 1927.

SN 66,050. S. H. Kress and Company, New York, N.Y. Filed Jan. 19, 1959.

SN 67,437. The Camp Manufacturing Company, Baltimore, Md. Filed Feb. 10, 1959.

Class 35 — Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 40,992. The Alan Packing & Rubber Company, Cleveland, Ohio. Filed Nov. 20, 1957.

MOLY SUPREME

For Industrial Packings.
First use in May 1957.

Class 36 — Musical Instruments and Supplies

SN 46,043. Alto Fonic Music Systems, Inc., Palo Alto, Calif. Filed Feb. 18, 1958.

Altofonic

For Recorded Magnetic Tapes, Magnetic Tape Reproducers, and Accessories and Interchangeable Components Therefor, Including Automatic Reversing Mechanisms, Timers, Automatic Message Insertion Units, Faders, and Personnel Paging Mechanisms, for Complete and Automatic Background Music Systems for Business and Industrial Applications.
First use Apr. 1, 1957.

SN 52,845. Benjamin Aisner, d.b.a. Specialty Case Mfg. Co., Philadelphia, Pa. Filed June 4, 1958.

STEREOVOX

For Record Players, Recorders of the Disc Type, and Record Holders of the Box Type.
First use on or about May 1, 1958.

SN 54,450. Urania Records Distributing Company, Belleville, N.J. Filed June 27, 1958.

URANIA

For Grooved Phonograph Records and Magnetic Tape Sound Records.
First use May 10, 1956.

SN 62,480. Anthony N. Pennetti, d.b.a. The Pennetti Accordion School, Denver, Colo. Filed Nov. 14, 1958.

Lux Fisa

For Accordions.
First use Apr. 10, 1956.

Class 37 — Paper and Stationery

SN 23,297. The Dow Chemical Company, Midland, Mich., assignee of The Dobeckmun Company, Cleveland, Ohio. Filed Jan. 28, 1957.

METALSEAL

For Heat-Sealable Packaging Laminates of Foil, Paper Stock, and Adhesive.
First use Aug. 9, 1955.

SN 24,250. Crown Zellerbach Corporation, San Francisco, Calif. Filed Feb. 12, 1957.

Beauty Box

For Cardboard Boxes in Which Facial Tissues Are Merchandised.
First use Sept. 24, 1956.

SN 35,889. Angel Soft Tissue Mills, Inc., New York, N.Y., by change of name from Thomson Paper Mills, Inc., New York, N.Y. Filed Aug. 20, 1957.

SMART SET

For Facial Tissues.
First use in 1947.

SN 56,592. Andrew F. Schott, Brookfield, Wis. Filed Aug. 4, 1958.

PLASTISLATE

For Forms and Work Sheets for Use as Educational Aids.
First use June 9, 1958.

SN 57,696. Keuffel & Esser Company, Hoboken, N.J. Filed Aug. 22, 1958.

HERCULENE

For Drafting Film.
First use June 20, 1958.

SN 60,041. Knight Brothers Paper Company, Jacksonville, Fla. Filed Oct. 3, 1958.

Supreme

For Office Supplies, Specifically Index Cards, Paper Tablets, File Folders, Adding, Teletype, and Check Proofing Machine Roll Paper, Second Sheets, and Stationery Envelopes.
First use Sept. 1, 1933.

SN 62,341. Morton C. Warnow, d.b.a. The Stikvelope Company, New York, N.Y. Filed Nov. 12, 1958.

AstikVelopes

For Combination Photograph Mount and Envelopes for Negatives.
First use on or about May 15, 1958.

SN 64,325. The Narrow Fabric Company, d.b.a. Wyomissing Paper Products, West Reading, Pa. Filed Dec. 15, 1958.

GENCOTE

For High Gloss Coated Paper.
First use Nov. 28, 1958.

Furniture.
First use Sept. 10, 1953.

First use on or about 1927.

SN 66,050. S. H. Kress and Company, New York, N.Y. Filed Jan. 19, 1959.

Bonita

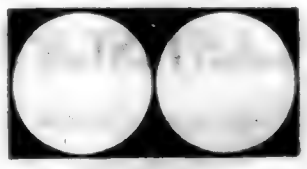
Owner of Reg. Nos. 363,925, 582,037, and others.
For Facial Tissues.
First use May 15, 1931.

SN 66,093. C. A. Reed Company, Williamsport, Pa. Filed Jan. 19, 1959.

JEWEL-BRITE

For Gift Wrapping Paper.
First use Apr. 15, 1958.

SN 66,106. Scott Paper Company, Chester, Pa. Filed Jan. 19, 1959.



For Toilet Tissue, Paper Napkins, Paper Towels, and Wipers, Waxed Paper.
First use on or about Mar. 1, 1958, on toilet tissue.

SN 66,516. West Virginia Pulp and Paper Company, New York, N.Y. Filed Jan. 26, 1959.

M/R

For Wax Impregnated Corrugated Paperboard.
First use Oct. 1, 1958.

SN 66,529. Blue Ribbon Pen & Pencil Co., Inc., Georgetown, Ky. Filed Jan. 27, 1959.

RITE-O-GRAPH

For Woodcased Lead Pencils, Pencil Style Ball Pens and Retractable Ball Pens.
First use Jan. 1, 1958.

SN 66,591. American Lithofold Corporation, St. Louis, Mo. Filed Jan. 28, 1959.

FLIP-FOLD

For Continuous Form Stationery.
First use Jan. 9, 1959.

SN 67,259. Tension Envelope Corporation of Kansas City, Kansas City, Mo. Filed Feb. 6, 1959.

SIM-PULL

For Envelopes.
First use Jan. 27, 1959.

SN 67,437. The Camp Manufacturing Company, Baltimore, Md. Filed Feb. 10, 1959.

A PLUS

For Notebooks, Memorandum Books, and Loose Leaf Fillers Therefor.
First use Jan. 6, 1959.

Class 38—Prints and Publications

SN 38,255. Baymer Publications, Inc., Los Angeles, Calif. Filed Oct. 3, 1957.

WESTERN MATERIAL HANDLING

For Trade Publication.
First use Sept. 24, 1957.

SN 42,093. The Washington Post Company, Washington, D.C. Filed Dec. 9, 1957.

PLAIN AND FANCY FOOD

For Section of a Newspaper.
First use Oct. 18, 1956.

SN 42,615. Hampton Greeting Card Company, Libertyville, Ill. Filed Dec. 18, 1957.

Christmas Classics

For Greeting Card.
First use May 1954.

SN 65,407. Business News Publishing Company, Detroit, Mich. Filed Jan. 7, 1959.

AIR CONDITIONING HEATING & REFRIGERATION NEWS

Owner of Reg. No. 643,947.
For Weekly Industry Newspaper.
First use Dec. 1, 1958.

SN 66,233. Chas. Pfizer & Co., Inc., Brooklyn, N.Y. Filed Jan. 21, 1959.

AGRI DYNAMICS

For Agricultural Newsletter Published Periodically.
First use Nov. 28, 1958.

SN 68,547. Wichita Allied Printing Trades Council, Wichita, Kans. Filed Feb. 16, 1959.

THE OFFICIAL DIRECTORY OF ORGANIZED LABOR FOR WICHITA, KANSAS

For Periodical, Issued Annually.
First use during 1943.

SN 55,544. Alex Lee Wallau, Inc., New York, N.Y. Filed July 17, 1958.

SN 57,831. J. C. Penney Company, New York, N.Y. Filed Aug. 25, 1958.

SN 76,003. McGraw-Hill Company of California, San Francisco, Calif. Filed June 18, 1959.

ARCHITECT AND ENGINEER

For Periodical Publication.
First use in 1905.
Subj. to Intf. with SN 63,939.

Class 39 — Clothing

SN 22,148. Westbrook Glove Company, Gloversville, N.Y. Filed Jan. 4, 1957.

Applicant claims the words "Native Deerskin" only in connection with the mark as shown. Owner of Reg. No. 639,199.
For Gloves and Moccasins for Men, Women, Boys, and Girls, and Women's Hats, Being Made in Whole or Substantial Part of Deerskin.
First use January 1954; prior to Jan. 4, 1957, as to women's hats.

SN 40,704. The Electric Storage Battery Company, Philadelphia, Pa., assignee of The Ray-O-Vac Company, Madison, Wis. Filed Nov. 14, 1957.

WILLSON

Owner of Reg. Nos. 575,797, 577,177, and 600,534.
For Safety Hats, Safety Helmets, Face Shields, Dust and Spark Protective Hoods and Masks.
First use Jan. 9, 1956; Apr. 29, 1922, as to "Willson" in a different display.

SN 48,007. Patent-Hose Corporation, Burlington, N.C., assignee of Browns Hosiery Mills, Inc., Burlington, N.C. Filed Mar. 19, 1958.

POODLE SOCK

The word "Sock" is disclaimed apart from the mark as shown. Owner of Reg. Nos. 578,033 and 578,766.
For Socks.
First use Feb. 11, 1958.

SN 48,008. Patent-Hose Corporation, Burlington, N.C., assignee of Browns Hosiery Mills, Inc., Burlington, N.C. Filed Mar. 19, 1958.

Owner of Reg. Nos. 578,033 and 578,766.
For Socks.
First use Feb. 11, 1958.

SN 51,262. Jacques De Loux, Inc., Sellersville, Pa. Filed May 8, 1958.

Donnamarie

For Sportswear—Namely, Sweaters, Blouses, Skirts, Jackets, Slacks, Shorts, Shirts, and Sport Hats.
First use Mar. 31, 1958.

SN 52,417. Morton Karten, Inc., New York, N.Y. Filed May 27, 1958.

BOGGINS

For Girls' and Boys' Ski Pants.
First use Apr. 22, 1958.

SN 53,699. Crescendoe Gloves, Inc., Johnstown, N.Y. Filed S.R. June 17, 1958; Am. P.R. Dec. 8, 1958.

YOUNGLOVES by CRESCENDOE

Owner of Reg. Nos. 413,299 and 420,108.
For Ladies' Gloves.
First use Feb. 18, 1957.

SN 54,254. J. C. Penney Company, New York, N.Y. Filed June 25, 1958.

PENLURA

For Women's and Girls' Coats.
First use May 23, 1957.

SN 54,766. Milton Julian, Milton's Clothing Cupboard, Chapel Hill, N.C. Filed July 3, 1958.

Milton's Clothing Cupboard

For Suits, Sport Jackets, Trousers, Shirts, Neckwear, and Shoes.
First use in 1948.

SN 54,954. Mack Kalison, New York, N.Y., assignee of Mayflower Dress Co., Inc., New York, N.Y. Filed July 8, 1958.

TRU-HALF

For Ladies' and Misses' Dresses.
First use Apr. 1, 1957.

SN 55,381. Cluett, Peabody & Co., Inc., New York, N.Y. Filed July 16, 1958.

FLIP-FRONT

For Outer Shirts.
First use July 10, 1958.

SN 64,300. Interwoven Stocking Company, New Brunswick, N.J. Filed Dec. 15, 1958.

SN 67,204. Chadbourn Gotham, Inc., Charlotte, N.C. Filed Feb. 6, 1959.

SN 55,544. Alex Lee Wallau, Inc., New York, N.Y. Filed July 17, 1958.

Bonnie Doon

Owner of Reg. No. 218,166.
For Ladies', Misses', and Girls' Leotards.
First use in November 1957.

SN 55,683. Merit Clothing Company, Mayfield, Ky. Filed July 21, 1958.

For Men's Suits, Sport Coats, Slacks, Top Coats, and Overcoats.
First use Mar. 1, 1957.

SN 55,684. Merit Clothing Company, Mayfield, Ky. Filed July 21, 1958.

For Men's Suits, Sport Coats, Slacks, Top Coats, and Overcoats.
First use Sept. 1, 1957.

SN 56,494. Orva Hosiery Stores, Inc., New York, N.Y. Filed Aug. 1, 1958.

Lady Orva

For Ladies' Hosiery.
First use Apr. 9, 1958.

SN 57,043. Winwood Sportswear, Inc., Manchester, N.H. Filed Aug. 11, 1958.

chip·o·granite

For Children's Shirts.
First use June 1, 1958.

SN 57,765. Canterbury Knitters, Ltd., New York, N.Y. Filed Aug. 25, 1958.

MINGLERS

For Skirts.
First use in January 1955.

SN 57,831. J. C. Penney Company, New York, N.Y. Filed Aug. 25, 1958.

FEATHER TRIQUE

For Women's and Girls' Nightgowns, Pajamas, Slips, and Panties.
First use May 27, 1958, on women's and girls' slips.

SN 58,282. Winwood Sportswear, Inc., Manchester, N.H. Filed Sept. 2, 1958.

WIN-TOGS

For Children's Shirts, Jackets, and Pants.
First use Apr. 1, 1958.

SN 60,207. Cordé de Paris Corset Co., Inc., New York, N.Y. Filed Oct. 7, 1958.

"Miss Cordé"

Owner of Reg. No. 665,425.
For Corsets, Brassieres, and Corselettes.
First use July 20, 1958.

SN 60,324. Wembley, Inc., New Orleans, La. Filed Oct. 8, 1958.

WASHABLY YOURS

For Neckties.
First use Sept. 16, 1958.

SN 60,588. Lowenthal & Hess, Inc., Baltimore, Md. Filed Sept. 30, 1958.

Dana Marté

Owner of Reg. No. 363,945.
For Hats for Women and Misses.
First use Nov. 17, 1937.

SN 62,325. Robert Reed Ltd. Company, New York, N.Y. Filed Nov. 12, 1958.

ROBERT REED

For Haberdashery, Including Hats, Caps, Neckties, and Gloves.
First use Aug. 22, 1958.

SN 62,891. Steven Williams, Ltd., Short Hills, N.J. Filed Nov. 20, 1958.

Dover Street

For Men's Shoes, Slippers, and Boots.
First use Feb. 11, 1955.

SN 59,705. Zwicker Knitting Mills, Appleton, Wis. Filed Mar. 16, 1959.

SN 64,948. S. J. Aronsohn, Inc., New York, N.Y. Filed Dec. 29, 1958.

SN 64,300. Interwoven Stocking Company, New Brunswick, N.J. Filed Dec. 15, 1958.

PULL UPS

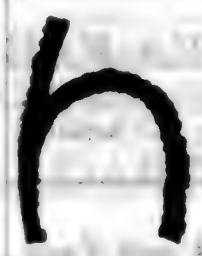
Owner of Reg. No. 366,962.
For Men's and Boys' Hosiery.
First use Mar. 17, 1938.

SN 64,614. Carters Shoes Inc., Springfield, Mass. Filed Dec. 19, 1958.

Maxine originals

The word "Originals" is disclaimed apart from the mark.
For Women's and Girls' Shoes.
First use Nov. 25, 1958.

SN 64,976. Grossman Clothing Company, New York, N.Y. Filed Dec. 29, 1958.



Owner of Reg. No. 632,922.
For Men's and Boys' Suits.
First use Aug. 14, 1957.

SN 65,527. Wellco Shoe Corporation, Waynesville, N.C. Filed Jan. 8, 1959.

For Shoes, Boots, Sandals for Men, Women, and Children.
First use Dec. 17, 1958.

SN 65,718. Michaels Stern & Company Incorporated, Rochester, N.Y. Filed Jan. 12, 1959.

SABRE

For Fabric Sold in Finished Apparel—Namely, Men's and Young Men's Topcoats, Sport Jackets, Suits, and Slacks.
First use Sept. 6, 1958.

SN 66,198. A. S. Beck Shoe Corporation, New York, N.Y. Filed Jan. 21, 1959.

Rest-Ease

Owner of Reg. No. 357,500.
For Men's and Women's Shoes and Slippers Made of Leather and/or Fabric or Mixtures of These Materials.
First use Nov. 26, 1937.

SN 67,204. Chadbourn Gotham, Inc., Charlotte, N.C. Filed Feb. 6, 1959.

HI-LARKS

For Hosiery.
First use Sept. 15, 1958.

SN 67,311. Commonwealth Shoe and Leather Company, d.b.a. London Character Shoes, Whitman, Mass. Filed Feb. 9, 1959.

LONDON CHARACTER PREPS

Owner of Reg. Nos. 136,518, 640,391, and others.
For Shoes of Leather, Fabric, Rubber or Plastic Materials or Combinations Thereof for Men and Boys.
First use Aug. 15, 1958.

SN 67,342. Julius Goldstein & Sons Co., Boston, Mass. Filed Feb. 9, 1959.

SLIPPER-GLO

For Luminescent Inserts for Shoes and Slippers.
First use June 1958.

SN 67,511. Boreva Sportswear Company, Chicago, Ill. Filed Feb. 11, 1959.

SKORT

Owner of Reg. Nos. 669,315 and 663,748.
For Children's Clothing—Namely, Combination Skirts and Shorts.
First use Apr. 4, 1957.

SN 67,717. Vylyt Corporation, New York, N.Y. Filed Feb. 13, 1959.

Vylyt

For Composition Sole for Shoes Made of Synthetic Products.
First use Jan. 23, 1959.

SN 67,784. Gustave, Inc., New York, N.Y. Filed Feb. 16, 1959.

COOL MAN

For Slippers.
First use Jan. 26, 1959.

SN 68,402. Sid Greenberg, Inc., New York, N.Y. Filed S.R. Feb. 26, 1959; Am. P.R. July 1, 1959.

Joan Starr

For Ladies' Lingerie, Slips, Panties, Nightgowns, Pajamas, Blouses, Petticoats, and Housedresses.
First use July 10, 1944.

SN 51,894. Maria Giannasi, d.b.a. Firm Maria Giannasi, Genoa, Italy. Filed May 19, 1958.

SN 67,182. Hinckley & Schmitt, Inc., Chicago, Ill. Filed Feb. 5, 1959.

First use in January 1955.

First use Feb. 11, 1955.

SN 69,705. Zwicker Knitting Mills, Appleton, Wis. Filed Mar. 16, 1959.

SNO-SHAG

For Knitted Mittens and Gloves for Men, Women, and Children.
First use Mar. 6, 1959.

SN 69,739. Halpern & Christenfeld, Inc., New York, N.Y. Filed Mar. 17, 1959.

Christenfeld

For Wearing Apparel for Men, Women, and Children—Namely, Trousers, Skirts, Suits, Slacks, Shorts, Shirts, Blouses, Jackets, Vests, Riding Breeches, Riding Jodhpurs, Riding Coats, and Pedal Pushers.
First use Mar. 15, 1954.

SN 69,761. Preston Shirt Company, Inc., New York, N.Y. Filed Mar. 17, 1959.

Lady Winthrop

For Ladies' Blouses and Shirts.
First use Jan. 2, 1959.

SN 69,762. Preston Shirt Company, Inc., New York, N.Y. Filed Mar. 17, 1959.

Lady Kentworth

For Ladies' Shirts.
First use Jan. 2, 1959.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 38,540. Hockmeyer Bros., Inc., New York, N.Y. Filed Oct. 8, 1957.

MELOTEX

For Textile Fabrics in the Piece Composed of Corduroy, Used Exclusively for the Manufacture of Boys' and Men's Wear.
First use Mar. 13, 1956.

SN 58,721. Harte & Company, Inc., New York, N.Y. Filed Sept. 10, 1958.

GOLDEN MIST

For Vinyl Fabric Used for Making Shower Curtains, Bathroom Curtains, Aprons, and Other Articles.
First use Aug. 26, 1958.

SN 64,947. S. J. Aronsohn, Inc., New York, N.Y. Filed Dec. 29, 1958.

THE GREETING TIE

For Necktie Fabrics in the Piece.
First use about Sept. 15, 1958.

SN 64,948. S. J. Aronsohn, Inc., New York, N.Y. Filed Dec. 29, 1958.

SAY IT WITH A TIE!

For Necktie Fabrics in the Piece.
First use about Sept. 15, 1958.

SN 69,431. Monarch Rug Mills, Inc., Dalton, Ga. Filed Mar. 12, 1959.

NORDIC HILLS

For Fine Textured Carpets.
First use Jan. 2, 1959.

SN 69,869. John Boyle & Company, Inc., New York, N.Y. Filed Mar. 19, 1959.

PERMACRYLIC

For Painted Awning Fabric.
First use Feb. 11, 1959.

SN 70,124. Ben Walters, Inc., New York, N.Y. Filed Mar. 23, 1959.

SEA-FAB

For Fabric of the Impregnated Type To Be Used for Casting, Modeling, Surfacing, and Repairing.
First use Mar. 12, 1959.

Class 43—Thread and Yarn

SN 65,162. The National Plastic Products Company, Odenton, Md. Filed Dec. 31, 1958.

Sparkle-lite

For Monofilament and Synthetic Raffia-Type Filament.
First use Dec. 22, 1958.

SN 70,232. Lastex Yarn & Lactron Thread Limited, Erdington, Birmingham, England. Filed Mar. 25, 1959.

FILRON

Owner of British Reg. No. 780,847, dated Aug. 15, 1958.
For Rubber Thread.

SN 70,379. The Mason Silk Company, Winsted, Conn. Filed Mar. 27, 1959.

SYNTHREAD

For Synthetic Thread.
First use Jan. 20, 1959.

Class 44—Dental, Medical, and Surgical Appliances

SN 45,144. Daleco Products Corporation, San Francisco, Calif. Filed Feb. 3, 1958.

SPIROJECTOR

For Rubber Tipped Attachment for a Saliva Ejection Tube.
First use Nov. 7, 1957.

SN 49,780. Nicholas Poccia, d.b.a. Poccia Products Company, Utica, N.Y. Filed Apr. 16, 1958.

SN 61,307. Mettler & Sons, Lodi, Calif., by change of name from J. J. Mettler & Sons, Lodi, Calif. Filed Oct. 24, 1958.

SN 51,894. Maria Giannasi, d.b.a. Firm Maria Giannasi, Genoa, Italy. Filed May 19, 1958.

The translation of the inscription on the mark is "The CIP, my kind lady friend, renders you free from your periodic slavery." Owner of Italian Reg. No. 114,707, dated Dec. 11, 1953.

For Catamenial Slips.

SN 54,722. Deutsche Elektronik G.m.b.H., Berlin-Wilmersdorf, Germany. Filed June 30, 1958.

RADARMED

Owner of German Reg. No. 701,568, dated Apr. 5, 1957.

For Hearing Aids, Stethoscopes, High-Frequency Therapeutic Apparatus for High Frequency Irradiation With Short Waves, Ultra-Short Waves, and Micro Waves.

SN 68,254. Gorman-Rupp Industries, Inc., Belleville, Ohio. Filed Feb. 24, 1959.

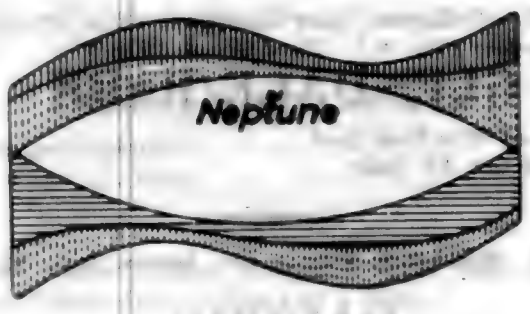
The lining on the drawing is for shading only.

For Heating Pads for Applying Heat to the Human Body and for Control Units Therefor.

First use Feb. 2, 1959.

Class 45—Soft Drinks and Carbonated Waters

SN 67,131. Hinckley & Schmitt, Inc., Chicago, Ill. Filed Feb. 5, 1959.



The drawing is lined for pink, purple, and blue. Owner of Reg. No. 151,504.

For Distilled Water.

First use Oct. 6, 1958.

SN 67,182. Hinckley & Schmitt, Inc., Chicago, Ill. Filed Feb. 5, 1959.

The drawing is lined for green and blue. Owner of Reg. No. 63,533.

For Drinking Water.

First use Oct. 6, 1958.

Class 46—Foods and Ingredients of Foods

SN 21,649. Taste Engineering, Inc., Chicago, Ill. Filed Dec. 26, 1956.

LIQUA-SOLID

For Flavors and Flavor Intensifiers for Animal Foods and Feed Supplements.

First use Mar. 31, 1956.

SN 39,518. The Capital City Products Company, Columbus, Ohio. Filed Oct. 25, 1957.

For Oleomargarine.

First use Oct. 22, 1957.

SN 41,892. Copel-Exportadora de Conservas de Peixe, Limitada, Lisbon, Portugal. Filed Dec. 6, 1957.

LUXOR

Owner of Portuguese Reg. No. 45,882, dated June 21, 1948.

For Canned Sardines.

SN 48,083. Knud W. Larsen, d.b.a. Larsen Confection Co., Gary, Ind. Filed Mar. 19, 1958.

SWEETHEART

For Candy Drops.

First use June 20, 1957.

SN 48,972. S. B. Davis Company, Inc., Grand Rapids, Mich. Filed Apr. 3, 1958.

APPLE RIDGE

No claim to exclusive right is made to the word "Apple," such word being the name of the goods.

For Fresh Apples.

First use Aug. 18, 1957.

SN 49,466. Howard Vair, d.b.a. Vair-E-Best Candies, Detroit, Mich. Filed Apr. 10, 1958.

POPPY COCK

For Candy.

First use on or about Mar. 1, 1957.

SN 64,146. Colgate-Palmolive Company, New York, N.Y. Filed Dec. 12, 1958.

SN 67,211. Eagle Produce Company, d.b.a. Eagle Produce Co., Los Angeles, Calif. Filed Feb. 6, 1959.

SN 49,780. Nicholas Poccia, d.b.a. Poccia Products Company, Utica, N.Y. Filed Apr. 16, 1958.

APREA

For Macaroni.
First use Nov. 2, 1952.

SN 50,685. Thomas Carvel, d.b.a. Carvel, Yonkers, N.Y. Filed Apr. 30, 1958.

ICY-WYCY

For Frozen Confections Mounted on Sticks, Liquid Concentrates for Making the Same, Chocolate Coatings for Coating Frozen Confections, Frozen Custards, Ice Creams, Fruit Ices, and Fruit Juice Ices, and Especially Congealed Confections Either Mounted on Sticks or in Edible Cones.
First use Apr. 3, 1958.

SN 50,909. Morinaga Confectionery Company Limited, Minato-ku, Tokyo, Japan. Filed May 2, 1958.

Morinaga

Owner of Japanese Reg. Nos. 464,412, 464,379, 461,590, 461,220, and 472,449, dated Apr. 12, 1955, Apr. 13, 1955, Mar. 7, 1955, Feb. 28, 1955, and Oct. 27, 1955, respectively.
For Soy, Ketchup, and Worcester Sauces, Vinegar, Sugar, Honeys, Candies, Tea, Coffee, Cocoa, and Coffee Flavored Lump Sugar.

SN 52,367. E. G. Whitman & Co., Inc., Philadelphia, Pa. Filed May 26, 1958.

MERION

Owner of Reg. No. 541,619.
For Candy.
First use Sept. 20, 1949.

SN 54,922. American Maple Products Corporation, Newport, Vt. Filed July 8, 1958.

MAPLE FARMS

For Pure Maple Syrup.
First use Nov. 9, 1956.

SN 58,308. The Maryland Baking Company, Baltimore, Md. Filed Sept. 3, 1958.

TRIPLE HEDER

Owner of Reg. No. 573,143.
For Unfilled Ice Cream Cones.
First use in or about 1932.

SN 61,091. Van Slyke Farms, Wilder, Idaho. Filed Oct. 21, 1958.

VAN'S VANITY

For Fresh Fruits.
First use Sept. 8, 1956.

SN 61,307. Mettler & Sons, Lodi, Calif., by change of name from J. J. Mettler & Sons, Lodi, Calif. Filed Oct. 24, 1958.

Bella-Nera

The mark may be translated into English as meaning "dark beauty."
For Fresh Fruit.
First use Sept. 15, 1958.

SN 63,156. Fair View Packing Company, Inc., d.b.a. Fairview Packing Co., Hollister, Calif. Filed Nov. 25, 1958.

No claim of exclusive right is made to the word "Tomato," such word being the name of the goods.
For Canned Tomatoes.
First use Oct. 20, 1958.

SN 63,179. S.I.L.I.A. Sicule Lombarde Industrie Associate, Società per Azioni, Codogno, Milan, Italy. Filed June 10, 1959.

LAZY-LEMON

For Lemon Juice and Lemon Essence for Food Purposes Sealed in Liquid Form in a Container.
First use Sept. 11, 1956; in commerce Sept. 21, 1956.

SN 63,180. S.I.L.I.A. Sicule Lombarde Industrie Associate, Società per Azioni, Codogno, Milan, Italy. Filed June 10, 1959.

LAZY-TOMATO

For Tomato Juice and Tomato Powder.
First use Dec. 3, 1956; in commerce Feb. 8, 1957.

SN 63,181. S.I.L.I.A. Sicule Lombarde Industrie Associate, Società per Azioni, Codogno, Milan, Italy. Filed June 10, 1959.

LAZY-ORANGE

For Orange Juice and Orange Essence Sealed in Liquid Form in a Container for Food Purposes.
First use Dec. 3, 1956; in commerce Jan. 18, 1957.

SN 63,669. Pedigreed Seed Company, d.b.a. Flower Lane Farm, Jersey City, N.J. Filed Dec. 4, 1958.

GLENDALE PARK

For Mixed Wild Bird Seed.
First use Oct. 17, 1958.

SN 63,889. Rubenstein & Sons, Inc., Dallas, Tex. Filed Dec. 8, 1958.

GAUCHO

For Fresh and Frozen Shrimp.
First use August 1957.

SN 68,544. White Packing Co., Inc., Brooklyn, N.Y. Filed Feb. 26, 1959.

SN 71,577. Hercules Powder Company, Wilmington, Del. Filed Apr. 15, 1959.

SN 64,146. Colgate-Palmolive Company, New York, N.Y. Filed Dec. 12, 1958.

COLGATE

Owner of Reg. Nos. 227,647, 322,167, and 331,580.
For Chewing Gum.
First use Oct. 6, 1958.

SN 65,299. Director's Inc., d.b.a. Directors, Washington, D.C. Filed Jan. 5, 1959.

DIRECTORS

For Corned Beef, Corned Tongue, Bologna, Salami, Frankfurters, and Pastrami.
First use June 1938.

SN 65,409. Central Soya Company, Inc., Fort Wayne, Ind. Filed Jan. 7, 1959.

CENSOY

Owner of Reg. Nos. 403,748, 426,748, and others.
For Soya Flour.
First use Dec. 1, 1958.

SN 65,572. Joe Lowe Corporation, New York, N.Y. Filed Jan. 9, 1959.

SCHOOL TIME

For Frozen Confections on Sticks and Liquid Flavoring Syrups or Concentrates for Making the Same.
First use Nov. 24, 1958.

SN 66,429. Excelsior Baking Co., Inc., d.b.a. Butter Krust Toast Company, Minneapolis, Minn. Filed Jan. 26, 1959

Cin-a-mon Krust

Owner of Reg. No. 631,867.
For Toast.
First use Mar. 12, 1926.

SN 67,122. Frazar & Company, Inc., New York, N.Y. Filed Feb. 5, 1959.

TOP-TEST

For Canned Fish and Canned Fruits.
First use Nov. 24, 1937.

SN 67,128. Charles Gulden, Inc., Saddle Brook, Rochelle Park, N.J. Filed Feb. 5, 1959.

CONEY ISLAND

For Prepared Mustard.
First use Jan. 21, 1959.

SN 67,210. Eagle Produce Company, d.b.a. Eagle Produce Co., Los Angeles, Calif. Filed Feb. 6, 1959.

FOB

For Fresh Vegetables.
First use Aug. 10, 1956.

SN 67,211. Eagle Produce Company, d.b.a. Eagle Produce Co., Los Angeles, Calif. Filed Feb. 6, 1959.

QUE SUAVE

"Que Suave" may be translated to mean "what a treat."
For Fresh Vegetables.
First use Sept. 26, 1958.

SN 67,212. Eagle Produce Company, d.b.a. Eagle Produce Co., Los Angeles, Calif. Filed Feb. 6, 1959.

FLYING E

For Fresh Vegetables, Fresh Deciduous Fruits, and Fresh Citrus Fruits.
First use Jan. 27, 1959.

SN 67,307. Carmello's, Lubbock, Tex. Filed Feb. 9, 1959.
For Frozen Italian Rolls and Pizza Pies.

Carmello's

First use June 1, 1957.

SN 67,459. Kinslow Egg Co., Russellville, Ark. Filed Feb. 10, 1959.

SKY FRESH

The word "Fresh" is disclaimed apart from the mark as shown.
For Fresh Eggs.
First use Feb. 7, 1959.

SN 67,626. Pepperidge Farm Incorporated, Norwalk, Conn. Filed Feb. 12, 1959.

ROCHELLE

For Cookies.
First use on or about Mar. 14, 1957.

SN 67,627. Pepperidge Farm Incorporated, Norwalk, Conn. Filed Feb. 12, 1959.

GENEVA

For Cookies.
First use on or about Mar. 14, 1957.

SN 67,628. Pepperidge Farm Incorporated, Norwalk, Conn. Filed Feb. 12, 1959.

ORLEANS

For Cookies.
First use on or about Mar. 14, 1957.

SN 64,691. The Buckeye Brewing Company, Toledo, Ohio.

Class 49 Distilled Alcoholic Liquors

SN 68,544. White Packing Co., Inc., Brooklyn, N.Y. Filed Feb. 26, 1959.

Heidelberg

For Canned Cooked Ham.
First use Oct. 22, 1958.

SN 68,561. Beldt's Aquarium, Inc., Hazelwood, Mo. Filed Feb. 27, 1959.

WILD LIFE NATURES BEST

For Prepared Food for Fish and Birds.
First use in September 1958.

SN 68,680. David Freedman and Company, Incorporated, El Centro, Calif. Filed Mar. 2, 1959.

Trophy

For Fresh Fruits.
First use June 1, 1958.

SN 68,775. James O. Welch Company, Cambridge, Mass. Filed Mar. 2, 1959.

RASCALS

For Candy.
First use Jan. 7, 1959.

SN 68,776. James O. Welch Company, d.b.a. Glenbrook Candy Company, Cambridge, Mass. Filed Mar. 2, 1959.

GLENBROOK

For Candy.
First use Feb. 14, 1955.

SN 70,153. The Kroger Co., Cincinnati, Ohio. Filed Mar. 24, 1959.

HILLCREST

For Candies and Chocolate Covered Nuts.
First use during September 1955.

SN 70,236. Robert E. McCrary, d.b.a. "Nest-Fresh" Egg Company, Amarillo, Tex. Filed Mar. 25, 1959.

"nest-fresh"

For Fresh Eggs.
First use July 1943.

SN 71,435. Wilson & Co., Inc., Chicago, Ill. Filed Apr. 13, 1959.

FIDELITY

For Smoked, Cured and Canned Meats Such as Ham, Bacon, Canned Luncheon Meat, and Canned Ham.
First use on or about Nov. 22, 1880.

SN 71,577. Hercules Powder Company, Wilmington, Del. Filed Apr. 15, 1959.

STARVIS

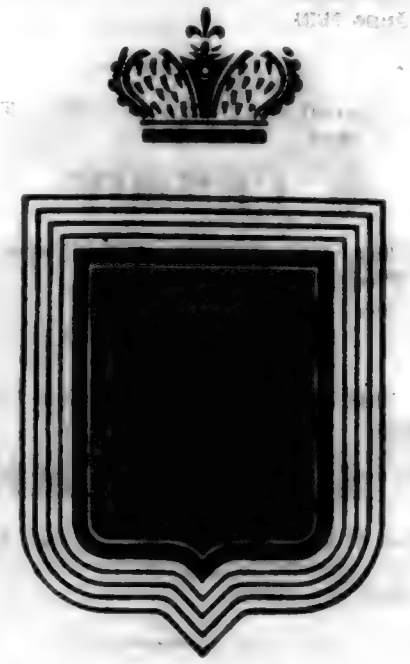
For Pregelatinized Edible Wheat Starch.
First use Dec. 9, 1957.

SN 71,671. Hygrade Food Products Corporation, Detroit, Mich. Filed Apr. 16, 1959.

FIESTA

For Skinned Fully Cooked Boneless Ham.
First use Dec. 31, 1956.

SN 71,683. The Northwestern Elevator & Mill Co., Toledo, Ohio. Filed Apr. 16, 1959.



The drawing is lined for red.
For Flour.
First use about 1950.

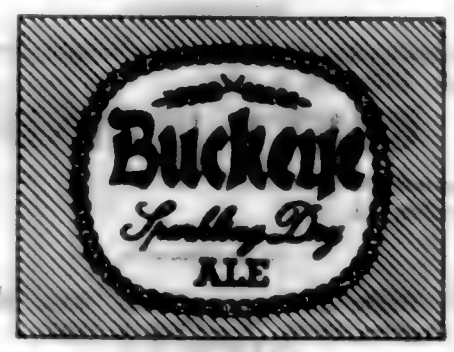
SN 71,749. Rod's Food Products, Inc., d.b.a. Wally's Distributing Co., Los Angeles, Calif. Filed Apr. 17, 1959.

WALLY'S

For Bleu Cheese, Sour Cream, and 1,000 Island Salad Dressings; Hamburger and Steak Relish.
First use Mar. 27, 1959.

Class 48 — Malt Beverages and Liquors

SN 64,689. The Buckeye Brewing Company, Toledo, Ohio. Filed Dec. 22, 1958.



The words "Sparkling Dry Ale" are disclaimed. The drawing is lined for green and gold. Owner of Reg. Nos. 335,012, 573,458, and 583,938.
For Ale.
First use July 17, 1957.

SN 68,863. Alva Studios, Inc., New York, N.Y. Filed Mar. 4,

SN 68,336. Techno-Economic Services, Incorporated, d.b.a.

First use Aug. 10, 1956.

First use on or about Mar. 14, 1957.

SN 64,691. The Buckeye Brewing Company, Toledo, Ohio. Filed Dec. 22, 1958.

The drawing is lined for green and gold. The word "Ale" appearing in the name of applicant's goods is disclaimed as a part of the mark. Owner of Reg. Nos. 235,012, 573,458, and 583,938.

For Ale.

First use Feb. 5, 1957.

SN 64,692. The Buckeye Brewing Company, Toledo, Ohio. Filed Dec. 22, 1958.

The words "Sparkling Dry Beer" are disclaimed. The drawing is lined for red and gold. Owner of Reg. Nos. 235,012, 573,458, and 583,938.

For Beer.

First use June 9, 1955.

SN 68,687. M. K. Goetz Brewing Company, St. Joseph, Mo. Filed Mar. 2, 1959.

The drawing is lined for red and gold. Owner of Reg. Nos. 82,494, 663,235, and others.

For Pilsener Beer.

First use Feb. 9, 1959; June 1, 1890, as to "Goetz."

Class 49—Distilled Alcoholic Liquors

SN 46,224. Hill, Thomson & Company Limited, Edinburgh, Scotland. Filed Feb. 20, 1958.

ST. LEGER

"Mr. P. T. Beasley" is the jockey depicted on the horse, whose consent is of record. Owner of British Reg. No. B765,082, dated May 1, 1957.

For Scotch Whisky.

SN 56,463. Destileria Serralles, Inc., d.b.a. Mercedita Distilling Company, Ponce, Puerto Rico. Filed Aug. 1, 1958.

DON JUAN

For Rum.

First use July 30, 1935.

Class 50—Merchandise Not Otherwise Classified

SN 68,805. Diversified Industries, Inc., Trenton, S.C. Filed Mar. 3, 1959.

MOON-DRIFT

For Varied Color Extruded and Molded Plastic Ornaments for Use in Artificial, Live, and Dried Floral Arrangements, and With Artificial Fruits, Etc.

First use Nov. 19, 1958.

SN 68,821. Hedwin Corporation, Baltimore, Md. Filed Mar. 3, 1959.

PLAYMATS

For Children's Novelty Table Place Mats.

First use Jan. 21, 1959.

SN 58,285. Plaza Five Inc., New York, N.Y. Filed June 10, 1958.

SN 64,526. The Black and Decker Manufacturing Company, Towson, Md. Filed Dec. 18, 1958.

First use on or about Nov. 22, 1880.

First use July 17, 1957.

SN 68,863. Alva Studios, Inc., New York, N.Y. Filed Mar. 4, 1959.

ALVACAST

For Articles of Sculpture Made of Plaster—Namely, Statues, Statuettes, and Figurines.
First use Feb. 4, 1959.

Class 52 — Detergents and Soaps

SN 66,771. John H. Breck, Inc., Springfield, Mass. Filed Jan. 30, 1959.

TENDERGLOW

For Cosmetic Products and Toilet Preparations—Namely, Cream Shampoos.
First use Jan. 16, 1959.

SN 68,336. Techno-Economic Services, Incorporated, d.b.a. Techno-Economic Services, Inc., Los Altos, Calif. Filed Feb. 24, 1959.

For Concentrated Laundry Detergent.
First use Feb. 9, 1959.

SN 68,363. Basic Chemicals Corporation, Sarasota, Fla. Filed Feb. 25, 1959.

VIRODINE

For Sanitary Rinse and Cleanser.
First use June 17, 1957.

SERVICE MARKS

Class 100 — Miscellaneous

SN 31,352. Sitkin's Metal Trading, Inc., Lewistown, Pa. Filed June 4, 1957.

For Scrap Metal and Junk Services.
First use Jan. 7, 1957.

SN 63,378. Thomas Carvel, Yonkers, N.Y. Filed Nov. 20, 1958.

CARVEL

Owner of Reg. Nos. 597,727, 647,627, and others.
For Serving Food Individually Ordered, Specially Prepared Food and Beverages From Vehicles.
First use Dec. 1, 1957.

SN 64,996. Military Order of the Purple Heart, Alexander Hamilton Chapter No. 3, New York, N.Y. Filed Dec. 29, 1958.

OPERATION REINDEER

For Providing Hospitalized Veterans Who Are Able To Travel With Free Transportation To Visit Their Respective Families at Home, and Providing the Families of Hospitalized Veterans Who Are Unable To Travel With Free Transportation To Visit Such Veterans at Their Respective Hospitals.
First use October 1952.

SN 65,389. John Wilson Lipscomb, Baton Rouge, La. Filed Jan. 6, 1959.

Stratagraph

For Making of Seismic Surveys in Order To Determine the Character of Deposits in the Earth.
First use July 24, 1958.

Class 101 — Advertising and Business

SN 32,754. Allan B. Goldenthal, d.b.a. Video-Rad, New York, N.Y. Filed June 27, 1957.

TV-TEAR-SHEETS

For Television Monitoring Services Rendered to Television Advertisers, Said Service Consisting in Recording and Preserving Pictures and Sound of Television Commercials.
First use May 4, 1957.

SN 45,107. Irene Bartlett, d.b.a. American Bride Publications, Culver City, Calif. Filed Feb. 3, 1958.

Balene Selection

For Promoting the Sale of Wedding Gowns of Others by Means of Booklets, Advertising, and Display Media.
First use Jan. 22, 1957.

SN 51,189. Grandma America, New York, N.Y. Filed May 7, 1958.

GRANDMA AMERICA

For Publicity and Public Relations for Others—Namely, Conducting Popularity Contests for the Selection of Most Popular Grandmother.
First use September 1957.

Class 106 — Material Treatment

SN 41,378. Hanes Dye and Finishing Company, Winston-Salem, N.C. Filed Nov. 26, 1957.

SN 53,285. Plaza Five Inc., New York, N.Y. Filed June 10, 1958.

Plaza Five

For Employment Agency for Photographers' Models.
First use July 10, 1958.

SN 62,300. McCall Corporation, New York, N.Y. Filed Nov. 12, 1958.

PRINTACULAR

For Aiding Advertisers and Advertising Agencies in the Development and Promotion of Unique and Dramatic Presentations of Advertising by Use of Magazines.
First use Apr. 9, 1957.

Class 102 — Insurance and Financial

SN 48,325. Pacific First Federal Savings and Loan Association, Tacoma, Wash. Filed Mar. 24, 1958.

PACIFIC 1ST FEDERAL SAVINGS ALL-PURPOSE HOME LOAN AND LOAN ASSOCIATION

Applicant disclaims "All-Purpose Home Loan" apart from the mark as shown. The lining on the drawing is part of the mark but does not represent color.
For Promoting, Making, and Servicing of Real Estate Loans.
First use Mar. 16, 1958.

Class 103 — Construction and Repair

SN 51,829. Sunbeam Corporation, Chicago, Ill. Filed May 16, 1958.

SUNBEAM

Owner of Reg. Nos. 433,547 and 582,382.
For Service and Repair of Animal Clipping and Shearing Machinery Belonging to Customers.
First use in August 1945.

SN 64,526. The Black and Decker Manufacturing Company, Towson, Md. Filed Dec. 18, 1958.

"Buddy Service"

For Complete Overhaul, Maintenance, and Repair of Portable Electric Tools and the Like; Comprising, Free Tool Inspection, Complete Disassembly, Cleaning, Worn Part Replacement, and Testing.
First use June 1, 1957.

Class 105 — Transportation and Storage

SN 26,853. National Warehouse Receipt System, Kansas City, Mo. Filed Mar. 25, 1957.

The words "National System" and "Warehouse Receipt" are disclaimed. The lining forms part of the mark but does not represent color.
For Special Services Furnished by Applicant to Its Members in the Nature of Advertising, Placing Insurance, Management Counseling, Procurement of Manuals, Forms and Similar Materials in the Field of Warehouse Operation of Public Warehouse Companies.
First use on or about July 15, 1956.

SN 41,979. Beverly Hills Transfer & Storage Co., Beverly Hills, Calif. Filed Dec. 9, 1957.

E-Z-STOR

For Goods-Handling, Transfer and Storage Service.
First use Oct. 9, 1957.

SN 48,892. Lothar Arends, d.b.a. Dog Agency, Heidelberg, Germany. Filed Apr. 2, 1958.

HANDLE WITH LOVE!

For Shipment of Pets of Others Between Germany and the United States.
First use Aug. 19, 1950; in commerce Aug. 19, 1950.

SN 55,396. Iredale Storage & Moving Co., Evanston, Ill. Filed July 16, 1958.

VAN CAPTAIN

For Moving and Storage Services Rendered to Others.
First use on or about Apr. 3, 1958.

tion To Visit Such Veterans at Their Respective Hospitals.
First use October 1952.

Popular Grandmother.
First use September 1957.

Class 106—Material Treatment

SN 37,161. Hanes Dye and Finishing Company, Winston-Salem, N.C. Filed Sept. 13, 1957.

FYRWAX

For Processing and Treatment of Cotton Cloth of Others for Manufacturers of Buffing Wheels, With Compounds Which Render It Fire Resistant Under the Heat Generated by Buffing Operations.
First use Apr. 30, 1957.

SN 41,376. Hanes Dye and Finishing Company, Winston-Salem, N.C. Filed Nov. 26, 1957.

TUFFBUFF

For Processing and Treatment of Cotton Cloth of Other Manufacturers of Buffing Wheels, With Compounds Which Render It Abrasion Resistant.
First use Apr. 30, 1957.

SN 41,377. Hanes Dye and Finishing Company, Winston-Salem, N.C. Filed Nov. 26, 1957.

RUFFBUFF

For Processing and Treatment of Cotton Cloth of Other Manufacturers of Buffing Wheels.
First use Apr. 30, 1957.

SN 41,378. Hanes Dye and Finishing Company, Winston-Salem, N.C. Filed Nov. 26, 1957.

FASTREAT

For Processing and Treatment of Cotton Cloth of Others for Manufacturers of Buffing Wheels.
First use Sept. 11, 1957.

SN 41,379. Hanes Dye and Finishing Company, Winston-Salem, N.C. Filed Nov. 26, 1957.

POLYBUFF

For Processing and Treatment of Cotton Cloth of Other Manufacturers of Buffing Wheels, With Compounds Which Render It Abrasion Resistant.
First use Apr. 30, 1957.

SN 41,380. Hanes Dye and Finishing Company, Winston-Salem, N.C. Filed Nov. 26, 1957.

PERMABUFF

For Processing and Treatment of Cotton Cloth of Other Manufacturers of Buffing Wheels With Compounds Which Render It Abrasion Resistant.
First use Apr. 30, 1957.

SN 41,381. Hanes Dye and Finishing Company, Winston-Salem, N.C. Filed Nov. 26, 1957.

WAXBUFF

For Processing and Treatment of Cotton Cloth of Other Manufacturers of Buffing Wheels, With Compounds Which Render It Abrasion Resistant and of Increased Compatibility to Buffing Compounds.
First use Apr. 30, 1957.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 60,555. Paralyzed Veterans of America, Inc., New York, N.Y. Filed Oct. 13, 1958.

For Indicating Membership in the Applicant Corporation.
First use Sept. 12, 1949.

SN 66,383. United Variety Wholesalers, New York, N.Y. Filed Jan. 23, 1959.

For Indicating Membership in Applicant.
First use Feb. 1, 1956.

SN 66,410. Brand Names Foundation, Inc., New York, N.Y. Filed Jan. 26, 1959.

For Indicating Membership in Applicant.
First use on or about Aug. 15, 1958.

SN 71,097. Delta Delta Delta, Chicago, Ill. Filed Apr. 8, 1959.

Owner of Reg. No. 223,230.
For Indicating Membership in a National Collegiate Fraternal Organization.
First use 1888.

683,504. E-ECUSTA. Olin Mathieson Chemical Corporation. SN 62,218. Pub. 6-2-59. Filed 11-10-58.

Class 14—Metals and Metal Castings and

First use in August 1945.

First use on or about Apr. 3, 1958.

TRADEMARK REGISTRATIONS ISSUED

PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

683,459. CHUCK WAGON AND DESIGN. The Quaker Oats Company. SN 40,149. Pub. 6–2–59. Filed 11–5–57.

683,460. POLYTHERM. Omni Products Corporation. SN 42,154. Pub. 6–2–59. Filed 12–10–57.

683,461. 7 AND DESIGN. Gordon Kershaw, d.b.a. 7 Dwarfs Nursery. SN 42,491. Pub. 6–2–59. Filed 12–16–57.

683,462. VITALSEAL. John Bodger & Sons Company, assignee of Bodger Seeds, Ltd. SN 43,423. Pub. 6–2–59. Filed 1–6–58.

683,463. HAVEG. Haveg Industries, Inc. SN 47,654. Pub. 6–2–59. Filed 3–13–58.

683,464. GOLD'N PURE. Waterman-Loomis Company. SN 53,217. Pub. 6–2–59. Filed 6–9–58.

683,465. DRI-SO. Canfield Oil Company. SN 58,903. Pub. 6–2–59. Filed 9–15–58.

683,466. CALCOT AND DESIGN. Calcot, Ltd. SN 61,779. Pub. 6–2–59. Filed 11–3–58.

683,467. PARADE OF BEAUTY. L. C. House & Sons Nursery. SN 62,083. Pub. 6–2–59. Filed 11–7–58.

683,468. LINTABOND. The Buckeye Cellulose Corporation. SN 62,368. Pub. 6–2–59. Filed 11–13–58.

683,469. HOBBY CRETE. Minnesota Perlite Corporation. SN 62,581. Pub. 6–2–59. Filed 11–17–58.

683,470. THE REAL McCOY. Organics, Incorporated. SN 62,603. Pub. 6–2–59. Filed 11–17–58.

683,471. MARTIN'S. Martin's Hatchery Poultry Farms, Inc. SN 62,697. Pub. 6–2–59. Filed 11–18–58.

683,472. M DESIGN. M. G. Michaelis, Jr., d.b.a. The Michaelis Ranches. SN 63,086. Pub. 6–2–59. Filed 11–24–58.

683,473. PENN VALLEY. The Atlantic Seed Company. SN 63,206. Pub. 6–2–59. Filed 11–26–58.

683,474. POLY-FRESH. Crown Zellerbach Corporation. SN 63,430. Pub. 6–2–59. Filed 12–1–58.

683,475. M AND DESIGN. K. C. Miller, d.b.a. K. C. Miller Ranches. SN 63,471. Pub. 6–2–59. Filed 12–1–58.

Class 2—Receptacles

683,476. HANDI-HAMPER. Foster-Stephens Inc. SN 20,102. Pub. 6–2–59. Filed 11–29–56.

683,477. DESIGN OF OVAL. American Can Company. SN 27,166. Pub. 6–2–59. Filed S.R. 3–29–57; Am. P.R. 12–10–58.

683,478. BOOSTER. John W. Kappen, d.b.a. Kappen Sales Company. SN 40,846. Pub. 6–2–59. Filed 11–18–57.

683,479. SPARTAN. F. H. Hill Company, Inc. SN 51,994. Pub. 6–2–59. Filed 5–20–58.

683,480. FLAMBOWARE. Flambeau Plastics Corporation. SN 56,950. Pub. 6–2–59. Filed 8–11–58.

683,481. FLAMBOWARE AND DESIGN. Flambeau Plastics Corporation. SN 56,951. Pub. 6–2–59. Filed 8–11–58.

683,482. DELTAINER. Delta Tank Manufacturing Company, Inc. SN 58,621. Pub. 6–2–59. Filed 9–9–58.

683,483. REPSCO. Republic Supply Company. SN 58,811. Pub. 6–2–59. Filed 9–11–58.

683,484. PERMASHELL. The Richardson Company. SN 59,851. Pub. 6–2–59. Filed 9–30–58.

683,485. DIAMOND DESIGN. Flambeau Plastics Corporation. SN 60,127. Pub. 6–2–59. Filed 10–6–58.

683,486. DIAMOND DESIGN. Flambeau Plastics Corporation. SN 60,498. Pub. 6–2–59. Filed 10–13–58.

683,487. UNI-TUCK. The Lord Baltimore Press, Incorporated. SN 65,109. Pub. 6–2–59. Filed 12–30–58.

683,488. STORAGER. Guardian Better-Pak Corp. SN 65,234. Pub. 6–2–59. Filed 1–2–59.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

683,489. ACCESSO. Rexbilt Leather Goods, Inc. SN 52,431. Pub. 6–2–59. Filed 5–27–58.

683,490. M M'A'DLER KOFFER AND DESIGN. Morits Mädler. SN 58,045. Pub. 6–2–59. Filed 8–28–58.

683,491. COPENHIDE. Schlesinger Bros. SN 58,747. Pub. 6–2–59. Filed 9–10–58.

683,492. PERMA EDGE. Digby Products Ltd. SN 62,534. Pub. 6–2–59. Filed 11–17–58.

683,493. SLIM-FLYTE. Since 1868 Crescent Corporation. SN 62,905. Pub. 6–2–59. Filed 11–19–58.

683,494. STANDEE. R. Appel, Inc. SN 63,629. Pub. 6–2–59. Filed 12–4–58.

Class 4—Abrasives and Polishing Materials

683,495. 3–D AND DESIGN. Associated Engineering Chemistry, Inc. SN 39,313. Pub. 6–19–58. Filed 10–22–57.

683,496. EASIEST. Arnold Sampson, d.b.a. E-Z-Est Products Co. SN 49,801. Pub. 6–2–59. Filed 3–24–58.

683,497. PLASTAB. The Lea Manufacturing Company. SN 59,401. Pub. 6–2–59. Filed 9–23–58.

Class 5—Adhesives

683,498. QO AND DESIGN. The Quaker Oats Company. SN 48,050. Pub. 6–2–59. Filed 3–19–58.

Class 6—Chemicals and Chemical Compositions

683,499. QUICK, HENRY, THE FLIT! Esso Standard Oil Company. SN 43,678. Pub. 6–2–59. Filed S.R. 1–9–58; Am. P.R. 4–14–59.

683,500. DYTROL. Monsanto Chemical Company. SN 60,949. Pub. 6–2–59. Filed 10–20–58.

683,501. LIQUIPAK. Scientific Packaging Corp. SN 65,382. Pub. 6–2–59. Filed 1–6–59.

Class 7—Cordage

683,502. DRUID. Mount Vernon Mills, Inc. SN 58,659. Pub. 6–2–59. Filed 9–9–58.

Class 8—Smokers' Articles, Not Including Tobacco Products

683,503. BARLING. B. Barling & Sons Limited. SN 47,484. Pub. 6–2–59. Filed 3–11–58.

683,560. WHITE OWL. General Cigar Co., Inc. SN 63,222.

683,564. DRYCOMATIC. Bishop David Freeman Co. SN

683,504. E-ECUSTA. Olin Mathieson Chemical Corporation. SN 62,218. Pub. 6–2–59. Filed 11–10–58.

Class 12 — Construction Materials

683,505. EXT-DFPA ETC. AND DESIGN. Douglas Fir Plywood Association. SN 683,371. COLLECTIVE MARK. Pub. 6–2–59. Filed 3–3–55.

683,506. SUSSEX "32." National Gypsum Company. SN 48,570. Pub. 6–2–59. Filed 3–27–58.

683,507. NERVASTRAL RIGID. Rubber & Plastics Compound Co., Inc. SN 50,734. Pub. 6–2–59. Filed 4–30–58.

683,508. KOSMOS. Kosmos Portland Cement Co. SN 51,999. Pub. 6–2–59. Filed 5–20–58.

683,509. COLOR LINE. Unistrut Products Company. SN 53,066. Pub. 6–2–59. Filed 6–6–58.

683,510. TROPICTILE AND DESIGN. Tropical Tiles, Inc. SN 53,673. Pub. 6–2–59. Filed 6–16–58.

683,511. PONCE AND DESIGN. Ponce Products, Inc. SN 56,184. Pub. 6–2–59. Filed 7–28–58.

683,512. STEELITE AND DESIGN. Clopay Corporation. SN 56,299. Pub. 6–2–59. Filed 7–30–58.

683,513. PALO ALTO. Simpson Redwood Company. SN 56,596. Pub. 6–2–59. Filed 8–4–58.

683,514. WABASH VISTARAMA ETC. AND DESIGN. The Wabash Screen Door Company. SN 59,579. Pub. 6–2–59. Filed 9–25–58.

683,515. FLEXIBLE PROTECTION. Carthage Mills Incorporated. SN 62,731. Pub. 6–2–59. Filed 11–19–58.

683,519. TIBAND. M. H. Detrick Company. SN 62,913. Pub. 6–2–59. Filed 11–21–58.

683,517. KOLORITE. Weyerhaeuser Timber Company. SN 63,140. Pub. 6–2–59. Filed 11–24–58.

683,518. COLLAPSE-A-DOOR. Yardley Created Products Co. SN 63,143. Pub. 6–2–59. Filed 11–24–58.

683,519. ANCHORLITE. Anchor Concrete Products Inc. SN 63,205. Pub. 6–2–59. Filed 11–26–58.

683,520. HIDE-A-SCREEN. Paul H. Lauer, d.b.a. P. H. Lauer Company. SN 63,236. Pub. 6–2–59. Filed 11–26–58.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

683,521. NEG'ATOR. American Machine and Metals, Inc., assignee of Hunter Spring Company. SN 29,285. Pub. 11–19–57. Filed 5–2–57.

683,522. LOAD RATED. American Hoist & Derrick Company. SN 45,441. Pub. 6–2–59. Filed 2–7–58.

683,523. BENSON. Benson's Anchors, Inc. SN 51,688. Pub. 6–2–59. Filed 5–15–58.

683,524. MOTHERDEAR. Baby Grand, Inc. SN 51,845. Pub. 6–2–59. Filed 5–19–58.

683,525. BUBBLE-STREAM. Wrightway Engineering Co. SN 52,182. Pub. 6–2–59. Filed 5–22–58.

683,526. 888 ETC. AND DESIGN. Service Saver System, Inc. SN 62,116. Pub. 6–2–59. Filed 11–7–58.

683,527. FLAIR. Regal Ware, Inc. SN 62,613. Pub. 6–2–59. Filed 11–17–58.

683,528. TRUE-FLO. True-Flo Valve Company, Inc. SN 64,221. Pub. 6–2–59. Filed 12–12–58.

683,529. CLEARFLOR. Chicago Pottery Company. SN 64,872. Pub. 6–2–59. Filed 12–24–58.

683,530. ROBERTS R. Roberts Manufacturing Co. SN 64,935. Pub. 6–2–59. Filed 12–26–58.

683,531. MID-ZIP. Talon, Inc. SN 65,025. Pub. 6–2–59. Filed 12–29–58.

683,532. FLUSH-RITE. John Bufogle, d.b.a. Flush-Rite Mfg. Co. SN 65,142. Pub. 6–2–59. Filed 12–31–58.

683,533. SWIRL-FLO. Aeronca Manufacturing Corporation. SN 65,346. Pub. 6–2–59. Filed 1–6–59.

Class 14 — Metals and Metal Castings and Forgings

683,534. COVANDUR. The Carpenter Steel Company. SN 48,826. Pub. 6–2–59. Filed 4–1–58.

683,535. ZIV REDCO. Ziv Steel & Wire Co. SN 60,380. Pub. 6–2–59. Filed 10–6–58.

683,536. BI-TEMP. Proctor & Schwartz, Inc. SN 60,964. Pub. 6–2–59. Filed 10–20–58.

683,537. ANACONDA. The Anaconda Company. SN 61,248. Pub. 6–2–59. Filed 10–24–58.

683,538. LESCALLOY. Latrobe Steel Company. SN 62,197. Pub. 6–2–59. Filed 11–10–58.

683,539. O.L.P. Institut de Recherches de la Siderurgie. SN 62,537. Pub. 6–2–59. Filed 11–17–58.

683,540. FANCIFUL DESIGN. Lakeside Malleable Castings Company. SN 62,561. Pub. 6–2–59. Filed 11–17–58.

683,541. OBERITE. The Oberhelman-Ritter Foundry Co. SN 63,596. Pub. 6–2–59. Filed 12–3–58.

683,542. FILTOROID. Magnetic Metals Company. SN 64,725. Pub. 6–2–59. Filed 12–22–58.

Class 15 — Oils and Greases

683,543. SOLVO-RUST. Permatex Company, Inc. SN 31,863. Pub. 3–4–58. Filed 6–12–57.

683,544. MOBILKOR. Socony Mobil Oil Company, Inc. SN 48,445. Pub. 6–2–59. Filed 3–24–58.

683,545. BUTABLOC. Marcel Quercia. SN 48,791. Pub. 6–2–59. Filed 3–31–58.

683,546. REGAL OIL R & O. Texaco Inc., by change of name from The Texas Company. SN 62,713. Pub. 6–2–59. Filed 11–18–58.

683,547. FUEL CHIEF. Texaco Inc., by change of name from The Texas Company. SN 63,614. Pub. 6–2–59. Filed 12–3–58.

683,548. REFINOIL. Velma Claver Harris, d.b.a. Harris Re-Refining Machinery Company. SN 65,092. Pub. 6–2–59. Filed 12–30–58.

683,549. ZEPLUBE. Zep Manufacturing Corporation. SN 65,195. Pub. 6–2–59. Filed 12–31–58.

683,550. DIESEL BLITZ. Chemical Compounds, Inc. SN 65,251. Pub. 6–2–59. Filed 1–6–59.

683,551. CONOJET. Continental Oil Company. SN 65,413. Pub. 6–2–59. Filed 1–7–59.

Class 16 — Protective and Decorative Coatings

683,552. MINIT TINT. M. A. Bruder & Sons, Incorporated. SN 68,367. Pub. 6–2–59. Filed 2–25–59.

683,553. AQUALOID. Jamestown Finishes, Inc. SN 68,496. Pub. 6–2–59. Filed 2–26–59.

683,554. CATALIN. Catalin Corporation of America. SN 68,658. Pub. 6–2–59. Filed 3–2–59.

683,555. DRI-TEN. Andrew Brown Company. SN 69,719. Pub. 6–2–59. Filed 3–17–59.

Class 17 — Tobacco Products

683,556. DESIGN OF WOMAN'S HEAD. Consolidated Cigar Corporation. SN 38,433. Pub. 6–2–59. Filed 10–7–57.

683,557. TAMPA MONARCH TIP TOP. Tampa Cigar Company, Inc. SN 45,424. Pub. 6–2–59. Filed 2–6–58.

683,558. JAH-WAS AND DESIGN. Oscar Cuesta. SN 58,484. Pub. 6–2–59. Filed 6–13–58.

683,559. MADISON. P. Lorillard Company. SN 60,672. Pub. 6–2–59. Filed 10–15–58.

683,616. BIRD-O-RAMA. Ideal Toy Corporation. SN 62,018.

683,647. MINNIPAC. S. A. Reider & Co. SN 60,967. Pub.

683,560. WHITE OWL. General Cigar Co., Inc. SN 68,222. Pub. 6-2-59. Filed 11-26-58.

Class 18—Medicines and Pharmaceutical Preparations

683,561. COSA-TETRACYDIN. Chas. Pfizer & Co., Inc. SN 60,431. Pub. 6-2-59. Filed 10-10-58.

683,562. TRIATHAN. The Wander Company, d.b.a. Smith-Dorsey. SN 61,882. Pub. 5-26-59. Filed 11-3-58.

683,563. FERRUTOPE. Olin Mathieson Chemical Corporation. SN 62,949. Pub. 6-2-59. Filed 11-21-58.

683,564. S-THERAP. Sonouma. SN 62,960. Pub. 6-2-59. Filed 10-24-58.

683,565. AZMARAX. Chas. Pfizer & Co., Inc. SN 63,247. Pub. 6-2-59. Filed 11-26-58.

683,566. CAPONADE. Vineland Poultry Laboratories. SN 63,559. Pub. 6-2-59. Filed 12-2-58.

Class 19—Vehicles

683,567. EXTENDED LIFE. American Steel Foundries. SN 23,597. Pub. 6-2-59. Filed 2-1-57.

683,568. SHIP N SHORE. Ferrell Manufacturing Company. SN 50,350. Pub. 6-2-59. Filed 4-25-58.

683,569. LARSON. Larson Boat Works, Inc. SN 60,825. Pub. 6-2-59. Filed 10-17-58.

683,570. ULTRA-GLAS. Fortin Plastics, Inc. SN 61,112. Pub. 6-2-59. Filed 10-22-58.

683,571. BATAVUS. A. Gaastra Rijwielen- en Motorenfabrieken "Batavus" N.V. SN 61,532. Pub. 6-2-59. Filed 10-29-58.

Class 20—Linoleum and Oiled Cloth

683,572. FUTURA. Miraplas Tile Company. SN 56,984. Pub. 6-2-59. Filed 8-11-58.

683,573. RENOIR AND DESIGN. Bonafide Mills, Inc. SN 63,383. Pub. 6-2-59. Filed 11-18-58.

Class 21—Electrical Apparatus, Machines, and Supplies

683,574. "PIONEERS IN COMPACT POWER." Yardney Electric Corporation. SN 34,101. Pub. 6-2-59. Filed 7-19-57.

683,575. M MAGNATONE AND DESIGN. Magna Electronics, Inc., assignee of Magna Electronics Co. Incorporated. SN 35,054. Pub. 1-20-59. Filed 8-6-57.

683,576. GENERAC. Dart Mfg. & Sales Co. SN 35,246. Pub. 6-2-59. Filed 8-9-57.

683,577. BULPLATE. Sprague Electric Company. SN 46,574. Pub. 6-2-59. Filed 2-25-58.

683,578. TRI COUSTI-CONE. Tri Cousti-Cone, Corp. SN 47,611. Pub. 6-2-59. Filed 3-12-58.

683,579. DISKONECT. Appleton Electric Company. SN 47,814. Pub. 6-2-59. Filed 3-17-58.

683,580. GLASTITE. Appleton Electric Company. SN 47,815. Pub. 6-2-59. Filed 3-17-58.

683,581. STOCKLITE. Appleton Electric Company. SN 47,816. Pub. 6-2-59. Filed 3-17-58.

683,582. STEREOTWIN. Audiogersh Corporation. SN 49,812. Pub. 6-2-59. Filed 4-17-58.

683,583. DELTAPLY. Benjamin S. Naven, d.b.a. Dearborn Electronic Laboratories. SN 50,457. Pub. 6-2-59. Filed 4-28-58.

683,584. DRYCOMATIC. Bishop David Freeman Co. SN 51,640. Pub. 6-2-59. Filed 5-19-58.

683,585. SANIFRESH. Northern Electric Company. SN 51,931. Pub. 6-2-59. Filed 5-19-58.

683,586. HYPAC. Era Pacific Inc. SN 54,935. Pub. 6-2-59. Filed 7-8-58.

683,587. SOFT WATER FOREVER AND DESIGN. Electronics Water Purifier Co., Inc. SN 56,438. Pub. 6-2-59. Filed 7-30-58.

683,588. HILUBEAL. Aktiebolaget Häggiund & Söner. SN 57,234. Pub. 6-2-59. Filed 8-15-58.

683,589. HI-VI. Kitchen Master Appliances, Inc. SN 58,868. Pub. 6-2-59. Filed 9-12-58.

683,590. EYE-FI ETC. AND DESIGN. National Electrical Manufacturers Association. SN 59,411. COLLECTIVE MARK. Pub. 6-2-59. Filed 9-23-58.

683,591. ATURIA. Società Italiana Pompe Aturia S.p.A. SN 60,719. Pub. 6-2-59. Filed 10-16-58.

683,592. ROBOTEC. Power Designs, Inc. SN 61,853. Pub. 6-2-59. Filed 11-3-58.

683,593. VM THE VOICE OF MUSIC. V-M Corporation. SN 62,120. Pub. 6-2-59. Filed 11-7-58.

683,594. WELCO. The World Electric Company. SN 63,265. Pub. 6-2-59. Filed 11-26-58.

683,595. WELCO AND DESIGN. The World Electric Company. SN 63,266. Pub. 6-2-59. Filed 11-26-58.

683,596. MICRO-PACK. Joslyn Mfg. and Supply Co. SN 63,319. Pub. 6-2-59. Filed 11-28-58.

683,597. MODULECTRIC. Vapor Heating Corporation. SN 63,370. Pub. 6-2-59. Filed 11-28-58.

683,598. FRAMELOK. Sylvania Electric Products Inc. (Delaware corporation), assignee of Sylvania Electric Products Inc. (Massachusetts corporation). SN 63,509. Pub. 6-2-59. Filed 12-1-58.

683,599. WICO. Globe-Union Inc. SN 63,824. Pub. 6-2-59. Filed 12-8-58.

683,600. STRATE LINE. The Pyle-National Company. SN 63,884. Pub. 6-2-59. Filed 12-8-58.

683,601. HUDSON'S HALF MOON AND DESIGN. Nederlandse Geschenkartikelen Industrie Junora. SN 64,736. Pub. 6-2-59. Filed 12-22-58.

683,602. SUNZWAY. Pabco. SN 64,742. Pub. 6-2-59. Filed 12-22-58.

683,603. STA-LIT AND DESIGN. Sta-Lit Lighter Company. SN 64,910. Pub. 6-2-59. Filed 12-24-58.

683,604. NO-KNOT. Essex Wire Corporation. SN 64,933. Pub. 6-2-59. Filed 12-26-58.

683,605. MAGIC TWINS. Iro Manufacturing Corporation. SN 65,096. Pub. 6-2-59. Filed 12-30-58.

683,606. TUFF-GUY. Duro-Test Corporation. SN 65,483. Pub. 6-2-59. Filed 1-8-59.

683,607. POWERLUME. Solar Light Manufacturing Co. SN 65,717. Pub. 6-2-59. Filed 1-12-59.

683,608. STATRONIC. American Statronic Corporation, assignee of Joseph C. Mahlbacher. SN 66,857. Pub. 6-2-59. Filed 1-23-59.

683,609. PERMA-CIRCUIT. Philco Corporation. SN 66,925. Pub. 6-2-59. Filed 2-2-59.

683,610. UNIMERSE. U.S. Electrical Motors Inc. SN 66,967. Pub. 6-2-59. Filed 2-2-59.

Class 22—Games, Toys, and Sporting Goods

683,611. CANADIAN CHAMPION AND DESIGN. Brookfield Athletic Shoe Company, Inc. SN 51,321. Pub. 6-2-59. Filed 5-9-58.

683,612. WORD-O-RAMA AND DESIGN. Word-O-Rama. SN 52,369. Pub. 6-2-59. Filed 5-26-58.

683,613. HYDROSEALED. A. G. Spalding & Bros., Inc. SN 57,297. Pub. 6-2-59. Filed 8-15-58.

683,614. CLIPPER. Commerce-Pacific Inc. SN 58,908. Pub. 6-2-59. Filed 9-15-58.

683,615. SIERRA. Commerce-Pacific Inc. SN 58,910. Pub. 6-2-59. Filed 9-15-58.

683,674. ZERO FREEZ. Rhodes Refrigeration, Inc. SN

Class 38—Paints and Publications

683,616. BIRD-O-RAMA. Ideal Toy Corporation. SN 62,018. Pub. 6–2–59. Filed 11–6–58.

683,617. TOP LINE ETC. AND DESIGN. The National Billiard Mfg. Co. SN 62,410. Pub. 6–2–59. Filed 11–13–58.

683,618. SPACE-KING. Rubim B. Riker. SN 62,614. Pub. 6–2–59. Filed 11–17–58.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

683,619. HELLER. Gebr. Heller Maschinenfabrik GMBH. SN 13,283. Pub. 8–13–57. Filed 8–2–56.

683,620. D & M. D & M Machine Works, Inc. SN 58,023. Pub. 6–2–59. Filed 9–30–57.

683,621. SYNCHRON. Cloyes Gear and Products, Inc. SN 47,837. Pub. 5–19–59. Filed 3–17–58.

683,622. SYNCHRO. Cloyes Gear and Products, Inc. SN 47,838. Pub. 5–19–59. Filed 3–17–58.

683,623. MODU-TRACK. Textron Inc. SN 53,670. Pub. 6–2–59. Filed 6–16–58.

683,624. MODU-SPIN. Textron Inc. SN 53,671. Pub. 6–2–59. Filed 6–16–58.

683,625. DRI-VAC. Economics Laboratory, Inc. SN 55,577. Pub. 6–2–59. Filed 7–18–58.

683,626. CLEVELAND TRAMRAIL. The Cleveland Crane & Engineering Company. SN 55,639. Pub. 6–2–59. Filed 7–21–58.

683,627. MOWHAWK AND DESIGN. Lilliston Implement Company. SN 56,976. Pub. 6–2–59. Filed 8–11–58.

683,628. IPS. The International Postal Supply Company of New York. SN 57,483. Pub. 6–2–59. Filed 8–19–58.

683,629. SUPERNOVA ULTRA. Necchi Societa per Azioni. SN 60,953. Pub. 6–2–59. Filed 10–20–58.

683,630. LPC JET. Lubrication Products Co. of Ohio, Inc. SN 61,232. Pub. 6–2–59. Filed 10–23–58.

683,631. EVERLAST. Par Enterprises & Novelty Co., Inc. SN 61,585. Pub. 6–2–59. Filed 10–29–58.

683,632. SWING-O-REEL. Clyde R. Kutil. SN 61,816. Pub. 6–2–59. Filed 11–3–58.

683,633. MAGNA WONDER KNIFE. Magna Wonder Knife, Inc. SN 61,823. Pub. 6–2–59. Filed 11–3–58.

683,634. TURN-A-BORE. Turn-A-Bore Equipment Company. SN 65,029. Pub. 6–2–59. Filed 12–29–58.

683,635. LINK-BELT ROTO-FIN AND DESIGN. Link-Belt Company. SN 65,107. Pub. 6–2–59. Filed 12–30–58.

683,636. ZERO SPATTER SPRAY AND DESIGN. Zero Manufacturing Company, Inc. SN 66,765. Pub. 6–2–59. Filed 1–29–59.

683,637. VIZ-PAK. National Sales, Inc. SN 67,383. Pub. 5–26–59. Filed 2–9–59.

683,638. DAFFINAIRE. Daffin Manufacturing Company. SN 67,442. Pub. 6–2–59. Filed 2–10–59.

683,639. ARMACK. Armack Importers, Inc. SN 68,023. Pub. 6–2–59. Filed 2–19–59.

683,640. JACK/SAVER. Blackhawk Mfg. Co. SN 68,218. Pub. 6–2–59. Filed 2–24–59.

683,641. BIG TWIN. Outboard Marine Corporation. SN 68,309. Pub. 6–2–59. Filed 2–24–59.

683,642. LUSTORR. The Torrington Company. SN 68,855. Pub. 6–2–59. Filed 3–3–59.

683,643. CYL-CHUCK. Ernest, Holdeman and Collet, Inc. SN 69,057. Pub. 6–2–59. Filed 3–6–59.

683,644. CAGEROL. McGill Manufacturing Company, Inc. SN 69,160. Pub. 6–2–59. Filed 3–9–59.

683,645. "FTO." Crane Carrier Corporation. SN 69,725. Pub. 6–2–59. Filed 3–17–59.

Class 24—Laundry Appliances and Machines

683,646. CURVALITE. Arvin Industries, Inc. SN 48,685. Pub. 6–2–59. Filed 3–31–58.

683,647. MINNIPAC. S. A. Reider & Co. SN 60,967. Pub. 6–2–59. Filed 10–20–58.

Class 26—Measuring and Scientific Appliances

683,648. COMPUR. Compur-Werk Friedrich Deckel OHG, assignee of Friedrich Deckel, Präzisionsmechanik und Maschinenbau. SN 647,764. Pub. 6–2–59. Filed 5–27–53.

683,649. FRACTOMATOR. Addiator Rechenmaschinen-Fabrik, C. Kübler. SN 18,039. Pub. 12–10–57. Filed 10–24–56.

683,650. GEVACOLOR. Gevaert Photo-Producten N.V. SN 59,535. Pub. 6–2–59. Filed 9–25–58.

683,651. GEVABROM. Gevaert Photo-Producten N.V. SN 59,536. Pub. 6–2–59. Filed 9–25–58.

683,652. GRAV-O-DEX. Black, Sivalls & Bryson, Inc. SN 60,259. Pub. 6–2–59. Filed 10–8–58.

683,653. CASTALOY. Fisher Scientific Company. SN 61,705. Pub. 6–2–59. Filed 10–31–58.

683,654. WALTHAM. Waltham Watch Company. SN 63,195. Pub. 6–2–59. Filed 11–25–58.

683,655. RADSON. Radson Engineering Corporation. SN 63,249. Pub. 6–2–59. Filed 11–26–58.

683,656. STATMASTER. Statmaster Corporation. SN 63,259. Pub. 6–2–59. Filed 11–26–58.

683,657. TELEFOCAL. George W. Bailey, d.b.a. The Telefocal Company. SN 63,282. Pub. 6–2–59. Filed 11–28–58.

683,658. CASHTRONIC. Cummins-Chicago Corp. SN 63,639. Pub. 5–26–59. Filed 12–4–58.

683,659. GRAMERCY. Raygram Corporation. SN 63,671. Pub. 6–2–59. Filed 12–4–58.

683,660. ECONO-WEIGH. The Woodman Company, Inc. SN 64,225. Pub. 6–2–59. Filed 12–12–58.

683,661. ABLE. North American Aviation, Inc. SN 64,429. Pub. 6–2–59. Filed 12–16–58.

683,662. TEMPEROMETER. W. C. Dillon & Co., Inc. SN 64,700. Pub. 6–2–59. Filed 12–22–58.

Class 27—Horological Instruments

683,663. STARDUST. General Time Corporation. SN 63,991. Pub. 5–26–59. Filed 12–10–58.

Class 29—Brooms, Brushes, and Dusters

683,664. SIGNET. Robert Simmons, Inc. SN 47,900. Pub. 6–2–59. Filed 3–17–58.

683,665. GLASSKLEER. Cadie Chemical Products, Inc. SN 48,964. Pub. 6–2–59. Filed 4–3–58.

683,666. DOTTIE. Chicopee Manufacturing Corporation. SN 62,268. Pub. 6–2–59. Filed 11–12–58.

Class 31—Filters and Refrigerators

683,667. THERMCCOLD. ThermcCold Corporation. SN 41,203. Pub. 6–2–59. Filed 11–22–57.

683,668. DURALAST AND DESIGN. DuraLast Filter Corporation. SN 49,260. Pub. 6–2–59. Filed 4–8–58.

683,669. AIRPURE. Flanders Filters, Inc. SN 49,690. Pub. 6–2–59. Filed 4–15–58.

683,670. NOVO. Industrial Enterprises, Inc. SN 63,161. Pub. 6–2–59. Filed 11–25–58.

683,671. CULLIGAN. Culligan, Inc. SN 68,234. Pub. 6–2–59. Filed 2–24–59.

683,672. ROTUNDA. Ford Motor Company. SN 68,394. Pub. 6–2–59. Filed 2–25–59.

683,673. RESINWELD. Lee Filter Corporation. SN 69,152. Pub. 6–2–59. Filed 3–9–59.

683,728. BABETTE. The May Department Stores Company.

683,755. SUG-R-MAPL. Piggly Wiggly Corporation. SN

683,674. ZERO FREEZ. Rhodes Refrigeration, Inc. SN 69,678. Pub. 6-2-59. Filed 3-16-59.

Class 32 — Furniture and Upholstery

683,675. WILLSON'S MIDGET DEPT. STORES. R. H. Merton Willson, d.b.a. Willson's Midget Department Stores. SN 30,052. Pub. 6-2-59. Filed 5-14-57.

683,676. PERM-A-LATOR PAL AND DESIGN. Flex-O-Lators, Inc. SN 53,605. Pub. 6-2-59. Filed 6-16-58.

683,677. UNA SHELF. Universal Equipment Company. SN 55,095. Pub. 6-2-59. Filed 7-10-58.

683,678. BROYHILL PREMIER. Broyhill Furniture Factories. SN 57,338. Pub. 6-2-59. Filed 8-16-58.

683,679. COLLAPSI. B. Merritt, Inc. SN 61,125. Pub. 6-2-59. Filed 10-22-58.

683,680. PRECIOUS PILLOW. Joseph Bentch. SN 68,636. Pub. 6-2-59. Filed 2-26-59.

683,681. SAFE-T-GRIPS. Guardian Products Company, Inc. SN 69,640. Pub. 6-2-59. Filed 3-16-59.

683,682. TILT-EZE. Guardian Products Company, Inc. SN 69,645. Pub. 6-2-59. Filed 3-16-59.

683,683. COACH LAMP. Camden Furniture Company. SN 70,187. Pub. 6-2-59. Filed 3-25-59.

Class 34 — Heating, Lighting, and Ventilating Apparatus

683,684. COOL TOP. Porter & Co. SN 53,423. Pub. 6-2-59. Filed 6-12-58.

683,685. MICROBAY. Hardwick Stove Company. SN 61,387. Pub. 6-2-59. Filed 10-27-58.

683,686. NIAGARA BLOWER COMPANY AND DESIGN. Niagara Blower Company. SN 62,027. Pub. 6-2-59. Filed 11-6-58.

683,687. ALUMELT. Vesuvius Crucible Company. SN 64,581. Pub. 6-2-59. Filed 12-18-58.

683,688. GAFFERS & SATTLER. Utility Appliance Corp. SN 68,182. Pub. 6-2-59. Filed 2-20-59.

Class 36 — Musical Instruments and Supplies

683,689. IRISH AND DESIGN. Orradio Industries, Inc. SN 16,472. Pub. 6-2-59. Filed 9-26-56.

683,690. COLPIX AND DESIGN. Columbia Pictures Corporation. SN 62,376. Pub. 6-2-59. Filed 11-13-58.

683,691. HOLLYWOOD. Hollywood Records, Incorporated. SN 63,160. Pub. 6-2-59. Filed 11-25-58.

683,692. VERRO. Alberta Roper, d.b.a. Verro Records. SN 63,352. Pub. 6-2-59. Filed 11-28-58.

Class 37 — Paper and Stationery

683,693. FLEXOWHYTE. Nashua Corporation (Delaware corporation), assignee of Nashua Corporation (Massachusetts corporation). SN 28,961. Pub. 6-2-59. Filed 5-8-57.

683,694. AMSTERDAM. Avrick & Company. SN 49,483. Pub. 6-2-59. Filed 4-11-58.

683,695. CONSTELLATION. Avrick & Company. SN 49,811. Pub. 6-2-59. Filed 4-17-58.

683,696. L.E.B. AND DESIGN. Cushman and Denison Mfg. Co., Inc. SN 51,781. Pub. 6-2-59. Filed 5-16-58.

683,697. HI-COUNT. Kimberly-Clark Corporation. SN 62,466. Pub. 6-2-59. Filed 11-14-58.

Class 38 — Prints and Publications

683,698. PTM TRIAD SERVICE AIDS AND DESIGN. Triad Transformer Corporation. SN 27,244. Pub. 6-2-59. Filed 3-29-57.

683,699. CHROMA. Chroma, Inc. SN 37,942. Pub. 6-2-59. Filed 9-27-57.

683,700. MY LUCKY DATE AND DESIGN. My Lucky Date Corporation. SN 38,369. Pub. 6-2-59. Filed 10-4-57.

683,701. PROBIE. Jo Brown. SN 38,429. Pub. 6-2-59. Filed 10-7-57.

683,702. AB CO. American Book Company. SN 46,686. Pub. 6-2-59. Filed 2-27-58.

683,703. FRAME-FAX. The Howard Company, Inc. SN 47,550. Pub. 6-2-59. Filed 3-12-58.

683,704. POOL AND PATIO. Hudson Publishing Company. SN 51,566. Pub. 6-2-59. Filed 5-13-58.

683,705. LION SERVICE STATION NEWS AND DESIGN. Monsanto Chemical Company. SN 55,254. Pub. 6-2-59. Filed 7-14-58.

683,706. FARM TALK FROM YOUR BANKER AND DESIGN. Michael Murphy, d.b.a. The Mi-Ho Publishing Company. SN 56,341. Pub. 6-2-59. Filed 7-30-58.

683,707. COUNTRYWOMEN'S LEAGUE. Pamphlets, Inc. SN 60,838. Pub. 6-2-59. Filed 10-17-58.

683,708. MULTIGLOS. Multiprint Co., Inc. SN 63,341. Pub. 6-2-59. Filed 11-28-58.

683,709. FATHER VICTOR. John T. O'Brien. SN 63,344. Pub. 6-2-59. Filed 11-28-58.

683,710. THE WORLD ALMANAC AND BOOK OF FACTS AND DESIGN. New York World-Telegram Corporation. SN 63,595. Pub. 6-2-59. Filed 12-3-58.

683,711. NEW ORLEANS STATES AND NEW ORLEANS ITEM. The Times-Picayune Publishing Company. SN 64,220. Pub. 6-2-59. Filed 12-12-58.

Class 39 — Clothing

683,712. LOOMBLEND. I. Schneierson & Sons, Inc. SN 36,740. Pub. 6-2-59. Filed 9-5-57.

683,713. SKILT. Borevs Sportswear Company. SN 37,776. Pub. 6-2-59. Filed 9-25-57.

683,714. P.G.G. AND DESIGN. Paul G. Gallin Co. SN 45,248. Pub. 6-2-59. Filed 2-4-58.

683,715. FRANCESCA. M.K.M. Knitting Mills, Inc. SN 46,183. Pub. 6-2-59. Filed 3-21-58.

683,716. GOLDEN KEY AND DESIGN. McGregor-Doniger Inc. SN 51,039. Pub. 6-2-59. Filed 5-5-58.

683,717. RAND SHARPSHOOTER. International Shoe Company. SN 52,817. Pub. 6-2-59. Filed 6-3-58.

683,718. JET MOC SPACEMEN AND DESIGN. Well-Built Shoe Company, Inc. SN 52,991. Pub. 6-2-59. Filed 6-5-58.

683,719. TWA-KNIT. Twain Westmoreland and Fred Folger, Jr. SN 54,342. Pub. 6-2-59. Filed 6-26-58.

683,720. FLATTERNIT "WHEN YOU MUST LOOK YOUR BEST" AND DESIGN. Huffman Full Fashioned Mills, Inc. SN 55,853. Pub. 6-2-59. Filed 7-23-58.

683,721. TIRANO BY MADISON SQUARE. Shoe Corporation of America. SN 58,588. Pub. 6-2-59. Filed 9-8-58.

683,722. ROCKMOUNT. Rockmount Ranch Wear Manufacturing Co. SN 59,643. Pub. 6-2-59. Filed 9-26-58.

683,723. CLEAN-SAN. Tip-Top Hosiery Mills, Inc. SN 60,450. Pub. 6-2-59. Filed 10-10-58.

683,724. RURAL LIFE. Shelburne Shirt Co., Inc. SN 60,687. Pub. 6-2-59. Filed 10-15-58.

683,725. TRUVAL. Truval Shirt Company, Inc. SN 61,521. Pub. 6-2-59. Filed 10-28-58.

683,726. POETIC. Empire Bloomer Co. SN 61,794. Pub. 6-2-59. Filed 11-3-58.

683,727. SMITH MORISON. Anglo-Scandinavian Manufacturing Company Limited. SN 61,894. Pub. 6-2-59. Filed S.R. 11-4-58; Am. P.R. 4-16-59.

683,775. HI-LEVEL. Hagan Chemicals & Controls, Inc. SN 50,794. Pub. 6-2-59. Filed 5-1-58.

Service Marks

683,728. BABETTE. The May Department Stores Company. SN 62,208. Pub. 6-2-59. Filed 11-10-58.

683,729. DIAMOND GRACE AND DESIGN. Grayson-Robinson Stores, Inc. SN 62,290. Pub. 6-2-59. Filed 11-12-58.

Class 42 — Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

683,730. PAVONE. J. P. Stevens & Co. Inc., assignee of D. B. Fuller & Co. Inc. SN 43,449. Pub. 6-2-59. Filed 1-6-58.

683,731. DURA-CORD. Bates Manufacturing Company. SN 55,303. Pub. 6-2-59. Filed 7-15-58.

683,732. YARROWVALE. Gibson & Lumgair Limited. SN 63,823. Pub. 6-2-59. Filed 12-8-58.

683,733. ST. MARYS AND DESIGN. St. Marys Woolen Manufacturing Company. SN 63,890. Pub. 6-2-59. Filed 12-8-58.

Class 44 — Dental, Medical, and Surgical Appliances

683,734. FIBRENDS. The Realistic Company, d.b.a. Beauty Specialties Company. SN 56,349. Pub. 6-2-59. Filed 7-30-58.

683,735. LOMULIZER. Benger Laboratories Limited. SN 61,473. Pub. 6-2-59. Filed 10-28-58.

683,736. LITE-ALERT. Sears, Roebuck and Co. SN 62,803. Pub. 6-2-59. Filed 11-19-58.

683,737. PEDALTRIM AND DESIGN. Stelber Cycle Corp. SN 64,773. Pub. 6-2-59. Filed 12-22-58.

683,738. AURA LIDS. Standard Cap & Seal Inc. SN 66,954. Pub. 6-2-59. Filed 2-2-59.

683,739. WONDERSOFT. Kimberly-Clark Corporation. SN 67,941. Pub. 6-2-59. Filed 2-18-59.

683,740. HOME PONY. Niblack System, Inc. SN 67,965. Pub. 6-2-59. Filed 2-18-59.

683,741. AIR RAIDER. Welsh Manufacturing Company. SN 68,010. Pub. 6-2-59. Filed 2-18-59.

683,742. DYNA-MAGIC. Dyna-Motion Products Co. SN 68,043. Pub. 6-2-59. Filed 2-19-59.

683,743. PERMEPOXY. Permadent Products Corporation. SN 68,420. Pub. 6-2-59. Filed 2-25-59.

683,744. TUBLIFT. John R. Manegold Inc. SN 68,581. Pub. 6-2-59. Filed 2-27-59.

Class 46 — Foods and Ingredients of Foods

683,745. VITETTES. Richard W. Underwood, d.b.a. R. W. Underwood. SN 38,105. Pub. 6-2-59. Filed 9-30-57.

683,746. ALBERT HOLLEY'S. Albert Holley. SN 42,020. Pub. 6-2-59. Filed 12-9-57.

683,747. JENO'S. C.K. Foods, Inc. SN 42,758. Pub. 6-2-59. Filed 12-20-57.

683,748. KINGS BREAD. A. V. Olsson Trading Co. Inc. SN 43,333. Pub. 6-2-59. Filed 1-2-58.

683,749. COURTESY. Morning Coffee, Inc., d.b.a. Courtesy Products. SN 46,972. Pub. 6-2-59. Filed 3-3-58.

683,750. STAR CRUST. Gladiola Biscuit Co. SN 52,299. Pub. 4-7-59. Filed 5-26-58.

683,751. COOKIE, REPRESENTATION OF BOY AND DESIGN. Salinas Lettuce Farmers Cooperative. SN 53,651. Pub. 5-19-59. Filed 6-16-58.

683,752. CRAZY NUTS. C. J. Vitner Co. SN 55,956. Pub. 6-2-59. Filed 7-24-58.

683,753. BUTTERCUPS. General Mills, Inc. SN 59,104. Pub. 6-2-59. Filed 9-18-58.

683,754. RITE-FLAVOR. Arvida Fruit Co. SN 59,160. Pub. 6-2-59. Filed 9-19-58.

683,755. SUG-R-MAPL. Piggly Wiggly Corporation. SN 59,485. Pub. 6-2-59. Filed 9-24-58.

683,756. PRIDE O' MERIT AND DESIGN. Merit Packing Co. SN 62,943. Pub. 6-2-59. Filed 11-21-58.

683,757. 7 ELEVEN. United Dairy Farmers. SN 63,617. Pub. 6-2-59. Filed 12-3-58.

683,758. BORDEN'S. The Borden Company. SN 64,046. Pub. 6-2-59. Filed 12-11-58.

683,759. CASWELL'S. Geo. W. Caswell Co. SN 64,141. Pub. 6-2-59. Filed 12-12-58.

683,760. BIG CHIEF. American Tea & Coffee Co., Inc., d.b.a. National Peanut Company. SN 64,236. Pub. 6-2-59. Filed 12-15-58.

Class 48 — Malt Beverages and Liquors

683,761. EKLA AND DESIGN. Anciennes Brasseries Vandenheuvel et Cie, Brasserie Saint-Michel. SN 63,684. Pub. 6-2-59. Filed 12-5-58.

Class 49 — Distilled Alcoholic Liquors

683,762. BONDED SCHENLEY BOURBON OF ELEGANCE. Schenley Industries, Inc. SN 27,529. Pub. 6-2-59. Filed 4-4-57.

683,763. WELLINGTON. Jay L. Ambrose, d.b.a. Ambrose & Company. SN 52,668. Pub. 6-2-59. Filed 6-2-58.

683,764. WESTMINSTER AND DESIGN. Reid Stuart & Co. Ltd. SN 61,330. Pub. 6-2-59. Filed 10-24-58.

Class 50 — Merchandise Not Otherwise Classified

683,765. METAL-STIK ETC. AND DESIGN. Multi-Color Process Company. SN 49,598. Pub. 6-2-59. Filed 4-14-58.

683,766. AIR-BLOK. The Firestone Tire & Rubber Company. SN 59,704. Pub. 6-2-59. Filed 9-29-58.

683,767. TOWNE HOUSE AND DESIGN. J. Spiegel Hanger Company. SN 61,337. Pub. 6-2-59. Filed 10-24-58.

683,768. PIONEER PINK ETC. AND DESIGN. J. H. Dunning Corporation. SN 62,537. Pub. 6-2-59. Filed 11-17-58.

683,769. SENSIT AND DESIGN. Catherine D. Chamberlin. SN 65,145. Pub. 6-2-59. Filed 12-31-58.

683,770. NYSTEEL. New York Silicate Book Slate Co., Inc. SN 65,163. Pub. 6-2-59. Filed 12-31-58.

Class 51 — Cosmetics and Toilet Preparations

683,771. MING JADE. Stanley Home Products, Inc., assignee of Vixen Chemical Corporation, d.b.a. Marquez de Elorza. SN 49,994. Pub. 6-2-59. Filed 4-18-58.

Class 52 — Detergents and Soaps

683,772. DEGREASEIT. Meirett Incorporated. SN 42,391. Pub. 6-2-59. Filed 12-13-57.

683,773. MR. CLEAR. The Procter & Gamble Company, assignee of Eastenn-Dukes Chemicals, Incorporated. SN 49,835. Pub. 6-2-59. Filed 4-17-58.

683,774. REX-O. Irving Tugend, d.b.a. Berry Chemical & Mfg. Co. SN 49,991. Pub. 6-2-59. Filed 4-18-58.

62,466. Pub. 6-2-59. Filed 11-14-58.

S.R. 11-4-58; Am. P.R. 4-16-59.

683,775. HI-LEVEL. Hagan Chemicals & Controls, Inc. SN 50,794. Pub. 6-2-59. Filed 5-1-58.

683,776. SENTOL. Wyandotte Chemicals Corporation. SN 53,972. Pub. 6-2-59. Filed 6-20-58.

683,777. HARPERGLO. Harper Method, Inc. SN 59,191. Pub. 6-2-59. Filed 9-19-58.

683,778. GERMIDYNE. West Chemical Products, Inc. SN 61,009. Pub. 6-2-59. Filed 10-20-58.

683,779. LAN-O-WOOL. Lan-O-Sheen, Inc. SN 62,196. Pub. 6-2-59. Filed 11-10-58.

683,780. EDITH REHNBORG EMERALD CLEAR. Nutrilite Products, Inc. SN 62,600. Pub. 6-2-59. Filed 11-17-58.

683,781. DIASYN-7. Joseph James Darling, d.b.a. Crown Chemical Co. SN 63,296. Pub. 6-2-59. Filed 11-28-58.

683,782. STAPH-TROLE. Multi-Clean Products, Incorporated. SN 63,340. Pub. 6-2-59. Filed 11-28-58.

683,783. PLEAN. Post Products, Incorporated. SN 63,479. Pub. 6-2-59. Filed 12-1-58.

683,784. OMEGA AND DESIGN. William E. Sievers, d.b.a. Omega Co. SN 63,491. Pub. 6-2-59. Filed 12-1-58.

683,785. PRADO FLORIDO. Myrurgia, S.A. SN 64,089. Pub. 6-2-59. Filed 12-11-58.

683,786. FOAMCHEK. West Chemical Products, Inc. SN 64,374. Pub. 6-2-59. Filed 12-15-58.

683,787. EVEREADY. Union Carbide Corporation. SN 64,789. Pub. 6-2-59. Filed 12-22-58.

683,788. PRESTONE. Union Carbide Corporation. SN 64,790. Pub. 6-2-59. Filed 12-22-58.

683,789. UNION CARBIDE AND DESIGN. Union Carbide Corporation. SN 64,791. Pub. 6-2-59. Filed 12-22-58.

683,790. GAIN. The Procter & Gamble Company. SN 65,122. Pub. 6-2-59. Filed 12-30-58.

683,791. ZEPCOREX. Zep Manufacturing Corporation. SN 65,189. Pub. 6-2-59. Filed 12-31-58.

683,792. ZEPOMIST. Zep Manufacturing Corporation. SN 65,191. Pub. 6-2-59. Filed 12-31-58.

683,793. ZEPOLENE. Zep Manufacturing Corporation. SN 65,192. Pub. 6-2-59. Filed 12-31-58.

683,794. ZEP-O-WIZ. Zep Manufacturing Corporation. SN 65,198. Pub. 6-2-59. Filed 12-31-58.

683,795. ZEPTEEN. Zep Manufacturing Corporation. SN 65,205. Pub. 6-2-59. Filed 12-31-58.

683,796. JOHN LAHOUD. John Lahoud. SN 66,293. Pub. 6-2-59. Filed 1-22-59.

Service Marks

Class 100—Miscellaneous

683,797. TANG O' THE SEA FOOD AND DESIGN. O'Donnell's Sea Grill, Inc. SN 695,338. Pub. 12-25-56. Filed 9-26-55.

Class 101—Advertising and Business

683,798. CLASSTIME U.S.A. Woodward & Lothrop Incorporated. SN 51,159. Pub. 6-2-59. Filed 5-6-58.

Class 105—Transportation and Storage

683,799. SPEEDY, THE UMT CONSOLIDATOR AND DESIGN. Empire State Truck Terminal Co., Inc. SN 22,523. Pub. 6-2-59. Filed 1-14-57.

683,800. BETTE MALONE. United Van Lines, Inc. SN 32,428. Pub. 6-2-59. Filed 6-21-57.

Class 106—Material Treatment

683,801. LECTRO-SHYNE. Haward Corporation. SN 58,195. Pub. 6-2-59. Filed 9-2-58.

Class 107—Education and Entertainment

683,802. THE FAIRY TALE PRINCESS. Shirley Papé. SN 60,553. Pub. 6-2-59. Filed 10-13-58.

Collective Membership Marks

Class 200

683,803. CRA. California Redwood Association. SN 34,588. Pub. 6-2-59. Filed 7-30-57.

683,804. THE ASSOCIATED GENERAL CONTRACTORS OF AMERICA ETC. AND DESIGN. The Associated General Contractors of America. SN 66,393. Pub. 6-2-59. Filed 12-18-58.

683,814. Riva Distributing Company, San Francisco, Calif.

Service Marks

Pub. 6-2-59. Filed 9-19-58.

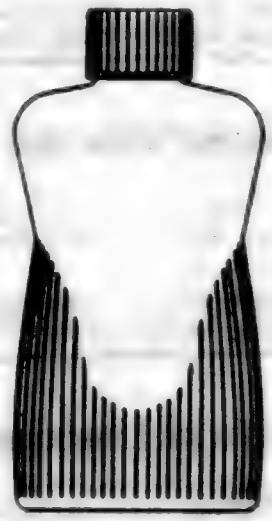
Mfg. Co. SN 49,991. Pub. 6-2-59. Filed 4-18-58.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 6—Chemicals and Chemical Compositions

683,805. Lehn & Fink Products Corporation, Bloomfield, N.J. SN 20,636. Filed P.R. 12-7-56; Am. S.R. 1-22-59.



The mark consists of the configuration of the bottle for the goods.

For Preparation Used on Animate and Inanimate Objects for Antiseptic, Disinfecting, Cleaning, and Deodorizing Purposes, and Also Used in the Preparation of Cosmetics and Pharmaceuticals.

First use Oct. 8, 1956.

683,806. Fred E. Hummel, d.b.a. Superthin Laboratories, Los Angeles, Calif. SN 57,872. Filed 7-21-58.

SUPERTHIN

For Drilling Fluid Additive in the Nature of a Chemical Preparation.

First use Mar. 22, 1955.

Class 12—Construction Materials

683,807. General Plywood Corporation, Louisville, Ky. SN 22,172. Filed P.R. 1-7-57; Am. S.R. 5-18-59.

SATIN SURFACE

For Wooden Doors Having a Relatively Smooth Glazed or Semi-Glazed Surface Finish.

First use Dec. 29, 1955.

683,808. General Plywood Corporation, Louisville, Ky. SN 22,175. Filed P.R. 1-7-57; Am. S.R. 5-18-59.

SUPER SATIN SURFACE

For Wooden Doors Having a Relatively Smooth Glazed or Semi-Glazed Surface Finish.

First use Sept. 28, 1956.

Class 24—Laundry Appliances and Machines

683,809. Atlantic Wire and Cable Corporation, College Point, N.Y. SN 66,137. Filed P.R. 1-20-59; Am. S.R. 6-8-59.

SURE-GRIP

For Plastic Clothes Lines.

First use in October 1956.

Class 37—Paper and Stationery

683,810. Accounting Forms Company, Inc., Gastonia, N.C., assignee of John E. Eck, Jr., d.b.a. Accounting Forms Company, Gastonia, N.C. SN 12,018. Filed P.R. 7-12-56; Am. S.R. 3-12-59.

TAX SNAPS

For Sets of Paper Interleaved With Carbon.

First use Dec. 28, 1953.

Class 44—Dental, Medical, and Surgical Appliances

683,811. S. H. Kress and Company, New York, N.Y. SN 52,498. Filed P.R. 5-28-58; Am. S.R. 4-2-59.

BEST STEEL

For Nail Clippers and Tweezers.

First use July 13, 1937.

Class 46—Foods and Ingredients of Foods

683,812. Midwestern Merchandising Company, Inc., San Francisco, Calif. SN 45,183. Filed P.R. 2-3-58; Am. S.R. 2-13-59.

Persia

For Frozen Shrimp.

First use Jan. 19, 1958.

683,813. Standard Brands Incorporated, New York, N.Y. SN 50,936. Filed P.R. 5-2-58; Am. S.R. 6-15-59.

For Dog Food.

First use Apr. 6, 1958.

373,108. DESIGN OF HAT AND COLORED BANDS. Cl. 19. 373,190. ZONAX. Cl. 34. 11-28-39.

683,814. Riva Distributing Company, San Francisco, Calif. SN 53,360. Filed P.R. 6-11-58; Am. S.R. 4-21-59.

Instant Orange

For Concentrated Orange Base for Use in Flavoring Foods and Beverages.
First use on or about Apr. 23, 1954.

683,815. Long Island Agricultural Marketing Assn., Inc., Riverhead, N.Y. SN 57,157. COLLECTIVE MARK. Filed P.R. 8-13-58; Am. S.R. 6-16-59.

LI

For Fresh Produce—Namely, Potatoes, Cauliflower, Corn, Cucumbers, Cabbage, and Brussels Sprouts.
First use June 4, 1958.

Class 51 — Cosmetics and Toilet Preparations

683,816. Avon Products, Inc., New York, N.Y. SN 52,552. Filed P.R. 5-29-58; Am. S.R. 5-27-59.

SURE CURL

For Hair Wave Setting Lotions.
First use May 23, 1958.

Service Marks

Class 100 — Miscellaneous

683,817. Russell G. Dressler, San Antonio, Tex. SN 24,764. Filed 6-1-59.

WATER-SAVE SERVICE

For Chemical Process Consulting Services in Connection With Water Evaporation Control.
First use November 1956.

Class 101 — Advertising and Business

683,818. United States Wholesale Grocers Association, Inc., Washington, D.C. SN 51,085. Filed P.R. 5-5-58; Am. S.R. 3-26-59.

For Trade Association Services to Its Members Including Publicity, Promotional Activity With the Purpose of Expanding the Market of Independent Retail Grocers Who Are Customers and Franchisees of Its Members, Representing Its Members Before Government Agencies and Dissemination of Information to Its Members Through Bulletins and Letters.
First use May 1, 1956.

TRADEMARK REGISTRATIONS RENEWED

125,799. DESIGN OF 3 WAVY LINES. Cl. 30. 6-17-19.
126,760. CAMEL. Cl. 17. 9-30-19.
126,805. JACK SPRAT AND DESIGN. Cl. 45. 9-30-19.
126,809. YARWAY. Cl. 13. 9-30-19.
126,855. ANGLER. Cl. 46. 10-7-19.
126,976. YARWAY AND DESIGN. Cl. 13. 10-14-19.
127,169. YARWAY. Cl. 26. 10-21-19.
127,257. YARWAY AND DESIGN. Cl. 26. 10-28-19.
127,406. WING FOOT. Cl. 39. 11-11-19.
127,438. LAST WORD. Cl. 26. 11-11-19.
127,469. SEA SIDE. Cl. 46. 11-11-19.
127,470. CORKER. Cl. 46. 11-11-19.
127,784. VANITIES. Cl. 39. 12-2-19.
127,798. JACK SPRAT AND DESIGN. Cl. 6. 12-2-19.
362,965. DOUBLETON. Cl. 39. 12-6-38.
365,450. AERO GLIDE. Cl. 39. 3-7-39.
365,451. AEROTIZED. Cl. 39. 3-7-39.
367,142. CLIMATIZER. Cl. 19. 5-9-39.
368,005. EDISON. Cl. 21. 6-6-39.
368,037. FLASH-SAND. Cl. 16. 6-6-39.
368,061. SIROP RAMI. Cl. 18. 6-6-39.
368,140. TROJAN. Cl. 32. 6-6-39.
368,213. ONE-PIE AND DESIGN. Cl. 46. 6-13-39.
368,233. NATA-PAK. Cl. 37. 6-13-39.
368,275. POLAR-WRAP. Cl. 37. 6-13-39.
368,278. "RED DEVIL" AND DESIGN. Cl. 13. 6-13-39.
368,279. RED DEVIL. Cl. 13. 6-13-39.
368,486. PANDA. Cl. 17. 6-20-39.
368,585. PLATE-TAK. Cl. 5. 6-27-39.
368,589. DIXIE BOND. Cl. 1. 6-27-39.
368,603. GABALITE. Cl. 39. 6-27-39.
368,612. APS. Cl. 39. 6-27-39.
368,757. PERMACOUSTIC. Cl. 12. 6-27-39.
368,847. SUPERPLATE. Cl. 34. 7-4-39.
368,976. KENMOSA. Cl. 1. 7-11-39.
369,074. STEEL HORIZONS. Cl. 38. 7-11-39.
369,076. REPRESENTATION OF A PINE TREE. Cl. 14. 7-11-39.
369,241. WHITE QUEEN. Cl. 39. 7-18-39.
369,650. FEATHER WEIGHT. Cl. 23. 8-1-39.
369,766. SANSIL. Cl. 45. 8-1-39.
369,801. FLAMHARD. Cl. 14. 8-1-39.
370,003. HEATMASTER. Cl. 35. 8-8-39.
370,004. AIR COASTER. Cl. 35. 8-8-39.
370,245. DISHADU. Cl. 52. 8-22-39.
370,285. THE TRADER. Cl. 38. 8-22-39.
370,326. FP. Cl. 21. 8-22-39.
370,327. INDUCTUNER. Cl. 21. 8-22-39.
370,333. THE JOLLY JUMP UPS. Cl. 22. 8-22-39.
370,513. SCIENAR. Cl. 26. 8-29-39.
370,597. FLEX. Cl. 46. 8-29-39.
370,636. METAG. Cl. 6. 8-29-39.
370,700. PARIS. Cl. 39. 9-5-39.
370,782. BIG TOWN. Cl. 46. 9-5-39.
370,792. TAP-A-TUNE. Cl. 22. 9-5-39.
370,868. QUIZ PAJAMAS! AND DESIGN. Cl. 39. 9-12-39.
371,304. FRIENDS. Cl. 38. 9-19-39.
371,423. STEELDUCTOR. Cl. 21. 9-26-39.
371,536. PADRA. Cl. 46. 9-26-39.
371,647. DU PONT WITHIN AN OVAL. Cl. 40. 10-3-39.
371,722. ELECDROPODE. Cl. 26. 10-3-39.
371,903. 944. Cl. 49. 10-10-39.
372,091. DURAMIC. Cl. 6. 10-24-39.
372,102. STANDARD. Cl. 18. 10-24-39.
372,143. SYLPH. Cl. 1. 10-24-39.
372,336. OSMOPLASTIC. Cl. 6. 10-31-39.
372,378. STAMCO. Cl. 46. 10-31-39.
372,428. BEAUTY HAZE. Cl. 51. 10-31-39.
372,573. KESSLER'S. Cl. 49. 11-7-39.
372,667. GLENDUNDEE. Cl. 39. 11-7-39.
372,687. SHADOWTHIN. Cl. 44. 11-7-39.
372,938. PENETRO. Cl. 18. 11-21-39.
372,962. PROLARMON. Cl. 18. 11-21-39.
372,999. HARMONE T. Cl. 18. 11-21-39.
373,002. TYPSOGEN. Cl. 18. 11-21-39.
373,082. RITURNA. Cl. 51. 11-21-39.

373,108. DESIGN OF HAT AND COLORED BANDS. Cl. 19. 11–28–39.
373,143. UNITED CROSS. Cl. 44. 11–28–39.
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Electronics Water Purifier Co., Inc., Lombard, Ill. 683,587, pub. 6–2–59. Cl. 21.
Empire Bloomer Co., New York, N.Y. 683,726, pub. 6–2–59. Cl. 39.
Empire State Truck Terminal Co., Inc., New York, N.Y. 683,799, pub. 6–2–59. Cl. 105.
Enrico Roselli Accordion Co., Seattle, Wash. 576,703, canc. Cl. 36.
Era Pacific Inc., Santa Monica, Calif. 683,586, pub. 6–2–59. Cl. 21.
Erneo Products, Inc., Ann Arbor, Mich. 588,553, canc. Cl. 21.
Ernest, Holdeman and Collet, Inc., Elkhart, Ind. 683,643, pub. 6–2–59. Cl. 23.
Essex Wire Corp., Fort Wayne, Ind. 683,604, pub. 6–2–59. Cl. 21.
Esso Standard Oil Co., New York, N.Y. 683,499, pub. 6–2–59. Cl. 6.
Everest & Jennings, Inc., Los Angeles, Calif. 576,720, canc. Cl. 44.
Farbwerke Hoechst, Vormals Meister Lucius & Bruning, Frankfurt am Main Hochst, Germany. 576,711, canc. Cl. 6.
Fashion Bureau, The: *See*— Gagen, J. Wilfrid.
Ferrell Mfg. Co., Groton, N.Y. 683,568, pub. 6–2–59. Cl. 19.
Firestone Tire & Rubber Co., The, Akron, Ohio. 683,766, pub. 6–2–59. Cl. 50.
First Elmersel Store, Deerfield, Ill. 576,570, canc. Cl. 26.
Fisher Scientific Co., Pittsburgh, Pa. 371,722, ren. 8–18–59. Cl. 26.
Fisher Scientific Co., Pittsburgh, Pa. 683,653, pub. 6–2–59. Cl. 26.
Flambeau Plastics Corp., Baraboo, Wis. 683,480–1, pub. 6–2–59. Cl. 2.
Flambeau Plastics Corp., Baraboo, Wis. 683,485–6, pub. 6–2–59. Cl. 2.
Flanders Filters, Inc., Riverhead, N.Y. 683,669, pub. 6–2–59. Cl. 31.
Flex-O-Lators, Inc., Carthage, Mo. 683,676, pub. 6–2–59. Cl. 32.
Flush-Rite Mfg. Co.: *See*— Bufogle, John.
Ford Motor Co., Dearborn, Mich. 683,672, pub. 6–2–59. Cl. 31.
Forging and Casting Corp., The, Ferndale, Mich., to Allegheny Ludlum Steel Corp., Pittsburgh, Pa. 369,801, ren. 8–18–59. Cl. 14.
Fortin Plastics, Inc., Van Nuys, Calif. 683,570, pub. 6–2–59. Cl. 19.
Foster-Stephens Inc., Chicago, Ill. 683,476, pub. 6–2–59. Cl. 2.
Fox Case Corp., New York, N.Y. 249,701, canc. Cl. 26.
Freeman, Bishop David, Co., Evanston, Ill. 683,584, pub. 6–2–59. Cl. 21.
Freshie, Inc., Merced, Calif. 576,624, canc. Cl. 46.
Fuller, D. B., & Co. Inc.: *See*— Stevens, J. P., & Co. Inc.
Gagen, J. Wilfrid, d.b.a. The Fashion Bureau, New York, N.Y. 576,613, canc. Cl. 38.
Gallin, Paul G., Co., New York, N.Y. 683,714, pub. 6–2–59. Cl. 39.
Gebr. Heller Maschinenfabrik GMBH, Nurtingen, Wurttemberg, Germany. 683,619, pub. 8–18–57. Cl. 23.
Gebruder Junghans Aktiengesellschaft, Schramberg/Schwarzwald, Wurttemberg, Germany. 576,797, canc. Cl. 27.
General Cigar Co., Inc., New York, N.Y. 683,560, pub. 6–2–59. Cl. 17.
General Mills, Inc., Minneapolis, Minn. 683,753, pub. 6–2–59. Cl. 46.
General Paint & Varnish Co. Inc., Chicago, Ill. 178,294, canc. Cl. 52.
General Paint & Varnish Co. Inc., Chicago, Ill. 179,148, canc. Cl. 16.
General Paint & Varnish Co. Inc., Chicago, Ill. 401,770, canc. Cl. 15.
General Plywood Corp., Louisville, Ky. 683,807–8. Cl. 12.
General Scientific Corp., Chicago, Ill. 370,518, ren. 8–18–59. Cl. 26.
General Time Corp., New York, N.Y. 683,663, pub. 5–26–59. Cl. 27.

Gevaert Photo-Producten N.V., Mortsel, Belgium. 683,650–1, pub. 6–2–59. Cl. 26.
Gibson & Lumgair Ltd., Selkirk, Scotland. 683,732, pub. 6–2–59. Cl. 42.
Gladiola Biscuit Co., Dallas, Tex. 683,750, pub. 4–7–59. Cl. 46.
Glidden Co., The, Cleveland, Ohio. 370,597, ren. 8–18–59. Cl. 46.
Globe Engineering Co., St. Louis, Mo. 576,861, canc. Cl. 103.
Globe-Union Inc., Milwaukee, Wis. 683,599, pub. 6–2–59. Cl. 21.
Goldfarb, Samuel J., New York, N.Y. 393,193, canc. Cl. 39.
Goodyear Tire & Rubber Co., The, Akron, Ohio. 127,406, ren. 8–18–59. Cl. 39.
Grayson-Robinson Stores, Inc., New York, N.Y. 683,729, pub. 6–2–59. Cl. 39.
Groset & Dunlap, Inc.: *See*—
McLoughlin Bros., Inc.
Guardian Better-Pak Corp., New York, N.Y. 683,488, pub. 6–2–59. Cl. 2.
Guardian Products Co., Inc., Los Angeles, Calif. 683,681–2, pub. 6–2–59. Cl. 32.
Guerlain Perfumery Corp. of Delaware, New York, N.Y. 372,428, ren. 8–18–59. Cl. 51.
Gulf States Sales Corp., Birmingham, Ala. 576,662, canc. Cl. 37.
Hagan Chemical & Controls, Inc., Pittsburgh, Pa. 683,775, pub. 6–2–59. Cl. 52.
Happy Mills, Memphis, Tenn. 411,181, canc. Cl. 46.
Hardwick Stove Co., Cleveland, Tenn. 683,685, pub. 6–2–59. Cl. 34.
Harper Method, Inc., Rochester, N.Y. 683,777, pub. 6–2–59. Cl. 52.
Harris, P. E., & Co., to P. E. Harris Co., Inc., Seattle, Wash. 126,855, ren. 8–18–59. Cl. 46.
Harris, P. E., Co., Inc.: *See*—
Harris, P. E., & Co.
Harris Re-Refining Machinery Co.: *See*—
Harris, Velma C.
Harris, Velma C., d.b.a. Harris Re-Refining Machinery Co., Kansas City, Mo. 683,548, pub. 6–2–59. Cl. 15.
Hart Schaffner & Marx: *See*—
Decker, Alfred, & Cohn, Inc.
Hauck, Albert E., Cincinnati, Ohio. 576,578, canc. Cl. 50.
Haveg Industries, Inc., Wilmington, Del. 683,463, pub. 6–2–59. Cl. 1.
Haward Corp., North Arlington, N.J. 683,801, pub. 6–2–59. Cl. 106.
Helldiver Co., Chicago, Ill. 423,638, canc. Cl. 22.
Heller, William, Inc., New York, N.Y. 576,731, canc. Cl. 42.
Hill, F. H., Co., Inc., Cleveland, Ohio. 683,479, pub. 6–2–59. Cl. 2.
Holley, Albert, Bakersfield, Calif. 683,746, pub. 6–2–59. Cl. 46.
Hollywood Records, Inc., Madison, Tenn. 683,691, pub. 6–2–59. Cl. 36.
Holtville Vegetable Co., Holtville, Calif. 576,853, canc. Cl. 46.
House, L. C., & Sons Nursery, Tyler, Tex. 683,467, pub. 6–2–59. Cl. 1.
Howard Co., Inc., The, Indianapolis, Ind. 683,703, pub. 6–2–59. Cl. 38.
Hudson Publishing Co., Hudson, Ohio. 683,704, pub. 6–2–59. Cl. 38.
Huffman Full Fashioned Mills, Inc., Morganton, N.C. 683,720, pub. 6–2–59. Cl. 39.
Hummel, Fred E., d.b.a. Superthin Laboratories, Los Angeles, Calif. 683,806. Cl. 6.
Hunter Spring Co.: *See*—
American Machine and Metals, Inc.
Ideal Toy Corp., Hollis, N.Y. 683,616, pub. 6–2–59. Cl. 22.
Illinois Shade Cloth Corp.: *See*—
Columbia Mills, Inc., The.
Imperial Sugar Co., Sugar Land, Tex. 576,576, canc. Cl. 46.
Indie Sales, Inc., New York, N.Y. 576,857, canc. Cl. 101.
Industria Quimica Farmaceutica Vir, S.A., Madrid, Spain. 576,673, canc. Cl. 18.
Industrial Enterprises, Inc., New York, N.Y. 683,670, pub. 6–2–59. Cl. 31.
Industrial Models: *See*—
Bowen, Hardy J.
Industrial Research Laboratories, Houston, Tex. 576,632, canc. Cl. 6.
Institut de Recherches de la Siderurgie, Saint-Germain-en-Laye, Seine-et-Oise, France. 683,539, pub. 6–2–59. Cl. 14.
International Affiliated Corp., Morris Plains, N.J. 368,061, ren. 8–18–59. Cl. 18.
International Affiliated Corp., Wilmington, Del. 576,793, canc. Cl. 18.
International Minerals & Chemical Corp.: *See*—
Eastern Clay Products, Inc.
International Postal Supply Co. of New York, The, Lewistown, Pa. 683,628, pub. 6–2–59. Cl. 23.
International Shoe Co., St. Louis, Mo. 683,717, pub. 6–2–59. Cl. 39.
Interstate Publishing Corp., New York, N.Y. 576,818, canc. Cl. 38.
Interwoven Stocking Co., New Brunswick, N.J. 373,379, ren. 8–18–59. Cl. 39.
Iro Mfg. Corp., Philadelphia, Pa. 683,605, pub. 6–2–59. Cl. 21.
Ivins', J. S., Son, Inc., Philadelphia, to Carr-Consolidated Biscuit Co., Wilkes-Barre, Pa. 576,560, canc. Cl. 46.
Jamestown Finishes, Inc., Jamestown, N.Y. 683,553, pub. 6–2–59. Cl. 16.
Jenny Watch G.m.b.H., Basel, Switzerland. 576,607, canc. Cl. 27.
Johns-Manville Corp.: *See*—
Van Cleef Bros.
Johns-Manville Corp., New York, N.Y. 368,757, ren. 8–18–59. Cl. 12.
Johnston, J. McLean, Philadelphia, Pa. 576,826, canc. Cl. 22.
Joseph & Feiss Co., The: *See*—
Shane, C. B., Corp.
Joslyn Mfg. and Supply Co., Chicago, Ill. 683,596, pub. 6–2–59. Cl. 21.
Judy Co., The, Minneapolis, Minn. 576,806, canc. Cl. 22.
K & J Co., Brooklyn, N.Y. 576,740, canc. Cl. 51.
Kahle Horisontal Fish Hook Co.: *See*—
Kahle, Victor C.
Kahle, Victor C., d.b.a. Kahle Horisontal Fish Hook Co., South St. Paul, Minn. 576,581, canc. Cl. 22.
Kappen, John W., d.b.a. Kappen Sales Co., Dayton, Ohio. 683,478, pub. 6–2–59. Cl. 2.
Kappen Sales Co.: *See*—
Kappen, John W.
Kaylon Inc., New York, N.Y. 370,868, ren. 8–18–59. Cl. 39.
Kellogg, Spencer, and Sons, Inc., Buffalo, N.Y. 576,705, canc. Cl. 6.
Kershaw, Gordon, d.b.a. 7 Dwarfs Nursery, Medford, Oreg. 683,461, pub. 6–2–59. Cl. 1.
Kessler, Julius, Distilling Co., Inc., Lawrenceburg, Ind., to Julius Kessler Distilling Co., Inc., Louisville, Ky. 372,573, ren. 8–18–59. Cl. 49.
Keystone Refractories Co., Jersey City, N.J. 180,145, canc. Cl. 12.
Kimberly-Clark Corp., Neenah, Wis. 683,697, pub. 6–2–59. Cl. 37.
Kimberly-Clark Corp., Neenah, Wis. 683,739, pub. 6–2–59. Cl. 44.
Kitchen Master Appliances, Inc., Los Angeles, Calif. 683,589, pub. 6–2–59. Cl. 21.
Kosmos Portland Cement Co., Louisville, Ky. 683,506, pub. 6–2–59. Cl. 12.
Kress, S. H., and Co., New York, N.Y. 683,811. Cl. 44.
Krispy Kernels, Inc., Newark, N.J. 576,579, canc. Cl. 46.
Kutil, Clyde R., River Grove, Ill. 683,682, pub. 6–2–59. Cl. 23.
Laganas, Chris, Shoe Co.: *See*—
Martz, L. V., & Sons Co., The.
Lahoud, John, Catano, Puerto Rico. 683,796, pub. 6–2–59. Cl. 52.
Lakeside Malleable Castings Co., Racine, Wis. 683,540, pub. 6–2–59. Cl. 14.
Lance, Inc.: *See*—
Lance Packing Co.
Lance Packing Co., now by change of name to Lance, Inc., Charlotte, N.C. 370,782, ren. 8–18–59. Cl. 46.
Lan-O-Sheen, Inc., St. Paul, Minn. 683,779, pub. 6–2–59. Cl. 52.
Lansburgh & Bro., Washington, D.C., to City Stores Co., Philadelphia, Pa. 369,241, ren. 8–18–59. Cl. 39.
Larson Boat Works, Inc., Little Falls, Minn. 683,569, pub. 6–2–59. Cl. 19.
Latrobe Steel Co., Latrobe, Pa. 683,538, pub. 6–2–59. Cl. 14.
Laurer, P. H., Co.: *See*—
Laurer, Paul H.
Lauer, Paul H., d.b.a. P. H. Lauer Co., Cuyahoga Falls, Ohio. 683,520, pub. 6–2–59. Cl. 12.
Lea Mfg. Co., The, Waterbury, Conn. 683,497, pub. 6–2–59. Cl. 4.
Lederwarenfabrik Kritzler K.G., Rebbelroth, Cologne, Germany. 576,798, canc. Cl. 26.
Lee Filter Corp., North Arlington, N.J. 683,673, pub. 6–2–59. Cl. 31.
Lehn & Fink Products Corp., Bloomfield, N.J. 683,805. Cl. 6.
Leonards & Lee Sales Co., Chicago, Ill. 576,683, canc. Cl. 26.
Lever Brothers Co., New York, N.Y. 576,712, canc. Cl. 51.
Lever Brothers Co., New York, N.Y. 576,713, canc. Cl. 51.
Lever Brothers Co., New York, N.Y. 576,714, canc. Cl. 51.
Lever Brothers Co., New York, N.Y. 576,715, canc. Cl. 51.
Lever Brothers Co., New York, N.Y. 576,716, canc. Cl. 51.
Lewis, Florence N., d.b.a. Elizabeth Arden, New York, N.Y. 205,534, canc. Cl. 51.
Lewis, Florence N., d.b.a. Elizabeth Arden, New York, N.Y. 205,535, canc. Cl. 51.
Lilliston Implement Co., Albany, Ga. 683,627, pub. 6–2–59. Cl. 23.
Link-Belt Co., Chicago, Ill. 683,635, pub. 6–2–59. Cl. 23.
Long Island Agricultural Marketing Assn., Inc., Riverhead, N.Y. 683,815. Cl. 46.
Lord Baltimore Press, Inc., The, Baltimore, Md. 683,487, pub. 6–2–59. Cl. 2.
Lorillard, P., Co., New York, N.Y. 683,559, pub. 6–2–59. Cl. 17.
Lowe, Henry A., Cleveland, Ohio, to The L. S. Starrett Co., Athol, Mass. 127,438, ren. 8–18–59. Cl. 26.
Lubrication Products Co. of Ohio, Inc., Cleveland, Ohio. 683,630, pub. 6–2–59. Cl. 23.
M.K.M. Knitting Mills, Inc., Manchester, N.H. 683,715, pub. 6–2–59. Cl. 39.
Macon Umbrella Corp., New York, N.Y. 576,772, canc. Cl. 32.
Madler, Moritz, Offenbach am Main, Germany. 683,490, pub. 6–2–59. Cl. 3.
Maggot Products Co., to Weco Products Co., Chicago, Ill. 372,962, ren. 8–18–59. Cl. 18.
Magna Electronics Co. Inc.: *See*—
Magna Electronics, Inc.
Magna Electronics, Inc., from Magna Electronics Co. Inc., Inglewood, Calif. 683,575, pub. 1–20–59. Cl. 21.
Magna Wonder Knife, Inc., New York, N.Y. 683,633, pub. 6–2–59. Cl. 23.

Magnetic Metals Co., Camden, N.J. 683,542, pub. 6–2–59. Cl. 14.
Mahlbacher, Joseph C.: *See*— American Stratronic Corp.
Mallory, P. R., & Co., Inc., Indianapolis, Ind. 370,326, ren. 8–18–59. Cl. 21.
Mallory, P. R., & Co., Inc., Indianapolis, Ind. 370,327, ren. 8–18–59. Cl. 21.
Manegold, John R., Inc., Milwaukee, Wis. 683,744, pub. 6–2–59. Cl. 44.
Marine Optical Mfg. Co., Boston, Mass. 576,690, canc. Cl. 26.
Marks, L. V., & Sons Co., The, Cincinnati, Ohio, to Chris Laganas Shoe Co., Lowell, Mass. 365,450, ren. 8–18–59. Cl. 39.
Marks, L. V., & Sons Co., The, Cincinnati, Ohio, to Chris Laganas Shoe Co., Lowell, Mass. 365,451, ren. 8–18–59. Cl. 39.
Marques de Elorza: *See*— Stanley Home Products, Inc.
Martinez, J. M.: *See*— Patterson, W. G., Brokerage Co., Inc.
Martin's Hatchery Poultry Farms, Inc., Lancaster, Pa. 683,471, pub. 6–2–59. Cl. 1.
Massera, Al, to W. Massera, Watsonville, Calif. 373,232, ren. 8–18–59. Cl. 46.
Massera, Walter: *See*— Massera, Al.
May Department Stores Co., St. Louis, Mo. 683,726, pub. 6–2–59. Cl. 39.
McGill Mfg. Co., Inc., Valparaiso, Ind. 683,644, pub. 6–2–59. Cl. 23.
McGraw-Edison Co.: *See*— Edison, Thomas A., Inc.
McGregor-Doniger Inc., New York, N.Y. 683,716, pub. 6–2–59. Cl. 39.
McLoughlin Bros., Inc., Springfield, Mass., to Grosset & Dunlap, Inc., New York, N.Y. 370,333, ren. 8–18–59. Cl. 22.
McLoughlin Bros., Inc., Springfield, Mass., to Grosset & Dunlap, Inc., New York, N.Y. 370,792, ren. 8–18–59. Cl. 22.
Meb Export Co., Inc., New York, N.Y. 576,694, canc. Cl. 42.
Meb Export Co. Inc., New York, N.Y. 576,763, canc. Cl. 42.
Medomak Canning Co., Winslaw's Mills, Maine. 368,213, ren. 8–18–59. Cl. 46.
Meirett Inc., Danbury, Conn. 683,772, pub. 6–2–59. Cl. 52.
Merit Packing Co., Salinas, Calif. 683,756, pub. 6–2–59. Cl. 46.
Merritt, B., Inc., Chicago, Ill. 683,679, pub. 6–2–59. Cl. 32.
Michaelis, M. G., Jr., d.b.a. The Michaelis Ranches, Kyle, Tex. 683,472, pub. 6–2–59. Cl. 1.
Michaelis Ranches, The: *See*— Michaelis, M. G., Jr.
Midwestern Merchandising Co., Inc., San Francisco, Calif. 683,812. Cl. 46.
Mi-Ho Publishing Co., The: *See*— Murphy, Michael.
Miller, K. C., d.b.a. K. C. Miller Ranches, Tyler, Tex. 683,475, pub. 6–2–59. Cl. 1.
Miller, K. C., Ranches: *See*— Miller, K. C.
Minnesota Perlite Corp., Minneapolis, Minn. 683,469, pub. 6–2–59. Cl. 1.
Mirapiaa Tile Co., Columbus, Ohio. 683,572, pub. 6–2–59. Cl. 20.
Miron Mills, Inc., Clinton, Mass. 576,809, canc. Cl. 42.
Miron Mills, Inc., Clinton, Mass. 576,810, canc. Cl. 42.
Mofusell Development Corp. Ltd., The, Ayr, Scotland. 576,684, canc. Cl. 6.
Monsanto Chemical Co., St. Louis, Mo. 683,500, pub. 6–2–59. Cl. 6.
Monsanto Chemical Co., St. Louis, Mo. 683,705, pub. 6–2–59. Cl. 38.
Monterey Canning Co., Monterey, Calif. 576,608, canc. Cl. 46.
Montgomery Bros., Inc., Philadelphia, Pa. 576,795, canc. Cl. 5.
Morning Coffee, Inc., d.b.a. Courtesy Products, San Diego, Calif. 683,749, pub. 6–2–59. Cl. 46.
Morris, Philip, Inc.: *See*— Axton-Fisher Tobacco Co., The.
Mortens Studio, The, Chicago, Ill. 576,710, canc. Cl. 50.
Motor City Publishing Co., to Ceco Publishing Co., Detroit, Mich. 371,304, ren. 8–18–59. Cl. 38.
Mount Vernon Mills, Inc., Baltimore, Md. 683,502, pub. 6–2–59. Cl. 7.
Multi-Clean Products, Inc., St. Paul, Minn. 683,782, pub. 6–2–59. Cl. 52.
Multi-Color Process Co., Tulsa, Okla. 683,765, pub. 6–2–59. Cl. 50.
Multiprint Co., Inc., Chicago, Ill. 683,708, pub. 6–2–59. Cl. 38.
Muralo Co., Inc., The, New Brighton and Staten Island, N.Y. 576,561, canc. Cl. 16.
Murphy, Michael, d.b.a. The Mi-Ho Publishing Co., Norfolk, Nebr. 683,706, pub. 6–2–59. Cl. 38.
My Lucky Date Corp., New York, N.Y. 683,700, pub. 6–2–59. Cl. 38.
Myrurgia, S.A., Barcelona, Spain. 683,785, pub. 6–2–59. Cl. 52.
National Billiard Mfg. Co., The, Cincinnati, Ohio. 683,617, pub. 6–2–59. Cl. 22.
National Distillers Products Corp., New York, N.Y. 576,689, canc. Cl. 38.
National Electrical Manufacturers Association, New York, N.Y. 683,590, pub. 6–2–59. Cl. 21.
National Gypsum Co., Buffalo, N.Y. 683,506, pub. 6–2–59. Cl. 12.
National Peanut Co.: *See*— American Tea & Coffee Co., Inc.
National Sales, Inc., Wichita, Kans. 576,865, canc. Cl. 23.
National Sales, Inc., Wichita, Kans. 683,637, pub. 5–26–59. Cl. 23.
National Silver Co., New York, N.Y. 576,754, canc. Cl. 30.
Nashua Corp., Wilmington, Del., from Nashua Corp., Nashua, N.H. 683,693, pub. 6–2–59. Cl. 37.
Naven, Benjamin S., d.b.a. Dearborn Electronic Laboratories, Chicago, Ill. 683,583, pub. 6–2–59. Cl. 21.
Necchi Societa per Azioni, Pavia, Italy. 683,629, pub. 6–2–59. Cl. 23.
Nederlandse Geschenkartikelen Industrie Junora, Hilversum, Netherlands. 683,601, pub. 6–2–59. Cl. 21.
New York Herald Tribune Inc., New York, N.Y. 576,802, canc. Cl. 38.
New York Herald Tribune Inc., New York, N.Y. 576,804, canc. Cl. 38.
New York World-Telegram Corp., New York, N.Y. 683,710, pub. 6–2–59. Cl. 38.
New York Silicate Book Slate Co., Inc., New York, N.Y. 683,770, pub. 6–2–59. Cl. 50.
Niagara Blower Co., New York, N.Y. 683,686, pub. 6–2–59. Cl. 34.
Niblack System, Inc., Houston, Tex. 683,740, pub. 6–2–59. Cl. 44.
North American Aviation, Inc., Los Angeles, Calif. 683,661, pub. 6–2–59. Cl. 26.
Northern Electric Co., Chicago, Ill. 683,585, pub. 6–2–59. Cl. 21.
Nutrilite Products, Inc., Buena Park, Calif. 683,780, pub. 6–2–59. Cl. 52.
Oberhelman-Ritter Foundry Co., The, Cincinnati, Ohio. 683,541, pub. 6–2–59. Cl. 14.
O'Brien, John T., Oakland, Calif. 683,709, pub. 6–2–59. Cl. 38.
O'Donnell's Sea Grill, Inc., Washington, D.C. 683,797, pub. 12–25–56. Cl. 100.
Oil Well Mfg. Corp., Los Angeles, Calif. 368,278, ren. 8–18–59. Cl. 13.
Oil Well Mfg. Corp., Los Angeles, Calif. 368,279, ren. 8–18–59. Cl. 13.
Olin Mathieson Chemical Corp., East Alton, Ill. 683,504, pub. 6–2–59. Cl. 8.
Olin Mathieson Chemical Corp., New York, N.Y. 683,563, pub. 6–2–59. Cl. 18.
Olsson, A. V., Trading Co. Inc., New York, N.Y. 683,748, pub. 6–2–59. Cl. 46.
Omega Co.: *See*— Sievers, William E.
Omni Products Corp., New York, N.Y. 683,460, pub. 6–2–59. Cl. 1.
Organics, Inc., Denver, Colo. 683,470, pub. 6–2–59. Cl. 1.
Orradio Industries, Inc., Opelika, Ala. 683,689, pub. 6–2–59. Cl. 36.
Osmose Wood Preserving Co. of America, Inc., Buffalo, N.Y. 372,336, ren. 8–18–59. Cl. 6.
Otis Elevator Co., New York, N.Y. 576,565, canc. Cl. 26.
Outboard Marine Corp., Waukegan, Ill. 683,641, pub. 6–2–59. Cl. 23.
Oxnard Citrus Association, Port Hueneme, Calif. 127,469, ren. 8–18–59. Cl. 46.
Oxnard Citrus Association, Port Hueneme, Calif. 127,470, ren. 8–18–59. Cl. 46.
Pabco, Cleveland, Ohio. 683,602, pub. 6–2–59. Cl. 21.
Pamphlets, Inc., Media, Pa. 683,707, pub. 6–2–59. Cl. 38.
Pape, Shirley, Eugene, Oreg. 683,802, pub. 6–2–59. Cl. 107.
Par Enterprises & Novelty Co., Inc., Northbrook, Ill. 683,631, pub. 6–2–59. Cl. 23.
Patterson, W. G., Brokerage Co., Inc., d.b.a. J. M. Martinez, Birmingham, Ala 576,757, canc. Cl. 17.
Penick, S. B., & Co., New York, N.Y. 576,600, canc. Cl. 6.
Permadent Products Corp., New York, N.Y. 683,743, pub. 6–2–59. Cl. 44.
Permatex Co., Inc., Huntington Station, N.Y. 683,543, pub. 3–4–58. Cl. 15.
Pfizer, Chas., & Co., Inc., Brooklyn, N.Y. 683,561, pub. 6–2–59. Cl. 18.
Pfizer, Chas., & Co., Inc., Brooklyn, N.Y. 683,565, pub. 6–2–59. Cl. 18.
Phaidon Publishers, Inc., New York, N.Y. 576,566, canc. Cl. 38.
Philco Corp., Philadelphia, Pa. 683,609, pub. 6–2–59. Cl. 21.
Pickwick Products Co., Elgin, Ill. 576,873, canc. Cl. 18.
Pierce, MacNeel, Los Angeles, Calif. 576,761, canc. Cl. 35.
Piggly Wiggly Corp., Jacksonville, Fla. 683,755, pub. 6–2–59. Cl. 46.
Plough, Inc., Memphis, Tenn. 372,988, ren. 8–18–59. Cl. 18.
Polikoff Ltd., London, England. 368,612, ren. 8–18–59. Cl. 39.
Ponce Products, Inc., Miami, Fla. 683,511, pub. 6–2–59. Cl. 12.
Portable Air Cooler and Heater, Inc., Chico, Calif. 576,698, canc. Cl. 34.
Porter & Co., Eugene, Oreg. 683,684, pub. 6–2–59. Cl. 34.
Post Products, Inc., Auburndale, Mass. 683,783, pub. 6–2–59. Cl. 52.
Power Designs, Inc., Richmond Hill, N.Y. 683,592, pub. 6–2–59. Cl. 21.
Pratt-Low Preserving Co., Santa Clara, Calif. 576,874, canc. Cl. 46.
Procter & Gamble Co., The, Cincinnati, Ohio. 683,790, pub. 6–2–59. Cl. 52.
Procter & Gamble Co., The, Cincinnati, Ohio, from Eastern-Dukes Chemicals, Inc., Rogersville, Tenn. 683,773, pub. 6–2–59. Cl. 52.
Proctor & Schwartz, Inc., Philadelphia, Pa. 683,536, pub. 6–2–59. Cl. 14.

Underwood, Richard W., d.b.a. R. W. Underwood, Alameda, Calif. 683,745, pub. 6–2–59. Cl. 46.
Waterman-Loomis Co., Bakersfield, Calif. 683,464, pub. 6–2–59. Cl. 1.

Proctology: See—
Drueck, Alice F.
Products of Cedar Cottage Ltd., Vancouver, British Columbia, Canada. 576,737, canc. Cl. 15.
Pyle-National Co., The, Chicago, Ill. 683,000, pub. 6-2-59. Cl. 21.
Quaker Oats Co., The, Chicago, Ill. 683,459, pub. 6-2-59. Cl. 1.
Quaker Oats Co., The, Chicago, Ill. 683,496, pub. 6-2-59. Cl. 8.
Quercia, Marcel, Paris, France. 683,548, pub. 6-2-59. Cl. 15.
Radsen Engineering Corp., Macon, Ill. 683,655, pub. 6-2-59. Cl. 26.
Raygram Corp., New York, N.Y. 683,650, pub. 6-2-59. Cl. 26.
Realistic Co., The, Cincinnati, Ohio. 683,734, pub. 6-2-59. Cl. 44.
Regal Ware, Inc., Kewaskum, Wis. 683,527, pub. 6-2-59. Cl. 13.
Reid Stuart & Co. Ltd., London, England. 683,764, pub. 6-2-59. Cl. 49.
Reider, S. A., & Co., New York, N.Y. 683,647, pub. 6-2-59. Cl. 24.
Reinhart, Paul, Co., Inc., New York, N.Y. 576,748, canc. Cl. 46.
Republic Supply Co., Oklahoma City, Okla. 683,483, pub. 6-2-59. Cl. 2.
Rexall Drug Co., Los Angeles, Calif. 576,786, canc. Cl. 27.
Rexhilt Leather Goods, Inc., New York, N.Y. 683,489, pub. 6-2-59. Cl. 3.
Reynolds, R. J., Tobacco Co., Winston-Salem, N.C. 126,780, ren. 8-18-59. Cl. 17.
Rhodes Refrigeration, Inc., Portland, Oreg. 683,674, pub. 6-2-59. Cl. 31.
Richardson Co., The, Melrose Park, Ill. 683,484, pub. 6-2-59. Cl. 2.
Riker, Rubim B., Columbia City, Ind. 683,618, pub. 6-2-59. Cl. 22.
Rinshed-Mason Co., Detroit, Mich. 268,037, ren. 8-18-59. Cl. 16.
Rit Products Corp., Chicago, Ill., to Corn Products Co., New York, N.Y. 373,082, ren. 8-18-59. Cl. 51.
Riva Distributing Co., San Francisco, Calif. 683,514. Cl. 46.
Roberts Mfg. Co., Industry, Calif. 683,530, pub. 6-2-59. Cl. 13.
Rockmount Ranch Wear Mfg. Co., Denver, Colo. 683,722, pub. 6-2-59. Cl. 39.
Roper, Alberta, d.b.a. Verro Records, Chicago, Ill. 683,692, pub. 6-2-59. Cl. 36.
Roper, Geo. D., Corp., Rockford, Ill. 576,638, canc. Cl. 34.
Rosefield, John B., d.b.a. An-Fe Mfg. Co., to An-Fe Mfg. Co., Oakland, Calif. 370,245, ren. 8-18-59. Cl. 52.
Rubber & Plastics Compound Co., Inc., New York, N.Y. 683,507, pub. 6-2-59. Cl. 12.
Russell Mfg. Co., The, Alexander City, Ala. 576,657, canc. Cl. 42.
Sacred Records, Inc., Los Angeles, Calif. 576,867, canc. Cl. 36.
Safeway Stores, Inc., Oakland, Calif. 576,708, canc. Cl. 4.
St. Marys Woolen Mfg. Co., St. Marys, Ohio. 683,733, pub. 6-2-59. Cl. 42.
Salinas Lettuce Farmers Cooperative, Salinas, Calif. 683,751, pub. 5-19-59. Cl. 46.
Sampson, Arnold, d.b.a. E-Z-Est Products Co., Oakland, Calif. 683,496, pub. 6-2-59. Cl. 4.
Schenley Industries, Inc., New York, N.Y. 683,762, pub. 6-2-59. Cl. 49.
Schlesinger Bros., Philadelphia, Pa. 683,491, pub. 6-2-59. Cl. 3.
Schneierson, I., & Sons, Inc., New York, N.Y. 683,712, pub. 6-2-59. Cl. 39.
Schnyder, Edward, Zurich, Switzerland. 576,572, canc. Cl. 51.
Schuylkill Silk Mills, to Vanity Fair Mills, Inc., Reading, Pa. 127,784, ren. 8-18-59. Cl. 39.
Scientific Packaging Corp., Newark, N.J. 683,501, pub. 6-2-59. Cl. 6.
Scull, William S., Co., to William S. Scull Co., Inc., Camden, N.J. 371,536, ren. 8-18-59. Cl. 46.
Scull, William S., Co., Inc.: See—
Scull, William S., Co.
Sears, Roebuck and Co., Chicago, Ill. 683,736, pub. 6-2-59. Cl. 44.
Select Sportswear, Inc., New York, N.Y. 372,667, ren. 8-18-59. Cl. 39.
Serpa & Paglia, Providence, R.I. 576,618, canc. Cl. 18.
Service Saver System, Inc., Detroit, Mich. 683,526, pub. 6-2-59. Cl. 13.
7 Dwarfs Nursery: See—
Kershaw, Gordon.
Sevi S.A. (Joias e Relogios), Rio de Janeiro, Brazil. 576,723, canc. Cl. 27.
Shaffre, Inc., New York, N.Y. 576,598, canc. Cl. 32.
Shane, C. B., Corp., Chicago, Ill., to The Joseph & Feiss Co., Cleveland, Ohio. 362,965, ren. 8-18-59. Cl. 39.
Sharpe Instruments Ltd., Toronto, Ontario, Canada. 576,672, canc. Cl. 34.
Shelburne Shirt Co., Inc., New York, N.Y. 683,724, pub. 6-2-59. Cl. 39.
Shoe Corp. of America, Columbus, Ohio. 683,721, pub. 6-2-59. Cl. 39.
Sievers, William E., d.b.a. Omega Co., Long Beach, Calif. 683,784, pub. 6-2-59. Cl. 52.
Simmons, Pearl M., 576,660, canc. Cl. 18.
Simmons, Robert, Inc., New York, N.Y. 683,664, pub. 6-2-59. Cl. 29.
Simon, Cremo, Anciennement J. Simon & Cie, Societe Anonyme, Lyon, France. 576,553, canc. Cl. 51.
Simpson Redwood Co., Seattle, Wash. 683,513, pub. 6-2-59. Cl. 12.
Since 1868 Crescent Corp., New York, N.Y. 683,493, pub. 6-2-59. Cl. 3.
Singer Mfg. Co., The, Elizabeth, N.J., 576,960, canc. Cl. 100.
Smidth, F. L., & Co., New York, N.Y., 373,190, ren. 8-18-59. Cl. 34.
Smith-Dorsey: See—
Wander Co., The.
Smith, Verle C., d.b.a. Surgeons Lotion Laboratories, Tulsa, Okla. 576,630, canc. Cl. 18.
Societa Italiana Pompe Ataria S.p.A., Milan, Italy. 683,501, pub. 6-2-59. Cl. 21.
Socony Mobil Oil Co., Inc., New York, N.Y. 683,544, pub. 6-2-59. Cl. 15.
Solar Light Mfg. Co., Chicago, Ill. 683,607, pub. 6-2-59. Cl. 21.
Sonsouma, Paris, France. 683,564, pub. 6-2-59. Cl. 18.
Spalding, A. G., & Bros, Inc., Chicopee, Mass. 683,613, pub. 6-2-59. Cl. 22.
Speedy Washer Mfg. Co., Miami, Fla. 576,871, canc. Cl. 24.
Spencer Chemical Co., Kansas City, Mo. 576,837, canc. Cl. 6.
Spiegel, J., Hanger Co., Teaneck, N.J. 683,767, pub. 6-2-59. Cl. 50.
Sprague Electric Co., North Adams, Mass. 683,577, pub. 6-2-59. Cl. 21.
Stack, Cornelius, New York, N.Y. 394,566, canc. Cl. 39.
Sta-Lit Lighter Co., Daytona Beach, Fla. 683,602, pub. 6-2-59. Cl. 21.
Standard Brands Inc., New York, N.Y. 683,513. Cl. 46.
Standard Cap and Seal Corp., now by change of name Standard Packaging Corp., Chicago, Ill. 576,593, canc. Cl. 50.
Standard Cap & Seal Inc., Chamblee, Ga. 683,738, pub. 6-2-59. Cl. 44.
Standard Chemical Mfg. Co., Omaha, Nebr. 372,102, ren. 8-18-59. Cl. 18.
Standard Milling Co., New York, N.Y., to Standard Milling Co., Kansas City, Mo. 372,378, ren. 8-18-59. Cl. 46.
Standard Packaging Corp.: See—
Standard Cap and Seal Corp.
Stanley Home Products, Inc., Westfield, Mass., from Vipon Chemical Corp., d.b.a. Marques de Blorna, Newark, N.J. 683,771, pub. 6-2-59. Cl. 51.
Starrett, L. S., Co., The: See—
Lowe, Henry A.
Statmaster Corp., New York, N.Y. 683,656, pub. 6-2-59. Cl. 26.
Stein, A., & Co., Chicago, Ill. 370,709, ren. 8-18-59. Cl. 39.
Stein, S., & Co., Inc., New York, N.Y. 576,775, canc. Cl. 42.
Stelber Cycle Corp., Brooklyn, N.Y. 683,737, pub. 6-2-59. Cl. 44.
Stevens, J. P., & Co. Inc., from D. B. Fuller & Co. Inc., New York, N.Y. 683,730, pub. 6-2-59. Cl. 42.
Stockett, Wiley T., Jr., Mesa, Ariz. 576,870, canc. Cl. 28.
Studebaker Corp., The, to Studebaker-Packard Corp., South Bend, Ind. 367,142, ren. 8-18-59. Cl. 19.
Studebaker-Packard Corp.: See—
Studebaker Corp., The.
Superthin Laboratories: See—
Hummel, Fred E.
Surgeons Lotion Laboratories: See—
Smith, Verle C.
Svenska Ackumulator Aktiebolaget Jungner, Stockholm, Sweden. 576,665, canc. Cl. 26.
Sylvania Electric Products Inc., Wilmington, Del., from Sylvania Electric Products Inc., New York, N.Y. 683,598, pub. 6-2-59. Cl. 21.
Sylvania Industrial Corp., Fredericksburg, Va., to American Viscose Corp., Philadelphia, Pa. 372,142, ren. 8-18-59. Cl. 1.
Talon, Inc., Meadville, Pa. 683,531, pub. 6-2-59. Cl. 13.
Tampa Cigar Co., Inc., Tampa, Fla. 683,557, pub. 6-2-59. Cl. 17.
Telefocal Co., The: See—
Bailey, George W.
Texaco Inc., by change of name from The Texas Co., New York, N.Y. 683,546-7, pub. 6-2-59. Cl. 15.
Texas Co., The: See—
Texaco Inc.
Textron Inc., Cleveland, Ohio. 683,623-4, pub. 6-2-59. Cl. 23.
ThermoCold Corp., Hudson, N.Y. 683,667, pub. 6-2-59. Cl. 31.
Times-Picayune Publishing Co., The, New Orleans, La. 683,711, pub. 6-2-59. Cl. 38.
Tip-Top Hosiery Mills, Inc., Asheboro, N.C. 683,723, pub. 6-2-59. Cl. 39.
Tokalon, Inc., New York, N.Y. 127,899, canc. Cl. 6.
Torrington Co., The, Torrington, Conn. 683,642, pub. 6-2-59. Cl. 23.
Transmission & Gear Co., The, Dearborn, Mich. 576,629, canc. Cl. 23.
Tri Counti-Cone Corp., North Hollywood, Calif. 683,573, pub. 6-2-59. Cl. 21.
Triad Transformer Corp., Venice, Calif. 683,696, pub. 6-2-59. Cl. 38.
Tropical Tiles, Inc., Orlando, Fla. 683,510, pub. 6-2-59. Cl. 12.
True-Flo Valve Co., Inc., Everett, Mass. 683,528, pub. 6-2-59. Cl. 13.
Truval Shirt Co., Inc., New York, N.Y. 683,725, pub. 6-2-59. Cl. 39.
Tucend, Irving, d.b.a. Berry Chemical & Mfg. Co., Chicago, Ill. 683,774, pub. 6-2-59. Cl. 52.
Turn-A-Bore Equipment Co., Fort Worth, Tex. 683,694, pub. 6-2-59. Cl. 23.
Underwood, R. W.: See—
Underwood, Richard W.

Underwood, Richard W., d.b.a. R. W. Underwood, Alameda, Calif. 683,745, pub. 6–2–59. Cl. 46.
Union Carbide Corp., New York, N.Y. 683,787–9, pub. 6–2–59. Cl. 52.
Unistrut Products Co., Chicago, Ill. 683,509, pub. 6–2–59. Cl. 12.
United Airy Farmers, Norwood, Ohio. 683,757, pub. 6–2–59 Cl. 46.
United Cigar-Whelan Stores Corp., New York, N.Y., to United Whelan Corp., Brooklyn, N.Y. 373,143, ren. 8–18–59. Cl. 44.
U.S. Electrical Motors Inc., Los Angeles, Calif. 683,610, pub. 6–2–59. Cl. 21.
United States Smelting Refining and Mining Co., The, Boston, Mass. 369,076, ren. 8–18–59. Cl. 14.
United States Wholesale Grocers Association, Inc., Washington, D.C. 683,818. Cl. 101.
United Van Lines, Inc., St. Louis, Mo. 683,800, pub. 6–2–59. Cl. 105.
United Whelan Corp.: *See*—
United Cigar-Whelan Stores Corp.
Universal Equipment Co., Chicago, Ill. 683,677, pub. 6–2–59. Cl. 32.
Universal Sports Corp., New York, N.Y. 576,664, canc. Cl. 50.
Utica Cutlery Co., Utica, N.Y. 369,650, ren. 8–18–59. Cl. 23.
Utility Appliance Corp., Los Angeles, Calif. 683,688, pub. 6–2–59. Cl. 34.
V-M Corp., Benton Harbor, Mich. 683,593, pub. 6–2–59. Cl. 21.
Van Art, Inc., San Francisco, Calif. 576,685, canc. Cl. 34.
Van Cleef Bros., Chicago, Ill., to Johns-Manville Corp., New York, N.Y. 368,585, ren. 8–18–59. Cl. 5.
Vanity Fair Mills, Inc.: *See*—
Schuylkill Silk Mills.
Vapor Heating Corp., Chicago, Ill. 683,597, pub. 6–2–59. Cl. 21.
Verro Records: *See*—
Roper, Alberta.
Vesuvius Crucible Co., Pittsburgh, Pa. 683,687, pub. 6–2–59. Cl. 34.
Vineland Poultry Laboratories, Landis, N.J. 683,566, pub. 6–2–59. Cl. 18.
Vitner, C. J., Co., Chicago, Ill. 683,752, pub. 6–2–59. Cl. 46.
Vixen Chemical Corp.: *See*—
Stanley Home Products, Inc.
Von Wertaur, Marcel J., New York, N.Y. 576,875, canc. Cl. 18.
Vylactos Laboratories, Inc., Des Moines, Iowa. 576,744, canc. Cl. 18.
Wabash Screen Door Co., The, Chicago, Ill. 683,514, pub. 6–2–59. Cl. 12.
Waltham Watch Co., New York, N.Y. 683,654, pub. 6–2–59. Cl. 26.
Wander Co., The, d.b.a. Smith-Dorsey, Chicago, Ill. 683,562, pub. 5–26–59. Cl. 18.
Warner & Swasey Co., The, Cleveland, Ohio. 576,864, canc. Cl. 23.
Waterman-Loomis Co., Bakersfield, Calif. 683,464, pub. 6–2–59. Cl. 1.
Weco Products Co.: *See*—
Maggot Products Co.
Weil-Bilt Shoe Co., Inc., Milford, Mass. 683,718, pub. 6–2–59. Cl. 39.
Welsh Mfg. Co., Providence, R.I. 683,741, pub. 6–2–59. Cl. 44.
West Chemical Products, Inc., Long Island City, N.Y. 683,778, pub. 6–2–59. Cl. 52.
West Chemical Products, Inc., Long Island City, N.Y. 683,786, pub. 6–2–59. Cl. 52.
Western Grocer Co., Marshalltown, Iowa, to Consolidated Foods Corp., Chicago, Ill. 126,805, ren. 8–18–59. Cl. 45.
Western Grocer Co., Marshalltown, Iowa, to Consolidated Foods Corp., Chicago, Ill. 127,798, ren. 8–18–59. Cl. 6.
Westmoreland, Twain, and Fred Folger, Jr., Mount Airy, N.C. 683,719, pub. 6–2–59. Cl. 39.
Weyerhaeuser Timber Co., Tacoma, Wash. 683,517, pub 6–2–59. Cl. 12.
Willson's Midget Department Stores: *See*—
Willson, R. H. Merton.
Winsor & Newton, Inc., New York, N.Y. 576,650, canc. Cl. 38.
Wolfenden Corp., J. W., Attleboro, Mass. 576,832, canc. Cl. 28.
Woodman Co., Inc., The, Decatur, Ga. 683,660, pub. 6–2–59. Cl. 26.
Woodward & Lothrop, Inc., Washington, D.C. 683,798, pub. 6–2–59. Cl. 101.
World Electric Co., The, Cleveland, Ohio. 683,594–5, pub. 6–2–59. Cl. 21.
Word-O-Rama, New York, N.Y. 683,612, pub. 6–2–59. Cl. 22.
Wrightway Engineering Co., Chicago, Ill. 683,525, pub. 6–2–59. Cl. 13.
Wyandotte Chemicals Corp., Wyandotte, Mich. 683,776, pub. 6–2–59. Cl. 52.
Willson, R. H. Merton, d.b.a. Willson's Midget Department Stores, Portland, Oreg. 683,675, pub. 6–2–59. Cl. 32.
Yardley Created Products Co., Chicago, Ill. 683,518, pub. 6–2–59. Cl. 12.
Yardney Electric Corp., New York, N.Y. 683,574, pub. 6–2–59. Cl. 21.
Yarnall-Waring Co., Philadelphia, Pa. 126,800, ren. 8–18–59. Cl. 13.
Yarnall-Waring Co., Philadelphia, Pa. 126,976, ren. 8–18–59. Cl. 13.
Yarnall-Waring Co., Philadelphia, Pa. 127,169, ren. 8–18–59. Cl. 26.
Yarnall-Waring Co., Philadelphia, Pa. 127,257, ren. 8–18–59. Cl. 26.
Year, Inc., Los Angeles, Calif. 576,701, canc. Cl. 38.
Young, A. & C., Co., Van Nuys, Calif. 576,642, canc. Cl. 46.
Zep Mfg. Corp., Atlanta, Ga. 683,549, pub. 6–2–59. Cl. 15.
Zep Mfg. Corp., Atlanta, Ga. 683,791–5, pub. 6–2–59. Cl. 32.
Zero Mfg. Co., Inc., Washington, Mo. 683,636, pub. 6–2–59. Cl. 23.
Ziv Steel & Wire Co., Chicago, Ill. 683,535, pub. 6–2–59. Cl. 14.

U. S. GOVERNMENT PRINTING OFFICE: 0——1959

2,813,991. Electron Emitting Electrode.

2,887,602. Ultra-High Frequency Electric Discharge Device.

OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

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PATENTS

NOTICES

Examination

Pursuant to the provisions of Rule 341(c), an examination for persons seeking registration before the United States Patent Office as patent attorneys or agents will be held on Monday, November 23, 1959.

This examination will be given under the supervision of the Civil Service Commission, and may be taken in any of the cities of the country in which the Civil Service Commission regularly conducts examinations. Applications to take the examination must be directed to the Commissioner of Patents and filed in the Patent Office not later than October 23, 1959.

Application blanks may be obtained from the Clerk of the Patent Office Committee on Enrollment, Room 3718, Department of Commerce Building, Washington 25, D.C.

ARTHUR W. CROCKER,
July 23, 1959. *Chairman, Committee on Enrollment.*

Board of Appeals Decisions Rendered in the Month of July 1959

Examiner affirmed	180
Examiner affirmed in part	32
Examiner reversed	47
Total	259

Information Aid to Inventors

The new Patent Office pamphlet "Patents and Inventions—An Information Aid to Inventors" is now available through the Superintendent of Documents, U.S. Government Printing Office, Washington 25, D.C., at a price of 15 cents per copy—$11.25 per 100 copies in larger lots.

Erratum

All references to Patent No. 2,899,531 to Edwin L. Wiegand, assignor to Edwin L. Wiegand Company, for Electric Heaters, appearing in the OFFICIAL GAZETTE of August 11, 1959, should be deleted as the application was withdrawn from issue and the patent was not issued.

Disclaimers

2,396,005.—*Bernard Gross* and *Leo W. Cornwell*, San Diego, Calif. SEALING DEVICE. Patent dated Mar. 5, 1946. Disclaimer filed July 20, 1959, by the assignee, *Rohr Aircraft Corporation*.

Hereby enters this disclaimer to claim 1 of said patent.

2,590,307.—*Thomas T. Woodson*, Bridgeport, Conn. MOTOR AND PUMP ASSEMBLY. Patent dated June 3, 1952. Disclaimer filed July 20, 1959, by the assignee, *General Electric Company*.

Hereby enters this disclaimer to claims 1, 2, and 3 of said patent.

Classification Order No. 286

Classification Order No. 286, dated July 30, 1959, incorporates changes in the following classes:

20
182—(New Class—FIRE ESCAPES, LADDERS, SCAFFOLDS—Definitions will appear in Bulletin No. 432)
189
227—(Abolished)
228—(Abolished)
257
280
304—(Abolished)

The above changes will be incorporated in the Manual of Classification replacement pages dated October 1959.

M. C. ROSA,
Director, Patent Examining Operation.

Patents Available for Licensing or Sale

2,641,598. Iodomethylate Compounds of the Dimethyl Xanthine Series (Iodomethylate Quaternary Ammonium Compounds of a Tertiary-Amino-Alkyl-Dimethyl-Xanthine Such as of 1 : 3-Dimethyl-7-(β-Diethylamino)-Ethyl Xanthine). Michel Mousseili, 37 Avenue George V, Paris 8e, France.

2,785,584. Engine Control Device. New England Bobbin & Shuttle Company, Nashua, N.H.

2,883,866. Power Control Mechanism. Conway C. Harkleroad, Batesville, Ark.

2,888,817. Pressure and Magnetic Key Blank for Locks. David E. Buck, 401 South Main St., Elizabethton, Tenn.

2,890,825. Mail Sorting (A Mailing Envelope). Ted Patrick, 261 Alhambra Circle, Coral Gables, Fla.

2,891,406. Oil Well Pumping Assembly. Joseph P. Burt, Jr., P.O. Box 2511, Tulsa, Okla.

2,891,804. Vehicle Body Rigidifying Device and Mounting for Passenger (Safety) Harness (To Prevent Roof From Caving in Should Car Roll Over in Accident). John S. Frayne, 1405 Washington Blvd., Birmingham, Mich.

General Electric Company is prepared to grant non-exclusive licenses *in the field of radio purposes* under the following 14 patents upon reasonable terms to domestic manufacturers.

Applications for license under the following 13 patents may be addressed to: Patent Counsel, Electronic Components Division, General Electric Company, Syracuse, N.Y.

2,689,930. Semiconductor Current Control Device.

New Applications Received During June 1959

Patents	7,109
Designs	466
Plant Patents	16
Reissues	21
Total	7,610

Issue

Patents	1,112	No. 2,900,637 to No. 2,901,748, incl.
Designs	64	No. 185,949 to No. 186,012, incl.
Reissues	4	No. 24,689 to No. 24,692, incl.
Total	1,180	

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1959

Total number of pending applications (excluding Designs)	198,248
Total number of pending Design applications	7,004

2,813,991. Electron Emitting Electrode.
2,820,487. Grid Fabrication Method.
2,860,218. Germanium Current Controlling Devices.
2,860,219. Silicon Current Controlling Devices.
2,878,410. Electronic Tube Structure.
2,879,918. Lead Loading Arrangement.
2,883,576. Thermionic Valves.
2,883,577. Envelope Structure for Electric Discharge Device.
2,887,602. Ultra-High Frequency Electric Discharge Device.
2,887,607. Electron Discharge Device Cathode.
2,888,588. Electron Gun Structure.
2,888,590. Electronic Tube Structure.

Applications for license under the following patent may be addressed to: Patent Counsel, Major Appliance Division, General Electric Company, Appliance Park, Louisville 1, Ky.

2,890,279. Synchronization Signal Separation Circuit.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended

Total	7,610	Total	1,180

CONDITION OF PATENT APPLICATIONS AS OF JUNE 30, 1959

Total number of pending applications (excluding Designs)	198, 248
Total number of pending Design applications	7, 004
Total number of applications awaiting action (excluding Designs)	87, 060
Total number of Design applications awaiting action	1, 931
Date of oldest new application	July 7, 1958
Date of oldest amended application	June 16, 1958

M. C. ROSA, Director, Patent Examining Operation

PATENT EXAMINING GROUPS, AND SUPERVISORY EXAMINERS	DIVISIONS
(I) STONE, I. G., CHEMICAL AND RELATED ARTS	6, 31, 36, 42, 46, 50, 56, 59, 60, 62, 64.
(II) STRACHAN, O. W., COMMUNICATIONS, RADIANT ENERGY AND ELECTRICAL ARTS	16, 35, 37, 41, 42, 44, 49, 51, 54, 60.
(III) YUNG KWAI, B., MECHANICAL MANUFACTURING, MACHINE ELEMENTS AND DESIGNS	2, 12, 13, 14, 21, 24, 57, 58, 61, 81, 82.
(IV) FREEHOF, H. B., MATERIAL HANDLING AND TREATING, OPTICS, RAILWAYS AND AMUSEMENT DEVICES.	7, 11, 17, 27, 34, 35, 39, 53, 62.
(V) HULL, J. S., STATIC STRUCTURES AND INSTRUMENTS OF PRECISION	5, 8, 20, 29, 33, 36, 40, 52, 66.
(VI) MURPHY, T. F., AGRICULTURE, CALCULATORS, PUMPS AND MOTORS, TRANSPORTATION	1, 4, 9, 10, 18, 23, 32, 36, 45, 47.
(VII) KAUFFMAN, H. E., HEATING AND COOLING, PLASTIC SHAPING AND COATING, SEPARATION AND MIXING, BODY TREATMENT AND CARE.	3, 15, 19, 25, 30, 33, 48, 55, 67.
(CLASS.) GORECKI, G. A., ARTS UNDERGOING RECLASSIFICATION AS LISTED UNDER CLASSIFICATION DIVISIONS.	91, 92, 93, 94, 95.

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application: New	Oldest Application: Amended
1. (VI) GOLDBERG, A. J., Brakes; Excavating; Planting; Plant Husbandry; Scattering Unloaders; Harrows and Diggers; Plows	12-2-58	12-1-58
2. (III) STONE, A., Fishing, Trapping and Vermin Destroying; Presses; Tobacco; Textile Wringers; Buckles, Buttons and Clasps	12-5-58	12-2-58
3. (VII) MARMELSTEIN, N. (WINDHAM, R. K., acting), Metal Founding and Treatment; Metallurgy (Process and Apparatus); Alloys; Electrical Resistors	1-5-59	12-30-58
4. (VI) FALLER, E. A., Hoists; Power Driven Conveyors; Handling Apparatus; Elevators; Pneumatic Dispatch; Store Service; Conveyors, Chutes, Skids, Guides and Ways	12-2-58	12-3-58
5. (V) ROBINSON, C. W., Harvesters; Unearthing Objects; Threshing; Knotters; Animal Husbandry; Bee Culture; Dairy; Butchering; Vegetable and Meat Cutters and Comminutors; Fences; Gates; Music; Signals and Indicators; Acoustics	10-6-58	10-1-58
6. (I) LIDOFF, H. J., Carbon Chemistry (part), e.g., Heterocyclic, General Organic Processes, Proteins, Amides, Amines	12-2-58	12-1-58
7. (IV) GONSALVES, J. E. (ANDERSON, E. G., acting), Optics	11-3-58	11-3-58
8. (V) BREHM, G. L., Beds; Chairs and Seats; Cabinets; Tables; Miscellaneous Furniture; Fire Escapes; Ladders; Deposit and Collection Receptacles; Scaffolds	1-3-59	1-2-59
9. (VI) BRANSON, J. H., Pumps; Fans; Turbines	12-15-58	12-15-58
10. (VI) BOYD, S., Firearms; Ordnance; Ammunition; Explosive Charge Making	12-11-58	12-3-58
11. (IV) BENHAM, E. V., Boots, Shoes and Leggings; Shoe and Leather Manufacture; Button, Eyelet and Rivet Setting; Nailing, Stapling and Clip Clenching; Card, Picture and Sign Exhibiting; Cutlery; Pipes and Tubular Conduits	12-2-58	12-3-58
12. (III) SPINTMAN, S., Machine Elements; Engine Starters; Interrelated Clutch and Motor Controls	11-30-58	12-1-58
13. (III) BEALL, T. E., Gear Cutting; Electric Lamp and Tube Manufacture; Needle and Pin Making; Metal Working (part), e.g. Special Work, Forging, Plastic Working, Drawing, Sawing, Milling, Planing, Turning	12-1-58	12-1-58
14. (III) WILTZ, W. A., Metal Working (part) e.g. Sheet Metal, Wire Bending, Miscellaneous Processes, Assembly and Disassembly Apparatus; Wire Fabrics	8-22-58	8-18-58
15. (VII) BRINDISI, M. V., Plastics; Plastic Block and Earthenware Apparatus	12-8-58	12-1-58
16. (II) ANDRUS, L. M., Telephony; Recorders (part)	11-10-58	11-10-58
17. (IV) LEIGHEY, R. A., Packaging; Typewriters; Printing; Type Casting and Setting; Sheet Material Associating or Folding; Sheet Feeding or Delivering	12-30-58	12-20-58
18. (VI) BLUM, A. (LEVINE, S., acting), Power Plants; Fluid Transmissions; Servomotor Systems; Jet Motors; Combustion Turbines; Speed Responsive Devices	12-10-58	11-19-58
19. (VII) PATRICK, P. L. (MATTESON, F. L., acting), Stoves and Furnaces; Boilers; Fluid Fuel Burners; Heating Systems; Miscellaneous Heating; Automatic Temperature and Humidity Regulation; Illuminating Burners	12-3-58	12-3-58
20. (V) SEERS, J. D., Miscellaneous Hardware; Closure Fasteners; Locks; Safes; Bank Protection; Bread, Pastry and Confection Making; Tents and Canopies; Umbrellas; Canes; Undertaking; Electrical Connectors	12-1-58	12-1-58
21. (III) MADER, R. C., Textiles	12-30-58	12-17-58
22. (VI) PAUL, E. (acting), Aeronautics; Boats; Buoys; Ships; Marine Propulsion; Propellers; Windmills; Fluid Diaphragms and Bellows	12-3-58	11-26-58
23. (VI) SMILOW, L., Data Processors; Digital and Analog Computers; Calculators; Bookkeeping Machines; Cash and Fare Registers; Voting Machines; Counters	7-7-58	7-7-58
24. (III) HICKEY, T. J., Apparel (except Corsets and Brassieres); Apparel Apparatus; Sewing Machines; Textiles, Ironing or Smoothing; Clutches and Power-Stop Control; Work Holders	12-10-58	12-10-58
25. (VII) NEVIUS, R. D., Coating—Processes, Miscellaneous Products and Apparatus; Distillation; Wood Treating Apparatus; Paper Making	1-2-59	1-2-59
26. (II) RADER, O. L., Electricity—Generation, Motive Power, Transmission Systems, Voltage and Phase Control Systems, Furnaces, Battery Charging and Discharging, Arc Lamps, Prime Mover Dynamo Plants; Elevators (part), e.g. Miscellaneous Electric Control Mechanisms; Inductors; Transformers	12-1-58	11-3-58
27. (IV) JAMES, S., Brushing, Scrubbing and General Cleaning; Brush, Broom and Mop Making; Textiles, Fluid Treating Apparatus; Cleaning and Liquid Contact with Solids	1-2-59	1-2-59
28. (VI) BRAUNER, R. H., Internal Combustion Engines; Expansible Chamber Motors; Fluid Servomotors; Spring, Weight and Animal Powered Motors; Cylinders; Pistons; Drive Shafts; Flexible-Shaft Couplings; Chucks or Sockets; Fluid Current Conveyors; Pressure Modulating Relays; Wheel Substitutes	12-1-58	12-6-58
29. (V) FRITZ, M. M., Tools; Woodworking; Button, Barrel and Wheel Making; Baggage; Cloth, Leather and Rubber Receptacles; Package and Article Carriers; Valved Pipe Couplings; Rod Joints; Tool-Handling Fastenings	12-15-58	12-10-58

DIVISIONS, EXAMINERS AND SUBJECTS OF INVENTION (Roman numerals in parentheses indicate Examining Group)	Oldest Application	
	New	Amended
30. (VII) O'LEARY, R. A., Comminutors; Refrigeration; Fluid Sprinkling, Spraying and Diffusing, Separating and Assorting Solids (part)	12-1-58	12-1-58
31. (I) BOETTCHER, A. M., Carbon Chemistry (part), e.g., Urea Adducts, Silicon Containing Carbon Compounds, Hydrogenation of Carbon Oxides, Partial Oxidation of Non-Aromatic Hydrocarbon Mixtures, Hydrocarbons, Halogenated Hydrocarbons; Synthetic Resins (part) (e.g., Polypropylenes, Polyisobutylenes); Mineral Oils	3-2-59	2-24-59
32. (VII) BERMAN, H., Gas and Liquid Contact Apparatus; Heat Exchange; Agitation; Fire Extinguishers	12-15-58	12-12-58
33. (V) MUSHAKE, W. L., Bridges; Hydraulic and Earth Engineering; Roads and Pavements; Roofs; Building Structures	12-1-58	11-12-58
34. (IV) QUACKENBUSH, L., Railways—Draft Appliances, Switches and Signals, Surface Track, Rolling Stock, Track Sanders; Electricity, Transmission to Vehicles; Dumping Vehicles; Vehicle Fenders; Hand and Hoist Line Implements; Separating and Assorting Solids (part)	8-18-58	6-16-58
35. (IV) DEMBO, L. J., Dispensing; Filling Receptacles; Toilet; Severing by Tearing or Breaking; Coin Controlled Apparatus; Dispensing Cabinets; Article Dispensing; Coin Handling	2-2-59	2-2-59
36. (V) EVANS, R. L., Measuring and Testing (part)	8-12-58	8-14-58
37. (II) LEVY, M. L., Electricity—Switches, Welding, Heating, Photo-cell Circuits	12-3-58	12-1-58
38. (I) PARKER, C. B., Carbon Chemistry (part), e.g., Azo, Carbocyclic or Acyclic Compounds (part), e.g., Anthrones, Triarylmethanes, Esters, Acids, Ketones, Aldehydes, Ethers, Phenols, Alcohols	12-8-58	12-16-58
39. (IV) WEIL, I., Fluid-Pressure Regulators; Valves; Fluid Handling (except Pressure Modulating Relays, Float Valves, Diaphragms and Bellows)	1-16-59	1-16-59
40. (V) DRUMMOND, E. J., Receptacles—Metallic, Paper, Wooden, Glass; Special Receptacles and Packages	12-10-58	12-15-58
41. (II) LOVEWELL, N. N., Recorders (part); Sound Recording; Television	1-5-59	1-2-59
42. (II) REYNOLDS, E. R., Electric Signaling; Telegraphy (part)	10-15-58	10-15-58
43. (I) KNIGHT, W. B. (WOLK, M. O., acting), Medicines, Poisons, Cosmetics; Sugar and Starch; Skins and Leathers; Preserving, Sterilizing and Disinfecting (except Wood Treatment Apparatus); Bleaching, Dyeing, Fluid Treatment of Textiles	12-4-58	12-2-58
44. (II) EVANS, N. H., Directive Radio Systems; Nuclear Batteries; Nuclear Resonant Devices; Radar; Sonar; Torpedoes	9-2-58	9-2-58
45. (VI) MANIAN, J. A. (DOUGLAS, R. A., acting), Wheels, Tires and Axles; Railway Wheels and Axles; Lubrication; Bearings and Guides; Belt and Sprocket Gearing; Spring Devices; Animal Draft Appliances	1-19-59	1-7-59
46. (I) WILES, W. G. (CAMPBELL, R. L., acting), Actinide Series (e.g., fissionable) Compounds; Sintered Metal Stock; Explosives; Power Plants (part); Metallurgy (part); Radioactive Medicines; Nuclear Reactions; Carbon Chemistry (part)	12-1-58	12-3-58
47. (VI) KANOF, W. J., Mining, Quarrying, and Ice Harvesting; Motor Vehicles; Land Vehicles; Education	12-10-58	12-8-58
48. (II) BERNSTEIN, S., Electricity—Conversion Systems, Protective Systems; Measuring and Testing (except Meters); Switchboards, Relays, Magnets, Condensers, Transistors, Barrier Layer Rectifiers	11-13-58	11-10-58
49. (VII) BENDETT, B., Drying and Gas or Vapor Contact with Solids; Ventilation; Wells; Concentrating Evaporators; Glass; Earth Boring	12-2-58	12-1-58
50. (I) ARNOLD, D., Carbon Chemistry (part), e.g., Synthetic Resin Compositions (part), Synthetic Rubber Compositions, Natural Rubber; Synthetic Resins (part) (e.g., Butadiene Polymers and Copolymers, Polyacrylonitriles, Acrylate Polymers and Copolymers)	10-8-58	10-1-58
51. (II) YAFFEE, S., Radio Transmitters, Receivers and Tuners; Modulators; Piezoelectric Devices; Antennas; Oscillators	11-3-58	11-3-58
52. (V) LE ROY, C. A., Supports and Racks	1-12-59	1-12-59
53. (IV) NINAS, G. A., Label Pasting and Paper Hanging; Books and Book Making; Manifolding; Printed Matter; Stationery; Paper Files and Binders; Flexible or portable Closures or Partitions; Doors, Windows, Awnings, and Shutters; Harness; Whip Apparatus; Food Apparatus; Closure Operators; Illumination	12-3-58	12-1-58
54. (II) NILSON, R. G., Electric Lamps; Electronic Tubes; Miscellaneous Discharge Devices; Lamp, Cathode Ray and Gas Discharge Device Circuits; Ray Energy (e.g., X-Ray, Ultraviolet, Radioactive) Applications; Mass Spectrometers	1-15-59	1-15-59
55. (VII) KLINE, J. R., Surgery; Dentistry; Artificial Body Members	11-3-58	11-4-58
56. (I) SPECK, J. R., Abrading Compositions; Batteries; Coating or Plastic Compositions; Electrical and Wave Energy Chemistry	12-12-58	12-1-58
57. (III) MILLER, A. B., Bolt, Nut, Rivet, Nail, Screw, Chain, and Horseshoe Making; Driven and Screw Fastenings; Nut and Bolt Locks; Jewelry; Pipe Joints or Couplings; Cutting and Punching	9-10-58	9-19-58
58. (III) BRONAUGH, F. H. (BAILEY, F. E., acting), Rolls and Rollers; Making Metal Tools and Implements; Stone Working; Abrading Processes and Apparatus; Baths, Closets, Sinks, and Spittoons; Boring and Drilling; Paper Manufactures; Selective Punching	12-2-58	12-9-58
59. (I) BRINDISI, M. A., Inorganic Chemistry; Fertilizers; Gas, Heating and Illuminating	9-26-58	11-10-58
60. (I) MANGAN, P. E. (STERMAN, M., acting), Carbon Chemistry (part), e.g., Synthetic Resins (part); Miscellaneous Polymers (e.g., Vinyl Polymers); Synthetic Resin Compositions (part), Synthetic Rubber; Photographic Processes and Products	11-3-58	11-3-58
61. (III) STRIZAK, J. P., Winding and Reeling; Pushing and Pulling; Horology; Railway Mail Delivery; Feeding of Indefinite Lengths	11-18-58	11-21-58
62. (IV) LOWE, D. B., Games; Toys; Amusements and Exercising Devices; Mechanical Guns and Projectors; Photographic Apparatus	12-15-58	12-15-58
63. (I) WINKELSTEIN, A. H., Foods and Beverages; Fermentation; Carbon Chemistry (part), e.g., Lignins, Carbohydrate Derivatives, Fats, Sulfurized Compounds; Heavy Metal Compounds	12-5-58	12-1-58
64. (I) GREENWALD, J., Fuels; Miscellaneous Compositions	10-7-58	10-1-58
65. (II) SAX, E. J., Wave Guides; Electric Meters; Conductors; Insulators; Amplifiers	1-2-59	1-2-59
66. (V) LISANN, I., Geometric Instruments; Measuring and Testing (part)	9-4-58	9-2-58
67. (VII) KRAFFT, C. F., Ornamentation; Liquid Separation or Purification; Centrifugal Bowl Separators	12-1-58	12-1-58
81. (III) MONCURE, J. A., Industrial Arts	3-16-59	4-13-59
82. (III) GRAY, M. A., Household, Personal and Fine Arts	3-23-59	3-23-59
91. BAILEY, J. S., Laminated Fabrics	11-4-58	11-3-58
92. GAUSS, H., Detectors, Miscellaneous Electron Tube Circuits	10-24-58	10-6-58
93. WAHL, R. A., Metal Bending; Web Feeding	10-1-58	10-3-58
94. BERLOWITZ, W., Gas Separation	11-21-58	10-15-58
95. ANGEL, C. D., Masonry and Concrete Structures; Time-Controlling Apparatus; Packed Rod Joints; Joint Packings	11-3-58	10-21-58
M. E. DIV. A (I) GASTON, L. H., Carbon Chemistry (part), e. g., Steroids; Synthetic Resins (part), i. e., Polyethylenes	2-19-59	10-17-58

EXPIRATION OF PATENTS

The patents within the range of numbers indicated below expire during August 1959, except those which may have been extended under the provisions of the Veterans Patent Extension Act (64 Stat. 316 as amended by 66 Stat. 321) and those which may have expired earlier due to shortened terms under the provisions of Public Law 600. A list of Veterans' patents which have been extended appears in the *Annual Index of Patents—1958*.

Patents ..... Numbers 2,891,897 to 2,894,357, inclusive
Plant Patents ..... Numbers 537 to 543, inclusive

The appeal was taken in an opposition proceeding

months after entry of the decree, the application to register "Lazy Pals" was filed in the name of "Shoe Corporation of

DECISIONS IN PATENT AND TRADEMARK CASES

U.S. Court of Customs and Patent Appeals

SHOE CORPORATION OF AMERICA

v.

THE JUVENILE SHOE CORPORATION OF AMERICA

No. 6334. Decided April 23, 1959

[— CCPA —; — F.2d —; 121 USPQ 510]

1. TRADEMARKS—OPPOSITION—GOODS RECITED IN APPLICATION—SECTION 7(b).

In view of Section 7(b) of the trademark statute, *Held* that "appellant cannot rely on certain goods recited in its application for registration, and then assert in an opposition proceeding, on the basis of testimony adduced during such proceeding, that the goods with which its mark is used differ from those recited in its application."

2. SAME—SAME—CONFUSING SIMILARITY—MOTIVE IN SELECTING A MARK.

Held that while evidence bearing upon the motive of a party in selecting a given trademark may influence the ultimate question of likelihood of confusion, intent is not necessarily controlling in an opposition proceeding.

3. SAME — CONFUSING SIMILARITY — WEAK MARK — SUGGESTIVENESS—"LAZY."

"The similarity between 'Lazy Pals' and 'Lazy Bones' resides in the common word 'Lazy.' That word, as applied to shoes, is not arbitrary. It contains a definite suggestion of comfort, relaxation and suitability for informal wear. Words or syllables of that character are considered to be weak in a trademark sense and will not be given as great weight in determining the likelihood of confusion between marks as will words or syllables which are of an arbitrary nature."

4. SAME—SAME—"LAZY" INDICATIVE OF CHARACTER OF SHOES RATHER THAN ORIGIN.

"We are of the opinion that prospective purchasers would be more apt to regard the word 'Lazy' in each of the marks here involved as indicative of the character of the shoes, rather than of their origin; and that the distinctive words 'Pals' and 'Bones' would be relied on as identifying the source from which they emanated."

5. SAME—SAME—EVIDENCE—THIRD PARTY REGISTRATIONS—DESCRIPTIVE OR SUGGESTIVE WORD OR SYLLABLE.

"In determining whether a word or syllable has a descriptive or suggestive significance as applied to merchandise it is proper to take notice of the extent to which it has been used in trademarks by others on such merchandise. If it has been frequently so used, the inference is warranted that it is not purely arbitrary; that it would be likely to be understood by purchasers as identifying or describing the merchandise itself, rather than the source thereof, and hence as having little or no trademark significance."

6. SAME—SAME—SAME—SAME.

"We conclude that our earlier decisions, so far as they indicate that third party registrations can never be given any weight in deciding an issue of confusing similarity, are too broad and they are hereby overruled."

7. SAME—OPPOSITION—EVIDENCE—THIRD PARTY REGISTRATIONS.

In an opposition by the registrant of "Lazy Bones" for shoes and slippers of leather or kid to the registration of "Lazy Pals" for shoes for men, women and children, in which the applicant called attention to five trademarks involving the initial word "Lazy," registered for footwear, *Held* that "For the purposes of the instant case, we rely on the third party registrations only as establishing what appears on their faces, namely, that each registrant made application to the Patent Office claiming that he had adopted and used the mark shown in commerce and that the registration was granted"; *Held* that "We need not determine whether the registrations afford evidence as to the extent to which the marks were or are used in commerce"; *Held* that "We regard the registrations only as evidence that five other concerns have considered five other marks, each of which contains 'Lazy' as its initial word, to be appropriate as trademarks for shoes"; and *Held* that the "registration of five such marks can scarcely be attributed to mere coincidence, but affords definite evidence that the word 'Lazy' has a suggestive significance as applied to shoes and hence would be taken primarily as describing or suggesting some quality of the shoes rather than as pointing to their origin."

8. SAME—CONFUSING SIMILARITY—"LAZY BONES" AND "LAZY PALS" ON FOOTWEAR.

In an opposition by the registrant of "Lazy Bones" for shoes and slippers of leather or kid to the registration of "Lazy Pals" for shoes for men, women and children, *Held* that, considering the marks as a whole, the public would not be likely to be confused by the concurrent use thereof; *Held* that, "Aside from the connotation and similarity caused by the word 'Lazy,' the marks do not otherwise look alike or sound alike"; and *Held* that "Almost any two-word mark bearing the prefix 'Lazy' would suggest comfort and relaxation * * *."

9. APPEAL TO U.S. COURT OF CUSTOMS AND PATENT APPEALS—MOTION TO STRIKE PORTION OF BRIEF.

"During the pendency of the appeal to this court, and after appellee had filed its brief, appellant moved to strike certain portions thereof on the ground that they contained improper 'allegations and vituperative statements challenging the correctness of the record and reflecting both upon counsel [for appellant] and this Court.' Appellant's motion to strike was denied on June 28, 1957, with the privilege of renewing the motion at the time of oral argument. This, appellant did. At oral argument counsel for appellee agreed to have the court strike certain sentences from appellee's brief. We have accordingly stricken this matter therefrom. The balance of appellee's arguments as to the propriety of considering the evidence in question should not be stricken, as they represent, in our opinion, legitimate argument on behalf of appellee as to what this court should consider in its review of the case."

10. SAME—SAME.

"Appellee has moved to strike the portions of appellant's brief and the record relating to certain mentioned letters. Inasmuch as we deem it unnecessary to consider this evidence in our determination of the case, we do not pass upon that motion. In view of our conclusion, other matters presented by the parties do not seem to us to require discussion herein."

APPEAL from the Patent Office. Opposition No. 32,765.

REVERSED.

A. Yates Dowell and *A. Yates Dowell, Jr.* for Shoe Corporation of America.

Kingsland, Rogers & Ezell (*Edmund C. Rogers* of counsel) for The Juvenile Shoe Corporation of America.

Before O'CONNELL, *Acting Chief Judge*, and WORLEY, RICH, and MARTIN, *Associate Judges* [Original argument before JOHNSON, *Chief Judge*, and O'CONNELL, WORLEY, and RICH, *Associate Judges*]

O'CONNELL, *Acting Chief Judge*, delivered the opinion of the court.

This case was originally argued here on January 10, 1958, and an opinion was thereafter rendered by the court on April 23, 1958. A petition for rehearing was subsequently filed by appellee and the case was set for further argument on November 6, 1958. Pursuant to such argument and the additional briefs filed by the parties, the opinion of April 23, 1958, is hereby withdrawn and the following opinion is substituted therefor:

1048, 40 F.2d 108, 5 USPQ 59; *Standard Oil Co. v. Clar*

Patents ..... Numbers 2,201,897 to 2,204,357, inclusive
Plant Patents ..... Numbers 537 to 543, inclusive

The appeal was taken in an opposition proceeding from the decision of the Assistant Commissioner of Patents, 110 USPQ 430, affirming the decision of the Examiner of Interferences, which sustained the opposition and held that the applicant (appellant here) was not entitled to the registration sought.

Appellant applied for registration on the Principal Register of its mark "Lazy Pals" for men's, women's and children's shoes, asserting use since January 21, 1949. Registration was opposed by appellee, owner of a registration for "Lazy Bones" for shoes and slippers of leather or kid.[1] The letters making up the mark "Lazy Bones" are each somewhat suggestive of bones. The record indicates that first use of appellee's "Lazy Bones" was in October, 1935, and appellant's "Lazy Pals" sometime in 1949. Both marks have been used continuously since the date of first use. Thus, appellee is clearly the prior user.

Appellant's application as hereinbefore described states that "Lazy Pals" is used in conjunction with "shoes for men, women and children" while appellee's registration certificate recites "shoes and slippers of leather or kid." Appellee's witness, however, testified that the mark "Lazy Bones" is not applied to men's shoes. Appellant's witnesses testified that "Lazy Pals" is used only on men's house slippers. Appellant relies on this distinction in goods in its argument that there is no possibility of confusion between the marks in issue. We cannot agree with appellant's view of this aspect of the case, in view of section 7(b) of the Lanham Act, which provides:

> A certificate of registration of a mark upon the principal register provided by this act shall be prima facie evidence of the validity of the registration, registrant's ownership of the mark, and of registrant's exclusive right to use the mark in commerce *in connection with the goods or services specified in the certificate*, subject to any conditions and limitations stated therein. [Emphasis added.]

[1] It is obvious from the above provision that appellant cannot rely on certain goods recited in its application for registration, and then assert in an opposition proceeding, on the basis of testimony adduced during such proceeding, that the goods with which its mark is used differ from those recited in its application. Therefore, we shall restrict ourselves to a consideration of the goods recited in appellant's application, and for the purposes of this proceeding, consider the goods of the respective parties to be practically identical. The case thus reduces itself to the question of confusing similarity between appellee's "Lazy Bones" and appellant's "Lazy Pals."

The Assistant Commissioner in reaching the conclusion that concurrent use of the two marks in issue would result in likelihood of confusion placed stress on a consent decree which had been entered into by the parties to this proceeding at a time prior to appellant's adoption and use of the mark "Lazy Pals," and stated:

> The parties of this proceeding are not strangers to one another. In December of 1947 applicant changed its name from The Schiff Company to Shoe Corporation of America. The Juvenile Shoe Corporation of America, opposer here, filed a civil action against applicant in the District Court for the Eastern District of Missouri, and on October 22, 1948 a consent decree was entered enjoining applicant from using the name "Shoe Corporation of America" in connection with the manufacture, advertisement, purchase, sale or shipment of shoes (except to its own subsidiaries and wholly-owned retail stores and departments), and permitting the use of the name for signing leases, borrowing money and other corporate purposes, but only in conjunction with the words "An Ohio Corporation." Three months after entry of the decree, applicant commenced using the mark "Lazy Pals"; and five months after entry of the decree, the application to register "Lazy Pals" was filed in the name of "Shoe Corporation of America."
>
> Applicant's record shows that it continues to use the name "Shoe Corporation of America" in buying shoes.

The Assistant Commissioner concluded, in the light of the above, and in view of appellee's extensive advertising and sales of its shoes under the mark "Lazy Bones," that "this course of conduct on the part of applicant indicates an intent to trade in some manner on opposer's good will." That conclusion, taken in conjunction with the similarities which she felt exist between the two marks, led her to decide that "their contemporaneous use is reasonably likely to cause confusion or mistake or deception of purchasers," and accordingly to sustain the opposition.

We are of the opinion that the Assistant Commissioner erred in giving undue weight to the consent decree and in sustaining the instant opposition.

[2] Evidence bearing upon the motive of a party in selecting a given trademark may influence the ultimate question of likelihood of confusion. *Lever Brothers Co.* v. *Riodela Chemical Co.*, 17 CCPA 1272, 41 F.2d 408, 5 USPQ 152. There it was stated that:

> * * * if, in the adoption and use of the mark, there be a purpose of confusing the mind of the public as to the origin of the goods to which it is applied, we have a right, in determining the question of likelihood of confusion or mistake, to consider the motive in adopting the mark as indicating an opinion, upon the part of one vitally interested, that confusion or mistake would likely result from use of the mark. * * *

Notwithstanding the foregoing citation, intent is not necessarily controlling in an opposition proceeding as this court further held in the same decision:

> Of course, if confusion or mistake is not likely to result from the use of the two marks, the motive of the later applicant in adopting its mark can not affect its right to registration; * * *

[3] The similarity between "Lazy Pals" and "Lazy Bones" resides in the common word "Lazy." That word, as applied to shoes, is not arbitrary. It contains a definite suggestion of comfort, relaxation and suitability for informal wear. Words or syllables of that character are considered to be weak in a trademark sense and will not be given as great weight in determining the likelihood of confusion between marks as will words or syllables which are of an arbitrary nature. *Benjamin D. Smith* v. *Tobacco By-Products & Chemical Corp.*, 44 CCPA 880, 243 F.2d 188, 113 USPQ 339, and cases there cited.

[4] We are of the opinion that prospective purchasers would be more apt to regard the word "Lazy" in each of the marks here involved as indicative of the character of the shoes, rather than of their origin; and that the distinctive words "Pals" and "Bones" would be relied on as identifying the source from which they emanated.

Appellant has called attention to the following five trademarks involving the initial word "Lazy," which have been registered for footwear: "Lazy Lacer," Reg. No. 362,784; "Lazy Lad," Reg. No. 374,144; "Lazy Joe," Reg. No. 417,125; "Lazy Dogs," Reg. No. 420,814; and "Lazy H," Reg. No. 574,031.

Appellee urges that third party registrations may not properly be considered in these proceedings and cites the following authorities in support of that proposition: *Sharpe & Dohme* v. *Parke, Davis & Co.*, 17 CCPA 842, 37 F.2d 960, 4 USPQ 181; *American Fruit Growers, Inc.* v. *Michigan Fruit Growers, Inc.*, 17 CCPA 906, 38 F.2d 696, 4 USPQ 220; *California Packing Corporation* v. *Tillman & Bendel, Inc.*, 17 CCPA

[1] Reg. No. 383,127, issued March 10, 1936, renewed and republished under § 12(c) of the Lanham Act, on July 5, 1949.

merce"; *Held* that "We regard the registrations only as for:

1048, 40 F.2d 108, 5 USPQ 59; *Standard Oil Co. v. Clarence W. Epley*, 17 CCPA 1224, 40 F.2d 997, 5 USPQ 142; *MacEachen v. Tar Products Corp.*, 17 CCPA 1264, 41 F.2d 295, 5 USPQ 505; *Federal Mills & Elevator Co., Inc. v. Pillsbury Flour Mills Co.*, 18 CCPA 1353, 49 F.2d 1042, 9 USPQ 349; *Wegenberg Shoe Manufacturing Co. v. Hood Rubber Co.*, 18 CCPA 1449, 49 F.2d 1046, 9 USPQ 449; *National Biscuit Co. v. Joseph W. Sheridan*, 18 CCPA 720, 44 F.2d 987, 7 USPQ 117; *Decker & Cohn, Inc. v. Liebovitz Sons, Inc.*, 18 CCPA 781, 46 F.2d 179, 7 USPQ 141; *The Celotex Co. v. Arthur Edward Millington*, 18 CCPA 1484, 49 F.2d 1053, 9 USPQ 353; *Trustees for Arch Preserver Shoe Patents v. James McCreery & Co.*, 18 CCPA 1507, 49 F.2d 1068, 9 USPQ 554.

The foregoing decisions, so far as they may hold that third party registrations can never be considered in deciding whether an opposer's mark is confusingly similar to that of an applicant, are not sound. [5] In determining whether a word or syllable has a descriptive or suggestive significance as applied to merchandise it is proper to take notice of the extent to which it has been used in trademarks by others on such merchandise. If it has been frequently so used, the inference is warranted that it is not purely arbitrary; that it would be likely to be understood by purchasers as identifying or describing the merchandise itself, rather than the source thereof, and hence as having little or no trademark significance.

While the cases relied on by appellee have not been heretofore expressly overruled, this court, in recent years, has considered third party registrations as bearing on the weight to be given to portions of trademarks. *Burroughs Wellcome & Co., Inc. v. Merger Phar. Co., Inc.*, 43 CCPA 703, 228 F.2d 243, 108 USPQ 130; *Lauritzen & Co., Inc. v. Borden Co.*, 44 CCPA 720, 239 F.2d 405, 112 USPQ 60. See also *Holiday Casuals v. M. Beckerman & Sons, Inc.*, 43 CCPA 731, 228 F.2d 224, 108 USPQ 140. It is to be noted also that in trademark infringement cases, third party registrations are commonly considered in passing on the question of confusing similarity. Cases to this effect are cited and discussed in articles by Jenney, 29 Journal of the Patent Office Society 669 (1947), and Derenberg, 38 Trade Mark Reporter 831, 854, 855 (1948).

[6] We conclude that our earlier decisions, so far as they indicate that third party registrations can never be given any weight in deciding an issue of confusing similarity, are too broad and they are hereby overruled.

[7] For the purposes of the instant case, we rely on the third party registrations only as establishing what appears on their faces, namely, that each registrant made application to the Patent Office claiming that he had adopted and used the mark shown in commerce and that the registration was granted. We need not determine whether the registrations afford evidence as to the extent to which the marks were or are used in commerce. We regard the registrations only as evidence that five other concerns have considered five other marks, each of which contains "Lazy" as its initial word, to be appropriate as trademarks for shoes.

The registration of five such marks can scarcely be attributed to mere coincidence, but affords definite evidence that the word "Lazy" has a suggestive significance as applied to shoes and hence would be taken primarily as describing or suggesting some quality of the shoes rather than as pointing to their origin.

[8] Considering the marks as a whole, we do not feel that the public would be likely to be confused by the concurrent use thereof. Aside from the connotation and similarity caused by the word "Lazy," the marks do not otherwise look alike or sound alike. Almost any two-word mark bearing the prefix "Lazy" would suggest comfort and relaxation (viz: "Lazy Dogs," "Lazy Lad," "Lazy-Joe," etc.).

It is necessary, however, to consider a further contention of appellee. Appellee argues that appellant is under an "especial duty to avoid confusion" due to the fact that "there is an inherent similarity in appellant's name, Shoe Corporation of America, and appellee's name, The Juvenile Shoe Corporation of America." The record clearly establishes, however, that neither one of the respective parties ever uses its corporate name in connection with the sale to the consumer of the merchandise here in issue.

[9] During the pendency of the appeal to this court, and after appellee had filed its brief, appellant moved to strike certain portions thereof on the ground that they contained improper "allegations and vituperative statements challenging the correctness of the record and reflecting both upon counsel [for appellant] and this court." Appellant's motion to strike was denied on June 28, 1957, with the privilege of renewing the motion at the time of oral argument. This, appellant did. At oral argument counsel for appellee agreed to have the court strike certain sentences from appellee's brief. We have accordingly stricken this matter therefrom. The balance of appellee's arguments as to the propriety of considering the evidence in question should not be stricken, as they represent, in our opinion, legitimate argument on behalf of appellee as to what this court should consider in its review of the case.

[10] Appellee has moved to strike the portions of appellant's brief and the record relating to certain mentioned letters. Inasmuch as we deem it unnecessary to consider this evidence in our determination of the case, we do not pass upon that motion. In view of our conclusion, other matters presented by the parties do not seem to us to require discussion herein.

For the foregoing reasons, the decision of the Assistant Commissioner is reversed.

REVERSED.

WORLEY, *J.* (concurring):

While I readily agree with the result reached by the majority, I strongly disagree as to the propriety, necessity and wisdom of considering the third party registrations cited by appellee.

During the thirty years Congress has charged this court with the responsibility of construing and applying the trademark statutes it enacts, we have, with two possible exceptions, consistently held that, in cancellation and opposition proceedings, marks belonging to those not parties to the proceedings are not to be considered.

One of the early decisions, *Trustees for Arch Preserver Shoe Patents v. James McCreery & Co.*, 18 CCPA 1507, 49 F.2d 1068, 9 USPQ 554, involved an opposition proceeding. This court, after refusing to consider some one hundred third party registrations said:

> We are not unmindful of the fact that, in proceedings in courts of equity relating to unfair competition and trademark

infringement cases, the courts take cognisance of the situations created by numerous uses of resembling marks on similar characters of merchandise and, in adjusting the equities, give consideration to such situations. But *registration* is controlled solely by the statute. Section 5 of the trademark registration act of February 20, 1905, provides that marks: [Italics quoted.]

* * * which so nearly resemble a registered or known trademark owned and in use by another and appropriated to merchandise of the same descriptive properties as to be likely to cause confusion or mistake in the mind of the public or to deceive purchasers shall not be registered.

* * * *One purpose of the trademark registration law* being to aid legitimate interstate and foreign commerce, *it seems to us that, both in letter and spirit, it requires a construction which will, to the fullest extent possible, prevent confusion, not add thereto.* If by inadvertence, or acting under a mistaken construction of the statute, improper registrations have heretofore been granted, such errors are not remedied by supplementing them with still another error, and a mistake of yesterday should not constitute a precedent for the law of today and tomorrow. [Italics supplied.]

Congress has been aware of that construction and of this court's adherence to it for many years. Yet, although the trademark statutes have been frequently amended, and in 1946 completely revised by the Lanham Act, Congress has shown no dissatisfaction with that interpretation. Thus it would appear reasonable to assume that our view has been consistent with congressional intent, and that the doctrine of legislative ratification of judicial decisions, so deeply rooted in our law and previously followed by us, is applicable here.

As a general rule the certainty and stability of the law can best be served by adherence to established precedents unless it be clearly shown that they are wrong, or unless Congress, in its wisdom, sees fit to change the law upon which such precedents rest. Congress has not changed the law, and I would remind my colleagues that this court has always subscribed to the principle that it is incumbent upon one who challenges the correctness of prior decisions to show by clear and convincing evidence where those decisions are wrong. I respectfully suggest there is no such showing here. On the contrary, I think our prior decisions are consistent with congressional intent; they are sound; they are fair to the litigants and public alike; and, of paramount importance, they have become settled law. Under such circumstances, I find myself in fundamental disagreement with respect to the propriety of the majority action in the wholesale reversal of those precedents.

In my view, the necessity for the length the majority goes is not supported by the facts of record. Under our adversary system of judicial procedure it is reasonable to expect the party urging consideration of third party marks to make a real issue of their criticality to the ultimate issue for decision. The Patent Office, in conformity with our established precedents, excluded consideration of the third party marks cited by appellee. However, in the thirty-two reasons of appeal to this court the only reference to that fact is buried deep in a subparagraph of a subparagraph of one reason of appeal, being (iv) of (*d*) of Reason 3 (R. 282). It would appear that alleged errors seriously relied on would be more strongly urged. The rather casual and perfunctory manner of treating that matter at least suggests the lack of importance with which it is regarded. Certainly counsel advances no grounds to support reversal of our precedents. There is no doubt in my mind but what the majority could quite easily have excluded those marks and still arrive at the same result.

Aside from the above considerations, I have serious doubts as to any real evidentiary value the marks belonging to others might have in determining the rights of those immediately involved in cancellation and opposition proceedings. Consideration of such marks will necessarily involve elements of such a speculative, specious and nebulous nature as to constitute a very real danger that the parties might well receive a lesser, rather than a greater, degree of justice in the task of determining their rights.

Here the majority restricts consideration of third party marks to mere *registration*. However, once the door is open to that extent, will we not also be asked, and with equal logic, to consider and pass on such related issues as actual use and abandonment; unregistered, as well as registered, marks, their use and abandonment; and determine, as well, the respective burdens of proof which will necessarily be involved in such proceedings? Will not the majority view also require consideration of the marks feared in the *Trustee* decision which, through inadvertence or other mistake, are improperly registered? Those and other uncertainties will naturally flow from the majority's action.

The majority appears to be influenced, unduly, I think, by the fact that other courts consider third party registrations. That is nothing new. It was recognized in the *Trustee* decision but did not influence the reasoning or result reached there any more than it should here. If there is any serious judicial conflict I think it would be far wiser to allow Congress to reconcile that matter than for us, especially at this late date, to arbitrarily repudiate our own decisions.

I freely confess my own guilt in allowing consideration of third party marks in our original decision, and my chief reason for favoring a reargument was to correct that inadvertence. I think it would be most unfortunate for use to fail to avail ourselves of this opportunity to correct that error rather than compound it by reversing established precedent. While I fully appreciate the laudable objectives of the majority, I am totally unable to join in reversing our precedents on the mere theory they "are not sound" or "too broad." Quite the contrary, I am convinced we are improperly, unnecessarily, and unwisely shattering sound and established precedents, and substituting nothing but new uncertainties which will impose additional burdens and require many years of decisions by the Patent Office and this court before the same degree of justice, certainty and stability now enjoyed can be achieved.

U.S. Court of Customs and Patent Appeals

SELLNER *v.* SOLLOWAY ET AL.

No. 6437. Decided May 28, 1959

[— CCPA —: — F.2d —: 122 USPQ 16]

1. INTERFERENCES—BURDEN OF PROOF.

Where appellees' application in interference, which was filed after the issuance of appellant's patent, was a continuation of an application filed later than but copending with the application on which appellant's patent was granted, *Held* that "appellees have the burden of proving priority by only a preponderance of the evidence rather than beyond a reasonable doubt."

2. SAME—CONCEPTION—REDUCTION TO PRACTICE.

Held that appellant, who did not take testimony in an interference proceeding, would be restricted to his filing date for conception and reduction to practice.

device by propelling herself up and down, or in other

U.S. Court of Customs and Patent Appeals

3. SAME—REDUCTION TO PRACTICE—EFFECT OF DELAY IN FILING AND FURTHER EXPERIMENTATION.

"Appellant emphasizes that there was a delay of several years after the 1950 tests before appellees' application was filed, and that during that period appellees continued to experiment with various forms of exercisers. Although such circumstances might tend to indicate that the tests may not have been satisfactory and may be important where the nature or results of the tests are otherwise doubtful, where, as here, the evidence sufficiently establishes satisfactory tests with no evidence of concealment or suppression, or stimulation by knowledge of another party's activity, mere delay and further experimentation does not require a holding that there was no reduction to practice."

4. SAME—SUPPRESSION OR CONCEALMENT.

Where appellant alleged that appellees had concealed or suppressed their invention and had therefore forfeited their right to an award of priority, citing *Mason* v. *Hepburn*, 13 App. D.C. 86, *Held* that "Such forfeiture, * * *, results only from suppression or concealment until stimulated into activity by knowledge of a rival's activity."

5. SAME—PRIORITY—COMBINATION CHAIR AND EXERCISER.

The decision of the Board of Patent Interferences awarding priority of invention of a count defining a combination chair and exerciser to the appellees is affirmed.

APPEAL from the Patent Office. Interference No. 88,049.

AFFIRMED.

I. Louis Wolk (*Ben Cohen* of counsel) for Sellner.

Homer H. Jamieson (*Leo A. Rosetta* of counsel) for Solloway et al.

Before WORLEY, *Acting Chief Judge*, and RICH, MARTIN, and JOHNSON (retired), *Associate Judges*

WORLEY, *Chief Judge*, delivered the opinion of the court.

This is an appeal from the decision of the Board of Patent Interferences of the United States Patent Office awarding priority of invention of the subject matter of count 1 of Interference No. 88,049 to the junior party, Solloway and Goodman.

The invention is a combination chair and exerciser comprising a body-supporting frame of seat and back portions pivotally connected with means for supporting the frame comprising two generally U-shaped members located at each side of said frame, with the upper ends of the legs of the members pivotally connected to the seat and back portions respectively. The arrangement is such that the pivotal connections between the portions of the frame may lie below the lines joining the connections with U-shaped member, thus forming a chair, or above such lines to form an inverted V-shaped support so that the user's body will be bent backwardly with respect to his legs. In the intermediate position, with the pivotal connections in alignment, a flat supporting surface is provided.

When the device is used as an exerciser it moves from one to another of the positions above described, in accordance with the position assumed by the body of the person performing the exercises. The U-shaped members are sufficiently resilient to permit the required movement of the body-supporting portions.

The count reads:

1. In combination, a body supporting frame consisting of two sections pivotally interconnected at the center of the frame, studs downwardly projecting from the side edges of the two sections intermediate the ends thereof, and two U-shaped supporting brackets, each bracket including a base member and legs rising from the end thereof, the upper ends of the legs of each bracket being pivotally mounted on the studs at one side edge of the frame, the two frame sections having freedom of relative swinging movement on their pivotal interconnection and on the pivotal connection with the upper ends of the legs.

Appellant is involved in the interference on Patent No. 2,724,428, granted November 22, 1955, on an application filed May 20, 1954, while appellees' application was filed January 30, 1956, after issuance of appellant's patent. However, appellees' application is a continuation, so far as the subject matter of count 1 is concerned, of an application filed April 4, 1955, and was thus copending with the application on which appellant's patent was granted. [1] Accordingly, appellees have the burden of proving priority by only a preponderance of the evidence rather than beyond a reasonable doubt. *Sloan* v. *Peterson et al.*, 29 CCPA 1055, 129 F.2d 330, 54 USPQ 96.

[2] Appellant did not take testimony and is accordingly restricted to his filing date of May 20, 1954, for conception and reduction to practice.

Appellees introduced as their Exhibit A a device so constructed as to satisfy the requirements of the count. Two witnesses, Mrs. Irene Barber and Alexander F. Borisoff, testified that they saw Exhibit A at a birthday party for Solloway February 23, 1950. While the witnesses did not remember every structural detail of the device they saw at that time, we agree with the Board that their testimony is sufficient to establish that what they saw was Exhibit A. The testimony of Borisoff is especially convincing on that point since he stated that he saw the chair at Solloway's apartment many times between February 1950 and some time in 1952 when Solloway moved to a house of his own. Appellees, therefore, have established conception of the invention at least as early as February 23, 1950, and were thus the first to conceive.

The Board held that Exhibit A was sufficiently tested on February 23, 1950, to effect a reduction to practice. If the evidence of record supports that holding then appellees were properly awarded priority as being the first to conceive and reduce to practice.

The Board appears to rely rather heavily on the following testimony of Mrs. Barber and Mr. Borisoff.

Mrs. Barber stated:

* * * it fit into the small of my back. I could lean right back on it and be very comfortable. And as near as I remember I said something about I would love to be the first customer when you go into production because it does the trick * * *.

Mr. Borisoff stated:

* * * everybody tried this chair and it was lots of fun. So then I tried, they asked me to—I was, in the beginning I saw this chair, I thought the chair wouldn't hold me. So when I tried this chair I noticed the chair is wobbly and I mentioned to Harry Solloway, so he says, "This only the first chair we accomplish, we are going to make experimental things in future about this chair so we will make probably heavier and stronger chair, but this is the first accomplishment." Later on Miss Barber come in, and she tried this chair; it was lots of fun and lots of laugh. That is what I remember.

Moreover, from our own examination of the record, we note that while Mrs. Barber did not in so many words expressly state on direct examination that she used the device as an exerciser, she testified as follows on cross examination:

Well, as I remember I used those corners for my heels. That is how I know that the corners are not there. My heels would fit into that part and by that you could propel yourself up or down. And as far as construction, I am not an engineer. I know it stands on two legs, and if you push your heels you will go up and down on it which is something that I would remember. That is all the construction that I would remember.

The most reasonable interpretation of the quoted testimony is that the witness actually tried using the

Aside from the above considerations, I have serious

interference proceeding, would be restricted to his filing date for conception and reduction to practice.

device by propelling herself up and down, or in other words, exercising with it, in February 1950; and since she further testified that she told Solloway that the chair "does the trick" and that she would like to be his first customer, it is evident that she regarded the results of her tests as satisfactory.

Borisoff's testimony as to his testing of the chair is generally similar to that of Mrs. Barber. While he makes no express reference to exercising as such, his statement that "everybody tried this chair and it was lots of fun" suggests that the device was used as an exerciser since merely sitting in it could scarcely be regarded as fun. Both Borisoff and Mrs. Barber apparently appreciated the fact that the device was an exerciser and it is reasonable to suppose that when they testified that they tried it, they meant they tried it for that purpose. We are of the opinion, therefore, that the Board correctly held that Exhibit A was satisfactorily tested in February 1950.

It is true, as appellant points out, that neither Mrs. Barber nor Borisoff was skilled in mechanical matters. However, the device involved and the manner in which it is intended to operate are comparatively simple. While we agree with appellant that the testimony is not as detailed and specific in some respects as might be desired, appellant's cross examination of the witnesses did not shake or weaken their testimony. The question as to whether the evidence submitted is sufficient to establish that an invention has been reduced to practice is one which must be decided largely on the basis of the particular circumstances of the case under consideration. Here, for the reasons set forth above, we are unable to conclude that the Board erred in accepting the evidence as sufficient for that purpose.

[3] Appellant emphasizes that there was a delay of several years after the 1950 tests before appellees' application was filed, and that during that period appellees continued to experiment with various forms of exercisers. Although such circumstances might tend to indicate that the tests may not have been satisfactory and may be important where the nature or results of the tests are otherwise doubtful, where, as here, the evidence sufficiently establishes satisfactory tests with no evidence of concealment or suppression, or stimulation by knowledge of another party's activity, mere delay and further experimentation does not require a holding that there was no reduction to practice. *Ernest Hedenskoog* v. *John Cayton Backus*, 18 CCPA 1065, 48 F.2d 408, 8 USPQ 436.

[4] Appellant alleges that appellees concealed or suppressed their invention and have therefore forfeited their right to an award of priority, citing *Mason* v. *Hepburn*, 13 App. D.C. 86. Such forfeiture, however, results only from suppression or concealment until stimulated into activity by knowledge of a rival's activity. *Hedenskoog* v. *Backus*, supra. As pointed out above, there is no evidence of any deliberate suppression or concealment of the invention by appellees here.

[5] Full consideration has been given appellant's contention but we find no sound reason to disturb the decision of the Board of Patent Interferences.

AFFIRMED.

JOHNSON, *J.*, retired, recalled to participate.

U.S. Court of Customs and Patent Appeals

ARCHER v. PAPA

No. 6400. Decided February 11, 1959. Petition for rehearing denied May 15, 1959

[— CCPA —; 265 F.2d 954; 121 USPQ 413]

1. INTERFERENCES — REDUCTION TO PRACTICE — ACTUAL — ABANDONED EXPERIMENT.

A delay of twenty months in filing appellant's application *Held* not to show that his earlier tests were abandoned experiments.

2. SAME — SAME — SAME — UTILITY.

Where it appeared that appellant's ultimate objective was to establish that a compound embraced within the structural formula set forth in the interference count would be an effective cholecystographic agent to diagnose human gall bladder diseases; that his experiments determined only that the compound could be used to cause the gall bladder of a cat to appear as an opaque shadow on a cholecystogram; that no toxicity was observed in cats and that acute oral toxicity tests were performed on mice with satisfactory results; and that appellant framed his application to cover only that which had been actually accomplished, without regard to his ultimate objective, *Held* that appellant's showing of the utility of the compound was sufficient to establish an actual reduction to practice of the compound.

3. APPEAL TO THE U.S. COURT OF CUSTOMS AND PATENT APPEALS — DIMINUTION OF THE RECORD.

"Subsequent to the filing of the record in this court, appellee filed a motion suggesting correction of a diminution of the record by adding certain testimony and exhibits of both parties. That motion was granted subject, however, to the order of the court taxing the additional costs of printing incurred thereby on final decision. We find that the additional matter certified to the court was reasonably necessary to a proper determination of the issues in the case. Accordingly, the costs of printing same will be taxed against the appellant."

4. INTERFERENCES — PRIORITY — CHOLECYSTOGRAPHIC AGENT.

The decision of the Board of Patent Interferences awarding priority of invention of a count covering a cholecystographic agent to the senior party Papa is reversed, with award of priority to Archer.

APPEAL from the Patent Office. Interference No. 86,729.

REVERSED.

Richard Whiting and *Sol B. Wiczer* (*Dean Laurence* and *Herbert I. Sherman* of counsel) for Archer.

Joseph Hirschmann for Papa.

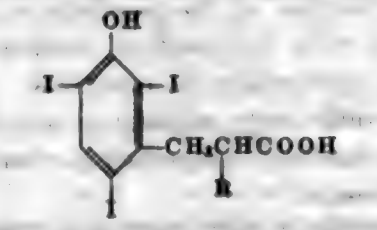
Before WORLEY, *Acting Chief Judge*, and RICH, MARTIN, and JOHNSON (retired), *Associate Judges*

MARTIN, *J.*, delivered the opinion of the court.

This is an appeal from the decision of the Board of Patent Interferences awarding priority of invention of the subject matter of Interference No. 86,729 to the senior party Domenick Papa, appellee here.

The issue of the interference is defined in the following count:

A compound of the group consisting of acids of the formula



wherein R is an alkyl radical of 1 to 3 carbon atoms and their non-toxic alkali metal and amine salts.

Papa is involved in the interference on application Serial No. 268,685, filed January 28, 1952, which date he relies upon for priority. Archer, appellant herein, relies upon application Serial No. 277,722, filed March 20, 1952. Since the applications were copending, the

appellant must sustain the burden of establishing priority by a preponderance of the evidence.

Archer relies upon an asserted actual reduction to practice of the claimed compounds by July of 1950, prior to Papa's filing date. The Board found that a compound embraced within the structural formula set forth was produced on Archer's behalf at the date alleged by him. Nevertheless, the Board awarded priority of invention to Papa after finding Archer's proof of actual reduction to practice deficient in that Archer had "* * * failed to establish practical utility for the product * * *." Accordingly, the sole issue before us is whether Archer's disclosure by July 1950 of the utility of the claimed compounds was sufficient to establish an actual reduction to practice of the composition.

There is no dispute concerning the pertinent facts in this case.

The compounds in issue are known as cholecystographic agents: that is, they aid in the roentgenographic examination of the gall bladder.[1] These compounds concentrate in the gall bladder after being orally administered, and, since they are opaque to X-rays, opacify that organ in radiographs. Appellant's assignee is a pharmaceutical company which has the usual departments including research, manufacturing and sales. This company has marketed other cholecystographic agents used to diagnose human gall bladder ailments, including two known as "Telepaque" and "Hypaque."

Experiments to ascertain the value and toxicity of these compounds follow a fairly uniform procedure, as reflected in the record. First, certain animals such as dogs or cats are given specified amounts of the compound. In the preliminary experiments about 10 animals are used, and if some degree of success is apparent, the experiments are continued with many more animals, in order to ascertain the proper dosage. Possibly 30 or 40 test animals are given various quantities of the compound in order to establish the dosage which will produce the desired results. Toxicity is determined separately by giving various amounts of the compounds to mice. If all of these experiments prove satisfactory, clinical tests (experiments with human beings) are initiated and the compound is administered to between 300 and 500 humans in order to determine its feasibility for commercial use.

A compound coming within the scope of the interference count was prepared, isolated and analyzed by June 1950 by technicians under appellant's direction. In June and July of 1950, this compound was administered to *healthy* cats in dosages of 50 and 100 milligrams per kilogram of test animal body weight, to each of two groups of 5 cats. The results proved satisfactory in that several X-ray pictures of the cats' gall bladders were produced which were characterized by testimony as "good" or "excellent." One such picture showed certain abnormalities of this particular organ. No clinical tests were made and no further experiments were performed until the fall of 1953.

Upon being queried as to the reason why the experiments were stopped in 1950, appellant's witness testified as follows:

[1] American Illustrated Medical Dictionary, Dorland (1944), page 321.

XQ290. Can you tell us why, under these circumstances, Win 4284 [a compound within the scope of the count] was not further tested after June 1950 and prior to 1953, when your testing was resumed? A. The data that I had, based on a small number of cats on Win 4284, indicated that Win 4284 was as effective as Win 2011 [Telepaque], but not more effective than Win 2011.

At that time, as I recall, we had clinical data on Win 2011 which showed that it was a very effective cholecystographic medium and there was no indication from the clinical reports that there were any serious adverse effects with Win 2011, and, if I can recall correctly the events at that time, there was no particular necessity or request from my employer that I do additional work on Win 4284 at that time, since the results at that time on Win 2011 seemed to be sufficiently encouraging that it did not seem necessary to do additional pharmacological workup on Win 4284. I had simply noted in my own judgment that if it became necessary to do additional work, that Win 4284 would be my second choice, as far as the workup, in the event I were called upon for such information.

* * * * * * * *

XQ306. Is that possibly the reason why further tests were not conducted with 4284? A. There are two possible reasons, and I am not certain that I can identify either of them as being the precise reason.

The first is, that there was a limited amount of compound available and it may have been that after the 50 and 100 milligramme per kilogramme dosage levels were completed and the acute oral toxicity determination completed that there may not have been enough material to go ahead with the 25 milligramme per kilogramme dose level.

The second is, that the collection of the data at 25 milligrammes per kilogramme of body weight may have been arbitrarily deferred to a later date in the face of the favorable data which were available at the time on Win 2011.

The reasons for resumption of the experiments were stated to be as follows:

XQ314. Why was your interest greater in the fall of 1953 than it was at the end of June 1950? A. One point was the report by Doctor Papa at the A.C.S. meetings in the fall of 1952.

XQ315. But that was a year previously? A. Secondly, the appearance of the announcement of Teridax [Papa's compound within the scope of the count], which appeared in the advertisements in the radiology journals, as I recall, in October 1953, was a source of interest to me to study Win 4284, in an effort to establish the cholecystographic properties of Win 4284 for study in comparison with Teridax, which had then become commercially available, and also to compare the cholecystographic efficiency of Win 4284 in comparison with Telepaque.

The appellant's application discloses that

These new compounds are useful as X-ray contrast media, and are particularly valuable as cholecystographic agents. * * * The compounds of my invention have been found to be more effective in producing shadows of the gall bladder than alpha-phenyl-beta-(4-hydroxy-3,5-diiodophenyl) propionic acid which is currently the cholecystographic agent of choice. * * * the compounds * * * when administered orally to cats in a dose of 100 mg. per kg. of body weight, gave excellent shadows of the gall-bladder in X-ray pictures. * * * No toxic manifestations in the cats were observed.

It is apparent that appellant's ultimate objective was to establish that this compound would be an effective cholecystographic agent to diagnose human gall bladder diseases: that the preliminary experiments determined only that the compound could be used to cause the gall bladder of a cat to appear as an opaque shadow on a cholecystogram; that no toxicity was observed in cats and that acute oral toxicity tests were performed on mice with satisfactory results; and that the appellant framed his application to cover only that which had been actually accomplished, without regard to his ultimate objective.

[1] [2] There are two issues in this case. Do tests showing a successful use of a compound, which use is only a step towards the ultimate intended use of that compound, constitute a showing of utility sufficient to establish an actual reduction to practice, when the count itself states no purpose and the specification is limited to the use disclosed in those tests? Second, does the delay, after such tests, of a year and eight months prior to filing a patent application, indicate that those tests were only abandoned experiments?

In *Ernest Hedenskoog* v. *John Cayton Backus*, 18 CCPA 1065, 48 F.2d 408, 8 USPQ 436, a pin-setting machine was constructed and successfully operated in

JOHNSON, J., retired, recalled to participate.

1920 and then dismantled and rebuilt in 1926. There, the question of reduction to practice was in issue. This court stated:

> The main contention of appellant here is that the 1920 machine, not being complete so as to properly set a full complement of pins, and later being dismantled and nothing further having been done to the machine until after appellant's application had been filed, must be looked upon as an abandoned experiment.
>
> Appellant seems to base his right to priority mainly upon the proposition that the tests of appellee's 1920 structure showed that it was admittedly an unsatisfactory machine from a commercial standpoint.
>
> Agreeable to the finding of the Board we conclude that, as affects the counts in this case and the issue as presented, the noisy character of the machine which rendered it commercially unsatisfactory is not a sufficient basis to justify a conclusion that the 1920 machine was not a reduction to practice. The machine was demonstrably proven to operate in setting the pins in the manner called for in the counts. The necessary details of improvement in order to make it commercially desirable are matters with which we are not concerned.

Further, this court had before it the question involving compositions of matter as effective mydriatics and antispasmodics in the case of *Blicke* v. *Treves*, 44 CCPA 753, 241 F.2d 718, 112 USPQ 472. Much of that opinion is pertinent to the case at bar, since the experiments were performed on rabbits, cats and dogs, whereas the compounds ultimately were to be used in the treatment of human beings. This court said in its decision on page 758:

> In its decision, the Board stated that "The only field of utility here disclosed is human therapy." In our opinion, that conclusion is not supported by the facts of record. It is apparently based on the testimony taken on behalf of Blicke which indicates an intention to use the compounds defined in the counts in human therapy if they were shown to be satisfactory for that purpose. However, the facts are that neither the Blicke application nor the Treves patents make any mention of human therapy. The application merely states that the compounds described "are useful in the form of their water-soluble non-toxic salts as antispasmodic agents," while each of the patents describes the compounds as "having mydriatic activity" and as being "further valuable as antispasmodics." Webster's New International Dictionary, 1949, defines "antispasmodic" as "having a sedative effect on the nervous system; preventing or allaying spasms or convulsions." The same authority defines "mydriatic" as "causing dilation of the pupil." Neither definition is limited in terms to therapy or to effects on human beings as distinguished from other animals.
>
> • • • • • • •
>
> We are of the opinion that the record amply establishes tests by or on behalf of Blicke prior to either of the record dates to which Treves is restricted. Those tests were of such a nature as to prove that the compounds in issue had a definite antispasmodic effect upon animals and were not seriously toxic, and we conclude those tests are sufficient to establish a reduction to practice of the invention in issue. It is, accordingly, unnecessary to consider whether the tests were sufficient to show that the compounds had utility in human therapy.

With reference to the delay of almost three years in filing the application after the experiments were performed, this court said:

> • • • While it is true that a long delay in applying for a patent after allegedly successful tests have been made is a factor to be considered in evaluating the tests, it is by no means conclusive. *Ernest Hedenskoog* v. *John Cayton Backus*, 18 CCPA (Patents) 1065, 48 F.2d 408, 8 USPQ 436. It is to be noted that Blicke's application was filed before either of the patents to Treves was issued. There is nothing in the record to show that the filing of the application was inspired by knowledge of another's activity, as was the case in *Mason* v. *Hepburn*, 13 App. D.C. 86, cited by appellant. In the instant case the evidence that Blicke's tests on animals were successful is sufficiently clear to rebut any presumption of failure which might arise from his delay in filing of his application.

These cases clearly indicate that the inventor's ultimate purpose need not be achieved in order to establish utility required for a reduction to practice. For, as this court found in *Blicke* v. *Treves*, supra, "• • • where an interference count does not specify any particular use, evidence proving substantial utility for any purpose is sufficient to establish reduction to practice."

Here, Archer had isolated a species of the compounds claimed and had completed experiments indicating its function as an opacifying agent to facilitate roentgenographic examination of cats' gall bladders. The evidence shows, in fact, that the experiments were successful in producing good to excellent X-ray pictures.

Furthermore, we do not consider that the twenty month delay in filing Archer's application shows that the earlier tests were abandoned experiments. Rather, Archer's attention was diverted to "Win 2011" which had already been proven clinically successful, thereby eliminating the necessity for an immediate "• • • pharmacological workup on Win 4284." There is no evidence that appellant's application was inspired by the work of others, since this record fails to show that the application was filed with knowledge of any of Papa's activities relating to "Teridax." As in *Blicke* v. *Treves*, supra, the evidence of Archer's production of satisfactory X-ray pictures of cats' gall bladders is "• • • sufficiently clear to rebut any presumption of failure which might arise from his delay in filing of his application."

We accordingly find that the tests in 1950 established utility, and hence that the subject matter of the count was actually reduced to practice at that date by the appellant Archer.

However, Papa relies upon the Board's statement that

> • • • the reduction to practice must have been appreciated by the inventor at the time it was made. See Interference Law and Practice (Rivise and Caesar), volume 1, pp. 484–488; *Jacobs et al.* v. *Buxton*, 553 O.G. 178; 30 CCPA 987, 135 F.2d 237, 57 USPQ 302; *Electro-Metallurgical Co.* v. *Krupp Nirosta Co.*, 45 USPQ 541, 83 Fed. (Supp.) 324 (affirmed 50 USPQ 158).

Those authorities are deemed inapposite herein. The cases cited involve situations in which parties asserting they had made a prior reduction to practice did not know the identity of substances used in useful processes or compositions of matter, and could not duplicate their production at the date of the alleged reductions to practice.

In view of the above, we are of the opinion that the appellant, Archer, has sustained the burden of showing that he reduced to practice the invention in issue by July 1950, prior to the filing date of the appellee, Papa.

[3] Subsequent to the filing of the record in this court, appellee filed a motion suggesting correction of a diminution of the record by adding certain testimony and exhibits of both parties. That motion was granted subject, however, to the order of the court taxing the additional costs of printing incurred thereby on final decision. We find that the additional matter certified to the court was reasonably necessary to a proper determination of the issues in the case. Accordingly, the costs of printing same will be taxed against the appellant.

[4] The decision of the Board of Patent Interferences is reversed, and priority of invention of the contested count is awarded to Archer.

REVERSED.

[1] American Illustrated Medical Dictionary, Dorland (1944), page 821.

machine was constructed and successfully operated in

PATENT SUITS

Notices under 35 U.S.C. 290; Patent Act of 1952

2,870,888, E. W. Austin, Vehicle tires, filed May 11, 1959, D.C., W.D. Okla. (Oklahoma City), Doc. 8429, *Enoch W. Austin* v. *Ford Motor Co.*

2,854,969. (See 2,732,327.)

2,334,567, H. W. Lord, Apparatus for starting and controlling discharge devices; **2,334,587**, T. T. Short, Starting and ballasting apparatus for electric discharge devices; **2,358,810**, W. J. Karash, Apparatus for starting and controlling discharge devices; **2,362,993**, W. W. Brooks, Magnetic core; **2,506,209**, H. W. Lord, Electric ballast; **2,741,528**, Clark and Mittemaier, Inductive device; **2,796,554**, C. E. Strecker, Electrical transformer ballast; **2,824,263**, Strecker and Lovinger, Ballast transformer; **2,869,037**, Brooks and Strecker, Fluorescent lamp ballast, filed June 8, 1959, D.C.N.J. (Newark), *General Electric Co.* v. *Universal Manufacturing Corp.*

2,334,587. (See 2,334,567.)

2,358,810. (See 2,334,567.)

2,359,057, G. D. Skinner, Heating and ventilating systems; **2,855,841**, J. Stein, Electric air purifier, filed June 6, 1959, D.C. Conn. (New Haven), Doc. 7853, *Modern Aids, Inc.* v. *Joseph Stein, doing business as The Puritron Corp.*

2,362,993. (See 2,334,567.)

2,452,096, Kuther and Smith, Fish canning machine, filed June 11, 1959, D.C., S.D. Calif. (Los Angeles), Doc. 592/59-TC, *Max K. Kuther* v. *Star Kist Foods, Inc.*

2,465,470. (See 2,732,327.)

2,496,514. (See 2,732,327.)

2,562,093. (See 2,334,567.)

2,596,209. (See 2,334,567.)

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2,670,214, S. M. Nampa, Freight loading; **2,870,721**, H. L. Dunlap, Freight loading apparatus; **2,870,722**, same, Cross bar, filed June 12, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c927, *Evans Products Co.* v. *Transportation Specialties Co. et al.*

2,731,300, S. V. Collins, Method of laying and retrieving underwater pipe line; **2,770,950**, same, Submarine cable installation, filed June 9, 1959, D.C., S.D. Tex. (Houston), Doc. CA-12/681, *Samuel W. Collins, doing business as Collins Construction Co.* v. *Sharman, Allen, Gay and Taylor, Inc.*

2,732,327, W. K. Teller, Anti-perspirant stick; **2,854,969**, W. C. Moore, Compositions for application to the human skin; **2,465,470**, A. L. Omohundro et al., Insect repellant stick; **2,496,514**, H. L. Van Mater, Zirconium compound deodorant and antiperspirant, filed Apr. 26, 1956, D.C., S.D.N.Y., Doc. 109/91, *Jules Montenier, Inc.* v. *Pharma-Craft Corp.* Order of dismissal for lack of prosecution June 4, 1959.

2,741,528. (See 2,334,567.)

2,770,950. (See 2,731,300.)

2,796,554. (See 2,334,567.)

2,824,263. (See 2,334,567.)

2,828,194. (See 2,640,763.)

2,852,619, John F. Wood, Phonograph cartridge; **Des. 186,347**, same, Phonograph transducer, filed Apr. 22, 1959, D.C., N.D. Ill. (Chicago), Doc. 59c636, *Electro-Voice, Inc.* v. *Radio Television Supply Corp.* Dismissal without prejudice June 4, 1959.

2,855,841. (See 2,359,057.)

2,869,037. (See 2,334,567.)

2,870,721. (See 2,640,763.)

2,870,722. (See 2,640,763.)

Re. 22,748, E. Levin, Method of treating cereal grain germ, filed May 8, 1959, D.C., E.D. Ill. (East St. Louis), Doc. 1706-D, *Vitamins, Inc.* v. *Ezra Levin et al.*

Des. 186,347. (See 2,852,619.)

Des. 188,836, T. W. Ganus, Combined beverage and food vending building; **Reg. No. 614,991** (FROSTOP), Frostop Products, Inc., Root beer and syrup used in making same, filed June 17, 1959, D.C., S.D. Miss. (Jackson), Doc. 2139, *Frostop Products, Inc.* v. *Sun-Glo Packers, Inc.*

REISSUES

AUGUST 25, 1959

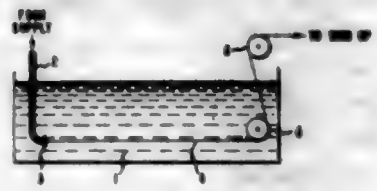
Matter enclosed in heavy brackets [ ] appears in the original patent but forms no part of this reissue specification; matter printed in italics indicates additions made by reissue.

24,689

PROCESS FOR FORMING FILMS AND FILAMENTS DIRECTLY FROM POLYMER INTERMEDIATES

Charles R. Koller, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Original No. 2,813,776, dated November 19, 1957, Serial No. 489,584, February 21, 1955. Application for reissue November 25, 1958, Serial No. 776,667
20 Claims. (Cl. 18—54)



1. A process which comprises forming a solid shaped structure by combining at least two liquid complementary reactive polymer intermediates, one of which contains at least two active hydrogens more reactive than alcoholic hydrogen, whereas its complement contains at least two reactive groups capable of reacting with alcohol at room temperature to form an ester, and at least one of said complementary reactive polymer intermediates being a multifunctional organic macromolecule, having a molecular weight within the range of from about 400 to about 7000, the said macromolecule consisting essentially of at least one member selected from the group consisting of a hydrocarbon polymer, a polyether and a polythioether, and at least one of the other of the said complementary reactive polymer intermediates being a polyfunctional, monomeric, organic molecule, the proportionate molecular weights of macromolecular intermediate to the monomeric molecular intermediate being such that at least about 30% by weight of the final shaped structure is contributed by the macromolecular intermediate [while at least about 10% by weight of the final shaped structure is contributed by the monomeric molecular intermediate], the combination of the said complementary intermediates being accomplished by extruding through an orifice one said complementary polymer intermediate into the other.

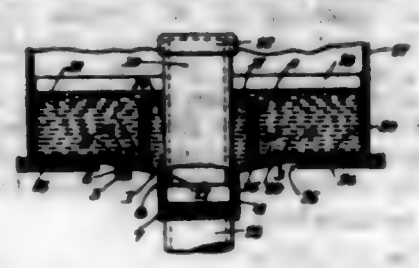
24,690

DEVICE FOR TESTING BATH CABINET SHOWER PANS FOR LEAKAGE

Morris Yavitch, Los Angeles, Calif.

Original No. 2,780,303, dated February 5, 1957, Serial No. 235,690, July 9, 1951, which is a continuation of Serial No. 626,662, November 5, 1945. Application for reissue June 2, 1958, Serial No. 739,441
3 Claims. (Cl. 4—288)

1. The combination of a shower drain including a base member formed with an outlet nipple to which a drain pipe may be connected, a shower pan provided with a central opening, said shower pan being placed upon said base member with the opening therein coinciding centrally with said outlet nipple, a clamp member formed with an integral flange base and a drain inlet receptacle upstanding from said flange base, said receptacle being substantially larger in diameter than said outlet nipple, said clamp member being placed with its flange base resting upon the bottom wall of said shower pan, means for securing said flange base and the bottom wall of said shower pan to said base member, said clamp member being provided with drain outlet means leading from the exterior of the lower end of said drain inlet receptacle into the lower end of said receptacle, an open-ended tubular test pipe, means for removably securing the lower



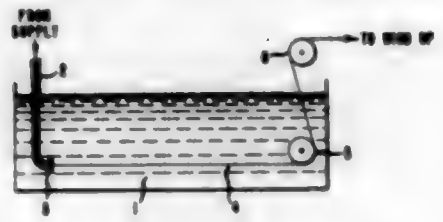
end of said test pipe to said outlet nipple, the other end of said open-ended test pipe extending through and above said drain inlet receptacle, and a collar slidably fitted on the test pipe for covering the upper end of the drain inlet receptacle, whereby the shower pan can be tested for leaks and the plumbing below the shower pan can be simultaneously flushed.

24,691

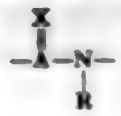
PROCESS FOR FORMING FILMS AND FILAMENTS DIRECTLY FROM POLYMER INTERMEDIATES

Walter Stenber, Springfield, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Original No. 2,813,775, dated November 19, 1957, Serial No. 489,583, February 21, 1955. Application for reissue November 25, 1958, Serial No. 776,666
20 Claims. (Cl. 18—54)



1. A process which comprises forming a solid shaped structure by combining at least two liquid complementary reactive poymer intermediates, one of which contains at least two active hydrogens more reactive than alcoholic hydrogen, whereas its complement contains at least two reactive groups capable of reacting with alcohol at room temperature to form an ester, and at least one of the said complementary reactive polymer intermediates being a multifunctional organic macromolecule possessing recurring amide type linkages of the class consisting of



wherein

is a member of the class consisting of

and

and R is a member of the class consisting of hydrogen, lower alkyl, and the lower alkylene chain of a heterocyclic diamine and having a molecular weight within the range of from about 400 to about 7000, and at least one of the other of the said complementary reactive polymer intermediates being a polyfunctional, monomeric, organic molecule, the proportionate molecular weights of macromolecular intermediate to the monomeric molecular intermediate being such that at least about 30% by weight of the final shaped structure is contributed by the macromolecular intermediate [while at least about 10% by weight of the final shaped structure is contributed by the monomeric molecular intermediate], the combination of the said complementary intermediates being accomplished by extruding through an orifice on said complementary polymer intermediate into the other.

24,692

OPTIONAL GUN SIGHT RETICULE ENLARGING DEVICE

Richard L. Oswald, Los Angeles County, Calif., assignor to David P. Bushnell, Pasadena, Calif.

Original No. 2,769,239, dated November 6, 1956, Serial No. 390,313, November 5, 1953. Application for reissue May 23, 1958, Serial No. 737,464

9 Claims. (Cl. 33—50)

1. A device for increasing the visibility of a telescopic gun sight reticule center comprising, a support for the reticule cross-strands mounted within the telescope tube, a lever pivotally mounted on the end of the support, a lever operating element mounted on the outer surface of the telescope tube, and connections between said element and the lever, said element being manually operable to swing the lever inwardly to bring the head thereof into axial alinement with the cross-strand intersection of the reticule.

2,900,648

said clamp member being placed with its flange base rest-

PATENTS

GRANTED AUGUST 25, 1959

GENERAL AND MECHANICAL

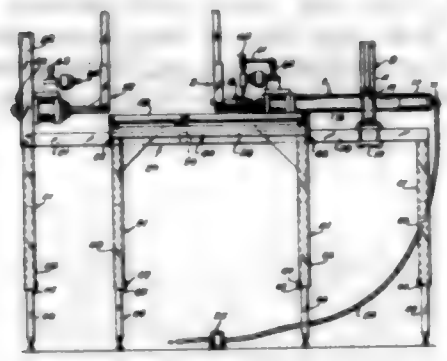
2,900,637

MOVABLE STAPLING HEAD AND MOUNTS THEREFOR

Werner Schafroth, Herrin, Ill.

Application March 26, 1956, Serial No. 573,797

4 Claims. (Cl. 1—13)



1. A stapling machine adapted to straddle moving conveying means for stapling the opposite sides or ends of cartons traveling thereon, said stapling machine comprising a frame having a center bar extending transversely of said conveying means with supporting means on the end portions thereof, said center bar having a pair of upstanding supports thereon, at least one of said supports being horizontally adjustable on said center bar toward and away from said other support, a stapling head connected to each of said upstanding supports in opposing relationship to each other for stapling a carton therebetween, at least one stapling head having an actuator thereon actuated by compressed air and connected to said upstanding support for moving said stapling head toward and away from a carton to be stapled, each of said stapling heads having air operated means thereon for controlling and operating said stapling head for driving and clinching a staple, a trip mechanism on one of said stapling heads for actuating said air operated means, and operator control means for allowing compressed air to flow to said actuator to move one of said stapling heads toward the other to operate the trip mechanism thereby causing a stapling operation.

2,900,638

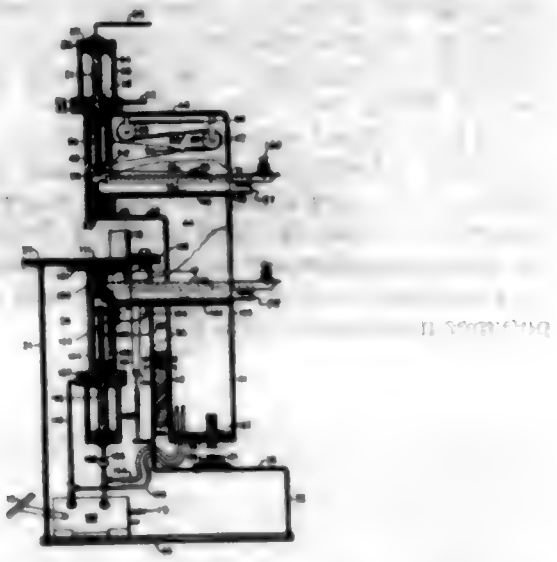
APPARATUS FOR DRIVING JOINT NAILS

O'Dell O'Kelley, Candler, N.C.

Application March 23, 1954, Serial No. 418,137

10 Claims. (Cl. 1—149)

1. Apparatus for fastening two pieces together by inserting joint nails therein comprising in combination means for supporting said pieces in position for fastening, a first reciprocative member acting in opposition to said supporting means, means for feeding joint nails to said first member, a second reciprocative member acting oppositely with respect to said first member, means for feeding joint nails to said second member, and means for causing said first member to drive a joint nail into one side of said pieces and hold said pieces in a fixed position on said supporting means while said second member is driving a joint nail into the opposite side of said pieces.



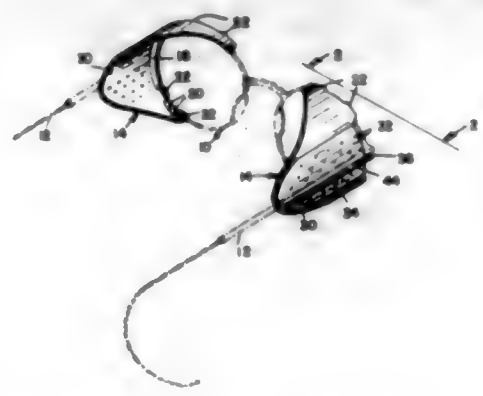
2,900,639

SPECTACLE ATTACHMENT

Evert P. Lindstrom, Burbank, Calif.

Application October 24, 1955, Serial No. 542,177

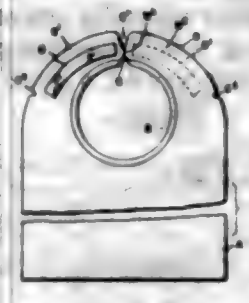
1 Claim. (Cl. 2—13)



An attachment for spectacles comprising a pair of readily detachable side shields, said shields composed of resilient material for clipping onto the spectacle frames, each shield including an arcuate rim and integral spaced protuberances for contacting and gripping the spectacle frame, the protuberances being in two separate planes, and comprising flange elements extending radially inwardly from the arcuate rim, an integral extension shaped to contact the temple of the wearer, said extension being perforated for ventilation and including a strengthening rib, one of the protuberances being adjacent the connection between the spectacle frame and its temple extension and of greater extent than the others, thereby forming a non-opening flange, certain of the protuberances being split, thereby providing greater resiliency of the adjacent portion of the shield rim, both shields being identical and inter-changeable.

portion permanently attached to the main part of the members of a davenport frame, said mounting means in-

2,900,640
DISPOSABLE CHILD'S BIB
Bartley A. Hayda, Oak Park, Mich.
Application May 6, 1957, Serial No. 657,348
5 Claims. (Cl. 2—49)



1. A bib comprising an elongated sheet of paper-like material provided in spaced relation to one end thereof with an opening for receiving the neck of a wearer and provided between said opening and said one end with spaced longitudinally aligned oppositely opening substantially V-shaped notches having closed apices and respectively opening outwardly through the end aforesaid of said sheet and opening inwardly through an edge of said opening, the material between and in longitudinal alignment with the closed apices of said notches constituting an integral longitudinally extending severable link between laterally spaced transversely extending portions of said material respectively upon opposite sides of said link, said spaced portions being adapted to be overlapped after the link aforesaid is severed, the front of one of said spaced portions and the back of the other of said spaced portions being provided respectively with adhesive coatings adapted to be adhered only to each other when said spaced portions are overlapped, whereby said portions will be held against accidental displacement when the opening aforesaid receives the neck of the wearer.

2,900,641
BAPTISMAL ROBE
Gilbert N. Bobinchak, Genesee, Pa.
Application May 31, 1956, Serial No. 588,519
1 Claim. (Cl. 2—111)

A baptismal robe comprising a body portion made of three layers of fabric, said three layers comprising a lining of soft blanket like material, an intermediate layer of fabric, and an outer layer of neat appearing material, and a collar attached to all said three layers, said collar defining an opening through said three layers comprising said blanket like material, said intermediate layer, and said neat appearing material, said three layers being attached together at the front and defining a continuation of said opening extending down from said collar a substantial distance down the front thereof, said layers of fabric being attached together and defining a continuation of said opening and extending at either side of said continuation of said opening, a slide fastener having a part thereof attached to said three fabric layers along each side of said opening, and means to close said slide fastener, said slide fastener being attached to said three fabric layers along one side thereof by means of a strip attached to said slide fastener along one edge thereof and being disposed between said neat appearing material and said intermediate material, said neat appearing material overlying said slide fastener along one edge of said opening and being bent outwardly and back on itself forming a flap, said blanket like material underlying said intermediate material and extending under said slide fastener along one edge of said opening, said blanket like material then being bent inwardly and back on itself to the edge of said strip forming a flap, said slide fastener being attached to said three fabric layers by means of stitching through said neat appearing material, the end thereof bent back on itself, said strip, said intermediate material, said blanket like material, and the end thereof bent back on itself.

2,900,642
VINYL MITTEN
Dale A. Bauer, Yonkers, N.Y., assignor to De-Icers, Inc., New York, N.Y., a corporation of New York
Application April 8, 1958, Serial No. 727,168
6 Claims. (Cl. 2—158)

1. A heat-sealed waterproof mitten made from flat heat-sealable plastic sheet material, the finished mitten having a body having palm and back panels each having fingertip, finger, and hand regions, the palm and back panels being heat-sealed together along an edge seam at their fingertip marginal edges, and a reinforcement for the fingertip region of the mitten in the form of an envelope made of heat-sealable plastic sheet material, said envelope generally conforming in shape to the fingertip region of the mitten and lying in telescoped relationship therewith, the envelope having front and back panels, the envelope panels being heat-sealed to the respective panels of the body along a zone adjacent the inner, palm-confronting edge of the envelope, substantially all of the remainder of the envelope, including that which confronts the central part of the peripheral edge of the fingertip portion of the body, being free from attachement to the body.

2,900,643
WOMEN'S GARMENT
Stephen J. Varnhagen, San Francisco, Calif., assignor to The Reynolds Company, San Francisco, Calif., a partnership
Application June 26, 1956, Serial No. 593,849
3 Claims. (Cl. 2—221)

1. In a women's garment of the maternity type, a waist construction having a cutout on one side of the garment and a main waistband with ends terminating at the cutout, said main waistband being formed of inner and outer connected cloth strips, a flap adapted to be positioned to cover the cutout and having its lower

2,900,644
WATER SKI HARNESS

edge cover strip with a chain-stitch which includes de-

feeding joint nails to said second member, and means for causing said first member to drive a joint nail into the adjacent portion of the shield rim, both shields being identical and inter-changeable.

portion permanently attached to the main part of the garment, the upper free end of the flap having a band portion adapted to overlie the end portions of the main band, adjustable means for forming an attachment between the free ends of the main band, the outer cloth strip of said main band having slits formed in the end portions of the same, each slit extending for a substantial distance along the length of the main band, devices carried by the main band adapted to be releasably attached to the ends of said band portion, said devices extending through said slits and being adjustable along the length of the same, and elastic tape means extending between said cloth strips and having its ends attached to said devices, said tape means serving to yieldably urge the devices in a direction to apply constant tension to said band portion on the flap only when the flap is engaged with said devices.

2,900,644

HETEROGRAFT MATERIAL

Norman Rosenberg, Highland Park, and Eugene R. L. Gaughran, New Brunswick, N.J., assignors to Johnson & Johnson, a corporation of New Jersey

No Drawing. Application November 1, 1955
Serial No. 544,368
11 Claims. (Cl. 3—1)

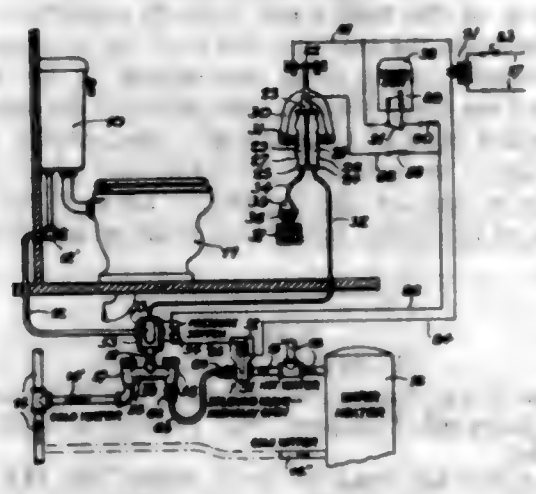
1. A tubular collagenous material useful for implanting in a mammal, which tubular material contains at least 80% by weight collagenous solids, the outer surface thereof giving the appearance of spiral interlacings of coarse bundles of fibers and the inner surface thereof being smooth.

2,900,645

MEANS FOR PREVENTING CONDENSATION ON FLUSH-TANKS

Norman F. Rom, Waurwatosa, Wis.

Application April 6, 1951, Serial No. 219,697
5 Claims. (Cl. 4—18)



1. In combination, a flush-tank to which water is supplied, heating means for warming the water to a temperature above dew point to prevent condensation of moisture on the tank, and means responsive to ambient atmospheric condition for varying the warming effect of said heating means in accordance with variations of dew point temperature.

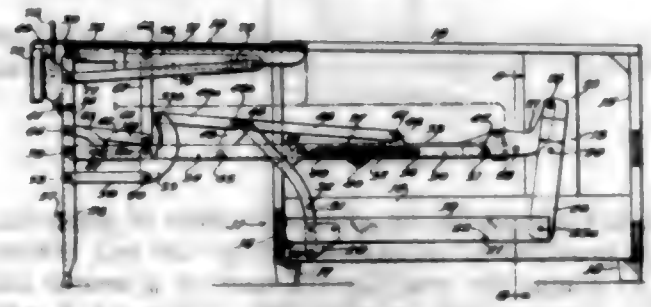
2,900,646

DAVENPORT BED

Martin Fox, Chicago, Ill., assignor to The Seng Company, a corporation of Illinois

Application January 4, 1956, Serial No. 557,394
2 Claims. (Cl. 5—13)

1. A folding bed bottom assembly adapted to be mounted in a davenport frame which has end frame members and a front rail, said assembly comprising: a pair of mounting means adapted to be mounted on the end frame members of a davenport frame, said mounting means including a front portion and a rear portion; a pair of rear supporting arms pivoted on said rear portion; a pair of front supporting arms pivoted on said front portion; an equalizer rod connecting said rear supporting arms together; and a folding bed bottom having a plurality of articulated bed sections pivotally connected together, said bed sections including a head section pivotally connected to said rear arms and having a head cross rail, and an



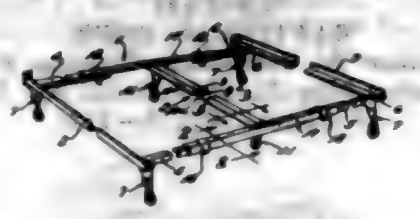
intermediate section linked to the front mounting arms so that said bed bottom may move between a horizontal bed position with said sections coplanar and a davenport position with the head section upright at the rear of the frame and the cross rail uppermost, said equalizer rod being in the same horizontal plane with said bed sections in bed position, and said rod being slightly forward of and generally in a horizontal plane passing through said head cross rail in davenport position to provide a mattress stop in said position.

2,900,647

BEDFRAME CENTER SUPPORT

Hillard I. Sands, Cleveland, Ohio, assignor to Harvard Manufacturing Company, Cleveland, Ohio, a corporation of Ohio

Application January 11, 1957, Serial No. 633,594
2 Claims. (Cl. 5—282)



1. A center support for a bedframe which center support comprises a pair of center rails each of right angular shape in section and positioned with dependent legs thereof in back-to-back relation and with horizontally aligned top support legs, a support member for each end of the associated center rails, said support members having anchor wings extending oppositely from upper portions thereof and presenting flat inner surfaces lying flush against said center rail dependent legs, a pair of rivet means permanently securing each of said support members to opposite end portions of said center rails and securing said center rails together, a cross rail member abutted against each end of said center rails and extending therefrom in both directions normally to said center rails, said cross rail members each having a top leg overlying and supported by said top support legs of said center rails and having dependent legs abutting against the ends of the dependent legs of said center rails and against the end of one anchor wing of said support member to be positioned thereby, the ends of the dependent legs of said center rails and of said anchor wing for abutting the dependent legs of said cross rail members being shorter in height than such legs of said cross rail members to avoid the provision of sharp exposed leg ends at the ends of said center rails, and means for securing said cross rail members to said center rails in the positions indicated.

coaxial with said first tube, both of said tubes disposed

said shaft but remote therefrom adjacent the outer periph-

fabric layers along one side thereof by means of a strip attached to said slide fastener along one edge thereof

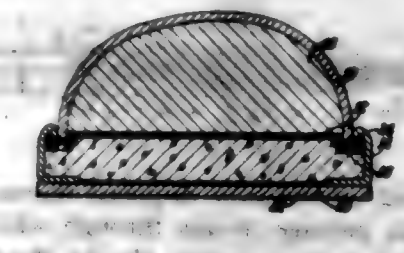
inner and outer connected cloth strips, a flap adapted to be positioned to cover the cutout and having its lower

2,900,648
WATER SKI HARNESS
Swan Hedlund and Glenn Leslie Reed, Nokomis, Ill.
Application February 24, 1955, Serial No. 490,256
1 Claim. (Cl. 9—31)

A water ski harness for removable interchangeable mounting on a water ski, said harness comprising an elongated generally rectangular base member having a circular opening in each end portion thereof, said openings being disposed along the longitudinal axis of the base member, a vamp member, clamping plate means attaching the vamp member adjacent the peripheral edge thereof to one end portion of said base member, said vamp member and one end portion of the base member defining a foot receiving binder, a generally rectangular counter plate adjustably mounted on the other end portion of said base member for relative adjustable longitudinal movement in relation to said vamp member, a counter member, a second clamping plate means attaching said counter member adjacent the peripheral edge thereof to one end portion of said counter plate in overlying relation thereto with a portion of the counter plate extending below the counter member and defining therewith a heel receiving binder, said counter plate having a longitudinally extending open-ended slot in the other end portion thereof that is disposed in longitudinal alignment with the circular opening in the other end portion of the base member, a cushion secured to that portion of the counter plate which extends below the counter member, means releasably retaining the heel receiving binder in a desired longitudinally adjusted position to said foot receiving binder, said means including guide lugs on said base member engaging opposed longitudinal side edge portions of the counter plate, said guide lugs being elongated integral portions of said base member extending generally upwardly therefrom with the end portions thereof projecting generally laterally inwardly and disposed in a plane substantially parallel to the base member with the end portions of the guide lugs frictionally engaging the respective longitudinal side edge portions of the counter plate with sufficient force to maintain the heel receiving binder in such desired selected adjusted position while removing and interchangeably mounting the water ski harness on a selected ski, and attaching and securing means for removably interchangeably mounting the water ski harness to a selected ski, said attaching and securing means comprising elongated threaded bolt and nut means passing through the circular openings in the base member and the longitudinal open-ended slot in the counter plate.

2,900,649
METHODS OF MAKING PLATFORM SHOES, THE PARTS OF WHICH ARE UNITED BY A REINFORCED SEAM
Edward Quinn, Saugus, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Original application April 26, 1955, Serial No. 503,904. Divided and this application October 18, 1956, Serial No. 616,666
1 Claim. (Cl. 12—142)

The method of making a platform shoe comprising the steps of sewing a sock lining, an upper, and a platform edge cover strip with a chain-stitch which includes depositing an adhesive agent in a continuous ribbon on the chain side of the seam beyond the sewing point and intermittently applying and relaxing tension on the last formed loop of the seam, whereby the adhesive agent is



massaged into the thread as the latter is introduced partially into the needle perforations of the seam whereby the adhesive agent after application will harden and reenforce the seam and provide a backing for supporting the cover strip.

2,900,650
TOOTHBRUSH HAVING A DENTIFRICE SUPPLY UNIT
Santiago Rivero, Santa Clara L.V., Cuba
Application April 3, 1958, Serial No. 726,216
3 Claims. (Cl. 15—138)

1. In a toothbrush, a hollow cylindrical body member providing a reservoir for dentifrice, said body member including a compressible wall portion for dispensing the dentifrice from said body member, said body member further including first and second spaced apart wall members that are formed integral with the opposite ends of said wall portion, said first wall member being of frustoconical formation and said second wall member being of cylindrical formation, there being a port in said first wall member, said port including a first inner portion and an enlarged outer internally threaded socket portion, a removable plug threadedly engaging said internally threaded socket portion, a shank extending from said second wall member, there being passageways in said shank and second wall member, a support member on the end of the shank, said support member including spaced apart side pieces and an end piece, a base movably mounted between said side pieces, a pivot pin connecting said base to said side pieces, and bristles extending from said base.

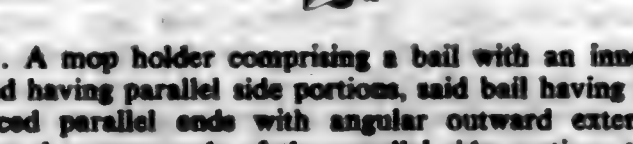
2,900,651
TOOTHBRUSH
Clinton O. Powell, Norfolk, Va.
Application April 23, 1958, Serial No. 730,364
6 Claims. (Cl. 15—136)

1. A pressure operated fountain toothbrush which has a capsule containing dentifrice under pressure, a housing, means separably securing said capsule to said housing, said means having a check valve therein that is normally maintained in the closed position, said check valve having a valve operator extending longitudinally of said housing, a first tube, a second dentifrice conducting tube

flanges engaged between the other pair of said flanges, a torsional and deformable characteristics of the blade

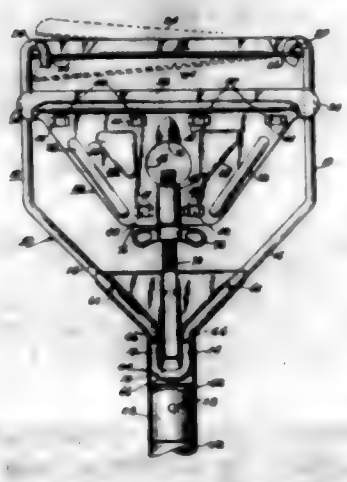
mounting means adapted to be mounted on the end frame positions indicated.

coaxial with said first tube, both of said tubes disposed in said housing and protruding from one end thereof, said first tube having an end in engagement with said valve operator to open said valve upon movement of said first tube in one direction with respect to said housing, a brush



head having said second tube disposed therein, said second tube having passage means through which the dentifrice is adapted to pass, means closing the end of said second tube at said head, said head having bristles, and ports in said head opening into said passage means and opening in the region of said bristles.

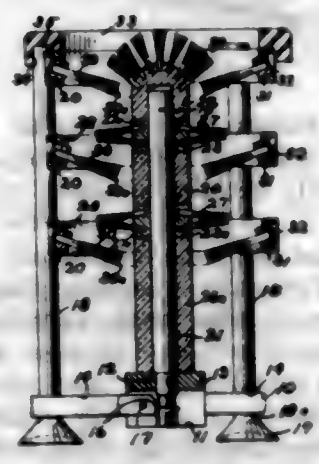
2,900,652
QUICK CHANGE MOP HOLDER WITH OUTER HINGED JAW
William E. Kautenberg, Freeport, Ill., assignor to W. E. Kautenberg Co., Freeport, Ill., a corporation of Illinois
Application November 28, 1955, Serial No. 549,426
3 Claims. (Cl. 15—153)



1. A mop holder comprising a bail with an inner U-bend having parallel side portions, said bail having outer spaced parallel ends with angular outward extensions from the outer ends of the parallel side portions to the outer spaced parallel ends, one of the parallel ends having an inwardly extending substantially closed loop and the other end having an inwardly turned hook, a cross piece with a hole at each end, one hole in detachable engagement with the substantially closed loop and the other hole adapted to make a releasable connection with the hook, means for engaging the said inner U-bend of the bail and attaching a mop handle thereto, and a clamping head movable on the said parallel spaced outer ends of the bail, the clamping head comprising an outer grooved portion with sides for seating therein the cross bar and the inwardly extending loop and hook of the ends of the bail and with end grooves for slidably engaging the said parallel ends of the bail and means for moving the clamping head in the bail relative to the inner U-bend and said cross piece.

2,900,653
CLEANING DEVICE
Robert W. Lamberton, Racine, Wis.
Application June 17, 1957, Serial No. 666,094
1 Claim. (Cl. 15—164)

A glass cleaning device comprising a base member having a centrally disposed shaft mounted therein with said shaft extending upwardly at right angles to said base, a plurality of spoke members spaced equally from said base, a plurality of upstanding columns spaced equally from said shaft but remote therefrom adjacent the outer periphery of said spokes and fixed in said spokes, one of said spokes pivoted in said base, extensions to said columns extending below said spokes and having surface contacting elements mounted on the free ends of said extensions, a series of demountable spaced cylinders arranged on said shaft, spaced tufts of fiber arranged equally about and from the outer circumferential surface of each cylinder, said tufts forming a circularly shaped brush, spaced recesses formed in said columns, with like spaced recesses in each column spaced opposite from each other, a plu-



rality of rings, each ring supported demountably and horizontally in said oppositely disposed recesses, tufts of fibers arranged about and extending inwardly from the inside circumferential surface of said rings, and forming a circular brush, the free ends of each tuft in said ring and the free ends of each tuft in said cylinders in opposed relation and in close proximity whereby as the open end of a glass is pressed downwardly between the tufts extending from said rings and said cylinders, the inside and outside surfaces of the glass are cleaned, said rings adaptable for disengagement from said recesses upon downward movement of said pivotally mounted spoke.

2,900,654
BRUSH OR THE LIKE HAVING REMOVABLE HEAD
Abel Koltvedt, St. Augustine, Fla.
Application November 6, 1957, Serial No. 694,765
1 Claim. (Cl. 15—176)

A detachable bristle brush comprising a wedge shaped shank, a handle extending integrally from one end of said shank, said shank having a pair of side walls converging toward the end opposite said handle, said shank having a transversely extending groove formed in the end thereof opposite said handle, a bristle unit having a plurality of bristles secured together at one end, said bristle unit having transversely extending grooves formed on opposite sides thereof with said grooves arranged in equispaced parallel relation to the secured together end of said bristle unit, a pair of generally U-shaped sleeve forming members each including a generally rectangular panel and a pair of perpendicularly extending side flanges formed on the opposite edges of said panel, said panels being arranged in spaced apart relation with one pair of said

and connected by internal conduit means to the fluid and being attachable to a lawn mower at one end of said

steps of sewing a sock lining, an upper, and a platform

housing, a first tube, a second dentifrice conducting tube

flanges engaged between the other pair of said flanges, a transversely extending pin pivotally securing said flanges together, said bristle unit being releasably engaged between said sleeve forming members adjacent one end thereof, an inwardly extending end flange formed on each of said panels at said one end of said sleeve forming member for engagement in the grooves on opposite sides of said bristle unit, said shank being wedged between the ends of said sleeve forming members opposite said bristle unit thus clamping the end flanges thereof in the grooves of said bristle unit with the groove in said shank engaging over said pin, and a resilient latch secured to one edge of said shank and biased outwardly therefrom, said side flanges adjacent said one edge of said shank having respectively a generally rectangular opening and a recess formed therein for registry with each other when said shank is wedged between said sleeve forming members, said resilient latch having a portion thereof releasably engaging in said recess and through said opening for locking said shank in wedged relation between said sleeve forming members.

2,900,655

FOLDED PAD AND METHOD OF MANUFACTURE THEREOF

Patrick Joseph O'Sullivan, New York, N.Y., assignor to Colgate-Palmolive Company, New York, N.Y., a corporation of Delaware

Application December 10, 1956, Serial No. 627,228
10 Claims. (Cl. 15—209)

1. A substantially rectangular scouring pad comprising a plurality of terminally interconnected superposed, substantially rectangular lengths, each of said lengths being formed from a flattened helix of loosely intertwined fibers.

6. A method of preparing rectangular scouring pads from loosely intertwined fibers comprising forming said fibers into a helix, flattening said helix, and doubling over rectangular lengths of said flattened helix perpendicularly to the longitudinal axis thereof so as to form a substantially rectangular pad composed of successive lengths of said flattened helix of loosely intertwined fibers.

2,900,656

CLEANING, SCRAPING AND MIXING IMPLEMENT

Earl S. Tupper, Upton, Mass., assignor to Tupper Corporation, North Smithfield, R.I., a corporation of Delaware

Application January 24, 1955, Serial No. 483,477
1 Claim. (Cl. 15—245)

A cleaning, scraping and mixing implement formed of polyethylene and comprising an elongated, straight and flat handle portion, a reinforcing conformation formed with said handle portion along the longitudinal edges and the outer end edge thereof to prevent bending across the longitudinal axis of said handle portion, a substantially flat blade formed integral with and carried by the inner end of said handle portion and coaxial with the longitudinal axis thereof, a second reinforcing conformation at the junction between the blade and inner end of said handle portion whereby said second reinforcing conformation serves to act as a fulcrum area for deformation of the blade and for torsion of the handle portion, said blade having a slot intermediate the length thereof and coaxial with the handle portion longitudinal axis to aid torsional and deformable characteristics of the blade member and also to permit penetration therethrough when said blade member is used as a mixing and heating implement, the faces of said blade tapering toward each

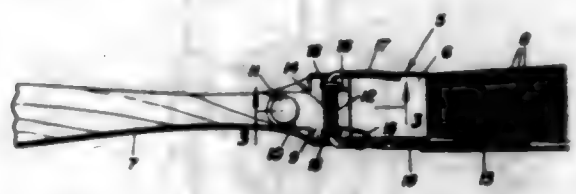
other, the blade having a relatively thin edge along the perimeter, said edge having straight and curved portions, said edge portions being more pressure sensitive for deformability then the rest of the blade.

2,900,657

BRUSH ATTACHMENT

Frank Gruden, Jr., Sheboygan, Wis.

Application May 14, 1958, Serial No. 735,171
2 Claims. (Cl. 15—248)



1. A paint brush attachment comprising: a band adapted to be mounted on the brush head, means for removably securing the band in position on the brush head, a pair of transversely aligned bearings on the band, a shaft journaled in said bearings, arms on the ends of the shaft, an elongated plate, engageable with the work, fixed on one of the arms and adapted to extend adjacent the brush bristles in parallelism therewith when in operative position, a coil spring encircling the shaft between the bearings and connected to said one arm for yieldingly urging the plate toward operative position, the other of said arms providing means for manually holding the plate in inoperative position against the tension of the spring, said other of said arms further being adapted to engage the brush head for arresting the plate in operative position.

2,900,658

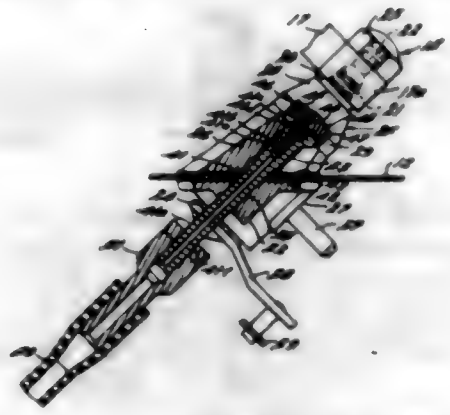
WINDSHIELD WIPER MOUNTING

Richard F. Baird, Royal Oak, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Application May 28, 1952, Serial No. 290,528
5 Claims. (Cl. 15—250.4)

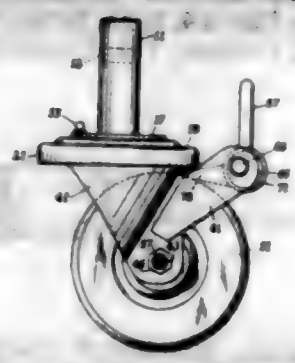
4. A window wiper mechanism including a wiper blade, a blade supporting arm, a motion transmitting means connected to said arm to effect oscillation thereof, and a mounting for said motion transmitting means comprising a part to be mounted on a support and a removable anchor belt to fixedly connect said part to said support, said anchor bolt having an internal fluid conduit extending axially through the shank portion thereof and nozzle means mounted on the head of said anchor bolt

and connected by internal conduit means to the fluid conduit in said bolt shank to provide means for passing fluid through said anchor bolt and emitting it from said nozzle means in the form of a spray stream, said



nozzle means comprising a second bolt threaded into the head of said anchor bolt and having passages therethrough connectible to the internal fluid conduit extending axially through said anchor bolt shank portion.

2,900,659
CASTER LOCKING MECHANISM
Clarence George Snell, Oriskany Falls, N.Y., assignor to Divine Brothers Company, Utica, N.Y., a corporation of New York
Application March 20, 1957, Serial No. 647,294
7 Claims. (Cl. 16—35)



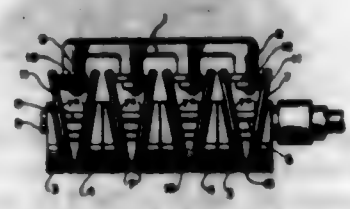
1. The combination of a stationary mounting plate having a depending marginal flange, of a caster trunnion member rotatably mounted on said mounting plate, a caster wheel rotatably mounted on said trunnion member with the upper part of its periphery spaced a short distance from the end of said depending flange, an eccentric also rotatably mounted on said trunnion member for rotation about an axis of rotation approximately radially outwardly of said depending flange and substantially parallel to the axis of rotation of said wheel, and a substantially triangular locking wedge having its apex interposed between the periphery of said wheel and said depending flange on said mounting plate, said locking wedge having its wide end connected to a portion encircling said eccentric to be moved thereby in a substantially horizontal direction when the eccentric is turned, the parts being so arranged that when said eccentric is turned from one position toward another position, said locking wedge is thrust tightly between said flange and the periphery of said wheel to lock said wheel against turning on its own axis and also to lock said trunnion member against turning relative to said stationary mounting plate.

2,900,660
LAWN MOWER HANDLE
Charles A. Wuerker, Jr., Racine, Wis., assignor to Jacobsen Manufacturing Company, Racine, Wis., a corporation of Wisconsin
Application December 3, 1956, Serial No. 625,878
3 Claims. (Cl. 16—111)

1. A lawn mower handle comprising a pair of juxtaposed members including an upper half and a lower half and being attachable to a lawn mower at one end of said lower half and with hand grips at one end of said upper half and said halves being fixed together and being separable from each other at the other ends thereof opposite each said one end, said members at said one end of said upper half being disposed to converge together and being fastened together at the point of convergence, a tie rod of a length greater than one-half the length of said

halves and having one end snugly disposed between the converging portions of said members and welded to said one end of said upper half thereof where said hand grips are disposed, a cross bar attached to said other end of said lower half of said members and having an opening therethrough in the plane of said members, the other end of said tie rod being a threaded end and extended through said opening, and a nut attached to said threaded end for securing said halves together.

2,900,661
PLUCKING DEVICE FOR FEATHERS, HAIRS OR THE LIKE
Carl Schnell, Winterbach, near Schorndorf, Germany
Application March 11, 1957, Serial No. 645,104
3 Claims. (Cl. 17—11.1)

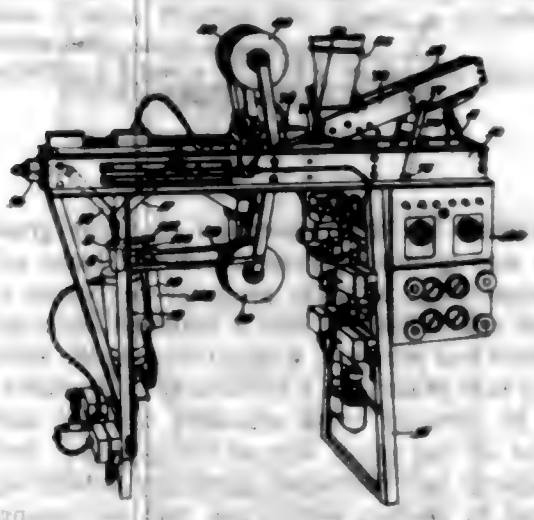


1. A plucking device for feathers, hairs or the like, comprising at least one pair of discs rotating at an angle to each other in the same direction and converging at one point; and presser rollers contacting the adjacent faces of adjacent discs of the pair and influencing the angular position of the discs relatively to one another; said rollers being arranged between the discs and pressing the discs apart, to cause the pair of discs to converge at said point; the axes of said presser rollers being offset relatively to each other, whereby the feathers or the like will be plucked.

2,900,662
MOLDING MACHINE
George A. Scherry, Berkeley, Ill., assignor to Grayhill, Chicago, Ill., a partnership consisting of Gordon E. Gray and Ralph Hill
Application September 1, 1955, Serial No. 532,833
11 Claims. (Cl. 18—5)

2. An automatic plastic molding machine of the horizontal type including in combination, a first fixed mold block assembly having a substantially vertical parting face, a second movable mold block assembly having a substantially vertical parting face adapted to engage said parting face of said first mold block assembly to provide a closed mold cavity and being movable away from said parting face of said first mold assembly to open the cavity, a transfer cylinder in communication with said mold cavity having an open end for receiving plastic material to be molded, a piston positioned for movement in said cylinder for forcing plastic material therein into said

mold cavity, feeding means including a feeding tube having an outlet for providing plastic molding material in said cylinder, said feeding means being mounted for swinging movement from a first position wherein said outlet of said feeding tube is adjacent said open end of said cylinder to a second position clear of said cylinder so that said piston is movable into said cylinder, said feeding means including a container for holding said



plastic molding material, means for providing material from said container into said feeding tube and a plunger for moving material in said feeding tube to said outlet thereof, and means coupling said feeding means and said piston for moving said feeding means to said first position thereof as said piston is withdrawn from said cylinder and moving said feeding means to said second position thereof as said piston moves toward said cylinder.

2,900,663
METHOD AND APPARATUS FOR MOLDING ARTICLES

Erwin F. Linhorst, Paterson, N.J., assignor to United States Rubber Company, New York, N.Y., a corporation of New Jersey

Application October 18, 1956, Serial No. 616,834
5 Claims. (Cl. 18—5)

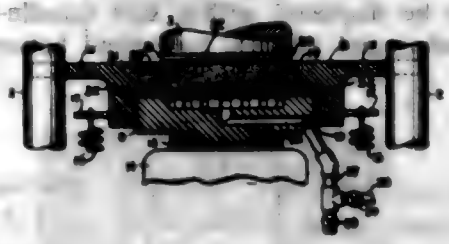
1. In a cover unit for use with a mold unit during curing, within the mold unit, of a molded article comprising a material, such as a rubber, a pair of substantially planar and rigid plates disposed one above the other and a pad comprising cured rubber positioned between and bearing against both plates, the surface of the pad that bears against one plate being convex.

2,900,664
APPARATUS FOR COMPRESSING FINELY DIVIDED SOLIDS

Louis A. Hauspel and Waldemar J. Wick, Milwaukee, Wis., assignors to Kelmar Laboratories, Inc., Milwaukee, Wis., a corporation of Delaware

Application September 1, 1955, Serial No. 531,927
6 Claims. (Cl. 18—16)

1. A die member for use in an apparatus for compressing a finely divided solid material comprising, a base portion formed of a generally foraminous metallic substance having a plurality of small openings extending therethrough, and characterized by the ability to permit a gaseous fluid to pass therethrough and to prevent the finely divided solid material from passing therethrough, a thin coating of chromium bonded to a surface of said base portion in position to receive the material to be compressed, said coating of chromium extending only between the openings on said surface of the base portion to permit a gaseous fluid contained within the material

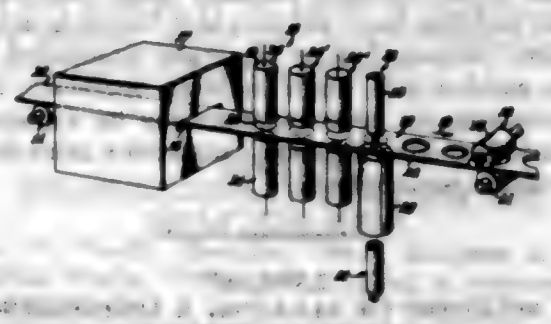


to pass freely through the die member to the exterior during compression of said material, and means to pass a separate gaseous fluid under pressure inwardly through said die member and against the surface of the compressed material to release the compressed material from engagement with said coating of chromium and purge the foraminous metallic substance of any divided solid material.

2,900,665
MEANS AND METHOD FOR MAKING TUBES FROM A THERMOPLASTIC MATERIAL

James H. Walker, Los Angeles, Calif.

Application October 14, 1957, Serial No. 689,836
4 Claims. (Cl. 18—19)



1. An apparatus for forming containers or other molded articles which comprises: means for intermittently conveying a strip of thermoplastic material along a predetermined path to sequentially position spaced areas thereof at successive spaced stations; means for preheating said strip to a temperature at which said strip is in a softened yet conveyable state; means for progressively superheating predetermined spaced central areas of said strip to a relatively high temperature at said successive spaced stations wherein said central areas are rendered plastic; mold means adjacent said path having male and female portions for forming containers from said central areas, and means for moving said male portion through said central areas whereby to displace the material thereof into said female portion.

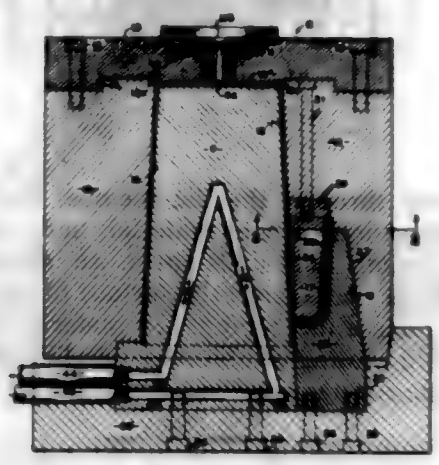
2,900,666
APPARATUS FOR MOLDING A HOLLOW CONTAINER WITH AN INTEGRAL HANDLE

William Marcus, Cleveland, Ohio

Application March 19, 1957, Serial No. 647,981
1 Claim. (Cl. 18—42)

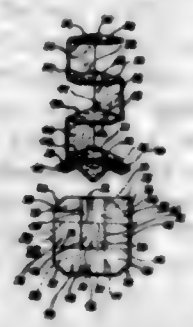
Injection molding apparatus for producing a hollow article having an integrally molded handle wherein said handle includes at its one end a single handle connector connected to the wall of said container, and at its other end two spaced handle connectors connected to the wall of said container, said apparatus comprising a female container-forming die member defining a core-receiving

cavity, a male container-forming die member having a projecting core provided thereon, said core of said male die member adapted to be disposed within said core receiving cavity to delimit the container walls between said die members defining a hollow article molding space, one of said die members having a handle-forming die core member rigidly connected thereto, the other of said die members having a handle-forming die cavity member rigidly connected thereto, said handle-forming die core member adapted to be disposed within said handle-forming die cavity member and adapted to extend between said two



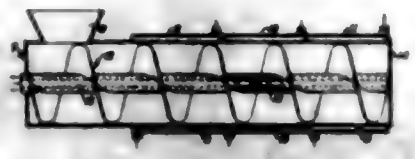
spaced handle connectors up to the inner face of said single handle connector and to delimit the inner surface of the handle and the outer surface of the container wall opposite said handle, said handle-forming die members defining between them a handle-forming molding space, and said handle-forming molding space communicating with said molding space defining said hollow article whereby hollow articles having integrally connected handles may be molded in a single molding operation, and said handle-forming die core member may be withdrawn between said two spaced handle connectors after the molding operation is completed.

2,900,667
METHOD OF MAKING A ONE-PIECE DISPLAY DEVICE
John S. Longenecker, Massillon, Ohio
Application January 6, 1953, Serial No. 329,841
12 Claims. (Cl. 18—47.5)



1. The method of forming a one-piece display device from a flat blank of normally substantially rigid sheet material, said method consisting in cutting a re-entrant slit in the sheet blank, said slit extending at least half the distance from one edge of the blank to the opposite edge thereof and then extending toward another edge of the blank and then extending toward said one edge of the blank at least one end of said slit terminating within the margins of the blank, and then bending the blank at various spaced points upon lines at angles to various portions of said re-entrant slit to form a one-piece display device having a plurality of horizontal shelves located at different levels and integral intervening upright supports.

2,900,668
PRODUCTION OF GRANULAR PERBORATES
Walter Willi Georg Hübner and Ernst Lange, Pratteln, Basel-Land, and Ernst Rindlisbacher, Pratteln, Switzerland, assignors to Henkel & Cie. A.G., Pratteln, Basel-Land, Switzerland, a corporation of Switzerland
Application October 31, 1956, Serial No. 619,529
Claims priority, application Switzerland November 4, 1955
13 Claims. (Cl. 18—47.5)

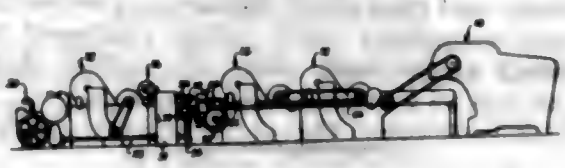


1. Method for the conversion of finely granular perborates into a more coarsely granular form which comprises converting a finely granular perborate containing water of crystallization into a softened deformable mass under heat and pressure, without causing the same to melt, molding said mass into a plastically deformable structure having its greatest cross sectional size not substantially in excess of the grain size of the granular perborate to be produced and thereafter promptly solidifying molded perborate by cooling with a gas, and recovering granular perborate in said more coarsely granular form.

2,900,669
IRREVERSIBLY ELONGATABLE CELLULOSE TRIACETATE STRUCTURE AND METHOD OF MAKING
Max H. Booth, Waynesboro, Va., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application March 27, 1957
Serial No. 648,787
7 Claims. (Cl. 18—48)

1. The process of producing irreversibly elongatable shaped structures which comprises treating an essentially drawn shaped structure of an organic ester of cellulose having a dry elongation of at least 30% by heating said structure to a temperature above the second order transition temperature and below the decomposition temperature of said organic ester of cellulose for a period of time less than that necessary for crystallization of said structure wherein a shrinkage of at least 10% of the original length of said structure is obtained.

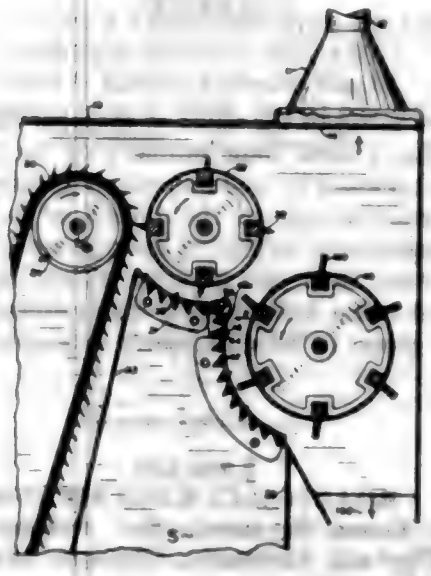
2,900,670
PICKER DRIVE
James A. Quinn and Johnny Quinn, Greenville, S.C.; said James A. Quinn assignor to said Johnny Quinn
Application December 30, 1953, Serial No. 401,144
3 Claims. (Cl. 19—70)



1. In a picker having an evener mechanism having the usual driven lower cone pulley and upper cone pulley, an automatic feeder, an opener picker, an intermediate picker, a finishing picker, mechanical means directly driving the feeding mechanism of said automatic feeder, opener picker and intermediate picker and means driven by the evener for feeding fibers into the finishing picker, said evener mechanism being positioned immediately preceding said finishing picker the improvement including, an axial shaft fixed with respect to the upper cone pulley, power take-off means connected to and driven directly

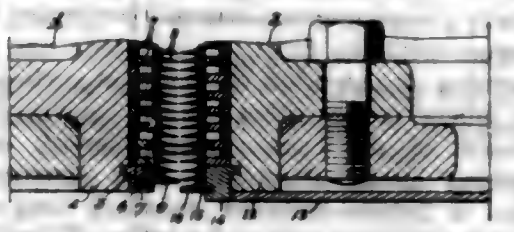
by said shaft, and mechanical drive means connected to said power take-off means directly driving the mechanical means directly driving the feeding mechanism of said automatic feeder, opener picker, and intermediate picker.

2,900,671
MACHINE FOR OPENING AND CLEANING FIBROUS MATERIAL
Zoltan Szaloki, Whitinsville, Mass., assignor to Whitin Machine Works, Whitinsville, Mass., a corporation of Massachusetts
Application March 15, 1955, Serial No. 494,474
3 Claims. (Cl. 19—93)



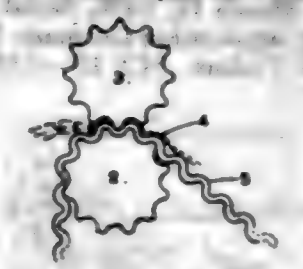
2. In an opening and cleaning machine, two parallel beater cylinders rotated in the same direction and having adjacent surfaces moving in opposite directions, means to feed fibrous material to the first beater cylinder, a plurality of grid bars associated with said second cylinder and including two pivotally mounted grid bars, a pivotally mounted deflector mounted closely adjacent said pivoted grid bars and effective to direct the fibers delivered by said first cylinder to the central portion of the zone between the oppositely-moving surfaces of said two cylinders and as said fibers are approaching said central portion, and means to selectively and angularly adjust said deflector and said adjacent pivoted grid bars simultaneously to variably control the approach path of travel of said fibers to said second cylinder.

2,900,672
CARDING ROLLS
John D. Hollingsworth, Greenville, S.C.
Application March 12, 1958, Serial No. 720,974
3 Claims. (Cl. 19—112)



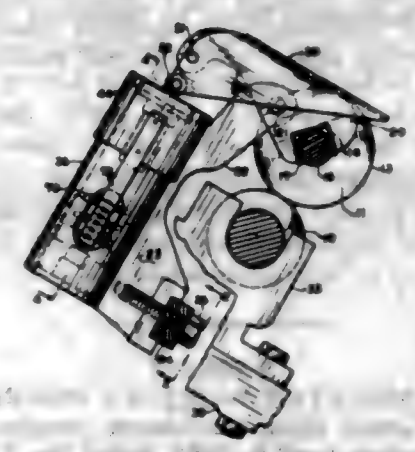
1. In a roll for carding machines, a cylindrical shell, an end plate at each end of said shell, metallic card clothing forming the working face of the roll, and a foundation for said clothing on the cylindrical surface of the shell, said foundation including clothing-supporting elements embracing the peripheral surfaces of the end plates.

2,900,673
TEXTILE MACHINERY
Wallace Ronald Brookshank, Ilkley, England
Application December 23, 1955, Serial No. 555,151
2 Claims. (Cl. 19—115)



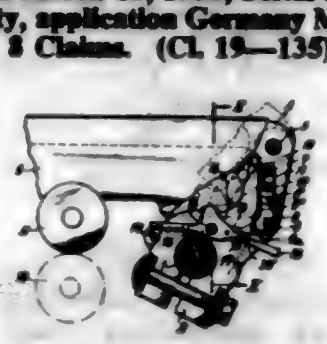
1. An endless apron for conveying textile fibers in apparatus having intermeshing fluted rollers between which the apron passes, comprising a length of flexible material having opposite end portions, said end portions having complementary tapered surfaces adhesively secured to one another to provide a joint portion of substantially uniform thickness with the end edge portions of said opposite end portions being disposed on opposite sides of the apron and spaced longitudinally from one another, said apron having transverse flutes preformed therein of a configuration such as to conform to the shape and pitch of the interspace between the intermeshing fluted rollers, said flutes being formed in predetermined relationship to the tapered surfaces of said end portions, said flutes extending substantially normally to the longitudinally extending lateral edges of the apron and being formed in a longitudinally extending area of the apron including said joint and extending longitudinally outwardly from said joint beyond said end edge portions of the opposite end portions of the length of material, so as to minimize damage to the joint portion produced by engagement of the fluted rollers therewith.

2,900,674
PRESSURE-APPLYING MEANS FOR DRAFTING ROLL
William W. Werth, Douglas, Mass., assignor to Whitin Machine Works, Whitinsville, Mass., a corporation of Massachusetts
Application February 23, 1954, Serial No. 411,635
2 Claims. (Cl. 19—135)



1. In a textile drafting machine having a continuously rotated bottom roll and having a top roll mounted above said bottom roll and frictionally driven thereby, in combination, a supporting stand permanently mounted in fixed relation to said bottom roll and shiftable transversely therewith but said stand being out of engagement with said bottom roll, a bearing lever pivoted to said stand and having an open-face bearing for said top roll, a spring-pressed slidable plunger in said stand and a pressure-applying lever pivoted to said bearing lever and manually movable to engage said plunger and to thereby transmit predetermined pressure therefrom successively through said pressure-applying lever and said bearing lever to said top roll.

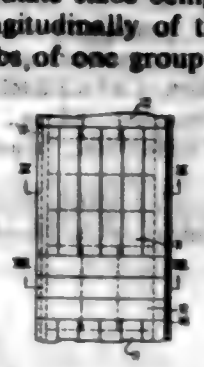
2,900,675
TEXTILE DRAWING MECHANISM
Ernst Dolisch, Stuttgart, Germany, assignor to SKF Kugellagerfabriken Gesellschaft mit beschränkter Haftung, Schweinfurt, Germany
Application March 12, 1958, Serial No. 720,859
Claims priority, application Germany March 15, 1957
8 Claims. (Cl. 19—135)



1. In a drawing mechanism for textile machinery having a fixed support, an arm pivoted on the support and carrying top rolls which are spring loaded against lower rolls in an operative position of the pivoted arm; a device for releasably locking the pivoted arm in its operative position against the reaction to the spring loading of the top rolls, said device comprising a latch member pivotally mounted on the pivoted arm and having a nose, a locking member pivoted on the fixed support for angular movement between first and second pivotal positions and having a keeper engageable by said nose of the latch member to prevent upward movement of the pivoted arm from its operative position, and spring means acting on said latch member to urge the latter to a predetermined pivotal position, said keeper being disposed in the path of said nose when said latch member is in said predetermined pivotal position and said locking member is in said first position, said keeper being located in relation to the pivoting axis of said locking member to cause the latter to move from said first position to said second position by the reaction to the spring loading of the top rolls applied by engagement of said nose with said keeper, said keeper and nose being shaped to resist movement of said latch member to said predetermined position when said locking member moves to said second position while said nose engages said keeper so that said latch member returns to said predetermined position to free said nose from said keeper and thereby release said pivoted arm for upward movement from its operative position only when the pivoted arm is first depressed, and said latch member and locking member further having cooperating surfaces which are slidably engageable during upward movement of the pivoted arm from its operative position to forcibly displace said locking member from said second position to said first position where said keeper is again disposed to receive said nose upon return of the pivoted arm to its operative position.

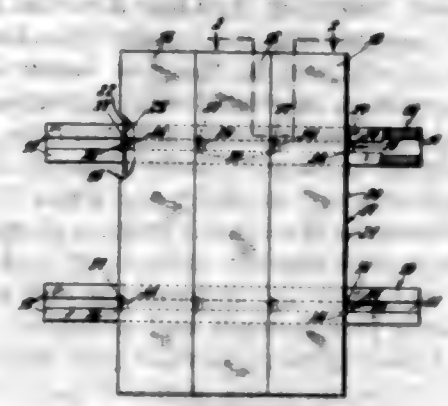
2,900,676
LAMINATED PARQUET BOARDS
Gustaf Kihr, Stockholm, Sweden
Application April 9, 1956, Serial No. 576,966
Claims priority, application Sweden November 4, 1955
3 Claims. (Cl. 20—7)

1. In a laminated parquet flooring board, the combination of a patterned wearing layer adhesively united with only a single patterned sublayer, said wearing layer consisting of a plurality of slabs of uniform thickness arranged in alternate groups of slabs aligned longitudinally of the board with the run of grain of the slabs of one group extending transversely to the run of grain of the slabs in the next adjacent group, said sublayer comprising marginal runners of uniform thickness underlying the wearing layer and extending in the direction of their grain along both longitudinal edges of and throughout the length of the board, said runners having facing flat inner sides and intermediate slabs of the same thickness as the runners, disposed between said marginal runners and having opposite flat edges contacting and opposing the respectively adjacent flat inner sides of the runners so as to form longitudinal joints covered by the slabs of the wearing layer, said intermediate slabs being arranged in alternate groups aligned longitudinally of the board with the run of grain of the slabs of one group extending transversely



to the run of grain of the slabs in the next adjacent group, the slabs that extend longitudinally of the board in one layer being opposed by and adhesively secured to the slabs extending transversely of the board in the other layer, and the longitudinal extent of each group of slabs in one layer that have their run of grain extending transversely of the board being less than the longitudinal extent of the contacting group of longitudinally extending slabs in the other layer.

2,900,677
BOARD SECURING MEANS
George K. Yetter, Savannah, Ga., assignor to Georgia-Pacific Plywood Company, Olympia, Wash., a corporation of Georgia
Application August 11, 1954, Serial No. 449,875
3 Claims. (Cl. 20—8)

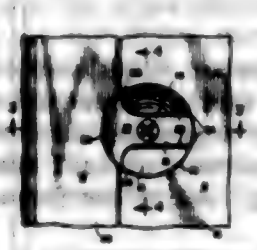


1. Board securing means, comprising in combination an elongated channeled member having oppositely disposed elongated recesses formed therein opening toward each other and forming elongated flanges each overlying a side portion of said channel, elongated boards having a front and back surface and extending in side by side relation across said channeled member, said boards each having grooves formed along the sides thereof forming substantially complementary laterally projecting front and back tongues with the front tongue along one side of a board forming an extension of the front surface thereof, the back tongue on the other side of the board forming an extension of the back surface thereof, said front tongue being longer than said back tongue so that a first slot is formed between the back tongue of one board and the adjacent side wall portion of another board with said front tongue engaging the corresponding side wall portion of said another board, the thickness of said tongues being less than the thickness of any one of said boards so that a second slot is formed between the opposed faces of said tongues, said boards each having a third slot formed therein extending into the side wall thereof behind said front tongue, said slots combining to

a common plane above said gutters and gutter plates, lel to said elastomer sealing member edges and forming

form an elongated T-shaped slot with said first slot forming the leg thereof and opening toward said channeled member and said second and third slots forming the arms thereof, and a clip member securing the boards to said channeled member having a base wing having tapered opposite end portions extending under said flanges and freely slidable in said channel, a web portion extending transversely of and out of said channel and having notches formed in either side through which said flanges extend, said web having a width less than the width of the channel, a pair of securing wings extending in opposite directions from said web portion and in said second and third slots, and said web portion extending in said first slot.

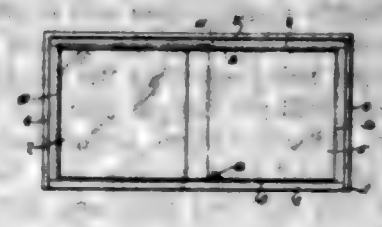
2,900,678
TURNBUTTON FASTENER FOR FRAME SUPPORTED INSERT SECTION
Paul S. Curtis, Jacksonville, Ill.
Application June 4, 1957, Serial No. 663,435
2 Claims. (Cl. 20—36)



2. In combination, a supporting frame section and a removable insert section contoured and shouldered to permit the insert section to fit and be retained in the frame section with the faces disposed in a common plane and having a circular concave recess formed in the common-plane faces of the two sections with the major portion of the recess located in one of the sections, a stamped metal fastener element of an arcuate cross-section conforming with the recess and in depth not to exceed that of the recess pivoted at its center to the center of the recess, the element having a quadrant wing portion the periphery of which substantially conforms with the circumference of the recess, the perimetrical portions of the element on one side of the quadrant wing and on opposite sides of a diameter through the center of the element and the middle point of the periphery of the quadrant wing being upset from the concave face of the element to provide upwardly-extending parallel finger-grip flanges the top edges of which flanges are in a plane common with that of the periphery of the quadrant wing and below the common plane faces of the assembled sections, the transverse spacing of the flanges being such that the tip of the periphery of the quadrant wing portion and the tip of the flange on the same side of the aforesaid diameter are alineable with the perimeter of the one section when the element is turned to permit the sections to be assembled or separated.

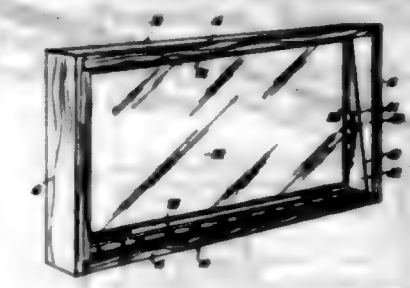
2,900,679
SASHLESS WINDOW CLAMPING MEANS
Reginald Mignecault and Fernand W. Mignecault, Gatineau, Quebec, Canada
Application June 26, 1958, Serial No. 744,713
4 Claims. (Cl. 20—52)

1. In a sashless window having a sill, head piece, and jambs constituting a frame, and a pair of glass panels slidably mounted therein, clamping means for said panels comprising a roller rotatably mounted in said head piece about an axis parallel to the surface of one of said panels, a spring resiliently urging said roller into pressure contact with said one panel, and a lever pivotally mounted on said sill and having a roller rotatably carried thereby, said second roller having an axis parallel to the adjacent edge of said one panel and being movable into and out



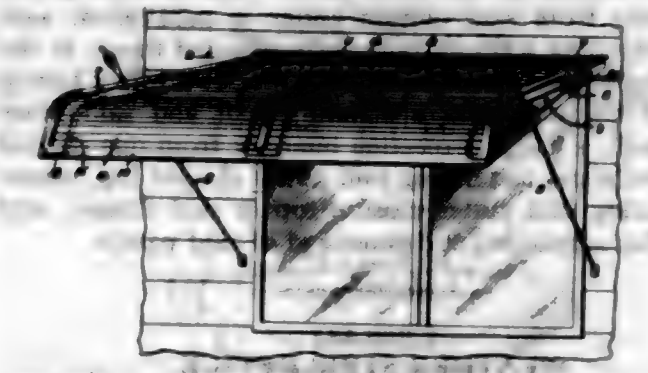
of frictional contact with said one panel in response to actuation of said lever.

2,900,680
PICTURE WINDOW CONSTRUCTION
Fred O. Oerly, Booneville, Mo., assignor of one-half to Harland R. Stretz, Booneville, Mo.
Application August 26, 1957, Serial No. 680,108
5 Claims. (Cl. 20—56.1)



1. In window construction, a frame provided with a pair of horizontal, vertically spaced, opposed members; and pane structure mounted in said frame and having upper and lower opposed edges, one of said members being provided with means pivotally and slidably receiving said upper edge of the structure and the other member having horizontally spaced means therein for alternately receiving the lower edge of the structure in any one of a plurality of preselected, spaced positions whereby the relative angularity of the structure with respect to a reference point may be changed.

2,900,681
AWNING STRUCTURE
Nathan Becker, Miami, Fla., assignor, by mesne assignments, to Small Business Administration, Atlanta, Ga.
Application May 22, 1956, Serial No. 586,606
1 Claim. (Cl. 20—57.5)



In an awning structure, spaced parallel end plates, a mid-rib parallel and coextensive with said end plates and interposed between the latter, flanges projecting inwardly from the upper edges of said end plates, flanges projecting laterally from the upper edges of said mid-rib and disposed in the same plane with said end plate flanges, gutter plates projecting inwardly from said end plates below said flanges and in parallelism therewith, gutters projecting laterally from said mid-rib in the same plane with said end gutter plates, gutter lips projecting upwardly from the outer edges of said end plate gutter plates and said mid-rib gutters, the upper edges of said ribs being in

length of the board, said runners having facing flat inner

thereof behind said front tongue, said slots combining to

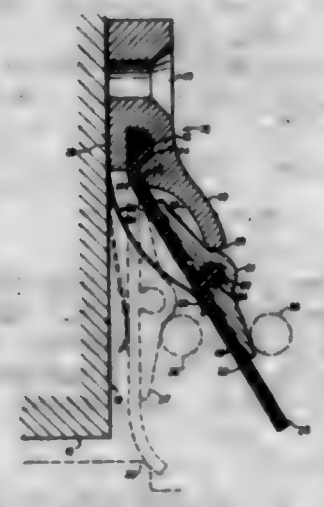
a common plane above said gutters and gutter plates, and roof panels having laterally disposed corrugations disposed between said end plates and mid-rib with their edge portions slidably resting upon and overlapping said gutter lips, the distance between the crowns and valleys of said corrugations being equal to the distance between said end plate and mid-rib flanges and the upper edges of said gutter lips, whereby water accumulating upon the upper surfaces of said roof panels will flow laterally thereof and pass into said end plate and mid-rib gutters.

2,900,682
METALLIC AWNING STRUCTURE
Nathan Becker, Miami, Fla., assignor to Seaview Industries, Inc., Miami, Fla., a corporation of Florida
Application September 9, 1957, Serial No. 682,689
6 Claims. (Cl. 20—67.5)

1. In an awning structure, a pair of elongated panels arranged with their sides in edge to edge relationship, means at the inner ends of said panels to secure the same to a support, one of said panels inwardly from its edge having an upstanding wall at substantially right angles to the panel, a gutter closure top projecting outwardly from said wall at the upper end of the latter and disposed in parallelism with said panel, a riser wall disposed inwardly from the edge of the adjacent panel disposed in parallelism with the upstanding wall of the first panel, a top member projecting outwardly from the outer end of said riser wall and disposed in the same plane with said gutter closure top, an inner gutter wall depending from the end of said top member parallel with said upstanding wall and spaced therefrom, a gutter bottom projecting outwardly from the bottom of said inner gutter wall, an outer gutter wall rising from said bottom gutter in parallelism with said upstanding wall, an outwardly directed flange at the upper end of said outer gutter wall, a hollow rafter having its sides engaging said upstanding wall and said inner gutter wall, a flange projecting laterally from one of said rafter walls and underlying said gutter closure top, means for securing said gutter closure top to said flanges, and means for supporting the outer end of said panels.

2,900,683
WEATHER STRIP DEVICE
Thomas Robertson Isbister, Toronto, Ontario, Canada
Application May 16, 1956, Serial No. 585,319
1 Claim. (Cl. 20—67)

In combination: a self suspendable elastomer sealing member defined by an extruded elongated body having side edges one of which serves as a sealing edge; a longitudinal bead-like enlargement defining the other edge of said member; an extruded bracket having a longitudinal recess to snugly receive said elastomer sealing member enlargement for suspension of said elastomer sealing member therefrom; said enlargement in said recess serving as the sole, self suspendable hinge means of said elastomer sealing member; a longitudinal bead-like formation parallel to said elastomer sealing member edges and forming a part of said member, an extruded stiffener fitting having a longitudinal recess for slidable assembly on said bead-like formation; a downwardly and forwardly extending portion of said bracket partially overlapping said stiffener fitting for engagement therewith upon forward motion

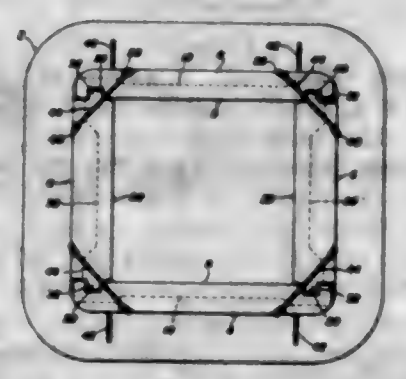


of said sealing member about said hinge means; and spring means urging said elastomer sealing member swingably outwardly with respect to said downwardly and forwardly extending portion of said bracket, said spring means by its urging, causing the forward motion of the sealing member.

2,900,684
WIRE HANGERS FOR CONCRETE MEMBERS
Thomas O. Miles, Jr., Glen Ellyn, Ill.
Application May 1, 1957, Serial No. 656,418
2 Claims. (Cl. 20—94)

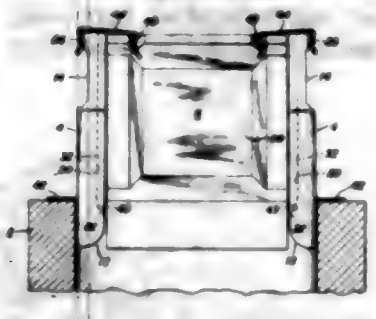
1. A wire hanger comprising companion upright units formed with pendent terminal sections defining pairs of bottom bends, and a plate spacing each pair of bottom bends, said sections being pivoted to the ends of the plate, whereby to facilitate the outward folding of the units to positions coplanar with the plate.

2,900,685
SECTIONAL HOT TOP
Edgar Marburg, Pittsburgh, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Application April 27, 1956, Serial No. 581,181
4 Claims. (Cl. 22—147)



1. A sectional hot top for a mold comprising a first pair of refractory slabs supported on said mold in spaced

relationship, a second pair of refractory slabs located between and in abutting relationship with said first pair of slabs, each end of each of said first pair of slabs having a generally vertical groove in its abutting face, and a generally vertical portion adjacent each end of both of the slabs of the second pair projecting into the corresponding grooves of the other slabs, the lower end of the bottom of each of said grooves tapering downwardly



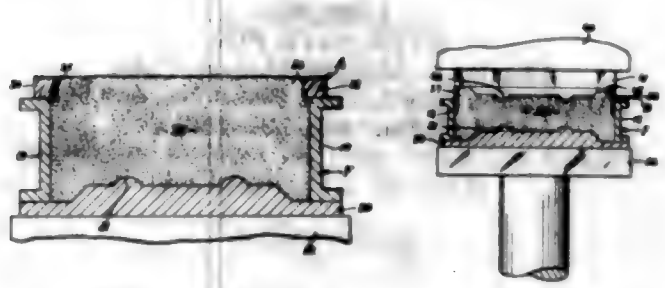
and inwardly toward the other slab of said first pair of slabs at an angle to the upper part of the associated groove, the lower end of each of said generally vertical portions having a tapered portion matching the tapered portion of the associated groove, the tapered portion of each of said generally vertical portions being arranged at an angle to the upper part of the associated vertical portion.

2,900,686

METHOD FOR MAKING SAND MOLDS FOR CASTINGS

Russell J Hines, Lakewood, Ohio, assignor to The Hines Flask Company, Cleveland, Ohio, a corporation of Ohio

Application August 7, 1956, Serial No. 602,659
3 Claims. (Cl. 22—197)



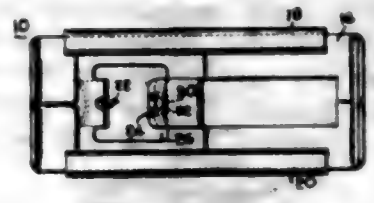
1. A method of making a sand mold comprising, placing an empty flask on an upwardly facing pattern plate in aligned relation therewith, positioning an open top and bottom sand measuring frame of predetermined volume on the flask in aligned relation therewith, the outside horizontal dimensions of said frame being greater than the corresponding inside horizontal dimensions of said flask whereby said frame is supported by said flask and the inside horizontal dimensions of said frame being smaller than the corresponding inside horizontal dimensions of said flask, filling the flask and frame with molding sand up to the upper level of said frame, removing the frame from the flask to form an upwardly extending section of sand projecting above the upper extremity of said flask and an upwardly facing continuous off-set shoulder of sand adjacent to and substantially level with the upper extremity of said flask, placing a band having the same general plan configuration as the flask on said sand shoulder so as to surround said sand section in generally engaged relation therewith with the exterior horizontal dimensions of said band being just slightly less than the corresponding interior horizontal dimensions of said flask and with the upper extremity of said band extending above the upper extremity of said sand section, applying a predetermined compressive force to the top of the band by compression means including a downwardly facing pattern plate, the pattern portion of which is adapted to be received in said band, and forcing the band downwardly partially into the sand in the flask and engaging the top surface of said sand section by said last mentioned pattern portion whereby a mold cavity is formed in the top surface as well as in the bottom surface of the sand, squeezing the sand between said pattern plates into a predetermined density by said compressive force with the uppermost extremity of said band being located in finalized position level with the uppermost extremity of the sand and above the upper extremity of said flask, removing the compression means and then removing the flask from the sand mold and leaving the band embedded in the sand as a reinforcement for the mold.

2,900,687

FASTENING DEVICE

Clarence W. Cochran, Belmont, Mass., assignor to United-Carr Fastener Corporation, Boston, Mass., a corporation of Delaware

Application April 19, 1957, Serial No. 653,819
2 Claims. (Cl. 24—73)



1. A fastening device for attaching an article to an apertured support comprising a base portion, a pair of spaced arms extending downwardly therefrom, said arms being struck out of said base portion within its periphery and providing two openings therein separated by a median strip of material, one of said arms bent arcuately away from one of said openings and providing hook means for engagement with the apertured support at one edge of the aperture therein, a second arm integral with said median strip whose terminal end passes through the opening created by the forming of the arm with the hook means and adapted to be deformed laterally providing cooperating locking means with said first arm to engage and lock with the support at the opposite edge of the aperture therein.

2,900,688

IN-LINE COUPLER

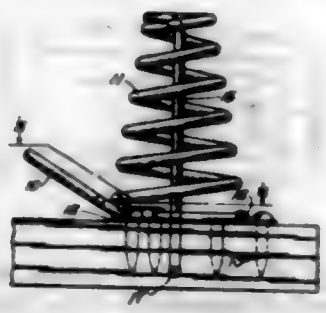
Drury F. Hicks, Jr., Maywood, Calif.

Application June 26, 1958, Serial No. 744,851
2 Claims. (Cl. 24—125)

1. A coupler for attaching wires together, at least one of which is continuous comprising matching complementary body members and a releasable anchor element attached to one of said members, said members comprising each an outer plate, a pair of parallel flanges spaced from each other on opposite edges of the plate and forming a chamber therebetween having opposite open ends for reception of the wires, each flange having an edge attached to the plate and a free edge, one of said flanges of each member having a trapezoidal shaped opening therethrough with the long parallel side of

said opening adjacent the edge attached to the plate and the other of said flanges of each member including a projection of corresponding trapezoidal shape with the long parallel side of said projection at the free edge, said projection being in alignment with and matching the opening, said members being slidable transversely of the flanges into positions wherein respectively complementary flanges are in engagement, said wires being received in the chambers during sliding of the members into position, and means forming an aperture through the plate of one of said members receptive of said anchor element to a position between the respective flanges whereby the wires are anchored in engagement with each other and to the plate and the members are anchored against disengagement.

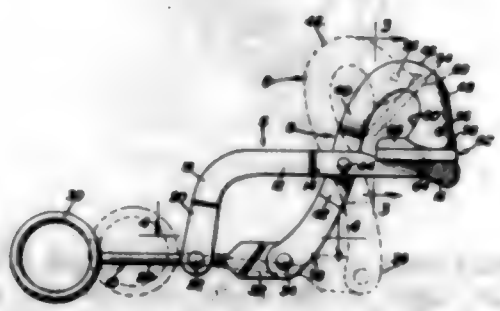
2,900,689
ROPE FASTENER
Harry A. Pearson, Wilmette, Ill.
Application January 21, 1954, Serial No. 405,437
2 Claims. (Cl. 24—128)



1. A rope fastener for securing a rope having a knot formed therein, said fastener comprising: an arcuate knot-holding arm having an opening at least as large as said rope and of lesser size than the formed knot for restricting movement of the rope beyond the knot without necessitating tying the rope thereto, said opening of said arcuate knot-holding arm being U-shaped and capable of receiving a rope which is inserted laterally therein, a spirally wound flexible upstanding coil secured to said knot-holding portion and extending in spaced relation thereto, said coil being adapted to receive and frictionally engage the rope beyond its formed knot when the rope passes through adjacent convolutions of said coil, said adjacent convolutions being spaced apart a distance not exceeding the diameter of the rope, an upstanding post extending substantially axially of and internally to said coil, said post being substantially centrally positioned in spaced relation to convolutions of the coil and being adapted to receive at least one turn of the rope, and a base secured to one end of the coil to form a support means therefor, said fastener serving to securely retain a knotted rope without necessitating tying the rope to the fastener by the combined action of said knot-holding portion that prevents movement therethrough of the rope beyond said knot, the said spirally wound coil frictionally engaging the rope when the rope passes through adjacent convolutions, and the said centrally positioned post that frictionally receives at least one turn of the rope wound thereon.

2,900,690
CABLE HANDLING CLAMP
Wayne C. Swearen, Moundridge, Kans.
Application January 7, 1955, Serial No. 480,515
2 Claims. (Cl. 24—134)

2. A clamp for gripping and handling cables comprising a first lever generally L-shaped in side elevation and embodying a long arm and a short arm, said short arm having a bifurcated end portion providing spaced furcations, a pin having end portions mounted for rotation in bearings provided therefor in the respective furcations, said pin spanning the space between the furcations and being provided with an opening located between said furcations, a jaw fixedly mounted on a forward end portion of said long arm, a straight rigid push-pull rod having a portion between its ends slidably mounted in the opening in said pin, one end of said push-pull rod extending rearwardly to one side of the furcations and being provided with a ring, the other end portion of said push-pull rod extending forwardly beyond said furcations and being disposed in a position spaced from



said long arm, a second lever J-shape in side elevation and having an arm crossing and pivotally connected with a median portion of said long arm rearwardly of said fixed jaw and having a curved portion the terminal end of which is directed toward said jaw and provided with a pivotally mounted self-levelling jaw member which is opposed to and cooperable with said fixed jaw, the other end portion of the arm of the J-shaped lever extending in a direction toward the bifurcated end portion of said short arm and having an end portion coplanar with and movable toward and from said bifurcated end and hingedly connected to the end portion of said push-pull rod.

2,900,691
EVER SAFE PIN
Charles A. Morgan, Denver, Colo.
Application July 2, 1957, Serial No. 669,503
1 Claim. (Cl. 24—159)

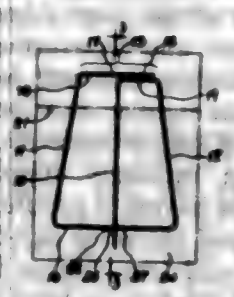
A safety pin comprising a flexible wire looped about itself to provide a single, generally circular torsion loop at one end of said pin, with the wire extending from said loop as a hasp leg and a point leg, and extending longitudinally from said loop in spaced relation and in the same general direction, the opposite end of said point leg being provided with a point for piercing a fabric material and the opposite end of said hasp leg being provided with a generally U-shaped hasp extending generally at right angles to said hasp leg and having an attached side and a free side, said attached side of said hasp being connected to said opposite end of said hasp leg, said hasp sides being spaced apart at said hasp leg to form an open end and said hasp sides being connected together opposite said hasp leg, said attached side and said free side of said hasp being of approximately the same height and said free side being spaced from said attached side a distance sufficient to freely receive said point leg between said hasp sides, said point leg crossing said hasp leg in said torsion loop on the same side as said attached side of said hasp, whereby said pin installed in fabric in closed position may be withdrawn from the fabric by turning said torsion loop to cause the open end of said hasp to engage said fabric and pulling on said torsion loop in a direction away from said hasp.

cent one end of the member, a sleeve formed on one of to be drawn together to apply tension to the band, a

2,900,692
PIN FASTENER
Fay S. Lincoln, New York, N.Y.
Application October 10, 1956, Serial No. 615,655
3 Claims. (Cl. 24—161)

1. A push-on, push-off pin fastener, for a tag, formed from a single length of spring wire which comprises two arms firmly joined together to form a closed lower portion, the free ends diverging from one another over at least a portion of their lengths and bent into spaced arms to form a generally U-shaped frame adjacent said closed lower portion, and having symmetrical pin pointed terminal portions bent back from the respective ends of the U-shaped frame to form between them an angular fabric-receiving recess with their pin ends contiguous to one another at a mid-point within the U-shaped frame and substantially in its plane, the maximum lateral spacing between said spaced arms being approximately as great as the spacing between the contiguous ends and the junction of the divergent portions, whereby fabric inserted through said angular recess is bunchable by jamming against said junction thereby preventing accidental detachment of said pin fastener from the fabric.

2,900,693
PIN TICKET
Fay S. Lincoln, New York, N.Y.
Application October 10, 1956, Serial No. 615,656
2 Claims. (Cl. 24—161)

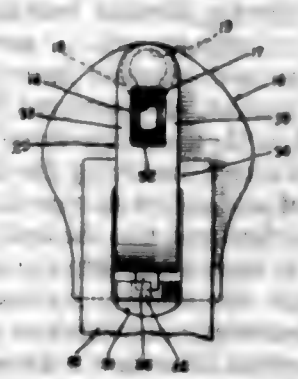


1. A pin ticket fastener for securement to an article formed from a single length of spring wire comprising two spaced arms joined together by a linear spring bar to form a closed lower portion, the said arms and spring bar together forming a U-shaped frame of plane configuration, the free ends of said arms being bent toward and free from direct interconnection with each other to form a ticket securing means, at least one of said arms being further bent downwardly and extending across in contact with said bar and at right angles thereto and terminating in a pinpoint portion immediately beyond said bar, said pinpoint portion being relatively short in relation to the length of said bar, whereby said bar may be resiliently bowed to either side of said pinpoint portion for locking the fastener on said article.

2,900,694
TOP STOP FOR SLIDE FASTENERS
Alexander M. Brown, Conneaut Lake, Pa., assignor to Talon, Inc., a corporation of Pennsylvania
Application February 20, 1956, Serial No. 566,436
5 Claims. (Cl. 24—205.11)

1. In a slide fastener of the class described, comprising a pair of opposed stringer tapes having a series of spaced-apart interlocking fastener elements attached to the opposed edges thereof and a slider arranged thereon for longitudinal movement therealong for engaging and disengaging the same, a plurality of the upper endmost fastener elements on each of said tapes being deformed in such manner so that the deformed endmost fastener elements on one stringer will not interengage with those of the opposed stringer and will not pass through said slider so as to provide an end stop for said fastener.

2,900,695
AUTOMATIC LOCK SLIDERS
Louis H. Morin, Bronx, N.Y.
Application March 5, 1953, Serial No. 340,560
1 Claim. (Cl. 24—205.14)



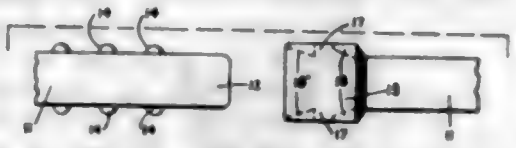
A lock element blank adapted to be formed into a pivoted pin lock element for a slider of the class comprising a channel body having an outwardly projecting apertured post on one wall thereof, said blank having a continuous unbroken four-walled aperture at one end portion thereof for receiving said post, opposed side walls of said blank aperture being bulged outwardly, inner surfaces of said bulged side walls having inwardly projecting pivot members adapted to freely pass over said post and said pivot members being movable into opposite end openings of said post aperture by compression of said outwardly bulged side walls toward each other to simultaneously straighten said side walls to form said lock element from said blank and pivotally attach said lock element to said post.

2,900,696
DOG COLLAR OR THE LIKE
John H. Bacon, Wellesley Hills, Mass.
Application February 27, 1956, Serial No. 568,026
2 Claims. (Cl. 24—206)

1. A fastener of the class described comprising an elongated member rectangular in cross section and molded of polyethylene, a number of projecting bosses formed on the narrow opposite sides of the member and adja-

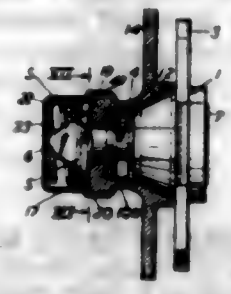
having a bifurcated end portion providing spaced furca- away from said hasp.

cent one end of the member, a sleeve formed on one of the other sides of the member and adjacent the other end, means forming an opening extending through the sleeve and parallel to the member for receiving the first named end of the member, a pair of oppositely disposed holes formed transversely through the sleeve and ex-



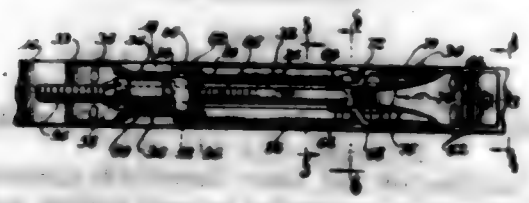
tending in the same direction as and adapted to receive the bosses, said opening being flared outwardly from the recesses to the end of the sleeve through which the first named end of the member is inserted and forming a shoulder which yieldably holds the bosses when they are inserted in the recesses.

2,900,697
FASTENERS FOR PANELS AND THE LIKE
John Freeman Cass, Cheltenham, England
Application April 5, 1955, Serial No. 499,469
13 Claims. (Cl. 24—221)



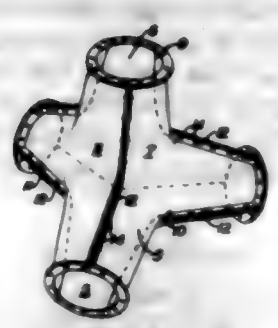
1. A fastener comprising separable mating parts including a spigot and a socket dimensioned to receive such spigot; a female conical bearing surface in said socket located to engage with a complementary male conical surface on said spigot to limit introduction of the spigot into the socket; an apertured locking surface at the rear of said socket; an apertured washer riding on said locking surface; a fastening pin carried by and extending axially of said spigot to pass through the aperture in said locking surface and into the aperture of said washer when the spigot is introduced into the front of said socket and engaged with the bearing surface therein, securing means on said fastening pin located to cooperate with said locking surface when the spigot is engaged with the bearing surface of the said socket, rotation of the fastening pin relatively to the socket to a locked position rotating the washer and engaging said securing means with said locking surface to secure the fastening pin in the socket; and co-operating catch and notch means on said washer and locking surface for resiliently retaining the washer in the position thereof corresponding to the said locked position of the fastening pin.

2,900,698
QUICK ACTING HOSE CLAMP
Herbert P. Zartler, Hillside, Ill., assignor to Wittek Manufacturing Co., Chicago, Ill., a corporation of Illinois
Application December 17, 1957, Serial No. 703,442
5 Claims. (Cl. 24—279)



1. A hose clamp of the quick release type comprising, a tension band having a pair of free ends adapted to be drawn together to apply tension to the band, a journal formation on one free end, a T-bolt pivotally mounted for swinging movement in said journal with the T-portion of the bolt extending to the second free end, a retainer for said T-portion secured on said second free end and having a base and a pair of ears upstanding on the base arranged in planes generally perpendicular to the axis of the clamp, said ears being spaced apart a substantially uniform distance less than the length of said T-portion and being apertured to enable seating of the T-portion therein, and an outwardly opening trough-like formation integral with said ears and rearward thereof, said formation being of suitable dimension along substantially the entire length thereof to freely accommodate said T-portion therein and connected with said ears by a pair of bent bridging segments, said bridging segments defining guide means extending inwardly into the trough from the outer edge of said formation and terminating at the apertures of the ears, said base having means located in said trough for leading the T-portion to said apertures when inserted into the trough outwardly of said segments.

2,900,699
MOLD FOR MOLDING CONCRETE BLOCKS PRESENTING IRREGULAR SURFACES
Pierre François Danel, Grenoble, France, assignor to Etablissements Neyrpic, Grenoble, France, a corporation of the French Republic
Application July 8, 1954, Serial No. 442,148
6 Claims. (Cl. 25—118)



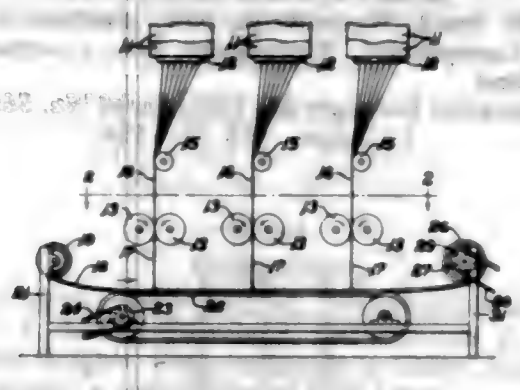
1. A mold for forming concrete blocks having four equi-angularly related legs projecting from a central body portion, said mold comprising four identical interchangeable mold sections, each having a central surface portion conforming to one of the four sides of the central body portion of said block and three trough-like portions connected to and extending outward from said central surface portion in equi-angular relation to each other, said central portion and said trough-like portions being connected together in mutually supporting relation, said trough-like portions having a profile in cross-section conforming in shape and extent to one-third of the bounding surface of one of said legs, means for securing said sections in assembled relation to form the mold and means cooperating with the outer ends of said trough-like portions forming three legs of the mold for closing said mold at said outer ends.

2,900,700
METHOD OF MAKING A TEXTILE MAT
Philip J. Frickert, Anderson, S.C., assignor to Owens-Corning Fiberglas Corporation, a corporation of Delaware
Application December 22, 1954, Serial No. 476,984
7 Claims. (Cl. 28—73)

1. Method of producing a mat comprising advancing a fibrous base material along an established path, advancing a bundle of filaments at sufficient speed with respect to the mass of the bundle to provide a driven bundle of filaments that forcibly impinges upon and inter-

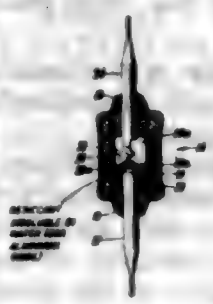
ing a first surface facing said guide face and a second

locks with said fibrous base material to form an integral product, at least some of the fibers in said integral product



being glass and others being a resinous material, and fusing the resinous material fibers.

2,900,701
SEMICONDUCTOR DEVICES AND METHODS
Donald L. Coggins, Stoneham, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application April 7, 1953, Serial No. 347,320
4 Claims. (Cl. 29—25.3)



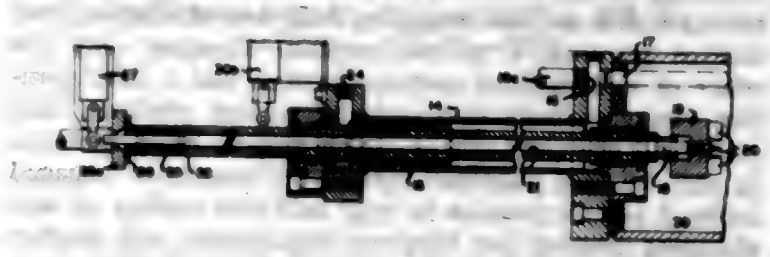
1. The process of preparing semiconductor devices comprising the steps of joining a semiconductor element having a prepared surface to a support, covering said surface with a quantity of a powdered desiccant, contacting said semiconductor element with a contact element extending through said desiccant while vibrating said elements, and hermetically sealing said desiccant and said elements within an envelope.

2,900,702
METHOD OF TREATING SILICON SURFACES
Russell S. Ohl, Fair Haven, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
No Drawing. Application December 19, 1955
Serial No. 553,697
6 Claims. (Cl. 29—25.3)

1. The method of manufacture of semiconductive devices having a silicon surface which comprises the steps of producing a surface having a high degree of crystallographic perfection, chemically cleaning said surface, immersing said clean surface in methyl alcohol, drying said methyl alcohol from said surface, and removing said surface from exposure to the atmosphere within a period of twelve hours.

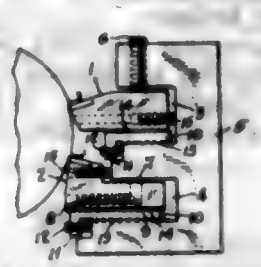
2,900,703
DESCALING APPARATUS
Thomas C. Kane, Mahoning, Ohio, assignor to The Commercial Shearing and Stamping Co., Youngstown, Ohio, a corporation of Ohio
Application May 25, 1954, Serial No. 432,270
10 Claims. (Cl. 29—81)

1. A descaler apparatus comprising a cylinder, a piston movable in said cylinder, means for delivering descaling liquid to one side of the piston, means adapted continuously to supply hydraulic fluid under pressure, pusher means adapted to receive the end of a piece to be descaled, means operable by pressure from the piece to be descaled admitting hydraulic fluid from the supply means to the piston opposite the descaling liquid whereby



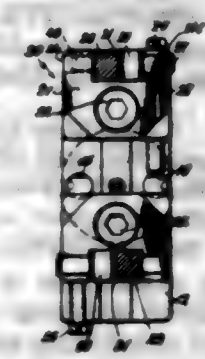
to discharge the descaling liquid from the cylinder and simultaneously move the pusher means and piece to be descaled axially away from the cylinder and means receiving the descaling liquid and discharging it against the moving piece to be descaled.

2,900,704
ADJUSTABLE TOOL MOUNTING FOR LATHES
Carlisle M. Sweet, Milwaukee, Wis.
Application April 22, 1957, Serial No. 654,248
5 Claims. (Cl. 29—96)



1. An adjustable tool mounting for lathes, comprising a tool holder having a recess therein for receiving a tool, a tool and guide block assembly adjustably clamped in said recess, a longitudinal way between the tool and guide block to provide for longitudinal adjustment of the tool and prevent relative lateral movement between the tool and guide block, longitudinal abutment means between the tool and tool holder determining the depth of cut position of the tool, a diagonal way between the guide block and tool holder to provide for lateral adjustment of the guide block and the associated tool, and means to adjust the guide block along said diagonal way to effect lateral adjustment of the tool.

2,900,705
TOOL HOLDER
Hermann Walker, Esslingen-Waldenbronn, Germany
Application January 24, 1958, Serial No. 711,013
Claims priority, application Germany January 29, 1957
6 Claims. (Cl. 29—96)



1. Tool holder comprising, in combination, supporting means including a body having two opposite wall portions, at least one of said wall portions having a guide face adapted to engage a face of a tool for slidably guiding the tool during adjustment; a clamping member hav-

ing. a tension band having a pair of free ends adapted bundle of filaments that forcibly impinges upon and inter-

ing a first surface facing said guide face and a second surface facing the other wall portion, said second surface having two opposite surface portions inclined to each other and to said guide face; and combined clamping and adjusting means mounted on said other wall portion and having a first position engaging only one of said inclined surface portions, a second position engaging only the other of said inclined surface portions and a third position engaging both said inclined surface portions, said combined clamping and adjusting means being movable in each of said positions toward the respective engaged inclined surface portion to urge said first surface of said clamping member into frictional engagement with another face of the tool and to move said clamping member and said tool together along said guide face in said first and second positions of said combined clamping and adjusting means, and to clamp said tool by said clamping member against said guide face in said third position of said combined clamping and adjusting means.

2,900,706
LENS, MIRROR OR LIKE ELEMENTS FOR HIGH FREQUENCY RADIO AERIALS

Peter Frederick Mariner, Elstree, and John Alexander Christie Kinnear, Bromley, England, assignors to Elliott Brothers (London) Limited, London, England, a company of Great Britain

Application November 20, 1953, Serial No. 393,485
Claims priority, application Great Britain November 21, 1952
3 Claims. (Cl. 29—155.5)

1. A method of manufacturing a lens element for high frequency electromagnetic energy which comprises preparing a plurality of elemental units of solid dielectric material having a predetermined thickness between opposed faces, producing an electrically conducting surface on at least one of said faces of each unit, assembling and securing the units together in a predetermined relationship to produce a blank in which the electrically conducting surfaces are disposed in parallel relationship and spaced apart by said predetermined thickness of dielectric material, slicing the blank in planes normal to said conducting surfaces to produce a plurality of secondary elemental units having a thickness between opposed faces substantially equal to said predetermined thickness, producing an electrically conducting coating on at least one of said faces of each secondary elemental unit and assembling and securing the secondary elemental units together in the same relative positions as those occupied prior to slicing of the blank to reconstitute the blank.

2,900,707
METALLIC PROTECTIVE COATING

Henry Brown, Huntington Woods, Mich., assignor to The Udylite Corporation, Detroit, Mich., a corporation of Michigan

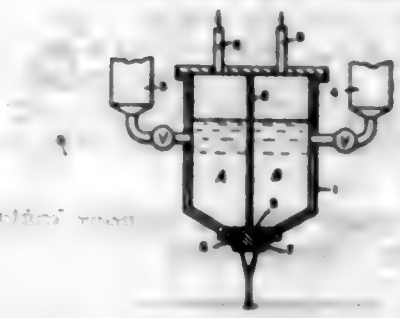
No Drawing. Application August 6, 1954
Serial No. 448,365
4 Claims. (Cl. 29—183.5)

3. A metallic bright protective coating on a metallic base consisting of a firmly adherent layer of a lustrous nickel deposit having a thickness in the range of about 0.5–2 mils, and a layer overlying said lustrous nickel deposit consisting of a nickel alloy and having a thickness of about 0.05–1 mil, said nickel alloy being an alloy of nickel with at least one metal selected from the group consisting of cobalt and iron and containing at least 50% nickel, the cobalt, when present, being present in an amount of about 10% to 50%, and the iron, when pres-

2,900,708
APPARATUS FOR PRODUCING ALLOY AND BIMETALLIC FILAMENTS

Robert B. Pond, Westminster, Md., assignor to Marvaland, Incorporated, Westminster, Md., a corporation of Maryland

Application February 16, 1956, Serial No. 565,814
4 Claims. (Cl. 29—194)



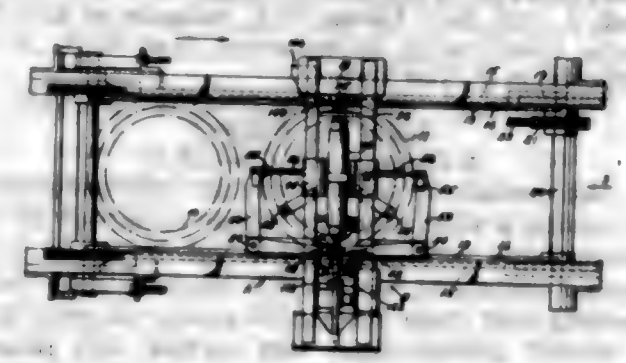
1. An article of manufacture comprising a cast metallic anistropic filament formed of at least two metals substantially simultaneously solidified wherein the composition varies continuously and progressively throughout the transverse direction of the filament from substantially 100% of one metal on one side of the filament to substantially 100% of the other metal on the other side of the filament.

4. The method for producing filaments formed of at least two metals which comprises bringing the metals in a molten state together to form a continuous single stream of molten metal, impinging the continuous single stream of molten metal against a concave chill surface, rotating the concave chill surface on an axis coincident with the center of concavity of the surface so that the surface moves relative to the stream of metal as it impinges upon the moving surface, solidifying the stream of molten metal on the chill surface so as to form a filament having a composition varying continuously and progressively throughout the transverse direction thereof.

2,900,709
AUTOMATIC VALVE STEM INSERTER

Homer S. Harrison, Birmingham, Mich., assignor to Allied Steel and Conveyors, Inc., Detroit, Mich., a corporation of Michigan

Application January 10, 1956, Serial No. 558,368
18 Claims. (Cl. 29—211)



1. A tubeless tire wheel valve inserting machine comprising a frame, means mounted on said frame for transporting wheels consecutively to a valve inserting location, means mounted on said frame at said location for rotating a wheel to a predetermined valve inserting position, means reactively mounted on said frame having a sensing member in the path of valve hole rotation for stopping said rotation when a valve hole in the wheel reaches said valve inserting position comprising resiliently mounted dog means adapted to engage a rotating wheel along a radial arc intersecting the valve hole, said dog means being adapted to engage the valve hole when it reaches the

frame for feeding valves consecutively to a position adjacent said valve inserting position, and means mounted on said frame for moving a valve from said adjacent position into assembled position in said wheel hole.

ERRATUM

For Class 29—235 see:
Patent No. 2,901,310

2,900,710
METHOD OF MAKING COLORED WIRE
Leonard T. Hurst, Cleveland, and Edward P. Presby, Garfield Heights, Ohio, assignors to United States Steel Corporation, a corporation of New Jersey
No Drawing. Application January 6, 1956
Serial No. 557,628
4 Claims. (Cl. 29—407)

1. The method of making colored wire comprising providing a rod, cleaning the rod, applying a wire drawing base coating to the surface of the rod, applying a solution of a water soluble dye to the rod with the base coating thereon, drying the rod with the dye thereon, and then drawing the rod to wire of the desired diameter.

2,900,711
METHOD OF MAKING BRAKE SHOES
Roscoe L. Wilson, Mahwah, N.J., assignor to American Brake Shoe Company, New York, N.Y., a corporation of Delaware
Application August 29, 1956, Serial No. 606,868
2 Claims. (Cl. 29—407)

1. In the manufacture of components for a specialized railroad braking system comprising a plurality of composition-type brake shoes subject to excessive wear and damage when incorporated in a standard system constructed for utilization of standard cast iron brake shoes, in which specialized braking system cast iron shoes provide inadequate braking, the method of fabricating component parts for said system to prevent substitution of standard cast iron shoes in said specialized system and to prevent incorporation of said composition-type shoes in a standard system comprising affixing to each of the composition-type shoes intended for use in said specialized braking system a plurality of mounting lugs corresponding in number and position to the lugs on a standard cast iron shoe, one of said mounting lugs having a first critical mounting dimension substantially larger than the corresponding standard dimension on a cast iron shoe and one of said lugs having a second critical mounting dimension substantially smaller than the corresponding standard dimension, and forming in each of the brake heads for said specialized system a plurality of lug-engaging elements corresponding to the lug-engaging elements of a standard brake head but having first and second critical lug-engaging dimensions individually corresponding to said first and second critical mounting lug dimensions, whereby said composition shoes cannot be mounted in standard brake heads by virtue of said enlarged first critical dimension and said specialized system brake heads cannot accept a standard cast iron shoe by virtue of said reduced second critical dimension.

2,900,712
METHOD OF MAKING SEALED METALLIC CONTAINERS
Marion M. Keating, Denver, Colo., assignor to Keating Manufacturing Corporation, Denver, Colo., a corporation of Colorado
Application July 26, 1956, Serial No. 599,184
4 Claims. (Cl. 29—422)

1. A method for forming hollow tubular sealed containers comprising: cutting a length of metal tubing into work pieces of uniform lengths; rolling each end of each work piece inwardly to form a restricted terminal opening; placing a fragment of fusible metal in each extremity of said work piece; placing the work piece in an enclosing mold while maintaining the fragments of fusible metal in each extremity of said work piece; placing the work piece in an enclosing mold while maintaining the fragments of fusible metal separated; rotating said mold on a medial axis at right angles to its length to force the fragments oppositely outward into their respective extremities; applying heat to the rotating mold to fuse the fragments so that the fused metal will be forced into the extremities of the work piece to seal the latter; cooling said mold while rotating to allow the fused metal to solidify while under the influence of centrifugal force to form a sealed container.

2,900,713
METHOD OF MAKING REINFORCED HONEYCOMB STRUCTURES
Harold S. Young, Claude Vista, Calif.
Application May 31, 1955, Serial No. 512,120
3 Claims. (Cl. 29—478)

1. In a method of making reinforced panels from metallic cellular structures having uniformly dimensioned and aligned openings comprising, placing a sheet of metal brazing material having affinity for the metal of said structure and provided with weakened zones corresponding in spacing to that between the centers of said openings superposed on said cellular structure with the zones aligned with said openings, punching said sheet in the area of said weakened zones to displace metal into the openings of said cells of said structure and cause the displaced metal to frictionally engage the walls of said openings, superimposing a metal covering sheet on the brazing sheet, and subjecting the assembly to a brazing temperature corresponding to the melting point of the brazing sheet to cause the displaced metal to be bonded to the cellular structure and the surface of said brazing sheet to said covering sheet.

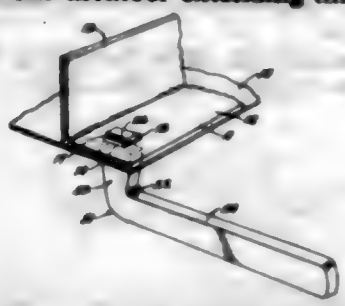
2,900,714
METHOD OF JOINING SHEET MATERIAL
Norman Berlin Watkins, Wichita, Kans., assignor to The Coleman Company, Inc., Wichita, Kans., a corporation of Kansas
Application June 25, 1954, Serial No. 439,371
4 Claims. (Cl. 29—513)

1. In a method of joining sheet material, the steps of providing a pair of members with polygonal openings

ent, being present in an amount less than 40%.

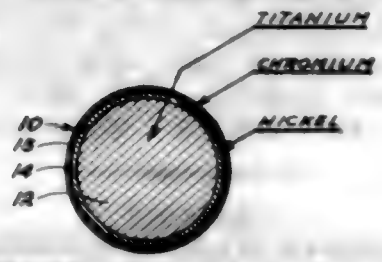
said valve inserting position, means mounted on said

therethrough, providing laterally extending flanges along opposite peripheral portions of one of said openings, bringing said members into abutting relation with said flanges of the one member extending through the opening



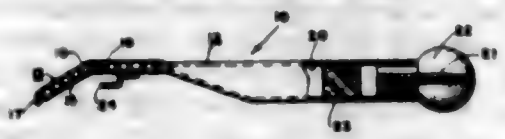
in the other member, and bending said flanges laterally against the member that they extend through by applying a deforming pressure sequentially across the width of each of said flanges.

2,900,715
PROTECTION OF TITANIUM
Aubrey H. Milnes, Cleveland, Ohio, assignor to The Steel Improvement & Forge Co., Cleveland, Ohio, a corporation of Ohio
Application May 28, 1956, Serial No. 587,712
1 Claim. (Cl. 29—528)



The method of hot forging titanium which includes the steps of electroplating the metal with a layer of nickel having a thickness of from about 0.0002 inch to about 0.001 inch, electroplating a layer of chromium having a thickness of from about 0.0002 inch to about 0.0005 inch over the nickel, heating the metal to forging temperature in a furnace having a reducing atmosphere, and forging the metal at an elevated temperature in air with the said layers thereon.

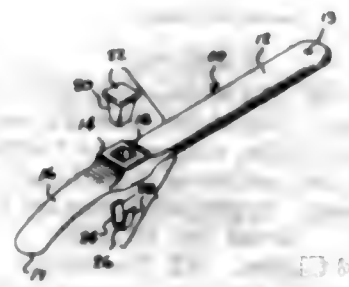
2,900,716
OPENING DEVICE
Robert D. Franz, West Allis, Wis.
Application January 29, 1959, Serial No. 789,858
7 Claims. (Cl. 30—16)



1. An opening device comprising a main body portion defining a central chamber, a head at one end of said main body portion, piercing means carried by said head for puncturing pressurized fluid containers, a longitudinal bore extending through said head in communication with said chamber, port means defined in said piercing means in communication with said bore, and valve means within said chamber accommodating therethrough the gas and liquid from the containers, said gas being permitted to pass therethrough while said liquid is blocked thereby.

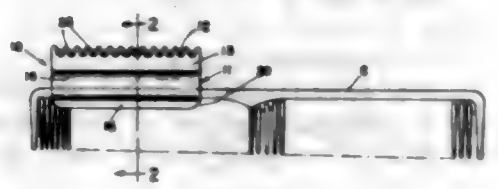
2,900,717
FRUIT PEELER
Raymond Byrd and Wade Byrd, Grant, Va.
Application June 6, 1958, Serial No. 740,339
5 Claims. (Cl. 30—24)

1. In a fruit peeler, a handle; a blade support portion on the handle; a blade carried by said portion; and means for holding the blade connected to said portion, said portion having an opening therethrough, said blade being engaged in said opening, the blade being of U-shape and including a bight portion spaced outwardly from said portion and sharpened to penetrate the skin of the fruit, said blade including legs, said legs for part of their lengths being exposed adjacent the bight portion for cutting the skin along parallel paths, with the bight portion cutting



the skin away from the pulp of the fruit between said paths, said opening being tapered in a direction from one toward its other end, the legs of the blade being extended in converging relation complementarily to the taper of the opening, said means comprising a plug wedging the legs in the opening in selected positions to which the bight portion is adjusted toward said first named position.

2,900,718
HAIR CUTTING DEVICE
Lee W. Bailey, Hewlett, and Paul Fisch, New York, N.Y.
Application June 17, 1957, Serial No. 666,821
5 Claims. (Cl. 30—36)

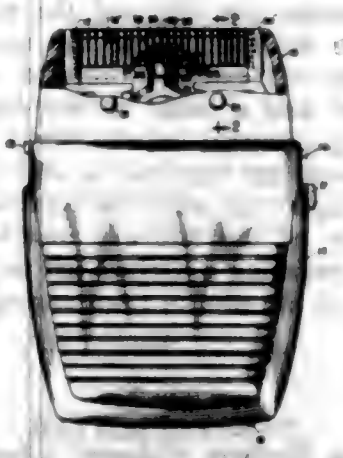


3. A blade and guard holding device adapted to be mounted on a support and comprising an elongated member made of resilient material, and being of uniform cross-section through at least a major portion of its length, and comprising a bight portion comprising a pair of opposed inner walls connected at one end by a curved wall, outwardly curved portions extending from the opposite ends of said opposed inner walls, outer walls extending from said outwardly curved walls, beyond said bight portion, said outer walls being spaced from said bight portion and from each other, whereby said outer walls may be pressed together to open said bight portion to facilitate insertion of a blade and guard into said bight, whereby said inner walls will grip said blade and guard when said outer walls are released, and whereby said outer walls may be spread apart by a support inserted therebetween so that said outer walls will resiliently grip said support.

2,900,719
CUTTERS FOR ELECTRIC SHAVERS
Melvin Kohner, Racine, Wis., and James A. Wright, Chicago, Ill., assignors to Supreme Products Corporation, Chicago, Ill., a corporation of Illinois
Application August 24, 1956, Serial No. 606,133
2 Claims. (Cl. 30—43)

1. An electric shaver cutter comprising a body member and a plurality of parallel cutter elements projecting from and spaced along the length of said body member, each of said cutter elements comprising a soft metal layer integrally sandwiched between a pair of hard metal layers exposed at their outer surfaces and defining oppositely forming cutting edges on said hard metal layers at their

remote margins, said soft metal layer being exposed at its edge within the outer dimension of said hard metal layers at their cutting edges and being gradually de-



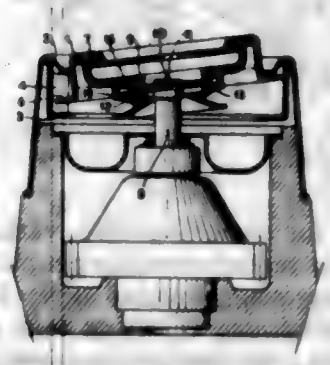
pressed toward the middle of said soft metal surface to form a concave contour between said cutting edges integral therewith.

2,900,720

DRY SHAVER WITH A SELF ADJUSTING SHEAR PLATE AND ROTARY CUTTER

Gerrit Starre and Eppo Bakker, Drachten, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Application December 27, 1956, Serial No. 630,824
Claims priority, application Netherlands January 17, 1956
3 Claims. (Cl. 30—43)



1. A dry shaver comprising a shear plate adapted to be positioned angularly relative to the axis of said shaver, a rotary cutting member co-acting with said shear plate and adjustable therewith, a driving shaft having a groove in one end thereof, means connecting said rotary cutting member to said driving shaft, said means including a sinuous spindle provided with a linear middle portion having part thereof in said groove, and straight end portions extending in the same plane as said middle portion and substantially at right angles thereto, said end portions secured to said cutting member, and parts connecting said end portions to said middle portion spaced from said driving shaft.

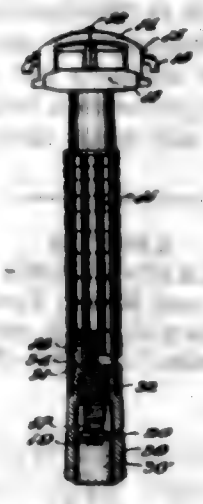
2,900,721

SAFETY RAZOR WITH SPIDER STEM LOCK RING

Warren L. Nissen, Marblehead, Mass., assignor to The Gillette Company, Gillette Park, Mass., a corporation of Delaware

Application January 16, 1957, Serial No. 634,527
1 Claim. (Cl. 30—60.5)

In a safety razor, a spider stem having an externally threaded portion bounded by a smooth cylindrical end section of less diameter than the thread and having a circular groove therein, a ring retained in said groove and movable with said stem, and a nut threaded on said stem having a bore, the bore including an intermediate recess portion terminating in an inner shoulder, said intermediate recess portion having a diameter sufficient to permit said threaded portion and said end section of said stem carrying said ring to move freely therein, said ring being movable with said stem into contact with said inner shoulder for limiting the movement of said stem, the clearance between the intermediate recess portion and the cylindrical end section of said stem being less than the thickness of said



ring, an inner recess portion connected to the intermediate recess portion having a diameter sufficient to permit said externally threaded portion of said stem to move therein, and an outer recess portion connected to the intermediate recess portion, said outer recess portion having a diameter sufficient to permit said ring to be slid over said end portion of said stem and to be placed in the groove therein, said groove having a tapered wall adapted to expand said ring when the latter is forced inwardly and longitudinally of said stem.

2,900,722

SHEARS

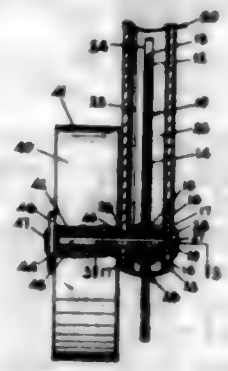
August Weisenburger, Frankfurt am Main, Germany

Application June 9, 1958, Serial No. 740,954
Claims priority, application Germany June 12, 1957
3 Claims. (Cl. 30—238)

1. Pruning shears comprising, in combination, a first integral shear means including a handle member, a blade member having a curved cutting edge, and a support portion intermediate said handle member and blade member; a second shear means including a second handle member, a second elongated support portion having one end integral with said second handle member, a second blade member having an outer curved cutting edge portion and an inner straight cutting edge portion, and a pivot connecting said one end of said second support portion with said blade member for turning movement about an axis, said second blade member having an elongate guide slot extending in direction of said second blade member; a

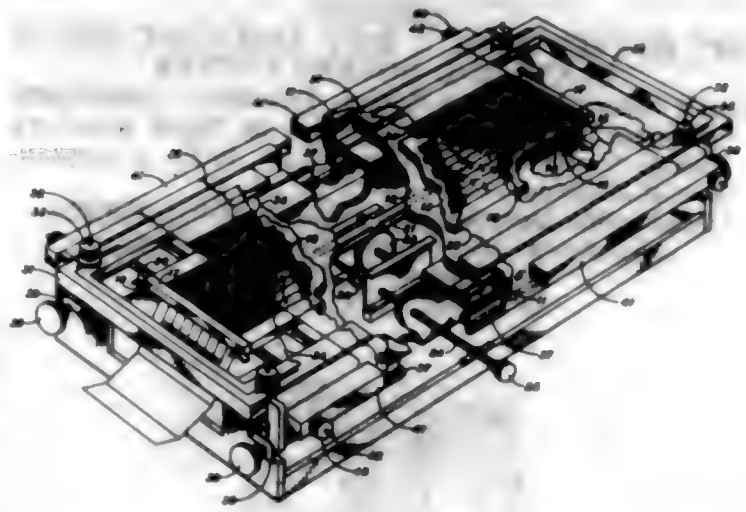
guide pin secured to said first support portion and passing through said guide slot; and a main pivot means connecting said first support portion and the other end of said second support portion for turning movement about a main axis between a first position in which said blade members are closed and said first blade member extends in direction of said guide slot and of said second blade member, and a second position in which said blade members extend at an angle to each other, said main pivot means and said guide pin being spaced from each other in a direction transverse to the direction of said first blade member and being substantially equidistant from said pivot when said blade members are closed whereby said second blade member performs a longitudinal movement during movement of said blade members to said closed position.

2,900,723
LAWN EDGER
Walter E. Hamilton and Robert Trafelet, Toledo, Ohio
Application January 20, 1958, Serial No. 709,827
1 Claim. (Cl. 30—319)



A lawn edger comprising, in combination, an elongated tubular member; one end of the member having a hand grip part by which the member may be manipulated; the opposite end of the member having a pair of slots of equal lengths and substantially uniform width throughout their lengths and extending from the mentioned other end of the member along straight lines parallel to the longitudinal axis of the member in diametrically opposite relation to each other for a distance less than the member length; the member having a pair of facing axially aligned openings at diametrically opposite points on opposite sides of the slots and spaced circumferentially about the member substantially ninety degrees from the slots and having their common axes normal to the longitudinal axis of the member and to the extension of the slots; a rotatable lawn and sod cutting disc having a radius of a length less than the length of the member slots and an opening coincident with its axis of rotation; a sleeve having substantially semi-spherical and identical end portions and a substantially cylindrical intermediate portion; the sleeve intermediate portion extending through the disc opening to support the sleeve end portions on opposite sides of and in engagement with opposite faces of the disc web whereby the sleeve and disc are interlocked and move as a unit; the sleeve end portions being each of a dimension and spaced from the other a distance that the semi-spherical surfaces thereof substantially fit the inner cylindrical surfaces of the mentioned member end on opposite sides of the slots when the disc with the therewith interlocked sleeve is inserted edgewise into the slots to a depth in excess of the length of disc radius and in such fitting provides both a bearing to sustain relative rotation of the disc and member end closure for substantially closing the otherwise open other end of the member; the disc being of a thickness substantially equal to the width of the slots whereby deflection of the disc is restricted by engagement of the disc web surface with the slot edges and lawn edging debris adhering to the disc may be scraped therefrom in the rotation of the disc relative to the member; a stub shaft in extension through the opening and the sleeve and adapted to provide a journal connection between the disc and the member allowing rotation of the disc relative to the member; the stub shaft having an end extension beyond and to one side of the member; and a roller of less diameter than the disc and having a journal bearing sleeve portion thereon adapted to receive and bear on the stub shaft end extension to thus support the roller for rotation independently and at one side of the disc and member whereby the roller may in engaging a surface act to guide and limit the movement of the disc in lawn edging.

2,900,724
STRATAPLOTTER
Edward Vernon Herbert, Calgary, Alberta, Canada, assignor, by mesne assignments, to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Application February 7, 1956, Serial No. 563,988
5 Claims. (Cl. 33—1)

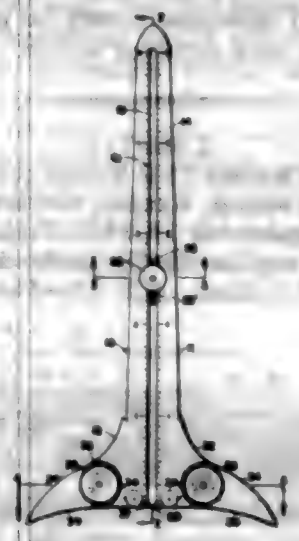


1. Apparatus for removing time variations from the traces of a seismic record containing a plurality of spaced timing lines comprising a record table for holding said record, a template frame overlying said record table for adjustably holding a transparent template having a plurality of time scale lines thereon corresponding to said timing lines and representing the required time corrections for the different traces, clamping means for clamping a sheet of transparent plotting paper over said template and in fixed relationship thereto, and drive means for moving said record table and said record longitudinally to successive positions at spaced intervals relative to said template and said plotting paper to maintain alignment between the said spaced timing lines on said record and corresponding said time scale lines on said template at the point of transcribing while a record trace is transcribed to said plotting paper.

2,900,725
DRAWING DEVICE
Konstantin F. Herchikov, Brooklyn, N.Y.
Application January 22, 1958, Serial No. 710,458
3 Claims. (Cl. 33—41)

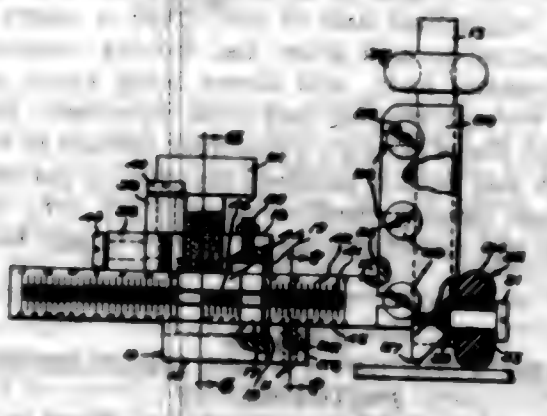
1. A device for drawing lines in conjunction with the use of a curved ruler and comprising a flat body portion of general T shape having a stem and arms and a longitudinal medial slot through the stem, and extending between the arms; a slide block having a hole therethrough to restrain the end of a marking device passing through the block, the latter being slidably disposed in the slot; means to secure selectively the block against sliding movement in the slot; arc pieces pivotally mount-

ed on the arms of the body and having curved edges to engage against the outer edge of the curved ruler with



which the device is to be used, and means for clamping the arc pieces in fixed position relative to the body.

2,900,726
DEVICES FOR USE IN MAKING PERMANENT LAYOUT IMPRESSIONS
Karl J. Hentz, Brunswick, Maine
Application February 27, 1953, Serial No. 339,300
9 Claims. (Cl. 33—42)



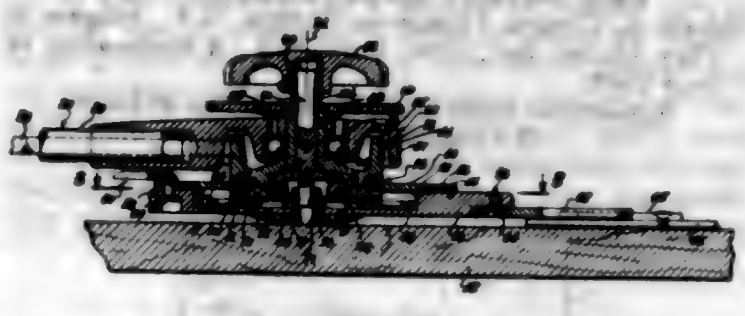
1. A device for use in marking lines by indentations in flat surfaced work that are gauged with respect to a shoulder, said device comprising a work engaging base of substantial area including a shoulder engaging element, a scale unit adjustably connected to said base and including an upright, a sleeve secured to said upright to define a vertical guideway, an indenting element slidable in said guideway for movement into and out of marking contact with the work, and a work engaging and resiliently yieldable wheel carried by said indenting element with its axis approximately at right angles to that of said indenting element, the resiliency of said wheel yieldably maintaining said indenting element out of engagement with the work.

2,900,727
FOOTBALL SIGHTING DEVICE
Henry R. Clime, Elkins Park, Pa.
Application May 10, 1955, Serial No. 507,226
3 Claims. (Cl. 33—46)

1. A football sighting device, comprising a flat plate, a compass rotatably mounted on the top face of said plate and having means to lock it in a selected position for the lubber line to parallel the N.S. needle, a level on the top face of said plate, and located at one side of the compass, spaced posts fixed to said plate and extending above the compass, a rifle sight having trunnions mounted at the upper ends of said posts, and a single standard carried by said plate and having longitudinal sections longitudinally adjustable, said device prior to being used on a particular playing field being calibrated to said field to cause the line of sight to be always at a right angle to the side lines of the playing field, and the platform, standard and other

component parts being of light weight to render the device capable of being quickly and manually transported and centered at a defined location at a side line of the playing field.

2,900,728
DRAFTING MACHINE INDEXING MEANS
Vard B. Wallace, Monrovia, Calif., assignor to Vard Products Inc., Pasadena, Calif., a corporation of California
Application March 11, 1957, Serial No. 645,267
11 Claims. (Cl. 33—79)

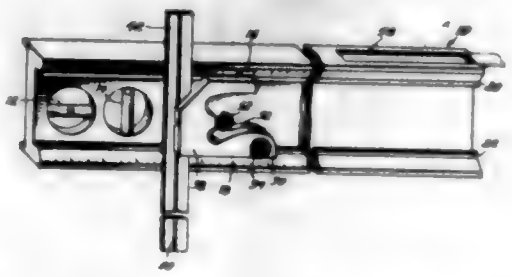


1. In a head assembly for a drafting machine, the combination of a head frame adapted for movement over the surface of a drawing board, a circular belt-driven reference member journaled on the frame on an axis perpendicular to the drawing board, the frame overlying the reference member, an instrument carrying work member journaled coaxially below the reference member and the frame in fixed axial relation thereto, upper and lower clutch elements having respective pluralities of circumferentially spaced tooth formations which are shiftable between engaged and disengaged relation by mutual axial movement of the clutch elements, means mounting the clutch elements in fixed rotational relation to the reference member and to the work member, respectively, one of the clutch elements being axially movable with respect to its associated member, a coaxial shaft journaled with respect to the reference member and having its lower end rotationally fixed with respect to the work member, and control means mounted above the frame, said control means being manually rotatable about the axis to rotate the shaft and the work member, a control element movable in one direction to cause engagement of the clutch means and movable in the other direction to cause release of the clutch means, motor means actuable to drive the control element movement and manually operable control means for supplying power to the motor means for actuation thereof.

means for axially extending same, and means including

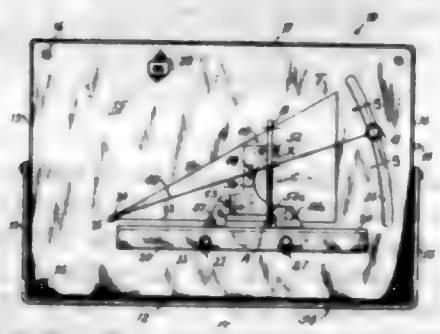
said spring clips, and a calibrated scale associating said

2,900,729
COMBINED LEVEL AND MEASURING TOOL
James V. Basile, Philadelphia, Pa.
Application November 28, 1956, Serial No. 624,807
1 Claim. (Cl. 33—89)



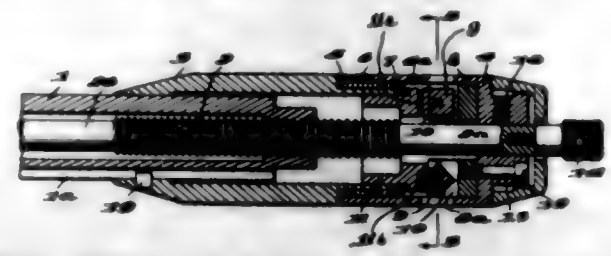
A combined level and measuring tool comprising an elongated body, a first track along an upper longitudinal edge of said body, a second track along a lower, longitudinal edge of said body, a carriage having oppositely facing grooves loosely engaging said tracks for slidably mounting said carriage on said body, said carriage having a slot therein extending transversely of said body, a rule freely movable in said slot, a pin passing through an opening in said carriage and engaged with said rule, a spring biasing said pin outwardly to bring said rule into frictional engagement with a wall of said slot to prevent free movement of said rule relative to said slot, a portion of said carriage which includes one of said grooves being slit longitudinally of said groove to form separated inner portions and outer portions, and a set screw passing through a hole in said outer portion and engaging a tapped hole in said inner portion to clamp said carriage onto said track.

2,900,730
PROPORTION MEASURING DEVICE
Marvin A. Gilman, Croton-on-Hudson, N.Y., assignor to Clay-Adams, Inc., New York, N.Y., a corporation of New York
Application April 19, 1957, Serial No. 653,820
12 Claims. (Cl. 33—125)



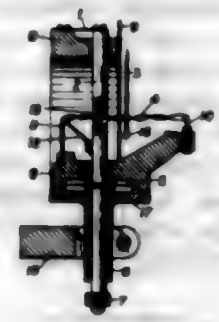
1. A device for measuring the relative proportions of at least two stratified layers of a column of material in a tubular container of uniform cross section, comprising a base, indicator means movably mounted adjacent said base, a triangular figure on one side of said base, an elongated member pivoted at one end thereof on the other side of said base at a point aligned with one vertex of said triangular figure, a second elongated member anchored at one end thereof adjacent the one side of said base at a point aligned with said one vertex of the triangular figure, said base being formed with an arcuate slot related to said one vertex as a center, means extending through said slot connecting the other ends of said elongated members for conjoint movement, means for moving said indicator means in response to pivoted movement of said first elongated member, said container being movable over the one side of said base to register the opposite ends of the column with the hypotenuse and the adjacent side of the triangular figure defining said vertex, said second elongated member being movable to a position wherein a portion thereof intersects the demarcation point between adjacent strata of the column of material in said container, thereby imparting movement to said indicator means to give a reading of the proportion of said stratified layers.

2,900,731
MICROMETER INDICATOR
Hans Meyer, Renens, Switzerland
Application September 19, 1957, Serial No. 685,003
Claims priority, application Switzerland March 16, 1957
3 Claims. (Cl. 33—166)



1. In a micrometer indicator having a body and a micrometer screw threadably connected thereto, a cylindrical drum rigidly secured to said micrometer screw coaxially with respect thereto, said drum having a plurality of apertures on the periphery thereof, a plurality of cubical members having indicia thereon rotatably mounted within said drum adjacent said apertures, said cubical members being rotatable about axes substantially tangential with respect to an imaginary circle concentric with the longitudinal axis of said drum, a sleeve rotatably connected to said drum and slidably connected to said micrometer body, said sleeve being keyed to said body to prevent relative rotational movement therebetween, said sleeve having a guide track thereon in engagement with said cubical members for causing partial rotation of said cubical members upon a full turn of said drum and said micrometer screw relative to said body.

2,900,732
INDICATOR DEVICE FOR MEASURING INSTRUMENTS
Hugo Abramsson, Eskilstuna, Sweden, assignor to Aktiebolaget C. E. Johansson, Eskilstuna, Sweden, a joint-stock company of Sweden
Application December 30, 1954, Serial No. 478,700
3 Claims. (Cl. 33—172)



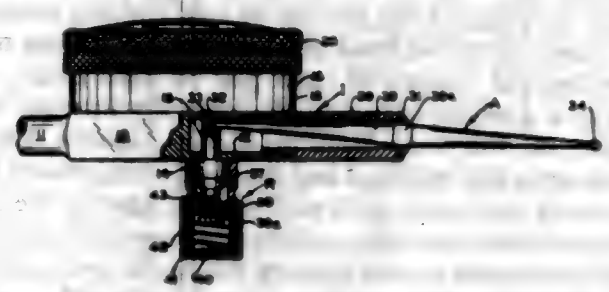
1. In a measuring instrument of the displaceable plunger type, the combination of a body member, a displaceable plunger extending into said body member, a mounting tube attached to said body member and in which said plunger is disposed in order that measurements can be made at a location remote from the location of said body member, the inner diameter of said mounting tube being sufficiently larger than the diameter of said plunger as to provide a clearance space between the two, a twisted band type of displacement responsive means oriented in a direction substantially perpendicular to the axis of said displaceable plunger, means including strut means for converting the axial motion of said displaceable plunger to a perpendicular motion and for transmitting said perpendicular motion to said displacement responsive

adjustable, said device prior to being used on a particular ation thereof.

means for axially extending same, and means including two resilient leaf-like members for mounting said plunger for axial movement only and for preventing such transverse movement thereof as would affect the extension of said displacement responsive means whereby said displacement responsive means will be affected only by the axial movement of said plunger, said resilient mounting means being located in said body member and serving to maintain said plunger out of contact with the wall of said mounting tube so that the latter can be gripped by clamping means and hence utilized as a mounting tube without interfering with the free axial motion of said plunger.

2,900,733
INDICATORS WITH RESILIENT MEANS FOR REVERSING THE BIAS OF THE OPERATING SPINDLE

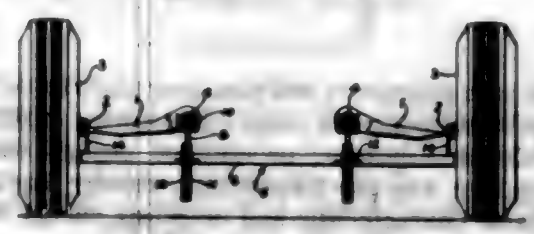
Charles Zelnick, Saginaw, Mich., assignor to The Lufkin Rule Company, Saginaw, Mich.
Application May 4, 1955, Serial No. 506,883
10 Claims. (Cl. 33—172)



1. In a dial indicator: a gauge casing; a spindle reciprocable in said casing, indicator means in said casing associated with said spindle movable in ratio to the movement of said spindle; a spring in said casing normally maintaining said plunger at substantially one limit of its travel; and disengageable spring means supported externally by the casing, in one position engaging said plunger with sufficient force to overcome said first spring means and maintaining said spindle at substantially the opposite limit of its travel, said disengageable spring means comprising a spring retaining member mounted on said casing around said spindle, and a spring pressed plunger in said spring retaining member in bearing engagement with the end of said spindle.

2,900,734
GAUGE FOR TORSION BAR SUSPENSION SYSTEMS FOR VEHICLES

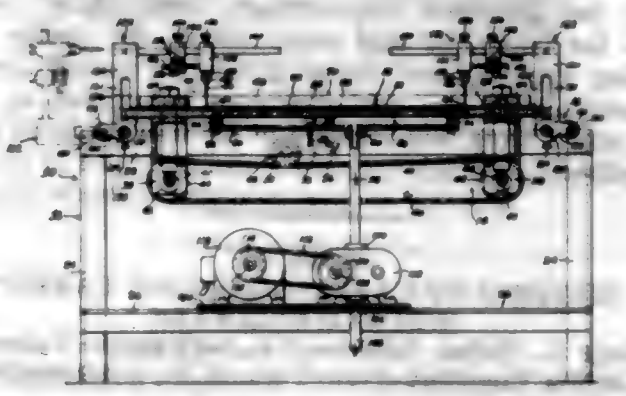
Burton A. Richards, Rock Island, Ill., assignor to Borg Manufacturing Company, Rock Island, Ill., a corporation of Delaware
Application May 13, 1957, Serial No. 658,776
4 Claims. (Cl. 33—180)



1. A gauge for measuring the suspension height of a torsion bar suspension system for vehicles, which comprises an elongated rod, an abutment of fixed length carried at each end of said rod, a pair of plunger bars carried by said rod and being slidably movable transversely with respect to said rod, a spring clip carried by each plunger bar, resilient means connecting said rod and each plunger bar for resiliently urging said rod toward said spring clips, and a calibrated scale associating said plunger bars and said rod to indicate the position of said spring clips with respect to said rod.

2,900,735
MACHINE FOR PRE-REGISTERING STEREOTYPE COLOR MATS

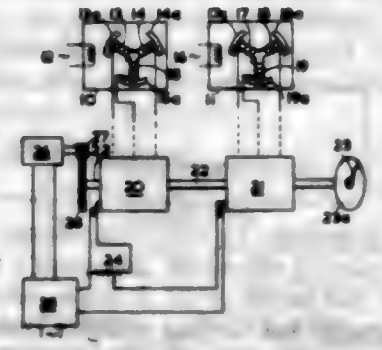
Ferdinand A. Mier, Detroit, Mich., assignor to Knight Newspapers, Inc., Miami, Fla., a corporation of Ohio
Application August 6, 1956, Serial No. 602,364
9 Claims. (Cl. 33—184.5)



9. A machine for pre-registering a set of stereotype color mats according to a plurality of registry marks on each mat in corresponding locations in the set, said machine comprising a sustaining structure, a mat receiving bed structure mounted on said sustaining structure, a mat clamping member mounted on one of said structures, cam mechanism operatively engageable with said clamping member for moving said clamping member into and out of clamping engagement with said bed structure, fixation device supporting means mounted on one of said structures, and a plurality of fixation devices movably mounted on said supporting means for adjustment to and fro relatively to said bed structure into registry with a plurality of the registry marks; said cam mechanism including a plurality of spaced shafts, cams on said shafts, motion transmitting mechanism drivingly interconnecting said shafts, and push rods engageable with said cams and connected to said clamping member.

2,900,736
SYSTEM FOR CORRECTION OF MAGNETIC COMPASSES

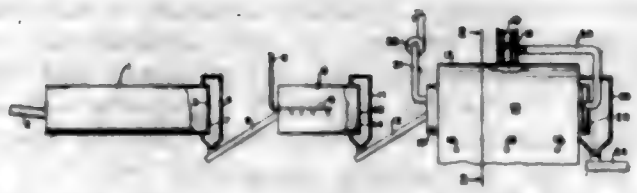
Gilbert Nathaniel Harvey, Colnbrook, England, assignor to The Sperry Gyroscope Company Limited, Brentford, Middlesex, England, a company of Great Britain
Application February 25, 1957, Serial No. 642,000
6 Claims. (Cl. 33—224)



1. A compass system for providing a measure of the true heading of a supporting craft with respect to the earth's magnetic field from measures of the direction of the total magnetic fields of the craft derived at spaced points thereon each latter measure being in error by an amount dependent upon the magnetic field deviations produced by the craft itself, the directions of said deviation fields at said points being the same but their

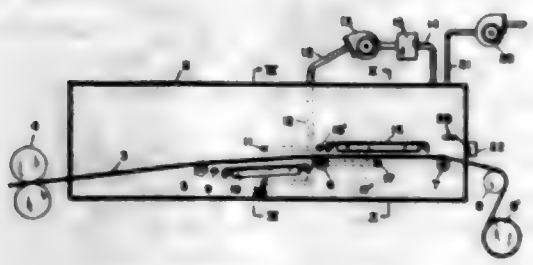
magnitudes being different by a predetermined fixed ratio for all craft headings, said system comprising magnetic field sensors at each point for sensing the direction of the total magnetic field thereat, signal generating means coupled with said sensors for providing signals in accordance with said sensed directions and constituting measures of direction differing only in accordance with the difference in the magnitudes of said deviation fields, circuit means for modifying one of said signals in accordance with said predetermined fixed ratio, motor means responsive to said modified signal and the other of said signals for providing an output in accordance with the difference therebetween, and means coupled with the output of said motor means for jointly positioning each of said signal generating means through an angle such that said difference is reduced to zero, said angle being said measure of the true magnetic heading of said craft.

2,900,737
METHOD OF CASE HARDENING CARBON BLACK PELLETS
George L. Heller, Monroe, La., assignor to Columbian Carbon Company, New York, N.Y., a corporation of Delaware
Application December 24, 1956, Serial No. 630,225
9 Claims. (Cl. 34—12)



1. Method of producing substantially dry beads of carbon black having exceptionally high resistance to crushing and packing which comprises uniformly wetting the outer portions only of preformed dry-process beads having a bulk density of at least 20.5 pounds per cubic foot, with water in proportions within the range of 40 pounds to 90 pounds per 100 pounds of the dry-process beads and thereafter drying the beads to a moisture content not exceeding about 1% by weight.

2,900,738
APPARATUS FOR DRYING PRINTED WEBS
Bernard Offen, Chicago, Ill.
Application August 22, 1956, Serial No. 605,532
8 Claims. (Cl. 34—60)

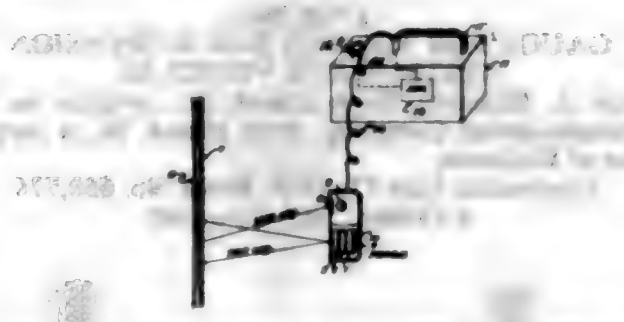


1. In apparatus for drying printed webs, the combination of a housing, means in the housing for discharging heated air adjacent the printed surface of the web, means in the housing for discharging water vapor adjacent the opposite surface of the web, and means for trapping discharged vapor adjacent the opposite surface of the web to retard evaporation of moisture from the web, said trapping means comprising support members and a pan-like element placed over said members with its open side extending downward away from the web.

2,900,739
PORTABLE ELECTRIC HAIR DRYER
Renate Tofield, Mexico City, Mexico
Application April 21, 1958, Serial No. 729,585
1 Claim. (Cl. 34—99)

An electric hair dryer, comprising, in combination, a cap adapted to be worn as a head gear having an inner layer of moisture-proof flexible material and an outer layer of sheet material, each of said layers of material being formed with a plurality of cutouts, the cutouts of one layer being aligned and communicating with the cutouts of the other to form a plurality of pairs of aligned cutouts; an elastic band carried by said cap for adjustable fixing said cap to the head of a person; connecting means connecting the cutouts of each pair to each other, so as to form a plurality of passages from the interior to the exterior of the cap; heating means located between the two layers of material and the connecting means being operatively connected with said cap for heating the same; a self-contained portable rechargeable source of electrical energy connected to said heating means for energizing the same; and connecting means carried by said self-contained rechargeable source of electrical energy for connecting the same to an electrical outlet of a source of electrical energy in order to recharge said self-contained source of electrical energy, so when said receptacle is placed on the hairy part of a scalp, said heating means when energized by said self-contained portable source of electrical energy will heat the head gear and thereby dry the hair.

2,900,740
SIMULATED RADIOACTIVE RADIATION METER
Andre R. Brault, Merrick, and Ralph Lindberg, Malba, N.Y., assignors to OPTOmechanisms, Inc., Mineola, N.Y., a corporation of New York
Application August 21, 1953, Serial No. 375,655
4 Claims. (Cl. 35—1)

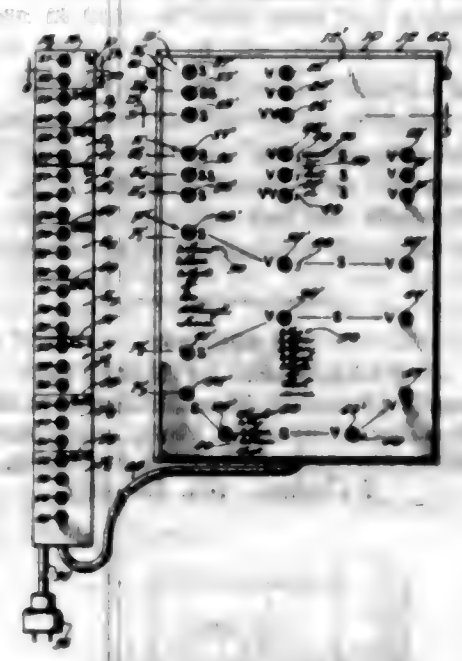


1. A safe process of training operators to detect radioactivity comprising the steps of, painting objects with a contaminant responsive to radiated energy and adapted to re-radiate energy, transmitting energy having a first identifiable characteristic and detecting energy re-radiated from said contaminant.

2,900,741
TEACHING APPARATUS
Alice Casey McIver, Winnetka, Ill.
Application February 8, 1956, Serial No. 564,261
9 Claims. (Cl. 35—35)

1. A teaching apparatus comprising a mounting board having a front face, said face having three areas thereon,

said areas representing simple sentences, compound sentences, and complex sentences, respectively, each of said areas having three smaller areas therein, each of said smaller areas representing a specific type of the more general type of sentence represented by the one of said first mentioned areas within which said smaller area is disposed, and means for selectively visually indicating on said face the general type, the specific type, start, finish, structure, and punctuation of a sentence being read or spoken, said means comprising a plurality of electric lamps mounted on said board in position whereby the illumination of each of said lamps is visible on said face when said lamp is energized, each of said smaller areas having one lamp of one color disposed therein to indicate, when illuminated, the start of a sentence of said specific type represented by said last mentioned area, and a second lamp



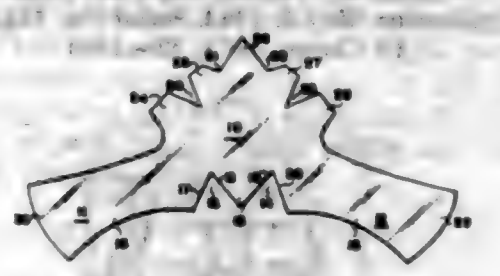
of a second color disposed in said last mentioned area to indicate, when illuminated, the finish of said last mentioned sentence, each of said smaller areas in said compound and complex areas having a third lamp of a third color disposed therein between said one lamp and said second lamp in said area to indicate, when illuminated, a pause, represented by a comma or conjunction, in a spoken sentence of the specific type represented by said last mentioned area, one of said smaller areas in said complex area having a fourth lamp of said third color disposed therein between said one lamp and said second lamp in said last mentioned smaller area to indicate, when illuminated, a pause, represented by a comma or conjunction, in a spoken sentence of the specific type represented by said last mentioned area, and means connected to said lamps for selectively energizing the latter.

2,908,742
EDUCATIONAL GAME FOR TEACHING SPELLING
Lyllard B. Barker, Arlington, Va., and Harold Brooks Baker, Washington, D.C.
Application April 5, 1956, Serial No. 576,270
1 Claim. (Cl. 35—35)

In an educational device of the character disclosed, a substantially flat board having a plurality of pictures thereon, a rectangular recess of uniform depth disposed adjacent to each of said pictures, a printed word disposed in each of said recesses identifying the adjacent pictures, an elongated rectangular slot of uniform depth adjacent one edge of said board, a plurality of square blocks of uniform shape each having a single letter thereon, said blocks being adapted to fit within said recesses and to overlie said printed words in adjacent relationship whereby words may be formed, and said blocks being

adapted to fit within said elongated slot in adjacent relationship whereby sentences may be formed.

2,908,743
BLANK FOR A SHOE
Beth Levine, New York, N.Y.
Application March 15, 1956, Serial No. 571,754
1 Claim. (Cl. 36—11)

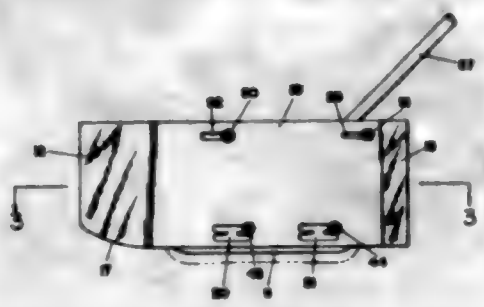


A blank for the formation of the toe and vamp of the upper and the forward outersole of a shoe, as well as quarter portions thereof, comprising a unitary piece of flexible material cut out in approximately triangular form and including a square central portion having converging side edges and wing portions extending from two sides of said central portion, said wings comprising the quarter portions of the shoe, notches formed in the rear edge of said blank at the juncture of said central portion with said wing portions, the converging side edges of said central portion comprising the apex portion of said triangle and being formed with inwardly directed notches thereby defining a plurality of perimetrically disposed tabs and intermediate notches along the sides of said triangle, the inwardly directed apexes of said notches extending into said central portion to define points along the perimeter of the tread portion of the outer sole of the shoe, said notches being positioned so that when the confronting edges of said tabs are united with each other there is developed from said blank, prior to the lasting operation, a shoe upper formed integrally with the sole portion thereof and wing portions to comprise the quarter portions of the shoe.

2,908,744
SNOW REMOVAL DEVICE
Louis Champoin, Westville Grove, N.J.
Application April 5, 1956, Serial No. 576,300
4 Claims. (Cl. 37—53)

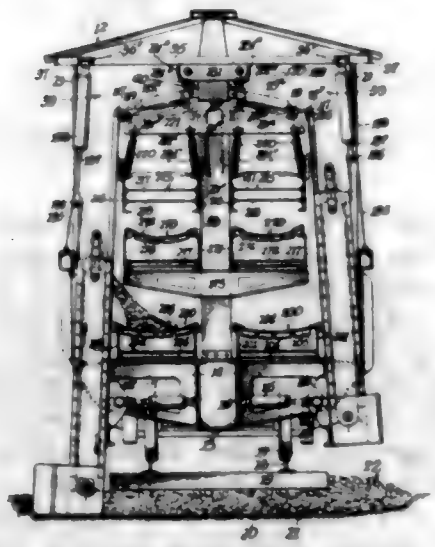
1. A snow-removal device comprising an integral pair of generally vertically disposed forwardly convergent pusher plates meeting at their forward ends to form a dihedral angle, said plates being fabricated of stiff but resiliently flexible material, a rigid generally triangular-shaped frame interposed between said plates in abutting engagement with the inner faces of the latter and spaced from the juncture of said plates, means connecting said frame to said plates for limited vertical and forward-and-

rearward adjustment relative to said plates with said frame abutting said plates to vary the juncture angle and combined lateral extent of said plates by flexing the latter, and ground runners carried rigidly by said frame



and extending generally longitudinally with respect to a bisector of said juncture angle, said runners thus being vertically adjustable relative to said plates for raising and lowering the latter and said plates thereby being adjustable to vary the angle therebetween and the latter extent thereof.

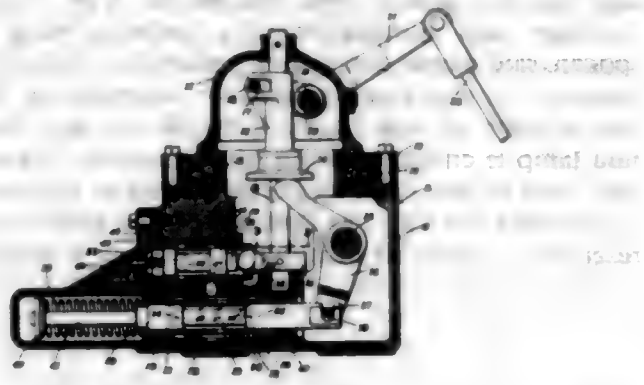
2,900,745
APPARATUS FOR AND IN METHOD OF CONDITIONING RAILWAY BALLAST
William R. Walters, Cos Cob, Conn.
Application May 1, 1953, Serial No. 352,502
17 Claims. (Cl. 37—104)



1. A railway ballast conditioning apparatus embodying therein a railroad car having wheels for supporting it for operation along a railroad, a ballast pick up elevator having an intake adjacent the lower end thereof and means mounting the elevator for movement as a whole in a generally upright inwardly inclined rectilinear path, at one side of the car, from a lower operative ballast engaging position to a higher inoperative position.

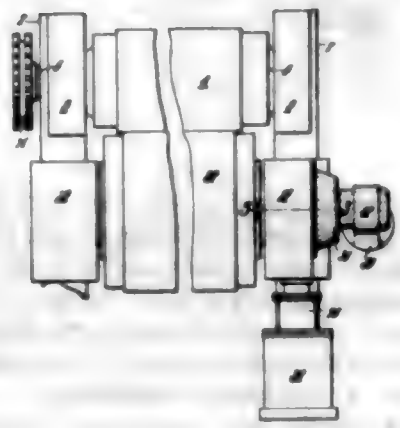
2,900,746
ACTUATOR FOR LEVELER CONTROL MECHANISM
Raymond A. Gurries, San Jose, and John Curlett, Los Gatos, Calif., assignors to Gurries Manufacturing Co., San Jose, Calif., a corporation of California
Application September 17, 1957, Serial No. 684,481
6 Claims. (Cl. 37—180)

1. An actuator for the hydraulic level control rams interposed in the conduit system of a land leveler, said actuator comprising a housing adapted to be mounted on the leveler and including a fixed lower member and a dome mounted on said member for rotation about a vertical axis, a shaft concentric and fixed with the dome depending into the lower member of the housing, a rearwardly projecting lever pivoted on the dome for swinging movement in a vertical plane and turnable as a unit with the dome about said vertical axis, a sleeve slidable on the shaft, means between the lever and sleeve to shift the latter along the shaft upon swinging of the lever in a vertical plane, a servo valve in the lower member of the housing and adapted to be interposed in the conduit system to control the flow of fluid to and from the rams, means between the sleeve and servo valve to actuate the



latter upon vertical movement of the sleeve, a normally open lock valve mounted in the lower member of the housing and adapted to be interposed in the conduit system between the servo valve and the rams, and means between the shaft and lock valve to close the latter upon rotation of the shaft a predetermined arcuate amount.

2,900,747
CALENDER APPARATUS
Kurt Zimmerli, Chicopee, Mass., assignor to E. F. Perkins & Son, Inc., Chicopee, Mass., a corporation
Application November 17, 1958, Serial No. 774,198
2 Claims. (Cl. 38—52)

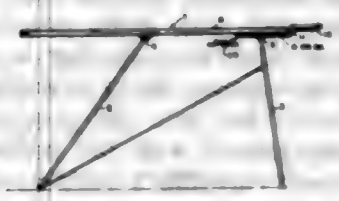


1. Calender apparatus comprising in combination, transversely spaced side frames, a drive roll between said side frames and means supporting opposite ends of said roll in said frames for rotation of the roll on a fixed axis, first driving means for continuously rotating said drive roll, mounting means slidable in each said side frame, a driven roll between and having opposite end portions journalled in said mounting means for rotation of said roll, said mounting means being slidable in said side frames towards said supporting means for operative coaction of said drive and driven rolls on material therebetween and rotation of the latter by the former and away from said supporting means to inoperative relation and non-coaction of said rolls where they are separated and said driven roll is rotatable independently of said drive roll, second independent driving means carried by one said mounting means including a continuously operable electric motor and operative connections between said motor and the end portion of the driven roll journalled in said one mounting means whereby the driven roll may be rotated at a speed slightly less than the speed at which the drive roll is rotated, and means for movement of each said mounting means towards and away from said supporting means.

2,900,748
FLAT IRON REST

Gertrude M. Magee, Portland, Oreg.

Application February 18, 1958, Serial No. 714,135
1 Claim. (Cl. 38—107)

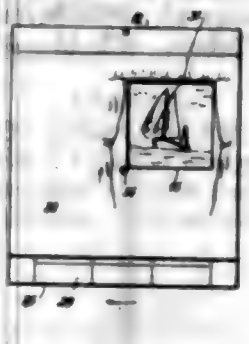


A flatiron rest, comprising a plate adapted for attachment to the under side of an ironing board at one end thereof, said plate having a pair of tubular guideways therein open at both of their ends and extending in the direction of the length of the ironing board, a pair of brace rods adapted to be slidably received and supported within either end of the guideways, said brace rods normally extending outwardly from one end of said plate rearwardly of the ironing board and bent upwardly and rearwardly into a horizontal portion, and a tray secured to the top of the horizontal portions of the brace rods whereby the top surface of the tray will be supported in an operative position in the plane of the top surface of the ironing board to thereby facilitate sliding movement of a flatiron from one of said surfaces to the other, and whereby the tray and brace rods may be withdrawn from said one end of the plate, inverted and reinserted in the opposite end of the plate to thereby entirely conceal the tray and brace rods in a retracted inoperative position beneath the ironing board.

2,900,749
CALENDAR DEVICE

Henry Lucien Supper, Bar-sur-Aube, France

Application January 28, 1958, Serial No. 711,690
Claims priority, application France February 1, 1957
2 Claims. (Cl. 40—114)

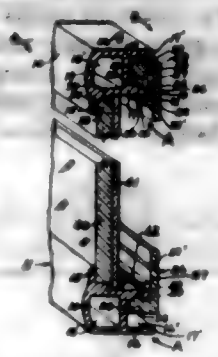


1. A calendar device comprising a rectangular first sheet element, a square second sheet element rotatably attached to the rear of said first element, the width of said first element being identical with the length of one side of said second element, and a pivot interconnecting said elements with freedom of relative rotation, said pivot being positioned centrally of said second element and along one axis of symmetry of said first element sufficiently displaced from the other axis of symmetry thereof to have different marginal portions of said second element project beyond an edge of said first element in successive relative positions of said elements 90° apart, said first element being provided with a window offset from said pivot, said second element bearing calendar indicia on said marginal portions and correlated messages viewable through said window on a central area framed by said marginal portions.

2,900,750
DEVICE FOR MOUNTING SHEET MATERIAL ON A WALL

John A. Buelow, St. Paul, Minn., assignor to Designware Industries, Inc., a corporation of Minnesota

Application May 16, 1956, Serial No. 585,218
12 Claims. (Cl. 40—152.1)

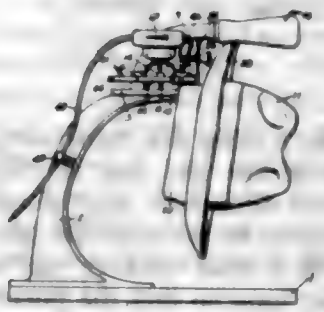


1. In a unit for mounting sheet material on a wall, a rectangular frame, a portion of the upper and lower opposed frame members each having a channel formed therein, upper and lower wall bracket members identical in transverse cross section and each having an extremity formed with an upstanding portion thereon which in the case of said lower bracket, said extremity thereof positioned in said channel of the lower frame member and under the upper portion forming part of said channel to support the load of said frame, and means for locking said extremity of said upper bracket within said channel of said upper frame member.

2,900,751
STAMPING MACHINES

Henry A. Mintz, Norwood, Mass.

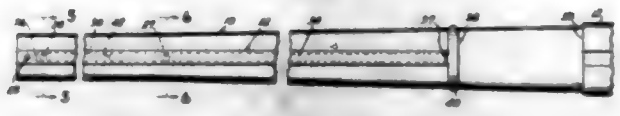
Application June 4, 1956, Serial No. 589,076
2 Claims. (Cl. 41—7)



1. A printing foil carrying means adapted for use in a stamping machine of the type comprising a platform on which an article to be stamped is adapted to be held, an arm rotatably mounted at one end adjacent said platform, a handle at the other end of said arm whereby said arm may be rotated about its opposite end, and a stamping pallet mounted on said arm intermediate its ends, said pallet being adapted to support a line of type, said carrying means comprising a frame member having a pair of outer ends adapted to be located in line with a stamping position on said platform, one of said ends having means for rotatably supporting a roll of ribbon of said printing foil, the other of said ends carrying a pair of intermeshing corrugated rollers adapted to receive said ribbon between them, and means for rotating one of said rollers whereby said ribbon may be fed across said stamping position, said carrying means being provided with pivot means whereby said carrying means may be pivotally carried by said machine adjacent said platform, said carrying means having an extension projecting beyond the pivot means in a direction away from said ends of said carrying means, said extension lying in a position whereby, when said carrying means is mounted on said machine, said extension is adapted to

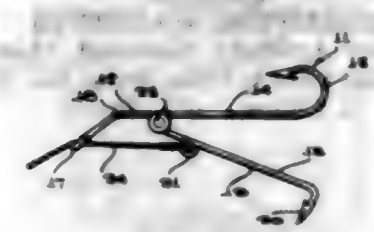
be engaged by the back surface of said arm whereby as said arm is rotated away from said platform said arm engages said extension and lifts said ends carrying said ribbon away from the stamping position.

2,900,752
CHOKE CONTROL DEVICE FOR SHOTGUN BARRELS
Val A. Browning, Ogden, Utah, assignor to Browning Industries, Inc., Ogden, Utah, a corporation of Utah
Application February 3, 1958, Serial No. 712,931
6 Claims. (Cl. 42—79)



1. In a shotgun barrel of the type defining a cartridge chamber, a main bore, a choke bore and a muzzle bore, a pair of gas ports extending through the barrel, one ahead of the cartridge chamber but rearwardly of the choke bore and the other forward of the choke bore and near the muzzle end of the barrel, a gas conduit connecting said ports externally of the barrel, and valve means for closing said outlet port to prevent gas flow to said conduit.

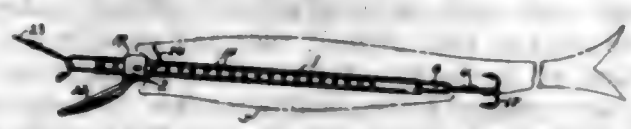
2,900,753
FISH HOOK
Park Millard Griffith, Mitchellville, Iowa
Application December 20, 1957, Serial No. 704,199
1 Claim. (Cl. 43—37)



In combination, a main fish hook comprising a shank having an eyelet at one end and an outwardly directed barb portion at its other end, said shank being formed with an eyelet loop at its intermediate portion, said shank being formed with a bend between said first-named eyelet and said eyelet loop so that the portion of the shank having the eyelet is angled outwardly at an obtuse angle to the remainder of the shank and so that said portion is inclined outwardly in a direction opposite to the direction of said barb portion, an auxiliary fish hook having a shank and a barb portion, said last-named shank being formed with an eyelet loop at its end and with an eyelet loop at its intermediate portion, pivot means connecting the end eyelet loop of the auxiliary fish hook to the intermediate eyelet loop of the main fish hook, said auxiliary fish hook having a barb portion projecting outwardly in a direction opposite to and away from that of the barb portion of the main fish hook, and a flexible line element extending slidably through the eyelet on the end of the first-named shank and extending directly to and secured to the eyelet loop at the intermediate portion of the shank of the auxiliary fish hook.

2,900,754
FISH BAIT
Roman Orlik, Cleveland, Ohio
Application November 28, 1958, Serial No. 776,795
3 Claims. (Cl. 43—44.2)

1. An attachment means for minnows comprising a bar extending through the minnow body and protruding forwardly from the minnow mouth and rearwardly from the minnow vent; a hook on the rearward end of the bar; the bar being movable forwardly to a final position to retract its rearward end inwardly through the vent to render it invisible and leave only the hook exposed; a tubular element telescoped on the forward protruding end of the bar; the bar and the inner wall of the tubular element fitting each other and both being non-circular in cross section to prevent rotation of the bar in the tubular elements; the tubular element being slidable on the bar to project its rearward end into the minnow's mouth and into abutting engagement with the minnow's flesh, and the tubular element carrying a barb having a forwardly projecting point that pierces the roof of the minnow's mouth; whereby the tubular element is locked to the minnow's head against movement out of the mouth and



against rotary movement in the mouth, by parts wholly within the mouth; operator operable means to lock the bar and tubular element together in the said final position of the bar; a line attached to the forward end of the bar to draw the minnow through the water; a forwardly inclined vane depending from the tubular element, formed to react on the water to exert downward thrust on the tubular element and minnow's head to maintain the minnow right side up and prevent rolling thereof, and the vane having a forward face formed to react on the water and to cause the vane to be reciprocated from side to side, to cause the minnow's head to have side to side movement; the combined forward and side to side movements of the minnow's head giving it a sinusoidal movement forwardly through the water and causing the whole minnow to have movement simulating natural forward swimming movement.

2,900,755
ATTACHMENT FOR FISHHOOKS
Harold S. Stinson, Town and Country, Mo.
Application May 13, 1957, Serial No. 658,760
5 Claims. (Cl. 43—44.6)

1. A fish-hook made of a single piece of wire-like material bent between its extremities to form a line-attaching end loop at its upper end, the two extremities of said loop extending to form two shanks of substantially equal length, the bend and burr of a fish-hook formed at the extremity of one of the shanks, the extremity of the other shank bent toward the first said shank and upwardly toward the loop, the end of the bent member bearing against the said first leg in abutting engagement, thus providing a triangular shaped opening so that bait may be used as a wedge to pry apart the respective shanks.

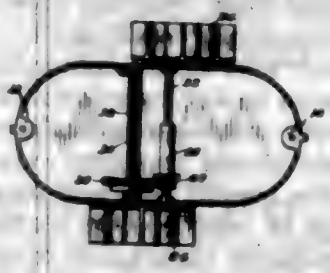
2,900,756
ATTRACTANTS FOR THE GYPSY MOTH
Martin Jacobson, Washington, D.C.
No Drawing. Application December 9, 1958
Serial No. 779,259
4 Claims. (Cl. 43—124)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A method for detecting infestation of gypsy moth in a field comprising baiting a trap with a member selected from the group consisting of 1,2-hexadecanediol, 1,2-epoxyhexadecane, and mixtures thereof as an attractant for the male gypsy moth.

2,900,757
SOAP HOLDER
Henry G. Grimm, Jr., Madison, Wis.
Application November 5, 1957, Serial No. 694,580
2 Claims. (Cl. 45—28)

1. An attachment for a cake of soap comprising a generally parallelepiped body having dimensions approximating the dimensions of a cake of soap, one surface of said body having longitudinal ridges thereon for engagement with a cake of soap for draining water away from the cake of soap and facilitating rapid drying thereof, said body having a centrally disposed transverse opening, a suction cup mounted in said opening for transverse movement in relation to the body, spring means interconnecting the suction cup and body urging the suction cup into the opening, said suction cup including a projecting stem extending through the opening and projecting from the opposite surface of the body whereby the suction cup may be forced outwardly of the ridges and compressed against the surface of the cake of soap by exerting pressure on the free end of the stem thereby expelling air from the suction cup and attaching the same to the cake of soap whereby the spring means urges the cake of soap into contact with the ridges, said attachment and the cake of soap being usable in the normal manner of a cake of soap.

2,900,758
LAND AND WATER TOY
Marvin I. Glass, Chicago, Ill.
Application December 1, 1954, Serial No. 472,325
2 Claims. (Cl. 46—92)

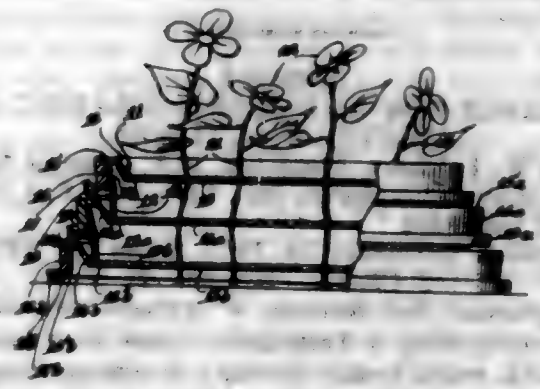


1. A self propelled toy vehicle for land or water comprising a body adapted to serve as a boat or as a land motor vehicle, an axle secured to said body, a pair of paddle wheels fixedly mounted on said axle at points eccentric to the center of each wheel, each of said wheels having radial blades, the mounting point of each wheel being displaced relative to the mounting point of the other wheel, means within said body for supporting a coil spring transversely of said body, means between said coil spring and said axle adapted to tension said coil spring by rotation of said wheels in one direction, said wheels when released adapted to rotate in the opposite direction to propel said vehicle on land or water and to cause same to wobble from side to side as same is being propelled on land or water.

2,900,759
SIMULATED TRUNK PLANTERS
David O. Hutchinson, St. Petersburg, Fla.
Application October 15, 1956, Serial No. 615,995
2 Claims. (Cl. 47—34)

1. A planter as for landscaping purposes, comprising an upright elongated stem having a passage extending therethrough, and containing soil-like material, said stem having an anchoring enlargement of substantial horizontally outward extent at the lower end thereof adapted to be embedded in a bed of soil-like material to anchor the stem in fixed upright position with the lower end of said passage and said soil-like material therein in communication with the soil-like material of the bed, a plant container having a constricted opening in the bottom thereof and containing a plant and root system thereof growing in soil-like material, said stem and container having complementally interfitting portions by which the container constitutes a separate self-contained plant holder attached on said stem with said constricted opening communicating with the upper end of said passage and the soil-like material therein, whereby said root system of the plant is free to grow downwardly through said passage substantially unrestrictedly and into said soil-like material of said bed.

2,900,760
STRAINING AND STEM HOLDING STRUCTURE
Earl S. Tupper, Smithfield, R.I., assignor to Tupper Corporation, North Smithfield, R.I., a corporation of Delaware
Application April 17, 1956, Serial No. 578,656
6 Claims. (Cl. 47—41)



1. A perforated yieldable plastic closure for a vessel wall for straining vessel contents and for aligning penetrating stalked articles supported in the vessel, comprising

a central perforated wall, an upwardly extending, inverted and grooved engaging edge for said vessel wall, said edge having an inner wall, a top wall, a thickened outer wall spaced from the inner wall, a horizontal flange extending outwardly from the lower end of said outer wall for finger engagement to spread said grooved engaging edge for removal from said vessel wall, said central perforated wall having an upwardly extending continuous wall projecting above the edge top wall and disposed adjacent the bottom of the edge inner wall adapted for engagement of another similar closure.

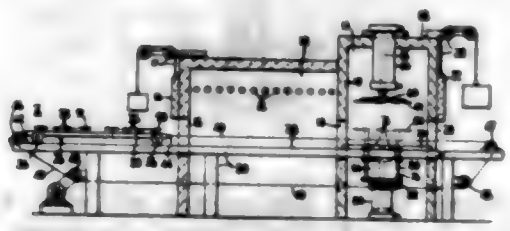
2,900,761

METHOD OF AND APPARATUS FOR TRANSFERRING SHEET MATERIAL

William R. Clever, Lincoln, Ill., assignor to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

Continuation of application Serial No. 316,867 dated October 25, 1952. This application July 23, 1957, Serial No. 673,661

7 Claims. (Cl. 49—1)



1. An apparatus for making double glazed units comprising a welding chamber, means mounted in the welding chamber for supporting one glass sheet in superposed, spaced relation to another glass sheet, a carriage movable in and out of the welding chamber, said carriage having an opening in a side thereof, and glass engaging supports movable through the opening in the carriage into contact with the bottom surface of a sheet of glass mounted on the carriage so as to raise the glass sheet from the carriage when it is in the chamber and being free from engagement from the carriage as it moves out of the chamber.

6. A method of producing a multiple glazed unit composed of two sheets which are spaced from each other with the edges of at least one of the sheets being bent and welded to the edges of the other sheet, which comprises supporting for movement cleaned first and second glass sheets so as not to mar their surfaces, moving said supported sheets into a preheating zone, preheating them, moving them into a welding zone, transferring said first sheet to a position for welding by contacting its bottom surface only, supporting said second sheet by its top surface only and moving it thus supported to a position for welding above and slightly spaced from said first sheet, and heating the edges of the glass sheets to cause them to join together and weld to each other.

2,900,762

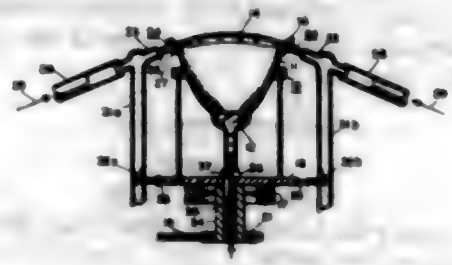
APPARATUS FOR UNIFORMLY HEATING NON-CIRCULAR OUTLINES

Herndon W. Leighton, Montclair, N.J., assignor to Allen B. du Mont Laboratories, Inc., Clifton, N.J., a corporation of Delaware

Application December 23, 1955, Serial No. 555,115

2 Claims. (Cl. 49—3)

1. Apparatus for forming a cathode ray tube envelope, comprising a rectangular glass faceplate positioned on a metal funnel having a matching rectangular sealing ledge; rotatable means to hold said metal funnel; a plurality of immovable gas burners spaced around said sealing ledge and positioned to direct flames from said burners at said sealing ledge; a source of fuel gas for said burners; a first set of supply lines connecting said source of fuel gas to said burners; a source of oxygen; a second set of supply lines connecting said source of oxygen gas to said burners; means to adjust the length of flame from each of said burners according to the instantaneous distance between the end of said burners and said sealing ledge so that the tips of the inner cones



of said flames always strike said ledge, said means comprising control valve means in one set of said supply lines, said control valve means acting to control the flow of gas in said valve control line and thus control the length of flame of said burners; and means to control the opening of said valve means in accordance with the instantaneous position of said metal funnel.

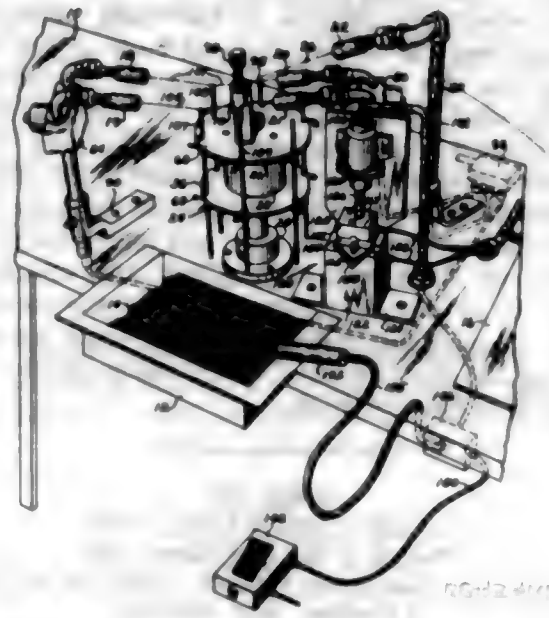
2,900,763

APPARATUS FOR THERMOMETER MANUFACTURE

John L. Hobin, Springfield, Ohio

Application February 28, 1955, Serial No. 491,072

4 Claims. (Cl. 49—7)



1. Thermometer bulb molding apparatus adapted to accommodate commercial variations in diameter of thermometer capillary tube blanks comprising a pair of separable die elements having complementary cavities therein defining a bulb mold having an entrance defined by relatively sharply sloped confining ridges for providing substantially a line contact with said tube blanks for minimizing breakage of oversize tube blanks and plastic deformation of undersize blanks, and means for closing together said die elements and substantially simultaneously injecting air under pressure into the heated tube blank end enclosed in the mold cavity therein for shaping and sizing the bulb formed.

3. Glass thermometer bulb molding apparatus for molding a hollow bulb on an end of a capillary tube comprising a pair of mating die elements having walls forming complementary cavities therein defining a bulb mold, each of said mold cavities being substantially tangent to a front face of the respective die element as viewed normal to the mating surface thereof, said front face being cut away at the point of tangency to provide an entrance

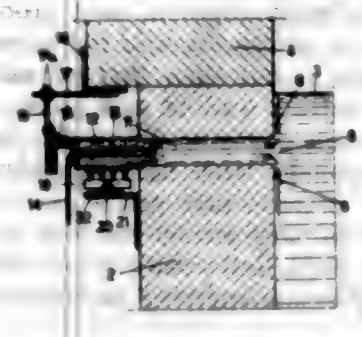
to the mold cavities having confining ridges surrounding the entrance thus provided, said confining ridges having a configuration conforming to the contour of the tube and being sloped to provide substantially a peripheral line contact with said tube.

2,900,764

MANUFACTURE OF GLASS

Bernard Long, Paris, France, assignor to Compagnies Reunies des Glaces & Verres Speciaux du Nord de la France, Paris, France, a corporation of France

Application November 7, 1955, Serial No. 545,492
Claims priority, application France November 13, 1954
5 Claims. (Cl. 49—54)



1. The method of eliminating bubbles which are introduced into a body of molten glass after it has been fined, when it is led through the thermal conditioning compartment of a glass furnace to its working compartment, which method comprises the step of permanently removing small quantities of glass from said body near the lateral walls which contain the glass during its thermal conditioning, said small quantities being withdrawn at the level at which the temperature of the glass on each vertical line of the thermal conditioning compartment is the highest, which level is located at a certain depth below the surface of the bath.

3. Apparatus for delivering substantially bubble-free molten glass to the working compartment of a glass furnace which comprises a thermal conditioning compartment through which said glass flows, en route towards said working compartment, said conditioning compartment being provided with lateral outer walls having longitudinally spaced canals therethrough, said canals being positioned at a level comprised between about 15 and about 25 centimeters below that of the surface of the glass bath in said compartment, said apparatus being provided with means for regulating the flow of glass through said canals.

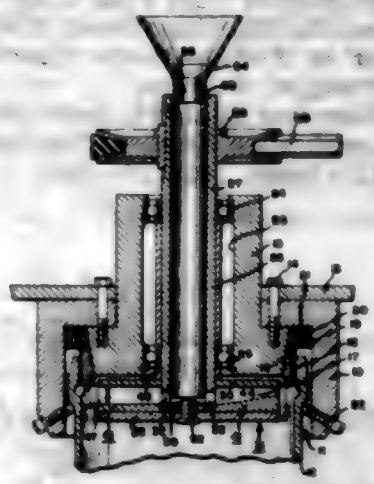
2,900,765

SHOT PEENING APPARATUS

Mack O. Blackburn, Dayton, Ohio, assignor to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application June 10, 1957, Serial No. 664,726
11 Claims. (Cl. 51—9)

1. A centrifugal blasting machine designed for throwing particulate material at blasting velocities including, a rotatable throwing wheel having a plurality of radially extending vanes terminating short of the axis of rotation to form a center inlet, said vanes having slots therebetween which terminate in peripheral discharge openings in said wheel, each peripheral discharge opening being of different cross-sectional area, and means for feeding particulate material into the center inlet of said wheel whereby the particulate material thrown from said wheel will be distributed over a path of predetermined area



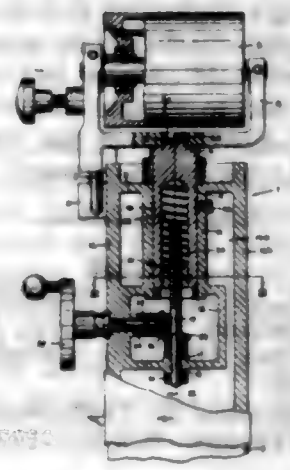
with a concentration at a portion of the area of said path.

2,900,766

MACHINE TOOL

Philip J. Robischung, Kalamazoo, Mich., assignor to Hammond Machinery Builders, Inc., Kalamazoo, Mich., a corporation of Michigan

Application May 29, 1958, Serial No. 738,869
4 Claims. (Cl. 51—148)

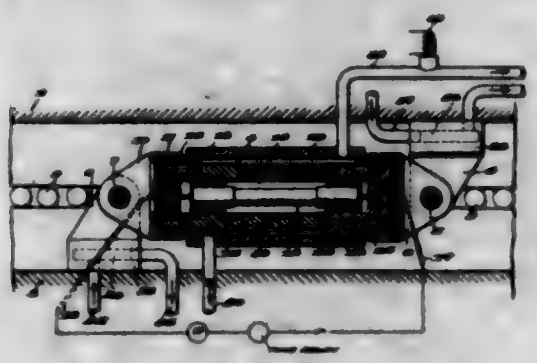


1. In a belt-tensioning apparatus for a belt-type abrading machine, the combination comprising: a movable belt-tensioning pulley; a hollow frame structure, said frame structure including wall means defining a cylinder having open ends and closed side walls and whose axis is parallel to the direction of movement of said belt-tensioning pulley; a piston movable in said cylinder and extending through one end thereof and terminating within said cylinder and means connecting said piston to said belt tensioning pulley whereby belt-tensioning force may be applied by moving said piston within said cylinder; said frame also including wall means defining a hollow box located at the other end of aid cylinder remote from said belt-tensioning device and communicating therewith; said piston having an internal chamber therein and a nut positioned in said chamber at the end thereof adjacent said hollow box, said nut being axially, but not rotatably, movable within said chamber; a coil spring positioned within said chamber and bearing at one end thereof against said nut and bearing at the other end thereof against the opposite end of said chamber; said hollow box having an opening in the end wall thereof opposite said other end of said cylinder and substantially coaxial therewith; a threaded rod extending through said opening and threadedly engaging said nut whereby upon rotation of said rod said nut will be moved axially within said chamber to adjust the tension exerted by said spring on said piston; said box having an opening through the side wall thereof; a manually rotatable shaft extending through said last-named opening and gearing connecting said shaft to said rod whereby said rod will be rotated upon rotation of said shaft.

burners at said sealing ledge; a source of fuel gas for

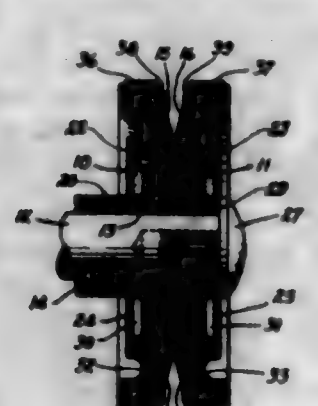
mal to the mating surface thereof, said front face being cut away at the point of tangency to provide an entrance

2,900,767
FINE FEED MECHANISM FOR GRINDING MACHINES AND THE LIKE
Rolf Völler, Hans Ruckle, Degersheim, Bebllngen, Germany, assignor to Fortuna-Werke Spezialmaschinenfabrik AG., Stuttgart, Germany
Application November 20, 1958, Serial No. 775,145
Claims priority, application Germany November 20, 1957
12 Claims. (Cl. 51—165)



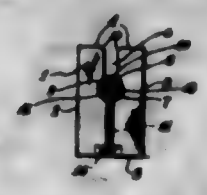
1. In a machine having two relatively slidable carriers, a material removing mechanism and a work holder mechanism, one of said mechanisms being rigidly mounted on one of the carriers, a connecting rod of a material having a substantial thermal coefficient of expansion connected without play to both said carriers, and means for heating and cooling said rod to expand and contract the same to cause relative movement of the work towards and from the material removing mechanism.

2,900,768
ANNULAR KNIFE SHARPENER
Charles H. MacFarland, Rocky River, Ohio, assignor to The Scott & Fetzer Company, Cleveland, Ohio, a corporation of Ohio
Application September 22, 1958, Serial No. 762,644
5 Claims. (Cl. 51—197)



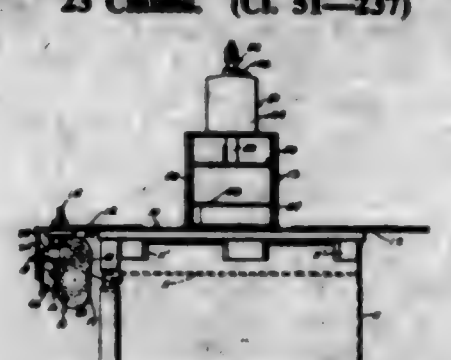
5. A knife sharpener comprising a pair of annular elastomeric members mounted coaxially on a shaft, each of said members having a front face in apposition to the other of said members, said front faces symmetrically curving relatively away from each other through a zone extending from radially intermediate locations to locations nearer the peripheries of said members, a pair of flexible abrasive webs each of which is supported against one of said front faces, said flexible abrasive webs being clamped between said members at locations radially inward of said zone, each of said members having a rear face opposite to said front face, a stiff member received against each of said rear faces, each stiff member being radially inward of at least the majority of said zone, and clamping means on said shaft and engaging said stiff members.

2,900,769
SKATE SHARPENER
Ernest J. Toms, Welland, Ontario, Canada
Application August 21, 1958, Serial No. 756,359
1 Claim. (Cl. 51—214)



A skate sharpener comprising a single unitary rectangular metal block having a groove in one longitudinal face thereof, and a cylindrical recess of greater diameter than the width of said groove extending longitudinally of the block from end to end thereof and communicating throughout its length with the base of said groove, said recess forming shoulders in said block extending outwardly of the lower edges of said groove, a rod of abrasive material in said recess, said rod having an arcuate surface of smaller radius than that of said recess and constituting the bottom wall of said groove, and adjustable clamping means engaging said rod to hold the same in seating engagement with said shoulders and comprising a bearing plate in said groove, said rod having a surface opposed to said arcuate surface in engagement with said bearing plate, and screws in said block each having an end in pressure-applying engagement with said bearing plate.

2,900,770
ROTARY WORK SUPPORTING AND INDEXING APPARATUS
George R. Carlson, Birmingham, Mich.
Application March 26, 1956, Serial No. 573,747
23 Claims. (Cl. 51—237)



1. A work forwarding mechanism comprising a rotatable work support having a plurality of individually rotative spindles supported thereon in spaced relation about the same, each spindle being adapted to mount a fluid pressure controlled holder for an article to be worked on, an individual driving unit for each spindle, and a control unit rotatable coaxially with said traveling support, said control unit being provided with periodically actuatable fluid pressure control means adapted to time the distribution of an operating fluid to said work holders and with further control means to effect the periodic actuation of said spindle driving units, and means operating upon rotation of said control unit to govern the operation of said respective control means.

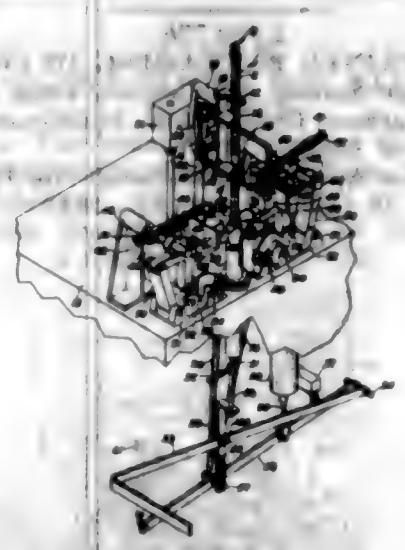
2,900,771
ELECTRIC LAMP GAS FILLING AND SEALING METHOD AND APPARATUS
Victor A. Levand, Lyndhurst, Ohio, assignor to General Electric Company, a corporation of New York
Application January 28, 1958, Serial No. 711,689
4 Claims. (Cl. 53—7)

1. In apparatus for flushing and sealing an electric lamp assembly, the combination of a chuck member adapted

below said device and carried also by the frame con-

said cases at the times of delivery of the bottles to the

to hold a lead-in conductor, means to support a vitreous lamp envelope in alignment with said chuck and with an end thereof enclosing the portion of said conductor projecting from said chuck, means adjacent said chuck for heating the said end of the envelope to plasticity, pinching jaws mounted adjacent said chuck, a hollow needle mounted in said chuck for reciprocable movement



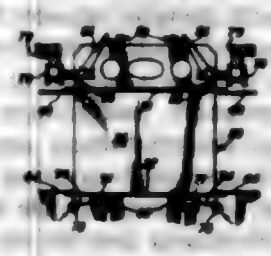
into and out of said end of the envelope, means connecting said needle to a supply of flushing gas, and means for actuating said needle and said pinching jaws in synchronism to cause said needle to be retracted from the envelope into said chuck and to then immediately cause said jaws to close upon said end of the envelope to compress and seal it about the said lead-in conductor.

2,900,772

MACHINE FOR LOADING CANS INTO CARTONS

Francis A. Chidsey, Jr., and Joseph H. Walter, Wayne, Pa., assignors to Container Corporation of America, Chicago, Ill., a corporation of Delaware

Application December 28, 1956, Serial No. 631,312
4 Claims. (Cl. 53—48)



1. Mechanism for loading cans into a series of open-end tubular cartons moving continuously in a predetermined path, said cartons having foldable can-locking tabs in the top and bottom walls thereof and said top and bottom walls extending axially beyond the side walls of said cartons, comprising dead plate means extending along said path adapted to slidably engage the upper and lower surfaces of the extended portions of said bottom and top walls, respectively, finger means adapted to fold said tabs inwardly while said cartons are in motion and engaging said dead plate means, and means for inserting cans into said cartons while said cartons are in motion and engaging said dead plate means.

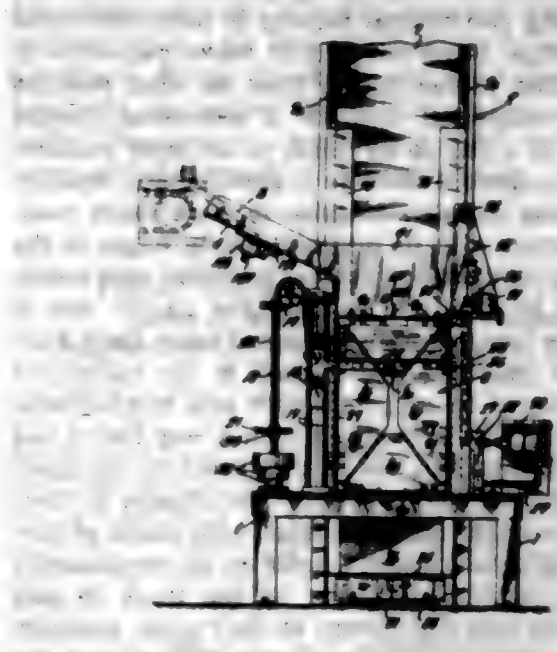
2,900,773

AUTOMATIC CARTON PACKING MACHINE

Melvin B. Koch, Lititz, Pa., assignor to Animal Trap Company of America, Lititz, Pa., a corporation of Pennsylvania

Application July 18, 1956, Serial No. 598,694
12 Claims. (Cl. 53—62)

1. An automatic carton packing machine comprising: carton receiving means to receive a plurality of cartons to be filled, a package accumulator connected to said carton receiving means to cyclically receive and accumulate in selected quantities packages of selected sizes to be packed into said cartons, means to selectively fill and position packages in said package accumulator to form a vertical stack of horizontal packages, means for tipping over any vertical package so as to properly position the package, a reciprocating pusher mechanism connected to said accumulator and adapted to take strokes of selected lengths and cooperating with said package accumulator to de-



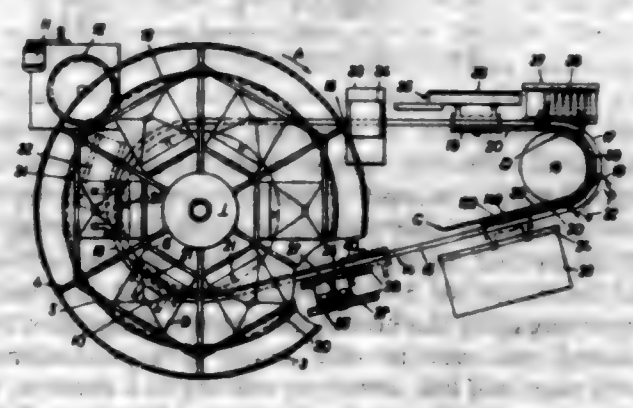
liver said selected quantities of accumulated packages into the cartons so as to fill each of the cartons in sequence, control means and fluid means connected to said package accumulator and said pusher mechanism to control and cyclically actuate said pusher so that it operates only when said selected quantities of packages have been accumulated and being adapted to selectively control the increase of the stroke length of said pusher mechanism whereby the filled cartons are ejected out of said carton receiving means when they are full.

2,900,774

MACHINE FOR PACKING BAGS WITH POWDERED OR GRANULATED MATERIAL

Arthur Lorange Henriksen, Haslum, Norway, assignor to Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Oslo, Norway

Application December 23, 1957, Serial No. 704,656
Claims priority, application Norway January 2, 1957
16 Claims. (Cl. 53—126)



1. Machine for packing of powdered or granulated goods into bags, comprising a frame construction mounted rotatably around a vertical axis, said frame construction bearing an upper, centrically arranged supply container for the goods to be packed and provided with a number of discharge funnels for the goods, an automatically working dispensing device arranged below each funnel and carried by the frame construction, a hopper arranged

clamping means on said shaft and engaging said stiff members.

1. In apparatus for flushing and sealing an electric lamp assembly, the combination of a chuck member adapted

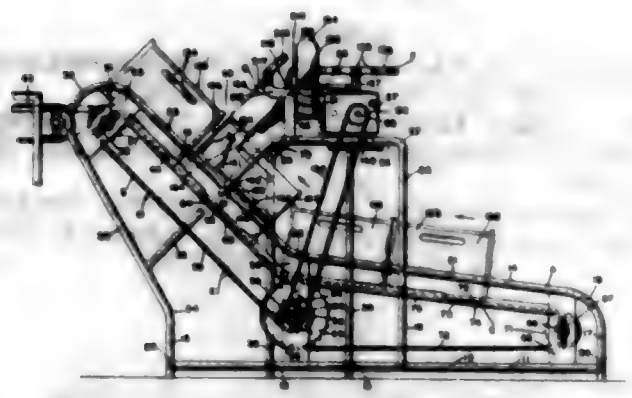
below said device and carried also by the frame construction, said dispensing device adapted to feed the goods in portions of predetermined weight to said hopper, the goods being able to flow downwardly from the lower discharge mouth of said hopper into a bag located below the hopper, a sealing apparatus for the filled bags and a conveyor for the bags, said conveyor comprising a series of trucks connected with each other to form an endless truck chain, a rail adapted to carry the trucks in a closed, longitudinal path, each truck being provided with a bag holder comprising two clamps located in about the same height, said clamps being adapted to move parallelly to the travel direction of the trucks, from an outer position in which their reciprocal distance is somewhat shorter than the width of a bag to be filled, to an inner position in which their reciprocal distance is considerably smaller, said clamps being adapted to grip, in their outer position, a bag inserted with its opposite lateral edges in the clamps, said bag holder being further provided with mechanisms adapted to open and to close the clamps and to move the clamps towards each other and away from each other, and fixed guiding cams located in the vicinity of the rail and adapted to cooperate with said mechanisms, the entire construction working in such a way that a bag being fastened in a holder will be conducted by the truck below one of the said hoppers with the clamps in their inner position, and that after it is filled with goods of predetermined weight, said bag, in order to be permanently closed, will be conducted further by the truck to said sealing apparatus with the clamps in their outer position, the bag being suspended in the clamps both during the filling operation and the sealing operation.

2,900,775

BOTTLE HANDLING MACHINE

Carl A. Carlson, Dennis L. Pommer, and Lyndon H. Reiten, Minneapolis, Minn., assignors to General Tool & Engineering Inc., Minneapolis, Minn., a corporation of Minnesota

Application January 21, 1954, Serial No. 405,315
12 Claims. (Cl. 53—160)



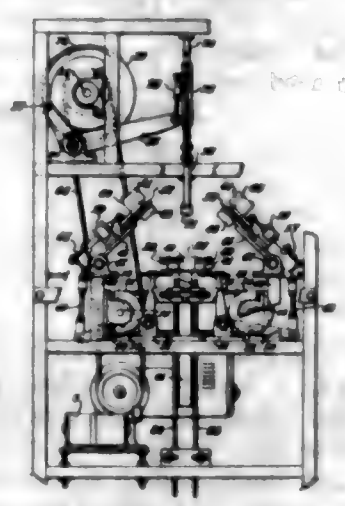
1. In combination, a conveyor carrying bottle cases having bottle receiving compartments successively passing a given station, a second conveyor carrying bottles and delivering them at said station, a chute for directing the bottles from said second conveyor to the compartments in said cases, means at the discharge end of said second conveyor engaging the bottles and transferring them from the second conveyor to said chute, at a predetermined constant rate, said first conveyor moving at a constant rate of speed such that when a number of bottles sufficient to fill a case have been discharged into the chute the conveyor will have traveled a distance equal to the length of a case plus the distance between cases, guide means for guiding said chute for movement in the direction of movement of said case, said chute being normally positioned to register with the first compartment of a case, compensating means for advancing said chute to cause the chute to register with each of the compartments of said cases at the times of delivery of the bottles to the respective compartments, said compensating means operating to return said chute upon filling of the last compartment in a case from its advanced position to its normal position to position the chute for delivery to the first compartment of a following case.

2,900,776

CONTAINER PACKAGING DEVICE

Russell William Anness, Middletown, Ohio, assignor to Diamond Gardner Corporation, Middletown, Ohio, a corporation of Ohio

Application April 17, 1958, Serial No. 729,131
20 Claims. (Cl. 53—191)



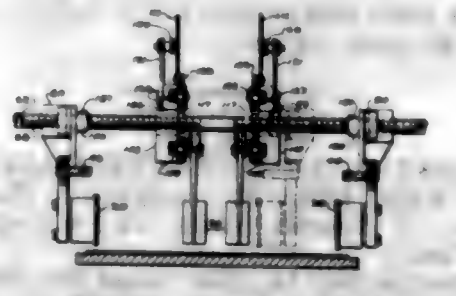
1. In a container packaging device, a pair of spaced apart forming members defining an opening between them, means for feeding a carrier blank onto said forming members with its bottom wall overlying the opening between said forming members, blocks on said forming members positioned to register with flaps formed in the side wall panels of the carrier blank, means for engaging the carrier blank and pressing it downwardly over said blocks so as to fold the flaps in the blank upwardly relative to the wall panels thereof, means for depositing a predetermined number of containers on the bottom wall of the carrier blank, a chute underlying the opening between said forming members, and plunger means to move the carrier blank and the containers positioned thereon downwardly through the said opening and into said chute, the downward movement of the container blank causing the side wall panels thereof to fold upwardly about the opposite sides of the containers.

2,900,777

WRAPPING MACHINE FOLDING CHANNEL SIDE WALL AND CONVEYOR MOUNTING MEANS

William Hoppe, Longmeadow, and Jacob Kramer, East Longmeadow, Mass., assignors to Package Machinery Company, East Longmeadow, Mass., a corporation of Massachusetts

Application February 28, 1957, Serial No. 643,037
5 Claims. (Cl. 53—223)



5. A wrapping machine having a folding channel comprising two opposed side walls and a base plate beneath said side walls, a pair of overhead conveyors having

2,900,781

CONVERTIBLE YARD TOOLS

ing tube, said spindle including a driven top section em-

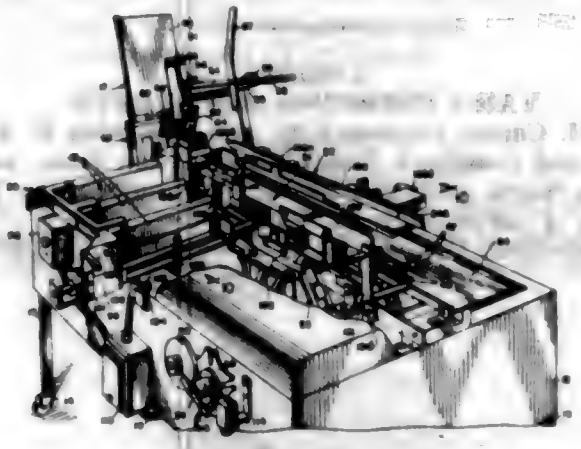
matching spaced flights passing between said side walls to carry successive articles along said base plate and through said folding channel, means for mounting said side walls and said conveyors for movement transversely of the folding channel and selective means for moving said side walls simultaneously with respective adjacent conveyors or independently of the conveyors.

2,900,778

TUCKING MECHANISM FOR PACKAGING MACHINE

Ellsworth A. Hartbauer, Des Plaines, Ill., assignor to F. B. Redington Co., Bellwood Village, Ill., a corporation of Delaware

Application August 27, 1957, Serial No. 680,546
6 Claims. (Cl. 53—376)



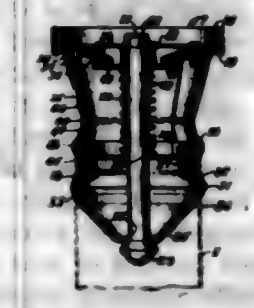
1. In a packaging machine adapted to package articles in an expanded tuck flap carton having four joined walls, side flaps extending from two of the opposed walls at opposite ends thereof, an end closure panel extending from the ends of one of said other walls, and a tuck flap extending from the ends of said end closure panels, a step-by-step driven conveyer having pockets adapted to receive cartons in expanded tubular form and with said side flaps assuming a vertical position, apparatus for closing the cartons comprising means for folding inwardly said side flaps, movable tuck flap breaker means for folding the tuck flap inwardly against said end closure panel, creasing means for further creasing the fold made by said breaker means, a plow for engaging said end closure panel and camming it toward closed position, and coacting movable tuck flap aligning means and movable tucking means for closing said end panel and inserting said tuck flap between the side flaps and the adjacent carton wall.

2,900,779

TOOL FOR OPENING AND EXPANDING THE MOUTH OF A FLEXIBLE RECEPTACLE

Thomas R. Baxter and Bennie C. Miller, Mount Vernon, Ohio, assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Application May 23, 1956, Serial No. 586,857
14 Claims. (Cl. 53—381)



1. A device for opening and expanding the mouth of a receptacle which is characterized by being formed of relatively flexible film material, said device comprising a base and a movable member thereon having a cylindrical section and a cone-shaped portion adapted to be positioned in the mouth of the receptacle, an outwardly facing peripheral cam surface between the cylindrical section and the cone-shaped portion, a plurality of receptacle expanding fingers pivotally mounted on the base and having their free ends adapted to be engaged with the outer surface of said cylindrical section adjacent said cam surface, and resilient means for urging the expanding fingers inwardly toward each other and for resisting movement of said movable member toward said base whereby when said movable member is positioned within the mouth of the receptacle and then moved toward the base said expanding fingers are forced outwardly in a radial direction by engagement with said cam surface to expand the mouth of the receptacle.

2,900,780

FRUIT PICKER WITH FIXED CUTTER

John G. Kaiser, Fort Lauderdale, Fla.

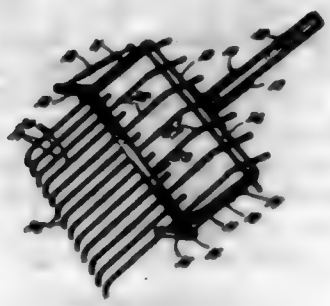
Application October 22, 1957, Serial No. 691,603
1 Claim. (Cl. 56—339)

A fruit picker of the character described that comprises an open frame consisting of a continuous section of relatively heavy wire and with the frame being generally oval and having its forward end terminating in a relatively pointed nose portion that is rounded and of smaller diameter than the opening of the frame, the rear extremities of the frame being straight and parallel and fixedly connected together, a ferrule that is detachably connected to the straight extremities of the frame, the ferrule adapted to receive one of a plurality of cumulative pole sections to support the frame for elevation into a tree for engagement with fruit to be picked, a second frame of arcuate shape overlying and spanning the opening of the first named frame and having its terminal ends permanently connected to the first named frame at opposite sides, the second named frame intermediate its ends defining a rearwardly opening U-shaped slot, the slot overlying the opening of the first named frame adjacent to the nose portion, a third frame that is arcuate in shape and that overlies the second frame to be parallel therewith, the terminal ends of the third frame being permanently connected to the second named frame, the third frame intermediate its width defining a U-shaped slot that is coextensive with the first named slot, the third named frame being flexible upwardly toward and from the second named frame, a cutting knife disposed between the second and third named frames and with the knife diagonally bisecting the slots, the second named frame provided with notches upon its upper side for the seating reception of the knife, a clamp device that engages the second and third named frames for clamping the knife within the notches, a flexible receptacle detachably connected with the first named frame, the first named frame and the second named frame defining a relatively large opening for engagement over the fruit to be picked and with the slots forming a guide for the stem portion of the fruit so that the stem may be severed when the device is pulled rearwardly, the said nose portion of the first named frame defining a leading end to the fruit picker to facilitate its entry into the foliage of a tree.

the chute to register with each of the compartments of

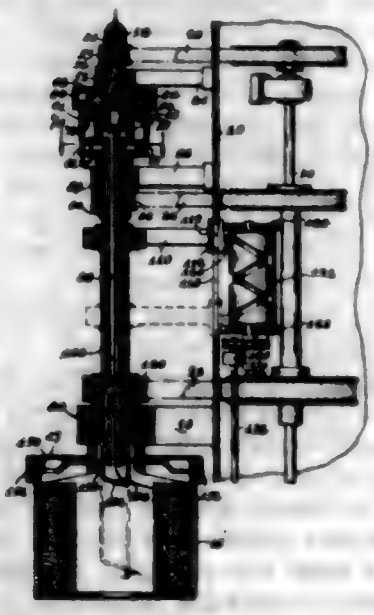
said side walls, a pair of overhead conveyors having

2,900,781
CONVERTIBLE YARD TOOLS
Henry P. Sondle, Denver, and William F. Pralle, Burlington, Colo., assignors to James T. Clark, Fort Morgan, Colo.
Application August 9, 1957, Serial No. 677,328
1 Claim. (Cl. 56—400.16)



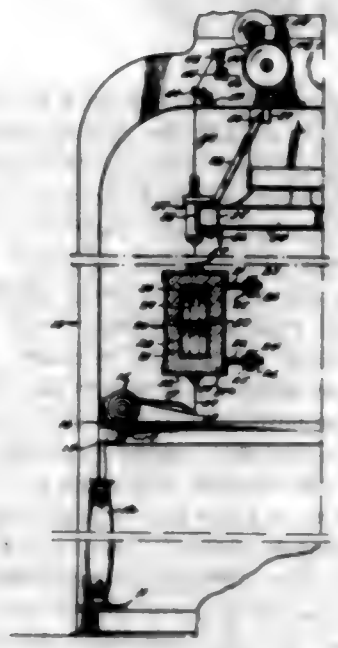
A convertible tool comprising a horizontal frame portion, side arms formed on and extending from the extremities of said frame portion in parallel spaced relation, a rotatable rake shaft extending between said side frame arms and extending at its extremities through said arms, a set of rake tines mounted on said rake shaft between said frame arms and extending outwardly from between said frame arms in operative position, a second set of tines extending from said shaft in a direction opposite said first set of tines and abutting said frame portion to provide a stop for rotation of said rake shaft, a lever fixed on a projecting extremity of said rake shaft, a tension spring extending from the end of said lever to a spring attaching means on the adjacent side frame arm in a direction toward said frame portion, whereby rotation of said rake shaft in a direction to extend said spring will move said first set of rake tines toward abutting relation with said horizontal frame portion and extend said second set of tines to operative position, said spring serving, when past its aligned position with said side arm to facilitate said rotation with an over-center snap action.

2,900,782
UNIVERSAL SPINNING UNIT
Emilian Bobkowicz, Montreal, Quebec, Canada
Application June 10, 1957, Serial No. 664,749
16 Claims. (Cl. 57—31)



1. A spinning and twisting apparatus of the false twist type adapted to impart a positive twist to a fiber roving, fiber strip or yarn, comprising, a supporting frame, a first fixed set of opposed material engaging rolls, a false twist spindle mounted for rotation on said frame about a vertical axis aligned with said material engaging rolls and including an internal hollow material feeding and delivering tube, said spindle including a driven top section embodying a variable bevel gear arrangement engaging the lower portion of said spindle, the lower portion of said spindle supporting a set of opposed material delivering rolls for axial and trans-axial rotation, a geared transmission between said upper spindle gear arrangement and said material delivering rolls, separate driving means for said upper and lower spindle portions whereby said rolls are adapted to be rotated in one direction feeding said material and also rotated about the axis of said feeding direction to impart a positive twist to said material, a material collecting pot mounted for rotation on said frame in aligned position relative to and about an axis representing the line of travel of the material fed thereto, a traverse motion package building mechanism mounted on said frame and cooperating with said hollow material delivery tube, and separate and variable driving means connected to said material collecting pot.

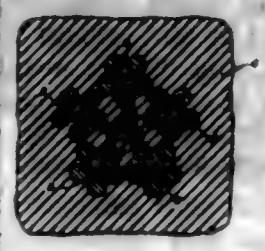
2,900,783
YARN CRIMPING APPARATUS
Ralph H. Carter, Johnson City, and Chadwick B. Kingsbury and Douglas J. Lamb, Elizabethton, Tenn., assignors to North American Rayon Corporation, New York, N.Y., a corporation of Delaware
Application October 28, 1955, Serial No. 543,361
10 Claims. (Cl. 57—34)



1. An apparatus for substantially uniformly crimping thermoplastic yarns comprising the combination of means for heating and softening a plurality of strands of thermoplastic yarn, said means comprising a plurality of tubular members through which said yarn strands are adapted to pass, said tubular members being arranged in groups, a plurality of fluid conducting heating chambers positioned around upper and lower portions of said tubular members respectively, one of said chambers being positioned around each of said groups, each of said chambers being partitioned into an upper section and a lower section, means for connecting said lower sections in series, means for connecting said upper sections in series, means for connecting the end of the upper section to the end of the lower section in the end chamber of the series, means for feeding heating fluid first through the lower sections of said series of chambers and returning said heating fluid through the upper sections of said series of chambers to provide substantially uniform heating of all of said tubular members, means for passing individual yarn strands to be softened through said tubular members, and means for uniformly crimping all of said yarn strands.

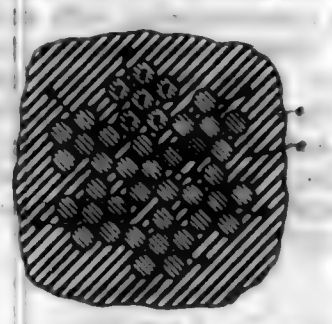
substantially less than one part by weight of 1,4-bis-(di- each communicating at one end thereof with said combus-

2,900,784
CORD AND ARTICLE CONTAINING THE SAME
James M. Fenner, Chagrin Falls, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey
Application January 15, 1958, Serial No. 709,079
6 Claims. (Cl. 57—148)



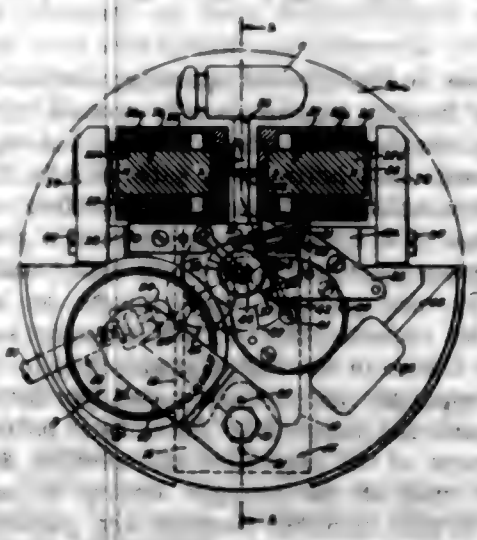
1. A cord comprising a center core formed of three wires twisted together, and five 6-wire strands laid helically around the core, each strand consisting of six wires twisted together with each wire being on the outside of the strand over part of its length.

2,900,785
SIX-WIRE STRAND
James M. Fenner, Chagrin Falls, Ohio, assignor to United States Steel Corporation, a corporation of New Jersey
Application May 18, 1956, Serial No. 585,662
7 Claims. (Cl. 57—153)



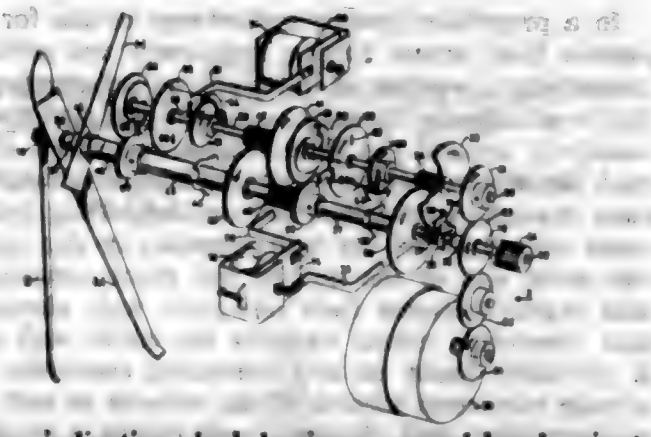
3. An article comprising a metallic strand embedded in rubber with the rubber extending into the interstices of said strand, said strand consisting of six individual wires twisted together with each wire being on the outside of the strand over part of its length.

2,900,786
TIMEPIECE ARRANGEMENT
Max Hetzel, Biel, Switzerland, assignor to Bulova Watch Company, Inc., Jackson Heights, N.Y.
Application May 31, 1956, Serial No. 588,409
8 Claims. (Cl. 58—23)



1. In a timepiece, in combination, substantially flat front and back wall means forming between themselves a flat timepiece chamber: substantially flat base plate means arranged within said chamber, extending substantially parallel to said front and back wall means and having an area smaller than the sectional area of said chamber in the plane of said base plate means so as to leave a free chamber portion between said front and back wall means which is unoccupied by said base plate means; a timepiece mechanism within said chamber and carried by said base plate means; a vibrator operatively associated with said timepiece mechanism for driving the same during oscillation of said vibrator, said vibrator having spaced attaching and oscillatable portions the former being fixed to said base plate means and the latter being arranged in said free chamber portion and having in a direction normal to said base plate means a maximum dimension which is greater than the distances between said base plate means and each of said front and back wall means so that said oscillatable portion of said vibrator projects across the plane of said base plate means; and means within said chamber, carried by said base plate means and being operatively associated with said oscillatable portion of said vibrator for oscillating the same.

2,900,787
RESET MECHANISM FOR TIME INDICATING CLOCK
Maurice A. Blouin, Gardner, Mass., assignor to Simplex Time Recorder Co., Gardner, Mass., a corporation of Massachusetts
Application October 3, 1956, Serial No. 613,698
1 Claim. (Cl. 58—34)



A time indicating clock having a second hand, minute hand and hour hand, geared together and driven so as to revolve at standard time rate; means for synchronizing specific clock-mechanism members with the clock hands so that these members will register clock time; specific reset members, held stationary except during correction time, and thus, with synchronized clock-mechanism members, registering the difference between master clock time and indicated clock time, if any; ratchets continuously revolving at 1 r.p.m. for driving said reset members, slip clutch means for permitting rapid advance of said reset members, electromagnets responsive to an electric control plus for triggering said reset mechanism; means for arresting the second hand at 00 if off-time at correction signal time; two single-revolution clutches for separately connecting and driving the minute hand and the hour hand at 1 r.p.m. to correct for any time error at correction time; and means to de-clutch the minute and hour hands and release the second hand when predetermined reset position and time indication is reached at the end of a one-minute correction period.

2,900,788
ROCKET FUEL AND FUEL ADDITIVE
Robert S. Felberg, Miami, Fla., and Jack R. Gould, Morristown, N.J., assignors, by mesne assignments, to Thiokol Chemical Corporation, a corporation of Delaware
No Drawing. Application January 20, 1955
Serial No. 483,172
5 Claims. (Cl. 60—35.4)

2. In the process of propelling a rocket, the steps which comprise forming a hypergolic propellant by mixing not

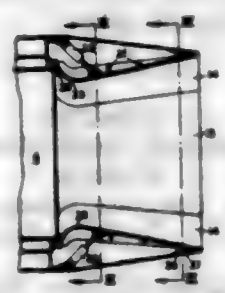
substantially less than one part by weight of 1,4-bis-(dimethylamino)-1,3-butadiene with about seven parts of a nonhypergolic jet-type hydrocarbon fuel, contacting said propellant with substantially an equal volume of fuming nitric acid and burning said propellant in the combustion chamber of a rocket motor.

2,900,789

DISCHARGE NOZZLES FOR PROPULSIVE JETS

Peter de Beriatte Philpot, Fleet, England, assignor to the Minister of Supply, in Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland, London, England

Application November 25, 1955, Serial No. 549,081
Claims priority, application Great Britain November 26, 1954
1 Claim. (Cl. 60—35.6)



In a propulsion system a discharge nozzle for a propulsive fluid stream having fluid entry and outlet ends comprising a number of one-piece wall elements extending longitudinally between said ends and arranged consecutively around the fluid stream, said wall elements each having an arcuate transverse section arranged concave inwardly to the fluid stream, supporting means located outwardly of the wall elements in the region of the outlet end of the nozzle, and pivot connections in said region between each one-piece wall element and said supporting means whereby the entire wall element is pivotable about an axis extending chordwise of the arcuate transverse section of the element in said region, said one-piece wall elements each having a curved longitudinal section arranged convex inwardly to the fluid stream, means for pivoting said wall elements simultaneously from an inner position defining a convergent-divergent configuration, outwardly of the fluid stream thereby varying the nozzle configuration, said supporting means comprising a tubular casing extending upstream of the nozzle, said tubular casing having an inner tubular duct for the fluid stream extending upstream from the inlet end of the nozzle and located within and spaced from said casing to define therewith a passage for a cooling fluid, means for supplying a cooling fluid to said passage, said inner tubular duct and the inlet end of said nozzle being separated one from the other whereby cooling fluid is directed through said separation and over the inner surfaces of said one-piece wall elements, the separation of said inner end of said nozzle from said inner tubular duct being increased by the pivoting of said wall elements outwardly from their inner position whereby the flow of cooling fluid therethrough is increased.

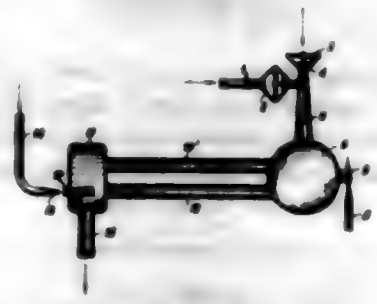
2,900,790

APPARATUS FOR STARTING A PULSATORY COMBUSTION DEVICE

Ernst Reimers, Wernau am Neckar, Germany, assignor to Junkers & Co. G.m.b.H., Wernau, Neckar, Germany

Application November 1, 1955, Serial No. 544,305
Claims priority, application Germany November 2, 1954
5 Claims. (Cl. 60—39.77)

5. In a pulse jet combustion device, in combination, a combustion chamber; an exhaust chamber spaced from said combustion chamber; a plurality of resonant tubes each communicating at one end thereof with said combustion chamber and at its opposite end with said exhaust chamber; and injector means cooperating with at least one but not all of said resonant tubes for transmitting through at least one of said resonant tubes to said combustion chamber a combustible fuel-air mixture for starting the device, said injector means comprising at least one tubular member carried by said exhaust chamber and extending into the same, said tubular member having an inlet end at the exterior of said exhaust chamber and an outlet end located closely adjacent to the end of one of the resonant tubes cooperating with said injector means and



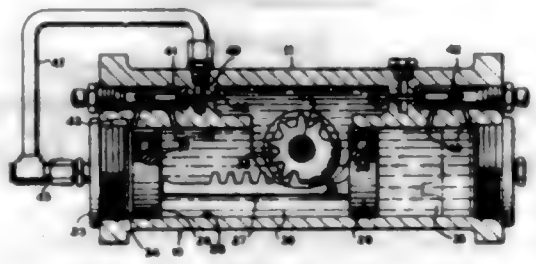
communicating with said exhaust chamber, and said injector means including at least one nozzle aligned with and spaced from said inlet end of said tubular member and located at the exterior of said exhaust chamber and conduit means communicating with said nozzle for supplying to the latter a combustible fuel which passes through the free space between said nozzle and tubular member into the latter to supply through said tubular member fuel and air drawn into the tubular member through said space which then pass through the resonant tube aligned with said tubular member into said combustion chamber.

2,900,791

AUTOMATIC DOOR OR LIKE CLOSURE OPERATOR

John A. Kinsey, Jr., Akron, Ohio

Application February 17, 1958, Serial No. 715,758
8 Claims. (Cl. 60—52)



1. A door or like closure operating device, comprising a housing having therein axially spaced pressure-fluid containing chamber portions, a plunger having longitudinally opposite end portions in substantially fluid-sealing reciprocative relationship within respective said chamber portions, said housing having therein a pressure-fluid containing compartment closed off from said chamber portions by said plunger ends, means on said casing operable by reciprocation of said plunger and adapted to operate a door or the like, pressure-fluid by-pass means between opposite said chamber end portions and said compartment and adapted to be at least partially closed by movement of the respective said plunger ends toward the outer ends of the plunger strokes to increase the pressures in said chamber portions and thereby to retard the speed of the plunger, a source of pressure fluid, control means operable to supply fluid under pressure from said source to at least one of said chamber portions to urge the plunger toward the opposite end, means for returning said plunger to said one end after said prede-

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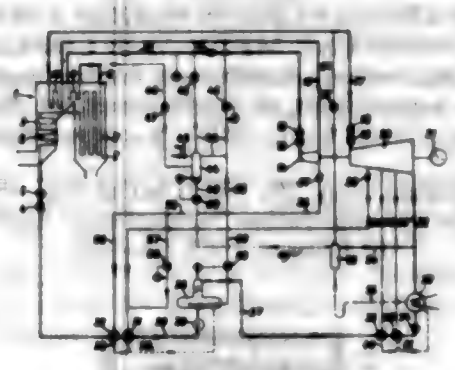
termined period, pressure-fluid return means being provided between said compartment and said source of pressure fluid, pressure-fluid conduit means provided from said supply source to said by-pass means at said at least one end and having therein a cut-off valve including a spring-pressed member normally positioned to open the respective by-pass means to said compartment, and check valve means provided between said source of pressure fluid and said at least one chamber portion to prevent return flow of pressure fluid therefrom which would otherwise close said cut-off valve means when said supply source is cut off, said member being yieldingly operable by pressure fluid supplied from said source by said control means in coordination with supply of fluid to said at least one chamber portion to close the respective said by-pass means to said compartment and thereby increase the effective pressure in said at least one chamber portion.

2,900,792

STEAM POWER PLANT HAVING A FORCED FLOW STEAM GENERATOR

Alfred M. Burl, Winterthur, Switzerland, assignor to Sulzer Frères S. A., Winterthur, Switzerland, a corporation of Switzerland

Application May 28, 1956, Serial No. 587,585
Claims priority, application Switzerland June 4, 1955
3 Claims. (Cl. 60—67)



1. A steam power plant including a turbine, a forced flow steam generator connected with said turbine for supplying steam to said turbine, said turbine having at least two parts operating at different steam pressures, a steam resuperheater interposed for steam flow between said parts and being combined with said steam generator to be heated therewith, a bypass conduit arranged to bypass steam around the high pressure part of said turbine and into said resuperheater, a bypass valve and a water separator interposed in series relation in said bypass conduit, the bypass valve being closed during normal operation of the plant, a plurality of feed water heaters receiving bleeder steam from said turbine, an automatic valve interposed in said bypass conduit downstream of said bypass valve and of said separator and being responsive to the pressure in said bypass conduit upstream of said automatic valve, and a heating steam conduit connected with said bypass conduit between said water separator and said automatic valve and connected with at least a part of said feed water heaters for supplying heating steam thereto.

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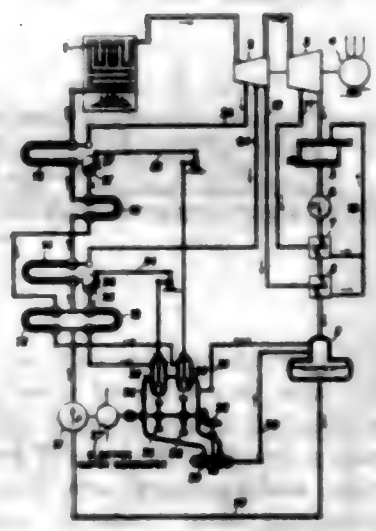
CONDENSING STEAM HEATED BOILER FEED WATER HEATING SYSTEM INCLUDING A CONDENSATE OPERATED TURBINE

Alfred Burl, Winterthur, Switzerland, assignor to Sulzer Freres, Societe Anonyme, Winterthur, Switzerland, a corporation of Switzerland

Application March 25, 1955, Serial No. 496,712
Claims priority, application Switzerland April 6, 1954
4 Claims. (Cl. 60—107)

1. A boiler feed water heating system for a steam power plant comprising an indirectly condensing steam heated feed water heater, a water turbine connected with said feed water heater for receiving and being operated by condensate produced in said feed water heater by condensation of the heating steam, a boiler feed water con-



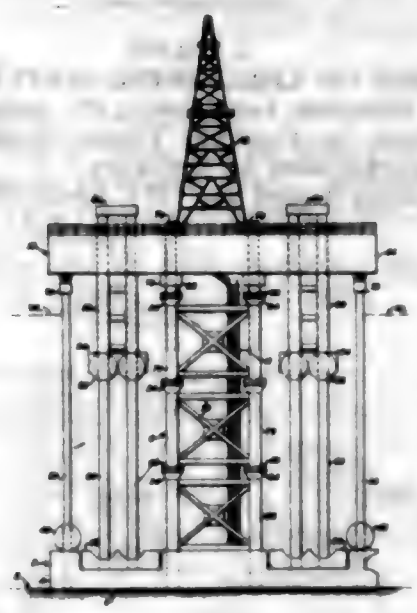
duit, and a pump connected with said turbine to be driven thereby and for receiving water discharged by said turbine and connected with said feed water conduit for discharging the water thereinto.

2,900,794

OFFSHORE EQUIPMENT SUPPORTS AND METHODS FOR MAKING SAME

John R. Sutton, Beaumont, Tex.

Application August 26, 1955, Serial No. 530,788
10 Claims. (Cl. 61—46.5)



1. A method of assembling a structure for supporting equipment at an offshore location in a body of water comprising, floating to position and then sinking to the bottom of the body of water a foundation unit; floating to a position above said foundation unit a platform unit having an equipment support, vertically movable guide means, first controllable buoyancy means mounted for up and down movement relative to said support, and second controllable buoyancy means fixed with respect to said support; lowering said guide means into engagement with said foundation unit; decreasing the buoyancy of said first buoyancy means to sink such means onto said foundation unit at a level far below the surface of the water; and then decreasing the buoyancy of said second buoyancy means to lower said support to a position in which it is supported by said foundation unit.

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said combustion chamber; a plurality of resonant tubes turning said plunger to said one end after said prede-

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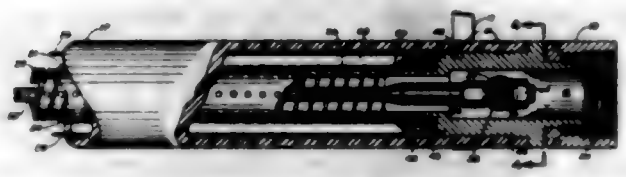
RAISING AND LOWERING APPARATUS

Harry Brandt, Whittier, Calif., assignor to California Research Corporation, San Francisco, Calif., a corporation of Delaware

Application October 20, 1955, Serial No. 541,716
1 Claim. (Cl. 61—72)



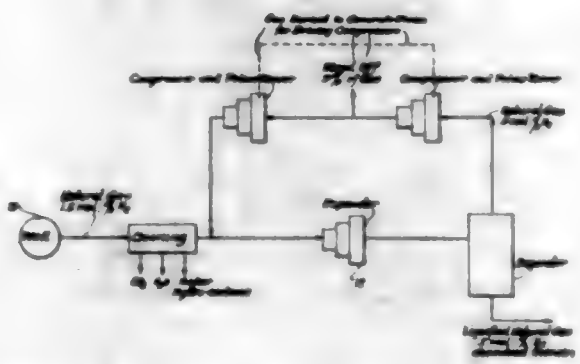
A device for controlling the vertical position of a seismic detector cable in a body of water comprising an auxiliary cable attached to and parallel with said seismic cable and having a length substantially coextensive with said seismic cable, said auxiliary cable being formed with a flexible water-impervious radially extensible outer covering the inner walls of which form a collapsible fluid-tight chamber in said auxiliary cable, a radially rigid and axially flexible conduit within said covering and radially separable from the inner walls thereof, radially disposed longitudinally spaced openings in the walls of said conduit to establish communication between the interior of said conduit and said chamber throughout the length of said auxiliary cable, means to introduce a fluid under pressure into one end of said conduit to radially extend the walls of said outer covering uniformly throughout the length of said auxiliary cable, and means to release the said fluid from said auxiliary cable through the said one end of said conduit to cause the walls of said outer covering to collapse onto said flexible conduit.

2,900,796

METHOD OF LIQUEFYING NATURAL GAS

Willard L. Morrison, Lake Forest, Ill., assignor, by mesne assignments, to Comstock Liquid Methane Corporation, a corporation of Delaware

Application August 16, 1954, Serial No. 450,256
4 Claims. (Cl. 62—11)



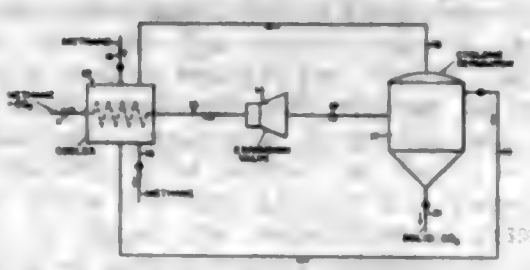
1. The method of controlling and limiting the nitrogen concentration in a recycling system, which liquefies a combustible gas, which may contain nitrogen, by causing the gas to expand and do external work with resultant liquefaction of part of the gas, separating the liquid from the unliquefied dry gas and discharging the liquid from the system, compressing the dry gas to a pressure above that at which separation from the liquid took place and discharging some of it from the system, compressing the remaining dry gas and recycling it through the system, together with fresh gas added in such quantity as to compensate for the liquefied and dry gas discharged from the system.

2,900,797

SEPARATION OF NORMALLY GASEOUS ACIDIC COMPONENTS AND METHANE

Fred Kurata, Lawrence, Kans., and James Paul Kohn, South Bend, Ind.

Application May 25, 1956, Serial No. 587,401
6 Claims. (Cl. 62—12)



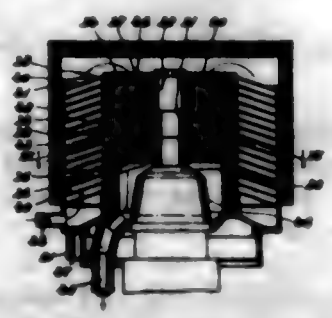
1. A process for the separation of carbon dioxide and methane which comprises maintaining a mixture of methane and carbon dioxide at a sufficiently high pressure and a sufficiently low temperature to completely liquefy methane in which all the carbon dioxide is dissolved, thereafter reducing the temperature on said liquid methane sufficiently low such that carbon dioxide precipitates from liquid methane as a solid, and separating solid carbon dioxide from methane.

2,900,798

HEAT-EXCHANGER IN WHICH A MULTI-COMPONENT MEDIUM IS COOLED

Cornelius Otto Jonkers, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Application May 29, 1953, Serial No. 358,317
Claims priority, application Netherlands April 22, 1953
12 Claims. (Cl. 62—42)



1. A heat exchanger having a gas passing therethrough containing a plurality of components to be cooled and having at least one of said components precipitated out comprising a conductor enclosure containing a conductor and having a hot end and a cold end, said medium flowing from the hot end to the cold end thereof, a plurality of fins with which the medium is in thermal contact, means mounting said fins in said conductor enclosure in superposed relationship and substantially laterally to said conductor enclosure, an inlet duct for said medium at the hot end of said conductor enclosure, an outlet duct for said medium at the cold end of said conductor enclosure, a thermal sink adjacent to the cold end of the conductor enclosure forming a cold source for said conductor enclosure and directly connected thereto, said component to be separated being deposited on certain of said fins, the composition of the medium being modified and the temperature at which said component is to be precipitated being reduced, and the mean temperature of each of said fins being at the maximum 20° C. lower than that of successive fins, and the mean temperature of one of said fins at which said precipitation begins is not more than 20° C. lower than the precipitation point of said component in the medium when it is supplied to said one of said fins.

plant comprising an indirectly condensing steam heated

second buoyancy means to lower said support to a position in which it is supported by said foundation unit.

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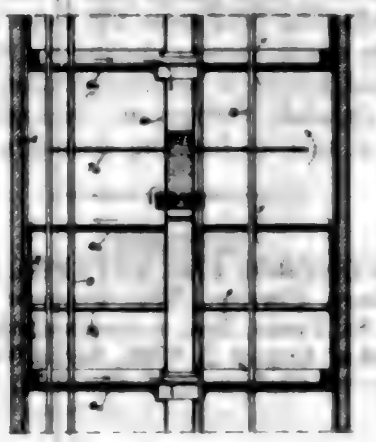
REFLUX CONDENSERS

Alfred Etienne, Paris, France, assignor to L'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude, Paris, France

Application February 28, 1956, Serial No. 566,681
Claims priority, application France March 9, 1955
3 Claims. (Cl. 62—42)



1. A reflux condenser for the separation of gaseous mixtures by low-temperature liquefaction, comprising an outer shell, a bundle of vertical tubes within the shell through which liquid is being circulated, means for passing the gaseous mixture upwardly in contact with said tubes for reflux condensation by heat exchange with the liquid within the tubes, and rectifying means comprising rectifying trays perforated with holes through which the tubes extend; said rectifying trays being connected to the outer shell in a tight manner by a liquid seal, the diameter of each hole being slightly greater than the outer diameter of the tube thereby forming annular gaps for gaseous mixture to rise only between the tubes and the edges of the holes and bubble through a liquid condensed portion of the mixture near the gaps thereby stripping heavy components from the mixture.

2,900,800

METHOD AND APPARATUS FOR MAINTAINING EFFICIENCY OF VACUUM INSULATION

Paul E. Loveday, Kenmore, N.Y., assignor to Union Carbide Corporation, a corporation of New York

Application January 5, 1956, Serial No. 557,477
11 Claims. (Cl. 62—45)

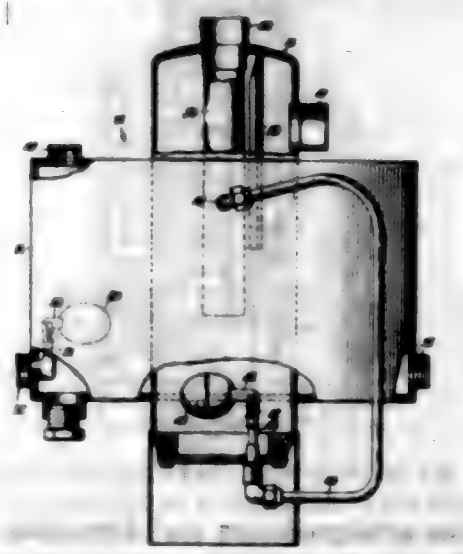
1. In an apparatus for the maintenance of a material in a predetermined temperature range wherein the material is stored within one container which container is substantially enclosed in a second container and a vacuum is maintained in the space between the two containers, the improvement which comprises a quantity of at least one crystalline zeolitic molecular sieve having pores of at least about 5 angstrom units in size within said space between said two containers.

2,900,801

METHOD AND APPARATUS FOR OIL SEPARATION IN REFRIGERATION SYSTEM

Eugene H. Honegger, Silver Spring, Md.

Application November 23, 1955, Serial No. 548,601
10 Claims. (Cl. 62—84)



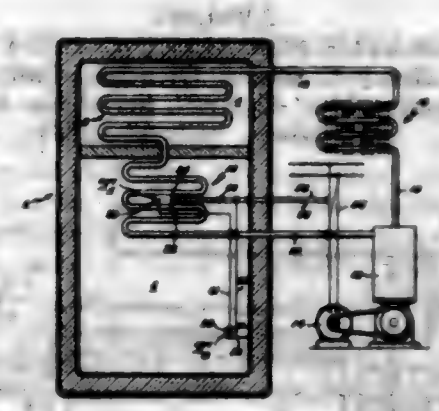
1. A method of separating refrigerant and liquid where the refrigerant is miscible in the liquid comprising passing compressed hot substantially gaseous refrigerant through a separating zone, separating the liquid from said refrigerant in said separating zone, moving said separated liquid from said separating zone into an accumulating zone, maintaining said separated liquid in said accumulating zone in indirect heat exchange relation with hot gaseous refrigerant continuously passing through said separating zone, and removing gaseous refrigerant from said accumulating zone separated from said liquid therein by the heat transferred thereto from said separating zone.

2,900,802

CONTROL FOR REFRIGERATOR

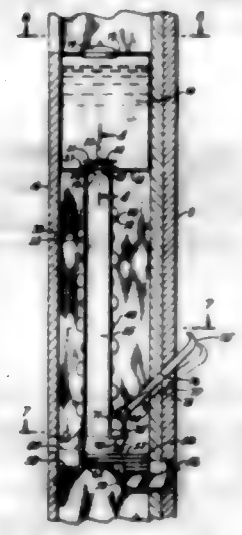
James A. Bagnall, Dearborn, Mich., assignor to Texas Instruments Incorporated, Attleboro, Mass., a corporation of Massachusetts

Application July 12, 1955, Serial No. 521,610
17 Claims. (Cl. 62—156)



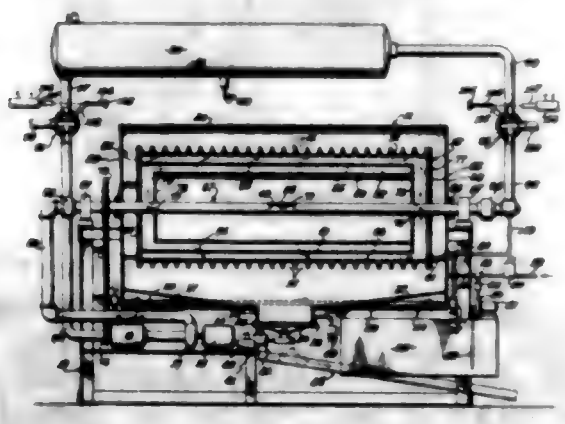
1. A control for a refrigerator having at least one evaporator together with refrigerant circulating means therefore, comprising first means thermally responsive to the temperature of said evaporator and adapted to be mounted so as to be in close temperature relationship therewith for controlling the operation of said refrigerant circulating means; second means for raising the temperature of said first means above the temperature of said evaporator; and third means thermally responsive to the temperature of the air in said refrigerator for controlling the operation of said second means.

2,900,803
ICE CUBE MAKER AND DISPENSER
John F. Horton, Jr., West Islip, N.Y.
Application December 3, 1956, Serial No. 626,014
2 Claims. (Cl. 62—157)



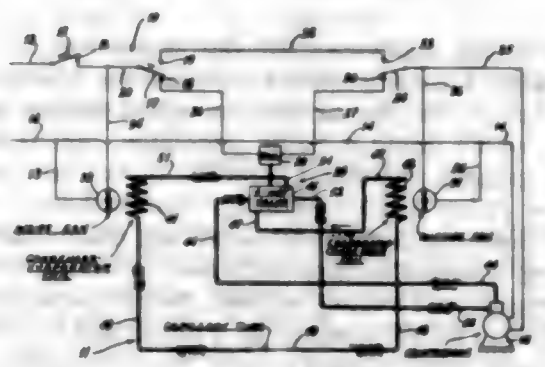
1. An ice cube producing and dispensing device comprising a housing, an overhead water reservoir, a plurality of freezing tubes of substantially rectangular cross-section arranged in series in side to side contact, opening into and dependent from said reservoir, a multiple float valve mounted in said reservoir hermetically sealing said tube openings when said reservoir is empty, refrigerant coils having a flat contact side helically wound around the collective exterior surface of said series of tubes, connected to a refrigerant source thermostatically regulated, an electrical heating tape element helically wound around and insulated from said collective exterior surface of said series of tubes connected to a 110 volt current source through an electrical delay timer switch, normally open, a stop member mounted below the lower ends of said tubes for limiting the drop therefrom of ice columns formed therein to a predetermined extent, means for severing the portions of said ice columns protruding below the lower ends of said tubes, means operable from the housing exterior for actuating said ice severing means and closing said electrical delay time switch in sequence, and a trough slidably mounted below said stop member for movement to a position partially outside said housing.

2,900,804
APPARATUS FOR MAKING ICE CUBES
Henry C. Rising, Glendale, Calif.
Application May 21, 1957, Serial No. 660,993
31 Claims. (Cl. 62—157)



1. In an apparatus of the character described for making small blocks of ice, the combination of: a tank containing a body of fresh water; a cylindrical drum having a plurality of peripheral conductive elements for forming small bodies of ice; a substantially horizontal rotary shaft united with and supporting said drum for rotation with at least a portion of the periphery of the drum immersed in the water in said tank, said shaft having an inflow passage and an outflow passage for circulation of fluid through the drum; a cylinder inside said drum and united therewith in communication with said inflow passage, said cylinder forming with said drum a rotary annular space and having spaced apertures to direct the inflowing fluid across said space, thereby to distribute the inflowing fluid over the inner circumferential surface of the drum; power means to rotate said shaft and drum; and means in communication with said two passages to circulate refrigerant through the drum to freeze water at said ice-forming elements.

2,900,805
ELECTRIC CONTROL CIRCUITS FOR HEAT PUMPS
Ralph B. Tilney, Clayton, Mo., assignor to Alco Valve Company, St. Louis, Mo., a corporation of Missouri
Application August 2, 1956, Serial No. 601,759
7 Claims. (Cl. 62—160)

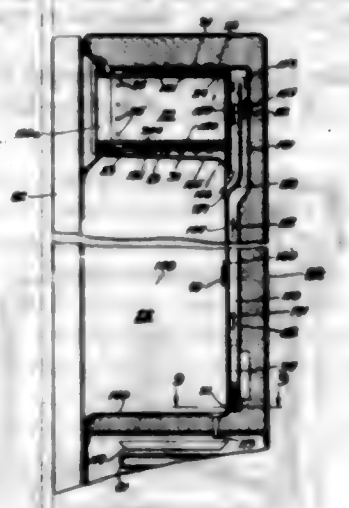


7. An electric circuit for controlling a reversible heat pump system having a solenoid operated reversing valve, a pair of reversible heat exchanging fluid coils, a fluid restricting means and a compressor, said circuit including automatic switching means for energizing and de-energizing the solenoid and thereby reversing the flow in said heat pump system, and means for energizing and de-energizing said compressor, said last named means including means in series with the solenoid for energizing the compressor when the solenoid is energized, and separate means for energizing the compressor when the solenoid is de-energized, both of said automatic switching means and said means for energizing and de-energizing the compressor including thermostat devices adapted to be connected in series with the compressor and being responsive to the temperature of a space to be temperature regulated by said heat pump system.

2,900,806
SELF-DEFROSTING TWO-TEMPERATURE REFRIGERATOR
Clifford H. Wurtz and Leonard J. Mann, Dayton, Ohio, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware
Application December 27, 1955, Serial No. 555,333
21 Claims. (Cl. 62—186)

1. In combination: a refrigerator having means forming a first compartment to be maintained at a temperature below 32° F. and a second compartment to be maintained at a refrigerating temperature above 32° F., a casing surrounding a major portion of said first compartment and having an air inlet into and an air outlet from said first compartment; a refrigerating system having a refrigerant liquefier and a refrigerant evaporator, one portion of said evaporator surrounding said casing and another portion of said evaporator being relatively remote from said casing; a first fan for circulating air from said air outlet past said one portion of said evaporator, through said air inlet into said first

compartment and into said air outlet for recirculation by said first fan; and a second fan for recirculating air



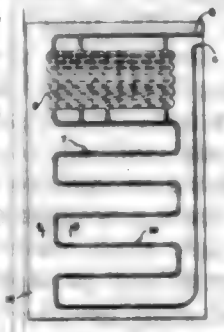
back and forth between said second compartment and said another portion of said evaporator.

2,900,807

DEFROSTABLE EVAPORATOR STRUCTURE

Douglas A. Solley, Jr., Fern Creek, and Kenneth A. Robbie, Louisville, Ky., assignors to General Electric Company, a corporation of New York

Application June 2, 1958, Serial No. 739,108
2 Claims. (Cl. 62—277)



1. A defrostable refrigerant evaporator structure comprising an evaporator composed of three sheets of metal bonded together, a refrigerant circuit between the intermediate sheet and one of the outer sheets including a serpentine passage and an accumulator portion composed of a plurality of closely spaced intersecting passages each having approximately the same dimensions as said serpentine passage, and a defrost circuit between said intermediate sheet and the other outer sheet, said defrost circuit being in the form of a closed loop and including a section of general serpentine configuration paralleling said refrigerant serpentine passage and another section including a plurality of passes disposed on the opposite side of said intermediate sheet from said accumulator portion.

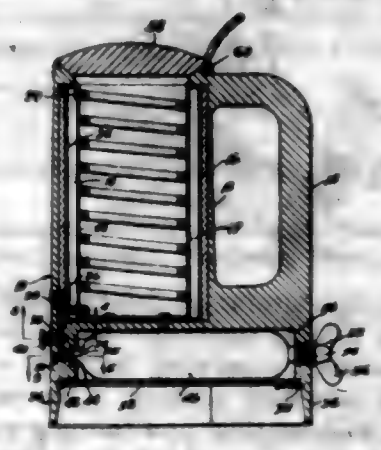
2,900,808

POCKET LIQUID COOLING DEVICE

Wenzan Wang, Tokyo, Japan

Original application November 22, 1955, Serial No. 548,488, now Patent No. 2,805,556, dated September 10, 1957. Divided and this application May 14, 1957, Serial No. 659,166
4 Claims. (Cl. 62—294)

1. A pocket liquid cooling device comprising a thermally insulated lined receptacle having an open top, a shell positioned within and spaced from said receptacle, the space between said shell and said receptacle defining an expansion chamber, a cooling coil having a plurality of spaced convolutions positioned vertically within said shell and having the uppermost one of said convolutions in communication with said expansion chamber, and a nipple carried by the lowermost convolution and extending through said expansion chamber and having the free end in communication with a duct formed in said receptacle, there being a passage in said receptacle having one end in communication with said duct and having the other end in communication with a recess formed in said receptacle, said receptacle having a cartridge chamber therein which communicates with said recess, a puncturable re-



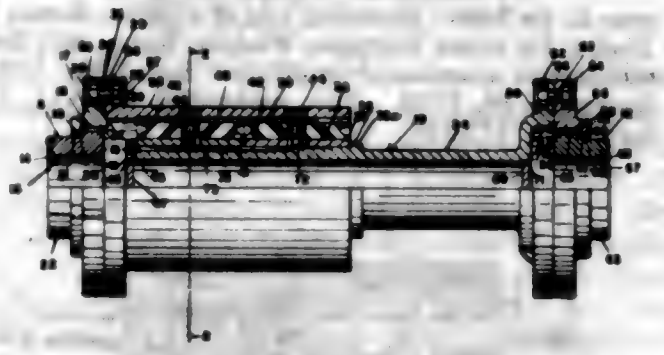
frigerant containing cartridge mounted in the cartridge chamber for movement in a rectilinear path therein, and a needle extending into the passage and carried by said receptacle and extending in the path of movement of the cartridge for puncturing said cartridge upon its advance toward said needle and delivering refrigerant from said cartridge through the recess, passage, duct, and convolutions of the coil, into the expansion chamber.

2,900,809

SOUND ISOLATING COUPLING

John H. Crankshaw, Erie, Pa., assignor to Zurn Industries, Inc., Erie, Pa., a corporation of Pennsylvania

Application January 25, 1957, Serial No. 636,315
6 Claims. (Cl. 64—13)

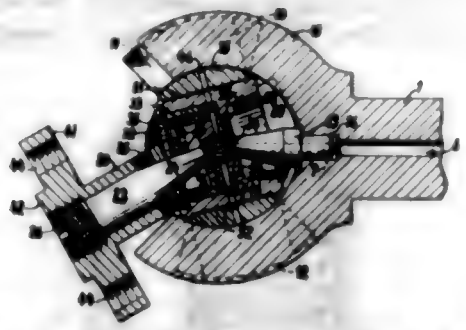


1. A coupling comprising an inner support tube, a resilient sleeve, an outer support tube, said inner and outer support tubes and said resilient sleeve being disposed concentric with each other, said resilient sleeve being disposed between said inner and said outer support tubes and having its inner and outer surfaces fixed to the outer and inner surfaces, respectively, of said inner and outer support tubes, driving means attached to said outer support tube, driven means attached to said inner support tube, circumferentially spaced bores in said inner support tube, plugs attached to said outer support tube extending radially inwardly and extending into said bores in said inner tube, said bores being substantially larger than the part of said plugs extending thereinto, said plugs being clear of engagement with the periphery of said bores when a torque of a relatively low value is transmitted by said coupling, said plugs engaging one wall of said bore when a relatively high torque is transmitted, said driving means comprising an outer member concentric with said outer support tube, said plugs being attached to said outer member and said outer support tube by means of threads on the periphery of said plugs engaging threaded bores in said outer member and said outer tube whereby said outer tube and said outer member are locked together by said plugs.

ing means is shifted fully to non-shielding position; re-

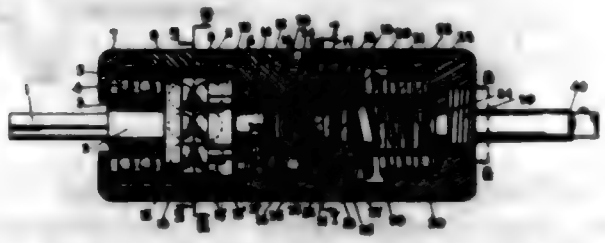
mediate region of the edges of each arm in the direction

2,900,810
CONSTANT ANGULAR VELOCITY JOINT
Helmuth A. Schultze, Syracuse, N.Y.
Application December 18, 1957, Serial No. 703,616
5 Claims. (Cl. 64—21)



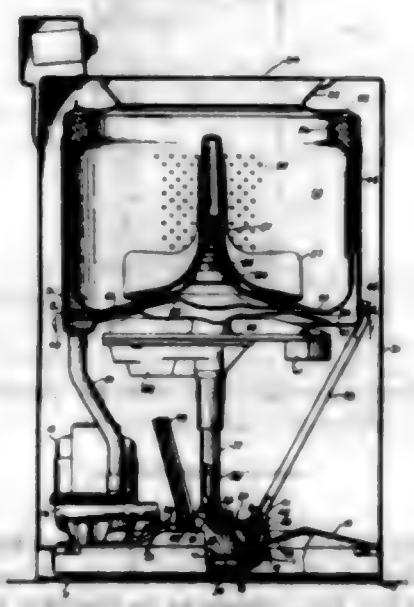
5. Means for turning a driven shaft at a constant velocity by a driving shaft; said means comprising a pair of shaft sections, cooperating bearings slidably engaged with each of said shaft sections, a bearing support member carrying said bearings and forming an operative connection between each of said shaft sections, and centering means cooperating between said shaft sections; each said shaft section having a bifurcated end portion forming a fork having a bearing surface thereon; said cooperating bearings operatively receiving in pairs thereof, each fork of said shaft sections; said centering means comprising a centering pin extending from the end of each said shaft section, and a disc with a hole therethrough disposed in a central opening in said bearing support member between each of said shaft sections, each of said centering pins entering the hole in said disc for maintaining said pair of shaft sections in alignment.

2,900,811
HYDRAULIC TORQUE TOOL
Jesse E. De Selms, deceased, late of Wichita, Kans., by Evelyn De Selms Brandon, Wichita, Kans., sole heir
Substitute for abandoned application Serial No. 133,904, December 19, 1949. This application May 11, 1959, Serial No. 812,555
1 Claim. (Cl. 64—28)



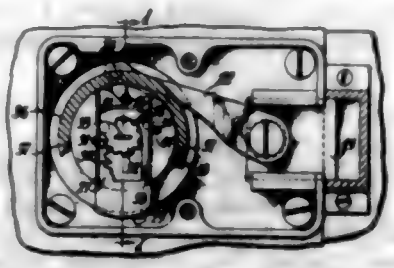
A hydraulic torque tool comprising a body, a rotatable shaft extending from one end of the body, a clutch between the body and the rotatable element, said clutch including a pair of parallel plates, one plate being carried by the body and longitudinally slidable therein, the other plate being carried by the rotatable element, ball bearings carried by each of the plates, said ball bearings intermeshing when the first mentioned plate is urged toward the other plate, a reduced piston chamber in the body concentric with the clutch, an enlarged piston chamber, an accumulator chamber in the body adjacent the enlarged piston chamber, a check valve chamber in the body adjacent the reduced piston chamber, a passage between the piston chambers, a passage between the reduced piston chamber and the check valve chamber, and a passage between the enlarged piston chamber and the accumulator chamber, a valve in the passage between the piston chambers opening toward the enlarged piston chamber, a valve in the passage between the accumulator chamber and the check valve chamber opening toward the check valve chamber, and a spring-urged piston in the accumulator chamber exerting pressure on the fluid therein.

2,900,812
SEDIMENT REMOVAL DEVICE
Thomas R. Smith, Newton, Iowa, assignor to The Maytag Company, Newton, Iowa, a corporation of Delaware
Application May 28, 1956, Serial No. 587,718
6 Claims. (Cl. 68—23)



4. In a washing machine, a tub having a bottom wall, a drain outlet in said tub, a perforate clothes receptacle nested within and spaced from said tub to separate sediment particles from clothes placed within said clothes receptacle, revoluble shaft means connected to said receptacle and extending through said tub bottom wall for rotation of said receptacle within said tub, a member positioned between said tub and said receptacle, said member being connected to said tub adjacent said drain outlet and extending from a position over said drain outlet inwardly toward said shaft means to cooperate with said tub in forming an effluent passageway having an inlet opening adjacent said shaft means for removal of fluids from said tub during the rotation of said clothes receptacle by said shaft means, and means for applying a suction to said drain outlet for scouring said tub free of sediment particles accumulated on said tub bottom wall adjacent said shaft means.

2,900,813
COMBINATION LOCK
Harry C. Miller, Rochester, N.Y.
Application July 5, 1957, Serial No. 670,115
9 Claims. (Cl. 70—333)



5. In a combination lock of the type having peripherally recessed tumblers, a rotatable driving cam for adjusting said tumblers having a peripheral gate therein, a bolt, a fence lever for operating said bolt having a nose selectively engageable with said fence, shielding means normally positioned to prevent entry of said nose in said gate during manipulation of said driving cam to adjust said tumblers, manually adjustable means for shifting said shielding means between gate-shielding and non-shielding positions, and means imposing a selected restraint upon rotation of said driving cam when said shield-

nipple carried by the lowermost convolution and extend-

ber are locked together by said plugs.

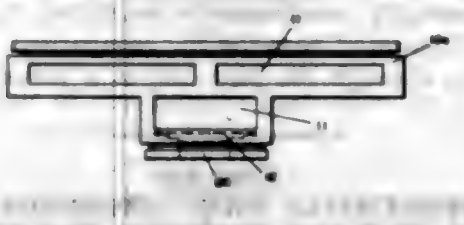
ing means is shifted fully to non-shielding position; resilient means intercoupling said manually adjustable means with said shielding means for transferring movement of said manually adjustable means to said shielding means, means restraining said shielding means against movement from said gate-shielding position during initial adjustment of said manually adjustable means for storing up energy in said resilient means upon adjustment of said manually adjustable means while rendering said shielding means nonresponsive to such adjustment, and means for releasing said restraining means from restraining relation with said shielding means when said stored up energy exceeds the work required to fully shift said shielding means from said gate-shielding position to said non-shielding position whereby said shielding means is shifted fully between said positions relative to said manually adjustable means by said stored up energy.

2,900,814

CONCRETE BLOCK CONSTRUCTION WITH A COMPARTMENT HAVING A KNOCK-OUT PANEL

Samuel R. Carson, Columbus, Ohio

Application February 25, 1958, Serial No. 717,449
6 Claims. (Cl. 72—41)



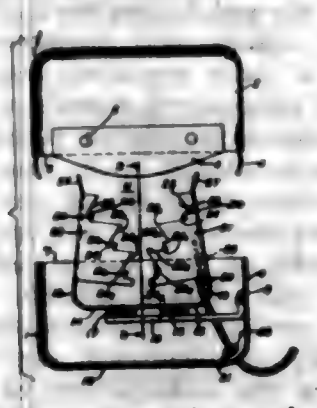
1. A building block comprising a body having a face wall, a receptacle compartment formed directly behind the face wall for receiving various devices, such as electrical devices, said compartment being closed at its upper end so that mortar or other material will not drop thereinto as the block is incorported in a wall, said compartment being open at its lower end and having its outer wall formed by the face wall of the block, and a knock-out panel formed in said face wall and coinciding with said compartment.

2,900,815

WATCH MOVEMENT TEST SUPPORT DEVICE

Frank Dostal, Great Neck, N.Y., assignor to American Time Products, Inc., New York, N.Y., a corporation of Delaware

Application May 25, 1956, Serial No. 587,367
7 Claims. (Cl. 73—6)



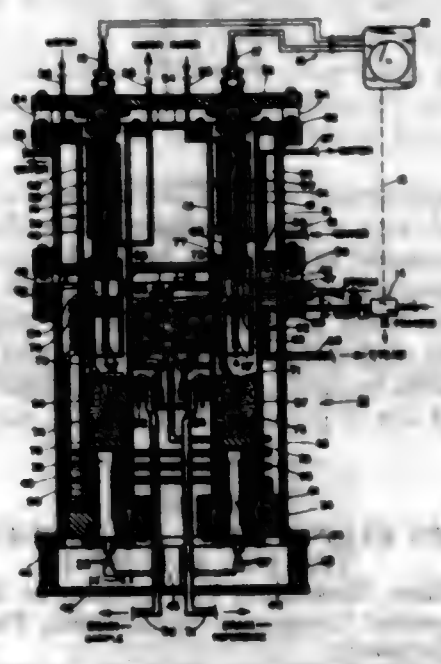
1. A holder for encased watches and uncased watch movements while testing the rate thereof, comprising a closed container having a bottom and a top portion, clamping means resiliently supported within the bottom portion thereof and consisting of a flexible flat metal U-shaped strip having a lower cross-piece, two arms spring biased towards each other and extending freely upward from the cross-piece and spaced from the container walls, a pair of like shaped lateral members extending from an intermediate region of the edges of each arm in the direction of the other arm, and a plurality of steps in the free edge region of each lateral members, the steps of the arms being aligned in pairs and each pair of steps adapted to support watches and uncased movements of a predetermined range of outer dimensions thereon and the range differing for each pair, a microphone supported on the clamping means, and leads from the microphone through the container for connection to a utilization circuit.

2,900,816

BOILING POINT TEMPERATURE MEASURING SYSTEM

Bernard E. Anderson, North Attleboro, Mass., assignor to The Foxboro Company, Foxboro, Mass., a corporation of Massachusetts

Application March 28, 1958, Serial No. 722,668
1 Claim. (Cl. 73—17)

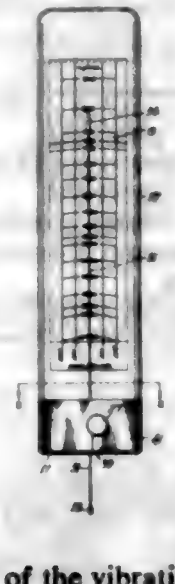


A system for continuously and differentially providing a representation of the temperature at which a flowing body of liquid boils, comprising a heating assembly and a condensing assembly mounted thereon, an air flow jacket around said heating assembly, a liquid flow coolant jacket around said condensing assembly, a sample liquid percolator system extending as a unit into both said heating and condensing assemblies, a reference liquid percolator system in structural duplication of said sample liquid percolator system and also extending as a unit into both said heating and condensing assemblies, a heating coil for preheating sample liquid prior to its entrance into said sample liquid percolator system, a condensing coil in said air flow jacket for providing reference material in liquid phase in said reference percolator system, a vapor trap liquid outlet unit in each of said percolator systems, and a pair of thermometer bulbs, one in the drain-off of said sample liquid percolator system and one in the drain-off of said reference liquid percolator system, whereby the outputs of said thermometer bulbs are available for a differential representation of the boiling temperature condition of said sample liquid, each of said percolator systems comprising a boiling tank, means for continuously supplying a flowing liquid to said boiling tank, a percolator tube with its lower end in said boiling tank below the normal liquid level thereof, a percolator tank above said boiling tank and arranged to drip into said boiling tank, with the upper end of said percolator tube arranged to discharge into said percolator tank, a passage to atmosphere from both of said tanks and through said condensing assembly, and with one of said thermometer bulbs between each of said percolator tanks and its related boiling tank with the dripping of each percolator tank arranged to flow over its related thermometer bulb into its related boiling tank.

oral regions, said portion of said body being arranged

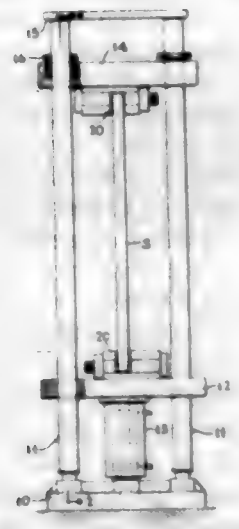
axis and said output axis, said apparatus comprising: an

2,900,817
VIBRATING REED VIBROMETER
Eugene L. Grindle, San Mateo, and James L. Savage, Redwood City, Calif., assignors to Deterjet Corporation, San Mateo, Calif., a corporation of California
Application March 2, 1955, Serial No. 491,586
4 Claims. (Cl. 73—70.2)



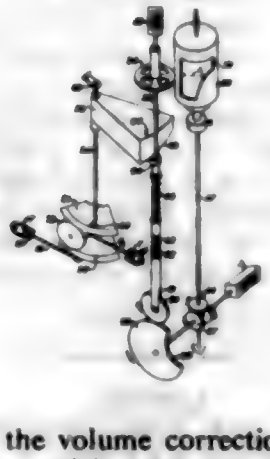
1. In a vibrometer of the vibrating reed type, a mounting formed with a pair of aligned slots therein, a reed slidably mounted in said slots, and roller means frictionally engaging a portion of the reed between the slots, the roller means being so positioned that the point of contact between the reed and the roller means is out of alignment with said slots to cause said reed to be urged against one side of said slot to provide a fulcrum for said reed.

2,900,818
COLUMN ELONGATION TRANSDUCER TYPE TESTING MACHINE
James E. Starr, Rosemont, Pa., assignor to Tatnall Measuring Systems Company, Philadelphia, Pa., a corporation of Delaware
Application October 22, 1957, Serial No. 691,754
4 Claims. (Cl. 73—95)



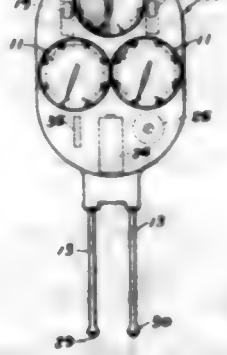
1. In a testing machine in combination, a plurality of columns, spaced load-applying members carried thereby including a crosshead selectively securable at different points along the length of the columns, means for applying a load on a specimen secured between said spaced members to load the columns, at least one of the columns including an outer column member and an inner column member secured to the outer column member at one end and connected with a load-applying element at its other end, the outer column member carrying the crosshead at various points along its length and the inner column member always having the load applied to its full length, and means for measuring the change in length of said inner column member.

2,900,819
GAS FLOW MEASURING EQUIPMENT
Hans Gehre, Oberkassel (Rhine), Germany
Application September 8, 1950, Serial No. 183,829
Claims priority, application Germany September 10, 1949
8 Claims. (Cl. 73—233)



1. Method for the volume correction of gases flowing through pipe lines which comprises maintaining a substantially constant volume of a comparison gas in heat exchange relation to the gas flowing through the pipe line to thereby maintain the comparison gas at substantially the temperature of the gas flowing through the pipe lines, and substantially, continuously measuring the change in pressure differential between the comparison gas and the gas flowing through the pipe line as a volume reduction factor.

2,900,820
DIFFERENTIAL ORAL THERMOMETER
Ardis Serafin, Detroit, Mich.
Application July 28, 1955, Serial No. 524,957
4 Claims. (Cl. 73—342)



1. A clinical thermometer for indicating directly the temperatures of and temperature differential between different oral regions, said thermometer comprising, a body, a pair of stems projecting away from said body, a plurality of temperature responsive variable electrical resistance elements in exposed position on said stems, said stems being adapted to be inserted into a human mouth, said stems being spaced apart a predetermined distance so that said elements will contact predetermined separate regions of the mouth, an electrical circuit connected to each of said elements, said circuits being connected in parallel to a battery on said body so that the current in said circuits will vary independently and responsively to the temperatures of the separate oral regions, ammeter means in each of said circuits operative to measure the current therein and being arranged to indicate directly an oral temperature, said ammeter means being positioned on a portion of said body, galvanometer means on said portion of said body, said galvanometer means being connected across said circuits for measuring the current differential therebetween, said galvanometer means being arranged to indicate directly the temperature differential between the separate

of like shaped lateral members extending from an inter-

related thermometer bulb into its related boiling tank.

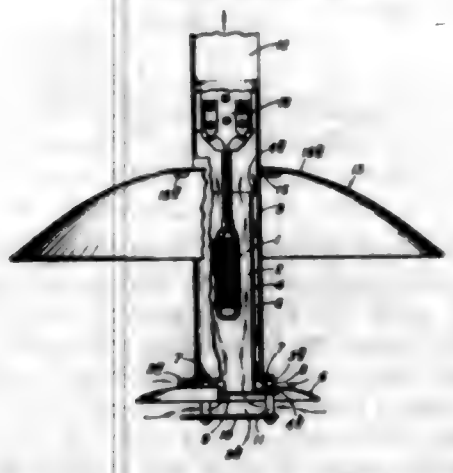
oral regions, said portion of said body being arranged to extend outside of the mouth when said stems are inserted therein, whereby to obtain a direct visual reading of the temperatures of and temperature differential between the separate oral regions.

2,900,821

FORCED DRAFT INSTRUMENT SHELTER

Jack V. Rich, Agoura, Calif., assignor to Bendix Aviation Corporation, North Hollywood, Calif., a corporation of Delaware

Application December 10, 1956, Serial No. 627,437
7 Claims. (Cl. 73—349)



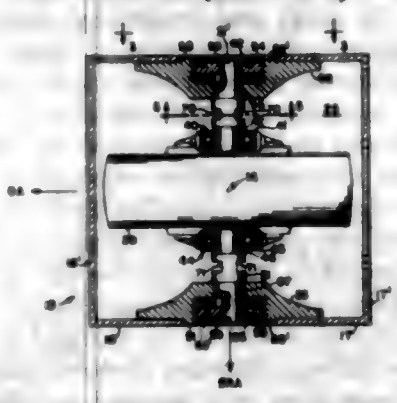
1. A shelter of the induced draft type for a temperature sensitive meterological instrument, said shelter comprising: an outer, vertical, open-ended fluid conducting member adapted to be connected at its upper end to a suction conduit for inducing a flow of fluid upwardly therethrough; an inner, vertical, open-ended fluid conducting member of smaller lateral dimensions than said outer member and positioned therewithin, said inner member defining a central space for an instrument, and defining with the juxtaposed portion of the outer member a fluid passage surrounding said central space, the lower end of said inner member extending below the lower end of said outer member; and a skirt on the lower end of said inner member, said skirt extending laterally below said outer member and defining with the lower end of the outer member a lateral passage for the entry of ambient fluid into the lower end of said fluid passage.

2,900,822

CONTROL APPARATUS

Hugh A. Raymond, Port Kennedy, Pa., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application June 19, 1958, Serial No. 743,054
7 Claims. (Cl. 74—5)



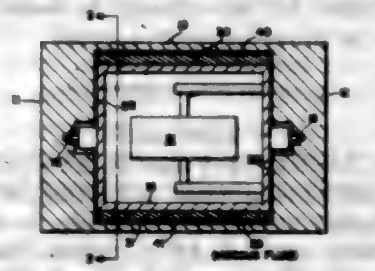
1. Apparatus for reducing anisoelastic torque in a gyroscope having a hermetically sealed gimbal floated in a viscous fluid and supported for rotation about an output axis, a shaft mounted in said gimbal, and a rotor rotatably mounted on said shaft for rotation about a spin axis, said spin axis being normal to said output axis and said gyroscope having an input axis normal to both said spin axis and said output axis, said apparatus comprising: an outer bearing race on said rotor; an inner bearing race on said shaft nested within the confines of said outer bearing race; a plurality of ball bearings interposed between said inner and said outer races, said inner and outer races contacting said ball bearings at an angle selected so that the difference between the compliance of said gyroscope to acceleration along said spin axis and the compliance of said gyroscope to acceleration along said input axis is substantially constant regardless of changes in loading on said ball bearings; and means for varying the compliance of said shaft to acceleration along said input axis, the compliance of said shaft to forces along said input axis being varied until the compliance of said gyroscope to forces along said spin axis is substantially equal to the compliance of said gyroscope to forces along said input axis, said compliance varying means comprising a pair of supporting portions on said gimbal, an aperture in each of said portions, said shaft being positioned so as to extend through said apertures of said portions, a portion of said shaft being notched, and means for rotating said shaft relative to said supporting portions so as to vary the angular relationship between said notched portion of said shaft and said input axis of said gyroscope.

2,900,823

INERTIAL APPARATUS

Kenneth H. White, White Bear Lake, Minn., assignor to Minneapolis-Honeywell Regulator Company, Minneapolis, Minn., a corporation of Delaware

Application March 4, 1957, Serial No. 643,704
8 Claims. (Cl. 74—5.5)



1. In a floated gyroscope: a generally hollow cylindrical housing; a generally hollow cylindrical chamber in said housing; a gyroscope in said chamber; support means for rotatably supporting said chamber in said housing for rotation about an axis, said chamber having a normal position relative to said housing; a fluid in said housing and surrounding said chamber; and means for resisting relative rotation of said chamber and said housing about said axis comprising a plurality of vanes on said chamber extending generally parallel to said axis and outwardly from said chamber, toward said housing defining a plurality of restrictive gaps between said vanes on said chamber and said housing, and a plurality of vanes on said housing extending generally parallel to said axis and inwardly from said housing toward said chamber defining a plurality of restrictive gaps between said vanes on said housing and said generally cylindrical chamber, said vanes on said housing and said chamber terminating with arcuate faces of substantial width.

2,900,824

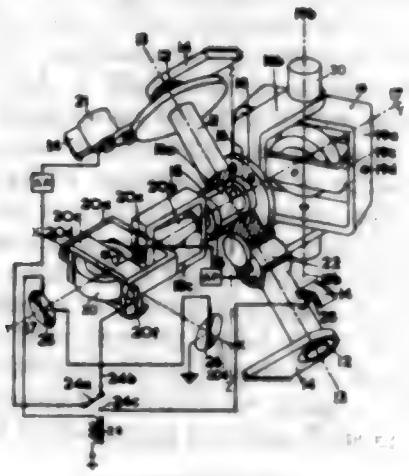
GYROSCOPE APPARATUS

Jeffery Walton Barnes, Farnborough, England, assignor to Minister of Supply in Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland, London, England

Application August 9, 1956, Serial No. 603,130
Claims priority, application Great Britain August 9, 1955
16 Claims. (Cl. 74—5.34)

6. Gyroscope apparatus comprising a reference member, an outer gimbal member, bearing means supporting

said reference member on said outer gimbal member for angular movement about an inner gimbal axis, a frame supporting said outer gimbal member for angular movement about an outer gimbal axis, an attitude gyroscope and an azimuth gyroscope mounted on the reference member at opposite sides respectively of the outer gimbal axis, the inner gimbal member extending in the direction of the inner gimbal axis from the one of said gyroscopes to the other, the outer gimbal member extending in the



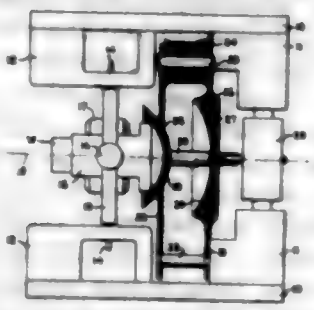
direction of the outer gimbal axis between the two gyroscopes, said reference member bearing means being located between the two gyroscopes, switch means comprising first switch means responsive to relative movement between the reference member and a gimbal of the attitude gyroscope about the inner gimbal axis of the attitude gyroscope, in series connection with second switch means responsive to movement between the reference member and the outer gimbal member.

2,900,825

EDDY-CURRENT FORCE SYSTEMS FOR CONSTRAINED GYROSCOPES

E. Frank Echolds and Paul L. Brink, Indianapolis, Ind.

Application April 9, 1954, Serial No. 422,282
14 Claims. (Cl. 74—5.46)
(Granted under Title 35, U.S. Code (1952), sec. 266)



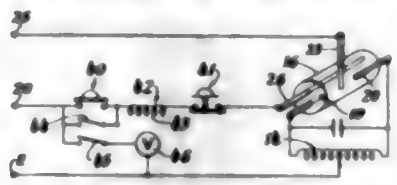
1. An eddy-current force applying system for precessing and controlling constrained gyroscopes comprising; an encased gyroscope gimbaled by gimbal axes on a gyroscope support frame for two degrees of freedom about its center of gravity with the gyroscope spin axis normal to one of the gimbal axes; two pairs of electromagnetic poles on the gyroscope case extending outwardly in two relatively normal planes on axes passing through said center of gravity symmetrical to the gyroscope spin axis, each pair being in acute angular relation; spherical disk means rotatably mounted on said gyroscope support frame with the center of curvature at the intersection of the gimbal axes and in close air-spaced relation with said electromagnetic poles; means to spin said spherical disk means; and means for controlling currents through said paired electromagnetic poles in each plane to establish magnetic control fields through said electromagnetic poles, across said air-space, and through said spherical disk means whereby reactive forces of eddy-currents created in said spherical disk means by cutting said magnetic control fields cause precession and positioning of said encased gyroscope in each plane in magnetic equilibrium with respect to the spin axis of said spherical disk means.

2,900,826

ERECTION SYSTEMS FOR GYROSCOPES

Frederick E. W. Schneider, Boreham Wood, Elstree, England, assignor to Engel & Gibbs Limited, Boreham Wood, Elstree, England

Application December 18, 1956, Serial No. 629,151
Claims priority, application Great Britain
April 18, 1956
8 Claims. (Cl. 74—5.47)



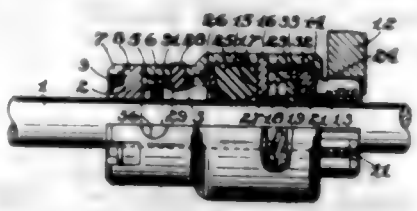
1. An erection system for a gyroscope comprising a control device responsive to the position of the gyroscope, an electric motor for erecting said gyroscope and a normal erection circuit for connecting said motor to a source of relatively low power through said control device when the gyroscope is near its erected position, a fast erection circuit operable to connect said motor also to a source of relatively high power through said control device but inoperable when said gyroscope is near its erected position, a normally open switch means in said fast erection circuit for completing said circuit, and a holding relay in said fast erection circuit for maintaining said circuit closed irrespective of the subsequent operation of said switch means until the circuit is broken by the control device.

2,900,827

ENGINE STARTER GEARING

Charles A. Mendenhall, Horseheads, N.Y., assignor to Bendix Aviation Corporation, Elmira Heights, N.Y., a corporation of Delaware

Application December 31, 1957, Serial No. 706,364
7 Claims. (Cl. 74—7)



1. In an engine starter drive a power shaft, a driving and traversing member having a spiral slot formed therein slidably journalled on said shaft, a pin fixedly mounted in the shaft and projecting radially therefrom slidably engaging said spiral slot, a barrel member surrounding the driving member and rigidly mounted at one end thereon, a pinion rotatably retained in the other end of the barrel and slidably journalled on the power shaft for movement into and out of mesh with a gear of an engine to be started, and means in the barrel for rotating and traversing the pinion comprising a driving coupling member connected to rotate with the barrel with freedom for limited relative longitudinal movement, an intermediate coupling member having an inclined driving connection with the driving coupling member and an overrunning clutch connection with the pinion, yielding means in the barrel normally holding the driving coupling member at the limit of its movement toward the intermediate coupling member but permitting the intermediate coupling member to declutch itself from the pinion, and spring means normally holding the intermediate coupling member and the pinion advanced in the barrel member toward the engine gear.

gyroscope having an input axis normal to both said spin

ber, an outer gimbal member, bearing means supporting

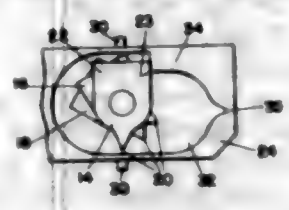
2,900,828

SHAFT POSITIONING DEVICE

Harry J. Laiming, Springfield, Pa., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Original application June 26, 1952, Serial No. 295,637. Divided and this application April 26, 1957, Serial No. 664,867

1 Claim. (Cl. 74—10.29)



Apparatus for sequentially rotating a control shaft through predetermined steps of rotation which comprises a plurality of cams fixedly mounted in general alignment transversely of the shaft, each of said cams having on its outer peripheral edge an indexing projection and spaced therefrom a skirt portion, said cams being generally similar in shape and disposed with their indexing projections spaced from each other circumferentially of the shaft, an independent actuator for each of said cams, each actuator being apertured to form an inner peripheral edge having a notch and spaced therefrom a shoulder, guide means mounting said actuators in general alignment and permitting transverse movement of each actuator relative to the shaft, and each of said cams being received within the aperture of its actuator whereby pressure applied in a forward transverse direction to an actuator will position the actuator shoulder in abutting relation with the skirt of its cam and rotate the shaft from one position until the indexing projection is received in the actuator notch and the shaft is maintained in a new position, biasing means for urging each actuator in the reverse direction when forward pressure is released to remove the indexing projection of a cam from an actuator notch and permit another actuator and cam to be operated and reposition the shaft.

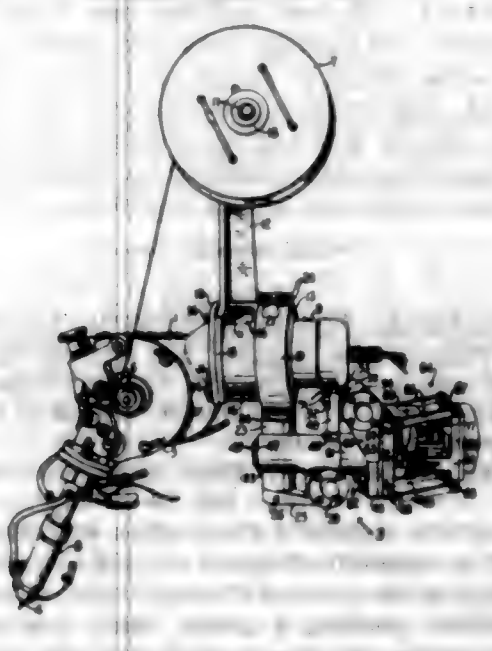
2,900,829

WELDING HEAD POSITIONER

Richard A. Tiedemann, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York

Application October 8, 1956, Serial No. 614,723

8 Claims. (Cl. 74—89)



1. In a welding head positioner to selectively angularly locate a welding head a base support means for said welding head, a rotatable member connected with the welding head, a bearing member for said rotatable member secured to said base support means, an arm connected to the rotatable member and extending laterally therefrom, and a longitudinally moving rod journaled within said base support means and having means adapted to engage the free terminal end of the arm and to pivot the arm about the axis of the member to thereby rotate the member and the attached head incident to longitudinal movement of the rod.

2,900,830

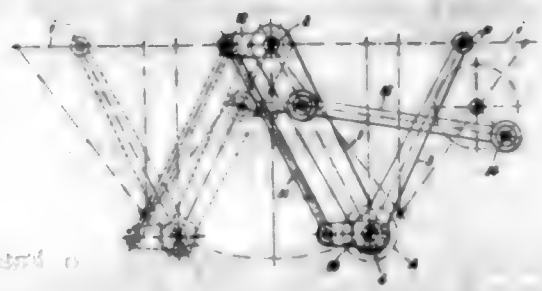
LINKAGE FOR DESCRIBING A STRAIGHT LINE

Kuno Eisenburger, Wels, Upper-Austria, and Josef Ritter, Graz, Styria, Austria, assignors to EVG Entwicklungs-u. Verwertungsgesellschaft m.b.H., Graz, Styria, Austria

Application December 17, 1957, Serial No. 703,350

Claims priority, application Austria December 18, 1956

5 Claims. (Cl. 74—103)



1. A linkage for describing a straight line, which comprises a fixed pivot, a carrying lever pivoted to said fixed pivot and having at least one pivotally movable end, a one-armed rocker lever having the same length as said carrying lever from said pivot to said pivotally movable end thereof, one end of said rocker lever being pivoted to said pivotally movable end of said carrying lever, an epicyclic gear having two crown wheels connected for rotation with said carrying lever and rocker lever, respectively, at least one planetary gear in mesh with both said crown wheels and a planet carrier carrying said planetary gear, and guide means arranged to hold said planet carrier always at the same angle with respect to said straight line.

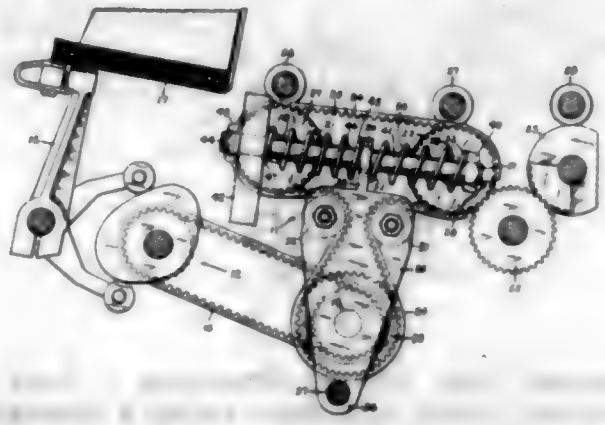
2,900,831

SHOCK ABSORBING MECHANISM

Lawrence A. Wilson, Apalachin, Benjamin M. Durfee, Binghamton, and Harry J. Tashjian, Endwell, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application November 15, 1956, Serial No. 622,421

2 Claims. (Cl. 74—216.5)



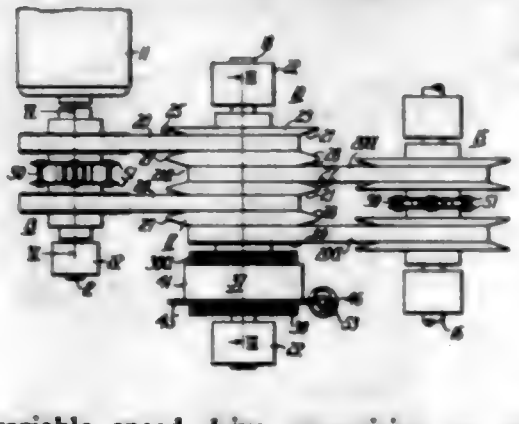
1. A shock absorbing drive mechanism for driving at least one load shaft comprising a power shaft, an elongated idler arm rotatably mounted at one end, two spaced-apart idler pulleys mounted adjacent each other on said idler arm at a distance from said rotatably mounted end,

connecting said cam element and said actuating member

junction including a stop defining the rear end of said

flexible belt means mounted about said power shaft and said load shaft and passing between and engaging said two idler pulleys, an extended portion on said idler arm attached to the end near said idler pulleys, and a spring means connected to said extended portion to resiliently resist movement of the idler arm from a predetermined position.

2,900,832
DOUBLE DRIVE
Joseph H. Saarteno, Cincinnati, Ohio, assignor to Allis-Chalmers Manufacturing Company, Milwaukee, Wis.
Application January 16, 1956, Serial No. 559,272
10 Claims. (Cl. 74—230.17)

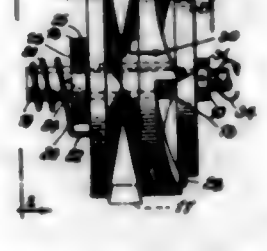


1. A variable speed drive comprising an automatic variable pitch diameter input sheave, an automatic variable pitch diameter output sheave, a countershaft disposed between said sheaves in a fixed position relative thereto, a motion control sheave structure mounted on said countershaft, said structure comprising a pair of end disks having a driving surface on their inner side, a plurality of intermediate disks having driving surfaces on both sides, said disks being axially slidably mounted on said countershaft, adjacent disks defining grooves therebetween, belts engaging said grooves, alternate belts being operatively connected to one of said automatic sheaves and the other belts being connected to the other of said automatic sheaves to transmit power from said input sheave to said output sheave, alternate disks of said motion control sheave being connected in sets for axial movement in unison toward and away from adjacent disks, and means for sliding said sets of disks axially along said countershaft to vary the pitch diameter of said grooves and thereby vary the speed of said driven sheave.

2,900,833
VARIABLE PITCH V-PULLEY
Alex D. Wiseman, Poplar Bluff, Mo.
Application May 7, 1957, Serial No. 657,675
1 Claim. (Cl. 74—230.17)

A variable pitch V-pulley comprising a sleeve for mounting on a shaft, said sleeve having a longitudinal keyway therein and including oppositely threaded end portions and receiving thereon a pair of complemental pulley half sections each including a hub threadedly engaged on a respective end of the sleeve whereby common rotation of the hubs will move the same toward and away from each other, each of said hubs being of generally rectangular configuration in cross section and each of said hubs having a keyway therein communicating with the first-named keyway, a key in the keyways fixing the hubs relative to the sleeve, a setscrew in one end portion of the key engaged in the first-named keyway for releasably securing said key in position, each half section also including an annular rim and a plurality of circumferentially spaced, trapezoidal spokes interconnecting the hub and rim, the hub and rim of each half section being disposed in spaced, parallel planes and said spokes being straight whereby each half section is of frustoconical configuration, the wide ends of said spokes being connected with their respective rims and the narrow ends thereof being connected to said hubs and the spokes of one section being interdigitated with the spokes of the other section whereby the spokes, at their point of crossing, provide a belt-receiving V-notch of substantially constant angularity which is shiftable radially of said sleeve upon movement of said hubs toward and away from each other, the narrow ends of said spokes being connected to their respective hubs substantially centrally thereof.

2,900,834
AUTOMATIC VARIABLE SPEED PULLEY
Georges Henri N. Beaudet, Iberville, Quebec, Canada
Application June 5, 1958, Serial No. 740,135
4 Claims. (Cl. 74—230.17)



1. A variable speed power transmission comprising a belt pulley mounted on a shaft and composed of two primary parts cooperating to form a variable belt groove and having freedom for oscillating movement with respect to the shaft, one of said primary parts also having freedom for axial movement with respect to the shaft, secondary pulley parts nonrotatably secured with respect to the shaft externally adjacent the respective primary parts, the axially movable primary part and associated secondary part having cooperating means for causing axial displacement of said one primary part upon oscillating movement of said primary parts with respect to said shaft, elastic means connected to said shaft and to said primary parts, and cooperating means between the other secondary part and the primary part having only freedom for oscillating movement to limit the oscillating movement of said primary parts with respect to said shaft.

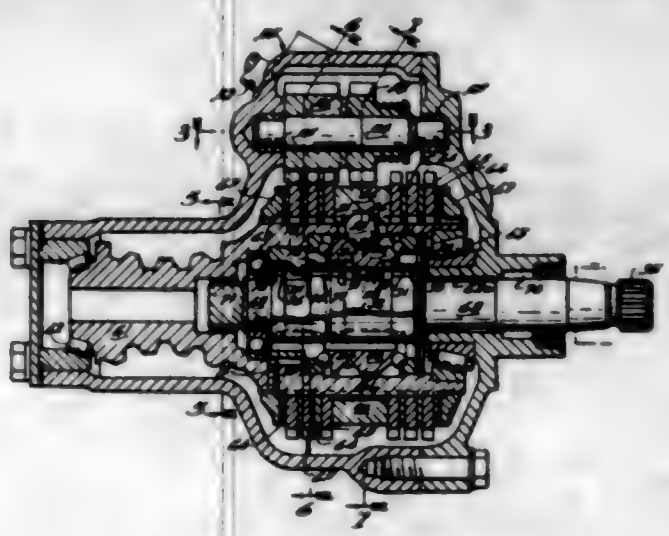
2,900,835
MECHANICAL POWER STEERING MECHANISM
Otto J. Winkelmann, Berkley, and William M. Swan, Jr., and Alexander G. Herreshoff, Grosse Pointe, Mich., assignors to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application July 27, 1953, Serial No. 370,524
7 Claims. (Cl. 74—388)

1. A power boosting mechanism including a driven member, a manually operated driving member, multiple disc clutch means carried by said driven member having a cylindrical portion, a power shaft, gearing drivably interconnecting said power shaft and said multiple disc clutch means, an actuating member for energizing said multiple disc clutch means, a cam element mounted within said cylindrical portion, a cam follower element inter-

combustion engine drive shaft with an overhead cam movement wherein said pawl co-acts with the teeth of said

locate a welding head a base support means for said welding head, a rotatable member connected with the apart idler pulleys mounted adjacent each other on said idler arm at a distance from said rotatably mounted end,

connecting said cam element and said actuating member whereby the manual effort applied to said driving member is effective to proportionately energize said multiple disc clutch means to permit the transfer of power from said power shaft therethrough to said driven member at a rate which is proportional to the manual effort, a loose spline connection between said driving and driven mem-



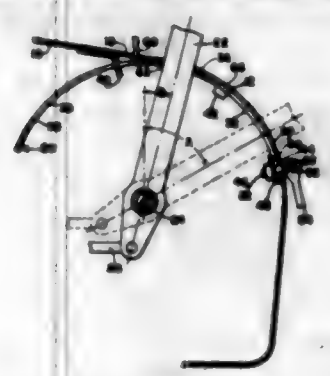
bers enabling limited relative rotary movement between the latter members, and overload spring means resiliently connecting said cam element and said driving member for yieldingly opposing relative rotary movement between said driving member and cam element throughout the extent of movement enabled by said loose spline connection.

2,900,836

CONTROL MECHANISM

John D. Gleeson and Lawrence R. Beard, Waterloo, Iowa, assignors to Deere & Company, Moline, Ill., a corporation of Delaware

Application September 5, 1958, Serial No. 759,292
16 Claims. (Cl. 74—469)



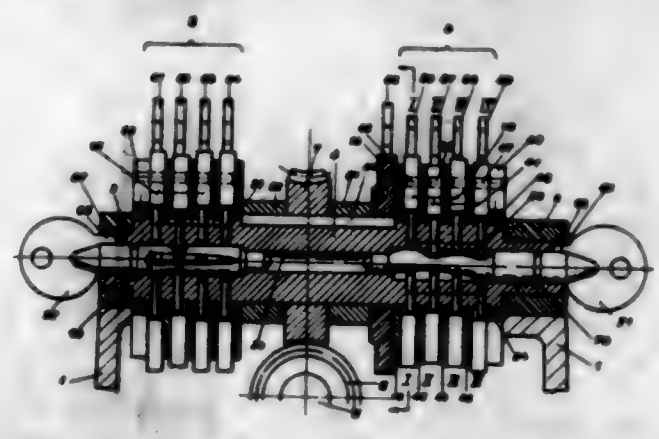
1. Control mechanism, comprising: a support having a fore-and-aft slot including first and second opposite sides and front and rear ends; a control member projecting through the slot and movable fore and aft therein along a normal control path and through a control range generally coterminous with the ends of the slot, said member having a thickness less than the width of the slot; means biasing the member toward the first edge of the slot for movement of the member in its normal path but yielding to enable lateral displacement of said member toward the second edge of the slot and thus out of said normal path; a regulating element juxtaposed relative to the support and having a fore and aft slot through which the member extends, said element slot having a forward slot portion lying along the normal path of the control member and substantially equal in length to the support slot, a rear slot portion rearwardly beyond said forward slot portion and a by-pass slot portion laterally offset from said forward slot portion in the direction away from said normal path and affording a junction between said forward and rear slot portions, said element at said junction including a stop defining the rear end of said forward slot portion; means mounting the element on the support for fore and aft adjustment between a rear position in which the forward slot portion is generally coextensive with the support slot and any one of several forward positions in which the stop is advanced along the support slot to establish a rear limit on movement of the control member along its normal path and requiring lateral displacement of said member to pass through the by-pass slot portion for further rearward movement into the rear slot portion; and means for selectively securing said element in any of said positions.

2,900,837

DEVICE FOR THE ADJUSTMENT OF DECORATIVE STITCH STENCIL IN AUTOMATIC ZIG-ZAG SEWING MACHINES

Kurt Brandt, Augsburg, Germany

Application January 14, 1957, Serial No. 634,044
Claims priority, application Germany January 14, 1956
31 Claims. (Cl. 74—568)



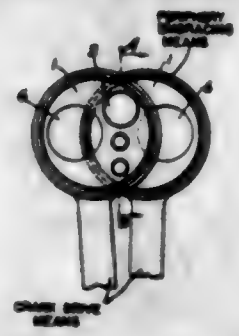
1. In a sewing machine having a zig-zag stitch mechanism, a combination variable-contour cam assembly for controlling the zig-zag stitch mechanism and setting means for rapidly setting the contour of the cam assembly, said combination cam assembly and setting means therefor comprising a cam assembly incorporating several cam discs each disc being subdivided into several elements each of which is capable of independent limited movement; and setting means carried by said cam assembly for setting each of said elements into any position within its range of limited movement, whereby said cam assembly may be given any one of an infinite number of contours.

2,900,838

CONSTRUCTION OF ECCENTRICS IN CONNECTING ROD DRIVES FOR INTERNAL COMBUSTION ENGINES WITH OVERHEAD CAMSHAFT

Albert Roder, Heilbronn, Germany, assignor to NSU Werke A.G., Neckarsulm, Wurtemburg, Germany

Application November 26, 1956, Serial No. 624,320
Claims priority, application Germany November 28, 1955
3 Claims. (Cl. 74—570)

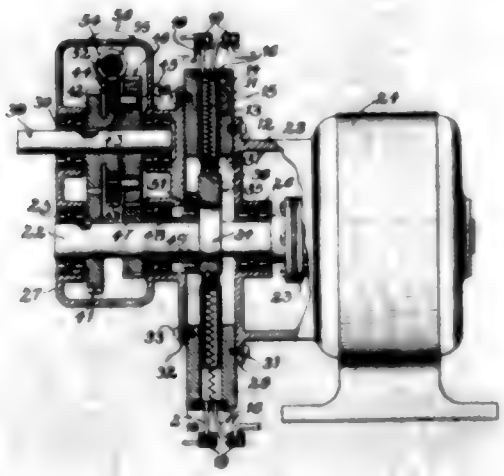


1. An eccentric construction for use in operably connecting crank drive means associated with an internal

away from each other, each of said hubs being of gen- multiple disc clutch means, a cam element mounted within said cylindrical portion, a cam follower element inter-

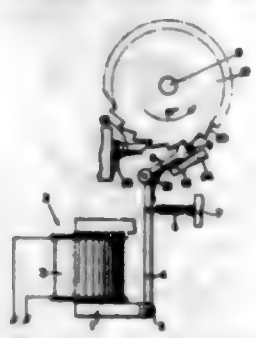
combustion engine drive shaft with an overhead cam shaft, comprising two disc components, each disc component having an eccentric bore for receiving the cam shaft, each disc component being provided with at least one further bore, and pin means lodged in said further bores after the disc components have been placed in facial contact in reverse image on the cam shaft to maintain the disc components in such assembled relationship, with the crank drive means being adapted to embrace the periphery of each disc component.

2,900,839
VARIABLE THROW RADIAL PUMP
Donald D. R. Mackintosh, Chicago, Ill.
Application January 26, 1954, Serial No. 406,112
2 Claims. (Cl. 74—571)



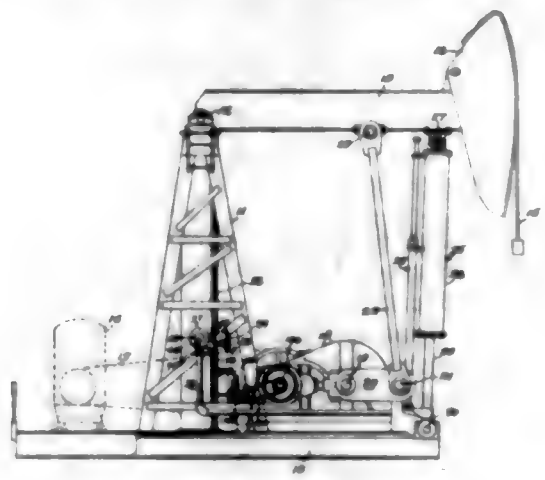
1. A drive mechanism including a first shaft having an eccentric mounting an eccentric ring, said mechanism comprising a second rotatable shaft, a sleeve mounted for free rotation on said first shaft adopted to have an operable connection with the eccentric ring, a gear integral with said sleeve, a pinion secured on the first shaft, a first gear secured firmly on the second shaft and meshed with said pinion at all times, a coaxial second gear integral with said first gear, an idler gear mounted loosely on said second shaft and meshed with the sleeve gear, planetary gears carried by said idler gear and meshed at all times with the coaxial gear, a ring gear surrounding and meshed with said planetary gears, said gear train permitting uniform rotation of the first rotatable shaft and the sleeve thereon when power is applied to either shaft, and means to rotate the ring gear to rotate the sleeve independently of shaft rotation.

2,900,840
STEPWISE OPERATING DRIVING DEVICE
Reinhard Cornelis Greve, Hilversum, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application December 10, 1957, Serial No. 701,798
Claims priority, application Netherlands December 22, 1956
3 Claims. (Cl. 74—575)



1. A stepwise driving device comprising a toothed pawl wheel, a pawl, means mounting said pawl for rocking movement wherein said pawl co-acts with the teeth of said pawl wheel, a stationary stop member having a guide surface, said guide surface and said toothed edge being substantially parallel during the return stroke of said pawl, said pawl having two edges, said two edges of said pawl co-operating with the teeth of the pawl wheel and the guide surface of the stop respectively, and said edges are curvilinear and the common center of said edges lies therebetween.

2,900,841
PNEUMATIC COUNTERBALANCE HAVING A CONTROL MECHANISM THEREFOR
Edgar F. Speiden, Parkersburg, W. Va., assignor to The Parkersburg Rig & Reel Company, Parkersburg, W. Va., a corporation of West Virginia
Application October 20, 1953, Serial No. 387,261
15 Claims. (Cl. 74—589)



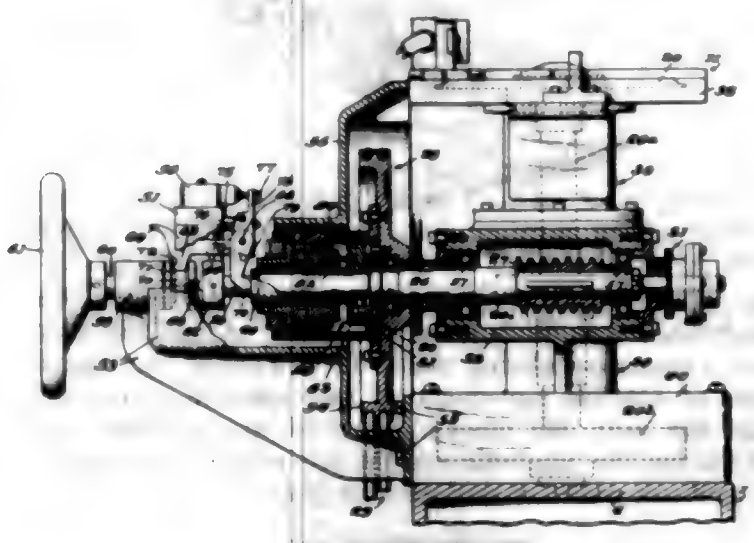
1. A counterbalancing apparatus for a pumping unit having a prime mover and a walking beam driven thereby and constituting therewith a continuously operable mechanism, comprising a pneumatic counterbalance connected between the walking beam and a stationary support, a pressure receiver communicating with said counterbalance, a valve controlling such communication, means biasing said valve to normally open position to maintain communication between said receiver and said counterbalance, a casing having a pressure responsive element therein connected to said valve and defining with said pressure responsive element a pressure chamber, a conduit connected between said chamber and said receiver, a relay valve in said conduit biased to open piping position, and means operative only during operation of said continuously operable mechanism for maintaining said relay valve closed whereby such valve automatically opens to supply pressure fluid from said receiver to said chamber to move said pressure responsive element against said biasing means to close said first-named valve when operation of said walking beam is stopped.

2,900,842
OVERLOAD RELEASE DRIVE AND INCHING MEANS
Justin Simpson, Elmhurst, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Original application August 3, 1955, Serial No. 526,197. Divided and this application May 13, 1957, Serial No. 658,730
6 Claims. (Cl. 74—625)

6. In a motor driven machine having (1) a drive shaft, (2) a driving clutch for said drive shaft, said clutch being of overload release type and having a shiftable element which automatically receives movement when clutch release occurs, and (3) a manually rotatable and axially shiftable inching shaft coaxial with one end of said drive shaft for rotating the latter by hand when desired, said

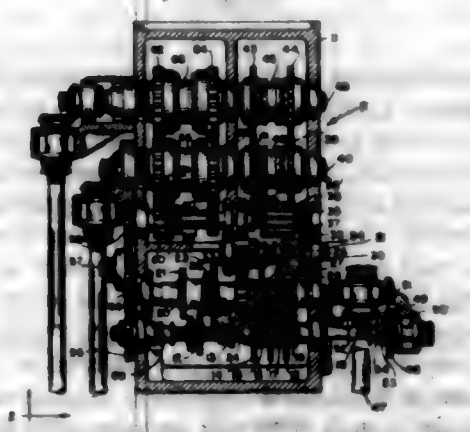
unit, means for applying a driving torque to said sup-

shafts having coacting clutch elements interengageable by inward shifting of said inching shaft; a fixed support near said clutch elements, a normally closed machine stopping switch mounted on said support, a lever fulcrumed between its ends on said support and having one end cooperatively related with said shiftable element to be moved by the latter, the other end of said lever being cooperatively related with said switch to open the latter when said lever is moved by said shiftable element, a locking arm pivoted to said support coaxially with the fulcrum



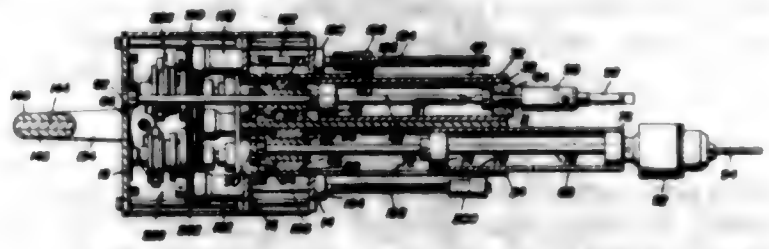
of said lever, said locking arm having a shoulder normally abutting the clutch element of said inching shaft and holding the same separated from the clutch element of said drive shaft, and coacting abutments on said lever and locking arm for moving said lever to switch open position when said locking arm is swung to free said shoulder from said clutch element of said inching shaft, this clutch element and said locking arm having coacting portions which hold said locking arm in its switch open position when this same element is engaged with the clutch element of the drive shaft.

2,900,843
TRANSMISSION
Franz A. Zeletzky, Bridgeport, and Ross M. G. Phillips, Sandy Hook, Conn., assignors to The Bullard Company, a corporation of Connecticut
Application July 11, 1955, Serial No. 521,879
12 Claims. (Cl. 74—665)



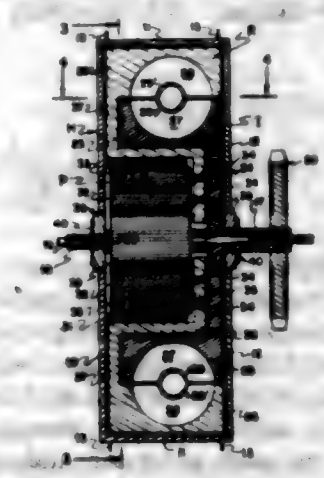
1. A transmission comprising in combination, an input shaft; four output shafts; four sets of four intermeshing gears each on said four output shafts; means for driving a gear in each of two of said sets in opposite directions; separate means for driving a gear in each of the remaining two sets in opposite directions; a variable speed mechanism drivingly connected to said separate means; and means for alternatively driving said variable speed mechanism from two power sources including said first-mentioned driving means.

2,900,844
DOUBLE SPINDLE POWER TOOL
Daniel Kallec, Cortland, N.Y.
Application September 22, 1958, Serial No. 762,465
18 Claims. (Cl. 74—665)



1. A multiple spindle power tool comprising a frame, a motor carried by said frame, said motor including a power shaft, two spindle units secured to said frame, each of said spindle units comprising a fixed spindle support rigidly secured to said frame, a movable spindle support secured to said fixed spindle support for longitudinal movement between a retracted position and a projected position, a spindle supported by said movable spindle support for longitudinal movement therewith and rotary movement relative thereto, spindle positioning means connected to said movable spindle supports for simultaneously projecting one spindle and retracting the other, and drive means connected to said power shaft and said spindles for rotating said spindles when in fully projecting positions.

2,900,845
TRANSMISSIONS
Roger E. Tielens, Mexico City, Mexico, assignor to Rotary Engineering de Mexico, S.A., Mexico City, Mexico, a Federal corporation of Mexico
Application October 11, 1954, Serial No. 461,323
6 Claims. (Cl. 74—688)



1. A transmission for a motorcycle and the like having a power actuated wheel, comprising a housing forming a hub for said wheel; a drive shaft extending axially into said housing; a radial plate carrying an annular hydraulic coupling impeller at its periphery and mounted on said drive shaft within said housing; a central gear of a planetary gear system mounted on said drive shaft within said housing and in axially spaced relation with respect to said plate and radially inwardly from said impeller; a ring gear attached to said housing and disposed radially inwardly of said impeller; an annular hydraulic coupling rotor within said housing and mounted in operative relation with respect to said impeller; and at least two sets of dual satellite gears mounted on said rotor, the inner gear of each set of satellite gears engaging said central gear and the outer gear of each set of satellite gears engaging said ring gear.

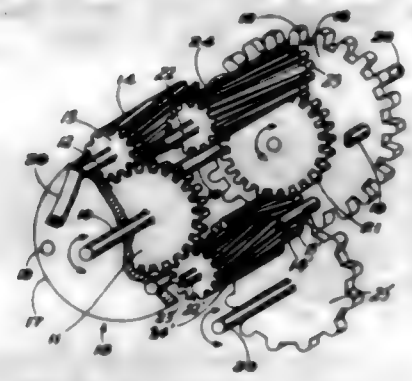
wheel, a pawl, means mounting said pawl for rocking shiftable inching shaft coaxial with one end of said drive shaft for rotating the latter by hand when desired, said

2,900,846

ANTIBACKLASH DIFFERENTIAL MECHANISM

Harry W. Lehman, Marion, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Application November 22, 1957, Serial No. 698,243
2 Claims. (Cl. 74—714)



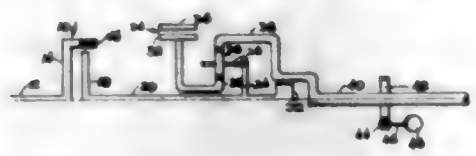
1. An antibacklash differential mechanism comprising a pair of rotatably mounted sun gears, a carrier rotatably mounted coaxially to said sun gears, paired planetary gear means meshing with said sun gears, said paired planetary gear means being rotatably mounted on said carrier, said paired planetary gear means being mutually coupled through coupling gear means having a helix angle different from the helix angle of said sun and planetary gear means, one planetary coupling being of opposite hand to that of the other coupling, spring means urging one part of each of said coupling gear means axially relative to the other part of said coupling gear means whereby said first shaft, said second shaft and said carrier are intercoupled with a minimum of backlash.

2,900,847

CLUTCH PULSATOR MECHANISM

Martin P. Winther, Gates Mills, Ohio, assignor to Eaton Manufacturing Company, Cleveland, Ohio, a corporation of Ohio

Application June 16, 1954, Serial No. 437,070
9 Claims. (Cl. 74—752)



1. A power drive system comprising a variably energizable clutch coupled between a power source and a load through a change speed means providing a plurality of gear ratios, a brake being engageable to alter the gear ratio between said source and said load, a governor responsive to the output of said change speed means, means operated by said governor and operatively connected to said clutch and said brake for controlling the deenergization of said clutch during intervals of initial engagement of said brake and for controlling engagement of said brake whereby shock or lurch in said power drive system is avoided due to quick engagement of said brake.

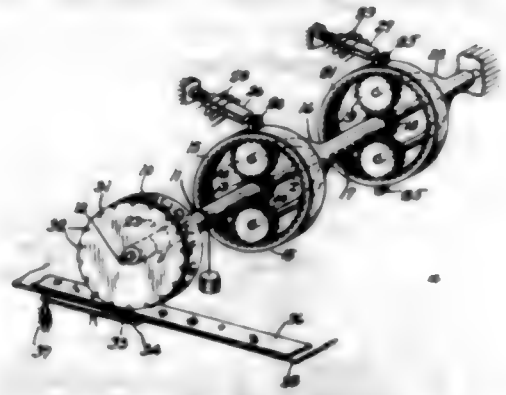
2,900,848

MECHANICAL SELECTIVE POSITIONING MECHANISM

Christopher Arthur Henn-Collins, London, England

Application April 8, 1955, Serial No. 500,262
Claims priority, application Great Britain April 9, 1954
4 Claims. (Cl. 74—768)

1. A mechanism for bringing a controlled unit into a position selected from a plurality of possible predetermined positions, said mechanism comprising a gear system, including a sun gear attached to the controlled unit, means for applying a driving torque to said sun gear, a planet gear meshing with said sun gear and adapted to rotate a predetermined magnitude about the center of said sun gear, a first regulating means for regulating the magnitude of rotative movement of said planet gear about said sun gear, an annulus gear meshing with said planet gear and adapted to rotate a predetermined magnitude about the center of said sun gear, and a second regulating means for regulating the magnitude of rotative movement of said annulus gear about said sun gear, the motion imparted to said controlled unit being the algebraic sum of the rotative movements of said sun gear and said annulus gear.

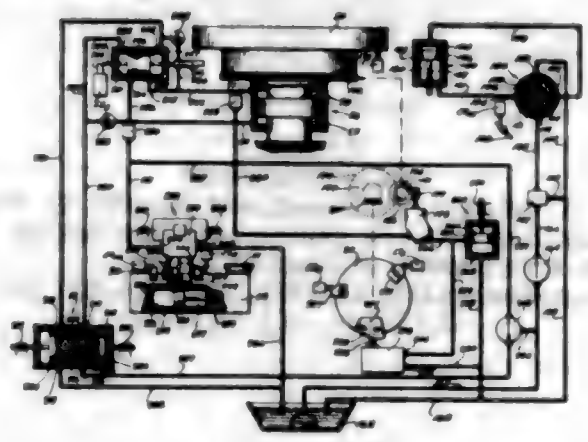


2,900,849

INDEXING MECHANISM FOR A MACHINE TOOL

Morris L. Hutchens, Brookfield, Joseph J. Lenert, Milwaukee, and Howard F. Henderson, West Allis, Wis., assignors to Kearney & Trecker Corporation, West Allis, Wis., a corporation of Wisconsin

Application July 20, 1954, Serial No. 444,438
18 Claims. (Cl. 74—826)



5. In a machine tool, a base, a member movably mounted on said base, a source of fluid pressure, a fluid motor connected to drive said movable member in its path of travel when actuated, a piston and cylinder mechanism secured to said base and associated with said movable member and operable when actuated in one direction to exert a force upon said movable member to force it against said base to clamp it in position and operable when actuated in an opposite direction to release said movable member from engagement with said base, a deceleration valve connected to receive fluid discharge from said motor and to pass said discharge to a reservoir and operable to progressively meter said discharge when actuated, control means connected to control the flow of fluid pressure from said source to one side or the other of said piston and cylinder mechanism, said control means being normally positioned to direct fluid pressure to said piston and cylinder mechanism to effect a clamping engagement of said movable member, means to move said control means from its normal position to an alternate position thereby directing

rod means extending therebetween, said anvil portion ex- element to provide an air gap between said elements in

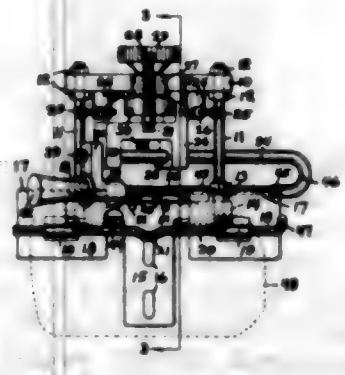
fluid pressure to said piston and cylinder mechanism to effect a release of said movable member, a dog plate connected to be rotated by said driving motor simultaneously with said movable member, means to connect the fluid motor to said source of fluid pressure to actuate it after said movable member has been released, a first dog mounted on said dog plate to move with it in a position to gradually actuate said decleration valve to thereby decelerate the rate of movement of said movable member at a uniform rate until it is stopped at a predetermined position, and a second dog mounted on said dog plate to move with it in position to actuate said control means from its alternate position to its normal position as said movable member is stopped to thereby direct the fluid pressure to said clamping chamber.

2,900,850

DEVICE FOR SHARPENING CHAIN SAW CHAINS

Ralph L. Travis, Sidney, Iowa, assignor of one-half to E. D. Schade and one-half to Donald Moseley, both of Sidney, Iowa

Application December 6, 1957, Serial No. 701,116
1 Claim. (Cl. 76—31)



A device for sharpening chain saw chains comprising a framework, a further framework spaced from said framework, said framework and said further framework adapted to receive a chain saw portion therebetween, a cam adapted to bear against said chain saw portion to tighten the same against said framework, said cam being mounted on said further framework, a filing member arranged for slidable movement with respect to said framework for filing the cutting teeth of said chains, said filing member including a carriage for slidably receiving said filing member, means for positioning said carriage at desired angles, means for adjustably positioning said carriage vertically, said angle positioning means including a substantially semi-circular plate extending from said framework including angle markings at either side thereof, adjustably limiting means for limiting said carriage angularly, and whereby said carriage can be swung from one side to the other to provide filing of chain saw teeth which have opposite pitches, said framework including a downwardly extending portion having slots therein for providing attachment to a vise when desired, said cam including a lengthened rod having a medially bent portion to provide said cam, a handle attached to said rod for rotating the same.

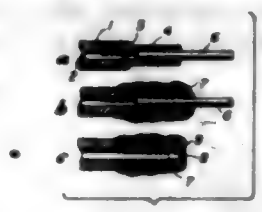
2,900,851

SANDBLASTING NOZZLE AND METHOD OF PRODUCING IT

John J. Rutledge, Philadelphia, Pa.

Application August 19, 1957, Serial No. 679,024
1 Claim. (Cl. 76—101)

The method of making a composite sandblasting nozzle which comprises the steps of reducing the extremity of a ferrous tube to a diameter less than that of its body, inserting in the bore of the reduced portion an element approximating said bore in diameter and of length sufficient to project beyond the end face of the reduced portion, progressively depositing a matrix of hot substantially fluid ferrous material containing particles of tungsten carbide about and in welded relation to said



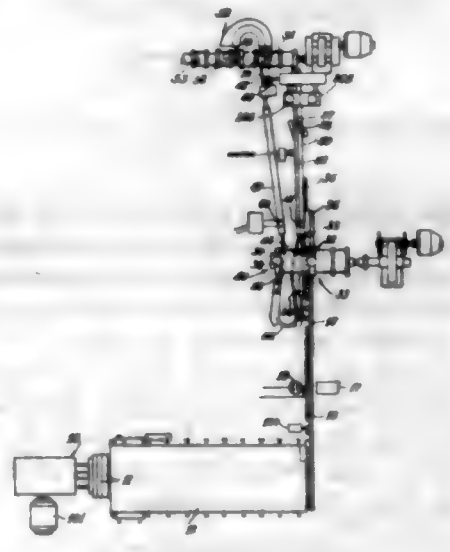
reduced portion, said face and the projecting part of the element adjacent thereto and, after the material has cooled, removing the element.

2,900,852

ROLLING MILL CONVEYOR CONTROL SYSTEMS

Bruce E. Frankenfield, Chicago, and Arthur E. Miller, North Riverside, Ill., assignors to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Application February 25, 1954, Serial No. 412,424
8 Claims. (Cl. 80—43)



3. A rolling mill conveyor system, which comprises a series of roughing rolls, a first series of finishing rolls, a second series of finishing rolls, means for feeding a first billet from the roughing rolls to the first series of finishing rolls and a second billet to the second series of finishing rolls, means for dispatching billets one at a time to the roughing rolls, means for detecting each billet longer than a predetermined length as it goes through the roughing mill, actuating means located beyond the detecting means and responsive to each billet for actuating the dispatching means to dispatch the next billet, a first timer means, a second timer means, means responsive to the detecting means for actuating the first timer means whenever the first billet of a predetermined length is detected, means responsive to the detecting means for actuating the second timer means whenever the second billet of said predetermined length is detected, means for operatively connecting the first timer means and the actuating means to delay the dispatching means when the second billet actuates the actuating means, and means for operatively connecting the second timer means and the actuating means to delay the dispatching means when the first billet actuates the actuating means.

2,900,853

HAND TOOL FOR REMOVING DENTS FROM SHEET METAL PLATES

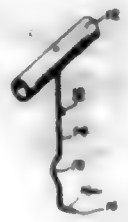
George L. Steck, Dayton, Ohio

Application July 10, 1957, Serial No. 670,914
6 Claims. (Cl. 81—15)

1. A pull tool for use in metal working comprising a handle portion, an anvil portion, and elongate resilient

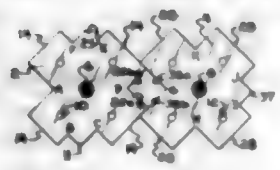
termined positions, said mechanism comprising a gear system, including a sun gear attached to the controlled member, means to move said control means from its normal position to an alternate position thereby directing

rod means extending therebetween, said anvil portion extending substantially normal to the axis defined by said



elongate resilient means and having an intermediate curved portion arching in the direction of the handle portion.

2,900,854
CRIMPING TOOL WITH A PAIR OF MULTI-SURFACED DIE PLATES
Walter M. Werner, Sharon Hill, Pa., assignor to AMP Incorporated, Harrisburg, Pa.
Application August 29, 1957, Serial No. 681,055
6 Claims. (Cl. 81—15)

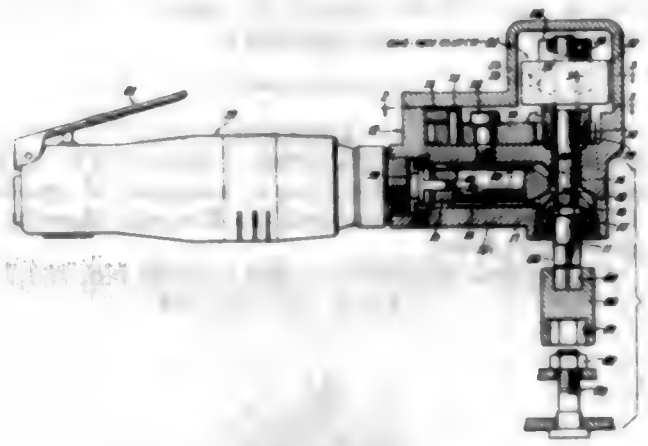


1. A tool for crimping electrical connectors of varying sizes comprising a pair of die plates each having portions of sides of a regular polygon and providing a plurality of pairs of reentrant die surfaces at apices of said polygon, each die surface intersecting a side of said polygon at an angle equal to the angle of the polygon whereby a pair of die surfaces of one of said die plates will mate with more than one pair of die surfaces of the other one of said plates, and means for moving said die plates towards and away from each other.

2,900,855
MAGNETICALLY CONTROLLED, PREDETERMINED TORQUE RELEASE WRENCH
William E. Van Hoose, Bell, Calif., assignor to Pendleton Tool Industries, Inc., Los Angeles, Calif., a corporation of California
Application July 29, 1957, Serial No. 674,956
17 Claims. (Cl. 81—52.4)

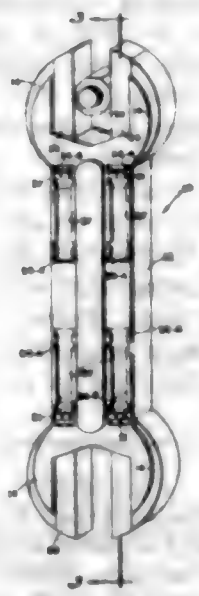
16. A predetermined torque limiting wrench, comprising a wrench handle, a torque applying member pivoted on the handle, said handle being rotatable in one direction to apply a torque load to a workpiece through said member and tending to turn in said direction with respect to the member during the application of said torque load, magnetically controlled means connecting said handle and member for turning of the latter in said one direction with the handle until a predetermined torque load is reached, said magnetically controlled means including a magnet element and a magnetically permeable armature element in the magnetic field of said magnet element, one of which elements is fixed to said handle and the other of which elements is operatively connected to said member so as to be moved away from a normal position proximate to said one element upon turning of said handle in said one direction with respect to said member, stop means for limiting movement of said other element toward said one element to provide an air gap between said elements in the normal position of said other element, and means for adjusting said stop means to adjust the width of said air gap.

2,900,856
POWER DRIVEN WRENCH WITH REVERSE ROTATION LIMITING MEANS
Dale E. Maier, Decatur, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application May 7, 1957, Serial No. 657,523
8 Claims. (Cl. 81—54)



1. In a wrench for use on a tightening element which is rotatable in one direction to tighten it and in the other direction to loosen it, the combination of a rotatable shaft adapted to be connected in driving relation with the rotatable tightening element, a one-way engaging device for limiting rotation of said shaft in a direction to unloosen the tightening element, and lost motion mechanism connected with said one-way device for allowing a predetermined rotation of said shaft in the unloosening direction prior to said one-way device being effective for stopping further rotation.

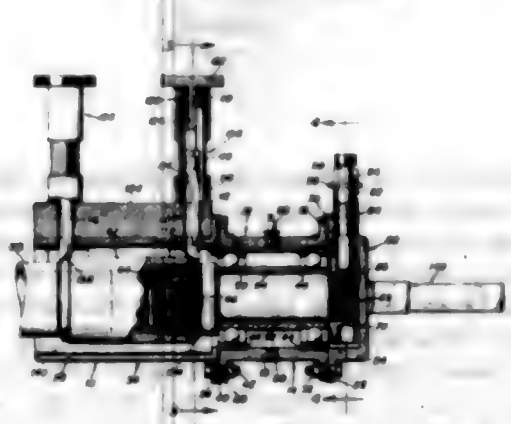
2,900,857
DOUBLE ENDED WRENCH WITH ADJUSTABLE SOCKETS
Wayne B. Burnette, Gladys, Va.
Application March 3, 1958, Serial No. 718,797
3 Claims. (Cl. 81—185)



1 A wrench comprising, in combination, a one piece hollow casing having a central body portion and integral jaws at each end having parallel sides conformable to a polygonal nut, a plurality of independently movable spacer elements slidably supported within said central body portion for longitudinal movement, said spacer elements capable of being moved longitudinally of said hol-

low casing to extend into said jaws to affect the spacing therebetween, each of said spacer elements having a detent assembled adjacent the upper side thereof, spring means inserted between each of said spacer elements and adjacent detents to normally urge the detents upwardly into locking engagement with longitudinally extending slots arranged in the upper walls of said central body portion, each of said detents releasably locking the spacer element assembled therewith in one of said openings for use within the jaws, and in another opening for non-use within the hollow casing.

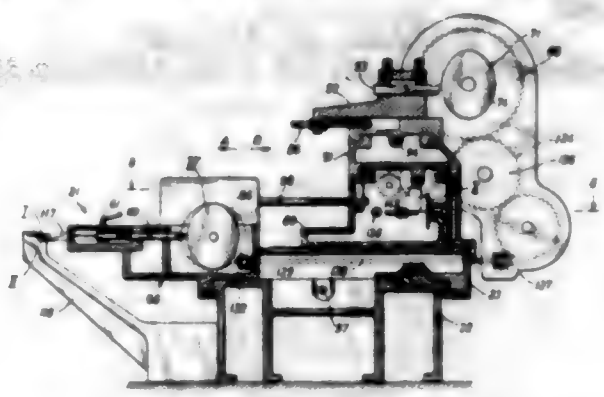
2,900,858
PORTABLE BEVELING MACHINE
Raymond P. Gauthier and Paul R. Arcemont, Franklin, La.
Application January 5, 1956, Serial No. 557,503
1 Claim. (Cl. 82—4)



A pipe coupling bevelling machine comprising a supporting shaft, a housing, said housing including an intermediate section and first and second end sections, means rotatably journalling said intermediate section on said supporting shaft, drive means connected to said first end section and extending therefrom remote from said intermediate section for rotating said housing, said shaft including a threaded end portion projecting into and terminating within said second end section for threadedly receiving a pipe coupling to be bevelled while such coupling remains connected to a pipe, a pair of longitudinally spaced tool holders carried by said end sections for rotation therewith and for supporting bevelling tools in oppositely facing directions, the opposite end of said shaft projecting into said first end section, a retaining collar on said opposite end of said shaft retaining said shaft within said intermediate section, and a locking pin carried by said first end section for engaging said collar and retaining said shaft against rotation whereby a pipe coupling may be coupled to and removed from said shaft.

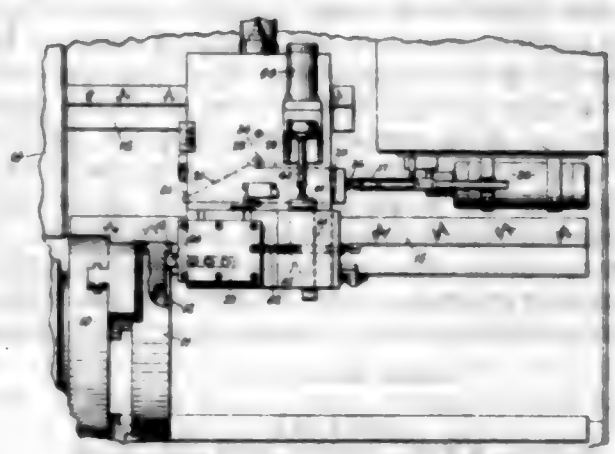
2,900,859
LATHES
Hans Becker, Duesseldorf-Heerdt, Germany
Application February 5, 1953, Serial No. 335,317
Claims priority, application Germany February 7, 1952
2 Claims. (Cl. 82—19)

1. In a lathe, for use in machining a work-piece of predetermined shape and dimensions, having a tool movable in two directions at an angle to each other and being controlled in said directions, in combination, a separate mechanism for moving said tool in each of said directions, each mechanism comprising a series of cam and retractable cam follower means, each cam being formed of a flat piece of material and profiled, some of said cams being rotatable synchronously with the work-piece, and other cams being fixed and disposed in the path of the respective followers movable with said tool, and means actuatable for selectively immobilizing cam followers in the retracted position for restraining movement thereof, the movements of all the moving cam followers of a mechanism causing a resultant movement imparted to the tools in one of said directions, a gear journalled on each cam follower, and a plurality of spaced racks, each



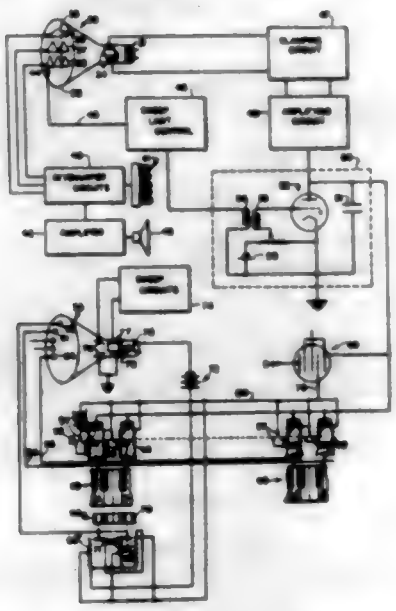
cam follower being disposed between two racks and being in mesh therewith, at least some of said racks being movable longitudinally of said cam followers, whereby the cam follower movements will be compounded.

2,900,860
MECHANISM FOR PERFORMING MACHINING OPERATIONS
Edmund J. Lomazzo, Detroit, Mich., assignor, by mesne assignments, to The Bullard Company, Bridgeport, Conn., a corporation of Connecticut
Application May 7, 1953, Serial No. 353,512
1 Claim. (Cl. 82—24)



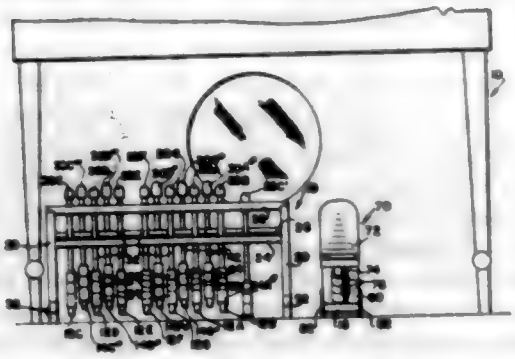
In a lathe, a bed; ways on said bed and located on the back side of said lathe; a tool carriage mounted on and adapted adjustably to be fixed to said bed at a predetermined location along said ways; a tool carrier mounted on said carriage for movement along angularly related paths; a piston and cylinder device mounted on said carriage for moving said tool carrier along one of said paths transversely of said ways and throughout its entire movement along said path; another piston and cylinder device mounted on said bed; a feed cam connected to said other piston and cylinder device for limiting the transverse movement of said tool carrier to a predetermined distance; a third piston and cylinder device mounted on said tool carriage; a cam connected to said third piston and cylinder device for causing said tool carrier to move along the path that is angularly related to said one of said paths; solenoid-operated valve means for controlling the flow of pressure fluid to said piston and cylinder devices; and electrical switches responsive to the movement of said piston and cylinder devices for controlling the operation of said solenoid valve means for causing said piston and cylinder devices to be rendered effective in accordance with a preselected sequence.

2,900,861
ELECTRONIC MUSICAL INSTRUMENTS
Merlin Davis, Washington, D.C.
Original application June 6, 1947, Serial No. 753,118, now Patent No. 2,601,265, dated June 24, 1952. Divided and this application May 15, 1952, Serial No. 288,868
17 Claims. (Cl. 84—1.28)
(Granted under Title 35, U.S. Code (1952), sec. 266)



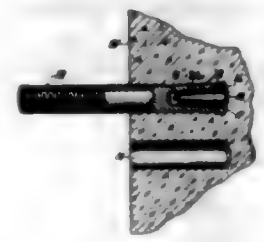
1. In combination, a cathode ray tube having at least one wave shaped pattern, said cathode ray tube having means for generating a beam for impinging upon said pattern, said cathode ray tube also having deflecting means for causing said beam to scan said pattern, a deflecting wave producing means coupled to said tube for applying scanning energy to said deflecting means, a keyboard having levers representative of at least one octave of musical notes coupled to said wave producing means, each lever on being operated controlling the deflection wave producing means to cause the electron beam to scan said pattern at such a speed as to produce an oscillation at a frequency represented by the lever operated, and distributing means connected to said keyboard operating to successively make the levers representing the notes of said octave effective to control said wave producing means.

2,900,862
PEDAL EXTENSIONS FOR ORGANS
Anthony J. Getz, Florence, N.J.
Application May 19, 1958, Serial No. 736,101
5 Claims. (Cl. 84—426)



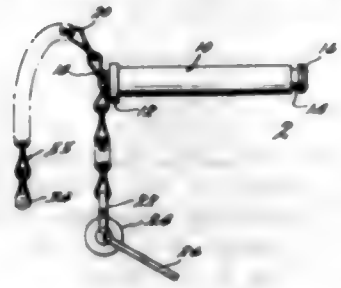
1. An extension device for a pedal keyboard comprising a top and sides, said sides being adapted to rest on a floor on opposite ends of an organ pedal keyboard, a set of key members including the usual black and white keys, each of said key members having a pair of guide rods extending therefrom intermediate its ends, said top having a series of pairs of holes therethrough, one pair for each of said key members and said pairs of holes being spaced to register with the keys of the pedal keyboard, said pairs of rods being engaged in said pairs of holes, and guide means between said sides, said guide means having holes therethrough receiving one of each of said pairs of rods, each of said last-mentioned rods extending beyond said guide means and having a terminal portion provided with a pedal-engaging groove.

2,900,863
EXPANSION BOLT AND WEDGE WITH A CYLINDRICAL HOLDING SECTION
Samuel J. Maynard, Seattle, Wash., assignor to Kwik-Set Expansion Co., Seattle, Wash., a limited partnership
Application March 7, 1955, Serial No. 492,497
1 Claim. (Cl. 85—2)



An anchor device secured in a cylindrical hole in a stone-like body, comprising: a solid substantially cylindrical shank having substantially the same diameter as said hole and positioned therein and having a threaded end extending out of said hole, said shank having an interiorly smooth axial cylindrical bore extending from its inner end toward the medial portion of the shank and having kerf slits at the bored end dividing the walls of the bore, and an expander plug disposed in said bore having an entrant portion with a conical exterior surface and an integral cylindrical locking portion, the free end of the conical entrant portion being smaller than the diameter of said bore and the conical surface flaring therefrom to said cylindrical portion which is larger than the normal diameter of said bore and smaller than the shank diameter and the cylindrical portion being pressed against the abutting bore wall expanding the same and compressing the corresponding exterior surface of said shank against the walls of said hole.

2,900,864
GROOVED PIN HAVING A LATCH PLATE WITH AN ARROW-SHAPED OPENING
Harvey W. Chapman, Detroit, and Henry L. Dunlap, Dearborn, Mich., assignors to Evans Products Company, Plymouth, Mich., a corporation of Delaware
Application January 7, 1955, Serial No. 480,396
1 Claim. (Cl. 85—8.9)

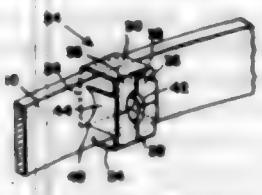


A latch pin and plate assembly comprising an elongated bolt member having a shouldered portion on one end and a groove near the other end, a length of flexible connecting member affixed to said shouldered end of said bolt member, a loop member affixed to a free end of said connecting member, and a latch plate affixed to said loop member, said latch plate having a generally arrow-shaped opening through which said loop member passes, a slot-like portion of said opening corresponding to the shank of the arrow being adapted to fit in said groove, the side portions of said opening corresponding to the

adhesive coating on the side of said hinge strip adjacent surface stretched between said marginal portions, a first

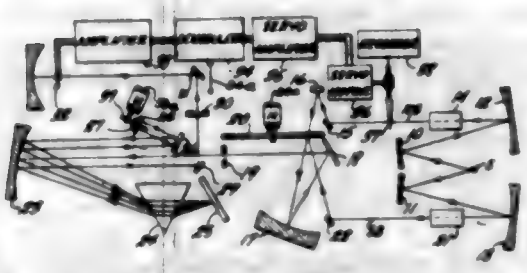
barbs of the arrow being large enough to receive said loop and permit the passage of the grooved end of said bolt member through said opening, and the size of the material of the loop itself being sufficient when located at the point of the arrow to prevent withdrawal of said plate from said groove, the weight of said flexible connecting member normally maintaining said loop member at the point of the arrow-shaped opening.

2,900,865
FASTENING DEVICE
Leon Mayon, Philadelphia, Pa., assignor to W & M Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application May 23, 1956, Serial No. 586,696
3 Claims. (Cl. 85—36)



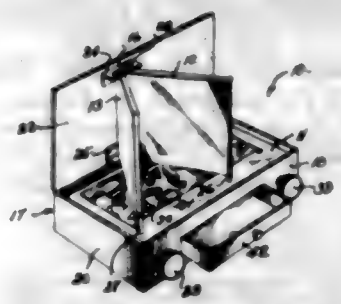
1. A fastening device for securing members together comprising a sheet of metal formed with areas thereof adapted to lie adjacent to opposite surfaces of a first member, one of said areas being formed for engagement with one of said surfaces, the other of said areas being formed with flanges extending toward and for engagement with the other of said surfaces thereby to space the last mentioned area therefrom, and said last mentioned area being provided with an opening for the reception of a second member and having flanges deformable towards the last mentioned surface adjacent to the opening adapted to be deformed by and to engage a second member extending through said opening.

2,900,866
RADIATION COMPARISON SYSTEMS
Vincent J. Coates, South Norwalk, and Larkin B. Scott, New Canaan, Conn., assignors to The Perkin-Elmer Corporation, Norwalk, Conn., a corporation of New York
Application June 14, 1954, Serial No. 436,388
5 Claims. (Cl. 88—14)



1. In a radiation comparison system, the combination of a radiation source, a detector producing a signal in response to radiation falling thereon, means defining a path for said radiation from said source to said detector, a switching shutter periodically acting on radiation at one point in the path to produce a pair of intermittent beams of radiation out of phase, a coding shutter periodically interrupting the radiation at another point in the path, the coding shutter operating at the same frequency as the switching shutter but 90° out of phase therewith, the radiation falling upon the detector under the control of the shutters producing a detector output containing an A.C. component of twice the frequency of the shutters and proportional to the difference in intensity of said two beams, and a demodulator receiving the detector output and operating at twice the shutter frequency and in such phase relation with the switching shutter as to produce a signal having a component proportional to the difference in intensity of said two beams, whereby to eliminate error due to any extraneous radiation between said source and said second point.

2,900,867
KALEIDOSCOPE
John E. Beatman, South Norwalk, Conn.
Application September 17, 1956, Serial No. 610,337
3 Claims. (Cl. 88—15)



1. A kaleidoscopic device comprising a generally rectangular case open at the top and having a cover hingedly connected to the back of the case for swinging between an erect, open position and a closed position covering the top of the case, a flat base within said case parallel to the bottom of the latter, a pair of mirrors, hinge means including a hinge pin pivotally connecting said mirrors for movement relative to each other to enclose various angles therebetween, and apertured brackets on the face of said cover which is lowermost in said closed position of the latter and receiving the opposite ends of said hinge pin for pivotally mounting said mirrors on said cover, said brackets being disposed so that said hinge pin extends substantially at right angles to the swinging axis of said cover, whereby said mirrors can be folded flat against said cover to lie between the latter and said base when the cover is in said closed position and, as the cover swings to said erect, open position, said mirrors tends to swing apart and away from said cover to operative positions extending over said base for reflecting a kaleidoscopic image of design components on the base in the space between the mirrors, each of said mirrors having a depending foot remote from said hinge pin to effect contact with said base in the operative positions of said mirrors, and at least one of said brackets having an aperture that is elongated in the direction parallel to the plane of said cover to permit canting of said hinge pin relative to the cover and thereby ensure simultaneous contact of the feet of said mirrors with said base for holding said mirrors in said operative positions.

2,900,868
FILM STRIP ATTACHMENT
Clyde M. Gaffney, Jr., Greenville, S.C.
Application May 10, 1954, Serial No. 428,532
4 Claims. (Cl. 88—19.5)

3. A film strip attachment for securing a motion picture film to a reel comprising a flexible strip of textile material, a pressure sensitive adhesive coating covering one side of said flexible strip, a flexible hinge strip of textile material stitched adjacent its inner end in the medial portion of said first mentioned flexible strip on said side having said pressure sensitive adhesive coating, so that adjacent ends of the hinge strip and said first mentioned flexible strip are alined, a pressure sensitive

2,900,872

length to maintain a portion thereof constantly engaging

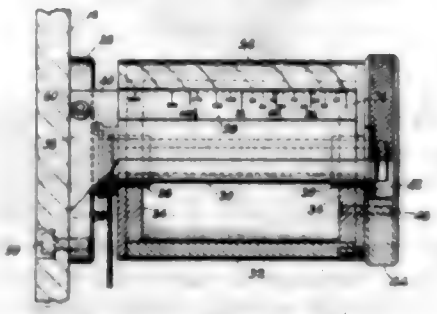
for each of said key members and said pairs of holes being spaced to register with the keys of the pedal keyboard, said shank of the arrow being adapted to fit in said groove, the side portions of said opening corresponding to the

adhesive coating on the side of said hinge strip adjacent said first mentioned strip, said first mentioned flexible strip and said hinge strip having a plurality of spaced aligned slots adjacent each edge adapted to engage gear teeth for the purpose of driving the film strip through the projector and foraminous protective coverings of textile material covering the portions having pressure sensitive adhesive coating.

2,900,869
STOP RATIONER FOR PHOTOENGRAVING CAMERA

John L. Bjelland, Huntington, and Floyd W. Flynn, Glen Cove, N.Y., assignors to Powers Chemco, Inc., Glen Cove, N.Y., a corporation of New York

Application July 19, 1957, Serial No. 672,896
7 Claims. (Cl. 88—24)

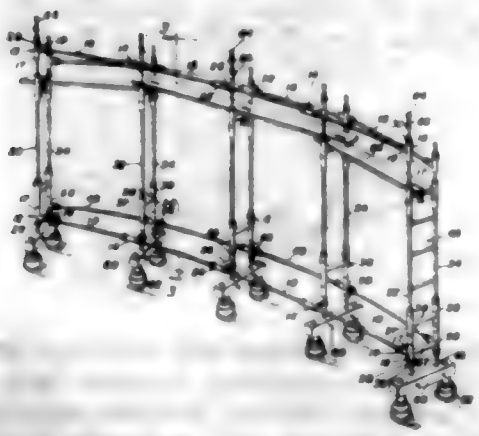


1. In a photoengraving camera adapted to produce negatives of varying size relative to the copy the combination of a lens assembly having an adjustable iris diaphragm, an iris ring operatively associated with the iris diaphragm to adjust the same to vary the opening thereof by rotating the ring, an axially rotatable drum mounted on the front of the camera laterally of the lens assembly and in generally parallel relation with the lens axis, a belt drive interconnecting said drum and said ring so that they rotate together whereby the iris diaphragm may be adjusted by rotation of said drum, a negative to copy size ratio scale and an *f*:stop scale associated with said rotatable drum with one of said scales being disposed about the rotatable drum for rotation therewith and comprised of helical lines and the other being stationarily mounted adjacent said one scale and longitudinally of the drum for indexing therewith and with the scales being arranged to indicate the *f*:stop of the iris opening for any desired image to copy ratios throughout the range of adjustment effected by the rotatable drum.

2,900,870
PROJECTION SCREEN

Thomas J. Jackson, Robstown, Tex.

Application April 9, 1954, Serial No. 422,150
3 Claims. (Cl. 88—28.9)

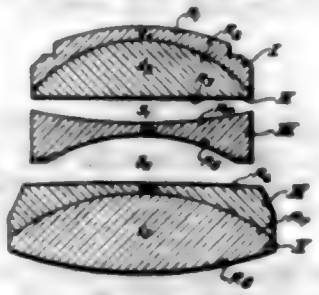


1. A wide angle motion picture projection screen assembly comprising a curved screen of pliable, flexible material concave on the picture receiving side held and tensioned solely along its marginal portion without contact with a supporting or other member along its curved surface stretched between said marginal portions, a first screen frame structure with vertical and curved horizontal tubular screen holding and tensioning frame members, the curved screen being held under high tension by the said tubular vertical and curved horizontal screen holding and tensioning frame members, a second bracing frame structure with curved horizontal frame members arranged at a distance from the first screen supporting frame structure for bracing the latter against deformation produced by the tensioning of the screen, the second bracing frame structure further consisting of a plurality of spaced bracing units, each unit consisting of a pair of interconnected vertical tubular members forming a transversely arranged frame in a plane substantially at right angles to the screen surface, said transversely arranged frames being interconnected by the curved horizontal bracing frame members, each being provided with horizontal spacing and bracketing members, projecting forwardly towards the screen and supporting and holding the curved horizontal screen holding and tensioning frame members at a distance from the bracing units with secure spacing between the screen and the said bracing units, the tubular vertical screen holding and tensioning frame members being themselves formed by one of the vertical tubular members of a transverse bracing frame unit, all bracing units being mounted on shoes provided with rotatable elements for rolling on the ground to produce mobility of the screen assembly.

2,900,871
MAGNIFIER

James G. Baker, Winchester, Mass., assignor to the United States of America as represented by the Secretary of the Air Force

Application March 12, 1958, Serial No. 721,074
1 Claim. (Cl. 88—57)



A lens system corrected for spherical and chromatic aberrations, coma, astigmatism and curvature of field comprising three air spaced components in optical alinement with each other, the end components being of positive power and the intermediate component being negative, said lens system being constructed according to the numerical data given in the table herebelow in which R_1 to R_8 designate the radii of the refractive surfaces of the lenses, starting at the front of the objective, t_1 to t_5 designate axial thicknesses of the respective lenses, S_1 and S_2 designate the axial spaces between the lenses, n_D represents the index of refraction of the lens material for the D line of the spectrum and ν represents the dispersion of said lens material:

Lens	Radii	Thickness	n_D	ν
I	R_1=1.825	t_1=.055	n_1=1.523	58.6
	R_2=1.060			
II		t_2=.445	n_2=1.642	58.1
	R_3=plano	S_1=0.160		
III	R_4=4.205	t_3=0.080	n_3=1.596	39.7
	R_5=1.455	S_2=0.360		
IV	R_6=20.40	t_4=0.085	n_4=1.583	46.5
	R_7=1.535			
V		t_5=0.595	n_5=1.678	55.5
	R_8=−3.155			

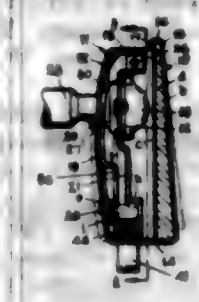
signal having a component proportional to the difference

mentioned flexible strip are alined, a pressure sensitive

2,900,872
REAR VIEW MIRROR

Ferdinand J. Mazur, Natrona Heights, and Dwight W. Barkley, New Kensington, Pa., assignors to Libbey-Owens-Ford Glass Company, Toledo, Ohio, a corporation of Ohio

Application March 3, 1954, Serial No. 413,827
5 Claims. (Cl. 88—77)

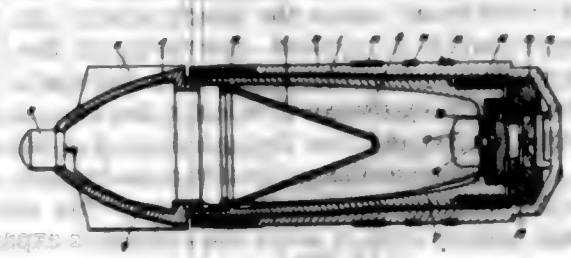


4. A rear view mirror for automobiles providing a selection of at least two different intensities of the rear road, comprising a substantially stationary support plate, a case surrounding said support plate, said case having a back wall and being open at the front thereof, a mirror element carried by said case and permanently closing the front thereof, means for pivotally attaching said case to said support plate, means carried by said support plate for attachment to an automobile, said support plate being movably engageable with said last named means within said case to enable said support plate and said case to be adjusted bodily with respect to said automobile, and a pivotally mounted cam carried by the case and engageable with said support plate for locating the mirror element at different angular locations relative to said support plate to position the mirror surface in predetermined selected positions to reflect to the same point images of different intensities when said case is pivoted with respect to said support plate.

2,900,873
ORDNANCE

Hans Wüst, Vichy, France, assignor to Manufacture de Machines du Haut-Rhin, Mulhouse-Bourtzwiller, France

Application October 30, 1956, Serial No. 619,327
Claims priority, application France November 10, 1955
6 Claims. (Cl. 89—1)

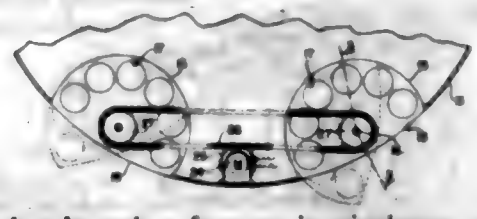


1. An ordnance system comprising a gun including a tube provided with circumferentially spaced lands forming conventional spiral rifling grooves between them, the lands having discontinuities aligned to form supplemental rifling comprising at least one supplemental groove, said supplemental groove forming with the longitudinal axis of the tube an angle the value of which is selected between zero so that the groove is substantially parallel to the axis and a small value thereby to form a spiral opposite to that of the conventional rifling grooves of said tube and having a depth no greater than the depth of the conventional grooves, a missile to be fired from the gun including a first outer portion and an inner portion coaxial therewith for carrying a charge and revolubly carried inside the outer portion extending outwardly at one end thereof, at least one driving band disposed peripherally on the outer portion of the missile for engaging the conventional rifling of the inner tube of the gun and having an axial length sufficient to maintain fluid-tightness between the tube and the missile and of sufficient length to maintain a portion thereof constantly engaging portions of the lands that are continuous and uninterrupted, and at least one guiding radial vane carried by the outer surface of the inner portion of the missile for slidably engaging the supplemental groove of the gun tube.

2,900,874
ROCKET LAUNCHER

Willard W. Tjossem, Burbank, Calif., assignor to Lockheed Aircraft Corporation, Burbank, Calif.

Application September 18, 1948, Serial No. 49,894
9 Claims. (Cl. 89—1.7)

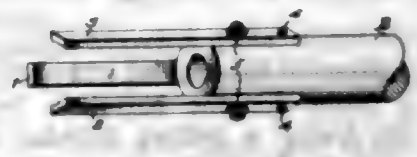


1. A rocket launcher for use in airplanes, comprising a generally cylindrical turret having a plurality of rocket tubes therein parallel to the axis of said turret and a chord-like surface also generally parallel to the axis of said turret and replacing a portion of the cylindrical surface thereof to produce a flattened area along a portion of the otherwise cylindrical surface of the turret, means for mounting said turret relative to a surface of said airplane to rotate on its axis in substantial parallelism with the adjacent surface of the airplane, and to have the chord-like surface flush with the surface of the airplane in one position of the turret, and to position the rocket tubes in said turret to successively project beyond the airplane surface when the turret is rotated from said flush position, means for rotating said turret, and means for firing rockets positioned in said rocket tubes when said tubes project beyond the airplane surface.

2,900,875
FLASH AND NOISE SUPPRESSOR FOR HIGH PRESSURE GAS EXHAUSTS

John H. Fergus, Media, Pa., and Aaron W. Horton, Cincinnati, Ohio, assignors to the United States of America as represented by the Secretary of the Army

Application May 11, 1950, Serial No. 161,336
4 Claims. (Cl. 89—14)



1. In combination with a gun barrel, three identical rods, and means securing each said rod to the exterior surface of said barrel parallel therewith and in symmetrical circumferentially-spaced relation thereabout, each said rod having its forward end projecting forwardly from the muzzle end thereof a distance approximately equal to at least four times the bore of said barrel, said rods defining radially and longitudinally open slots from said muzzle to the forward ends of said rods.

2,900,876
COMBINED RAMMER AND CAM MEANS FOR CHAMBERING CARTRIDGES IN REVOLVER-TYPE GUNS

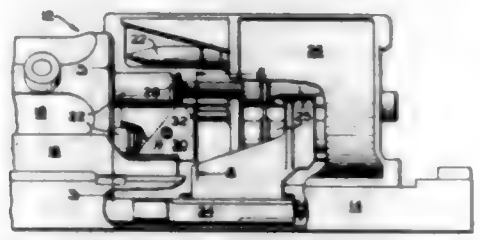
John G. Brubaker, Park Forest, Eugene S. Wassel, La Grange, and William E. Reynolds, Riverside, Ill., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Army

Application September 11, 1956, Serial No. 609,331
1 Claim. (Cl. 89—155)

In a gun fed with cartridges from a linked belt and including a receiver with a recoil unit therein, a drum rotat-

tact with a supporting or other member along its curved

ably disposed in the recoil unit and provided with cartridge chambers, and actuating means for serially rotating the drum and successively indexing the chambers in stations including a pair of adjacent ramming stations and an immediately succeeding firing station responsive to forces produced by discharge of the cartridges in the firing station, the combination of a rammer disposed on the actuator means for successively moving the cartridges from the linked belt to a partial-ram position in the chambers when indexed in the first of the pair of ramming stations, and a cam device including a latch engageable

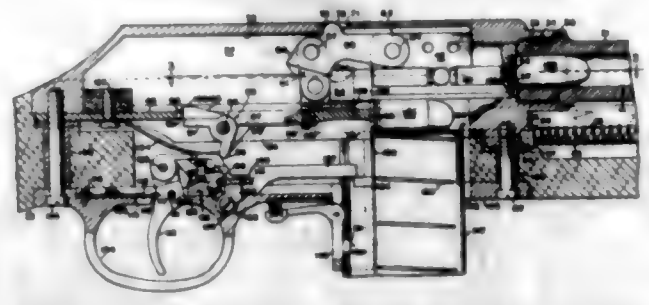


by the bases of the cartridges in the partial-ram position to prevent displacement of the cartridges rearwardly therefrom, and a helical cam surface leading from the first of the ramming stations to the firing station, said cam surface being disposed for engagement by the bases of the cartridges when rotated from the first of the ramming stations and being helically developed to cammingly convert rotational movement of the cartridges with the drum to longitudinally displacement to a fully chambered position in the cooperating ones of the chambers when moved by the drum through the second of the ramming stations to the firing station.

2,900,877
RECOIL-ACTION MACHINE GUN
Douglas Sloan McClenahan, West Cornwall, Conn.
Application June 8, 1956, Serial No. 590,303
5 Claims. (Cl. 89—173)

1. The improvement in machine guns which comprises a receiver, a frame for the barrel, a barrel slidably mounted in the frame, a locking member connected to and movable with the barrel, means on the receiver forming a stop for the rearward travel of the barrel and locking member, a unit comprising a breech block, a slide within the breech block, a firing pin within the slide, a plurality of slots in the forward end of the breech block, a locking lug in each slot movable outwardly to engage the locking member and inwardly to an unlocked position, inclined surfaces on the slide, inclined surfaces on the lugs which coact with the inclined surfaces of the slide, and an inclined surface on the forward end of the firing pin which also coacts with said inclined surfaces on the lugs, whereby, on firing, the barrel and locking member with the unit travel rearward until the locking member strikes the stop, the slide continues to move rearward under its own momentum and the inclined surfaces thereof pull the locking lugs out of locking engagement with the locking member and the breech block is unlocked and carried rearward along with the slide and firing pin, means for returning the barrel to its firing position immediately after unlocking, means for returning the unit of breech block, slide and firing pin to the locked position, and a hammer which drives the firing pin and forces the inclined surface thereof into engagement with the locking lugs, locking the breech block to the locking member.

2,900,878
TOGGLE BREECH BLOCK LOCKING MEANS FOR A GAS PISTON OPERATED GUN
Louis Nolan Nomar, Charleston, W. Va., assignor to Nomar Arms, Inc., Charleston, W. Va., a corporation of West Virginia
Application October 4, 1955, Serial No. 538,340
2 Claims. (Cl. 89—189)



1. In a firearm, a barrel, members forming in relation to the barrel a breech chamber having a top wall, said wall having a forwardly facing shoulder and a bottom surface extending rearwardly from the shoulder parallel to the longitudinal axis of the chamber, a breech slide block and a firing pin actuator slidably mounted in the chamber, means cooperating with said bottom surface to constrain the movements of the said block and actuator parallel to the longitudinal axis of the chamber, said block being disposed in the chamber forwardly of the actuator, a reciprocating firing pin coaxially aligned with and constrained for coaxial movement relative to the barrel, said pin being fixed to and movable with the actuator, said block having a longitudinal aperture therethrough slidably engaging the firing pin, said means including a collapsible linkage connecting the said block and actuator, said linkage including a bracing link for the block, said bracing link being adjacent to and slidable in relation to the said bottom surface, said bracing link having a vertically movable part a portion of which is adapted to engage said shoulder when the block and actuator are forwardmost in the breech chamber and the linkage is collapsed, thereby to brace the block against rearward movement under force applied rearwardly to the block, and means connected to the actuator for moving it rearwardly from its forwardmost position in the breech chamber, thereby to expand the linkage from the collapsed position and disengage the vertically movable part from the shoulder another portion of said movable part engaging said bottom surface when the linkage is expanded.

2,900,879
MANUFACTURE OF SEAM-WELDED TUBING
Albert Norton and Harry O. Bradshaw, Warwickshire, England, assignors to Tube Products Limited, Oldbury, Worcestershire, England, a British company
Application August 10, 1955, Serial No. 527,606
Claims priority, application Great Britain March 18, 1955
1 Claim. (Cl. 90—24)

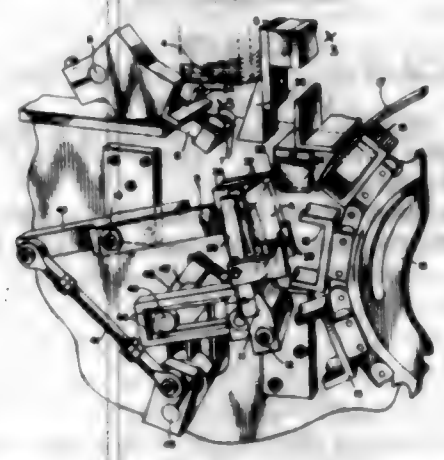
A cutting head for trimming internal flash from a welded joint in the manufacture of seam-welded tubing comprising a carrier, a cutting tool rigidly mounted on the carrier for engaging and cutting such internal flash, an elongated reaction member for engaging the side of

substantially at a location which is spaced from said shaft

ond position for feeding film and for protecting film

the bore opposite the cutting tool and radially slidable in fluid pressure retaining relation in a complementarily-shaped recess in the carrier and means for connecting the interior of said recess with a source of fluid-pressure, the elongated member having, to engage the walls of the recess, spaced sides parallel to one another and to the axis of the tube, the length of the sides greatly exceeding the width and thickness of the reaction member.

2,900,880
CARTON EXPANDING AND CONVEYER LOADING MECHANISM
Harry E. Engleson, Chicago, and Elmer D. Sramek, Cicero, Ill., assignors to F. B. Rodington Co., Bellwood Village, Ill., a corporation of Delaware
Application August 30, 1956, Serial No. 607,132
9 Claims. (Cl. 93—53)

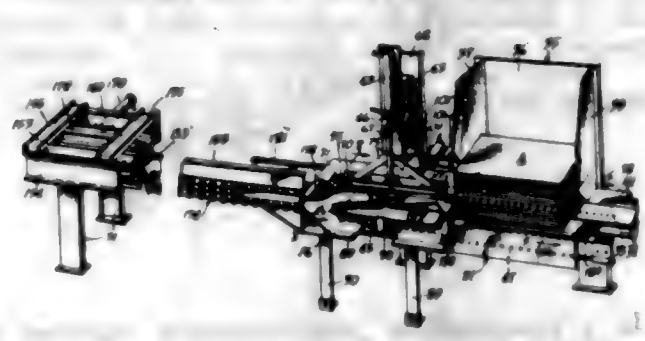


1. In a packaging machine having a conveyer movable about a rotatable end support means, apparatus for expanding and inserting cartons into buckets carried by the conveyer, said apparatus comprising a magazine for containing a stack of flat cartons, a first transfer member pivotally mounted in spaced relation with the magazine and operable to engage and pull a single carton downwardly from the magazine to a first position, a second transfer member mounted to pivot in spaced relation with the first transfer member and operable to receive the carton from the first transfer member at the first position and convey it to a second position, and a third transfer member mounted to pivot in spaced relation with the second transfer member and with the rotatable end support means of the conveyer, the third transfer member being operable to receive the carton from the second transfer member at said second position and to insert the carton into a conveyer bucket as the bucket is moving around the rotatable end support means.

2,900,881
TUBE COATING APPARATUS
James F. Barnes, Van Nuys, and Herman I. Silversher, Los Angeles, Calif., assignors to Foil Process Corporation, Van Nuys, Calif., a corporation of California
Application March 23, 1956, Serial No. 573,565
5 Claims. (Cl. 93—80)

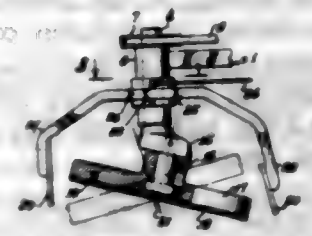
1. In a tube winding machine having a stationary mandrel provided with at least one longitudinal groove along the outer periphery thereof, a resilient fluid absorbent wick mounted within said groove and having a curved outer surface flush with the curved peripheral surface of said mandrel, and fluid passage means including a bore extending longitudinally through said mandrel and communicating with said wick along substantially the entire length thereof for supplying tube coating fluid to said wick, whereby, upon operation of said tube winding machine said tube coating material is wiped from said wick upon the inner surface of a tube being wound upon said mandrel.

2,900,882
METHOD AND APPARATUS FOR FORMING TRIANGULAR POSTS
Albert Paul Theobald, St. Paul, Minn., assignor to Waldorf Paper Products Company, Wabash, Minn., a corporation of Minnesota
Application July 25, 1957, Serial No. 674,253
19 Claims. (Cl. 93—84)



1. A post forming apparatus for forming a generally triangular post from a flat blank having four panels hingedly secured together along substantially parallel fold lines, the apparatus including a plunger means engageable with the blank for folding the blank along its intermediate fold line into U-shaped form with the end panels of the blank generally parallel, plunger means engaging one of said parallel end panels of the blank folding said one end panel of the series to extend diagonally across the next adjoining panels and folding said next adjoining panels into angular relation, means folding the other end panel of the series to overlie the first folded end panel, and means securing the two end panels of the series in surface contact.

2,900,883
DEVICE FOR KNEADING AND SURFACING PLASTIC MATERIAL
Robert D. Dening, Montebello, Calif., assignor to Garlinghouse Brothers, Los Angeles, Calif., a copartnership
Application March 8, 1954, Serial No. 414,550
10 Claims. (Cl. 94—45)

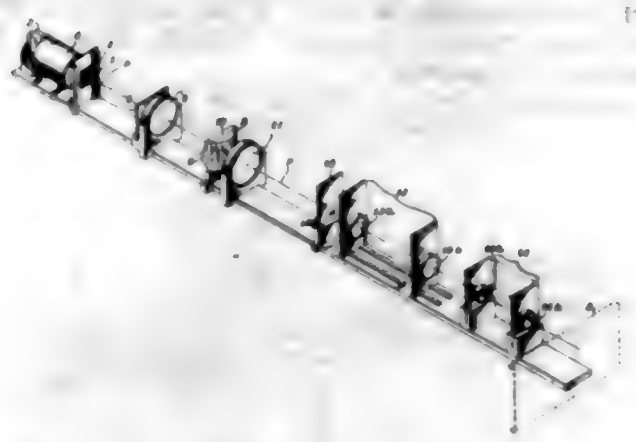


7. A device for compacting compactible material comprising a support for supporting said compacting device relative to the surface of said material being compacted, a shaft rotatably mounted on the support and having an axis of rotation thereon, a head element at a free end of the shaft offset laterally of the axis of the shaft, a thrust bearing surface on said head element inclined at an angle relative to the axis of the shaft, a compacting disk having a working face, and having a thrust bearing face in rotatable engagement with said bearing surface at an oblique axis of rotation relative to the shaft, a stem normal to said thrust bearing surface for rotatably mounting said compacting disk on said oblique axis, said oblique axis having a point of intersection with the axis of the shaft

the unit of breech block, slide and firing pin to the locked position, and a hammer which drives the firing

substantially at a location which is spaced from said shaft a distance which is at least equal to the distance of the center of the working face of said disk from the shaft.

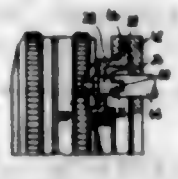
2,900,884
PHOTOCOMPOSING MACHINE
Eugene F. Coleman, Brooklyn, N.Y., assignor to Mergenthaler Linotype Company, a corporation of New York
Application October 23, 1953, Serial No. 387,928
3 Claims. (Cl. 95—4.5)



1. In a typographical photocomposing machine, the combination of a stationary font plate presenting an array of type characters arranged thereon in horizontal rows and vertical columns, means for illuminating any selected type character in the array to the exclusion of all the other characters, a collimating lens for rendering the light rays from the selected character substantially parallel, a light bending component arranged to separate and direct bundles of collimated light emanating from the collimating lens, said light bending component comprising a series of stationary different angularly disposed horizontal light bending elements, all simultaneously operative and one for each horizontal row of characters on the font plate, as well as a series of stationary different angularly disposed vertical light bending elements, all simultaneously operative and one for each vertical column of characters on the font plate, an image forming lens common to all of the characters in the font array and arranged to receive the light rays from the light bending component and form a series of images of the selected character in a common plane, with one image falling on a path of projection which is common to all the characters in the array, a mask located in said plane and containing an aperture positioned in said common path of projection, said mask permitting transmission of the light rays forming the image falling on the common path of projection while preventing transmission of the light rays forming other images, and a light sensitive film onto which the projected images of the different selected characters are recorded, one after another, as they are successively formed at the mask aperture.

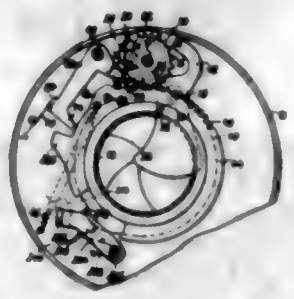
2,900,885
PHOTOGRAPHIC CAMERA WITH INTERCHANGEABLE SHUTTER
Kurt Gebele, Munich, Germany, assignor to Hans Deckel, Munich-Solln, Germany, and Friedrich Wilhelm Deckel, Zug, Switzerland
Application June 9, 1955, Serial No. 514,218
Claims priority, application Germany June 11, 1954
18 Claims. (Cl. 95—11)

1. A photographic camera including a body, a shutter detachably mounted on said body and removable therefrom by predetermined movement relative to said body in one direction and replaceable thereon by predetermined movement in the opposite direction, a member mounted on said body for movement from a first position to a second position for feeding film and for protecting film against access of light notwithstanding opening of the shutter, and means including a portion mounted on said body movable to and from blocking relation to the removal movement of said shutter and controlled by the



position of said member for locking said shutter against said predetermined movement of removal from said body when said member is in said first position and for releasing said shutter for removal, if desired, when said member is in said second position.

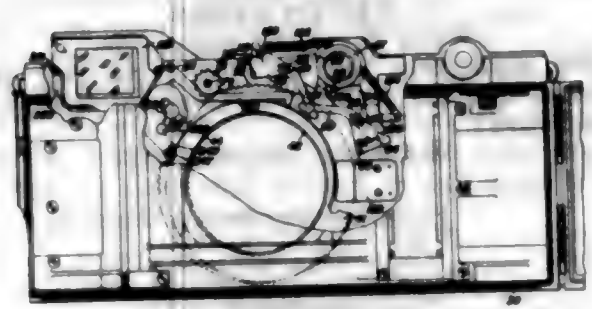
2,900,886
PHOTOGRAPHIC CAMERA AND SHUTTER CONSTRUCTION
Kurt Gebele, Munich, Germany, assignor to Hans Deckel, Munich-Solln, Germany, and Friedrich Wilhelm Deckel, Zug, Switzerland
Application July 8, 1955, Serial No. 520,875
Claims priority, application Germany July 9, 1954
13 Claims. (Cl. 95—31)



1. The combination with a photographic camera body, of a shutter of the tensioning type mounted on said body, said shutter including a casing having an optical axis, a spring powered master member rotatable in one direction in said casing to tension the shutter preparatory to making an exposure and rotatable in the opposite direction under the influence of its tensioned spring power to make an exposure, a master member latch for latching said master member in tensioned position, a control member movably mounted within said casing for movement between a run-down position and a tensioned position, means on said control member for releasing said master member latch as said control member moves from tensioned position toward run-down position, an actuating member located at least partially within said shutter casing and effective upon movement in a first direction to tension both said master member and said control member, said actuating member being operatively coupled to said control member in such manner that said control member may not move toward run-down position without corresponding movement of said actuating member in a second direction, said actuating member including only a single member extending from said shutter casing into said camera body, and means mounted on said camera body and cooperating with said single member for moving said actuating member in said first direction to tension the shutter, for holding said actuating member stationary to maintain the shutter in tensioned position until an exposure is to be made, and for releasing said actuating member for movement in said second direction so that said control member may move toward run-down position to release said latch so that said master member may make an exposure.

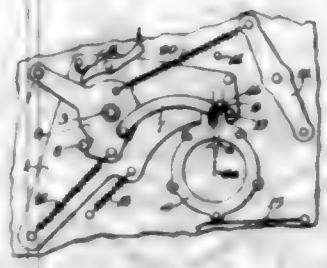
exposed to said external pressure for controlling the stantially the full length of the room wall, and duct means

2,900,887
PHOTOGRAPHIC CAMERA
Hubert Nerwin, Rochester, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Application November 1, 1952, Serial No. 318,231
9 Claims. (Cl. 95—44)



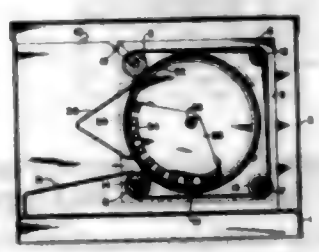
1. A photographic camera having a viewfinding system and a coupled rangefinding system, a single viewing eyepiece for both systems, means for detachably securing to said camera selectively any one of a number of interchangeable focusing mounts for photographic objectives of different focal lengths, means for automatically coupling the rangefinder system to each of said focusing mounts during attachment of the focusing mount to the camera whereby the rangefinder system will be operated upon focusing adjustment of the focusing mount, adjustable optical means for varying the magnification of the image seen in said eyepiece, separate adjustable means for framing the image area seen in said eyepiece, a gear rotatable by an objective focusing mount during attachment of the objective focusing mount to said camera for actuating said optical means to vary automatically the magnification of said image in accordance with the focal length of said objective focusing mount, and a cam secured to said gear to rotate therewith and separately operatively connected to said framing means to adjust said framing means automatically also and simultaneously with the adjustment of said optical means and also in accordance with the focal length of said objective focusing mount.

2,900,888
PHOTOGRAPHIC LENS SHUTTER
Erich Burger, Munich, Germany
Application July 13, 1951, Serial No. 236,484
9 Claims. (Cl. 95—63)



1. A photographic lens shutter mechanism capable of operating at variable exposure time and including shutter members comprising: an operating member connected to said shutter members for moving said shutter members in shutter opening and shutter closing directions, a tensionable driving member pivoted for uni-directional movement during a shutter opening and reclosing operation, means for tensioning said driving member, adjustable transmission means connected with said driving member and said operating member for transmitting movement of said driving member to said operating member, said adjustable transmission means including a resilient link and structure for varying the extent of movement of said operating member in response to the movement of said driving member hypothetically considering said resilient link to be rigid, exposure time control means connected with said tensioning means and said adjustable transmission means for simultaneously varying the amount and path of tensioning of said driving member and said hypothetical extent of movement of said operating member, and said exposure time control means limiting said hypothetical extent of movement of said operating member to open said shutter members a predetermined amount less than their full opening which permits the momentum of the masses of the driven parts and the resiliency of said resilient link to provide said full opening of said shutter mechanism upon reversal of motion of said transmission means from said shutter opening to said shutter closing direction.

2,900,889
PHOTOGRAPHIC PRINTING APPARATUS
Emanuel M. Jaffe, Brooklyn, and Edmund S. Galaw, Bellerose, N.Y., assignors to Duophoto Corporation, New York, N.Y., a corporation of New York
Application February 12, 1954, Serial No. 409,881
2 Claims. (Cl. 95—77.5)



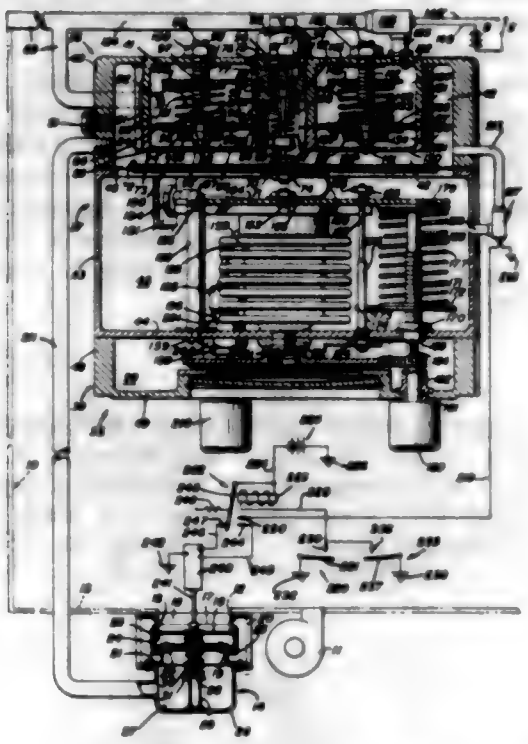
1. In a photographic printing machine a frame comprising end plates, means for fixedly supporting said plates in spaced relation with their opposite faces substantially parallel, an open ended glass cylinder of a length slightly less than the space between said plates, means for supporting said cylinder between said plates comprising a plurality of parallel rollers having their ends mounted for rotation in said plates at spaced points around said cylinder, two of said rollers on one side of said cylinder being separated by a distance less than the diameter of said cylinder, a series of endless belts of extensible material trained around said rollers, said belts being of such length that one reach of said belts extends around said cylinder and holds said cylinder against said two rollers and a lamp within said glass cylinder for photo-printing light sensitive surfaces carried around with said cylinder by the movement of said belt about said rollers one of said two last mentioned rollers being mounted in slots extending radially outward from the cylinder.

2,900,890
DUAL DIFFERENTIAL PRESSURE REGULATING CONTROL
Richard A. Fischer, Los Angeles, and James M. Kemper, Hollywood, Calif., assignors to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Application March 26, 1954, Serial No. 418,826
18 Claims. (Cl. 98—1.5)

1. In pressure control mechanism: means defining a pair of pressure chambers having a restricted connection therebetween; means for controlling the pressure in one of said chambers including pilot valve means having a pressure responsive element responsive to variations in the differential of pressures in said chambers for controlling the flow of fluid relative to said one chamber, differential pressure responsive means having one side exposed to the pressure in one of said chambers and the opposite side subjected to external pressure and adapted to control the pressure in said one chamber in a differential range of operation, and a second differential pressure responsive means having one side exposed to the pressure in one of said chambers, and the opposite side

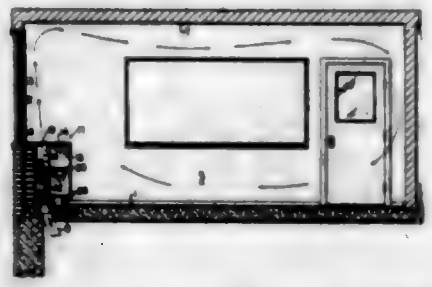
on said body for movement from a first position to a sec- may make an exposure.

exposed to said external pressure for controlling the pressure in said one chamber in another differential range



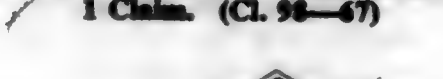
of operation; bypass means interconnecting said chambers; and means for controlling said bypass means.

2,900,891
ROOM AIR CONDITIONING SYSTEM
Laurent J. Schutte, Elm Grove, Wis., assignor to Super-Steel Products Company, Milwaukee, Wis., a corporation of Wisconsin
Application April 30, 1956, Serial No. 581,528
3 Claims. (Cl. 98—40)



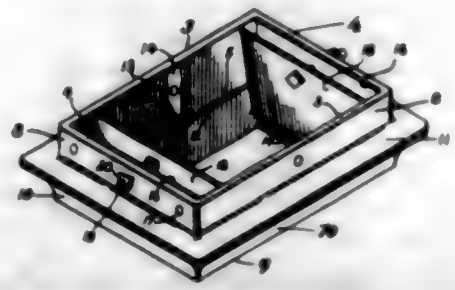
1. A room air conditioning system adapted to be disposed on the inside of a wall containing a series of windows and a window sill therefor, comprising a plurality of open ended like casing units, each unit comprising a top panel adapted to be disposed as an extension of the window sill, a front panel adapted to be spaced from the wall and to support said top panel from the floor with the top panel extending into the room from said front panel, a horizontally disposed partition secured to said front panel and adapted to extend to the wall therefrom and to separate the space between said front panel and the wall and beneath said top panel into an upper plenum chamber and a lower air distributing chamber, a horizontal shelf secured on the front side of said front panel to provide a rigid support for storage purposes beneath said extended top panel, said partition having an opening to transmit air from said distributing chamber to said plenum chamber, a narrow slot in the top panel extending substantially for the full length thereof and adapted to discharge air upwardly from the plenum chamber at high velocities without noise, said casing units being joined end to end and having end walls cooperating with the partition and the top, front and room walls to provide continuous air distribution and plenum chambers and an air discharge slot for substantially the full length of the room wall, and duct means to supply air to said air distribution chamber at a rate effecting air discharge through said slot at velocities in excess of five hundred feet per minute.

2,900,892
VENTILATORS
Wyley Shepherd, Miami, Fla.
Original application July 6, 1954, Serial No. 441,236. Divided and this application November 4, 1955, Serial No. 544,931
6 Claims. (Cl. 98—43)



1. A roof ventilator comprising in combination a casing open at its top and bottom and adapted to be mounted on a roof over an opening therein, a fan mounted in said casing for rotation about a vertical axis, a downwardly concave hood mounted on and over said casing for pivotal movement about a substantially horizontal axis disposed more closely adjacent one side of the hood than the opposite side of the hood, said downwardly concave hood having a substantially vertical side, a fan motor mounted on the outer side of said substantially vertical side of said hood a substantial distance from said axis and on the same side of said axis as said opposite side of the hood, said motor having a downwardly extending vertical drive shaft, detachable means drivingly connecting said drive shaft and said fan, and a motor casing mounted on the outer side of said substantially vertical side of said hood and enclosing said motor but open at its bottom, whereby better access to said motor is afforded upon upward swinging of said hood about said horizontal axis, said motor and casing being disposed outside the air stream.

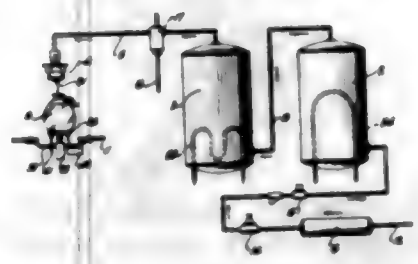
2,900,893
CHIMNEY DRAFT REGULATOR
Harry A. Wiedenroth, Rockville Centre, N.Y.
Application August 28, 1957, Serial No. 680,801
1 Claim. (Cl. 98—67)



A chimney draft regulator comprising in combination with a chimney having a chimney liner extending above the top thereof, a rectangular casting of a form and dimension to fit upon and to be mounted upon said chimney liner to serve as a main supporting element of the device, said casting having an inner undercut ledge on all its sides to be cemented to and upon the upper surface of said chimney liner with the inner walls of said casting flush with the inner walls of the chimney liner, said casting having upon two of its opposed inner walls metal strips riveted to said walls and extending downward within said casting to contact said liner below the undercut ledge therein, said casting forming on all its outsides three distinct surfaces adjacent to each other,

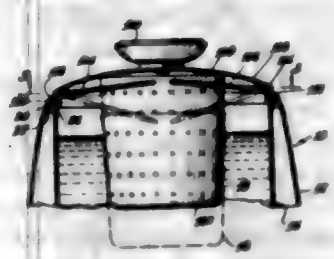
said surfaces consisting of a first lowest inwardly curved surface, a second vertical upper surface and a third horizontal intermediate surface joining the said two other surfaces, said casting having on its other two opposed inner sides draft regulating members, each of which consists of an immovable base member riveted to the upper portion of the inner wall of said casting and an integral movable wing member joined to said base member at the bottom thereof, the upper edges of said base and said movable members being substantially flush with the upper edges of the casting and means accessible from outside the chimney and engaging said movable wing members for moving the latter with relation to each other to regulate the draft opening of the said chimney.

2,900,894
AUTOMATIC COFFEE MAKER
Charles W. Tritt, Long Beach, Calif.
Application May 31, 1955, Serial No. 511,967
2 Claims. (Cl. 99—283)



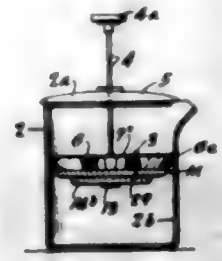
1. An automatic coffee maker comprising a housing, a water reservoir in said housing, a cartridge containing coffee grounds, means mounting said cartridge on the housing, a pipe extending from the reservoir to said cartridge, a water intake pipe extending into the reservoir, a first valve in the first named pipe, electrical actuating means on said first valve, said valve including a by-pass pipe extending therefrom and by-passing the water from the cartridge in one position of the valve, a receptacle mounted on said housing below the cartridge and adapted to receive a decanter thereon, means mounting the receptacle for limited vertical movement, a spring engaging the receptacle and urging said receptacle to an elevated position, a switch adjacent the receptacle engageable by the receptacle to actuate the switch, a second valve in the water intake pipe, the second valve being positioned ahead of the reservoir, electrical actuating means on the second valve, and electrical conduits extending from said switch to both the electrical actuating means on the first valve and the electrical actuating means on the second valve to actuate both of said valves when said switch is engaged by the receptacle.

2,900,895
TEA BASKET AND VAPORIZER
Fred C. Schwaneke and James E. Tucker, Chicago, Ill., assignors to Dormeyer Corporation, Chicago, Ill., a corporation of Illinois
Application May 24, 1955, Serial No. 510,697
6 Claims. (Cl. 99—284)



1. A combination tea-maker and vaporizer comprising a heating container for liquids, a closure for said container, a basket element and spring means on said basket element operable in one position to urge said basket element into engagement with said closure and in another position to urge said basket element out of engagement with said closure, said spring means comprising a pair of resilient arcuate handles having each end thereof pivotally secured in said basket, said closure having an annular peripheral recess adapted to engage said handles therein and having a diameter substantially less than the maximum distance between the outer arcuate centers of said handles.

2,900,896
COFFEE FILTER POT
Fallero Bondanini, Lausanne, Switzerland
Application July 16, 1957, Serial No. 672,146
Claims priority, application Switzerland February 25, 1955
3 Claims. (Cl. 99—297)

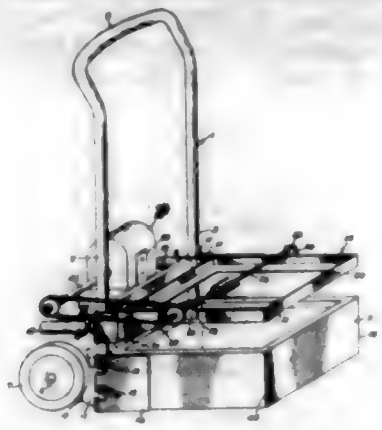


1. An apparatus for the preparation and the filtration of infusions comprising, in combination, a container having a bottom, side walls, and a removable cover, a rod axially slidable in said cover and supporting at its lower end a piston unit extending across the interior of the container and being axially reciprocatable therein, said piston unit being defined by a perforated frame and a filter supported by said frame, and extending across the perforations therein, said frame comprising two sheet metal disks formed with open work to define said perforations, one of said disks defining a dish-shaped unit and said filter being mounted between said disks, said piston rod having a threaded extremity, threaded means engaging with the threaded extremity of the said piston rod and engaging with at least one of said disks to hold said disks, said dish-shaped unit having a rim defining a peripheral wall of constant height on one side of the bottom of said dish-shaped unit, said wall being inclined towards the exterior at least along part of its height and being formed with a plurality of slits dividing the wall into a plurality of free flexible tongues, said slits extending from the outer edge of the wall at least to the juncture of said wall and the bottom of said dish-shaped unit, the juncture of said wall with said bottom being interiorly concave and having a radius of curvature of several millimeters in a plane containing the axis of the rod, said filter having a turned up rim adapted to be located between said tongues and the inner surface of said container, the other of said disks extending radially beyond the inner ends of said slits under the filter and having a turned up rim extending to a level and having a radial dimension intermediate those of the bottom of said dish-shaped unit and of the edge of the free end of said wall, said last-named disk having at least one annular rib turned towards the filter and being formed with a plurality of holes having a diameter less than one millimeter, said holes being distributed over the entire surface of said other disk.

2,900,897
PORTABLE BARBECUE
Charles H. Fisher, Redwood City, Calif.
Application May 27, 1954, Serial No. 432,652
1 Claim. (Cl. 99—340)

In a portable barbecue of the character described, a generally vertical open frame, a portion of the frame

being formed into a handle, a fire carrying element on the frame extended to one side only of the frame, a grill frame, adjustable means to mount the grill frame on the open frame so that said grill frame extends only to the side of the frame above said fire carrying element; the said open frame being sufficiently open to permit access to said fire carrying element and to said grill frame therethrough from the other side of said open frame, and rolling elements on the lower end of said open frame extending oppositely to said fire carrying element, a pivot connection between said grill frame and said mounting means to permit the folding of said grill frame to a position adjacent to and alongside said open frame, and



releasable means to secure said grill frame in said folded position, means to detachably secure said fire carrying element to said open frame, said means for mounting said grill frame comprising a cross-frame slidable on said open frame toward and away from said fire carrying element, handles on said cross-frame and means on said handles for releasably fastening said cross-frame in adjusted position on said open frame, vertical bearing elements extended from said grill frame upwardly to accommodate a spit, and an engagement element on said cross frame to support a driving mechanism for said spit on the other side of said open frame in operative relation to said spit.

2,900,898

ARRANGEMENT FOR PRINTING WITH A NUMBERING FRAME IN A HIGH-SPEED CYLINDER PRESS

Arthur Büttner, Heidelberg, Germany, assignor to Schnellpressenfabrik Aktiengesellschaft Heidelberg, Heidelberg, Germany

Application February 10, 1954, Serial No. 409,411
Claims priority, application Germany February 13, 1953
1 Claim. (Cl. 101—76)

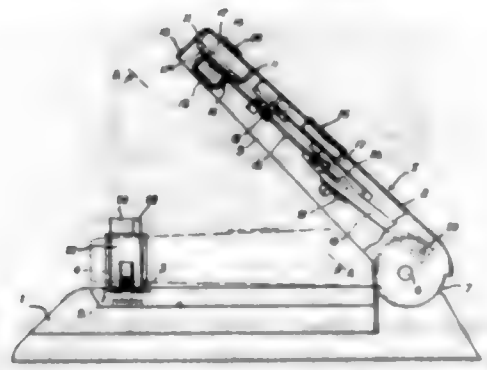
An arrangement for numbering sheet material in a high-speed bed and cylinder printing press comprising, a machine frame, a reciprocating bed in said machine frame, an inking mechanism, a reciprocating numbering mechanism, link means for indexing said numbering mechanism in each cycle of operation, a numbering frame carrying said numbering mechanism mounted on said bed, a shift rod on said numbering frame reciprocating with said numbering mechanism, a pivot shaft oscillatably mounted in said machine frame, a stop pivoted to said pivot shaft and movable to a first position into engagement with said shift rod for actuating said numbering mechanism upon travel of said bed to a front reversal position and when said stop is oscillated about its pivot in one direction and manually movable to a second position out of registry with said shift rod when said pivot shaft is oscillated in a reverse direction out of the path of said bed, a lever arm carried by said pivot shaft having a free end provided with a roller, lever means connected to said inking mechanism for actuating said inking mechanism, spring means connected to said lever arm urging said roller into engagement with said lever means, a locking lever rigidly connected to said shaft, locking means for locking said locking lever to said lever arm to position said stop in engagement with said shift rod for actuating said numbering mechanism.

2,900,899

IMPRINTING APPARATUS

Jean-Paul Robert Marix Evans, Chalfont-St. Giles, England, assignor to Account-Tokens Limited, London, England, a British company

Application February 18, 1955, Serial No. 489,157
9 Claims. (Cl. 101—269)



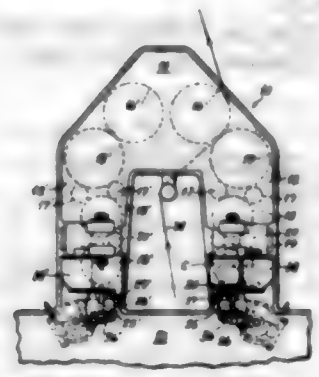
1. A printing apparatus for use with a printing plate, comprising a base for receiving said plate, a printing head mounted on and movable toward and away from said base, an impression roller movably mounted on said printing head, means including a spring for traversing said roller relative to said plate under the influence of said spring and upon release of energy stored in said spring when the printing head is adjacent to and in printing relationship with the base, means for loading said spring in response to movement of said printing head toward said base, means for latching said printing head when it arrives in printing relationship with the base, and means for releasing said spring when said printing head is in printing position to traverse said roller across said plate, said printing head being automatically released when said roller completes its traverse.

2,900,900

INKING MECHANISM FOR PRINTING MACHINES

Charles A. Harless, Riverside, Conn., assignor to R. Hoe & Co., Inc., New York, N.Y., a corporation of New York

Application April 6, 1954, Serial No. 421,379
4 Claims. (Cl. 101—366)



1. In a printing machine inking mechanism, and in combination, an ink drum, an ink rail element for sup-

2,900,905

between the body and the fuze, an annularly arranged

plying ink thereto, a support member for holding the ink rail element in operative relation to the ink drum, means pivotally mounting the support member for movement toward and away from the drum, yieldable mechanism for moving the support member to a position where it holds the ink rail element in operative relation to the ink drum and to a position spacing the ink rail element therefrom, and adjustable stop means for limiting further movement of the support member when moved to the first said position.

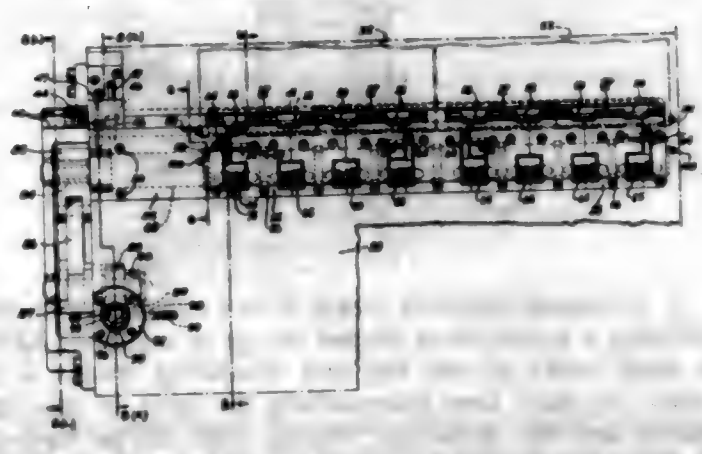
2,900,901
COLUMNAR TYPE FORM AND REMOVABLE TYPE SLUGS FOR SUCH FORM
James Schwartz, Chicago, and Gunnard E. Stark, Lake Forest, Ill., assignors to R. R. Donnelley & Sons Company, a corporation of Delaware
Application June 10, 1957, Serial No. 664,579
5 Claims. (Cl. 101—368)

1. A type form comprising: a plurality of columns of type positioned side-by-side, each of said columns consisting predominantly of a pluralaity of retainable slugs the ends of which form two upright plane surfaces; a column spacer between each pair of adjacent columns against which the adjacent plane surfaces abut; and at least one removable slug in one of said columns, said removable slug having positioning surfaces at its two ends which are coplanar with the ends of the retainable slugs, an upright recessed surface at each end of the removable slug which extends upwardly from the bottom of said slug to the lower margin of the positioning surface, and lifting ears above the positioning surfaces which overhang an adjacent column spacer.

2,900,902
UNIFORM PRESSURE HAND STAMP
Henry Becker, Los Angeles, Calif.
Application April 14, 1958, Serial No. 728,290
10 Claims. (Cl. 101—368)

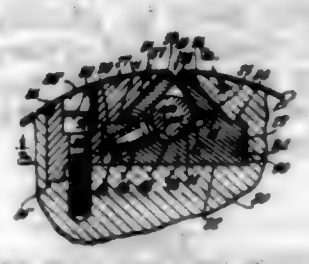
1. A hand stamp comprising a casing having a portion adapted to contact material to be stamped, a fixed plate within said casing, a movable pressure plate adapted to be moved toward and away from said fixed plate, an impression stamp mounted within said casing and movable by said movable pressure plate, resilient means for maintaining said stamp in a predetermined position within said casing, an element extending from said movable pressure plate, a second element relatively fixed with respect to said fixed plate and extending toward said first-mentioned element, and means for adjusting the distance between said elements to control the pressure of said stamp on said material to be stamped when said movable pressure plate moves said stamp to said material.

2,900,963
PRINTING CYLINDERS
Carson Walter Chase, Oak Park, Ill., assignor, by mesne assignments, to Miehle-Goss-Dexter, Incorporated, Wilmington, Del., a corporation of Delaware
Original application September 18, 1948, Serial No. 48,622, now Patent No. 2,639,668, dated May 26, 1953. Divided and this application March 4, 1953, Serial No. 340,267
20 Claims. (Cl. 101—378)



1. In a plate cylinder for tensioning printing plates having pockets in their undersides adjacent their longitudinal edges, the combination comprising an elongated cylindrical body for receiving a plurality of printing plates in generally alined relation longitudinally of said cylinder, a plurality of hooks respectively engageable with the pockets at one edge of the alined plates, means for mounting said hooks on said body in generally alined relation longitudinally of said body for movement in a generally circumferential direction relative to said body, a plurality of generally longitudinal rods extending respectively from one end of said body to said hooks, a plurality of cams respectively coupled to said rods for individually adjusting the hooks associated with a given plate in a generally circumferential direction and thereby individually registering the plates, a plurality of take-up hooks movable circumferentially on said cylindrical body and engageable with the pockets at the other edges of the generally alined plates, respective preloaded springs interposed between said cylinder and said take-up hooks for urging the latter against the plates in a plate-tensioning direction, and means including a shaft and a link connection therefrom to each of said take-up hooks for withdrawing said take-up hooks simultaneously from the plates.

2,900,964
PRINTING PRESS ROLLERS
George Hantscho, Tuckahoe, N.Y.
Application June 8, 1953, Serial No. 360,269
19 Claims. (Cl. 101—415.1)



8. A printing press roller having within the body thereof single means for gripping both ends of a printing plate wrapped about the roller and tightening the printing plate against the roller, means for holding said gripping means against radial movement, and means for independently shifting each end of the plate gripping means transversely of the axis of the roller and the corresponding side of the gripped plate in a circumferential direction to angularly adjust one side of the plate with respect to the other.

of said bed to a front reversal position and when said stop

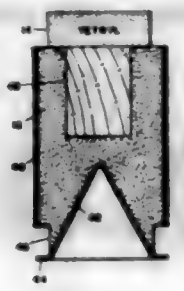
combination, an ink drum, an ink rail element for sup-

2,900,905

PROJECTILE CAVITY CHARGES

Duncan P. MacDougall, Los Alamos, N. Mex., assignor to the United States of America as represented by the Secretary of the Navy

Application October 15, 1951, Serial No. 251,433
3 Claims. (Cl. 102—24)
(Granted under Title 35, U.S. Code (1952), sec. 266)



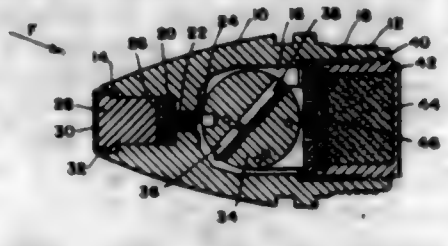
1. A shaped explosive charge device comprising in combination a symmetrical shaped charge of explosive having a lined cavity at one end and detonating means at the other, an inert core intermediate the apex of the lined cavity and the detonating means, said charge having a reduced outer diameter over a portion of the end containing the lined cavity.

2,900,906

SELF-DESTRUCTION DEVICE

Charles R. Olsen, China Lake, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Application June 30, 1955, Serial No. 519,291
11 Claims. (Cl. 102—49)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. In a missile including a casing carrying an explosive charge, a fuze, a mechanism for arming said fuze, and means operative after arming of the fuze by said mechanism to initiate detonation of the charge upon the application of a shock force to said means as by impact of the missile with a target, the improvements comprising a device carried by the missile adapted to produce in the said casing a shock wave of sufficient intensity to travel through said casing to cause operation of the first mentioned means whereby to cause detonation of the explosive charge, and delay means for effecting operation of said device a predetermined period of time after firing of the missile whereby to effect self-destruction of the missile should impact of the latter with a target not occur within the predetermined period of time.

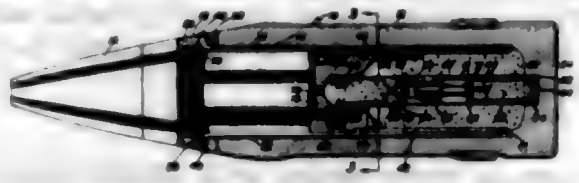
2,900,907

RETARDATION DEVICE FOR THE RECOVERY OF PROJECTILE COMPONENTS

Marvin L. Kempton and Everly J. Workman, Socorro, N. Mex., assignors to the United States of America as represented by the Secretary of the Navy

Application May 7, 1952, Serial No. 286,506
2 Claims. (Cl. 102—63)

1. The combination with a rotating projectile having a body and a fuze, said body having a cavity formed with a cylindrical inner wall and said fuze having an ejecting tube in the cavity spaced from said cylindrical wall; of a retardation device including a pair of rings between the body and the fuze, an annularly arranged series of rods initially lying within the projectile and extending between the cylindrical wall and the ejecting tube, said rods being disposed in parallel, interengaging relation thereby to form a cylinder and having corresponding outer ends bent to extend between the rings



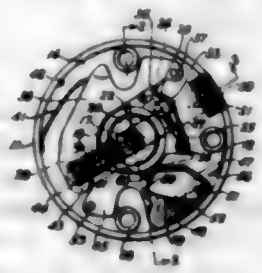
for securement thereby, an ejecting charge in the projectile, and detonating means for the charge, said charge, upon detonation by said means and subsequent to discharge of the projectile from a gun, projecting the fuze and retardation device ahead of said projectile for exposing the rods, said rods being bent radially by centrifugal force for retarding the descent of the fuze.

2,900,908

CENTRIFUGAL SAFETY DEVICE FOR A PROJECTILE FUZE

Ellis Burrell, Rochester, N.Y., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy

Application October 7, 1949, Serial No. 120,051
5 Claims. (Cl. 102—70)

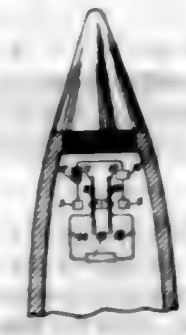


1. In projectile fuze safety means to prevent firing of a detonator during handling, the combination with a spring restrained main detent pivotably mounted to rotate outward under the influence of centrifugal force from a normal first position wherein said main detent holds a spring actuated percussion detonator away from a firing pin to a second position in which said detonator is released, and a spring restrained auxiliary detent pivotably mounted to rotate outward under the influence of centrifugal force from a normal first position wherein said auxiliary detent interlocks with said main detent to prevent outward motion of both detents to a second position in which said main detent is free to rotate outward, of a safety detent restrained against outward rotation by a spring weaker than the spring restraining said auxiliary detent and having a normal first position in which said safety detent interferes with said auxiliary detent to prevent outward motion of said auxiliary detent and a second position wherein said auxiliary detent is free to move outward, said safety detent being pivotably mounted to rotate outward to the second position under the influence of centrifugal force before said auxiliary detent moves outward to its second position, and means for positively locking all of said detents against outward movement to their second positions when the fuze is subjected to an abnormal force tending to move said auxiliary detent toward its second position prior to movement of said safety detent to its second position by positively locking said auxiliary and said safety detents against outward rotation to their second positions, said means including a stop member on said auxiliary detent and an abutting surface on said safety detent.

2,900,909
CENTRIFUGAL SWITCH

James D. Jordan, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy

Application August 20, 1943, Serial No. 499,414
3 Claims. (Cl. 102—70.2)

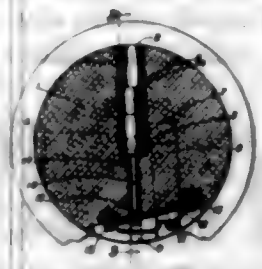


1. In a centrifugal switch, a body having an opening, contacts mounted within the opening, a supporting strip extending within the opening, contact plungers carried in a transverse opening of the supporting strip, and springs supported between the body and the supporting strip and normally retaining the plungers in inoperative position, said plungers being movable outwardly against the tension of the springs to engage said contacts within the opening of said body, for closing an electric circuit.

2,900,910
UNSHORTER

William W. Small, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Navy

Application August 27, 1943, Serial No. 500,265
5 Claims. (Cl. 102—70.2)

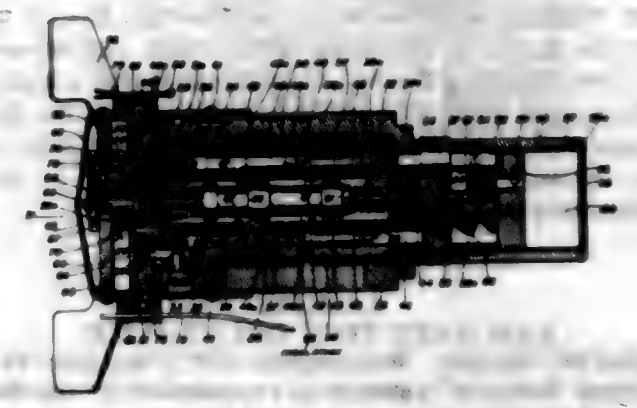


5. In an unshorter for use in an electrical detonating fuze for a rotating type projectile, said fuze having a squib mounted in an explosive chamber, a frangible wall adjacent said squib, and an axial discharge port; in combination, a body, a radial bore in said body, said radial bore being located between said frangible wall and said discharge port and communicating with the latter, a gate slidable in said bore so as to interrupt communication between said frangible wall and said discharge port, said gate initially closing said port, reinforcing said frangible wall, and operable under the influence of centrifugal force to open said port, a detent for retaining said gate in inoperative position, said gate having a shearing element, a groove in said body extending across said bore, a shortening wire located within said groove for shortening out said squib, terminals at each end of said groove for receiving said shortening wire, said shortening wire being arranged to pass through said shearing element, means for releasing said detent to free said gate, whereby said gate, under the influence of centrifugal force, moves to a position to uncover said discharge port, and, at the same time, actuates said shearing element to shear said unshortening wire so that upon ignition of said squib in said explosion chamber, the explosion thereof fractures said frangible wall and passes through said discharge port.

2,900,911
FUZE

Louis D. Statham, Beverly Hills, Calif., assignor to the United States of America as represented by the Secretary of the Navy

Application November 30, 1943, Serial No. 512,384
7 Claims. (Cl. 102—70.2)

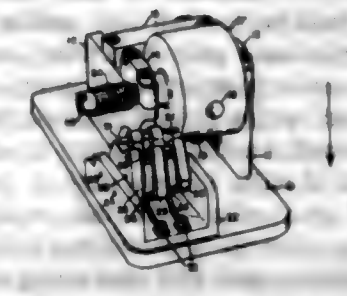


3. A magnetic bomb fuze comprising a tubular magnet, a spool on one end of the magnet, a coil on the spool, a tubular frame extending through the magnet and into the spool, the magnet and the frame being maintained in concentric spaced relation by the spool, a cap secured on one end of the frame and engaging the adjacent end of the magnet, an arming device mounted on the opposite end of the frame, a tubular insulator in the frame, an electrically operable detonator, means for electrically connecting the coil to the detonator and including a pair of normally open contacts in the insulator, an operating rod in the insulator having a bridging member and being slidable in the cap, said arming device normally holding the rod in position to maintain the bridging member out of engagement with said contacts, and means under control of said arming device for actuating the rod to move the bridging member into engagement with the contacts, whereby the presence of a metallic object adjacent the magnet alters the magnetic field thereof to cause an electro-motive force to be generated in the coil and thereby operate the detonator.

2,900,912
WATER DISCRIMINATION FUZE

Henry D. Saunderson, Riverside, Calif., assignor to the United States of America as represented by the Secretary of the Navy

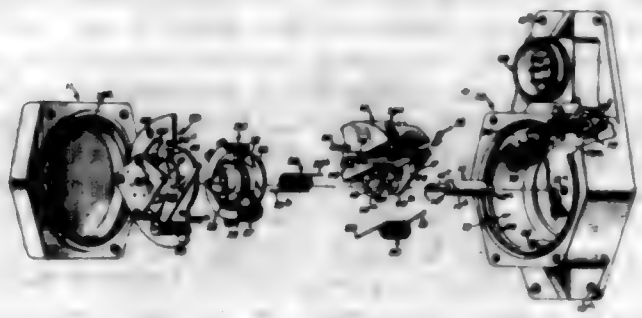
Application March 15, 1956, Serial No. 571,851
3 Claims. (Cl. 102—76)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A water discrimination fuze comprising a rotor adapted for limited rotational movement about an axis, said rotor having an aperture adapted to receive a detonator and an electrical contact terminal, a plurality of leaves eccentrically mounted for movement by the deceleration forces resulting from entry of a missile into water, a pair of pivot pins for mounting said leaves, each of said leaves having a slot therethrough, alternate leaves being mounted on one of said pivot pins and the intermediate leaves being mounted on the other pivot pin with

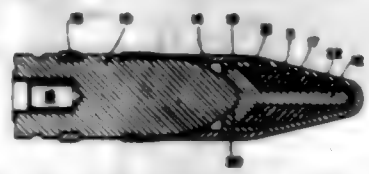
said pivot pins extending through the slot in the leaves which are not mounted thereon, spring restraining means adapted to engage said leaves and resist movement due to deceleration, the first of said leaves being free to move against said spring means when the missile is decelerated by water entry, the other of said leaves having latching means adapted to engage the next preceding leaf until said leaf has moved against the action of said spring means whereby said leaves are successively free to move under the forces of sustained deceleration, and means on said rotor engaging the last of said leaves and adapted to be disengaged when said leaf has moved under the forces of deceleration, and means adapted to move said rotor when released to a position where said fuze is armed mechanically and electrically.

2,900,913
FAIL-SAFE TIME DELAY FUZE
Eugene N. Sheeley, Washington, D.C., assignor to the United States of America as represented by the Secretary of the Army
Application October 2, 1958, Serial No. 765,008
9 Claims. (Cl. 102—84)
(Granted under Title 35, U.S. Code (1952), sec. 266)



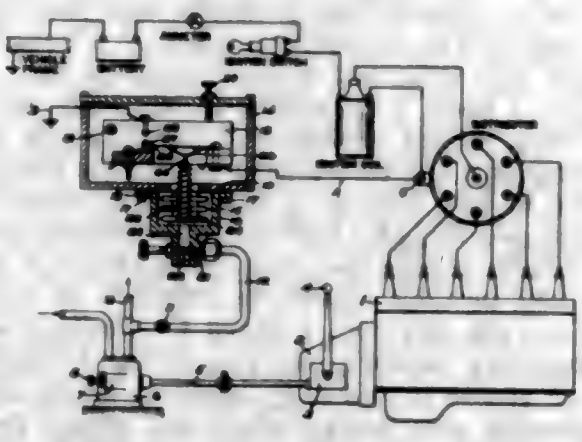
8. A fuze for use in nonrotative missiles, said fuze comprising: a shaft having first and second end portions; an inertia element eccentically positioned on the first end portion, said inertia element adapted to rotate from an initial to a final position in response to forces of acceleration; a pin on said inertia element; an arming gear freely rotatable on the second end portion of said shaft; a tab fixed to, and extending from said gear and rotatable therewith; a coil spring on said second end portion of said shaft, one end of said spring connected to said gear and the other end to said inertia element, said spring being substantially untensioned when said inertia element is in said initial position, said spring winding and tensioning upon rotation of said inertia element from said initial position to an intermediate position between said initial and final position thereby biasing said gear for rotation in one direction; rotary switch means operatively connected to said arming gear and adapted to arm said fuze when said switch means is driven by said gear in said one direction; and escapement-gear time delay train engaging said gear, said delay train adapted to retard spring-biased rotation of said gear to some predetermined angular velocity; an arm having one edge adjacent said tab, a step and a rectangular slot formed in said one edge, said tab engaging said step when said inertia element rotates from said initial to said intermediate position, said pin contacting said edge when said inertia element is in said intermediate position, continued rotation of said inertia element being adapted to cause said pin to drive said arm and said step portion at an angular velocity which is greater than said predetermined angular velocity of said gear so that the greater angular velocity of said arm causes said rectangular slot to rotate beyond engagement with said tab on said gear, freeing said tab and gear for further rotation, further rotation of said gear driving said rotary switch, rotation of said switch arming said fuze.

2,900,914
INCENDIARY PROJECTILE
Thomas Q. Ciccone, Langhorne, Pa., assignor to the United States of America as represented by the Secretary of the Army
Application March 11, 1958, Serial No. 720,802
7 Claims. (Cl. 102—90)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. An armor piercing incendiary projectile of the type using crystal shear to ignite the incendiary mixture, having a solid penetrator and circumferential band of soft material for imparting spin to the projectile, the combination therewith of the improvement for increasing the uniformity of sensitivity and functioning at long ranges and over a wide range of impact angles, said improvement comprising a nose of softer metal than said penetrator, an adapter secured to said penetrator for mounting said nose, an elongated anvil having a radially extended rear portion mounted slidably inside said adapter, in contact with said penetrator, and a forward extending portion having substantially the same contour as the inner surface of said nose such that the distance between said anvil and the inner surface of said nose is constant over a wide angle, said distance being controlled to a close tolerance by preloading the nose with incendiary mixture prior to assembly and by the length of said anvil such that the incendiary mix will ignite by crystal shear upon impact with the target but will still be safe to handle, said anvil being of sufficiently hard material to withstand crush-up of said nose, but not so hard as to impede the penetrator, the entire space around said anvil and between said anvil and said nose being loaded with incendiary mixture.

2,900,915
AUTOMATIC ENGINE CUT-OFF FOR PUMP-EQUIPPED TANK TRUCK VEHICLES
William G. Rowell, Quincy, Mass., assignor to Scully Signal Company, Melrose, Mass., a corporation of Massachusetts
Application March 25, 1955, Serial No. 496,696
2 Claims. (Cl. 103—27)



1. In a vehicle for transporting and dispensing fluids having a tank and an internal combustion engine for propelling said vehicle provided with an ignition system having a pair of make and break contacts in the primary circuit thereof, the combination comprising a power take-off mechanism, a fluid pump driven by said power take-off mechanism having the inlet thereof connected to said tank and the outlet thereof connected to a fluid discharge conduit, means for selectively actuating said power take-off mechanism by said engine, a

2,900,919

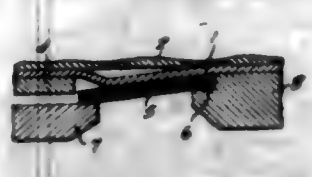
pressure generated by said pump to said chamber where-

said frangible wall and passes through said discharge port.

being mounted on one of said pivot pins and the intermediate leaves being mounted on the other pivot pin with

pressure sensitive switch connected to said fluid discharge conduit and actuated by the discharge pressure of said pump to close its contacts, fluid flow control means positioned in the connection between said pressure sensitive switch and said fluid discharge conduit, means for adjusting said switch to vary the pressure operating range thereof, means electrically connecting said pressure sensitive switch in parallel to said make and break contacts, whereby during operation of said pump and predetermined continuance of a preselected pressure in said fluid discharge conduit, said pressure sensitive switch is actuated to short circuit said make and break contacts to interrupt the operation of said ignition system.

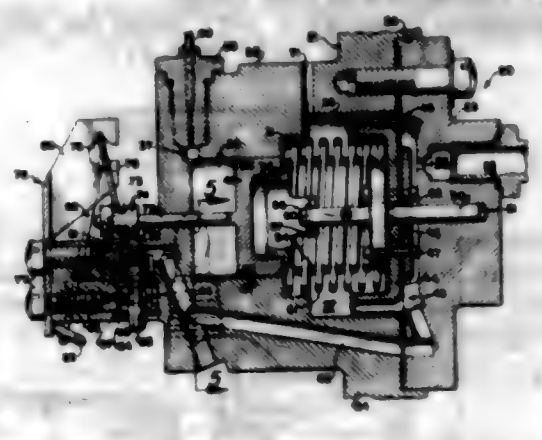
2,900,916
VOLUMETRIC DIAPHRAGM PUMPS FOR GASOLINE INJECTION
Lucien Péras, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Application October 11, 1955, Serial No. 539,897
Claims priority, application France October 14, 1954
1 Claim. (Cl. 103—38)



A volumetric diaphragm pump comprising a flexible wall, a plurality of pressure members lying in a plane and resting against the wall about the axis of the pump, and means for actuating said pressure members in succession to effect delivery of fluid, said last-named means comprising a single bearing roller rotatable about an axis which is oblique with respect to said axis of the pump and forms an acute angle with said last-named axis with said two axes intersecting in said plane of the pressure members, and a support carrying said bearing roller and rotatable about said axis of the pump, said bearing roller having a tapered surface engageable with said pressure members which lies on the surface of a cone having an axis coinciding with the axis of said bearing roller, the cone having an obtuse apex angle at the intersection of said axes and said bearing roller being mounted in said support for rotation about its axis to bring it into selective contact with said pressure members, a lifting support for the pressure members to vary the delivery of the pump, a first extension of said support passing through the flexible wall against which the pressure members rest and a regulating spring biased against said extension, and a second extension opposite said first extension, a diaphragm connected to the end of said second extension, and a second spring biasing said extension in the direction of said regulating spring, said diaphragm defining two chambers one of which is adapted to communicate with the atmosphere and the other with a source of different pneumatic pressure.

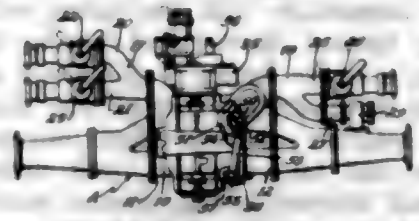
2,900,917
PNEUMATIC OIL PUMPING DEVICE
Roy L. Schlanger, Long Beach, Calif., assignor to The Garrett Corporation, Los Angeles, Calif., a corporation of California
Application May 22, 1956, Serial No. 586,599
10 Claims. (Cl. 103—47)

1. Fluid pumping apparatus comprising a casing defining a pump chamber with inlet and outlet ports; wall forming means disposed in said chamber for movement in intake and discharge strokes; fluid pressure responsive means having a power stroke and a return stroke; yieldable means coupling said fluid pressure responsive means to impart a yieldable force to said wall forming means during at least a portion of the power stroke to move it in said discharge stroke and provide for relative movement between said fluid pressure responsive means and said wall forming means; and valve means having a con-



nection with and actuated by said wall forming means at predetermined stages of movement thereof to control the operation of said fluid pressure responsive means.

2,900,918
ELECTRICALLY OPERATED TRANSFER VALVE FOR CENTRIFUGAL PUMP
David F. Thomas, West St. Paul, and Robert A. Hill, Minneapolis, Minn., assignors to Waterous Company, St. Paul, Minn., a corporation of Minnesota
Application June 4, 1956, Serial No. 589,320
9 Claims. (Cl. 103—106)

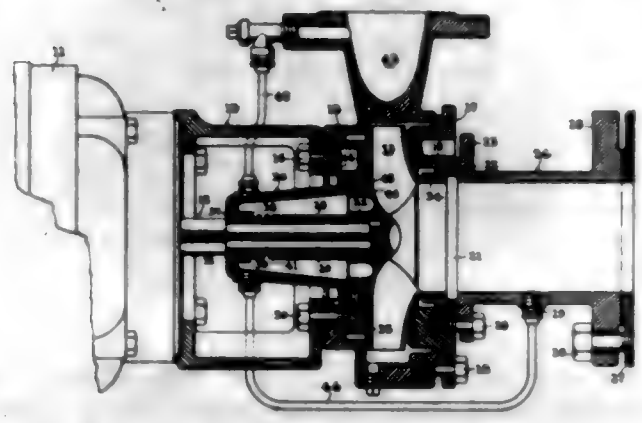


1. In combination with a two stage centrifugal pump constructed for parallel or series operation, a valve for controlling the flow of fluid through said pump, a valve shaft connected to, and rotatable with, said arm, a reversible electrically operable means for actuating said valve shaft for rotating said valve between predetermined limits, control means for controlling the operation of said electrically operable means, said control including a manually operable main switch, first and second electrically operable indicator means, first and second limit switches operable by said valve upon movement into its opposite extreme positions, each limit switch including a normally closed switch and a normally open switch, first and second relay coils, and first and second relay armatures actuated by said first and second relay coils, the control including a first circuit including a source of current supply, said main switch, said normally open switch of said first limit switch, and said first relay coil, a second circuit including said current supply, said main switch, said normally closed switch of said second limit switch, and said second relay coil, a third circuit including said current supply, said first indicator means, and said first normally open switch of said first limit switch, a fourth circuit including said power source, said main switch, said normally open switch of said second limit switch, and said second indicator means, said main switch being operable to selectively close said first and third circuits or said second and fourth circuits, said electrically operable means having forward and reverse operating means, a circuit including said power source, said forward operating means, and said first relay armature, and a circuit including said power source, said reverse operating means, and said second relay armature.

of said switch arming said fuze.

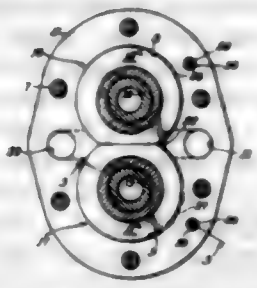
a fluid discharge conduit, means for selectively actuating said power take-off mechanism by said engine, a

2,900,919
SEAL ASSEMBLY FOR CENTRIFUGAL PUMPS
Gene W. Anderson, Aurora, and Willis Babcock, Sugar Grove, Ill., assignors to The New York Air Brake Company, a corporation of New Jersey
Application February 1, 1957, Serial No. 637,706
1 Claim. (Cl. 103—111)



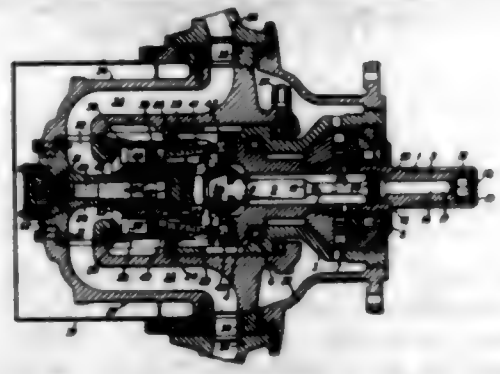
In a rotary impeller pump of the single inlet type including a casing, an overhung shaft extending into said housing, a first opening in a side wall of the casing encircling said shaft, a second opening larger than the other opening and formed in the opposite side wall of the casing, an impeller insertable through the second opening and fastened to the end of the shaft, and an external cover plate closing said second opening; the improvement which consists in a shoulder provided on said shaft and a seal assembly insertable as a unit through the second opening and comprising an adapter having means thereon for connection with the casing within the impeller cavity formed therein and closing the first side wall opening; a sleeve having a cylindrical outer surface slidable onto the overhung end of said shaft and confined against rotation and longitudinal movement between said impeller and said shoulder, said sleeve being encircled by said adapter; sealing means reacting between the sleeve and the adapter; an encircling sealing surface formed on the inner face of said adapter; and a complementary sealing surface formed on the impeller and forming a running fit with the last-mentioned surface of the adapter in the assembled pump.

2,900,920
METHOD OF ASSEMBLING PRESSURE LOADED GEAR PUMPS
James A. Compton, South Euclid, Ohio, assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Original application July 19, 1950, Serial No. 174,606, now Patent No. 2,748,454, dated June 5, 1956. Divided and this application August 1, 1955, Serial No. 528,495
6 Claims. (Cl. 103—126)



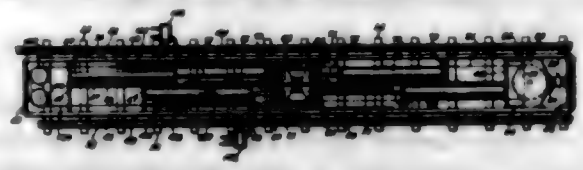
1. A pressure loaded type intermeshing gear pump including a pumping cavity and at least one set of pressure loadable bushings having outer peripheral surface means and being adapted to engage the gear side faces in sealing relation, and a plural section housing enclosing said pump, means defining a chamber behind said bushings, means defining passage means for connecting pressure generated by said pump to said chamber whereby said bushings in response to said pressure in said chamber are moved into engagement with said gear side faces to provide said sealing relation, said pressure loadable bushings being disposed in one of said housing sections, said one housing section being slightly off-centered with respect to the other housing section so that the outer peripheral surface means of said pressure loadable bushings are in contact with the walls of said cavity in the area of said inlet thereby providing an effective seal and reducing to a minimum leakage in this area.

2,900,921
HYDRAULIC PUMPS AND MOTORS
Peter H. Brown, Prestbury, England, assignor to Dowty Hydraulic Units Limited, and Oswald Thoma, both of Tewkesbury, England
Application February 25, 1957, Serial No. 641,989
Claims priority, application Great Britain February 27, 1956
7 Claims. (Cl. 103—162)



1. In a device of the character described, a rotatable cylinder block element, formed with a plurality of cylinders whose axes are substantially parallel to the axis of rotation, a rotatably driven thrust plate element, the block element and the thrust plate element being so disposed in operation that their rotational axes intersect in the plane of the latter, a piston reciprocable in each cylinder, a connecting rod extending between and articulated with respect to each piston and the thrust plate element, means independent of said connecting rods interconnecting the cylinder block element and the thrust plate element for conjoint and like rotation, said means including a first portion secured to one such element and a complemental second portion for connection to the other such element, said latter element being preliminarily shiftable angularly about its rotative axis relative to said second portion, and means operatively connected to one of the second portion and the second element, reacting from the other, and accessible after the two elements have been mounted in the device to lock the shiftable second element to its second portion, following any relative rotation of the two to align the connecting rods in planes which include the axis of rotation of the block element.

2,900,922
CAR ADVANCING AND RETARDING APPARATUS
Byron P. Edmonds, Alice, Tex.
Application April 4, 1955, Serial No. 498,850
8 Claims. (Cl. 104—162)



2. In apparatus for advancing or retarding cars along a path of movement: a car engaging barney arranged for longitudinal movement along said path; a barney advancing fluid motor for advancing said barney along said path; a barney retarding cylinder and piston assembly for

retainer, the corrugations being trapezoidal in cross sec- said primary and secondary shingles having parallel up-

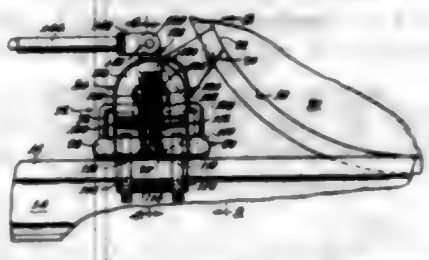
retarding advancing movement of said barney along said path by discharge of fluid from said cylinder; a conduit for discharge of fluid from said cylinder upon advancing movement of said barney along said path and valve means in said conduit responsive to reduction in fluid pressure in said fluid motor for throttling discharge of fluid through said conduit, whereby a reduction in fluid pressure in said fluid motor resulting from a tendency of the cars to advance said barney will actuate said valve means to cause said cylinder and piston assembly to retard advancing movement of said barney.

2,900,923
WHEEL RETAINER WITH SCREW ACTUATED CLAMPS

Stanley W. Hayes, Richmond, Ind., assignor to Hayes Track Appliance Company, Richmond, Ind., a corporation of Indiana

Original application January 3, 1952, Serial No. 264,703, now Patent No. 2,835,207, dated May 20, 1958. Divided and this application September 3, 1957, Serial No. 681,634

4 Claims. (Cl. 104—258)



1. A wheel retainer adapted to be mounted on a railway rail, comprising in combination, a wheel abutment providing frame structure adapted to be seated on top of a rail head and including a pair of upstanding spaced parallel vertically slotted plates and means forming fulcrum surfaces at both sides of the outer faces of said plates and spaced therefrom and in a plane immediately below the lower ends of the plate slots, and a frame part positioned between and secured to said plates at their lower ends and below said plate slots; movable clamping elements at either side of said plates with a clamping element between one place and one of said fulcrum surfaces and another clamping element between said other plate and the other of said fulcrum surfaces, said clamping elements each having an aperture therein, a part engaging beneath the rail head, and an outwardly and downwardly extending cam surface engaging the adjacent fulcrum surface; a shaft extending transversely through said plate slots and said clamping element apertures and being movable vertically in said slots to move said clamping elements into and out of clamping position; a screw threaded through said shaft in the plane of vertical movement of said shaft and acting against said part of said frame and bearing means carried by said screw to position said screw between said plates for rotation about a vertical axis, whereby when said screw is rotated in one direction said shaft is raised to move said clamping elements into clamping position below the rail head and to simultaneously clamp said frame structure against the top of the rail head and when said screw is rotated in the opposite direction said shaft is lowered to release said clamping elements from clamping position.

2,900,924
VEHICLE TRUCK

John R. Farrer, Bronxville, and Gerd Ranken, Cold Spring, N.Y., assignors to ACF Industries, Incorporated, New York, N.Y., a corporation of New Jersey

Application June 13, 1956, Serial No. 591,095
21 Claims. (Cl. 105—199)

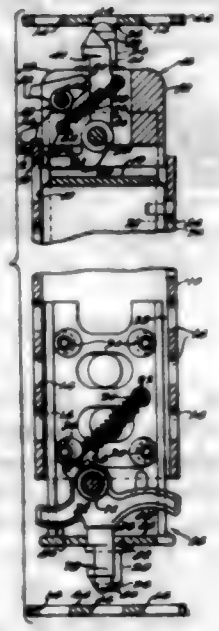
1. A vehicle body supporting truck comprising a wheel and axle assembly, spaced side frames mounted by journal bearings at each end of said assembly, hollow end pieces connecting corresponding ends of said side frames and forming therewith a truck frame, said end pieces having closed ends to provide pneumatic reservoirs, pneumatic spring means including a vertically yieldable chamber supported by each of said side frames, each of said

yieldable chambers having a rigid chamber mounted thereon and in communication therewith, conduit means effecting communication between each respective end piece and one of said yieldable chambers, and hanger means pivotally mounted on said rigid chamber for supporting the vehicle body structure therefrom.

2,900,925
FREIGHT SECURING BAR

Henry L. Dunlap, Dearborn, Mich., assignor to Evans Products Company (Delaware)

Application January 7, 1955, Serial No. 480,549
9 Claims. (Cl. 105—369)

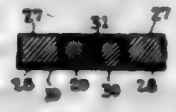


1. In a freight securing bar, an elongated body, a fitting telescopically mounted on one end of the body, a fixed pin secured to the fitting and projecting outwardly therefrom, a movable pin secured to the fitting and projecting outwardly therefrom, said pins being capable of extending simultaneously in openings in a support member for the bar, one of said pins having a locking surface thereon for locking the bar to such support member, movable actuator means secured to the fitting for moving the movable pin, and means connected to said body operatively engageable with said actuator means to operate said actuator means upon relative telescopic movement of the body and fitting and thereby cause said actuator means to move said movable pin.

2,900,926
LINER FOR CARGO SPACER

David Sanborn Neuhart, Omaha, Nebr.

Application November 10, 1955, Serial No. 546,949
1 Claim. (Cl. 105—423)



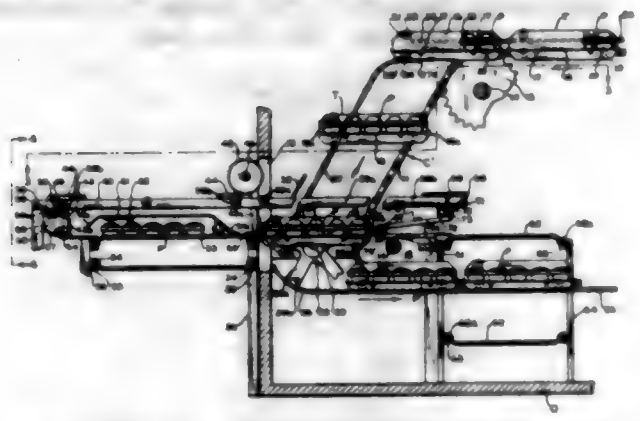
In a liner, for attachment to the walls of a transport vehicle, of the type including a corrugated sheet metal

ing said pump, means defining a chamber behind said bushings, means defining passage means for connecting

vancing fluid motor for advancing said barney along said path; a barney retarding cylinder and piston assembly for

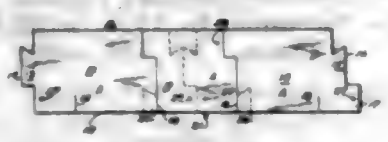
retainer, the corrugations being trapezoidal in cross section, the improvement in which the corrugations exposed toward the interior of the vehicle have a short base which is the open face of the corrugation and is of a length at least half that of the long base; a laterally insertable filler filling at least one of said corrugations and comprising two pieces of trapezoidal form, one of the non-parallel sides of each piece abutting a corresponding non-parallel side of the other, the abutting non-parallel sides defining an acute angle with the base of the corrugation in said retainer at least as small as the one defined between said base and one of the sides of said corrugation, said pieces each having a long base of a length less than the length of the short base of the corrugation; and means to hold said pieces in the defined abutting relation.

2,900,927
BREAD HANDLING APPARATUS
Eugene O. Engels and John A. Dersch, Saginaw, Mich., assignors to Baker Perkins, Inc., Saginaw, Mich.
Application March 17, 1955, Serial No. 495,012
25 Claims. (Cl. 107—57)



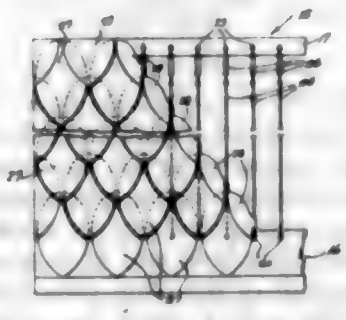
25. In combination with a conveyor in an oven or the like; a loading surface for supporting the articles to be loaded; an unloading surface spaced therefrom for receiving unloaded articles; said conveyor including a run extending vertically down between said surfaces and carrying spaced trays for supporting articles thereon; means for supporting a loading element and an unloading element outward of the path of said trays at the side thereof remote from said unloading surface with the loading element on one side of the loading surface and the unloading element on the other; and means for moving said means supporting the loading element and the unloading element in a path across said loading surface into the path of travel of said trays to move an article from a tray substantially aligned with said loading surface to said unloading surface with said unloading element while moving an article from said loading surface to said tray with said loading element.

2,900,928
ROOFING OF DUAL-FORM SHINGLES
Herbert Abraham, New York, N.Y., assignor to The Ruberoid Co., New York, N.Y., a corporation of New Jersey
Application June 27, 1955, Serial No. 518,315
2 Claims. (Cl. 108—7)



1. A roofing of dual-form shingles laid in overlapping courses, each course being formed of a plurality of primary and secondary shingles, the primary shingles being all of the same form applied side by side in abuttal, both said primary and secondary shingles having parallel upper and lower edges, a portion of the lower edges of both the primary and secondary shingles forming a butt edge adapted to be exposed when said shingles are laid on a roof, each primary shingle having a pair of slits extending upwardly from its lower edge, said pair of slits being located at the opposite sides of and defining the exposed butt edge of said primary shingle, the secondary shingles cooperating with but being shorter and of different form from the primary shingles, said secondary shingles being superposed upon and covering the region of the joint between each pair of primary shingles, said secondary shingles each having a locking tab at the bottom of each side edge, said locking tabs extending through the proximate slits of the pair of primary shingles, the joint between which is covered by said secondary shingles and lying, respectively, beneath the exposed butt portions of said pair of primary shingles, the distance between the locking tabs of the secondary shingles being substantially equal to the distance between the slits of the primary shingles, the exposed butt edge portions of the secondary shingles in each course being in alignment with the exposed butt edge portions of the primary shingles.

2,900,929
ROOF CONSTRUCTION
Carl W. Adelt, Mays Landing, N.J.
Application August 6, 1954, Serial No. 448,240
2 Claims. (Cl. 108—17)



1. A roof construction comprising a substructure including a pair of members arranged in longitudinal spaced relation, and a plurality of spaced flexible elements extending transversely of said members and each element having one end fixedly connected to one of said members and having the other end adjustably connected to the other of said members, a plurality of shingles in the form of decking superimposed upon said structure, said shingles being arranged in staggered relationship, each of said shingles being provided on opposite side edges with wire attaching means slidably connected to corresponding flexible elements, and additional fastening elements connected to opposed wire attaching means of each shingle and slidably connected to an intermediate flexible element whereby each shingle is connected to three flexible elements, said shingles being provided with stop means abutting the next lower shingle to position the shingles in predetermined relationship.

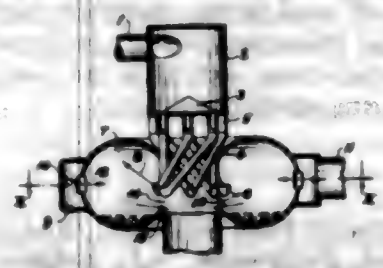
2,900,930
COMBUSTION SYSTEM FOR AN INTENSIFIED BURNING OF SOLID, LIQUID OR GASEOUS FUELS IN AN ANNULAR COMBUSTION SPACE
Josef Cermak, Prague, Czechoslovakia
Application August 2, 1957, Serial No. 675,838
Claims priority, application Czechoslovakia August 11, 1956
5 Claims. (Cl. 110—28)

1. A combustion apparatus comprising an annular shell arranged with its axis extending substantially vertically and having a generally C-shaped cross section opening radially inward toward said axis and defining a combustion space, said shell having an opening at the center of the bottom thereof for the downward discharge there-

a folded length of material spaced inwardly of the side

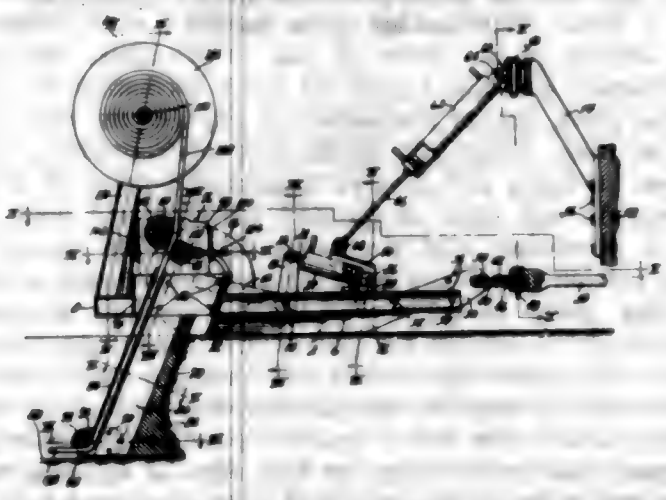
said machine, and an upstanding spring finger having the

through of products of combustion from said combustion space, means for supplying a mixture of primary air and fuel to said combustion space including a series of inlet nozzles arranged approximately in a circle adjacent said vertical axis of the annular shell and opening into the



latter in directions that slant upwardly and are approximately tangential to said circle in which the nozzles are arranged, and means for supplying secondary air to said combustion space including a series of inlet orifices distributed along the outer periphery of said annular shell and opening into said combustion space.

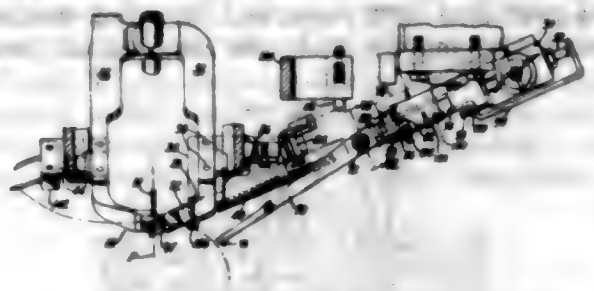
2,900,931
CABLE-LAYING PLOW
Henry L. Lisle, Lamar, Mo., assignor to Frank Horton, doing business as Frank Horton & Company, Lamar, Mo.
Application September 7, 1955, Serial No. 532,892
2 Claims. (Cl. 111—5)



1. A cable-laying plow comprising a frame, means for attaching said frame to a tractor to be towed over the ground, said attaching means comprising a universal connection including a vertically disposed pivot pin, whereby to permit pivotal movement of said frame in horizontal and vertical planes, a bracket adapted to be affixed to said tractor, a single double-acting power member, universal connecting means securing one end of said power member to said bracket and including a pivot pin coaxial with said vertically disposed pin, pivot means connecting the other end of said power member to the frame, whereby said power member is thus adapted to support an axial compressive force and said frame may be selectively raised or lowered, a blade fixed in said frame and extending downwardly therefrom whereby to cut a trench in the ground, means carried by said frame for supporting a reel of cable to be laid, and guide means carried by said blade for guiding cable from said reel downwardly along the trailing edge of said blade and depositing it in said trench.

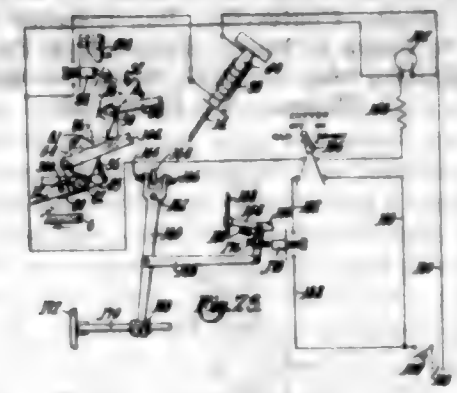
2,900,932
SHOE MACHINES
George Pickford and Ralph Ward, Beverly, Mass., assignors to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Application January 13, 1956, Serial No. 558,965
12 Claims. (Cl. 112—44)

1. In a shoe machine for fastening the projecting marginal portions of lasted stitchdown uppers and soles, attaching and feeding devices including a work support and a presser foot and acting progressively along the marginal portions of the uppers and soles while presented in sole uppermost position, a guide for directing the movement of a welt toward an upper within a crevice formed by the projecting and bulging last supported portions of the upper and a sole at the point of attach-



ment with the upper, a welt severing knife spaced from the point of attachment nad movable transversely of the guide, and means for actuating the knife comprising a feeler finger adapted to be pressed in a substantially horizontal direction against the bulging last supported portion only of the upper into a position to be actuated by the leading end of the welt first attached to the shoe as the shoe is fed by the feeding devices.

2,900,933
SHOE MACHINES
James P. Carter, Beverly, Mass., assignor to United Shoe Machinery Corporation, Flemington, N.J., a corporation of New Jersey
Application January 13, 1956, Serial No. 558,933
25 Claims. (Cl. 112—46)



1. A shoe machine for attaching a welt to a last supported shoe upper and a sole member, said machine having attaching, feeding and guiding devices for the shoe parts, and a welt severing knife mounted for movement toward and from the welt as it passes through its guiding device at a point in advance of the attaching devices, in combination with means for actuating the knife comprising a feeler mounted for yielding movement during sewing operations toward a bulging last support portion of the upper to engage the leading end of the welt already attached to the shoe at a point backed by the bulging upper and to be actuated away from the bulging upper by the leading welt end as it approaches the attaching devices.

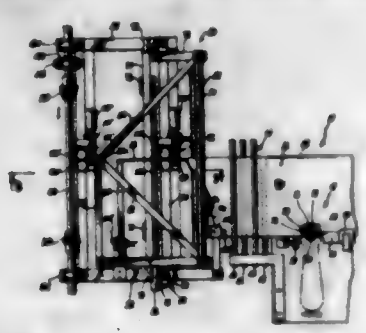
2,900,934
COMBINATION MATERIAL DOUBLER AND SEAM OPENER
David N. Judelson, New York, N.Y.
Application April 20, 1955, Serial No. 502,620
11 Claims. (Cl. 112—63)

1. In combination with a sewing machine including a needle movable through a stitch forming stroke and a feed dog movable through a feed stroke, said needle being operative along a predetermined path to form a seam in

mary and secondary shingles, the primary shingles being all of the same form applied side by side in abuttal, both

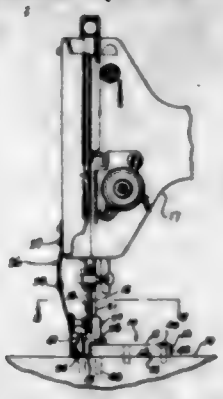
tion space, said shell having an opening at the center of the bottom thereof for the downward discharge there-

a folded length of material spaced inwardly of the side edges thereof, and doubling means in advance of said sewing machine for delivering said material to said sewing machine folded about a longitudinal median line with the opposite side edges in substantial registry and along a reference line which is fixed in relation to said predetermined path, said doubling means including a first doubling member extending at right angles to said predetermined path in a first plane and including one end terminating substantially along the longitudinal center line



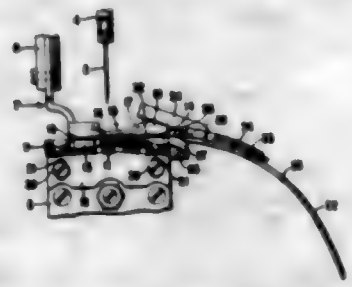
of said doubling means, second and third angularly disposed doubling members disposed in a second plane substantially parallel to said first plane and arranged symmetrically of said center line, said second and third doubling members meeting at an apex at said one end of said first doubling member and having material-turning edges at right angles to each other, and a fourth doubling member disposed substantially in said first plane and having a material-turning edge lying substantially along said center line.

2,900,935
EYE-SHANK BUTTON HOLDER ATTACHMENT
Charles L. Byers, Coatesville, Pa., assignor of one-half to Floyd R. Blume, Parkesburg, Pa.
Application May 31, 1957, Serial No. 662,847
3 Claims. (Cl. 112—169)



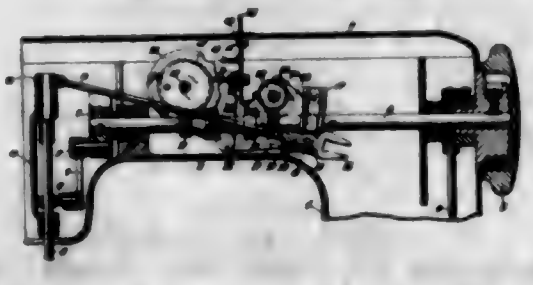
1. An eye-shank button holder attachment comprising a block member having spaced sides, a flat top, a flat bottom, a front and a rear end, adapted to be positioned so that the front end is in the path of travel of a needle of a sewing machine of the zigzag stitch forming vibrating needle type with the bottom adapted to rest upon a workpiece supporting bed of said machine, said block member having a slot extending inwardly from said front end between the sides from the top to the bottom and terminating at a point spaced from the rear end of said member, there being a portion of said block member cut away inwardly of said front end on each side of said slot between the sides of said member from the top to a point spaced from the bottom of said member to provide a channel for the reception of the eye-shank of an eye-shank button, an upstanding retaining element adapted to be positioned forwardly of the front end of said block member, said element having an aperture extending therethrough for extension therethrough of the portion of the eye-shank adjacent the button, means on said element for detachably securing same to a presser foot bar of said machine, and an upstanding spring finger having the upper end adapted to be secured to a head of said sewing machine and having the lower end adapted to bear against the button of an eye-shank button when the eye-shank of said button is supported in the aperture of said element and channel of said block member, said finger being jointed with the lower end portion being swingable about the joint to a position such that the lower end is away from the bearing-against position.

2,900,936
FITTINGS FOR SEWING MACHINES
Orland B. Reid, Kenilworth, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Application December 5, 1955, Serial No. 550,953
3 Claims. (Cl. 112—147)



2. In a sewing machine having a work support including a throat plate and an apron having a work supporting surface in the plane of said throat plate, stitching mechanism defining a point of stitch formation on said throat plate, presser mechanism in engagement with said throat plate about said point of stitch formation, said apron having a slot directed toward said point of stitch formation and open at the end adjacent said point of stitch formation, said slot being designed to receive a side portion of a work piece disposed upon said apron, folding guide means comprising an element arranged astride of the slot on the side of said apron opposite to said work supporting surface and having a work folding groove for folding the side portion of a work piece disposed in said slot into a position parallel to said work support and for infolding the free edge of the side portion, means for guiding the work piece from said folding guide means to the point of stitch formation, and an auxiliary presser mechanism having a spring-biased presser foot arranged to engage resiliently the work supporting surface of said apron over said slot for holding the work on said apron with the side portion in said slot.

2,900,937
SEWING MACHINES
Fritz Gegauf, Steckborn, Switzerland, assignor to Fritz Gegauf Aktiengesellschaft Bernina-Nähmaschinenfabrik, Steckborn, Switzerland
Application June 18, 1954, Serial No. 435,832
Claims priority, application Switzerland June 18, 1953
16 Claims. (Cl. 112—158)



14. A sewing machine comprising a frame, a needle bar pivotally carried by said frame and mounted for endwise reciprocation and for lateral swinging movements, a drive shaft, connecting means connecting said needle bar and said frame in operative relation to said drive shaft to impart to said needle bar movements for producing zig-

plate disposed over the loop-taker and formed with a

a shirring shoe pivotally carried by said pivot pin, said

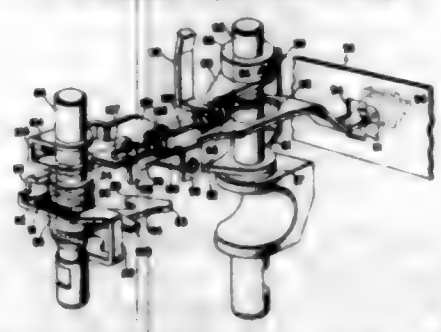
zag stitches and ornamental stitches, operable means adjacent said drive shaft for moving said connecting means to cause zig-zag stitches and ornamental stitches, said operable means including a swingable guide lever having a member attached to said connecting means, an axle supporting said guide lever, said operable means further including first means and second means in driving engagement with said drive shaft, a fork loosely seated on said axle and actuated by said first means to impart swinging movement to said fork, said guide lever being coupled through a manual lever operated coupling means mounted on said axle with said fork oscillating said connecting means for producing zig-zag stitches, said second means including a plurality of driven cam disc means, a transmission lever provided with a slot, and feeler means cooperable with a predetermined cam disc means upon displacement of said manual lever in an opposite direction to bring said coupling means into registry with said slot of said transmission lever and to transmit movements from said predetermined cam disc means through said guide lever to said connecting means for producing said ornamental stitches.

2,900,938

ORNAMENTAL STITCH SEWING MACHINES

Ralph E. Johnson, Mountainside, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Application January 7, 1958, Serial No. 707,492
4 Claims. (Cl. 112—158)



1. A control mechanism for an ornamental stitch sewing machine having a hollow frame and a member in said frame to be controlled by said mechanism, comprising, a post fixed within said frame and provided with a plurality of transverse slots, an elongated lever disposed within said frame transversely of the longitudinal axis of the post with a handle carried on its one end and extending outside the confines of said frame and a bar carried on its other end for engagement in a selected one of the post slots, a spring connecting said frame and said lever and biasing said lever endwise of itself whereby said bar will be maintained within a selected one of said post slots, means carried by said frame and an intermediate portion of said lever enabling said lever to be manually shifted lengthwise of itself and to be oscillated about an axis disposed transversely of the lever whereby the bar may be shifted into engagement with any one of the post slots, means connecting the bar-carrying end of the lever with the member to be controlled whereby the member may be actuated in response to shifting of the bar from one slot to another, and means carried by the frame for releasably locking the handle-carrying end of the lever in a selected one of a plurality of predetermined positions.

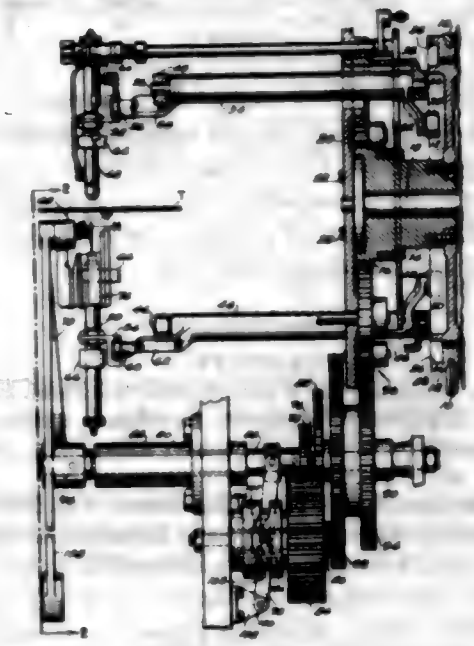
2,900,939

SEWING MACHINE LOOPER MECHANISM

Carl W. Johnson, Brooklyn, N.Y., assignor to American Machine & Foundry Company, a corporation of New Jersey

Application May 7, 1956, Serial No. 583,027
8 Claims. (Cl. 112—171)

1. In a sewing machine, the combination with a needle and opposed upper and lower needle bars, of means for alternately connecting said needle with said bars and projecting said needle with a thread having a fixed end and a loose end through work to be stitched, a drum located adjacent said lower needle bar, a thread puller device cooperating with said drum to pull the loose end of said thread through the work and lay it on said drum, driving means for operating said needle bars in a predetermined normal cyclical rate of speed, and mechanism for driving said shaft for moving said thread puller relative to said drum for at least a part of its travel along said drum at a speed greater than said normal cyclical operation of said driving means, whereby said loose end of said thread is pulled rapidly through said work and disposed on said drum, said mechanism including a shaft mounting said thread puller for rotary movement, an



actuating arm attached to said shaft, a link having one end connected to said actuating arm, a second link having one end connected to the other end of said first-named link, a crank arm loosely mounted on said shaft, with the free end of said crank arm connected to the other end of said second-named link, a cam follower mounted on said second-named link, a cam having a track engaged by said cam follower, and means for driving said crank arm, whereby in response to the operation of said mechanism said thread puller is moved slowly to a point of engagement with a loop of thread adjacent said lower needle bar and then moved with a highly accelerated movement to a point substantially 180° from said point of engagement with said loop to rapidly pull a relatively long length of thread through said work.

2,900,940

SEWING MACHINES WITH BOBBIN THREAD CONTROLLING MEANS

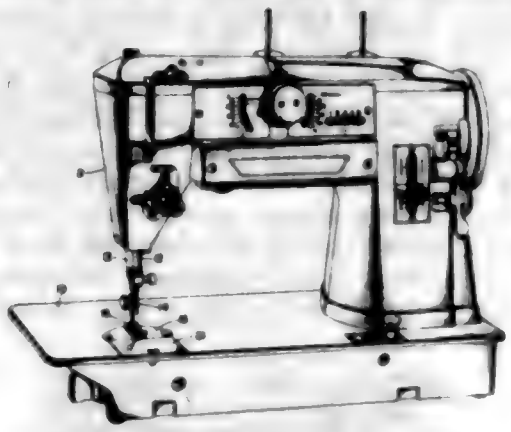
Ralph E. Johnson, Mountainside, N.J., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey

Original application November 29, 1954, Serial No. 471,766, now Patent No. 2,862,468, dated December 2, 1958. Divided and this application December 12, 1956, Serial No. 627,878
4 Claims. (Cl. 112—184)

1. In a sewing machine, the combination of a curved loop-taker having an interior loop-seizing hook continuously rotatable about an upright axis, a thread case for an interlocking bobbin-thread supported within the loop-taker, a holder for restraining the case from rotating with the loop-taker, work-feeding means for normally advancing the work along a straight-line horizontal path, an endwise reciprocable needle arranged to descend inside of the circular path of movement of the loop-seizing hook at a location rearwardly of the loop-taker axis with reference to the direction of normal work-feed, a throat-

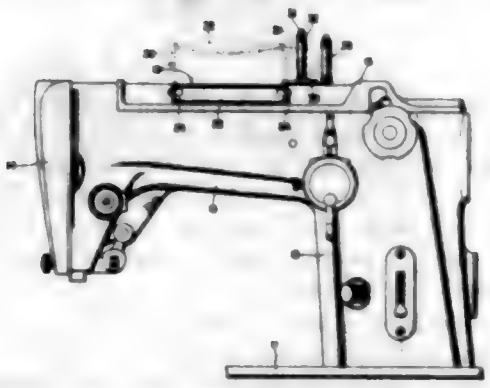
for detachably securing same to a presser foot bar of to impart to said needle bar movements for producing zig-

plate disposed over the loop-taker and formed with a needle-receiving aperture whereby a horizontal line intersecting the center of the needle-receiving aperture and the loop-taker axis will be disposed in parallelism with



the direction of feed, and a bobbin-thread detaining shoulder formed on the bottom surface of the throat-plate in front of the needle-receiving aperture with reference to the direction of normal work-feed and between the aperture and the loop-taker axis.

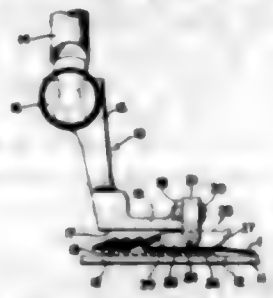
2,900,941
SPOOL HOLDERS FOR SEWING MACHINES
John Platt, Dalmuir, Glasgow, Scotland, assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Application April 12, 1956, Serial No. 577,719
Claims priority, application Great Britain March 19, 1956
4 Claims. (Cl. 112—218)



1. In a sewing machine having a frame, a carrying handle, means for pivoting said carrying handle to said sewing machine frame for turning movement from an upright operative position to an inoperative position against said sewing machine frame, a spool holder including a spool supporting pin, and means for fixing said spool supporting pin on said handle in an upright position when said handle is turned to said inoperative position.

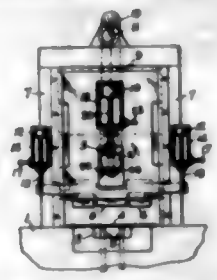
2,900,942
SHIRRING PRESSER FOOT
Walter J. Mendles, Bridgeport, Conn., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Application August 31, 1956, Serial No. 607,381
1 Claim. (Cl. 112—235)

A sewing machine shirring presser foot comprising a shank adapted at its upper end for attachment to the lower end of a sewing machine presser bar, a heel plate projecting from the lower end of said shank, said heel plate having an upstanding toe on its free end and said heel plate at a location between said shank and said toe being provided with a needle receiving aperture, a horizontally extending stud projecting from the front end of said toe, a yoke pivotally carried by said stud for rocking movement thereabout, a pair of spaced arms depending from said yoke and thereby forming a bifurcated lower end on said yoke, a pivot pin carried by said spaced arms, a shirring shoe pivotally carried by said pivot pin, said shoe having a toe portion extending forwardly of said pivot pin and said shoe having a heel portion extending rearwardly of said pivot pin, said heel portion being dis-



posed below said heel plate and being provided at its rearward end with a vertically extending groove, said groove being aligned with a portion of the needle receiving aperture formed in said heel plate.

2,900,943
CUSHIONING MEANS FOR DOUBLE ACTION PRESSES
Julius B. Tiedemann, Milwaukee, Wis., assignor to A. O. Smith Corporation, Milwaukee, Wis., a corporation of New York
Application October 19, 1953, Serial No. 386,892
5 Claims. (Cl. 113—45)



1. An assembly for attachment to a vertically driven ram of a single action press to convert the same into a double action press, comprising means to drive said ram, a die carrying member to be rigidly attached to the press ram, a die member extending downwardly from the die carrying member and being disposed to cooperate with a die cavity in the press bed to form a blank disposed on the press bed to the shape of the cavity as said ram is moved downwardly relative to the press bed, a blank holder disposed to each side of the die member for engaging and holding the blank during the forming of same, guide means disposed between said blank holder and said die carrying member to prevent relative horizontal movement therebetween, a hold-down pressure cylinder mounted on the die carrying member, a piston operatively disposed within the hold-down cylinder, a rod extending downwardly from the piston through the die carrying member and provided with a vertically extending slot in the lower end thereof, abutment means provided on said blank holder and disposed within said slot and normally engaging the upper end of the slot, fluid pressure means acting on said piston to normally maintain the blank holder and die member in fixed relation and exerting a downward force on the blank holder as the die member is moved relatively thereto after the blank holder engages the blank, and biasing means constantly exerting an upward force on said blank holder of lesser magnitude than the downward force of said pressure means but great enough to accelerate the blank holder upwardly independently of the driven ram after the downward force of the piston on the blank holder is removed, said slot in the piston rod permitting a momentary disengagement between the abutment means on the blank holder and the upper end of the slot until the force exerted by said biasing means has had adequate time to accelerate the blank holder upwardly to effect a reengagement between the abutment means and the upper end of the slot with minimum impact.

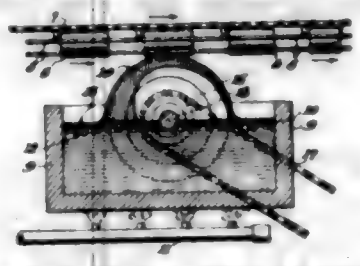
end of the drive housing and supported solely thereby, tially parallel surfaces, said panel being formed with a

2,900,944

METHOD OF AND APPARATUS FOR APPLYING BONDING SOLDER TO CAN BODY SIDE SEAMS

Willard B. Eastman, La Grange, and Philip F. Catalano, Chicago, Ill., assignors to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Application October 17, 1955, Serial No. 540,686
11 Claims. (Cl. 113—60)



1. The herein described method of applying solder to can body side seams which comprises rotating in a vertical longitudinal plane and in a molten solder bath a body presenting a smooth continuous and narrow surface of rotation, said rotation being at such a speed as to present a thick film of the molten solder at the periphery of said surface, and moving a can body in the direction of its axis and with said axis in said vertical plane of said rotation and in such position as to present the can body seam entrance in tangential relation to said surface of rotation and in contact with said film but out of contact with said surface.

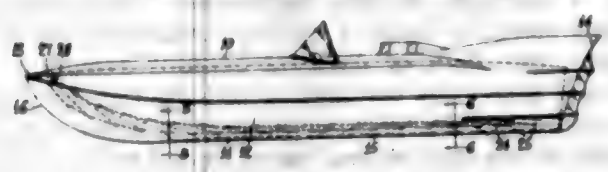
6. In apparatus of the character described, the combination of means for feeding can bodies in the direction of their axes and in processional order with their side seams aligned one with another, and means for applying seam bonding solder in a narrow line along the entrance into each travelling side seam, said last named means comprising a solder pot having a bath of molten solder therein, a solder applying rotor uprightly disposed in the bath and having a smooth continuous periphery projecting above the bath into closely spaced but out-of-contact relation to the can body seams passing thereover, and means for rotating the rotor at a speed for presenting by centrifugal force a thick film of molten solder for contact with the passing side seams along the entrances thereinto.

2,900,945

SPEED BOAT HULLS

Henry Donald Canazzi, Buffalo, N.Y.

Application February 13, 1957, Serial No. 640,828
8 Claims. (Cl. 114—66.5)



1. In a rectangularly shaped planing type of speed boat hull; a pair of substantially vertical and parallel outer side walls each formed with a straight bottom edge for a major portion of its length and a forwardly and upwardly curved portion forwardly thereof; a pair of substantially flat bottom planing surfaces each formed contiguous to the straight bottom edge of one side wall, said planing surfaces being relatively narrow with respect to the width of the hull for a minor portion of its length from its stern forwardly, and thereafter being of progressively reduced width to merge with its side wall substantially at the juncture of its straight and curved portions; and a curved central bottom wall extending from the stern to the bow of the hull and extending transversely between and adjoining the inner sides of the planing surfaces and the curved side portions, said wall being progressively curved longitudinally and progressively arched transversely and being progressively offset upwardly above the inner sides of the planing surfaces from the stern forwardly and combining with the inner sides of the planing surfaces and the curved portions of the side walls in forming a central tunnel and a bow stem at each side of its enlarged bow end, said tunnel being of a predetermined shape, area and volume to receive and rearwardly direct therethrough substantially all of the water and air displaced by and during forward motion of the hull, whereby during forward motion of the hull displaced water and air enter the bow end of the tunnel and continuously act on the bottom surface of the wall to continuously convert their energies into predetermined lifting effects on the hull, thereby causing the hull to attain and maintain more speed from a given amount of power.

2,900,946

BOAT FENDER

Dunaway H. Walker, Baltimore, Md.

Application February 21, 1957, Serial No. 641,652
4 Claims. (Cl. 114—220)

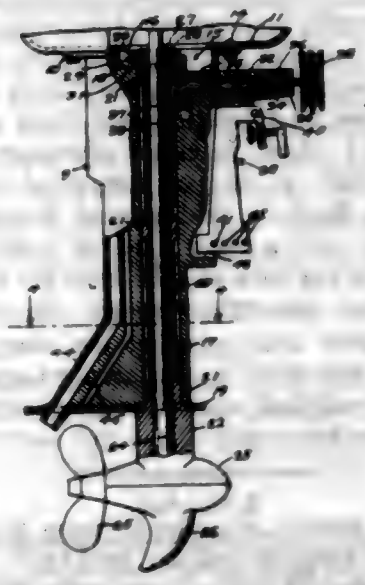
1. A fender for watercraft comprising, in combination, a single center bumper element and a pair of side bumper elements normally positioned outwardly from the center bumper in spaced relationship, a supporting frame for the center bumper element, foldable arms carried on the frame at each side of the center bumper for supporting on their outer ends the two side bumpers, tensioning means carried by the frame for normally holding the foldable arms in extended position to position the side bumper elements outwardly from the center bumper whereby, the arms will fold to allow the outer bumpers to move inwardly and contact the center roll when a predetermined pressure has been exerted against the two outer bumper elements.

2,900,947

OUTBOARD MOTOR WITH INDEPENDENT STEERING UNIT

Charles R. Cotal, Paradise, Calif.

Application September 27, 1957, Serial No. 686,608
3 Claims. (Cl. 115—18)

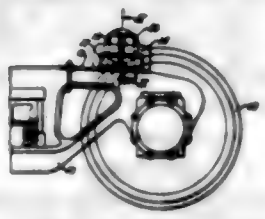


1. An outboard motor comprising a single casting constituting a drive housing, a transom clamp rigidly connected to an upper and forward part of said drive housing, said drive housing having a recessed upper end, a power head including a casing mounted on said upper

from said yoke and thereby forming a bifurcated lower end on said yoke, a pivot pin carried by said spaced arms, the abutment means and the upper end of the slot with minimum impact.

end of the drive housing and supported solely thereby, means detachably fastening the power head casing rigidly to the drive housing, said drive housing having a bore extending longitudinally and substantially vertically therethrough, a sleeve extending longitudinally through and journaled in said bore, an elongated gear casing connected to and supported by said sleeve beneath and spaced from the lower end of the drive housing, the axis of said gear casing being disposed at an angle to the axes of the sleeve and drive housing, a propeller, means forming a driving connection between the propeller and the power head and supporting the propeller for rotation beyond an end of said gear casing, said last mentioned means including a drive shaft extending longitudinally through said sleeve and having a lower end extending into the gear case and an upper end extending into the power head casing, said drive housing having a second bore in the upper portion thereof having one end opening forwardly from the drive housing and an opposite end opening into a portion of said recess, said last mentioned bore being disposed at an angle to the first mentioned drive housing bore, a steering shaft extending through and journaled in the last mentioned bore and having a rear end extending into said recess and a forward end projecting forwardly from said second bore, steering means connected to the forward end of said steering shaft, and meshing bevel gears turnably disposed in said drive housing recess for connecting the steering shaft and sleeve, one of said gears being keyed to the steering shaft and the other gear being fixed to said sleeve whereby turning of the steering shaft will turn the sleeve and gear case for swinging the propeller about the axis of the sleeve for causing the propeller to steer or drive in either a forward or a reverse direction.

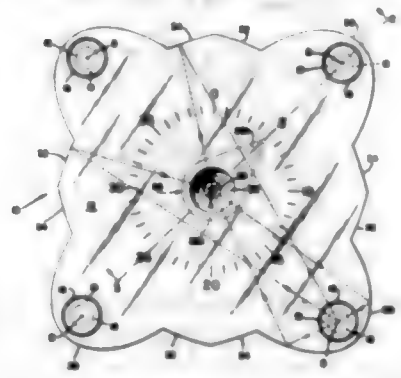
2,900,948
WARNING SIGNAL FOR RAIL CAR
Michael S. Krynak, Parkville, Minn.
Application May 13, 1957, Serial No. 658,728
2 Claims. (Cl. 116—60)



1. The combination, with a vehicle which includes a frame and a wheel journaled to said frame, of a bell and an actuating mechanism for said bell, said actuating mechanism comprising a second frame fixed to said first named frame, a shaft, means journaling said shaft on said second frame, a wheel on said shaft engaging said first named wheel and rotating said shaft on rotation of said first named wheel in either direction, a lever pivoted to said shaft, a clanger supported by said lever, said bell being fixed to said second frame in the path of said clanger, and a lifter fixed to said shaft and including means in the path of said lever for abutting either side of the lever depending on the direction of wheel and shaft rotation and swinging the clanger and lever over the top of the shaft as the latter rotates so that said clanger strikes said bell under the force of gravity when the vehicle is moving slowly.

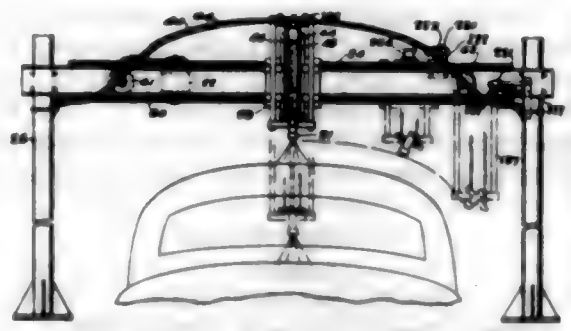
2,900,949
ELLIPTICAL REFLECTOR FOR INSTRUMENT DIALS
Stephen D. Baker, Annapolis, Md.
Application October 4, 1956, Serial No. 614,836
13 Claims. (Cl. 116—129)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An illuminated device comprising a panel of light-transmitting material having two smooth plane substantially parallel surfaces, said panel being formed with a first aperture therein normal to said surfaces and spaced from the edges of the panel, a second aperture formed in said panel and spaced inwardly of said first aperture, said second aperture being bound by a beveled surface, a light source in said first aperture, an edge of said panel



at least partly surrounding said first aperture being convex and having thereon a light-reflecting surface having one focus thereof at said first aperture and a second focus at the center of said second aperture, whereby light from said source is reflected by said convex surface and converged on the beveled surface of said second aperture.

2,900,950
AUTOMATIC COATING APPARATUS
Donald J. Peeps, Rossford, Ohio, assignor to The De Vilbiss Company, Toledo, Ohio, a corporation of Ohio
Application May 31, 1956, Serial No. 588,489
16 Claims. (Cl. 118—2)



1. In an apparatus of the type described a horizontal track, a carriage, driving mechanism reciprocating the carriage upon the track, a spray gun reciprocated with the carriage, two bars of different contour extending along the track above the carriage, a rocking link between the bars and generally parallel thereto, a roller supporting one end of the link on one bar, a second roller supporting the other end of the link on the other bar, a vertically slidable connecting means carried by the carriage depending from the center of the link, the spray gun being supported upon the lower end of the connecting means, whereby the spray gun in addition to its reciprocation with the carriage is moved vertically by the connecting means according to changing elevation of the center of the link as the rollers on the ends of the link follow the contours of the two bars.

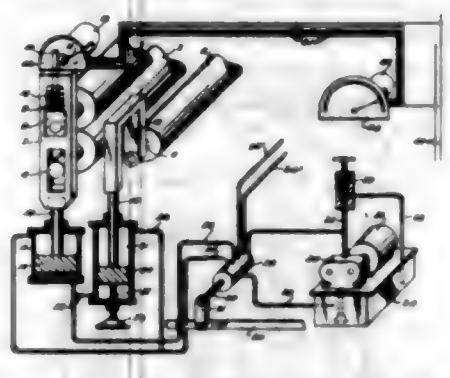
2,900,951
MACHINES FOR TREATING SHEET MATERIAL
Hans Kabelitz, M.-Gladbach, Rhineland, Germany, assignor to Firma Gebruder Socker G.m.b.H., M.-Gladbach, Rhineland, Germany
Application February 7, 1955, Serial No. 486,653
9 Claims. (Cl. 118—122)

1. In a machine for treating sheet material, in combination, a stationary pressure roller; a movable pressure roller parallel to said stationary roller; a pair of

endless conveyor having an upper reach normally travel-

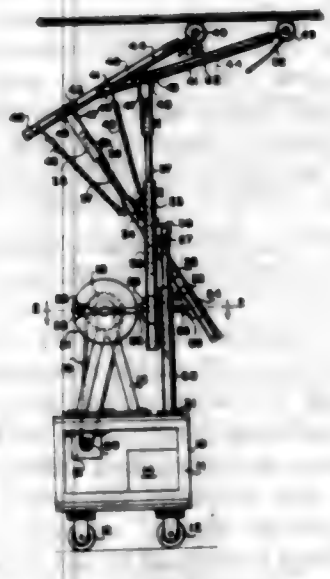
one of said legs, and a washable cover operatively at-

journals coaxial with and respectively fixed to opposite ends of said movable roller; a pair of frame members respectively located in planes normal to the axes of said rollers and respectively formed with elongated slots into which said journals respectively extend; a pair of bearings respectively supporting said journals for turning movement and respectively located in said slots in slidable engagement with said frame members for movement along said slots; a pair of springs respectively located in said slots and engaging said frame members and



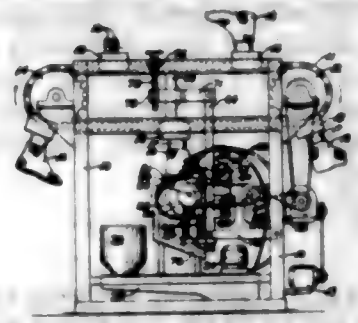
bearings for urging the latter and said movable roller therewith toward said stationary roller; first moving means operatively connected to said frame members for simultaneously moving the same at the same speeds and directions respectively along paths perpendicular to the axes of said rollers; an immersion roller parallel to said pressure rollers; and second moving means connected to said first moving means to be operated thereby and connected to said immersion roller for moving the latter when said movable pressure roller is moved by said first moving means.

2,900,952
PAINTING MACHINE
Stanley Perry, Brooklyn, N.Y.
Application August 29, 1957, Serial No. 681,049
1 Claim. (Cl. 118—207)



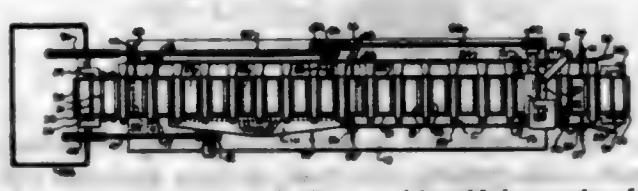
A machine for applying a coating to a surface comprising a base, motive power means carried by said base, a pair of supporting brackets secured to said base and extending thereupon, a shaft rotatably journaled in said brackets, a pair of crank discs mounted on the opposing ends of said shaft for rotation therewith, means for rotating said shaft secured to said shaft and operatively associated with said motive power means whereby said crank discs are rotated by said motive power means, a support carried by said base, said support including a horizontal crossbar, a pair of lever arms mounted in spaced relation for pivotal movement on said crossbar in a plane normal to the plane of the surface to be coated, an applicator arm pivotally secured to each of said lever arms, applicating means carried by each of said applicating arms and resilient means associated with each of said applicator arms for resiliently urging said coating means toward the surface to be coated, connecting rod means interconnecting a terminal portion of each of said lever arms with said crank discs whereby each of said lever arms is pivotally moved on said crossbar to thereby reciprocate said applicator arms and their associated applicating means along the surface to be coated.

2,900,953
APPARATUS FOR MAKING FOOTWEAR
Malcolm S. Cate, Watertown, Mass., assignor to The B. F. Goodrich Company, New York, N.Y., a corporation of New York
Application August 22, 1957, Serial No. 679,608
5 Claims. (Cl. 118—217)



1. Apparatus for applying liquid adhesive to the lower marginal zone of the upper of a shoe assembly preparatory to assembling an outsole and a foxing strip onto the shoe assembly, said apparatus comprising a pair of guide rolls mounted in lateral opposition for engaging opposite sides of the lateral edge of the shoe assembly as it is advanced through a coating station at which liquid adhesive is applied to the lower marginal zone of the upper of the shoe assembly, said guide rolls being mounted for revolution in the same direction and having peripheral faces which at said coating station are slanted to present faces in the form of an obtuse-angled V when viewed in the direction of advance of the shoe assembly against which the lateral edge of the shoe assembly bears as it is advanced over said guide rolls, each said guide roll having associated therewith and spaced therefrom means at said coating station for applying liquid adhesive to the lower marginal zone of the upper of the shoe assembly as the shoe assembly is advanced over said guide rolls, each said guide roll and the said adhesive-applying means associated therewith being mounted for vertical movement as a unit independently of the other said guide roll and adhesive-applying means to and from a position to which said guide roll and adhesive-applying means unit is biased so that adhesive will be applied a uniform distance up the side of the upper of the shoe assembly irrespective of the vertical variance in the contour of the lateral edge of the shoe assembly, said apparatus having means for continually urging each of said adhesive-applying means against the shoe assembly as the shoe assembly is advanced past said adhesive-applying means.

2,900,954
BOBBIN TIP PAINTING APPARATUS
Herbert E. Freese, Landis, N.C.
Application July 1, 1957, Serial No. 669,214
2 Claims. (Cl. 118—232)

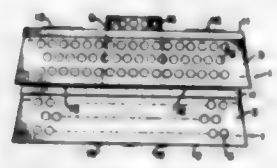


1. An apparatus for painting an identifying color band on the tips of bobbins comprising a continuously driven

1. An illuminated device comprising a panel of light-transmitting material having two smooth plane substan-

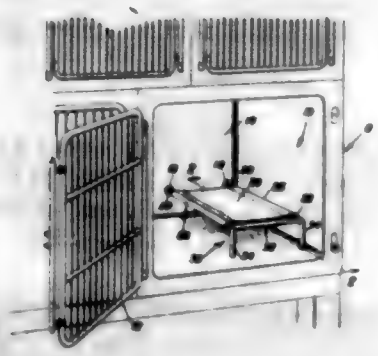
endless conveyor having an upper reach normally traveling a straight horizontal path, spaced pairs of upstanding lugs on said conveyor for carrying bobbins placed transversely on said conveyor and between said lugs, the width of the conveyor being less than the length of said bobbins so that opposite ends of the bobbins extend outwardly beyond the sides of the conveyor, a bobbin trackway disposed adjacent each side edge of said conveyor with its upper level being disposed at a higher elevation than the upper surface of the conveyor so that the bobbins are normally supported in rolling engagement by said trackways and rolled along the trackways with movement of the conveyor, conveyor raising means disposed between said bobbin trackways to cause said conveyor to travel a path above its normal path of travel during one portion of its travel to support said bobbins on the conveyor and out of engagement with the trackways, a bobbin engaging paint applicator brush disposed above and adjacent the raised portion of said conveyor for engagement with a portion of the surface of each succeeding bobbin carried by the conveyor, and a continuously driven roll positioned to engage the upper portion of and to rotate each bobbin simultaneously with the application of paint thereto.

2,900,955
PORTABLE CHIMNEY TYPE CHICK CONTAINER ASSEMBLY
Dale A. Danielsen, Miami, Fla., assignor to Riddle Airlines, Inc., Miami, Fla., a corporation of Florida
Application October 23, 1957, Serial No. 691,890
5 Claims. (Cl. 119—15)



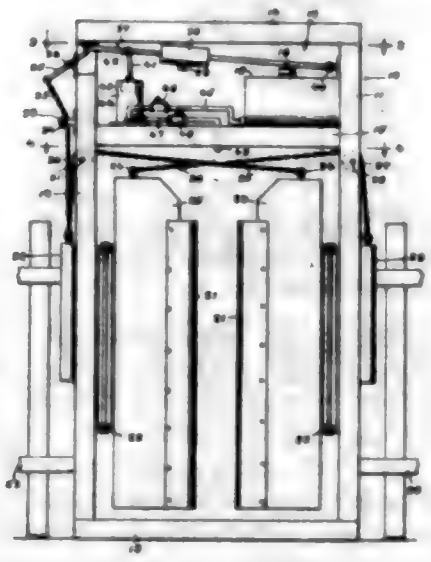
1. A chick container comprising a flat rectangular base having upstanding perforated side walls, a first central opening in said base, a flat cover having a second central opening therein smaller than said first opening, said cover resting on said side walls and spaced from said base, a centrally disposed tapered perforated ventilating duct having side walls of a shape substantially conforming to that of said first and second openings and in alignment therewith, and a portion of said walls of said duct extending through and above said second opening.

2,900,956
COT FOR DOG AND ANIMAL CAGES
Roy D. Hoffman, Bedford, Pa.
Application December 19, 1957, Serial No. 703,928
6 Claims. (Cl. 119—15)



1. An enclosure for an animal including a side wall and a floor, a cot having side rails, at least one end rail and legs, said legs resting on the floor, anchoring means on said side wall having separable engagement with at least one of said legs, and a washable cover operatively attached to opposite side rails of said cot to form a raised bed for an animal.

2,900,957
HOG OILER
Clarence N. Peterson, deceased, late of Grand Island, Nebr., by Marian N. Peterson and Dolan N. Peterson, administrators, Gering, Nebr.
Application July 25, 1957, Serial No. 674,874
1 Claim. (Cl. 119—159)

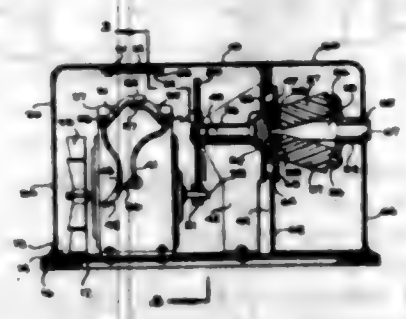


In a hog oiler, a frame of rectangular formation including a pair of vertically disposed spaced parallel side bars, a horizontally disposed base extending between the lower ends of said side bars and secured thereto, a top piece extending between the upper ends of said side bars and secured thereto, a horizontally disposed crosspiece arranged below said top piece and secured to said side bars, a pair of doors hingedly connected to the inner portions of said side bars, each of said doors having a partial protective covering thereon, a first pulley supported by each of said side bars, a first and second chain arranged in crisscross relation with respect to each other, eyelets extending upwardly from said doors, said chains each having an end thereof connected to the eyelets on said doors, a weight arranged externally of said frame and connected to said chain, a fluid holding tank supported on said crosspiece, a first conduit extending from said tank and having a check valve therein, a pump supported by said crosspiece and connected to said first conduit, a movable lever having one end pivotally connected to said bar, a weight member adjustably mounted on said lever, a securing element for maintaining said weight member immobile in its adjusted position on said lever a pump rod extending upwardly from said pump and connected to said lever, a link pivotally connected to said frame and having a portion thereof adapted to engage said lever, said link being connected to one of said chains, and a second conduit extending from said pump and having a check valve therein, and said second conduit including a downwardly extending portion for dispensing fluid onto the cattle passing between the doors.

2,900,958
ELECTRIC PENCIL SHARPENER
Gerald A. Johnson, Malta, Ill.
Application August 22, 1958, Serial No. 756,623
3 Claims. (Cl. 120—96)

3. An electric pencil sharpener comprising a main housing having a top wall formed with an aperture, an electric motor mounted in said main housing subjacent said aperture, a horizontal shaft journaled in said main housing,

means drivingly coupling said motor to said shaft, a resilient switch contact on said motor, a second switch contact on said motor beneath said first-named contact, a closure element pivoted in said aperture above said resilient switch contact and being engageable therewith to cause said resilient switch contact to engage said second switch contact responsive to downward manual force exerted on said closure element, said resilient switch contact biasing said closure element upwardly in said aperture, means limiting upward movement of said closure element to a position wherein it is substantially flush with said top wall, an energizing circuit connected to said motor and including said switch contacts, guide bracket means rigidly secured on said shaft including a tubular end portion spaced from and axially aligned with said shaft and



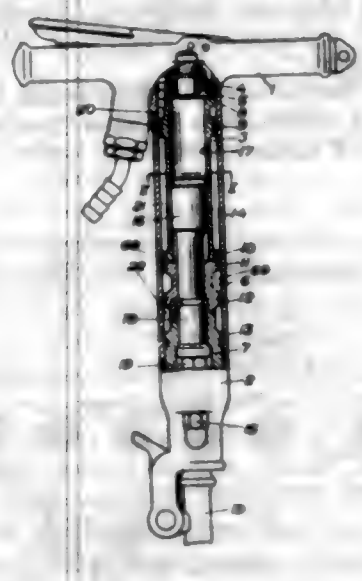
adapted to receive a pencil, a pair of opposed helically-bladed sharpening rollers journaled in said guide bracket means inwardly adjacent said tubular end portion on inclined inwardly converging axes, an internally toothed ring gear mounted in said housing coaxially with said shaft, pinion gears on said rollers meshing with said ring gear and arranged to rotate said rollers on their own axes responsive to rotation of said shaft, and an auxiliary housing member removably engageable with an end portion of said main housing and being constructed and arranged to receive said rollers, said auxiliary housing having a vertical transverse end wall formed with an aperture aligned with and adapted to rotatably receive the outer extremity of said tubular end portion.

2,900,959

PNEUMATIC PERCUSSION TOOLS

Gösta Ivar Ekström, Nacka, and John Gösta Fredrik Löwenborg, Stockholm, Sweden, assignors to Atlas Copco Aktiebolag, Nacka, Sweden, a corporation of Sweden

Application June 4, 1957, Serial No. 663,378
6 Claims. (Cl. 121—13)



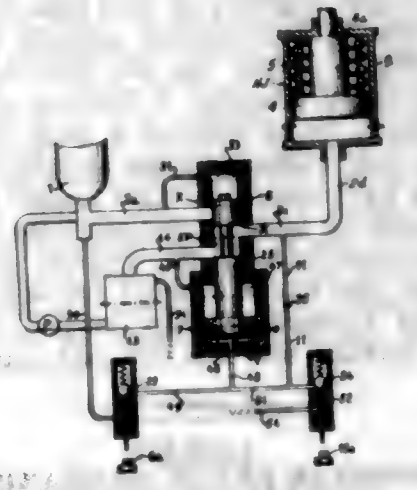
1. A pneumatic percussion tool comprising a cylinder casing, a working cylinder in said cylinder casing, a differential hammer piston reciprocable in said working cylinder, a valve casing at the rear end of the cylinder casing, an intermediate casing forming a guide for the small diameter portion of said hammer piston at the front end of the cylinder casing, a back head, a front head, a tube in which said cylinder casing and said intermediate casing are stapled one upon the other, lands on said cylinder casing cooperating with the inner wall of said tube and having substantially the same outer diameter as the inner diameter of the tube, and bolts connecting said front head and said rear head and pressing said heads and the cylinder casing and intermediate casing axially together within said tube.

2,900,960

HYDRAULIC CONTROL DEVICE

Jean Louis Gratzmuller, Paris, France

Application January 3, 1955, Serial No. 479,620
Claims priority, application France January 15, 1954
12 Claims. (Cl. 121—38)

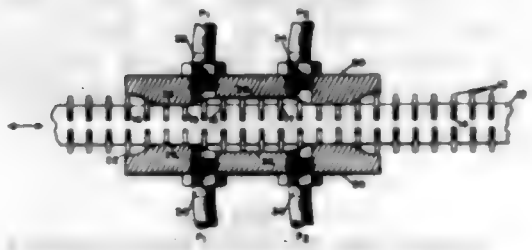


1. In a hydraulic system for controlling a circuit-breaker, including a spring-loaded control jack operatively connected with said circuit-breaker to ensure one of the circuit-breaking and circuit-making strokes of the same, against the action of said spring, a source of pressure liquid, feeding duct means between said source and said control jack and a container at a pressure lower than that of said source, a hydraulic control device including a valve means in said feeding duct means between said source and said control jack and controlling communication between said control jack and said source and between said control jack and said container respectively, a loaded hydraulic pilot jack operatively connected with said valve means and including a piston adapted, when fed with liquid under pressure, to move said valve means against the load to establish communication between said source and said control jack, feeding means including a first normally closed triggering valve means operable when open to feed said pilot jack with liquid from source during a short time, unloading means including a second normally closed triggering valve means operable when open to permit exhaust of liquid from said pilot jack, liquid conducting means downstream of said control device for placing said pilot jack in permanent communication with said feeding duct means, for maintaining feeding of the pilot jack for an indefinite duration after the closing of said first triggering valve means so as to maintain the circuit breaker in one of its circuit-making and circuit breaking positions, and means for limiting the rate of flow through said liquid conducting means to maintain the rate of flow therethrough lower than the rate of discharge through said second triggering valve means, whereby said pilot jack means can be completely unloaded during the time of operation of said triggering valve means so as to reset said circuit breaker into the other one of said two positions.

said side wall having separable engagement with at least

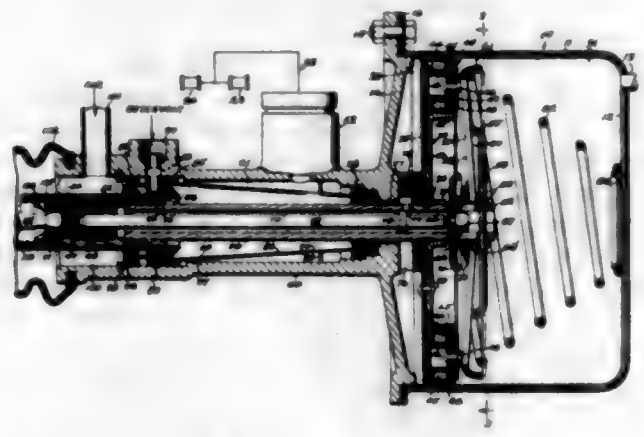
motor mounted in said main housing subjacent said aperture, a horizontal shaft journaled in said main housing,

2,900,961
LINEAR FLUID ACTUATOR UTILIZING VANES
Chien-hor Sung, Oak Park, Mich., assignor to Bendix Aviation Corporation, Detroit, Mich., a corporation of Delaware
Application April 5, 1957, Serial No. 650,954
5 Claims. (Cl. 121—38)



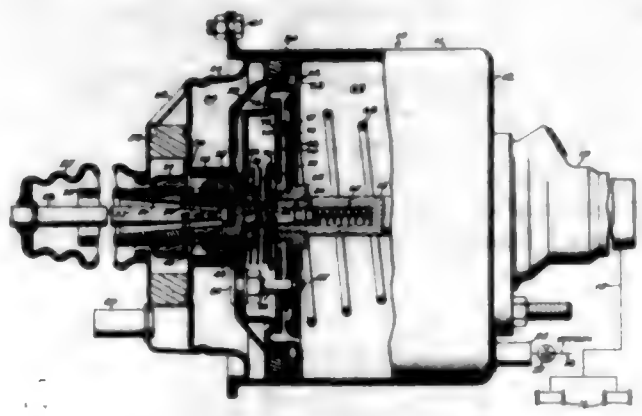
1. In a fluid actuator device in combination: a first member having a longitudinal hole passing through it; a second member having a length substantially greater than that of said first member and having a traverse cross-section substantially similar to that of said hole; parallel opposed surfaces disposed on said first and said second members, one of said parallel surfaces having a cam contour along its length, and the other of said parallel surfaces having a plurality of traverse grooves spaced along its length; vanes disposed in each of said grooves and having their extending edges abutting said cam surface; means for biasing said vanes against said cam contour; and ports for injecting and removing fluid from the chambers formed between the opposed surfaces of said first member, said second member and said vanes, whereby the fluid pressures thereby created cause relative movement between said first and said second members.

2,900,962
BOOSTER BRAKE MECHANISM
Jeannot G. Ingres, Dearborn, Mich., assignor to Kelsey-Hayes Company, a corporation of Delaware
Application December 18, 1953, Serial No. 399,030
7 Claims. (Cl. 121—41)



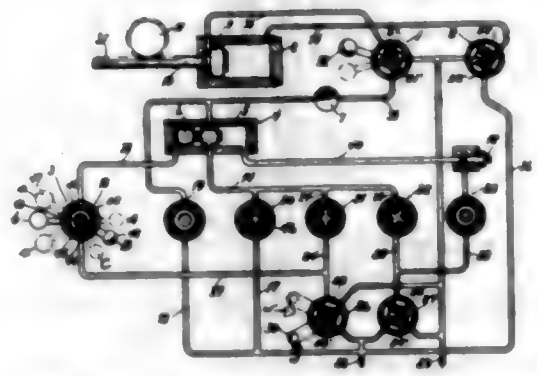
6. A motor mechanism comprising a fluid motor having a pressure responsive unit therein formed of inner and outer concentric relatively axially movable sections in fluid sealing relation to each other, a member to be operated, the inner of said sections being positively connected to said member, a valve having fluid connection with said motor and with a pressure source and movable from a normal position for establishing differential pressures in said motor to actuate said pressure responsive unit and move said member, and means connected for utilizing relative movement of said sections upon energization of said motor for opposing motor-energizing movement of said valve, said means comprising a plate having segmental fingers forming lever elements having radially inner and outer portions mechanically engaging respec- having mechanical connection intermediate said radially tively with said valve and the outer of said sections and inner and outer portions with the inner of said sections.

2,900,963
FLUID MOTOR
David T. Ayers, Jr., Birmingham, Mich., assignor to Kelsey-Hayes Company, a corporation of Delaware
Application March 8, 1954, Serial No. 414,764
13 Claims. (Cl. 121—41)



1. A fluid motor comprising a casing, a pressure responsive unit in said casing dividing the latter to form a pair of chambers one of which is a constant pressure chamber, a force transmitting member mechanically connected to said unit and projecting through said casing, for connecting said constant pressure chamber to a source of relatively low pressure, a sleeve carried by said pressure responsive unit, a valve slidable in said sleeve between a normal position and a motor energizing position, said sleeve being provided with a port communicating with the other motor chamber, said valve being grooved to connect said port to said constant pressure chamber when said valve is in said normal position, a seal carried by said pressure responsive unit at one end of said valve and having a space radially inwardly thereof connected to a source of higher pressure, said end of said valve engaging said seal when said valve is in its normal position to prevent leakage from said source of higher pressure around said valve, said valve, in said motor energizing position, being spaced from said seal to open said port to communication with said space within said seal, and sealing means engaging pressure responsive unit and the other end of said valve for sealing the interior of said sleeve and the grooves of said valve from said constant pressure chamber when said valve is in said motor energizing position.

2,900,964
HYDRAULICALLY OPERATED PRE-SELECTOR FEEDING DEVICE
Hans Werner Liebmann, Karlskoga, Sweden, assignor to Aktiebolaget Johanssons Press- & Hejarverktyg, a Swedish company
Application December 16, 1955, Serial No. 553,620
Claims priority, application Sweden December 23, 1954
9 Claims. (Cl. 121—45)



1. The combination with a reciprocatable element such as a machine table and a double-acting hydraulic motor

2,900,968
INTERNAL COMBUSTION ENGINE

ated motor connected to said member, a venturi in said

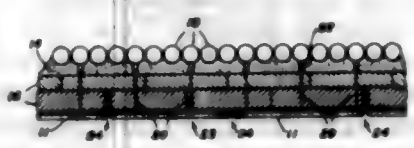
connected to said element for reciprocating the same, a source of pressure fluid, a pressure duct for conveying pressure fluid from said source to said motor, and a return duct for conveying pressure fluid from said motor; of a hydraulically-operated control valve having an inlet and an outlet connected in series in the pressure fluid duct of said hydraulic motor, said control valve having a valve member therein controlling the passage of fluid through said valve, a reversing valve unit including a pair of reversing valves connected in parallel in said pressure fluid duct intermediate the pressure source and said control valve, said reversing valve unit being operated by said reciprocatable element when said element reaches an end position during its movment, each of said reversing valves having a stop valve connected in series therewith intermediate said reversing valves and said control valve, and actuating duct means for controlling the operation of said control valve member comprising a pair of actuating ducts each connected at one end to said control valve and at the other end respectively to a branch of said pressure duct intermediate one of said reversing valves and its associated stop valve.

2,900,965

INSULATED BOILER WALL

Ernest C. Witzke, Bayside, N.Y., assignor to Combustion Engineering, Inc., New York, N.Y., a corporation of Delaware

Application September 16, 1953, Serial No. 380,486
1 Claim. (Cl. 122—6)



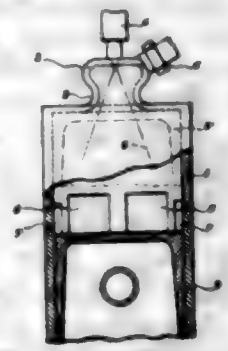
An insulated wall having metallic tubes lining one of its surfaces and a coating of cement forming its other surface with a plurality of layers of relatively movable insulating blocks interposed between the two, flexible wire means extending from the metallic tubes through the insulating blocks to the cement coating and integrally binding these wall elements together while permitting relative movement therebetween without cracking of the cement coating with this wire bending sufficiently to accommodate substantially the full extent of such relative movement, said cement coating including reenforced rectangular cement panels having expanded metal reinforcing embedded therewithin and extending uninterrupted throughout the area thereof with adjacent panels having their edges parallel and slightly spaced and with adjacent edges of adjacent panels being coextensive and of equal length, said wire means effectively interconnecting the tubes and the reenforcing, flexible metallic strips positioned intermediate said adjacent edges with each strip extending throughout the length of the adjacent edges of one pair of panels and sealably secured thereto with structural means interconnecting the strips and reenforcing in the panels, said strips having a longitudinally extending offset portion intermediate their logitudinal edges, means sealing the juncture of the strips at the corner of the panels, said means comprising a container having a pliable filling therein, additional flexible metallic strips extending across each panel between each pair of opposite sides of the panel and in overlying relation with the outer surface of the reenforcement, said additional strips being provided with flexible longitudinally extending and outwardly projecting offset portions intermediate their longitudinal edges, said last named offset portions extending from the reenforcement to the outer surface of the panel with the longitudinal edges of the strips being secured to the reenforcing.

2,900,966

TWO-STROKE ENGINES

Antoine Broeder, Paris, France, assignor to Societe Anonyme Andre Citroen, Paris, France, a French company

Application November 29, 1956, Serial No. 625,078
Claims priority, application France April 16, 1956
3 Claims. (Cl. 123—32)



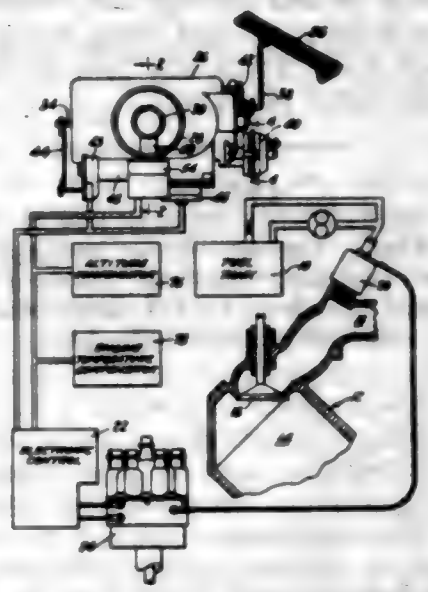
1. In a two-cycle internal combustion engine including a cylinder, a piston reciprocable in said cylinder and having a top dead center position, means to inject fuel into the cylinder near the end of the scavenging period at least at low scavenging ratios to form a heterogeneous mixture of air, fuel and burnt gases, a turbulence chamber beyond the top of the cylinder, a relatively restricted passage connecting said chamber and said cylinder, said passage being unobstructed and of the same area throughout the piston stroke, said chamber being adapted for receiving the compressed mixture of air, fuel and burnt gases therein as the piston reaches said position and for imparting turbulence thereto in said chamber, and ignition means in the chamber for firing the turbulent compressed mixture.

2,900,967

FUEL SUPPLY SYSTEM

Robert W. Sutton, Elmira, N.Y., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware

Application March 11, 1957, Serial No. 645,045
7 Claims. (Cl. 123—119)

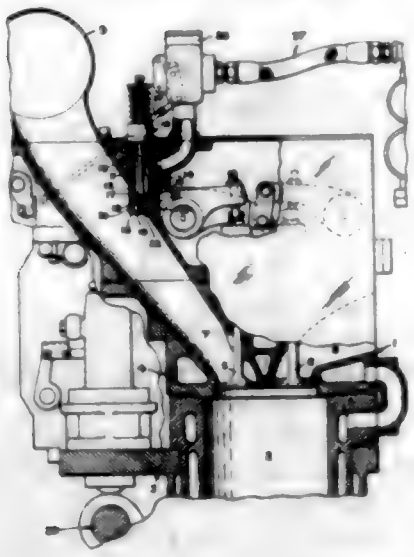


1. In a fuel supply system for a multi-cylinder internal combustion engine having an induction passage, a nozzle for each of said cylinders, a valve in each of said nozzles, a solenoid for each of said valves energizable to open said valves, an electrical circuit for said solenoids, a switch in said circuit adapted to be periodically closed as a function of engine speed, a device in said circuit adapted to be activated when said switch is closed to control the time duration of current flow in said circuit, and means operatively connected to said device and responsive to pressures varying as a function of the rate of air flow through said passage for modifying said control.

tively with said valve and the outer of said sections and inner and outer portions with the inner of said sections.

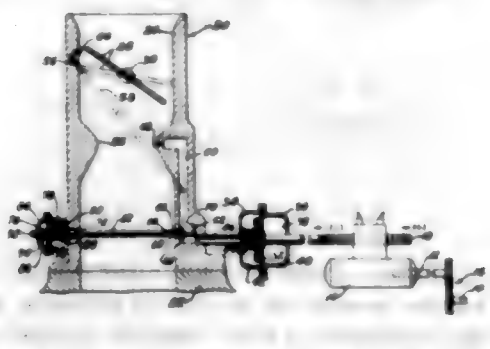
1. The combination with a reciprocatable element such as a machine table and a double-acting hydraulic motor

2,900,968
INTERNAL COMBUSTION ENGINE
William M. Kaufmann, Hamburg N.Y., assignor to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Application March 25, 1958, Serial No. 723,724
2 Claims. (Cl. 123—120)



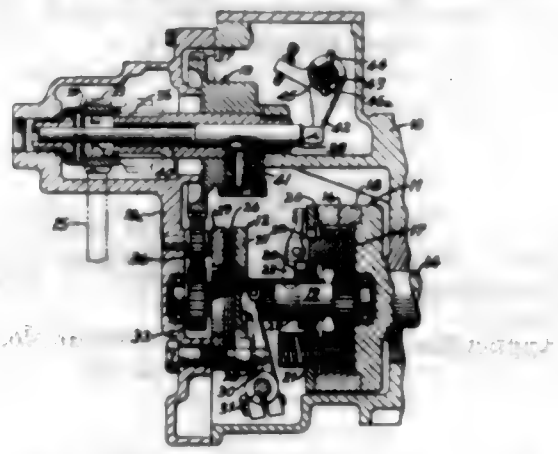
1. In an internal combustion engine, a cam shaft, a cylinder including a head therefor, inlet means and exhaust means in said head and opening into said cylinder, an intake passageway passing through said head and opening on said inlet means, fuel injection means opening in said intake passageway, means connected to said cam shaft and for cooperatively and simultaneously actuating said inlet valve and said fuel injection valve, said last mentioned means comprising a shaft having a lever pivotably mounted thereon, said lever operatively connected to said inlet means at one end and operatively connected to said cam shaft at the other respective end, linkage means interconnecting said lever to said fuel injection valve, and delaying means on said fuel injection means including a tubing means mounted thereon for delaying the openings of said fuel injection means until said exhaust means is closed and said tubing means for causing axial admission of the fuel passing from the fuel injection means into the intake passageway.

2,900,969
FUEL INJECTION SYSTEM
Stanley M. Udale, Detroit, Mich., assignor to Holley Carburetor Company, Van Dyke, Mich., a corporation
Application December 19, 1957, Serial No. 703,934
22 Claims. (Cl. 123—140)



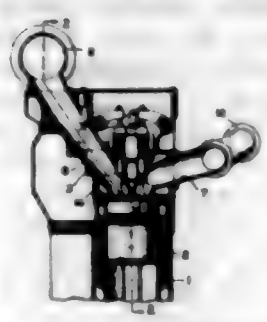
1. A fuel-air ratio control system for a fuel injection system for an internal combustion engine having an intake manifold, a fuel pump having a drive shaft connected to said engine to be driven at a speed determined by engine speed and adapted to deliver its entire output to said engine, and an air supply passage having an air valve therein leading to said manifold, the control system comprising a pump control member movable to regulate the delivery of fuel per rotation of said pump shaft, a vacuum operated motor connected to said member, a venturi in said air passage downstream from said air valve, vacuum passage means connected to said motor having a first port in the throat of said venturi and a second port in communication with manifold vacuum, and a control valve for said second port operable to restrict said port when manifold vacuum is outside of an intermediate operating range.

2,900,970
SINGLE LEVER CONTROL FOR ENGINE STARTING MECHANISM
Everett E. Sims, Peoria, Peter P. Konyha, Washington, and Loren N. Petersen, Peoria, Ill., assignors to Caterpillar Tractor Co., Peoria, Ill., a corporation of California
Application February 17, 1958, Serial No. 715,804
3 Claims. (Cl. 123—179)



1. In a starting mechanism for an engine having a ring gear, a pinion on a hollow shaft for engagement with the ring gear, power transmission means between a power input shaft and the pinion including a clutch carried on a clutch shaft, a brake carried on said clutch shaft, control means for actuating said clutch, brake and pinion with a single lever carried on a rockable shaft, and connecting means between said pinion and lever comprising a rod slidable in said hollow shaft and secured to the pinion, an arm having a projection thereon rotatably retained on said rockable shaft, a pin carried by said rockable shaft contacting said projection in one direction to actuate said arm and rod to effect engagement of the pinion, and said pin being rotated out of contact with said projection during clutch engagement to permit disengagement of the pinion without transmitting motion to the control lever.

2,900,971
INTERNAL COMBUSTION ENGINE
William M. Kaufmann, Hamburg, and Hubert Ueberschaer, Buffalo, N.Y., assignors to Worthington Corporation, Harrison, N.J., a corporation of Delaware
Application October 2, 1956, Serial No. 613,529
1 Claim. (Cl. 123—188)



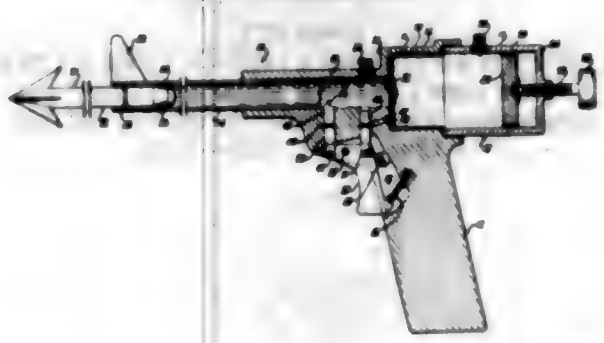
In an induction system for an internal combustion engine having a cylinder and a cylinder head provided with at least one inlet port therein opening into the cylinder, said system being comprised of a vertical intake passage to said inlet port characterized in that the same is disposed

said container, metallic walls forming an upstanding combustion zone within said container including an upper

the cable and forming a loop at the end of the same,

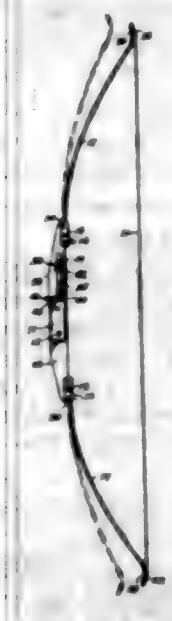
at an acute angle to the vertical axis of the cylinder whereby the lower portion thereof is disposed eccentrically of said inlet port to impart a swirl to the gases entering said cylinder, and the medial portion thereof is of smaller cross-sectional area than other portions of said intake passage to provide a Venturi construction therein for also causing a ramming of said gases.

2,900,972
UNDERWATER SPEAR GUN
De Loss L. Marsh, Hayward, and Stanley C. Butler, San Lorenzo, Calif.
Application September 24, 1956, Serial No. 611,716
6 Claims. (Cl. 124—13)



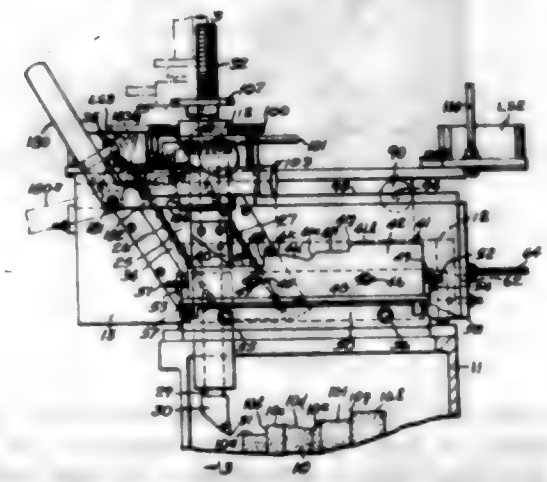
2. An underwater spear gun comprising a tubular barrel having a bore therethrough, said bore being closed at one end thereof, a movable member in said bore spaced from said closed end and sealed with respect to said bore to form a compressible reservoir in said barrel, a piston in said bore disposed between said movable member and said closed end, manually operable means to move said piston towards and away from said closed end, and a spear having a shaft closely fitting in the other end of said bore.

2,900,973
ARCHERY BOW
Charles A. Diehr, Shelton, Conn.
Application July 25, 1956, Serial No. 600,100
1 Claim. (Cl. 124—24)



In an archery bow, a handle section including a vertically elongate planular frame member of greater width than thickness disposed edgewise to the direction of draw of the bow with its central vertical plane coincident to the central vertical plane of the bow parallel to the direction of draw of the bow, a pair of socket means respectively secured upon the upper and lower ends of said frame member defining vertically disposed sockets of greater width than thickness with their width dimension at right angles to the width dimension of said frame member and extending laterally an equal distance at each side of the ends of said frame member, said socket means each comprising a channel member having a base disposed in rearwardly spaced parallel opposed relation to the rearward edge surface of said frame member and side flanges disposed in outwardly spaced parallel opposed relation to the side surfaces of said frame member, and connection means rigidly connecting said flanges to said frame member, a pair of hand grip members respectively secured at the opposed sides of the intermediate portion of said frame member in vertically spaced relation to said socket means, and a pair of bow limbs having butt ends of greater width than thickness with their width dimension at right angles to said width dimension of said frame members and removably engageable in said respective socket means, the forward and rearward sides of said butt ends being respectively opposed by said bases of said channel members and the rearward edge of said frame member, and the side edges of said butt ends being opposed by said flanges of said channel members.

2,900,974
GRINDING MACHINE-TRUING APPARATUS
Olva E. Hill, West Boylston, Mass., assignor to Norton Company, Worcester, Mass., a corporation of Massachusetts
Application March 28, 1958, Serial No. 724,671
10 Claims. (Cl. 125—11)



1. A grinding wheel truing apparatus for truing a predetermined shape on the operative face of a rotatable grinding wheel comprising a base, a longitudinally traversable slide thereon, means to traverse said side longitudinally in either direction, an angularly arranged transversely movable slide on said longitudinal slide, anti-friction slide-ways interposed between said slides, a truing tool carrier on said transversely movable slide, a truing tool holder on said carrier, a truing tool thereon, a feed mechanism interposed between said transversely movable slide and said carrier, a forming bar on said base, and a follower on said transversely movable slide, said transversely movable slide being arranged at an angle greater than the angle of repose relative to the longitudinally movable slide to facilitate maintaining the follower in operative engagement with the forming bar during the longitudinal movement of the longitudinal slide so as to generate a predetermined shape on the operative face of the grinding wheel.

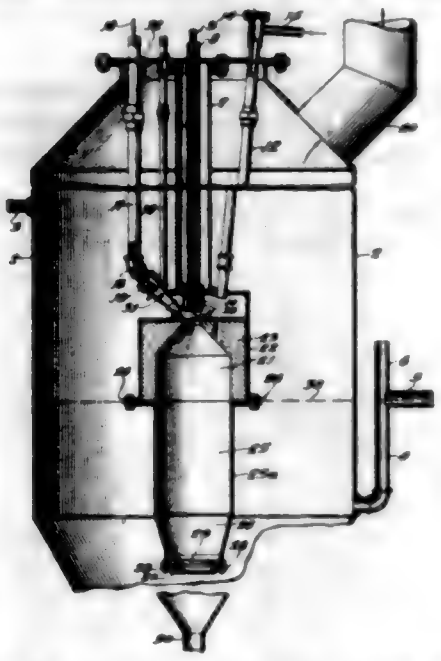
2,900,975
SUBMERGED HEATING APPARATUS
Elliott Northcott, Lakeland, Fla., assignor to International Minerals & Chemical Corporation, a corporation of New York
Application October 13, 1955, Serial No. 540,264
2 Claims. (Cl. 126—360)

1. A heating apparatus for liquid comprising a container having a liquid inlet for introduction of liquid to be heated and an outlet in the upper portion thereof for discharge of vapors and products of combustion from

pump control member movable to regulate the delivery of fuel per rotation of said pump shaft, a vacuum oper-

said system being comprised of a vertical intake passage to said inlet port characterized in that the same is disposed

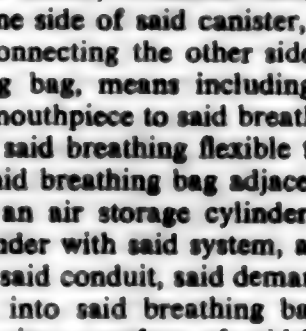
said container, metallic walls forming an upstanding combustion zone within said container including an upper primary combustion chamber and a lower secondary combustion chamber communicating with the lower end of said primary combustion chamber, said metallic walls being substantially unobstructed along the exterior of the upstanding combustion zone, said primary combustion chamber having lining of refractory material and said secondary combustion chamber being unlined with the inner surface of said secondary combustion chamber forming a continuation of the inner surface of said lining to form said secondary combustion chamber of a cross sectional area substantially equal to that of the interior of said lining at the junction between said primary and secondary combustion chambers, a liquid hydrocarbon fuel burner in said container and having a fuel atomizing nozzle directed downwardly into the upper end of said primary combustion chamber, an outlet tube for products of combustion communicating with and extending down-



wardly from the lower end of said secondary combustion chamber, a baffle horizontally disposed and spaced beneath the lower end of said outlet tube, said baffle having a dished central portion surrounded by a generally planar lip, said dished central portion facing upwardly toward the lower open end of said outlet tube and said lip lying beneath and aligned with the lower end of said outlet tube, adjustable means connecting said lip and the lower end of said tube to determine the spacing between said baffle and the lower end of said outlet tube to vary the cross sectional area of said exit orifice to alter the splashing of liquid against said upper primary combustion chamber caused by entry of products of combustion into such liquid from such exit orifice below the surface of such liquid, and means to withdraw liquid from said container and maintain the quiescent liquid level within said container at approximately the junction between said upper primary combustion chamber and said lower secondary combustion chamber.

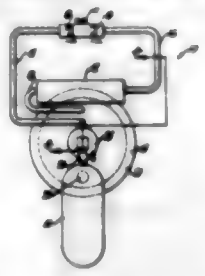
2,900,976
DEVICES ADAPTED FOR ASSISTING PARALYZED OR HEMIPLEGIC PERSONS
George McQ. Kilmer, Fort Howard, Md.
Application February 5, 1957, Serial No. 638,372
4 Claims. (Cl. 128—1)

1. An apparatus for aiding movement of a paralyzed limb, comprising, a band for encircling the limb, the band having a loop at each end, one of the loops extending through the other loop, a cable attached to the first-mentioned loop, an upright for attachment to a wheel chair, pulley guide means carried by the upright adjacent to the top thereof and through which the cable extends, means for regulating the effective length of the cable and forming a loop at the end of the same, and a handle in said loop at one end of the cable by



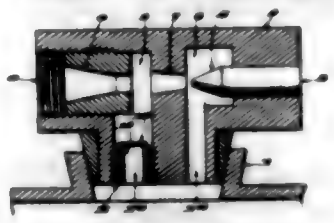
means of which the cable may be moved through the pulley to elevate the limb encircled by the band.

2,900,977
UNDERWATER BREATHING APPARATUS
De Loss L. Marsh, Hayward, Calif.
Application May 31, 1955, Serial No. 512,223
1 Claim. (Cl. 128—142)



In a breathing apparatus, a circulating system comprising a mouthpiece, a carbon dioxide absorbing canister, a breathing bag, said breathing bag being smaller than the volume of air breathed during one inhalation of the person using the device, a flexible tube connecting said mouthpiece to one side of said canister, means including a flexible tube connecting the other side of said canister to said breathing bag, means including a flexible tube connecting said mouthpiece to said breathing bag, a check valve in each of said breathing flexible tubes, an exhaust check valve in said breathing bag adjacent the lowermost portion thereof, an air storage cylinder, a conduit connecting said cylinder with said system, a normally closed demand valve in said conduit, said demand valve having a stem protruding into said breathing bag, and a striker plate fixed to the inner surface of said bag opposite said stem, whereby when said bag is collapsed said striker plate will strike said stem to open said valve to permit air from said cylinder to enter said circulating system.

2,900,978
SUCTION DEVICE
Dag Olof Alfred Johannisson, Lidingo, Sweden, assignor to Svenska Aktiebolaget Gasaccumulator, Lidingo (near Stockholm), Sweden, a corporation of Sweden
Application October 15, 1954, Serial No. 462,578
Claims priority, application Sweden October 23, 1953
4 Claims. (Cl. 128—276)

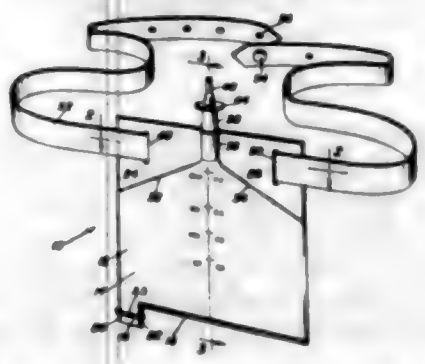


1. A suction device comprising a mucus receptacle adapted to communicate with a patient's respiratory tract, first and second gas suction means, valve means operatively connecting said first suction means with said receptacle, passage means operatively connecting said second suction means with said receptacle, and a source of gas under pressure connected with said second suction means, said first and second suction means commonly including a frusto-conical passageway providing a flow

manner holding the center portions of said concaved side

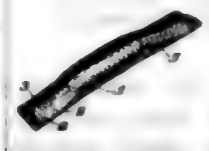
path such that with normal respiration of said patient said valve means is opened to draw mucus from said tract, and, with restricted respiration due to mucus blockage and buildup of sub-pressure in said second suction means, said valve means is closed and said passage means is rendered operative to draw mucus from said track.

2,900,979
BILE BAG
Joel L. Bishop, New Orleans, La.
Application August 18, 1955, Serial No. 529,132
4 Claims. (Cl. 128—283)



1. A bile bag comprising a receptacle formed of a tubular member having a lower end provided with a discharge opening, said lower end being sealed about said discharge opening, an inlet opening at the top of said tubular member, pairs of opposed trapezoidal sections of said tubular member being bonded to each other on either side of said inlet opening, an inlet pipe in said inlet opening, and a connector stem seated in said inlet pipe, slots in said trapezoidal sections, and a belt extending through said slots for supporting said bile bag.

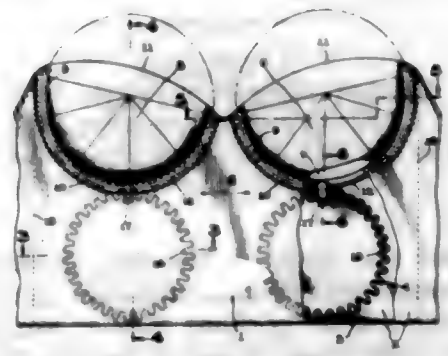
2,900,980
CELLULOSIC PRODUCT
Kenneth J. Harwood, Neenah, Wis., assignor, by mesne assignments, to Kimberly-Clark Corporation, a corporation of Delaware
Application September 30, 1954, Serial No. 459,477
18 Claims. (Cl. 128—290)



11. A sanitary napkin having an absorbent pad and a wrapper enclosing said pad, said wrapper comprising a set of spaced threads which extend in one direction, and a second set of spaced threads which extend transversely of the threads of said first mentioned set entirely on one side thereof, said sets of threads being adhesively bonded to each other at the crossings of their threads, the threads of both said sets being of low twist, having a twist less than 6 turns per inch, and said threads being of multiple filament construction having a denier within the range of 30 to 150, said wrapper being calendered and the filaments thereof caused to fan out to form thin flat crossing thread portions having a combined thickness which is significantly less than the sum of the normal thicknesses of said threads transversely of the plane of the wrapper.

2,900,981
BODY ENCIRCLING GARMENT
Henry M. Herbener, Thomasville, Ga.
Application March 18, 1957, Serial No. 646,593
14 Claims. (Cl. 128—465)

1. A garment comprising a flexible body encircling portion including front and rear sides forming a main pocket having a closed bottom, bust receiving pockets carried by the upper portion of the body encircling portion, lines of stitching connecting said sides near the bust receiving pockets and forming small holding pockets, inclined lines of stitching connecting said sides near the closed bottom, one of said sides having openings formed therein outwardly of the bust receiving pockets,



upstanding ribs having their upper ends removably mounted within the holding pockets, resilient hoops of zigzag formation mounted within the main pocket and held in place by the inclined lines of stitching, the side portions of the hoops being horizontally movable with relation to the inclined lines of stitching above the same, and means mounting the ribs upon the tops of the hoops.

2,900,982
BRASSIERE CONSTRUCTION
Miguel López-Henriquez, Bronx, N.Y.
Application July 13, 1956, Serial No. 597,744
4 Claims. (Cl. 128—476)

1. A brassiere comprising a fabric body portion adapted to embrace closely the body of the wearer below and at the sides of the breasts, a pair of breast pockets positioned to receive the breasts and joined at their peripheries to said body portion and an arcuate spring member extending peripherally of each breast pocket, said spring member comprising a plurality of substantially coextensive arcuate leaves of thin spring sheet material superposed on one another face-to-face and slidable on one another and a single sheath of flexible material closely embracing all of said leaves and holding them together in a single unit, said spring members being highly flexible to bending transversely to the plane of said spring member and highly resistant to bending in an edgewise direction so as to resist distortion of the breast pockets, the body portion of said brassiere holding said spring members against the body and cooperating with said spring members from twisting or buckling when subjected to edgewise forces.

2,900,983
BRASSIERES
Jacob L. Kleinman, New York, N.Y.
Application March 2, 1955, Serial No. 491,572
7 Claims. (Cl. 128—482)

1. A brassiere structure comprising two separate sections, each of said sections provided with a shoulder strap and with a cup-shaped portion and with a concaved side portion, each of said concaved side portions provided with a row of fastening elements, an expansion section, said expansion section secured to the said concaved side portions underneath the said rows of fastening elements in a

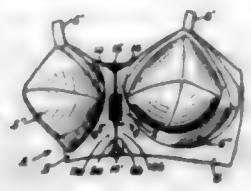
2,900,987

the denier per filament is less than 16; (c) the crimp in

extends, means for regulating the effective length of

including a frusto-conical passageway providing a flow

manner holding the center portions of said concaved side portions spaced apart from each other and the said rows of fastening elements facing each other, each of said concaved side portions having upper angularly disposed end portions converging towards each other and lower angularly disposed end portions converging towards each other, slidable means carried by said rows of fastening elements, said means movable into one direction for inter-



locking said two rows of fastening elements with each other forming a fold of said expansion section and bringing said cup-shaped portions into a position closer to each other, said means movable towards the opposite direction for unlocking the said two rows of fastening elements from each other releasing said fold and causing the said cup-shaped portions to be in a position spaced further apart from each other.

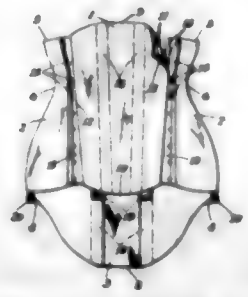
2,900,984

FOUNDATION GARMENT

Violet Ruth Cunningham, Stockton, Calif., assignor to Cunning Controller Corporation, Stockton, Calif., a corporation of California

Continuation of application Serial No. 531,346, August 30, 1955. This application August 6, 1957, Serial No. 677,191

3 Claims. (Cl. 128—556)



1. A foundation garment comprising a front panel, side panels and back panel, all of said panels being connected together along their adjacent edges and the back panel being of elastic material and of relatively narrow parallel-sided form so as to extend along the spinal area only of the wearer, and a pair of laterally spaced stays in the front panel intermediate its side edges and diverging upwardly; said stays extending from top to bottom of said front panel.

2,900,985

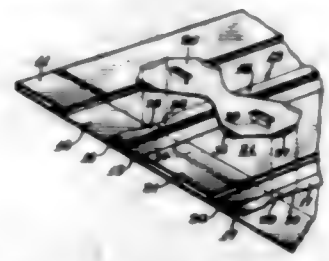
RECORD CARD TRANSFER DEVICE

Allan H. Tod and Walter W. Gray, Charlottesville, Va., assignors to Acme Visible Records, Inc., Crozet, Va., a corporation of Delaware

Application February 29, 1956, Serial No. 568,602

5 Claims. (Cl. 129—16)

2. A fixture for bridging the abutting aligned ends of card runways wherein each runway comprises a base portion and a pair of laterally spaced parallel coplanar oppositely extending guide flanges spaced from one face of the base portions, and for facilitating the transfer from one aligned runway to an end-abutting runway of overlapped endwise regularly spaced groups of flexible record cards slidably engaged thereover by pairs of ears on each record card projecting toward each other and disposed beneath said flanges, said fixture comprising a planar body portion for overlying and spanning end-abutting pairs of said flanges, said body portion having opposite edges and being of greater width and length than thickness, deflecting legs integral with said body portion and carried by two opposite edges of said body portion, said deflecting legs extending from the plane of said body portion divergently with respect to each other for disposition between the laterally spaced oppositely extending flanges, said



deflecting legs being substantially planar and of substantial width and length compared to thickness, the legs and body portion adjacent the line of juncture between the legs and body portion being relieved arcuately transversely to said line of juncture to deflect and guide the leading edges of said cards over said body portion during transfer of said cards from one card runway to another.

2,900,986

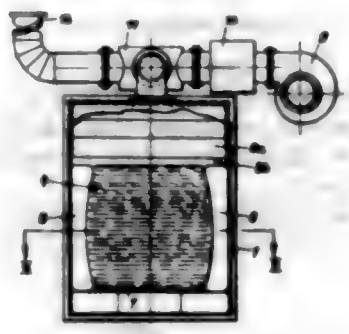
MOISTENING OF TOBACCO

Friedrich Pietruska, Memmingen, Germany, assignor to Schiff & Stern, Gesellschaft mit beschraenkter Haftung, Vienna, Austria, a firm

Application September 11, 1956, Serial No. 611,405

Claims priority, application Great Britain September 27, 1955

2 Claims. (Cl. 131—134)



1. An apparatus for moistening tobacco compacts consisting of pressed layers of tobacco leaves, comprising in combination: a closed housing defining a moistening chamber, means in said housing for supporting the tobacco compact in said moistening chamber, sealing members in said housing and arranged to define a zone for receiving the compact, said sealing members being adapted to conform to the contour of the compact and forming together with the compact a partition dividing the moistening chamber into two compartments, said sealing members restricting fluid flow between the compartments to the zone occupied by the compact, said zone being symmetrical about a center line whereby a symmetrical compact placed therein may have symmetrical portions each extending into a respective one of said compartments, means for maintaining different pressures in said compartments, means for introducing moist air into one of said compartments, means for exhausting air from the other one of said compartments, whereby a moist air stream is produced between said two compartments and through said compact, the compact supporting means being arranged to support the compact with its layers parallel to the direction of flow of said air stream, and adjustable means for selectively connecting the two compartments with the air introducing and air exhausting means, respectively, thereby to reverse the direction of flow of the air stream.

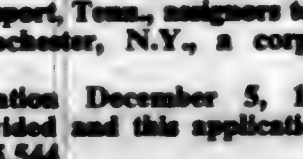
1. A garment comprising a flexible body encircling portion including front and rear sides forming a main expansion section secured to the said concaved side portions underneath the said rows of fastening elements in a

2,900,987

ASH-RETAINING JACKET FOR A CIGARETTE

Robert A. Campbell, Oak Park, Ill., assignor of one-tenth to Gadget-Of-The-Month Club, Inc., Los Angeles, Calif., a corporation of California

Application December 26, 1956, Serial No. 630,528
1 Claim. (Cl. 131—174)



A fire-resistant, ash-retaining jacket cooperable for retaining cigarette ashes and for automatically extinguishing a lighted cigarette at a predetermined length, comprising: a jacket having a closed end, an open end, and a retaining band and being substantially cylindrical when enclosing a cigarette therein, said jacket being sufficiently porous so as to provide proper ventilation for cigarette burning; said retaining band being attached adjacent the open end of said jacket and being cooperable for encompassing a portion of a cigarette, said retaining band having at least a partially inside adhesive surface which is cooperable for adhesively retaining a cigarette; support legs, attached with respect to said jacket, which are cooperable for parking a cigarette; a snuffer band, affixed adjacent said retaining band and between said retaining band and said closed end, cooperable for extinguishing a lighted cigarette; fastening means cooperable for securing said closed end of said jacket.

2,900,988

TOBACCO SMOKE FILTER ELEMENTS

Robert T. Crawford, Greenville, S.C., and Joel B. Stevens, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

Original application December 5, 1952, Serial No. 324,342. Divided and this application June 9, 1954, Serial No. 435,544
8 Claims. (Cl. 131—208)

1. A tobacco smoke filter adapted to remove certain undesirable components from tobacco smoke, said filter being essentially comprised of a bundle of continous longitudinally aligned, crimped uncoated filaments of a material consisting essentially of cellulose acetate and plasticizer therefor, said plasticizer being present in the amount of 5–30% by weight of the filaments and being so associated with said filaments that the removal properties of the cellulose acetate for the undesired components in the tobacco smoke is not substantially impaired and a paper wrapper, the filter being further characterized in that: (*a*) the bundle is made up of at least several thousand individual filaments in which substantially all of the filaments extend from end to end of the filter; (*b*) the denier per filament is less than 16; (*c*) the crimp in the filaments is greater than 4 per inch; (*d*) the filaments are substantially uniformly distributed across the transverse section of the bundle and joined to one another at random points of contact to a substantial extent from the action of the aforesaid plasticizer, the bundle being pervious along its longitudinal axis; and (*e*) said paper wrapper surrounds the bundle at the circumference thereof.

2,900,989

CIGARETTE FILTER TIP

Glenn Davidson, Aurora, Ill.

Application January 26, 1955, Serial No. 484,128
10 Claims. (Cl. 131—208)

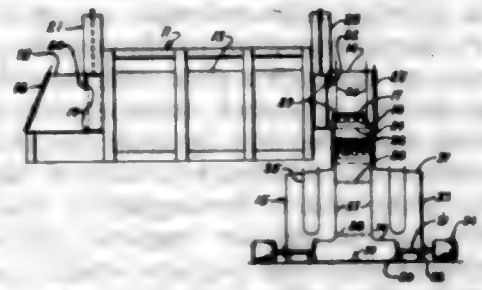
1. A filter element for a cigarette tip or the like comprising a substantially cylindrical portion made up of multiple sheets of air-permeable cellulosic material, with the component sheets extending lengthwise of said portion, and an integral tubular extension of said portion at the mouth end having a relatively thin, compact wall of predetermined axial extent, substantially coaxial with said cylindrical portion, said multiple sheets of air-permeable cellulosic material being secured together at such mouth end to form said relatively thin, compact wall of said tubular extension.

2,900,990

HEAT TREATING APPARATUS

Orville E. Cullen, Toledo, Ohio, assignor to Surface Combustion Corporation, Toledo, Ohio, a corporation of Ohio

Application August 24, 1955, Serial No. 530,371
3 Claims. (Cl. 134—57)



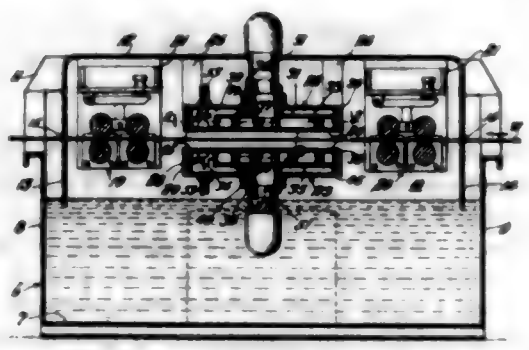
1. For a furnace having a discharge vestibule containing an element oxygen free gas atmosphere, a quench tank adapted to be located below said discharge vestibule for holding hot oil and comprising: a vertical quench chute adapted to extend down from said vestibule, a top connecting the bottom of said chute liquid-tightly to the tops of the walls of said tank and sloping downward thereto, and means for maintaining the level of the oil in the upper portion of said chute, means comprising: a float in the upper portion of said chute; a first contact outside said chute; a lever arm connecting said float and said first contact, said lever arm being attached to a wall of said quench chute between said float and said first contact whereby said arm may vertically pivot; a second contact located above said first contact whereby said first contact touches said second contact when the level of said oil falls to a predetermined point; a third contact located below said first contact whereby said first contact touches said third contact when the oil rises to a predetermined point; a reservoir located outside said tank and below the level of the oil in said tank; pump means for creating an oil flow from reservoir to said tank; first pipe means connecting said reservoir and said tank

beneath said flanges, said fixture comprising a planar body portion for overlying and spanning end-abutting pairs of

ing and air exhausting means, respectively, thereby to reverse the direction of flow of the air stream.

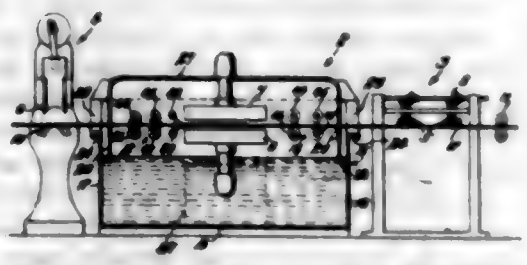
through said pump means; a relay valve; second pipe means for connecting said tank and said reservoir through said valve, with said valve being normally closed; means for operating said pump means when said first contact touches said second contact; and means for operating said valve when said first contact touches said third contact.

2,900,991
POWER WASHER
Orlan M. Arnold, Grosse Pointe Park, Mich., assignor to Ajem Laboratories, Inc., Livonia, Mich.
Application March 26, 1956, Serial No. 573,883
8 Claims. (Cl. 134—64)



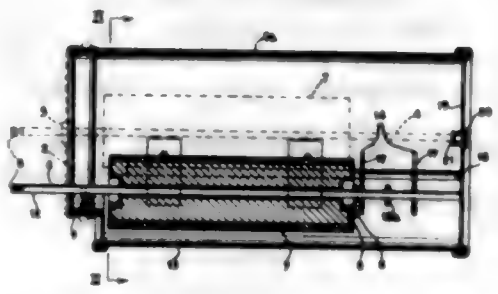
1. Apparatus for treating surfaces of a workpiece by subjecting it to the multiphase scouring action of jets of liquid and gas comprising rectangular fluid-distributing boxes arranged at opposite sides of the workpiece and extending throughout the width and for a substantial distance along the workpiece, at least one of the fluid-distributing boxes having a continuous rectangular orifice plate overlying one side thereof and adjacent the workpiece, an outer closure plate and an intermediate partition cooperating with the orifice plate and closure plate to form separate chambers, the orifice plate being detachably mounted on the box and having a contour corresponding to the shape of the workpiece with a pattern of jet forming orifices therein, one of the chambers formed by the intermediate partition walls overlying at least a part of the orifice plate and the other chamber overlying the first chamber, tubes extending from the intermediate partition wall in communication with the outer chamber and overlying certain of the orifices in the orifice plate, means for supplying liquid and gas, respectively, to the separate chambers of the fluid-distributing member at high pressure which issue from the orifices in the form of jets of liquid and gas, and means providing unrestricted flow of liquid from the workpiece to cause the jets to directly impinge on the surfaces of the workpiece at high velocity to produce the multiphase scouring action of liquid and gas.

2,900,992
METAL PROCESSING APPARATUS
Willard L. Johnson, Detroit, Mich., assignor to Ajem Laboratories, Inc., Livonia, Mich.
Application March 14, 1956, Serial No. 571,415
14 Claims. (Cl. 134—122)



1. Apparatus for treating the surfaces of a workpiece comprising a housing, juxtaposed fluid-distributing members in said housing at opposite sides of the workpiece, means for mounting the fluid distributing members in the housing for adjustment toward and away from each other to adapt them for a workpiece of any thickness and for rocking movement relative to each other for cleaning or repair, said fluid-distributing members extending throughout the width and for a substantial distance along the workpiece, means beyond the confines of the fluid-distributing members for feeding the workpiece forwardly between the members, means for supplying treating fluid to said fluid-distributing members under pressure, the adjacent sides of said fluid-distributing members having a plurality of orifices for providing high velocity jets of the treating fluid and directing the jets toward the workpiece, means providing unrestricted flow of liquid from the workpiece to cause the jets to directly impinge the workpiece at high velocity to scrub the surfaces impinged by the jets, and the area of the fluid-distributing members and the orifices therein being so arranged as to thoroughly clean all surfaces of the workpiece and wash away all material scrubbed therefrom before the workpiece is engaged by the feeding means.

2,900,993
APPARATUS FOR THE CLEANING AND DRYING OF ROLLER-TYPE PAINT APPLICATORS
Eric S. Cohen, Fairmount, Johannesburg, Transvaal, Union of South Africa
Application November 29, 1956, Serial No. 625,174
Claims priority, application Union of South Africa February 22, 1956
3 Claims. (Cl. 134—135)



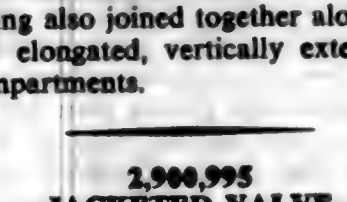
1. A device for cleaning and drying a roller-type applicator for paint and like material comprising, in combination, a cylindrical container having one open end and a closed end, a removable lid for closing said open end, a journal bearing in the central portion of said lid, a thrust bearing in the central portion of said closed end of the container, a circumferential side of said container having a rectangular opening, a trough-like receptacle extending outwardly from said rectangular opening in the container for receiving and retaining a cleansing liquid, a spindle on which the roller is adapted to be coaxially threaded and locked for rotation therewith, said spindle being disposed interiorly of said container with one end portion extending through the open end of the container and its opposite end portion permanently rotatably mounted for limited axial movement in pivoted mounting means, means on the spindle for locking the roller coaxially thereon, said spindle mounting means being swingably disposed within the closed end portion of the container about an axis in parallel spaced relationship with respect to the longitudinal axis of the container and adjacent said receptacle, said mounting means being movable from a lower position in which a roller mounted on the spindle will extend into the cleansing liquid contained in the said trough-like receptacle extension to a raised position in which said roller will be in a raised position above the liquid, said lower position being retained by gravity and said raised position being retained by the lid when applied to the open end of the casing with the spindle extending through the journal bearing in the lid and the thrust bear-

stream of the seat, the extension by-passing the sealed

through; a disk adapted to cooperate with and seat in said

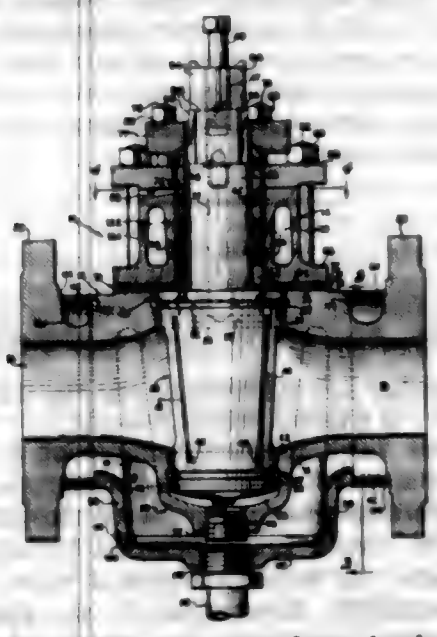
ing, a rotary action being appliable to the roller when in its lower position and when in raised position a spinning action being appliable, such rotating and spinning actions being appliable to the outwardly extending end of the spindle.

2,900,994
COLLAPSIBLE INFLATABLE TENT
John R. Igoe, Kansas City, Mo.
Application October 7, 1955, Serial No. 539,193
1 Claim. (Cl. 135—1)



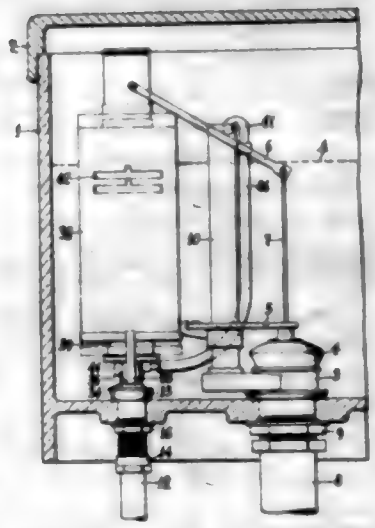
A collapsible inflatable enclosure having the top and sides thereof formed by a substantially semi-cylindrical wall of pliable, air impermeable material, said wall being of double thickness having a pair of spaced layers, said layers being joined together along their edges except for an opening at one end thereof and being joined together along lines whereby to form a plurality of elongated, interconnected air compartments, said compartments extending generally circumferentially of the curvature of said wall and being adapted to receive air under pressure, a floor comprising a pliable sheet member having a pair of opposite parallel edges thereof secured respectively to the longitudinal edges of said semi-cylindrical wall, and a vertical end wall secured around its edges to said floor and to a curved end of said semi-cylindrical wall, said end wall being formed of pliable, air impermeable material and being of double thickness, comprising a pair of spaced layers, said layers being joined respectively to the distal faces of the layers of said semi-cylindrical wall along the edge thereof whereby the opening between the edges of said semi-cylindrical wall layers communicates with the space between said end wall layers, said end wall layers being also joined together along lines to form a plurality of elongated, vertically extending, interconnected air compartments.

2,900,995
JACKETED VALVE
John L. Dickerson, West Salem, Ohio, and Robert H. Herring, Sulphur Springs, Tex., assignors to Rockwell Manufacturing Company, Pittsburgh, Pa., a corporation of Pennsylvania
Application April 20, 1953, Serial No. 349,592
8 Claims. (Cl. 137—340)



1. In a valve housing, a valve body having inner and outer walls defining a space therebetween and a plug bore with inlet and outlet ports to the exterior of the body in fluid isolated relationship to said space, said plug bore having an end opening through said outer wall, a valve cover on said body over said plug bore end opening and having inner and outer walls defining a second space therebetween, conduit means in said body and cover connecting said spaces and means for introducing a fluid temperature control medium into at least one of said spaces.

2,900,996
TOILET TANK SUPPLY VALVE ASSEMBLY
Charley L. Goldtrap, Denver, Colo., assignor of one-third to Dan Kamphausen, Littleton, and one-third to William W. Flemmiken, Englewood, Colo.
Application June 28, 1957, Serial No. 668,788
9 Claims. (Cl. 137—416)



6. A toilet tank supply valve assembly comprising, in combination with a toilet tank having overflow conduit means, a normally upright housing, inlet conduit means adapted for connection to a supply of water, and having an outlet opening into said housing at a point substantially above the top of said overflow conduit means, a control valve for said outlet opening, a float member supported on said housing for rising and falling thereon with said housing extending through said float member, said float member controlling opening and closing movements of said control valve, means venting said housing through the upper end thereof to the interior of said tank at a point above said outlet opening, tank filling conduit means placing the interior of said housing in communication with the interior of said tank exteriorly of said housing and having an entrance positioned between said outlet opening and the top of said overflow conduit means, and bowl filling conduit means opening into said housing and placing the interior of said housing in communication with said overflow conduit means, said bowl filling conduit means having an entrance positioned substantially below the top of said overflow conduit means.

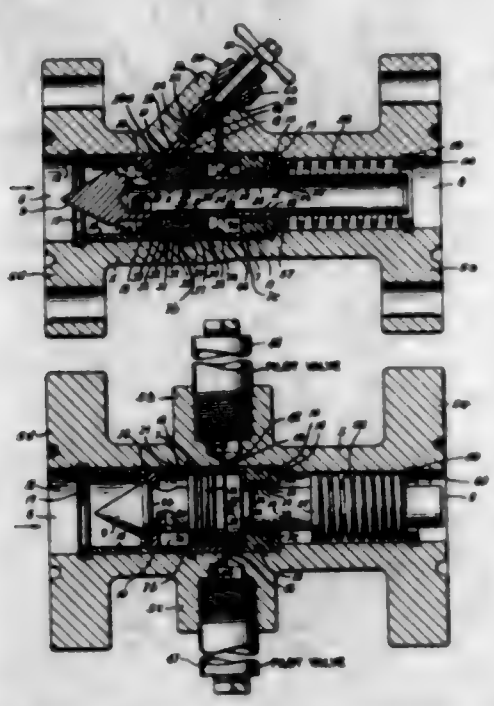
2,900,997
PRESSURE RESPONSIVE VALVE
James H. Bostock, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas
Application July 17, 1953, Serial No. 368,742
15 Claims. (Cl. 137—458)

1. In a safety device, a body with a flow passage, a valve seat in the passage, a valve member urged toward the seat by upstream pressure, a tubular extension on the valve member extending through the seat and carrying a piston, means slidably mounting the tubular extension and providing a sealed control chamber for the piston with the one pressure face of the piston exposed to the control chamber and the other exposed to the passage down-

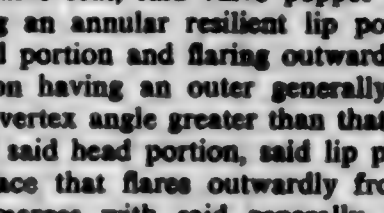
1. Apparatus for treating the surfaces of a workpiece comprising a housing, juxtaposed fluid-distributing mem-

to the open end of the casing with the spindle extending through the journal bearing in the lid and the thrust bear-

stream of the seat, the extension by-passing the sealed chamber, and choke means for selectively communicating between the sealed chamber and the passage upstream of the seat to supply an expansible pressure fluid to the chamber, said piston being movable by pressure of fluid in said chamber in a direction opposite that which said upstream pressure urges the valve member as aforesaid, the ratio of volumes of the chamber, with the valve member in open and seated positions being at least 2:1 such that movement of the piston results in high rate of change of the volume relative to the length of piston travel.

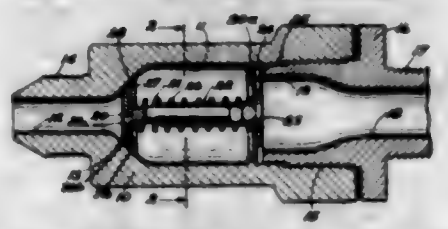


through; a disk adapted to cooperate with and seat in said seat member; shaft means attached to said disk for pivotally suspending said disk, in a cooperating position with respect to said seating member, within the passageway



in said first body member, said shaft means extending without said first body member on opposite sides thereof; a bar trans-axially fixed to each said extended outer end of said shaft means; and balanced weights mounted on said bar on opposite sides of said shaft means.

2,900,999
VALVE SEAL
Louis B. Courtot, Euclid, Ohio, assignor to The Weatherhead Company, Cleveland, Ohio, a corporation of Ohio
Application July 21, 1955, Serial No. 523,589
1 Claim. (Cl. 137—516.25)



In a valve body having a bore therethrough, a conical valve seat formed as part of said bore, a single piece metallic valve poppet element including a stem, said valve poppet element having a head portion with an outer conical surface substantially complementary to that of said conical valve seat, said valve poppet element head portion having an annular resilient lip portion integral with said head portion and flaring outwardly therefrom, said lip portion having an outer generally conical surface having a vertex angle greater than that of said conical surface of said head portion, said lip portion having an inner surface that flares outwardly from said head portion and merges with said generally conical outer lip portion surface to render the lip portion flexible relative to said head portion, initial closure of said valve poppet causing engagement of the periphery of said lip portion with said conical valve seat, further closure of said valve poppet element causing progressive engagement of the outer conical surface of said lip portion with said valve seat which progressive engagement continues until the outer conical surface of said head portion of the valve poppet element engages said valve seat to thereby firmly prevent further closing motion of said valve poppet element.

2. A high pressure safety device having a body with a passageway therethrough, a valve member and a seat controlling the passageway, means providing a sealed pressure chamber within the passageway with a piston reciprocally mounted therein to vary the volume thereof, said piston connected to the valve member and movable to unseat the valve member against upstream pressure acting on the valve member, said piston being exposed exteriorly of the chamber to pressure within the passageway downstream of the seat, an opening in the chamber for venting the chamber controllable by a pilot relief valve, means for supplying an expansible control pressure fluid to the chamber only when the valve member is in full open position and interrupting such supply upon movement of the valve member toward seated position, choke means for selectively admitting an expansible pressure fluid to the chamber when the valve member is seated to provide a force due to pressure acting against the piston to unseat and snap the valve member to open position, the construction and arrangement of the means providing the sealed chamber being such that the volume of the chamber at least doubles as the valve is snapped from seated to open position and this together with the small flow capacity of the choke means produces a reduction of the opening impact force of the valve member as it attains full open position to within acceptable limits.

2,900,998
CHECK VALVE
Russell W. Lertz, Sweeny, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware
Application December 1, 1955, Serial No. 550,340
7 Claims. (Cl. 137—515.3)

4. A check valve comprising, in combination: separable first and second body members having substantially aligned passageways therethrough and cooperating adjacent faces; means for securing said body members together; an annular seat member mounted in the face of said second body member around the passageway there-

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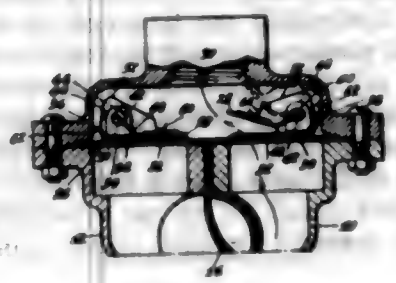
2,901,000
VALVE ASSEMBLY
George W. Wright, Yoder, Ind., assignor to Tokheim Corporation, Fort Wayne, Ind., a corporation of Indiana
Application July 22, 1954, Serial No. 445,030
5 Claims. (Cl. 137—527)

1. A unitary valve assembly, comprising a sheet-metal plate having a port formed therethrough, a rim about said port deformed from the plane of the plate to form a raised valve seat, a bracket carried by said plate adjacent said seat and forming a pivotal valve support on an axis substantially elevated above the plane of said seat, a sheet-metal valve member having a head seating in metal-to-metal contact on said seat and having a

at their upper and lower ends between the flat inside spill-over point for fluid traveling through said spout

lateral tongue projecting from the edge thereof outward and upward from such head into loose pivotal engage-



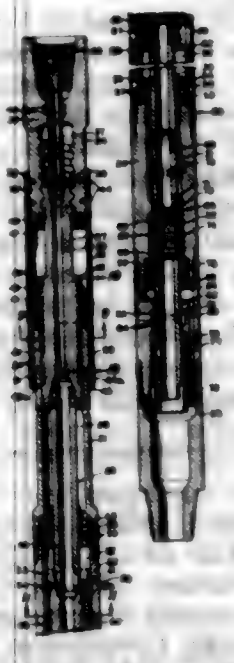
ment with said elevated support, and a spring engaging said head centrally of said seat to bias the valve to closed position.

2,901,001

HYDRAULIC TESTER AND SHUT-IN PRESSURE TOOL

Benjamin P. Nutter, Houston, Tex., assignor, by mesne assignments, to Johnston Testers, Inc., Houston, Tex., a corporation of Texas

Application March 18, 1955, Serial No. 495,247
16 Claims. (Cl. 137—599.2)



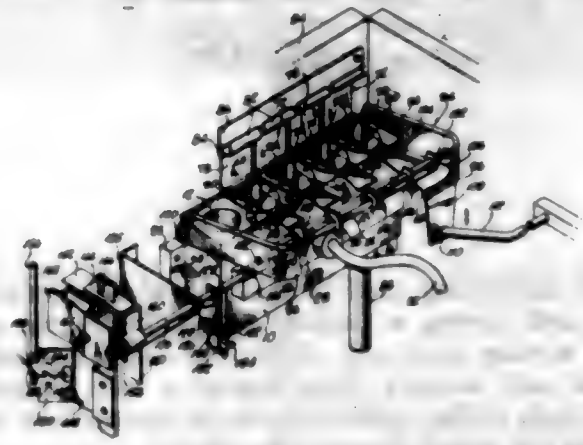
1. In a well tool, a tubular housing, a tubular mandrel mounted in said housing for limited longitudinal movement relative thereto, means for manipulating said mandrel relative to said housing comprising a sleeve telescopically mounted above the upper end of said housing and threadedly connected to the upper end of said mandrel, means on said sleeve and housing adapted to interengage to prevent rotational movement of said sleeve relative to said housing when said sleeve is in its uppermost position relative to said housing and adapted to disengage to permit such rotational movement when said sleeve is moved to its lowermost position relative to said housing, whereby when said sleeve is in its uppermost position relative to said housing said mandrel may be moved from its uppermost position to its lowermost position by downward movement of said sleeve relative to said housing, whereby said mandrel may subsequently be moved upwardly relative to said housing to an intermediate position by rotational movement of said sleeve relative to said mandrel and housing while said sleeve remains in its lowermost position, and whereby said mandrel may be finally returned to its uppermost position by upward movement of said sleeve to an intermediate position relative to said housing.

2,901,002

VALVE MECHANISM

Sollie W. Small and David Herman, Newark, N.J., assignors to Coffee-Mat Corporation, Elizabeth, N.J., a corporation of New Jersey

Application April 10, 1956, Serial No. 577,295
13 Claims. (Cl. 137—635)



1. An improved valve device comprising a casing having a plurality of cavities formed therein, main outlet and inlet conduits communicating with said cavities, a plug member removably located in each of said cavities, the assembly of said plug member in said respective cavity having a passageway formed therein between said outlet and inlet conduits, each of said plug members having a longitudinal bore formed therein, a tubular valve member slidably engaging each of said bores and having an inner end directed into said corresponding passageway and an outer end connected to a source of liquid, a valve seat confronting said inner end of each of said tubular valve members, spring means normally urging said valve member inner ends into closing engagement with said valve seats and means for selectively raising said tubular members to effect the opening of the corresponding valves.

2,901,003

SOLID HEAD TUBULAR CONNECTOR AND METHOD OF MAKING SAME

Seal Rosner, Norwalk, and Fred Heller, Stamford, Conn., assignors to Burndy Corporation, a corporation of New York

Application November 1, 1956, Serial No. 619,793
6 Claims. (Cl. 138—89)

1. The method of forming a solid head in a tube, transverse to the longitudinal axis of said tube, which comprises the steps of locating said tube in a confining die, displacing the material at an area of contact within said confining die from the wall of the tube inwardly in sufficient amounts and with sufficient force to form a solid head of the desired thickness at the area of contact.

5. A tube having a solid head of material displaced from the walls of the tube and disposed perpendicular to the longitudinal axis of said tube, and positioned to form a seal inside the tube, the wall of the solid head being made of denser metal than the walls of the tube.

2,901,004

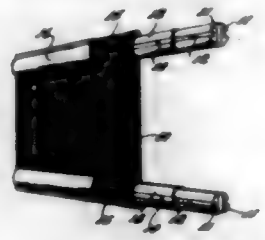
REEDS FOR LOOMS

Frank H. Kaufmann, Huntingdon Valley, Pa., assignor to Steel Heddle Manufacturing Company, Philadelphia, Pa., a corporation of Pennsylvania

Application January 7, 1957, Serial No. 632,886
3 Claims. (Cl. 139—192)

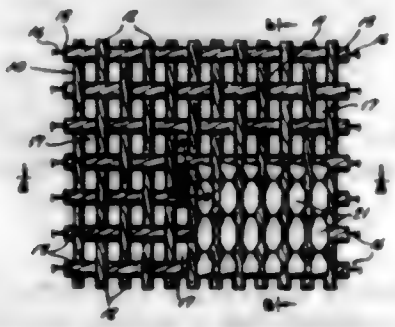
1. A reed for looms comprising a plurality of suitably spaced dents made of thin flat strips of metal secured

at their upper and lower ends between the flat inside faces of a pair of longitudinally extending wooden strips each of substantially semi-circular cross-section, said wooden strips having longitudinally extending grooves in their outside portions, and each of said wooden strips being encased on its outer surface with a complementally



shaped reinforcing shell of sheet metal, said reinforcing shells each having a portion extending into the groove of the wooden strip with which it is associated, and each pair of said wooden strips having a cord wrapped on the outside of the reinforcing shells thereof and passing through the spaces between the dents.

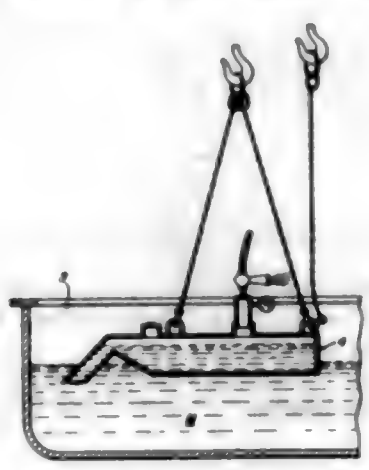
2,901,005
PILE RUGS AND RUG-BASES AND COMPOSITE YARNS THEREFOR
Harold A. Schwartz, Norwalk, Conn., assignor to Patchogue-Plymouth Corporation, a corporation of New York
Application May 27, 1955, Serial No. 511,655
1 Claim. (Cl. 139—420)



A woven textile fabric adapted to form a backing for a tufted rug, said fabric comprising warp and filler threads in loosely interwoven relationship to define a backing having interstices through which tufting needles are penetrable, said warp threads being composed of a ribbon of wet strength twisted paper, said filler threads being a composite of a bulky jute yarn and a flexible pliable thread of fibre glass of relatively small cross-sectional area, which is plied to said jute yarn, said bulky jute yarn being subject to rupture by said needles, said fibre glass thread maintaining continuity of said composite filler threads despite said rupture, thereby to minimize sprouting of said backing.

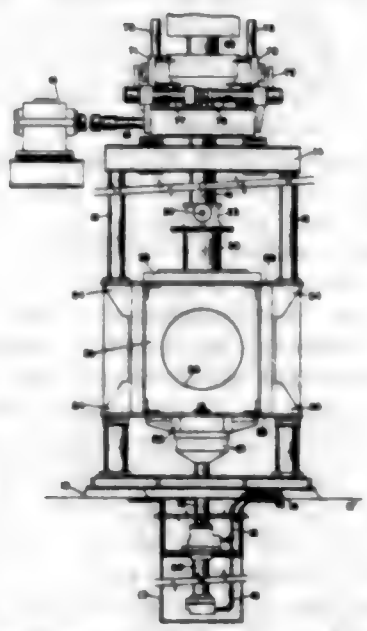
2,901,006
VACUUM BAILING BOAT PARTICULARLY FOR BATHS OF MOLTEN METAL
Steve Andrews, Fairless Hills, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Application January 23, 1958, Serial No. 710,682
1 Claim. (Cl. 141—28)

A bailing boat for removing molten metal fluid and the like from an open top container which comprises a fluid-tight vessel substantially in the shape of a rectangular parallelepipedon, said vessel being substantially shallow and having a length substantially greater than its height, a downwardly and angularly extending spout on one end of said vessel, said spout communicating with the interior of said vessel, said spout being rigid and forming an integral part of said vessel, the junction of said spout with the end of said vessel constituting a spill-over point for fluid traveling through said spout into said vessel, said spill-over point being in a horizontal plane above the horizontal plane containing the bottom of said vessel when the longitudinal axis of said vessel is in a horizontal plane, the distance between the horizontal plane containing the free end of said spout and the horizontal plane containing said spill-over point being greater than the distance between the horizontal plane containing the spill-over point and the horizontal plane containing the bottom of said vessel when the longitudinal axis of said vessel is in a horizontal plane, a connection on said vessel to an air evacuating means for reducing the pressure in said vessel, said last named



means being an ejector mounted on the top of said vessel, a first lift lug on the top of said vessel adjacent the end thereof remote from said spout, a second lift lug on the top of said vessel spaced from said first lift lug at a point adjacent the end of the vessel from which said spout projects, a first lifting means attached to said first and second lift lugs whereby said vessel is adapted to be lifted in a level position, and a second lifting means attached to said first lift lug whereby said vessel can be tilted from a level position to a position wherein the end of said vessel from which said spout projects is below the end of the vessel adjacent said first lift lug to thereby cause emptying of said vessel.

2,901,007
APPARATUS FOR HANDLING MIXTURES OF SOLID MATERIALS
John P. Hubbell, Garden City, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application June 7, 1951, Serial No. 230,308
17 Claims. (Cl. 141—73)



1. A filling and compacting apparatus adapted to deposit a mixture of dust-forming solid materials in a con-

pivoted on said member having one arm positioned for

2,901,013
FRUIT HOLDER

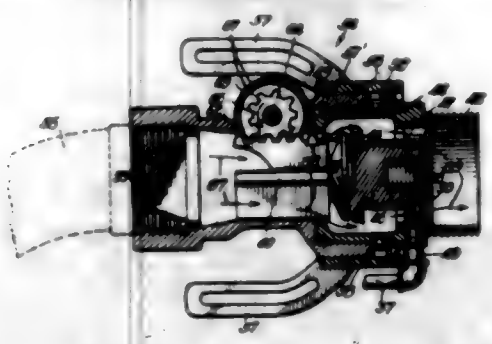
tainer while confining the materials against escape into the surrounding atmosphere including, means supporting said container, a covered hopper receiving said mixture of materials, a movable filling tube connected at one end to said hopper and extending into said container at a second end, compacting means at the second end of said tube interiorly thereof, means for reciprocating said filling tube within said container and means for changing the relative positioning of said filling tube and container in dependence upon the pressure established upon the material by the compacting means as material is compacted in said container.

2,901,008

FUELING SYSTEM

Paul A. Cavett, Evanston, and Preston O. Robards, Chicago, Ill., assignors to Equipment Research Corporation, Chicago, Ill., a corporation of Illinois

Application February 21, 1958, Serial No. 716,681
7 Claims. (Cl. 141—207)



1. A system for automatically shutting off the flow of liquid fuel from a source of the same under pressure to a locomotive having a source of air pressure comprising, in combination, a liquid fuel tank on the locomotive, a nipple providing a fuel inlet passageway to said fuel tank, a cylinder carried by said nipple, a fuel valve for closing said passageway, said fuel valve having a piston slidable in said cylinder, a fueling hose for connection to said source of liquid fuel, a nozzle detachably connected to said nipple and mounted on one end of said fueling hose, a fuel valve in said nozzle for closing the opening therethrough and engaging said fuel valve in said nipple, manually operable means on said nozzle for opening said fuel valves when the same are in engagement, a conduit opening into said cylinder and connected to said source of air pressure, an air valve interposed in said conduit, a float chamber connected to said fuel tank, a float in said float chamber, and means operatively interconnecting said float and said air valve when the fuel in said tank reaches a predetermined level to open said air valve and apply air pressure to said cylinder whereupon said piston moves outwardly to close said fuel valves.

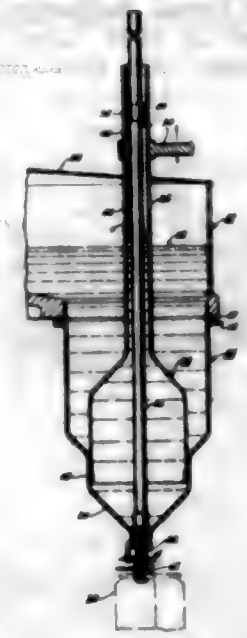
2,901,009

APPARATUS FOR FILLING MILK BOTTLES

Sidney D. Potter, Los Angeles, Calif.

Application September 4, 1956, Serial No. 607,930
3 Claims. (Cl. 141—286)

1. In an apparatus for dispensing measured quantities of milk to containers for distribution to consumers, the combination of: a supply receptacle having a lower portion with a downwardly extending bottom nozzle; means inside said receptacle to isolate a predetermined quantity of the liquid in communication with said bottom nozzle; a valve member inside said lower portion and normally seated on the lower portion to cut off said nozzle, said valve member having an axial extension through said nozzle normally extending below the end of the nozzle when the valve member is in closed position; and an operating means movably mounted on the exterior of said nozzle and having an angular finger dimensioned to extend into the container under said extension of the valve member, said operating means being movable between a normal lower position and an upper position, said angular finger of the operating means being spaced below said extension of the valve member at the lower position of the operating means, said angular finger moving upward against said extension to lift the valve member to open position when said operating means moves from its lower



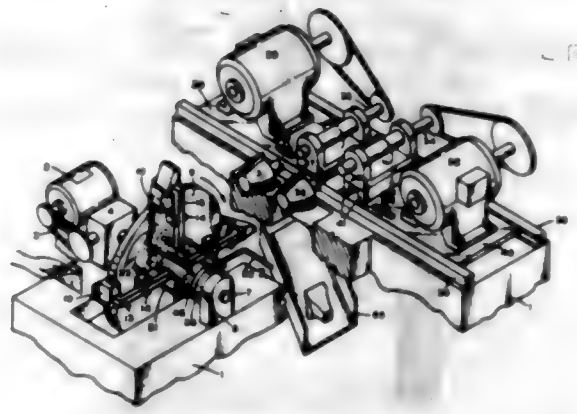
position to its upper position, said operating means extending laterally from said nozzle for engagement with the top of a container to be lifted to its upper position by upward movement of the container thereby to lift said valve member to open position for filling the container, the area of said operating means that is positioned for contact with the container being less than the area of the opening of the container to permit the air in the container to be displaced into the atmosphere.

2,901,010

WOOD HEEL TRIMMING MACHINE

Norris D. Dalton, Affton, Mo., and John F. Smith, Braintree, Mass., assignors, by mesne assignments, to Fred W. Mears Heel Company, Inc., Lawrence, Mass., a corporation of Massachusetts

Application September 24, 1956, Serial No. 611,644
5 Claims. (Cl. 144—154)

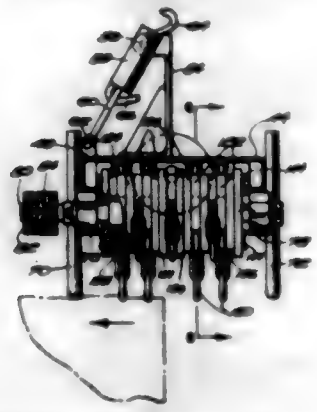


1. In a machine for trimming wood heels, the combination comprising, a rotary disk member providing a heel-blank support, a plurality of heel-blank seats peripherally arranged on said member and having clamp elements at one side of said member, a clamp arm for each of said seats pivoted on the other side of said disk member adjacent the center thereof and having a clamp element opposite said seat, spring means operating to move said arm away from said seat, a fluid-pressure unit on said disk member for each of said arms, and a lever

said spout with the end of said vessel constituting a posit a mixture of dust-forming solid materials in a con-

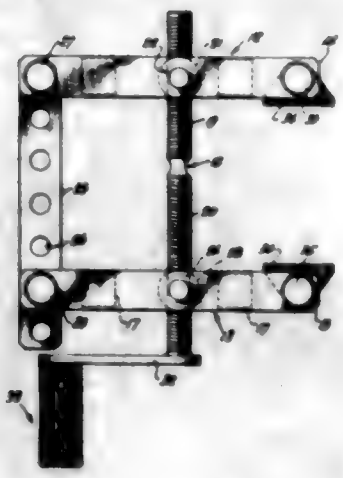
pivoted on said member having one arm positioned for engagement by said unit and another arm engaging said clamp arm to move the same into clamping engagement with a heel-blank in said seat.

2,901,011
CHAIN-TYPE DEBARKING FLAILS CUSHIONED BY RUBBER PLATES COAXIALLY MOUNTED ON A ROTOR SHAFT
John C. Eaton, Rochester, Vt.
Application April 24, 1956, Serial No. 580,209
2 Claims. (Cl. 144—208)



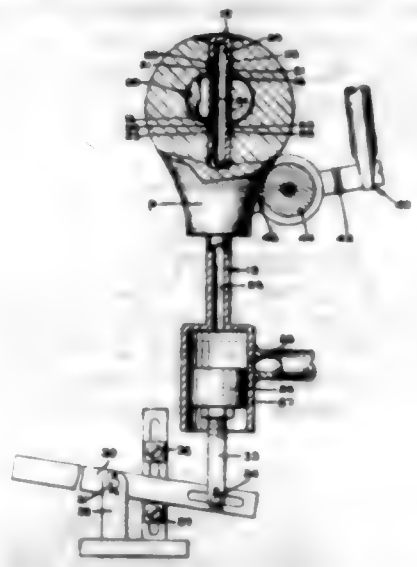
1. A flail head for a debarking machine comprising a rotatable shaft, a plurality of rubber plates mounted on said shaft in coaxial relation therewith, each of said plates having a slot in one of its edges, a plurality of chains, each chain having an end link positioned in the slot of one of said plates, a plurality of rods extending through said plates, each rod extending through said end links of certain of said chains whereby to pivotally attach said chains to said plates, and means at each end of said rods for maintaining said plates together as a compact unit on said shaft.

2,901,012
EXPANSION OR CONTRACTION COMPENSATING CLAMP
Thayer S. Crispin, Malibu, Calif., assignor to Douglas Aircraft Company, Inc., Santa Monica, Calif.
Application May 21, 1956, Serial No. 586,153
4 Claims. (Cl. 144—302)



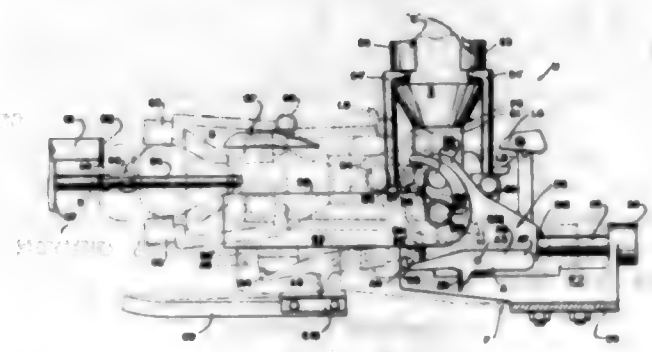
1. In a clamp, the combination of: a pair of spaced levers each having a work-engaging end and an opposite end; a fulcrum member pivotally connecting said levers intermediate their ends; and a compression member extending between said opposite ends and pivotally connected thereto; said compression member having a higher coefficient of linear thermal expansion than that of the fulcrum member; whereby to approach said work-engaging ends closer together upon augmentation of the temperature to which said clamp is exposed.

2,901,013
FRUIT HOLDER
Marshall E. C. Freeman, San Jose, Calif., assignor to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware
Application June 13, 1955, Serial No. 514,991
5 Claims. (Cl. 146—43)



4. In a holder for fruit having a cavity of globular configuration formed therein, the combination of an elongated member having a portion adapted to be positioned in the cavity of the fruit, an inflatable member on said elongated member having a globular configuration when inflated adapting said inflatable member to engage the entire surface that defines the cavity in the fruit, and means in communication with the interior of said inflatable member for inflating said inflatable member to thereby hold the fruit against movement relative to said support member.

2,901,014
FRUIT FEEDING, END TRIMMING, HALVING AND KNOCK-OFF MECHANISM
Burton C. Coons, San Jose, and Willard B. Coons, Santa Clara, Calif.
Application August 2, 1954, Serial No. 447,076
18 Claims. (Cl. 146—72)



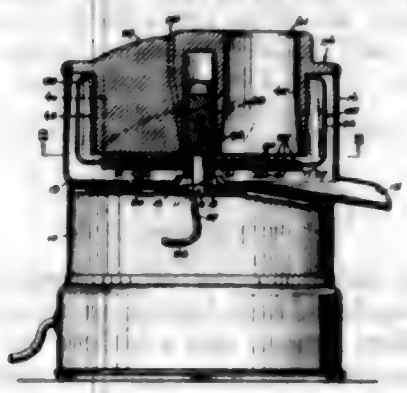
17. A pear processing machine comprising: a stationary frame; a pear impaling spindle journaled in said frame and secured thereto against axial movement; a bed mounted on said frame for movement to and from said spindle in the direction of the axis thereof; a carriage mounted on said bed for movement relative thereto in the direction of the axis of said spindle; releasable latching means operatively associated with said bed and said carriage; a pear receiving and feeding cup mounted on said carriage for coaxial disposition relative to said spindle and arranged to impale a pear on said spindle coaxially therewith; a latching trip and pear sensing member mounted on said frame immediately adjacent said spindle and in the path of a pear impaled thereon, said trip and sensing member being movable to and

side wall for said groove, and fastening elements extending through said tubular end portion inwardly into said

ings in a series of said pads to form a circle of pads, substantially deforming the pads elastically by pressing them

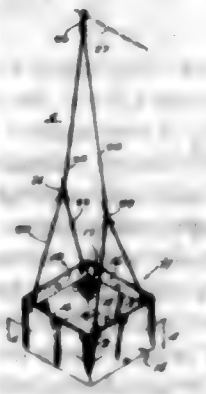
away from said carriage and being resiliently biased towards said carriage; and means responsive to the movement of said trip and sensing member away from said carriage for releasing said latching means and arresting the further movement of said carriage towards said trip member.

2,901,015
FRUIT AND VEGETABLE JUICER
Harvey F. Swenson and André A. Baudet, Seattle, Wash., assignors to Sweden Freezer Manufacturing Co., Seattle, Wash., a corporation of Washington
Application March 19, 1956, Serial No. 572,298
3 Claims. (Cl. 146—76)



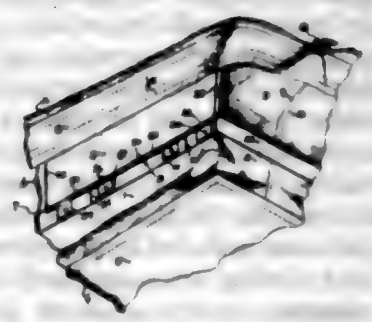
1. In a fruit and vegetable juicer, in combination: a mounting base having an electric motor housed therein with the motor's armature shaft projecting above the base, a bowl surmounting the base with an opening in its center to accommodate the armature shaft, a fly-wheel having a hub providing a bore in which said armature shaft is received, a screw adjustably threaded in the floor wall of said bore with the head bearing freely against the armature shaft to regulate the vertical setting of the fly-wheel, said screw being completely contained within the hub, a rotary basket having a perforated side wall and an imperforate floor, a rotary cutting disc presenting multiple upstanding cutting teeth, means detachably securing said basket and disc to the fly-wheel with the latter centered upon the floor of the basket and the former centered upon the fly-wheel, and means carried by the bowl depending into the basket and forming a delivery throat terminating immediately above the upper limits of the teeth for feeding the material which is to be juiced into cutting relation thereto.

2,901,016
CLOTHES PIN BASKET
Arthur E. Wilbricht, San Antonio, Tex.
Application June 27, 1958, Serial No. 744,996
1 Claim. (Cl. 150—1.8)



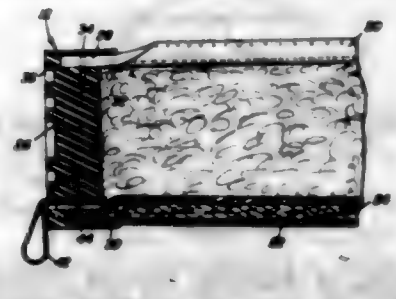
A clothes pin basket comprising a rigid square frame, a square receptacle of flexible material provided with a hem at its top margin receiving the frame, respective inwardly extending apertured lugs secured to opposite side elements of said frame adjacent the corners of the frame and extending through said hem, flexible cable members secured to said apertured lugs, respective additional flexible cable members connected to the outer ends of opposing pairs of the first-named cable members, a snap hook member secured to the outer ends of the last-named cable members, a plurality of spaced eyelets in the bottom wall of the receptacle, a square rigid bottom board in said receptacle, said bottom board being formed with apertures registering with said eyelets, and a flexible cord member laced through said registering apertures and eyelets and fastened thereto so as to detachably secure said bottom board to the bottom wall of the receptacle and to rigidify same.

2,901,017
TOILET CASE WITH A SPRING ACTUATED COVER
Emil K. Renz, Dedham, and George Miller, Wellesley, Mass., assignors to Knight Leather Products, Inc., Jamaica Plain, Mass., a corporation of Massachusetts
Application January 14, 1957, Serial No. 633,915
6 Claims. (Cl. 150—3)



1. A case having continuous flexible sidewalls, endwalls and bottom, means forming a pair of opposite cover members in the upper portions of the opposite sidewall members with longitudinal hinge lines along each sidewall member, a frame member of continuous rigid material having a cross sectional configuration substantially rectangular in shape and substantially fitted to said sidewalls and end walls at the upper ends thereof, torsional spring means each having torsional sections and a pair of end sections angular thereto with said torsional sections secured to and one end section of each spring means bearing against said frame member, with the other end section of each torsional spring means bearing against one of said cover members for tensioning said cover members toward a preselected position.

2,901,018
FIREARM CASE WITH RUBBER BUMPER
Howard H. Kolpin, Berlin, Wis.
Application December 24, 1957, Serial No. 704,960
3 Claims. (Cl. 150—52)



1. In a gun case, the combination of a hollow case body having a substantially tubular end portion, a combined closure and bumper member for said body, said member comprising a block of resilient material having a face formed with a continuous annular groove receiving said tubular end portion of said body therein, said groove being disposed adjacent the marginal edge of said block whereby to provide a relatively thin and flexible out-

perature to which said clamp is exposed.

said trip and sensing member being movable to and

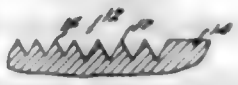
side wall for said groove, and fastening elements extending through said tubular end portion inwardly into said block, said outside wall being bendable outwardly to facilitate insertion of said fastening elements but normally lying against said tubular end portion whereby to conceal the fastening elements in the latter.

2,901,019

SELF-TAPPING AND SELF-LOCKING EXTERNALLY THREADED FASTENER HAVING LOCKING SECTION OF GREATER PITCH

Howard B. Schweppe, Detroit, Mich.

Application December 28, 1955, Serial No. 555,826
1 Claim. (Cl. 151—22)



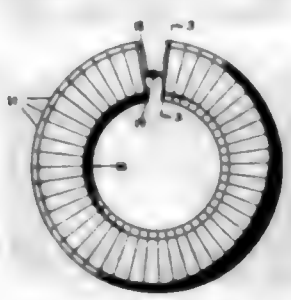
A self-tapping and self-locking externally threaded fastener comprising an anchor portion having substantially V-shaped thread convolutions continuously over its length, said anchor portion having a threaded self-tapping section immediately inwardly of its entering end including a thread cutting structure having metal cutting edges, an intermediate section of constant pitch and of substantially standard root surfaces inwardly of said self-tapping section and a threaded self-locking section of constant pitch and of substantially standard root surfaces inwardly of said intermediate section, the threads of said self-locking section having the same included angle between the flanks of the thread and similar cross-sectional form and the same outside diameter as the adjacent threads of the intermediate section but being of greater pitch and lesser root diameter than the threads of said intermediate section, said self-locking section being formed on said anchor portion in the last few thread convolutions at the rearward end thereof, the change in pitch being of the order of ½ thread per inch and being accomplished over approximately a single thread convolution so as to lock in the threads formed by said self-tapping section when the fastener is rotated into the work and so that substantially all of the locking occurs at the flanks of the threads with a minimum of cold working and with a uniform and controllable torque buildup.

2,901,020

WHEEL FOR VEHICLES

Charles S. Starr, Hixson, and Oliver G. Barnes, Chattanooga, Tenn., assignors to Notat Tire Company, Chattanooga, Tenn., a corporation of Tennessee

Application March 4, 1955, Serial No. 496,475
(Filed under Rule 47(a) and 35 U.S.C. 116)
4 Claims. (Cl. 152—307)



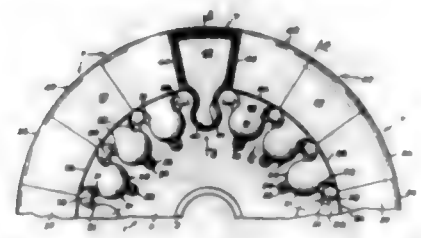
1. The process of building vehicle wheels from uniform wedge-shaped pads of resilient material and of fabric which comprises stamping the pattern of the pad from a section formed by a layer of resilient material of substantial thickness bonded to a layer of fabric of substantial thickness, tapering the opposite faces of the section, fastening a pair of sections together in abutting relation to form a pad, forming an opening through each pad, inserting a length of metal band through the openings in a series of said pads to form a circle of pads, substantially deforming the pads elastically by pressing them heavily against each other, securing the ends of the band together, and releasing the pressure on the pads to allow them to abut while substantially deformed elastically face to face against each other in the shape of a wheel.

2,901,021

TIRE AND WHEEL CONSTRUCTION

Leo Y. Booharin, San Francisco, Calif., assignor of thirty percent to Casimir David, and thirty percent to Morris Katz, both of San Francisco, Calif.

Application September 27, 1956, Serial No. 612,503
4 Claims. (Cl. 152—334)



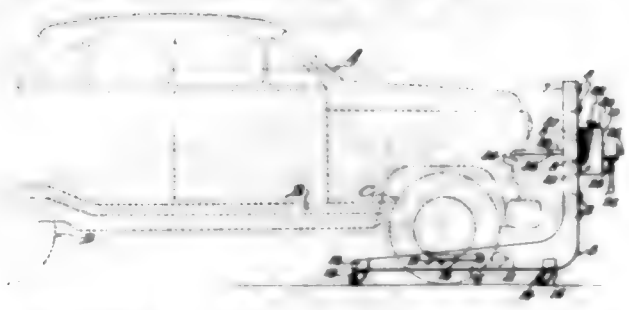
1. A wheel and tire construction comprising a plurality of tire sections, each having an anchoring unit in form of a hollow sphere, and a hollow tire unit having a top, sides and two end walls, said tire units forming a tire proper with an uninterrupted continuous circumferential surface and sides; a disk having a plurality of sockets in the periphery thereof, each socket being formed with a hemispherical depression to admit the sphere of the tire section; and a neck extending from said socket and being flared out to form substantially a rectangular rim for supporting the tire unit; and retainers for closing each socket and locking the sphere therein, each of said retainers being formed with hemispherical and neck depressions and each having a flared out rim to complement the disk rim.

2,901,022

APPARATUS FOR CORRECTING COLLISION DAMAGE

Edward D. Wilkerson, Northfield, N.J.

Application October 6, 1953, Serial No. 384,470
14 Claims. (Cl. 153—32)



8. In apparatus for correcting collision damage in an automobile resting upon a base, the combination of a draft device, means resting at two spaced points on the base for supporting said draft device, means adjustably mounting the draft device on said supporting means so that it can be placed on said supporting means at a selected position vertically and laterally with respect to and opposite a distorted automobile part, means for effecting connection of the draft device with said part so that manipulation of the draft device will exert a force in a direction for pulling the part toward its prior shape, and means on said supporting means and engageable at two widely spaced points with stationary portions of the automobile for pressing directly thereagainst and exerting thereagainst a reaction force in a direction opposite the part reshaping force, said draft device being supported on the device supporting means in position to exert its part reshaping force

being pivotally connected to said seat frame, and a coil

hold the edge portion of said cover, said gripping means

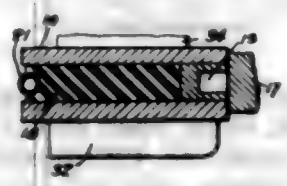
in a generally horizontal direction and said means engageable with stationary portions of the automobile for exerting the reaction force being supported on said device supporting means in position to apply the reaction force against opposing lower wheel quaters so that when it is drawn against the wheels its engagement with the wheels will be effective to exert a downward force component and hold the supporting means against the supporting base and the draft device from swinging upward out of the intended line of the part reshaping force.

2,901,023

TUBE BENDING DIE WITH FLOWABLE RUBBER PAD TO PREVENT COLLAPSE OF THE TUBE

Herbert Tettelmann, Wabun, Mass.

Application September 24, 1954, Serial No. 458,293
9 Claims. (Cl. 153—48)
(Granted under Title 35, U.S. Code (1952), sec. 266)



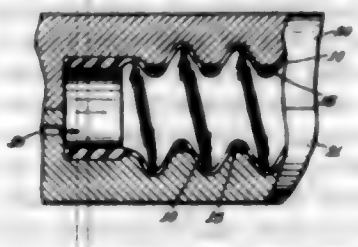
1. A pipe bending die comprising a casing having a chamber therein with an open edge and otherwise closed, and a body of elastic and incompressible but deformable material confined snugly in said chamber and having its exposed surface at said open edge of the chamber of convexly arcuate shape corresponding to the curvature of a bend to be placed in said pipe, and over which a pipe may be bent when the part of the pipe to be bent is disposed lengthwise of itself along the curvature of said arcuate surface, whereby the pipe when said arcuate surface is pressed against it will indent itself somewhat into said body and displace by deformation some of the elastic body sidewise up along the sides of the pipe where it resists sidewise deformation of the pipe at the bend during the bending.

2,901,024

METHOD OF MAKING HOSE

John F. Marsden, Jr., Malone, N.Y., assignor to Fred T. Roberts and Robert E. Roberts, both of Wilton, Conn.

Application August 15, 1957, Serial No. 678,277
10 Claims. (Cl. 154—8)



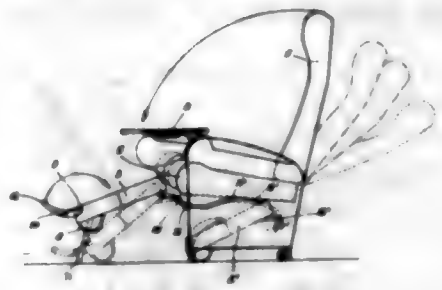
1. The method of making a reenforced hose comprising forming a tubular body of moldable elastic material, preforming a strip of moldable reenforcing material similar to, but harder than the material of said body, applying said preformed reenforcing strip to the exterior of the body at predetermined spaced points along said body, inserting said body into a mold cavity having corrugated walls with said strip disposed in predetermined position with respect to the corrugated walls, applying fluid pressure to the interior of said body to cause the body and reenforcing strip to be pressed into engagement with the corrugated walls of the cavity to form a hose with corrugated walls, with the reenforcing strip being integrated with the wall and being molded in situ in the mold to blend into and form the outer surface of the corrugated wall.

2,901,025

SEATS WITH RETRACTABLE LEG AND FOOT REST

Robert Mallita, Chatenay-Malabry, France

Application April 1, 1955, Serial No. 498,695
Claims priority, application France July 8, 1954
2 Claims. (Cl. 155—111)



1. A chair comprising a pair of laterally-spaced side support means, a seat bridging between said pair of support means above the base level of said support means, said seat and said support means forming a forwardly-opening recess below said seat; leg-support means movable from an operative position wherein it forms a forward continuation of said seat to an inoperative position wherein it is stowed in said recess, and vice versa; a double-acting spring tensioned in each position of said leg-support means to urge the latter to its other position; first lock means automatically acting to lock said leg-support means against the action of said spring in the inoperative position; second lock means acting automatically to lock the leg-support means against the action of said spring in the operative position; first remote control means actuable by the operator to release said first lock means to initiate movement of said leg-support means to the operative position; second control means actuable by the operator to release said second lock means to initiate movement of said leg-support means to the inoperative position; in said leg-support means, a transverse shaft mounted between said laterally-spaced side support means; a carrier mounted for pivotal movement at one of its ends about said transverse shaft; a transverse tube on the free end of said carrier, a frame section mounted for pivotal movement about said transverse tube, a first cross member on said frame section, and a second cross member mounted across said carrier; said double-acting spring being of coil construction with projecting extremities and a projecting loop intermediate the latter, said double acting spring being mounted around said tube with its extremities on the one hand and its projecting loop on the other hand bearing respectively against said first and second cross members, the disposition of said spring extremities and intermediate loop and of said cross members being such that the spring is tensioned when the leg-support means is in both the operative and inoperative positions.

2,901,026

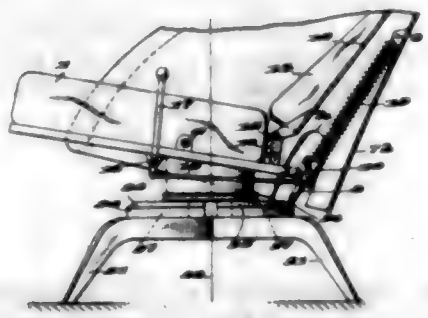
RECLINING CHAIR

Herbert V. Thaden, High Point, N.C., assignor to Thaden Molding Corporation, High Point, N.C., a corporation of North Carolina

Application August 27, 1957, Serial No. 680,466
4 Claims. (Cl. 155—116)

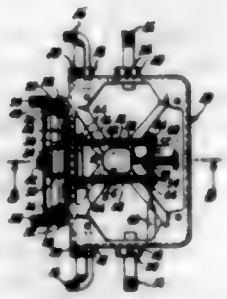
1. A reclining chair comprising a base; a seat frame rotatably connected to said base for rotational movement about a vertical axis with respect to said base; a rigid shell pivotally connected to said seat frame and having a substantially vertically disposed back portion and arm portions substantially at right angles to said back portion; spring means biasing said shell to its normally erect position with respect to said seat frame comprising a shell supporting rod pivotally connected at its upper extremity to the back portion of said shell, a tubular member adapted to slidably receive said rod, said tubular member

being pivotally connected to said seat frame, and a coil spring positioned about said rod intermediate said tubular member and the pivot connection of the rod to the shell; and means for supporting said shell in a first reclined position with respect to said seat frame, said supporting means comprising a cylindrical member secured to the base adjacent the swivel mounting, said cylindrical



member having a circular track thereon concentric with the swivel axis, and a roller member secured to the lower extremity of said rod and adapted to ride on said circular track when the shell is pivoted rearwardly to a first reclined position with respect to the seat frame so that the shell will be supported by said rod and the base for 360° rotation of the seat about the swivel axis.

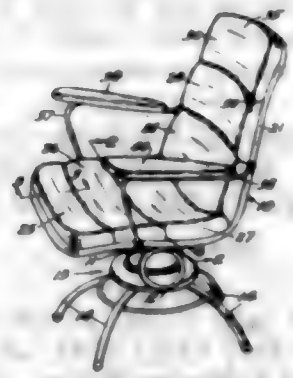
2,901,027
ADJUSTABLE CHAIR
Clifford C. Dickson, St. Paul, Minn., assignor to Michael F. Murray, St. Cloud, Minn.
Application December 21, 1956, Serial No. 629,906
4 Claims. (Cl. 155—160)



1. In a chair having a seat support and an upstanding back rest pivoted thereto on a horizontal axis, a control structure comprising relatively slidable first and second portions, spring means urging said portions to relatively extended positions in a fore-and-aft direction, said first portion being mounted on said seat support and said second portion being connected to said back rest below said axis, means for adjusting the position of said first portion on said seat support in a fore-and-aft direction, and locking means for locking said portions against relative sliding in any selected one of a plurality of predetermined relative positions thereof.

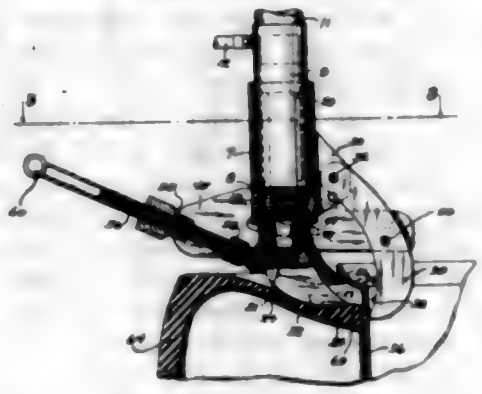
2,901,028
SEAT CONSTRUCTION
Merton M. Bottemiller, Wadena, Minn.
Application March 1, 1957, Serial No. 643,371
7 Claims. (Cl. 155—184)

1. In a seat construction, a seat base, a pad of resilient material of substantially the same area configuration as said base and secured to said base except for a short peripheral portion adjacent the edge of said base, a cover extending over said pad of resilient material with the edge portion of said cover extending beneath the free edge of said pad, gripping means disposed adjacent the under side of said pad near the edge thereof to grip and detachably hold the edge portion of said cover, said gripping means being accessible upon flexure of the edge of said pad away



from said base, and means for detachably securing the main portion of said cover to said base.

2,901,029
RIM CLAMPING, TIRE-BEAD-BREAKING TOOL
John B. Mraz, Fond du Lac, Wis.
Application January 14, 1957, Serial No. 634,022
2 Claims. (Cl. 157—1.17)



1. In a device for exerting pressure on the bead portion of a tire for dismounting it from a rim, the combination with a frame and a jack mounted thereon and having a downwardly extensible ram, of a rim-engaging jaw connected with the frame and extending downwardly and outwardly for engagement with the inner periphery of a tire rim, a pair of laterally spaced jaws complementary to the jaw first mentioned and having toothed portions extending downwardly and inwardly for engagement within the flange of said rim, means for effecting relative approaching movement between the jaw first mentioned and the laterally spaced jaws whereby the laterally spaced jaws are forced inwardly with the apices of the pair of jaws bearing along the rim flange and between the flange and the tire bead engaged therewith, and a head connected with the jack ram and normally lying between the laterally spaced jaws and extending to an apex adapted to be forced with said jaws between the rim flange and tire bead whereby, upon the extension of said ram, the said head will engage the tire in proximity to its bead in a direction to displace the bead portion of the tire from adhesion to the rim flange, the jaw first mentioned having pivotal connection with the frame and the laterally spaced jaws being rigidly connected therewith, an operating screw in swivel connection with the laterally spaced jaws and provided with a nut yoke having links connecting it with the jaw first mentioned and constituting means for effecting relative movement between the jaw first mentioned and the laterally spaced jaws, the laterally spaced jaws having laterally projecting studs and the links having guide slots engaged with the studs whereby the force exerted by the screw maintains the apices of the laterally spaced jaws in bearing relation on the rim flange.

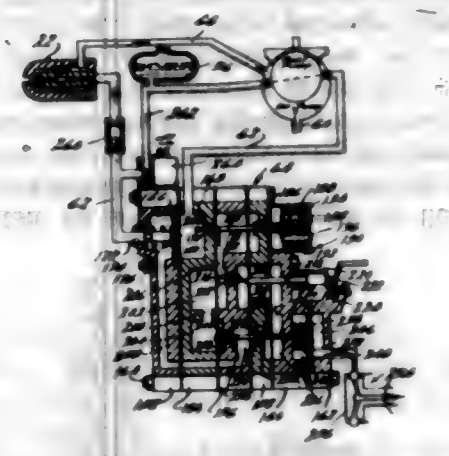
a plane which includes at least one line extending radially with respect to the axis of said shell member, each of

means leading to a pilot burner; second gas outlet means leading to a main burner; main valve means arranged

2,901,030
LIQUID FUEL CONTROL MECHANISM

Alexander Chadwick, Inkster, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Application February 8, 1955, Serial No. 486,816
2 Claims. (Cl. 158—36.4)



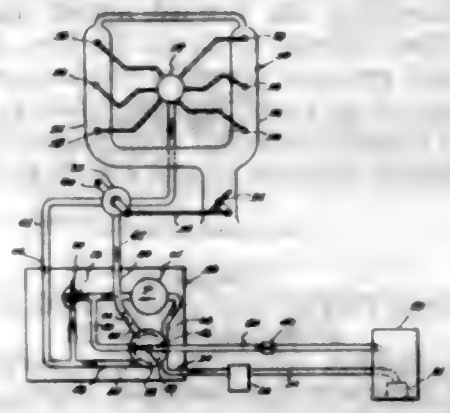
1. In a liquid fuel control means for an internal combustion engine, the combination of a fuel delivery conduit for connecting said engine with a source of pressurized fuel, throttle valve means, said conduit including a chamber downstream of said throttle valve means, a branch conduit in communication with the first-named conduit upstream of said throttle valve means and bypassing the latter, an acceleration metering orifice and an idle metering orifice comprising portions of said first-named and branch conduit respectively and extending through the walls of said chamber at spaced locations, a fuel scheduling and overspeed governor valve means, a starting fuel scheduling and idle speed governor valve means, the two scheduling and governor valve means comprising separate metering rod portions on a common movable element, said separate rod portions being movable respectively within said acceleration metering and idle metering orifices, speed responsive means operatively connected with said element for progressively moving the same in one direction or the opposite with increasing or decreasing engine speed respectively, each metering rod portion having an intermediate section of reduced cross sectional area, the metering rod portion in said acceleration metering orifice being arranged to reduce the restriction to fuel flow through the latter orifice progressively upon movement in said one direction under engine accelerating conditions from a position corresponding to a predetermined idling speed to a position corresponding to a predetermined upper speed proximate the maximum allowable speed of said engine and to increase the restriction to fuel flow through the latter orifice upon continued movement in said one direction beyond said last-named position, the metering rod portion in said idle metering orifice being arranged to reduce the restriction to fuel flow through the latter orifice progressively upon movement in said one direction from a position corresponding to an engine starting condition to a position corresponding to said predetermined idling speed and to restrict the fuel flow through said idle metering orifice progressively upon continued movement of the latter metering rod portion in said one direction beyond the latter position, thereby to close said idle metering orifice at speeds above said predetermined idling speed.

2,901,031
FUEL SYSTEM

Robert J. Powell and James E. Champion, Muskegon, Mich., assignors to Continental Motors Corporation, Detroit, Mich., a corporation of Virginia

Application February 13, 1957, Serial No. 640,044
15 Claims. (Cl. 158—36.4)

1. In a fuel delivery system for an internal combustion engine, a fuel tank, a fuel pump for pumping fuel from said tank to said engine and having a capacity in excess of the fuel requirements of the engine, a fuel metering means for metering fuel to said engine, fuel conducting means connecting the intake side of said pump and said tank, a vapor separator disposed in said conducting means upstream of said pump and comprising a casing having a centrifuge chamber, a fuel inlet, a fuel outlet, a vapor outlet, and means inducing a substantially rotary motion to fuel in said chamber to centrifugally separate rela-

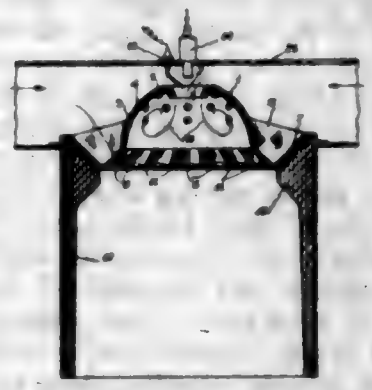


tively light weight vapor and heavier weight fuel, a second fuel conducting means directly connecting the outlet side of said pump with said fuel tank to return excess fuel under pressure to said fuel tank, said vapor outlet connected with said second conducting means, and means reducing pressure at the junction of said vapor outlet with said second conducting means to a value below the pressure in said chamber, said last means being thereby operable to extract vapor from said chamber into said second conducting means.

2,901,032
COMBUSTION APPARATUS

Gabriel Brola, Bourg La Reine (Seine), France, assignor to Société Anonyme dite: Generale Thermique-Procedes Brola, Le Pre Saint Gervais, France

Application November 22, 1955, Serial No. 548,491
Claims priority, application France November 24, 1954
2 Claims. (Cl. 158—76)



1. In combustion apparatus, the combination of a concave-convex shell member having a centrally located axial air-inlet aperture, an injector nozzle located outside of said shell member at the convex side of the latter and aligned axially with said air-inlet aperture for injecting divided fuel into said shell member through said air inlet aperture, ignition means for igniting the divided fuel issuing from said injector nozzle, said shell member further having openings therein for the admission of secondary air, a frusto-conical annular wall extending coaxially around said shell member and spaced radially from the latter with said annular wall converging in the direction in which said shell member is concave, and a plurality of angularly spaced fin elements extending radially between said shell member and said annular wall to define air-inlet passages for tertiary air between the successive elements, each of said elements being symmetrical about

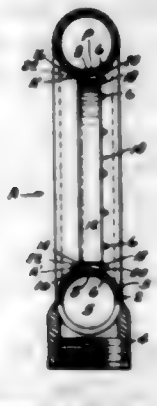
said pad, gripping means disposed adjacent the under side of said pad near the edge thereof to grip and detachably the screw maintains the apices of the laterally spaced jaws in bearing relation on the rim flange.

a plane which includes at least one line extending radially with respect to the axis of said shell member, each of said elements increasing in thickness in the direction toward the end face of the element between the small diameter edge of said annular wall and the edge of said shell member so that said air-inlet passages are convergent in the direction of the flow of the tertiary air therethrough, said small diameter edge of the annular wall extending beyond said edge of the shell member in the axial direction so that said end faces of the fin elements and the passages therebetween are directed toward said axis of the shell member, thereby to direct the flow of tertiary air through said passages toward a combustion zone at the concave side of said shell member while the flow of tertiary air is rendered turbulent upon release from said convergent air-inlet passages at said end faces of the fin elements.

2,901,033
FLAME RETENTION PILOTING DEVICE FOR GAS BURNER

James D. Holden, Memphis, Tenn., assignor to C. J. Gaskell Company, Inc., Memphis, Tenn., a corporation of Tennessee

Application June 20, 1956, Serial No. 592,522
5 Claims. (Cl. 158—116)



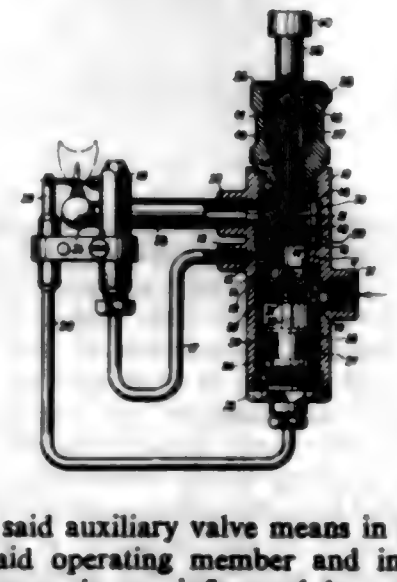
4. A gas burner comprising a conduit having a side wall, said conduit having a row of main burner ports through the side wall thereof, an elongate shield having a side wall substantially U-shaped in cross-section mounted on one side of said conduit adjacent said row of main burner ports, the length of said shield extending lengthwise of the conduit along the entire length of the row of main burner ports, the concave side of the shield side wall facing the side wall of the conduit and defining a mixing chamber on said side of said conduit between the side walls of the shield and conduit, said shield side wall having one leg of the U thereof disposed adjacent said row of main burner ports, the free end of said one leg being spaced from the side wall of the conduit and defining between said free end and said side wall a slit restricted in cross-section with respect to the cross-section of said mixing chamber and constituting an elongate pilot flame opening extending along the entire length of said row of main burner ports, said main burner ports terminating outside the confines of said shield, said conduit including means for supplying raw gas to said main burner ports and to said mixing chamber, and other ports through the shield side wall for supplying air to said mixing chamber.

2,901,034
VALVE ARRANGEMENT

Heinrich Puttfarcken and Rudolf Schork, Wernau (Neckar), Germany, assignors to Junkers & Co., G.m.b.H., Wernau (Neckar), Germany

Application July 1, 1957, Serial No. 668,940
Claims priority, application Germany July 14, 1956
15 Claims. (Cl. 158—131)

1. A valve arrangement comprising, in combination, a housing; gas inlet means in said housing; first gas outlet means leading to a pilot burner; second gas outlet means leading to a main burner; main valve means arranged between said gas inlet means on the one hand and said first and second gas outlet means on the other hand; first spring means permanently tending to close said main valve means; holding means adapted to hold said main valve means in open position, said holding means being automatically actuated when said pilot burner is lighted; auxiliary valve means arranged in sequence after said main valve means and between said first and second gas outlet means; second spring means permanently tending to move said auxiliary valve means into closed position; an operating member; means mounting said member in said housing for movement between an inoperative posi-



tion in which said auxiliary valve means in held in open position by said operating member and in which said main valve means is not influenced by said operating member and an operative position in which said auxiliary valve means is released by said operating member and is moved toward its closed position by said second spring means and in which said main valve means is opened by said operating member against the action of said first spring means; and said mounting means including guiding means for so guiding said operating member between its inoperative and operative positions that said operating member stays in any desired intermediate position thereof between said inoperative and operative positions, when moved into such position.

2,901,035
VENETIAN BLIND HOLD-DOWN ARRANGEMENT

Joseph A. Anderle, Westerleigh, N.Y., assignor to Lorentsen Hardware Mf'g. Corp., Hoboken, N.J., a corporation of New York

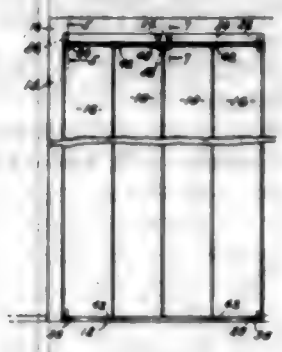
Application August 16, 1955, Serial No. 528,693
5 Claims. (Cl. 160—178)

1. In a Venetian blind organization in which the bottom bar of the blind is provided with gudgeon pins extending from the ends thereof and hold-down brackets are provided for receiving the gudgeon pins and holding the blind against substantial swinging movement, the improvement which comprises: each hold-down bracket having a hollow oval portion for receiving and retaining its associated gudgeon pin, the oval having about midway between its top and bottom a side opening of somewhat lesser height than the diameter of the gudgeon pin and providing for horizontal entry of the gudgeon pin into the oval with

wardly immediately below said top wall portion and the operable to feed a tape one column for each punch cycle,

the bottom bar at normal level, the oval formation being sufficiently yieldable for the gudgeon pin to be forced horizontally sidewise through the side opening to locate the pin within the oval and the oval formation being sufficiently resilient to restore the side opening to approximately its original size and thereby hold the gudgeon pin against fortuitous disengagement from the oval, the shorter diameter of the oval being disposed substantially horizontally and being slightly in excess of the diameter of the gudgeon pin and the longer diameter of the oval being disposed substantially vertically and being considerably in excess of the diameter of the gudgeon pin whereby the gudgeon pin may freely rise and fall in the oval as the slats of the blind are tilted.

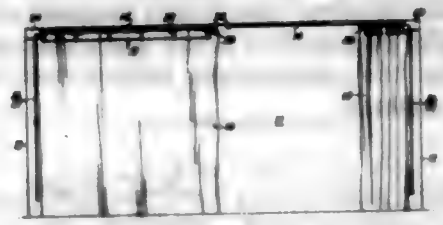
2,901,036
FOLDING DOOR ASSEMBLY
James W. Greig, Grosse Pointe Park, Mich., assignor to Woodall Industries, Incorporated, Detroit, Mich., a corporation of Michigan
Application October 1, 1956, Serial No. 613,131
2 Claims. (Cl. 160—206)



1. In a folding door assembly comprising a door frame having a header channel extending lengthwise along the header and open downwardly, and comprising two complementary door sections hinged together along two vertical edges to fold toward each other or to be unfolded in a planar alignment, one door section provided with a socket in its top edge and provided with a threaded nut fixed in its bottom edge which said nut and socket are disposed in vertical alignment, a header pintle fixed in the header channel and projecting downwardly therefrom and vertically slidably received within the socket in the upper edge of the door, a threaded stud threadedly received within the nut in the bottom edge of the door for adjustment of the stud upwardly and downwardly therein, said stud provided on its lower end with a mounting plate fixed thereon for adjustment up and down with the stud, said plate adapted to be secured to the door frame to support the stud projecting upwardly therefrom, said door being swingable upon the threaded stud by threaded relative rotation of the stud and nut, a pivot pin secured to the other door section adjacent to the free vertical margin thereof and projecting upwardly therefrom, said pivot pin provided with a roller on its outer end adapted to travel through the header channel.

2,901,037
APPARATUS FOR HANGING DRAPERIES
William B. Yohner and James Joseph Miknak, Sacramento, Calif.; said Yohner assignor to said Miknak
Application May 3, 1956, Serial No. 582,553
2 Claims. (Cl. 160—346)

1. In a device of the character described, means adapted to support a drapery of the type which is adapted to be pleated by a deformable resilient member positioned in a horizontal tunnel in said drapery, said means comprising a horizontal C-shaped track, a plurality of support members mounted in said track and adapted to be moved longitudinally therealong comprising a roller, a mounting for said roller, and an extensible member secured to and extending from said mounting, each of said extensible members being provided with a pointed end having a flange thereabouts, vertical tubular members



on said resilient member receiving said pointed ends and resting on said flanges, and means for opening and closing said drapery comprising cords secured to selected support members.

2,901,038
SUN VISOR
Gerhard Herr, Wuppertal-Vohwinkel, and Willy O. Treber, Wuppertal-Elberfeld, Germany, assignors to Gebruder-Happich-Gesellschaft mit beschrankter Haftung, Wuppertal-Elberfeld, Germany
Application March 21, 1956, Serial No. 572,997
Claims priority, application Germany April 4, 1955
3 Claims. (Cl. 160—354)

2. A soft, elastic, flat sun visor for a motor vehicle, comprising a pair of outer covering sheets joined together along abutting edges thereof, a resilient wire of a configuration complementary to the outer contour of said covering sheets disposed in said sun visor in an imaginary plane dividing said sun visor in two longitudinally disposed, substantially equal sections, a sheet of cushioning material disposed in and at least partly filling said covering sheets on each side of said imaginary plane, and the edge portions of each of said cushioning sheets meeting the corresponding edge portions of the other of said cushioning sheets, said oppositely disposed covering sheets defining a chamber receiving said resilient wire, thereby providing free movement of said resilient wire between said cushioning sheets and maintaining said covering sheets and said cushioning sheets in substantially flat position, simultaneously compressing said cushioning material by said cover sheets, yet permitting contraction of said resilient wire upon subjecting said covering sheets to an outside blow.

2,901,039
APPARATUS FOR PRECONDITIONING CHIPS IN A DIGESTER
Sven A. Salmonson, Portland, Oreg.
Application December 20, 1954, Serial No. 476,480
3 Claims. (Cl. 162—246)

1. A digester for the chemical reduction of fibrous material, such as wood chips, to pulp comprising, a digester wall having a top portion with a vertical central charging inlet passageway which is adapted to be closed during a cooking operation, a plurality of steam nozzles mounted in and projecting through a portion of said wall around said passageway of greater diameter than said passageway and directed approximately horizontally and radially in-

other of said wells being an output well; initially providing movably mounted on said body for movement longi-

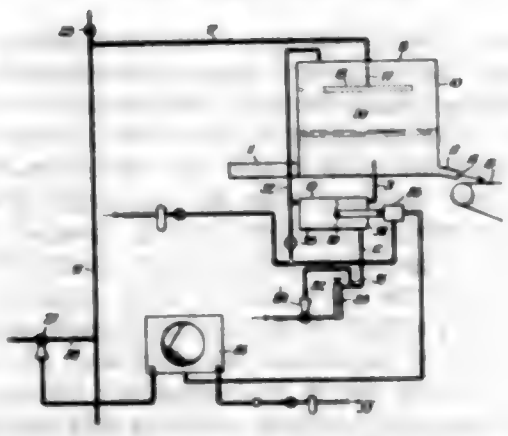
a housing; gas inlet means in said housing; first gas outlet

horizontal entry of the gudgeon pin into the oval with

wardly immediately below said top wall portion and the lower end of said passageway, said nozzles being spaced from the center of the projected area of said passageway and projecting only slightly into said projected area to discharge jets of steam radially into the center of a falling stream of said material introduced through said passageway, said inlet passageway being unencumbered and unobstructed for the substantially unimpeded rapid admission of said material.

3. A digester as defined in claim 1 including steam supply means connected to said nozzles, valve means in said steam supply means, a control element having an actuating member projecting into the path of said stream of material, and means operated by actuation of said control element to open said valve when said actuating member is deflected by said material.

2,901,040
APPARATUS FOR CONTROLLING STOCK LEVEL IN A PRESSURIZED HEADBOX
Marvin Francis Gade, Fullerton, Calif., assignor to Kimberly-Clark Corporation, Neenah, Wis., a corporation of Delaware
Application May 20, 1957, Serial No. 660,175
9 Claims. (Cl. 162—259)

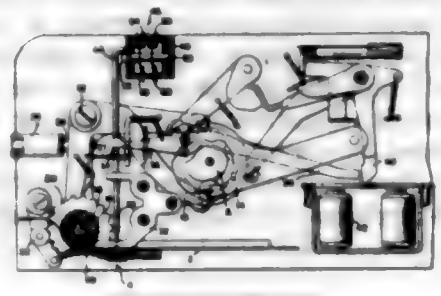


1. A system for controlling the stock level in an air pressurized headbox of a paper making machine comprising means for sensing the difference between the stock pressure at the outlet of said headbox and the air pressure within said headbox, and a valve for varying the air pressure in said headbox, said valve being actuated by said means.

2,901,041
AUTOMATIC COLUMN ERROR OBLITERATION FOR PAPER TAPE
Raymond A. Barbeau, Poughkeepsie, and Harold L. Meade, Wappingers Falls, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application December 30, 1955, Serial No. 556,643
10 Claims. (Cl. 164—113)

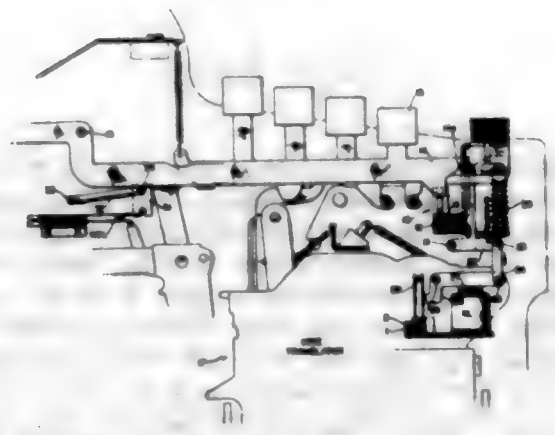
1. A tape punching machine having clutch controlled means for operating the same in individual punch cycles comprising punch pins for perforating a tape, interpoeer magnets for selectively controlling the punch pins which are to be operable in each punch cycle, a tape feed arm

operable to feed a tape one column for each punch cycle, a no feed magnet having connections when energized for disabling said tape feed arm, normally closed circuit means during each cycle for energizing said no feed magnet, a mechanism responsive to the operation of pre-



determined punch pin combinations for interrupting the circuit to said no feed magnet, and means selectively operable when said no feed magnet is energized for operating all of said interposer magnets and said clutch controlled means.

2,901,042
VERIFYING PRINTING MACHINE
Edwin O. Blodgett, Rochester, N.Y., assignor to Commercial Controls Corporation, Rochester, N.Y., a corporation of Delaware
Application February 21, 1956, Serial No. 567,034
34 Claims. (Cl. 164—113)



1. A verifying printing machine comprising, means operable in successive steps to print copy and including means for providing at each step thereof a first indication denoting the printing operation performed during said each step, means operable in successive steps controlled by said printing means for providing at each step thereof a second indication denoting a desired printing operation against which the identity of said first indication may be verified concurrently with said each printing step means for effecting concurrent step-by-step verification that said first indication is concurrently identical with said second indication, and means for providing an indication of departure from identity of said verified indications.

2,901,043
HEAVY OIL RECOVERY
Frank E. Campion and Eugene D. Glass, Tulsa, Okla., and Richard A. Morse, Pittsburgh, Pa., assignors to Pan American Petroleum Corporation, a corporation of Delaware
Application July 29, 1955, Serial No. 525,284
4 Claims. (Cl. 166—11)

1. In a method of recovering a high viscosity oil from an underground producing formation in which it occurs, wherein heat is generated by combustion within said producing formation, the improvement which comprises the steps of drilling at least two spaced wells into said formation, one of said wells being an input well and the

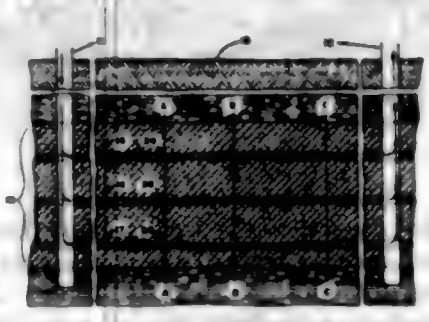
surfaces of the expander when said expander and slips are moved longitudinally relative to each other for

2,901,048
POTATO HARVESTER AND SEPARATING

moved longitudinally therealong comprising a roller, a

and directed approximately horizontally and radially in-

other of said wells being an output well; initially providing at least one generally horizontal fracture extending continuously through said formation between said wells, said fracture having a gas flow capacity which is large compared to the gas flow capacity of said formation without said fracture; thereafter initiating combustion at the depth of said formation within the bore of said output well; injecting a cool combustion-supporting gas through said input well to flow primarily through said fracture to support said combustion and to propagate a zone of combustion chiefly along said fracture back toward said input well; controlling the composition and injection rate of said combustion-supporting gas so that the equivalent of at least about 0.4 cubic foot of a stoichiometric mixture of

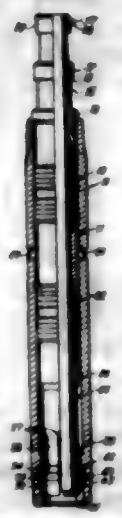


air and gaseous fuel is consumed per foot of length of said zone, per foot of propagation, per foot of thickness of said formation, per degree F. of temperature rise necessary to reduce the viscosity of said oil to a predetermined level where it will flow easily to said output well, whereby the major portion of the heat generation takes place in said fracture, and the oil in said formation above and below the combusion zone in said fracture is heated primarily by the heat diffusing generally vertically through said formation from said fracture, and whereby the temperature of most of said oil remains substantially below a level where cracking takes place; and recovering from said output well the oil which is released from said formation by said diffusing heat and which enters said output well.

2,901,044
PULLING TOOL
Edward W. Arnold, Houston, Tex.
Application July 7, 1955, Serial No. 520,404
10 Claims. (Cl. 166—98)

1. A pulling tool for engaging and pulling stuck objects from a well comprising a body, there being a fluid conducting passage extending longitudinally of said body, means mounted on said body for movement laterally of said body in response to fluid pressure from said passage to position said body in the well bore, means movably mounted on said body for movement longitudinally of said body in response to fluid pressure from said passage to exert an upward pull relative to said tool body, and valve means in said body closing off flow through said body passage, but operable upon relative rotation between said valve and body to open said body passage for fluid flow to actuate said body positioning means and said pulling means.

2,901,045
LOCKING MEANS FOR WELL TOOLS
Harry B. Schramm, Dallas, Tex., assignor to Otis Engineering Corporation, Dallas, Tex., a corporation of Texas
Application April 20, 1953, Serial No. 351,075
22 Claims. (Cl. 166—125)



1. A well tool for use in a well string having internal projections providing a downwardly facing stop shoulder and an upwardly facing stop shoulder, said tool including: an outer elongate tubular member; means on said tubular member for engaging said upwardly facing stop shoulder to arrest downward movement of said tubular member in said well string; a plurality of resilient expansible prongs mounted on said tubular member, said prongs having projections engageable with said downwardly facing stop shoulder when said prongs are in expanded position; an expander member movably mounted on said tubular member for moving said prongs into expanded position after downward movement of said tubular member has been arrested, said expander member providing a flow passage through said tool; and cooperative stop means comprising a plurality of oppositely facing shoulders on each of said expander member and said prongs co-engageable for firmly locking said expander member in prong expanding position.

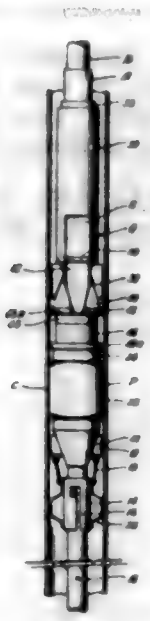
2,901,046
HOLD-DOWN DEVICES FOR WELL PACKERS
Jack C. Webber, Houston, Tex.
Application May 27, 1954, Serial No. 432,691
4 Claims. (Cl. 166—134)

1. A hold-down device for use in locking a well tool against upward movement in a well casing including, a mandrel, a slip expander having upwardly and inwardly inclined wedge surfaces, means mounting the slip expander on the mandrel for both radial and longitudinal movement with respect to the mandrel, the downward movement of the slip expander being arrested by its engagement with the well tool when the mandrel and slip expander are lowered into the well casing, whereby the mandrel may thereafter be moved in a longitudinal direction relative to said expander, slips positioned about the mandrel, means mounting the slips for both radial and longitudinal movement with respect to the slip expander, said slips having surfaces cooperable with the wedge

are to be operable in each punch cycle, a tape feed arm

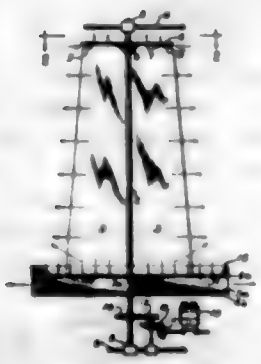
formation, one of said wells being an input well and the

surfaces of the expander when said expander and slips are moved longitudinally relative to each other for moving the slips laterally of the mandrel, means on the mandrel co-acting with the slip expander to move the slip expander radially outwardly when the mandrel is moved downwardly relative to the expander and to move the slip expander radially inwardly upon upward move-



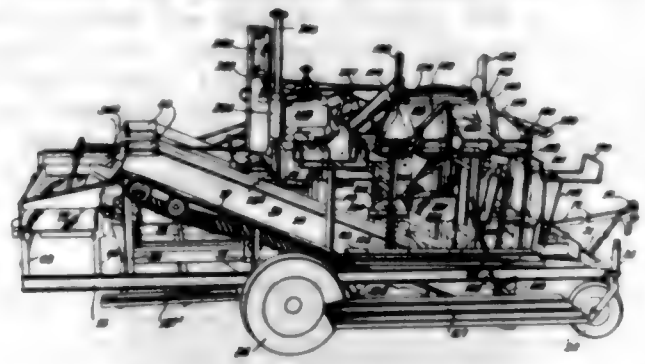
ment of the mandrel relative to said expander, a coiled spring surrounding the mandrel above the slips, a sleeve enclosing the coiled spring and having its lower end engaging the slips, and abutments on the interior of the sleeve and the exterior of the mandrel between which the coiled spring is confined to constantly urge the slips downwardly relative to the expander.

2,901,047
CENTRIFUGAL AIR PROPELLERS
Elmer Grant Still, Livermore, Calif.
Application September 23, 1957, Serial No. 685,694
2 Claims. (Cl. 170—135)



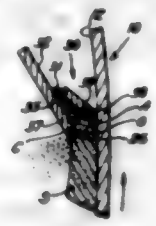
1. In a propulsion mechanism, a rotary driven shaft; a plurality of vanes secured to the shaft, extending axially coextensively and radiating in balanced relationship from the shaft; a disc centrally secured to one end of said vanes at an angle of ninety degrees to the shaft and extending as far outward as the nearby outer ends of said vanes; a second disc centrally disposed a comparatively short distance from said first-mentioned disc, at an angle of ninety degrees to the shaft and extending as far outward as the nearby outer ends of said vanes, but on the opposite side of said first-mentioned disc from said vanes, and a second set of such radiating vanes extending completely between said two discs and of the same radial length as said discs; said first-mentioned disc being provided with perforations.

2,901,048
POTATO HARVESTER AND SEPARATING MEANS THEREFOR
John K. Krukowski, Hammond, Ind., assignor to Champion Corporation, Hammond, Ind., a corporation of Indiana
Application July 6, 1953, Serial No. 369,464
36 Claims. (Cl. 171—28)



1. A potato digger having a mobile frame, digging means on said mobile frame, and conveying means extending upwardly and rearwardly from said digging means, and including devining means adjacent the upper end of said conveying means, said devining means comprising a pair of cooperating rotary members, and said cooperating rotary members having axes which lie in a plane extending downwardly and rearwardly from the upper end of said conveying means.

2,901,049
SCRAPER DEVICE FOR A FARM DISC
Kermit M. De Haai, Monroe, Iowa
Application June 3, 1957, Serial No. 663,275
1 Claim. (Cl. 172—558)

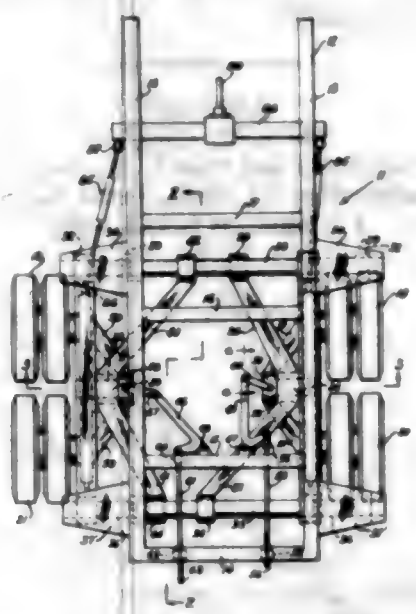


A cleaning and abrading device for the disc of a soil discing machine wherein the disc is of a concavo-convex shape and rotatably supported on a frame structure of the machine for rotation about a horizontal axis, said device including a support member secured to said frame member such that a lower blade portion of said support member is inclined downwardly and angularly toward the concave side of said disc, an edge of said lower blade portion extended substantially radially outwardly of said axis and being adjacent the surface of said concave side, and a soil-receiving V-shaped trough forming means including an elongated bar-like element secured along one side thereof to the side of said lower blade portion facing said concave side and at a spaced distance from said edge, said element extending angularly from said lower blade portion toward said concave side and being slightly bowed along the length thereof to lie in a contiguous relation closely abutting a radial portion of said concave side and substantially prevent the passage of soil between said element and said concave disc side, said trough forming means being open in a direction counter to the rotation of said disc, the lower face of said bar-like element being beveled in a direction to trap soil within said trough forming means, and the edge of said lower blade portion acting to shear soil adjacent the surface of said concave side, to trap the soil into a substantially triangular clod, the base of which contacts said concave disc side for cleaning and abrading purposes.

having slots therein and the slots of the sleeve having in-

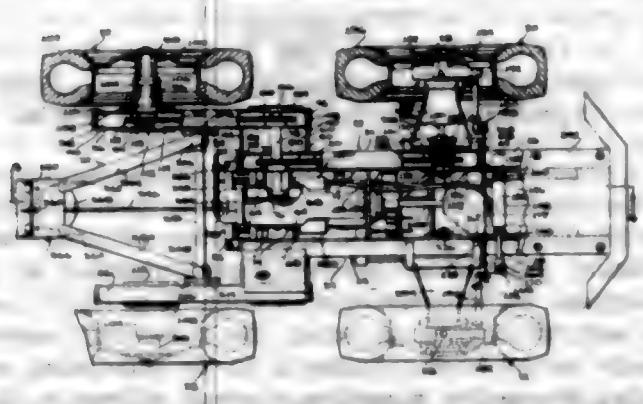
sections and hold them in said center section aligned

2,901,050
VARIABLE TREAD CRANE CARRIER DRIVE ASSEMBLY
Lorraine E. Talbert, Mount Pleasant, Iowa
Application February 10, 1959, Serial No. 792,404
6 Claims. (Cl. 180—22)



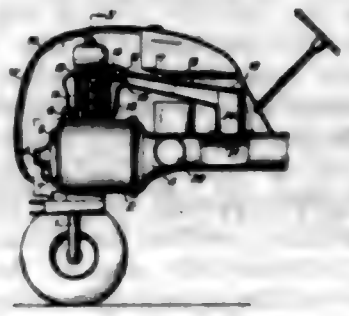
1. In a crane carrier drive assembly, a main frame comprising a pair of longitudinal side bars and cross bars rigidly connecting said side bars, two pairs of vertically spaced transverse shafts secured between said side bars, one pair being spaced longitudinally from the other pair, a first pivot shaft at one side of the main frame, a longitudinal wheel truck pivoted to said pivot shaft, a supporting bracket secured to said pivot shaft, respective oppositely extending arms on said bracket slidably connected to the upper transverse shaft of one of said pairs and the lower transverse shaft of the other of said pairs, a second transverse pivot shaft at the other side of said main frame, a second longitudinal wheel truck pivoted on said second pivot shaft, a second supporting bracket secured to said second pivot shaft, oppositely extending arms on said second bracket slidably connected to the lower transverse shaft of said one pair and the upper transverse shaft of said other pair, and means for adjusting said wheel trucks and brackets laterally on said transverse shafts.

2,901,051
TRACTOR DRIVE AND SUSPENSION MECHANISM
John L. Thibodeau, Melrose, Fla.
Application April 30, 1954, Serial No. 426,643
4 Claims. (Cl. 180—41)



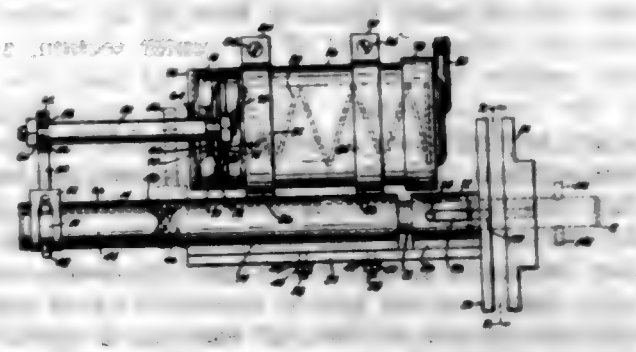
2. In a tractor comprising a power plant, a differential, a respective driven shaft extending from opposite sides of said differential, a frame, and a front and a rear wheel on each side of said frame, respective drive means interconnecting the front and rear wheel on each side for driving together at the same speed and connecting each said intereconnected front and rear wheel with a respective said shaft, said rear wheels being rigidly suspended to said frame, and a respective hydraulic liquid cylinder suspending each said front wheel, said cylinders being interconnected to equalize hydraulic liquid pressure therebetween.

2,901,052
TRACTOR ENGINE COOLING AND EXHAUST SYSTEM
Karl Rabe, Kornthal, Wuerttemberg, and Egon Forstner, Stuttgart-Degerloch, Germany, assignors to Dr. Ing. h.c.F. Porsche K.-G., Stuttgart-Zuffenhausen, Germany
Application November 16, 1954, Serial No. 469,246
Claims priority, application Germany December 28, 1953
1 Claim. (Cl. 180—54)



In a tractor particularly for cultivating row crops including front and rear axles, an internal combustion engine having at least one air cooled cylinder located adjacent the front axle of the tractor, a central longitudinally extending frame tube connecting the front and rear axles, and means for drawing cooling air over the engine cylinder including an engine exhaust ejector installation located behind the engine cylinder above the frame tube and directed rearwardly in the longitudinal direction of the tractor, the improvement comprising a tubular member one end of which is connected into the outlet of the exhaust ejector installation, said tubular member extending rearwardly from the ejector along and above the frame tube, and a sound-muffling chamber located above the frame tube having a connection with the other end of the tubular member for the flow of exhaust gases and air and a connection with the frame tube at a point rearwardly of the exhaust ejector installation for the flow of exhaust gases and air, said frame tube having an outlet for engine exhaust gases and air located in an offset position forwardly with respect to said point, the arrangement being such that the engine exhaust gases and air flow rearwardly from the exhaust ejector installation through the tubular member into the sound-muffling chamber then downwardly into the frame tube and forwardly in the frame tube to its outlet.

2,901,053
SAFETY DOOR LOCK
John M. Lassiter, Sterling, Colo.
Application November 30, 1956, Serial No. 625,303
1 Claim. (Cl. 180—82)



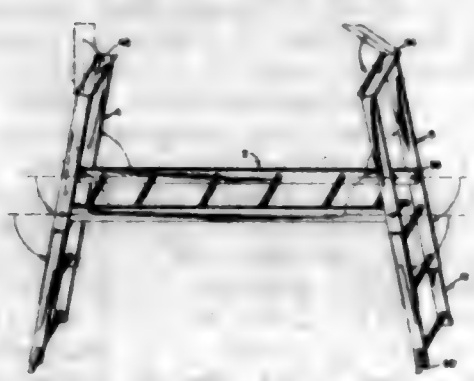
In a motor vehicle door lock, the combination which comprises a sleeve having clamps extended therefrom, a lock bolt slidably mounted in said sleeve, a face plate having a bushing extended therefrom positioned with the bushing aligned with the sleeve, said sleeve and bushing

perforations.

cleaning and abrading purposes.

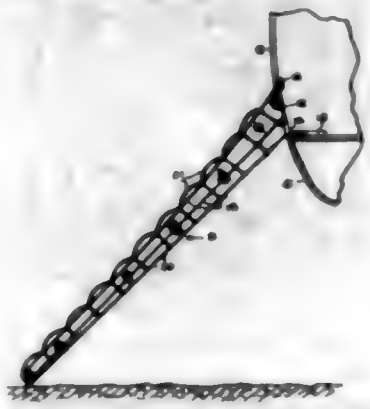
having slots therein and the slots of the sleeve having inclined end sections, said lock bolt having pins therein and the ends of said pins extending into the slots of the sleeve and bushing, a cylinder secured in the clamps of the sleeve, a piston in said cylinder, a piston rod extended from the piston through one end of the cylinder, means connecting the piston rod to the lock bolt, a spring in the cylinder for actuating the piston to retract the lock bolt, said inclined end sections of the slots of the sleeve turning the lock bolt as the bolt is actuated to a locking position, a control valve for use on the steering wheel post of a motor vehicle and adapted to be actuated by the gear shift lever thereon, means for connecting one side of the control valve to a source of vacuum, means for connecting the opposite side of the control valve to the cylinder on the sleeve of the lock bolt, and a button actuated valve in the connection from the control valve to the cylinder for preventing locking the door except when the door is completely closed, said device being adapted to be installed in a door of a motor vehicle whereby upon moving the gear shift lever of the vehicle to an operative position the vacuum of the engine of the vehicle automatically actuates the lock bolts of the doors of the vehicle to locking positions.

2,901,054
COMBINATION SCAFFOLD-LADDERS
Clayton E. Larson, Weston, Conn., assignor to White Metal Rolling & Stamping Corporation, Brooklyn, N.Y., a corporation of New York
Application August 28, 1956, Serial No. 606,605
3 Claims. (Cl. 182—27)



1. A combination scaffold-ladder comprising: a center section including two unbroken side rails and a plurality of equidistantly spaced rungs fixed between the side rails, and two end sections, each including two side rails and a plurality of rungs fixed between said end section side rails, with at least one-half the length of the end sections containing no rungs, the rungs in the end sections being of such length that the end sections are just about wide enough to slip over the center section, one of said end sections being fixed upon pins to said center section, so that the rung-free portion of the end section may rotate past the side rails of the center section, the other of said end sections being similarly fixed to the center section upon the remaining end of the center section, an extension section telescopically carried by each end section at the rung-containing end thereof, spring-biased pin means to hold each extension section at various extension positions relative to its respective end section, a side plate which is at least as long as the distance between the tips of the two end sections when they are folded over the center section and aligned therewith, said plate being hinged at one end to the inside tip of one of the side rails of one of the end sections, a second similar plate being hinged at one end to the inside tip of the side rail of the remaining end section which is diagonally opposed to the side rail to which said first plate is hinged, snap pin means carried by the center section side rails designed to engage openings in the side rails of the end sections and hold them in said center section aligned position, and hinge strap means carried by the end sections adapted to hold the end sections in a position about perpendicular to the center section to create vertically extending standards for the center section to form a scaffold unit in which the center section creates a horizontal platform support.

2,901,055
ESCAPE CHUTE
Bertram S. Fairchilds and Paul C. Forward, Miami, Fla.
Application May 13, 1957, Serial No. 658,572
1 Claim. (Cl. 182—49)



An emergency escape chute for aircraft that is adapted to be detachably connected into the access doorway of an aircraft to be extended and directed downwardly and outwardly angled to the ground level and whereby the chute which forms a trough for the sliding escape of aircraft passengers, the chute when in the extended position being convergent toward its lower end, the chute being formed of a section of a flexible material having a bottom and upwardly and outwardly inclined side walls and whereby the chute is generally U-shaped transversely, the chute being reinforced both longitudinally and transversely by relatively wide fabric strips, the longitudinal reinforcing being extended beyond the upper end of the chute along the marginal edges of the side walls and at points upon the bending of the side walls and the bottom and whereby to receive detachable connectors for anchoring the chute into the access doorway of the aircraft, the transverse reinforcing being in one piece and alternately extended beyond the marginal edges of the side walls to form hand loops and whereby to create a ladder and a means for manually holding the chute in the extended position outwardly from the plane, the chute being collapsible into a relatively small package for storage within the aircraft.

2,901,056
FIRE ESCAPE LADDER
Edward J. McConologue, San Francisco, Calif.
Application June 1, 1956, Serial No. 588,768
2 Claims. (Cl. 182—85)

1. The combination with a fire escape balcony of a collapsible fire escape ladder extending from said balcony to the ground at an angle to the latter, when in extended position, said ladder consisting of a plurality of major and minor sections, the upper section being rigidly secured to said balcony at an angle, the remaining major and minor section being arranged in an alternating order; each major section consisting of a pair of inward channels each channel including a pair of flanges and extensions depending therefrom, said flanges and extensions being arranged inwardly; each minor section consisting of a pair of outward channels, each channel including a pair of outward flanges and extensions; a flange and its extension of each channel of a major section being interlocked with a flange and its extension of a channel of a next adjoining minor section, a plurality of rungs carried by

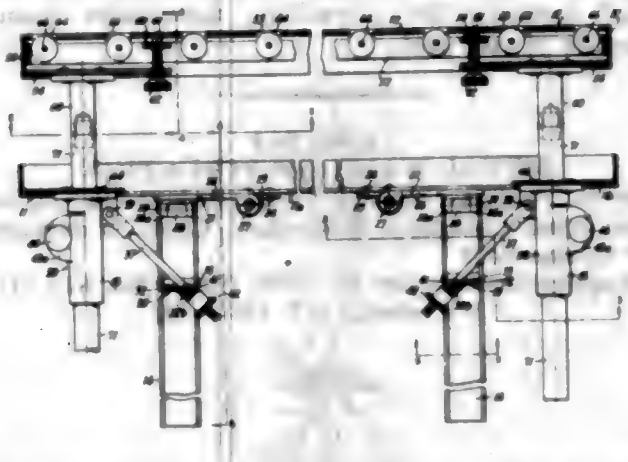
snow, water and the like, axially spreadable brake shoes

80 mesh standard screen size, while also flowing a liquid

said channels; stops secured to the channels of the minor sections; abutments secured to the channels of the major sections, said abutments in cooperation with said stops limiting the upward and downward slide of one section

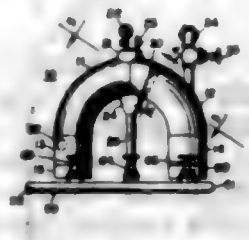
in relation to the other; means carried by said upper section for lifting the remaining sections adjacent said upper sections; means for retaining said sections in elevated position.

2,901,057
SAWHORSE
Spilios A. Peppas, San Francisco, Calif.
Application March 29, 1957, Serial No. 649,378
5 Claims. (Cl. 182—155)



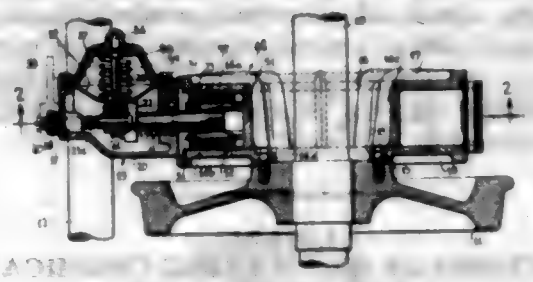
1. In a sawhorse, a lower frame, two pairs of legs, a two-way hinge for mounting each of said legs on said frame adjacent the ends of the frame to permit movement of the legs from an erected position to a folded position, said two-way hinges permitting movement of said legs independent of each other inwardly and laterally of the frame from the erected position and movement longitudinally towards the center of the frame from the erected position, each of the two-way hinges comprising a leaf having one end pivotally connected to the frame, an additional leaf pivotally connected to the other end of the first named leaf, the other end of the additional leaf being secured to the associated leg, a spreading member hinged to one leg of each of said pairs of legs, cooperating means mounted on the other leg of each of said pairs of legs and adapted to be engaged by the free end of the spreading member to prevent inward and lateral movement of the legs with respect to the frame, means mounted on the frame and adapted to engage the spreading member to retain the free end of the spreading member in engagement with the cooperating means, said last named means also serving to prevent movement of the legs longitudinally towards the center of the frame when the legs are in an erected position, clamping means mounted on each end of the lower frame, an upper frame, an extension mounted on each of the opposite ends of the upper frame and extending at substantially right angles to the plane of the upper frame, said extensions being adapted to be engaged by said clamping means and being of such a length so as to permit vertical adjustment of the upper frame with respect to the lower frame, a plurality of spaced rollers mounted in parallel rows in the upper frame longitudinally of the upper frame for rotation about axes perpendicular to the longitudinal axis of the upper frame, a flat member providing a work surface mounted over said rollers, and means permitting exposure of said rollers when it is desired to move work pieces on said sawhorse.

2,901,058
SEPARATOR
Cletus H. Samples, Midland, Tex., assignor, by mesne assignments, to Socony Mobil Oil Company, Inc., New York, N.Y., a corporation of New York
Application September 20, 1957, Serial No. 685,315
8 Claims. (Cl. 183—2.7)



1. A gas-liquid-cuttings separator which comprises in combination an inverted U-shaped, hollow body closed at opposite ends and having an inlet leg and an outlet leg, a cuttings trap secured to said body and extending downwardly therefrom intermediate said inlet leg and said outlet leg, a baffle secured within said body adjacent to said cuttings trap and adapted to deflect cuttings into said trap, said baffle being provided with an opening to permit the passage of gas and entrained liquids, means for introducing gas, cuttings, and liquids into said inlet leg, means for removing gas from said outlet leg, and means for removing cuttings and liquid from said separator.

2,901,059
ENCLOSED DUAL-DISK BRAKES FOR VEHICLES
Robert G. Stacy, Jenkintown, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Application May 16, 1957, Serial No. 659,673
3 Claims. (Cl. 188—73)



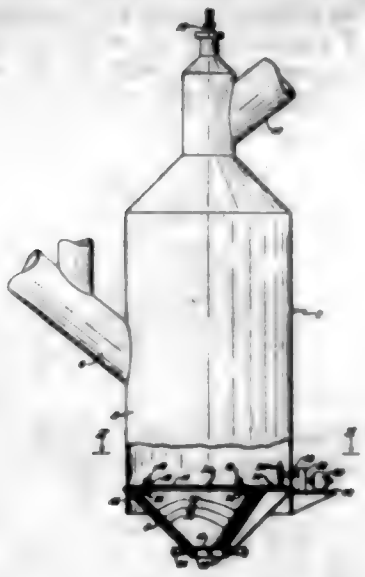
1. A disk brake assembly for rail vehicles comprising in combination, a supporting axle, a pair of axially spaced rotatable brake disks secured on the axle, said disks having axially spaced opposed facing braking surfaces, a brake shoe operating assembly mounted in a fixed position at one side of the axle beyond the periphery of the disks, said operating assembly including a turnable brake shoe operating cam shaft disposed radially of the cam shaft with its inner cam end disposed between said brake disks, and means for turning said cam shaft about its axis, a cover carried by said operating assembly and enclosing the disks and the space between them to exclude

snap pin means carried by the center section side rails designed to engage openings in the side rails of the end

with a flange and its extension of a channel of a next adjoining minor section, a plurality of rungs carried by

snow, water and the like, axially spreadable brake shoes supported by said cover between said disks for engaging the opposed faces of the disks, and a turnable cam on said cam shaft between said brake shoes for actuating them, supporting means for the brake shoes being at one side of said cam shaft and arranged for the shoes to move in the direction toward their said supporting means past the cam when lifted with the cover to provide quick removal of the shoes from the assembly and disks.

2,901,060
CLEANER FOR THE CONICAL BOTTOM OF DUST CATCHER
Julius B. Evans, Chicago, Ill., assignor to United States Steel Corporation, a corporation of New Jersey
Application December 31, 1957, Serial No. 706,379
6 Claims. (Cl. 183—76)

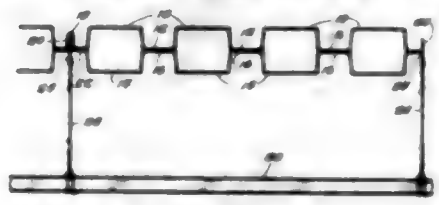


1. A cleaner for the conical bottom of a dust catcher comprising a large upper ring adjacent the top of said conical bottom, a small lower ring spaced below said upper ring in said conical bottom, a plurality of brackets attached to the top of the upper ring and each having a portion extending inwardly toward the center of the cleaner and downwardly below said upper ring, a portion on each of said brackets extending outwardly away from the center of said cleaner below said upper ring, a plurality of rods fastened to the last named portion of each of said brackets and to said lower ring at different radial distances from the center of said rings, the most outwardly of said rods being adjacent the wall of said conical bottom, horizontal bearings attached to the wall of said dust catcher at spaced intervals and extending inwardly toward the center of said catcher for supporting said upper ring, bearings attached to said conical bottom for supporting said lower ring, and means for rotating said rings whereby material on the wall of said conical bottom is removed by said rods.

2,901,061
METHOD OF RECOVERING CHEMICAL MISTS FROM GASES
Rufus G. Hartig, Park Forest, Ill., and James R. Archer, East Point, Ga., assignors to International Minerals & Chemical Corporation, a corporation of New York
No Drawing. Application November 30, 1954
Serial No. 472,212
6 Claims. (Cl. 183—115)

1. A method for the elimination of sulfur trioxide mist from gases which comprises passing a gas stream containing sulfur trioxide mist through a confined space packed with material inert with respect to said gas stream and sulfur trioxide mist and having a particle size distributed through a substantial range of particle sizes included in the range between about 10 mesh and about 80 mesh standard screen size, while also flowing a liquid having absorptive power for sulfur trioxide through said confined space in such volume as to maintain a back pressure on the gas stream in the range between about 10 inches and about 30 inches of water, and separately removing from said confined space a gas stream free from sulfur trioxide mist and a sulfur trioxide enriched liquid.

2,901,062
METALDECKING
Norman D. Rice, Milwaukee, Wis., assignor to Inland Steel Products Company, a corporation of Delaware
Application August 29, 1955, Serial No. 530,999
1 Claim. (Cl. 189—34)



Cellular metal-deck structure adapted to receive a covering thereon comprising a plurality of complementary upper and lower sections providing alternate cells and flats with corresponding flats positioned in contiguous abutting relationship and secured together, the formed cells being unobstructed and adapted to receive electrical wiring and the like, the outermost edge flat of each upper section having an outer marginal flange for interlocking engagement with the adjacently positioned and adjoining upper section, one of the outermost edge flats of each lower section having a continuous downwardly extending marginal flange, said marginal flange being apertured at spaced intervals for suspending accessories from the underside of said deck.

2,901,063
METAL WALL CONSTRUCTION
Henry E. Voegeli, Cheshire, Conn., assignor to The American Brass Company, Waterbury, Conn., a corporation of Connecticut
Application October 11, 1956, Serial No. 615,318
9 Claims. (Cl. 189—34)

7. In a metal curtain wall construction, a group of four rectangular metal panels arranged in the form of a rectangle with two sides of each panel contiguous respectively to one side of the two adjacent panels and with all such pairs of contiguous sides terminating proximate a common joint intersection, and a metal expansion insert having four two-sided expansible elements equally spaced circumferentially about a common apex coincident with said joint intersection, each of said expansible elements being positioned between the ends of and secured to a pair of said contiguous sides for permitting expansion and contraction of said panels and each pair of said contiguous sides being secured together beyond the end of the expansible element therebetween.

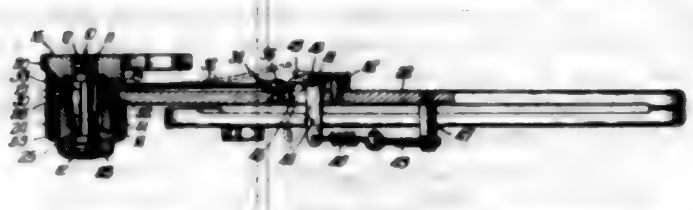
2,901,064
FUSIBLE HOLDING ARM FOR DOOR CLOSERS
David R. Lanier, Princeton, Ill., assignor to LCN Closers, Inc., Princeton, Ill., a corporation of Illinois
Application March 14, 1958, Serial No. 721,563
3 Claims. (Cl. 189—45)

1. A door holder comprising a stationary plate member, a rotatable unit, a screw connection between said sta-

plurality of bearings supported by said hub means be-

link-engaging end of said lever for exerting thrust on the

tionary plate member and said rotatable unit to move the same relatively toward and away from each other, a friction face on said stationary plate, a friction face on said rotatable unit opposed to said stationary plate friction face for frictional engagement and disengagement therewith as said rotatable unit is moved toward and away from said stationary plate, a cylindrical member on said rotatable unit, an arm member rotatably mounted on

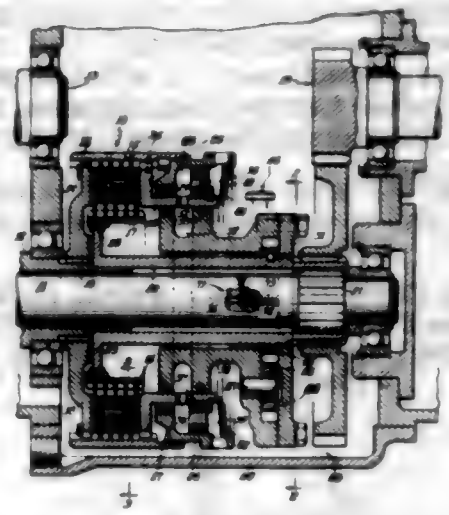


said cylindrical member, a deformable resilient spring arm rigidly connected to said rotatable unit biased to a position spaced from said arm member, releasable means including a fusible link for releasably locking said spring arm in a deformed position to said arm member, and a spring means between said arm member and said rotatable unit to move the arm member relative to said rotatable unit when the latter means is released.

2,901,065
AWNING TYPE WINDOW STRUCTURE
Theodore Hauck, Bellmore, N.Y., assignor to General Bronze Corporation, Garden City, N.Y.
Application January 4, 1954, Serial No. 401,988
13 Claims. (Cl. 189—67)

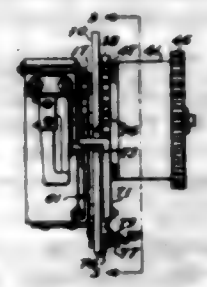
10. In a window construction, a frame comprising vertical jambs, slides mounted in each of said jambs for vertical sliding movements, at least two sashes extending between and pivotally mounted on said slides on horizontal pivots, stay bars extending between and pivoted to each of said sashes and to said frame, said slides and said horizontal pivots being connected together for relative vertical movements into first and second relationships, cooperating separable fastener elements on said sashes and said slides adjacent said horizontal pivots for interengagement when said first relationship is existent and for disengagement when said second relationship is existent, and means for moving said slides to create said first and second relationships selectively, said separable fastener elements comprising abutments on and vertically movable with said slides and shoulders on and movable pivotally with said sashes into and out of the paths of movement of said abutments.

2,901,066
CLUTCH
Curt H. Garmager, Rockford, Ill., assignor to Borg-Warner Corporation, Chicago, Ill., a corporation of Illinois
Application March 21, 1955, Serial No. 495,550
18 Claims. (Cl. 192—17)



1. A clutch comprising a first rotatable cylindrical member supporting a clutch plate and a second rotatable cylindrical member supporting a friction plate; an axially movable cylindrical member having a radially extending flange at one end thereof, adapted to pack said plates in frictional engagement; resilient means engaging and acting upon the other end of said axially movable member to move the same toward said plates to hold said plates normally engaged; means forming a fluid pressure chamber operatively associated with said axially movable member for receiving fluid pressure to thereby move said axially movable member, against the force exerted by said resilient means, to disengage said clutch; a third cylindrical member connected to rotate with said first cylindrical member and having a radially extending flange thereon, one face of which forms a stop to engage the flange of said axially movable member to limit the movement of said axially movable member during clutch disengagement and the other face of which forms a wall of said chamber; a ring element fixed with respect to said axially movable member adjacent said other end thereof and having one side providing another wall of said chamber; and means supplying fluid pressure to said chamber to disengage said clutch.

2,901,067
SHAFT POSITIONING CLUTCH DEVICE
Gordon E. Nicholson, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application September 25, 1956, Serial No. 611,948
8 Claims. (Cl. 192—17)



1. A coupling device for an output shaft comprising collar means formed with a plurality of surfaces about its periphery, torque-limiting clutch means fixed between said collar means and said output shaft, driving means supported on said shaft concentrically with said collar means, hub means supported on said shaft concentrically between said collar means and said driving means, a

and having a shoulder opposite the shoulder on said ex-

stantially mutually conforming face portions by a fused

included in the range between about 10 mesh and about

a rotatable unit, a screw connection between said sta-

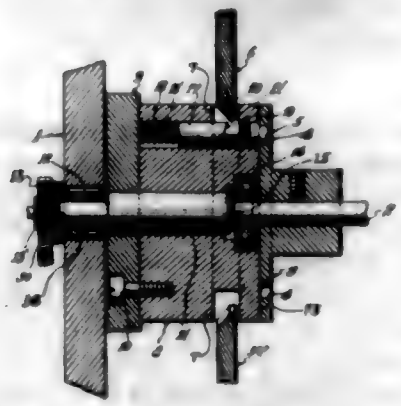
plurality of bearings supported by said hub means between said driving means and respective surfaces formed on said collar means, a sawtoothed shoulder fixed with said hub means, with the sawteeth each having a long side and a short side, locking means for said output shaft, first pawl means being pivotably supported by said device for engaging said locking means, second pawl means being pivotably supported by said device for engaging said sawtoothed shoulder, said second pawl means being disengaged by disengagement of said first pawl means, and friction means having substantially less torque than said clutch means situated between said hub means and said driving means.

2,901,868

CYCLE CONTROL FOR CASING CLOSURE

Maynard J. G. Tipper, Castro Valley, Calif.

Application December 27, 1956, Serial No. 630,910
2 Claims. (Cl. 192—25)



1. In a clutch for driving a feed means in timed relation with another movable unit of a machine operated by a driven shaft mounted in a side of a housing and having a flange concentrically attached to and near the end of said driven shaft, a series of openings disposed in said flange arranged concentrically around said shaft serving as clutch pin engaging means, a floating shaft mounted in the other side of said housing coaxially and adjacent to said driven shaft, a cylindrical clutch body disposed concentrically around the end of said floating shaft and having one face disposed adjacent said flange, a circumferential groove cut into the peripheral surface of said clutch body, a retractable clutch pin slidably disposed within said clutch body at right angles to said groove and having a portion thereof exposed within the lower part of said groove and designed to protrude beyond said clutch face and engage one of said openings in said flange when said clutch pin is extended, a retracting notch disposed in the portion of said pin exposed in said groove, a cam fixed to the opposite end face of said clutch body in line with said shaft, an upper and a lower spring-held beveled clutch pin retracting arm, each having one end swivelly attached to said housing and its other end arranged to ride yieldingly in said groove when so permitted and, by means of its bevel to retract said clutch pin during rotation of said clutch body, thereby temporarily disengaging said clutch body from said flange, operating means coacting with said cam and arranged so as to operate said other movable unit as said cam is rotated, a vertically movable lever pivoted near its center and having an operated end and a link-engaging end, a link swivelly connected at one end to said upper retracting arm and at the other end to the engaging end of said lever in a manner so that said upper arm is released out of said groove when said operated end of said lever is depressed, and engaging means on said lower arm disposed to engage the operated end portion of said lever when said lever is depressed, whereby said lower arm is released out of said groove, the improvement comprising a first-mentioned thrust element disposed on the link-engaging end of said lever for exerting thrust on the bottom of said link riding thereon, a kicker arm having one end fixed to said lever between its pivot and said thrust element, a second-mentioned thrust element disposed on the other end of said kicker arm for exerting a thrust on the side of said link, in a manner such that said link is pushed off said first-mentioned thrust element toward said lever pivot when said lever is completely depressed, spring means attached to said link and also serving as the spring holding means tending to hold said upper arm in said groove and to move said link onto said first-mentioned thrust element when said operated end of said lever is raised, and spring means attached to said lever in a manner so as to raise said lever when pressure is not exerted thereon.

2,901,869

CLUTCH FOR CODING MACHINE

Theodore L. Przyiecki, Elmwood Park, Ill., assignor to the United States of America as represented by the Secretary of the Navy

Application December 15, 1944, Serial No. 568,365
6 Claims. (Cl. 192—33)

1. A cyclically operable power transmitting device, comprising a shaft, a sleeve rotatable thereon, a driving gear and a clutch driving member fixed on said sleeve, a clutch driven member feathered on said shaft to be movable into and out of engagement with said driving member, resilient means disposed to urge said driven member toward said driving member, a radially extending flange on said driven member, said flange having formed thereon a peripheral cam and a lateral cam, a pivotally mounted throwout lever having an operating arm and a follower arm with a laterally extending portion disposed to follow said lateral cam to disengage said driven member from said driving member and lock said driven member in disengaged position; a generally U-shaped stop lever mounted on the same pivot with said throwout lever and astride the latter, said stop lever having an actuating arm, a reset arm and a latching arm, said actuating arm overlying said operating arm to apply force to said operating arm to disengage the throwout lever from said lateral cam when the stop lever is rocked in one direction, a spring connected to said stop lever to urge it in said one direction, resilient means connecting said stop lever and said throwout lever to hold said actuating arm and said operating arm in contact, said reset arm being disposed to follow said peripheral cam to re-engage said throwout lever with said lateral cam upon completion of one revolution; a pivotally mounted armature having a latching extension substantially at right angles to said armature, said extension having a shoulder engageable with said latching arm to hold said throw-out lever engaged with said lateral cam; an electromagnet disposed to attract said armature and release said latching arm from said shoulder to free said stop lever for movement on its pivot to disengage the throwout lever from the lateral cam and allow the driven member of the clutch to engage the driving member, make-before-break contacts disposed to be closed when said armature is attracted to keep said electromagnet energized for a time, a non-repeat latch co-pivotal at one end with said latching extension disposed under said extension

said clutch coupling said driving shaft to said driven shaft

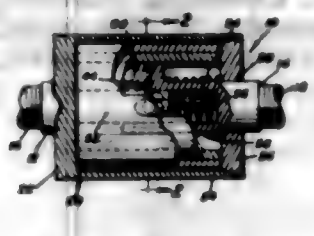
ner surfaces of the casing portions, the outer portions

otally with said sashes into and out of the paths of movement of said abutments.

means, hub means supported on said shaft concentrically between said collar means and said driving means, a

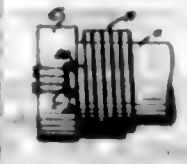
and having a shoulder opposite the shoulder on said extension and an overturned end portion to contact said extension to limit approach of said latch theretoward, a spring connected to draw said latch and said extension toward each other, said latching arm being moved to engage the shoulder on said latch by the reset arm following said peripheral cam, said latching arm remaining so engaged while the armature is held by said electromagnet, but slipping into engagement with the shoulder on the latching extension when said stop lever turns on its pivot upon deenergization of said magnet.

2,901,070
CAM ACTUATED CLUTCH
Woodrow C. Hansen, Mount Shasta, Calif.
Application April 25, 1957, Serial No. 655,091
6 Claims. (Cl. 192—34)



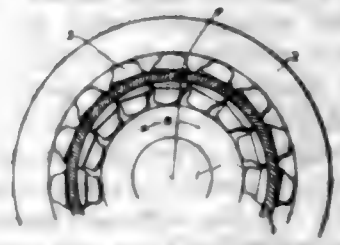
1. A pressure responsive cam actuated clutch assembly comprising a pair of aligned shafts, a housing secured to one of said shafts for rotation therewith, a pair of oppositely facing clutch members mounted within said housing for frictional engagement therewith, the other of said shafts having an end portion projecting into and journaled in said housing, a transversely disposed crank, said crank having aligned end portions rotatably journalled in at least one of said clutch members, said crank including cam portions disposed between said clutch members for urging said clutch members apart, said crank having an offset central portion connected to said shaft end portion whereby said crank is pivoted in response to longitudinal shifting of said shafts relative to each other to move said clutch members apart.

2,901,071
MAKING CLUTCH SPRING ANCHOR PORTIONS
Columbus R. Sacchini, Willoughby, Ohio, assignor, by mesne assignments, to Curtiss-Wright Corporation, Marquette Metal Products Division, Cleveland, Ohio, a corporation of Delaware
Application June 7, 1955, Serial No. 513,737
2 Claims. (Cl. 192—41)



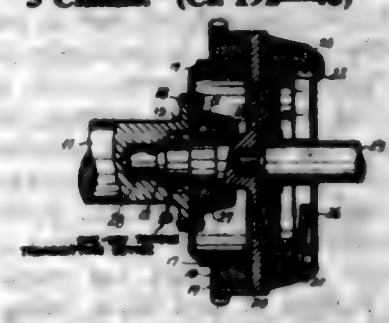
2. In combination, a clutch or brake member coiled from spring tempered helical metal spring stock of generally rectangular cross section, said member being adapted to transmit torque when its coils are in frictional mating contact with a mating circular drum surface, and an anchor or actuator lug for the spring member at one end thereof, the lug comprising an elongated metal block which is a cut off piece of metal stock of generally rectangular cross section and which has been coiled in such manner in relation to the coiled form of said spring member as to provide at least one side defining face portion on the block conforming substantially exactly to a side defining face portion of said spring member, the block being longer than the principal transverse dimension of the stock from which cut, the block and spring member being permanently joined together in mutually parallel lengthwise relationship at their substantially mutually conforming face portions by a fused film of metal the fusion temperature of which is below such temperature as would normally adversely affect the strength of metal spring stock when applied thereto to effect fusion.

2,901,072
OVER-RUNNING CLUTCH COUPLINGS OR THE LIKE
Albrecht Maurer and Emil Giese, Homburg vor der Hohe, Germany, assignors to Ringspann Albrecht Maurer K.G., Homburg vor der Hohe, Germany, a firm of Germany
Application May 27, 1957, Serial No. 661,667
Claims priority, application Germany June 1, 1956
4 Claims. (Cl. 192—45.1)



1. An over-running clutch coupling comprising an inner cylindrical race and an outer cylindrical race coaxial with said inner race and spaced therefrom, a plurality of sprags of constant elongated vertical cross section interposed between said inner and outer races, each of said sprags having a pair of cylindrical opposite outer and inner bearing surfaces and a pair of cylindrical opposite lateral contact surfaces, said lateral surfaces being adapted to be in substantially constant engagement with the corresponding contact surfaces of the adjacent sprags and to slide along said last contact surfaces when said sprags are tilted, said outer and inner bearing surfaces being adapted to engage with the inner surface of said outer race and the outer surface of said inner race, respectively, said lateral contact surfaces and said outer bearing surface having a common center line of curvature, the center of gravity of the vertical cross sections of each sprag falling within said common center line of curvature of said outer bearing surface and the two lateral contact surfaces of said sprag, the radii of said lateral contact surfaces being substantially less than the radius of said outer bearing surface, and the radius of said inner bearing surface being substantially greater than the radius of said outer bearing surface, and at least one tubular spring means engaging all of said sprags to maintain the inner bearing surfaces of said sprags in constant engagement with said outer surface of said inner race.

2,901,073
BEARING ARRANGEMENT FOR CENTRIFUGAL AND AXIALLY ENGAGING CLUTCHES
Franz Josef von Bomhard and Kurt Fiddler, Schweinfurt am Main, Germany, assignors to Fichtel & Sachs A.G., Schweinfurt am Main, Germany, a corporation of Germany
Application October 22, 1956, Serial No. 617,419
Claims priority, application Germany November 9, 1955
3 Claims. (Cl. 192—48)



1. In a centrifugal clutch including a driving shaft and a driven shaft in axial alignment with said driving shaft,

end of the inner shaft for rotation with and axial move-

ment and disengagement with the indicator, a coin rotator

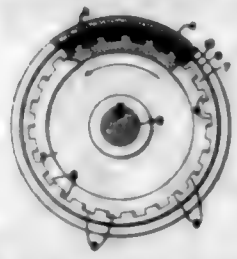
prising a first-mentioned thrust element disposed on the with said latching extension disposed under said extension

said clutch coupling said driving shaft to said driven shaft whenever the speed of said driving shaft exceeds a predetermined minimum speed, the provision of means defining an axially extending cylindrical aperture formed in said driving shaft coaxially therewith, said aperture being open at one end of said driving shaft, an intermediate clutch member having a shaft extension formed thereon which is received in said aperture coaxially with said driving shaft, a bearing disposed in said aperture in which said extension is slidably and freely rotatably guided, an anti-friction bearing mounted on said extension exteriorly of said aperture, said anti-friction bearing being connected to said driving shaft and to said intermediate clutch member for maintaining said extension and said driving shaft coaxially aligned independently of said first-named bearing, centrifugal weight actuated means driven by said driving shaft and engageable with said intermediate clutch member for coupling said driving shaft to said intermedaite clutch member when the speed of said driving shaft exceeds said minimum speed, a further clutch member connected directly to drive said driven shaft, spring pressed clutch means normally connecting said further clutch member for rotation with said intermediate clutch member, and means separate from said centrifugal weight actuated means for selectively controlling engagement and disengagement of said spring pressed clutch means.

2,901,074
CENTRIFUGAL POWDER CLUTCHES
Ferdinand Bodin, Paris, France
Application February 24, 1954, Serial No. 412,308
Claims priority, application France March 9, 1953
2 Claims. (Cl. 192—58)

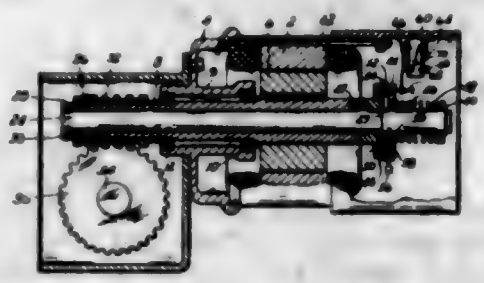
1. A mechanical coupling device of the type employing a subdivided solid material as a fluid coupling medium comprising a substantially circular casing formed of two interconnected portions, each of said portions having an inner surface, said inner surfaces defining a cavity within said casing for containing said medium, said inner surfaces tapering toward one another in a radially outward direction of the casing and being disposed in adjacent relationship at the outermost portion of said cavity, said medium being adapted to be disposed by centrifugal action packingly in the outermost portion in said cavity when the casing is rotated about its axis, a support hub extending coaxially within said housing and being of substantially less diameter than said cavity whereby the support hub is unsubmerged in the medium when the same is packingly disposed in the outermost portion of the cavity, said hub having a radially extending portion, said support hub and casing being rotatable with respect to one another, and a substantially annular coupling member comprising a sheet metal blade, said radially extending portion having at least one substantially radially extending surface, means for securing said blade to said last mentioned surface, the outermost portion of said blade being disposed adjacent the outermost portion of said cavity and disposed adjacent the inwardly tapered outer portion of the inner surfaces of the casing portions, the outer portions of said blade having formed therein a plurality of substantially radially extending corrugations the width and depth of which increase toward the outermost portion of said blade, whereby under the influence of centrifugal force during rotation of the apparatus, said corrugations and adjacent tapered surfaces of the casing cooperate to form substantially wedge-shaped piles of said fluid coupling medium which ensure a non-alip coupling between said coupling member and the casing, and yet which ensures substantially instantaneous collapse of the piles upon cessation of rotation of the apparatus thereby automatically decoupling the coupling member from the casing without any risk of permanent binding.

2,901,075
CENTRIFUGAL CLUTCH
Elmer C. Kiekhaefer, Cedarburg, Wis.
Application September 14, 1953, Serial No. 379,879
2 Claims. (Cl. 192—105)



1. In a centrifugal clutch, a driven drum, a driving wheel having a series of projecting teeth about the periphery thereof, a molded clutch band having a series of corresponding teeth in engagement with the teeth on said wheel and having a natural elasticity which retains the band on the wheel during rotation of the wheel up to and within a given speed, the outer face of said band and the inner face of said drum having a nominal clearance which allows the wheel to rotate freely without driving the drum at said speeds, the elasticity of the band when the wheel exceeds such speed allowing the band to be expanded by centrifugal force into engagement with the inner surface of the drum whereby the rotation of the wheel effects the rotation of the drum upon the frictional engagement of the outer surface of the band with the inner surface of the drum, and a layer of fabric woven diagonally with respect to the outer periphery of the band and integrally bonded to the outer face of the band and engageable with said drum, said fabric being expansible to accommodate the increased peripheral dimension of the band during such engagement.

2,901,076
OVERLOAD PROTECTION FOR POWER DRIVES
Peter Payne Deen, Westbrook, Conn.
Application February 8, 1955, Serial No. 486,936
2 Claims. (Cl. 192—150)



1. In an electric motor, a rotor, a hollow drive shaft mounted coaxially within the rotor and journaled intermediate its ends, an inner shaft journaled within the drive shaft having a driving member on one end and having the other end thereof projecting from the drive shaft, a first coupling member mounted on the projecting

ment by an engaged roll tooth in a path which carries the bearing devices lying parallel to the direction of the car-

and spring member being permanently joined together in mutually parallel lengthwise relationship at their sub-

1. In a centrifugal clutch including a driving shaft and a driven shaft in axial alignment with said driving shaft,

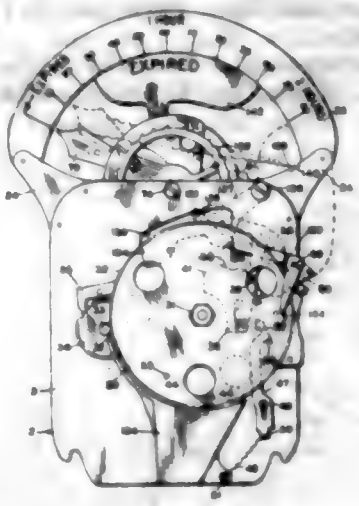
end of the inner shaft for rotation with and axial movement relative to said inner shaft, a second coupling member adjacent the first coupling member fixed on the corresponding end of said drive shaft for rotation therewith, said coupling members having normally abutting surfaces facing in opposite directions axially of the shafts, shearable torque transmitting pins extending in an axial direction and drivingly connecting said coupling members, cooperating cam surfaces on said coupling members for displacing said first coupling member axially of said driven shaft in response to relative rotation of said coupling members, a spring between the inner shaft and the first coupling member urging said first coupling member toward said second coupling member, and a switch mounted for actuation responsive to axial movement of the first coupling member.

2,901,077
COIN-OPERATED LIQUID DELIVERY MACHINE
Eduard Stark, Raron, Switzerland
Application August 22, 1956, Serial No. 605,607
Claims priority, application Switzerland September 1, 1955
6 Claims. (Cl. 194—13)

5. A coin slot machine for the delivery of varying quantities of liquid, particularly petrol, corresponding to given coin values, comprising a liquid reservoir, a supply pump, a flow meter and delivery means for the liquid, a flow line for the said liquid from the said liquid reservoir through the said supply pump, the said flow meter and the said delivery means, a cam shaft in operative connection with the said flow meter, a cam disc associated with each denomination of coins it is possible to insert into the machine fixedly attached to the said cam shaft, individual feeler means operatively associated with each of the said cam discs, individual coin controlled means for each of the said feeler means, a control position for each coin inserted and supporting means operable for supporting inserted coins in the said control position, each feeler means being continuously held by the said coin controlled means in contact with its associated cam disc as long as a coin is held in the said control position by the said supporting means, energizing means for the said supply pump operative on insertion of a coin and deenergizing means for the said supply pump controllable by any of the said feeler means.

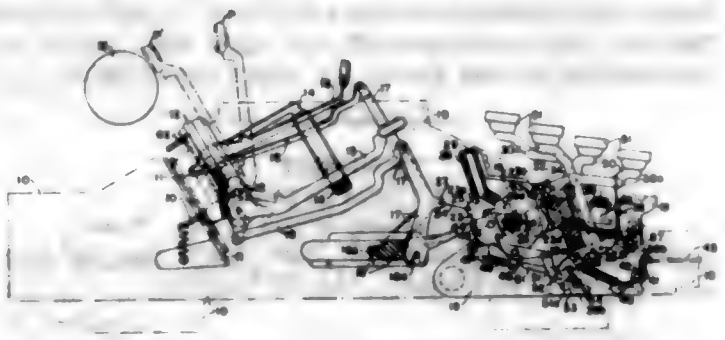
2,901,078
MULTIPLE COIN PARKING METER
Robert W. Hamilton, Oklahoma City, Okla., assignor to Magee-Hale Park-O-Meter Company, Oklahoma City, Okla., a corporation of Delaware
Application February 16, 1956, Serial No. 565,855
10 Claims. (Cl. 194—72)

1. In an automatic parking meter for receiving multiple coins of varying diameter and different denominations and comprising an indicator disc movable relative to a time scale, a clock works for driving the indicator in one direction relative to the scale, spring means for moving the indicator in a direction opposite to the first mentioned direction, an indexing mechanism for determining a selected period of time having alternate engagement and disengagement with the indicator, a coin rotator plate, means responsive to insertion of a coin for tripping the rotator to permit rotation thereof, means for carrying the coin with the rotator, a re-set lever movable into a plurality of angular positions, detent means cooperating between the re-set lever and the indexing mechanism for setting the indicator disc at a selected position relative to the time scale, bell crank means pivotally connected with the re-set lever and responsive to the inserted coin mov-



able by the coin rotator for causing movement of the re-set lever to a position relative to the value of the coin, and means on the bell crank cooperating with means on the coin rotator upon utilization of a coin of smaller diameter but of greater denomination than at least two of the coins of the multiple coins utilized for continuing the movement of the re-set lever after the bell crank is non-responsive to the coin, said detent means responsive to the position of the re-set lever for controlling the selected position of the indicator disc.

2,901,079
TYPEWRITER HAVING POWER OPERATED INSTRUMENTALITIES
Joseph P. Barkdoll, Groton, N.Y., assignor to Smith-Corona Marchant Inc., Syracuse, N.Y., a corporation of New York
Application September 30, 1957, Serial No. 686,925
19 Claims. (Cl. 197—17)

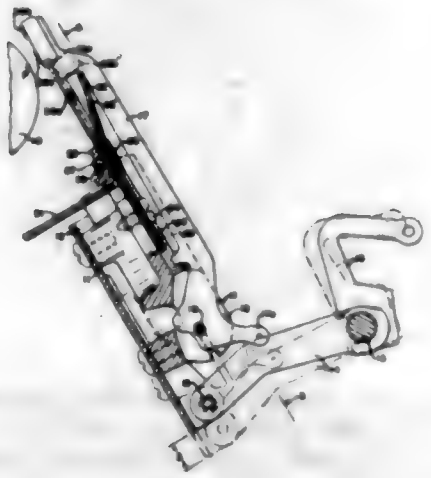


1. A power operated typewriter having a power driven rotary toothed snatch roll, a part to be actuated by power from said roll, a member connected to actuate said part and rockable about a fixed axis which is parallel to said roll, a pawl pivoted on the member to rock about an axis parallel to said roll into and out of the path of rotation of the teeth of said roll, means to limit rocking of the pawl in both directions relatively to said member, and means to rock the pawl to its limit for roll tooth engagement and to thereafter rock the pawl to its other limit and hold it there upon disengagement of the pawl and roll, said member carrying the pawl for move-

adjacent the inwardly tapered outer portion of the in- shaft, a first coupling member mounted on the projecting

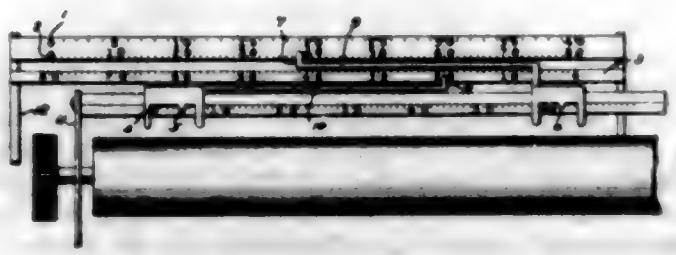
ment by an engaged roll tooth in a path which carries the pawl out of the path of rotation of the roll teeth following a transitory drive of the pawl and member, and said pawl having provision for adjustment thereof to vary the extent of said transitory drive of the pawl and member.

2,901,000
TYPEWRITER CASE SHIFT CONTROL OF TYPE IMPACT
Aaron C. Zenmer, Groton, N.Y., assignor to Smith-Corona Marchant Inc., Syracuse, N.Y., a corporation of New York
Application September 30, 1957, Serial No. 686,928
8 Claims. (Cl. 197—183)



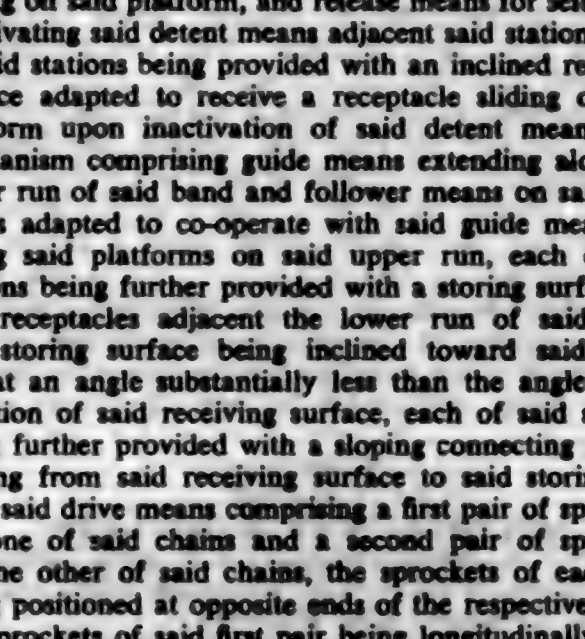
1. In a typewriting machine having a frame, a platen, type bars each having an upper and lower case character thereon and being pivotally mounted for impact strike upon a common point on said platen, and case shift means for changing the relative position of said platen and type bars in said frame to selectively bring said upper or lower case characters to said strike point; case shift controlled mechanism for impact control of said type bars, comprising a resilient repulser member adjacent said strike point and a depressor member embracing said repulser member, one of said members being secured to said frame and the other member being adapted to be moved by said case shift means, said repulser member being adapted to engage said type bars upon their approach to said strike point at a point removed from said platen for lower case printing and being deflected by said depressor member upon operation of said case shift means to a point closer to said platen for upper case printing.

2,901,001
TYPEWRITER
Lawrence Robinson, Walla Walla, Wash.
Application September 10, 1956, Serial No. 609,038
21 Claims. (Cl. 197—194)



1. In a typewriter, the combination of margin-stops, a frame, a carriage traveling between the limits of said stops on the frame, type-line scales, printing-point index-bearing devices lying parallel to the direction of the carriage movement connected to said margin-stops, and pointers on the margin-stops and index-bearing devices to indicate the positions of the margin-stops and carriage upon the scales, a printing-point index-bearing device being shiftable with each of said margin-stops.

2,901,002
CONVEYOR SYSTEM
Albert Baumann, Bielefeld, Germany, assignor to Dürkoppwerke Aktiengesellschaft, Bielefeld, Germany, a corporation of Germany
Application May 16, 1957, Serial No. 659,501
9 Claims. (Cl. 198—19)

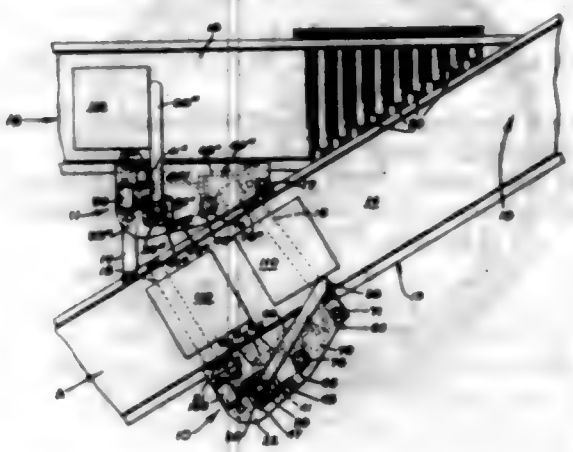


1. A conveyor system for the distribution of articles to be processed, comprising a pair of endless chains disposed in parallel vertical planes, a series of carriages bridging said chains, each of said carriages being provided with a tiltable platform adapted to hold a receptacle for said articles, said chains and said carriages together defining an elongated, endless band with an upper and a lower run, drive means for rotating said band, a plurality of work stations alongside said band, mechanism for maintaining the platform of each carriage in a tilted position during its movement past all of said stations along one of said runs, detent means on said platform normally adapted to prevent a receptacle carried thereon from sliding off said platform, and release means for selectively inactivating said detent means adjacent said stations, each of said stations being provided with an inclined receiving surface adapted to receive a receptacle sliding off said platform upon inactivation of said detent means, said mechanism comprising guide means extending along the upper run of said band and follower means on said platforms adapted to co-operate with said guide means for tilting said platforms on said upper run, each of said stations being further provided with a storing surface for said receptacles adjacent the lower run of said band, said storing surface being inclined toward said lower run at an angle substantially less than the angle of inclination of said receiving surface, each of said stations being further provided with a sloping connecting surface leading from said receiving surface to said storing surface, said drive means comprising a first pair of sprockets for one of said chains and a second pair of sprockets for the other of said chains, the sprockets of each pair being positioned at opposite ends of the respective chain, the sprockets of said first pair being longitudinally offset from the sprockets of said second pair by a given distance, each of said carriages being connected with said chains by respective gudgeons longitudinally offset from each other by said given distance whereby said carriages remain substantially horizontal upon passing around said sprockets, said platforms being thus adapted to receive on said lower run, by way of said connecting and storing surfaces, a receptacle previously deposited on the associated receiving surface by a carriage on said upper run.

the length thereof, means for rotating said rolls to feed

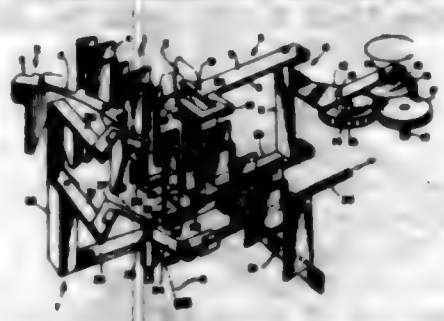
2,901,003

2,901,883
ARTICLE CONTROL MECHANISM FOR CONVEYORS
Earle J. McGrath, San Bernardino, Calif., assignor to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware
Application March 25, 1955, Serial No. 496,659
9 Claims. (Cl. 198—21)



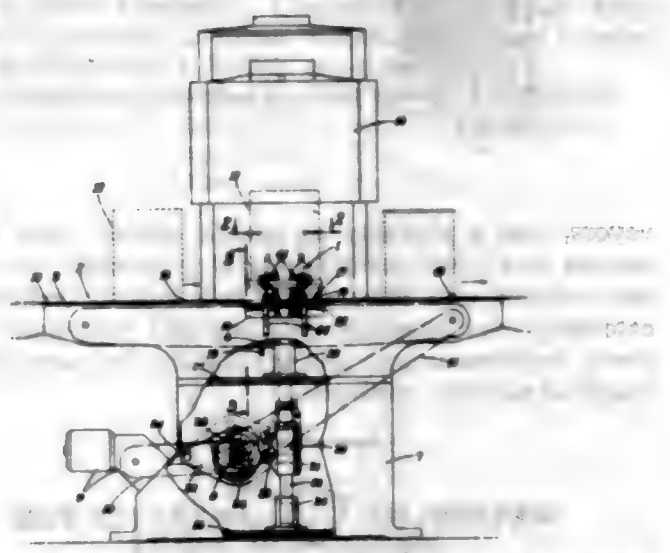
1. An article control mechanism for two converging conveyors comprising a stop member mounted adjacent one of said conveyors for movement between an article arresting position over the conveyor to a position removed from the path of movement of articles on the conveyor, a hydraulic cylinder having a piston connected to said stop member, a fluid supply line for said cylinder, an electrically operated valve in said fluid line arranged to be moved to a closed position stopping the flow of fluid in said line to lock said stop member in a fixed position, an electric circuit for said valve, a switch in said circuit arranged upon actuation to control said circuit to effect movement of said valve to closed position, and a movable actuating member mounted on the other conveyor in the path of movement of articles thereon and operatively connected to said switch to actuate said switch upon a predetermined movement of said actuating member.

2,901,884
CONVEYER TRANSFER MECHANISMS
Harry E. Engleson, Chicago, and Elmer D. Sramek, Cicero, Ill., assignors to F. B. Rodington Co., Bellwood, Ill., a corporation of Delaware
Application March 28, 1956, Serial No. 572,765
10 Claims. (Cl. 198—24)



1. A conveyor system for a packaging machine comprising a first conveyer having a continuously movable line of buckets having open sides for carrying cartons, said first conveyer extending past a first transfer point and a second transfer point, an intermittently movable conveyer having buckets with open sides for carrying the cartons about a closed path from the first transfer point to the second transfer point, a first transfer mechanism operatively associated with both conveyers at the first transfer point, said first transfer mechanism being operable to transfer each carton from a bucket of the first conveyer to a bucket of the second conveyer, and a second transfer mechanism operatively associated with both conveyers at the second transfer point, said second transfer mechanism being operable to transfer each carton from a bucket of the second conveyer to a bucket of the first conveyer each of said transfer mechanisms comprising means for engaging and holding each carton, said means being moved to a position for receiving cartons from a bucket in one of the conveyers and thence being moved to carry the carton to a bucket in the other conveyer.

2,901,885
ELEVATING AND CENTERING DEVICE FOR CYLINDRICAL BODIES
Thomas A. McCoy, Stockton, Calif., assignor to Carando Machine Works, Stockton, Calif., a partnership
Application December 8, 1958, Serial No. 778,783
17 Claims. (Cl. 198—29)



11. An elevating and centering device, for an upstanding cylindrical body, comprising a frame, a horizontal platform mounted on the frame for vertical reciprocation between an initially lowered position and a raised position, means to reciprocate the platform, a plurality of upstanding gripping arms pivotally mounted on the platform for swinging movement between a clearance position outwardly of a cylindrical body on the platform and an inward body engaging and centering position, opposed rockers rigid with each arm and projecting laterally in opposite directions relative to the pivotal axis thereof, each arm being swung to said body engaging and centering position upon upward movement of one rocker and swung to said clearance position upon upward movement of the other rocker, plungers on the platform positioned to engage each rocker from below, and means operative upon raising and lowering of the platform to cause the corresponding plungers to move said one rocker and said other rocker upwardly, respectively.

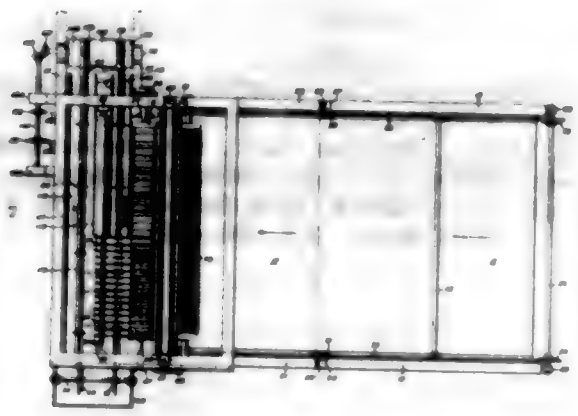
2,901,886
CARTON FEEDER
Joseph Shuster, Santa Cruz, Calif., assignor to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
Application May 1, 1958, Serial No. 732,289
10 Claims. (Cl. 198—30)

1. In a carton feeder having a carton receiving table, an upwardly inclined extension for said table and pusher means for moving the cartons across the table and up the inclined extension, an idler roll spaced from and extending across the upper end of the inclined extension said roll having resilient peripheral corrugations at right angles to the length thereof, a lower accelerator roll spaced from and parallel to the upper end of the inclined extension having resilient peripheral corrugations at right angles to the length thereof, an upper accelerator roll spaced from and parallel to said lower accelerator roll having resilient peripheral corrugations at right angles to

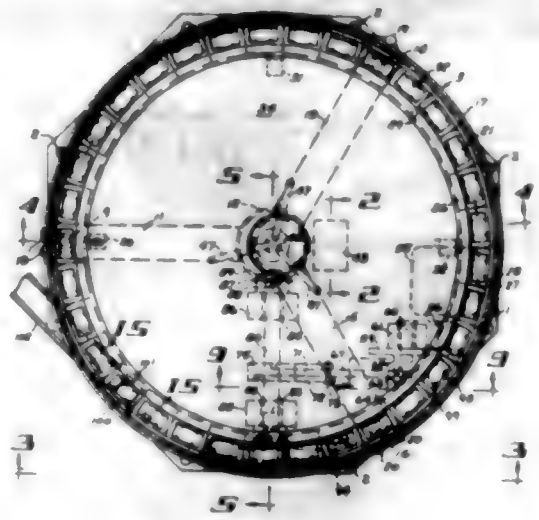
of said contact elements, whereby upon coincidence of first pulley fixedly secured to said worm gear shaft for ro-

a frame, a carriage traveling between the limits of said stops on the frame, type-line scales, printing-point index-surfaces, a receptacle previously deposited on the associated receiving surface by a carriage on said upper run.

the length thereof, means for rotating said rolls to feed cartons therebetween, a conveyor adjacent and parallel to said lower accelerator roll, a second conveyor spaced from and parallel to said first conveyor, means for moving said conveyors in the same direction along the length of said accelerator rolls, an idler shaft between said conveyors, and a plurality of spaced endless belts passing around said lower accelerator roll in corrugations therein and around said idler shaft, said spaced endless belts extending over approximately one half the length of said lower accelerator roll and embracing the corresponding length of said first conveyor.

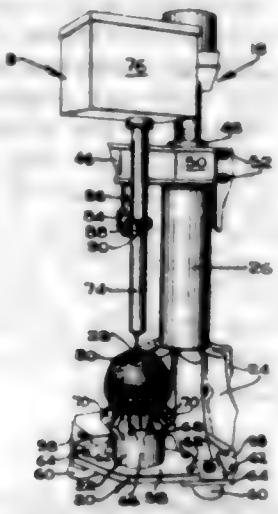


2,901,083
HOPPER FEEDER
John Evasic, Detroit, Mich.
Application June 14, 1957, Serial No. 665,862
14 Claims. (Cl. 198—33)



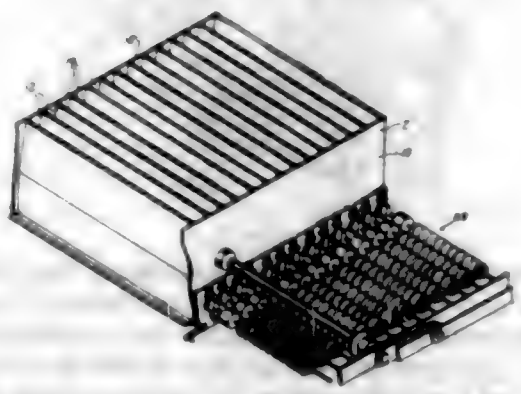
1. An orienter of the class described, comprising: a base; a cylindrically shaped member fixedly mounted on said base and being open at the top and bottom ends thereof; an inclined circular track fixedly mounted on the inner surface of said cylindrically shaped member and having a bottom wall; a conveyor belt movably mounted on said track; an inclined disk mounted within said circular track and being adapted to have deposited thereon a random mass of workpieces; an agitating means for agitating said disk to cause the workpieces thereon to slide off of the disk and onto said conveyor belt; a gear rack formed on the bottom side of said conveyor belt; a hole formed in said track; a gear operatively mounted on said base and extending through said hole in said track and adapted to mesh with said gear rack for driving said conveyor belt on said track; a power drive means mounted on said base and being drivingly connected to said agitating means and said gear; and, a discharge chute adapted to receive the workpieces from said conveyor belt in a pre-determined oriented position.

2,901,087
METHOD OF AND APPARATUS FOR POSITIONING FRUIT
Thomas G. Cox, Lakeland, Fla., assignor to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware
Original application November 1, 1954, Serial No. 466,104. Divided and this application December 20, 1956, Serial No. 629,703
13 Claims. (Cl. 198—33)



5. In a machine for handling grapefruit or similar fruit which have surface marks thereon locating their stem-blossom axes, an upright cup disposed with its axis extending vertically, said cup being arranged to receive and center a grapefruit therein, means mounting said cup for movement along a horizontal path, means operable to position said cup mounting means at a predetermined station, and a light projector mounted above said cup at said station and arranged to project a beam of light toward said cup in alignment with the axis thereof to form a light spot on the surface of the fruit through which the axis of the cup extends whereby the stem-blossom axis of the fruit is aligned with the axis of the cup by centering the surface mark of the fruit with relation to the illuminated spot.

2,901,089
MECHANICAL CODING AND SORTING DEVICE
Jacob Rabinow, Takoma Park, Md., and Lawrence J. Kamm, San Diego, Calif.; said Rabinow assignor of fifteen percent to Max L. Libman, Vienna, Va.
Application March 5, 1957, Serial No. 644,017
13 Claims. (Cl. 198—38)



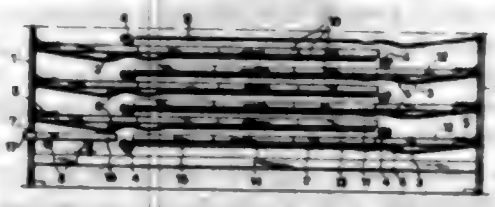
1. A mechanical coding device comprising a support, a plurality of contact elements on said support, each element being positionally settable on said support, means for retaining each element in any one of said settable positions on said support to which it is set, means defining a surface, means for moving said support along and biased toward said surface with at least some of said elements in contact therewith, said surface containing a number of groups of depressions corresponding to possible positions

comprising a helically wound spring, two end hub ele- **2,901,096**

both conveyers at the second transfer point, said second having resilient peripheral corrugations at right angles to

of said contact elements, whereby upon coincidence of a group of depressions and a selected pattern of contact elements said support moves in a direction toward said surface, an operating device and means actuated by motion of said support toward said surface to actuate said operating device.

2,901,090
CARRYING-FRAME CONVEYOR FOR TIERED DRIERS
Augusto Marchetti, Milan, Italy, assignor to Gebrueder Buehler, Uzwil, Switzerland, a Swiss firm
Application October 18, 1957, Serial No. 691,083
Claims priority, application Italy October 18, 1956
14 Claims. (Cl. 198—84)

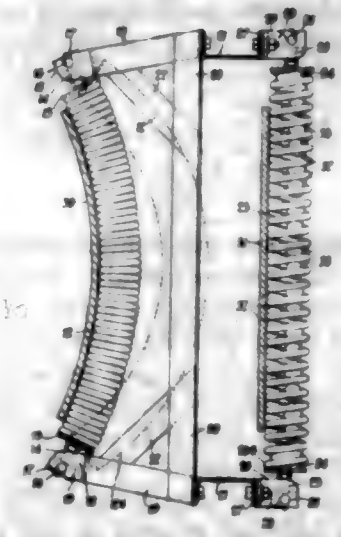


1. A tiered drier comprising, in combination, a lower tier and at least one upper tier; a plurality of carrier frames; substantially horizontal tracks for said frames in each tier; a drive mechanism in each tier for advancing the frames along and beyond the respective tracks; and means for lifting the frames onto the tracks of the upper tier comprising energy accumulator means located in the path of frames advancing beyond the tracks in the lower tier and adapted to be loaded by said frames to assist in lifting the latter onto the tracks in the upper tier.

2,901,091
CONVEYOR VERTICAL ADJUSTMENT MEANS
Lavern L. Weinschenk, Bellevue, Iowa
Application December 6, 1957, Serial No. 701,183
6 Claims. (Cl. 198—120.5)

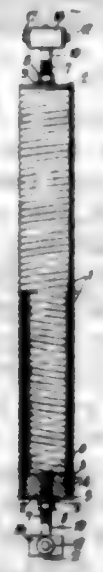
1. In a conveyor having a frame including a bight member from the longitudinally extending sides of which project a pair of laterally spaced, substantially parallel and confronting side frame member, a pair of standards disposed in spaced, parallel and confronting relation, means pivotally connecting one adjacent pair of ends of said standards on said conveyor frame intermediate the ends of said side frame members, a roller mounted on the other end of each of said standards, said rollers engaging one end of said bight and being movable thereon to raise or lower adjacent portions of said one end of said bight relative to the other end thereof, a pulley mounted on each of said standards adjacent said other ends thereof, a first cross-shaft mounted on said conveyor frame and extending transversely of said standards, a pair of axially spaced drums fixedly secured on said first cross-shaft, a cable for each of said drums, each of said cables having one of their ends anchored to said drums, each of said cables, respectively, being trained around said pulleys, means anchoring the other ends of said cables to said conveyor frame, a first gear fixedly secured on said first cross-shaft adjacent an end thereof, a worm gear and shaft therefor supported for rotation on said conveyor frame with the axis of said worm gear shaft disposed perpendicular to the axis of said first cross-shaft and with said worm gear meshing with said first gear, a first pulley fixedly secured to said worm gear shaft for rotation therewith, a second cross-shaft supported for rotation on said conveyor frame with the axes thereof positioned parallel with the axis of said worm gear shaft, said second cross shaft having second and third pulleys fixedly secured to each of its respective ends with said second pulley aligned with said first pulley, a motor having a drive shaft, a fourth pulley mounted on said drive shaft and aligned with said third pulley, means supporting said motor on said conveyor frame, and an endless belt trained around each pair of aligned pulleys.

2,901,092
SPRING ROLLERS OR IDLERS FOR CONVEYOR BELTS
John Russell Harbottle, Claremont, Union of South Africa, assignor to Jonas Woodhead & Sons Limited, Leeds, England, a British company
Application September 9, 1954, Serial No. 455,002
Claims priority, application Union of South Africa September 9, 1953
1 Claim. (Cl. 198—192)



A spring roller for use in resiliently supporting an endless conveyor belt on a frame of a material conveying system comprising a coiled wire having a plurality of convolutions, said wire being tensionally stressed along the axis thereof and torsionally stressed about the axis thereof in a predetermined direction so that said convolutions are urged both radially and axially together.

2,901,093
RESILIENT CONVEYOR ROLLERS
John Russell Harbottle, Claremont, Cape Town, Union of South Africa, assignor to Jonas Woodhead & Sons Limited, Leeds, England, a British company
Application September 21, 1954, Serial No. 457,376
Claims priority, application Union of South Africa February 6, 1954
2 Claims. (Cl. 198—192)



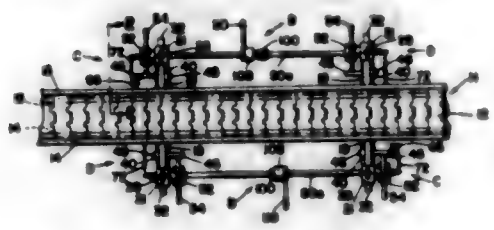
1. A spring roller or idler for a belt or band conveyor

spot.

in contact therewith, said surface containing a number of groups of depressions corresponding to possible positions

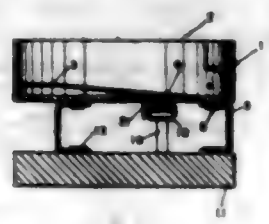
comprising a helically wound spring, two end hub elements disposed one at each end of the spring and to which the end convolutions of the latter are attached, a spindle carried by each of said end hub elements to project outwardly therefrom, bearing means for supporting said spindles so as to permit a limited amount of angular movement so that the spring roller is not only free to rotate but also to sag under its own weight and the weight of the belt or band and of the load carried thereby and means whereby each end hub element may be adjusted axially of its respective spindle thereby to vary the tension on the spring roller and to control the amount of sag.

2,901,094
ARTICLE GUIDING AND POSITIONING MEANS
Edward C. Jett, Coxs Creek, Ky.
Application August 14, 1958, Serial No. 755,059
5 Claims. (Cl. 198—204)



1. In article guiding and positioning means the combination of a frame; slide means movably mounted upon said frame; said slide means including a pair of separate slide shafts, said frame being provided with separate openings for receiving and supporting said separate slide shafts, and a clamp bar and spacer secured to said slide shafts for unitarily supporting said slide shafts in a spaced relation for cooperative movements; an article guide secured to said slide means; cam means rotatably supported by said frame; and a follower secured to said clamp bar and spacer and abutting said cam means, said cam means operatively engaging said follower for movement of said slide means and said article guide with respect to said frame.

2,901,095
PARTS FEEDER
Floyd E. Smith, Erie, Pa.
Application July 23, 1956, Serial No. 599,503
1 Claim. (Cl. 198—220)

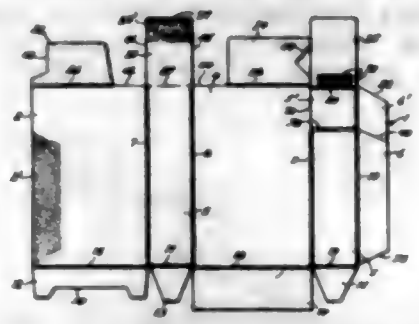


A parts feeder comprising a base, a hopper generally cylindrical and having a helical track, spring means to support said hopper on said base, means to exert a torsional force on said track, said means comprising spaced solenoids attached to said base, spaced armature means attached to said hopper in close spaced proximity to said solenoids, and means to apply intermittent electrical impulses to said solenoids whereby said track is vibrated in a confined inclined helical path, said solenoids applying a force to said armature means in a direction perpendicular to the central axis of said helical track, said spring means being U-shaped and the end portions of said U-shaped spring means being attached one to said base and the other to said hopper of said feeder, the ends of said U-shaped spring means being disposed radially of said hopper.

2,901,096
CONVEYOR SYSTEMS
Arthur Thomas Charles Burrows, Hertfordshire, England, assignor to Geo. W. King Limited, Stevenage, England, a British company
Application May 22, 1956, Serial No. 586,398
Claims priority, application Great Britain May 26, 1955
9 Claims. (Cl. 198—225)

1. A conveyor system comprising a stationary runway, a mobile unit, load carriers normally supported on the unit for movement therewith but displaceable longitudinally thereof, means for imparting a reciprocatory motion to said unit, stationary guide means adjacent said runway and a plurality of individual strip like elements freely supported by said guide means to extend into the path of the load carriers, said strip like elements being individually displaceable and constituting ratchet teeth displaceable by a load carrier on movement of the unit in one direction but stationary and effective to prevent movement of the carriers with the unit on movement of the latter in the reverse direction.

2,901,097
CONTAINER
Bernard J. Tamarin, Whitemarsh, Pa.
Application June 19, 1958, Serial No. 743,127
8 Claims. (Cl. 206—41.2)



1. In a container formed from a unitary packaging blank and having a pair of wide wall panels spaced opposite and parallel to one another, a pair of narrow wall panels spaced opposite and parallel to one another and perpendicular to and joining the wide wall panels, with a dispensing opening in one end and a captive closure slide for the dispensing opening, the improvement comprising a hinged portion of one of the wall panels attached to the closure slide and adapted to swing outward from the body of the container, upon movement of the closure slide to uncover the dispensing opening, and a plane member attached to the hinged wall portion and adapted to underlie one of the adjacent wall panels when the dispensing opening is covered by the closure slide and to move out from under that adjacent wall panel to maintain surface continuity between the edge of that adjacent wall panel and the hinged wall portion when the dispensing opening is uncovered by the closure slide.

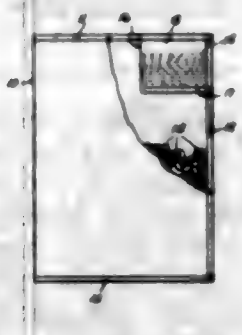
2,901,098
DISCARDABLE OR REUSABLE PLASTIC PACKAGE
Earl S. Tupper, Upton, Mass., assignor to Tupper Corporation, North Smithfield, R.I., a corporation of Delaware
Application November 10, 1954, Serial No. 467,992
3 Claims. (Cl. 206—46)

1. A self shape-retaining and pressure-sensitive, hermetically sealed and deformable package including con-

tents sealed therein and adapted for selective discarding or reusability as a frictionally sealable container and cover after severance for removal of enclosed contents comprising a container and cover both being of thin gauge, pressure-sensitive and deformable material, the container having a bottom and side wall terminating in a rigidifying outwardly disposed peripheral rim flange having horizontal and skirt portions, a cover having a central wall, an upwardly extending side wall and a rigidifying outwardly disposed peripheral slide wall rim flange having horizontal and skirt portions, the side wall portion of the con-

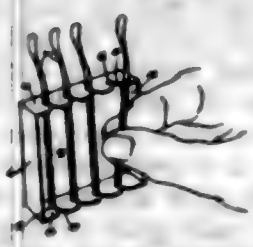
tainer adjacent the flange thereof being operative for frictional, telescopic and hermetical engagement with the cover side wall, the cover flange and the container flange being in abutting engagement, fusion means between the opposing faces of opposite portions of said flange skirt portions and tearing means disposed above said fusion means for severable disconnection therebelow of said flange skirt portions whereby the package may also serve selectively as a container and separate frictionally engageable cover therefor for reuse or as a separated package to be discarded.

2,901,099
PACKAGED METAL FASTENERS AND BONDING AGENT
Vernon K. Krieble, Hartford, Conn., assignor to The American Sealants Company, Hartford, Conn., a corporation of Connecticut
Application July 2, 1956, Serial No. 595,300
11 Claims. (Cl. 206—47)



7. A package comprising an outer plastic container containing metal fasteners and an inner container formed of plastic containing an air space and an anaerobic uncured resin consisting essentially of an acrylic acid type ester and a peroxidic catalyst.

2,901,100
LIPSTICK APPLICATOR AND PACKAGE
Richard B. Mueller and Margery C. Mueller, Altadena, Calif.
Application November 26, 1954, Serial No. 471,364
15 Claims. (Cl. 206—56)



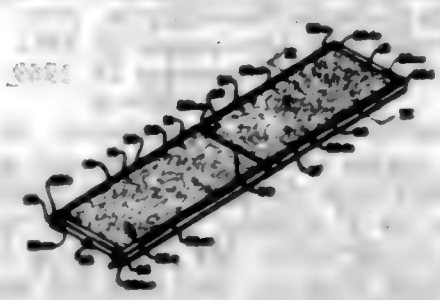
1. A cosmetic device which includes: a solid applicator head formed with opposite surfaces, one being longitudinally relatively flat and the obverse surface being longitudinally concave; and handle means on said applicator head connected through a resilient section for manipulating said head.

10. A cosmetic device comprising: a box and a plurality of cosmetic applicators having handle means removably affixed to said box, said box having upper and lower sides formed with a plurality of spaced notches, each notch having a substantially V-shaped entry and a circular end frictionally holding said individual applicators in spaced substantially parallel array, each said applicator being formed with an applicator head having opposite operative surfaces, one surface being formed to conform to the upper lip and one surface being formed to conform to the lower lip, said surfaces being coterminous in a tapered edge, said applicator having curved relatively flexible neck means joining said handle means and said head.

2,901,101
COSMETIC CONTAINER
Sabatino De Santis, Waterbury, Conn., assignor to The Eyelet Specialty Company, Waterbury, Conn.
Application November 12, 1957, Serial No. 695,875
2 Claims. (Cl. 206—56)

1. A cosmetic stick holder comprising a sleeve, a carrier cup located in the sleeve and mounted for advancing and retracting movement within the same, said cup being provided with a spring tongue formed out of its side wall and located rearwardly of its forward end, which tongue has an inwardly-directed detent portion, a refill cup its rear end portion inserted within the carrier cup and having a finger-engaging forward portion projecting out of the carrier cup, said refill cup being provided adjacent to its rear end with an annular groove for engagement by the detent of the spring tongue to thereby hold the two cups together in nested relationship, the sleeve having a recess formed in its side wall adjacent to but rearwardly of the forward end of the sleeve, which recess is so positioned that it will register with the spring tongue when the nested cups reach their advanced position, thereby permitting the spring tongue to be outwardly flexed into said recess by forward manual pull on the refill cup to withdraw said refill cup from the carrier cup.

2,901,102
PACKING CRATE FOR SHEETS OR THE LIKE
James W. McCracken, Leechburg, Pa.
Application April 12, 1956, Serial No. 577,853
3 Claims. (Cl. 206—60)



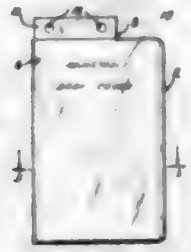
3. In a packing crate for sheets or the like, in combination, a rectangular frame having substantially the dimensions of said sheets or the like, a base for said frame comprising longitudinally extending rails, a plurality of upper

position to an open position in the path of a falling body

2,901,108
MAGNETIC SEPARATOR

and lower rigid sheet metal cornerpieces defining each corner and the sides and ends of said frame, said upper and lower cornerpieces being right-angled in plan and in section, the sides of said cornerpieces extending in adjustable overlapping relation to the sides of adjoining cornerpieces, the vertical flanges of said upper and lower cornerpieces at adjoining corners of said frame being in overlapping relation respectively to define the edges of a contents space for said sheets or the like, said overlappings being intermediate the corners of said cornerpieces, the horizontal flanges of said cornerpieces extending inwardly to define an adjustable C-shaped section around the perimeter of said frame, rectangular sheets of cover material at the top and bottom of said space, the edges of said cover material being held in place in a completed crate by said horizontal flanges of said cornerpieces respectively, lateral banding means longitudinally spaced to bind together the sides of said crate, the lower reach of said lateral banding means extending around said cornerpieces and above said base, longitudinal banding means laterally spaced to bind together the ends of said crate, and upwardly extending groove means for said longitudinal banding means in said base.

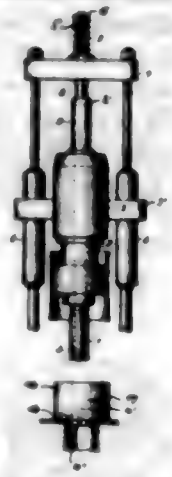
2,901,103
DISPLAY FOR BOOK PROTECTORS
Sam W. Brunner, New York, N.Y.
Application July 30, 1958, Serial No. 751,924
2 Claims. (Cl. 206—80)



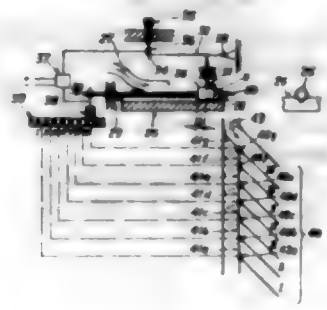
1. A display for plastic protectors for books, said display comprising an assembly composed of a protector having a pocket along one side edge extending from top to bottom of the protector, and a suspension sheet enclosed in the material of the protector, a portion of one side of said suspension sheet extending into the protector pocket to be interlocked therewith, and a portion of said sheet extending beyond the top of the protector to provide for suspension of the assembly without distorting or mutilating the protector.

2,901,104
PIERCING RAM ARRANGEMENT FOR AN EXTRUSION PRESS
Matthias Arenz, Lintorf, near Duesseldorf, Germany, assignor to Firma Schloemann Aktiengesellschaft, Duesseldorf, Germany
Application April 11, 1955, Serial No. 500,504
In Germany November 26, 1949
Public Law 619, August 23, 1954
Patent expires November 26, 1969
1 Claim. (Cl. 207—3)

In an extrusion press, in combination, an elongated piercing ram having an elongated free end portion of a diameter smaller than the next portion of said ram and joined thereto by a shoulder; a cross bar formed with an opening through which said end portion of said ram passes with slight clearance, said cross bar engaging said shoulder; moving means for moving said cross bar toward the end of said ram distant from said free end portion thereof to engage said shoulder with said bar and move said ram; a coil spring located about said elongated free end portion of said ram and engaging the side of said bar directed away from said shoulder; and an annular member fixed to said free end portion of said piercing ram and engaging the end of said spring distant from said bar.



2,901,105
DEVICE FOR THE TOLERANCE TESTING AND GRADING INTO TOLERANCE CATEGORIES OF OBJECTS AND WORKPIECES
Karl Max Harder, Vaduz, Liechtenstein, assignor to Patent- und Versuchs-Anstalt, Vaduz, Liechtenstein, a company of Liechtenstein
Application December 10, 1954, Serial No. 474,516
Claims priority, application Switzerland December 31, 1953
1 Claim. (Cl. 209—88)



An apparatus for measuring a tapered surface extending about an axis of a body and for comparing the latter with a perfect body; comprising a support for said body provided with a guide surface forming a path of movement of said body in the general direction of said axis, a slide having a recess therein, said slide extending longitudinally of said path and continuously shiftable in the longitudinal direction of said path, said recess receiving said body for advancing the latter continuously along said path, a plurality of stationary electric contacts arranged close to each other in a row parallel to said path, a first movable electric contact carried by said slide and movable with the latter and along said row of contacts for measuring the position of said slide with respect to said path, a feeler extending in transverse direction to said path and said slide and having a feeler tip for contacting said tapered surface of said body, means guiding said feeler for movement in said transverse direction, said feeler being moved in said transverse direction by said tapered surface as said body is advanced along said path by said slide, a second movable electric contact carried by and movable with said feeler, an additional stationary contact located in the path of movement of said second movable contact to be engaged thereby when said feeler tip contacting said tapered surface is at a predetermined distance from said guide surface equal to a dimension of said tapered surface transverse to said guide surface but less than the maximum transverse dimension of said tapered surface, a plurality of compartments arranged in a vertical row below and in front of said path, each of said compartments having an entrance door movable from a closed

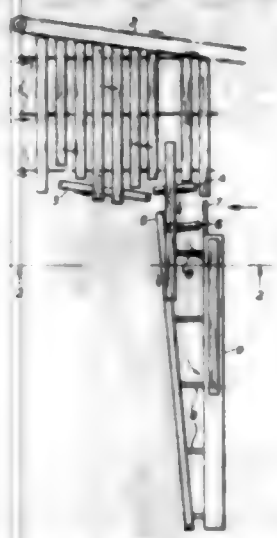
nected to said casing, one at each end of said sifters and collecting bottoms, each terminal box having an [illegible] chutes, spring means connected with said hangers for de-

cator head formed with opposite surfaces, one being longitudinally relatively flat and the obverse surface be-

sions of said sheets of the mat, a comb for said frame comprising longitudinally extending rails, a plurality of upper

position to an open position in the path of a falling body for intercepting the body and directing it into a compartment, said compartments corresponding respectively to the contacts of said row of contacts, and means for automatically opening the door of that compartment which corresponds to the contact of said row of contacts engaged by said first movable contact when said second movable contact engages said additional stationary contact.

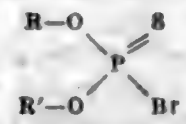
2,901,106
APPARATUS FOR SORTING TIMBER
Robert London Aitken, London, England
Application March 10, 1958, Serial No. 720,142
Claims priority, application Great Britain March 15, 1957
6 Claims. (Cl. 209—103)



2. Apparatus for sorting planks according to length comprising a main conveyor on which the planks are carried breadthwise, a guide means for engaging one end of the planks on the main conveyor, ejecting means arranged beside the main conveyor at a plurality of stations, the gap between the ejecting means and the guide means decreasing at each successive station, each ejecting means comprising a means for engaging and raising the end of those planks on the main conveyor which, on arrival at the ejecting station, project laterally from the main conveyor by more than a predetermined amount, and a lateral conveying means arranged at a higher level than the main conveyor and positioned to receive the raised end of a plank from the engaging and raising means and to move such plank laterally of the main conveyor, said lateral conveying means being arranged to give the plank a component of motion lengthwise of the main conveyor substantially equal to the speed of the main conveyor.

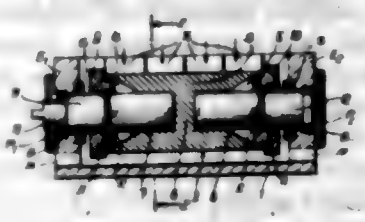
2,901,107
FROTH FLOTATION OF COPPER SULFIDE ORES
Arthur H. Fischer, New York, N.Y., assignor to Minerec Corporation, New York, N.Y., a corporation of New York
No Drawing. Application August 20, 1957
Serial No. 679,148
7 Claims. (Cl. 209—166)

1. Process for the concentration of copper sulfide ores by froth flotation that comprises effecting the froth flotation in the presence of a flotation reagent selected from the group of compounds represented by the formula:



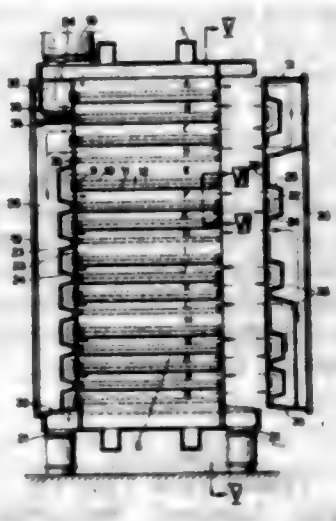
wherein R and R′ are members selected from the group consisting of lower alkyl radicals, and recovering a froth concentrate relatively rich in copper and a froth tailing relatively poor in copper.

2,901,108
MAGNETIC SEPARATOR
Heinrich Spodig, Bork, Westphalia, Germany
Application December 12, 1956, Serial No. 627,807
Claims priority, application Germany December 12, 1955
6 Claims. (Cl. 209—219)



1. In a magnetic separator, in combination, a housing made of magnetic material; a roller comprising a roller body made of magnetic material and being formed with a pair of axially extending recesses opening in the opposite end faces of said roller body, respectively, and a pair of elongated magnets each having opposite pole portions, said magnets being arranged partly in said recesses, respectively, in such a manner that the pole portions of like polarity are within the respective recesses, face each other and are in physical contact with said roller body and that the pole portions of the opposite polarity project exteriorly from the respective recesses and are therefore out of physical contact with said roller body; and combined mounting and magnetic flux transmitting means for rotatably mounting said roller in said housing and for transmitting thereto the polarity of said pole portions of said opposite polarity, whereby a self-contained magnetic field is formed between said roller and said housing, the axial spacing of said inner pole portions from each other being such that their respective fluxes are diverted from and by each other in the roller body towards the respective ends thereof whereby a high flux density throughout the effective roller area facing opposite polarities of a corresponding area of the housing is obtained.

2,901,109
PLANSIFTER COMPARTMENT
Paul Eppenberger, Amriswil, Switzerland, assignor to Gebrueder Buehler, Uzwil, Switzerland, a Swiss firm
Application November 20, 1957, Serial No. 697,571
7 Claims. (Cl. 209—316)



1. A plansifter compartment comprising, in combination: a casing having an intake for the product to be assorted and classified and a plurality of outlets for the assorted and classified fractions of the product; a plurality of superposed sifters and collecting bottoms in said casing, each sifter and each collecting bottom having two lateral sides and two ends; ducts in said casing for the passing fractions of the product disposed laterally of said sifters and collecting bottoms; a pair of terminal boxes con-

for removing from said screen member the solids ac-

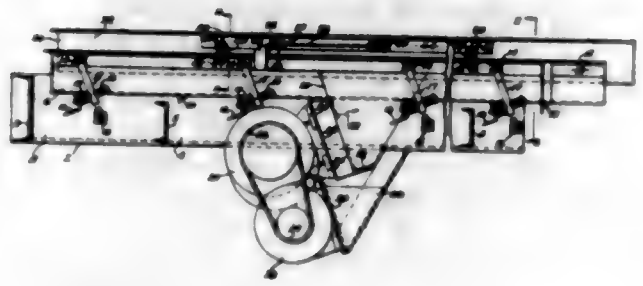
2,901,115

move said ram; a coil spring located about said elongated free end portion of said ram and engaging the side of

below and in front of said path, each of said compartments having an entrance door movable from a closed

nected to said casing, one at each end of said sifters and collecting bottoms, each terminal box having an upper end, a lower end, a substantially vertical side adjacent to the respective ends of said sifters and collecting bottoms, and comprising bypassing and carrying-away ducts for the overriding and rejected fractions of the product, respectively; a vertical sealing face connected to the side of each terminal box and extending between the upper and lower ends thereof, each sealing face having a plurality of cutouts constituting passages between said sifters and collecting bottoms on the one hand and said bypassing and carrying-away ducts on the other hand; and a substantially horizontal sealing face fixed to the lower end of each terminal box, each said last mentioned sealing face having at least one cutout for the passage of product fractions from the ducts in said terminal boxes into said outlets.

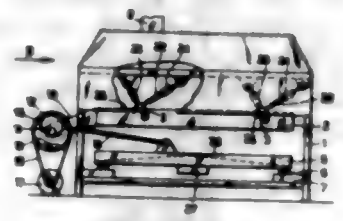
2,901,110
VIBRATORY CONVEYORS
Thomas H. Brumagin, Westfield, N.Y., assignor to Ajax Flexible Coupling Co. Inc., Westfield, N.Y., a corporation of New York
Application December 6, 1955, Serial No. 551,310
9 Claims. (Cl. 209—330)



7. A vibratory screening and conveying apparatus comprising a stationary frame; a pair of elongated conveyor pans one above the other and generally horizontal in a position of use and each comprising a bottom; perforations in the bottom of the upper pan; the lower pan supported on the frame by supporting means that constrains it to have bodily conveying vibratory movement in horizontal and vertical directions concurrently; means for vibrating the lower pan; means connecting the pans to transmit horizontal movements of the lower pan to the upper pan; spring means between the pans, supporting the upper pan on the lower pan and transmitting vertical movements of the lower pan therethrough to the upper pan; adjustable means to put adjustable pre-load tension in the spring means comprising stop means to retain the pre-load tension in the spring means; the spring means arranged to be additionally tensioned upon initiation of transmission of vertical movement therethrough and to thereafter discharge the additional tension and transmit vertical movement to the upper pan thereby; and the stop means arranged to abruptly stop spring-discharge-effected vertical movement of the upper pan.

2,901,111
VIBRATOR CHUTE
Paul Eppenberger, Azariswil, Switzerland, assignor to Gebrueder Buehler, Uzwil, Switzerland, a Swiss firm
Application July 16, 1957, Serial No. 672,223
Claims priority, application Switzerland July 24, 1956
3 Claims. (Cl. 209—344)

1. In a conveyer, in combination: a pair of reciprocable vibrator chutes, a drive shaft connected with one of said chutes, an eccentric on said shaft, a coupling rod having one end pivotally connected to the other of said chutes and another end operatively connected with said eccentric, a plurality of hangers for suspending one of said chutes, spring means connected with said hangers for determining the position of rest of said last mentioned



chute, and slide shoes for carrying the other of said chutes.

2,901,112
COMBINING TUBE AND FILTER THEREFOR
Henry Naftulin, Skokie, and Robert Egge, Midlothian, Ill., assignors to Michael Reese Research Foundation, Inc., Chicago, Ill., a corporation of Illinois
Application May 10, 1957, Serial No. 658,428
6 Claims. (Cl. 210—94)

1. A fluid combining tube, comprising an enlarged transparent plastic tube having one end provided with an outlet and the other end sealed about at least two plastic inlet tubes, said inlet tubes having end portions projecting into the interior of the large tube, said end portions terminating in a pair of adjacent discharge openings within said enlarged tube and being held together adjacent the central portion of said enlarged tube for discharge thereinto.

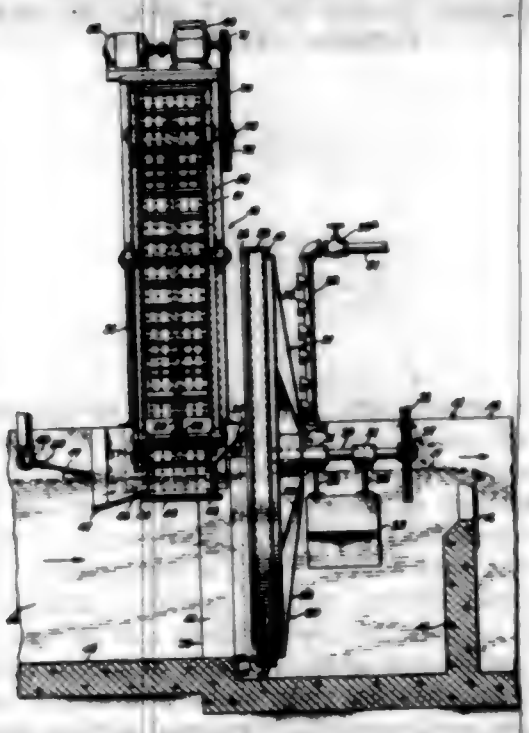
2,901,113
APPARATUS FOR REMOVING SOLIDS FROM A FLOWING STREAM OF LIQUID
Elwin C. Newell, Abington Township, Montgomery County, Pa., assignor to Link-Belt Company, a corporation of Illinois
Application August 27, 1957, Serial No. 680,539
9 Claims. (Cl. 210—158)

1. A device for removing solids from a liquid stream, comprising a screen member movable in a closed path extending above and below the surface of the stream for removing suspended solids from said stream, means for driving said member along said path, an elongated skimming trough partially submerged in the top portion of said stream ahead of said screen member, said trough having an upstream portion defining a top edge disposed transversely of said stream and spaced slightly below the surface thereof to allow floating solids carried by the stream to pass over said upstream portion and enter said trough, cleaning means above the surface of the stream

relatively poor in copper.

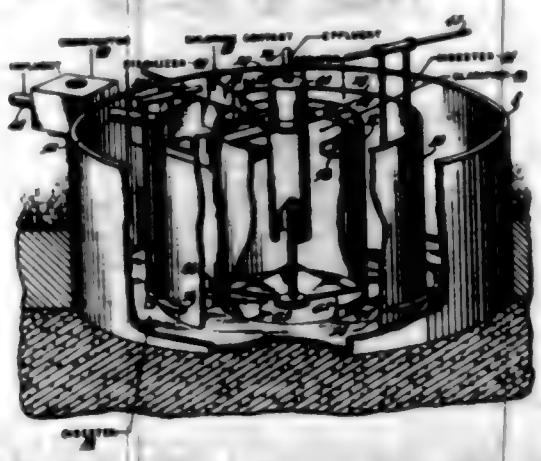
and collecting bottoms; a pair of terminal boxes con-

for removing from said screen member the solids accumulated thereon and for carrying such solids to said



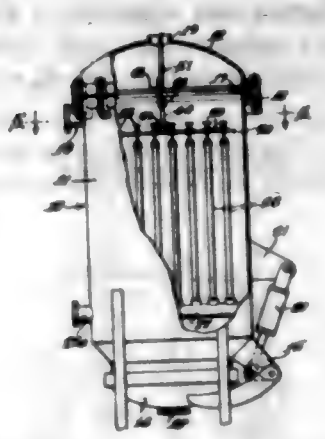
trough, and means for removing from said trough the combined mass of solids contained therein.

2,901,114
SEWAGE TREATMENT APPARATUS
Arnold R. Smith, Haddonfield, N.J., and Walter T. McPhee, Scarborough, N.Y.; said Smith assignor to said McPhee
Application April 17, 1957, Serial No. 653,329
5 Claims. (Cl. 210—200)



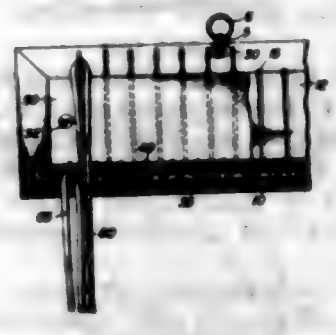
1. Apparatus for treating sewage comprising, in combination, at least a first, a second, and a third substantially cylindrical tank, said tanks being arranged substantially concentrically around a common axis to provide a single unitary structure for the complete treatment of sewage by the activated sludge process, means dividing the volume of said first tank into a pair of digestion chambers and a chlorine contact chamber, means dividing the volume of said second tank into a stabilization chamber and an aeration chamber, the volume of said third tank providing a clarification chamber, means for supplying influent sewage to said aeration chamber, means for discharging aerated sewage from said aeration chamber to said clarification chamber, means for discharging clarified liquid from said clarification chamber into said chlorine contact chamber, means for discharging chlorinated effluent liquid from said chlorine chamber, means for removing settled solids from said clarification chamber, means for distributing and discharging said solids into said digestion chambers and said stabilization chamber, and means for discharging matter from said stabilization chamber into said aeration chamber for mixing with said influent sewage.

2,901,115
FILTERING APPARATUS
Henry Schmidt, Jr., Hinsdale, and Raymond F. Ledford, Riverside, Ill., assignors to Industrial Filter & Pump Mfg. Co., Chicago, Ill., a corporation of Illinois
Application May 24, 1957, Serial No. 661,363
8 Claims. (Cl. 210—331)



1. In filtration apparatus the combination of a plurality of filter leaves each comprising a rigid core and a porous, flexible bag enclosing said core, means for rigidly supporting said cores within a filter chamber, means separate from said last named means movably mounted within said chamber for supporting said bags, and a plurality of resilient means interposed between each of said cores and the associated bags.

2,901,116
TIE HOLDER DEVICE
John L. Daley, Norfolk, Va.
Application December 6, 1957, Serial No. 701,013
2 Claims. (Cl. 211—13)



1. A tie holder device comprising a support having a plurality of straight, transverse grooves therein, a plurality of wire hanger units adapted for relatively free pivotal movement in said grooves, said units comprising a straight groove contacting portion, unitary upper and lower tie clip means extending right angularly from said portion, each of said clip means being integrally formed with said contacting portion and comprising reverse bends in said wire forming an outwardly opening wedge-shaped tie receiving space in the end thereof, means to maintain said units in said grooves comprising a plate secured on said support and over said grooves, said lower clip means being offset with respect to said upper clip means, whereby at least one tie may be supported from each of said clip means, said ties being in parallel and spaced relationship with each other.

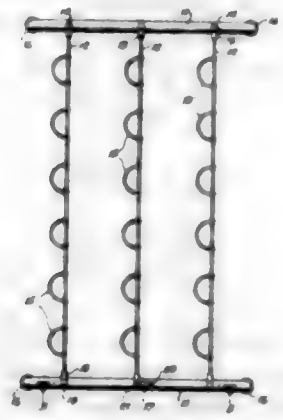
2,901,117
COLLAPSIBLE SHOE RACK
Peter H. Plocki, Riverdale, and Gilbert J. Holtz, Yonkers, N.Y., assignors to Belvedere Space Saving Products, Inc., Yonkers, N.Y., a corporation of New York
Application May 31, 1956, Serial No. 588,537
4 Claims. (Cl. 211—38)

1. A shoe rack comprising two upright support members in substantially parallel spaced relation, at least two

full height of the assembly, a plurality of trays, each

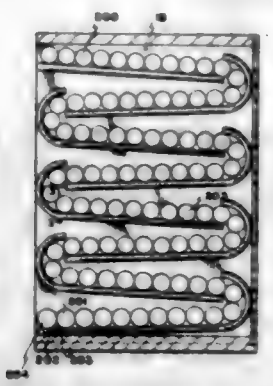
U-shaped side frames extending along parallel vertical

horizontal cross members in substantially parallel spaced relation, each said cross member being pivotally attached at one end to a point on the upper portion of one upright support member and at the other end to a point on the upper portion of the other upright support member, the pivotal attachment of said support members and said cross members being about a vertical axis so that the rack may be collapsed and extended, a plurality of shoe retaining members attached to said cross members, a locking member attached to the end of one of said cross



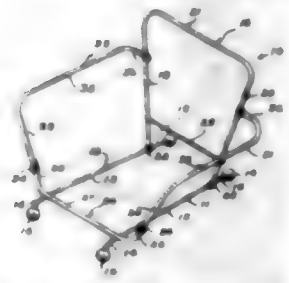
members and extending at a right angle thereto, a downward projection on said locking member, a recess in an upright support member adapted to engage said projection when said cross members are perpendicular to said support members, a releasing member attached to said locking member, said releasing member extending through and beyond said support member whereby pressure on the extension of said pivot and releasing member lifts the locking pin out of the recess allowing relative movement between said support members and said cross members for collapsing the rack.

2,901,118
STORING AND DISPENSING APPARATUS
Scott L. Beesley, Salt Lake City, Utah
Application June 11, 1958, Serial No. 741,393
6 Claims. (Cl. 211—49)



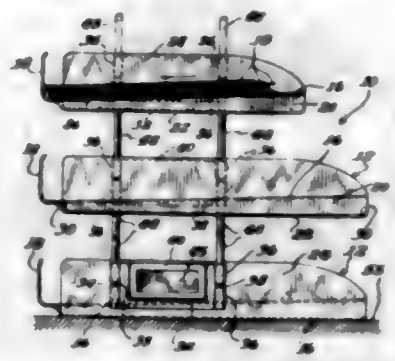
1. Apparatus for storing and dispensing containers of generally cylindrical configuration, said apparatus including, in combination: a plurality of parallel, vertical partitions; a multiplicity of sets of chute rails, the rails in each of said sets being inclined and vertically interspaced to accommodate the storage and gravity feed of said containers, the lower chute rail of each set having means for impeding such gravity feed, each set being mounted on a side of one of said partitions, both sides of said partitions except the outer side of each of the end partitions being provided with a respective set of said chute rails, and adjacent sets of rails associated with adjacent partitions being of corresponding disposition to cooperate in producing such storage and gravity feed of those containers confined in the storage cells defined by such adjacent partitions; and means for selectably interspacing said partitions a selectable distance apart.

2,901,119
FOLDABLE RECORD HOLDING DEVICE
Tor Almer, Los Angeles, Calif.
Application October 14, 1957, Serial No. 689,981
4 Claims. (Cl. 211—50)



1. In a phonograph record holding device, the combination of: base means, including a pair of parallel rods joined together adjacent their front ends by a transverse tubular member secured to said pair of rods and adjacent their rear ends by a transverse rod the ends of which extend beyond said parallel rods; a substantially U-shaped back member having upright portions connected by a horizontal portion, the lower ends of said upright portions being pivotally secured to said ends of the transverse rod outside of said parallel rods; and a pair of side members each having a substantially horizontal portion detachably journaled in one end of said transverse member and having an upstanding portion detachably fixed to one of the upright portions of said back member.

2,901,120
DESK TRAY
Charles M. Abrahamson, Aurora, Ill., assignor to All-Steel Equipment Inc., Aurora, Ill., a corporation of Illinois
Application January 31, 1956, Serial No. 562,400
1 Claim. (Cl. 211—126)



A desk tray formed from a single sheet of material and comprising a generally rectangular planar floor portion flanked on opposite sides by side walls or like configuration with a downwardly extending trough member connecting each side wall with the adjacent side margin of said floor portion, the lower surface of said trough members lying in a plane which is oblique with respect to the plane of said floor portion whereby the tray when placed on a flat surface rests uniformly on said trough members with the floor member inclined rearwardly downwardly, and a rear wall rising upwardly from the rear margin of said floor portion, said trough members providing an air escape path as papers are dropped on the tray.

2,901,121
MULTI-TIERED RACK UNITS
David Maldon James, Sussex, England, assignor to Beanstalk Shelving Limited, Sussex, England, a British company
Application September 16, 1957, Serial No. 684,123
4 Claims. (Cl. 211—126)

1. A collapsible tiered tray assembly comprising a plurality of rigid support posts each extending over the

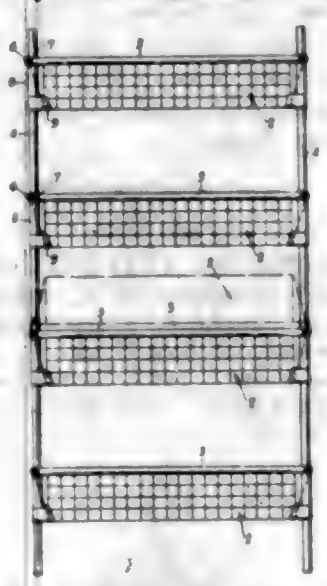
2,901,125
DERRICKS

device, a wedge cam carried by said rod engaging the

tion chamber into said aeration chamber for mixing with said influent sewage.

bers in substantially parallel spaced relation, at least two

full height of the assembly, a plurality of trays, each having a base, rimmed side walls and upper corners, the trays being supported in superposed relationship by said posts, which latter pass through aligned openings defined

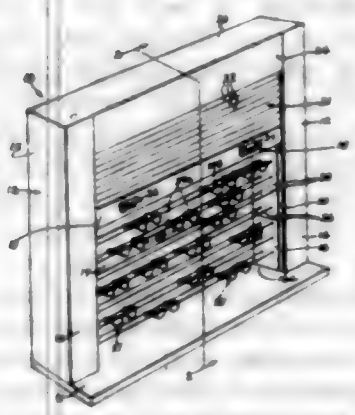


by the trays, at said corners, means detachably connecting each tray rim to each post, and bearing members projecting from the posts at intervals and bearing against the supported trays at locations spaced from the tray rims.

2,901,122
DISPLAY DEVICES

Louis S. Edman, Putnam, Conn., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

Application January 15, 1958, Serial No. 709,074
6 Claims. (Cl. 211—134)



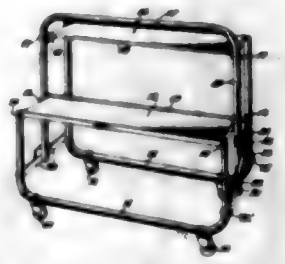
1. In a display device of the character described the combination of a base having vertically disposed side supports attached to said base in fixed spaced relation with each other, each of said supports having a pair of rows of vertically spaced openings therein with the respective openings in one of said supports being transversely aligned with the openings in the other of said supports and with the rearmost row of openings in each of said supports being located a given amount below the respective openings of the forwardly disposed row of openings in said supports, a plurality of substantially parallel normally limp thread-like members spanning the space between said supports, each of said members extending into a respective pair of transversely aligned openings and means for securing said thread-like members under tension to said supports.

2,901,123
COLLAPSIBLE STAND

Axel E. F. Johnson, Cincinnati, Ohio, assignor to American Hospital Supply Corporation, Evanston, Ill., a corporation of Illinois

Application August 25, 1953, Serial No. 376,342
4 Claims. (Cl. 211—142)

1. A collapsible stand comprising an inverted U-shaped central frame extending along a vertical plane, a pair of U-shaped side frames extending along parallel vertical planes and being spaced from said central frame on opposite sides thereof, a pair of shelves extending between said central frame and each of said side frames, each of said shelves being pivotally connected to said central frame and to one of said side frames for pivotal movement as said central and side frames are moved vertically with reference to each other, connecting means pivotally connecting said central and side frames and spaced below said shelves for maintaining said frames along parallel planes, and a pair of obliquely-positioned elongated links having lower ends pivotally connected to said side frames and having upper portions with longitudinally extending

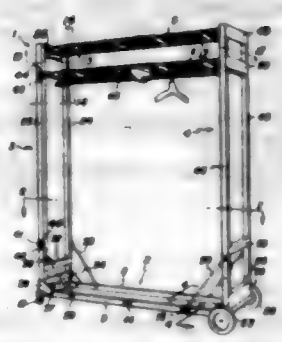


slots, said central frame having a post projecting through both of said slots and being slidable therealong as said central frame is moved vertically with reference to said side frames, said post being engageable with said links at the lower ends of said slots for preventing downward movement of said central frame below a point where said pivotal shelves are horizontally disposed, said central frame projecting above said shelves to provide a handle, whereby, when said stand is lifted by said handle said central frame moves upwardly with reference to said side frames to collapse said stand, and when said handle is moved downwardly said post slides along said slots until said shelves are horizontally disposed and said stand is fully expanded.

2,901,124
FOLDING PORTABLE RACK

Carl E. Gingher and Carl E. Gingher, Jr., Scranton, Pa., assignors, by mesne assignments, to Gingher Manufacturing Company, Scranton, Pa., a corporation of Pennsylvania

Application January 20, 1956, Serial No. 560,410
6 Claims. (Cl. 211—149)



2. In a portable rack, a base, a slide telescopingly mounted into one end of said base, a first end up-right pivotally mounted on said slide and adapted to be pivoted into a flat position on said base, a brace having one end pivotally connected to said base and the other end pivotally connected to said first up-right whereby said slide will telescope outwardly of said base when said first up-right is pivoted into flat position upon said base, a second end up-right pivotally mounted on the opposite end of said base by hinges offset from the base and adapted to be pivoted into a position upon said first end up-right, and shelf means mounted between said end up-rights and pivotally connected to one of said up-rights.

said carriage, and means for lowering said carriage

ing to the outer two of three storage stalls in side by side

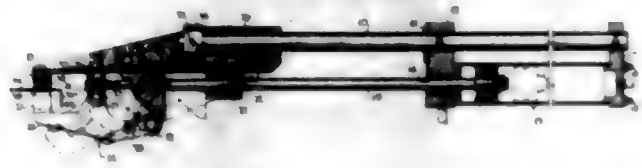
a selectable distance apart.

rality of rigid support posts each extending over the

2,901,125
DERRICKS
Herman J. Troche, Fairview Park, Ohio, assignor to J. H. Holan Corporation, Cleveland, Ohio, a corporation of Ohio
Application June 22, 1954, Serial No. 438,436
8 Claims. (Cl. 212—8)

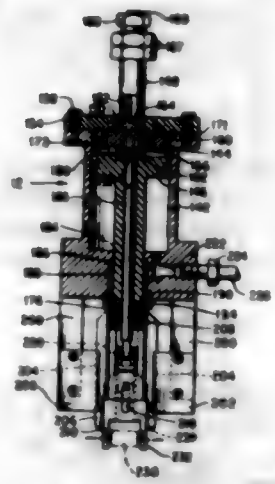
8. A derrick, for use on a support upon which it is rested in lowered inboard position and is swingable through a sector of a circle between such inboard position and an outboard position, having converging side legs, a telescoping middle leg depending from the side legs and removably pivotally secured adjacent its lower end to the support, a cable playing over the derrick legs, mounts for the derrick side legs pivotally secured to the support, hydraulic means for erecting the derrick including a cylinder pivotally mounted on the support and having a piston and piston rod, means for controlling the hydraulic pressure, rigid linkage pivotally secured adjacent one end to the piston rod, the linkage being pivotally secured adjacent its opposite end to the respective mounts, the mounts being formed to engage the linkage during movement of the derrick outboard and cause the linkage to turn with the mounts, and guideways for the piston rod and linkage mounted on the support.

2,901,126
WORK HANDLING APPARATUS WITH CONTROLLED GRIP MECHANICAL HAND
Charles C. Halberstadt, Gladwynne, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania
Application December 7, 1956, Serial No. 626,855
2 Claims. (Cl. 214—1)



1. Work handling apparatus including mechanical hand mechanism adapted to be traversed for serving a workpiece, comprising in combination, a movable support, and gripping hand mechanism mounted for to-and-fro traversing movement on said support, said gripping hand mechanism including a slide and two relatively movable jaws carried thereby for engaging a workpiece, a stop on said support for limiting the forward position of said slide, a power device carried by said support for both traversing said slide and actuating said jaws to engage a workpiece, one of said jaws being rigidly secured on said slide and the other being pivotally mounted on the slide for movement toward and from the rigidly-secured jaw, said pivoted jaw having an operating arm with a cam follower, a spring biasing said pivoted jaw toward open position, a push rod operated by said power device, a wedge cam carried by said rod engaging the cam follower of said pivoted jaw arm, and an adjustable stop on said slide for limiting the forward movement of said push rod and cam, the cam first acting against said cam follower and the tension of the spring to force said slide and rigidly-secured jaw to a fixed position against said stop and then acting further to close the pivoted jaw toward the rigidly-secured jaw to grip a workpiece between them.

2,901,127
ARTICLE FORMING AND INSERTING TOOL
Herbert K. Hazel, Kingston, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application May 1, 1957, Serial No. 656,243
14 Claims. (Cl. 214—1)



1. A pneumatic tool comprising a casing having centrally located openings at each end, a tubular member slidably received in the first of said openings, a first piston slidable in said casing and having a central opening therethrough and coaxially connected to said tubular member for moving the latter in a forward direction through said first opening and in a reverse direction, a bar slidably received in said tubular member and in the second of said openings in said casing, a second piston slidable in said casing and coaxially connected to said bar between the ends of the latter for driving the same in the forward direction through said first opening and in the reverse direction, said second piston having an opening for the passage of fluid therethrough, means effective to bias said first piston in the reverse direction, means for injecting fluid under pressure between said pistons effective to overcome said biasing means, and means coupling said tubular member to said bar after predetermined displacement of the former in the forward direction.

2,901,128
CASE STACKER
Julius J. Barski, Chicago, Ill., assignor to The Lathrop-Paulson Company, Chicago, Ill., a corporation of Illinois
Application May 1, 1956, Serial No. 581,925
8 Claims. (Cl. 214—6)

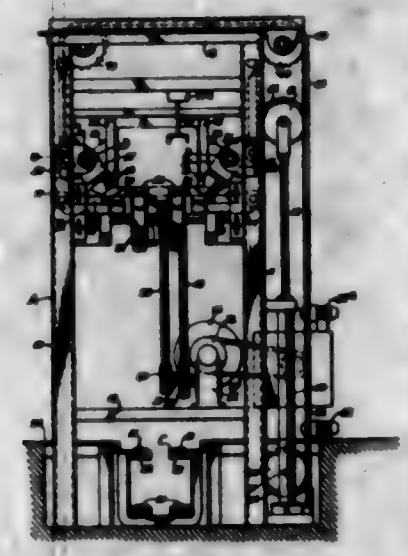
1. In an apparatus for stacking cases, a vertical frame, a conveyor adapted to deliver cases successively to an upper portion of said frame, a carriage mounted in said frame for lowering cases, a conveyor at the lower exit side of said frame for receiving stacks of cases, a pair of rock shafts mounted in said frame, continuously-driven rollers rotatively supported upon said rock shafts and normally extending inwardly and downwardly to receive cases from said first mentioned conveyor and to center said cases above said carriage, means for rocking said shaft to tilt said rollers further downwardly into case-discharging positions for the discharge of cases upon

around the arm and sprockets and being under tension to restrain twisting, cutters projecting laterally on the

2,901,133
APPARATUS FOR TRANSPORTING LOOSE

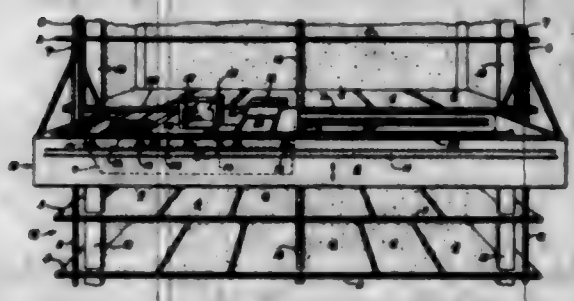
central frame extending along a vertical plane, a pair of pivotally connected to one of said up-rights.

said carriage, and means for lowering said carriage successively through a distance equal to the height of the case after each discharge from said rollers, and stop



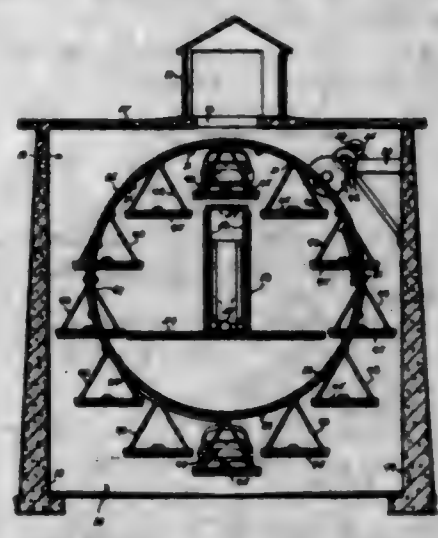
means provided by said rock shafts for limiting the advancement of cases by the delivery conveyor when said rollers are tilted.

2,901,129
AUTOMOBILE PARKING APPARATUS
Leon D. Sanders, York, Pa., assignor to Systematic Parking Company, York, Pa., a body corporate of Washington
Application March 21, 1957, Serial No. 647,711
1 Claim. (Cl. 214—16.1)



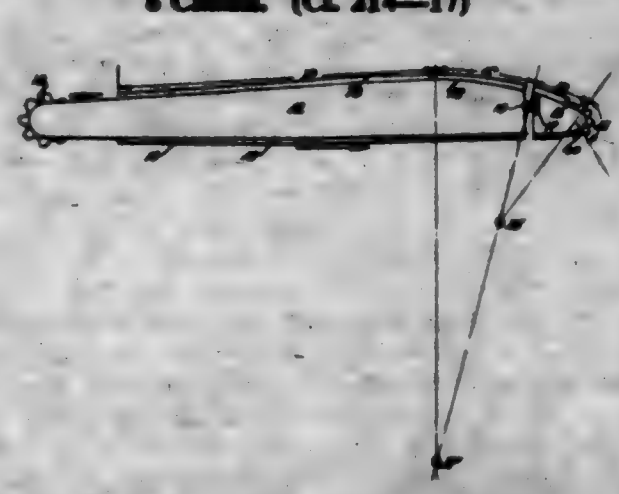
An automobile parking faciilty comprising a multistory structure providing two banks of stalls horizontally spaced a distance slightly greater than the length of a standard passenger automobile with each bank comprising numerous vertically spaced floors each of which has numerous storage stalls in side by side relation, an elevator in said space for conveying vehicles to and from said stalls, a stationary frame forming part of said structure for guiding said elevator, said elevator including a horizontally disposed platform mounted in said frame for vertical movement and extending longitudinally of the space with the length of the platform being sufficient to extend past numerous of the side by side stalls, and with the width being sufficient to accommodate a standard passenger automobile thereacross, a carriage mounted on said platform and guided for movement lengthwise thereof from one end to the other, means for effecting such movement, said carriage being adapted to receive vehicles thereon transversely of the platform with the dimension of the carriage corresponding with the longitudinal dimension of the platform being generally equal to the width of three storage stalls and the reciprocal movement of the carriage along the platform being at least equal to the width of several storage stalls, a pair of transfer devices mounted on said carriage and movable transversely of the platform to and from the carriage and stalls for transferring vehicles to and from the elevator and stalls, said transfer devices occupying positions on the carriage transversely of the platform corresponding to the outer two of three storage stalls in side by side relation, means for effecting such movement of the transfer device, and a control center on the carriage intermediate the transfer device including means to control operation of the transfer devices.

2,901,130
AUTOMOTIVE VEHICLE UNDERGROUND STORAGE DEVICE
Henry Thomas, Omaha, Nebr.
Application April 8, 1957, Serial No. 651,246
15 Claims. (Cl. 214—16.1)



1. In a vehicle storage means, a compartment having an opening in its top, two vertical spaced apart rotatably mounted circular members in said compartment, a plurality of spaced apart stub axles on each of said circular members; each stub axle on one circular member extending toward a diametrically positioned stub axle on the other circular member whereby a plurality of pairs of stub axles will be provided, a frame means pivoted at its top to each of said pairs of stub axles, a base platform adapted to normally rest on each of said frame means and adapted to support a vehicle, a lifting and lowering means capable of lifting any one of said base platforms from its frame means into the opening of said compartment or lowering said base platform from said opening in said compartment to its frame means, and a means for rotating said two circular members.

2,901,131
SILO UNLOADER
Charles W. Collier, Darlington, Md.
Application September 21, 1956, Serial No. 611,137
8 Claims. (Cl. 214—17)



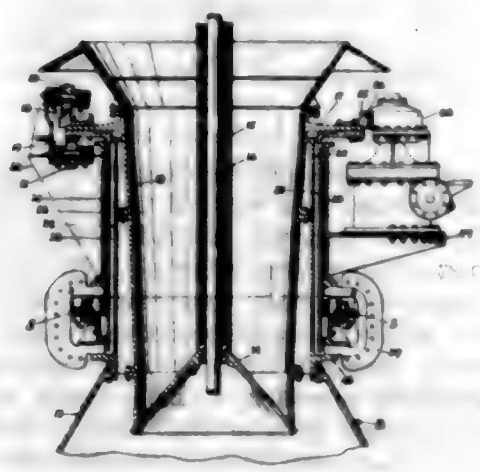
1. In a storage structure unloader having an arm positioned to swing from one end horizontally around a pivot, sprockets at the arm ends, a vertically extending linked endless chain of substantial width and with pintles parallel to the chain inner face extending peripherally

2,901,135

against said drum and above said table, a box turning

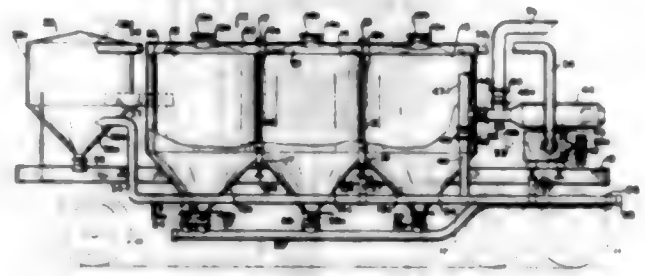
around the arm and sprockets and being under tension to restrain twisting, cutters projecting laterally on the chain, means to rotate the arm and to drive the chain in the direction of arm rotation to pull material toward the pivoted end of the arm as the arm rotates, the arm and cutters in use being under downward pressure of the stored materials, the improvement comprising a vertical chain guide of a depth as great as the chain width and against which the inner face of the linked chain closely rides, the guide supporting the chain and being substantially bowed forwardly between the sprockets on the forward moving side of the arm to supplement the chain tension to restrain the chain from twisting under pressure of the material on the cutters, the degree of curvature in the bow being greatest at the swinging end and decreasing toward the pivotal end of the arm.

2,901,132
BLAST FURNACE SEAL
Helmer Adolph Ruth, Duluth, Minn., assignor to Interlake Iron Corporation, Cleveland, Ohio, a corporation of New York
Application March 14, 1958, Serial No. 721,378
5 Claims. (Cl. 214—37)



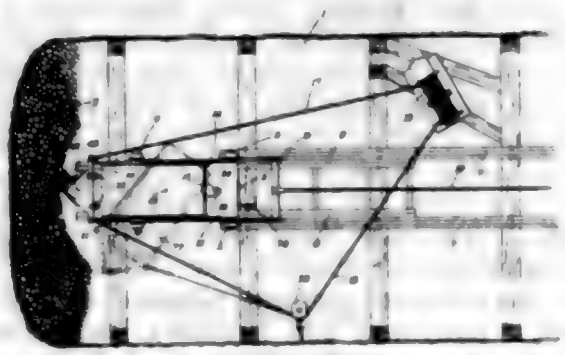
1. Sealing means for a rotatable hopper of a blast furnace to prevent the escape of gases from the furnace around the hopper comprising, an annular member surrounding and connected to the hopper for rotation therewith, an annular plate element carried by said member in generally radially extending, fluid-tight relation therewith, said plate element providing a substantially horizontally disposed surface on one face thereof, a stationary substantially rigid structure of open inner side configuration surrounding said plate element and receiving the free outer portion of said plate element therein, said rigid structure comprising upper and lower sections detachably connected together and providing said structure with an outer side portion spaced from the outer extremity of said free outer portion of said plate element and vertically spaced inwardly extending top and bottom portions disposed in vertically spaced overlapping relation with said free outer portion of said plate element, said rigid structure in combination with said plate element providing a clearance for rotation of said hopper with respect to said furnace, a flexible generally annular sealing strip of polymeric material mounted on said stationary structure and projecting inwardly from said outer side portion thereof into overlapping engaged relation with said horizontal surface of said plate element to seal the space between said outer extremity of said free outer portion of said plate element and said outer side portion of said rigid structure, and spaced, independently actuatable spring means disposed between said rigid structure and said sealing strip and yieldably urging said sealing strip into healing engagement with said surface of said plate member.

2,901,133
APPARATUS FOR TRANSPORTING LOOSE MATERIAL IN BULK
Leo G. Weller, Catasauqua, Pa., assignor to Fuller Company, Catasauqua, Pa., a corporation of Pennsylvania
Application July 30, 1957, Serial No. 675,097
9 Claims. (Cl. 214—83.28)



1. Apparatus for transporting loose bulk material, which comprises a vehicle and, mounted on the vehicle, a tank having at least a pair of openings at its upper end and at least one outlet at its lower end, a closable intake pipe connected to one of the tank openings, a discharge conduit connected to the tank outlet, a valve for controlling flow through the outlet to the discharge conduit, a duct connecting the interior of the tank at its upper end to the discharge conduit at the upstream side of the point where the conduit is connected to the tank outlet, a dust collector having an inlet and separate outlets for gas and solids, conduit means connecting the second tank opening to the dust collector inlet and containing a valve, a blower having its intake connected to the gas outlet of the dust collector, connecting means between the blower outlet and the conduit means on the tank side of the valve in the conduit means, a valve in the connecting means, and a valved branch line leading to the atmosphere from the connecting means at the blower side of the valve in the connecting means.

2,901,134
MUCKER SKIP
Lewis L. Hueisdonk, Downieville, Calif.
Application June 25, 1957, Serial No. 667,801
13 Claims. (Cl. 214—103)



2. A mucker skip to remove muck from the head of a shaft, said skip comprising a carriage arranged for movement along the shaft to the head end thereof, a bucket open at one end and closed at the other end, a digging lip projecting laterally at a forward angle from one side of the bucket at the open end and toward the other side thereof for engagement with the muck, means mounting the bucket on the carriage for swinging movement about an upstanding axis and independent tilting movement relative to the carriage, means to control the swinging of the bucket, and separate means to control the tilt of the bucket; the bucket mounting means comprising a platform, a spindle mounted in a fixed upstanding position and on which the bucket is turnably mounted, and means pivoting the platform at its forward end on the forward end of the carriage in a plane transversely of the spindle and of the carriage.

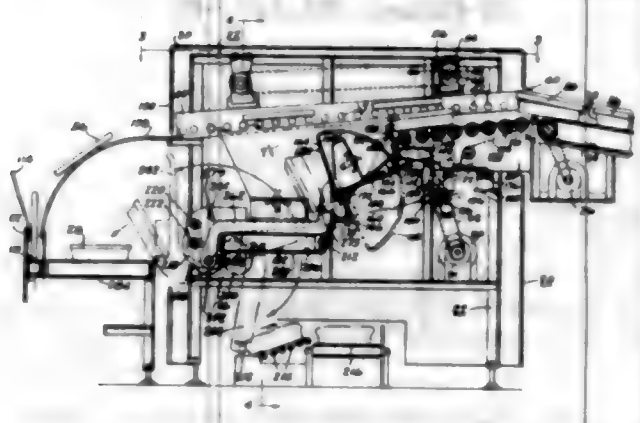
on the carriage transversely of the platform correspond- parallel to the chain inner face extending peripherally

2,901,135

METHOD OF, AND APPARATUS FOR, DE-LIDDING AND DE-PANNING BREAD LOAVES OR THE LIKE

Frank Stadelman, Cranford, N.J., assignor to Latendorf Conveying Corporation, Bayonne, N.J., a corporation of New Jersey

Application July 1, 1957, Serial No. 668,961
11 Claims. (Cl. 214—308)



1. A machine for de-lidding and de-panning a pan strap containing a plurality of bread loaves or the like disposed in side-by-side relationship therewithin and having a separate removable lid fitting over the pan strap with the lid rim extending peripherally about the outside of the pan strap, said machine including a pair of transversely spaced longitudinally extending forwardly and downwardly inclined conveyor flights constructed and arranged to provide underlying support for the sides of the lid rim; a longitudinally extending conveyor flight disposed below and laterally intermediate the first-mentioned conveyor flights and constructed and arranged to provide underlying support for the pan strap, the last-mentioned conveyor flight being forwardly and downwardly inclined at a somewhat steeper angle than the first-mentioned flights; driving means for moving the pan strap and its lid forwardly and downwardly, the pan strap moving along the last-mentioned conveyor flight and the lid moving along the first-mentioned conveyor flights whereby the pan strap drops gradually relative to its lid; means for halting forward movement of the pan strap after it has dropped clear of its lid, while the lid continues to move forwardly beyond the pan strap along the first-mentioned conveyor flights; pivoted means for engaging the underside of the de-lidded pan strap and for tilting the pan strap forwardly and upwardly through an arc of somewhat more than 90 degrees so that the pan strap can fall forward by gravity in generally upside-down position; means for yieldably checking and slowing the fall of the upside-down pan strap; and means for halting the fall of the upside-down pan strap with sufficient impact force to jar the loaves free and to dump them from the pan strap in side-by-side inverted position.

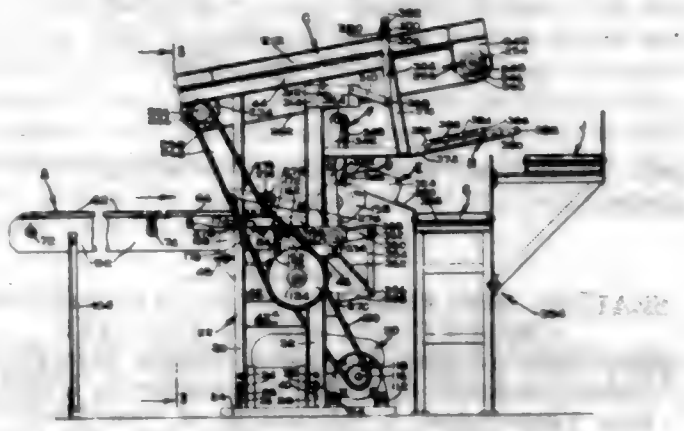
2,901,136

BOX HANDLING DEVICE

Wilber C. Belk, Lakeland, and Hans W. Grotewold, Sebring, Fla., assignors to Food Machinery and Chemical Corporation, San Jose, Calif., a corporation of Delaware

Application August 17, 1956, Serial No. 604,737
7 Claims. (Cl. 214—314)

1. A box dumping device comprising a pivot drum about which the boxes are rotated for dumping, a box raising table secured to and extending forwardly from said drum and mounted for rotation about the axis thereof, means for swinging said table upwardly from a box receiving position to an upwardly inclined position, means responsive to the presence of a box above said table in a position to be tilted for actuating said table swinging means, a feed conveyor for feeding boxes successively against said drum and above said table, a box turning belt above said drum and said box raising table and adapted to be contacted by an upper portion of a box on said table when said table is raised and to cooperate with said pivot drum to rotate said box about the surface of said drum, and drive means operatively connected to



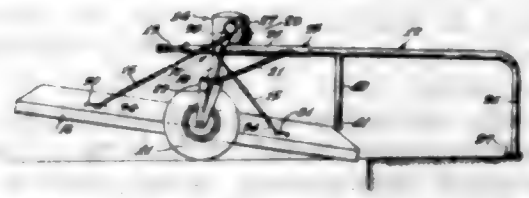
said table and to said belt and arranged to swing said table upwardly to move a box into engagement with said belt and to thereafter simultaneously lower said table to box receiving position and drive said belt in a direction to continue the rotation of the box about the surface of the drum.

2,901,137

BURIAL VAULT LID CARRIAGE

Gerald E. Emert, Chicago, Ill., assignor to Frigid Fluid Company, a corporation of Illinois

Application January 24, 1957, Serial No. 636,058
7 Claims. (Cl. 214—394)



1. A slab handling and transporting carriage comprising, in combination, a frame having a first member and a second member rigid with said first member and extending transversely thereof substantially intermediate the ends thereof, a wheel on each end of said first member, a winding drum rotatably supported on said first member parallel thereto and spaced therefrom in a generally upwardly direction in all normal positions of the carriage, cables secured at one end to and wound on said drum and adapted to be attached at the remaining end to a slab to be transported, means for rotating said drum, a nose piece projecting from one end of said second member for contacting the slab and determining the angle of tilt of the carriage when swung to slab attaching position, and a handle projecting from said second member in a direction opposite to said nose piece.

2,901,138

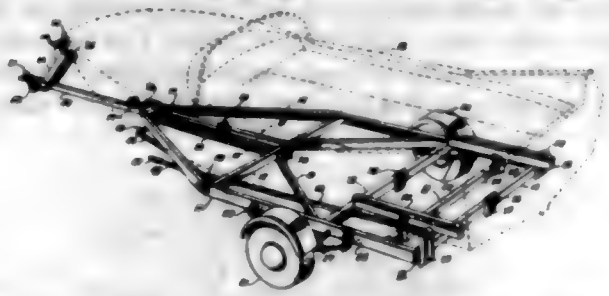
BOAT TRAILERS

Frank B. Whalen, Dallas, Tex., assignor to Lone Star Boat Company, Grand Prairie, Tex., a corporation of Texas

Application January 16, 1959, Serial No. 787,161
8 Claims. (Cl. 214—506)

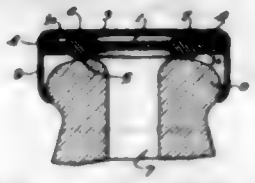
1. A boat trailer including a frame, a tongue pivotally attached to the front portion of the frame, latch means for fastening the tongue and frame against relative movement, boat supporting means on said frame, and boat engaging means mounted on said frame for movement into and out of engagement with a boat resting upon the

boat supporting means, the latch means having connection with the boat engaging means for imparting move-



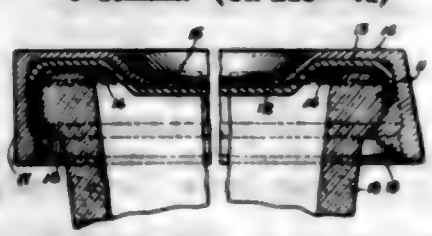
ment thereto upon fastening and unfastening of said latch means.

2,901,139
SEALING DISC FOR METALLIC CAP CLOSURES, CROWN CLOSURES OR THE LIKE
Alfons Isele-Aregger, Immensee, Canton Schwyz, Switzerland, assignor, by mesne assignments, to Union Carbide Corporation, a corporation of New York
Application January 16, 1956, Serial No. 559,445
Claims priority, application Germany January 26, 1955
5 Claims. (Cl. 215—40)



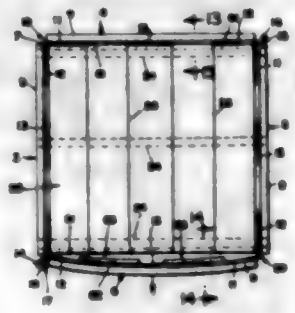
1. A sealing disc for bottle closures and the like, comprising a generally planar polyethylene disc, said disc being symmetrical in relation to the median plane thereof and including a thin circular central portion, an annular pad encircling said central portion, said pad being of elliptical shape in cross-section and defining a line contact on opposite sides thereof for engagement, respectively, with the mouth of a bottle and the inner surface of a closure prior to attachment of the closure to the bottle, the line contact on said pad for engagement with the mouth of the bottle being at most of a diameter equal approximately to the diameter of the bottle opening plus twice 75% of the thickness of the wall of the bottle defining the opening, a thin annular portion encircling said pad, and an annular marginal rim encircling said last-named portion, said rim being of an outer diameter greater than the inner diameter of the closure and being beaded to define on said disc a marginal edge of substantial area, said rim being adapted to be fitted frictionally within the closure and to engage the closure over a substantial area detachably to secure the seal within the closure.

2,901,140
DUAL-PURPOSE CLOSURE MEMBERS
William H. Robinson, Miamisburg, Ohio
Application October 7, 1955, Serial No. 539,104
5 Claims. (Cl. 215—41)



3. In combination with an open-topped container having an outwardly projecting lip, a rigid member having an upwardly extending annular trough in its peripheral portion, a sealing material in said trough, said lip having its upper portion receivable in said trough and adapted to bear against said sealing material, a flexible member superposed upon said rigid member, a dependent skirt formed integrally with said flexible member and a series of inwardly directed circumferentially spaced latch members engageable with the under portion of said lip.

2,901,141
WIREBOUND SNAP-ON CRATE
James F. Dedmon, Milan, Tenn.
Application June 11, 1956, Serial No. 590,652
10 Claims. (Cl. 217—48)



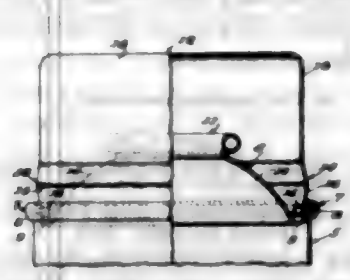
10. A crate comprising a body having a plurality of hingedly connected panels, each panel including inner vertically positioned corner slats, bracing slats arranged between said corner slats, upper and lower exterior cleats mounted on the outside faces of said corner slats and said bracing slats and fastened thereto, crate encircling binding wires hingedly connecting said panels together, said binding wires extending across the inside faces of the bracing slats and arranged between the outer faces of the corner slats and the inner faces of the cleats, a pallet upon which the crate is mounted, said pallet comprising an upper section and a lower section, the upper section having spaced side rails and a deck fastened to said side rails projecting a predetermined distance beyond the outer sides of said side rails forming an overhang on each side of the pallet, said lower section having spaced rails wider than the rails of the upper section and extending outwardly from the outer sides of the rails of the first section forming a projection on each side of the pallet, pallet binding wires hingedly connecting the two sections together, said wires locking the two sections together, locking means on a pair of opposed crate panels positioned beneath the overhang on the deck detachably interlocking the crate to the pallet, said locking means comprising a pair of horizontally disposed spaced apart wood strips mounted on the inner faces of a pair of opposed panels adjacent the lower ends of the opposed panels, said corner slats of each panel having horizontal grooves formed on their outer surfaces at the top and bottom thereof and receiving the crate binding wires, said bracing slats having horizontal grooves formed on their inner surfaces at the top and bottom thereof in alinement with the grooves in the corner slats to receive said crate binding wires, certain panels being spaced apart a distance at least twice the thickness of two corner slats forming a folding corner, the diametrically opposite corner having the panels spaced apart a distance equal to two corner slats, and remaining spaces between adjacent panels being spaced a distance apart equal to the thickness of one slat each, whereby the crate body may be folded completely flat.

2,901,142
DISPENSING CONTAINER WITH FRICTION MOUNTED CAP
Jack F. Fralick, Baltimore, Md., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York
Application March 11, 1957, Serial No. 645,036
3 Claims. (Cl. 220—42)

3. In a can structure, a body having a can end secured thereon by a seam including an inwardly directed upstanding and outwardly flared chuck wall, and a cap hav-

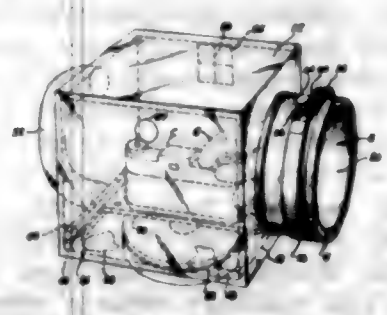
movable downwardly therein from an upper position to their axes, a press board longitudinally disposed between

ing a lower end portion provided with a taper conforming to the flare of the chuck wall and adapted to frictionally engage therewithin to hold the cap in place and yet permit ready removal of the cap, said taper merging into and bearing tangential relation to an inwardly directed curl at



the lower end extremity of the cap, and said can end having an annular channel merging into the chuck wall and having a bottom conforming generally to the shape of the cap curl and in which said curl is adapted to seat when the cap is forced into full seating contact in its frictional mounting.

2,901,143
UNDERWATER CAMERA CASE
Charles M. Pope, El Segundo, Calif.
Application December 3, 1954, Serial No. 472,956
1 Claim. (Cl. 220—85)

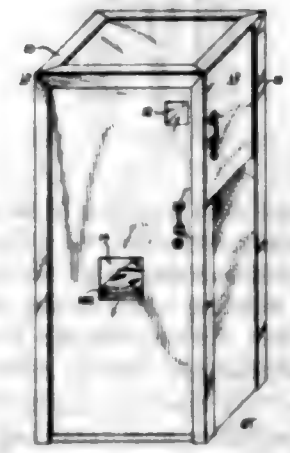


A camera case comprising a transparent, rectangular receptacle having a circular opening in one side thereof, a hollow cylindrical member integrally joined to said one side of the receptacle about the periphery of the opening and projecting outwardly from said side and a flexible glove connected to that end of the cylindrical member remote from the receptacle, said glove being sealed to the said named end of the cylindrical member throughout the periphery of the open end of the glove with the glove projecting inwardly within the cylindrical member and receptacle and having its closed end disposed within the receptacle, said closed end of the glove including a plurality of fingers, thus to permit insertion of one's hand into the glove for the purpose of manipulating a camera disposed within the receptacle.

2,901,144
BAIL EAR FOR CONTAINER
Niels J. Haastrup, Odense, Denmark
Application November 25, 1957, Serial No. 698,539
3 Claims. (Cl. 220—91)

1. A pail or similar container of comparatively thin sheet material such as tinplate and provided with an element, such as a handle consisting of metal wire or a similar material, each end of said element being journalled in a sleeve mounted in an opening in the wall of the pail, said sleeve having an outside circumferential groove in which the rim portion around the hole in the wall of the pail extends, said rim portion having an inwardly projecting neck portion forming a curved wall, the groove of the sleeve being shaped to fit the neck portion so that the neck portion is capable of establishing perfect sealing with the sleeve, the outer diameter of the groove in the sleeve being normally greater than the diameter of the hole before mounting of the sleeve, the portion of the element which is journalled in the sleeve having a narrow part spaced from the end of the portion, the sleeve being of a resilient material such as plastic or the like, so that after mounting the sleeve the material is distorted and pressed around the narrow part of the element portion journalled in the sleeve.

2,901,145
AUTOMATIC DISPENSING APPARATUS FOR DISPENSING TOWELS, WIPING CLOTHS AND LIKE ARTICLES
Isadore E. Black, Cleburne, Tex.
Application May 20, 1957, Serial No. 660,172
3 Claims. (Cl. 221—34)



1. A wiping cloth dispensing machine of the character described, comprising a plurality of platforms, each adapted to support a pile of wiping cloths, a pick-up arm mounted for movement across the top of each pile of cloths, and a stripper needle carried by said pick-up arm for engagement with the uppermost cloth in each pile, whereby said cloth is stripped from the pile as the pick-up arm moves across it, said platforms being arranged at selected points along a circular line, a circular track being provided in concentric relation to said circular line, bearing plates secured to the said track and supporting it upon the piles of wiping cloths, said pick-up arm being supported by said track and being movable in a circular path along said track to enable the stripper needle to strip the wiping cloths from the several piles in the order in which said piles are encountered by the pick-up arm and its said stripper needle, said bearing plates being bifurcated, forming a pair of spaced arms joined at one end by a yoke, the pressure of said arms upon the wiping cloths under the weight of the track and pick-up arm causing the uppermost wiping cloth to bulge upwardly in the space between said arms, the stripper needle being positioned on the pick-up arm to engage said upwardly bulging wiping cloth and to strip it off its pile without disturbing the wiping cloths below it.

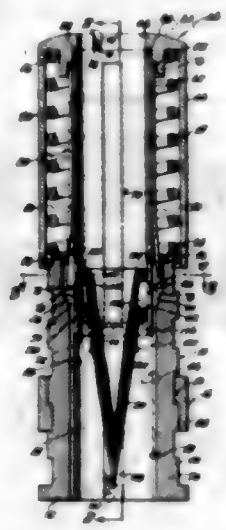
2,901,146
GOLF TEE DISPENSER
Jonathan S. Powell, Jr., Pasadena, and Douglas A. Stromsoe, San Gabriel, Calif.
Application October 13, 1955, Serial No. 540,297
2 Claims. (Cl. 221—190)

1. In a dispenser, the combination of: a tubular base; a tubular member telescoped into said tubular base and

with spaced inlet and outlet ports; said passageway ex- the axes of said port and spout form an obtuse angle

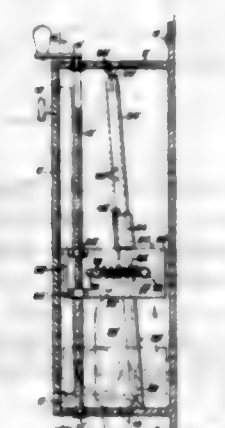
to bear against said sealing material, a flexible member superposed upon said rigid member, a dependent skirt thereon by a seam including an inwardly directed upstanding and outwardly flared chuck wall, and a cap hav-

movable downwardly therein from an upper position to a lower, dispensing position; spring means engaging said base and said member and biasing said member upwardly toward said upper position; ejecting means carried by said member so as to be movable upwardly and downwardly therewith, said ejecting means being movable inwardly and outwardly relative to said member; retaining means carried by said member so as to be movable upwardly and downwardly therewith, said retaining means being located below said ejecting means and being movable inwardly and outwardly relative to said member; ejecting spring means connected to said ejecting means and mounted on said



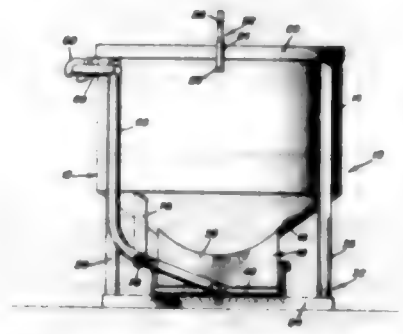
member and biasing said ejecting means outwardly; retaining spring means connected to said retaining means and mounted on said member and biasing said retaining means outwardly; ejecting cam means on said base and engageable with said ejecting means in an intermediate position of said member and during downward movement thereof for moving said ejecting means inwardly into the interior of said member; and retaining cam means on said base and engageable with said retaining means in an intermediate position of said member and during upward movement thereof for moving said retaining means inwardly into the interior of said member.

2,901,147
DISPENSER FOR TUBES
Edgar L. Bond, Jr., Reisterstown, Md.
Application November 6, 1957, Serial No. 694,826
2 Claims. (Cl. 222—102)



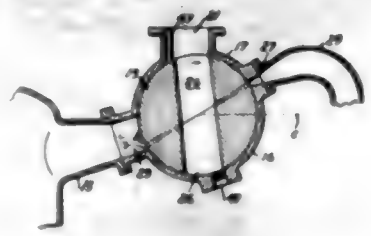
1. A tube dispenser comprising a casing having a tube positioned therein, including means for access to said casing, a positioner engaging the dispensing end of said tube, a longitudinal screw shaft rotatably mounted between ends of said casing, a yoke reciprocally mounted on said screw shaft, a pair of transversely reciprocal compressing rollers axially mounted in said yoke, said rollers being urged together by spring means inter-connecting their axes, a press board longitudinally disposed between said rollers, said press board having transverse slots and a slidable sleeve attached at a side of one extremity, said slots and sleeve combining to anchor the closed end of said tube in spaced relation to said discharge end, and said pressboard having at its other extremity a concavity permitting substantially parallel alignment of said tube and said press board.

2,901,148
BUCKET FOR CONVEYING CONCRETE
Samuel C. Cunningham and Ernest H. Shaw, Fort Worth, Tex.
Application April 1, 1957, Serial No. 650,007
2 Claims. (Cl. 222—185)



1. A bucket assembly for conveying concrete, said bucket assembly comprising a bucket, said bucket including a cylindrical upper portion and a conical lower portion, said lower portion terminating in a discharge scupper, said discharge scupper having an open lower end, opposed gate members normally closing said open lower end, said gate members being pivotally mounted on single pivots at opposite ends of said discharge scupper, operator means connected to said gate members for swinging said gate members between open and closed positions, hangers depending from said bucket, said operator means including a bail operator in the form of a pair of spaced arms connected together at their upper ends by a transverse handle, means pivotally mounting said arms on said hangers, links extending between said arms and said gate members, and pivoted thereto, said links being extensible to take up wear on the pivots of said links to said arms and gate members and wear on the pivotal mountings of said arms to said hangers.

2,901,149
DEVICE FOR FEEDING COMMINUTED CELLULOSIC FIBROUS MATERIAL INTO A PRESSURE VESSEL
Ole Johan Richter, Facture, France, assignor to Aktiebolaget Kamyr, Karlstad, Sweden, a company of Sweden
Application March 7, 1958, Serial No. 719,912
3 Claims. (Cl. 222—367)

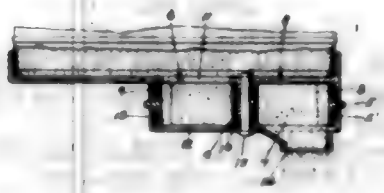


1. A charging valve device for feeding fibrous material or the like into a pressure vessel comprising: a housing having spaced feed inlet and outlet ports; a rotor body rotatably mounted in said housing and having at least one passageway extending transversely therethrough; means for rotating said rotor body about a horizontal axis for sequentially placing said passageway in communication

in a sleeve mounted in an opening in the wall of the pail, a tubular member telescoped into said tubular base and

with spaced inlet and outlet ports; said passageway extending through said rotor transversely to said axis; said housing having a liquid supply port arranged for communication said outlet port through said passageway, said feed inlet port and said liquid supply port being entirely disposed substantially above the horizontal plane through the axis of said rotor body so as to be out of communication with said passageway when said passageway is in the horizontal position, said inlet port being located on the periphery of said housing and so as to be in communication with said passageway at least a portion of the time when said passageway is in communication with said outlet port; wherein the center angle from the axis of said rotor subtended by the cross-sectional area of said liquid supply port is substantially less than the center angle subtended by the cross-sectional area of said outlet port.

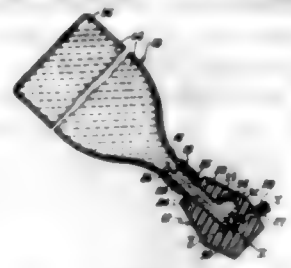
2,901,150
MEASURING DISPENSER
Gustave O. Matter, Portland, Oreg.
Original application April 26, 1954, Serial No. 425,419. Divided and this application August 13, 1956, Serial No. 603,515
5 Claims. (Cl. 222—370)



1. A dispenser for a container, said dispenser comprising a top wall and a bottom wall held in spaced relationship by a central shaft securely attached to said top and bottom walls to form a stationary unit, an inlet opening in said top wall, an outlet opening in said bottom wall, a measuring compartment unit rotatable around said central shaft and between said top wall and said bottom wall, said measuring compartment unit comprising a plurality of measuring compartments arranged between said top wall and said bottom wall and between said central shaft and an exposed outer wall defining the outer periphery of said measuring compartment unit, said outer wall adaptable to serve as a means to rotate said measuring compartment unit around said central shaft, said top and bottom walls have no connecting element therebetween outside the outer periphery of said exposed outer wall whereby the outer surface of said outer wall is accessible around the entire periphery thereof thereby to permit the operator's hand to partially or completely encircle said outer wall for manual rotation of said measuring compartment unit, each of said measuring compartments provided with top inlet means and bottom outlet means, said measuring compartment unit rotatable in relation to said top wall and said bottom wall to allow registration of said top wall inlet opening with said measuring compartment top inlet means and registration of said measuring compartment bottom outlet means with said bottom wall outlet opening.

2,901,151
VACUUM TYPE DISPENSER
Paul C. Kiyuna, Wahiawa, Oahu, Territory of Hawaii
Application July 18, 1958, Serial No. 749,446
17 Claims. (Cl. 222—456)

1. A vacuum type dispenser for dispensing a metered quantity of liquid from a container, comprising a member including a passage having an inlet port and an outlet spout, said passage undergoing a change in direction between said inlet port and said outlet spout whereby the axes of said port and spout form an obtuse angle between them, and an air trap chamber disposed in the



region of such direction change wholly on the obtuse angle side of and communicating with said passage.

2,901,152
CLOSURE FOR A DISPENSER
James H. Wahnsiedler, San Fernando, Calif.
Application August 26, 1957, Serial No. 680,151
1 Claim. (Cl. 222—502)

A closure for a dispenser consisting of a hollow cone-shaped nipple which is cleft from the tip toward the base, said nipple being made of an elastic material such that pressure against the sides of said nipple can cause said cleft to close but such that in the absence of this pressure said cleft remains open, collar means having an internal diameter such that when said collar means is placed in a first position on said nipple close to its tip, no pressure is exerted against the sides of said nipple so that said cleft remains open, and when said collar means is placed in a second position on said nipple close to the base of said nipple, pressure is exerted against the sides of said nipple so that said cleft is forced closed, first and second retaining means, said first retaining means being located on said nipple closer to the tip of said nipple than said second retaining means, said first retaining means being of such a size in relation to the internal diameter of said collar means that said collar means can be forced past said first retaining means only with difficulty, said second retaining means being of such a size that said collar means may be pushed back and forth past said second retaining means with relative ease, said first retaining means being so positioned as to retain said collar means in said first position on said nipple, said second retaining means being so positioned as to retain said collar means in said second position on said nipple.

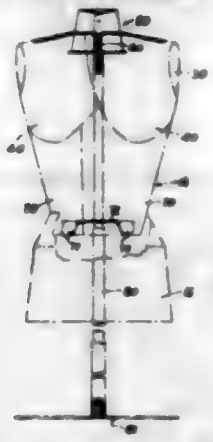
2,901,153
DISPENSING VALVE
Leonard M. Collins, Hollywood, Calif., assignor to Pressure Dispensers, Inc., Los Angeles, Calif., a corporation of California
Application May 13, 1957, Serial No. 658,828
23 Claims. (Cl. 222—525)

1. A dispensing valve for a top opening container which comprises: a sleeve affixed to the opening of said container and having a bore formed therein; an inlet port forming a passageway between the interior of said container and said bore; a dispensing closure member slidably movable within said bore from a first position to a second position, and press-fitted within said bore for at least a portion of its travel in the region of said second position; a dispensing passage formed within said closure member and adapted to communicate with said inlet port when said closure member is in said first position, said inlet port being blocked when said closure member is in

said second position, said closure member being positively sealed within said bore when said closure member is in said second position to thereby prevent leakage of

the material to be dispensed from within said container into said dispensing passage, by means of the press-fit of said bore and closure member in the region of said second position.

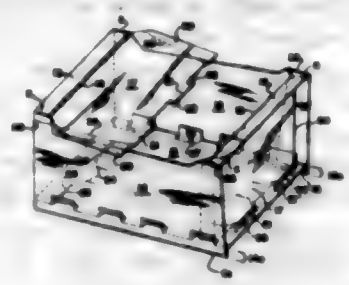
2,901,154
KNOCK-DOWN GARMENT FORM AND SUPPORT THEREFOR
Ann Baldwin, New York, N.Y.
Application April 1, 1957, Serial No. 649,828
4 Claims. (Cl. 223—68)



1. In a knock-down hollow garment form fabricated of flexible sheet sections defining a waist portion and a neck opening, a collar section extending through said neck opening, and securement means associated with said collar section for supporting said garment form upon a vertical support member, said collar section comprising a two-dimensional blank in an assembled three-dimensional form of substantially truncated conical shape having a lower portion of substantially greater diameter than the neck opening, said securement means including a bracket carried by said collar section adapted to be removably secured to a vertical support, said collar section further including a base member underlying said lower portion, and said bracket having portions extending diametrically through the wall of said conically shaped form and through said base.

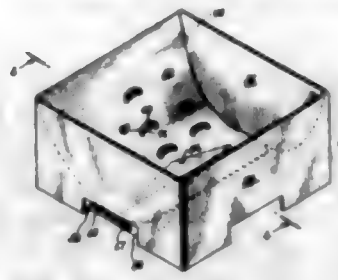
2,901,155
CARTON
Oscar L. Vines, New York, N.Y., assignor to Continental Paper Company, Ridgefield Park, N.J., a corporation of New Jersey
Application December 21, 1955, Serial No. 554,567
7 Claims. (Cl. 229—16)

7. A collapsible open top carton formed from a rectangular carton blank initially provided with two side wall panels of equal width, a top wall panel and a bottom wall panel of equal width, the integral connection of the four panels being completed by the gluing together of the portions of the panels at the extremities of the blank and a pair of fold sections formed from the center portion of the top wall panel and adjoining portions of the two side wall panels, said carton comprising a bottom wall formed from said bottom wall panel, two side walls formed from the lower portions of said side wall panels, a partial top wall formed from the outboard portions of the top wall panel and adjacent upper portions of the side wall panels, and two end walls formed from said pair of fold sections, said fold sections from which said end walls are formed being wider than the top wall panel adjacent the upper edges thereof and being the same width as the bottom wall panel adjacent the lower edges



thereof, the said upper portions of each side wall panel adjacent the said outboard portions of said top wall panel being disposed substantially in the plane of the top wall of the erected carton whereby the top wall of the carton is wider than the bottom wall of the carton and the side walls of the carton diverge outwardly from the bottom wall toward the top wall thereof.

2,901,156
BERRY TRAY
Oscar L. Vines, Hudson Heights, N.J., assignor to Continental Paper Company, Bergen, N.J., a corporation of New Jersey
Application October 21, 1958, Serial No. 768,719
5 Claims. (Cl. 229—16)



1. A tray comprising a single blank of material having a score line extending longitudinally throughout the length of the blank, a plurality of parallel score lines disposed perpendicular to said longitudinal score line and extending therefrom to one edge of said blank thereby defining the outer side walls of said tray, a pair of inner side wall flaps formed in said blank as an extension of a pair of said outer side walls at the other side of said longitudinal score line, a slot in the free end of each of said inner side walls, a first and a second bottom panel formed in said blank as an extension of a different pair of said outer side walls at said other side of said longitudinal score line, a locking tongue at the free end of said first bottom panel and a locking slot at the free end of said second bottom panel adapted to receive said locking tongue, and a latch shoulder extending laterally from each edge of said panels near the free end thereof adapted to engage in the slots in said inner side wall flaps when said blank is folded on said perpendicular score lines and said inner side wall flaps and said bottom wall panels are folded inwardly about said longitudinal score line.

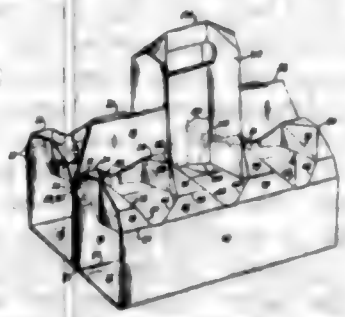
2,901,157
MULTICELLULAR CARRIERS
Marshall I. Williamson, New Haven, Conn., assignor to Federal Paper Board Company, Inc., Bogota, N.J., a corporation of New York
Application July 19, 1957, Serial No. 673,067
6 Claims. (Cl. 229—28)

1. A multicellular flat collapsible folding box of the twin-row style formed from a single blank of board and

than that of said blank adhesively secured to one face of

2,901,162

comprising two tubular structures arranged side by side, each structure comprising a bottom panel; an outer side wall and an inner side wall articulated to the bottom panel along bottom fold lines, the inner side wall comprising an upper wall panel and a lower wall panel; a top panel articulated to the side walls along top fold lines, the top panel being arched to rise above said top fold lines and having cells in it, the mouth of the cells extending beyond said top fold lines into the body of said side walls, said cells including depending cell walls integral with said top panel and depending therefrom at the cell mouth towards the bottom panel, each of the inner side walls of the two structures including an intermediate folding score intermediate of, and substantially parallel to, said top and bottom fold lines to which intermediate folding score

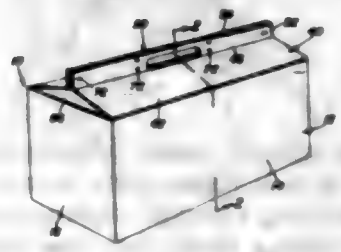


said cell apertures extend, each of said inner side walls further comprising a glue lap articulated to said upper wall panel and adhered to the lower wall panel adjacent said intermediate folding score, the width of the bottom panel measured between the bottom fold lines being less than the width of the structure measured at the level of the intermediate folding score, said two structures being pivotally movable relatively to each other at said intermediate folding score for freedom of the structures to tilt towards each other when the box is centrally lifted up, in which event the bottom panels assume slanted positions and the cell axes tilt outwardly, and for freedom to tilt in the opposite direction when the bottom panels are placed on a flat support, in which event the bottom positions of the two units automatically separate.

2,901,158
BOX BLANK
Frank Carpino, Stockton, Calif.
Application June 14, 1956, Serial No. 591,383
4 Claims. (Cl. 229—35)

1. A box blank comprising a sheet of box stock, means forming fold lines on said sheet positioned to define a rectangular bottom panel, a rectangular side panel connected to said bottom panel along one of said fold lines, a substantially rectangular end panel having an end and being connected to said bottom panel along another of said fold lines, a flap connected to the end of said side panel along a flap fold line which is substantially an extension of said other fold line, said flap having a contour narrowing outwardly from said flap fold line to form a tongue, means forming an outstanding tab on the narrowing contour of said tongue with a straight edge on said tab parallel to said tab fold line and spaced from said tab fold line a predetermined distance, means on said end panel defining a first slit substantially normal to said other fold line and having a length only slightly more than the distance across said tab parallel to said tab fold line at a location in said narrowing contour of said tab spaced from said tab fold line about as far as said first slit is spaced from said adjacent end of said end panel, and means on said end panel defining a second slit substantially normal to said other fold line and having a length only slightly more than the distance across said tab parallel to said tab fold line at a location in line with said straight edge.

2,901,159
CONTAINER CONSTRUCTION
Claiborne E. Talbot, Jr., New Orleans, La.
Application September 16, 1955, Serial No. 534,754
2 Claims. (Cl. 229—39)



1. In a portable ice chest having a liner, an outer container including four side panels connected together at right angles to each other at confronting edges thereof, two of said side panels having parallel lower edges, a bottom for said container and including two overlapping flaps, one of said flaps secured to one of said panel edges and the other of said flaps secured to the other of said panel edges, each of said flaps being sufficiently large to cover the entire bottom area of the container thereby being fully overlapped and forming a two-ply bottom for the container, interlocking means operatively connected with said flaps and including a first slot in one of said flaps disposed in parallel relation to said panel edges, other slots spaced from said slot and spaced apart a greater distance than the length of said first slot and disposed perpendicularly thereto, a tongue on the other of said flaps which passes through said slot, extensions on the end of said tongue projecting outwardly on either side thereof which pass through said other slots, a top forming a part of said container and including additional flaps hingedly connected to the upper edges of two of said sides and adapted to be brought together over the upper open end of said container, hinged panels protruding from the upper edges of two of said sides, said panels each being slightly wider than half the width of the container and having strips at the upper edges thereof, hinge lines separating said strips from the remainder of said hinged panels, said strips and said hinged panels having hand grip openings therein adapted to be brought into registry with each other when said strips are hingedly moved with respect to the remainder of said panels so as to be returned approximately 180° and superposed thereon, a plurality of fasteners, said strips being disposed in contacting relation to each other and held to their respective panels along said hinge lines by means of said fasteners, said fasteners in said strips holding said panels in gable formation at the top of the container, said liner having upper flaps adapted to overlap each other and disposed beneath said hinged panel in order to maintain the interior of the liner cool by preventing the heat from entering through the opening in said container.

2,901,160
PACKAGE STRUCTURE
Joseph H. Vineberg, Ottawa, Ontario, Canada
Application April 26, 1957, Serial No. 655,374
2 Claims. (Cl. 229—40)

1. A package structure comprising a rectangular paper blank, a plurality of strips of material of greater rigidity

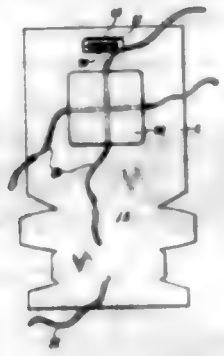
cells and said apertured wall means for relative rotation

shifted in close proximity to a wall of said outer hopper,

formed from the lower portions of said side wall panels, a partial top wall formed from the outboard portions of

1. A multicellular flat collapsible folding box of the twin-row style formed from a single blank of board and

than that of said blank adhesively secured to one face of said blank in transverse relation thereto and in parallel spaced relation to each other, the intermediate one of said strips and the underlying portion of said blank constituting a bottom panel, each of the others of said strips and the underlying portion of said blank constituting a top panel, the portions of said blank between said bottom panel de-

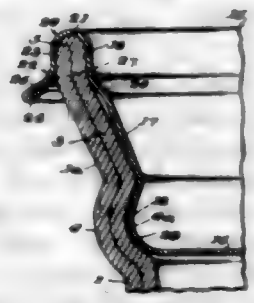


fining strip and said top panel defining strips constituting front and rear panels respectively, one of said top panel defining strips having a handle thereon extending through said blank for access from the outer face thereof, said strips each terminating inwardly of the side edges of said blank, the longitudinal marginal portions of said blank being thereby uninterrupted by said strips and constituting end panels.

2,901,161
CONTAINER CLOSURE AND METHOD OF FORMING SAME

John Henchert, River Forest, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Application December 27, 1955, Serial No. 555,371
4 Claims. (Cl. 229—43)

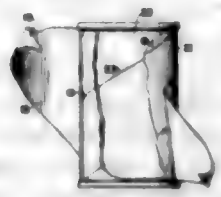


1. A container for food products comprising a tapered fiber body having an open outwardly flared end portion thereof turned back into intimate contact with the inner face of said flared end portion, said body wall and said turned back portion adjacent the lower end thereof being beaded outwardly, and a metal cover for said fiber body having a central substantially flat bottom surrounded by a flared wall, said flared wall of the cover at the lower portion thereof being beaded outwardly and shaped to smoothly join with the bottom and to conform to the bead in the body wall and dimensioned so as to snap into said body wall bead when assembled thereon and make a tight seal between the body wall and cover, said metal cover having an offset depending skirt, the upper portion of which is substantially vertical and forms with said flared portion of the cover a channel adapted to receive the upper end of the body wall, the lower portion of the skirt being flared outwardly and then rolled inwardly to provide a hollow bead, said flared portion of the body wall above the bead being initially at an angle slightly greater than the flare of the cover wall and adapted when the cover is placed on the body wall to contact with the vertical wall on the skirt of the cover whereby the body wall is forced inwardly into contact with the flared wall of the cover and squeezed into the channel so as to make a tight seal therewith.

2,901,162
SPIRAL CONTAINER TUBE

Charles L. Vallas, Altadena, Calif., assignor to The Cleveland Container Company, Cleveland, Ohio, a corporation of Ohio

Application July 18, 1955, Serial No. 522,438
2 Claims. (Cl. 229—51)



1. In a spirally wound, multi-ply container tube having at least a semi-rigid wall construction, two adjacent independently flexible ply strips wound one upon the other and in the same direction, each of said strips being wound with its edges in homogeneous abutment and presenting internal and external lateral surfaces of substantially uniform diameter, the abutting edges of one ply being spaced axially apart from the edges of the other ply to impart maximum rigidity to the container tube, the major portion of the inner surface of the outer of said ply strips and the major portion of the outer surface of the inner of said ply strips adhering one to the other in static bonded engagement, the spirally extending zonular area in which lie the abutting edges of said inner ply being included in said major portion, the outer of said ply strips having formed therein and spaced from the edges thereof a spirally extending weakened zone of greater than hemispherical order and primarily circumferential in direction formed by a series of perforations in the ply disposed in adjacent offset substantial parallelism with the abutting edges of the inner ply, a sealing ply strip of substantially lesser thickness than the said inner and outer plies disposed in contact with said inner ply and substantially fully bonded thereto, and a second sealing ply strip adhesively secured to said outer ply strip and disposed to have thereon instructions and labeling, said second sealing ply being spirally wound in the same direction as the inner and outer plies, the bond between said second sealing ply and said outer ply strip being weaker than the bond between said outer ply strip and said inner ply strip, rigid closure caps at each end of the container with annular flange portions thereof seamed over the ends of the tubular container wall and holding the same in circumferential compression and radial tension, and means provided on said label to facilitate unwrapping thereof from said outer ply strip whereby to expose said spirally extending series of perforations such that when an inwardly directed force is applied along at least a portion of the perforation line, the surface bond between the plies in the zone adjacent thereto and between the abutting edge of the inner ply will be broken, permitting the container to be opened along the thus weakened spirally extending zone.

2,901,163
PRESSURE CONVERTER

José Waleffe, Baden, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint-stock company

Application July 15, 1954, Serial No. 443,686
Claims priority, application Switzerland July 29, 1953
7 Claims. (Cl. 230—69)

1. A pressure-converter comprising means establishing a plurality of cells in cylindrical array about an axis, wall means providing pressure chambers for gaseous fluids at the opposite ends of said plurality of cells and under different pressures, said wall means being apertured adjacent each end of said plurality of cells to control the transfer of fluids between the cells and the respective pressure chambers, and means supporting said

panel defining a first slit substantially normal to said other fold line and having a length only slightly more

1. A package structure comprising a rectangular paper blank, a plurality of strips of material of greater rigidity

cells and said apertured wall means for relative rotation to connect said cells in sequence to said pressure chambers to establish pressure waves moving along each cell in sequence thereby to set its contents in motion, the dimensions of said cells and the peripheral lengths and

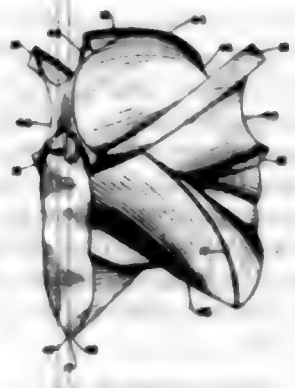
locations of said wall apertures bearing such relation to each other that an end of each cell is opened at the beginning of a pressure wave originating at one end of the cell and is reclosed when the oppositely moving pressure wave arrives at such cell end from the opposite end of the cell.

2,901,164
GENERATED ROTOR FORM

Joseph E. Whitfield, York, Pa., assignor, by mesne assignments, to Ingersoll-Rand Company, New York, N.Y., a corporation of New Jersey

Original application February 9, 1950, Serial No. 143,259, now Patent No. 2,792,763, dated May 21, 1957. Divided and this application March 18, 1957, Serial No. 646,849

2 Claims. (Cl. 230—143)



1. Rotary elements for use in a ported housing of an axial flow fluid device of the character described comprising a male rotor having helical lobes and a gate rotor having helical troughs mating with said lobes, said lobes having in profile sides generated with respect to said troughs and at their outermost crests a flattened face with defined edges, and said troughs having in profile a curvature generated by a point laterally offset from one of said defined edges to provide clearance between said rotors in their fully mated position greater at all points in the sides of said troughs than at the crest of the lobe.

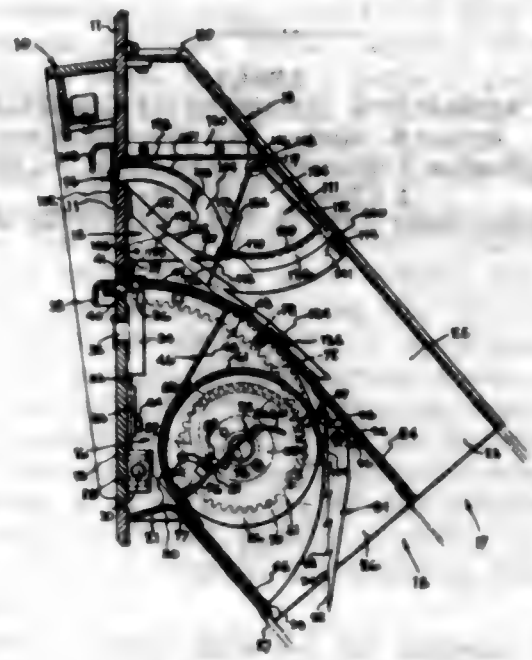
2,901,165
NIGHT DEPOSITORY

Newton J. Krag, Cincinnati, Ohio, assignor to The Mosler Safe Company, Hamilton, Ohio, a corporation of New York

Application February 27, 1957, Serial No. 642,840

18 Claims. (Cl. 232—44)

1. A night depository comprising a housing having a bag receiving opening formed therein, a door for closing said opening, an outer hopper pivotally mounted within said housing and adapted to be rotated outwardly through said opening, an inner hopper disposed within said outer hopper, said inner hopper having an arcuate transverse wall and being rotatably carried by said outer hopper, means operable upon the closing of said door for rotating said inner hopper relative to said outer hopper, whereby the arcuate wall of said inner hopper is shifted in close proximity to a wall of said outer hopper, an ejector member pivotally mounted within said inner hopper, and means for shifting said ejector member from



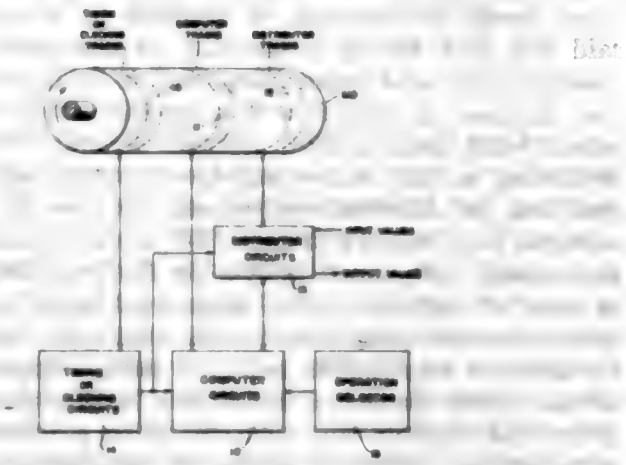
a position adjacent to one wall of said inner hopper to a position spaced therefrom, whereby said transverse wall of said inner hopper sweeps a wall of said outer hopper and said ejector member sweeps said inner hopper.

2,901,166
DIGITAL COMPUTER

Francis E. Hamilton, Binghamton, and George V. Hawkins, Robert E. Lawhead, Jr., and Ernest S. Hughes, Jr., Vestal, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application February 5, 1953, Serial No. 335,202

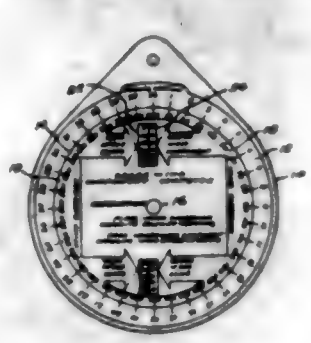
42 Claims. (Cl. 235—61)



1. In a magnetic drum computer, a first portion for storing a first value manifestation, a second portion for storing a second value manifestation, an adder for concurrently receiving and adding two value manifestations, first entry means for enabling a value manifestation to enter said adder as a true value manifestation, second entry means for enabling a value manifestation to enter said adder as a complement manifestation, a first settable device adapted to be set when said first value manifestation is to enter said adder as a complement manifestation, a second settable device adapted to be set when said second value manifestation is to enter said adder as a complement manifestation, first switch means controlled by said first settable device for rendering said first entry means responsive to said second portion and for rendering said second entry means responsive to said first por-

tion, and second switch means controlled by said second settable device for rendering said first entry means responsive to said first portion and for rendering said second entry means responsive to said second portion.

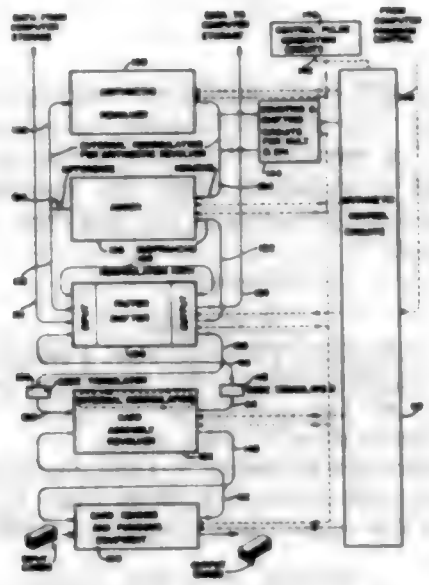
2,901,167
CROSS-WIND COMPONENT COMPUTER
Parker B. Mudge, East Norwalk, Conn.
Application February 28, 1956, Serial No. 568,412
5 Claims. (Cl. 235—61)
(Granted under Title 35, U.S. Code (1952), sec. 266)



5. A computer for indicating actual cross-wind speed components with respect to any predetermined aircraft runway compass heading comprising, a first circular base disk having a compass rose adjacent its periphery divided circumferentially to indicate from 0° to 360° for indicating predetermined runway compass heading directions, a second circular disk concentrically pivoted on the first disk for rotative adjustment and having a similar concentric circular ring of compass rose degree indicating indicia lying in radially spaced adjacent relation to the runway heading degree indicia on the first disk and indicating 360° for indicating actual wind compass directions in degrees, said second disk having a window slit therein extending diametrically between the pivotal center and the 180° and 360° indicia, increasing actual wind speed indicating indicia adjacent the edge of said window reading in direction from said 360° to said 180° indicia on the second disk to indicate actual different wind speeds independent of heading or aircraft speed; said first disk having a plurality of concentric circular rows of cross-wind speed component indicia, each circular row disposed to register with a predetermined one of the actual wind speed indicia adjacent the slit window, and indicating actual cross-wind speed components on the first disk for different degrees indicated on the first disk compass rose relative to zero 180° runway heading, said wind speed component indicia on the first disk disposed in rows of radially spaced cross-wind speed component indicia for indicating actual cross-wind speed components for different wind speeds, each row being disposed for registration with the actual wind-speed indicia aforesaid adjacent the window slit, whereby when a selected cross-wind compass direction degree on the second disk is set opposite the actual compass direction runway heading direction on the first disk the actual cross-wind speed component relative to runway heading is displayed in the window opposite the indicated actual wind speed indication adjacent the window slot.

2,901,168
DIGITAL DATA SYSTEM
Warren P. Burrell and Arnold A. Cohen, Minneapolis, and George A. Hardenbergh, St. Paul, Minn., assignors, by mesne assignments, to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application March 5, 1954, Serial No. 414,341
43 Claims. (Cl. 235—61.6)

1. In a digital data circuit, means comprising an adder section having an input and an output, means including a drum comprising an arithmetic revolver section having an input and output, said arithmetic revolver section providing time delay storage for a predetermined number of digits, means connecting the output of said arithmetic revolver section to the adder section input and the adder section output to the arithmetic revolver section input, means comprising pulse generation and control means cooperating with said adder section and said arithmetic revolver section for producing serial circulation of data in the continuous recirculation path formed by the adder section and arithmetic revolver section, means comprising



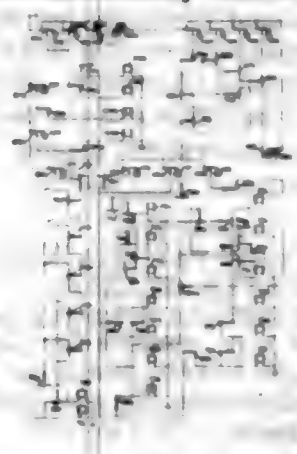
a factor shifter section with a predetermined number of stages for retaining a corresponding number of digits, each in its own individual stage, means including factor shifter control means to directly shift the respective contents of each of the stages of said factor shifter section from stage to stage thereof, and means connected with said pulse generation and control means for transferring digits from the output of said factor shifter section to said adder section input in predetermined synchronism with digits circulating through said adder section and arithmetic revolver section.

2,901,169
VARIABLE RADIX COUNTER
Jean Cambou, Les Pavillons-sous-Bois, and Claude J. Gorgand, Vanves, France, assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application November 4, 1955, Serial No. 545,058
Claims priority, application France December 30, 1954
16 Claims. (Cl. 235—61.8)

5. A counter for operating in any one of a predetermined number of numeration bases, a source of pulses to be counted, means for selecting a desired numeration base, means for selecting certain ones of said digit representing pulses for entry into said counter in the selected numeration base, both said selecting means channeling

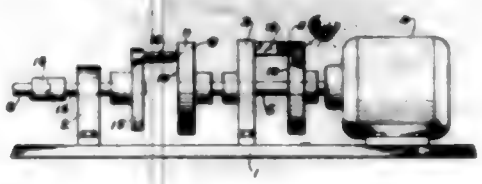
combination, an electric circuit, means responsive to end of said cylindrical valve member through said re-

said digit representing pulses into said counter, and means for reading out differentially timed pulses representing



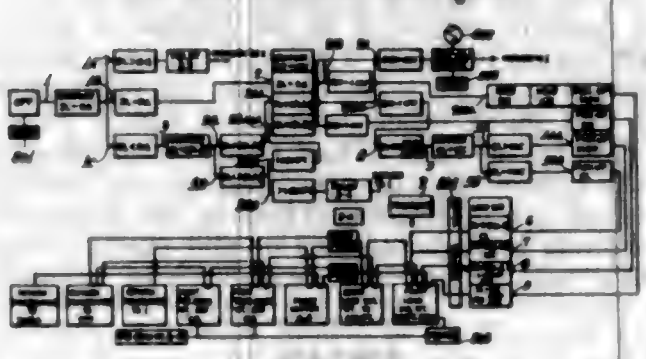
the true and complementary values of the digit present in the counter.

2,901,170
SHAFT POSITION INDICATOR
Joseph R. Poole, Summit, N.J., assignor to The Austin Company, New York, N.Y., a corporation of Ohio
Application August 24, 1953, Serial No. 375,878
8 Claims. (Cl. 235—92)



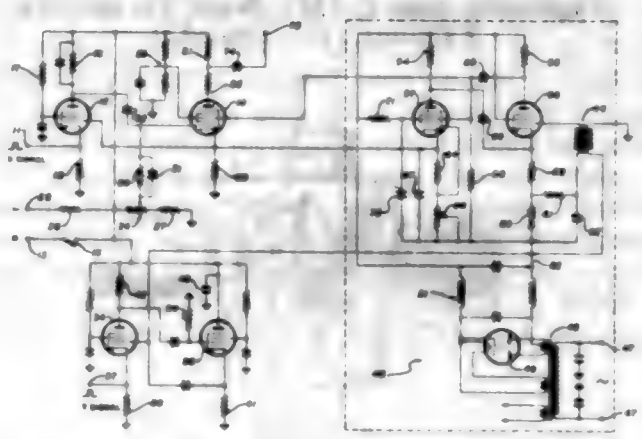
1. Apparatus for indicating the angular position of a rotating member comprising means for generating a first train of distinct signals, the number of signals in said first train being related to the angular displacement during a first time interval of a reference member with respect to a stationary reference point, means for generating a second train of distinct signals, the number of signals in said second train being related to the algebraic sum of the angular displacement of said reference member during a second interval of time continuous of the first interval and the angular displacement during the second interval of the rotating member, and means for recording the sum of the signals generated during the first and second intervals of time.

2,901,171
EQUIPMENT FOR PLANNING THE LOADING OF AIRCRAFT
Emil Kolisch, New York, N.Y., assignor to Continental Electrolog Corp., a corporation of New York
Application July 25, 1955, Serial No. 524,134
29 Claims. (Cl. 235—151)



1. Equipment for determining the distribution of weight into regions of an aircraft for desired center of gravity position of the loaded aircraft, said equipment comprising an adjustable unit, means to set said unit to a position related to the weight remaining to be loaded into the aircraft, a second adjustable unit, means to set said unit to a position related to the moment of such remaining weight, which is the difference between any desired moment of the aircraft after it is loaded with the entire weight to be carried and the actual moment of the aircraft before loading the remaining weight, a plurality of units predetermined values related to a given weight and corresponding moment for any sequence of regions of the aircraft, means to select a group of such units for a desired sequence of regions to be loaded, means controlled conjointly by the settings of said two adjustable units and the selected groups of said plurality of units for determining the portion of the weight to be loaded into the first region of the sequence, the means to set said adjustable units, resetting the latter to the weight and moment remaining after deduction of the weight previously determined and its corresponding moment, and means to eliminate successive units of the plurality from the computations of the equipment as the portions of weight are determined for the corresponding regions of the sequence, the means controlled conjointly by the settings of the two adjustable units coacting successively with the plurality of units remaining to determine the portions of weight for the remaining regions of the sequence.

2,901,172
ELECTRONIC MULTIPLIER CIRCUIT
Robert E. Thomas, Walnut Creek, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application August 6, 1954, Serial No. 448,399
10 Claims. (Cl. 235—194)



1. An electronic multiplier circuit comprising first and second input terminals adapted to receive simultaneous pulsed voltage signals for multiplication, a first multielement electron tube having at least two control electrodes, means applying a first signal at said first input terminal to one control electrode of said tube, a second electron tube having a cathode and a control electrode, means coupling said first input terminal to the cathode of said second tube, isolating means applying a second signal at said second input terminal between the cathode and the control electrode of said second tube without reference to electrical ground whereby the output thereof is proportional to the sum of said first and second input signals, and means coupling the output of said second tube to the second control electrode of said first electron tube whereby the output thereof is proportional to the product of simultaneous signals at said pair of input terminals.

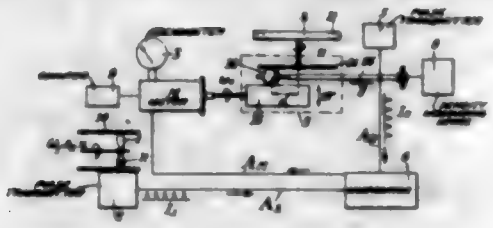
2,901,173
APPARATUS FOR MEASURING THE PRODUCT OF TWO CONCURRENTLY VARYING QUANTITIES
Marcel Paul Clicques, Paris, France, assignor to Etablissements Labinal, Paris, France, a society of France
Application October 17, 1956, Serial No. 616,438
Claims priority, application France October 28, 1955
8 Claims. (Cl. 235—194)

1. Apparatus for measuring the product of two concurrently varying quantities x and y which comprises, in

connected to the exchanger for circulation of water

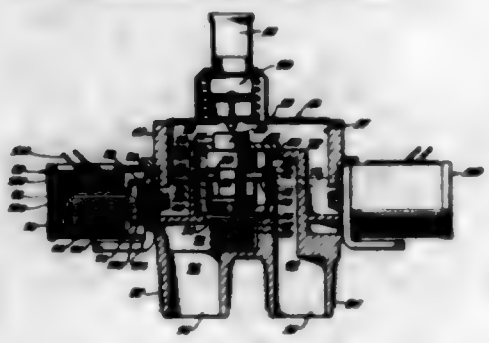
2,901,178

combination, an electric circuit, means responsive to variations of quantity x for transmitting through said circuit a succession of pulses at a frequency proportional at any time to the value of said quantity x at this time, a rotating part, means connected with said circuit for controlling the rotational speed of said part to make it proportional to said frequency, another rotating part, a



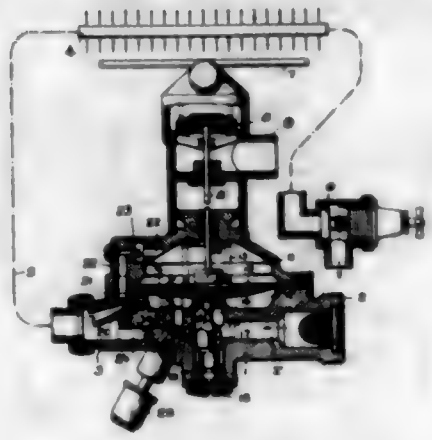
variable ratio transmission gear between said two parts, means responsive to variations of quantity y for controlling said transmission gear to keep at any time the ratio of the speed of the second part to that of the speed of the first part equal to the value of said quantity y at said time, and means for indicating the number of revolutions of said second part from a given time origin.

2,901,174
THERMOSTATICALLY CONTROLLED MIXING VALVES
Charles D. Branson, Greensburg, Pa., assignor to Robertshaw-Fulton Controls Company, Greensburg, Pa., a corporation of Delaware
Application June 6, 1957, Serial No. 663,954
2 Claims. (Cl. 236—12)



2. In a mixing valve, a casing having hot and cold fluid inlets and an outlet, a cylindrical shaped body member formed in said casing and having an open end and an orifice opposite said open end, means forming a first passage connecting said hot fluid inlet with said open end, means forming a second passage connecting said cold fluid inlet with said orifice, means forming a third passage connecting said body member with said casing outlet, control means responsive to an external condition for controlling fluid flow in said third passage, means forming a bypass passage connecting said hot fluid inlet with said casing outlet, another control means responsive to an external condition for controlling fluid flow in said bypass passage, a thermostatic element partially housed in said cylindrical body member and having a temperature sensitive portion extending into said third passage, a cylindrical valve member disposed in said body member and having a closed end and an open end, the diameter of said cylindrical valve member being greater than that of said body orifice, resilient means biasing said open end of said cylindrical valve member to cover said body orifice to prevent fluid flow therethrough, said thermostatic element being connected to said cylindrical valve member for moving the same away from said body orifice in response to a predetermined temperature of fluid in said third passage, and a resilient ring rigidly connected within said body member and having an inside diameter smaller than the diameter of said cylindrical valve member, said thermostatic element being adapted for moving said closed end of said cylindrical valve member through said resilient ring in response to another predetermined temperature of fluid in said third passage to prevent fluid flow through said open end of said body member, said resilient ring maintaining fluid-tight contact with said cylindrical valve member upon overtravel thereof against the bias of the same said resilient means.

2,901,175
WATER FLOW REGULATOR FOR WATER HEATER
Ernst Keppel, Remscheid, Germany, assignor to Joh. Vaillant K.G., Remscheid, Germany
Application April 8, 1958, Serial No. 727,159
Claims priority, application Germany May 31, 1957
7 Claims. (Cl. 236—25)

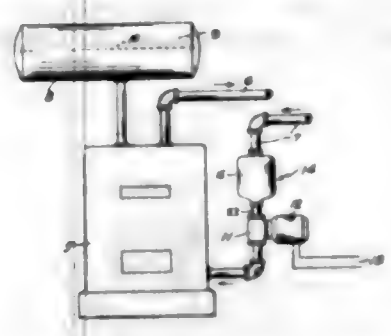


1. In a water flow regulator for a water heater having a downwardly biased flexible diaphragm separating the water chamber of said regulator into an upper chamber and a lower chamber, valve means responsive to the position of said diaphragm for controlling the flow of gas to a burner, a water intake connected to said lower chamber and containing therein an intake regulator valve having a valve stem biased for continuous engagement with said diaphragm and responsive to the position thereof, a regulator outlet, a venturi tube providing a first outlet passageway connecting said lower chamber with said regulator outlet, a faucet remotely controlling flow through said regulator outlet, a passageway connecting the throat of said venturi tube with said upper chamber and having means therein for retarding flow therethrough, the improvement therein which comprises a control valve having a valve plate positioned to control the flow of water from the lower chamber through said venturi, operating means connected with said control valve and arranged to be engaged by said diaphragm to close the same upon downward movement of said diaphragm, the inner surface of said valve plate being exposed to the water pressure within said lower chamber whereby pressure exerted thereagainst maintains said control valve in closed position irrespective of the position of said diaphragm, means providing a permanently open restricted passage between said lower chamber and said regulator outlet, and spring means urging said control valve to open position, the force of said spring means being such that said control valve is opened thereby upon reduction in pressure to a predetermined level in said lower chamber resulting from the opening of said faucet, whereby regulated flow through said regulator outlet is initiated.

2,901,176
WATER COMPENSATOR FOR FORCED FLOW WATER SYSTEM INCLUDING AN EXPANSION TANK
Leroy W. Hoyt, Stamford, Conn.
Application July 26, 1956, Serial No. 600,231
7 Claims. (Cl. 237—66)

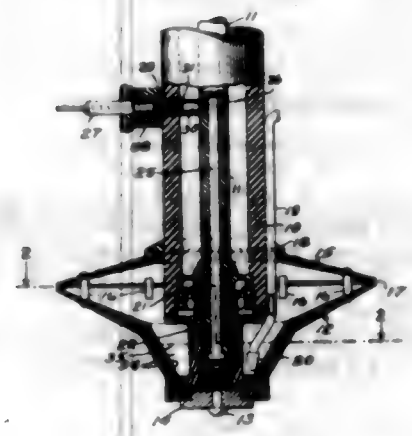
1. In a water circulating heating or cooling system comprising a heat exchanger, supply and return pipe lines

connected to the exchanger for circulation of water through the system, a circulating pump in the return line to the exchanger including suction and discharge connections to the line, an expansion tank connected to the system on the discharge side of the pump, and a compensator in the line on the suction side of the pump comprising a hollow member enclosing an air chamber, a depending tube in said chamber connected at its upper



end to the return line and open at its lower end adjacent the bottom of the chamber forming a conduit for flow of water from said line to the lower part of the chamber, said tube otherwise closed against communication with the chamber so that there is a closed air space above said open lower end of the tube, and a pipe connection from the lower part of said chamber to the suction side of the pump.

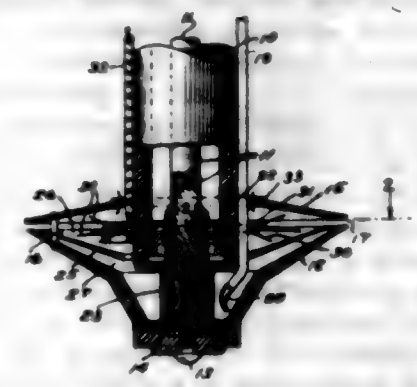
2,901,177
SPRAYING APPARATUS
Edward O. Norris, Westport, Conn.
Application August 30, 1956, Serial No. 607,036
5 Claims. (Cl. 239—15)



1. A spraying apparatus for ionizing and atomizing a sprayable material comprising an elongated tubular holder, a shaft rotatably mounted in said holder, a rotary spray head of electrical insulating material having an outwardly flaring film supporting surface terminating in a peripheral discharge edge, a feed conduit secured to said holder in position to feed sprayable material onto the central portion of said surface, said spray head being secured to said shaft for rotation thereby at a rate to cause said material to flow outwardly in a thin film over said surface by centrifugal force and be discharged outwardly from said peripheral discharge edge, a film contacting electrode disposed in fixed position in the flow path of said film with the entire film contacting portion of said electrode being disposed a substantial distance inwardly from said peripheral discharge edge, to thereby provide an annular ring shaped insulating area of said surface between said electrode and said peripheral discharge edge over which said film flows after ionization, and electrical connecting means by which an ionizing potential is applied to said electrode.

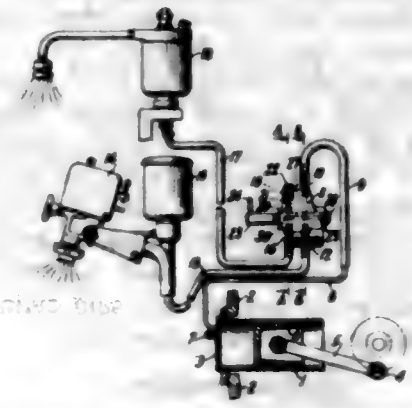
1. Apparatus for measuring the product of two concurrently varying quantities x and y which comprises, in

2,901,178
SPRAYING APPARATUS
Edward O. Norris, Westport, Conn.
Application August 30, 1956, Serial No. 607,104
1 Claim. (Cl. 239—15)



Apparatus for producing an ionized spray of sprayable material, comprising a rotary spray head including a pair of frusto conical members of electrical insulating material forming a confined area therebetween and having peripheral edges spaced to provide therebetween a peripheral discharge opening and a radial member of electrical insulating material disposed between said first members to divide said confined area into two separate chambers, said radial member having a peripheral edge spaced from the peripheral edges of said first member to provide a peripheral discharge opening communicating with each of said chambers, a fluid pipe disposed to feed material for spraying to the central portion of one of said frusto conical members, means rotating said head to cause said material to flow along the frusto conical surface of said last member by centrifugal force and to be discharged from said peripheral discharge opening and a fixed electrode disposed between said radial member and the other of said frusto conical members, means connected to pass air through the chamber containing said electrodes and outwardly therefrom through said peripheral discharge opening for mixing with and assisting in the atomization of said material and electrical connections to apply an ionizing potential to said electrode suited to ionize the air in its passage through said last mentioned chamber.

2,901,179
PRINTING PRESS
Artur Büttner, Heidelberg, Germany, assignor to Schnellpressenfabrik Aktiengesellschaft Heidelberg, Heidelberg, Germany, a corporation of Germany
Application October 26, 1955, Serial No. 542,938
Claims priority, application Germany November 2, 1954
2 Claims. (Cl. 239—67)



1. In a printing press having a frame structure and means for receiving printed sheets discharged consecutively from the press, in combination, a pressure-operated wet dusting device and a pressure-operated dry dusting device mounted on said frame structure in position to dust the printed sheets individually on said receiving means as they are discharged consecutively from the printing press, a source of compressed air for operating both of said devices having means cyclically operable to provide air

said valve body defining a gas passage and a fluid pas-

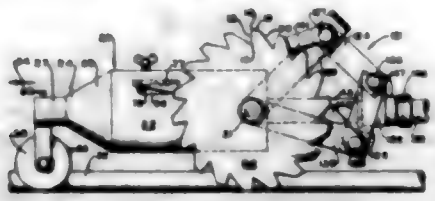
members, holding means spaced radially inwardly from

thermostatic element being adapted for moving said closed

comprising a heat exchanger, supply and return pipe lines

intermittently at a given pressure and at a proper interval during each operational cycle of the press, an improved shifting unit operable at will to alternatively and individually operatively connect said dusting devices with said source of compressed air and automatically provide said devices with optimum, different air pressures at a proper interval of each press operational cycle without need of adjustment of the given air pressure delivered by the source of air pressure, means providing communication between said unit and the source of air pressure and means providing communication between the unit and the dusting devices, said shifting unit comprising a single selector valve having a rotatable valve member operative to a valve closing position and alternatively positionable in a first operative position for placing the wet dusting device in communication with the source of air pressure to operate it and positionable in a second operative position for separately placing the dry dusting device in communication with the source of air pressure to operate it at a predetermined optimum air pressure corresponding to a reduced pressure below said given air pressure, pressure-responsive means in said shifting unit automatically rendered effective to reduce the air pressure at said unit when the valve member is placed in the second position to control the application of said optimum operating reduced air pressure to the dry dusting device, said valve having passageways for alternatively placing the compressed air source in communication with said devices when said valve member is operated alternatively to said two positions and having a passageway for placing said pressure-responsive means in communication with said air source and a passageway providing communication between the unit and said source when said valve member is in said second operative position, and means connected to said valve member operable at will for operating said valve member to said two operative positions.

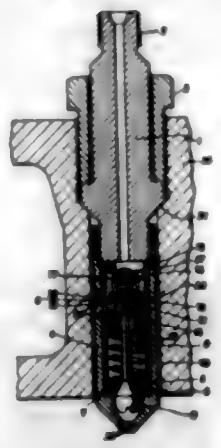
2,901,180
LAWN SPRINKLER
Leon H. Warrick, North Sacramento, and Alvin L. Loy, Sr., North Highlands, Calif.
Application November 18, 1957, Serial No. 697,110
7 Claims. (Cl. 239—67)



6. A lawn sprinkler comprising a hollow cylinder including an interior cylindrical chamber defined by the circular cylinder walls, a forward wall and an after wall, a piston slidable within said cylindrical chamber, said piston having a coaxial chamber opening toward the after end of said piston, a water conduit mounted on said piston and connecting with the opening of said coaxial chamber, said conduit being slidably disposed in the after wall of said cylinder, a pair of ground-engaging wheels rotatably mounted on said cylinder, and means connecting said water conduit and said cylinder for driving said wheels in a forward direction.

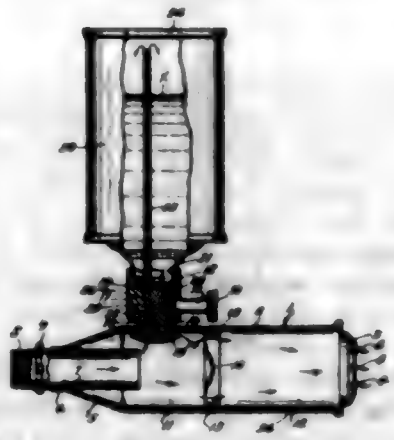
2,901,181
INJECTION NOZZLE INCLUDING DOUBLE CHECK VALVE
Helarich Bek, Arbon, Switzerland, assignor to Adolph Saurer Ltd., Arbon, Switzerland
Application July 3, 1957, Serial No. 669,882
Claims priority, application Switzerland May 25, 1957
4 Claims. (Cl. 239—101)

1. A fuel injection nozzle comprising in combination, a casing, seat and sleeve portions forming part of said casing, a valve-like jet needle adapted to open in the direction of flow of the fuel, extending inside said sleeve portion and having a seat portion normally engaging said seat portion on the casing, a closing spring surrounding said valve needle, the surface of the seat portion on the casing, facing the interior of said sleeve portion serving as one abutment for said closing spring, a nut assembly mounted on the upper part of said valve needle, said nut assembly including a bottom portion in the form of a spring collar serving as the other abutment for said closing spring, and a nut assembly top portion guided in said casing and having a bottom formed



as a disk valve seat, said nut assembly including a portion of reduced diameter, an annular disk valve adapted to open in the direction of flow of the fuel, surrounding said reduced diameter portion with a clearance, said clearance defining a ring slot effective as a by-pass for the fuel, said disk valve being guided, with some play, in said casing, and an additional spring abutting against said spring collar portion and disposed to force said disk valve against said disk valve seat, whereby the jet needle begins to oscillate at the start of the delivery stroke and to inject small quantities of fuel, to open entirely only in the further course of the injection procedure under the influence of growing opening forces.

2,901,182
ENGINE OPERATED INSECTICIDE SPRAYER
Arthur C. Cragg and Donald A. Schuldt, St. Paul, Minn., assignors to Donaldson Company, Inc., St. Paul, Minn., a corporation of Delaware
Application August 7, 1957, Serial No. 676,867
4 Claims. (Cl. 239—129)



1. In an engine exhaust silencer and insecticide sprayer, an elongated muffler shell having an inlet at one end adapted for connection to the exhaust manifold of an internal combustion engine and a discharge opening at its opposite end, a valve body having its lower end removably secured to one side of said muffler shell adjacent the inlet end thereof and an upwardly opening recess at its upper end for reception of the mouth of a fluid container,

alignment with said discharge opening, an open harness

at different relative velocities; and a conduit extending

to said electrode.

devices having means cyclically operable to provide air

said valve body defining a gas passage and a fluid passage each extending generally vertically therethrough and communicating with the interior of said muffler shell and a fluid container applied to said body, said body further defining a valve seat in said fluid passage, a fluid control valve stem mounted in said body for valving movements toward and away from said seat, a gas tube extending upwardly from said body and defining an extension of said gas passage, said gas tube being adapted to be received in said container with the upper end of said tube disposed above the level of fluid in said container, and check valve means permitting movement of exhaust gas through said gas passage and gas tube to the interior of said container but preventing return movement of said exhaust gas therethrough.

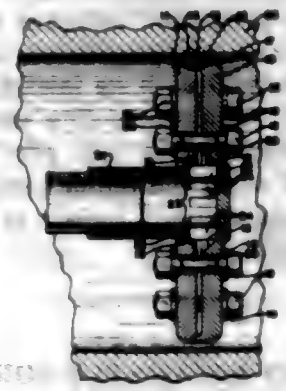
2,901,183
SELF-RETRACTING NOZZLE UNIT FOR SUBSURFACE WATER SPRINKLER SYSTEMS
Gerald C. Kohl, Tacoma, Wash.
Application December 23, 1957, Serial No. 704,575
3 Claims. (Cl. 239—205)

1. A retractable sprinkler nozzle comprising in combination, a water supply pipe, a substantially rigid tubular member connected at one end to the water supply pipe, a sprinkler nozzle unit supported on the opposite end of said tubular member, said unit including a frustoconical extension sleeve member of flexible material having its base secured peripherally at one end to the said opposite end of the tubular member and extending freely therefrom, a substantially rigid nozzle head of a size smaller than the tubular member attached to the opposite end of said extension sleeve member, and spring means fixed at one end within the tubular member and connected at its other end to the nozzle head to retract the sprinkler nozzle unit within the confines of the tubular member.

2,901,184
JET RINGS
Thomas C. Kane, Mahoning County, Ohio, assignor to The Commercial Shearing and Stamping Company, Youngstown, Ohio, a corporation of Ohio
Application November 30, 1956, Serial No. 625,304
3 Claims. (Cl. 239—452)

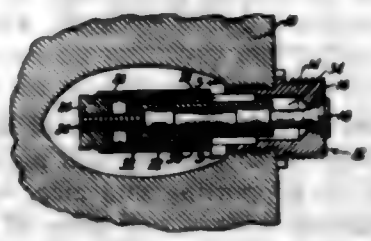
1. A jet ring for delivering a high pressure circular film of liquid outwardly from a central point at an angle less than normal to the axis of the ring comprising a pair of axially aligned side by side circular members, an axially extending flange on one of said members, having inner and outer peripheral faces, a sloping face on said flange facing toward the axis of the circular members and forming a V-shaped ridge with the inner face of the flange, an angularly outwardly extending face on the other member, said face forming a line contact with the edge of the V-shaped ridge on the flange, to form a chamber beneath the flange between the circular

members, holding means spaced radially inwardly from the line contact holding said annular members resiliently together and means connected to said chamber for in-



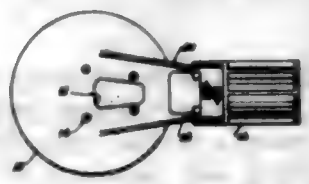
troducing a high pressure liquid into the chamber between the annular members whereby the annular members are caused to flex along the line of contact to form an outwardly directed circular nozzle.

2,901,185
DAMPENED PINTLE NOZZLE
John W. Dickey, Wood-Ridge, N.J., assignor to Bendix Aviation Corporation, South Bend, Ind., a corporation of Delaware
Application April 19, 1956, Serial No. 579,286
3 Claims. (Cl. 239—453)



1. A nozzle comprising a housing, an inlet and an outlet in said housing, a conduit connecting said inlet and said outlet, a sleeve in said inlet spaced from the walls of said conduit, a valve in said outlet, a stem formed on said valve reciprocably disposed in said sleeve, said valve controlling the flow through said outlet, a cylinder surrounding a portion of said sleeve, an inwardly turned flange formed on one end of said cylinder, a piston operatively connected to said stem exteriorly of said sleeve adapted to coact with said cylinder to retard vibration of said valve and a spring in said cylinder adapted to engage said piston and flange to urge said valve toward closed position.

2,901,186
VALVE ASSEMBLY
Clarence A. Price, Ann Arbor, Edward Fischer, Saline, and Robert J. Schultz, Detroit, Mich., assignors to Bradson Manufacturing Corporation, Saline, Mich., a corporation of Michigan
Application December 30, 1957, Serial No. 706,203
5 Claims. (Cl. 239—538)



1. Valve apparatus comprising a generally cylindrical housing open at opposite ends, an outlet member with a coaxial discharge opening projecting from one end of said housing, said outlet member being adapted to turn about its axis within said housing, the opposite end of said outlet member having at least one inlet port out of axial

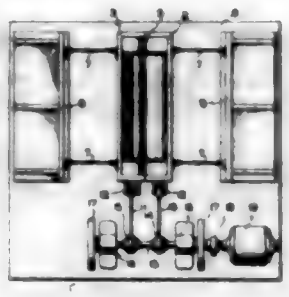
tudinally with respect to said spindle to position its center ment with respect thereto, said clutch assembly having

1. A fuel injection nozzle comprising in combination, a casing, seat and sleeve portions forming part of said

inlet end thereof and an upwardly opening recess at its upper end for reception of the mouth of a fluid container,

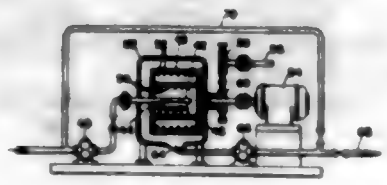
alignment with said discharge opening, an open harness member mounted in said housing for passage of liquid therethrough and retaining a ball of larger diameter than said port for movement longitudinally of said housing, said harness being positioned adjacent the opposite end of said outlet member and open thereto so that when said outlet member is turned with its inlet port in alignment with said ball and liquid is flowing through said valve housing the ball will seat in said port interrupting the flow of liquid, and when the outlet member is turned to another position said ball will be out of said port allowing flow of said liquid.

2,901,187
METHODS AND APPARATUS FOR CRUSHING MATERIALS
Hans G. Heymann, Ulm (Danube), Germany, assignor to Hein Lehmann & Company, Aktiengesellschaft, Duesseldorf, Germany
Application February 18, 1955, Serial No. 489,168
12 Claims. (Cl. 241—263)



9. The method of crushing a piece of material which comprises the steps of suspending said piece of material against free fall by supporting said piece of material at substantially opposite sides of said piece of material, and then applying rapidly occurring force couples to said piece of material by moving both supports simultaneously first toward and then away from each other to fracture said piece of material into smaller pieces of material capable of free fall, each support being moved in a curved path of movement having a substantial component of movement perpendicular to the path of free fall.

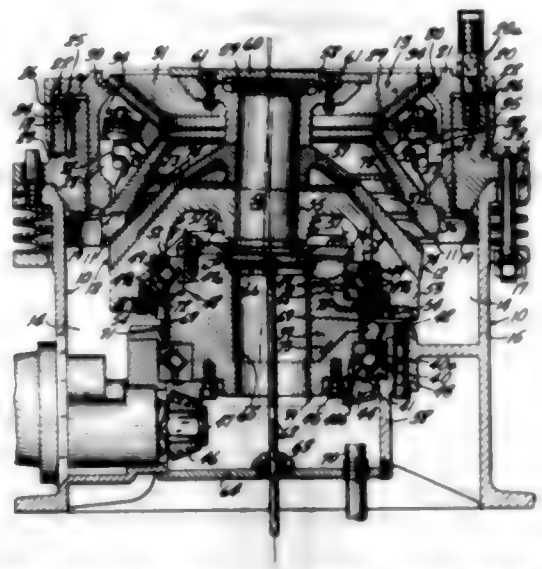
2,901,188
APPARATUS FOR SUBDIVIDING SOLIDS
Egidius Welfers, Kassel, and Heinz Hose, Kassel-Ndzw., Germany, assignors to Spinnfaser Aktiengesellschaft, Kassel-Bettenhausen, Germany
Application August 7, 1956, Serial No. 602,638
Claims priority, application Germany August 8, 1955
3 Claims. (Cl. 241—152)



1. A device suitable for subdividing solids dispersed in a liquid which comprises: a first, rotatably mounted, cylindrical, outer drum; a second, cylindrical, inner drum inside said first drum and mounted for rotation independent of the rotation of said first drum; said drums having uniformly distributed on the inner side of the cylindrical walls thereof a plurality of protrusions, each protrusion being tapered to a sharp point spaced inwardly from the inner side of the cylindrical walls of said drums; said cylindrical walls having a plurality of openings therethrough; drive means for rotating said drums

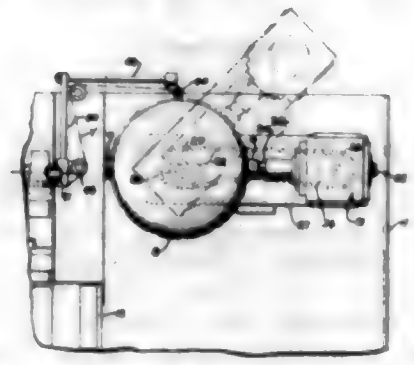
at different relative velocities; and a conduit extending into said inner drum for delivering a liquid containing solids to the inner portion of said inner drum.

2,901,189
CONE CRUSHING MECHANISM
Robert D. Conway, Cedar Rapids, Iowa, and William Messinger, deceased, late of Philadelphia, Pa., by The First National Bank of Philadelphia, administrator, Philadelphia, Pa., assignors, by direct and mesne assignments, to Pettibone Mulliken Corporation, Chicago, Ill., a corporation of Delaware
Application August 23, 1954, Serial No. 451,394
4 Claims. (Cl. 241—207)



1. Crushing mechanism comprising relatively movable complementary crushing members, and means to actuate one of the crushing members including a rotary member, first bearing means to mount the rotary member for rotation about a vertical first axis, and second bearing means comprising an X-type bearing having races that are eccentric with respect to the first axis to mount the crushing member on the rotary member for rotary movement relative thereto about a second axis at an angle to the first axis, the second axis intersecting the first above the lower portions of the complementary crushing members.

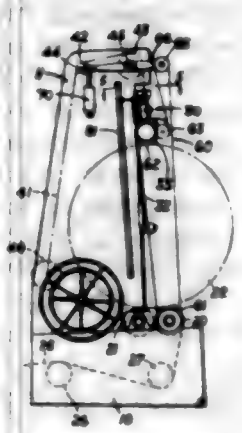
2,901,190
SPHERE WINDING MACHINE
Edward A. Wentz, Montclair, N.J., assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Application September 9, 1955, Serial No. 533,308
6 Claims. (Cl. 242—2)



1. In a winding machine of the class described, the combination of a spindle adapted to support a spherical object on which a winding is to be applied, yarn applying means adapted to move in a substantially circular path about the object within a given plane passing through approximately the center of the object, said spindle having means thereon for threadedly securing the object thereon whereby the object can be adjusted longi-

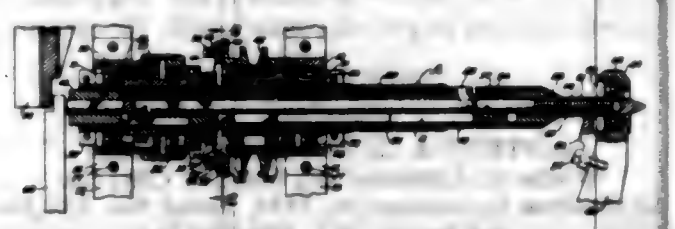
tudinally with respect to said spindle to position its center in the plane wherein the circular path of the yarn applying means lies, means for tilting said spindle in a plane passing substantially diametrically through the circular path and substantially perpendicular to the first mentioned plane and being constructed and arranged to tilt the object about an axis lying within the first mentioned plane and passing diametrically through the object, and means for rotating said spindle to rotate the object about an axis perpendicularly intersecting the first mentioned axis.

2,901,191
PAPER MACHINERY
Richard W. Phelps, Fulton, N.Y., assignor to The Black-Clawson Company, Hamilton, Ohio, a corporation of Ohio
Application May 6, 1957, Serial No. 657,274
6 Claims. (Cl. 242—66)



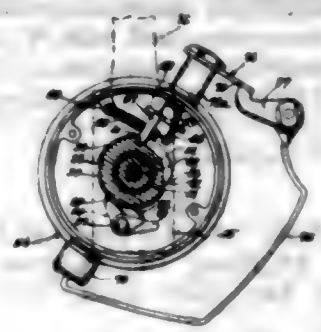
2. In a winding machine for web material including side frames and a rider roll adapted to engage an upper portion of the new roll being wound and to be moved upwardly by the accumulated web material on said new roll, the combination of carriage means for said rider roll, means supporting said carriage means for upward movement on said said side frames along a predetermined path, means including a drive belt for driving said rider roll at a predetermined greater surface speed than said new roll, variable means for regulating the tension in said belt, and means responsive to the position of said carriage means on said path for adjusting said variable means to provide maximum tension in said belt when said carriage means is at its lowermost position on said path and decreasing tension in said belt as said carriage means moves upwardly along said path.

2,901,192
WEB WINDING MANDREL
Ernst Daniel Nystrand, Green Bay, Wis., assignor to Paper Converting Machine Co., Inc., Green Bay, Wis., a corporation of Wisconsin
Application May 12, 1955, Serial No. 507,822
12 Claims. (Cl. 242—75.5)



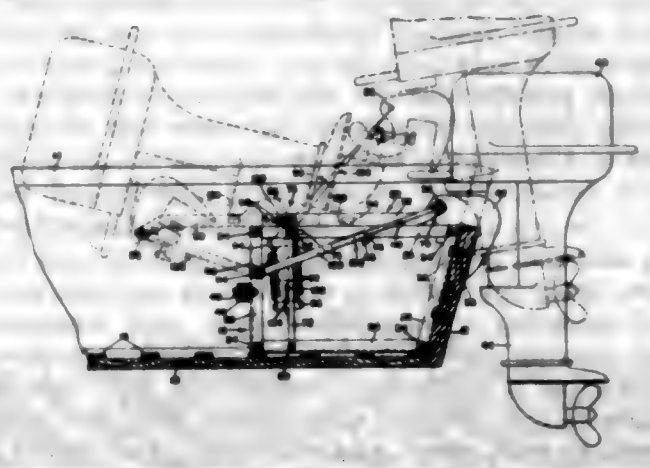
1. In a mandrel structure adapted for use in the winding of a web thereon, an elongated mandrel adapted to receive a core thereon, means for supporting that mandrel for rotation, a drive wheel rotatably mounted coaxially with said mandrel and being adapted to be rotatably driven, and a friction clutch asembly coaxial with said mandrel and being locked against rotational movement with respect thereto, said clutch assembly having friction elements frictionally and adjustably engaging said drive wheel for drivingly coupling it to said mandrel.

2,901,193
SPINNING TYPE FISHING REEL
William J. Askins and Howard R. Chapin, Park Ridge, Ill., assignors, by mesne assignments, to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Application October 22, 1956, Serial No. 617,561
1 Claim. (Cl. 242—84.21)



In a spinning type fishing reel, the combination of a housing having a generally cylindrical neck portion, said neck portion having a ridge extending circumferentially thereof over a part of the circumference with one end of said ridge affording an abutment, a flyer disposed adjacent to said neck portion and supported for rotation coaxially with said neck portion, a line retrieving member pivotally supported on said flyer and pivotal about an axis transverse to the axis of rotation thereof, an arm rigidly operatively connected with one end of said line engaging member, said arm being disposed eccentrically to the pivotal axis of said line retrieving member and being revolvable about said transverse axis, said arm extending towards said neck portion transversely thereof, the end of said arm when said line retrieving member is in casting position being disposed substantially in alignment with said ridge, said arm when said flyer is caused to be rotated being revolved into engagement with said abutment, the same effecting displacement of said arm and rocking of said line retrieving member into line retrieving position.

2,901,194
OUTBOARD MOTOR LIFT
Harry W. Shoutz, Davenport, Iowa
Application October 1, 1956, Serial No. 613,335
10 Claims. (Cl. 248—4)



5. For a boat having floor means and a transom and an outboard motor having an operating position behind the transom: mechanism for moving the motor selectively between said operating position and a storage position ahead of the transom and within the boat, comprising support structure having means for the affixation thereof of

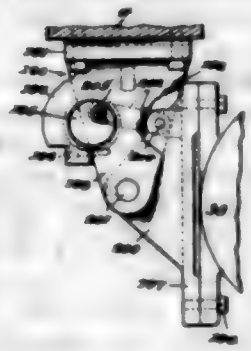
the boat ahead of the transom; an arm element pivoted to the support structure on a transverse axis ahead of the transom to extend rearwardly in a rear position in which its terminal part is proximate to the operatively positioned motor, said terminal part having motor-engaging means for supporting the motor, and said arm element being swingable upwardly and forwardly about said axis to extend forwardly in a forward position and operative thereby to carry the motor to said storage position and for returning said motor to its operating position; and extensible and retractable brace means connected to the arm element in spaced relation to the pivot axis and connected to the support structure also in spaced relation to said pivot axis, said brace means extending and retracting as the arm element swings, and said brace means including releasable means for securing same against retraction and extension for locking said arm element against swinging.

2,901,195
MOTOR MOUNTING MEANS

Justin Simpson, Elmhurst, Ill., assignor to Continental Can Company, Inc., New York, N.Y., a corporation of New York

Original application August 3, 1955, Serial No. 526,197. Divided and this application May 13, 1957, Serial No. 658,712

1 Claim. (Cl. 248—16)



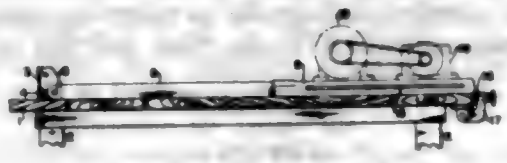
A motor mounting means comprising a bracket having an attaching plate and two spaced arms projecting rigidly in the same direction from one side of said attaching plate, one of said arms being provided with a bearing the axis of which is spaced from and parallel with said one side of said attaching plate, a motor mounting base at an angle to said attaching plate and having two spaced arms overlapping the free ends of the aforesaid bracket arms, means pivotally connecting the free ends of said arms of said motor mounting base and said free ends of said bracket arms on aligned axes parallel with the aforesaid axis of said bearing, a rotatively adjustable cylindrical stub mounted in said bearing, a link extending from one end of said stub to said motor mounting base, pivot means pivotally connecting one end of said link with one of said arms of said motor mounting base on an axis parallel with the aforesaid axes, additional pivot means pivotally connecting the other end of said link with said one end of said stub, the axis of said additional pivot means being parallel with and spaced radially from the axis of said stub, and releasable means for holding said stub in rotatively adjusted position, said bearing being integrally joined to said one of said bracket arms and including a longitudinal split, said longitudinally split bearing having a threaded clamping member for contracting it frictionally around said stub, said motor mounting base and said arms thereof being also integrally joined to each other, said additional pivot means comprising a terminally threaded screw extending transversely through aligned bores in said stub, the one of said arms and said other end of said link, the bore in said other end of said link being internally threaded, said threaded clamping member and terminally threaded screw adjustably retaining the parts in a predetermined position.

2,901,196
RETRACTABLE TOOL MOUNT

Albert T. Rowan, New Orleans, La., assignor, by decree of distribution, of one-half to Margery Fanz Rowan, one-sixth to Donald Albert Rowan, one-sixth to Albert T. Rowan, Jr., and one-sixth to Mary Ann Rowan

Application October 8, 1954, Serial No. 461,115

7 Claims. (Cl. 248—23)



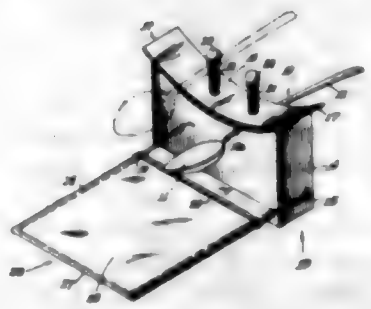
1. A retractable tool mount comprising two arms, a hinged connection between ends of said arms, said arms being adapted to lie, when extended in endwise relation, across a workbench or the like, a bracket member adapted to be fixed to the workbench pivotally connected to the distal end of one of said arms, and means carried by at least one of said arms intermediate its ends for mounting a tool, said hinge connection including downwardly-extending pintle-bearing members carried by one of said arms and a pintle horizontally mounted in said bearing members to permit jackknifing of the arms to bring said arms to a raised position in which they lie generally parallel to one another, upon the lifting of the arms adjacent their hinged connection and the swinging of the arm pivoted to the bracket about its pivotal connection thereto, said bracket having means for supporting said arms when in their raised jackknifed position.

2,901,197
SPOON HOLDER

Alice G. Posey, White Plains, N.Y.

Application April 12, 1957, Serial No. 652,458

3 Claims. (Cl. 248—37.3)



1. A holder for a spoon having a handle comprising a base, slots formed in the sides of the base member, a substantially U-shaped support having the outer ends of its legs positioned in the slots of the base and extending substantially horizontally from the base, a liner on the support, a band for holding the liner on the support, and means on the base engageable with the handle of the spoon for holding the spoon suspended above the liner whereby the liner serves to collect any drippings from the spoon and yet is out of contact with the spoon.

2,901,198
ANTENNA GUY WIRE ANCHOR

Walter T. Gilmore, Jr., Morgan City, La.

Application September 28, 1955, Serial No. 537,208

4 Claims. (Cl. 248—48.2)

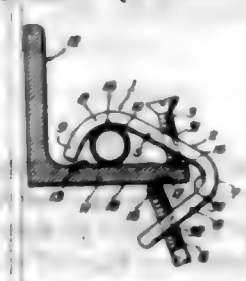
1. A guy wire anchoring bracket comprising an upright plate attachable to a side of a building beneath a gutter and having an upper end and an arm on said upper end extending upwardly and laterally from said upper end and curving in an arc throughout its length and adapted to extend in front of and above a gutter in supporting engagement therewith, said arm having an upper end pro-

ber attached to the lower end of said spring for engaging

vided with an opening therein and with a depending straight cleat having an upper end joined to said arm be-

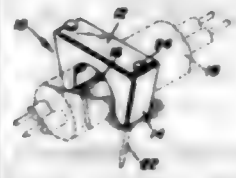
neath said opening and for attachment thereto of a guy wire extending through said opening.

2,901,199
PIPE CLAMP
Arthur M. Thompson, Chicago, Ill.
Application May 15, 1956, Serial No. 585,674
11 Claims. (Cl. 248—72)



6. A fastening device to secure a conduit to a flange of a structural unit comprising a V-shaped clamp provided with a wide mouth divergent open end to straddle the outer free edge of said flange and to extend inwardly from said edge adjacent opposite faces thereof to permit a wide range angular adjustment of said clamp in respect to said recipient flange, a hook on one outer end of said clamp to engage over the conduit, and cooperative inwardly directed screw members on the legs of said V-clamp to contact opposite outwardly disposed faces of the flange, one of said screw members being positioned along an axis located toward the outer open end of said V-clamp and inwardly with respect to the hook on said one clamp end, the other of said screw members occupying a position along an axis located inwardly of the clamp in relation to the first screw member location whereby said members engage said flange faces at different inwardly spaced positions with respect to the hook end of the clamp, one of said screw members providing a fulcrum for said clamp and the other screw member providing means to rotate said clamp hook against said conduit to urge the latter against said flange.

2,901,200
ELECTRIC CABLE STAPLE
Orville A. Voeks, Baileys Harbor, Wis.
Application April 23, 1956, Serial No. 579,992
1 Claim. (Cl. 248—74)



A device for mounting an electric cable on a supporting member comprising a generally U-shaped resilient body of insulation material having relatively converging legs forming with said body of a C-shaped inner surface of a circumference greater than one-half of the circumference of a cable whereby said device is adapted to clip over a cable and conformably grip the same, said legs having inner surfaces intersecting said C-shaped surface and inclining in flaring relation from said C-shaped surface to facilitate clipping the device over a cable, and said body and legs having a pair of relatively converging nail bores therethrough at opposite sides of said C-shaped inner surface for driving a pair of nails therethrough into a supporting member in converging relation to compress said body and legs against a cable, said legs having flat bottoms and being of a length to engage a supporting member when the device is clipped over a cable of a given size engaged with a supporting member.

2,901,201
MATERIAL HANDLING FIXTURE
Allan J. Taylor, Pacific Palisades, and Anthony Toth, Compton, Calif., assignors to Northrop Corporation, Hawthorne, Calif., a corporation of California
Application February 20, 1956, Serial No. 566,586
1 Claim. (Cl. 248—119)

A material handling fixture comprising: an elongated member having a longitudinal axis of symmetry; a pair of arch-like members of predetermined width and having inner and outer edges, a crown portion and leg portions; said arch-like members being adjustably mounted on said elongated member for longitudinal movement thereon and in an attitude in which said leg portions are equally spaced on opposite sides of a reference plane containing said axis of symmetry; the outer edges of said leg portions having an indentation formed therein and which extends the full width thereof; each of said indentations being defined by a first plane surface which lies in a common plane which is normal to said reference plane and a second plane surface which is parallel to and a predetermined distance from said reference plane at such times as said arch-like members are mounted on said elongated member; a support assembly mounted on and extending inwardly from the inner edge of each of said leg portions; each of said support assemblies includes a bracket member pivotally and adjustably mounted on each of said leg portions for movement thereon between a plurality of positions located lengthwise of said leg portions; a pair of individual pad members, each having an arcuate outer face, pivotally mounted on each of said bracket members; and the mounting of said bracket members on said leg portions, and individual pad members on said bracket members, being further characterized in that the arcuate faces of the individual pad members on each of said arch-like members have an opposed relation.

2,901,202
COUNTER BALANCE
Robert J. Stava, deceased, late of University Heights, Ohio, by Eleanore Grace Stava, executrix, University Heights, Ohio, and Oswald Conrad Hollstein, Cleveland, Ohio, assignors to Picker X-Ray Corporation, Waite Mfg. Div. Inc., Cleveland, Ohio, a corporation of Ohio
Application December 3, 1954, Serial No. 472,985
6 Claims. (Cl. 248—123)

1. In an X-ray apparatus having an X-ray tube mounted for movement along a vertical support, the combination

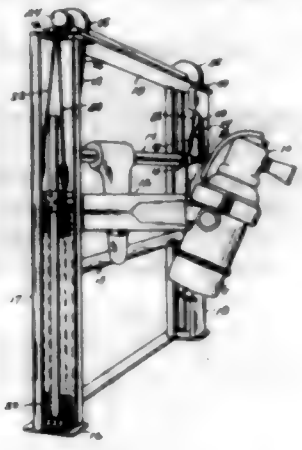
2,901,206

termediate-supporting means between said load and said

taining the parts in a predetermined position.

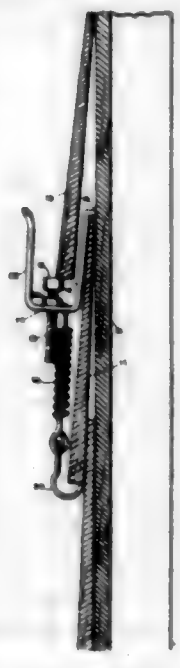
engagement therewith, said arm having an upper end pro-

comprising an overhead drum assembly rotatably mounted on the vertical support, a spring suspension having one end anchored to the base of the vertical support, at least a pair of flexible connecting members extending about said drum assembly and having one end connected to the X-ray tube, a second pair of flexible connecting members extending about said drum assembly and operatively connected to the spring suspension, latch means including a tiltable latch member having a central tilt



axis secured to the other end of the spring suspension, and having its extremities on opposite sides of the tilt axis connected respectively to a different one of said second pair of flexible connecting members, and means on said tiltable latch member adapted frictionally to coact with the support to immobilize the X-ray tube against vertical movement downwardly consequent upon failure of any of said second set of flexible connecting members.

2,901,203
CLAPBOARD SUPPORT
Clarence L. Harrison, Syracuse, N.Y.
Application December 29, 1953, Serial No. 400,904
3 Claims. (Cl. 248—226)

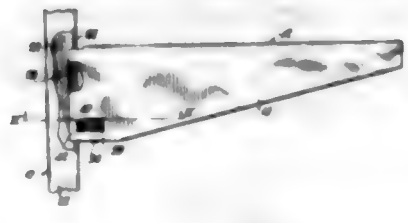


1. A device for temporarily supporting one end of a clapboard during the erection thereof comprising a U-shaped body member, one leg of said member being formed on its outer surface with a projection extending laterally from said surface and adapted to overlie the upper edge of a previously erected clapboard with the open end of said U-shaped member facing upwardly, a clapboard supporting member mounted in said U-shaped body between the legs thereof and being adjustable vertically relative to the body member toward and from the open end thereof, a tension spring secured at one end to said body member and depending therefrom, a clip member attached to the lower end of said spring for engaging the bottom edge of the erected clapboard when said spring is expanded whereby to detachably secure said body member to the erected clapboard.

2,901,204
LITTER BRACKETS
Frank Louis Davis, College Point, N.Y.
Application January 11, 1957, Serial No. 633,610
2 Claims. (Cl. 248—229)

2. A litter bracket comprising companion hook plates having open hooks, connecting and spacing pins securing said hook plates in spaced parallel relation, a clamp lever pivotally mounted on one of said pins in position above said open hooks and movable downwardly to engage a litter handle supported in said open hooks and means connected with said hook plates for adjustably supporting them with said open hooks in upwardly faced position for reception of a litter handle, including a supporting web and reversely faced cams engageable with said web for securing the bracket against movement in opposite directions on the web, said reversely acting cams having projecting handle levers by which either cam may be released to permit movement of the bracket on the web in one direction or the other, and a common release lever pivoted on the bracket in position to engage the handle levers of both cams and whereby both cams may be simultaneously released to permit free movement of the bracket on the web in both directions.

2,901,205
SHELF BRACKET HAVING CAM LOCK
Otto N. Gredell, Kansas City, Mo., assignor to Standard Steel Works, Inc., North Kansas City, Mo., a corporation of Texas
Application April 1, 1957, Serial No. 649,919
8 Claims. (Cl. 248—245)

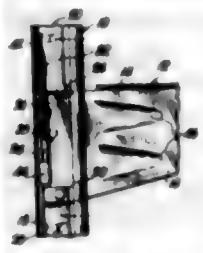


1. Shelving structure comprising an upright support having a return bent portion forming a hook; a shelf-receiving bracket including a vertical web extending laterally from the support and having a return bent portion forming a hook at the rearmost edge thereof interlocked with the hook of the support for vertical sliding therealong; and latch means swingable horizontally on the web to and from a position engaging the hook of the support for holding the bracket in selected positions relative to the support.

to weigh said container and material therein and deter-

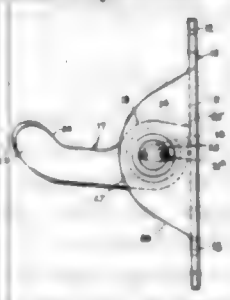
upward movement of said first armature, a second arma-

2,901,206
SPRING-LOADED SHELF BRACKET
Otto N. Gredell, Kansas City, Mo., assignor to Standard Steel Works, Inc., North Kansas City, Mo., a corporation of Texas
Application April 1, 1957, Serial No. 649,920
8 Claims. (Cl. 248—246)



1. Shelving structure comprising an upright support; and a shelf-supporting bracket extending laterally from the support, said support and said bracket having interlocking hook means and interengaging lock means for holding the bracket against movement relative to the support when a load is placed on the bracket, the lock means being spaced below the hook means, permitting swinging of the outermost end of the bracket upwardly to disengage the hook means and the lock means.

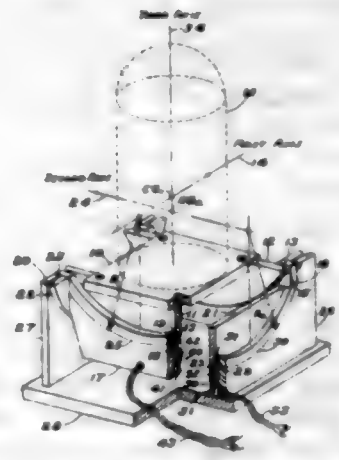
2,901,207
RELIEVABLE HANGERS AND THE LIKE
Folger Adam, Joliet, Ill.
Application April 21, 1958, Serial No. 729,874
7 Claims. (Cl. 248—293)



1. As a new article of manufacture, a relievable hanger, comprising a bracket element including a base plate for attachment to a vertical structural element and including a pair of forwardly projecting parallel bracket flanges, a journal pin extending between said bracket flanges, an article supporting arm including a hub portion journalled on the pin between the bracket flanges, means in connection with said arm to engage the front surface of the base plate to limit upswing of the arm at a position substantially at right angles to the base plate and means in connection with the journal pin to flex the bracket flanges towards each other to create a frictional pressure against the hub portion of the arm, said flange flexing means being preadjustable to vary the amount of said friction pressure, the top edges of the bracket flanges being formed at an angle of not less than substantially forty-five degrees to the base plate, and an upstanding lug on the end portion of the supporting arm, said lug slanting down to meet the top surface of the supporting arm at an angle of not more than substantially forty-five degrees to the top surface of the supporting arm, the lower surface of the supporting arm and the lower portions of the bracket flanges being constituted to allow down swing of the supporting arm into substantial parallelism with the base plate.

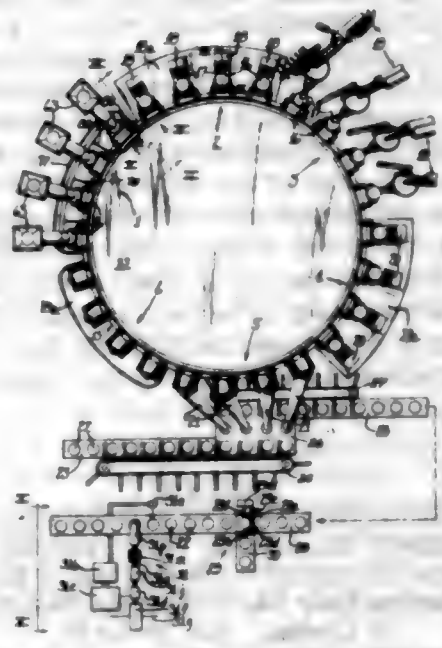
2,901,208
STABILIZED LOAD
Paul R. Jones, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application January 11, 1957, Serial No. 633,731
10 Claims. (Cl. 248—346)

1. Means for stabilizing a load to minimize its rotation with respect to a movable base means, comprising intermediate-supporting means between said load and said base, first-bearing means connected between said load and said intermediate-supporting means to support the mass of said load on said supporting means, with said first-mentioned mass having a first center of gravity, second bearing means connected between said base and said intermediate-supporting means to support the mass of said load



and said supporting means on said base, with said second-mentioned mass having a second center of gravity, a pair of nonparallel axes passing respectively through each of said centers of gravity, said first bearing means being aligned arcuately about said first axis, and said second bearing means being aligned arcuately about said second axis.

2,901,209
CONTAINER FILLING MACHINE
Peter J. Bardy, Park Ridge, and Abraham Siegelman, Chicago, Ill., assignors to Armour Research Foundation of Illinois Institute of Technology, Chicago, Ill., a corporation of Illinois
Application January 30, 1956, Serial No. 562,214
22 Claims. (Cl. 249—15)



1. In a mechanism to dispense material in accurately measured quantities, a support structure, a conveyor relatively movably carried on said support structure, a container carried by said conveyor, means on said support structure to intermittently controllably drive said conveyor to move said conveyor successively to a series of stations along the path of movement of said conveyor; a fill station to fill said container including a hopper, a gate on said hopper, means to open said gate when said container is aligned with said hopper, means actuated by overflow of material from said container to close said gate, and means to wipe across said container to limit the level of material in said container; a weigh station

the projecting end of said inner shell overlying and

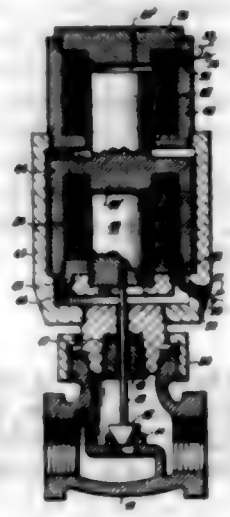
degree of radial displacement of said diaphragm, said wall being provided with an aperture therethrough offset from

open end thereof, a tension spring secured at one end to said body member and depending therefrom, a clip member support for holding the bracket in selected positions relative to the support.

to weigh said container and material therein and determine the deficiency of weight of material below the desired weight therefor including a scale mechanism, a first displacement-sensing differential transformer connected to said scale and having as an output a signal having a phase and amplitude corresponding to the weight error of the material in the container, a two-phase motor having an input connected to the output of said transformer, a reference supply of electrical energy connected to an input of each said first transformer and said motor, a second displacement-sensing transformer having a core connected to an output of said motor to thereby have an output corresponding to angular displacement of said motor, the output of said transformers being connected in series opposition, a null amplifier having an input which is the resultant signal from a series opposition connection of the outputs of said transformers, a relay energized from said null amplifier when the outputs of said transformers are equal and opposite and having normally closed contacts in series with the input to said motor to deenergize said motor when said relay is energized, and a second relay having normally open contacts in series with said normally closed contacts and energized through means on said scale to sense the presence of said container, and a sweep switch mechanism connected to the motor output, said switch having a plurality of relatively fixed contacts and a relatively movable contact whereby movement of said movable contact with said motor connects the same with different ones of said fixed contacts and deenergization of said motor locks said movable contact in its position; a weight-adjusting station to add sufficient material to the container to cause the weight of material therein to be an accurately measured desired amount including a supplemental material hopper, a trough leading from said supplemental hopper, a vibrator on said supplemental hopper to assist the flow of material therefrom into said trough and to orient material in said trough, a shaft slidably and rotatably mounted adjacent and substantially parallel to said trough, a material deflecting vane on said shaft to move a selected quantity of the material from said trough into said container when said shaft is moved axially and rotated, a stop bar, a plurality of selectively operable stop mechanisms on said stop bar connected to and controlled by said sweep switch mechanism; a weight-checking station including a scale, a third differential transformer, an output from said transformer indicative of the weight of the container and contents thereof, and means actuated by the output of the transformer to control a relay network; and a pouring station to pour the material from said container, and means to restrain pouring of the material from the container if the weight thereof is different from the desired weight, and means interconnecting the relay control and the pouring restraining means.

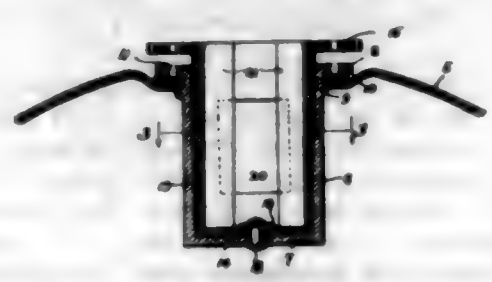
2,901,210
ELECTRO-MAGNETIC DEVICE
Glen G. Hebard, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application June 29, 1953, Serial No. 364,596
4 Claims. (Cl. 25—137)

1. An electromagnetic device, comprising, in combination, a first armature having a flat-faced upper end, a first solenoid encircling the upper portion of said first armature, means forming a first housing of magnetic material adapted to carry said first armature, said first housing together with said first armature providing a first magnetic path completely enclosing said first solenoid except for a first space through which said first armature moves in an upward direction when said first solenoid is energized, said first space serving as a first air gap defined in part by said flat-faced upper end of said first armature and a flat-faced surface of an adjacent depending portion of said first housing, the latter surface serving as a stop limiting upward movement of said first armature, a second armature surmounting said first armature and integral with said first housing, said second armature having a flat-faced upper end, a second solenoid encircling the upper portion of said second armature, means forming a second housing a magnetic material which together with said second armature provides a second magnetic path completely enclosing said second solenoid except for a second space through which said second armature moves in an upward direction when said second solenoid is energized, said second space serving as a second air gap defined in part by said flat-faced upper end of said second armature and a flat-faced surface of an adjacent depending portion of said second housing, the latter surface serving as a



stop limiting upward movement of said second armature, said first air gap being shorter than said second air gap whereby the tractive force of said first solenoid is of a greater magnitude than that of said second solenoid, an electromagnetic actuated member operatively secured to said first and second armatures, a voltage source, and means to apply said voltage source across both of said first and second solenoids simultaneously, whereby said member is moved a first distance in an upward direction by the force of said first solenoid and said member is moved a second further distance in an upward direction by the force of said second solenoid alone, the movement of said member being normally opposed by a force which is reduced substantially when said member completes its said upward movement through said first distance.

2,901,211
VALVE MEANS FOR IRRIGATION PIPES
David A. Epp, Henderson, Nebr.
Application October 16, 1957, Serial No. 690,485
2 Claims. (Cl. 251—145)



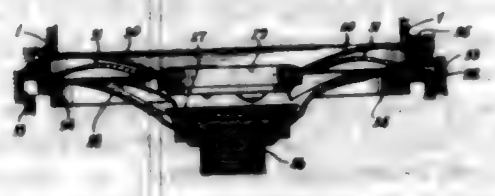
2. A valve structure comprising an outer cylindrical shell having openings in its side wall closed at its bottom and open at its top, a flange projecting outwardly from the open end of said shell, a thread on the exterior of said shell below said flange, an inner shell arranged within said outer shell and corresponding in shape and size with the interior of the latter having a closed bottom and of a length greater than said outer shell to project at its open end beyond the corresponding end of said outer shell, a flange projecting outwardly from

mounting plate and projecting forwardly therefrom, a fluid

transversely of a pair of track rails for movement length-

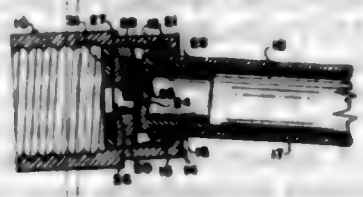
the projecting end of said inner shell overlying and spaced from the flange of said outer shell, said inner shell having openings in its side wall corresponding to the openings in the wall of said outer shell, pivot means connecting the bottoms of said shells to permit rotation of said shells with respect to one another, and said shell flanges having registering openings therein to receive a tool for rotating said shells.

2,901,212
VALVE UNIT FOR GAS OVEN TEMPERATURE REGULATOR
Hans Winet, Zurich-Wollishofen, Switzerland, assignor to Landis & Gyr, A.G., a body corporate of Switzerland
Original application October 2, 1951, Serial No. 249,273, now Patent No. 2,726,041, dated December 6, 1955. Divided and this application February 2, 1954, Serial No. 408,523
Claims priority, application Switzerland July 9, 1951
2 Claims. (Cl. 251—333)



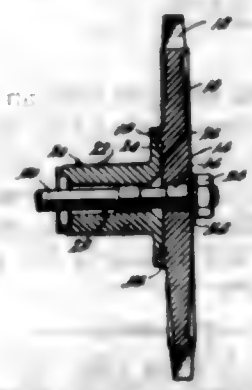
1. In a valve unit for a temperature regulator for gas-heated ovens the combination of a pair of dished disc-linked springs mounted at a spaced distance one above the other, one of said springs being centrally apertured for the passage of gas, the other of said springs being perforated other than at its center for the passage of gas and being weaker than said one spring, a valve head supported centrally of the perforated spring and a cooperating valve seat adjacent to the aperture in said one spring, said valve head being variably movable toward the valve seat to control the flow of gas through the centrally apertured spring, and a centrally apertured relatively stiff disc positioned between the two aforesaid springs to limit movement of the valve seat in one direction.

2,901,213
VALVED FLOW CONTROL COUPLING
Leonard Osrow, Great Neck, and Harold Osrow, Roslyn, N.Y.
Application February 4, 1957, Serial No. 638,082
12 Claims. (Cl. 251—352)



12. A valved coupling device for interconnecting a pair of conduits and controlling the flow of fluid therethrough, said device comprising a hollow cylindrical body having a terminal portion adapted to be connected to a conduit, a second conduit having a terminal portion disposed within the other end portion of said body, said body and second conduit being relatively rotatable and in fluid tight sealing engagement with each other, a plug transversely disposed within said body between the terminal portions of said conduits, said plug being provided with an aperture therethrough to permit fluid flow between said conduits, a transverse wall disposed across the terminal portion of said second conduit located within said body, a diaphragm disposed intermediate said plug and said wall and confined for limited axial movement therebetween, means associated with said plug and complementary means associated with said diaphragm for restricting the degree of radial displacement of said diaphragm, said wall being provided with an aperture therethrough offset from the aperture provided in said plug, said aperture being disposed so as to be brought into and out of confronting relation with respect to said diaphragm by the relative rotation of said body and second conduit.

2,901,214
TURBINE WHEEL AND SHAFT ASSEMBLY
Arthur J. Stemmons, Birmingham, Mich.
Application April 12, 1954, Serial No. 422,400
2 Claims. (Cl. 253—39)



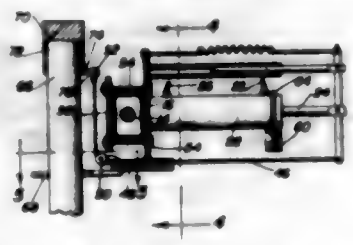
1. In combination, a rotatable gas turbine wheel comprising a radially inner hub portion and an integral radially outer disc portion, peripheral blades carried by said outer portion, said blades and the outer periphery of said wheel being in a high temperature zone exposed to high temperature driving gases effective to react with said blades and rotate said wheel at high speed, said inner hub portion being in a comparatively cool temperature zone effective to maintain a steep temperature gradient between said inner hub portion and outer periphery, said outer portion being elastically deformed and said inner portion being plastically deformed by the combined thermal and centrifugal operating forces on said wheel at said high speed and temperature, said outer portion having an integral coaxial annular pilot shoulder projecting axially from a side thereof, a hub member separable from said wheel, said hub member frictionally engaging said wheel and extending axially therefrom to comprise an axial hub extension, clamping means comprising the sole means effecting driving engagement between said hub member and wheel, said clamping means extending coaxially through at least portions of said hub member and wheel and engaging and clamping the same together, said hub member having a rigid load sustaining radial extension having in turn an annular pilot shoulder sleeved over the first-named shoulder in coaxial supporting engagement therewith, said hub member and radial extension being independent of direct contact with said thermal and centrifugal forces except as transmitted thereto by said first-named shoulder, said shoulders tightly interfitting at all times and comprising rigid means for transmitting said operating forces to said load sustaining radial extension to preserve the concentricity of said plastically deformed inner portion when said wheel is subject to said forces.

2,901,215
POST DRIVER
Edwin G. Jones, New Ulm, Minn.
Application October 18, 1954, Serial No. 462,854
3 Claims. (Cl. 254—29)

1. In combination with a tractor of the type which includes a rear axle housing having a forwardly facing surface, a post driver attachment, said post driver attachment comprising a vertical mounting plate, clamp members carried by said mounting plate clamping said mounting plate against said forward facing surface of said rear axle housing, a horizontal fluid cylinder secured to said

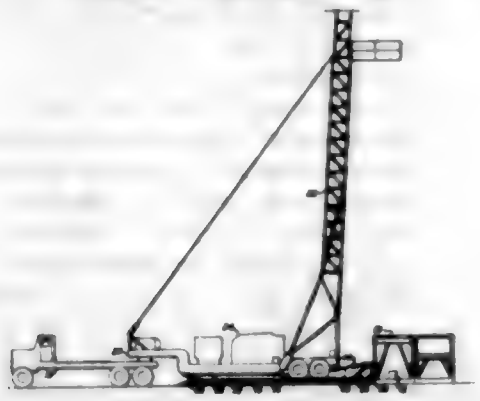
flat-faced surface of an adjacent depending portion of said first housing, the latter surface serving as a stop limiting

mounting plate and projecting forwardly therefrom, a fluid pressure responsive piston rod reciprocably supported by and projecting from the other end of the fluid cylinder, a post cap for receiving an upper end of a post to be vertically driven, drive means including a flexible force transmitting connector operatively connected to and extending between said cap and said piston rod, direction



changing guide means engaged with an intermediate portion of said flexible connector and carried by said mounting plate rearwardly of said rear axle housing, and a post guide extending rearwardly from said mounting plate beyond said direction changing guide means for receiving a post being driven and engaging the periphery of such post in guided relation.

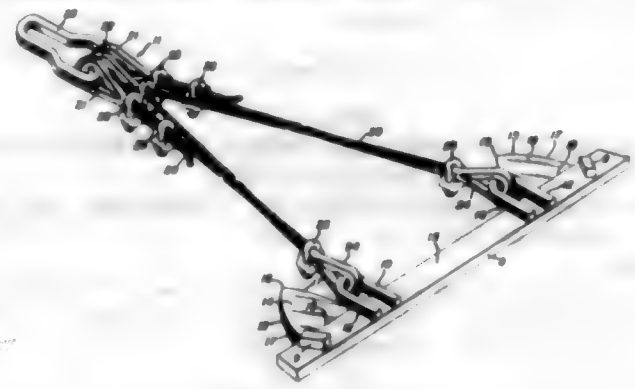
2,901,216
RIG LIFTING APPARATUS
Emil A. Bender, Bakersfield, Calif.
Application February 28, 1955, Serial No. 490,731
4 Claims. (Cl. 254—86)



1. In a portable oil drilling rig, a wheeled vehicle for transporting the draw works, a parallel-link system suspended from and adapted to be folded closely to the underside of the vehicle including: a pair of elongated support members for engagement with the vehicle, means for holding said members in generally parallel relation; a pair of complemental ground contact members, elongated, extending in substantially parallel relation to said support members and having broad, weight-distributing areas for ground contact; means for holding the ground contact members in parallel relation, four link members pivotally connecting the support members and the ground contact members in two parallel-link system; apertured lugs on said link members, complementally spaced apertured lugs mounted on the ground contact members, pins for fastening complemental pairs of lugs by passage thereof through the complemental apertures of the pairs of lugs whereby the linkage system may be held in rectangular array, means for transposing the parallel linkage into rectangular array and means for securing a part of the vehicle to a part of the structure of a drilling platform.

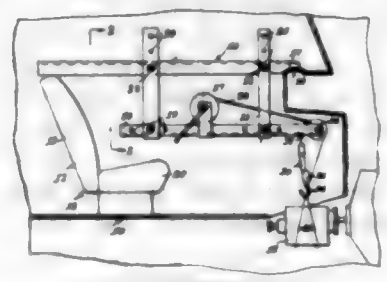
2,901,217
RAIL PLOW FOR DISMANTLING RAILWAY TRACKS
John W. Boyle, McClellandtown, Pa., assignor to United States Steel Corporation, a corporation of New Jersey
Application October 18, 1955, Serial No. 541,161
8 Claims. (Cl. 254—104)

1. A railway track dismantling apparatus comprising a draft bar adapted to be arranged below and extending transversely of a pair of track rails for movement lengthwise thereof, a pair of plows secured to said draft bar in laterally spaced positions and projecting therefrom in the direction of its movement, each of said plows being slidable along the bottom of one of said rails and having wedge means comprising a wedging point at its forward



end for entry between such rail and a cross-tie on which it is supported, and wedging edges that diverge rearwardly from said point and are spaced at their trailing ends a distance greater than the width of the rail bottom along which it has sliding movement for releasing the holding connections provided by spikes fastening opposite edges of the rail to its supporting cross-tie.

2,901,218
TRANSMISSION LIFT
Archie Scott, Lake View, S.C.
Application June 26, 1957, Serial No. 668,114
4 Claims. (Cl. 254—150)



1. In a transmission hoist for a vehicle including a seat having a backrest and a dashboard, a first horizontally disposed beam U-shaped in cross section adapted to extend between said backrest and dashboard, a U-shaped second beam arranged in spaced parallel relation with respect to said first beam and positioned therebelow, a first pair of spaced parallel vertically disposed bars extending between said first and second beams and secured thereto, a second pair of spaced parallel vertically disposed bars extending between said first and second beams and secured thereto, a bracket extending upwardly from said second beam and secured thereto, a winch mounted on said bracket, a crank for operating said winch, a cable arranged in engagement with said winch, a pulley journaled in an end of said second beam and having said cable trained thereover, a block and tackle depending from said second beam and connected to said cable, a hook depending from said block and tackle, and a line arranged in engagement with said hook and adapted to engage the transmission being handled.

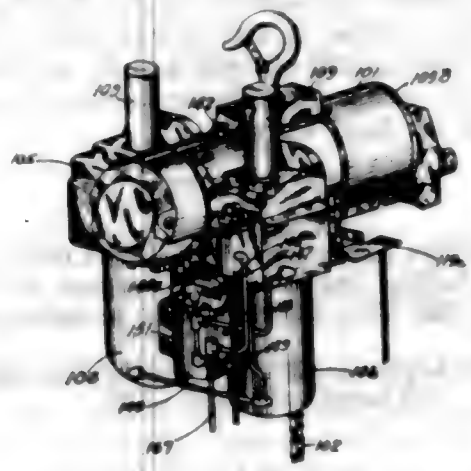
2,901,219
LOAD BALANCER FOR HOISTS
John D. Bottje, Grand Haven, and Robert B. Shulters, Spring Lake, Mich., assignors to Gardner-Denver Company, Quincy, Ill., a corporation of Delaware
Application April 4, 1957, Serial No. 650,695
13 Claims. (Cl. 254—168)

1. In a hoist having a driving spindle and a load lifting element driven thereby through a differential mech-

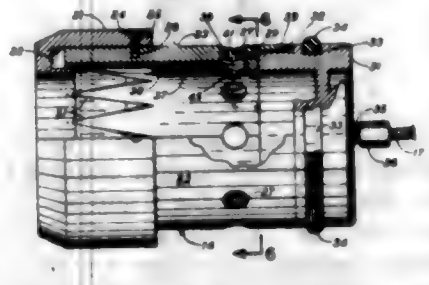
axially of the bit head, a downward projection on said

rial under pressure, and valve means for successively ad-

anism: a load balancing device comprising a cylinder having a reciprocable piston therein, said piston being connected to said load lifting element through said differential mechanism; and means for directing fluid pressure to said cylinder active upon said piston to counterbalance a load on said load lifting element.



2,901,220
SIDEWALL SAMPLER BULLET
William E. Linn, Denver, Colo., assignor, by mesne assignments, to California Research Corporation, San Francisco, Calif., a corporation of Delaware
Application September 30, 1957, Serial No. 687,195
6 Claims. (Cl. 255—1.4)

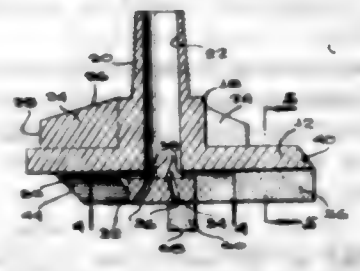


1. A side wall sampler bullet comprising a cylindrical barrel, a removable head portion at one end of said barrel, and a cylindrical catcher member having one end thereof serrated to form a plurality of resilient fingers, said catcher member being positioned within and in axial alignment with said barrel with said serrated end adjacent to said one end of said barrel, each of said resilient fingers having an inherent bias tending to collapse said fingers toward the axis of said catcher and being movable against said bias to position said fingers adjacent to said barrel to establish said cylindrical form for said catcher, means on said head portion extending interiorly of said barrel and engaging said resilient fingers to maintain said fingers adjacent to said barrel, and releasable means engaging said head portion and barrel for securing said head portion to said barrel in engaging position with said fingers.

2,901,221
WELL DRILLING APPARATUS
Frank Whittle, Dunsford, England, assignor to Shell Development Company, New York, N.Y., a corporation of Delaware
Application November 21, 1955, Serial No. 547,988
Claims priority, application Great Britain December 10, 1954
3 Claims. (Cl. 255—4)

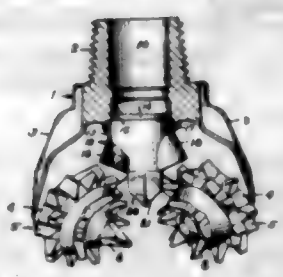
1. Well drilling apparatus through which a drilling fluid is circulated during drilling operations, said apparatus comprising a drill string adapted to be vertically positioned in a borehole, a rotary drill bit carried at the lower end of said drill string, said bit having at least one mud flush opening, motor means coupled in said drill string above said drill bit for rotating said drill bit, at least two telescopic hydraulic subs connected into said drill string adjacent said motor means, and at least one drill collar being secured in said drill string between the telescopic subs, the speed-to-bit weight ratio of said motor means being alterable by successively extending said hydraulic subs.

2,901,222
ROTARY DRILL BIT
George W. Pease, Jr., Fairfax, Okla.
Application October 4, 1957, Serial No. 688,335
6 Claims. (Cl. 255—61)



1. In a well drill bit, a flat disc portion having an underside, a cylindrical axial boss depending from said underside disc portion, circumferentially spaced horizontally elongated radial cutting blades on the underside of said disc portion and radiating from said boss, said boss having an underside, and a pair of diametrically opposed segmental vertical boring blades on and depending from the underside of the boss, the horizontal cutting blades and the vertical boring blades having flat vertical working sides, the working sides of some of the cutting blades being aligned with each other across the bit and with working faces of the vertical boring blades.

2,901,223
EARTH BORING DRILL
Floyd L. Scott, Seabrook, Tex., assignor to Hughes Tool Company, Houston, Tex., a corporation of Delaware
Application November 30, 1955, Serial No. 549,969
3 Claims. (Cl. 255—302)



1. A drill bit including, a head having a plurality of depending legs, a shaft extending inwardly and downwardly from each of said legs, a rolling cutter rotatably mounted upon each of said shafts, each of said rolling cutters extending a portion of the distance from the periphery of the bit toward the axis of the bit and enclosing the inner end of the associated shaft, there being a passage

said additional side leg portion extending away from and choke valve for progressively opening the latter upon movement of said piston in one direction away from said

a draft bar adapted to be arranged below and extending

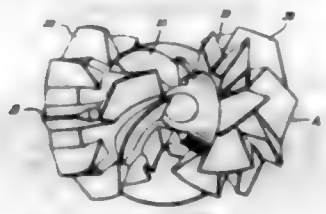
ing element driven thereby through a differential mech-

axially of the bit head, a downward projection on said head axially of the head and intermediate and spaced inwardly from the inner ends of said cutters, said projection terminating in a cutter proximate the inner ends of the rolling cutters, a plurality of downwardly directed nozzles about said projection and at the base thereof arranged to direct flushing fluid from said passage and upon bottom of the hole and intermediate said rolling cutters whereby formation material is disintegrated and moves upwardly with the flushing fluid from the bottom of the hole.

2,901,224
DRILL BITS

Elvin G. Boice and Robert G. Peter, Houston, Tex., assignors to Reed Roller Bit Company, Houston, Tex., a corporation of Texas

Original application December 10, 1951, Serial No. 260,858, now Patent No. 2,728,559, dated December 27, 1955. Divided and this application March 21, 1955, Serial No. 495,535
3 Claims. (Cl. 255—349)

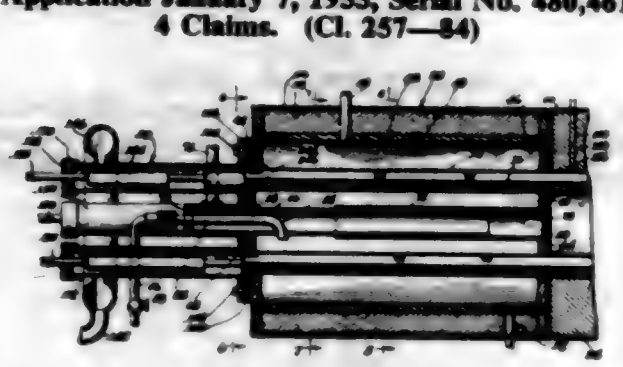


1. As a sub-combination in a roller bit, a roller cutter comprising an annular body, an outer row of cutter teeth on the body, and an inner row of cutter teeth on the body, said outer and inner rows of teeth being disposed in a herringbone pattern, the teeth in one row being staggered relative to the teeth in the other row with the adjacent portions of the said rows of teeth overlapping each other, each tooth of the inner row being disposed at an inclination of approximately forty five degrees in one direction from the axis of the cutter body and each tooth of the outer row being disposed at an inclination in an opposite direction from the axis of the cutter body also at an inclination of approximately forty five degrees.

2,901,225
APPARATUS FOR STERILIZING FLUID FOODS

Victor R. Abrams, Rockford, Ill., assignor to W. F. and John Barnes Company, Rockford, Ill., a corporation of Illinois

Application January 7, 1955, Serial No. 480,461
4 Claims. (Cl. 257—84)



2. In an apparatus for processing fluid material, the combination comprising means providing an elongated passageway having an annular transverse section, means including a plurality of elongated members extending longitudinally of and circularly arranged in said passageway and substantially separating a plurality of longitudinally extending and circularly arranged portions of said annular passageway from each other for providing a plurality of substantially independent paths of travel through said passageway, fluid material feeding means adjacent an inlet end of said annular passageway, said feeding means including means for receiving fluid material under pressure, and valve means for successively admitting fluid material from said receiving means into said passageway portions, means encircling and disposed within said annular passageway for heating fluid material therein, and means in said annular passageway for continuously mixing fluid material and for scraping inner and outer walls of the passageway to promote uniform processing of the fluid material.

2,901,226
COMBINATION AIR CONDITIONER-CONVECTOR

Arthur B. Modine, Racine, Wis., assignor to Modine Manufacturing Co., Racine, Wis., a corporation of Wisconsin

Application September 27, 1957, Serial No. 686,733
6 Claims. (Cl. 257—300)

1. A combination heat exchanger for convection or forced air operation, comprising a cabinet having an air inlet adjacent the bottom thereof and an air outlet positioned above said inlet, a heat exchange element operatively positioned intermediate said air inlet and said air outlet, power actuated blower means positioned in said cabinet having an air inlet communicating with the interior of the cabinet structure and provided with an air outlet arranged to discharge air from the cabinet, means for directing the flow of air entering the air inlet opening to either said air outlet or the air inlet of said blower means, an air filter of a size to be interposed across the path of air entering said air inlet opening operative to filter such air, means for supporting said filter within the cabinet for movement therein from a filtering position to an inoperative position out of the path of air entering said cabinet to provide an air flow path unimpeded by such filter, means accessible from the cabinet exterior for effecting movement of said filter from one to the other of said positions, and means operatively connected to said filter for preventing said directing means from directing air through said air outlet in the cabinet while said filter is in said filtering position.

2,901,227
MIXING APPARATUS

Gaillard R. Ruenzel, Somerville, N.J., assignor to Johns-Manville Corporation, New York, N.Y., a corporation of New York

Application November 27, 1956, Serial No. 624,658
5 Claims. (Cl. 259—81)

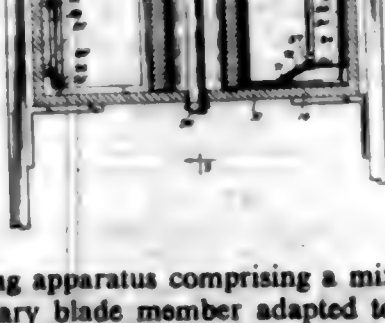
1. A blending apparatus comprising a material container having an open apex portion and a plurality of hollow side leg portions diverging therefrom, at least one additional side leg portion extending from said apex portion, said additional side leg portion being of approximately constant cross-sectional area and having an internal volume substantially equal to the total internal volume of the plurality of hollow side leg portions and

piston unit, and a flexible connecting member connected

of rotation of said crank; means drivingly connecting

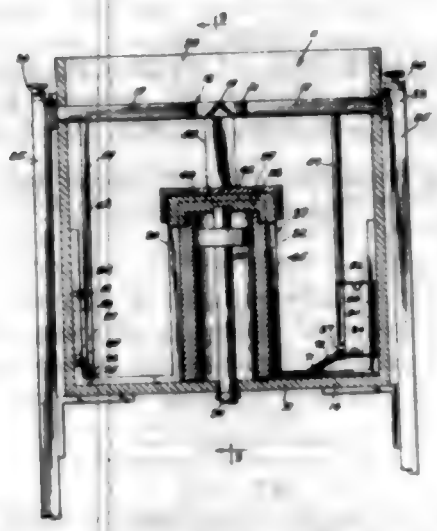
above said drill bit for rotating said drill bit, at least two

said additional side leg portion extending away from the apex portion in a direction away from said plurality of hollow side leg portions so as to receive freely the con-



tents of the plurality of hollow side leg portions during blending, and means for mounting said container for rotation about an axis extending in the plane of the axes of at least two of said portions.

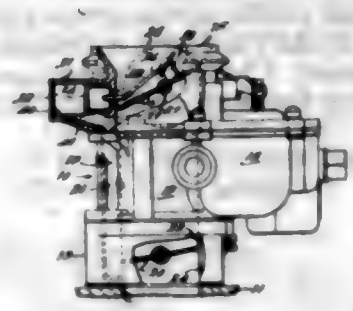
2,901,228
MIXING APPARATUS
Cresswell E. Stedman, Chicago, Ill., assignor to U.S. Acoustics Corporation, Coral Gables, Fla., a corporation of Florida
Application October 21, 1957, Serial No. 691,268
11 Claims. (Cl. 259—107)



1. A mixing apparatus comprising a mixer housing, at least one rotary blade member adapted to rotate within said mixer housing to mix batch materials disposed therein, support means mounted within said mixer housing, and wiping means comprising a plurality of wiper members mounted on said support means in the path of travel of said blade member for engaging said blade member to wipe batch material therefrom, each of said wipers being a spring-like member resilient throughout its effective wiping length.

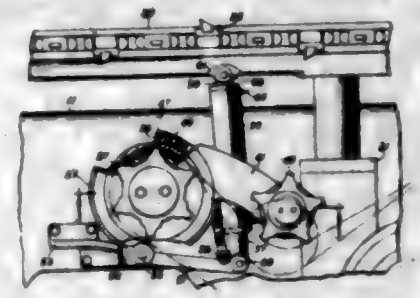
2,901,229
MULTIPLE STAGE CHOKE CONTROL
Jorma O. Sarto, Orchard Lake, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware
Application February 5, 1958, Serial No. 713,352
6 Claims. (Cl. 261—39)

1. In a device for regulating the choke valve position for the carburetor of an internal combustion engine at conditions of low engine load and temperature, the combination of a gas intake passage connecting said carburetor with said engine, means responsive to the temperature of said intake passage for yieldingly regulating the position of said choke valve, a throttle valve in said passage, a cylinder having one end in communication with said passage upstream of said throttle valve, a piston reciprocable in said cylinder, means connecting said piston and choke valve for progressively opening the latter upon movement of said piston in one direction away from said one end, a radially opening air bleed duct in the side wall of said piston communicating with said one end, conduit means connecting said cylinder with said passage downstream of said throttle valve, said conduit means opening at the sidewall of said cylinder at locations in



communication with said bleed duct when said piston is in a range of positions extending in said direction from a cold idling position, said bleed duct having a progressively decreasing cross sectional area in said direction to progressively increase it area of communication with said conduit means upon progressive movement of said piston in said one direction from said cold idling position.

2,901,230
TRIMMER CHAIN TENSIONING MEANS FOR BORING TYPE MINING MACHINE
Herman W. Driehaus, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois
Application April 25, 1958, Serial No. 730,872
3 Claims. (Cl. 262—7)



1. In a mining machine of the boring type having a plurality of boring heads for forming contiguous bores in advance of the machine, a frame, upper and lower horizontally extending chain carrying cutter bars mounted on said frame immediately to the rear of said boring heads for vertical adjustment with respect thereto, a drive sprocket and an idler sprocket rotatably mounted on said frame in inwardly spaced relation with respect to opposite ends of said cutter bars and between the latter, tensioning means for said cutter chain comprising a rocking arm pivotally mounted on said main frame between said cutter bars and in inwardly spaced relation with respect to the ends thereof, a tension idler on said rocking arm and meshing with said cutter chain, a self-adjusting connection between the upper of said cutter bars and said tension idler comprising a cylinder and piston unit pivotally connected to the upper of said cutter bars and depending therefrom, and means stabilizing said cylinder and piston unit and applying a take-up force on said idler sprocket, comprising a stabilizing link pivotally connected between said main frame and said cylinder and

adjacent an inlet end of said annular passageway, said feeding means including means for receiving fluid material volume substantially equal to the total internal volume of the plurality of hollow side leg portions and

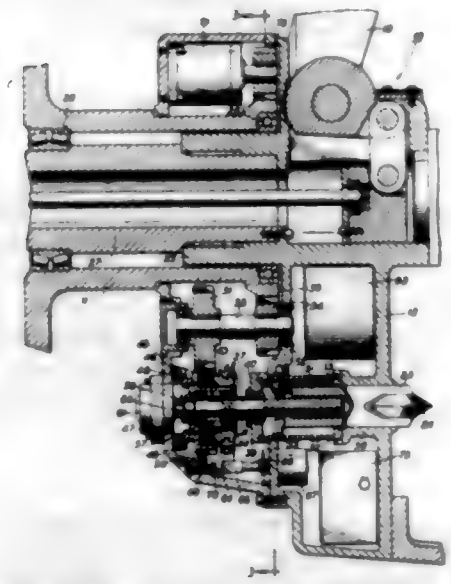
piston unit, and a flexible connecting member connected between said cylinder and piston unit and said rocking arm and maintained in position to exert a force on said rocking arm at substantially right angles to a radial line extending through the axis of rocking movement of said rocker arm and to thereby maintain a uniform force on said rocking arm and a uniform tension on said cutter chain in all positions of said cylinder and piston unit and said cutter bars with respect to each other.

2,901,231

PERCUSSIVE CORE BREAKING DEVICE FOR BORING TYPE MINERS

Loy D. Hagenbook, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Application May 5, 1958, Serial No. 732,924
5 Claims. (Cl. 262—7)



1. In a machine for fragmenting coal and the like from a solid working face, a boring head having spaced cutters projecting therefrom for cutting spaced kerfs in the working face and leaving an annular core therebetween, radially spaced percussive rolling core breakers carried by said boring head, at least one of said core breakers being mounted on said boring head between said cutters for reciprocable movement in the direction of the axis of rotation thereof, drive means driven by rotatable movement of said boring head for retractably moving said percussive core breaker and cocking said percussive core breaker for a percussive core breaking action out of phase with respect to each complete cycle of rotation of said boring head, and fluid pressure operated means controlled by rotation of said boring head for non-periodically firing said percussive core breaker in a core breaking direction.

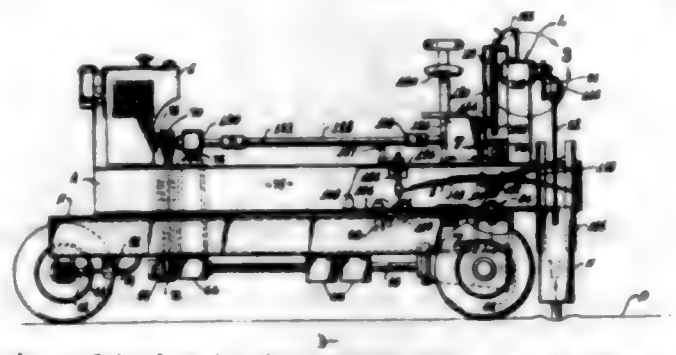
2,901,232

MOBILE PAVEMENT BREAKER HAVING LEAF SPRING IMPACT TOOL ACCELERATING MEANS

William H. Lewis, Arcadia, Calif., assignor to Cutcrete Manufacturing Corp., El Monte, Calif., a corporation of California

Application February 6, 1956, Serial No. 563,664
9 Claims. (Cl. 262—18)

1. A mobile pavement breaker, comprising: a wheeled frame movable over said pavement; a crank mounted upon said frame for rotation in a vertical plane; power-operated means on said frame for effecting rotation of said crank; a guide member formed on said frame below said crank in approximate vertical alignment therewith; a pavement-breaking hammer slidably carried by said guide member for vertical reciprocal movement relative to said pavement, said hammer being offset from the axis of rotation of said crank; means drivingly connecting said power-operated means and said crank during an upstroke of said crank, said means disconnecting said power-operated means from said crank during a downstroke of the latter; a flexible element interconnecting the free end of said crank and said hammer whereby said crank will raise said hammer during its upstroke; and a



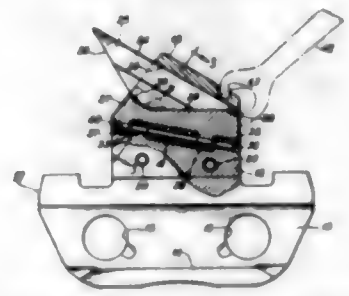
horizontal leaf spring interposed between said frame and said hammer with its free end extending into the confines of said guide member for abutting said hammer, said spring means being deformed by upward movement of said hammer and said spring means returning towards its normal configuration during a downstroke of said hammer to thereby accelerate the downward movement of said hammer.

2,901,233

BIT HOLDER FOR CUTTER CHAIN BITS

Clarence H. Brown, Chicago, Ill., assignor to Goodman Manufacturing Company, Chicago, Ill., a corporation of Illinois

Application November 18, 1957, Serial No. 696,982
1 Claim. (Cl. 262—33)



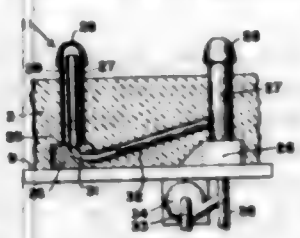
In a cutter block, a cutter bit adapted to be held in place in said block, said bit being generally diamond shaped in cross-section and having oppositely inclined faces inclined from one edge portion of the bit from positions adjacent the transverse center of the bit to opposite ends of an opposite edge portion of the bit and defining cutting points at opposite ends of said opposite edge portion of the bit, said cutter block having a lug extending longitudinally therealong having parallel spaced longitudinally extending side walls and an outer face inclined outwardly from the rear to the forward end of said lug having longitudinally spaced ears extending outwardly therefrom, means for securing said bit to said lug comprising a strap generally U-shaped in cross-section having a closed outer end portion and parallel legs extending therefrom along opposite sides of said lug, means detachably securing said parallel legs to said lug, the inner wall of the closed outer end portion of said strap having inner bit engaging surfaces inclined outwardly from an apex to conform to the sides of said bit and inclined outwardly from the rear to the forward end of said strap at the cutting angle of said bit, a bit holding jaw slidably guided on the outer inclined face of said lug between the legs of said strap and having oppositely inclined advance and retreating bit engaging faces facing the closed end of said strap and conforming to the oppositely inclined faces of said bit for retaining said bit into engagement with the apex of the inner wall of said strap by the action of

and the free ends of the trailing fingers do not extend

2,901,239

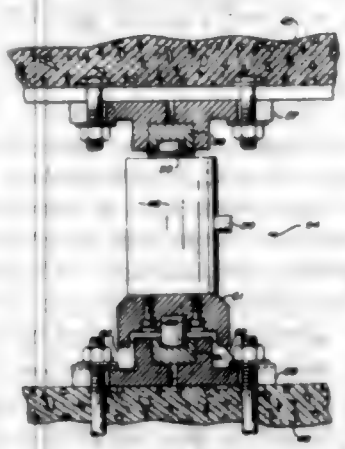
the cutting forces on said bit, said jaw having longitudinally spaced ears extending inwardly therefrom in advance of the ears extending outwardly from said lug, a pin extending through said ears extending from said lug and said jaw and slidably guiding said jaw on said lug, and a spring on said pin biasing said ears into engagement with each other and said jaw into retracted relation with respect to said strap, and accommodating release of said bit by pressing on the rear end of said jaw and compressing said spring.

2,901,234
HEATING APPARATUS
Joseph A. Sisto, South Orange, N.J., and John Milos, Phoenixville, Pa., assignors to Barium Steel Corporation, New York, N.Y., a corporation of New York
Application June 17, 1953, Serial No. 362,293
4 Claims. (Cl. 263—44)



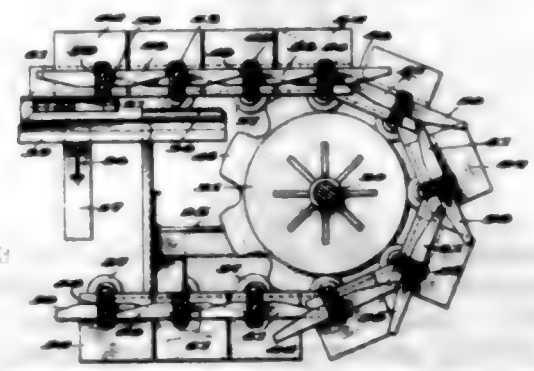
1. Apparatus for use in the heating of ingots comprising a furnace having a floor therein, a plurality of vertically extending ingot supports attached to said floor, each of said supports comprising a tubular member having a closed upper end upon which the ingot rests, a pipe extending through said member and terminating adjacent to the interior of said closed end, means to supply cooling water to one of said tubular members, means to connect one of said pipes to a discharge, means to connect the rest of said plurality of members to the rest of said plurality of pipes, whereby cooling water will flow in series through said tubular members and pipes from the supply to the discharge.

2,901,235
PLATFORM SUPPORTING STRUCTURE FOR WEIGHING SCALES
Robert O. Bradley, Toledo, Ohio, assignor, by mesne assignments, to Toledo Scale Corporation, Toledo, Ohio, a corporation of Ohio
Application November 21, 1956, Serial No. 623,651
8 Claims. (Cl. 265—71)



1. A weighing device comprising, in combination, a base member having a bearing surface, a load receiver member having a bearing surface, a strut that is interposed between said surfaces and that has a lower end cooperating with the bearing surface of the base and an upper end cooperating with the bearing surface of the load receiver, at least one of the cooperating surfaces at the lower end of the strut being convexly curved with a radius of curvature less than one half of the length of the strut and at least one of the cooperating surfaces at the upper end of the strut being convexly curved with a radius of curvature less than one half of the length of the strut, a load cell incorporated in the strut, the strut being free to turn about its axis, and means on the strut which cooperate with one of the members to limit the movement of the strut about its axis.

2,901,236
SINTERING APPARATUS
Robert F. Leftwich, Bronxville, N.Y., assignor to Sayre & Fisher Company, Sayreville, N.J., a corporation of New Jersey
Application July 27, 1956, Serial No. 600,552
2 Claims. (Cl. 266—21)



1. In continuous sintering apparatus of the type including a plurality of units forming an endless grate structure, two axially aligned sprocket wheels at a loading end of the apparatus, two axially aligned sprocket wheels at a discharge end of the apparatus, a chain trained about two of said sprocket wheels at opposite ends of the apparatus, a chain trained about the other sprocket wheels at opposite ends of the apparatus, each chain comprising elongated links of substantially equal lengths, stub shafts pivotally connecting said links to each other, a flanged wheel rotatable on each stub shaft, rigid rails supporting said flanged wheels for rolling movement in a substantially horizontal upper course of movement from the first to the second sprocket wheels, means on the sprocket wheels engaging said chains maintaining the stub shafts at opposite sides of the apparatus in substantial alignment, a plurality of grate units each comprising two supporting members with one member spanning two adjacent stub shafts at one side of the apparatus, two side walls each rectangular shaped in side elevation for each grate unit, the side walls at each side of the apparatus having plane inner surfaces aligned with each other, means rigidly securing an intermediate portion of each side wall to an intermediate portion of one of said supporting members with a major portion of each side wall trailing one set of aligned stub shafts, a bar extending transversely of the apparatus secured to a forward portion of the side walls of each grate unit, spaced forwardly extending fingers and spaced trailing fingers carried by each bar with transversely aligned free ends terminating adjacent the bar of the next adjacent grate unit and with the trailing fingers of one grate unit intermeshing with the forward extending fingers of the next succeeding grate unit, upper surfaces of all of said fingers being in a substantially common horizontal plane and substantially flush with upper edges of said bars while the flanged wheels are supported on said rails, interengaging means on the sprocket wheels and the chains at the discharge end of the apparatus for advancing the elongated links around the second sprocket wheels whereby the fingers of a grate unit are inclined downwardly from said horizontal plane in proceeding forwardly as each unit starts to turn about the second sprocket wheels

2,901,241

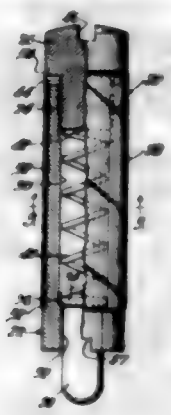
ply crossing those of the other ply at an included angle

to said pavement, said hammer being offset from the axis

the apex of the inner wall of said strap by the action of

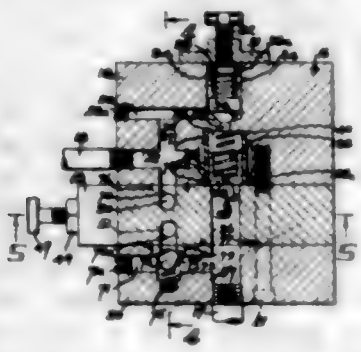
and the free ends of the trailing fingers do not extend above the plane of the forwardly disposed fingers of the next succeeding grate unit.

2,901,237
SPRING PLUNGER
William E. Gruer, Elgin, Ill.
Application May 21, 1954, Serial No. 431,490
7 Claims. (Cl. 267—1)



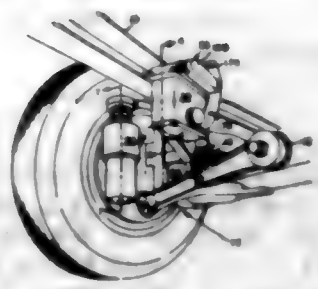
1. A spring plunger for mounting in a tool or the like, having structure defining a hole therethrough including in combination, a body supporting a spring pressed plunger element normally projecting from the body adapted to be inserted into said opening with said plunger normally projecting from one end of said hole, and means for fixedly securing the body in the opening comprising an outwardly expansible gripping element mounted on said body and adapted to grip the hole defining structure of the tool, and means for expanding said gripping element against said structure, said expansion means comprising a rotatable member accessible through the other end of said hole.

2,901,238
CIRCULATING SYSTEMS FOR HYDRAULIC LIQUID BETWEEN TANKS AND CYLINDERS
Floyd M. Williamson, Detroit, Mich.
Application December 18, 1957, Serial No. 703,667
12 Claims. (Cl. 267—1)



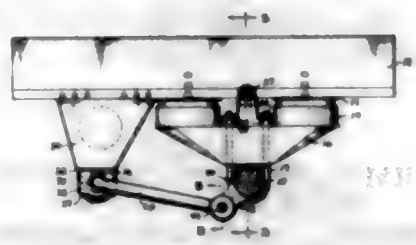
1. A circulating system for hydraulic liquid comprising a supply tank having liquid therein under relatively low pressure, a cylinder having a plunger therein, a conduit connecting the tank with the cylinder, a check valve in the conduit through which liquid flows to the cylinder to move the plunger therein in one direction, a shut-off valve in the conduit, a by-pass connected at its extremities to the conduit and extending around both the valves therein, a relief valve in the by-pass through which liquid expelled under relatively high pressure from the cylinder by movement of the plunger in the opposite direction flows to the tank, means connecting the cylinder with the shut-off valve through which liquid under pressure from said cylinder flows to close said shut-off valve, means tending to open the shut-off valve, and means connected to said shut-off valve for delaying the release of liquid under pressure therefrom.

2,901,239
SUSPENSION SYSTEM
Pataraop R. Sethna, Detroit, Mich., assignor to Bendix Aviation Corporation, Detroit, Mich., a corporation of Delaware
Application September 10, 1956, Serial No. 608,992
8 Claims. (Cl. 267—8)



1. In a suspension system for a vehicle having a sprung mass and an unsprung mass, the combination therewith of damping means operatively connected between the sprung and unsprung masses including means controlled only by sprung mass movements for effectively damping sprung mass movements at all times and unsprung mass movements only when said unsprung mass movements occur simultaneously with said sprung mass movements, and damping means operatively connected only to the unsprung mass for damping only unsprung mass movements.

2,901,240
VEHICLE SUSPENSION SYSTEM
Tyman H. Fikse, Seattle, Wash.
Application December 12, 1955, Serial No. 552,388
6 Claims. (Cl. 267—11)



1. In a spring system, a frame assembly and an axle assembly movable with respect to one another, said axle assembly having a wheel turning axis extending laterally beneath the frame assembly, a pair of spring units spaced apart cross-wise of the frame assembly and each having inner and outer members telescopically associated with one another, said inner members being mounted on one of said assemblies and said outer members being mounted on the other of said assemblies, a respective elastic ring radially compressed between the inner and outer members of each spring unit, torsion rod means extending cross-wise of the frame assembly and journal mounted on one of said assemblies, and lever means operatively associated with said torsion rod means and operatively associated with the other of said assemblies at pivot points displaced vertically with respect to the level of said elastic rings and said wheel turning axis, the level of said pivot points and the level of said rings being at opposite sides, vertically speaking, of said wheel turning axis whereby lateral tilting of the axle assembly with respect to the frame assembly about a longitudinal axis between said spring units causes a torsional windup of said torsion rod means for yieldingly resisting such tilting and whereby said lever means and said elastic rings provide force couples for resisting braking and drive torques.

ture and panel respectively, and a guide follower of unitary structure having first and second portions, said

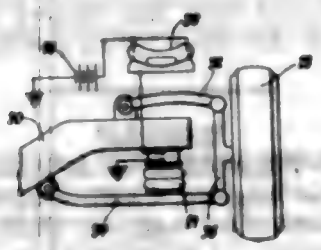
end portion, said leaf spring having a flexible free end

at the lower end of the strut being convexly curved with each unit starts to turn about the second sprocket wheels

2,901,241
CONTROL DEVICE

Argyle G. Leutzenhiser, Anderson, Ind., and Kenneth E. Faiver, Lansing, Mich., assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application July 10, 1956, Serial No. 597,821
6 Claims. (Cl. 267—11)

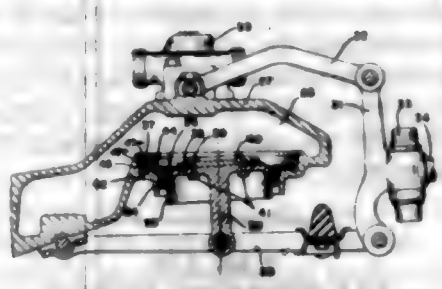


5. In a suspension system for a motor vehicle having an unsprung mass and a sprung mass wherein a variable volume primary chamber is arranged between said masses for supporting the sprung mass on the unsprung mass and a fluid reservoir has a fluid connection with said primary chamber increasing the effective volume of said primary chamber when the fluid reservoir is in fluid connection with the said primary chamber, valve means comprising two normally open valves in said fluid connection controlling fluid flow through the fluid connection between said primary chamber and reservoir, said valves being arranged within the valve means to effect a constant resistance to closing on fluid flow through said connection in both directions, electromagnetic means for actuating both of said valves concurrently to closed position, and switch means mounted on the sprung mass controlling said electromagnetic means.

2,901,242
FLUID SPRING

Daniel R. Elliott, Grosse Pointe Woods, Eugene H. Culp, Detroit, and William H. Hulswit, Jr., Grosse Pointe Farms, Mich., assignors to United States Rubber Company, New York, N.Y., a corporation of New Jersey

Application March 21, 1955, Serial No. 495,534
7 Claims. (Cl. 267—15)

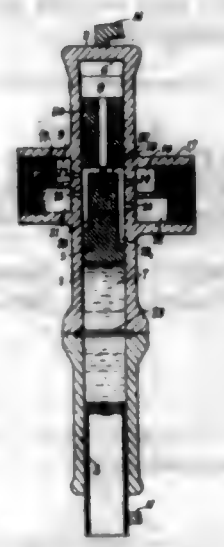


1. In a fluid spring wheel suspension system of the type having a frame, a wheel supporting member mounted for movement relative to said frame, a cylinder carried by said frame, a plunger of smaller diameter than said cylinder pivotally secured to said wheel supporting member whereby said plunger is mounted for both lateral movement relative to said cylinder and reciprocating movement through and beyond said cylinder, and a generally tubular flexible diaphragm having a larger end connected to said cylinder and a smaller end connected to said plunger whereby the smaller end of said diaphragm may pass through and beyond said larger end in the extreme positions of the spring, the improvement comprising a diaphragm construction in which the body of the diaphragm has at least two plies of cord fabric formed of relatively inextensible cord elements coated with a fluid-impermeable composition, each of the cord elements of each ply extending from one end of said diaphragm to the other with the cord elements of one ply crossing those of the other ply at an included angle of between 30° and 150° and at a cord angle of between 15° and 75° whereby during operation of the spring the plunger is free to reciprocate through and beyond the cylinder but is restrained against lateral movement relative thereto by the disposition of the cord elements of the plies of the cord fabric.

2,901,243
VEHICLE SUSPENSION SYSTEM

Georges Boulet, Toulouse, France, assignor to Société à responsabilité limitée; Recherches Etudes Production R.E.P., Paris, France, a corporation of France

Application March 5, 1956, Serial No. 569,426
Claims priority, application France May 5, 1955
8 Claims. (Cl. 267—65)



1. A pneumatic suspension for a vehicle having suspended and non-suspended portions, comprising means coupled to the suspended and non-suspended portions and defining a chamber the volume of which varies with the suspended load, means defining auxiliary chambers of constant volume, isolating and communicating means between said auxiliary chambers and the chamber with variable volume such that, with a reference volume of the variable-volume chamber corresponding to a predetermined distance of the suspended and non-suspended portions, a first group of the auxiliary chambers communicate with said variable chamber whereas a second group are isolated therefrom, so that, with the variable-volume chamber reduced below the reference volume, the second group of auxiliary chambers are successively put in communication with the variable-volume chamber, those of the first group remaining in communication with the variable-volume chamber, and so that, with the variable-volume chamber increased above the reference volume, the auxiliary chambers of the second group remain isolated while those of the first group are isolated successively; the variable and invariable chambers together enclosing a constant total weight of a pneumatic medium, the amount of which is such that, under a given static load of the suspended portion, the volume of the variable chamber is the reference volume.

2,901,244
WINDOW REGULATOR

Henry E. Jones, Detroit, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Application October 28, 1957, Serial No. 692,817
11 Claims. (Cl. 268—124)

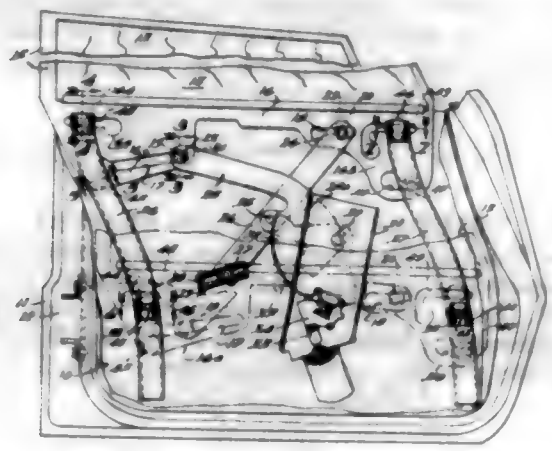
5. In a vehicle body structure having a movable window panel, first and second linear guides disposed angularly with respect to each other and secured to said struc-

face on the supporting means to which the tape will ad- said receiving end and transverse to said frame, said

of liquid under pressure therefrom.

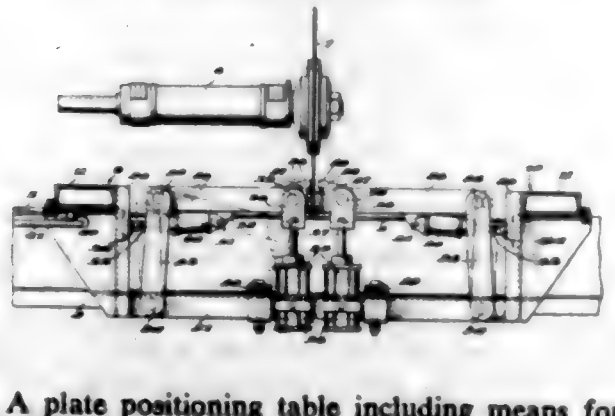
by said lever means and said elastic rings provide force couples for resisting braking and drive torques.

ture and panel respectively, and a guide follower of unitary structure having first and second portions en-



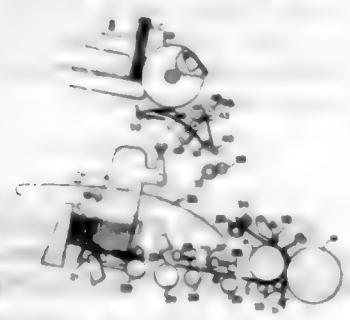
gaged with said first and second guides respectively for guided movement therealong.

2,901,245
PLATE POSITIONING TABLES
James L. Hensley, Clinton, Tenn., assignor to Ty-Sa-Man Machine Company, Knoxville, Tenn., a corporation of Tennessee
Application May 7, 1958, Serial No. 733,727
10 Claims. (Cl. 269—109)



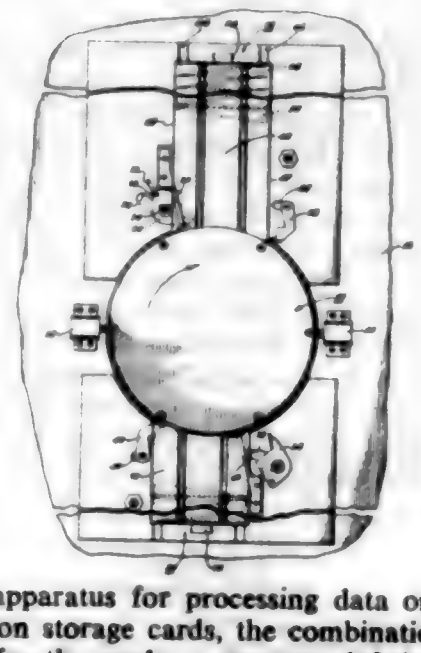
1. A plate positioning table including means forming supporting surfaces adapted to receive a plate thereon for severing into respective sections, plate clamping means in position for receiving and holding opposite edge portions of said plate, and means mounting one of the clamping means for movement to a position below said surface to permit a severed section of the plate to be moved over the surface above said clamping means.

2,901,246
SHEET TURNING MEANS
Walter W. Wagner, Endwell, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application April 17, 1957, Serial No. 653,482
9 Claims. (Cl. 271—3)



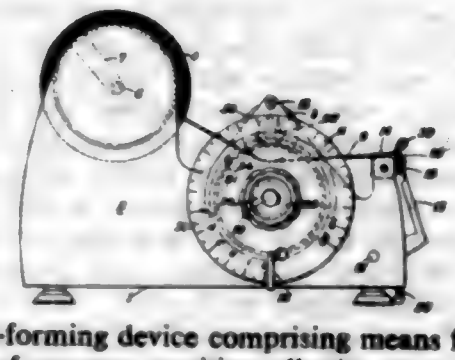
1. A device for turning a sheet comprising sheet feeding means with a sheet path having a dead end portion wherein said sheet feed movement is reversed, and a leaf spring mounted at one end near the bottom of said dead end portion, said leaf spring having a flexible free end near the bottom of said dead end portion and in the path of said sheet for reversing the direction of movement of said sheet, said feeding means including a pair of feeding devices located in said path and about a sheet's length short of said dead end, one of said devices for advancing the sheet into said dead end portion in one facing position and the other of said devices for taking the sheet out of said dead end portion after it rebounds off said spring in the other facing position.

2,901,247
CARD PROCESSING APPARATUS
Allan Orner, Los Angeles, Calif., assignor to The Magnavox Company, Los Angeles, Calif., a corporation of Delaware
Application September 23, 1957, Serial No. 685,539
23 Claims. (Cl. 271—5)



1. In an apparatus for processing data on a plurality of information storage cards, the combination of: transport means for the cards, a structure defining a supporting surface adjacent said transporting means, and a magazine movable on the supporting surface and constructed to hold the information cards in a stacked condition on said supporting surface and having an end disposed in coupled relationship to said transport means in one position of the transport means for a transfer of cards between the transport means and the magazine, and means coupled to the magazine for providing a controlled movement of the magazine along the supporting surface into position for a transfer of cards between the transport means and the magazine.

2,901,248
TAB-FORMING DEVICE
William John Britton, Brentwood, England, assignor, by mesne assignments, to Johnson & Johnson, New Brunswick, N.J., a corporation of New Jersey
Application January 18, 1956, Serial No. 559,942
Claims priority, application Great Britain January 18, 1955
3 Claims. (Cl. 270—68)



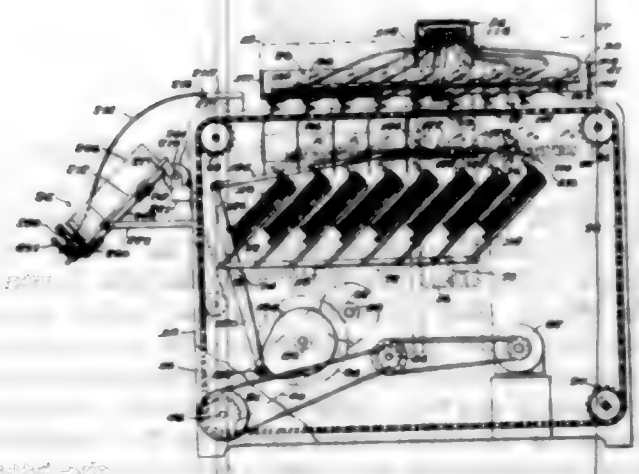
1. A tab-forming device comprising means for supporting a roll of pressure-sensitive adhesive tape, a fixed sur-

2,901,252

walls, the end edges of the wall members being disposed

face on the supporting means to which the tape will adhere, a second surface to which said tape will adhere pivotally mount[illegible] for movement toward or away from the fixed surface, a cutter on the second pivotal surface, means constantly urging the pivotal surface toward the fixed surface, means adapted to contact the back of the tape and actuated by the withdrawal of tape for driving the pivotal surface away from the fixed surface, and means driven by said tape actuated means and connected to said pivotal surface for effecting pivotal movement of said pivotal surface.

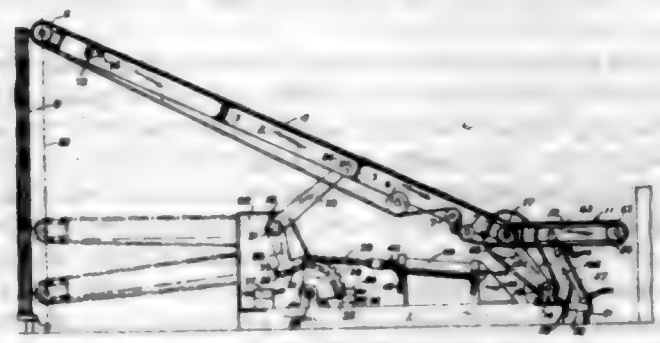
2,901,249
COLLATING MACHINE
Robert G. Dexter, Harvard, and John A. Willett, Boston, Mass., assignors to Cunningten Corporation, Boston, Mass., a corporation of Massachusetts
Application February 1, 1956, Serial No. 562,762
15 Claims. (Cl. 271—26)



1. Sheet withdrawing mechanism comprising, in combination, means for supporting a stack of sheets, a pivotally mounted suction unit including an arm, a suction pipe mounted to rock in said arm, and a pair of spaced suction cups fixed in said pipe, means for releasing said arm to rock by gravity into engagement with the top of the stack and for thereafter rocking the arm upwardly, said suction cups having their suction faces arranged at opposed angles relative to the plane of the top of the stack with said faces directed inwardly toward each other in front elevation, the axes of said suction cups being arranged at right angles to the plane of the top of the stack in side elevation, an air nozzle fixed to said pipe at right angles to said suction cups in side elevation and arranged to project a stream of air medially of said suction cups across the top of and parallel to the top of the stack to effect lifting of the uppermost sheet into engagement with said angularly arranged suction cups to withdraw the sheet from the stack, and parallel linkage associated with said arm and said pipe for maintaining the suction cups and air nozzle in the same relative stack engaging position as the stack is reduced in height upon successive withdrawals therefrom.

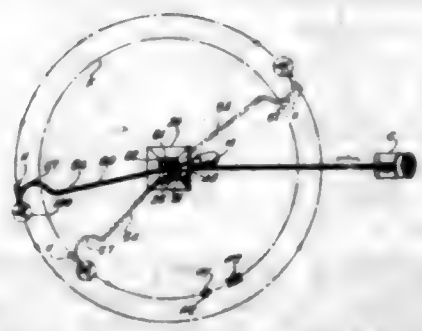
2,901,250
AUTOMATIC SHEET STACKER APPARATUS
George M. Martin, Emeryville, Calif.
Application April 1, 1957, Serial No. 649,867
22 Claims. (Cl. 271—68)

1. In a sheet stacker of the character described, in combination, a base, a stacker frame having a receiving end and a stacking end and including a plurality of conveyors longitudinal on said frame to carry sheets along said frame from said receiving end to said stacking end so as to deposit such sheets in stacks, support means on said base for pivotally supporting the receiving end of said frame, the pivot axis of said frame being along said receiving end and transverse to said frame, said support means being swivelable about an axis beneath and generally parallel with said pivot axis and said receiving end so as to permit said frame to shift its position longitudinally during its movement about said pivot axis; lifting elements fulcrumed on said base beneath said stacker frame and pivotally connected to said frame for shifting said frame upwardly about said pivot axis and longitudinally toward the stacking end while the frame is raised so as to compensate oppositely for the horizontal component of the arc of movement of



the frame about said pivot axis and maintain said upward movement of said stacker end on a generally perpendicular plane, operating means to turn said lifting elements about their respective fulcrums so as to impart generally constant and uniform lifting force to said lifting elements, and control devices actuated by the positioning of said frame to render said operating means operative from the lowermost position to the top position of said stacking frame and render said operating means ineffective at said top position so as to permit the frame to turn to its lowermost position.

2,901,251
AIRPLANE TOYS
Frank Pettit, Union, N.J.
Application July 6, 1955, Serial No. 520,228
6 Claims. (Cl. 272—31)

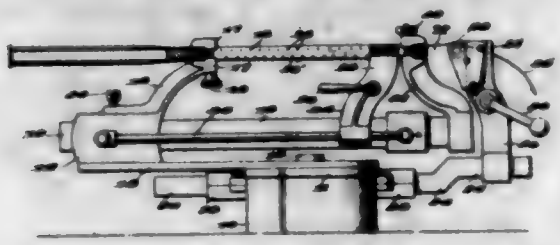


1. An aerial toy comprising a toy landing field, a pylon, an arm, a toy helicopter having an arm receiving opening therein and detachably secured to the arm at an end thereof by clip means slidably engaging the helicopter body to hold the arm within the opening, said helicopter having a motor driven propeller with a normally vertical axis, mounting means securing the arm to the pylon for rotation about a vertical axis and for limited movement about a horizontal axis, whereby the helicopter may circle about the pylon and raise and lower, said arm mounting means further including means whereby the helicopter body may be tilted to vary the angle of axis of rotation of the propeller each side of the vertical to cause the helicopter to hover, or fly forward or backward, said helicopter having a pendant magnetizable member, and a load on the landing field in a position to have the toy helicopter lowered close to it, the load including a magnet to attract the magnetizable member whereby the load may be lifted by the toy helicopter and carried away by it.

spring mounted at one end near the bottom of said dead

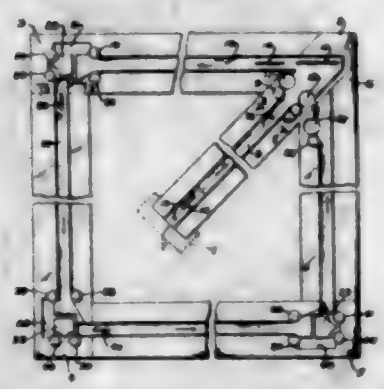
1. A tab-forming device comprising means for supporting a roll of pressure-sensitive adhesive tape, a fixed sur-

2,901,252
RACKET STRINGING DEVICE
Daniel K. Watson, Rockville, Md.
Application February 25, 1957, Serial No. 642,102
2 Claims. (Cl. 273—73)



1. In apparatus for stringing a racket and having means for securing the racket frame in a horizontal plane, string tensioning means comprising an arm mounted on said apparatus for movement toward and away from the frame of a racket secured in said apparatus, a small metal snubbing cylinder removably secured on said arm in a position to lie directly adjacent the frame of the racket at one end of movement of said arm, said cylinder being mounted with its cylindrical axis substantially in the horizontal plane of the racket frame and being of such a diameter that strings passed through holes in a row of spaced holes in the racket frame and passed around the snubbing cylinder remain in the plane of said row of holes between the holes and the snubbing cylinder, and means mounted on said arm on the opposite side of said cylinder from the racket frame for gripping a piece of string passed around said cylinder during the racket stringing operation.

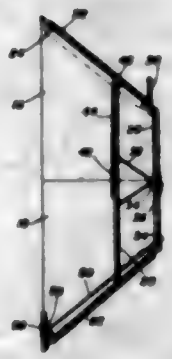
2,901,253
SIMULATED BASEBALL GAME APPARATUS
Harry C. Grant, Jr., Ridgewood, N.J.
Application January 11, 1955, Serial No. 481,122
26 Claims. (Cl. 273—88)



1. Game apparatus comprising a simulated baseball diamond, a runway on said diamond having means at one end to which a ball is presented and having a base at the other end towards which the ball is delivered, a plurality of ball receiving means adjacent said base, means adjacent said receiving means for directing the ball to one of the receiving means, means for changing the condition of said directing means to perform one operation and then another to determine to which of the receiving means the ball is delivered, means for actuating said condition changing means at a predetermined frequency, and motor means for driving said actuating means.

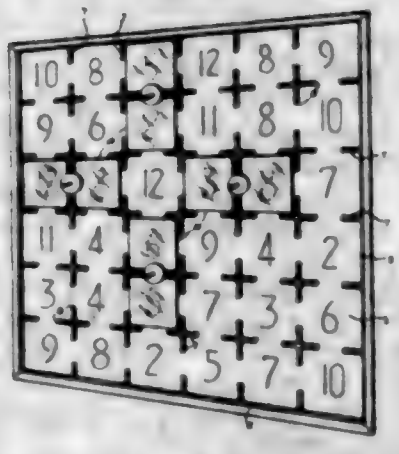
2,901,254
PELLET GUN TARGET TRAP
Warren D. Fortson, Clinton, Miss.
Application August 8, 1957, Serial No. 677,012
2 Claims. (Cl. 273—102.4)

1. A target device for spherical pellet type projectiles comprising four identical wall members each having parallel end edges and converging side edges, means securing the side edges of adjacent wall member together thereby defining a hollow enclosure having converging walls, the end edges of the wall members being disposed in a vertical plane with the longer end edges adapted to face a pellet projector, a vertical rear plate connected with the rear end edges of the wall members, means on the housing and bridging the connected side edges of a pair of adjacent wall members for suspending the housing with a corner at the upper extremity and a corner at the lower extremity, a vertically disposed target plate disposed in said housing and being constructed of penetratable material, said target plate being disposed in forwardly spaced relation to the rear plate and in rearwardly spaced relation to the front end edges of the wall mem-



ber, said target plate having a shape complementary to the interior shape of the housing with the lower corner of the target plate being defined by a horizontal edge thereby providing a passageway from the area between the target plate and rear plate and the area forwardly of the target plate whereby spherical pellets passing through the target plate will engage the rear plate and will drop to the lower corner of the housing and roll forwardly toward the front edge of the housing, and means supported on the lower front corner of the housing and forming a closure for the lower corner of the housing thereby retaining the pellets in the front bottom corner of the housing for access for re-use.

2,901,255
GAME APPARATUS
Clifford O. Sutherland, Milwaukee, Wis.
Application September 6, 1957, Serial No. 682,389
4 Claims. (Cl. 273—135)



1. A game apparatus including, a game board having a plurality of substantially equal size areas thereon, said areas each having a numeral thereon, and a plurality of cover pieces placed on said board and each of a size and shape to indicate coverage of the numerals on any two adjoining areas.

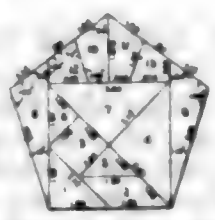
2,901,256
PENTAGONAL BLOCK PUZZLE
Elwood J. Way, Washington, D.C.
Application October 13, 1954, Serial No. 462,845
2 Claims. (Cl. 273—157)

1. A block puzzle comprising a set of thirteen blocks constituting a regular pentagon when assembled in juxta-

side walls of the shield, said slots being positioned at the

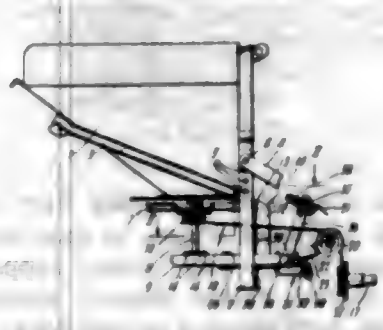
2,901,261

position, seven of said blocks comprising at least three different types of polygons, each having at least two equal sides and angles of 45° and multiples thereof, the length of at least one side on a plurality of said seven blocks being equal to an even multiple of the length of at least one side on a plurality of the remainder of said seven blocks, said seven blocks forming an interior square having one side coincident with one side of the pentagon, and six of said blocks having angles of 18° and multiples thereof, two of said group of six blocks constituting side blocks each having one side equal in length to one side of said pentagon and each of said side blocks filling the space adjacent to one side of said square between said side and the adjacent side of said pentagon, and the remaining four of said group of six blocks each having one right angle and fitting together with one side of each in longitudinal alinement coincident with the fourth side of said square forming a line equal in length thereto and



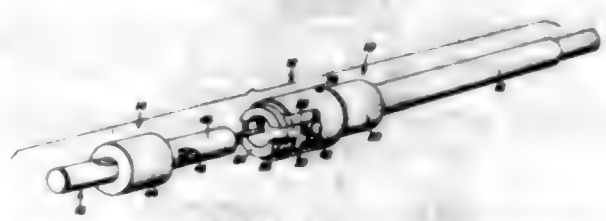
filling the space between said side of the square and the two sides of said pentagon remote from the side thereof which is coincident with the first named side of said square, two of said four blocks forming an interior pentagon within said first named pentagon and having two sides coincident with an apex of said first named pentagon, said two sides being of equal length and of the same length as two adjacent sides thereof and also of the same length as contiguous sides of the other two blocks of said group, and said first two of said four blocks each having one side of the same length as a non-adjacent side of each of said two other blocks of said group, each of said non-adjacent sides extending in the same line as one of the sides of said square contiguously to the inner side of one of said side blocks, whereby a large number of arrangements may be made wherein groups of adjoining blocks have contiguous sides of the same length.

2,901,257
AGRICULTURAL MACHINES
William T. Teagle, Blackwater, Truro, England
Application January 23, 1956, Serial No. 560,868
Claims priority, application Great Britain January 28, 1955
2 Claims. (Cl. 275—8)



1. An agricultural machine having means for carrying it on an hydraulic lift on a tractor for raising the machine to an operative position and for lowering the machine to an inoperative position and the tractor having a power take-off shaft and a driving pulley thereon, said machine embodying a rotary device, and a belt and pulley system for transmitting drive from the driving pulley on the tractor take-off shaft to the rotary device on the machine, said drive transmitting system comprising a driven pulley connected to said rotary device on the machine, a belt passing around said driven pulley, a pair of laterally spaced idler pulleys for guiding the belt around the driving and driven pulleys while the machine is in raised operative position, a clamping device mounted on the machine to cooperate with the idler pulleys to clamp the belt when the machine is lowered to inoperative position and thereby form a bight in the belt in a position free of contact with the driving pulley but in a position for movement into driving engagement with the said driving pulley when the machine is lifted to operative position, and means for mounting the idler pulleys and clamping device on the machine for lifting and lowering movements therewith comprising a bar of inverted channel section fixed longitudinally on the machine, a spring-loaded arm carrying said idler pulleys and belt clamping device and having pivot means for attaching it to said bar, said arm nesting beneath said bar and being guided by the side flanges thereof for pivotal movement and said bar having a longitudinal slot therein, said pivot means for said arm engaging in said slot in said bar to permit adjustment of the idler pulleys and clamping device longitudinally of the machine, and a vertical spindle on said bar rotatably supporting said rotary device and driven pulley on the machine.

2,901,258
DRILL PRESS SPINDLE
Gabriel Brandell, Riegelsville, Pa.
Application September 30, 1957, Serial No. 687,242
3 Claims. (Cl. 279—97)



1. An interlocked drill press spindle construction comprising a drill chuck, a drill spindle, and locking collar means therefor, the lower end of said drill spindle having a hollow, cylindrical portion thereon, said cylindrical portion having a bayonet slot formed therethrough, with the major portion thereof disposed in a vertical plane, said bayonet slot having a vertical portion and an offset portion, said drill chuck being inserted into said cylindrical portion, a pin projecting from said drill chuck and disposed in said slot for vertical sliding movement and subsequent angular movement therein whereby the pin may be positioned within the offset portion of the slot, the lower end of said drill chuck having a portion of a greater diameter than the remainder of said drill chuck which defines an enlarged end, the upper edge of said enlarged end being spaced from the pin a distance substantially equal to the distance between the offset portion of the bayonet slot and the lower edge of the cylindrical portion so that the pin is positioned in alignment with the offset portion of the slot when the enlarged end of the drill chuck abuts against the lower edge of the cylindrical portion, said locking collar means being slidably positioned on said cylindrical portion for locking said pin in the offset portion of said bayonet slot.

2,901,259
TOE GRIP SAFETY SKATE
Daniel S. Williams, Pottstown, Pa.
Application February 12, 1958, Serial No. 714,845
4 Claims. (Cl. 280—11.19)

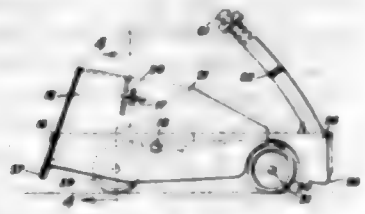
4. A roller skate comprising a platform having toe and heel sections, means for adjustably connecting the sections, pairs of wheels mounted on the sections, a shield U-shaped in plan, having side walls with slots in upper portions connected by an inclined forward end, mounted on the toe section of the platform, a strap having spaced notches in edges thereof extended through the slots in

2,901,263

block intermediate its ends, a plate secured to and de-

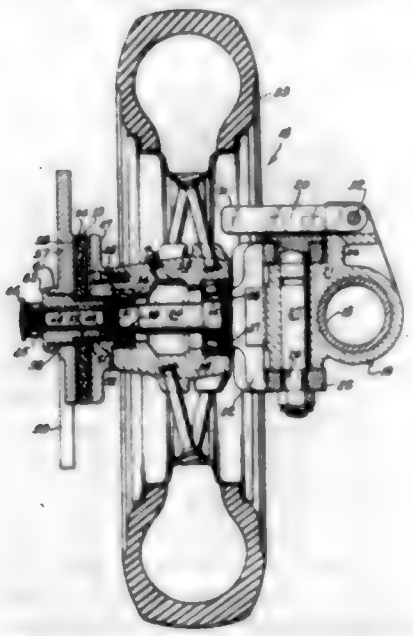
thereby defining a hollow enclosure having converging constituting a regular pentagon when assembled in juxta-

side walls of the shield, said slots being positioned at the ball of a foot in a shoe in the shield and being spaced above the platform a distance less than the height of the shoe whereby the shoe is gripped by the strap extended through the slots for securing the toe of a shoe in



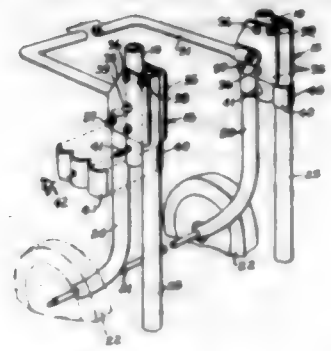
the shield and upon the platform, and a heel strap mounted in the heel section of the platform and having a T-shaped head on one end with a slot and notches in the sides of the opposite end positioned to receive the T-shaped head for securing the heel of the shoe in position on the platform.

2,901,260
WHEEL LOCK
Earl B. Lear, Utica, N.Y., and George E. Douglas, Franklin, Pa., assignors to Chicago Pneumatic Tool Company, New York, N.Y., a corporation of New Jersey
Application June 19, 1956, Serial No. 594,074
3 Claims. (Cl. 280—29)



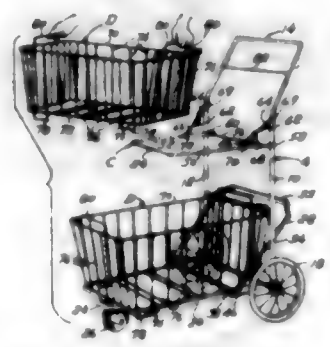
1. In a drill wagon of the character described including a supporting chassis, a bracket fixed to a side of the chassis in close proximity to the rear end of the latter and having a block portion extending at right angles away from the said side of the chassis, a common spindle, pivot means connecting the spindle at one end to the block for pivotable movement of the spindle in a horizontal plane from a position at the side of the chassis to a position at the rear thereof, a wheel supporting the chassis upon the ground having a hub that is rotatably mounted on the spindle and includes a radially enlarged outer end face, and means carried upon the spindle for locking the wheel against rotation regardless of the pivoted position of the spindle, the said locking means comprising an extension of the spindle beyond the outer end face of the hub of the wheel, a friction disc axially slidable on the extension into and out of frictional engagement with the said end face of the hub of the wheel, and pressure disc plate means located on the spindle outwardly of the friction disc being threadable along the spindle for carrying the friction disc into locking frictional engagement with the end face of the hub of the wheel, wherein the pressure disc plate means is characterized by a radial arm adapted to be manually gripped for direct application of manual operating force to thread the disc plate means along the spindle.

2,901,261
COLLAPSIBLE CART
Charles L. Olvey, Piqua, Ohio, assignor to The Wood Shovel and Tool Company, Piqua, Ohio, a corporation of Ohio
Application February 4, 1957, Serial No. 637,950
7 Claims. (Cl. 280—36)



5. A joining and interlocking construction for interconnecting movable parts in a collapsible cart of the character described having a frame member with respect to which wheel-carrying leg and support members are mounted for pivotal movement selectively from extended positions substantially aligned with said frame member to collapsed positions folded back substantially against said frame member, comprising a pair of plates rigidly mounted on opposite sides of said frame member for receiving said leg and support members, means for pivotally mounting said leg member and support members between said plates for pivoting movement of said members, clamp brackets for enclosing said members therebetween preventing said pivoting movement of said members out of said extended positions thereof, and means for releasably securing said clamp brackets tightly together effecting rigid interlocking of all said members in said extended positions thereof.

2,901,262
MULTI-TIER LAUNDRY CART
Daniel Berlin, Philadelphia, Pa.
Application December 10, 1956, Serial No. 627,401
1 Claim. (Cl. 280—41)



A multi-tier collapsible shopping cart comprising a single, inverted, U-shaped frame, an axle passing through the ends of said frame and having supporting wheels thereon, a U-shaped basket support member pivotally connected at the ends thereof to said axle, a ground engaging front wheel pivotally connected between the sides of said U-shaped frame and spaced from the front end of said support member, an extension integrally formed on said basket support member to guard said wheel and to serve as a bumper for said wheel, and a U-shaped locking brace partially extending to each side of said inverted U-shape frame and having a pair of links pivotally connected at one end to said basket support member and the other end of said links being connected to the free end of said locking brace whereby said basket support may be elevated by pressing on said locking brace.

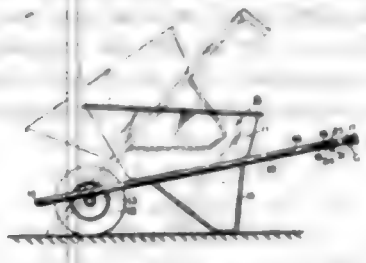
2,901,266

central section, means attached between said framework

belt passing around said driven pulley, a pair of laterally

notches in edges thereof extended through the slots in

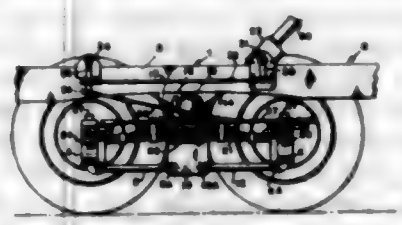
2,901,263
WHEEL BARROW HANDLES
Peter J. Van Loon, Jr., Portland, Oreg.
Application December 26, 1956, Serial No. 630,502
1 Claim. (Cl. 280—47.31)



In combination a wheel barrow having a tubular frame, a pair of hollow substantially cylindrical rearwardly extending free end portions integrally formed on said frame, a body member arranged in axially aligned relation to each of said free end portions of said frame, a cylindrical boss integrally extending from one end of each of said body members and telescoped respectively within the adjacent free end portions, means rigidly securing said boss in said frame, a vertically disposed tongue integrally formed on the other end of each of said body members and extending oppositely of said boss, each of said tongues having a width less than the width of said body members and forming oppositely disposed shoulders at the juncture of said body member and said tongue, a handle adjacent said other end of each of said body members, a pair of spaced parallel ears integrally formed on one end of said handle and positioned on opposite sides of said tongue, a horizontal pivot pin securing said ears to said tongue, means on said ears for engaging said shoulders to limit upward swinging movement of said handle to a point with said handle axially aligned with the free end of said frame, and means on said handle for engaging said body member to limit downward swinging movement of said handle to a point with said handle depending substantially perpendicularly from said tongue, said handles pivoting downwardly into engagement with said body members during dumping of the contents of said wheel barrow whereby the user may retain his grasp on said handles at all times during the dumping operation without having to shift the position of his hands.

2,901,264
DUAL FRONT AXLE SUSPENSION MEANS AND STEERING MECHANISM THEREFOR
Harold P. Hart, Coquille, Oreg.
Application January 15, 1958, Serial No. 709,116
1 Claim. (Cl. 280—91)

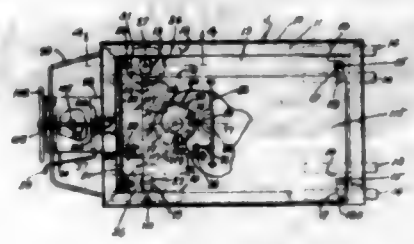
A front end construction for vehicles comprising a frame, front and rear axles extending transversely of the frame in tandem relationship and provided with steering knuckles at opposite ends thereof, a pair of spaced apart



vertically disposed brackets permanently secured to and extending above and below said axles, a pair of semi-elliptical leaf springs slidably bearing at their ends on said axles and each provided with a superimposed bearing

block intermediate its ends, a plate secured to and depending from each of the opposite sides of said frame, a trunnion cross shaft secured to and extending through said plates and journalled at their ends in said bearing blocks, two sets of upper and lower parallel torque rods pivotally attached at one of their ends to said plates below said springs and at their opposite ends to said brackets, a steerable ground engaging wheel journalled on each of said knuckles, steering gear mechanism secured to the frame between said front and rear axles and including a first arm supported at one side of said frame for rocking movement, a second arm pivotally supported on the frame on the same side thereof as the steering mechanism and at a point in vertical alignment with said front axle, a link interconnecting said first and second arms, a drag-link of greater length than said link connecting said second arm with an arm integrated with the steering knuckle at one end of said rear axle, a tie-rod interconnecting the last mentioned arm at a point intermediate its ends with the outermost end of a companion arm integrated with the steering knuckle at the corresponding end of said front axle, and tie rods interconnecting the steering knuckles at opposite ends of each axle, whereby rocking movement of said first and second arms will impart turning moment to the rear ground engaging wheels on a greater radius than that imparted to the front ground engaging wheels.

2,901,265
STEERING MECHANISM FOR CAMERA DOLLY
Leonard M. Knight and Ralph Chapman, Sherman Oaks, Calif.
Application March 17, 1958, Serial No. 721,923
9 Claims. (Cl. 280—91)



1. A camera dolly, including a frame, front and rear wheels, a kingpin for each wheel carried by the frame for turning the respective axes of each wheel, a steering transmission for each rear wheel comprising an assembly of three coaxial disks arranged in juxtaposition on a kingpin to provide an intermediate disk and two outer disks, the intermediate disk of each steering transmission being secured to the kingpin for the respective wheel, means for interlocking all of said disks against rotation and shiftable to lie between either outer disk and the intermediate disk, the other outer disk being held against rotation on the kingpin, and a third steering transmission having an intermediate and two outer disks, a shaft coaxially mounting said disks, the intermediate of said aforesaid disks being fixedly secured to said shaft, and means for said third named steering transmission shiftable between the disks thereof to like positions of the first named means with the rear wheel transmissions when the first named means is moved, means for rotating the shaft of the third named steering transmission, links extending between an outer disk of said third steering transmission and a like positioned outer disk for each steering transmission for each rear wheel for movement by the shaft of the third named steering transmission, the first named means in each instance interlocking the intermediate disks and the other outer disks of each transmission causing turning movement of the rear wheels through said links.

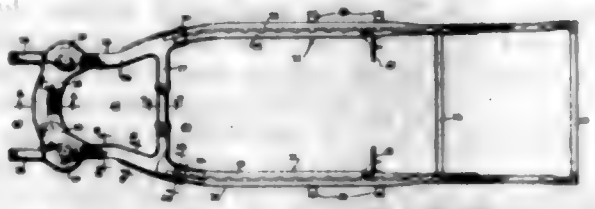
ing force to thread the disc plate means along the spindle.

may be elevated by pressing on said locking brace.

2,901,266
AUTOMOBILE CHASSIS OR UNDERFRAME STRUCTURE

Alexander R. Lindsay, Glenside, Pa., assignor to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania

Application June 21, 1954, Serial No. 438,144
18 Claims. (Cl. 280—106)

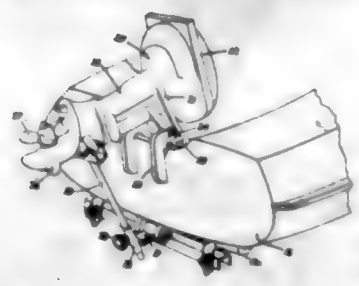


1. In an underframe structure for automobiles, a pair of longitudinal side sills interconnected by transverse means, one of said transverse beams comprising a monopiece stamping extending over the entire width of the underframe and having formed thereon minor portions only of the length of said side sills, said sill portions extending fore and aft from said beam, the outer ends of said beam bridging the space between said sill portions and thereby constituting themselves minor parts of the sills, the regions of said stamping where said beam and said sill portions meet being shaped and designed for the attachment of wheel guiding means and being formed into a downwardly open housings for the reception of the upper ends of generally cylindrical upright supporting springs, one of said sill portions being connected with adjoining main side sill members which are separate from each other and from said stamping and which constitute the major portion of the length of said side sills.

2,901,267
OUTBOARD MOTOR SUPPORT

Charles H. Holsclaw, Evansville, Ind.

Application October 7, 1955, Serial No. 539,210
16 Claims. (Cl. 280—179)



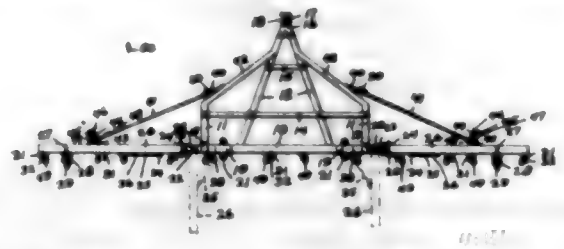
5. In a boat trailer for carrying a boat having an attached outboard motor with a propeller shaft housing and arranged for tilting into horizontal transport position, the combination comprising a trailer frame, support means extending upwardly at the rear end of the trailer frame, said support means including a laterally extending socket member, a pair of pad members eccentrically pivoted upon said socket member and defining a central groove of variable width for receiving the propeller shaft housing of the motor, and means anchored to said socket member and passed over said propeller shaft housing for holding the housing in contact with the pad members.

2,901,268
DRAG EVENER

Lars N. Christensen, Viborg, S. Dak.

Application October 15, 1956, Serial No. 615,860
1 Claim. (Cl. 280—411)

A drag evener comprising a central section, outer sections pivotally attached to said central section, said outer sections being movable in a vertical and a horizontal plane, a forwardly extending framework attached to said central section, means attached between said framework and said outer sections for retaining said outer sections in alignment with said central section including bars pivoted to said framework and secured to said outer sections, substantially U-shaped retainers attached to said outer sections, spring urged pins passing through said retainers, said bars having openings for receiving said pins, means for pulling said pins outwardly to release said bars so that said outer sections can be folded inwardly, said central section and said outer sections including a plu-

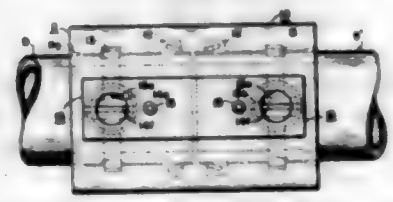


rality of vertically positioned spaced rods attached thereto, said rods having hook portions upon which harrows can be supported, said central section including substantially U-shaped supports secured thereto, ground-engaging wheels journalled in said supports, caster wheels journalled in said outer sections, the pivotal attachment of said outer sections and said central section including horizontally spaced ears to which said outer sections are pivoted, and vertically spaced ears attached thereto to which said central section is pivoted.

2,901,269
SPLIT RING COUPLING

Clyde E. Rickard, Pittsburgh, Pa., assignor to McDowell Manufacturing Company, Millvale, Pa., a corporation of Pennsylvania

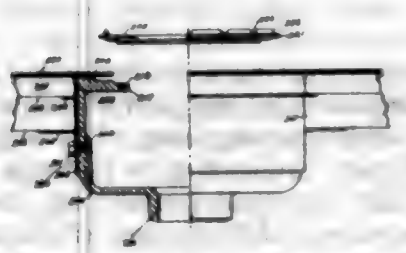
Application January 31, 1957, Serial No. 637,496
2 Claims. (Cl. 285—39)



1. A quick-release latch coupling for nose end portions of a pair of cylindrical conduit members which comprises, a longitudinally-extending tubular housing body member having a cylindrical bore longitudinally therethrough to longitudinally-slidably receive the nose end portions of the conduit members and position them in longitudinally spaced-apart axial alignment therewithin, the cylindrical bore of said housing body being of substantially uniform diameter throughout, the external diameter of the nose end portions being of the same radial external diameter as their respective conduit members, each nose end portion having an annular seating groove of rectangular cross-section recessed in its outer periphery, said cylindrical bore having a pair of longitudinally spaced-apart annular seating grooves recessed therein with each of said grooves having a rectangular cross-section which cooperates with the groove in one of the nose end portions when aligned in axially complementary and radially adjacent relationship therewith to form a latching portion between the longitudinal cylindrical bore of said housing body and the periphery of the nose end portion, a rectangular cross-sectioned resilient split-ring operatively positioned within each of the latching portions; a pair of transverse bores projecting through a wall of said housing body, each terminating in one of said annular seating grooves, and each having portions of different diameter defining a seat therein; a pair of annular control plugs,

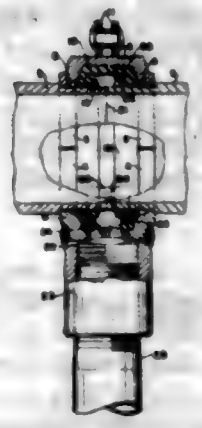
each having portions of different diameter and a seating shoulder to complement the portions of different diameter and the seat in said transverse bores, said control plugs each having a camming surface extending into one of said latching portions, each of said control plugs being operatively positioned within one of said transverse bores, the camming surface of one plug being positioned between opposed ends of one of said split rings, and the camming surface of the other plug being positioned between opposed ends of the other of said split-rings, each said split ring in a locking relation being resiliently positioned partially within both of the groves forming one latching portion, each of said annular seating grooves in said housing body members being of a depth at least equal to and the grooves in said nose end portion being less than a cross-sectional depth of one of said split rings, so that each of said camming surfaces may operatively engage the split end portions of one split ring and expand it out of position within the groove of one nose end portion and entirely into one of the grooves that are recessed in the cylindrical bore to unlock each nose end portion with respect to said housing body, each of said control plugs having a head portion provided with a transverse slot recessed therein, the head portion of each of said plugs being positioned in a recessed relation within one of said transverse bores and within the outer periphery of said housing body, a thin retaining plate removably secured to an outer wall of said housing body to loosely hold said plugs in the transverse bores of said housing body for rotation, said retainer plate having end portions overhanging said plugs and having an open sight portion axially-aligned with each of said plugs, so that a tool may be inserted therein to engage each said transverse slot and turn each said plug between its locked position and its unlocked position without removing said retaining plate.

2,901,270
RESERVATORY SUPPORTING DEVICE
Albert A. Baker and Harry L. Rhoades, Jr., Erie, Pa., assignors to Zurn Industries, Inc., Erie, Pa., a corporation of Pennsylvania
Application December 10, 1954, Serial No. 474,596
2 Claims. (Cl. 285—42)



1. In combination, a reservatory for a drainage system and means to attach said reservatory to a platform having a top and a bottom surface comprising a generally cup-shaped reservatory having generally vertical side walls, an open top, a bottom having an outlet therefrom, said outlet being adapted to be connected to a soil pipe, a hoop like partition member disposed around the outside upper portion of said side walls, circumferentially spaced clamping brackets disposed around the outside of the wall of said reservatory, the outside surface of said reservatory being disposed in engagement with the inside surface of said partition member and said brackets, said brackets being disposed below said partition member and having the inside walls of said brackets flush with the inside surface of said partition member, holes in said reservatory extending partly through the walls thereof, said clamping brackets each having a flat leg lying against the side of said reservatory, an upper and a lower vertically spaced, radially extending leg attached to each said flat leg, a slot in each said flat leg, a bolt extending through each said slot and threadably engaging said holes, said upper legs engaging the top of said platform and said lower legs engaging the bottom of said platform supporting said reservatory thereon, and an inwardly extending rim having an inwardly and downwardly extending top surface integrally attached to the upper edge of said reservatory, and a clamping ring for clamping flashing to said rim.

2,901,271
LONGITUDINALLY-DIVIDED PIPE COUPLING SLEEVE WITH FLUID PRESSURE SEAL
John Zoldak, Butte, Mont., assignor to The Anaconda Company, New York, N.Y., a corporation of Montana
Application August 29, 1957, Serial No. 681,052
1 Claim. (Cl. 285—108)

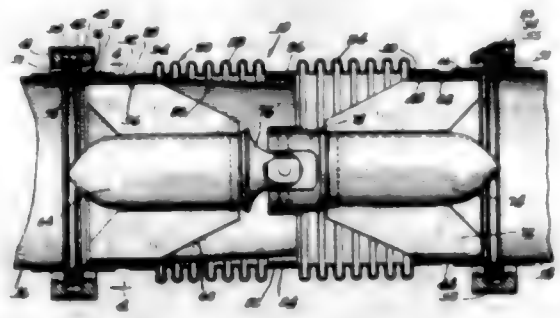


A coupling for connecting a branch take-off pipe to a main conduit comprising a pair of mated, semi-cylindrical clamping members hinged together at one end and clampable together at their other end, said clamping members being adapted to be clamped about a main conduit at a place where a take-off branch pipe is to be connected thereto, a pipe sleeve adapter permanently secured to and extending radially from one of said semi-cylindrical clamping members intermediate its ends to which a branch pipe is adapted to be connected, said clamping members having a circumferential groove in their inner faces, a flexible ring gasket generally C-shaped in cross-section throughout in said groove, said gasket comprising a base portion lying against the bottom of said groove and a pair of flanges extending inwardly towards one another from the sides of said base portion and spaced from said base portion, and a reinforcing gasket in the space between said base portion and said flanges and bridging the space between the inner sides of said flanges, said reinforcing gasket extending for only a minor portion of the circumference of said ring gasket, the combined thicknesses of said base portion, one of said flanges and said reinforcing gasket being no less in magnitude than the depth of said groove, said base portion of said ring gasket and said reinforcing gasket being adapted to have openings formed in them opposite a take-off opening in the main conduit to which the coupling is attached, said reinforcing gasket, at such time, being adapted to hold the flanges of the ring gasket against the main conduit and to hold the base portion of the ring gasket against the coupling member in the vicinity of such opening in the main conduit.

2,901,272
EXPANSION JOINT
Raymond C. Anderson, Lombard, Ill., assignor to Flexonics Corporation, Maywood, Ill., a corporation of Illinois
Application January 9, 1956, Serial No. 557,883
3 Claims. (Cl. 285—227)

1. A self-contained expansion joint comprising an elongated tube having a pair of elongated inlet and outlet corrugated sections separated by an integral relatively

short cylindrical section and a pair of opposite cylindrical end sections, the inner diameters of each of said cylindrical sections and the minimum diameters of said corrugated sections being substantially the same; a pair of cylindrical end members respectively extending into and welded to opposite end sections of said tube, a pair of sleeve members disposed within and welded to said cylindrical members, a plurality of narrow radially disposed and axially extending fins disposed within and welded to said sleeve members at the opposite ends of said tube, a pair of relatively light hollow streamlined members respectively supported intermediate the ends thereof and in axial alignment by the fins adjacent the opposite ends of said tube and the adjacent ends of said hollow members being bifurcated and disposed in interfitting relationship and in radial alignment with said short cylindrical section, said fins extending toward and terminating adjacent the bifurcated ends of said hollow members, pivot means interconnecting the bifurcated ends of said hollow members to provide a universal joint therebetween, said universal joint limiting axial expansion of said tube while permitting radial deflection of opposite ends of the tube, one of said sleeve members adjacent the inlet end of said



tube having an inwardly tapering sleeve extension traversing the adjacent inlet corrugated section of the tube and said intermediate short cylindrical section and the pivotal interconnection between the bifurcated ends of said hollow members, the inner extremity of said sleeve extension terminating downstream of the inlet corrugated section and radially inwardly of and closely adjacent to the adjacent end of the outlet corrugated section; the free end of said sleeve extension, said fins and said hollow streamlined members serving to promote laminar fluid flow through said tube with the tapering sleeve extension preventing contact of the fluid with the inlet corrugated section and directing fluid inwardly of the outlet corrugated section to minimize contact of the flowing fluid with the outlet corrugated section, and a reinforcing and stop band disposed within and secured to the intermediate short cylindrical section of the tube and traversing the pivotal interconnection between the bifurcated ends of the hollow members, said sleeve extension normally being radially inwardly spaced from said reinforcing and stop band and being engageable therewith after a predetermined amount of relative radial deflection between opposite ends of the tube to restrain said tube ends against further relative radial deflection.

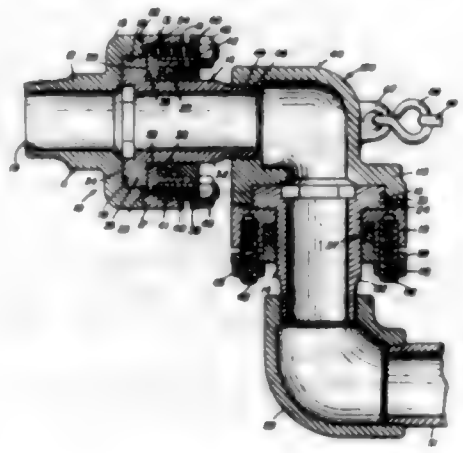
2,901,273

SWIVEL JOINTS IN CONNECTORS FOR STEAM LINES OF RAILWAY CARS

John Morris, Jr., Union City, N.J., assignor to Chemical Appliances, Inc., New York, N.Y., a corporation of Delaware

Application February 17, 1958, Serial No. 715,752
1 Claim. (Cl. 285—281)

In a pipe connector assembly for railway car steam heat lines to conduct flow therethrough of steam at elevated temperatures and pressures destructive to packing materials and other elements characteristic of the swivel joints of conventional connectors for such service, a connector swivel joint comprising, in combination; a pipe fitting having a longitudinal, cylindrical through passage for flow therethrough of railway car high pressure heating steam and a concentric socketed end portion arranged about the passage and having a cylindrical socket of certain internal diameter, said socketed end portion providing a lateral end seat and an internal, lateral, circular swivel seat at the bottom of the socket spaced longitudinally inward of said end seat with said seats arranged concentric of the passage; an annular socket closing ring having a stepped inner end face providing an annular land abutted to said lateral end seat and an annular gasket ring recess radially inward of said land between the lateral end seat of said socketed end portion and the inner end face of said ring arranged concentrically with respect to the through steam passage, said socket closing ring having an inwardly-extending lateral, circular, seat-defining portion of certain internal diameter with one circular lateral face thereof constituting a ring swivel seat opposed to and longitudinally spaced from said circular swivel seat of said pipe fitting to define with said socketed end portion between said swivel seats a swiveling chamber concentric with the through steam passage and opened on the radially-inward side thereof to the through steam passage by an annular, longitudinally-extending, entry space, the opposite circular lateral face of said ring seat-defining portion constituting a bottom, lateral, circular packing recess seat longitudinally spaced from said ring swivel seat; a gasket ring mounted in the gasket ring

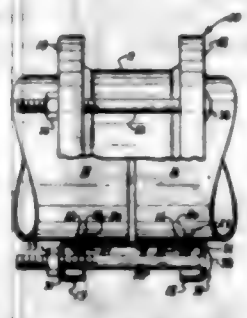


recess and compressed between the lateral end seat of said pipe fittting socketed end portion and the inner end face of said socket closing ring; tightening means anchoring said socket closing ring to said pipe fitting socketed end portion with said gasket ring clamped therebetween in its recess radially inward of the annular land; said socket closing ring having its outer end provided with a longitudinally-extending circular socket arranged concentrically with respect to and of limited depth terminating at said bottom, lateral, circular packing recess seat with the socket being of an internal diameter appreciably greater than the internal diameter of said ring seat-defining portion to define an annular packing recess; a companion pipe fitting having a longitudinally-extending, cylindrical hollow body portion provided with a longitudinal, cylindrical through passage for flow therethrough of railway car high pressure heating steam communicating and coaxially aligned with the through passage of said first pipe fitting and carrying thereon a laterally-extending, exterior circular flange rotatably received through said annular entry space into said swiveling chamber and of an external diameter slightly less than the internal diameter of the chamber socket with the cylindrical side wall of the latter juxtaposed to the circumferential edge of said flange, said annular flange having a pair of opposite, longitudinally-spaced, lateral bearing faces respectively opposed to said chamber swivel seats and seated in bearing contact thereof with rela-

said frame and rotatably movable with respect to said tion, a dog link rotatably mounted on said dog bolt, hold-

tively close tolerance for rotation against both of said swivel seats, said cylindrical hollow body portion of said companion pipe fitting being of an external diameter slightly less than the internal diameter of said seat-defining portion of said socket ring and extending out through the latter and its packing recess in relative rotary relation thereto; a ring of packing material mounted in said packing recess in annular contact with said hollow body portion and against said bottom lateral seat of said packing recess; an annular gland ring mounted about said hollow body portion and having an axially-extending, cylindrical end flange slidably telescoped into the open outer end of said packing recess against said packing ring; and pressure-applying, adjustable means fastening said gland ring to said socket closing ring and forcing said gland ring longitudinally against said packing ring with compression of the latter against said packing recess bottom seat and snugly about said hollow body portion in a gasket-tight seal.

2,901,274
SLEEVE TYPE PIPE COUPLING HAVING SHEET METAL FOLLOWERS
Telford L. Smith, South San Francisco, and Paul G. Dunmire, Burlingame, Calif.
Application April 9, 1956, Serial No. 577,155
2 Claims. (Cl. 285—341)



1. In a coupling for cylindrical piping, said coupling having a sleeve of substantially constant thickness whose ends flare outwardly at a constant angle, the combination of a pair of followers at each end, each with a sloping axially inner face with its radially outer portion nearer the opposite follower than its radially inner portion but radially short of said sleeve ends; a pair of unitary gaskets, each having a plain cylindrical pipe-engaging face, a constant-sloping sleeve-end-engaging face radially short of said sleeve end, a constant-sloping follower-engaging face radially short of said follower, the sleeve-end-engaging face of said gasket extending radially outwardly beyond said follower-engaging face, and a gently sloping generally axial face joining the outer ends of said sleeve-end-engaging face and said follower-engaging face, for resolving pressure radially inwardly and toward said follower face when said coupling is tightened, the followers each being die-formed of sheet metal stock of constant thickness to provide a radially extending wall portion having an annular opening, the wall of the opening closely surrounding the piping and having a reentrant bend forming a frusto-conical flange portion of said metal stock extending integrally and at a substantially complementary angle to the follower-engaging face of the gasket from the periphery of the opening to form the sloping axially inner face, the radially outer periphery of the wall having an integral flange extending axially toward the other of said followers, and means for urging said followers toward each other so that said sleeve ends ride over said gasket and said followers' sloping portion without pinching said gasket, said gasket when compressed by the follower assuming practically a triangular section under full compression, without tending to squeeze up in between said follower and said sleeve.

2,901,275
PATTERN CAM-DISK RETAINING MEANS FOR ZIGZAG SEWING MACHINES
Charles R. Odermann, Milford, Conn., assignor to The Singer Manufacturing Company, Elizabeth, N.J., a corporation of New Jersey
Application October 18, 1956, Serial No. 616,740
2 Claims. (Cl. 287—53)

1. Means for holding a pattern cam-disk on the camshaft of a sewing machine, said means comprising a cylindrical end-portion on said camshaft, said end-portion having a coaxially extending unthreaded hole, external screw threads formed on the surface of said end-portion, and a thumb-nut adapted to be mounted on said end-portion, said thumb-nut having an internal cavity, internal screw threads formed in the internal cavity of said thumb-nut and designed to engage the external threads formed on the surface of said end-portion, an unthreaded pilot-stud formed on said thumb-nut and having a surface defining a cylinder positioned coaxially with respect to the internal threads of said internal cavity and said pilot-stud extending beyond the internal threads and also beyond the end of said thumb-nut, said pilot-stud being long enough to support said thumb-nut on said end-portion when said internal threads are completely disengaged from said external threads, and said pilot-stud acting as a guide for easy engagement of said internal threads and said external threads when attaching said thumb-nut to said end-portion.

2,901,276
SOLENOID CONSTRUCTION
William F. Nolden, Milwaukee, and Edwin W. Seeger, Wauwatosa, Wis., assignors to Cutler-Hammer, Inc., Milwaukee, Wis., a corporation of Delaware
Application August 28, 1953, Serial No. 377,210
6 Claims. (Cl. 287—100)

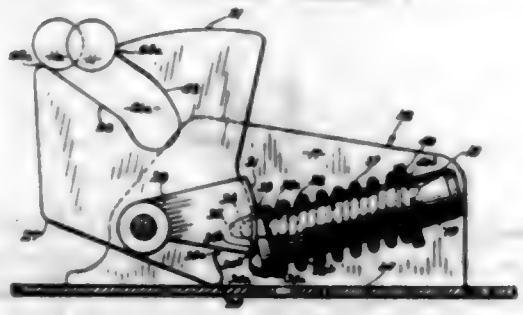
1. In a solenoid plunger construction, in combination, a plunger member, a load member, a clevis pin driving connection therebetween, said members jointly having a multiplicity of transversely-alined openings formed therein, said clevis pin having its end portions positioned within a plurality of openings in one of said members and its intermediate portion positioned within an opening in the other of said members, and shock-reducing means for said plunger member comprising a plurality of members of resilient rubber-like material surrounding the body portion of said clevis pin and confined under a slight degree of compression between said pin and the surrounding walls of said openings in said one member having a plurality of openings.

2,901,277
LATCH MECHANISM
Lloyd L. Anderson, Grand Rapids, Mich., assignor to Jervis Corporation, Grandville, Mich., a corporation of Michigan
Application December 11, 1956, Serial No. 627,593
19 Claims. (Cl. 292—78)

3. In a mechanism of the character described, a supporting frame, a bolt member pivotally connected to

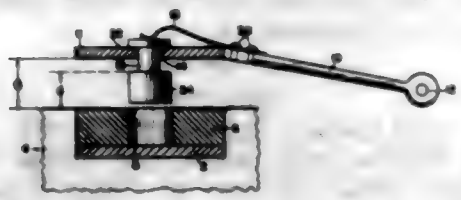
nector swivel joint comprising, in combination; a pipe fit- seats and seated in bearing contact thereof with rela-

said frame and rotatably movable with respect to said frame between at least two predetermined positions, a bolt actuating means including a spring biased element having a cam surface which is maintained in working relationship with respect to and is adapted to rollably contact a corresponding surface portion of said bolt mem-



ber, said actuating means pivotally connected to said frame and operable to resiliently urge said bolt into one of its predetermined positions, the contour of the cam surface of said element being determinative of the energy release of the actuating means in at least one of said predetermined positions.

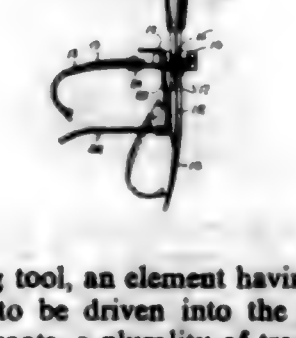
2,901,278
MAGNETIC LATCH ASSEMBLY
Preston Robinson, Williamstown, Mass., assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application June 17, 1957, Serial No. 666,190
5 Claims. (Cl. 292—251.5)



1. A magnetic latch assembly comprising a support, a first pole piece, means securing said first pole piece to said support, an apertured magnet mounted on said first pole piece with at least a portion of said first pole piece forming a seat closing one end of said aperture, a holder mounted for independent limited movement to and from said apertured magnet, a part of said holder being a second pole piece with an aperture therein, a third pole piece having a face portion shaped complementary to said magnet aperture, said third pole piece having a sliding fit in the aperture of said second pole piece whereby when said holder is moved toward said magnet said third pole piece is drawn by magnetic force into said magnet aperture and seated on the seat of said first pole piece and said second pole piece is drawn into engagement with said magnet.

2,901,279
DOGGING MEANS
Donald Frederick MacNaught, Hingham, and Robert Allan Jacobson, North Abington, Mass., assignors to Bethlehem Steel Company, a corporation of Pennsylvania
Original application March 2, 1955, Serial No. 491,632. Divided and this application April 25, 1956, Serial No. 580,662
21 Claims. (Cl. 292—256.5)

21. In a hatch cover, dogging means comprising a dog bolt, restraining means to limit movement of said dog bolt along its longitudinal axis, a major portion of the length of said dog bolt being disposed on one side of said restraining means when said dog bolt is in undogging position, and being disposed on the other side of said restraining means when said dog bolt is in dogging position, a dog link rotatably mounted on said dog bolt, holding means to receive said dog link, and means to rotate said dog link in said holding means eccentric to the axis



of rotation of said dog link about said dog bolt, said dog link lying substantially flat on one side of said restraining means when said dog bolt is in undogging position.

2,901,280
WEEDING TOOL
Chauncey A. Hall, Melrose, Mass.
Application October 24, 1957, Serial No. 692,062
3 Claims. (Cl. 294—50.8)

1. In a weeding tool, an element having a cutting edge at its front end to be driven into the ground under a weed to sever its roots, a plurality of transversely spaced, parallel, forwardly extending, weed extracting claws transversely hinged to said tool rearwardly of said edge with their free, weed engaging ends curved towards said edge to slide over the ground and swing upwardly relative to said edge as said edge is driven into a root cutting position and to catch and extract the body of said weed as said cutting edge is withdrawn, and a plurality of fixed fingers mounted on said tool and extending upwardly between said claws to force said weed body therefrom when said tool is turned over and held to permit said claws to swing rearwardly and downwardly away from said element under the influence of gravity.

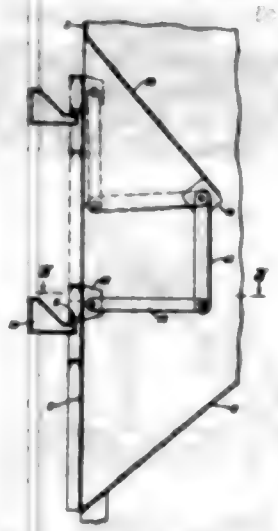
2,901,281
LOAD HOISTING AND LOWERING SKIPS
Thomas Martins, Rhiwbina, Cardiff, Wales, assignor to Rhymney Engineering Company Limited, Cardiff, Wales, a British company
Application February 7, 1956, Serial No. 564,069
Claims priority, application Great Britain February 9, 1955
3 Claims. (Cl. 294—69)

1. A material container having a discharge opening, a guillotine-type door slidably mounted upon the container for controlling flow of material through said opening, an internal door having an upper end, hinged members secured to the upper end and to the container whereby said internal door is movable about said hinged members, and an operating linkage secured to said guillotine-type door and to said internal door at a point below said

2,901,285

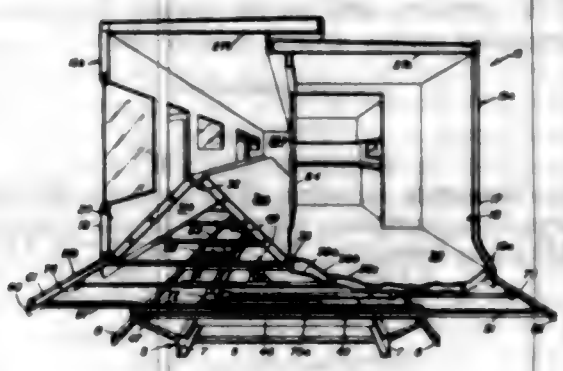
the canopy so as to raise and lower the canopy responsive

upper end whereby opening and closing movements of said guillotine-type door are transmitted to said internal



door for opening and closing the latter, the opening movement of said internal door being in a direction away from material in the container.

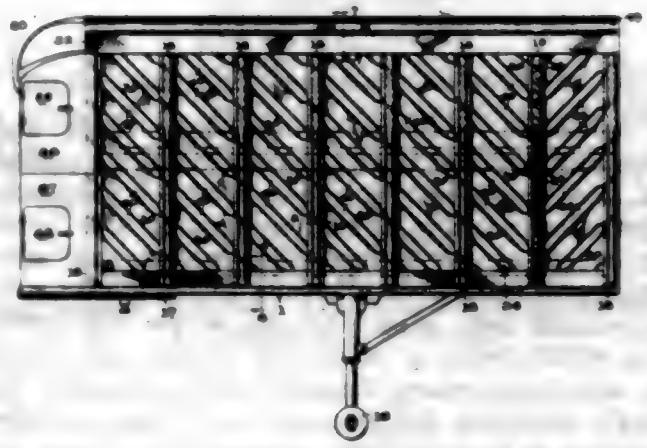
2,901,282
TRAILER CONSTRUCTION
Archibald G. Meaker, Corona, Calif., assignor of forty percent to Stanley B. Meaker, Arlington, Calif.
Application January 15, 1957, Serial No. 634,385
3 Claims. (Cl. 296—23)



3. In a laterally expansible and contractible house trailer having a chassis and relatively laterally movable side portions and a laterally expansible and contractible floor, cantilever units carried by said chassis, each of said cantilever units comprising a pair of oppositely disposed, back-to-back positioned, parallel track members each of C-shaped cross section the free edges of each of which define a longitudinal slot, a slide member of channelled cross section disposed in each of said track members and having its channel opening towards the back portion of its carrying track member, a pair of slide blocks disposed in and slideable along said respective slots, means securing said respective slide blocks to said respective slide members, and floor joist means secured to said respective slide blocks for supporting said floor.

2,901,283
MONOCOQUE SEMI-TRAILER CONSTRUCTION
Conrad O. Curell, Highland Park, Ill., assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Application October 19, 1954, Serial No. 463,168
17 Claims. (Cl. 296—28)

1. In a vehicle body construction, the combination of a floor frame, a plurality of upright posts arranged in spaced relationship to each other on one side of and lengthwise of said floor frame, each of said posts including an inner flanged portion and an outer portion provided with panel receiving grooves on each side thereof, a plurality of diagonally arranged skin members secured to said posts and to said floor frame, said diagonally arranged skin members being arranged in successive groups, the diagonal arrangement of the skin members in one group being different from the diagonal arrangement of the skin members in an adjacent group so as to form a stressed skin side framework for the



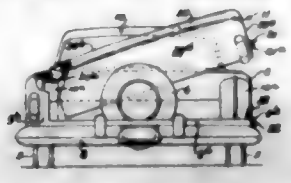
said vehicle body, each of said diagonal members including alternate wide flattened portions in contact with the said posts and narrow flanged portions extending between the said posts, and means dividing the interior of the vehicle body into a plurality of compartments, said means including an elongated deck supporting member secured to the inner flanged portions of said posts intermediate the tops and bottoms thereof, said deck supporting member also being provided with a channel-shaped opening for receiving panel members therein.

2,901,284
ADJUSTABLE LEAF SPRING ASSEMBLY FOR VEHICLE BODY MOUNTING
Ancel S. Page, Portland, Oreg.
Application February 24, 1958, Serial No. 716,932
2 Claims. (Cl. 296—35)

2. In a vehicle having a main frame and a body supported on said frame, means for connecting said body to said frame, said means including a transversely-extending, upwardly-bowed leaf spring, a pair of stationary housings for the ends of said spring mounted on opposite sides of said main frame respectively, a spring-supporting bearing plate in each housing, said spring ends slidable longitudinally to a limited extent on said plates, said body mounted on said spring, a downwardly-bowed leaf spring located below said first mentioned spring and in the same vertical plane with said first mentioned spring, the ends of said downwardly-bowed leaf spring located in said housings respectively and similarly bearing against the undersides of said bearing plates, and clamping means connecting the oppositely-bowed portions of said springs and exerting a constant force tending to pull said springs closer together, whereby said downwardly-bowed spring will act to restrict the vibration of said upper spring and therewith of said body.

straining means when said dog bolt is in dogging position, and being disposed on the other side of said retype door and to said internal door at a point below said

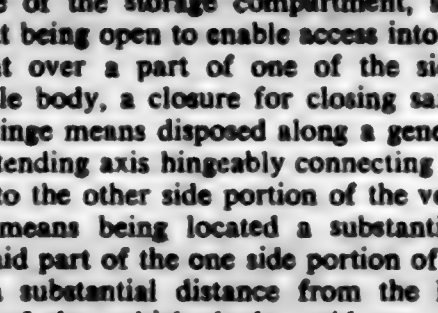
2,901,285
VEHICLE LUGGAGE COMPARTMENT
Brooks Walker, San Francisco, Calif.
Continuation of application Serial No. 332,627, January 22, 1953. This application November 5, 1958, Serial No. 772,033
9 Claims. (Cl. 296—37)



9. A vehicle body having passenger space and a storage compartment located rearwardly of the passenger space, said vehicle body including generally longitudinally extending laterally spaced upstanding side portions at each side of the storage compartment, said storage compartment being open to enable access into the storage compartment over a part of one of the side portions of the vehicle body, a closure for closing said compartment, and hinge means disposed along a generally longitudinally extending axis hingeably connecting one side of the closure to the other side portion of the vehicle body, said hinge means being located a substantial distance above the said part of the one side portion of the vehicle body and a substantial distance from the longitudinal center line of the vehicle body, said one side of the closure being movable without substantially increasing the width of the vehicle body at the closure as measured from the longitudinal center line of the vehicle body to the said other side portion thereof when the closure is fully open, the other side of the closure including another part of the said one side portion of the vehicle body, said another part of the said one side of the vehicle body having the lower edge portion thereof disposed a substantial distance below the hinge means when the closure is closed.

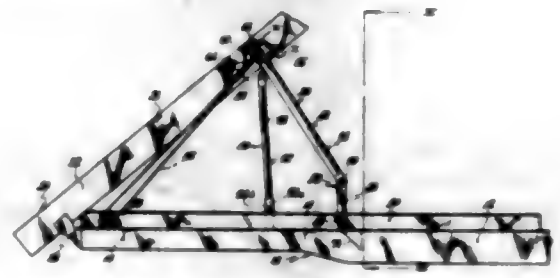
2,901,286
MECHANICALLY OPERABLE COVER AND RACK FOR TRUCKS AND SIMILAR VEHICLES
William H. Harris, San Antonio, Tex.
Application January 10, 1958, Serial No. 708,279
5 Claims. (Cl. 296—100)

1. The combination, with a truck bed, of a cover structure for said bed, comprising: a rack assembly extending upwardly from the truck bed; a canopy vertically slidable upon said assembly; and means for raising and lowering said canopy, said rack assembly including rectangularly spaced posts, the canopy having correspondingly spaced openings through which the posts extend, said rack assembly further including a rectangular, horizontal rein-



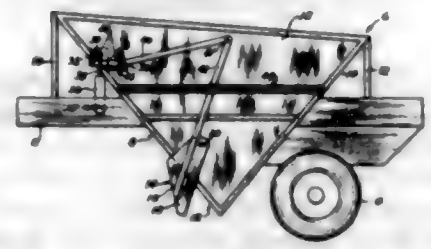
forcing frame disposed above the canopy and connected at its several corners rigidly to the several posts, said means for raising and lowering the canopy comprising a shaft journalled in the canopy and extending longitudinally and centrally thereof, cables coiled at one end about the shaft, and pulley means on the canopy and posts about which the cables are trained intermediate their ends, said cables being connected at their other ends to the canopy so as to raise and lower the canopy responsive to rotation of the shaft in respectively opposite directions.

2,901,287
HOISTING MECHANISM FOR TRUCK BEDS
Willis D. Risley, Sterling, Kans.
Application July 19, 1954, Serial No. 444,186
4 Claims. (Cl. 298—19)



1. In a vehicle having a frame, a pivot connecting a bed frame to said vehicle frame along a horizontal axis, track means secured along said bed frame extending perpendicular to said pivot axis; and means for tilting said bed frame with respect to said vehicle frame, said means comprising a first unit having a link pivotally connected to the vehicle frame at a point spaced from said pivot and an arm pivotally connected to the link by a pin and having track-engaging means, and a second unit comprising an extensible member having one end thereof pivotally connected to said frame intermediate said pivot and said point, the other end of said extensible member being pivotally connected to the arm between the pin and the track-engaging means, stop means limiting the retraction of said extensible member, and power means for drawing the track-engaging means toward said pivot.

2,901,288
HOPPER TRUCK
Mark J. Gilpatrick, Riverton, Wyo., assignor to Gilpatrick Construction Company, Riverton, Wyo., a partnership
Application December 23, 1955, Serial No. 555,138
2 Claims. (Cl. 298—30)



1. A hopper vehicle comprising a body having spaced parallel side walls and downwardly converging front and rear walls, the front wall terminating at its lower end above the lower edge of the rear wall to provide a dump opening, a gate for said opening comprising a flat plate and side plates projecting towards the rear of said body from the side edges of said flat plate, each of said side plates having a part overlying a part of said side walls, a pivotal connection between each side wall of said body and the adjacent side wall of the plate, said pivotal connections being transversely aligned and spaced rearwardly of the front wall of the vehicle and above the bottom edge of the dump opening, a gate operating arm rigidly connected at its lower end to the plate and extending upwardly therefrom, a lever arm pivotally mounted at its one end on the body above the gate, a link pivotally connected at its ends to the opposite end of the lever arm and to the upper end of the gate operating arm, and means for rotating said lever about said pivot on said body so as to cause said link to operate on said lever arm so as to move said gate between open or closed position.

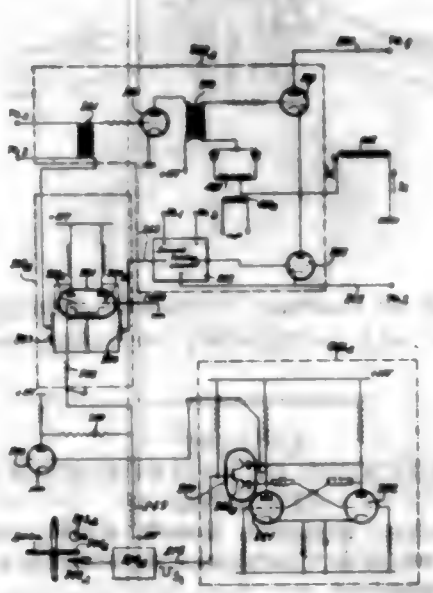
portion being formed concaved in respect to the wall of

ling said shaft, a sleeve member retaining said bearing

2,901,289
AUTOMATIC MACHINE FOR THE MANUFACTURE OF BRUSHES

Jean P. P. Martin, Beauvais, France, assignor to La Brosse & J. Dupont Reunis (Societe Anonyme), Paris, France, a company of France

Application September 27, 1954, Serial No. 458,630
Claims priority, application France October 3, 1953
6 Claims. (Cl. 300—9)



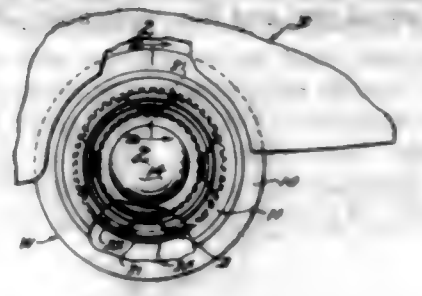
1. In a rapid response device permitting an easy adjustment of the operating time for moving an operating member in a to and fro motion; the combination comprising a bell shaped magnet provided with a hollow core coaxially disposed in said bell magnet and terminating in a pole piece forming with the internal wall of the said bell magnet an annular air-gap, a cylindrical moving coil arranged in said air-gap to move coaxially therein; stopping devices adapted for locating said moving coil in an innermost and an outermost position respectively with respect to said bell magnet; an operating member, means mechanically connecting said moving coil with said operating member; guiding means for guiding said operating member along the common axis of said bell magnet and said coil; means for emitting an electrical impulse each time said operating member is to be displaced; a three-phase current source; a pair of gas-filled rectifier tubes supplied from two different phases of said three phase current source and having their outputs connected in parallel to said moving coil and arranged to feed said coil with direct current of reverse polarities; and electronic means operated by said electrical impulses for simultaneously applying to the control grids of said rectifier tubes a potential igniting the first one of said rectifier tubes and putting the second tube of said pair of tubes to cut-off, or conversely igniting the second tube of said pair of tubes and putting the first one to cut-off, whereby said moving coil is permanently traversed by a direct current whose polarity is reversed at each impulse and is rapidly moved, with the operating member connected therewith, from its innermost position to its outermost position and from its outermost position to its innermost position.

2,901,290
WHEEL MOUNTED VIBRATION DAMPER

Alan G. Loofbourrow, Bloomfield Hills, Mich., assignor to Chrysler Corporation, Highland Park, Mich., a corporation of Delaware

Application April 25, 1958, Serial No. 730,870
7 Claims. (Cl. 301—5)

1. In combination, a wheel disc having a rim portion seating an inflatable tire wherein an air chamber is provided between said wheel rim and said tire, and a vibration damper mounted on said wheel rim within said air chamber, said vibration damper comprising a resilient means mounted on said rim, inertia means supported on said resilient means for vibratory movement within said



air chamber and friction means mounted on said rim and arranged to damp the movement of said inertia means.

2,901,291
WHEEL COVER

George Albert Lyon, Detroit, Mich.

Application September 16, 1954, Serial No. 456,366
8 Claims. (Cl. 301—37)

1. In a wheel structure including a tire rim having a generally radially facing flange, a cover for disposition at the outer side of the wheel having generally axially inwardly directed cover retaining fingers provided with generally radially extending short and stiff cover retaining terminal flanges, said flanges being divided into a plurality of sections having the adjacent edges thereof relatively axially offset and provided with corners cooperable with the tire rim flange to retain the cover against turning on the wheel.

2,901,292
TIRE TRIM

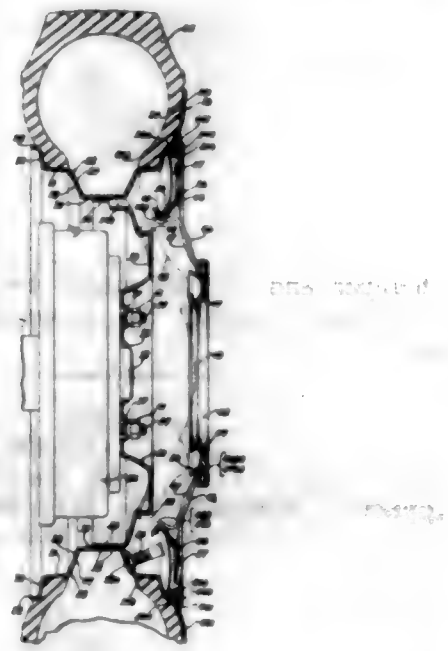
Edward L. Wood, Detroit, Mich., assignor, by direct and mesne assignments, to Gar Wood Industries, Inc., a corporation of Michigan

Application March 15, 1956, Serial No. 571,759
6 Claims. (Cl. 301—37)

1. Tire trim for the tires of vehicle wheels comprising an annular resilient tire trim ring of a color other than the color of the tire composed of an outer annular wall portion and a relatively narrow annular inner bead portion of substantial thickness in respect to said wall portion having an axially inwardly facing groove therein formed to permit said bead portion to firmly engage and overlie the lip of the wheel rim when telescoped thereonto, the said bead portion and said groove thereon being formed in angular relationship with respect to said wall portion, the said tire trim being annularly grooved at the juncture between said wall and bead portion to provide flexibility thereat and permit rotation of said bead portion in respect to said wall portion when said bead portion is telescoped onto the lip of said rim, and the said wall

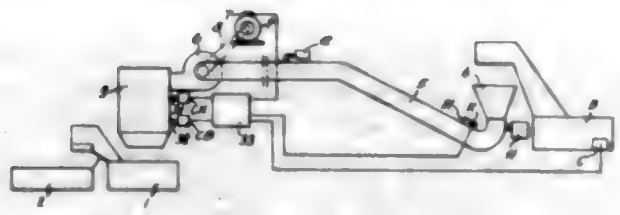
about which the cables are trained intermediate their ends, said cables being connected at their other ends to as to cause said link to operate on said lever arm so as to move said gate between open or closed position.

portion being formed concaved in respect to the wall of the vehicle tire and conformable thereto responsive to the telescoping of the bead portion of the tire trim onto the lip of the wheel rim and the application of axial pressure



thereagainst, and means adapted to conform to and overlie the bead portion of said tire trim constantly urging the said bead portion axially onto the lip of said wheel rim.

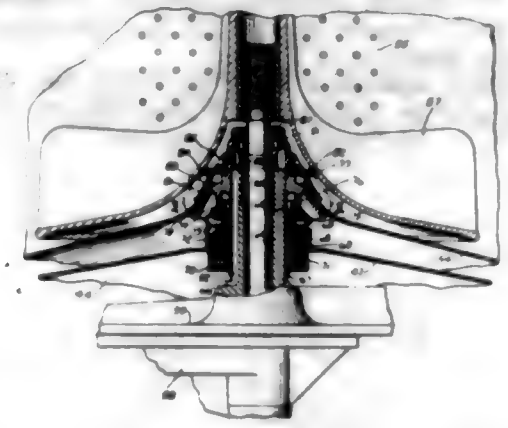
2,901,293
PNEUMATIC INSTALLATION FOR CONVEYING GREASY WOOL
Edmond Jeanne, Auvers-sur-Oise, France
Application October 9, 1957, Serial No. 689,173
Claims priority, application France October 18, 1956
12 Claims. (Cl. 302—20)



1. A pneumatic installation for conveying greasy wool from a first point to a second point to present the wool suitable for processing which comprises, in combination, an elongated conduit having smooth internal walls extending from an inlet end to an outlet end, means for inducing an air stream in said conduit to convey the wool from said inlet end to said outlet end, and means for introducing a liquid having at least a partial solvent action for wool grease at least adjacent the inlet end of said conduit and being effective to introduce said liquid substantially along said smooth walls, said liquid introducing means leaving the interior of said conduit free from obstruction, whereby free flow of the wool across the entire cross section of said conduit is permitted at all times during introduction of said liquid.

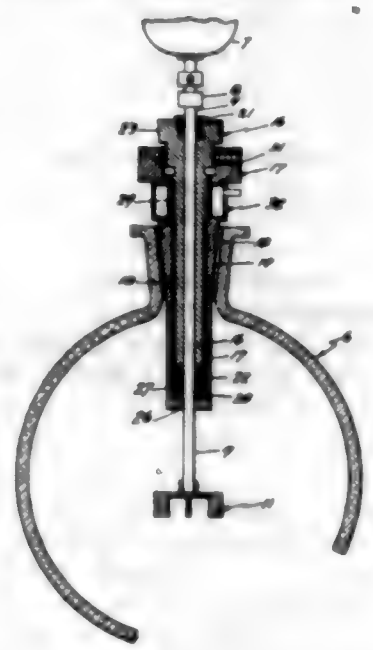
2,901,294
TUB SEAL AND BEARING STRUCTURE
Thomas R. Smith, Newton, Iowa, assignor to The Maytag Company, Newton, Iowa, a corporation of Delaware
Application May 7, 1956, Serial No. 583,176
6 Claims. (Cl. 308—36.1)

1. A bearing assembly comprising, a support member provided with a flanged opening therein, a revoluble shaft protruding through said opening, a porous bearing journalling said shaft, a sleeve member retaining said bearing in concentric relationship therewith, and means flexibly mounting said sleeve member in said flanged opening



and defining an oil reservoir below said opening and said sleeve member and contiguously encircling said porous bearing.

2,901,295
VACUUM PACKING GLAND FOR HIGH SPEED STIRRING
Robert R. Becker, Redondo Beach, Calif., assignor to American Potash & Chemical Corporation, a corporation of Delaware
Application September 12, 1958, Serial No. 760,709
1 Claim. (Cl. 308—36.1)



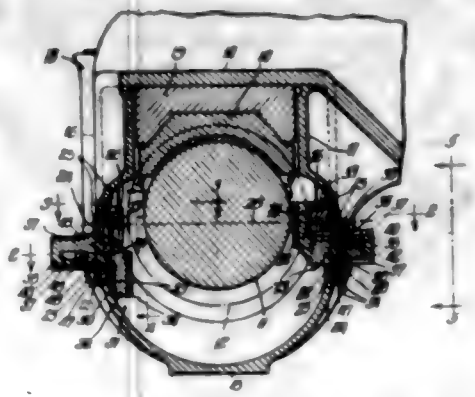
A shaft seal and a bearing support for a high speed rotatable stirring shaft consisting of a first shaft support means comprising an elongated tubular shaft support member having a first bearing and a second bearing therein, said bearings being spaced apart and being at opposite ends of the shaft support means to support the shaft for rotation, a second shaft support means comprising an elongated tubular casing surrounding the first shaft support means and having a first end through which said shaft extends, said first end being cooperatively adjacent to and spaced from an adjacent end on the first shaft support means, packing between said first end and said adjacent end, a screw thread connection between said first and second shaft support means for moving the first shaft support means longitudinally of the second shaft support means, to compress said packing, the end of said first shaft support means and said second bearing being V-shaped in section to engage the packing and force the packing to engage the shaft positively upon movement of the first shaft support means longitudinally of the second shaft support means and of the second bearing toward the first end on the second shaft support means.

sleeve that is longitudinally split, that is normally of an corresponding one of said mounting seats, to thereby sup-

2,901,296
MEANS FOR CENTERING RAILWAY CAR AXLE JOURNALS

Theodore J. Sweger, Riverdale, Ill., assignor to Illinois Railway Equipment Company, Chicago, Ill., a corporation of Illinois

Application November 25, 1957, Serial No. 698,471
15 Claims. (Cl. 308—41)

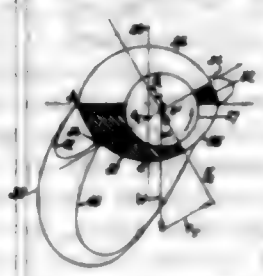


1. In combination with a railway car journal box having therein an axle journal provided with an end collar and having its side walls spaced from said journal further than said end collar extends therefrom, a journal centering guide interposed between a side wall of said journal box and said journal and in operative position extending inwardly inside of the periphery of said end collar and movable to a retracted position outside the periphery of said end collar, and operating means connected to said journal centering guide and extending through said side wall and operable exteriorly of said journal box for shifting said journal centering guide between said operative and retracted positions.

2,901,297
BEARINGS

Beno Sternlicht, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Application July 16, 1956, Serial No. 598,059
7 Claims. (Cl. 308—121)



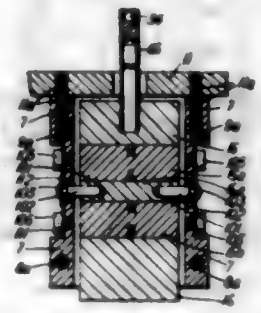
1. An elliptical bearing for a cylindrical journal, the longer axis of the bearing extending transverse to the direction of the load on the bearing at an angle so large that one bearing sector carries substantially the entire load, said one bearing sector having a groove in the surface thereof and extending axially of the bearing in a region of high pressure due to eccentricity of the journal in rotation under load, said groove being so located that the sum of the horizontal hydrodynamic forces on the bearing is zero and the radial force in the direction of the shaft center and center of said bearing sector carrying the load is maximum.

2,901,298
PIVOTAL SUPPORTS

Rupert Evan Howard Carpenter, South Croydon, England

Application August 23, 1957, Serial No. 679,971
Claims priority, application Great Britain
August 31, 1956
12 Claims. (Cl. 308—159)

1. A pivotal supporting system comprising an angularly movable part such as the armature of a polarized relay and having a pair of supporting surfaces, one on each side thereof, two coaxial spaced bearings having a pair of opposed surfaces cooperating with the surfaces of the part to restrain movements thereof transverse to the axes of the bearings, the surfaces of at least one pair being tapered, two supports at opposite sides of said part, each of said bearings being fixed rigidly to a corresponding one of said supports, a frame on which said supports are mounted, and clamping means rigidly clamping said supports against said frame through engaging surfaces on

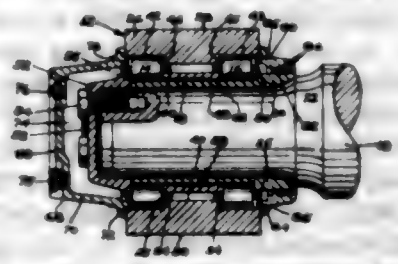


said supports and said frame, said supports being movable, on removal of said clamping means, over said surfaces of said frame so as to permit said bearings to be shifted in directions transverse to the axis of said bearings, at least one of said supports comprising a resilient plate clamped in position by said clamping means so that the resilience of said plate causes the bearing fixed to said plate to be continuously pressed in an axial direction to maintain accurately the position of the axis of said part through said tapered surfaces.

2,901,299
JOURNAL BOX

Raymond H. Cramer, deceased, late of Bloomfield, N.J., by Eleanor Cramer, Newark, and Ruth Gertler, Summit, N.J., executrices, assignors to General Motors Corporation, Detroit, Mich., a corporation of Delaware

Application April 4, 1956, Serial No. 576,153
6 Claims. (Cl. 308—180)



1. In a journal box, a housing for supporting a load and having cylindrical raceways and a pair of spaced annular shoulders, a rotatable axis extending into the housing, a pair of axially spaced circumferentially disposed sets of rollers respectively engageable with the raceways and with said shoulders, said sets of rollers receiving the axle for antifrictional rotation, means on the axle providing a pair of spaced roller-engageable shoulders, the shoulders on the axle and the housing shoulders cooperatively providing for a predetermined extent of endwise axle movement in the housing, an axially shiftable roller-guiding sleeve journalled about the axle between the sets of rollers, said roller-guiding sleeve being engageable with the roller ends to maintain the rollers axially parallel, and said sleeve having a length exceeding the distance between the housing shoulders.

2,901,300
CONTROLLED CLEARANCE CARBON BEARINGS

Myrtice C. Burr, St. Marys, Pa., assignor, by mesne assignments, to Pure Carbon Company, Inc., St. Marys, Pa., a corporation of Pennsylvania

Application April 25, 1956, Serial No. 580,552
4 Claims. (Cl. 308—238)

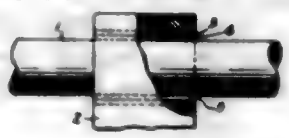
1. A bearing assembly comprising a shaft, a tubular outer shell and an inner one-piece bonded carbon liner

porting frame, links connecting the frame to each of the between said carrier and said spring support, and means

protruding through said opening, a porous bearing journal-

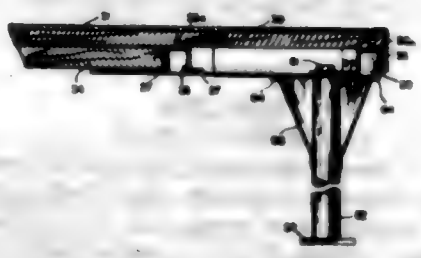
second shaft support means and of the second bearing toward the first end on the second shaft support means.

sleeve that is longitudinally split, that is normally of an external diameter slightly greater than the internal diameter of said shell whereby said sleeve is prestressed upon insertion into said shell and exerts a radial expansive thrust thereon, said sleeve having a coefficient



of thermal expansion that is low with respect to that of both said shaft and said shell and having sufficient resiliency to expand circumferentially with said shell and maintain a bearing clearance throughout the range of temperatures to which the bearing may be subjected in service.

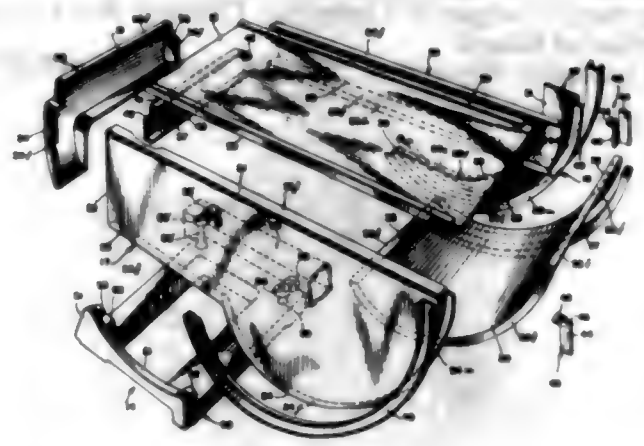
2,901,301
WORK BENCH INCLUDING LEG AND FRAME CONSTRUCTION
Peter W. R. Johnson, Wilton, Conn., assignor to Johnson Products Incorporated, Wilton, Conn., a corporation of Connecticut
Application February 4, 1958, Serial No. 713,260
7 Claims. (Cl. 311—1)



2. A work bench frame for use with a work top panel and selectively an additional reinforcing panel comprising a substantially rectangular frame member, a plurality of legs secured to said frame member, each of said legs being provided at a part adjacent to said work top panel with a cone-shaped support member wherein the base of said cone fixedly engages said frame member, a pair of supporting ribs secured to opposite sides of said frame member, each of said supporting ribs having a hat-shaped cross-section whereby the work top panel is supported on the top of said supporting ribs and an additional reinforcing panel may be supported by the opposing brims of said supporting ribs and upbearing said work top panel, and means secured to said frame member for clamping at least two edges of said work top panel to said work bench frame.

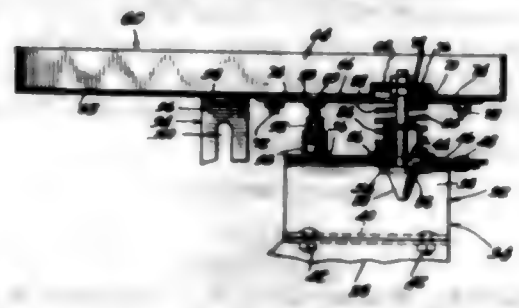
2,901,302
TILTABLE TABLE
Arthur J. Kinzer, Brookfield, Wis., assignor to General Electric Company, a corporation of New York
Application July 3, 1956, Serial No. 595,773
9 Claims. (Cl. 311—6)

1. A tilting table structure comprising means forming a generally rectangular support frame embodying spaced apart opposite side members providing upper edge portions and transverse members interconnecting and supporting the side members in spaced relation, bracket means mounted on and at the opposite ends of said side members and presenting mounting seats above said upper edge portions thereof, a rectangular table top panel, and elongated strengthening members secured at and along the opposite side edges of said panel, the opposite ends of said strengthening members being secured each in a corresponding one of said mounting seats, to thereby support the panel and said edge strengthening members in



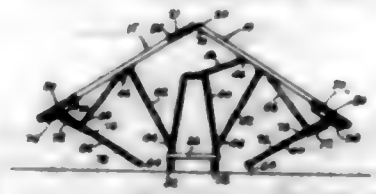
position spaced above the upper edge portions of a said side member.

2,901,303
AUTO MECHANIC'S TRAY
Arthur B. Anderson, Chicago, Ill.
Application January 4, 1955, Serial No. 479,764
5 Claims. (Cl. 311—21)



2. A supporting tray for use with an automobile hood latching mechanism including an apertured horizontal plate and a latch member biased to traverse at least a portion of the aperture; and comprising a supporting member, an attachment member depending from said supporting member and having shoulder means at the lower end thereof for cooperation with the latch member of the hood latching mechanism when passed through the aperture in the horizontal plate, spring means on the attachment member normally maintaining the supporting tray elevated above the horizontal plate of the hood latching mechanism, and adjustable leveling means depending from said tray for abutment with an adjacent portion of the automobile to initially level the tray with respect thereto and cooperate with said attachment member in supporting the tray in leveled position.

2,901,304
FOLDING SECTIONAL TABLE
Albert J. Fike, Pacific Palisades, Calif.
Application June 2, 1958, Serial No. 739,219
1 Claim. (Cl. 311—92)



A folding all-purpose table comprising two table tops, hinges connecting the same, a wheeled central sup-

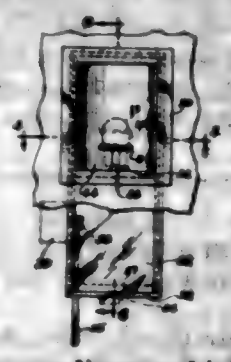
prises in combination, a cabinet having opposite side mounted upon said drum, making an acute angle with

movable part such as the armature of a polarized relay

outer shell and an inner one-piece bonded carbon liner

porting frame, links connecting the frame to each of the tables tops and an equalizer bar connecting the top of the frame to one of the table tops.

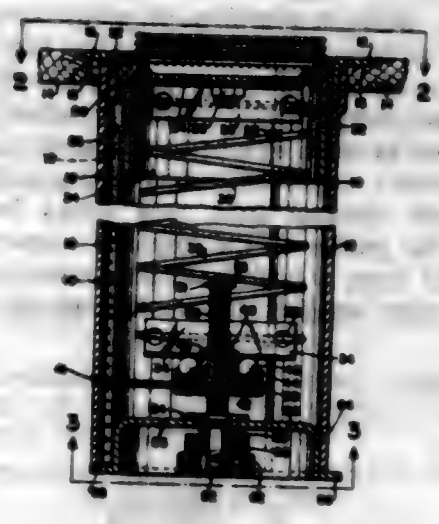
2,901,305
DOOR ASSEMBLY IN A VENDING MACHINE FOR FROZEN CONFECTIONS
Joseph R. Salerno, Chicago, Ill.
Application August 30, 1954, Serial No. 452,818
9 Claims. (Cl. 312—36)



1. In an automatic vending machine having a housing with a delivery opening to which the article being dispensed is carried by an arm on the machine to a delivery position for removal by the purchaser, means for minimizing communication between the delivery opening and the interior of the housing and to prevent access to the interior of the housing through the outlet opening, comprising an outer door dimensioned to extend vertically and laterally beyond the edges of the delivery opening and mounted within the wall of the housing for shifting movement between a raised or closed position blocking the opening and a lowered or open position in which the outer door is substantially withdrawn from the opening, an inner door spaced inwardly from the outer door by an amount to enable the article delivered by the machine to be positioned therebetween in delivery position and which is mounted for shifting movement between a lowered or closed position blocking the opening and a raised or open position spaced from the base of the opening by an amount to permit the article to be displaced beyond the inner door to delivery position, means in the inner door aligned with the arm supporting the article in vending position to permit the inner door to be lowered beyond the arm to closed position with the article supported outwardly thereof, an operative connection between the outer door and the inner door for controlling movements of the inner door to closed and open positions respectively responsive to movements of the outer door to open and closed positions respectively, power operated means automatically responsive to movement of the article to be dispensed to delivery position for initiating the sequence of door opening and closing operations, and means for preventing displacement of the doors from closed position other than by operation of said power operated means.

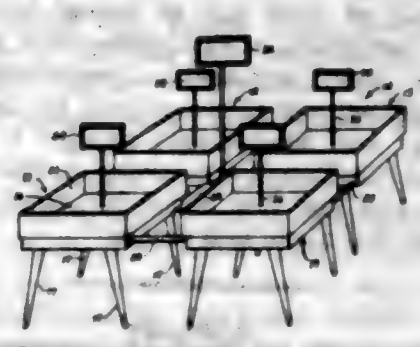
2,901,306
SELF LEVELING, STORING AND DISPENSING APPARATUS
Carl H. Larsen, Brooklyn, N.Y., assignor to American Machine & Foundry Company, a corporation of New Jersey
Application December 23, 1954, Serial No. 477,281
14 Claims. (Cl. 312—71)

1. A self-leveling, storing and dispensing apparatus comprising a tubular housing, vertically extending rib channels formed in said housing, a material supporting carrier mounted for up and down movement inside of said housing, radially extending arms extending from said carrier and coacting with said rib channels to prevent said carrier from rotating, a spring support mounted at the lower end of said tubular housing, a calibrated spring interposed between said carrier and said spring support, and means positioned under the lower end of said spring support to



permit the spring support to rotate as said carrier moves up and down.

2,901,307
DISPLAY STAND FOR WEARING APPAREL
Norman Moore, Jackson Heights, N.Y., assignor to S. Klein Department Stores, Inc., New York, N.Y., a corporation of New York
Application September 10, 1957, Serial No. 683,042
1 Claim. (Cl. 312—140.3)



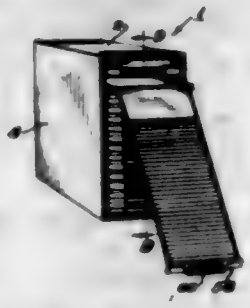
A sales display stand for merchandise that is made in different sizes, said stand comprising a plurality of tables, each of which has a top and side walls extending upwardly above the top and forming with the table top a shallow bin for merchandise, the different tables being spaced from one another to leave chasms between the outside faces of the confronting side walls of adjacent tables, an obstruction bar extending between adjacent tables and across one end of the chasm in position to prevent customers from entering the chasm, a holder connected to at least one of the tables for supporting a display which advertises the merchandise, and in which the tables include a cluster of four tables in two rows of two tables each with the two contiguous sides of each table along the outside edge of the cluster and with the tables of each row separated from the corresponding tables of the other row in a manner similar to that in which the tables of each row are spaced from each other, and in which the cluster of tables has a center platform at the inner ends of all of the chasms for supporting an advertising display referring to the items on all of the tables of the cluster.

2,901,308
RECORD CARD CABINET HAVING MOVABLE CARD-CARRYING DRAWERS
Charles E. Attwood, Lake Worth, Fla., assignor to Acme Visible Records, Inc., Crozet, Va., a corporation of Delaware
Application October 10, 1956, Serial No. 615,048
2 Claims. (Cl. 312—303)

1. A record card cabinet for holding a plurality of superimposed record card-carrying drawers which com-

said strengthening members being secured each in a hinges connecting the same, a wheeled central sup-

prises in combination, a cabinet having opposite side walls, a rear wall, a top and bottom wall and an open front, a supporting web carried upon each opposite side wall in inwardly spaced relationship to the inner face of said side walls, a plurality of guides carried by said webs, pairs of runner bars, each runner bar of each pair comprising a channel iron comprising a web, a relatively narrow upper flange and a relatively wide lower flange, straps carried by each web of each runner bar, said straps having opposite edges extending above and below the web of each channel iron, said straps being slidably carried by the guides on the opposite supporting webs to support said bars, a transverse bar connecting each pair of runner bars together in parallel spaced relationship,



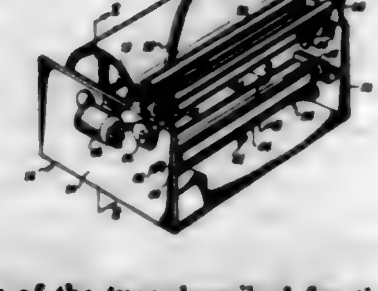
lugs carried by said straps abutting said supporting web and limiting movement of said runner bars relative to said supporting webs, a card-carrying tray positioned upon the relatively wide flanges of said runner bars and movable with respect to each pair of runner bars in plane-parallel relationship thereto, stop means upon the forward ends of each pair of runner bars for causing concurrent movement of said runner bars and tray when said tray is pulled outwardly a predetermined distance from said cabinet and pintles carried by the rear portion of each tray and substantially parallel to the plane of the tray and substantially transverse to the length thereof engageable with said stop means to permit pivotal movement of each tray about said pintles.

2,901,309

RECORDER FOR PRODUCING FERROGRAPHIC IMAGES

Ralph B. Atkinson, Beverly Hills, and Steven G. Ellis, Van Nuys, Calif.; said Ellis assignor to said Atkinson

Application January 3, 1955, Serial No. 479,486
19 Claims. (Cl. 346—74)



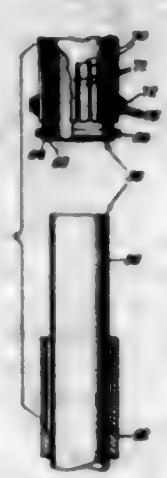
1. A device of the type described for the magnetic recording of images, which includes: means for supplying a sheet of magnetizable record material; a recording bar of high permeability and of a size to extend across one dimension of said sheet; coil means for variably magnetizing said recording bar a rotatable drum adjacent said recording bar; a helicoid of high permeability resiliently mounted upon said drum, making an acute angle with the surface of said drum, said helicoid being rotatable with said drum about the axis of said helicoid, and being adapted to make a resilient wiping contact with said bar to wipe thereacross, and being formed so that said wiping contact is in the general direction from the base of said helicoid toward the tip thereof; guiding means adapted to advance said sheet between said bar and said helicoid in a direction generally perpendicular to said bar and while said helicoid is rotating the combined resiliencies of said helicoid produced by its acute-angle mounting and its resilient mounting providing proper pressure on said sheet of record material; and driving means connected to said helicoid and to said guiding means and acting to rotate said helicoid at a speed having a predetermined correlation with the rate of advance of said sheet.

2,901,310

MECHANISM FOR STRIPPING AN ELASTIC BAND FROM AN END PORTION OF A BAND-RECEIVING TUBE

Carl W. Mott, Lake Ozark, Mo., assignor, by mesne assignments, to The Kendall Company, Boston, Mass., a corporation of Massachusetts

Original application November 20, 1948, Serial No. 61,224, now Patent No. 2,709,836, dated June 7, 1955. Divided and this application October 11, 1954, Serial No. 461,589
2 Claims. (Cl. 29—235)



1. In a mechanism for stripping an elastomeric band from an end portion of a band receiving tube onto which such band is grippingly mounted in an expanded attenuated and highly stressed condition causing such band to cling to such tube portion in the respect of resisting sliding movement thereon, a band stripper tube telescopically disposed upon the band receiving tube, said stripping tube having a stripping end portion disposed retractively from the band receiving end portion of the receiving tube when such stripping tube is in an axially retracted position, said stripping end portion containing a plurality of circumferentially spaced axially extending notches to cause the existence of axially extending stripping fingers therebetween with end portions engageable with the band to force it endwise from the receiving tube attendant to axial advancement of the stripper tube, and means exerting radially inward force on said fingers and pressing their end portions firmly against the receiving tube to maintain a zero clearance between said tube and fingers to thereby obviate wedging of the band between such tube and the fingers when the stripper tube is advanced.

end of said tubular housing, a calibrated spring interposed

1. A record card cabinet for holding a plurality of superimposed record card-carrying drawers which com-

CHEMICAL

2,901,311
PROCESS FOR THE PRINTING OF FIBROUS TEXTILE MATERIAL MADE OF POLYESTER FIBRES

Joseph Nüsslein, Frankfurt am Main, Carl Koch, Hofheim (Taunus), and Hugo Bartl, Frankfurt am Main, Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Application February 28, 1956
Serial No. 568,180
Claims priority, application Germany March 4, 1955
12 Claims. (Cl. 8—62)

1. A process for printing textile material comprising a member of the group consisting of cellulose triacetate fibers and linear aromatic dicarboxylic acid polyester fibers with a dispersion dyestuff which comprises printing said material with said dyestuff and a compound of the group consisting of (A) a phosphoric acid ester of a polyethylene glycol, (B) a phosphoric acid ester of a condensation product of a polyethylene glycol and an aliphatic monohydric alcohol having from twelve to eighteen carbon atoms, and (C) a phosphoric acid ester of a polyethylene glycol that is esterified with an aliphatic carboxylic acid having from twelve to eighteen carbon atoms, drying the printed material and subjecting it to a temperature of about 140 to about 220° C.

2,901,312
PROCESS UTILIZING FLUIDIZED BEDS IN THE DYEING OF FABRICS, YARNS AND THE LIKE

Francis George Andus, Cheadle Hulme, England, assignor to The British Rayon Research Association, Manchester, England, a British association

No Drawing. Application May 3, 1956
Serial No. 582,335
Claims priority, application Great Britain May 7, 1955
7 Claims. (Cl. 8—151)

1. A method of dyeing filaments, fibres, threads, yarns, films, and sheets made of a synthetic fibrous material, comprising the steps of passing a synthetic fibrous material adapted to be dyed into a dye bath containing a dyeing assistant, the dye of said dye bath being adapted to be fixed at a predetermined temperature; padding said dye onto said synthetic fibrous material; and passing the thus treated synthetic fibrous material containing said dye through a bed of hot, solid, discrete particles, while subjecting the bed to an upward gaseous current, the size and weight of the particles and the velocity and nature of the current being so chosen that the force exerted by the current is sufficient to counter-balance the gravitational force on free particles and to expand the bed thus allowing movement of the particles but is insufficient to convert the bed into a unidirectional stream of moving particles, the temperature of the bed being substantially at said predetermined temperature and the rate at which said treated synthetic fibrous material is passed therethrough, being adjusted to fix said dye into said synthetic fibrous material.

2,901,313
SEPARATION OF PLUTONIUM FROM WATER INSOLUBLE FLUORIDES DERIVED FROM NITRATE SOLUTIONS OF PLUTONIUM, URANIUM AND FISSION PRODUCTS

Alfred Gavin Maddock, Didcot, and Fred Smith, Birmingham, England, assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application March 5, 1948
Serial No. 19,638
6 Claims. (Cl. 23—14.5)

2. A method of separating plutonium from a mixture of relatively water insoluble fluorides containing plutonium in not higher than the tetravalent state which comprises treating the mixture with 40 to 100% saturated aqueous nitrate solution of at least one of a group consisting of aluminium nitrate, ferric nitrate and manganous nitrate to selectively dissolve the plutonium and removing the solution formed.

2,901,314
REMOVAL OF URANIUM FROM ORGANIC LIQUIDS

Spears P. Vavalides, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application March 22, 1950
Serial No. 151,301
15 Claims. (Cl. 23—14.5)

1. A process for removing uranium values from a neutral organic liquid which comprises intimately contacting said liquid with a comminuted solid alkaline earth hydroxide and thereafter separating the resulting uranium-containing solid phase from the substantially uranium-free liquid phase.

2,901,315
PROCESS OF OXIDIZING PLUTONIUM

Charles D. Coryell, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application July 31, 1944
Serial No. 547,509
1 Claim. (Cl. 23—14.5)

A process of oxidizing plutonium in combined soluble form from a valence state selected from the group consisting of +3 and +4 to a +6 valence state which comprises treating the plutonium in combined soluble form and in a valence state selected from the group consisting of +3 and +4 with a solution above 0.01 molar in argentic ion, above 1.1 molar in nitric acid and above 0.02 molar in argentous ion.

2,901,316
HYDRATED BISMUTH ALUMINATE

Jacques Rafael Roques, Paris, France, assignor to "Etablissements Roques" (Societe Anonyme), Paris, France, a corporation of France

No Drawing. Application October 18, 1954
Serial No. 463,027
3 Claims. (Cl. 23—52)

1. As a new composition of matter a hydrated bismuth aluminate corresponding to the formula

$$Bi_2(Al_2O_4)_3.10H_2O$$

2,901,317
ANTI-CAKING AGENT FOR AMMONIUM NITRATE

Paul O. Marti, Jr., Munster, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application December 31, 1952
Serial No. 329,146
11 Claims. (Cl. 23—103)

1. A particulate composition consisting of ammonium nitrate particles coated with a comminuted copper oxide, which coated particles are characterized by substantially free-flowability at atmospheric humidity and by a storage stability substantially that of dynamite grade ammonium nitrate.

relation between the electrical precipitation zone and the

which comprises cooling a mixture containing methane

2,901,318
POTASSIUM MONOPERSULFATE HYDRATE AND ITS PRODUCTION

Alfred A. D'Addieco, Grand Island, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application October 31, 1957
Serial No. 693,522
1 Claim. (Cl. 23—114)

Potassium monopersulfate monohydrate.

2,901,319
PREPARATION OF POTASSIUM MONOPERSULFATE

Alfred A. D'Addieco, Grand Island, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

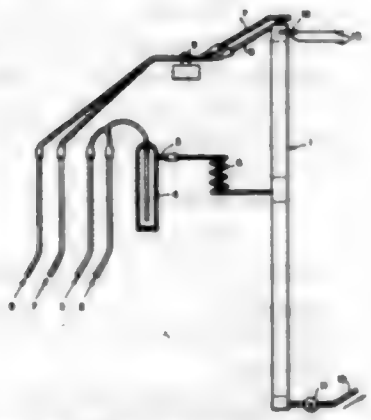
No Drawing. Application October 31, 1957
Serial No. 693,554
8 Claims. (Cl. 23—114)

1. The method of preparing a potassium monopersulfate product containing at least 8.9% active oxygen comprising reacting a monopersulfuric acid solution containing at least 25% H_2SO_5 and an amount of sulfuric acid such that the mole ratio of H_2SO_5:H_2SO_4 is in the range 2 to 10, with an amount of a potassium compound of the group consisting of the carbonate, bicarbonate and hydroxide which will precipitate directly a potassium monopersulfate product having an active oxygen content of at least 8.9% and separating said product from the resulting mixture.

2,901,320
PROCESS FOR FORMING NITROGEN OXIDES

John F. Haller, Mount Carmel, Conn., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

Application August 18, 1955, Serial No. 529,234
9 Claims. (Cl. 23—163)



1. A process for the production of nitrogen oxides which comprises confining in one portion of a reaction space a make charge of a gaseous mixture consisting essentially of nitrogen and oxygen, confining in another portion of the reaction space a detonation charge of a material which will detonate upon ignition, igniting the detonation charge, impinging the resulting detonation wave against the make charge whereby the nitrogen and oxygen of the make charge are caused to react.

2,901,321
TWO-STEP METHOD OF MAKING CALCIUM OXIDE FROM CALCIUM SULFATE

Knud S. Horn, Dunsmuir, Argentina

No Drawing. Application June 28, 1956
Serial No. 592,478
3 Claims. (Cl. 23—186)

1. A two-step process of desulfurizing calcium sulfate to produce calcium oxide substantially free of sulfur comprising simultaneously heating and grinding calcium sulfate in the absence of a reducing agent therefor at a temperature in the range from about 1000° F. to about 2000° F. to reduce the sulfur content thereof approximately in half without incipient fusion taking place and to form ground particles free from a coating of protective eutectoid and then heating the resulting ground particles at a temperature in the range from about 2100° F. to about 2700° F. to form calcium oxide having a sulfur content less than about 0.1% by weight.

2,901,322
METHOD AND COMPOSITION FOR PRODUCING BORON TRIHALIDES

Norman T. Sprouse, Whittier, and Glenn H. McIntyre, Jr., Monterey Park, Calif., assignors to United States Borax & Chemical Corporation, Los Angeles, Calif., a corporation of Nevada

No Drawing. Application September 9, 1957
Serial No. 682,575
6 Claims. (Cl. 23—205)

1. A solid reactant composition for continuous production of BCl_3 which comprises discrete granules, each granule consisting essentially of an inner core portion and an outer coating portion contiguous therewith, said inner core portion consisting essentially of an admixture of carbon and boric oxide and said outer coating consisting essentially of carbon.

2,901,323
PURIFICATION OF CRUDE AQUEOUS HYDROGEN PEROXIDE

Jerome W. Sprauer, Niagara Falls, N.Y., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

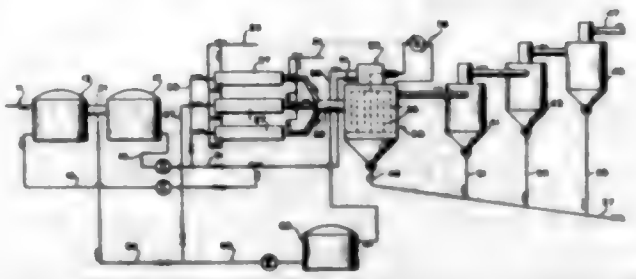
No Drawing. Application March 31, 1953
Serial No. 346,017
6 Claims. (Cl. 23—207)

1. In a process for producing hydrogen peroxide by alternately hydrogenating a solution of an alkyl anthraquinone in a water-immiscible solvent and oxidizing the resulting solution of an alkylanthrahydroquinone to regenerate said solution of an alkylanthraquinone for recycling after separating therefrom the hydrogen peroxide which is simultaneously formed, said hydrogen peroxide being separated in the form of a crude aqueous solution thereof containing from 10 to 50% H_2O_2 by weight, the improvement comprising extracting said crude solution with an inert hydrocarbon liquid having an atmospheric boiling point not exceeding 145° C., and stripping residual amounts of said hydrocarbon liquid from the resulting extracted hydrogen peroxide solution.

2,901,324
OIL SEAL FOR ELECTRO-PRECIPITATORS EMPLOYED IN CARBON BLACK PROCESSES

Robert C. Howell, Borger, Tex., assignor to Phillips Petroleum Company, a corporation of Delaware

Application December 12, 1952, Serial No. 325,642
15 Claims. (Cl. 23—209.6)



4. A method for operating a furnace carbon black production operation wherein carbon black is recovered from furnace effluents in a high potential electro-precipitator, the improvement comprising introducing carbon black furnace charge oil into an oil seal zone in liquid sealing

means communicating with said chamber; a third pipe ing at least as great as the width of the annulus and the

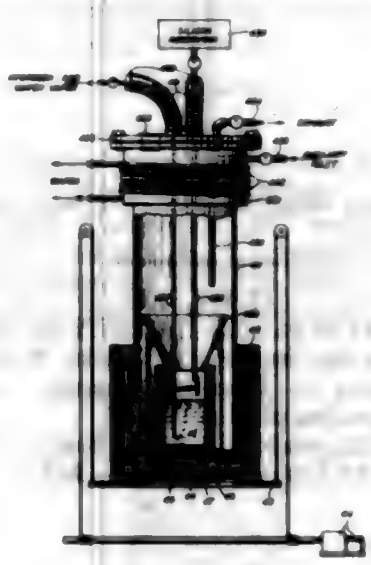
2. A method of separating plutonium from a mixture of relatively water insoluble fluorides containing

stability substantially that of dynamite grade ammonium nitrate.

1085

relation between the electrical precipitation zone and the high potential electrical terminal containing zone of said precipitator, withdrawing charge oil from said oil seal zone and introducing charge oil comprising the oil withdrawn from said oil seal zone into the carbon black production furnace of said furnace carbon black production operation.

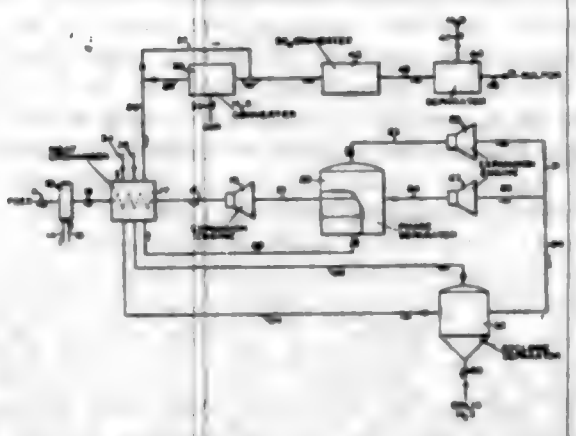
2,901,325
METHOD OF PREPARING SILICON
Henry C. Theuerer, New York, N.Y., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application July 22, 1955, Serial No. 523,897
10 Claims. (Cl. 23—223.5)



1. The method of refining silicon which comprises establishing a molten zone in a mounted silicon body, the size of said zone being such that surface tension forces in the zone keep the silicon body integral, and advancing said molten zone through said silicon body while producing a flow of a neutral atmosphere comprising water vapor having a partial pressure of from about 0.94 millimeter of mercury to about 25 millimeters of mercury over the surface of the said molten zone so as to produce intimate contact therewith.

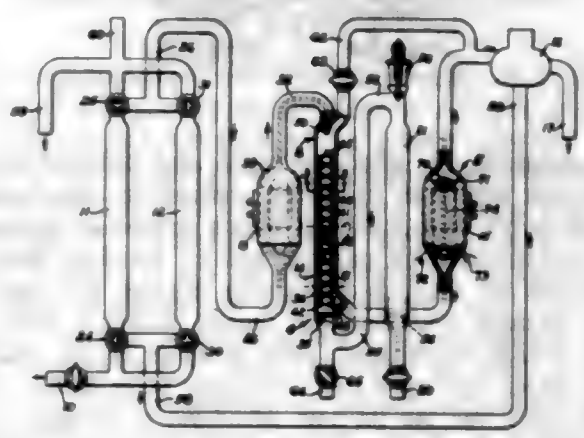
10. The method of refining silicon which comprises bubbling a gas through a mass of molten silicon, said gas comprising water vapor having a partial pressure of from about 0.94 millimeter of mercury to about 25 millimeters of mercury.

2,901,326
SEPARATION OF HYDROGEN SULFIDE AND METHANE
Fred Kurata, Lawrence, Kans., and James Paul Kohn, South Bend, Ind.
Application December 22, 1955, Serial No. 554,705
20 Claims. (Cl. 23—225)



1. A process for the recovery of sulfur and a normally gaseous hydrocarbon from a mixture containing same which comprises cooling a mixture containing methane and hydrogen sulfide in an amount above 6 mole percent while under a pressure above 450 pounds per square inch absolute to a temperature sufficiently low to form two liquid phases and a vapor phase, said vapor phase being rich in methane and containing not more than 6 mole percent hydrogen sulfide, one of said liquid phases being rich in methane and containing a minor amount of hydrogen sulfide and the other of said liquid phases being rich in hydrogen sulfide, expanding said vapor phase and said methane rich liquid phase to reduce the temperature to not higher than —258° F. such that solid hydrogen sulfide is formed, passing said cooled phases containing solid hydrogen sulfide to a separation zone to remove solid hydrogen sulfide from methane, recovering the methane from said separation zone containing less than 0.1 mole percent hydrogen sulfide, recovering said liquid hydrogen sulfide rich phase, treating said liquid hydrogen sulfide phase to produce free sulfur from the hydrogen sulfide, and recovering the free sulfur thus produced.

2,901,327
METHOD FOR MEASURING TRACES OF DISSOLVED OXYGEN
Louis C. Thayer, Duarte, and Michael Czuha, Jr., Temple City, Calif., assignors, by mesne assignments, to Beckman Instruments, Inc., Fullerton, Calif., a corporation of California
Application May 23, 1955, Serial No. 510,491
11 Claims. (Cl. 23—230)



1. A process for measuring traces of dissolved oxygen in a liquid that per se has very low electrical conductance, which comprises: converting the ions in said liquid to a predetermined species; measuring the conductance of said liquid; reacting nitric oxide with a basic reagent to remove all nitrogen dioxide therefrom; reacting the dissolved oxygen in said liquid with said reacted nitric oxide so as to form acid, with said nitric oxide not being ionizable in said liquid per se while being reactable with said dissolved oxygen to change the conductance of said liquid, with said predetermined ion species not being reactable with said nitric oxide; and measuring the conductance of said liquid so that the oxygen content of said liquid may be determined by the change in conductance thereof.

2,901,328
ISOTHERMAL DISTILLATION MOLECULAR WEIGHT APPARATUS
Norman H. Knight, Kalamazoo, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan
Application April 29, 1957, Serial No. 655,683
2 Claims. (Cl. 23—253)

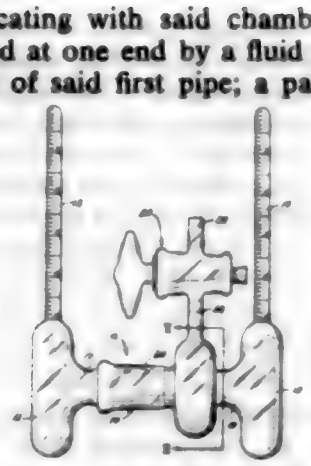
1. An isothermal distillation apparatus, comprising: a reservoir having a substantially circular chamber; first and second pipes communicating substantially coaxially with said chamber on opposite sides thereof, said pipes being of smaller diameter than said chamber; outlet

diameter of the openings in said bracket and valve plate removing the precipitated sodium hydroxide from the

comprising simultaneously heating and grinding calcium sulfate in the absence of a reducing agent therefor at a

the improvement comprising introducing carbon black furnace charge oil into an oil seal zone in liquid sealing

means communicating with said chamber; a third pipe releasably secured at one end by a fluid tight connection to the other end of said first pipe; a pair of bulbs con-



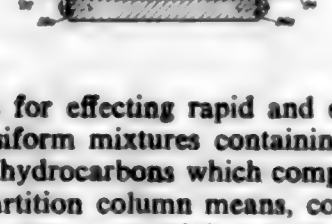
nected to the other ends of said second and third pipes; and a pair of graduated tubes respectively connected to said bulbs and extending therefrom substantially perpendicularly to the axis of said chamber.

2,901,329

COMBUSTIBLES DETECTOR FOR GAS CHROMATOGRAPHY

Sixt Frederick Kapff, Homewood, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

Application September 24, 1957, Serial No. 685,846
5 Claims. (Cl. 23—255)



1. Apparatus for effecting rapid and efficient analyses of complex gasiform mixtures containing trace amounts of combustible hydrocarbons which comprises in combination elution-partition column means, conduit means for introducing an oxygen-containing eluting gas into said column means, and detector means through which said column means discharges, said detector means including a metal block having a first relatively large cavity, a bore in said block having its axis arranged transverse to said first cavity, a first catalytic detection element in said first cavity remote from said bore, a second non-catalytic reference element in another portion of said first cavity, said catalytic and non-catalytic elements being connected with a pair of resistances in an electrical bridge circuit, and gas pervious diffusion screen means arranged within said bore and extending through said first cavity between the said elements.

2,901,330

STATIONARY BED CATALYTIC APPARATUS

Warren E. Stewart, Park Forest, Ill., assignor to Sinclair Refining Company, New York, N.Y., a corporation of Maine

Application May 23, 1955, Serial No. 510,440
6 Claims. (Cl. 23—288)

1. An annular reactor for handling divided contact material in fixed bed endothermic and exothermic chemical conversion processes which comprises an elongated cylindrically shaped tube, an elongated cylindrically shaped plug coaxially disposed within said tube, said plug and tube defining therebetween an annular reaction space, a plurality of fin-shaped members attached to said plug and extending radially outward from and lengthwise of said plug, said fin-shaped members being disposed in said reaction space in groups about said plug at a plurality of separate locations along said plug, each of said plurality of fin groups circumferentially surrounding said plug and constituting a fluid permeable support for divided contact material, the longitudinal spacings between fin groups be-

ing at least as great as the width of the annulus and the width of the annulus being greater than the spacing be-

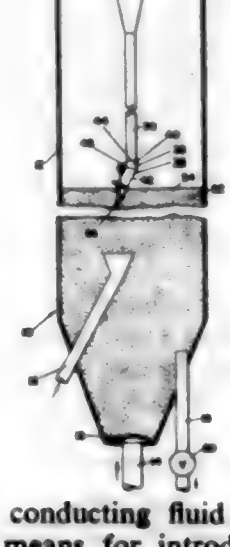
tween confronting lengthwise faces of adjacent fins in each group of fins.

2,901,331

APPARATUS FOR FLUID CATALYTIC REACTIONS

Hans J. Held, Lake Success, and John Weitz, Westbury, N.Y., assignors to Ducon Company, Inc., Mineola, N.Y., a corporation of New York

Application September 12, 1955, Serial No. 533,853
10 Claims. (Cl. 23—288)



1. A vessel for conducting fluid catalytic operations including a shell, means for introducing reactants and solid catalyst particles into said shell, means in the upper portion of said shell for discharging gaseous product therefrom, separation means for separating gaseous product from solid catalyst particles in communication with said last-mentioned means, said separation means including a cyclone separator, said cyclone separator having a dip leg depending into the interior of said shell, said cyclone separator having fixedly secured to the lowermost end of its dip leg a trickle valve, said trickle valve including a bracket fixedly secured to the outer surface of said dip leg, said bracket having a plurality of openings therein, an annular hinge in each said opening formed from a rod having a core thickness appreciably less than the inner diameter of the opening in which said hinge is received, a valve plate, said hinges passing through openings in the upper portion of said valve plate whereby said valve plate is suspended from said hinges on the outside of said dip leg with said valve plate juxtaposed to the mouth of said dip leg, the openings in said valve plate having an inside diameter appreciably larger than the core thickness of the rod forming said hinges, the

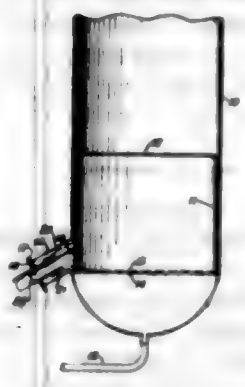
lead of bromine as a bromine-containing scavenger, from

small to relatively large sizes into lignin-like substances,

gaseous hydrocarbon from a mixture containing same being of smaller diameter than said chamber; outlet

diameter of the openings in said bracket and valve plate being so much larger than the core thickness of the rod forming the hinges as to permit both lateral and rotational movement of said hinges through each of said openings, the width and length of said valve plate being appreciably greater than the maximum width and length dimensions of the discharge opening of said dip leg, the face of the valve plate juxtaposed to the discharge opening of said dip leg seating against the edge of the discharge opening of said dip leg when said valve plate is disposed in its closed position, and said juxtaposed face of the valve plate being disposed away from the edge of the discharge opening of said dip leg when the valve plate is disposed in its open position the discharge opening of said dip-leg being so positioned in respect to the valve plate that gravity biases the valve plate away from the edge of the discharge opening.

2,901,332
GRID SUPPORT AND SEAL FOR FLUIDIZED SOLIDS SYSTEMS
Pryor N. Randall, Homewood, Ill., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana
Application September 28, 1956, Serial No. 612,710
2 Claims. (Cl. 23—288)



1. In a fluidized solids contacting system which comprises a contacting vesel, a distributor grid near the base of said vessel, a gas inlet below the grid and a gas outlet in the upper part of the vessel, the improvement which comprises a skirt of smaller outside diameter than the inside diameter of the vessel and extending from the periphery of the grid to a higher level in the vessel, said skirt being secured to the vessel walls at its upper end and being secured to the periphery of the grid at its lower end to serve the combined functions of supporting the grid and sealing the space between the grid and the vessel walls, a solids outlet conduit leading from said vessel immediately above the grid, an opening in said skirt aligned with said outlet, and an expansible and contractible tubular member secured to the skirt around said opening and movably mounted with respect to said conduit.

2,901,333
METHOD FOR PREPARING SODIUM BOROHYDRIDE
Robert W. Bragdon, Marblehead, Mass., assignor to Metal Hydrides Incorporated, Beverly, Mass., a corporation of Massachusetts
No Drawing. Application July 11, 1956
Serial No. 597,100
1 Claim. (Cl. 23—296)

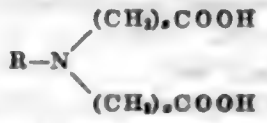
The method for recovering sodium borohydride from a water solution having an invariant ratio of sodium borohydride to sodium hydroxide and which is substantially saturated with these components at a temperature of about 25° C. which comprises adding methanol to said solution to obtain a mixture containing about 23 percent by weight of methanol, cooling the mixture to a temperature of about 25° C. to precipitate sodium hydroxide, removing the precipitated sodium hydroxide from the cooled mixture to obtain a liquor containing in solution most of the sodium borohydride content of the original solution, subjecting said liquor to vacuum distillation followed by cooling the liquor to a temperature of about 25° C. to precipitate solid sodium borohydride, and separating the solid sodium borohydride.

2,901,334
REMOVAL OF IRON FROM ALUMINUM SURFACES
Melvin H. Brown, Allegheny Township, Westmoreland County, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
No Drawing. Application April 9, 1958
Serial No. 727,272
3 Claims. (Cl. 41—42)

1. The method of removing iron impurities from a surface of an aluminum article which comprises treating said surface with an aqueous solution consisting essentially of at least 0.05 percent by weight of soluble citrate ion and at least 0.005 percent by weight of soluble sulfite ion, and having a pH below about 7.0.

2,901,335
ADDITIVE FOR LEADED GASOLINE
Ellis K. Fields, Chicago, Ill., and Allen E. Brehm, Griffith, Ind., assignors to Standard Oil Company, Chicago, Ill., a corporation of Indiana
No Drawing. Application October 5, 1954
Serial No. 460,509
7 Claims. (Cl. 44—69)

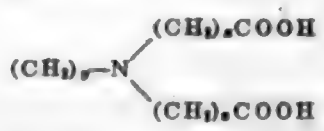
1. A composition consisting essentially of a gasoline containing between about 0.5 and 6 cc. per gallon of tetraethyllead and between about 0.0005 and 0.5 weight percent of an amine salt of an amino-carboxylic acid obtained by reacting, at a temperature between about 30° C. and 200° C., a molar ratio of amine to acid between about 0.5 and 1.5 of the stoichiometric requirement to react all the carboxylic groups in the acid, an amine selected from the class consisting of (1) aliphatic amines wherein an aliphatic group contains at least 8 carbon atoms and (2) imidazoline containing an aliphatic substituent having at least 8 carbon atoms is present, with (B) an amino-carboxylic acid having the configuration



wherein R is selected from the class consisting of

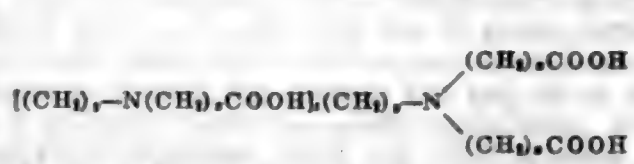
(a) Hydrogen

(b)



and

(c)



wherein x is an integer from 1 to 3, y is an integer from 2 to 3, and z is an integer from 1 to 3.

2,901,336
ANTIKNOCK COMPOSITIONS
Jerome E. Brown, Detroit, Mich., assignor to Ethyl Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Application May 15, 1957
Serial No. 659,222
6 Claims. (Cl. 44—69)

1. Gasoline having a motor octane number when clear of at least about 76 containing a lead alkyl antiknock agent, from about 0.4 to about 0.6 theory based on the

2,901,342

2,901,346
MILD STEEL

material, the longitudinal spacings between fin groups be-

the core thickness of the rod forming said hinges, the

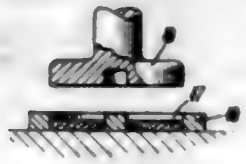
lead of bromine as a bromine-containing scavenger, from about 0.8 to about 1.2 theory based on the lead of chlorine as a chlorine-containing scavenger, and iron pentacarbonyl, there being present in the gasoline an amount of said agent equivalent to from about 1.58 to about 3.17 grams of elemental lead per gallon, and an amount of iron pentacarbonyl equivalent to from about 0.005 to 0.2 gram of iron per gallon.

2,901,337

ABRASIVE ARTICLES AND METHOD OF MAKING THE SAME

William A. Keutgen, Martinsville, Charles R. Duvall, Somerville, and Rupert S. Daniels, Union, N.J., and Robert D. Noyes, Greenwich, Conn., assignors to Union Carbide Corporation, a corporation of New York

Application July 31, 1956, Serial No. 601,139
10 Claims. (Cl. 51—298)



1. A composition for making abrasive articles consisting essentially of abrasive grains coated with an organic liquid wetting agent and dispersed throughout as a heat hardenable binder for said grains, fusible heat-polished solid microspheres of a ground heat-hardenable phenol aldehyde resin, said microspheres having a size of about 5 to 150 microns in diameter and having a higher bulk density than the ground fusible particles of said resin before heat polishing into microspheres.

2,901,338

HALOGENATED ORGANIC COMPOUNDS

Sidney B. Richter, Chicago, Ill., assignor to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Application March 20, 1957
Serial No. 647,197
8 Claims. (Cl. 71—2.5)

6. A herbicidal composition comprising an inert carrier and a herbicidal toxic amount of the composition of matter described in claim 8.

8. A composition of matter having the structure

$$R_1-O-(CH_2)_y-O-\overset{O}{\overset{\|}{S}}-O-(CH_2)_z-X$$

wherein R_1 is selected from the group consisting of alicyclic hydrocarbon radicals having from 5 to 6 carbon atoms in the ring, alicyclic saturated hydrocarbon radicals having an epoxy group in the 2,3-position and from 5 to 6 carbon atoms in the ring, and chlorinated alicyclic saturated hydrocarbon radicals having from 5 to 6 carbon atoms in the ring and wherein said chlorine is attached directly to said ring, y and z are integers from 2 to 4, and X is selected from the group consisting of chlorine, bromine, and fluorine.

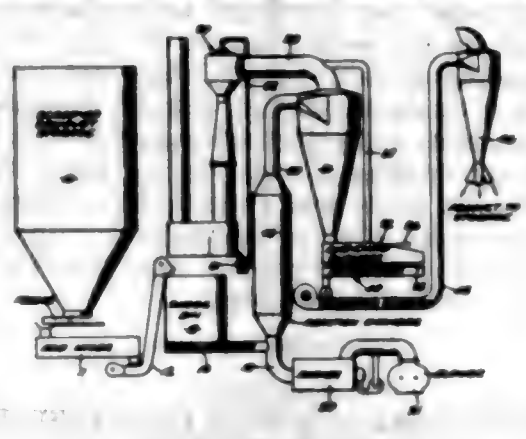
2,901,339

CONTINUOUS PROCESS FOR CONVERSION OF LIGNO-CELLULOSE MATERIALS

Daryl R. Boomer and Edward T. Clepperton, Oak Ridge, Oreg., and Russell C. Phillips, Menlo Park, Calif., assignors to Woodman, Inc., San Francisco, Calif., a corporation of California

Application December 27, 1955, Serial No. 555,449
5 Claims. (Cl. 71—23)

1. A continuous process for the conversion of particulate ligno-cellulose materials ranging from relatively small to relatively large sizes into lignin-like substances, which comprises the steps of mixing the particles with at least one mineral acid, feeding the mixture into a flowing stream of hot gases, conveying said particles in suspension in said hot gases upwardly through a vertical reaction zone, controlling the velocity of the hot gases through such zone so that small particles are car-



ried through said zone by the hot gases at a faster rate than the large particles and substantially uniform chemical conversion of the large and small particles to a lignin-like product substantially inert to bacterial and fungal action is obtained, the temperature of such gases being sufficiently high to effect such chemical conversion by said acid, and then separating the product thus formed from the gas stream.

2,901,340

METHOD OF PRODUCING CONCENTRATED MIXTURES OF NITRIC AND PHOSPHORIC ACID

Georg Von Semel, Berlin-Grunewald, and Heinz Lehmann, Berlin-Neukolln, Germany, assignors to Pintsch Bamag A.-G., Berlin, Germany

No Drawing. Application December 26, 1956
Serial No. 630,443
Claims priority, application Germany January 6, 1956
7 Claims. (Cl. 71—37)

1. In a method of producing concentrated mixtures of nitric acid and phosphoric acid, the step of passing a nitrogen oxide gas and a gas containing free oxygen into a dilute phosphoric acid solution having an inorganic salt selected from the group consisting of potassium sulfate, sodium nitrate, calcium nitrate, potassium nitrate, magnesium nitrate and magnesium sulfate dissolved therein in an amount between 1% by weight and the solubility limit of said salt, whereby said nitrogen oxide gas is absorbed and converted to nitric acid, the absorption of said nitrogen oxide gas being promoted by said inorganic salt, thereby forming a concentrated mixture of nitric and phosphoric acids.

2,901,341

PROCESS FOR THE SEPARATION AND RECOVERY OF IRON AND TITANIA FROM ORES AND CONCENTRATES OF SAME

Marvin J. Udy, Niagara Falls, N.Y., assignor to Strategic-Udy Metallurgical and Chemical Processes, Ltd., Hamilton, Ontario, Canada

No Drawing. Application October 14, 1957
Serial No. 689,786
14 Claims. (Cl. 75—40)

1. In a process for the treatment of a metallurgical charge comprising at least one material selected from the group consisting of ilmenites, titaniferous iron ores and concentrates of the same, involving the selective reduction and recovery of metallic iron and the production of an essentially iron-free titania slag therefrom, the improvement that comprises fluxing said charge exclusively with alumina in the production and furnacing of the reduction burden.

about 1/10 to about 3 microns thick and a layer of a photo-

2,901,352

by weight of methanol, cooling the mixture to a temperature of about 25° C. to precipitate sodium hydroxide

of at least about 76 containing a lead alkyl antiknock agent, from about 0.4 to about 0.6 theory based on the

2,901,342

PURIFICATION OF INDIUM

William Jan Siemons, Landenberg, Pa., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application November 29, 1956
Serial No. 624,964
3 Claims. (Cl. 75—84)

1. A process for the purification of metallic indium containing up to 1000 parts per million of metallic zinc as an impurity, which comprises exposing said indium in the molten state at a temperature between 156.4° C.–250° C. to an oxygen-containing atmosphere whereby to effect the preferential oxidation of zinc contained therein, solidifying the melt and removing from the indium the zinc oxide so formed.

2,901,343

DISSOLUTION OF ALUMINUM JACKETS FROM URANIUM CORES BY NITRIC ACID CONTAINING MERCURIC NITRATE

James H. Peterson, Oak Ridge, Tenn., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application August 25, 1944
Serial No. 551,269
1 Claim. (Cl. 75—97)

A process of dissolving aluminum jackets from uranium cores without substantial attack of said uranium cores, comprising immersing said aluminum-jacketed uranium cores into nitric acid having a maximum concentration of 50% and containing mercuric nitrate in a concentration of between 0.05 and 1% by weight of solution, bringing the nitric acid solution to boiling temperature while said jacketed uranium core remains immersed, whereby said aluminum is dissolved but said uranium remains substantially unaffected.

2,901,344

REMOVAL OF IRON FROM ALUMINUM SURFACES

Melvin H. Brown, Allegheny Township, Westmoreland County, Pa., assignor to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania

No Drawing. Application February 7, 1958
Serial No. 713,784
3 Claims. (Cl. 75—97)

1. The method of removing iron impurities from a surface of an aluminum article which comprises treating said surface with an aqueous solution consisting essentially of at least 0.1 percent by weight of soluble citrate ion and at least 0.1 percent by weight of soluble nitrate ion, and having a pH below about 2.75.

2,901,345

PLUTONIUM-CERIUM-COBALT AND PLUTONIUM-CERIUM-NICKEL ALLOYS

Arthur S. Coffinberry, Los Alamos, N. Mex., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application July 17, 1958
Serial No. 749,304
3 Claims. (Cl. 75—122.7)

1. A ternary alloy for a neutronic reactor fuel consisting essentially of from 10 to 20 atomic percent cobalt, sufficient plutonium to achieve a condition of nuclear criticality and not in excess of 88 atomic percent, and the balance cerium.

2,901,346

MILD STEEL

Roy Alfred Uffindell Huddle, East Ilsley, near Newbury, Thomas Felix Pearson, Blackhill, and Michael de Lippe, Consett, England, assignors to Consett Iron Company Limited, Durham, England, and United Kingdom Atomic Energy Authority, London, England; both are British companies

No Drawing. Application May 3, 1957
Serial No. 656,749
Claims priority, application Great Britain May 4, 1956
1 Claim. (Cl. 75—124)

A mild steel containing from 0.13 to 0.15% by weight of carbon, from 0.5 to 1.2% by weight of manganese, from 0.08 to 0.11% by weight of silicon, from 0.014 to 0.08% by weight of beryllium, from 0.0 to 0.50% by weight of copper, from 0.0 to 1.0% by weight of nickel, from 0.10 to 1.00% by weight of chromium and from 0.1 to 1.5% by weight of aluminum, the remaining constituents of the mild steel being iron and residuals.

2,901,347

NICKEL-CHROMIUM-GERMANIUM ALLOYS FOR STAINLESS STEEL BRAZING

James A. McGurty and Earl S. Funston, Oak Ridge, Tenn., assignors to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application May 11, 1954
Serial No. 429,139
2 Claims. (Cl. 75—171)

1. A new ternary brazing alloy consisting of from 37 to 65 weight percent of nickel, from 5 to 40 weight percent of chromium, and from 15 to 40 weight percent of germanium.

2,901,348

RADIATION SENSITIVE PHOTOCONDUCTIVE MEMBER

John H. Dessauer, Pittsford, and Harold E. Clark, Rochester, N.Y., assignors to Haloid Xerox Inc., a corporation of New York

Application March 17, 1953, Serial No. 342,856
21 Claims. (Cl. 96—1)

1. A photoconductive member comprising an electrically conductive base layer, a separately formed barrier layer directly overlying a surface of said base layer, a non-particulate photoconductive insulating layer between about 10 and 200 microns thick permanently affixed on said barrier, layer, and a separately formed layer about 0.05 to about 1 micron thick disposed on the outer surface of said photoconductive insulating layer, the barrier layer being a body of electrically insulating material less than about 2 microns thick adapted to substantially prevent charge dissipation in the absence of activating the photoconductive insulating layer and adapted to permit substantially complete charge dissipation under the influence of activating the photoconductive insulating layer, and the outer layer being an electrically insulating layer incapable of supplying charge carriers by absorption of visible light.

2,901,349

XEROGRAPHIC PLATE

Roland M. Schaffert, Vestal, N.Y., and James F. Hansen, Hilliards, Ohio, assignors, by mesne assignments, to Haloid Xerox Inc., a corporation of New York

Application May 23, 1957, Serial No. 661,888
4 Claims. (Cl. 96—1)

1. A xerographic plate comprising a conductive backing having thereon a layer of arsenic trisulfide from

readily dispersible granular shortening in which the fat

overlapping portions adhesively secured to each other at

1. A continuous process for the conversion of particulate ligno-cellulose materials ranging from relatively

sively with alumina in the production and furnacing of the reduction burden.

about 1/10 to about 3 microns thick and a layer of a photo-

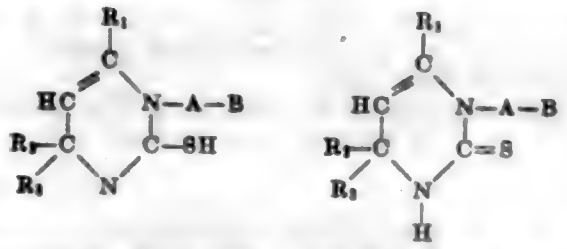
conductive insulating material from about 10 to about 200 microns thick on said arsenic trisulfide.

2,901,350
COMBINED DEVELOPERS AND FIXERS
Jerome Stewart Goldhammer, Levittown, N.Y.
No Drawing. Application October 12, 1954
Serial No. 461,929
1 Claim. (Cl. 96—61)

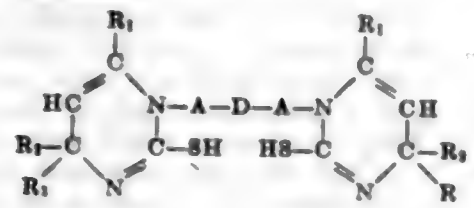
In a chemical composition for combined developing and fixing of silver halide photographic emulsions, the combination of sodium thiosulfate and ethylene diamine with 2,4, diaminophenol, and p-hydroxyphenylaminoacetic acid.

2,901,351
DIRECT POSITIVE PHOTOGRAPHIC MATERIAL
Paul Désiré Van Poe, Edegem-Antwerp, and Laurent Pierre Reosens, Antwerp, Belgium, assignors to Gevaert Photo-Producten N.V., Mortsel (Antwerp), Belgium, a Belgian company
No Drawing. Application December 6, 1955
Serial No. 551,458
Claims priority, application Great Britain December 10, 1954
13 Claims. (Cl. 96—67)

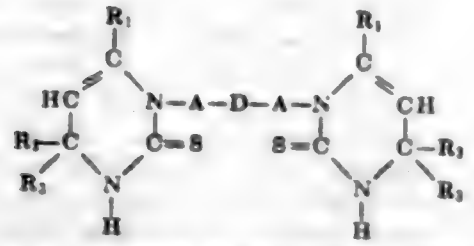
11. A direct positive silver halide photographic material comprising a silver halide emulsion layer and a gelatin layer adjacent thereto, at least one of said layers containing a compound selected from the group consisting of compounds corresponding to one of the tautomeric formulae:



and symmetrical compounds corresponding to one of the tautomeric formulae:

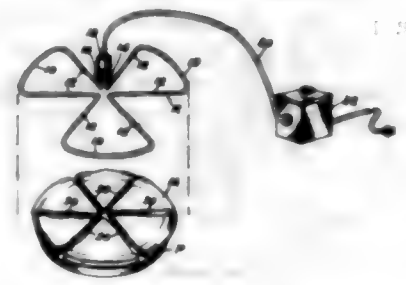


and



in which four formulae A represents a member selected from the group consisting of a single bond and —NH—, B represents an aryl radical substituted with at least one nitro group, D represents a member selected from the group consisting of an arylene radical substituted with at least one nitro group, and an arylene-SO_2-arylene radical, each arylene group of which is substituted with at least one nitro group, R_1 and R_2 each represents a member selected from the group consisting of a hydroxyl radical and an alkyl radical, and R_3 represents a member selected from the group consisting of a hydrogen atom, an alkyl radical, and an aryl radical.

2,901,352
PIE MARKER, METHOD OF FINISHING MERINGUE PIES AND THE RESULTING MERINGUE PIE
Monroe Boston Strauss, San Diego, Calif.
Application May 24, 1951, Serial No. 228,045
4 Claims. (Cl. 99—92)



2. As a new article of manufacture, a meringue pie having channels formed in the meringue to define pie sections, the channels extending to a point adjacent the filling of the pie and being considerably wider than the width of a knife blade used for cutting the pie, the vertical side walls of said channels being toasted.

2,901,353
PROCESS FOR DEBITTERING SOYBEANS
Katsusaburo Hirose, Tsuruminu, Yokohama City, Kanagawa Prefecture, Japan
No Drawing. Application July 1, 1957
Serial No. 668,927
3 Claims. (Cl. 99—98)

1. Process for debittering soybeans, which comprises treating soybeans with enzyme enriched water to bring about absorption of a small amount of water in said soybeans, said enzyme enriched water being prepared by soaking soybeans in water for a time sufficient to permit the primary root of the young seedlings to emerge from the seed coat, and then subjecting said treated soybeans to drying at a relatively low temperature.

2,901,354
METHOD OF PROTECTING DRY SAUSAGE AGAINST DISCOLORATION AND RANCIDITY
Wilson F. Douglass and William E. Phalen, Omaha, Nebr., assignors to The Cudahy Packing Company
No Drawing. Application August 18, 1955
Serial No. 529,356
14 Claims. (Cl. 99—109)

1. The process of treating dry sausage to protect the same against discoloration and rancidity, which comprises incorporating in such sausage, in the process of manufacture, and uniformly distributing in the meat mass an antioxidant of the hindered phenol type in an amount not less than that necessary to act effectively as an antioxidant upon substantially all portions of the sausage and not greatly in excess of the amount required to do so with maximum antioxidant effect, such amount not exceeding about 1/10 of 1% of the meat based on weight.

2,901,355
FOOD PRODUCT
James G. Bangert, Fairview, N.J., and Arthur Feldman, Monsey, N.Y., assignors to General Foods Corporation, White Plains, N.Y., a corporation of Delaware
No Drawing. Application September 23, 1957
Serial No. 685,403
4 Claims. (Cl. 99—139)

1. A composition for use in preparing an instant pudding comprising in combination a phosphate milk protein coagulating agent and a coagulation accelerator; a pudding stiffening agent; a dry-to-the-touch, free-flowing,

face over a cellular body, which process consists in com-

proximately 20 to 40% by weight of beryllium fluoride

the balance cerium.

1. A xerographic plate comprising a conductive backing having thereon a layer of arsenic trisulfide from

readily dispersible granular shortening in which the fat has a hydrophilic lipin dissolved therein; and a winterized edible oil distributed throughout the composition, and having a solidification point substantially below the freezing point of milk.

2,901,356
METHOD OF PRESERVING ORANGE JUICE
Filippo Gallotti, Villalba, Italy
No Drawing. Application March 22, 1956
Serial No. 573,104
Claims priority, application Italy March 23, 1955
5 Claims. (Cl. 99—155)

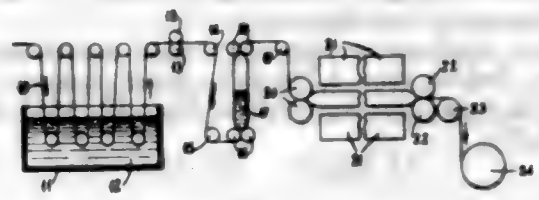
1. A process of improving the storability of orange juice, comprising the steps of reducing the water content of said orange juice by at least 50% while maintaining a maximum temperature of 35° C. and also maintaining the liquid condition of said orange juice, so as to concentrate said orange juice; treating the thus concentrated orange juice with a gas containing ozone so as to substantially sterilize said orange juice; removing ozone from the thus-treated concentrated orange juice, thereafter adjusting the temperature of the concentrated orange juice to between 18° C. and 25° C.; subsequently lowering the temperature of said concentrated orange juice in a plurality of separate primary cooling stages to a maximum temperature of between 1° C. and 8° C., each of said separate primary cooling stages being so adjusted as to reduce the temperature of said concentrated orange juice by approximately 5° C. during a time period not exceeding approximately 1 minute, said concentrated orange juice being maintained at the temperature to which it has been reduced during any of said primary cooling stages for a time period of approximately two hours prior to being subjected to further cooling in the next subsequent primary cooling stage; subsequently lowering the temperature of said concentrated orange juice in a plurality of secondary cooling stages from said temperature of between 1° C. and 8° C. to a maximum temperature of −1° C., each of said secondary cooling stages being so adjusted as to reduce the temperature of said concentrated orange juice by approximately 1° C. during a time period not exceeding approximately one minute, said concentrated orange juice being maintained at the temperature to which it has been reduced during any of said secondary cooling stages for a time period of approximately one hour prior to being subjected to further cooling in the next subsequent secondary cooling stage; and subsequently increasing the temperature of the thus-cooled concentrated orange juice in a plurality of separate heating stages to a temperature of about 20° C., each of said separate heating stages being so adjusted as to increase the temperature of said concentrated orange juice by between about 1° C. and 5° C. during a time period not exceeding approximately 1 minute, said concentrated orange juice being maintained at the temperature to which it has been heated during any of said heating stages for a time period of at least 1 hour prior to being subjected to further heating in the next subsequent heating stage, whereby a concentrated orange juice having increased resistance against spoilage is obtained.

2,901,357
PACKAGED BEVERAGE PRODUCTS AND METHODS OF MAKING THEM
Jack A. Epstein, Skokie, Ill.
Application September 10, 1958, Serial No. 760,236
1 Claim. (Cl. 99—171)

A paper straw package for flavored and colored, water soluble, flowing powder for beverages, and for use in stirring and sipping beverage made therefrom, comprising a helically wrapped narrow cylindrical paper straw having successive helical turns of a paper strip provided with overlapping portions adhesively secured to each other at the overlapping portions, forming a single walled paper sipping straw, said straw being waterproofed inside and out by a coating of wax over all, said straw having both of its ends integrally closed by a closure formed of the paper of the end portions of the straw, the sides of which are brought together and adhesively engaged with adjacent end portions of the straw to close said ends without lateral projections interfering with other straws in packing the straws, said straws alone forming a substantially rigid container without additional reinforcement,

supporting and containing a filling of water soluble, flowing powder for beverages, which flows entirely out of the end of the straw after one end is torn off by a child to make the beverage powder available for mixing with water, the straw being available for stirring the powder in the water, and the other end being torn off to use the straw in sipping the beverage, the said powder being colored in a manner suggestive of its flavor, and the adhesive securing the successive turns together being colored in a similar color and pressed into the paper, impregnating and coloring the overlapping portions in such manner that the package color indicates the flavor of its content.

2,901,358
METHOD FOR PRODUCING ARTIFICIAL FOOD CASING
William F. Underwood, Oak Park, and Howard L. Leventhal, Melrose Park, Ill., assignors to Union Carbide Corporation, a corporation of New York
Application February 25, 1958, Serial No. 717,476
12 Claims. (Cl. 99—176)



1. A method of producing an artificial meat casing easily separable from the meat mass encased therein, which comprises coating the wall of said casing which is to be nearest said meat mass with stearato chromic chloride, and thereafter drying said coated casing.

2,901,359
DRIED APPLE AND PROCESS FOR PREPARING
John H. Forkner, Fresno, Calif., assignor to The Pillsbury Company, a corporation of Delaware
Application December 15, 1955, Serial No. 553,313
6 Claims. (Cl. 99—204)

1. A process for making a dried apple product, capable of ready hydration, from a conventionally sulphured dried apple piece having a moisture resistant tough outer sur-

phate selected from the group consisting of sodium meta-

2,901,360

from the group consisting of a hydrogen atom, an alkyl radical, and an aryl radical.

coagulating agent and a coagulation accelerator; a pudding stiffening agent; a dry-to-the-touch, free-flowing,

face over a cellular body, which process consists in compressing the entire piece to the extent of at least partially crushing the inner cellular structure, and rupturing discontinuously the surface to expose the cellular body and then drying the apple piece to a lower moisture content.

2,901,360

DRIED EGG PRODUCT AND METHOD OF PREPARATION

James M. Gorman and Arthur C. Keith, Topeka, Kans., assignors to Seymour Foods, Inc., Topeka, Kans., a corporation of Kansas

No Drawing. Application August 11, 1958
Serial No. 754,186
5 Claims. (Cl. 99—210)

1. The method of preparing and storing a dried egg product containing yolk which product exhibits improved baking properties without off-odor development over long periods of storage, said method including treating liquid egg material with an additive selected from the group consisting of corn syrup and malt syrup having a dextrose equivalent of from about 20% to 35% and in quantities ranging from about 5% to 20% by weight, drying the treated egg material to a moisture content of no greater than 8%, and storing the dried product in substantially moisture tight containers.

2,901,361

MOLD RELEASE AGENT

Frederick W. Meisel, Jr., South River, N.J., assignor to Allied Asphalt & Mineral Corp., New York, N.Y.

No Drawing. Application September 6, 1956
Serial No. 608,213
2 Claims. (Cl. 106—38.23)

1. A mold release agent for spraying or painting on the surfaces of a mold or the like consisting essentially of a water emulsion including a substantially homogeneous mixture of an estersil and a liquid release material selected from the class consisting of oils, waxes, greases, esters, polyalkylene glycol, and glycerol, and an emulsifying agent consisting essentially of substantially 5 parts hydrophobic polyoxyethylene lauryl ether and 10 parts hydrophilic polyoxyethylene lauryl ether, the proportions by weight of water, estersil, and release material being substantially in the ratio of 48:2.5:32.5.

2,901,362

GLASS COMPOSITIONS AND METHOD OF MAKING SAME

Alexis G. Pincus, Worcester, Mass., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

Original application July 27, 1948, Serial No. 40,963, now Patent No. 2,716,069, dated August 23, 1955. Divided and this application May 18, 1955, Serial No. 509,355

13 Claims. (Cl. 106—47)

4. A homogeneous durable clear transparent optical glass consisting essentially of the fused product of approximately 20 to 40% by weight of beryllium fluoride (BeF_2), approximately 10 to 70% by weight of aluminum silicofluoride ($Al_2(SiF_6)_3$) and approximately 10 to 70% by weight of sodium metaphosphate ($NaPO_3$), said fused product having a low refractive index ranging between approximately 1.368 and 1.447 and a nu value ranging between approximately 64 and 83.

2,901,363

GLASS COMPOSITIONS AND METHOD OF MAKING SAME

Alexis G. Pincus, Worcester, Mass., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

No Drawing. Original application July 27, 1948, Serial No. 40,963, now Patent No. 2,716,069, dated August 23, 1955. Divided and this application May 18, 1955, Serial No. 509,356

3 Claims. (Cl. 106—47)

1. The method of manufacture comprising the steps of preparing a glass batch consisting essentially of approximately 10 to 50% by weight of beryllium fluoride (BeF_2), approximately 20 to 40% by weight of sodium metaphosphate ($NaPO_3$), and the balance approximately 30 to 50% by weight of aluminum metaphosphate ($Al(PO_3)_3$), heating said batch at a temperature and for a period of time sufficient to melt the ingredients thereof and produce a homogeneous glassy structure, annealing said structure at a lower temperature to relieve strain therein, and slowly cooling said structure to room temperature, to thereby produce a clear durable transparent optical glass.

2,901,364

GLASS COMPOSITIONS AND METHOD OF MAKING SAME

Alexis G. Pincus, Worcester, Mass., assignor to American Optical Company, Southbridge, Mass., a voluntary association of Massachusetts

Original application July 27, 1948, Serial No. 40,963, now Patent No. 2,716,069, dated August 23, 1955. Divided and this application May 18, 1955, Serial No. 509,357

10 Claims. (Cl. 106—47)

10. A homogeneous durable clear transparent fused optical glass consisting essentially of approximately 10 to 40% by weight of beryllium fluoride (BeF_2), approximately 5 to 25% by weight of sodium fluoride (NaF) and approximately 35 to 85% by weight of a metaphos-

a blend of a higher aliphatic hydrophobic water-insoluble

surface, said process comprising forming a deposit of

ing successive helical turns of a paper strip provided with apple piece having a moisture resistant tough outer sur-

phate selected from the group consisting of sodium metaphosphate, potassium metaphosphate, aluminum metaphosphate, beryllium metaphosphate and magnesium metaphosphate and mixtures thereof, said fused glass having a relatively low refractive index ranging between approximately 1.384 and 1.453 and a dispersion factor ranging between 63 and 81.

2,901,365

GLASS COMPOSITION

Samuel L. Seymour, Oakmont, and James E. Duncan, Brackenridge, Pa., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

No Drawing. Application November 25, 1957
Serial No. 698,328
6 Claims. (Cl. 106—52)

1. A glass having a density of 2.55 to 2.65 grams per cubic centimeter and a refractive index, N_d, of 1.56 to 1.58 consisting essentially of the following ingredients in percent by weight: 58 to 64 percent SiO_2, 0 to 17.5 percent Na_2O, 0 to 15.5 percent K_2O, 0 to 5 percent Li_2O, the sum total of alkali metal oxides being 12.5 to 17.5 percent, 7.5 to 14 percent of alkali earth metal oxides selected from the group consisting of CaO and CaO plus MgO, 5 to 9 percent TiO_2, 0 to 10 percent B_2O_3 and 0 to 3 percent Al_2O_3, the above listed essential ingredients plus small amounts of colorants constituting 100 percent by weight of the glass.

2,901,366

GLASS COMPOSITION

John J. Sealfs and James E. Duncan, Brackenridge, Pa., assignors to Pittsburgh Plate Glass Company, Allegheny County, Pa., a corporation of Pennsylvania

No Drawing. Application December 12, 1957
Serial No. 702,237
8 Claims. (Cl. 106—52)

1. A glass having substantially uniform absorption of light in the portion of the light spectrum lying between 440 and 660 millimicrons consisting essentially of the following ingredients in percent by weight: 50 to 63 percent SiO_2, 2 to 12 percent Al_2O_3, the sum total of SiO_2 plus Al_2O_3 being 61 to 68 percent, 7 to 22 percent Na_2O, 0.5 to 17.5 percent K_2O, the sum total of alkali metal oxides being 20 to 26 percent, 0 to 8 percent CaO, 0 to 6 precent MgO, 2 to 10 percent of bivalent metal oxides selected from the group consisting of BaO, PbO, CdO, SrO and combinations thereof, the sum total of CaO, MgO and selected bivalent metal oxides being 5 to 12 percent, 0.05 to 1.0 percent Fe_2O_3, 0.001 to 0.02 percent CoO and 0.005 to 0.05 percent NiO.

2,901,367

LOW FIRED SILICA BRICK

Hobart M. Kraner, Bethlehem, Pa., assignor to Bethlehem Steel Company, a corporation of Pennsylvania

No Drawing. Application September 10, 1956
Serial No. 608,717
2 Claims. (Cl. 106—69)

1. A fired refractory silica brick which before firing and after forming consists essentially of unfired silica material, said fired brick having a density of 2.39–2.46 and containing essentially quartz and cristobalite, each being present in an amount of about 25–50%, balance if any, tridymite, and having present, if any, not more than 1% total amount of alumina and alkali.

2,901,368

CEMENTITIOUS STRUCTURAL MATERIAL

W. J. Newell and Ted W. Lewis, Fort Worth, Tex., assignors to Waterproofing Materials, Inc., Fort Worth, Tex., a corporation of Texas

No Drawing. Application February 25, 1957
Serial No. 641,859
1 Claim. (Cl. 106—95)

A composition essentially consisting of the following ingredients:

	Pounds
Calcium chloride ($CaCl_2 6H_2O$)	10
Potash alum	5
Amorphous diatomaceous silica	12
Calcium stearate	2½
Titanium dioxide	8
#1 grade silica	75
Portland cement	376
Marble dust and silica sand	150

2,901,369

PROCESS OF FORMING FOAMED ASPHALT

Otto Porter, Windsor, Berks, England, assignor to Shell Development Company, New York, N.Y., a corporation of Delaware

No Drawing. Application August 8, 1957
Serial No. 676,918
Claims priority, application Great Britain
January 16, 1957
9 Claims. (Cl. 106—122)

1. A process for the manufacture of foamed asphalt which comprises heating asphalt in which is dispersed a gas generating agent and an oil-soluble surface-active agent containing at least 1 hydrocarbon radical having at least 8 carbon atoms and at least 1 polar group, to a temperature of 100–200° C., said temperature being above both the softening point of the asphalt and the decomposition temperature of the gas generating agent but below the temperature at which the viscosity of the asphalt falls to such a low value that a substantial escape of emitted gas occurs, maintaining the mixture at the said temperature until the desired foam volume has been obtained and cooling the foamed asphalt.

2,901,370

ANTISTRIPPING AGENTS FOR BITUMINOUS MATERIALS

Eugene A. Kent, Argo, and Louis J. Secco, Jr., Chicago, Ill., assignors to National Aluminate Corporation, Chicago, Ill., a corporation of Delaware

No Drawing. Application July 22, 1957
Serial No. 673,126
2 Claims. (Cl. 106—123)

1. The reaction product of a tall oil fatty acid mixture containing at least 70% by weight of fatty acids having a molecular weight in the range of 235–280 and a polyalkylene polyamine mixture consisting essentially of 75–90% diethylenetriamine, 5–15% triethylenetetramine, and 5–10% tetraethylenepentamine, said reaction product being prepared by heating the two said mixtures at 160–190° C. for 60–90 minutes, then at 190–225° C. for 210–360 minutes, and then at 225–250° C. for 210–270 minutes, the reaction product analyzing 85–99% glyoxalidine ring closure and 88–99% total titratables.

2,901,371

SIZING COMPOSITIONS CONTAINING FATTY ACID

Herbert G. Arlt, Jr., Glenbrook, Conn., assignor to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application June 12, 1957
Serial No. 665,125
5 Claims. (Cl. 106—243)

1. A self-emulsifying composition of matter useful in the manufacture of sized paper consisting essentially of

2,901,377

HIGH TEMPERATURE RESISTANT VITREOUS

glass consisting essentially of the fused product of ap- and approximately 35 to 85% by weight of a metaphos-

a blend of a higher aliphatic hydrophobic water-insoluble ketene dimer and a sufficient amount, less than 5% by weight thereof, of a higher fatty acid as emulsifying agent and emulsion stabilizer, said ketene dimer having side chains composed of hydrogen and carbon atoms only.

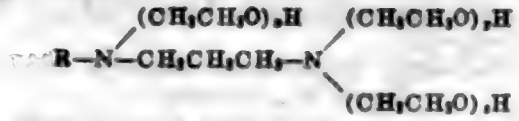
2,901,372

STRIP-RESISTANT BITUMINOUS COMPOSITIONS

Jack N. Dybalski and Paul L. Du Brow, Chicago, Ill., assignors to Armour and Company, Chicago, Ill., a corporation of Illinois

No Drawing. Application September 21, 1956
Serial No. 611,415
20 Claims. (Cl. 106—273)

1. A strip-resistant bituminous composition comprising a bitumen and from 0.05 to 2.5 weight percent of an amine salt formed by mixing together between 1 and 2 molar equivalents of a sulfonic acid selected from the group consisting of alkylaryl sulfonic acids having between 6 and 18 carbon atoms in the alkyl radical thereof and alkyl sulfonic acids having from 1 to 4 carbon atoms, and 1 molar equivalent of a diamine having the general formula



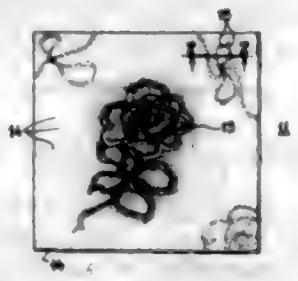
wherein R is an aliphatic hydrocarbon radical having from 8 to 22 carbon atoms, and x, y, and z are integers the sum of which is from 2 to 10.

2,901,373

PATTERN FLOCK FABRIC AND METHODS FOR PRODUCING SAID PATTERN

Ernst Weiss, Wattwil, Switzerland, assignor to Heberlein Patent Corporation, New York, N.Y., a corporation of New York

Application March 12, 1957, Serial No. 645,577
Claims priority, application Austria March 13, 1956
12 Claims. (Cl. 117—9)



1. A process of treating a sheet material having an area of its surface coated with a flock material which is bonded to said sheet by an intermediate film of adhesive material which is inert to the later mentioned solvent, which process includes applying a solvent for said flock material to local points within said area which conform to a predetermined pattern to cause said solvent to penetrate the flock to said adhesive film at said points and to at least partially dissolve flock material, and precipitating the so dissolved flock as a deposit adhering to said adhesive film at said points, to thereby delineate upon said sheet the said pattern as an adherent film upon the adhesive film and bounded by the flock material adjacent said local points.

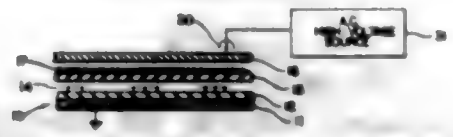
2,901,374

DEVELOPMENT OF ELECTROSTATIC IMAGE AND APPARATUS THEREFOR

Robert W. Gundlach, Spencerport, N.Y., assignor, by mesne assignments, to The Battelle Development Corporation, Columbus, Ohio, a corporation of Delaware

Application May 4, 1955, Serial No. 505,963
22 Claims. (Cl. 117—17.5)

1. A method of developing an electrostatic latent image comprising areas of varying charge on an insulating surface, said process comprising forming a deposit of finely-divided electrostatically charged powder material on one surface of an insulating sheet, bringing a printing sheet into contact with the powder-bearing side of said insulating sheet to thereby form a sandwich, contacting one side of said sandwich with an insulating surface bear-



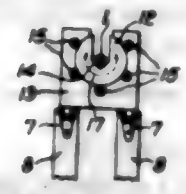
ing an electrostatic latent image, said insulating surface being positioned on a conductive backing member and applying a voltage to the opposite side of said sandwich from said insulating surface to cause powder material to deposit on said printing sheet in conformity with said electrostatic latent image.

2,901,375

FLUORESCENT LAMP COATING PROCESS

Milton E. Patterson and Kenneth E. Luna, Circleville, and William E. Ishler, Lyndhurst, Ohio, assignors to General Electric Company, a corporation of New York

Application August 7, 1957, Serial No. 676,813
6 Claims. (Cl. 117—37)



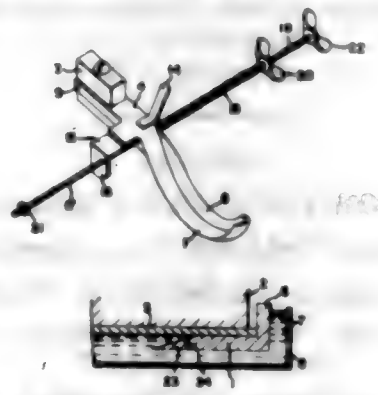
1. The method of forming a longitudinally extending reflective band along a portion of the interior of an elongated tubular envelope which comprises the steps of depositing a longitudinally extending pool of coating suspension along the bottom of the envelope, supporting the envelope horizontally and rocking it on its longitudinal axis through a prescribed angle less than 360° in order to spread the pool circumferentially therein into a longitudinally extending band.

2,901,376

WEB COATING PROCESS AND SHIELDING APPARATUS TO PREVENT BEADED EDGES

Roland James Lehman, Sayreville, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

Application February 27, 1957, Serial No. 642,849
8 Claims. (Cl. 117—44)



1. The method of continuously dip coating a substantially uniformly thick layer of coating material onto a width of a moving flexible web, which method comprises positively applying said coating material across the entire said width, while applying said coating material in a lesser amount on the edge of said width than at the central portion of said width, said lesser amount tapering toward the edge of said width.

2,901,382

a thickness up to about 30 mm. and containing copper in

any, trioymite, and having present, if any, not more than 1% total amount of alumina and alkali.

1. A self-emulsifying composition of matter useful in the manufacture of sized paper consisting essentially of

2,901,377

WALL SURFACING AND METHOD OF MAKING THE SAME

Hans Bode, Moers (Rhine), Germany, assignor to M. Belmont Ver Standig, Inc., a corporation of Maryland

No Drawing. Application August 11, 1954
Serial No. 449,249
8 Claims. (Cl. 117—70)

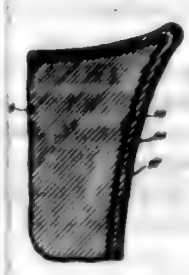
1. The method of producing a wall surfacing comprising the steps of applying to the wall a first primer comprising a film-forming synthetic resin selected from the group consisting of polyvinyl ester resins and polyacrylic ester resins, or a mixture thereof, thereupon applying a second primer comprising a film-forming synthetic resin selected from the group consisting of polyvinyl ester resins, polyacrylic ester resins, cellulose esters, and cellulose ethers, or a mixture thereof, applying a paste-like mixture comprising Portland-type cement to form the layer of greatest thickness in said wall surfacing, applying a sealing coating comprising a film-forming synthetic resin selected from the group consisting of cellulose esters, cellulose ethers, polyvinyl ester resins, polyacrylic ester resins, epoxy resins, and styrene resins, or mixtures thereof over said cement containing layer, and thereupon applying a glazing coating comprising a film-forming substantially craze resistant synthetic resin selected from the group consisting of polyvinyl ester resins, polyacrylic ester resins and epoxy resins or mixtures thereof.

2,901,378

PROCESS OF FINISHING A WOOD CORE

Edward F. Kempen, St. Louis, Mo., assignor to The Don-Ite Company, St. Louis, Mo., a corporation of Missouri

Application April 29, 1955, Serial No. 504,388
11 Claims. (Cl. 117—73)



1. The process of finishing a wood core to form shoe heels and the like, comprising the steps of coating the core with a dilute solution whose major non-volatile constituents form a film of a tacky adhesive character, drying the core for a time sufficient to prevent lifting of the resulting film and without sanding the base coat, dip coating the core in a bath whose major non-volatile constituents are thermoplastic substances forming a relatively tough thick hard film, and thereafter spray coating the core with a solution whose non-volatile constituents include thermoplastic substances which differ in their reaction to solvents from that of the second coat, said spray solution including volatile components, one of which is a low boiler having relatively strong solvent action of said thermoplastic substance of the final coat in comparison with the thermoplastic substances of the intermediate coat and another of which is a relatively high-boiler having solvent action on the thermoplastic substances of said intermediate coat, thereby to produce a leveling action on the intermediate coat.

2,901,379

HIGH TEMPERATURE RESISTANT VITREOUS MATERIAL

Richard F. Shannon, Lancaster, and Robert H. Mitchell, New Concord, Ohio, assignors to Owens-Corning Fiberglas Corporation, Toledo, Ohio, a corporation of Delaware

No Drawing. Application April 9, 1956
Serial No. 577,428
17 Claims. (Cl. 117—124)

1. An article of manufacture comprising a mass of a vitreous substance having a maximum dimension in at least one direction not greater than 0.005 inch, and a coating comprising at least one refractory metal oxide having a pH not greater than 10.5 adhered to at least one surface of said mass, the refractory oxide content of said coating constituting at least about 10 percent of the weight of vitreous substance and coating.

2,901,380

SOLID LUBRICANT FILMS HAVING VITREOUS ENAMEL BINDERS

Ralph E. Crump, Granada Hills, Calif., assignor to Electrofilm, Inc., North Hollywood, Calif., a corporation of California

No Drawing. Application October 12, 1956
Serial No. 615,477
9 Claims. (Cl. 117—129)

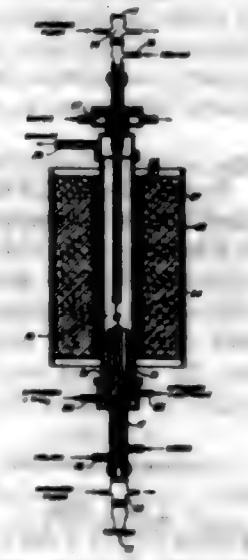
1. The process of lubricating the irregularized friction surface of a bearing or like metallic element to be subjected to mechanical friction at high temperatures that comprises coating said surface with a uniform mixture of (1) finely divided particles of an inorganic frit fusible to form a binder, and (2) finely divided solid lubricant particles including sufficient graphite to impart lubricity to the subsequently fused film, the weight percentage of lubricant particles in said mixture being in excess of the frit particles therein, heating the coating to a temperature at which the frit particles fuse to form an essentially glassy binder which bonds the graphite-containing lubricant particles therein to the metal surface in a coating in which the graphite has stable lubricity at temperatures in excess of 650° F.

2,901,381

METHOD OF MAKING ELECTRICAL RESISTORS

Gordon K. Teal, Dallas, Tex., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application October 12, 1956, Serial No. 615,644
7 Claims. (Cl. 117—221)



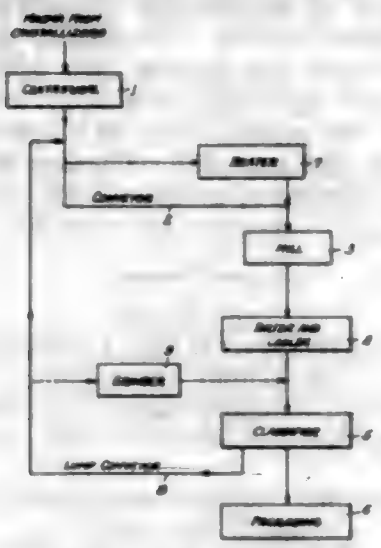
1. The method of forming an electrical resistor having a high resistance deposited layer which comprises pyrolytically decomposing a gaseous mixture comprising titanium tetrachloride and a carbonaceous gas at the heated surface of a base on which said film is to be deposited.

2,901,387

a water-soluble polymer containing at least 20% N-vinyl-

age comprising areas of varying charge on an insulating portion of said width, said lesser amount tapering toward the edge of said width.

2,901,382
MANUFACTURE OF DEXTROSE CONTROLLING PARTICLE SIZE
Robert G. Rohwer, John E. Cadotte, and Harold Reter, Clinton, Iowa, assignors, by mesne assignments, to Standard Brands Incorporated, New York, N.Y., a corporation of Delaware
Application August 27, 1954, Serial No. 452,686
3 Claims. (Cl. 127—63)



1. In the process for the manufacture of dextrose wherein a liquor containing the dextrose is subjected to a crystallization operation followed by the removal of the mother liquor resulting in the formation of a sugar cake, the steps which comprise: forming a mixture of sugar cake of dextrose with a small amount of adhesive syrup of dextrose by heating said sugar cake to a temperature in the range from about 110° F. to 150° F. and for a period short of substantial melting, said sugar cake of dextrose having lumpy particles and a large quantity of fine loose particles at a moisture content of about 12% to about 20% by weight, said adhesive syrup being formed in amounts at least sufficient to compact said fine loose particles but not in amounts sufficient to make said mixture too sticky for handling; reducing and compacting sufficient proportions of said lumpy and fine particles of said sugar cake into particles of sizes such that when dried at least 55 percent by weight will be retained on U.S. 100 mesh screen and will pass a U.S. No. 16 mesh screen; and then drying said particles to a moisture content below 9.08% by weight.

2,901,383
PROCESS FOR CLEANING OBJECTS
Kurt Lebensft, Munich-Lochham, and Ernst Schmidt, Munich, Germany, assignors to Wacker-Chemie G.m.b.H., Munich, Germany, a corporation of Germany
No Drawing. Application October 1, 1956
Serial No. 612,971
Claims priority, application Germany October 26, 1950
10 Claims. (Cl. 134—7)

8. Process for cleaning objects which comprises treating them with a chlorinated aliphatic hydrocarbon containing finely divided particles of polyvinyl chloride, and subsequently rinsing the cleaned objects in a chlorinated aliphatic hydrocarbon to remove the polyvinyl chloride particles.

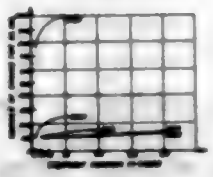
2,901,384
METHOD FOR TREATING CAST IRON CASTINGS
Léon Selves, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Application February 10, 1953, Serial No. 336,187
Claims priority, application France February 20, 1952
9 Claims. (Cl. 148—3)

1. A method of treating cast iron which comprises casting said iron in the form of a white iron casting having a thickness up to about 30 mm. and containing copper in a concentration of 0.7% to 3%, subjecting the casting of said white cast iron thus obtained to hardening by austenitization with heat at a temperature above the temperature at the end of the eutectoid transformation, followed by step quenching, to a temperature below the M_s whereby to form martensite, tempering at a temperature between 400 and 500° C. for 24 to 100 hours to effect the formation of nuclei in the graphite, and subjecting the casting to graphitization of the primary cementite by maintaining the casting at a temperature of about 875° C. to 900° C. for a period of time sufficient for the total disappearance of the cementite.

2,901,385
MICRO-CRYSTALLINE BONDING COATS FOR METAL
Leo P. Curtin, Cranbury, N.J.
No Drawing. Application October 30, 1957
Serial No. 693,259
8 Claims. (Cl. 148—6.16)

1. Process for producing an adherent, micro-crystalline chromite-phosphate bonding coat on ferrous metal surfaces which comprises the following sequence of steps: (1) wetting the metal surface with a solution containing a dichromate selected from the class which consists of barium, calcium, magnesium and zinc dichromates, the solution also containing a reducing agent for said dichromate, said reducing agent being present in amount sufficient to reduce substantially completely the hexavalent chromium present, the solution also containing a phosphoric acid compound selected from the class which consists of barium, calcium, magnesium and zinc dihydrogen phosphates and free phosphoric acid, the phosphate being less in amount that the dichromate in the solution, and (2) destroying substantially completely hexavalent chromium compounds and reducing agents present in the film of said dichromate solution adhering to the metal surface by heating to a temperature above 100° C., the residue remaining on the metal surface constituting an adherent, micro-crystalline, chromite-phosphate bonding coat.

2,901,386
METHOD OF HEAT TREATING CAST IRON
Leon Salves, Billancourt, France, assignor to Regie Nationale des Usines Renault, Billancourt, France
Application February 6, 1953, Serial No. 335,579
Claims priority, application France February 18, 1952
7 Claims. (Cl. 148—21.8)



1. A process for the treatment of white cast iron suitable for formation of pearlitic malleable iron which comprises subjecting a casting of said white cast iron after cooling to a sequence of steps which includes effecting martensitic hardening of the casting by austenization with heat at a temperature slightly above that at the end of the eutectoid transformation followed by progressive cooling including quenching in a salt bath maintained between 150–250° C., maintaining the casting in the salt bath for a period of time between 30 seconds and 6 minutes, and then cooling to room temperature to produce the martensitic transformation, tempering the thus-produced martensite by heating at a temperature of 450 to 500° C. for a prolonged period of time of 3 to 48 hours, further heating the thus treated iron at a temperature of about 900° C. to effect graphitization of the iron, and cooling to room temperature.

2,901,395

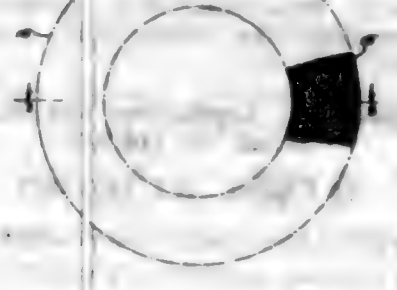
leveling action on the intermediate coat.

surface of a base on which said film is to be deposited.

2,901,387
SOLDERING FLUX COMPOSITION
Gordon M. Ferker, Lyndhurst, and Herman F. Ogrise, Chagrin Falls, Ohio, assignors to General Electric Company, a corporation of New York
No Drawing. Application October 29, 1956
Serial No. 618,689
13 Claims. (Cl. 148—23)

1. A solder flux composition consisting essentially of about 2 to about 10 percent by weight hydrohalide derivative of 2-ethylhexylamine, about 10 to about 90 percent by weight rosin and a suitable solvent therefor.

2,901,388
FRICTION FACING
Henry Clifford Morton, Branford, Conn., assignor to The Russell Manufacturing Company, Middletown, Conn., a corporation of Connecticut
Application November 19, 1956, Serial No. 622,886
4 Claims. (Cl. 154—52)



1. A friction facing, comprising a spiral wound web impregnated with a heat-set thermosetting bonding friction material, said web being composed of plied yarn some of said plies comprising spun yarn composed of a blend of asbestos, cotton and synthetic fibers, others of said plies comprising a continuous filament fiber, and thermoplastic synthetic fibers dispersed in said bonding material whereby under the action of increased temperature due to surface friction the thermoplastic fibers soften to a tacky state resulting in increased friction, and return to their original form and condition when the temperature falls.

2,901,389
PULPING PROCESS
Shafi Ul Hossain, Sault Ste. Marie, Ontario, Canada, assignor to Abitibi Power & Paper Company, Limited, Iroquois Falls, Ontario, Canada, a Canadian company
No Drawing. Application June 10, 1957
Serial No. 664,477
Claims priority, application Canada October 12, 1956
7 Claims. (Cl. 162—72)

1. A process for pulping lignocellulosic material comprising the step of treating said lignocellulosic material at an elevated temperature with an aqueous solution comprising dimethyl sulphoxide in a concentration of at least 75% by weight in the presence of an acid catalyst substantially to delignify said lignocellulosic material.

2,901,390
INORGANIC PAPERS AND METHODS OF MAKING SAME
Joseph E. Conklin, New York, and Robert J. Holmes, Huntington, N.Y., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Application December 19, 1955
Serial No. 553,696
14 Claims. (Cl. 162—152)

2. A process for preparing a sheet-like product from siliceous stock which comprises adding to an aqueous dispersion of said stock from about 0.2 to about 5% of a water-soluble polymer containing at least 20% N-vinyl-2-pyrrolidone based on the weight of the stock and forming a sheet from said stock.

2,901,391
MODIFIED UREA-FORMALDEHYDE RESINS AND PAPER CONTAINING THE SAME
Lucius H. Wilson, Riverside, and Yun Jen, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine
No Drawing. Application June 15, 1954
Serial No. 436,998
17 Claims. (Cl. 162—167)

1. A process for the manufacture of a wet strength cellulosic web which comprises contacting cellulosic fibers with a dilute aqueous dispersion of a hydrophilic colloidal cationic thermo-setting resin formed by acid reaction of a methylol urea with a water-soluble quaternary ammonum salt having one aldehyde-reactive $-NH_2$ group, thereby depositing from about 0.1% to 5% of said resin on said fibers based on the dry weight thereof, and heating said fibers at an acid pH at a temperature between about 160° F. and 260° F. for about ¼ to 4 minutes to dry the fibers and form a bond of cured resin therebetween.

2,901,392
ORGANIC MERCURY SOLUTIONS AND METHOD OF PREPARING THE SAME
Sylvan L. Cohen, Flushing, and Martin S. Frant, Ossining, N.Y., and Frank J. Sowa, Cranford, N.J.; said Cohen and said Frant assignors to Gallowhur Chemical Corporation, New York, N.Y., a corporation of New York
No Drawing. Application July 14, 1954
Serial No. 443,424
2 Claims. (Cl. 167—30)

1. An organic mercury solution for the durable antisepsis of nylon and synthetic plastics which consists essentially of phenylmercury formate in an amount of formic acid sufficient to reduce the concentration of phenylmercury formate to the extent that the equivalent of metallic mercury in the solution is in the range of 0.25 to 5%, the said solution, when applied directly to the nylon and synthetic plastic articles without pretreatment thereof, forming in and on the same a chemically adherent deposit of phenylmercury formate which penetrates and diffuses into the said nylon and synthetic plastic articles and is resistant to leaching therefrom.

2,901,393
PESTICIDES
John M. Magner, Webster Groves, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware
No Drawing. Application September 26, 1955
Serial No. 536,734
2 Claims. (Cl. 167—30)

2. The method of destroying Mollusca which comprises contacting the organism in its environment with an aqueous dispersion of copper phthalate in the concentration range of 1–50 p.p.m.

2,901,394
FUNGICIDES
Ronald Rosher, Wilmington, Del., assignor to Hercules Powder Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application November 29, 1957
Serial No. 699,457
5 Claims. (Cl. 167—30)

2. A composition dispersible in water for inhibiting fungi growth which comprises a water-dispersible volatile organic solvent containing dissolved therein about 3–25% m-nitrophenacyl chloride.

2,901,401

ing said iron in the form of a white iron casting having about 900° C. to effect graphitization of the iron, and cooling to room temperature.

2,901,395

COPPER PENTACHLOROPHENATE SOLUTION

Charles Parkes Matzinger, Berkeley, Calif., assignor to The Mountain Copper Company, Ltd., a corporation of Great Britain

No Drawing. Application April 28, 1958
Serial No. 731,122
4 Claims. (Cl. 167—42)

1. As a new composition of matter a mixture of copper pentachlorophenate and the methyl esters of tallow fatty acids.

2,901,396

PREPARATION OF PHARMACEUTICAL LIVER PRODUCTS

Sheldon H. Lewis, Park Forest, La Verne W. Van Ness, Bradley, and Alex Lukas, Chicago, Ill., assignors to Armour and Company, Chicago, Ill., a corporation of Illinois

No Drawing. Application May 26, 1955
Serial No. 511,426
3 Claims. (Cl. 167—74.6)

1. In a process for preparing a pharmaceutical liver liquid of improved physical stability, the steps of mixing an aqueous liver concentrate having a pH within the neutral pH range with a proteolytic enzyme substance having an optimal activity in said neutral pH range, incubating the resulting mixture to proteolyze said aqueous liver concentrate, fractionating said proteolyzed liver concentrate by combining therewith an alcohol of the group consisting of ethanol and methanol in such amount as to produce an alcohol concentration therein of from 60 to 80% by volume, separating the precipitate thereupon formed from the alcohol-soluble liver fraction, removing a substantial portion of the alcohol contained in said alcohol-soluble liver fraction, rapidly heating the resulting aqueous alcohol-soluble liver fraction to about the boiling point thereof at the atmospheric pressure employed to selectively heat-denature a portion of the liver substances contained therein, chilling the boiled liver concentrate to a temperature of less than 10° C. at which a precipitate of the heat-denatured liver substances is obtained, and separating said precipitate from the aqueous liver concentrate.

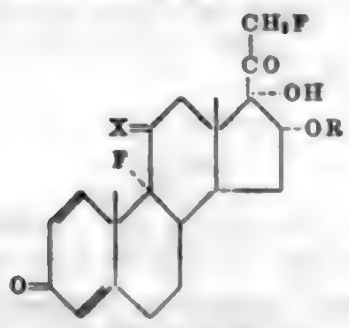
2,901,397

11-OXYGENATED 9α-21-DIFLUORO-1,4 PREGNADIENE STEROIDAL COMPOSITIONS

Alexander L. Nussbaum, Bloomfield, N.J., assignor to Schering Corporation, Bloomfield, N.J., a corporation of New Jersey

No Drawing. Application November 30, 1956
Serial No. 625,219
9 Claims. (Cl. 167—77)

1. A compound of the formula



wherein X is a member of the class consisting of =O and (H,β—OH), and R is a member of the class consisting of H and lower alkanoyl.

6. A pharmaceutical composition comprising a nontoxic carrier and a compound as defined in claim 1.

2,901,398

ION-EXCHANGE PURIFICATION OF ALLERGENIC POLLEN COMPONENT

Ely Perlman, Roslyn Heights, N.Y., assignor to Mount Sinai Hospital Research Foundation, Inc., New York, N.Y., a membership corporation of New York

No Drawing. Application June 19, 1952
Serial No. 294,487
6 Claims. (Cl. 167—78)

1. In a method for recovering an active pollen component, the step of mixing an undegraded pollen solution with a mixture of a synthetic anion exchange resin and a synthetic cation exchange resin in such proportions relative to each other to maintain the resultant pH of the solution within a range of 5 to 8 whereby substantially only said active component to be recovered remains in said solution unabsorbed by said resin mixture.

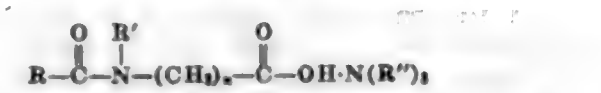
2,901,399

THERAPEUTIC PREPARATIONS FOR TOPICAL APPLICATION TO THE SKIN

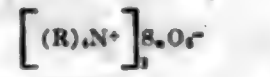
John J. Clarey, Bronxville, N.Y., assignor to Bristol-Myers Company, New York, N.Y., a corporation of Delaware

No Drawing. Application May 20, 1955
Serial No. 510,029
20 Claims. (Cl. 167—87)

1. A synergistic therapeutic composition for the treatment of skin diseases comprising a compound having the formula



where *n* represents an integer 1 to 2, R is selected from the group consisting of alkyl radicals having from 6 to 24 carbon atoms, R′ is selected from the group consisting of H and an alkyl radical having from 1 to 5 carbon atoms and R″ is selected from the group consisting of H, an alkyl radical having from 1 to 24 carbon atoms, an aryl radical, a hydroaryl radical, an aralkyl radical, an alkyl hydroaryl radical and combinations thereof, wherein the alkyl moiety in said aralkyl radical and said alkyl hydroaryl radical contains from 1 to 3 carbon atoms, and a compound having the formula



where *n* represents an integer from 4 to 6, and R is an alkyl radical having from 1 to 24 carbon atoms.

2,901,400

CRYPTOCRYSTALLINE CALCIUM PYROPHOSPHATE AND DENTIFRICE COMPOSITION COMPRISING THE SAME

Fritts William Thomas, St. Louis, Mo., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application December 30, 1955
Serial No. 556,443
2 Claims. (Cl. 167—93)

2. A dentifrice composition containing a dental-caries-retarding water-soluble fluoride and an effective dentifrice polishing concentration of calcium pyrophosphate, said pyrophosphate being in the form of a particulate cryptocrystalline solid having an average particle size below about 5 microns prepared by the slow molecular dehydration of anhydrous dicalcium orthophosphate.

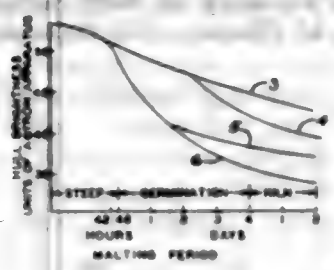
siliceous stock which comprises adding to an aqueous dispersion of said stock from about 0.2 to about 5% of

tile organic solvent containing dissolved therein about 3–25% m-nitrophenacyl chloride.

2,901,401
MALTING PROCESS

Phyllis W. Grimm, Brookfield, and Dwight L. Baker, Milwaukee, Wis., assignors to Basic Products Corporation, a corporation of Wisconsin

Application June 21, 1957, Serial No. 667,089
11 Claims. (Cl. 195—71)

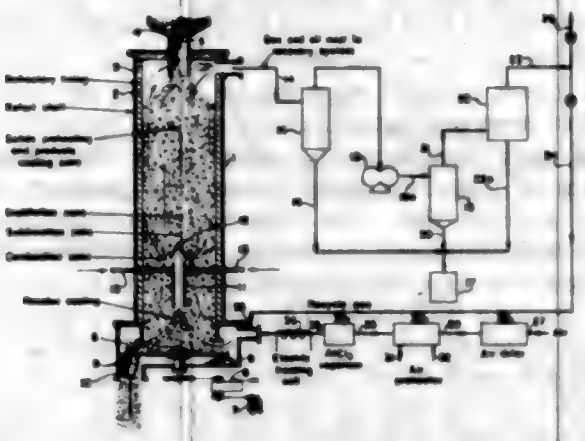


1. The process of malting in which grain is subjected to formaldehyde prior to placement in a germinating environment and is subsequently treated with formaldehyde as germination takes place.

2,901,402
PROCESS FOR DESTRUCTIVE DISTILLATION OF HYDROCARBONACEOUS MATERIALS

Maurice William Putman, Midland, Mich., assignor to the United States of America as represented by the Secretary of the Interior

Application July 19, 1957, Serial No. 673,099
9 Claims. (Cl. 202—6)
(Granted under Title 35, U.S. Code (1952), sec. 266)

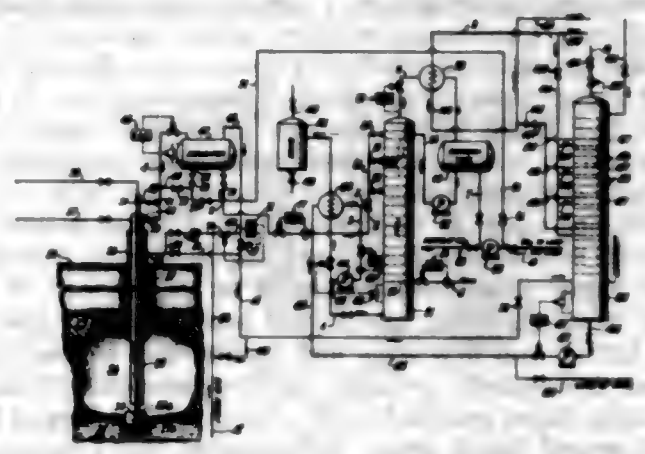


1. A method for the destructive distillation of oil shale for the production of useful liquid products which involves the steps of continuously passing the shale as a bed of broken solids downwardly in a substantially vertical column successively through a preheating zone and a distillation zone, continuously passing a stream of non-condensable gases containing artificially induced condensation nuclei selected from the class consisting of aluminum oxide, titanium oxide and tin oxide upwardly through said distillation zone at a temperature sufficient to effect thermal decomposition of said oil shale, thereby producing condensable product vapors which are carried upwardly in said gas stream containing artificially induced condensation nuclei, permitting said vapor-containing gas stream to pass upwardly through said preheating zone, whereby the descending shale becomes progressively heated, withdrawing said gas stream from said column at a temperature sufficiently low so that substantially the entire vapor content of said gas stream containing artificially induced condensation nuclei undergoes condensation within said column, whereby the major portion of the vapors condense on the artificially induced nuclei as a relatively stable mist and a minimum amount of condensation occurs on the surface of said shale, withdrawing said relatively stable mist and accompanying gas stream from the column, and separating the shale-oil mist, including the artificially induced nuclei, from the accompanying gases.

2,901,403
UNDERGROUND STORAGE OF AMMONIA AND ITS RECOVERY

Loyd W. Adams and John E. Cottle, Bartlesville, Okla., assignors to Phillips Petroleum Company, a corporation of Delaware

Application February 15, 1954, Serial No. 410,290
10 Claims. (Cl. 202—39)

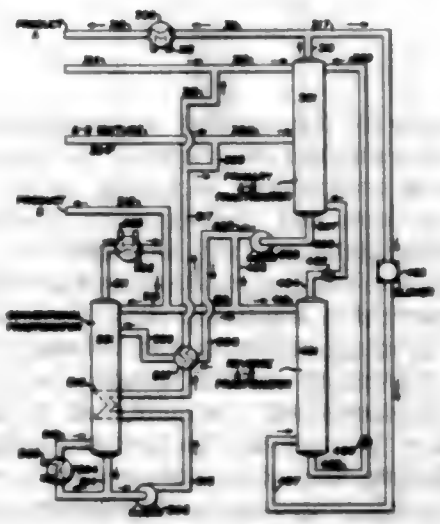


1. A method for storing liquid ammonia and recovering same from the storage comprising introducing liquid ammonia into an underground storage space in a subterranean salt formation, introducing a synthetic ammonia plant off gas into said storage space under pressure, withdrawing a liquid comprising liquid ammonia from said storage space by displacement with said gas, introducing the withdrawn liquid comprising liquid ammonia into a fractionating still, introducing water into said still, adding reboiling heat to the kettle section of said still, removing vapors from the top of said still, condensing said vapors, dividing the condensate into two portions, returning one portion to the upper portion of said still as reflux, removing the other portion as the main product of the process and removing a salt brine from the kettle of said still.

2,901,404
PROCESS FOR THE SEPARATION OF FLUIDS BY EXTRACTIVE DISTILLATION

Isidor Kirshenbaum, Union, N.J., Fredrick Lowell Jonach, Kew Gardens, N.Y., and Lewis D. Etherington, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

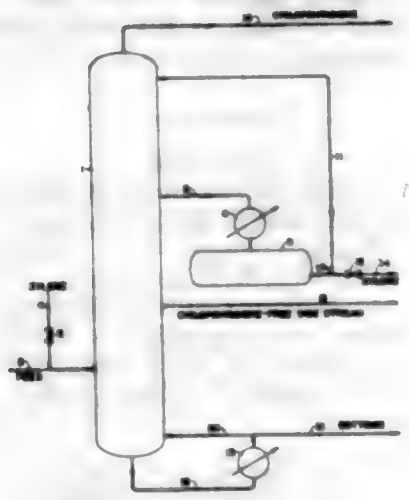
Application February 18, 1955, Serial No. 489,218
20 Claims. (Cl. 202—39.5)



1. A process for separating a liquid mixture of components A and B where the relative volatility of A to B is responsive to changes in the concentration of a liquid combining agent in contact with said mixture, said combining agent being capable of selective combination with at least one of the components, comprising the steps of

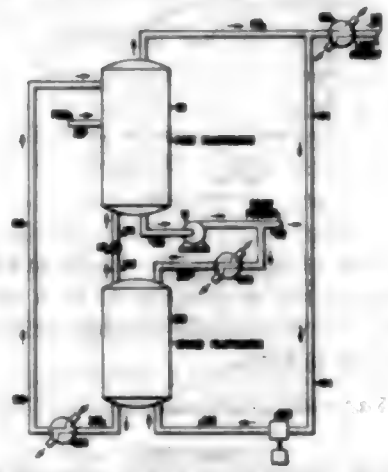
introducing said liquid mixture and said combining agent into the top of a first multi-stage fractionation zone, regulating the concentration of said combining agent in said first zone so that A is more volatile than B, fractionating said liquid mixture to produce a vapor enriched in A and a first liquid phase containing B and said combining agent, withdrawing a portion of said vapor enriched in A as a product, and introducing the remainder of said vapor into the bottom of a second multi-stage fractionating zone, introducing said first liquid phase into the top of said second zone, contacting downwardly flowing liquid with rising vapor to condense A vapor and strip B from said first liquid phase, thereby forming a vapor phase enriched in B and a second liquid phase containing A, B, and said combining agent, wherein the ratio of B to combining agent in said second liquid phase is less than in said first liquid phase, recycling at least a portion of said vapor phase enriched in B to the bottom of said first zone, recycling all of said second liquid phase to the top of said first zone and passing said second liquid phase downwardly through said first zone countercurrent to rising vapor enriched in B, whereby A is stripped from said second liquid phase, withdrawing liquid mixture of B and combining agent from the bottom of said first fractionation zone, and passing a portion thereof to a separation zone wherein B and combining agent are separated.

2,901,405
DISTILLATION PROCESS
Reginald Jeremiah Venis, Manchester, England, assignor to Shell Development Company, New York, N.Y., a corporation of Delaware
Application March 7, 1957, Serial No. 644,598
Claims priority, application Great Britain March 16, 1956
3 Claims. (Cl. 202—40)



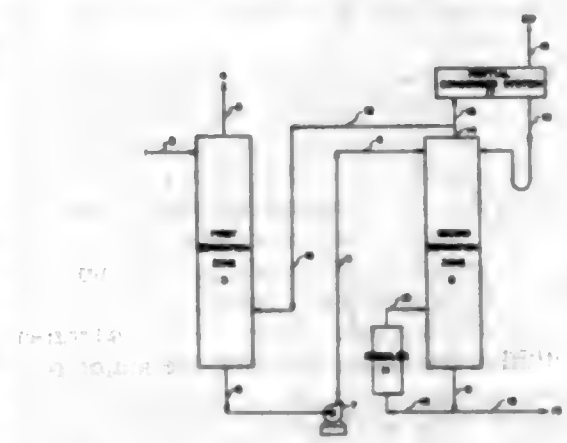
1. A process for the recovery of valuable organic compounds from a mixture consisting of cyclopentadiene and higher boiling compounds, including in substantial concentration at least one resin-forming unsaturated compound boiling between 150° and 200° C., and xylene which comprises charging said mixture in vapor phase to the lower part of a fractional distillation column, adding as sole external reflux to said column, near the top thereof, a stream of xylene, withdrawing an overhead vapor stream consisting essentially of cyclopentadiene; withdrawing a first liquid side stream boiling mainly in the xylene boiling range comprising essentially said xylene and free of cyclopentadiene and polymers thereof, cooling said first side stream and returning at least part thereof as said external reflux; withdrawing at least a second liquid side stream boiling between 150° and 200° C., comprising at least one of said unsaturated resin-forming compounds and essentially free of cyclopentadiene and polymers thereof, and recovering resin-forming unsaturated compounds as products from said side stream.

2,901,406
SEPARATION OF LIQUIDS BY ALTERING THEIR RELATIVE VOLATILITIES
Isidor Kirshenbaum, Union, N.J., Fredrick Lowell Jonach, Kew Gardens, N.Y., and Lewis D. Etherington, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
Application February 18, 1955, Serial No. 489,219
13 Claims. (Cl. 202—41)



1. A process for separating a fluid mixture of components A and B in which the relative volatility of A to B is responsive to changes in a thermodynamic variable of the class temperature and pressure, comprising the steps of introducing said mixture into a first fractionating zone, maintaining conditions in said first zone such that A is more volatile than B, withdrawing a first vapor product from the top of said zone and passing a portion thereof to the bottom of a second fractionating zone, withdrawing a first liquid product enriched in B from the bottom of said first zone and introducing a portion thereof into the top of said second zone, adjusting a thermodynamic variable of the class temperature and pressure in said second zone so that A is relatively less volatile than it was in said first zone, contacting said first liquid product with said first vapor product in said second fractionating zone, whereby B is stripped from said first liquid product to form a second vapor product enriched in B and a second liquid product enriched in A, recycling said second liquid product to the top of said first zone, and passing said second vapor product to the bottom of said first zone.

2,901,407
HYDROGEN CHLORIDE PURIFICATION
John White Colton, Pelham Manor, N.Y., assignor, by mesne assignments, to Scientific Design Company, Inc., a corporation of Delaware
Application July 31, 1957, Serial No. 675,422
6 Claims. (Cl. 202—42)



1. In a cyclic process for the purification of a contaminated aqueous hydrochloric acid solution, the steps of: passing said aqueous solution into a first separation zone, removing from said separation zone as separate

tially lower anode current density until the instantaneous

to 50 wt. percent and a gravity in the range of 0 to 20°

streams hydrogen chloride containing said contaminants and an aqueous hydrochloric acid effluent more concentrated with respect to hydrogen chloride than said original contaminated aqueous hydrochloric acid solution, passing said effluent into a second separation zone maintained at a pressure higher than that maintained in said first separation zone, removing from said second separation zone as separate streams an aqueous hydrochloric acid solution of azeotropic concentration and a vapor effluent of hydrogen chloride and water, introducing a portion of said vapor effluent into said first separation zone sufficient to effect said separation in said first zone, separating the remaining portion of said vapor effluent into anhydrous hydrogen chloride and aqueous hydrochloric acid solution.

2,901,408

COATING METHOD

Raymond G. Townsend, Scotia, N.Y., assignor to the United States of America as represented by the United States Atomic Energy Commission

No Drawing. Application May 23, 1951
Serial No. 227,935
1 Claim. (Cl. 204—38)

A method of protectively coating beryllium metal which comprises the steps of etching said metal in an acid bath, immersing the etched beryllium in a solution of sodium zincate for a brief period of time, immersing the beryllium in concentrated nitric acid, immersing the beryllium in a second solution of sodium zincate, electroplating a thin layer of copper over said beryllium, and finally electroplating a layer of chromium over said copper layer.

2,901,409

ANODIZING MAGNESIUM

Herbert K. De Long, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application August 3, 1956
Serial No. 602,059
9 Claims. (Cl. 204—56)

1. An anodizing bath consisting of an aqueous solution of water-soluble inorganic compounds yielding in the aqueous solution the radicals; ammonium, fluoride, phosphate, sodium, and hexavalent chromium, the amount by weight of the ammonium radical being between 3.2 and 15 percent, that of the fluoride radical being at least 6 percent, that of the phosphate radical calculated as PO_4 being between 2 and 10 percent, that of the sodium radical being between 0.3 and 5 percent and that of the hexavalent chromium radical being between about 0.3 and 5 percent, and sufficient mineral acid to give the solution a pH between 0.5 and 4.

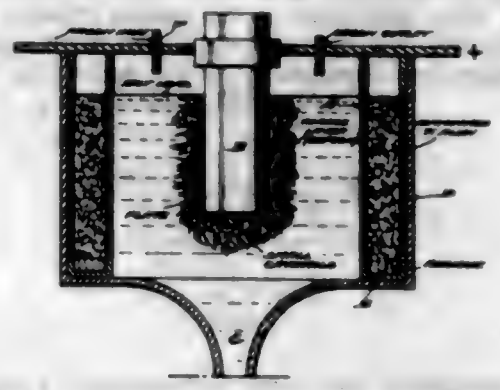
2,901,410

ELECTRO-REFINING TITANIUM

Reginald S. Dean, Hyattsville, and William W. Gullett, College Park, Md., assignors to Chicago Development Corporation, Riverdale, Md., a corporation of Delaware

Application August 2, 1956, Serial No. 601,705
1 Claim. (Cl. 204—64)

In an electrolytic method of producing pure titanium according to which comminuted metallic titanium-containing material having a specific surface of at least one square foot per lb. of material and containing at least one impurity selected from the group consisting of oxygen, nitrogen, carbon, iron, chromium, copper, vanadium, aluminum, and silicon, is made the anode in an electrolytic cell having a cell bath material therein consisting essentially of oxygen-free molten sodium chloride containing titanium 3–7% as dilute acid soluble titanium having an average valence of 2.0–2.5 and metallic sodium as determined by hydrogen evolution in ferric sulphate solution of 1–7 ml. H_2 per gram, said cell having a cathode inert with respect to the cell bath when acting as a cathode, the improvement which consists in locating the comminuted anode material in a steel basket having a foraminous wall thereof between the anode material and the cathode in the cell bath in spaced relation with and substantially surrounding the cathode; connecting the conductive foraminous steel basket and the cathode with



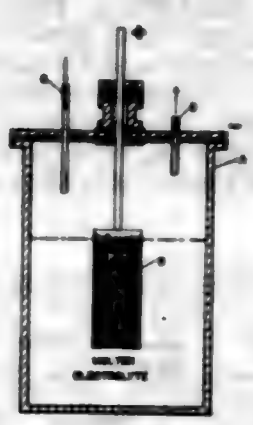
a source of direct current; and passing direct current at a current density of 100–2000 amperes per sq. ft. of original cathode surface between the comminuted anode material and the cathode to form substantially only coarse titanium crystals adherent to the cathode and to maintain the cell bath without change in composition by solution of titanium only from the comminuted anode material in electrical contact with the foraminous steel wall between the anode material and the cathode.

2,901,411

METHODS FOR PREPARING SINGLE PHASE MOLTEN BATHS OF ALKALINOUS CHLORIDES, TITANIUM CHLORIDES, AND ALKALINOUS METALS

William W. Gullett, College Park, Md., assignor to Chicago Development Corporation, Riverdale, Md., a corporation of Delaware

Application May 28, 1957, Serial No. 660,418
1 Claim. (Cl. 204—64)



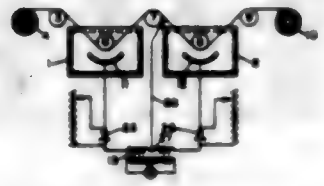
In a process for preparing a single phase molten bath for use as an electrolyte in a process for electrorefining titanium characterized by passing a direct current from crude titanium anode to an inert cathode in an electrolyte of at least one alkalinous chloride containing 1–8% soluble titanium as chlorides, 0.1–5% dissolved alkalinous metal, the titanium having an average valence from 2.05–2.4, the improvement which consists in establishing the optimum relationship of soluble titanium, dissolved alkalinous metal and average effective titanium valence for titanium refining by treating a bath of at least one molten alkalinous chloride containing 1–8% Ti as lower titanium chlorides with an average valence of 2.7–3.0 by passing a direct current from a large-surface titanium anode to an inert cathode at a cathode current density not exceeding 50 amperes per square foot and a substan-

and polymers thereof, and recovering resin-forming unsaturated compounds as products from said side stream.

of: passing said aqueous solution into a first separation zone, removing from said separation zone as separate

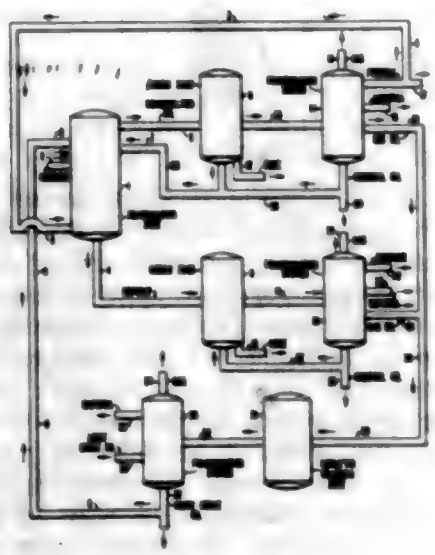
tially lower anode current density until the instantaneous open circuit voltage initially in reverse to the applied voltage is in the same direction as the applied voltage by a steady value not exceeding 20 millivolts whereby to maintain the cathode in its initial condition.

2,901,412
APPARATUS FOR ANODIZING ALUMINUM SURFACES
Nicholas Mostovych and Alexander Cybriwsky, Louisville, Ky., assignors to Reynolds Metals Company, Richmond, Va., a corporation of Delaware
Application December 9, 1955, Serial No. 552,182
1 Claim. (Cl. 204—211)



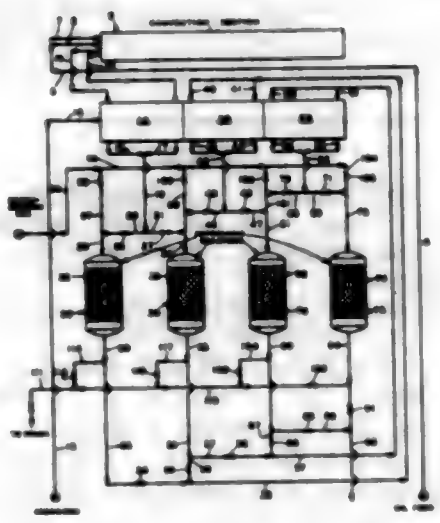
An anodizing apparatus comprising: a first unit including a first shunt-resistor rectifier and a first tank for containing an electrolyte for anodizing an aluminum surface immersed in said electrolyte, said tank having cathode and anode terminals; a second unit substantially similar to said first unit, said second unit including a second shunt-resistor rectifier and a second anodizing tank having cathode and anode terminals; an alternating current source having first and second power terminals and a common terminal; means electrically connecting both anode terminals to said common terminal; and means electrically connecting said first power terminal serially through the first rectifier to the cathode terminal of the first tank and said second power terminal serially through the second rectifier to the cathode terminal of the second tank, each rectifier constituting a means for restricting the inverse current flowing through it to a value substantially less than that of the anodizing current flowing therethrough.

2,901,413
COMBINATION DEASPHALTING, COKING, AND CATALYTIC CRACKING PROCESS
Edwin Joseph Newchurch and Edward Ancil McCracken, Baton Rouge, La., assignors to Esso Research and Engineering Company, a corporation of Delaware
Application April 26, 1955, Serial No. 503,988
4 Claims. (Cl. 208—55)



1. A residual oil conversion process which comprises the steps, in combination, of: separating a residual oil having a Conradson carbon content in the range of 5 to 50 wt. percent and a gravity in the range of 0 to 20° A.P.I. by deasphalting using a solvent comprising light hydrocarbons having 2 to 5 carbon atoms to obtain a solvent-containing deasphalted oil having a substantially lower Conradson carbon content and a solvent-containing asphalt; separately coking in two individual coking steps said solvent-containing deasphalted oil and solvent-containing asphalt by contact with fluidized solids at a temperature in the range of 900–1400° F., recovering from the deasphalted oil coking step a gas oil having an end point above 1100° F., separately recovering from the asphalt coking step a gas oil having an end point substantially below 1100° F.; combining and catalytically cracking the two gas oil streams having characteristically different end points which have been so recovered by contacting said gas oils in a catalytic cracking zone with fluidized cracking catalyst at a temperature in the range of 800 to 1000° F.; and recovering hydrocarbon products from the catalytic cracking zone effluent.

2,901,414
HYDROCARBON CONVERSION SYSTEM
Louis J. Kelly, Tenafly, N.J., assignor to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware
Application June 15, 1954, Serial No. 436,789
14 Claims. (Cl. 208—65)



3. In a catalytic hydrocarbon conversion process utilizing a plurality of catalytic reaction zones in which it becomes necessary to periodically regenerate the catalyst for the removal of carbonaceous material deposited thereon during the conversion process, the method of operating which comprises introducing a hydrocarbon reactant to a system which comprises at least two contacting zones containing said catalyst adapted for serial flow therethrough, an additional contacting zone containing said catalyst for service in the reaction series when one of said zones is being regenerated, all of the contacting zones being situated to provide parallel flow of the hydrocarbon reactant to pairs thereof, there being at least two such pairs and at least one of the zones forms two pairs with two other zones to provide two separate parallel flow arrangements, passing the hydrocarbon reactant through the contacting zones adapted for serial flow under reaction conditions suitable for conversion of the hydrocarbon until such time as regeneration of the catalyst in one of said zones is required, placing at least the zone not in reaction service in parallel flow arrangement with a zone forming a pair therewith and discontinuing parallel flow of reactant through the zones by having the zones shift in position relative to the original reaction series such that the zone originally not in service is part of the serial flow in the reaction series and the zone to be regenerated is out of service.

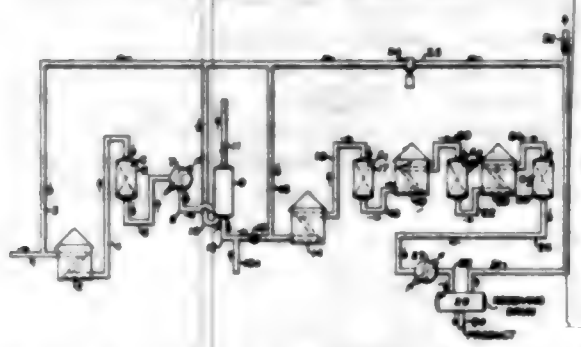
drogen-containing gas from the condensate and fractionat-

2,901,420

2,901,415
HYDROFORMING WITH PRELIMINARY HYDRODESULFURIZATION

Charles E. Hemminger, Albert B. Welty, Jr., and Wilfred O. Taff, Westfield, and Richard W. Sage, Fanwood, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application May 27, 1955, Serial No. 511,682
7 Claims. (Cl. 208—65)

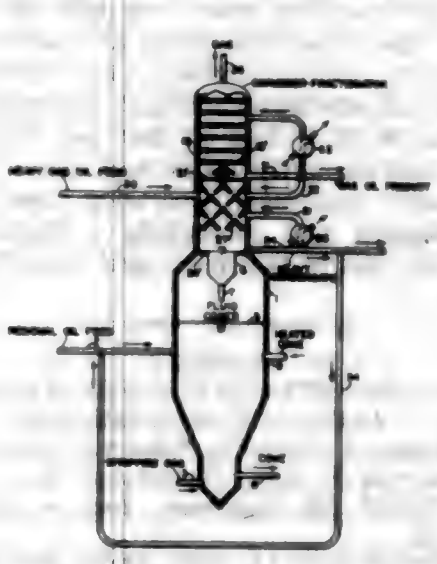


1. In the hydroforming of sulfur-containing naphthas carried out in the presence of a platinum group metal catalyst, the improvement comprising subjecting the naphtha to hydrodesulfurization to reduce the sulfur content of the said naphtha, thereafter subjecting the thus treated naphtha to stripping with an inert gas to remove volatile sulfur material, thereafter adjusting to sulfur content of the thus treated naphtha to about 0.001 wt. percent, adjusting the halogen content of the thus treated naphtha to about 1 to 10 parts per million parts of naphtha and adjusting the water content of the said naphtha to from 5 to 20 parts per million parts of naphtha thereby providing a feed stock for hydroforming which may be treated under hydroforming conditions in the presence of a platinum group metal catalyst for an extended period of time without causing serious deactivation of the catalyst, subjecting the thus adjusted feed stock to hydroforming in a plurality of separate hydroforming zones each containing a fixed bed of a platinum group metal catalyst carried on a support comprising eta alumina, said zones being employed in series and recovering a product of improved octane rating from the hydroforming step.

2,901,416
FRACTIONATION IN COKER SCRUBBER OF HEAVY GAS OILS CONTAINING A HIGH CONCENTRATION OF METAL CONTAMINANTS

Roger W. Tate, Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application September 3, 1954, Serial No. 454,097
4 Claims. (Cl. 208—82)

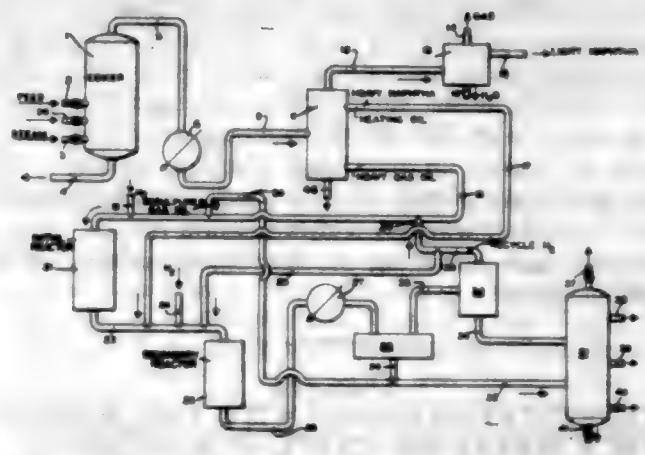


1. In a process for coking a residual hydrocarbon oil by contacting the residual oil coking charge stock at a coking temperature with a body of inert particulate solids maintained in the form of a dense turbulent fluidized bed in a coking zone to produce vapors, removing vapors overhead from said coking zone and passing them to a scrubbing-fractionation zone, scrubbing and cooling said vapors therein to a temperature sufficient to condense a heavy hydrocarbon fraction and fractionating the remaining vapors to separate a lighter gas oil distillate fraction substantially free of metal contaminants, circulating the inert solids through a heating zone wherein a portion of the inert solids are heated and back to said coking zone to supply heat thereto, the improved method of removing metal contaminants from a heavy gas oil distillate fraction boiling above about 850° F. and containing a high concentration of metal contaminants which comprises the steps of feeding said heavy gas oil fraction to said scrubbing-fractionating zone to vaporize part of said heavy gas oil, scrubbing and cooling said vapors therein at a temperature in the range of 950° F. to 1050° F. to condense a heavy condensate fraction boiling predominantly above 1015° F. and containing substantially all the metal contaminants, fractionating the remaining vapors to separate a lighter gas oil fraction substantially free of metal contaminants, recycling at least a portion of said heavy condensate fraction to said coking zone and recovering a lighter gas oil product fraction, including that derived from said coking step and that derived from said contaminated heavy gas oil fraction, substantially free of metal contaminants.

2,901,417
HYDRODESULFURIZATION OF A COKED HYDROCARBON STREAM COMPRISING GASOLINE CONSTITUENTS AND GAS OIL CONSTITUENTS

David E. Cook, East Orange, and Edward J. Barrasso, Newark, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application May 17, 1954, Serial No. 430,234
5 Claims. (Cl. 208—97)



1. A combination process for upgrading heavy residual petroleum oil which comprises in combination, coking said residual oil at a temperature in the range of about 850 to 1050° F., distilling the coker products to segregate a heavy naphtha-heating oil fraction boiling in the range of from about 250 to about 730° F. and a heavy gas oil fraction boiling in the range of from about 700 to 1050° F., adding hydrogen and desulfurized gas oil to said heavy gas oil fraction and passing the resultant mixture through an initial hydrodesulfurization zone to effect a substantial reduction in the sulfur content of said heavy gas oil fraction combining the effluent from said initial hydrodesulfurization zone with said heavy naphtha-heating oil fraction and passing the same into a secondary hydrodesulfurization zone to effect a substantial reduction in the sulfur content of said heavy naphtha-heating oil fraction, partially condensing effluent from said secondary hydrodesulfurization zone to segregate desulfurized gas oil for addition to the heavy gas oil feed to the initial hydrodesulfurization zone, condensing the normally liquid hydrocarbons, separating hy-

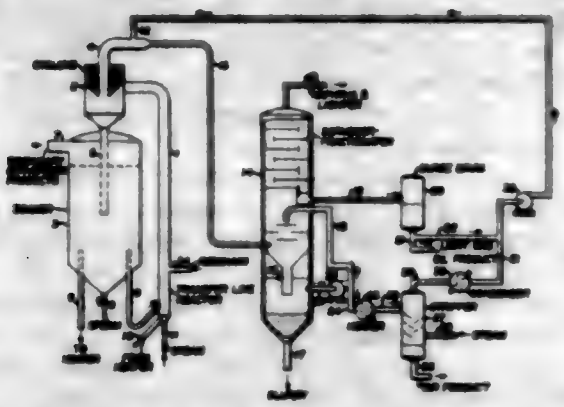
wherein it flows downwardly as a substantially compact and contact material from the upper end of said stream

having a Conradson carbon content in the range of 5

generated is out of service.

drogen-containing gas from the condensate and fractionating the condensate to segregate motor fuel and heating oil fractions of low sulfur content.

2,901,418
IMPROVED QUENCH OIL FOR HIGH TEMPERATURE COKING OF RESIDUA
George F. Pappas, Westfield, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware
Application December 3, 1956, Serial No. 625,838
3 Claims. (Cl. 208—102)

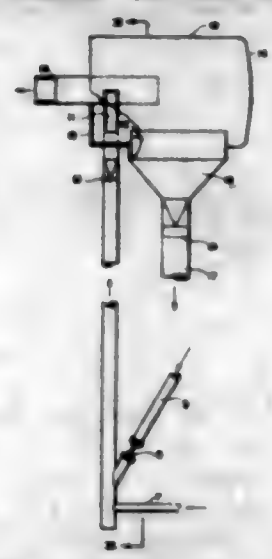


2. An improved fluidized solids transfer line heavy oil coking process for the production of chemicals and chemical intermediates which comprises contacting a heavy oil in a transfer line coking zone with flowing fluidized particulate solids maintained at a temperature above 1200° F. to produce vaporous product and carbonaceous residue which is deposited on said particulate solids, separating particulate solids from said vaporous products, thereafter injecting a liquid quench medium obtained as described below into said vaporous product to quickly lower the temperature thereof below at least 700° F. and form a liquid-vapor mixture, separating said mixture to obtain at least a naphtha product, a light gas oil fraction boiling in the range of 430–650° F., and a tar bottoms having an initial boiling point immediately above said light gas oil fraction and including substantially all vaporous product boiling above said light gas oil fraction, stripping said tar bottoms to obtain an overhead fraction having a final boiling point below 800° F. and condensing and combining said overhead fraction with a portion of said light gas oil fraction, and returning the combined material as said quench medium.

2,901,419
CATALYTIC CONVERSION WITH THE ADDITION OF A METAL OR METALLIC COMPOUND
Rudolf F. Brill, Princeton, N.J., assignor to Phillips Petroleum Company, a corporation of Delaware
No Drawing. Application February 18, 1954
Serial No. 411,269
28 Claims. (Cl. 208—119)

5. In the catalytic cracking of hydrocarbons wherein the hydrocarbon feed contains a metallic contaminant which is deposited on the surface of cracking catalyst during said conversion and causes said catalyst to promote formation of fixed gases and carbon under conditions of said cracking thereby reducing the selectivity of said cracking catalyst, the improvement comprising introducing together with said catalyst into the catalytic cracking zone, as a non-catalyst component, at least one material selected from the group consisting of a metal selected from the group consisting of copper, silver, gold, zinc, cadmium and mercury, and compounds of said metals, whereby said concomitant reduction of catalyst selectivity is substantially decreased, the amount of said materials so introduced into the catalytic cracking zone being at least a detectable amount not exceeding 0.5 percent of the weight of said catalyst.

2,901,420
PROCESS OF SEPARATING CATALYST PARTICLES FROM HYDROCARBON VAPORS
Harry D. Evans, Oakland, Calif., assignor to Shell Development Company, New York, N.Y., a corporation of Delaware
Application December 24, 1956, Serial No. 630,187
5 Claims. (Cl. 208—153)



1. In effecting a catalytic reaction of reactant material in the vapor phase with a finely divided solid catalyst wherein the finely divided solid catalyst in an amount of at least two pounds per pound of reactant is dispersed by the reactant vapors in an elongated transfer line reaction zone and passed through said zone under reaction conditions of temperature and pressure and at a velocity sufficiently high to prevent settling of the catalyst in said zone, the improvement which comprises passing said suspension in a vertical straight line path into an enlarged horizontally disposed centrifugal separation zone near one end thereof, withdrawing separated catalyst from said horizontal separating zone from a point below the axis thereof and withdrawing reacted vapors substantially free of catalyst horizontally from within said centrifugal separation zone at a point on said axis horizontally displaced from the point of entry of said suspension whereby the reacted vapors and catalyst are contacted for a short reaction time with rapid mechanical separation at the end of said short reaction time without any curvature in the line of flow which tends to concentrate and delay the catalyst by centrifugal action prior to entering said enclosed centrifugal separation zone, the enlarged centrifugal separation zone comprising an unobstructed horizontal annular centrifugal separating space disposed about and separated from a horizontally disposed tubular zone in open-end communication with said annular space and with the exterior of said centrifugal separating space, the linear velocity of the suspension entering vertically and tangentially into said horizontal annular centrifugal separating space being between about 8 and 60 feet per second and the separated catalyst being withdrawn downwardly from the horizontal centrifugal separation zone through an axially elongated area subtending a dihedral angle of 10–90° at the axis of said horizontal centrifugal separating space.

2,901,421
METHOD AND APPARATUS FOR TRANSFER OF CONTACT MATERIALS
Jean M. Bourguet, Westville, Robert D. Drew, Wenonah, and Frederick E. Ray, Woodbury, N.J., assignors to Socony Mobil Oil Company, Inc., a corporation of New York
Application July 12, 1952, Serial No. 298,592
21 Claims. (Cl. 208—174)

6. In a hydrocarbon conversion process wherein a granular contact material is passed cyclically through at least two contacting zones, one being a reaction zone

ment which comprises effecting said contacting in the

29. In the vacuum distillation of a heavy oil, the im-

coking temperature with a body of inert particulate solids

densing the normally liquid hydrocarbons, separating hy-

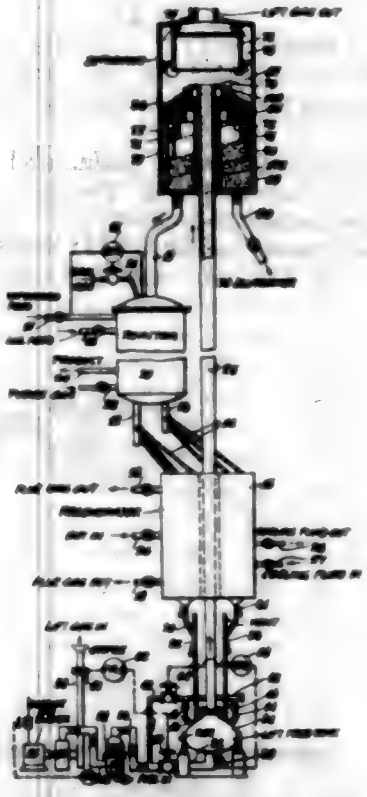
wherein it flows downwardly as a substantially compact column while contacting a fluid hydrocarbon charge to effect conversion of said charge to gasiform products and the other zone being a reconditioning zone wherein the contact material flows downwardly as a substantially compact column while being contacted with a suitable gas to effect its reconditioning for reuse in said conversion zone, the improved method for effecting transfer of contact material from one of said contacting zones to the other which comprises: withdrawing contact material downwardly from the lower section of one of said contacting zones as a substantially compact gravitating stream of sufficient length and sufficiently restricted cross-section to prevent substantial escape of gas from said contacting zone; delivering said stream to a location where it is mixed with a suitable lift gas to effect its suspension therein; then passing said contact material suspended in said lift gas upwardly as a confined, substantially vertical stream, causing the contact material to rapidly accelerate in the lower section of said stream to a linear velocity which is in excess of 35 feet per second, causing the contact material to substantially decelerate from its maximum linear velocity by gradually increasing the horizontal cross-sectional area of said confined stream at least along the upper portion thereof; controlling the rate of expansion of stream cross-section and the rate of lift gas supplied to said stream to maintain the average linear velocity of the contact material at the upper end of said stream below about 35 feet per second and further to maintain the gas velocity U_g at all levels along the stream at least equal to that required by the equation,

$$U_g = C_t + \left[H\left(\frac{8.0}{H_t} + 0.12\right)\frac{A_{max.}}{A_{mean}}\right]$$

where C_t is the terminal velocity at the level in question of granular material of the average size material under the conditions involved, H is the distance in feet below the upper end of said stream to the level in question, H_t is the total length of said lift stream in feet, $A_{max.}$ is the maximum horizontal cross-sectional area of said stream in square feet and A_{mean} is the mean horizontal cross-sectional area of said stream in square feet and the ratio

$$\frac{A_{max.}}{A_{mean}}$$

is within the range of 1.05–3.0; discharging the mixed gas and contact material from the upper end of said stream upwardly into a separation zone of substantially greater horizontal cross-sectional area than said stream, whereby the contact material settles in said separation zone and is separated from the lift gas; and flowing the separated contact material downwardly to the other of said contacting zones.



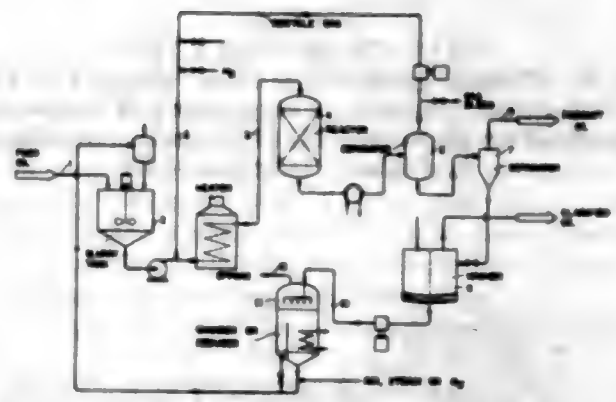
745 O.G.—73

2,901,422

HYDRODESULFURIZATION OF HYDROCARBON OILS

Norman E. Peery, San Francisco, Calif., assignor to Shell Development Company, New York, N.Y., a corporation of Delaware

Application November 16, 1956, Serial No. 622,575
5 Claims. (Cl. 208—213)



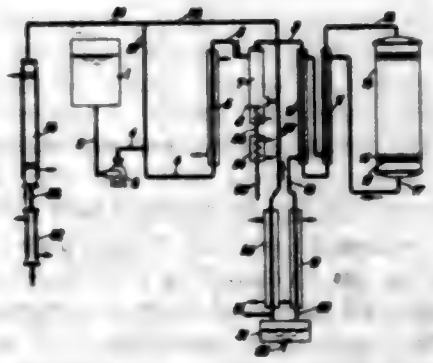
1. A process for the hydrodesulfurization of a hydrocarbon oil which comprises suspending in the oil to be desulfurized a finely divided metal compound capable of reacting with hydrogen sulfide under the subsequent hydrogenation conditions, in an amount at least stoichiometrically equivalent to the sulfur in the oil, adding hydrogen and continuously passing the mixture down through a fixed, foraminous bed of a sulfactive hydrogenation catalyst under hydrogenation conditions, and separating suspended finely divided solid containing sulfur from the effluent of said foraminous catalyst bed.

2,901,423

PROCESS FOR THE HYDROGENATION OF HYDROCARBONS

Wilhelm Herbert, Frankfurt am Main, Carl Bratzler and Oskar Dorschner, Bad Homburg vor der Hohe, and Karl-Heinz Eisenlohr and Hans-Werner Gross, Frankfurt am Main, Germany, assignors to Metallgesellschaft Aktiengesellschaft, Frankfurt am Main, Germany

Application November 23, 1955, Serial No. 549,581
Claims priority, application Germany November 25, 1954
(Filed under Rule 47(a) and 35 U.S.C. 116)
7 Claims. (Cl. 208—264)



1. In the process for the catalytic hydrogenating refining of hydrocarbons in which a hydrocarbon ranging from a normally liquid to solid hydrocarbon is contacted with a hydrogen-containing hydrogenation gas in the presence of a sulfur-resistant hydrogenation catalyst under conditions of elevated temperature and pressure, the improve-

than that of the last said vapors so as to condense at least of the mixture, said sulphite liquor being the product

being at least a detectable amount not exceeding 0.5 percent of the weight of said catalyst.

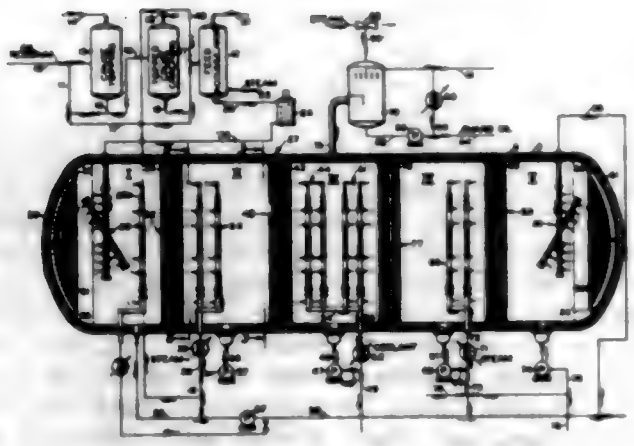
granular contact material is passed cyclically through at least two contacting zones, one being a reaction zone

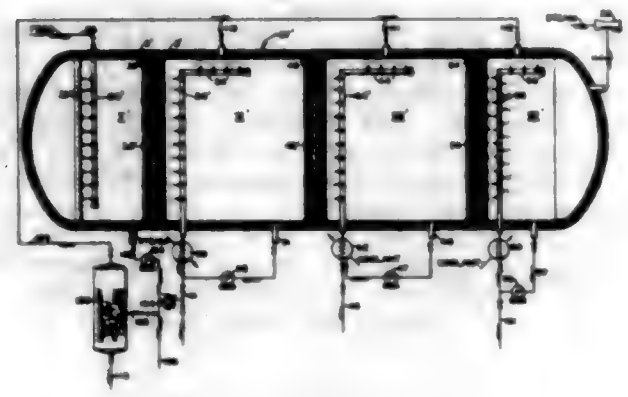
ment which comprises effecting said contacting in the additional presence of 5–50% by volume of water vapor based on the hydrogenation gas.

2,901,424
PROCESS FOR THE PREVENTION OF TAR STILL CORROSION
Kenneth R. Burke, Harrisburg, Pa., assignor to Koppers Company, Inc., a corporation of Delaware
No Drawing. Application May 7, 1957
Serial No. 657,513
3 Claims. (Cl. 208—348)

1. A process for substantially reducing the corrosion of the equipment in which low temperature tar is being distilled which comprises mixing phosphoric acid with said tar to the extent of 0.05 percent to 1 percent phosphoric acid.

2,901,425
VACUUM DISTILLATION
Paul M. Waddill, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware
Application December 28, 1953, Serial No. 400,450
31 Claims. (Cl. 208—352)

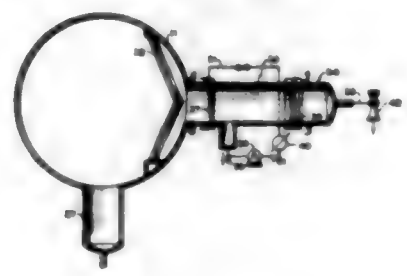


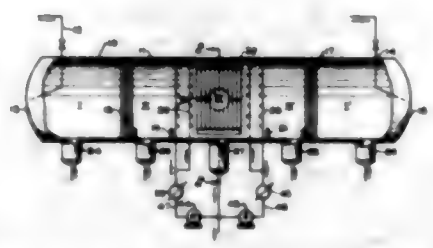


11. In a vacuum distillation process wherein a material is partially flash vaporized in a first zone at subatmospheric pressure, the improvement which comprises separating an unvaporized portion of said material from said vapors, flowing an unvaporized portion of said material out of contact and separated from said vapors to a second zone in open vapor communication with said first zone and flash redistilling same at a pressure substantially lower than said subatmospheric pressure, so that a second flash distillation is obtained, in the same vacuum distillation system, utilizing pressure reducing means employed in maintaining said subatmospheric pressure, as the sole source of vacuum for said partial vaporization and said second flash redistilling.

29. In the vacuum distillation of a heavy oil, the improvement comprising introducing liquid charge stock into a distillation zone, under flash conditions providing for vaporization of a portion of said charge to form vapors containing entrained liquid droplets, in a direction opposite to the direction of vapor flow therein and against a liquid coalescing surface, under conditions causing vapors emitted toward said surface to suddenly change their direction of flow subsequent to contacting said surface, whereby separation of unvaporized and vaporized portions of charge is facilitated and entrainment of liquid in the vapor form is minimized by coalescence of unvaporized liquid droplets on said coalescing surface, and draining coalesced liquid from said surface and collecting liquid so drained below said coalescing surface.

2,901,426
VAPORIZATION WITH CONDENSATION OF VAPORS AND RECOVERY OF RESULTING CONDENSATE IN AN EXTERNAL GUARD ZONE
Paul M. Waddill, Bartlesville, Okla., and William E. Barr, Phillips, Tex., assignors to Phillips Petroleum Company, a corporation of Delaware
Application December 28, 1953, Serial No. 400,526
16 Claims. (Cl. 208—355)





1. A process for the vacuum distillation of a distillable material, comprising introducing a stream of such a material into a first end section of an elongated distillation zone under flashing conditions so as to vaporize a portion of same, unvaporized material settling in said first end section; passing a separate stream of such material into a second end section of said distillation zone under flashing conditions so as to vaporize a portion of same, unvaporized material settling in said second end section; passing vapor containing entrained liquid droplets, from said first end section into and through a third and adjacent section toward a central section of said distillation zone, whereby at least a portion of said entrained liquid settles from vapor in said third section; passing vapor containing entrained droplets from said second end section into and through a fourth and adjacent section toward said central section, whereby at least a portion of entrained liquid settles from vapors in said fourth section; passing vapors from said third section into said central section in contact therein with a spray of atomized droplets emitted in a direction concurrently with flow of the last said vapors and maintained at a temperature lower than that of the last said vapors so as to condense at least a portion of same; passing vapors from said fourth section into said central section in contact therein with a spray of atomized droplets emitted in a direction concurrent with flow of the last said vapors and maintained at a temperature lower

2,901,433

ous slurry totaling about 40 percent to 60 percent by

is within the range of 1.05–3.0; discharging the mixed gas

745 O.G.—73

tions of elevated temperature and pressure, the improve-

than that of the last said vapors so as to condense at least a portion of same; recovering liquid from at least one of said sections; passing any uncondensed vapors from said central section to a guard zone external to said distillation zone in contact with a spray of atomized droplets emitted in a direction concurrent with flow of vapors contacted therewith and maintained at a temperature below that of said vapors so as to substantially completely condense same; applying vacuum to said distillation zone at a point in said guard zone downstream from vapor-spray contacting therein; at least a portion of spray and condensate droplets settling in said guard zone; passing any unsettled liquid droplets in said guard zone against a liquid droplet deflecting surface therein, at a point intermediate said vapor-spray contacting and the point of application of said vacuum so as to prevent flow of any residual liquid to said vacuum producing zone; and recovering liquid from said guard zone.

2,901,427
DRY FIRE EXTINGUISHING COMPOSITION
Vollrad Steppe, Ulm (Danube), Germany, assignor, by mesne assignments, to Chemische Fabrik Grunau Aktiengesellschaft, Frankfurt am Main, Germany
No Drawing. Application May 6, 1957
Serial No. 657,017
Claims priority, application Germany May 12, 1956
5 Claims. (Cl. 252—5)

1. A solid dry chemical fire extinguishing composition in the form of a finely divided mixture comprising a finely divided solid condensation product of an aldehyde and an amino compound capable of condensing with an aldehyde, at least one finely divided foam forming material selected from the group consisting of phosphoric acid salts, boric acid, and boric acid salts, and finely divided dried sulfite waste liquor the proportion of the condensation product to said foam forming material being between 1:1 and 1:6 and the proportion of foam forming material to dried sulfite waste liquor being between 100:30 and 100:70.

2,901,428
FIRE EXTINGUISHING METHOD
Wilhelm Schulenburg, Frankfurt am Main, Germany, assignor to Chemische Fabrik Grünau Aktiengesellschaft, Frankfurt am Main, Germany
No Drawing. Application July 6, 1956
Serial No. 596,169
Claims priority, application Germany May 22, 1953
8 Claims. (Cl. 252—7)

3. A method of combatting fires of burning combustible material which comprises applying to said burning combustible material a solid dry chemical fire extinguishing composition comprising a powdered solid condensation product of an aldehyde selected from the group consisting of formaldehyde and acrolein and an amino compound selected from the group consisting of urea, thiourea, guanidine, dicyandiamide and melamine in admixture with at least one solid finely divided foam forming material selected from the group consisting of ammonium phosphates, boric acid and boric acid salts, the proportion of the condensation product to said material being between 1:1 and 1:6.

2,901,429
DRILLING FLUIDS
John K. Russell, Ste. Foy, Quebec, and Gerald J. Byrd, Sillery, Quebec, Canada, assignors to Lignosol Chemicals Limited, Quebec, Quebec, Canada
No Drawing. Application April 17, 1956
Serial No. 578,603
5 Claims. (Cl. 252—8.5)

1. A drilling fluid comprising bentonite and pretreated sulphite liquor mixed in aqueous dispersion with substantially 1 to 2 pounds of sodium hydroxide and substantially 2 to 6 pounds of calcium hydroxide per barrel of the mixture, said sulphite liquor being the product formed by adjusting the pH of waste sulphite liquor to 3.5–10, heating it at 125 to 165° C. under corresponding pressure and passing air into the hot liquor at the rate of not less than two cubic feet per minute per cubic foot of liquor for one to four hours.

2,901,430
CORROSION INHIBITION
Max E. Chiddix, Easton, Pa., and William J. Maxcy, Hartford, and Robert L. Sundberg, Alpha, N.J., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware
No Drawing. Application November 6, 1953
Serial No. 390,761
20 Claims. (Cl. 252—8.55)

1. A process comprising (A) reacting under amidating conditions one mole of a polyalkylene polyamine with two molecular equivalents of an unsaturated higher fatty acid compound to form the corresponding aliphatic aminodiamide, (B) reacting the product of step A with more than sufficient lower alkylene oxide of from about 2 to 4 carbon atoms to condense with all the remaining replaceable N-hydrogen atoms therein, and (C) reacting one mole of the product of step B with one equivalent to one mole of an alkylating agent to form the corresponding quaternary ammonium derivative.

6. A composition made in accordance with the process of claim 1.

13. A method of inhibiting the corrosion of ferrous metal surfaces in contact with a composition comprising an oil and an aqueous brine solution which comprises dispersing in said composition a small amount sufficient to inhibit such corrosion of a composition as defined in claim 6.

2,901,431
LUBRICATING COMPOSITIONS
Harvey M. Trowbridge and Harold A. Woods, Martinez, Calif., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware
No Drawing. Application August 10, 1955
Serial No. 527,648
2 Claims. (Cl. 252—37.2)

1. A lubricating composition comprising a major proportion of (I) a base mixture of from about 30 to about 40% of a mineral oil and from about 70 to about 60% of asphalt and having incorporated therein (II) from about 6% to about 10% oil-soluble lead naphthenate, from about 6% to about 8% of an oil-soluble polychlornaphtha xanthate containing from about 25% to about 45% chlorine and from about 7% to about 15% sulfur in the molecule and from about 1% to about 2% butyl stearate.

2,901,432
COPOLYMERS OF PROPYLENE AND PIPERYLENE AS GREASE THICKENERS
Arnold J. Morway, Clark, Charles W. Seelbach, Cranford, and Delmer L. Cottle, Highland Park, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware
No Drawing. Application October 26, 1956
Serial No. 618,433
5 Claims. (Cl. 252—59)

1. A lubricating grease composition comprising a major proportion of a lubricating oil and a grease thickening amount of a copolymer of propylene and piperylene containing about 1.0 to 50 wt. percent piperylene and 99 to 50.0 wt. percent propylene, said copolymer having a molecular weight within the range of about 1,000 to 500,000 and being prepared by copolymerizing at pressures below 1000 pounds per square inch in the presence of a catalyst comprising a mixture of a reducing metallo-organo compound and a reducible metal compound.

solutions contained therein which comprises adding to

of molybdenum disilicide particles and alumina particles

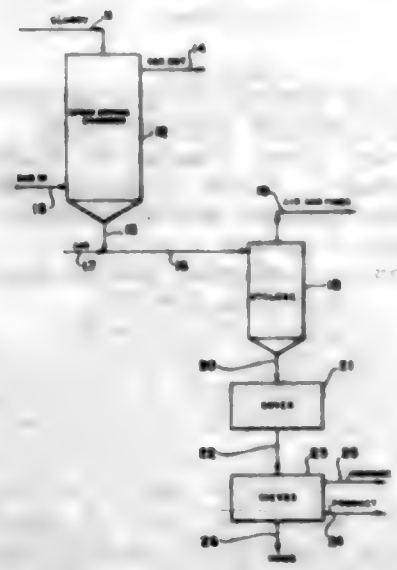
2,901,433
CLEANING COMPOSITION
Samuel Spring, Philadelphia, Pa., assignor to Pennsalt Chemicals Corporation, a corporation of Pennsylvania
Application July 17, 1953, Serial No. 368,771
12 Claims. (Cl. 252—118)

1. A cleaning composition comprising by weight, from about 1% to about 50% of a soap selected from the group consisting of the alkali metal, ammonium, amine and alkanol amine salts of the fatty and rosin acids, from about 5% to about 80% water; from about 1% to about 50% of an organic acid selected from the group consisting of rosin acids, and fatty acids having from about 6 to about 26 carbon atoms; from about 6% to about 90% of an organic solvent selected from the group consisting of hydrocarbon solvents having a boiling point range between about 75° C. and about 400° C., carbon tetrachloride, perchloroethylene and trichloroethylene; and at least about 0.05% of a neutral alkali metal salt of a mineral acid selected from the group consisting of sulphuric acid, hydrochloric acid and chromic acid.

2,901,434
RAILROAD ROLLING STOCK CLEANERS
Arthur Frank Butcosk, Fairfax County, Va.
No Drawing. Application January 10, 1957
Serial No. 633,394
4 Claims. (Cl. 252—136)

1. The process of cleaning the surface of railroad rolling stock which comprises applying to said surface an aqueous solution containing for each gallon thereof about four ounces of a mixture consisting essentially, on a dry weight basis, of about 3–6% at least one synthetic wetting agent having surface activity at a pH of 1 and selected from non-ionic and anionic agents exclusive of soap, about .25 to 10% of a water-soluble magnesium compound selected from the group consisting of magnesium sulfate and magnesium chloride, a minor proportion up to about 3% of a water-soluble cellulose dispersing agent, a minor proportion up to about 5% of the molecularly dehydrated phosphate salt of an alkali metal, about 1–3% benzaldehyde, and the remainder sodium acid sulfate, the solution having a pH of about one.

2,901,435
SPRAY DRYING CALCIUM HYPOCHLORITE SLURRY
Homer L. Robson, Lewiston, N.Y., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia
Application April 18, 1955, Serial No. 501,977
8 Claims. (Cl. 252—187)



1. A method for the preparation of a calcium hypochlorite composition which comprises preparing an aqueous slurry totaling about 40 percent to 60 percent by weight of calcium hypochlorite and sodium chloride grains, the sodium chloride grains having a maximum size of 30 microns, with at least 90 percent by weight of the sodium chloride grains less than 25 microns and at least 50 percent by weight of the sodium chloride grains less than 15 microns, and spray drying the aqueous slurry to provide particles not exceeding 1,000 microns maximum size.

2,901,436
RED LUMINESCENT MATERIAL
Hendrik Anne Klasens, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application September 16, 1954, Serial No. 456,518
Claims priority, application Netherlands October 22, 1953
9 Claims. (Cl. 252—301.4)

1. A red luminescent material consisting essentially of a magnesium lithium arsenate activated by manganese and corresponding to the formula

$$x\mathrm{MgO}\cdot y\mathrm{Li_2O}\cdot z\mathrm{As_2O_5}\cdot p\mathrm{Mn}$$

wherein $(x+2y):z=6:1$ and

$y:z$ lies between 0.1 and 1.0 and
$p:z$ lies between 0.001 and 0.1.

2,901,437
CORROSION INHIBITING COMPOSITION
Nathaniel A. Bailey, Oak Park, Anthony F. Pasowicz, Mount Prospect, and Joseph F. Reynolds, Chicago, Ill., assignors to Wright Chemical Corporation, Chicago, Ill., a corporation of Illinois
No Drawing. Application May 3, 1955
Serial No. 505,857
6 Claims. (Cl. 252—387)

1. A corrosion inhibiting composition consisting essentially of a water-soluble inorganic polyphosphate, a water-soluble inorganic complex cyanide, and a water-soluble inorganic chromate, said ingredients being present in parts, by weight, as follows:

	Parts
Water-soluble inorganic polyphosphate	8 to 40
Water-soluble inorganic complex cyanide	2 to 25
Water-soluble inorganic chromate	10 to 65

2,901,438
CORROSION INHIBITORS
Lewis M. Rogers, Kenah, Tex., assignor to Union Carbide Corporation, a corporation of New York
No Drawing. Application October 25, 1956
Serial No. 618,190
7 Claims. (Cl. 252—387)

1. A method for inhibiting the corrosion of ferrous metals in sea water, which comprises adding to said sea water at least one phosphorus-containing compound selected from the group consisting of orthophosphoric acid, pyridine phosphate, alkylated pyridine phosphates and aniline phosphate, in a concentration greater than 20 parts of said phosphorus-containing compound per million parts of said sea water and effecting a pH value of not less than 4.5 in said sea water.

2,901,439
CORROSION REDUCTION
John T. Burke, Jr., Pittsburgh, Pa., assignor to National Aluminate Corporation, Chicago, Ill., a corporation of Delaware
No Drawing. Application October 3, 1956
Serial No. 613,605
6 Claims. (Cl. 252—389)

1. A method for protecting mild carbon steel containers against corrosion by corrosive nitrogen fertilizer

solutions contained therein which comprises adding to said containers containing said corrosive solutions 25–500 p.p.m. of a corrosion-inhibiting composition composed of the following ingredients expressed as weight percentages of the corrosion-inhibiting composition, 15–70% sodium sulfite, 0.01–1% of a cobalt salt, and 10–35% lignin derivatives soluble in alkaline solutions and resulting from hydrolysis in caustic alkali of sodium lignin sulfonate at a temperature within the range of 265° C. to 325° C. under superatmospheric pressure for 30 to 120 minutes.

2,901,440

CATALYST FOR HYDROCARBON CONVERSION REACTIONS

Charles P. Wilson, Cincinnati, Ohio, assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Application March 23, 1956
Serial No. 573,348
8 Claims. (Cl. 252—441)

1. The method of preparing a SiO_2—MgO catalyst which comprises the steps of reacting a colloidal dispersion of hydrated magnesia and magnesium oxysalt with silica hydrogel, recovering the resulting silica-magnesia complex therefrom, dispersing said complex into an aqueous slurry containing free magnesium ions, thereby increasing the content of free magnesium ions, aging said slurry at an elevated temperature, separating the solids therefrom, reslurrying said solids with a solution containing dissolved fluorine, at a concentration sufficient to impregnate said silica-magnesia complex with from 0.5 to 5.0 wt. percent of residual fluorine in said catalyst, and washing and drying said composite.

2,901,441

PREPARATION OF AN OXIDATION CATALYST

Wendell W. Waterman, Arlington Heights, Ill., assignor to Publicker Industries, Inc., Philadelphia, Pa., a corporation of Pennsylvania

No Drawing. Application January 28, 1953
Serial No. 333,822
4 Claims. (Cl. 252—463)

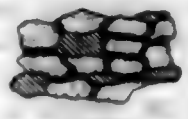
1. A process for preparing a highly active and selective catalyst for use in catalyzing the oxidation of olefins to olefin oxides which comprises washing an alpha alumina having an average porosity of between 35 and 65% with an aqueous solution of lactic acid, washing the alpha alumina thus treated with water until the washings are substantially neutral, then impregnating the so prepared alpha alumina with an aqueous solution of silver lactate, drying and heating the impregnated alpha alumina at a temperature below about 425° C. for a time sufficient to remove the anionic constituent of the silver lactate and to deposit elemental silver in a highly active form upon the surface and throughout the pores of the alpha alumina.

2,901,442

RESISTORS AND RESISTOR MATERIALS

John B. Huffadine and Roy W. Sanders, Northampton, England, assignors to The Plessey Company Limited, Ilford, England, a British company

Application February 24, 1958, Serial No. 717,267
Claims priority, application Great Britain May 15, 1957
11 Claims. (Cl. 252—506)



1. An electrical resistor which comprises a resistive body consisting of a compact sintered insulating mixture of molybdenum disilicide particles and alumina particles containing 15 to 30% by weight of molybdenum disilicide, adjacent molybdenum disilicide particles being separated by alumina particles, wherein the insulation between adjacent molybdenum disilicide particles is bridged resistively by the incorporation of elemental carbon in the sintered mixture, the elemental carbon forming ½ to 3% by weight of the mixture.

2,901,443

PROCESS FOR PREPARING HIGH MOLECULAR COMPOUNDS

Werner Starck, Hofheim (Taunus), Hans Starck, Frankfurt am Main, and Felix Schüide, Bad Soden (Taunus), Germany, assignors to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning, Frankfurt am Main, Germany, a corporation of Germany

No Drawing. Application March 6, 1956
Serial No. 569,696
Claims priority, application Germany March 9, 1955
9 Claims. (Cl. 260—2)

1. In a process for preparing a plastic material, the step which comprises reacting, at a temperature within the range of 15 to 200° C., one to ten parts of an ethylene imine ester corresponding to the general formula

wherein R' represents a monovalent to hexavalent radical selected from the group consisting of hydrocarbon radicals containing one to ten carbon atoms, hydrocarbon radicals containing one to ten carbon atoms the chains of which are interrupted by a heteroatom selected from the group consisting of oxygen, sulfur, tertiary nitrogen, and wherein R represents a bivalent radical selected from the group consisting of aliphatic and aralkyl radicals containing two to fourteen carbon atoms, and wherein *n* is an integer from 1 to 6, with ten to one parts of a compound containing more than one ethylene oxide group in the molecule.

2,901,444

POLYMERS MADE FROM 1-AZIRIDINYL PHOSPHINE OXIDES AND SULFIDES AND FLAME RESISTANT ORGANIC TEXTILES

Leon H. Chance, George L. Drake, Jr., and Wilson A. Reeves, New Orleans, La., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application June 5, 1956
Serial No. 589,560
4 Claims. (Cl. 260—2)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. A process for producing a flame resistant polymer which comprises heating in an aqueous alkaline medium, a material selected from the group consisting of tris(1-aziridinyl)phosphine oxide, tris(1-aziridinyl)phosphine sulfide, and mixtures thereof until polymerization takes place.

2,901,445

CELLULAR POLYURETHANE REACTION PRODUCT CONTAINING POLYSILOXANE AND METHOD OF PREPARING SAME

Ralph F. Harris, Penns Grove, N.J., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application June 17, 1955
Serial No. 516,302
4 Claims. (Cl. 260—2.5)

1. A process for the preparation of cellular reaction products which comprises mixing a liquid polymeric polytetramethylene ether glycol-organic polyisocyanate reaction product having terminal isocyanate groups and where-

in at least 60% by weight of the composition is the residue obtained by removing the terminal hydrogen atoms from a polytetramethylene ether glycol having a molecular weight of from about 750 to 7,500, with from 0.05 to 2.0% by weight of a polysiloxane which is characterized by the recurring structural units of the formula

$$\{O—Si(R)_2\}$$

wherein R is a radical selected from the group consisting of methyl and phenyl radicals, with the proviso that the phenyl radicals comprise not more than about 50% by weight of the polysiloxane, said polysiloxane having a viscosity of from 0.65 to 30,000 centistokes and thereafter reacting the mixture with water so as to form a cellular reaction product.

2,901,446

PROCESS FOR PRODUCING RIGID EXPANDED POLYVINYL CHLORIDE

John Gilmour Hawkins, Leicester, England, assignor to Whiffen and Sons Limited, London, England

No Drawing. Application February 11, 1957
Serial No. 639,236
Claims priority, application Great Britain March 8, 1956
4 Claims. (Cl. 260—2.5)

1. A process for producing rigid expanded polyvinyl chloride which comprises the steps of admixing polyvinyl chloride with a chemical blowing agent and a halogenated hydrocarbon selected from the group consisting of 1:1:2:2-tetrachloroethane, 1:1:1:2-tetrachloroethane and tetrachloroethylene, heating this mixture under pressure to decompose the chemical blowing agent and thereafter reheating the product to effect expansion.

2,901,447

RUBBER-REACTIVE PIGMENT AND DRYING OIL PROTECTIVE COATING COMPOSITIONS

Walter E. Lox, Minneapolis, Minn., assignor to Forman, Ford & Company, Minneapolis, Minn., a corporation of Minnesota

No Drawing. Application August 31, 1955
Serial No. 531,838
8 Claims. (Cl. 260—3)

1. In the process of preparing an elastomeric composition, the steps of mixing a rubber from the class consisting of natural rubber and copolymers of butadiene and styrene and butadiene and acrylonitrile, drying oil, and reactive pigment in the proportions of about 100 pounds of rubber to about 18–28 pounds of drying oil and at least about 5 pounds reactive pigment; milling said mixture to form a plastic material; and cutting back said plastic material first with mineral spirits, then xylene, and then further mineral spirits; said xylene and mineral spirits and plastic material being in the proportions by weight of about one part xylene and two parts mineral spirits to two and one-half parts of plastic material.

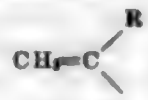
2,901,448

RUBBER-RESIN ADHESIVE SOLUTION, PROCESS FOR PREPARATION, AND LAMINATED PRODUCT OBTAINED THEREWITH

Gerard Kraus, Bartlesville, Okla., assignor to Phillips Petroleum Company, a corporation of Delaware

No Drawing. Application November 2, 1955
Serial No. 544,588
13 Claims. (Cl. 260—5)

1. An adhesive composition comprising a sulfur vulcanizable rubber, selected from the group consisting of natural rubber and a synthetic rubber prepared by polymerizing a conjugated diene, as a continuous phase in solution in an organic solvent for said rubber; and a resin phase dispersed therein, said resin phase consisting of the copolymerized product of at least 5 weight parts of a crosslinking monomer containing a plurality of terminal groups having the formula



wherein R is selected from the group consisting of H and CH_3, and at least 5 weight parts of a copolymerizable unsaturated polar monomer containing a radical selected from the group consisting of hydroxyl, carboxyl, pyridyl, quinolyl and isoquinolyl, said weight parts being weight parts per 100 parts of total monomers copolymerized to form said resin.

2,901,449

ORGANOSILICON CONDENSATION PRODUCTS AND PROCESSES FOR PRODUCING THEM

Robert Schwarz and Wilhelm Kuchen, Aachen, and Fritz Weigel, Schwabach, Germany, assignors to Siemens-Schuckertwerke, Aktiengesellschaft, Berlin-Siemensstadt, Germany, a corporation of Germany

Application July 1, 1954, Serial No. 440,816
Claims priority, application Germany July 6, 1950
3 Claims. (Cl. 260—18)

1. The method of producing heat-hardenable resinous products, comprising heating an admixture of an aromatic silicic acid ester and at least one aliphatic polyhydroxy compound, an isocyanate taken from the group consisting of alkylene and arylene polyisocyanates being added to the said admixture to react with the said polyhydroxy compound, the polyisocyanate addition being in an amount to leave at least 0.1 mole of hydroxyl groups per mole of aromatic silicate, there being a ratio of 0.1 to about 0.33 mole of the aromatic silicic acid ester per mole of hydroxyl groups in the polyhydroxy compound and a maximum total mole ratio of the silicic acid ester and polyisocyanate of about 0.66 per mole of the hydroxyl groups in said polyhydroxy compound, continuing the heating until separation of the components upon cooling substantially ceases, and separating liberated aromatic alcohol from the reaction product comprising a substantial ratio of free hydroxyl groups.

2,901,450

FILM-FORMING AND DRYING COMPOSITIONS

Harry H. Beacham, Plainfield, N.J., assignor to National Lead Company, New York, N.Y., a corporation of New Jersey

No Drawing. Application January 24, 1956
Serial No. 561,147
5 Claims. (Cl. 260—19)

1. A film-forming and drying composition comprising a conjugated drying oil, a titanium ester and an oil soluble resin, said titanium ester being selected from the group consisting of a lower alkyl titanate and a lower alkoxytitanium alkanoate, the lower alkyl group in said alkyl titanate being a monovalent, unsubstituted, saturated hydrocarbon group and the alkanoate group containing from 3 to 18 carbon atoms, said oil soluble resin being selected from the group consisting of phenol-formaldehyde resin and dehydrated castor oil modified alkyd resin, said titanium ester being present in amount from about 2% to about 10% by weight of said composition and said composition containing from one to six parts of oil for each part of resin employed.

2,901,451

ANTISTATIC COMPOSITIONS FOR TEXTILES AND METHODS FOR PRODUCING AND APPLYING THE SAME

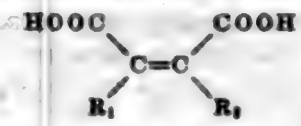
Dmitry M. Gagarine, Pendleton, and Henry Repokis, Clemson, S.C., assignors to Deering Milliken Research Corporation, Pendleton, S.C., a corporation of Delaware

No Drawing. Application December 21, 1954
Serial No. 476,836
4 Claims. (Cl. 260—29.2)

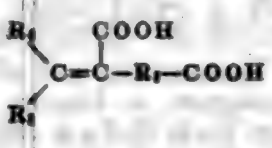
1. An aqueous solution for use in treating textile materials to impart a durable antistatic finish thereto comprising between about 0.2 and 20% by weight of a water-soluble polyester resin formed by heating together, in the presence of a dehydration catalyst and at a temperature of from 110° C., to 250° C., a polyglycol compound of the formula:

$$H(OR)_x—Z—(RO)_yH$$

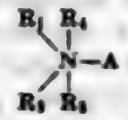
wherein R in each instance represents a lower alkylene group, x and y represent positive integers the sum of which is about 12 to 40, and Z represents a divalent radical R'' selected from the group consisting of —ORO—, —N—, COR' and —N—, where R is as above and R' and R'' represent aliphatic hydrocarbon radicals having not more than about 25 carbon atoms, and from 0.5 to 20 mols for each mol of said polyglycol compound of a compound selected from the group consisting of dibasic unsaturated acids selected from the group consisting of those of the formula:



wherein R_1 and R_2 in each instance represent a member selected from the group consisting of hydrogen and hydrocarbon radicals having not more than about seven carbon atoms, and those of the formula:



wherein R_3 and R_4 in each instance represent a member selected from the group consisting of hydrogen and lower alkyl radicals and R_5 represents a lower alkylene group; the acid chlorides of such acids, the anhydrides of such acids and the esters of such acids resulting from lower alkyl alcohols; said heating being conducted with continuous agitation sufficiently vigorous to prevent the formation of a surface skin and with the reaction mixture in surface contact with oxygen, and said heating being conducted at least until the resin has an average molecular weight of at least about 6000 but for an insufficient time for the reaction mixture to become noticeably heterogeneous, between about 1 and 3% by weight based on the weight of the resin of a vinyl polymerization catalyst selected from the group consisting of water soluble inorganic peroxides and sodium hypochlorite and between about 5 and 20% by weight based upon the weight of said resin of a water soluble quarternary ammonium compound having the formula:



wherein A represents an anion and R_1, R_2, R_3 and R_4 represent members selected from the group consisting of alkyl and aralkyl groups, at least one of the members R_1, R_2, R_3 and R_4 representing a long chain alkyl radical having between about 10 and 25 carbon atoms.

2,901,452

WATER MODIFIED METALLO ORGANIC COMPOUND, METHOD OF MAKING, AND RESINOUS COATING COMPOSITION COMPRISING SAME

Charles Peter West, Metuchen, N.J., assignor to The Harshaw Chemical Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Application August 21, 1956
Serial No. 605,427
7 Claims. (Cl. 260—29.6)

1. As a new water soluble composition the reaction product of a metallo-organic compound and a polyalcohol, said metallo-organic compound being mixed prior to reaction with the polyalcohol with .1 to about .7 mol of water per mol of said metallo-organic compound and said reaction product having the following characteristic formula:

$$(AmX)_yM(Gly)_n$$

wherein
Am represents dimethylethanol amine,
X represents a halogen selected from the group consisting of chlorine, iodine and bromine,
M represents a metal selected from the group consisting of zirconium, tin and aluminum,
Gly represents a polyalcohol selected from the group consisting of ethylene and propylene glycols,
n represents an integer from 1 to 4 corresponding to a coordinate valence of the metal, and
y represents an integer corresponding to a primary valence of the metal.

2,901,453

AQUEOUS COMPOSITION COMPRISING AMMONIUM SALT OF MALEAMIC ACID/DIISOBUTYLENE COPOLYMER AND LINEAR ADDITION POLYMER AND ARTICLE COATED THEREWITH

Arthur D. Jordan, Jr., Moorestown, N.J., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application January 14, 1957
Serial No. 633,840
11 Claims. (Cl. 260—29.6)

1. An aqueous composition comprising (1) an ammonium salt of an approximately 1:1 mole ratio copolymer of maleamic acid and diisobutylene, said salt having an average molecular weight of about 500 to 5000, and (2) a water-insoluble linear addition polymer of polymerizable monomeric molecules selected from the group consisting of acrylic acid esters of primary and secondary alkanols having 1 to 18 carbon atoms, methacrylic acid esters of alkanols having 5 to 18 carbon atoms, mixtures thereof with each other, and mixtures of at least one of these esters with molecules of at least one hardening comonomer selected from the group consisting of the lower alkyl methacrylates in which the alkyl group has 1 to 4 carbon atoms, styrene, acrylonitrile, methacrylonitrile, vinyl acetate, vinyl chloride and vinylidene chloride, the addition polymer having a modulus of rigidity transition temperature value in the range of —45° C. to 30° C. determined at 300 kg./cm.^{2} and the proportions between (1) and (2) being from 10 to 35 parts by weight of the former to 90 to 65 parts of the latter.

2,901,454

ALKYL METHACRYLATE POLYMER COATING COMPOSITIONS AND METHOD OF MAKING SAME

Francis S. Stewart, Los Angeles, Calif.

No Drawing. Application July 22, 1952
Serial No. 300,332
3 Claims. (Cl. 260—32.8)

1. A coating composition comprising further polymerizable polymers of alkyl methacrylate, the alkyl portion of which has from one to four carbon atoms admixed with

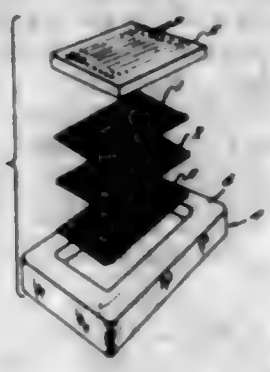
polymerization catalyst and dissolved in a volatile solvent vehicle comprising a volatile solvent polymerization permitter means which in the absence of polymerization inhibitor permits further polymerization of said further polymerizable polymers, said mixture of polymers, catalyst and solvent being such that further polymerization at said polymers will take place under conditions of coating application in the absence of polymerization inhibitor, and a sufficient proportion of volatile solvent polymerization inhibitor means to inhibit further polymerization of said further polymerizable polymers under conditions of coating application even in the presence of said polymerization permitter, said polymers admixed with polymerization catalyst being capable of further polymerization without said polymerization inhibitor in an applied coating and being of sufficiently high molecular weight that there is substantially no evaporation thereof on application and drying of the coating composition but not of sufficiently high molecular weight to cobweb on spraying when present to the extent of 20% by weight of the composition, said polymerization catalyst being present in sufficient proportion to cause said polymers to further polymerize in the presence of said volatile solvent polymerization permitter when said coating composition is applied, upon removal of said volatile solvent polymerization inhibitor, and said volatile solvent polymerization inhibitor evaporating from the applied coating at a greater rate than said volatile solvent polymerization permitter so that upon application of the coating composition the concentration of polymerization inhibitor in the applied coating will be reduced by evaporation of said inhibitor at a greater rate than the evaporation of said permitter from the applied film leaving a film of such relatively reduced concentration of polymerization inhibitor that said further polymerizable polymers admixed with polymerization catalyst will further polymerize and produce a hard and tough polyalkyl methacrylate resin film from which said volatile solvent polymerization permitter evaporates leaving a dry, hard and tough polyalkyl methacrylate resin film coating, said volatile solvent polymerization permitter being a mixture of di-isobutyl ketone and 2-ethylhexanol and said volatile solvent polymerization inhibitor being a light petroleum aliphatic hydrocarbon solvent.

2,901,455

MOLDING COMPOSITION COMPRISING SYNTHETIC RESIN AND METALLIC FILAMENTS, ARTICLES MOLDED THEREFROM AND METHOD OF MAKING SAME

Andrew W. Jurras, Detroit, Mich., assignor, by mesne assignments, to Union Carbide Corporation, New York, N.Y., a corporation of New York

Application August 9, 1954, Serial No. 448,739
22 Claims. (Cl. 260—40)



1. The method which comprises mixing a resin selected from the class consisting of glycidyl ethers of polyhydroxy compounds and the unsaturated polymerizable polyhydric alcohol polycarboxylic acid polyesters with a curing agent for said resin and a mass of unwoven metallic filaments, compressing said mass to form a consolidated mass and effecting cure of said consolidated mass under pressure, said filaments being present in an amount sufficient to materially improve the thermal conductivity of the resulting mixture.

2,901,456

FRICTION ELEMENTS

Ray E. Spokes, Ann Arbor, Mich., and John B. Littlefield, Mamaroneck, N.Y., assignors to American Brake Shoe Company, New York, N.Y., a corporation of Delaware

No Drawing. Application March 1, 1955
Serial No. 491,510
3 Claims. (Cl. 260—41.5)

1. A pressed and molded composition friction element displaying substantially equal wet and dry friction and consisting essentially of a non-metallic organic binder matrix subject to thermal decomposition and affording the main body of the friction element, and hard filler particles dispersed uniformly throughout said matrix and affording the essential wet-dry friction equivalence; said filler particles in proportions consisting essentially of about ten to twenty percent by weight of the shoe of heat conductive cast iron particles which tend to incandesce at high temperatures engendered by friction and which serve to conduct heat engendered by friction away from the wear face of the friction element, and in addition about ten percent by weight of a refractory heat insulating aluminum silicate selected from the group consisting of kyanite, sillimanite, andalusite, dumortierite, topaz and mullite, said aluminum silicate particles serving as heat insulating bodies among the cast iron particles tending to suppress the thermal decomposing effect of the incandescible cast iron particles on the organic binder matrix; and said organic binder matrix consisting essentially of a heat stable rubber.

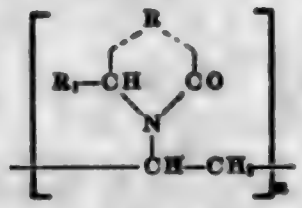
2,901,457

PROCESS OF REACTING A POLYMERIC N-VINYL LACTAM WITH A POLYMERIC CARBOXYLIC ACID AND PRODUCT OBTAINED THEREBY

George G. Stoner, Easton, Pa., and George C. Wright, Bel Air, Md., assignors to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application November 15, 1954
Serial No. 468,988
16 Claims. (Cl. 260—45.5)

1. A process comprising reacting a polymeric N-vinyl lactam having the formula



wherein R represents an alkylene bridge group necessary to complete a 5, 6 or 7-membered heterocyclic ring system; R_1 is selected from the group consisting of hydrogen and methyl; and n has a value of at least 3, with a polymeric carboxylic acid, selected from the group consisting of hydrolyzed interpolymers of alpha, beta-ethylenically unsaturated dicarboxylic acid anhydrides with compounds capable of being polymerized and containing a single $>C=CH_2$ group, partial amides of such hydrolyzed interpolymers, and partial esters of said hydrolyzed interpolymers with 1 to 2 carbon atom alkyl alcohols by admixing said lactam and said acid in a weight ratio of from about 4:1 to 1:4 at a pH of less than about 5 to produce a water-insoluble complex.

2,901,464

0.4 as measured in a mixture of 40% tetrachloroethane

2,901,458

PROCESS FOR REACTING A COPOLYMER OF AN ISOOLEFIN AND A CONJUGATED DIENE WITH A POLAR ORGANIC MONOMER AND PRODUCT THEREOF

Fred W. Banes, Westfield, and William P. Fitz Gerald, Florham Park, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application December 30, 1954
Serial No. 478,906

21 Claims. (Cl. 260—45.5)

1. Process which comprises reacting as the sole ingredients 100 parts by weight of a rubber copolymer consisting of monomeric isobutylene and a conjugated diolefin of 4 to 6 carbon atoms, having a Staudinger molecular weight of about 4,000 to 60,000 and a mole percent unsaturation of about 5 to 40, with about 5 to 200 parts by weight of a polar organic monomer containing a terminal $CH_2{=}C<$ group and at least one element selected from the group consisting of oxygen and nitrogen, in the presence of about 1 to 10 volumes of inert diluent, and in the presence of a peroxide catalyst, at a temperature of about 50–250° C. for about 1 to 10 hours.

2,901,459

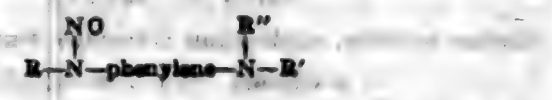
RUBBER COMPOSITIONS CONTAINING NITROSO ALIPHATIC ARYLENEDIAMINES

Dudley B. Merrifield, Charleston, W. Va., assignor to Monsanto Chemical Company, St. Louis, Mo., a corporation of Delaware

No Drawing. Application May 16, 1955
Serial No. 508,791

12 Claims. (Cl. 260—45.9)

3. A sulfur vulcanizable diene elastomer having incorporated therein 0.2–5.0% of the elastomer of a compound of the structure



where R and R' are selected from the group consisting of saturated aliphatic, unsaturated aliphatic and alicyclic radicals and R'' is selected from a group consisting of hydrogen and nitroso radicals.

2,901,460

HALOSILANE HYDROLYSIS WITH TETRAHYDROFURAN AND WATER

Edith M. Boldebuck, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

No Drawing. Application February 7, 1956
Serial No. 563,840

5 Claims. (Cl. 260—46.5)

1. The method of hydrolyzing a chlorosilane composition having a chlorine-to-silicon ratio of at least 2.5, there being present in said chlorosilane composition a trichlorosilane, the remaining 0 to 1.5 silicon-bonded members, other than the chlorine, of the chlorosilane being selected from the class consisting of hydrogen, alkyl, cyanoalkyl, alkenyl, cycloalkyl, aryl, aralkyl, and haloaryl radicals, which method comprises adding said chlorosilane composition to a hydrolysis medium in which the amount of water used is sufficient to hydrolyze all the silicon-bonded chlorine atoms, the said hydrolysis medium being maintained at a temperature of from 25° to 65° C. and comprising a mixture of water and tetrahydrofuran, there being employed from 1 to 25 mols water and from 1 to 20 mols tetrahydrofuran per mol of hydrolyzable chlorine.

2,901,461

CURABLE GLYCIDYL POLYETHER-POLYAMINE COMPOSITIONS

Victor Auerbach, North Plainfield, and Arthur K. Ingberman, Middlebush, N.J., assignors to Union Carbide Corporation, a corporation of New York

No Drawing. Application May 5, 1955
Serial No. 506,386

15 Claims. (Cl. 260—47)

1. Hardenable composition comprising a polyglycidyl ether of a polyhydric phenol having an epoxy equivalency of more than one and a hydroxyalkyl alkylene polyamine having at least one hydroxyalkyl group and at least three amino hydrogen atoms per molecule in an amount reactive with said polyglycidyl ether to form a hard, infusible, and insoluble product.

2,901,462

PROCESS FOR THE MANUFACTURE OF EPOXY RESINS

John Anderson, San Pedro, and Donald S. Melstrom, Torrance, Calif., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

No Drawing. Application November 30, 1956
Serial No. 625,223

4 Claims. (Cl. 260—47)

1. A process for the production of glycidyl ether of 2,2-bis(4-hydroxyphenyl)propane which comprises mixing about 1.8 to 2.5 moles of sodium hydroxide with a solution containing a mole of the phenol, about 5 to 25 moles of epichlorohydrin and about 3 to 10% by weight of the 2,2-bis(4-hydroxyphenyl)propane of a monohydric phenol, the mixture being heated and agitated in liquid phase at about 40 to 150° C., and recovering the glycidyl ether from the reaction mixture.

2,901,463

COMPOSITIONS, TEXTILES TREATED THEREWITH AND PROCESSES FOR THE TREATMENT THEREOF

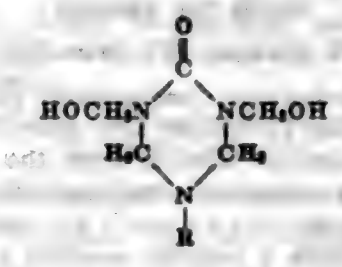
Melvin D. Hurwitz, Huntingdon Valley, Pa., assignor to Rohm & Haas Company, Philadelphia, Pa., a corporation of Delaware

No Drawing. Application June 21, 1955
Serial No. 517,062

14 Claims. (Cl. 260—67.5)

1. A composition comprising an aqueous solution of a mixture of 25 to 75 mole percent of a compound of Formula I:

I



where R is selected from the group consisting of 2-hydroxyethyl, 2-methyl-2-hydroxyethyl, and alkyl groups having 1 to 4 carbon atoms, and 75 to 25 mole percent respectively of a water-soluble condensate of formaldehyde with N,N'-ethyleneurea.

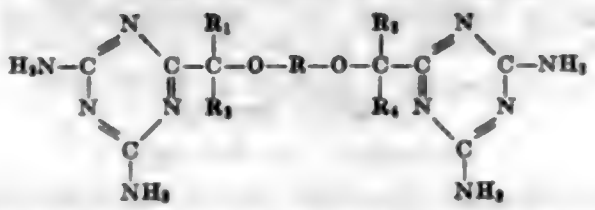
metallic filaments, compressing said mass to form a con- 5 to produce a water-insoluble complex.

2,901,464
DIOXO-BIS-GUANAMINES AND RESINS THEREFROM

Frederic C. Schaefer, Darien, and Leo A. Landers, Stamford, Conn., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application December 28, 1955
Serial No. 555,799
11 Claims. (Cl. 260—67.6)

1. A dioxo-bis-guanamine of the formula:



in which R_1, R_2, R_3, and R_4 are selected from the group consisting of hydrogen and methyl and R is selected from the group consisting of a lower alkylene, a lower alkylidene and a lower alkylidene diphenyl radical.

2,901,465
POLYESTER AND PROCESS OF MAKING THE SAME

James H. Sample, Chicago, Ill., assignor to The Sherwin-Williams Company, Cleveland, Ohio, a corporation of Ohio

No Drawing. Application October 6, 1955
Serial No. 539,029
8 Claims. (Cl. 260—75)

1. The process of making a viscid oil-free composition of matter having an acid value less than 5 which comprises heating together at a temperature between about 350° F. and 450° F. a saturated aliphatic polyol containing at least 3 OH groups attached to different non-adjacent carbon atoms, an alkyl di-ester of an aromatic dibasic acid selected from the group consisting of isophthalic acid, terephthalic acid, and mixtures thereof, the alkyl group containing from 1 to 4 carbon atoms, and an aliphatic dibasic acid having the general formula:

$$HO_2C(CH_2)_nCO_2H$$

wherein n is a number from 1 to 8 inclusive, the proportion of said polyol being such as to provide an average of from about 1.2 to about 1.5 hydroxyl groups per carboxyl group, and the ratio of carboxyl groups in the aliphatic dibasic acid to the carboxyl groups in the aromatic di-ester being from about 3:1 to about 1:4.

2,901,466
LINEAR POLYESTERS AND POLYESTER-AMIDES FROM 1,4-CYCLOHEXANEDIMETHANOL

Charles J. Kibler, Alan Bell, and James G. Smith, Kingsport, Tenn., assignors to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey

No Drawing. Application December 22, 1955
Serial No. 554,639
32 Claims. (Cl. 260—75)

1. A highly polymeric condensation polymer of (A) at least one dibasic carboxylic acid and (B) at least one bifunctional compound selected from the group consisting of dihydroxy compounds and aliphatic diamines, the relative proportions of (A) and (B) constituents being such as to constitute a polymer selected from the group consisting of polyesters and polyesteramides in which at least 50 mole percent of said bifunctional compound B consists of at least one member selected from the group consisting of the cis and trans isomers of 1,4-cyclohexanedimethanol, which polymer melts at above 100° C. and below about 330° C., has an inherent viscosity of at least 0.4 as measured in a mixture of 40% tetrachloroethane plus 60% phenol and is capable of being formed into fibers.

2,901,467
POLYURETHANE COATING COMPOSITIONS

Carlton W. Crees, Newark, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application April 20, 1956
Serial No. 579,460
4 Claims. (Cl. 260—77.5)

1. A stable, curable polyurethane coating composition obtained by heating to a temperature of about 50 to 120° C. in an inert solvent (*a*) 1.0 molar proportion of a polytetramethylene ether glycol having a molecular weight of from about 400 to 2,000, (*b*) 0 to 1.0 molar proportion of an aliphatic diol having 2 to 8 carbon atoms, (*c*) 1.0 to 4.0 molar proportions of an aliphatic triol having from 3 to 6 carbon atoms, and (*d*) 4.0 to 11.0 molar proportions of an organic diisocyanate, until substantially all of the hydroxyl groups have been reacted with isocyanate groups; with the proviso that at least 25% by weight of the composition be the radicals obtained by removing the terminal hydrogens from the polytetramethylene ether glycol and that the molar proportion of organic diisocyanate which is used is such that the number of isocyanate groups is at least 3 greater than but less than twice the sum of all of the hydroxyl groups introduced into the reaction.

2,901,468
PROCESS FOR MANUFACTURING NITROGEN-CONTAINING POLYMERIZATES INSOLUBLE IN WATER

Karl Meinel, Burghausen-Upper Bavaria, Germany, assignor to Wacker-Chemie G.m.b.H., Munich, Germany, a corporation

No Drawing. Application July 1, 1953
Serial No. 365,518
Claims priority, application Germany November 8, 1952
4 Claims. (Cl. 260—85.5)

1. Process for producing water insoluble nitrogen-containing polymerizates from a water soluble substance selected from the group consisting of polyacrylamide and copolymers of polyacrylamide and polyacrylonitrile, which consists in heating said substance to a temperature of 100–250° C. in a mixture with a carboxylic acid anhydride only until said substance becomes insoluble in water.

2,901,469
COATING COMPOSITIONS

John C. Cowan and Howard M. Teeter, Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture

No Drawing. Application October 15, 1956
Serial No. 616,110
1 Claim. (Cl. 260—91.1)
(Granted under Title 35, U.S. Code (1952), sec. 266)

A protective coating composition comprising a vehicle, a dryer and a film-forming ingredient, said film-forming ingredient consisting essentially of homopolymers of vinyl ethers of polyunsaturated fatty alcohols, said film-forming ingredient being selected from the group consisting of homopolymers of the vinyl ether of linoleyl alcohol, the vinyl ether of linolenyl alcohol, and homopolymers of the vinyl ethers of the mixed polyunsaturated fatty alcohols obtained by reduction of drying and semidrying vegetable oils, said homopolymers being polymerized pre-

formed at a neutral to weakly acid reaction of the solu- the group consisting of hydrogen, halogen, phenylcar-

dominately by linking of the vinyl groups, the unsaturation originally present in the fatty alcohol being substantially present in the homopolymer.

2,901,470

PROCESS OF PREPARING LINEAR POLYMERS OF MULTIVINYL AROMATIC COMPOUNDS

William Franklin Gresham, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application November 22, 1954
Serial No. 470,497

4 Claims. (Cl. 260—93.5)

1. A process for preparing linear polymers of multivinyl aromatic hydrocarbon compounds comprising subjecting a monomeric, vinyl, aromatic hydrocarbon compound, having 2–3 vinyl groups per molecule and being selected from the group consisting of unsubetituted vinyl aromatic hydrocarbons and halogen-subetituted vinyl aromatic hydrocarbons, to polymerization conditions comprising a pressure of 1–200 atmospheres and a temperature of 0°–300° C. in the presence of a mixture of titanium tetrahalide and a reducing agent having at least one metal-to-hydrocarbon bond, said reducing agent being present in an amount sufficient to cause the average valence of all of the said titanium to be reduced to less than 3, and recovering a linear polymer of said vinyl aromatic hydrocarbon compound.

2,901,471

CONTROL OF ISOBUTYLENE POLYMERIZATION REACTION RATE

Michael A. Pavlick, Passaic, N.J., assignor to Esso Research and Engineering Company, a corporation of Delaware

Application July 12, 1954, Serial No. 442,813

3 Claims. (Cl. 260—94.8)

1. The polymerization process consisting of the steps in combination of mixing isobutylene and 0.1–1.0 volume percent of tertiary butyl alcohol and 0.1–1.0 volume percent of diisobutylene and polymerizing the mixture in a continuous manner at a temperature within the range between 0° C. and —164° C. in the presence of boron fluoride as catalyst.

2,901,472

METHOD OF CONVERTING DIFFICULTLY SOLUBLE ORGANIC COMPOUNDS TO READILY SOLUBLE COMPLEX COMPOUNDS, AND SAID COMPLEX COMPOUNDS

Martin Ruben, Milan, Italy

No Drawing. Application April 21, 1955
Serial No. 503,007

Claims priority, application Italy April 24, 1954

10 Claims. (Cl. 260—96.5)

1. A method of converting difficulty soluble organic heterocyclic compounds selected from the group consisting of aminopyrine, caffeine, and salts of quinine, to crystallizable readily soluble stable inclusion compounds, said method comprising heating said heterocyclic compound under substantially anhydrous conditions with at least the stoichiometric amount of a member of the group consisting of methyl urethan, ethyl urethan, and mixtures of at least one of said urethans with not more than 30 percent, calculated on the weight of said urethan, of an alkyl derivative of urea, above the melting point of said urethan, and cooling, thereby forming a crystalline stable water-soluble inclusion compound of said reactants.

2,901,473

OXAZOLINE AND DIHYDRO OXAZINE MONOAZO DYESTUFFS AND THEIR METAL COMPLEX COMPOUNDS

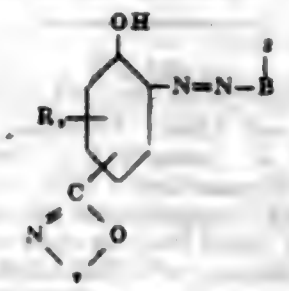
Willy Steinemann, Basel, Switzerland, assignor to Sandoz Ltd., Basel, Switzerland, a Swiss firm

No Drawing. Application May 12, 1958
Serial No. 734,444

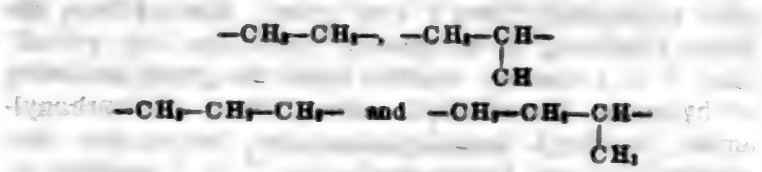
Claims priority, application Switzerland May 17, 1957

7 Claims. (Cl. 260—146)

1. A member selected from the group consisting of monoazo dyestuffs of the formula



and the chromium and cobalt complex compounds thereof, wherein R represents a member selected from the group consisting of H, chloro, nitro, lower alkyl, acetyl, acetylamino, sulfo, sulfonic acid amide, sulfonic acid lower alkylamide, sulfonic acid di-lower alkylamide, sulfonic acid lower hydroxyalkylamide, sulfonic acid di-(lower hydroxyalkyl)-amide, sulfonic acid lower alkoxyalkylamide, sulfonic acid mononuclear arylamide, sulfonic acid cyclohexylamide, sulfonic acid benzylamide, sulfonic acid morpholide, sulfonic acid pyrrolidide, and methylsulfonyl radicals; B-z represents the radical of a coupling component coupling in ortho-position to the substituent z and selected from the group consisting of 4-lower-alkyl-hydroxy-benzene, hydroxynaphthalene, aminonaphthalene, methylaminonaphthalene, phenylaminonaphthalene, phenylaminonaphthalene, acetoacetylaminooctane, acetoacetylaminobenzene, acetoacetylaminonaphthalene and 1-phenyl-3-methyl-5-pyrazolone coupling components; x represents a member selected from the group consisting of



y represents a numeral from 1 to 3; and z represents a member selected from the group consisting of phenolic hydroxy group, enolic hydroxy group, primary amino, methylamino and phenylamino groups.

2,901,474

PROCESS FOR THE PRODUCTION OF HIGH MOLECULAR EARTH ALKALI METAL COMPLEX COMPOUNDS

Robert Pulver, Basel, Switzerland, assignor to Geigy Chemical Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application February 28, 1957
Serial No. 642,946

Claims priority, application Switzerland March 5, 1956

7 Claims. (Cl. 260—209.5)

1. Process for the production of high molecular earth-alkali metal complex compounds comprising reacting pectin in aqueous solution with hydrogen peroxide in a concentration of at least 1% and at most 5% and in an amount of at least 20% and at most 100% calculated on the dry weight of the pectin, the reaction being per-

dimethanol, which polymer melts at above 100° C. and below about 330° C., has an inherent viscosity of at least

alcohols obtained by reduction of drying and semidrying vegetable oils, said homopolymers being polymerized pre-

formed at a neutral to weakly acid reaction of the solution until the desired degree of degradation is attained, then precipitating the higher molecular parts of the degradation products by the addition of a water soluble organic solvent, isolating and drying them and then converting by means of chlorosulphonic acid in a reaction medium selected from the group consisting of formamide and pyridine into acid polysulphuric acid esters, reacting the latter, after having neutralised with a non-precipitating base in aqueous solution and while maintaining at least an almost neutral reaction, with an ionising earth-alkali metal salt selected from the group consisting of calcium salts and strontium salts.

2,901,475

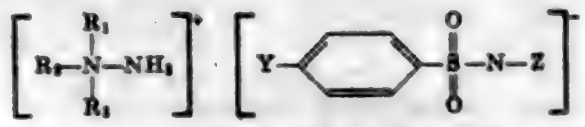
CHEMOTHERAPEUTIC SALTS

Bernard Rudner and Albert Tockman, Baltimore, Md., assignors to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Application March 4, 1957
Serial No. 643,541
11 Claims. (Cl. 260—239.65)

1. As a new chemical compound, the 1,1-dimethyl-1-octadecylhydrazinium salt of sulfathiazole.

6. New chemotherapeutic salts having the following structure:



wherein R_1 is a member selected from the group consisting of acyclic alkyl and alkenyl hydrocarbon radicals having 8 to 24 carbon atoms, acyclic alkylcarbonylaminoloweralkyl radicals containing a total of from 8 to 24 carbon atoms, acyclic alkylcarbonyloxyloweralkyl radicals containing a total of from 8 to 24 carbon atoms and acyclic alkylcarbonyloxyloweralkylaminoloweralkyl radicals containing a total of from 8 to 24 carbon atoms; R_2 and R_3 taken separately are members selected from the group consisting of acyclic alkyl and alkenyl hydrocarbon radicals containing 1 to 25 carbon atoms, hydroxyloweralkyl and hydroxypolyloweralkoxyloweralkyl; R_2 and R_3 taken together with the N on which they are both substituents form a ring system selected from the group consisting of morpholine, piperidine and pyrrolidine; Y is a member selected from the group consisting of hydrogen, lower alkyl, amino, lower alkylcarbonylamine, succinoyl, benzalkylideneimine, benzeneazo, benzenehydrazo and benzenehydrazino; Z is a member selected from the group consisting of hydrogen, carbamoyl, lower alkanoyl, oxazole, isoxazole, thiazole, pyridine, pyrimidine, pyrazine, quinoline, quinoxaline, loweralkyloxazole, loweralkylisoxazole, loweralkylthiazole, loweralkylpyridine, loweralkylpyrimidine, loweralkylpyrazine, loweralkylquinoline and loweralkylquinoxaline.

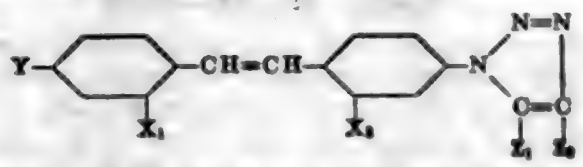
2,901,476

STILBENE TRIAZOLES

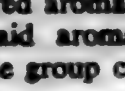
Heinrich Gold, Opladen, and Otto Bayer, Leverkusen-Bayerwerk, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application June 12, 1956
Serial No. 590,807
Claims priority, application Germany June 15, 1955
6 Claims. (Cl. 260—240)

5. Stilbene triazoles of the general formula



wherein X_1 and X_2 stand for a member of the group consisting of sulfo and carboxyl; Y stands for a member of the group consisting of hydrogen, halogen, phenylcarbamoylamino, methoxy-methyl-benzoyl-amino, methoxybenzoylamino, acetylamino, triazinyl, and triazolyl; and Z_1 and Z_2 represent a member of the group consisting of hydrogen, lower alkyl, lower alkoxy, phenyl, and



where R is lower alkyl.

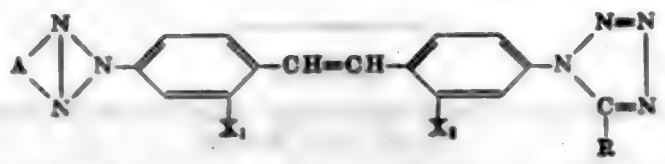
2,901,477

STILBENE TETRAZOLE BRIGHTENING AGENTS

Edgar Siegel, Leverkusen, and Heinrich Gold, Köln-Stammheim, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application October 2, 1957
Serial No. 687,610
Claims priority, application Germany October 4, 1956
6 Claims. (Cl. 260—240)

1. Stilbene tetrazoles of the general formula



wherein R is a member selected from the group consisting of hydrogen and lower alkyl, X_1 and X_2 represent independently of each other a member of the group consisting of hydrogen, sulfonyl, the carboxyl group, and the sulfonamide group, whereas A stands for an aromatic carmbocyclic radical in which two vicinal carbon atoms of a six-membered aromatic ring form part of the 1:2:3-triazole ring, said aromatic carbocyclic radical being selected from the group consisting of the benzene and naphthalene series.

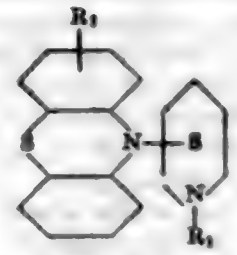
2,901,478

PHENOTHIAZINE COMPOUNDS

Wilhelm Alfons Schuler, Bad Homburg vor der Hohe, Germany, assignor to Chemische Fabrik Promonta, G.m.b.H.

No Drawing. Application February 11, 1957
Serial No. 639,208
6 Claims. (Cl. 260—243)

1. A piperidyl substituted phenothiazine compound selected from the group consisting of compounds of the formula



wherein R_1 is lower alkyl and R_2 is selected from the group consisting of hydrogen, halogen, lower alkyl and

a carbodiimide and an aluminum alcoholate, converting

lower alkoxy, and the non-toxic acid addition salts thereof.

2,901,479

PROCESS FOR THE PRODUCTION OF NEW VAT DYESTUFFS

Fritz Baumann, Leverkusen-Bayerwerk, and Hans-Samuel Bien, Leverkusen, Germany, assignors to Farbenfabriken Bayer Aktiengesellschaft, Leverkusen, Germany, a corporation of Germany

No Drawing. Application May 18, 1956
Serial No. 585,607
11 Claims. (Cl. 260—247.1)

1. A dyestuff which is obtained by treating a member selected from the group consisting of dyestuffs formed by (*a*) condensing a Bz 1-benzanthronylamino-5-amino-1,1'-dianthrimide with a complex compound of aluminum chloride and a base of the group consisting of amines and ammonia and (*b*) by condensing a Bz 1-benzanthronyl-5-amino-1,1'-dianthrimide carbazol with alcoholic potassium hydroxide, with chlorosulphonic acid at an elevated temperature and reacting the compound thus obtained with an excess of a member selected from the group consisting of ammonia, monomethyl amine, dimethyl amine, piperidine, morpholine, 1,2,3,4-tetrahydroquinoline and aniline at a temperature up to about 100° C.

4. A dyestuff which is obtained by treating a dyestuff formed by condensing a Bz 1-benzanthronyl-5-amino-1,1'-dianthrimide with a complex compound of aluminum chloride and a base of the group consisting of amines and ammonia, with chlorosulphonic acid at an elevated temperature, reacting the compound thus obtained with an excess of morpholine at a temperature up to about 100° C. and recovering the dyestuff formed.

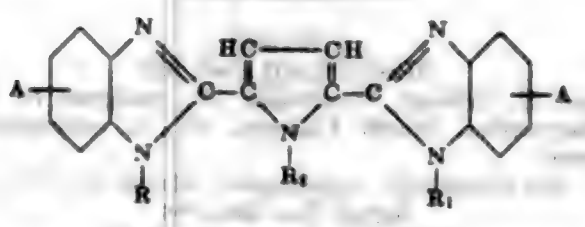
2,901,480

PROCESS FOR THE MANUFACTURE OF NEW PYRROLE DERIVATIVES

Adolf Emil Siegrist, Basel, and Max Duennenberger, Birsfelden, Switzerland, assignors to Ciba Limited, Basel, Switzerland

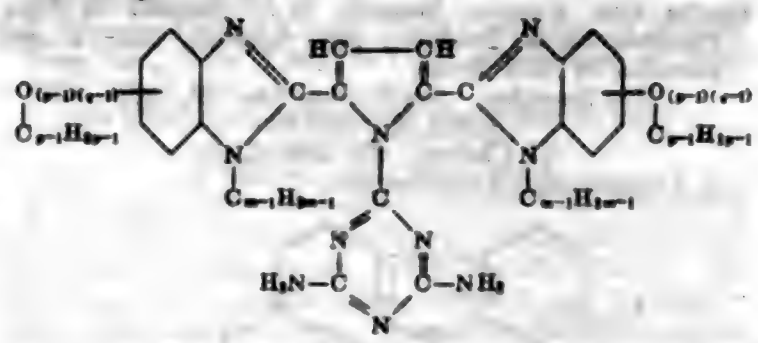
No Drawing. Application July 24, 1957
Serial No. 673,761
Claims priority, application Switzerland July 31, 1956
14 Claims. (Cl. 260—249.6)

1. A member selected from the group consisting of (1) compounds of the formula



(2) acid addition salts of said compounds and (3) alkyl, aralkyl, sulfoalkyl, sulfoaralkyl and hydroxyalkyl quaternary ammonium salts of said compounds; A representing a member selected from the group consisting of a hydrogen atom, a chlorine atom, a methyl group and a methoxy group; R and R_1 each representing a member selected from the group consisting of a hydrogen atom, a methyl group and an ethyl group; and R_2 representing a member selected from the group consisting of a hydrogen atom, an acyl radical of a carboxylic acid and a radical obtained by removing the H_2N— group from a primary amine.

4. Compounds of the formula



in which *m* represents a whole number of at most 3 and *p* and *q* each represent a whole number of at the most 2.

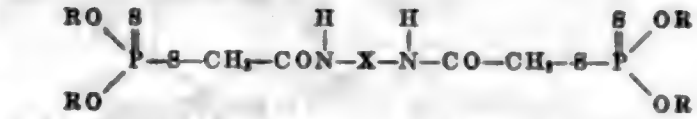
2,901,481

PROCESS FOR PREPARING DIALKYLDITHIOPHOSPHORIC ACID ESTER DERIVATIVES HAVING TWO AMIDE GROUPS IN THE MOLECULE AND THE INSECTICIDAL COMPOUNDS OBTAINED THEREBY

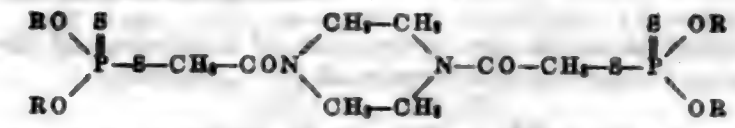
Raffaello Fusco, Giuseppe Losco and Mario Perini, Milan, Italy, assignors to Montecatini-Societa Generale per l'Industria Mineraria e Chimica, a corporation of Italy

No Drawing. Application July 10, 1956
Serial No. 596,845
Claims priority, application Italy July 14, 1955
3 Claims. (Cl. 260—268)

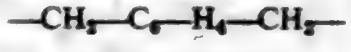
3. An insecticide taken from the group consisting of those of the formula:



and those of the formula:



in which respective formulae R is a number of the group consisting of methyl and ethyl, and X is a bridging group taken from the class consisting of —CH_2—, —CH_2—CH_2—, the phenylene radical —C_6H_4—, the mixed aliphatic-aromatic chain



2,901,482

MANUFACTURING PROCESS FOR PIPERAZINE

Gordon F. MacKenzie and Kenneth L. Turbin, Midland, Mich., assignors to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application July 23, 1956
Serial No. 599,291
7 Claims. (Cl. 260—268)

1. Continuous process for manufacturing piperazine from at least one of the homologous polyamines of ethylene having the formula: H_2N—$(C_2H_4NH)_x$—H, wherein *x* is an integer from 1 to about 4, which process consists of the essential steps of continuously passing a stream of the polyamine reactant material under a pressure between about 300 pounds per square inch and about the liquefying pressure of the reaction mass at the temperature of the reaction and at a space velocity between about 1 and 3 reciprocal hours over a fixed bed of a catalytic mass, supported on a non-acidic carrier, selected from the group consisting of Raney nickel and Raney cobalt that is maintained at a temperature between about 150° C. and 250° C. to convert the polyamine to piperazine; continuously withdrawing a piperazine-containing stream from the catalyst bed; and subsequently separating a piperazine product from the piperazine-containing stream.

wherein X_1 and X_2 stand for a member of the group consisting of sulfo and carboxyl; Y stands for a member of

wherein R_1 is lower alkyl and R_2 is selected from the group consisting of hydrogen, halogen, lower alkyl and

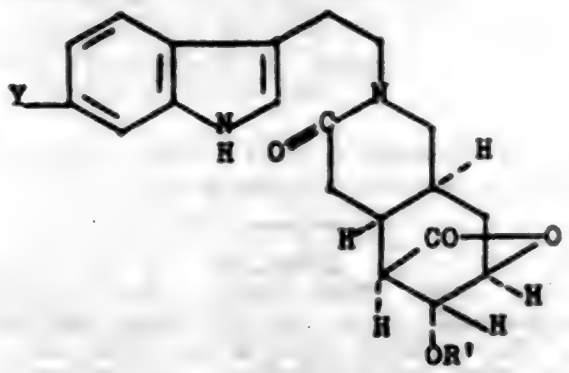
2,901,483

PROCESS FOR THE PREPARATION OF LACTONES IN THE YOHIMBANE SERIES

Martin Eric Kuehne, Summit, N.J., assignor to Ciba Pharmaceutical Products, Inc., Summit, N.J., a corporation of New Jersey

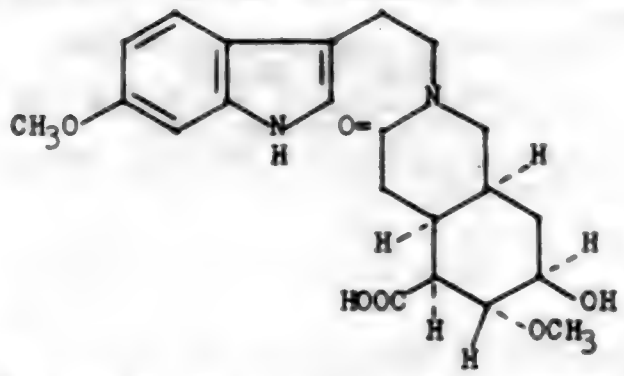
No Drawing. Application May 29, 1956
Serial No. 587,923
12 Claims. (Cl. 260—286)

2. Compounds of the formula:

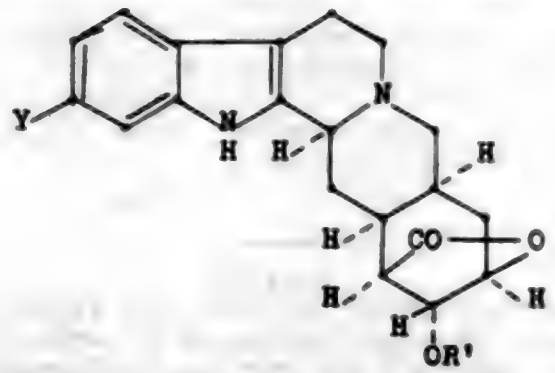


wherein Y stands for a member of the group consisting of hydrogen and methoxy and R′ represents lower alkyl.

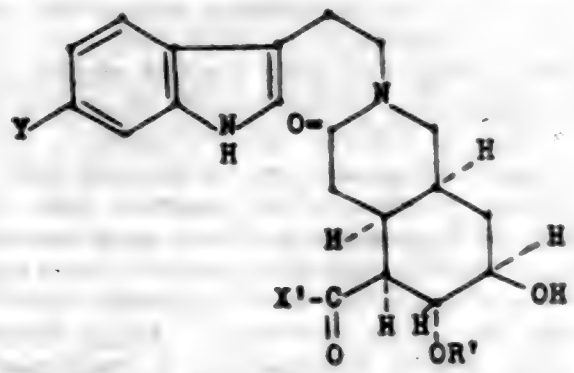
5. The compound of the formula:



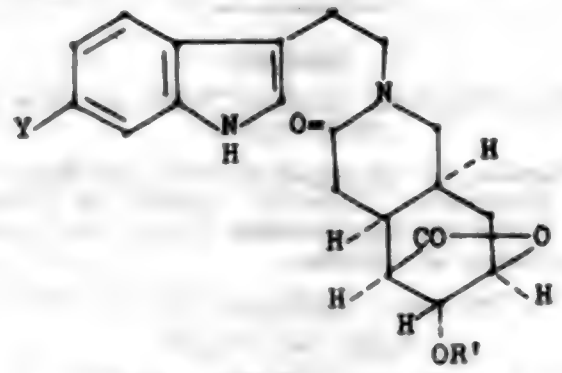
8. Process for the preparation of a member of the group consisting of a compound of the formula:



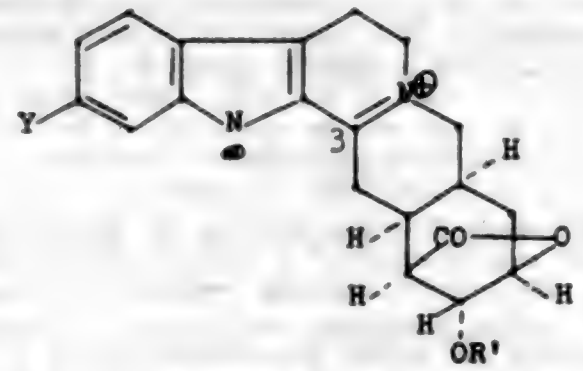
in which Y stands for a member of the group consisting of hydrogen and methoxy and R′ for a lower alkyl radical, and an acid addition salt thereof, which comprises treating a compound of the formula:



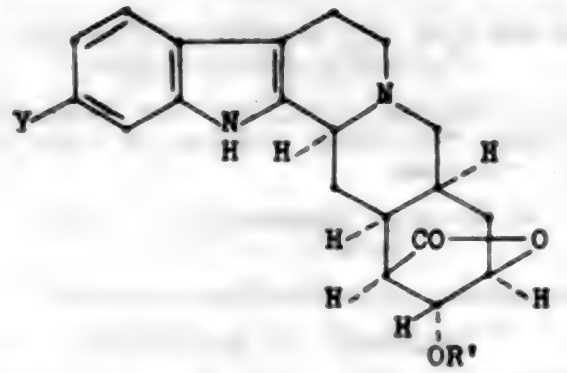
in which Y and R′ have the above given meaning, and X′ stands for a member of the group consisting of hydroxyl and lower alkoxy with a dehydrating agent selected from the group consisting of a chloride and an anhydride of a strong inorganic and a strong organic acid, a carbodiimide and an aluminum alcoholate, converting a resulting lactone of the formula:



into a member of the group consisting of a lactone of the formula:



in which formulae Y and R′ have the above given meaning, and an acid addition salt thereof, by treatment with a ring closing agent selected from the group consisting of a strong inorganic acid, an anhydride and an acid chloride thereof and a mixture of such compounds, and reducing the double bond in the 3-position with a hydrogenating agent selected from the group consisting of catalytically activated hydrogen, sodium borohydride, an alkali metal in wet ether, an alkali metal amalgam and zinc in an acidic medium, to produce a member of the group consisting of compounds of the formula:



in which Y and R′ have the above given meaning, and an acid addition salt thereof.

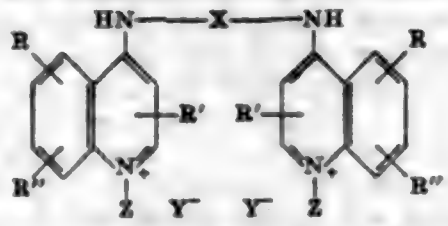
2,901,484

BIS-QUINOLINIUMS

Richard U. Schock, Waukegan, Ill., assignor to Abbott Laboratories, North Chicago, Ill., a corporation of Illinois

No Drawing. Application March 4, 1957
Serial No. 643,494
10 Claims. (Cl. 260—286)

1. Chemical compounds having the formula



wherein X is a member selected from the group consisting of phenyl, cyclohexyl, —CH_2—CHOH—CH_2—, and

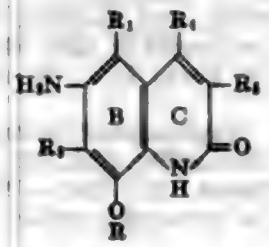
an alkylene group having from 2 to 12 carbon atoms inclusive; R is a member selected from the group consisting of hydrogen, halogen, and lower alkoxy; R' is a member selected from the group consisting of hydrogen and lower alkyl; R'' is a member selected from the group consisting of hydrogen, halogen, and lower alkoxy; Y is an anion and Z is a lower alkyl group.

2,901,485
8-ALKOXY-6-AMINOCARBOSTYRILS

Frederick Brody, New York, N.Y., and Julian Jacob Leavitt, Somerville, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Original application December 23, 1952, Serial No. 327,667, now Patent No. 2,754,293, dated July 10, 1956. Divided and this application January 26, 1954, Serial No. 406,357
6 Claims. (Cl. 260—288)

1. New compounds of the formula:



in which R is a lower alkyl group, R_1 is a member of the group consisting of hydrogen, halogen, phenyl, lower alkyl and lower alkoxy radicals; R_2 is a member of the group consisting of hydrogen, halogen, phenyl, lower alkyl, and lower alkoxy radicals; R_4 is a member of the group consisting of hydrogen, lower alkyl and phenyl radicals; R_5 is a member of the group consisting of hydrogen and lower alkyl radicals, and R_4 and R_5 together may form a cyclohexene ring.

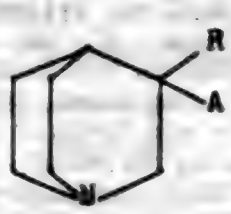
2,901,486
NEW QUINUCLIDINES

Cyril A. Grob, Basel, Switzerland, assignor to Ciba Pharmaceutical Products Inc., Summit, N.J.

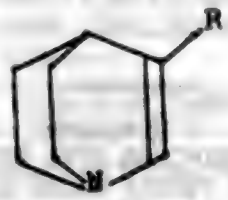
No Drawing. Application October 5, 1955
Serial No. 538,789
Claims priority, application Switzerland October 8, 1954
13 Claims. (Cl. 260—293)

1. 3-hydroxy-3-cyano-quinuclidine.

11. A member of the group consisting of quinuclidines of the formulae



and



in which formulae R stands for a member of the group consisting of carboxy and carbo-lower alkoxy and A represents a member of the group consisting of hydrogen and hydroxyl, therapeutically useful acid addition salts and lower alkyl quaternary ammonium compounds thereof.

2,901,487
LOWER-ALKYL 4-PHENYL-1-(HIGHER-ALKYL)-PIPERIDINE-4-CARBOXYLATES AND THEIR PREPARATION

Bill Elpern, Walnut Creek, Calif., assignor to Sterling Drug Inc., New York, N.Y., a corporation of Delaware

No Drawing. Application September 9, 1957
Serial No. 682,639
17 Claims. (Cl. 260—293.4)

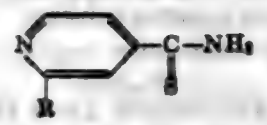
1. A composition of matter selected from the group consisting of lower-alkyl 4-phenyl-1-(higher-alkyl)piperidine-4-carboxylates where the lower-alkyl radical has from one to four carbon atoms inclusive and the higher-alkyl radical has from six to nine carbon atoms inclusive, and acid-addition salts thereof.

2,901,488
CERTAIN 2-SUBSTITUTED ISONICOTINIC THIOAMIDES

David Liberman, Paris, France, assignor to Chimie et Atomistique, Paris, France, a corporation of France

Application March 25, 1957, Serial No. 648,107
Claims priority, application France March 27, 1956
9 Claims. (Cl. 260—294.8)

1. As new compounds: α-substituted isonicotinic thioamides having the general formula



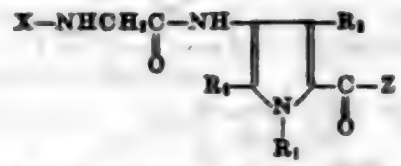
wherein R is selected from the group consisting of the alkyl radicals having from 1 to 6 inclusive carbon atoms, the phenyl and the benzyl radicals.

2,901,489
SUBSTITUTED PYRROLES

George Allen, Jr., Paramus, and John S. Webb, Woodcliff Lake, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application December 4, 1956
Serial No. 626,082
8 Claims. (Cl. 260—326.3)

1. A compound selected from the group consisting of those having the formula



in which R_1, R_2 and R_3 are members of the group consisting of hydrogen and lower alkyl radicals, X is a member of the group consisting of hydrogen and the amidino radical, and Z is a member of the group consisting of lower alkoxy, amino, and omega-carbamoyl lower-alkyl amino radicals and acid addition salts of the group consisting of acetate, hydrobromide, picrate, and nitrate salts.

2,901,490
REGENERATION OF DEGRADED ANTHRAQUINONE WORKING SOLUTIONS FOR THE PRODUCTION OF HYDROGEN PEROXIDE

Jerome W. Spencer, Wilmington, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application January 29, 1957
Serial No. 636,868
12 Claims. (Cl. 260—369)

1. The method comprising subjecting a solution of anthraquinone degradation products to the reducing action of a metal and an acid, said metal being from the group consisting of zinc and magnesium, and said acid being one which is miscible with said solution and which together with said metal will reduce the anthraquinone from which said degradation products were derived to the anthrahy-

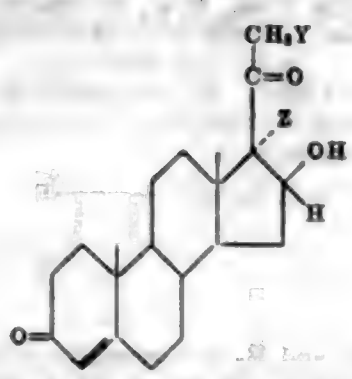
droquinone, said anthraquinone degradation products having been formed in a cyclic reduction-oxidation process for producing hydrogen peroxide employing an anthraquinone working intermediate.

2,901,491
PURIFICATION OF WORKING SOLUTIONS FOR PRODUCING HYDROGEN PEROXIDE
Carl W. Eller, Jr., and James M. Snyder, Memphis, Tenn., assignors to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware
No Drawing. Application May 24, 1957
Serial No. 661,283
15 Claims. (Cl. 260—369)

1. The method of purifying a working solution of a working intermediate from the group consisting of anthraquinones, tetrahydroanthraquinones and mixtures thereof in a water-immiscible organic solvent, which solution has become degraded through use in cyclic reduction and oxidation operations for the production of hydrogen peroxide, said method comprising extracting anthrahydroquinone values from said degraded solution in its reduced state with an aqueous solution of a water-soluble metal hydroxide, recovering organic solvent from the residual organic solution, recovering the anthrahydroquinone values from the aqueous extract and dissolving them in the recovered organic solvent.

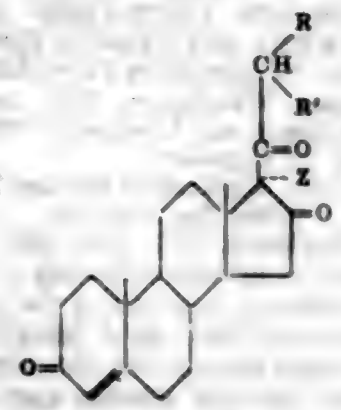
2,901,492
16,20-DIKETO STEROIDS AND PROCESS FOR PREPARING SAME
Josef E. Herz and Josef Fried, New Brunswick, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Application August 31, 1954
Serial No. 453,433
15 Claims. (Cl. 260—397.1)

1. A process of oxidizing a 16-hydroxy steroid which comprises reacting a 16-hydroxy steroid of the general formula



wherein Z is selected from the group consisting of hydrogen and α-hydroxy; and Y is selected from the group consisting of hydrogen, halogen, hydroxy, lower alkanoyloxy and benzoxy, with a chromic oxidizing agent in the absence of acid other than that required to bind the resulting reduced chromic ion as a salt under non-acidic conditions and recovering the product thus produced.

15. A steroid of the general formula



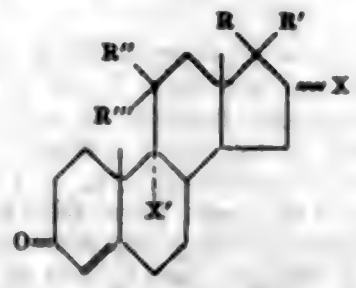
wherein Z is selected from the group consisting of hydrogen and α-hydroxy; individually R is hydrogen, R' is selected from the group consisting of hydrogen, halogen, hydroxy, lower alkanoyloxy, and benzoxy, and together R and R' is keto.

2,901,493
7-KETO-11-OXY-STEROIDS AND PROCESSES OF PREPARING THEM
John M. Chemerda, Metuchen, N.J., assignor to Merck & Co., Inc., Rahway, N.J., a corporation of New Jersey
No Drawing. Original application August 3, 1951, Serial No. 240,281, now Patent No. 2,749,337, dated June 5, 1956. Divided and this application October 5, 1953, Serial No. 384,318
6 Claims. (Cl. 260—397.2)

4. A 7-keto-11-oxy-steroid selected from the group which consists of Δ^{22}-3,11-dihydroxy-7-keto-ergostene and lower alkanoyl esters thereof.

2,901,494
9,16-DIHALO STEROIDS OF THE ANDROSTANE SERIES
Josef Fried, Princeton, and Gordon H. Thomas, New Brunswick, N.J., assignors to Olin Mathieson Chemical Corporation, New York, N.Y., a corporation of Virginia
No Drawing. Application November 25, 1957
Serial No. 698,321
13 Claims. (Cl. 260—397.3)

1. A steroid of the general formula



wherein individually R is selected from the group consisting of hydroxy and the acyloxy radical of a hydrocarbon carboxylic acid having less than ten carbon atoms and R' is hydrogen and together R and R' is keto, individually R'' is hydrogen, R''' is β-hydroxy, and together R'' and R''' is keto, and X and X' are halo.

2,901,495
ADDITION PRODUCTS OF FATTY ACIDS AND UNSATURATED NITRO COMPOUNDS
Howard M. Teeter, Morris J. Dunnig, and John C. Cowan, Peoria, Ill., assignors to the United States of America as represented by the Secretary of Agriculture
No Drawing. Application November 1, 1956
Serial No. 619,909
21 Claims. (Cl. 260—404)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An adduct of a long-chain, conjugated polyolefinic monocarboxylic fatty acid having at least 8 carbon atoms and a compound having the radical —CH=CH—NO_2.

16. The process which comprises reacting a long-chain, conjugated polyolefinic monocarboxylic fatty acid having at least 8 carbon atoms with a compound having the radical —CH=CH—NO_2 and recovering the resulting adduct.

2,901,496
SALICYLATE PROCESS FOR THORIUM SEPARATION FROM RARE EARTHS
George A. Cowan, Los Alamos, N. Mex., assignor to the United States of America as represented by the United States Atomic Energy Commission
No Drawing. Application September 9, 1949
Serial No. 114,901
4 Claims. (Cl. 260—429.1)

1. A process for the separation of thorium from aqueous solutions containing salts of thorium and rare earths

and sufficient acetate buffer to effect a pH of between 2 and 5, which comprises adding an ammonium salicylate to said aqueous buffered solution, contacting the resultant solution with a substantially water-immiscible organic solvent mixture of an ether and an ester and separating a solvent extract phase containing a thorium salicylate from the aqueous phase containing the rare earths.

2,901,497

PRODUCTION OF AROMATIC ISOCYANATES

Detlef Delfs, Opladen, and Ferdinand Minz, Köln-Stammheim, Germany, assignors, by mesne assignments, of one-half to Mobay Chemical Company, Pittsburgh, Pa., a corporation of Delaware

No Drawing. Application April 9, 1954
Serial No. 422,276
Claims priority, application Germany April 11, 1953
7 Claims. (Cl. 260—453)

1. In the process for the production of di- and polyisocyanates in which phosgene is reacted with a hydrochloride of an aromatic amine, the improvement which comprises effecting said reaction with an amine hydrochloride formed by mixing an aromatic amine selected from the group consisting of primary aromatic diamines and primary aromatic polyamines with a solvent having the general formula

$$R—SO_2—X$$

in which R is a member selected from the group consisting of phenyl and lower alkyl substituted phenyl radicals and X is a member selected from the group consisting of lower alkyl radicals, fluorine, the phenoxy radical, and di-lower alkylamino radicals, and passing in hydrogen chloride at a temperature between about 50 and 100° C.

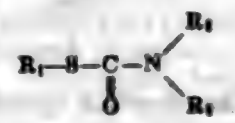
2,901,498

N-ALKYL, N-ALLYL THIOLCARBAMATE COMPOSITIONS

Harry Tilles, El Cerrito, and Joe Antognini, Mountain View, Calif., assignors to Stauffer Chemical Company, a corporation of Delaware

No Drawing. Application January 11, 1957
Serial No. 633,551
6 Claims. (Cl. 260—455)

1. A new compound of the formula



wherein R_1 and R_2 are lower alkyl radicals, and R_3 is allyl.

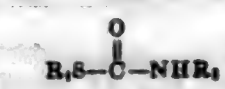
2,901,499

LOWER ALKYL ESTERS OF N-ALKOXYALKYLTHIOLCARBAMIC ACIDS

Harry Tilles, El Cerrito, and Joe Antognini, Mountain View, Calif., assignors to Stauffer Chemical Company, a corporation of Delaware

No Drawing. Application February 13, 1957
Serial No. 639,854
6 Claims. (Cl. 260—455)

1. The chemical compound:



wherein R_1 is a lower alkyl group and R_2 is a lower alkoxyalkyl group.

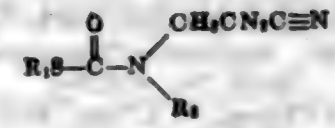
2,901,500

LOWER ALKYL ESTERS OF N-CYANOALKYL-N-ALKYL THIOLCARBAMIC ACIDS AS COMPOSITIONS

Harry Tilles, El Cerrito, and Joe Antognini, Mountain View, Calif., assignors to Stauffer Chemical Company, a corporation of Delaware

No Drawing. Application February 13, 1957
Serial No. 639,866
4 Claims. (Cl. 260—455)

1. The chemical compound:



wherein R_1 is a lower alkyl group and R_2 is a lower alkyl group.

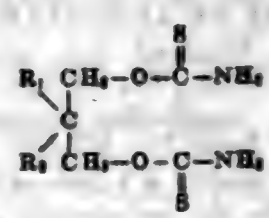
2,901,501

PROPANEDIOL BIS(THIOCARBAMATES)

Burton Kendall Wasson, Valois, Quebec, and John Melvin Parker, Montreal, Quebec, Canada, assignors to Charles E. Frosst & Co., Montreal, Quebec, Canada, a corporation of Canada

No Drawing. Application February 3, 1958
Serial No. 712,672
2 Claims. (Cl. 260—455)

1. A substituted 1,3-propanediol of the general formula:



wherein R_1 and R_2 stand for lower alkyl radicals.

2,901,502

ACETYL AMINO PHENOL STABILIZING GR-A RUBBER LATEX

David W. Young and Harold J. Rose, Westfield, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

No Drawing. Application June 25, 1954
Serial No. 439,476
1 Claim. (Cl. 260—45.9)

A method which comprises polymerizing in aqueous emulsion a mixture of a major proportion of butadiene-1,3 and a minor proportion of acrylonitrile to form a synthetic rubber latex, adding to the latex 0.1 to 2.0% based on the weight of rubber of an acetyl-amino-phenol, and thereafter stripping the latex of unreacted monomer by means of a gaseous stripping agent at a temperature between 60 and 70° C.

2,901,503

DIALKYLAMINOPHENYL ESTERS OF THIOPHOSPHORIC ACIDS

Howard M. Fitch, New York, N.Y., assignor to Campbell Pharmaceuticals, Inc., New York, N.Y., a corporation of Delaware

No Drawing. Application August 28, 1956
Serial No. 606,563
20 Claims. (Cl. 260—461)

1. A poly di-(di-lower-alkylaminophenyl)thionophosphoryl compound containing from two to five di-(di-lower-alkylaminophenyl) thionophosphoryl groups.

13. The method of making poly di-(di-lower-alkylaminophenyl)thiophospboryl compounds which com-

prises reacting in any order *n* moles of a thiophosphoryl trihalide with 2*n* moles of a di-lower-alkylaminophenol and with one mole of a polyfunctional compound containing at least *n* groups selected from primary amino, secondary amino and hydroxyl, *n* being at least two and not more than five.

2,901,504

NITRILES FROM AROMATIC ACIDS AND DERIVATIVES

Robert S. Aries, New York, N.Y.

No Drawing. Application September 6, 1956
Serial No. 608,204

11 Claims. (Cl. 260—465)

1. In the conversion into the corresponding nitriles of normally solid aromatic carboxylic acids, aromatic carboxylic acid anhydrides, aromatic carboxylic acid amides, aromatic carboxylic acid imides and mixtures thereof by reaction with ammonia in the presence of a dehydrating catalyst, the improvement which comprises forming an intimate mixture of the catalyst and the solid reactant, and heating said mixture in the presence of gaseous ammonia, whereby the solid reactant immediately upon vaporization is reacted with the ammonia.

2,901,505

PROCESS FOR PREPARING GLYCOL ESTERS OF BENZENE DICARBOXYLIC ACIDS

Kenneth E. Kolb, Highland, Ind., assignor to Standard Oil Company, Chicago, Ill., a corporation of Indiana

No Drawing. Application November 20, 1957
Serial No. 697,545

6 Claims. (Cl. 260—475)

1. A process for the preparation of 2-hydroxyalkyl esters of aromatic dicarboxylic acids which comprises reacting an aromatic dicarboxylic acid selected from the group consisting of isophthalic acid, terephthalic acid and mixtures thereof dissolved in a solvent comprising an N-di-(lower alkyl) formamide with an alkylene oxide having from 2 to 8 carbon atoms in the molecule at a temperature of from about 25° C. to about 200° C. in a mole ratio of from about 1.8 to about 2.5 moles alkylene oxide per mole of aromatic dicarboxylic acid and recovering the 2-hydroxyalkyl ester so formed.

2,901,506

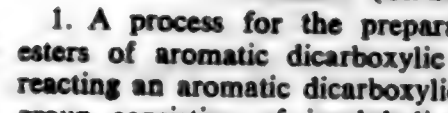
PYROLYSIS OF SUBSTITUTED CARBONYLOXY-ALKYL HALIDES

Milon W. Bullock, Pearl River, N.Y., and John J. Hand, New Milford, N.J., assignors to American Cyanamid Company, New York, N.Y., a corporation of Maine

No Drawing. Application December 6, 1956
Serial No. 626,781

8 Claims. (Cl. 260—488)

1. The vapor phase process which comprises pyrolyzing at a temperature of at least 400° C. in the presence of a solid catalyst of the group consisting of porous ceramic and common ferrous metals a compound of the formula



where *n* is a small integer less than 6.

8. In a process of preparing 4-chlorobutene-1 and 3-butenyl acetate the step which comprises reacting tetrahydrofuran with acetyl chloride in the presence of catalytic amounts of cadmium choride and recovering 4-chlorobutyl acetate thereform.

2,901,507

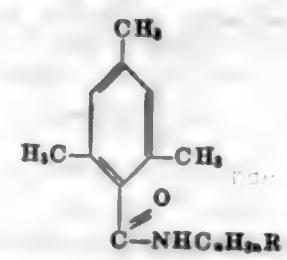
ALKYLAMINOALKYL 2,4,6-TRIMETHYL-BENZAMIDE

Merrill E. Speeter and Robert D. Birkenmeyer, Kalamazoo Township, Kalamazoo County, Mich., assignors to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application April 18, 1955
Serial No. 502,206

2 Claims. (Cl. 260—558)

1. A compound of the formula



wherein *n* is an integer from one to six, inclusive, R is a saturated secondary amino radical containing not more than eight carbon atoms and is selected from the group consisting of a dialkylamino and a cyclicamino radical selected from the group consisting of a morpholino, piperidino, and pyrrolidino radical and nontoxic acid addition salts thereof.

2,901,508

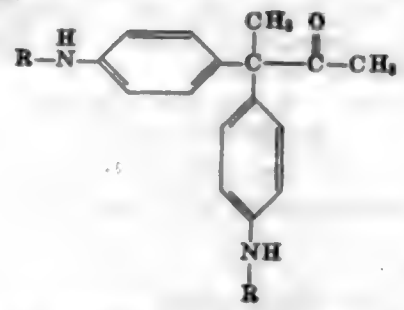
ORGANIC COMPOUNDS AND PROCESS

Jerome Korman, Portage Township, Kalamazoo County, Mich., assignor to The Upjohn Company, Kalamazoo, Mich., a corporation of Michigan

No Drawing. Application May 2, 1957
Serial No. 656,518

3 Claims. (Cl. 260—562)

1. A compound having the following general structural formula:



wherein R is an alkanoyl group containing not more than four carbon atoms.

2,901,509

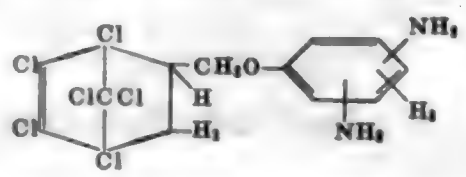
HEXACHLOROBICYCLO-DIAMINOPHENYL ETHERS

Hyman M. Molotsky and Sidney B. Richter, Chicago, Ill., assignors to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Application August 16, 1956
Serial No. 604,330

6 Claims. (Cl. 260—571)

1. As a new composition of matter a compound of the structure



2,901,517

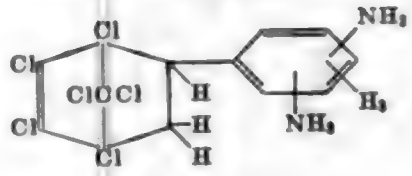
in at least two stages by reducing the pressure on said

2,901,510
HEXACHLORO-5-PHENYLDIAMINE BICYCLO-(2.2.1)-2-HEPTENE

Hyman M. Molotsky and Sidney B. Richter, Chicago, Ill., assignors to Velsicol Chemical Corporation, Chicago, Ill., a corporation of Illinois

No Drawing. Application August 16, 1956
Serial No. 604,329
6 Claims. (Cl. 260—578)

1. A compound of the structure:



2,901,511
SUBSTITUTED HYDRAZINE PROCESS

Forrest R. Hurley, Glen Burnie, Md., assignor to W. R. Grace & Co., New York, N.Y., a corporation of Connecticut

No Drawing. Application March 22, 1956
Serial No. 573,089
5 Claims. (Cl. 260—583)

1. In a process for making substituted hydrazines comprising passing an ammonia-stabilized anhydrous chloramine mixture into an anhydrous liquid amine, having at least one active hydrogen attached directly to the amino nitrogen capable of reacting preferentially with chloramine selected from the group consisting of primary acyclic amines, primary alicyclic amines, secondary acyclic amines, secondary alicyclic amines and heterocyclic amines and maintaining sufficient ammonia in the reaction mixture to provide therein alkaline conditions, the improvement comprising adding continuously to said anhydrous liquid amine a tertiary amine of the general formula R_3N wherein R is a lower alkyl radical having at least two and not more than six carbon atoms in a quantity equivalent to the amount of free hydrazinium ion being formed by the reaction between said chloramine and the said anhydrous liquid amine, and separating the mixture into its component parts to recover the substituted hydrazine therefrom.

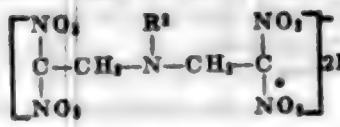
2. A process according to claim 1, wherein the anhydrous liquid amine is methylamine and the tertiary amine is triethylamine.

2,901,512
TETRANITRODIETHYLAMINE SALTS

Karl Klager, Monrovia, Calif.

No Drawing. Application January 7, 1957
Serial No. 632,946
3 Claims. (Cl. 260—583)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. Tetranitrodiethylamines having the formula:



in which R^1 is a member selected from the group consisting of potassium and sodium; and R^2 is a member selected from the group consisting of nitroso and cyano.

2,901,513
PROCESS FOR THE STABILIZATION OF AMINO ALCOHOLS

Robert M. Thomas, Niagara Falls, N.Y., assignor to Olin Mathieson Chemical Corporation, a corporation of Virginia

No Drawing. Application December 31, 1956
Serial No. 631,510
5 Claims. (Cl. 260—584)

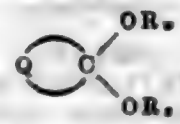
1. As a new composition of matter, an ethanolamine chosen from the group consisting of monoethanolamine, diethanolamine, and triethanolamine containing hydrazine in an amount of substantially 25 parts per million to 0.50 percent by weight, the said ethanolamine having a color not exceeding 100 APHA before the addition of the hydrazine.

2,901,514
ACYCLIC KETALS OF α,α'-DIFLUOROPERHALOGENOKETONES AND THEIR PREPARATION

John J. Drysdale, Clifton Park Manor, Del., assignor to E. I. du Pont de Nemours and Company, Wilmington, Del., a corporation of Delaware

No Drawing. Application May 3, 1956
Serial No. 582,328
11 Claims. (Cl. 260—615)

1. A ketal of the formula



wherein (1) Q is at least one radical taken in sufficient number to satisfy the two free valences of the ketal carbon and is selected from the group consisting of monovalent and divalent perhalogenohydrocarbon radicals of up to 7 carbons and in which any multiple bonds are aromatic, each radical containing at least one fluorine on any carbon alpha to the ketal carbon, with the proviso that, when Q is divalent, it forms with the ketal carbon a wholly-saturated ring of not more than 6–8 carbons, and (2) R_x and R_y are monovalent 1–18 carbon radicals, in which any multiple bonds are aromatic, selected from the class consisting of hydrocarbon and halohydrocarbon, any halogen on nonaromatic carbon being fluorine, at least one of said R_x and R_y being bonded to its ketal oxygen by carbon possessing only single bonds.

2,901,515
2-ALKENYL-3,4-DICHLOROPHENOLS

Raymond H. Rigterink, Midland, Mich., assignor to The Dow Chemical Company, Midland, Mich., a corporation of Delaware

No Drawing. Application December 5, 1956
Serial No. 626,297
1 Claim. (Cl. 260—623)

2-allyl-3,4-dichlorophenol.

2,901,516
MANUFACTURE OF 2,2,3,3-TETRACHLORO-1,4-BUTANEDIOL

Robert W. Wynn, Easton, Pa., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

No Drawing. Application July 23, 1956
Serial No. 599,359
5 Claims. (Cl. 260—633)

1. A process comprising reacting a 1,4-diacyloxy-2-butyne, wherein said acyl group is that of a monocarboxylic acid of the formula RCOOH wherein R is selected from the group consisting of hydrogen, alkyl, phenyl, naphthyl, tolyl, benzyl, furyl and 3-pyridinyl, with sufficient chlorine to produce the corresponding 1,4-diacyloxy-2,2,3,3-tetrachlorobutane, and then subjecting the latter to hydrolysis conditions to produce the desired 2,2,3,3-tetrachloro-1,4-butanediol.

2. A process as defined in claim 1 wherein said acyloxy groups are acetoxy groups.

chlorobutyl acetate thereform.

2,901,517

PREPARATION OF SUBSTITUTED ORTHO-POLYMETHYLENE AROMATIC HYDROCARBONS

Louis Schmerling, Riverside, Ill., assignor, by mesne assignments, to Universal Oil Products Company, Des Plaines, Ill., a corporation of Delaware

No Drawing. Application May 10, 1955
Serial No. 507,513
13 Claims. (Cl. 260—668)

1. A process which comprises reacting as the sole reactants in the process an orthopolymethylene aromatic hydrocarbon selected from the group consisting of indans, 1,2,3,4-tetrahydronaphthalenes, 1,2,3,4-tetrahydroanthracenes and 1,2,3,4-tetrahydrophenanthrenes with a compound selected from the group consisting of polyhaloalkanes in which at least two halogen atoms are on the same carbon atom and haloalkenes in the presence of a Friedel-Crafts type catalyst, and recovering the resultant reaction products.

2,901,518

DEHYDROCYCLIZATION OF HYDROCARBONS

John H. Raley, Walnut Creek, Calif., assignor to Shell Development Company, New York, N.Y., a corporation of Delaware

No Drawing. Application February 18, 1955
Serial No. 489,382
16 Claims. (Cl. 260—673.5)

1. A process for the production of aromatics by dehydrocyclization of a hydrocarbon containing at least six contiguous non-quaternary carbon atoms in a chain, no more than two of which are in a single ring, which comprises injecting said hydrocarbon into a reaction zone, heating it therein in the presence of at least about 0.6 mole of free iodine per mole of said hydrocarbon in vapor phase for a time not exceeding about 0.8 minute at a temperature of at least 300° C. to effect C-to-H bond cleavages in the molecule in the presence of free iodine, whereby said iodine is converted to hydrogen iodide and at least about 46 mole percent of the hydrocarbon converted is dehydrocyclized to an aromatic product, withdrawing the resulting reaction mixture from said reaction zone and recovering said aromatic product from said mixture.

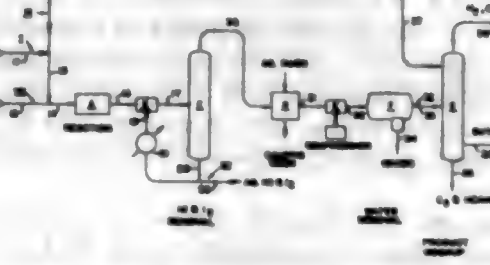
2,901,519

MOLECULAR SIEVE SEPARATION PROCESS

Albert C. Patterson, Westfield, and Homer Z. Martin, Cranford, N.J., assignors to Esso Research and Engineering Company, a corporation of Delaware

Application April 29, 1957, Serial No. 655,695
4 Claims. (Cl. 260—676)

1. A process for separating straight chain hydrocarbons from non-straight chain hydrocarbons which comprises contacting a partially vaporized mixture of straight chain and non-straight chain hydrocarbons with a molecular sieve adsorbent selective for straight chain hydrocarbons, discontinuing said contacting before said adsorbent becomes saturated, contacting said adsorbent with an additional quantity of said mixture in vapor phase, and thereafter desorbing adsorbed straight chain hydrocarbons in at least two stages by reducing the pressure on said adsorbent.



4. In a process wherein hydrocarbons are selectively adsorbed from a hydrocarbon mixture onto a molecular sieve adsorbent and are subsequently desorbed, the improvement which comprises commencing adsorption with said mixture in mixed liquid-vapor phase and completing adsorption with said mixture in vapor phase.

2,901,520

PURIFICATION OF DIOLEFIN PRODUCT FROM HYDROCARBON-IODINE DEHYDROGENATION REACTION BY PROMPT SOLVENT CONTACT TO REMOVE IODINE SPECIES FROM HYDROCARBON PHASE

John H. Raley, Walnut Creek, and Richard D. Mullineaux, Oakland, Calif., assignors to Shell Development Company, New York, N.Y., a corporation of Delaware

Application February 6, 1956, Serial No. 563,658
14 Claims. (Cl. 260—680)

1. A process for the production of diolefins from more saturated non-iodine-aromatizable hydrocarbons having the same carbon skeletons as said diolefins which comprises contacting in a reaction zone a hydrocarbon feed of at least one of said more saturated hydrocarbons and at least about 0.1 mole of iodine per mole of hydrocarbon charged to said reaction zone at a reaction temperature of at least 300° C. to produce a mixture comprising a substantial proportion of diolefin, iodine and hydrogen iodide, withdrawing said mixture from said reaction zone at said reaction temperature and within 0.1 second of said withdrawal removing substantially all hydrogen iodide and iodine from the hydrocarbon phase of said mixture.

ELECTRICAL

2,901,521

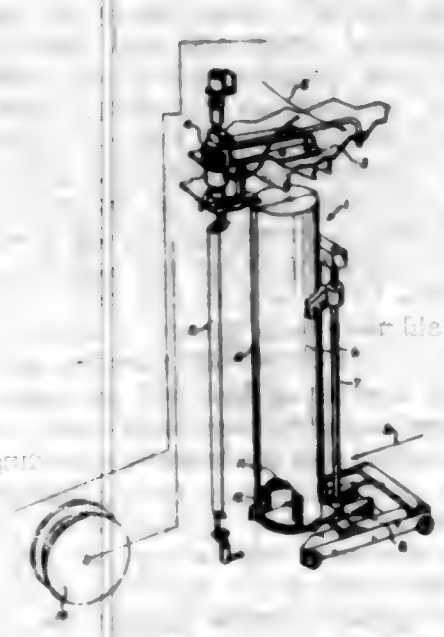
ELECTRIC OVEN CORE BLOCK

Joe B. Yoder, Mayfield Heights, and John Cappello, Cleveland, Ohio, assignors to General Electric Company, a corporation of New York

Application April 19, 1955, Serial No. 502,294
1 Claim. (Cl. 13—25)

A core block for an electric oven comprising a refractory insulating body of generally semi-cylindrical hollow configuration, said body having a plurality of circumferentially extending grooves in its inside surface for accommodating coiled electric resistance wire, said grooves having a substantially circular cross section over more than 180 degrees and being relatively closely spaced and separated by comparatively thin undercut fins extending into downwardly inclined lips for restraining said resistance wire within the grooves and protecting it by shedding foreign material coming into contact with the

inside wall of said body, terminal end portions of the fins being removed between adjacent grooves alternating



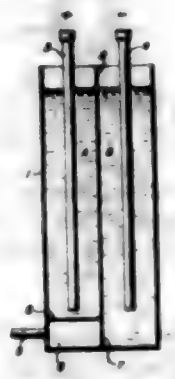
on opposite sides of the body to allow winding the resistance wire back and forth in successive grooves.

2,901,522

OXIDATION CELLS

Anton Bopp, Mollen, Switzerland

Application October 17, 1951, Serial No. 251,835
3 Claims. (Cl. 136—84)



1. As a source of electricity, an oxidation cell comprising an anode of carbon, a carbon cathode, aqueous electrolyte solutions surrounding and in contact with said cathode and said anode, the aqueous solution surrounding said anode containing CrO_3 and sulfuric acid in effective amounts as essential ingredients dissolved therein and the aqueous solution surrounding said cathode comprises an alkali and means for introducing air into said electrolyte solution at a region of the cell adjacent said cathode.

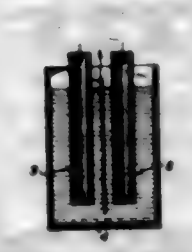
2,901,523

DIRECT PRODUCTION OF ELECTRICAL ENERGY FROM THE OXIDATION OF FLUID FUEL

Eduard Justi and August Winsel, Braunschweig, Germany, assignors to Ruhrchemie Aktiengesellschaft, Oberhausen-Holten, and Steinkohlen-Elektrizitat Aktiengesellschaft, Essen-Ruhr, Germany, both corporations of Germany

Application February 9, 1956, Serial No. 564,606
Claims priority, application Germany February 12, 1955
18 Claims. (Cl. 136—86)

1. In a fuel cell for the direct production of electrical energy from a fluid fuel and an oxidizing gas, having a porous fuel electrode and a porous oxygen electrode for the adsorption and de-adsorption as ions of fuel and oxygen, respectively spaced apart in a liquid electrolyte bath, the improvement which comprises a partition having multiple openings of less than 1 millimeter size defined



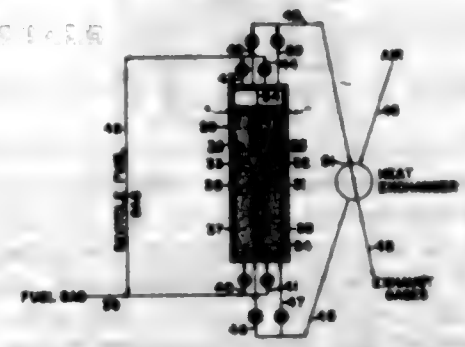
therethrough positioned in the electrolyte bath separating the oxygen electrode from the fuel electrode to prevent oxygen bubbles emerging from the oxygen electrode from contacting the fuel electrode.

2,901,524

METHOD FOR GENERATING ELECTRICAL ENERGY FROM ELECTROCHEMICAL COMBUSTION OF FUEL GASES

Everett Gorin and Howard L. Recht, Pittsburgh, Pa., assignors to Consolidation Coal Company, a corporation of Pennsylvania

Application April 2, 1956, Serial No. 575,586
12 Claims. (Cl. 136—86)



1. In the method of generating electrical energy through electrochemical combustion of fuel gases with oxygen in an electrochemical cell having therein two gas passageways separated by an oxygen-transferring electrolyte comprising carbonate and having a first electrode surface which is in communication with fuel gases from one gas passageway and a second electrode surface spaced from the first and being in communication with oxygen-containing gas from the other gas passageway, the improvement comprising removing carbon dioxide from the fuel gases by absorption on a solid particulate acceptor, recovering carbon dioxide from said solid particulate acceptor by passing the oxygen-containing gas through said acceptor whereby carbon dioxide is released and commingled with the oxygen-containing gas in the oxygen-containing gas passageway, and recovering electrical energy from the two electrode surfaces.

2,901,525

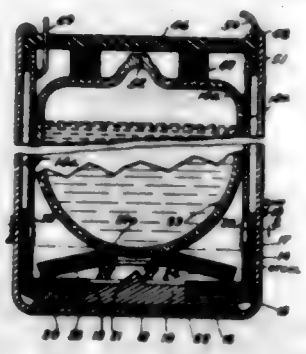
BREAKER MECHANISM FOR FRANGIBLE AMPOULE IN DEFERRED ACTION PRIMARY CELL

Franklin L. Everett, Ann Arbor, Mich., assignor to the United States of America as represented by the Secretary of the Navy

Application September 11, 1943, Serial No. 502,069
1 Claim. (Cl. 136—90)

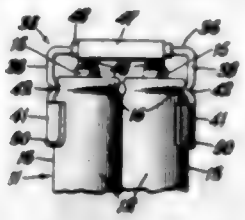
A primary cell comprising a can, a generally cylindrical electrode in the can, an insulating ring between the can and the electrode and having an internal flange, an anvil in the can having a breaker point, an ampoule in the can containing an electrolyte, and a generally frusto-conical spring washer seated on said flange with the inner rim of the washer supporting the ampoule in

spaced relation to the breaker point, said anvil being movable against the spring action of the washer to en-



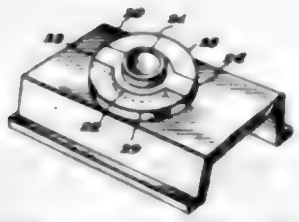
gage the ampoule with said point through the washer opening, thereby fracturing the ampoule.

2,901,526
BATTERY CONNECTOR
Alton Karl Huntley and Robert Carmichael, Lakewood, Ohio, assignors to Union Carbide Corporation, a corporation of New York
Application May 26, 1954, Serial No. 432,453
6 Claims. (Cl. 136—135)



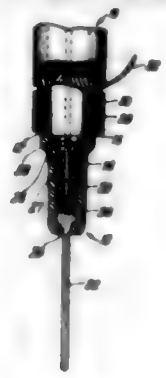
1. Apparatus for electrically connecting and retaining a battery of cells having cell walls and upwardly projecting cell caps as cell terminals thereof, the apparatus comprising a cell holder having a plurality of resilient elements for simultaneously retaining said cells in adjustably fixed position and affording resilient means for establishing conductive contact between the walls of the cells, a cell cap contactor having a plurality of flexibly bendable elements integral therewith, said bendable elements coacting with said cell caps to provide a common conductive contact therebetween, and an insulating strip between said contactor and said holder.

2,901,527
BATTERY CELL COVER
Verlin A. Mocas, Indianapolis, Ind., assignor to The Richardson Company, Melrose Park, Ill., a corporation of Ohio
Application May 28, 1958, Serial No. 738,335
8 Claims. (Cl. 136—168)



1. A molded battery cell cover having a main body portion and a raised portion, a terminal post aperture extending through said body and said raised portions, a metallic bushing disposed in said aperture and adapted to receive a terminal post, said bushing comprising a cylindrical sleeve, a plurality of laterally extending ribs, and a surface flange, said plurality of laterally extending ribs being disposed at substantially equidistant longitudinal positions along a periphery of the lower portion of the cylindrical sleeve and being integrally connected thereto and adapted to be embedded within the main body portion of said molded battery cell cover, said surface flange consisting of a laterally extending flange and a plurality of laterally extending projections, said laterally extending flange being integrally connected to the upper portion of the cylindrical sleeve and said laterally extending projections being integrally and radially connected to the periphery of said laterally extending flange, the outermost edges of the plurality of laterally extending projections being disposed at a substantially greater radial distance than the radial distance of the outer edges of the plurality of laterally extending ribs, the lower surface of said laterally extending flange and said laterally extending projections being substantially flush with the upper surface of said main body portion of said cover, and said raised portion of the cover body extending upwardly along the sides and terminating flush with the upper surfaces of said flange and said projections, said raised portion of the cover body united with the laterally extending flange and the plurality of projections to form a substantially solid annular member integrally attached to the upper surface of said main portion of said battery cell cover, said flange and projections being firmly embedded in said cover and offering an exposed metallic support for a connecting strap lug terminal.

2,901,528
WIRE CONNECTOR
Michael Lazar, White Plains, N.Y., assignor to Burndy Corporation, a corporation of New York
Application December 24, 1957, Serial No. 704,972
2 Claims. (Cl. 174—75)



1. A termination for a coaxial cable having an inner conductor, an insulation material disposed about said inner conductor and a coaxially disposed outer conductor comprising a terminal member having a tubular body section having one end closed and adapted to receive said inner conductor and mechanically secured thereto, a flexible conductor section integral with and extending from the closed end of and having a diameter less than said body section, an insulating cap enclosing said body section and having an aperture therein through which said flexible conductor section extends, said cap including a portion extending between said inner and outer conductors, an outer sleeve made of collapsible metal positioned over said outer conductor and said extended portion of said insulating cap and an inner sleeve positioned between said outer and inner conductors coaxially with said outer sleeve.

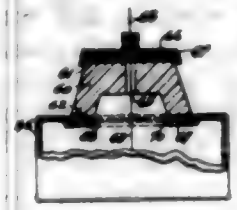
2,901,529
HERMETIC SEAL TERMINALS AND METAL TO PLASTIC BONDING
Merritt A. Rudner, Camden, N.J., assignor to United States Gasket Company, Camden, N.J., a corporation of New Jersey
Application August 22, 1951, Serial No. 243,073
4 Claims. (Cl. 174—152)

1. A sealing device for a hermetically sealed container, comprising a perforated solid body composed of poly-

2,901,532

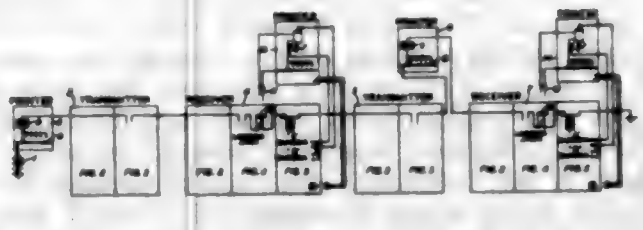
second terminal, the combination comprising an image

merized material selected from the group consisting of polytetrafluoroethylene and trifluorochloroethylene, said body having at least two flat surfaces and having mixtures of metal particles and said polymerized material disposed only in regions of limited depth directly subjacent said flat surfaces to provide metalized surface portions, a first of said metalized portions being contiguous to the perforation and extending outwardly therefrom along a flat surface of said body, and a second of said metalized surface portions being contiguous to the periphery of one of said flat surfaces and extending inwardly therefrom along said flat surface and terminating in spaced relation with both the perforation and said first metallic portion, the



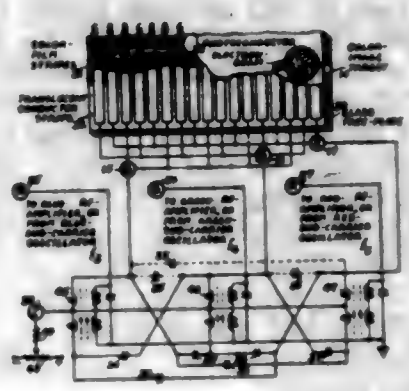
surfaces of each of said metalized surface portions having a high proportion of metal particles relative to said polymerized material with said subjacent regions having smaller proportions of metal particles, the surfaces of said metalized portions being solderable for formation respectively of hermetic seals between said first metalized portion and a solderable member threaded through the perforation and between said second metalized portion and a wall portion of the sealed container, and said body except for said metalized surface portions and said limited subsurface regions thereof comprising only said polymerized material thereby to retain for the body as a whole the resiliency of said polymerized material.

2,901,530
SELECTING SYSTEMS
Dwight Virgil Stuninger, Oak Park, Ill., assignor, by mesne assignments, to Hupp Corporation, Detroit, Mich., a corporation of Virginia
Application June 4, 1953, Serial No. 359,467
30 Claims. (Cl. 178—2)



18. In a selecting system, a transmitting station and a plurality of receiving stations interconnected over a communication channel, a distributor at each said station, means to start all said distributors simultaneously and to operate them synchronously, a plurality of marking switches at said transmitting station connected in different segmental positions of said distributors, function storage relays at different ones of said receiving stations each responsive to a different one of said marking switches, a function actuate switch associated with each said function storage relay, a holding circuit for each said function actuate switch responsive to its said associated function storage relay only at the termination of a selecting cycle whereby a function storage relay may be operated during a selecting cycle to cause the operation of its said associated function actuate switch at the termination of said selecting cycle, whereby a function storage relay may be released and reoperated during a selecting cycle without changing the operated condition of its said associated function actuate switch and whereby a function storage relay may be released during a selecting cycle to cause the release of its said function actuate switch at the termination of a selecting cycle, a clear out relay at each said receiving station operated at the beginning of a selecting cycle for releasing all operated function storage relays, said starting means including a starting switch at said transmitting station, a circuit maker on each of said receiving station marking switches for transiently closing a circuit for rendering said starting switch active during its movement of operation or release, said starting switch closing a starting circuit for said distributors, a prompting relay responsive to said transiently closed circuit, means controlled by said prompting relay for enabling said starting switch, a start relay jointly controlled by said starting switch and said prompting relay, a locking circuit for said prompting relay, means controlled by said start relay for releasing said prompting relay to disable said starting switch, and a combined switch having a first normally closed circuit maker in series with said locking circuit for said prompting relay constructed and arranged to be transiently operated during a movement of operation or of release of said combined switch and a second normally closed circuit maker for opening said circuit for said clear out relay whereby a given one or more of said function storage relays may be operated or released without disturbing a pattern of previously operated function actuate switches.

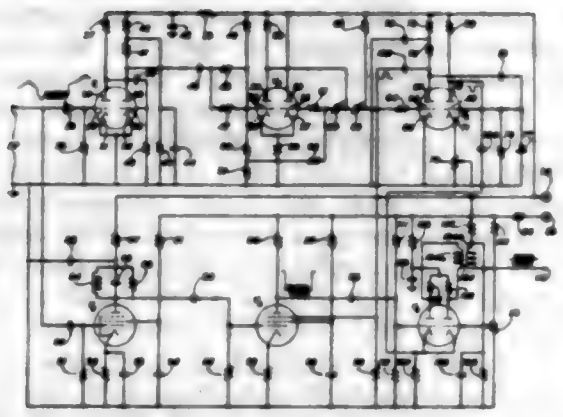
2,901,531
CROSS-TALK NEUTRALIZATION IN COLOR PICK-UP TUBE
Robert E. McCoy and Meguer V. Kalfaian, Los Angeles, Calif.
Application March 28, 1952, Serial No. 277,632
1 Claim. (Cl. 178—5.4)



In a color television system employing an image pick-up tube of the type having a plurality of electrodes responsive to different component colors, said response being electrically modulatable and said electrodes having undesired but inevitable mutual capacitance: means for producing alternating voltages at a plurality of frequencies; means for applying said voltages to modulate the response of said electrodes; a plurality of tuned transformers, one tuned to each of said frequencies; connections from a first terminal in each of said transformers to a corresponding one of said electrodes; connections from a second terminal in each of said transformers to a common point; a third terminal in each of said transformers having its potential relative to the second terminal opposite in polarity from the potential of the first terminal in the same transformer; and a plurality of capacitances connected from the third terminal of one transformer to the first terminal of another transformer, said capacitances being so adjusted that their contribution to coupling between transformers is substantially equal and opposite to the coupling produced by inter-electrode capacitances, thereby making the voltage at each electrode substantially independent of the voltages at the other electrodes.

cylindrical sleeve and being integrally connected thereto comprising a perforated solid body composed of poly-

2,901,532
BURST SEPARATOR FOR COLOR TELEVISION
Michael V. Sullivan, Florham Park, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application December 4, 1953, Serial No. 396,152
2 Claims. (Cl. 178—5.4)

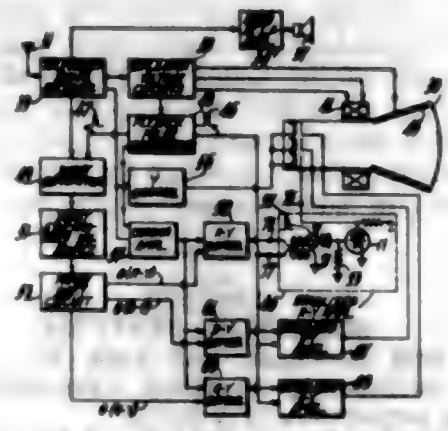


1. Apparatus for separating color synchronizing burst signals from composite color picture signals which comprises means responsive to said picture signals for developing positive and negative gating pulses substantially coincident with said burst signals, said gating pulses having amplitudes equal to each other and durations equal to the duration of said burst signals, first gating means supplied with said composite signals and activated by said positive gating pulses for passing during the occurrence of said positive gating pulses said burst signals superimposed on step voltages representative of said positive gating pulses, means for removing said step voltages comprising a gated differential amplifier including a pair of amplifier elements connected in push-pull relationship, each of said elements having a control element, a cathode and an anode, means for applying said step voltages with superimposed burst signals to the control terminal of one of said amplifying elements, means for applying a selected reference potential to the control electrode of the other of said amplifiers, means for applying said negative gating pulses to the common cathodes of said amplifying elements for conditioning said differential amplifier during the occurence of said negative gating pulses to pass only said burst signals, and means connected to the anodes of said amplifying elements for inductively coupling the output of said differential amplifier to a load circuit.

2,901,533
INTERCARRIER SOUND TELEVISION RECEIVERS
Eugene O. Keizer, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application April 29, 1954, Serial No. 426,400
12 Claims. (Cl. 178—5.8)

1. In a television receiver for processing a first carrier wave modulated by image signals and a second carrier wave modulated by sound signals, the nominal frequencies of said carrier waves being separated by a fixed frequency, and having an amplifier including an output circuit, comprising an output transformer having an output winding, said output winding having a first and a second terminal, the combination comprising an image signal detector for deriving said image signals from said first carrier wave and for heterodyning said first and second carrier waves whereby to produce a third wave equal in frequency to said fixed frequency, said detector comprising a unilaterally conductive device having first and second electrodes, a connection between said first electrode and the first terminal of said transformer output winding for applying said carrier waves to said first electrode; a load impedance having a pair of signal terminals, one terminal being connected to said second electrode; and frequency-selective sound take-off means serially connected between the second terminal of said transformer output winding and the other terminal of said load impedance, for selecting said third wave, whereby said transformer output winding, said unilaterally conductive means, said load impedance and said sound take-off means are in series with each other.

2,901,534
D-C STABILIZED AMPLIFIERS
Charles B. Oakley, Hamilton Square, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application October 19, 1955, Serial No. 541,499
16 Claims. (Cl. 178—5.4)



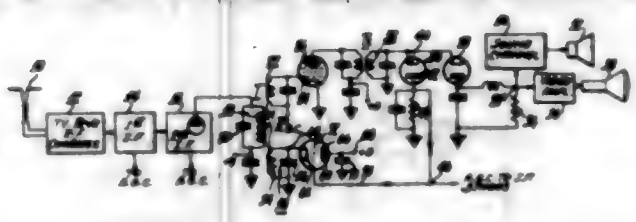
1. In a color television receiver adapted to receive a color television signal including a luminance signal, a chrominance signal, and horizontal deflection synchronizing pulses, said horizontal deflection synchronizing pulses occurring during scanning retrace intervals, the combination of, means to derive from said color television signal a color information signal wherein said horizontal deflection synchronizing pulses and selected frequency components of said luminance signal are suppressed, an electron flow device having a cathode and a control electrode to control electron flow, means for developing one pulse during each retrace interval, means to add said pulses to said color information signal to form a combined signal, and means to apply said combined signal to said control electrode for developing a bias voltage between said cathode and said control electrode therefrom.

2,901,535
FREQUENCY SELECTIVE SIGNAL ATTENUATING CIRCUIT
Edwin B. Smith, Collingswood, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application November 8, 1954, Serial No. 467,418
3 Claims. (Cl. 178—5.8)

1. Apparatus comprising a source of signals; a signal utilization circuit; means for coupling signals from said source to said utilization circuit, said coupling means having a pass band encompassing an associated signal frequency; a signal trapping circuit associated with said coupling means and comprising a resonant circuit tuned to said associated signal frequency between said source and

intensity, a current conducting device arranged to be nor- from the output of said camera device; a radiation-sensi-

utilization circuit; means for detecting the amplitude of such signals; means including an electron discharge device defining a current path which includes said trapping circuit; and means coupled to said amplitude-detecting means for varying the conduction of said electron discharge device in such manner as to vary the response of

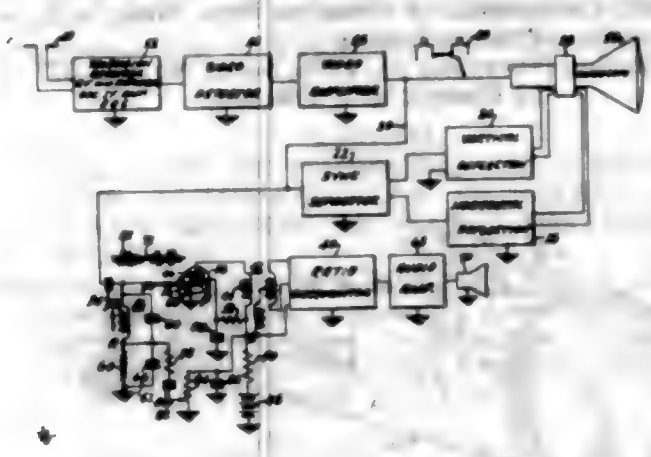


said trapping circuit as a function of signal amplitude, said electron discharge device having a cathode, an anode and a control grid, said trapping circuit being connected in series with said anode and cathode, and said conduction varying means comprising a coupling between said amplitude-detecting means and said control grid.

2,901,536
INTERCARRIER SOUND BUZZ REDUCING CIRCUIT

Lucius Ponder Thomas, Jr., West Collingswood, and Clyde Warren Hoyt, Pennsauken, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Application May 31, 1955, Serial No. 512,224
3 Claims. (Cl. 178—5.8)

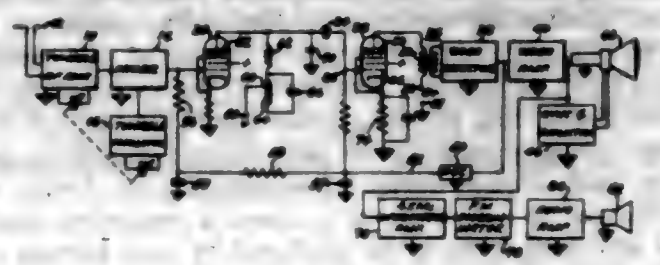


2. In an intercarrier sound type television receiver the combination of: a source of intercarrier sound signal carrier bearing sound frequency modulation and fortuitously amplitude modulated in an undesirable manner by synchronizing components forming a part of the received television signal; an amplifier including an input circuit having in series connection means resonant to the carrier signal and a time constant circuit comprising a first resistor and first capacitor connected in parallel, across which time constant circuit a signal corresponding to said undesirable synchronizing component is developed; signal demodulating means connected with the output of said amplifier for demodulating said carrier, said demodulating means being responsive to said fortuitous modulation to produce a sound signal contaminated by synchronizing component having an audible disturbance frequency; a second capacitor of a value greater than said first capacitor; a second resistor of value less than said first resistor; means connecting said second resistor and second capacitor in series to form a correction network; and means connecting said correction network across said time constant network, the value of said first and second capacitors and resistors being so proportioned as to reduce the degree of sound signal contamination by said synchronizing component without substantially altering the waveform thereof over that present in the absence of said correction network.

2,901,537
TELEVISION RECEIVING SYSTEMS

Donald A. Cammack, Woodbury, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Application December 30, 1955, Serial No. 556,566
2 Claims. (Cl. 178—5.8)



1. In a television receiver including tuner apparatus for receiving signals comprising a modulated picture carrier and an accompanying modulated sound carrier and for converting said received signals to intermediate frequencies, said tuner apparatus having fine tuning means for controllably adjusting the precise intermediate frequencies to which said picture and sound carriers are converted, said receiver also including automatic gain control apparatus for developing a gain control voltage varying in accordance with variations in strength of the received signals; an intermediate frequency amplifier including a first amplifying device having an input circuit and an output electrode, the input circuit of said first amplifying device being coupled to said tuner apparatus; a second amplifying device having an input electrode and presenting an input capacitance between said input electrode and a point of reference potential; means for applying said gain control voltage to said input electrode in such polarity and magnitude that said input capacitance is caused to vary inversely with respect to changes in the strength of said received signals; and an interstage coupling network comprising a first parallel resonant circuit including a first inductance, a second parallel resonant circuit including a second inductance, means for connecting said first and second inductances in series, means for coupling said output electrode to said input electrode, means for connecting said first inductance to said electrode coupling means, said first resonant circuit being tuned to resonate under weak signal conditions at a first intermediate frequency, said second resonant circuit being tuned to resonate under weak signal conditions at a second intermediate frequency differing from said first intermediate frequency by an amount substantially equal to the frequency difference between said received picture and sound carriers, and means for causing the difference between the resonant frequency of said first and second resonant circuits to exceed the picture-sound carrier frequency difference under strong signal conditions, said last named means comprising means for connecting an intermediate point on said second inductance to said point of reference potential whereby a decrease in said input capacitance caused by an increase in signal strength results in a greater change in the resonant frequency of said first resonant circuit than in the resonant frequency of said second resonant circuit.

2,901,538
FREQUENCY MODULATION SYSTEM

Maurice Artzt, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

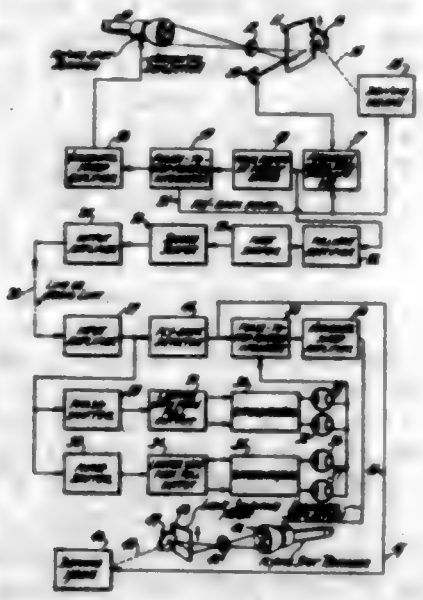
Application June 19, 1958, Serial No. 743,216
30 Claims. (Cl. 178—6)

20. A variable velocity facsimile system comprising means to scan an image to be transmitted by a beam of light, phototube pick-up means positioned in relation to said image to be responsive to the intensity of light reflected from said image to produce a modulating signal varying in amplitude according to the changes in light

put winding, said output winding having a first and a

said associated signal frequency between said source and

intensity, a current conducting device arranged to be normally conducting, a storage device connected to said current conducting device so as to be charged at constant current by the current of said current conducting device, means connected to said pick-up means and said current conducting device to vary the current conduction of said current conducting device according to the amplitude of said modulating signal, the rate of charge of said storage device being determined according to the variation in the current conduction of said current conducting device, discharge means connected to said storage device to discharge said storage device upon said storage device being charged to a given level to cause a frequency modulated sawtooth wave to be produced by said storage device and said current conducting device having a constant amplitude peak-to-peak value, a plurality of pulse producing circuits coupled to said sawtooth wave to produce a pulse at different angles of each cycle of said sawtooth wave, each one of said pulse producing circuits producing a pulse at the same angle of each cycle of said sawtooth wave so that a number of pulses are produced by



said pulse producing circuits for each cycle of said sawtooth wave equal to the number of said pulse producing circuits regardless of the frequency of said sawtooth wave, an integrator coupled to said pulse producing circuits and responsive to the pulses produced thereby to produce an output signal determined according to the spacing between the pulses produced by said pulse producing circuits, means connected to said integrator and to said first-mentioned means and responsive to said output signal to operate said first-mentioned means to cause said beam of light to scan said image at a rate of speed determined according to the spacing between the pulses produced by said pulse producing circuits, a full-wave rectifier connected to said storage device and responsive to said sawtooth wave to form a symmetrical frequency modulated triangular wave from said sawtooth wave, wave shaping means connected to said rectifier and responsive to said triangular wave to form a frequency modulated near sine wave from said triangular wave, and an output circuit connected to said shaping means and responsive to said sine wave.

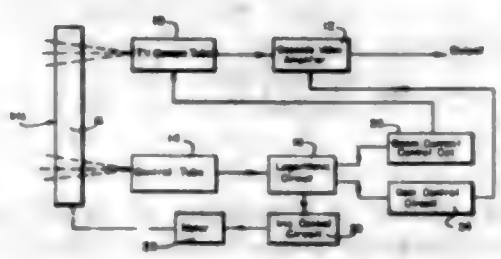
2,901,539

SYSTEM FOR THE AUTOMATIC ADAPTATION OF TELEVISION CAMERA APPARATUS TO VARYING LIGHT INTENSITY LEVELS

Russell H. Morgan, Baltimore, Md.

Application April 20, 1956, Serial No. 579,543
17 Claims. (Cl. 178—7.2)

1. In a system of the type described, including a radiation-sensitive camera device of the type employing an electron beam, and a cascade amplifier receiving signals from the output of said camera device; a radiation-sensitive control device, said camera device and said control device being adapted for exposure to radiation from a common subject, means coupled to said control device for producing an electric signal which varies logarithmically with respect to the intensity of said radiation, means coupled to said signal producing means for con-



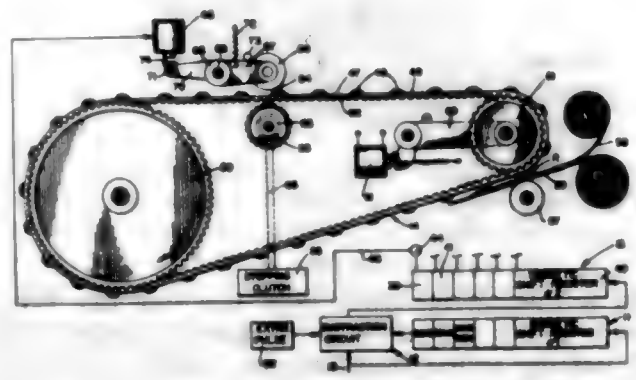
trolling the gain of said amplifier in accordance with said signal, means coupled to said signal producing means for controlling the intensity of said electron beam in accordance with said signal, and means responsive to the radiation incident on said control device for controlling the intensity of the radiation incident on said camera tube and said control device.

2,901,540

NON-RESETTING DECODING AND PRINTING APPARATUS

Michele Canepa, South Norwalk, Conn., assignor to Olivetti Corporation of America, New York, N.Y., a corporation of Massachusetts

Application November 15, 1956, Serial No. 622,377
12 Claims. (Cl. 178—34)

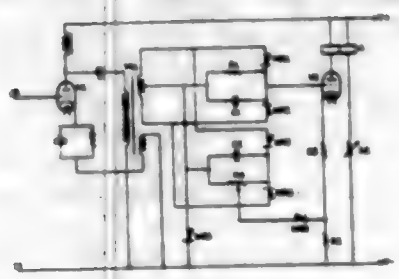


1. An apparatus for decoding and printing binary coded information representing a plurality of decimal digits comprising subtraction means for serially subtracting successive binary coded decimal quantities for each of said digits and obtaining the respective arithmetic differences therebetween, input means directly coupled with said subtraction means for receiving such quantities and delivering them to said subtraction means, storage means interconnected between said input means and said subtraction means for serially receiving binary coded decimal quantities each representative of a particular one of said digits and for delivering said quantities after a predetermined time delay to said subtraction means along a parallel path, separate decoding means for each of said digits connected to the output of said subtraction means for converting each of said differences to a decimal notation, distributing means interconnecting said subtraction means and said decoding means for serially receiving said differences and for subsequently delivering the same to their respective decoding means simultaneously and printing means associated with said decoding means for imprinting said notation on a printing medium.

2,901,541
TELEGRAPH RECEIVERS

Philip Kenyon, Liverpool, England, assignor to Automatic Telephone & Electric Company Limited, Liverpool, England, a British company

Application May 8, 1956, Serial No. 583,389
Claims priority, application Great Britain May 25, 1956
4 Claims. (Cl. 178—88)

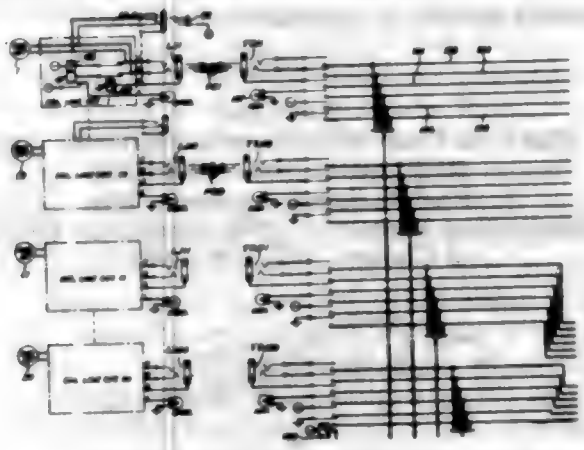


1. A carrier current signal receiver comprising a thermionic tube, a signal responding device controlled by current flow in said tube, means for demodulating the incoming carrier current signal and for applying the demodulated signal to said thermionic tube, means for applying a substantially constant negative bias to said thermionic tube and comprising a first rectifying circuit having a first time constant and provided for deriving a first control bias from said incoming signal and for applying said first control bias to said thermionic tube and a second rectifying circuit having a second time constant less than said first time constant and provided for deriving a second control bias from said incoming signal and for applying said second control bias to said thermionic tube in opposition to said first control bias.

2,901,542
"WAKE UP" OR "MORNING CALL" SYSTEM FOR AUTOMATICALLY SIGNALING PRIVATE BRANCH EXCHANGE EXTENSION STATIONS

Eugene W. Henches, New York, and Ivan R. Sheldon, New Rochelle, N.Y., assignors to American Telephone and Telegraph Company, a corporation of New York

Application October 12, 1956, Serial No. 615,520
12 Claims. (Cl. 179—6)

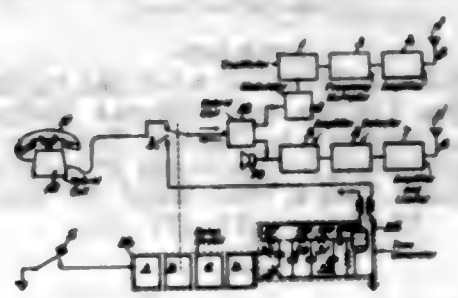


1. In a signaling system, a telephone line, a station on said line, a signal device at said station, a remote point, a source of signaling current at said remote point, a second source of signaling current at said remote point, time controlled means for testing said line for idle or busy conditions, means responsive to an indicated idle condition of said line for connecting both said sources of signaling current to said line whereby said signal device responds to current from said first source as a call signal, means effective incident to the response of the subscriber at said station to a call signal for disconnecting said first source of current from said line, and other means controlled jointly from said station and said remote point for disconnecting said second source of current from said line.

2,901,543
RADIO SYSTEM COMPRISING A MAIN STATION AND A PLURALITY OF SUBSTATIONS

Dirk Johan Braak, Hilversum, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Application June 7, 1955, Serial No. 513,727
Claims priority, application Netherlands June 15, 1954
5 Claims. (Cl. 179—15.5)

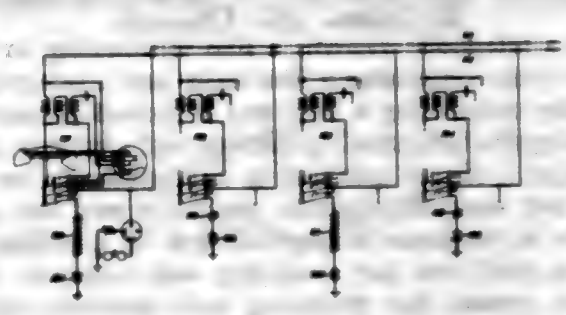


1. A communication system comprising a main station and a plurality of substations, said main station including a transmitter comprising signal-transmitting means, means providing a calling signal for calling a substation, means for generating a release tone, means for generating a blocking tone, means for temporarily transmitting said release tone immediately before calling a substation, means for transmitting said blocking tone temporarily after calling a substation, and means for transmitting information after said temporary transmission of the blocking tone, and said substations each including a receiver comprising reproducing means for reproducing said information, a blocking circuit for selectively blocking said reproducing means in response to said tones, first filter means connected to feed said release tone when it occurs to said blocking circuit for rendering operative said reproducing means, second filter means connected to feed said blocking tone when it occurs to said blocking circuit for rendering inoperative said reproducing means, whereby all of said substations are caused to reproduce said calling signal and thereafter are normally prevented from reproducing said information and a switch connected to selectively render operative said reproducing means irrespective of the blocking condition of said blocking circuit, whereby a called substation may selectively be switched into the operative condition so as to reproduce said information.

2,901,544
FOUR-PARTY STATION IDENTIFICATION CIRCUIT

John J. Collins, Jersey City, N.J., assignor to American Telephone and Telegraph Company, a corporation of New York

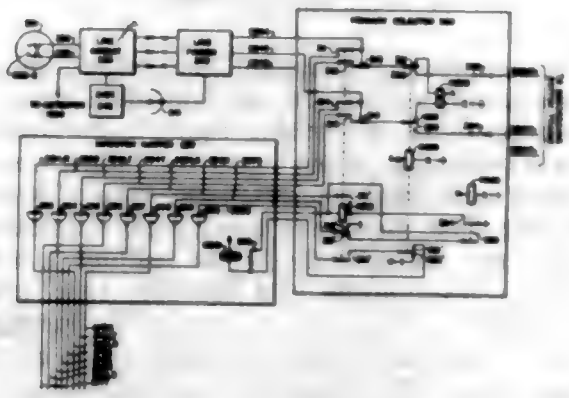
Application December 31, 1954, Serial No. 479,143
6 Claims. (Cl. 179—17)



1. In a telephone system, a line having a plurality of substations, each provided with a device connected in series with a resistance to ground to permit a flow of current in one direction and resisting its flow in the opposite direction, the resistance for each of certain of said

substations being of lower value than the resistance for each of the remaining ones of said substations, a test circuit including a source of potential, a marginal relay and two oppositely polarized relays, a register for each of said substations, said registers being selectively operable by the relays of said test circuit, and means responsive to a calling condition on one of said stations for establishing a flow of current through the relays of said test circuit and the device and resistance of said calling substation for selectively operating the relays of said test circuit, thereby to operate the one of said registers which is individual to said calling substation.

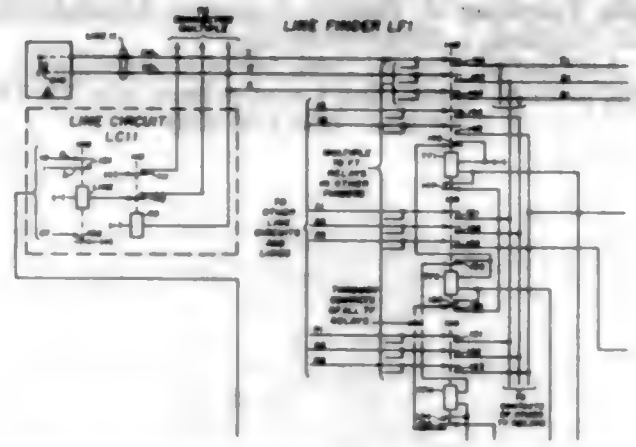
2,901,545
DIRECTOR HUNTER AND SELECTOR
John E. Ostline, Chicago, and William J. Phillips, Northbrook, Ill., assignors to General Telephone Laboratories, Incorporated, a corporation of Delaware
Application April 8, 1955, Serial No. 500,077
15 Claims. (Cl. 179—18)



2. In a toll ticketing telephone system, calling subscriber lines, called subscriber lines, a plurality of register senders and means for routing calls from said calling subscriber lines to said called subscriber lines, a step-by-step switch having access to said register senders, means for operating said switch responsive to one of said calling subscriber lines initiating a call for connecting said calling subscriber line to the next idle one of said register senders, a detector associated with said connected register sender to detect and identify said calling subscriber line, and means in said connected register sender operative in case said associated detector fails to detect and identify said calling subscriber line for always advancing said switch one step ahead to another register sender and to restore said connected register sender to common use by other calling lines said restored register sender reselectable for use only by said step-by-step switch advancing ahead in successive step-by-step operations.

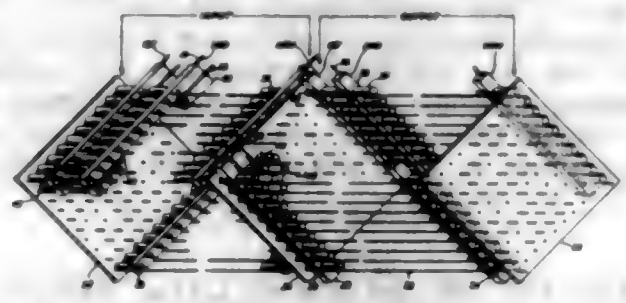
2,901,546
LINE FINDER AND ALLOTTER SYSTEM
Ben A. Harris, Rochester, N.Y., assignor to General Dynamics Corporation, a corporation of Delaware
Application December 12, 1955, Serial No. 552,360
17 Claims. (Cl. 179—18)

1. In a telephone system, a line terminating in a line circuit, a link comprising a line finder and a selector, said line finder comprising a first and a second element, operating circuits individual to each of said elements, means comprising a circuit common to said elements for completing said operating circuits, means in said line circuit operative in response to the existence of a calling condition on said line for rendering said common circuit operative, means for preparing said operating circuits, other means in said line circuit operative in response to the existence of a calling condition on said line for operating said preparing means, means in said line finder operative in response to the operation of said preparing means for rendering said common means operative to operative in response to the operation of said first element complete said first element operating circuit, and means



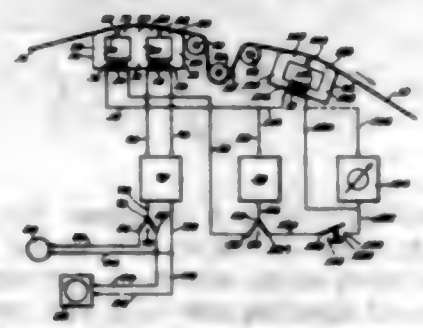
for causing said common means to complete said second element operating circuit.

2,901,547
SWITCHING SYSTEM NETWORK
Herman A. Miloche, Teaneck, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application June 28, 1955, Serial No. 518,480
17 Claims. (Cl. 179—27.54)



1. A coordinate switch comprising in combination a first plurality of conductors arranged in groups in parallel planes, a second plurality of conductors arranged in an equal number of groups in parallel planes at right angles to said first-mentioned parallel planes, and means for establishing an electrical connection between any conductor in each one of said first-mentioned groups of conductors and any conductor in each one of said second-mentioned groups of conductors.

2,901,548
EDITOR FOR SOUND RECORDING AND REPRODUCING DEVICES
Karl E. Sager, Appleton, Wis.
Application January 3, 1955, Serial No. 479,426
8 Claims. (Cl. 179—100.1)

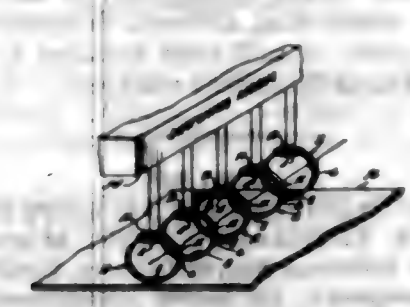


1. In a sound recording and reproducing device, a carrier of sound impressions, a sound impressing element for recording sound impressions on said carrier, a pick-up element actuated by sound impressions located on said carrier, means connected with said pick-up element for converting the signals received by said pick-up element from said sound carrier into intelligible sound, an erase

within one of said temple bow members for providing an operating potential; and a solar cell mounted on an members being thus capable of adjustment relative to

element spaced from said pick-up element which is adapted for erasing undesired sound impressions from said carrier at the same time that said pick-up element is receiving signals from said carrier, means for transporting said carrier of sound impressions past said sound impressing element, said pick-up element and said erase element, control means for activating either said sound impressing element or said pick-up element and simultaneously inactivating the other of said elements, said erase element being spaced from said pick-up element in that direction of movement of said carrier of sound impressions which permits the sound to be reproduced in its original form, a manually operable control for activating said erase element, and operator adjustable means for varying the time interval between reproduction of a sound in its original form by said pick-up element and operator controlled erasure of said sound by said erase element to compensate for operator reaction time, whereby the closing of said control by the operator promptly in response to hearing an undesired portion of the recording and the opening of said control promptly in response to hearing the end of said undesired portion of the recording will automatically cause the proper erasure of said undesired portion of the recording from said carrier.

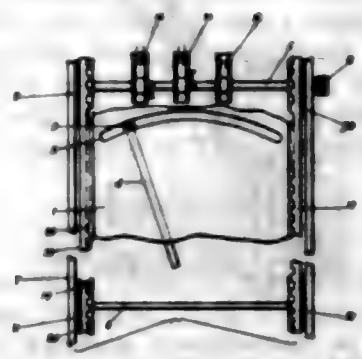
2,901,549
MAGNETIC RECORDING SYSTEM
Robert Serrell, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application May 29, 1953, Serial No. 358,398
7 Claims. (Cl. 179—100.2)



3. A record transducing means comprising, in combination, a magnetic record transducing head including a core structure of magnetic material having a first and second loop, said first loop constituting a closed magnetic path, said second loop including said first loop and having a signal translating gap located opposite said first loop, said magnetic material of at least said first loop having a substantially rectangular hysteresis loop, an energizing coil cooperatively associated with said first loop, a signal translating winding cooperatively associated with said second loop, said head being normally electrically and magnetically balanced, means associated with said energizing coil for normally biasing said first loop to magnetic saturation of a given polarity, said last mentioned means including means for periodically pulsing said energizing coil whereby to drive said first loop to magnetic saturation of opposite polarity, and signal means for selectively unbalancing said second loop whereby said head translates signals from said signal means as a function of the amount by which said second loop is unbalanced.

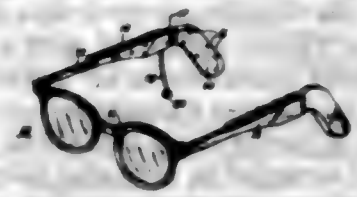
2,901,550
SOUND RECORDING AND REPRODUCING DEVICES
Endore Brasseur, Mont-sur-Marchienne, Belgium, assignor to Societe Anonyme Ateliers de Constructions Electriques de Charleroi, Brussels, Belgium, a corporation of Belgium
Application June 19, 1957, Serial No. 666,643
Claims priority, application France June 25, 1956
2 Claims. (Cl. 179—100.2)

1. In a sound recording and reproducing device wherein a sound track receiving means is moved step-by-step past a recording and reproducing zone and a sound head is moved in successive reverse directions generally transverse to the direction of movement of the sound track receiving means, motive means for advancing the sound track receiving means in successive step-by-step movements past the recording-reproducing zone comprising, a rotatable driving shaft, at least one magnetic member having a plurality of teeth disposed on an arcuate end of said member, at least one rotative magnetic disc fixed on said shaft having peripheral teeth spaced from the teeth of said member and disposed radially opposite thereto in position to maintain the tips of each of its teeth equally spaced from the tips of the teeth of the member when rotated relative to said member, the disc teeth disposed opposite to the teeth of the member having their axis normally disposed in a given direction away from the axis of the teeth of said member and portions of the disc teeth opposite the teeth of said member lying in corresponding radial planes with the teeth of said



member, means for generating flux in said magnetic member in timed relationship with the movements of said sound head to rotate said disc in a direction toward alignment of its teeth with the teeth of said member, means for imparting motion to said rotative disc in the direction of rotation past a point of alignment of said teeth rotative disc and magnetic member thereby to misalign said teeth a selected angular distance comprising, a radial projection on said shaft, said rotative disc of said motive means having a radial slot with said radial projection on said shaft disposed in said slot so as to freely move therein, spring means fixed to said projection and to said disc at a point ahead of said projection and in the direction of rotation of said disc, and positioning means comprising, a second magnetically-actuated disc for accurately positioning said shaft in successive positions corresponding to equal angular displacements when rotated in successive movements in two opposite directions of rotation thereby to accurately position said sound track receiving means during said step-by-step movements.

2,901,551
EYEGLASS HEARING AID
Edward B. Passow, Park Ridge, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Application May 19, 1958, Serial No. 736,244
7 Claims. (Cl. 179—107)



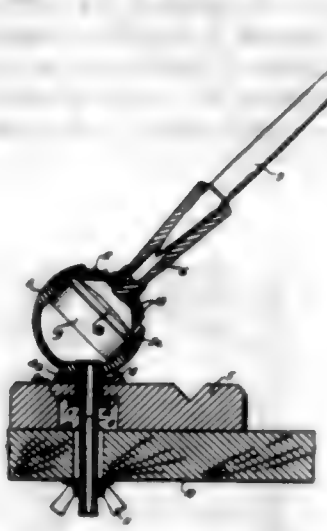
1. A combined eyeglass hearing aid comprising: a spectacle frame, including a frontal piece for supporting eyeglass lenses and a pair of side temple bow members attached to said frontal piece, for supporting the hearing aid components; a re-chargeable battery mounted

means for rendering said common means operative to

from said sound carrier into intelligible sound, an erase

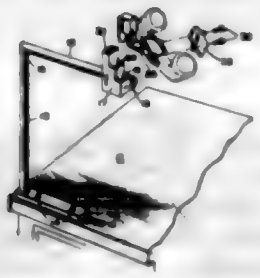
within one of said temple bow members for providing an operating potential; and a solar cell mounted on an exposed surface of one of said temple bow members and connected in parallel with said battery, said solar cell being operative in response to incident actinic radiation to develop an electrical operating potential and re-charge said battery.

2,901,552
DESK MICROPHONE COMBINED WITH SUPPORT FOR PEN
Giovanni Geloso, Milan, Italy
Application February 4, 1957, Serial No. 637,924
4 Claims. (Cl. 179—147)



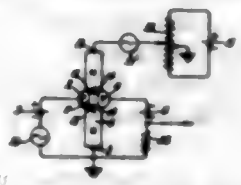
1. A camouflaged desk microphone arrangement comprising in combination, a microphone unit having a peripheral portion and a sound receiving face portion; a casing for enclosing the microphone unit having a bottom portion surrounding said microphone unit along the periphery thereof with said sound receiving face portion facing outwardly from said botom portion, and a top portion having sound passage openings and arranged to secure said microphone unit in place in said casing and itself being detachably secured to said bottom portion; and camouflaging means mounted on said top portion of the casing.

2,901,553
TELEPHONE HOLDER
William R. Stone, Mount Rainier, Md.
Application May 16, 1955, Serial No. 508,438
4 Claims. (Cl. 179—148)



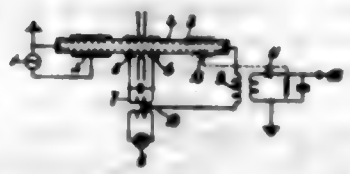
1. In a telephone holder, vertical supporting means having a foot for attachment to a desk-like supporting surface, an arm rigidly connected with said means and extending laterally therefrom at an elevation above said foot, a bracket for holding a telephone instrument in position for use by a person using said surface, said bracket constructed and arranged to hold said instrument with its long axis at an angle to the vertical in planes at right angles to one another with its mouthpiece at the bottom and away from the user and its receiver at the top and to one side of said mouthpiece, and cooperating supporting members interlocking detachably with each other at each of a plurality of vertically spaced positions, said members being thus capable of adjustment relative to each other stepwise in a vertical direction and one of said members being rigidly connected with said bracket and the other rigidly connected with said arm.

2,901,554
SEMICONDUCTOR DEVICE AND APPARATUS
Israel Arnold Lesk, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Application January 19, 1953, Serial No. 331,947
19 Claims. (Cl. 179—171)



1. A semiconductor device comprising in combination a body of semiconductor material of one carrier type having a pair of opposed surfaces, an emitter mounted on one of said surfaces to form a junction of a predetermined area therewith, a collector mounted on the other of said surfaces to form a junction of a predetermined area therewith separated from said emitter junction by a distance sufficiently small to permit an appreciable number of carriers injected across said emitter junction to reach said collector junction by diffusion, at least a portion of said emitter and collector junction being directly opposite each other, and means independent of said emitter and collector for establishing different electrostatic potentials at different points of said body adjacent to said emitter in response to suitably applied voltages.

2,901,555
ELECTROMECHANICAL AMPLIFIER
Jacob Fredrik Klinkhamer, Cornelis Martinus van der Burgt, and Johannes Meyer Cluwen, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application June 30, 1953, Serial No. 365,104
Claims priority, application Netherlands June 30, 1952
6 Claims. (Cl. 179—171)

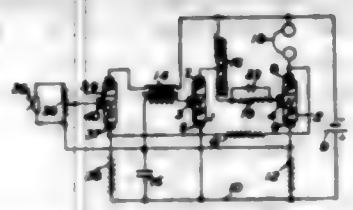


1. An electromechanical filter device comprising a vibrator body composed at least in part of polarizable material and having a mechanical resonance frequency and a polarization characteristic curve having a non-linear part, a source of signal oscillations, means connected to apply said signal oscillations to said vibrator body, a source of auxiliary oscillations having a frequency exceeding the frequency of said signal oscillations, and means connected to apply said auxiliary oscillations to said vibrator body with a magnitude to cause said body to be operated in said non-linear part of its polarization characteristic curve thereby to produce amplification of said signal and auxiliary oscillations, said mechanical resonance frequency being equal to the frequency of said signal only oscillations or a mixed frequency component of both of said signal and auxiliary oscillations so that said vibrator body filters out the frequency of said auxiliary oscillations, whereby said vibrator body produces an amplified output oscillation which depends on said signal oscillations and said auxiliary oscillations.

vices, a second series combination of a resistor and an

having a pair of secondary coils connected to apply ex-

2,901,556
SEMI-CONDUCTOR AMPLIFIERS
Roger Chapman and Laurence Elsworth Robinson, Sidcup, England, assignors to International Standard Electric Corporation, New York, N.Y.
Application January 5, 1955, Serial No. 480,006
Claims priority, application Great Britain February 10, 1954
3 Claims. (Cl. 179—171)



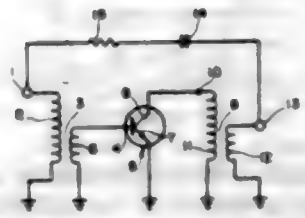
1. An alternating current amplifier comprising a plurality of transistor amplifier stages, each stage having an input and an output circuit, a plurality of coupling means for coupling said stages in cascade, at least one of said coupling means comprising both a direct current coupling means and an alternating current coupling means, said last named means including a voltage transformation means for substantially matching the output impedance of one of said stages to the input impedance of the next succeeding stage, and a direct current negative feedback path connected between said next succeeding stage and an earlier stage of said plurality of stages, whereby the collector current in said next succeeding stage is stabilized.

2,901,557
OSCILLATOR AND AMPLIFIER CIRCUIT
Linus O. Hubbard, Chicago, Ill., assignor to Bendix Aviation Corporation, Davenport, Iowa, a corporation of Delaware
Application February 7, 1955, Serial No. 486,541
8 Claims. (Cl. 179—171)

1. An electronic oscillator and amplifier system, comprising an oscillator circuit including a tank inductance and an electron discharge tube including a control grid and a cathode and an associated plate coupled to said control grid and cathode through said inductance, an amplifier circuit including two electron discharge tubes connected in push-pull relation, each including a control grid and a plate, a coupling circuit connecting one control grid with a point on the tank inductance, a second coupling circuit connecting the other control grid with another point on the tank inductance in phase opposition to the former point, a grid radio frequency current minimizing resistance in each of the latter two circuits, an output impedance, and an output circuit connecting the amplifier tube plates across said impedance.

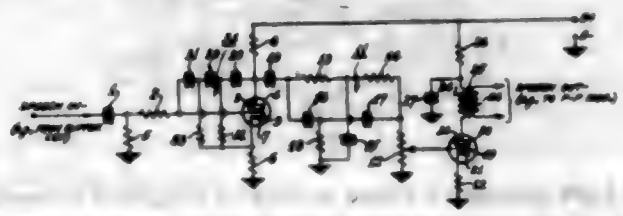
2,901,558
TRANSISTOR AMPLIFIER CIRCUITS
Roger Robinson Webster, Dallas, Tex., assignor to Texas Instruments Incorporated, Dallas, Tex., a corporation of Delaware
Application April 5, 1955, Serial No. 499,369
1 Claim. (Cl. 179—171)

An electrical circuit including a transistor having an inherent shunted interelectrode capacitance and an inherent input interelectrode resistance, a step-down input transformer having primary and secondary windings, an output transformer having primary and secondary windings, one of said transformers producing a 180° output phase shift, said input transformer being attached to an effective terminal of said interelectrode resistance and said output transformer being connected to an effective terminal of the shunt circuit of said interelectrode capacitance, and means for neutralizing the interelectrode ca-



pacitance and resistance of said transistor comprising a circuit from the primary winding of said input transformer to the secondary winding of said output transformer consisting of a resistor and a capacitor, said resistor and capacitor having a combined impedance to exactly match the combined impedance of the inherent input interelectrode resistance and the inherent shunted interelectrode capacitance of said transistor after transformation.

2,901,559
LOW PASS SPEECH AMPLIFIER
Walter S. Glazar, Brooklyn, N.Y., assignor to Radio Corporation of America, a corporation of Delaware
Application August 2, 1955, Serial No. 525,885
6 Claims. (Cl. 179—171)



1. A low-pass speech amplifier having first and second amplifying stages coupled in cascade, each stage comprising an electron discharge device having an anode, a grid and a cathode; a null network coupling the output of said first stage to the input of said second stage, and a phase-shift feedback network connected between said anode and cathode of said electron discharge device of said first amplifying stage coupling the output of said first stage to the input of the same stage, the component values of said phase-shift network being so chosen that the same network provides positive feedback at a frequency below the null frequency of said null network and negative feedback at a frequency above said null frequency.

2,901,560
AMPLIFIER FOR A WIDE FREQUENCY BAND MORE PARTICULARLY VIDEO FREQUENCY AMPLIFIERS
Ate Wieberdink, Eindhoven, Netherlands, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application August 29, 1955, Serial No. 531,078
Claims priority, application Netherlands September 14, 1954
2 Claims. (Cl. 179—171)

1. A wide-band amplifier comprising a pair of electron-discharge devices each having at least a cathode, a control electrode and an output electrode, a first series combination of a resistor and an inductor connected at an end thereof to the output electrode of one of said de-

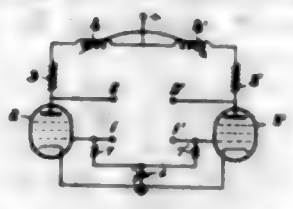
current feedback signal to said input converting means

body and inwardly toward the axis of said opening for engagement by said plug, the terminal ends of said leg

each of a plurality of vertically spaced positions, said

cillations.

vices, a second series combination of a resistor and an inductor connected at an end thereof to the output electrode of the other of said devices, means for supplying an operating voltage to the remaining ends of said series combinations, means for applying a reference potential to both of said cathodes, means for applying a push-pull



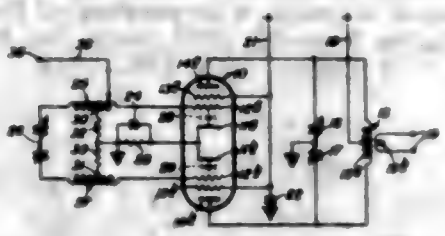
input signal to said control electrodes whereby a push-pull output signal is produced in said first and second series combinations thereby causing external fields to be produced by said inductors, and means for providing electrical coupling between said inductors to cause said external fields to counteract one another.

2,901,561

HIGH FREQUENCY AMPLIFIER CIRCUIT

Robert E. Cunningham, Canoga Park, and Harvey R. Sigler, Jr., Burbank, Calif., assignors to Bendix Aviation Corporation, North Hollywood, Calif., a corporation of Delaware

Application January 23, 1956, Serial No. 560,753
1 Claim. (Cl. 179—171)



A high frequency tuned push-pull amplifier comprising: a pair of electronic amplifying devices, each having an input electrode, an output electrode, and a common electrode, and having inherent capacity between its input and common electrodes; means connecting said common electrodes together; an output circuit connected between said output electrodes; a tuned input circuit comprising a first inductance element, a tuning capacitor, and a second inductance element connected in the order named in series relation between said input electrodes; said inductance elements and capacitor having such values relative to said inherent capacities of said amplifying devices that the closed series circuit defined by said input circuit and said inherent capacities is resonant at the operating frequency means providing a bias potential between said common electrodes and said input electrodes comprising two direct current paths connected between said common electrodes and the null potential point on said respective inductance elements; and means for applying a high frequency input potential to be amplified between said common electrodes and a point on said input circuit.

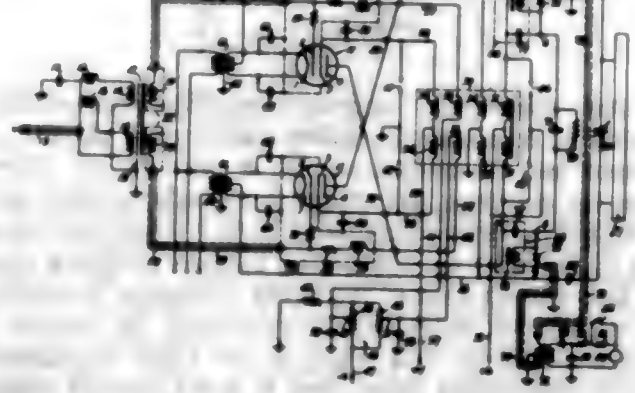
2,901,562

INVERSE PARALLEL AMPLIFIER NETWORK

Hugo Romander, Redwood City, Calif., assignor, by mesne assignments, to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Continuation of application Serial No. 448,474, August 9, 1954. This application July 31, 1957, Serial No. 676,464
10 Claims. (Cl. 179—171)

1. An electronic network for amplification of radio frequencies comprising a pair of vacuum tubes having plate, cathode, and control grid elements, a pair of input leads connected to the control grids, an input transformer having a pair of secondary coils connected to apply exciting voltages to said leads, said secondary coils being insulated with respect to ground, electrostatic shielding disposed about each of said secondary coils and connected to one terminal of the same, the other terminal of each of said secondary coils being connected to the corresponding input lead, a pair of output leads, an output transformer having a pair of secondary coils connected to apply amplified radio frequency energy to the output leads, said transformer having a pair of primary



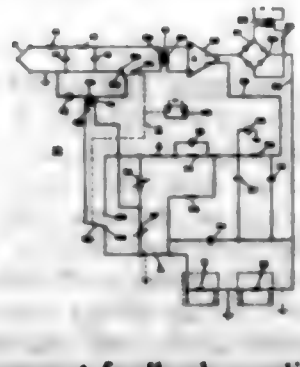
windings, one terminal of each primary winding being connected to a source of plate voltage and the other terminal of each primary winding being connected to a corresponding tube plate, a pair of current supply transformers having secondary windings insulated with respect to ground and connected to supply heating current to the cathodes of the tubes, each of said last named windings being electrically connected to a corresponding output lead, and means for applying bias voltage to said control grids.

2,901,563

NEGATIVE FEEDBACK AMPLIFIERS

Will McAdam, Blue Bell, and John H. Moore, Havertown, Pa., assignors to Leeds and Northrup Company, Philadelphia, Pa., a corporation of Pennsylvania

Application September 9, 1958, Serial No. 760,035
14 Claims. (Cl. 179—171)



11. A direct-current feedback amplifying system comprising input converting means, means for applying a direct-current input signal to said input converting means for conversion of said direct-current input signal to an alternating-current signal, an alternating-current amplifier responsive to the output from said input converting means and including a non-conductive coupling element for direct-current isolation, rectifier means connected to the output of said alternating-current amplifier for converting the amplified alternating-current signal to a direct-current output signal, feedback means for developing from said output signal a direct-current feedback signal, feedback converting means for converting said direct-current feedback signal to an alternating-current feedback signal, and a second non-conductive coupling element coupled between said feedback converting means and said input converting means for application of said alternating-

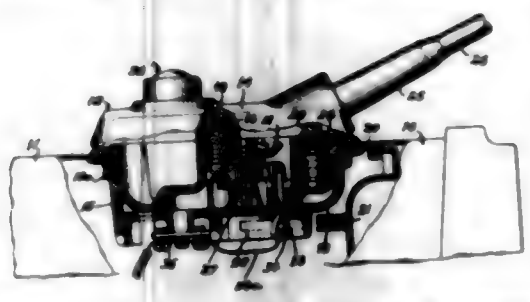
inherent shunted interelectrode capacitance and an inherent feedback signal to said input converting means for converting said alternating-current feedback signal to a direct-current signal opposing said input signal.

2,901,564

ELECTRICAL APPLIANCE HAVING DETACHABLE COMBINED SWITCH AND CONNECTOR BLOCK

Bengt Erik Nilsson, Hagersten, Sweden, assignor to Aktiebolaget Electrolux, Stockholm, Sweden, a corporation of Sweden

Application December 31, 1957, Serial No. 706,316
Claims priority, application Sweden January 10, 1957
4 Claims. (Cl. 200—51)



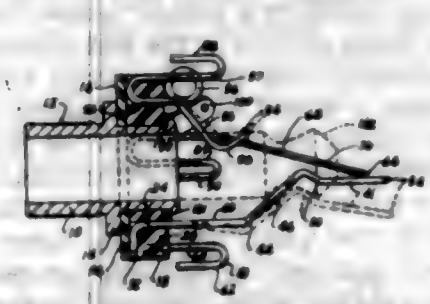
1. An electrically operable household appliance having an electrical circuit including a first pair of metal members accessible from the exterior thereof, a combined switch and electrical connector comprising structure which is formed of insulating material and provides a chamber having a pair of openings and a pair of slots in the wall thereof, a switch in said chamber having an operating member accessible exteriorly of said structure at one of the openings therein, an electrical cord having first and second conductors insulated from one another, one end of said cord being adapted to be connected to a source of electrical supply and the opposite end thereof extending through the other opening into said chamber, a third conductor in said chamber which is connected to said first conductor with said switch connected therebetween, a pair of connecting means in said chamber fixed to the inner wall surface of said structure for respectively connecting thereto the second and third conductors, a second pair of metal members which extend from said connecting means, means for detachably mounting said structure on said appliance, one of said pairs of metal members extending through the slots to effect electrical contact with the other of said pairs of metal members when said structure is detachably mounted on said appliance.

2,901,565

WIRE-FORM CURRENT CONTROL DEVICE

Nicholas Frantz, Chicago, Ill., assignor to Carter Parts Company, Skokie, Ill., a corporation of Illinois

Application April 11, 1957, Serial No. 652,199
11 Claims. (Cl. 200—51.1)



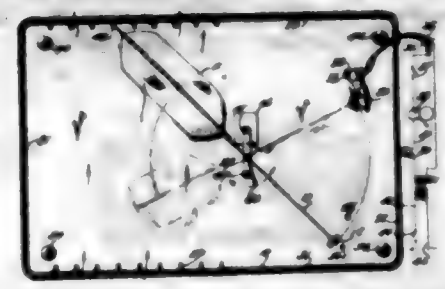
1. In an electrical jack adapted to receive a plug, an insulator body having a central opening and a pair of spaced slots extending lengthwise in the outer wall of said body, said body having adjacent its one end lugs projecting into said slots in opposed lateral directions, a generally U-shaped resilient contact element having its leg portions extending respectively into said spaced slots and its mid-portion projecting axially away from said body and inwardly toward the axis of said opening for engagement by said plug, the terminal ends of said leg portions partially encircling said lugs and being urged laterally thereonto by resilient properties in said contact element, one of said terminal ends projecting outwardly from said body to serve as an electric terminal so that an electric circuit can be closed between said plug and said electric terminal when the plug is inserted through the opening in said body into contact with said mid-portion.

2,901,566

GAS ANTICIPATOR

Lucius K. Clark and Charles Lee King, Grundy Center, Iowa

Application January 18, 1957, Serial No. 635,057
5 Claims. (Cl. 200—61.03)



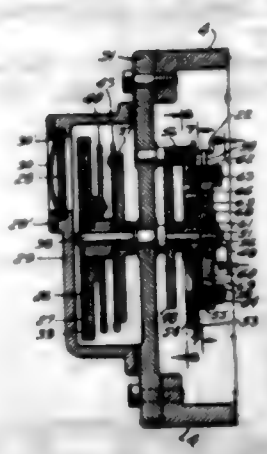
4. A gas anticipator comprising an arm, a container carried by one end of the arm, a magnet mounted on the opposite end of the arm, a pin having pointed ends extended through the arm and providing an axle therefor, bearings in which the pointed ends of the pin are pivotally mounted, a switch positioned to be closed by the magnet upon operation of the arm, a casing having louvers in upper and lower parts thereof, means for mounting the bearings in the casing, means for mounting the switch in the casing and a shaft having a loop thereon and a button on one end rotatably mounted in the casing for resetting the arm.

2,901,567

SWITCH MECHANISM FOR STORAGE TANK LEVEL MEASURING APPARATUS

Harry F. Tapp, Longmeadow, Mass., assignor to Gilbert & Barker Manufacturing Company, West Springfield, Mass., a corporation of Massachusetts

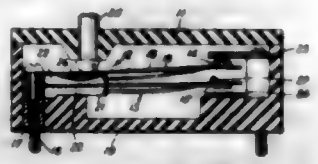
Application April 3, 1957, Serial No. 650,477
2 Claims. (Cl. 200—65)



1. Switch actuating mechanism, comprising a stationary support, a circular series of contacts mounted spaced one from another on said support, a circular track on said support having pairs of indentations therein, the indentations of each pair located one near an end of one contact of the series and the other near the adjacent end of the next succeeding contact of the series, a carrier, a brush mounted on the carrier and movable over said contacts, a detent mounted in the carrier and riding on said track in the path of said detents, a driving disk

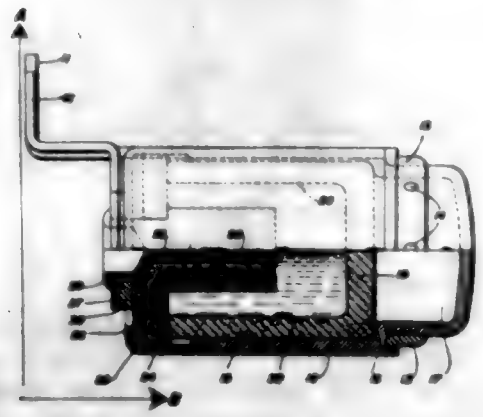
having a recess therein, a pin fixed to the carrier and projecting through said recess, said pin being smaller in diameter than the width of the recess, and a spring wire fixed at its inner end to said disk and engaged at its other end in said pin, said wire being capable of rotating said carrier without flexing itself, whenever the detent rides on the track between the indentations but incapable of moving the carrier to force the detent out of an indentation, the detent being moved out of an indentation by the abutment of one wall of said recess with said pin, whereby the spring, previously stressed by the last-named movement, snaps the brush across the gap between successive contacts.

2,901,568
SNAP-ACTION SWITCH
Justin B. Goff, Indianapolis, Ind.
Application April 26, 1957, Serial No. 655,308
2 Claims. (Cl. 200—67)



1. A snap-action switch comprising, a base, a plurality of stationary contacts attached to said base, first and second movable contacting means each having a tension leaf and a pair of compression leaves, and having one end attached to said base and adaptable for engaging corresponding stationary contacts, a stationary abutting means intermediate said first and second movable contacting means for limiting travel of said first and second movable contacting means, a plunger for actuating said first movable contacting means between one of said stationary contacts and said stationary abutting means, and means on said first movable contacting means for actuating the other said movable contacting means when said first movable contacting means is engaged with said stationary abutting means.

2,901,569
CENTRIFUGAL SWITCH WITH FLUENT CONDUCTOR FOR ROTATING PROJECTILES
Samuel M. Darr, Silver Spring, Md., assignor to the United States of America as represented by the Secretary of the Navy
Application September 19, 1945, Serial No. 617,366
9 Claims. (Cl. 102—70)



4. A centrifugal electric switch, comprising, an exterior casing, a sintered metal cup nested within the casing and cooperating therewith to form a pressure chamber and a sump chamber, and fixed and fluent contact members normally disposed within said pressure chamber.

2,901,570
HYDRAULICALLY ACTUATED ELECTRIC CIRCUIT-BREAKERS
Jean Louis Gratzmuller, Paris, France
Application March 29, 1957, Serial No. 649,327
Claims priority, application France April 4, 1956
2 Claims. (Cl. 200—82)

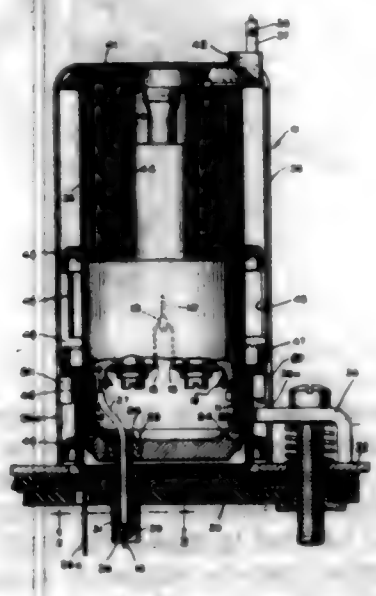
1. In an electric circuit breaker for making and breaking a circuit between a pair of conductor terminals, a tubular insulator extending from one of the terminals to the other of the terminals, with the insulator defining an oil filled chamber, a fixed contact located at the upper end of the chamber and operatively connected to one of the terminals, an electric conducting bell-shaped element defined by an end portion, a tubular sleeve portion and a flange portion with the end portion and sleeve portion being located within the lower portion of the chamber, and the other terminal being connected to the flange portion, a second fixed contact carried by said end portion, the said tubular sleeve portion and second fixed contact having an over-all length such as to extend within the chamber to a point substantially midway of the conductor terminals, a movable conductor rod passing through an aperture formed in said end portion and making a sliding contact with said second contact member, the upper end of the rod serving to engage the first-named contact to close the circuit through approximately one-half the length of the chamber, actuator means connected to the lower end of the rod to move the rod longitudinally between circuit making and circuit breaking positions, the actuator means including a second tubular insulator connected to the flange portion of the bell-shaped element in co-axial relationship with the first-named tubular insulator and forming a second oil filled chamber, a grounded base member closing the lower end of the second tubular member, a single-acting cylinder-piston means of electric conducting material positioned partly within the bell-shaped element and partly within the upper end of the second named chamber, the movable component of the cylinder-piston means being connected to the lower end of the rod, compression spring means surrounding the movable part, with one end thereof bearing against the bell-shaped element and the other end bearing against abutment means on the movable part to urge the movable part and the rod to circuit breaking position, and a feed and exhaust pipe of insulating material located within the second chamber serving to establish communication between the base member and the movable part of the cylinder-piston means, the length of the pipe being sub-

2,901,574

moving said element in the other of said second opposite

stantially equal to the distance between the fixed contacts whereby oil under pressure conducted through the base member and the pipe to the movable part will cause the movable part to move the rod against the action of the spring means into circuit making position.

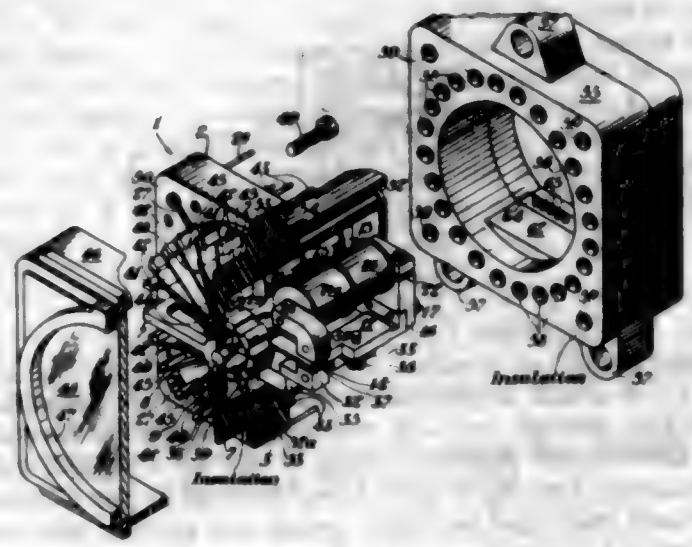
2,901,571
SYNCHRONOUS INVERTER
John L. Russell, Waterbury, Conn., assignor to The Bristol Company, Waterbury, Conn., a corporation of Connecticut
Application May 22, 1958, Serial No. 737,037
12 Claims. (Cl. 200—90)



1. A synchronous inverter, comprising an electrically conductive non-magnetic gas-tight envelope, an elongated armature member within said envelope and mounted for limited displacement, a plurality of contacts within said envelope one of which being movable with said armature member, magnetomotive means for cyclically displacing said armature member and including a winding, an insulative support carrying said winding and supporting the same with said winding encircling a portion of said envelope in which said armature extends, a plurality of wire conductors, one for each of said contacts and connected thereto, a plurality of metallic tubular members vitreously sealed through said envelope in mutually insulated relation, a portion of each of said tubular members extending externally of said envelope, a plurality of tubular metallic terminal members one on and encircling each of said tubular members, each of said wire conductors extending through one of said tubular members, means sealing each of said tubular members and maintaining each of said wire conductors conductively connected with a respective one of said terminal members, each of said wire conductors and the terminal member connected thereto being formed of thermoelectrically equivalent metal, a magnetic circuit member enclosing said envelope, and insulative means engirdling said envelope and spacing the same from said magnetic circuit member.

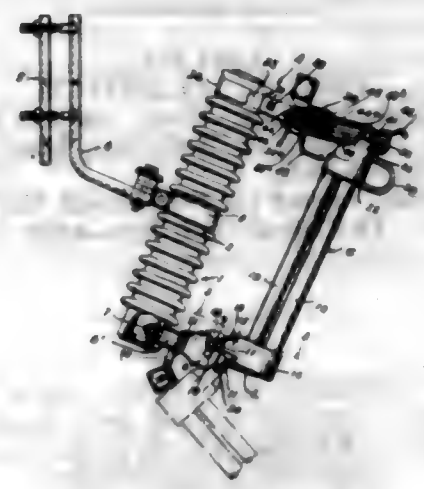
2,901,572
ELECTRICAL RELAYS
William A. Robison, Jr., Pittsburgh, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Application January 22, 1954, Serial No. 405,566
23 Claims. (Cl. 200—93)

1. In an electrical relay, the combination comprising two independent substantially closed magnetizable loops, said loops being positioned in parallel planes substantially equidistant at all points from one another, each of said loops being formed with an air gap; means for each of said magnetizable loops for at times magnetizing said loops, a pivoted armature of magnetizable material extending into the air gaps provided in each of said magnetizable loops and rotatable between two extreme positions, and a source of polarizing flux mag-



netically interconnecting both of said loops, said polarizing flux and the flux due to said magnetizing means having in part a common path, the polarizing flux in each of said loops being of opposite polarities.

2,901,573
FUSE CUTOUTS
Robert A. Gesellschap, Florissant, Mo., assignor to James R. Kearney Corporation, St. Louis, Mo., a corporation of Missouri
Application May 18, 1956, Serial No. 585,897
4 Claims. (Cl. 200—114)

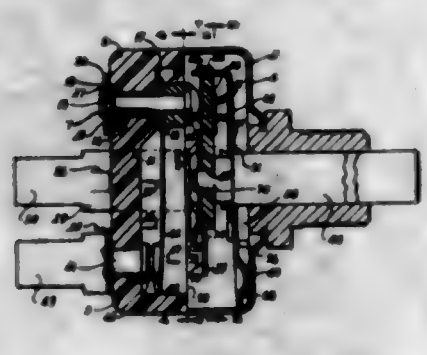


1. In an electrical cutout of the character having a fuse cartridge arranged to discharge downwardly the gases generated as a consequence of rupture of the fuse link within the cartridge, said cartridge having a hinge for engagement with a lower fixed terminal at the bottom and being resiliently latched at the top to an upper fixed terminal but free to swing downwardly outwardly about its hinge when unlatched, the improvement comprising, the upper fixed terminal having a movable contact member, and a contact finger resiliently mounted for movement with respect to said movable contact member and adapted to engage the side of said cartridge upon upward movement of said movable contact member so as to propel said cartridge outwardly about its hinge, said cartridge being so latched at its top as to normally remain in a position where the upper end thereof is spaced from said contact finger.

a sump chamber, and fixed and fluent contact members normally disposed within said pressure chamber.

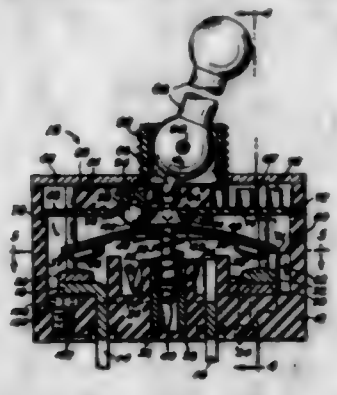
between the base member and the movable part of the cylinder-piston means, the length of the pipe being sub-

2,901,574
SWITCH
Andrew F. Raab, Chicago, Ill., assignor to Carter Parts Company, Skokie, Ill., a corporation of Illinois
Application September 27, 1956, Serial No. 612,529
5 Claims. (Cl. 200—114)



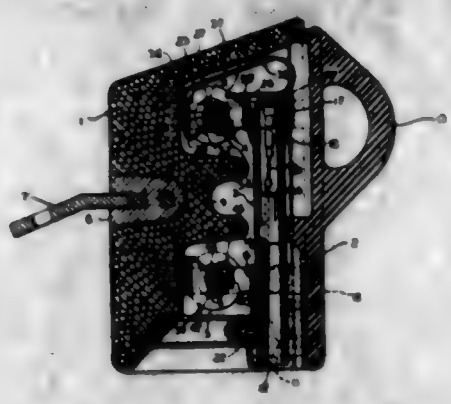
1. A switch comprising a housing, a rotary shaft extending through one wall into the interior of the housing, a drive-detent member having a slot of U-shaped configuration forming a central wall portion fixedly attached to said shaft and an outer spring arm portion with two parallel leg portions and an interconnecting web portion, said web portion being urged into engagement with said one wall of the housing, cooperating detents in said housing and said web portion releasably holding said shaft in selected rotated positions, said shaft carrying on its inner end a dielectric member, said drive-detent member having an ear extending through the dielectric member to retain the latter in fixed position on said shaft, a contact plate carried by the dielectric member, and spaced contact elements carried by the housing in the path of movement of said contact plate so that rotary movement of the shaft is effective to put different contact elements into engagement with said contact plate and said spring arm portion is effective to bias the contact plate into electrical engagement with the contact elements.

2,901,575
ELECTRICAL SWITCH
David E. Clarke, Norton, Mass., assignor to Texas Instruments Incorporated, Attleboro, Mass., a corporation of Massachusetts
Application August 16, 1957, Serial No. 678,512
15 Claims. (Cl. 200—122)



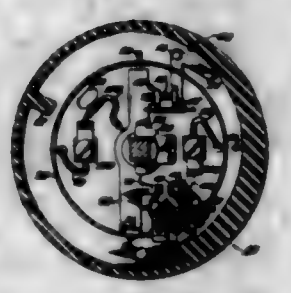
1. In combination; a casing, an inwardly extending ledge carried by said casing, a first electrical contact carried by said casing, an inherently snap-acting thermostatic element carrying a second contact, means mounting said element for movement of the latter in first opposite directions between a contacts-open position and a contacts-closed position, said means permitting movement of said element in second opposite directions laterally relative to said first opposite directions when said element is in said contacts-open position, and means for exerting a force against said element for first moving the latter in one of said second opposite directions and toward said contacts-closed position to bring a portion of said element into overlapping engagement with said ledge and for then moving said element in the other of said second opposite directions and to contacts-closed position whereby said portion of the element snaps off said ledge and said first contact snaps into engagement with said second contact.

2,901,576
CONTACT CLIP FOR FUSE CUTOUT
George R. McCloud, Cudahy, Wis., assignor to McGraw-Edison Company, a corporation of Delaware
Application December 28, 1956, Serial No. 629,650
7 Claims. (Cl. 200—133)



1. A housed type of fuse cutout construction, comprising an insulating housing having a fuse entrance and a transversely extending lead-in opening, and a contact positioned within the housing in alignment with said fuse entrance and adapted to engage the fuse tube and having a laterally extending arm adapted to extend into the lead-in opening with the clip and housing assembled to support the clip, said housing and said contact having a cooperating projection and slot adapted to support the contact within the housing with the clip and housing assembled.

2,901,577
COVER OPERATED THERMOSTAT
Ralph E. Drummond, Bell, and John W. Wright, Long Beach, Calif., assignors to Robertshaw-Fulton Controls Company, Richmond, Va., a corporation of Delaware
Application March 20, 1958, Serial No. 722,810
4 Claims. (Cl. 200—138)



1. A thermostatic control device comprising a base member, first contact means carried by said base member, temperature setting means movably mounted on said base member and including a substantially circular cover member spaced from said base member for ambient air flow between said cover member and said base member, a bimetallic element secured to said temperature setting means and being disposed adjacent the space between said base member and said cover member, and second contact means carried by said bimetallic element and movable therewith relative to said first contact means in response to movement of said temperature setting means and in response to temperature variations of the air, said bimetallic element having a substantially circular configuration to provide a maximum area exposed to the air flowing between said base member and said cover member.

an extension adjacent one end thereof provided with an- ther including induction heating means surrounding said

each of said loops being formed with an air gap; means said contact finger.

2,901,578
DUAL SWITCH ACTUATING DEVICE

Thomas E. Noakes, Detroit, Mich., assignor to American Radiator & Standard Sanitary Corporation, New York, N.Y., a corporation of Delaware

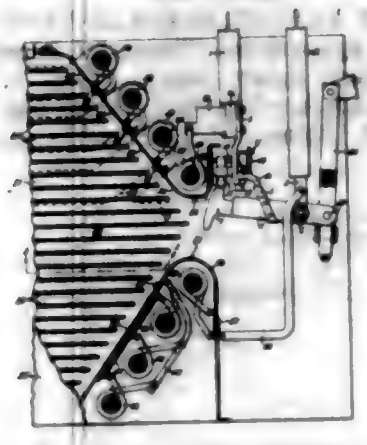
Application November 14, 1957, Serial No. 696,380
15 Claims. (Cl. 200—140)

4. A dual switch mechanism comprising a casing; first and second arms therein; means mounting said arms for pivotal movements; first and second switches carried by respective ones of said arms; first and second trigger means for actuating respective ones of said switches; concentrically disposed manually operable adjusting means carried by the casing for limiting angular movement of the arms to control operation of the switches; said adjusting means comprising a sleeve engaged with the first arm and threaded in the casing, and an abutment mechanism engaged with the second arm and threaded in the sleeve; and a switch-operating lever movable angularly in opposite directions to actuate said first and second trigger means.

2,901,579
ELECTRIC CIRCUIT BREAKER

Amos W. Simpson, Jr., Springfield, Pa., assignor to General Electric Company, a corporation of New York

Application September 12, 1957, Serial No. 683,613
9 Claims. (Cl. 200—147)

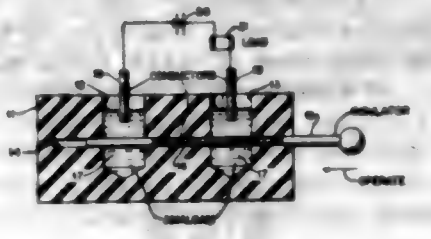


1. An electric circuit breaker comprising an arc chute into which a circuit-interrupting arc is adapted to be driven for the purpose of extinguishing the arc, said arc chute comprising a pair of side walls extending generally perpendicular to the path of the arc and a pair of conductive arc runners spaced apart within said chute and extending transversely with respect to said arc path, means including separable contacts for establishing said arc in such a manner that a first terminal of the arc transfers to a first one of said arc runners after a relatively small contact separation and a second terminal of said arc transfers to a second one of said arc runners after a larger contact separation, means for accelerating the motion of said arc into the interior of said chute comprising a first group of magnetic blowout coils located along said first runner and a second group of magnetic blowout coils located along said second runner, means effective when said first terminal is transferred to said first runner for connecting said first group of blowout coils in circuit with said arc in such a manner as to drive the first terminal of said arc into the interior of said chute at a predetermined first speed, and means effective when said second terminal is transferred to said second runner for connecting said second group of blowout coils in circuit with said arc in such a manner as to drive said second arc terminal into the interior of said chute at a speed which substantially exceeds said first speed.

2,901,580
ELECTRICAL CONTACT DEVICE

Martin J. Kelly, Endicott, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application December 28, 1954, Serial No. 477,980
4 Claims. (Cl. 200—152)

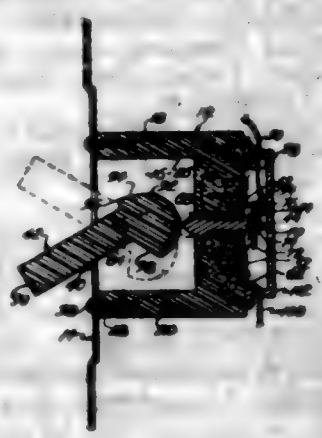


2. An electrical circuit making device comprising, in combination, a base body having a pair of open ended reservoirs, an electrically conductive ternary amalgam of mercury with palladium and silver which is fluid at room temperatures partially filling each of said reservoirs and serving as one element of the electrical contact means, an aligned opening into and through said pair of reservoirs at one side of the base body, a plunger in said opening and movable therein, said plunger being of insulating material having a conductive band material located in the central part thereof comprising metallic rhodium capable of forming a non-amalgamating wetting bond with said fluid amalgam and where movement of the plunger is such as to effect engagement of the conductive band material with the conductive fluids in both reservoirs for establishing an electrical connection between said reservoirs.

2,901,581
WALL SWITCH ASSEMBLY

Andrew Craig Russell, Shawnee, Okla.

Application July 9, 1956, Serial No. 596,596
3 Claims. (Cl. 200—153)



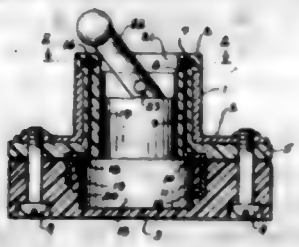
1. In a noiseless wall switch assembly, in combination, a hollow main housing adapted for disposition on a supporting wall; an elongated, manually manipulable actuating member having a spherical intermediate portion and

of said spool, said trackways having bearing sockets ducting relation with said bowl to control said heating

into overlapping engagement with said ledge and for then member.

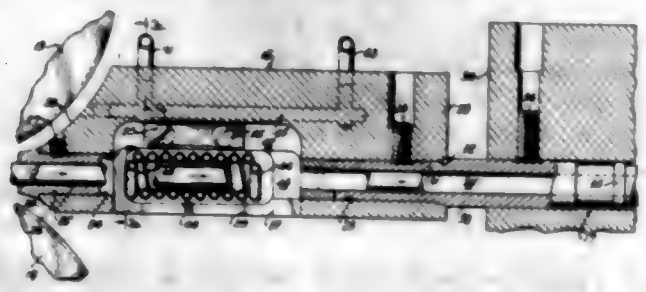
an extension adjacent one end thereof provided with an arcuate cam surface; means for swingably mounting the member on the housing with the extension disposed within the same; electrical switching mechanism carried by the housing, said mechanism including a pair of relatively shiftable contact elements provided with flat interengageable faces, reciprocable structure operably coupled to one of the elements and spring means carried by the housing and engaging the structure for biasing the latter in a direction normally moving said one element into contacting relationship with the other element, said structure being engageable with said arcuate cam surface upon swinging of the member to thereby reciprocate the structure, said one element being disposed to shift smoothly and substantially inaudibly into and out of engagement with the other element upon reciprocation of the structure as said other end thereof slides smoothly on said cam surface; and means for making an electrical connection to each of the elements respectively.

2,901,582
ELECTRIC SWITCH WITH ELECTRO LUMINESCENT SIGNAL
Robert Valverde, New York, N.Y.
Application December 17, 1957, Serial No. 703,385
8 Claims. (Cl. 200—167)



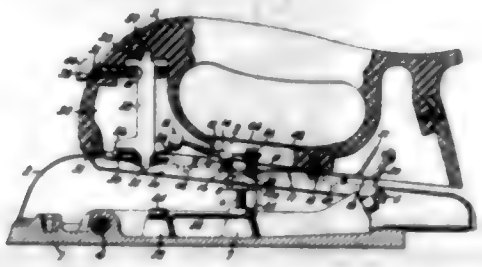
7. An electric switch including a housing having a transparent portion, an electroluminescent element imbedded in said transparent portion, conductors extending from the electroluminescent element through the transparent portion and to the surface of said transparent portion, and other conductors of the switch contacting with the conductors which come to the surface of the transparent portion of the housing for connecting the electroluminescent element in the circuit of the switch, contacts in the switch, one of which is movable toward and from the other to close and open the switch, at least one of the conductors from the electroluminescent element being in series with the switch contacts whereby operation of the switch opens and closes the electric circuit of the electroluminescent element.

2,901,583
FORGING APPARATUS AND STOCK WARMING MEANS THEREFOR
Paul W. Klooz, West Hartford, Conn., assignor to The Holo-Krome Screw Corporation, Hartford, Conn., a corporation of Connecticut
Application August 17, 1956, Serial No. 604,758
9 Claims. (Cl. 219—10.49)



8. In apparatus for warming wire and rod stock having spaced stock feeding and cutoff means, said apparatus further including induction heating means surrounding said stock between the feeding and cutoff means, a shield of energy absorbing material about said heating means and including cooling means restricting radiation of heat from said shield to said stock, and second shielding means of low heat conductivity material between the first said shield and said cutoff means, said shielding means minimizing air circulation about said stock and heating means and reciprocal temperature influences of said apparatus and stock one on the other.

2,901,584
THERMOSTATICALLY CONTROLLED FLATIRON
Frank E. Finlayson, Ontario, Calif., assignor to General Electric Company, a corporation of New York
Application October 27, 1954, Serial No. 464,960
9 Claims. (Cl. 219—25)



1. An electric flatiron comprising a soleplate, a cover, a handle composed of electrically-insulating material, a leaf spring having one end mounted directly on the underside of said handle, an insulator mounted on the free end of said leaf spring, an arm carried by said leaf spring, a movable contact carried by said arm, a fixed contact mounted directly on said handle and adapted to be engaged by said movable contact, said leaf spring and said fixed contact being electrically isolated by the insulating material of said handle, an adjusting means engaging said insulator for varying the temperature setting of the flatiron, and a temperature-responsive element mounted on said soleplate and engaging said arm to effect movement of said movable contact into and out of engagement with said fixed contact.

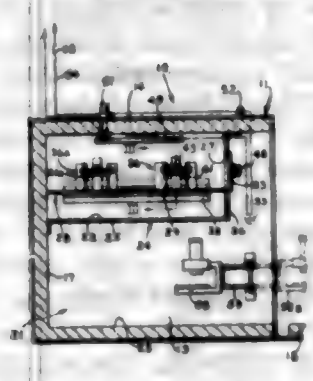
2,901,585
GUN TYPE ELECTRIC SOLDERING IRON
Ernest Baccari and Thomas J. Manse, Sault Sainte Marie, Mich.
Application October 24, 1955, Serial No. 542,283
6 Claims. (Cl. 219—27)

1. In an electric soldering gun, the combination of a casing structure having a chamber therein, and an opening at the rear of said chamber leading into said chamber, an electric resistant type heating unit carried by the casing including a solder melting tip, guide means for directing a solder strip into melting proximity to said tip, clutch means upon the casing for engaging the solder strip, trigger means mounted upon the casing for effecting operation of the clutching means to grip and move the strip into feeding relation with the heating tip, a spool of strip solder material having hub extensions at the outer sides thereof, elongated trackways carried by the casing adjacent to said opening for slidably and removably receiving the hubs

or to rotate in either direction, and a variable resistance ing the skin sheet to the crests of a curved core sheet

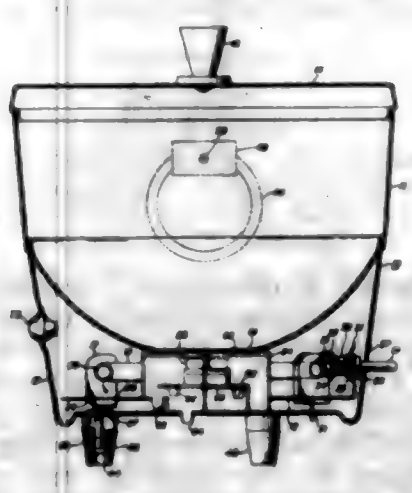
of said spool, said trackways having bearing sockets spaced from said opening for rotatably supporting said spool when in its feeding position against lengthwise movement along the trackways, said opening to said chamber being sufficient to permit easy entrance and access of the spool with respect to said chamber and the trackways.

2,901,586
EVAPORATION APPARATUS
Russell D. Kranik, Kalamazoo Township, Kalamazoo County, Mich.
Application December 2, 1957, Serial No. 700,103
2 Claims. (Cl. 219—35)



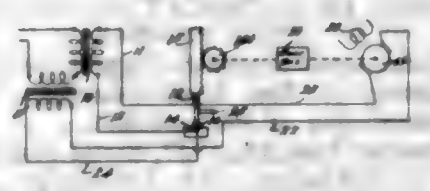
1. Apparatus for evaporating liquid specimens, comprising: heat insulating means defining an oven having a door on one end thereof; partition means defining a compartment in the upper part of said oven, said partition means having an opening facing said door; a specimen tray and guide means within said compartment slidably engaging and supporting said tray for movement through said opening into said compartment, said tray having an upstanding wall at its outer end for closing said opening; electrical heating means in the upper end of said compartment; slide supporting means on said tray including a flat member substantially parallel with and spaced upwardly from said tray, said member having a plurality of spaced specimen indicia on the upper surface thereof and means for releasably holding a said slide on said member; a thermostat, a switch and conductor means connecting same in series with said electrical heating means.

2,901,587
UTILITY APPLIANCE COOKER
Zina A. M. Burreson, Mansfield, Ohio, assignor to Dominion Electric Corporation
Application April 14, 1958, Serial No. 728,193
8 Claims. (Cl. 219—44)



1. An electric corn popper receiving a current to operate same and comprising in combination, a bowl having a center bottom portion, an element plate having mounted thereon a heating element, a housing member containing therein a snap-action thermostat in heat conducting relation with said bowl to control said heating element, an enclosure pan to enclose therein said element plate and said housing member, said housing member having a mounting portion secured to said center bottom portion of said bowl, said housing member having attached to said mounting portion a first set of substantially similar walls oppositely disposed to one another and a second set of substantially similar walls oppositely disposed to one another, each of said walls having a tab-edge portion, said tab-edge portion of said first set of walls having a plurality of first twist tabs attached thereon, said tab-edge portion of said second set of walls having a plurality of second and third twist tabs attached thereon, said first, second and third twist tabs at different elevations with respect to each other, a metal strip having slits at each end thereof, said first twist tabs engaging said slits of said metal strip to hold said metal strip in place, said metal strip engaging said snap-action thermostat to hold same in said housing member and in heat conducting relation to said bowl, said element plate having a plurality of slits therein to receive said second twist tabs to attach said element plate to said housing member, said heating element and said snap-action thermostat connected in series to form a circuit path, said thermostat designed to open at a predetermined temperature reached in said bowl to limit current flow through said heating element, said enclosure pan having a plurality of slits to receive said third twist tabs of said housing member to fasten said enclosure pan to said bowl and enclose said element plate and said housing member therein.

2,901,588
METHOD AND APPARATUS FOR AUTOMATIC ELECTRIC DISCHARGE MACHINING
Ian C. McKechnie, Detroit, Mich., assignor to Elox Corporation of Michigan, Royal Oak, Mich., a corporation of Michigan
Original application April 17, 1956, Serial No. 578,696. Divided and this application June 11, 1958, Serial No. 741,418
6 Claims. (Cl. 219—69)



1. An electric discharge machining apparatus comprising a source of A.C. E.M.F., a transformer connected to said source of E.M.F., a first rectifier connected to said transformer secondary to polarize the current, an electrode cutter connected to the negative lead from said first rectifier, an electrode workpiece connected to the positive lead from said first rectifier; said cutter being positioned adjacent the workpiece to form a discharge gap, a rack supporting said cutter, a gear engaging said rack, a two-direction servomotor armature connected to said gear so that rotation of said armature in one direction advances said cutter toward the workpiece and rotation of said armature in the opposite direction retracts said cutter from the workpiece; a second transformer interposed in the E.M.F. lead to said first transformer so as to be responsive to the current flowing to said first transformer, a second rectifier connected to said second transformer secondary, a lead connecting the positive sides of said rectifiers in bucking relationship, a negative lead from said cutter to one side of said armature, a negative lead from said second rectifier to the other side of said armature; said negative leads at said armature bucking through said armature of said servomotor so that said armature is rotationally sensitive to balance or unbalance of voltage and current in the leads connected thereto to stand still

spaced stock feeding and cutoff means, said apparatus fur-

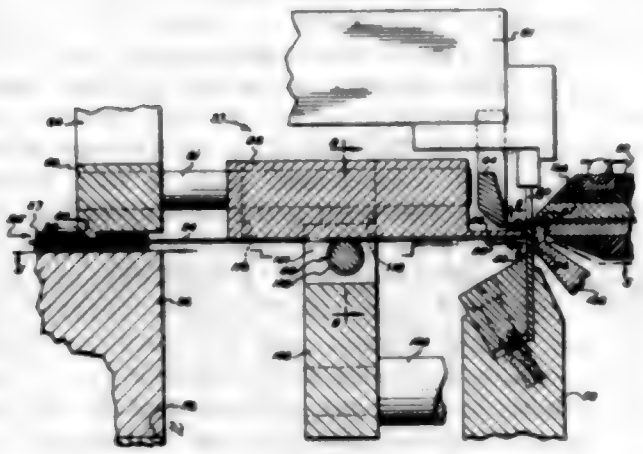
or to rotate in either direction, and a variable resistance element disposed between said opposed positive leads and said opposed negative leads for controlling the spaced relationships of said electrodes.

2,901,589

APPARATUS FOR SPREADING WIRES OF WIRE SPRING RELAY COMPONENTS AND WELDING CONTACTS THERETO

Rudolph Spillar, Cicero, Ill., assignor to Western Electric Company, Incorporated, New York, N.Y., a corporation of New York

Application July 17, 1957, Serial No. 672,464
8 Claims. (Cl. 219—78)



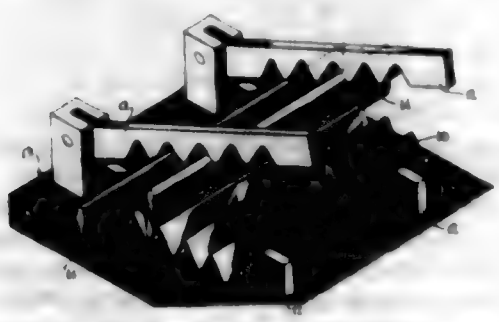
1. In an apparatus having a plurality of laterally spaced electrodes for welding elements onto closely positioned resilient parts of an article, means for supporting the article in a welding position relative to the electrodes, and means for spreading the parts laterally into a predetermined spaced relation to each other in alignment with said electrodes.

2,901,590

METHOD OF FABRICATING SANDWICH TYPE PANELS

Michael Watter and Walter S. Eggert, Jr., Philadelphia, Pa., assignors to The Budd Company, Philadelphia, Pa., a corporation of Pennsylvania

Application June 19, 1957, Serial No. 667,064
2 Claims. (Cl. 219—117)



1. The method of fabricating a curved sandwich panel which includes mating corrugated core sheets and a smooth covering skin sheet on at least one side, which comprises, assembling two mating corrugated core sheets together with continuous solid conductor bar mandrels disposed between each pair of opposed spaced crests of the corrugations, resistance welding the core sheets together in the contacting valleys between crests and mandrels, keeping the mandrels in position and bending the composite core and mandrels together to a predetermined curved shape, placing a preshaped skin sheet on one side of the curved core and mandrel assembly, resistance welding the skin sheet to the crests of a curved core sheet with welding current passing through said mandrels, and thereafter removing the bent mandrels from the assembly.

2,901,591

WELDING OF TWO PIECES, IN PARTICULAR IN THE PRODUCTION OF GAS CYLINDERS, AND VESSELS THUS OBTAINED

Pierre Tesson, Paris, France, assignor to Pecquet, Tesson & Cie, Crouy (Aisne), France, a French company

No Drawing. Application December 16, 1955
Serial No. 553,404
Claims priority, application France December 20, 1954
3 Claims. (Cl. 219—137)

1. In a process of manufacture of substantially closed steel vessels of the class of gas cylinders, comprising butt-welding together by a deep penetration welding method the open ends of two tubular vessel sections, each provided with a bottom, the inside of the welded vessel thus provided communicating with the atmosphere only through a hole in the vessel wall and the diameter of said hole being much shorter than the length of the weld, and a weld backing strip having a length substantially equal to that of the weld being applied within the vessel along said open ends to be welded together, using as such weld backing strip a strip of a material not weldable to the vessel metal and having a melting point much lower than that of the latter but high enough to resist the welding heat, simultaneously melting said strip and annealing said welded vessel after the welding operation, the material of said strip being therefor so chosen as to have a melting point lower than the annealing temperature of said steel vessel, and pouring out through said hole the molten material of said strip upon said annealing operation terminated while said material is still in a liquid state.

2,901,592

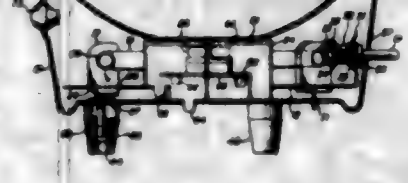
METHOD FOR FABRICATING VESSELS

David B. Rossheim, Keyport, N.J., assignor to The M. W. Kellogg Company, Jersey City, N.J., a corporation of Delaware

Application March 29, 1956, Serial No. 574,706
7 Claims. (Cl. 219—137)

1. The method of fabricating a pressure vessel having an impervious transverse member united to the longitudinal walls thereof and separating the internal space thereof into a plurality of independent pressure sections which comprises, providing a transition piece of generally Y shaped section and having extending therefrom a first leg adapted to abut upon the wall of said vessel at one side of said transverse member, a second leg adapted to abut upon the wall of said vessel on the other side of said transverse member and a third leg located inwardly of one of said first and second legs and providing a crotch formation therewith, said third leg adapted to abut upon said transverse member, forming

tational displacement thereon; cable drive means wrapped lectively energizing the transmitter thereof; an arrange-

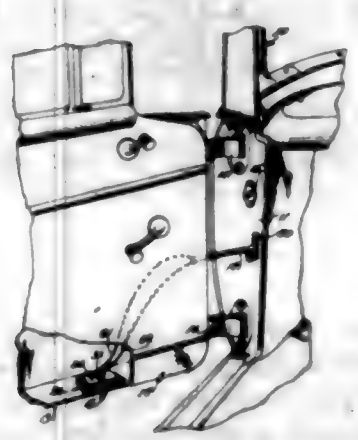


1. An electric corn popper receiving a current to operate same and comprising in combination, a bowl having a center bottom portion, an element plate having mounted thereon a heating element, a housing member containing therein a snap-action thermostat in heat con-

the E.M.F. lead to said first transformer so as to be responsive to the current flowing to said first transformer, a second rectifier connected to said second transformer secondary, a lead connecting the positive sides of said rectifiers in bucking relationship, a negative lead from said cutter to one side of said armature, a negative lead from said second rectifier to the other side of said armature; said negative leads at said armature bucking through said armature of said servomotor so that said armature is rotationally sensitive to balance or unbalance of voltage and current in the leads connected thereto to stand still

said crotch formation free of defects, stress concentrators and stress raisers and of a size to permit insertion therein of sensitized film for X-ray examination, abutting said third leg upon said transverse member and uniting said third leg and transverse member into an integral structure by welding from both sides thereof, abutting said one leg upon said wall and uniting said one leg and said wall into an integral structure by welding from the side thereof external of said crotch, and abutting the other of said first and second legs upon said wall and uniting said other leg and said wall into a unitary structure by welding from both sides thereof.

2,901,593
VEHICLE LIGHT
Harold E. McNally, Fort Lauderdale, Fla., assignor of one-half to Cecil H. Nelson, Fort Lauderdale, Fla.
Application January 14, 1958, Serial No. 708,940
2 Claims. (Cl. 240—7.1)



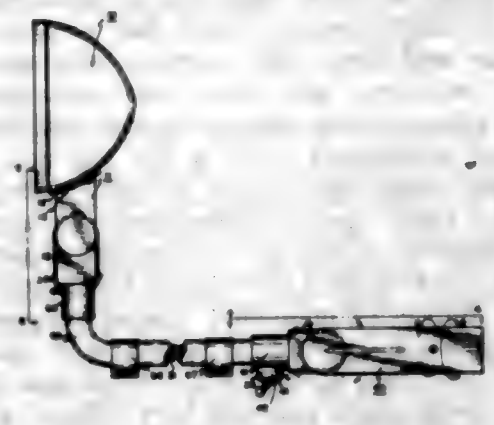
2. In a vehicle, a body including a door frame, a door hingedly connected to said frame, a switch carried by the frame for selective engagement by the door, a hollow tube hingedly connected to said frame, conductor wires extending through said tube and connected to said switch, a support portion extending upwardly from the bottom of the door and said support portion terminating in a horizontally disposed flange, there being threaded sockets in said flange, a casing, a socket member supported by said casing, a light bulb in said socket member, said socket member being electrically connected to said wires, said casing further including a flaring portion terminating in a horizontally disposed lip arranged contiguous to the lower surface of said flange, a first bracket arranged below said lip, a cover member arranged below said bracket, a second bracket arranged below said cover member, and securing elements for said brackets, cover member and lip engaging the threaded sockets in said flange.

2,901,594
LUMINAIRE
John P. Foulds, Hendersonville, N.C., assignor to General Electric Company, a corporation of New York
Application November 13, 1957, Serial No. 696,193
8 Claims. (Cl. 240—25)

1. A luminaire comprising: a reflector mounted to face away from a fixed vertical plane and having upper and lower trough-like portions, each of which has a concave reflecting surface of parabolic cross-section, said upper and lower portions of said reflector having a common axial plane and said upper portion having a shorter focal length than that of said lower portion, the focal lines of said parabolic portions being parallel with the focal line of said upper portion located closer to said vertical plane than the focal line of said lower portion; and means for supporting a pair of laterally spaced rectilinear light sources with each of said sources lengthwise of one of said focal lines of said upper and lower reflector portions and with the major portions of said light sources located between planes including said

focal lines and extending at right angles to said common axial plane.

2,901,595
UNIVERSAL SPOTLIGHT MECHANISM
Kenneth F. Sheeted, Murray, Utah
Application October 9, 1958, Serial No. 766,256
6 Claims. (Cl. 240—61.13)



1. A universal spotlight mechanism having a twistable, manual control pivotal in a space-plane parallel to the orientation of said mechanism and requiring a minimal displacement for maximum effect, said mechanism including, in combination: a spotlight; mounting means affixed to said spotlight and including a pair of depending ears and a first, cable cylinder disposed between and securely affixed to said ears; a first clevis connector having a pair of ears provided with aligned apertures, said first cable cylinder being journaled therewithin for pivotal cooperation with said first clevis connector, said clevis connector also being provided with a base bore, a bearing surface disposed therearound, and a fixed sleeve concentric with said base bore and surrounding said bearing surface; a twistable, pivotal, manual control having forwardly extending ears and a second, cable cylinder disposed between and securely affixed to said ears; a second clevis connector having a pair of ears provided with aligned apertures, said second cable cylinder being journaled therewithin for pivotal cooperation with said second clevis connector, said second clevis connector also being provided with a base bore, a bearing surface disposed therearound, and a fixed sleeve concentric with said base bore and surrounding said bearing surface; a flexible, elongate, inner conduit member having end collars respectively affixed within the said base bores of said first and second clevis connectors; an elongate, outer conduit member disposed within said clevis connector sleeves and encompassing said flexible inner conduit member, the bearing surfaces of said clevis connectors abutting the ends of said outer conduit member for ro-

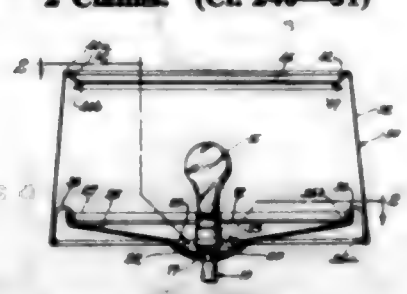
erator circuit connected between the grid and cathode of

nections devoid of concentrated impedance and devoid

of the curved core and mandrel assembly, resistance weld-

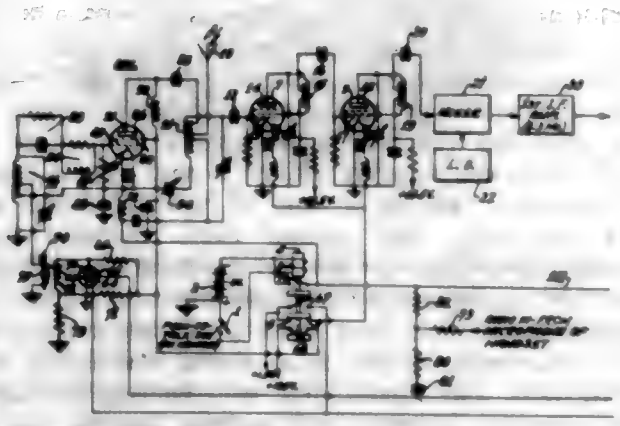
tational displacement thereon; cable drive means wrapped around said cable cylinders and extending therebetween; a light switch disposed in proximity with said manual control; means for electrically intercoupling said spotlight with said light switch; and clamp means for fixedly attaching said outer, conduit member to a vehicle.

2,901,596
LAMP
Joseph L. Bell, Chicago, and Richard Meinke, Riverside, Ill., assignors to Sears, Roebuck and Co., Chicago, Ill., a corporation of New York
Application November 1, 1956, Serial No. 619,868
2 Claims. (Cl. 240—81)

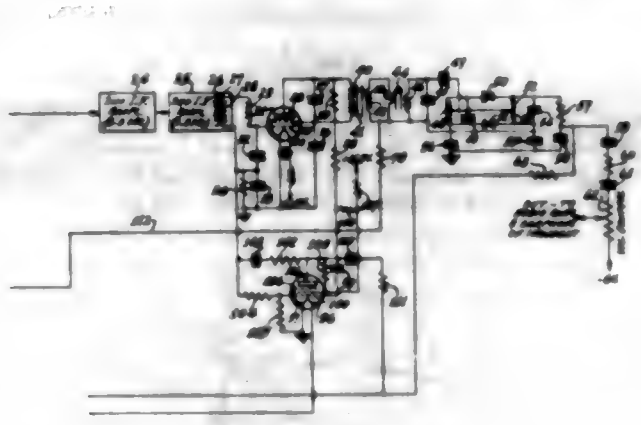


1. An electric lamp comprising a vertical standard terminating in an electrical socket at the upper end thereof, a supporting member for a lamp shade assembly affixed to the upper part of said standard below said socket, said lamp shade assembly including a light-transmitting plate with a central opening larger than said socket but smaller than said supporting member with means for detachably mounting said plate onto said supporting member, a tubular lamp shade of translucent sheet material having reinforcing rims at the top and bottom edges thereof, supporting means affixed to the bottom rim having a small inward displacement for support by the outer periphery of said plate, supporting means affixed to the upper rim extending inwardly of said tubular shade, and a light diffuser of open-mesh material supported by said last-mentioned supporting means, said open-mesh material of said light diffuser and the passages between the tubular lamp shade and said light diffuser and light transmitting plate resulting in adequate ventilating effects consonant with optimum light-diffusing effects.

2,901,597
TRANSMITTER FREQUENCY CONTROL
Craig L. Whitman, Moorestown, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Army
Application July 19, 1955, Serial No. 523,015
5 Claims. (Cl. 250—13)

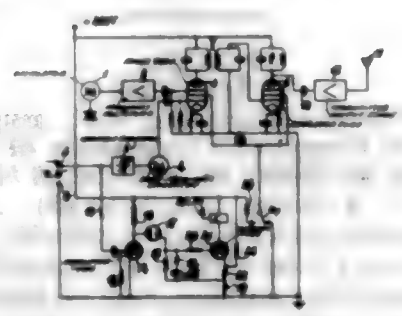


1. In a two-way radio apparatus including a transmitter and a receiver, said apparatus having means for selectively energizing the transmitter thereof: an arrangement for controlling and stabilizing the frequency of the oscillator of said transmitter comprising means responsive to the output frequency of said oscillator for developing a control voltage in response to variations of said output frequency from a predetermined value, voltage-responsive means for controlling the frequency of said oscillator, means for applying said developed control voltage to said last-mentioned means, the combination of said output frequency responsive means, said voltage-



responsive means and said applying means providing a relatively narrow oscillator lock-in frequency range, circuit means energized with the energization of said transmitter for developing a repetitive low frequency voltage wave, said last-mentioned means including as a part thereof one of the amplifiers in the signal-amplifying path of said receiver; and means for applying said low frequency wave to said voltage-responsive means to vary the frequency of said oscillator over a frequency range greater than said lock-in range.

2,901,598
RADIO-TRANSMITTER FOR FREQUENCY-SHIFT TELEGRAPHY MADE OPERATIVE IN RESPONSE TO MODULATION
Louis Raymond Bourgonjon, Hilversum, Netherlands, and Johannes van Sandwijk, Montreal, Quebec, Canada, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application May 5, 1954, Serial No. 427,781
Claims priority, application Netherlands May 18, 1953
1 Claim. (Cl. 250—17)



A radio transmitter for frequency-shift telegraphy, comprising a transmitter stage, a source of telegraph signals connected as an input signal to said transmitter stage, and a switching device connected to normally block said transmitter stage, said switching device comprising a grid-controlled switch tube having a cathode and having an output electrode connected to control the blocking of said transmitter stage, means for biasing said tube to normally block said transmitter stage, a switch-voltage gen-

cluding an amplitude modulation pulse detector con- having an *i*th outlet and a *f*'th generator having an *f*'th

lengthwise of one of said focal lines of said upper and abutting the ends of said outer conduit member for ro-

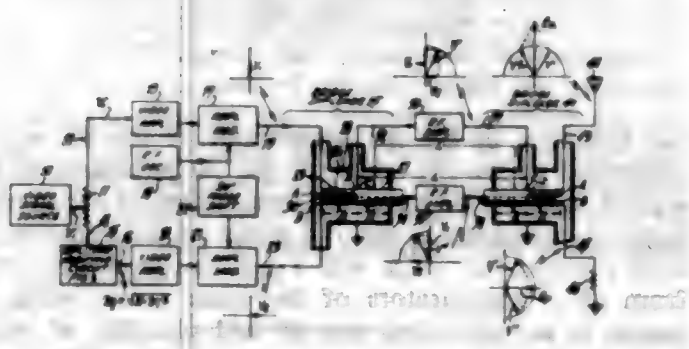
erator circuit connected between the grid and cathode of said switch tube and comprising an input resistor for said grid and a series combination of a series resistor and a capacitor, said series combination being connected in parallel with said input resistor, and means including a biased diode connected to feed said telegraph signals to said switch-voltage generator whereby said capacitor becomes charged by said signals thereby to bias said tube so as to render said transmitter stage operative and whereby said series resistor delays the initial charging of said capacitor so that the leading edge of the first of said telegraph signals quickly renders said switch tube conductive, said series resistor having a smaller value of resistance than said input resistor, and said capacitor and resistors having a time constant sufficiently large to cause said transmitter stage to remain operative during normal pauses between said telegraph signals.

2,901,599

AMPLITUDE-MODULATED RADIO TRANSMITTER COMBINING TWO CONSTANT AMPLITUDE PHASE MODULATED SIGNALS

Eric M. Leyton, Princeton, N.J., assignor to Radio Corporation of America, a corporation of Delaware

Application July 16, 1954, Serial No. 443,843
8 Claims. (Cl. 250—17)



1. A radio transmitter comprising a source of two radio frequency carriers of the same frequency displaced 90 degrees in phase, means for amplitude modulating one of said carriers with an intelligence signal v_1, means for amplitude modulating the other of said carriers with an intelligence signal v_2 equal to $\sqrt{K-v_1^2}$ where K is a constant, thereby producing two amplitude modulated waves which are in quadrature and whose amplitudes vary in opposite directions in response to the first-mentioned intelligence signal, first and second diplexers each having two inputs and two outputs, means coupling the two amplitude modulated carriers to respective inputs of said first diplexer, said first diplexer operating to produce on one of its two outputs the vectorial sum of the two inputs applied thereto and operating to produce on the other of its two outputs the vectorial difference of the two inputs applied thereto, said vectorial sum and vectorial difference comprising signals of constant amplitude which are phase modulated differentially; means coupling respective outputs of said first diplexer and respective inputs of said second diplexer, said second diplexer likewise operating to produce on one of its two outputs the vectorial sum of the two inputs applied thereto and operating to produce on the other of its two outputs the vectorial difference of the two inputs applied thereto, a utilization device coupled to one of the outputs of said second diplexer, and a balancing resistor coupled to the other output of said second diplexer.

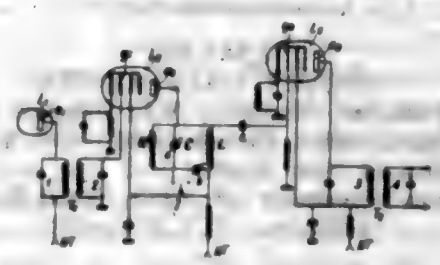
8. An amplitude modifying circuit for providing an output voltage varying as a predetermined function of a single input voltage, comprising a plurality of pairs of vacuum tubes each having cathode, grid, and anode electrodes, each pair including an operating tube and a cathode follower control tube; means coupling the input voltage to the grids of all operating tubes through connections devoid of concentrated impedance and devoid of electron discharge paths, a common load resistor connected to the anodes of all of the plurality of operating tubes, connections for taking output voltage from across said common resistor, cathode coupling resistors coupling the cathodes of the operating tube and the control tube in each pair, and means to apply an adjustable direct current bias to the grid of each control tube to determine the cathode bias on the respective operating tube, whereby the number of operating tubes which are conductive varies with the amplitude of the input signal, and whereby the values of said cathode coupling resistors determine the gains of the respective operating tubes.

2,901,600

TELEVISION SET ADAPTED TO RECEIVE TWO DEFINITIONS

Henry Megard, Geneva, Switzerland, assignor to Sautter & Jaeger, Geneva, Switzerland, a firm of Switzerland

Application October 22, 1954, Serial No. 464,146
Claims priority, application Switzerland October 23, 1953
2 Claims. (Cl. 250—20)



2. An intermediate frequency amplifying stage of a television set adapted to receive selectively low and high definition transmissions respectively within a narrow frequency range and within a broader range constituted by the narrower range and an extension thereof towards higher frequency values, said stage including a frequency changing tube, a chain of intermediate frequency tubes, two tightly coupled transformers permanently tuned to the limit frequencies of the narrow frequency range and inserted respectively between the frequency changing tube and the first tube of the intermediate frequency chain and between two successive tubes of said intermediate frequency chain and a tuning circuit inserted in the anode circuit of one of the intermediate frequency tubes ahead of the second transformer, including a resistance, an inductance and two condensers of greatly different capacities and means for short-circuiting the larger capacity condenser, said tuning circuit being coupled with the control grid of the next intermediate frequency tube, said circuit being tuned selectively to the medial frequency of the narrower frequency range and of the extension thereof according as to whether said condenser short-circuiting means are closed or open to obtain in the second case transmission of the entire broader frequency range.

2,901,601

RADIO RECEIVER WITH IMPULSE NOISE BLANKING

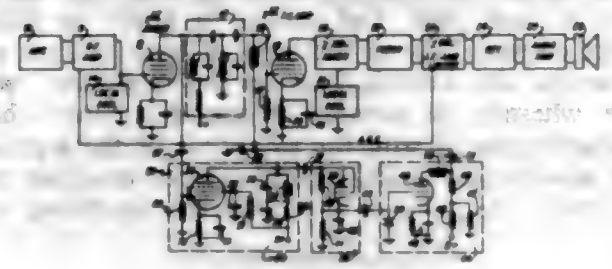
Roy A. Richardson, Skokie, and Jona Colm, Chicago, Ill., assignors to Motorola, Inc., Chicago, Ill., a corporation of Illinois

Application February 19, 1957, Serial No. 641,790
21 Claims. (Cl. 250—20)

8. In a frequency modulation superheterodyne receiver including a first portion in which may appear a frequency modulated carrier wave accompanied by noise pulses of greater amplitude than the carrier wave, and a second portion following said first portion for repeating the frequency modulated carrier wave, and in which the second portion is adapted to be interrupted by a control signal, a noise silencer system for the receiver in-

ter and a receiver, said apparatus having means for selectively block said transmitter stage, a switch-voltage gen-

cluding an amplitude modulation pulse detector connected to the first portion of the receiver for deriving therefrom noise pulses having amplitude greater than the amplitude of said carrier wave to produce thereby control signals, coupling means connecting said detector

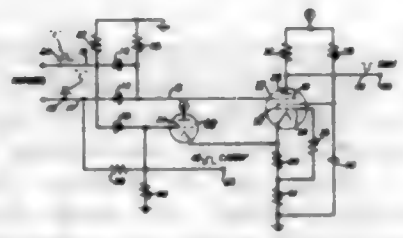


to the second portion of the receiver for applying only the alternating current component of said control signals to the second portion to interrupt the same, and detector means responsive to reception of a carrier signal for disabling said noise silencer system when such carrier signal exceeds a predetermined level.

2,901,602
BINARY HALF ADDER

Elmer L. Younker, Madison, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York

Application November 19, 1953, Serial No. 393,204
8 Claims. (Cl. 250—27)



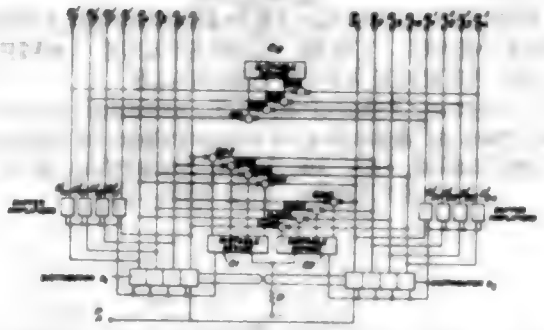
1. An electrical circuit comprising a pair of input terminals, an electron discharge device having a cathode, an anode, and a first, second and third electrode positioned in that order between said cathode and said anode, a pair of cathode resistances connected between said cathode and a reference potential, means connecting said first electrode to the common point between said resistances to bias said first electrode to maintain a substantial current in said device to said second electrode, means for applying a positive voltage to said anode and said second electrode, means connected to said input terminals for applying a positive pulse to said third electrode on the occurrence of an input pulse at either of said terminals, and means connected to said input terminals for increasing the current through said cathode resistances to increase the potential of said cathode by an amount substantially equal to said positive pulse applied to said third electrode on the occurrence of input pulses substantially simultaneously applied to said input terminals whereby an output pulse appears at said anode only on the occurrence of an input pulse at one of said input terminals.

2,901,603
CONTROL MEANS FOR PULSE DISTRIBUTORS OPERATING IN SYNCHRONISM

Camille Weill, Garches, and Claude Hannigsberg, Versouillet, France, and Hans Helmut Adolnar, Antwerp, Belgium, assignors to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Application February 2, 1954, Serial No. 407,742
Claims priority, application Netherlands May 21, 1953
1 Claim. (Cl. 250—27)

A plurality of *m* pulse generators producing substantially identical pulses comprising at least a *j*th generator having an *i*th outlet and a *j'*th generator having an *i'*th outlet, each generator having *n* outlets, *n*—1 of which are at any instant at a first potential value while the remaining outlet is at a second potential value, the 1st, 2nd, . . . and *n*th outlets of each generator in turn assuming said second potential value for a time period T once every complete pulse period *n*T, a plurality of *m* electrically bistable devices, and comparator means to compare the potential on a predetermined outlet of the *j*th generator with the potential on a predetermined outlet of the *j'*th generator, said comparator means comprising *m* series of potential comparators, comprising at least a *j*th series having an *i*th comparator and a *j'*th series having an *i'*th comparator, each series having *n* comparators, each comparator having two inlets and one outlet, said comparator outlet assuming a particular potential only when the potentials at the two inlets of said comparator bear a particular predetermined relationship with respect to one another and are so connected that

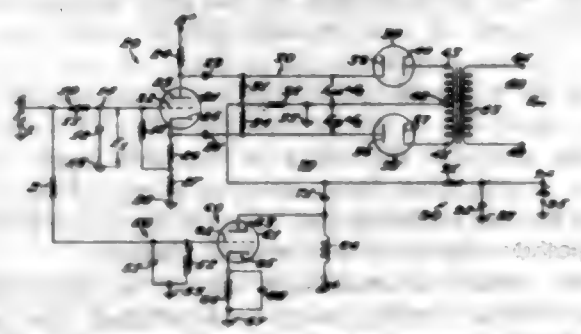


the first inlet of the *i*th comparator of the *j*th series is connected to the *i*th outlet of the *j*th generator and the second inlet of the same *i*th comparator of the same *j*th series is connected to the *i'*th outlet of the *j'*th generator with $i'=i+1$ for $i<n$ and $i'=1$ for $i=n$, the outlets from all *n* comparators of the same series being connected to an individual one of said plurality of bistable devices which is normally in one stable condition and is transferred to its other stable condition upon said particular potential being present on one of the outlets from the comparators as a result of which the corresponding generator may be put out of action, said particular predetermined relationship being obtained when one outlet from each of two generators is connected to one comparator and both generator outlets are at said second potential value, wherein *m*, *n*, *i*, *i'*, *j* and *j'* are integers, and means connecting together the bistable devices for preventing their simultaneous operation to a new stable state.

2,901,604
DISCRIMINATOR CIRCUIT

Gordon J. Nordstrom and John W. Smith, Cedar Rapids, Iowa, assignors to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Application March 12, 1954, Serial No. 415,863
1 Claim. (Cl. 250—27)

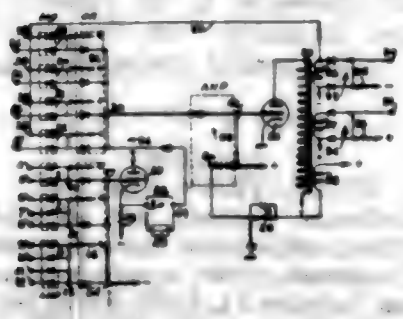


A frequency discriminator comprising an input voltage source which is subject to variation about a mean frequency, a reference voltage channel and a frequency error voltage channel energized by said source, said

charge elements, including cathodes, control electrodes, circuit and an output circuit, a coupling network includ-

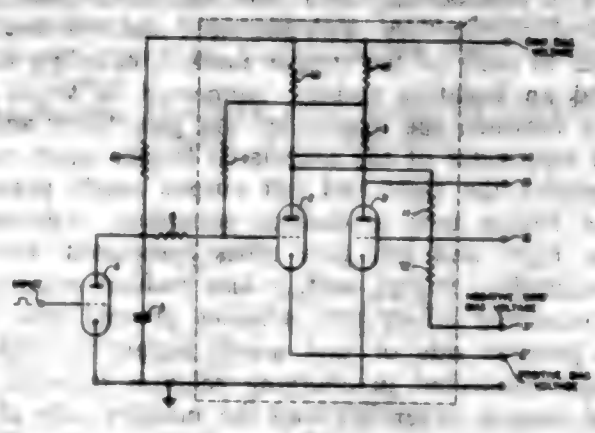
reference voltage channel including a first phase shift circuit for phase shifting its received voltage by 45° in one direction at said mean frequency, said first phase shift circuit connected between said source and a phase inverter for driving first and second reference voltages of equal magnitude and opposite phase, comprising an electron tube having grid, cathode, and anode electrodes, said grid electrode connected to said input voltage source, said cathode electrode connected to ground through a cathode circuit resistance, a plate voltage source having one terminal connected to ground, said anode electrode connected to the other terminal of said plate voltage source through a plate circuit resistance equal to the cathode circuit resistance, a first impedance connected between said plate electrode and ground for developing said first reference voltage, a second equal impedance connected between said cathode electrode and ground for developing said second reference voltage, said frequency error voltage channel including a tunable frequency responsive circuit and a second phase shift circuit for phase shifting its received voltage by 45° in an opposite direction at said mean frequency, said second phase shift circuit connected across said input source for producing an error voltage having a phase relation to said reference voltages which depends upon the departure of the source voltage from said mean frequency, means for vectorially adding said error voltage to said first reference voltages for obtaining a first resultant voltage, means for vectorially adding said error voltage to said second reference voltage for obtaining a second resultant voltage, means for combining said resultant voltages in a differential manner for obtaining a control voltage proportional to the departure of said input voltage source from said mean frequency, a switching-signal source, and means for switching off and on both of said vectorial adding means to modulate said discriminator output.

2,901,605
IMPROVEMENTS IN/OR RELATING TO ELECTRIC PULSE RESHAPING CIRCUITS
François Henri Raymond, Saint-Germain-en-Laye, and Jacques Albin, Le Vesinet, France, assignors to Societe d'Electronique et d'Automatisme, Courbevoie, France
Application October 6, 1954, Serial No. 460,633
Claims priority, application France December 18, 1953
3 Claims. (Cl. 250—27)



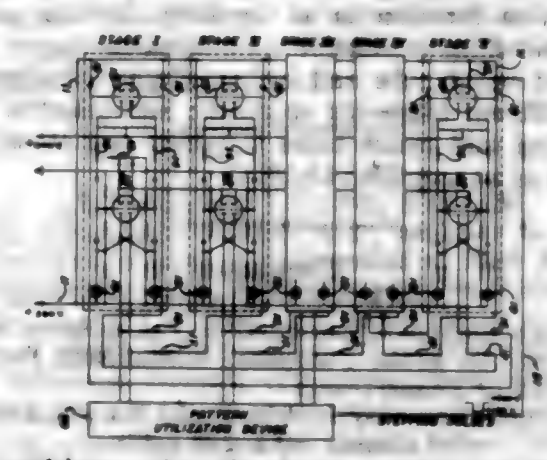
1. An electric pulse reshaping circuit comprising a plurality of And circuits and Or circuits; each And circuit having at least one information input terminal, at least one synchronization input terminal, and an output terminal; each Or circuit having at least a number of input terminals each coupled to an And circuit output terminal, and an output terminal; a buffer stage comprising a vacuum tube and an associated output load resistor; said vacuum tube having a control grid coupled to an Or circuit output terminal; and a pulse regenerative amplifier having an input terminal coupled to said load resistor and to another Or circuit output terminal, and at least one output terminal; and a regenerative feedback loop coupling said amplifier output terminal to at least one And circuit input terminal associated with said other Or circuit.

2,901,606
ELECTRONIC TIME DELAY RELAY
Jens Peter Rehnke, Berlin, Germany, assignor to VEB Funkwerk Koepenick, Berlin-Koepenick, Germany
Application February 9, 1955, Serial No. 487,170
3 Claims. (Cl. 250—27)



1. An electronic time delay apparatus comprising a flip-flop circuit including a first electron tube and a second electron tube, a source of anode potential, resistive circuit means connecting the anodes of said tubes to said source of potential, a direct current connection from the control grid of each tube to the anode resistive circuit of the other tube applying a high positive potential to the control grid of said second tube from the plate of said first tube when said first tube is non-conducting, means for maintaining the cathode of the first electron tube at a considerable positive potential yet lower than the potential of the anode of said first electron tube, and maintaining the cathode of the second tube at a much lower potential than that of the cathode of said first tube, a switching circuit comprising a third electron tube, a capacitor connected between the cathode and the anode of said third tube, means including a resistor for applying a charging potential to the anode of said third tube and said capacitor, a direct current coupling from the control grid of said first tube of said flip-flop circuit to the anode of said third tube, means for maintaining said first tube non-conductive and said second and third tubes normally in a conductive state, and means for applying control potentials to the control electrode of said third tube for rendering it non-conductive and thereby applying potential to said control grid of the first tube which renders it conductive and causes said third tube to become non-conductive, and means for obtaining output voltages from said flip-flop circuit which are delayed with respect to said control potentials.

2,901,607
MULTISTAGE RING CIRCUIT
Orren J. Stoddard, Minneapolis, Minn., assignor to the United States of America as represented by the Secretary of the Navy
Application June 8, 1955, Serial No. 514,133
2 Claims. (Cl. 250—27)



1. A multistage ring circuit comprising a plurality of trigger units each having right and left electron dis-

each including a plate and a cathode and a control grid,

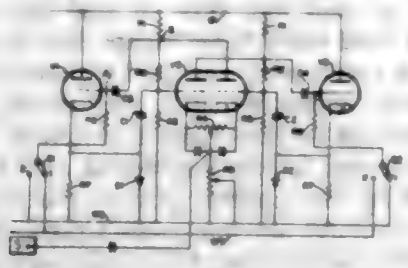
rating all parts of the first and the second conducting rods

tially identical pulses comprising at least a /th generator

quency, a reference voltage channel and a frequency error voltage channel energized by said source, said

charge elements, including cathodes, control electrodes, anodes and a voltage supply therefor, and individual output terminals connected directly to the anodes for providing output potentials having different values in accordance with whether the right or left side discharge element is conducting, right and left triode gate tubes associated, respectively, with the right and left discharge elements in each of the trigger units, a coupling capacitor and an isolating resistor connected in series individually between the anodes of the gate tubes and the control electrodes of the associated trigger units, means for applying the right and left output anode potentials of each trigger unit as control potentials, respectively, for the right and left gate tubes associated with the next succeeding trigger unit, a bias resistor common to and connecting all of the cathodes of said gate tubes to the positive side of said anode supply, a hold-over capacitor connected in charging relation between each of said control potentials and the positive side of said anode supply, and means for applying across said bias resistor a stepping pulse such that it is passed by each gate tubing having a control potential derived from a trigger unit discharge element which is not conducting and drives below cut-off the trigger unit discharge elements associated with such gate tubes, whereby in response to each stepping pulse the conducting condition of each trigger unit is transferred to the next succeeding trigger unit.

2,901,608
POLYSTABLE TRIGGER CIRCUIT
Robert C. Paulsen, Boonton, N.J., and Arthur H. Dickinson, Greenwich, Conn., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application December 28, 1955, Serial No. 555,859
3 Claims. (Cl. 250—27)



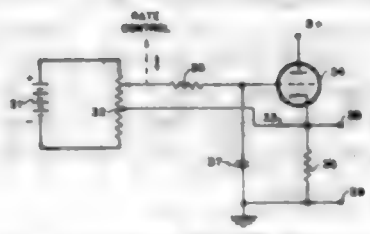
1. A reversible tristable trigger circuit comprising a pair of symmetrical resistance networks, a pair of amplifiers, each having an input connected to a point on one of the networks and an output connected to a different point on the other network to form a basic trigger circuit, a pair of cathode follower switch tubes each having an input coupled to said first point on one of the networks and an output capacitatively coupled to said different point on said different point of the same network, said capacitative coupling, when the associated switch tube is biased to function as an amplifier, causing said networks and tube to function as a tristable trigger circuit, each said switch tube and its capacitative coupling causing a different triggering sequence; and selective means for biasing said switch tubes to render one of said tubes effective as an amplifier.

2,901,609
DIFFERENTIATOR
Richard D. Campbell, Harmarville, Pa., assignor to Westinghouse Air Brake Company, Wilmerding, Pa., a corporation of Pennsylvania
Application May 2, 1956, Serial No. 582,249
2 Claims. (Cl. 250—27)

1. Differentiating apparatus for a source of electrical signals comprising an amplifier provided with an input circuit and an output circuit, a coupling network including a first capacitor and a first resistor connected in a series relationship between said source of signals and said input circuit with the capacitor connected to the source of signals and the resistor connected to the input circuit, and a feed-back network including a second capacitor

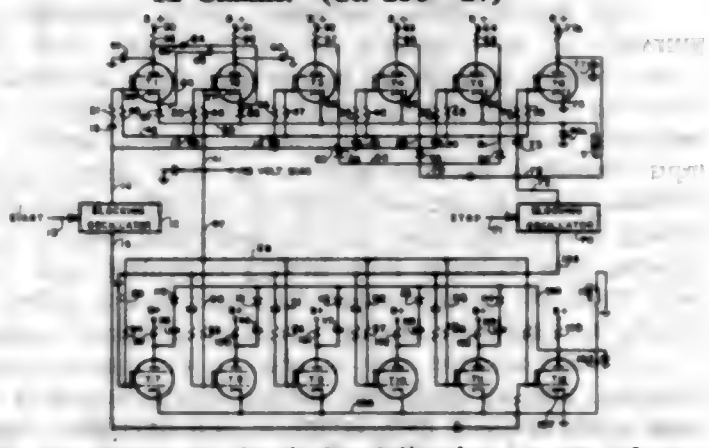
connected between said output circuit and said input circuit and a second resistor connected between said output circuit and the junction of said first resistor and said first capacitor, whereby the amplifier is responsive to slowly varying variations of said source of signals and is substantially irresponsive to rapidly varying variations of said source of signals.

2,901,610
CONTROLLABLE VOLTAGE INTEGRATION CIRCUIT
Forrest W. Brown, New Canaan, Conn., assignor to The Reflectone Corporation, Stamford, Conn., a corporation of Connecticut
Application January 31, 1957, Serial No. 637,526
5 Claims. (Cl. 250—27)



1. A controllable voltage integration circuit comprising; a source of unidirectional potential; a variable resistor connected across said source, said resistor including an adjustable contact and a tap; a cathode follower circuit including an electron tube which has an anode, a control electrode and a cathode; the control electrode of said tube serially connected with a resistor to the adjustable contact of said resistor; the tap of said resistor connected to the cathode of said tube; one end of another resistor connected to the cathode of said tube, and a capacitor connected from the other end of said latter resistor to the control electrode of said tube.

2,901,611
THYRATRON CIRCUIT
Wesley Tannenbaum, Bedford, and Richard D. Adams, Billerica, Mass., assignors to Avco Manufacturing Corporation, Cincinnati, Ohio, a corporation of Delaware
Application October 11, 1957, Serial No. 689,727
12 Claims. (Cl. 250—27)



12. An electronic circuit for delivering a surge of current to a load comprising a plurality of thyratron tubes,

regions approximating foci in accordance with the mag-

ciated with said other Or circuit.

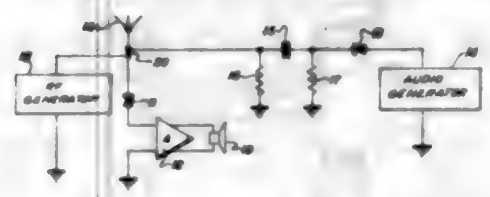
1. A multistage ring circuit comprising a plurality of trigger units each having right and left electron dis-

each including a plate and a cathode and a control grid, the plates of said tubes being connected to a direct current source, a rectifier connected to the cathode of each of said tubes, said rectifiers being connected to a common load, electrical energy storage means connected to the plate of each tube, and means for biasing the grids of said tubes to initiate current flow therethrough simultaneously.

2,901,612
PHASE SHIFT DETECTOR
Leo E. Dwork, Ipswich, and Chaang Huang, Watertown, Mass., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application December 29, 1955, Serial No. 556,236
2 Claims. (Cl. 250—31)

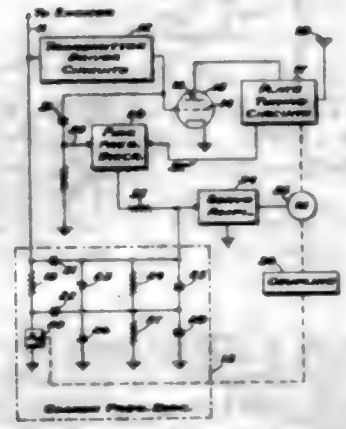
1. A frequency modulation discriminator comprising, in combination, a p-n-p transistor and an n-p-n transistor having common emitter and base connections, a pair of series-connected impedances, each impedance being situated in the collector-to-emitter circuit of one of the transistors, each of said circuits including a rectifier, a transformer having a primary winding connected between the emitter and the connection between said impedances and a secondary winding connected between the emitters and bases, and a capacitor connected in parallel with the secondary winding.

2,901,613
DETECTOR FOR MODULATED AND UNMODULATED SIGNALS
Hubert H. Patterson, Albuquerque, N. Mex., and George H. Webber, Syracuse, N.Y., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Application August 5, 1957, Serial No. 676,452
1 Claim. (Cl. 250—31)



A crystal detector unit comprising an outer conductive casing, a first cylindrical RF conducting rod supported therein and extending from an antenna coaxial connector at one outer casing surface to the cathode of a first crystal diode mounted adjacent an opposing casing outer surface, said first conducting rod being internally interrupted by an air gap sufficient to create a predetermined value of capacitance in said conductor, a second cylindrical RF conducting rod supported within said casing and joined at one of its ends to the first conducting rod at a point intermediate the air gap and the antenna connection thereof, its other end extending to the cathode of a second crystal diode mounted adjacent the said opposite outer casing surface, a first resistor connected between the outer casing and the first conductor intermediate the diode connection thereof and the air gap therein, a second resistor connected between the outer casing and the second conductor at a point intermediate the diode connection thereof and its junction with the first conducting rod, and a continuous plastic insulation separating all parts of the first and the second conducting rods from the outer casing to effect a predetermined unit impedance.

2,901,614
COARSE FREQUENCY DISCRIMINATOR
John R. Sherwood, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application March 14, 1957, Serial No. 645,957
1 Claim. (Cl. 250—40)



A servo system including a coarse-frequency discriminator, a fine-frequency discriminator, a servo amplifier, and a servo motor; a resonant circuit to be tuned by said servo system, an input circuit to which is applied signal of different frequencies at different times, said coarse-frequency discriminator including a resistor and a variable reactor connected in series to said input circuit, discriminator circuit means connected to said resistor and variable reactor for developing a first control voltage that is the function of the difference between the voltage developed across said resistor and the voltage developed across said reactor, said fine-frequency discriminator being coupled to said input circuit and to said resonant circuit for deriving a second control voltage that is a function of the difference in phase between voltage that is applied to said input circuit and current in said resonant circuit, said discriminator circuit means and said fine-frequency discriminator being connected to said servo amplifier for applying said first and said second control voltages to said amplifier, both of said discriminators applying voltage of one polarity to said amplifier in response to application of signal having frequency higher than the resonant frequency of said resonant circuit and of opposite polarity in response to application of signal having lower frequency, said motor operating in response to the application of control voltage to said amplifier, the direction of operation being dependent upon the polarity of voltage applied to said amplifier, said plate tuning circuits and said variable reactor being mechanically connected to said motor, and said variable reactor being positioned for producing null control voltage in said discriminator circuit means in response to said resonant circuit being positioned for resonance at the frequency of the signal in said input circuit.

2,901,615
AUTOMATIC TUNING SYSTEM
Alan E. Devendorf, Fulton, N.Y., assignor to General Electric Company, a corporation of New York
Application April 25, 1958, Serial No. 730,896
11 Claims. (Cl. 250—40)

1. In a power tuning system for automatically selecting a television channel comprising in combination, a motor, a motor circuit connected to said motor for supplying operating potential thereto when said motor circuit is closed, a control shaft adapted to be rotatably driven by said motor when said motor circuit is closed,

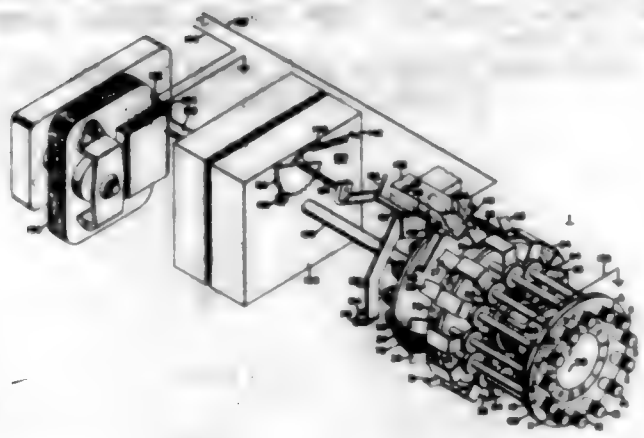
2,901,619

6. A calutron receiver comprising means forming a

1. Differentiating apparatus for a source of electrical signals comprising an amplifier provided with an input

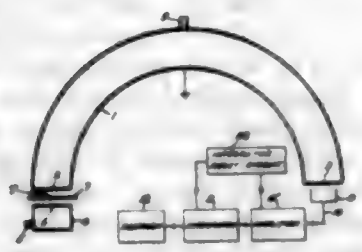
12. An electronic circuit for delivering a surge of current to a load comprising a plurality of thyratron tubes,

a channel selector knob coupled to said control shaft and rotatable therewith, a plurality of push buttons on said channel selector knob each corresponding to a different channel, a plurality of spring contacts conductively mounted on said control shaft, each of said spring



contacts coupled to a different push button, a collector ring adapted to be contacted by any one of said spring contacts when the push button to which it is coupled is depressed, a terminal in said motor circuit conductively contacting said collector ring whereby said motor circuit is closed when a push button is depressed.

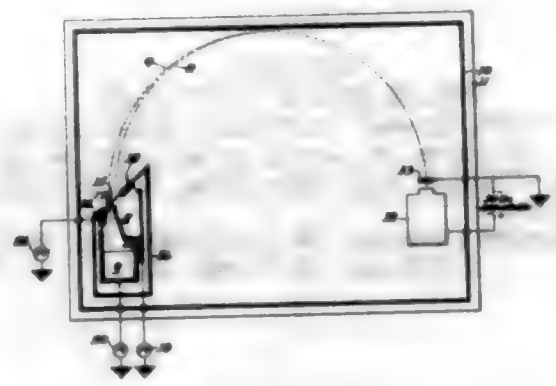
2,901,616
MASS SPECTROMETRY
Paul D. Zemany, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Application August 19, 1954, Serial No. 450,863
8 Claims. (Cl. 250—41.9)



5. In a device for analyzing matter rendered gaseous in which the matter is ionized, accelerated and dispersed in different diverging beams in accordance with the charge-to-mass ratios thereof, and wherein the forces acting upon the beams are progressively changed so that ions having different charge-to-mass ratios are caused to pass through an output slit of the device at a preselected scanning rate, the combination of means for detecting the charges of ions passing through said slit, means for integrating the charge induced in said detecting means by ions passing through said slit and representing ions having closely adjacent charge-to-mass ratios which may not be resolved, so as to obtain the algebraic sum of the ionic charges representing said ions having closely adjacent charge-to-mass ratios, and means for returning the integrating means to the zero reference point after said charge has been algebraically summed.

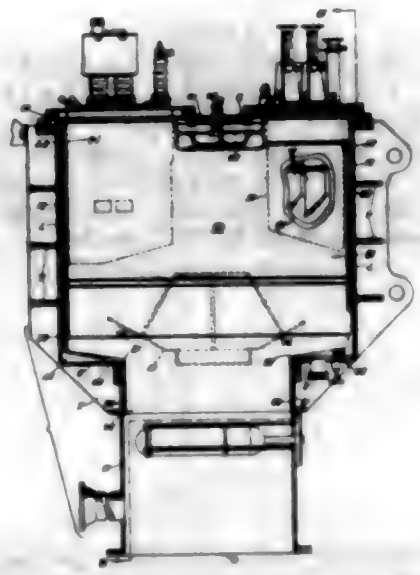
2,901,617
CALUTRON RECEIVER
Sidney W. Barnes, Rochester, N.Y., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Application May 14, 1946, Serial No. 669,481
7 Claims. (Cl. 250—41.9)

1. In isotope separating apparatus in which ions of the different isotopes are caused to travel through different regions approximating foci in accordance with the magnetic mass spectrum thereof, means for establishing the magnetic mass spectrum of the respective isotopes as closely adjacent beams of ions at the foci regions, a receiver comprising means forming two collecting pockets having openings corresponding in size and position to said



foci regions, and a dividing wall between the two pockets arranged at an angle such that substantially all of the ions of the less abundant isotope entering one of the pockets strikes one side of the wall directly and substantially none of the ions entering the other pocket strikes the wall directly.

2,901,618
CALUTRON
Leon R. Ludwig, Buffalo, N.Y., and Royal C. Bergvall, Pittsburgh, Pa., assignors, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Application June 28, 1946, Serial No. 679,974
4 Claims. (Cl. 250—41.9)



4. A calutron assembly comprising a tank structure that encloses an operating chamber, said tank structure having an open end adapted to be closed by a face plate and an end wall opposite said open end, a tubular pump-out connection opening through said end wall and projecting outwardly from it, a liner slidably mounted in the operating chamber for removal through the open side, said liner comprising walls enclosing a processing space and that are spaced inward from the inner surfaces of the tank structure, said liner having a tubular extension opening into the processing space and projecting into the pump-out connection, said extension having its outer surfaces spaced inward from the inner surfaces of said connection, providing passages within the connection that are separated from the processing space and that communicate with the spaces between the liner and tank structure.

in its safety position for effectively connecting said cath-

2,901,624

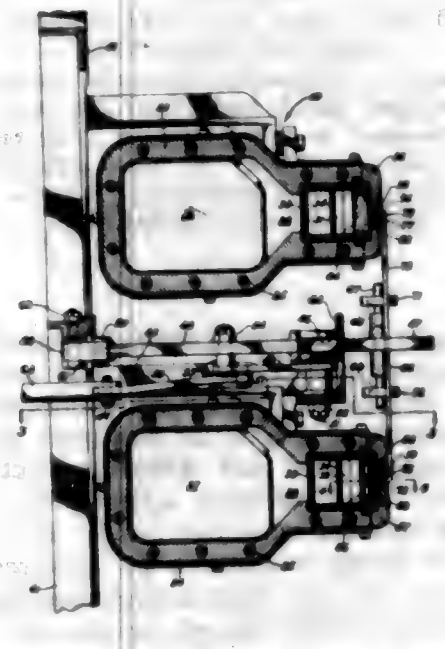
conducting rod, and a continuous plastic insulation sepa- driven by said motor when said motor circuit is closed,

2,901,619

CALUTRON ION SOURCE SLIT CLEANER

Allan M. Starr, Piedmont, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application October 8, 1946, Serial No. 701,905
4 Claims. (Cl. 250—41.9)



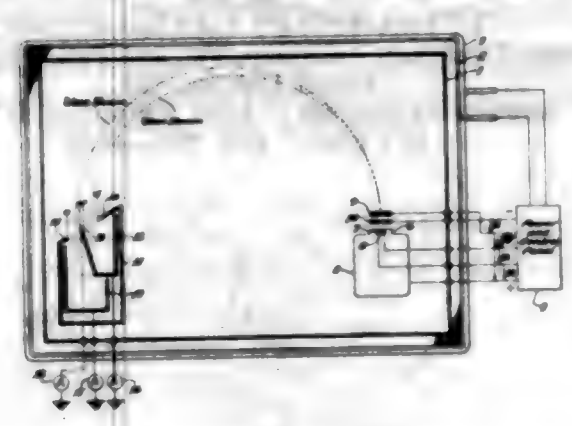
1. Apparatus for projecting an ion beam comprising walls defining an evacuated vessel, ion generating chambers having beam defining slits therein, scrapers mounted in the slits for longitudinal movement therein, means comprising a bell crank, scraper-actuating linkage members associated with said bell crank, a hatchet associated with said linkage members, a guide casting having an elongated slot adapted to receive the said hatchet therein, stops positioned at opposite ends of the said guide casting for limiting longitudinal movement of the said hatchet along the said slot and means connecting said linkage and said scrapers for compelling longitudinal movement of the said scrapers along the said beam defining slits.

2,901,620

ISOTOPE SEPARATING APPARATUS CONTROL

Sidney W. Barnes, Rochester, N.Y., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Application October 8, 1946, Serial No. 701,906
6 Claims. (Cl. 250—41.9)



4. The method of controlling a calutron ion beam for optimum collection of two adjacent component beams thereof at respective collecting pockets of a receiver, comprising the steps of adjusting the accelerating potential until a minimum ion current is received at an electrode disposed in said receiver intermediate said pockets, and adjusting the focusing potential, and the ionization arc potential and current until a further minimum current is received at said electrode.

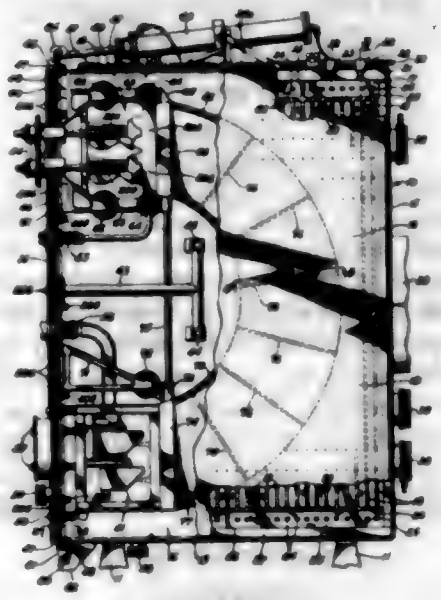
6. A calutron receiver comprising means forming a first insulated pocket disposed in said receiver for receiving and collecting a first ion beam composed of ions of a particular mass, means forming a second insulated pocket disposed adjacent to said first pocket for receiving and collecting a second adjacent ion beam composed of ions of a different mass, an insulated electrode disposed intermediate said two pockets for receiving the inner adjacent fringes of both of said component ion beams, and respective meter means connected to said pocket forming means and said electrode, respectively, for indicating the respective deionizing currents to said pockets and said electrode.

2,901,621

CALUTRON FACE PLATE

William M. Brobeck, Berkeley, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application October 8, 1946, Serial No. 701,912
3 Claims. (Cl. 250—41.9)



1. A calutron tank for operation under high vacuum conditions comprising in combination, a pair of massive side walls adapted to be disposed in closely spaced relation to magnet pole faces and providing support for the remaining tank walls, one of said latter walls comprising a pivoted door movable between said pole faces in a vertical plane and adapted to support a cantilever mounted load in addition to the vacuum load, sealing means interposed between said door and the cooperating walls of said tank, said door having a rectangular frame portion mounting a relatively thin outwardly convex plate section and provided with transverse stiffening members to which said cantilever load is attached.

2,901,622

CALUTRON CONTROL DEVICE

Lawrence W. Baldwin, San Diego, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission

Application November 21, 1946, Serial No. 711,414
14 Claims. (Cl. 250—41.9)

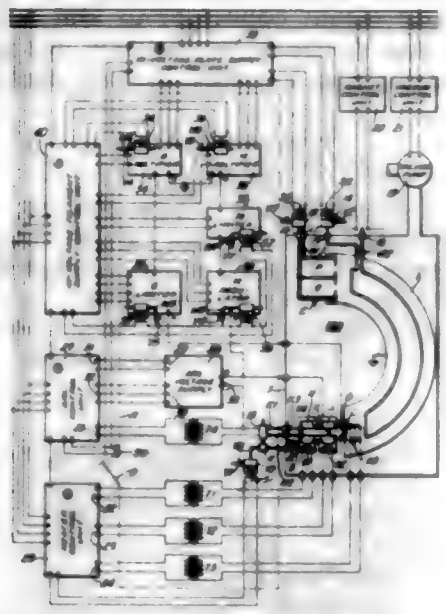
9. In a calutron having an evacuated tank including a wall structure having an opening therein, an ion source comprising an arc block disposed in said tank adjacent said wall structure, a thermally emissive cathode, retractable means for supporting said cathode from the tank wall adjacent said arc block, a tank door adapted for placement in a safety position outside of said tank, said tank door providing access to said retractable means only when said tank door is removed therefrom, a cathode supply circuit, a control network associated with said cathode supply circuit, means controlled by operation of said control network and placement of said tank door

level for producing a self-sustained electric discharge in second tube bisecting the angle formed by the axes of

different isotopes are caused to travel through different and tank structure.

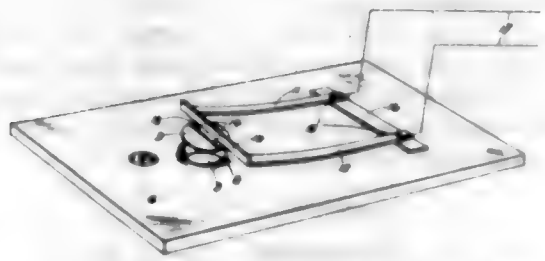
in its safety position for effectively connecting said cathode to said cathode supply, and means controlled by removal of said tank door from its safety position for disconnecting said cathode from said cathode supply.

14. In an ionic discharge device, a reservoir containing charge material to be vaporized, an electrode structure, first and second electrical heating elements respec-



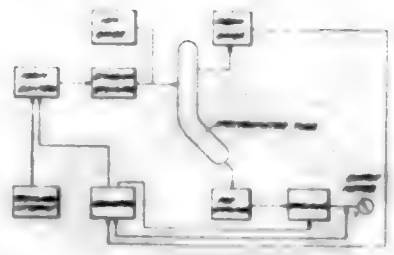
tively arranged in heat exchange relationship with said reservoir and said electrode structure, means for supplying electric power to said electrical heating elements, and means responsive to the application of electric power to said second electrical heating element permitting the application of electric power to said first electrical heating element, thereby preventing the distillation of said charge material from said reservoir to said electrode.

2,901,623
VAPOR VALVE
Louis F. Wouters, Oakland, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application May 26, 1947, Serial No. 750,597
8 Claims. (Cl. 250—41.9)



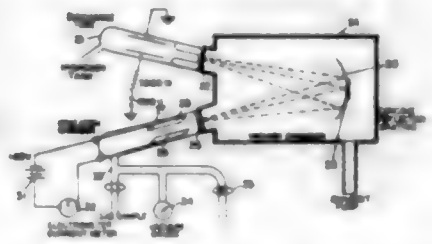
5. An arrangement for controlling the flow of gaseous vapors comprising a charge chamber for vaporizing a charge, an ionizing chamber, an orifice connecting said ionizing chamber with said charge chamber, said charge chamber and said ionizing chamber being disposed in a magnetic field, and valve means for closing the mouth of the orifice to restrict the flow of vapors therethrough, said valve means including a valve element operatively connected to a pair of resilient leg portions having one set of ends rigidly mounted, the opposite free ends of said leg portions being bridged by a cross member, said cross member moving in response to current flow therethrough for movement towards and away from said orifice and actuate said valve to regulate the flow through said orifice.

2,901,624
MASS SPECTROMETRY
Alfred O. C. Nier, Minneapolis, Minn., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission
Application September 2, 1947, Serial No. 771,728
6 Claims. (Cl. 250—41.9)



6. In a system of the class described, in combination, a mass spectrometer having an accelerating electrode, an accelerating voltage supply circuit connected to said accelerating electrode, a collector electrode, and an output circuit connected to said collecting electrode, said voltage supply circuit including a source of a plurality of voltages of different magnitudes and a set of switches and associated circuit connections for applying any one of said voltages to said accelerating electrode, motor driven means for closing said switches one at a time in a scheduled sequence, said output circuit including means for deriving a plurality of voltage signals all proportional to the ion current impinging upon said collector but having different proportionality constants and a set of switches and associated circuits for taking off any one of said voltage signals, motor driven means for closing said last-named switches one at a time in a scheduled sequence, a motor driven recorder of the type capable of printing a plurality of traces in response to a plurality of signals fed thereto, means connecting to said recorder the voltage signal taken off from said output circuit, driving means for continuously and automatically driving, in synchronism, said recorder and both of said switch closing means, and a pressure gauge associated with said mass spectrometer for producing a voltage signal proportional to the operating pressure of said spectrometer said last-named set of switches and associated circuits including one switch and associated circuit for taking off the output voltage signal from said pressure gauge in place of a signal from said collector output circuit.

2,901,625
ULTRA-VIOLET GAS ANALYSIS
Herbert Friedman, Arlington, Va., and Talbot A. Chubb, Forest Heights, Md.
Application January 5, 1956, Serial No. 557,474
14 Claims. (Cl. 250—43.5)



1. A gas detector for detecting a gas component having a predetermined ultra-violet photoelectric ionization threshold comprising an ion chamber having a pair of spaced electrodes, means for positioning said electrodes in a medium in which the presence of said component is to be detected, means for producing a potential difference between said electrodes of magnitude below the

characterized by different concentrations of a predeter- of a tubular sleeve forming a carrier member embracing

is received at said electrode.

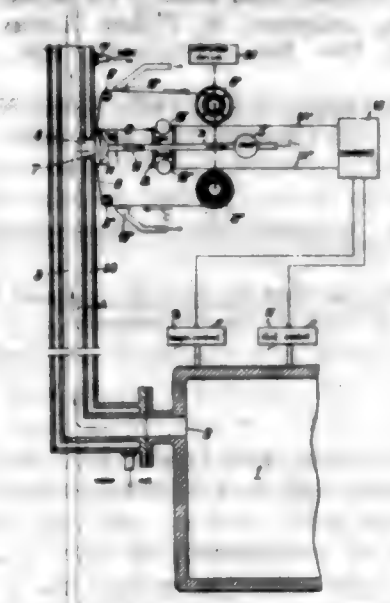
level for producing a self-sustained electric discharge in said chamber, means for irradiating with ultra-violet light the space in said chamber and means for detecting the ionization current produced by said ultra-violet light between said electrodes.

2,901,626

APPARATUS FOR THE ANALYSIS OF HOT, DUST-LADEN GASES

Helmut Becker, Oberhausen-Osterfeld, Germany, assignor to Hüttenwerk Oberhausen A.G., Oberhausen, Rhineland, Germany, a corporation of Germany

Application April 29, 1958, Serial No. 731,839
Claims priority, application Germany May 27, 1957
10 Claims. (Cl. 250—43.5)



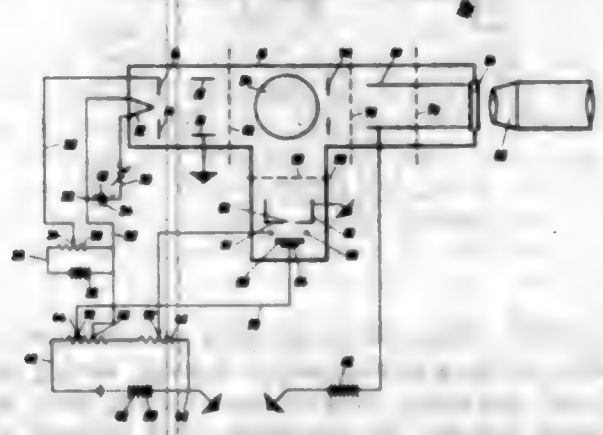
1. A system for continuously analyzing hot, dust-laden gases, comprising a duct traversed by said gases, said duct being provided with a jacket for the circulation of a cooling fluid, an analyzer, a passage connecting said duct with said analyzer, a movable dust filter extending across said passage, regenerating means for said filter operatively positioned adjacent said filter beyond said passage, and mechanism for recurrently advancing said filter across said passage and past said regenerating means.

2,901,627

METHOD OF AND APPARATUS FOR THE ELECTRONIC MAGNIFICATION OF OBJECTS

Detmar Wiskott, Günter Bartz, and Gustav Weissenberg, Marburg an der Lahn, Germany, assignors to Ernst Leitz G.m.b.H., Wetzlar, Germany, a corporation of Germany

Application February 17, 1954, Serial No. 410,795
Claims priority, application Germany February 19, 1953
6 Claims. (Cl. 250—49.5)



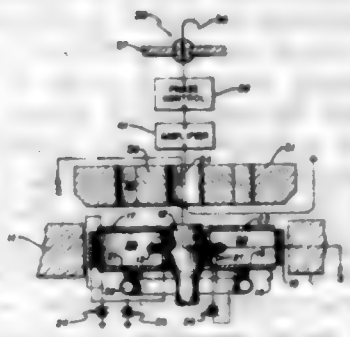
1. A system for the production of an image of an electrical potential field existing in front of the surface of an object, by the reflection of electrons; comprising first, second and third communicating evacuated tubes having intersecting longitudinal axes, the axis of the second tube bisecting the angle formed by the axes of the first and third tubes, means disposed within said first tube for producing an electron beam directed axially thereof and including a cathode, a collecting electrode and means for accelerating said electron beam within said first tube, means at the junction of said three tubes for deflecting said electron beam axially of said second tube toward the free end thereof, a first electrode disposed in said second tube and having an aperture formed therein, said first electrode being maintained at the same potential as said accelerating means, and a second electrode aligned with said deflecting means and with said aperture of said first electrode, said second electrode being maintained substantially at the potential of said cathode and serving as a carrier for said object, whereby said electron beam is reflected axially of said second tube by said second electrode prior to coming in contact therewith, means within said tubes for deflecting said reflected electron beam axially of said third tube, and screen means for receiving said deflected reflected electron beam, whereby an image is obtained on said screen means corresponding to the configuration of said object disposed on said second electrode.

2,901,628

ION SOURCE

William A. S. Lamb, Berkeley, Calif., assignor, by mesne assignments, to the United States of America as represented by the United States Atomic Energy Commission

Application December 31, 1954, Serial No. 479,255
4 Claims. (Cl. 250—49.5)



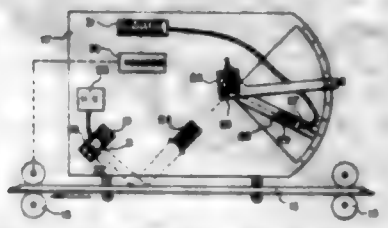
1. An improved ion source comprising means establishing an annular ionizing discharge, means providing gaseous material to said discharge whereby ions thereof are produced, a ring of material having a high magnetic permeability disposed adjacent said discharge coaxially therewith in a plane parallel thereto, and a loop about said ring for energization with high frequency electrical energy for attracting ions from said generator to form a hollow cylindrical ion beam.

2,901,629

METHOD AND APPARATUS FOR SLAG DETECTION IN METAL SHEETS

Herbert Friedman, Arlington, Va., assignor, by mesne assignments, to J. J. Maguire, trading as J. J. Maguire Company, Washington, D.C.

Application January 26, 1954, Serial No. 406,214
17 Claims. (Cl. 250—53)



11. Apparatus for detecting the inclusion of slag in a sheet of material, said slag and slag-free material being

2,901,634

REMOTE MONITORING AMPLIFICATION

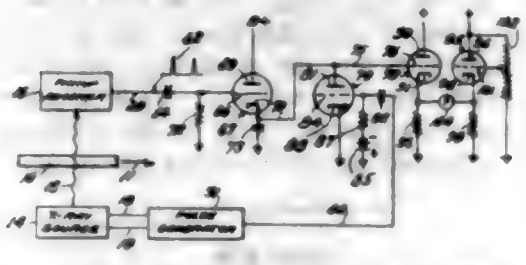
decay at such a slow rate that each pulse has greater

said orifice.

ence between said electrodes of magnitude below the

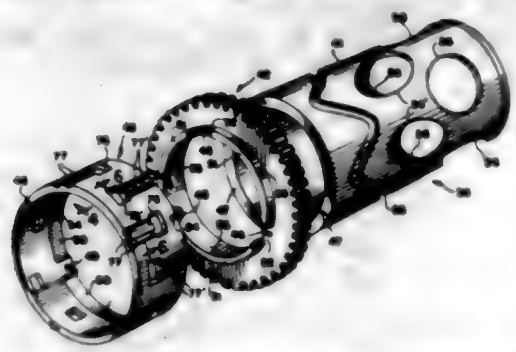
characterized by different concentrations of a predetermined element, comprising means for irradiating an elemental area of said sheet with a beam of X-rays of a wavelength which excites the fluorescent X-ray spectrum of said element, means for moving said sheet past said area with substantially uniform speed, means for selectively detecting fluorescent X-rays of wavelength characteristic of said element and utilization means responsive to the detection of the change of concentration of said element.

2,901,630
SYNCHRONIZED RECYCLING DETECTOR FOR PULSED ENERGY
Carl A. Voorberg, Umatilla, Fla.
Application October 11, 1956, Serial No. 615,314
8 Claims. (Cl. 250—83.3)



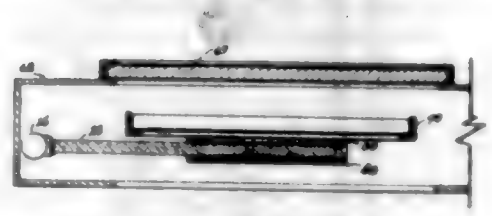
4. Gauging apparatus of the class described, comprising in combination, a source of X-rays disposed to direct X-rays toward a specimen to be gauged, X-ray pickup means disposed to receive said X-rays after passage through said specimen and to produce an output having a magnitude in accordance with the instantaneous intensity of the X-rays received from said source, precision pulse generating means connected to energize said source with a series of energizing pulses of uniform peak amplitude and waveshape whereby a series of measurement pulses is produced by said pickup means, peak voltage responsive means connected to said pickup means, said peak voltage responsive means including a measurement capacitor which becomes repeatedly charged to a potential individually determined by the peak amplitude of each of said measurement pulses, recycling means connected to said pulse generator to receive recycling pulses therefrom, each recycling pulse immediately preceding one of said measurement pulses by a time interval of short duration with respect to the time interval between successive energizing pulses, said recycling means being connected to said measurement capacitor to discharge said capacitor at least partially in response to each recycling pulse, and voltage responsive utilization means connected to said measurement capacitor.

2,901,631
FILTER MEANS FOR PENETRATING RAYS
Carl W. Hansen, Milwaukee, and Jerome F. Kozlow, Wauwatosa, Wis., assignors to General Electric Company, a corporation of New York
Application March 4, 1955, Serial No. 492,144
8 Claims. (Cl. 250—86)



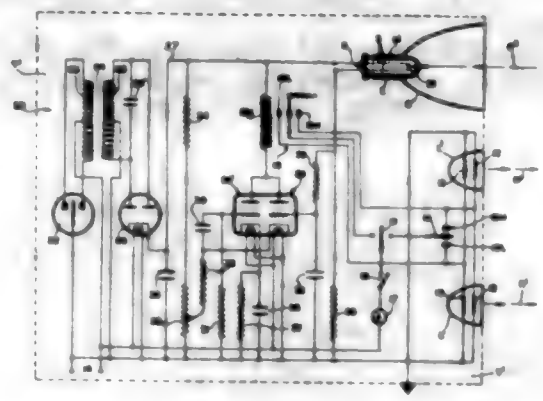
1. The combination, with a penetrating ray source embodying means for emitting a directional ray beam, of a tubular sleeve forming a carrier member embracing said ray source and providing a plurality of rows of filter mounting stations, the stations of each row being circumferentially spaced apart and offset axially of the sleeve with respect to the stations of an adjacent row, means operable to turn the sleeve about said source, and a serpentine cam formed on said sleeve in position to engage a cam driving member as the sleeve is turned, to thereby axially shift the same in order to present said stations successively in alined position with respect to said beam.

2,901,632
PHOTO TUBE ENERGIZER
Robert J. Stava, University Heights, Walter G. Reininger, Cleveland Heights, and Gunter G. Wilkens, East Cleveland, Ohio, assignors to Picker X-Ray Corporation, Waite Mfg. Div. Inc., Cleveland, Ohio, a corporation of Ohio
Application September 3, 1953, Serial No. 378,368
15 Claims. (Cl. 250—95)



1. A device for guiding light energy in a confined path from a source of light to a light responsive element comprising, a solid guide member made of material having a high degree of transparency to light, said guide member having a light accepting portion and a light emitting portion displaced therefrom and including selected external surfaces adapted for guiding light in confined path from the accepting portion to the emitting portion at least one of said external surfaces of said accepting portion being serrated for coaction with another of said surfaces in a predetermined manner to transmit a maximum of light energy substantially uniformly from the entire accepting portion to the emitting portion.

2,901,633
LIGHT RESPONSIVE SYSTEM
John E. Jacobs, Milwaukee, Wis., assignor to General Electric Company, a corporation of New York
Application October 12, 1953, Serial No. 385,563
7 Claims. (Cl. 250—214)



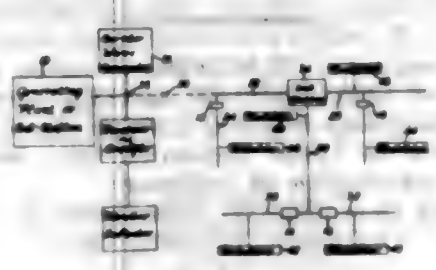
1. Control apparatus comprising an electrical power operable device, a photosensitive detector having initially rapid and thereafter progressively slower time lagging impedance response characteristics when exposed to light of changing intensity, means to develop electrical power having an intensity level varying as a function of the rate of change of the impedance of said detector, and means for applying such developed power to said device for the actuation of the same.

tive state until said anode current pulse has terminated, for applying trigger pulses thereto to render said tran-

first, second and third communicating evacuated tubes having intersecting longitudinal axes, the axis of the

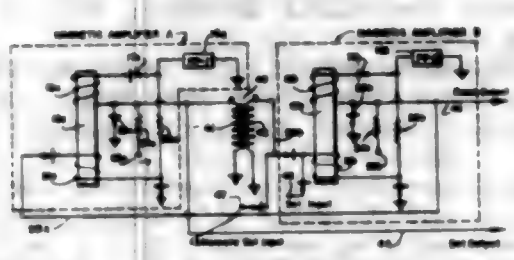
11. Apparatus for detecting the inclusion of slag in a sheet of material, said slag and slag-free material being

2,901,634
REMOTE MONITORING AMPLIFICATION
Samuel Lubin, Pittsfield, Mass., assignor to Sprague Electric Company, North Adams, Mass., a corporation of Massachusetts
Application February 16, 1955, Serial No. 488,634
2 Claims. (Cl. 340—253)



1. In an electric signal receiver connected to directly receive high frequency carrier signals from a carrier generator and to detect and amplify remotely generated audio frequency modulation on said carrier, an input circuit including a sharply-tuned carrier rejection piezo-electric filter connected to reduce the carrier level in the incoming signals and thereby effectively increase the degree of modulation, a high frequency amplification circuit connected to amplify the incoming signals of reduced carrier level by at least about 30 decibels, and a detector and demodulated signal amplification circuit connected to separate the modulation signal from the carrier and further amplify the modulating signal by at least about 30 decibels.

2,901,635
DELAY FLOP
William F. Steagall, Merchantville, N.J., assignor, by mesne assignments, to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Application Septemer 24, 1954, Serial No. 458,079
18 Claims. (Cl. 307—88)



1. A delay flop comprising first and second pulse generators each of which produces spaced pulses that occur during the gaps between pulses of the other generator; first and second complementing magnetic amplifiers respectively fed with pulses from said two generators and which have outputs to which the pulses normally flow, the magnetic amplifiers each having a control input and including means to interrupt the flow of any pulse to the output if such pulse was preceded by a control pulse at the input of that magnetic amplifier; the delay flop having an input circuit feeding the input of the first magnetic amplifier; fedback means connecting the output of the first magnetic amplifier to the input of the second and the output of the second to the input of the first; said feedback means including means which interrupts the flow of pulses from the output of the second to the input of the first magnetic amplifier after a predetermined number of pulses has passed that path; the last-named means comprising a transformer having a primary and a secondary, a circuit connecting said primary to the output of the second magnetic amplifier and another circuit connecting the secondary to the input of the first magnetic amplifier, the first-named circuit including means for causing the current of each pulse to decay at such a slow rate that each pulse has greater amplitude than the preceding one until finally the core is saturated at which time there is no output from the secondary; and output means energized by the output of the second magnetic amplifier.

2,901,636
MAGNETIC AMPLIFIER
Robert D. Torrey and Theodore H. Bonn, Philadelphia, Pa., assignors, by mesne assignments, to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware
Application April 7, 1955, Serial No. 499,905
31 Claims. (Cl. 307—88)

1. In a magnetic amplifier, a saturable core, a source of spaced power pulses, coil means on the core connected to said source and fed with said pulses whereby said core is regularly subjected to a magnetomotive force in a first direction, said coil means having distributed capacity and inductive reactance such that said pulses cause a transient current in the coil means flowing in a direction opposite to that effected by said power pulses, whereby said core is subjected to an undesired magnetomotive force tending to reduce the remanent flux density of the said core during the spaces between power pulses, and means for producing an auxiliary magnetomotive force in said core during the spaces between said power pulses, said auxiliary magnetomotive force being substantially equal and opposite to that effected by said transient current thereby to prevent said transient current from lowering the remanence flux density of the said core during the spaces between power pulses.

2,901,637
ANTI-COINCIDENCE CIRCUIT
An Wang, Belmont, Mass.
Application April 13, 1955, Serial No. 501,145
4 Claims. (Cl. 307—88)

1. A pulse transponding network adapted to reproduce in a series pulses occurring simultaneously, said network comprising for each one of the pulse input channels, a triode electron discharge device having an anode circuit and a control grid circuit, means for impressing an input pulse on said control grid circuit to cause anode current to flow in said triode, a saturable core device having an input winding in said anode circuit and an output winding in said grid circuit to rapidly increase the flow of anode current in said triode to saturate said saturable core device in one direction and thereby provided an anode current pulse in response to said input pulse, circuit means intercoupling the control circuits of the triode electron devices and the saturable core devices to maintain all but the conducting one of the triodes in a nonconduc-

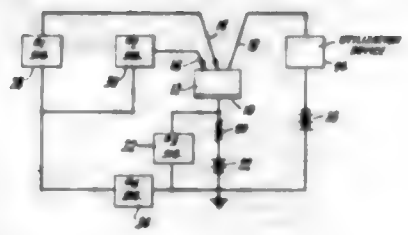
to thereby extinguish said second device when said second

motor driving the said shaft after receiving a starter im-

embodying means for emitting a directional ray beam, for applying such developed power to said device for the actuation of the same.

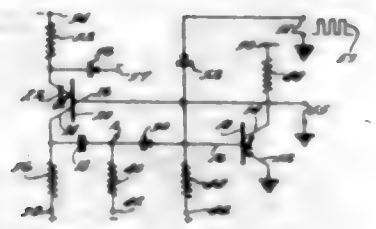
tive state until said anode current pulse has terminated, and magnetizing means to saturate the saturable core device to its initial state of magnetic flux density associated with the conducting one of the triodes after said anode current pulse has terminated.

2,901,638
TRANSISTOR SWITCHING CIRCUIT
Chaang Huang, Ipswich, Mass., assignor, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware
Application March 12, 1954, Serial No. 415,851
Claims priority, application Canada July 21, 1953
6 Claims. (Cl. 307—88.5)



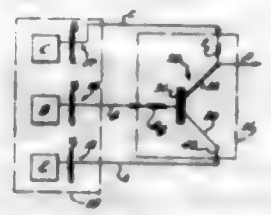
1. A semiconductor circuit including a transistor having a semiconductor body, a base electrode, multiple-emitter electrodes, and a collector electrode, individual input circuits connected to respective emitter electrodes, a common impedance connected to said base electrode and included in all of said input circuits, an output circuit connected to said collector electrode, means for providing back conducting bias to said collector electrode with respect to said base electrode, the parameters of said transistor and said input, base electrode and output circuits being related to provide an input characteristic having a stable low current state and a stable high current state, and circuit connection means to said common impedance for simultaneously impressing a signal between all the emitter electrodes and said base electrode effective to drive the transistor from one stable point of operation to the other stable point of operation.

2,901,639
SEMI-CONDUCTOR MULTIVIBRATOR CIRCUIT
Harry J. Woll, Haddon Heights, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application December 31, 1954, Serial No. 479,048
3 Claims. (Cl. 307—88.5)



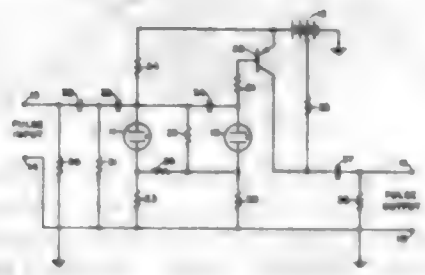
1. A monostable multivibrator circuit comprising, a first transistor of one conductivity type having a first base, a first emitter and a first collector electrode, a second transistor of an opposite conductivity type having a second base, a second emitter and a second collector electrode, means providing direct current biasing potentials for the emitter and collector electrodes of said devices, conductive circuit means directly connecting said first collector with said second base, means including a serially connected unilateral conducting element and a storage element connecting said first base with said second collector, means providing a conductive charge path for said storage element and forward biasing potentials for said unilateral conducting element connected with a point intermediate said storage element and said unilateral conducting element, means connected with said first base for applying trigger pulses thereto to render said transistors non-conductive whereby said storage element is charged, the collector-to-emitter path of said second transistor providing a conductive discharge path for said storage element, and output circuit means connected with said first collector electrode for deriving an output voltage wave therefrom.

2,901,640
TRANSISTOR GATES
Leon Steinman, Los Angeles, Calif., assignor, by mesne assignments, to Litton Industries, Inc., Beverly Hills, Calif., a corporation of Delaware
Application December 31, 1956, Serial No. 631,563
12 Claims. (Cl. 307—88.5)



1. A single transistor gate for combining first, second and third bilevel input signals to produce a bilevel output signal in accordance with a predetermined Boolean logical equation, said gate comprising: a single transistor having emitter, base and collector electrodes; means for receiving the first, second and third bilevel signals and for applying the first bilevel signal to said emitter electrode, the second bilevel signal to said base electrode and the third bilevel signal to said collector electrode to thereby produce the bilevel output signal at a predetermined one of said emitter and collector electrodes.

2,901,641
THREE-STATE ELECTRONIC CIRCUIT
Edward L. Wolf, Fairport, N.Y., assignor to General Dynamics Corporation, Rochester, N.Y., a corporation of Delaware
Application January 14, 1957, Serial No. 633,988
4 Claims. (Cl. 307—88.5)



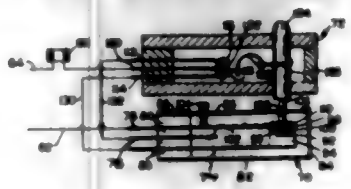
1. A circuit for indicating the relative order of occurrence of discrete pulses having a voltage amplitude at least equal to a predetermined minimum and comprising, first and second constant current gaseous diode devices, means to apply a voltage across each device that is lower than the firing potential of each device by an amount that is less than the predetermined minimum amplitude of the pulses to be indicated and with the voltage across said first device greater than the voltage across said second device, a source of pulses to be indicated, and means including a differentiating coupling network for connecting the source of pulses to be indicated across the anode electrodes of each of said devices in a manner to add to and increase the voltages across said devices to thereby cause said first device to become conductive when neither of said devices are conducting, to thereby cause said second device to become conductive and extinguish said first device when said first device is conducting, and

and common to said plurality of separate single phase

between about 2.50 to 2.98 moles of combined calcium

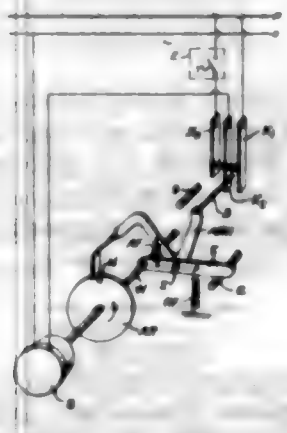
to thereby extinguish said second device when said second device is conducting, the relative states of conduction of said devices being indicative of the relative order of occurrence of pulses.

2,901,642
THERMOSTATIC TIMING CONTROL
James J. Smith, Logansport, and Robert D. Graf, Flora, Ind., assignors to Essex Wire Corporation
Application September 19, 1958, Serial No. 762,023
6 Claims. (Cl. 307—112)



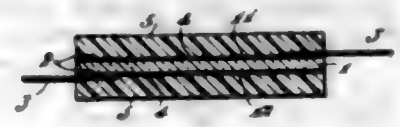
1. A thermostatic timing control for an electrical device connected to a source of eelctric power comprising a thermally responsive element, means for heating said thermally responsive element, switch means operative to open and close a circuit to said electrical device in response to heating and cooling of said thermally responsive element, second switch means operative in one position to close a circuit including said first switch means and said electrical device and operative in an alternate position to connect said electrical device and said heating means in series connection, an actuator for actuating said second switch from said one position to said alternate position, restraining means for retaining said second switch in said alternate position, said thermally responsive element being effective when heated to a predetermined temperature to overcome said restraining means for returning said second switch to said one position, and said thermally responive element being effective to open said first switch means upon returning said second switch to said one position.

2,901,643
REMOTE CONTROL RECEIVER FOR CENTRAL REMOTE CONTROL INSTALLATIONS UTILIZING AUDIO-FREQUENCY SIGNALS SUPERIMPOSED ON THE MAINS NETWORK
Hans Schmid, Zurich, and Hans Hürlimann, Baar, Zug, Switzerland, assignors to Landis & Gyr A.G., Zug, Switzerland, a body corporate of Switzerland
Application June 20, 1957, Serial No. 666,875
Claims priority, application Switzerland June 23, 1956
6 Claims. (Cl. 307—140)



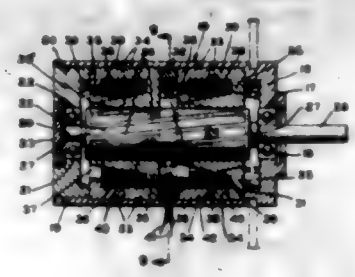
1. In a remote control receiver for central remote control installations, utilizing audio-frequency signals superimposed on the mains network and operating in accordance with the synchronous selector principle wherein order impulses in timed relation with a starter impulse are processed by means of a synchronous selector having a shaft driven by a synchronous motor to actuate a contact arrangement lying in the circuit of the synchronous motor driving the said shaft after receiving a starter impulse, and at least one contact arrangement allocated to an order impulse, means for rendering said receiver immune to interference and for increasing the sensitivity of said receiver comprising a resetting device coupled to said synchronous selector to return the synchronous selector to a neutral position on deflection form this position by impulses which do not exceed a predetermined length shorter than the starter impulse, said resetting device comprising a resetting member acting on the synchronous shaft, and a resetting spring acting on said resetting member through a resetting lever member, and a retaining member acting on the synchronous shaft, and a retaining spring acting on said retaining member through a retaining lever member.

2,901,644
ELECTROMECHANICAL DEVICE AND METHOD OF MAKING SAME
George C. Tibbetts and Raymond W. Tibbetts, Camden, Maine, assignors to Tibbetts Laboratories, Inc., Camden, Maine, a corporation of Maine
Application December 5, 1955, Serial No. 551,111
8 Claims. (Cl. 310—9.1)



1. An electromechanical assembly comprising an extremely thin, frangible piezoelectric plate, electrodes attached to opposite sides of said plate, and a facing adhered to at least one of said sides and electrodes, said facing extending over said opposite sides only to the edges of said sides, having a mass not substantially greater than that of the plate, and having an effective elastic modulus substantially less than said plate so as to permit substantially unimpeded edgewise vibration of said plate, and said facing being at least substantially one-half as thick as said plate so as to reinforce said plate flexurally, whereby said assembly may be handled without breaking said plate.

2,901,645
INDUCTION MOTORS
Harold E. Sulger, Westbury, N.Y., assignor to Porto Holding Corporation, Freeport, N.Y., a corporation of New York
Application September 18, 1956, Serial No. 610,562
4 Claims. (Cl. 310—166)



1. A polyphase induction motor comprising a plurality of separate axially spaced substantially annular single phase stator windings, each said single phase stator winding being free from electrical connection with the next adjacent stator winding, a companion pair of generally annular magnetic field pieces substantially enclosing each single phase stator winding, each pair of magnetic field pieces including generally axial circumferentially spaced interfitting pole pieces arranged to define an axial bore for a rotor, and a unitary elongated squirrel cage rotor extending rotatably through said rotor bore

defining a window opening, said coils of said first pair coating of electroluminescent phosphor and a sheet of

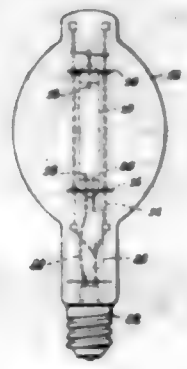
conducting element, means connected with said first base said first device when said first device is conducting, and said second device to become conductive and extinguish

and common to said plurality of separate single phase stator windings and substantially coextensive with said plurality of the stator windings, said separate single phase stator windings interacting with said rotor to produce torque thereon as a result of an effective rotating field due to the separate actions of the individual single phase stator windings.

2,901,646
HIGH PRESSURE MERCURY VAPOR LAMP AND METHOD

Vernon L. Plagge, East Orange, and Walter A. Boyce, West Orange, N.J., assignors to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania

Application April 2, 1956, Serial No. 575,485
2 Claims. (Cl. 313—17)

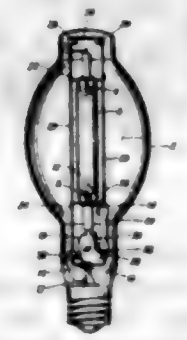


1. The method of protecting from sulphur dioxide-including-corrosive atmospheres for prolonged periods of time the soft glass outer envelope of a high-pressure mercury-vapor lamp having a low coefficient of thermal expansion inner envelope enclosing an operating charge of mercury and having electrodes operatively disposed therein, comprising exteriorly washing said outer envelope with a solution of hydrofluoric acid to substantially remove surface flaws and impurities, then exteriorly coating the washed outer envelope with an organic material consisting of a light-transmitting organically-substituted polysiloxane silicone polymer in order to impart lubricity thereto and for protecting said outer envelope during lamp operation from crazing under corrosive atmospheres.

2,901,647
DISCHARGE LAMP AND PHOSPHOR

Martha J. Thomas, Brookline, and Keith H. Butler, Marblehead, Mass., assignors, by mesne assignments, to Sylvania Electric Products Inc., Wilmington, Del., a corporation of Delaware

Application March 2, 1956, Serial No. 569,055
6 Claims. (Cl. 313—25)

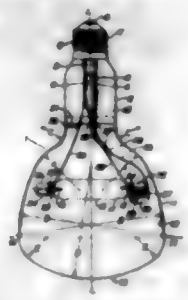


1. A high pressure mercury lamp comprising a mercury discharge tube, a transparent outer jacket around said tube but spaced therefrom, and a coating of a calcium zinc phosphate phosphor on said jacket, said phosphor comprising between about 0.1 and 0.8 mole of zinc oxide per mole of phosphorous pentoxide present, between about 2.50 to 2.98 moles of combined calcium oxide and zinc oxide per mole of phosphorous pentoxide, and about 0.03 to 0.12 mole of stannous oxide per mole of phosphorous pentoxide.

2,901,648
REFLECTOR MERCURY LAMP

Elton A. Linsday and Donald R. Phillips, Cleveland Heights, Ohio, assignors to General Electric Company, a corporation of New York

Application April 19, 1957, Serial No. 653,850
4 Claims. (Cl. 313—25)

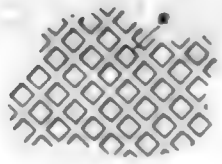


1. An electric lamp comprising a glass bulb generally symmetrical about its longitudinal axis and having a tubular neck portion extending along said axis and opening into a flaring bowl portion closed by a light-transmitting convex end face, said bowl portion being coated with a light-reflecting layer approximately up to its region of maximum diameter and having an axial length from 50% to 100% of its maximum diameter, an elongated mercury vapor arc tube within said bulb having an overall length greater than the diameter of said neck portion and not over 30% less than the axial length of said bowl portion, and a mount supporting said arc tube within the bowl portion transversely to said longitudinal axis and in a plane about midway between the maximum diameter of the bowl portion and its juncture with the neck portion.

2,901,649
IMAGE STORAGE SCREENS AND METHOD OF MAKING SAME

Albert J. Knight, Fort Wayne, Ind., assignor to International Telephone and Telegraph Corporation, a corporation of Maryland

Application June 15, 1953, Serial No. 361,655
6 Claims. (Cl. 313—68)



4. A fine mesh storage screen having strands composed predominantly of silicon monoxide and having a mesh size of between about 500 mesh and 1000 mesh, the physical characteristics of such screen being such as to permit its handling for affixation to a supporting structure, said strands being solid and without cracks.

2,901,650
ELECTROMAGNETIC DEFLECTION YOKE

William Henry Barkow, Pennsauken, and Clifford Charles Matthews, Merchantville, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Application January 27, 1956, Serial No. 561,773
19 Claims. (Cl. 313—76)

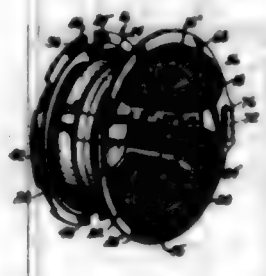
1. In combination with a cathode ray tube having a generally cylindrical neck and a flared bulbous portion, an electromagnetic deflection yoke which comprises: a first pair of electromagnetic deflection coils, each such coil having longitudinal conductors and end conductors

drical metal shell having inturned end portions forming cylindrical member comprising a relatively rigid section

a shaft driven by a synchronous motor to actuate a contact arrangement lying in the circuit of the synchronous

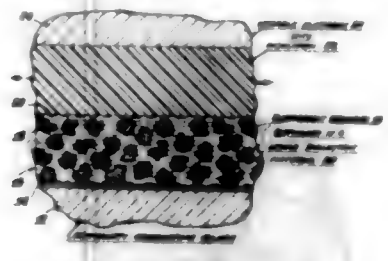
axial bore for a rotor, and a unitary elongated squirrel cage rotor extending rotatably through said rotor bore

defining a window opening, said coils of said first pair being arranged to face each other and with their longitudinal conductors being shaped, for a portion of their length, in generally cylindrical form of such diameter as to accommodate said tube neck and, for a succeeding portion of their length, flared in general conformity with the flared portion of such tube; a second pair of electromagnetic deflection coils, each such coil having longitudinal conductors and end conductors defining a window



opening therebetween, said coils of said second pair being arranged to face each other and being shaped for a portion of their length in generally cylindrical form and of said diameter and, for a succeeding portion of their length, flared in general conformity with the flared portion of such tube, said second pair of coils being arranged around said first pair with the longitudinal conductors of one pair fitting entirely within the window openings of the other pair.

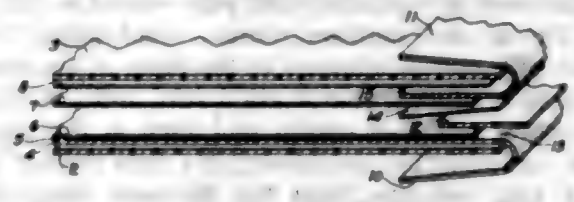
2,901,651
ELECTROLUMINESCENT CELL
Georges Destriau, Casderan, France, assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application June 21, 1955, Serial No. 517,001
4 Claims. (Cl. 313—108)



1. An electroluminescent cell comprising two parallel electrodes, at least one of which is light-transmitting, electroluminescent phosphor particles and liquid light-transmitting dielectric material contained between said electrodes, said phosphor particles exhibiting light emission when stationary in an alternating field and exhibiting enhanced light emission when rotated about their axes in an alternating field, said electrodes adapted to have applied thereto an alternating potential, said phosphor particles adapted to be rotated about their axes with respect to said electrodes, and means for effecting an axial rotation of said phosphor particles with respect to said electrodes.

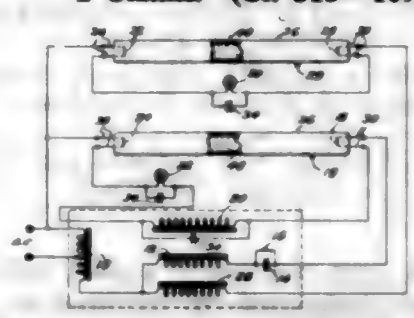
2,901,652
ELECTROLUMINESCENT LAMP CONSTRUCTION
Elmer G. Fridrich, Cleveland, Ohio, assignor to General Electric Company, a corporation of New York
Application December 10, 1957, Serial No. 701,894
4 Claims. (Cl. 313—108)

1. An electroluminescent cell comprising a laminated evacuated assembly including outer envelope sheets of thermoplastic material of which at least the front sheet has a light-transmitting portion and an electrically active assembly including a thin flexible metal foil having a coating of electroluminescent phosphor and a sheet of conducting glass fibers facing said coating, said outer envelope sheets being sealed together along their margins and overreaching the electrically active assembly, and a pair of contact foils extending out of said laminated assembly and separated by and laminated to an



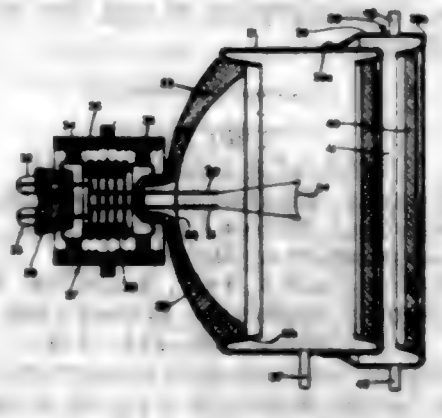
intermediate thermoplastic strip serving as an insulator, one of said contact foils being a prolongation of the metal foil of the electrically active assembly, and the other of said contact foils being a strip laid under the front thermoplastic envelope sheet and over-reaching the margin of the conducting glass sheet and in conductive engagement therewith.

2,901,653
FLUORESCENT LAMP
John F. Gilmore, Verona, N.J., assignor to Westinghouse Electric Corporation, East Pittsburgh, Pa., a corporation of Pennsylvania
Application April 22, 1957, Serial No. 654,294
2 Claims. (Cl. 313—109)



1. A fluorescent lamp comprising, a phosphor-coated, double-ended and radiation-transmitting envelope, operatively-disposed electrodes positioned at the ends of said envelope, lead conductors sealed through the ends of said envelope and electrically connected to said electrodes, a small charge of mercury within said envelope, an argon gas fill at a pressure of from 1.5 mm. to 6 mm. within said envelope, and said envelope also having an additive xenon gas fill of from 0.5% to 1% by volume of said argon.

2,901,654
REFLECTING ELECTRIC LAMP
Elman B. Myers, Pompton Lakes, N.J., assignor to Scarborough Associates, Inc., New York, N.Y., a corporation of New York
Application March 16, 1955, Serial No. 494,742
14 Claims. (Cl. 313—113)



5. A reflecting-type lamp for producing a sharply-defined illuminated area comprising an open-ended cylin-

2,901,658

cathode for generating a beam of electrons which is

of zinc oxide per mole of phosphorous pentoxide present, coil having longitudinal conductors and end conductors

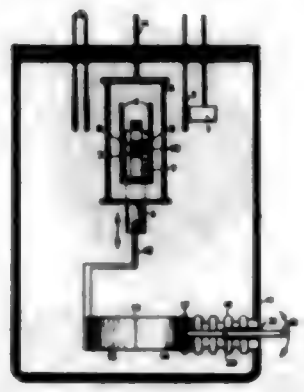
drical metal shell having inturned end portions forming single bellows, each bellows having a tapered inner lip, a Mangin reflector enclosing one end of said shell and peripherally-sealed to the tapered inner lip of the bellows thereat, said reflector having a tapered periphery complementary to the taper of the associated bellows to provide a compression seal, a glass window plate enclosing the other end of said shell and edge-sealed to the tapered inner lip of the bellows thereat, said plate having a tapered edge complementary to the taper of the associated bellows to produce a compression seal, and a substantially flat filament mounted within said shell at the focal position of said reflector and having one face thereof directed toward said reflector, said flat filament being disposed perpendicularly relative to the optical axis of said reflector.

2,901,655
REFLECTING ELECTRIC LAMP
Elton A. Linsday, Cleveland Heights, and Quentin D. Dobras, Cleveland, Ohio, assignors to General Electric Company, a corporation of New York
Application November 10, 1955, Serial No. 546,154
2 Claims. (Cl. 313—113)

1. An electric lamp comprising a glass bulb having a coated reflecting surface of double contour including major and minor portions and closed by a light-transmitting end face and containing a single compact high intensity light source, the major portion of the reflecting surface having a closed paraboloidal contour defined by revolving about the bulb axis a parabola having its axis at an acute angle to the bulb axis and its focus spaced from said bulb axis toward the parabola, the light source having its geometric center located substantially in the bulb axis and below the plane normal to the bulb axis and containing the locus of the focal points of the paraboloid so that light rays projected from said geometric center toward one side of said major reflecting surface are reflected thereby across the said bulb axis before passing through the said end face, the minor portion of said reflecting surface being joined to the outer edge of said major portion and flared outward to a maximum diameter where it joins the end face of the bulb so that light rays projected from said geometric center toward said minor reflecting surface are reflected through the adjacent portion of said face without crossing said bulb axis.

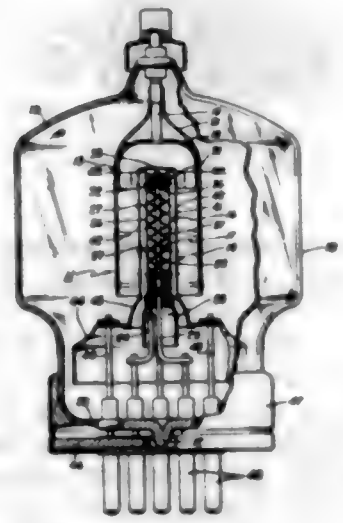
2,901,656
LINKAGE MECHANISM
Frederik Coeterier, Eindhoven, Netherlands, assignor to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application April 4, 1957, Serial No. 650,744
Claims priority, application France April 13, 1956
2 Claims. (Cl. 313—148)

1. An electron discharge tube comprising an evacuated envelope; a flexible section in the wall of said envelope; a first rod extending through said flexible section and being pivoted to move in a limited orbital path; a hollow cylindrical member comprising a relatively rigid section including approximately ⅔ of the circumference thereof and a relatively flexible section including the remainder of the circumference thereof, said rod being attached to the central part of said rigid section with the axis of said cylindrical member substantially parallel to the plane of movement of said rod and substantially perpendicular to



the axis of movement of said rod; a second rod having one end connected to the central part of said flexible section diametrically opposite said central part of said rigid section and extending along a generatix of said cylindrical member; and an electrode constrained to move along a rectilinear path within said envelope, said electrode being connected to the other end of said second rod.

2,901,657
ELECTRODE STRUCTURE FOR ELECTRON
William R. Stuart, Millbrae, Calif., assignor to Eitel-McCullough, Inc., San Bruno, Calif., a corporation of California
Application July 30, 1956, Serial No. 600,807
4 Claims. (Cl. 313—257)

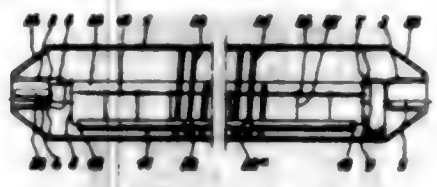


1. An electron tube grid comprising a plurality of U-shaped wire bars having the legs thereof extending longitudinally of the grid to define circumferentially spaced elements of a cylinder, a supporting base to which said wires are secured at one end of the cylinder, and at the other end of the cylinder an insulating member having opposite faces thereof extending transversely of the cylinder, the base of certain of said wire bars extending across and engaging one face of said member, and the base of others of said wire bars extending across and engaging the other face of said member, whereby said member is gripped between said wire bars to form with the latter a rigid structure.

assembly including a thin flexible metal foil having a

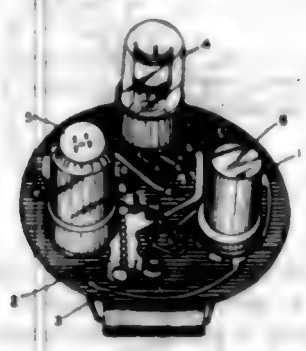
3. A reflecting-type lamp for producing a sharply-defined illuminated area comprising an open-ended cylin-

2,901,658
METHOD OF MANUFACTURING A PARTLY SILVERED TUBULAR INCANDESCENT LAMP
Johannes Gerardus Pero, Simon Wijnberg, and Wilhelm Honing, Eindhoven, Netherlands, assignors, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware
Application January 4, 1956, Serial No. 557,366
Claims priority, application Netherlands January 5, 1955
2 Claims. (Cl. 313—279)



1. A tubular incandescent lamp comprising an elongated glass envelope being at least partly silvered internally, a plurality of detachable, resilient helical straps engaging at least a portion of the inner periphery of said glass envelope, an elongated support in said glass envelope extending parallel to the longitudinal axis of said envelope, a U-shaped resilient clamp secured to one of said helical straps and fixed to said elongated support, a filament, and means for securing said filament to said elongated support.

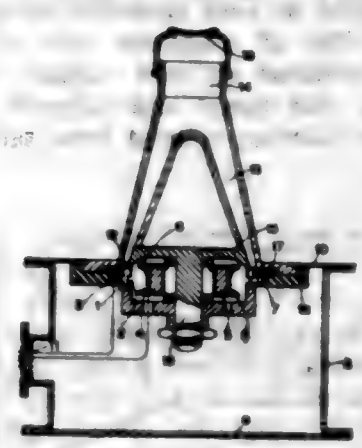
2,901,659
PRINTED CIRCUIT SURGE RELIEF GAP
William H. Beaubien, Beverly, Mass., assignor to General Electric Company, a corporation of New York
Application March 25, 1954, Serial No. 418,718
12 Claims. (Cl. 313—309)



1. Apparatus forming an electric surge relief gap and comprising two metallic conductor films each of which is bonded to an insulating base in juxtaposed position to the other and each of which respectively terminates at an edge of opposite sides of an elongated aperture extending through said base.

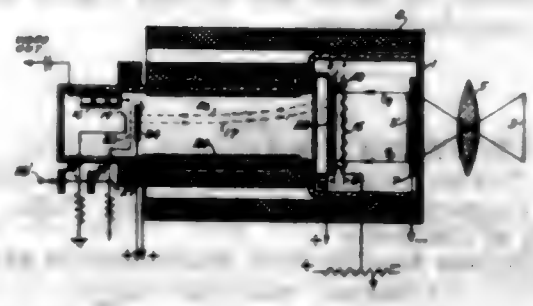
2,901,660
ELECTRON DISCHARGE DEVICES EMPLOYING CAVITY RESONATORS
Albert Frederick Pearce, Denison, Gerrards Cross, and Douglas Jaques Wootton, Bredon, Harrow, England, assignors to Electric & Musical Industries Limited, Hayes, England, a British company
Application April 7, 1954, Serial No. 421,542
Claims priority, application Great Britain April 10, 1953
18 Claims. (Cl. 315—5.52)

1. An electron discharge device comprising a toroidal cavity resonator, said resonator having two annular oppositely disposed walls each formed with an annular opening said openings together forming an annular gap, a cathode for generating a beam of electrons which is adapted to pass through said annular gap, said resonator having at least one opening other than an electron beam passing opening separate from said openings forming said annular gap and spaced from and symmetrically disposed



about the axis of said resonator and constituting energy transferring means which transfers energy externally of the resonator to provide substantially uniform loading of said resonator and thereby to reduce the liability of said resonator to oscillate in an unwanted mode.

2,901,661
TELEVISION PICKUP TUBE CIRCUIT ARRANGEMENTS
Robert Groff Neuhauser, Lancaster, Pa., assignor to Radio Corporation of America, a corporation of Delaware
Application March 1, 1955, Serial No. 491,481
12 Claims. (Cl. 315—11)



1. In a television system, the combination including a pickup tube comprising a target electrode adapted to have a charge image formed thereon corresponding to an optical image of an object, and means including an electron gun for producing an electron beam, said electron gun having a cathode and an intensity control electrode, means for angularly deflecting said beam for scanning said target electrode to develop signals representative of said charge image, said signals being subject to shading distortion, and means for varying the potential of the cathode and control electrode of said electron gun relative to the potential of said target electrode as a function of the beam deflection angle to compensate for said shading distortion of said signals.

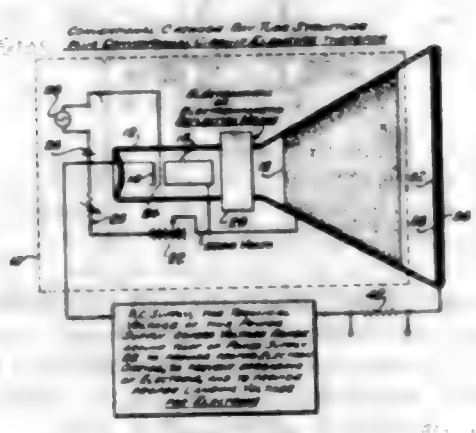
2,901,662
ELECTRONIC STORAGE DEVICE
Seymour Nozick, New York, N.Y.
Application March 15, 1955, Serial No. 494,591
12 Claims. (Cl. 315—12)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. An electronic storage device comprising; a support; a target mounted on said support and including a conductor, one side of said conductor being formed with a continuous, substantially flat surface, a film of signal storage material of ionic crystals covering the one side

constitute a cathode-anode space, said anode structure

2,901,668

of said conductor and of uniform thickness and surface continuity over its entire face area, the thickness of said film of signal storage material being on the order of several microns, and a uniform film of conductor covering said film of signal storage material; said film of conductor having a thickness on the order of one micron; first means adapted to emit electrons mounted on said support on the film of conductor side of said target; second means mounted on said support between said first means and said target and adapted for forming into a beam the electrons emitted from said first means



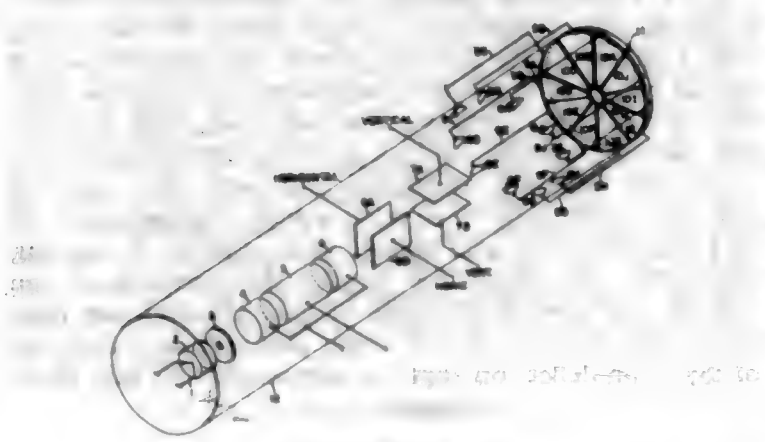
and for directing the beam toward said target to reach said crystals before said conductor; third means mounted on said support between said first means and said target and adapted for modulating the electron beam, a high voltage power supply connected between said first means and said second means; means for connecting said film of conductor directly to said first means whereby they are at substantially the same potential; an output load resistor connected at one end to said first-mentioned conductor; and a second high voltage power supply connected between the other end of said output load resistor and said first means.

2,901,663

ELECTRONIC DIGITIZING DEVICE

Searle G. Nevius, Tujunga, Calif., assignor to Telecomputing Corporation, North Hollywood, Calif., a corporation of California

Application July 15, 1957, Serial No. 671,816
10 Claims. (Cl. 315—12)



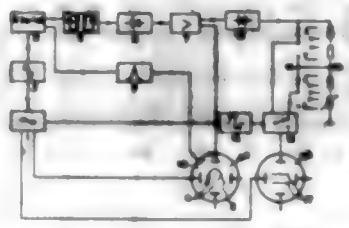
1. An electronic digitizing device for converting simultaneous sine and cosine voltages into discrete step-function signals comprising means for projecting a beam of electrons, means responsive to variable phase quadrature signals for deflecting said electron beam, means for holding said beam and detecting the presence of said beam at discrete increments over its path, and means for varying said phase quadrature signals in response to information to be digitized, said beam being solely under the influence of said deflecting means and said holding means.

2,901,664

CIRCUIT-ARRANGEMENT FOR PRODUCING ADJUSTABLE REFERENCE LINES ON THE PICTURE SCREENS OF CATHODE-RAY TUBES SIMULTANEOUSLY WITH THE CURVE OF A PHENOMENON

Klaus Firmenich, Wetzlar, Germany, assignor, by mesne assignments, to North American Philips Company, Inc., New York, N.Y., a corporation of Delaware

Application March 13, 1956, Serial No. 571,305
Claims priority, application Germany May 5, 1955
9 Claims. (Cl. 315—22)



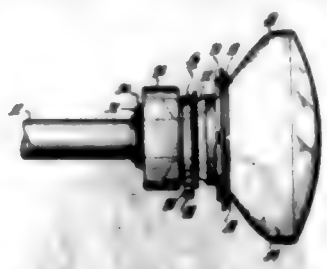
1. An electrical measuring system comprising a display device having a screen means for producing an electrical signal curve to be measured, said signal curve having a peak value, means connected to display said curve on said screen, means for generating one or more reference voltage signals which are proportional to a fraction of the peak value of said curve, and means connected to display said reference voltage signals on said screen.

2,901,665

CATHODE RAY TUBE DEFLECTION YOKE

William Henry Barkow, Pennsauken, and Clifford C. Matthews, Merchantville, N.J., assignors to Radio Corporation of America, a corporation of Delaware

Application February 13, 1956, Serial No. 564,897
18 Claims. (Cl. 315—27)



1. An electromagnetic deflection yoke for a cathode ray tube having a generally cylindrical neck and a flared bulb whose contour is generally parabolic, said yoke comprising: a pair of deflection coils, said coils being arranged in opposing relation and shaped, for at least a portion of their length, with a generally parabolic contour so that said coils may conform to the flared contour of such tube, the parabolic contour of said bulb and the parabolic contour of said coils being defined by the equation $y=ax^2+C$, where x and y are the loci of points defining a parabolic curve in a system of rectangular coordinates and C is a constant.

2,901,666

MAGNETRON OSCILLATORS

Herbert Strumith, Reading, England, assignor to English Electric Valve Company Limited, London, England, a British company

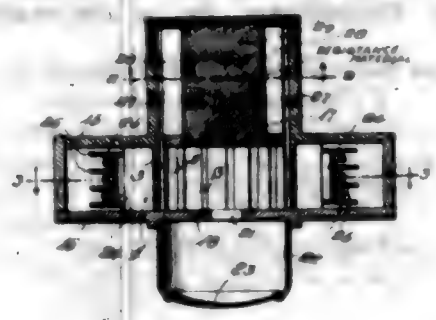
Original application December 26, 1951, Serial No. 263,280, now Patent No. 2,815,469, dated December 3, 1957. Divided and this application July 29, 1957, Serial No. 674,675
Claims priority, application Great Britain January 8, 1951
4 Claims. (Cl. 315—39.51)

1. A magnetron oscillator comprising an anode structure and a cathode spaced from the anode structure to

ductor which together with its distributed capacitance connecting the battery and said relay contact and said

positely disposed walls each formed with an annular opening said openings together forming an annular gap, a continuous, substantially flat surface, a film of signal storage material of ionic crystals covering the one side

constitute a cathode-anode space, said anode structure comprising a plurality of discrete anode members each of said members comprising a pair of limbs that are disposed substantially parallel to and spaced from each other and joined at their ends by a third limb that surrounds a cylindrical space, each of said pairs of anode limbs enclosing a longitudinal cavity resonator, upper and lower portions connected to opposite ends of said pairs of anode limbs closing said cylindrical space constituting said cylindrical space a cylindrical cavity resonator, said cathode comprising a cylindrical cathode dis-

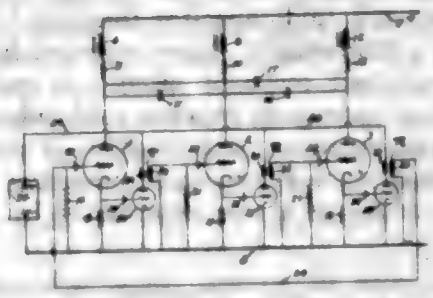


posed coaxially with and surrounding and spaced from said anode structure and having a cylindrical activated surface facing said anode structure, couplings between the cathode anode space and said cylindrical cavity resonator, said couplings comprising the spaces between said pairs of anode members, and out-coupling means coupled to said cylindrical cavity resonator for extracting oscillatory energy therefrom, and damping means for suppressing undesired higher modes of oscillation, said damping means comprising an annular coupling slot and resistive loading means coupled thereby.

2,901,667
FLASHING INCANDESCENT LAMP
William E. Kotsch and Stanley C. Ackerman, Cleveland Heights, Ohio, assignors to General Electric Company, a corporation of New York
Application February 4, 1957, Serial No. 638,080
6 Claims. (Cl. 315—72)

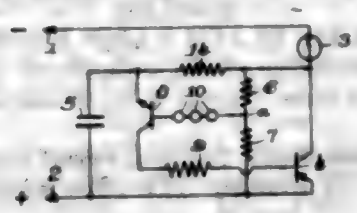
2. A flashing incandescent lamp comprising a sealed glass envelope having a glass support member therein, a pair of lead-in conductors sealed into said envelope, a bi-metallic strip in said envelope having an end free of electrical connections thereto embedded in said glass support member with the glass thereof surrounding the said embedded end to electrically insulate it therein, the embedded end of said bi-metallic strip having a surface projection on one of its flat sides forming a transverse shoulder thereon positively locking the bi-metallic strip in place in said glass support member against withdrawal therefrom, the other end of said bi-metallic strip being free and located adjacent one of said conductors and in normal pressure contact therewith in position to flex away and disengage therefrom when heated, the sole electrical connection of said bi-metallic strip to said one conductor being its said pressure contact therewith when in its normal unheated position, and a filament in said envelope having one end directly connected to and supported by the free end of said bi-metallic strip and its other end directly connected to and supported by the other of said conductors.

2,901,668
COUNTING CIRCUIT
Albert G. Thomas, Charlottesville, Va., assignor to Industrial Controls Corporation, Chattanooga, Tenn., a corporation of Tennessee
Application September 19, 1957, Serial No. 684,969
16 Claims. (Cl. 315—84.5)



1. In a counting circuit, a plurality of principal grid-controlled current control devices, a plurality of auxiliary grid-controlled current control devices associated therewith, means conductively connecting said principal current control devices and said auxiliary current control devices to affect the electrical conductivity thereof as a result of steady current flow in said principal current control devices, means electrically connecting said auxiliary current control devices with said principal current control devices to affect the electrical conductivity thereof as a result of pulsed current flow in said auxiliary current control devices, and means for producing intermittent current flow in said auxiliary current control devices.

2,901,669
DAYTIME OFF SOLAR CELL FLASHER CIRCUIT
Joseph J. Coleman, Freeport, Ill., assignor, by mesne assignments, to Servel, Inc., Evansville, Ind., a corporation of Delaware
Application June 6, 1958, Serial No. 740,243
7 Claims. (Cl. 315—158)



1. In an electric lamp flasher comprising a pair of terminals adapted to be connected to a direct current source, an electric lamp in series circuit therewith, a pair of semiconductive devices each of which is of an oppositely conducting type with respect to the other, each of said devices having a control element and a pair of load elements, the load elements of the first of said semiconductive devices being in series with said lamp circuit, and the control element of said first semiconductive device being connected to a load element of said second semiconductive device, and means for intermittently applying a current to the control element of said second semiconductive device, the improvement which comprises means for disabling said flasher during daylight, said means comprising a solar cell connected to said second semiconductive device to bias it to the conducting condition when less than a predetermined amount of light falls on said photoelectric device and to the nonconducting condition when more than said predetermined amount of light falls on said photoelectric device.

2,901,670
IGNITION SYSTEM
David E. Sunstein, Bala-Cynwyd, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania
Application January 24, 1956, Serial No. 560,976
2 Claims. (Cl. 315—200)

1. In an ignition system, a source of relatively low D.-C. voltage, an energy-storage device including an in-

state to an active state, thereby changing the amplitude

first contact of the succeeding relay of said series, and

fluence of said deflecting means and said holding means.

ture and a cathode spaced from the anode structure to

ductor which together with its distributed capacitance forms an effective resonant circuit having a relatively high resonant frequency, a circuit interconnecting said source and said device, means for recurrently closing and opening the latter circuit to effect recurrent storage of energy from said source in said device, a capacitor connected to said inductor for transfer of said energy to the capacitor, said inductor and said capacitor forming a resonant circuit having a substantially lower resonant frequency than the first-mentioned resonant circuit, a unilaterally-conductive device connected between said inductor and said capacitor and poled so that transfer of energy to said capacitor takes place in response to opening of said interconnecting circuit at a rate determined by the resonant

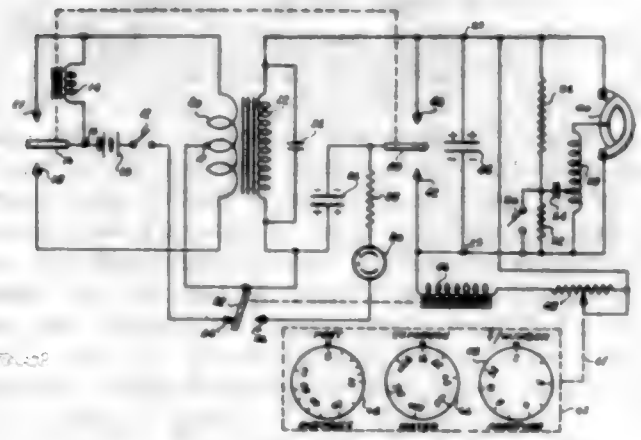
frequency of said inductor and said capacitor, the first-mentioned resonant circuit causing abrupt reversal of polarity of the voltage across said inductor when substantially all of the energy has been transferred to said capacitor, a discharge circuit connected to said capacitor, an arc device in said discharge circuit connected to the junction of said unilaterally-conductive device and said capacitor, said arc device having a starting electrode, means connecting said starting electrode to the junction of said inductor and said unilaterally-conductive device to initiate discharge of said capacitor in response to the aforementioned abrupt reversal of polarity of the voltage across said inductor, and means responsive to the discharge of said capacitor for producing a high voltage pulse.

2,901,671

CONTROLLED FLASH LAMP POWER SUPPLY

David Most, Brooklyn, N.Y., assignor to ACR Electronics Corporation, New York, N.Y., a corporation of New York

Application April 5, 1956, Serial No. 576,467
12 Claims. (Cl. 315—219)



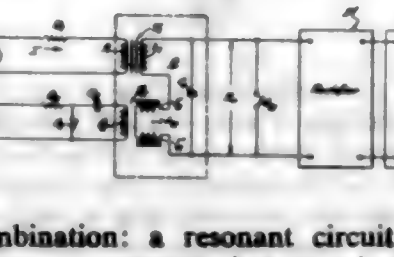
1. A controlled power supply for a photoflash tube for use with a camera having a camera control including in combination a battery, a storage capacitor, a relay contact, a relay armature, said armature and said contact forming a normally closed switch, a relay winding for actuating the relay armature to open said normally closed switch upon a predetermined current flow through said winding, a resistor, means connecting the relay winding and the resistor in series, means responsive to the actuation of the camera control for varying the resistance of said resistor, a circuit for producing unidirectional output pulses said circuit having a pair of input terminals and a pair of output terminals and including a voltage doubling capacitor and vibrator means and a transformer, means connecting the battery and said relay contact and said relay armature forming said normally closed switch in series across the input terminals, means for connecting the storage capacitor across said output terminals and means for connecting the series-connected relay winding and resistor in parallel with said storage capacitor.

2,901,672

INTERNAL COMBUSTION ENGINE IGNITION SYSTEMS

James L. Lauer, Philadelphia, Pa., assignor to Sun Oil Company, Philadelphia, Pa., a corporation of New Jersey

Application September 27, 1957, Serial No. 686,635
3 Claims. (Cl. 315—226)



1. Apparatus for suppressing spark plug fouling in a spark ignition internal combustion engine, comprising a unidirectional power source having a voltage insufficient to ignite a combustible fuel mixture when applied across the electrodes of a spark plug in contact with said fuel mixture, a first circuit between said source and the electrodes of at least one spark plug in said engine, a first controllable contact in said circuit, a source of firing potential for said plug, a second circuit between said firing potential source and the electrodes of said plug, a second controllable contact in said second circuit, common means for operating both of said contacts in such a manner that said first contact is closed when said second contact is opened, and vice versa, thereby to connect said unidirectional power source across the electrodes of said plug only when said firing potential source is disconnected therefrom and to disconnect said unidirectional power source from the electrodes of said plug when said firing potential source is connected thereto.

2,901,673

RELAY CIRCUIT

Thomas H. Wiancko, Altadena, Calif.

Application December 14, 1954, Serial No. 475,041
24 Claims. (Cl. 315—228)

1. In combination: a resonant circuit comprising a linear inductor, a saturable inductor including a magnetic core, and a condenser connected in series in closed loop; a source of A.C. voltage coupled to said closed loop, said resonant circuit having two stable states of operation and an unstable transition region therebetween at the frequency of said source, said two stable states of operation being characterized by high and low amplitudes of voltage respectively, at the frequency of said source, in said resonant circuit whereby said circuit has an active state in which the amplitude of the A.C. current in said loop is high and an inactive state in which the amplitude of said A.C. current is low; means for changing said resonant circuit through said unstable transition region between said two stable states comprising means for selectively saturating the core of said saturable inductor momentarily to change said resonant circuit from an inactive

larized load device will respond only when the magnetic

the other end thereof and projecting toward said one end

connected to and supported by the other of said conductors.

1. In an ignition system, a source of relatively low D.-C. voltage, an energy-storage device including an in-

state to an active state, thereby changing the amplitude of said A.C. current from such a low value to such a high value if said amplitude is low just prior to the time that said core is saturated; said means for changing including means for selectively reducing the current in said loop to change said resonant circuit from an active state to an inactive state, thereby changing the amplitude of said A.C. current from such a high value to such a low value if said circuit is active at the time said current is reduced; and a utilization device controlled by said resonant circuit in accordance with the amplitude of A.C. voltage therein.

2,901,674

HIGH FREQUENCY LUMINESCENT SIGN

Seymour Cuker, Whitestone, N.Y., assignor, by mesne assignments, to Jacqueline Modes, Inc., New York, N.Y., a corporation

Application February 9, 1956, Serial No. 564,459
9 Claims. (Cl. 315—248)

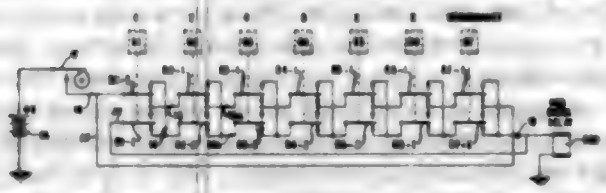
1. A high frequency luminescent display sign having individual, gaseous discharge tubes, comprising means for supporting said tubes in an upright position, said means including a base member formed with a longitudinal channel for receiving therein stem portions of said tubes, a pair of longitudinally extending, closely spaced electrodes respectively located on either side of said channel, a third electrode on said support means remotely spaced from one of said pair of electrodes and in a common plane therewith which is disposed at an angle to a common plane including said pair of electrodes.

2,901,675

ERROR CHECKING APPARATUS

Merle E. Homan, Poughkeepsie, N.Y., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application September 9, 1957, Serial No. 682,968
2 Claims. (Cl. 317—140)



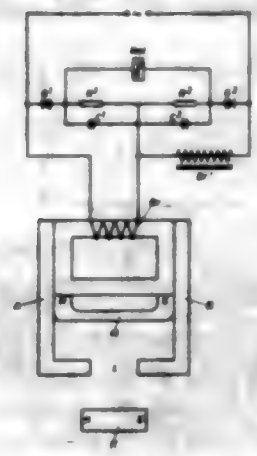
1. In an analyzing network of the type controlled by a series of relays wherein the network includes for the first relay of said series a single transfer contact having a transfer strap and a normally open and normally closed contact side, and for each of the other relays of said series, a first and second transfer contact each having a transfer strap and a normally open and a normally closed contact side, the normally closed contact side of the first transfer contact of each relay being electrically commoned with the normally open contact side of the second transfer contact of that same relay and also electrically commoned with the transfer strap of the first transfer contact of the succeeding relay, with the normally open contact side of the first transfer contact of each pair being electrically commoned with the normally closed contact side of the second transfer contact of that same relay and also electrically commoned with the transfer strap of the second transfer contact of the succeeding relay, the normally closed contact side of the single transfer contact of the first relay of said series being electrically connected to the transfer strap of the first contact of the succeeding relay of said series, and the normally open side of the single transfer contact of the first relay of said series being electrically connected to the transfer strap of the second contact of the succeeding relay of said series with a circuit being available from an impulse signal source feeding the transfer strap of said single transfer contact, through said network when an odd number of said relays are energized and their associated contacts transferred, to an impulse responsive device electrically connected to the electrically commoned normally open contact side of the first transfer contact and normally closed contact side of the second transfer contact of the last relay of said series; further characterized by auxiliary apparatus for providing an auxiliary circuit path through said analyzing network from said impulse signal source to said impulse responsive device when an odd number of relays of said series are energized, said auxiliary apparatus comprising, an additional transfer contact for the first relay of said series, said additional contact having a transfer strap and a normally open contact side with an electrical connection therefrom to the normally closed contact side of the transfer contact of that relay, said additional contact also having a normally closed contact side with an electrical connection therefrom to the normally open contact side of said other transfer contact of that relay; and electrical connection linking said input signal source to the electrically commoned normally closed contact side of the first transfer contact and the normally open side of the second transfer contact of the last relay of said series, and an electrical connection linking the transfer strap of said additional transfer contact to said impulse responsive device.

2,901,676

ARRANGEMENT TO PRODUCE ELECTRICAL SIGNALS THROUGH AFFECTING A MAGNETIC CIRCUIT

Fritz H. Mittag, Berlin-Friedenau, Germany, assignor to International Standard Electric Corporation, New York, N.Y., a corporation of Delaware

Application March 15, 1955, Serial No. 494,440
Claims priority, application Germany March 16, 1954
3 Claims. (Cl. 317—150)



1. In an electric signalling device, a source of alternating current, first and second circuits each comprising a rectifier, an inductance and a resistance, means for applying current from said source to said first and second circuits, a polarized load device connected in a third circuit including in series connection said resistances of said first and second circuits, a core of magnetic material associated with said inductance of said first circuit, a permanent magnet member adapted to be moved into proximity with said core to change the equilibrium of said first and second circuits, and means for premagnetizing said core in a predetermined direction whereby said po-

winding short-circuited, and a selsyn receiver, the rotor of which is provided with two single-phase windings in

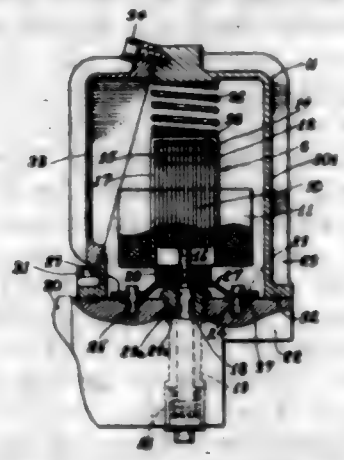
connected with said surface for moving the latter, reference means for developing a signal corresponding in

capacitor and vibrator means and a transformer, means

mentarily to change said resonant circuit from an inactive

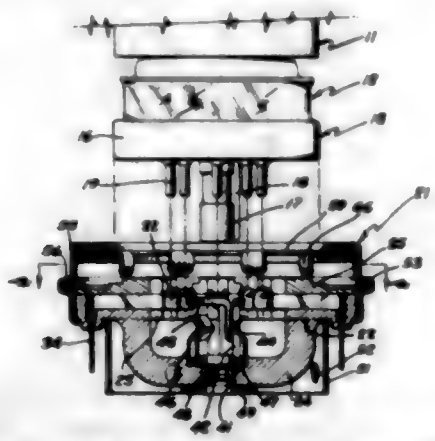
larized load device will respond only when the magnetic field of said permanent magnet member has a predetermined direction relative to the direction of the field set up in said core by said premagnetizing means.

2,901,677
SOLENOID MOUNTING
Samuel C. Chessman and Kenneth H. Meyer, Salem, Ohio, assignors to Hunt Valve Company, a corporation of Ohio
Application February 24, 1956, Serial No. 567,489
12 Claims. (Cl. 317—195)



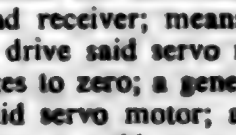
1. For use with a movable mechanism including a rigid member providing a supporting surface, a solenoid having a core, a coil, and a plunger movable by energization of said coil, a mounting plate rigidly connected to the core of said solenoid for supporting the latter from said supporting surface in operable relation with said movable mechanism whereby said plunger is positioned to operate the same, and resilient means interposed between said mounting plate and said supporting surface for cushioning said mounting plate against shock caused by movement of said plunger.

2,901,678
ELECTRON TUBE SOCKET
Lowell A. Noble and Richard H. Chamberlin, San Bruno, Calif., assignors to Eitel-McCullough, Inc., San Bruno, Calif., a corporation of California
Application October 5, 1956, Serial No. 614,236
9 Claims. (Cl. 317—257)



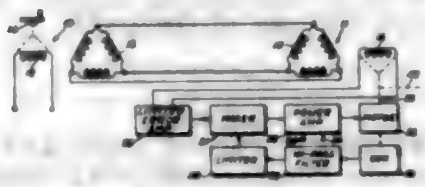
1. A tube socket for electron tubes of the type having a plurality of prong type terminals and a ring type terminal, said socket comprising a plurality of resilient contact elements forming a plurality of contact apertures, each of said contact apertures having its axis parallel to the axes of the other contact apertures, supporting means for said contact elements comprising insulating material separating said contact elements one from the other, a metal shield ring, one end of said shield ring being mounted on said supporting means, and a circle of resilient contact fingers around the inside of said shield ring, said contact fingers being insulatingly mounted on said shield ring adjacent the other end thereof and projecting toward said one end thereof in substantial parallelism with the axes of said apertures, and the circle of said contact fingers being of large enough diameter to encircle all of said contact apertures.

2,901,679
FERROELECTRIC DEVICES
Bernd T. Matthias, Berkeley Heights, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application February 18, 1955, Serial No. 489,193
10 Claims. (Cl. 317—262)



10. An electrical memory device which comprises in combination a ferroelectric element of crystalline material comprising guanidinium aluminum sulphate hexahydrate in the trigonal form and a pair of electrodes coupled in electrical contacting relation with the surfaces of said element.

2,901,680
FEEDBACK CIRCUITS FOR SERVO APPLICATIONS
Lemuel Goldman, Jr., Pennsauken, N.J., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application October 18, 1956, Serial No. 616,897
4 Claims. (Cl. 318—28)



3. A servo system comprising; a servo transmitter and a servo receiver constituting an error detector detecting the position errors existing between the transmitter and receiver and converts said position errors into error signal voltages; a servo motor for correcting the errors between the transmitter and receiver; means coupling the error signal voltages to drive said servo motor to reduce the error signal voltages to zero; a geneartor of output voltages driven by said servo motor; and a feedback loop from said generator to said means coupling the error signal voltage to drive said servo motor, said feedback loop having a high-pass filter and a limiter for limiting the amplitude of said generated voltages to less than the amplitude of said error signal voltages whereby the error signal voltages remain dominant in the mixed voltages which are amplified and applied directly to said servo motor to produce high acceleration of the servo motor in accordance with the magnitude of the error between the transmitter and receiver of the servo system.

2,901,681
REMOTE ANGULAR POSITION CONTROL SYSTEM
Leslie Carter Ludbrook, Cawston, near Rugby, England, assignor to The British Thomson-Houston Company Limited, London, England, a British company
Application April 21, 1958, Serial No. 729,862
4 Claims. (Cl. 318—30)

1. A remote angular position control system comprising a selsyn transmitter having its single-phase rotor

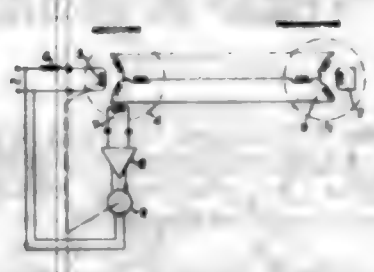
connected across said current sensitive means, and at least

2,901,686

being electrically connected to the transfer strap of the single transfer contact of the first relay of said series

said core in a predetermined direction whereby said po- first and second circuits, and means for premagnetizing

winding short-circuited, and a selsyn receiver, the rotor of which is provided with two single-phase windings in space quadrature, one of the rotor windings being connected through resistance to a source of single-phase supply, while the other, or quadrature, winding is con-



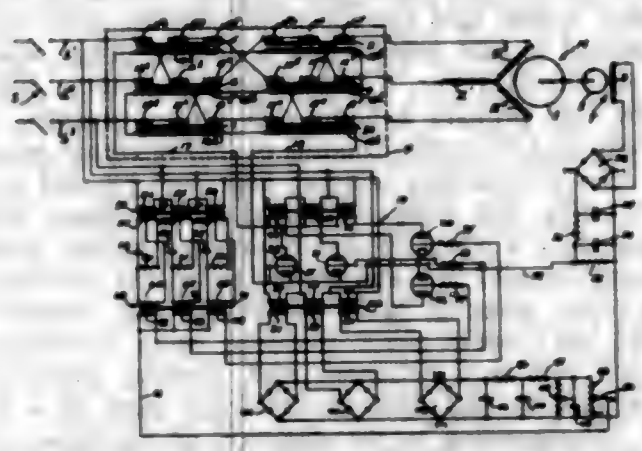
nected through amplifying means to energize an electric motor coupled with the receiver whereby to rotate the receiver into angular positional alignment with the transmitter in response to single-phase voltages induced in the quadrature winding.

2,901,682

CONTROL DEVICES FOR ALTERNATING-CURRENT MOTORS AND THE LIKE

Wilson A. Charbonneaux and John J. Velesky, Dayton, Ohio, assignors to Wac Line, Inc., Dayton, Ohio, a corporation of Ohio

Application March 11, 1957, Serial No. 645,128
6 Claims. (Cl. 318—229)



1. For use with polyphase alternating-current induction motors and the like; control means comprising reactors interposed in each phase of the motor current-supply, means for producing a stable reference voltage, means for producing a sensory voltage, the value of which varies responsive to the variation in speed of the motor means for combining said reference and sensory voltages whereby to produce a control voltage which is the algebraic sum of the reference and sensory voltages, a control winding for the reactors, said control winding being formed by separate windings for each reactor, said windings being connected in series, first grid-controlled electron tube means for modifying the current in said control windings responsive to variations in said control voltage, and second electron tube means for maintaining a substantially continuous flow of current through said control winding.

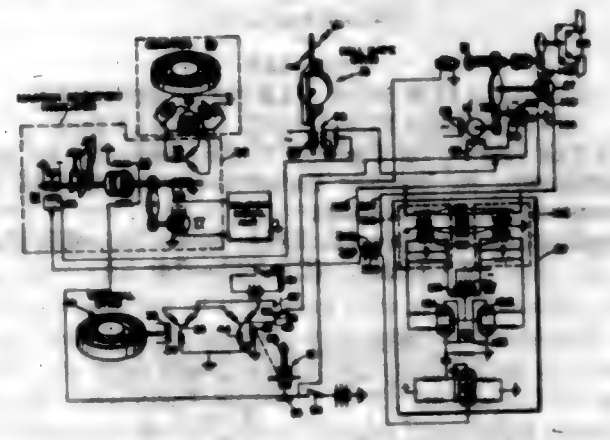
2,901,683

DAMPING ARRANGEMENT FOR AUTOPILOT SERVOSYSTEMS

Alfred Bennett, New York, N.Y., and Raymond I. Meyers, Hasbrouck Heights, N.J., assignors to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware

Application April 24, 1953, Serial No. 350,830
5 Claims. (Cl. 318—489)

2. In an automatic steering system for an aircraft having a control surface thereon, a servomotor operatively connected with said surface for moving the latter, reference means for developing a signal corresponding in phase and amplitude to the direction and extent of deviation of the craft from a predetermined reference, means connecting said reference means and said servomotor for operating the latter from said signal including means for detecting the phase of the signal and developing a corresponding output, normally balanced saturable reactor



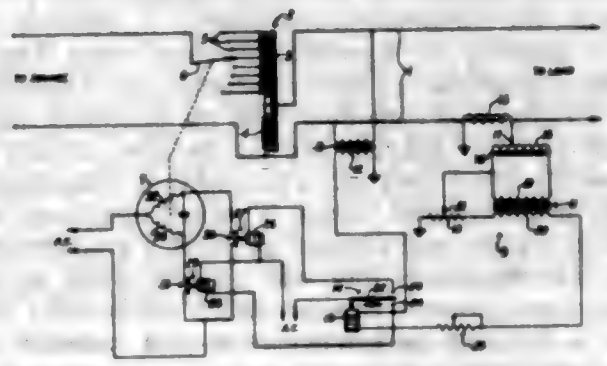
means responsive to said output for developing a delayed amplified signal corresponding to said output when unbalanced thereby, and means operatively connected between said last named means and said motor and with said reference means for feeding a portion of said delayed amplified signal back to said reference means in opposition to said reference signal whereby said servomotor is operated by a combination of said reference signal and said feedback portion.

2,901,684

LINE DROP COMPENSATING CIRCUIT

Raymond J. Bronikowski, Milwaukee, Wis., assignor to McGraw-Edison Company, Milwaukee, Wis., a corporation of Delaware

Application August 30, 1957, Serial No. 681,219
8 Claims. (Cl. 323—66)



7. A voltage regulating system for an electrical circuit having distribution lines and including electroresponsive means to adjust the line voltage at a control center to maintain a relatively constant voltage at a load center, which comprises voltage sensitive means operatively associated with the lines at the control center to establish a signal voltage proportional to the line voltage, current sensitive means operatively associated with the lines to establish a current in phase with the line current, an adjustable resistance potentiometer having a resistor connected in series circuit with said signal voltage and having a tap adjustably connecting the resistor across said current sensitive means in proportion to the total resistance between said control center and said load center, a reactor winding connected in a series circuit with said resistor and said voltage sensitive means to establish a control voltage to control said electroresponsive means, a primary winding inductively connected to said reactor winding, and an adjustable autotransformer having a first set of terminals across said primary winding and a second set of terminals

ting electrodes, and adjusting the spherical directivity of said receiving electrodes until the currents induced ther-

2,901,690

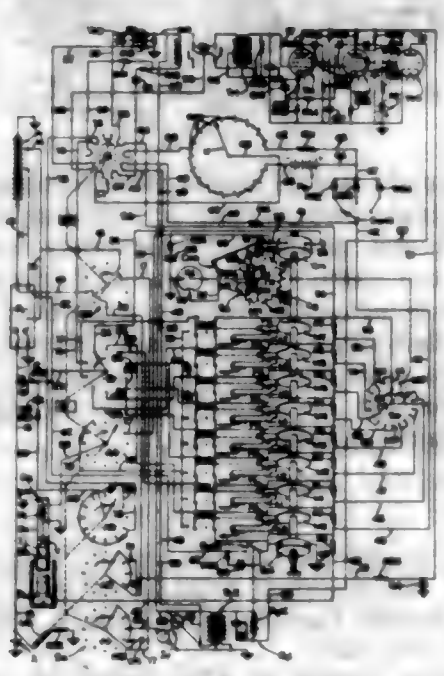
INTERCHANGEABLE TUBE CAP CIRCUIT

being insulatingly mounted on said shield ring adjacent

prising a selsyn transmitter having its single-phase rotor

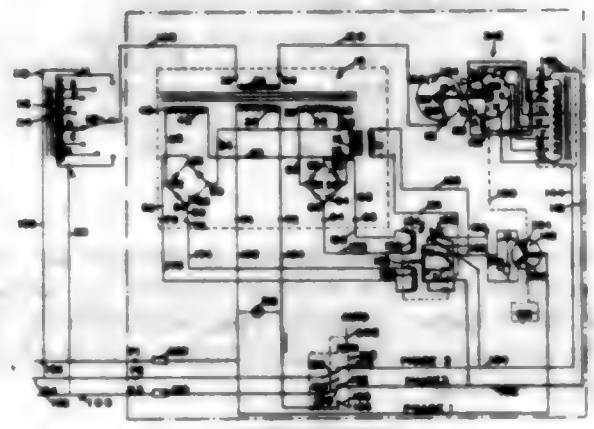
connected across said current sensitive means, and at least one of said terminals being continuously adjustable to permit adjusting the portion of the autotransformer winding connected in series circuit relation with said primary winding, the relative reactance of the autotransformer and the primary winding being such that the current through the primary winding is determined essentially in whole by the autotransformer in series therewith.

2,901,685
APPARATUS FOR EARTH BOREHOLE INVESTIGATING AND SIGNALING
Robert Lee Alder, La Canada, Calif., assignor, by mesne assignments, to Dresser Industries, Inc., Dallas, Tex., a corporation of Delaware
Application October 18, 1954, Serial No. 462,724
4 Claims. (Cl. 323—74)



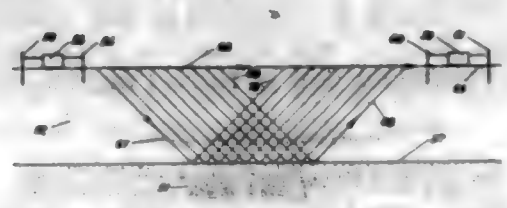
4. In a signaling system for simultaneously measuring and encoding information for use in logging-while-drilling operations, the combination comprising: a rotatable camshaft; a plurality of essentially circular cams fixed to and spaced axially along said camshaft, each of said cams having a radial riser extending from the periphery thereof with said risers in different angular positions around said shaft, an electrical network; a plurality of resistances of different predetermined values; a switch associated with each of said cams and adapted to insert a predetermined one of said resistances into said network when in open position; spring-loaded plunger means reciprocally movable in a direction perpendicular to said camshaft and spaced therealong corresponding to said cams associated with each of said switches for opening the same and each positioned with respect to a cam so that rotation of its riser to a single predetermined angular position moves said plunger to a switch-opening position; a latch positioned adjacent and extending essentially parallel to each of said plungers and adapted to hold the same in switch-opening position; a lobe portion extending from said latch toward said camshaft and terminating short of the radial extent of the main body of each of said cams but within the radial extent of said risers; a solenoid responsive to the condition of electrical balance of said network as affected by the insertion of said resistances thereinto for effecting axial translatory displacement of said camshaft for bringing the riser of a cam in the predetermined angular position against an adjacent lobe portion to disengage the latch from the corresponding plunger and thereby close its corresponding switch to withdraw a corresponding resistance from said network; and means for effecting step-wise rotation of said camshaft to move each of said cams sequentially through its plunger-engaging position.

2,901,686
REMOTE CONTROL CIRCUIT AND COMPONENT
Leonard L. Horner, Jr., Atlanta, and James L. Cross, Decatur, Ga., assignors to I-T-E Circuit Breaker Company, Philadelphia, Pa., a corporation of Pennsylvania
Application April 1, 1957, Serial No. 649,914
7 Claims. (Cl. 323—114)



2. In a control device for controlling a D.C. relay from an A.C. line to control a motor in response to changes from a remote point, an A.C. line having a variable control device energized by a basic phase therefrom, a controlled device energized by the basic phase from said line, a primary reference winding energized by said basic line phase, a secondary winding energized by said primary reference winding from said basic line phase, a control line from said control device to said controlled device, said control device varying selectively the potential in said control line, a control phase winding in said control line, a first secondary winding energized by said primary winding and being connected in phase with said secondary winding of said reference winding, a second secondary winding energized by said primary winding and being connected out of phase with said secondary winding of said reference winding, rectifier means for said first and second secondary windings, said in-phase potential being additive to said reference potential, said out-of-phase potential being subtractive from said reference potential, said unequal potentials being applied to said relay to unbalance same in a direction corresponding to the direction of movement of said control device, whereby said controlled device responds in the same direction thereby moving said controlled device by the shortest route.

2,901,687
METHOD AND APPARATUS FOR GROUND-WAVE TRANSMISSION AND RECEPTION OF RADIO WAVES
William M. Barret, Shreveport, La., assignor to Engineering Research Corporation, Shreveport, La., a corporation of Louisiana
Application September 30, 1950, Serial No. 187,792
9 Claims. (Cl. 324—1)



1. A method of exploring the earth for a geologic feature, comprising generating radio waves, propagating said waves into the earth through two transmitting electrodes spaced apart therein, adjusting the spherical directivity of said transmitting electrodes until said waves are propagated downward into the earth and onto a geologic feature and thence to two receiving electrodes imbedded in the earth and spaced apart from said transmit-

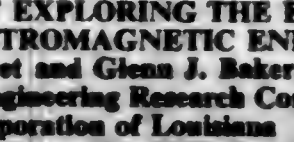
nent magnetic field strength at points in proximity to and

mitting material having a bore extended longitudinally

ing a control surface thereon, a servomotor operatively across said primary winding and a second set of terminals

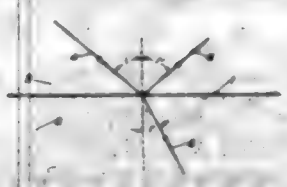
ting electrodes, and adjusting the spherical directivity of said receiving electrodes until the currents induced therein by the waves arriving from said geologic feature are detected by a receiver which is energized by said receiving electrodes, whereby the character of the currents detected by said receiver is indicative of said geologic feature.

2,901,688
METHOD OF EXPLORING THE EARTH WITH ELECTROMAGNETIC ENERGY
William M. Barret, Shreveport, La., assignor to Engineering Research Corporation, Shreveport, La., a corporation of Louisiana
Application February 10, 1954, Serial No. 409,485
22 Claims. (Cl. 324—6)



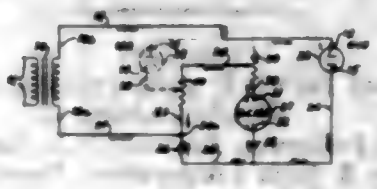
1. The method of investigating earth formations including a subsurface reflector of electromagnetic waves lying substantially parallel to the surface of the earth, comprising propagating from a sending means electromagnetic waves substantially at grazing incidence onto the air-earth interface substantially at the location of said sending means so that a part of the radiation from said sending means travels along said interface to receiving means spaced apart from said sending means and a part of said radiation is refracted into said earth onto said reflector and thence to said receiving means, measuring at said receiving means a selected parameter of the electromagnetic field resulting from the combined waves arriving at said receiving means, and varying the spread between said sending means and said receiving means until the magnitude of said spread reaches a particular value that bears a predetermined relation to the depth of said reflector, said particular value lying within the range of 1.4 to 2.7 times the depth of said reflector, whereat the presence of said reflector is indicated by an anomalous variation in said parameter as measured by said receiving means, and the magnitude of said spread when said particular value is reached is a measure of the depth of said reflector.

2,901,689
METHOD OF EXPLORING THE EARTH WITH ELECTROMAGNETIC ENERGY
William M. Barret and Glenn J. Baker, Shreveport, La., assignors to Engineering Research Corporation, Shreveport, La., a corporation of Louisiana
Application January 23, 1957, Serial No. 635,763
10 Claims. (Cl. 324—6)



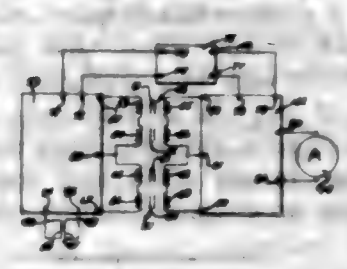
1. In a method of transmitting vertically polarized electromagnetic waves into the earth, measuring in the field significant electrical properties of the surficial earth material at the location where said waves are to be introduced into said earth, utilizing the value of said significant electrical properties in determining the optimum angle of incidence corresponding to said significant electrical properties at a selected frequency, and then propagating said waves into the earth at substantially said optimum angle and at substantially said frequency.

2,901,690
INTERCHANGEABLE TUBE CAP CIRCUIT
David Lossef, New York, N.Y.
Application December 26, 1957, Serial No. 705,224
4 Claims. (Cl. 324—22)



1. A tube testing device comprising in combination: an interchangeable tube cap connector, an alternating current power supply comprising a first side and a second side, a direct current indicating device having a positive connector and a negative connector, at least one tube socket comprising at least one tube pin connector adapted to be contacted to at least one cathode connected pin of a tube, at least one tube socket comprising at least one tube pin connector adapted to be contacted to at least one anode connected pin of a tube, resistance means, and an electrical network; in which the first side of the alternating current power supply is connected through a junction point respectively; to at least one cathode pin connection of a first mentioned tube socket through resistance means and to at least one anode pin connection of a second mentioned tube socket through resistance means; the second side of the alternating current power supply being connected by a conductor to the tube cap connector; the cathode pin connection of the first mentioned tube socket being connected to the positive connector of the direct current indicating device through resistance means; and the negative connector of the direct current indicating device being connected to the anode pin connector of the second mentioned tube socket; whereby, when a tube with a tube cap connected to an anode element in the said tube is inserted in a said first mentioned tube socket and the said tube cap connector is connected to the cap of said tube, a circuit will be closed causing an electron flow to travel from the negative connector of the direct current indicating device toward the positive connector of the said direct current indicating device; and when a tube with a tube cap connected to a cathode element in the tube is inserted in a second mentioned tube socket and the said tube cap connector is connected to the cap of the said tube, a circuit will be closed causing an electron flow to travel from the negative connector of the direct current indicating device toward the positive connector of the said direct current indicating device.

2,901,691
METHOD AND APPARATUS FOR NON-DESTRUCTIVE TESTING
Friedrich M. O. Förster, Reutlingen, Germany
Application April 12, 1955, Serial No. 500,947
14 Claims. (Cl. 324—34)



6. In an instrument for testing a specimen structure of magnetic material to determine coercive force and related physical properties, means for applying to the specimen structure a magnetizing field of a certain intensity which is concentrated in a localized portion of the structure, and means for measuring the induced rema-

control grid, the plates and cathodes of the tubes in the

named voltages, and fourthly, means for comparing each

cams sequentially through its plunger-engaging position.

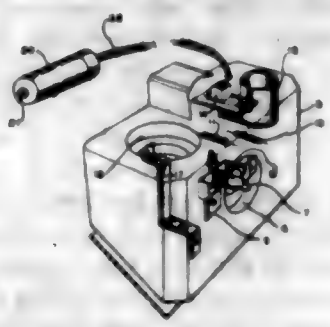
bedded in the earth and spaced apart from said transmit-

nent magnetic field strength at points in proximity to and in fixed relation to such localized portion along a preselected one of a plurality of directional axes passing through such localized portion.

2,901,692
TESTING DEVICE FOR CAMERAS AND FLASHLAMPS

John Kenneth Polhemus, Endwell, N.Y., assignor to General Aniline & Film Corporation, New York, N.Y., a corporation of Delaware

Application November 14, 1956, Serial No. 622,047
2 Claims. (Cl. 324—51)

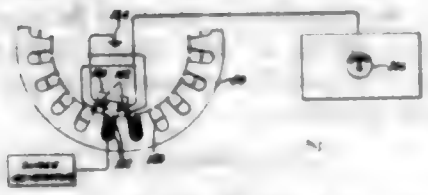


1. A testing attachment for use in connection with photoflash accessories and cameras comprising a support containing as components, a miniature electric lamp bulb, a socket for accommodating a flash bulb, a switch, a compartment accommodating a flashlight battery, an electric contact terminal in said compartment, an electrical plug suitable for sockets used for flash bulbs connected to said support by a flexible cord, electrical connections between said components including a resistor in series between one terminal of said bulb and said socket and in parallel with said switch, another resistor in parallel with terminals of said socket, both said lamp and said socket being in series between leads connected to said plug, said electric contact terminal being connected to the junction point of said lamp bulb and said plug.

2,901,693
FAULTY COIL DETECTOR

Edward C. Schrom, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York

Application September 27, 1955, Serial No. 536,835
8 Claims. (Cl. 324—52)



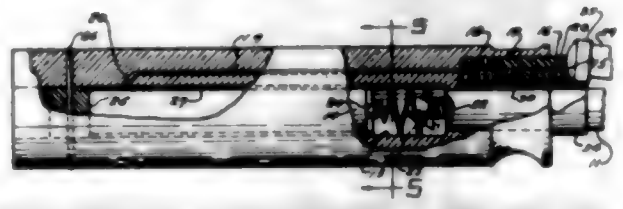
1. A detector for discovering faulty coils wound in a stator for a dynamoelectric machine comprising electrical responsive means adapted for positioning adjacent the inner peripheral surface of said stator, a motor having a shaft connected with said responsive means for rotating the latter at a predetermined speed over slots containing coils arranged in said stator, and electrical indicating means connected with said responsive means so that the energization of any one of said coils causes production of a signal voltage in said responsive means for actuating said indicating means when said responsive means is moved adjacent an energized coil by said motor.

2,901,694
SCREW DRIVER FUSE TESTER

Sidney Le Roy Lewis, Dover, N.H.

Application December 3, 1954, Serial No. 472,862
1 Claim. (Cl. 324—53)

In a screw driver fuse tester, the combination which comprises an elongated cylindrical handle of light transmitting material having a bore extended longitudinally therethrough, a metallic shank fixedly mounted in the bore at one end of the handle and extended from the handle, a spring in the bore of the handle and having a light bulb retaining coil in one end, the light bulb retaining coil being positioned to support a base of a light bulb with a center contact of the base of the light bulb in contact with the shank, the opposite end of the spring being positioned to engage a center terminal of a battery positioned in the bore of the handle, a plug retained in the bore of the handle by a pin for preventing accidental displacement of the battery from the handle, a contact bar extended through the material of the handle and mounted with one end positioned to contact the casing of a battery in the bore and with the opposite end ex-

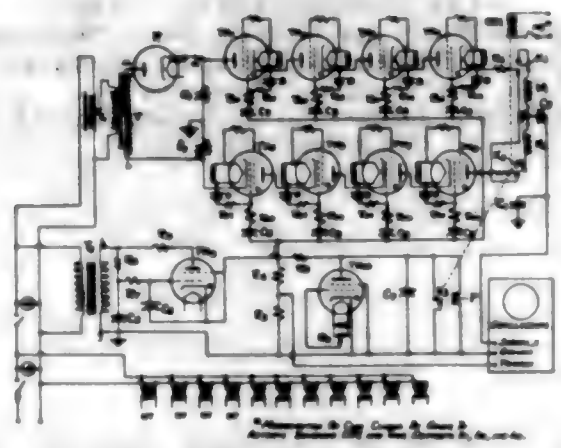


tended from the end of the handle from which the shank extends, a counterbore extended inwardly from the end of the handle from which the shank extends and offset in relation to the bore extended through the handle, a sleeve of insulating material slidably mounted in the offset counterbore and also slidably positioned on the contact bar, a spring in the counterbore and positioned to urge the sleeve of insulating material outwardly of the counterbore, the contact bar having a head on the extended end, and the outer end of the sleeve having a counterbore therein and the counterbore of the sleeve being positioned to receive the head of the contact bar with the parts released whereby the head is covered in the released position, and a sleeve of insulating material extended around a portion of the shank and positioned against the end of the handle.

2,901,695
TESTING DEVICE FOR ELECTRICAL WINDINGS AND THE LIKE

Herman R. Weed, Worthington, Ohio, assignor to Robbins & Myers, Inc., Springfield, Ohio, a corporation of Ohio

Application July 2, 1954, Serial No. 441,058
10 Claims. (Cl. 324—57)



1. A testing device for electrical windings comprising a pair of substantially identical discharge capacitors and a rectifier in series, a ground connection between said capacitors, means for charging said capacitors through said rectifier, a discharge path for one of said capacitors into a standard winding, a discharge path for the other capacitor into a winding to be tested which is connected in series opposition with the standard winding, each of said paths comprising at least one electronic tube having a

brating signal into a signal having a wave-form corre-

armature connected to a register and adapted to be

optimum angle and at substantially said frequency.

the structure, and means for measuring the induced rema-

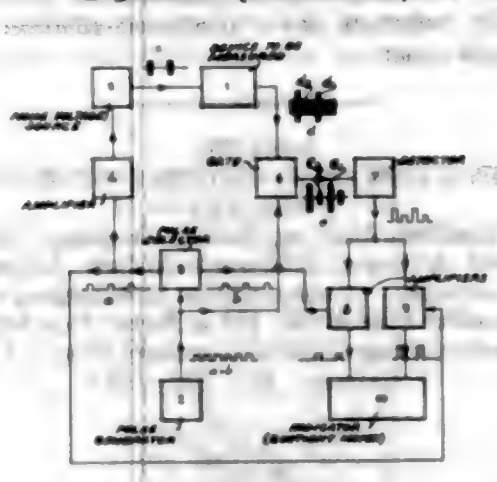
control grid, the plates and cathodes of the tubes in the respective discharge paths being reversely connected relative to the two windings, an oscilloscope having one input terminal grounded and having its other input terminal connected to a common point between said standard winding and said winding to be tested, a trigger circuit including at least one electronic tube and associated passive components producing a steep wave front voltage pulse, resistance-capacitance coupling means connecting said voltage pulse to the said control grids to synchronize the firing of said electronic tubes in each of said paths, and means connecting said voltage pulse to the input of the oscilloscope to synchronize its sweep circuit with the discharge of said identical discharge capacitors.

2,901,696

ARRANGEMENT FOR AUTOMATIC AND CONTINUOUS MEASURING OF THE NOISE FACTOR OF AN ELECTRIC DEVICE

Hans Gösta Möllfors, Stockholm, Sweden, assignor to Ingenjörsfirman Magnetic Ab, Stockholm, Sweden, a corporation of Sweden

Application September 24, 1954, Serial No. 458,090
Claims priority, application Sweden November 25, 1953
2 Claims. (Cl. 324—57)



1. A system for the automatic and continuous measuring of the noise factor of an electrical device comprising in combination a noise voltage source connected to the input of the electrical device and adapted to supply a noise voltage in the shape of a pulse train, a pulse generator connected to said noise voltage source to control the same, a measuring device for measuring the quotient between the output signal of the electrical device during time intervals when pulses appear and during time intervals when pulse spaces appear in the pulse train, a pulse selector interconnected between the said pulse generator and said noise voltage source to suppress every second pulse of the pulse train output from said pulse generator, and a gating device connected to the output of said pulse generator and to the output of said electrical device, the said measuring device connected to the output of said gating device.

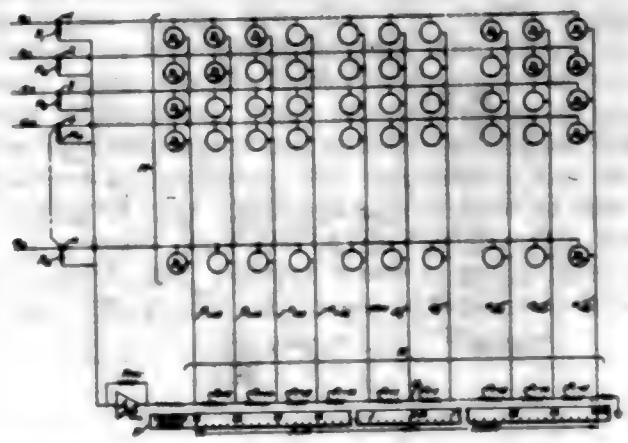
2,901,697

ANALYSES OF VOLTAGE DISTRIBUTION

Caldwell P. Smith, Bedford, Mass., assignor to the United States of America as represented by the Secretary of the Air Force

Application February 29, 1956, Serial No. 568,688
18 Claims. (Cl. 324—77)
(Granted under Title 35, U.S. Code (1952), sec. 266)

1. Apparatus for analysing and normalizing the content of an electrical signal pattern which comprises, first, means for dividing the signal pattern into a series of component segments, secondly, means for deriving a series of voltages, each representative of a different one of said pattern segments, thirdly, means for deriving a reference voltage equivalent to the sum of said first-named voltages, and fourthly, means for comparing each of said first-named voltages with said reference voltage, to determine the ratio therebetween, said comparing means



also operating to maintain said signal pattern stable throughout periods of signal amplitude variation.

2,901,698

MICROWAVE FREQUENCY METER

Kiyo Tomiyasu, Menlo Park, Calif., assignor to Sperry Rand Corporation, a corporation of Delaware

Application September 21, 1955, Serial No. 535,668
12 Claims. (Cl. 324—78)

1. High frequency apparatus, including a transmission line section for propagating electromagnetic energy in a first mode over a wide band of microwave frequencies, means adjustable to different positions along said transmission line section for converting a portion of said energy into a different mode as a function of frequency and position, said transmission line section being above cut-off for any frequency throughout said frequency band for said first mode and having a gradually varying cut-off frequency from one end to the other for said different mode so as to be slightly above cut-off near one end thereof for said different mode at the highest frequency within said band and slightly above cut-off at the other end thereof for said different mode at the lowest frequency within said band, said adjustable mode converting means being regulatable along said transmission line section to a location at which said transmission line section is just above cut-off for propagation of energy in said different mode at a particular frequency within said band.

2,901,699

FREQUENCY MEASURING INSTRUMENT

Joseph W. Motz, Silver Spring, Md., and John H. Reaves, McLean, Va.

Application April 19, 1957, Serial No. 653,923
10 Claims. (Cl. 324—78)

1. Apparatus for measuring the instantaneous frequency of a periodic, recurring unknown signal comprising: means responsive to the unknown signal to be measured for generating a reference signal of predetermined wave-form having a duration corresponding to a function of the period of said signal, means responsive to said reference signal for generating a time calibrating signal having an adjustable, predetermined time period which can be varied means responsive to said time calibrating signal generating means for converting said time cali-

to reciprocate it about said axis from a normal angu-

tion, said sections being of molded plastic with transverse-

In a screw driver fuse tester, the combination which comprises an elongated cylindrical handle of light transparent material, a pair of spaced electrical contacts mounted on one end of said handle, a pair of electrical conductors extending through said handle and connected to said contacts, a pair of electrical terminals mounted on the other end of said handle and connected to said conductors, and a pair of resilient electrical contacts mounted on said handle and connected to said terminals, said resilient contacts being adapted to engage the ends of a fuse.

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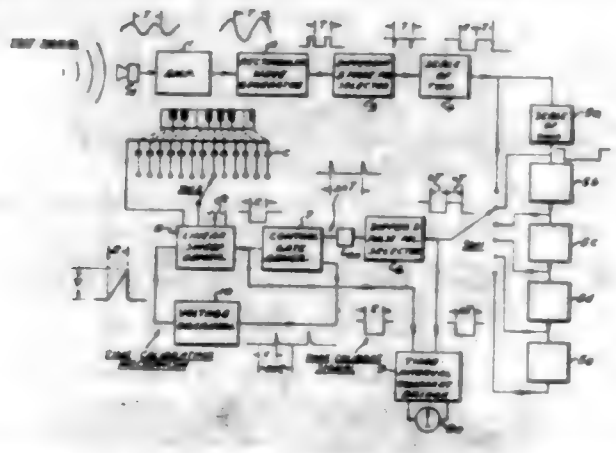
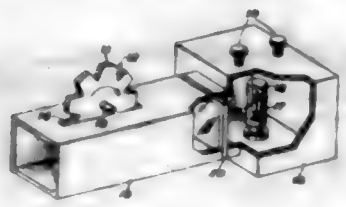
brating signal into a signal having a wave-form corresponding to that of said reference signal and means for



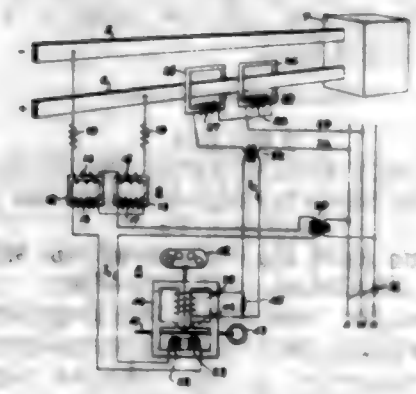
comparing the respective durations of said reference, and said converted time calibrating signals.

2,901,700
LOW LEVEL MICROWAVE POWER METER
Victor W. Bolie, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa
Application May 22, 1956, Serial No. 586,405
2 Claims. (Cl. 324—95)



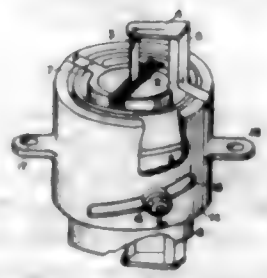
1. A low level microwave power meter comprising a waveguide, a resonant cavity connected to receive energy from said waveguide, a photocell mounted in said resonant cavity, a filter interposed between said waveguide and said resonant cavity, said filter blocking electromagnetic energy which has a frequency higher than one million megacycles per second, and chopper means associated with said waveguide for modulating the electromagnetic energy carried therein.

2,901,701
POWER METERING SYSTEM
Max J. Kramer, Parma, Ohio, and Robert N. Wagner, Pittsburgh, Pa., assignors to Aluminum Company of America, Pittsburgh, Pa., a corporation of Pennsylvania
Application December 21, 1956, Serial No. 629,854
4 Claims. (Cl. 324—117)



1. A system for measuring and totalizing the power delivered through two line conductors of a direct current power circuit comprising an induction watthour meter having its potential and current windings replaced by an ampere winding and a milliampere winding which are wound to adapt them to the output currents of the two transductors hereinafter specified and a rotatable disc armature connected to a register and adapted to be driven by torque developed thereon by phase displaced currents flowing through said windings, a voltage transductor comprising two closed magnetic cores, a direct current control winding on each core connected in series with each other and across said two line conductors so as to be responsive to the D.C. voltage thereacross, an A.C. winding on each of said cores connected with each other in reverse polarity and in series circuit relation, a polyphase A.C. supply source, a circuit connecting said A.C. windings and said milliampere meter winding in series circuit relation across one phase of said A.C. source, a current transductor comprising two other magnetic cores for which one of said line conductors constitutes the D.C. control windings so that their magnetic saturation varies in accordance with the direct current flowing through said one line conductor, an A.C. winding on each of said two other cores connected with each other in reverse polarity and in series circuit relation, and a circuit connecting said A.C. windings of said current transductor and said ampere winding of said meter in series circuit relation across another phase of said A.C. source, whereby the alternating currents supplied from said A.C. source to the said ampere and milliampere windings of said meter are maintained in a definite and substantially constant phase displaced relation with respect to each other.

2,901,702
MOVING COIL INSTRUMENT WITH CORE MAGNET
Friedrich Endlich, Langen, Hesse, Germany, assignor to Hartmann & Braun Aktiengesellschaft, Frankfurt am Main, Germany, a corporation of Germany
Application March 20, 1953, Serial No. 343,571
Claims priority, application Germany March 27, 1952
7 Claims. (Cl. 324—151)



1. A moving coil instrument comprising a support, a cylindrical permanent magnetic core, magnetized in a direction perpendicular to its axis, and rigidly fixed to the support, a coil surrounding said core in inductive relationship thereto and rotatably mounted to turn on said support coaxially of the core about a transverse axis of the coil, a cylinder of magnetic material surrounding said coil and core coaxially with said axes and having a part magnetically saturated by the core, a magnetic flux return path member consisting of a cylindrical iron ring coaxially surrounding said cylinder and slidable on the saturated part, the ring being rotatable on the cylinder, a rod radially mounted on said iron ring, and means to guide said rod in a direction oblique to the said axes so that rotation of the ring relative to the cylinder produces relative axial movement of the ring and cylinder.

2,901,703
FRICTIONLESS SUSPENSION MEANS FOR ROTARY ELEMENTS
Robert Plunkett, Schenectady, N.Y., assignor to General Electric Company, a corporation of New York
Application February 19, 1957, Serial No. 641,099
8 Claims. (Cl. 324—155)

6. The combination, with an index carrying shaft rotary about its longitudinal axis having actuating means

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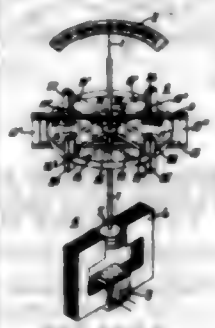
lator tube and ground and when the impedance across the dielectric material, said rectangular guide being provided

reference voltage equivalent to the sum of said first-

signal generating means for converting said time cali-

to reciprocate it about said axis from a normal angular position, of a frictionless suspension for said rotary shaft, said suspension comprising a flat elongated spring member attached to said shaft and extending therefrom in a plane defined by said spring member and the axis of rotation of said shaft, a support, a second flat elongated spring member attached to said support near said shaft and extending outward radially of said shaft in the



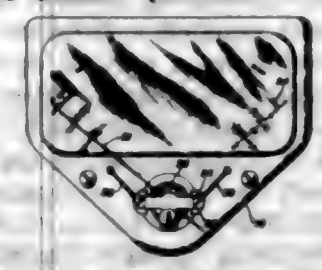
same plane as the first spring member, said spring members being connected together at a point remote from said shaft and from said support to support said shaft and to flex circumferentially of said shaft upon reciprocation of said shaft from said normal position, said spring members having larger dimensions in the direction longitudinal of said shaft than lateral thereof to reduce vibration of said element both longitudinally and laterally of itself.

2,901,704

ELECTRICAL INSTRUMENT WITH SCALE FORMED ON CASE

Francis X. Lamb, East Orange, N.J., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of New Jersey

Application November 12, 1954, Serial No. 468,192
1 Claim. (Cl. 324—156)



A combined electrical indicating instrument mechanism carrying member and scale consisting of an integrally molded case, including a cup-like container portion for receiving an instrument mechanism having a pointer and a flat deck portion extending laterally to one side only from the upper edge of said cup-like portion, a scale formed directly on the upper face of said deck portion whereby the pointer is adapted to travel thereover, said deck portion having a coplanar flange extending from the periphery adjacent the bottom surface thereof and of less thickness than said deck portion, a transparent cover with a scale-viewing portion disposed parallel to and with a peripheral flange enclosing said deck portion above its flange and extending to engage the flange of said deck portion and notched to encircle said flange, said deck portion and transparent cover having registering holes for receiving connecting means, and the scale-viewing portion of said cover being upwardly offset to form a flat boss for reception in an opening in a supporting panel.

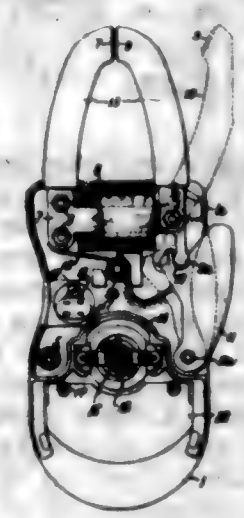
2,901,705

INSTRUMENT CASE

Francis X. Lamb, East Orange, N.J., assignor, by mesne assignments, to Daystrom, Incorporated, Murray Hill, N.J., a corporation of New Jersey

Application June 6, 1955, Serial No. 513,490
2 Claims. (Cl. 324—156)

1. A clamp-type meter having a case comprising a front domed section, a complementary back domed section, said sections being of molded plastic with transversely aligned recesses in their inner surfaces, laminated tongs anchored to the front case section, one of said tongs being fixed and carrying a secondary winding, the second tong being hinged to the first tong, an electric instrument mechanism of the magnetized core type having complementary bridge members with outstanding stepped projections and between which said mechanism is gripped, ribs on the inner face of one of said case sections defining a chamber for receiving said mechanism, one of said ribs having an inset at its free edge to seat an edge portion of a scale plate and provide a shoulder limiting movement thereof, resilient washers snugly fitted upon the outer ends of said projections in position to fit within



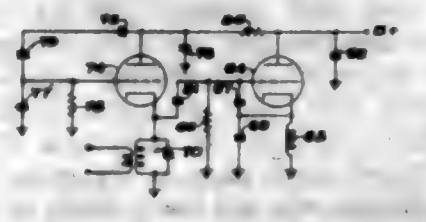
said recesses when the instrument is placed within said chamber and the case sections are assembled, a scale plate for said mechanism with an edge portion received in said inset and spaced from said mechanism, studs having heads embedded in the front case section, intermediate portions of smaller diameter than that of said heads and having rearwardly projecting threaded ends of still smaller diameter and at which the intermediate portions define shoulders, said rear case section being provided with openings through which the threaded ends of said studs pass, and nuts threaded upon the threaded ends of the studs to secure the case sections to each other, with the body of the back case section engaging said shoulders.

2,901,706

IMPULSE-GOVERNED OSCILLATOR

William S. Elliott, Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Application February 28, 1956, Serial No. 568,222
2 Claims. (Cl. 331—48)



1. An impulse-governed oscillator circuit including a crystal-controlled oscillator circuit comprising a crystal, and an electron tube, a first capacitance connected between the plate of the tube and ground, a second capacitance connected in series with the crystal, and a free-running oscillator circuit comprising a tuned circuit, a second electron tube, an inductor connected between ground and the cathode of the second electron tube, a third capacitor, said free-running oscillator electron tube having its grid coupled to the cathode of said crystal oscillator electron tube through the third capacitor and having said tuned circuit connected between the cathode of said crystal oscil-

being so chosen that the reactance of the probe substan-

2,901,714

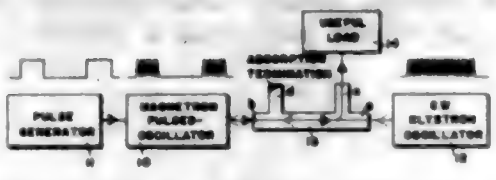
TRANSFORMER

transducers hereinafter specified and a rotatable disc

6. The combination, with an index carrying shaft rotary about its longitudinal axis having actuating means

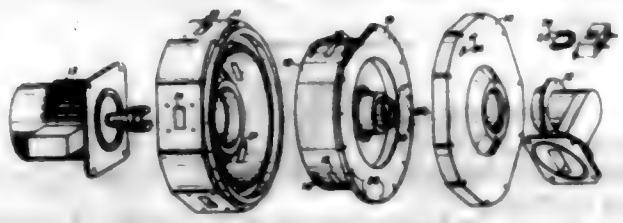
lator tube and ground and when the impedance across the tuned circuit is small the oscillations of said free-running oscillator circuit are quenched.

2,901,707
COHERENT-PULSED OSCILLATOR
Jack Kline, Concord, Mass., and Martin R. Richmond, Nashua, N.H., assignors to Sanders Associates, Inc., Nashua, N.H., a corporation of Delaware
Application October 19, 1956, Serial No. 617,116
7 Claims. (Cl. 331—173)



1. A coherent-pulsed oscillator, comprising: oscillator means to generate a high frequency signal; pulse generating means coupled to said oscillator means to cause it to oscillate during predetermined time intervals recurring in a predetermined pattern; synchronizing means to provide a synchronizing signal; a load means; and non-reciprocal directional coupling means for coupling energy from said synchronizing means only to said oscillator means and from said oscillator means only to said load means, thereby, to cause substantially all of the energy in said high frequency signal to be translated to said load means and substantially all of the energy in said synchronizing signal to be translated to said oscillator means to prime said oscillator means and establish pulse-to-pulse phase coherence between pulses of energy generated by said oscillator means.

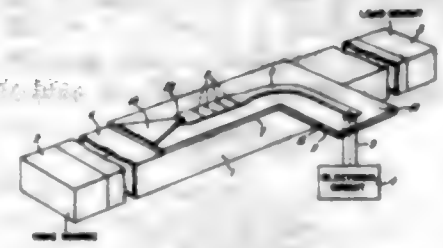
2,901,708
HIGH SPEED MECHANICAL R-F WAVEGUIDE SWITCH
Lee Alvin Meadows, San Diego, Calif.
Application April 8, 1955, Serial No. 500,310
13 Claims. (Cl. 333—7)
(Granted under Title 35, U.S. Code (1952), sec. 266)



7. A waveguide switch comprising a stator having openings, a rotor having waveguide transmission paths alignable with said openings whereby energy may be transmitted therethrough, said stator having a cover plate mounting magnetic synchronizing means thereon, said rotor having slots with magnetic metal alloy inserts therein thereby to vary the reluctance of the magnetic field about said cover plate as the rotor revolves about its axis, said slots and said inserts being so spaced on said rotor as to externally indicate the position of one of said paths.

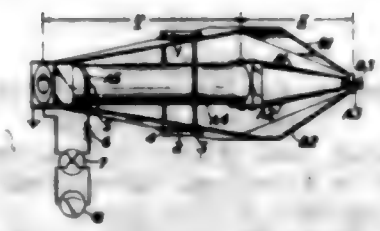
2,901,709
WAVE COUPLING ARRANGEMENT
Stanley R. Fitzmorris, Baldwinsville, N.Y., assignor to General Electric Company, a corporation of New York
Application December 14, 1954, Serial No. 475,215
4 Claims. (Cl. 333—10)

1. In combination a rectangular waveguide for propagating waves, a wave transmission line comprising a strip conductor extending outside and along a predetermined length of said guide and spaced therefrom by a sheet of dielectric material, said rectangular guide being provided with coupling slots in at least two points along said length of said guide, said slots being located in said rectangular



guide opposite said strip conductor to a degree to provide a desired directional coupling of propagated waves to said transmission line.

2,901,710
RESISTANCE TERMINATING LOADING DEVICES
Ernest Garthwaite, Saint Albans, England, assignor to Marconi Instruments Limited, London, England, a British company
Application February 13, 1956, Serial No. 565,244
Claims priority, application Great Britain February 16, 1955
4 Claims. (Cl. 333—22)



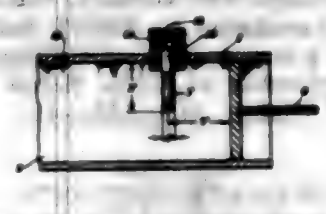
1. A resistance terminating loading device consisting of inner and outer conductor structures of which the inner structure comprises a pair of oppositely disposed divergent conductive inner plates continuing at their divergent ends into a resistor element and wherein the outer structure consists of a second pair of oppositely disposed plates symmetrically positioned on opposite sides of the inner structure forming outer plates, said outer plates of the outer structure being springily flexible and diverging from one another and from the adjacent inner plates of the inner structure substantially over the length over which said inner plates diverge, said outer plates converging again towards the far end of the resistor element of the inner structure whereat the resistor and the outer plates are connected, matching adjustment means constituted by means for controllably bending said outer plates towards one another, and means for applying input between the inner and outer conductive structures at their common convergent end.

2,901,711
WAVE-GUIDE TERMINATION
Edward W. Houghton, Chatham, N.J., assignor to Bell Telephone Laboratories, Incorporated, New York, N.Y., a corporation of New York
Application February 5, 1957, Serial No. 638,412
4 Claims. (Cl. 333—22)

1. In combination, a wave guide, a reflector at one end thereof, and a probe having resistance associated therewith, the probe projecting from a side of the guide part way only thereacross in the direction of the electric field of the waves therein, the length and resistance of the probe and its position with respect to the reflector and the center of the guide being chosen to provide a terminating impedance the resistive component of which matches the resistive component of the characteristic impedance of the guide over a comparatively wide band of frequencies and the transverse dimensions of the probe

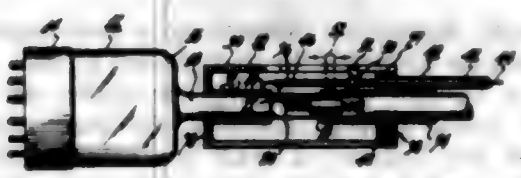
front domed section, a complementary back domed section, a coupling between the cathode of said crystal oscil-

being so chosen that the reactance of the probe substantially cancels the reactance of the section of guide ter-



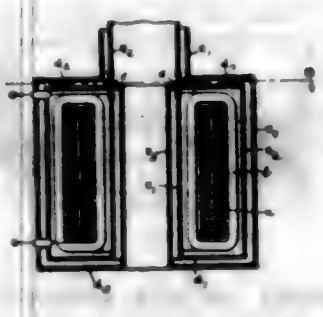
minating in the reflector, as seen from the probe, over the same band.

2,901,712
MATCHING DEVICE
Aaron G. Hogg, East Orange, N.J., assignor to Radio Corporation of America, a corporation of Delaware
Application March 22, 1957, Serial No. 647,772
5 Claims. (Cl. 333—33)



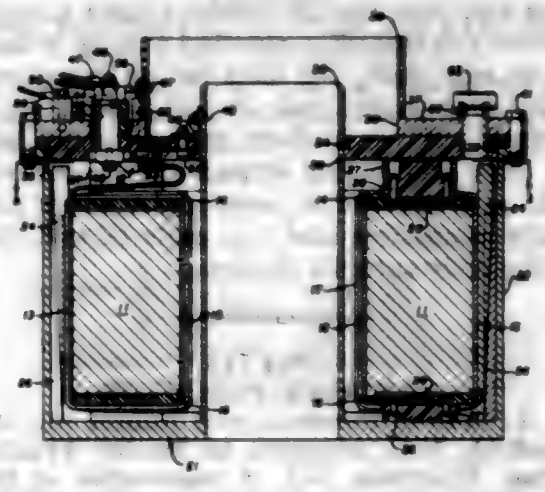
1. In combination, a hollow coupler having a hollow metallic casing, a transmission line having an inner conductor covered with insulation extending within and coupled to said coupler, and means for matching the impedance of said coupler to said transmission line, said means comprising a metallic strip wrapped around the insulated portion of said conductor within the coupler and in close proximity to the insulation, said strip having closely spaced straight portions extending to and directly connected at their ends to said casing.

2,901,713
HIGH CURRENT TRANSFORMER
Hans Hartmann, Baden, Switzerland, assignor to Aktiengesellschaft Brown, Boveri & Cie, Baden, Switzerland, a joint-stock company
Application May 6, 1953, Serial No. 353,395
Claims priority, application Switzerland May 10, 1952
6 Claims. (Cl. 336—82)



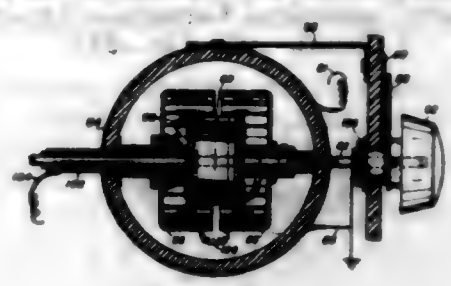
1. A heavy-current transformer for supplying current converters of the mechanical switching type comprising an annular iron core, a primary winding on said core and a heavy-current secondary winding comprising a first pair of radially spaced tubular conductors disposed within said core, a second pair of radially spaced tubular conductors disposed outside of said core, the outermost of said tubular conductors of second pair forming a cover for said transformer, secondary terminal means connected respectively to one conductor of said first pair and to one conductor of said second pair and means connecting said conductors of said first pair with said conductors of said second pair at the ends thereof comprising bridging conductors extending therebetween, one of said bridging conductors being passed through one of said tubular conductors in order to interconnect a conductor of said first pair with a conductor of said second pair.

2,901,714
TRANSFORMER
William R. Baker, Orinda, Calif., assignor to the United States of America as represented by the United States Atomic Energy Commission
Application November 29, 1955, Serial No. 549,900
1 Claim. (Cl. 336—82)



In an electrical transformer, the combination comprising a secondary winding in the form of a fluid-impermeable, conducting, re-entrant cylinder, the outer cylindrical wall of which is inwardly directed at the open extremity thereof, said shell being divided upon at least one axial plane into a plurality of parts, dielectric means disposed in fluid tight contact between the adjacent ones of said parts, a ferromagnetic annular core member disposed within said cylinder, said core member being positioned encircling the inner cylindrical wall of said cylinder, and a primary winding in the form of a toroidal coil of rectangular cross section, the turns of which are wound helically upon spaced sectors of said core member.

2,901,715
VARIABLE TRANSFORMER
Sam E. Parker, San Diego, Calif.
Original application April 30, 1952, Serial No. 285,298, now Patent No. 2,762,971, dated September 11, 1956. Divided and this application April 12, 1956, Serial No. 582,615
1 Claim. (Cl. 336—87)
(Granted under Title 35, U.S. Code (1952), sec. 266)



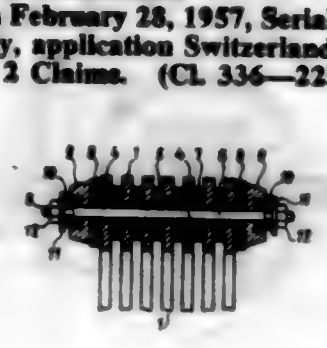
A variable transformer comprising a first hollow cylindrical form, a first coil wound on said first form, a second hollow cylindrical form disposed within said first form, a second coil wound on said second form, a shaft rotatably mounted in said first form normal to the longitudinal axis thereof, said 2nd form mounted on said shaft with the longitudinal axis thereof normal thereto, a sleeve of insulation surrounding said shaft and extending from one side of said second form through said first form, a conductive sleeve surrounding said insulation sleeve, a contact brush mounted outside said first form in sliding electrical contact with said conductive sleeve, an electrostatic cylindrical shield symmetrically disposed around said second coil and within said first form, said

shield comprising a first part conductively mounted on said shaft between one side of said 2nd coil and said first form, and a second part insulatedly mounted on said shaft between the other side of said 2nd coil and said first form, said shield being concentric and rotatable with said shaft, and said first and second parts comprising a bisected closed right circular cylinder, the plane of bisection of said right circular cylinder being normal to the longitudinal axis thereof, a plurality of slots in said shield parallel to said shaft, said slots having extensions forming radial slots in the ends of said shield, one end of said second coil conductively connected to said shaft and the other end of said second coil conductively connected to said conductive sleeve and a single conductor electrically connecting said two parts of said shield for minimizing eddy currents therein.

2,901,716
VARIABLE INDUCTOR
Abbott A. Brown, Paramus, and Robert M. De Luca, Bloomfield, N.J., assignors to Bendix Aviation Corporation, Teterboro, N.J., a corporation of Delaware
Application March 4, 1954, Serial No. 413,997
6 Claims. (Cl. 336—135)

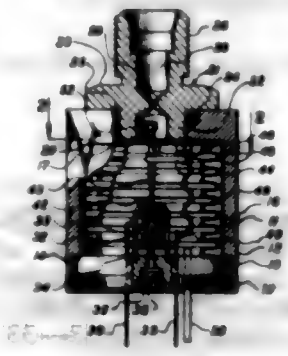
5. An inductive position-signal transmitting device comprising a pair of closely associated relatively displaceable members of magnetic material, one of said members having inductance windings thereon, the other member including a cam-like element of variable thickness, said cam-like element being shaped and arranged to vary the air gap between said members upon relative displacement of said members to change the inductance of the device linearly.

2,901,717
HIGH CAPACITY CHOKE FOR D.C. INSTALLATIONS
Bjarne Storsand, Zurich, Switzerland, assignor to Oerlikon Engineering Company, Zurich, Switzerland, a corporation of Switzerland
Application February 28, 1957, Serial No. 643,081
Claims priority, application Switzerland March 6, 1956
2 Claims. (Cl. 336—223)



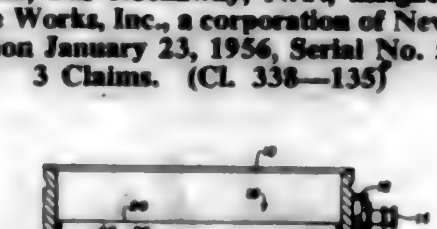
1. A choke of high current-carrying capacity coil for direct current installations; comprising a coil formed of an edgewise-wound flat conductor and including a plurality of integrally formed consecutive, axially adjacent coil sections, separated by intervening insulating layers, said sections and said insulating layers having aligned apertures therethrough, a plurality of tie-bolts having insulating bushings thereabout extending through said apertures, compression plates disposed in alignment with said apertures, said compression plates having recesses therein, said tie-bolts extending through said compression plates, nuts threadedly engaged on said tie-bolts, and compression springs disposed about said tie-bolts seating in said recesses and engaging said nuts.

2,901,718
PRESSURE TRANSDUCER
Edward H. Rehnborg, San Gabriel, and Jack L. Sayre, Duarte, Calif., assignors to Edcliff Instruments, Inc., Duarte, Calif., a corporation of California
Application September 14, 1956, Serial No. 609,941
1 Claim. (Cl. 338—41)



A pressure transducer comprising a base member, a flexible bellows mounted to and closed at one end by the base, a closure plate sealing the other end of the bellows, a frame rigidly affixed to the base within the confines of the bellows, a shaft journaled at one end through the base and at the other end in the frame remote from the base, a resistor element threaded on the shaft between the base and the remote portion of the frame whereby rotation of the shaft results in displacement of the resistor element longitudinally on the shaft, the shaft being adapted to be hermetically and structurally sealed upon final adjustment of the position of the resistor element, a wiper contact depending from the closure plate within the bellows and engaging the resistor element for relative motion responsive to elongation and contraction of the bellows, and electrical leads extending from the resistor element and wiper exteriorly of the housing.

2,901,719
ADJUSTABLE TAP MEANS FOR VARIABLE RESISTANCE DEVICE
Paul C. Smith, Far Rockaway, N.Y., assignor to Micro Machine Works, Inc., a corporation of New York
Application January 23, 1956, Serial No. 560,729
3 Claims. (Cl. 338—135)



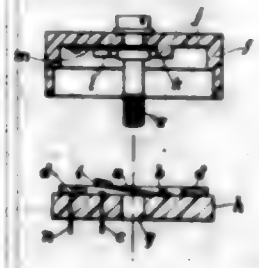
1. A wire-wound variable electrical resistance unit that comprises, a cylindrical casing, a non-conductive liner mounted within said casing and consisting of a circular bottom piece, an upright central hub portion and an upright cylindrical wall portion adapted to be received against the inner wall of said casing, said hub portion and wall portion being spaced from each other to define an annular cavity therebetween and closed across one end by said circular bottom piece, a wire-wound resistance element mounted within said annular cavity against the upright cylindrical wall and extending around substantially the entire circumference of said wall, said central hub portion being adapted to be undercut adjacent said bottom piece at any point around its periphery such as to define tap element mounting means, at least one such tap element mounting means, at least one pretensioned resilient wire tap element having a pivot arm pivotally mounted within said mounting means for adjustable movement with respect to said wire-wound re-

2,901,724
ELECTRIC LIGHT FIXTURE

positioned in an eye of a bolt will be crimped by a movement contemporaneous with said closing of said

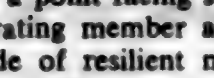
sistance element and having a contact arm adapted to engage the wire-wound resistance element in pressure relationship when the pivot arm thereof is inserted within said undercut mounting means, and means for connecting said wire tap element into an electrical circuit exteriorly of said casing.

2,901,720
CIRCUIT BREAKERS
Cyril Jack Kershaw, Swindon, England, assignor to The Plessey Company Limited, Ilford, England, a British company
Application July 22, 1957, Serial No. 676,698
Claims priority, application Great Britain July 20, 1956
5 Claims. (Cl. 338—163)



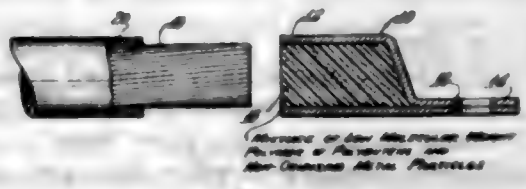
1. A variable resistor device comprising an approximately plate-shaped insulating base equipped on one surface with a part-circular resistor track, an operating member of insulating material, means including a spindle arranged approximately co-axially with said track and connecting said operating member to said base for rotation of said operating member relative to said base about the axis of said spindle while restraining axial relative movement of said base and said operating member, a conductive wiper element secured in said operating member in contact with said spindle and extending from said spindle to a point facing said track for movement with said operating member along said track, an annular contact blade of resilient material having one point fixed to the base so as to surround the spindle substantially concentrically inside the track in insulated relation to the track and spindle, said blade having a cam portion projecting away from the base and arranged in approximate diametric opposition to the said point, at least one contact member fixed in the base projecting from said base towards said blade laterally of the plane containing the spindle axis and the centre of said cam portion, said contact blade being so arranged as to tend to assume a position inclined to the base plate and clear of said at least one fixed contact, an at least part-circular cam track on said control member projecting towards the base plate co-axially with the resistor track for cooperation with said cam portion to flex the contact blade into pressure contact with said at least one fixed contact, said cam track being formed with at least one recess allowing the contact blade to return resiliently to a contact breaking position when the wiper element reaches a predetermined point on the resistor track.

2,901,721
ELECTRICAL TERMINAL MEANS
Theodore F. Aronson, Glen Cove, and Floyd A. Lyon, Brookville, N.Y.
Application January 6, 1958, Serial No. 707,183
2 Claims. (Cl. 338—258)



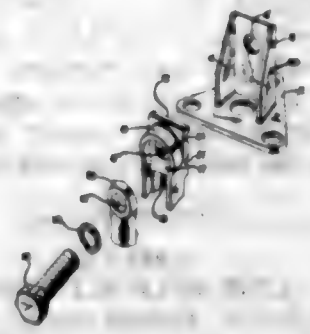
1. Electrical resistor means comprising a hollow tube having an internal lip projecting inwardly at its ends, resistance material deposited on the inside surface of said hollow tube, and terminal means comprising a member having at least two spring means, said spring means being adapted to fit behind said internal lip in a positive manner to provide electrical and mechanical contact between said member and said tube.

2,901,722
COATING FOR METAL TO REDUCE ELECTRICAL CONTACT RESISTANCE
William Arnott, Jr., New Canaan, Conn., assignor to Burndy Corporation, a corporation of New York
Application April 21, 1953, Serial No. 350,251
1 Claim. (Cl. 339—114)



An electrical connection comprising an electrical conductor, a connector for connecting said conductor to another conductor, said connector and conductor provided with contacting faces covered with a mixture of non-drying, permanently wet polymer of polybutene and zinc metal particles.

2,901,723
ARTICLE OF MANUFACTURE
Andrew L. Kolb, Newark, Ohio, assignor to Kaiser Aluminum & Chemical Corporation, Oakland, Calif., a corporation of Delaware
Application September 4, 1956, Serial No. 607,934
3 Claims. (Cl. 339—114)



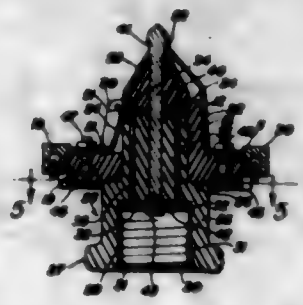
1. An electrical connector for conductively joining an aluminum conductor to another conductor of a dissimilar metal comprising a ferrous metal mounting element, separable primary and secondary compressive clamping members fixed to said element at least one of which engages both said aluminum conductor and said conductor of a dissimilar metal, said clamping members acting as sacrificial anodes and being comprised solely of aluminum and of such a configuration as to surround and shield the terminal end of said aluminum conductor at the connector such that galvanic corrosion occurring at the connector will affect said aluminum primary and secondary clamping members in preference to said aluminum conductor, the mass of said members being such that deterioration thereof due to corrosion will be prolonged for a time approximating that of the useful life of said aluminum conductor, and said clamping members when placed adjacent each other also comprising a separable sleeve adapted to surround and overlie the terminal end of said aluminum conductor to such an extent that corrosive action will occur in an area remote from the area of clamping contact between said aluminum conductor and said separable sleeve.

for transmitting and receiving coded signals over an inter- means for accomplishing direct selection of a point in

bolts seating in said recesses and engaging said nuts.

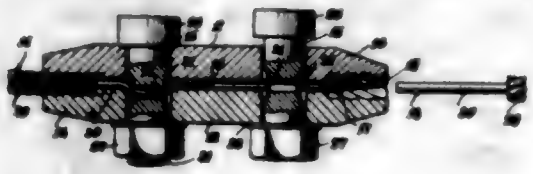
pivotally mounted within said mounting means for adjustable movement with respect to said wire-wound re-

2,901,724
ELECTRIC LIGHT FIXTURE
Sheldon M. Lohr, Forest, Ohio
Application January 24, 1958, Serial No. 711,092
3 Claims. (Cl. 339—154)



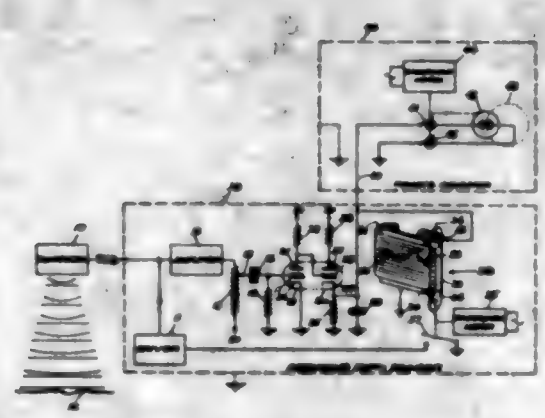
1. In an electric light fixture, a stationary support member including a horizontally disposed annular flange and a cylindrical collar arranged above said flange, there being a cutout in said collar, there being a cylindrical bore within said support member, first and second terminals arranged adjacent the outer periphery of said flange, conductor wires connected to said terminals, a first spring contact extending from said first terminal and positioned in the cutout in said collar, a second spring contact extending from said second terminal, a body member including a cylindrical section releasably mounted in the bore in said support member, said body member further including an enlarged cylindrical base section defining a shoulder abutting the lower surface of said flange, a conical section on the upper end of said body member, there being a recess in the lower base section of said body member, a shell seated in said recess for receiving an electric lamp base therein, said shell including a threaded cylindrical side wall and a horizontally disposed top wall, a contact band connected to said body member and engaged by said first spring contact, spaced parallel studs extending between said contact band and the top wall of said shell for retaining said shell in the recess in the base section of said body member, a terminal extending through said body member, said terminal having an annular groove adjacent its upper end for engagement by said second spring contact, and a securing element engaging the lower end of said terminal.

2,901,725
LINE SPLICE CLAMP
Thomas C. Schuyler, Poughkeepsie, N.Y., assignor to Fargo Mfg. Company, Inc., Poughkeepsie, N.Y., a corporation of New York
Application December 13, 1954, Serial No. 474,858
2 Claims. (Cl. 339—272)



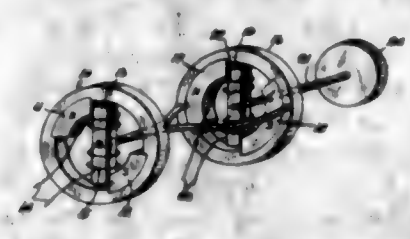
1. A line splice clamp comprising a pair of separable members, bolts for drawing said separable members together, an axial passage formed by recesses in said members extending through said clamp from one end to the other, transverse passages through said clamp at an angle to said axial passage, each for receiving one of said bolts, an eye in each of said bolts positionable axially to said clamp so as to form a part of said axial passage, jaw portions formed at each end of said clamp for receiving large diameter sections of conductors and nuts threadable on said bolts for closing said separable members together and moving said eyes transversely to said axial passage whereby a section of a conductor positioned in an eye of a bolt will be crimped by a movement contemporaneous with said closing of said separable members.

2,901,726
ECHO RANGING SYSTEMS
Robert A. Frykland, Dedham, Mass., assignor to Raytheon Company, a corporation of Delaware
Application December 19, 1952, Serial No. 326,906
7 Claims. (Cl. 340—3)



1. An electron discharge system comprising a source of signals, a grid leak detector, a cathode follower directly coupled to said detector, and a recording indicator and flashing light indicator both coupled directly to the cathode electrode at the output of said cathode follower.

2,901,727
SELECTIVE POSITIONING MECHANISMS
Christopher Arthur Henn-Collins, London, England
Application April 8, 1955, Serial No. 500,261
Claims priority, application Great Britain
April 9, 1954
7 Claims. (Cl. 340—324)

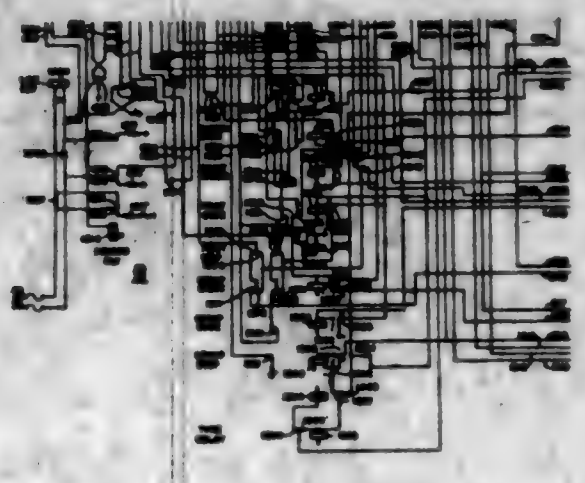


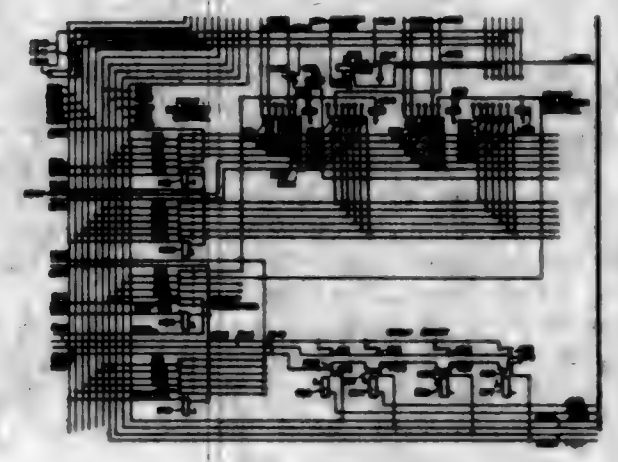
1. Aggregate motion positioning means comprising first permanent magnet means having fixed positioned north and south poles disposed in a predetermined manner, a first armature mounted for movement between said north and south poles, said first armature having a winding adapted to be energized with direct current for determining the position of said first armature in accordance with the polarity of such direct current, second permanent magnet means whose position is determined by said first armature, said second permanent magnet means having north and south poles disposed in a predetermined manner, and a second armature mounted for movement between the north and south poles of said second permanent magnet means, said second armature having a winding adapted to be energized with direct current for determining the position of said second armature in accordance with the polarity of such direct current.

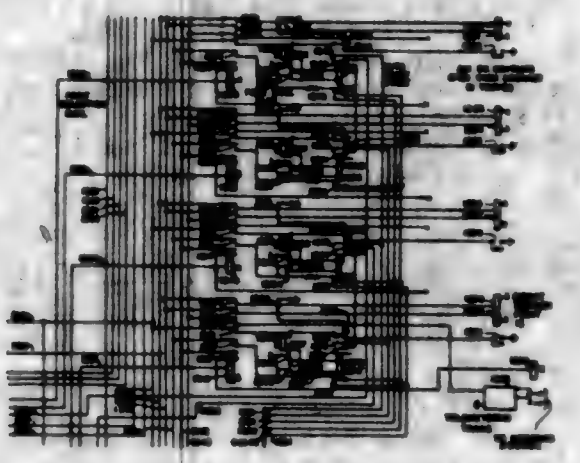
2,901,728
SUPERVISORY CONTROL SYSTEM
Lemuel R. Breese, Galion, Ohio, assignor to North Electric Company, a corporation of Ohio
Application April 10, 1951, Serial No. 220,261
38 Claims. (Cl. 340—163)

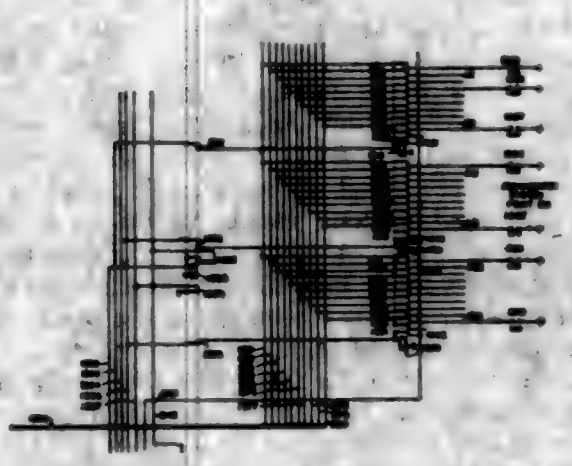
2. In a supervisory system adapted for remote control purposes having a controlling station and at least one controlled substation, each station including equipment

for transmitting and receiving coded signals over an interconnecting signal channel, a plurality of points at said









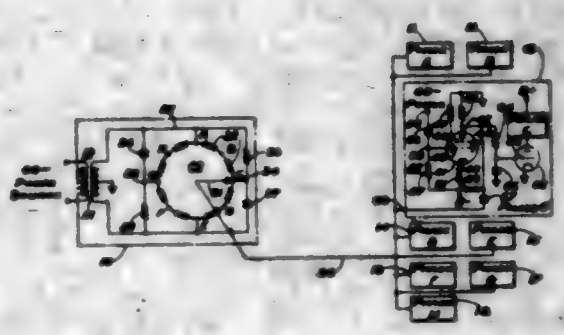
controlled station, each of which points has a coded signal preassigned to effect the seizure thereof, selection means for accomplishing direct selection of a point in accordance with the particular coded signal received thereby from said control station, at least one of said points having a plurality of groups of functional members connected for seizure thereover, means for connecting each functional member to individually perform an assigned functional operation, functional group selection means for each of said groups, and means including said selection means for a point operative responsive to receipt of a further signal after seizure of the point to effect operation of the ones of the functional group selection means at said point represented by said signal, and means including said point selection means operative responsive to operation of one of said functional group selection means to sequentially select each of said functional members in the selected group to accomplish the functional operation assigned to each of said members.

2,901,729

PHASE-SELECTIVE CONTROL SYSTEM

Samuel L. Broadhead, Jr., Cedar Rapids, Iowa, assignor to Collins Radio Company, Cedar Rapids, Iowa, a corporation of Iowa

Application March 12, 1956, Serial No. 570,938
6 Claims. (Cl. 340—170)



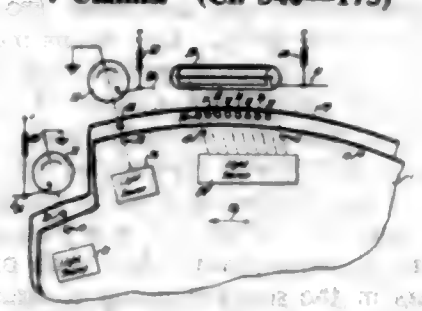
1. A phase-selective control system for a control station and a remote station in a network, said remote station including a gated-beam vacuum tube having at least a pair of grids, means for providing a reference-phase wave common to said control and remote stations, a first phase-shift means provided at said remote station and connected between said reference-wave means and one of the grids in said gated-beam tube to provide an assigned phase to one of said grids, said control station including a second phase-shift means connected to said reference-wave means, the output of said second-phase shift means being adjustable to a plurality of phases, carrier-wave means for conveying the output of said control station phase-shift means to the other grid of said gated-beam tube at said remote station, with one output phase of said control station conveyed to the other grid substantially 180 degrees out-of-phase with the assigned phase received on said one grid, the plate-current conduction of said gated-beam tube being substantially cut off by the assigned phase, and controlled means in said remote station actuated by the cutoff plate-current condition of said gated-beam tube, an electron control device, with its input connected to the plate of said gated-beam tube, means for providing different direct-voltage bias levels to said gated-beam tube and said electron control device to maintain the output of said device in a reversed conduction state from the plate-current of said gated-beam tube, and information responsive means connected to the output of said device, whereby said information responsive means in said remote station can be controlled by the phase-shift means of said control station.

2,901,730

DATA STORAGE APPARATUS

William A. Goddard, Los Gatos, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application August 29, 1955, Serial No. 531,092
4 Claims. (Cl. 340—173)



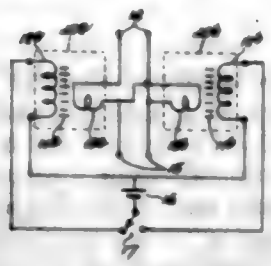
1. Digital data storage apparatus comprising a moving record upon which digital information may be stored in a plurality of character locations each including a plurality of digit locations, said record having a plurality of transparent holes spaced along its length, the spacing of said holes corresponding to the spacing of said character locations, a stationary mask having a plurality of transparent holes so arranged that each of said holes in the record successively passes through a plurality of stationary positions optically alined with respective ones of said holes in the mask, the spacing of said positions corresponding to the spacing of said digit locations, and electro-optical means producing an electric pulse as each of said holes in the record passes through each of said positions, whereby successive electric pulses are produced as said record moves through successive distances equal to the spacing of successive digit locations.

2,901,731

SWITCH DEVICES

Richard L. Snyder, Jr., Moorestown, N.J.

Application May 12, 1954, Serial No. 429,351
3 Claims. (Cl. 340—174)



1. An electrical switch comprising a pair of first terminals and a pair of second terminals, a first and second mechanically static electrical reactance element, said elements exhibiting non-linear controllable reactance characteristics, control means associated with each of said elements for varying the magnitudes of said reactances, an electrical circuit path, between said first and said second pairs of terminals including said first element in series relation to said circuit path and said second element in shunt relation to said circuit path, and circuit means including said control means for selectively effecting simultaneous increase of the reactance of one of said elements and decrease of the other of said elements, thereby to control the electrical impedance between said first and second pairs of terminals.

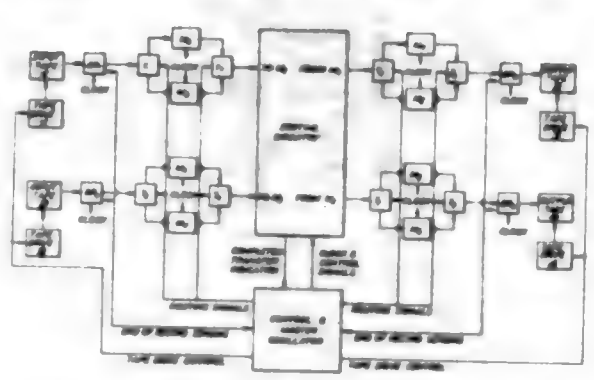
2,901,732

ELECTRONIC SORTER

Richard G. Canning, Venice, Calif., assignor to The Regents of The University of California, a corporation of California

Application June 28, 1954, Serial No. 439,709
4 Claims. (Cl. 340—174)

1. Sorting apparatus comprising: first storage means for sequentially storing a plurality of signals representing serially arrangable items of information; second storage means for sequentially storing a second plurality of signals representing serially arrangeable items of information; withdrawal means for withdrawing the leading signals representing serially arrangeable items of inforance with a selected comparison; temporary storage means for storing the signal last withdrawn by said withdrawing means; comparing means for comparing the respective leading signals in said first and second storage means



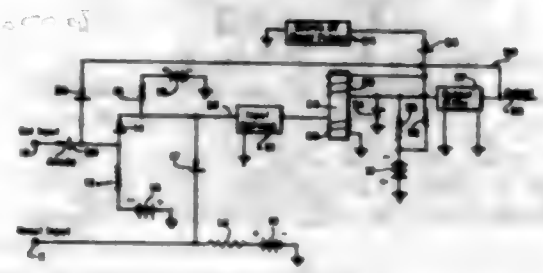
and the signal stored in said temporary storage means, said withdrawal means being responsive to said comparing means for selecting the leading signal from said first or second storage means in accordance with a respective desired serial relation among said leading signals and said signal last withdrawn; fourth and fifth storage means for receiving said selected signals, said comparing means including means for directing the selected signal to said fourth or fifth storage means so as to store therein signals in predetermined serial arrangement in each of said fourth and fifth storage means, as long as such predetermined serial arrangement can be effected.

2,901,733

SINGLE ENDED CARRIER TYPE MAGNETIC AMPLIFIER BISTABLE DEVICE

John Presper Eckert, Jr., Philadelphia, Pa., assignor, by mesne assignments, to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Application October 1, 1954, Serial No. 459,631
14 Claims. (Cl. 340—174)



7. A bistable device comprising a saturable core having a substantially rectangular hysteresis loop, input and power windings on said core, a source of spaced power pulses in series with the power winding and operative, in the absence of resetting magnetizing force, to drive the core to saturation thereby to lower the impedance of the power winding and allow large amplitude power pulses to flow therethrough, means for normally applying a resetting magnetizing force to the core during the spaces between the power pulses, a set input, a reset input, feedback means for adding the output of the power winding to the signals received at the set input, control means fed by the set input and the feedback means to energize said input winding and cancel the resetting magnetizing force when signals appear at the set input or at the feedback means and which inhibits flow of current in the input winding in response to energization of the reset input, the duration of the set input and reset input signals being long as compared with the duration of said power

of conductive material each extending into one of said

lateral position of said transducer relative to said record-

nal preassigned to effect the seizure thereof, selection the phase-shift means of said control station.

pulses, filter means between said control means and the input winding to allow set input and feedback signals to flow to said input winding but to block flow of any of the power pulses induced in the input winding to said control means, said control means comprising a first rectifier having its anode connected to the set input, a second rectifier having its cathode connected to the cathode of the first rectifier and also to the feedback means, a first resistor connected at one end to the cathode of the second rectifier, means for applying negative potential to the other end of the first resistor, a second resistor one end of which is connected to the anode of the second rectifier, means for applying positive potential to the other end of the second resistor, means connecting said anode of the second rectifier to said filter means, a third rectifier having its anode connected to the anode of the second rectifier, a third resistor one end of which is connected to the cathode of the third rectifier, and means for applying a positive potential to the other end of the third resistor, the reset input being connected to the cathode of the third rectifier; said resistors and potentials having such relative values that a positive pulse at the set input will cut off the second rectifier and cause current to flow through the second resistor to the filter means while a negative pulse on the reset input will interrupt flow of current through the second resistor to the filter means.

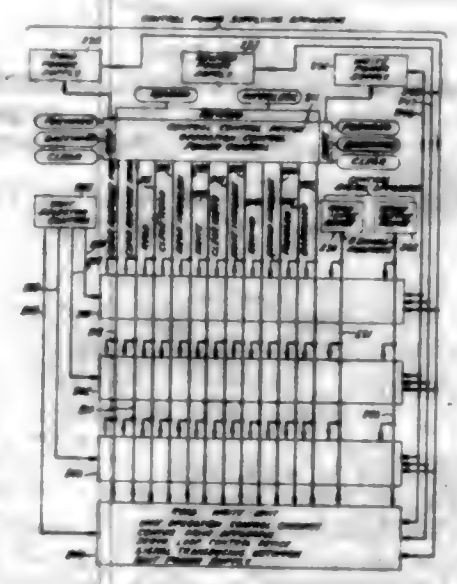
2,901,734

TAPE DRIVE AND RECORDING APPARATUS

Herbert Frazer Welsh, Philadelphia, Pa., Edmund D. Schreiner, Port Washington, and Leon Robert Mock, Forest Hills, N.Y., and John Presper Eckert, Jr., Philadelphia, Pa., assignors to Sperry Rand Corporation, a corporation of Delaware

Original application July 29, 1950, Serial No. 176,722, now Patent No. 2,708,554, dated May 17, 1955. Divided and this application April 6, 1955, Serial No. 499,567

5 Claims. (Cl. 340—174)



1. In combination, a plurality of electric switch devices each capable of executing a first and second operation, a corresponding plurality of sets of control elements governing the operation of individual electric switch devices, common control buses connecting together corresponding members of said sets of control elements, conductors connecting an electric signalling source with said plurality of electric devices, and a signal transfer link connected between each of said individual conductors and one of said common control buses conditioned to pass signals in response to predetermined settings of said control elements.

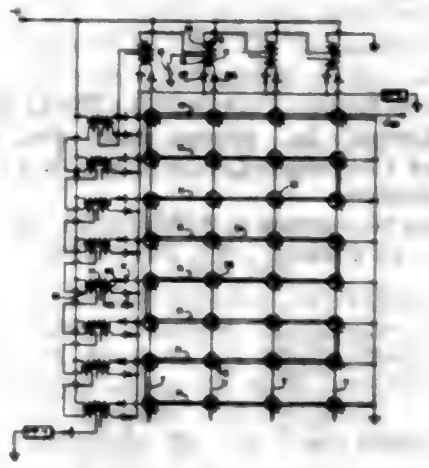
2,901,735

MAGNETIC AMPLIFIER DRIVE FOR COINCIDENT CURRENT SWITCH

Joseph D. Lawrence, Jr., Philadelphia, Pa., assignor, by mesne assignments, to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Application April 29, 1955, Serial No. 504,916

14 Claims. (Cl. 340—174)



1. In a coincident current switch, a core of magnetic material, biasing means for applying a biasing magnetizing force to the core in one direction, an output winding on the core, a first magnetic amplifier, core magnetizing means responsive to the output of the first magnetic amplifier for applying a magnetizing force to the core in a direction opposite to that of the biasing means, a second magnetic amplifier, and core magneticing means responsive to the output of the second magnetic amplifier for applying a magnetizing force to the core in a direction opposite to that of said biasing means, each of said first and second magnetic amplifiers having an input winding and a power winding, a first source of power pulses coupled to the power windings of both said first and second amplifiers whereby said amplifiers are energized by said first source in synchronism with one another, a second source of control pulses, and means for selectively coupling pulses from said second source to the input windings of said first and second amplifiers whereby input signals are selectively applied to said amplifiers from said second source in synchronism with one another, each of said amplifiers including means responsive to an input signal applied thereto for producing an output.

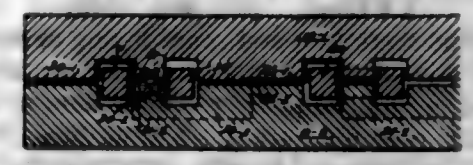
2,901,736

PRINTED CIRCUIT FOR ARRAY OF TOROIDAL CORES

Frederick F. Sylvester, Short Hills, N.J., assignor to Steatite Research Corporation, Kenilworth, N.J., a corporation of Delaware

Application August 23, 1955, Serial No. 530,163

4 Claims. (Cl. 340—174)



1. In a memory core system, a pair of complementary supporting plates for holding a multiplicity of toroidal cores therebetween, at least one of said plates having a multiplicity of aligned depressions therein into which said cores are adapted to fit, said depressions containing a post in the central portion thereof adapted to extend through the opening in the toroid, a toroidal core fitted into each of said depressions, said supporting plates being formed of insulating material, said plate with said depressions containing a plurality of spaced, line portions

1. Sorting apparatus comprising: first storage means for sequentially storing a plurality of signals represent-

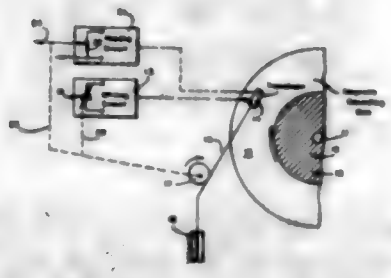
of conductive material each extending into one of said depressions and ending on the post of its depression, the other of said plates containing a plurality of spaced, line portions of conductive material which are complementary to the line portions of the first plate which when the plates are pressed together form at least one continuous line of conducting material passing through a plurality of aligned cores.

2,901,737

DISK RECORDING COMPENSATING DEVICES

John Reed Stovall, Jr., Mount Airy, Pa., assignor to Sperry Rand Corporation, New York, N.Y., a corporation of Delaware

Application November 1, 1955, Serial No. 544,256
12 Claims. (Cl. 340—174)



12. In an information sensing system, a rotatable disk having a magnetic storage surface, a magnetic transducer adjacent said disk, input means connected to said transducer, output means conected to said transducer, means causing said transducer to scan said disk at different positions between the periphery of said disk and the center of said disk, said input means including means for supplying a plurality of information pulses to said transducer whereby said information may be placed on the magnetic surface of said disk, variable impedance means for controlling the rate of which said information pulses are supplied to said transducer, means coupled to said transducer and to said impedance and responsive to the position of said transducer relative to said disk to change said impedance in order that said pulses are recorded at a constant rate, said output means comprising further variable impedance means for controlling the output amplitude of said information pulses when detected by said transducer, said means responsive to said position of said transducer being coupled to said transducer and said further impedance to change said further impedance to compensate for amplitude variations in said output signals.

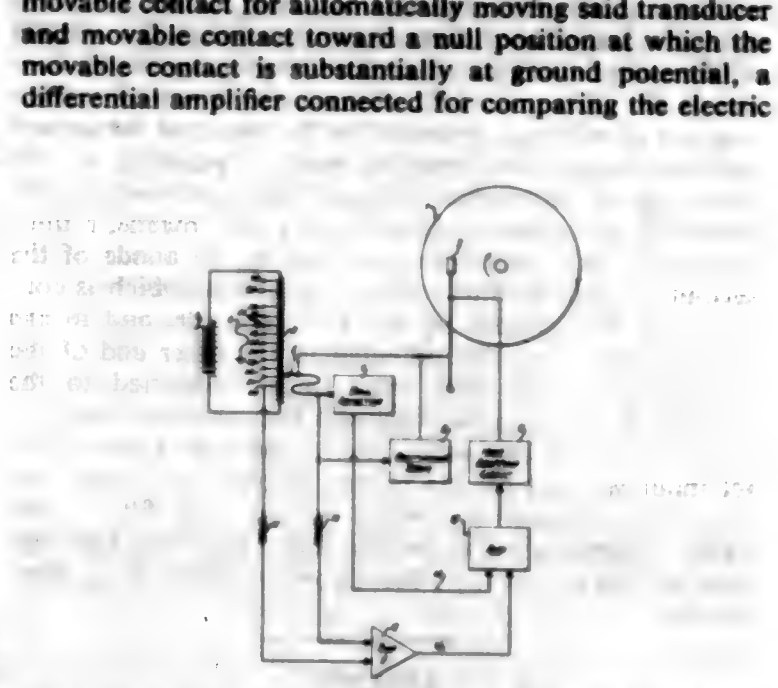
2,901,738

DIFFERENTIAL INTERLOCK FOR SERVO SYSTEM

Dennis D. Willard, San Jose, Calif., assignor to International Business Machines Corporation, New York, N.Y., a corporation of New York

Application December 13, 1956, Serial No. 628,041
3 Claims. (Cl. 340—174)

3. Magnetic recording and reproducing apparatus comprising a rotative disc having a magnetic recording surface adapted to store magnetically recorded data in a plurality of concentric recording tracks, a transducer, means for moving said transducer laterally with respect to said surface between a "home" position and a plurality of positions alined with respective ones of said tracks, selectively, said "home" position being outside of the periphery of said disc. floating voltage supply means, a potentiometer connected across said voltage supply means, said potentiometer having a movable contact and a plurality of fixed contacts, means for moving said movable contact along the length of said potentiometer in synchronism with movement of said transducer laterally with respect to said recording surface so that each position of said movable contact on the potentiometer corresponds to a definite lateral position of said transducer relative to said recording surface, said fixed taps of the potentiometer being at positions of the movable contact that correspond to alinement of said transducer with respective ones of said recording tracks, electrical switching means operable to connect each of said fixed taps selectively to circuit ground, servo means responsive to the electric potential of said movable contact for automatically moving said transducer and movable contact toward a null position at which the movable contact is substantially at ground potential, a differential amplifier connected for comparing the electric



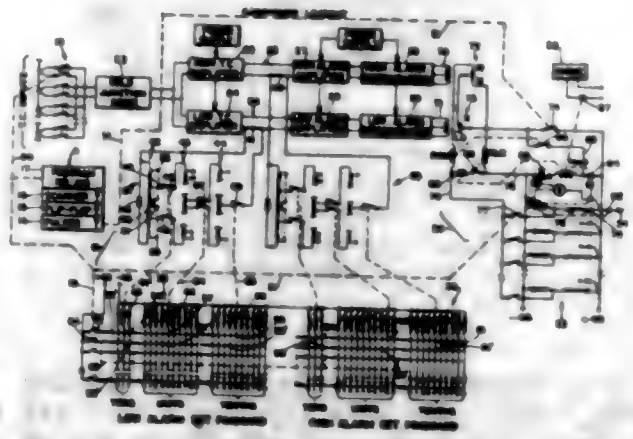
potential of said movable contact with the electric potential of the fixed tap on said potentiometer that represents the position of the outermmost one of said recording tracks, and means for dropping said transducer into closely-spaced relation with said recording surface only when the voltages compared by said differential amplifier have predetermined relative polarities and said movable contact is substantially at ground potential, whereby inadvertent dropping of said head between said "home" position and the position in alinement with the outermost one of said recording tracks is prevented.

2,901,739

DATA SCANNER MONITORING ALARM SYSTEM

Manuel P. Freitas, Stoughton, Mass., assignor to The Foxboro Company, Foxboro, Mass., a corporation of Massachusetts

Application May 21, 1958, Serial No. 736,885
3 Claims. (Cl. 340—213)



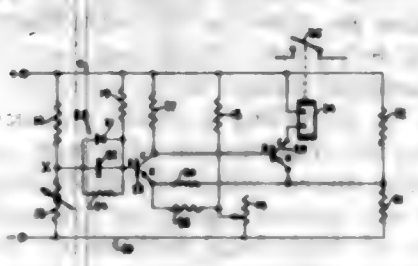
1. A visual and audible automatic alarm system for monitoring a group of variable conditions on the basis of scanning representatives of said conditions and producing normal and off-normal signals individually with respect thereto, said system comprising, in combination, means for producing said signals, and an electrical alarm system responsive to said signals, said alarm system comprising a multiple-unit visual alarm system and a single-unit audible alarm system operably common to all of

fiers, and means synchronizing said gate generating means with said pulse fields whereby each of said pulses

from the aircraft to a predetermined pull-out path situated

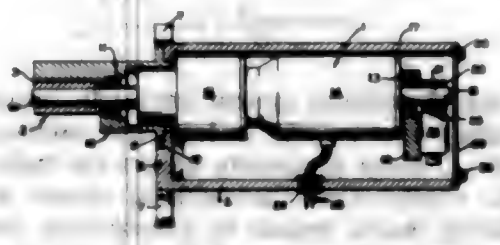
said visual alarm units, said visual alarm system comprising a normal circuit and an off-normal circuit, means for individually locking up said visual alarm units upon the application of off-normal signals thereto, means for individually resetting said visual alarm units in locked-up condition upon the application of normal signals thereto, means for locking up said audible alarm system upon the application of an off-normal signal to any one of said visual alarm units, manual means for resetting said audible alarm system, and means for preventing the actuation of said audible alarm system by an off-normal signal to any one of said visual alarm units in the situation wherein said last-named one of said visual alarm units is locked up and said audible alarm system has been manually reset.

2,901,740
ELECTRICAL NETWORK AUTOMATICALLY RESPONSIVE TO A CHANGE IN CONDITION
George A. Cutsogeorge, Elizabeth, N.J., assignor to Specialties Development Corporation, Belleville, N.J., a corporation of New Jersey
Application November 23, 1956, Serial No. 624,074
12 Claims. (Cl. 340—233)



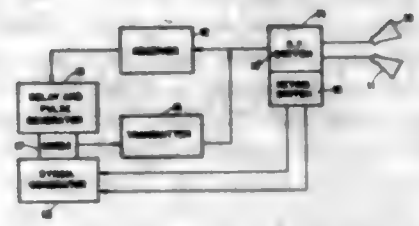
1. In a condition responsive system, the combination of a source of unidirectional current, first and second resistance elements connected in series across said source, third and fourth resistance elements connected in series across said source, said elements having resistance values to provide a voltage dividing bridge normally unbalanced in one direction and one of said elements being constructed and arranged so that the resistance thereof changes in response to a predetermined condition to another value whereby the bridge goes towards unbalance in the opposite direction, a transistor having one of its input electrodes connected to the junction of said first and second elements through conductive elements adapted to pass a continuous direct current and having the other of its input electrodes connected to the junction of said third and fourth elements through conductive elements adapted to pass a continuous direct current and having its collector connected for supply of current thereto, and an electrically operable device connected to be controlled by the output of said transistor.

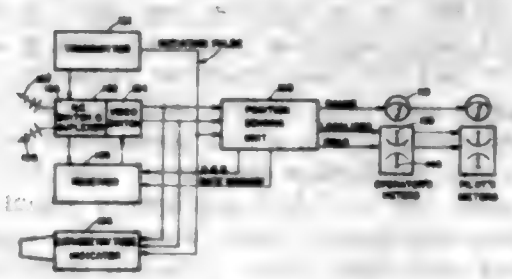
2,901,741
ICE DETECTORS
David W. Moore, Pacific Palisades, and William E. Blair, Redondo Beach, Calif., assignors to Servomechanisms, Inc., Hawthorne, Calif., a corporation of New York
Application June 2, 1958, Serial No. 739,149
3 Claims. (Cl. 340—234)



1. Ice detecting apparatus including: frame means; bearing means carried by said frame means; torque-producing means having an active element and a reactive element; an active shaft being connected to the active element of said torque-producing means; a reactive shaft being connected to the reactive element of said torque-producing means; said shafts being in axial alignment and being carried by said bearing means; a cylinder exposed to possible ice-forming atmosphere and mounted upon said active shaft; an ice-shaving knife edge carried by said frame and arranged in proximity with said cylinder; a torque arm carried by said reactive shaft; signalling means operable in response to reactive forces transmitted by said torque arm for indicating a state of torque existing between the active element and the reactive element of said torque-producing means as initiated by the formation of ice upon said cylinder.

2,901,742
BLIND LANDING SYSTEM
Thomas Robert Burnight, Washington, D.C., and Robert A. Emmett, Jr., United States Navy
Application November 19, 1945, Serial No. 629,688
5 Claims. (Cl. 343—6)
(Granted under Title 35, U.S. Code (1952), sec. 266)





1. In a radio landing system in which a pair of alternately pulsed radiation fields overlap along the axis of a runway to define the axis and position of the runway, means for indicating in an aircraft the course path and range to the runway and wind drift, comprising dual-channel radio receiving means for receiving the pulses, directional receiving antennas positioned on opposite sides of the axis of the aircraft and having field patterns that overlap along said axis, each of said antennas being coupled to one of said receiver channels, means coupled to said receiver channels for comparing the output of each of said channels including indicating means for indicating the relative amplitude of the signals received in each of said antennas and calibrated in terms of the heading of the aircraft, automatic gating means rendering said receiving means operative only at the time said pulses reach said receiver, indicating means controlled by said gating means for indicating the range of said runway, a pair of signal amplifiers, means coupling said pair of pulsed fields to each of said signal amplifiers, indicating means coupled to both said signal amplifiers to indicate the relative amplitudes of the output of said amplifiers, gate generating means coupled to said ampli-

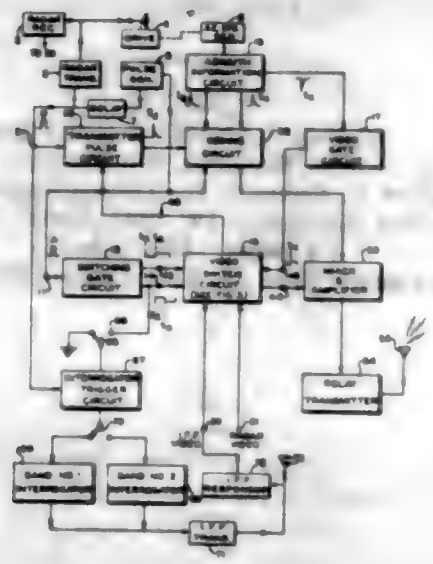
with said impulses a sweep controlling pulse of a given frequencies, receiving means for detecting the reflected

recording surface so that each position of said movable contact on the potentiometer corresponds to a definite

prising a multiple-unit visual alarm system and a single-unit audible alarm system operably common to all of

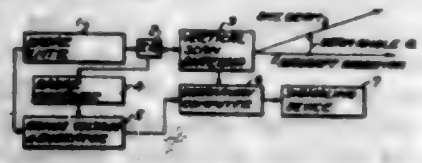
fiers, and means synchronizing said gate generating means with said pulse fields whereby each of said signal amplifiers is sensitive to only one of said pulsed fields.

2,901,743
RADAR TELEMETERING SYSTEM
Andrew B. Jacobsen, Somerville, Mass., and Louis A. Turner, Princeton, N.J., assignors, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application January 5, 1946, Serial No. 639,282
9 Claims. (Cl. 343—6.5)



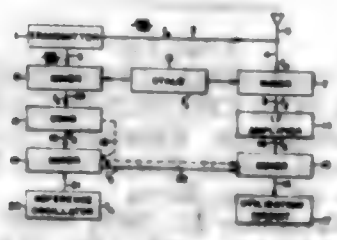
2. In a system for the alternate transmission on a single carrier of first and second intelligence signals, means for periodically generating first and second gates at a first pulse repetition frequency, each of said first gates occurring in time between two successive second gates, means for periodically generating a third gate at a second pulse repetition frequency that is an even harmonic of said first pulse repetition frequency, each of said third gates coinciding in time with one of either of said first and second gates, a first coincidence circuit responsive to the application thereto of said first gates, said third gates and said first intelligence signal for passing said first intelligence signal during the coincidence of said first and third gates, a second coincidence circuit responsive to the application thereto of said second gates, said third gates and said second intelligence signal for passing said second intelligence signal during the coincidence of said second and third gates, and means for combining the outputs of said first and second coincidence circuits.

2,901,744
BREAKAWAY COMPUTER
William H. Isely, Cocoa Beach, Fla., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Air Force
Application February 12, 1957, Serial No. 639,838
2 Claims. (Cl. 343—7)



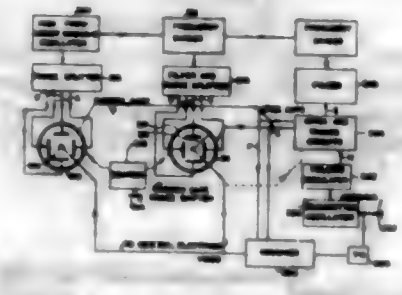
1. In combination with vertically scanning apparatus on an aircraft for continuously measuring the range from the aircraft to the terrain over a predetermined vertical angle measured upward from the longitudinal axis of the aircraft, means synchronized with said range measuring apparatus for continuously computing the distance in the direction of the instantaneous range measurement from the aircraft to a predetermined pull-out path situated a predetermined distance in advance of the aircraft in the plane of said sector and moving at the speed of the aircraft, means for comparing the instantaneous value of said distance with the corresponding instantaneous value of range, and means for giving an indication when the compared values are equal.

2,901,745
SIGNAL PROCESSING ARRANGEMENT
Donald H. Kuhn, Syracuse, N.Y., assignor to General Electric Company, a corporation of New York
Application April 26, 1957, Serial No. 655,435
7 Claims. (Cl. 343—7.7)



3. In an object detection system of the pulse echo type wherein means are provided for periodically transmitting pulsed waves to remote objects and for receiving echoes of said transmitted pulsed waves returned from said object, means for providing a signal representative of the time between the transmission of a pulse and the reception of an echo thereof which is independent of the phase with which said pulsed waves are transmitted comprising a source of stable local oscillations, means for mixing said local oscillations with said received echoes to provide echoes at an intermediate frequency level, means for mixing said local oscillations with a portion of said transmitted pulses for providing a first signal, a coherent oscillator responsive to said first signal for providing coherent oscillations having a phase corresponding to that of successively transmitted pulsed waves, a source of continuous, stable frequency reference oscillations, means for mixing said reference oscillations with said coherent oscillations to provide second oscillations, means for mixing said second oscillations with said echoes at an intermediate frequency level to provide output oscillations at an intermediate frequency level, and means for utilizing said output oscillations.

2,901,746
AUTOMATIC RANGE TRACKING APPARATUS
Albert M. Grass, Quincy, Mass., assignor, by mesne assignments, to the United States of America as represented by the Secretary of the Navy
Application February 10, 1944, Serial No. 522,300
1 Claim. (Cl. 343—13)



In a radio detection system having a transmitter for transmitting impulses, and at least one oscillograph provided with a sweep producing means for indicating purposes, the combination therewith of means to generate an oscillating wave, means to synchronize transmission of the impulse with certain of the periods of said wave, means to synchronize the sweep of said oscillograph with periods of said wave, means to generate in synchronism

bearing means carried by said frame means; torque-producing means having an active element and a reactive

indicate the relative amplitudes of the output of said amplifiers, gate generating means coupled to said ampli-

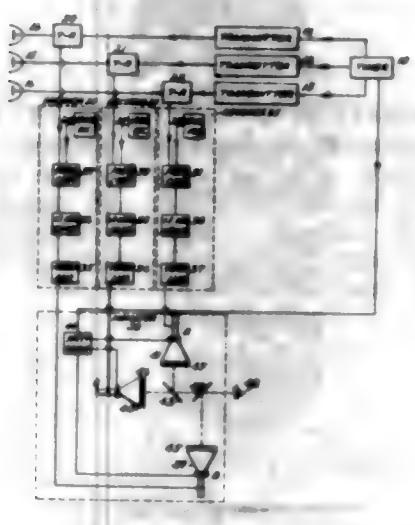
with said impulses a sweep controlling pulse of a given duration, means to apply said sweep controlling pulse to said oscillograph to control the perceptibility of the sweep thereof, the sweep circuit of the oscillograph being arranged to provide a plurality of circular sweeps one for each period of said wave and said means for generating the sweep controlling pulse being arranged to render the duration of the pulse substantially equal to a period of said wave, so as to render perceptible one of said circular sweeps.

2,901,747

COLOR IDENTIFICATION IN RADAR SYSTEMS

David E. Sunstein, Cynwyd, Pa., assignor to Philco Corporation, Philadelphia, Pa., a corporation of Pennsylvania

Application June 7, 1946, Serial No. 674,969
7 Claims. (Cl. 343—17)



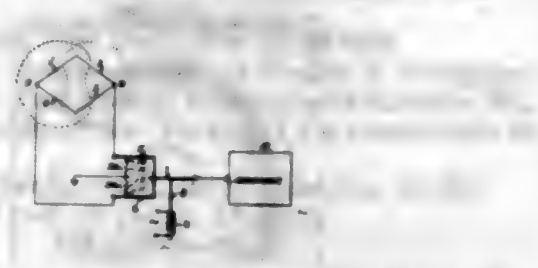
4. A radar system to detect at least one of a plurality of targets each reflecting energy at a preferential frequency comprising a plurality of signal sources each at a different frequency, means to transmit said plurality of frequencies, receiving means for detecting the reflected signals from at least one of said targets and means for deriving information signals representative of said targets from said detected signals in accordance with the frequency of said detected signals.

2,901,748

ANTENNA LOBE SWITCHING SYSTEM

Janis A. Sirons, Springfield, Ohio, assignor to the United States of America as represented by the Secretary of the Air Force

Application January 26, 1956, Serial No. 561,693
13 Claims. (Cl. 343—733)
(Granted under Title 35, U.S. Code (1952), sec. 266)



1. A switching device for coaxial transmission lines comprising first and second cantilever spring contacts anchored to spaced fixed points and extending toward each other, in the general direction of a line joining said points, with their free ends in proximity; a third contact situated between the free ends of said first and second contacts, said third contact having a pair of contact surfaces facing in opposite directions substantially normal to said first and second contacts and having a neutral position in which said contact surfaces are engaged by free ends of said first and second contacts; and means for displacing said third contact in a direction substantially normal to said first and second spring contacts until electrical contact with one of said first and second contacts is broken said first, second and third contacts being extensions of the center conductors of three separate coaxial lines.

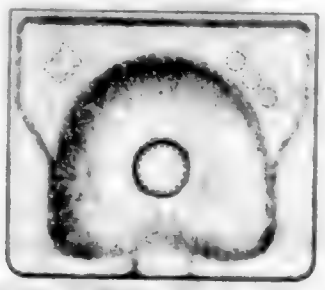
ring apparatus for continuously computing the distance in the direction of the instantaneous range measurement

means to synchronize the sweep of said oscillograph with periods of said wave, means to generate in synchronism

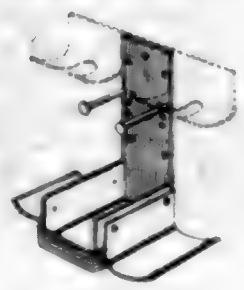
DESIGNS

AUGUST 25, 1959

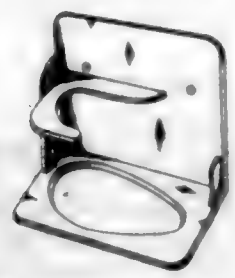
185,949
SHAMPOO BOWL
Walter J. Kiefer, Belvidere, Ill., assignor to Belvedere Products Inc., Belvidere, Ill., a corporation of Illinois
Application December 31, 1958, Serial No. 54,007
Term of patent 14 years
(Cl. D4—2)



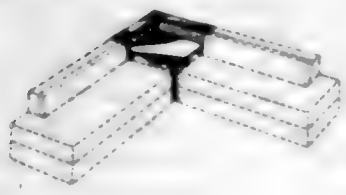
185,950
HOLDER FOR TUBES, SHAVING GEAR AND THE LIKE
George Wise, Washington, D.C.
Application March 25, 1959, Serial No. 55,169
Term of patent 14 years
(Cl. D4—3)



185,951
HOLDER FOR AN ELECTRIC SHAVER
Troy A. Wambaugh, Portland, Oreg.
Application March 30, 1959, Serial No. 55,243
Term of patent 3½ years
(Cl. D4—3)



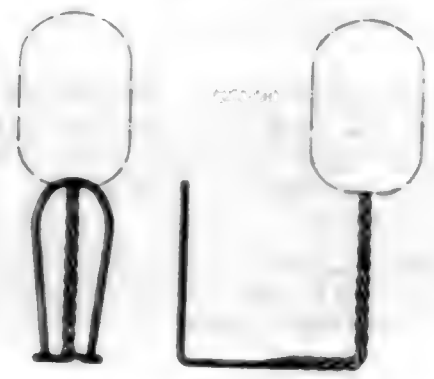
185,952
TWIN SOFA BED AND CORNER TABLE UNIT
Louis Elliott Frey, Los Angeles, Calif.
Application August 4, 1958, Serial No. 52,036
Term of patent 14 years
(Cl. D5—4)



185,953
SHOE SOLE
Bertram H. MacLeod, Red Wing, Minn., assignor to Avon Sole Company, Avon, Mass., a corporation of Massachusetts
Application January 9, 1958, Serial No. 49,177
Term of patent 14 years
(Cl. D7—5)

185,954
SOLE FOR SHOES
Neal W. Powell, Taneytown, Md., assignor to Cambridge Rubber Company, Cambridge, Mass., a corporation of Maryland
Application February 11, 1958, Serial No. 49,598
Term of patent 7 years
(Cl. D7—5)

185,955
BRUSH
Vincent B. Nyhan, Chicago, Ill.
Application February 18, 1959, Serial No. 54,663
Term of patent 14 years
(Cl. D9—2)



185,963
LOUDSPEAKER CABINET

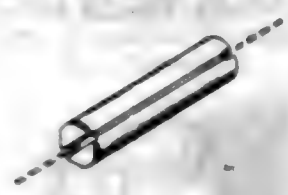
185,966
ROLLER SKATE

185,956
TELEVISION CART
Robert J. Wright and Rudy Kopernak, Indianapolis, Ind.
Application September 22, 1958, Serial No. 52,710
Term of patent 14 years
(Cl. D14—3)

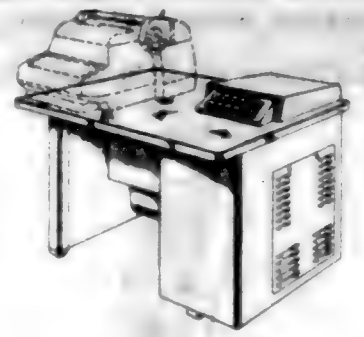
185,957
PORTABLE HAND FIRE EXTINGUISHER
Merritt R. Bauman and Roy E. Downham, Marinette, Wis., Carl Jones, Jr., Menominee, Mich., and Robert Paus, Chicago, Ill., assignors to Ansul Chemical Company, Marinette, Wis., a corporation of Wisconsin
Application December 19, 1958, Serial No. 53,833
Term of patent 14 years
(Cl. D16—2)

185,958
KNIFE
Gabriel W. Bougie, Portland, Oreg.
Application October 8, 1957, Serial No. 48,010
Term of patent 14 years
(Cl. D22—3)

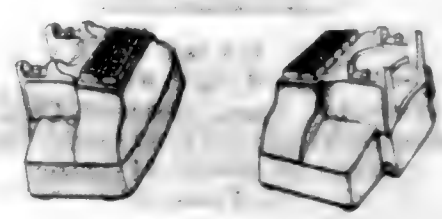
185,959
MOLDED CASING
Walter W. Schroeder, Williamstown, Mass.
Application June 24, 1958, Serial No. 51,508
Term of patent 14 years
(Cl. D26—1)



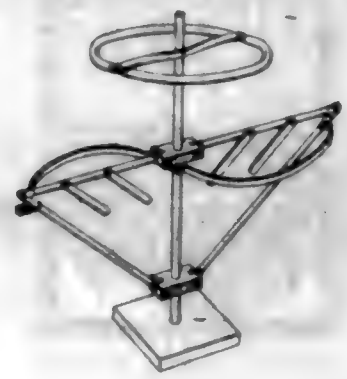
185,960
COMPUTER INQUIRY STATION
David G. Moore, Johnson City, and George F. Fahringer, Endicott, N.Y., assignors to International Business Machines Corporation, New York, N.Y., a corporation of New York
Application February 19, 1958, Serial No. 49,703
Term of patent 14 years
(Cl. D26—5)



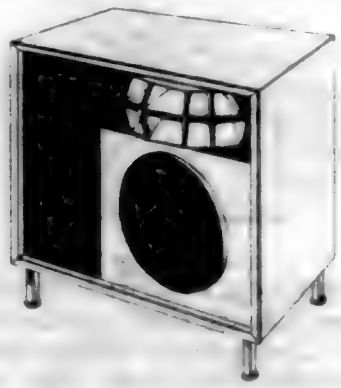
185,961
HOUSING OF A TELEPHONE
Haruo Nogami, Tokyo, Japan
Application March 17, 1958, Serial No. 50,047
Term of patent 3½ years
(Cl. D26—14)



185,962
TELEVISION ANTENNA
Thomas Vitanza, Buffalo, N.Y.
Application March 26, 1959, Serial No. 55,187
Term of patent 14 years
(Cl. D26—14)

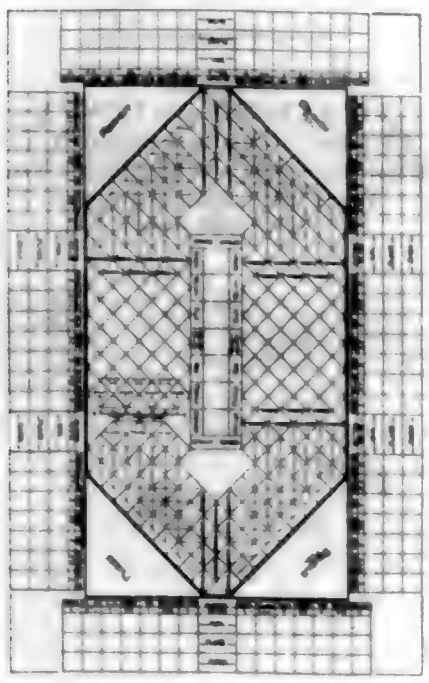


185,963
LOUDSPEAKER CABINET
Charles Eames, Pacific Palisades, Calif., assignor to Stephens Tru-Sonic Inc., Culver City, Calif., a corporation of California
Application May 20, 1957, Serial No. 46,232
Term of patent 14 years
(Cl. D26—14)

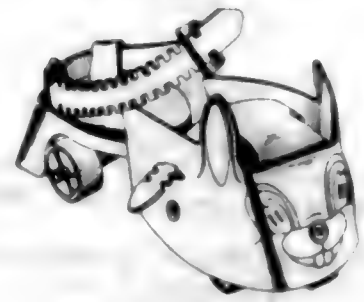


185,964
HAND MICROPHONE FOR A DICTATING MACHINE
Garabed Barsumian, Monroe, Conn., assignor to Dictaphone Corporation, Bridgeport, Conn., a corporation of New York
Application March 25, 1959, Serial No. 55,154
Term of patent 14 years
(Cl. D26—14)

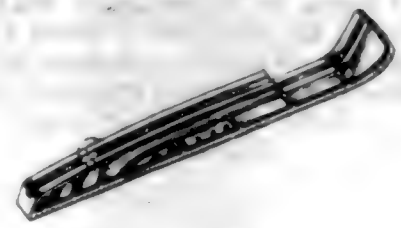
185,965
GAMEBOARD
Herbert E. Hagen, Oakland, Calif.
Application December 16, 1957, Serial No. 48,927
Term of patent 14 years
(Cl. D34—5)



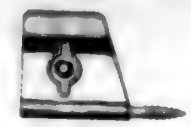
185,966
ROLLER SKATE
Daniel S. Williams, Pottstown, Pa.
Application February 12, 1959, Serial No. 54,588
Term of patent 14 years
(Cl. D34—14)



185,967
SKATE GUARD
Stanley K. Johns, Quebec, Quebec, Canada, assignor to St. Lawrence Manufacturing Co. Inc., Quebec, Quebec, Canada, a company of Quebec
Application May 19, 1958, Serial No. 50,932
Term of patent 14 years
(Cl. D34—15)



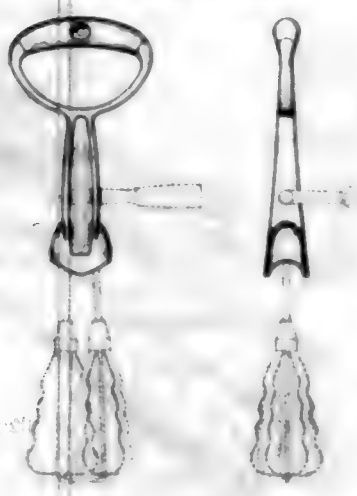
185,968
BRANCH HOLDER
Winfield H. Moore, St. Paul, Minn.
Application December 12, 1957, Serial No. 48,887
Term of patent 3½ years
(Cl. D35—1)



185,969
WATCH OR SIMILAR ARTICLE
Adolph Katz, Providence, R.I.
Application March 12, 1959, Serial No. 54,965
Term of patent 7 years
(Cl. D42—8)

185,977

185,970
CULINARY BEATER
Richard S. Latham, Chicago, Ill., assignor to Ekco Products Company, Chicago, Ill., a corporation of Illinois
Application February 19, 1959, Serial No. 54,674
Term of patent 14 years
(Cl. D44—1)



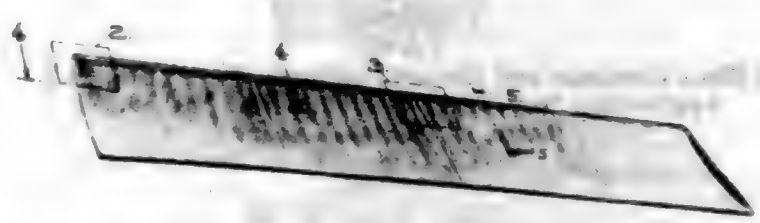
185,971
COMBINED CUP AND DRINKING TUBE HANDLE
Meyer Saffer, Jamaica, N.Y.
Application May 23, 1958, Serial No. 51,049
Term of patent 14 years
(Cl. D44—9)

185,972
HOLDER FOR CULINARY IMPLEMENTS AND THE LIKE
Richard S. Latham, Chicago, Ill., assignor to Ekco Products Company, Chicago, Ill., a corporation of Illinois
Application February 19, 1959, Serial No. 54,677
Term of patent 14 years
(Cl. D44—29)

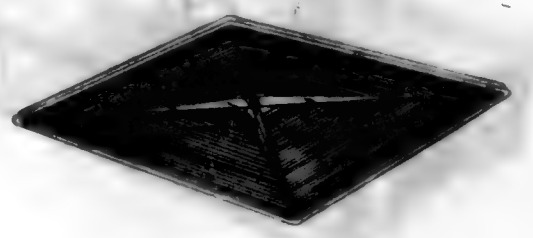
185,973
HANGER PLATE FOR ELECTRIC FIXTURES OR THE LIKE
Carl X. Meyer, St. Louis County, Mo., assignor to Day-Brite Lighting, Inc., St. Louis, Mo., a corporation of Missouri
Application June 20, 1957, Serial No. 46,667
Term of patent 14 years
(Cl. D48—4)

185,974
ILLUMINATING FIXTURE
Harold W. Rambusch, Lloyd Harbor, and Joaquin Santos, Garden City, N.Y., assignors to Rambusch Decorating Company, New York, N.Y., a corporation of New York
Application June 30, 1958, Serial No. 51,593
Term of patent 14 years
(Cl. D48—4)

185,975
LENS FOR LIGHT FIXTURE
Kurt Franck and Vearl S. Wince, Newark, Ohio, assignors to Holophane Company, Inc., New York, N.Y., a corporation of Delaware
Application September 25, 1957, Serial No. 47,859
Term of patent 14 years
(Cl. D48—16)

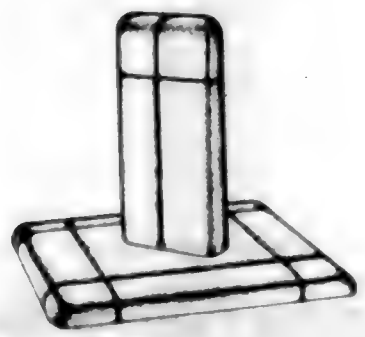


185,976
LIGHTING FIXTURE LENS
Carl X. Meyer, St. Louis County, Mo., assignor to Day-Brite Lighting, Inc., St. Louis, Mo., a corporation of Missouri
Application March 17, 1958, Serial No. 50,044
Term of patent 14 years
(Cl. D48—16)



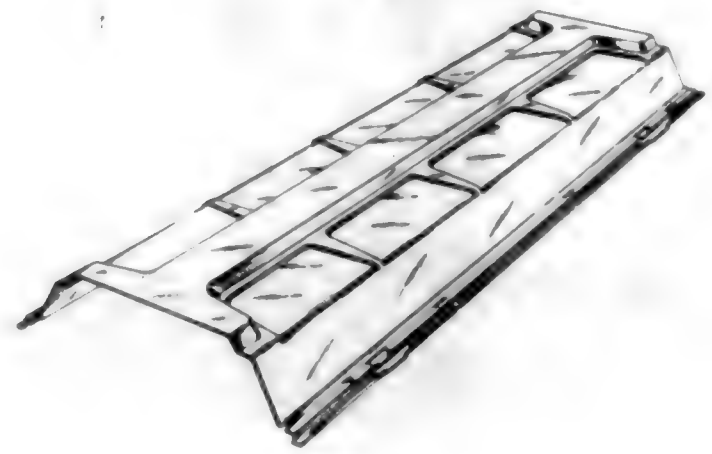
185,977
LAMP
Jerome E. Hughes, Richmond, Va.
Application December 23, 1958, Serial No. 53,885
Term of patent 14 years
(Cl. D48—20)

185,978
LAMP BASE
Pasquale U. Franzone, East Greenwich, R.I.
Application March 11, 1959, Serial No. 54,937
Term of patent 14 years
(Cl. D48—20)

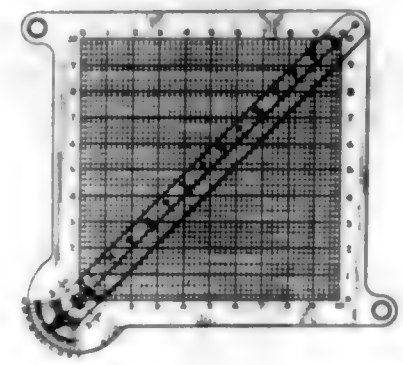


185,979
LAMP
Lillian Goldman and Robert Goldman, New York, N.Y.
Application November 4, 1958, Serial No. 53,271
Term of patent 7 years
(Cl. D48—20)

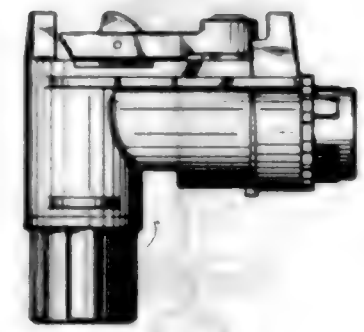
185,980
REFLECTOR FOR FLUORESCENT LIGHTING FIXTURES OR THE LIKE
Leo G. Stahlhut, Kirkwood, and Carl X. Meyer, St. Louis County, Mo., assignors to Day-Brite Lighting, Inc., St. Louis, Mo., a corporation of Missouri
Application April 11, 1958, Serial No. 50,447
Term of patent 14 years
(Cl. D48—23)



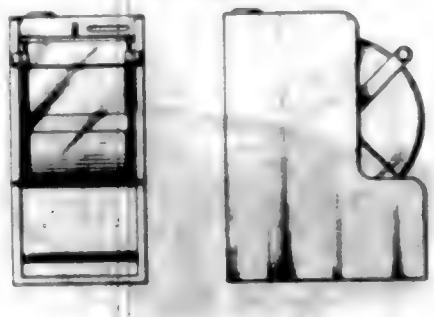
185,981
TRIANGULATOR RANGE FINDER
William Henry Klein, Hawthorne, Calif.
Application June 2, 1958, Serial No. 51,136
Term of patent 7 years
(Cl. D52—1)



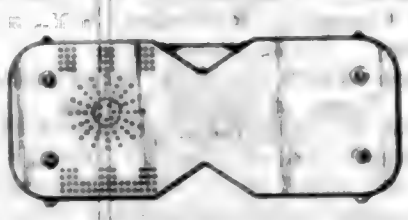
185,982
NOZZLE FOR DISPENSING FLUID
Frank P. Scully, Belmont, Mass., assignor to Scully Signal Company, Melrose, Mass., a corporation of Massachusetts
Application December 22, 1958, Serial No. 53,858
Term of patent 14 years
(Cl. D52—2)



185,983
VENDING MACHINE FOR CAPSULES
Grant A. Wiswell, San Mateo, Calif.
Application July 28, 1958, Serial No. 51,953
Term of patent 14 years
(Cl. D52—3)

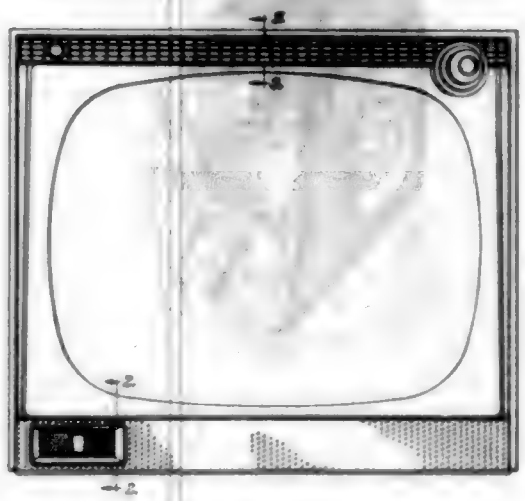


185,984
GUITAR CASE
Rundlette K. Palmer, Newcastle, Maine
Application April 2, 1958, Serial No. 50,304
Term of patent 14 years
(Cl. D56—1)

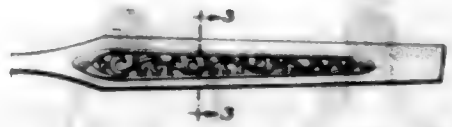


185,985
MUSICAL INSTRUMENT KEY
Robert E. Lowry, Sioux City, Iowa, assignor to G. Leblanc Corporation, Kenosha, Wis., a corporation of Wisconsin
Application April 23, 1958, Serial No. 50,591
Term of patent 14 years
(Cl. D56—1)

185,986
COMBINED ESCUTCHEON AND FACE PLATE FOR A TELEVISION RECEIVER CABINET
Melvin H. Boldt, Glenview, Ill., assignor to Zenith Radio Corporation, a corporation of Delaware
Application March 24, 1958, Serial No. 50,143
Term of patent 7 years
(Cl. D56—4)

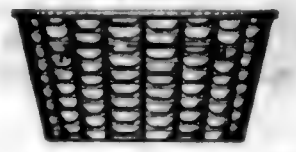


185,987
SPECTACLE TEMPLE
Rose S. Marfuggi, Short Hills, N.J.
Application November 12, 1958, Serial No. 53,351
Term of patent 14 years
(Cl. D57—1)

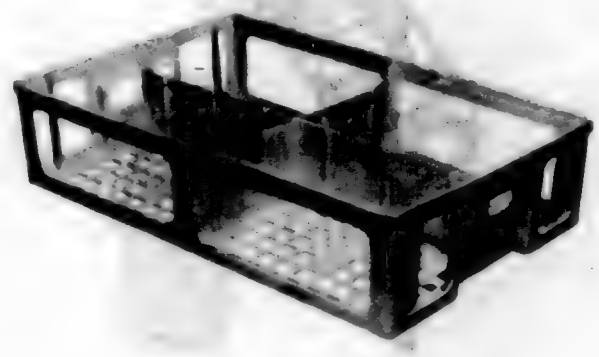


185,988
COMBINATION FOOD AND BEVERAGE BASKET FOR AUTOMOBILES OR THE LIKE
Willis L. Harrold, Mishawaka, Ind.
Application September 11, 1957, Serial No. 47,706
Term of patent 14 years
(Cl. D58—4)

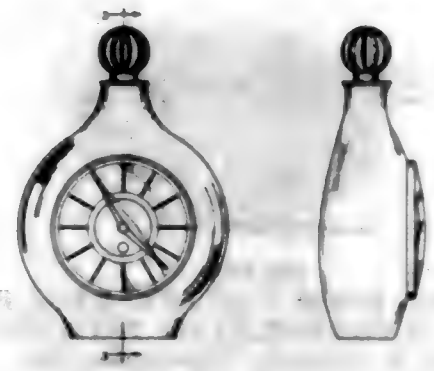
185,989
BASKET
Faye Elvira Saviano, Tuckahoe, N.Y.
Application December 31, 1958, Serial No. 54,005
Term of patent 3½ years
(Cl. D58—4)



185,990
BEVERAGE CASE
Carl H. Dickman, Scranton, and Carmin A. Castellano, Clarks Summit, Pa., assignors to Consolidated Molded Products Corporation, Scranton, Pa., a corporation of Delaware
Application May 6, 1959, Serial No. 55,792
Term of patent 14 years
(Cl. D58—5)

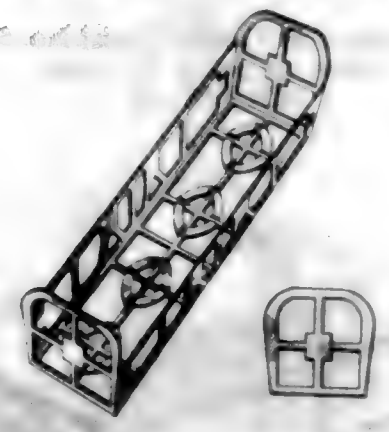


185,991
DECANTER
Raymond F. Loewy, New York, N.Y.
Application November 18, 1957, Serial No. 48,512
Term of patent 14 years
(Cl. D58—8)

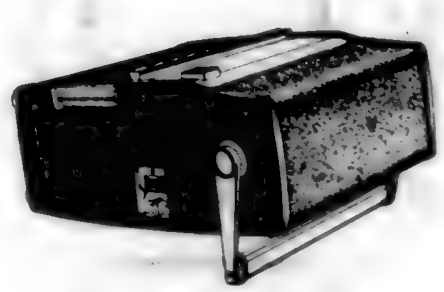


185,992
JEWELRY BOX OR SIMILAR ARTICLE
Vladimir A. D'Arbeloff, Riverside, Conn.
Application October 9, 1958, Serial No. 52,920
Term of patent 7 years
(Cl. D58—12)

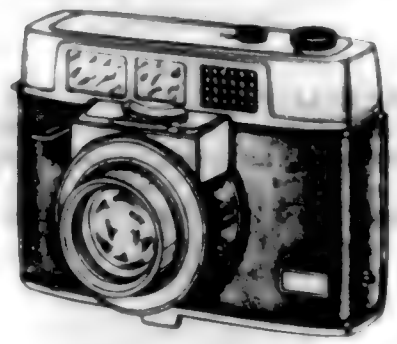
185,993
TRAY FOR A WRAPPED FRUIT CONTAINER
Murray Schnall, Brooklyn, N.Y.
Application March 3, 1959, Serial No. 54,822
Term of patent 14 years
(Cl. D58—26)



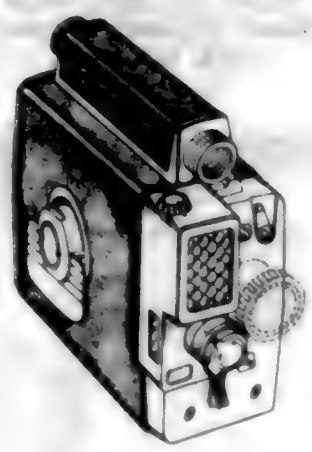
185,994
STILL PICTURE PROJECTOR
Richard W. Lanigan, Evanston, Ill., assignor to Bell & Howell Company, Chicago, Ill., a corporation of Illinois
Application September 19, 1958, Serial No. 52,692
Term of patent 14 years
(Cl. D61—1)



185,995
CAMERA
Arthur H. Crapsey, Jr., Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Application March 23, 1959, Serial No. 55,112
Term of patent 7 years
(Cl. D61—1)

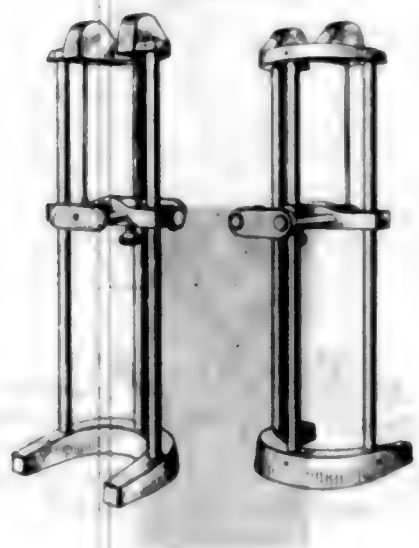


185,996
MOTION PICTURE CAMERA
Frederick G. Knowles, Rochester, N.Y., assignor to Eastman Kodak Company, Rochester, N.Y., a corporation of New Jersey
Application March 23, 1959, Serial No. 55,111
Term of patent 14 years
(Cl. D61—1)

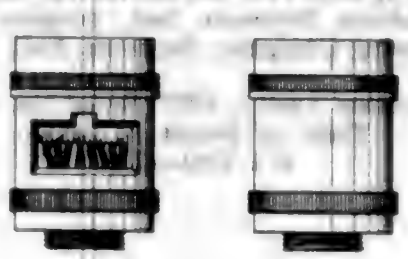


186,004

185,997
CAMERA STAND OR SIMILAR ARTICLE
Joseph R. Lasby, Kansas City, Mo.
Application January 2, 1958, Serial No. 49,103
Term of patent 14 years
(Cl. D61—1)

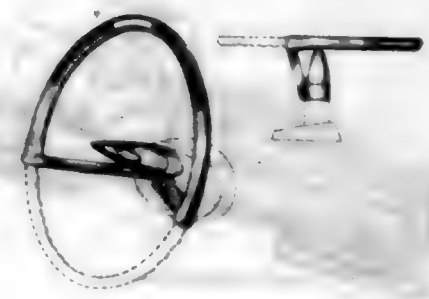


185,998
PHOTOELECTRIC EXPOSURE METER
Mamoru Harada, Tokyo, Japan
Application April 30, 1958, Serial No. 50,679
Claims priority, application Japan January 23, 1958
Term of patent 14 years
(Cl. D61—1)



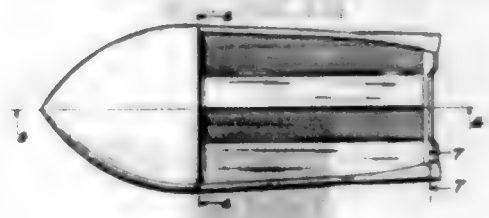
185,999
PHOTOGRAPHIC COPY ATTACHMENT FOR A CAMERA OR SIMILAR ARTICLE
Grant H. Muse, Jr., Englewood, Colo.
Application March 24, 1958, Serial No. 50,148
Term of patent 7 years
(Cl. D61—1)

186,000
STEERING WHEEL
Glenn W. Monigle, Pittsburgh, Pa., assignor to Attwood Brass Works, Inc., Grand Rapids, Mich., a corporation of Michigan
Application May 14, 1958, Serial No. 50,889
Term of patent 14 years
(Cl. D71—1)

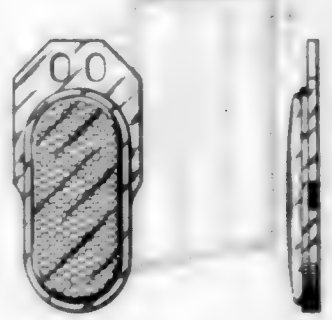


186,001
STEERING WHEEL
Glenn W. Monigle, Pittsburgh, Pa., assignor to Attwood Brass Works, Inc., Grand Rapids, Mich., a corporation of Michigan
Application May 15, 1958, Serial No. 50,896
Term of patent 14 years
(Cl. D71—1)

186,002
BOAT HULL
Harold S. Hollnagel, Milwaukee, Wis.
Application July 22, 1957, Serial No. 47,045
Term of patent 14 years
(Cl. D71—1)



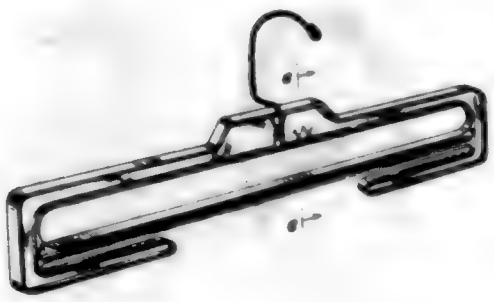
186,003
REFLECTOR FOR PEDESTRIANS
Lane Soutar, Hickory, N.C.
Application May 2, 1958, Serial No. 50,729
Term of patent 14 years
(Cl. D72—1)



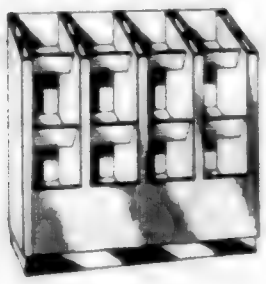
186,009
UMBRELLA

186,011
LAWN SPRINKLER

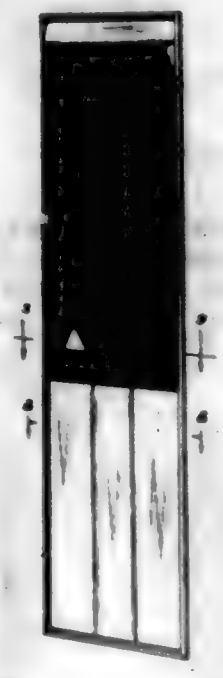
186,004
HANGER FOR SLACKS OR SIMILAR ARTICLE
Herb Coon, Kings Point, N.Y., assignor to Red Wing Products, New Hyde Park, N.Y., a partnership
Application September 10, 1958, Serial No. 52,595
Term of patent 14 years
(Cl. D80—8)



186,005
DISPLAY CABINET
Harold L. Hosley, Greensboro, N.C.
Application June 2, 1958, Serial No. 51,154
Term of patent 14 years
(Cl. D80—11)

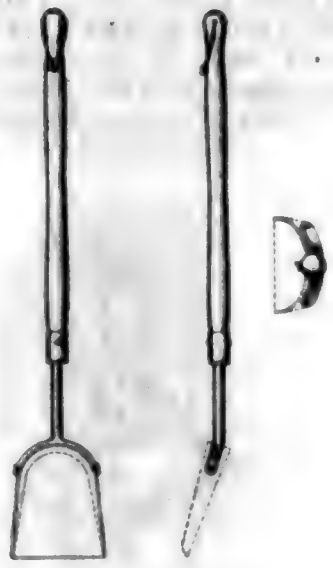


186,006
FRONT PANEL FOR FURNACES
George H. Fiedler, Euclid, and John R. Ewart, Cuyahoga Falls, Ohio, assignors to Hupp Corporation, Cleveland, Ohio, a corporation of Virginia
Application November 1, 1957, Serial No. 48,311
Term of patent 14 years
(Cl. D81—19)



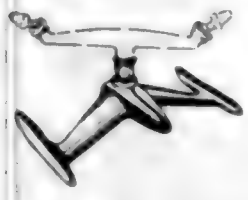
186,007
FRONT PANEL FOR A FURNACE
Douglas G. Aitken, Painesville, Ohio, assignor to Hupp Corporation, Cleveland, Ohio, a corporation of Virginia
Application September 11, 1958, Serial No. 52,614
Term of patent 14 years
(Cl. D81—19)

186,008
HEARTH SHOVEL OR SIMILAR ARTICLE
Willis S. Hobson, Seymour, Ind., assignor to Seymour Manufacturing Company, Seymour, Ind., a corporation of Indiana
Application April 3, 1957, Serial No. 45,567
Term of patent 14 years
(Cl. D81—24)



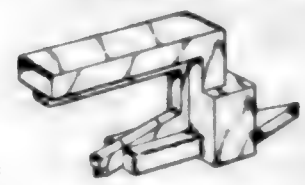
186,009
UMBRELLA
Bela Lorincz, Los Angeles, Calif.
Application August 6, 1958, Serial No. 52,074
Term of patent 3½ years
(Cl. D88—3)

186,010
LAWN SPRINKLER
William P. O'Brien, Western Springs, Ill., assignor to W. D. Allen Manufacturing Co., Chicago, Ill., a corporation of Illinois
Application May 29, 1958, Serial No. 51,122
Term of patent 14 years
(Cl. D91—1)



186,011
LAWN SPRINKLER
E Burton Benjamin, Chicago, Ill., assignor to W. D. Allen Manufacturing Co., Chicago, Ill., a corporation of Illinois
Application October 27, 1958, Serial No. 53,178
Term of patent 14 years
(Cl. D91—1)

186,012
HANDLE FOR A NOZZLE
Benjamin Soenick, San Jose, Calif.
Application May 26, 1958, Serial No. 51,088
Term of patent 14 years
(Cl. D91—3)



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Paus, Robert: *See*—
Bauman, Merritt R., Downham, Jones, and Paus. 185,057, 8–8–50, Cl. D91—3.

Sosnick, Benjamin. Handle for a nozzle. 186,012, 8–25–59, Cl. D91—3.

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PATENTS WERE ISSUED ON THE 25TH DAY OF AUGUST, 1959

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

Bushnell, David P.: *See*—
Oswald, Richard L. Re. 24,692.
Du Pont de Nemours, E. I., and Co.: *See*—
Koller, Charles R. Re. 24,689.
Steuber, Walter. Re. 24,691.
Koller, Charles R., to E. I. du Pont de Nemours and Co. Process for forming films and filaments directly from polymer intermediates. Re. 24,689, 8–25–59, Cl. 18—54.
Oswald, Richard L., to D. P. Bushnell. Optional gun sight reticule enlarging device. Re. 24,692, 8–25–59, Cl. 33—50.
Steuber, Walter, to E. I. du Pont de Nemours and Co. Process for forming films and filaments directly from polymer intermediates. Re. 24,691, 8–25–59, Cl. 18—54.
Yavitch, Morris. Device for testing bath cabinet shower pans for leakage. Re. 24,690, 8–25–59, Cl. 4—288.

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Aitken, Douglas G., to Hupp Corp. Front panel for a furnace. 186,007, 8–25–59, Cl. D81—10.
Allen, W. D., Mfg. Co.: *See*—
Benjamin, E Burton. 186,011.
O'Brien, William P. 186,010.
Ansul Chemical Co.: *See*—
Bauman, Merritt R., Downham, Jones, and Paus. 185,957.
Attwood Brass Works, Inc.: *See*—
Monigle, Glenn W. 186,000.
Monigle, Glenn W. 186,001.
Avon Sole Co.: *See*—
MacLeod, Bertram H. 185,953.
Barsumian, Garabed, to Dictaphone Corp. Hand microphone for a dictating machine. 185,964, 8–25–59, Cl. D26—14.
Bauman, Merritt R., R. E. Downham, C. Jones, Jr., and R. Paus, to Ansul Chemical Co. Portable hand fire extinguisher. 185,957, 8–25–59, Cl. D16—2.
Bell & Howell Co.: *See*—
Lanigan, Richard W. 185,994.
Belvedere Products Inc.: *See*—
Kiefer, Walter J. 185,949.
Benjamin, E Burton, to W. D. Allen Mfg. Co. Lawn sprinkler. 186,011, 8–25–59, Cl. D91—1.
Boldt, Melvin H., to Zenith Radio Corp. Combined escutcheon and face plate for a television receiver cabinet. 185,986, 8–25–59, Cl. D36—4.
Bougie, Gabriel W. Knife. 185,958, 8–25–59, Cl. D22—3.
Cambridge Rubber Co.: *See*—
Powell, Neal W. 185,954.
Castellano, Carmin A.: *See*—
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Coon, Herb, to Red Wing Products. Hanger for slacks or similar article. 186,004, 8–25–59, Cl. D80—8.
Crapsey, Arthur H., Jr., to Eastman Kodak Co. Camera. 185,995, 8–25–59, Cl. D61—1.
D'Arbeloff, Vladimir A. Jewelry box or similar article. 185,992, 8–25–59, Cl. D58—12.
Day-Brite Lighting, Inc.: *See*—
Meyer, Carl X. 185,973.
Meyer, Carl X. 185,976.
Stahlhut, Leo G., and Meyer. 185,980.
Dickman, Carl H., and C. A. Castellano, to Consolidated Molded Products Corp. Beverage case. 185,990, 8–25–59, Cl. D58—5.
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Downham, Roy E.: *See*—
Bauman, Merritt R., Downham, Jones, and Paus. 185,957.
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Knowles, Frederick G. 185,996.
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Latham, Richard S. 185,972.
Ewart, John R.: *See*—
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Fahringer, George F.: *See*—
Moore, David G., and Fahringer. 185,960.
Fiedler, George H., and J. R. Ewart, to Hupp Corp. Front panel for furnaces. 186,006, 8–25–59, Cl. D81—10.
Franck, Kurt, and V. S. Wince, to Holophane Co., Inc. Lens for light fixture. 185,975, 8–25–59, Cl. D48—16.
Franzone, Pasquale U. Lamp base. 185,978, 8–25–59, Cl. D48—20.
Frey, Louis E. Twin sofa bed and corner table unit. 185,952, 8–25–59, Cl. D5—4.
Goldman, Lillian and R. Lamp. 185,979, 8–25–59, Cl. D48—20.
Goldman, Robert: *See*—
Goldman, Lillian and R. 185,979.
Hagen, Herbert E. Gameboard. 185,965, 8–25–59, Cl. D34—5.
Harada, Mamoru. Photoelectric exposure meter. 185,998, 8–25–59, Cl. D61—1.
Harrold, Willis L. Combination food and beverage basket for automobiles or the like. 185,988, 8–25–59, Cl. D58—4.
Hobson, Willis S., to Seymour Mfg. Co. Hearth shovel or similar article. 186,008, 8–25–59, Cl. D81—24.
Hollnagel, Harold S. Boat hull. 186,002, 8–25–59, Cl. D71—1.
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Hughes, Jerome E. Lamp. 185,977, 8–25–59, Cl. D48—20.
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Aitken, Douglas G. 186,007.
Fiedler, George H., and Ewart. 186,006.
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Moore, David G., and Fahringer. 185,960.
Johns, Stanley K., to St. Lawrence Mfg. Co. Inc. Skate guard. 185,967, 8–25–59. Cl. D34—15.
Jones, Carl, Jr.: *See*—
Bauman, Merritt R., Downham, Jones, and Paus. 185,957.
Katz, Adolph. Watch or similar article. 185,960, 8–25–59, Cl. D42—8.
Kiefer, Walter J., to Belvedere Products Inc. Shampoo bowl. 185,949, 8–25–59, Cl. D4—2.
Klein, William H. Triangulator range finder. 185,981, 8–25–59, Cl. D52—1.
Knowles, Frederick G., to Eastman Kodak Co. Motion picture camera. 185,996, 8–25–59, Cl. D61—1.
Kopernak, Rudy: *See*—
Wright, Robert J., and Kopernak. 185,956.
Lanigan, Richard W., to Bell & Howell Co. Still picture projector. 185,994, 8–25–59, Cl. D61—1.
Latham, Richard S., to Ekco Products Co. Culinary beater. 185,970, 8–25–59, Cl. D44—1.
Latham, Richard S., to Ekco Products Co. Holder for culinary implements and the like. 185,972, 8–25–59, Cl. D44—29.
Leblanc, G., Corp.: *See*—
Lowry, Robert E. 185,985.
Loewy, Raymond F. Decanter. 185,991, 8–25–59, Cl. D58—8.
Lorincs, Bela. Umbrella. 186,009, 8–25–59, Cl. D88—3.
Lowry, Robert E., to G. Leblanc Corp. Musical instrument key. 185,985, 8–25–59, Cl. D56—1.
Lusby, Joseph R. Camera stand or similar article. 185,997, 8–25–59, Cl. D61—1.
MacLeod, Bertram H., to Avon Sole Co. Shoe sole. 185,953, 8–25–59, Cl. D7—5.
Marfuggi, Rose S. Spectacle temple. 185,987, 8–25–59, Cl. D57—1.
Meyer, Carl X.: *See*—
Stahlhut, Leo G., and Meyer. 185,980.
Meyer, Carl X., to Day-Brite Lighting, Inc. Hanger plate for electric fixtures or the like. 185,973, 8–25–59, Cl. D48—4.
Meyer, Carl X., to Day-Brite Lighting, Inc. Lighting fixture lens. 185,976, 8–25–59, Cl. D48—16.
Monigle, Glenn W., to Attwood Brass Works, Inc. Steering wheel. 186,000, 8–25–59, Cl. D71—1.
Monigle, Glenn W., to Attwood Brass Works, Inc. Steering wheel. 186,001, 8–25–59, Cl. D71—1.
Moore, David G., and G. F. Fahringer, to International Business Machines Corp. Computer inquiry station. 185,960, 8–25–59, Cl. D26—5.
Moore, Winfield H. Branch holder. 185,968, 8–25–59, Cl. D35—1.
Muse, Grant H., Jr. Photographic copy attachment for a camera or similar article. 185,999, 8–25–59, Cl. D61—1.
Nogami, Haruo. Housing of a telephone. 185,961, 8–25–59, Cl. D26—14.
Nyham, Vincent B. Brush. 185,955, 8–25–59, Cl. D9—2.
O'Brien, William P., to W. D. Allen Mfg. Co. Lawn sprinkler. 186,010, 8–25–59, Cl. D91—1.
Palmer, Rundlette K. Guitar case. 185,984, 8–25–59, Cl. D56—1.

LIST OF DESIGN PATENTEES

Paus, Robert: *See*—
Bauman, Merritt R., Downham, Jones, and Paus. 185,957.

Powell, Neal W., to Cambridge Rubber Co. Sole for shoes. 185,954, 8–25–59, Cl. D7—5.

Rambusch Decorating Co.: *See*—
Rambusch, Harold W., and Santos. 185,974.

Rambusch, Harold W., and J. Santos, to Rambusch Decorating Co. Illuminating fixture. 185,974, 8–25–59, Cl. D48—4.

Red Wing Products: *See*—
Coon, Herb. 186,004.

Saffer, Meyer. Combined cup and drinking tube handle. 185,971, 8–25–59, Cl. D44—9.

St. Lawrence Mfg. Co. Inc.: *See*—
Johns, Stanley K. 185,967.

Santos, Joaquin: *See*—
Rambusch, Harold W., and Santos. 185,974.

Saviano, Faye E. Basket. 185,989, 8–25–59, Cl. D58—4.

Schnall, Murray. Tray for a wrapped fruit container. 185,993, 8–25–59, Cl. D58—26.

Schroeder, Walter W. Molded casing. 185,950, 8–25–59, Cl. D26—1.

Scully, Frank P., to Scully Signal Co. Nozzle for dispensing fluid. 185,982, 8–25–59, Cl. D52—2.

Scully Signal Co.: *See*—
Scully, Frank P. 185,982.

Seymour Mfg. Co.: *See*—
Hobson, Willis S. 186,008.

Sosnick, Benjamin. Handle for a nozzle. 186,012, 8–25–59, Cl. D91—3.

Soutar, Lane. Reflector for pedestrians. 186,003, 8–25–59, Cl. D72—1.

Stahlhut, Leo G., and C. X. Meyer, to Day-Brite Lighting, Inc. Reflector for fluorescent lighting fixtures or the like. 185,980, 8–25–59, Cl. D48—23.

Stephens Tru-Sonic Inc.: *See*—
Eames, Charles. 185,963.

Vitanza, Thomas. Television antenna. 185,962, 8–25–59, Cl. D26—14.

Wambaugh, Troy A. Holder for an electric shaver. 185,951, 8–25–59, Cl. D4—3.

Williams, Daniel S. Roller skate. 185,966, 8–25–59, Cl. D34—14.

Wince, Vearl S.: *See*—
Franck, Kurt, and Wince. 185,975.

Wise, George. Holder for tubes, shaving gear, and the like. 185,950, 8–25–59, Cl. D4—3.

Wiswell, Grant A. Vending machine for capsules. 185,983, 8–25–59, Cl. D52—3.

Wright, Robert J., and R. Kopernak. Television cart. 185,956, 8–25–59, Cl. D14—3.

Zenith Radio Corp.: *See*—
Boldt, Melvin H. 185,986.

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Auerbach, Victor, and A. K. Ingbermann, to Union Carbide Corp. Curable glycidyl polyether polyamine compositions. 2,906,727, 9–29–59, Cl. 260—2.

Barski, Julius J., to The Lathrop-Paulson Co. Case stacker. 2,906,403, 9–29–59, Cl. 214—6.

Hagen, Herbert E. Gameboard. 185,965, 8–25–59, Cl. D34—5.

Palmer, Rundlette K. Guitar case. 185,984, 8–25–59, Cl. D56—1.

LIST OF PATENTEES

TO WHOM

PATENTS WERE ISSUED ON THE 25TH DAY OF AUGUST, 1959

NOTE.—Arranged in accordance with the first significant character or word of the name (in accordance with city and telephone directory practice).

A C F Industries, Inc.: *See*—
Furrer, John R., and Runken. 2,900,924.

AMP Inc.: *See*—
Werner, Walter M. 2,900,854.

Abbott Laboratories: *See*—
Schock, Richard U. 2,901,484.

Abitibi Power & Paper Co., Ltd.: *See*—
Hossain, Shafi U. 2,901,389.

Abraham, Herbert, to The Ruberoid Co. Roofing of dual-form shingles. 2,900,928, 8–25–59, Cl. 108—7.

Abrahamson, Charles M., to All-Steel Equipment Inc. Desk tray. 2,901,120, 8–25–59, Cl. 211—126.

Abrams, Victor R., to W. F. and John Barnes Co. Apparatus for sterilizing fluid foods. 2,901,225, 8–25–59, Cl. 257—84.

Abramson, Hugo, to Aktiebolaget C.E. Johansson. Indicator device for measuring instruments. 2,900,732, 8–25–59, Cl. 33—172.

Account-Tokens Ltd.: *See*—
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Ackerman, Stanley C.: *See*—
Kotsch, William E., and Ackerman. 2,901,667.

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Attwood, Charles E. 2,901,308.
Tod, Allan H., and Gray. 2,900,985.

Acr Electronics Corp.: *See*—
Most, David. 2,901,671.

Adam, Folger. Relievable hangers, and the like. 2,901,207, 8–25–59, Cl. 248—293.

Adams, Loyd W., and J. E. Cottle, to Phillips Petroleum Co. Underground storage of ammonia and its recovery. 2,901,403, 8–25–59, Cl. 202—39.

Adams, Richard D.: *See*—
Tannenbaum, Wesley, and Adams. 2,901,611.

Adelaar, Hans H.: *See*—
Weill, Camille, Hannigsberg, and Adelaar. 2,901,603.

Adelt, Carl W. Roof construction. 2,900,929, 8–25–59, Cl. 108—17.

Aitken, Robert L. Apparatus for sorting timber. 2,901,106, 8–25–59, Cl. 209—103.

Ajax Flexible Coupling Co. Inc.: *See*—
Brumagin, Thomas H. 2,901,110.

Ajem Laboratories, Inc.: *See*—
Arnold, Orlan M. 2,900,991.
Johnson, Willard L. 2,900,902.

Aktiebolaget C.E. Johansson: *See*—
Abramson, Hugo. 2,900,732.

Aktiebolaget Electrolux: *See*—
Nilsson, Bengt E. 2,901,564.

Aktiebolaget Johanssons Press- & Hejarverktyg: *See*—
Liebmann, Hans W. 2,900,964.

Aktiebolaget Kamyr: *See*—
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Aktiengesellschaft Brown, Boveri & Cie: *See*—
Hartmann, Hans. 2,901,713.
Waleffe, José. 2,901,163.

Albin, Jacques: *See*—
Raymond, Francois H., and Albin. 2,901,605.

Alco Valve Co.: *See*—
Tilney, Ralph B. 2,900,805.

Alder, Robert L., to Dresser Industries, Inc. Apparatus for earth borehole investigating and signaling. 2,901,685, 8–25–59, Cl. 323—74.

All-Steel Equipment Inc.: *See*—
Abrahamson, Charles M. 2,901,120.

Allen, George, Jr., and J. S. Webb, to American Cyanamid Co. Substituted pyrroles. 2,901,489, 8–25–59, Cl. 260—326.3.

Allied Asphalt & Mineral Corp.: *See*—
Meisel, Frederick W., Jr. 2,901,361.

Allied Steel and Conveyors, Inc.: *See*—
Harrison, Homer S. 2,900,709.

Allis-Chalmers Mfg. Co.: *See*—
Snartemo, Joseph H. 2,900,832.

Almer, Tor. Foldable record holding device. 2,901,119, 8–25–59, Cl. 211—50.

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Brown, Melvin H. 2,901,344.
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Spokes, Ray E., and Littlefield. 2,901,456.
Wilson, Rosser L. 2,900,711.

American Brass Co., The: *See*—
Voegeli, Henry E. 2,901,063.

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Brody, Frederick, and Leavitt. 2,901,485.
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Anderson, Bernard E., to The Foxboro Co. Boiling point temperature measuring system. 2,900,816, 8–25–59, Cl. 73—17.

Anderson, Gene W., and W. Babcock, to The New York Air Brake Co. Seal assembly for centrifugal pumps. 2,900,919, 8–25–59, Cl. 103—111.

Anderson, John, and D. S. Melstrom, to Shell Development Co. Process for the manufacture of epoxy resins. 2,901,462, 8–25–59, Cl. 260—47.

Anderson, Lloyd L., to Jervis Corp. Latch mechanism. 2,901,277, 8–25–59, Cl. 292—78.

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Arnott, William, Jr., to Burndy Corp. Coating for metal to reduce electrical contact resistance. 2,901,722, 8–25–59, Cl. 339—114.

Aronson, Theodore F., and F. A. Lyon. Electrical terminal means. 2,901,721, 8–25–59, Cl. 338—258.

Artzt, Maurice, to Radio Corp. of America. Frequency modulation system. 2,901,538, 8–25–59, Cl. 178—6.

Askins, William J., and H. R. Chapin, to Sears, Roebuck and Co. Spinning type fishing reel. 2,901,193, 8–25–59, Cl. 242—84.21.

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Auerbach, Victor, and A. K. Ingbermann, to Union Carbide Corp. Curable glycidyl polyether-polyamine compositions. 2,901,461, 8–25–59, Cl. 260—47.

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Bacon, John H. Dog collar or the like. 2,900,696, 8–25–59, Cl. 24—206.

Badin, Ferdinand. Centrifugal powder clutches. 2,901,074, 8–25–59, Cl. 192—58.

Bagnall, James A., to Texas Instruments Inc. Control for refrigerator. 2,900,802, 8–25–59, Cl. 62—156.

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Baird, Richard F., to Chrysler Corp. Windshield wiper mounting. 2,900,658, 8–25–59, Cl. 15—250.4.

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Baker, James G., to United States of America, Air Force. Magnifier. 2,900,871, 8–25–59, Cl. 88—57.

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Baker, Stephen D. Elliptical reflector for instrument dials. 2,900,949, 8–25–59, Cl. 116—129.

Baker, William R., to United States of America, Atomic Energy Commission. Transformer. 2,901,714, 8–25–59, Cl. 336—82.

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Baldwin, Ann. Knock-down garment form and support therefor. 2,901,154, 8–25–59, Cl. 223—68.

Baldwin, Lawrence W., to United States of America, Atomic Energy Commission. Calutron control device. 2,901,622, 8–25–59, Cl. 250—41.9.

Banes, Fred W., and W. P. Fitz Gerald, to Esso Research and Engineering Co. Process for reacting a copolymer of an isoolefin and a conjugated diene with a polar organic monomer and product thereof. 2,901,458, 8–25–59, Cl. 260—45.5.

Bangert, James G., and A. Feldman, to General Foods Corp. Food product. 2,901,355, 8–25–59, Cl. 99—139.

Barbeau, Raymond A., and H. L. Meade, to International Business Machines Corp. Automatic column error obliteration for paper tape. 2,901,041, 8–25–59, Cl. 164—113.

Bardy, Peter J., and A. Siegelman, to Armour Research Foundation of Illinois Institute of Technology. Container filling machine. 2,901,209, 8–25–59, Cl. 249—15.

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Barkdoll, Joseph P., to Smith-Corona Marchant Inc. Typewriter having power operated instrumentalities. 2,901,079, 8–25–59, Cl. 197—17.

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Barkow, William H., and C. C. Matthews, to Radio Corp. of America. Cathode ray tube deflection yoke. 2,901,665, 8–25–59, Cl. 315—27.

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Barnes, Jeffery W., to Minister of Supply, in Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland. Gyroscope apparatus. 2,900,824, 8–25–59, Cl. 74—5.34.

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Barret, William M., to Engineering Research Corp. Method and apparatus for ground-wave transmission and reception of radio waves. 2,901,687, 8–25–59, Cl. 324—1.

Barret, William M., to Engineering Research Corp. Method of exploring the earth with electromagnetic energy. 2,901,688, 8–25–59, Cl. 324—6.

Barret, William M., and G. J. Baker, to Engineering Research Corp. Method of exploring the earth with electromagnetic energy. 2,901,689, 8–25–59, Cl. 324—6.

Barski, Julius J., to The Lathrop-Paulson Co. Case stacker. 2,901,128, 8–25–59, Cl. 214—6.

Bartl, Hugo : *See*—
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Basile, James V. Combined level and measuring tool. 2,900,729, 8–25–59, Cl. 33—89.

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Bauer, Dale A., to De-Icers, Inc. Vinyl mitten. 2,900,642, 8–25–59, Cl. 2—158.

Baumann, Albert, to Durkoppwerke Akt. Conveyor system. 2,901,082, 8–25–59, Cl. 198—19.

Baumann, Fritz, and H. Bien, to Farbenfabriken Bayer Aktiengesellschaft. Process for the production of new vat dyestuffs. 2,901,479, 8–25–59, Cl. 260—247.1.

Baxter, Thomas R., and B. C. Miller, to Continental Can Co., Inc. Tool for opening and expanding the mouth of a flexible receptacle. 2,900,779, 8–25–59, Cl. 53—381.

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Beacham, Harry H., to National Lead Co. Film-forming and drying compositions. 2,901,450, 8–25–59, Cl. 260—19.

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Beatman, John E. Kaleidoscope. 2,900,867, 8–25–59, Cl. 88—15.

Beaubien, William H., to General Electric Co. Printed circuit surge relief gap. 2,901,659, 8–25–59, Cl. 313—309.

Becker, Hans. Lathes. 2,900,859, 8–25–59, Cl. 82—19.

Becker, Helmut, to Hüttenwerk Oberhausen A.G. Apparatus for the analysis of hot, dust-laden gases. 2,901,626, 8–25–59, Cl. 250—43.5.

Becker, Henry. Uniform pressure hand stamp. 2,900,902, 8–25–59, Cl. 101—368.

Becker, Nathan, to Small Business Administration. Awning structure. 2,900,681, 8–25–59, Cl. 20—57.5.

Becker, Nathan, to Seaview Industries, Inc. Metallic awning structure. 2,900,682, 8–25–59, Cl. 20—57.5.

Becker, Robert R., to American Potash & Chemical Corp. Vacuum packing gland for high speed stirring. 2,901,295, 8–25–59, Cl. 308—36.1.

Beckman Instruments, Inc. : *See*—
Thayer, Louis C. and Czuha. 2,901,327.

Beesley, Scott L. Storing and dispensing apparatus. 2,901,118, 8–25–59, Cl. 211—49.

Bek, Heinrich, to Adolph Saurer Ltd. Injection nozzle including double check valve. 2,901,181, 8–25–59, Cl. 239—101.

Belk, Wilber C., and H. W. Grotewold, to Food Machinery and Chemical Corp. Box handling device. 2,901,136, 8–25–59, Cl. 214—314.

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Sullivan, Michael V. 2,901,532.
Teal, Gordon K. 2,901,881.
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Bergvall, Royal C. : *See*—
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Berlin, Daniel. Multi-tier laundry cart. 2,901,262, 8–25–59, Cl. 280—41.

Bessette, Georges H. N. Automatic variable speed pulley. 2,900,834, 8–25–59, Cl. 74—230.17.

Bethlehem Steel Co. : *See*—
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MacNaught, Donald F., and Jacobson. 2,901,279.

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Bjelland, John L., and F. W. Flynn, to Powers Chemco, Inc. Stop rationer for photoengraving camera. 2,900,869, 8–25–59, Cl. 88—24.

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Audas, Francis G., to The British Rayon Research Assn. Process utilizing fluidized beds in the dyeing of fabrics, yarns and the like. 2,901,312, 8–25–59, Cl. 8—151.

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Phelps, Richard W. 2,901,191.

Black, Isadore E. Automatic dispensing apparatus for dispensing towels, wiping cloths and like articles. 2,901,145, 8–25–59, Cl. 221—34.

Blackburn, Mack O., to General Motors Corp. Shot peening apparatus. 2,900,765, 8–25–59, Cl. 51—9.

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Blodgett, Edwin O. to Commercial Controls Corp. Verifying printing machine. 2,901,042, 8–25–59, Cl. 164—113.

Blouin, Maurice A., to Simplex Time Recorder Co. Reset mechanism for time indicating clock. 2,900,787, 8–25–59, Cl. 58—34.

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Bobinchak, Gilbert N. Baptismal robe. 2,900,641, 8–25–59, Cl. 2—111.

Bobkowicz, Emilian. Universal spinning unit. 2,900,782, 8–25–59, Cl. 57—31.

Bode, Hans, to Belmont Ver Standig, M., Inc. Wall surfacing and method of making same. 2,901,377, 8–25–59, Cl. 117—70.

Boice, Elvin G., and R. G. Peter, to Reed Roller Bit Co. Drill bits. 2,901,224, 8–25–59, Cl. 255—349.

Boldebuck, Edith M., to General Electric Co. Halosilane hydrolysis with tetrahydrofuran and water. 2,901,460, 8–25–59, Cl. 260—46.5.

Bolie, Victor W., to Collins Radio Co. Low level microwave power meter. 2,901,700, 8–25–59, Cl. 324—95.

Bond, Edgar L., Jr. Dispenser for tubes. 2,901,147, 8–25–59, Cl. 222—102.

Bondanini, Faliero. Coffee filter pot. 2,900,896, 8–25–59, Cl. 99—297.

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Booharin, Leo Y., 30% to C. David and 30% to M. Katz. Tire and wheel construction. 2,901,021, 8–25–59, Cl. 152—334.

Boomer, Daryl R., E. T. Clapperton, and R. C. Phillips, to Woodusc, Inc. Continuous process for conversion of lignocellulose materials. 2,901,339, 8–25–59, Cl. 71—23.

Booth, Max H., to E. I. du Pont de Nemours and Co. Irreversibly elongatable cellulose triacetate structure and method of making. 2,900,669, 8–25–59, Cl. 18—48.

Bopp, Anton. Oxidation cells. 2,901,522, 8–25–59, Cl. 136—84.

Borg-Warner Corp.: *See*—
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Garmager, Curt H. 2,901,066.
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Bostock, James H., to Otis Engineering Corp. Pressure responsive valve. 2,900,997, 8–25–59, Cl. 137—458.

Bottemiller, Merton M. Seat construction. 2,901,028, 8–25–59, Cl. 155—184.

Bottje, John D., and R. B. Shulters, to Gardner-Denver Co. Load balancer for hoists. 2,901,219, 8–25–59, Cl. 254—168.

Boulet, Georges, to Societe à responsabilité limitée, Recherches Etudes Production R.E.P. Vehicle suspension system. 2,901,243, 8–25–59, Cl. 267—65.

Bourgonjon, Louis R., and J. van Sandwijk, to North American Philips Co., Inc. Radio-transmitter for frequency-shift telegraphy made operative in response to modulation. 2,901,598, 8–25–59, Cl. 250—17.

Bourguet, Jean M., R. D. Drew, and F. E. Ray, to Socony Mobil Oil Co., Inc. Method and apparatus for transfer of contact materials. 2,901,421, 8–25–59, Cl. 208—174.

Boyce, Walter A.: *See*—
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Boyle, John W., to United States Steel Corp. Rail plow for dismantling railway tracks. 2,901,217, 8–25–59, Cl. 254—104.

Braak, Dirk J., to North American Philips Co., Inc. Radio system comprising a main station and a plurality of substations. 2,901,543, 8–25–59, Cl. 179—15.5.

Bradley, Robert O., to Toledo Scale Corp. Platform supporting structure for weighing scales. 2,901,235, 8–25–59, Cl. 265—71.

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Bragdon, Robert W., to Metal Hydrides Inc. Method for preparing sodium borohydride. 2,901,333, 8–25–59, Cl. 23—296.

Brandau, Gabriel. Drill press spindle. 2,901,258, 8–25–59, Cl. 279—97.

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Brandt, Harry, to California Research Corp. Raising and lowering apparatus. 2,900,795, 8–25–59, Cl. 61—72.

Brandt, Kurt. Device for the adjustment of decorative stitch stencil in automatic zig-zag sewing machines. 2,900,837, 8–25–59, Cl. 74—568.

Branson, Charles D., to Robertshaw-Fulton Controls Co. Thermostatically controlled mixing valves. 2,901,174, 8–25–59, Cl. 236—12.

Brasseur, Eudore, to Societe Anonyme Ateliers de Constructions Electriques de Charleroi. Sound recording and reproducing devices. 2,901,550, 8–25–59, Cl. 179—100.2.

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Brault, Andre R., and R. Lindberg, to OPTOmechanisms, Inc. Simulated radioactive radiation meter. 2,900,740, 8–25–59, Cl. 35—1.

Breese, Lemuel R., to North Electric Company. Supervisory control system. 2,901,728, 8–25–59, Cl. 340—163.

Brehm, Allen E.: *See*—
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Brill, Rudolf F., to Phillips Petroleum Co. Catalytic conversion with the addition of a metal or metallic compound. 2,901,419, 8–25–59, Cl. 208—119.

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Bristol Co., The: *See*—
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British Rayon Research Association: *See*—
Audas, Francis G. 2,901,312.

British Thompson-Houston Co. Ltd., The: *See*—
Ludbrook, Leslie C. 2,901,681.

Britton, William J., to Johnson & Johnson. Tab-forming device. 2,901,248, 8–25–59, Cl. 270—68.

Broadhead, Samuel L., Jr., to Collins Radio Co. Phase-selective control system. 2,901,729, 8–25–59, Cl. 340—170.

Brobeck, William M., to United States of America, Atomic Energy Commission. Calutron face plate. 2,901,621, 8–25–59, Cl. 250—41.9.

Brody, Frederick, and J. J. Leavitt, to American Cyanamid Co. 8-alkoxy-6-aminocarbostyrils. 2,901,485, 8–25–59, Cl. 260—288.

Brola, Gabriel, to Societe Anonyme dite: Generale Thermique-Procedes Brola. Combustion apparatus. 2,901,032, 8–25–59, Cl. 158—76.

Bronikowski, Raymond J., to McGraw-Edison Co. Line drop compensating circuit. 2,901,684, 8–25–59, Cl. 323—66.

Brooksbank, Wallace R. Textile machinery. 2,900,673, 8–25–59, Cl. 19—115.

Brown, Abbott A., and R. M. De Luca, to Bendix Aviation Corp. Variable inductor. 2,901,716, 8–25–59, Cl. 336—135.

Brown, Alexander M., to Talon, Inc. Top stop for slide fasteners. 2,900,694, 8–25–59, Cl. 24—205.11.

Brown, Clarence H., to Goodman Mfg. Co. Bit holder for cutter chain bits. 2,901,283, 8–25–59, Cl. 262—33.

Brown, Forrest W., to The Reflectone Corp. Controllable voltage integration circuit. 2,901,610, 8–25–59, Cl. 250—27.

Brown, Henry, to The Udylite Corp. Metallic protective coating. 2,900,707, 8–25–59, Cl. 29—183.5.

Brown, Jerome E., to Ethyl Corp. Antiknock compositions. 2,901,336, 8–25–59, Cl. 44—69.

Brown, Melvin H., to Aluminum Co. of America. Removal of iron from aluminum surfaces. 2,901,334, 8–25–59, Cl. 41—42.

Brown, Melvin H., to Aluminum Co. of America. Removal of iron from aluminum surfaces. 2,901,344, 8–25–59, Cl. 75—97.

Brown, Peter H., to Dowty Hydraulic Units Ltd., and O. Thoma. Hydraulic pumps and motors. 2,900,921, 8–25–59, Cl. 103—162.

Browning Industries, Inc.: *See*—
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Browning, Val A., to Browning Industries, Inc. Choke control device for shotgun barrels. 2,900,752, 8–25–59, Cl. 42—79.

Brubaker, John G., E. S. Wassel, and W. E. Reynolds, to United States of America, Army. Combined rammer and cam means for chambering cartridges in revolver-type guns. 2,900,876, 8–25–59, Cl. 89—155.

Brueder, Antoine, to Societe Anonyme Andre Citroen. Two-stroke engines. 2,900,966, 8–25–59, Cl. 123—32.

Brumagin, Thomas H., to Ajax Flexible Coupling Co, Inc. Vibratory conveyors. 2,901,110, 8–25–59, Cl. 209—330.

Brunner, Sam. W. Display for book protectors. 2,901,103, 8–25–59, Cl. 206—80.

Budd Co., The: *See*—
Halberstadt, Charles C. 2,901,126.
Lindsay, Alexander R. 2,901,266.
Stacy, Robert G. 2,901,059.
Watter, Michael, and Eggert. 2,901,590.

Buelow, John A., to Designware Industries, Inc. Device for mounting sheet material on a wall. 2,900,750, 8–25–59, Cl. 40—152.1.

Bullard Co., The: *See*—
Lomasso, Edmund J. 2,900,860.
Zeletzky, Frans A., and Phillips. 2,900,848.

Bullock, Milon W., and J. J. Hand, to American Cyanamid Co. Pyrolysis of substituted carbonyloxyalkyl halides. 2,901,506, 8–25–59, Cl. 260—488.

Bulova Watch Co., Inc.: *See*—
Hetzel, Max. 2,900,786.

Burger, Erich. Photographic lens shutter. 2,900,888, 8–25–59, Cl. 95—63.

Buri, Alfred, to Sulzer Freres S. A. Steam power plant having a forced flow steam generator. 2,900,792, 8–25–59, Cl. 60—67.

Buri, Alfred, to Sulzer Freres, Societe Anonyme. Condensing steam heated boiler feed water heating system including a condensate operated turbine. 2,900,793, 8–25–59, Cl. 60—107.

Burke, John T., Jr., to National Aluminate Corp. Corrosion reduction. 2,901,439, 8–25–59, Cl. 252—389.

Burke, Kenneth R., to Koppers Co., Inc. Process for the prevention of tar still corrosion. 2,901,424, 8–25–59, Cl. 208—348.

Burndy Corp.: *See*—
Arnott, William, Jr. 2,901,722.
Lazar, Michael. 2,901,528.
Rosner, Saul, and Heller. 2,901,003.

Burnette, Wayne B. Double ended wrench with adjustable sockets. 2,900,857, 8–25–59, Cl. 81—185.

Burnight, Thomas R., and R. A. Emmett, Jr. Blind landing system. 2,901,742, Cl. 343—6.

Burr, Myrtice C., to Pure Carbon Co., Inc. Controlled clearance carbon bearings. 2,901,300, 8–25–59, Cl. 308—238.

Burrell, Ellis, to United States of America, Navy. Centrifugal safety device for a projectile fuse. 2,900,908, 8–25–59, Cl. 102—70.
Burrell, Warren P., A. A. Cohen, and G. A. Hardenbergh, to International Business Machines Corporation. Digital data system. 2,901,168, 8–25–59, Cl. 235—61.6.
Burreson, Zina A. M., to Dominion Electric Corp. Utility appliance cooker. 2,901,587, 8–25–59, Cl. 219—44.
Burrows, Arthur T. C., to Geo. W. King, Ltd. Conveyor systems. 2,901,096, 8–25–59, Cl. 198—225.
Butcosk, Arthur F. Railroad rolling stock cleaners. 2,901,434, 8–25–59, Cl. 252—136.
Butler, Keith H.: *See*—
Thomas, Martha J., and Butler. 2,901,647.
Butler, Stanley C.: *See*—
Marsh, De Loss L., and Butler. 2,900,972.
Büttner, Arthur, to Schnellpressenfabrik Aktiengesellschaft Heidelberg. Arrangement for printing with a numbering frame in a high-speed cylinder press. 2,900,898, 8–25–59, Cl. 101—76.
Buttner, Artur, to Schnellpressenfabrik Aktiengesellschaft Heidelberg. Printing press. 2,901,179, 8–25–59, Cl. 230—67.
Byers, Charles L., ½, to Floyd R. Blume. Eye-shank button holder attachment. 2,900,935, 8–25–59, Cl. 112—109.
Byrd, Gerald J.: *See*—
Russell, John K., and Byrd. 2,901,429.
Byrd, Raymond and W. Fruit peeler. 2,900,717, 8–25–59, Cl. 30—24.
Byrd, Wade: *See*—
Byrd, Raymond and W. 2,900,717.
Cadotte, John E.: *See*—
Rohwer, Robert G., Reter, and Cadotte. 2,901,382.
California Research Corp.: *See*—
Brandt, Harry. 2,900,795.
Herbert, Edward V. 2,900,724.
Linn, William E. 2,901,220.
Campbell Pharmaceuticals, Inc.: *See*—
Fitch, Howard M. 2,901,503.
Campbell, Richard D., to Westinghouse Air Brake Co. Differentiator. 2,901,009, 8–25–59, Cl. 250—27.
Campbell, Robert A., 1-10, to Gadget-Of-The-Month Club, Inc. Ash-retaining jacket for a cigarette. 2,900,987, 8–25–59, Cl. 131—174.
Campion, Frank E., E. D. Glass, and R. A. Morse, to Pan American Petroleum Corp. Heavy oil recovery. 2,901,043, 8–25–59, Cl. 166—11.
Canazzi, Henry D. Speed boat hulls. 2,900,945, 8–25–59, Cl. 114—66.5.
Canepa, Michele, to Olivetti Corp. of America. Non-resetting decoding and printing apparatus. 2,901,540, 8–25–59, Cl. 178—34.
Canning, Richard G., to The Regents of The University of California. Electronic sorter. 2,901,732, 8–25–59, Cl. 340—174.
Cappello, John: *See*—
Yoder, Joe B., and Cappello. 2,901,521.
Carando Machine Works: *See*—
McCoy, Thomas A. 2,901,085.
Carlson, Carl A., D. L. Pommer, and L. H. Reiten, to General Tool & Engineering Inc. Bottle handling machine. 2,900,775, 8–25–59, Cl. 53—160.
Carlson, George R. Rotary work supporting and indexing apparatus. 2,900,770, 8–25–59, Cl. 51—237.
Carmichael, Robert: *See*—
Huntley, Alton K., and Carmichael. 2,901,520.
Carpenter, Rupert E. H. Pivotal supports. 2,901,298, 8–25–59, Cl. 308—159.
Carpino, Frank. Box blank. 2,901,158, 8–25–59, Cl. 220—35.
Carson, Samuel R. Concrete block construction with a compartment having a knock-out panel. 2,900,814, 8–25–59, Cl. 72—41.
Carter, James P., to United Shoe Machinery Corp. Shoe machines. 2,900,933, 8–25–59, Cl. 112—46.
Carter Parts Co.: *See*—
Frantz, Nicholas. 2,901,565.
Raab, Andrew F. 2,901,574.
Carter, Ralph H., C. B. Kingsbury, and D. J. Lamb, to North American Rayon Corp. Yarn crimping apparatus. 2,900,783, 8–25–59, Cl. 57—34.
Catalano, Philip F.: *See*—
Eastman, Willard B., and Catalano. 2,900,944.
Cate, Malcom S., to The B. F. Goodrich Co. Apparatus for making footwear. 2,900,953, 8–25–59, Cl. 118—217.
Caterpillar Tractor Co.: *See*—
Sima, Everett E., Konyha, and Petersen. 2,900,970.
Cauboue, Jean, and C. J. Gergaud, to International Business Machines Corp. Variable radix counter. 2,901,169, 8–25–59, Cl. 235—61.8.
Cavett, Paul A., and P. O. Robarda, to Equipment Research Corp. Fueling system. 2,901,008, 8–25–59, Cl. 141—207.
Cermak, Josef. Combustion system for an intensified burning of solid, liquid or gaseous fuels in an annular combustion space. 2,900,930, 8–25–59, Cl. 110—28.
Chadwick, Alexander, to Chrysler Corp. Liquid fuel control mechanism. 2,901,030, 8–25–59, Cl. 158—36.4.
Chamberlin, Richard H.: *See*—
Noble, Lowell A., and Chamberlin. 2,901,678.
Champain, Louis. Snow removal device. 2,900,744, 8–25–59, Cl. 37—53.
Champion Corp.: *See*—
Krukowski, John K. 2,901,048.
Champion, James E.: *See*—
Powell, Robert J., and Champion. 2,901,031.
Chance, Leon H., G. L. Drake, Jr., and W. A. Reeves, to United States of America, Agriculture. Polymers made from 1-aziridinyl phosphine oxides and sulfides and flame resistant organic textiles. 2,901,444, 8–25–59, Cl. 260—2.
Chapin, Howard R.: *See*—
Askins, William J., and Chapin. 2,901,193.
Chapman, Harvey W., and H. L. Dunlap, to Evans Products Co. Grooved pin having a latch plate with an arrow-shaped opening. 2,900,864, 8–25–59, Cl. 85—8.9.
Chapman, Ralph: *See*—
Knight, Leonard M., and Chapman. 2,901,265.
Chapman, Roger, and L. E. Robinson, to International Standard Electric Corp. Semi-conductor amplifiers. 2,901,556, 8–25–59, Cl. 179—171.
Charbonneaux, Wilson A., and J. J. Velesky, to Wac Line, Inc. Control devices for alternating-current motors and the like. 2,901,682, 8–25–59, Cl. 318—229.
Chase, Corson W., to Miehle-Goss-Dexter, Inc. Printing cylinders. 2,900,903, 8–25–59, Cl. 101—378.
Chemerda, John M., to Merck & Co., Inc. 7-keto-11-oxysteroids and processes of preparing them. 2,901,493, 8–25–59, Cl. 260—397.2.
Chemical Appliances, Inc.: *See*—
Morris, John, Jr. 2,901,273.
Chemische Fabrik Grunau Aktiengesellschaft: *See*—
Schulenburg, Wilhelm. 2,901,428.
Steppe, Vollrad. 2,901,427.
Chemische Fabrik Promonta, G.m.b.H.: *See*—
Schuler, Wilhelm A. 2,901,478.
Chessman, Samuel C., and K. H. Meyer, to Hunt Valve Co. Solenoid mounting. 2,901,677, 8–25–59, Cl. 317—195.
Chicago Development Corp.: *See*—
Dean, Reginald S., and Gullett. 2,901,410.
Gullett, William W. 2,901,411.
Chicago Pneumatic Tool Co.: *See*—
Lear, Earl B., and Douglas. 2,901,260.
Chiddix, Max E., W. J. Maxey, and R. L. Sundberg, to General Aniline & Film Corp. Corrosion inhibition. 2,901,430, 8–25–59, Cl. 252—8.55.
Chidsey, Francis A., Jr., and J. H. Walter, to Container Corp. of America. Machine for loading cans into cartons. 2,900,772, 8–25–59, Cl. 53—48.
Chimie et Atomistique: *See*—
Liberman, David. 2,901,488.
Christensen, Lars N. Drag evener. 2,901,268, 8–25–59, Cl. 280—411.
Chrysler Corp.: *See*—
Baird, Richard F. 2,900,658.
Chadwick, Alexander. 2,901,030.
Jones, Henry E. 2,901,244.
Loofbourrow, Alan G. 2,901,290.
Sarto, Jorma O. 2,901,229.
Winkelmann, Otto J., Swan, and Herreshoff. 2,900,835.
Chubb, Talbot A.: *See*—
Friedman, Herbert, and Chubb. 2,901,625.
Ciba Ltd.: *See*—
Siegrist, Adolf E., and Duennenberger. 2,901,480.
Ciba Pharmaceutical Products Inc.: *See*—
Grob, Cyril A. 2,901,486.
Kuehne, Martin E. 2,901,483.
Ciccone, Thomas Q. to United States of America, Army. Incendiary projectile. 2,900,914, 8–25–59, Cl. 102—90.
Clapperton, Edward T.: *See*—
Boomer, Daryl R., Clapperton, and Phillips. 2,901,339.
Clarey, John J., to Bristol-Myers Co. Therapeutic preparations for topical application to the skin. 2,901,399, 8–25–59, Cl. 167—87.
Clark, James T.: *See*—
Sondle, Henry P., and Pralle. 2,900,781.
Clark, Lucius K., and C. L. King. Gas anticipator. 2,901,566, 8–25–59, Cl. 200—61.03.
Clarke, David E., to Texas Instruments Inc. Electrical switch. 2,901,573, 8–25–59, Cl. 200—122.
Clay-Adams, Inc.: *See*—
Gilman, Marvin A. 2,900,730.
Cleveland Container Co., The: *See*—
Vallas, Charles L. 2,901,162.
Clever, William R., to Pittsburgh Plate Glass Co. Method of and apparatus for transferring sheet material. 2,900,761, 8–25–59, Cl. 49—1.
Clicques, Marcel P., to Etablissements Labinal. Apparatus for measuring the product of two concurrently varying quantities. 2,901,173, 8–25–59, Cl. 235—194.
Clime, Henry R. Football sighting device. 2,900,727, 8–25–59, Cl. 33—46.
Cluwen, Johannes M.: *See*—
Klinkhamer, Jacob F., Van Der Burgt, and Cluwen. 2,901,355.
Coates, Vincent J., and L. B. Scott, to The Perkin-Elmer Corp. Radiation comparison systems. 2,900,866, 8–25–59, Cl. 88—14.
Cochran, Clarence W., to United-Carr Fastener Corp. Fastening device. 2,900,687, 8–25–59, Cl. 24—73.
Coeterier, Frederik, to North American Philips Co., Inc. Linkage mechanism. 2,901,656, 8–25–59, Cl. 313—148.
Coffee-Mat Corp.: *See*—
Small, Sollie W., and Herman. 2,901,002.
Coffinberry, Arthur S., to United States of America, Atomic Energy Commission. Plutonium-cerium-cobalt and plutonium-cerium-nickel alloys. 2,901,345, 8–25–59, Cl. 75—122.7.
Coggins, Donald I., to Sylvania Electric Products Inc. Semiconductor devices and methods. 2,900,701, 8–25–59, Cl. 29—25.3.
Cohen, Arnold A.: *See*—
Burrell, Warren P., Cohen, and Hardenbergh. 2,901,168.
Cohen, Eric S. Apparatus for the cleaning and drying of roller-type paint applicators. 2,900,993, 8–25–59, Cl. 134—135.
Cohen, Sylvan I., M. S. Frant, and F. J. Sowa, said Cohen and said Frant assors. to Gallowhur Chemical Corp. Organic mercury solutions and method of preparing the same. 2,901,392, 8–25–59, Cl. 167—30.

Dean, Reginald S., and W. W. Gullett, to Chicago Develop-
Drysdale, John J., to E. I. du Pont de Nemours and Co.

Cohn, Jona: *See*—
Richardson, Roy A., and Cohn. 2,901,601.
Coleman Co., Inc., The: *See*—
Watkins, Norman B. 2,900,714.
Coleman, Eugene F., to Mergenthaler Linotype Co. Photocomposing machine. 2,900,884, 8–25–59, Cl. 95—4.5.
Coleman, Joseph J., to Servel, Inc. Daytime off solar cell flasher circuit. 2,901,669, 8–25–59, Cl. 315—158.
Colgate-Palmolive Co.: *See*—
O'Sullivan, Patrick J. 2,900,655.
Collier, Charles W. Silo unloader. 2,901,131, 8–25–59, Cl. 214—17.
Collins, John J., to American Telephone and Telegraph Co. Four-party station identification circuit. 2,901,544, 8–25–59, Cl. 179—17.
Collins, Leonard M., to Pressure Dispensers, Inc. Dispensing valve. 2,901,153, 8–25–59, Cl. 222—525.
Collins Radio Co.: *See*—
Bolie, Victor W. 2,901,700.
Broadhead, Samuel L., Jr. 2,901,729.
Elliott, William S. 2,901,706.
Jones, Paul R. 2,901,208.
Lehman, Harry W. 2,900,846.
Nicholson, Gordon E. 2,901,067.
Nordstrom, Gordon J., and Smith. 2,901,604.
Sherwood, John R. 2,901,614.
Colton, John W., to Scientific Design Co., Inc. Hydrogen chloride purification. 2,901,407, 8–25–59, Cl. 202—42.
Columbian Carbon Co.: *See*—
Heller, George L. 2,900,737.
Combustion Engineering, Inc.: *See*—
Witske, Ernest C. 2,900,965.
Commercial Controls Corp.: *See*—
Blodgett, Edwin O. 2,901,042.
Commercial Shearing and Stamping Co., The: *See*—
Kane, Thomas C. 2,900,703.
Kane, Thomas C. 2,901,184.
Comninos, Donald A., to Radio Corp. of America. Television receiving systems. 2,901,537, 8–25–59, Cl. 178—5.8.
Compagnies Reunies des Glaces & Verres Speciaux du Nord de la France: *See*—
Long, Bernard. 2,900,764.
Compton, James A., to Borg-Warner Corp. Method of assembling pressure loaded gear pumps. 2,900,920, 8–25–59, Cl. 103—126.
Conklin, Joseph E., and R. J. Holmes, to General Aniline & Film Corp. Inorganic papers and methods of making same. 2,901,390, 8–25–59, Cl. 162—152.
Consett Iron Co. Ltd.: *See*—
Huddle, Roy A. U., Pearson, and de Lippa. 2,901,346.
Consolidation Coal Co.: *See*—
Gorin, Everett, and Recht. 2,901,524.
Constock Liquid Methane Corp.: *See*—
Morrison, Willard L. 2,900,796.
Container Corp. of America: *See*—
Chidsey, Francis A., Jr., and Walter. 2,900,772.
Continental Can Co., Inc.: *See*—
Baxter, Thomas R., and Miller. 2,900,779.
Eastman, Willard B., and Catalano. 2,900,944.
Fralick, Jack F. 2,901,142.
Hechert, John. 2,901,161.
Simpson, Justin. 2,900,842.
Simpson, Justin. 2,901,195.
Continental Electrolog Corp.: *See*—
Kolisch, Emil. 2,901,171.
Continental Motors Corp.: *See*—
Powell, Robert J., and Champion. 2,901,031.
Continental Paper Co.: *See*—
Vines, Oscar L. 2,901,155.
Vines, Oscar L. 2,901,156.
Conway, Robert D., and W. Messinger, deceased, by The First National Bank of Philadelphia, administrator, to Pettibone Mulliken Corp. Cone crushing mechanism. 2,901,189, 8–25–59, Cl. 241—207.
Cook, David E., and E. J. Barrasso, to Esso Research and Engineering Co. Hydrodesulfurization of a coked hydrocarbon stream comprising gasoline constituents and gas oil constituents. 2,901,417, 8–25–59, Cl. 208—97.
Coons, Burton C. and W. B. Fruit feeding, end trimming, halving and knock-off mechanism. 2,901,014, 8–25–59, Cl. 146—72.
Coons, Willard B.: *See*—
Coons, Burton C. and W. B. 2,901,014.
Coryell, Charles D., to United States of America, Atomic Energy Commission. Process of oxidizing plutonium. 2,901,315, 8–25–59, Cl. 23—14.5.
Cotal, Charles R. Outboard motor with independent steering unit. 2,900,947, 8–25–59, Cl. 115—18.
Cottle, Delmer L.: *See*—
Morway, Arnold J., Seelbach, and Cottle. 2,901,432.
Cottle, John E.: *See*—
Adams, Loyd W., and Cottle. 2,901,403.
Courtot, Louis B., to The Weatherhead Co. Valve seal. 2,900,999, 8–25–59. Cl. 137—516.25.
Cowan, George A., to United States of America, Atomic Energy Commission. Salicylate process for thorium separation from rare earths. 2,901,496, 8–25–59, Cl. 260—429.1.
Cowan, John C.: *See*—
Teeter, Howard M., Dansig, and Cowan. 2,901,495.
Cowan, John C., and H. M. Teeter, to United States of America, Agriculture. Coating compositions. 2,901,469, 8–25–59, Cl. 260—91.1.
Cox, Thomas G., to Food Machinery and Chemical Corp. Method of and apparatus for positioning fruit. 2,901,087, 8–25–59, Cl. 198—33.
Cragg, Arthur C., and D. A. Schuldt, to Donaldson Co., Inc. Engine operated insecticide sprayer. 2,901,182, 8–25–59, Cl. 239—129.
Cramer, Eleanor: *See*—
Cramer, Raymond H. 2,901,299.
Cramer, Raymond H., deceased, by E. Cramer and R. Gertler, executrices, to General Motors Corp. Journal box. 2,901,299, 8–25–59, Cl. 308—180.
Crankshaw, John H., to Zurn Industries, Inc. Sound isolating coupling. 2,900,809, 8–25–59, Cl. 64—13.
Crawford, Robert T., and J. B. Stevens, to Eastman Kodak Co. Tobacco smoke filter elements. 2,900,988, 8–25–59, Cl. 131—208.
Crispin, Thayer S., to Douglas Aircraft Co., Inc. Expansion or contraction compensating clamp. 2,901,012, 8–25–59, Cl. 144—302.
Croco, Carlton W., to E. I. du Pont de Nemours and Co. Polyurethane coating compositions. 2,901,467, 8–25–59, Cl. 260—77.5.
Cross, James L.: *See*—
Horner, Leonard L., Jr., and Cross. 2,901,686.
Crump, Ralph E., to Electrofilm, Inc. Solid lubricant films having vitreous enamel binders. 2,901,380, 8–25–59, Cl. 117—129.
Cudahy Packing Co., The: *See*—
Douglass, William F., and Phalen. 2,901,354.
Cuker, Seymour, to Jacqueline Modes, Inc. High frequency luminescent sign. 2,901,674, 8–25–59, Cl. 315—248.
Cullen, Orville E., to Surface Combustion Corp. Heat treating apparatus. 2,900,990, 8–25–59, Cl. 134—57.
Culp, Eugene H.: *See*—
Elliott, Daniel R., Culp, and Hulswit. 2,901,242.
Cummington Corp.: *See*—
Dexter, Robert G., and Willett. 2,901,249.
Cunning Controller Corp.: *See*—
Cunningham, Violet R. 2,900,984.
Cunningham, Robert E., and H. R. Sigler, Jr., to Bendix Aviation Corp. High frequency amplifier circuit. 2,901,561, 8–25–59, Cl. 179—171.
Cunningham, Samuel C., and E. H. Shaw. Bucket for conveying concrete. 2,901,148, 8–25–59, Cl. 222—185.
Cunningham, Violet R., to Cunning Controller Corp. Foundation garment. 2,900,984, 8–25–59, Cl. 128—556.
Curell, Conrad O., to Kaiser Aluminum & Chemical Corp. Monocoque semi-trailer construction. 2,901,283, 8–25–59, Cl. 296—28.
Curlett, John: *See*—
Gurries, Raymond A., and Curlett. 2,900,746.
Curtin, Leo P. Micro-crystalline bonding coats for metal. 2,901,385, 8–25–59, Cl. 148—6.16.
Curtis, Paul S. Turnbutton fastener for frame supported insert section. 2,900,678, 8–25–59, Cl. 20—36.
Curtiss-Wright Corp., Marquette Metal Products Division: *See*—
Sacchini, Columbus R. 2,901,071.
Cuss, John F. Fasteners for panels and the like. 2,900,697, 8–25–59, Cl. 24—221.
Cutcrete Mfg. Corp.: *See*—
Lewis, William H. 2,901,232.
Cutler-Hammer, Inc.: *See*—
Nolden, William F., and Seeger. 2,901,276.
Cutsogeorge, George A., to Specialties Development Corp. Electrical network automatically responsive to a change in condition. 2,901,740, 8–25–59, Cl. 340—233.
Cybriwsky, Alexander: *See*—
Mostovych, Nicholas, and Cybriwsky. 2,901,412.
Czuha, Michael, Jr.: *See*—
Thayer, Louis C., and Czuha. 2,901,327.
D'Addieco, Alfred A., to E. I. du Pont de Nemours and Co. Potassium monopersulfate hydrate and its production. 2,901,318, 8–25–59, Cl. 23—114.
D'Addieco, Alfred A., to E. I. du Pont de Nemours and Co. Preparation of potassium monopersulfate. 2,901,319, 8–25–59, Cl. 23—114.
Daley, John L. Tie holder device. 2,901,116, 8–25–59, Cl. 211—13.
Dalton, Norris D., and J. F. Smith, to Fred W. Mears Heel Co., Inc. Wood heel trimming machine. 2,901,010, 8–25–59, Cl. 144—154.
Danel, Pierre F., to Etablissements Neyrpic. Mold for molding concrete blocks presenting irregular surfaces. 2,900,699, 8–25–59, Cl. 25—118.
Daniels, Rupert S.: *See*—
Keutgen, William A., Davall, Daniels, and Noyes. 2,901,337.
Danielsen, Dale A., to Riddle Airlines, Inc. Portable chimney type chick container assembly. 2,900,955, 8–25–59, Cl. 119—15.
Dansig, Morris J.: *See*—
Teeter, Howard M., Dansig, and Cowan. 2,901,495.
Darr, Samuel M., to United States of America, Navy. Centrifugal switch with fluent conductor for rotating projectiles. 2,901,569, 8–25–59, Cl. 102—70.
Daüsch, Ernst, to SKF Kugellagerfabriken Gesellschaft mit beschrankter Haftung. Textile drawing mechanism. 2,900,675, 8–25–59, Cl. 19—135.
Davall, Charles R.: *See*—
Keutgen, William A., Davall, Daniels, and Noyes. 2,901,337.
David, Casimir: *See*—
Booharin, Leo Y. 2,901,021.
Davidson, Glenn. Cigarette filter tip. 2,900,980, 8–25–59, Cl. 131—208.
Davis, Frank L. Litter brackets. 2,901,204, 8–25–59, Cl. 248—229.
Davis, Merlin. Electronic musical instruments. 2,900,861, 8–25–59, Cl. 84—1.28.
Daystrom, Inc.: *See*—
Lamb, Francis X. 2,901,704.
Lamb, Francis X. 2,901,705.
Dean, Peter P. Overload protecton for power drives. 2,901,076, 8–25–59, Cl. 192—150.

Elox Corp. of Michigan: *See*—
McKechnie, Ian C. 2,901,588.
Elpern, Bill, to Sterling Drug Inc. Lower-alkyl 4-phenyl-1-
Felberg, Robert S., and J. R. Gould, to Thiokol Chemical Corp. Rocket fuel and fuel additive. 2,900,788, 8–25–59, Cl. 60—35.4.

Dean, Reginald S., and W. W. Gullett, to Chicago Development Corp. Electro-refining titanium. 2,901,410, 8–25–59, Cl. 204—64.

Deckel, Friedrich W.: *See*—
Gebele, Kurt. 2,900,885.
Gebele, Kurt. 2,900,886.

Deckel, Hans: *See*—
Gebele, Kurt. 2,900,885.
Gebele, Kurt. 2,900,886.

Dedmon, James F. Wirebound snap-on crate. 2,901,141, 8–25–59, Cl. 217—48.

Deere & Co.: *See*—
Gleeson, John D., and Beard. 2,900,836.

Deering Milliken Research Corp.: *See*—
Gagnrine, Dmitry M., and Repokis. 2,901,451.

De Haai, Kermit M. Scraper device for a farm disc. 2,901,049, 8–25–59, Cl. 172—558.

De-Icers, Inc.: *See*—
Bauer, Dale A. 2,900,642.

Delfs, Detlef, and F. Münz, ½ to Mobay Chemical Co. Production of aromatic isocyanates. 2,901,497, 8–25–59, Cl. 260—453.

De Lippa, Michael: *See*—
Huddle, Roy A. U., Pearson, and de Lippa. 2,901,346.

De Long, Herbert K., to The Dow Chemical Co. Anodizing magnesium. 2,901,409, 8–25–59, Cl. 204—56.

De Luca, Robert M.: *See*—
Brown, Abbott A., and De Luca. 2,901,716.

Dening, Robert D., to Garlinghouse Brothers. Device for kneading and surfacing plastic material. 2,900,883, 8–25–59, Cl. 94—45.

Dersch, John A.: *See*—
Engels, Eugene O., and Dersch. 2,900,927.

De Santis, Sabatino, to The Eyelet Specialty Co. Cosmetic container. 2,901,101, 8–25–59, Cl. 206—56.

De Selms, Jesse E., deceased, by E. D. Brandon, sole heir. Hydraulic torque tool. 2,900,811, 8–25–59, Cl. 64—28.

Designware Industries, Inc.: *See*—
Buelow, John A. 2,900,750.

Dessauer, John H., and H. E. Clark, to Haloid Xerox Inc. Radiation sensitive photoconductive member. 2,901,348, 8–25–59, Cl. 96—1.

Destriau, Georges, to Westinghouse Electric Corp. Electroluminescent cell. 2,901,651, 8–25–59, Cl. 313—108.

Deterjet Corp.: *See*—
Grindle, Eugene L., and Savage. 2,900,817.

Devendorf, Alan E., to General Electric Co. Automatic tuning system. 2,901,615, 8–25–59, Cl. 250—40.

De Vilbiss Co., The: *See*—
Peeps, Donald J. 2,900,950.

Dexter, Robert G., and J. A. Willett, to Cummington Corp. Collating machine. 2,901,249, 8–25–59, Cl. 271—26.

Diamond Gardner Corp.: *See*—
Anness, Russell W. 2,900,776.

Dickerson, John L., and R. H. Herring, to Rockwell Mfg. Co. Jacketed valve. 2,900,995, 8–25–59, Cl. 137—340.

Dickey, John W., to Bendix Aviation Corp. Dampened pintle nozzle. 2,901,185, 8–25–59, Cl. 239—453.

Dickinson, Arthur H.: *See*—
Paulsen, Robert C., and Dickinson. 2,901,608.

Dickson, Clifford C., to M. F. Murray. Adjustable chair. 2,901,027, 8–25–59, Cl. 155—160.

Diehr, Charles A. Archery bow. 2,900,973, 8–25–59, Cl. 124—24.

Divine Brothers Co.: *See*—
Snell, Clarence G. 2,900,659.

Dobras, Quentin D.: *See*—
Linsday, Elton A., and Dobras. 2,901,635.

Dominion Electric Corp.: *See*—
Burreson, Zina A. M. 2,901,587.

Donaldson Co., Inc.: *See*—
Cragg, Arthur C., and Schuldt. 2,901,182.

Don-Ite Co., The: *See*—
Kempsen, Edward F. 2,901,378.

Donnelley, R. R., & Sons Co.: *See*—
Schwartz, James, and Stark. 2,900,901.

Dormeyer Corp.: *See*—
Schwaneke, Fred C., and Tucker. 2,900,895.

Dorschner, Oskar: *See*—
Herbert, Wilhelm, Bratzler, Dorschner, Eisenlohr, and Gross. 2,901,423.

Dostal, Frank, to American Time Products, Inc. Watch movement test support device. 2,900,815, 8–25–59, Cl. 73—6.

Douglas Aircraft Co., Inc.: *See*—
Crispin, Thayer S. 2,901,012.

Douglas, George E.: *See*—
Lear, Earl B., and Douglas. 2,901,200.

Douglass, Wilson F., and W. E. Phalen, to The Cudahy Packing Co. Method of protecting dry sausage against discoloration and rancidity. 2,901,354, 8–25–59, Cl. 99—109.

Dow Chemical Co., The: *See*—
De Long, Herbert K. 2,901,409.
MacKenzie, Gordon F., and Turbin. 2,901,482.
Rigterink, Raymond H. 2,901,515.

Dowty Hydraulic Units Ltd.: *See*—
Brown, Peter H. 2,900,921.

Dr. Ing. h. c. F. Porsche K.-G.: *See*—
Rabe, Karl, and Forstner. 2,901,052.

Drake, George L., Jr.: *See*—
Chance, Leon H., Drake, and Reeves. 2,901,444.

Dresser Industries, Inc.: *See*—
Alder, Robert L. 2,901,685.

Drew, Robert D.: *See*—
Bourguet, Jean M., Drew, and Ray. 2,901,421.

Driehaus, Herman W., to Goodman Mfg. Co. Trimmer chain tensioning means for boring type mining machine. 2,901,230, 8–25–59, Cl. 262—7.

Drummond, Ralph E., and J. W. Wright, to Robertshaw-Fulton Controls Co. Cover operated thermostat. 2,901,577, 8–25–59, Cl. 200—138.

Drysdale, John J., to E. I. du Pont de Nemours and Co. Acyclic ketals of α,α'-difluoroperhalogenoketones and their preparation. 2,901,514, 8–25–59, Cl. 260—615.

Du Brow, Paul L.: *See*—
Dybalski, Jack N., and Du Brow. 2,901,372.

Ducon Co., Inc.: *See*—
Held, Hans J., and Weits. 2,901,331.

Duennenberger, Max: *See*—
Siegrist, Adolf E., and Duennenberger. 2,901,480.

Du Mont, Allen B., Laboratories, Inc.: *See*—
Leighton, Herndon W. 2,900,762.

Duncan, James E.: *See*—
Seymour, Samuel L., and Duncan. 2,901,365.
Smith, John J., and Duncan. 2,901,366.

Dunlap, Henry L.: *See*—
Chapman, Harvey W., and Dunlap. 2,900,864.

Dunlap, Henry L., to Evans Products Co. (Delaware). Freight securing bar. 2,900,925, 8–25–59, Cl. 105—369.

Dunmire, Paul G.: *See*—
Smith, Telford L., and Dunmire. 2,901,274.

Duophoto Corp.: *See*—
Jaffe, Emanuel M., and Galaw. 2,900,889.

Du Pont de Nemours, E. I., and Co.: *See*—
Booth, Max H. 2,900,669.
Croco, Carlton W. 2,901,467.
D'Addieco, Alfred A. 2,901,318.
D'Addieco, Alfred A. 2,901,319.
Drysdale, John J. 2,901,514.
Eller, Carl W., Jr., and Snyder. 2,901,491.
Gresham, William F. 2,901,470.
Harris, Ralph F. 2,901,445.
Lehman, Roland J. 2,901,376.
Siemons, Willem J. 2,901,342.
Sprauer, Jerome W. 2,901,323.
Sprauer, Jerome W. 2,901,490.

Durfee, Benjamin M.: *See*—
Wilson, Lawrence A., Durfee, and Tashjian. 2,900,831.

Durkoppwerke Akt.: *See*—
Baumann, Albert. 2,901,082.

Dwork, Leo E., and C. Huang, to Sylvania Electric Products Inc. Phase shift detector. 2,901,612, 8–25–59, Cl. 250—31.

Dybalski, Jack N., and P. L. Du Brow, to Armour and Co. Strip-resistant bituminous compositions. 2,901,372, 8–25–59, Cl. 106—273.

E V G Entwicklungs- u. Verwertungsgesellschaft m.b.H.: *See*—
Eisenburger, Kuno, and Ritter. 2,900,830.

Eastman Kodak Co.: *See*—
Crawford, Robert T., and Stevens. 2,900,988.
Kibler, Charles J., Bell, and Smith. 2,901,466.

Eastman, Willard B., and P. F. Catalano, to Continental Can Co., Inc. Method of and apparatus for applying bonding solder to can body side seams. 2,900,944, 8–25–59, Cl. 113—60.

Eaton, John C. Chain-type debarking flails cushioned by rubber plates coaxially mounted on a rotor shaft. 2,901,011, 8–25–59, Cl. 144—208.

Eaton Mfg. Co.: *See*—
Winther, Martin P. 2,900,847.

Echolds, E. Frank, and P. L. Brink. Eddy-current force systems for constrained gyroscopes. 2,900,825, 8–25–59, Cl. 74—5.46.

Eckert, John P., Jr.: *See*—
Welsh, Herbert F., Schreiner, Mock, and Eckert. 2,901,734.

Eckert, John P., Jr., to Sperry Rand Corp. Single ended carrier type magnetic amplifier bistable device. 2,901,733, 8–25–59, Cl. 340—174.

Edcliff Instruments, Inc.: *See*—
Rehnborg, Edward H., and Sayre. 2,901,718.

Edman, Louis S., to American Optical Co. Display devices. 2,901,122, 8–25–59, Cl. 211—134.

Edmonds, Byron P. Car advancing and retarding apparatus. 2,900,922, 8–25–59, Cl. 104—162.

Egge, Robert: *See*—
Naftulin, Henry, and Egge. 2,901,112.

Eggert, Walter S., Jr.: *See*—
Watter, Michael, and Eggert. 2,901,390.

Eisenburger, Kuno, and J. Ritter, to E V G Entwicklungs- u. Verwertungsgesellschaft m.b.H. Linkage for describing a straight line. 2,900,830, 8–25–59, Cl. 74—103.

Eisenlohr, Karl-Heinz: *See*—
Herbert, Wilhelm, Bratzler, Dorschner, Eisenlohr, and Gross. 2,901,423.

Eitel-McCullough, Inc.: *See*—
Noble, Lowell A., and Chamberlin. 2,901,678.
Stuart, William R. 2,901,657.

Ekström, Gösta I., and J. G. F. Löwenborg, to Atlas Copco Aktiebolag. Pneumatic percussion tools. 2,900,959, 8–25–59, Cl. 121—13.

Electric & Musical Industries Ltd.: *See*—
Pearce, Albert F., and Wooton. 2,901,660.

Electroflim, Inc.: *See*—
Crump, Ralph E. 2,901,380.

Eller, Carl W., Jr., and J. M. Snyder, to E. I. du Pont de Nemours and Co. Purification of working solutions for producing hydrogen peroxide. 2,901,491, 8–25–59, Cl. 260—369.

Elliott Brothers (London) Ltd.: *See*—
Mariner, Peter F., and Kinnear. 2,900,700.

Elliott, Daniel R., E. H. Culp, and W. H. Hulswit, Jr., to United States Rubber Co. Fluid spring. 2,901,242, 8–25–59, Cl. 267—15.

Elliott, William S., to Collins Radio Co. Impulse-governed oscillator. 2,901,706, 8–25–59, Cl. 331—48.

Ellis, Steven G.: *See*—
Atkinson, Ralph B., and Ellis. 2,901,309.

Engel & Gibbs Ltd. : *See*—
Schneider, Frederick E. W. 2,900,826.
Engels, Eugene O., and J. A. Dersch, to Baker Perkins, Inc. Bread handling apparatus. 2,900,927, 8–25–59, Cl. 107—57.
Engineering Research Corp. : *See*—
Barret, William M. 2,901,687.
Barret, William M. 2,901,688.
Barret, William M., and Baker. 2,901,689.
Engleson, Harry E., and E. D. Sramek, to F. B. Redington Co. Carton expanding and conveyer loading mechanism. 2,900,880, 8–25–59, Cl. 93—53.
Engleson, Harry E., and E. D. Sramek, to F. B. Redington Co. Conveyer transfer mechanisms. 2,901,084, 8–25–59, Cl. 198—24.
English Electric Valve Co. Ltd. : *See*—
Sixsmith, Herbert. 2,901,666.
Epp, David A. Valve means for irrigation pipes. 2,901,211, 8–25–59, Cl. 251—145.
Eppenberger, Paul, to Gebrueder Buehler. Plansifter compartment. 2,901,109, 8–25–59, Cl. 209—316.
Eppenberger, Paul, to Gebrueder Buehler. Vibrator chute. 2,901,111, 8–25–59, Cl. 209—344.
Epstein, Jack A. Packaged beverage products and methods of making them. 2,901,357, 8–25–59, Cl. 99—171.
Equipment Research Corp. : *See*—
Cavett, Paul A., and Robards. 2,901,008.
Essex Wire Corp. : *See*—
Smith, James J., and Graf. 2,901,642.
Esso Research and Engineering Co. : *See*—
Banes, Fred W., and Fitz Gerald. 2,901,458.
Cook, David E., and Barrasso. 2,901,417.
Hemminger, Charles E., Welty, Taff, and Sage. 2,901,-415.
Kirshenbaum, Isidor, Jonach, and Etherington. 2,901,-404.
Kirshenbaum, Isidor, Jonach, and Etherington. 2,901,-406.
Morway, Arnold J., Seelbach, and Cottle. 2,901,432.
Newchurch, Edwin J., and McCracken. 2,901,413.
Pappas, George F. 2,901,418.
Patterson, Albert C., and Martin. 2,901,519.
Pavlick, Michael A. 2,901,471.
Tate, Roger W. 2,901,416.
Young, David W., and Rose. 2,901,502.
Etablissements Labinal : *See*—
Clicques, Marcel P. 2,901,173.
Etablissements Neyrpic : *See*—
Danel, Pierre F. 2,900,699.
"Etablissements Roques" (Societe Anonyme) : *See*—
Roques, Jacques R. 2,901,316.
Etherington, Lewis D. : *See*—
Kirschenbaum, Isidor, Jonach, and Etherington. 2,901,404.
Kirshenbaum, Isidor, Jonach, and Etherington. 2,901,406.
Ethyl Corp. : *See*—
Brown, Jerome E. 2,901,336.
Etienne, Alfred, to L'Air Liquide, Societa Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude. Reflux condensers. 2,900,799, 8–25–59, Cl. 62—42.
Evans, Harry D., to Shell Development Co. Process of separating catalyst particles from hydrocarbon vapors. 2,901,420, 8–25–59, Cl. 208—153.
Evans, Jean-Paul R. M. to Account-Tokens Ltd. Imprinting apparatus. 2,900,899 8–25–59, Cl. 101—269.
Evans, Julius B., to United States Steel Corp. Cleaner for the conical bottom of dust catcher. 2,901,060, 8–25–59, Cl. 183—76.
Evans Products Co. : *See*—
Chapman, Harvey W., and Dunlap. 2,900,864.
Evans Products Co. (Delaware) : *See*—
Dunlap, Henry L. 2,900,925.
Evasic, John. Hopper feeder. 2,901,088, 8–25–59, Cl. 198—33.
Everett, Franklin L., to United States of America, Navy. Breaker mechanism for frangible ampoule in deferred action primary cell. 2,901,525, 8–25–59, Cl. 136—90.
Eyelet Specialty Co., The : *See*—
De Santis, Sabatino. 2,901,101.
Fädler, Kurt : *See*—
Von Bombard, Franz J., and Fädler. 2,901,073.
Fairchilds, Bertram S., and P. C. Forward. Escape chute. 2,901,055, 8–25–59, Cl. 182—49.
Faiver, Kenneth E. : *See*—
Lautzenhiser, Argyle G. and Faiver. 2,901,241.
Farbenfabriken Bayer Aktiengesellschaft : *See*—
Baumann, Fritz, and Bien. 2,901,479.
Gold, Heinrich, and Bayer. 2,901,476.
Siegel, Edgar, and Gold. 2,901,477.
Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning : *See*—
Nüsslein, Joseph, Kuch, and Bartl. 2,901,311.
Starck, Werner and H., and Schülde. 2,901,443.
Fargo Mfg. Co., Inc. : *See*—
Schuyler, Thomas C. 2,901,725.
Federal Paper Board Co., Inc. : *See*—
Williamson, Marshall I. 2,901,157.
Felberg, Robert S., and J. R. Gould, to Thiokol Chemical Corp. Rocket fuel and fuel additive. 2,900,788, 8–25–59, Cl. 60—35.4.
Feldman, Arthur : *See*—
Bangert, James G., and Feldman. 2,901,355.
Fenner, James M., to United States Steel Corp. Cord and article containing the same. 2,900,784, 8–25–59, Cl. 57—148.
Fenner, James M., to United States Steel Corp. Six-wire strand. 2,900,785, 8–25–59, Cl. 57—153.
Fergus, John H., and A. W. Horton, to United States of America, Army. Flash and noise suppressor for high pressure gas exhausts. 2,900,875, 8–25–59, Cl. 89—14.
Fichtel & Sachs A.G. : *See*—
Von Bombard, Franz J., and Fädler. 2,901,073.
Fields, Ellis K., and A. E. Brehm, to Standard Oil Co. Additive for leaded gasoline. 2,901,335, 8–25–59, Cl. 44—69.
Fihe, Albert J. Folding sectional table. 2,901,304, 8–25–59, Cl. 311—92.
Fikse, Tyman H. Vehicle suspension system. 2,901,240, 8–25–59, Cl. 267—11.
Finlayson, Frank E., to General Electric Co. Thermostatically controlled flatiron. 2,901,584, 8–25–59, Cl. 219—25.
Firma Gebruder Sucker G.m.b.H. : *See*—
Kabelitz, Hans. 2,900,951.
Firma Schloemann Akt. : *See*—
Arens, Matthias. 2,901,104.
Firmenich, Klaus, to North American Philips Co., Inc. Circuit-arrangement for producing adjustable reference lines on the picture screens of cathode-ray tubes simultaneously with the curve of a phenomenon. 2,901,664, 8–25–59, Cl. 315—22
First National Bank of Philadlephia, The : *See*—
Conway, Robert D., and Messinger. 2,901,189.
Fisch, Paul : *See*—
Bailey, Lee W., and Fisch. 2,900,718.
Fischer, Arthur H., to Minerec Corp. Froth flotation of copper sulfide ores. 2,901,107. 8–25–59, Cl. 209—166.
Fischer, Edward : *See*—
Price, Clarence A., Fischer, and Schultz. 2,901,186.
Fischer, Richard A., and J. M. Kemper, to The Garrett Corp. Dual differential pressure regulating control. 2,900,890, 8–25–59, Cl. 98—1.5.
Fisher, Charles H. Portable barbecue. 2,900,897. 8–25–59, Cl. 99—340.
Fitch, Howard M., to Campbell Pharmaceuticals, Inc. Dialkylaminophenyl esters of thiophosphoric acids. 2,901,503, 8–25–59, Cl. 260—461.
Fitz Gerald, William P. : *See*—
Banes, Fred W., and Fitz Gerald. 2,901,458.
Fitzmorris, Stanley R., to General Electric Co. Wave coupling arrangement. 2,901,709, 8–25–59, Cl. 333—10.
Flenniken, William W. : *See*—
Goldtrap, Charley L. 2,900,996.
Flexonics Corp. : *See*—
Andersen, Raymond C. 2,901,272.
Flynn, Floyd W. : *See*—
Bjelland, John L., and Flynn. 2,900,869.
Foil Process Corp. : *See*—
Barnes, James F., and Silversher. 2,900,881.
Food Machinery and Chemical Corp. : *See*—
Belk, Wilber C., and Grotewold. 2,901,136.
Cox, Thomas G. 2,901,087.
Freeman, Marshall E. C. 2,901,013.
McGrath, Earle J. 2,901,083.
Forker, Gordon M., and H. F. Ogrinc, to General Electric Co. Soldering flux composition. 2,901,387, 8–25–59, Cl. 148—23.
Forkner, John H., to The Pillsbury Co. Dried apple and process for preparing. 2,901,359. 8–25–59, Cl. 99—204.
Forman, Ford & Co. : *See*—
Lox, Walter E. 2,901,447.
Förster, Friedrich M. O. Method and apparatus for nondestructive testing. 2,901,691 8–25–59, Cl. 324—34.
Forstner, Egon : *See*—
Rabe, Karl and Forstner. 2,901,052.
Fortson, Warren D. Pellet gun target trap. 2,901,254, 8–25–59, Cl. 273—102.4.
Fortuna-Werke Spezialmaschinenfabrik A.G. : *See*—
Voller, Rolf. 2,900,767.
Forward, Paul C. : *See*—
Fairchilds, Bertram S., and Forward. 2,901,055.
Foulds, John P., to General Electric Co. Luminaire. 2,901,594, 8–25–59, Cl. 240—25.
Fox, Martin, to The Seng Co. Davenport bed. 2,900,646, 8–25–59, Cl. 5—13.
Foxboro Co., The : *See*—
Anderson, Bernard E. 2,900,816.
Freitas, Manuel P. 2,901,739.
Fralick, Jack F., to Continental Can Co., Inc. Dispensing container with friction mounted cap. 2,901,142, 8–25–59, Cl. 220—42.
Frankenfield, Bruce E., and A. E. Miller, to Western Electric Co., Inc. Rolling mill conveyor control systems. 2,900,852, 8–25–59, Cl. 80—43.
Frans, Robert D. Opening device. 2,900,716, 8–25–59, Cl. 30—16.
Frant, Martin S. : *See*—
Cohen, Sylvan I., Frant, and Sowa. 2,901,392.
Frantz, Nicholas, to Carter Parts Co. Wire-form current control device. 2,901,565, 8–25–59, Cl. 200—51.1.
Freeman, Marshall E. C., to Food Machinery and Chemical Corp. Fruit holder. 2,901,013, 8–25–59, Cl. 146—43.
Freeze, Herbert E. Bobbin tip painting apparatus. 2,900,954, 8–25–59, Cl. 118—232.
Freitas, Manuel P., to The Foxboro Co. Data scanner monitoring alarm system. 2,901,739, 8–25–59, Cl. 340—213.
Frickert, Philip J., to Owens-Corning Fiberglas Corp. Method of making a textile mat. 2,900,700, 8–25–59, Cl. 28—73.

Grass, Albert M., to United States of America, Navy. Automatic range tracking apparatus. 2,901,746, 8–25–59, Cl. 343—13.
Grattapaglia, Jean L. Hydraulic control device. 2,900,900
Harris, Ralph F., to E. I. du Pont de Nemours and Co. Cellular polyurethane reaction product containing polysiloxane and method of preparing same. 2,901,445, 8–25–59,

Fridrich, Elmer G., to General Electric Co. Electroluminescent lamp construction. 2,901,652, 8–25–59, Cl. 313—108.
Fried, Josef: *See*—
Herz, Josef E., and Fried. 2,901,492.
Fried, Josef, and G. H. Thomas, to Olin Mathieson Chemical Corp. 9,16-dihalo steroids of the androstane series. 2,901,494, 8–25–59, Cl. 260—397.3.
Friedman, Herbert, and T. A. Chubb. Ultra-violet gas analysis. 2,901,625, 8–25–59, Cl. 250—43.5.
Friedman, Herbert, to J. J. Maguire, d.b.a. J. J. Maguire Co. Method and apparatus for slag detection in metal sheets. 2,901,629, 8–25–59, Cl. 250—53.
Frigid Fluid Co.: *See*—
Emert, Gerald E. 2,901,137.
Frosst, Charles E., & Co.: *See*—
Wasson, Burton K., and Parker. 2,901,501.
Fryklund, Robert A., to Raytheon Mfg. Co. Echo ranging systems. 2,901,726, 8–25–59, Cl. 340—3.
Fuller Co.: *See*—
Weller, Leo G. 2,901,133.
Funston, Earl S.: *See*—
McGurty, James A., and Funston. 2,901,347.
Furrer, John R., and G. Runken, to A C F Industries, Inc. Vehicle truck. 2,900,924, 8–25–59, Cl. 105—199.
Fusco, Raffaello, G. Losco, and M. Perini, to Montecatini-Societa Generale per l'Industria Mineraria e Chimica. Process for preparing dialkyldithiophosphoric acid ester derivatives having two amide groups in the molecule and the insecticidal compounds obtained thereby. 2,901,481, 8–25–59, Cl. 260—268.
Gade, Marvin F., to Kimberly-Clark Corp. Apparatus for controlling stock level in a pressurized head box. 2,901,040, 8–25–59, Cl. 162—259.
Gadget-Of-The-Month Club, Inc.: *See*—
Campbell, Robert A. 2,900,987.
Gaffney, Clyde M., Jr. Film strip attachment. 2,900,868, 8–25–59, Cl. 88—19.5.
Gagarine, Dmitry M., and H. Repokis, to Deering Milliken Research Corp. Antistatic compositions for textiles and methods for producing and applying the same. 2,901,451, 8–25–59, Cl. 260—29.2.
Galaw, Edmund S.: *See*—
Jaffe, Emanuel M., and Galaw. 2,900,889.
Gallotti, Filippo. Method of preserving orange juice. 2,901,356, 8–25–59, Cl. 99—155.
Gallowhur Chemical Corp.: *See*—
Cohen, Sylvan I., Frant, and Sowa. 2,901,392.
Gardner-Denver Co.: *See*—
Bottje, John D., and Shulters. 2,901,219.
Garlinghouse Brothers: *See*—
Dening, Robert D. 2,900,883.
Garmager, Curt H., to Borg-Warner Corp. Clutch. 2,901,066, 8–25–59, Cl. 192—17.
Garrett Corp., The: *See*—
Fischer, Richard A., and Kemper. 2,900,890.
Schinnerer, Roy L. 2,900,917.
Garthwaite, Ernest, to Marconi Instruments Ltd. Resistance terminating loading devices. 2,901,710, 8–25–59, Cl. 333—22.
Gaskell, C. J., Co., Inc.: *See*—
Holden, James D. 2,901,033.
Gaughran, Eugene R. L.: *See*—
Rosenberg, Norman, and Gaughran. 2,900,644.
Gauthier, Raymond P., and P. R. Arcemont. Portable beveling machine. 2,900,858, 8–25–59, Cl. 82—4.
Gavaert Photo-Producten N.V.: *See*—
Van Pee, Paul D., and Roosens. 2,901,351.
Gebele, Kurt, to H. and F. W. Deckel. Photographic camera with interchangeable shutter. 2,900,885, 8–25–59, Cl. 95—11.
Gebele, Kurt, to H. and F. W. Deckel. Photographic camera and shutter construction. 2,900,886, 8–25–59, Cl. 95—31.
Gebruder-Happich-Gesellschaft mit beschrankter Haftung: *See*—
Herr, Gerhard, and Treber. 2,901,038.
Gebrueder Buehler: *See*—
Eppenberger, Paul. 2,901,109.
Eppenberger, Paul. 2,901,111.
Marchetti, Augusto. 2,901,090.
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Gehre, Hans. Gas flow measuring equipment. 2,900,819, 8–25–59, Cl. 73—233.
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Geloso, Giovanni. Desk microphone combined with support for pen. 2,901,552, 8–25–59, Cl. 179—147.
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Conklin, Joseph E., and Holmes. 2,901,390.
Polhemus, John K. 2,901,692.
Stoner, George G., and Wright. 2,901,457.
Wynn, Robert W. 2,901,516.
General Bronze Corp.: *See*—
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Wolf, Edward L. 2,901,641.
General Electric Co.: *See*—
Beaubien, William H. 2,901,659.
Boldebuck, Edith M. 2,901,460.
Devendorf, Alan E. 2,901,615.
Finlayson, Frank E. 2,901,584.
Fitzmorris, Stanley R. 2,901,709.
Forker, Gordon M., and Ogrine. 2,901,387.
Foulds, John P. 2,901,594.
Fridrich, Elmer G. 2,901,652.
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Hansen, Carl W., and Kozlow. 2,901,631.
Jacobs, John E. 2,901,633.
Kizaur, Arthur J. 2,901,302.
Kotsch, William E., and Ackerman. 2,901,667.
Kuhn, Donald H. 2,901,745.
Lesk, Israel A. 2,901,554.
Levand, Victor A. 2,900,771.
Linsday, Elton A., and Dobras. 2,901,655.
Linsday, Elton A., and Phillips. 2,901,648.
Patterson, Milton E., Luna, and Ishler. 2,901,375.
Plunkett, Robert. 2,901,703.
Schrom, Edward C. 2,901,693.
Simpson, Amos W., Jr. 2,901,579.
Solley, Douglas A., Jr., and Robbie. 2,900,807.
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Yoder, Joe B., and Cappello. 2,901,521.
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Blackburn, Mack O. 2,900,765.
Cramer, Raymond H. 2,901,299.
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Wurtz, Clifford H., and Mann. 2,900,806.
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Yetter, George K. 2,900,677.
Gergaud, Claude J.: *See*—
Cauboue, Jean, and Gergaud. 2,901,169.
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Cramer, Raymond H. 2,901,299.
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Getz, Anthony J. Pedal extensions for organs. 2,900,862, 8–25–59, Cl. 84—426.
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Gilman, Marvin A., to Clay-Adams, Inc. Proportion measuring device. 2,900,730, 8–25–59, Cl. 33—125.
Gilmore, John F., to Westinghouse Electric Corp. Fluorescent lamp. 2,901,653, 8–25–59, Cl. 313—109.
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Gingher, Carl E. and Carl E., Jr. 2,901,124.
Gingher Mfg. Co.: *See*—
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Campion, Frank E., Glass, and Morse. 2,901,043.
Glass, Marvin I. Land and water toy. 2,900,758, 8–25–59, Cl. 46—92.
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Goff, Justin B. Snap-action switch. 2,901,568, 8–25–59, Cl. 200—67.
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Siegel, Edgar, and Gold. 2,901,477.
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Brown, Clarence H. 2,901,233.
Driehaus, Herman W. 2,901,230.
Hagenbook, Loy D. 2,901,231.
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Cate, Malcolm S. 2,900,953.
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Wilson, Charles P. 2,901,440.
Rudner, Bernard, and Tockman. 2,901,475.
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Grant, Harry C., Jr. Simulated baseball game apparatus. 2,901,253, 8–25–59, Cl. 273—88.

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Small, Sollie W., and Herman. 2,901,002.
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Herz, Josef E., and Fried. 2,901,492.
Hess, Ralph W., and R. L. Peterson, to Minnesota Mining & Manufacturing Co. Electrostatic printing. 2,901,348, 8–25–59, Cl. 96—1.
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Hetherington, Robert. 2,901,224.
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Tod, Allan H., and Gray. 2,900,985.

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Gurries, Rayond A., and Curlett. 2,900,746.

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Dessauer, John H., and Clark. 2,901,348.
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Hamilton, Francis E., G. V. Hawkins, R. E. Lawhead, Jr., and E. S. Hughes, Jr., to International Business Machines Corp. Digital computer. 2,901,166, 8–25–59, Cl. 235—61.

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Hand, John J.: *See*—
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Burrell, Warren P., Cohen, and Hardenbergh. 2,901,168.

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Endlich, Friedrich. 2,901,702.

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Sands, Hillard J. 2,900,647.

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Haustrup, Niels J. Bail ear for container. 2,901,144, 8–25–59, Cl. 220—91.

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Hübner, Walter W. G., Lange, and Rindlisbacher. 2,900,668.

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Thomas, David F., and Hill. 2,900,918.
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Pero, Johannes G., Wijnberg, and Honing. 2,901,658.
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Fergus, John H., and Horton. 2,900,875.
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Horton, John F., Jr. Ice cube maker and dispenser. 2,900,803, 8–25–59, Cl. 62—157.
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Hunt Valve Co.: *See*—
Chessman, Samuel C., and Meyer. 2,901,677.
Huntley, Alton K., and R. Carmichael, Union Carbide Corp. Battery connector. 2,901,526, 8–25–59, Cl. 136—135.
Hupp Corp.: *See*—
Sinninger, Dwight V. 2,901,530.
Hurat, Leonard T., and E. P. Presby, to United States Steel Corp. Method of making colored wire. 2,900,710, 8–25–59, Cl. 29—407.
Hurley, Forrest R., to W. R. Grace & Co. Substituted hydrazine process. 2,901,511, 8–25–59, Cl. 260—583.
Härtlmann, Hans: *See*—
Schmid, Hans, and Härtlmann. 2,901,643.
Hurwitz, Melvin D., to Rohm & Haas Co. Compositions, textiles treated therewith and processes for the treatment thereof. 2,901,463, 8–25–59, Cl. 260—67.5.
Hutchens, Morris L., J. J. Lenert, and H. F. Henderson, to Kearney & Trecker Corp. Indexing mechanism for a machine tool. 2,900,849, 8–25–59, Cl. 74—826.
Hutchinson, David O. Simulated trunk planters. 2,900,759, 8–25–59, Cl. 47—34.
Hüttenwerk Oberhausen A.G.: *See*—
Becker, Helmut. 2,901,626.
I-T-E Circuit Breaker Co.: *See*—
Horner, Leonard L., Jr., and Cross. 2,901,686.
Igoe, John R. Collapsible inflatable tent. 2,900,994, 8–25–59, Cl. 135—1.
Illinois Railway Equipment Co.: *See*—
Sweger, Theodore J. 2,901,296.
Industrial Controls Corp.: *See*—
Thomas, Albert G. 2,901,668.
Industrial Filter & Pump Mfg. Co.: *See*—
Schmidt, Henry, Jr., and Ledford. 2,901,115.
Ingbermann, Arthur K.: *See*—
Auerbach, Victor, and Ingbermann. 2,901,461.
Ingeniorsfirman Magnetic Ab: *See*—
Mollfors, Hans G. 2,901,696.
Ingersoll-Rand Co.: *See*—
Whitfield, Joseph E. 2,901,164.
Ingres, Jeannot G., to Kelsey-Hayes Co. Booster brake mechanism. 2,900,962, 8–25–59, Cl. 121—41.
Inland Steel Products Co.: *See*—
Rice, Norman D. 2,901,062.
Interlake Iron Corp.: *See*—
Ruth, Heimer A. 2,901,132.
International Business Machines Corp.: *See*—
Barbeau, Raymond A., and Meade. 2,901,041.
Burrell, Warren P., Cohen, and Hardenbergh. 2,901,168.
Cauboue, Jean, and Gergaud. 2,901,169.
Goddard, William A. 2,901,730.
Hamilton, Francis E., Hawkins, Lawhead, and Hughes. 2,901,166.
Hazel, Herbert K. 2,901,127.
Homan, Merle E. 2,901,675.
Kelly, Martin J. 2,901,580.
Paulsen, Robert C., and Dickinson. 2,901,608.
Wagner, Walter W. 2,901,246.
Willard, Dennis D. 2,901,738.
Wilson, Lawrence A., Durfee, and Tashjian. 2,900,831.
International Minerals & Chemical Corp.: *See*—
Hartig, Rufus G., and Archer. 2,901,061.
Northcott, Elliott. 2,900,975.
International Standard Electric Corp.: *See*—
Chapman, Roger, and Robinson. 2,901,550.
Mittag, Fritz H. 2,901,676.
Weill, Camille, Hannigsberg, and Adelsar. 2,901,603.
International Telephone and Telegraph Corp.: *See*—
Knight, Albert J. 2,901,649.
Isbister, Thomas R. Weather strip device. 2,900,683, 8–25–59, Cl. 20—67.
Isele-Aregger, Alfons, to Union Carbide Corp. Sealing disc for metallic cap closures, crown closures, or the like. 2,901,139, 8–25–59, Cl. 215—40.
Isely, William H., to United States of America, Air Force. Breakaway computer. 2,901,744, 8–25–59, Cl. 343—7.
Ishler, William E.: *See*—
Patterson, Milton E., Luna, and Ishler. 2,901,375.
Jackson, Thomas J. Projection screen. 2,900,870, 8–25–59, Cl. 88—28.9.
Jacobs, John E., to General Electric Co. Light responsive system. 2,901,633, 8–25–59, Cl. 250—214.
Jacobsen, Andrew B., and L. A. Turner, to United States of America, Navy. Radar telemetering system. 2,901,743, 8–25–59, Cl. 343—6.5.
Jacobsen Mfg. Co.: *See*—
Wuerker, Charles A., Jr. 2,900,660.
Jacobson, Martin. Attractants for the gypsy moth. 2,900,756, 8–25–59, Cl. 43—124.
Jacobson, Robert A.: *See*—
MacNaught, Donald F., and Jacobson. 2,901,279.
Jacqueline Modes, Inc.: *See*—
Cuker, Seymour. 2,901,674.

Knight, Norman H., to The Upjohn Co. Isothermal distilla-
Larsen, Carl H., to Americas Machine & Tower Co. Self-

Jaffe, Emanuel M., and E. S. Galaw, to Duophoto Corp. Photographic printing apparatus. 2,900,889, 8–25–59, Cl. 95—77.5.

James, David M., to Beanstalk Shelving Ltd. Multi-tiered rack units. 2,901,121, 8–25–59, Cl. 211—126.

Jeanne, Edmond. Pneumatic installation for conveying greasy wool. 2,901,293, 8–25–59, Cl. 302—20.

Jen, Yun: *See*—
Wilson, Lucius H., and Jen. 2,901,391.

Jervis Corp.: *See*—
Anderson, Lloyd L. 2,901,277.

Jett, Edward C. Article guiding and positioning means. 2,901,094, 8–25–59, Cl. 198—204.

Johannisson, Dag O. A., to Svenska Aktiebolaget Gasaccumulator. Suction device. 2,900,978, 8–25–59, Cl. 128—276.

Johns-Manville Corp.: *See*—
Russum, Gaillard R. 2,901,227.

Johnson, Axel E. F., to American Hospital Supply Corp. Collapsible stand. 2,901,123, 8–25–59, Cl. 211—142.

Johnson, Carl W., to American Machine & Foundry Co. Sewing machine looper mechanism. 2,900,939, 8–25–59, Cl. 112—171.

Johnson, Gerald A. Electric pencil sharpener. 2,900,958, 8–25–59, Cl. 120—96.

Johnson & Johnson: *See*—
Britton, William J. 2,901,248.
Rosenberg, Norman, and Gaughran. 2,900,644.

Johnson, Peter W. R., to Johnson Products Inc. Work bench including leg and frame construction. 2,901,301, 8–25–59, Cl. 311—1.

Johnson Products Inc.: *See*—
Johnson, Peter W. R. 2,901,301.

Johnson, Ralph E., to The Singer Mfg. Co. Ornamental stitch sewing machines. 2,900,938, 8–25–59, Cl. 112—158.

Johnson, Ralph E., to The Singer Mfg. Co. Sewing machines with bobbin thread controlling means. 2,900,940, 8–25–59, Cl. 112—184.

Johnson, Willard L., to Ajem Laboratories, Inc. Metal processing apparatus. 2,900,992, 8–25–59, Cl. 134—122.

Johnston Testers, Inc.: *See*—
Nutter, Benjamin P. 2,901,001.

Jonach, Fredrick L.: *See*—
Kirshenbaum, Isidor, Jonach, and Etherington. 2,901,404.
Kirshenbaum, Isidor, Jonach, and Etherington. 2,901,406.

Jones, Edwin G. Post driver. 2,901,215, 8–25–59, Cl. 254—29.

Jones, Henry E., to Chrysler Corp. Window regulator. 2,901,244, 8–25–59, Cl. 268—124.

Jones, Paul R., to Collins Radio Co. Stabilized load. 2,901,208, 8–25–59, Cl. 248—346.

Jonkers, Cornelius O., to North American Philips Co., Inc. Heat-exchanger in which a multi-component medium is cooled. 2,900,798, 8–25–59, Cl. 62—42.

Jordan, Arthur D., Jr., to Rohm & Haas Co. Aqueous composition comprising ammonium salt of maleamic acid/diisobutylene copolymer and linear addition polymer and article coated therewith. 2,901,453, 8–25–59, Cl. 260—29.6.

Jordan, James D., to United States of America, Navy. Centrifugal switch. 2,900,909, 8–25–59, Cl. 102—70.2.

Judelson, David N. Combination material doubler and seam opener. 2,900,934, 8–25–59, Cl. 112—63.

Junkers & Co. G.m.b.H.: *See*—
Puttfarcken, Heinrich, and Schork. 2,901,034.
Reimers, Ernst. 2,900,790.

Jurras, Andrew W., to Union Carbide Corp. Molding composition comprising synthetic resin and metallic filaments, articles molded therefrom and method of making same. 2,901,455, 8–25–59, Cl. 260—40.

Justi, Eduard, and A. Winsel, to Ruhrchemie Aktiengesellschaft, and Steinkohlen-Elektrizitat Aktiengesellschaft. Direct production of electrical energy from the oxidation of fluid fuel. 2,901,523, 8–25–59, Cl. 136—86.

Kabelitz, Hans, to Firma Gebruder Sucker G.m.b.H. Machines for treating sheet material. 2,900,951, 8–25–59, Cl. 118—122.

Kihr, Gustaf. Laminated parquet boards. 2,900,676, 8–25–59, Cl. 20—7.

Kaiser Aluminum & Chemical Corp.: *See*—
Curell, Conrad O. 2,901,283.
Kolb, Andrew L. 2,901,723.

Kaiser, John G. Fruit picker with fixed cutter. 2,900,780, 8–25–59, Cl. 56—339.

Kallilec, Daniel. Double spindle power tool. 2,900,844, 8–25–59, Cl. 74—665.

Kamm, Lawrence J.: *See*—
Rabinow, Jacob, and Kamm. 2,901,089.

Kamphausen, Dan: *See*—
Goldtrap, Charley L. 2,900,996.

Kane, Thomas C., to The Commercial Shearing and Stamping Co. Descaling apparatus. 2,900,703, 8–25–59, Cl. 29—81.

Kane, Thomas C., to The Commercial Shearing and Stamping Co. Jet rings. 2,901,184, 8–25–59, Cl. 239—452.

Kapff, Sixt F., to Standard Oil Co. Combustibles detector for gas chromatography. 2,901,329, 8–25–59, Cl. 23—255.

Katz, Morris: *See*—
Booharin, Leo Y. 2,901,021.

Kauffmann, William M., to Worthington Corp. Internal combustion engine. 2,900,968, 8–25–59, Cl. 123—120.

Kauffmann, William M., and H. Ueberschaer, to Worthington Corp. Internal combustion engine. 2,900,971, 8–25–59, Cl. 123—188.

Kaufmann, Frank H., to Steel Heddle Mfg. Co. Reeds for looms. 2,901,004, 8–25–59, Cl. 139—192.

Kautenberg, W. E., Co.: *See*—
Kautenberg, William E. 2,900,652.

Kautenberg, William E., to W. E. Kautenberg Co. Quick change mop holder with outer hinged jaw. 2,900,652, 8–25–59, Cl. 15—153.

Kearney, James R., Corp.: *See*—
Gesellschap, Robert A. 2,901,573.

Kearney & Trecker Corp.: *See*—
Hutchens, Morris L., Lenert, and Henderson. 2,900,849.

Keating Mfg. Corp.: *See*—
Keating, Marion M. 2,900,712.

Keating, Marion M., to Keating Mfg. Corp. Method of making sealed metallic containers. 2,900,712, 8–25–59, Cl. 29—422.

Keith, Arthur C.: *See*—
Gorman, James M., and Keith. 2,901,360.

Keizer, Eugene O., to Radio Corp. of America. Intercarrier sound television receivers. 2,901,533, 8–25–59, Cl. 178—5.8.

Kellogg, M. W., Co., The: *See*—
Kelly, Louis J. 2,901,414.
Rossheim, David B. 2,901,592.

Kelly, Louis J., to The M. W. Kellogg Co. Hydrocarbon conversion system. 2,901,414, 8–25–59, Cl. 208—65.

Kelly, Martin J., to International Business Machines Corp. Electrical contact device. 2,901,580, 8–25–59, Cl. 200—152.

Kelsey-Hayes Co.: *See*—
Ayers, David T., Jr. 2,900,963.
Ingres, Jeannot G. 2,900,962.

Kempen, Edward F., to The Don-Ite Co. Process of finishing a wood core. 2,901,378, 8–25–59, Cl. 117—73.

Kemper, James M.: *See*—
Fischer, Richard A., and Kemper. 2,900,890.

Kempton, Marvin L., and E. J. Workman, to United States of America, Navy. Retardation device for the recovery of projectile components. 2,900,907, 8–25–59, Cl. 102—63.

Kendall, Co., The: *See*—
Mott, Carl W. 2,901,310.

Kent, Eugene A., and L. J. Sacco, Jr., to National Aluminate Corp. Antistripping agents for bituminous materials. 2,901,370, 8–25–59, Cl. 106—123.

Kenyon, Philip, to Automatic Telephone & Electric Co. Ltd. Telegraph receivers. 2,901,541, 8–25–59, Cl. 178—88.

Keppel, Ernst, to Joh Vaillant, K.G. Water flow regulator for water heater. 2,901,175, 8–25–59, Cl. 236—25.

Kerslake, Cyril J., to The Plessey Co. Ltd. Circuit breakers. 2,901,720, 8–25–59, Cl. 338—163.

Keutgen, William A., C. R. Duvall, R. S. Daniels, and R. D. Noyes, to Union Carbide Corp. Abrasive articles and method of making the same. 2,901,337, 8–25–59, Cl. 51—298.

Kibler, Charles J., A. Bell, and J. G. Smith, to Eastman Kodak Co. Linear polyesters and polyester-amides from 1,4-cyclohexanedimethanol. 2,901,466, 8–25–59, Cl. 260—75.

Kiekhaefer, Elmer C. Centrifugal clutch. 2,901,075, 8–25–59, Cl. 192—105.

Kilmer, George McQ. Devices adapted for assisting paralyzed or hemiplegic persons. 2,900,976, 8–25–59, Cl. 128—1.

Kimberly-Clark Corp.: *See*—
Gade, Marvin F. 2,901,040.
Harwood, Kenneth J. 2,900,980.

King, Charles L.: *See*—
Clark, Lucius K., and King. 2,901,566.

King, Geo. W., Ltd.: *See*—
Burrows, Arthur T. C. 2,901,096.

Kingsbury, Chadwick B.: *See*—
Carter, Ralph H., Kingsbury, and Lamb. 2,900,783.

Kinnear, John A. C.: *See*—
Mariner, Peter F., and Kinnear. 2,900,706.

Kinsey, John A., Jr. Automatic door or like closure operator. 2,900,791, 8–25–59, Cl. 60—52.

Kirshenbaum, Isidor, F. L. Jonach, and L. D. Etherington, to Esso Research and Engineering Co. Process for the separation of fluids by extractive distillation. 2,901,404, 8–25–59, Cl. 202—39.5.

Kirshenbaum, Isidor, F. L. Jonach, and L. D. Etherington, to Esso Research and Engineering Co. Separation of liquids by altering their relative volatilities. 2,901,406, 8–25–59, Cl. 202—41.

Kiyuna, Paul C. Vacuum type dispenser. 2,901,151, 8–25–59, Cl. 222—456.

Kizaur, Arthur J., to General Electric Co. Tiltable table. 2,901,302, 8–25–59, Cl. 311—6.

Klager, Karl. Tetranitrodiethylamine salts. 2,901,512, 8–25–59, Cl. 260—583.

Klasens, Hendrik A., to North American Philips Co., Inc. Red luminescent material. 2,901,436, 8–25–59, Cl. 252—301.4.

Klein, S., Department Stores, Inc.: *See*—
Moore, Norman. 2,901,307.

Kleinman, Jacob L. Brassieres. 2,900,983, 8–25–59, Cl. 128—482.

Kline, Jack, and M. R. Richmond, to Sanders Associates, Inc. Coherent-pulsed oscillator. 2,901,707, 8–25–59, Cl. 331—173.

Klinkhamer, Jacob F., C. M. Van Der Burgt, and J. M. Cluwen, to North American Philips Co., Inc. Electromechanical amplifier. 2,901,555, 8–25–59, Cl. 179—171.

Kloos, Paul W., to The Holo-Krome Screw Corp. Forging apparatus and stock warming means therefor. 2,901,583, 8–25–59, Cl. 219—10.49.

Knight, Albert J., to International Telephone and Telegraph Corp. Image storage screens and method of making same. 2,901,649, 8–25–59, Cl. 313—68.

Knight Leather Products, Inc.: *See*—
Renz, Emil K., and Miller. 2,901,017.

Knight, Leonard M., and R. Chapman. Steering mechanism for camera dolly. 2,901,265, 8–25–59, Cl. 280—91.

Knight Newspapers, Inc.: *See*—
Mier, Ferdinand A. 2,900,735.

Lisle, Henry L., to F. Horton, d.b.a Frank Horton & Co. Cable-laying plow. 2,900,931, 8–25–59, Cl. 111—5.

Littlefield, John B.: *See*—
Littlefield, Lyman C. 2,901,220.

Littlefield, Lyman C. Golf club head. 2,901,220, 8–25–59, Cl. 273—169.

Livingston, Robert, Jr., to Esso Research and Engineering Co. Method of preparing a catalyst. 2,901,441, 8–25–59, Cl. 252—439.

Lockheed Aircraft Corp.: *See*—
Bowen, Robert L. 2,901,200.
Hall, Charles F. 2,901,199.

Lockwood, Robert B., to Lockwood Grader Corp. Fruit grading machine. 2,900,925, 8–25–59, Cl. 99—510.

Loeb, Leonard, to Loeb Electronics Inc. Electrostatic printing. 2,901,348, 8–25–59, Cl. 96—1.

Loeb Electronics Inc.: *See*—
Loeb, Leonard. 2,901,348.

Loewenstein, Kurt, to Owens-Corning Fiberglas Corp. Glass fiber reinforced polyester resin structure. 2,901,384, 8–25–59, Cl. 154—101.

Lofgren, Ernest J., to Stanley Works. Hinge. 2,901,775, 8–25–59, Cl. 16—169.

Lofgren, Ernest J., to Stanley Works. Hinge. 2,901,776, 8–25–59, Cl. 16—169.

Lofgren, Ernest J., to Stanley Works. Hinge. 2,901,777, 8–25–59, Cl. 16—169.

Lofgren, Ernest J., to Stanley Works. Hinge.

Knight, Norman H., to The Upjohn Co. Isothermal distillation molecular weight apparatus. 2,901,328, 8–25–59, Cl. 23—253.

Koch, Melvin B., to Animal Trap Co. of America. Automatic carton packing machine. 2,900,773, 8–25–59, Cl. 53—62.

Kohl, Gerald C. Self-retracting nozzle unit for subsurface water sprinkler systems. 2,901,183, 8–25–59, Cl. 239—205.

Kohn, James P.: *See*—
Kurata, Fred, and Kohn. 2,900,797.

Kohn, James P.: *See*—
Kurata, Fred, and Kohn. 2,901,326.

Kohner, Melvin, and J. A. Wright, to Supreme Products Corp. Cutters for electric shavers. 2,900,719, 8–25–59, Cl. 30—43.

Kolb, Andrew L., to Kaiser Aluminum & Chemical Corp. Article of manufacture. 2,901,723, 8–25–59, Cl. 339—114.

Kolb, Kenneth E., to Standard Oil Co. Process for preparing glycol esters of benzene dicarboxylic acids. 2,901,505, 8–25–59, Cl. 260—475.

Kollsch, Emil, to Continental Electrolog Corp. Equipment for planning the loading of aircraft. 2,901,171, 8–25–59, Cl. 235—151.

Kolmar Laboratories, Inc.: *See*—
Hampel, Louis A., and Wick. 2,900,664.

Kolpin, Howard H. Firearm case with rubber bumper. 2,901,018, 8–25–59, Cl. 150—52.

Koltvedt, Abel. Brush or the like having removable head. 2,900,654, 8–25–59, Cl. 15—176.

Konyha, Peter P.: *See*—
Sims, Everett E., Konyha, and Petersen. 2,900,970.

Koppers Co., Inc.: *See*—
Burke, Kenneth R. 2,901,424.

Korman, Jerome, to The Upjohn Co. Organic compounds and process. 2,901,508, 8–25–59, Cl. 260—562.

Kotsch, William E., and S. C. Ackerman, to General Electric Co. Flashing incandescent lamp. 2,901,667, 8–25–59, Cl. 315—72.

Kozlow, Jerome F.: *See*—
Hensen, Carl W., and Kozlow. 2,901,631.

Kramer, Jacob: *See*—
Hoppe, William, and Kramer. 2,900,777.

Kramer, Max J., and R. N. Wagner, to Aluminum Co. of America. Power metering system. 2,901,701, 8–25–59, Cl. 324—117.

Kraner, Hobart M., to Bethlehem Steel Co. Low fired silica brick. 2,901,367, 8–25–59, Cl. 106—69.

Kraus, Gerard, to Phillips Petroleum Co. Rubber-resin adhesive solution, process for preparation, and laminated product obtained therewith. 2,901,448, 8–25–59, Cl. 260—5.

Krieble, Vernon K., to The American Sealant Co. Packaged metal fasteners and bonding agent. 2,901,099, 8–25–59, Cl. 206—47.

Krug, Newton J., to The Mosler Safe Co. Night depository. 2,901,165, 8–25–59, Cl. 232—44.

Krukowski, John K., to Champion Corp. Potato harvester and separating means therefor. 2,901,048, 8–25–59, Cl. 171—28.

Krusik, Russell D. Evaporation apparatus. 2,901,586, 8–25–59, Cl. 219—35.

Krynak, Michael S. Warning signal for rail car. 2,900,948, 8–25–59, Cl. 116—60.

Kuch, Carl: *See*—
Nüeslein, Joseph, Kuch, and Bartl. 2,901,311.

Kuchen, Wilhelm: *See*—
Schwarz, Robert, Kuchen, and Weigel. 2,901,449.

Kuehne, Martin E., to Ciba Pharmaceutical Products, Inc. Process for the preparation of lactones in the yohimbane series. 2,901,483, 8–25–59, Cl. 260—286.

Kuhn, Donald H., to General Electric Co. Signal processing arrangement. 2,901,745, 8–25–59, Cl. 343—7.7

Kurata, Fred, and J. P. Kohn. Separation of normally gaseous acidic components and methane. 2,900,797, 8–25–59, Cl. 62—12.

Kurata, Fred, and J. P. Kohn. Separation of hydrogen sulfide and methane. 2,901,326, 8–25–59, Cl. 23—225.

Kwik-Set Expansion Co.: *See*—
Maynard, Samuel J. 2,900,863.

LCN Closers, Inc.: *See*—
Lasier, David R. 2,901,064.

La Bronze & J. Dupont Reunis (Societe Anonyme): *See*—
Martin, Jean P. P. 2,901,289.

Lahr, Sheldon M. Electric light fixture. 2,901,724, 8–25–59, Cl. 339—154.

Laiming, Harry J., to United States of America, Navy. Shaft positioning device. 2,900,828, 8–25–59, Cl. 74—10.29.

L'Air Liquide, Societe Anonyme pour l'Etude et l'Exploitation des Procedes Georges Claude: *See*—
Etienne, Alfred. 2,900,799.

Lamb, Douglas J.: *See*—
Carter, Ralph H., Kingsbury, and Lamb. 2,900,783.

Lamb, Francis X., to Daystrom, Inc. Electrical instrument with scale formed on case. 2,901,704, 8–25–59, Cl. 324—156.

Lamb, Francis X., to Daystrom, Inc. Instrument case. 2,901,705, 8–25–59, Cl. 324—156.

Lamb, William A. S., to United States of America, Atomic Energy Commission. Ion source. 2,901,628, 8–25–59, Cl. 250—49.5.

Lamberton, Robert W. Cleaning device. 2,900,653, 8–25–59, Cl. 15—164.

Landers, Leo A.: *See*—
Schaefer, Frederic C., and Landers. 2,901,464.

Landis & Gyr., A.G.: *See*—
Schmid, Hans, and Hürlimann. 2,901,643.
Winet, Hans. 2,901,212.

Lange, Ernst: *See*—
Hübner, Walter W. G., Lange, and Rindlisbacher. 2,900,668.

Larsen, Carl H., to American Machine & Foundry Co. Self leveling storing and dispensing apparatus. 2,901,306, 8–25–59, Cl. 312—71.

Larson, Clayton E., to White Metal Rolling & Stamping Corp. Combination scaffold-ladders. 2,901,054, 8–25–59, Cl. 182—27.

Lasier, David R., to LCN Closers, Inc. Fusible holding arm for door closers. 2,901,064, 8–25–59, Cl. 189—45.

Lassiter, John M. Safety door lock. 2,901,053, 8–25–59, Cl. 180—82.

Latendorf Conveying Corp.: *See*—
Stadelman, Frank. 2,901,135.

Lathrop-Paulson Co., The: *See*—
Barski, Julius J. 2,901,128.

Lauer, James L., to Sun Oil Co. Internal combustion engine ignition systems. 2,901,672, 8–25–59, Cl. 315—226.

Lautzenhiser, Argyle G., and K. E. Fuiver, to General Motors Corp. Control device. 2,901,241, 8–25–59, Cl. 267—11.

Lawhead, Robert E., Jr.: *See*—
Hamilton, Francis E., Hawkins, Lawhead, and Hughes. 2,901,110.

Lawrence, Joseph D., Jr., to Sperry Rand Corp. Magnetic amplifier drive for coincident current switch. 2,901,735, 8–25–59, Cl. 340—174.

Lazar, Michael, to Burndy Corp. Wire connector. 2,901,528, 8–25–59, Cl. 174—75.

Lear, Earl B., and G. E. Douglas, to Chicago Pneumatic Tool Co. Wheel lock. 2,901,260, 8–25–59, Cl. 280—29.

Leavitt, Julian J.: *See*—
Brody, Frederick, and Leavitt. 2,901,485.

Lebsanft, Kurt, and E. Schmidt, to Wacker-Chemie G.m.b.H. Process for cleaning objects. 2,901,383, 8–25–59, Cl. 134—7.

Ledford, Raymond F.: *See*—
Schmidt, Henry, Jr., and Ledford. 2,901,115.

Leeds and Northrup Co.: *See*—
McAdam, Will, and Moore. 2,901,563.

Leftwich, Robert F., to Sayre & Fisher Co. Sintering apparatus. 2,901,236, 8–25–59, Cl. 266—21.

Lehman, Harry W., to Collins Radio Co. Antibacklash differential mechanism. 2,900,846, 8–25–59, Cl. 74—714.

Lehman, Roland J., to E. I. du Pont de Nemours and Co. Web coating process and shielding apparatus to prevent beaded edges. 2,901,376, 8–25–59, Cl. 117—44.

Lehmann, Heinz: *See*—
Von Semel, Georg, and Lehmann. 2,901,340.

Leighton, Herndon W., to Allen B. Du Mont Laboratories, Inc. Apparatus for uniformly heating non-circular outlines. 2,900,762, 8–25–59, Cl. 49—2.

Leitz, Ernst, G.m.b.H.: *See*—
Wiskott, Detmar, Bartz, and Weissenberg. 2,901,627.

Lenert, Joseph J.: *See*—
Hutchens, Morris L., Lenert, and Henderson. 2,900,849.

Lesk, Israel A., to General Electric Co. Semiconductor device and apparatus. 2,901,554, 8–25–59, Cl. 179—171.

Levand, Victor A., to General Electric Co. Electric lamp gas filling and sealing method and apparatus. 2,900,771, 8–25–59, Cl. 53—7.

Leventhal, Howard L.: *See*—
Underwood, William F., and Leventhal. 2,901,358.

Levine, Beth. Blank for a shoe. 2,900,743, 8–25–59, Cl. 36—11.

Lewis, Sheldon H., L. W. Van Ness, and A. Lukas, to Armour and Co. Preparation of pharmaceutical liver products. 2,901,396, 8–25–59, Cl. 167—74.6.

Lewis, Sidney L. Screw driver fuse tester. 2,901,694, 8–25–59, Cl. 324—53.

Lewis, Ted W.: *See*—
Newell, W. J., and Lewis. 2,901,368.

Lewis, William H., to Cuterete Mfg. Corp. Mobile pavement breaker having leaf spring impact tool accelerating means. 2,901,232, 8–25–59, Cl. 262—18.

Leyton, Eric M., to Radio Corp. of America. Amplitude-modulated radio transmitter combining two constant amplitude phase modulated signals. 2,901,599, 8–25–59, Cl. 250—17.

Libbey-Owens-Ford Glass Co.: *See*—
Mazur, Ferdinand J., and Barkley. 2,900,872.

Liberman, David, to Chimie et Atomistique. Certain 2-substituted isonicotinic thioamides. 2,901,488, 8–25–59, Cl. 260—294.8.

Libman, Max L.: *See*—
Rabinow, Jacob, and Kamm. 2,901,089.

Liebmann, Hans W., to Aktiebolaget Johanssons Press- & Hejarverktyg. Hydraulically operated pre-selector feeding device. 2,900,964, 8–25–59, Cl. 121—45.

Lignosol Chemicals Ltd.: *See*—
Russell, John K., and Byrd. 2,901,429.

Lincoln, Fay S. Pin fastener. 2,900,692, 8–25–59, Cl. 24—161.

Lincoln, Fay S. Pin ticket. 2,900,693, 8–25–59, Cl. 24—161.

Lindberg, Ralph: *See*—
Brault, Andre R., and Lindberg. 2,900,740.

Lindsay, Alexander R., to The Budd Co. Automobile chassis or underframe structure. 2,901,266, 8–25–59, Cl. 280—106.

Lindstrom, Evert P. Spectacle attachment. 2,900,639, 8–25–59, Cl. 2—13.

Linhorst, Erwin F., to United States Rubber Co. Method and apparatus for molding articles. 2,900,663, 8–25–59, Cl. 18—5.

Link-Belt Co.: *See*—
Newell, Elwin C. 2,901,113.

Linn, William E., to California Research Corp. Sidewall sampler bullet. 2,901,220, 8–25–59, Cl. 255—1.4.

Linsday, Elton A., and D. R. Phillips, to General Electric Co. Reflector mercury lamp. 2,901,648, 8–25–59, Cl. 313—25.

Linsday, Elton A., and Q. D. Dobrus, to General Electric Co. Reflecting electric lamp. 2,901,655, 8–25–59, Cl. 313—113.

Mendenhall, Charles A., to Bendix Aviation Corp. Engine starter gearing. 2,900,827, 8–25–59, Cl. 74—7.

Morris, John, Jr., to Chemical Appliances, Inc. Swivel joints in connectors for steam lines of railway cars. 2,901,273,

Kautenberg, W. E., Co.: *See*—
Kautenberg, William E. 2,900,652.

Knight Newspapers, Inc.: *See*—
Mier, Ferdinand A. 2,900,735.

Lisle, Henry L., to F. Horton, d.b.a Frank Horton & Co. Cable-laying plow. 2,900,931, 8–25–59, Cl. 111—5.

Littlefield, John B.: *See*—
Spokes, Ray E. and Littlefield. 2,901,456.

Litton Industries, Inc.: *See*—
Steinman, Leon. 2,901,640.

Lockheed Aircraft Corp.: *See*—
Tjossem, Willard W. 2,900,874.

Lomazzo, Edmund J., to The Bullard Co. Mechanism for performing machining operations. 2,900,860, 8–25–59, Cl. 82—24.

Lone Star Boat Co.: *See*—
Whalen, Frank B. 2,901,138.

Long, Bernard, to Compagnies Reunies des Glaces & Verres Speciaux du Nord de la France. Manufacture of glass. 2,900,764, 8–25–59, Cl. 49—54.

Longenecker, John S. Method of making a one-piece display device. 2,900,667, 8–25–59, Cl. 18—47.5.

Loofbourrow, Alan G., to Chrysler Corp. Wheel mounted vibration damper. 2,901,290, 8–25–59, Cl. 301—5.

López-Henriquez, Miguel. Brassiere construction. 2,900,982, 8–25–59, Cl. 128—470.

Lorentsen Hardware Mf'g. Corp.: *See*—
Anderle, Joseph A. 2,901,035.

Lortz, Russell W., to Phillips Petroleum Co. Check valve. 2,900,998, 8–25–59, Cl. 137—515.3.

Losco, Guiseppe: *See*—
Fusco, Raffaello Losco, and Perini. 2,901,481.

Lossef, David. Interchangeable tube cap circuit. 2,901,690, 8–25–59, Cl. 324—22.

Loveday, Paul E., to Union Carbide Corp. Method and apparatus for maintaining efficiency of vacuum insulation. 2,900,800, 8–25–59, Cl. 62—45.

Löwenborg, John G. F.: *See*—
Ekström, Gösta I., and Löwenborg. 2,900,959.

Lox, Walter E., to Forman, Ford & Co. Rubber-reactive pigment and drying oil protective coating compositions. 2,901,447, 8–25–59, Cl. 260—3.

Loy, Alvin L., Sr.: *See*—
Warrick, Leon H., and Loy. 2,901,180.

Lubin, Samuel, to Sprague Electric Co. Remote monitoring amplification. 2,901,634 8–25–59, Cl. 250—253.

Ludbrook, Leslie C., to The British Thomson-Houston Co. Ltd. Remote angular position control system. 2,901,681, 8–25–59, Cl. 318—30.

Ludwig, Leon R. and R. C. Bergvall, to United States of America, Atomic Energy Commission. Calutron. 2,901,618, 8–25–59, Cl. 250—41.9.

Lufkin Rule Co., The: *See*—
Zelnick, Charles. 2,900,733.

Lukas, Alex: *See*—
Lewis, Sheldon H., Van Ness, and Lukas. 2,901,396.

Luna, Kenneth E.: *See*—
Patterson, Milton E., Luna, and Ishler. 2,901,375.

Lyon, Floyd A.: *See*—
Aronson, Theodore F., and Lyon. 2,901,721.

Lyon, George A. Wheel cover. 2,901,291, 8–25–59, Cl. 301—37.

MacDougall, Duncan P., to United States of America, Navy. Projectile cavity charges. 2,900,905, 8–25–59, Cl. 102—24.

MacFarland, Charles H. to The Scott & Fetzer Co. Annular knife sharpener. 2,900,768, 8–25–59, Cl. 51—197.

MacKenzie, Gordon F., and K. L. Turbin, to The Dow Chemical Co. Manufacturing process for piperazine. 2,901,482, 8–25–59, Cl. 260—268.

Mackintosh, Donald D. R. Variable throw radial pump. 2,900,839, 8–25–59, Cl. 74—571.

MacNaught, Donald F., and R. A. Jacobson, to Bethlehem Steel Co. Dogging means. 2,901,279, 8–25–59, Cl. 292—256.5.

Maddock, Alfred G., and F. Smith, to United States of America, Atomic Energy Commission. Separation of plutonium from water insoluble fluorides derived from nitrate solutions of plutonium, uranium and fission products. 2,901,313, 8–25–59, Cl. 23—14.5.

Magee, Gertrude M. Flat iron rest. 2,900,748, 8–25–59, Cl. 38—107.

Magee-Hale Park-O-Meter Co.: *See*—
Hamilton, Robert W. 2,901,078.

Magnavox Co., The: *See*—
Orner, Allan. 2,901,247.

Magner, John M. Monsanto Chemical Co. Pesticides. 2,901,393, 8–25–59, Cl. 167—30.

Maguire, J. J.: *See*—
Friedman, Herbert. 2,901,629.

Maguire, J. J., Co.: *See*—
Friedman, Herbert. 2,901,629.

Maier, Dale E., to Borg-Warner Corp. Power driven wrench with reverse rotation limiting means. 2,900,856, 8–25–59, Cl. 81—54.

Mailtte, Robert. Seats with retractable leg and foot rest. 2,901,025, 8–25–59, Cl. 155—111.

Mann, Leonard J.: *See*—
Wurtz, Clifford H. and Mann. 2,900,806.

Manse, Thomas J.: *See*—
Baccari, Ernest, and Manse. 2,901,585.

Manufacture de Machines du Haut-Rhin: *See*—
Wust, Hans. 2,900,873.

Marburg, Edgar, to United States Steel Corp. Sectional hot top. 2,900,685, 8–25–59, Cl. 22—147.

Marchetti, Augusto, to Gebrueder Buehler. Carrying-frame conveyor for tiered driers. 2,901,090, 8–25–59, Cl. 198—84.

Marconi Instruments Ltd.: *See*—
Garthwaite, Ernest. 2,901,710.

Marcus, William. Apparatus for molding a hollow container with an integral handle. 2,900,666, 8–25–59, Cl. 18—42.

Mariner, Peter F., and J. A. C. Kinnear, to Elliott Brothers (London) Ltd. Lens, mirror or like elements for high frequency radio aerials. 2,900,706, 8–25–59, Cl. 20—155.5.

Marsden, John F., Jr., to F. T. and R. E. Roberts. Method of making hose. 2,901,024, 8–25–59, Cl. 154—8.

Marsh, De Loss L., and S. C. Butler. Underwater spear gun. 2,900,972, 8–25–59, Cl. 124—13.

Marsh, De Loss L. Underwater breathing apparatus. 2,900,977, 8–25–59, Cl. 128—142.

Marti, Paul O., Jr., to Standard Oil Co. Anti-caking agent for ammonium nitrate. 2,901,317, 8–25–59, Cl. 23—103.

Martin, George M. Automatic sheet stacker apparatus. 2,901,250, 8–25–59, Cl. 271—68.

Martin, Homer Z.: *See*—
Patterson, Albert C., and Martin. 2,901,519.

Martin, Jean P. P., to La Brosse & J. Depont Reunis (Societe Anonyme). Automatic machine for the manufacture of brushes. 2,901,289, 8–25–59, Cl. 300—9.

Martins, Thomas, to Rhymney Engineering Co. Ltd. Load hoisting and lowering skips. 2,901,281, 8–25–59, Cl. 294—69.

Marvalaud, Inc.: *See*—
Pond, Robert B. 2,900,708.

Matter, Gustave O. Measuring dispenser. 2,901,150, 8–25–59, Cl. 222—370.

Matthews, Clifford C.: *See*—
Barkow, William H., and Matthews. 2,901,665.
Barkow, William H. 2,901,650.

Matthias, Bernd T., to Bell Telephone Laboratories, Inc. Ferroelectric devices. 2,901,679, 8–25–59, Cl. 317—262.

Matzinger, Charles P., to The Mountain Copper Co., Ltd. Copper pentachlorophenate solution. 2,901,395, 8–25–59, Cl. 167—42.

Maurer, Albrecht, and E. Giese, to Ringspann Albrecht Maurer K.G. Over-running clutch couplings or the like. 2,901,072, 8–25–59, Cl. 192—45.1.

Maxcy, William J.: *See*—
Chiddix, Max E., Marcy, and Sundberg. 2,901,430.

Maynard, Samuel J., to Kwik-Set Expansion Co. Expansion bolt and wedge with a cylindrical holding section. 2,900,863, 8–25–59, Cl. 85—2.

Mayon, Leon, to W & M Corp. Fastening device. 2,900,865. 8–25–59, Cl. 85—36.

Maytag Co., The: *See*—
Smith, Thomas R. 2,900,812.
Smith, Thomas R. 2,901,294.

Mazur, Ferdinand J., and D. W. Barkley, to Libbey-Owens-Ford Glass Co. Rear view mirror. 2,900,872, 8–25–59, Cl. 88—77.

McAdam, Will, and J. H. Moore, to Leeds and Northrup Co. Negative feedback amplifiers. 2,901,563, 8–25–59, Cl. 179—171.

McClenahan, Douglas S. Recoil-action machine gun. 2,900,877, 8–25–59, Cl. 89—173.

McCloud, George R., to McGraw-Edison Co. Contact clip for fuse cutout. 2,901,576, 8–25–59, Cl. 200—133.

McConologue, Edward J. Fire escape ladder. 2,901,056, 8–25–59, Cl. 182—85.

McCoy, Robert E., and M. V. Kalfaian. Cross-talk neutralisation in color pick-up tube. 2,901,531, 8–25–59, Cl. 178—5.4.

McCoy, Thomas A., to Carando Machine Works. Elevating and centering device for cylindrical bodies. 2,901,085. 8–25–59, Cl. 198—29.

McCracken, Edward A.: *See*—
Newchurch, Edwin J., and McCracken. 2,901,413.

McCracken, James W. Packing crate for sheets or the like. 2,901,102, 8–25–59, Cl. 206—60.

McDowell Mfg. Co.: *See*—
Rickard, Clyde E. 2,901,269.

McGrath, Earle J., to Food Machinery and Chemical Corp. Article control mechanism for conveyors. 2,901,083, 8–25–59, Cl. 198—21.

McGraw-Edison Co.: *See*—
Bronikowski, Raymond J. 2,901,684.
McCloud, George R. 2,901,576.

McGurty, James A., and E. S. Funston, to United States of America, Atomic Energy Commission. Nickel-chromium-germanium alloys for stainless steel brazing. 2,901,347, 8–25–59, Cl. 75—171.

McIntyre, Glenn H., Jr.: *See*—
Sprouse, Norman T., and McIntyre. 2,901,322.

McIver, Alice C. Teaching apparatus. 2,900,741, 8–25–59, Cl. 35—35.

McKechnie, Ian C., to Elox Corp. of Michigan. Method and apparatus for automatic electric discharge machining. 2,901,588, 8–25–59, Cl. 219—69.

McNally, Harold E., ½ to C. H. Nelson. Vehicle light. 2,901,593, 8–25–59, Cl. 240—7.1.

McPhee, Walter T.: *See*—
Smith, Arnold R., and McPhee. 2,901,114.

Meade, Harold L.: *See*—
Barbeau, Raymond A., and Meade. 2,901,041.

Meadows, Lee A. High speed mechanical R-F waveguide switch. 2,901,708, 8–25–59, Cl. 333—7.

Meaker, Archibald G., 40% to S. B. Meaker. Trailer construction. 2,901,282, 8–25–59, Cl. 296—23.

Meaker, Stanley B.: *See*—
Meaker, Archibald G. 2,901,282.

Mears, Fred W., Heel Co., Inc.: *See*—
Dalton, Norris D., and Smith. 2,901,010.

Megard, Henry, to Sautier & Jaeger. Television set adapted to receive two definitions. 2,901,600, 8–25–59, Cl. 250—20.

Meinel, Karl, to Wacker-Chemie G.m.b.H. Process for manufacturing nitrogen-containing polymerizates insoluble in water. 2,901,468, 8–25–59, Cl. 260—85.5.

Meinke, Richard: *See*—
Bell, Joseph L., and Meinke. 2,901,596.

Meisel, Frederick W., Jr., to Allied Asphalt & Mineral Corp Mold release agent. 2,901,361, 8–25–59, Cl. 106—38.23.

Melstrom, Donald S.: *See*—
Anderson, John, and Melstrom. 2,901,462.

Norris, Edward O. Spraying apparatus. 2,901,177, 8–25–59,

Pan American Petroleum Corp.: *See*—

Mendenhall, Charles A., to Bendix Aviation Corp. Engine starter gearing. 2,900,827, 8–25–59, Cl. 74—7.

Mendlea, Walter J., to The Singer Mfg. Co. Shirring presser foot. 2,900,942, 8–25–59, Cl. 112—235.

Merck & Co., Inc.: *See*—
Chemerda, John M. 2,901,493.

Mergenthaler Linotype Co.: *See*—
Coleman, Eugene F. 2,900,884.

Merrifield, Dudley B., to Monsanto Chemical Co. Rubber compositions containing nitroso aliphatic arylenediamines. 2,901,459, 8–25–59, Cl. 260—45.9.

Messinger, William: *See*—
Conway, Robert D., and Messinger. 2,901,189.

Metal Hydrides Inc.: *See*—
Bragdon, Robert W. 2,901,333.

Metallgesellschaft Aktiengesellschaft: *See*—
Herbert, Wilhelm, Bratzler, Dorschner, Eisenlohr, and Gross. 2,901,423.

Meyer, Hans. Micrometer indicator. 2,900,731, 8–25–59, Cl. 33—166.

Meyer, Kenneth H.: *See*—
Chessman, Samuel C., and Meyer. 2,901,677.

Meyers, Raymond I.: *See*—
Bennett, Alfred, and Meyers. 2,901,683.

Micro Machine Works, Inc.: *See*—
Smith, Paul C. 2,901,719.

Miehle-Goss-Dexter, Inc.: *See*—
Chase, Corson W. 2,900,903.

Mier, Ferdinand A., to Knight Newspapers, Inc. Machine for pre-registering stereotype color mats. 2,900,735, 8–25–59, Cl. 33—184.5.

Migneault, Romuald and F. W. Sashless window clamping means. 2,900,679, 8–25–59, Cl. 20—52.

Miksak, James J.: *See*—
Yohner, William B., and Miksak. 2,901,037.

Miles, Thomas O., Jr. Wire hangers for concrete members. 2,900,684, 8–25–59, Cl. 20—94.

Miller, Arthur E.: *See*—
Frankenfield, Bruce E., and Miller. 2,900,852.

Miller, Bonnie C.: *See*—
Baxter, Thomas R., and Miller. 2,900,779.

Miller, George: *See*—
Renz, Emil K., and Miller. 2,901,017.

Miller, Harry C. Combination lock. 2,900,813, 8–25–59, Cl. 70—333.

Milnes, Aubrey H., to The Steel Improvement & Forge Co. Protection of titanium. 2,900,715, 8–25–59, Cl. 29—528.

Miloche, Herman A., to Bell Telephone Laboratories, Inc. Switching system network. 2,901,547, 8–25–59, Cl. 179—27.54.

Milos, John: *See*—
Sisto, Joseph A., and Milos. 2,901,234.

Minerec Corp.: *See*—
Fischer, Arthur H. 2,901,107.

Minister of Supply, in Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland, The: *See*—
Barnes, Jeffery W. 2,900,824.
Philpot, Peter de B. 2,900,789.

Minneapolis-Honeywell Regulator Co.: *See*—
Raymond, Hugh A. 2,900,822.
White, Kenneth H. 2,900,823.

Mintz, Henry A. Stamping machines. 2,900,751, 8–25–59, Cl. 41—7.

Mitchell, Robert H.: *See*—
Shannon, Richard F., and Mitchell. 2,901,379.

Mittag, Fritz H., to International Standard Electric Corp. Arrangement to produce electrical signals through affecting a magnetic circuit. 2,901,676, 8–25–59, Cl. 317—150.

Mobay Chemical Co.: *See*—
Delfs, Detlef, and Münz. 2,901,497.

Mocas, Verlin A., to The Richardson Co. Battery cell cover. 2,901,527, 8–25–59, Cl. 136—168.

Mock, Leon R.: *See*—
Welsh, Herbert F., Schreiner, and Mock. 2,901,734.

Modine, Arthur B., to Modine Mfg. Co. Combination air conditioner-convector. 2,901,226, 8–25–59, Cl. 257—300.

Modine Mfg. Co.: *See*—
Modine, Arthur B. 2,901,226.

Mollfors, Hans G., to Ingeniorsfirman Magnetic Ab. Arrangement for automatic and continuous measuring of the noise factor of an electric device. 2,901,696, 8–25–59, Cl. 324—57.

Molotsky, Hyman M., and S. B. Richter, to Velsicol Chemical Corp. Hexachlorobicyclo-diaminophenyl ethers. 2,901,509, 8–25–59, Cl. 260—571.

Molotsky, Hyman M., and S. B. Richter, to Velsicol Chemical Corp. Hexachloro-5-phenyldiamine bicyclo-(2.2.1)-2-heptene. 2,901,510, 8–25–59, Cl. 260—578.

Monsanto Chemical Co.: *See*—
Magner, John M. 2,901,393.
Merrifield, Dudley B. 2,901,459.
Thomas, Fritts W. 2,901,400.

Montecatini-Societa Generale per l'Industria Mineraria e Chimica: *See*—
Fusco, Raffaello, Losco, and Perini. 2,901,481.

Moore, David W., and W. E. Blair, to Servomechanisms, Inc. Ice detectors. 2,901,741, 8–25–59, Cl. 340—234.

Moore, John H.: *See*—
McAdam, Will, and Moore. 2,901,563.

Moore, Norman, to S. Klein Department Stores, Inc. Display stand for wearing apparel. 2,901,307, 8–25–59, Cl. 312—140.3.

Morgan, Charles A. Ever safe pin. 2,900,601, 8–25–59, Cl. 24—159.

Morgan, Russell H. System for the automatic adaptation of television camera apparatus to varying light intensity levels. 2,901,539, 8–25–59, Cl. 178—7.2.

Morin, Louis H. Automatic lock sliders. 2,900,695, 8–25–59, Cl. 24—205.14.

Morris, John, Jr., to Chemical Appliances, Inc. Swivel joints in connectors for steam lines of railway cars. 2,901,273, 8–25–59, Cl. 285—281.

Morrison, Willard L., to Constock Liquid Methane Corp. Method of liquefying natural gas. 2,900,796, 8–25–59, Cl. 62—11.

Morse, Richard A.: *See*—
Campion, Frank E., Glass, and Morse. 2,901,043.

Morton, Henry C., to The Russell Mfg. Co. Friction facing. 2,901,388, 8–25–59, Cl. 154—52.

Morway, Arnold J., C. W. Seelbach, and D. L. Cottle, to Esso Research and Engineering Co. Copolymers of propylene and piperylene as grease thickeners. 2,901,432, 8–25–59, Cl. 252—59.

Moseley, Donald: *See*—
Travis, Ralph L. 2,900,850.

Mosler Safe Co., The: *See*—
Krug, Newton J. 2,901,165.

Most, David, to Acr Electronics Corp. Controlled flash lamp power supply. 2,901,671, 8–25–59, Cl. 315—219.

Mostovych, Nicholas, and A. Cybriwsky, to Reynolds Metals Co. Apparatus for anodizing aluminum surfaces. 2,901,412, 8–25–59, Cl. 204—211.

Motorola, Inc.: *See*—
Richardson, Roy A., and Cohn. 2,901,601.

Mott, Carl W., to The Kendall Co. Mechanism for stripping an elastic band from an end portion of a band-receiving tube. 2,901,310, 8–25–59, Cl. 29—235.

Motz, Joseph W., and J. H. Reaves. Frequency measuring instrument. 2,901,699, 8–25–59, Cl. 324—78.

Mount Sinai Hospital Research Foundation, Inc.: *See*—
Perlman, Ely. 2,901,398.

Mountain Copper Co., Ltd., The: *See*—
Matzinger, Charles P. 2,901,395.

Mraz, John B. Rim clamping, tire-bead-breaking tool. 2,901,029, 8–25–59, Cl. 157—1.17.

Mudge, Parker B. Cross-wind component computer. 2,901,167, 8–25–59, Cl. 235—61.

Mueller, Margery C.: *See*—
Mueller, Richard B. and M. C. 2,901,100.

Mueller, Richard B. and M. C. Lipstick applicator and package. 2,901,100, 8–25–59, Cl. 206—56.

Mullineaux, Richard D.: *See*—
Raley, John H., and Mullineaux. 2,901,520.

Münz, Ferdinand: *See*—
Delfs, Detlef, and Münz. 2,901,497.

Murray, Michael F.: *See*—
Dickson, Clifford C. 2,901,027.

Myers, Elman B., to Scarborough Associates, Inc. Reflecting electric lamp. 2,901,654, 8–25–59, Cl. 313—113.

NSU Werke A.G.: *See*—
Roder, Albert. 2,900,838.

Naftulin, Henry, and R. Egge, to Michael Reese Research Foundation, Inc. Combining tube and filter therefor. 2,901,112, 8–25–59, Cl. 210—94.

National Aluminate Corp.: *See*—
Burke, John T., Jr. 2,901,439.
Kent, Eugene A., and Sacco. 2,901,370.

National Lead Co.: *See*—
Beecham, Harry H. 2,901,450.

Nelson, Cecil H.: *See*—
McNally, Harold E. 2,901,593.

Nerwin, Hubert, to United States of America, Army. Photographic camera. 2,900,887, 8–25–59, Cl. 95—44.

Neuhart, David S. Liner for cargo spacer. 2,900,926, 8–25–59, Cl. 105—423.

Neuhauser, Robert G., to Radio Corp. of America. Television pickup tube circuit arrangements. 2,901,661, 8–25–59, Cl. 315—11.

Nevius, Searle G., to Telecomputing Corp. Electronic digitizing device. 2,901,663, 8–25–59, Cl. 315—12.

Newchurch, Edwin J., and E. A. McCracken, to Esso Research and Engineering Co. Combination deasphalting, coking, and catalytic cracking process. 2,901,413, 8–25–59, Cl. 208—55.

Newell, Elwin C., to Link-Belt Co. Apparatus for removing solids from a flowing stream of liquid. 2,901,113, 8–25–59, Cl. 210—158.

Newell, W. J., and T. W. Lewis, to Waterproofing Materials, Inc. Cementitious structural material. 2,901,368, 8–25–59, Cl. 106—95.

New York Air Brake Co., The: *See*—
Anderson, Gene W., and Babcock. 2,900,919.

Nicholson, Gordon E., to Collins Radio Co. Shaft positioning clutch device. 2,901,067, 8–25–59, Cl. 192—17.

Nier, Alfred O. C., to United States of America, Atomic Energy Commission. Mass spectrometry. 2,901,624, 8–25–59, Cl. 250—41.9.

Nilsson, Bengt E., to Aktiebolaget Electrolux. Electrical appliance having detachable combined switch and connector block. 2,901,564, 8–25–59, Cl. 200—51.

Nissen, Warren I., to The Gillette Co. Safety razor with spider stem lock ring. 2,900,721, 8–25–59, Cl. 30—60.5.

Noakes, Thomas E., to American Radiator & Standard Sanitary Corp. Dual switch actuating device. 2,901,578, 8–25–59, Cl. 200—140.

Noble, Lowell A., and R. H. Chamberlin, to Eitel-McCullough, Inc. Electron tube socket. 2,901,678, 8–25–59, Cl. 317—257.

Nolden, William F., and E. W. Seeger, to Cutler-Hammer, Inc. Solenoid construction. 2,901,270, 8–25–59, Cl. 287—100.

Nomar Arms, Inc.: *See*—
Nomar, Louis N. 2,900,878.

Nomar, Louis N., to Nomar Arms, Inc. Toggle breech block locking means for a gas piston operated gun. 2,900,878, 8–25–59, Cl. 89—180.

Nordstrom, Gordon J., and J. W. Smith, to Collins Radio Co. Discriminator circuit. 2,901,604, 8–25–59, Cl. 250—27.

Phillips Petroleum Co.: *See*—
Adams, Loyd W., and Cottle. 2,901,403.

Quinn, Edward, to United Shoe Machinery Corp. Methods

Norris, Edward O. Spraying apparatus. 2,901,177, 8–25–59, Cl. 239—15.
Norris, Edward O. Spraying apparatus. 2,901,178, 8–25–59, Cl. 239—15.
Norsk Hydro-Elektrisk Kvaelstofaktieselskab: *See*—
Henriksen, Arthur L. 2,900,774.
North American Philips Co., Inc.: *See*—
Bourgonjon, Louis R., and van Sandwijk. 2,901,598.
Braak, Dirk J. 2,901,543.
Coeterier, Frederik. 2,901,656.
Firmenich, Klaus. 2,901,664.
Greve, Reinhard C. 2,900,840.
Jonkers, Cornelius O. 2,900,798.
Klasens, Hendrik A. 2,901,436.
Klinkhamer, Jacob F., Van Der Burgt, and Cluwen. 2,901,555.
Pero, Johannes G., Wijnberg, and Honing. 2,901,658.
Robinson, Preston. 2,901,278.
Starre, Gerrit, and Bakker. 2,900,720.
Wieberdink, Ate. 2,901,560.
North American Rayon Corp.: *See*—
Carter, Ralph H., Kingsbury, and Lamb. 2,900,783.
North Electric Co.: *See*—
Breese, Lemuel R. 2,901,728.
Northcott, Elliott, to International Minerals & Chemical Corp. Submerged heating apparatus. 2,900,975, 8–25–59, Cl. 126—360.
Northrop Corp.: *See*—
Taylor, Allan J., and Toth. 2,901,201.
Norton, Albert, and H. O. Bradshaw, to Tube Products Ltd. Manufacture of seam-welded tubing. 2,900,879, 8–25–59, Cl. 90—24.
Norton Co.: *See*—
Hill, Olva E. 2,900,974.
Notat Tire Co.: *See*—
Starr, Charles S., and Barnes. 2,901,020.
Noyes, Robert D.: *See*—
Keutgen, William A., Davall, Daniels, and Noyes. 2,901,337.
Nozick, Seymour. Electronic storage device. 2,901,662, 8–25–59, Cl. 315—12.
Nussbaum, Alexander L., to Schering Corp. 11-oxygenated 9a - 21 - difluoro - 1,4 pregnadiene steroidal compositions. 2,901,397, 8–25–59, Cl. 167—77.
Nüsslein, Joseph, C. Kuch, and H. Bartl, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Bruning. Process for the printing of fibrous textile material made of polyester fibres. 2,901,311, 8–25–59, Cl. 8—62.
Nutter, Benjamin P., to Johnston Testers, Inc. Hydraulic tester and shut-in pressure tool. 2,901,001, 8–25–59, Cl. 137—599.2.
Nystrand, Ernst D., to Paper Converting Machine Co., Inc. Web winding mandrel. 2,901,192, 8–25–59, Cl. 242—75.5.
OPTOmechanisms, Inc.: *See*—
Brault, Andre R., and Lindberg. 2,900,740.
Oakley, Charles B., to Radio Corp. of America. D.-C. stabilized amplifiers. 2,901,534, 8–25–59, Cl. 178—5.4.
Odermann, Charles R., to The Singer Mfg. Co. Pattern cam-disk retaining means for zigzag sewing machines. 2,901,275, 8–25–59, Cl. 287—53.
Oerlikon Engineering Co.: *See*—
Storsand, Bjarne. 2,901,717.
Oerly, Fred O., ½ to H. R. Stretz. Picture window construction. 2,900,680, 8–25–59, Cl. 20—56.1.
Offen, Bernard. Apparatus for drying printed webs. 2,900,738, 8–25–59, Cl. 34—60.
Ogrinc, Herman F.: *See*—
Forker, Gordon M., and Ogrinc. 2,901,387.
Ohl, Russell S., to Bell Telephone Laboratories, Inc. Method of treating silicon surfaces. 2,900,702, 8–25–59, Cl. 29—25.3.
O'Kelley, O'Dell. Apparatus for driving joint nails. 2,900,638, 8–25–59, Cl. 1—149.
Olin Mathieson Chemical Corp.: *See*—
Fried, Josef, and Thomas. 2,901,494.
Haller, John F. 2,901,320.
Herz, Josef E., and Fried. 2,901,492.
Robson, Homer L. 2,901,435.
Thomas, Robert M. 2,901,513.
Olivetti Corp. of America: *See*—
Canepa, Michele. 2,901,540.
Olsen, Charles R., to United States of America, Navy. Self-destruction device. 2,900,906, 8–25–59, Cl. 102—49.
Olvey, Charles L., to The Wood Shovel and Tool Co. Collapsible cart. 2,901,261, 8–25–59, Cl. 280—36.
Orlik, Roman. Fish bait. 2,900,754, 8–25–59, Cl. 43—44.2.
Orner, Allan, to The Magnavox Co. Card processing apparatus. 2,901,247, 8–25–59, Cl. 271—5.
Osrow, Harold: *See*—
Osrow, Leonard and H. 2,901,213.
Osrow, Leonard and H. Valved flow control coupling. 2,901,213, 8–25–59, Cl. 251—352.
Ostline, John E., and W. J. Phillips, to General Telephone Laboratories, Inc. Director hunter and selector. 2,901,545, 8–25–59, Cl. 179—18.
O'Sullivan, Patrick J., to Colgate-Palmolive Co. Folded pad and method of manufacture thereof. 2,900,655, 8–25–59, Cl. 15—209.
Otis Engineering Corp.: *See*—
Bostock, James H. 2,900,997.
Schramm, Harry B. 2,901,045.
Owens-Corning Fiberglas Corp.: *See*—
Frickert, Philip J. 2,900,700.
Shannon, Richard F., and Mitchell. 2,901,379.
Package Machinery Co.: *See*—
Hoppe, William, and Kramer. 2,900,777.
Page, Ancel S. Adjustable leaf spring assembly for vehicle body mounting. 2,901,284, 8–25–59, Cl. 290—35.
Pan American Petroleum Corp.: *See*—
Campion, Frank E., Glass, and Morse. 2,901,043.
Paper Converting Machine Co., Inc.: *See*—
Nystrand, Ernst D. 2,901,192.
Pappas, George F., to Esso Research and Engineering Co. Improved quench oil for high temperature coking of residua. 2,901,418, 8–25–59, Cl. 208—102.
Pappas, Spilios A. Sawhorse. 2,901,057, 8–25–59, Cl. 182—155.
Parker, John M.: *See*—
Wasson, Burton K., and Parker. 2,901,501.
Parker, Sam E. Variable transformer. 2,901,715, 8–25–59, Cl. 336—87.
Parkersburg Rig & Reel Co., The: *See*—
Spelden, Edgar F. 2,900,841.
Pasowicz, Anthony F.: *See*—
Bailey, Nathaniel A., Pasowicz, and Reynolds. 2,901,437.
Passow, Edward B., to Zenith Radio Corp. Eyeglass hearing aid. 2,901,551, 8–25–59, Cl. 179—107.
Patchogue-Plymouth Corp.: *See*—
Schwartz, Harold A. 2,901,005.
Patent-und Versuchs-Anstalt: *See*—
Harder, Karl M. 2,901,105.
Patterson, Albert C., and H. Z. Martin, to Esso Research and Engineering Co. Molecular sieve separation process. 2,901,519, 8–25–59, Cl. 260—676.
Patterson, Hubert H., and G. H. Webber, to United States of America, Atomic Energy Commission. Detector for modulated and unmodulated signals. 2,901,613, 8–25–59, Cl. 250—81.
Patterson, Milton E., K. E. Luna, and W. E. Ishler, to General Electric Co. Fluorescent lamp coating process. 2,901,375, 8–25–59, Cl. 117—37.
Paulsen, Robert C., and A. H. Dickinson, to International Business Machines Corp. Polystable trigger circuit. 2,901,608, 8–25–59, Cl. 250—27.
Pavlick, Michael A., to Esso Research and Engineering Co. Control of isobutylene polymerization reaction rate. 2,901,471, 8–25–59, Cl. 260—94.8.
Pearce, Albert F., and D. J. Wootton, to Electric & Musical Industries Ltd. Electron discharge devices employing cavity resonators. 2,901,660, 8–25–59, Cl. 315—5.32.
Pearson, Harry A. Rope fastener. 2,900,689, 8–25–59, Cl. 24—128.
Pearson, Thomas F.: *See*—
Huddle, Roy A. U., Pearson, and de Lippa. 2,901,346.
Pease, George W., Jr. Rotary drill bit. 2,901,222, 8–25–59, Cl. 255—61.
Pecquet, Tesson & Cie: *See*—
Tesson, Pierre. 2,901,591.
Peeps, Donald J., to The De Vilbiss Co. Automatic coating apparatus. 2,900,950, 8–25–59, Cl. 118—2.
Peery, Norman E., to Shell Development Co. Hydrodesulfurization of hydrocarbon oils. 2,901,422, 8–25–59, Cl. 208—213.
Pendleton Tool Industries, Inc.: *See*—
Van Hoose, William E. 2,900,855.
Pennsalt Chemicals Corp.: *See*—
Spring, Samuel. 2,901,433.
Péras, Lucien, to Regie Nationale des Usines Renault. Volumetric diaphragm pumps for gasoline injection. 2,900,916, 8–25–59, Cl. 103—38.
Perini, Mario: *See*—
Fusco, Raffeallo, Losco, and Perini. 2,901,481.
Perkin-Elmer Corp., The: *See*—
Coates, Vincent J., and Scott. 2,900,866.
Perkins, B. F., & Son, Inc: *See*—
Zimmerli, Kurt. 2,900,747.
Periman, Ely, to Mount Sinai Hospital Research Foundation, Inc. Ion-exchange purification of allergenic pollen component. 2,901,398, 8–25–59, Cl. 167—78.
Pero, Johannes G., S. Wijnberg, and W. Honing, to North American Philips Co., Inc. Method of manufacturing a partly silvered tubular incandescent lamp. 2,901,658, 8–25–59, Cl. 313—279.
Perry, Stanley. Painting machine. 2,900,952, 8–25–59, Cl. 118—207.
Peter, Robert G.: *See*—
Boice, Elvin G., and Peter. 2,901,224.
Petersen, Loren N.: *See*—
Sims, Everett E., Konyha, and Petersen. 2,900,970.
Peterson, Clarence N., deceased: by M. N. and D. N. Peterson, administrators. Hog oiler. 2,900,957, 8–25–59, Cl. 119—159.
Peterson, Dolan N.: *See*—
Peterson, Clarence N. 2,900,957.
Peterson, James H., to United States of America, Atomic Energy Commission. Dissolution of aluminum jackets from uranium cores by nitric acid containing mercuric nitrate. 2,901,343, 8–25–59, Cl. 75—97.
Peterson, Marian N.: *See*—
Peterson, Clarence N. 2,900,957.
Pettibone Mulliken Corp.: *See*—
Conway, Robert D., and Messinger. 2,901,189.
Pettit, Frank. Airplane toys. 2,901,251, 8–25–59, Cl. 272—31.
Phalen, William E.: *See*—
Douglass, Wilson F., and Phalen. 2,901,354.
Phelps, Richard W., to The Black-Clawson Co. Paper machinery. 2,901,191, 8–25–59, Cl. 242—66.
Philco Corp.: *See*—
Romander, Hugo. 2,901,562.
Sunstein, David E. 2,901,670.
Sunstein, David E. 2,901,747.
Phillips, Donald R.: *See*—
Linsday, Elton A., and Phillips. 2,901,648.

Phillips Petroleum Co.: *See*—
Adams, Loyd W., and Cottle. 2,901,403.
Brill, Rudolf F. 2,901,419.
Hebard, Glen G. 2,901,210.
Howell, Robert C. 2,901,324.
Kraus, Gerard. 2,901,448.
Lortz, Russell W. 2,900,998.
Waddill, Paul M. 2,901,425.
Waddill, Paul M., and Barr. 2,901,426.

Phillips, Ross M. G.: *See*—
Zeletzky, Franz A., and Phillips. 2,900,843.

Phillips, Russell C.: *See*—
Boomer, Daryl R., Clapperton, and Phillips. 2,901,339.

Phillips, William J.: *See*—
Ostline, John E., and Phillips. 2,901,545.

Philpot, Peter D., to The Minister of Supply, in Her Majesty's Government of the United Kingdom of Great Britain and Northern Ireland. Discharge nozzles for propulsive jets. 2,900,789, 8–25–59, Cl. 60—35.6.

Picker X-Ray Corp., Waite Mfg. Div. Inc.: *See*—
Stava, Robert J., and Hollstein. 2,901,202.
Stava, Robert J., Reininger, and Wilkens. 2,901,632.

Pickford, George, and R. Ward, to United Shoe Machinery Corp. Shoe machines. 2,900,932, 8–25–59, Cl. 112—44.

Pietruska, Friedrich, to Schiff & Stern, Gesellschaft mit beschrankter Haftung. Moistening of tobacco. 2,900,986, 8–25–59, Cl. 131—134.

Pillsbury Co., The: *See*—
Forkner, John H. 2,901,359.

Pincus, Alexis G., to American Optical Co. Glass compositions and method of making same. 2,901,362, 8–25–59, Cl. 106—47.

Pincus, Alexis G., to American Optical Co. Glass compositions and method of making same. 2,901,363, 8–25–59, Cl. 106—47.

Pincus, Alexis G. Glass compositions and method of making same. 2,901,364, 8–25–59, Cl. 106—47.

Pintsch Bamag A.-G.: *See*—
Von Semel, Georg, and Lehmann. 2,901,340.

Pittsburgh Plate Glass Co.: *See*—
Clever, William R. 2,900,761.
Seymour, Samuel L., and Duncan. 2,901,365.
Smith, John J., and Duncan. 2,901,366.

Plagge, Vernon L., and W. A. Boyce, to Westinghouse Electric Corp. High pressure mercury vapor lamp and method. 2,901,646, 8–25–59, Cl. 313—17.

Platt, John, to The Singer Mfg. Co. Spool holders for sewing machines. 2,900,941, 8–25–59, Cl. 112—218.

Plessey Co. Ltd., The: *See*—
Huffadine, John B., and Sanders. 2,901,442.
Kerslake, Cyril J. 2,901,720.

Plocki, Peter H., and G. J. Holtz, to Belvedere Space Saving Products, Inc. Collapsible shoe rack. 2,901,117, 8–25–59, Cl. 211—38.

Plunkett, Robert, to General Electric Co. Frictionless suspension means for rotary elements. 2,901,703, 8–25–59, Cl. 324—155.

Polhemus, John K., to General Aniline & Film Corp. Testing device for cameras and flashlamps. 2,901,692, 8–25–59, Cl. 324—51.

Pommer, Dennis L.: *See*—
Carlson, Carl A., Pommer, and Reiten. 2,900,775.

Pond, Robert B., to Marvalaud, Inc. Apparatus for producing alloy and bimetallic filaments. 2,900,708, 8–25–59, Cl. 29—194.

Poole, Joseph R., to The Austin Co. Shaft position indicator. 2,901,170, 8–25–59, Cl. 235—92.

Pope, Charles M. Underwater camera case. 2,901,143, 8–25–59, Cl. 220—85.

Pordes, Otto, to Shell Development Co. Process of forming foamed asphalt. 2,901,369, 8–25–59, Cl. 106—122.

Porto Holding Corp.: *See*—
Sulger, Harold R. 2,901,643.

Posey, Alice G. Spoon holder. 2,901,197, 8–25–59, Cl. 248—37.3.

Potter, Sidney D. Apparatus for filling milk bottles. 2,901,009, 8–25–59, Cl. 141—286.

Powell, Clinton O. Toothbrush. 2,900,651, 8–25–59, Cl. 15—138.

Powell, Jonathan S., Jr., and D. A. Stromsoe. Golf tee dispenser. 2,901,146, 8–25–59, Cl. 221—190.

Powell, Robert J., and J. E. Champion, to Continental Motors Corp. Fuel system. 2,901,031, 8–25–59, Cl. 158—36.4.

Powers Chemco, Inc.: *See*—
Bjelland, John L., and Flynn. 2,900,869.

Pralle, William F.: *See*—
Sondle, Henry P., and Pralle. 2,900,781.

Presby, Edward P.: *See*—
Hurat, Leonard T., and Presby. 2,900,710.

Price, Clarence A., E. Fischer, and R. J. Schultz, to Bradson Mfg. Corp. Valve assembly. 2,901,186, 8–25–59, Cl. 239—538.

Przysiecki, Theodore L., to United States of America, Navy. Clutch for coding machine. 2,901,069, 8–25–59, Cl. 192—33.

Publicker Industries, Inc.: *See*—
Waterman, Wendell W. 2,901,441.

Pulver, Robert, to Geigy Chemical Corp. Process for the production of high molecular earth alkali metal complex compounds. 2,901,474, 8–25–59, Cl. 260—209.5.

Pure Carbon Co., Inc.: *See*—
Burr, Myrtice C. 2,901,300.

Putman, Maurice W., to United States of America, Interior. Process for destructive distillation of hydrocarbonaceous materials. 2,901,402, 8–25–59, Cl. 202—6.

Puttfarcken, Heinrich, and R. Schork, to Junkers & Co. G.m.b.H. Valve arrangement. 2,901,034, 8–25–59, Cl. 158—131.

Quinn, Edward, to United Shoe Machinery Corp. Methods of making platform shoes, the parts of which are united by a reinforced seam. 2,900,649, 8–25–59, Cl. 12—142.

Quinn, James A. and J.; said J. A. Quinn assor. to said J. Quinn. Picker drive. 2,900,670, 8–25–59, Cl. 19—70.

Quinn, Johnny: *See*—
Quinn, James A. and J. 2,900,670.

Raab, Andrew F., to Carter Parts Co. Switch. 2,901,574, 8–25–59, Cl. 200—114.

Rabe, Karl, and E. Forstner, to Dr. Ing. h. c. F. Porsche K.-G. Tractor engine cooling and exhaust system. 2,901,052, 8–25–59, Cl. 180—54.

Rabinow, Jacob, and L. J. Kamm; said Rabinow assor. of 15% to M. L. Libman. Mechanical coding and sorting device. 2,901,089, 8–25–59, Cl. 198—38.

Radio Corp. of America: *See*—
Artzt, Maurice. 2,901,538.
Barkow, William H., and Matthews. 2,901,650.
Barkow, William H., and Matthews. 2,901,665.
Comninos, Donald A. 2,901,537.
Glazar, Walter S. 2,901,559.
Hogg, Aaron G. 2,901,712.
Keizer, Eugene O. 2,901,533.
Leyton, Eric M. 2,901,599.
Neuhauser, Robert G. 2,901,661.
Oakley, Charles B. 2,901,534.
Serrell, Robert. 2,901,549.
Smith, Edwin B. 2,901,535.
Thomas, Lucius P., Jr., and Hoyt. 2,901,536.
Woll, Harry J. 2,901,639.

Raley, John H., to Shell Development Co. Dehydrocyclization of hydrocarbons. 2,901,518, 8–25–59, Cl. 260—673.5.

Raley, John H., and R. D. Mullineaux, to Shell Development Co. Purification of diolefin product from hydrocarbon-iodine dehydrogenation reaction by prompt solvent contact to remove iodine species from hydrocarbon phase. 2,901,520, 8–25–59, Cl. 260—680.

Randall, Pryor N., to Standard Oil Co. Grid support and seal for fluidized solids systems. 2,901,332, 8–25–59, Cl. 23—288.

Ray, Frederick E.: *See*—
Bourguet, Jean M., Drew, and Ray. 2,901,421.

Raymond, Francois H., and J. Albin, to Societe d'Electronique et d'Automatisme. Improvements in/or relating to electric pulse reshaping circuits. 2,901,605, 8–25–59, Cl. 250—27.

Raymond, Hugh A., to Minneapolis-Honeywell Regulator Co. Control apparatus. 2,900,822, 8–25–59, Cl. 74—5.

Raytheon Mfg. Co.: *See*—
Fryklund, Robert A. 2,901,726.

Reaves, John H.: *See*—
Motz, Joseph W., and Reaves. 2,901,699.

Recht, Howard L.: *See*—
Gorin, Everett, and Recht. 2,901,524.

Redington, F. B., Co.: *See*—
Engleson, Harry E., and Sramek. 2,900,880.
Engleson, Harry E., and Sramek. 2,901,084.
Hartbauer, Ellsworth A. 2,900,778.

Reed, Glenn L.: *See*—
Hedlund, Swan, and Reed. 2,900,648.

Reed Roller Bit Co.: *See*—
Boice, Elvin G., and Peter. 2,901,224.

Reese, Michael, Research Foundation, Inc.: *See*—
Naftulin, Henry, and Egge. 2,901,112.

Reeves, Wilson A.: *See*—
Chance, Leon H., Drake, and Reeves. 2,901,444.

Reflectone Corp., The: *See*—
Brown, Forrest W. 2,901,610.

Regie Nationale des Usines Renault: *See*—
Péras, Lucien. 2,900,916.
Saives, Léon. 2,901,384.
Saives, Léon. 2,901,386.

Rehahn, Jens P., to VEB Funkwerk Kopenick. Electronic time delay relay. 2,901,606, 8–25–59, Cl. 250—27.

Rehnborg, Edward H., and J. L. Sayre, to Edcliff Instruments, Inc. Pressure transducer. 2,901,718, 8–25–59, Cl. 338—41.

Reid, Orland B., to The Singer Mfg. Co. Fittings for sewing machines. 2,900,936, 8–25–59, Cl. 112—147.

Reimers, Ernst, to Junkers & Co. G.m.b.H. Apparatus for starting a pulsatory combustion device. 2,900,790, 8–25–59, Cl. 60—39.77.

Reininger, Walter G.: *See*—
Stava, Robert J., Reininger, and Wilkens. 2,901,632.

Reiten, Lyndon H.: *See*—
Carlson, Carl A., Pommer, and Reiten. 2,900,775.

Renz, Emil K., and G. Miller, to Knight Leather Products, Inc. Toilet case with a spring actuated cover. 2,901,017, 8–25–59, Cl. 150—3.

Repokis, Henry: *See*—
Gagarine, Dmitry M., and Repokis. 2,901,451.

Reter, Harold: *See*—
Rohwer, Robert G., Cadotte, and Reter. 2,901,382.

Reynolds Co., The: *See*—
Varnhagen, Stephen J. 2,900,643.

Reynolds, Joseph F.: *See*—
Bailey, Nathaniel A., Pusowicz, and Reynolds. 2,901,437.

Reynolds Metals Co.: *See*—
Mostovych, Nicholas, and Cybriwsky. 2,901,412.

Reynolds, William E.: *See*—
Brubaker, John G., Wassel, and Reynolds. 2,900,876.

Rhoades, Harry L., Jr.: *See*—
Baker, Albert A., and Rhoades. 2,901,270.

Rhymney Engineering Co. Ltd.: *See*—
Martins, Thomas. 2,901,281.

Rice, Norman D., to Inland Steel Products Co. Metaldecking. 2,901,062, 8–25–59, Cl. 189—34.

Rich, Jack V., to Bendix Aviation Corp. Forced draft instrument shelter. 2,900,821, 8–25–59, Cl. 73—349.

Schinnerer, Roy L., to The Garrett Corp. Pneumatic oil

Sheldon, Ivan R.: *See*—

Richards, Burton A., to Bear Mfg. Co. Gauge for torsion bar suspension systems for vehicles. 2,900,734, 8–25–59, Cl. 33—180.
Richardson Co., The: *See*—
Mocas, Verlin A. 2,901,527.
Richardson, Roy A., and J. Cohn, to Motorola, Inc. Radio receiver with impulse noise blanking. 2,901,601, 8–25–59, Cl. 250—20.
Richmond, Martin R.: *See*—
Kline, Jack, and Richmond. 2,901,707.
Richter, Ole J., to Aktiebolaget Kamyr. Device for feeding comminuted cellulosic fibrous material into a pressure vessel. 2,901,149, 8–25–59, Cl. 222—367.
Richter, Sidney B.: *See*—
Molotsky, Hyman M., and Richter. 2,901,509.
Molotsky, Hyman M., and Richter. 2,901,510.
Richter, Sidney B., to Velsicol Chemical Corp. Halogenated organic compounds. 2,901,338, 8–25–59, Cl. 71—2.5.
Rickard, Clyde E., to McDowell Mfg. Co. Split ring coupling. 2,901,269, 8–25–59, Cl. 285—39.
Riddle Airlines, Inc.: *See*—
Danielsen, Dale A. 2,900,935.
Rigterink, Raymond H., to The Dow Chemical Co. 2-alkenyl-3,4-dichlorophenols. 2,901,515, 8–25–59, Cl. 260—623.
Rindlisbacher, Ernst: *See*—
Hubner, Walter W. G., Lange, and Rindlisbacher. 2,900,668.
Ringspann Albrecht Maurer K.G.: *See*—
Maurer, Albrecht, and Giese. 2,901,072.
Rising, Henry C. Apparatus for making ice cubes. 2,900,804, 8–25–59, Cl. 62—157.
Risley, Willis D. Hoisting mechanism for truck beds. 2,901,287, 8–25–59, Cl. 298—19.
Ritter, Josef: *See*—
Eisenburger, Kuno, and Ritter. 2,900,830.
Rivero, Santiago. Toothbrush having a dentifrice supply unit. 2,900,650, 8–25–59, Cl. 15—138.
Robards, Preston O.: *See*—
Cavett, Paul A., and Robards. 2,901,008.
Robbie, Kenneth A.: *See*—
Solley, Douglas A., Jr., and Robbie. 2,900,807.
Robbins & Myers, Inc.: *See*—
Weed, Herman R. 2,901,695.
Roberts, Fred T.: *See*—
Marsden, John F., Jr. 2,901,024.
Roberts, Robert E.: *See*—
Marsden, John F., Jr. 2,901,024.
Robertshaw-Fulton Controls Co.: *See*—
Branson, Charles D. 2,901,174.
Drummond, Ralph E., and Wright. 2,901,577.
Robinson, Laurence E.: *See*—
Chapman, Roger, and Robinson. 2,901,556.
Robinson, Lawrence. Typewriter. 2,901,081, 8–25–59, Cl. 197—194.
Robinson, Preston, to North American Philips Co., Inc. Magnetic latch assembly. 2,901,278, 8–25–59, Cl. 292—251.5.
Robinson, William H. Dual-purpose closure members. 2,901,140, 8–25–59, Cl. 215—41.
Robischung, Philip J., to Hammond Machinery Builders, Inc. Machine tool. 2,900,766, 8–25–59, Cl. 51—148.
Robison, William A., Jr., to Westinghouse Air Brake Co. Electrical relays. 2,901,572, 8–25–59, Cl. 200—93.
Robson, Homer L., to Olin Mathieson Chemical Corp. Spray drying calcium hypochlorite slurry. 2,901,435, 8–25–59, Cl. 252—187.
Rockwell Mfg. Co.: *See*—
Dickerson, John L., and Herring. 2,900,995.
Roder, Albert, to NSU Werke A.G. Construction of eccentrics in connecting rod drives for internal combustion engines with overhead camshaft. 2,900,838, 8–25–59, Cl. 74—570.
Rogers, Lewis M., to Union Carbide Corp. Corrosion inhibitors. 2,901,438, 8–25–59, Cl. 252—387.
Rohm & Haas Co.: *See*—
Hurwitz, Melvin D. 2,901,463.
Jordan, Arthur D., Jr. 2,901,453.
Rohwer, Robert G., J. E. Cadotte, and H. Reter, to Standard Brands Inc. Manufacture of dextrose controlling particle size. 2,901,382, 8–25–59, Cl. 127—63.
Rom, Norman F. Means for preventing condensation on flush-tanks. 2,900,645, 8–25–59, Cl. 4—18.
Romander, Hugo, to Philco Corp. Inverse parallel amplifier network. 2,901,562, 8–25–59, Cl. 179—171.
Roosens, Laurent P.: *See*—
Van Pee, Paul D., and Roosens. 2,901,351.
Roques, Jacques R., to "Etablissements Roques" (Societe Anonyme). Hydrated bismuth aluminate. 2,901,316, 8–25–59, Cl. 23—52.
Rose, Harold J.: *See*—
Young, David W., and Rose. 2,901,502.
Rosenberg, Norman, and E. R. L. Gaughran, to Johnson & Johnson. Heterograft material. 2,900,644, 8–25–59, Cl. 3—1.
Rosher, Ronald, to Hercules Powder Co. Fungicides. 2,901,394, 8–25–59, Cl. 167—30.
Rosner, Saul, and F. Heller, to Burndy Corp. Solid head tubular connector and method of making same. 2,901,003, 8–25–59, Cl. 138—89.
Rossheim, David B., to The M. W. Kellogg Co. Method for fabricating vessels. 2,901,392, 8–25–59, Cl. 219—137.
Rotary Engineering de Mexico, S.A.: *See*—
Tielens, Roger E. 2,900,845.
Rowan, Albert T., ⅓ to M. F. Rowan, ⅙ to D. A. Rowan, ⅙ to A. T. Rowan, Jr., and ⅙ to M. A. Rowan, by decree of distribution. Retractable tool mount. 2,901,196, 8–25–59, Cl. 248—23.
Rowan, Albert T., Jr.: *See*—
Rowan, Albert T. 2,901,196.
Rowan, Donald A.: *See*—
Rowan, Albert T. 2,901,196.
Rowan, Margery F.: *See*—
Rowan, Albert T. 2,901,196.
Rowan, Mary A.: *See*—
Rowan, Albert T. 2,901,196.
Rowell, William G., to Scully Signal Co. Automatic engine cut-off for pump-equipped tank truck vehicles. 2,900,915, 8–25–59, Cl. 103—27.
Ruben, Martin. Method of converting difficultly soluble organic compounds to readily soluble complex compounds, and said complex compounds. 2,901,472, 8–25–59, Cl. 260—96.5.
Ruberoid Co., The: *See*—
Abraham, Herbert. 2,900,928.
Rudner, Bernard, and A. Tockman, to W. R. Grace & Co. Chemo-therapeutic salts. 2,901,475, 8–25–59, Cl. 260—239.65.
Rudner, Merritt A., to United States Gasket Co. Hermetic seal terminals and metal to plastic bonding. 2,901,529, 8–25–59, Cl. 174—152.
Ruhrchemie Aktiengesellschaft: *See*—
Justl, Eduard, and Winsel. 2,901,523.
Runken, Gerd: *See*—
Furrer, John R., and Runken. 2,900,924.
Russell, Andrew C. Wall switch assembly. 2,901,581, 8–25–59, Cl. 200—153.
Russell, John K., and G. J. Byrd, to Lignosol Chemicals Ltd. Drilling fluids. 2,901,429, 8–25–59, Cl. 252—8.5.
Russell, John L., to The Bristol Co. Synchronous inverter. 2,901,571, 8–25–59, Cl. 200—90.
Russell Mfg. Co., The: *See*—
Morton, Henry C. 2,901,388.
Russum, Gaillard R., to Johns-Manville Corp. Mixing apparatus. 2,901,227, 8–25–59, Cl. 259—81.
Ruth, Helmer A., to Interlake Iron Corp. Blast furnace seal. 2,901,132, 8–25–59, Cl. 214—37.
Rutledge, John J. Sandblasting nozzle and method of producing it. 2,900,851, 8–25–59, Cl. 76—101.
SKF Kugellagerfabriken Gesellschaft mit beschrankter Haftung: *See*—
Dufsch, Ernst. 2,900,675.
Sacchini, Columbus R. to Curtiss-Wright Corp., Marquette Metal Products Division. Making clutch spring anchor portions. 2,901,071 8–25–59, Cl. 102—41.
Sacco, Louis J., Jr.: *See*—
[illegible] Eugene A., and Sacco. 2,901,370.
Sage, [illegible]ard W.: *See*—
He[illegible]inger, Charles E., Welty, Taff, and Sage. 2,901,415.
Sager, Karl E. Editor for sound recording and reproducing devices. 2,901,548, 8–25–59, Cl. 179—100.1.
Saives, Léon, to Regie Nationale des Usines Renault. Method for treating cast iron castings. 2,901,384, 8–25–59, Cl. 148—3.
Saives, Léon, to Regie Nationale des Usines Renault. Method of heat treating cast iron. 2,901,386, 8–25–59, Cl. 148—21.8.
Salerno, Joseph R. Door assembly in a vending machine for frozen confections. 2,901,305, 8–25–59, Cl. 312—35.
Salmonson, Sven A. Apparatus for preconditioning chips in a digester. 2,901,039 8–25–59, Cl. 162—246.
Sample, James H., to The Sherwin-Williams Co. Polyester and process of making the same. 2,901,465, 8–25–59, Cl. 260—75.
Samples, Cletus H., to Socony Mobil Oil Co., Inc. Separator. 2,901,058, 8–25–59, Cl. 183—2.7.
Sanders Associates, Inc.: *See*—
Kline, Jack, and Richmond. 2,901,707.
Sanders, Leon D., to Systematic Parking Co. Automobile parking apparatus. 2,901,129, 8–25–59, Cl. 214—16.1.
Sanders, Roy W.: *See*—
Huffadine, John B., and Sanders. 2,901,442.
Sandoz Ltd.: *See*—
Steinemann, Willy. 2,901,473.
Sands, Hillard J., to Harvard Mfg. Co. Bedframe center support. 2,900,647, 8–25–59 Cl. 5—202.
Sarto, Jorma O., to Chrysler Corp. Multiple stage choke control. 2,901,229, 8–25–59, Cl. 261—39.
Saurer, Adolph, Ltd.: *See*—
Beck, Heinrich. 2,901,181.
Saunderson, Henry D., to United States of America, Navy. Water discrimination fuze. 2,900,912, 8–25–59, Cl. 102—76.
Sautier & Jaeger: *See*—
Megard, Henry. 2,901,600.
Savage, James L.: *See*—
Grindle, Eugene L., and Savage. 2,900,817.
Sayre & Fisher Co.: *See*—
Leftwich, Robert F. 2,901,236.
Sayre, Jack L.: *See*—
Rehnborg, Edward H. and Sayre. 2,901,718.
Scarborough Associates, Inc.: *See*—
Myers, Elman B. 2,901,654.
Schade, E. D.: *See*—
Travis, Ralph L. 2,900,850.
Schaefer, Frederic C., and L. A. Landers, to American Cyanamid Co. Dioxo-bis-guanamines and resins therefrom. 2,901,464, 8–25–59, Cl. 260—67.6.
Schaffert, Roland M., and J. F. Hansen, to Haloid Xerox Inc. Xerographic plate. 2,901,349, 8–25–59, Cl. 96—1.
Schafroth, Werner. Movable stapling head and mounts therefor. 2,900,637, 8–25–59, Cl. 1—13.
Schering Corp.: *See*—
Nussbaum, Alexander L. 2,901,[illegible]87.
Scherry, George A., to Grayhill. Molding machine. 2,900,662, 8–25–59, Cl. 18—5.
Schiff & Stern, Gesellschaft mit beschrankter Haftung: *See*—
Pietruska, Friedrich. 2,900,986.

Smith, Paul C., to Micro Machine Works, Inc. Adjustable tap means for variable resistance device. 2,901,719, 8–25–59, Cl. 338—135.
Stark, Eduard. Coin-operated liquid delivery machine. 2,901,077, 8–25–59, Cl. 194—13.

Schinnerer, Roy L., to The Garrett Corp. Pneumatic oil pumping device. 2,900,917, 8–25–59, Cl. 103—47.

Schmerling, Louis, to Universal Oil Products Co. Preparation of substituted ortho-polymethylene aromatic hydrocarbons. 2,901,517, 8–25–59, Cl. 260—668.

Schmid, Hans, and H. Hürlimann, to Landis & Gyr A.G. Remote control receiver for central remote control installations utilizing audio-frequency signals superimposed on the mains network. 2,901,643, 8–25–59, Cl. 307—140.

Schmidt, Ernst: *See*—
Lebsanft, Kurt, and Schmidt. 2,901,383.

Schmidt, Henry, Jr., and R. F. Ledford, to Industrial Filter & Pump Mfg. Co. Filtering apparatus. 2,901,115, 8–25–59, Cl. 210—331.

Schneider, Frederick E. W., to Engel & Gibbs Ltd. Erection systems for gyroscopes. 2,900,826, 8–25–59, Cl. 74—5.47.

Schnell, Carl. Plucking device for feathers, hairs or the like. 2,900,661, 8–25–59. Cl. 17—11.1.

Schnellpressenfabrik Aktiengesellschaft Heidelberg: *See*—
Buttner, Arthur. 2,900,898.
Buttner, Artur. 2,901,179.

Schock, Richard U., to Abbott Laboratories. Bis-quinoliniums. 2,901,484, 8–25–59, Cl. 260—286.

Schork, Rudolf: *See*—
Puttfarcken, Heinrich, and Schork. 2,901,034.

Schramm, Harry B., to Otis Engineering Corp. Locking means for well tools. 2,901,045, 8–25–59, Cl. 166—125.

Schreiner, Edmund D.: *See*—
Welsh, Herbert F., Schreiner, Mock, and Eckert. 2,901,734.

Schrom, Edward C., to General Electric Co. Faulty coil detector. 2,901,693, 8–25–59, Cl. 324—52.

Schulde, Felix: *See*—
Starck, Werner and H., and Schulde. 2,901,443.

Schuldt, Donald A.: *See*—
Cragg, Arthur C., and Schuldt. 2,901,182.

Schulenburg, Wilhelm, to Chemische Fabrik Grunau Aktiengesellschaft. Fire extinguishing method. 2,901,428, 8–25–59, Cl. 252—7.

Schuler, Wilhelm A., to Chemische Fabrik Promonta, G.m.b.H. Phenothiazine compounds. 2,901,478, 8–25–59, Cl. 260—243.

Schultz, Robert J.: *See*—
Price, Clarence A., Fischer, and Schultz. 2,901,186.

Schultze, Helmuth A. Constant angular velocity joint. 2,900,810, 8–25–59 Cl 64—21.

Schutte, Laurent J., to Super-Steel Products Co. Room air conditioning system. 2,900,891, 8–25–59, Cl. 98—40.

Schuyler, Thomas C., to Fargo Mfg. Co., Inc. Line splice clamp. 2,901,725, 8–25–59, Cl. 339—272.

Schwaneke, Fred C., and J. E. Tucker, to Dormeyer Corp. Tea basket and vaporizer. 2,900,895, 8–25–59, Cl. 99—284.

Schwartz, Harold A., to Patchogue-Plymouth Corp. Pile rugs and rug-bases and composite yarns therefor. 2,901,005, 8–25–59. Cl. 139—420.

Schwartz, James, and G. E. Stark, to R. R. Donnelley & Sons Co. Columnar type form and removable type slugs for such form. 2,900,901, 8–25–59, Cl. 101—368.

Schwarz, Robert, W. Kuchen, and F. Weigel, to Siemens-Schuckertwerke, Akt. Organosilicon condensation products and processes for producing them. 2,901,449, 8–25–59, Cl. 260—18.

Schweppe, Howard B. Self-tapping and self-locking externally threaded fastener having locking section of greater pitch. 2,901,019, 8–25–59. Cl. 151—22.

Scientific Design Co., Inc.: *See*—
Colton, John W. 2,901,407.

Scott, Archie. Transmission lift. 2,901,218, 8–25–59, Cl. 254—150.

Scott & Fetzer Co., The: *See*—
MacFarland, Charles H. 2,900,768.

Scott, Floyd L., to Hughes Tool Co. Earth boring drill. 2,901,223, 8–25–59. Cl. 255—302.

Scott, Larkin B.: *See*—
Coates, Vincent J., and Scott. 2,900,866.

Scully Signal Co.: *See*—
Rowell, William G. 2,900,915.

Sears, Roebuck and Co.: *See*—
Askins, William J., and Chapin. 2,901,193.
Bell, Joseph L., and Meinke. 2,901,596.

Seaview Industries, Inc.: *See*—
Becker, Nathan. 2,900,682.

Seeger, Edwin W.: *See*—
Nolden, William F. and Seeger. 2,901,276.

Seelbach, Charles W.: *See*—
Morway, Arnold J., Seelbach, and Cottle. 2,901,432.

Seng Co., The: *See*—
Fox, Martin. 2,900,646.

Serafin, Ardis. Differential oral thermometer. 2,900,820, 8–25–59, Cl. 73—342.

Serrell, Robert, to Radio Corp. of America. Magnetic recording system. 2,901,549, 8–25–59, Cl. 179—100.2.

Servel, Inc.: *See*—
Coleman, Joseph J. 2,901,669.

Servomechanisms, Inc.: *See*—
Moore, David W., and Blair. 2,901,741.

Sethna, Pataraspa R., to Bendix Aviation Corp. Suspension system. 2,901,239, 8–25–59, Cl. 267—8.

Seymour Foods, Inc.: *See*—
Gorman, James M., and Keith. 2,901,360.

Seymour, Samuel L., and J. E. Duncan, to Pittsburgh Plate Glass Co. Glass composition. 2,901,365, 8–25–59, Cl. 106—52.

Shannon, Richard F., and R. H. Mitchell, to Owens-Corning Fiberglas Corp. High temperature resistant vitreous material. 2,901,379, 8–25–59, Cl. 117—124.

Shaw, Ernest H.: *See*—
Cunningham, Samuel C., and Shaw. 2,901,148.

Sheeley, Eugene N., to United States of America, Army. Fail-safe time delay fuse. 2,900,913, 8–25–59, Cl. 102—84.

Sheldon, Ivan R.: *See*—
Henches, Eugene W., and Sheldon. 2,901,542.

Shell Development Co.: *See*—
Anderson, John, and Melstrom. 2,901,462.
Evans, Harry D. 2,901,420.
Peery, Norman E. 2,901,422.
Pordes, Otto. 2,901,369.
Raley, John H. 2,901,518.
Raley, John H., and Mullineaux. 2,901,520.
Trowbridge, Harvey M., and Woods. 2,901,431.
Venis, Reginald J. 2,901,405.
Whittle, Frank. 2,901,221.

Shepherd, Wyley. Ventilators. 2,900,892, 8–25–59, Cl. 98—43.

Sherwin-Williams Co., The: *See*—
Samples, James H. 2,901,465.

Sherwood, John R., to Collins Radio Co. Coarse frequency discriminator. 2,901,614, 8–25–59, Cl. 250—40.

Shontz, Harry W. Outboard motor lift. 2,901,194, 8–25–59, Cl. 248—4.

Shosted, Kenneth F. Universal spotlight mechanism. 2,901,595, 8–25–59, Cl. 240—61.13.

Shulters, Robert B.: *See*—
Bottje, John D., and Shulters. 2,901,219.

Shuster, Joseph, to General Foods Corp. Carton feeder. 2,901,086, 8–25–59, Cl. 198—30.

Siegel, Edgar, and H. Gold, to Farbenfabriken Bayer Atiengesellschaft. Stilbene tetrazole brightening agents. 2,901,477, 8–25–59, Cl. 260—240.

Siegelman, Abraham: *See*—
Bardy, Peter J., and Siegelman. 2,901,209.

Siegrist, Adolf E., and M. Duennenberger, to Ciba Ltd. Process for the manufacture of new pyrrole derivatives. 2,901,480, 8–25–59, Cl. 260—249.6.

Siemens-Schuckertwerke, Akt.: *See*—
Schwarz, Robert, Kuchen, and Weigel. 2,901,499.

Siemons, Willem J., to E. I. du Pont de Nemours and Co. Purification of indium. 2,901,342, 8–25–59, Cl. 75—84.

Sigler, Harvey R., Jr.: *See*—
Cunningham, Robert E., and Sigler. 2,901,561.

Silversher, Herman I.: *See*—
Barnes, James F., and Silversher. 2,900,881.

Simplex Time Recorder Co.: *See*—
Blouin, Maurice A. 2,900,787.

Simpson, Amos W., Jr., to General Electric Co. Electric circuit breaker. 2,901,579, 8–25–59, Cl. 200—147.

Simpson, Justin, to Continental Can Co., Inc. Overload release drive and inching means. 2,900,842, 8–25–59, Cl. 74—625.

Simpson, Justin, to Continental Can Co., Inc. Motor mounting means. 2,901,195, 8–25–59, Cl. 248—16.

Sims, Everett E., P. P. Konyha, and L. N. Petersen, to Caterpillar Tractor Co. Single lever control for engine starting mechanism. 2,900,970, 8–25–59, Cl. 123—179.

Sinclair Refining Co.: *See*—
Stewart, Warren E. 2,901,330.

Singer Mfg. Co., The: *See*—
Johnson, Ralph E. 2,900,938.
Johnson, Ralph E. 2,900,940.

Mendles, Walter J. 2,900,942.
Odermann, Charles R. 2,901,275.
Platt, John. 2,900,941.
Reid, Orland B. 2,900,936.

Sinninger, Dwight V., to Hupp Corp. Selecting systems. 2,901,530, 8–25–59, Cl. 178—2.

Sirons, Janis A., to United States of America, Air Force. Antenna lobe switching system. 2,901,748, 8–25–59, Cl. 343—733.

Sisto, Joseph A., and J. Milos, to Barium Steel Corp. Heating apparatus. 2,901,234, 8–25–59, Cl. 263—44.

Sixsmith, Herbert, to English Electric Valve Co. Ltd. Magnetron oscillators. 2,901,666, 8–25–59, Cl. 315—39.51.

Slemmons, Arthur J. Turbine wheel and shaft assembly. 2,901,214, 8–25–59, Cl. 253—39.

Small Business Administration: *See*—
Becker, Nathan. 2,900,681.

Small, Sollie W., and D. Herman, to Coffee-Mat Corp. Valve mechanism. 2,901,002, 8–25–59, Cl. 137—625.

Small, William W., to United States of America, Navy. Unshorter. 2,900,910, 8–25–59, Cl. 102—70.2.

Smith, A. O., Corp.: *See*—
Tiedemann, Julius B. 2,900,948.
Tiedemann, Richard A. 2,900,829.

Smith, Arnold R., and W. T. McPhee, to said Smith assor. to said McPhee. Sewage treatment apparatus. 2,901,114, 8–25–59, Cl. 210—200.

Smith, Caldwell P., to United States of America, Air Force. Analysis of voltage distribution. 2,901,697, 8–25–59, Cl. 324—77.

Smith-Corona Marchant Inc.: *See*—
Barkdoll, Joseph P. 2,901,079.
Zeamer, Aaron C. 2,901,080.

Smith, Edwin B., to Radio Corp. of America. Frequency selective signal attenuating circuit. 2,901,535, 8–25–59, Cl. 178—5.8.

Smith, Floyd E. Parts feeder. 2,901,095, 8–25–59, Cl. 198—220.

Smith, Fred: *See*—
Maddock, Alfred G., and Smith. 2,901,313.

Smith, James G.: *See*—
Kibler, Charles J., Bell, and Smith. 2,901,466.

Smith, James J., and R. D. Graf, to Essex Wire Corp. Thermostatic timing control. 2,901,642, 8–25–59, Cl. 307—112.

Smith, John F.: *See*—
Dalton, Norris D., and Smith. 2,901,010.

Smith, John J., and J. E. Duncan, to Pittsburgh Plate Glass Co. Glass composition. 2,901,366, 8–25–59, Cl. 106—52.

Smith, John W.: *See*—
Nordstrom, Gordon J., and Smith. 2,901,604.

Sunstein, David E., to Philco Corp. Color identification in radar systems. 2,901,747, 8–25–59, Cl. 343—17.

Thiokol Chemical Corp.: *See*—
Felberg, Robert S., and Gould. 2,900,788.

Thoma, Oswald: *See*—

Rowan, Albert T., Jr.: *See*—
Rowan, Albert T. 2,901,196.

Schiff & Stern, Gesellschaft mit beschrankter Haftung: *See*—
Pietruska, Friedrich. 2,900,986.

Smith, Paul C., to Micro Machine Works, Inc. Adjustable tap means for variable resistance device. 2,901,719, 8–25–59, Cl. 338—135.

Smith, Telford L., and P. G. Dunmire. Sleeve type pipe coupling having sheet metal followers. 2,901,274, 8–25–59, Cl. 285—341.

Smith, Thomas R., to The Maytag Co. Sediment removal device. 2,900,812, 8–25–59, Cl. 68—23.

Smith, Thomas R., to The Maytag Co. Tub seal and bearing structure. 2,901,294, 8–25–59, Cl. 308—36.1.

Snartemo, Joseph H., to Allis-Chalmers Mfg. Co. Double drive. 2,900,832, 8–25–59, Cl. 74—230.17.

Sneil, Clarence G., to Divine Brothers Co. Caster locking mechanism. 2,900,659, 8–25–59, 16—35.

Snyder, James M.: *See*—
Eller, Carl W., Jr., and Snyder. 2,901,491.

Snyder, Richard L., Jr. Switch devices. 2,901,731, 8–25–59, Cl. 340—174.

Societe á responsabilité limited, Recherches Etudes Production R.E.P.: *See*—
Boulet, Georges. 2,901,243.

Societe Anonyme Andre Citroen: *See*—
Brueder, Antoine. 2,900,966.

Societe Anonyme Ateliers de Constructions Electriques de Charleroi: *See*—
Brasseur, Eudore. 2,901,550.

Societe Anonyme dite: Generale Thermique-Procedes Brola: *See*—
Brola, Gabriel. 2,901,032.

Societe D'Electronique et d'Automatisme: *See*—
Raymond, Francois H., and Albin. 2,901,605.

Socony Mobil Oil Co., Inc.: *See*—
Bourguet, Jean M., Drew, and Ray. 2,901,421.
Samples, Cletus H. 2,901,058.

Solley, Douglas A., Jr., and K. A. Robbie, to General Electric Co. Defrostable evaporator structure. 2,900,807, 8–25–59, Cl. 62—277.

Sondle, Henry P., and W. F. Pralle, to J. T. Clark. Convertible yard tools. 2,900,781, 8–25–59, Cl. 56—400.16

Sowa, Frank J: *See*—
Cohen, Sylvan L., Frant, and Sowa. 2,901,392.

Specialties Development Corp.: *See*—
Cutsogeorge, George A. 2,901,740.
Wentz, Edward A. 2,901,190.

Speeter, Merrill E., and R. D. Birkenmeyer, to The Upjohn Co. Alkylaminoalkyl 2,4,6-trimethylbenzamide. 2,901,507, 8–25–59, Cl. 260—558.

Speiden, Edgar F., to The Parkersburg Rig & Reel Co. Pneumatic counterbalance having a control mechanism therefor. 2,900,841, 8–25–59, Cl. 74—589.

Sperry Gyroscope Co. Ltd., The: *See*—
Harvey, Gilbert N. 2,900,736.

Sperry Rand Corp.: *See*—
Eckert, John P., Jr. 2,901,733.
Lawrence, Joseph D., Jr. 2,901,735.
Steagall, William F. 2,901,635.
Stovall, John R., Jr. 2,901,737.
Tomiyasu, Kiyo. 2,901,698.
Torrey, Robert D., and Bonn. 2,901,636.
Welsh, Herbert F., Schreiner, Mock, and Eckert. 2,901,734.

Spillar, Rudolph, to Western Electric Co., Inc. Apparatus for spreading wires of wire spring relay components and welding contacts thereto. 2,901,589, 8–25–59, Cl. 219—78.

Spinnfaser Akt.: *See*—
Welfers, Egidius, and Hose. 2,901,188.

Spodig, Heinrich. Magnetic separator. 2,901,108, 8–25–59, Cl. 209—219.

Spokes, Ray E., and J. B. Littlefield, to American Brake Shoe Co. Friction elements. 2,901,456, 8–25–59, Cl. 260—41.5.

Sprague Electric Co.: *See*—
Lubin, Samuel. 2,901,634.

Sprauer, Jerome W., to E. I. du Pont de Nemours and Co. Purification of crude aqueous hydrogen peroxide. 2,901,323, 8–25–59, Cl. 23—207.

Sprauer, Jerome W., to E. I. du Pont de Nemours and Co. Regeneration of degraded anthraquinone working solutions for the production of hydrogen peroxide. 2,901,490, 8–25–59, Cl. 260—369.

Spring, Samuel, to Pennsalt Chemicals Corp. Cleaning composition. 2,901,433, 8–25–59, Cl. 252—118.

Sprouse, Norman T., and G. H. McIntyre, Jr., to United States Borax & Chemical Corp. Method and composition for producing boron trihalides. 2,901,322, 8–25–59, Cl. 23—205.

Sramek, Elmer D.: *See*—
Engleson, Harry E., and Sramek. 2,900,880.
Engleson, Harry E., and Sramek. 2,901,084.

Stacy, Robert G., to The Budd Co. Enclosed dual-disk brakes for vehicles. 2,901,059, 8–25–59, Cl. 188—73.

Stadelman, Frank, to Latendorf Conveying Corp. Method of, and apparatus for, de-lidding and de-panning bread loaves or the like. 2,901,135, 8–25–59, Cl. 214—308.

Standard Brands Inc.: *See*—
Rohwer, Robert G., Cadotte, and Reter. 2,901,382.

Standard Oil Co. (Indiana): *See*—
Fields, Ellis K., and Brehm. 2,901,335.
Kapff, Sixt F. 2,901,329.
Kolb, Kenneth E. 2,901,505.
Marti, Paul O., Jr. 2,901,317.
Randall, Pryor N. 2,901,332.

Standard Steel Works, Inc.: *See*—
Gredell, Otto N. 2,901,205.
Gredell, Otto N. 2,901,206.

Starck, Hans: *See*—
Starck, Werner and H., and Schülde. 2,901,443.

Starck, Werner and H., and F. Schülde, to Farbwerke Hoechst Aktiengesellschaft vormals Meister Lucius & Brüning. Process for preparing high molecular compounds. 2,901,443, 8–25–59, Cl. 260—2.

Stark, Eduard. Coin-operated liquid delivery machine. 2,901,077, 8–25–59, Cl. 194—13.

Stark, Gunnard E.: *See*—
Schwartz, James, and Stark. 2,900,901.

Starr, Allan M., to United States of America, Atomic Energy Commission. Calutron ion source slit cleaner. 2,901,619, 8–25–59, Cl. 250—41.9.

Starr, Charles S., and O. G. Barnes, to Notat Tire Co. Wheel for vehicles. 2,901,020, 8–25–59, Cl. 152—307.

Starr, James E., to Tatnall Measuring Systems Co. Column elongation transducer type testing machine. 2,900,818, 8–25–59, Cl. 73—95.

Starre, Gerrit, and E. Bakker, to North American Philips Co., Inc. Dry shaver with a self adjusting shear plate and rotary cutter. 2,900,720, 8–25–59, Cl. 30—43.

Statham, Louis D., to United States of America, Navy. Fuze. 2,900,911, 8–25–59, Cl. 102—70.2.

Stauffer Chemical Co.: *See*—
Tilles, Harry, and Antognini. 2,901,498.
Tilles, Harry, and Antognini. 2,901,499.
Tilles, Harry, and Antognini. 2,901,500.

Stava, Eleanore G.: *See*—
Stava, Robert J., and Hollstein. 2,901,202.

Stava, Robert J., deceased (by E. G. Stava, executrix), and O. C. Hollstein, to Picker X-Ray Corp., Waite Mfg. Div. Inc. Counter balance. 2,901,202, 8–25–59, Cl. 248—123.

Stava, Robert J., W. G. Reininger, and G. G. Wilkens, to Picker X-Ray Corp., Waite Mfg. Div. Inc. Photo tube energizer. 2,901,632, 8–25–59, Cl. 250—95.

Steagall, William F., to Sperry Rand Corp. Delay flop. 2,901,635, 8–25–59, Cl. 307—88.

Stentite Research Corp.: *See*—
Sylvester, Frederick F. 2,901,736.

Steck, George L. Hand tool for removing dents from sheet metal plates. 2,900,853, 8–25–59, Cl. 81—15.

Stedman, Cresswell E., to U. S. Acoustics Corp. Mixing apparatus. 2,901,228, 8–25–59, Cl. 259—107.

Steel Heddle Mfg. Co.: *See*—
Kaufmann, Frank H. 2,901,004.

Steel Improvement & Forge Co., The: *See*—
Milnes, Aubrey H. 2,900,715.

Steinemann, Willy, to Sandoz Ltd. Oxazoline and dihydro oxazine monoazo dyestuffs and their metal complex compounds. 2,901,473, 8–25–59, Cl. 260—146.

Steinkohlen-Elektrizitat Aktiengesellschaft: *See*—
Justi, Edward, and Winsel. 2,901,523.

Steinman, Leon, to Litton Industries, Inc. Transistor gates. 2,901,640, 8–25–59, Cl. 307—88.5.

Steppe, Vollrad, to Chemische Fabrik Grunau Aktiengesellschaft. Dry fire extinguishing composition. 2,901,427, 8–25–59, Cl. 252—5.

Sterling Drug Inc.: *See*—
Elpern, Bill. 2,901,487.

Sternlicht, Beno, to General Electric Co. Bearings. 2,901,297, 8–25–59, Cl. 308—121.

Stevens, Joel B.: *See*—
Crawford, Robert T., and Stevens. 2,900,988.

Stewart, Francis S. Alkyl methacrylate polymer coating compositions and method of making same. 2,901,454, 8–25–59, Cl. 260—32.8.

Stewart, Warren E., to Sinclair Refining Co. Stationary bed catalytic apparatus. 2,901,330, 8–25–59, Cl. 23—288.

Still, Elmer G. Centrifugal air propellers. 2,901,047, 8–25–59, Cl. 170—135.

Stinson, Harold S. Attachment for fishhooks. 2,900,755, 8–25–59, Cl. 43—44.6.

Stoddard, Orren J., to United States of America, Navy. Multistage ring circuit. 2,901,607, 8–25–59, Cl. 250—27.

Stone, William R. Telephone holder. 2,901,553, 8–25–59, Cl. 179—148.

Stoner, George G., and G. C. Wright, to General Aniline & Film Corp. Process of reacting a polymeric N-vinyl lactam with a polymeric carboxylic acid and product obtained thereby. 2,901,457, 8–25–59, Cl. 260—45.5.

Storsand, Bjarne, to Oerlikon Engineering Co. High capacity choke for D.C. installations. 2,901,717, 8–25–59, Cl. 336—223.

Stovall, John R., Jr., to Sperry Rand Corp. Disk recording compensating devices. 2,901,737, 8–25–59, Cl. 340—174.

Strategic-Udy Metallurgical and Chemical Processes, Ltd.: *See*—
Udy, Marvin J. 2,901,341.

Strause, Monroe B. Pie marker, method of finishing meringue pies and the resulting meringue pie. 2,901,352, 8–25–59, Cl. 99—92.

Streta, Harland R.: *See*—
Oerly, Fred O. 2,900,680.

Stromsoe, Douglas A.: *See*—
Powell, Jonathan S., Jr., and Stromsoe. 2,901,146.

Stuart, William R., to Eitel-McCullough, Inc. Electrode structure for electron. 2,901,657, 8–25–59, Cl. 313—257.

Suenram, Wayne C. Cable handling clamp. 2,900,690, 8–25–59, Cl. 24—134.

Sulger, Harold E., to Porto Holding Corp. Induction motors. 2,901,645, 8–25–59, Cl. 310—166.

Sullivan, Michael V., to Bell Telephone Laboratories, Inc. Burst separator for color television. 2,901,532, 8–25–59, Cl. 178—5.4.

Sulzer Freres, Societe Anonyme: *See*—
Burl, Alfred. 2,900,792.
Burl, Alfred. 2,900,793.

Sun Oil Co.: *See*—
Lauer, James L. 2,901,672.

Sundberg, Robert L.: *See*—
Chiddix, Max E., Maxcy, and Sundberg. 2,901,430.

Sung, Chien-Bor, to Bendix Aviation Corp. Linear fluid actuator utilizing vanes. 2,900,961, 8–25–59, Cl. 121—38.

Sunstein, David E., to Philco Corp. Ignition system. 2,901,670, 8–25–59, Cl. 315—200.

Tupper, Earl S., to Tupper Corp. Discardable or reusable plastic package. 2,901,098, 8–25–59, Cl. 206—46.

Turbin, Kenneth L.: *See*—

United States Steel Corp.: *See*—
Andrews, Steve. 2,901,006.
Boyle, John W. 2,901,217.

Sunstein, David E., to Philco Corp. Color identification in radar systems. 2,901,747, 8–25–59, Cl. 343—17.

Super-Steel Products Co.: *See*—
Schutte, Laurent J. 2,900,891.

Supper, Henry L. Calendar device. 2,900,749, 8–25–59, Cl. 40—114.

Supreme Products Corp.: *See*—
Kohner, Melvin, and Wright. 2,900,719.

Surface Combustion Corp.: *See*—
Cullen, Orville E. 2,900,990.

Sutherland, Clifford O. Game apparatus. 2,901,255, 8–25–59, Cl. 273—135.

Sutton, John R. Offshore equipment supports and methods for making same. 2,900,794, 8–25–59, Cl. 61—46.5.

Sutton, Robert W., to Bendix Aviation Corp. Fuel supply system. 2,900,967, 8–25–59, Cl. 123—119.

Svenska Aktiebolaget Gasaccumulator: *See*—
Johannisson, Dag O. A. 2,900,978.

Swan, William M., Jr.: *See*—
Winkelmann, Otto J., Swan, and Herreshoff. 2,900,835.

Sweden Freezer Mfg. Co.: *See*—
Swenson, Harvey F., and Baudat. 2,901,015.

Sweet, Corlise M. Adjustable tool mounting for lathes. 2,900,704, 8–25–59, Cl. 29—96.

Sweger, Theodore J., to Illinois Railway Equipment Co. Means for centering railway car axle journals. 2,901,296, 8–25–59, Cl. 308—41.

Swenson, Harvey F., and A. A. Baudat, to Sweden Freezer Mfg. Co. Fruit and vegetable juicer. 2,901,015, 8–25–59, Cl. 146—76.

Sylvania Electric Products Inc.: *See*—
Coggins, Donald I. 2,900,701.
Dwork, Leo E., and Huang. 2,901,612.
Huang, Chaang. 2,901,638.
Thomas, Martha J., and Butler. 2,901,647.

Sylvester, Frederick F., to Steatite Research Corp. Printed circuit for array of toroidal cores. 2,901,736, 8–25–59, Cl. 340—174.

Systematic Parking Co.: *See*—
Sanders, Leon D. 2,901,129.

Szaloki, Zoltan, to Whitin Machine Works. Machine for opening and cleaning fibrous material. 2,900,671, 8–25–59, Cl. 19—93.

Taff, Wilfred O.: *See*—
Hemminger, Charles E., Welty, Taff, and Sage. 2,901,415.

Talbert, Lorraine E. Variable tread crane carrier drive assembly. 2,901,050, 8–25–59, Cl. 180—22.

Talbot, Claiborne E., Jr. Container construction. 2,901,159, 8–25–59, Cl. 229—39.

Talon, Inc.: *See*—
Brown, Alexander M. 2,900,694.

Tamarin, Bernard J. Container. 2,901,097, 8–25–59, Cl. 206—41.2.

Tannenbaum, Wesley, and R. D. Adams, to Avco Mfg. Corp. Thyratron circuit. 2,901,611, 8–25–59, Cl. 250—27.

Tapp, Harry F., to Gilbert & Barker Mfg. Co. Switch mechanism for storage tank level measuring apparatus. 2,901,567, 8–25–59, Cl. 200—65.

Tashjian, Harry J.: *See*—
Wilson, Lawrence A., Durfee, and Tashjian. 2,900,831.

Tate, Roger W., to Esso Research and Engineering Co. Fractionation in coker scrubber of heavy gas oils containing a high concentration of metal contaminants. 2,901,416, 8–25–59, Cl. 208—82.

Tatnall Measuring Systems Co.: *See*—
Starr, James E. 2,900,818.

Taylor, Allan J., and A. Toth, to Northrop Corp. Material handling fixture. 2,901,201, 8–25–59, Cl. 248—119.

Teagle, William T. Agricultural machines. 2,901,257, 8–25–59, Cl. 275—8.

Teal, Gordon K., to Bell Telephone Laboratories, Inc. Method of making electrical resistors. 2,901,381, 8–25–59, Cl. 117—221.

Teeter, Howard M.: *See*—
Cowan, John C., and Teeter. 2,901,469.

Teeter, Howard M., M. J. Danzig, and J. C. Cowan, to United States of America, Agriculture. Addition products of fatty acids and unsaturated nitro compounds. 2,901,495, 8–25–59, Cl. 260—404.

Teitelman, Herbert. Tube bending die with flowable rubber pad to prevent collapse of the tube. 2,901,023, 8–25–59, Cl. 153—48.

Telecomputing Corp.: *See*—
Nevius, Searle G. 2,901,663.

Tesson, Pierre, to Pecquet, Tesson & Cie. Welding of two pieces, in particular in the production of gas cylinders, and vessels thus obtained. 2,901,591, 8–25–59, Cl. 219—137.

Texas Instruments Inc.: *See*—
Bagnall, James A. 2,900,802.
Clarke, David E. 2,901,575.
Webster, Roger R. 2,901,558.

Thaden, Herbert V., to Thaden Molding Corp. Reclining chair. 2,901,026, 8–25–59, Cl. 155—116.

Thaden Molding Corp.: *See*—
Thaden, Herbert V. 2,901,026.

Thayer, Louis C., and M. Czuha, Jr., to Beckman Instruments, Inc. Method for measuring traces of dissolved oxygen. 2,901,327, 8–25–59, Cl. 23—230.

Theobald, Albert P., to Waldorf Paper Products Co. Method and apparatus for forming triangular posts. 2,900,882, 8–25–59, Cl. 93—84.

Theuerer, Henry C., to Bell Telephone Laboratories, Inc. Method of preparing silicon. 2,901,323, 8–25–59, Cl. 23—223.5.

Thibodeau, John L. Tractor drive and suspension mechanism. 2,901,051, 8–25–59, Cl. 180—41.

Thiokol Chemical Corp.: *See*—
Feiberg, Robert S., and Gould. 2,900,788.

Thoma, Oswald: *See*—
Brown, Peter H. 2,900,921.

Thomas, Albert G., to Industrial Controls Corp. Counting Circuit. 2,901,668, 8–25–59, Cl. 315—84.5.

Thomas, David F., and R. A. Hill, to Waterous Co. Electrically operated transfer valve for centrifugal pump. 2,900,918, 8–25–59, Cl. 103—106.

Thomas, Fritts W., to Monsanto Chemical Co. Cryptocrystalline calcium pyrophosphate and dentifrice composition comprising the same. 2,901,400, 8–25–59, Cl. 167—93.

Thomas, Gordon H.: *See*—
Fried, Josef, and Thomas. 2,901,494.

Thomas, Henry. Automotive vehicle underground storage device. 2,901,130, 8–25–59, Cl. 214—16.1.

Thomas, Lucius P., Jr., and C. W. Hoyt, to Radio Corp. of America. Intercarrier sound buzz reducing circuit. 2,901,536, 8–25–59, Cl. 178—5.8.

Thomas, Martha J., and K. H. Butler, to Sylvania Electric Products Inc. Discharge lamp and phosphor. 2,901,647, 8–25–59, Cl. 313—25.

Thomas, Robert E., to United States of America, Atomic Energy Commission. Electronic multiplier circuit. 2,901,172, 8–25–59, Cl. 235—194.

Thomas, Robert M., to Olin Mathieson Chemical Corp. Process for the stabilization of amino alcohols. 2,901,513, 8–25–59, Cl. 260—584.

Thompson, Arthur M. Pipe clamp. 2,901,199, 8–25–59, Cl. 248—72.

Tibbetts, George C. and R. W., to Tibbets Laboratories, Inc. Electromechanical device and method of making same. 2,901,644, 8–25–59, Cl. 310—9.1.

Tibbets Laboratories, Inc.: *See*—
Tibbetts, George C. and R. W. 2,901,644.

Tibbetts, Raymond W.: *See*—
Tibbetts, George C. and R. W. 2,901,644.

Tiedemann, Julius B., to A. O. Smith Corp. Cushioning means for double action presses. 2,900,943, 8–25–59, Cl. 113—45.

Tiedemann, Richard A., to A. O. Smith Corp. Welding head positioner. 2,900,829, 8–25–59, Cl. 74—89.

Tielens, Roger E., to Rotary Engineering de Mexico, S.A. Transmissions. 2,900,845, 8–25–59, Cl. 74—688.

Tilles, Harry, and J. Antognini, to Stauffer Chemical Co. N-alkyl, N-allyl thiolcarbamate compositions. 2,901,498, 8–25–59, Cl. 260—455.

Tilles, Harry, and J. Antognini, to Stauffer Chemical Co. Lower alkyl esters of N-alkoxyalkylthiolcarbamic acids. 2,901,499, 8–25–59, Cl. 260—455.

Tilles, Harry, and J. Antognini, to Stauffer Chemical Co. Lower alkyl esters of N-cyanoalkyl-N-alkyl thiolcarbamic acids as compositions. 2,901,500, 8–25–59, Cl. 260—455.

Tilney, Ralph B., to Alco Valve Co. Electric control circuits for heat pumps. 2,900,805, 8–25–59, Cl. 62—160.

Tipper, Maynard J. G. Cycle control for casing closure. 2,901,068, 8–25–59, Cl. 192—25.

Tjomsem, Willard W., to Lockheed Aircraft Corp. Rocket launcher. 2,900,874, 8–25–59, Cl. 89—1.7.

Tockman, Albert: *See*—
Rudner, Bernard, and Tockman. 2,901,475.

Tod, Allan H., and W. W. Gray, to Acme Visible Records, Inc. Record card transfer device. 2,900,985, 8–25–59, Cl. 129—16.

Tofield, Ronnie. Portable electric hair dryer. 2,900,739, 8–25–59, Cl. 34—99.

Tokheim Corp.: *See*—
Wright, George W. 2,901,000.

Toledo Scale Corp.: *See*—
Bradley, Robert O. 2,901,235.

Tomiyasu, Kiyo, to Sperry Rand Corp. Microwave frequency meter. 2,901,698, 8–25–59, Cl. 324—78.

Toms, Ernest J. Skate sharpener. 2,900,769, 8–25–59, Cl. 51—214.

Torrey, Robert D., and T. H. Bonn, to Sperry Rand Corp. Magnetic amplifier. 2,901,636, 8–25–59, Cl. 307—88.

Toth, Anthony: *See*—
Taylor, Allan J., and Toth. 2,901,201.

Townsend, Raymond G., to United States of America, Atomic Energy Commission. Coating method. 2,901,408, 8–25–59, Cl. 204—38.

Trafelet, Robert: *See*—
Hamilton, Walter E., and Trafelet. 2,900,723.

Travis, Ralph L., ⅓ to E. D. Schade and ⅓ to D. Moseley. Device for sharpening chain saw chains. 2,900,850, 8–25–59, Cl. 76—31.

Treber, Willy O.: *See*—
Herr, Gerhard, and Treber. 2,901,038.

Tritt, Charles W. Automatic coffee maker. 2,900,894, 8–25–59, Cl. 99—283.

Troche, Herman J., to J. H. Holan Corp. Derricks. 2,901,125, 8–25–59, Cl. 212—8.

Trowbridge, Harvey M., and H. A. Woods, to Shell Development Co. Lubricating compositions. 2,901,431, 8–25–59, Cl. 252—37.2.

Tube Products Ltd.: *See*—
Norton, Albert, and Bradshaw. 2,900,879.

Tucker, James E.: *See*—
Schwaneke, Fred C., and Tucker. 2,900,895.

Tupper Corp.: *See*—
Tupper, Earl S. 2,900,656.
Tupper, Earl S. 2,900,760.
Tupper, Earl S. 2,901,098.

Tupper, Earl S., to Tupper Corp. Cleaning, scraping and mixing implement. 2,900,656, 8–25–59, Cl. 15—245.

Tupper, Earl S., to Tupper Corp. Straining and stem holding structure. 2,900,760, 8–25–59, Cl. 47—41.

Wallace, Vard B., to Vard Products Inc. Drafting machine indexing means. 2,900,728, 8–25–59, Cl. 33—79.

Walter, Joseph H.: *See*—
Hall, Walter, and Walter. 2,900,966.

Walton, Ralph E., to Walton Laboratories, Inc. Method of making a fluid dispensing device. 2,901,153, 8–25–59, Cl. 222—95.

Walton Laboratories, Inc.: *See*—
Walton, Ralph E. 2,901,153.

Wang, An, to Wang Laboratories, Inc. Pulse transformer. 2,901,715, 8–25–59, Cl. 336—178.

Wang Laboratories, Inc.: *See*—
Wang, An. 2,901,715.

Ward, Jack, to Ward Products Corp. Tool for removing and replacing spark plugs. 2,900,870, 8–25–59, Cl. 81—177.

Ward Products Corp.: *See*—
Ward, Jack. 2,900,870.

Warner, Edward P., to United States of America, Air Force. Method of making a rocket motor. 2,901,884, 8–25–59, Cl. 60—35.55.

Warner, Harold E., to Warner Electric Brake & Clutch Co. Electromagnetic brake. 2,901,072, 8–25–59, Cl. 188—161.

Warner Electric Brake & Clutch Co.: *See*—
Warner, Harold E. 2,901,072.

Warren, Charles H., to Warren Mfg. Co. Apparatus for making fibrous articles. 2,900,681, 8–25–59, Cl. 18—5.

Warren Mfg. Co.: *See*—
Warren, Charles H. 2,900,681.

Washburn, Ralph M., to Bell Telephone Laboratories, Inc. Method of making electrical resistors. 2,901,382, 8–25–59, Cl. 117—221.

Waterous Co.: *See*—
Thomas, David F., and Hill. 2,900,918.

Watson, Robert L., to Watson Laboratories, Inc. Electrical connector. 2,901,724, 8–25–59, Cl. 339—177.

Watson Laboratories, Inc.: *See*—
Watson, Robert L. 2,901,724.

Watts, Ralph B., to Lockheed Aircraft Corp. Lubrication system. 2,901,058, 8–25–59, Cl. 184—6.

Weaver, Robert L., to Bell Telephone Laboratories, Inc. Method of making electrical resistors. 2,901,383, 8–25–59, Cl. 117—221.

Webb, Jack H., to Webb Co. Method of making a fluid dispensing device. 2,901,154, 8–25–59, Cl. 222—95.

Webb Co.: *See*—
Webb, Jack H. 2,901,154.

Webster, Roger R.: *See*—
Texas Instruments Inc. 2,901,558.

Weeks, Ralph W., to Bell Telephone Laboratories, Inc. Method of making electrical resistors. 2,901,384, 8–25–59, Cl. 117—221.

Weiss, Ernest, to Weiss Co. Inc. Method of making a fluid dispensing device. 2,901,155, 8–25–59, Cl. 222—95.

Weiss Co. Inc.: *See*—
Weiss, Ernest. 2,901,155.

Welch, Ralph, to Welch Co. Method of making a fluid dispensing device. 2,901,156, 8–25–59, Cl. 222—95.

Welch Co.: *See*—
Welch, Ralph. 2,901,156.

Welty, Taff, and Sage: *See*—
Hemminger, Charles E. 2,901,415.

Wenzel, Lawrence A., to Wenzel Co. Method of making a fluid dispensing device. 2,901,157, 8–25–59, Cl. 222—95.

Wenzel Co.: *See*—
Wenzel, Lawrence A. 2,901,157.

Werner, Ralph, to Werner Co. Method of making a fluid dispensing device. 2,901,158, 8–25–59, Cl. 222—95.

Werner Co.: *See*—
Werner, Ralph. 2,901,158.

Wesley, Richard H., to Bell Telephone Laboratories, Inc. Method of making electrical resistors. 2,901,385, 8–25–59, Cl. 117—221.

Westinghouse Air Brake Co.: *See*—
Bowen, Ralph E. 2,900,941.

Westinghouse Electric Corp.: *See*—
Bowen, Ralph E. 2,900,941.
Cooper, Robert. 2,900,610.
Hall, Walter, and Walter. 2,900,966.
Hamilton, Walter E., and Trafelet. 2,900,723.
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Lee, Robert. 2,900,621.
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Tupper, Earl S., to Tupper Corp. Discardable or reusable plastic package. 2,901,098, 8–25–59, Cl. 206—46.
Turbin, Kenneth L.: *See*—
MacKenzie, Gordon F., and Turbin. 2,901,482.
Turner, Louis A.: *See*—
Jacobsen, Andrew B., and Turner. 2,901,743.
Ty-Sa-Man Machine Co.: *See*—
Hensley, James L. 2,901,245.
Udale, Stanley M., to Holley Carburetor Co. Fuel injection system. 2,900,969, 8–25–59, Cl. 123—140.
Udy, Marvin J., to Strategic-Udy Metallurgical and Chemical Processes, Ltd. Process for the separation and recovery of iron and titania from ores and concentrates of same. 2,901,341, 8–25–59, Cl. 75—40.
Udylite Corp., The: *See*—
Brown, Henry. 2,900,707.
Ueberschaer, Hubert: *See*—
Kauffmann, William M., and Ueberschaer. 2,900,971.
Underwood, William F., and H. L. Leventhal, to Union Carbide Corp. Method for producing artificial food casing. 2,901,358, 8–25–59, Cl. 99—176.
Union Carbide Corp.: *See*—
Auerbach, Victor, and Ingbermann. 2,901,461.
Huntley, Alton K., and Carmichael. 2,901,526.
Isele-Aregger, Alfons. 2,901,139.
Jurras, Andrew W. 2,901,455.
Keutgen, William A., Davall, Daniels, and Noyes. 2,901,337.
Loveday, Paul E. 2,900,800.
Rogers, Lewis M. 2,901,438.
Underwood, William F., and Leventhal. 2,901,358.
United-Carr Fastener Corp.: *See*—
Cochran, Clarence W. 2,900,687.
United Kingdom Atomic Energy Authority: *See*—
Huddie, Roy A. U., Pearson, and de Lippa. 2,901,346.
United Shoe Machinery Corp.: *See*—
Carter, James P. 2,900,933.
Pickford, George, and Ward. 2,900,932.
Quinn, Edward. 2,900,649.
U.S. Acoustics Corp.: *See*—
Stedman, Cresswell E. 2,901,228.
United States Borax & Chemical Corp.: *See*—
Sprouse, Norman T., and McIntyre. 2,901,322.
United States Gasket Co.: *See*—
Rudner, Merritt A. 2,901,529.
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Agriculture: *See*—
Chance, Leon H., Drake, and Reeves. 2,901,444.
Cowan, John C., and Teeter. 2,901,469.
Teeter, Howard M., Danzig, and Cowan. 2,901,495.
Air Force: *See*—
Baker, James G. 2,900,871.
Isely, William H. 2,901,744.
Strona, Janis A. 2,901,748.
Smith, Caldwell P. 2,901,697.
Army: *See*—
Brubaker, John G., Wassel, and Reynolds. 2,900,876.
Ciccone, Thomas Q. 2,900,914.
Fergus, John H., and Horton. 2,900,875.
Nerwin, Hubert. 2,900,887.
Sheeley, Eugene N. 2,900,913.
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Atomic Energy Commission: *See*—
Baker, William R. 2,901,714.
Baldwin, Lawrence W. 2,901,622.
Barnes, Sidney W. 2,901,617.
Barnes, Sidney W. 2,901,620.
Brobeck, William M. 2,901,621.
Coffinberry, Arthur S. 2,901,345.
Coryell, Charles D. 2,901,315.
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324— 1: 2,901,687
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336— 82: 2,901,713
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135: 2,901,716
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163: 2,901,720
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339— 114: 2,901,722
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340— 3: 2,901,726
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234: 2,901,741
253: 2,901,634
324: 2,901,727
343— 6: 2,901,742
6.5: 2,901,743
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7.7: 2,901,745
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346— 74: 2,901,309

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28—	73:	2, 900, 700	153:	2, 900, 785	88—	14:	2, 900, 896	111—	5:	2, 900, 931		420:	2, 901, 005		2, 901, 556

Classification of Designs

D 4—	2:	185, 949	D26—	5:	185, 960	D44—	9:	185, 971	D52—	2:	185, 982	D58—	26:	185, 993	D80—	8:	186, 004
	3:	185, 950		14:	185, 961		29:	185, 972		3:	185, 983	D61—	1:	185, 994		11:	186, 005
		185, 951			185, 962	D48—	4:	185, 973	D56—	1:	185, 984			185, 995	D81—	19:	186, 006
D 5—	4:	185, 952			185, 963			185, 974			185, 985			185, 996			186, 007
D 7—	5:	185, 953			185, 964		10:	185, 975		4:	185, 986			185, 997		24:	186, 008
		185, 954	D34—	5:	185, 965			185, 976	D57—	1:	185, 987			185, 998	D88—	3:	186, 009
D 9—	2:	185, 955		14:	185, 966		20:	185, 977	D58—	4:	185, 988			185, 999	D91—	1:	186, 010
D14—	3:	185, 956		15:	185, 967			185, 978			185, 989	D71—	1:	186, 000			186, 011
D16—	2:	185, 957	D35—	1:	185, 968			185, 979		5:	185, 990			186, 001		3:	186, 012
D22—	3:	185, 958	D42—	8:	185, 969		23:	185, 980		8:	185, 991			186, 002			
D26—	1:	185, 959	D44—	1:	185, 970	D52—	1:	185, 981		12:	185, 992	D72—	1:	186, 003			

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OFFICIAL GAZETTE • UNITED STATES PATENT OFFICE

August 25, 1959 Volume 745 Number 4

TRADEMARKS

NOTICES

Trademark Suits

Notices under 15 U.S.C. 1116; Trademark Act of July 5, 1946

Reg. No. 75,365 (ALLIGATOR BRAND), The Alligator Co., Oiled clothing; **Reg. No. 251,201** (ALLIGATOR), same, Coats, jackets, pants, hats and caps for men, women and children, etc., filed May 6, 1959, D.C., E.D. Pa. (Philadelphia), Doc. 26297, *The Alligator Co. and David Crystal, Inc.* v. *Campus Sweater and Sportswear Co.*

Reg. No. 155,951 (ALFRED DUNHILL IN SCRIPT), Alfred Dunhill of London, Inc., Tobacco products; **Reg. No. 203,732** (UNIQUE LIGHTER DUNHILL AND DESIGN), same, Portable and pocket cigar and cigarette lighters; **Reg. No. 355,304** (DUNHILL), Razors; **Reg. No. 356,564** (DUNHILL DOUBLE-CLARO), same, Tobacco products, particularly cigars; **Reg. No. 402,585** (DUNHILL), same, Clocks and watches; **Reg. No. 406,661**, same, Alfred Dunhill, Ltd., Pyrophoric lighters; **Reg. No. 406,218**, same, Tobacco, manufactured or unmanufactured, cigars and cigarettes; **Reg. No. 406,638**, same, Tobacco pipes, cigar and cigarette holders; **Reg. No. 419,717** (ALFRED DUNHILL IN SCRIPT), same, Cosmetic preparations, namely, powder, rouge, lipstick, grease paints, hair oil, shampoo preparations, hair lotions, hair tinting preparations, etc.; **Reg. No. 421,429**, same, Soaps and shaving creams; **Reg. No. 527,207** (DUNHILL), same, Pyrophoric lighters; **Reg. No. 527,208**, same, Tobacco pipes, cigar and cigarette holders; **Reg. No. 534,765**, same, Tobacco pouches made of leather; **Reg. No. 539,892**, same, Raw tobacco, smoking and chewing tobacco, snuff, cigars, and cigarettes; **Reg. No. 546,339**, same, Billfolds, purses, handbags, document cases and wallets, all being goods made of leather; **Reg. No. 541,949** (DUNHILL DOUBLE-CLARO), Alfred Dunhill of London, Inc., Tobacco products, particularly cigars; **Reg. No. 634,071** (ALFRED DUNHILL), same, Men's ties, filed June 3, 1959, D.C., S.D.N.Y., Doc. 146/376, *Alfred Dunhill of London, Inc.* v. *Dunhill Shirt Co.*

Reg. No. 195,359. (See Reg. No. 510,092.)

Reg. No. 203,732. (See Reg. No. 155,951.)

Reg. No. 223,310 (TABASCO), McIlhenny Co., Pepper sauce; **Reg. No. 230,910** (TABASCO, ETC. WITH DESIGN), same; **Reg. No. 230,758**, same; **Reg. No. 285,491**, same; **Reg. No. 288,762**, same; **Reg. No. 597,767**, same; **Reg. No. 606,402** (TABASCO), same; **Reg. No. 606,423** (TABASCO WITH DESIGN), same; **Reg. No. 629,841** (REPRESENTATION OF A BOTTLE), same; **Reg. No. 656,314** (TABASCO AND DESIGN), same, filed June 12, 1959, D.C.N.J. (Newark), Doc. 503/59, *McIlhenny Co.* v. *Cramore Products, Inc.*

Reg. No. 251,201. (See Reg. No. 75,365.)

Reg. No. 263,745 (STRIDE RITE ENCIRCLED), La Londe and Clarke, Inc., Boots and shoes of leather, fabric, or combinations thereof; **Reg. No. 281,811** (THE STRIDE RITE SHOE ENCIRCLED), The Green Shoe Mfg. Co., Shoes of leather, fabric and combinations thereof; **Reg. No. 406,586**

CONDITION OF TRADEMARK APPLICATIONS AS OF JUNE 30, 1959

Total number of applications awaiting action [excluding renewals and Sec. 12 (c)]	10,792
Date of oldest new application	Jan. 2, 1959
Date of oldest amended application	Feb. 3, 1959

J. H. MERCHANT, Director, Trademark Examining Operation

TRADEMARK EXAMINING DIVISIONS, EXAMINERS AND TRADEMARK CLASSES UNDER EXAMINATION	Oldest Application: New	Oldest Application: Amended
C. M. WENDT, Deputy Director, Trademark Examining Operation		
(I) J. R. STERBA, Classes 4, 5, 12, 13, 14, 16, 19, 21, 23, 24, 25, 26, 30, 31, 32, 33, 34, 35, 36, 44, 50	2-13-59	3-11-59
(II) R. F. SHRYOCK, Classes 6, 18, 27, 28, 46, 51; Service Mark Classes 100, 101, 102, 103, 104, 105, 106, 107; Collective Membership Marks Class 200	1-29-59	2-3-59
(III) K. I. HANCOCK, Classes 1, 2, 3, 7, 8, 9, 10, 11, 15, 17, 20, 22, 29, 37, 38, 39, 40, 41, 42, 43, 45, 47, 48, 49, 52; and Certification Marks	1-2-59	3-3-59
Renewals (All Classes)	5-29-59	6-25-59
Sec. 12 (c) Publications (All Classes)	6-5-59	6-5-59

Applications filed during the month of June 1959—2,029

Registrations Issued	420—No. 683,819 to No. 684,238
Renewals Issued	76

The TRADEMARK SECTION of the OFFICIAL GAZETTE, issued weekly, is mailed under the direction of the Superintendent of Documents, Government Printing Office, Washington 25, D. C., to whom all subscriptions should be made payable and all communications addressed; subscription price, $10.00 per annum, foreign mailing $3.75 additional; single copies, 20 cents each.

PRINTED COPIES OF TRADEMARK REGISTRATIONS are furnished by the Patent Office for 10 cents each. Address orders to the Commissioner of Patents, Washington 25, D.C.

(STRIDE RITE), same; **Reg. No. 528,048** (THE STRIDE RITE SHOE), same, **filed** June 19, 1959, D.C., S.D.N.Y., Doc. 147/215, *The Green Shoe Mfg. Co. v. National Shoes, Inc.*

Reg. No. 280,758. (See Reg. No. 223,310.)

Reg. No. 280,910. (See Reg. No. 223,310.)

Reg. No. 283,766 (PING PONG), Parker Brothers, Inc., Bats and rackets of the tennis type for games; **Reg. No. 283,767**, same, Hollow composition and like balls for indoor bat or racket games, table games, tennis-type games and the like; **Reg. No. 294,408**, same, Table and parts thereof especially constructed for a game; **Reg. No. 520,270**, same, Game played with rackets and balls, **filed** May 1, 1959, D.C., E.D.N.Y. (Brooklyn), Doc. C–19734, *Parker Bros. Inc. v. The Plas-tris Co., Inc. et al.* Consent judgment, injunction granted June 12, 1959.

Reg. No. 283,767. (See Reg. No. 283,766.)

Reg. No. 285,491. (See Reg. No. 223,310.)

Reg. No. 288,762. (See Reg. No. 223,310.)

Reg. No. 294,408. (See Reg. No. 283,766.)

Reg. No. 355,304. (See Reg. No. 155,951.)

Reg. No. 356,504. (See Reg. No. 155,951.)

Reg. No. 356,719. (See Reg. No. 556,671.)

Reg. No. 361,811. (See Reg. No. 263,745.)

Reg. No. 393,642. (See Reg. No. 556,671.)

Reg. No. 403,585. (See Reg. No. 155,951.)

Reg. No. 403,661. (See Reg. No. 155,951.)

Reg. No. 404,218. (See Reg. No. 155,951.)

Reg. No. 406,565. (See Reg. No. 263,745.)

Reg. No. 406,638. (See Reg. No. 155,951.)

Reg. No. 419,717. (See Reg. No. 155,951.)

Reg. No. 421,429. (See Reg. No. 155,951.)

Reg. No. 422,335. (See Reg. No. 510,992.)

Reg. No. 510,992 (CHANEL), Chanel, Inc., Perfume, toilet water, eau de cologne, face powder, talcum powder, lipsticks and lip oil; **Reg. No. 195,339** (TWO C's IN DESIGN), same, Face powder, perfume, eau de cologne, toilet water, lipstick and rouge; **Reg. No. 422,335** (NO. 5), same, Perfume, toilet water, eau de cologne, face powder, talcum powder and bath powder, **filed** June 10, 1959, D.C., N.D. Ill. (Chicago); Doc. 59c913, *Chanel Industries, Inc. v. Edward Baker, doing business as Bonheur Co. et al.*

Reg. No. 520,270. (See Reg. No. 283,766.)

Reg. No. 527,207. (See Reg. No. 155,951.)

Reg. No. 527,208. (See Reg. No. 155,951.)

Reg. No. 528,068. (See Reg. No. 263,745.)

Reg. No. 534,705. (See Reg. No. 155,951.)

Reg. No. 539,892. (See Reg. No. 155,951.)

Reg. No. 540,389. (See Reg. No. 155,951.)

Reg. No. 541,949. (See Reg. No. 155,951.)

Reg. No. 556,671 (HAYMAKERS), Avon Shoe Co., Inc., Men's, women's and children's shoes of leather, suede, canvas, etc.; **Reg. No. 571,010**, same; **Reg. No. 380,719** (THE HAYMAKER), C. D. Osborn Co., Gloves made of leather, fabric and/or combinations thereof; **Reg. No. 393,642** (HAYMAKER), The Daniel Hays Co., Inc., same, **filed** Oct. 28, 1953, D.C., S.D.N.Y., Doc. 89/29, *Avon Shoe Co., Inc. and Haymaker Shoe Corp. v. David Crystal, Inc., Haymaker Sports, Inc., B. Altman and Co., Best and Co., Inc., and John Wanamaker.* Complaint and counterclaim for infringement of trademark "HAYMAKER" dismissed on merits Mar. 4, 1959; pending opposition dissolved.

Reg. No. 571,010. (See Reg. No. 556,671.)

Reg. No. 597,767. (See Reg. No. 223,310.)

Reg. No. 606,402. (See Reg. No. 223,310.)

Reg. No. 606,422. (See Reg. No. 223,310.)

Reg. No. 614,901 (FROSTOP), Frostop Products, Inc., Root beer and syrup used in making root beer; **Des. 188,826**, T. W. Ganus, Combined beverage and food vending building, **filed** June 17, 1959, D.C., S.D. Miss. (Jackson), Doc. 2139, *Frosty Products, Inc. v. Sun-Glo Packers, Inc.*

Reg. No. 629,641. (See Reg. No. 223,310.)

Reg. No. 634,071. (See Reg. No. 155,951.)

Reg. No. 656,314. (See Reg. No. 223,310.)

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MARKS PUBLISHED FOR OPPOSITION

The following marks are published in compliance with section 12(a) of the Trademark Act of 1946. Notice of opposition under section 13 may be filed within thirty days of this publication. See Rules 2.101 to 2.105.
As provided by section 31 of said act, a fee of twenty-five dollars must accompany each notice of opposition.

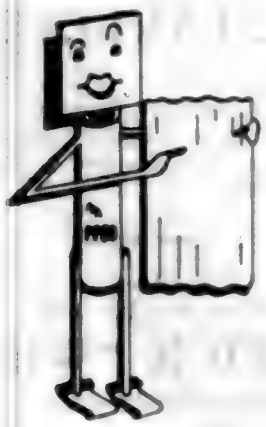
Class 1—Raw or Partly Prepared Materials

SN 45,841. Packaged Hulls, Inc., Sacramento, Calif. Filed Feb. 5, 1958.

Grapak

For Processed Rice Hulls Used in Packing and Shipping Fruit.
First use Feb. 15, 1957.

SN 49,191. Joe H. Reznik, d.b.a. A.A.A. Plastic Products Company, Birmingham, Ala. Filed Apr. 7, 1958.



For Resin Plastics in Sheet, Rod, and Tube and Film Form.
First use Feb. 3, 1958.

SN 52,842. Wesley H. Yorgensen, d.b.a. Industrial Absorbents and Supply Company, Hartford, Conn. Filed June 3, 1958.

SUPER
Sorb-Mor

For Fuller's Earth for Use as an All Purpose Absorbent for Oil, Water, Grease, and Materials Having Offensive Odors, Such as Animal Litter.
First use May 8, 1958.

SN 56,115. Foster Grant Co., Inc., Leominster, Mass. Filed July 28, 1958.

FOSTACRYL

For Thermoplastic Polystyrene Resins for Molding and Extruding Purposes.
First use July 18, 1958.

SN 56,155. Mitchell Farms, Windfall, Ind. Filed July 28, 1958.

SCOTTY'S CHOICE

For Hybrid Seed Corn.
First use Jan. 28, 1958.

SN 57,914. Minnesota Mining and Manufacturing Company, St. Paul, Minn. Filed Aug. 26, 1958.

CuCLAD
LAMICOID

Owner of Reg. Nos. 277,883 and 575,208.
For Metal Coated Sheet Material (e.g. Metal Coated Paper, Cloth, Linen, or Fiber Mat), for General Use in the Industrial Arts.
First use Oct. 28, 1955.

SN 59,479. North American Rayon Corporation, New York, N.Y. Filed Sept. 24, 1958.

Narene

For Polyester Staple Fiber and Tow.
First use on or about June 9, 1958.

SN 59,480. North American Rayon Corporation, New York, N.Y. Filed Sept. 24, 1958.

COMISO

For Rayon Staple Fiber and Tow.
First use on or about June 16, 1958.

SN 68,804. Diversified Industries, Inc., Trenton, S. C. Filed Mar. 3, 1959.

SN 66,832. Romney Fashions Inc., New York, N.Y. Filed Jan. 13, 1959.

SN 61,766. Associated Seed Growers, Incorporated, New Haven, Conn. Filed Nov. 3, 1958.

Asgrow

Owner of Reg. Nos. 299,969, 657,931, and others.
For Garden and Field Seeds, Bulbs, and Plants.
First use Mar. 15, 1943.

SN 62,883. Texas Farm Products Company, Nacogdoches, Tex. Filed Nov. 20, 1958.

LONE STAR

Owner of Reg. Nos. 295,169 and 278,243.
For Live Baby Chicks.
First use Mar. 25, 1958.

SN 63,096. Rezolin, Inc., Santa Monica, Calif. Filed Nov. 24, 1958.

CORFILL

For Soluble and Insoluble Aggregates for Use in Bonded Forms.
First use on or about Oct. 1, 1957.

SN 64,222. Tuffite Plastics, Inc., New York, N.Y. Filed Dec. 12, 1958.

FLEXLITE

For Closed Cell Polyethylene for General Use in the Industrial Arts.
First use Oct. 13, 1958.

SN 64,527. Robert Black and Associates, Traverse City, Mich. Filed Dec. 18, 1958.

NO-MAR

For Self-Adhering Polyurethane or Polyvinyl Chloride Foam or Sponge.
First use Nov. 3, 1958.

SN 65,529. Woodruff's Triple "T" Seeds, Incorporated, Wethersfield, Conn. Filed Jan. 8, 1959.

TRIPLE "T"

For Garden Seeds and Flower Seeds.
First use on or about Feb. 5, 1946.

SN 66,809. Penola Oil Company, New York, N.Y. Filed Jan. 30, 1959.

Jersey

For Asphalt.
First use July 28, 1958.

SN 69,625. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Mar. 16, 1959.

ORLON CANTRECE

Owner of Reg. Nos. 529,080 and 536,272.
For Synthetic Fibers and Filaments for Generalized Use in the Industrial Arts.
First use on or about Feb. 13, 1959.

Class 2—Receptacles

SN 53,963. Kordite Corporation, Macedon, N.Y., assignee of Textron Inc., Providence, R.I. Filed June 20, 1958.

Holiday

For Freezer and Refrigerator Food Storage Supplies—Namely, Plastic Bags and Boxes.
First use Mar. 15, 1958.

SN 59,174. Dispensers Inc., Los Angeles, Calif. Filed Sept. 19, 1958.

STARLINE

Owner of Reg. No. 573,924.
For Dispensing Receptacles—Namely, Paper Napkin Holders, Menu Holders, Straw Holders, Salt and Pepper Shakers, Sugar Pourers, Cheese Servers, and Serving Trays.
First use March 1954.

SN 62,299. Oscar F. Igersheim, d.b.a. Plastic Fabricators, New York, N.Y. Filed Nov. 12, 1958.

LIPSTICK "WHEEL"

For Plastic Tray Type Holder for Cosmetics and the Like.
First use in March 1958.

SN 65,116. The Norwich Pharmacal Company, d.b.a. Eaton Laboratories, Norwich, N.Y. Filed Dec. 30, 1958.

SQUEEJET

For Squeeze-Type Dispensers Containing Liquid Preparations.
First use Oct. 20, 1958.

SN 67,902. U.S. Dust Bag Corp., New York, N.Y. Filed Feb. 17, 1959.

VACSAC

For Disposable Vacuum Cleaner Bags.
First use Feb. 11, 1959.

SN 68,678. Fibran, S.A., San Juan de Las Abadesas, Gerona, Spain. Filed Mar. 2, 1959.

FIBRAN

Owner of Spanish Reg. No. 274,388, dated Jan. 20, 1954.
For Artificial and Natural Sausage Casings.

SN 68,753. The Syracuse Stamping Co., Inc., Syracuse, N.Y. Filed Mar. 2, 1959.

SYRACO

For Ribbon Spools.
First use at least as early as 1920.

First use May 8, 1958.

For Rayon Staple Fiber and Tow.
First use on or about June 16, 1958.

SN 68,804. Diversified Industries, Inc., Trenton, S. C. Filed Mar. 3, 1959.

FLORA-LAVA

For Free-Form Varied Colored Extruded and Molded Plastic Containers for Use With Artificial, Live and Dried Materials, and With Artificial Fruits, Etc.
First use Jan. 2, 1959.

SN 69,073. The Lawrence Paper Company, Lawrence, Kans. Filed Mar. 6, 1959.

RIGITUF

For Corrugated Paper Board Cartons.
First use Feb. 13, 1959.

Class 3 — Baggage, Animal Equipments, Portfolios, and Pocketbooks

SN 34,792. Hickok Manufacturing Co. Inc., Rochester, N.Y. Filed Aug. 1, 1957.

The drawing is lined for red and gold. The words "Positively Finer" appear on the scroll at the lower portion of the medallion. Owner of Reg. Nos. 177,816, 518,984, and others.
For Wallets, Billfolds, Pocket Secretaries, Key Cases, Fitted and Unfitted Kit Travel Cases.
First use June 3, 1957.

SN 63,395. American Kleer-Vu Plastics, Inc., New York, N.Y. Filed Dec. 1, 1958.

AMERICAN
KLEER-VU

For Wallets and Inserts in Wallets and Card-Carrying Cases.
First use December 1942.

SN 66,832. Romney Fashions Inc., New York, N.Y. Filed Jan. 13, 1959.

ROMNEY

Owner of Reg. No. 366,749.
For Women's and Children's Handbags and Pocketbooks.
First use Sept. 28, 1937.

SN 70,958. The Star Case Company, New York, N.Y. Filed Apr. 6, 1959.

CHARGETTE

For Wallets.
First use July 15, 1958.

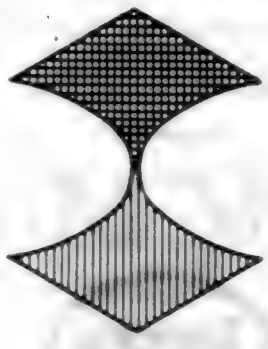
SN 71,503. Lou Nathan, Inc., New York, N.Y. Filed Apr. 14, 1959.

LONA

For Handbags.
First use Apr. 6, 1959.

Class 4 — Abrasives and Polishing Materials

SN 53,162. S. C. Johnson & Son, Inc., Racine, Wis. Filed June 9, 1958.



The drawing is lined for red and black.
For Cleaning, Polishing, and Protective Coating Preparations for Use on Wood, Metal, Linoleum, Tile, and Other Surfaces.
First use May 28, 1958.

SN 66,512. Valay Industries Limited, London, England. Filed Jan. 26, 1959.

WADPOL

For Abrasives and Polishing Materials for Aircraft.
First use Oct. 31, 1952; in commerce Oct. 17, 1955.

SN 70,683. Union Wadding Company, Pawtucket, R.I. Filed Apr. 1, 1959.

SHYN-MAID

For Treated Dusting, Polishing, and Wiping Cloths.
First use Mar. 3, 1948.

SN 69,205. Daniel Silverman, d.b.a. Jameco Metal Products Company, New York, N.Y. Filed Mar. 9, 1959.

SN 53,552. Edward W. Westlake, Atlanta, Ga. Filed June 13, 1958.

Class 5—Adhesives

SN 61,781. The Cambridge Tile Mfg. Co., Cincinnati, Ohio. Filed Nov. 3, 1958.

LION-BOND

For Tile Setting Adhesive.
First use Oct. 27, 1958.

SN 64,332. Pierce & Stevens Chemical Corp., Buffalo, N.Y. Filed Dec. 15, 1958.

HYBOND

For Contact Adhesives Applied by Rolling, Brushing, Troweling, and/or Spraying, for Bonding Laminates by Contact Alone.
First use on or about Feb. 5, 1957.

Class 6—Chemicals and Chemical Compositions

SN 66,442. Hoyt Pharmaceutical Corporation, Newton, Mass. Filed Jan. 26, 1959.

E-GRAPH

For Electrode Contact Solution for Use in Taking Electro-Cardiograms.
First use Jan. 2, 1959.

SN 66,811. Penola Oil Company, New York, N.Y. Filed Jan. 30, 1959.

Jersey

For Petrolatum.
First use July 25, 1958.

SN 67,490. R. T. Vanderbilt Company, Inc., New York, N.Y. Filed Feb. 10, 1959.

Varox

For Peroxide Accelerator for Use in the Manufacture of Natural and Artificial Rubber and Rubber Products.
First use Jan. 23, 1959.

SN 68,305. H. Raymond Neilson, d.b.a. Neilson Chemical Company of California, Los Angeles, Calif. Filed Feb. 24, 1959.

PHOSFA-TIZIT

For Chemical Preparation for Preparing Metal for Paint.
First use Dec. 10, 1958.

SN 70,385. National Lead Company, New York, N.Y. Filed Mar. 27, 1959.

INVIN

For Liquid Stabilizers for Vinyl Resins.
First use Sept. 24, 1958.

SN 70,594. The Harshaw Chemical Company, Cleveland, Ohio. Filed Mar. 31, 1959.

KEL-PAK

For Packaged Reagents for Nitrogen Determination.
First use Oct. 4, 1957.

Class 7—Cordage

SN 61,596. Tyrex Inc., New York, N.Y. Filed Oct. 29, 1958. COLLECTIVE MARK.

TYREX

For Viscose Yarns and Cords for Use in Making Pneumatic Tires.
First use July 11, 1958.

SN 65,783. Plas-Ties Company, Santa Ana, Calif. Filed Jan. 13, 1959.

Tab Tie

For Wire-Reinforced Tape Providing Tabs for Marking.
First use June 18, 1958.

Class 8—Smokers' Articles, Not Including Tobacco Products

SN 61,999. Distinguished Gift Manufacturers, Inc., Waterloo, Iowa. Filed Nov. 6, 1958.

The lining on the drawing is for shading purposes only. The words "A," "Gift," and "Creation" are disclaimed apart from the mark as shown.
For High Quality Specialised Gift Articles Consisting of Cigarette Lighters Mounted in Wooden Bases, Ash Trays in Decorative and Ornamental Bases, Desk Pieces in the Form of Lighter and Clock Items on a Single Base, and Combination Lighter and Ash Tray Units.
First use November 1956.

SN 68,991. The Dennis Company, Chicago, Ill. Filed Mar. 4, 1959.

"BIG WHEEL"

For Ashtray.
First use Nov. 26, 1958.

First use December 1942.

First use Mar. 3, 1948.

SN 69,205. Daniel Silverman, d.b.a. Jameco Metal Products Company, New York, N.Y. Filed Mar. 9, 1959.

GOLD TONE

The drawing is lined for gold.
For Lighter, Ashtray, and Cigarette Case.
First use May 31, 1957.

Class 10 — Fertilizers

SN 69,276. Olin Mathieson Chemical Corporation, New York, N.Y. Filed Mar. 10, 1959.

ROSY FUTURE

For Fertilizer.
First use Aug. 30, 1955.

SN 69,460. Norsk Hydro-Elektrisk Kvaelstofaktieselskab, Oslo, Norway. Filed Feb. 12, 1959.

NITRODOL

Owner of Norwegian Reg. No. 46,166, dated Mar. 29, 1955.
For Fertilizers.

Class 12 — Construction Materials

SN 21,124. L. S. Brown Company, Atlanta, Ga. Filed Dec. 17, 1956.

WEATHER KING

For Glass Jalousies.
First use on or about Oct. 21, 1953.

SN 39,295. Taylor & Art, Inc., Oakland, Calif. Filed Oct. 21, 1957.

FLEX BOND

For Plastic Composition for Repairing and Restyling Automobile Bodies and the Like.
First use Aug. 15, 1957.

SN 50,235. The Columbus Beverage Company, Columbus, Nebr. Filed Apr. 28, 1958.

OMEGA

For Shower Doors and Tub Enclosures and Fiber Glass Shower Receptors.
First use Feb. 6, 1958.

SN 53,552. Edward W. Westlake, Atlanta, Ga. Filed June 13, 1958.

For Metal Windows and Doors.
First use Feb. 1, 1952.

SN 60,000. Standard Oil Company of California, San Francisco, Calif. Filed Oct. 2, 1958.

CHEVRON

Owner of Reg. Nos. 401,420, 656,306, and others.
For Asphaltic Construction and Surfacing Compositions.
First use November 1956.

SN 61,924. Morgan Company of Wisconsin, Oshkosh, Wis. Filed Nov. 4, 1958.

MORGAN
M-400
Custom-Line

The words "Custom-Line" are disclaimed apart from the mark as shown. Owner of Reg. Nos. 604,993, 594,741, and others.
For Doors.
First use Sept. 9, 1958.

SN 63,799. Burnham Corporation, Irvington-on-Hudson, N.Y. Filed Dec. 8, 1958.

SWIM-MOR

For Fitted Enclosure Comprising a Frame Member and a Cover Therefor for an Outdoor Swimming Pool.
First use Nov. 22, 1958.

SN 64,498. Shell Chemical Corporation, New York, N.Y. Filed Dec. 17, 1958.

GUARDKOTE

For Resinous Paving Cement.
First use June 27, 1958.

SN 65,683. The Morgan Crucible Company Limited, London, England. Filed Jan. 12, 1959.

BRIMOR

Owner of British Reg. No. 760,277, dated Dec. 6, 1956.
For Refractory Cements for Use in Embedding Strain Gauges.

SN 68,480. Electrovert Ltd., Montreal, Quebec, Canada. Filed Feb. 26, 1959.

RODOFIX

Owner of Canadian Reg. No. 113,226, dated Feb. 13, 1959.
For Caulking Compounds.

SN 68,911. Klise Manufacturing Company, Grand Rapids, Mich. Filed Mar. 4, 1959.

SOLARDOME

For Skylights, Ceiling Units, Etc.
First use Feb. 1, 1955.

SN 69,029. The Ruberoid Co., New York, N.Y. Filed Mar. 5, 1959.

RUBEROID

Owner of Reg. Nos. 50,919, 607,814, and others.
For Building, Roofing, and Sound and Heat Insulating Products Made From Asphalt, Asbestos, Asbestos-Cement, Gypsum, or Combinations Thereof.
First use on or about Sept. 1, 1890.

Class 13—Hardware and Plumbing and Steam-Fitting Supplies

SN 57,882. A. W. Cash Valve Manufacturing Corporation, Decatur, Ill. Filed Aug. 26, 1958.

HYDROZONE

For Valves for Controlling the Flow of Water.
First use Aug. 22, 1958.

SN 58,265. Stewart-Warner Corporation, Chicago, Ill. Filed Sept. 2, 1958.

SURGEPRUF

Owner of Reg. No. 666,604.
For Hose Couplings.
First use Jan. 31, 1955.

SN 67,569. Ross Operating Valve Company, Detroit, Mich. Filed Feb. 11, 1959.

CUB

For Control Valve for Use in Conjunction With Machines and Other Industrial Uses.
First use Feb. 3, 1959.

SN 69,061. The Farm Bureau Cooperative Association, Inc., Columbus, Ohio. Filed Mar. 6, 1959.

The drawing is lined for shading only. Owner of Reg. Nos. 671,363, 676,557, and others.
For Metal Fence.
First use Nov. 14, 1958.

Class 15—Oils and Greases

SN 22,884. Continental Oil Company, Ponca City, Okla. Filed Jan. 22, 1957.

TUNES-IT

For Upper Cylinder Lubricant and Crankcase Additive.
First use Dec. 28, 1956.

SN 69,942. Sheldon M. Booth, d.b.a. Diamond Tool Company, South Haven, Mich. Filed Mar. 20, 1959.

COOLIE-GREEN

Owner of Reg. No. 659,777.
For Cutting Oil for Grinding Purposes.
First use Mar. 3, 1959.

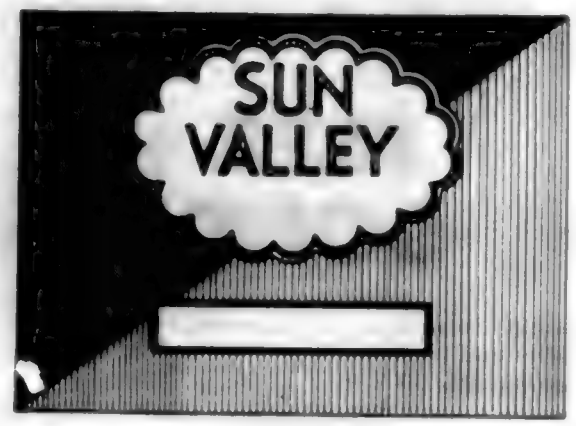
Class 16—Protective and Decorative Coatings

SN 55,974. Gillespie Varnish Company, Jersey City, N.J., assignee of The Bulldog Corporation, Jersey City, N.J. Filed July 25, 1958.

BULL DOG

Owner of Reg. No. 108,200.
For Paints and Varnishes.
First use Nov. 1, 1910.
Subj. to Intf. with Reg. No. 680,245.

SN 63,945. Lincoln Overseas Company, Inc., New York, N.Y. Filed Dec. 9, 1958.



The word "Sun" is disclaimed apart from the mark as shown. The drawing is lined for red.
For Paints.
First use on or about Oct. 15, 1953.

SN 65,335. Royaltone Products Corporation, Brooklyn, N.Y. Filed Jan. 5, 1959.

ROYALTONE

For Protective Glaze Coating for Automotive Vehicles.
First use June 3, 1955.

SN 70,152. Keystone View Company, Meadville, Pa. Filed Mar. 24, 1959.

BRILLIANT VU

For Protective Coating for Etched Glass Slides.
First use Jan. 2, 1959.

SN 72,552. Southland Naval Stores Company, Gainesville, Tex. Filed Apr. 29, 1959.

OLD SOUTH Hi-Fi

For Paint.
First use Feb. 23, 1959.

SN 72,707. Cook & Dunn Paint Corp., Newark, N.J. Filed May 1, 1959.

COLORMARVL

For Paint Colorant.
First use Feb. 6, 1959.

SN 72,745. Arthur G. Miller, d.b.a. Miller Paint & Chemical Company, Atkinson, Nebr. Filed May 1, 1959.

Millstex

For Paint.
First use June 17, 1954.

SN 72,755. The Sherwin-Williams Company, Cleveland, Ohio. Filed May 1, 1959.

SHER-WIL-LAST

Owner of Reg. Nos. 633,497, 656,318, and others.
For Paints, Undercoaters, and Masonry Surface Sealers and Conditioners.
First use Apr. 22, 1959.

SN 72,830. Gilman Paint and Varnish Company, Chattanooga, Tenn. Filed May 4, 1959.

FASTCOTE

Owner of Reg. No. 615,967.
For Wall Primer Sealer.
First use Sept. 17, 1953.

SN 72,899. Subox, Inc., Hackensack, N.J. Filed May 4, 1959.

SUBALOX

For Protective and Decorative Coatings.
First use Mar. 1, 1932.

Class 17 — Tobacco Products

SN 55,021. Hermanos Ortega, Havana, Cuba. Filed July 9, 1958.

LOS NOBLES

Owner of Cuban Reg. No. 89,783, dated Jan. 29, 1954.
For Twist and Cut Tobacco Products.

SN 55,022. Hermanos Ortega, Havana, Cuba. Filed July 9, 1958.

LA NOBLEZA

Owner of Cuban Reg. No. 89,804, dated Jan. 30, 1954.
For Twist and Cut Tobacco Products.

SN 60,872. Oscar Leon Alvarez, Cabalguan, Las Villas, Cuba. Filed Oct. 20, 1958.

For Cigars.
First use July 26, 1958; in commerce July 26, 1958.

SN 65,814. Bayuk Cigars Incorporated, Philadelphia, Pa. Filed Jan. 14, 1959.

The drawing is lined for the colors red, blue, and gold, but no claim is made to color. Owner of Reg. Nos. 301,341 and 545,999.
For Cigars.
First use Nov. 13, 1958.

SN 67,049. R. Faerch A/S, Aarhus, Denmark. Filed Feb. 4, 1959.

R. FAERCH'S DANISH WHIFFS

For Small Cigars, Sometimes Termed Cigarillos.
First use Oct. 1, 1957; in commerce Oct. 1, 1957.

SN 66,530. Bristol Laboratories Inc., Syracuse, N.Y. Filed Jan. 27, 1959.

SN 67,681. Heusner Cigar Company, Inc., Hanover, Pa. Filed Feb. 13, 1959.

WIFF 'N' PUFF

For Cigars.
First use Jan. 21, 1959.

SN 70,276. Brown & Williamson Tobacco Corporation, Louisville, Ky. Filed Mar. 26, 1959.

VALIANT

For Cigarettes.
First use Mar. 4, 1959.

SN 70,576. Brown & Williamson Tobacco Corporation, Louisville, Ky. Filed Mar. 31, 1959.

CORONET

For Cigarettes.
First use Mar. 20, 1959.

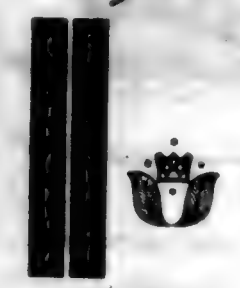
SN 70,577. Brown & Williamson Tobacco Corporation, Louisville, Ky. Filed Mar. 31, 1959.

BREEZE

For Cigarettes.
First use Mar. 20, 1959.

SN 70,829. The American Tobacco Company, New York, N.Y. Filed Apr. 6, 1959.

Tennyson



For Cigarettes.
First use Apr. 1, 1959.

SN 70,830. The American Tobacco Company, New York, N.Y. Filed Apr. 6, 1959.

TENNYSON

For Cigarettes.
First use Apr. 1, 1959.

Class 18—Medicines and Pharmaceutical Preparations

SN 63,130. U.S. Vitamin & Pharmaceutical Corporation, New York, N.Y., by change of name from U.S. Vitamin Corporation, New York, N.Y. Filed Nov. 24, 1958.

INSORAL

For Pharmaceutical Preparation Used in the Treatment of Diabetes Mellitus To Regulate Blood Sugar Levels.
First use Oct. 16, 1958.

SN 63,571. Burroughs Wellcome & Co. (U.S.A.) Inc., Tuckahoe, N.Y. Filed Dec. 3, 1958.

IMBRETIL

For Medicinal Preparation for the Purpose of Producing Muscle Relaxation During Surgical Anesthesia and Shock Therapy.
First use Sept. 4, 1958.

SN 63,663. The National Drug Company, Philadelphia, Pa. Filed Dec. 4, 1958.

HESPER-C AGIATRIC

Owner of Reg. No. 668,915.
For Medicinal Preparation for Use as a Geriatric Nutritional Supplement.
First use Nov. 25, 1958.

SN 64,011. Merck & Co., Inc., Rahway, N.J. Filed Dec. 10, 1958.

HYDRODIURIL

Owner of Reg. Nos. 605,687, 676,884, and others.
For Medicinal Compound for Use as a Diuretic and as an Agent in the Treatment of Hypertension.
First use Nov. 18, 1958.

SN 64,047. Brown Laboratories, Incorporated, Greenville, N.C. Filed Dec. 11, 1958.

The drawing is lined for blue, but color is not claimed as a feature of the mark.
For Expectorant and Antipyretic for Irritations of the Nasal Passages.
First use Sept. 18, 1958.

SN 64,506. Frank L. Thompson, Miami, Fla. Filed Dec. 17, 1958.

FRANK'S

For Liniment.
First use Oct. 28, 1958.

SN 64,744. Pabst Brewing Company, Chicago, Ill. Filed Dec. 22, 1958.

PABSTGARD

Owner of Reg. Nos. 180,636, 609,742, and others.
For Poultry Medicine and Growth Stimulator.
First use Sept. 15, 1958.

First use Sept. 17, 1953.

First use Oct. 1, 1957; in commerce Oct. 1, 1957.

SN 64,997. Millpax, Inc., Carlock, Ill. Filed Dec. 29, 1958. Owner of Reg. No. 632,557.

Millrue

For Vitamin and Mineral Preparation Used as a Dietary Supplement.
First use Oct. 1, 1958.

SN 65,061. C. H. Boehringer Sohn, Ingelheim am Rhein, Germany. Filed Dec. 30, 1958.

RADOSISTEN

Owner of German Reg. No. 713,481, dated Apr. 30, 1958.
For Medicated Preparation for the Treatment of Radiation Burn.

SN 65,640. Max Derfler, d.b.a. Nutrition Control Products, New York, N.Y. Filed Jan. 12, 1959.

LEVOID

For Thyroid Preparation.
First use on or before July 15, 1958.

SN 65,986. Wynn Pharmacal Corporation, Philadelphia, Pa. Filed Jan. 16, 1959.

DEXATAL #2

For Sustained Medication Tablet Used in the Treatment of Obesity.
First use Mar. 26, 1954.

SN 66,232. Chas. Pfizer & Co., Inc., Brooklyn, N.Y. Filed Jan. 21, 1959.

NEOCOR-TYZINE

Owner of Reg. Nos. 605,685 and 662,468.
For Anti-Bacterial, Anti-Inflammatory Nasal Decongestant.
First use May 29, 1958.

SN 66,234. Chas. Pfizer & Co., Inc., Brooklyn, N.Y. Filed Jan. 21, 1959.

COR-TYZINE

Owner of Reg. Nos. 605,685 and 662,468.
For Anti-Inflammatory Nasal Decongestant.
First use May 29, 1958.

SN 66,462. The S. E. Massengill Company, Bristol, Tenn. Filed Jan. 26, 1959.

THE S. E. MASSENGILL COMPANY VETERINARY DIVISION

The words "Veterinary Division" are disclaimed.
For Veterinary Medicinal and Pharmaceutical Preparations for Internal and Topical Use.
First use Nov. 18, 1958.

SN 66,530. Bristol Laboratories Inc., Syracuse, N.Y. Filed Jan. 27, 1959.

VITREX

For Antibiotic Preparation.
First use Dec. 19, 1958.

SN 66,644. Chas. Pfizer & Co., Inc., Brooklyn, N.Y. Filed Jan. 28, 1959.

NIAMID

For Psycho-Therapeutic Preparation.
First use Jan. 27, 1959.

SN 67,452. Geigy Chemical Corporation, Ardsley, N.Y. Filed Feb. 10, 1959.

FABIANOL

For Autonomic Blocking Agents.
First use Jan. 29, 1959.

SN 68,696. Hoyt Pharmaceutical Corporation, Newton, Mass. Filed Mar. 2, 1959.

PRO-BLEM

For Medicinal Preparation for External Use in the Treatment of Skin Infections.
First use Feb. 10, 1959.

SN 70,381. Miles Laboratories, Inc., Elkhart, Ind. Filed Mar. 27, 1959.

CHOCKS

For Multiple Vitamins.
First use Oct. 27, 1958.

SN 70,473. The G. F. Harvey Company, Inc., New York, N.Y. Filed Mar. 30, 1959.

PALFIUM

For Analgesic Preparation.
First use Mar. 19, 1959.

SN 70,474. The G. F. Harvey Company, Inc., New York, N.Y. Filed Mar. 30, 1959.

ACK-PIRIN

For Preparation for the Temporary Relief of Minor Aches and Pains.
First use Feb. 24, 1959.

SN 70,475. The G. F. Harvey Company, Inc., New York, N.Y. Filed Mar. 30, 1959.

ACK-SYN

For Preparation for the Temporary Relief of Minor Aches and Pains.
First use Feb. 24, 1959.

SN 70,503. The Murine Company, Inc., Chicago, Ill. Filed Mar. 30, 1959.

MURINE

Owner of Reg. Nos. 47,813, 567,602, and others.
For Preparations for the Hygienic Care of the Eyes.
First use October 1894.

SN 69,605. Bendix Aviation Corporation, Washington, D.C. Filed Mar. 16, 1959.

SN 40,130. Pal, Narodni Podnik, Kbely, near Prague, Czechoslovakia. Filed Nov. 5, 1957.

SN 70,571. American Home Products Corporation, d.b.a. Ayerst Laboratories, New York, N.Y. Filed Mar. 31, 1959.

CYFUMATE

For Vitamin Mineral Preparation.
First use Mar. 17, 1959.

SN 70,780. Ciba Pharmaceutical Products Inc., Summit, N.J. Filed Apr. 3, 1959.

GAMMACORTEN

For Pharmaceutical Preparations of Steroid Hormones.
First use Mar. 3, 1959.

SN 70,871. William Cooper & Nephews, Incorporated, Chicago, Ill. Filed Apr. 6, 1959.

OPTICURE

For Medicinal Spray for Prevention and Treatment of Pink Eye in Cattle and Sheep.
First use March 1958.

SN 70,890. The G. F. Harvey Company, Inc., New York, N.Y. Filed Apr. 6, 1959.

OTHO DERMA

For Preparation for the Relief of Chronic and Subacute Eczema, Seborrhea, Psoriasis, and Related Dermatoses.
First use October 1945.

SN 70,941. The Purdue Frederick Company, New York, N.Y. Filed Apr. 6, 1959.

PRIPSEN

For Laxative Preparation.
First use Apr. 2, 1959.

SN 70,966. Tully Laboratories, Inc., Lexington, Ky. Filed Apr. 6, 1959.

STERISOLONE

For Tablet Containing Prednisolone (an Analogue of Hydrocortisone); for Use as a Steroid Therapy in the Treatment of Allergies and Arthritic Complaints.
First use Feb. 15, 1959.

SN 70,975. Harvey Wolfson, d.b.a. Columbia Medical Company, New York, N.Y. Filed Apr. 6, 1959.

BAXINETS

For Medicated Troches.
First use Dec. 12, 1958.

Class 19—Vehicles

SN 51,176. Curtiss-Wright Corporation, Cleveland, Ohio. Filed May 7, 1958.

No exclusive right in the word "Safety-Lock" is made apart from the mark as shown. The black square in the drawing is a portion of a dark background of no particular color or shape.

For Helical Coil Spring Brake Mechanism Units and Components Thereof Particularly for Steering of Vehicles.
First use on about Apr. 30, 1958.

SN 55,222. Cambria Spring Company, Los Angeles, Calif. Filed July 14, 1958.

Equa-Loader

For Boosters for the Springs of Automotive Vehicles.
First use Jan. 21, 1958.

SN 60,744. Juncker Rijwielfabriek N.V., Apeldoorn, Netherlands. Filed Oct. 16, 1958.

For Bicycles, Bicycles With Auxiliary Motors and Structural Parts Therefor.
First use Apr. 26, 1940.

SN 63,275. Anderson-Bolling Mfg. Co., Grand Haven, Mich. Filed Nov. 28, 1958.

THE WHEEL OF FORTUNE

For Differential Wheels for Land Vehicles.
First use Nov. 5, 1958.

SN 69,103. Aktiebolaget Scania-Vabis, Sodertalje, Sweden. Filed Mar. 9, 1959.

SCANIA-VABIS

Owner of Swedish Reg. No. 69,519, dated Feb. 23, 1951.
For Motor-Cars, Especially Trucks and Busses, and Parts Thereof.

SN 69,265. Liberty Coach Company, Inc., Bremen, Ind. Filed Mar. 10, 1959.

SPENCE-CRAFT

For Mobile Homes.
First use Feb. 22, 1954.

SN 69,394. Aktiebolaget Scania-Vabis, Sodertalje, Sweden. Filed Mar. 16, 1959.

Owner of Swedish Reg. No. 75,672, dated Mar. 19, 1954.
For Motor-Cars, Especially Trucks and Busses, and Parts Thereof.

First use Nov. 18, 1958.

First use October 1894.

SN 69,605. Bendix Aviation Corporation, Washington, D.C. Filed Mar. 16, 1959.

MASTER VAC

For Vehicle Brakes.
First use in January 1959.

SN 69,766. Scoo-Ped Limited, Barton-on-Humber, Lincolnshire, England. Filed Mar. 17, 1959.

SCOO-PED

Owner of British Reg. No. 775,356, dated Mar. 13, 1958.
For Bicycles and Parts Thereof.

SN 69,928. Wilson, Nuttall, Raimond Engineers, Inc., Chestertown, Md. Filed Mar. 19, 1959.

MUSK-OX

For Articulated Tracked Vehicles for Use as a Cargo and/or Personnel Carrier in Snow Country and Off-the-Road Terrain.
First use on or about Feb. 1, 1959.

SN 70,143. Fuji Jukogyo Kabushiki Kaisha, d.b.a. Fuji Heavy Industries Ltd., Chiyoda-ku, Tokyo, Japan. Filed Mar. 24, 1959.

Rabbit

For Motor Scooters, Motor Cars, Motor Buses, Auto Trucks, Delivery Trucks, and Parts Thereof.
First use Jan. 3, 1957; in commerce Jan. 3, 1957.

Class 20—Linoleum and Oiled Cloth

SN 49,035. Chas. H. Anderson Floors, Inc., Chicago, Ill. Filed Apr. 4, 1958.

VYLAM

For Laminated Plastic Wall Tile and Sheets.
First use Feb. 20, 1958.

Class 21—Electrical Apparatus, Machines, and Supplies

SN 30,382. The Wilcox-Gay Corporation, Charlotte, Mich. Filed May 20, 1957.

EAGLE EYE TUNING

The word "Tuning" is disclaimed apart from the mark as shown.
For Radio and Television Tuners.
First use May 22, 1950.

SN 34,264. The Stiffel Company, Chicago, Ill. Filed July 23, 1957.

LAMPOLE

For Electrically Operated Lighting Fixtures.
First use Jan. 18, 1956.

SN 40,139. Pal, Narodni Podnik, Kbely, near Prague, Czechoslovakia. Filed Nov. 5, 1957.

PAL

Owner of Czechoslovakian Reg. No. 113,485, dated Jan. 17, 1940.
For Electric Equipment and Electrically Operated Accessories for Motorcars and Motorcycles—Namely, Headlamps; Dome Lamps; Wing Lamps; Handlamps; Telltale Lamps; Stop Lamps; Fog Lamps; Signal Horns; Direction Indicators; Switches; Fuses; Cigar and Cigarette Lighters; Ignition Coils; Ignition Distributors; Spark Plugs; Heater Plugs; Switch, Lighting, and Fuse Boxes; Heater Controllers; Windshield Wiper Motors; Batteries; Starters; Generators; Regulators; and Parts of All Such Goods.

SN 44,961. General Electric Company, Pittsfield, Mass. Filed Jan. 30, 1958.

ATMOSEAL

For Oil Preservation Systems for Transformers.
First use on or about Jan. 8, 1958.

SN 51,690. Dudley B. Clark, d.b.a. Clark Electronic Laboratories, Palm Springs, Calif. Filed May 15, 1958.

CELAB

For Electrical Composition Resistors in the Form of Solid State Transducers, Such as Load Cells and Pressure Resistors.
First use Oct. 24, 1955.

SN 52,971. Benjamin S. Naven, d.b.a. Dearborn Electronic Laboratories, Chicago, Ill. Filed June 5, 1958.

Deltaply

Owner of Reg. No. 663,726.
For Capacitors Intended for Use in Electrical and Electronic Circuits.
First use on or before Mar. 13, 1957.

SN 52,972. Benjamin S. Naven, d.b.a. Dearborn Electronic Laboratories, Chicago, Ill. Filed June 5, 1958.

Dearborn

Owner of Reg. No. 663,726.
For Capacitors Intended for Use in Electrical and Electronic Circuits.
First use on or before August 1954.

SN 66,991. American Telephone and Telegraph Company, New York, N.Y. Filed Feb. 3, 1959.

Class 22—Games, Toys, and Sporting Goods

SN 54,207. Connecticut Telephone & Electric Corporation of Meriden, Meriden, Conn. Filed June 25, 1958.

DIRECT-A-CALL

For Intercommunication Systems and Components Thereof—To Wit, Telephones, Power Supplies, and Connecting Circuitry.

First use Dec. 9, 1953.

Subj. to Intf. with SN 66,991.

SN 54,599. Century Lighting, Inc., New York, N.Y. Filed July 1, 1958.

For Electric Lighting Equipment for Theater and Stage Use, for Outdoor Areas, Merchandise Display, Auditoriums, Industrial Plants, Projection, Stores, and Television, for General Illumination; and for Control Equipment for Stage, Television, Projection and Auditorium Uses; and Auxiliary Equipment and Supplies for All the Foregoing; Consisting of Floodlights, Spotlights, Arc Lights, Border Lights, Footlights; Louvre, Aisle, and Exit Lights, Fixtures for Such Lights, Wiring Fixtures Therefor, Portable Standards, Lamps, Unitary Lamp Banks and Strips and Separable Lamps Therefor, Flashers, Dimmers, Switchboards, Arclight Carbons, wires, and Cables, Ultra-Violet Projectors, Special Effect Projectors, Towers, Pipes, Stands, Clamps, Projector Supports, Reflectors, Lenses, Rheostats, Slides, Luminous Paints, Consoles, Presets, Color Frames, Color Glasses, Color Gelatines, Color Wheels, Color Dyes, Lens Frames, Slide Carriers, Cut-Offs, Diaphragms, Receptacle Outlets, Plugs, Color Changing Devices, Remote Controls, Fluorescent Units, Ceiling Fixtures, Steplights, Mirror Showers, and Auto Transformers.

First use May 20, 1955.

SN 57,607. Electronics Water Purifier Co., Inc., Lombard, Ill. Filed Aug. 21, 1958.

Filter-All

The drawing is lined for red, but this color is not claimed as a part of the mark.

For Electro-Chemical Apparatus for Installation in a Plumbing System Using Water for Treating the Water To Remove Undesirable Salts, Metals and the Like and Sold as a Complete Unit for Such Installation.

First use Oct. 1, 1957.

SN 58,368. Radio Electric Service Company of Pennsylvania, Inc., Philadelphia, Pa. Filed Sept. 4, 1958.

RA-DEL

For Ear Pieces, IF Transformer Kits, Fuse Resistors, Tubular Ceramic Kits, Printed Circuits, and Disc Ceramic Kits.

First use July 1, 1958.

SN 60,072. Astra Trading Corporation, New York, N.Y. Filed Sept. 22, 1958.

STELLAR

Owner of Reg. No. 617,426.

For Battery Operated Flashlights, Battery Operated Lanterns, and Flashlight Batteries.

First use Nov. 8, 1957, on flashlights.

SN 61,955. Intercontinental Industries Inc., Chicago, Ill. Filed Nov. 5, 1958.

MINUTE MAN

For Radios, Television Sets, Radio-Phono Combinations, Radio-Clock Combinations.

First use July 10, 1958.

SN 62,801. Sears, Roebuck and Co., Chicago, Ill. Filed Nov. 19, 1958.

ROTO-MEAT-R

For Motor Driven Rotisserie for Range Top and Range Oven, Including Thermometer-Spit.

First use Nov. 9, 1956.

SN 63,914. Aerojet-General Corporation, Azusa, Calif. Filed Dec. 9, 1958.

Aero SWITCH

Applicant disclaims any right to the term "Switch," apart from the mark as shown.

For Pressure Operated Electrical Switches.

First use on about July 23, 1958.

SN 66,379. Union Carbide Corporation, New York, N.Y. Filed Jan. 23, 1959.

The drawing is lined for blue, red, and silver. Owner of Reg. Nos. 135,757, 509,456, and others.

For Electric Dry Cells.

First use on or about May 9, 1958; 1901 as to "Eveready"; about July 1946 as to the hexagonal and oval device; about July 1948 as to "Nine Lives" and representation of a cat.

First use Jan. 18, 1956.

First use on or before August 1954.

SN 66,991. American Telephone and Telegraph Company, New York, N.Y. Filed Feb. 3, 1959.

the CALL director

For Telephone Sets.
First use on or about Dec. 15, 1958.
Subj. to Intf. with SN 54,207.

SN 67,066. Little Miss Hi-Heels, Inc., Miami, Fla. Filed Feb. 4, 1959.

ORBIT

For Radios.
First use Jan. 26, 1959.

SN 67,833. Vectrol Engineering Inc., Stamford, Conn. Filed Feb. 16, 1959.

SILICONTROL

For Electrical Phase Shifters, Phase Modulators, Peaking Networks and Pulse Generators, Magnetic Amplifiers and Modulators for Controlling the Flow or Phase Relationship of Electric Power.
First use Feb. 4, 1959.

SN 70,240. Niagara Electric Fluorescent Fixture Co., Inc., Buffalo, N.Y. Filed Mar. 25, 1959.

GUARD-O-MATIC

For Fluorescent Starters.
First use in December 1958.

SN 70,810. Multi-Vox Ltd.-Multi-Vox Ltee, Montreal-North, Quebec, Canada. Filed Apr. 3, 1959.

MULTI-VOX

Owner of Canadian Reg. No. N.S. 38,575, dated May 3, 1951.
For Complete Equipment of an Intercommunication System.

SN 70,884. Don R. Genly, d.b.a. Perma Electric Co., Dayton, Ohio. Filed Apr. 6, 1959.

PERMCO

For Incandescent Lamp Bulbs, Fluorescent Lamps, Fluorescent Starters, and Fixtures for Fluorescent Lamps.
First use Mar. 26, 1959.

Class 22 — Games, Toys, and Sporting Goods

SN 62,284. John B. Ferguson, d.b.a. Four Seasons Sporting Goods Company, Chicago, Ill. Filed Nov. 12, 1958.

FOUR SEASONS

For Sporting Goods—Namely, Fishing Tackle; Baseball, Golf, Tennis, Badminton, Football and Basketball Playing Equipment; Archery and Aquatic Equipment; Horseshoe, Croquet and Table Tennis Sets; and Camping Equipment—Namely, Tents, Sleeping Bags, and Mattresses.
First use Oct. 8, 1958.

SN 64,598. American Machine & Foundry Company, New York, N.Y. Filed Dec. 19, 1958.

AMFLITE

For Bowling Balls.
First use approximately Oct. 17, 1958.

SN 65,076. Efco Products, Loveland, Colo. Filed Dec. 30, 1958.

CA-BOY

For Toy Rubber Band Gun and Target.
First use Nov. 7, 1958.

SN 65,286. Efco Products, Loveland, Colo. Filed Dec. 30, 1958.

EFCO

For Toy Rubber Band Gun and Target.
First use Nov. 7, 1958.

SN 65,343. Western Lace & Line Company, d.b.a. Western Fishing Line Co., Glendale, Calif. Filed Jan. 5, 1959.

Western W80

The center circle represents a cut out portion in the mark and is not a feature of the mark. Owner of Reg. No. 597,738.
For Fishing Line.
First use Dec. 11, 1958.

SN 66,523. Ace Plastic Company, Jamaica, N.Y. Filed Jan. 27, 1959.

ACRO

For Artificial Fishing Lures.
First use Dec. 22, 1958.

SN 66,500. Abram B. Mininger, Souderton, Pa. Filed Jan. 27, 1959.

POT O' GOLD

For Apparatus Sold as a Unit for Playing a Board Game.
First use Dec. 3, 1958.

SN 66,600. Childhood Interests, Inc., Roselle Park, N.J. Filed Jan. 28, 1959.

CRADLE SYMPHONY

For Infant Exercising Toys.
First use May 1953.

SN 67,105. The Whirley Corporation, St. Louis, Mo. Filed Feb. 4, 1959.

WHIRLEY WHIRLER

For Spinning Plate Toy.
First use Oct. 31, 1958.

SN 67,395. Adorno Raffaelli, Reading, Pa. Filed Feb. 9, 1959.

MISSILE WHISTLE

No claim of exclusive right is made to "Whistle" as used on toy whistles.
For Toy Whistles.
First use Dec. 4, 1958.

SN 68,533. Uniform Supply Co., Inc., New York, N.Y. Filed Feb. 26, 1959.

PLI-O-TYL

For Fishing Lines.
First use Feb. 20, 1959.

SN 69,131. Doozee, Inc., Oak Lawn, Ill. Filed Mar. 9, 1959.

DOOZEE

For Combination Fish Hook Setter and Scale for Weighing Fish While on Hook.
First use June 10, 1958.

SN 69,181. Rainbow Crafts, Inc., Cincinnati, Ohio. Filed Mar. 9, 1959.

WOOD-DOH

Owner of Reg. No. 650,035.
For Plastic Type Modeling Compound for Children's Use.
First use Feb. 20, 1959.

SN 69,203. Daniel Silverman, d.b.a. Jameco Metal Products Company, New York, N.Y. Filed Mar. 9, 1959.

GOLD TONE

The drawing is lined for gold.
For Banks.
First use June 25, 1958.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

SN 49,100. Van Gorp Mfg. Inc., Pella, Iowa. Filed Apr. 4, 1958.

Van Gorp
TURN-CLEAN PULLEYS

The word "Pulleys" is disclaimed apart from the mark shown.
For Pulleys.
First use Mar. 20, 1958.

SN 50,123. Underwood Corporation, New York, N.Y. Filed Apr. 21, 1958.

CREST

For Typewriting Machines and Parts Thereof.
First use Mar. 26, 1958.

SN 53,600. B. Elliott & Company Limited, London, England. Filed June 16, 1958.

RAPIDMIL

For Milling Machines and Parts Thereof.
First use in April 1957; in commerce in April 1957.

SN 55,760. A. C. Weber & Co., Inc., Chicago, Ill. Filed July 21, 1958.

EVER-READY
CLUTCH MASTER

For Clutches for Industrial Sewing Machines.
First use Mar. 25, 1958.

SN 59,458. Ellicott Machine Corporation, Baltimore, Md. Filed Sept. 24, 1958.

ELLICOTT
DRAGON
MODEL

Owner of Reg. Nos. 264,337, 586,574, and others.
For Dredges, Dredge Machinery and Parts Thereof.
First use Feb. 11, 1954.

SN 61,332. Sanford-Day Iron Works, Inc., Knoxville, Tenn. Filed Oct. 24, 1958.

TRANSLOADER

For Rock and Earth Loading, Hauling, and Dumping Machines.
First use July 1, 1958.

SN 61,768. Auto-Air Industries, Inc., Lansing, Mich. Filed Nov. 3, 1958.

AUTO AIR

Owner of Reg. No. 667,258.
For Product Metal Forming Tools, Stretch Form Blocks, Hydro-Form Blocks, Drop Hammer Dies, Draw Dies, Crushing Punches, Spinning Tools, Tube Bending Mandrels, Plastic Forming Molds, Vacuum Form Molds, Mastering Tools, Check Fixtures, Assembly Fixtures, Router Fixtures, Drill Fixtures, Saw Fixtures, and Plastic Core Boxes.
First use Mar. 25, 1956.

SN 65,461. Worthington Corporation, Harrison, N.J. Filed Jan. 7, 1959.

QUI-KEY

For Locking Devices for Sheaves and Pulleys.
First use on or about Dec. 22, 1958.

SN 67,229. Madison Industries Inc., Pawtucket, R.I. Filed Feb. 6, 1959.

For Boring, Reaming, Honing, Cutting, Burnishing, and Trepanning Tools; Grinding Fixtures; Drills, Counterbores, and Drilling Machines; Coolant Inductors, and Parts Thereof.
First use Jan. 5, 1959.

SN 67,545. L & R Manufacturing Company, Arlington, N.J. Filed Feb. 11, 1959.

VARI-MATIC

For Watch Part Cleaning Machine.
First use Jan. 27, 1959.

SN 67,724. Walter Pilkington, d.b.a. Victor Valley Gem Shop, Hesperia, Calif. Filed Jan. 19, 1959.

VICTOR

For Stone-Cutting, -Tumbling, and -Polishing Machines.
First use on or about Mar. 15, 1952.

SN 69,658. Link-Belt Speeder Corporation, Cedar Rapids, Iowa. Filed Mar. 16, 1959.

Hi-Lift Lite

For Crane Booms and Repair and Replacement Parts Therefor.
First use Feb. 17, 1959.

SN 69,840. The Palmer Engine Company, Cos Cob, Conn. Filed Mar. 18, 1959.

SPACEMOVER

For Internal Combustion Engines.
First use on or about Nov. 10, 1957.

SN 69,850. SKF Industries, Inc., Philadelphia, Pa. Filed Mar. 18, 1959.

EXPEDITER

For Roller Bearing Assembled Units for Mounting on Journals Used Under Railway Freight Cars.
First use Nov. 25, 1958.

SN 69,887. The Griffith Laboratories, Inc., d.b.a. Griffith Laboratories, Chicago, Ill. Filed Mar. 19, 1959.

GRIFFITH'S

For Machines for Forming, Pressing, and Cutting Meats and Meat Products.
First use in December 1939.

SN 69,926. Towlsaver, Inc., Los Angeles, Calif. Filed Mar. 19, 1959.

Towlsaver

Owner of Reg. Nos. 420,432, 558,930, 618,246, and others.
For Toilet Tissue Dispensers.
First use Dec. 8, 1958.

SN 69,976. Morse Sewing Machine and Supply Co. of California, Inc., Los Angeles, Calif. Filed Mar. 20, 1959.

Voque

For Sewing Machines.
First use in June 1953.

SN 70,155. Master-Hung Door Equip. Co., Pottstown, Pa. Filed Mar. 24, 1959.

For Apparatus and Equipment for the Assembly and Installation of Doors and Pre-Hung Door Units Comprising Dado and Jamb Dowel Boring Machines, Miter Saw Tables, Door-Sizing Jigs and Work Bench, and Assembly Tables.
First use in July 1958.

SN 70,345. The Baird Machine Company, Stratford, Conn. Filed Mar. 27, 1959.

POLI ACTION

The drawing is lined for red.
For Tilting Tumbling Equipment—Namely, Tumbling Machines as Applied to Finishing Various Articles.
First use Sept. 16, 1957.

SN 70,367. H. D. Hudson Manufacturing Company, Chicago, Ill. Filed Mar. 27, 1959.

FUTURA

For Portable Sprayers for Applying Pesticides, Insecticides, and Other Sprayable Solutions, and Parts Thereof.
First use Jan. 5, 1959.

SN 70,368. H. D. Hudson Manufacturing Company, Chicago, Ill. Filed Mar. 27, 1959.

ORBITOR

For Portable Sprayers for Applying Pesticides, Insecticides, and Other Sprayable Solutions, and Parts Thereof.
First use Jan. 5, 1959.

SN 70,443. Dempster Mill Manufacturing Company, Beatrice, Nebr. Filed Mar. 30, 1959.

DUAL-CONVERT-O-JET

Owner of Reg. No. 610,365.
For Water Pumping and Supply Systems.
First use Aug. 12, 1957.

SN 70,445. Dempster Mill Manufacturing Company, Beatrice, Nebr. Filed Mar. 30, 1959.

MATCHED-FLOW

For Water Pumping and Supply Systems.
First use Dec. 28, 1956.

SN 70,446. Dempster Mill Manufacturing Company, Beatrice, Nebr. Filed Mar. 30, 1959.

PRIME-O-JET

Owner of Reg. No. 610,365.
For Water Pumping and Supply Systems.
First use Mar. 27, 1956.

SN 70,447. Dempster Mill Manufacturing Company, Beatrice, Nebr. Filed Mar. 30, 1959.

CONVERT-O-JETMASTER

Owner of Reg. Nos. 547,088 and 610,365.
For Water Pumping and Supply Systems.
First use Mar. 5, 1955.

SN 70,448. Dempster Mill Manufacturing Company, Beatrice, Nebr. Filed Mar. 30, 1959.

DUAL-JETMASTER

Owner of Reg. No. 547,088.
For Water Pumping and Supply Systems.
First use Jan. 11, 1956.

SN 72,391. Underwood Corporation, New York, N.Y. Filed Apr. 27, 1959.

TOUCH-MASTER

Owner of Reg. Nos. 355,221, 357,469, and 638,011.
For Typewriters and Parts Thereof.
First use approximately June 1957.

SN 72,392. Underwood Corporation, New York, N.Y. Filed Apr. 27, 1959.

SERVOMASTER

Owner of Reg. Nos. 357,469, 629,909, and 638,911.
For Typewriters and Parts Thereof.
First use January 1958.

SN 72,393. Underwood Corporation, New York, N.Y. Filed Apr. 27, 1959.

MASTERTYPER

Owner of Reg. Nos. 355,221, 357,469, and 638,011.
For Typewriters and Parts Thereof.
First use approximately January 1958.

SN 72,431. Goman Trading Corporation, New York, N.Y. Filed Apr. 28, 1959.

CROWN

For Family Sewing Machines.
First use Oct. 14, 1958.

SN 72,463. Wilbar Sewing Machine Co., Inc., New York, N.Y. Filed Apr. 28, 1959.

CROWN

For Sewing Machines and Parts Thereof.
First use Apr. 3, 1959.

SN 72,510. Kinetic Dispersion Corporation, Buffalo, N.Y. Filed Apr. 29, 1959.

KADYZOLVER

Owner of Reg. No. 588,107.
For Dispersion Mills for Dispersing Finely Divided Solid Materials in Liquid Suspension, Such as in the Preparation of Paint, Varnish, Lacquer, Printing Ink and the Like.
First use Oct. 6, 1958.

SN 72,576. Cameron Machine Company, Dover, N.J. Filed Apr. 30, 1959.

SEALCUT

Owner of Reg. No. 587,423.
For Slitting Wheel Assembly in a Machine for Automatically Slitting Webs of Paper or Other Flexible Material.
First use Oct. 30, 1950.

SN 72,654. Pratt & Whitney Company, Incorporated, West Hartford, Conn. Filed Apr. 30, 1959.

MAGNESPARK

For Tracer Controlled Electrically Operated Duplicating Machines.
First use Dec. 17, 1958.

SN 72,734. Lanston Industries, Incorporated, Philadelphia, Pa. Filed May 1, 1959.

MONOMATIC

For Type Casting and Composing Machines.
First use Feb. 27, 1959.

SN 72,826. Fuller Manufacturing Company, Kalamazoo, Mich. Filed May 4, 1959.

Fuller TRANSMISSIONS

Applicant disclaims the word "Transmissions" apart from the mark as shown. Owner of Reg. No. 527,995.
For Motor Vehicle Transmissions and Parts Thereof.
First use in 1943.

SN 72,849. Kulwite, Inc., Jacksonville, Fla. Filed May 4, 1959.

KULSHAVE

Owner of Reg. No. 620,702.
For Razor Blades and Dispensers Therefor.
First use on or about Apr. 28, 1959.

SN 72,858. The Midland Company, South Milwaukee, Wis. Filed May 4, 1959.

MIDLAND

Owner of Reg. No. 622,619.
For Power Driven Lawn and Garden Care Equipment, and Attachments Therefor Including Mowers, Plows, Snow Plows, Harrows, Sickles, Carts, and Sprayers.
First use Jan. 1, 1959.

SN 72,859. The Midland Company, South Milwaukee, Wis. Filed May 4, 1959.

MIDLAND

Owner of Reg. No. 622,619.
For Power Driven Lawn and Garden Care Equipment, and Attachments Therefor Including Mowers, Plows, Snow Plows, Harrows, Sickles, Carts, and Sprayers.
First use Jan. 3, 1949, on farm and garden tractors.

SN 72,879. Oil Center Tool Company, Houston, Tex. Filed May 4, 1959.

O·C·T

For Bottom Hole Test Adapters, Choke Adapters, Tubing Head Adapters, Well Head Assemblies, Tubing Head Attachments, Positive Chokes, Adjustable Chokes, Flow Controls, Crosses, T's, L's, Adapter Flanges, Flanged Fittings, Casing Hangers, Tubing Hangers, Hanger Couplings, Braden Heads, Tubing Heads, Pumping Heads, Casing Heads, Nipples, Cage Nipples, Swage Nipples, Reinstallation Nipples, Blowout Preventers, Bull Plugs, Valve Removal Plugs, Unions, Unitrees, Needle Valves, Back Pressure Valves, Packoff Flanges, Strippers.
First use Oct. 9, 1933.

SN 72,900. Syncro Machine Company, Perth Amboy, N.J. Filed May 4, 1959.

SYNCRO

Owner of Reg. No. 396,818.
For Rod and Wire Drawing Machines; Rod and Wire Spooling Machines; Combination Rod and Wire Drawing and Spooling Machines; Coiler Blocks; Combination Rod and Wire Drawing and Coiling Machines; Strand Coating Machines Including Wire Tinning Machines, Wire Enameling Machines, Wire Tapping Machines, Wire Wrapping Machines, Wire Serving Machines and Machines for Applying Powdered Insulating Material to Wires; Machines for Insulating, Weatherproofing, and Moistureproofing Wires and Cables; Strand Take-Up Machines; Strand Reel Pay-Off Machines, Strand Coiling Machines, Insulating Wire Saturating and Finishing Machines, Strand Armoring Machines, Strand Annealing Machines; Armoring Wire Packaging Machines; Machines for Applying Wax Adhesives and Top Coats to Strands and Wires and Parts Thereof; Wire Bunching Machines, Wire Stranding and Closing Machines, Wire Twisting and Pairing Machines, and Rod Pointing and Wire Measuring Machines.
First use Aug. 24, 1933.

SN 72,950. A. Kimball Company, Brooklyn, N.Y. Filed May 5, 1959.

KIMBALL STAMP-IT

Owner of Reg. Nos. 508,751, 513,650, and 624,923.
For Machines for Marking Labels.
First use June 4, 1958; in January 1924 as to "Kimball."

SN 73,001. John Lilburn Coffee, d.b.a. Jolico Industries, Allen Park, Mich. Filed May 6, 1959.

Jolico

For Die Accessories.
First use Apr. 8, 1959.

Class 24—Laundry Appliances and Machines

SN 70,110. The T. L. Smith Company, Milwaukee, Wis. Filed Mar. 23, 1959.

ROLLAFOLDER

For Laundry Folding and Stacking Machines.
First use in December 1958.

Class 26—Measuring and Scientific Appliances

SN 17,989. Certified Electric Corporation, Clarendon, Pa. Filed Oct. 23, 1956.

BOND

Applicant disclaims the words "Tested and Approved—Guaranteed" appearing in the drawing. Owner of Reg. Nos. 250,832 and 278,451.
For Photoflash Lamps.
First use in September 1955.

SN 29,414. A-N Tool & Die, Pasadena, Calif. Filed May 6, 1957.

AQUA

For Automatic Time Control Valves for Sprinkling Systems.
First use Nov. 1, 1955.

SN 29,897. Friden, Inc., San Leandro, Calif., by change of name from Friden Calculating Machine Co., Inc., San Leandro, Calif. Filed May 13, 1957.

tape-talk

For Integrated Data Producing and Processing Machines Such as Tape Punches, Punched Tape Readers and Converters, Calculating Machines, Adding Machines, Combination Calculators and Typewriters, Combination Tape Punches and Calculators, Combination Tape Punches and Adding Machines, and Combinations of the Same and Parts Thereof.
First use on or before June 15, 1957.

SN 38,871. Marshalltown Manufacturing Company, Marshalltown, Iowa, assignee of Tagliabue Manufacturing Company, Philadelphia, Pa. Filed Oct. 14, 1957.

TAG

For Thermometers and Hydrometers.
First use June 11, 1956.

SN 44,052. Van Norman Industries, Inc., Manchester, N.H. Filed Jan. 15, 1958.

VANTRON

For Electronic Apparatus—Namely, Signal Generators, Insulation Testers, Engine Testers, Radar Apparatus, Pulse Generators, Pulse and Micro Wave Testing and Measuring Apparatus, Test Equipment—Namely, Signal Generators, Sweep Generators, Special Meters; Kits Consisting of Generators, Sweep Generators, Special Meters, and Other Elements or Accessories Required for Testing; and Home Construction Kits Consisting of Generators, Sweep Generators, Special Meters, and Other Elements or Accessories Required for Home Construction.
First use on or about July 1, 1957.

SN 47,397. Burton L. London, New York, N.Y. Filed Mar. 10, 1958.

ADD-O-RULE

For Slide Rule.
First use Dec. 5, 1957.

SN 48,310. Texas Instruments Incorporated, Attleboro, Mass., by merger from Metals & Controls Corporation, Attleboro, Mass. Filed Mar. 24, 1958.

Ampli-TUBE

For Thermostats, Thermostatic Controls, and Thermostatic Switches.
First use on or before Oct. 9, 1957.

SN 49,528. Specialties, Inc., Syosset, N.Y. Filed Apr. 11, 1958.

CHROMOSORTER

For Instruments—Namely, Instruments for Measuring and Analyzing Color Characteristics.
First use Feb. 3, 1958.

SN 52,231. Minneapolis-Honeywell Regulator Company, Philadelphia, Pa. Filed May 23, 1958.

VISICORDER

The drawing is lined for the colors red and brown but these colors are disclaimed since this trademark consists of the word "Visicorder" whether spoken or formed of letters of any particular style or color. Owner of Reg. No. 548,931.
For Paper Sensitized to Radiant Energy.
First use in December 1956.

SN 54,415. Ling Electronics, Inc., Culver City, Calif. Filed June 27, 1958.

SINE-O-MATIC

For Electronic Systems and Parts Thereof for Sine Wave Testing.
First use Feb. 19, 1958.

SN 55,487. Joseph P. Kleiber, Mount Vernon, N.Y. Filed Aug. 26, 1958.

AQUA TENDA

For Time Operated Fish Feeding Device for Aquariums in the Form of an Automatic Feeding Device That Is Attached to the Upper Edge of the Aquarium and Is Operated by an Electric Time Clock Motor.
First use Jan. 2, 1958.

SN 55,595. Miller Lauffer Printing Equipment Corp., New York, N.Y. Filed July 18, 1958.

Tally-Tab

For Predetermined Electronic Counters.
First use Oct. 23, 1957.

SN 56,068. Zünderwerke Ernst Brün, Zweigniederlassung der Wasag-Chemie Aktiengesellschaft, Krefeld-Linn, Germany. Filed July 17, 1958.

ZEB

Owner of German Reg. No. 705,806, dated Aug. 26, 1957; and U.S. Reg. No. 673,440.
For Electric Testing Apparatus for Exploders and Detonators, Such as Circuit Testers, Ohmmeters and the Like.

SN 58,290. Henry Hal Burman and Harry H. Wayner, Miami, Fla. Filed Sept. 3, 1958.

PROTECT-U-SCOPE

For Dehumidifying Covers for Scientific Instruments.
First use July 14, 1958.

SN 60,566. Radiation, Inc., Melbourne, Fla. Filed Oct. 13, 1958.

RADICON

For Analog-to-Digital and Digital-to-Analog Electrical Converters.
First use Sept. 23, 1958.

SN 61,884. Weller Electric Corporation, Easton, Pa. Filed Nov. 3, 1958.

MAGNASTAT

For Temperature Controls for Electric Soldering Irons.
First use May 18, 1958.

SN 62,605. Philco Corporation, Philadelphia, Pa. Filed Nov. 17, 1958.

HUMISTOR

For Electrical Resistance Humidity Sensors.
First use Nov. 3, 1958.

SN 63,546. The Plastic Contact Lens Company, Chicago, Ill. Filed Dec. 2, 1958.

CON-LISH

For Optical Contact Lenses.
First use Nov. 18, 1958.

SN 64,849. Tellurometer (Proprietary) Limited, Plumstead, Cape Town, Union of South Africa. Filed Dec. 23, 1958.

MICRO-DISTANCER

For Electronic Distance Measuring Machines Employing Micro-Waves, Parts Thereof and Accessories Therefor.
First use Jan. 15, 1957; in commerce Feb. 23, 1957.

SN 64,850. Tellurometer (Proprietary) Limited, Plumstead, Cape Town, Union of South Africa. Filed Dec. 23, 1958.

The drawing is lined for shading purposes only. Owner of U.S. Reg. Nos. 655,785 and 655,786.
For Electronic Distance Measuring Machines Employing Micro-Waves, Parts Thereof and Accessories Therefor.
First use Jan. 15, 1957; in commerce Feb. 23, 1957.

SN 65,120. The Plastic Coating Corporation, Holyoke, Mass. Filed Dec. 30, 1958.

STATIGRAPH

For Expendable Photoelectrostatic Paper for Reproduction Purposes.
First use Nov. 19, 1958.

SN 66,487. Projection Optics Company, Inc., East Orange, N.J. Filed Jan. 26, 1959.

OPA-SCOPE

For Projectors.
First use Nov. 3, 1958.

SN 67,298. Burke & James, Inc., Chicago, Ill. Filed Feb. 9, 1959.

WELTINI

For Cameras.
First use July 5, 1935.

SN 62,442. Aristocrat Clock Company, New York, N.Y. Filed

SN 73,202. Wallace Silversmiths, Inc., Wallingford, Conn.

SN 67,299. Burke & James, Inc., Chicago, Ill. Filed Feb. 9, 1959.

REXO

For Photographic Equipment Including: Cameras, Photo Enlargers, Camera Enlarging and Condensing Lenses, Electrical Mechanism for Photographic Time Exposing, Photographic Dark Room Equipment Such as Trimming Boards, Film and Plate Developing and Washing Trays, Scales, Film and Photographic Plates, Tripods Such as Camera and Lamp Supports, Exposure Timers, Switches Having a Construction Adapting Them for Use in the Photographic Art for Controlling Timers and Photographic Lighting Systems and Lighting Equipment Such as Flood and Flash Lights.
First use May 1, 1925.

SN 67,527. Diebold, Incorporated, Canton, Ohio. Filed Feb. 11, 1959.

Diebold

Owner of Reg. Nos. 161,934 and 404,085.
For Microfilm Cameras, Microfilm Projectors, and Apparatus for Developing and Processing Microfilm and the Like, and Parts of the Aforementioned Devices.
First use in 1953.

SN 67,988. Herbert Howard Ross, d.b.a. Ross Enterprises, Phoenix, Ariz. Filed Feb. 18, 1959.

BRIEFCASE THEATRE

For Sound-Filmstrip Projector Installed in an Attache Style Briefcase.
First use Nov. 28, 1958.

SN 68,011. Welsh Manufacturing Company, Providence, R.I. Filed Feb. 18, 1959.

SOFT-I

For Industrial Safety Goggles.
First use in October 1957.

SN 68,013. Welsh Manufacturing Company, Providence, R.I. Filed Feb. 18, 1959.

ZEPHYR

For Industrial Safety Goggles.
First use in January 1959.

SN 68,538. Vapor Heating Corporation, Chicago, Ill. Filed Feb. 26, 1959.

Owner of Reg. No. 678,736.
For Cooling Effect Detectors.
First use Jan. 24, 1959.

SN 70,093. Minneapolis Contact Lens Clinic, Minneapolis, Minn. Filed Mar. 23, 1959.

FLEXICON

For Contact Lenses.
First use Mar. 1, 1959.

SN 70,122. Frank J. Urban, Louisville, Ky. Filed Mar. 20, 1959.

PEEK-A-RAMA

For Motion Picture Projecting and Viewing Units Comprising Portable Booths Each Having Projector, Screen, and Automatic Film Rewinder.
First use Feb. 8, 1959.

SN 70,177. Adage, Inc., Cambridge, Mass. Filed Mar. 25, 1959.

For Electronic Computing and Control Apparatus.
First use Dec. 28, 1957.

SN 70,210. Educational Developmental Laboratories, Huntington, N.Y. Filed Mar. 25, 1959.

READING EYE

For Eye Movement Camera.
First use Feb. 14, 1959.

SN 70,250. Radiant Manufacturing Corp., Morton Grove, Ill. Filed Mar. 25, 1959.

OPTIGLOW

For Projection Screen Fabrics for Use in the Projection of Still and Motion Pictures Thereon.
First use Sept. 29, 1958.

SN 70,323. Nathan R. Schutz, d.b.a. Contact Lens Center, New York, N.Y. Filed Mar. 26, 1959.

For Contact Ophthalmic Lenses.
First use in May 1956.

SN 70,685. Viewlex, Inc., Long Island City, N.Y. Filed Apr. 1, 1959.

SALESTALK

For Photographic Projector in Combination With a Record Player in a Portable Case, the Viewing Screen Being on the Inside Cover of the Case.
First use Jan. 20, 1959.

Class 27—Horological Instruments

SN 61,728. J. Midlash, Chicago, Ill. Filed Oct. 31, 1958.

JOLI

For Watches.
First use Dec. 9, 1957.

SN 59,777. Silver-Stabl Corporation, San Francisco, Calif.

SN 66,160. N.F.C. Engineering Company, Anoka, Minn. Filed Jan. 20, 1959.

SN 62,442. Aristocrat Clock Company, New York, N.Y. Filed Nov. 14, 1958.

Time Master

For Clocks.
First use 1942.

SN 64,474. Kabushiki-Kaisha Hattori Tokei-Ten, Chuo-ku, Tokyo-to, Japan. Filed Dec. 17, 1958.

SEIKOSHA

Owner of Japanese Reg. No. 409,276, dated Mar. 5, 1952.
For Watches and Clocks and Parts Thereof.

SN 67,060. H. Gribi & Sohn, Sperina Watch, Lengnau, Bern, Switzerland. Filed Feb. 4, 1959.

SPERINA

For Gentlemen's and Ladies' Watches.
First use January 1932; in commerce January 1957.

SN 67,194. Natacha Brooks, Ltd., New York, N.Y. Filed Feb. 6, 1959.

MATINÉE WATCH

The word "Watch" is disclaimed apart from the mark as shown.
For Wrist Watches, Fob Watches, Pendant Watches, and Brooch Watches.
First use July 1, 1958.

Class 28—Jewelry and Precious-Metal Ware

SN 84,791. Hickok Manufacturing Co. Inc., Rochester, N.Y. Filed Aug. 1, 1957.

The drawing is lined for red and gold. The words "Positively Finer" appear on the scroll at the lower portion of the medallion. Owner of Reg. Nos. 177,816, 522,561, and others.
For Men's Jewelry—Namely, Buckles and Slides, Necktie Clips, Necktie Fasteners, Necktie Guards, Key Chains, Cuff Links, Collar Fasteners, Shirt Studs, Watch Chains, Watch Bands, and Money Clips.
First use July 15, 1956.

SN 73,202. Wallace Silversmiths, Inc., Wallingford, Conn. Filed May 8, 1959.

DEBUTANTE

For Sterling Silver Flatware, i.e., Knives, Forks, and Spoons.
First use 1954.

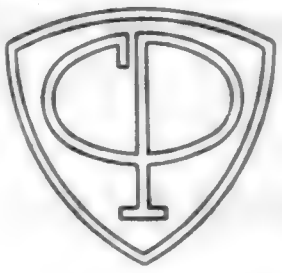
SN 74,077. The Stieff Company, Baltimore, Md. Filed May 19, 1959.

PERSONNA

For Hollowware, and Flatware, All Made of Sterling Silver or Solid Gold.
First use Jan. 15, 1959.

Class 29—Brooms, Brushes, and Dusters

SN 56,535. The Creamery Package Mfg. Company, Chicago, Ill. Filed Aug. 4, 1958.



For Brushes.
First use Apr. 28, 1958.

SN 65,453. Silver Chamberlin Co., Clayton, N.J. Filed Jan. 7, 1959.

NIBCO

For Brushes for General Household and Personal Use; Mops, Dusters.
First use June 1912.

Class 30—Crockery, Earthenware, and Porcelain

SN 60,551. Oriental Promotions Inc., New York, N.Y. Filed Oct. 13, 1958.

Summit

For China Dinnerware, Plates, Dishes, Cups.
First use Jan. 1, 1958.

Class 31—Filters and Refrigerators

SN 59,506. Borgerud Mfg. Co., Inc., Deerfield, Wis. Filed Sept. 25, 1958.

NEPTUNE

For Water Conditioning and Filtering Equipment.
First use Apr. 11, 1958.

SN 67,797. K-S-H Plastics Inc., High Ridge, Mo. Filed Feb. 16, 1959.

SN 59,520. Custom Fidelity Records, Pasadena, Calif. Filed Sept. 25, 1958.

SN 59,777. Silver-Stahl Corporation, San Francisco, Calif. Filed Sept. 29, 1958.

SILVER-KOLD

For Refrigerator Equipment.
First use Apr. 17, 1950.

SN 72,465. Wix Corporation, Gastonia, N.C. Filed Apr. 28, 1959.

WIX-KNIT

For Filter Cartridges and Filters.
First use Jan. 1, 1950.

SN 72,466. Wix Corporation, Gastonia, N.C. Filed Apr. 28, 1959.

WIXITE

For Filter Cartridges and Filters.
First use in November 1950.

Class 32 — Furniture and Upholstery

SN 59,716. The General Tire & Rubber Company, Akron, Ohio. Filed Sept. 29, 1958.

BOLTA-TUFT

Owner of Reg. Nos. 628,825, 632,458, and others.
For Quilted Plastic Material for Use in the Manufacture of Upholstered Furniture.
First use Aug. 27, 1958.

SN 72,398. Winchendon Furniture Company, Winchendon, Mass. Filed Apr. 27, 1959.

For Wood Household Furniture, Bedroom, Dining Room, and Occasional Pieces.
First use Mar. 24, 1959.

Class 33 — Glassware

SN 43,066. Borske Sklo, Narodni Podnik, Novy Bor, Czechoslovakia. Filed Dec. 27, 1957.

LOBMEYR CZECHOSLOVAKIA

Priority is claimed under Sec. 44(d) on Czechoslovakian application filed Aug. 19, 1957; Reg. No. 153,136, dated Oct. 9, 1957.
For Glassware and Crystalware Including Tableware and Cut Glassware.
Subj. to Intf. with SN 71,993.

SN 66,160. N.F.C. Engineering Company, Anoka, Minn. Filed Jan. 20, 1959.

Glamour 'Our

For Glass Shaker and Covered Pouring Containers Including Salt and Pepper Shakers and Dispenser for Granular Material Including Sugar.
First use Feb. 2, 1958.

SN 71,993. Hans Harald Rath, d.b.a. J. & L. Lobmeyr, Vienna, Austria. Filed Apr. 22, 1959.

For Glassware: Namely, Decorative Glassware—Namely, Drinking Sets, Pitchers, Decanters, Cocktail Shakers, Perfume Bottles, Bowls, Vases, Dishes, Covered Boxes, Punch Sets, Decorated Wall Panels and Windows, Presentation Cups and Other Presentation Pieces, All Made of Glass; Tableware, White and Colored, Plain and Decorated.
First use 1832; in commerce 1876.
Subj. to Intf. with SN 43,066.

Class 34 — Heating, Lighting, and Ventilating Apparatus

SN 57,139. Elgen Manufacturing Corporation, Long Island City, N.Y. Filed Aug. 18, 1958.

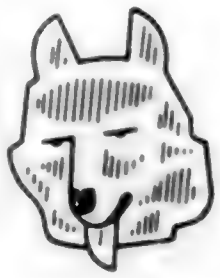
For Heating, Ventilating, and Air-Conditioning Damper Fixtures.
First use May 28, 1958.

SN 66,520. Wolf Range and Manufacturing Co., Los Angeles, Calif. Filed Jan. 26, 1959.

WOLF

For Commercial Cooking Equipment—Namely, Ranges, Ovens, Griddles, Broilers, Hot Plates, Deep Fat Fryers.
First use in or about spring of 1934.

SN 66,321. Wolf Range and Manufacturing Co., Los Angeles, Calif. Filed Jan. 26, 1959.



For Commercial Cooking Equipment—Namely, Ranges, Ovens, Griddles, Broilers, Hot Plates, Deep Fat Fryers.
First use in or about spring of 1938.

SN 68,053. Graham Paper Company, St. Louis, Mo. Filed Feb. 19, 1959.

SN 67,158. Scholastic Magazines, Inc., New York, N.Y. Filed Feb. 5, 1959.

First use July 15, 1956.

First use Apr. 11, 1958.

SN 67,797. K-S-H Plastics Inc., High Ridge, Mo. Filed Feb. 16, 1959.

K-LITE

For Lighting Panels.
First use June 30, 1958.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

SN 54,227. The B. F. Goodrich Company, Akron, Ohio. Filed June 25, 1958.

NYCORD

For Conveyor Belting.
First use May 9, 1958.

SN 69,153. Lee Rubber & Tire Corporation, d.b.a. Republic Rubber Division, Youngstown, Ohio. Filed Mar. 9, 1959.

SMOOTHTEX

Owner of Reg. Nos. 542,056, 619,071, and others.
For Fire Hose of the Smooth Woven Type.
First use Aug. 21, 1958.

SN 69,875. Colorite Plastics of New Jersey, Inc., Paterson, N.J. Filed Mar. 19, 1959.

GARDEN MATE

For Plastic Hose.
First use Dec. 5, 1958.

SN 69,957. The Dayton Rubber Company, Dayton, Ohio. Filed Mar. 20, 1959.

DRIVE KING

Owner of Reg. Nos. 427,574 and 540,138.
For Drive Belts.
First use Feb. 18, 1959.

Class 36—Musical Instruments and Supplies

SN 55,002. Carlos Diaz Granados, Miami, Fla. Filed July 9, 1958.

Sonolux

For Grooved Phonograph Records.
First use in July 1956.

SN 55,181. Durium S.p.A., Milan, Italy. Filed June 13, 1958.

Owner of Italian Reg. No. 73,747, dated Mar. 27, 1947.
For Grooved Phonograph Records, Phonographs and Parts Therefor, Tape Recorders.

SN 59,520. Custom Fidelity Records, Pasadena, Calif. Filed Sept. 25, 1958.

CUSTOM FIDELITY RECORDS

The word "Records" is disclaimed.
For Phonograph Recordings of All Speeds, Tape Recordings of All Speeds.
First use May 9, 1957.

SN 65,001. Muzak Corporation, New York, N.Y. Filed Dec. 29, 1958.

PROGRAMATIC

For Tape Playback Equipment Primarily for Use by Radio Stations.
First use Sept. 22, 1958.

SN 68,449. Retwin Corporation, Bronx, N.Y., assignee of Aeolian American Corporation, Stamford, Conn. Filed Feb. 26, 1959.

BREWSTER

For Pianos.
First use in 1898.

Class 37—Paper and Stationery

SN 61,802. Germain's, Inc., Los Angeles, Calif. Filed Nov. 3, 1958.

TWIS-TAGS

Owner of Reg. No. 515,259.
For Combination Paper Tie Tape and Marker.
First use Aug. 17, 1949.

SN 66,105. Scott Paper Company, Chester, Pa. Filed Jan. 19, 1959.

GRIPPER-KRAFT

For Processed Kraft Paper.
First use Oct. 29, 1958.

SN 67,496. Union Envelope Company, Richmond, Va. Filed Feb. 10, 1959.

PRINTMASTER

For Envelopes.
First use Aug. 2, 1957.

SN 67,562. Name-Maker, Inc., New York, N.Y. Filed Feb. 11, 1959.

LUCKY

For Laundry Marking Pens.
First use Jan. 8, 1959.

SN 67,969. Orchard Paper Company, St. Louis, Mo. Filed Feb. 18, 1959.

FASHUNMARK

For Wrapping Paper and Paper Bags.
First use May 1, 1934.

SN 68,041. A. B. Dick Company, Niles, Ill. Filed Feb. 19, 1959.

STEN-SET

For Stencils and Stencil Sheet Assemblies.
First use Aug. 11, 1958.

SN 40,063. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Nov. 4, 1957.

SN 51,632. Hanes Hosiery Mills Company, Winston-Salem, N.C. Filed May 14, 1958.

SN 68,053. Graham Paper Company, St. Louis, Mo. Filed Feb. 19, 1959.

CLIPPER

For Paper Bags.
First use in 1929.

SN 68,785. Sitrue Inc., New York, N.Y. Filed Feb. 19, 1959.

Chantilly

For Facial Tissues.
First use June 26, 1937.

Class 38—Prints and Publications

SN 25,534. L. Ron Hubbard, Washington, D.C. Filed Dec. 2, 1957.

For Books, Magazines.
First use 1951.

SN 56,127. Gulf Coast Films, Inc., Houston, Tex. Filed July 28, 1958.

No claim is made to the words "Houston" and "Films," and the representation of the camera, apart from the mark as shown, applicant reserving all of its rights at common law.
For Motion Pictures.
First use Dec. 19, 1949.

SN 58,983. Aircraft Industries Association of America, Inc., Los Angeles, Calif. Filed Sept. 16, 1958.

AIRCRAFT YEAR BOOK

For Annual Publication—Namely, a Standard Reference of United States Aviation.
First use 1919.

SN 63,519. Board of Christian Education and Publication Evangelical and Reformed Church, Philadelphia, Pa. Filed Dec. 2, 1958.

For Books, Pamphlets, and Audio-Visual Materials, the Latter Being Specifically Lithographs and Religious Pictorial Art, Filmstrips and Slide Sets.
First use in 1939.

SN 67,158. Scholastic Magazines, Inc., New York, N.Y. Filed Feb. 5, 1959.

THE ARROWHEAD

For Bulletin Published Periodically Containing News and Short Reviews of Current Books.
First use in August 1958.

Class 39—Clothing

SN 22,367. M. I. Kohan Inc., New York, N.Y. Filed Jan. 10, 1957.

For Leotards.
First use Aug. 27, 1956.

SN 28,839. Carmi-Ainsbrooke Corporation, New York, N.Y. Filed Apr. 25, 1957.

NO PAMPER

For Wash and Wear Finish With Which Men's Shorts and Pajamas Sold by Applicant Have Been Treated.
First use Apr. 12, 1957.

SN 34,790. Hickok Manufacturing Co. Inc., Rochester, N.Y. Filed Aug. 1, 1957.

The drawing is lined for red and gold. The words "Positively Finer" appear on the scroll at the lower portion of the medallion. Owner of Reg. Nos. 274,484 and 517,146.
For Suspenders, Braces, Garters and Apparel Belts, and Neckwear.
First use Feb. 1, 1957.

SN 37,435. I. B. Kleinert Rubber Company, New York, N.Y. Filed Sept. 18, 1957.

WAIST-IN

Owner of Reg. No. 577,788.
For Girdles, Brassieres, and Combinations Thereof.
First use Sept. 7, 1951, on girdles.

Therefor, Tape Recorders.

First use Aug. 11, 1958.

SN 40,063. Maiden Form Brassiere Company, Inc., New York, N.Y. Filed Nov. 4, 1957.

STITCH-IN-TIME

For Foundation Garments—Namely, Brassieres.
First use Oct. 22, 1957.

SN 41,039. Olga Company, Van Nuys, Calif. Filed Nov. 20, 1957.

FRENCH CURVE

For Girdles, Brassieres, and Garter Belts.
First use July 13, 1957.

SN 47,338. Carling of California, Inc., Los Angeles, Calif. Filed Mar. 10, 1958.

CAR-LON

For Infants', Little Girls', and Teen-Age Girls' Pajamas, Nightgowns, and Underwear.
First use Dec. 31, 1957, on girls' pajamas.

SN 47,409. Munsingwear, Inc., d.b.a. Hollywood V-Ette-Vassarette, Minneapolis, Minn. Filed Mar. 10, 1958.

HOLLYWOOD -ette Vassarette

Owner of Reg. Nos. 343,505, 417,060, and others.
For Brassieres, Garter Belts, Girdles, Pantie Girdles, and Foundation Garments.
First use on or about Aug. 15, 1957.

SN 48,821. Ashear Bros., Inc., New York, N.Y. Filed Apr. 1, 1958.

ONE ON THE HOUSE

Owner of Reg. No. 650,115.
For Men's Handkerchiefs.
First use Nov. 19, 1957.

SN 49,067. Morton Karten, Inc., New York, N.Y. Filed Apr. 4, 1958.

TOW-BOGGINS

For Children's Snowsuit Sets Including Coats, Pants, and Hats.
First use Apr. 1, 1958.

SN 51,067. Helen M. Shaw, Beverly Hills, Calif. Filed May 5, 1958.

SHIELDETTE

For Cotton Net Vest Type Holder for Women's Dress Shields.
First use May 29, 1957.

SN 51,632. Hanes Hosiery Mills Company, Winston-Salem, N.C. Filed May 14, 1958.

SOUTH PACIFIC

For Ladies' Hosiery.
First use Nov. 30, 1949.

SN 52,048. International Latex Corporation, Dover, Del. Filed May 21, 1958.

VENTEX

For Girdles.
First use Apr. 18, 1958.

SN 56,002. The Goodyear Tire & Rubber Company, Akron, Ohio. Filed July 25, 1958.

NEOCHROME

For Soles.
First use June 25, 1958.

SN 56,245. Canterbury Knitters, Ltd., New York, N.Y. Filed July 29, 1958.

MERSETA

For Yarn Sold in Finished Apparel—Namely, Ladies' Sweaters, Skirts, and Slacks.
First use April 1958.

SN 57,003. Quality Mills, Incorporated, Mount Airy, N.C. Filed Aug. 11, 1958.

TODDLY WINKS

For Infants' and Children's Knit and Woven Underwear and Outer Wear—Namely, Pants, Shirts, Sweaters, Blouses, T-Shirts, Undershirts, Panties, Briefs, Gowns, Sacques, Kimonos, Binders, and Bibs.
First use Aug. 1, 1958.

SN 57,840. Regano Box Toe Co., Haverhill, Mass. Filed Aug. 25, 1958.

FADE-A-WAY BRAND

For Box Toes for Shoes.
First use July 7, 1958.

SN 58,047. Reliance Manufacturing Company, New York, N.Y. Filed Aug. 28, 1958.

RED COACHMAN

For Men's, Boys', Women's, and Girls' Pajamas.
First use Apr. 30, 1958.

SN 58,053. Santina, Washington, D.C. Filed Aug. 28, 1958.

COCKTAIL VEST BY MADAME SANTINA

Applicant disclaims the exclusive right to use the word "Vest" apart from the mark as shown. Owner of Reg. No. 679,668.

For Men's Vests.

First use November 1957.

SN 58,249. S.D.S. Inc., d.b.a. Renée of Hollywood, Los Angeles, Calif. Filed Sept. 2, 1958.

Renée OF HOLLYWOOD

Owner of Reg. No. 377,684.

For Corsets, Brassieres, Bandeaux, Girdles, Corset Combinations, and Garter Belts.

First use in 1932.

SN 59,314. Eleanor M. Marshall, Brooklyn, N.Y. Filed Sept. 22, 1958.

Sheherazade

For Ladies' and Misses' Garments—Namely, Lounging Pants With or Without Jackets.

First use June 1958.

SN 59,799. Slumbertogs, Inc., New York, N.Y. Filed Sept. 30, 1958.

SLUMBERTOTS

Owner of Reg. No. 530,027.

For Infants' and Children's One Piece Pajamas, Two-Piece Pajamas, Nightshirts, Nightgowns, and Robes.

First use Nov. 1, 1945.

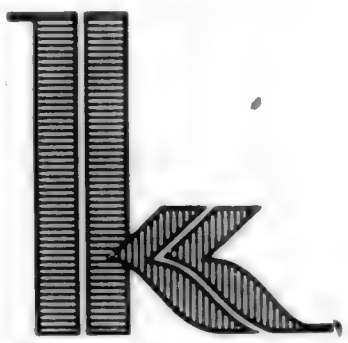
SN 61,137. Max Ulman, Inc., New York, N.Y. Filed Oct. 22, 1958.

NIP-N-TY

For Women's Dresses.

First use on or about Mar. 5, 1958.

SN 61,573. S. H. Kress and Company, New York, N.Y. Filed Oct. 29, 1958.



The drawing is lined for blue and red. Owner of Reg. No. 562,353.

For Handkerchiefs.

First use Oct. 25, 1958.

SN 61,895. Anglo-Scandinavian Manufacturing Company Limited, Manchester, England. Filed Nov. 4, 1958.

Abbey

For Men's Shoes.

First use June 13, 1955; in commerce July 25, 1955.

SN 62,536. Doncaster Collar and Shirt Company, Inc., Rutherfordton, N.C. Filed Nov. 17, 1958.

DONCASTER

Owner of Reg. No. 359,995.

For Ladies' and Misses' Suits, Dresses, Skirts, Blouses, Jackets, Slacks, Shorts, Playsuits, Culottes, Bandeaux, and Belts for Outer Wear.

First use February 1931.

SN 62,619. Royal Court Shirtmakers, Inc., Los Angeles, Calif. Filed Nov. 17, 1958.

VERDI MANTOVA

For Men's Shirts.

First use Oct. 15, 1958.

SN 62,681. Fortuna Foundations, Inc., New York, N.Y. Filed Nov. 18, 1958.

Owner of Reg. No. 671,872.

For Girdles.

First use Jan. 21, 1958.

SN 62,790. Russell Hosiery Mills, Inc., Star, N.C., assignee of Rocky Mountain Textile Mills, Inc., Denver, Colo. Filed Nov. 19, 1958.

Rockay

Assignee owner of Reg. No. 557,081.

For Men's and Women's Hosiery.

First use on or about Oct. 3, 1958.

SN 62,815. Yorn Import Co., Inc., San Francisco, Calif. Filed Nov. 19, 1958.

QUEEN ROSE

The lining is for shading only.

For Ladies' and Misses' Brassieres and Blouses.

First use July 14, 1958.

SN 62,915. Empire Shield Co., Inc., New York, N.Y. Filed Nov. 21, 1958.

Pearly Pants

The word "Pants" is disclaimed apart from the mark as shown.

For Baby Pants.

First use Nov. 11, 1958.

SN 63,082. The Lovable Brassiere Co., Atlanta, Ga. Filed Nov. 24, 1958.

Miss Lovable

Owner of Reg. Nos. 378,181, 636,849, and others.

For Ladies' Panties and Brassieres.

First use Oct. 27, 1958.

SN 63,456. Alfred Koenig, Paris, France. Filed Dec. 1, 1958.

PERMATISATION

Owner of French Reg. No. 463,104, dated Feb. 22, 1957 (Seine); Natl. Inst. No. 86,017.

For Hosiery Articles, in Particular, Socks, Stockings, Stockings for Ladies, Skin Tights.

SN 63,457. Alfred Koenig, Paris, France. Filed Dec. 1, 1958.

PERMAT

Owner of French Reg. No. 463,103, dated Feb. 22, 1957 (Seine); Natl. Inst. No. 86,016.

For Hosiery Articles, in Particular, Socks, Stockings, Stockings for Ladies, Skin Tights.

SN 63,554. The Touraine Stores, Inc., Boston, Mass. Filed Dec. 2, 1958.

WONDER WEAVE

For Women's and Girls' Hosiery.

First use Jan. 1, 1924.

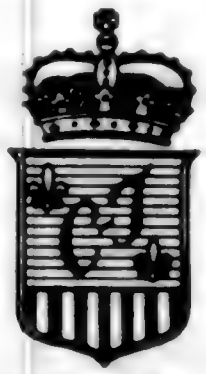
SN 64,683. Blumm Incorporated, Chicago, Ill. Filed Dec. 22, 1958.

PAGANINI

For Women's Shoes.

First use June 12, 1953.

SN 65,537. Craddock-Terry Shoe Corporation, Lynchburg, Va. Filed Jan. 9, 1959.



The lining on the drawing is a part of the mark and does not represent color.

For Shoes.

First use Nov. 5, 1958.

SN 66,116. Stewart Sportwear, Inc., Los Angeles, Calif. Filed Jan. 19, 1959.

For Swimwear Such as Bathing Suits.

First use Jan. 10, 1956.

SN 66,422. Desco Shoe Corporation, New York, N.Y. Filed Jan. 26, 1959.

Cantare

For Misses', Girls', Boys', Children's, Men's, and Women's Shoes of Leather, Fabric, or Part Leather and Part Fabric, Plastic, or Other Materials.

First use Nov. 17, 1958.

SN 66,645. Rand Products Co., Inc., Brooklyn, N.Y. Filed Jan. 28, 1959.

LEE-STEFF'S

For Women's Shoes and Bedroom Slippers.

First use Aug. 22, 1958.

SN 66,841. George L. Brown, d.b.a. The London Shop, New York, N.Y. Filed Feb. 2, 1959.

THE REX

For Men's Shirts.

First use Mar. 1, 1952.

SN 67,479. Samuel E. Schlein, Inc., New York, N.Y. Filed Feb. 10, 1959.

EASTBROOKE

For Men's and Boys' Suits, Coats, and Jackets.

First use Jan. 5, 1959.

SN 67,531. J. Edwards & Co., Philadelphia, Pa. Filed Feb. 11, 1959.

FEATHER-EZE

For Children's Shoes.

First use July 26, 1937.

SN 67,615. Robert Kirk, Ltd., San Francisco, Calif. Filed Feb. 12, 1959.

REGENT STREET

For Men's and Ladies' Suits, Coats, Sport Coats, Shirts, Sport Shirts, Neckwear, Sweaters, and Gloves and Men's Raincoats, Slacks, Underwear, and Shoes.

First use Sept. 11, 1934.

SN 67,688. M.K.M. Knitting Mills, Inc., Manchester, N.H. Filed Feb. 13, 1959.

TIARA

Owner of Reg. No. 568,529.
For Swimsuits.
First use Jan. 20, 1959.

SN 67,691. M.K.M. Knitting Mills, Inc., Manchester, N.H. Filed Feb. 13, 1959.

FIREFLY

Owner of Reg. Nos. 519,421 and 667,457.
For Swimsuits.
First use Jan. 20, 1959.

SN 68,047. Famous Knitwear Corp., New York, N.Y. Filed Feb. 19, 1959.

FAME-LON

For Girls', Boys', and Ladies' Sweaters, and Infants' Bootees and Sweaters.
First use Dec. 30, 1958.

SN 68,112. Bulluck Hosiery, Inc., New York, N.Y. Filed Feb. 20, 1959.

For Hosiery.
First use July 1, 1958.

SN 68,534. United Sheeplined Clothing Company, Inc., New York, N.Y. Filed Feb. 26, 1959.

SHO-CREST

For Men's, Boys', Women's, and Children's Jackets, Caps, Sweaters, and Vests.
First use Nov. 25, 1957.

SN 68,579. Lazy U Incorporated, New York, N.Y. Filed Feb. 27, 1959.

WRAP-ADAPT

For Women's Dresses and Lounging Robes.
First use Feb. 15, 1959.

SN 69,087. Morris B. Sachs, Inc., Chicago, Ill. Filed Mar. 6, 1959.

SACMOR

For Men's Suits.
First use Nov. 21, 1932.

SN 69,984. Ohrbach's Incorporated, New York, N.Y. Filed Mar. 20, 1959.

Ohr-elle

Owner of Reg. No. 367,095.
For Women's and Children's Wearing Apparel—Namely, Dresses, Sweaters; Lingerie—Namely, Silk Underslips, Petticoats, Drawers, Bed Jackets, Nightgowns; and Gloves of Leather and Fabric; Shoes of Leather, Fabric and Combinations Thereof; Hats, Coats, Blouses, Dressing Robes, Hosiery, Handkerchiefs, Housecoats, and Pajamas.
First use on or about Aug. 24, 1938.

SN 70,307. Milsan Mills, Incorporated, Lebanon, Pa. Filed Mar. 26, 1959.

MILSANO

Owner of Reg. Nos. 500,306 and 648,646.
For Ladies', Girls', Children's Tights or Leotards, Gowns, Slips, Panties, Pajamas, Robes, and Men's and Boys' Underwear, T-Shirts, Underpants, Pajamas, Midway Shorts.
First use Oct. 21, 1958.

SN 70,478. Hortex Manufacturing Co., Inc., El Paso, Tex. Filed Mar. 30, 1959.

"JIVEYS"

For Boys' Slacks.
First use Oct. 13, 1958.

SN 70,575. Belmont Manufacturing Corp., Reading, Pa. Filed Mar. 31, 1959.

ISLE OF CLOUD

For Men's and Women's Clothing—Namely, Knit Shirts and Sweaters.
First use Feb. 12, 1959.

SN 73,271. Sears, Roebuck and Co., Chicago, Ill. Filed May 8, 1959.

DURALON

For Men's and Boys' Jackets and Trousers.
First use Dec. 22, 1953.
Subj. to Intf. with SN 57,143.

Class 40—Fancy Goods, Furnishings, and Notions

SN 31,318. Jules Friedman, d.b.a. Merit Plastics, Lynbrook, N.Y. Filed June 4, 1957.

GEMPEARL

For Buttons Made in Whole or in Part of Plastic Composition.
First use November 1955.

SN 33,471. Endsdown Company, Inc., New York, N.Y. Filed July 10, 1957.

ENDS-LO

For Anticurling Strips for Use on Collars and Other Types of Apparel.
First use June 25, 1957.

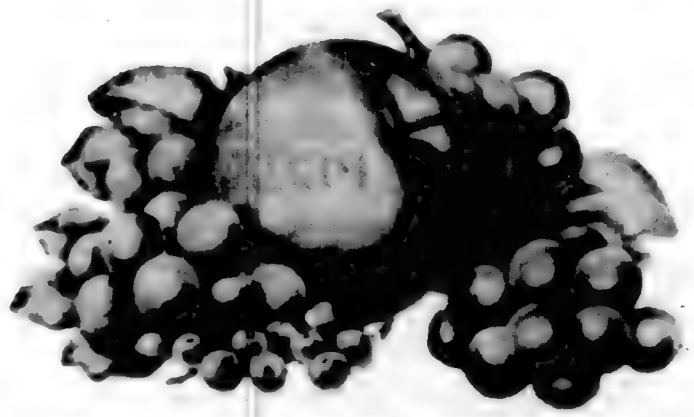
SN 50,307. Matson Manufacturing Co. Inc., Long Island City, N.Y. Filed Apr. 24, 1958.

Matson

For Toilet Articles—Namely, Combs, Brushes, Hand Mirrors, Combinations Thereof and Dresser Sets, of Metal and Plastic, and Make Up and Shaving Mirrors.
First use January 1948.

SN 55,773. Fruit of the Loom, Inc., Providence, R.I. Filed July 23, 1958.

FRUIT OF THE LOOM



Owner of Reg. Nos. 124,730, 174,998, and 175,314.
For Bias Tape, Shoe Laces, Sewing Notions—Namely, Blanket Binding, Seam Binding, Quilt Binding, Hem Facing, Twistless Tape, Twill Tape, Bias Seam Tape, Piping, Rick Rack, Soutache, Braid and Middy Braid, Velvet Ribbon, Hanks of Elastic Braided Tape, Iron-On Denim Patches, and Ribbon.
First use 1921.

SN 63,557. Vail Manufacturing Company, Chicago, Ill. Filed Dec. 2, 1958.

MONARCH

Owner of Reg. Nos. 674,205 and 678,733.
For Bank Pins.
First use Mar. 15, 1933; 1927 on paper clips.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

SN 33,870. J. P. Stevens & Co. Inc., New York, N.Y., assignee of D. B. Fuller & Co. Inc., New York, N.Y. Filed July 17, 1957.

FANTASY

For Patterned Broadcloth, for Use in Ladies' Blouses and Dresses.
First use Nov. 19, 1956.

SN 66,489. Reliable Textile Company, Inc., New York, N.Y. Filed Jan. 26, 1959.

LA NORKA

For Woven Textile Fabric of Synthetic Fibers Comprising a Suiting Fabric Adaptable for Suits, Skirts, Dresses, Coats, Shorts, and Slacks.
First use Oct. 21, 1958.

SN 66,955. J. P. Stevens & Co. Inc., New York, N.Y. Filed Feb. 2, 1959.

VISOR

For Cotton Fabrics.
First use July 8, 1958.

Class 43—Thread and Yarn

SN 69,626. E. I. du Pont de Nemours and Company, Wilmington, Del. Filed Mar. 16, 1959.

ORLON CANTRECE

Owner of Reg. Nos. 529,080 and 536,272.
For Yarns and Threads of Synthetic Fibers.
First use on or about Feb. 13, 1959.

Class 44—Dental, Medical, and Surgical Appliances

SN 51,969. The Dick X-Ray Company, St. Louis, Mo. Filed May 19, 1958.

COMMANDO

For Teletherapy Unit.
First use Dec. 6, 1956.

SN 56,934. Demar Products, Inc., Columbus, Ohio. Filed Aug. 11, 1958.

DEMAR

For Specimen Containers and Other Containers for Medical Purposes and Urinometers.
First use about Nov. 15, 1957.

Class 45—Soft Drinks and Carbonated Waters

SN 57,015. Seminole Flavor Company, Chattanooga, Tenn. Filed Aug. 11, 1958.

DOUBLE-STRAWBERRY

Owner of Reg. Nos. 363,942, 369,889, and 394,666.
For Strawberry-Flavored Syrups and Concentrates Used in the Manufacture of Carbonated Soft Drink Beverages.
First use Oct. 28, 1937.

SN 57,016. Seminole Flavor Company, Chattanooga, Tenn. Filed Aug. 11, 1958.

DOUBLE-ROOT BEER

Owner of Reg. Nos. 363,941, 369,889, and 394,666.
For Root Beer Flavor Used in the Manufacture of Carbonated Soft Drink Beverages.
First use Oct. 28, 1937.

SN 74,932. Drinks, Incorporated, New York, N.Y. Filed June 2, 1959.

NUFIZZ

For Powders Sold for Use in Making Soft Drinks.
First use Nov. 4, 1957.

Class 46—Foods and Ingredients of Foods

SN 61,848. Order of St. Benedict, Collegeville, Minn. Filed Nov. 3, 1958.

ST. JOHN'S

Owner of Reg. No. 595,000.
For Bread.
First use July 14, 1958.

SN 62,544. Filler Products, Inc., Atlanta, Ga. Filed Nov. 17, 1958.

JUNGLE KORN

No claim of exclusive right is made to "Korn" as used on the goods claimed.
For Sugar-Coated Puffed Corn.
First use July 31, 1958.

SN 63,202. American Chocolate and Cocoa Co., Inc., d.b.a. American Chocolate Company, Inc., St. Louis, Mo. Filed Nov. 26, 1958.

"DIVINITY"

For Coconut Sauce Used in the Making of Ice Cream, Pies, and Sundae Cups.
First use Sept. 24, 1958.

SN 63,576. Dining In Distributors Inc., Chicago, Ill. Filed Dec. 3, 1958.

DINING IN

Owner of Reg. Nos. 441,931 and 662,901.
For Frozen Potatoes, Macaroni and Beef, and Frozen Meat and Poultry Pies.
First use Oct. 28, 1958.

SN 64,410. Green Giant Company, Le Sueur, Minn. Filed Dec. 16, 1958

Owner of Reg. Nos. 230,035, 590,870, and others.
For Canned Beans.
First use Aug. 11, 1958.

SN 64,462. General Mills, Inc., Minneapolis, Minn. Filed Dec. 17, 1958.

CHICKQUICK

For Frozen Chicken Parts.
First use Nov. 24, 1958.

SN 65,875. White Feather Farms, Inc., Dundee, Ill. Filed Jan. 14, 1959.

For Fresh and Frozen Chickens, Caponettes, Turkeys, and Rock Cornish Game Hens.
First use July 1954.

SN 65,930. Hugh J. X. Coffey, Washington, D.C. Filed Jan 16, 1959.

SHABBAZZ

For All Beef Sausages.
First use Aug. 1, 1958.

SN 66,453. Kaypeck Inc., Westfield, N.Y. Filed Jan. 26, 1959.

KAY PECK'S

For Canned Fruit Drink.
First use on or about Oct. 29, 1958.

SN 67,198. Cal-Tex Citrus Juice Co., Houston, Tex. Filed Feb. 6, 1959.

The letters are white and orange, and the background green.
For Fresh Orange Juice.
First use Oct. 20, 1958.

SN 67,234. John Morrell & Company, Ottumwa, Iowa. Filed Feb. 6, 1959.

Applicant disclaims any exclusive rights to the word "Brand" apart from the mark as shown. Owner of Reg. Nos. 153,253, 670,703, and others.
For Smoked Ham.
First use Jan. 14, 1958.

SN 68,739. Saratoga Dairy, Inc., Saratoga Springs, N.Y. Filed Mar. 2, 1959.

For Dairy Products—Namely, Fresh Milk, Butter, Fresh Eggs and Cottage Cheese, Cream, Buttermilk, and Chocolate Milk.
First use Jan. 15, 1959.

SN 69,883. Harold Nailes, d.b.a. Leuco Food Products, Chicago, Ill. Filed Mar. 18, 1959.

PARTY QUEEN

For Barbecue Sauce.
First use Dec. 1, 1958.

SN 69,920. A. E. Staley Manufacturing Company, Decatur, Ill. Filed Mar. 19, 1959.

SANGAMO

Owner of Reg. Nos. 170,902 and 668,193.
For Corn Syrup Solids.
First use Mar. 11, 1959.

SN 69,961. Golden Citrus Juices, Incorporated, Fullerton, Calif. Filed Mar. 20, 1959.

For Canned Orange Juice.
First use Feb. 12, 1959.

SN 70,660. Jewel Tea Co., Inc., Melrose Park, Ill. Filed Apr. 1, 1959.

SMOOTHIE

For Peanut Butter.
First use September 1947.

SN 71,690. Red River Valley Potato Flake Co., Grand Forks, N. Dak. Filed Apr. 16, 1959.

FARM STYLE

For Potato Flakes.
First use Jan. 21, 1959.

SN 71,836. J. L. Granger, d.b.a. Granger & Company, Seattle, Wash. Filed Apr. 20, 1959.

The drawing is lined for blue and red.
For Seafoods Sold in Containers—Namely, Crab, Oysters, Clams, Clam Nectar, Shrimp, Tuna, and Salmon.
First use Jan. 27, 1958.

SN 71,872. Pacific Mercantile Company, San Francisco, Calif. Filed Apr. 20, 1959.

For Canned Dog Food.
First use Mar. 1, 1956.

Class 47—Wines

SN 67,257. Societe Anonyme Etablissements Noilly Prat & Cie, Marseille, Bouches du Rhone, France. Filed Feb. 6, 1959.

NOILLY PRAT

Owner of French Reg. Nos. 96,998, 251,851, and 616,366.
For Wines.
First use 1843; in commerce 1859.

Class 50—Merchandise Not Otherwise Classified

SN 50,906. The E. F. MacDonald Company, Dayton, Ohio. Filed May 2, 1958.

SOUND GRAPHICS

For Educational Materials Kits.
First use Dec. 27, 1957.

SN 69,270. Minuteman, Inc., New York, N.Y. Filed Mar. 10, 1959.

MINUTEMAN

For Printed Plastic Signs.
First use Nov. 10, 1958.

Class 51—Cosmetics and Toilet Preparations

SN 33,362. Ferdinand Mülhens, d.b.a. Eau de Cologne- & Parfümerie-Fabrik Glockengasse No. 4711 gegenüber der Pferdepost von Ferd. Mülhens, Cologne (Rhine), Germany. Filed May 1, 1959.

4711 ELAN

For Cosmetics—Namely, Perfumes, Essential Oils for Inclusion in Perfumes and Cosmetic Products, Face Powder in Solid or Cake Form, Loose Powder for Facial or Other Cosmetic Purposes.
First use Jan. 29, 1953; in commerce Jan. 27, 1954.

SN 61,658. Parfums Ciro, Inc., New York, N.Y. Filed Oct. 30, 1958.

VELVET BATH

For Fragranced Bath Oil.
First use October 1957.

First use Nov. 24, 1958.

First use Jan. 14, 1958.

SN 62,740. Chesebrough-Pond's Inc., New York, N.Y. Filed Nov. 19, 1958.

HEART THROB

Owner of Reg. No. 390,848.

For Cosmetic Facial and Body Cream, Cosmetic Facial and Body Lotion, Lipstick, Rouge, Facial and Body Powder, Facial Lotion or Liquid Used as a Foundation Base and Also as a Powder Substitute.

First use Apr. 24, 1941.

SN 63,568. Star Lore Company, St. Louis, Mo. Filed Dec. 3, 1958.

STAR LORE

For Hair Pressing Oil.
First use Oct. 23, 1958.

SN 65,601. Mary E. Weenink, d.b.a. Mary Lynne, Cleveland, Ohio. Filed Jan. 9, 1959.

MARY LYNNE PERSIAN NIGHTS

For Perfume.
First use Nov. 1, 1950.

SN 66,236. Helena Rubinstein, Inc., New York, N.Y. Filed Jan. 21, 1959.

COLOR LIFT

For Hair Rinse.
First use Oct. 21, 1958.

SN 66,692. Samuel Bonat & Bro. Inc., West Paterson, N.J. Filed Jan. 29, 1959.

GOLD RIBBON

For Permanent Wave Solution.
First use Sept. 4, 1956.

SN 66,694. Samuel Bonat & Bro. Inc., West Paterson, N.J. Filed Jan. 29, 1959.

TRU-TIME

For Permanent Wave Lotion.
First use Sept. 12, 1955.

SN 67,005. Sally Hansen, Inc., New York, N.Y. Filed Feb. 3, 1959.

SALLY HANSEN

For Preparations for Repairing Split, Chipped or Torn Nails, for Coating Nails To Increase Their Resistance to Chipping, Etc., and for Coating Nails To Increase Their Length.

First use October 1956.

SN 67,152. I. Posner, Inc., New York, N.Y. Filed Feb. 5, 1959.

SILIPRESS

For Hair Pressing Oil.
First use Jan. 5, 1958.

SN 67,208. G. A. Davis Incorporated, San Francisco, Calif. Filed Feb. 6, 1959.

GOLD BRAID

For Hair Grooming Preparation, After Shave Lotion, and Men's Cologne.

First use Mar. 1, 1958.

SN 67,934. Richard Hudnut, Morris Plains, N.J. Filed Feb. 18, 1959.

BRIGHT FUTURE

For Hair Lightener.
First use Apr. 15, 1958.

Class 52—Detergents and Soaps

SN 62,322. General Aerosols, Inc., Shelton, Conn., assignee of Reed Research Corporation, Shelton, Conn. Filed Nov. 12, 1958.

aeromagic

For Aerosol Packaged Tar Remover, and Dust Laying Compounds Comprising an Oil Base Dust Spraying Composition.

First use Sept. 24, 1958.

SERVICE MARKS

Class 100—Miscellaneous

SN 62,228. Walter Reade, Inc., Oakhurst, N.J. Filed Nov. 10, 1958.

tasty ten

For Restaurant Services.
First use on or about June 1, 1956.

Class 101—Advertising and Business

SN 61,829. McCall Corporation, New York, N.Y. Filed Nov. 3, 1958.

Congress on BETTER LIVING

For Service to Home Builders and Suppliers of Home Builders Informing Them as to Features of Home Construction, Design, Furnishing and Equipment Recommended by Typical Consumers Brought Together by the Applicant, and Assisting in the Promotion of Homes Containing Such Features.

First use January 1958.

SN 66,073. National Advertising Company, Bedford Park, Ill. Filed Jan. 19, 1959.

HI-WAY SPECTACULARS

For Rental of Highway Advertising Signs.
First use Jan. 15, 1958.

SN 67,016. Martin Miller, d.b.a. The Martin Miller Company, New York, N.Y. Filed Feb. 3, 1959.

PRESTIGE PROSPECTING PLAN

For Sales Promotion and Prospecting Plan by Creating Planned Writing and Producing Direct Mail Sales Campaigns for Others.
First use Nov. 6, 1958.

SN 67,910. American Express Company, New York, N.Y. Filed Feb. 18, 1959.

Owner of Reg. No. 526,407.
For Credit Card Plan for Extension of Credit to Customers Who Patronize Subscribing Establishments and Making Collections From Said Customers Through a Central Billing System.
First use Sept. 23, 1958.

Class 102—Insurance and Financial

SN 62,452. First Colony Life Insurance Company, Inc., Lynchburg, Va. Filed Nov. 14, 1958.

For Underwriting Life Insurance.
First use on or about Oct. 31, 1956.

SN 66,730. National Creditors Services, Inc., Tyler, Tex. Filed Jan. 29, 1959.

The drawing is lined for orange.
For Delinquent Account Collection Service for Professional and Business People.
First use Dec. 17, 1958.

SN 67,498. United Investment Counsel, Inc., Boston, Mass. Filed Feb. 10, 1959.

UNITED INVESTMENT COUNSEL

Applicant disclaims the words "Investment Counsel" apart from the mark.
For Investment Counseling Services.
First use Jan. 5, 1959.

Class 104—Communication

SN 60,708. Mission Broadcasting Co., San Antonio, Tex. Filed Oct. 15, 1958.

More Music ... Less YAK!

For Radio Broadcasting Services.
First use June 24, 1957.

Class 105—Transportation and Storage

SN 67,414. Western Air Lines, Inc., Los Angeles, Calif. Filed Feb. 9, 1959.

Owner of Reg. Nos. 441,614, 654,916, and others.
For Transportation of Passengers by Air.
First use Mar. 5, 1956.

Class 107—Education and Entertainment

SN 64,848. Storer Broadcasting Company, Miami Beach, Fla. Filed Dec. 23, 1958.

DANCELAND

For Title of a Radio Program Featuring the Playing of Popular Music.
First use 1941.

COLLECTIVE MEMBERSHIP MARKS

Class 200

SN 64,303. Kappa Delta Sorority, Incorporated, Springfield, Mo. Filed Dec. 15, 1958.

For Indicating Membership in Applicant.
First use 1917.

SN 64,304. Kappa Delta Sorority Incorporated, Springfield, Mo. Filed Dec. 15, 1958.

The drawing is lined for green and gold.
For Indicating Membership Pledge in Applicant.
First use 1916.

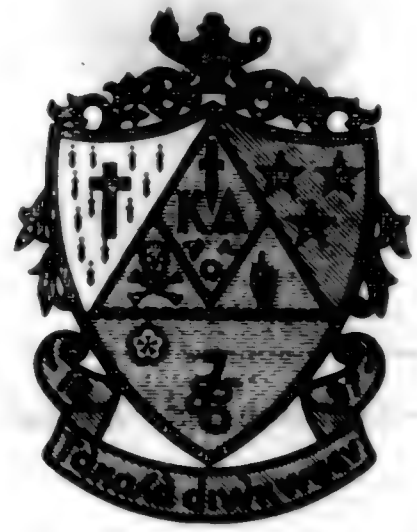
SN 64,305. Kappa Delta Sorority, Incorporated, Springfield, Mo. Filed Dec. 15, 1958.

For Indicating Approved Membership Pledge in Applicant.
First use 1903.

SN 64,306. Kappa Delta Sorority, Incorporated, Springfield, Mo. Filed Dec. 15, 1958.

Owner of Reg. Nos. 238,465 and 597,205.
For Indicating Membership in Applicant.
First use 1917.

SN 64,307. Kappa Delta Sorority, Incorporated, Springfield, Mo. Filed Dec. 15, 1958.



The drawing is lined for green, gold, and silver. The wording shown in the scroll is translated as "Let us strive for that which is honorable, beautiful, and highest." Owner of Reg. Nos. 238,465 and 597,205.
For Indicating Membership in Applicant.
First use 1913.

First use on or about Oct. 31, 1956.

Popular Music.
First use 1941.

TRADEMARK REGISTRATIONS ISSUED
PRINCIPAL REGISTER

Class 1—Raw or Partly Prepared Materials

683,819. GARDEN CHARM. L. C. House & Sons Nursery. SN 62,084. Pub. 6–9–59. Filed 11–7–58.

683,820. FIRENZE. B. D. Eisendrath Tanning Co. SN 62,277. Pub. 6–9–59. Filed 11–12–58.

Class 2—Receptacles

683,821. STATUE OF LIBERTY AND DESIGN. Liberty Corrugated Container Corporation. SN 48,761. Pub. 6–9–59. Filed 3–31–58.

683,822. STATUE OF LIBERTY ETC. AND DESIGN. Liberty Corrugated Container Corporation. SN 48,762. Pub. 5–12–59. Filed 3–31–58.

683,823. V–2 AND DESIGN. Victor Vending Corporation. SN 49,319. Pub. 6–9–59. Filed 4–8–58.

683,824. KOTE KUP. Mid-West-Pak Corporation. SN 64,481. Pub. 6–9–59. Filed 12–17–58.

683,825. AMIGO. Swank, Inc. SN 64,925. Pub. 6–9–59. Filed 12–18–58.

683,826. FIBROCAST. The Firestone Tire & Rubber Company. SN 65,421. Pub. 6–9–59. Filed 1–7–59.

683,827. BERIGARD. Diamond Gardner Corporation. SN 65,481. Pub. 6–9–59. Filed 1–8–59.

Class 3—Baggage, Animal Equipments, Portfolios, and Pocketbooks

683,828. STAR LACE AND DESIGN. R. Appel, Inc. SN 49,807. Pub. 6–9–59. Filed 4–17–58.

Class 4—Abrasives and Polishing Materials

683,829. MIXMASTER. Sunbeam Corporation. SN 64,215. Pub. 6–9–59. Filed 12–12–58.

683,830. ZEPROTEX. Zep Manufacturing Corporation. SN 65,178. Pub. 6–9–59. Filed 12–31–58.

683,831. ZEPREME. Zep Manufacturing Corporation. SN 65,179. Pub. 6–9–59. Filed 12–31–58.

Class 6—Chemicals and Chemical Compositions

683,832. EXTRODOR. Westfalische Essenzen-Fabrik F. W. Baecker K.G. SN 29,678. Pub. 6–9–59. Filed 5–8–57.

683,833. RIM-SAVER. Tuxco Corporation. SN 38,846. Pub. 6–9–59. Filed 7–16–57.

683,834. UOP INHIBITOR NO. 7 AND DESIGN. Universal Oil Products Company (Delaware corporation—organized 1958), assignee of Universal Oil Products Company (Delaware corporation). SN 42,254. Pub. 6–9–59. Filed 12–11–57.

683,835. KLEEN-N-GREEN. Floralife, Inc. SN 43,679. Pub. 3–3–59. Filed 1–9–58.

683,836. PERCEL. Fritzsche Brothers, Inc. SN 47,637. Pub. 6–9–59. Filed 3–13–58.

683,837. DISPERSCON. Koppers Company, Inc. SN 48,566. Pub. 6–9–59. Filed 3–27–58.

683,838. SANI-VAT. Koppers Company, Inc. SN 48,567. Pub. 6–9–59. Filed 3–27–58.

683,839. INSTANTREAT. Hagan Chemicals & Controls, Inc. SN 49,368. Pub. 6–9–59. Filed 4–9–58.

683,840. OMSET. Olin Mathieson Chemical Corporation. SN 49,769. Pub. 6–9–59. Filed 4–16–58.

683,841. VISCOBOND. Stein, Hall & Company, Inc. SN 53,910. Pub. 6–9–59. Filed 6–19–58.

683,842. VIVITEX. The Stamford Chemical Company. SN 55,735. Pub. 4–14–59. Filed 7–21–58.

683,843. ESPESENE. Eastern States Petroleum & Chemical Corporation. SN 58,411. Pub. 6–9–59. Filed 9–5–58.

683,844. THPC. Hooker Chemical Corporation. SN 58,925. Pub. 6–9–59. Filed 9–15–58.

683,845. FLEACIDE. Curtis Laboratories, Inc. SN 59,517. Pub. 6–9–59. Filed 9–25–58.

683,846. SAG. Union Carbide Corporation. SN 60,375. Pub. 6–9–59. Filed 10–9–58.

683,847. DUEL. National Laboratories, Inc. SN 60,548. Pub. 6–9–59. Filed 10–13–58.

683,848. MERVAN. R. T. Vanderbilt Company, Inc. SN 61,090. Pub. 6–9–59. Filed 10–21–58.

683,849. VISKOTE. Union Carbide Corporation. SN 61,673. Pub. 6–9–59. Filed 10–30–58.

683,850. VISKING AND REPRESENTATION OF CROWN AND DESIGN. Union Carbide Corporation. SN 61,750. Pub. 6–9–59. Filed 10–31–58.

683,851. HELLIGE. Heilige, Incorporated. SN 62,654. Pub. 6–9–59. Filed 6–23–58.

683,852. LIQUIBOR. United States Borax & Chemical Corporation. SN 63,128. Pub. 6–9–59. Filed 11–24–58.

683,853. OILAN. Wilson & Toomer Fertilizer Co. SN 63,779. Pub. 6–9–59. Filed 12–5–58.

683,854. TRIP. Wilson & Toomer Fertilizer Co. SN 63,781. Pub. 6–9–59. Filed 12–5–58.

683,855. KEMET. Union Carbide Corporation. SN 64,032. Pub. 6–9–59. Filed 12–10–58.

683,856. MUTUAL IN CIRCLE. Allied Chemical Corporation. SN 64,132. Pub. 6–9–59. Filed 12–12–58.

683,857. PRESTONE. Union Carbide Corporation. SN 64,362. Pub. 6–9–59. Filed 12–15–58.

683,858. ZEPORIZER. Zep Manufacturing Corporation. SN 65,187. Pub. 6–9–59. Filed 12–31–58.

683,859. BROMOLEN. Crookes-Barnes Laboratories, Inc. SN 65,889. Pub. 6–9–59. Filed 1–15–59.

683,860. TRYSBEN. E. I. du Pont de Nemours and Company. SN 66,338. Pub. 6–9–59. Filed 1–23–59.

683,861. SOLANOSE. W. A. Scholten's Chemische Fabrieken N.V. SN 66,937. Pub. 6–9–59. Filed 2–2–59.

Class 9—Explosives, Firearms, Equipments, and Projectiles

683,862. STAR AND DESIGN. Star, Bonifacio Echeverria, S.A. SN 44,652. Pub. 6–9–59. Filed 1–24–58.

Class 11—Inks and Inking Materials

683,863. ROTOGEM. Interchemical Corporation. SN 27,016. Pub. 6–9–59. Filed 9–11–57.

683,864. ROTOTUF. Interchemical Corporation. SN 37,018. Pub. 6–9–59. Filed 9–11–57.

683,865. U AND DESIGN. Underwood Corporation. SN 38,327. Pub. 6–9–59. Filed 9–3–58.

Class 12 — Construction Materials

683,866. EXT-DFPA ETC. AND DESIGN. Douglas Fir Plywood Association. SN 683,370. COLLECTIVE MARK. Pub. 6–9–59. Filed 3–3–55.

683,867. SOLATEX SILVER. Wasco Products, Inc. SN 31,526. Pub. 6–9–59. Filed 6–6–57.

683,868. WHITESTONE. The Georgia Marble Company. SN 47,162. Pub. 6–9–59. Filed 3–5–58.

683,869. STRUTWALL. Andersen Corporation. SN 48,683. Pub. 6–9–59. Filed 3–31–58.

683,870. GEMMAIL. Roger Francois Desire Navarre, alias Malherbe. SN 49,082. Pub. 6–9–59. Filed 4–4–58.

683,871. WASP. A. & P. Iron Works, Inc. SN 51,107. Pub. 6–9–59. Filed 5–6–58.

683,872. STAZON. Plastic Products Company. SN 58,876. Pub. 6–9–59. Filed 9–12–58.

683,873. REPRESENTATION OF FLUSH WELD IN A CIRCLE. AA Wire Products Company. SN 60,006. Pub. 6–9–59. Filed 10–3–58.

683,874. KILROY'S KASTLES. United Sanitary Rentals, Inc. SN 61,456. Pub. 6–9–59. Filed 10–27–58.

683,875. TENTOR. Lemvigh-Muller & Munck A/S. SN 63,943. Pub. 6–9–59. Filed 12–9–58.

683,876. HYDRO-GARD. The Philip Carey Manufacturing Company. SN 63,979. Pub. 6–9–59. Filed 12–10–58.

683,877. SPEEDLOCK. Waco Manufacturing Company. SN 64,224. Pub. 6–9–59. Filed 12–12–58.

683,878. MAYPORT. Frank B. Pope Co. SN 64,336. Pub. 6–9–59. Filed 12–15–58.

Class 13 — Hardware and Plumbing and Steam-Fitting Supplies

683,879. SEAL-"O"-RING. Grove Valve and Regulator Company. SN 31,004. Pub. 6–9–59. Filed 5–29–57.

683,880. SPARTAN. F. H. Hill Company, Inc. SN 51,993. Pub. 6–9–59. Filed 5–20–58.

683,881. FLITE-FLOW. Edward Valves, Inc. SN 52,175. Pub. 6–9–59. Filed 5–22–58.

683,882. HOZE-LOK. Parker-Hannifin Corporation. SN 53,901. Pub. 6–9–59. Filed 6–19–58.

683,883. VF. N.V. "Industrie" v/h Van Lohuizen & Co. SN 60,761. Pub. 6–9–59. Filed 10–16–58.

683,884. HI-FI. Federal Enameling & Stamping Company. SN 61,909. Pub. 6–9–59. Filed 11–4–58.

683,885. REPRESENTATION OF EAGLE AND STARS. Federal Enameling & Stamping Company. SN 61,910. Pub. 6–9–59. Filed 11–4–58.

683,886. BLUESTONE. Federal Enameling & Stamping Company. SN 61,911. Pub. 6–9–59. Filed 11–4–58.

683,887. FESCO. Federal Enameling & Stamping Company. SN 61,912. Pub. 6–9–59. Filed 11–4–58.

683,888. BABY DEAR. Federal Enameling & Stamping Company. SN 61,914. Pub. 6–9–59. Filed 11–4–58.

683,889. SNOW-WHITE. Federal Enameling & Stamping Company. SN 61,915. Pub. 6–9–59. Filed 11–4–58.

683,890. MASTERPIECE SERIES. Federal Enameling & Stamping Company. SN 62,283. Pub. 6–9–59. Filed 11–12–58.

683,891. LEVERLOCK. ACF Industries, Incorporated. SN 64,227. Pub. 6–9–59. Filed 12–15–58.

683,892. PERK-A-POT. Minit Spray Corporation. SN 65,433. Pub. 6–9–59. Filed 1–7–59.

683,893. SYNFLEX. Samuel Moore & Company. SN 65,852. Pub. 6–9–59. Filed 1–14–59.

683,894. HULA DANCER. Southeastern Products Corporation. SN 65,866. Pub. 6–9–59. Filed 1–14–59.

683,895. SUPERAIN. Melnor Industries, Inc. SN 65,967. Pub. 6–9–59. Filed 1–16–59.

683,896. WAVE-MASTER. Melnor Industries, Inc. SN 65,968. Pub. 6–9–59. Filed 1–16–59.

683,897. NUPRO. Nuclear Products Company. SN 65,973. Pub. 6–9–59. Filed 1–16–59.

Class 14 — Metals and Metal Castings and Forgings

683,898. RAY-ROLD. Eastern Rolling Mills, Inc. SN 47,844. Pub. 6–9–59. Filed 3–17–58.

683,899. EMPIRE REEVES AND DESIGN. Empire-Reeves Steel Corporation. SN 60,909. Pub. 6–9–59. Filed 10–20–58.

683,900. PER MAR. Chicago Railway Equipment Company. SN 66,022. Pub. 6–9–59. Filed 1–19–59.

Class 15 — Oils and Greases

683,901. CMC CELESTIAL ETC. AND DESIGN. Celestial Mercantile Corporation. SN 12,706. Pub. 3–5–57. Filed 7–24–56.

683,902. DRY-LUBE. William L. Reardon, d.b.a. Reardon Products. SN 32,718. Pub. 6–9–59. Filed 6–24–57.

683,903. HI-OCTALINE. Buchanan & Company, Inc. SN 36,278. Pub. 6–9–59. Filed 8–27–57.

683,904. POLYFLO. Moore & Munger. SN 49,701. Pub. 6–9–59. Filed 4–15–58.

683,905. KERR-McGEE AND DESIGN. Kerr-McGee Oil Industries, Inc. SN 60,151. Pub. 6–9–59. Filed 10–6–58.

683,906. DIPKOTE. D. A. Stuart Oil Co., Limited. SN 63,362. Pub. 6–9–59. Filed 11–28–58.

Class 16 — Protective and Decorative Coatings

683,907. DRYGALV. Drynamels Limited. SN 46,116. Pub. 6–9–59. Filed 2–19–58.

683,908. RES-N-GEL. F. Weber Co. SN 50,426. Pub. 3–31–59. Filed 4–25–58.

683,909. RITE-HUE. Color Corporation of America. SN 50,774. Pub. 6–9–59. Filed 5–1–58.

683,910. FLOOR LASTIC. M. A. Bruder & Sons, Incorporated. SN 52,271. Pub. 6–9–59. Filed 5–26–58.

683,911. SUPER SYNTEX. Devoe & Raynolds Company, Inc. SN 52,285. Pub. 2–17–59. Filed 5–26–58.

683,912. COLCO. Columbia Wax Company. SN 60,247. Pub. 6–9–59. Filed 3–10–59.

Class 18 — Medicines and Pharmaceutical Preparations

683,913. SURGI-STAT. Dale V. Bell, d.b.a. The Belport Company. SN 17,983. Pub. 4–23–57. Filed 10–23–56.

683,914. CITRA. Boyle & Company. SN 21,509. Pub. 8–6–57. Filed 12–24–56.

683,915. OBCT LONGCAPS. G and G Pharmacal Co., Inc. SN 24,845. Pub. 6–9–59. Filed 2–21–57.

683,916. NOSIK. Infant's Accessories, Inc. SN 48,174. Pub. 6–9–59. Filed 3–21–58.

683,917. PEL. The Merritt Corporation. SN 59,120. Pub. 6–9–59. Filed 9–18–58.

683,918. CARDIOQUIN. The G. F. Harvey Company, Inc. SN 59,293. Pub. 6–9–59. Filed 9–22–58.

683,975. SLIDE-N-CUT AND DESIGN. Lawrence H. Cook,

Class 25 — Locks and Safes

683,919. PRESSOROL. Travenol Laboratories, Inc. SN 59,360. Pub. 5–26–59. Filed 9–22–58.

683,920. OLD 97 AND DESIGN. Old 97 Company. SN 60,052. Pub. 6–9–59. Filed 10–3–58.

683,921. FRANTEN. Burroughs Wellcome & Co. (U.S.A.) Inc. SN 60,105. Pub. 6–9–59. Filed 10–6–58.

683,922. DERONIL. Schering Corporation. SN 61,738. Pub. 5–19–59. Filed 10–31–58.

683,923. CHROMPHOSPHOTOPE. Olin Mathieson Chemical Corporation. SN 62,029. Pub. 6–9–59. Filed 11–6–58.

683,924. DARICON. Chas. Pfizer & Co., Inc. SN 62,955. Pub. 6–9–59. Filed 11–21–58.

683,925. BACISTAT. Chas. Pfizer & Co., Inc. SN 62,956. Pub. 6–9–59. Filed 11–21–58.

683,926. POSILIN. Chas. Pfizer & Co., Inc. SN 63,246. Pub. 6–9–59. Filed 11–26–58.

683,927. AMIFUR. The Norwich Pharmacal Company, d.b.a. Eaton Laboratories. SN 63,665. Pub. 6–9–59. Filed 12–4–58.

683,928. VANCOCIN. Eli Lilly and Company. SN 64,010. Pub. 6–9–59. Filed 12–10–58.

683,929. SUPAC-B. Mission Pharmacal Co. SN 64,188. Pub. 6–9–59. Filed 12–12–58.

683,930. HEMOID. Boyle & Company. SN 64,252. Pub. 6–9–59. Filed 12–15–58.

683,931. COLSAR. Crookes-Barnes Laboratories, Inc. SN 64,266. Pub. 6–9–59. Filed 12–15–58.

683,932. SKF AND DESIGN. Smith Kline & French Laboratories. SN 64,348. Pub. 6–9–59. Filed 12–15–58.

683,933. CIDICILLIN. Chas. Pfizer & Co., Inc. SN 64,655. Pub. 6–9–59. Filed 12–19–58.

683,934. ROBAXISAL. A. H. Robins Company, Inc. SN 71,640. Pub. 6–9–59. Filed 4–17–59.

Class 19—Vehicles

683,935. FEED PIPER. Sprout, Waldron & Company, Inc. SN 30,529. Pub. 6–9–59. Filed 5–22–57.

683,936. WOLFWAGON. Wolf Engineering Corp. SN 31,298. Pub. 6–9–59. Filed 6–3–57.

683,937. ESKAPADE. Kreidler's Metall-u. Drahtwerke G.m.b.H. SN 46,630. Pub. 11–18–58. Filed 2–26–58.

683,938. GOLF LIZZIE. Industrial Manufacturing Co. of Texas, Inc. SN 57,813. Pub. 2–17–59. Filed 8–25–58.

683,939. FIREFLY AND DESIGN. Klopstock & Samson Manufacturing Company. SN 60,152. Pub. 6–9–59. Filed 10–6–58.

683,940. ROVER AND DESIGN. The Rover Company Limited. SN 61,506. Pub. 6–9–59. Filed 10–28–58.

683,941. LAND-ROVER AND DESIGN. The Rover Company Limited. SN 61,507. Pub. 6–9–59. Filed 10–28–58.

683,942. LAND-ROVER WITHIN OVAL. The Rover Company Limited. SN 61,508. Pub. 6–9–59. Filed 10–28–58.

683,943. ROBIN HOOD. Al Rose, Inc. SN 64,341. Pub. 6–9–59. Filed 12–15–58.

683,944. FAIRFIELD. Ventoura Corporation. SN 64,368. Pub. 6–9–59. Filed 12–15–58.

683,945. BACK-O-SEAT. Frank D. Brown. SN 64,686. Pub. 6–9–59. Filed 12–22–58.

683,946. MOTO MAC ETC. AND DESIGN. Economy Auto Stores, Inc. SN 65,484. Pub. 6–9–59. Filed 1–8–59.

Class 20—Linoleum and Oiled Cloth

683,947. VYRON. Fibreboard Paper Products Corporation. SN 63,816. Pub. 6–9–59. Filed 12–8–58.

683,948. NAIRN. Congoleum-Nairn Inc. SN 65,067. Pub. 6–9–59. Filed 12–30–58.

Class 21—Electrical Apparatus, Machines, and Supplies

683,949. MAGNERASER. Amplifier Corporation of America. SN 7,411. Pub. 1–13–57. Filed 5–1–56.

683,950. RENEWATRON. McGraw-Edison Company, assignee of Star Fuse Co. Inc. SN 18,655. Pub. 4–30–57. Filed 11–2–56.

683,951. RELIABLE LONG LIFE AND DESIGN. Quik-Chek Corp. SN 31,148. Pub. 6–9–59. Filed 5–31–57.

683,952. CONTROL AND DESIGN. Magnetics, Inc. SN 40,355. Pub. 6–9–59. Filed 11–8–57.

683,953. METROPOLITAN. Metropolitan Telephone Supply Corp. SN 47,508. Pub. 6–9–59. Filed 3–11–58.

683,954. DYNOX. Universal Winding Company. SN 47,699. Pub. 5–26–59. Filed 3–13–58.

683,955. AQUA SONIC. Lek Trol, Inc. SN 48,760. Pub. 3–3–59. Filed 3–31–58.

683,956. DECORPLATE. Decorplate, Inc. SN 50,032. Pub. 6–9–59. Filed 4–21–58.

683,957. DYNAWELD. L'Air Liquide Societe Anonyme Pour l'Etude et l'Exploitation des Procedes Georges Claude. SN 52,420. Pub. 1–20–59. Filed 5–27–58.

683,958. ROCKETTE. Cutler-Hammer, Inc. SN 53,860. Pub. 6–9–59. Filed 6–19–58.

683,959. DP AND DESIGN. Dresser Products Incorporated. SN 54,218. Pub. 6–9–59. Filed 6–25–58.

683,960. KAR-LIFE. Warshawsky and Company, Inc. SN 60,191. Pub. 6–2–59. Filed 10–6–58.

683,961. SUN-TRON. Sun-Tron Corporation. SN 63,122. Pub. 6–9–59. Filed 11–24–58.

683,962. DIETZ AND DESIGN. R. E. Dietz Company. SN 63,299. Pub. 6–9–59. Filed 11–28–58.

683,963. NICOPRESS. The National Telephone Supply Company. SN 64,189. Pub. 6–9–59. Filed 12–12–58.

683,964. PREAC. Airpax Products Company. SN 64,443. Pub. 6–9–59. Filed 12–17–58.

683,965. COLUMBIA CD. Columbia Broadcasting Systems, Inc., d.b.a. CBS-Hytron. SN 65,243. Pub. 6–9–59. Filed 1–2–59.

683,966. THE FLYING DUTCHMAN ETC. AND DESIGN. Nederlandse Geschenkartikelen Industrie Junora. SN 65,322. Pub. 6–9–59. Filed 1–5–59.

683,967. COLUMBUS' SANTA MARIA AND DESIGN. Nederlandse Geschenkartikelen Industrie Junora. SN 65,323. Pub. 6–9–59. Filed 1–5–59.

683,968. THE PILGRIM FATHERS' SHIP MAYFLOWER AND DESIGN. Nederlandse Geschenkartikelen Industrie Junora. SN 65,324. Pub. 6–9–59. Filed 1–5–59.

683,969. FRIENDSHIP. Friendship Lanterns, Inc. SN 66,875. Pub. 6–9–59. Filed 2–2–59.

683,970. PIGGY-BACK. K. W. Battery Company. SN 68,063. Pub. 6–9–59. Filed 2–19–59.

683,971. K-W AND DESIGN. K. W. Battery Company. SN 68,064. Pub. 6–9–59. Filed 2–19–59.

Class 22—Games, Toys, and Sporting Goods

683,972. 'ISH 'N' FUN AND DESIGN. John O. Malott. SN 60,230. Pub. 6–9–59. Filed 10–7–58.

683,973. TINY LUCKY LOUIE. William David Minser, d.b.a. Minser Tackle Company. SN 61,649. Pub. 6–9–59. Filed 10–30–58.

Class 23—Cutlery, Machinery, and Tools, and Parts Thereof

683,974. H 90. Hughes Tool Company. SN 609,968. Pub. 6–9–59. Filed 12–14–55.

Class 27—Horological Instruments

684,057. MERCEDES-BENZ. Daimler-Benz Aktiengesellschaft. SN 45,137. Pub. 6–9–59. Filed 2–3–58.

683,975. SLIDE-N-CUT AND DESIGN. Lawrence H. Cook, d.b.a. Safety Cutter Co. SN 42,449. Pub. 6-9-59. Filed 12-16-57.

683,976. MORE PER MAN WITH HARRISON LOADERS AND DESIGN. Harrison Manufacturing Company. SN 49,274. Pub. 6-9-59. Filed 4-8-58.

683,977. EZEE-UP. Charles Barancik, d.b.a. The Lathrop-Paulson Company. SN 50,675. Pub. 6-9-59. Filed 4-30-58.

683,978. POWER TOUCH AND DESIGN. The Skookum Company, Inc. SN 51,511. Pub. 6-9-59. Filed 5-12-58.

683,979. THE MAIN LINE ETC. AND DESIGN. Meicor, Inc. SN 51,924. Pub. 6-9-59. Filed 5-19-58.

683,980. WALLACE. Wallace Manufacturing Corp. SN 52,256. Pub. 6-9-59. Filed 5-23-58.

683,981. TOASTEE-LIFT. The Beacon Company. SN 52,674. Pub. 6-9-59. Filed 6-2-58.

683,982. DUO-DRIVE. The Cleveland Twist Drill Company. SN 52,690. Pub. 6-9-59. Filed 6-2-58.

683,983. MODU-CHUCK. Textron Inc. SN 53,664. Pub. 6-9-59. Filed 6-16-58.

683,984. MODU-MILL. Textron Inc. SN 53,669. Pub. 6-9-59. Filed 6-16-58.

683,985. GRASSCOMB. Eastern Tool & Mfg. Co. SN 57,354. Pub. 6-9-59. Filed 8-18-58.

683,986. TURFCOMB. Eastern Tool & Mfg. Co. SN 57,355. Pub. 6-9-59. Filed 8-18-58.

683,987. SHRUBCOMB. Eastern Tool & Mfg. Co. SN 57,356. Pub. 6-9-59. Filed 8-18-58.

683,988. P PECCO AND DESIGN. American Pecco Corporation. SN 57,736. Pub. 6-9-59. Filed 8-25-58.

683,989. BIG "6" ETC. AND DESIGN. Automatic Industries, Inc. SN 60,720. Pub. 6-9-59. Filed 10-16-58.

683,990. MAHLE. Mahle Kommandit-Gesellschaft. SN 62,770. Pub. 6-9-59. Filed 11-19-58.

683,991. ROTOLOK. Vesuvius Crucible Company. SN 62,886. Pub. 6-9-59. Filed 11-20-58.

683,992. GEARBELT. Browning Manufacturing Company. SN 63,149. Pub. 6-9-59. Filed 11-25-58.

683,993. TROPI-KOTE. Tropical Muffler Corporation. SN 65,598. Pub. 6-9-59. Filed 1-9-59.

683,994. STAR MAGIC. Wallace Silversmiths, Inc. SN 67,834. Pub. 6-9-59. Filed 2-16-59.

683,995. SCANIA-VABIS. Aktiebolaget Scania-Vabis. SN 69,102. Pub. 6-9-59. Filed 3-9-59.

683,996. PERMA-VANE. Davey Compressor Company. SN 69,323. Pub. 6-9-59. Filed 3-11-59.

683,997. TANGO. Gorham Manufacturing Company. SN 69,403. Pub. 6-9-59. Filed 3-12-59.

683,998. PINBALL. Dayton Perforators, Inc. SN 69,487. Pub. 6-9-59. Filed 3-13-59.

683,999. "JITTERBUG." Goldblatt Tool Company. SN 69,637. Pub. 6-9-59. Filed 3-16-59.

684,000. DELIVR-ALL. Marmon-Herrington Company, Inc. SN 69,662. Pub. 6-9-59. Filed 3-16-59.

684,001. "FPTO." Crane Carrier Corporation. SN 69,723. Pub. 6-9-59. Filed 3-17-59.

Class 24—Laundry Appliances and Machines

684,002. SURGEMASTER. Roland Andersen, d.b.a. Surgemaster Co. SN 33,187. Pub. 6-9-59. Filed 7-5-57.

684,003. ATLAS. H. V. Keller Manufacturing Company. SN 56,728. Pub. 6-9-59. Filed 8-6-58.

684,004. GEM FOAM. Gem, Incorporated. SN 65,088. Pub. 6-9-59. Filed 12-30-58.

684,005. HYDRAXTOR. Hydraxtor Company, d.b.a. The Hydraxtor Co. SN 65,563. Pub. 6-9-59. Filed 1-9-59.

Class 25—Locks and Safes

684,006. DIEBOLD. Diebold, Incorporated. SN 64,961. Pub. 6-9-59. Filed 12-29-58.

Class 26—Measuring and Scientific Appliances

684,007. DESIGN INC AND DESIGN. Design, Inc. SN 23,614. Pub. 6-9-59. Filed 2-1-57.

684,008. JEWEL-LITE. Art Craft Optical Company, Inc. SN 29,585. Pub. 3-25-58. Filed 5-8-57.

684,009. EVENFLO. The Pyramid Rubber Company. SN 42,605. Pub. 6-9-59. Filed 12-17-57.

684,010. PROXIMAT. Photographic Importing and Distributing Corp. SN 44,485. Pub. 6-9-59. Filed 1-22-58.

684,011. METROPOLITAN. Metropolitan Telephone Supply Corp. SN 47,509. Pub. 6-9-59. Filed 3-11-58.

684,012. HEAT-EYE. Herbert Fuel Devices. SN 47,578. Pub. 6-9-59. Filed 3-12-58.

684,013. MASCOT. Consolidated Electrodynamics Corporation. SN 50,873. Pub. 6-9-59. Filed 5-2-58.

684,014. BELFORT AND DESIGN. The Instruments Corporation. SN 51,567. Pub. 6-9-59. Filed 5-13-58.

684,015. FARRAND. Farrand Optical Co., Inc. SN 51,885. Pub. 6-9-59. Filed 5-19-58.

684,016. MEASURAID. Andrew F. Schott. SN 52,161. Pub. 6-9-59. Filed 5-22-58.

684,017. SITSONDE. G. T. Schjeldahl Company. SN 52,242. Pub. 6-9-59. Filed 5-23-58.

684,018. SONITROL. The Sheffield Corporation. SN 52,600. Pub. 6-9-59. Filed 5-29-58.

684,019. MAGNA-MATIC. Alvin J. Karrels, d.b.a. A. J. Karrels Co. SN 52,613. Pub. 6-9-59. Filed 5-2-58.

684,020. CONSTANTAIRE. The Sheffield Corporation. SN 52,772. Pub. 6-9-59. Filed 6-2-58.

684,021. MAGICARE. Minneapolis-Honeywell Regulator Company. SN 53,896. Pub. 6-9-59. Filed 6-19-58.

684,022. MULTIMINOR. Avo Limited. SN 53,992. Pub. 6-9-59. Filed 6-23-58.

684,023. ADD-MASTER. Underwood Corporation. SN 54,445. Pub. 6-9-59. Filed 6-27-58.

684,024. COSMOTRON. Olivery Garfield Co., Inc. SN 55,790. Pub. 6-9-59. Filed 7-22-58.

684,025. DUPL-O-SCOPE. Houdaille Industries, Inc. SN 56,132. Pub. 6-9-59. Filed 7-28-58.

684,026. AUTOCOPY. General Aniline & Film Corporation, d.b.a. Ansco. SN 57,365. Pub. 3-3-59. Filed 9-18-58.

684,027. COIN-O-MATIC. Eugene M. Huber. SN 60,732. Pub. 6-9-59. Filed 10-16-58.

684,028. DIAMATOR. Agfa Aktiengesellschaft. SN 61,536. Pub. 6-9-59. Filed 10-29-58.

684,029. LOS AND DESIGN. Losenhausenwerk Dusseldorfer Maschinenbau A.G. SN 62,199. Pub. 6-9-59. Filed 11-10-58.

684,030. EXPO-RITE. Photographic Importing and Distributing Corp. SN 62,221. Pub. 6-9-59. Filed 11-10-58.

684,031. BESSAMATIC. Voigtlander A.G. SN 62,240. Pub. 6-9-59. Filed 11-10-58.

684,032. ROLLER MIKE. Walter Cronan. SN 62,839. Pub. 6-9-59. Filed 11-20-58.

684,033. VITTEX. Gevaert Photo-Producten N.V. SN 64,463. Pub. 6-9-59. Filed 12-17-58.

684,034. ALFRED. Alfred Electronics. SN 64,675. Pub. 6-9-59. Filed 12-22-58.

684,035. FLAME-PAK. Protection Controls, Inc. SN 64,749. Pub. 6-9-59. Filed 12-22-58.

684,036. CON-TA-CHEK. Tama, Inc. SN 64,776. Pub. 6-9-59. Filed 12-22-58.

684,037. MECABLITZ. Burleigh Brooks Inc. SN 64,869. Pub. 6-9-59. Filed 12-24-58.

684,082. MAGNESIUM TOPICS. The Dow Chemical Com-

Class 42—Knitted, Netted, and Textile

6–9–59. Filed 12–30–58.

684,166. HACIENDA. XLNT Spanish Food Co. SN 65,099. Pub. 6–9–59. Filed 1–12–59. Hughes Tool Company. SN 699,988. Pub. 6–9–59. Filed 12–14–55.

Class 27—Horological Instruments

684,038. D DITIS. Ditis S.A. SN 55,180. Pub. 6–9–59. Filed 5–27–58.

684,039. AUTRONIC. Bulova Watch Company, Inc. SN 66,013. Pub. 6–9–59. Filed 1–19–59.

684,040. THEATRE-WATCH. Natacha Brooks, Ltd. SN 67,195. Pub. 6–9–59. Filed 2–6–59.

Class 28—Jewelry and Precious-Metal Ware

684,041. SPEC-LACE. Otto Spielberg, d.b.a. O. Spielberg. SN 47,692. Pub. 6–9–59. Filed 3–13–58.

Class 30—Crockery, Earthenware, and Porcelain

684,042. GLADDING McBEAN & CO. ETC. AND DESIGN. Gladding, McBean & Co. SN 53,610. Pub. 6–9–59. Filed 6–16–58.

684,043. THE COTTON BUNNY. Jens Monefeldt. SN 61,499. Pub. 6–9–59. Filed 10–28–58.

Class 31—Filters and Refrigerators

684,044. KMP AND DESIGN. Kenmore Machine Products, Inc. SN 50,067. Pub. 6–9–59. Filed 4–21–58.

684,045. NOVO AND DESIGN. Industrial Enterprises, Inc. SN 58,856. Pub. 6–9–59. Filed 9–12–58.

684,046. CHARMAC. Charles McAnally, d.b.a. Charmac Products. SN 61,410. Pub. 6–9–59. Filed 10–27–58.

684,047. REFILCO. Refill Filter Company. SN 63,760. Pub. 3–31–59. Filed 12–5–58.

684,048. CARFILTER. ACF Industries, Incorporated. SN 64,674. Pub. 6–9–59. Filed 12–22–58.

684,049. CAMDEN MAID. The Camden Freezer Corporation. SN 69,478. Pub. 6–9–59. Filed 3–13–59.

Class 32—Furniture and Upholstery

684,050. ELESCO. Fa. L. Stromeyer & Co., GmbH. SN 58,295. Pub. 6–9–59. Filed 9–10–58.

684,051. TOOL-A-MAT. Fuller Tool Co. Inc. SN 60,503. Pub. 6–9–59. Filed 10–13–58.

684,052. TYFYLE. Wolf S. Landsman. SN 62,089. Pub. 6–9–59. Filed 11–7–58.

684,053. KREST. Kresge-Newark, Inc. SN 69,264. Pub. 6–9–59. Filed 3–10–59.

Class 33—Glassware

684,054. DISTINGUISHED GIFT ETC. AND DESIGN. Distinguished Gift Manufacturers, Inc. SN 60,276. Pub. 6–9–59. Filed 10–8–58.

684,055. THERMOGLAS. Nursmatic Corporation. SN 68,510. Pub. 6–9–59. Filed 2–26–59.

Class 34—Heating, Lighting, and Ventilating Apparatus

684,056. BREEZE WAGON. Peuchen Engineering Corp., assignee of Wilfred S. Peuchen. SN 16,507. Pub. 6–9–59. Filed 8–23–56.

684,057. MERCEDES-BENZ. Daimler-Benz Aktiengesellschaft. SN 45,137. Pub. 6–9–59. Filed 2–3–58.

684,058. LECTROFILTER. McGraw-Edison Company. SN 48,678. Pub. 6–9–59. Filed 3–13–58.

684,059. HEARTH CRAFT. Hearth Craft, Inc. SN 60,290. Pub. 6–9–59. Filed 10–8–58.

684,060. GRADUVAC. Parks-Cramer Company. SN 63,091. Pub. 6–9–59. Filed 11–24–58.

684,061. THE CITATION LINE. Temco, Inc. SN 64,359. Pub. 6–9–59. Filed 12–15–58.

Class 35—Belting, Hose, Machinery Packing, and Nonmetallic Tires

684,062. PYRO-COIN. Raybestos-Manhattan, Inc. SN 59,132. Pub. 6–9–59. Filed 9–18–58.

684,063. ECUSTA. Olin Mathieson Chemical Corporation. SN 61,315. Pub. 6–9–59. Filed 10–24–58.

684,064. E-ECUSTA. Olin Mathieson Chemical Corporation. SN 62,217. Pub. 6–9–59. Filed 11–10–58.

684,065. SPARE-SAVER. The General Tire & Rubber Company. SN 62,754. Pub. 6–9–59. Filed 11–19–58.

684,066. DURASOLID. Vacu-Lug Traction Tyres Limited. SN 65,340. Pub. 6–9–59. Filed 1–5–59.

Class 36—Musical Instruments and Supplies

684,067. ANTHONY RECORDS AND DESIGN. Justin Kramer and Jean Kramer, d.b.a. Anthony Records. SN 49,857. Pub. 6–9–59. Filed 4–17–58.

684,068. SOUNDPAC. Soundcraft, Inc. SN 50,935. Pub. 6–9–59. Filed 5–2–58.

684,069. MADISON. Bell Enterprises, Inc. SN 56,384. Pub. 6–9–59. Filed 7–31–58.

684,070. FFSS AND DESIGN. The Decca Record Company Limited. SN 56,543. Pub. 6–9–59. Filed 8–4–58.

684,071. VARIETY RECORDS AND DESIGN. Stephen Janis, d.b.a. Variety Records. SN 56,777. Pub. 6–9–59. Filed 8–7–58.

684,072. HARDMAN. Hardman, Peck & Company. SN 63,583. Pub. 6–9–59. Filed 12–3–58.

Class 37—Paper and Stationery

684,073. P.B.F. Providence Business Forms Co. SN 25,118. Pub. 6–9–59. Filed 2–26–57.

684,074. CAROLINA TAG. Riegel Paper Corporation. SN 32,132. Pub. 6–9–59. Filed 6–17–57.

684,075. KUSA AND DESIGN. M. D. Burns & Co. SN 48,897. Pub. 6–9–59. Filed 4–2–58.

684,076. FANCIFUL REPRESENTATION OF PROFESSOR. School Pen Company. SN 51,722. Pub. 6–9–59. Filed 5–15–58.

684,077. TRANSGRID. Chart-Pak, Incorporated. SN 53,477. Pub. 6–9–59. Filed 6–13–58.

684,078. CRUSADER. Knight Brothers Paper Company, d.b.a. Crusader Paper Products Company. SN 54,318. Pub. 1–6–59. Filed 6–26–58.

684,079. FF DESIGN. Fiberform, Inc. SN 62,003. Pub. 6–9–59. Filed 11–6–58.

684,080. LIBERTY BELL. Colonial Stationery & Supply Co., Inc. SN 62,833. Pub. 6–9–59. Filed 11–20–58.

Class 38—Prints and Publications

684,081. WHOLESALE DRUG SALESMAN. Davidson Publishing Company. SN 39,049. Pub. 6–9–59. Filed 10–17–57.

684,133. RICE RONI. Golden Grain Macaroni Co. SN

Hydraxtor Co. SN 65,363. Pub. 6–9–59. Filed 1–9–59.

Pub. 6–9–59. Filed 12–24–58.

684,082. MAGNESIUM TOPICS. The Dow Chemical Company. SN 57,351. Pub. 6–9–59. Filed 8–18–58.

Class 39—Clothing

684,083. SHELTON STROLLER AND DESIGN. Shelton Casuals, Inc. SN 661,912. Pub. 6–28–55. Filed 3–2–54.

684,084. STROLLER (WITHIN A RECTANGULAR DESIGN). Shelton Casuals, Inc. SN 684,479. Pub. 6–21–55. Filed 3–29–55.

684,085. RHINO-HIDE. Joseph H. Cohen & Sons, Inc. SN 39,947. Pub. 6–9–59. Filed 11–1–57.

684,086. HALL SHEEN. Robert Hall Clothes, Inc. SN 45,970. Pub. 6–9–59. Filed 2–17–58.

684,087. HARPOON AND DESIGN. Queen Knitting Mills, Inc. SN 47,781. Pub. 10–28–58. Filed 3–14–58.

684,088. SOUFFLE. Lily of France, Inc. SN 49,449. Pub. 6–9–59. Filed 4–10–58.

684,089. JEDWAY AND DESIGN. Durham Men's Shop, Inc., d.b.a. Van Straaten's. SN 52,870. Pub. 6–9–59. Filed S.R. 6–4–58; Am. P.R. 4–2–59.

684,090. TWIN MATES. Bond Stores, Incorporated. SN 63,634. Pub. 6–16–59. Filed 12–4–58.

684,091. WEST WIND. J. Schoeneman, Incorporated. SN 60,589. Pub. 6–9–59. Filed 10–10–58.

684,092. SWAP-TOPS. Hi-Jac Corporation. SN 61,184. Pub. 6–9–59. Filed 10–23–58.

684,093. STYLE MAJOR. The H. A. Seinsheimer Company. SN 61,334. Pub. 6–9–59. Filed 10–24–58.

684,094. MISS B AND DESIGN. Belk Stores Services, Inc. SN 61,353. Pub. 6–9–59. Filed 10–27–58.

684,095. NORCRAFT. Morris B. Sachs, Inc. SN 61,591. Pub. 6–9–59. Filed 10–29–58.

684,096. DURAFOAM. Foamade Industries. SN 61,798. Pub. 6–9–59. Filed 11–3–58.

684,097. HAPPY PYTHON. Sportville Mens Wear, Inc. SN 61,864. Pub. 6–9–59. Filed 11–3–58.

684,098. BE-KEEN. Robert Reis & Co. SN 61,930. Pub. 6–9–59. Filed 11–4–58.

684,099. MOUNT HOOD. White Stag Manufacturing Co. SN 62,046. Pub. 6–9–59. Filed 11–6–58.

684,100. BRUXTON. Publix Shirt Corporation. SN 62,111. Pub. 6–9–59. Filed 11–7–58.

684,101. TOWN TOPIC. Publix Shirt Corporation. SN 62,112. Pub. 6–9–59. Filed 11–7–58.

684,102. OXFORD-SHIRE. The Enro Shirt Company. SN 62,384. Pub. 6–9–59. Filed 11–13–58.

684,103. LIBRETTO'S. Consolidated-National Shoe Corporation, d.b.a. Webster Shoe Company. SN 62,528. Pub. 6–9–59. Filed 11–17–58.

684,104. DRYFOOT. G. B. Britton & Sons Limited. SN 62,671. Pub. 6–9–59. Filed 11–18–58.

684,105. GLAD-KAP. Crofton Manufacturing Company. SN 62,674. Pub. 6–9–59. Filed 11–18–58.

684,106. ZODIAC. Wameset Sales Company, Inc. SN 62,813. Pub. 6–9–59. Filed 11–19–58.

684,107. FLUTTER. Rhoden and Bryan. SN 63,097. Pub. 6–9–59. Filed 11–24–58.

Class 40—Fancy Goods, Furnishings, and Notions

684,108. QUICK. The Quickline Company. SN 49,782. Pub. 6–9–59. Filed 4–16–58.

Class 42—Knitted, Netted, and Textile Fabrics, and Substitutes Therefor

684,109. VACALON. United States Rubber Company. SN 52,782. Pub. 6–9–59. Filed 6–2–58.

684,110. FLX-I-BASE. United States Rubber Company. SN 53,442. Pub. 6–9–59. Filed 6–12–58.

684,111. HYWORTH. Associated Dry Goods Corporation, d.b.a. Stewart Dry Goods Co. SN 63,515. Pub. 6–9–59. Filed 12–2–58.

684,112. TABLEVOGUE. J. P. Stevens & Co., Inc. SN 64,356. Pub. 6–9–59. Filed 12–15–58.

684,113. WYNDCREST. E. T. Barwick Mills, Inc. SN 64,388. Pub. 6–9–59. Filed 12–16–58.

684,114. BUNNIL. The Bernhard Altmann Corporation. SN 64,445. Pub. 6–9–59. Filed 12–17–58.

684,115. MEDALIST. United Merchants and Manufacturers, Inc. SN 64,918. Pub. 6–9–59. Filed 12–24–58.

Class 44—Dental, Medical, and Surgical Appliances

684,116. FLEXIDOSE. Olin Mathieson Chemical Corporation. SN 58,874. Pub. 6–9–59. Filed 9–12–58.

684,117. J & J GUARANTEED STERILE ETC. AND DESIGN. Johnson & Johnson. SN 65,362. Pub. 6–9–59. Filed 1–6–59.

684,118. BEAUTI-VATOR BY POSTURAMIC. Posturamic System, Inc. SN 60,174. Pub. 6–9–59. Filed 3–9–59.

Class 45—Soft Drinks and Carbonated Waters

684,119. HOME AND DESIGN. Home Brand of America, Inc. SN 38,612. Pub. 6–9–59. Filed 10–9–57.

684,120. CHERI-CASA. Hazlewood Dairy Products Company, Inc. SN 61,053. Pub. 6–9–59. Filed 10–21–58.

Class 46—Foods and Ingredients of Foods

684,121. QUAKER MAID AND DESIGN. National Quaker Maid Stores System, Inc. SN 694,082. Pub. 7–10–56. Filed 9–1–55.

684,122. ALAADEN'S COUNTRY CHARM. Theophilus J. Nachowitz, d.b.a. Alaaden Candy Company. SN 17,586. Pub. 4–30–57. Filed 10–16–56.

684,123. WALKER'S. H. F. Walker Company. SN 22,645. Pub. 6–9–59. Filed 1–15–57.

684,124. CALF MAKER. Southern States Cooperative, Inc. SN 28,390. Pub. 6–9–59. Filed 4–17–57.

684,125. ETON. United Biscuit Company of America. SN 34,877. Pub. 6–9–59. Filed 8–2–57.

684,126. PARTY TIME. Krueger's Frosted Foods Incorporated. SN 35,179. Pub. 6–9–59. Filed 8–8–57.

684,127. FLUFFY. McCormick & Company, Incorporated. SN 40,135. Pub. 3–3–59. Filed 11–5–57.

684,128. FLUFFY AND DESIGN. McCormick & Company, Incorporated. SN 42,148. Pub. 3–3–59. Filed 12–10–57.

684,129. SIESTA AND DESIGN. Standard Brands Incorporated. SN 46,771. Pub. 6–9–59. Filed 2–27–58.

684,130. PACIFIC ISLE. Wilbur-Ellis Company, d.b.a. Wilbur-Ellis Co., Inc. SN 48,217. Pub. 6–9–59. Filed 3–21–58.

684,131. TOVAH. David Silverberg, d.b.a. Tovah. SN 49,028. Pub. 6–9–59. Filed 4–3–58.

684,132. RICE-A-RONI. Golden Grain Macaroni Co. SN 50,478. Pub. 12–30–58. Filed 4–28–58.

684,190. DAIRENE. Allied Home Products Corporation, d.b.a. C-S Chemical Company. SN 36,143. Pub. 6–9–59.

684,212. HOME OWNER'S INSURED PAYMENT PLAN AND DESIGN. The United States Life Insurance Co[illegible]

684,133. RICE RONI. Golden Grain Macaroni Co. SN 50,479. Pub. 12-30-58. Filed 4-28-58.

684,134. JUNGLE QUEEN. Jitney-Jungle Incorporated. SN 51,797. Pub. 6-9-59. Filed 5-16-58.

684,135. PT. A. Michaud Co. SN 52,580. Pub. 6-9-59. Filed 5-29-58.

684,136. SCOUR LESS. Mutual Products Company of Minnesota, Inc., d.b.a. Mutual Products Co. SN 53,184. Pub. 6-9-59. Filed 6-9-58.

684,137. FISH-WICH. Fishery Products, Inc. SN 54,032. Pub. 6-9-59. Filed 6-23-58.

684,138. BLUE PLATE WHI-P-NUT. Blue Plate Foods, Inc. SN 54,488. Pub. 6-9-59. Filed 6-30-58.

684,139. "KEEP ME COLD. AND I'LL STAY HOT." The Frank Tea & Spice Co. SN 54,509. Pub. 6-9-59. Filed 6-30-58.

684,140. TWO COWS AND DESIGN. Cao-Dong-Hung. SN 55,070. Pub. 6-9-59. Filed 7-10-58.

684,141. CONFECTION ROLL. Baker Boy Bakeries, Inc. SN 55,212. Pub. 6-9-59. Filed 7-14-58.

684,142. NUSPRED. Beatrice Foods Co., assignee of Shedd-Bartush Foods, Inc. SN 56,191. Pub. 6-9-59. Filed 7-28-58.

684,143. EHLERS WITHIN AN OVAL. Albert Ehlers, Inc. SN 56,702. Pub. 6-9-59. Filed 8-6-58.

684,144. EHLERS. Albert Ehlers, Inc. SN 56,703. Pub. 6-9-59. Filed 8-6-58.

684,145. BIRD 'N BULL ETC. AND DESIGN. Oscarsson Sales Co. Inc. SN 56,874. Pub. 6-9-59. Filed 8-8-58.

684,146. SUPER-KUP. The Maryland Baking Company, d.b.a. Flare-Top Eat-it-All Bakery. SN 58,310. Pub. 6-9-59. Filed 9-3-58.

684,147. SQUARE DEAL. The Maryland Baking Company, d.b.a. Flare-Top Eat-it-All Bakery. SN 58,311. Pub. 6-9-59. Filed 9-3-58.

684,148. AMERICA'S CUP. Chris Hoerr & Son Co. SN 58,534. Pub. 6-9-59. Filed 9-8-58.

684,149. PIONEER SUP-R-FLO. Hales & Hunter Co. SN 59,186. Pub. 6-9-59. Filed 9-10-58.

684,150. SMITHERS. Smithers Sons, Ltd., assignee of Louis Milani Foods, Inc. SN 59,315. Pub. 6-9-59. Filed 9-22-58.

684,151. TINY TIM AND REPRESENTATION OF MAN AND BOY. Limpert Bros. Inc. SN 59,546. Pub. 6-9-59. Filed 9-25-58.

684,152. CHEERI-FLAKES. General Mills, Inc. SN 60,133. Pub. 6-9-59. Filed 10-6-58.

684,153. ALICE IN APPLE LAND. Sebastopol Cooperative Cannery. SN 60,185. Pub. 6-9-59. Filed 10-6-58.

684,154. DRIKUBE. The Buckeye Cellulose Corporation. SN 60,264. Pub. 6-9-59. Filed 10-8-58.

684,155. CERES. Nebraska Consolidated Mills Company. SN 60,619. Pub. 6-9-59. Filed 10-14-58.

684,156. ITALIAN BOY. Demar Foods. SN 60,658. Pub. 6-9-59. Filed 10-15-58.

684,157. COUNT CALORIE AND DESIGN. Bresler Ice Cream Co. SN 62,266. Pub. 6-9-59. Filed 11-12-58.

684,158. ALARM. E. W. Ligon, d.b.a. E. W. Ligon Produce Company. SN 64,418. Pub. 6-9-59. Filed 12-16-58.

684,159. TURTLE. E. W. Ligon, d.b.a. E. W. Ligon Produce Company. SN 64,419. Pub. 6-9-59. Filed 12-16-58.

684,160. DUET. Swift & Company. SN 64,573. Pub. 6-9-59. Filed 12-18-58.

684,161. CREAM AND DESIGN. Pandol & Sons. SN 64,653. Pub. 6-9-59. Filed 12-19-58.

684,162. WORTHMORE BRAND. Phil J. Hock, d.b.a. Phil J. Hock & Co. SN 64,981. Pub. 6-9-59. Filed 12-29-58.

684,163. BIMANCO BRAND. Bimanco, Inc. SN 65,621. Pub. 6-9-59. Filed 1-12-59.

684,164. WESTERN ROUND UP AND DESIGN. Jackson Produce Company. SN 65,670. Pub. 6-9-59. Filed 1-12-59.

684,165. PEARSONS AND CROWN DESIGN. Pearson Candy Company. SN 65,695. Pub. 6-9-59. Filed 1-12-59.

684,166. HACIENDA. XLNT Spanish Food Co. SN 65,999. Pub. 6-9-59. Filed 1-19-59.

684,167. MONMOUTH. Monmouth Canning Co. SN 66,071. Pub. 6-9-59. Filed 1-19-59.

684,168. SCARLETT'S. Wm. G. Scarlett & Co. SN 66,238. Pub. 6-9-59. Filed 1-21-59.

684,169. APPLE-FLO. Dutchess County Apple Mills. SN 66,288. Pub. 6-9-59. Filed 1-22-59.

684,170. 50/50. Seco Products. SN 66,302. Pub. 6-9-59. Filed 1-22-59.

Class 49—Distilled Alcoholic Liquors

684,171. "LOCH CORRIE" WHISKY AND DESIGN. Marshall Taplow Limited. SN 46,471. Pub. 6-9-59. Filed 2-24-58.

684,172. LADY KINTORE. Schenley Import Corporation. SN 64,495. Pub. 6-9-59. Filed 12-17-58.

Class 50—Merchandise Not Otherwise Classified

684,173. SALLY STITCH AND DESIGN. Frank Crohn, d.b.a. Vol-Cro Manufacturing Co. SN 44,603. Pub. 6-9-59. Filed 1-24-58.

684,174. GLO AND DESIGN. Mary Virginia Stern. SN 47,291. Pub. 6-9-59. Filed 3-7-58.

684,175. STANFOAM. Standard Plastics, Inc. SN 60,693. Pub. 6-9-59. Filed 10-15-58.

684,176. EXECU-FLEX. The Chartmakers, Inc. SN 61,901. Pub. 6-9-59. Filed 11-4-58.

684,177. TURNERTILE. Turner Mfg. Co. SN 64,781. Pub. 6-9-59. Filed 12-22-58.

684,178. TWISTO-POR. Sapient Sales Co., Inc. SN 65,379. Pub. 6-9-59. Filed 1-6-59.

684,179. KAROSEL. Kresky Mfg. Co., Inc. SN 65,776. Pub. 6-9-59. Filed 1-13-59.

684,180. BIG HUSKY. Klein Manufacturing Co. SN 65,963. Pub. 6-9-59. Filed 1-16-59.

Class 51—Cosmetics and Toilet Preparations

684,181. CULTURE PHYSIQUE DU VISAGE AND FEMALE PROFILE. Société Anonyme Laboratoires du Dr. N. G. Payot. SN 687,820. Pub. 6-9-59. Filed 1-28-59.

684,182. CARITA. Maria Carita and Rosa Carita. SN 37,557. Pub. 6-9-59. Filed 9-20-57.

684,183. DY-ZOFF. King Research, Inc. SN 49,441. Pub. 6-9-59. Filed 4-10-58.

684,184. MEDALLION. Silhouette Products Ltd. SN 50,252. Pub. 6-9-59. Filed 4-23-58.

684,185. GOLDEN AUTUMN. Prince Matchabelli, Inc. (New York corporation—new corporation), assignee of Lexomad, Inc., by change of name from Prince Matchabelli, Inc. (New York corporation). SN 55,514. Pub. 6-9-59. Filed 7-17-58.

684,186. VALGROOM. Chesebrough-Pond's Inc. SN 62,738. Pub. 6-9-59. Filed 11-19-58.

684,187. STAN-A-CREME. Standex Laboratories, Inc. SN 63,258. Pub. 6-9-59. Filed 11-26-58.

684,188. PRO-STYL. George C. Turek, d.b.a. Pro-Styl Beauty Products. SN 63,555. Pub. 6-9-59. Filed 12-2-58.

Class 52—Detergents and Soaps

684,189. LUSTRAPON. The Wella Corporation. SN 684,001. Pub. 12-6-55. Filed 3-22-55.

Pub. 6–9–59. Filed 4–16–58.

50,478. Pub. 12–30–58. Filed 4–28–58.

684,190. DAIRENE. Allied Home Products Corporation, d.b.a. C-Z Chemical Company. SN 36,143. Pub. 6–9–59. Filed 8–26–57.

684,191. KLEER BLU. Texize Chemicals, Inc. SN 44,134. Pub. 9–30–58. Filed 1–16–58.

684,192. NICE. Texize Chemicals, Inc. SN 44,771. Pub. 6–9–59. Filed 1–27–58.

684,193. ALADDIN. Hutchinson Chemical Corporation. SN 49,498. Pub. 6–9–59. Filed 4–11–58.

684,194. CROWN CLEANSER AND DESIGN. The Brentwood Company, Inc. SN 51,100. Pub. 6–9–59. Filed 4–18–58.

684,195. TEUTONIC. Harry G. Heiserman, d.b.a. Twentieth Century Manufacturing Company. SN 60,707. Pub. 6–9–59. Filed 10–15–58.

Service Marks

Class 100—Miscellaneous

684,196. MISS MAJORETTE OF AMERICA. Donald L. Sartell, d.b.a. Drum Major Magazine. SN 44,207. Pub. 6–9–59. Filed 1–17–58.

Class 101—Advertising and Business

684,197. NATIONAL ELECTRICAL EXPOSITION AND DESIGN. National Electrical Contractors Association. SN 685,114. Pub. 6–9–59. Filed 4–7–55.

684,198. TELEFIND. Thomas G. Sorrell, d.b.a. Telefind. SN 697,421. Pub. 6–9–59. Filed 10–31–55.

684,199. CONSUMERS. Consumers Trading Stamp Company. SN 16,418. Pub. 3–31–59. Filed 9–26–56.

684,200. "SILVER DOLLAR JUBILEE." Carolyn Sholdar and David Bohm, d.b.a. Carolyn Sholdar Associates. SN 30,303. Pub. 6–9–59. Filed 5–20–57.

684,201. WELCOME STRANGER. Welcome Stranger, Inc. SN 33,592. Pub. 6–9–59. Filed 7–11–57.

684,202. NATIONAL PARKING INVESTIGATIONS ETC. AND DESIGN. Joseph A. Cirillo, d.b.a. National Parking Investigations. SN 47,836. Pub. 6–9–59. Filed 3–17–58.

684,203. NOLAND AND DESIGN. Noland Company Inc. SN 48,427. Pub. 6–9–59. Filed 3–25–58.

Class 102—Insurance and Financial

684,204. HOLLAND AMERICA AND DESIGN. Holland-America Insurance Company. SN 47,857. Pub. 6–9–59. Filed 3–17–58.

684,205. ADAPT-A-PLAN. Gulf Life Insurance Company. SN 48,916. Pub. 6–9–59. Filed 4–2–58.

684,206. OLD RELIANCE. The Old Reliance Agency, Inc. SN 48,927. Pub. 6–9–59. Filed 4–2–58.

684,207. MONU-MATIC. Monumental Life Insurance Company. SN 50,715. Pub. 6–9–59. Filed 4–30–58.

684,208. MORRISTRONIC AND DESIGN. The Morristown Trust Company. SN 51,281. Pub. 6–9–59. Filed 5–8–58.

684,209. FAMINC IN A DIAMOND DESIGN. The Union Central Life Insurance Company. SN 52,253. Pub. 6–9–59. Filed 5–23–58.

684,210. CONSUMER'S AND DESIGN. Consumer's Money Order Corp. of America. SN 53,126. Pub. 5–5–59. Filed 6–9–58.

684,211. LIFECO-MATIC. General Life Company of America. SN 56,120. Pub. 6–9–59. Filed 7–28–58.

684,212. HOME OWNER'S INSURED PAYMENT PLAN AND DESIGN. The United States Life Insurance Company in the City of New York. SN 56,370. Pub. 4–14–59. Filed 7–30–58.

684,213. PLANNED LIVING ETC. AND DESIGN. State Mutual Life Assurance Company of America. SN 60,058. Pub. 6–9–59. Filed 10–3–58.

684,214. PLANET INSURANCE COMPANY ETC. AND DESIGN. Planet Insurance Company. SN 60,561. Pub. 6–9–59. Filed 10–13–58.

Class 103—Construction and Repair

684,215. LUBRI-CHROME. Spar-Tan Engineering Company. SN 45,623. Pub. 6–9–59. Filed 2–10–58.

684,216. SCOTCHWASH. Scotchwash Incorporated. SN 51,593. Pub. 6–9–59. Filed 5–13–58.

Class 105—Transportation and Storage

684,217. GLOBUS. Globus Tours—Mantegazza & Albek, Inc. SN 54,685. Pub. 6–9–59. Filed 7–2–58.

684,218. BRANCHPORTATION. Branch Motor Express Company. SN 55,378. Pub. 6–9–59. Filed 7–16–58.

684,219. REPRESENTATION OF SEA HORSE. States Steamship Company. SN 61,338. Pub. 6–9–59. Filed 10–24–58.

Class 106—Material Treatment

684,220. METALWELD. Metalweld, Incorporated. SN 50,090. Pub. 6–9–59. Filed 4–21–58.

684,221. CEM. Platecraft of America, Inc. SN 51,581. Pub. 6–9–59. Filed 5–13–58.

Collective Membership Marks

Class 200

684,222. PRODUCTION AND MISCELLANEOUS WORKERS UNION, ETC. Chicago Truck Drivers, Chauffeurs and Helpers Union of Chicago and Vicinity, Local 705 (Independent), d.b.a. Chicago Teamsters, Chauffers, and Helpers of Chicago and Vicinity. SN 32,434. Pub. 6–9–59. Filed 5–20–57.

684,223. FTA AND DESIGN. National Education Association of the United States, d.b.a. Future Teachers of America. SN 64,094. Pub. 6–9–59. Filed 12–11–58.

684,224. STUDENT NATIONAL EDUCATION ASSOCIATION. National Education Association of the United States, d.b.a. Student National Education Association. SN 64,097. Pub. 6–9–59. Filed 12–11–58.

684,225. STUDENT NEA AND DESIGN. National Education Association of the United States, d.b.a. Student National Education Association. SN 64,098. Pub. 6–9–59. Filed 12–11–58.

Certification Marks

Class A—Goods

684,226. NACO ETC. AND DESIGN. National Association of Consumer Organizations. SN 53,630. Pub. 6–9–59. Filed 6–16–58.

684,227. APPROVED ETC. AND DESIGN. New England Testing Laboratory, Inc. SN 58,440. Pub. 6–9–59. Filed 9–5–58.

684,237. Ben Post, Reedley, Calif. SN 61,852. Filed P.R. 11–3–58; Am. S.R. 6–4–59.

Class 50—Merchandise Not Otherwise

Candy Company. SN 65,695. Pub. 6–9–59. Filed 1–12–59.

684,189. DUSTRAPON. The Wells Corporation. SN 684,001. Pub. 12–6–55. Filed 3–22–55.

SUPPLEMENTAL REGISTER

These registrations are not subject to opposition.

Class 2 — Receptades

684,228. C. E. Erickson Company, Inc., Des Moines, Iowa. SN 33,064. Filed P.R. 7–2–57; Am. S.R. 6–18–59.

ZINC-KOTE

For Metal Cases for Carrying Milk Bottles.
First use June 17, 1957.

Class 21 — Electrical Apparatus, Machines, and Supplies

684,229. Harvic Manufacturing Corp., Bronx, N.Y. SN 46,541. Filed P.R. 2–25–58; Am. S.R. 6–11–59.

SOMETHING NEW UNDER THE STEAK

For Electric Stoves.
First use Jan. 7, 1958.

684,230. Perkins Battery Company, York, Pa. SN 70,673. Filed 4–1–59.

TRUC-POWER

For Lead-Acid Storage Batteries for Use in Electric Motive-Power Equipment—Such as Industrial Electric Lift Trucks.
First use July 25, 1955.

Class 23 — Cutlery, Machinery, and Tools, and Parts Thereof

684,231. The Union Fork & Hoe Company, Columbus, Ohio. SN 50,421. Filed P.R. 4–25–58; Am. S.R. 6–15–59.

YARD 'N GARDEN

For Hand-Operated Tools—Namely, Rakes, Shovels, Hoes, Spades, Forks, Hooks, Cultivators, Turf Edgers, Weeders, Whip-Type Weed and Grass Cutters, Trowels and Replacement-Type Tool Handles.
First use Mar. 26, 1958.

Class 38 — Prints and Publications

684,232. Kinney Publications, Inc., Providence, R.I. SN 52,737. Filed P.R. 6–2–58; Am. S.R. 5–28–59.

WHO'S WHO IN AMERICAN HIGH SCHOOLS

For Periodic Publication Listing Outstanding United States High-School Students.
First use on about May 21, 1958.

Class 46 — Foods and Ingredients of Foods

684,233. Rosenberg Bros. & Co., Inc., d.b.a. Rosenberg Bros. Inc., San Francisco, Calif. SN 32,414. Filed P.R. 6–21–57; Am. S.R. 1–22–58.

QUICK 8 MINUTE

For Dried Fruits.
First use 1942.

684,234. S. B. Thomas, Inc., Long Island City, N.Y. SN 33,580. Filed P.R. 7–11–57; Am. S.R. 6–30–59.

Toast-r-Cakes

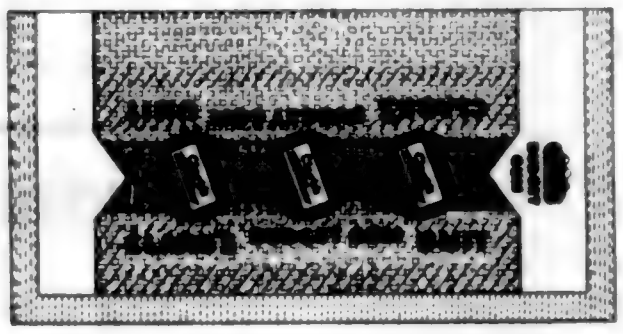
For Muffins or Cakes Designed To Fit and Be Toasted in the Ordinary Toaster.
First use Apr. 29, 1957.

684,235. Jack's Cookie Co., Inc., Baton Rouge, La. SN 35,051. Filed P.R. 8–6–57; Am. S.R. 5–5–59.

DEVIL DAINTY

For Cakes.
First use on or about Jan. 1, 1938.

684,236. Clark Brothers Chewing Gum Company, Pittsburgh, Pa. SN 59,270. Filed 9–22–58.



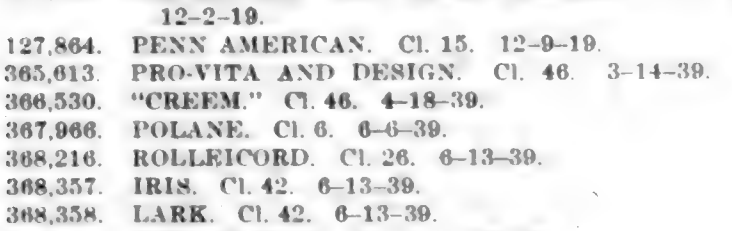
The drawing is lined for red or pink, green and yellow, respectively.
For Chewing Gum.
First use July 25, 1957; about January 1955 in a different display.

354,079. GUILD HALL EAGLE OTTAWA AND DESIGN. Cl. 1. 2–1–38.

576,938. ANN BARTON. Cl. 37.

576,962. CELRICRAT AND DESIGN. Cl. 46.

684,237. Ben Post, Reedley, Calif. SN 61,852. Filed P.R. 11-3-58; Am. S.R. 6-4-59.



The drawing is lined for yellow, blue, green, red, gray, and brown.
For Fresh Fruits.
First use Jan. 6, 1958.

Class 50—Merchandise Not Otherwise Classified

684,238. Plaque Craft, Inc., Baltimore, Md. SN 54,091. Filed P.R. 6-23-58; Am. S.R. 5-27-59.

PLAQUE Craft

The lining on the drawing is for shading purposes only.
For Embossed Designs for Subsequent Decorative Coloring.
First use May 5, 1958.

TRADEMARK REGISTRATIONS RENEWED

126,564. SAXMAYER. Cl. 23. 9-16-19.
126,764. J. RUSSELL & CO. GREEN RIVER WORKS. Cl. 23. 9-30-19.
126,765. J. RUSSELL & CO. ETC. AND DESIGN. Cl. 23. 9-30-19.
126,766. RUSSELL. Cl. 23. 9-30-19.
126,771. J. RUSSELL & CO. GREEN RIVER WORKS AND DESIGN. Cl. 23. 9-30-19.
127,058. H. & B. LIGHT LOAF. Cl. 46. 10-21-19.
127,067. BABY BUNTING AND DESIGN. Cl. 39. 10-21-19.
127,094. REPRESENTATION OF A HEART. Cl. 46. 10-21-19.
127,205. CASAFRU. Cl. 18. 10-21-19.
127,266. PYRAMID AND DESIGN. Cl. 39. 11-4-19.
127,346. FITRITE. Cl. 39. 11-11-19.
127,619. DYKELAND. Cl. 46. 11-18-19.
127,769. PERIGEE. Cl. 6. 12-2-19.
127,775. OMEGA OIL AND LEAF DESIGN. Cl. 18. 12-2-19.
127,864. PENN AMERICAN. Cl. 15. 12-9-19.
365,613. PRO-VITA AND DESIGN. Cl. 46. 3-14-39.
366,530. "CREEM." Cl. 46. 4-18-39.
367,966. POLANE. Cl. 6. 6-6-39.
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ment-Type Tool Handles.
First use Mar. 26, 1958.

First use July 25, 1957; about January 1958 in a different display.

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Meyers, Louis, & Son, Inc., New York, N.Y. 373,545, ren. 8-25-59. Cl. 39.
Michaud, A., Co., Philadelphia, Pa. 684,135, pub. 6-9-59. Cl. 46.
Mid-West-Pak Corp., Belvidere, Ill. 683,824, pub. 6-9-59. Cl. 2.
Milani, Louis, Foods, Inc.: *See*—
Smithers Sons, Ltd.
Minit Spray Corp., Park Ridge, Ill. 683,892, pub. 6-9-59. Cl. 13.
Minneapolis-Honeywell Regulator Co., Minneapolis, Minn. 684,021, pub. 6-9-59. Cl. 26.
Minser Tackle Co.: *See*—
Minser, William D.
Minser, William D., d.b.a. Minser Tackle Co., Chinook, Wash. 683,973, pub. 6-9-59. Cl. 22.
Miron Mills, Inc., Clinton, Mass. 576,985, canc. Cl. 42.
Miss Petite, Inc., New York, N.Y. 577,045, canc. Cl. 39.
Miss Swank, Inc., New York, N.Y. 576,933, canc. Cl. 39.
Mission Pharmacal Co., San Antonio, Tex. 683,929, pub. 6-9-59. Cl. 18.
Mittag & Volger, Inc., Park Ridge, N.J., to Burroughs Corp., Detroit, Mich. 371,499, ren. 8-25-59. Cl. 11.
Molle, Thomas, d.b.a. Coast Side Produce, Oakland, Calif. 576,952, canc. Cl. 46.
Monefeldt, Jens, Hayward, Calif. 684,043, pub. 6-9-59. Cl. 30.
Monmouth Canning Co., Portland, Maine. 684,167, pub. 6-9-59. Cl. 46.
Monroe Food Products Co.: *See*—
Soffer, Harry L.
Monumental Life Insurance Co., Baltimore, Md. 684,207, pub. 6-9-59. Cl. 102.
Moore & Munger, New York, N.Y. 683,904, pub. 6-9-59. Cl. 15.
Moore, Samuel, & Co., Mantua, Ohio. 683,893, pub. 6-9-59. Cl. 13.
Morrell, John, & Co., Ottumwa, Iowa. 127,094, ren. 8-25-59. Cl. 46.
Morrell, John, & Co., Ottumwa, Iowa. 372,728, ren. 8-25-59. Cl. 46.
Morristown Trust Co., The, Morristown, N.J. 684,208, pub. 6-9-59. Cl. 102.
Morton Chemical Co., Greensboro, N.C., to Chas. Pfizer & Co., Inc., Brooklyn, N.Y. 369,232, ren. 8-25-59. Cl. 6.
Multi-Aid Computer Corp., New York, N.Y. 576,936, canc. Cl. 26.
Mutual Pharmacal Co., Inc., Syracuse, N.Y. 577,070, canc. Cl. 18.
Mutual Products Co.: *See*—
Mutual Products Co. of Minnesota, Inc.
Mutual Products Co. of Minnesota, Inc., d.b.a. Mutual Products Co., Minneapolis, Minn. 684,136, pub. 6-9-59. Cl. 46.
N.V. "Industrie" v/h Van Lohuizen & Co., Vaassen, Netherlands. 683,883, pub. 6-9-59. Cl. 13.
Nachowitz, Theophilus J., d.b.a. Alaaden Candy Co., Chicago, Ill. 684,122, pub. 4-30-57. Cl. 46.
Natacha Brooks, Ltd., New York, N.Y. 684,040, pub. 6-9-59. Cl. 27.
National Aniline & Chemical Co., Inc., to Allied Chemical Corp., New York, N.Y. 127,769, ren. 8-25-59. Cl. 6.
National Biscuit Co.: *See*—
Ranger Joe, Inc.
National Bundle Tyer Co., Blissfield, Mich. 126,564, ren. 8-25-59. Cl. 23.
National Education Association of The United States, d.b.a. Future Teachers of America, Washington, D.C. 684,223-5, pub. 6-9-59. Cl. 200.
National Electrical Contractors Association, Washington, D.C. 684,197, pub. 6-9-59. Cl. 101.
National Laboratories, Inc., Toledo, Ohio. 683,847, pub. 6-9-59. Cl. 6.
National Parking Investigations: *See*—
Cirillo, Joseph A.
National Production Co., Detroit, Mich. 371,896, ren. 8-25-59. Cl. 32.
National Quaker Maid Stores System, Inc., Akron, Ohio. 684,121, pub. 7-10-56. Cl. 46.
National Telephone Supply Co., The, Cleveland, Ohio. 683,963, pub. 6-9-59. Cl. 21.
Nebraska Consolidated Mills Co., Omaha, Nebr. 684,155, pub. 6-9-59. Cl. 46.
Nederlandse Geschenkartikelen Industrie Junora, Hilversum, Netherlands. 683,966-68, pub. 6-9-59. Cl. 21.
New England Testing Laboratory, Inc., Lowell, Mass. 684,227, pub. 6-9-59. Cl. A.
Noland Co., Inc., Newport News, Va. 684,203, pub. 6-9-59. Cl. 101.
Nordic Seafood Corp.: *See*—
Atlantic Coast Fisheries Corp. of New York.
Norwich Pharmacal Co., The, d.b.a. Eaton Laboratories, New York, N.Y. 683,927, pub. 6-9-59. Cl. 18.
Nuclear Products Co., Cleveland, Ohio. 683,897, pub. 6-9-59. Cl. 13.
Nursmatic Corp., Crystal Lake, Ill. 684,055, pub. 6-9-59. Cl. 33.
Odora Co., Inc., New York, N.Y. 372,826, ren. 8-25-59. Cl. 2.
Old 97 Co., Tampa, Fla. 683,920, pub. 6-9-59. Cl. 18.
Old Reliance Agency, Inc., The, Des Moines, Iowa. 684,206, pub. 6-9-59. Cl. 102.
Olin Mathieson Chemical Corp., East Alton, Ill. 684,063-4, pub. 6-9-59. Cl. 35.
Olin Mathieson Chemical Corp, New York, N.Y. 683,840, pub. 6-9-59. Cl. 6.
Olin Mathieson Chemical Corp., New York, N.Y. 683,923, pub. 6-9-59. Cl. 18.
Olin Mathieson Chemical Corp., New York, N.Y. 684,116, pub. 6-9-59. Cl. 44.
Oscarsson Sales Co. Inc., New York, N.Y. 684,145, pub. 6-9-59. Cl. 46.
Omega Chemical Co., Inc.: *See*—
Omega Chemical Co., The.
Omega Chemical Co., The., New York, N.Y., to Omega Chemical Co., Inc., Jersey City, N.J. 127,775, ren. 8-25-59. Cl. 18.
Omega Machine Co., Providence, R.I. 576,932, canc. Cl. 26.
Ostrow, Barnet, d.b.a. Ronal Chemicals, Brooklyn, N.Y. 559,947, canc. Cl. 6.
Outwest Co.: *See*—
Tomlin, Amos S.
Page Milk Co., The, Merrill, Wis. 577,048, canc. Cl. 46.
Pandol & Sons, Delano, Calif. 684,161, pub. 6-9-59. Cl. 46.

Spar-Tan Engineering Co., Los Angeles, Calif. 684,215, pub. 6-9-59. Cl. 103.
Union Carbide Corp., New York, N.Y. 683,857, pub. 6-9-59. Cl. 6.

Parents' Institute, Inc., The, to Baby Care Manual, Inc., New York, N.Y. 370,271, ren. 8–25–59. Cl. 38.
Parker-Hannifin Corp., Cleveland, Ohio. 683,882, pub. 6–9–59. Cl. 13.
Parks-Cramer Co., Fitchburg, Mass. 684,060, pub. 6–9–59. Cl. 34.
Patent Fuels & Color Corp., Cincinnati, Ohio. 367,966, ren. 8–25–59. Cl. 6.
Patvin, R. J., Shoe Co.: *See*—
Juvenile Shoe Corp. of America, The.
Pearson Candy Co., St. Paul, Minn. 684,165, pub. 6–9–59. Cl. 46.
Penguin Pie Co., Los Angeles, Calif., to Eskimo Pie Corp., Richmond, Va. 373,283, ren. 8–25–59. Cl. 46.
Penn American Refining Co., to South Penn Oil Co., Oil City, Pa. 127,864, ren. 8–25–59. Cl. 15.
Pergament, Marcus N., d.b.a. Kleen-pup Laboratories, Arabi, La. 577,131, canc. Cl. 52.
Perkins Battery Co., York, Pa. 684,230. Cl. 21.
Petite Miss Co.: *See*—
Lipman & Schlifman, Inc.
Peuchen Engineering Corp., New Castle, from W. S. Peuchen, Wilmington, Del. 684,056, pub. 6–9–59. Cl. 34.
Peuchen, Wilfred S.: *See*—
Peuchen Engineering Corp.
Pfizer, Chas., & Co., Inc.: *See*—
Morton Chemical Co.
Pfizer, Chas., & Co., Inc., Brooklyn, N.Y. 683,924–26, pub. 6–9–59. Cl. 18.
Pfizer, Chas., & Co., Inc., Brooklyn, N.Y. 683,933, pub. 6–9–59. Cl. 18.
Philadelphia and Reading Coal and Iron Co., The, Philadelphia, Pa. 562,372, canc. Cl. 1.
Photographic Importing and Distributing Corp., Valley Stream, N.Y. 684,010, pub. 6–9–59. Cl. 26.
Photographic Importing and Distributing Corp., Valley Stream, N.Y. 684,030, pub. 6–9–59. Cl. 26.
Pilgrim Novelty Corp., New York, N.Y. 577,049, canc. Cl. 24.
Pillsbury Co., The: *See*—
Pillsbury Flour Mills Co.
Pillsbury Flour Mills Co., to The Pillsbury Co., Minneapolis, Minn. 368,471, ren. 8–25–59. Cl. 46.
Pioneer Coat Mfg. Co., Minneapolis, Minn. 577,000, canc. Cl. 39.
Planet Insurance Co., Detroit, Mich. 684,214, pub. 6–9–59. Cl. 102.
Plaque Craft, Inc., Baltimore Md. 684,238. Cl. 50.
Plastic Products Co., Detroit, Mich. 683,872, pub. 6–9–59. Cl. 12.
Platecraft of America, Inc., Buffalo, N.Y. 684,221, pub. 6–9–59. Cl. 106.
Plymouth Rock Shirt Co.: *See*—
Bernstein, Samuel.
Pope, Frank B., Co., Pittsburgh, Pa. 683,878, pub. 6–9–59. Cl. 12.
Posner, Harold, Brooklyn, N.Y. 576,947, canc. Cl. 39.
Post, Ben, Reedley, Calif. 684,237. Cl. 46.
Posturamic System, Inc., St. Louis, Mo. 684,118, pub. 6–9–59. Cl. 44.
Pressing Supply Co., Philadelphia, Pa. 577,077, canc. Cl. 24.
Price, Kenneth B., d.b.a. The Tenna-Trailer Co., Pontiac, Ill. 577,025, canc. Cl. 19.
Prince Matchabelli, Inc., from Lexomad, Inc., by change of name from Prince Matchabelli, Inc., New York, N.Y. 684,185, pub. 6–9–59. Cl. 51.
Pro-Styl Beauty Products: *See*—
Turek, George C.
Protection Controls, Inc., Chicago, Ill. 684,035, pub. 6–9–59. Cl. 26.
Providence Business Forms Co., Providence, R.I. 684,073, pub. 6–9–59. Cl. 37.
Publix Shirt Corp., New York, N.Y. 684,100–1, pub. 6–9–59. Cl. 39.
Pyramid Rubber Co., The, Ravenna, Ohio. 684,009, pub. 6–9–59. Cl. 26.
Queen Knitting Mills, Inc., Philadelphia, Pa. 684,087, pub. 10–28–58. Cl. 39.
Quickline Co., The, Detroit, Mich. 684,108, pub. 6–9–59. Cl. 40.
Quik-Chek Corp., Philadelphia, Pa. 683,951, pub. 6–9–59. Cl. 21.
Ranger Joe, Inc., to National Biscuit Co., New York, N.Y. 369,484, ren. 8–25–59. Cl. 46.
Raybestos-Manhattan, Inc., Passaic, N.J. 684,062, pub. 6–9–59. Cl. 35.
Reardon Products: *See*—
Reardon, William L.
Reardon, William L., d.b.a. Reardon Products, Peoria, Ill. 683,902, pub. 6–9–59. Cl. 15.
Red Arrow Laboratories: *See*—
Southwestern Drug Corp.
Refill Filter Co., Newark, N.J. 684,047, pub. 3–31–59. Cl. 31.
Reis, Robert, & Co., New York, N.Y. 684,098, pub. 6–9–59. Cl. 39.
Rhoden and Bryan, Roseburg, Oreg. 684,107, pub. 6–9–59. Cl. 39.
Riegel Paper Corp., New York, N.Y. 684,074, pub. 6–9–59. Cl. 37.
Ringler, F. A., Co., New York, N.Y. 576,888, canc. Cl. 50.
Riverside & Dan River Cotton Mills, Inc., to Dan River Mills, Inc., Danville, Va. 368,496, ren. 8–25–59. Cl. 42.
Riverside & Dan River Cotton Mills, Inc., to Dan River Mills, Inc., Danville, Va. 372,253, ren. 8–25–59. Cl. 42.
Roberts, Charles D., Co., Greensboro, N.C. 564,063, canc. Cl. 23.
Robins, A. H., Co., Inc., Richmond, Va. 683,934, pub. 6–9–59. Cl. 18.
Rochester Button Co., New York, N.Y. 369,992, ren. 8–25–59. Cl. 40.
Roger Francois Desire Navarre Alias Malherbe, Paris, France. 683,870, pub. 6–9–59. Cl. 12.
Ronal Chemicals: *See*—
Ostrow, Barnet.
Rose, Al, Inc., El Monte, Calif. 683,943, pub. 6–9–59. Cl. 19.
Rosenberg Bros. & Co., Inc., San Francisco, Calif. 684,233. Cl. 46.
Rover Co. Ltd., The, Solihull, Warwickshire, England. 683,940-42, pub. 6–9–59. Cl. 19.
Ruberoid Co., The, Bound Brook, N.J., and New York, N.Y. 566,176, canc. Cl. 5.
Russell Harrington Cutlery Co.: *See*—
Russell, John, Cutlery Co.
Russell, John, Cutlery Co., Turners Falls, to Russell Harrington Cutlery Co., Southbridge, Mass. 126,764, ren. 8–25–59. Cl. 23.
Russell, John, Cutlery Co., Turners Falls, to Russell Harrington Cutlery Co., Southbridge, Mass. 126,765, ren. 8–25–59. Cl. 23.
Russell, John, Cutlery Co., Turners Falls, to Russell Harrington Cutlery Co., Southbridge, Mass. 126,766, ren. 8–25–59. Cl. 23.
Russell, John, Cutlery Co., Turners Falls, to Russell Harrington Cutlery Co., Southbridge, Mass. 126,771, ren. 8–25–59. Cl. 23.
Sachs, Morris B., Inc., Chicago, Ill. 684,095, pub. 6–9–59. Cl. 39.
Safety Cutter Co.: *See*—
Cook, Lawrence H.
Sanctuary, Inc., The, Effingham, Ill. 577,015, canc. Cl. 22.
Sapient Sales Co., Inc., Lawrence, Mass. 684,178, pub. 6–9–59. Cl. 50.
Sartell, Donald L., d.b.a. Drum Major Magazine, Janesville, Wis. 684,196, pub. 6–9–59. Cl. 100.
Scarlett, Wm. G., & Co., Baltimore, Md. 684,168, pub. 6–9–59. Cl. 46.
Schenley Import Corp., New York, N.Y. 684,172, pub. 6–9–59. Cl. 49.
Schering Corp., Bloomfield, N.J. 683,922, pub. 5–19–59. Cl. 18.
Schjeldahl, G. T., Co., Northfield, Minn. 684,017, pub. 6–9–59. Cl. 26.
Schniebs, Otto Eugen, Co.: *See*—
Schniebs, Otto Eugen.
Schniebs, Otto E., d.b.a. Otto Eugen Schniebs Co., Lake Placid, N.Y. 442,427, canc. Cl. 16.
Schoeneman, J., Inc., Baltimore, Md. 684,091, pub. 6–9–59. Cl. 39.
Scholten's, W. A., Chemische Fabrieken N.V., Gromingen, Netherlands. 683,861, pub. 6–9–59. Cl. 6.
School Pen Co., Chatham, N.J. 684,076, pub. 6–9–59. Cl. 37.
Schott, Andrew F., Wauwatosa, Wis. 684,016, pub. 6–9–59. Cl. 26.
Scotchwash Inc., Springfield, Ill. 684,216, pub. 6–9–59. Cl. 103.
Seamprufe Inc., New York, N.Y. 577,090, canc. Cl. 39.
Sears, Roebuck and Co., Chicago, Ill. 576,892, canc. Cl. 39.
Sears, Roebuck and Co., Chicago, Ill. 576,897, canc. Cl. 26.
Sears, Roebuck and Co., Chicago, Ill. 576,958, canc. Cl. 37.
Sears, Roebuck and Co., Chicago, Ill. 577,112, canc. Cl. 23.
Sebastopol Cooperative Cannery, Sebastopol, Calif. 684,153, pub. 6–9–59. Cl. 46.
Seco Products, Kansas City, Mo. 684,170, pub. 6–9–59. Cl. 46.
Seinsheimer, H. A., Co., The, Cincinnati, Ohio. 684,093, pub. 6–9–59. Cl. 39.
Selcraft Products Co.: *See*—
Selsky, Albert.
Selsky, Albert, d.b.a. Selcraft Products Co., Brooklyn, N.Y. 576,972, canc. Cl. 22.
Shedd-Bartush Foods, Inc.: *See*—
Beatrice Foods Co.
Sheffield Corp., The, Dayton, Ohio. 684,018, pub. 6–9–59. Cl. 26.
Sheffield Corp., The, Dayton, Ohio. 684,020, pub. 6–9–59. Cl. 26.
Shelton Casuals, Inc., New York, N.Y. 684,083–4, pub. 6–28–55. Cl. 39.
Sholdar, Carolyn Associates: *See*—
Sholdar, Carolyn, and D. Bohm.
Sholdar, Carolyn, and D. Bohm, d.b.a. Sholdar, Carolyn Associates, New York, N.Y. 684,200, pub. 6–9–59. Cl. 101.
Silhouette Products Ltd., Toronto, Ontario, Canada. 684,184, pub. 6–9–59. Cl. 51.
Silverberg, David, d.b.a. Tovah, Riverside, N.J. 684,131, pub. 6–9–59. Cl. 46.
Skookum Co., Inc., The, Portland, Oreg. 683,978, pub. 6–9–59. Cl. 23.
Smith Kline & French Laboratories, Philadelphia, Pa. 683,932, pub. 6–9–59. Cl. 18.
Smithers Sons, Ltd., from Louis Milani Foods, Inc., Los Angeles, Calif. 684,150, pub. 6–9–59. Cl. 46.
Societe Anonyme Laboratoires du Dr. N. G. Payot, Paris, France. 684,181, pub. 6–9–59. Cl. 51.
Society Brand Clothes, Inc., Chicago, Ill. 576,944, canc. Cl. 39.
Soffer, Harry L., d.b.a. Monroe Food Products Co., Monroe, N.Y. 577,114, canc. Cl. 46.
Sorrell, Thomas G., d.b.a. Telefind, Houston, Tex. 684,198, pub. 6–9–59. Cl. 101.
Soundcraft, Inc., Detroit, Mich. 684,068, pub. 6–9–59. Cl. 36.
Southeastern Products Corp., Birmingham, Ala. 683,894, pub. 6–9–59. Cl. 18.
Southern States Cooperative, Inc., Richmond, Va. 684,124, pub. 6–9–59. Cl. 46.
Southwestern Drug Corp., d.b.a. Red Arrow Laboratories, Waco, Tex. 368,492, ren. 8–25–59. Cl. 51.

Spar-Tan Engineering Co., Los Angeles, Calif. 684,215, pub. 6–9–59. Cl. 103.
Spielberg, Otto, d.b.a. O. Spielberg, New York, N.Y. 684,041, pub. 6–9–59. Cl. 28.
Sportville Men's Wear, Inc., New York, N.Y. 684,097, pub. 6–9–59. Cl. 39.
Sprout, Waldron & Co., Inc., Muncy, Pa. 683,935, pub. 6–9–59. Cl. 19.
Squarey, Edward M., West Orange, N.J. 577,119, canc. Cl. 29.
Stamford Chemical Co., The, Stamford, Conn. 683,842, pub. 4–14–59. Cl. 6.
Standard Brands Inc., New York, N.Y. 576,995, canc. Cl. 46.
Standard Brands Inc., New York, N.Y. 684,129, pub. 6–9–59. Cl. 46.
Standard Plastics, Inc., Fogelsville, Pa. 684,175, pub. 6–9–59. Cl. 50.
Standex Laboratories, Inc., Columbus, Ohio. 684,187, pub. 6–9–59. Cl. 51.
Star, Bonifacio Echeverria, S.A., Eibar, Spain. 683,862, pub. 6–9–59. Cl. 9.
Star Fuse Co. Inc.: *See*—
McGraw-Edison Co.
State Mutual Life Assurance Co. of America, Worcester, Mass. 684,213, pub. 6–9–59. Cl. 102.
States Steamship Co., San Francisco, Calif. 684,219, pub. 6–9–59. Cl. 105.
Stein, Hall & Co., Inc., New York, N.Y. 683,841, pub. 6–9–59. Cl. 6.
Stephens & Stephens, Fort Smith, Ark. 577,054, canc. Cl. 39.
Stern, Mary V., Sewanee, Tenn. 684,174, pub. 6–9–59. Cl. 50.
Stevens, J. P., & Co., Inc., New York, N.Y. 684,112, pub. 6–9–59. Cl. 42.
Stevens, Seriah, to Davies, Rose & Co., Ltd., Boston, Mass. 127,205, ren. 8–25–59. Cl. 18.
Stewart Dry Goods Co.: *See*—
Associated Dry Goods Corp.
Stork-Bound, Inc., New York, N.Y. 577,062, canc. Cl. 39.
Stuart, D. A., Oil Co., Ltd., Chicago, Ill. 683,906, pub. 6–9–59. Cl. 15.
Sturgis Products Co., The, Sturgis, Mich. 562,951, canc. Cl. 4.
Sunbeam Corp., Chicago, Ill. 683,829, pub. 6–9–59. Cl. 4.
Sun-Pacific Inc., San Diego, Calif. 577,101, canc. Cl. 46.
Sun-Tron Corp., Chicago, Ill. 683,961, pub. 6–9–59. Cl. 21.
Superior Brands Inc., to Superior Brands, Inc., New York, N.Y. 365,613, ren. 8–25–59. Cl. 46.
Surgemaster Co.: *See*—
Andersen, Roland.
Swank, Inc., Attleboro, Mass. 683,825, pub. 6–9–59. Cl. 2.
Swift & Co., Chicago, Ill. 684,160, pub. 6–9–59. Cl. 46.
Sylvania Industrial Corp., Fredericksburg, Va., and New York, N.Y., to American Viscose Corp., Philadelphia, Pa. 372,198, ren. 8–25–59. Cl. 5.
Tama, Inc., Chicago, Ill. 684,036, pub. 6–9–59. Cl. 26.
Telefind, See: *See*—
Sorrell, Thomas G.
Television Forecast, Inc., Chicago, Ill. 563,747, canc. Cl. 38.
Temco, Inc., Nashville, Tenn. 684,061, pub. 6–9–59. Cl. 34.
Tenna-Trailer Co., The: *See*—
Price, Kenneth B.
Texize Chemicals, Inc., Greenville, S.C. 684,191–2, pub. 9–30–58. Cl. 52.
Textron Inc., Cleveland, Ohio. 683,983–4, pub. 6–9–59. Cl. 23.
Thomas, S. B., Inc., Long Island City, N.Y. 684,234. Cl. 46.
Titanine Inc., Union, N.J. 576,905, canc. Cl. 16.
Tobey—Fine Papers, Inc., St. Louis, Mo. 372,677, ren. 8–25–59. Cl. 37.
Todd, G. W., & Co., Rochester, N.Y. 92,147, canc. Cl. 23.
Tomlin, Amos S., d.b.a. Outwest Co., Houston, Tex 577,019, canc. Cl. 46.
Tonk Mfg. Co., Chicago, Ill. 150,142, canc. Cl. 32.
Tovah: *See*—
Silverberg, David.
Travenol Laboratories, Inc., Morton Grove, Ill. 683,919, pub. 5–26–59. Cl. 18.
Tropical Muffler Corp., Miami, Fla. 683,993, pub. 6–9–59. Cl. 23.
Tryon Processing Co., Tryon, N.C. 577,055, canc. Cl. 43.
Tuchock, Wanda, and G. de Normand: *See*—
Hour Glass Productions.
Turek, George C., d.b.a. Pro-Styl Beauty Products, Beverly Hills, Calif. 684,188, pub. 6–9–59. Cl. 51.
Turner Mfg. Co., Chicago, Ill. 684,177, pub. 6–9–59. Cl. 50.
Tuxco Corp., North Chicago, Ill. 683,833, pub. 6–9–59. Cl. 6.
Twentieth Century Mfg. Co.: *See*—
Heiserman, Harry G.
U. & J. Lenson Corp., Brooklyn, N. Y. 577,011, canc. Cl. 46.
Underwood Corp., New York, N.Y. 683,865, pub. 6–9–59. Cl. 11.
Underwood Corp., New York, N.Y. 684,023, pub. 6–9–59. Cl. 26.
Union Carbide Corp., New York, N.Y. 683,846, pub. 6–9–59. Cl. 6.
Union Carbide Corp., New York, N.Y. 683,850, pub. 6–9–59. Cl. 6.
Union Carbide Corp., New York, N.Y. 683,855, pub. 6–9–59. Cl. 6.
Union Carbide Corp., New York, N.Y. 683,857, pub. 6–9–59. Cl. 6.
Union Central Life Insurance Co., The, Cincinnati, Ohio. 684,209, pub. 6–9–59. Cl. 102.
Union Fork & Hoe Co., The, Columbus, Ohio. 684,231. Cl. 23.
United Biscuit Co. of America, Melrose Park, Ill. 684,125, pub. 6–9–59. Cl. 46.
United Merchants and Manufacturers, Inc., New York, N.Y. 684,115, pub. 6–9–59. Cl. 42.
United Sanitary Rentals, Inc., Kansas City, Mo. 683,874, pub. 6–9–59. Cl. 12.
United States Borax & Chemical Corp., Los Angeles, Calif. 683,852, pub. 6–9–59. Cl. 6.
United States Life Insurance Co. in the City of N.Y., The, New York, N.Y. 684,212, pub. 4–14–59. Cl. 102.
United States Rubber Co., New York, N.Y. 684,109–10, pub. 6–9–59. Cl. 42.
Universal Oil Products Co., from Universal Oil Products Co., Des Plaines, Ill. 683,834, pub. 6–9–59. Cl. 6.
Universal Winding Co., Cranston, R.I. 683,954, pub. 5–26–59. Cl. 21.
Vacu-Lug Traction Tyres Ltd., Grantham, England. 684,066, pub. 6–9–59. Cl. 35.
Van Straaten's: *See*—
Durham Men's Shop, Inc.
Van Valkenburgh, Hugh C., from Caravan Trading Co., Inc., Seattle, Wash. 576,885, canc. Cl. 46.
Vanderbilt, R. T., Co., Inc., New York, N.Y. 683,848, pub. 6–9–59. Cl. 6.
Variety Records: *See*—
Janis, Stephen.
Ventoura Corp., Elwood, Ind. 683,944, pub. 6–9–59. Cl. 19.
Vesuvius Crucible Co., Swissvale, Pittsburgh, Pa. 683,991, pub. 6–9–59. Cl. 23.
Vette Co.: *See*—
Lanning, Clair.
Victor Vending Corp., Chicago, Ill. 683,823, pub. 6–9–59. Cl. 2.
Victory Optical Mfg. Co., Newark, N.J. 577,046, canc. Cl. 26.
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U. S. GOVERNMENT PRINTING OFFICE: 0——1959

OFFICIAL GAZETTE

UNITED STATES PATENT OFFICE

VOL. 744-745

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